Interchange Modification Report

Final

FOR I-75 (SR 93) AT SR 758 (BEE RIDGE ROAD) INTERCHANGE

SARASOTA COUNTY, FLORIDA

FINANCIAL PROJECT ID:
201277-5-32-01

November 2015

FINAL

INTERCHANGE MODIFICATION REPORT

I-75 (SR 93)/SR 758 (BEE RIDGE ROAD) INTERCHANGE

SARASOTA COUNTY, FLORIDA

The Florida Department of Transportation (FDOT), District One is preparing an Interchange Modification Report (IMR) to document the traffic operational and highway safety benefits of improving the I-75 interchange at Bee Ridge Road in Sarasota County, Florida.

Prepared for:

Federal Highway Administration
Florida Division

Prepared by:

Florida Department of Transportation
District One

November 2015

Executive Summary

Background

The Florida Department of Transportation (FDOT) conducted a Project Development and Environmental (PD&E) Study to evaluate improvement alternatives along Interstate 75 (I-75) from south of State Route (SR) 681 to north of University Parkway in Sarasota County, Florida. Due to changes in projected traffic volumes since the approval of the I-75 PD&E Study, FDOT undertook a reexamination of the PD&E Preferred Alternative for the I-75/SR 758 (Bee Ridge Road) interchange to determine the adequacy of the concept to accommodate future traffic demand. Another concept has since been developed that is expected to adequately accommodate future traffic volumes and provide enhanced operations when compared to the I-75 PD&E Study's Preferred Alternative. This new concept is a Diverging Diamond Interchange (DDI) variant with a partial Continuous-Flow Intersection (CFI) at Bee Ridge Road/Cattlemen Road. This Interchange Modification Report (IMR) documents the benefits of the proposed geometric improvements and the information necessary to confirm the need for this project, as well as traffic impacts associated with the interchange improvement as they relate to surrounding transportation facilities.

Purpose and Need

I-75, a north/south facility, is an integral part of the Strategic Intermodal System (SIS) providing for high-speed, high-volume traffic movements within the State. I-75 improvements are needed to provide relief from existing and projected traffic congestion and to improve safety. I-75 also serves as a hurricane evacuation route. Therefore, there is a need for I-75 to operate at an acceptable Level of Service (LOS) at all times to ensure that a viable escape route is provided to local residents in the event of an emergency. Improvements to this facility will also increase regional connectivity and enhance freight mobility and goods movement.

The purpose of this project is to relieve existing and future operational and safety deficiencies along the I-75 corridor. The proposed I-75 mainline and I-75/Bee Ridge Road interchange modification improvements provide additional capacity along the interstate system as well as the surrounding arterials and local roads. The I-75/Bee Ridge Road interchange needs to be modified to accommodate the I-75 ten-lane Ultimate cross section and future traffic volumes. It needs to be reconfigured to address delay and queuing deficiencies associated with the future traffic volume projections, close proximity of the Bee Ridge Road/Cattlemen Road intersection to the I-75/Bee Ridge Road interchange, and lane utilization issues caused by the partial clover leaf interchange due to the northbound I-75 loop on ramp.

The Project Development Summary Report (PDSR) that was submitted in July 2009 as part of the I-75 PD&E Study recommended improvements to the I-75/Bee Ridge Road interchange. These improvements included the addition of a second lane to the northbound and southbound off-ramps, as well as triple left-turn lanes at the southbound ramp terminal intersection. On Bee Ridge Road, additional travel lanes were recommended in both directions, as well as improvements to the intersection with Cattlemen Road. Location Design Concept Acceptance (LDCA) for the I-75 PD&E Preferred Alternative was received from the Federal Highway Administration (FHWA) on December 8, 2009.

The Final I-75 Systems Interchange Modification Report (SIMR) from Laurel Road to North of Moccasin Wallow Road, dated May 2012, re-analyzed the I-75/Bee Ridge Road interchange and recommended several modifications by 2038. These included two-lane ramps at the northbound off, southbound off, and southbound on-ramp junctions, and the addition of auxiliary lanes north and south of the interchange on I-75. As documented in the I-75 PD&E study, the previously adopted Sarasota-Manatee-Charlotte (SMC) Cost Feasible (CF) Model with a horizon year in 2030 considered an average growth rate of more than 2 percent per year along the intersecting cross streets of I-75. However, based on a review of the traffic forecasts from the currently adopted SMC horizon year (2035) CF Model plus the I-75 ten-lane Ultimate cross section included (SMC CF+ Model) that was provided for use in volume development, the traffic projections are considerably lower than the previous estimates.

This Interchange Modification Report (IMR) reevaluates the future traffic operations of the I-75/Bee Ridge Road interchange based on revised SMC population and traffic growth projections and identifies the optimal I-75/Bee Ridge Road interchange configuration to maximize safety and operations. This IMR analyzes the I-75 SIMR Preferred Alternative and the newly Proposed Build Alternative in order to identify the most suitable interchange configuration to meet the demands of future travelers while minimizing project costs and impacts.

Existing Conditions

The existing I-75/Bee Ridge Road interchange is a partial cloverleaf interchange with a northbound loop on ramp in the southeast quadrant of the interchange to service eastbound-to-northbound traffic. The northbound off ramp includes one left-turn lane and one free-flow right-turn lane. The southbound off-ramp includes one left-turn lane and dual right-turn lanes operated under signal control. The northbound on ramp includes one free-flow right-turn lane and the southbound on ramp includes one free-flow right-turn lane and one receiving lane for the westbound left-turn movement at the west ramp terminal. Both on ramps are reduced to one lane before merging into I-75.

The existing configuration of the project study area was analyzed in the existing year (2013) to document the deficiencies of the existing configuration. The I-75 mainline was analyzed in Highway Capacity Software (HCS) 2010 using density thresholds specified in Exhibit 11-5 of the Highway Capacity Manual (HCM) 2010. The I-75/Bee Ridge Road ramp merge and diverge areas were analyzed in HCS 2010 using density thresholds specified in Exhibit 13-2 of the HCM 2010. Ramp capacities, expressed as passenger cars per hour (pc/h), were checked and compared to the demand volumes. The I-75 mainline and I-75/Bee Ridge Road ramp merge and diverge areas perform at an acceptable LOS (LOS D or better) in the existing year (2013) during both the AM and PM peak hours. The volume-to-capacity ratio (v/c) of each I-75/Bee Ridge Road ramp was also checked and all operate well under capacity.

Average speeds were extracted from VISSIM in order to conduct the arterial segment operational analysis. The Bee Ridge Road/Cattlemen Road intersection approaches experience low average travel speeds during both the AM and PM peak periods. Low travel speeds may be attributed to red-time delays at signalized intersections. Intersections in the project area were analyzed in VISSIM in order to establish a baseline for comparing future traffic operations and determining if the interchange improvements would adversely impact intersection operations. The Bee Ridge Road/Cattlemen Road and Bee Ridge Road/Maxfield Drive intersections have overall delays in excess of 55.0 seconds/vehicle (s/veh) (or equivalent to LOS E or worse operations, according to HCM 2010 LOS thresholds) during the PM peak periods. All other intersections operate at an acceptable level overall during both the AM and PM peak periods. The northbound and southbound

I-75 off ramps incur delays of 90.2 and 69.3 s/veh, respectively, during the AM peak hour. Maximum vehicle queue lengths were analyzed at the I-75 east and west ramp terminals, as well as the adjacent intersections in the study area using VISSIM. The results show that there is excessive vehicle queuing on the northbound and southbound I-75 off ramps during the AM peak period and on eastbound Bee Ridge Road during the PM peak period.

Design Alternatives Considered

The approved I-75 PD&E Study proposed that I-75 be upgraded to accommodate projected traffic volumes. I-75 Interim Build improvements have been developed for the freeway segment contained within the study area and will be implemented in the opening year (2020). The I-75 Interim Build improvements include widening by one lane to the inside from SR 72 (Clark Road) to Bee Ridge Road and from Bee Ridge Road to SR 780 (Fruitville Road) for a configuration of three general-use lanes (GULs) and one auxiliary lane in each direction between the I-75/Bee Ridge Road interchange on and off ramps. The outside lane will serve as the auxiliary lane in each direction between Bee Ridge Road and the adjacent interchanges to the north and south. The eight-lane cross section will be positioned in such a way that it provides enough space for the I-75 Ultimate Build configuration.

The I-75 Ultimate Build improvements include adding two special-use lanes (SULs) in each direction to the I-75 Interim Build improvements by the design year (2040). There will be one auxiliary lane in each direction between the on and off ramps of the adjacent interchanges to the north and south of the I-75/Bee Ridge Road interchange. However, the ten-lane cross section on I-75 is currently unfunded. The I-75 Interim Build improvements will be constructed to allow the four SULs to be added within the median when future funding becomes available.

The I-75 PD&E Study Preferred Alternative and approved I-75 SIMR Alternative proposed that lanes be added to the existing configuration of the I-75/Bee Ridge Road interchange. This includes adding one lane to the northbound I-75 off ramp with one additional left turn lane at the east ramp terminal and adding one lane to the southbound I-75 off ramp with triple left-turn lanes at the west ramp terminal. This also includes widening Bee Ridge Road by one lane in each direction for a total of eight lanes to the east side of the west ramp terminal and ten lanes to the west side. Additional turn lanes would also be added at the Bee Ridge Road/Cattlemen Road intersection approaches.

The I-75 SIMR Alternative was reevaluated to address operational deficiencies and changes in traffic patterns that were shown in the most-recent horizon year (2035) of the SMC CF+ Regional Travel Demand Model. A new concept that was not evaluated in the I-75 PD&E Study was developed for the I-75/Bee Ridge Road interchange. This Proposed Build Alternative includes retrofitting the existing interchange to a DDI variant and converting the Bee Ridge Road/Cattlemen Road intersection to a partial CFI with displaced left turns on the east and west legs of the intersection. The partial CFI minimizes work proposed on Cattlemen Road, which is maintained by Sarasota County, as well as right-of-way (R/W) and driveway access impacts. Also, the westbound-to-southbound left-turn movement will be eliminated from the Bee Ridge Road/Cattlemen Road intersection for vehicles originating from the southbound I-75 off ramp and will instead be accommodated by a new off ramp leading from the southbound I-75 off ramp at Bee Ridge Road to Wilkinson Road.

Future Conditions

The I-75 mainline Interim and Ultimate Build improvements and the I-75 SIMR Alternative were reevaluated for consideration and comparison to the Proposed Build Alternative based on newly

developed traffic volumes for the design year (2040) and the opening year (2020). The Proposed Build Alternative shows the same v/c ratios as the I-75 SIMR Alternative on all ramps, with the exception of the northbound I-75 on ramp because the Proposed Build Alternative improves this ramp to two lanes at the I-75 gore and the I-75 SIMR Alternative maintains it as a one-lane ramp at the I-75 gore.

The Proposed Build Alternative is generally projected to show average travel speeds similar to those in the I-75 SIMR Alternative on Bee Ridge Road and Cattlemen Road segments. Decreases in average speed from the Proposed Build Alternative to the I-75 SIMR Alternative may be attributed to different signal timing schemes between the two Alternatives. In the design year (2040), the Proposed Build Alternative is projected to have lower overall intersection control delay than the I-75 SIMR Alternative at all study intersections, with the exception of Cattlemen Road/Wilkinson Road during both the AM and PM peak hours. This can be attributed to the increased connectivity to the surrounding network due to the new westbound approach at this intersection in the Proposed Build Alternative. The Cattlemen Road/Wilkinson Road intersection is projected to operate at an acceptable level with either Alternative implemented. The Bee Ridge Road/Maxfield Drive intersection is expected to have delay reductions in excess of 40.0 s/veh during both the AM and PM peak hours with the Proposed Build Alternative implemented. Overall intersection delay reductions are expected to range from 14.4 s/veh to 49.9 s/veh in the AM peak hour and 0.7 s/veh to 44.3 s/veh in the PM peak hour with the Proposed Build Alternative implemented.

In the I-75 SIMR Alternative, the Bee Ridge Road/Maxfield Drive intersection meters traffic destined for the study intersections. In the design year (2040), the overall system-wide latent demand is 862 and 1801 vehicles under the I-75 SIMR Alternative during the AM and PM peak periods, respectively, and 0 and 11 vehicles under the Proposed Build Alternative. The overall system-wide delay is substantially decreased under the Proposed Build Alternative with a reduction of 549 hours (hrs) during the AM peak period and 406 hrs during the PM peak period in the design year (2040).

The Proposed Build Alternative is projected to reduce maximum vehicle queuing on most approaches of the study intersections compared to the I-75 SIMR Alternative. Note that the I-75 SIMR Alternative requires more turn lanes at the Bee Ridge Road/Cattlemen Road intersection than the Proposed Build Alternative, which could contribute to comparable vehicle queue-length reduction at that location, as well as the adjacent intersections on Cattlemen Road. Vehicle queue lengths are generally projected to be reduced throughout the system and the vehicle queue lengths on the northbound and southbound I-75 off ramps are projected to be reduced by 3300 feet (ft) and 2575 ft during the AM peak hour, respectively, which ensures better I-75 mainline operations near the diverge areas.

A qualitative safety comparison of the I-75 SIMR and Proposed Build Alternatives was performed. The shallow crossing angles inherent to DDIs and CFIs are expected to lead to a reduction in the number of crashes at the I-75/Bee Ridge Road interchange and Bee Ridge Road/Cattlemen Road intersection for the Proposed Build Alternative. The two-phase signal timing scheme of the Proposed Build Alternative is projected to result in reduced intersection control delay and less vehicle queuing, which could reduce the number of rear-end collisions as there would be fewer unexpected stops. Also, various left-turn movements are eliminated in the Proposed Build Alternative, which could potentially reduce crash severity. The Proposed Build Alternative provides pedestrian and bicycle facilities on Bee Ridge Road and Cattlemen Road, while the I-75 SIMR Alternative does not. These multimodal enhancements promote safe traveling conditions for all users and could potentially reduce the number of crashes related to pedestrians and bicyclists.

FHWA Policy Points

The FHWA's Policy on Access to the Interstate System provides the requirements for the justification and documentation necessary to substantiate any proposed changes in access to the Interstate System. This policy also facilitates decision-making regarding proposed changes in access to the Interstate System in a manner that considers and is consistent with the vision, goals, and long-range transportation plans of a metropolitan area, region, and State. All new or modified points of access must be approved by the FHWA and developed in accordance with federal laws and regulations (as specified in 23 U.S.C. 109 and 111, 23 C.F.R. 625.4, and 49 C.F.R. 1.48(b)(1)). The following documents the adherence of the proposed I-75/Bee Ridge Road interchange improvements to FHWA's 8 Policy Points:

Policy Point 1: The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).

The I-75/Bee Ridge Road interchange currently exhibits deficient operations at the northbound and southbound off ramps with queue lengths in excess of 2875 ft and 1775 ft, respectively, during the AM peak period. This excess vehicle queuing contributes to vehicle delay and overall traffic congestion. In order to mitigate these operational deficiencies, additional capacity is needed at the I-75/Bee Ridge Road ramp terminal intersections and the adjacent intersection of Bee Ridge Road/Cattlemen Road, which is only 745 ft away from the I-75/Bee Ridge Road west ramp terminal. Adding lanes to the existing I-75/Bee Ridge Road partial cloverleaf interchange and Bee Ridge Road/Cattlemen Road intersection, as proposed in the I-75 SIMR Alternative, does not effectively accommodate design year (2040) traffic volumes. Lane utilization is imbalanced on eastbound Bee Ridge Road due to vehicles anticipating the movement onto the northbound I-75 loop on ramp and additional lanes do not help the lanes become better-utilized. The Proposed Build Alternative (DDI variant and adjacent partial CFI intersection) provides acceptable operations in the design year (2040) with greatly reduced levels of delay and queuing and lower R/W and environmental impacts compared to the I-75 SIMR Alternative. Overall intersection delay is expected to be reduced at the intersections of Bee Ridge Road with Maxfield Drive, Cattlemen Road, the I-75 west ramp terminal, the I-75 east ramp terminal, and Mauna Loa Boulevard by 49.9, 32.1, 21.6, 36.3, and 39.6 s/veh, respectively. Vehicle queue lengths are also reduced throughout the system and, notably, on the northbound and southbound I-75 off ramps, which are projected to be reduced by 3300 ft and 2575 ft, respectively. Improving traffic operations on Bee Ridge Road at I-75 is critical to serving interregional and regional trips from the Sarasota area to Freight Activity Centers (FACs) throughout the State of Florida.

Policy Point 2: The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a)).

Adequate capacity cannot be achieved at the Bee Ridge Road/Cattlemen Road intersection through Transportation System Management (TSM) methods. Adding triple left-turn and right-turn lanes on multiple approaches would not diminish delay enough to allow the intersection to operate at an acceptable level or accommodate design year (2040) traffic volumes. Adequate capacity can be

provided with the Proposed Build Alternative through the use of two-phase signal schemes, which greatly reduces intersection delay and vehicle queuing on Bee Ridge Road and its cross streets, while also facilitating easier movements onto and off of I-75. Under the Proposed Build Alternative, freeway operations on the I-75 on ramps are expected to be improved because vehicles arrive more uniformly to the freeway as a result of the upstream free-flow left-turn and right-turn conditions inherent to DDIs and DDI variants. Conversely, a dense platoon of vehicles released from an upstream signal under the I-75 SIMR Alternative contributes to congested traffic conditions within the I-75 mainline/ramp gore area. Other alternatives, such as ramp metering, transit, HOT/HOV facilities, and other multimodal options, are not viable as the transportation network immediately adjacent to the project area does not provide for these measures.

Policy Point 3: An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

The Proposed Build Alternative is anticipated to improve safety for motorists, pedestrians, and bicyclists. The two-phase signal operation of the Proposed Build Alternative allows for more green time for pedestrian movements at the signalized ramp terminal intersections. Pedestrians will cross through the interchange area in one or two stages, depending on the movement. Refuge areas are being designed to accommodate pedestrians and there are potentially more opportunities for pedestrians to cross in shorter stages as the Proposed Build Alternative includes a series of alternating contraflow lanes on several segments, each divided with a physical barrier.

Since vehicles experience less control delay and reduced queuing with the Proposed Build Alternative, vehicles approaching the signals will be less likely to reach the sudden end of a long queue, which can be a dangerous and unexpected obstacle. Therefore, the Proposed Build Alternative could lead to a reduction in rear-end collisions. Also, left-turn movements are eliminated through the DDI variant at the I-75/Bee Ridge Road interchange and crossing locations have shallower crossing angles. Therefore, drivers would be less susceptible to 90-degree angle crashes that have a higher chance of severe injury. The Wilkinson Road ramp allows vehicles to more safely access the Cattlemen Road leg south of Bee Ridge Road as they do not have to weave across several lanes of traffic on Bee Ridge Road between Cattlemen Road and the I-75 west ramp terminal to get to the westbound left-turn lane at the Bee Ridge Road/Cattlemen Road intersection.

Besides the safety benefits of the DDI variant, the traffic operational analysis of design year (2040) traffic conditions, using VISSIM, indicate that the poor operating conditions of the I-75 SIMR

Alternative can be improved with the proposed DDI variant and partial CFI intersection in the Proposed Build Alternative. Improvements to the Bee Ridge Road/Cattlemen Road intersection are an integral part of the overall I-75/Bee Ridge Road interchange improvement due to their close proximity and the ability for one intersection to affect the other's operations. The Proposed Build Alternative proposes two-lane on and off ramps at all locations. This increases ramp capacity and allows vehicles using the on ramps to comfortably accelerate onto I-75, which decreases the speed differential between merging vehicles and vehicles upstream of the merge area. Two-lane off ramps provide more storage space, which reduces the potential for queuing onto the freeway, and provides lane channelization upstream of the decision point, which also improves lane utilization on the I-75 mainline.

A comparison of the VISSIM network-wide statistics between the I-75 SIMR Alternative and Proposed Alternative shows that the I-75 SIMR Alternative has a latent demand of 862 and 1801 vehicles during the AM and PM peak periods, respectively, while the Proposed Alternative has a latent demand of 0 and 11 vehicles. This demonstrates that the Proposed Alternative can accommodate significantly more vehicles during the peak periods than the I-75 SIMR Alternative.

Policy Point 4: The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)).

The existing full-access interchange at I-75 and Bee Ridge Road will be maintained with the DDI variant in the Proposed Build Alternative. This interchange is compatible with the I-75 Ultimate Build typical section. The design of the DDI variant follows standards and criteria set forth in the most current version of the following documents:

- A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2004
- A Policy on Design Standards – Interstate System, AASHTO, 2005
- FDOT Plans Preparation Manual, 2015

Design variances for base course clearance above the Base Clearance Water Elevation (BCWE), two-percent full-depth shoulders, and number of lanes sloped in one direction will be required as part of this interchange access request. These design variations are not expected to affect traffic operations for the Proposed Build Alternative.

Policy Point 5: The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93.

The I-75/Bee Ridge Road interchange improvement is currently identified in the State Transportation Improvement Program (STIP) and SIS CF Plan. This project is also included in the Sarasota-Manatee Metropolitan Planning Organization (MPO) Draft 2040 Long-Range Transportation Plan (LRTP). FDOT will continue coordination with Sarasota County and the Sarasota-Manatee MPO throughout the project.

Policy Point 6: In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111).

There are two other access requests on I-75 within the immediate vicinity of Bee Ridge Road. These include interchange reconstruction projects at the two adjacent interchanges of I-75/Clark Road and I-75/Fruitville Road, which are located approximately 2.0 and 2.7 miles away, respectively. Given the relatively long distance between these interchanges and the I-75/Bee Ridge Road interchange, there is limited anticipated interaction of traffic operations between these interchange access requests. These interchanges are being modified to accommodate the ultimate ten-lane widening of I-75; the current system plan for I-75.

Policy Point 7: When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d)).

The primary need for improvement of the I-75/Bee Ridge Road interchange is to resolve existing operational deficiencies, as well as anticipated deficiencies expected due to the magnitude of the projected design year (2040) traffic volumes. Although traffic growth is anticipated in Sarasota County, the Proposed Build Alternative provides for additional capacity without adding an excessive number of turn lanes at the Bee Ridge Road/Cattlemen Road intersection, while also maintaining two departure lanes on Cattlemen Road with the partial CFI intersection. There are no proposed changes to existing driveway accesses along Bee Ridge Road. Access changes to driveways along Cattlemen Road are expected and will be minimized to the greatest extent possible. However, further coordination with Sarasota County is needed to determine the final driveway access changes.

Policy Point 8: The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111).

The proposed improvement to retrofit the existing partial cloverleaf interchange to a DDI variant with a partial CFI will require R/W. The total impacts of the I-75 SIMR Alternative include 28 parcels at 29.21 acres and the total impacts of the Proposed Build Alternative include 33 parcels at 24.60 acres. However, it is anticipated that there will be minimal to no natural, cultural, or socio-economic (SE) impacts associated with implementing the proposed improvement. The FDOT will seek FHWA approval for the Design Change Reevaluation of the I-75 PD&E Study'sType II Categorical Exclusion.

Conclusions

The I-75 Ultimate Build improvements with three GULs and two SULs are required for the freeway to operate at an acceptable LOS through the design year (2040). However, the I-75 Interim Build improvements (i.e. eight-lane widening of I-75) are expected to operate at an acceptable LOS until 2027 before the I-75 Ultimate Build improvements are needed. The I-75 Interim Build improvements

will be implemented in such a way as to allow the I-75 Ultimate Build improvements to be constructed with minimal throw-away if future traffic volumes continue to support the need for additional capacity.

The Proposed Build Alternative shows substantial benefits over the I-75 SIMR Alternative during both the AM and PM peak periods with overall delays less than 55.0 s/veh at all study intersections. Vehicle queue lengths are also reduced throughout the system and, notably, on the northbound and southbound I-75 off ramps, which are projected to be reduced by 3300 ft and 2575 ft, respectively.

The I-75 SIMR Alternative does not adhere to the constraint of maintaining two departure lanes on Cattlemen Road at the northbound and southbound approaches of the Bee Ridge Road intersection due to the need to accommodate triple left-turn receiving lanes while the Proposed Build Alternative does maintain two departure lanes on Cattlemen Road with the partial CFI intersection at Bee Ridge Road. The I-75 SIMR Alternative also does not include bicycle and pedestrian facilities along Bee Ridge Road and Cattlemen Road while the Proposed Build Alternative accommodates both.

Recommendations

Traffic simulation results show that the Proposed Build Alternative is projected to safely and efficiently operate at an acceptable level through the design year (2040) while the I-75 SIMR Alternative does not. The Proposed Build Alternative has fewer R/W and environmental impacts, as well as a lower construction cost, while maintaining two departure lanes on Cattlemen Road at the northbound and southbound approaches of the Bee Ridge Road intersection and providing bicycle and pedestrian facilities. Therefore, the Proposed Build Alternative is the recommended Alternative.

Contents

Tables

Figures

Appendices

Glossary of Terms

Term	Definition
AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
BEBR	Bureau of Economic and Business Research
CF	Cost Feasible
CFI	Continuous-Flow Intersection
DDHV	Directional Design Hour Volume
DDI	Diverging Diamond Interchange
DHT	Design Hour Truck
DHV	Design Hour Volume
DRI	Development of Regional Impact
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FSUTMS	Florida Standard Urban Transportation Model Structure
FTI	Florida Traffic Information
GUL	General-Use Lane
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
IMR	Interchange Modification Report
LDCA	Location Design Concept Acceptance
LOS	Level of Service
LRTP	Long-Range Transportation Plan
MOCF	Model Output Conversion Factor
MOE	Measure of Effectiveness
MPO	Metropolitan Planning Organization
OD	Origin/Destination
PD&E	Project Development and Environment
PSWADT	Peak Season Weekday Average Daily Traffic
R/W	Right of Way
SHS	State Highway System
SMC	Sarasota-Manatee-Charlotte
SUL	Special-Use Lane
TAZ	Traffic Analysis Zone
TIP	Transportation Improvement Program

1.0 Introduction

1.1 Background

The Florida Department of Transportation (FDOT) conducted a Project Development and Environmental (PD&E) Study[1] to evaluate improvement alternatives along Interstate 75 (I-75) from south of State Route (SR) 681 to north of University Parkway in Sarasota County, Florida. Due to changes in projected traffic volumes since the approval of the I-75 PD&E Study in 2009, FDOT undertook a reexamination of the PD&E Preferred Alternative for the I-75/SR 758 (Bee Ridge Road) interchange to determine the adequacy of the concept to accommodate future traffic demand. Another concept has since been developed that is expected to adequately accommodate future traffic volumes and provide enhanced operations when compared to the I-75 PD&E Study's Preferred Alternative. This new concept is a Diverging Diamond Interchange (DDI) variant with a partial Continuous-Flow Intersection (CFI) at Bee Ridge Road/Cattlemen Road. This Interchange Modification Report (IMR) documents the benefits of the proposed geometric improvements and the information necessary to confirm the need for this project, as well as traffic impacts associated with the interchange improvement as they relate to surrounding transportation facilities.

1.2 Purpose and Need

I-75, a north/south facility, is an integral part of the Strategic Intermodal System (SIS) providing for high-speed, high-volume traffic movements within the State. I-75 improvements are needed to provide relief from existing and projected traffic congestion and to improve safety. I-75 also serves as a hurricane evacuation route. Therefore, there is a need for I-75 to operate at an acceptable Level of Service (LOS) at all times to ensure that a viable escape route is provided to local residents in the event of an emergency. Improvements to this facility will also increase regional connectivity and enhance freight mobility and goods movement.

The purpose of this project is to relieve existing and future operational and safety deficiencies along the I-75 corridor. The proposed I-75 mainline and I-75/Bee Ridge Road interchange modification improvements provide additional capacity along the interstate system as well as the surrounding arterials and local roads. The I-75/Bee Ridge Road interchange needs to be modified to accommodate the I-75 ten-lane Ultimate cross section and future traffic volumes. It needs to be reconfigured to address delay and queuing deficiencies associated with the future traffic volume projections, close proximity of the Bee Ridge Road/Cattlemen Road intersection to the I-75/Bee Ridge Road interchange, and lane utilization issues caused by the partial clover leaf interchange due to the northbound I-75 loop on ramp.

The Project Development Summary Report (PDSR)[2] that was submitted in July 2009 as part of the I-75 PD&E Study recommended improvements to the I-75/Bee Ridge Road interchange. These improvements included the addition of a second lane to the northbound and southbound off-ramps, as well as triple left-turn lanes at the southbound ramp terminal intersection. On Bee Ridge Road, additional travel lanes were recommended in both directions, as well as improvements to the intersection with Cattlemen Road. Location Design Concept Acceptance (LDCA) for the I-75 PD&E Preferred Alternative was received from the Federal Highway Administration (FHWA) on December 8, 2009.

The Final I-75 Systems Interchange Modification Report[3] (SIMR) from Laurel Road to North of Moccasin Wallow Road, dated May 2012, re-analyzed the I-75/Bee Ridge Road interchange and recommended several modifications by 2038. These included two-lane ramps at the northbound off, southbound off, and southbound on-ramp junctions, and the addition of auxiliary lanes north and south of the interchange on I-75. As documented in the I-75 PD&E study, the previously adopted Sarasota-Manatee-Charlotte (SMC) Cost Feasible (CF) Model with a horizon year in 2030 considered an average growth rate of more than 2 percent per year along the intersecting cross streets of I-75. However, based on a review of the traffic forecasts from the currently adopted SMC horizon year (2035) CF Model[4] plus the I-75 ten-lane Ultimate cross section included (SMC CF+ Model) that was provided for use in volume development, the traffic projections are considerably lower than the previous estimates.

This Interchange Modification Report (IMR) reevaluates the future traffic operations of the I-75/Bee Ridge Road interchange based on revised SMC population and traffic growth projections and identifies the optimal I-75/Bee Ridge Road interchange configuration to maximize safety and operations. This IMR analyzes the I-75 SIMR Preferred Alternative and the newly Proposed Build Alternative in order to identify the most suitable interchange configuration to meet the demands of future travelers while minimizing project costs and impacts.

1.3 Project Description

The project location for the purposes of this IMR includes Bee Ridge Road from Maxfield Drive to Mauna Loa Boulevard and I-75 from the north-oriented ramps of SR 72 (Clark Road) to the south-oriented ramps of SR 780 (Fruitville Road). The Proposed Build Alternative includes modification to the adjacent intersection of Bee Ridge Road/Cattlemen Road and a new ramp tying into Wilkinson Road, which will reroute traffic from the existing southbound I-75 off ramp destined for the south leg of Cattlemen Road. Therefore, the intersections of Cattlemen Road with Wilkinson Road, Center Pointe Drive, and Maxfield Drive are considered to be in the area of influence of this project. The project location is shown on **Figure 1.1**.

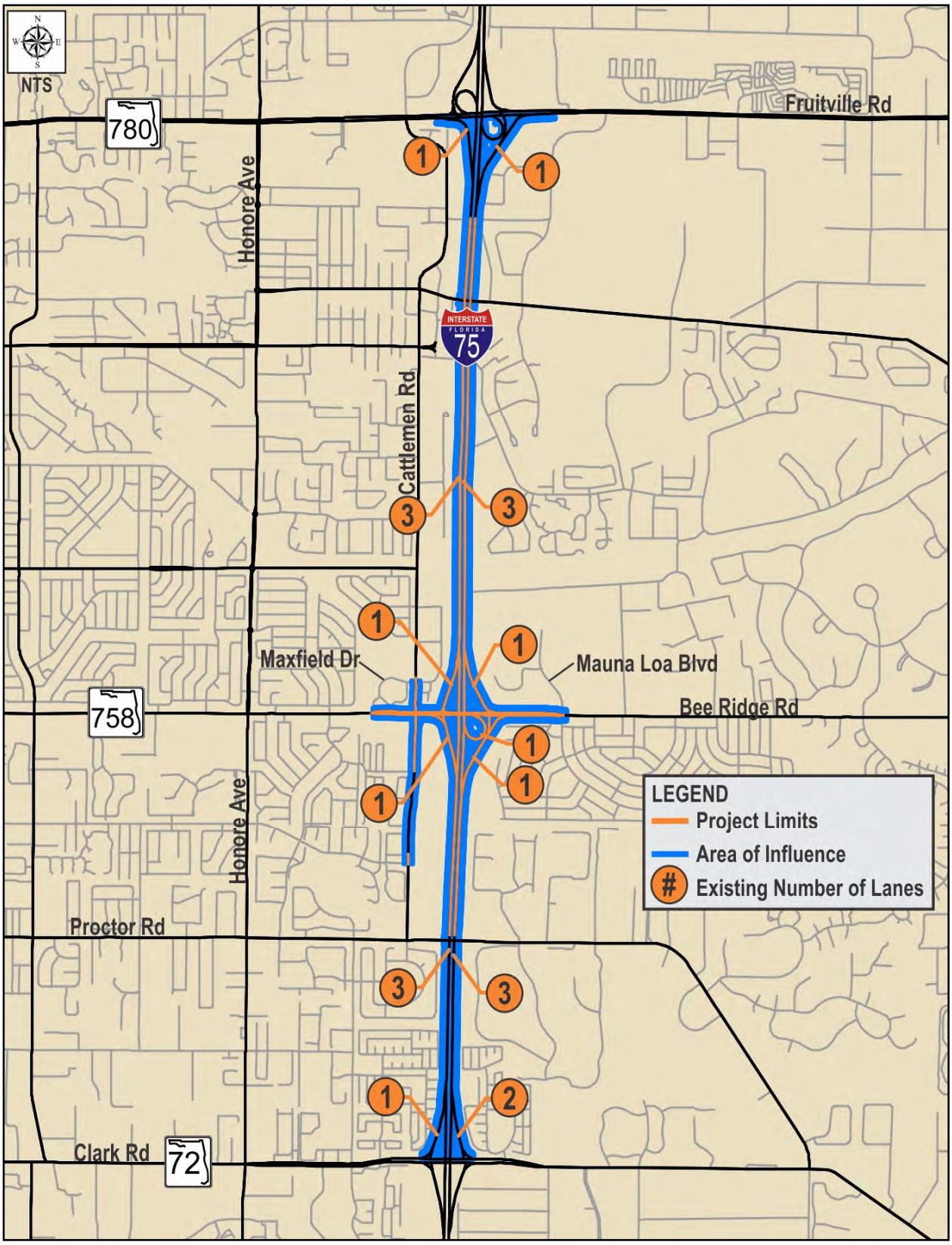


Figure 1.1. Project Location Map

1.4 Concept Consistency

Five concept alternatives were analyzed in the I-75 PD&E Study[1] for the I-75/Bee Ridge Road interchange. These five concepts included adding a southbound I-75 off ramp to Wilkinson Road, adding new northbound and southbound I-75 off ramps at Proctor Road, retrofitting the interchange to a Single-Point Urban Interchange (SPUI), retrofitting the interchange to a DDI, and adding lanes to the existing geometry, including the I-75 off ramps and the Bee Ridge Road/Cattlemen Road intersection. The I-75 PD&E Study's[1] Preferred Alternative for the I-75/Bee Ridge Road interchange was adding lanes to the existing diamond interchange. Two of the Alternatives were advanced to the Public Hearings held on February 10, 2009 and May 21, 2009. These two concepts included adding lanes to the existing diamond interchange and adding a southbound I-75 off ramp to Wilkinson Road.

The three concepts that were not advanced to the public hearings were the SPUI, DDI, and adding new northbound and southbound I-75 off ramps at Proctor Road. The SPUI Alternative was eliminated because of the excessive cost associated with the longer and deeper structure required for the I-75 bridge over Bee Ridge Road, considering that the concept did not significantly outperform the others that were analyzed. The DDI concept was removed because other alternatives produced similar or better LOS and because of the potential difficulty with implementing this Alternative due to the close proximity of the Bee Ridge Road/Cattlemen Road intersection. The concept of adding new northbound and southbound off ramps at Proctor Road was eliminated because it did not provide adequate relief from congestion.

Adding lanes to the existing diamond interchange was chosen as the Preferred Alternative following the Public Hearing because it provided the greatest level of operation of the five alternatives analyzed, improved safety, and had costs comparable to the other alternatives. The Sarasota-Manatee Metropolitan Planning Organization (MPO) verified that the I-75 PD&E Study's[1] Preferred Alternative was consistent with their 2030 Long-Rang Transportation Plan[5] (LRTP) on June 4, 2009.

Reevaluation of the I-75 PD&E Study's[1] Preferred Alternative using the latest traffic projections revealed that the Preferred Alternative provided an excessive number of lanes at the Bee Ridge Road/Cattlemen Road intersection, which do not achieve an acceptable LOS (LOS D or better) in the design year (2040). The DDI and Wilkinson Road ramp Alternatives were reconsidered in the newly proposed Build Alternative, as well as a CFI to address the issues caused by the close proximity of the Bee Ridge Road/Cattlemen Road intersection. The Bee Ridge Road/Cattlemen Road CFI was incorporated as part of the overall I-75/Bee Ridge Road design concept. This IMR documents the analysis and benefits of the newly proposed Build Alternative as well as its consistency with the FHWA's Eight Policy Points.

2.0 Methodology

2.1 Area of Influence

The I-75/Bee Ridge Road interchange, at milepost (MP) 36.434, is located in Sarasota County, Florida at a distance of 2.02 miles north of the I-75/Clark Road interchange and 2.72 miles south of the I-75/Fruitville Road interchange. The study area along I-75 is between the I-75/Clark Road interchange (MP 34.408) and the I-75/Fruitville Road interchange (MP 39.156) for a total distance of 4.748 miles. The study area along Bee Ridge Road is from west of Maxfield Drive to east of Mauna Loa Boulevard, a distance of approximately 0.9 miles. The area of influence is shown on **Figure 2.1**.

2.2 Data Collection and Sources

Data collection for the study consisted of information from various sources, including existing traffic and roadway characteristics information, field-collected data, area transportation plans, and FDOT standards and guidelines, which include, but are not limited to, the following:

- Straight Line Diagrams (SLDs);
- Latest Five-Year Crash History;
- Traffic Count Information;
- FDOT Standard Indexes;
- FDOT Project Traffic Forecasting Handbook;
- FDOT Quality/LOS Handbook;
- SMC Base Year (2007) and Horizon Year (2035) CF+ Models;
- Sarasota-Manatee County Comprehensive Plan;
- Sarasota-Manatee County Adopted LRTP; and
- Developments of Regional Impact (DRIs).

2.3 Design Alternatives Considered

The project study area was analyzed for the existing year (2013) to document the deficiencies of the existing configuration. I-75 SIMR Alternative was reevaluated for the design year (2040) for consideration and comparison to the Proposed Build Alternative. The details of each Alternative are discussed in the following sections.

Figure 2.1. Area of Influence Map

2.3.1 I-75 Mainline Improvements

The approved I-75 PD&E Study[1] proposed that I-75 be upgraded to accommodate future projected traffic volumes. I-75 Interim Build improvements have been developed for the freeway segment contained within the study area and will be implemented in the opening year (2020). The I-75 Interim Build improvements include widening by one lane to the inside from SR 72 (Clark Road) to Bee Ridge Road and from Bee Ridge Road to SR 780 (Fruitville Road) as shown on **Figure 2.2** for a configuration of three general-use lanes (GULs) and one auxiliary lane in each direction. The outside lane will serve as the auxiliary lane in each direction between Bee Ridge Road and the adjacent interchanges to the north and south. The eight-lane cross section will be positioned in such a way that it provides enough space for the I-75 Ultimate Build configuration.

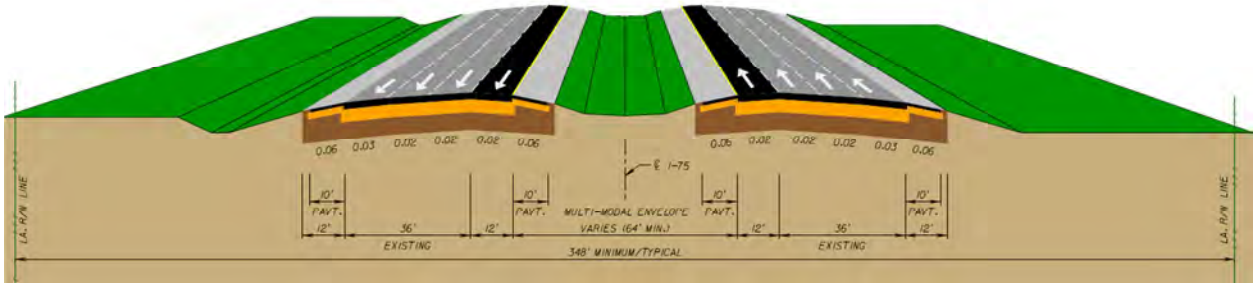


Figure 2.2. I-75 Typical Section – I-75 Interim Build Improvements

The I-75 Ultimate Build improvements include adding two special-use lanes (SULs) in each direction to the I-75 Interim Build improvements by the design year (2040) as shown on **Figure 2.3**. There will be one auxiliary lane in each direction between Bee Ridge Road and the adjacent interchanges to the north and south of Bee Ridge Road. However, the ten-lane cross section on I-75 is currently unfunded. The I-75 Interim Build improvements will be constructed to allow the four SULs to be added within the median when future funding becomes available.

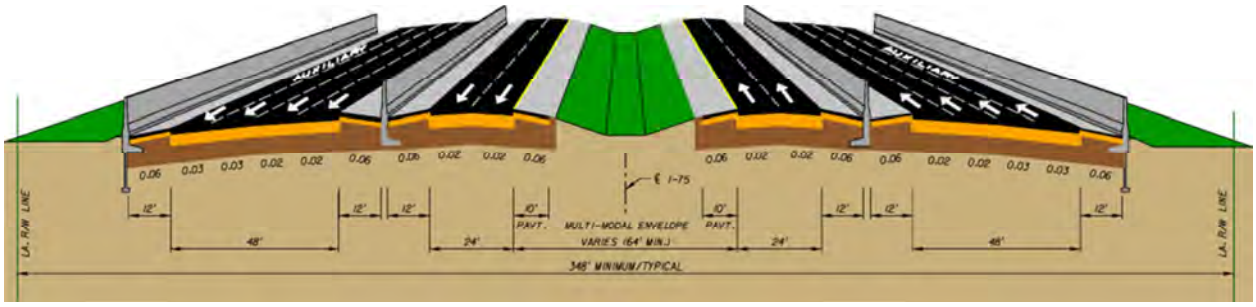


Figure 2.3. I-75 Typical Section – I-75 Ultimate Build Improvements

2.3.2 I-75 SIMR Alternative

The I-75 PD&E Study[1] Preferred Alternative and approved I-75 SIMR[3] Alternative proposed that lanes be added to the existing configuration of the I-75/Bee Ridge Road interchange. This includes adding one lane to the northbound I-75 off ramp with one additional left-turn lane at the east ramp terminal and adding one lane to the southbound I-75 off ramp with triple right-turn lanes at the west ramp terminal. This also includes widening Bee Ridge Road by one lane in each direction for a total of eight lanes to the east side of the west ramp terminal and ten lanes to the west side. Additional turn lanes would also be added at the Bee Ridge Road/Cattlemen Road intersection approaches. The No Build Alternative is shown on **Figure 2.4**. The detailed concept of the I-75 SIMR Alternative is shown in **Appendix A**.

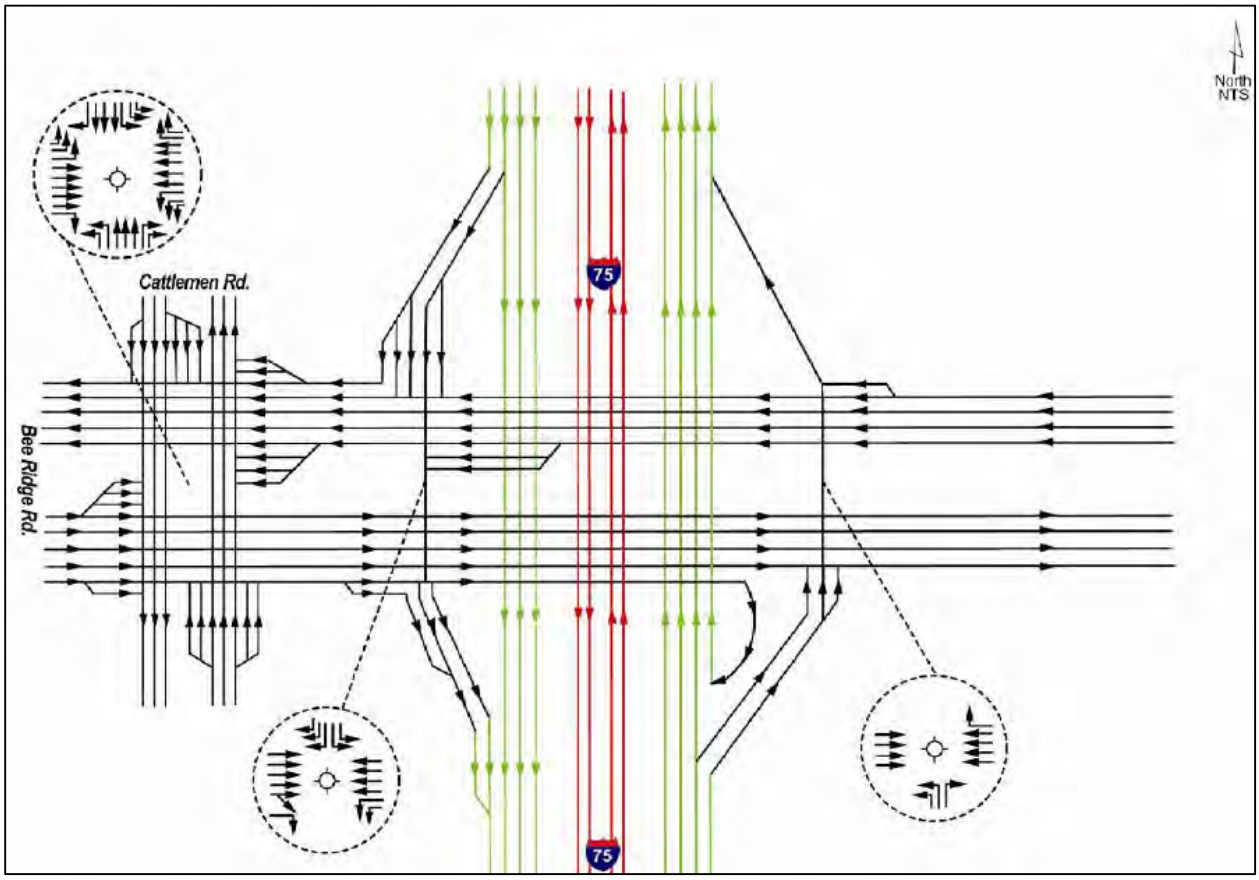


Figure 2.4. I-75 SIMR Alternative

2.3.3 Proposed Build Alternative

The I-75 SIMR Alternative was reevaluated to address operational deficiencies and changes in traffic patterns that were shown in the most-recent horizon year (2035) of the SMC CF+ Regional Travel Demand Model. A new concept that was not evaluated in the I-75 PD&E Study was developed for the I-75/Bee Ridge Road interchange. This Proposed Build Alternative includes retrofitting the existing interchange to a DDI variant and converting the Bee Ridge Road/Cattlemen Road intersection to a partial CFI with displaced left turns on the east and west legs of the intersection. The partial CFI minimizes work proposed on Cattlemen Road, which is maintained by Sarasota

County, as well as right-of-way (R/W) and driveway access impacts. Also, the westbound-to-southbound left-turn movement will be eliminated from the Bee Ridge Road/Cattlemen Road intersection for vehicles originating from the southbound I-75 off ramp and will instead be accommodated by a new off ramp leading from the southbound I-75 off ramp at Bee Ridge Road to Wilkinson Road. The Proposed Build Alternative concept is shown on **Figure 2.5**.

2.3.4 Transportation System Management (TSM) Considerations

TSM improvements were not considered at the I-75/Bee Ridge Road interchange because conventionally adding lanes to the existing interchange geometry would not remedy the affect that the closely-spaced Bee Ridge Road/Cattlemen Road intersection has on the operations of the I-75/Bee Ridge Road interchange. As such, a concept that involves merging the I-75/Bee Ridge Road interchange and the Bee Ridge Road/Cattlemen Road intersection together as one interchange configuration was needed. Moreover, the intent of the project is to update the entire interchange as part of an Ultimate Build improvement concept for I-75 that involves several other interchange improvements as described in the I-75 PD&E Study[1] and I-75 SIMR[3]. The I-75/Bee Ridge Road interchange improvement is meant to produce long-lasting benefits without incurring significant costs due to reconstruction. Also, preliminary analyses during the Proposed Build Alternative concept development stage showed that TSM improvements would not provide the necessary capacity for the I-75/Bee Ridge Road interchange to operate at an acceptable level in the design year (2040).

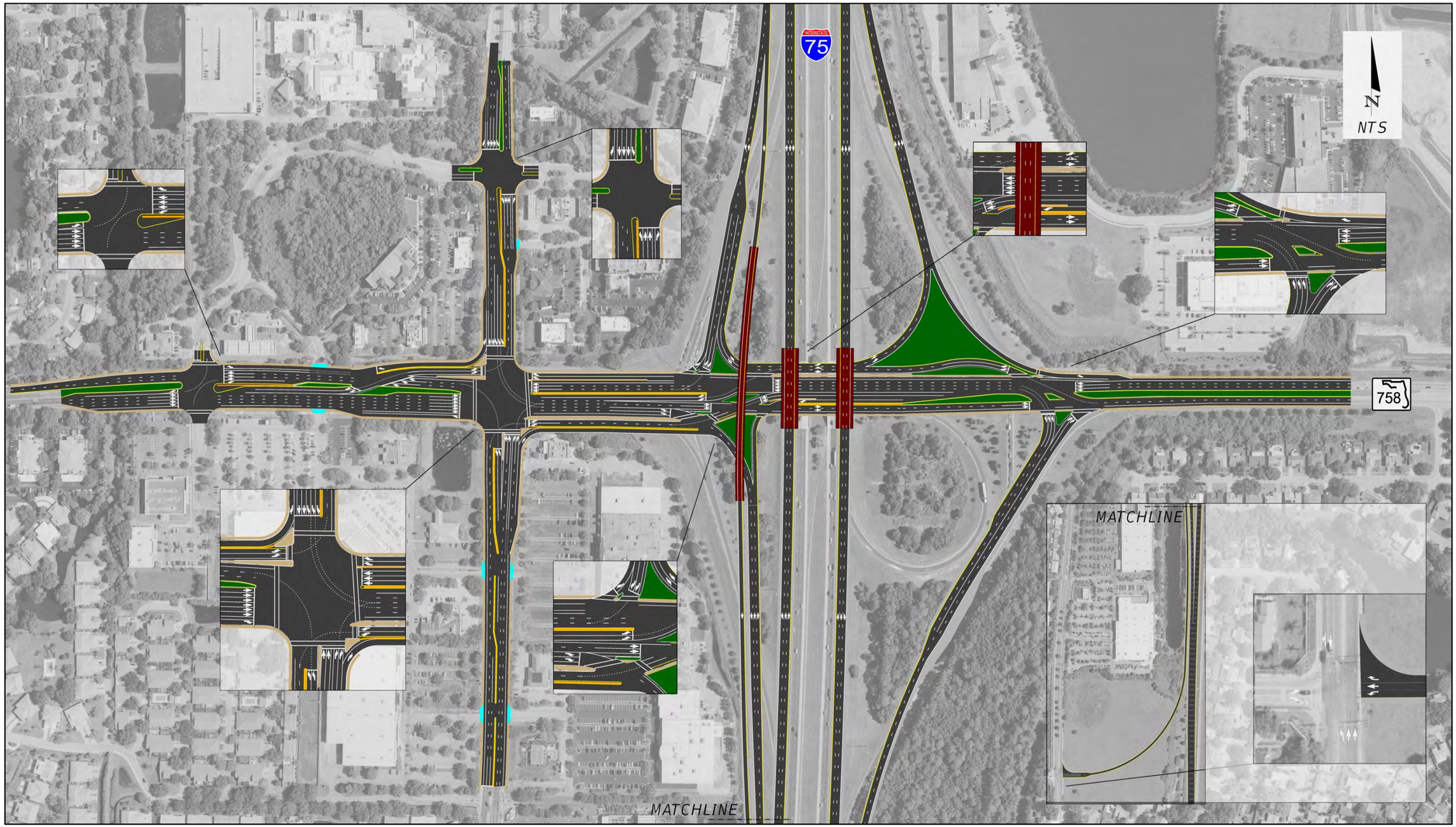


Figure 2.5. Proposed Build Alternative

2.4 Analysis Years

The following Alternatives were analyzed for the analysis years shown below.

- Existing Year (2013):
    - I-75 Mainline:
        - Existing Configuration
    - I-75 Ramps:
        - Existing Configuration
    - Bee Ridge Road:
        - Existing Configuration
- Opening Year (2020):
    - I-75 Mainline:
        - Interim Build Improvements
    - I-75 Ramps:
        - Interim Build Improvements
    - Bee Ridge Road:
        - I-75 SIMR Alternative
        - Proposed Build Alternative
- Design Year (2040):
    - I-75 Mainline:
        - Existing Configuration
        - Interim Build Improvements
        - Ultimate Build Improvements
    - I-75 Ramps:
        - Interim Build Improvements
        - Ultimate Build Improvements
    - Bee Ridge Road:
        - I-75 SIMR Alternative
        - Proposed Build Alternative

2.5 Operational Analysis Approach

The Proposed Build Alternative was analyzed and compared to the I-75 SIMR Alternative using VISSIM 5.40[6], a high-end microsimulation software program. The Measures of Effectiveness (MOEs) used for the comparison include arterial speed, intersection control delay, and maximum vehicle queue lengths within the project limits. The I-75 Interim and Ultimate Build improvements freeway and ramp operations were also reanalyzed as part of this IMR using Highway Capacity Software[7] (HCS) 2010, which is based on the Highway Capacity Manual[8] (HCM) 2010 methodology.

3.0 Existing Conditions

3.1 Roadway and Intersection Characteristics

Roadway geometric information was obtained from the FDOT Roadway Characteristics Inventory[9] (RCI). I-75 is currently a 6-lane, north-south limited access freeway facility that is part of the National Highway System, Interstate System, and the Strategic Intermodal System (SIS). It is functionally classified as an urban principal arterial-interstate facility within the project area. Within the project limits, I-75 has three 12-foot lanes in each direction, 12-foot inside shoulders, and 10-foot outside paved shoulders. The existing posted speed on I-75 is 70 miles per hour (mph) within the study area. I-75 spans Bee Ridge Road with two bridges (bridge numbers 170145 and 170146) that are each approximately 184 feet (ft) long. These bridges each have three spans and a vertical clearance of 16.4 ft. There is also a two span overpass (bridge number 170143) along Proctor Road that crosses over I-75 south of the I-75/Bee Ridge Road interchange. This overpass also has a vertical clearance of 16.3 ft.

Bee Ridge Road is a divided east-west corridor with two lanes in each direction west of Cattlemen Road and east of the I-75 east ramp terminal. It has six lanes between Cattlemen Road and the I-75 east ramp terminal and transitions to a two-lane facility east of Mauna Loa Boulevard. The signalized intersections on Bee Ridge Road are maintained by Sarasota County as well as both of the ramp terminal intersections. Bee Ridge Road west of Maxfield Drive to Cattlemen Road is classified as an urban principal arterial. Bee Ridge Road is classified as an urban minor arterial on either side of I-75 with a posted speed limit of 45 mph within the project area.

The existing I-75/Bee Ridge Road interchange is a partial cloverleaf interchange with a northbound loop on ramp in the southeast quadrant of the interchange to service the eastbound-to-northbound traffic. The northbound off ramp includes one left-turn lane and one free-flow right-turn lane. The southbound off-ramp includes one left-turn lane and dual right-turn lanes operated under signal control. The northbound on ramp includes one free-flow right-turn lane and the southbound on ramp includes one free-flow right-turn lane and one receiving lane for the westbound left-turn movement at the west ramp terminal. Both on ramps are reduced to one lane before merging into I-75. The location of signalized intersections, arterial segment distances, and intersection lane geometry is shown on **Figure 3.1** and **Figure 3.2**.

3.2 Environmental Characteristics

Wetlands exist on the south side of the northbound off ramp and southbound on ramp at the I-75/Bee Ridge Road interchange as well as inside all quadrants of the interchange except the northeast quadrant. The Phillippi River/Creek also contains wetlands within the vicinity of I-75. Surface water exists on the north side of the I-75/Bee Ridge Road northbound on ramp.

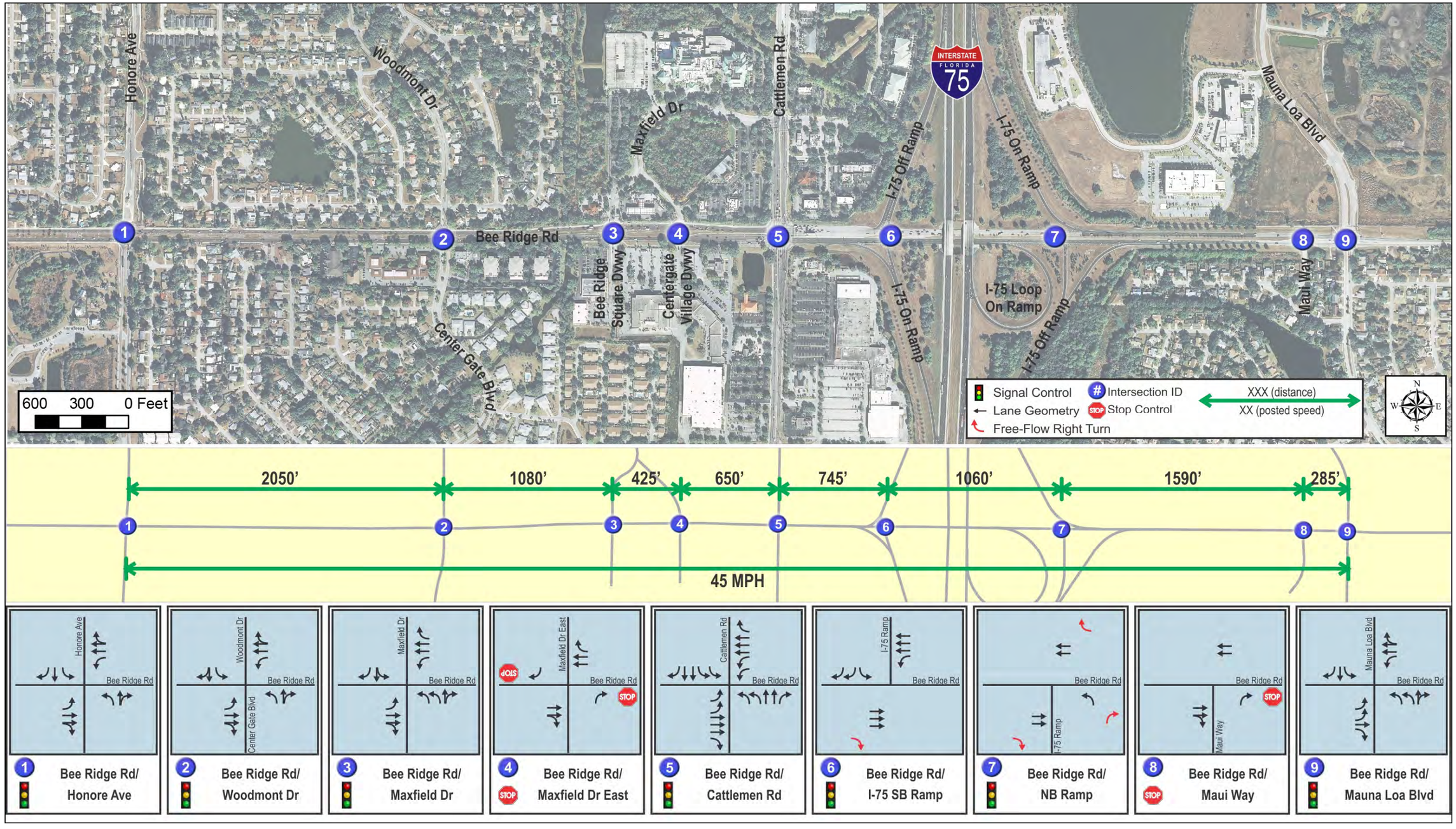


Figure 3.1. Existing Year (2013) Lane Geometry – Bee Ridge Road

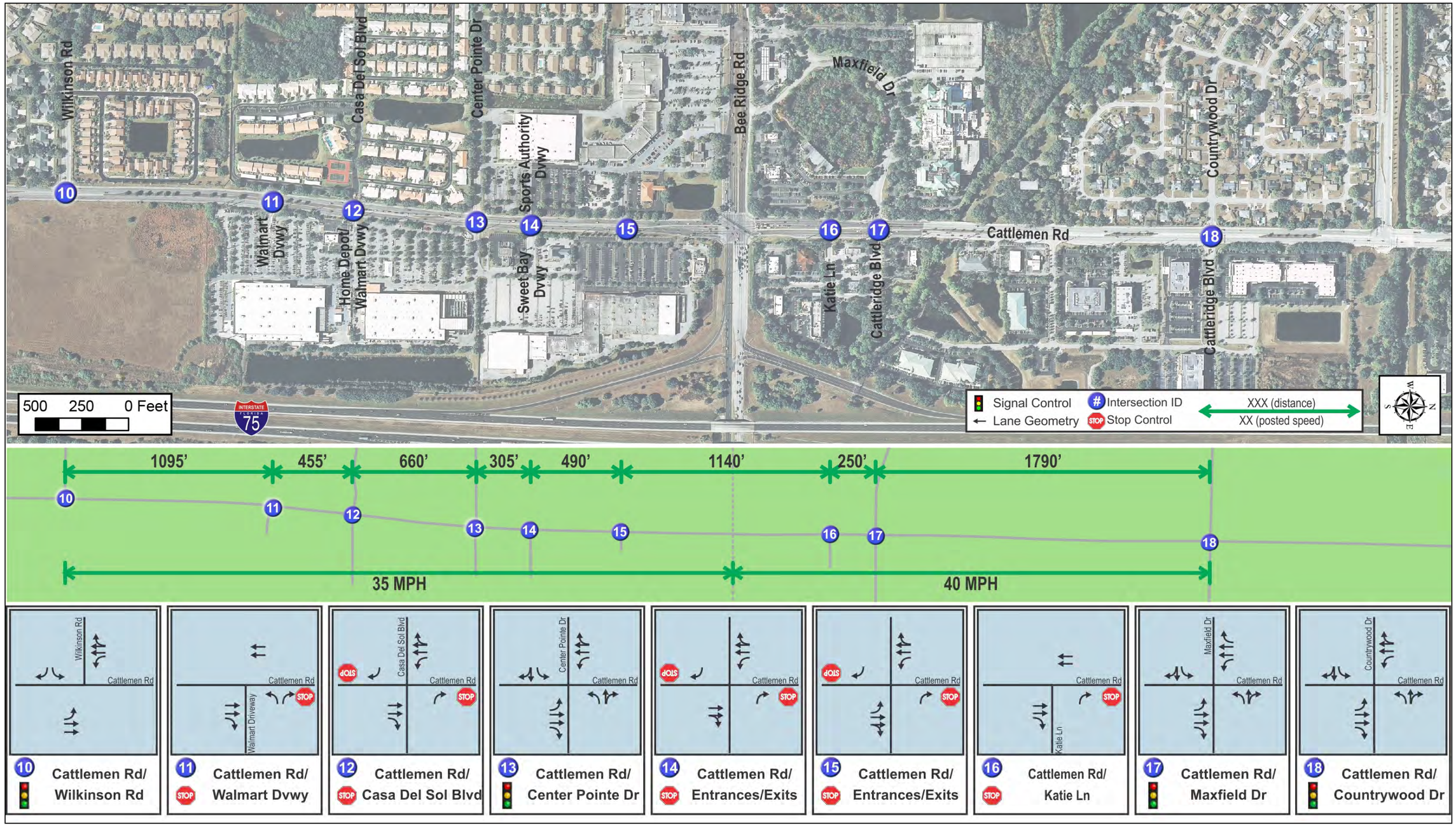


Figure 3.2. Existing Year (2013) Lane Geometry – Cattlemen Road

3.3 Land-Use Characteristics

The study area has a variety of land uses including residential, retail, and office. The west side of the I-75/Bee Ridge Road interchange is comprised heavily of shopping, dining, and office land uses, including Walmart, Home Depot, and Sports Authority. The southeast quadrant of the I-75/Bee Ridge Road interchange is made up of residential land uses and the northeast quadrant contains some institutional, agricultural, industrial, and vacant land uses. The predominant land use beyond the immediate I-75/Bee Ridge Road interchange is residential.

3.4 Safety Characteristics

Crash data was analyzed along I-75 and Bee Ridge Road from 2008 to 2012. I-75 had 139 total crashes and Bee Ridge Road had 228. **Table 3.1** shows the number of crashes by severity. There were 2 fatal crashes on I-75 and none on Bee Ridge Road in the five-year span. **Table 3.2** shows the number of crashes by type. There were 29 rear-end crashes on I-75 and 130 on Bee Ridge Road. On I-75, there were 30 crashes that involved hitting a fixed object. There were 7 crashes on Bee Ridge Road that involved pedestrians, 10 that involved bicyclists, and 42 angle crashes.

Crash rates along I-75 and Bee Ridge Road were calculated using the highest Annual Average Daily Traffic (AADT) on each segment for a conservative approach. They were then compared to statewide crash rates to determine if the roadway segments within the study area are particularly susceptible to crash events. All segments show crash rates below the statewide averages and critical crash rates, indicating that the study area has not had a high frequency of crashes compared to other locations throughout the state within the last five years. **Table 3.3** shows the crash rate summary as well as the economic loss. The economic loss is divided into three categories: property damage only (PDO), injuries, and fatalities. Crashes with no injuries were assumed to have PDO for a conservative estimate of economic loss. The crashes along Bee Ridge Road are shown graphically on **Figure 3.3** within the vicinity of Cattlemen Road and the I-75 ramp terminals. Additional crashes west of the Bee Ridge Road/Cattlemen Road intersection are not shown.

Table 3.1. Crash Severity Summary

Year	Fatal	Injury	No Injury	Total
I-75				
2008	2	9	21	32
2009	0	12	15	27
2010	0	17	18	35
2011	0	7	11	18
2012	0	14	13	27
Total	2	59	78	139
Bee Ridge Road				
2008	0	18	21	39
2009	0	27	16	43
2010	0	32	17	49
2011	0	24	16	40
2012	0	29	28	57
Total	0	130	98	228

Table 3.2. Crash Type Summary

Year	Rear End	Angle	Sideswipe	Left Turn	Right Turn	Hit Fixed Object	Pedestrian/ Bicyclist	Other	Total
I-75									
2008	5	5	3	0	0	7	0	12	32
2009	5	2	6	0	0	4	0	10	27
2010	9	2	3	0	0	4	0	17	35
2011	4	2	0	0	0	6	0	6	18
2012	6	1	0	0	0	9	0	11	27
Total	29	12	12	0	0	30	0	56	139
Bee Ridge Road									
2008	17	8	3	1	1	5	3	1	39
2009	28	8	1	1	1	0	3	1	43
2010	30	6	5	1	2	0	3	2	49
2011	24	8	2	0	1	1	2	2	40
2012	31	12	1	1	1	0	6	5	57
Total	130	42	12	4	6	6	17	11	228

Table 3.3. Crash Rate Summary

Year	Length (Miles)	Crash Rate Analysis					Economic Loss (Thousand Dollars)			
		Total Crashes	*AADT	Crash Rate	Statewide Crash Rate	Critical Crash Rate	PDO ($7.5)	Injury ($52.9)	Fatality ($3,150)	Total ($)
I-75										
2008	3.069	32	104,000	0.275	0.643	0.761	158	476	6,300	6,934
2009	3.069	27	103,500	0.233	0.681	0.803	113	635	0	747
2010	3.069	35	105,500	0.296	0.706	0.829	135	899	0	1,034
2011	3.069	18	104,000	0.155	0.645	0.763	83	370	0	453
2012	3.069	27	105,500	0.228	0.732	0.857	98	741	0	838
Total	3.069	139	105,500	0.235	0.681	0.802	585	3,121	6,300	10,006
Bee Ridge Road										
2008	1.566	39	56,000	1.218	4.004	4.570	158	952	0	1,110
2009	1.566	43	36,500	2.061	4.088	4.792	120	1,428	0	1,548
2010	1.566	49	41,500	2.066	3.728	4.359	128	1,693	0	1,820
2011	1.566	40	41,500	1.686	3.120	3.696	120	1,270	0	1,390
2012	1.566	57	35,000	2.849	3.833	4.528	210	1,534	0	1,744
Total	1.566	228	56,000	1.425	3.701	4.245	735	6,877	0	7,612

*AADT was obtained from the FDOT 2012 FTI CD[10]

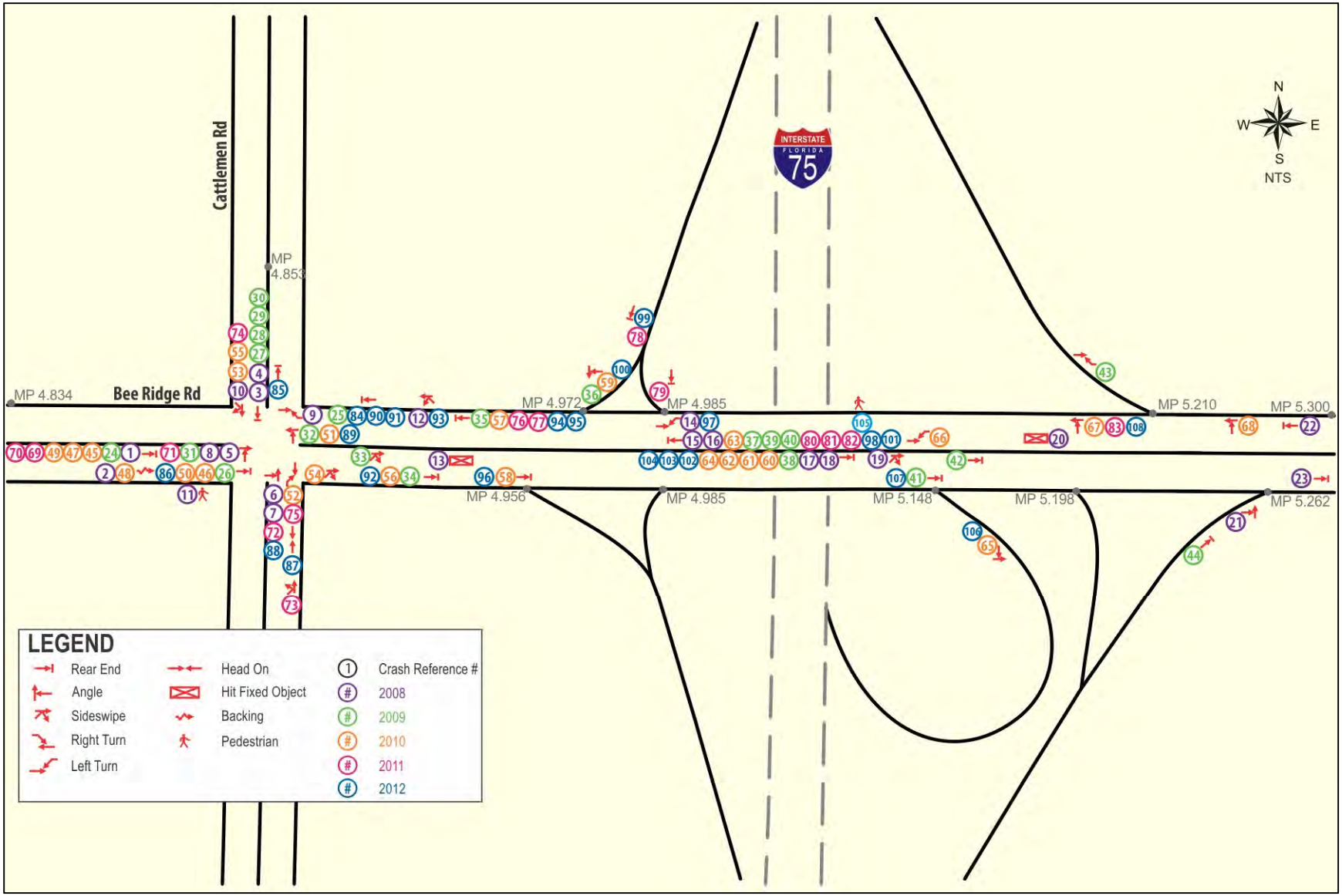


Figure 3.3. Bee Ridge Road Crash Diagram (MP 4.834 to MP 5.300)

3.5 Traffic Volume Counts and Field Data Collection

A comprehensive traffic count program was performed from September 10, 2013 to September 12, 2013 beyond the limits of the project location along the arterials of Bee Ridge Road from Honore Avenue to Mauna Loa Boulevard and Cattlemen Road from Wilkinson Road to Countrywood Drive-Cattleridge Boulevard to accurately determine the amount of traffic on adjacent roadways. The traffic count data collected along the arterials was used in the VISSIM simulation models for calibration and for modeling existing and future traffic conditions.

Vehicle classification counts were collected along I-75 north and south of Bee Ridge Road and along Bee Ridge Road west of Maxfield Drive and east of Mauna Loa Boulevard. Twenty-four-hour bi-directional approach counts were taken at various locations along Bee Ridge Road and Cattlemen Road. Eight-hour turning movement counts were taken at numerous intersections on Bee Ridge Road from Honore Avenue to Mauna Loa Boulevard and on Cattlemen Road from Wilkinson Road to Countrywood Drive-Cattleridge Boulevard from 7:00 AM to 11:00 AM and from 2:00 PM to 6:00 PM. Seven signalized intersections and two stop-controlled intersections/driveways along Bee Ridge Road were included in the eight-hour turning movement count program as follows:

- Bee Ridge Road/Honore Avenue
- Bee Ridge Road/Woodmont Drive
- Bee Ridge Road/Maxfield Drive (West)
- Bee Ridge Road/Maxfield Drive (East)
- Bee Ridge Road/Cattlemen Road
- I-75 West Ramp Terminal/Bee Ridge Road
- I-75 East Ramp Terminal/Bee Ridge Road
- Bee Ridge Road/Maui Way
- Bee Ridge Road/Mauna Loa Boulevard

Four signalized intersections and five stop-controlled intersections/driveways along Cattlemen Road were included in the eight-hour turning movement count program as follows:

- Cattlemen Road/Wilkinson Road
- Cattlemen Road/Walmart Driveway
- Cattlemen Road/Casa Del Sol Boulevard
- Cattlemen Road/Center Pointe Drive
- Cattlemen Road/Sports Authority Driveway
- Cattlemen Road/Bee Ridge Square Driveway
- Cattlemen Road/Katie Lane
- Cattlemen Road/Maxfield Drive-Cattleridge Boulevard
- Cattlemen Road/Countrywood Drive-Cattleridge Boulevard

In addition to traffic counts, travel times and saturation flow rates were measured in the field and queue length and signal timing observations were made for use in calibrating the VISSIM simulation models. Origin-Destination (OD) data was collected using blue tooth technology to ensure that lane utilization and vehicle routing patterns were sufficiently represented in the VISSIM models. Traffic count data can be found in **Appendix B**.

3.6 Traffic Parameters

The peak-to-daily ratios (K-pk), directional distribution (D-pk), and twenty-four-hour percentage of trucks (T24-pk) were measured based on the results of the traffic count program. The measured values were compared to historical data provided by the FDOT 2012 Florida Traffic Information (FTI) CD[10] and the acceptable ranges obtained from the FDOT Project Traffic Forecasting Handbook[11]. This data was also compared to the standard design hour factor (K_{std}) and design hour directional distribution (D) that is to be used for this project as specified in the I-75/Bee Ridge Road Methodology Letter of Understanding (MLOU) that was approved by FHWA on March 11, 2014. The MLOU can be found in **Appendix C**. The design hour truck percentage (DHT), which is taken as half of the twenty-four-hour percentage of trucks (T24), was developed based on vehicle classification counts. The design hour traffic factors recommended for the study area are as follows:

K_{std} = 9.0 percent

D = 54.0 percent

DHT = 3.0 percent – Bee Ridge Road and I-75 Ramps

5.0 percent – I-75 Mainline

The intent of selecting the appropriate design hour traffic factors is to ensure that the facility is designed to accommodate a specific level of future traffic loadings.

3.7 Development of Existing Year (2013) Peak-Hour Traffic Volumes

Twenty-four-hour automatic tube counters were used to obtain the Average Daily Traffic (ADT) along Bee Ridge Road, Cattlemen Road, and cross streets within the study area. The axle correction factor (AF) of 0.99 and the seasonal adjustment factor (SF) of 1.13 were obtained from the FDOT 2012 FTI CD[10] and were applied to the measured ADT in order to obtain the existing year (2013) AADT. Historical counts obtained from the FDOT 2012 FTI CD[10] were used to develop the existing year AADT on the adjacent interchanges of I-75/Clark Road and I-75/Fruitville Road. The AADT volumes were balanced to ensure that all vehicles entering and exiting the system were maintained. The existing year (2013) AADT volumes and peak-hour traffic volumes on I-75 and on adjacent interchange ramps are shown on **Figure 3.4** and **Figure 3.5**, respectively. Historical traffic data can be found in **Appendix D**.

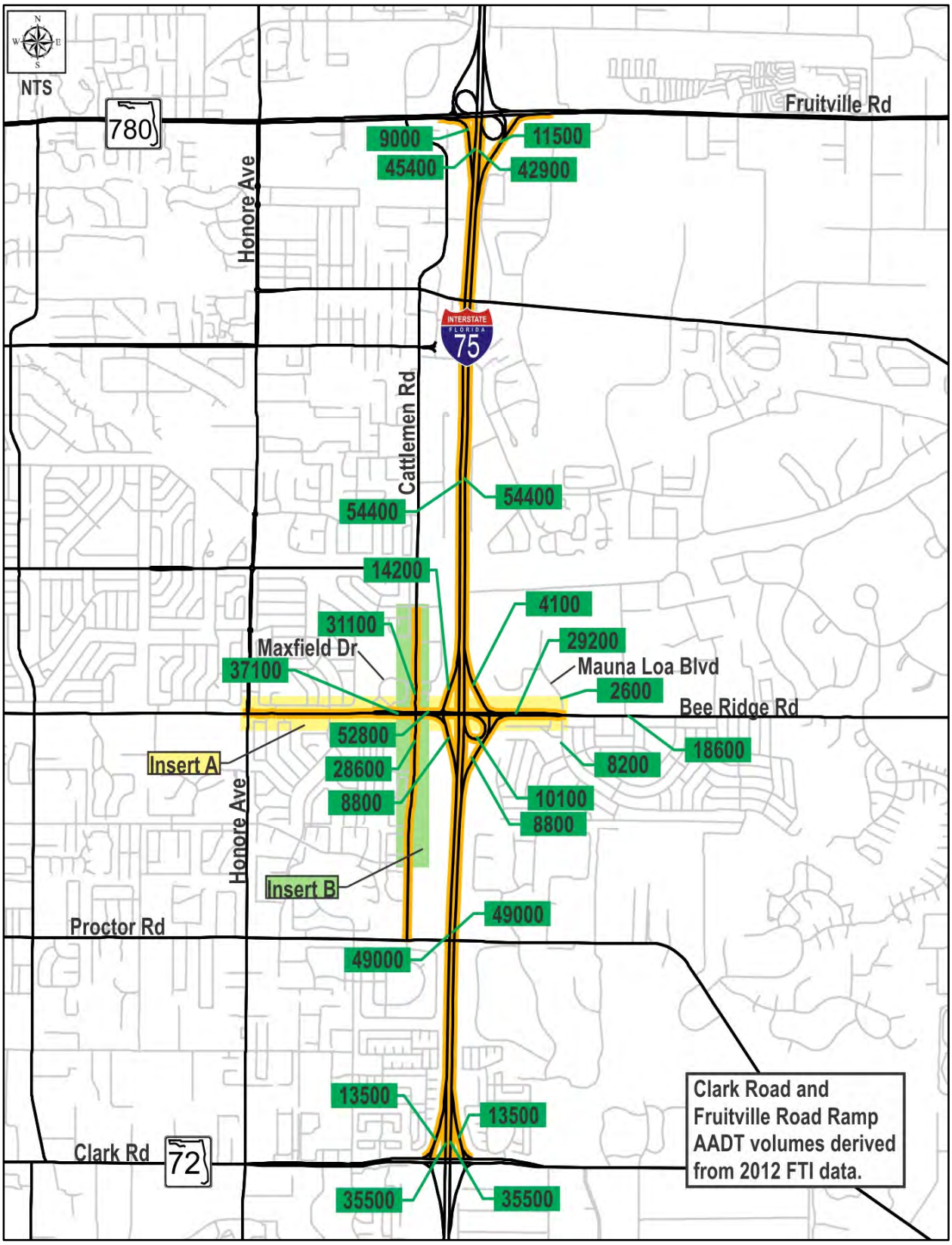


Figure 3.4. Existing Year (2013) AADT Volumes

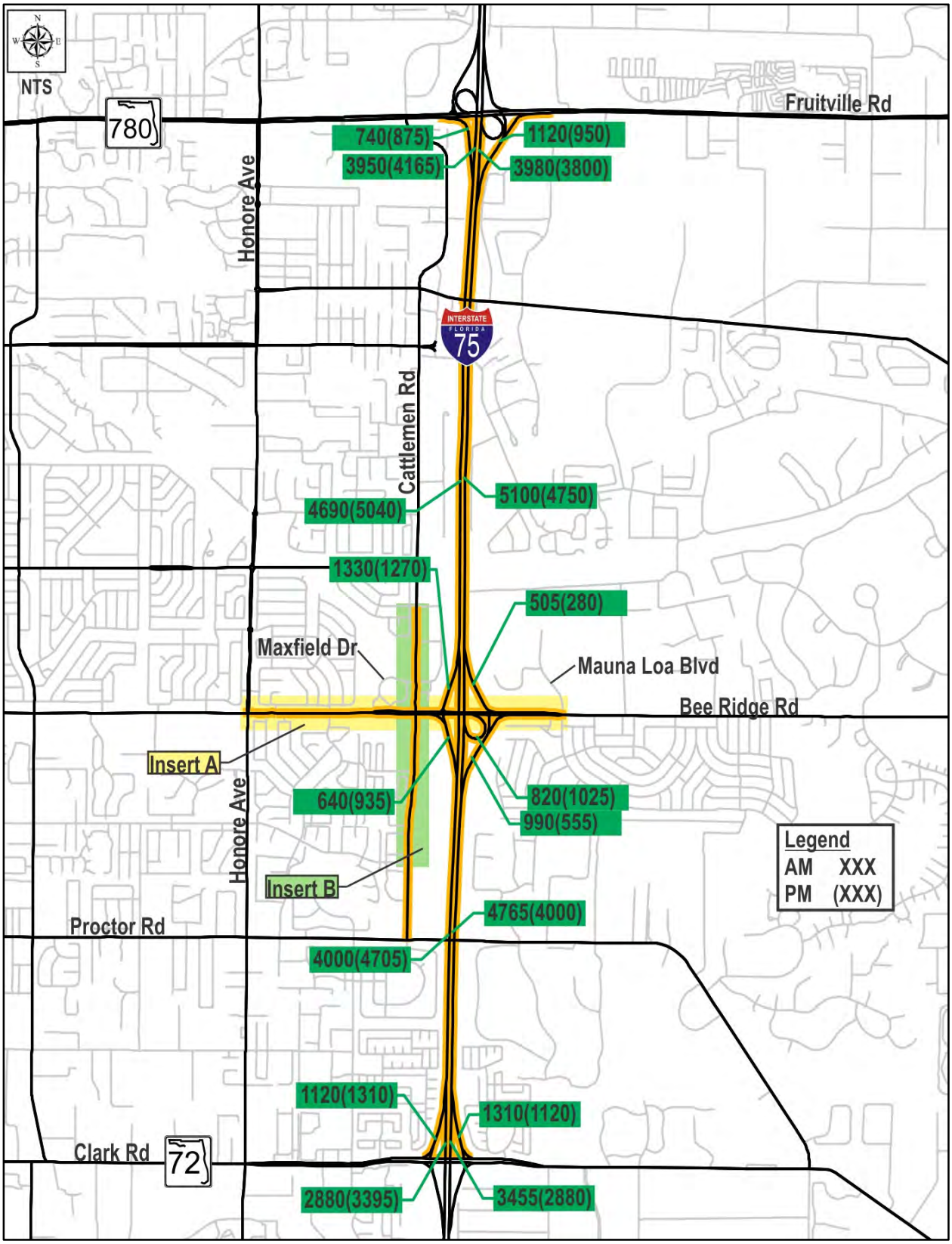


Figure 3.5. Existing Year (2013) Peak-Hour Traffic Volumes

The peak direction of travel was determined using existing traffic count data. During the AM peak period, the northbound direction on I-75 was the peak direction of travel, while the southbound direction was the peak direction during the PM peak period. During the AM peak period, the westbound direction on Bee Ridge Road was the peak direction of travel, while the eastbound direction was the peak direction during the PM peak period. During the AM peak period, the northbound direction on Cattlemen Road was the peak direction of travel, while the southbound direction was the peak direction during the PM peak period. These peak travel directions were also used in the development of the opening year (2020) and design year (2040) Directional Design Hour Volumes (DDHVs). The existing year (2013) AM and PM peak-hour turning movement volumes were developed by applying the SF factor of 1.13 to the raw AM and PM peak-hour turning movement counts.

The global AM and PM peak hours occurred from 7:45 AM to 8:45 AM and from 4:45 PM to 5:45 PM, respectively, as determined from existing traffic counts. A manual smoothing process was performed to ensure that traffic flows were balanced between adjacent intersections. **Figure 3.6** shows the existing year (2013) AADT and peak-hour traffic volumes for both the AM and PM peak periods along Bee Ridge Road and Cattlemen Road.

3.8 Existing Year (2013) Operational Analysis

The MLOU specified HCS 2010 as the tool to be used to analyze the I-75 mainline and ramp operations. Due to the unique and innovative geometry of the I-75/Bee Ridge Road interchange and the Bee Ridge Road/Cattlemen Road intersection in the Proposed Build Alternative, microsimulation was required to analyze traffic operations at those locations. VISSIM was chosen as the simulation tool for use in the analysis because of its ability to accommodate complex geometry and to allow highly customized inputs for a wide range of variables, including signal timing schemes.

The VISSIM Models were calibrated around volume and travel time thresholds using FHWA guidelines. Driver behavior and model parameters were iteratively changed until the calibration targets were satisfied. Model assumptions, input parameters, and network coding techniques used in developing the VISSIM models are further discussed in the VISSIM Model Development and Calibration Report, which can be found in **Appendix E**. Bluetooth OD data, signal timing plans, and field observations can be found in the attachments of the VISSIM Model Development and Calibration Report.

After the existing configuration model was calibrated using raw traffic counts, the existing year (2013) peak-hour traffic volumes were used in the existing year (2013) VISSIM analysis. Simulation output results from an average of twelve simulation runs were used to account for variations between runs due to the stochastic nature of the program. A three-hour multiple period analysis was performed during both the AM and PM peak periods to ensure that congestion was not building before the peak hour or remaining after the peak hour. The volumes of the adjacent hours were determined by applying a factor to the peak-hour volumes in order to proportionately scale the balanced peak-hour volumes. The scale factors were determined by the ratio of the sum of the existing approach and departure volume counts on each leg of the Bee Ridge Road/Cattlemen Road intersection in the adjacent hours to the peak hour. Scale factors of 0.74 during the AM peak period and 0.86 during the PM peak period were used for the adjacent hour before the peak hour and scale factors of 0.81 during the AM peak period and 0.76 during the PM peak period were used for the adjacent hour after the peak hour. The peak-hour results were used for analysis and comparison of the I-75 SIMR and Proposed Build Alternatives in the design year (2040) and opening year (2020). The operational analysis results during the adjacent hours to the peak hour are shown in **Appendix F**.

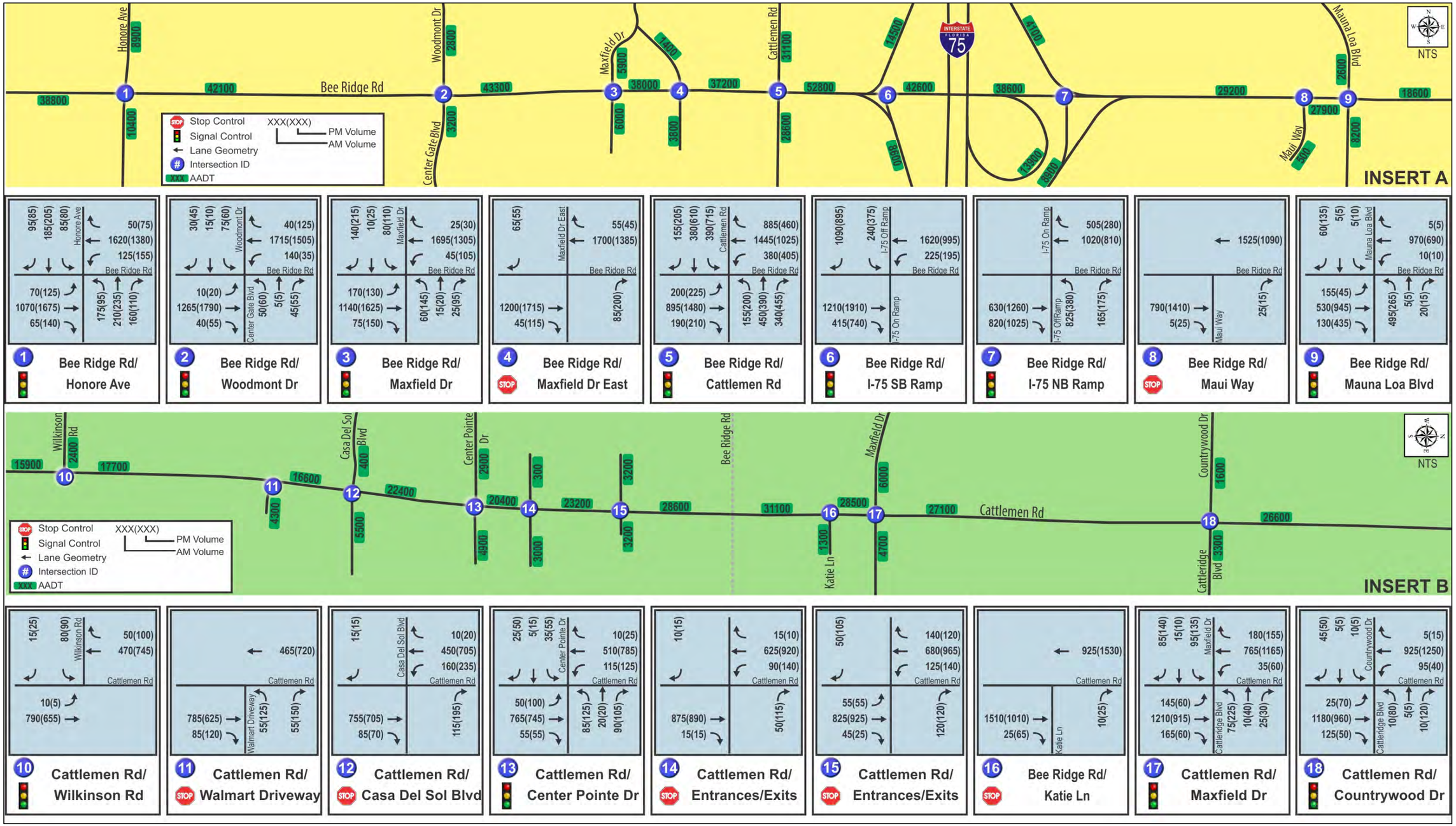


Figure 3.6. Existing Year (2013) AADT and Peak-Hour Traffic Volumes

Bee Ridge Road and Cattlemen Road were analyzed using Measures of Effectiveness (MOEs) that were extracted from the VISSIM model output, including the I-75/Bee Ridge Road interchange terminals. Arterial analysis was based on average speed along segments between intersections. Intersection analysis was performed for the I-75/Bee Ridge Road interchange east and west ramp terminals and the intersections adjacent to the I-75/Bee Ridge Road interchange, which include Bee Ridge Road/Maxfield Drive, Bee Ridge Road/Cattlemen Road, and Bee Ridge Road/Mauna Loa Boulevard. The intersections of Cattlemen Road/Maxfield Drive and Cattlemen Road/Center Pointe Drive were also analyzed due to their close proximity to Bee Ridge Road. Vehicle queuing was also analyzed at these intersections to assess the storage length needs.

The Sarasota County intersection LOS minimum standard is LOS C. The I-75 PD&E Study uses an intersection LOS minimum standard of LOS D and the SIS intersection LOS minimum standard of LOS C. The LOS minimum standard used in this IMR is LOS D for consistency with the I-75 PD&E Study. These LOS thresholds have been developed based on empirical data and deterministic methodologies employed in the HCM 2010. Microsimulation programs calculate results based on stochastic formulas and real-time vehicle interaction. They aggregate data output using different methods than those used by the HCM 2010. HCM 2010 LOS thresholds do not necessarily correlate to a similar performance in microsimulation softwares. Therefore, it is not appropriate to report LOS for MOEs extracted from VISSIM. The LOS thresholds could underestimate the operational benefits of the improvements as observed in the VISSIM animation. LOS is reported for the I-75 mainline and ramp operations as these analyses were performed using HCM 2010 methodologies. The I-75 SIMR and Proposed Build Alternatives were compared using the percent difference between performance measures that were extracted from VISSIM to show the benefits of one alternative compared to another.

3.8.1 Mainline and Ramp Operational Analysis

The I-75 mainline was analyzed in HCS 2010 using density thresholds specified in Exhibit 11-5 of the HCM 2010. The I-75/Bee Ridge Road ramp merge and diverge areas were analyzed in HCS 2010 using density thresholds specified in Exhibit 13-2 of the HCM 2010. Ramp capacities, expressed as passenger cars per hour (pc/h), were checked and compared to the demand volumes using Exhibit 13-10 of the HCM 2010. The existing year (2013) peak-hour traffic volumes were used in the HCS 2010 analysis. The HCS 2010 freeway and ramp output for the existing year (2013) can be found in **Appendix G**. The I-75 mainline and ramp densities, displayed in passenger cars per mile per lane (pc/mi/ln), and LOS are summarized in **Table 3.4** and **Table 3.5**. The I-75 mainline and I-75/Bee Ridge Road ramp merge and diverge areas perform at an acceptable LOS (LOS D or better) in the existing year (2013) during both the AM and PM peak hours. The volume-to-capacity ratio (v/c) of each I-75/Bee Ridge Road ramp was checked and all operate well under capacity, as shown in **Table 3.6**.

Table 3.4. Existing Year (2013) I-75 Mainline Density and LOS – Existing Configuration

Segment	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75, South of Bee Ridge Road	25.6	20.8	C	C
Northbound I-75, North of Bee Ridge Road	28.1	25.5	D	C
Southbound I-75, North of Bee Ridge Road	25.1	27.6	C	D
Southbound I-75, South of Bee Ridge Road	20.8	25.2	C	C

Table 3.5. Existing Year (2013) I-75 Ramp Density and LOS – Existing Configuration

Ramp Description	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75 Off Ramp	31.1	28.0	D	D
Northbound I-75 On Ramp from Eastbound Bee Ridge Road	23.2	23.1	C	C
Northbound I-75 On Ramp from Westbound Bee Ridge Road	29.2	26.8	D	C
Southbound I-75 Off Ramp	31.8	33.2	D	D
Southbound I-75 On Ramp	24.5	29.0	C	D

Table 3.6. Existing Year (2013) I-75/Bee Ridge Road Ramp Capacity

Ramp Description	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c
Northbound I-75 Off Ramp	2100	1058	593	0.504	0.282
Northbound I-75 Loop On Ramp from Eastbound Bee Ridge Road	2000	876	1095	0.438	0.548
Northbound I-75 On Ramp from Westbound Bee Ridge Road	2100	540	299	0.257	0.142
Southbound I-75 Off Ramp	2100	1421	1357	0.677	0.646
Southbound I-75 On Ramp	2100	684	999	0.326	0.476

3.8.2 Arterial Operational Analysis

The existing year (2013) peak-hour traffic volumes were used in the arterial analyses for the Bee Ridge Road and Cattlemen Road segments within the study area. Average speeds were extracted from VISSIM in order to conduct the arterial segment operational analysis. The Bee Ridge Road and Cattlemen Road speeds are shown in **Table 3.7**. The Bee Ridge Road/Cattlemen Road intersection approaches experience low average travel speeds during both the AM and PM peak periods. Low travel speeds may be attributed to red-time delays at signalized intersections.

3.8.3 Intersection Operational Analysis

Intersections in the project area were analyzed in VISSIM in order to establish a baseline for comparing future traffic operations and determining if the interchange improvements would adversely impact intersection operations. The existing year (2013) approach and overall intersection control delay results are summarized in **Table 3.8** and shown graphically on **Figure 3.7**. The Bee Ridge Road/Cattlemen Road and Bee Ridge Road/Maxfield Drive intersections have overall delays in excess of 55.0 seconds/vehicle (s/veh) during the PM peak periods. All other intersections operate at an acceptable level overall during both the AM and PM peak periods. The northbound and southbound I-75 off ramps incur delays of 90.2 and 69.3 s/veh, respectively, during the AM peak hour.

3.8.4 Vehicle Queuing Operational Analysis

The existing year (2013) peak-hour traffic volumes were used in the vehicle queue analysis at the I-75 east and west ramp terminals, as well as the other intersections in the study area. Vehicle queuing results were extracted from VISSIM for the analysis. The existing year (2013) maximum vehicle queuing results on each approach of the study intersections are shown on **Figure 3.8**. The

results show that there is excessive vehicle queuing on the northbound and southbound I-75 off ramps during the AM peak period and on eastbound Bee Ridge Road during the PM peak period.

Table 3.7. Existing Year (2013) Arterial Average Speed - Existing Configuration

Segment	Segment Length (ft)	Posted Speed (mph)	Arterial Average Speed (mph)	
			AM	PM
Eastbound Bee Ridge Road				
Maxfield Drive to Cattlemen Road	650	45	16.9	10.4
Cattlemen Road to I-75 West Ramp Terminal	745	45	15.9	16.0
I-75 West Ramp Terminal to I-75 East Ramp Terminal	1060	45	23.1	26.1
I-75 East Ramp Terminal to Mauna Loa Boulevard	1875	45	33.6	24.2
Westbound Bee Ridge Road				
Mauna Loa Boulevard to I-75 East Ramp Terminal	1875	45	23.2	31.5
I-75 East Ramp Terminal to I-75 West Ramp Terminal	1060	45	23.0	22.9
I-75 West Ramp Terminal to Cattlemen Road	745	45	11.2	8.7
Cattlemen Road to Maxfield Drive	650	45	26.9	28.0
Northbound Cattlemen Road				
Wilkinson Road to Center Pointe Drive	2210	40	30.6	29.6
Center Pointe Drive to Bee Ridge Road	1410	40	21.5	12.2
Bee Ridge Road to Maxfield Drive	775	40	29.9	26.1
Southbound Cattlemen Road				
Maxfield Drive to Bee Ridge Road	775	35	12.8	11.0
Bee Ridge Road to Center Pointe Drive	1410	35	27.4	24.3
Center Pointe Drive to Wilkinson Road	2210	35	32.6	30.1

Table 3.8. Existing Year (2013) Intersection Control Delay - Existing Configuration

Intersection	Intersection Approach Delay (s/veh)								Overall Intersection Delay (s/veh)	
	Eastbound		Westbound		Northbound		Southbound			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	45.8	41.8	50.5	63.3	4.2	8.3	9.8	26.2	11.0	25.3
Bee Ridge Road/Maxfield Drive	16.7	122.7	11.9	14.8	55.8	52.9	40.1	51.1	16.9	70.1
Bee Ridge Road/Cattlemen Road	35.0	54.7	28.0	39.5	57.3	126.0	44.8	44.9	36.8	58.8
Bee Ridge Road/I-75 West Ramp Terminal	20.2	17.9	25.8	37.2	N/A	N/A	69.3	48.7	36.0	30.5
Bee Ridge Road/I-75 East Ramp Terminal	13.1	10.7	22.8	10.6	90.2	40.2	N/A	N/A	36.1	15.0
Bee Ridge Road/Mauna Loa Boulevard	18.4	21.4	18.0	10.7	58.6	35.9	14.6	12.4	27.0	19.5
Cattlemen Road/Center Pointe Drive	39.1	42.3	40.5	42.0	8.2	13.9	11.4	20.3	14.1	21.4
Cattlemen Road/Wilkinson Road	55.7	55.6	N/A	N/A	2.8	2.5	3.5	7.7	6.6	8.9

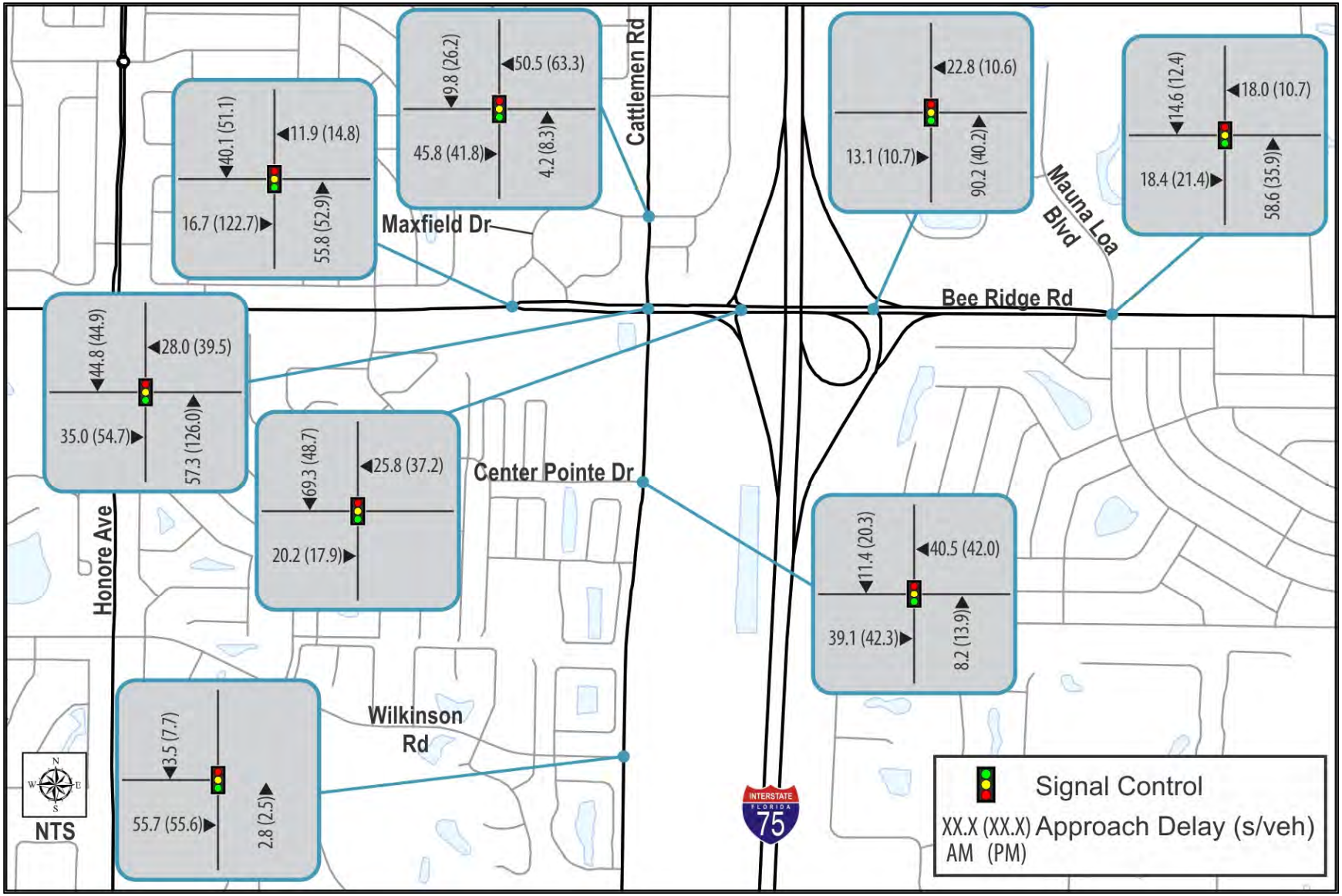


Figure 3.7. Existing Year (2013) Approach and Intersection Control Delay – Existing Configuration

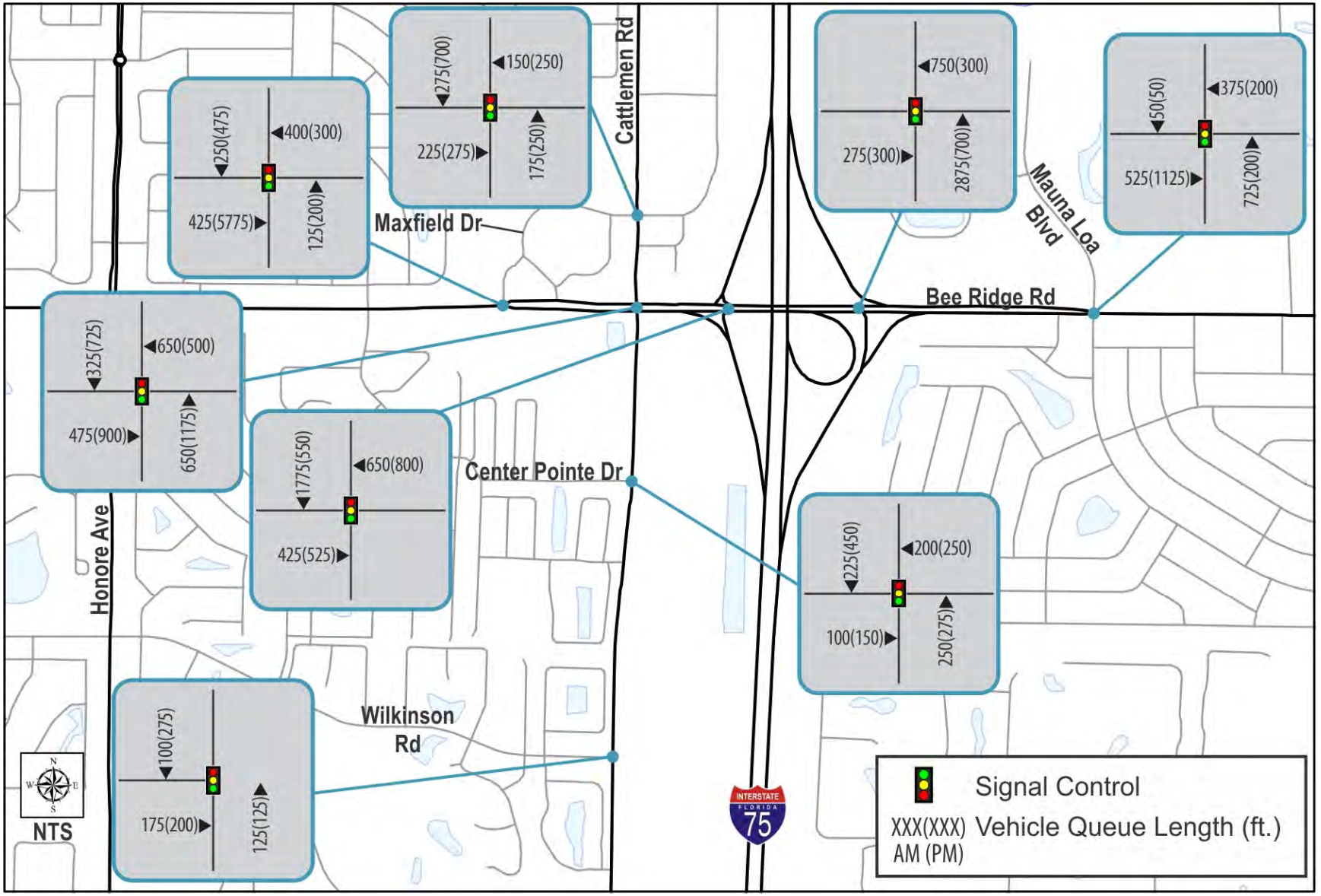


Figure 3.8. Existing Year (2013) Vehicle Queue Lengths – Existing Configuration

4.0 Travel Demand Forecasting

4.1 Development of Design Year (2040) Traffic Projections

The SMC Regional Travel Demand Model[4], which includes the I-75 Ultimate ten-lane cross section, was the travel demand forecasting model used to derive the future year (2040) traffic projections for the I-75/Bee Ridge Road improvement. The SMC Model has a base year of 2007 and the most-recently adopted CF Model has a horizon year of 2035. The SMC CF Model was provided with the modification of the currently unfunded I-75 Ultimate ten-lane cross section included to ensure that the proposed I-75/Bee Ridge Road interchange would be able to accommodate the volume demand of the ultimate configuration of I-75. This version of the SMC CF Model plus the I-75 ten-lane cross section configuration included, SMC CF+ Model, is being used for all interchange updates in the surrounding area as well to ensure that the future I-75 demand volumes are accounted for when funding does become available for the ten-lane cross section of I-75. The SMC Model is based on the Florida Standard Urban Transportation Model Structure (FSUTMS) and is recognized by FDOT as the accepted travel demand forecasting model for the SMC Region. A sub-area validation was performed on the base year (2007) and the horizon year (2035) CF+ Models. The SMC Model was further refined based on the initial results of the sub-area validation to better-represent the existing and planned networks and developments within the vicinity of the project area.

4.1.1 Historical Trends Analysis

Historical trends analysis was performed using count information from FDOT count stations along the Bee Ridge Road study corridor and at the adjacent interchanges of I-75/Fruitville Road and I-75/Clark Road. Growth rates were calculated based on historical data using the least square linear regression method. The trends analysis method relies on historical traffic counts and does not consider traffic diversion to other roadways due to road capacity improvements within the surrounding highway network. The historical trends analysis shows nearly no growth along Bee Ridge Road and its cross streets. The average growth rate along I-75 using the trends analysis is approximately 3.0 percent. The average growth rate on the Bee Ridge Road ramps and the adjacent interchange ramps is -2.7 percent. The results of the historical trends analysis can be found in **Appendix D**.

4.1.2 Population Estimates

In addition to the trends analysis, historical population data obtained from the Bureau of Economic and Business Research[12] (BEBR) was used in developing growth rates that may be applicable in developing future traffic projections. As shown in **Table 4.1**, Sarasota County had a population of 383,700 in 2012. **Table 4.1** shows the low, medium, and high population estimates for 2020, 2030, and 2040, along with the corresponding growth rates from 2012 to each future year. The population growth rates were compared to the historical growth rates. The medium population growth rate of approximately 1.1 percent was used as the minimum growth rate for this analysis. The historical population data can be found in **Appendix D**.

Table 4.1. BEBR Population Growth Rates

Projection Range	2012 Population	2020		2030		2040	
		Population	Growth	Population	Growth	Population	Growth
Low	383,700	384,200	0.02%	397,200	0.20%	395,700	0.11%
Medium	383,700	422,200	1.26%	467,300	1.21%	500,800	1.09%
High	383,700	460,200	2.49%	537,400	2.23%	606,000	2.07%

4.1.3 FSUTMS Base Year (2007) Model Review

The SMC Model was validated for the base year (2007) by FDOT and met the required regional model validation criteria. This Model's performance was assessed in the I-75/Bee Ridge Road study area. The SMC base year (2007) Model traffic estimates were adjusted from peak-season weekday average daily traffic (PSWADT) volumes to AADT volumes by using the model output conversion factors (MOCFs) of 0.90 for I-75 and ramps and 0.88 for Bee Ridge Road and other arterials as specified in the I-75/Bee Ridge Road MLOU. The SMC base year (2007) Model AADT volume estimates were compared with the observed 2007 traffic counts. Changes were made to the SMC base year (2007) Model in order to improve the percent deviation between the counts and modeled AADT volumes. A centroid connector was added from Traffic Analysis Zone (TAZ) 579 to Cattlemen Road and from TAZ 560 to Webber Street for a more realistic representation of traffic loading onto the network.

The acceptable ranges for percent deviation of Model projected traffic volumes from observed traffic counts are based on thresholds specified in the FDOT Project Traffic Forecasting Handbook[11] and vary based on the magnitude of the traffic volumes. Overall, the percent deviations fall within acceptable ranges, as shown in **Table 4.2**. The refined SMC base year (2007) Model plots can be found in **Appendix H**.

Table 4.2. SMC Base Year (2007) Model AADT Volume to Observed Count Comparison

Traffic Count Location	2007 Count (AADT)	2007 Model Assignment (AADT)	Volume/ Count Ratio	Percent Difference	FDOT Acceptable Percent Difference	FDOT Standard Met?
I-75 S of Clark Rd	84500	97300	1.15	15.1%	10%	No
I-75 S of Bee Ridge Rd	94600	94200	1.00	-0.4%	10%	Yes
I-75 N of Bee Ridge Rd	108500	99400	0.92	-8.4%	10%	Yes
I-75 N of Fruitville Rd	116500	100700	0.86	-13.6%	10%	No
I-75/Fruitville Rd NB Off Ramp	14000	10800	0.77	-22.9%	30%	Yes
I-75/Fruitville Rd SB On Ramp	10500	8200	0.78	-21.9%	30%	Yes
I-75/Fruitville Rd NB Loop On Ramp	12500	9300	0.74	-25.6%	30%	Yes
I-75/Fruitville Rd SB Loop On Ramp	3600	4800	1.33	33.3%	50%	Yes
I-75/Fruitville Rd NB On Ramp	4600	5500	1.20	19.6%	50%	Yes
I-75/Fruitville Rd SB Off Ramp	17000	10400	0.61	-38.8%	30%	No
I-75/Bee Ridge Rd NB Off Ramp	8300	10000	1.20	20.5%	50%	Yes
I-75/Bee Ridge Rd SB On Ramp	8500	9900	1.16	16.5%	50%	Yes
I-75/Bee Ridge Rd NB Loop On Ramp	9900	9300	0.94	-6.1%	50%	Yes
I-75/Bee Ridge Rd SB Off Ramp	13500	11000	0.81	-18.5%	30%	Yes
I-75/Bee Ridge Rd NB On Ramp	3500	4800	1.37	37.1%	50%	Yes
I-75/Clark Rd NB Off Ramp	6700	12500	1.87	86.6%	50%	No
I-75/Clark Rd SB On Ramp	6800	9500	1.40	39.7%	50%	Yes
I-75/Clark Rd NB On Ramp	14000	8600	0.61	-38.6%	30%	No
I-75/Clark Rd SB Off Ramp	14000	10300	0.74	-26.4%	30%	Yes
Bee Ridge Rd E of Woodmont Dr	49500	43000	0.87	-13.1%	25%	Yes

4.1.4 FSUTMS Horizon Year (2035) Model Review

The changes that were made to the SMC base year (2007) Model to obtain acceptable differences between the modeled volumes and observed counts were implemented in the SMC horizon year (2035) CF+ Model for consistency. Prior to obtaining future traffic volumes from the SMC horizon year (2035) CF+ Model, this Model was reviewed to ensure that nearby DRIs and funded improvements were accurately represented in the socio-economic (SE) data and network, respectively. The I-75 SULs were accurately represented in the Model as well as the Heritage Harbor DRI at the I-75/SR 64 interchange and the Palmer Ranch DRI near the I-75/Clark Road interchange. The I-75 SULs were assumed to be present in the design year (2040) for the I-75 SIMR and Proposed Build Alternatives.

The Sarasota-Manatee LRTP[5], FDOT Five-Year Adopted Work Program for 2013 to 2017, and the Sarasota-Manatee Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) for 2013 to 2017 were reviewed to determine if there were any funded network improvements that were not represented in the SMC horizon year (2035) CF+ Model. All relevant fully-funded improvements were represented in the SMC horizon year (2035) CF+ Model network. Sarasota County and the Sarasota-Manatee MPO indicated that the four-lane widening of Bee Ridge Road between Mauna Loa Boulevard to Iona Road is in the County's Capital Improvement Program (CIP). However, the project is not fully-funded and was, therefore, not included the SMC horizon year (2035) CF+ Model network.

The Sarasota Interchange Park of Commerce (SIPOC) DRI is a mixed-use development located in the southwest quadrant of the I-75/University Parkway interchange. The SE data in the SMC horizon year (2035) CF+ Model was updated to encompass the full buildout of the SIPOC DRI. The SMC horizon year (2035) CF+ Model plots can be found in **Appendix H**.

The National Cooperative Highway Research Program[13] (NCHRP), Report 255 methodology was used to adjust the SMC horizon year (2035) CF+ Model AADT volume estimates in cases where the percent difference between 2007 observed AADT volumes and base year (2007) modeled AADT volumes did not meet the FDOT's acceptable thresholds or when the AADT volume growth rate from the SMC base year (2007) Model to the SMC horizon year (2035) Model was less than the minimum acceptable growth rate of 1.1 percent.

The Proposed Build Alternative includes the removal of the westbound-to-southbound left-turn volumes from Bee Ridge Road to Cattlemen Road for vehicles originating from the I-75/Bee Ridge Road southbound off ramp. These volumes will be accommodated by a ramp leading from southbound I-75, north of Bee Ridge Road, to a new westbound approach at Wilkinson Road. A SelectLink analysis was performed on the I-75/Bee Ridge Road southbound off ramp in the SMC horizon year (2035) CF+ Model to determine the percentage of traffic to reroute for the Proposed Build Alternative.

4.1.5 Development of Design Year (2040) AADT Volumes

The SMC base year (2007) Model to the SMC horizon year (2035) CF+ Model growth rates were different on each link. Therefore, link-by-link growth rates were not used in order to maintain balance between intersections and produce uniform design year (2040) traffic volumes. The SMC base year (2007) and SMC horizon year (2035) CF+ Model volumes were compared to the existing volumes as a reasonableness check and different growth methods were employed to reasonably satisfy all of the constraints such as appropriate growth from existing year (2013) to horizon year (2035). Existing AADT volumes were used for design year AADT volumes for minor drives leading to built out developments that would not be expected to continue growing.

In most cases, the SMC horizon year (2035) CF+ Model AADT volumes were used directly throughout the project area and grown using the BEBR medium population growth rate of 1.1 percent to obtain design year (2040) AADT volumes. Particular attention was then given to the main intersection of Bee Ridge Road/Cattlemen Road, where the horizon year (2035) CF+ Model appeared to be overestimating future volumes in this built out area when compared to existing year (2013) volumes, due to the decrease in traffic between the base year (2007) and the horizon year (2035), likely because of the recent economic recession.

The AADT volumes on the west leg of the Bee Ridge Road/Cattlemen Road intersection was grown from existing year (2013) to design year (2040) using the SMC base year (2007) Model to SMC horizon year (2035) CF+ Model growth rate on that link (1.7 percent) and the volumes were smoothed out towards the west, reducing the Bee Ridge Road through movement volumes accordingly as the cross street volumes appeared to be reasonable. The AADT volumes on the east leg of the Bee Ridge Road/Cattlemen Road intersection was grown from existing year (2013) to design year (2040) using the SMC base year (2007) Model to SMC horizon year (2035) CF+ Model growth rate on that link (2.3 percent) and the volumes were smoothed out towards the east, reducing the Bee Ridge Road through movement volumes accordingly. The AADT volumes on the north and south legs of the Bee Ridge Road/Cattlemen Road intersection were grown from existing year

(2013) to design year (2040) using the BEBR medium population growth rate of 1.1 percent since the SMC base year (2007) Model to SMC horizon year (2035) CF+ Model growth rates on those links were less than 1.1 percent and the volumes were smoothed out towards the north and south, reducing the Cattlemen Road through movement volumes accordingly. The north-oriented ramp AADT volumes were used directly from the SMC horizon year (2035) CF+ Model and the south-oriented ramp AADT volumes were grown from existing year (2013) to design year (2040) using the SMC base year (2007) Model to SMC horizon year (2035) CF+ Model growth rate (3.5 percent).

The SUL volumes were developed based on the percentage of traffic using the SUL compared to the GUL on each segment as shown in the SMC horizon year (2035) CF+ Model. The percentages were applied to the final adjusted design year (2040) AADTs. The SUL volumes were then checked for reasonableness to ensure that the SUL volumes did not exceed the LOS D generalized service volume thresholds given in the most recent version of the FDOT Quality/LOS Handbook[14]. In cases where the SUL volumes were not operating at LOS D or better based on generalized service volume thresholds, the SULs were maxed out to their LOS D service volume and the remaining demand was routed onto the GULs, except at the ingress/egress locations between Bee Ridge Road and Fruitville Road. The design year (2040) projected traffic volumes were also compared to the approved I-75 PD&E Study[1] 2035 volume projections to verify reasonableness and consistency.

4.1.6 Development of Design Year (2040) DDHV

The adopted traffic parameters (K_{std} and D) were applied to the design year (2040) AADT volumes to develop the DDHVs in the study area for the design year (2040). The existing year (2013) peak-hour volumes were entered into the TURNS5 volume development spreadsheet and used as a basis for developing the design year (2040) turning movement volumes. The TURNS5 results are shown in **Appendix I**. A manual smoothing process was then performed to ensure that traffic flows were balanced between adjacent intersections. After the DDHVs were balanced, the AADT volumes were recalculated using the K_{std} of 9.0 percent and the Design Hour Volumes (DHVs) to ensure that the correct AADTs were represented as a result of the iterative smoothing process when going from the more precise numbers (turning movement volumes) to the less precise numbers (AADT volumes) and to ensure that the smoothing process did not cause substantial deviation from the initial AADT volumes that were obtained using the SMC Models and growth rate methods. The design year (2040) AADT volumes are reported as the maximum of the AADT volumes calculated from AM DHVs and PM DHVs, rounded to the nearest one hundred. This methodology and the traffic volumes have been reviewed by FDOT and were approved for use on June 13, 2014.

The design year (2040) I-75 SIMR and Proposed Build Alternatives' AADT volumes on I-75 and on adjacent interchange ramps are shown on **Figure 4.1** and **Figure 4.2**, respectively. The design year (2040) I-75 SIMR and Proposed Build Alternatives' DDHVs on I-75 and on adjacent interchange ramps are shown on **Figure 4.3** and **Figure 4.4**, respectively. **Figure 4.5** and **Figure 4.6** show the design year (2040) I-75 SIMR and Proposed Build Alternatives' AADT volumes and DDHVs, respectively, on Bee Ridge Road and Cattlemen Road.

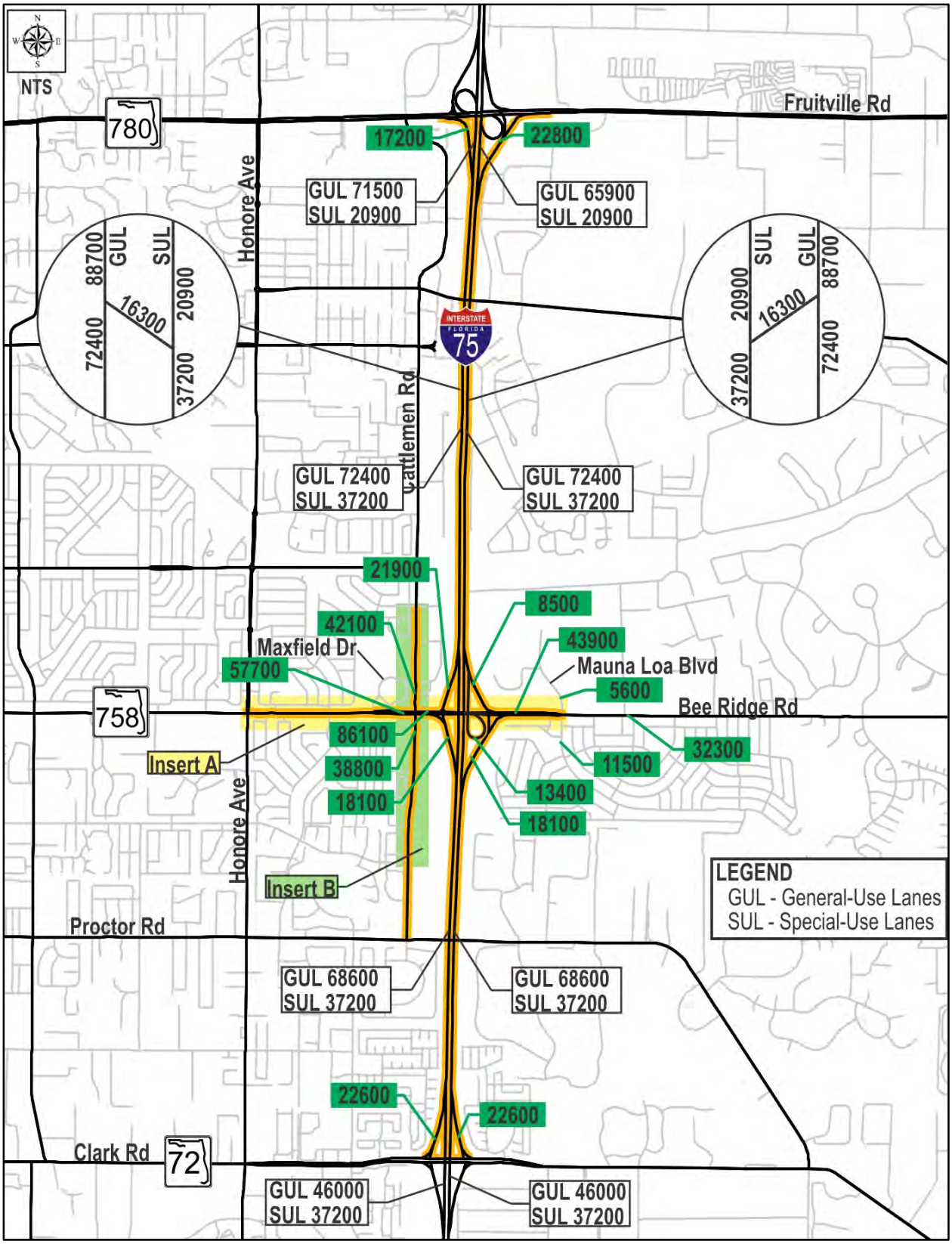


Figure 4.1. Design Year (2040) AADT Volumes – I-75 SIMR Alternative

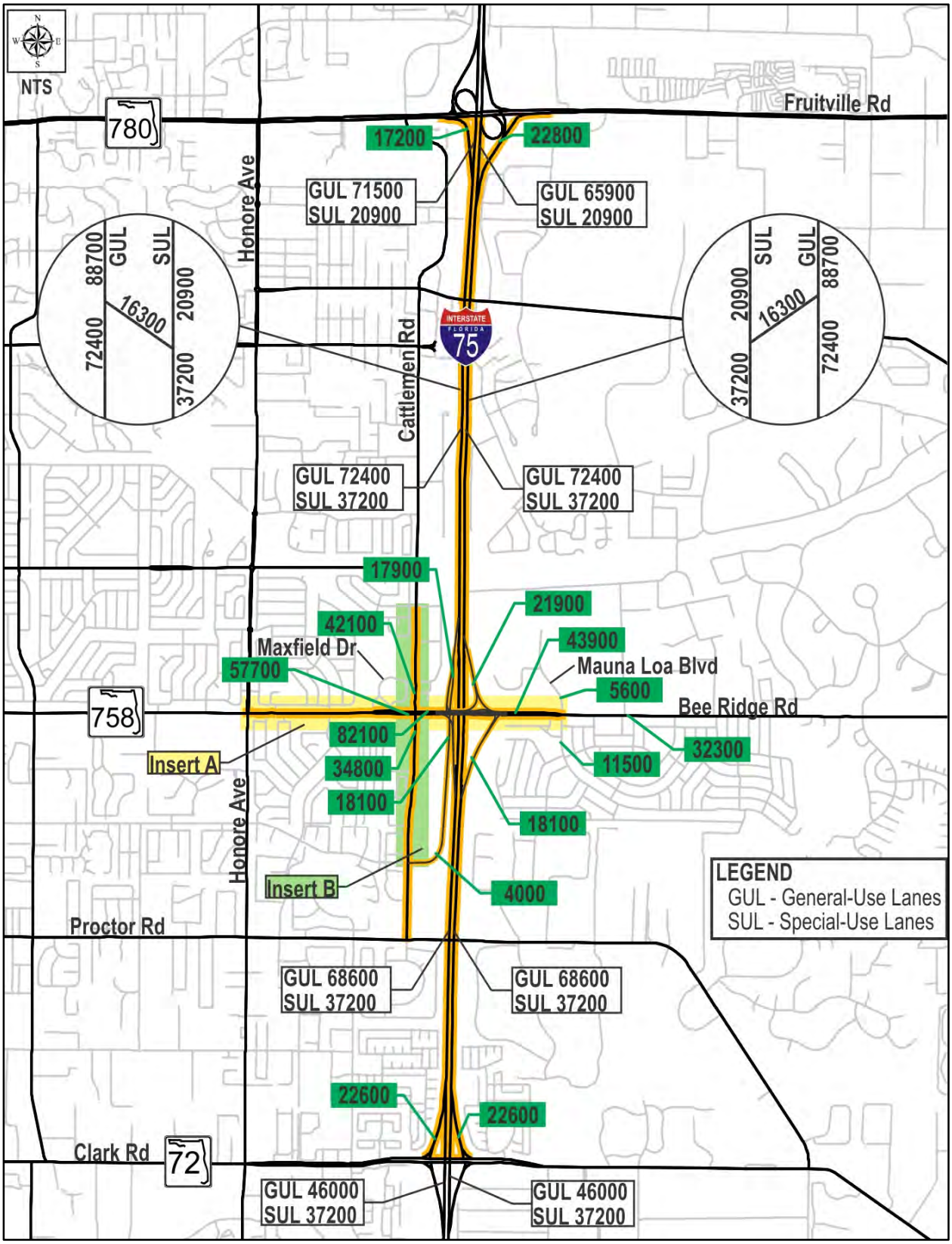


Figure 4.2. Design Year (2040) AADT Volumes – Proposed Build Alternative

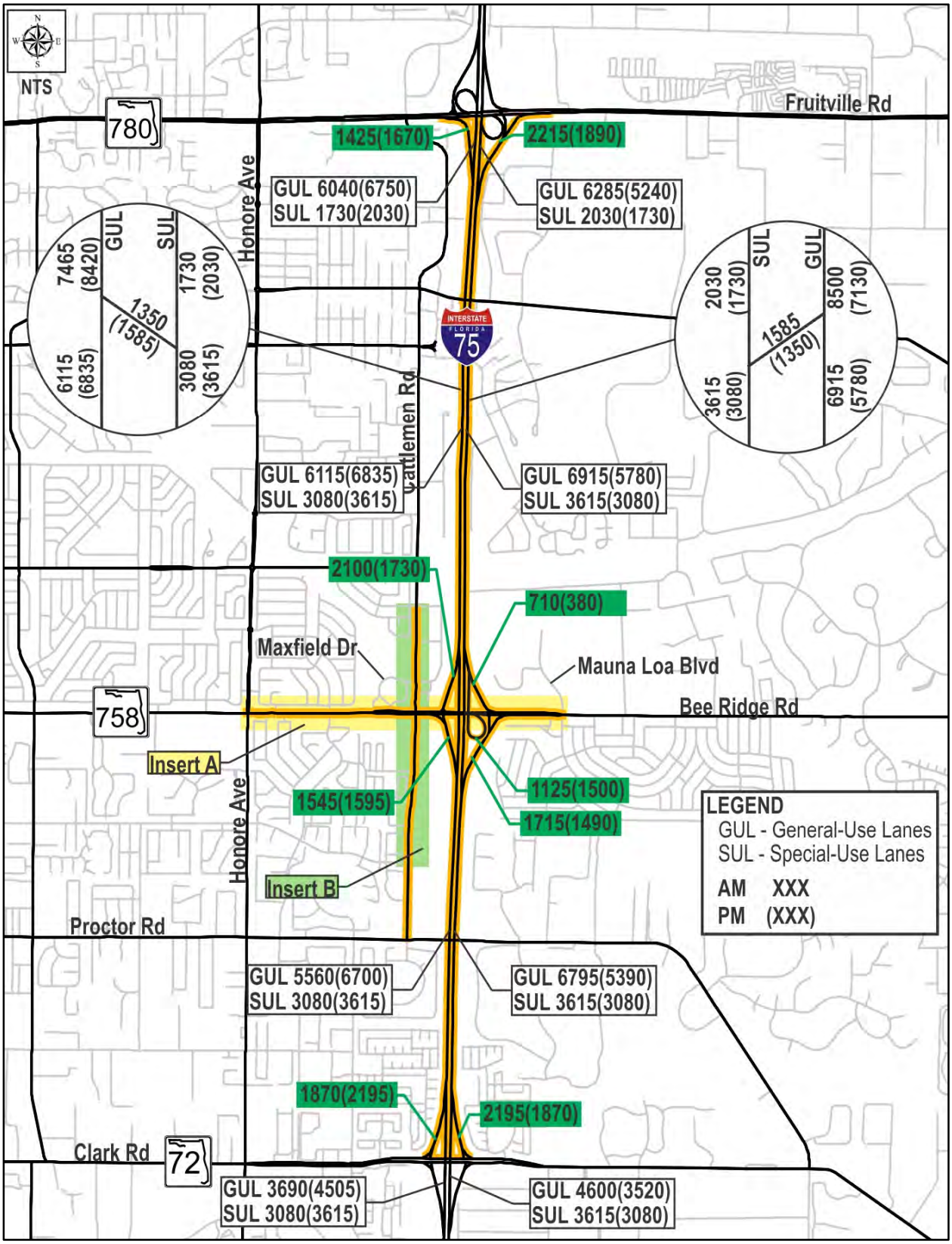


Figure 4.3. Design Year (2040) DDHVs – I-75 SIMR Alternative

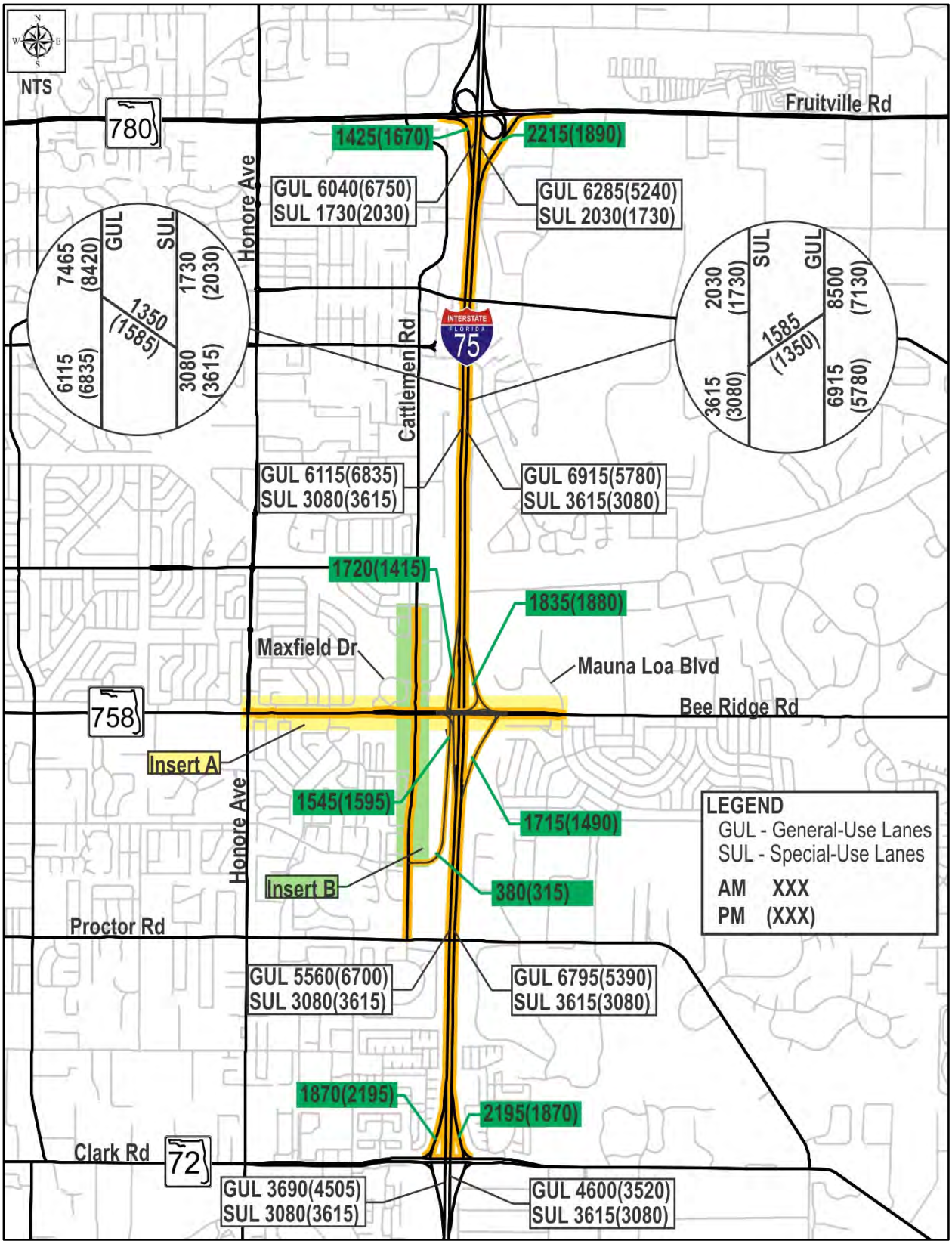


Figure 4.4. Design Year (2040) DDHVs – Proposed Build Alternative

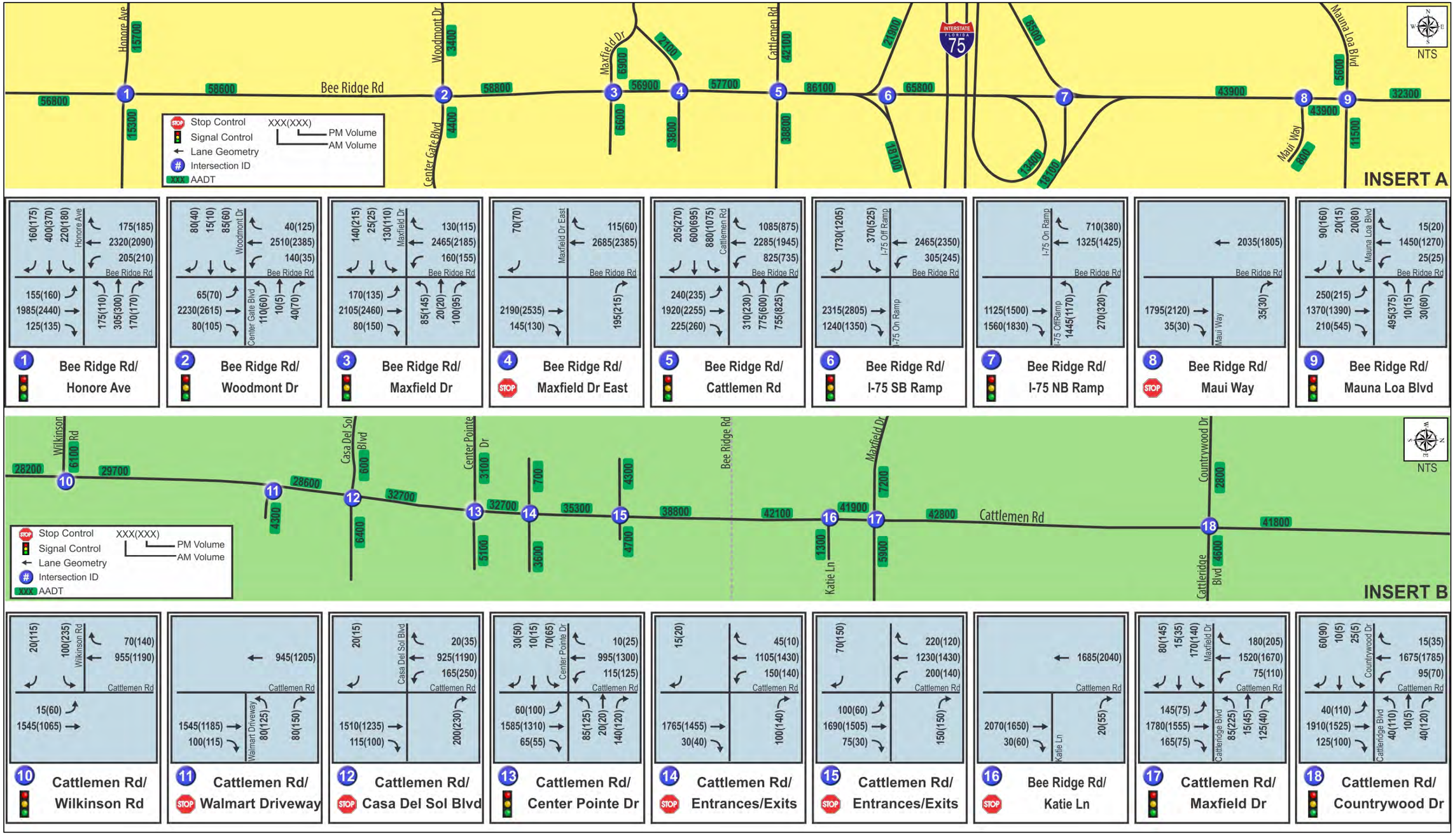


Figure 4.5. Design Year (2040) AADT and DDHVs – I-75 SIMR Alternative

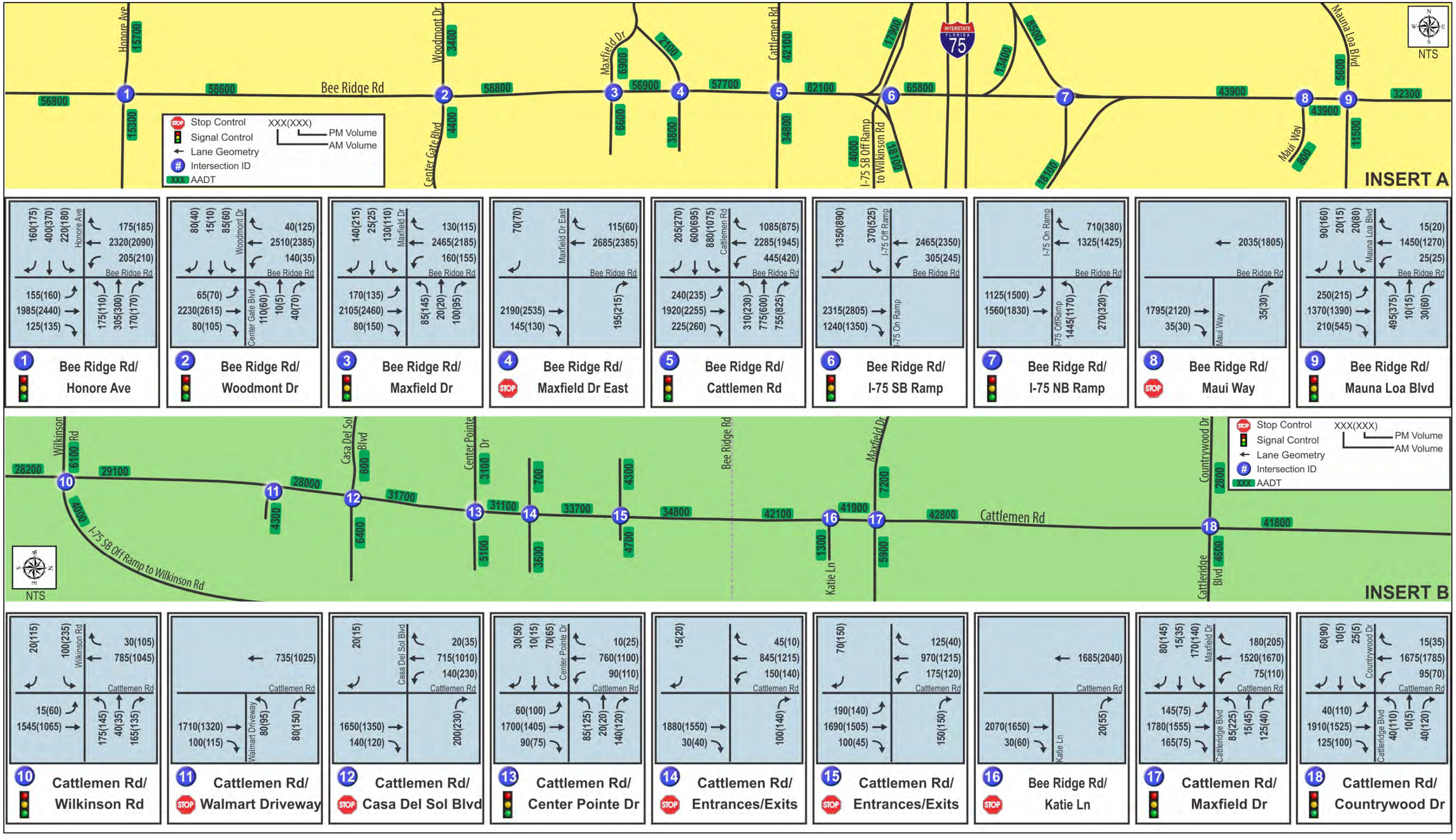


Figure 4.6. Design Year (2040) AADT and DDHVs – Proposed Build Alternative

4.2 Development of Opening Year (2020) Traffic Volumes

In conjunction with the development of the design year (2040) volumes, the opening year (2020) volumes were developed by linearly interpolating the AADT volumes, DDHVs, and turning movement volumes between the existing year (2013) and design year (2040) for the I-75 SIMR and Proposed Build Alternatives' volume projections. The opening year (2020) I-75 SIMR and Proposed Build Alternatives' AADT volumes on I-75 and on adjacent interchange ramps are shown on **Figure 4.7** and **Figure 4.8**, respectively. The opening year (2020) I-75 SIMR and Proposed Build Alternatives' DDHVs on I-75 and on adjacent interchange ramps are shown on **Figure 4.9** and **Figure 4.10**, respectively. **Figure 4.11** and **Figure 4.12** show the opening year (2020) I-75 SIMR and Proposed Build Alternatives' AADT volumes and DDHVs, respectively, on Bee Ridge Road and Cattlemen Road.

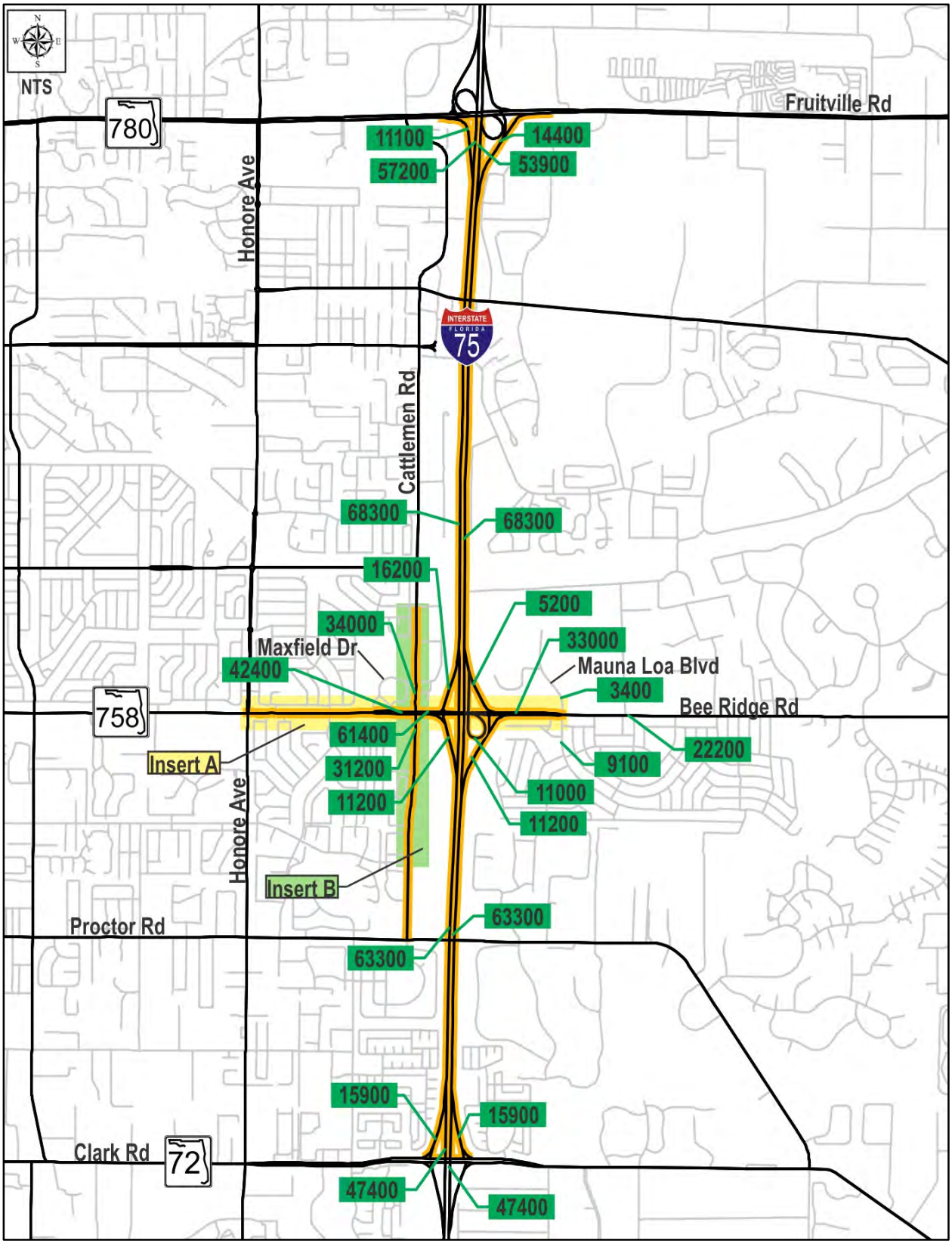


Figure 4.7. Opening Year (2020) AADT Volumes – I-75 SIMR Alternative

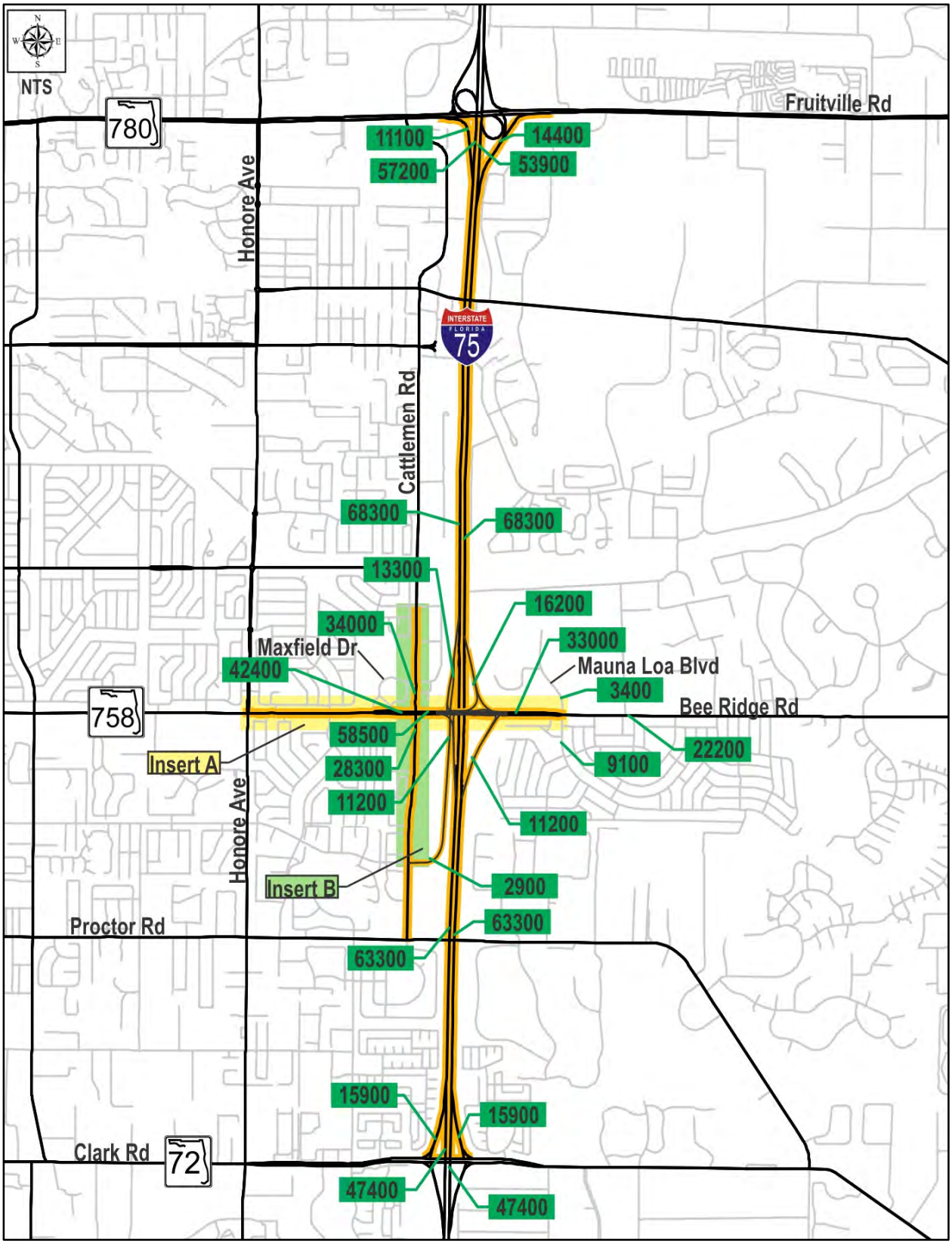


Figure 4.8. Opening Year (2020) AADT Volumes – Proposed Build Alternative

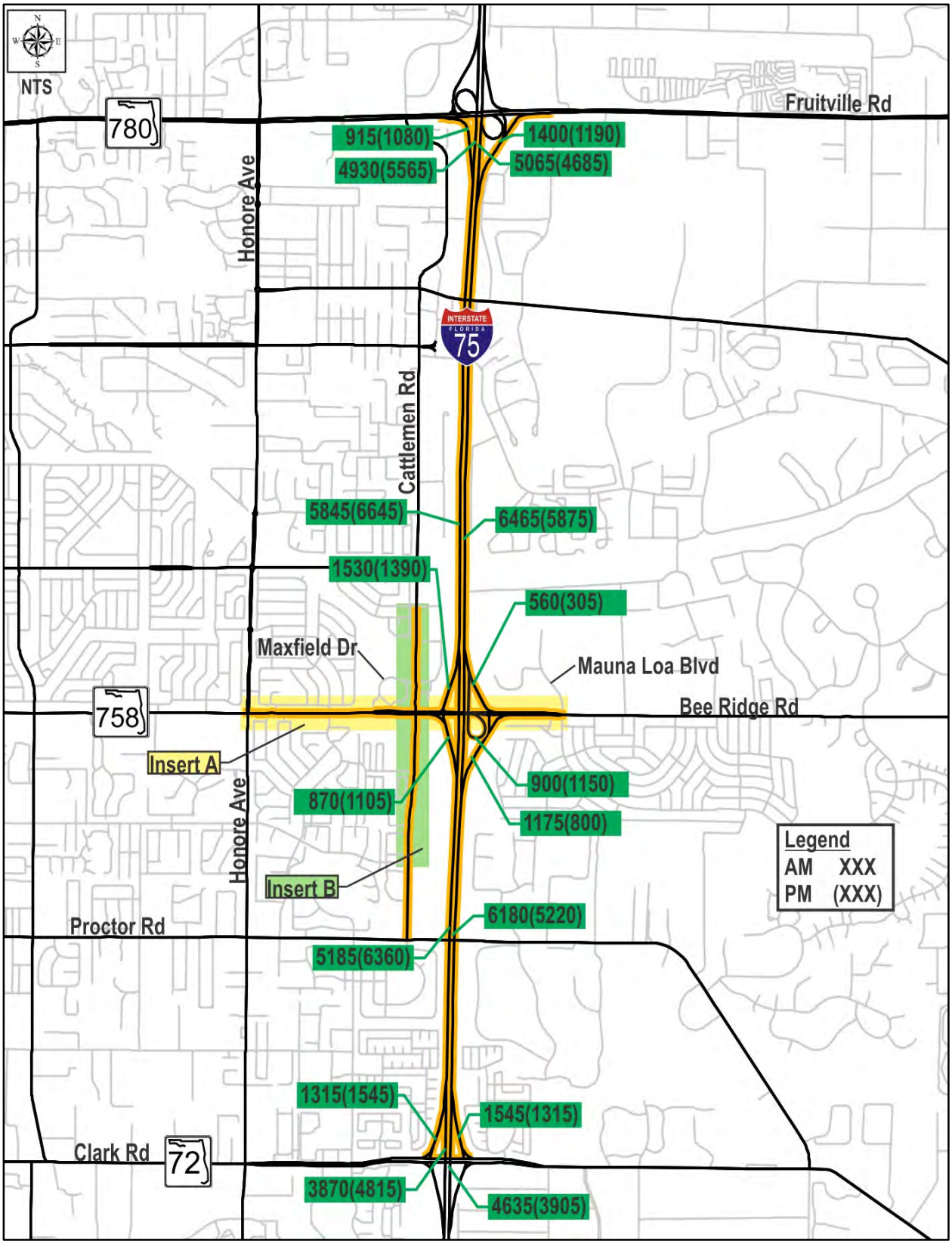


Figure 4.9. Opening Year (2020) DDHVs – I-75 SIMR Alternative

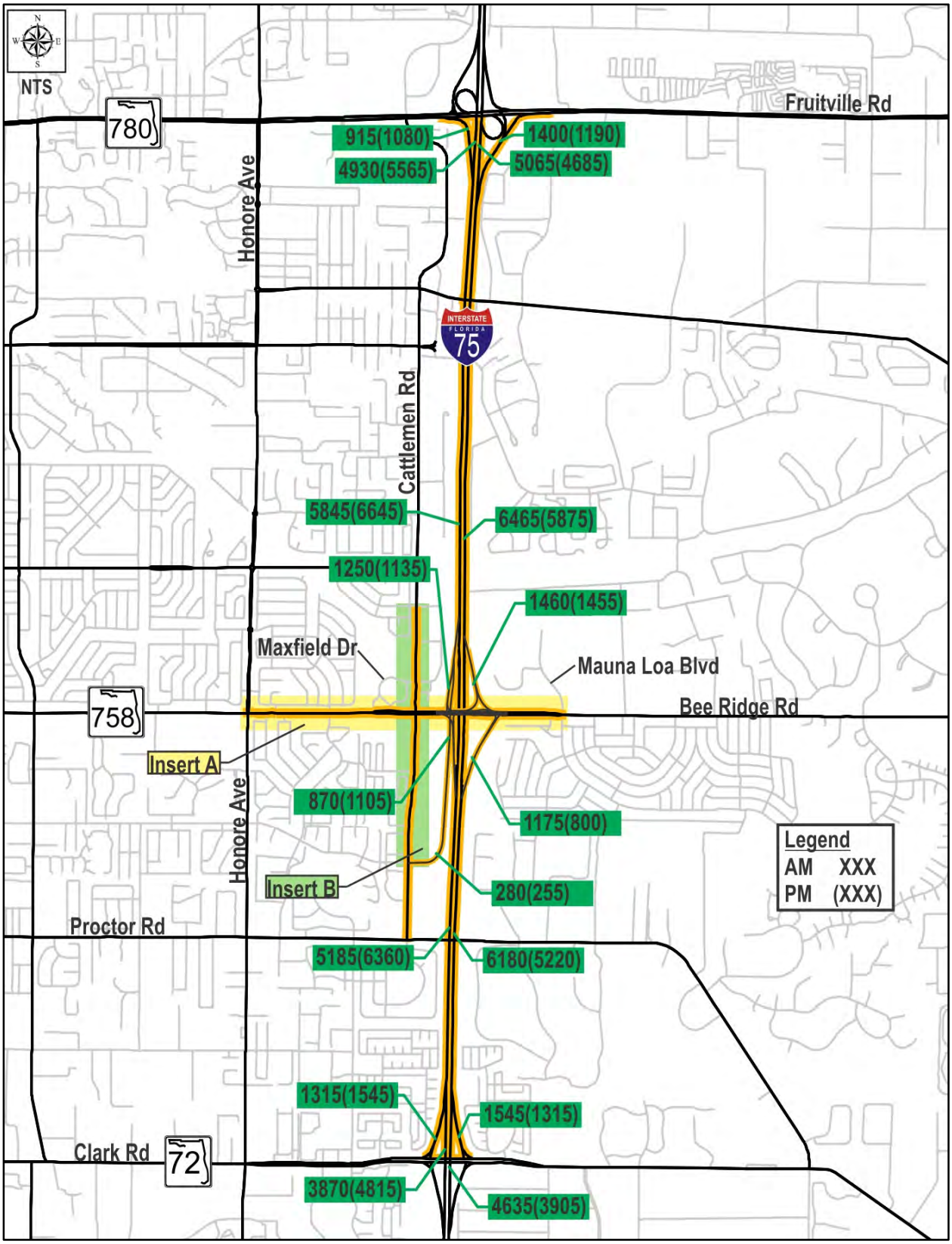


Figure 4.10. Opening Year (2020) DDHVs – Proposed Build Alternative

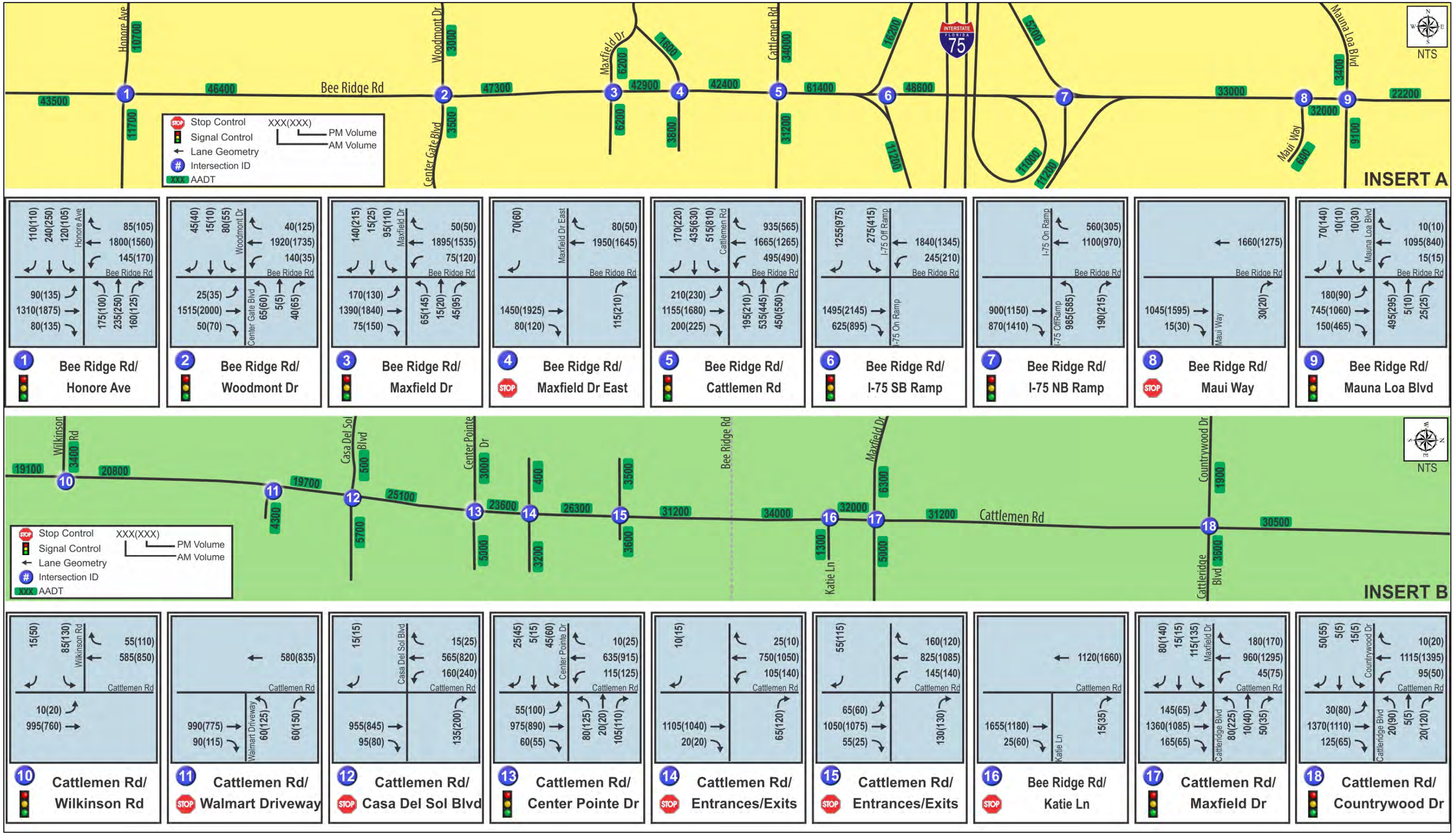


Figure 4.11. Opening Year (2020) AADT and DDHVs – I-75 SIMR Alternative

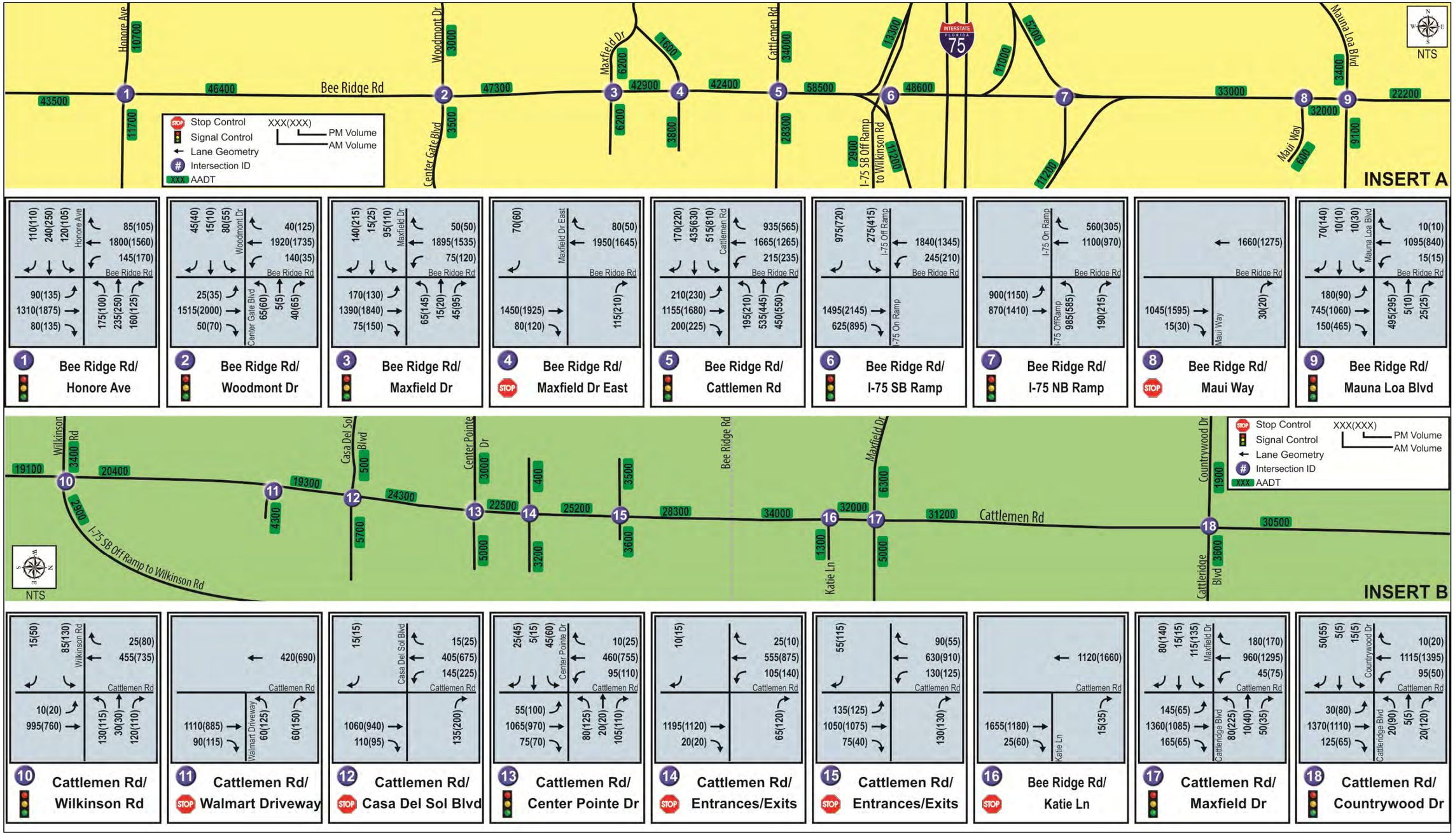


Figure 4.12. Opening Year (2020) AADT and DDHVs – Proposed Build Alternative

5.0 Future Conditions

5.1 Design Year (2040) Mainline Operational Analysis

Similar to the existing conditions analysis, the I-75 mainline was analyzed using HCS 2010 for the existing configuration, I-75 Interim Build improvements, and I-75 Ultimate Build improvements during both the AM and PM peak periods in the design year (2040). The I-75 SIMR and Proposed Build Alternatives both include the same I-75 Interim and Ultimate Build improvements for the I-75 mainline. The design year (2040) DDHVs were used in the HCS 2010 analysis. The I-75 mainline densities and LOS are summarized in **Table 5.1**, **Table 5.2**, and **Table 5.3** for the existing configuration, Interim Build improvements, and Ultimate Build improvements, respectively. The I-75 mainline does not perform at an acceptable LOS through the design year on any segment within the study area during both the AM and PM peak hours for the existing configuration and Interim Build improvements, while all segments perform at an acceptable LOS through the design year during both the AM and PM peak hours for the Ultimate Build improvements. The HCS 2010 output for the design year (2040) can be found in **Appendix G**.

Table 5.1. Design Year (2040) I-75 Mainline Density and LOS – Existing Configuration

Segment	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75, South of Bee Ridge Road	>500	100.0	F	F
Northbound I-75, North of Bee Ridge Road	>500	131.4	F	F
Southbound I-75, North of Bee Ridge Road	178.7	>500	F	F
Southbound I-75, South of Bee Ridge Road	111.7	>500	F	F

Table 5.2. Design Year (2040) I-75 Mainline Density and LOS – Interim Build

Segment	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75, South of Bee Ridge Road	70.2	40.6	F	E
Northbound I-75, North of Bee Ridge Road	73.2	44.6	F	E
Southbound I-75, North of Bee Ridge Road	48.6	71.2	F	F
Southbound I-75, South of Bee Ridge Road	42.3	67.9	E	F

Table 5.3. Design Year (2040) I-75 Mainline Density and LOS – Ultimate Build

Segment	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75 GULs, South of Bee Ridge Road	28.0	21.0	D	C
Northbound I-75 GULs, North of Bee Ridge Road	28.7	22.8	D	C
Northbound I-75 SULs	30.7	24.6	D	C
Southbound I-75 GULs, North of Bee Ridge Road	24.4	28.3	C	D
Southbound I-75 GULs, South of Bee Ridge Road	21.8	27.5	C	D
Southbound I-75 SULs	24.6	30.7	C	D

5.2 Design Year (2040) I-75 SIMR Alternative Ramp Operational Analysis

Similar to the existing conditions analysis, the I-75/Bee Ridge Road ramps in the I-75 SIMR Alternative were analyzed using HCS 2010 for the I-75 Interim Build and Ultimate Build improvements during both the AM and PM peak periods in the design year (2040). The I-75 SIMR and Proposed Build Alternatives both include the same I-75 Interim Build and Ultimate Build improvements for the I-75 mainline. The design year (2040) DDHVs were used in the HCS 2010 analysis.

The special case methodology for major merge and major diverge areas was used for the I-75 SIMR Alternative ramp analyses due to the presence of auxiliary lanes between the I-75/Bee Ridge Road interchange and adjacent interchanges to the north and south. Using this methodology, the v/c ratios were calculated for the ramps and the segments upstream and downstream of the ramps. The major diverge methodology calculates the density and LOS of the segment upstream of the off ramps while the major merge methodology only considers v/c ratios for ramp analysis. The HCS 2010 standard ramp analysis was completed to determine the flow rates in lanes one and two of the freeway segment upstream of the ramp influence areas (v_{12} or v_{12a}), the flow rates on the ramps (v_r), and the flow rates entering the ramp merge areas (v_{r12}). However, the density and LOS results using this standard methodology were not used for the analysis. The output for the HCS 2010 standard ramp analysis and HCM 2010 special case analysis calculations can be found in **Appendix G**.

The I-75/Bee Ridge Road ramps are expected to operate at an acceptable v/c ratio (under 1.00) in both the AM and PM peak periods with the I-75 SIMR Alternative and I-75 Interim Build improvements implemented. However, several of the I-75 segments upstream and downstream of the ramps are not expected to perform at an acceptable v/c ratio. The density was calculated for the I-75 segments upstream of the off ramps and it was determined that both the northbound and southbound I-75 off ramps are expected to operate at an unacceptable LOS of E or worse. The results of the special case methodology for major merge and diverge areas can be found in **Table 5.4**.

Table 5.5 shows the results of the major merge and diverge analyses with the I-75 SIMR Alternative and I-75 Ultimate Build improvements implemented. The v/c ratios for all ramps, upstream segments, and downstream segments are expected to be within acceptable levels in both the AM and PM peak periods. The density was calculated for the I-75 segments upstream of the off ramps and it was determined that both the northbound and southbound I-75 off ramps are expected to operate at an acceptable LOS D or better in both the AM and PM peak periods.

Table 5.4. Design Year (2040) I-75/Bee Ridge Road Capacity, Density, and LOS – I-75 SIMR Alternative with I-75 Interim Build

Item	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c	AM Density (pc/mi/ln)	PM Density (pc/mi/ln)	AM LOS	PM LOS
Northbound I-75/Bee Ridge Road Off Ramp									
Upstream of Northbound I-75 Off Ramp	9600	11232	9139	1.170	0.952	49.1	40.0	F	E
Northbound I-75 Off Ramp	4200	1832	1592	0.436	0.379	-	-	-	-
Downstream of Northbound I-75 Off Ramp	7200	9400	7547	1.305	1.048	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	8532	6439	1.939	1.463	-	-	-	-
Northbound I-75/Bee Ridge Road On Ramp									
Upstream of Northbound I-75 On Ramp	7200	9381	7531	1.303	1.046	-	-	-	-
Northbound I-75 Loop On Ramp from Eastbound Bee Ridge Road	2000	1202	1603	0.601	0.802	-	-	-	-
Northbound I-75 On Ramp from Westbound Bee Ridge Road	2100	759	406	0.361	0.193	-	-	-	-
Northbound I-75 On Ramp (Eastbound Loop and Westbound Ramp Segments Combined)	2100	1961	2009	0.934	0.956	-	-	-	-
Downstream of Northbound I-75 On Ramp	9600	11342	9540	1.181	0.994	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	8642	6840	1.879	1.487	-	-	-	-
Southbound I-75/Bee Ridge Road Off Ramp									
Upstream of Southbound I-75 Off Ramp	9600	9921	11275	1.033	1.174	43.4	49.3	F	F
Southbound I-75 Off Ramp	4200	2244	1848	0.534	0.440	-	-	-	-
Downstream of Southbound I-75 Off Ramp	7200	7677	9427	1.066	1.309	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	7221	8575	1.641	1.949	-	-	-	-
Southbound I-75/Bee Ridge Road On Ramp									
Upstream of Southbound I-75 On Ramp	7200	7655	9408	1.063	1.307	-	-	-	-
Southbound I-75 On Ramp	4200	1651	1704	0.393	0.406	-	-	-	-
Downstream of Southbound I-75 On Ramp	9600	9306	11113	0.969	1.158	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	6606	8412	1.436	1.829	-	-	-	-

Table 5.5. Design Year (2040) I-75/Bee Ridge Road Capacity, Density, and LOS – I-75 SIMR Alternative with I-75 Ultimate Build

Item	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c	AM Density (pc/mi/ln)	PM Density (pc/mi/ln)	AM LOS	PM LOS
Northbound I-75/Bee Ridge Road Off Ramp									
Upstream of Northbound I-75 Off Ramp	9600	7331	5816	0.764	0.606	32.1	25.4	D	C
Northbound I-75 Off Ramp	4200	1832	1592	0.436	0.379	-	-	-	-
Downstream of Northbound I-75 Off Ramp	7200	5499	4224	0.764	0.587	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	4631	3493	1.053	0.794	-	-	-	-
Northbound I-75/Bee Ridge Road On Ramp									
Upstream of Northbound I-75 On Ramp	7200	5481	4208	0.761	0.584	-	-	-	-
Northbound I-75 Loop On Ramp from Eastbound Bee Ridge Road	2000	1202	1603	0.601	0.802	-	-	-	-
Northbound I-75 On Ramp from Westbound Bee Ridge Road	2100	759	406	0.361	0.193	-	-	-	-
Northbound I-75 On Ramp (Eastbound Loop and Westbound Ramp Segments Combined)	2100	1961	2009	0.934	0.956	-	-	-	-
Downstream of Northbound I-75 On Ramp	9600	7442	6217	0.775	0.648	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	5356	4616	1.164	1.003	-	-	-	-
Southbound I-75/Bee Ridge Road Off Ramp									
Upstream of Southbound I-75 Off Ramp	9600	6598	7375	0.687	0.768	28.9	32.3	D	D
Southbound I-75 Off Ramp	4200	2244	1848	0.534	0.440	-	-	-	-
Downstream of Southbound I-75 Off Ramp	7200	4354	5526	0.605	0.768	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	4203	4675	0.955	1.063	-	-	-	-
Southbound I-75/Bee Ridge Road On Ramp									
Upstream of Southbound I-75 On Ramp	7200	4332	5508	0.602	0.765	-	-	-	-
Southbound I-75 On Ramp	4200	1651	1704	0.393	0.406	-	-	-	-
Downstream of Southbound I-75 On Ramp	9600	5983	7212	0.623	0.751	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	4126	4851	0.897	1.055	-	-	-	-

5.3 Design Year (2040) I-75 SIMR Alternative Operational Analysis

VISSIM was used to analyze the Bee Ridge Road arterial and signalized intersections within the project area in the design year (2040). Maximum vehicle queuing on each intersection approach was also analyzed at the study intersections. The operational analysis results and VISSIM animation clips during the AM and PM peak hours are shown in **Appendix F**.

5.3.1 Arterial Operational Analysis

The design year (2040) DDHVs were used in the arterial analyses for the Bee Ridge Road and Cattlemen Road segments within the study area for the I-75 SIMR Alternative during both the AM and PM peak periods. Average speeds were extracted from VISSIM in order to conduct the arterial segment operational analysis. The Bee Ridge Road and Cattlemen Road average speeds are shown in **Table 5.6**. The Bee Ridge Road/Cattlemen Road intersection approaches all operate with average travel speeds lower than 15 mph during both the AM and PM peak hours. Low travel speeds may be attributed to red-time delays at signalized intersections.

Table 5.6. Design Year (2040) Arterial Average Speed – I-75 SIMR Alternative

Segment	Segment Length (ft)	Posted Speed (mph)	Arterial Average Speed (mph)	
			AM	PM
Eastbound Bee Ridge Road				
Maxfield Drive to Cattlemen Road	650	45	13.5	12.7
Cattlemen Road to I-75 West Ramp Terminal	745	45	25.5	20.8
I-75 West Ramp Terminal to I-75 East Ramp Terminal	1060	45	17.7	15.1
I-75 East Ramp Terminal to Mauna Loa Boulevard	1875	45	29.0	28.0
Westbound Bee Ridge Road				
Mauna Loa Boulevard to I-75 East Ramp Terminal	1875	45	12.1	21.9
I-75 East Ramp Terminal to I-75 West Ramp Terminal	1060	45	10.2	14.4
I-75 West Ramp Terminal to Cattlemen Road	745	45	7.0	12.2
Cattlemen Road to Maxfield Drive	650	45	12.2	19.8
Northbound Cattlemen Road				
Wilkinson Road to Center Pointe Drive	2210	40	23.1	24.5
Center Pointe Drive to Bee Ridge Road	1410	40	10.9	12.6
Bee Ridge Road to Maxfield Drive	775	40	20.8	17.2
Southbound Cattlemen Road				
Maxfield Drive to Bee Ridge Road	775	35	9.0	10.3
Bee Ridge Road to Center Pointe Drive	1410	35	24.2	14.1
Center Pointe Drive to Wilkinson Road	2210	35	29.9	26.5

5.3.2 Intersection Operational Analysis

The intersections within the project area were analyzed in VISSIM in order to determine if the improvements would have adverse impacts to adjacent intersection operations. The design year

(2040) approach and overall intersection control delay results are summarized in **Table 5.7** and shown graphically on **Figure 5.1**. The Bee Ridge Road/Cattlemen Road and Bee Ridge Road/Maxfield Drive intersections are projected to have overall delays in excess of 60.0 and 75.0 s/veh, respectively, during both the AM and PM peak hours with the I-75 SIMR Alternative. The I-75 east ramp terminal and Bee Ridge Road/Mauna Loa Boulevard are projected to have overall delays in excess of 65.0 and 75.0 s/veh, respectively, during the AM peak hour with the I-75 SIMR Alternative. The Cattlemen Road/Center Pointe Drive intersection is projected to have an overall delay in excess of 55.0 s/veh during the PM peak hour with the I-75 SIMR Alternative.

Table 5.7. Design Year (2040) Intersection Control Delay – I-75 SIMR Alternative

Intersection	Intersection Approach Delay (s/veh)								Overall Intersection Delay (s/veh)	
	Eastbound		Westbound		Northbound		Southbound			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	77.2	88.1	58.8	68.4	14.6	18.7	60.9	67.0	40.8	50.1
Bee Ridge Road/Maxfield Drive	114.1	127.8	55.7	37.7	60.7	91.9	59.9	58.0	77.7	77.7
Bee Ridge Road/Cattlemen Road	46.0	52.9	66.1	53.0	116.4	96.5	94.1	69.4	76.7	64.3
Bee Ridge Road/I-75 West Ramp Terminal	12.0	16.9	56.7	36.4	N/A	N/A	115.7	76.9	53.9	35.9
Bee Ridge Road/I-75 East Ramp Terminal	21.2	22.4	80.3	27.0	120.8	46.0	N/A	N/A	66.6	29.5
Bee Ridge Road/Mauna Loa Boulevard	28.3	26.6	101.1	31.9	184.3	49.3	38.4	26.8	76.3	31.1
Cattlemen Road/Center Pointe Drive	48.9	43.6	48.0	71.7	46.9	47.2	25.8	71.6	39.4	59.6
Cattlemen Road/Wilkinson Road	55.7	46.2	N/A	N/A	5.5	9.1	9.6	13.2	9.3	15.8

5.3.3 Vehicle Queuing Operational Analysis

The design year (2040) DDHVs were used in the vehicle queue analysis at the I-75 east and west ramp terminals, as well as the other intersections in the study area. Vehicle queuing results were extracted from VISSIM for the analysis. The design year (2040) maximum vehicle queuing results on each approach of the study intersections are shown on **Figure 5.2**. The results show that there is vehicle queuing on the northbound and southbound I-75 off ramps in excess of 3900 ft and 3300 ft, respectively, during the AM peak hour. The eastbound approach of the Bee Ridge Road/Maxfield Drive intersection shows vehicle queues approaching 6000 ft during both the AM and PM peak hours. The westbound approach of the Bee Ridge Road/Mauna Loa Boulevard intersection shows vehicle queues in excess of 2500 ft during the AM peak hour. The vehicle queuing results for the other intersection approaches within the project area may appear lower due to the traffic metering at the Bee Ridge Road/Maxfield Drive intersection, which prevents vehicles from entering the network.

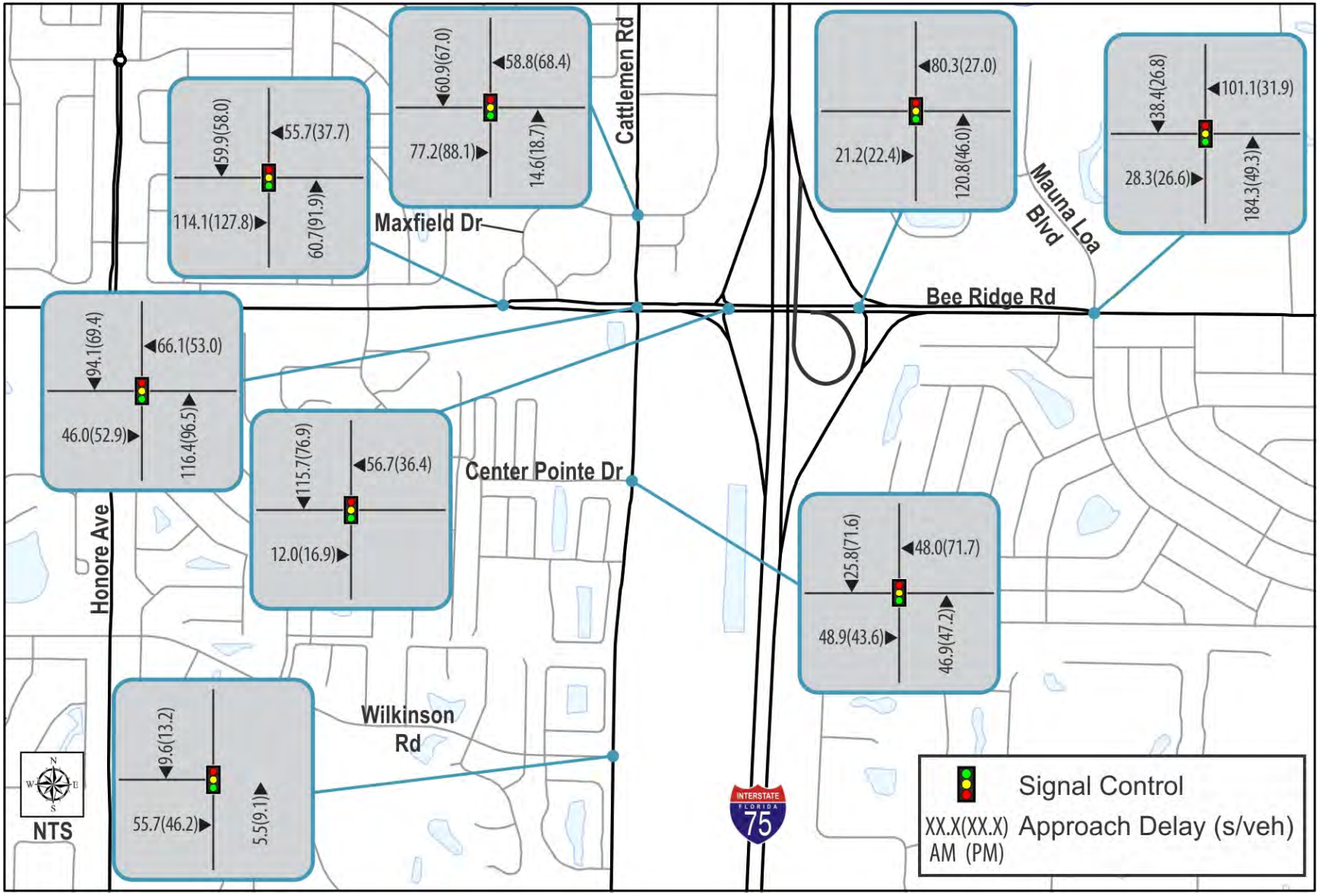


Figure 5.1. Design Year (2040) Approach and Intersection Control Delay – I-75 SIMR Alternative

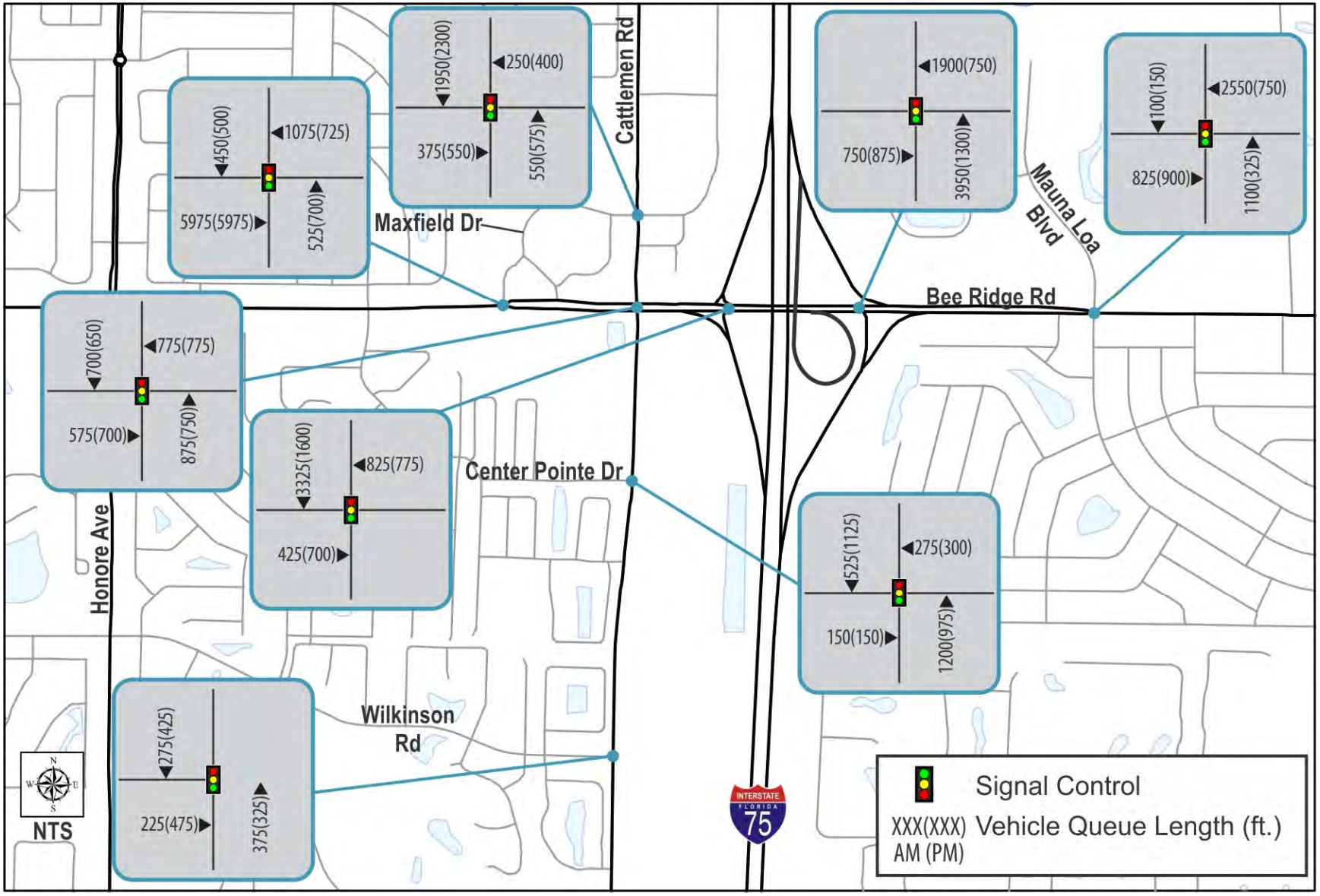


Figure 5.2. Design Year (2040) Maximum Vehicle Queue Lengths – I-75 SIMR Alternative

5.4 Design Year (2040) Proposed Build Alternative Ramp Operational Analysis

The I-75/Bee Ridge Road ramps in the Proposed Build Alternative were analyzed using HCS 2010 for the I-75 Interim Build and Ultimate Build improvements during both the AM and PM peak periods in the design year (2040). The I-75 SIMR and Proposed Build Alternatives both include the same I-75 Interim Build and Ultimate Build improvements for the I-75 mainline. The design year (2040) DDHVs were used in the HCS 2010 analysis.

The special case methodology for major merge and major diverge areas was used for the Proposed Build Alternative ramp analyses due to the presence of auxiliary lanes between the I-75/Bee Ridge Road interchange and adjacent interchanges to the north and south, with the exception of the southbound I-75/Wilkinson Road off ramp. The standard HCM 2010 ramp methodology was used to analyze the southbound I-75/Wilkinson Road off ramp. Using this methodology, the v/c ratios were calculated for the ramps and the segments upstream and downstream of the ramps. The major diverge methodology calculates the density and LOS of the segment upstream of the off ramps while the major merge methodology only considers v/c ratios for ramp analysis. The HCS 2010 standard ramp analysis was completed to determine the flow rates in lanes one and two of the freeway segment upstream of the ramp influence areas (v_{12} or v_{12a}), the flow rates on the ramps (v_r), and the flow rates entering the ramp merge areas (v_{r12}). However, the density and LOS results using this standard methodology were not used for the analysis, with the exception of the southbound I-75/Wilkinson Road off ramp. The output for the HCS 2010 standard ramp analysis and HCM 2010 special case analysis calculations can be found in **Appendix G**.

The I-75/Bee Ridge Road ramps are expected to operate at an acceptable v/c ratio (under 1.00) in both the AM and PM peak periods with the Proposed Build Alternative and I-75 Interim Build improvements implemented. However, several of the I-75 segments upstream and downstream of the ramps are not expected to perform at an acceptable v/c ratio. The density was calculated for the I-75 segments upstream of the off ramps and it was determined that both the northbound and southbound I-75 off ramps are expected to operate at an unacceptable LOS of E or worse. The Wilkinson Road off ramp was analyzed using the HCS 2010 standard ramp analysis and is expected to operate at LOS C or better. The results of the special case methodology for major merge and diverge areas can be found in **Table 5.8**.

Table 5.9 shows the results of the major merge and diverge analyses with the Proposed Build Alternative and I-75 Ultimate Build improvements implemented. The v/c ratios for all ramps, upstream segments, and downstream segments are expected to be within acceptable levels in both the AM and PM peak periods. The density was calculated for the I-75 segments upstream of the off ramps and it was determined that both the northbound and southbound I-75 off ramps are expected to operate at an acceptable LOS D or better in both the AM and PM peak periods. The Wilkinson Road off ramp was analyzed using the HCS 2010 standard ramp analysis and is expected to operate at LOS C or better in both the AM and PM peak periods.

Table 5.8. Design Year (2040) I-75/Bee Ridge Road Capacity, Density, and LOS – Proposed Build Alternative with I-75 Interim Build

Item	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c	AM Density (pc/mi/ln)	PM Density (pc/mi/ln)	AM LOS	PM LOS
Northbound I-75/Bee Ridge Road Off Ramp									
Upstream of Northbound I-75 Off Ramp	9600	11232	9139	1.170	0.952	49.1	40.0	F	E
Northbound I-75 Off Ramp	4200	1832	1592	0.436	0.379	-	-	-	-
Downstream of Northbound I-75 Off Ramp	7200	9400	7547	1.305	1.048	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	8532	6439	1.939	1.463	-	-	-	-
Northbound I-75/Bee Ridge Road On Ramp									
Upstream of Northbound I-75 On Ramp	7200	9381	7531	1.303	1.046	-	-	-	-
Northbound I-75 On Ramp	4200	1961	2009	0.467	0.478	-	-	-	-
Downstream of Northbound I-75 On Ramp	9600	11342	9540	1.181	0.994	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	8642	6840	1.879	1.487	-	-	-	-
Southbound I-75/Bee Ridge Road Off Ramp									
Upstream of Southbound I-75 Off Ramp	9600	9921	11275	1.033	1.174	43.4	49.3	F	F
Southbound I-75 Off Ramp	4200	2244	1848	0.534	0.440	-	-	-	-
Southbound I-75 Wilkinson Road Off Ramp	2100	406	337	0.193	0.160	21.3	17.9	C	B
Downstream of Southbound I-75 Off Ramp	7200	7677	9427	1.066	1.309	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	7221	8575	1.641	1.949	-	-	-	-
Southbound I-75/Bee Ridge Road On Ramp									
Upstream of Southbound I-75 On Ramp	7200	7655	9408	1.063	1.307	-	-	-	-
Southbound I-75 On Ramp	4200	1651	1704	0.393	0.406	-	-	-	-
Downstream of Southbound I-75 On Ramp	9600	9306	11113	0.969	1.158	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	6606	8412	1.436	1.829	-	-	-	-

Table 5.9. Design Year (2040) I-75/Bee Ridge Road Capacity, Density, and LOS – Proposed Build Alternative with I-75 Ultimate Build

Item	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c	AM Density (pc/mi/ln)	PM Density (pc/mi/ln)	AM LOS	PM LOS
Northbound I-75/Bee Ridge Road Off Ramp									
Upstream of Northbound I-75 Off Ramp	9600	7331	5816	0.764	0.606	32.1	25.4	D	C
Northbound I-75 Off Ramp	4200	1832	1592	0.436	0.379	-	-	-	-
Downstream of Northbound I-75 Off Ramp	7200	5499	4224	0.764	0.587	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	4631	3493	1.053	0.794	-	-	-	-
Northbound I-75/Bee Ridge Road On Ramp									
Upstream of Northbound I-75 On Ramp	7200	5481	4208	0.761	0.584	-	-	-	-
Northbound I-75 On Ramp	4200	1961	2009	0.467	0.478	-	-	-	-
Downstream of Northbound I-75 On Ramp	9600	7442	6217	0.775	0.648	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	5093	4413	1.107	0.959	-	-	-	-
Southbound I-75/Bee Ridge Road Off Ramp									
Upstream of Southbound I-75 Off Ramp	9600	6598	7375	0.687	0.768	28.9	32.3	D	D
Southbound I-75 Off Ramp	4200	2244	1848	0.534	0.440	-	-	-	-
Southbound I-75 Wilkinson Road Off Ramp	2100	406	337	0.193	0.160	21.3	17.9	C	B
Downstream of Southbound I-75 Off Ramp	7200	4354	5526	0.605	0.768	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	4203	4675	0.955	1.063	-	-	-	-
Southbound I-75/Bee Ridge Road On Ramp									
Upstream of Southbound I-75 On Ramp	7200	4332	5508	0.602	0.765	-	-	-	-
Southbound I-75 On Ramp	4200	1651	1704	0.393	0.406	-	-	-	-
Downstream of Southbound I-75 On Ramp	9600	5983	7212	0.623	0.751	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	4126	4851	0.897	1.055	-	-	-	-

5.5 Design Year (2040) Proposed Build Alternative Operational Analysis

As with the I-75 SIMR Alternative, VISSIM was used to analyze the Bee Ridge Road arterial and intersection control delay at signalized intersections within the project area for the Proposed Build Alternative in the design year (2040). Maximum vehicle queuing on each intersection approach was also analyzed at the study intersections. The operational analysis results and VISSIM animation clips during the AM and PM peak hours are shown in **Appendix F**.

5.5.1 Arterial Operational Analysis

The design year (2040) DDHVs were used in the arterial analyses for the Bee Ridge Road and Cattlemen Road segments within the study area for the Proposed Build Alternative during both the AM and PM peak periods. Average speeds were extracted from VISSIM in order to conduct the arterial segment operational analysis. The Bee Ridge Road and Cattlemen Road average speeds are shown in **Table 5.10**. The Bee Ridge Road/Cattlemen Road intersection approaches all operate with average travel speeds lower than 15 mph during both the AM and PM peak hours, with the exception of northbound Cattlemen Road from Center Pointe Drive to Bee Ridge Road and eastbound Bee Ridge Road from Maxfield Drive to Cattlemen Road during the AM peak hour. Low travel speeds may be attributed to red-time delays at signalized intersections.

Table 5.10. Design Year (2040) Arterial Average Speed – Proposed Build Alternative

Segment	Segment Length (ft)	Posted Speed (mph)	Arterial Average Speed (mph)	
			AM	PM
Eastbound Bee Ridge Road				
Maxfield Drive to Cattlemen Road	650	45	18.6	12.9
Cattlemen Road to I-75 West Ramp Terminal	745	45	21.0	19.0
I-75 West Ramp Terminal to I-75 East Ramp Terminal	1060	45	12.0	13.1
I-75 East Ramp Terminal to Mauna Loa Boulevard	1875	45	23.8	22.7
Westbound Bee Ridge Road				
Mauna Loa Boulevard to I-75 East Ramp Terminal	1875	45	19.2	19.6
I-75 East Ramp Terminal to I-75 West Ramp Terminal	1060	45	11.4	8.3
I-75 West Ramp Terminal to Cattlemen Road	745	45	9.4	8.8
Cattlemen Road to Maxfield Drive	650	45	22.5	26.5
Northbound Cattlemen Road				
Wilkinson Road to Center Pointe Drive	2210	40	25.1	26.5
Center Pointe Drive to Bee Ridge Road	1410	40	18.4	22.6
Bee Ridge Road to Maxfield Drive	775	40	15.3	20.3
Southbound Cattlemen Road				
Maxfield Drive to Bee Ridge Road	775	35	10.5	8.6
Bee Ridge Road to Center Pointe Drive	1410	35	24.7	24.5
Center Pointe Drive to Wilkinson Road	2210	35	25.5	22.5

5.5.2 Intersection Operational Analysis

The intersections within the project area were analyzed in VISSIM in order to determine if the improvements would have adverse impacts to adjacent intersection operations. The design year (2040) approach and overall intersection control delay results are summarized in **Table 5.11** and shown graphically on **Figure 5.3**. All overall intersections are projected to operate with control delays less than 45.0 and 55.0 s/veh during both the AM and PM peak hours, respectively.

Table 5.11. Design Year (2040) Intersection Control Delay – Proposed Build Alternative

Intersection	Intersection Approach Delay (s/veh)								Overall Intersection	
	Eastbound		Westbound		Northbound		Southbound			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	49.4	39.1	60.4	92.1	15.4	9.7	23.1	30.5	23.1	28.1
Bee Ridge Road/Maxfield Drive	32.9	46.9	16.9	12.3	48.6	62.0	71.8	53.9	27.8	33.5
Bee Ridge Road/Cattlemen Road	36.4	64.9	26.9	35.1	82.4	69.9	60.3	56.7	44.6	53.6
Bee Ridge Road/I-75 West Ramp Terminal	18.8	17.3	45.2	58.7	N/A	N/A	39.3	32.7	32.3	33.2
Bee Ridge Road/I-75 East Ramp Terminal	37.5	33.1	30.0	29.3	38.7	38.3	57.6	42.8	30.3	27.1
Bee Ridge Road/Mauna Loa Boulevard	27.8	26.6	36.6	28.6	65.6	52.5	33.9	29.6	36.7	30.4
Cattlemen Road/Center Pointe Drive	43.4	43.8	41.7	43.3	24.7	23.5	19.2	17.3	25.0	23.4
Cattlemen Road/Wilkinson Road	21.0	24.5	25.1	21.9	17.2	13.7	19.5	31.8	19.0	23.0

5.5.3 Vehicle Queuing Operational Analysis

The design year (2040) DDHVs were used in the vehicle queue analysis at the I-75 east and west ramp terminals, as well as the other intersections in the study area. Vehicle queuing results were extracted from VISSIM for the analysis. The design year (2040) maximum vehicle queuing results on each approach of the study intersections are shown on **Figure 5.4**. The results show that only minor vehicle queuing is projected on all intersection approaches within the project area during both the AM and PM peak hours.

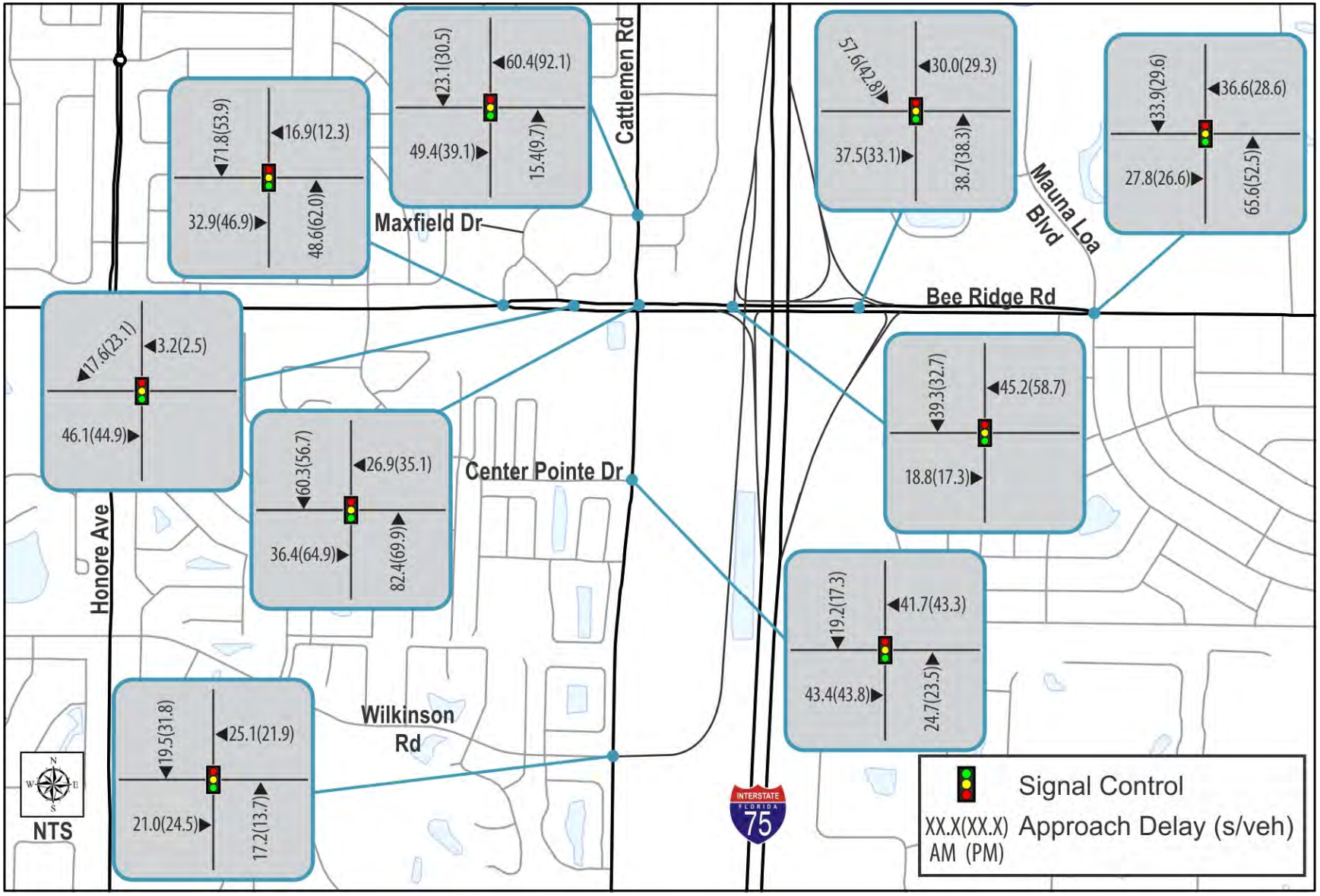


Figure 5.3. Design Year (2040) Approach and Intersection Control Delay – Proposed Build Alternative

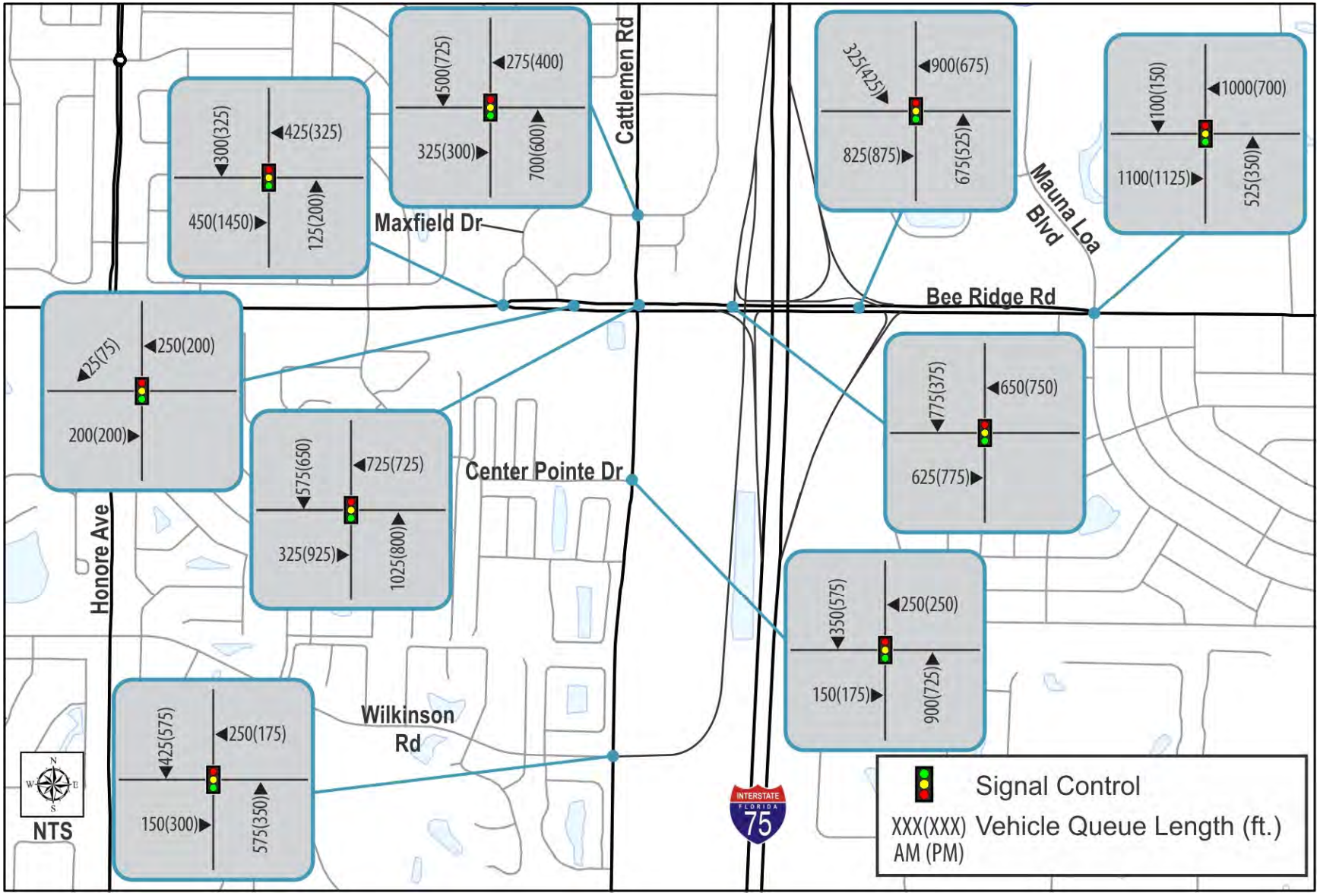


Figure 5.4. Design Year (2040) Maximum Vehicle Queue Lengths – Proposed Build Alternative

5.6 Opening Year (2020) Mainline Operational Analysis

The I-75 mainline was analyzed using HCS 2010 for the existing configuration and I-75 Interim Build during both the AM and PM peak periods in the opening year (2020). The I-75 SIMR and Proposed Build Alternatives both include the same I-75 Interim Build improvements for the I-75 mainline. The opening year (2020) DDHVs were used in the HCS 2010 analysis. The I-75 mainline densities and LOS are summarized in **Table 5.12** and **Table 5.13** for the existing configuration and I-75 Interim Build improvements, respectively. The I-75 mainline is not projected to perform at an acceptable LOS in the opening year (2020) with the existing configuration in the northbound direction during the AM peak hour and in the southbound direction during the PM peak hour. However, it is projected to perform at an acceptable LOS in the opening year (2020) on all segments within the study area during both the AM and PM peak hours for the I-75 Interim Build improvements. The HCS 2010 output for the opening year (2020) can be found in **Appendix G**.

Table 5.12. Opening Year (2020) I-75 Mainline Density and LOS – Existing Configuration

Segment	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75, South of Bee Ridge Road	38.4	29.0	E	D
Northbound I-75, North of Bee Ridge Road	42.0	35.0	E	E
Southbound I-75, North of Bee Ridge Road	34.7	44.6	D	E
Southbound I-75, South of Bee Ridge Road	28.7	40.6	D	E

Table 5.13. Opening Year (2020) I-75 Mainline Density and LOS – Interim Build

Segment	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM
Northbound I-75, South of Bee Ridge Road	24.7	20.3	C	C
Northbound I-75, North of Bee Ridge Road	26.2	23.2	D	C
Southbound I-75, North of Bee Ridge Road	23.1	27.2	C	D
Southbound I-75, South of Bee Ridge Road	20.1	25.6	C	C

5.7 Opening Year (2020) I-75 SIMR Alternative Ramp Operational Analysis

The I-75/Bee Ridge Road ramps in the I-75 SIMR Alternative were analyzed using HCS 2010 for the I-75 Interim Build improvements during both the AM and PM peak periods in the opening year (2020). The I-75 SIMR and Proposed Build Alternatives both include the same I-75 Interim Build improvements for the I-75 mainline. The opening year (2020) DDHVs were used in the HCS 2010 analysis.

The special case methodology for major merge and major diverge areas was used for the I-75 SIMR Alternative ramp analyses due to the presence of auxiliary lanes between the I-75/Bee Ridge Road interchange and adjacent interchanges to the north and south. Using this methodology, the v/c ratios were calculated for the ramps and the segments upstream and downstream of the ramps. The major diverge methodology calculates the density and LOS of the segment upstream of the off ramps while

the major merge methodology only considers v/c ratios for ramp analysis. The HCS 2010 standard ramp analysis was completed to determine the flow rates in lanes one and two of the freeway segment upstream of the ramp influence areas (v_{12} or v_{12a}), the flow rates on the ramps (v_r), and the flow rates entering the ramp merge areas (v_{r12}). However, the density and LOS results using this standard methodology were not used for the analysis. The output for the HCS 2010 standard ramp analysis and HCM 2010 special case analysis calculations can be found in **Appendix G**.

Table 5.14 shows the results of the major merge and diverge analyses with the I-75 SIMR Alternative and I-75 Interim Build improvements implemented. The v/c ratios for all ramps, upstream segments, and downstream segments are expected to be within acceptable levels in both the AM and PM peak periods. The density was calculated for the I-75 segments upstream of the off ramps and it was determined that both the northbound and southbound I-75 off ramps are expected to operate at an acceptable LOS D or better in both the AM and PM peak periods.

Table 5.14. Opening Year (2020) I-75/Bee Ridge Road Capacity, Density, and LOS – I-75 SIMR Alternative with I-75 Interim Build

Item	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c	AM Density (pc/mi/ln)	PM Density (pc/mi/ln)	AM LOS	PM LOS
Northbound I-75/Bee Ridge Road Off Ramp									
Upstream of Northbound I-75 Off Ramp	9600	6668	5632	0.695	0.587	29.2	24.6	D	C
Northbound I-75 Off Ramp	4200	1255	855	0.299	0.204	-	-	-	-
Downstream of Northbound I-75 Off Ramp	7200	5413	4777	0.752	0.664	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	3968	3218	0.902	0.731	-	-	-	-
Northbound I-75/Bee Ridge Road On Ramp									
Upstream of Northbound I-75 On Ramp	7200	5400	4769	0.750	0.662	-	-	-	-
Northbound I-75 Loop On Ramp from Eastbound Bee Ridge Road	2000	962	1229	0.481	0.615	-	-	-	-
Northbound I-75 On Ramp from Westbound Bee Ridge Road	2100	598	326	0.285	0.155	-	-	-	-
Northbound I-75 On Ramp (Eastbound Loop and Westbound Ramp Segments Combined)	2100	1560	1555	0.743	0.740	-	-	-	-
Downstream of Northbound I-75 On Ramp	9600	6960	6324	0.725	0.659	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	4905	4509	1.066	0.980	-	-	-	-
Southbound I-75/Bee Ridge Road Off Ramp									
Upstream of Southbound I-75 Off Ramp	9600	6306	7170	0.657	0.747	27.6	31.4	C	D
Southbound I-75 Off Ramp	4200	1635	1485	0.389	0.354	-	-	-	-
Downstream of Southbound I-75 Off Ramp	7200	4672	5685	0.649	0.790	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	3737	4470	0.849	1.016	-	-	-	-
Southbound I-75/Bee Ridge Road On Ramp									
Upstream of Southbound I-75 On Ramp	7200	4656	5670	0.647	0.787	-	-	-	-
Southbound I-75 On Ramp	4200	930	1181	0.221	0.281	-	-	-	-
Downstream of Southbound I-75 On Ramp	9600	5585	6850	0.582	0.714	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	3590	4421	0.780	0.961	-	-	-	-

5.8 Opening Year (2020) I-75 SIMR Alternative Operational Analysis

VISSIM was used to analyze the Bee Ridge Road arterial and signalized intersections within the project area in the opening year (2020). Maximum vehicle queuing on each intersection approach was also analyzed at the study intersections.

5.8.1 Arterial Operational Analysis

The opening year (2020) DDHVs were used in the arterial analyses for the Bee Ridge Road and Cattlemen Road segments within the study area for the I-75 SIMR Alternative during both the AM and PM peak periods. Average speeds were extracted from VISSIM in order to conduct the arterial segment operational analysis. The Bee Ridge Road and Cattlemen Road projected average speeds are shown in **Table 5.15**. The Bee Ridge Road/Cattlemen Road intersection approaches are projected to operate with average travel speeds less than 15 mph during both the AM and PM peak hours. Low travel speeds may be attributed to red-time delays at signalized intersections.

Table 5.15. Opening Year (2020) Arterial Average Speed – I-75 SIMR Alternative

Segment	Segment Length (ft)	Posted Speed (mph)	Arterial Average Speed (mph)	
			AM	PM
Eastbound Bee Ridge Road				
Maxfield Drive to Cattlemen Road	650	45	14.8	13.5
Cattlemen Road to I-75 West Ramp Terminal	745	45	27.4	25.0
I-75 West Ramp Terminal to I-75 East Ramp Terminal	1060	45	22.6	20.6
I-75 East Ramp Terminal to Mauna Loa Boulevard	1875	45	33.4	31.0
Westbound Bee Ridge Road				
Mauna Loa Boulevard to I-75 East Ramp Terminal	1875	45	25.9	31.0
I-75 East Ramp Terminal to I-75 West Ramp Terminal	1060	45	17.8	20.5
I-75 West Ramp Terminal to Cattlemen Road	745	45	13.2	14.7
Cattlemen Road to Maxfield Drive	650	45	27.0	27.6
Northbound Cattlemen Road				
Wilkinson Road to Center Pointe Drive	2210	40	28.4	27.9
Center Pointe Drive to Bee Ridge Road	1410	40	14.8	14.8
Bee Ridge Road to Maxfield Drive	775	40	22.2	21.8
Southbound Cattlemen Road				
Maxfield Drive to Bee Ridge Road	775	35	12.4	12.3
Bee Ridge Road to Center Pointe Drive	1410	35	27.4	26.2
Center Pointe Drive to Wilkinson Road	2210	35	31.9	30.9

5.8.2 Intersection Operational Analysis

The intersections within the project area were analyzed in VISSIM in order to determine if the improvements would have adverse impacts to adjacent intersection operations. The opening year (2020) approach and overall intersection control delay results are summarized in **Table 5.16** and

shown graphically on **Figure 5.5**. All intersections are projected to have overall delays lower than 50.0 s/veh during both the AM and PM peak hours, with the exception of the Bee Ridge Road/Maxfield Drive intersection during the PM peak hour, which is projected to have overall delays in excess of 50.0 s/veh.

Table 5.16. Opening Year (2020) Intersection Control Delay – I-75 SIMR Alternative

Intersection	Intersection Approach Delay (s/veh)								Overall Intersection	
	Eastbound		Westbound		Northbound		Southbound			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	50.4	48.9	53.8	65.7	14.3	15.0	16.9	26.7	19.4	27.9
Bee Ridge Road/Maxfield Drive	50.9	97.7	17.4	24.7	37.2	83.0	37.5	55.5	33.0	64.9
Bee Ridge Road/Cattlemen Road	36.7	46.0	31.3	30.7	64.4	67.9	60.2	57.3	42.8	47.4
Bee Ridge Road/I-75 West Ramp Terminal	10.6	11.1	28.8	28.7	N/A	N/A	44.2	45.1	26.2	23.9
Bee Ridge Road/I-75 East Ramp Terminal	12.3	12.2	15.7	8.9	36.4	39.4	N/A	N/A	19.7	16.0
Bee Ridge Road/Mauna Loa Boulevard	21.9	17.8	26.5	19.4	68.2	43.4	22.7	18.2	32.9	21.3
Cattlemen Road/Center Pointe Drive	44.6	41.2	42.8	44.3	15.0	21.0	12.0	15.8	17.3	21.8
Cattlemen Road/Wilkinson Road	57.4	48.7	N/A	N/A	3.8	4.8	4.9	7.1	7.3	10.1

5.8.3 Vehicle Queuing Operational Analysis

The opening year (2020) DDHVs were used in the vehicle queue analysis at the I-75 east and west ramp terminals, as well as the other intersections in the study area. Vehicle queuing results were extracted from VISSIM for the analysis. The opening year (2020) maximum vehicle queuing results on each approach of the study intersections are shown on **Figure 5.6**. The results show that there is projected to be vehicle queuing on the eastbound approach of the Bee Ridge Road/Maxfield Drive intersection in excess of 5600 ft during the PM peak hour. The vehicle queuing results for the other intersection approaches within the project area may appear lower due to the traffic metering at the Bee Ridge Road/Maxfield Drive intersection, which prevents vehicles from entering the network.

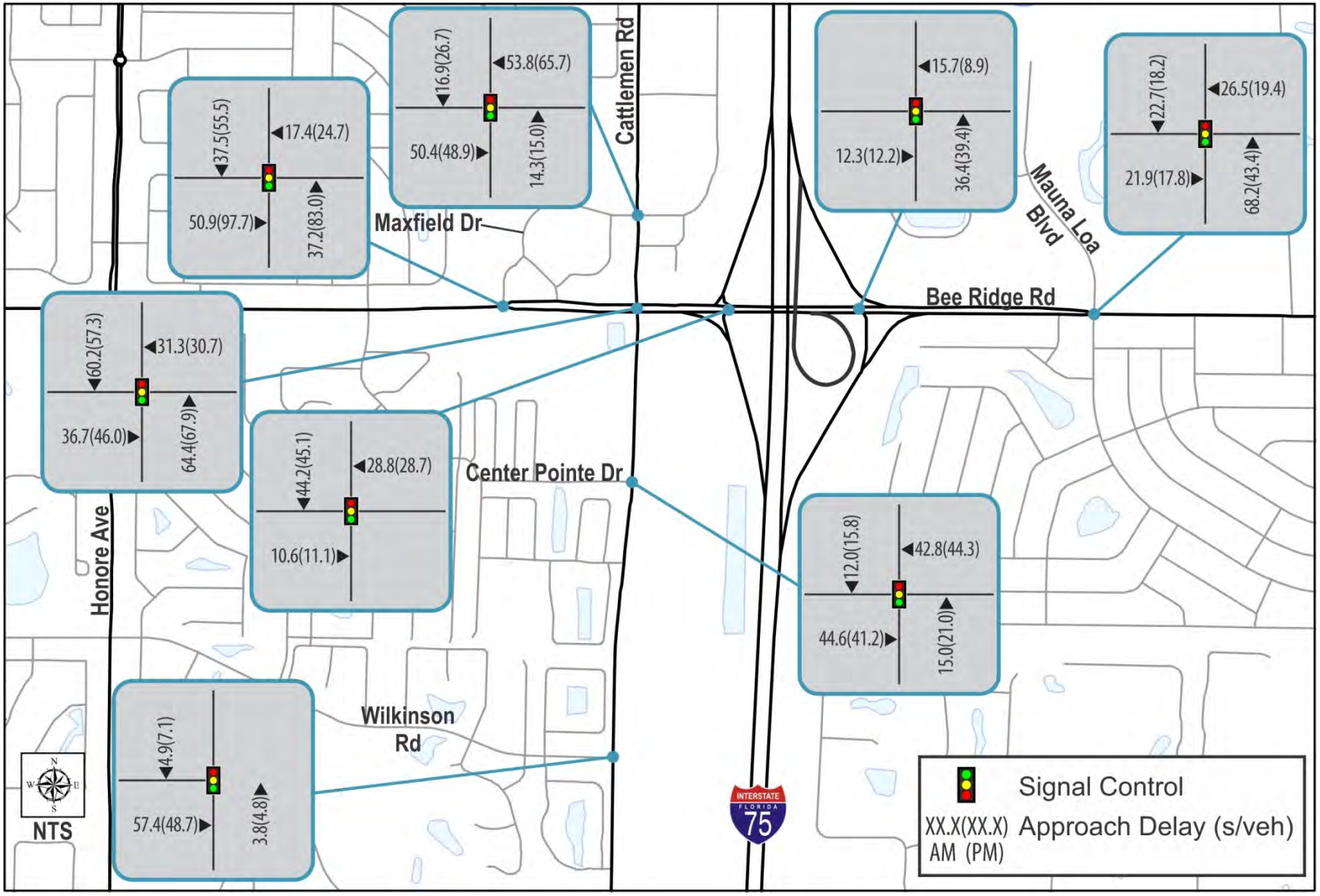


Figure 5.5. Opening Year (2020) Approach and Intersection Control Delay – I-75 SIMR Alternative

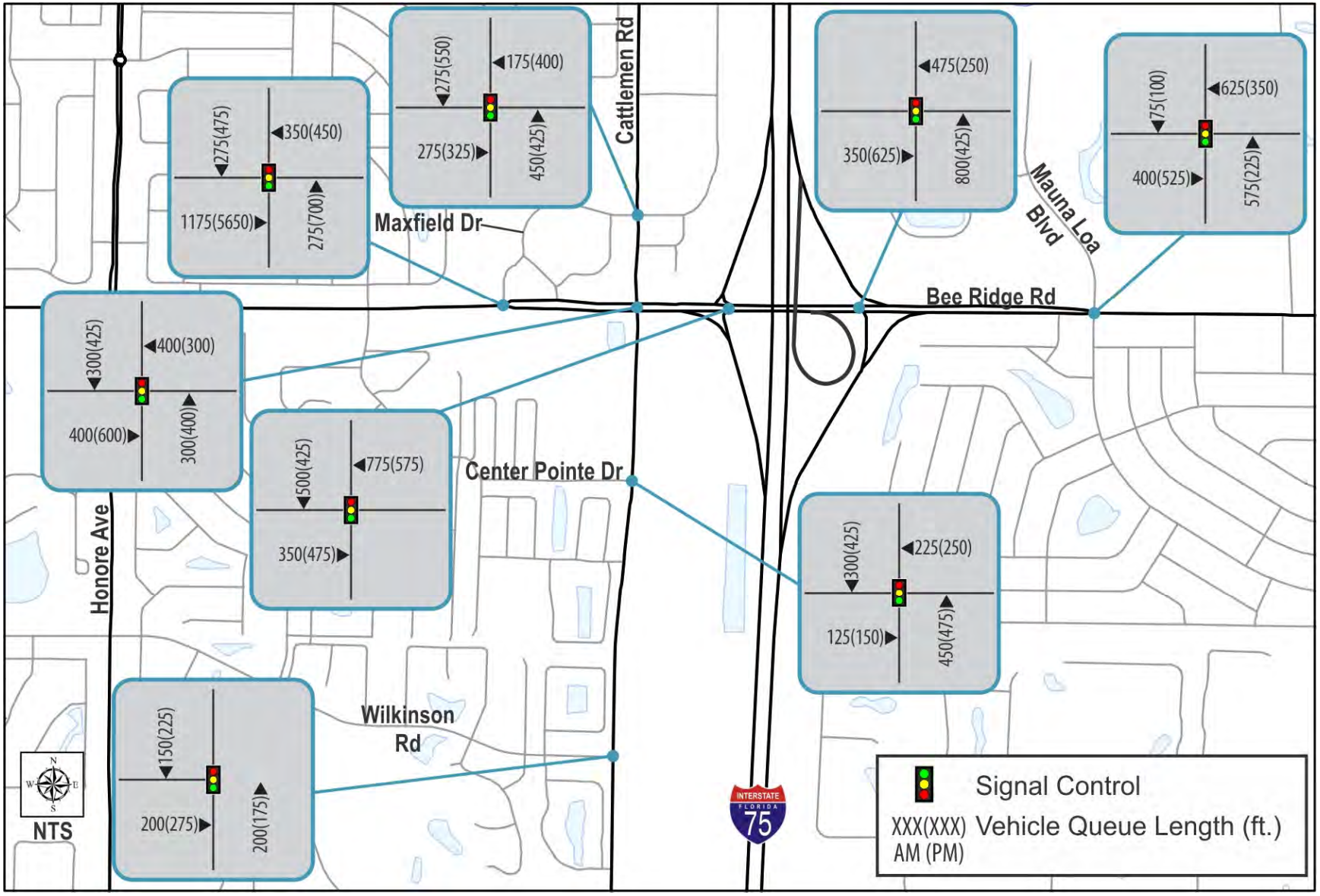


Figure 5.6. Opening Year (2020) Maximum Vehicle Queue Lengths – I-75 SIMR Alternative

5.9 Opening Year (2020) Proposed Build Alternative Ramp Operational Analysis

The I-75/Bee Ridge Road ramps in the Proposed Build Alternative were analyzed using HCS 2010 for the I-75 Interim Build improvements during both the AM and PM peak periods in the opening year (2020). The I-75 SIMR and Proposed Build Alternatives both include the same I-75 Interim Build and Ultimate Build improvements for the I-75 mainline. The opening year (2020) DDHVs were used in the HCS 2010 analysis.

The special case methodology for major merge and major diverge areas was used for the Proposed Build Alternative ramp analyses due to the presence of auxiliary lanes between the I-75/Bee Ridge Road interchange and adjacent interchanges to the north and south, with the exception of the southbound I-75/Wilkinson Road off ramp. The standard HCM 2010 ramp methodology was used to analyze the southbound I-75/Wilkinson Road off ramp. Using this methodology, the v/c ratios were calculated for the ramps and the segments upstream and downstream of the ramps. The major diverge methodology calculates the density and LOS of the segment upstream of the off ramps while the major merge methodology only considers v/c ratios for ramp analysis. The HCS 2010 standard ramp analysis was completed to determine the flow rates in lanes one and two of the freeway segment upstream of the ramp influence areas (v_{12} or v_{12a}), the flow rates on the ramps (v_r), and the flow rates entering the ramp merge areas (v_{r12}). However, the density and LOS results using this standard methodology were not used for the analysis, with the exception of the southbound I-75/Wilkinson Road off ramp. The output for the HCS 2010 standard ramp analysis and HCM 2010 special case analysis calculations can be found in **Appendix G**.

Table 5.17 shows the results of the major merge and diverge analyses with the Proposed Build Alternative and I-75 Interim Build improvements implemented. The v/c ratios for all ramps, upstream segments, and downstream segments are expected to be within acceptable levels in both the AM and PM peak periods. The density was calculated for the I-75 segments upstream of the off ramps and it was determined that both the northbound and southbound I-75 off ramps are expected to operate at an acceptable LOS D or better in both the AM and PM peak periods. The Wilkinson Road off ramp was analyzed using the HCS 2010 standard ramp analysis and is expected to operate at LOS B in both the AM and PM peak periods.

Table 5.17. Opening Year (2020) I-75/Bee Ridge Road Capacity, Density, and LOS – Proposed Build Alternative with I-75 Interim Build

Item	Capacity (pc/h)	AM Volume (pc/h)	PM Volume (pc/h)	AM v/c	PM v/c	AM Density (pc/mi/ln)	PM Density (pc/mi/ln)	AM LOS	PM LOS
Northbound I-75/Bee Ridge Road Off Ramp									
Upstream of Northbound I-75 Off Ramp	9600	6668	5632	0.695	0.587	29.2	24.6	D	C
Northbound I-75 Off Ramp	4200	1255	855	0.299	0.204	-	-	-	-
Downstream of Northbound I-75 Off Ramp	7200	5413	4777	0.752	0.664	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	3968	3218	0.902	0.731	-	-	-	-
Northbound I-75/Bee Ridge Road On Ramp									
Upstream of Northbound I-75 On Ramp	7200	5400	4769	0.750	0.662	-	-	-	-
Northbound I-75 On Ramp	4200	1560	1555	0.371	0.370	-	-	-	-
Downstream of Northbound I-75 On Ramp	9600	6960	6324	0.725	0.659	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	4645	4280	1.010	0.930	-	-	-	-
Southbound I-75/Bee Ridge Road Off Ramp									
Upstream of Southbound I-75 Off Ramp	9600	6306	7170	0.657	0.747	27.6	31.4	C	D
Southbound I-75 Off Ramp	4200	1635	1485	0.389	0.354	-	-	-	-
Southbound I-75 Wilkinson Road Off Ramp	2100	299	272	0.142	0.130	16.1	14.8	B	B
Downstream of Southbound I-75 Off Ramp	7200	4672	5685	0.649	0.790	-	-	-	-
Maximum Desirable Flow Rate Entering Diverge Influence Area	4400	3737	4470	0.849	1.016	-	-	-	-
Southbound I-75/Bee Ridge Road On Ramp									
Upstream of Southbound I-75 On Ramp	7200	4656	5670	0.647	0.787	-	-	-	-
Southbound I-75 On Ramp	4200	930	1181	0.221	0.281	-	-	-	-
Downstream of Southbound I-75 On Ramp	9600	5585	6850	0.582	0.714	-	-	-	-
Maximum Desirable Flow Rate Entering Merge Influence Area	4600	3590	4421	0.780	0.961	-	-	-	-

5.10 Opening Year (2020) Proposed Build Alternative Operational Analysis

As with the I-75 SIMR Alternative, VISSIM was used to analyze the Bee Ridge Road arterial and intersection control delay at signalized intersections within the project area for the Proposed Build Alternative in the opening year (2020). Maximum vehicle queuing on each intersection approach was also analyzed at the study intersections.

5.10.1 Arterial Operational Analysis

The opening year (2020) DDHVs were used in the arterial analyses for the Bee Ridge Road and Cattlemen Road segments within the study area for the Proposed Build Alternative during both the AM and PM peak periods. Average speeds were extracted from VISSIM in order to conduct the arterial segment operational analysis. The Bee Ridge Road and Cattlemen Road average speeds are shown in **Table 5.18**. The Bee Ridge Road/Cattlemen Road intersection eastbound and northbound approaches operate with average travel speeds greater than 15 mph, while the westbound and southbound approaches operate below 15 mph during both the AM and PM peak hours. Low travel speeds may be attributed to red-time delays at signalized intersections.

Table 5.18. Opening Year (2020) Arterial Average Speed – Proposed Build Alternative

Segment	Segment Length (ft)	Posted Speed (mph)	Arterial Average Speed (mph)	
			AM	PM
Eastbound Bee Ridge Road				
Maxfield Drive to Cattlemen Road	650	45	21.9	19.5
Cattlemen Road to I-75 West Ramp Terminal	745	45	26.1	26.2
I-75 West Ramp Terminal to I-75 East Ramp Terminal	1060	45	16.0	16.9
I-75 East Ramp Terminal to Mauna Loa Boulevard	1875	45	30.2	27.2
Westbound Bee Ridge Road				
Mauna Loa Boulevard to I-75 East Ramp Terminal	1875	45	21.3	23.8
I-75 East Ramp Terminal to I-75 West Ramp Terminal	1060	45	14.4	10.0
I-75 West Ramp Terminal to Cattlemen Road	745	45	11.6	12.5
Cattlemen Road to Maxfield Drive	650	45	27.3	26.8
Northbound Cattlemen Road				
Wilkinson Road to Center Pointe Drive	2210	40	28.8	28.3
Center Pointe Drive to Bee Ridge Road	1410	40	24.4	24.3
Bee Ridge Road to Maxfield Drive	775	40	17.7	18.8
Southbound Cattlemen Road				
Maxfield Drive to Bee Ridge Road	775	35	13.0	10.4
Bee Ridge Road to Center Pointe Drive	1410	35	28.2	26.3
Center Pointe Drive to Wilkinson Road	2210	35	25.9	25.0

5.10.2 Intersection Operational Analysis

The intersections within the project area were analyzed in VISSIM in order to determine if the improvements would have adverse impacts to adjacent intersection operations. The opening year (2020) approach and overall intersection control delay results are summarized in **Table 5.19** and shown graphically on **Figure 5.7**. All intersection approaches are projected to operate with control delays less than 60.0 and 75.0 s/veh during both the AM and PM peak hours, respectively. All overall intersections are projected to operate with control delays less than 35.0 and 45.0 s/veh during both the AM and PM peak hours, respectively.

Table 5.19. Opening Year (2020) Intersection Control Delay – Proposed Build Alternative

Intersection	Intersection Approach Delay (s/veh)								Overall Intersection	
	Eastbound		Westbound		Northbound		Southbound			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	42.9	36.3	48.6	71.5	11.7	10.6	13.4	22.7	16.1	24.3
Bee Ridge Road/Maxfield Drive	24.0	25.9	10.6	12.3	46.5	55.6	46.6	48.8	19.5	24.4
Bee Ridge Road/Cattlemen Road	30.4	38.7	21.6	26.3	55.7	57.2	57.4	57.6	34.8	42.0
Bee Ridge Road/I-75 West Ramp Terminal	18.6	10.0	34.8	43.8	N/A	N/A	32.0	29.7	27.9	23.1
Bee Ridge Road/I-75 East Ramp Terminal	24.5	22.2	24.0	18.7	26.3	28.2	38.5	28.7	21.1	17.7
Bee Ridge Road/Mauna Loa Boulevard	20.5	16.8	25.4	16.8	59.5	48.6	23.3	19.6	30.3	20.7
Cattlemen Road/Center Pointe Drive	40.3	42.8	41.4	43.3	10.8	16.1	8.2	11.2	14.0	18.3
Cattlemen Road/Wilkinson Road	17.4	18.3	22.2	21.1	18.1	14.9	18.7	21.4	18.9	18.6

5.10.3 Vehicle Queuing Operational Analysis

The opening year (2020) DDHVs were used in the vehicle queue analysis at the I-75 east and west ramp terminals, as well as the other intersections in the study area. Vehicle queuing results were extracted from VISSIM for the analysis. The opening year (2020) maximum vehicle queuing results on each approach of the study intersections are shown on **Figure 5.8**. The results show that there is projected to be only minor vehicle queuing on all study intersection approaches during both the AM and PM peak periods.

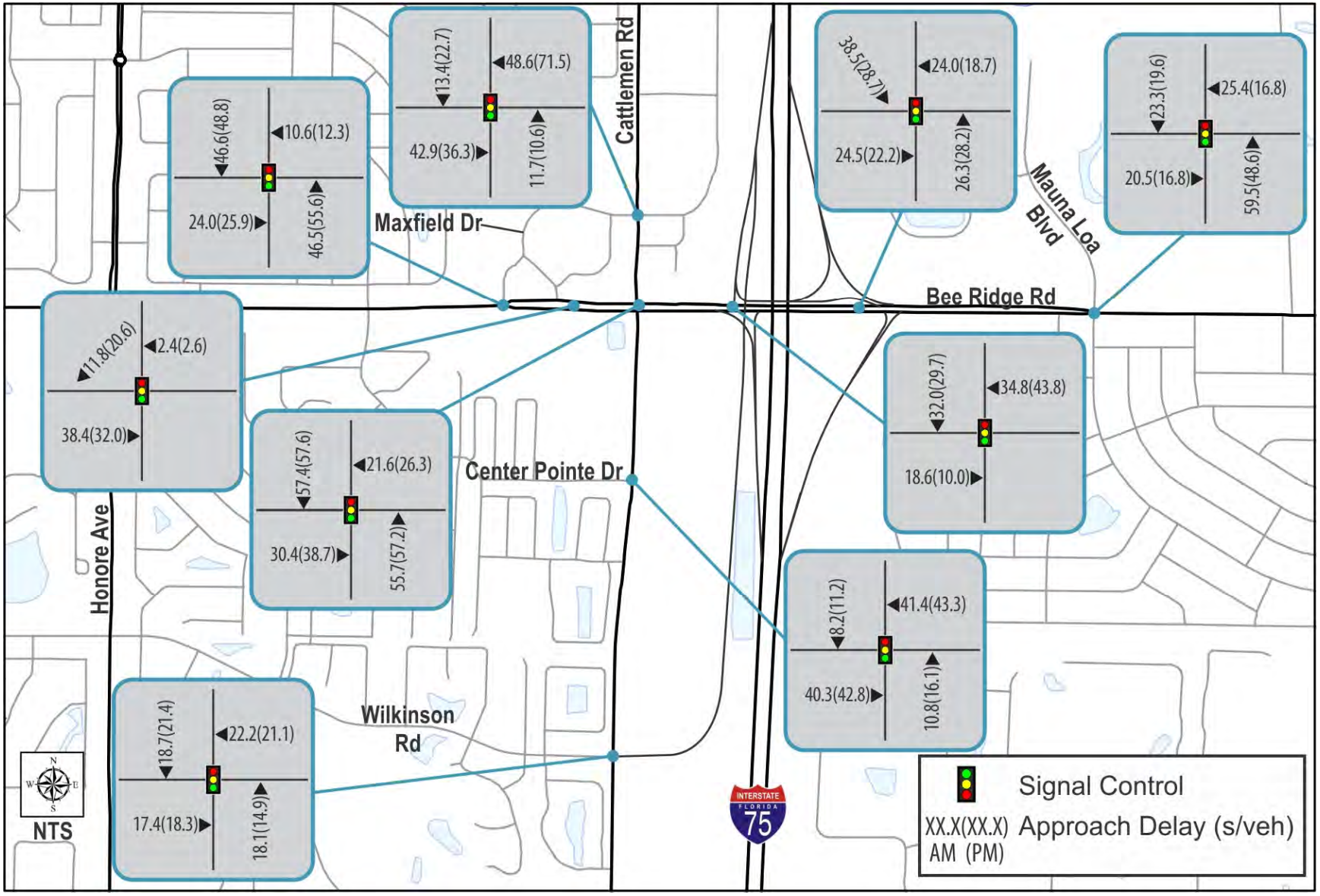


Figure 5.7. Opening Year (2020) Approach and Intersection Control Delay – Proposed Build Alternative

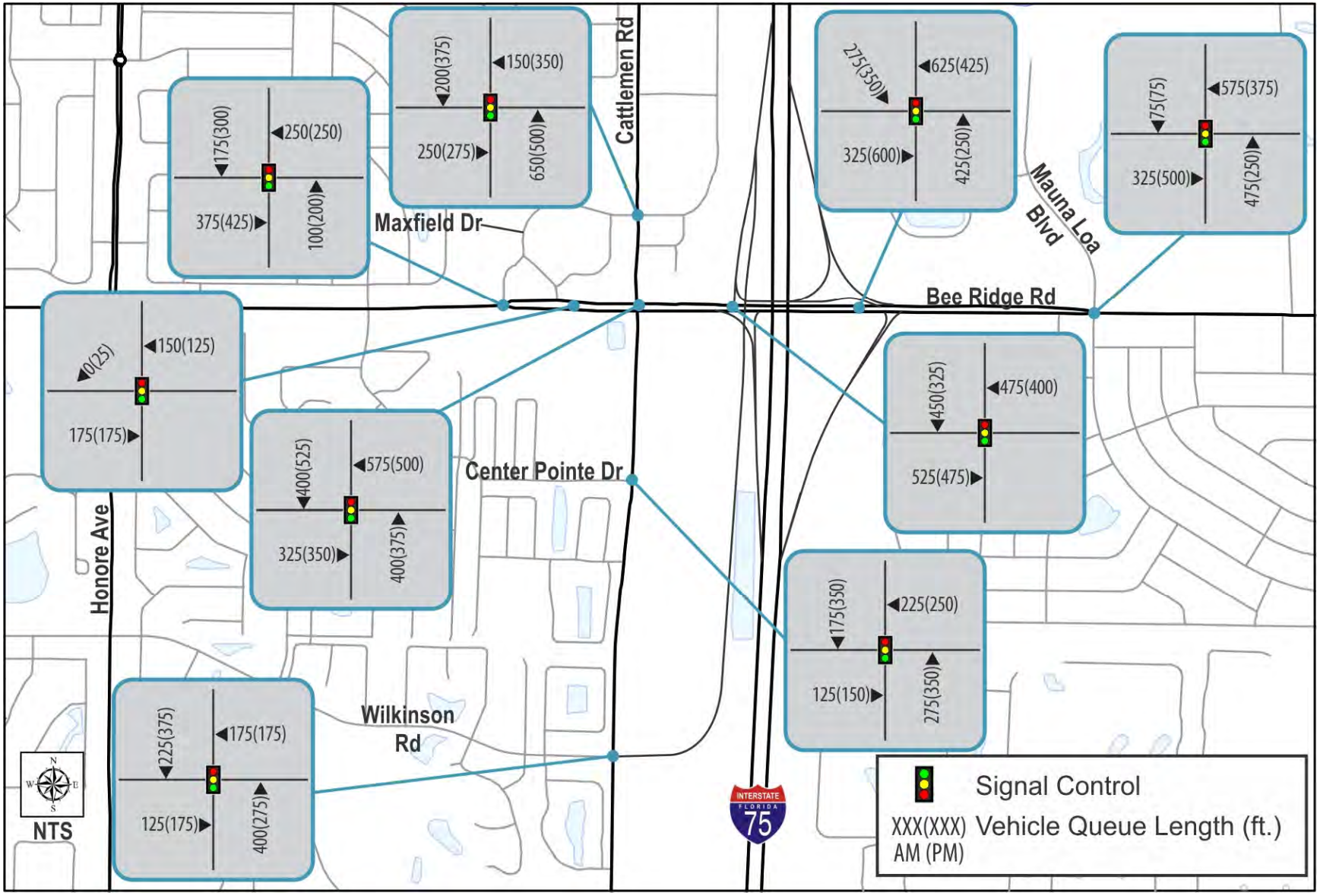


Figure 5.8. Opening Year (2020) Maximum Vehicle Queue Lengths – Proposed Build Alternative

5.11 Alternatives Comparison

Various attributes of the I-75 SIMR and Proposed Build Alternatives were analyzed including traffic operations, safety, environmental and R/W impacts, and construction costs. The I-75 SIMR and Proposed Build Alternatives were compared in order to identify which Alternative has the greater benefit.

5.11.1 Operational Analysis Comparison

The Proposed Build Alternative shows the same v/c ratios as the I-75 SIMR Alternative on all ramps, with the exception of the northbound I-75 on ramp because the Proposed Build Alternative improves this ramp to two lanes at the I-75 gore and the I-75 SIMR Alternative maintains it as a one-lane ramp at the I-75 gore. In the design year (2040), the I-75 SIMR Alternative is expected to have v/c ratios of 0.934 and 0.956 during the AM and PM peak periods, respectively, on the northbound I-75 on ramp while the Proposed Build Alternative is expected to have v/c ratios of 0.467 and 0.478 during the AM and PM peak periods, respectively. This shows that the northbound I-75 on ramp is projected to approach capacity in the I-75 SIMR Alternative, which could lead to reduced acceleration speeds in the I-75 merge area. In the opening year (2020), the I-75 SIMR Alternative is expected to have v/c ratios of 0.743 and 0.740 during the AM and PM peak periods, respectively, on the northbound I-75 on ramp while the Proposed Build Alternative is expected to have v/c ratios of 0.371 and 0.370 during the AM and PM peak periods, respectively.

The Proposed Build Alternative is generally projected to show average travel speeds similar to those in the I-75 SIMR Alternative on Bee Ridge Road and Cattlemen Road segments, as shown in **Table 5.20** and **Table 5.21**. Decreases in average speed from the Proposed Build Alternative to the I-75 SIMR Alternative may be attributed to different signal timing schemes between the two Alternatives.

In the design year (2040), the Proposed Build Alternative is projected to have lower overall intersection control delay than the I-75 SIMR Alternative at all study intersections, with the exception of Cattlemen Road/Wilkinson Road during both the AM and PM peak hours. This can be attributed to the increased connectivity to the surrounding network due to the new westbound approach at this intersection in the Proposed Build Alternative. **Table 5.22** shows the delay comparison between the two Alternatives in the design year (2040). The Cattlemen Road/Wilkinson Road intersection is projected to operate at an acceptable level with either Alternative implemented. The Bee Ridge Road/Maxfield Drive intersection is expected to have delay reductions in excess of 40.0 s/veh during both the AM and PM peak hours with the Proposed Build Alternative implemented. Overall intersection delay reductions are expected to range from 14.4 s/veh to 49.9 s/veh in the AM peak hour and 0.7 s/veh to 44.3 s/veh in the PM peak hour with the Proposed Build Alternative implemented.

Table 5.20. Design Year (2040) - I-75 SIMR and Proposed Build Alternatives Arterial Average Speed Comparison

Segment	Arterial Average Speed (mph)				Arterial Average Speed (mph)			
	AM I-75 SIMR	AM Proposed Build	Diff.	Percent Change	PM I-75 SIMR	PM Proposed Build	Diff.	Percent Change
Eastbound Bee Ridge Road								
Maxfield Drive to Cattlemen Road	13.5	18.6	5.1	38.0%	12.7	12.9	0.3	2.2%
Cattlemen Road to I-75 West Ramp Terminal	25.5	21.0	-4.4	-17.4%	20.8	19.0	-1.8	-8.7%
I-75 West Ramp Terminal to I-75 East Ramp Terminal	17.7	12.0	-5.7	-32.1%	15.1	13.1	-2.0	-13.3%
I-75 East Ramp Terminal to Mauna Loa Boulevard	29.0	23.8	-5.1	-17.8%	28.0	22.7	-5.3	-19.0%
Westbound Bee Ridge Road								
Mauna Loa Boulevard to I-75 East Ramp Terminal	12.1	19.2	7.1	58.1%	21.9	19.6	-2.3	-10.3%
I-75 East Ramp Terminal to I-75 West Ramp Terminal	10.2	11.4	1.2	11.9%	14.4	8.3	-6.1	-42.3%
I-75 West Ramp Terminal to Cattlemen Road	7.0	9.4	2.4	34.9%	12.2	8.8	-3.4	-28.0%
Cattlemen Road to Maxfield Drive	12.2	22.5	10.4	85.4%	19.8	26.5	6.6	33.4%
Northbound Cattlemen Road								
Wilkinson Road to Center Pointe Drive	23.1	25.1	2.0	8.7%	24.5	26.5	2.0	8.2%
Center Pointe Drive to Bee Ridge Road	10.9	18.4	7.5	69.4%	12.6	22.6	10.0	79.6%
Bee Ridge Road to Maxfield Drive	20.8	15.3	-5.4	-26.2%	17.2	20.3	3.2	18.4%
Southbound Cattlemen Road								
Maxfield Drive to Bee Ridge Road	9.0	10.5	1.5	16.6%	10.3	8.6	-1.7	-16.6%
Bee Ridge Road to Center Pointe Drive	24.2	24.7	0.4	1.8%	14.1	24.5	10.5	74.4%
Center Pointe Drive to Wilkinson Road	29.9	25.5	-4.5	-14.9%	26.5	22.5	-3.9	-14.9%

Table 5.21. Opening Year (2020) - I-75 SIMR and Proposed Build Alternatives Arterial Average Speed Comparison

Segment	Arterial Average Speed (mph)				Arterial Average Speed (mph)			
	AM I-75 SIMR	AM Proposed Build	Diff.	Percent Change	PM I-75 SIMR	PM Proposed Build	Diff.	Percent Change
Eastbound Bee Ridge Road								
Maxfield Drive to Cattlemen Road	14.8	21.9	7.1	47.8%	13.5	19.5	6.0	44.0%
Cattlemen Road to I-75 West Ramp Terminal	27.4	26.1	-1.3	-4.6%	25.0	26.2	1.2	4.9%
I-75 West Ramp Terminal to I-75 East Ramp Terminal	22.6	16.0	-6.6	-29.2%	20.6	16.9	-3.7	-17.9%
I-75 East Ramp Terminal to Mauna Loa Boulevard	33.4	30.2	-3.3	-9.8%	31.0	27.2	-3.8	-12.4%
Westbound Bee Ridge Road								
Mauna Loa Boulevard to I-75 East Ramp Terminal	25.9	21.3	-4.6	-17.8%	31.0	23.8	-7.3	-23.5%
I-75 East Ramp Terminal to I-75 West Ramp Terminal	17.8	14.4	-3.4	-19.2%	20.5	10.0	-10.5	-51.2%
I-75 West Ramp Terminal to Cattlemen Road	13.2	11.6	-1.6	-12.2%	14.7	12.5	-2.2	-14.9%
Cattlemen Road to Maxfield Drive	27.0	27.3	0.3	1.1%	27.6	26.8	-0.8	-2.8%
Northbound Cattlemen Road								
Wilkinson Road to Center Pointe Drive	28.4	28.8	0.4	1.3%	27.9	28.3	0.4	1.5%
Center Pointe Drive to Bee Ridge Road	14.8	24.4	9.6	64.8%	14.8	24.3	9.5	64.0%
Bee Ridge Road to Maxfield Drive	22.2	17.7	-4.5	-20.4%	21.8	18.8	-3.0	-13.6%
Southbound Cattlemen Road								
Maxfield Drive to Bee Ridge Road	12.4	13.0	0.7	5.3%	12.3	10.4	-1.9	-15.5%
Bee Ridge Road to Center Pointe Drive	27.4	28.2	0.8	3.0%	26.2	26.3	0.1	0.6%
Center Pointe Drive to Wilkinson Road	31.9	25.9	-6.0	-18.7%	30.9	25.0	-5.9	-19.0%

Table 5.22. Design Year (2040) - I-75 SIMR and Proposed Build Alternatives Control Delay Comparison

Intersection	Overall Intersection Delay (s/veh)				Overall Intersection Delay (s/veh)			
	AM I-75 SIMR	AM Proposed Build	Diff.	Percent Change	PM I-75 SIMR	PM Proposed Build	Diff.	Percent Change
Cattlemen Road/Maxfield Drive	40.8	23.1	-17.7	-43.4%	50.1	28.1	-22.0	-43.8%
Bee Ridge Road/Maxfield Drive	77.7	27.8	-49.9	-64.2%	77.7	33.5	-44.3	-56.9%
Bee Ridge Road/Cattlemen Road	76.7	44.6	-32.1	-41.9%	64.3	53.6	-10.7	-16.7%
Bee Ridge Road/I-75 West Ramp Terminal	53.9	32.3	-21.6	-40.1%	35.9	33.2	-2.7	-7.5%
Bee Ridge Road/I-75 East Ramp Terminal	66.6	30.3	-36.3	-54.5%	29.5	27.1	-2.4	-8.2%
Bee Ridge Road/Mauna Loa Boulevard	76.3	36.7	-39.6	-51.9%	31.1	30.4	-0.7	-2.3%
Cattlemen Road/Center Pointe Drive	39.4	25.0	-14.4	-36.6%	59.6	23.4	-36.2	-60.8%
Cattlemen Road/Wilkinson Road	9.3	19.0	9.7	104.8%	15.8	23.0	7.2	45.4%

In the opening year (2020), the Proposed Build Alternative is projected to show lower overall intersection control delay than the I-75 SIMR Alternative at all study intersections, with the exception of the I-75 east and west ramp terminals and the Cattlemen Road/Wilkinson Road intersection during the AM peak hour and only the I-75 east ramp terminal and the Cattlemen Road/Wilkinson Road intersection during the PM peak hour. The control delay is expected to increase by less than 2.0 s/veh at the I-75 east and west ramp terminals and by less than 12.0 s/veh at the Cattlemen Road/Wilkinson Road intersection. This can be attributed to the increased connectivity to the surrounding network due to the new westbound approach at the Cattlemen Road/Wilkinson Road intersection in the Proposed Build Alternative as well as different signal timing schemes. **Table 5.23** shows the delay comparison between the two Alternatives in the opening year (2020). The Cattlemen Road/Wilkinson Road intersection is projected to operate at an acceptable level with either Alternative implemented. Delay reductions are expected to range from 2.6 s/veh to 13.5 s/veh in the AM peak hour and 0.6 s/veh to 40.5 s/veh in the PM peak hour with the Proposed Build Alternative implemented.

In the I-75 SIMR Alternative, the Bee Ridge Road/Maxfield Drive intersection meters traffic destined for the study intersections, which explains the slightly lower delays at the I-75 east and west ramp terminals. In the design year (2040), the overall system-wide latent demand is 862 and 1801 vehicles under the I-75 SIMR Alternative during the AM and PM peak periods, respectively, and 0 and 11 vehicles under the Proposed Build Alternative. The overall system-wide delay is substantially decreased under the Proposed Build Alternative with a reduction of 549 hours (hrs) during the AM peak period and 406 hrs during the PM peak period in the design year (2040). **Table 5.24** and **Table 5.25** show the system-wide VISSIM results for the I-75 SIMR Alternative and Proposed Build Alternative in the design year (2040) and opening year (2020), respectively.

Table 5.23. Opening Year (2020) - I-75 SIMR and Proposed Build Alternatives Control Delay Comparison

Intersection	Overall Intersection Delay (s/veh)				Overall Intersection Delay (s/veh)			
	AM I-75 SIMR	AM Proposed Build	Diff.	Percent Change	PM I-75 SIMR	PM Proposed Build	Diff.	Percent Change
Cattlemen Road/Maxfield Drive	19.4	16.1	-3.3	-16.9%	27.9	24.3	-3.7	-13.2%
Bee Ridge Road/Maxfield Drive	33.0	19.5	-13.5	-40.8%	64.9	24.4	-40.5	-62.3%
Bee Ridge Road/Cattlemen Road	42.8	34.8	-7.9	-18.5%	47.4	42.0	-5.4	-11.5%
Bee Ridge Road/I-75 West Ramp Terminal	26.2	27.9	1.7	6.3%	23.9	23.1	-0.7	-3.1%
Bee Ridge Road/I-75 East Ramp Terminal	19.7	21.1	1.3	6.8%	16.0	17.7	1.6	10.3%
Bee Ridge Road/Mauna Loa Boulevard	32.9	30.3	-2.6	-8.0%	21.3	20.7	-0.6	-2.9%
Cattlemen Road/Center Pointe Drive	17.3	14.0	-3.3	-19.1%	21.8	18.3	-3.5	-16.1%
Cattlemen Road/Wilkinson Road	7.3	18.9	11.6	158.5%	10.1	18.6	8.5	84.3%

Table 5.24. Design Year (2040) - I-75 SIMR and Proposed Build Alternatives System-wide Comparison

Parameter	AM I-75 SIMR	AM Proposed Build	Diff.	Percent Change	PM I-75 SIMR	PM Proposed Build	Diff.	Percent Change
Total Travel Time (hr)	1443	1058	-385	-26.7%	1307	1130	-177	-13.5%
Total Delay Time (hr)	911	440	-471	-51.7%	773	509	-264	-34.2%
Average Delay Time (s/veh)	204	95	-109	-53.4%	174	108	-66	-37.9%
Latent Delay Time (hr)	78	0	-78	-100.0%	144	2	-142	-98.6%
Latent Vehicles	862	0	-862	-100.0%	1801	11	-1790	-99.4%
Total Delay and Latent Delay (hr)	989	440	-549	-55.5%	917	511	-406	-44.3%

Table 5.25. Opening Year (2020) - I-75 SIMR and Proposed Build Alternatives System-wide Comparison

Parameter	AM I-75 SIMR	AM Proposed Build	Diff.	Percent Change	PM I-75 SIMR	PM Proposed Build	Diff.	Percent Change
Total Travel Time (hr)	675	666	-9	-1.3%	824	719	-105	-12.7%
Total Delay Time (hr)	270	234	-36	-13.3%	398	263	-135	-33.9%
Average Delay Time (s/veh)	82	71	-11	-13.4%	112	73	-39	-34.8%
Latent Delay Time (hr)	0	0	0	0.0%	12	0	-12	-100.0%
Latent Vehicles	1	0	-1	-100.0%	111	0	-111	-100.0%
Total Delay and Latent Delay (hr)	270	234	-36	-13.3%	410	263	-147	-35.9%

The Proposed Build Alternative is projected to reduce maximum vehicle queuing on most approaches of the study intersections compared to the I-75 SIMR Alternative, as shown in **Table 5.26** and **Table 5.27**. Vehicle queue lengths on the northbound and southbound I-75 off ramps are projected to be reduced by 3300 ft and 2575 ft, respectively, with the Proposed Build Alternative implemented, during the AM peak hour in the design year (2040), which ensures better I-75 mainline operations near the diverge areas. The Proposed Build Alternative also divides the northbound and southbound I-75 traffic by removing the loop ramp, which reduces queuing and improves lane utilization, whereas the I-75 SIMR Alternative shows excessive queuing and poor lane utilization due to the loop ramp. The I-75 SIMR Alternative has 1801 unprocessed vehicles while the Proposed Build Alternative has only 11 unprocessed vehicles by the end of the PM peak hour. The queue lengths for the I-75 SIMR Alternative could theoretically be much greater if the full demand was able to enter the system.

In some cases, the queue lengths of some movements of the Proposed Build Alternative may be slightly longer than queue lengths of the I-75 SIMR Alternative due to different allotments of green time between the two Alternatives that allows other approaches to have reduced delay or queue lengths and allows the overall intersection to perform better. Note that the I-75 SIMR Alternative requires more turn lanes at the Bee Ridge Road/Cattlemen Road intersection than the Proposed Build Alternative, which could contribute to comparable vehicle queue lengths at that location, as well as the adjacent intersections on Cattlemen Road. The results show that several of the external intersections, especially the Bee Ridge Road/Maxfield Drive intersection, meter traffic entering the system. The vehicle queuing results for the internal intersections within the project area may appear lower due to the traffic metering. **Appendix F** shows the queue lengths and storage lengths for each intersection.

Table 5.26. Design Year (2040) - I-75 SIMR and Proposed Build Alternatives Vehicle Queue Length Comparison

Intersection	Intersection Approach Difference I-75 SIMR – Proposed Build							
	Eastbound		Westbound		Northbound		Southbound	
	Max Queue (ft)		Max Queue (ft)		Max Queue (ft)		Max Queue (ft)	
	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	50	275	-25	-25	-175	-25	1475	1575
Bee Ridge Road/Maxfield Drive	5525	4525	650	425	400	500	175	175
Bee Ridge Road/Cattlemen Road	250	-225	75	50	-150	-75	125	25
Bee Ridge Road/I-75 West Ramp Terminal	-225	-75	200	50	N/A	N/A	2575	1225
Bee Ridge Road/I-75 East Ramp Terminal	-100	25	1000	75	3300	800	N/A	N/A
Bee Ridge Road/Mauna Loa Boulevard	-300	-250	1575	50	575	-50	25	-25
Cattlemen Road/Center Pointe Drive	25	-25	25	50	300	275	175	550
Cattlemen Road/Wilkinson Road	75	200	N/A	N/A	-200	-50	-150	-175

Table 5.27. Opening Year (2020) - I-75 SIMR and Proposed Build Alternatives Vehicle Queue Length Comparison

Intersection	Intersection Approach Difference I-75 SIMR – Proposed Build							
	Eastbound		Westbound		Northbound		Southbound	
	Max Queue (ft)		Max Queue (ft)		Max Queue (ft)		Max Queue (ft)	
	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	25	75	50	50	-225	-75	100	175
Bee Ridge Road/Maxfield Drive	800	5250	100	200	175	500	125	175
Bee Ridge Road/Cattlemen Road	100	275	-175	-200	-100	25	-125	-125
Bee Ridge Road/I-75 West Ramp Terminal	-175	25	300	175	N/A	N/A	50	100
Bee Ridge Road/I-75 East Ramp Terminal	50	50	-150	-200	375	200	N/A	N/A
Bee Ridge Road/Mauna Loa Boulevard	75	25	50	-25	125	-25	-25	25
Cattlemen Road/Center Pointe Drive	-25	-25	25	-25	200	125	150	100
Cattlemen Road/Wilkinson Road	75	125	N/A	N/A	-200	-100	-75	-175

5.11.2 Safety Analysis Comparison

A qualitative safety comparison of the I-75 SIMR and Proposed Build Alternatives was performed. The shallow crossing angles inherent to DDIs and CFIs are expected to lead to a reduction in the number of crashes at the I-75/Bee Ridge Road interchange and Bee Ridge Road/Cattlemen Road intersection for the Proposed Build Alternative. The two-phase signal timing scheme of the Proposed Build Alternative is projected to result in reduced intersection control delay and less vehicle queuing, which could reduce the number of rear-end collisions as there would be fewer unexpected stops. Also, various left-turn movements are eliminated in the Proposed Build Alternative, which could potentially reduce crash severity.

The Proposed Build Alternative provides pedestrian and bicycle facilities on Bee Ridge Road and Cattlemen Road, while the I-75 SIMR Alternative does not. The Proposed Build Alternative includes 6-ft back-of-curb sidewalks and 7-ft bicycle lanes on both sides of Bee Ridge Road and Cattlemen Road designed in accordance with the new FDOT buffered bicycle lane criteria. Pedestrian crosswalks and phasing are provided across all approaches of the Bee Ridge Road/Cattlemen Road intersection. The crossing movements in the northbound/southbound direction on the east and west sides of the Bee Ridge Road/Cattlemen Road intersection are two-stage crossings. The crossing movement in the northbound/southbound direction on the east side would require 70 seconds of combined walk (W) and flashing-don't-walk (FDW) time with the I-75 SIMR Alternative since it is a one-stage crossing. The Proposed Build Alternative reduces the required combined W and FDW time to 57 seconds for one of the two stages, which allows for an additional 13 seconds to green time for vehicles traveling in the northbound/southbound direction. The Proposed Build Alternative pedestrian crosswalk phasing scheme for the Bee Ridge Road/Cattlemen Road intersection is shown on **Figure 5.9**. These multimodal enhancements promote safe traveling conditions for all users and could potentially reduce the number of crashes related to pedestrians and bicyclists.

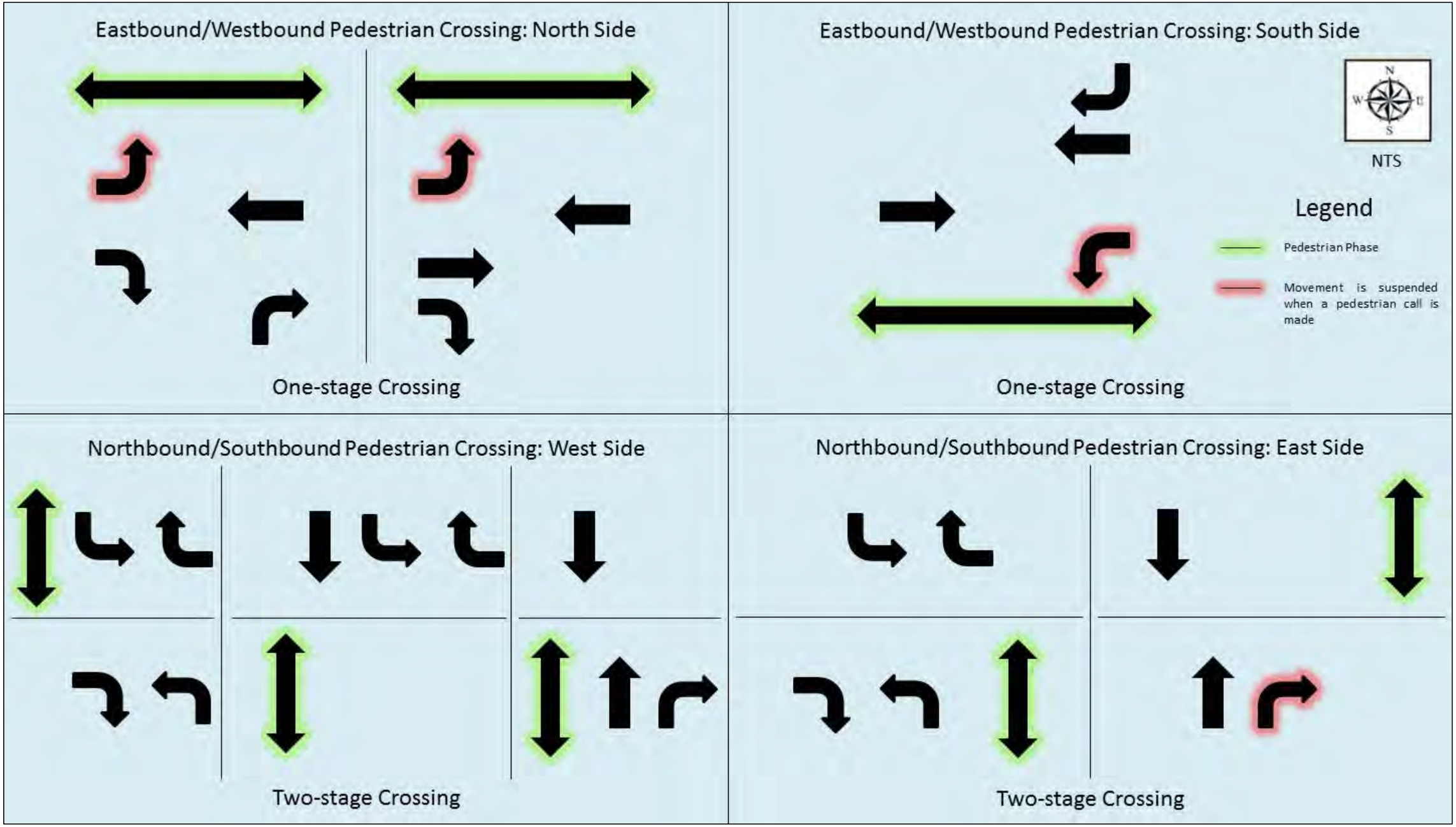


Figure 5.9. Bee Ridge Road/Cattlemen Road Pedestrian Crosswalk Phasing - Proposed Build Alternative

5.11.3 Environmental Impact and R/W Comparison

The Proposed Build Alternative is expected to have lower R/W and environmental impacts than the I-75 SIMR Alternative as shown on **Figure 5.10**. R/W is needed in both Alternatives for a combination of roadway and stormwater facility (SWF) impacts. The Proposed Build Alternative R/W impacts were analyzed for the I-75 Interim Build while the I-75 SIMR R/W impacts were analyzed for the I-75 Ultimate Build.

The Proposed Build Alternative has 3 total parcel takes. There are no total takes identified in the I-75 SIMR Alternative. The I-75 SIMR Alternative shows SWFs for the I-75 Ultimate Build that are not included with the Proposed Build, which includes the I-75 Interim Build. However, the Proposed Build Alternative does maximize R/W parcel impacts by utilizing SWF designs that offset some of the I-75 Ultimate Build SWF needs.

The I-75 SIMR Alternative omits bicyclist and pedestrian accommodations on Bee Ridge Road and Cattlemen Road while the Proposed Build Alternative accommodates bicyclists with the new FDOT buffered bicycle lane criteria and includes 7-ft bicycle lanes on both sides of Bee Ridge Road and Cattlemen Road. Pedestrians are also accommodated in the Proposed Build Alternative by back-of-curb, 6-ft wide sidewalks.

The I-75 SIMR Alternative impacts 23 parcels for roadway needs for a total of 4.01 acres and 5 parcels for SWF needs for a total of 25.20 acres. The Proposed Build Alternative impacts 33 parcels for roadway needs for a total of 15.88 acres and 3 parcels for SWF needs (total parcel takes that are also used for roadway needs) for a total of 8.72 acres. The total impacts of the I-75 SIMR Alternative include 28 parcels at 29.21 acres and the total impacts of the Proposed Build Alternative include 33 parcels at 24.60 acres.

The Proposed Build Alternative's ponds are designed to accommodate the I-75 Ultimate configuration to avoid redoing pond designs and the R/W acquisition process and it has fewer ponds than the I-75 SIMR Alternative, which was only designed to consider the I-75 Interim configuration. The Proposed Build Alternative utilizes parcels with roadway impacts for ponds, which is more efficient, and involves three total takes. Note that if the comparison between the two concepts was more similar with the I-75 SIMR Alternative including bicycle and pedestrian facilities and including pond design to accommodate the I-75 Ultimate configuration, then the I-75 SIMR Alternative would likely have many more R/W impacts on the basis of both parcel count and acreage. Since the Proposed Build Alternative is considered to be both a safety and operational improvement, the FDOT will seek FHWA's approval of a Design Change Reevaluation of the I-75 PD&E Study's[1] Type II Categorical Exclusion that documents the findings of the environmental impact analysis.

5.11.4 Cost Comparison

The Long-Range Estimating (LRE) system was used to develop construction cost estimates for the I-75 SIMR Alternative as part of the I-75 PD&E Study[1]. The I-75 SIMR Alternative construction cost was estimated to be approximately $136.1 million with an additional $2.8 million for ponds for a total of $138.9 million. The LRE system was also used to estimate the Proposed Build Alternative, which was determined to be approximately $74.3 million. The LRE cost estimates for the I-75 SIMR Alternative and Proposed Build Alternative can be found in **Appendix J**. The construction cost of the Proposed Build Alternative is estimated to be approximately $64.6 million less than the I-75 SIMR Alternative.

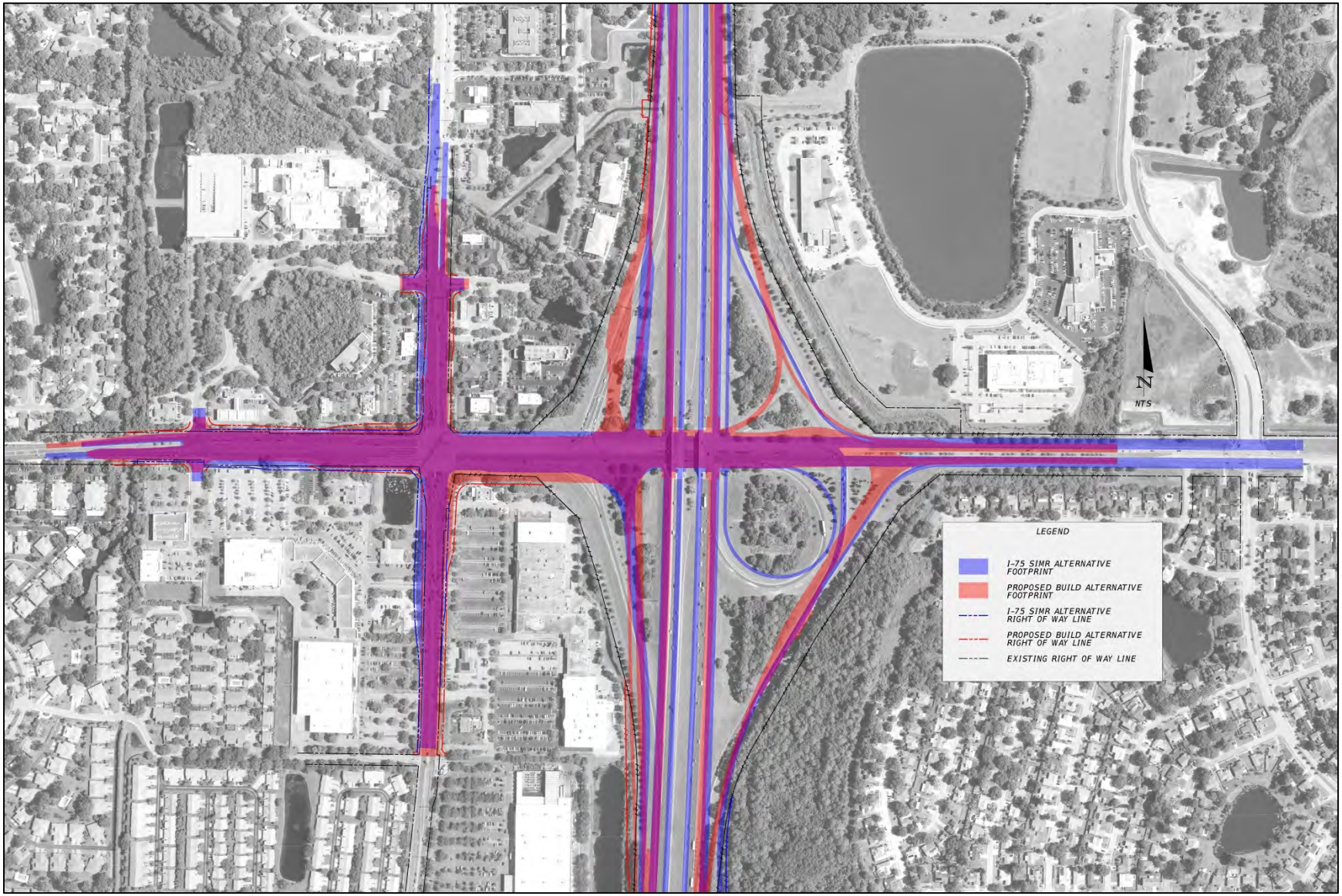


Figure 5.10. Alternatives Footprint Comparison

5.11.5 Benefit and Cost Comparison

A benefit and cost comparison was performed between the I-75 SIMR and Proposed Build Alternatives using the reduction in the total delay and latent delay as a measure of the overall benefit and using the LRE construction estimates for the costs. The cost of one hour of delay in the Sarasota-Bradenton area is estimated to be $22.20[15]. **Table 5.28** shows the annual benefit of the Proposed Build Alternative over the I-75 SIMR Alternative for the opening year (2020) and design year (2040). The Proposed Build Alternative's mitigation benefits over the design life of the project compared to the I-75 SIMR Alternative have a present day worth of approximately $43.3 million, which can be achieved for $64.4 million less ($4.7 million less annualized over the life of the project using a 4.0 percent interest rate) than the cost of constructing the I-75 SIMR Alternative. The annualized saving due to the mitigation benefits is estimated to be $2.2 million over the design life of the project and the annualized construction cost savings is estimated to be $4.7 million over the life of the project, using a 4.0 percent interest rate. The total estimated annualized saving that can be achieved by implementing the Proposed Build Alternative rather than the I-75 SIMR Alternative is $6.9 million over the design life of the project based on delay reduction and construction costs. The benefit and cost comparisons between the I-75 SIMR and Proposed Build Alternatives show that the Proposed Build Alternative is favorable due to both benefit and cost.

Table 5.28. I-75 SIMR and Proposed Build Alternatives Arterial Average Speed Comparison

Total Delay and Latent Delay (hr)	I-75 SIMR Alternative	Proposed Build Alternative	Difference	Annual Benefit
2020				
AM Peak Hour	270	234	36	$207,792
PM Peak Hour	410	263	147	$848,484
AM and PM Peak Hour Total	680	497	183	$1,056,276
2040				
AM Peak Hour	989	440	549	$3,168,828
PM Peak Hour	917	511	406	$2,343,432
AM and PM Peak Hour Total	1,906	951	955	$5,512,260

The Wilkinson Road ramp is required more so to remove the westbound left-turn movement from the Bee Ridge Road/Cattlemen Road intersection to improve the efficiency of the overall intersection's signal phasing plan, allowing more phases to run concurrently, although it is not anticipated that the Wilkinson Road ramp will have a high volume demand. While the delay and queue length reduction may appear low when looking at this single component of the Proposed Build Alternative, the benefit of the overall concept greatly exceeds the benefits of the I-75 SIMR Alternative and has a lower construction cost while also providing seven-foot buffered bicycle lanes and sidewalks. Benefits and costs are generally compared between two complete Alternatives rather than on a component by component basis within one Alternative as all components are needed for the desired system-wide results, thus justifying the need for the Wilkinson Road ramp.

This ramp also removes the southbound I-75 off ramp to southbound Cattlemen Road weave, which improves safety as vehicles will not be required to quickly cross to the opposite side of the Bee Ridge Road segment between Cattlemen Road and I-75 to execute a left turn onto southbound Cattlemen Road. This Wilkinson Road ramp has additional benefits such as allowing trucks to easily access the commercial developments in the southwest quadrant of the I-75/Bee Ridge Road

interchange, including major deliveries at Wal-Mart and Home Depot, rather than traveling southbound on Cattlemen Road to access that quadrant via a left turn, which requires a larger gap for trucks and blocks through traffic along Cattlemen Road. This ramp also has the potential to carry westbound through traffic along Wilkinson Road as it runs parallel to Bee Ridge Road where they would eventually turn right onto a perpendicular cross street and then left onto Bee Ridge Road to avoid any congestion near the I-75/Bee Ridge Road interchange. Therefore, the cost of this ramp leads to several intuitive benefits that are not readily quantifiable in addition to improving operations at the I-75/Bee Ridge Road interchange and Bee Ridge Road/Cattlemen Road intersection.

6.0 Project Schedule and Funding Plan

6.1 Design Schedule

The MLOU was submitted to FHWA and approved on March 11, 2014. The project is currently in design. Phase I Roadway Plans were submitted on June 5, 2015 and Phase II Roadway Plans are expected to be completed by January 27, 2016. A public meeting is scheduled to take place in the first half of 2016. Two separate newsletters will be sent out and a website will be opened and maintained to inform the public about the project. The final design is expected to be completed in the first half of 2017. R/W and construction funding has not yet been advanced. However, FDOT is currently seeking funding and will continue to seek funding as the design progresses.

6.2 Project Phasing

Due to a lack of funding for the Ultimate Build improvements of the I-75 mainline, Interim Build improvements have been developed to help alleviate future traffic congestion. There are no interim phases planned for the Proposed Build Alternative as this project is part of a system of interchange and freeway improvements that are intended to be constructed in their ultimate configurations without revisiting construction.

The I-75 Interim Build improvements are not expected to meet adopted LOS standards prior to the design year (2040), although the improvements will provide some relief from congestion. **Table 6.1** shows when the I-75 mainline is expected to fall below LOS D. I-75 is projected to exceed LOS D in 2028 south of Bee Ridge Road and in 2027 north of Bee Ridge Road with the Interim Build improvements implemented. I-75 is projected to exceed LOS E in 2033 south of Bee Ridge Road and in 2032 north of Bee Ridge Road with the Interim Build improvements implemented. The I-75 Ultimate Build cross section will need to be built by 2027 in order for the freeway to operate at an acceptable LOS through the design year (2040). The I-75/Bee Ridge Road interchange and the Bee Ridge Road/Cattlemen Road intersection are also projected to operate at an acceptable level throughout the design year (2040) with the Proposed Build Alternative implemented while providing pedestrian and bicyclist facilities and adhering to the constraint of maintaining two departure lanes on Cattlemen Road. The I-75 Ultimate Build improvements should be implemented when funding becomes available, provided that the traffic demand continues to support the need for additional capacity.

Table 6.1. I-75 Interim Build Mainline Failure Year

Segment	Failure Year	
	LOS Worse Than LOS D	LOS Worse Than LOS E
Northbound I-75, South of Bee Ridge Road	2028	2033
Northbound I-75, North of Bee Ridge Road	2027	2032
Southbound I-75, North of Bee Ridge Road	2027	2032
Southbound I-75, South of Bee Ridge Road	2028	2033

7.0 Consistency with Other Plans/Projects

The proposed I-75/Bee Ridge Road DDI variant is a safety and operational improvement included in the I-75 widening project from south of Bee Ridge Road to south of Fruitville Road and is also included in the SIS CF Plan. Sarasota County has advertised for Bee Ridge Road widening east of I-75 from Mauna Loa Boulevard to Iona Road to four lanes. This project was identified in the Sarasota County Fiscal Year 2012-2016 Capital Improvement Program. Bee Ridge Road widening from Bond Place to I-75 was listed as the 14th highest priority major improvement project in the Sarasota-Manatee MPO's Transportation Improvement Program, adopted in June, 2013 and was noted as having regional priority.

8.0 Intergovernmental Coordination

The FDOT has coordinated with Sarasota County to achieve consensus for the Proposed Build Alternative. The I-75/Bee Ridge Road DDI variant and Bee Ridge Road/Cattlemen Road partial CFI are capable of improving existing operational deficiencies and accommodating additional traffic growth anticipated within the study area. The I-75/Bee Ridge Road interchange improvement is currently identified in the State Transportation Improvement Program (STIP) and SIS CF Plan. FDOT is currently seeking R/W and construction funding. This project is also included in the Sarasota-Manatee MPO Draft 2040 LRTP and FDOT will continue coordination with the Sarasota-Manatee MPO throughout the project.

9.0 Anticipated Design Exceptions and Variations

There are three anticipated design variations related to the Proposed Build Alternative and no design exceptions. The first variation is for roadway base course clearance above the Base Clearance Water Elevation (BCWE), the second variation is for two-percent full-depth shoulders, and the third variation is for the number of lanes sloped in same direction. These variations are not expected to impact safety or operations along I-75 or Bee Ridge Road.

9.1 Base Clearance Water Elevation

A design variation is being requested for the proposed I-75 Interim Build eight-lane widening of the existing travel lanes and roadside linear treatment ditches to allow the clearance for the roadway base course above the BCWE to be less than three-ft, but not less than two-ft, in lieu of the FDOT Plans Preparation Manual (PPM), which requires three-foot BCWE minimum clearance for freeways and rural multi-lane mainline facilities. The AASHTO Geometric Design for Highways and Streets 2004 Manual does not have any required criteria of the Clearance for Roadway Base Course above the BCWE.

I-75 mainline base clearance of less than three ft, but not less than two ft, will occur as a result of the proposed linear treatment facilities adjacent to the roadway. In order to provide runoff treatment, proposed roadside treatment ditch weir control elevations (top of water quality detention volume) are anticipated to be set between two and three ft below the road base. These linear treatment facilities are anticipated to be wet detention treatment ditches with bleed-down orifices, resulting in water stages at or above the weir for durations greater than 24 hours, thereby saturating the roadway embankment at a higher elevation than its current condition. Roadside treatment ditches are anticipated to be located along the I-75 mainline within the eight-lane inside widening median and outside edge of the southbound existing travel lanes. In general, the roadside ditch along the northbound travel lanes is anticipated to maintain existing conveyance of offsite drainage to avoid blocking offsite runoff from entering the R/W.

Potential locations along the I-75 mainline where proposed roadside treatment ditch influences could reduce the existing BCWE within the two-foot clearance of the design variation threshold are estimated by raising the existing BCWE to account for water quality volume and water quantity storage. The required treatment volume recovery of 72 hours is the basis for this design variation request as it exceeds the 24-hour design high water (DHW) soil saturation. The existing I-75 travel lanes meet the three-foot base clearance throughout the project limits. There will also be over two ft of clearance subsequent to the I-75 Interim Build eight-lane widening project, with the addition of the linear treatment systems. Field observations and drivability of the existing pavement surface suggests it to be in fair condition with no evidence of block cracking indicative of road base fatigue.

Meeting current FDOT criteria for the three foot Clearance of the Roadway Base Course above the BCWE may require the reconstruction of parts of the northbound and southbound travel lanes, which could exceed the scope and budget for this project's widening and resurfacing limits. Reconstructing both the northbound and southbound lanes would require extensive maintenance of traffic detour schemes, requiring additional temporary detour lanes throughout the entire project length. FDOT has future plans to reconstruct this section of I-75 to a ten-lane facility. It is recommended that any travel-lane reconstruction necessary to accommodate the future reconstruction BCWE be performed at that time.

9.2 Two-Percent Full-Depth Shoulders

A design variation is being requested to allow the use of two percent cross slopes (0.02 ft/ft) for full-depth inside shoulders on the I-75 mainline instead of the six percent cross slopes (0.06 ft/ft) required on the inside shoulders per the FDOT PPM. FDOT's new policy is to construct the inside shoulder using full-depth pavement and have it sloped down toward the median at a two percent cross slope. This allows the shoulder to be used as a travel lane during emergencies or, potentially, as a congestion mitigation strategy during peak periods with high traffic volumes. Additionally, if there is to be future inside widening, then the shoulder is paved to twelve ft, while if there is not future inside widening, then the shoulder is to be paved to ten ft.

The difference in construction cost between the standard inside shoulder and the full-depth inside shoulder is warranted in order to make additional capacity available along I-75. Reducing the shoulder slopes from six percent to two percent will also enhance the overall safety on I-75 as the grade break from the through lane to the shoulder will be reduced or eliminated. Storm water runoff efficiency will not be impacted as the shoulder will still slope toward the median.

9.3 Number of Lanes Sloped in Same Direction

A design variation is being requested for the Bee Ridge Road proposed curb and gutter typical section to allow the use of six 11-foot wide travel lanes, including five-foot wide bike lanes and a raised median, to slope in the same direction on Bee Ridge Road in lieu of the FDOT PPM standard for the maximum number of lanes sloped in the same direction. According to the FDOT PPM, the maximum number of travel lanes with the same cross slope in one direction is three lanes. This maximum may be increased to four lanes for curb and gutter roadways with four travel lanes in the same direction. A design variation is requested for the Bee Ridge Road proposed typical section for allowing more than four lanes to all slope in the same direction.

The proposed urban typical section has curb and gutter to the outside, and is crowned about the centerline of the median. In general, the inside two travel lanes and bike lane will be sloped at two percent to the outside and the remaining four lanes will be sloped at three percent to the outside. The outer four lanes will transition to two percent cross slope prior to the diverging diamond cross over and transition back to three percent cross slope after the diverging diamond cross over. The PPM standard cross slope criteria for an urban curb and gutter section would unnecessarily complicate grading and drainage requirements unique to DDIs and would increase construction costs as follows: The PPM standard requires both directions of the two inside lanes to slope towards the median, resulting in ponded medians and complicated special profiles for median curb line drainage. Inward sloping travel lanes are not feasible within the diverging cross overs, thereby requiring cross slope transitions for all lanes to slope outward within the crossovers. Inward sloping

travel lanes result in substantial increases in drainage system costs due to the requirement of additional storm drain systems for draining the ponded medians.

The Bee Ridge Road existing configuration has three lanes in each direction heading into and out of the interchange. The proposed configuration adds a fourth lane in each direction after the adjacent intersections, adds a fifth lane in each direction prior to entering the interchange, and adds a sixth lane in each direction within the core of the interchange under the I-75 bridges. Subsequently, the lanes are similarly dropped leaving the interchange. These additional lanes perform as auxiliary lanes to facilitate traffic through the interchange or onto I-75. The crowned cross slope is the most common way DDIs are designed with constraints such as tight R/W and minimal longitudinal slope. It also assists with the ease of construction and maintenance of traffic on a high-volume roadway. The crowned cross slope eliminates the need for reversing cross slopes from inside to outside at the diverging crossovers, ensures a break-over algebraic difference of no more then four percent at the cross over intersections; eliminates additional inside drainage system requirements, and ensures that water ponding does not occur in the median or at the cross over intersections due to cross slope transitions.

Analysis of the hydroplaning estimates the crowned cross slope configuration would not significantly vary from the PPM standard configuration with respect to hydroplaning velocity thresholds. In addition, proposed drainage improvements will provide sufficient pavement drainage and flow spread control to ensure that the roadway parameters are consistent with those utilized in the analysis. Therefore, safety should not be compromised with the proposed configuration. Given the overall benefits in constructability, predicted cost savings, and conformance with FDOT pavement drainage and safety practices, this design variation is recommended for implementation.

10.0 Conceptual Signing Plan

A conceptual signing plan has been developed for the Proposed Build Alternative. Advanced signing approaching the partial CFI at the Bee Ridge Road/Cattlemen Road intersection and DDI variant crossover locations is essential in minimizing lane-changing maneuvers and safely positioning vehicles in the appropriate travel lanes on Bee Ridge Road upstream of the on ramps leading to I-75. The advanced signing can be accomplished through the use of overhead guide signs designating the usage of each travel lane. Advanced signing shall be used prior to the main DDI variant crossover points and then reinforced through additional overhead signing for the left-turn movements from Bee Ridge Road onto I-75 located within the core of the DDI variant. The conceptual signing plan on the I-75 mainline and Bee Ridge Road for the DDI variant and partial CFI at Cattlemen Road is shown in **Appendix K**.

11.0 Access Management Plan

Access management provides for the orderly movement of traffic to and from adjacent land uses along a roadway and helps a roadway facility to operate more efficiently, safely, and in a more accessible manner by reducing potential vehicle and pedestrian conflict points (i.e. driveways). The FDOT has developed minimum spacing standards for connections, median openings, and signalized intersections on the State Highway System (SHS). Even though Bee Ridge Road is maintained by Sarasota County to the east of I-75, Bee Ridge Road will need to comply with these standards because of its SIS distinction. SIS facilities are held to strict standards to ensure maximum mobility for goods and people.

Bee Ridge Road is maintained by FDOT west of I-75. Cattlemen Road is maintained by Sarasota County. Bee Ridge Road is designated as Access Class 5 and no new access points are proposed within the vicinity of the project area. The intersections of Bee Ridge Road/Cattlemen Road and Bee Ridge Road/Mauna Loa Boulevard are located about 745 ft and 1875 ft away from the I-75/Bee Ridge Road interchange to the west and east sides, respectively.

The existing I-75 facility is limited access from Cattlemen Road to several hundred ft east of the northbound ramps at the I-75/Bee Ridge Road interchange. There are no emergency median crossovers on I-75 within the project limits. The proposed ramp leading from southbound I-75 to Wilkinson Road services traffic to bypass the Bee Ridge Road/Cattlemen Road intersection to access the south leg of Cattlemen Road. The ramp would allow traffic to travel south on Cattlemen Road more efficiently or access the shopping attractions in the southwest quadrant of the I-75/Bee Ridge Road interchange by making a right turn rather than a left turn. The proposed Wilkinson Road ramp will also facilitate easier movements for delivery trucks destined for the shopping attractions in the southwest quadrant of the I-75/Bee Ridge Road interchange. They will be able to make right-in/right-out turn movements rather than blocking southbound traffic on the south leg of Cattlemen Road while waiting for a gap to make a left turn into the shopping attractions.

The segment of Bee Ridge Road from Maxfield Drive to Mauna Loa Boulevard is currently classified as an Access Class 5 facility with a posted speed limit of 45 mph. The minimum connection spacing required, as defined in Rule 14-97 of the Florida Administrative Code (FAC), is 1320 ft. There are no median openings on Bee Ridge Road between Maxfield Drive and Cattlemen Road and there are no driveways or median openings between the Bee Ridge Road/Cattlemen Road intersection and the I-75/Bee Ridge Road west ramp terminal. There is one unsignalized drive, Maui Way, between the east ramp terminal and Mauna Loa Boulevard approaching from the south side of Bee Ridge Road. Maui Way currently leads to a residential neighborhood. Sarasota County has future plans to close the Maui Way driveway at Bee Ridge Road and redesign it as a cul-de-sac.

Adequate access spacing currently exists between the I-75/Bee Ridge Road east ramp terminal and Mauna Loa Boulevard as Mauna Loa Boulevard is located at a distance that is greater than 1320 ft away from the I-75/Bee Ridge Road east ramp terminal. The minimum access spacing between the intersections of Bee Ridge Road/Maxfield Drive and Bee Ridge Road/Cattlemen Road are currently substandard. However, the current access management plan will be maintained along Bee Ridge Road with the Proposed Build Alternative in order to continue to preserve safe and efficient traffic operations on Bee Ridge Road within the vicinity of the I-75 interchange. The traffic signals at and around the Bee Ridge Road/Cattlemen Road intersection and the median openings on Cattlemen

Road are substandard to the Access Class 5 minimum spacing criteria. These deficiencies will be considered during the design phase.

The proposed partial CFI at the Bee Ridge Road/Cattlemen Road intersection will have minimal impacts to driveway openings as there are few openings along Bee Ridge Road west of I-75 and on the north leg of Cattlemen Road. There are several median openings on the south leg of the Bee Ridge Road/Cattlemen Road intersection. The first median opening south of this intersection would need to be closed as part of the proposed design. This closure is being coordinated with Sarasota County. All other median openings are scheduled to remain opened.

12.0 FHWA Policy Points

The FHWA's Policy on Access to the Interstate System provides the requirements for the justification and documentation necessary to substantiate any proposed changes in access to the Interstate System. This policy also facilitates decision-making regarding proposed changes in access to the Interstate System in a manner that considers and is consistent with the vision, goals, and long-range transportation plans of a metropolitan area, region, and State. All new or modified points of access must be approved by the FHWA and developed in accordance with federal laws and regulations (as specified in 23 U.S.C. 109 and 111, 23 C.F.R. 625.4, and 49 C.F.R. 1.48(b)(1)). The following documents the adherence of the proposed I-75/Bee Ridge Road interchange improvements to FHWA's 8 Policy Points:

12.1 Policy Point 1

Policy Point 1: The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).

The I-75/Bee Ridge Road interchange currently exhibits deficient operations at the northbound and southbound off ramps with queue lengths in excess of 2875 ft and 1775 ft, respectively, during the AM peak period. This excess vehicle queuing contributes to vehicle delay and overall traffic congestion. In order to mitigate these operational deficiencies, additional capacity is needed at the I-75/Bee Ridge Road ramp terminal intersections and the adjacent intersection of Bee Ridge Road/Cattlemen Road, which is only 745 ft away from the I-75/Bee Ridge Road west ramp terminal. Adding lanes to the existing I-75/Bee Ridge Road partial cloverleaf interchange and Bee Ridge Road/Cattlemen Road intersection, as proposed in the I-75 SIMR Alternative, does not effectively accommodate design year (2040) traffic volumes. Lane utilization is imbalanced on eastbound Bee Ridge Road due to vehicles anticipating the movement onto the northbound I-75 loop on ramp and additional lanes do not help the lanes become better-utilized. The Proposed Build Alternative (DDI variant and adjacent partial CFI intersection) provides acceptable operations in the design year (2040) with greatly reduced levels of delay and queuing and lower R/W and environmental impacts compared to the I-75 SIMR Alternative. Overall intersection delay is expected to be reduced at the intersections of Bee Ridge Road with Maxfield Drive, Cattlemen Road, the I-75 west ramp terminal, the I-75 east ramp terminal, and Mauna Loa Boulevard by 49.9, 32.1, 21.6, 36.3, and 39.6 s/veh, respectively. Vehicle queue lengths are also reduced throughout the system and, notably, on the northbound and southbound I-75 off ramps, which are projected to be reduced by 3300 ft and 2575 ft, respectively. Improving traffic operations on Bee Ridge Road at I-75 is critical to serving interregional and regional trips from the Sarasota area to Freight Activity Centers (FACs) throughout the State of Florida.

12.2 Policy Point 2

Policy Point 2: The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a)).

Adequate capacity cannot be achieved at the Bee Ridge Road/Cattlemen Road intersection through TSM methods. Adding triple left-turn and right-turn lanes on multiple approaches would not diminish delay enough to allow the intersection to operate at an acceptable level or accommodate design year (2040) traffic volumes. Adequate capacity can be provided with the Proposed Build Alternative through the use of two-phase signal schemes, which greatly reduces intersection delay and vehicle queuing on Bee Ridge Road and its cross streets, while also facilitating easier movements onto and off of I-75. Under the Proposed Build Alternative, freeway operations on the I-75 on ramps are expected to be improved because vehicles arrive more uniformly to the freeway as a result of the upstream free-flow left-turn and right-turn conditions inherent to DDIs and DDI variants. Conversely, a dense platoon of vehicles released from an upstream signal under the I-75 SIMR Alternative contributes to congested traffic conditions within the I-75 mainline/ramp gore area. Other alternatives, such as ramp metering, transit, HOT/HOV facilities, and other multimodal options, are not viable as the transportation network immediately adjacent to the project area does not provide for these measures.

12.3 Policy Point 3

Policy Point 3: An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

The Proposed Build Alternative is anticipated to improve safety for motorists, pedestrians, and bicyclists. The two-phase signal operation of the Proposed Build Alternative allows for more green time for pedestrian movements at the signalized ramp terminal intersections. Pedestrians will cross through the interchange area in one or two stages, depending on the movement. Refuge areas are being designed to accommodate pedestrians and there are potentially more opportunities for

pedestrians to cross in shorter stages as the Proposed Build Alternative includes a series of alternating contraflow lanes on several segments, each divided with a physical barrier.

Since vehicles experience less control delay and reduced queuing with the Proposed Build Alternative, vehicles approaching the signals will be less likely to reach the sudden end of a long queue, which can be a dangerous and unexpected obstacle. Therefore, the Proposed Build Alternative could lead to a reduction in rear-end collisions. Also, left-turn movements are eliminated through the DDI variant at the I-75/Bee Ridge Road interchange and crossing locations have shallower crossing angles. Therefore, drivers would be less susceptible to 90-degree angle crashes that have a higher chance of severe injury. The Wilkinson Road ramp allows vehicles to more safely access the Cattlemen Road leg south of Bee Ridge Road as they do not have to weave across several lanes of traffic on Bee Ridge Road between Cattlemen Road and the I-75 west ramp terminal to get to the westbound left-turn lane at the Bee Ridge Road/Cattlemen Road intersection.

Besides the safety benefits of the DDI variant, the traffic operational analysis of design year (2040) traffic conditions, using VISSIM, indicate that the poor operating conditions of the I-75 SIMR Alternative can be improved with the proposed DDI variant and partial CFI intersection in the Proposed Build Alternative. Improvements to the Bee Ridge Road/Cattlemen Road intersection are an integral part of the overall I-75/Bee Ridge Road interchange improvement due to their close proximity and the ability for one intersection to affect the other's operations. The Proposed Build Alternative proposes two-lane on and off ramps at all locations. This increases ramp capacity and allows vehicles using the on ramps to comfortably accelerate onto I-75, which decreases the speed differential between merging vehicles and vehicles upstream of the merge area. Two-lane off ramps provide more storage space, which reduces the potential for queuing onto the freeway, and provides lane channelization upstream of the decision point, which also improves lane utilization on the I-75 mainline.

A comparison of the VISSIM network-wide statistics between the I-75 SIMR Alternative and Proposed Alternative shows that the I-75 SIMR Alternative has a latent demand of 862 and 1801 vehicles during the AM and PM peak periods, respectively, while the Proposed Alternative has a latent demand of 0 and 11 vehicles. This demonstrates that the Proposed Alternative can accommodate significantly more vehicles during the peak periods than the I-75 SIMR Alternative.

12.4 Policy Point 4

Policy Point 4: The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)).

The existing full-access interchange at I-75 and Bee Ridge Road will be maintained with the DDI variant in the Proposed Build Alternative. This interchange is compatible with the I-75 Ultimate Build typical section. The design of the DDI variant follows standards and criteria set forth in the most current version of the following documents:

- A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2004
- A Policy on Design Standards – Interstate System, AASHTO, 2005
- FDOT Plans Preparation Manual, 2015

Design variances for base course clearance above the BCWE, two-percent full-depth shoulders, and number of lanes sloped in one direction will be required as part of this interchange access request. These design variations are not expected to affect traffic operations for the Proposed Build Alternative.

12.5 Policy Point 5

Policy Point 5: The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93.

The I-75/Bee Ridge Road interchange improvement is currently identified in the STIP and SIS CF Plan. This project is also included in the Sarasota-Manatee MPO Draft 2040 LRTP. FDOT will continue coordination with Sarasota County and the Sarasota-Manatee MPO throughout the project.

12.6 Policy Point 6

Policy Point 6: In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111).

There are two other access requests on I-75 within the immediate vicinity of Bee Ridge Road. These include interchange reconstruction projects at the two adjacent interchanges of I-75/Clark Road and I-75/Fruitville Road, which are located approximately 2.0 and 2.7 miles away, respectively. Given the

relatively long distance between these interchanges and the I-75/Bee Ridge Road interchange, there is limited anticipated interaction of traffic operations between these interchange access requests. These interchanges are being modified to accommodate the ultimate ten-lane widening of I-75; the current system plan for I-75.

12.7 Policy Point 7

Policy Point 7: When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d)).

The primary need for improvement of the I-75/Bee Ridge Road interchange is to resolve existing operational deficiencies, as well as anticipated deficiencies expected due to the magnitude of the projected design year (2040) traffic volumes. Although traffic growth is anticipated in Sarasota County, the Proposed Build Alternative provides for additional capacity without adding an excessive number of turn lanes at the Bee Ridge Road/Cattlemen Road intersection, while also maintaining two departure lanes on Cattlemen Road with the partial CFI intersection. There are no proposed changes to existing driveway accesses along Bee Ridge Road. Access changes to driveways along Cattlemen Road are expected and will be minimized to the greatest extent possible. However, further coordination with Sarasota County is needed to determine the final driveway access changes.

12.8 Policy Point 8

Policy Point 8: The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111).

The proposed improvement to retrofit the existing partial cloverleaf interchange to a DDI variant with a partial CFI will require R/W. The total impacts of the I-75 SIMR Alternative include 28 parcels at 29.21 acres and the total impacts of the Proposed Build Alternative include 33 parcels at 24.60 acres. However, it is anticipated that there will be minimal to no natural, cultural, or SE impacts associated with implementing the proposed improvement. The FDOT will seek FHWA approval for the Design Change Reevaluation of the I-75 PD&E Study's[1] Type II Categorical Exclusion.

13.0 Conclusions and Recommendations

13.1 Conclusions

The I-75 Ultimate Build improvements with three GULs and two SULs are required for the freeway to operate at an acceptable LOS through the design year (2040). However, the I-75 Interim Build improvements (i.e. eight-lane widening of I-75) are expected to operate at an acceptable LOS until 2027 before the I-75 Ultimate Build improvements are needed. The I-75 Interim Build improvements will be implemented in such a way as to allow the I-75 Ultimate Build improvements to be constructed with minimal throw-away if future traffic volumes continue to support the need for additional capacity.

The Proposed Build Alternative shows substantial benefits over the I-75 SIMR Alternative during both the AM and PM peak periods with overall delays less than 55.0 s/veh at all study intersections. Vehicle queue lengths are also reduced throughout the system and, notably, on the northbound and southbound I-75 off ramps, which are projected to be reduced by 3300 ft and 2575 ft, respectively.

The I-75 SIMR Alternative does not adhere to the constraint of maintaining two departure lanes on Cattlemen Road at the northbound and southbound approaches of the Bee Ridge Road intersection due to the need to accommodate triple left-turn receiving lanes while the Proposed Build Alternative does maintain two departure lanes on Cattlemen Road with the partial CFI intersection at Bee Ridge Road. The I-75 SIMR Alternative also does not include bicycle and pedestrian facilities along Bee Ridge Road and Cattlemen Road while the Proposed Build Alternative accommodates both.

13.2 Recommendations

Traffic simulation results show that the Proposed Build Alternative is projected to safely and efficiently operate at an acceptable level through the design year (2040) while the I-75 SIMR Alternative does not. The Proposed Build Alternative has fewer R/W and environmental impacts, as well as a lower construction cost, while maintaining two departure lanes on Cattlemen Road at the northbound and southbound approaches of the Bee Ridge Road intersection and providing bicycle and pedestrian facilities. Therefore, the Proposed Build Alternative is the recommended Alternative.

14.0 References

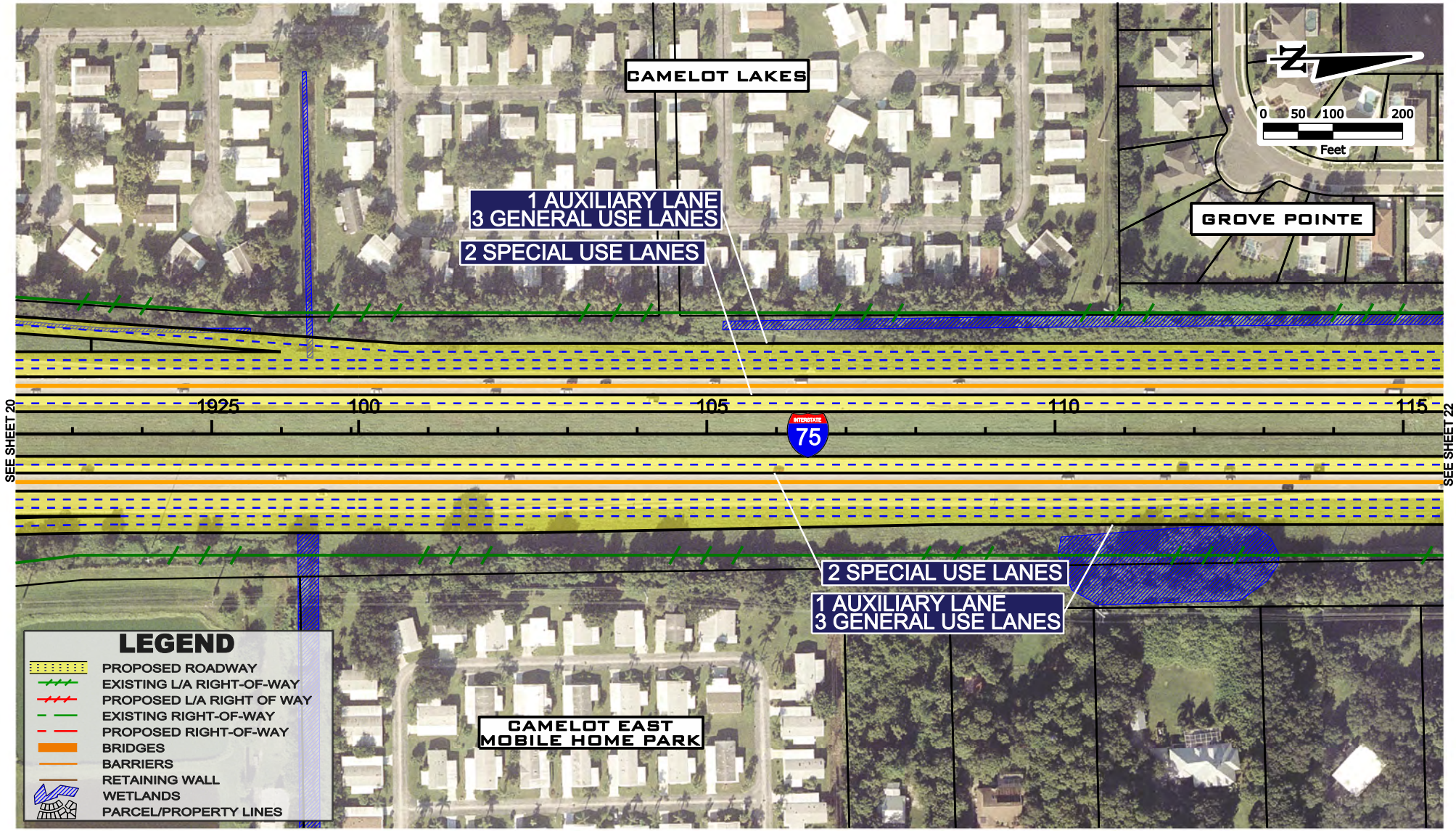
1. *I-75 Project Development and Environmental Study from south of SR 681 to north of Bee Ridge Road, Florida Department of Transportation, District One. FPID: 201277-1-22-01.*
2. *I-75 Project Development Summary Report from south of SR 681 to north of Bee Ridge Road, Florida Department of Transportation, District One. FPID: 201277-1-22-01.*
3. *I-75 Systems Interchange Modification Report from Laurel Road to Moccasin Wallow Road. FDOT District 1. May, 2012.*
4. *Sarasota-Manatee-Charlotte Regional Travel Demand Model with I-75 Ten-Lane Ultimate Cross Section.*
5. *Sarasota-Manatee MPO. Long Range Transportation Plan 2030. February, 2006.*
6. *VISSIM 5.40.*
7. *M^CTrans. University of Florida. Highway Capacity Software. 2010.*
8. *Transportation Research Board. Highway Capacity Manual. 2010.*
9. *FDOT Roadway Characteristics Inventory. 2012.*
10. *FDOT Florida Traffic Information CD. 2012.*
11. *FDOT Project Traffic Forecasting Handbook. 2012.*
12. *Bureau of Economic and Business Research Bulletin 162 (Revised), Projections of Florida Population by County, 2011-2040, March, 2012.*
13. *National Cooperative Highway Research Program, Report 255. Highway Traffic Data for Urbanized Area Project Planning and Design. Transportation Research Board. December, 1982.*
14. *FDOT Quality/Level of Service Handbook. 2013.*
15. *Texas Transportation Institute Urban Mobility Report, 2015.*

Appendices

Appendix A
SIMR I-75/Bee Ridge Road Preferred Concept

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

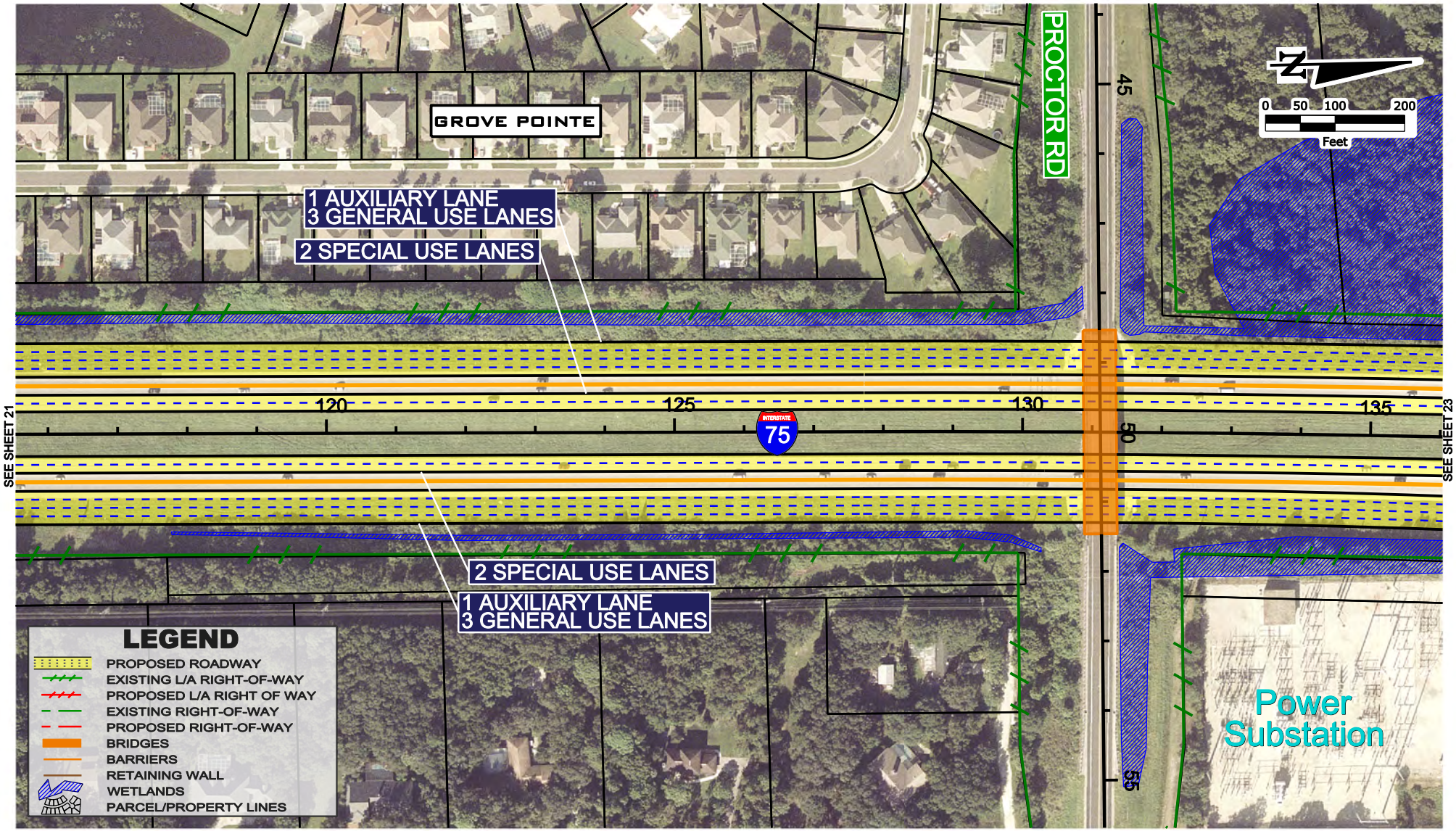
FPID
201277-1-22-01



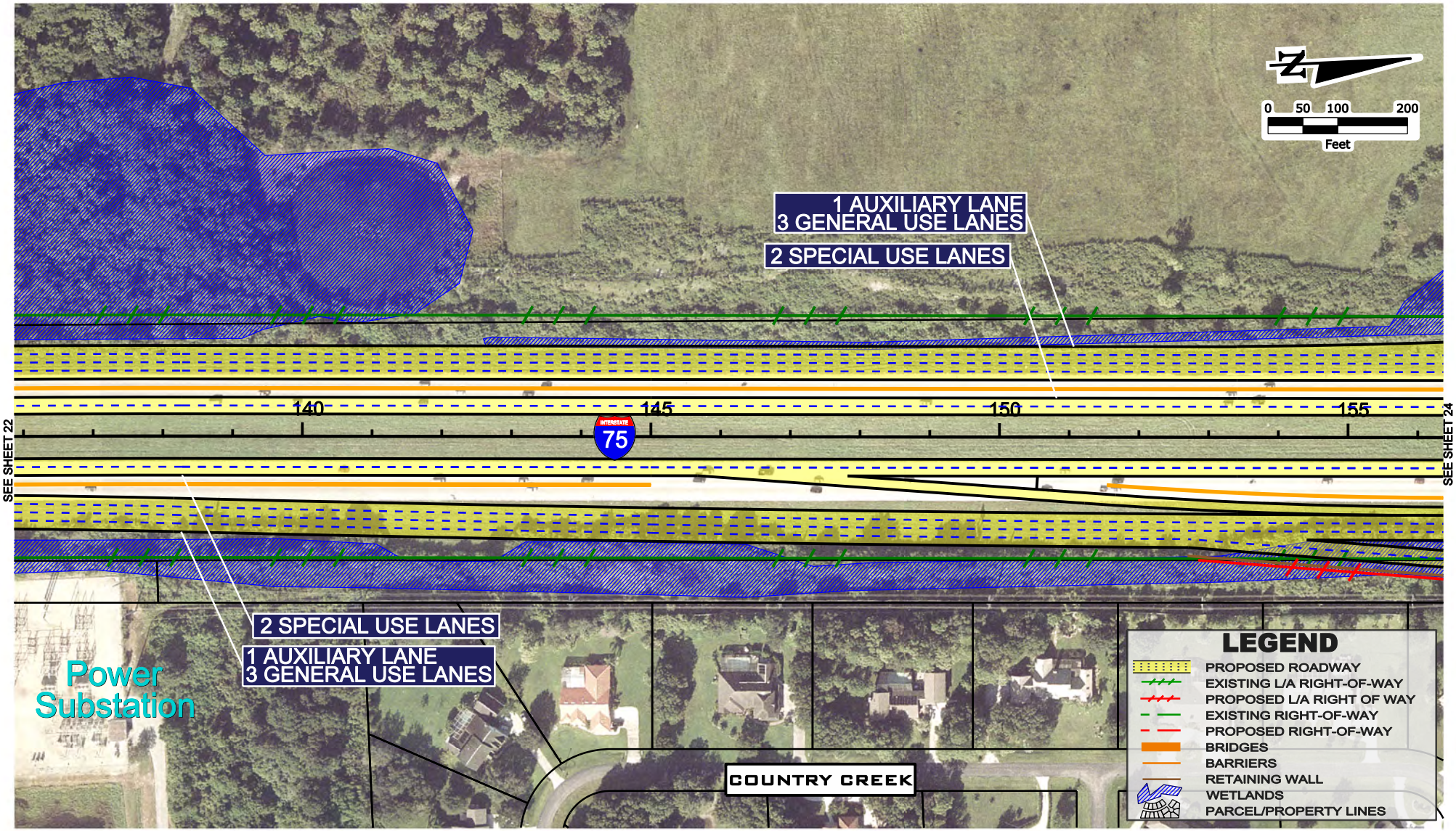
Carter::Burgess

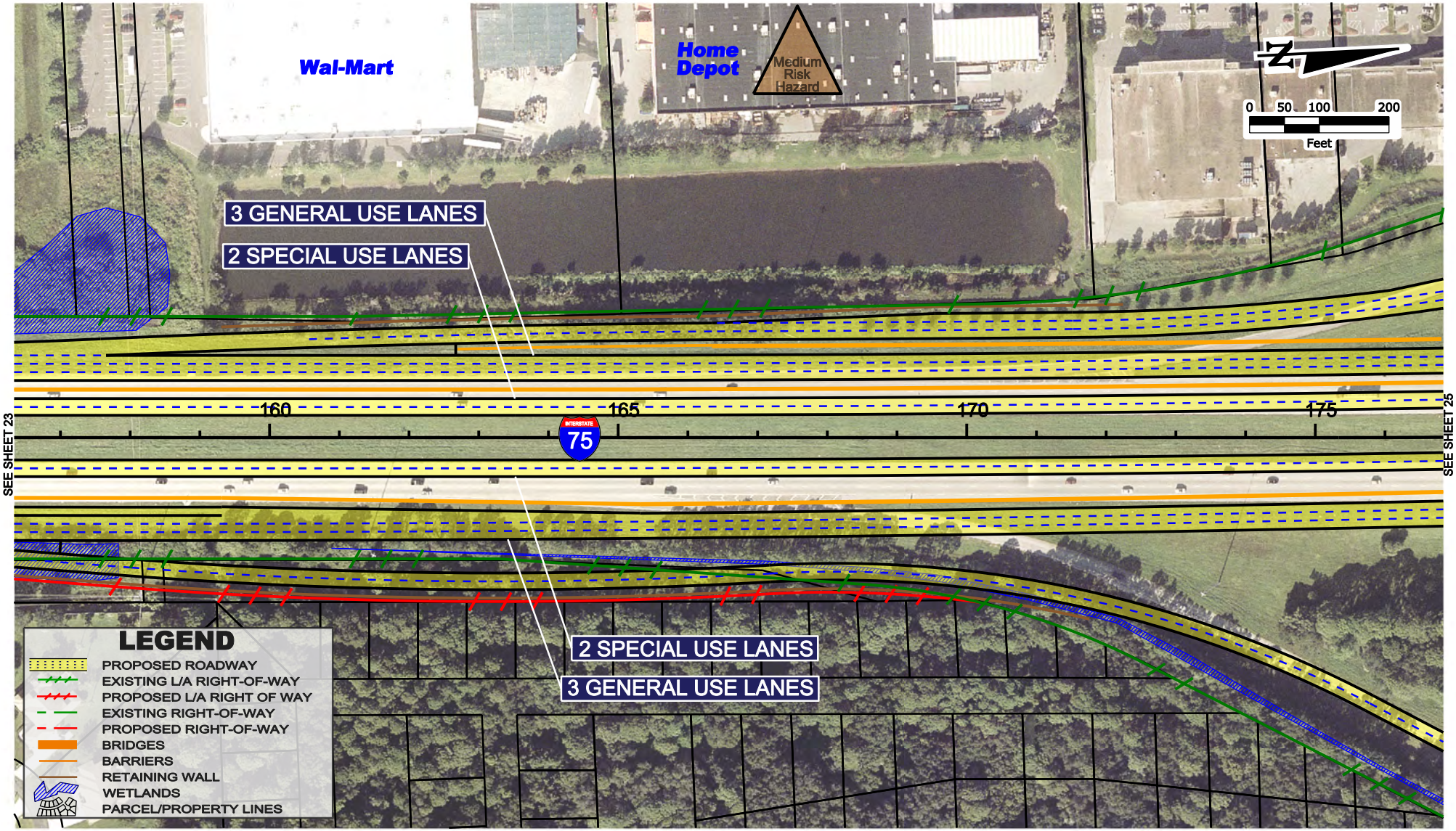
Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



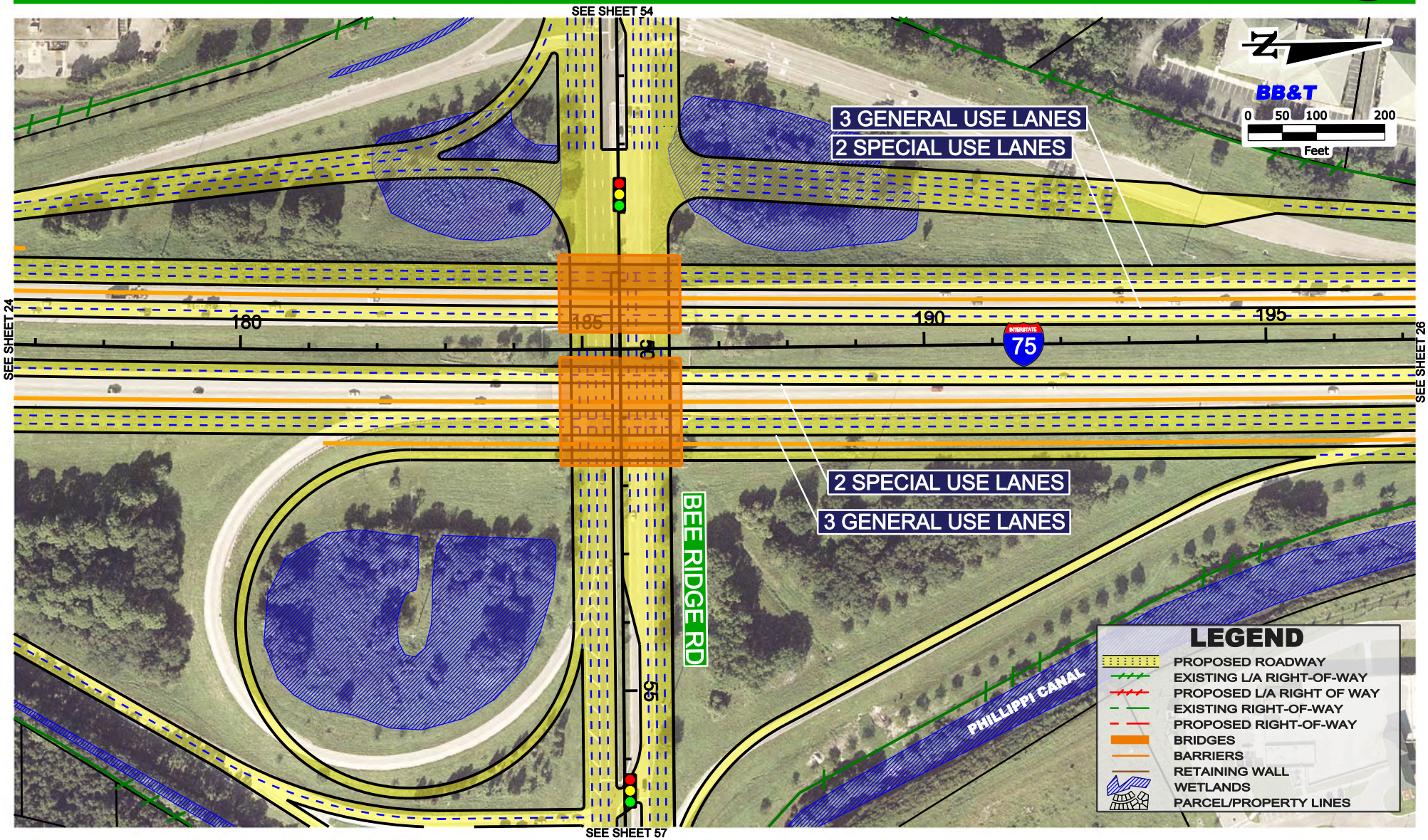
Carter::Burgess


N
0 50 100 200
Feet
1 AUXILIARY LANE
3 GENERAL USE LANES
2 SPECIAL USE LANES
140
145
150
155
INTERSTATE
75
SEE SHEET 22
SEE SHEET 24
2 SPECIAL USE LANES
1 AUXILIARY LANE
3 GENERAL USE LANES
Power Substation
COUNTRY CREEK
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES


Wal-Mart
Home Depot
Medium Risk Hazard
0 50 100 200
Feet
3 GENERAL USE LANES
2 SPECIAL USE LANES
160
165
170
175
INTERSTATE 75
SEE SHEET 23
SEE SHEET 25
2 SPECIAL USE LANES
3 GENERAL USE LANES
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES

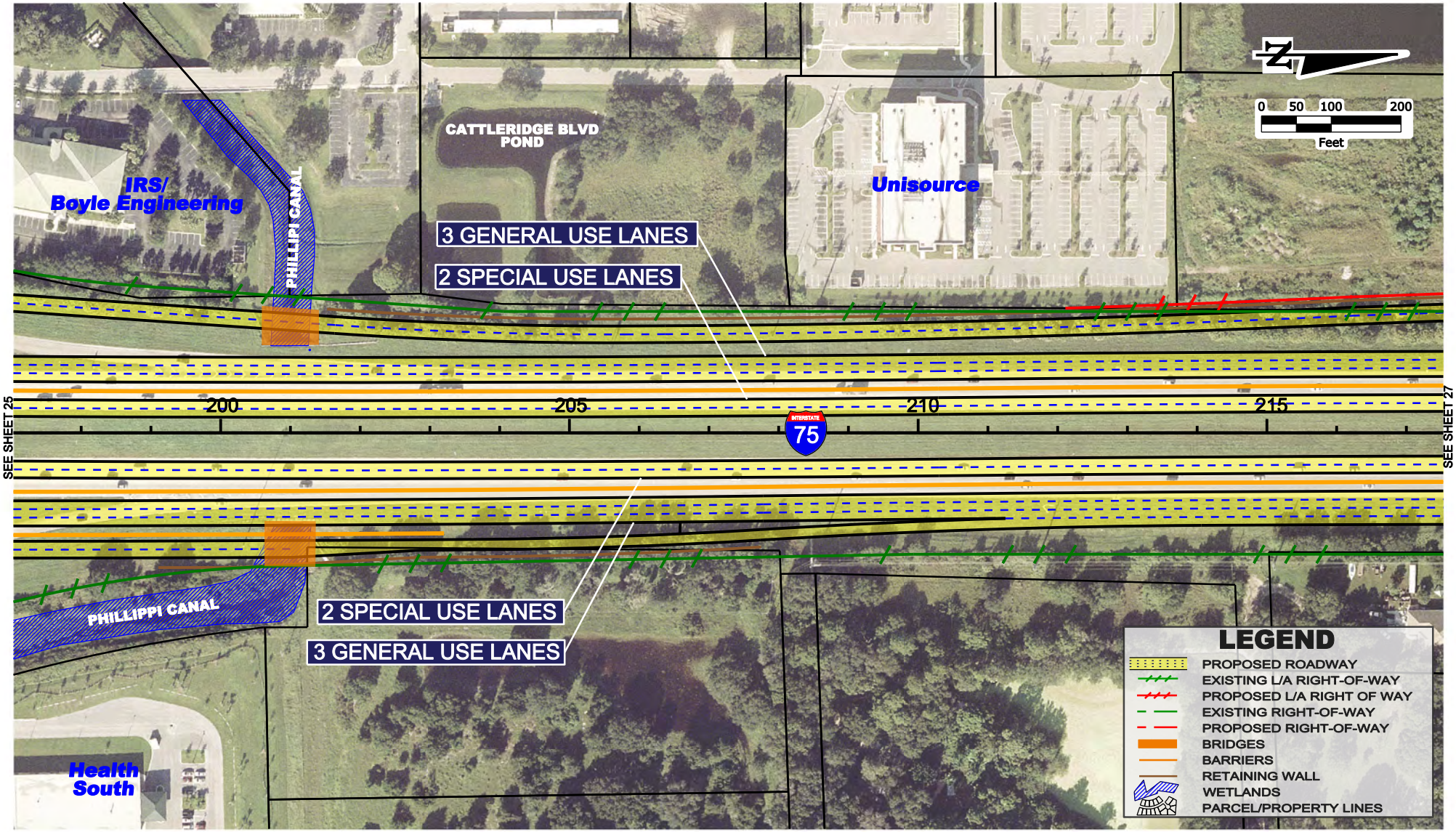
Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



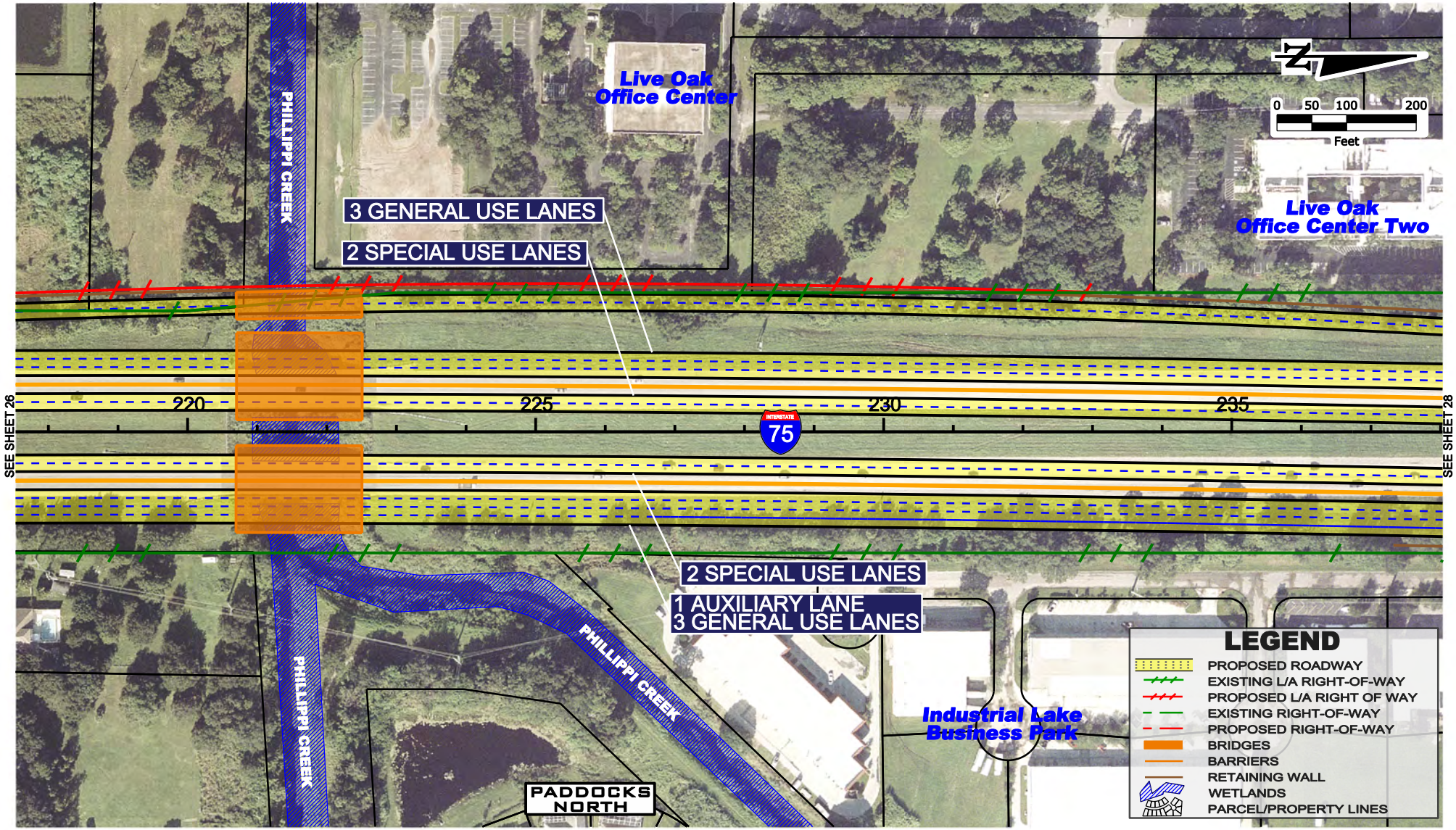
Carter::Burgess

Sheet No. 25

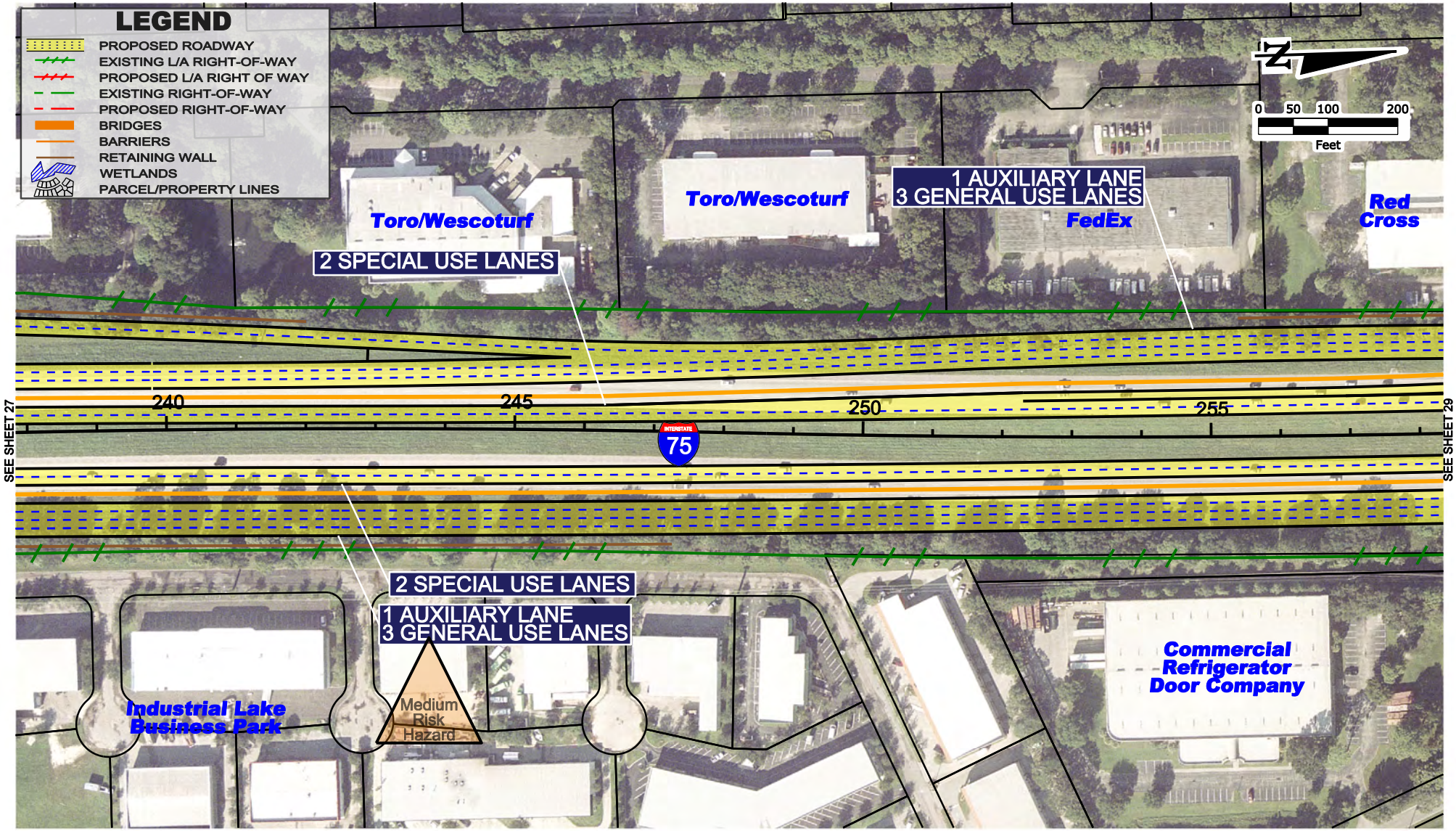

CATTLERIDGE BLVD POND
IRS/ Boyle Engineering
PHILLIPPI CANAL
Unisource
3 GENERAL USE LANES
2 SPECIAL USE LANES
0 50 100 200
Feet
SEE SHEET 25
200
205
210
215
INTERSTATE 75
SEE SHEET 27
PHILLIPPI CANAL
2 SPECIAL USE LANES
3 GENERAL USE LANES
Health South
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



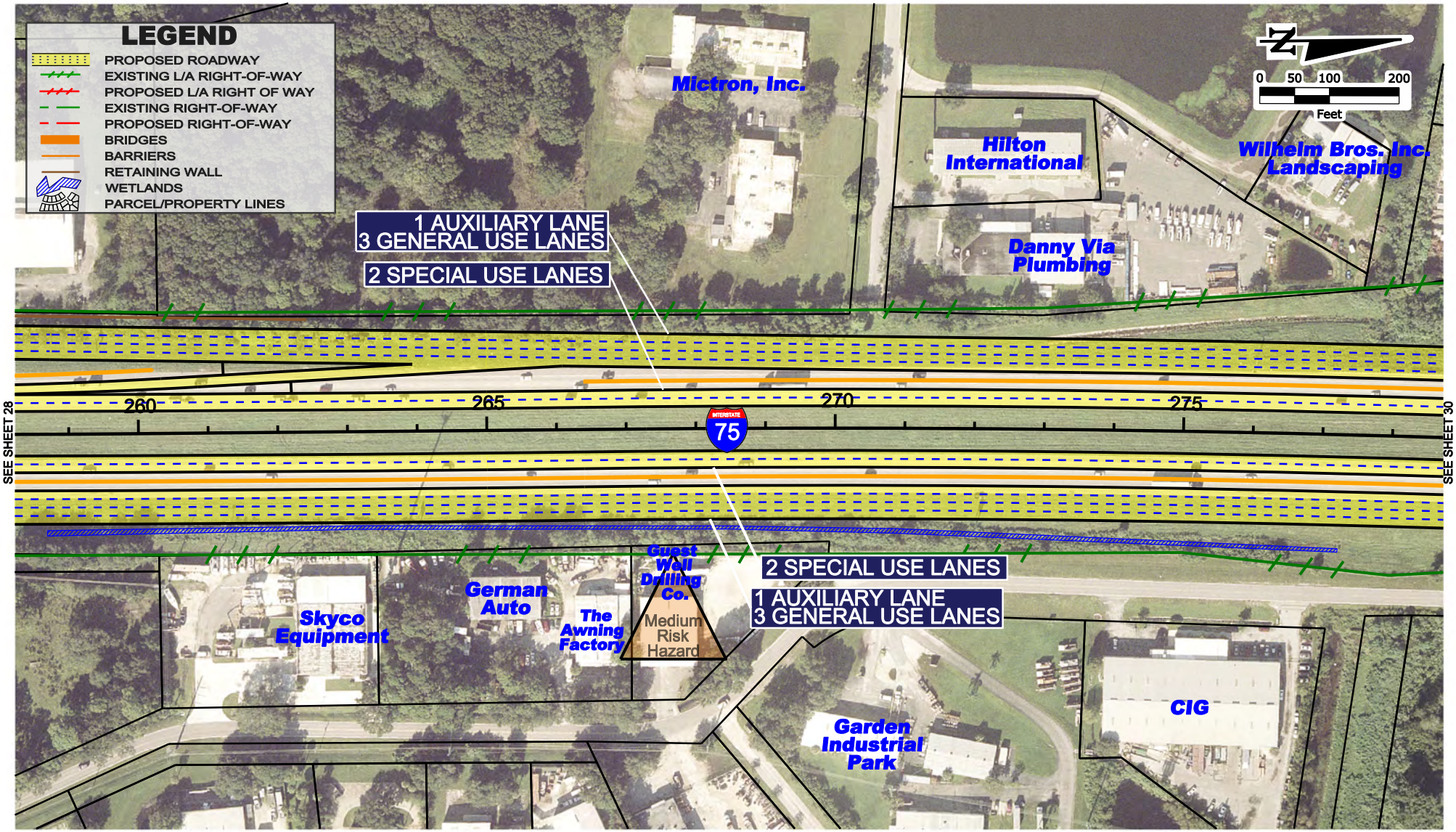
Carter::Burgess



Carter::Burgess

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01

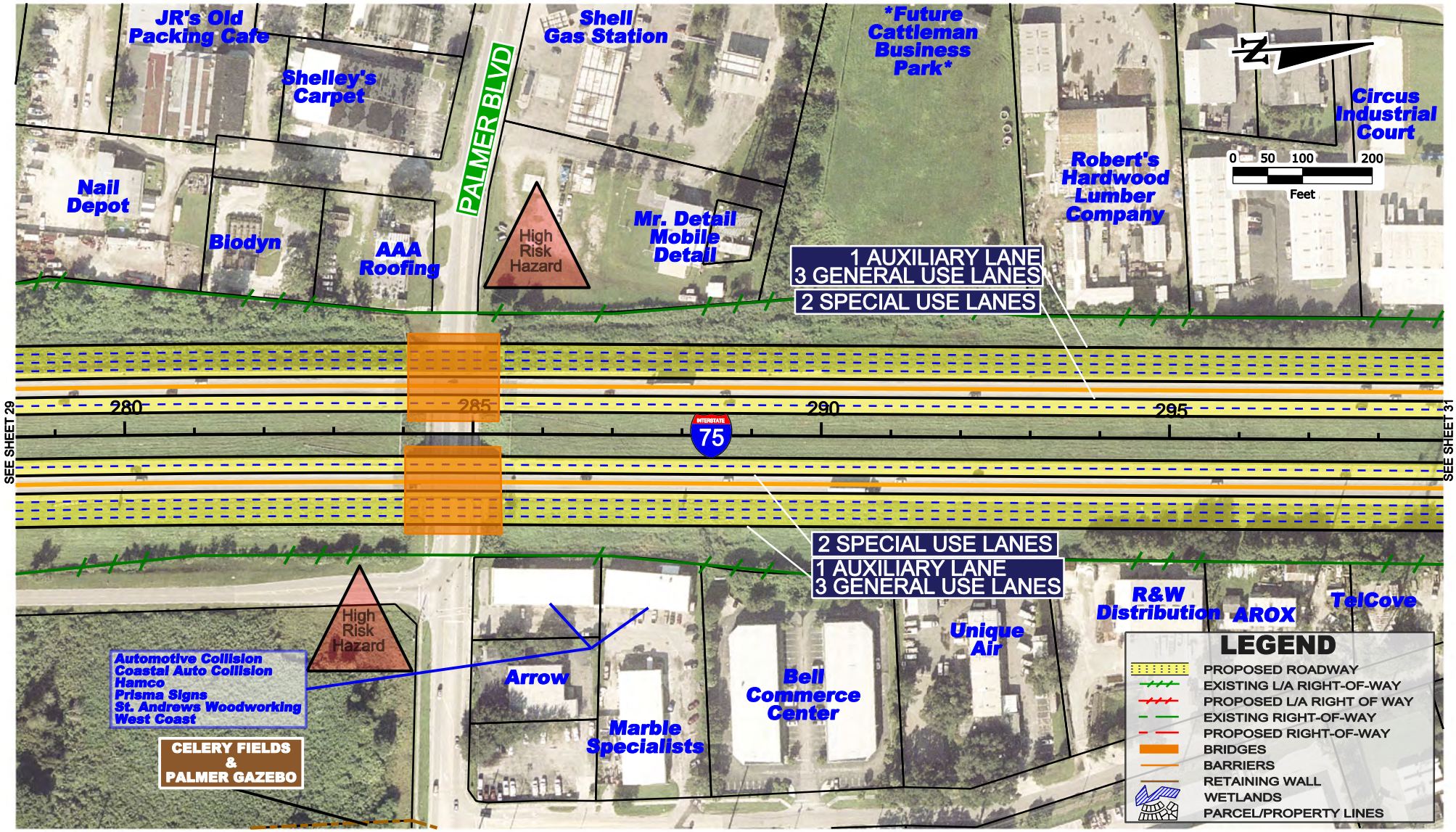


Carter::Burgess

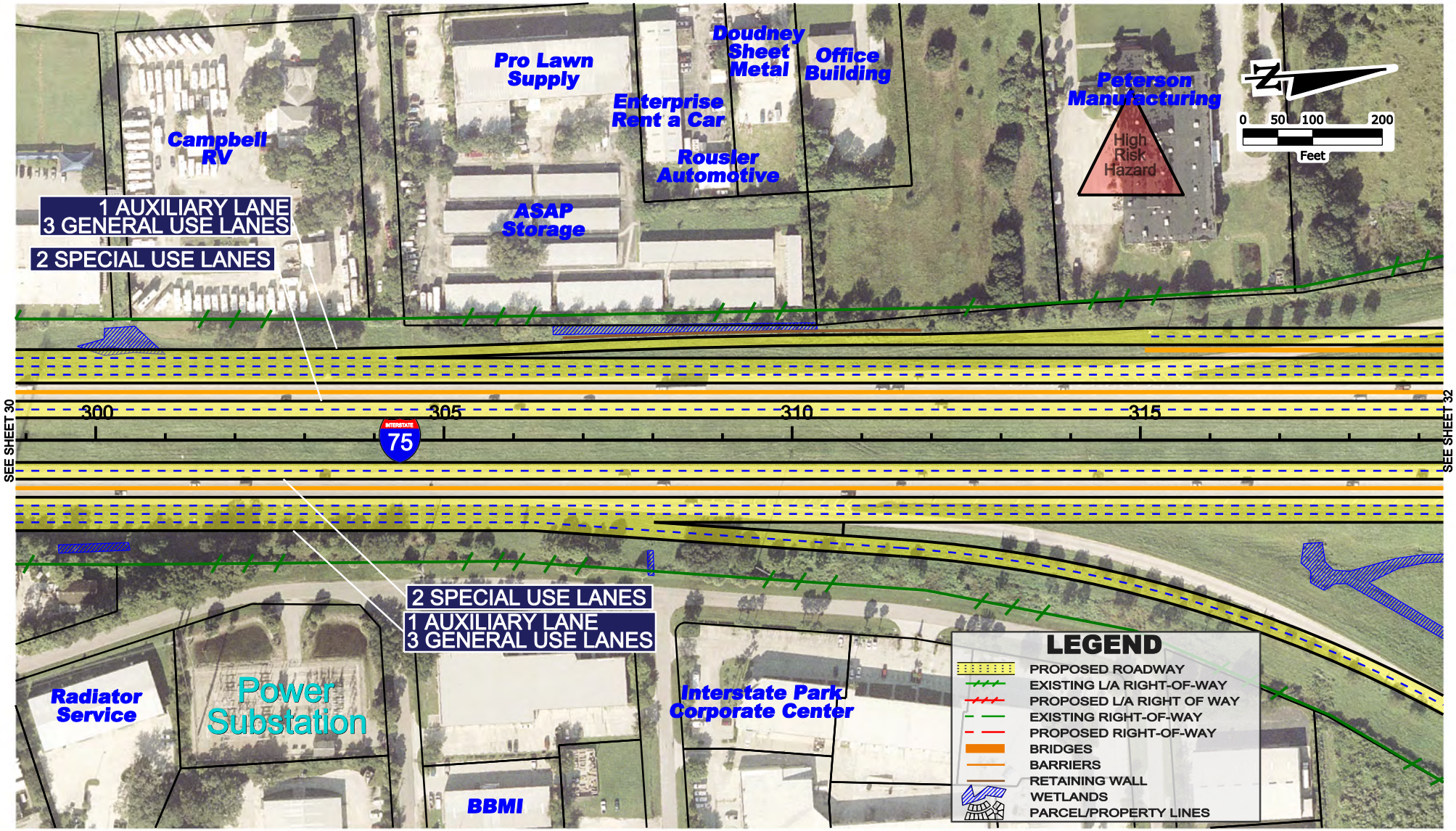
Sheet No. 29

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01

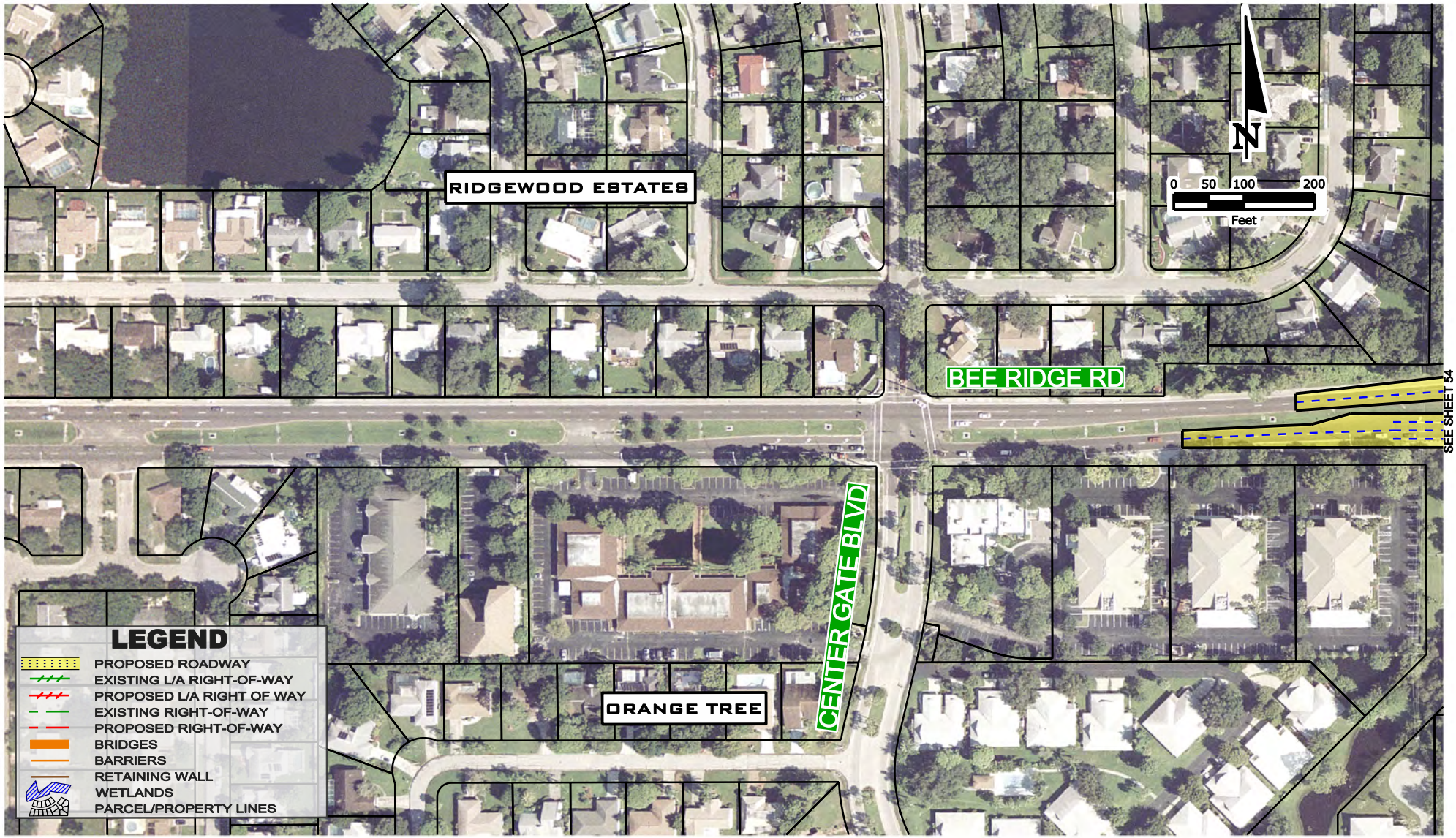


Carter::Burgess

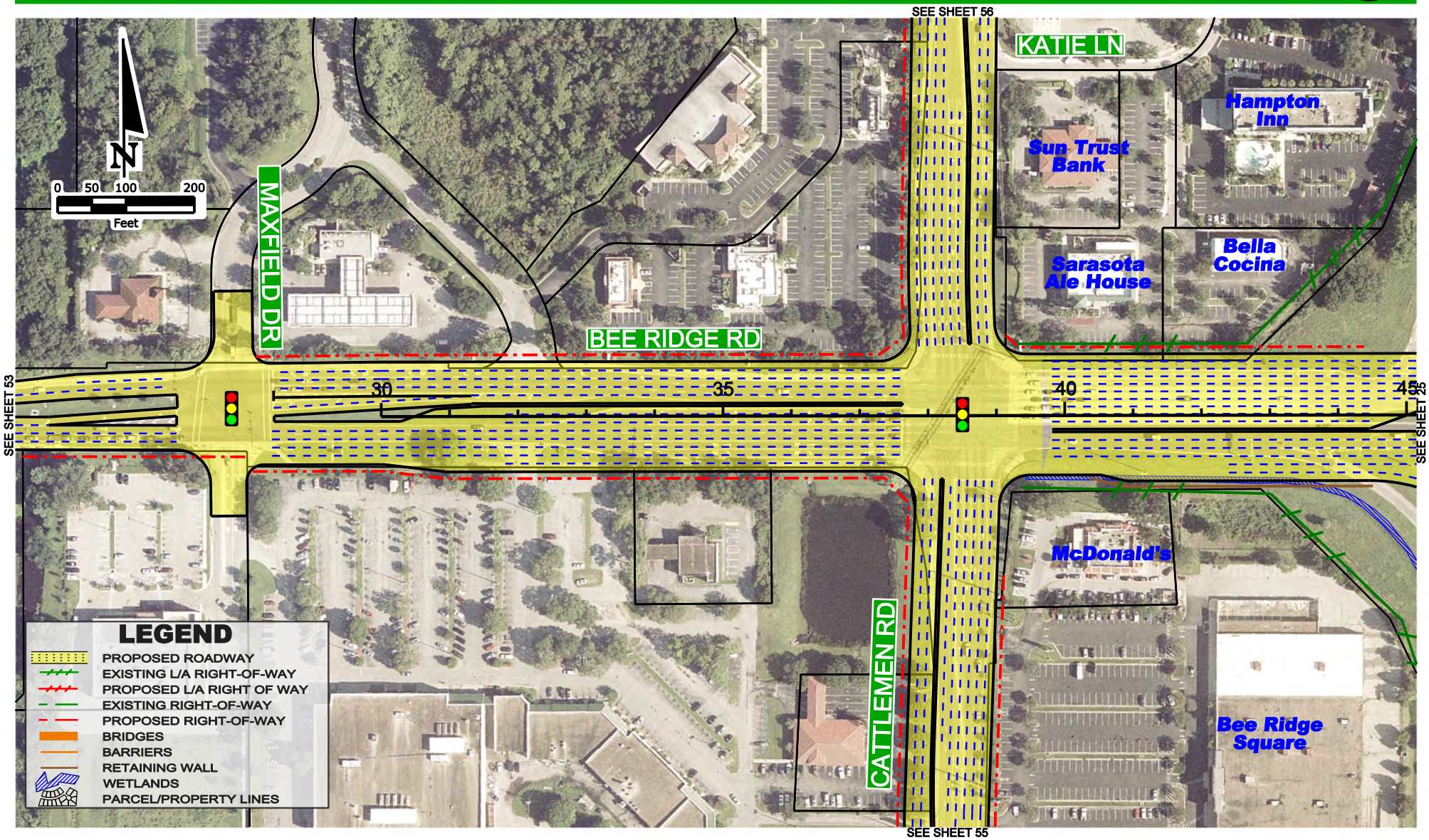

Campbell RV
Pro Lawn Supply
Doudney Sheet Metal
Office Building
Enterprise Rent a Car
Rousler Automotive
ASAP Storage
Peterson Manufacturing
High Risk Hazard
1 AUXILIARY LANE
3 GENERAL USE LANES
2 SPECIAL USE LANES
0 50 100 200
Feet
SEE SHEET 30
300
305
310
315
75
SEE SHEET 32
2 SPECIAL USE LANES
1 AUXILIARY LANE
3 GENERAL USE LANES
Radiator Service
Power Substation
BBMI
Interstate Park Corporate Center
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



Carter::Burgess

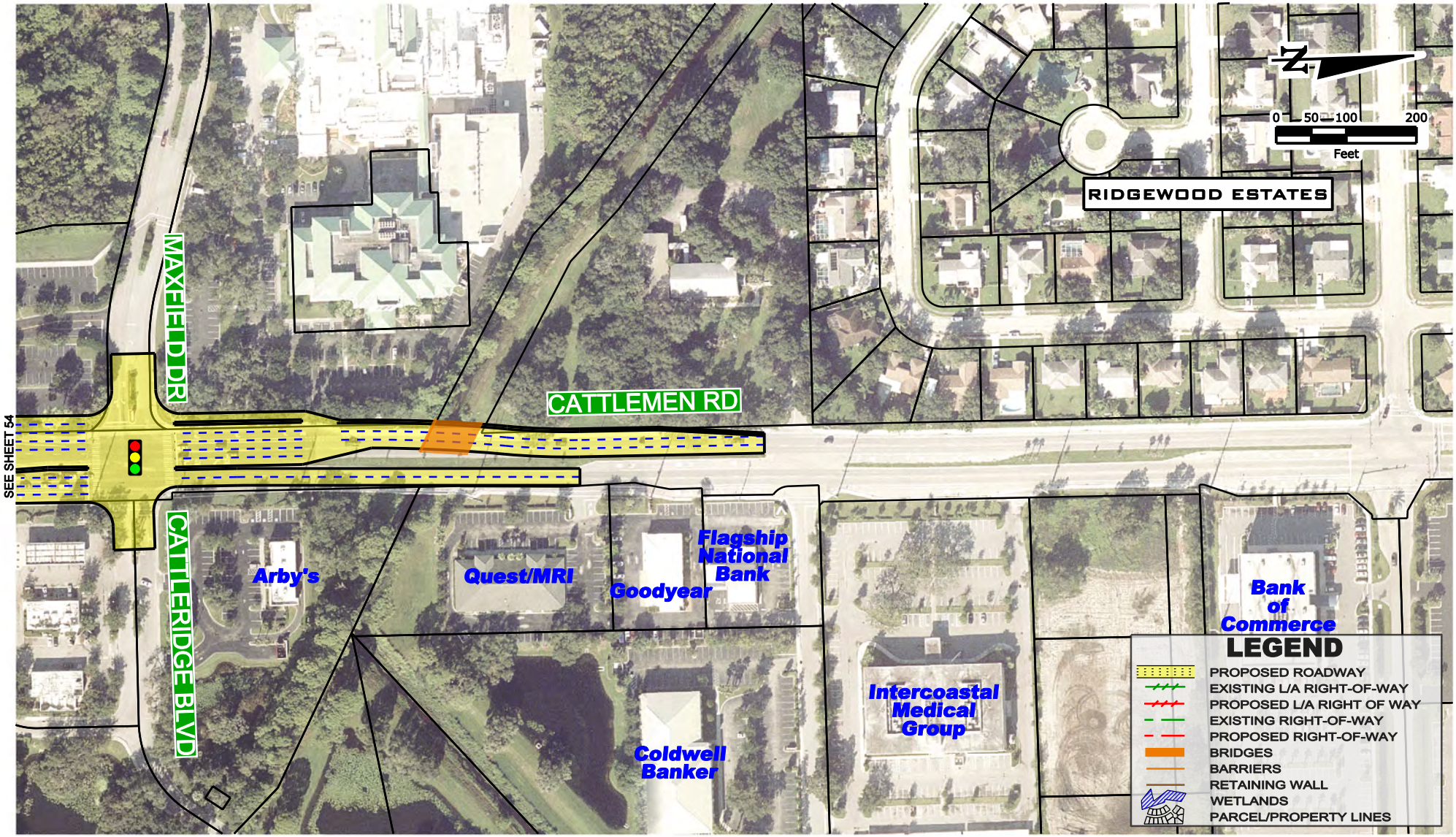


Carter::Burgess

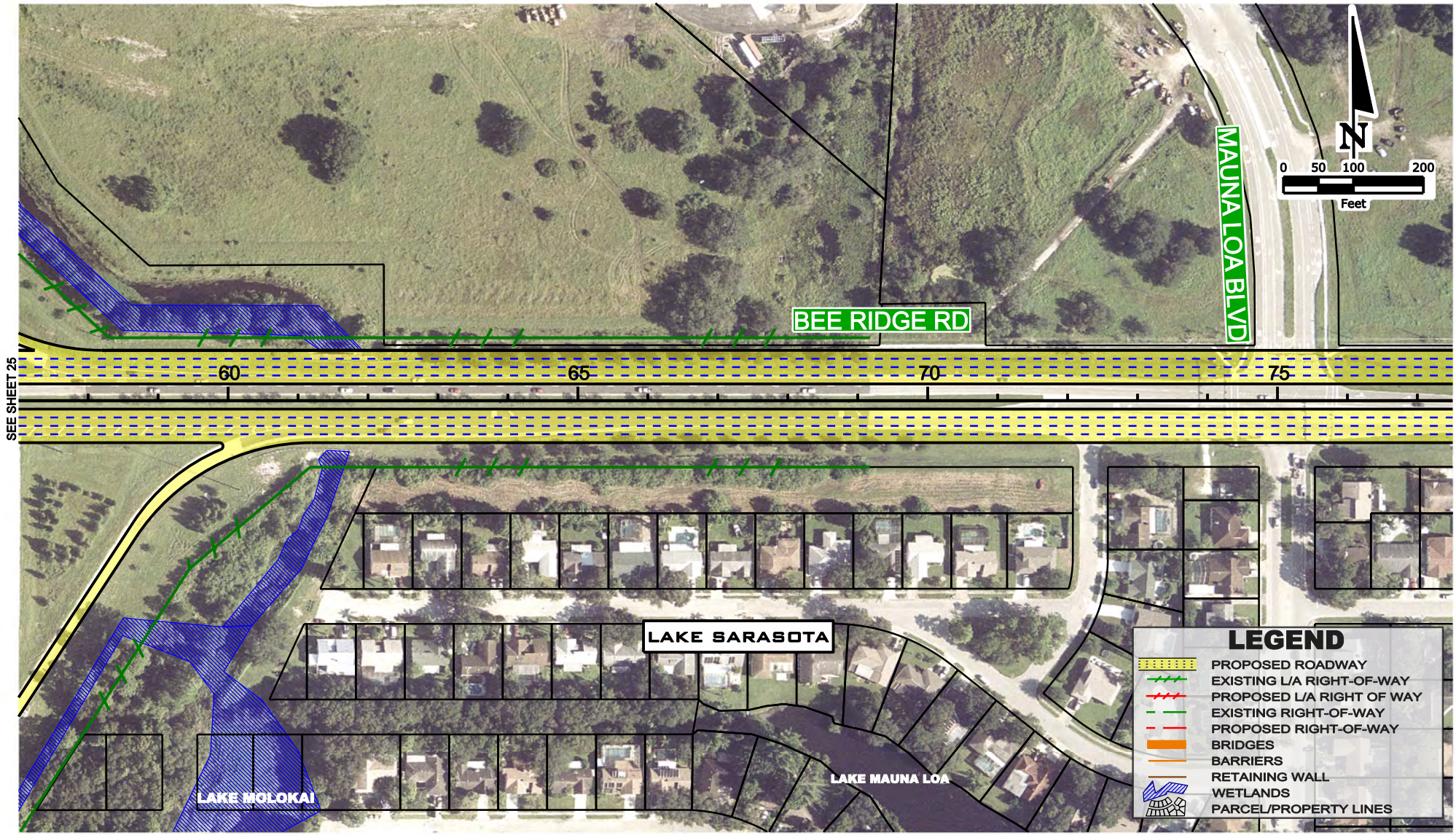

N
0 50 100 200
Feet
CATTLEMEN RD
SEE SHEET 54
Steak & Shake
Madfish Grill
Regions Bank
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



Carter::Burgess


BEE RIDGE RD
MAUNA LOA BLVD
60
65
70
75
SEE SHEET 25
N
0 50 100 200
Feet
LAKE SARASOTA
LAKE MAUNA LOA
LAKE MOLOKAI
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES

Appendix B
Traffic Counts

Vehicle Classification Counts

Station ID: 170001311100
Bee Ridge Rd - West of Maxfield

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	EB LN1	83	7888	1391	85	243	37	4	56	63	19	0	1	9	0	0	9879
9/10/2013	Tuesday	EB LN2	48	6412	1689	42	259	14	2	44	18	9	1	0	4	0	0	8542
	Tuesday	EB	131	14300	3080	127	502	51	6	100	81	28	1	1	13	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	EB LN1	75	8012	1413	79	198	38	6	51	57	14	0	1	9	0	0	9953
9/11/2013	Wednesday	EB LN2	51	6613	1699	29	239	11	0	40	12	4	1	0	0	0	0	8699
	Wednesday	EB	126	14625	3112	108	437	49	6	91	69	18	1	1	9	0	0	

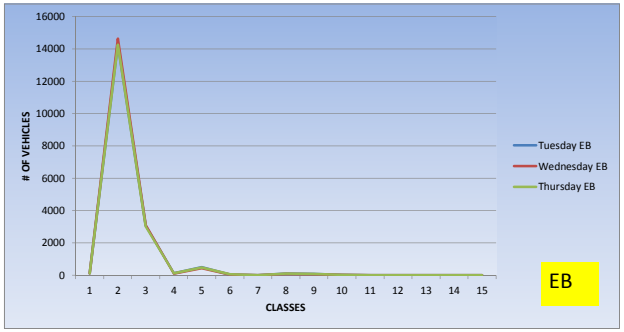
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	EB LN1	66	7875	1357	99	225	56	0	49	58	19	0	1	8	0	0	9813
9/12/2013	Thursday	EB LN2	50	6387	1659	31	254	8	0	47	17	7	0	0	1	0	0	8461
	Thursday	EB	116	14262	3016	130	479	64	0	96	75	26	0	1	9	0	0	

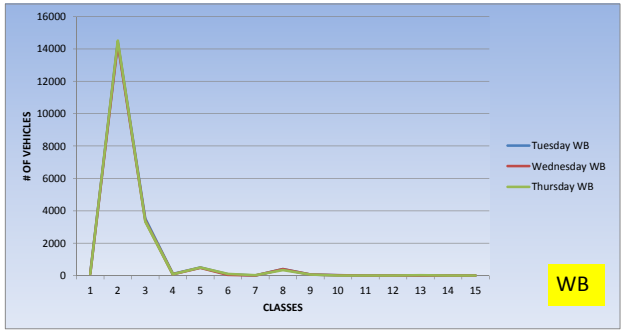
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	WB LN1	53	7498	1444	52	227	20	0	293	31	30	1	0	1	11	0	9661
9/10/2013	Tuesday	WB LN2	81	6917	2053	42	277	58	5	112	31	0	2	1	7	0	0	9586
	Tuesday	WB	134	14415	3497	94	504	78	5	405	62	30	3	1	8	11	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	WB LN1	30	7248	1334	48	218	24	0	265	31	18	1	0	3	5	0	9225
9/11/2013	Wednesday	WB LN2	76	7062	2049	40	257	27	2	129	24	0	1	1	6	0	0	9674
	Wednesday	WB	106	14310	3383	88	475	51	2	394	55	18	2	1	9	5	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	WB LN1	27	7534	1347	36	202	67	4	214	44	0	0	0	19	0	0	9494
9/12/2013	Thursday	WB LN2	74	6984	1989	38	304	40	20	124	26	0	1	1	7	0	0	9608
	Thursday	WB	101	14518	3336	74	506	107	24	338	70	0	1	1	26	0	0	

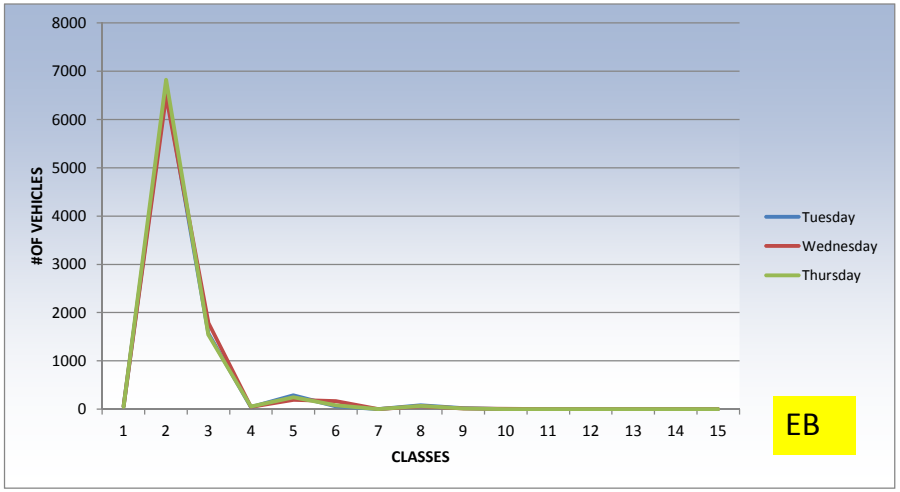
Station ID: 170001311100
Bee Ridge Rd - West of Maxfield

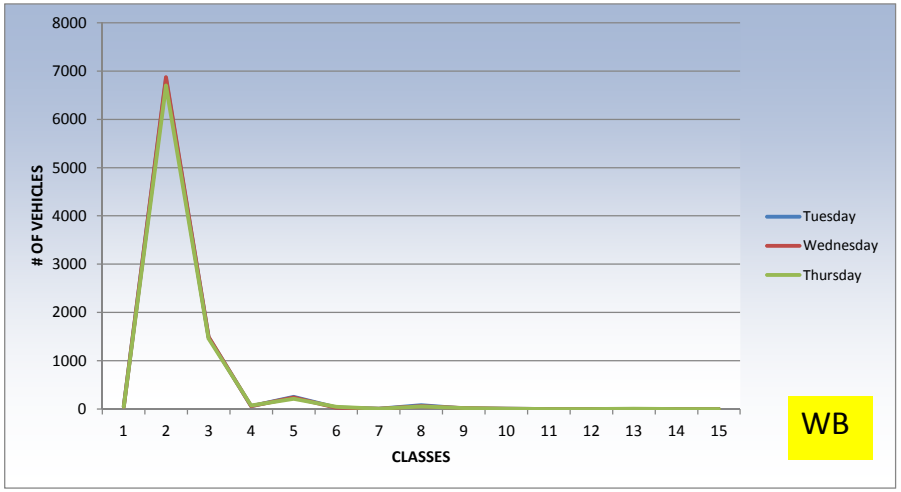




Station ID: 170002711100
Bee Ridge Rd - East of Mauna Loa Blvd

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	EB	55	6610	1569	42	288	62	1	82	19	2	0	0	0	0	0	8730
9/11/2013	Wednesday	EB	55	6488	1794	47	195	165	3	61	17	5	0	0	1	0	0	8831
9/12/2013	Thursday	EB	45	6822	1541	53	246	80	4	65	16	1	0	0	1	0	0	8874
			155	19920	4904	142	729	307	8	208	52	8	0	0	2	0	0	26435
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	WB	52	6832	1488	56	247	28	1	75	14	1	0	0	0	0	0	8794
9/11/2013	Wednesday	WB	45	6876	1496	56	236	27	1	56	15	3	0	0	0	0	0	8811
9/12/2013	Thursday	WB	45	6703	1453	71	211	42	3	52	17	4	0	0	1	0	0	8602
			142	20411	4437	183	694	97	5	183	46	8	0	0	1	0	0	26207





Station ID: 170003122100
3-I -75 approximately ¼ mile north of SB
off-NB on Ramp Terminals of Bee Ridge Rd

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	NB LN1	185	10139	2519	40	645	266	66	435	546	13	39	22	0	0	0	14915
9/10/2013	Tuesday	NB LN2	189	13180	3031	34	637	325	35	704	512	35	22	10	46	0	0	18760
9/10/2013	Tuesday	NB LN3	51	11718	2395	8	372	7	0	184	3	4	0	0	1	0	0	14743
	Tuesday	NB	425	35037	7945	82	1654	598	101	1323	1061	52	61	32	47	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	NB LN1	183	10133	2463	50	625	250	88	439	551	9	41	18	0	0	0	14850
9/11/2013	Wednesday	NB LN2	195	13091	3109	35	621	288	50	674	487	24	24	10	52	0	0	18660
9/11/2013	Wednesday	NB LN3	40	11869	2349	14	340	10	0	173	3	6	0	0	0	4	0	14808
	Wednesday	NB	418	35093	7921	99	1586	548	138	1286	1041	39	65	28	52	4	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	NB LN1	132	10148	2512	42	522	164	19	224	337	5	18	11	0	0	0	14134
9/12/2013	Thursday	NB LN2	151	12887	3114	51	333	176	12	406	353	19	13	9	42	0	0	17566
9/12/2013	Thursday	NB LN3	32	12185	3259	2	290	5	0	130	5	0	0	0	0	0	0	15908
	Thursday	NB	315	35220	8885	95	1145	345	31	760	695	24	31	20	42	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	NB	425	35037	7945	82	1654	598	101	1323	1061	52	61	32	47	0	0	48418
9/11/2013	Wednesday	NB	418	35093	7921	99	1586	548	138	1286	1041	39	65	28	52	4	0	48318
9/12/2013	Thursday	NB	315	35220	8885	95	1145	345	31	760	695	24	31	20	42	0	0	47608
		NB	1158	105350	24751	276	4385	1491	270	3369	2797	115	157	80	141	4	0	

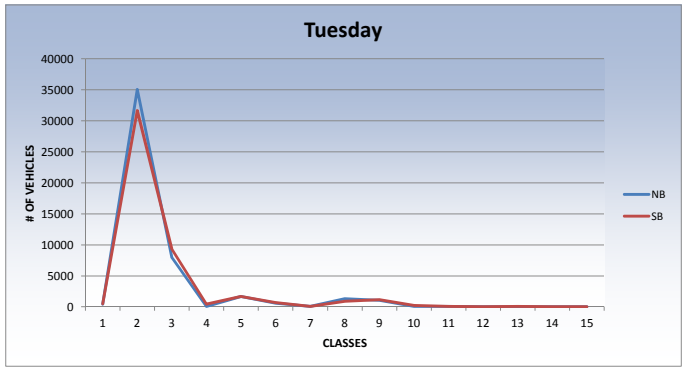
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	SB LN1	204	12887	2878	235	648	367	47	485	673	13	36	22	1	0	0	18496
9/10/2013	Tuesday	SB LN2	243	9647	3027	219	663	317	47	327	501	207	17	8	63	0	0	15286
9/10/2013	Tuesday	SB LN3	36	9099	3416	4	367	2	0	94	1	0	1	0	0	0	0	13020
	Tuesday	SB	483	31633	9321	458	1678	686	94	906	1175	220	54	30	64	0	0	

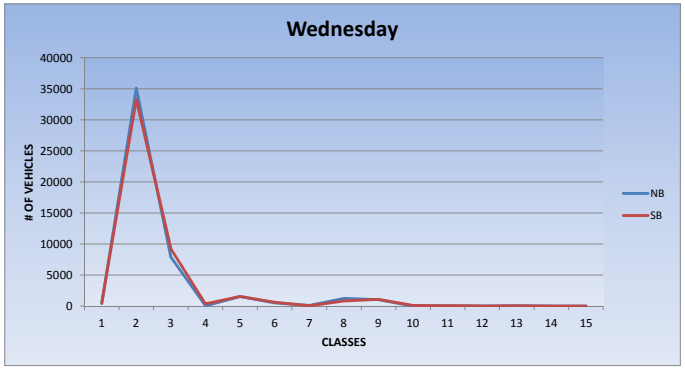
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	SB LN1	197	13005	2927	209	639	359	33	436	719	10	39	20	2	0	0	18595
9/11/2013	Wednesday	SB LN2	325	10651	2378	174	552	280	55	353	404	137	17	7	50	0	0	15383
9/11/2013	Wednesday	SB LN3	32	9628	3932	10	399	8	0	81	6	0	0	0	0	0	0	14096
	Wednesday	SB	554	33284	9237	393	1590	647	88	870	1129	147	56	27	52	0	0	

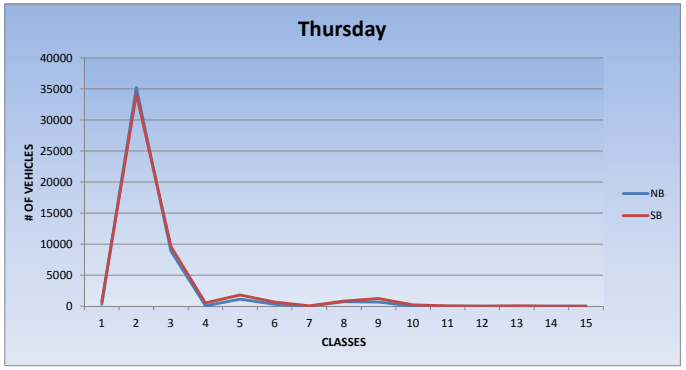
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	SB LN1	325	14159	2968	268	644	298	6	363	595	22	26	24	4	0	0	19702
9/12/2013	Thursday	SB LN2	370	10271	2701	259	700	411	61	415	655	198	30	12	49	0	0	16132
9/12/2013	Thursday	SB LN3	32	9736	3974	6	508	4	0	76	3	0	0	0	0	0	0	14339
	Thursday	SB	727	34166	9643	533	1852	713	67	854	1253	220	56	36	53	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	SB	483	31633	9321	458	1678	686	94	906	1175	220	54	30	64	0	0	46802
9/11/2013	Wednesday	SB	554	33284	9237	393	1590	647	88	870	1129	147	56	27	52	0	0	48074
9/12/2013	Thursday	SB	727	34166	9643	533	1852	713	67	854	1253	220	56	36	53	0	0	50173
		SB	1764	99083	28201	1384	5120	2046	249	2630	3557	587	166	93	169	0	0	

Station ID: 170003122100
3-I -75 approximately ¼ mile north of SB
off-NB on Ramp Terminals of Bee Ridge Rd







Station ID: 170004122100
I -75 approximately ¼ mile south of SB
on / NB off Ramp Terminals of Bee Ridge

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	NB LN1	302	10250	2748	235	692	389	69	495	451	25	44	22	1	0	0	15723
9/10/2013	Tuesday	NB LN2	222	10772	2360	188	563	270	44	402	445	116	18	9	41	0	0	15450
9/10/2013	Tuesday	NB LN3	44	8645	2825	2	317	3	0	85	4	1	0	0	0	0	0	11926
	Tuesday	NB	568	29667	7933	425	1572	662	113	982	900	142	62	31	42	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	NB LN1	329	10127	2756	227	659	351	91	491	427	22	38	21	3	0	0	15542
9/11/2013	Wednesday	NB LN2	186	10798	2350	210	544	230	52	419	421	129	17	11	37	0	0	15404
9/11/2013	Wednesday	NB LN3	38	8708	2938	6	351	3	0	70	7	1	0	0	1	0	0	12123
	Wednesday	NB	553	29633	8044	443	1554	584	143	980	855	152	55	32	41	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	NB LN1	190	11031	2580	50	610	190	19	430	535	7	33	20	0	0	0	15695
9/12/2013	Thursday	NB LN2	173	10449	2245	43	530	252	30	497	417	33	10	9	57	0	0	14745
9/12/2013	Thursday	NB LN3	28	11132	2123	10	234	4	0	41	12	3	0	0	0	0	0	13587
	Thursday	NB	391	32612	6948	103	1374	446	49	968	964	43	43	29	57	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	NB	568	29667	7933	425	1572	662	113	982	900	142	62	31	42	0	0	43099
9/11/2013	Wednesday	NB	553	29633	8044	443	1554	584	143	980	855	152	55	32	41	0	0	43069
9/12/2013	Thursday	NB	391	32612	6948	103	1374	446	49	968	964	43	43	29	57	0	0	44027
	72 Hours	NB	1512	91912	22925	971	4500	1692	305	2930	2719	337	160	92	140	0	0	

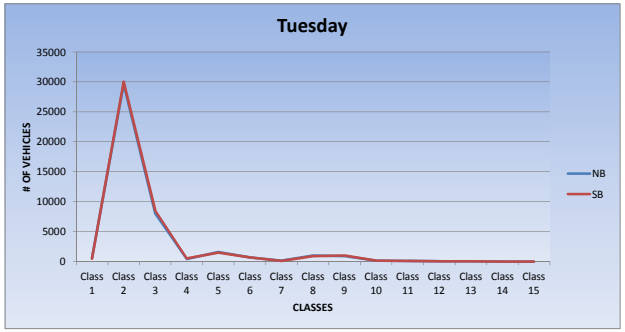
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	SB LN1	188	10533	2080	223	484	320	35	381	618	18	36	20	3	0	0	14939
9/10/2013	Tuesday	SB LN2	233	10664	3568	261	749	325	43	386	365	92	23	10	24	0	0	16743
9/10/2013	Tuesday	SB LN3	32	8809	2815	2	226	3	0	97	3	0	0	0	0	0	0	11987
	Tuesday	SB	453	30006	8463	486	1459	648	78	864	986	110	59	30	27	0	0	

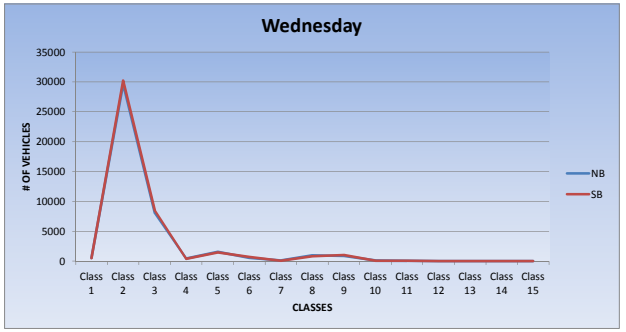
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	SB LN1	168	10687	2128	175	460	335	28	375	672	19	40	20	5	0	0	15112
9/11/2013	Wednesday	SB LN2	290	10662	3591	245	745	368	28	385	386	75	13	9	21	0	0	16818
9/11/2013	Wednesday	SB LN3	34	8890	2778	4	247	4	0	89	2	0	0	0	0	0	0	12048
	Wednesday	SB	492	30239	8497	424	1452	707	56	849	1060	94	53	29	26	0	0	

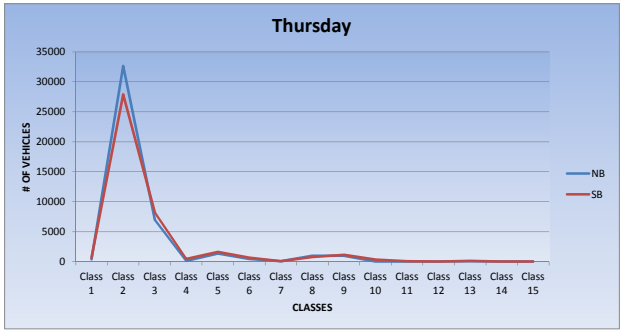
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	SB LN1	290	9291	2571	263	585	341	12	379	709	126	34	20	50	0	0	14671
9/12/2013	Thursday	SB LN2	323	8966	2632	199	772	318	62	311	407	219	14	9	91	0	0	14323
9/12/2013	Thursday	SB LN3	38	9617	2991	6	270	5	0	94	2	0	0	0	0	0	0	13023
	Thursday	SB	651	27874	8194	468	1627	664	74	784	1118	345	48	29	141	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	SB	453	30006	8463	486	1459	648	78	864	986	110	59	30	27	0	0	43669
9/11/2013	Wednesday	SB	492	30239	8497	424	1452	707	56	849	1060	94	53	29	26	0	0	43978
9/12/2013	Thursday	SB	651	27874	8194	468	1627	664	74	784	1118	345	48	29	141	0	0	42017
	72 Hours	SB	1596	88119	25154	1378	4538	2019	208	2497	3164	549	160	88	194	0	0	

Station ID: 170004122100
I -75 approximately ¼ mile south of SB
on / NB off Ramp Terminals of Bee Ridge



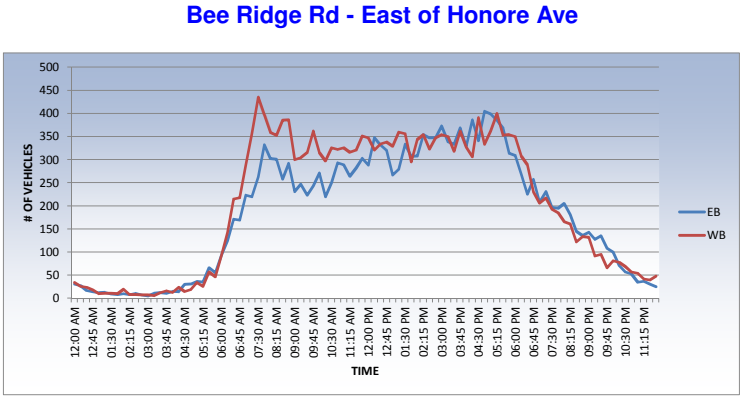




24-Hour Bi-Directional Vehicle Counts

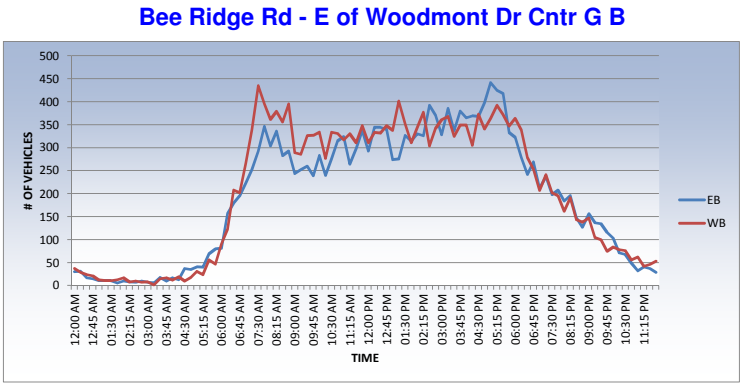
Volume
Station ID: 171701321100
Bee Ridge Rd - East of Honore Ave
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	31	34
12:15 AM	27	26
12:30 AM	17	24
12:45 AM	14	18
01:00 AM	12	10
01:15 AM	13	11
01:30 AM	9	11
01:45 AM	8	10
02:00 AM	10	20
02:15 AM	8	8
02:30 AM	11	8
02:45 AM	7	7
03:00 AM	5	7
03:15 AM	11	6
03:30 AM	12	12
03:45 AM	11	16
04:00 AM	15	13
04:15 AM	14	24
04:30 AM	30	15
04:45 AM	31	19
05:00 AM	36	34
05:15 AM	35	26
05:30 AM	66	57
05:45 AM	55	47
06:00 AM	93	93
06:15 AM	125	143
06:30 AM	171	215
06:45 AM	169	218
07:00 AM	223	288
07:15 AM	220	356
07:30 AM	263	435
07:45 AM	332	397
08:00 AM	302	359
08:15 AM	301	353
08:30 AM	258	385
08:45 AM	292	386
09:00 AM	231	300
09:15 AM	247	304
09:30 AM	223	315
09:45 AM	243	362
10:00 AM	271	315
10:15 AM	220	297
10:30 AM	250	326
10:45 AM	293	322
11:00 AM	289	326
11:15 AM	264	316
11:30 AM	282	321
11:45 AM	303	351
12:00 PM	288	347
12:15 PM	348	321
12:30 PM	332	334
12:45 PM	320	338
01:00 PM	267	329
01:15 PM	279	360
01:30 PM	333	356
01:45 PM	307	295
02:00 PM	308	344
02:15 PM	354	354
02:30 PM	347	323
02:45 PM	347	347
03:00 PM	373	354
03:15 PM	339	350
03:30 PM	333	318
03:45 PM	369	362
04:00 PM	329	327
04:15 PM	386	306
04:30 PM	341	391
04:45 PM	405	333
05:00 PM	399	362
05:15 PM	385	400
05:30 PM	368	353
05:45 PM	314	354
06:00 PM	309	350
06:15 PM	268	308
06:30 PM	225	289
06:45 PM	257	230
07:00 PM	208	206
07:15 PM	231	217
07:30 PM	196	193
07:45 PM	195	185
08:00 PM	205	166
08:15 PM	181	161
08:30 PM	145	122
08:45 PM	136	133
09:00 PM	143	132
09:15 PM	128	92
09:30 PM	135	95
09:45 PM	108	66
10:00 PM	100	81
10:15 PM	71	78
10:30 PM	57	69
10:45 PM	53	57
11:00 PM	35	54
11:15 PM	37	42
11:30 PM	31	40
11:45 PM	25	48
Total	18003	19618



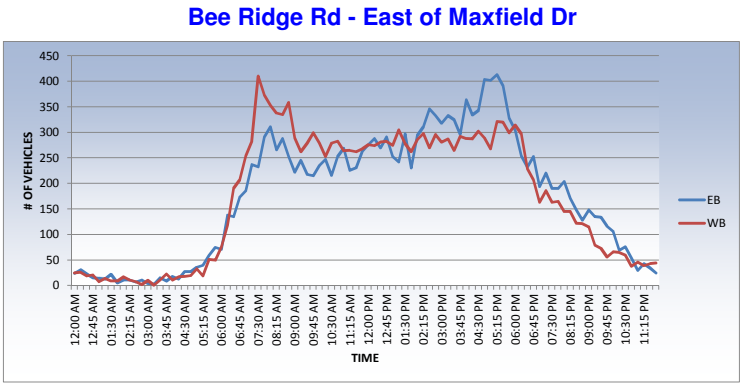
Volume
Station ID: 171702321100
Bee Ridge Rd - E of Woodmont Dr Cntr G B
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	30	37
12:15 AM	31	29
12:30 AM	17	24
12:45 AM	15	21
01:00 AM	11	12
01:15 AM	11	11
01:30 AM	11	11
01:45 AM	6	13
02:00 AM	10	17
02:15 AM	8	8
02:30 AM	7	10
02:45 AM	10	7
03:00 AM	7	8
03:15 AM	6	2
03:30 AM	18	15
03:45 AM	10	17
04:00 AM	17	12
04:15 AM	13	19
04:30 AM	37	10
04:45 AM	35	18
05:00 AM	41	31
05:15 AM	40	24
05:30 AM	69	56
05:45 AM	80	47
06:00 AM	81	91
06:15 AM	157	123
06:30 AM	179	208
06:45 AM	195	202
07:00 AM	223	266
07:15 AM	252	339
07:30 AM	293	435
07:45 AM	346	396
08:00 AM	304	362
08:15 AM	336	379
08:30 AM	283	356
08:45 AM	293	395
09:00 AM	244	289
09:15 AM	252	286
09:30 AM	260	326
09:45 AM	239	327
10:00 AM	283	334
10:15 AM	240	277
10:30 AM	276	334
10:45 AM	315	331
11:00 AM	324	317
11:15 AM	264	330
11:30 AM	298	311
11:45 AM	337	348
12:00 PM	293	311
12:15 PM	344	333
12:30 PM	344	332
12:45 PM	340	348
01:00 PM	274	338
01:15 PM	275	401
01:30 PM	327	352
01:45 PM	314	311
02:00 PM	330	344
02:15 PM	326	377
02:30 PM	392	304
02:45 PM	371	342
03:00 PM	328	361
03:15 PM	385	368
03:30 PM	337	325
03:45 PM	380	349
04:00 PM	365	349
04:15 PM	369	305
04:30 PM	368	373
04:45 PM	398	341
05:00 PM	442	364
05:15 PM	425	392
05:30 PM	418	372
05:45 PM	333	347
06:00 PM	323	364
06:15 PM	279	339
06:30 PM	242	279
06:45 PM	269	253
07:00 PM	212	207
07:15 PM	237	241
07:30 PM	198	202
07:45 PM	208	195
08:00 PM	184	162
08:15 PM	196	191
08:30 PM	148	144
08:45 PM	127	138
09:00 PM	156	147
09:15 PM	137	105
09:30 PM	135	100
09:45 PM	116	75
10:00 PM	103	84
10:15 PM	71	78
10:30 PM	68	76
10:45 PM	49	56
11:00 PM	32	62
11:15 PM	41	42
11:30 PM	37	46
11:45 PM	29	53
Total	18889	19799



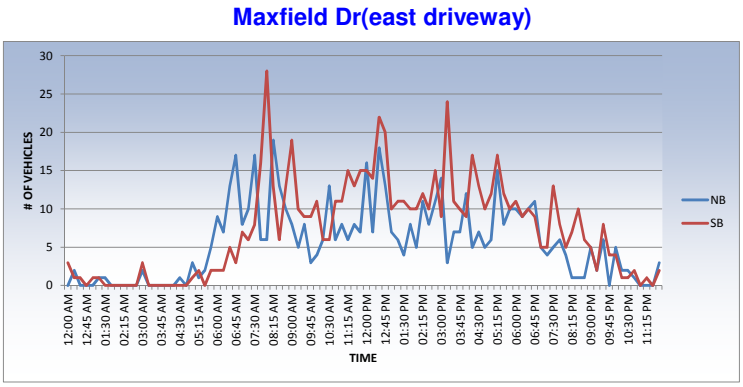
Volume
Station ID: 171703321100
Bee Ridge Rd - East of Maxfield Dr
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	24	25
12:15 AM	31	26
12:30 AM	23	19
12:45 AM	15	21
01:00 AM	14	8
01:15 AM	13	14
01:30 AM	22	9
01:45 AM	5	9
02:00 AM	11	17
02:15 AM	11	11
02:30 AM	7	8
02:45 AM	11	2
03:00 AM	4	10
03:15 AM	3	1
03:30 AM	15	11
03:45 AM	9	23
04:00 AM	18	11
04:15 AM	13	17
04:30 AM	27	18
04:45 AM	27	20
05:00 AM	36	33
05:15 AM	40	19
05:30 AM	59	51
05:45 AM	75	50
06:00 AM	71	76
06:15 AM	138	118
06:30 AM	135	191
06:45 AM	173	207
07:00 AM	186	254
07:15 AM	237	283
07:30 AM	233	410
07:45 AM	291	373
08:00 AM	311	353
08:15 AM	266	338
08:30 AM	288	335
08:45 AM	253	359
09:00 AM	222	289
09:15 AM	245	262
09:30 AM	218	279
09:45 AM	215	299
10:00 AM	235	279
10:15 AM	247	253
10:30 AM	216	279
10:45 AM	253	283
11:00 AM	269	264
11:15 AM	226	265
11:30 AM	231	262
11:45 AM	263	268
12:00 PM	276	276
12:15 PM	288	274
12:30 PM	270	281
12:45 PM	291	282
01:00 PM	253	275
01:15 PM	242	305
01:30 PM	297	278
01:45 PM	230	262
02:00 PM	294	286
02:15 PM	311	298
02:30 PM	346	270
02:45 PM	333	296
03:00 PM	318	281
03:15 PM	333	287
03:30 PM	325	265
03:45 PM	296	292
04:00 PM	364	288
04:15 PM	334	287
04:30 PM	343	302
04:45 PM	404	289
05:00 PM	402	268
05:15 PM	413	321
05:30 PM	391	320
05:45 PM	328	299
06:00 PM	304	314
06:15 PM	254	297
06:30 PM	232	229
06:45 PM	253	207
07:00 PM	194	163
07:15 PM	220	186
07:30 PM	190	163
07:45 PM	190	165
08:00 PM	204	145
08:15 PM	171	145
08:30 PM	148	122
08:45 PM	128	121
09:00 PM	148	115
09:15 PM	135	79
09:30 PM	134	73
09:45 PM	116	56
10:00 PM	106	66
10:15 PM	69	65
10:30 PM	76	60
10:45 PM	54	38
11:00 PM	30	46
11:15 PM	43	39
11:30 PM	35	43
11:45 PM	25	44
Total	17076	16875



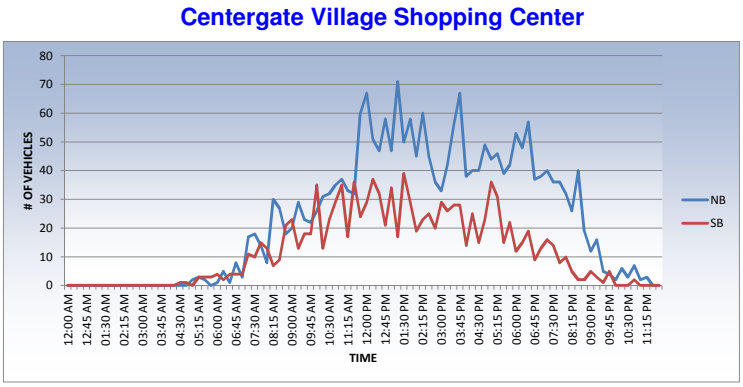
Volume
Station ID: 171744111100
Maxfield Dr(east driveway)
Start Date: 9/10/2013

Time	NB	SB
12:00 AM	0	3
12:15 AM	2	1
12:30 AM	0	1
12:45 AM	0	0
01:00 AM	0	1
01:15 AM	1	1
01:30 AM	1	0
01:45 AM	0	0
02:00 AM	0	0
02:15 AM	0	0
02:30 AM	0	0
02:45 AM	0	0
03:00 AM	2	3
03:15 AM	0	0
03:30 AM	0	0
03:45 AM	0	0
04:00 AM	0	0
04:15 AM	0	0
04:30 AM	1	0
04:45 AM	0	0
05:00 AM	3	1
05:15 AM	1	2
05:30 AM	2	0
05:45 AM	5	2
06:00 AM	9	2
06:15 AM	7	2
06:30 AM	13	5
06:45 AM	17	3
07:00 AM	8	7
07:15 AM	10	6
07:30 AM	17	8
07:45 AM	6	16
08:00 AM	6	28
08:15 AM	19	13
08:30 AM	13	6
08:45 AM	10	13
09:00 AM	8	19
09:15 AM	5	10
09:30 AM	8	9
09:45 AM	3	9
10:00 AM	4	11
10:15 AM	6	6
10:30 AM	13	6
10:45 AM	6	11
11:00 AM	8	11
11:15 AM	6	15
11:30 AM	8	13
11:45 AM	7	15
12:00 PM	16	15
12:15 PM	7	14
12:30 PM	18	22
12:45 PM	13	20
01:00 PM	7	10
01:15 PM	6	11
01:30 PM	4	11
01:45 PM	8	10
02:00 PM	5	10
02:15 PM	11	12
02:30 PM	8	10
02:45 PM	11	15
03:00 PM	14	9
03:15 PM	3	24
03:30 PM	7	11
03:45 PM	7	10
04:00 PM	12	9
04:15 PM	5	17
04:30 PM	7	13
04:45 PM	5	10
05:00 PM	6	12
05:15 PM	15	17
05:30 PM	8	12
05:45 PM	10	10
06:00 PM	10	11
06:15 PM	9	9
06:30 PM	10	10
06:45 PM	11	9
07:00 PM	5	5
07:15 PM	4	5
07:30 PM	5	13
07:45 PM	6	8
08:00 PM	4	5
08:15 PM	1	7
08:30 PM	1	10
08:45 PM	1	6
09:00 PM	5	5
09:15 PM	2	2
09:30 PM	6	8
09:45 PM	0	4
10:00 PM	5	4
10:15 PM	2	1
10:30 PM	2	1
10:45 PM	1	2
11:00 PM	0	0
11:15 PM	0	1
11:30 PM	0	0
11:45 PM	3	2
Total	541	701



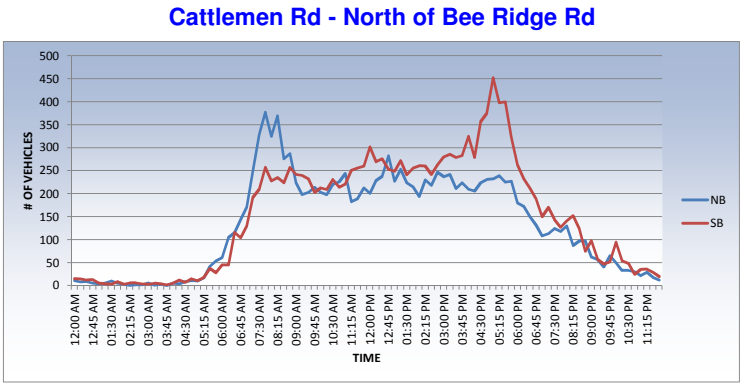
Volume
Station ID: 171755111100
Centergate Village Shopping Center
Start Date: 9/10/2013

Time	NB	SB
12:00 AM	0	0
12:15 AM	0	0
12:30 AM	0	0
12:45 AM	0	0
01:00 AM	0	0
01:15 AM	0	0
01:30 AM	0	0
01:45 AM	0	0
02:00 AM	0	0
02:15 AM	0	0
02:30 AM	0	0
02:45 AM	0	0
03:00 AM	0	0
03:15 AM	0	0
03:30 AM	0	0
03:45 AM	0	0
04:00 AM	0	0
04:15 AM	0	0
04:30 AM	0	1
04:45 AM	0	1
05:00 AM	2	0
05:15 AM	3	3
05:30 AM	2	3
05:45 AM	0	3
06:00 AM	1	4
06:15 AM	5	2
06:30 AM	1	4
06:45 AM	8	4
07:00 AM	3	4
07:15 AM	17	11
07:30 AM	18	10
07:45 AM	14	15
08:00 AM	8	13
08:15 AM	30	7
08:30 AM	27	9
08:45 AM	18	21
09:00 AM	20	23
09:15 AM	29	13
09:30 AM	23	18
09:45 AM	22	18
10:00 AM	26	35
10:15 AM	31	13
10:30 AM	32	23
10:45 AM	35	29
11:00 AM	37	35
11:15 AM	33	17
11:30 AM	32	36
11:45 AM	60	24
12:00 PM	67	29
12:15 PM	51	37
12:30 PM	47	32
12:45 PM	58	21
01:00 PM	47	34
01:15 PM	71	17
01:30 PM	50	39
01:45 PM	58	29
02:00 PM	45	19
02:15 PM	60	23
02:30 PM	45	25
02:45 PM	36	20
03:00 PM	33	29
03:15 PM	42	26
03:30 PM	56	28
03:45 PM	67	28
04:00 PM	38	14
04:15 PM	40	25
04:30 PM	40	15
04:45 PM	49	23
05:00 PM	44	36
05:15 PM	46	31
05:30 PM	39	15
05:45 PM	42	22
06:00 PM	53	12
06:15 PM	48	15
06:30 PM	57	19
06:45 PM	37	9
07:00 PM	38	13
07:15 PM	40	16
07:30 PM	36	14
07:45 PM	36	8
08:00 PM	32	10
08:15 PM	26	5
08:30 PM	40	2
08:45 PM	19	2
09:00 PM	12	5
09:15 PM	16	3
09:30 PM	5	1
09:45 PM	4	5
10:00 PM	2	0
10:15 PM	6	0
10:30 PM	3	0
10:45 PM	7	2
11:00 PM	2	0
11:15 PM	3	0
11:30 PM	0	0
11:45 PM	0	0
Total	2230	1157



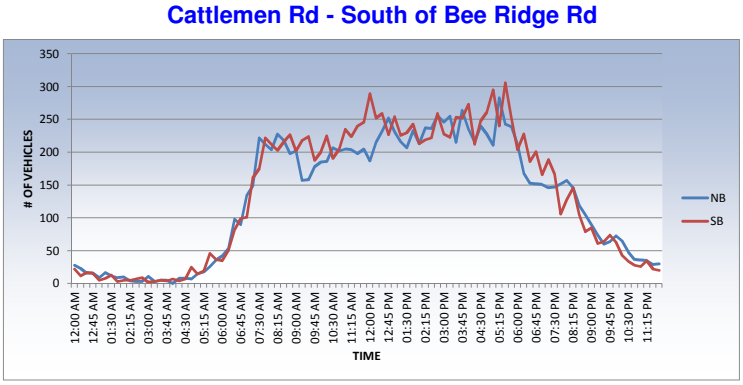
Volume
Station ID: 171706111100
Cattlemen Rd - North of Bee Ridge Rd
Start Date: 9/10/2013

Time	NB	SB
12:00 AM	11	15
12:15 AM	8	14
12:30 AM	9	12
12:45 AM	5	13
01:00 AM	4	5
01:15 AM	6	4
01:30 AM	10	3
01:45 AM	5	9
02:00 AM	3	3
02:15 AM	0	6
02:30 AM	2	6
02:45 AM	2	4
03:00 AM	6	3
03:15 AM	1	5
03:30 AM	3	4
03:45 AM	0	2
04:00 AM	5	5
04:15 AM	4	12
04:30 AM	9	7
04:45 AM	11	15
05:00 AM	10	11
05:15 AM	17	18
05:30 AM	42	37
05:45 AM	54	28
06:00 AM	61	45
06:15 AM	105	45
06:30 AM	115	116
06:45 AM	144	104
07:00 AM	171	130
07:15 AM	249	192
07:30 AM	329	210
07:45 AM	377	257
08:00 AM	325	228
08:15 AM	369	235
08:30 AM	276	224
08:45 AM	287	257
09:00 AM	224	242
09:15 AM	198	240
09:30 AM	203	232
09:45 AM	214	203
10:00 AM	203	213
10:15 AM	198	209
10:30 AM	220	231
10:45 AM	226	214
11:00 AM	244	221
11:15 AM	183	251
11:30 AM	189	256
11:45 AM	213	260
12:00 PM	201	302
12:15 PM	229	270
12:30 PM	238	276
12:45 PM	282	253
01:00 PM	227	249
01:15 PM	253	272
01:30 PM	224	241
01:45 PM	215	256
02:00 PM	194	261
02:15 PM	230	260
02:30 PM	218	242
02:45 PM	247	263
03:00 PM	237	280
03:15 PM	242	286
03:30 PM	211	279
03:45 PM	224	283
04:00 PM	210	325
04:15 PM	206	279
04:30 PM	224	357
04:45 PM	231	375
05:00 PM	232	452
05:15 PM	239	398
05:30 PM	225	400
05:45 PM	227	322
06:00 PM	180	263
06:15 PM	172	232
06:30 PM	150	212
06:45 PM	132	189
07:00 PM	108	150
07:15 PM	113	170
07:30 PM	124	144
07:45 PM	118	127
08:00 PM	130	141
08:15 PM	87	152
08:30 PM	97	124
08:45 PM	97	75
09:00 PM	62	98
09:15 PM	57	57
09:30 PM	41	47
09:45 PM	65	52
10:00 PM	50	94
10:15 PM	33	54
10:30 PM	33	48
10:45 PM	30	25
11:00 PM	22	35
11:15 PM	29	36
11:30 PM	18	29
11:45 PM	12	20
Total	12976	14811



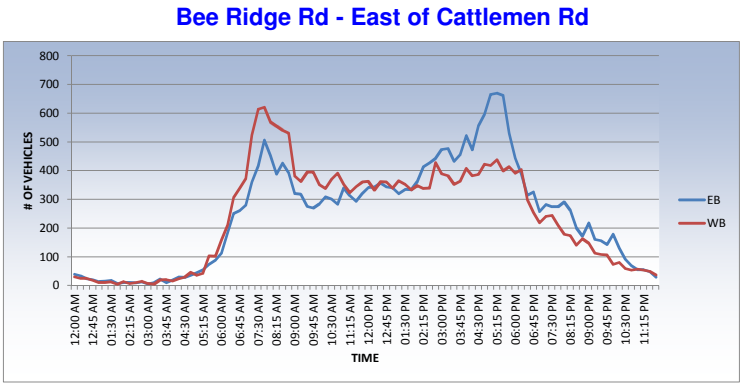
Volume
Station ID: 171707111100
Cattlemen Rd - South of Bee Ridge Rd
Start Date: 9/10/2013

Time	NB	SB
12:00 AM	28	22
12:15 AM	23	12
12:30 AM	16	17
12:45 AM	16	16
01:00 AM	9	5
01:15 AM	17	8
01:30 AM	12	13
01:45 AM	9	3
02:00 AM	10	5
02:15 AM	4	5
02:30 AM	3	7
02:45 AM	3	9
03:00 AM	11	2
03:15 AM	3	3
03:30 AM	5	5
03:45 AM	5	4
04:00 AM	0	7
04:15 AM	8	4
04:30 AM	8	7
04:45 AM	7	25
05:00 AM	15	15
05:15 AM	18	19
05:30 AM	26	46
05:45 AM	36	37
06:00 AM	42	35
06:15 AM	54	51
06:30 AM	98	82
06:45 AM	90	99
07:00 AM	134	101
07:15 AM	149	161
07:30 AM	222	175
07:45 AM	212	222
08:00 AM	204	212
08:15 AM	228	203
08:30 AM	218	216
08:45 AM	198	227
09:00 AM	202	202
09:15 AM	157	218
09:30 AM	158	224
09:45 AM	178	188
10:00 AM	185	200
10:15 AM	186	225
10:30 AM	207	191
10:45 AM	202	205
11:00 AM	205	235
11:15 AM	204	224
11:30 AM	198	240
11:45 AM	205	246
12:00 PM	187	289
12:15 PM	215	252
12:30 PM	232	259
12:45 PM	252	227
01:00 PM	231	254
01:15 PM	216	226
01:30 PM	207	230
01:45 PM	233	243
02:00 PM	213	213
02:15 PM	237	219
02:30 PM	236	222
02:45 PM	256	259
03:00 PM	246	228
03:15 PM	255	223
03:30 PM	215	253
03:45 PM	264	252
04:00 PM	235	273
04:15 PM	216	212
04:30 PM	240	248
04:45 PM	228	261
05:00 PM	211	295
05:15 PM	283	240
05:30 PM	243	306
05:45 PM	239	252
06:00 PM	212	204
06:15 PM	168	228
06:30 PM	153	186
06:45 PM	152	201
07:00 PM	151	166
07:15 PM	146	189
07:30 PM	147	167
07:45 PM	152	106
08:00 PM	157	128
08:15 PM	146	146
08:30 PM	119	105
08:45 PM	105	79
09:00 PM	90	85
09:15 PM	74	61
09:30 PM	60	64
09:45 PM	64	74
10:00 PM	73	63
10:15 PM	65	43
10:30 PM	48	34
10:45 PM	37	28
11:00 PM	36	26
11:15 PM	35	35
11:30 PM	29	22
11:45 PM	30	20
Total	12467	13074



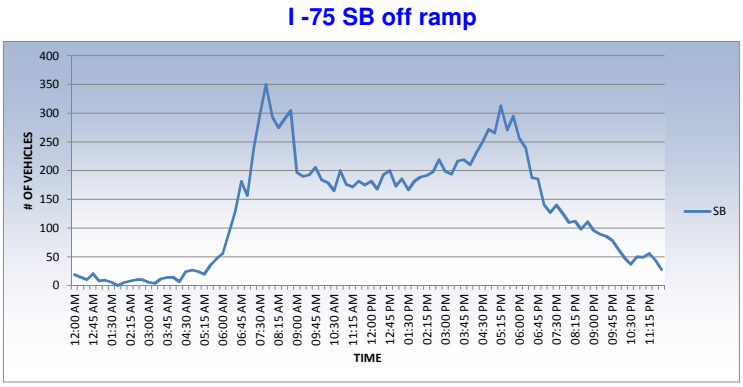
Volume
Station ID: 171708311100
Bee Ridge Rd - East of Cattlemen Rd
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	40	31
12:15 AM	34	25
12:30 AM	24	25
12:45 AM	21	18
01:00 AM	14	10
01:15 AM	15	11
01:30 AM	18	13
01:45 AM	7	5
02:00 AM	11	14
02:15 AM	10	7
02:30 AM	9	11
02:45 AM	13	15
03:00 AM	6	7
03:15 AM	10	5
03:30 AM	23	19
03:45 AM	11	21
04:00 AM	19	16
04:15 AM	29	24
04:30 AM	28	29
04:45 AM	36	46
05:00 AM	45	36
05:15 AM	55	43
05:30 AM	74	103
05:45 AM	88	102
06:00 AM	113	159
06:15 AM	183	210
06:30 AM	251	307
06:45 AM	261	339
07:00 AM	280	373
07:15 AM	360	524
07:30 AM	417	614
07:45 AM	506	621
08:00 AM	453	570
08:15 AM	388	555
08:30 AM	426	541
08:45 AM	393	531
09:00 AM	320	381
09:15 AM	318	363
09:30 AM	276	395
09:45 AM	270	395
10:00 AM	285	351
10:15 AM	309	338
10:30 AM	301	370
10:45 AM	283	391
11:00 AM	340	353
11:15 AM	313	324
11:30 AM	294	345
11:45 AM	320	360
12:00 PM	341	363
12:15 PM	342	332
12:30 PM	357	361
12:45 PM	344	360
01:00 PM	340	339
01:15 PM	320	365
01:30 PM	335	352
01:45 PM	334	334
02:00 PM	363	348
02:15 PM	414	338
02:30 PM	427	339
02:45 PM	443	428
03:00 PM	474	389
03:15 PM	477	383
03:30 PM	433	352
03:45 PM	456	364
04:00 PM	522	408
04:15 PM	473	383
04:30 PM	556	387
04:45 PM	597	423
05:00 PM	665	418
05:15 PM	670	438
05:30 PM	662	399
05:45 PM	531	414
06:00 PM	444	392
06:15 PM	389	404
06:30 PM	315	299
06:45 PM	326	254
07:00 PM	258	219
07:15 PM	282	241
07:30 PM	274	244
07:45 PM	274	210
08:00 PM	291	179
08:15 PM	262	174
08:30 PM	201	141
08:45 PM	172	163
09:00 PM	218	147
09:15 PM	161	113
09:30 PM	156	109
09:45 PM	143	106
10:00 PM	179	74
10:15 PM	131	81
10:30 PM	92	59
10:45 PM	69	54
11:00 PM	55	57
11:15 PM	55	54
11:30 PM	48	49
11:45 PM	29	37
Total	24000	23223



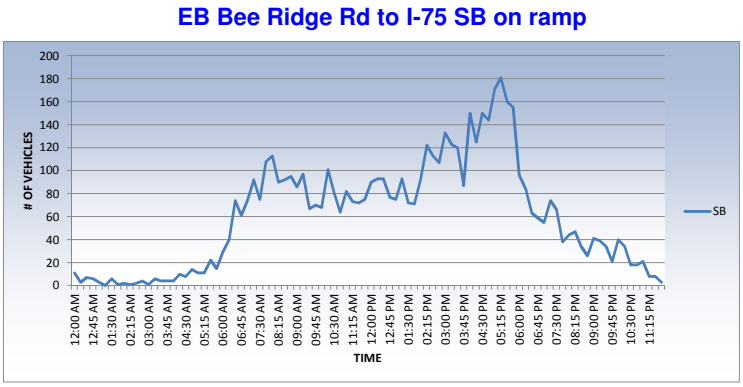
Volume
Station ID: 171709511100
I -75 SB off ramp
Start Date: 9/10/2013

Time	SB
12:00 AM	19
12:15 AM	15
12:30 AM	10
12:45 AM	21
01:00 AM	8
01:15 AM	9
01:30 AM	6
01:45 AM	0
02:00 AM	5
02:15 AM	8
02:30 AM	10
02:45 AM	10
03:00 AM	6
03:15 AM	4
03:30 AM	12
03:45 AM	14
04:00 AM	14
04:15 AM	7
04:30 AM	24
04:45 AM	27
05:00 AM	25
05:15 AM	20
05:30 AM	36
05:45 AM	47
06:00 AM	56
06:15 AM	93
06:30 AM	129
06:45 AM	181
07:00 AM	157
07:15 AM	239
07:30 AM	297
07:45 AM	350
08:00 AM	294
08:15 AM	275
08:30 AM	290
08:45 AM	305
09:00 AM	197
09:15 AM	190
09:30 AM	193
09:45 AM	206
10:00 AM	184
10:15 AM	179
10:30 AM	165
10:45 AM	200
11:00 AM	176
11:15 AM	172
11:30 AM	182
11:45 AM	175
12:00 PM	182
12:15 PM	168
12:30 PM	193
12:45 PM	200
01:00 PM	173
01:15 PM	186
01:30 PM	167
01:45 PM	182
02:00 PM	189
02:15 PM	192
02:30 PM	198
02:45 PM	219
03:00 PM	199
03:15 PM	194
03:30 PM	217
03:45 PM	219
04:00 PM	210
04:15 PM	231
04:30 PM	249
04:45 PM	272
05:00 PM	266
05:15 PM	313
05:30 PM	271
05:45 PM	295
06:00 PM	256
06:15 PM	239
06:30 PM	188
06:45 PM	186
07:00 PM	141
07:15 PM	127
07:30 PM	140
07:45 PM	126
08:00 PM	110
08:15 PM	112
08:30 PM	98
08:45 PM	111
09:00 PM	96
09:15 PM	90
09:30 PM	86
09:45 PM	79
10:00 PM	63
10:15 PM	48
10:30 PM	37
10:45 PM	50
11:00 PM	49
11:15 PM	56
11:30 PM	44
11:45 PM	28
Total	12987



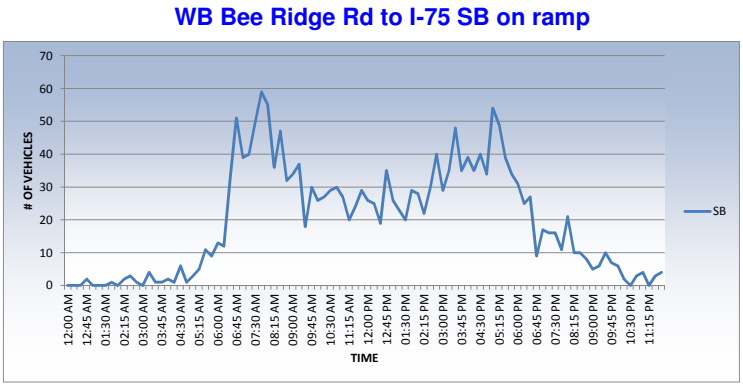
Volume
Station ID: 171710511100
EB Bee Ridge Rd to I-75 SB on ramp
Start Date: 9/10/2013

Time	SB
12:00 AM	11
12:15 AM	3
12:30 AM	7
12:45 AM	6
01:00 AM	3
01:15 AM	0
01:30 AM	6
01:45 AM	1
02:00 AM	2
02:15 AM	1
02:30 AM	2
02:45 AM	4
03:00 AM	1
03:15 AM	6
03:30 AM	4
03:45 AM	4
04:00 AM	4
04:15 AM	10
04:30 AM	8
04:45 AM	14
05:00 AM	11
05:15 AM	11
05:30 AM	22
05:45 AM	15
06:00 AM	29
06:15 AM	40
06:30 AM	74
06:45 AM	61
07:00 AM	74
07:15 AM	92
07:30 AM	75
07:45 AM	108
08:00 AM	113
08:15 AM	90
08:30 AM	92
08:45 AM	95
09:00 AM	86
09:15 AM	97
09:30 AM	67
09:45 AM	70
10:00 AM	68
10:15 AM	101
10:30 AM	81
10:45 AM	64
11:00 AM	82
11:15 AM	73
11:30 AM	72
11:45 AM	75
12:00 PM	90
12:15 PM	93
12:30 PM	93
12:45 PM	77
01:00 PM	75
01:15 PM	93
01:30 PM	72
01:45 PM	71
02:00 PM	92
02:15 PM	122
02:30 PM	113
02:45 PM	107
03:00 PM	133
03:15 PM	123
03:30 PM	120
03:45 PM	87
04:00 PM	150
04:15 PM	125
04:30 PM	150
04:45 PM	144
05:00 PM	171
05:15 PM	181
05:30 PM	160
05:45 PM	155
06:00 PM	96
06:15 PM	84
06:30 PM	63
06:45 PM	59
07:00 PM	55
07:15 PM	74
07:30 PM	66
07:45 PM	38
08:00 PM	44
08:15 PM	47
08:30 PM	34
08:45 PM	26
09:00 PM	41
09:15 PM	39
09:30 PM	34
09:45 PM	21
10:00 PM	40
10:15 PM	34
10:30 PM	18
10:45 PM	18
11:00 PM	21
11:15 PM	8
11:30 PM	8
11:45 PM	3
Total	5803



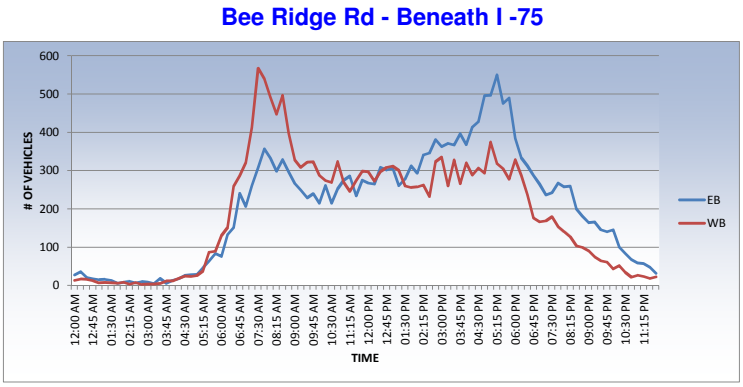
Volume
Station ID: 171711511100
WB Bee Ridge Rd to I-75 SB on ramp
Start Date: 9/10/2013

Time	SB
12:00 AM	0
12:15 AM	0
12:30 AM	0
12:45 AM	2
01:00 AM	0
01:15 AM	0
01:30 AM	0
01:45 AM	1
02:00 AM	0
02:15 AM	2
02:30 AM	3
02:45 AM	1
03:00 AM	0
03:15 AM	4
03:30 AM	1
03:45 AM	1
04:00 AM	2
04:15 AM	1
04:30 AM	6
04:45 AM	1
05:00 AM	3
05:15 AM	5
05:30 AM	11
05:45 AM	9
06:00 AM	13
06:15 AM	12
06:30 AM	33
06:45 AM	51
07:00 AM	39
07:15 AM	40
07:30 AM	50
07:45 AM	59
08:00 AM	55
08:15 AM	36
08:30 AM	47
08:45 AM	32
09:00 AM	34
09:15 AM	37
09:30 AM	18
09:45 AM	30
10:00 AM	26
10:15 AM	27
10:30 AM	29
10:45 AM	30
11:00 AM	27
11:15 AM	20
11:30 AM	24
11:45 AM	29
12:00 PM	26
12:15 PM	25
12:30 PM	19
12:45 PM	35
01:00 PM	26
01:15 PM	23
01:30 PM	20
01:45 PM	29
02:00 PM	28
02:15 PM	22
02:30 PM	30
02:45 PM	40
03:00 PM	29
03:15 PM	35
03:30 PM	48
03:45 PM	35
04:00 PM	39
04:15 PM	35
04:30 PM	40
04:45 PM	34
05:00 PM	54
05:15 PM	49
05:30 PM	39
05:45 PM	34
06:00 PM	31
06:15 PM	25
06:30 PM	27
06:45 PM	9
07:00 PM	17
07:15 PM	16
07:30 PM	16
07:45 PM	11
08:00 PM	21
08:15 PM	10
08:30 PM	10
08:45 PM	8
09:00 PM	5
09:15 PM	6
09:30 PM	10
09:45 PM	7
10:00 PM	6
10:15 PM	2
10:30 PM	0
10:45 PM	3
11:00 PM	4
11:15 PM	0
11:30 PM	3
11:45 PM	4
Total	1896



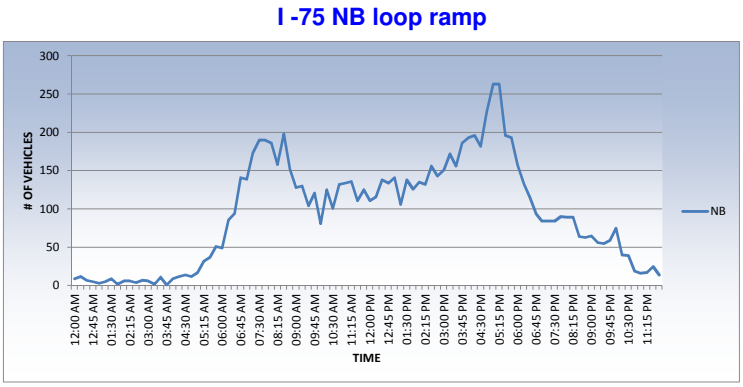
Volume
Station ID: 171712321100
Bee Ridge Rd - Beneath I -75
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	28	14
12:15 AM	36	17
12:30 AM	21	16
12:45 AM	18	13
01:00 AM	15	7
01:15 AM	16	8
01:30 AM	14	7
01:45 AM	6	6
02:00 AM	9	9
02:15 AM	11	4
02:30 AM	7	8
02:45 AM	10	3
03:00 AM	9	4
03:15 AM	5	4
03:30 AM	19	5
03:45 AM	6	12
04:00 AM	14	12
04:15 AM	18	19
04:30 AM	26	25
04:45 AM	28	24
05:00 AM	29	26
05:15 AM	46	38
05:30 AM	64	87
05:45 AM	84	90
06:00 AM	76	131
06:15 AM	133	152
06:30 AM	152	259
06:45 AM	241	287
07:00 AM	207	321
07:15 AM	261	413
07:30 AM	309	568
07:45 AM	357	540
08:00 AM	333	492
08:15 AM	299	447
08:30 AM	329	497
08:45 AM	297	398
09:00 AM	267	329
09:15 AM	249	309
09:30 AM	229	322
09:45 AM	240	323
10:00 AM	215	288
10:15 AM	261	274
10:30 AM	215	269
10:45 AM	253	324
11:00 AM	275	269
11:15 AM	286	246
11:30 AM	234	274
11:45 AM	275	299
12:00 PM	268	297
12:15 PM	265	273
12:30 PM	309	298
12:45 PM	302	309
01:00 PM	307	312
01:15 PM	261	301
01:30 PM	279	260
01:45 PM	313	256
02:00 PM	294	258
02:15 PM	341	263
02:30 PM	346	233
02:45 PM	381	324
03:00 PM	363	335
03:15 PM	371	260
03:30 PM	367	328
03:45 PM	396	266
04:00 PM	368	320
04:15 PM	414	289
04:30 PM	428	307
04:45 PM	496	294
05:00 PM	497	375
05:15 PM	550	319
05:30 PM	476	305
05:45 PM	490	278
06:00 PM	385	329
06:15 PM	334	288
06:30 PM	313	238
06:45 PM	288	177
07:00 PM	265	167
07:15 PM	237	169
07:30 PM	243	180
07:45 PM	268	154
08:00 PM	258	141
08:15 PM	259	127
08:30 PM	201	104
08:45 PM	182	100
09:00 PM	164	91
09:15 PM	166	75
09:30 PM	146	65
09:45 PM	141	61
10:00 PM	146	44
10:15 PM	101	52
10:30 PM	84	35
10:45 PM	68	22
11:00 PM	59	27
11:15 PM	57	24
11:30 PM	48	19
11:45 PM	32	23
Total	19859	18261



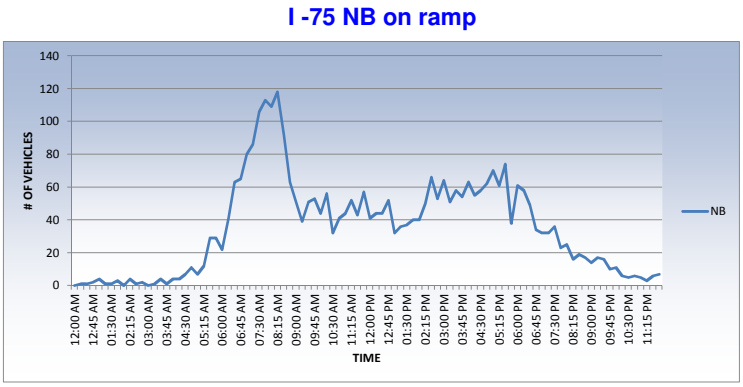
Volume
Station ID: 171713111100
I -75 NB loop ramp
Start Date: 9/10/2013

Time	NB
12:00 AM	9
12:15 AM	12
12:30 AM	7
12:45 AM	5
01:00 AM	3
01:15 AM	5
01:30 AM	9
01:45 AM	2
02:00 AM	6
02:15 AM	6
02:30 AM	4
02:45 AM	7
03:00 AM	6
03:15 AM	2
03:30 AM	11
03:45 AM	1
04:00 AM	9
04:15 AM	12
04:30 AM	14
04:45 AM	12
05:00 AM	17
05:15 AM	32
05:30 AM	37
05:45 AM	51
06:00 AM	49
06:15 AM	86
06:30 AM	94
06:45 AM	141
07:00 AM	139
07:15 AM	173
07:30 AM	190
07:45 AM	190
08:00 AM	186
08:15 AM	158
08:30 AM	198
08:45 AM	152
09:00 AM	128
09:15 AM	130
09:30 AM	104
09:45 AM	121
10:00 AM	81
10:15 AM	125
10:30 AM	101
10:45 AM	132
11:00 AM	134
11:15 AM	136
11:30 AM	111
11:45 AM	125
12:00 PM	111
12:15 PM	116
12:30 PM	138
12:45 PM	134
01:00 PM	141
01:15 PM	106
01:30 PM	138
01:45 PM	126
02:00 PM	135
02:15 PM	132
02:30 PM	156
02:45 PM	143
03:00 PM	151
03:15 PM	172
03:30 PM	156
03:45 PM	186
04:00 PM	193
04:15 PM	196
04:30 PM	182
04:45 PM	227
05:00 PM	263
05:15 PM	263
05:30 PM	196
05:45 PM	193
06:00 PM	158
06:15 PM	133
06:30 PM	115
06:45 PM	94
07:00 PM	84
07:15 PM	84
07:30 PM	84
07:45 PM	90
08:00 PM	89
08:15 PM	89
08:30 PM	64
08:45 PM	63
09:00 PM	65
09:15 PM	56
09:30 PM	55
09:45 PM	59
10:00 PM	75
10:15 PM	40
10:30 PM	39
10:45 PM	19
11:00 PM	16
11:15 PM	17
11:30 PM	25
11:45 PM	14
Total	9044



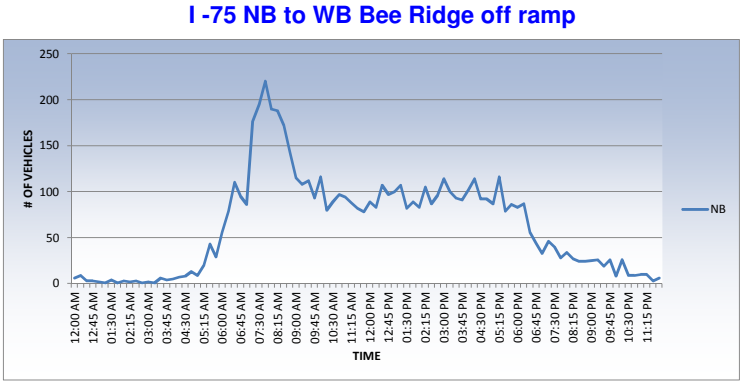
Volume
Station ID: 171714111100
I -75 NB on ramp
Start Date: 9/10/2013

Time	NB
12:00 AM	0
12:15 AM	1
12:30 AM	1
12:45 AM	2
01:00 AM	4
01:15 AM	1
01:30 AM	1
01:45 AM	3
02:00 AM	0
02:15 AM	4
02:30 AM	1
02:45 AM	2
03:00 AM	0
03:15 AM	1
03:30 AM	4
03:45 AM	1
04:00 AM	4
04:15 AM	4
04:30 AM	7
04:45 AM	11
05:00 AM	7
05:15 AM	12
05:30 AM	29
05:45 AM	29
06:00 AM	22
06:15 AM	41
06:30 AM	63
06:45 AM	65
07:00 AM	80
07:15 AM	86
07:30 AM	106
07:45 AM	113
08:00 AM	109
08:15 AM	118
08:30 AM	92
08:45 AM	63
09:00 AM	51
09:15 AM	39
09:30 AM	51
09:45 AM	53
10:00 AM	44
10:15 AM	56
10:30 AM	32
10:45 AM	41
11:00 AM	44
11:15 AM	52
11:30 AM	43
11:45 AM	57
12:00 PM	41
12:15 PM	44
12:30 PM	44
12:45 PM	52
01:00 PM	32
01:15 PM	36
01:30 PM	37
01:45 PM	40
02:00 PM	40
02:15 PM	50
02:30 PM	66
02:45 PM	53
03:00 PM	64
03:15 PM	51
03:30 PM	58
03:45 PM	54
04:00 PM	63
04:15 PM	55
04:30 PM	58
04:45 PM	62
05:00 PM	70
05:15 PM	61
05:30 PM	74
05:45 PM	38
06:00 PM	61
06:15 PM	58
06:30 PM	49
06:45 PM	34
07:00 PM	32
07:15 PM	32
07:30 PM	36
07:45 PM	23
08:00 PM	25
08:15 PM	16
08:30 PM	19
08:45 PM	17
09:00 PM	14
09:15 PM	17
09:30 PM	16
09:45 PM	10
10:00 PM	11
10:15 PM	6
10:30 PM	5
10:45 PM	6
11:00 PM	5
11:15 PM	3
11:30 PM	6
11:45 PM	7
Total	3401



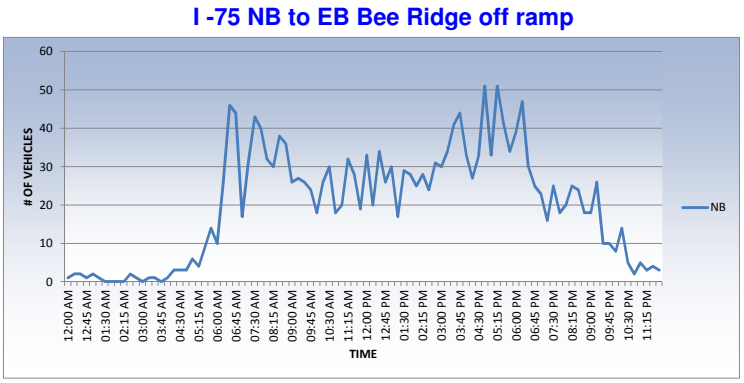
Volume
Station ID: 171715111100
I -75 NB to WB Bee Ridge off ramp
Start Date: 9/10/2013

Time	NB
12:00 AM	6
12:15 AM	9
12:30 AM	3
12:45 AM	3
01:00 AM	2
01:15 AM	1
01:30 AM	4
01:45 AM	1
02:00 AM	3
02:15 AM	2
02:30 AM	3
02:45 AM	1
03:00 AM	2
03:15 AM	1
03:30 AM	6
03:45 AM	4
04:00 AM	5
04:15 AM	7
04:30 AM	8
04:45 AM	13
05:00 AM	9
05:15 AM	20
05:30 AM	43
05:45 AM	29
06:00 AM	56
06:15 AM	79
06:30 AM	110
06:45 AM	95
07:00 AM	86
07:15 AM	177
07:30 AM	195
07:45 AM	220
08:00 AM	190
08:15 AM	188
08:30 AM	172
08:45 AM	143
09:00 AM	115
09:15 AM	108
09:30 AM	112
09:45 AM	93
10:00 AM	116
10:15 AM	80
10:30 AM	89
10:45 AM	97
11:00 AM	94
11:15 AM	88
11:30 AM	82
11:45 AM	78
12:00 PM	89
12:15 PM	83
12:30 PM	107
12:45 PM	97
01:00 PM	100
01:15 PM	107
01:30 PM	82
01:45 PM	89
02:00 PM	83
02:15 PM	105
02:30 PM	87
02:45 PM	96
03:00 PM	114
03:15 PM	100
03:30 PM	93
03:45 PM	91
04:00 PM	102
04:15 PM	114
04:30 PM	92
04:45 PM	92
05:00 PM	87
05:15 PM	116
05:30 PM	79
05:45 PM	86
06:00 PM	83
06:15 PM	87
06:30 PM	56
06:45 PM	44
07:00 PM	33
07:15 PM	46
07:30 PM	40
07:45 PM	28
08:00 PM	34
08:15 PM	27
08:30 PM	24
08:45 PM	24
09:00 PM	25
09:15 PM	26
09:30 PM	19
09:45 PM	26
10:00 PM	8
10:15 PM	26
10:30 PM	9
10:45 PM	9
11:00 PM	10
11:15 PM	10
11:30 PM	3
11:45 PM	6
Total	6042



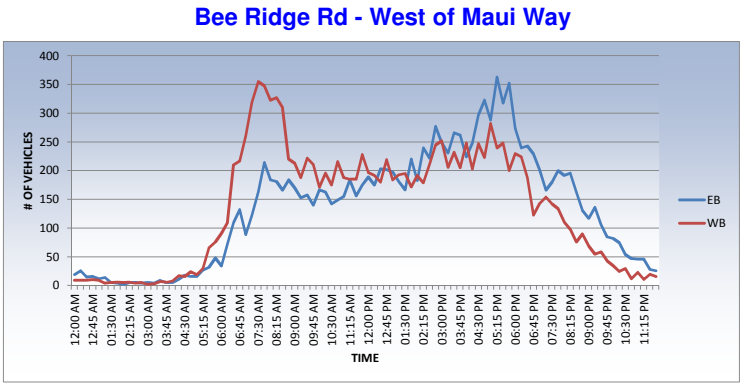
Volume
Station ID: 171716111100
I -75 NB to EB Bee Ridge off ramp
Start Date: 9/10/2013

Time	NB
12:00 AM	1
12:15 AM	2
12:30 AM	2
12:45 AM	1
01:00 AM	2
01:15 AM	1
01:30 AM	0
01:45 AM	0
02:00 AM	0
02:15 AM	0
02:30 AM	2
02:45 AM	1
03:00 AM	0
03:15 AM	1
03:30 AM	1
03:45 AM	0
04:00 AM	1
04:15 AM	3
04:30 AM	3
04:45 AM	3
05:00 AM	6
05:15 AM	4
05:30 AM	9
05:45 AM	14
06:00 AM	10
06:15 AM	26
06:30 AM	46
06:45 AM	44
07:00 AM	17
07:15 AM	31
07:30 AM	43
07:45 AM	40
08:00 AM	32
08:15 AM	30
08:30 AM	38
08:45 AM	36
09:00 AM	26
09:15 AM	27
09:30 AM	26
09:45 AM	24
10:00 AM	18
10:15 AM	26
10:30 AM	30
10:45 AM	18
11:00 AM	20
11:15 AM	32
11:30 AM	28
11:45 AM	19
12:00 PM	33
12:15 PM	20
12:30 PM	34
12:45 PM	26
01:00 PM	30
01:15 PM	17
01:30 PM	29
01:45 PM	28
02:00 PM	25
02:15 PM	28
02:30 PM	24
02:45 PM	31
03:00 PM	30
03:15 PM	34
03:30 PM	41
03:45 PM	44
04:00 PM	33
04:15 PM	27
04:30 PM	33
04:45 PM	51
05:00 PM	33
05:15 PM	51
05:30 PM	41
05:45 PM	34
06:00 PM	39
06:15 PM	47
06:30 PM	30
06:45 PM	25
07:00 PM	23
07:15 PM	16
07:30 PM	25
07:45 PM	18
08:00 PM	20
08:15 PM	25
08:30 PM	24
08:45 PM	18
09:00 PM	18
09:15 PM	26
09:30 PM	10
09:45 PM	10
10:00 PM	8
10:15 PM	14
10:30 PM	5
10:45 PM	2
11:00 PM	5
11:15 PM	3
11:30 PM	4
11:45 PM	3
Total	1939



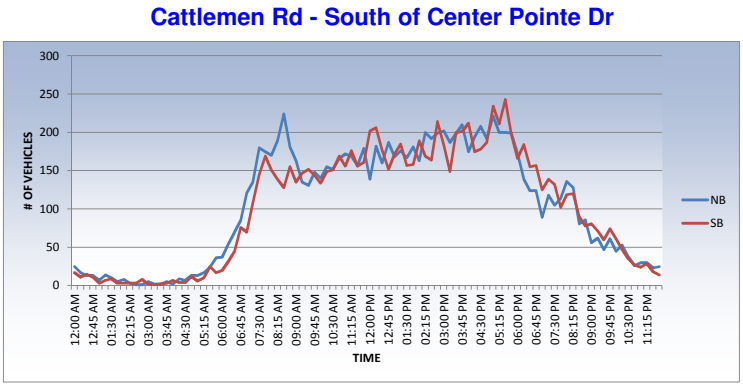
Volume
Station ID: 171717321100
Bee Ridge Rd - West of Maui Way
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	19	9
12:15 AM	26	9
12:30 AM	15	9
12:45 AM	16	10
01:00 AM	12	9
01:15 AM	14	4
01:30 AM	5	5
01:45 AM	4	6
02:00 AM	2	5
02:15 AM	5	6
02:30 AM	5	4
02:45 AM	4	5
03:00 AM	5	2
03:15 AM	4	3
03:30 AM	9	7
03:45 AM	5	6
04:00 AM	5	8
04:15 AM	11	17
04:30 AM	18	16
04:45 AM	16	24
05:00 AM	16	19
05:15 AM	27	30
05:30 AM	32	66
05:45 AM	48	76
06:00 AM	34	91
06:15 AM	73	110
06:30 AM	110	210
06:45 AM	132	217
07:00 AM	89	261
07:15 AM	122	319
07:30 AM	163	355
07:45 AM	214	348
08:00 AM	184	323
08:15 AM	181	327
08:30 AM	166	310
08:45 AM	184	220
09:00 AM	170	213
09:15 AM	153	188
09:30 AM	158	222
09:45 AM	140	211
10:00 AM	167	171
10:15 AM	163	196
10:30 AM	142	175
10:45 AM	149	216
11:00 AM	155	188
11:15 AM	184	185
11:30 AM	156	185
11:45 AM	175	228
12:00 PM	189	197
12:15 PM	175	192
12:30 PM	203	180
12:45 PM	202	219
01:00 PM	198	184
01:15 PM	181	193
01:30 PM	167	195
01:45 PM	220	172
02:00 PM	183	192
02:15 PM	240	179
02:30 PM	222	211
02:45 PM	277	245
03:00 PM	249	252
03:15 PM	231	206
03:30 PM	266	232
03:45 PM	262	205
04:00 PM	224	248
04:15 PM	248	203
04:30 PM	297	247
04:45 PM	323	223
05:00 PM	288	282
05:15 PM	363	240
05:30 PM	318	248
05:45 PM	352	200
06:00 PM	274	230
06:15 PM	240	224
06:30 PM	243	188
06:45 PM	229	123
07:00 PM	202	143
07:15 PM	166	154
07:30 PM	180	142
07:45 PM	200	134
08:00 PM	192	111
08:15 PM	196	98
08:30 PM	163	76
08:45 PM	131	90
09:00 PM	117	69
09:15 PM	136	55
09:30 PM	106	59
09:45 PM	85	43
10:00 PM	82	35
10:15 PM	75	25
10:30 PM	54	30
10:45 PM	47	12
11:00 PM	46	23
11:15 PM	46	11
11:30 PM	28	20
11:45 PM	26	16
Total	13029	13080



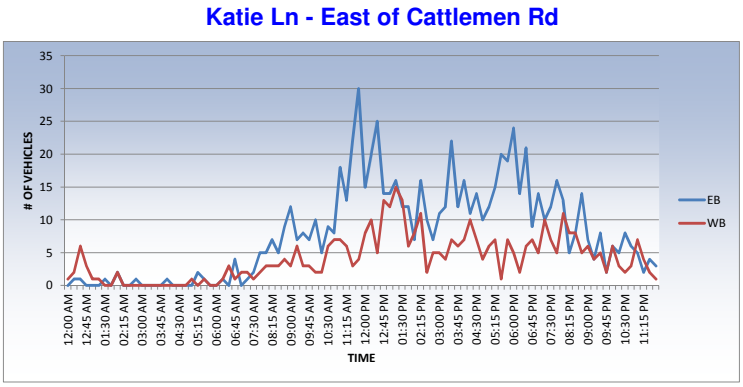
Volume
Station ID: 171718111100
Cattlemen Rd - South of Center Pointe Dr
Start Date: 9/10/2013

Time	NB	SB
12:00 AM	25	17
12:15 AM	17	11
12:30 AM	13	15
12:45 AM	13	11
01:00 AM	7	3
01:15 AM	14	7
01:30 AM	10	9
01:45 AM	5	3
02:00 AM	8	3
02:15 AM	3	3
02:30 AM	1	3
02:45 AM	1	8
03:00 AM	5	2
03:15 AM	2	1
03:30 AM	2	2
03:45 AM	5	3
04:00 AM	2	7
04:15 AM	9	4
04:30 AM	7	4
04:45 AM	13	12
05:00 AM	13	6
05:15 AM	17	10
05:30 AM	24	25
05:45 AM	36	17
06:00 AM	37	20
06:15 AM	55	32
06:30 AM	70	45
06:45 AM	85	76
07:00 AM	121	70
07:15 AM	135	108
07:30 AM	180	145
07:45 AM	175	169
08:00 AM	170	151
08:15 AM	189	139
08:30 AM	224	128
08:45 AM	181	155
09:00 AM	163	135
09:15 AM	135	147
09:30 AM	131	152
09:45 AM	148	144
10:00 AM	140	134
10:15 AM	155	149
10:30 AM	152	151
10:45 AM	166	169
11:00 AM	172	156
11:15 AM	169	176
11:30 AM	157	156
11:45 AM	179	161
12:00 PM	139	202
12:15 PM	182	206
12:30 PM	160	177
12:45 PM	187	152
01:00 PM	168	172
01:15 PM	176	185
01:30 PM	167	157
01:45 PM	181	158
02:00 PM	163	189
02:15 PM	200	169
02:30 PM	192	164
02:45 PM	199	214
03:00 PM	202	183
03:15 PM	187	149
03:30 PM	198	200
03:45 PM	210	201
04:00 PM	175	212
04:15 PM	194	175
04:30 PM	208	178
04:45 PM	192	187
05:00 PM	221	234
05:15 PM	200	211
05:30 PM	200	243
05:45 PM	199	197
06:00 PM	173	166
06:15 PM	139	184
06:30 PM	124	155
06:45 PM	124	157
07:00 PM	89	125
07:15 PM	118	139
07:30 PM	105	132
07:45 PM	114	102
08:00 PM	136	119
08:15 PM	128	120
08:30 PM	81	90
08:45 PM	86	78
09:00 PM	56	81
09:15 PM	62	71
09:30 PM	47	60
09:45 PM	61	74
10:00 PM	45	61
10:15 PM	53	47
10:30 PM	37	35
10:45 PM	26	27
11:00 PM	30	24
11:15 PM	30	29
11:30 PM	23	18
11:45 PM	25	14
Total	10153	9877



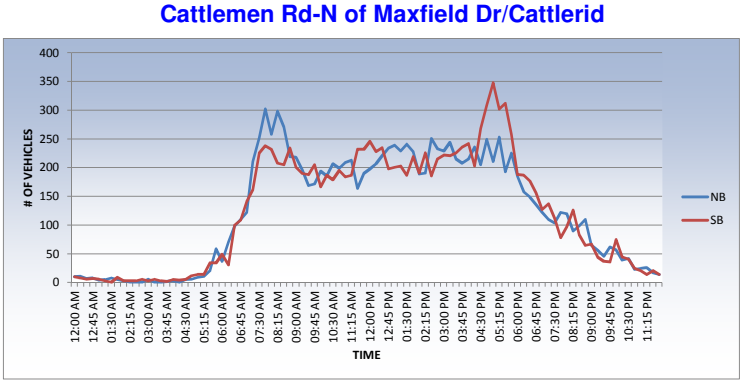
Volume
Station ID: 171719311100
Katie Ln - East of Cattlemen Rd
Start Date: 9/10/2013

Time	EB	WB
12:00 AM	0	1
12:15 AM	1	2
12:30 AM	1	6
12:45 AM	0	3
01:00 AM	0	1
01:15 AM	0	1
01:30 AM	1	0
01:45 AM	0	0
02:00 AM	2	2
02:15 AM	0	0
02:30 AM	0	0
02:45 AM	1	0
03:00 AM	0	0
03:15 AM	0	0
03:30 AM	0	0
03:45 AM	0	0
04:00 AM	1	0
04:15 AM	0	0
04:30 AM	0	0
04:45 AM	0	0
05:00 AM	0	1
05:15 AM	2	0
05:30 AM	1	1
05:45 AM	0	0
06:00 AM	0	0
06:15 AM	1	1
06:30 AM	0	3
06:45 AM	4	1
07:00 AM	0	2
07:15 AM	1	2
07:30 AM	2	1
07:45 AM	5	2
08:00 AM	5	3
08:15 AM	7	3
08:30 AM	5	3
08:45 AM	9	4
09:00 AM	12	3
09:15 AM	7	6
09:30 AM	8	3
09:45 AM	7	3
10:00 AM	10	2
10:15 AM	5	2
10:30 AM	9	6
10:45 AM	8	7
11:00 AM	18	7
11:15 AM	13	6
11:30 AM	22	3
11:45 AM	30	4
12:00 PM	15	8
12:15 PM	20	10
12:30 PM	25	5
12:45 PM	14	13
01:00 PM	14	12
01:15 PM	16	15
01:30 PM	12	13
01:45 PM	12	6
02:00 PM	7	8
02:15 PM	16	11
02:30 PM	10	2
02:45 PM	7	5
03:00 PM	11	5
03:15 PM	12	4
03:30 PM	22	7
03:45 PM	12	6
04:00 PM	16	7
04:15 PM	11	10
04:30 PM	14	7
04:45 PM	10	4
05:00 PM	12	6
05:15 PM	15	7
05:30 PM	20	1
05:45 PM	19	7
06:00 PM	24	5
06:15 PM	14	2
06:30 PM	21	6
06:45 PM	9	7
07:00 PM	14	5
07:15 PM	10	10
07:30 PM	12	7
07:45 PM	16	5
08:00 PM	13	11
08:15 PM	5	8
08:30 PM	8	8
08:45 PM	14	5
09:00 PM	7	6
09:15 PM	4	4
09:30 PM	8	5
09:45 PM	2	2
10:00 PM	6	6
10:15 PM	5	3
10:30 PM	8	2
10:45 PM	6	3
11:00 PM	5	7
11:15 PM	2	4
11:30 PM	4	2
11:45 PM	3	1
Total	760	398



Volume
Station ID: 171720121100
Cattlemen Rd-N of Maxfield Dr/Cattlerid
Start Date: 9/10/2013

Time	NB	SB
12:00 AM	10	10
12:15 AM	11	8
12:30 AM	7	6
12:45 AM	8	7
01:00 AM	4	6
01:15 AM	5	3
01:30 AM	8	1
01:45 AM	5	9
02:00 AM	3	3
02:15 AM	1	3
02:30 AM	1	3
02:45 AM	1	6
03:00 AM	6	3
03:15 AM	1	6
03:30 AM	1	3
03:45 AM	2	2
04:00 AM	3	5
04:15 AM	1	4
04:30 AM	5	5
04:45 AM	6	12
05:00 AM	9	14
05:15 AM	11	14
05:30 AM	21	34
05:45 AM	59	34
06:00 AM	37	49
06:15 AM	71	31
06:30 AM	98	100
06:45 AM	110	109
07:00 AM	122	141
07:15 AM	211	162
07:30 AM	252	225
07:45 AM	302	238
08:00 AM	258	232
08:15 AM	298	208
08:30 AM	271	205
08:45 AM	219	234
09:00 AM	218	201
09:15 AM	197	190
09:30 AM	169	188
09:45 AM	172	205
10:00 AM	194	167
10:15 AM	186	187
10:30 AM	207	179
10:45 AM	199	195
11:00 AM	209	184
11:15 AM	213	187
11:30 AM	164	232
11:45 AM	190	232
12:00 PM	198	246
12:15 PM	207	228
12:30 PM	221	235
12:45 PM	234	198
01:00 PM	239	201
01:15 PM	229	203
01:30 PM	241	187
01:45 PM	228	219
02:00 PM	189	191
02:15 PM	191	226
02:30 PM	251	186
02:45 PM	233	215
03:00 PM	229	222
03:15 PM	244	221
03:30 PM	215	226
03:45 PM	208	236
04:00 PM	215	242
04:15 PM	236	203
04:30 PM	205	268
04:45 PM	249	309
05:00 PM	211	348
05:15 PM	253	302
05:30 PM	193	312
05:45 PM	225	258
06:00 PM	185	188
06:15 PM	158	187
06:30 PM	149	177
06:45 PM	136	156
07:00 PM	123	127
07:15 PM	110	137
07:30 PM	104	112
07:45 PM	122	78
08:00 PM	120	97
08:15 PM	90	126
08:30 PM	99	83
08:45 PM	110	65
09:00 PM	65	67
09:15 PM	56	44
09:30 PM	46	37
09:45 PM	62	36
10:00 PM	57	75
10:15 PM	39	45
10:30 PM	42	41
10:45 PM	23	25
11:00 PM	25	21
11:15 PM	26	14
11:30 PM	17	21
11:45 PM	14	14
Total	12078	12137



8-Hour Turning Movement Counts

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 1-Honore Ave at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Honore Ave Northbound						Honore Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	10	144	7	0	161	0	14	239	7	0	260	0	30	25	19	1	74	0	13	23	14	0	50	545
7:15 AM	0	14	212	15	0	241	0	30	255	11	0	296	0	32	37	25	1	94	0	9	37	20	0	66	697
7:30 AM	1	17	186	7	0	211	0	22	301	10	0	333	0	38	50	25	0	113	0	18	44	18	0	80	737
7:45 AM	0	20	246	16	0	282	1	23	310	12	0	346	0	49	45	39	0	133	0	19	44	32	0	95	856
Hourly Total	1	61	788	45	0	895	1	89	1105	40	0	1235	0	149	157	108	2	414	0	59	148	84	0	291	2835
8:00 AM	0	21	269	10	0	300	1	15	323	11	0	350	0	34	38	40	0	112	0	22	40	16	0	78	840
8:15 AM	1	8	215	17	0	241	2	26	307	5	0	340	0	42	52	31	0	125	0	23	41	24	0	88	794
8:30 AM	0	10	236	16	0	262	1	25	286	13	0	325	0	31	52	32	0	115	0	14	39	13	0	66	768
8:45 AM	0	13	246	16	0	275	1	30	347	7	0	385	0	22	32	35	1	89	0	23	30	11	0	64	813
Hourly Total	1	52	966	59	0	1078	5	96	1263	36	0	1400	0	129	174	138	1	441	0	82	150	64	0	296	3215
9:00 AM	0	11	192	13	0	216	0	31	239	9	0	279	0	33	30	37	0	100	0	16	41	9	0	66	661
9:15 AM	1	14	205	12	0	232	1	14	266	5	0	286	0	28	32	27	0	87	0	12	23	11	0	46	651
9:30 AM	0	13	194	13	0	220	1	15	279	8	0	303	0	30	37	18	0	85	0	16	24	7	2	47	655
9:45 AM	0	11	200	15	0	226	3	22	304	10	0	339	0	23	37	29	0	89	0	8	27	14	0	49	703
Hourly Total	1	49	791	53	0	894	5	82	1088	32	0	1207	0	114	136	111	0	361	0	52	115	41	2	208	2670
10:00 AM	0	16	211	19	0	246	2	27	274	8	1	311	0	19	28	12	0	59	0	19	20	19	0	58	674
10:15 AM	0	10	208	8	0	226	0	22	267	6	0	295	0	19	27	18	0	64	0	9	25	11	0	45	630
10:30 AM	0	17	205	14	0	236	1	18	286	10	0	315	0	21	26	10	1	57	0	14	23	13	0	50	658
10:45 AM	1	11	235	12	0	259	2	23	278	13	3	316	0	17	23	29	1	69	0	16	24	19	0	59	703
Hourly Total	1	54	859	53	0	967	5	90	1105	37	4	1237	0	76	104	69	2	249	0	58	92	62	0	212	2665
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	1	16	245	21	0	283	0	19	306	8	0	333	0	27	40	34	0	101	0	10	32	17	0	59	776
2:15 PM	2	20	306	28	0	356	0	22	307	18	0	347	0	27	36	27	0	90	0	11	34	9	0	54	847
2:30 PM	1	33	294	23	0	351	1	26	259	14	1	300	0	32	37	30	0	99	0	10	47	18	0	75	825
2:45 PM	0	32	328	23	0	383	0	32	295	13	0	340	0	20	42	32	0	94	0	27	47	9	0	83	900
Hourly Total	4	101	1173	95	0	1373	1	99	1167	53	1	1320	0	106	155	123	0	384	0	58	160	53	0	271	3348
3:00 PM	0	16	303	31	1	350	0	28	297	17	0	342	0	19	46	26	2	91	0	21	42	20	1	83	866
3:15 PM	0	17	285	27	0	329	3	32	276	16	0	327	0	23	56	37	1	116	0	21	37	21	0	79	851
3:30 PM	1	23	320	29	0	373	3	27	266	16	0	312	0	19	41	20	0	80	0	19	41	22	0	82	847
3:45 PM	0	29	307	29	8	365	1	32	300	14	0	347	0	20	50	22	0	92	0	20	42	14	0	76	880
Hourly Total	1	85	1215	116	9	1417	7	119	1139	63	0	1328	0	81	193	105	3	379	0	81	162	77	1	320	3444
4:00 PM	0	25	342	28	3	395	3	27	280	22	0	332	0	21	34	19	0	74	0	20	34	17	0	71	872
4:15 PM	1	22	309	28	3	360	3	26	293	13	0	335	0	24	50	30	1	104	0	13	48	23	0	84	883
4:30 PM	1	23	305	29	0	358	5	20	305	16	0	346	0	28	56	32	0	116	0	13	51	16	0	80	900
4:45 PM	1	26	338	28	0	393	1	24	301	10	0	336	0	23	60	28	0	111	0	18	50	17	2	85	925
Hourly Total	3	96	1294	113	6	1506	12	97	1179	61	0	1349	0	96	200	109	1	405	0	64	183	73	2	320	3580
5:00 PM	1	25	353	31	0	410	0	33	307	17	0	357	0	20	36	15	0	71	0	16	37	20	2	73	911
5:15 PM	0	26	376	30	1	432	1	41	335	24	0	401	0	29	62	37	0	128	0	13	46	23	0	82	1043
5:30 PM	0	31	405	32	0	468	1	34	269	13	0	317	0	14	48	17	0	79	0	22	49	17	0	88	952
5:45 PM	0	24	296	37	0	357	3	31	315	16	0	365	0	20	53	22	2	95	0	24	53	10	0	87	904
Hourly Total	1	106	1430	130	1	1667	5	139	1226	70	0	1440	0	83	199	91	2	373	0	75	185	70	2	330	3810
Car	13	596	8284	652	-	9545	40	795	9022	386	-	10243	0	817	1296	835	-	2948	0	521	1167	520	-	2208	24944
% Car	100.0	98.7	97.3	98.2	-	97.4	97.6	98.0	97.3	98.5	-	97.4	-	98.0	98.3	97.8	-	98.1	-	98.5	97.7	99.2	-	98.2	97.6
Truck	0	8	232	12	-	252	1	16	250	6	-	273	0	17	22	19	-	58	0	8	28	4	-	40	623
% Truck	0.0	1.3	2.7	1.8	-	2.6	2.4	2.0	2.7	1.5	-	2.6	-	2.0	1.7	2.2	-	1.9	-	1.5	2.3	0.8	-	1.8	2.4
Ped	-	-	-	-	16	-	-	-	-	-	5	-	-	-	-	-	11	-	-	-	-	-	7	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 1-Honore Ave at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Honore Ave Northbound						Honore Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	20	246	16	0	282	1	23	310	12	0	346	0	49	45	39	0	133	0	19	44	32	0	95	856
8:00 AM	0	21	269	10	0	300	1	15	323	11	0	350	0	34	38	40	0	112	0	22	40	16	0	78	840
8:15 AM	1	8	215	17	0	241	2	26	307	5	0	340	0	42	52	31	0	125	0	23	41	24	0	88	794
8:30 AM	0	10	236	16	0	262	1	25	286	13	0	325	0	31	52	32	0	115	0	14	39	13	0	66	768
PHF	0.250	0.702	0.898	0.868	-	0.904	0.625	0.856	0.949	0.788	-	0.972	0.000	0.796	0.899	0.888	-	0.912	0.000	0.848	0.932	0.664	-	0.861	0.952
Car	1	58	947	59	-	1065	5	88	1172	40	-	1305	0	152	187	140	-	479	0	78	159	83	-	320	3169
% Car	100.0	98.3	98.0	100.0	-	98.2	100.0	98.9	95.6	97.6	-	95.9	-	97.4	100.0	98.6	-	98.8	-	100.0	97.0	97.6	-	97.9	97.3
Truck	0	1	19	0	-	20	0	1	54	1	-	56	0	4	0	2	-	6	0	0	5	2	-	7	89
% Truck	0.0	1.7	2.0	0.0	-	1.8	0.0	1.1	4.4	2.4	-	4.1	-	2.6	0.0	1.4	-	1.2	-	0.0	3.0	2.4	-	2.1	2.7
Ped	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 1-Honore Ave at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Honore Ave Northbound						Honore Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:45 PM	1	26	338	28	0	393	1	24	301	10	0	336	0	23	60	28	0	111	0	18	50	17	2	85	925
5:00 PM	1	25	353	31	0	410	0	33	307	17	0	357	0	20	36	15	0	71	0	16	37	20	2	73	911
5:15 PM	0	26	376	30	1	432	1	41	335	24	0	401	0	29	62	37	0	128	0	13	46	23	0	82	1043
5:30 PM	0	31	405	32	0	468	1	34	269	13	0	317	0	14	48	17	0	79	0	22	49	17	0	88	952
PHF	0.500	0.871	0.909	0.945	-	0.910	0.750	0.805	0.904	0.667	-	0.880	0.000	0.741	0.831	0.655	-	0.760	0.000	0.784	0.910	0.837	-	0.932	0.918
Car	2	107	1447	118	-	1674	3	129	1197	64	-	1393	0	85	203	94	-	382	0	69	181	77	-	327	3776
% Car	100.0	99.1	98.3	97.5	-	98.3	100.0	97.7	98.8	100.0	-	98.7	-	98.8	98.5	96.9	-	98.2	-	100.0	99.5	100.0	-	99.7	98.6
Truck	0	1	25	3	-	29	0	3	15	0	-	18	0	1	3	3	-	7	0	0	1	0	-	1	55
% Truck	0.0	0.9	1.7	2.5	-	1.7	0.0	2.3	1.2	0.0	-	1.3	-	1.2	1.5	3.1	-	1.8	-	0.0	0.5	0.0	-	0.3	1.4
Ped	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 2-Woodmont Dr/Center Gate Blvd at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Center Gate Blvd Northbound						Woodmont Dr Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	169	9	0	178	10	4	236	7	3	257	0	3	2	4	2	9	0	20	2	9	1	31	475
7:15 AM	0	1	255	6	0	262	4	12	279	9	1	304	0	10	0	10	1	20	0	10	0	8	0	18	604
7:30 AM	0	0	232	9	0	241	7	10	361	7	0	385	0	15	2	11	0	28	0	33	3	9	2	45	699
7:45 AM	1	1	294	7	0	303	8	25	363	7	0	403	0	13	0	9	1	22	0	21	3	9	0	33	761
Hourly Total	1	2	950	31	0	984	29	51	1239	30	4	1349	0	41	4	34	4	79	0	84	8	35	3	127	2539
8:00 AM	0	2	302	6	0	310	3	24	318	7	0	352	0	6	2	15	1	23	0	11	5	7	0	23	708
8:15 AM	0	1	283	12	0	296	6	21	305	7	0	339	0	13	0	8	1	21	0	21	3	7	0	31	687
8:30 AM	0	2	274	10	0	286	7	16	352	10	0	385	0	13	2	6	2	21	0	14	2	5	0	21	713
8:45 AM	0	4	232	15	0	251	3	24	321	9	0	357	0	19	3	11	2	33	0	12	1	14	0	27	668
Hourly Total	0	9	1091	43	0	1143	19	85	1296	33	0	1433	0	51	7	40	6	98	0	58	11	33	0	102	2776
9:00 AM	1	4	236	13	0	254	8	10	282	13	0	313	0	12	0	10	1	22	0	9	0	2	1	11	600
9:15 AM	1	3	221	11	0	236	4	9	265	10	0	288	0	13	2	10	1	25	0	11	5	9	0	25	574
9:30 AM	1	4	230	8	0	243	4	12	272	6	0	294	0	16	1	8	2	25	0	12	3	7	2	22	584
9:45 AM	1	3	209	7	0	220	6	12	300	8	0	326	0	16	0	6	0	22	0	15	2	6	0	23	591
Hourly Total	4	14	896	39	0	953	22	43	1119	37	0	1221	0	57	3	34	4	94	0	47	10	24	3	81	2349
10:00 AM	0	6	233	15	0	254	7	8	285	12	0	312	0	21	2	9	1	32	0	17	2	5	0	24	622
10:15 AM	0	1	220	10	0	231	6	12	268	13	0	299	0	16	2	5	1	23	0	8	0	9	2	17	570
10:30 AM	0	2	232	7	0	241	9	7	275	5	0	296	0	26	1	10	2	37	0	8	2	6	0	16	590
10:45 AM	0	2	294	15	0	311	4	13	310	5	0	332	0	12	0	5	0	17	0	10	3	3	0	16	676
Hourly Total	0	11	979	47	0	1037	26	40	1138	35	0	1239	0	75	5	29	4	109	0	43	7	23	2	73	2458
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	1	3	288	7	0	299	5	10	323	19	1	357	0	12	0	7	1	19	0	10	1	8	0	19	694
2:15 PM	0	7	299	7	0	313	1	13	321	19	0	354	0	12	2	2	0	16	0	11	3	6	2	20	703
2:30 PM	1	2	361	13	0	377	5	11	290	15	0	321	0	11	1	9	0	21	0	15	5	5	0	25	744
2:45 PM	0	5	324	15	0	344	1	9	307	19	1	336	0	17	1	8	1	26	0	16	3	4	0	23	729
Hourly Total	2	17	1272	42	0	1333	12	43	1241	72	2	1368	0	52	4	26	2	82	0	52	12	23	2	87	2870
3:00 PM	0	3	287	15	0	305	3	12	306	14	0	335	0	12	3	7	1	22	0	16	4	8	0	28	690
3:15 PM	0	5	356	12	0	373	1	11	301	24	0	337	0	14	2	7	1	23	0	8	1	5	0	14	747
3:30 PM	0	6	319	18	0	343	4	8	303	15	0	330	0	12	4	9	0	25	0	9	0	4	0	13	711
3:45 PM	0	11	339	12	1	362	3	7	314	22	0	346	0	21	1	11	1	33	0	10	0	5	0	15	756
Hourly Total	0	25	1301	57	1	1383	11	38	1224	75	0	1348	0	59	10	34	3	103	0	43	5	22	0	70	2904
4:00 PM	1	10	305	15	0	331	3	12	303	19	0	337	0	11	1	9	1	21	0	10	4	2	0	16	705
4:15 PM	0	6	325	7	0	338	2	6	279	14	0	301	0	12	2	7	0	21	0	16	0	6	2	22	682
4:30 PM	2	5	339	10	0	356	1	10	351	22	0	384	0	13	3	7	1	23	0	5	3	9	3	17	780
4:45 PM	2	4	385	15	0	406	0	5	290	21	0	316	0	9	2	6	3	17	0	12	0	9	0	21	760
Hourly Total	5	25	1354	47	0	1431	6	33	1223	76	0	1338	0	45	8	29	5	82	0	43	7	26	5	76	2927
5:00 PM	0	4	398	6	0	408	1	10	303	26	0	340	0	23	0	14	0	37	0	8	3	9	0	20	805
5:15 PM	2	4	378	12	0	396	0	7	361	29	0	397	0	15	1	15	2	31	0	12	1	12	0	25	849
5:30 PM	0	3	394	14	0	411	0	6	333	29	0	368	0	6	1	15	0	22	0	17	4	7	0	28	829
5:45 PM	0	10	307	13	0	330	2	6	309	31	0	348	0	12	0	10	4	22	1	19	1	5	1	26	726
Hourly Total	2	21	1477	45	0	1545	3	29	1306	115	0	1453	0	56	2	54	6	112	1	56	9	33	1	99	3209
Car	14	118	9085	344	-	9561	128	359	9544	450	-	10481	0	431	42	276	-	749	1	419	68	216	-	704	21495
% Car	100.0	95.2	97.5	98.0	-	97.5	100.0	99.2	97.5	95.1	-	97.5	-	98.9	97.7	98.6	-	98.7	100.0	98.4	98.6	98.6	-	98.5	97.6
Truck	0	6	235	7	-	248	0	3	242	23	-	268	0	5	1	4	-	10	0	7	1	3	-	11	537
% Truck	0.0	4.8	2.5	2.0	-	2.5	0.0	0.8	2.5	4.9	-	2.5	-	1.1	2.3	1.4	-	1.3	0.0	1.6	1.4	1.4	-	1.5	2.4
Ped	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	34	-	-	-	-	-	16	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 2-Woodmont Dr/Center Gate Blvd at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Center Gate Blvd Northbound						Woodmont Dr Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	1	1	294	7	0	303	8	25	363	7	0	403	0	13	0	9	1	22	0	21	3	9	0	33	761
8:00 AM	0	2	302	6	0	310	3	24	318	7	0	352	0	6	2	15	1	23	0	11	5	7	0	23	708
8:15 AM	0	1	283	12	0	296	6	21	305	7	0	339	0	13	0	8	1	21	0	21	3	7	0	31	687
8:30 AM	0	2	274	10	0	286	7	16	352	10	0	385	0	13	2	6	2	21	0	14	2	5	0	21	713
PHF	0.250	0.750	0.954	0.729	-	0.964	0.750	0.860	0.921	0.775	-	0.917	0.000	0.865	0.500	0.633	-	0.946	0.000	0.798	0.650	0.778	-	0.818	0.943
Car	1	6	1134	35	-	1176	24	85	1297	30	-	1436	0	45	4	38	-	87	0	67	13	28	-	108	2807
% Car	100.0	100.0	98.4	100.0	-	98.4	100.0	98.8	96.9	96.8	-	97.1	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	97.8
Truck	0	0	19	0	-	19	0	1	41	1	-	43	0	0	0	0	-	0	0	0	0	0	-	0	62
% Truck	0.0	0.0	1.6	0.0	-	1.6	0.0	1.2	3.1	3.2	-	2.9	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	2.2
Ped	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 2-Woodmont Dr/Center Gate Blvd at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Center Gate Blvd Northbound						Woodmont Dr Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:45 PM	2	4	385	15	0	406	0	5	290	21	0	316	0	9	2	6	3	17	0	12	0	9	0	21	760
5:00 PM	0	4	398	6	0	408	1	10	303	26	0	340	0	23	0	14	0	37	0	8	3	9	0	20	805
5:15 PM	2	4	378	12	0	396	0	7	361	29	0	397	0	15	1	15	2	31	0	12	1	12	0	25	849
5:30 PM	0	3	394	14	0	411	0	6	333	29	0	368	0	6	1	15	0	22	0	17	4	7	0	28	829
PHF	0.500	0.938	0.977	0.783	-	0.986	0.250	0.700	0.891	0.905	-	0.895	0.000	0.576	0.500	0.833	-	0.723	0.000	0.721	0.500	0.771	-	0.839	0.955
Car	4	15	1533	47	-	1599	1	27	1274	102	-	1404	0	53	4	49	-	106	0	49	8	36	-	93	3202
% Car	100.0	100.0	98.6	100.0	-	98.6	100.0	96.4	99.0	97.1	-	98.8	-	100.0	100.0	98.0	-	99.1	-	100.0	100.0	97.3	-	98.9	98.7
Truck	0	0	22	0	-	22	0	1	13	3	-	17	0	0	0	1	-	1	0	0	0	1	-	1	41
% Truck	0.0	0.0	1.4	0.0	-	1.4	0.0	3.6	1.0	2.9	-	1.2	-	0.0	0.0	2.0	-	0.9	-	0.0	0.0	2.7	-	1.1	1.3
Ped	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 3-Maxfield Dr at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Maxfield Dr Northbound						Maxfield Dr Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	20	158	11	0	189	1	7	222	6	0	236	0	10	1	4	1	15	0	8	0	15	2	23	463
7:15 AM	0	31	214	12	0	257	1	12	245	6	0	264	0	16	1	5	1	22	0	10	0	29	0	39	582
7:30 AM	1	31	214	15	0	261	0	11	322	5	0	338	0	14	2	3	1	19	0	12	2	29	1	43	661
7:45 AM	1	39	269	19	0	328	0	5	375	5	1	385	0	12	6	7	1	25	0	15	2	28	0	45	783
Hourly Total	2	121	855	57	0	1035	2	35	1164	22	1	1223	0	52	10	19	4	81	0	45	4	101	3	150	2489
8:00 AM	1	51	277	11	2	340	2	10	319	2	0	333	0	6	1	6	1	13	0	26	6	35	0	67	753
8:15 AM	1	33	239	19	0	292	1	10	299	7	0	317	0	18	1	6	0	25	0	18	0	38	2	56	690
8:30 AM	4	19	259	16	0	298	1	7	321	7	0	336	0	16	5	6	1	27	0	15	0	25	0	40	701
8:45 AM	2	26	248	18	0	294	4	15	295	12	0	326	0	13	7	11	0	31	0	15	1	42	1	58	709
Hourly Total	8	129	1023	64	2	1224	8	42	1234	28	0	1312	0	53	14	29	2	96	0	74	7	140	3	221	2853
9:00 AM	3	40	178	15	1	236	0	18	265	9	0	292	0	18	5	12	0	35	0	21	3	25	0	49	612
9:15 AM	0	29	223	20	1	272	0	11	263	9	0	283	0	14	4	15	0	33	0	14	3	23	1	40	628
9:30 AM	1	28	188	17	0	234	0	11	227	5	0	243	0	21	10	10	2	41	0	22	7	34	0	63	581
9:45 AM	2	28	188	16	0	234	6	11	278	9	2	304	0	28	5	7	0	40	0	12	6	27	1	45	623
Hourly Total	6	125	777	68	2	976	6	51	1033	32	2	1122	0	81	24	44	2	149	0	69	19	109	2	197	2444
10:00 AM	2	33	207	27	0	269	6	13	235	7	2	261	0	22	16	11	0	49	0	12	7	41	0	60	639
10:15 AM	3	22	187	20	0	232	3	9	245	6	2	263	0	21	7	18	2	46	0	20	8	33	6	61	602
10:30 AM	6	27	193	23	1	249	0	9	233	10	2	252	0	25	6	8	2	39	0	18	4	31	0	53	593
10:45 AM	1	33	216	32	0	282	1	14	285	4	2	304	0	24	4	14	3	42	0	19	4	31	1	54	682
Hourly Total	12	115	803	102	1	1032	10	45	998	27	8	1080	0	92	33	51	7	176	0	69	23	136	7	228	2516
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	3	29	233	44	0	309	5	11	249	9	3	274	0	32	6	8	0	46	0	12	6	40	4	58	687
2:15 PM	3	25	285	31	0	344	5	18	272	10	1	305	0	43	5	19	0	67	0	23	4	34	1	61	777
2:30 PM	3	30	277	32	0	342	6	15	240	16	0	277	0	32	2	26	0	60	0	20	7	48	0	75	754
2:45 PM	1	33	306	41	0	381	4	24	269	12	0	309	0	35	7	24	0	66	0	24	8	30	0	62	818
Hourly Total	10	117	1101	148	0	1376	20	68	1030	47	4	1165	0	142	20	77	0	239	0	79	25	152	5	256	3036
3:00 PM	2	30	265	39	0	336	5	13	239	9	1	266	0	32	8	22	0	62	0	22	8	45	0	75	739
3:15 PM	2	30	291	33	1	356	1	19	286	7	0	313	0	31	5	24	0	60	1	22	4	47	0	74	803
3:30 PM	1	31	303	34	0	369	5	18	248	8	0	279	0	38	5	19	0	62	0	17	6	38	0	61	771
3:45 PM	1	25	273	35	0	334	2	10	273	7	0	292	0	26	8	19	0	53	0	20	6	41	0	67	746
Hourly Total	6	116	1132	141	1	1395	13	60	1046	31	1	1150	0	127	26	84	0	237	1	81	24	171	0	277	3059
4:00 PM	3	32	313	37	0	385	3	20	258	7	0	288	0	19	8	19	3	46	0	26	5	37	0	68	787
4:15 PM	3	26	287	41	2	357	5	24	260	13	0	302	0	26	5	27	1	58	0	30	6	36	1	72	789
4:30 PM	1	27	291	27	1	346	4	30	279	13	0	326	0	39	11	19	2	69	0	24	9	48	0	81	822
4:45 PM	0	30	350	24	0	404	8	23	240	5	3	276	1	24	9	28	0	62	0	23	13	40	0	76	818
Hourly Total	7	115	1241	129	3	1492	20	97	1037	38	3	1192	1	108	33	93	6	235	0	103	33	161	1	297	3216
5:00 PM	0	27	369	25	0	421	2	18	265	4	0	289	0	29	7	21	1	57	0	30	5	62	0	97	864
5:15 PM	0	26	387	31	0	444	3	19	307	10	0	339	0	36	2	26	2	64	0	24	7	48	0	79	926
5:30 PM	1	35	337	25	0	398	2	23	261	7	0	293	0	32	3	20	0	55	0	25	4	42	0	71	817
5:45 PM	3	25	311	52	1	391	2	24	305	4	0	335	0	30	7	13	2	50	0	18	5	41	1	64	840
Hourly Total	4	113	1404	133	1	1654	9	84	1138	25	0	1256	0	127	19	80	5	226	0	97	21	193	1	311	3447
Car	55	930	8098	830	-	9913	86	468	8445	245	-	9244	1	770	179	469	-	1419	1	602	152	1141	-	1896	22472
% Car	100.0	97.8	97.1	98.6	-	97.3	97.7	97.1	97.3	98.0	-	97.3	100.0	98.5	100.0	98.3	-	98.6	100.0	97.6	97.4	98.1	-	97.9	97.5
Truck	0	21	238	12	-	271	2	14	235	5	-	256	0	12	0	8	-	20	0	15	4	22	-	41	588
% Truck	0.0	2.2	2.9	1.4	-	2.7	2.3	2.9	2.7	2.0	-	2.7	0.0	1.5	0.0	1.7	-	1.4	0.0	2.4	2.6	1.9	-	2.1	2.5
Ped	-	-	-	-	10	-	-	-	-	-	19	-	-	-	-	-	26	-	-	-	-	-	22	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 3-Maxfield Dr at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Maxfield Dr Northbound						Maxfield Dr Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	1	39	269	19	0	328	0	5	375	5	1	385	0	12	6	7	1	25	0	15	2	28	0	45	783
8:00 AM	1	51	277	11	2	340	2	10	319	2	0	333	0	6	1	6	1	13	0	26	6	35	0	67	753
8:15 AM	1	33	239	19	0	292	1	10	299	7	0	317	0	18	1	6	0	25	0	18	0	38	2	56	690
8:30 AM	4	19	259	16	0	298	1	7	321	7	0	336	0	16	5	6	1	27	0	15	0	25	0	40	701
PHF	0.438	0.696	0.942	0.855	-	0.925	0.500	0.800	0.876	0.750	-	0.890	0.000	0.722	0.542	0.893	-	0.833	0.000	0.712	0.333	0.829	-	0.776	0.935
Car	7	141	1024	64	-	1236	4	31	1273	21	-	1329	0	50	13	23	-	86	0	71	7	119	-	197	2848
% Car	100.0	99.3	98.1	98.5	-	98.3	100.0	96.9	96.9	100.0	-	96.9	-	96.2	100.0	92.0	-	95.6	-	95.9	87.5	94.4	-	94.7	97.3
Truck	0	1	20	1	-	22	0	1	41	0	-	42	0	2	0	2	-	4	0	3	1	7	-	11	79
% Truck	0.0	0.7	1.9	1.5	-	1.7	0.0	3.1	3.1	0.0	-	3.1	-	3.8	0.0	8.0	-	4.4	-	4.1	12.5	5.6	-	5.3	2.7
Ped	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	2	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 3-Maxfield Dr at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Maxfield Dr Northbound						Maxfield Dr Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	27	369	25	0	421	2	18	265	4	0	289	0	29	7	21	1	57	0	30	5	62	0	97	864
5:15 PM	0	26	387	31	0	444	3	19	307	10	0	339	0	36	2	26	2	64	0	24	7	48	0	79	926
5:30 PM	1	35	337	25	0	398	2	23	261	7	0	293	0	32	3	20	0	55	0	25	4	42	0	71	817
5:45 PM	3	25	311	52	1	391	2	24	305	4	0	335	0	30	7	13	2	50	0	18	5	41	1	64	840
PHF	0.333	0.807	0.907	0.639	-	0.931	0.750	0.875	0.927	0.625	-	0.926	0.000	0.882	0.679	0.769	-	0.883	0.000	0.808	0.750	0.778	-	0.802	0.931
Car	4	112	1383	133	-	1632	8	84	1123	25	-	1240	0	127	19	80	-	226	0	96	21	192	-	309	3407
% Car	100.0	99.1	98.5	100.0	-	98.7	88.9	100.0	98.7	100.0	-	98.7	-	100.0	100.0	100.0	-	100.0	-	99.0	100.0	99.5	-	99.4	98.8
Truck	0	1	21	0	-	22	1	0	15	0	-	16	0	0	0	0	-	0	0	1	0	1	-	2	40
% Truck	0.0	0.9	1.5	0.0	-	1.3	11.1	0.0	1.3	0.0	-	1.3	-	0.0	0.0	0.0	-	0.0	-	1.0	0.0	0.5	-	0.6	1.2
Ped	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	1	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 4-Cattlemen Rd at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	19	130	23	0	172	0	40	220	101	0	361	0	15	45	57	0	117	0	50	42	23	0	115	765
7:15 AM	0	32	187	17	0	236	0	62	269	134	2	465	0	14	74	64	0	152	0	63	60	27	0	150	1003
7:30 AM	0	40	174	29	1	243	0	67	351	191	0	609	0	26	77	71	0	174	0	77	73	23	0	173	1199
7:45 AM	0	53	185	43	1	281	0	78	337	219	0	634	0	36	92	93	0	221	0	101	98	32	0	231	1367
Hourly Total	0	144	676	112	2	932	0	247	1177	645	2	2069	0	91	288	285	0	664	0	291	273	105	0	669	4334
8:00 AM	0	28	215	36	0	279	0	78	327	204	1	609	0	38	84	56	0	178	0	96	76	27	0	199	1265
8:15 AM	0	47	183	42	0	272	0	90	264	177	0	531	0	34	135	79	0	248	0	63	81	42	0	186	1237
8:30 AM	0	50	209	45	0	304	0	89	354	182	1	625	1	28	87	73	0	189	0	84	82	34	0	200	1318
8:45 AM	1	47	184	39	0	271	0	97	265	124	0	486	0	39	82	65	0	186	0	84	82	42	0	208	1151
Hourly Total	1	172	791	162	0	1126	0	354	1210	687	2	2251	1	139	388	273	0	801	0	327	321	145	0	793	4971
9:00 AM	0	31	149	25	1	205	0	61	236	98	1	395	0	48	83	73	2	204	0	55	98	37	0	190	994
9:15 AM	0	32	181	48	0	261	0	60	223	81	0	364	0	30	53	52	0	135	0	65	87	37	0	189	949
9:30 AM	0	46	145	50	2	241	0	91	188	96	0	375	0	37	70	58	0	165	0	49	98	42	1	189	970
9:45 AM	1	36	141	33	1	211	0	70	242	85	0	397	0	51	71	48	0	170	0	64	76	33	0	173	951
Hourly Total	1	145	616	156	4	918	0	282	889	360	1	1531	0	166	277	231	2	674	0	233	359	149	1	741	3864
10:00 AM	0	38	165	58	0	261	0	52	202	88	0	342	0	39	65	40	0	144	0	38	80	31	0	149	896
10:15 AM	0	26	160	56	0	242	0	69	194	79	0	342	0	41	71	55	0	167	0	61	94	42	0	197	948
10:30 AM	1	34	131	52	0	218	0	54	205	78	0	337	0	44	107	70	0	221	0	72	89	40	0	201	977
10:45 AM	0	57	167	46	0	270	0	77	228	92	0	397	0	53	79	60	0	192	0	54	91	33	0	178	1037
Hourly Total	1	155	623	212	0	991	0	252	829	337	0	1418	0	177	322	225	0	724	0	225	354	146	0	725	3858
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	42	187	61	1	290	0	63	194	67	0	324	0	56	83	63	0	202	0	91	99	48	0	238	1054
2:15 PM	1	51	231	65	1	348	0	64	208	84	0	356	0	72	80	76	2	228	0	85	87	48	0	220	1152
2:30 PM	0	45	228	69	1	342	0	73	175	71	0	319	0	58	92	80	0	230	0	92	74	40	0	206	1097
2:45 PM	0	57	249	52	0	358	0	96	212	96	1	404	0	54	102	95	0	251	0	79	107	50	0	236	1249
Hourly Total	1	195	895	247	3	1338	0	296	789	318	1	1403	0	240	357	314	2	911	0	347	367	186	0	900	4552
3:00 PM	1	48	226	47	1	322	0	85	223	93	0	401	1	50	87	87	0	225	0	104	90	44	0	238	1186
3:15 PM	0	57	235	49	0	341	0	72	212	72	0	356	0	48	97	104	0	249	0	96	99	43	0	238	1184
3:30 PM	0	42	261	68	0	371	0	81	200	88	1	369	0	50	85	80	0	215	0	86	118	43	0	247	1202
3:45 PM	1	44	227	54	3	326	0	67	216	81	0	364	0	62	87	118	0	267	0	88	117	38	0	243	1200
Hourly Total	2	191	949	218	4	1360	0	305	851	334	1	1490	1	210	356	389	0	956	0	374	424	168	0	966	4772
4:00 PM	0	52	259	74	2	385	0	98	219	78	0	395	0	56	93	81	0	230	0	128	104	41	0	273	1283
4:15 PM	0	46	258	52	0	356	0	74	238	93	0	405	0	51	80	79	0	210	0	128	90	33	3	251	1222
4:30 PM	0	43	263	49	1	355	0	82	227	100	0	409	0	43	75	105	0	223	0	148	100	57	0	305	1292
4:45 PM	0	49	336	42	1	427	0	74	233	117	0	424	0	48	89	106	0	243	0	160	142	38	0	340	1434
Hourly Total	0	190	1116	217	4	1523	0	328	917	388	0	1633	0	198	337	371	0	906	0	564	436	169	3	1169	5231
5:00 PM	0	46	321	49	0	416	0	93	217	89	0	399	0	32	53	72	0	157	0	155	150	36	1	341	1313
5:15 PM	0	62	366	45	0	473	0	105	216	93	1	414	0	43	102	84	0	229	0	132	126	39	0	297	1413
5:30 PM	0	40	287	48	2	375	0	84	205	87	0	376	0	64	74	77	1	215	0	147	137	34	0	318	1284
5:45 PM	0	46	288	51	0	385	0	92	227	83	0	402	0	45	93	89	0	227	0	130	124	40	0	294	1308
Hourly Total	0	194	1262	193	2	1649	0	374	865	352	1	1591	0	184	322	322	1	828	0	564	537	149	1	1250	5318
Car	6	1348	6723	1496	-	9573	0	2384	7299	3312	-	12995	2	1388	2596	2346	-	6332	0	2830	2992	1176	-	6998	35898
% Car	100.0	97.3	97.0	98.6	-	97.3	-	97.8	97.0	96.8	-	97.1	100.0	98.8	98.1	97.3	-	98.0	-	96.8	97.4	96.6	-	97.0	97.3
Truck	0	38	205	21	-	264	0	54	228	109	-	391	0	17	51	64	-	132	0	95	79	41	-	215	1002
% Truck	0.0	2.7	3.0	1.4	-	2.7	-	2.2	3.0	3.2	-	2.9	0.0	1.2	1.9	2.7	-	2.0	-	3.2	2.6	3.4	-	3.0	2.7
Ped	-	-	-	-	19	-	-	-	-	-	8	-	-	-	-	-	5	-	-	-	-	-	5	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 4-Cattlemen Rd at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	53	185	43	1	281	0	78	337	219	0	634	0	36	92	93	0	221	0	101	98	32	0	231	1367
8:00 AM	0	28	215	36	0	279	0	78	327	204	1	609	0	38	84	56	0	178	0	96	76	27	0	199	1265
8:15 AM	0	47	183	42	0	272	0	90	264	177	0	531	0	34	135	79	0	248	0	63	81	42	0	186	1237
8:30 AM	0	50	209	45	0	304	0	89	354	182	1	625	1	28	87	73	0	189	0	84	82	34	0	200	1318
PHF	0.000	0.840	0.921	0.922	-	0.934	0.000	0.931	0.905	0.893	-	0.946	0.250	0.895	0.737	0.809	-	0.843	0.000	0.851	0.860	0.804	-	0.883	0.949
Car	0	172	771	162	-	1105	0	321	1245	753	-	2319	1	134	392	296	-	823	0	326	320	125	-	771	5018
% Car	-	96.6	97.3	97.6	-	97.3	-	95.8	97.1	96.3	-	96.7	100.0	98.5	98.5	98.3	-	98.4	-	94.8	95.0	92.6	-	94.5	96.7
Truck	0	6	21	4	-	31	0	14	37	29	-	80	0	2	6	5	-	13	0	18	17	10	-	45	169
% Truck	-	3.4	2.7	2.4	-	2.7	-	4.2	2.9	3.7	-	3.3	0.0	1.5	1.5	1.7	-	1.6	-	5.2	5.0	7.4	-	5.5	3.3
Ped	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 4-Cattlemen Rd at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	43	263	49	1	355	0	82	227	100	0	409	0	43	75	105	0	223	0	148	100	57	0	305	1292
4:45 PM	0	49	336	42	1	427	0	74	233	117	0	424	0	48	89	106	0	243	0	160	142	38	0	340	1434
5:00 PM	0	46	321	49	0	416	0	93	217	89	0	399	0	32	53	72	0	157	0	155	150	36	1	341	1313
5:15 PM	0	62	366	45	0	473	0	105	216	93	1	414	0	43	102	84	0	229	0	132	126	39	0	297	1413
PHF	0.000	0.806	0.878	0.944	-	0.883	0.000	0.843	0.958	0.853	-	0.971	0.000	0.865	0.782	0.866	-	0.877	0.000	0.930	0.863	0.746	-	0.941	0.950
Car	0	200	1256	184	-	1640	0	350	880	390	-	1620	0	166	311	361	-	838	0	591	513	169	-	1273	5371
% Car	-	100.0	97.7	99.5	-	98.1	-	98.9	98.5	97.7	-	98.4	-	100.0	97.5	98.4	-	98.4	-	99.3	99.0	99.4	-	99.2	98.5
Truck	0	0	30	1	-	31	0	4	13	9	-	26	0	0	8	6	-	14	0	4	5	1	-	10	81
% Truck	-	0.0	2.3	0.5	-	1.9	-	1.1	1.5	2.3	-	1.6	-	0.0	2.5	1.6	-	1.6	-	0.7	1.0	0.6	-	0.8	1.5
Ped	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 5-I -75 SB ramp termini at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound					Bee Ridge Rd Westbound				Northbound		I -75 SB off ramp Southbound				
	U-Turn	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	163	50	0	213	37	216	0	253	0	0	41	147	0	188	654
7:15 AM	0	191	76	0	267	48	251	0	299	1	0	25	146	0	171	737
7:30 AM	0	230	87	0	317	31	329	0	360	0	0	41	193	1	234	911
7:45 AM	0	278	77	0	355	66	394	0	460	0	0	45	256	0	301	1116
Hourly Total	0	862	290	0	1152	182	1190	0	1372	1	0	152	742	1	894	3418
8:00 AM	0	272	106	0	378	49	360	0	409	0	0	83	277	0	360	1147
8:15 AM	0	243	97	0	340	42	348	0	390	0	0	42	210	0	252	982
8:30 AM	0	275	85	0	360	42	332	0	374	0	0	41	220	0	261	995
8:45 AM	0	242	82	0	324	47	301	0	348	0	0	39	241	0	280	952
Hourly Total	0	1032	370	0	1402	180	1341	0	1521	0	0	205	948	0	1153	4076
9:00 AM	0	266	95	0	361	29	260	0	289	0	0	51	232	0	283	933
9:15 AM	0	166	84	0	250	38	210	0	248	0	0	43	150	0	193	691
9:30 AM	0	219	65	0	284	22	227	0	249	0	0	41	129	0	170	703
9:45 AM	0	177	68	0	245	23	237	0	260	0	0	41	158	0	199	704
Hourly Total	0	828	312	0	1140	112	934	0	1046	0	0	176	669	0	845	3031
10:00 AM	0	165	66	0	231	28	216	0	244	0	0	30	146	0	176	651
10:15 AM	0	210	83	0	293	30	190	0	220	0	0	31	147	0	178	691
10:30 AM	0	184	86	0	270	21	192	0	213	0	0	42	139	0	181	664
10:45 AM	0	227	62	0	289	30	221	0	251	0	0	18	147	0	165	705
Hourly Total	0	786	297	0	1083	109	819	0	928	0	0	121	579	0	700	2711
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	233	72	0	305	17	202	0	219	0	0	32	142	0	174	698
2:15 PM	0	247	101	0	348	30	186	0	216	0	0	50	128	0	178	742
2:30 PM	0	277	106	0	383	21	198	0	219	0	0	44	145	0	189	791
2:45 PM	0	318	109	0	427	29	196	0	225	0	0	57	155	0	212	864
Hourly Total	0	1075	388	0	1463	97	782	0	879	0	0	183	570	0	753	3095
3:00 PM	0	301	104	0	405	41	249	0	290	0	0	48	151	0	199	894
3:15 PM	0	309	128	0	437	28	254	0	282	0	0	54	135	0	189	908
3:30 PM	0	318	117	0	435	31	206	0	237	0	0	44	136	0	180	852
3:45 PM	0	312	104	0	416	47	203	0	250	0	0	48	174	0	222	888
Hourly Total	0	1240	453	0	1693	147	912	0	1059	0	0	194	596	0	790	3542
4:00 PM	0	308	101	0	409	33	218	0	251	0	0	57	148	0	205	865
4:15 PM	0	329	143	0	472	42	236	0	278	0	0	58	151	0	209	959
4:30 PM	0	316	125	0	441	28	202	0	230	0	0	81	159	1	240	911
4:45 PM	0	378	152	0	530	45	256	0	301	0	0	60	173	0	233	1064
Hourly Total	0	1331	521	0	1852	148	912	0	1060	0	0	256	631	1	887	3799
5:00 PM	0	424	150	0	574	36	205	0	241	0	0	76	187	0	263	1078
5:15 PM	0	431	182	0	613	61	235	0	296	0	0	78	206	0	284	1193
5:30 PM	0	430	154	0	584	41	235	0	276	0	0	80	212	0	292	1152
5:45 PM	0	420	170	0	590	36	210	0	246	0	0	98	185	0	283	1119
Hourly Total	0	1705	656	0	2361	174	885	0	1059	0	0	332	790	0	1122	4542
Car	0	8619	3142	-	11761	1097	7550	-	8647	-	0	1569	5388	-	6957	27365
% Car	-	97.3	95.6	-	96.8	95.5	97.1	-	96.9	-	-	96.9	97.5	-	97.4	97.0
Truck	0	240	145	-	385	52	225	-	277	-	0	50	137	-	187	849
% Truck	-	2.7	4.4	-	3.2	4.5	2.9	-	3.1	-	-	3.1	2.5	-	2.6	3.0
Ped	-	-	-	0	-	-	-	0	-	1	-	-	-	2	-	-
% Ped	-	-	-	-	-	-	-	-	-	100.0	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 5-I -75 SB ramp termini at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Bee Ridge Rd Eastbound					Bee Ridge Rd Westbound				Northbound		I -75 SB off ramp Southbound				Int. Total
	U-Turn	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Peds	App. Total	Left	Right	Peds	App. Total	
7:45 AM	0	278	77	0	355	66	394	0	460	0	0	45	256	0	301	1116
8:00 AM	0	272	106	0	378	49	360	0	409	0	0	83	277	0	360	1147
8:15 AM	0	243	97	0	340	42	348	0	390	0	0	42	210	0	252	982
8:30 AM	0	275	85	0	360	42	332	0	374	0	0	41	220	0	261	995
PHF	0.000	0.960	0.861	-	0.948	0.754	0.910	-	0.888	-	0.000	0.636	0.869	-	0.815	0.924
Car	0	1041	340	-	1381	192	1398	-	1590	-	0	204	940	-	1144	4115
% Car	-	97.5	93.2	-	96.4	96.5	97.5	-	97.4	-	-	96.7	97.6	-	97.4	97.1
Truck	0	27	25	-	52	7	36	-	43	-	0	7	23	-	30	125
% Truck	-	2.5	6.8	-	3.6	3.5	2.5	-	2.6	-	-	3.3	2.4	-	2.6	2.9
Ped	-	-	-	0	-	-	-	0	-	0	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 5-I -75 SB ramp termini at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Bee Ridge Rd Eastbound					Bee Ridge Rd Westbound				Northbound		I -75 SB off ramp Southbound				Int. Total
	U-Turn	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Peds	App. Total	Left	Right	Peds	App. Total	
5:00 PM	0	424	150	0	574	36	205	0	241	0	0	76	187	0	263	1078
5:15 PM	0	431	182	0	613	61	235	0	296	0	0	78	206	0	284	1193
5:30 PM	0	430	154	0	584	41	235	0	276	0	0	80	212	0	292	1152
5:45 PM	0	420	170	0	590	36	210	0	246	0	0	98	185	0	283	1119
PHF	0.000	0.989	0.901	-	0.963	0.713	0.941	-	0.894	-	0.000	0.847	0.932	-	0.961	0.952
Car	0	1683	649	-	2332	162	874	-	1036	-	0	328	782	-	1110	4478
% Car	-	98.7	98.9	-	98.8	93.1	98.8	-	97.8	-	-	98.8	99.0	-	98.9	98.6
Truck	0	22	7	-	29	12	11	-	23	-	0	4	8	-	12	64
% Truck	-	1.3	1.1	-	1.2	6.9	1.2	-	2.2	-	-	1.2	1.0	-	1.1	1.4
Ped	-	-	-	0	-	-	-	0	-	0	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 6- I -75 NB ramp termini at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound				Bee Ridge Rd Westbound				I 75 NB off Ramp Northbound				
	U-Turn	Thru	Peds	App. Total	U-Turn	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	1	60	0	61	0	175	0	175	94	0	1	94	330
7:15 AM	0	93	0	93	0	217	0	217	126	0	0	126	436
7:30 AM	0	119	0	119	0	245	0	245	176	0	0	176	540
7:45 AM	0	154	0	154	0	218	0	218	203	0	0	203	575
Hourly Total	1	426	0	427	0	855	0	855	599	0	1	599	1881
8:00 AM	0	157	0	157	0	237	0	237	161	0	0	161	555
8:15 AM	0	126	0	126	0	187	0	187	181	0	0	181	494
8:30 AM	0	139	0	139	0	215	0	215	153	0	0	153	507
8:45 AM	0	140	0	140	0	158	0	158	140	0	0	140	438
Hourly Total	0	562	0	562	0	797	0	797	635	0	0	635	1994
9:00 AM	0	132	0	132	2	157	0	159	105	0	0	105	396
9:15 AM	0	122	0	122	0	155	0	155	88	0	0	88	365
9:30 AM	0	116	0	116	0	153	0	153	117	0	0	117	386
9:45 AM	0	131	0	131	0	170	0	170	70	0	0	70	371
Hourly Total	0	501	0	501	2	635	0	637	380	0	0	380	1518
10:00 AM	0	122	0	122	0	122	0	122	106	0	0	106	350
10:15 AM	0	147	0	147	0	145	0	145	68	0	1	68	360
10:30 AM	0	106	0	106	0	132	0	132	94	0	0	94	332
10:45 AM	0	126	0	126	1	174	0	175	89	0	0	89	390
Hourly Total	0	501	0	501	1	573	0	574	357	0	1	357	1432
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	155	0	155	0	141	0	141	76	0	1	76	372
2:15 PM	0	203	0	203	0	134	0	134	103	0	1	103	440
2:30 PM	0	196	0	196	0	130	0	130	69	0	0	69	395
2:45 PM	0	241	0	241	0	175	0	175	97	0	0	97	513
Hourly Total	0	795	0	795	0	580	0	580	345	0	2	345	1720
3:00 PM	0	210	0	210	0	192	0	192	108	0	0	108	510
3:15 PM	0	198	0	198	0	142	0	142	82	0	0	82	422
3:30 PM	0	212	0	212	0	179	0	179	87	0	2	87	478
3:45 PM	0	215	0	215	0	155	0	155	82	0	1	82	452
Hourly Total	0	835	0	835	0	668	0	668	359	0	3	359	1862
4:00 PM	0	184	0	184	0	182	0	182	93	0	0	93	459
4:15 PM	0	222	0	222	0	158	0	158	94	0	0	94	474
4:30 PM	0	244	0	244	0	169	0	169	98	0	1	98	511
4:45 PM	0	280	0	280	0	163	0	163	78	0	0	78	521
Hourly Total	0	930	0	930	0	672	0	672	363	0	1	363	1965
5:00 PM	0	247	0	247	0	207	0	207	75	0	0	75	529
5:15 PM	0	300	0	300	0	171	0	171	96	0	1	96	567
5:30 PM	0	277	0	277	0	170	0	170	72	0	0	72	519
5:45 PM	0	300	0	300	0	150	0	150	85	0	0	85	535
Hourly Total	0	1124	0	1124	0	698	0	698	328	0	1	328	2150
Car	1	5502	-	5503	3	5317	-	5320	3247	0	-	3247	14070
% Car	100.0	97.0	-	97.0	100.0	97.1	-	97.1	96.5	-	-	96.5	96.9
Truck	0	172	-	172	0	161	-	161	119	0	-	119	452
% Truck	0.0	3.0	-	3.0	0.0	2.9	-	2.9	3.5	-	-	3.5	3.1
Ped	-	-	0	-	-	-	0	-	-	-	9	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 6- I -75 NB ramp termini at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Bee Ridge Rd Eastbound				Bee Ridge Rd Westbound				I 75 NB off Ramp Northbound				
	U-Turn	Thru	Peds	App. Total	U-Turn	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:30 AM	0	119	0	119	0	245	0	245	176	0	0	176	540
7:45 AM	0	154	0	154	0	218	0	218	203	0	0	203	575
8:00 AM	0	157	0	157	0	237	0	237	161	0	0	161	555
8:15 AM	0	126	0	126	0	187	0	187	181	0	0	181	494
PHF	0.000	0.885	-	0.885	0.000	0.905	-	0.905	0.888	0.000	-	0.888	0.941
Car	0	538	-	538	0	864	-	864	702	0	-	702	2104
% Car	-	96.8	-	96.8	-	97.4	-	97.4	97.4	-	-	97.4	97.2
Truck	0	18	-	18	0	23	-	23	19	0	-	19	60
% Truck	-	3.2	-	3.2	-	2.6	-	2.6	2.6	-	-	2.6	2.8
Ped	-	-	0	-	-	-	0	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 6- I -75 NB ramp termini at Bee Ridge Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Bee Ridge Rd Eastbound				Bee Ridge Rd Westbound				I 75 NB off Ramp Northbound				
	U-Turn	Thru	Peds	App. Total	U-Turn	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
5:00 PM	0	247	0	247	0	207	0	207	75	0	0	75	529
5:15 PM	0	300	0	300	0	171	0	171	96	0	1	96	567
5:30 PM	0	277	0	277	0	170	0	170	72	0	0	72	519
5:45 PM	0	300	0	300	0	150	0	150	85	0	0	85	535
PHF	0.000	0.937	-	0.937	0.000	0.843	-	0.843	0.854	0.000	-	0.854	0.948
Car	0	1108	-	1108	0	678	-	678	316	0	-	316	2102
% Car	-	98.6	-	98.6	-	97.1	-	97.1	96.3	-	-	96.3	97.8
Truck	0	16	-	16	0	20	-	20	12	0	-	12	48
% Truck	-	1.4	-	1.4	-	2.9	-	2.9	3.7	-	-	3.7	2.2
Ped	-	-	0	-	-	-	0	-	-	-	1	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 7-Mauna Loa Blvd at Bee Ridge Rd
Site Code:
Start Date: 09/12/2013

Turning Movement Data

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Mauna Loa Blvd Northbound						Mauna Loa Blvd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	18	70	16	0	104	0	1	177	1	0	179	0	82	0	1	0	83	0	1	0	4	0	5	371
7:15 AM	0	17	78	24	0	119	0	3	196	0	0	199	0	116	0	0	0	116	0	0	0	4	0	4	438
7:30 AM	0	29	122	35	0	186	0	4	204	2	0	210	0	79	2	7	0	88	0	0	0	17	0	17	501
7:45 AM	0	47	137	29	0	213	0	2	223	2	0	227	0	127	2	4	0	133	0	0	0	12	0	12	585
Hourly Total	0	111	407	104	0	622	0	10	800	5	0	815	0	404	4	12	0	420	0	1	0	37	0	38	1895
8:00 AM	0	40	115	29	0	184	0	4	212	1	0	217	0	107	1	3	0	111	0	0	0	15	0	15	527
8:15 AM	0	34	130	30	0	194	0	1	204	0	0	205	0	113	1	3	0	117	0	0	0	7	0	7	523
8:30 AM	0	36	111	30	0	177	0	2	174	0	0	176	0	71	2	2	0	75	0	0	0	11	0	11	439
8:45 AM	0	31	120	18	0	169	0	2	223	3	0	228	0	72	0	4	0	76	0	1	0	8	0	9	482
Hourly Total	0	141	476	107	0	724	0	9	813	4	0	826	0	363	4	12	0	379	0	1	0	41	0	42	1971
9:00 AM	1	22	130	29	0	182	0	2	151	2	0	155	0	50	1	3	0	54	0	0	1	3	0	4	395
9:15 AM	0	8	104	20	0	132	0	0	159	1	0	160	0	45	0	2	0	47	0	0	1	10	0	11	350
9:30 AM	0	19	90	25	0	134	0	1	145	0	0	146	0	55	0	1	0	56	0	0	1	11	0	12	348
9:45 AM	0	24	109	19	0	152	0	1	125	3	0	129	0	38	0	4	0	42	0	2	0	10	0	12	335
Hourly Total	1	73	433	93	0	600	0	4	580	6	0	590	0	188	1	10	0	199	0	2	3	34	0	39	1428
10:00 AM	1	11	107	23	0	142	1	0	114	1	0	116	0	34	0	1	0	35	0	0	0	3	0	3	296
10:15 AM	0	9	98	21	0	128	0	3	152	0	0	155	0	43	0	0	0	43	0	0	1	17	0	18	344
10:30 AM	0	10	113	28	0	151	0	0	149	0	0	149	0	40	0	3	0	43	0	0	0	7	0	7	350
10:45 AM	0	15	136	22	0	173	0	3	156	0	1	159	0	40	1	2	0	43	0	0	0	12	0	12	387
Hourly Total	1	45	454	94	0	594	1	6	571	1	1	579	0	157	1	6	0	164	0	0	1	39	0	40	1377
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	2	8	115	39	0	164	0	4	167	1	0	172	0	29	0	5	0	34	0	2	2	24	0	28	398
2:15 PM	0	13	142	42	0	197	0	1	155	0	0	156	0	45	0	3	0	48	0	1	0	15	0	16	417
2:30 PM	0	11	135	42	0	188	0	1	129	0	0	130	0	43	0	2	0	45	0	1	0	18	0	19	382
2:45 PM	1	12	167	58	0	238	0	3	144	0	0	147	0	29	1	5	0	35	0	1	1	12	0	14	434
Hourly Total	3	44	559	181	0	787	0	9	595	1	0	605	0	146	1	15	0	162	0	5	3	69	0	77	1631
3:00 PM	0	16	162	52	0	230	0	3	131	2	0	136	0	44	0	2	0	46	0	1	0	17	0	18	430
3:15 PM	0	11	153	56	0	220	0	3	168	1	0	172	0	37	2	1	0	40	0	1	0	14	0	15	447
3:30 PM	1	14	138	66	0	219	0	2	175	0	0	177	0	50	0	2	0	52	0	1	0	12	0	13	461
3:45 PM	1	5	169	80	0	255	0	1	151	1	0	153	0	43	0	1	1	44	0	0	0	15	0	15	467
Hourly Total	2	46	622	254	0	924	0	9	625	4	0	638	0	174	2	6	1	182	0	3	0	58	0	61	1805
4:00 PM	0	6	160	48	0	214	0	4	136	1	0	141	0	59	0	4	0	63	0	1	0	17	0	18	436
4:15 PM	0	9	158	81	0	248	0	3	143	0	0	146	0	50	0	2	0	52	0	1	0	23	0	24	470
4:30 PM	1	13	138	74	0	226	0	5	142	1	0	148	0	59	0	3	0	62	0	4	0	52	0	56	492
4:45 PM	1	13	185	83	0	282	0	0	127	0	0	127	0	45	0	2	0	47	0	0	0	28	0	28	484
Hourly Total	2	41	641	286	0	970	0	12	548	2	0	562	0	213	0	11	0	224	0	6	0	120	0	126	1882
5:00 PM	0	7	178	72	0	257	0	2	149	1	0	152	0	46	0	5	0	51	0	1	1	36	0	38	498
5:15 PM	2	9	168	105	0	284	0	0	158	1	0	159	0	62	0	3	0	65	0	3	2	36	0	41	549
5:30 PM	1	6	218	95	0	320	0	2	152	2	0	156	0	72	0	0	0	72	0	2	0	24	0	26	574
5:45 PM	0	11	231	97	0	339	0	3	145	1	0	149	0	51	1	5	1	57	0	1	1	24	0	26	571
Hourly Total	3	33	795	369	0	1200	0	7	604	5	0	616	0	231	1	13	1	245	0	7	4	120	0	131	2192
Car	12	520	4261	1445	-	6238	1	60	5006	25	-	5092	0	1846	14	83	-	1943	0	23	9	503	-	535	13808
% Car	100.0	97.4	97.1	97.1	-	97.1	100.0	90.9	97.5	89.3	-	97.3	-	98.4	100.0	97.6	-	98.4	-	92.0	81.8	97.1	-	96.6	97.4
Truck	0	14	126	43	-	183	0	6	130	3	-	139	0	30	0	2	-	32	0	2	2	15	-	19	373
% Truck	0.0	2.6	2.9	2.9	-	2.9	0.0	9.1	2.5	10.7	-	2.7	-	1.6	0.0	2.4	-	1.6	-	8.0	18.2	2.9	-	3.4	2.6
Ped	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 7-Mauna Loa Blvd at Bee Ridge Rd
Site Code:
Start Date: 09/12/2013

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Mauna Loa Blvd Northbound						Mauna Loa Blvd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	0	29	122	35	0	186	0	4	204	2	0	210	0	79	2	7	0	88	0	0	0	17	0	17	501
7:45 AM	0	47	137	29	0	213	0	2	223	2	0	227	0	127	2	4	0	133	0	0	0	12	0	12	585
8:00 AM	0	40	115	29	0	184	0	4	212	1	0	217	0	107	1	3	0	111	0	0	0	15	0	15	527
8:15 AM	0	34	130	30	0	194	0	1	204	0	0	205	0	113	1	3	0	117	0	0	0	7	0	7	523
PHF	0.000	0.798	0.920	0.879	-	0.912	0.000	0.688	0.945	0.625	-	0.946	0.000	0.839	0.750	0.607	-	0.844	0.000	0.000	0.000	0.750	-	0.750	0.913
Car	0	149	475	120	-	744	0	8	820	5	-	833	0	423	6	17	-	446	0	0	0	50	-	50	2073
% Car	-	99.3	94.2	97.6	-	95.8	-	72.7	97.3	100.0	-	97.0	-	99.3	100.0	100.0	-	99.3	-	-	-	98.0	-	98.0	97.1
Truck	0	1	29	3	-	33	0	3	23	0	-	26	0	3	0	0	-	3	0	0	0	1	-	1	63
% Truck	-	0.7	5.8	2.4	-	4.2	-	27.3	2.7	0.0	-	3.0	-	0.7	0.0	0.0	-	0.7	-	-	-	2.0	-	2.0	2.9
Ped	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 7-Mauna Loa Blvd at Bee Ridge Rd
Site Code:
Start Date: 09/12/2013

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Bee Ridge Rd Eastbound						Bee Ridge Rd Westbound						Mauna Loa Blvd Northbound						Mauna Loa Blvd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	7	178	72	0	257	0	2	149	1	0	152	0	46	0	5	0	51	0	1	1	36	0	38	498
5:15 PM	2	9	168	105	0	284	0	0	158	1	0	159	0	62	0	3	0	65	0	3	2	36	0	41	549
5:30 PM	1	6	218	95	0	320	0	2	152	2	0	156	0	72	0	0	0	72	0	2	0	24	0	26	574
5:45 PM	0	11	231	97	0	339	0	3	145	1	0	149	0	51	1	5	1	57	0	1	1	24	0	26	571
PHF	0.375	0.750	0.860	0.879	-	0.885	0.000	0.583	0.956	0.625	-	0.969	0.000	0.802	0.250	0.650	-	0.851	0.000	0.583	0.500	0.833	-	0.799	0.955
Car	3	32	789	367	-	1191	0	7	596	5	-	608	0	230	1	13	-	244	0	7	4	118	-	129	2172
% Car	100.0	97.0	99.2	99.5	-	99.3	-	100.0	98.7	100.0	-	98.7	-	99.6	100.0	100.0	-	99.6	-	100.0	100.0	98.3	-	98.5	99.1
Truck	0	1	6	2	-	9	0	0	8	0	-	8	0	1	0	0	-	1	0	0	0	2	-	2	20
% Truck	0.0	3.0	0.8	0.5	-	0.8	-	0.0	1.3	0.0	-	1.3	-	0.4	0.0	0.0	-	0.4	-	0.0	0.0	1.7	-	1.5	0.9
Ped	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 8-Cattlemen Rd at Wilkinson Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Wilkinson Rd Eastbound					Cattlemen Rd Northbound					Cattlemen Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	11	0	0	11	0	0	95	0	95	1	54	3	0	58	164
7:15 AM	0	20	2	0	22	0	4	106	0	110	1	75	7	0	83	215
7:30 AM	0	11	7	1	18	0	4	157	0	161	1	105	17	0	123	302
7:45 AM	0	14	3	1	17	0	1	148	0	149	4	98	11	0	113	279
Hourly Total	0	56	12	2	68	0	9	506	0	515	7	332	38	0	377	960
8:00 AM	0	14	5	0	19	0	1	156	0	157	0	120	14	0	134	310
8:15 AM	0	23	5	0	28	0	2	162	0	164	0	100	11	0	111	303
8:30 AM	0	18	2	0	20	0	5	193	0	198	2	99	10	0	111	329
8:45 AM	0	23	3	0	26	0	2	132	0	134	1	113	5	0	119	279
Hourly Total	0	78	15	0	93	0	10	643	0	653	3	432	40	0	475	1221
9:00 AM	0	25	2	0	27	0	1	135	0	136	3	94	12	0	109	272
9:15 AM	0	22	2	0	24	0	1	90	0	91	1	96	7	0	104	219
9:30 AM	0	20	2	2	22	0	1	88	0	89	2	98	20	0	120	231
9:45 AM	0	12	1	1	13	0	2	116	0	118	5	107	15	0	127	258
Hourly Total	0	79	7	3	86	0	5	429	0	434	11	395	54	0	460	980
10:00 AM	0	17	2	0	19	0	0	111	2	111	3	89	12	0	104	234
10:15 AM	0	25	2	1	27	0	1	101	0	102	0	86	18	0	104	233
10:30 AM	0	22	2	0	24	0	0	128	0	128	1	107	14	0	122	274
10:45 AM	0	23	4	1	27	0	0	143	0	143	2	134	13	0	149	319
Hourly Total	0	87	10	2	97	0	1	483	2	484	6	416	57	0	479	1060
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	21	6	0	27	0	1	125	0	126	1	137	24	0	162	315
2:15 PM	0	10	2	0	12	0	3	135	0	138	2	129	20	0	151	301
2:30 PM	0	20	1	0	21	0	0	134	0	134	2	124	16	0	142	297
2:45 PM	0	15	5	0	20	0	4	155	0	159	5	164	18	0	187	366
Hourly Total	0	66	14	0	80	0	8	549	0	557	10	554	78	0	642	1279
3:00 PM	0	14	6	1	20	0	0	136	0	136	0	154	12	0	166	322
3:15 PM	0	22	4	0	26	0	0	135	0	135	1	111	18	0	130	291
3:30 PM	0	15	5	0	20	0	0	155	0	155	7	134	10	0	151	326
3:45 PM	0	20	3	0	23	0	0	141	0	141	3	142	24	0	169	333
Hourly Total	0	71	18	1	89	0	0	567	0	567	11	541	64	0	616	1272
4:00 PM	0	24	3	0	27	0	2	94	0	96	2	146	22	0	170	293
4:15 PM	0	20	5	0	25	0	3	131	0	134	0	131	21	0	152	311
4:30 PM	0	21	4	0	25	0	3	148	0	151	0	122	25	0	147	323
4:45 PM	0	18	5	0	23	0	2	146	0	148	4	153	17	0	174	345
Hourly Total	0	83	17	0	100	0	10	519	0	529	6	552	85	0	643	1272
5:00 PM	0	21	5	2	26	0	1	162	1	163	0	162	21	0	183	372
5:15 PM	0	19	10	0	29	0	2	124	0	126	0	183	21	0	204	359
5:30 PM	0	17	2	1	19	0	1	127	0	128	2	158	29	0	189	336
5:45 PM	0	16	6	1	22	0	4	133	0	137	3	137	33	0	173	332
Hourly Total	0	73	23	4	96	0	8	546	1	554	5	640	104	0	749	1399
Car	0	586	114	-	700	0	51	4167	-	4218	59	3780	513	-	4352	9270
% Car	-	98.8	98.3	-	98.7	-	100.0	98.2	-	98.3	100.0	97.9	98.7	-	98.0	98.2
Truck	0	7	2	-	9	0	0	75	-	75	0	82	7	-	89	173
% Truck	-	1.2	1.7	-	1.3	-	0.0	1.8	-	1.7	0.0	2.1	1.3	-	2.0	1.8
Ped	-	-	-	12	-	-	-	-	3	-	-	-	-	0	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 8-Cattlemen Rd at Wilkinson Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Wilkinson Rd Eastbound					Cattlemen Rd Northbound					Cattlemen Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	14	3	1	17	0	1	148	0	149	4	98	11	0	113	279
8:00 AM	0	14	5	0	19	0	1	156	0	157	0	120	14	0	134	310
8:15 AM	0	23	5	0	28	0	2	162	0	164	0	100	11	0	111	303
8:30 AM	0	18	2	0	20	0	5	193	0	198	2	99	10	0	111	329
PHF	0.000	0.750	0.750	-	0.750	0.000	0.450	0.854	-	0.843	0.375	0.869	0.821	-	0.875	0.928
Car	0	68	14	-	82	0	9	654	-	663	6	403	44	-	453	1198
% Car	-	98.6	93.3	-	97.6	-	100.0	99.2	-	99.3	100.0	96.6	95.7	-	96.6	98.1
Truck	0	1	1	-	2	0	0	5	-	5	0	14	2	-	16	23
% Truck	-	1.4	6.7	-	2.4	-	0.0	0.8	-	0.7	0.0	3.4	4.3	-	3.4	1.9
Ped	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Ped	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 8-Cattlemen Rd at Wilkinson Rd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Wilkinson Rd Eastbound					Cattlemen Rd Northbound					Cattlemen Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:45 PM	0	18	5	0	23	0	2	146	0	148	4	153	17	0	174	345
5:00 PM	0	21	5	2	26	0	1	162	1	163	0	162	21	0	183	372
5:15 PM	0	19	10	0	29	0	2	124	0	126	0	183	21	0	204	359
5:30 PM	0	17	2	1	19	0	1	127	0	128	2	158	29	0	189	336
PHF	0.000	0.893	0.550	-	0.836	0.000	0.750	0.863	-	0.867	0.375	0.896	0.759	-	0.919	0.949
Car	0	75	21	-	96	0	6	548	-	554	6	652	88	-	746	1396
% Car	-	100.0	95.5	-	99.0	-	100.0	98.0	-	98.1	100.0	99.4	100.0	-	99.5	98.9
Truck	0	0	1	-	1	0	0	11	-	11	0	4	0	-	4	16
% Truck	-	0.0	4.5	-	1.0	-	0.0	2.0	-	1.9	0.0	0.6	0.0	-	0.5	1.1
Ped	-	-	-	3	-	-	-	-	1	-	-	-	-	0	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 9-Cattlemen Rd at Walmart Driveway
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Walmart Driveway Westbound					Cattlemen Rd Northbound					Cattlemen Rd Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
7:00 AM	0	11	13	0	24	0	96	12	0	108	0	0	46	0	46	178
7:15 AM	0	15	15	0	30	0	114	6	1	120	0	0	66	0	66	216
7:30 AM	0	9	15	0	24	0	161	11	0	172	0	0	113	0	113	309
7:45 AM	0	11	14	0	25	0	159	14	0	173	0	0	106	1	106	304
Hourly Total	0	46	57	0	103	0	530	43	1	573	0	0	331	1	331	1007
8:00 AM	0	12	11	1	23	0	159	17	0	176	0	0	115	0	115	314
8:15 AM	0	7	14	0	21	0	169	20	0	189	0	0	102	0	102	312
8:30 AM	0	13	10	0	23	0	188	24	0	212	0	0	100	0	100	335
8:45 AM	0	18	18	1	36	0	185	15	0	200	0	0	96	0	96	332
Hourly Total	0	50	53	2	103	0	701	76	0	777	0	0	413	0	413	1293
9:00 AM	0	17	22	0	39	0	144	17	0	161	1	0	90	0	91	291
9:15 AM	0	16	13	0	29	0	100	10	0	110	0	0	91	0	91	230
9:30 AM	0	23	25	0	48	0	98	18	0	116	0	0	99	0	99	263
9:45 AM	0	28	25	0	53	0	111	15	0	126	0	0	103	0	103	282
Hourly Total	0	84	85	0	169	0	453	60	0	513	1	0	383	0	384	1066
10:00 AM	0	17	18	0	35	0	110	25	0	135	0	0	85	0	85	255
10:15 AM	0	16	19	0	35	0	105	21	0	126	0	0	88	0	88	249
10:30 AM	0	30	20	0	50	0	127	22	0	149	0	0	86	0	86	285
10:45 AM	0	26	26	1	52	0	138	27	0	165	0	0	116	0	116	333
Hourly Total	0	89	83	1	172	0	480	95	0	575	0	0	375	0	375	1122
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	38	27	0	65	0	129	25	0	154	1	0	120	0	121	340
2:15 PM	0	34	25	0	59	0	122	11	0	133	0	0	117	0	117	309
2:30 PM	0	38	29	0	67	0	137	15	0	152	0	0	104	0	104	323
2:45 PM	0	26	37	0	63	0	139	26	0	165	0	0	156	0	156	384
Hourly Total	0	136	118	0	254	0	527	77	0	604	1	0	497	0	498	1356
3:00 PM	0	37	39	0	76	0	117	23	0	140	0	0	131	0	131	347
3:15 PM	0	16	28	1	44	0	139	28	0	167	0	0	111	0	111	322
3:30 PM	0	20	32	0	52	0	147	30	0	177	0	0	135	0	135	364
3:45 PM	0	24	42	0	66	0	145	23	0	168	0	0	142	0	142	376
Hourly Total	0	97	141	1	238	0	548	104	0	652	0	0	519	0	519	1409
4:00 PM	0	32	34	0	66	0	94	26	0	120	0	0	135	0	135	321
4:15 PM	0	34	31	0	65	0	127	22	0	149	0	0	118	0	118	332
4:30 PM	0	33	38	0	71	0	144	29	0	173	0	0	119	0	119	363
4:45 PM	0	32	28	0	60	0	144	29	0	173	0	0	143	0	143	376
Hourly Total	0	131	131	0	262	0	509	106	0	615	0	0	515	0	515	1392
5:00 PM	0	24	30	0	54	0	160	25	0	185	0	0	169	0	169	408
5:15 PM	0	28	41	0	69	0	118	30	0	148	0	0	182	0	182	399
5:30 PM	0	26	33	0	59	0	127	17	0	144	0	0	166	0	166	369
5:45 PM	0	27	35	0	62	0	131	22	0	153	0	0	150	0	150	365
Hourly Total	0	105	139	0	244	0	536	94	0	630	0	0	667	0	667	1541
Car	0	734	801	-	1535	0	4205	654	-	4859	2	0	3602	-	3604	9998
% Car	-	99.5	99.3	-	99.4	-	98.2	99.8	-	98.4	100.0	-	97.4	-	97.4	98.2
Truck	0	4	6	-	10	0	79	1	-	80	0	0	98	-	98	188
% Truck	-	0.5	0.7	-	0.6	-	1.8	0.2	-	1.6	0.0	-	2.6	-	2.6	1.8
Ped	-	-	-	4	-	-	-	-	1	-	-	-	-	1	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 9-Cattlemen Rd at Walmart Driveway
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Walmart Driveway Westbound					Cattlemen Rd Northbound					Cattlemen Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
8:00 AM	0	12	11	1	23	0	159	17	0	176	0	0	115	0	115	314
8:15 AM	0	7	14	0	21	0	169	20	0	189	0	0	102	0	102	312
8:30 AM	0	13	10	0	23	0	188	24	0	212	0	0	100	0	100	335
8:45 AM	0	18	18	1	36	0	185	15	0	200	0	0	96	0	96	332
PHF	0.000	0.694	0.736	-	0.715	0.000	0.932	0.792	-	0.916	0.000	0.000	0.898	-	0.898	0.965
Car	0	50	53	-	103	0	696	76	-	772	0	0	396	-	396	1271
% Car	-	100.0	100.0	-	100.0	-	99.3	100.0	-	99.4	-	-	95.9	-	95.9	98.3
Truck	0	0	0	-	0	0	5	0	-	5	0	0	17	-	17	22
% Truck	-	0.0	0.0	-	0.0	-	0.7	0.0	-	0.6	-	-	4.1	-	4.1	1.7
Ped	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
% Ped	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 9-Cattlemen Rd at Walmart Driveway
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Walmart Driveway Westbound					Cattlemen Rd Northbound					Cattlemen Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
4:45 PM	0	32	28	0	60	0	144	29	0	173	0	0	143	0	143	376
5:00 PM	0	24	30	0	54	0	160	25	0	185	0	0	169	0	169	408
5:15 PM	0	28	41	0	69	0	118	30	0	148	0	0	182	0	182	399
5:30 PM	0	26	33	0	59	0	127	17	0	144	0	0	166	0	166	369
PHF	0.000	0.859	0.805	-	0.877	0.000	0.858	0.842	-	0.878	0.000	0.000	0.907	-	0.907	0.951
Car	0	110	132	-	242	0	539	100	-	639	0	0	653	-	653	1534
% Car	-	100.0	100.0	-	100.0	-	98.2	99.0	-	98.3	-	-	98.9	-	98.9	98.8
Truck	0	0	0	-	0	0	10	1	-	11	0	0	7	-	7	18
% Truck	-	0.0	0.0	-	0.0	-	1.8	1.0	-	1.7	-	-	1.1	-	1.1	1.2
Ped	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 10-Cattleman Rd at Casa Del Sol Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Casa Del Sol Blvd Eastbound				Casa Del Sol Blvd Westbound				Cattlemen Rd Northbound				Cattlemen Rd Southbound						
	U-Turn	Right	Peds	App. Total	U-Turn	Right	Peds	App. Total	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	1	0	1	0	9	0	9	103	3	0	106	0	26	35	2	0	63	179
7:15 AM	0	2	0	2	0	8	0	8	132	14	1	146	0	24	78	2	0	104	260
7:30 AM	0	0	1	0	0	10	0	10	158	12	0	170	0	24	110	0	0	134	314
7:45 AM	0	2	1	2	0	15	1	15	154	8	1	162	0	46	116	1	0	163	342
Hourly Total	0	5	2	5	0	42	1	42	547	37	2	584	0	120	339	5	0	464	1095
8:00 AM	0	2	1	2	0	16	1	16	143	20	0	163	0	24	111	3	0	138	319
8:15 AM	0	6	1	6	0	26	0	26	157	14	0	171	0	37	102	1	0	140	343
8:30 AM	0	4	0	4	0	29	0	29	176	21	0	197	0	36	79	0	0	115	345
8:45 AM	0	3	1	3	0	25	2	25	151	21	0	172	0	42	101	3	0	146	346
Hourly Total	0	15	3	15	0	96	3	96	627	76	0	703	0	139	393	7	0	539	1353
9:00 AM	0	0	2	0	0	20	0	20	132	23	0	155	0	40	84	3	0	127	302
9:15 AM	0	3	1	3	0	31	1	31	95	15	0	110	0	49	91	3	1	143	287
9:30 AM	0	2	3	2	0	23	0	23	110	13	0	123	0	39	104	0	0	143	291
9:45 AM	0	0	0	0	0	26	0	26	118	21	0	139	0	46	93	4	0	143	308
Hourly Total	0	5	6	5	0	100	1	100	455	72	0	527	0	174	372	10	1	556	1188
10:00 AM	0	1	1	1	0	32	1	32	101	19	0	120	0	37	91	1	0	129	282
10:15 AM	0	1	0	1	0	37	0	37	106	19	0	125	0	52	88	5	0	145	308
10:30 AM	0	0	0	0	0	24	0	24	126	32	0	158	0	56	91	1	0	148	330
10:45 AM	0	3	1	3	0	32	0	32	132	30	0	162	0	48	114	7	0	169	366
Hourly Total	0	5	2	5	0	125	1	125	465	100	0	565	0	193	384	14	0	591	1286
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	1	0	1	0	39	0	39	119	24	0	143	0	54	127	5	0	186	369
2:15 PM	0	0	0	0	0	52	0	52	138	20	0	158	0	51	108	1	0	160	370
2:30 PM	0	4	0	4	0	43	0	43	155	28	0	183	0	53	114	4	0	171	401
2:45 PM	0	2	1	2	0	46	0	46	153	23	0	176	0	45	155	4	0	204	428
Hourly Total	0	7	1	7	0	180	0	180	565	95	0	660	0	203	504	14	0	721	1568
3:00 PM	0	1	1	1	0	46	0	46	139	9	0	148	0	42	139	5	0	186	381
3:15 PM	0	4	0	4	0	38	0	38	141	26	1	167	0	47	100	4	0	151	360
3:30 PM	0	4	1	4	0	42	0	42	167	30	0	197	0	53	132	7	0	192	435
3:45 PM	0	0	1	0	0	42	2	42	147	20	0	167	0	50	135	8	0	193	402
Hourly Total	0	9	3	9	0	168	2	168	594	85	1	679	0	192	506	24	0	722	1578
4:00 PM	0	3	0	3	0	53	0	53	130	9	0	139	0	66	139	8	0	213	408
4:15 PM	0	3	0	3	0	33	0	33	135	13	0	148	1	57	117	3	0	178	362
4:30 PM	0	1	0	1	0	35	0	35	167	17	0	184	0	51	122	5	0	178	398
4:45 PM	0	4	1	4	0	35	0	35	144	14	0	158	0	50	139	3	0	192	389
Hourly Total	0	11	1	11	0	156	0	156	576	53	0	629	1	224	517	19	0	761	1557
5:00 PM	0	5	2	5	0	44	0	44	182	17	0	199	1	48	176	4	0	229	477
5:15 PM	0	2	2	2	0	38	1	38	140	11	0	151	0	53	155	4	1	212	403
5:30 PM	0	4	1	4	0	52	0	52	156	20	0	176	0	55	183	7	0	245	477
5:45 PM	0	2	2	2	0	35	1	35	146	14	0	160	0	52	131	3	0	186	383
Hourly Total	0	13	7	13	0	169	2	169	624	62	0	686	1	208	645	18	1	872	1740
Car	0	68	-	68	0	1004	-	1004	4362	569	-	4931	2	1426	3564	109	-	5101	11104
% Car	-	97.1	-	97.1	-	96.9	-	96.9	98.0	98.1	-	98.0	100.0	98.1	97.4	98.2	-	97.6	97.7
Truck	0	2	-	2	0	32	-	32	91	11	-	102	0	27	96	2	-	125	261
% Truck	-	2.9	-	2.9	-	3.1	-	3.1	2.0	1.9	-	2.0	0.0	1.9	2.6	1.8	-	2.4	2.3
Ped	-	-	25	-	-	-	10	-	-	-	3	-	-	-	-	-	2	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 10-Cattleman Rd at Casa Del Sol Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Casa Del Sol Blvd Eastbound				Casa Del Sol Blvd Westbound				Cattlemen Rd Northbound				Cattlemen Rd Southbound						
	U-Turn	Right	Peds	App. Total	U-Turn	Right	Peds	App. Total	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
8:00 AM	0	2	1	2	0	16	1	16	143	20	0	163	0	24	111	3	0	138	319
8:15 AM	0	6	1	6	0	26	0	26	157	14	0	171	0	37	102	1	0	140	343
8:30 AM	0	4	0	4	0	29	0	29	176	21	0	197	0	36	79	0	0	115	345
8:45 AM	0	3	1	3	0	25	2	25	151	21	0	172	0	42	101	3	0	146	346
PHF	0.000	0.625	-	0.625	0.000	0.828	-	0.828	0.891	0.905	-	0.892	0.000	0.827	0.885	0.583	-	0.923	0.978
Car	0	15	-	15	0	91	-	91	621	74	-	695	0	133	374	7	-	514	1315
% Car	-	100.0	-	100.0	-	94.8	-	94.8	99.0	97.4	-	98.9	-	95.7	95.2	100.0	-	95.4	97.2
Truck	0	0	-	0	0	5	-	5	6	2	-	8	0	6	19	0	-	25	38
% Truck	-	0.0	-	0.0	-	5.2	-	5.2	1.0	2.6	-	1.1	-	4.3	4.8	0.0	-	4.6	2.8
Ped	-	-	3	-	-	-	3	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 10-Cattleman Rd at Casa Del Sol Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Casa Del Sol Blvd Eastbound				Casa Del Sol Blvd Westbound				Cattlemen Rd Northbound				Cattlemen Rd Southbound						
	U-Turn	Right	Peds	App. Total	U-Turn	Right	Peds	App. Total	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:45 PM	0	4	1	4	0	35	0	35	144	14	0	158	0	50	139	3	0	192	389
5:00 PM	0	5	2	5	0	44	0	44	182	17	0	199	1	48	176	4	0	229	477
5:15 PM	0	2	2	2	0	38	1	38	140	11	0	151	0	53	155	4	1	212	403
5:30 PM	0	4	1	4	0	52	0	52	156	20	0	176	0	55	183	7	0	245	477
PHF	0.000	0.750	-	0.750	0.000	0.813	-	0.813	0.854	0.775	-	0.859	0.250	0.936	0.892	0.643	-	0.896	0.915
Car	0	15	-	15	0	168	-	168	611	61	-	672	1	206	647	18	-	872	1727
% Car	-	100.0	-	100.0	-	99.4	-	99.4	98.2	98.4	-	98.2	100.0	100.0	99.1	100.0	-	99.3	98.9
Truck	0	0	-	0	0	1	-	1	11	1	-	12	0	0	6	0	-	6	19
% Truck	-	0.0	-	0.0	-	0.6	-	0.6	1.8	1.6	-	1.8	0.0	0.0	0.9	0.0	-	0.7	1.1
Ped	-	-	6	-	-	-	1	-	-	-	0	-	-	-	-	-	1	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 11-Cattlemen Rd at Center Pointe Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Center Pointe Dr Eastbound						Center Pointe Dr Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	3	1	4	0	8	0	8	1	7	0	16	0	7	103	4	1	114	0	14	62	1	0	77	215
7:15 AM	0	4	0	4	0	8	0	6	1	11	0	18	0	6	134	2	0	142	0	12	104	0	0	116	284
7:30 AM	0	11	4	7	0	22	0	18	0	18	0	36	0	5	160	6	0	171	0	18	111	1	1	130	359
7:45 AM	0	5	0	4	1	9	0	15	0	10	0	25	2	3	158	11	0	174	0	28	139	0	0	167	375
Hourly Total	0	23	5	19	1	47	0	47	2	46	0	95	2	21	555	23	1	601	0	72	416	2	1	490	1233
8:00 AM	0	7	0	4	2	11	0	21	6	14	0	41	0	4	148	7	1	159	0	24	118	0	0	142	353
8:15 AM	0	3	2	7	1	12	0	14	2	16	0	32	0	7	188	8	0	203	0	23	123	0	0	146	393
8:30 AM	0	7	1	6	0	14	0	18	6	23	1	47	1	13	176	17	0	207	0	24	86	2	0	112	380
8:45 AM	0	13	1	7	1	21	0	19	3	28	1	50	1	15	153	20	0	189	0	30	124	5	0	159	419
Hourly Total	0	30	4	24	4	58	0	72	17	81	2	170	2	39	665	52	1	758	0	101	451	7	0	559	1545
9:00 AM	0	8	3	3	0	14	0	17	4	28	1	49	1	8	135	10	0	154	1	30	99	1	0	131	348
9:15 AM	0	4	3	8	1	15	0	22	5	22	0	49	0	11	102	10	0	123	1	31	116	3	0	151	338
9:30 AM	0	3	3	10	2	16	0	23	3	20	0	46	2	6	117	11	0	136	0	35	106	3	0	144	342
9:45 AM	0	9	1	9	0	19	0	16	3	27	1	46	2	13	136	7	0	158	0	24	112	1	2	137	360
Hourly Total	0	24	10	30	3	64	0	78	15	97	2	190	5	38	490	38	0	571	2	120	433	8	2	563	1388
10:00 AM	0	6	1	6	0	13	0	26	2	25	0	53	1	13	107	12	0	133	1	40	92	2	1	135	334
10:15 AM	0	8	8	8	0	24	0	29	5	27	0	61	0	20	113	8	0	141	0	37	106	6	0	149	375
10:30 AM	0	11	1	9	0	21	0	25	2	48	1	75	2	14	130	5	0	151	0	32	109	4	0	145	392
10:45 AM	0	12	1	7	0	20	0	25	3	30	0	58	7	14	134	12	0	167	0	33	129	3	0	165	410
Hourly Total	0	37	11	30	0	78	0	105	12	130	1	247	10	61	484	37	0	592	1	142	436	15	1	594	1511
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	6	1	10	0	17	0	31	6	43	0	80	3	14	134	11	0	162	0	40	135	1	0	176	435
2:15 PM	0	14	4	7	0	25	0	27	1	31	0	59	3	15	166	9	1	193	0	38	122	3	0	163	440
2:30 PM	0	7	5	15	1	27	0	31	7	29	0	67	3	8	166	12	0	189	0	36	122	4	0	162	445
2:45 PM	0	9	3	10	0	22	0	28	9	37	0	74	2	15	161	15	0	193	1	21	161	4	1	187	476
Hourly Total	0	36	13	42	1	91	0	117	23	140	0	280	11	52	627	47	1	737	1	135	540	12	1	688	1796
3:00 PM	0	11	3	15	0	29	0	26	10	29	0	65	3	13	159	10	0	185	0	30	142	6	0	178	457
3:15 PM	0	16	4	9	0	29	0	15	3	27	0	45	2	11	157	8	0	178	1	35	129	2	0	167	419
3:30 PM	0	16	4	11	0	31	0	26	7	20	0	53	4	15	178	11	0	208	0	36	152	0	0	188	480
3:45 PM	0	16	6	13	0	35	0	25	2	24	0	51	4	10	168	10	0	192	1	26	150	4	0	181	459
Hourly Total	0	59	17	48	0	124	0	92	22	100	0	214	13	49	662	39	0	763	2	127	573	12	0	714	1815
4:00 PM	0	9	4	16	0	29	0	24	5	24	0	53	5	14	157	9	0	185	0	35	164	6	0	205	472
4:15 PM	0	12	3	9	0	24	0	29	9	29	0	67	0	13	138	15	0	166	1	22	138	4	0	165	422
4:30 PM	0	15	2	12	0	29	0	19	6	23	0	48	4	25	161	12	0	202	0	22	139	12	0	173	452
4:45 PM	0	10	3	11	0	24	0	19	4	12	0	35	1	19	145	10	0	175	1	31	159	5	0	196	430
Hourly Total	0	46	12	48	0	106	0	91	24	88	0	203	10	71	601	46	0	728	2	110	600	27	0	739	1776
5:00 PM	0	15	6	7	1	28	0	29	8	25	0	62	4	24	183	18	0	229	0	33	181	6	0	220	539
5:15 PM	0	14	3	13	3	30	0	27	2	26	1	55	5	10	151	9	0	175	0	21	179	5	0	205	465
5:30 PM	0	11	1	11	0	23	0	36	5	28	1	69	9	15	175	13	0	212	1	24	181	5	1	211	515
5:45 PM	0	7	4	14	0	25	0	20	8	27	0	55	3	10	155	10	2	178	0	23	136	8	0	167	425
Hourly Total	0	47	14	45	4	106	0	112	23	106	2	241	21	59	664	50	2	794	1	101	677	24	1	803	1944
Car	0	294	85	280	-	659	0	705	136	774	-	1615	74	387	4664	330	-	5455	9	897	4032	105	-	5043	12772
% Car	-	97.4	98.8	97.9	-	97.8	-	98.7	98.6	98.2	-	98.5	100.0	99.2	98.2	99.4	-	98.4	100.0	98.8	97.7	98.1	-	97.9	98.2
Truck	0	8	1	6	-	15	0	9	2	14	-	25	0	3	84	2	-	89	0	11	94	2	-	107	236
% Truck	-	2.6	1.2	2.1	-	2.2	-	1.3	1.4	1.8	-	1.5	0.0	0.8	1.8	0.6	-	1.6	0.0	1.2	2.3	1.9	-	2.1	1.8
Ped	-	-	-	-	13	-	-	-	-	-	7	-	-	-	-	-	5	-	-	-	-	-	6	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 11-Cattlemen Rd at Center Pointe Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Center Pointe Dr Eastbound						Center Pointe Dr Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	7	0	4	2	11	0	21	6	14	0	41	0	4	148	7	1	159	0	24	118	0	0	142	353
8:15 AM	0	3	2	7	1	12	0	14	2	16	0	32	0	7	188	8	0	203	0	23	123	0	0	146	393
8:30 AM	0	7	1	6	0	14	0	18	6	23	1	47	1	13	176	17	0	207	0	24	86	2	0	112	380
8:45 AM	0	13	1	7	1	21	0	19	3	28	1	50	1	15	153	20	0	189	0	30	124	5	0	159	419
PHF	0.000	0.577	0.500	0.857	-	0.690	0.000	0.857	0.708	0.723	-	0.850	0.500	0.650	0.884	0.650	-	0.915	0.000	0.842	0.909	0.350	-	0.879	0.922
Car	0	30	4	24	-	58	0	69	16	78	-	163	2	39	654	52	-	747	0	97	436	7	-	540	1508
% Car	-	100.0	100.0	100.0	-	100.0	-	95.8	94.1	96.3	-	95.9	100.0	100.0	98.3	100.0	-	98.5	-	96.0	96.7	100.0	-	96.6	97.6
Truck	0	0	0	0	-	0	0	3	1	3	-	7	0	0	11	0	-	11	0	4	15	0	-	19	37
% Truck	-	0.0	0.0	0.0	-	0.0	-	4.2	5.9	3.7	-	4.1	0.0	0.0	1.7	0.0	-	1.5	-	4.0	3.3	0.0	-	3.4	2.4
Ped	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 11-Cattlemen Rd at Center Pointe Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Center Pointe Dr Eastbound						Center Pointe Dr Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:45 PM	0	10	3	11	0	24	0	19	4	12	0	35	1	19	145	10	0	175	1	31	159	5	0	196	430
5:00 PM	0	15	6	7	1	28	0	29	8	25	0	62	4	24	183	18	0	229	0	33	181	6	0	220	539
5:15 PM	0	14	3	13	3	30	0	27	2	26	1	55	5	10	151	9	0	175	0	21	179	5	0	205	465
5:30 PM	0	11	1	11	0	23	0	36	5	28	1	69	9	15	175	13	0	212	1	24	181	5	1	211	515
PHF	0.000	0.833	0.542	0.808	-	0.875	0.000	0.771	0.594	0.813	-	0.801	0.528	0.708	0.893	0.694	-	0.864	0.500	0.826	0.967	0.875	-	0.945	0.904
Car	0	50	13	41	-	104	0	111	19	90	-	220	19	68	642	50	-	779	2	109	697	21	-	829	1932
% Car	-	100.0	100.0	97.6	-	99.0	-	100.0	100.0	98.9	-	99.5	100.0	100.0	98.2	100.0	-	98.5	100.0	100.0	99.6	100.0	-	99.6	99.1
Truck	0	0	0	1	-	1	0	0	0	1	-	1	0	0	12	0	-	12	0	0	3	0	-	3	17
% Truck	-	0.0	0.0	2.4	-	1.0	-	0.0	0.0	1.1	-	0.5	0.0	0.0	1.8	0.0	-	1.5	0.0	0.0	0.4	0.0	-	0.4	0.9
Ped	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 12-Cattlemen Rd at Sports Authority driveway
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Sports Authority driveway Eastbound						Driveway Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	11	0	11	0	0	110	2	0	112	0	6	82	1	0	89	212
7:15 AM	0	0	0	0	1	0	0	0	0	4	0	4	0	0	134	1	0	135	0	12	92	1	0	105	244
7:30 AM	0	0	0	2	1	2	0	0	0	9	0	9	0	1	192	1	0	194	1	10	127	2	0	140	345
7:45 AM	0	0	0	1	0	1	0	0	0	7	0	7	0	0	170	1	0	171	0	9	162	0	0	171	350
Hourly Total	0	0	0	3	2	3	0	0	0	31	0	31	0	1	606	5	0	612	1	37	463	4	0	505	1151
8:00 AM	0	0	0	0	2	0	0	0	0	17	0	17	0	0	168	0	0	168	0	13	136	2	1	151	336
8:15 AM	0	0	0	1	1	1	0	0	0	7	0	7	0	0	195	4	0	199	4	15	145	3	0	167	374
8:30 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	207	4	0	211	1	13	129	4	0	147	361
8:45 AM	0	0	0	3	1	3	0	0	0	15	0	15	0	0	193	4	0	197	1	27	141	3	0	172	387
Hourly Total	0	0	0	4	4	4	0	0	0	42	0	42	0	0	763	12	0	775	6	68	551	12	1	637	1458
9:00 AM	0	0	0	3	0	3	0	0	0	17	1	17	0	0	177	3	0	180	3	16	136	2	0	157	357
9:15 AM	0	0	0	1	1	1	0	0	0	16	0	16	0	0	130	3	0	133	0	16	138	2	0	156	306
9:30 AM	0	0	0	0	1	0	0	0	0	17	0	17	0	0	136	1	0	137	0	26	154	5	0	185	339
9:45 AM	0	0	0	1	0	1	0	0	0	14	0	14	0	0	157	3	0	160	1	11	135	2	0	149	324
Hourly Total	0	0	0	5	2	5	0	0	0	64	1	64	0	0	600	10	0	610	4	69	563	11	0	647	1326
10:00 AM	0	0	0	2	1	2	0	0	0	20	0	20	0	0	143	0	0	143	1	10	130	2	0	143	308
10:15 AM	0	0	0	1	0	1	0	0	0	24	0	24	0	0	148	3	0	151	0	18	144	3	0	165	341
10:30 AM	0	0	0	1	0	1	0	0	0	15	0	15	0	0	176	2	0	178	0	10	148	1	0	159	353
10:45 AM	0	0	0	5	2	5	0	0	0	26	0	26	0	0	173	3	0	176	0	11	164	2	0	177	384
Hourly Total	0	0	0	9	3	9	0	0	0	85	0	85	0	0	640	8	0	648	1	49	586	8	0	644	1386
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	0	0	5	3	5	0	0	0	25	0	25	0	0	180	3	0	183	1	20	179	3	0	203	416
2:15 PM	0	0	0	3	0	3	0	0	0	20	0	20	0	0	200	4	0	204	1	18	173	1	0	193	420
2:30 PM	0	0	1	1	1	2	0	0	0	19	0	19	0	0	194	1	0	195	2	26	166	6	0	200	416
2:45 PM	0	0	0	4	0	4	0	0	0	22	0	22	0	0	213	3	0	216	0	25	195	3	0	223	465
Hourly Total	0	0	1	13	4	14	0	0	0	86	0	86	0	0	787	11	0	798	4	89	713	13	0	819	1717
3:00 PM	0	0	0	9	0	9	0	0	0	26	0	26	0	0	198	4	0	202	1	14	168	7	0	190	427
3:15 PM	0	0	0	5	1	5	0	0	0	18	0	18	0	1	200	2	0	203	1	20	161	3	0	185	411
3:30 PM	0	0	0	5	0	5	0	0	0	12	2	12	0	0	196	3	0	199	1	25	192	8	0	226	442
3:45 PM	0	0	0	4	0	4	0	0	0	29	1	29	0	0	216	6	0	222	2	26	180	6	0	214	469
Hourly Total	0	0	0	23	1	23	0	0	0	85	3	85	0	1	810	15	0	826	5	85	701	24	0	815	1749
4:00 PM	0	0	0	7	1	7	0	0	0	30	0	30	0	0	177	4	0	181	3	36	201	4	0	244	462
4:15 PM	0	0	0	6	0	6	0	0	0	19	0	19	0	0	185	6	0	191	3	28	166	3	0	200	416
4:30 PM	0	0	0	4	0	4	0	0	0	23	0	23	0	0	194	5	0	199	0	31	158	8	0	197	423
4:45 PM	0	0	0	3	1	3	0	0	0	21	0	21	0	0	177	6	0	183	1	26	195	3	0	225	432
Hourly Total	0	0	0	20	2	20	0	0	0	93	0	93	0	0	733	21	0	754	7	121	720	18	0	866	1733
5:00 PM	0	0	0	3	1	3	0	0	0	25	0	25	0	0	199	4	0	203	4	33	215	2	0	254	485
5:15 PM	0	0	0	4	0	4	0	0	0	22	0	22	0	0	196	2	0	198	0	35	219	2	0	256	480
5:30 PM	0	0	0	3	3	3	0	0	0	29	0	29	0	0	199	5	0	204	2	23	193	3	0	221	457
5:45 PM	0	0	0	3	0	3	0	0	0	26	0	26	0	0	189	3	0	192	0	29	187	3	0	219	440
Hourly Total	0	0	0	13	4	13	0	0	0	102	0	102	0	0	783	14	0	797	6	120	814	10	0	950	1862
Car	0	0	1	90	-	91	0	0	0	574	-	574	0	2	5620	93	-	5715	34	629	5000	95	-	5758	12138
% Car	-	-	100.0	100.0	-	100.0	-	-	-	97.6	-	97.6	-	100.0	98.2	96.9	-	98.2	100.0	98.6	97.8	95.0	-	97.9	98.0
Truck	0	0	0	0	-	0	0	0	0	14	-	14	0	0	102	3	-	105	0	9	111	5	-	125	244
% Truck	-	-	0.0	0.0	-	0.0	-	-	-	2.4	-	2.4	-	0.0	1.8	3.1	-	1.8	0.0	1.4	2.2	5.0	-	2.1	2.0
Ped	-	-	-	-	22	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 12-Cattlemen Rd at Sports Authority driveway
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (8:15 AM)

Start Time	Sports Authority driveway Eastbound						Driveway Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
8:15 AM	0	0	0	1	1	1	0	0	0	7	0	7	0	0	195	4	0	199	4	15	145	3	0	167	374
8:30 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	207	4	0	211	1	13	129	4	0	147	361
8:45 AM	0	0	0	3	1	3	0	0	0	15	0	15	0	0	193	4	0	197	1	27	141	3	0	172	387
9:00 AM	0	0	0	3	0	3	0	0	0	17	1	17	0	0	177	3	0	180	3	16	136	2	0	157	357
PHF	0.000	0.000	0.000	0.583	-	0.583	0.000	0.000	0.000	0.618	-	0.618	0.000	0.000	0.932	0.938	-	0.932	0.563	0.657	0.950	0.750	-	0.935	0.955
Car	0	0	0	7	-	7	0	0	0	38	-	38	0	0	761	13	-	774	9	69	527	12	-	617	1436
% Car	-	-	-	100.0	-	100.0	-	-	-	90.5	-	90.5	-	-	98.6	86.7	-	98.3	100.0	97.2	95.6	100.0	-	96.0	97.1
Truck	0	0	0	0	-	0	0	0	0	4	-	4	0	0	11	2	-	13	0	2	24	0	-	26	43
% Truck	-	-	-	0.0	-	0.0	-	-	-	9.5	-	9.5	-	-	1.4	13.3	-	1.7	0.0	2.8	4.4	0.0	-	4.0	2.9
Ped	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 12-Cattlemen Rd at Sports Authority driveway
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Sports Authority driveway Eastbound						Driveway Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	0	0	3	1	3	0	0	0	25	0	25	0	0	199	4	0	203	4	33	215	2	0	254	485
5:15 PM	0	0	0	4	0	4	0	0	0	22	0	22	0	0	196	2	0	198	0	35	219	2	0	256	480
5:30 PM	0	0	0	3	3	3	0	0	0	29	0	29	0	0	199	5	0	204	2	23	193	3	0	221	457
5:45 PM	0	0	0	3	0	3	0	0	0	26	0	26	0	0	189	3	0	192	0	29	187	3	0	219	440
PHF	0.000	0.000	0.000	0.813	-	0.813	0.000	0.000	0.000	0.879	-	0.879	0.000	0.000	0.984	0.700	-	0.977	0.375	0.857	0.929	0.833	-	0.928	0.960
Car	0	0	0	13	-	13	0	0	0	100	-	100	0	0	770	14	-	784	6	118	809	9	-	942	1839
% Car	-	-	-	100.0	-	100.0	-	-	-	98.0	-	98.0	-	-	98.3	100.0	-	98.4	100.0	98.3	99.4	90.0	-	99.2	98.8
Truck	0	0	0	0	-	0	0	0	0	2	-	2	0	0	13	0	-	13	0	2	5	1	-	8	23
% Truck	-	-	-	0.0	-	0.0	-	-	-	2.0	-	2.0	-	-	1.7	0.0	-	1.6	0.0	1.7	0.6	10.0	-	0.8	1.2
Ped	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 13-Cattlemen Rd Bi - Directional Median Opening South of Bee Ridge Rd (Bee Ridge Square driveway)
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Sports Authority Driveway Eastbound				Bee Ridge Square Driveway Westbound				Cattlemen Rd Northbound						Cattlemen Rd Southbound						
	U-Turn	Right	Peds	App. Total	U-Turn	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	3	0	3	0	8	0	8	0	1	110	5	0	116	1	10	86	11	0	108	235
7:15 AM	0	10	0	10	0	19	0	19	0	7	124	9	0	140	1	23	99	17	0	140	309
7:30 AM	0	14	0	14	0	31	0	31	0	5	176	12	0	193	0	29	125	13	0	167	405
7:45 AM	0	1	0	1	0	34	0	34	0	4	165	14	0	183	1	31	173	14	0	219	437
Hourly Total	0	28	0	28	0	92	0	92	0	17	575	40	0	632	3	93	483	55	0	634	1386
8:00 AM	0	9	0	9	0	23	0	23	0	4	168	9	0	181	0	28	137	17	0	182	395
8:15 AM	0	13	0	13	0	25	1	25	0	5	192	8	0	205	1	26	152	28	0	207	450
8:30 AM	0	8	0	8	0	34	0	34	0	15	175	13	0	203	0	42	141	38	1	221	466
8:45 AM	0	15	0	15	0	20	0	20	0	14	178	6	0	198	0	23	162	35	0	220	453
Hourly Total	0	45	0	45	0	102	1	102	0	38	713	36	0	787	1	119	592	118	1	830	1764
9:00 AM	0	11	0	11	0	23	0	23	0	16	169	12	0	197	1	18	141	23	0	183	414
9:15 AM	0	11	1	11	0	21	1	21	0	14	124	4	0	142	0	23	140	22	0	185	359
9:30 AM	0	11	3	11	0	22	0	22	0	10	131	11	0	152	2	29	176	30	0	237	422
9:45 AM	0	20	1	20	0	22	0	22	0	16	149	7	0	172	0	32	127	25	0	184	398
Hourly Total	0	53	5	53	0	88	1	88	0	56	573	34	0	663	3	102	584	100	0	789	1593
10:00 AM	0	13	0	13	0	25	0	25	0	10	148	6	0	164	1	40	126	23	0	190	392
10:15 AM	0	15	0	15	0	21	0	21	0	10	158	5	0	173	0	30	153	30	1	213	422
10:30 AM	0	9	0	9	0	29	1	29	1	17	165	3	0	186	0	17	149	25	2	191	415
10:45 AM	0	18	0	18	0	24	1	24	1	14	174	9	1	198	0	25	160	29	0	214	454
Hourly Total	0	55	0	55	0	99	2	99	2	51	645	23	1	721	1	112	588	107	3	808	1683
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	27	0	27	0	23	0	23	0	14	181	9	0	204	0	29	165	19	0	213	467
2:15 PM	0	19	1	19	0	38	0	38	0	18	195	8	0	221	0	28	164	25	0	217	495
2:30 PM	0	25	1	25	0	38	0	38	0	12	192	10	0	214	0	27	166	25	0	218	495
2:45 PM	0	25	0	25	0	36	0	36	1	12	216	9	0	238	0	33	181	30	0	244	543
Hourly Total	0	96	2	96	0	135	0	135	1	56	784	36	0	877	0	117	676	99	0	892	2000
3:00 PM	0	19	0	19	0	43	0	43	0	20	197	8	0	225	0	33	169	23	0	225	512
3:15 PM	0	13	1	13	0	43	0	43	0	14	191	8	0	213	1	29	165	27	0	222	491
3:30 PM	0	23	0	23	0	25	0	25	0	10	190	10	0	210	0	23	187	37	1	247	505
3:45 PM	0	22	0	22	0	34	0	34	0	19	222	7	0	248	0	30	182	28	3	240	544
Hourly Total	0	77	1	77	0	145	0	145	0	63	800	33	0	896	1	115	703	115	4	934	2052
4:00 PM	0	15	0	15	0	44	0	44	0	15	185	8	0	208	2	29	226	16	1	273	540
4:15 PM	0	23	0	23	0	24	0	24	0	18	180	7	0	205	0	18	178	20	0	216	468
4:30 PM	0	13	0	13	0	25	0	25	0	15	201	3	0	219	0	23	181	28	0	232	489
4:45 PM	0	27	1	27	0	29	0	29	0	8	188	3	0	199	1	25	196	31	1	253	508
Hourly Total	0	78	1	78	0	122	0	122	0	56	754	21	0	831	3	95	781	95	2	974	2005
5:00 PM	0	30	0	30	0	22	0	22	0	14	194	3	0	211	1	30	222	29	0	282	545
5:15 PM	0	23	2	23	0	26	1	26	0	10	226	5	0	241	0	26	233	31	1	290	580
5:30 PM	0	19	2	19	0	27	1	27	0	12	209	7	0	228	2	33	209	21	1	265	539
5:45 PM	0	18	3	18	0	29	0	29	0	17	199	5	1	221	1	32	206	28	0	267	535
Hourly Total	0	90	7	90	0	104	2	104	0	53	828	20	1	901	4	121	870	109	2	1104	2199
Car	0	517	-	517	0	880	-	880	3	385	5544	241	-	6173	16	866	5150	791	-	6823	14393
% Car	-	99.0	-	99.0	-	99.2	-	99.2	100.0	98.7	97.7	99.2	-	97.9	100.0	99.1	97.6	99.1	-	98.0	98.0
Truck	0	5	-	5	0	7	-	7	0	5	128	2	-	135	0	8	127	7	-	142	289
% Truck	-	1.0	-	1.0	-	0.8	-	0.8	0.0	1.3	2.3	0.8	-	2.1	0.0	0.9	2.4	0.9	-	2.0	2.0
Ped	-	-	16	-	-	-	6	-	-	-	-	-	2	-	-	-	-	-	12	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 13-Cattlemen Rd Bi - Directional Median Opening South of Bee Ridge Rd (Bee Ridge Square driveway)
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (8:15 AM)

Start Time	Sports Authority Driveway Eastbound				Bee Ridge Square Driveway Westbound				Cattlemen Rd Northbound						Cattlemen Rd Southbound						
	U-Turn	Right	Peds	App. Total	U-Turn	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
8:15 AM	0	13	0	13	0	25	1	25	0	5	192	8	0	205	1	26	152	28	0	207	450
8:30 AM	0	8	0	8	0	34	0	34	0	15	175	13	0	203	0	42	141	38	1	221	466
8:45 AM	0	15	0	15	0	20	0	20	0	14	178	6	0	198	0	23	162	35	0	220	453
9:00 AM	0	11	0	11	0	23	0	23	0	16	169	12	0	197	1	18	141	23	0	183	414
PHF	0.000	0.783	-	0.783	0.000	0.750	-	0.750	0.000	0.781	0.930	0.750	-	0.979	0.500	0.649	0.920	0.816	-	0.940	0.957
Car	0	46	-	46	0	100	-	100	0	49	694	39	-	782	2	108	570	122	-	802	1730
% Car	-	97.9	-	97.9	-	98.0	-	98.0	-	98.0	97.2	100.0	-	97.4	100.0	99.1	95.6	98.4	-	96.5	97.0
Truck	0	1	-	1	0	2	-	2	0	1	20	0	-	21	0	1	26	2	-	29	53
% Truck	-	2.1	-	2.1	-	2.0	-	2.0	-	2.0	2.8	0.0	-	2.6	0.0	0.9	4.4	1.6	-	3.5	3.0
Ped	-	-	0	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Ped	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 13-Cattlemen Rd Bi - Directional Median Opening South of Bee Ridge Rd (Bee Ridge Square driveway)
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Sports Authority Driveway Eastbound				Bee Ridge Square Driveway Westbound				Cattlemen Rd Northbound						Cattlemen Rd Southbound						
	U-Turn	Right	Peds	App. Total	U-Turn	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	30	0	30	0	22	0	22	0	14	194	3	0	211	1	30	222	29	0	282	545
5:15 PM	0	23	2	23	0	26	1	26	0	10	226	5	0	241	0	26	233	31	1	290	580
5:30 PM	0	19	2	19	0	27	1	27	0	12	209	7	0	228	2	33	209	21	1	265	539
5:45 PM	0	18	3	18	0	29	0	29	0	17	199	5	1	221	1	32	206	28	0	267	535
PHF	0.000	0.750	-	0.750	0.000	0.897	-	0.897	0.000	0.779	0.916	0.714	-	0.935	0.500	0.917	0.933	0.879	-	0.952	0.948
Car	0	90	-	90	0	103	-	103	0	52	814	20	-	886	4	120	865	108	-	1097	2176
% Car	-	100.0	-	100.0	-	99.0	-	99.0	-	98.1	98.3	100.0	-	98.3	100.0	99.2	99.4	99.1	-	99.4	99.0
Truck	0	0	-	0	0	1	-	1	0	1	14	0	-	15	0	1	5	1	-	7	23
% Truck	-	0.0	-	0.0	-	1.0	-	1.0	-	1.9	1.7	0.0	-	1.7	0.0	0.8	0.6	0.9	-	0.6	1.0
Ped	-	-	7	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 14-Cattlemen Rd at Maxfield Dr / Cattleridge Blvd
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Maxfield Dr Eastbound						Cattleridge Blvd Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	10	1	10	1	21	0	1	0	0	0	1	2	25	113	8	0	148	0	4	109	20	0	133	303
7:15 AM	0	14	1	9	0	24	0	8	2	4	0	14	1	26	200	19	0	246	1	4	147	25	0	177	461
7:30 AM	0	23	3	17	0	43	0	14	2	6	0	22	0	20	259	33	0	312	0	11	168	39	1	218	595
7:45 AM	0	29	5	17	1	51	0	16	1	7	0	24	0	40	256	42	0	338	1	7	178	43	1	229	642
Hourly Total	0	76	10	53	2	139	0	39	5	17	0	61	3	111	828	102	0	1044	2	26	602	127	2	757	2001
8:00 AM	0	17	5	15	0	37	0	18	3	7	1	28	1	33	230	23	0	287	1	8	157	34	0	200	552
8:15 AM	0	20	2	21	0	43	0	16	4	3	0	23	0	29	274	43	0	346	0	3	168	43	0	214	626
8:30 AM	0	21	1	20	0	42	0	22	1	10	0	33	7	28	191	45	0	271	0	3	144	41	0	188	534
8:45 AM	0	35	5	17	0	57	0	22	3	7	0	32	4	31	188	29	0	252	2	9	161	24	0	196	537
Hourly Total	0	93	13	73	0	179	0	78	11	27	1	116	12	121	883	140	0	1156	3	23	630	142	0	798	2249
9:00 AM	0	17	3	24	0	44	0	15	1	8	0	24	1	28	153	15	0	197	3	7	156	24	0	190	455
9:15 AM	0	25	4	24	0	53	0	16	2	5	0	23	1	23	154	16	0	194	0	9	150	28	0	187	457
9:30 AM	0	15	2	20	2	37	0	15	2	4	0	21	3	29	146	9	1	187	2	10	151	38	1	201	446
9:45 AM	0	26	6	29	0	61	0	15	3	8	0	26	1	27	132	15	0	175	3	11	120	34	0	168	430
Hourly Total	0	83	15	97	2	195	0	61	8	25	0	94	6	107	585	55	1	753	8	37	577	124	1	746	1788
10:00 AM	0	17	1	22	0	40	0	20	2	11	0	33	4	29	160	5	0	198	1	9	146	20	0	176	447
10:15 AM	0	29	2	27	0	58	0	25	1	9	0	35	1	25	142	6	0	174	1	10	127	26	0	164	431
10:30 AM	0	25	2	28	1	55	0	15	2	9	1	26	2	30	156	5	1	193	4	10	141	28	0	183	457
10:45 AM	0	21	3	26	0	50	0	17	6	11	0	34	6	22	169	16	0	213	1	13	147	25	0	186	483
Hourly Total	0	92	8	103	1	203	0	77	11	40	1	128	13	106	627	32	1	778	7	42	561	99	0	709	1818
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	20	4	23	1	47	0	29	7	13	0	49	5	19	158	11	0	193	0	11	175	27	0	213	502
2:15 PM	0	24	4	31	1	59	0	38	5	14	0	57	4	13	180	10	0	207	0	13	150	36	0	199	522
2:30 PM	0	28	3	28	0	59	0	22	3	14	0	39	4	13	173	5	0	195	0	12	160	29	0	201	494
2:45 PM	0	21	7	33	0	61	0	16	6	9	0	31	2	19	211	9	0	241	1	10	181	15	0	207	540
Hourly Total	0	93	18	115	2	226	0	105	21	50	0	176	15	64	722	35	0	836	1	46	666	107	0	820	2058
3:00 PM	0	29	5	39	2	73	0	28	3	8	0	39	4	17	188	6	0	215	1	7	184	38	0	230	557
3:15 PM	0	27	2	33	0	62	0	28	3	15	0	46	3	13	190	2	1	208	2	3	197	32	0	234	550
3:30 PM	0	22	2	31	0	55	0	28	6	13	0	47	2	12	154	15	1	183	0	19	189	19	0	227	512
3:45 PM	0	28	1	33	1	62	0	30	5	8	0	43	2	11	171	10	0	194	1	16	173	27	0	217	516
Hourly Total	0	106	10	136	3	252	0	114	17	44	0	175	11	53	703	33	2	800	4	45	743	116	0	908	2135
4:00 PM	0	34	4	33	1	71	0	39	3	6	1	48	3	11	184	5	0	203	0	14	204	20	0	238	560
4:15 PM	0	20	5	34	0	59	0	25	5	13	1	43	2	8	173	7	0	190	0	8	187	18	1	213	505
4:30 PM	0	33	4	31	1	68	0	51	3	6	1	60	2	13	170	14	0	199	0	12	238	43	0	293	620
4:45 PM	0	30	3	29	0	62	0	43	6	12	1	61	2	12	206	17	0	237	1	13	249	35	0	298	658
Hourly Total	0	117	16	127	2	260	0	158	17	37	4	212	9	44	733	43	0	829	1	47	878	116	1	1042	2343
5:00 PM	0	31	3	38	0	72	0	57	22	0	0	79	0	13	181	11	0	205	0	10	285	29	0	324	680
5:15 PM	0	24	1	26	0	51	0	45	3	9	4	57	0	8	207	8	0	223	0	16	250	28	0	294	625
5:30 PM	0	25	2	27	0	54	1	58	4	16	1	79	1	9	169	5	0	184	0	11	233	34	0	278	595
5:45 PM	0	21	5	29	3	55	0	38	6	24	0	68	0	14	176	12	0	202	0	10	210	11	0	231	556
Hourly Total	0	101	11	120	3	232	1	198	35	49	5	283	1	44	733	36	0	814	0	47	978	102	0	1127	2456
Car	0	751	97	805	-	1653	1	816	122	283	-	1222	70	639	5672	475	-	6856	26	307	5454	917	-	6704	16435
% Car	-	98.7	96.0	97.7	-	98.0	100.0	98.3	97.6	97.9	-	98.2	100.0	98.3	97.6	99.8	-	97.8	100.0	98.1	96.8	98.3	-	97.1	97.5
Truck	0	10	4	19	-	33	0	14	3	6	-	23	0	11	142	1	-	154	0	6	181	16	-	203	413
% Truck	-	1.3	4.0	2.3	-	2.0	0.0	1.7	2.4	2.1	-	1.8	0.0	1.7	2.4	0.2	-	2.2	0.0	1.9	3.2	1.7	-	2.9	2.5
Ped	-	-	-	-	15	-	-	-	-	-	11	-	-	-	-	-	4	-	-	-	-	-	4	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 14-Cattlemen Rd at Maxfield Dr / Cattleridge Blvd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Maxfield Dr Eastbound						Cattleridge Blvd Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	23	3	17	0	43	0	14	2	6	0	22	0	20	259	33	0	312	0	11	168	39	1	218	595
7:45 AM	0	29	5	17	1	51	0	16	1	7	0	24	0	40	256	42	0	338	1	7	178	43	1	229	642
8:00 AM	0	17	5	15	0	37	0	18	3	7	1	28	1	33	230	23	0	287	1	8	157	34	0	200	552
8:15 AM	0	20	2	21	0	43	0	16	4	3	0	23	0	29	274	43	0	346	0	3	168	43	0	214	626
PHF	0.000	0.767	0.750	0.833	-	0.853	0.000	0.889	0.625	0.821	-	0.866	0.250	0.763	0.930	0.820	-	0.927	0.500	0.659	0.942	0.924	-	0.940	0.940
Car	0	89	14	67	-	170	0	61	9	22	-	92	1	119	1010	141	-	1271	2	25	640	155	-	822	2355
% Car	-	100.0	93.3	95.7	-	97.7	-	95.3	90.0	95.7	-	94.8	100.0	97.5	99.1	100.0	-	99.1	100.0	86.2	95.4	97.5	-	95.5	97.5
Truck	0	0	1	3	-	4	0	3	1	1	-	5	0	3	9	0	-	12	0	4	31	4	-	39	60
% Truck	-	0.0	6.7	4.3	-	2.3	-	4.7	10.0	4.3	-	5.2	0.0	2.5	0.9	0.0	-	0.9	0.0	13.8	4.6	2.5	-	4.5	2.5
Ped	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 14-Cattlemen Rd at Maxfield Dr / Cattleridge Blvd
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Maxfield Dr Eastbound						Cattleridge Blvd Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	33	4	31	1	68	0	51	3	6	1	60	2	13	170	14	0	199	0	12	238	43	0	293	620
4:45 PM	0	30	3	29	0	62	0	43	6	12	1	61	2	12	206	17	0	237	1	13	249	35	0	298	658
5:00 PM	0	31	3	38	0	72	0	57	22	0	0	79	0	13	181	11	0	205	0	10	285	29	0	324	680
5:15 PM	0	24	1	26	0	51	0	45	3	9	4	57	0	8	207	8	0	223	0	16	250	28	0	294	625
PHF	0.000	0.894	0.688	0.816	-	0.878	0.000	0.860	0.386	0.563	-	0.813	0.500	0.885	0.923	0.735	-	0.911	0.250	0.797	0.896	0.785	-	0.933	0.950
Car	0	117	11	121	-	249	0	196	34	27	-	257	4	45	748	50	-	847	1	51	1009	134	-	1195	2548
% Car	-	99.2	100.0	97.6	-	98.4	-	100.0	100.0	100.0	-	100.0	100.0	97.8	97.9	100.0	-	98.0	100.0	100.0	98.7	99.3	-	98.8	98.6
Truck	0	1	0	3	-	4	0	0	0	0	-	0	0	1	16	0	-	17	0	0	13	1	-	14	35
% Truck	-	0.8	0.0	2.4	-	1.6	-	0.0	0.0	0.0	-	0.0	0.0	2.2	2.1	0.0	-	2.0	0.0	0.0	1.3	0.7	-	1.2	1.4
Ped	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 15-Cattlemen Rd at Countrywood Dr / Cattleridge Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Data

Start Time	Countrywood Dr Eastbound						Cattleridge Dr Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	1	0	13	2	14	0	0	0	1	0	1	0	1	122	8	0	131	1	8	122	2	0	133	279
7:15 AM	0	0	0	14	0	14	0	0	0	2	0	2	0	5	183	5	0	193	1	10	169	2	0	182	391
7:30 AM	0	0	0	18	2	18	0	1	0	1	0	2	0	5	213	17	0	235	1	15	188	0	0	204	459
7:45 AM	0	2	0	9	1	11	0	2	0	1	0	3	0	5	238	33	0	276	0	26	218	1	0	245	535
Hourly Total	0	3	0	54	5	57	0	3	0	5	0	8	0	16	756	63	0	835	3	59	697	5	0	764	1664
8:00 AM	0	3	0	9	1	12	0	1	0	3	0	4	1	2	193	20	0	216	1	13	191	1	0	206	438
8:15 AM	0	3	0	6	0	9	0	4	0	6	0	10	1	4	219	21	0	245	2	24	224	1	0	251	515
8:30 AM	0	3	0	9	2	12	0	1	0	5	0	6	1	2	166	19	0	188	0	17	189	1	0	207	413
8:45 AM	0	1	0	13	0	14	0	3	0	8	1	11	1	8	187	20	0	216	2	24	187	3	0	216	457
Hourly Total	0	10	0	37	3	47	0	9	0	22	1	31	4	16	765	80	0	865	5	78	791	6	0	880	1823
9:00 AM	0	0	0	7	1	7	0	2	0	3	0	5	1	4	154	5	0	164	1	12	169	0	0	182	358
9:15 AM	0	1	0	6	0	7	0	2	0	1	0	3	1	6	157	1	0	165	1	5	156	1	0	163	338
9:30 AM	0	3	0	7	0	10	0	3	0	1	0	4	1	4	151	5	0	161	0	7	166	1	0	174	349
9:45 AM	0	0	1	5	0	6	0	2	0	4	1	6	2	5	148	9	0	164	0	8	158	2	2	168	344
Hourly Total	0	4	1	25	1	30	0	9	0	9	1	18	5	19	610	20	0	654	2	32	649	4	2	687	1389
10:00 AM	0	2	0	5	2	7	0	4	0	4	0	8	0	4	159	8	0	171	0	10	169	1	0	180	366
10:15 AM	0	1	0	4	0	5	0	1	0	2	0	3	0	9	174	2	0	185	0	7	156	3	0	166	359
10:30 AM	0	1	0	7	0	8	0	2	0	4	0	6	1	5	180	4	0	190	1	3	156	0	0	160	364
10:45 AM	0	0	0	4	0	4	0	4	0	3	0	7	0	1	174	3	0	178	0	6	160	1	0	167	356
Hourly Total	0	4	0	20	2	24	0	11	0	13	0	24	1	19	687	17	0	724	1	26	641	5	0	673	1445
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	0	0	6	0	6	0	8	0	8	2	16	2	4	186	2	0	194	0	4	184	1	0	189	405
2:15 PM	0	0	0	3	0	3	0	4	0	4	1	8	3	6	202	4	0	215	0	5	173	0	0	178	404
2:30 PM	0	0	0	7	0	7	0	1	0	3	0	4	3	7	205	3	0	218	0	2	203	4	0	209	438
2:45 PM	0	0	0	7	0	7	0	2	0	1	0	3	2	6	219	11	0	238	1	10	177	2	0	190	438
Hourly Total	0	0	0	23	0	23	0	15	0	16	3	31	10	23	812	20	0	865	1	21	737	7	0	766	1685
3:00 PM	0	0	0	8	0	8	0	7	0	4	0	11	4	8	206	6	0	224	0	7	189	0	0	196	439
3:15 PM	0	1	1	5	0	7	0	3	0	3	0	6	1	7	216	4	0	228	0	2	195	2	0	199	440
3:30 PM	0	1	0	4	0	5	0	3	0	8	0	11	0	4	178	3	0	185	0	4	212	3	0	219	420
3:45 PM	0	1	0	9	2	10	0	3	0	8	0	11	5	7	211	5	0	228	0	2	207	1	0	210	459
Hourly Total	0	3	1	26	2	30	0	16	0	23	0	39	10	26	811	18	0	865	0	15	803	6	0	824	1758
4:00 PM	0	0	0	6	3	6	0	8	0	10	0	18	1	10	206	4	0	221	0	3	188	2	0	193	438
4:15 PM	0	1	0	3	2	4	0	8	0	4	0	12	2	7	210	3	0	222	0	7	206	4	0	217	455
4:30 PM	0	1	0	9	1	10	0	10	1	27	0	38	2	8	206	11	0	227	0	16	242	4	0	262	537
4:45 PM	0	1	1	7	0	9	0	11	0	17	2	28	5	11	214	17	0	247	0	11	254	9	0	274	558
Hourly Total	0	3	1	25	6	29	0	37	1	58	2	96	10	36	836	35	0	917	0	37	890	19	0	946	1988
5:00 PM	0	4	1	14	2	19	0	38	0	47	1	85	5	10	215	8	0	238	2	3	268	2	0	275	617
5:15 PM	0	0	0	7	1	7	0	7	0	17	0	24	0	17	205	7	0	229	0	3	243	0	1	246	506
5:30 PM	0	1	0	9	2	10	0	15	0	30	0	45	0	11	191	8	0	210	0	5	235	5	0	245	510
5:45 PM	0	0	0	9	0	9	0	7	0	17	0	24	0	9	207	5	0	221	0	9	191	6	0	206	460
Hourly Total	0	5	1	39	5	45	0	67	0	111	1	178	5	47	818	28	0	898	2	20	937	13	1	972	2093
Car	0	28	4	242	-	274	0	166	1	251	-	418	45	198	5941	278	-	6462	14	286	5957	60	-	6317	13471
% Car	-	87.5	100.0	97.2	-	96.1	-	99.4	100.0	97.7	-	98.4	100.0	98.0	97.5	98.9	-	97.6	100.0	99.3	96.9	92.3	-	97.0	97.3
Truck	0	4	0	7	-	11	0	1	0	6	-	7	0	4	154	3	-	161	0	2	188	5	-	195	374
% Truck	-	12.5	0.0	2.8	-	3.9	-	0.6	0.0	2.3	-	1.6	0.0	2.0	2.5	1.1	-	2.4	0.0	0.7	3.1	7.7	-	3.0	2.7
Ped	-	-	-	-	24	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 15-Cattlemen Rd at Countrywood Dr / Cattleridge Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Countrywood Dr Eastbound						Cattleridge Dr Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	0	0	18	2	18	0	1	0	1	0	2	0	5	213	17	0	235	1	15	188	0	0	204	459
7:45 AM	0	2	0	9	1	11	0	2	0	1	0	3	0	5	238	33	0	276	0	26	218	1	0	245	535
8:00 AM	0	3	0	9	1	12	0	1	0	3	0	4	1	2	193	20	0	216	1	13	191	1	0	206	438
8:15 AM	0	3	0	6	0	9	0	4	0	6	0	10	1	4	219	21	0	245	2	24	224	1	0	251	515
PHF	0.000	0.667	0.000	0.583	-	0.694	0.000	0.500	0.000	0.458	-	0.475	0.500	0.800	0.907	0.689	-	0.880	0.500	0.750	0.916	0.750	-	0.902	0.910
Car	0	8	0	41	-	49	0	8	0	9	-	17	2	16	850	91	-	959	4	78	785	2	-	869	1894
% Car	-	100.0	-	97.6	-	98.0	-	100.0	-	81.8	-	89.5	100.0	100.0	98.5	100.0	-	98.7	100.0	100.0	95.6	66.7	-	95.9	97.3
Truck	0	0	0	1	-	1	0	0	0	2	-	2	0	0	13	0	-	13	0	0	36	1	-	37	53
% Truck	-	0.0	-	2.4	-	2.0	-	0.0	-	18.2	-	10.5	0.0	0.0	1.5	0.0	-	1.3	0.0	0.0	4.4	33.3	-	4.1	2.7
Ped	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FTE (Florida Transportation Engineering)
Fax# (941) 639-4851
8250 Pascal Drive
Punta Gorda, Florida, United States 33950
Ph# (800) 639-4851

Count Name: 15-Cattlemen Rd at Countrywood Dr / Cattleridge Dr
Site Code:
Start Date: 09/10/2013

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Countrywood Dr Eastbound						Cattleridge Dr Westbound						Cattlemen Rd Northbound						Cattlemen Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	1	0	9	1	10	0	10	1	27	0	38	2	8	206	11	0	227	0	16	242	4	0	262	537
4:45 PM	0	1	1	7	0	9	0	11	0	17	2	28	5	11	214	17	0	247	0	11	254	9	0	274	558
5:00 PM	0	4	1	14	2	19	0	38	0	47	1	85	5	10	215	8	0	238	2	3	268	2	0	275	617
5:15 PM	0	0	0	7	1	7	0	7	0	17	0	24	0	17	205	7	0	229	0	3	243	0	1	246	506
PHF	0.000	0.375	0.500	0.661	-	0.592	0.000	0.434	0.250	0.574	-	0.515	0.600	0.676	0.977	0.632	-	0.952	0.250	0.516	0.939	0.417	-	0.961	0.899
Car	0	6	2	36	-	44	0	66	1	107	-	174	12	46	827	42	-	927	2	33	996	14	-	1045	2190
% Car	-	100.0	100.0	97.3	-	97.8	-	100.0	100.0	99.1	-	99.4	100.0	100.0	98.5	97.7	-	98.5	100.0	100.0	98.9	93.3	-	98.9	98.7
Truck	0	0	0	1	-	1	0	0	0	1	-	1	0	0	13	1	-	14	0	0	11	1	-	12	28
% Truck	-	0.0	0.0	2.7	-	2.2	-	0.0	0.0	0.9	-	0.6	0.0	0.0	1.5	2.3	-	1.5	0.0	0.0	1.1	6.7	-	1.1	1.3
Ped	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Ped	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Appendix C
Methodology Letter of Understanding

METHODOLOGY LETTER OF UNDERSTANDING

INTERSTATE 75 AT BEE RIDGE ROAD (SR 758)

INTERCHANGE MODIFICATION REPORT

FINANCIAL PROJECT ID NO. 201277-5-32-01
SARASOTA COUNTY, FLORIDA

Prepared by:

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
801 North Broadway Avenue
Bartow, Florida 33831

FEBRUARY 2014

METHODOLOGY LETTER OF UNDERSTANDING
CONCURRENCE

The Requestor will provide upon request all modeling data, networks and input/output files needed to run the complete validated model used to analyze the proposed interchange action.

The MLOU will not be binding upon the FDOT and FHWA to approve the proposal under any circumstances, nor will it nullify the FDOT's or FHWA's right to request changes to the study design or require additional data collection, analysis, or documentation at any point during the interchange proposal process. The Requestor also acknowledges that full compliance of the MLOU requirements does not obligate the FDOT and FHWA to approve the interchange proposal.

Lawrence Massey 3/4/14 **Date**
Interchange Review Coordinator
FDOT District One

Martha Hodgson 3/10/14 **Date**
Systems Planning Office
FDOT Central Office

Chad Thompson, P.E. 3/11/14 **Date**
Program Operations Engineer
FHWA, Florida Division

1.0 INTRODUCTION

This document serves as the Methodology Letter of Understanding (MLOU) submitted by the Florida Department of Transportation (FDOT) District 1 (Requestor), to the Florida Department of Transportation Office of Systems Planning (SPO), and Federal Highway Administration (FHWA). This MLOU describes the preparation of an Interchange Modification Report (IMR) for the I-75 (SR 93) interchange with Bee Ridge Road (SR 758) in Sarasota County, and has been developed in accordance with FDOT Policy No. 000-525-015-f: Approval of New or Modified Access to Limited Access Facilities, FDOT Procedure No. 525-030-160: New or Modified Interchanges and the FDOT Traffic Forecasting Handbook (Procedure No. 525-030-120-g).

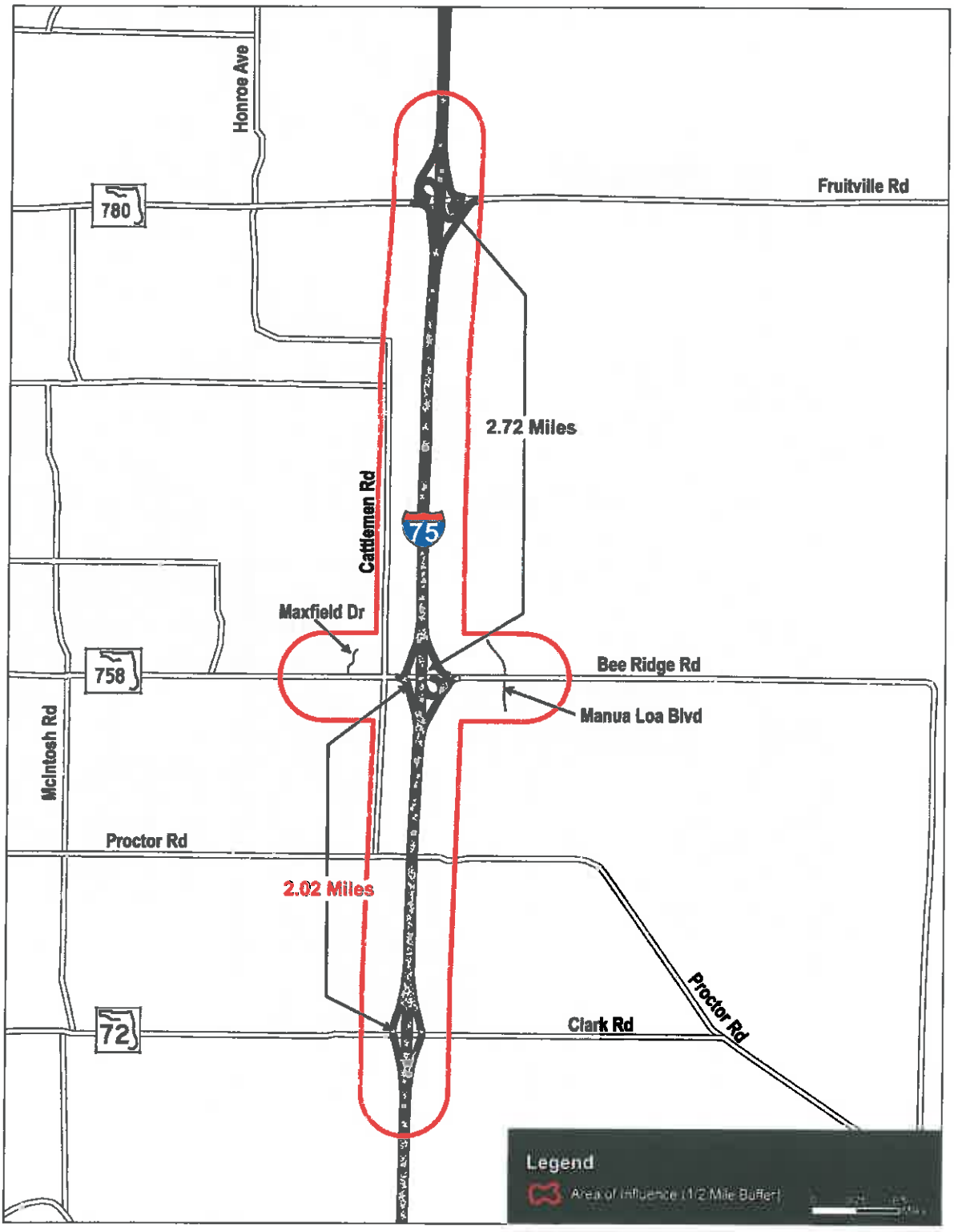
2.0 PURPOSE AND NEED FOR PROJECT

I-75, a north/south facility, is an integral part of the Strategic Intermodal System (SIS) providing for high-speed, high-volume traffic movements within the State. The Project Development Summary Report (PDSR) that was submitted in July 2009 as part of the I-75 Sarasota County Project Development and Environment (PD&E) Study from south of SR 681 to north of University Parkway, recommended improvements to the Bee Ridge Road interchange. These improvements included the addition of a second lane to the northbound and southbound off-ramps, as well as triple left-turn lanes at the southbound ramp terminal intersection. On Bee Ridge Road, additional travel lanes were recommended in both directions, as well as improvements to the intersection with Cattlemen Road. The Location Design Concept Acceptance (LDCA) was received from FHWA on December 8, 2011.

The Final I-75 Systems Interchange Modification Report (SIMR) from Laurel Road to North of Moccasin Wallow Road dated May 2012, re-analyzed the I-75 and Bee Ridge Road interchange and recommended several modifications by year 2040. These included two-lane ramps at the northbound off, southbound off, and southbound on-ramp junctions, and the addition of auxiliary lanes north and south of the interchange. As documented in the PD&E study, the previously adopted 2030 cost feasible model considered an average growth rate of more than 2 percent per year along the intersecting cross streets of I-75. However, based on review of the traffic forecasts from the currently adopted 2035 Sarasota/Manatee/Charlotte (SMC) model, the traffic projections are significantly lower than the previous estimates.

The purpose of this IMR is to reevaluate the future traffic operations at the I-75 and Bee Ridge Road interchange, based on the revised population/traffic growth projections and reevaluate the need for the improvements recommended by the PD&E study and the SIMR. The need for this IMR is to identify the most suitable interchange configuration to meet the demands of future travelers while minimizing project costs and impacts.

Figure 1: Project Location and Area of Influence



3.0 PROJECT LOCATION

Figure 1: Project Location Map illustrates the project location and the assumed study area. The project is located in Sarasota County, Florida. The Bee Ridge Road interchange is 2.02 miles north of I-75 and Clark Road interchange and is 2.72 miles south of the I-75 and Fruitville Road interchange.

4.0 ALTERNATIVES CONSIDERED

In the preliminary phase of the IMR, the following interchange configuration alternatives will be considered for the I-75 and Bee Ridge Road interchange:

- 2012 I-75 SIMR Approved Alternative –Diamond with Single Loop (This will serve as the No-Build Alternative)
- An additional Build alternative based on re-analysis and comparison with the SIMR Approved Alternative. The Build alternative will consider all available ROW and associated impacts.

Since our focus is to construct an ultimate interchange, a Transportation System Management (TSM) Alternative will not be considered in this evaluation.

5.0 ANTICIPATED AREA OF INFLUENCE

Figure 1 provides an overview of the study interchange location and total area of influence. The Bee Ridge Road interchange (MP 36.434) is between the interchanges at Clark Road to the south and Fruitville Road to the north. The study area along I-75 is between the I-75 and Clark Road interchange (MP 34.408) and the I-75 and Fruitville Road interchange (MP 39.156), a distance of 4.748 miles and along Bee Ridge Road from west of Maxfield Drive to east of Mauna Loa Boulevard, a distance of approximately 0.9 miles.

6.0 ANALYSIS YEARS

The analysis years proposed for this project are as follows:

- Existing Year – 2013
- Opening Year – 2020
- Design Year – 2040

7.0 EXISTING CONDITIONS

I-75: I-75 is currently a 6-lane, north-south limited access freeway facility that is part of the SIS. It is functionally classified as an urban principal arterial-interstate facility within the project influence area. I-75 within the area of influence has a posted speed limit of 70 miles per hour (mph).

Bee Ridge Road: Bee Ridge Road west of Maxfield Drive to Cattlemen Road is a divided four-lane urban principal arterial with a posted speed limit of 45 mph. It has six lanes between Cattlemen Road and Mauna Loa Boulevard, and transitions to a two-lane facility east of there.

8.0 *FUTURE TRAVEL DEMAND FORECASTING & MODEL ADJUSTMENTS*

The adopted 2007 SMC Validation Model and 2035 SMC Cost Feasible Model will be utilized for the purposes of forecasting future travel demand. This model includes a ten-lane ultimate mainline typical section on I-75, consisting of two special-use lanes and three general-purpose lanes in each direction. This configuration is also consistent with the I-75 typical section used in the approved PD&E studies. Other currently approved development plans that may impact the study area will be obtained from Sarasota County. The recently adopted 2035 SMC Cost Feasible Model will be used to perform a sub-area validation for the defined project study area. The sub-area validation will meet the requirements of the Florida Standard Urban Transportation Model Structure (FSUTMS) Model Update Task Force. This procedure is also consistent with the recommendations from the Interchange Handbook Technical Resource Document (TRD) 8 – Travel Demand Model Selection. If required, adjustments to the model will be made as noted within the Interchange Handbook TRD Section 8.This is also consistent with Section 3.8.2 of 2012 Project Traffic Forecasting Handbook (Figures 3.3 and 3.4) and the FSUTMS-Cube Framework Phase II Model Calibration and Validation Standards dated October 2, 2008.

The travel demand forecasts from the sub-area validated 2035 cost feasible model will be extrapolated using growth rates to obtain design year (2040) traffic projections. The growth rates will be developed based on comparison of historic trends, 2013 existing traffic counts, and forecasted model output volumes.

The opening year (2020) traffic projections will be developed by interpolating the existing volumes (2013) and the design year (2040) traffic projections. Future year Annual Average Daily Traffic (AADT) volumes will be provided for all locations as identified for the existing conditions and where applicable additional locations as necessitated by alternatives considered.

9.0 *DATA COLLECTION*

Data collection for the study shall consist of information from various sources. It shall be comprised of existing information and field collected data. Sources of information to be collected shall include but not be limited to:

- Straight Line Diagrams (SLD's)
- Roadway Characteristic Inventory
- Latest Five Year Crash History
- Traffic Count Information
- Florida Geographic Data Library (FGDL) Geographic Information System (GIS) Data
- FDOT Standard Indexes
- Project Traffic Forecasting Handbook
- Quality/Level of Service (LOS) Handbook
- SMC 2007 and 2035 FSUTMS Cost Feasible Model
- Sarasota/Manatee County Comprehensive Plan
- Sarasota/Manatee County Adopted Long Range Transportation Plan (LRTP)
- Other PD&E studies, master plans, approved Development of Regional Impacts (DRIs) within the area

Field Data (Traffic Counts):

In accordance with Manual on Uniform Traffic Studies (MUTS) and the Project Traffic Handbook (PTH), field traffic count data shall be collected at a minimum number of locations as listed below.

3 Day Classification Counts:

- I-75 approximately ¼ mile north of SB off/NB on Ramp Terminals of Bee Ridge Road
- I-75 approximately ¼ mile south of SB on/NB off Ramp Terminals of Bee Ridge Road
- Bee Ridge Road west of Maxfield Drive
- Bee Ridge Road east of Mauna Loa Boulevard

24 Hour Bi-Directional Volume Counts:

- Maxfield Drive – N/S of Bee Ridge Road
- Bee Ridge Road east of Maxfield Drive
- Cattlemen Road – N/S of Bee Ridge Road
- Bee Ridge Road east of Cattlemen Road
- EB Bee Ridge Road to SB on ramp to I-75
- SB off ramp from I-75 to WB/EB Bee Ridge Road
- EB Bee Ridge Road to NB loop to I-75
- Bee Ridge Road under I-75 Bridges
- Bee Ridge Road west of Mauna Loa Boulevard
- Mauna Loa Boulevard – N/S of Bee Ridge Road
- WB Bee Ridge Road to NB I-75 on ramp
- WB Bee Ridge Road to SB I-75 on ramp

8 Hour Turning Movement Counts:

- Maxfield Drive at Bee Ridge Road
- Cattlemen Road at Bee Ridge Road
- I-75 SB off ramp/I-75 SB on ramp at Bee Ridge Road
- I-75 NB off ramp/I-75 NB on Ramp at Bee Ridge Road
- Mauna Loa Boulevard at Bee Ridge Road

Additional counts might be needed at other locations like Cattlemen Road between Wilkinson Road and Cattleridge Drive depending on the alternative configuration being analyzed.

10.0 TRAFFIC FACTORS

The traffic factor tables from the 2012 FDOT Project Traffic Handbook provide a summary of peak to daily factors or Standard K factors and acceptable ranges for direction distribution factors or D factors. Peak hour traffic volumes will be obtained from the 2035 SMC Cost Feasible Model in the form of Peak Season Weekday Average Daily Traffic (PSWADT) and

opening year (2020) volumes will be linearly interpolated between extrapolated design year (2040) volumes and existing year (2013) volumes. The PSWADT forecasts generated by the updated SMC travel demand model will be multiplied by three factors to obtain Directional Design Hour Volume (DDHV). The first factor is a Model Output Conversion Factor (MOCF) which is applied to PSWADT to obtain Annual Average Daily Traffic (AADT).

The AADT volumes will then be converted to DDHV by applying the Standard K factor and directional distribution factor (D_{30}). The Standard K factor is the proportion of AADT occurring during the peak hour of the design year, depending upon the area type and facility type. The directional distribution factor, D_{30}, is the proportion of traffic in the 30th highest hour of the year traveling in the peak direction. The adopted traffic factors are tabulated below:

MOCF		
Area Type	**Adopted MOCF**	
I-75 and Ramps	**0.90**	
Arterial	**0.88**	
Standard K Factor[1]		
Area Type	**Standard K Factors**	
Large Urbanized Areas	8.0 - 9.0	
Transitioning to Urbanized Area	9.0	
Rural Areas	10.5	
Adopted K Factor	**9.0**	
D Factor[1]		
D_{30}(%)	**Rural**	**Urban**
Low	52.3	50.4
Average	54.8	55.8
High	57.3	61.2
Adopted D Factor	**54**	

Notes: FDOT Acceptable Range of Values for Freeways from 2012 Project Traffic Forecasting Handbook, Figures 2.4 and 2.9.

The T24 factor is the adjusted, annual 24-hour percentage of truck traffic. T24-factor will be obtained from the classification counts performed as part of the count program, and that these estimates will be compared to the factors that can be obtained from FDOT permanent count stations to assess reasonableness of the data. The Design Hour Truck (DHT) factor is the percentage of truck traffic during the peak hour and can be estimated as half of the T_{24} factor. The Peak Hour Factor (PHF) is applied to convert hourly flow to peak 15-minute flow rate for capacity analysis.

11.0 CONSISTENCY WITH MASTER PLANS, LRTP AND DRI APPLICATIONS

This IMR will maintain consistency with the I-75 Master Plan, Sarasota County's Comprehensive Plan and any approved DRIs within the area of influence.

This IMR will consider all programmed and planned roadway improvements in the area. These capacity improvements would be consistent with those specified in the regional transportation plans including the following:

- FDOT 5 Year Adopted Work Program
- FDOT SIS plans
- FDOT State Transportation Improvement Program (STIP)
- Sarasota County Comprehensive Plan
- Committed improvements from local and private sources
- Sarasota County access management plans.
- Sarasota Manatee MPO 2035 LRTP
- Sarasota Manatee MPO FY2013-2017 Transportation Improvement Program (TIP)
- Unified Planning Work Program (UPWP) (if applicable)

12.0 OPERATIONAL ANALYSIS PROCEDURES

A detailed operational analysis will be performed for all analysis years for the Build scenarios. The operational analysis will take into account all the relevant FDOT design standards and determination of the Level of Service (LOS) by using the latest version (2010) of Highway Capacity Software (HCS) based on the 2010 Highway Capacity Manual (HCM). The HCS analysis will be performed for the mainline, ramps and weaving segments for existing year (2013), and future years 2020 and 2040. Micro-simulation modeling using VISSIM 5.4 will be conducted for existing year (2013) and design year (2040) traffic conditions. Due to the complexity of the signal timing and operational analysis of the proposed Build Alternative [i.e., CFI and hybrid Diverging Diamond Interchange (DDI), VISSIM will be used instead of Synchro to document control delay. The microsimulation model will be validated with travel time runs collected for existing conditions. The microsimulation model will be calibrated to the existing year traffic counts observed in the field.

Origin-Destination (OD) pairs are crucial given the geometry in this section. Major OD movements will be collected using video capture along the arterial section of the study area. The VISSIM model will be calibrated to match the OD data collected in the field. This will ensure all movements including weaving, lane changes etc at intersections are replicated based on OD pairs. The OD pairs will be coded in VISSIM from external to external. This will allow the vehicles make lane changing decisions well in advance of the next routing decision so that they are more accurately aligned in the lane they need to be in for the next movement. Existing OD patterns will be used in determining future OD patterns. As part of the model validation process, the OD output will be checked to ensure that the routes were modeled as intended. Volumes will be calibrated based on GEH calculation thresholds and travel times will be calibrated within 15% of the field-measured data. The percent difference between the field-measured values and modeled values will also be compared. The simulation model will be modified accordingly to

reflect future conditions. A three-hour AM and PM peak period analysis will be conducted using 15 minute flow rates with microsimulation for design year 2040. The number of microsimulation runs required will be determined based on the statistical test provided in the FHWA Toolbox Volume III. The microsimulation will be performed consistent with guidelines provided in the FHWA Toolbox Volume III and ODOT VISSIM manual. Speed profiles will be prepared from speed data collected in the field. The VISSIM model will reflect realistic lane change decisions based on the tentative location of guide signs.

MOEs used to evaluate and compare the alternatives will be as follows:

- Signalized intersections –Control Delay (VISSIM)
- Arterial Segments –Travel Speed (VISSIM)
- Ramps Merge/Diverge – LOS, Density (HCS 2010)
- Freeway Segments – LOS, Density, Travel Speed (HCS 2010)
- Interchange – Queue lengths and back up queue on ramps (VISSIM)

The following components within the area of influence will be included in the operational analysis:

- I-75 mainline through movements
- Ramp merge and diverge areas
- Queuing analysis for ramps
- Mainline weaving sections
- Queuing analysis along arterial (Bee Ridge Road) at ramp termini intersections
- Intersections
    - Maxfield Drive at Bee Ridge Road
    - Cattlemen Road at Bee Ridge Road
    - I-75 SB off ramp/I-75 SB on ramp at Bee Ridge Road
    - I-75 NB off ramp/I-75 NB on Ramp at Bee Ridge Road
    - Mauna Loa Boulevard at Bee Ridge Road

13.0 ENVIRONMENTAL CONSIDERATIONS

Any potential National Environmental Policy Act (NEPA) impacts associated with the proposed alternatives will be assessed relative to the approved Type 2 Categorical Exclusion (CE) and documented as part of the Design Change Reevaluation. A summary of the reevaluation impacts will be included in the IMR.

14.0 CONCEPTUAL FUNDING PLAN/CONSTRUCTION SCHEDULE

Design is currently funded. The expected completion date of the IMR is summer 2014 and of final design is September 2016. No future phases are funded in the FDOT Adopted Work Program. The Strategic Intermodal System Cost Feasible Plan shows right of way funded in 2020-2025 and construction funded in 2025-2035.

15.0 ANTICIPATED EXCEPTIONS

Any exceptions determined during the analysis phase would be processed per Federal and FDOT requirements. Currently, there are no anticipated exceptions.

16.0 CONCEPTUAL SIGNING PLAN FOR RECOMMENDED ALTERNATIVE(S)

A conceptual signing plan shall be prepared for the recommended alternative(s). The conceptual signing plan will provide major guide sign placement and messages. The conceptual signing plan will be prepared in accordance with all applicable FDOT, FHWA and MUTCD guidelines. The VISSIM microsimulation model will reflect driver behavior (lane changing decisions) based on conceptual guide sign placement.

17.0 CONSIDERATION OF OTHER INTERCHANGE PROPOSALS

Any new proposed and/or planned interchanges along I-75 in the vicinity of the project will be assumed in future year analysis. Clark Road (SR 72) Interchange is proposed to transition from diamond to diverging diamond configuration. Fruitville Road (SR 780) Interchange is proposed to include arterial separation at both ramp terminal intersections. The analysis of future conditions for this IMR will include the proposed modifications to those interchanges.

18.0 QUALIFYING PROVISIONS

The FDOT LOS criteria used in this analysis will be in accordance with *Procedure No. 525-000-006, Level of Service Standards and Highway Capacity Analysis for the State Highway System* (for urbanized areas) as summarized below:

- I-75: Mainline and Ramps: LOS D
- Bee Ridge Road: LOS D
- Study Intersections: LOS D

The operational analysis will compare defined Measures of Effectiveness (MOEs) for the analysis of the Build alternatives to quantify potential betterment or non-significant degradation of the Build alternative improvements.

The I-75 and Bee Ridge Road interchange will be evaluated based on the following provisions:

➢ **Ramp Queues on I-75 Mainline**

The proposed design concepts will be evaluated for overcapacity conditions on the I-75 mainline by analyzing ramp capacity and queuing. Overcapacity will be identified whenever results show that the traffic back-up queue on a proposed ramp extends onto the I-75 mainline beyond auxiliary lane storage capacity. Ramp queuing is not anticipated to affect I-75 mainline operations for any of the Build Alternatives.

➢ **Potential for an individual element (intersections or roadways) to adversely impact the performance of any other element on the facility**

The individual elements of the proposed interchange alternatives will be evaluated for their system impacts. The back-up queue on any approach will be checked to assess impacts to the other intersections in the system.

- **FHWA 8 Policy Points**

The following eight FHWA Policy Criteria (also known as 8 FHWA criteria, Doc E9-20679, dated August 22, 2009) will be specifically addressed within the IMR.

Policy Point 1: Existing system is incapable of accommodating traffic demand
Policy Point 2: All reasonable alternatives to the new interchange have been considered
Policy Point 3: Proposal does not adversely impact operations or safety of the existing freeway
Policy Point 4: A full interchange with all traffic movements at a public road is provided
Policy Point 5: The proposal is consistent with local and regional transportation plans.
Policy Point 6: Consistent with State Highway Master Plans
Policy Point 7: Coordination with Transportation System Improvements
Policy Point 8: Request needs to consider planning and environmental constraints

These eight points will be addressed within the interchange modification proposal.

19.0 PUBLIC INVOLVEMENT

No public involvement effort will be conducted as part of the IMR process. Public meetings will be held to gain input from stakeholders and the public during the design phase of the project.

Appendix D
Historical Traffic Data

Projections of Florida Population by County, 2015-2040, with Estimates for 2012

County and State	Estimates April 1, 2012	Projections, April 1 2015	2020	2025	2030	2035	2040
PUTNAM	73,158						
Low		69,100	67,700	65,900	64,200	62,400	60,500
Medium		73,500	74,400	74,900	75,600	76,100	76,600
High		77,900	81,100	83,900	86,900	89,800	92,700
ST. JOHNS	196,071						
Low		196,400	217,800	229,500	235,300	235,700	231,700
Medium		213,500	247,500	279,800	309,600	336,700	362,100
High		230,600	277,200	330,200	383,900	437,700	492,400
ST. LUCIE	280,355						
Low		281,400	305,000	323,300	336,400	344,300	346,600
Medium		299,400	338,900	376,000	410,200	441,500	468,400
High		317,300	372,800	428,600	484,100	538,600	590,200
SANTA ROSA	155,390						
Low		153,100	161,100	167,000	170,100	170,700	170,100
Medium		162,900	179,000	194,100	207,400	218,800	229,900
High		172,700	196,900	221,300	244,700	266,900	289,700
SARASOTA	383,664						
Low		372,000	384,200	392,600	397,200	398,200	395,700
Medium		395,800	422,200	446,200	467,300	485,600	500,800
High		419,500	460,200	499,700	537,400	573,100	606,000
SEMINOLE	428,104						
Low		413,700	423,500	429,700	432,000	430,600	426,800
Medium		440,100	465,400	488,300	508,200	525,100	540,300
High		466,500	507,200	546,900	584,400	619,700	653,700
SUMTER	100,198						
Low		102,200	116,600	125,300	130,400	132,000	130,900
Medium		111,100	132,500	152,900	171,600	188,600	204,500
High		120,000	148,400	180,400	212,700	245,200	278,200
SUWANNEE	43,796						
Low		42,400	43,800	44,700	45,300	45,400	45,200
Medium		45,100	48,100	50,800	53,200	55,300	57,200
High		47,900	52,400	56,900	61,200	65,300	69,200
TAYLOR	22,898						
Low		21,300	20,900	20,400	19,800	19,200	18,400
Medium		23,200	23,800	24,300	24,800	25,200	25,600
High		25,100	26,600	28,200	29,800	31,300	32,700
UNION	15,510						
Low		14,600	14,500	14,400	14,100	13,700	13,300
Medium		15,800	16,500	17,100	17,600	18,100	18,500
High		17,100	18,500	19,800	21,100	22,400	23,700
VOLUSIA	497,145						
Low		477,300	482,700	484,400	482,200	476,400	468,200
Medium		507,700	530,500	550,500	567,200	580,900	592,700
High		538,200	578,200	616,600	652,300	685,500	717,200
WAKULLA	30,771						
Low		30,200	31,400	32,200	32,600	32,700	32,400
Medium		32,100	34,800	37,400	39,800	41,900	43,800
High		34,000	38,300	42,700	47,000	51,100	55,100
WALTON	56,965						
Low		57,000	61,500	64,800	67,000	68,000	68,600
Medium		60,600	68,300	75,400	81,700	87,200	92,700
High		64,300	75,100	85,900	96,400	106,400	116,700
WASHINGTON	24,922						
Low		23,500	23,600	23,400	23,100	22,600	21,900
Medium		25,500	26,800	27,900	28,900	29,700	30,400
High		27,500	30,000	32,400	34,700	36,900	38,900
FLORIDA	19,074,434						
Low		19,316,800	20,063,600	20,846,200	21,640,600	22,322,500	22,921,300
Medium		19,750,600	21,141,300	22,434,000	23,601,100	24,639,500	25,583,200
High		20,297,000	22,106,300	23,924,300	25,659,400	27,305,800	28,899,800

2012 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1701 SR758,CR789A-SR72	1702 SR72,US41-I75	1703 SR 72,BEE RDG-DESOTO	1704 SR72,I 75-BEE RIDGE
1	01/01/2012 - 01/07/2012	0.99	0.99	0.93	0.94
2	01/08/2012 - 01/14/2012	0.99	0.99	0.93	0.94
3	01/15/2012 - 01/21/2012	0.99	0.99	0.93	0.94
4	01/22/2012 - 01/28/2012	0.99	0.99	0.93	0.94
5	01/29/2012 - 02/04/2012	0.99	0.99	0.93	0.94
6	02/05/2012 - 02/11/2012	0.99	0.99	0.93	0.94
7	02/12/2012 - 02/18/2012	0.99	0.99	0.93	0.94
8	02/19/2012 - 02/25/2012	0.99	0.99	0.93	0.94
9	02/26/2012 - 03/03/2012	0.99	0.99	0.93	0.94
10	03/04/2012 - 03/10/2012	0.99	0.99	0.93	0.94
11	03/11/2012 - 03/17/2012	0.99	0.99	0.93	0.94
12	03/18/2012 - 03/24/2012	0.99	0.99	0.93	0.94
13	03/25/2012 - 03/31/2012	0.99	0.99	0.93	0.94
14	04/01/2012 - 04/07/2012	0.99	0.99	0.93	0.94
15	04/08/2012 - 04/14/2012	0.99	0.99	0.93	0.94
16	04/15/2012 - 04/21/2012	0.99	0.99	0.93	0.94
17	04/22/2012 - 04/28/2012	0.99	0.99	0.93	0.94
18	04/29/2012 - 05/05/2012	0.99	0.99	0.93	0.94
19	05/06/2012 - 05/12/2012	0.99	0.99	0.93	0.94
20	05/13/2012 - 05/19/2012	0.99	0.99	0.93	0.94
21	05/20/2012 - 05/26/2012	0.99	0.99	0.93	0.94
22	05/27/2012 - 06/02/2012	0.99	0.99	0.93	0.94
23	06/03/2012 - 06/09/2012	0.99	0.99	0.93	0.94
24	06/10/2012 - 06/16/2012	0.99	0.99	0.93	0.94
25	06/17/2012 - 06/23/2012	0.99	0.99	0.93	0.94
26	06/24/2012 - 06/30/2012	0.99	0.99	0.93	0.94
27	07/01/2012 - 07/07/2012	0.99	0.99	0.93	0.94
28	07/08/2012 - 07/14/2012	0.99	0.99	0.93	0.94
29	07/15/2012 - 07/21/2012	0.99	0.99	0.93	0.94
30	07/22/2012 - 07/28/2012	0.99	0.99	0.93	0.94
31	07/29/2012 - 08/04/2012	0.99	0.99	0.93	0.94
32	08/05/2012 - 08/11/2012	0.99	0.99	0.93	0.94
33	08/12/2012 - 08/18/2012	0.99	0.99	0.93	0.94
34	08/19/2012 - 08/25/2012	0.99	0.99	0.93	0.94
35	08/26/2012 - 09/01/2012	0.99	0.99	0.93	0.94
36	09/02/2012 - 09/08/2012	0.99	0.99	0.93	0.94
37	09/09/2012 - 09/15/2012	0.99	0.99	0.93	0.94
38	09/16/2012 - 09/22/2012	0.99	0.99	0.93	0.94
39	09/23/2012 - 09/29/2012	0.99	0.99	0.93	0.94
40	09/30/2012 - 10/06/2012	0.99	0.99	0.93	0.94
41	10/07/2012 - 10/13/2012	0.99	0.99	0.93	0.94
42	10/14/2012 - 10/20/2012	0.99	0.99	0.93	0.94
43	10/21/2012 - 10/27/2012	0.99	0.99	0.93	0.94
44	10/28/2012 - 11/03/2012	0.99	0.99	0.93	0.94
45	11/04/2012 - 11/10/2012	0.99	0.99	0.93	0.94
46	11/11/2012 - 11/17/2012	0.99	0.99	0.93	0.94
47	11/18/2012 - 11/24/2012	0.99	0.99	0.93	0.94
48	11/25/2012 - 12/01/2012	0.99	0.99	0.93	0.94
49	12/02/2012 - 12/08/2012	0.99	0.99	0.93	0.94
50	12/09/2012 - 12/15/2012	0.99	0.99	0.93	0.94
51	12/16/2012 - 12/22/2012	0.99	0.99	0.93	0.94
52	12/23/2012 - 12/29/2012	0.99	0.99	0.93	0.94
53	12/30/2012 - 12/31/2012	0.99	0.99	0.93	0.94

2012 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1706 SR758/BEE RIDGE ROAD	1708 SR780/FRUITVILLE RD	1709 SR789,US41-MANATEE C/L	1710 US301,US41-U PKWY
1	01/01/2012 - 01/07/2012	0.99	0.99	0.99	0.99
2	01/08/2012 - 01/14/2012	0.99	0.99	0.99	0.99
3	01/15/2012 - 01/21/2012	0.99	0.99	0.99	0.99
4	01/22/2012 - 01/28/2012	0.99	0.99	0.99	0.99
5	01/29/2012 - 02/04/2012	0.99	0.99	0.99	0.99
6	02/05/2012 - 02/11/2012	0.99	0.99	0.99	0.99
7	02/12/2012 - 02/18/2012	0.99	0.99	0.99	0.99
8	02/19/2012 - 02/25/2012	0.99	0.99	0.99	0.99
9	02/26/2012 - 03/03/2012	0.99	0.99	0.99	0.99
10	03/04/2012 - 03/10/2012	0.99	0.99	0.99	0.99
11	03/11/2012 - 03/17/2012	0.99	0.99	0.99	0.99
12	03/18/2012 - 03/24/2012	0.99	0.99	0.99	0.99
13	03/25/2012 - 03/31/2012	0.99	0.99	0.99	0.99
14	04/01/2012 - 04/07/2012	0.99	0.99	0.99	0.99
15	04/08/2012 - 04/14/2012	0.99	0.99	0.98	0.99
16	04/15/2012 - 04/21/2012	0.99	0.99	0.98	0.99
17	04/22/2012 - 04/28/2012	0.99	0.99	0.98	0.99
18	04/29/2012 - 05/05/2012	0.99	0.99	0.99	0.99
19	05/06/2012 - 05/12/2012	0.99	0.99	0.99	0.99
20	05/13/2012 - 05/19/2012	0.99	0.99	0.99	0.99
21	05/20/2012 - 05/26/2012	0.99	0.99	0.99	0.99
22	05/27/2012 - 06/02/2012	0.98	0.99	0.99	0.99
23	06/03/2012 - 06/09/2012	0.98	0.99	0.99	0.98
24	06/10/2012 - 06/16/2012	0.98	0.99	0.99	0.98
25	06/17/2012 - 06/23/2012	0.98	0.99	0.99	0.98
26	06/24/2012 - 06/30/2012	0.98	0.99	0.99	0.99
27	07/01/2012 - 07/07/2012	0.98	0.99	0.99	0.99
28	07/08/2012 - 07/14/2012	0.99	0.99	0.99	0.99
29	07/15/2012 - 07/21/2012	0.99	0.99	0.99	0.99
30	07/22/2012 - 07/28/2012	0.99	0.99	0.99	0.99
31	07/29/2012 - 08/04/2012	0.99	0.99	0.99	0.99
32	08/05/2012 - 08/11/2012	0.99	0.99	0.99	0.99
33	08/12/2012 - 08/18/2012	0.99	0.99	0.99	0.99
34	08/19/2012 - 08/25/2012	0.99	0.99	0.99	0.99
35	08/26/2012 - 09/01/2012	0.99	0.99	0.99	0.99
36	09/02/2012 - 09/08/2012	0.99	0.99	0.99	0.99
37	09/09/2012 - 09/15/2012	0.99	0.99	0.99	0.99
38	09/16/2012 - 09/22/2012	0.99	0.99	0.99	0.99
39	09/23/2012 - 09/29/2012	0.99	0.99	0.99	0.99
40	09/30/2012 - 10/06/2012	0.99	0.99	0.99	0.99
41	10/07/2012 - 10/13/2012	0.99	0.99	0.99	0.99
42	10/14/2012 - 10/20/2012	0.99	0.99	0.99	0.99
43	10/21/2012 - 10/27/2012	0.99	0.99	0.99	0.99
44	10/28/2012 - 11/03/2012	0.99	0.99	0.99	0.99
45	11/04/2012 - 11/10/2012	0.99	0.99	0.99	0.99
46	11/11/2012 - 11/17/2012	0.99	0.99	0.99	0.99
47	11/18/2012 - 11/24/2012	0.99	0.99	0.99	0.99
48	11/25/2012 - 12/01/2012	0.99	0.99	0.99	0.99
49	12/02/2012 - 12/08/2012	0.99	0.99	0.99	0.99
50	12/09/2012 - 12/15/2012	0.99	0.99	0.99	0.99
51	12/16/2012 - 12/22/2012	0.99	0.99	0.99	0.99
52	12/23/2012 - 12/29/2012	0.99	0.99	0.99	0.99
53	12/30/2012 - 12/31/2012	0.99	0.99	0.99	0.99

2012 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1713 US41,SR681-SR72	1715 US41,US301-MANATEE	1716 US41,SR72-US301	1717 I75,CHARLOT-SUMTER
1	01/01/2012 - 01/07/2012	0.99	0.99	0.99	0.87
2	01/08/2012 - 01/14/2012	0.99	0.99	0.99	0.87
3	01/15/2012 - 01/21/2012	0.99	0.99	0.99	0.87
4	01/22/2012 - 01/28/2012	0.99	0.99	0.99	0.87
5	01/29/2012 - 02/04/2012	0.99	0.99	0.99	0.87
6	02/05/2012 - 02/11/2012	0.99	0.99	0.99	0.87
7	02/12/2012 - 02/18/2012	0.99	0.99	0.99	0.87
8	02/19/2012 - 02/25/2012	0.99	0.99	0.99	0.87
9	02/26/2012 - 03/03/2012	0.99	0.99	0.99	0.87
10	03/04/2012 - 03/10/2012	0.99	0.99	0.99	0.87
11	03/11/2012 - 03/17/2012	0.99	0.99	0.99	0.87
12	03/18/2012 - 03/24/2012	0.99	0.99	0.99	0.87
13	03/25/2012 - 03/31/2012	0.99	0.99	0.99	0.87
14	04/01/2012 - 04/07/2012	0.99	0.99	0.99	0.87
15	04/08/2012 - 04/14/2012	0.99	0.99	0.99	0.87
16	04/15/2012 - 04/21/2012	0.99	0.99	0.99	0.87
17	04/22/2012 - 04/28/2012	0.99	0.99	0.99	0.87
18	04/29/2012 - 05/05/2012	0.99	0.99	0.99	0.87
19	05/06/2012 - 05/12/2012	0.99	0.99	0.99	0.87
20	05/13/2012 - 05/19/2012	0.99	0.99	0.99	0.87
21	05/20/2012 - 05/26/2012	0.99	0.99	0.99	0.87
22	05/27/2012 - 06/02/2012	0.99	0.99	0.99	0.87
23	06/03/2012 - 06/09/2012	0.99	0.99	0.99	0.87
24	06/10/2012 - 06/16/2012	0.99	0.99	0.99	0.87
25	06/17/2012 - 06/23/2012	0.99	0.99	0.99	0.87
26	06/24/2012 - 06/30/2012	0.99	0.99	0.99	0.87
27	07/01/2012 - 07/07/2012	0.99	0.99	0.99	0.87
28	07/08/2012 - 07/14/2012	0.99	0.99	0.99	0.87
29	07/15/2012 - 07/21/2012	0.99	0.99	0.99	0.87
30	07/22/2012 - 07/28/2012	0.99	0.99	0.99	0.87
31	07/29/2012 - 08/04/2012	0.99	0.99	0.99	0.87
32	08/05/2012 - 08/11/2012	0.99	0.99	0.99	0.87
33	08/12/2012 - 08/18/2012	0.99	0.99	0.99	0.87
34	08/19/2012 - 08/25/2012	0.99	0.99	0.99	0.87
35	08/26/2012 - 09/01/2012	0.99	0.99	0.99	0.87
36	09/02/2012 - 09/08/2012	0.99	0.99	0.99	0.87
37	09/09/2012 - 09/15/2012	0.99	0.99	0.99	0.87
38	09/16/2012 - 09/22/2012	0.99	0.99	0.99	0.87
39	09/23/2012 - 09/29/2012	0.99	0.99	0.99	0.87
40	09/30/2012 - 10/06/2012	0.99	0.99	0.99	0.87
41	10/07/2012 - 10/13/2012	0.99	0.99	0.99	0.87
42	10/14/2012 - 10/20/2012	0.99	0.99	0.99	0.87
43	10/21/2012 - 10/27/2012	0.99	0.99	0.99	0.87
44	10/28/2012 - 11/03/2012	0.99	0.99	0.99	0.87
45	11/04/2012 - 11/10/2012	0.99	0.99	0.99	0.87
46	11/11/2012 - 11/17/2012	0.99	0.99	0.99	0.87
47	11/18/2012 - 11/24/2012	0.99	0.99	0.99	0.87
48	11/25/2012 - 12/01/2012	0.99	0.99	0.99	0.87
49	12/02/2012 - 12/08/2012	0.99	0.99	0.99	0.87
50	12/09/2012 - 12/15/2012	0.99	0.99	0.99	0.87
51	12/16/2012 - 12/22/2012	0.99	0.99	0.99	0.87
52	12/23/2012 - 12/29/2012	0.99	0.99	0.99	0.87
53	12/30/2012 - 12/31/2012	0.99	0.99	0.99	0.87

2012 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1718 I75,SUMTER-SR681	1719 SR681/VENICE CONNECT	1740 US41/VENICE BYPASS	1741 U PKWY/SIS
1	01/01/2012 - 01/07/2012	0.91	0.97	0.98	0.97
2	01/08/2012 - 01/14/2012	0.90	0.97	0.98	0.97
3	01/15/2012 - 01/21/2012	0.90	0.97	0.98	0.97
4	01/22/2012 - 01/28/2012	0.90	0.97	0.98	0.97
5	01/29/2012 - 02/04/2012	0.90	0.97	0.98	0.97
6	02/05/2012 - 02/11/2012	0.91	0.97	0.98	0.97
7	02/12/2012 - 02/18/2012	0.91	0.97	0.98	0.97
8	02/19/2012 - 02/25/2012	0.91	0.97	0.98	0.97
9	02/26/2012 - 03/03/2012	0.91	0.97	0.98	0.97
10	03/04/2012 - 03/10/2012	0.91	0.97	0.98	0.97
11	03/11/2012 - 03/17/2012	0.91	0.97	0.98	0.97
12	03/18/2012 - 03/24/2012	0.91	0.97	0.98	0.97
13	03/25/2012 - 03/31/2012	0.91	0.97	0.98	0.97
14	04/01/2012 - 04/07/2012	0.90	0.97	0.98	0.97
15	04/08/2012 - 04/14/2012	0.90	0.97	0.98	0.97
16	04/15/2012 - 04/21/2012	0.90	0.97	0.98	0.97
17	04/22/2012 - 04/28/2012	0.90	0.97	0.98	0.97
18	04/29/2012 - 05/05/2012	0.90	0.97	0.98	0.97
19	05/06/2012 - 05/12/2012	0.90	0.97	0.98	0.97
20	05/13/2012 - 05/19/2012	0.90	0.97	0.98	0.97
21	05/20/2012 - 05/26/2012	0.90	0.97	0.98	0.97
22	05/27/2012 - 06/02/2012	0.90	0.97	0.98	0.97
23	06/03/2012 - 06/09/2012	0.90	0.97	0.98	0.97
24	06/10/2012 - 06/16/2012	0.90	0.97	0.98	0.97
25	06/17/2012 - 06/23/2012	0.90	0.97	0.98	0.97
26	06/24/2012 - 06/30/2012	0.90	0.97	0.98	0.97
27	07/01/2012 - 07/07/2012	0.90	0.97	0.98	0.97
28	07/08/2012 - 07/14/2012	0.90	0.97	0.98	0.97
29	07/15/2012 - 07/21/2012	0.90	0.97	0.98	0.97
30	07/22/2012 - 07/28/2012	0.90	0.97	0.98	0.97
31	07/29/2012 - 08/04/2012	0.90	0.97	0.98	0.97
32	08/05/2012 - 08/11/2012	0.90	0.97	0.98	0.97
33	08/12/2012 - 08/18/2012	0.90	0.97	0.98	0.97
34	08/19/2012 - 08/25/2012	0.90	0.97	0.98	0.97
35	08/26/2012 - 09/01/2012	0.90	0.97	0.98	0.97
36	09/02/2012 - 09/08/2012	0.90	0.97	0.98	0.97
37	09/09/2012 - 09/15/2012	0.90	0.97	0.98	0.97
38	09/16/2012 - 09/22/2012	0.90	0.97	0.98	0.97
39	09/23/2012 - 09/29/2012	0.90	0.97	0.98	0.97
40	09/30/2012 - 10/06/2012	0.90	0.97	0.98	0.97
41	10/07/2012 - 10/13/2012	0.90	0.97	0.98	0.97
42	10/14/2012 - 10/20/2012	0.90	0.97	0.98	0.97
43	10/21/2012 - 10/27/2012	0.90	0.97	0.98	0.97
44	10/28/2012 - 11/03/2012	0.90	0.97	0.98	0.97
45	11/04/2012 - 11/10/2012	0.90	0.97	0.98	0.97
46	11/11/2012 - 11/17/2012	0.90	0.97	0.98	0.97
47	11/18/2012 - 11/24/2012	0.90	0.97	0.98	0.97
48	11/25/2012 - 12/01/2012	0.90	0.97	0.98	0.97
49	12/02/2012 - 12/08/2012	0.91	0.97	0.98	0.97
50	12/09/2012 - 12/15/2012	0.91	0.97	0.98	0.97
51	12/16/2012 - 12/22/2012	0.91	0.97	0.98	0.97
52	12/23/2012 - 12/29/2012	0.90	0.97	0.98	0.97
53	12/30/2012 - 12/31/2012	0.90	0.97	0.98	0.97

2012 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1742 SR776,CHARLOTTE-US41	1743 SR45/US41B	1744 US 41, US 41B - SR 681	1745 US41,CH C/L-VENICE AV
1	01/01/2012 - 01/07/2012	0.99	0.99	0.98	0.99
2	01/08/2012 - 01/14/2012	0.99	0.99	0.98	0.99
3	01/15/2012 - 01/21/2012	0.99	0.99	0.98	0.99
4	01/22/2012 - 01/28/2012	0.99	0.99	0.98	0.99
5	01/29/2012 - 02/04/2012	0.99	0.99	0.98	0.99
6	02/05/2012 - 02/11/2012	0.99	0.99	0.98	0.99
7	02/12/2012 - 02/18/2012	0.99	0.99	0.98	0.99
8	02/19/2012 - 02/25/2012	0.99	0.99	0.98	0.99
9	02/26/2012 - 03/03/2012	0.99	0.99	0.98	0.99
10	03/04/2012 - 03/10/2012	0.99	0.99	0.98	0.99
11	03/11/2012 - 03/17/2012	0.99	0.99	0.98	0.99
12	03/18/2012 - 03/24/2012	0.99	0.99	0.98	0.99
13	03/25/2012 - 03/31/2012	0.99	0.99	0.98	0.99
14	04/01/2012 - 04/07/2012	0.99	0.99	0.98	0.99
15	04/08/2012 - 04/14/2012	0.99	0.99	0.98	0.99
16	04/15/2012 - 04/21/2012	0.99	0.99	0.98	0.99
17	04/22/2012 - 04/28/2012	0.99	0.99	0.98	0.99
18	04/29/2012 - 05/05/2012	0.99	0.99	0.98	0.99
19	05/06/2012 - 05/12/2012	0.99	0.99	0.98	0.99
20	05/13/2012 - 05/19/2012	0.99	0.99	0.98	0.99
21	05/20/2012 - 05/26/2012	0.99	0.99	0.98	0.99
22	05/27/2012 - 06/02/2012	0.99	0.99	0.98	0.99
23	06/03/2012 - 06/09/2012	0.99	0.99	0.98	0.99
24	06/10/2012 - 06/16/2012	0.99	0.99	0.98	0.99
25	06/17/2012 - 06/23/2012	0.99	0.99	0.98	0.99
26	06/24/2012 - 06/30/2012	0.99	0.99	0.98	0.99
27	07/01/2012 - 07/07/2012	0.99	0.99	0.98	0.99
28	07/08/2012 - 07/14/2012	0.99	0.99	0.98	0.99
29	07/15/2012 - 07/21/2012	0.99	0.99	0.98	0.99
30	07/22/2012 - 07/28/2012	0.99	0.99	0.98	0.99
31	07/29/2012 - 08/04/2012	0.99	0.99	0.98	0.99
32	08/05/2012 - 08/11/2012	0.99	0.99	0.98	0.99
33	08/12/2012 - 08/18/2012	0.99	0.99	0.98	0.99
34	08/19/2012 - 08/25/2012	0.99	0.99	0.98	0.99
35	08/26/2012 - 09/01/2012	0.99	0.99	0.98	0.99
36	09/02/2012 - 09/08/2012	0.99	0.99	0.98	0.99
37	09/09/2012 - 09/15/2012	0.99	0.99	0.98	0.99
38	09/16/2012 - 09/22/2012	0.99	0.99	0.98	0.99
39	09/23/2012 - 09/29/2012	0.99	0.99	0.98	0.99
40	09/30/2012 - 10/06/2012	0.99	0.99	0.98	0.99
41	10/07/2012 - 10/13/2012	0.99	0.99	0.98	0.99
42	10/14/2012 - 10/20/2012	0.99	0.99	0.98	0.99
43	10/21/2012 - 10/27/2012	0.99	0.99	0.98	0.99
44	10/28/2012 - 11/03/2012	0.99	0.99	0.98	0.99
45	11/04/2012 - 11/10/2012	0.99	0.99	0.98	0.99
46	11/11/2012 - 11/17/2012	0.99	0.99	0.98	0.99
47	11/18/2012 - 11/24/2012	0.99	0.99	0.98	0.99
48	11/25/2012 - 12/01/2012	0.99	0.99	0.98	0.99
49	12/02/2012 - 12/08/2012	0.99	0.99	0.98	0.99
50	12/09/2012 - 12/15/2012	0.99	0.99	0.98	0.99
51	12/16/2012 - 12/22/2012	0.99	0.99	0.98	0.99
52	12/23/2012 - 12/29/2012	0.99	0.99	0.98	0.99
53	12/30/2012 - 12/31/2012	0.99	0.99	0.98	0.99

2012 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1746 I75,SR681-MANATEE CO	1770 I-75 RAMPS, SUMPTER - FRU
1	01/01/2012 - 01/07/2012	0.94	0.98
2	01/08/2012 - 01/14/2012	0.94	0.98
3	01/15/2012 - 01/21/2012	0.93	0.98
4	01/22/2012 - 01/28/2012	0.93	0.98
5	01/29/2012 - 02/04/2012	0.94	0.98
6	02/05/2012 - 02/11/2012	0.94	0.98
7	02/12/2012 - 02/18/2012	0.94	0.98
8	02/19/2012 - 02/25/2012	0.94	0.98
9	02/26/2012 - 03/03/2012	0.94	0.98
10	03/04/2012 - 03/10/2012	0.93	0.98
11	03/11/2012 - 03/17/2012	0.93	0.98
12	03/18/2012 - 03/24/2012	0.93	0.98
13	03/25/2012 - 03/31/2012	0.93	0.98
14	04/01/2012 - 04/07/2012	0.93	0.98
15	04/08/2012 - 04/14/2012	0.93	0.98
16	04/15/2012 - 04/21/2012	0.93	0.98
17	04/22/2012 - 04/28/2012	0.93	0.98
18	04/29/2012 - 05/05/2012	0.93	0.98
19	05/06/2012 - 05/12/2012	0.93	0.98
20	05/13/2012 - 05/19/2012	0.93	0.98
21	05/20/2012 - 05/26/2012	0.93	0.98
22	05/27/2012 - 06/02/2012	0.93	0.98
23	06/03/2012 - 06/09/2012	0.93	0.98
24	06/10/2012 - 06/16/2012	0.93	0.98
25	06/17/2012 - 06/23/2012	0.93	0.98
26	06/24/2012 - 06/30/2012	0.93	0.98
27	07/01/2012 - 07/07/2012	0.93	0.98
28	07/08/2012 - 07/14/2012	0.93	0.98
29	07/15/2012 - 07/21/2012	0.93	0.98
30	07/22/2012 - 07/28/2012	0.93	0.98
31	07/29/2012 - 08/04/2012	0.93	0.98
32	08/05/2012 - 08/11/2012	0.93	0.98
33	08/12/2012 - 08/18/2012	0.93	0.98
34	08/19/2012 - 08/25/2012	0.93	0.98
35	08/26/2012 - 09/01/2012	0.93	0.98
36	09/02/2012 - 09/08/2012	0.93	0.98
37	09/09/2012 - 09/15/2012	0.93	0.98
38	09/16/2012 - 09/22/2012	0.93	0.98
39	09/23/2012 - 09/29/2012	0.93	0.98
40	09/30/2012 - 10/06/2012	0.93	0.98
41	10/07/2012 - 10/13/2012	0.93	0.98
42	10/14/2012 - 10/20/2012	0.93	0.98
43	10/21/2012 - 10/27/2012	0.93	0.98
44	10/28/2012 - 11/03/2012	0.94	0.98
45	11/04/2012 - 11/10/2012	0.94	0.98
46	11/11/2012 - 11/17/2012	0.94	0.98
47	11/18/2012 - 11/24/2012	0.94	0.98
48	11/25/2012 - 12/01/2012	0.94	0.98
49	12/02/2012 - 12/08/2012	0.94	0.98
50	12/09/2012 - 12/15/2012	0.94	0.98
51	12/16/2012 - 12/22/2012	0.94	0.98
52	12/23/2012 - 12/29/2012	0.93	0.98
53	12/30/2012 - 12/31/2012	0.93	0.98

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 1700 SARASOTA COUNTYWIDE

MOCF: 0.88

WEEK	DATES	SF	PSCF
1	01/01/2012 - 01/07/2012	1.01	1.15
2	01/08/2012 - 01/14/2012	0.98	1.12
3	01/15/2012 - 01/21/2012	0.95	1.08
* 4	01/22/2012 - 01/28/2012	0.93	1.06
* 5	01/29/2012 - 02/04/2012	0.91	1.04
* 6	02/05/2012 - 02/11/2012	0.89	1.01
* 7	02/12/2012 - 02/18/2012	0.87	0.99
* 8	02/19/2012 - 02/25/2012	0.86	0.98
* 9	02/26/2012 - 03/03/2012	0.85	0.97
*10	03/04/2012 - 03/10/2012	0.84	0.96
*11	03/11/2012 - 03/17/2012	0.83	0.95
*12	03/18/2012 - 03/24/2012	0.85	0.97
*13	03/25/2012 - 03/31/2012	0.87	0.99
*14	04/01/2012 - 04/07/2012	0.88	1.00
*15	04/08/2012 - 04/14/2012	0.90	1.03
*16	04/15/2012 - 04/21/2012	0.92	1.05
17	04/22/2012 - 04/28/2012	0.94	1.07
18	04/29/2012 - 05/05/2012	0.97	1.11
19	05/06/2012 - 05/12/2012	0.99	1.13
20	05/13/2012 - 05/19/2012	1.01	1.15
21	05/20/2012 - 05/26/2012	1.03	1.17
22	05/27/2012 - 06/02/2012	1.06	1.21
23	06/03/2012 - 06/09/2012	1.08	1.23
24	06/10/2012 - 06/16/2012	1.10	1.25
25	06/17/2012 - 06/23/2012	1.10	1.25
26	06/24/2012 - 06/30/2012	1.09	1.24
27	07/01/2012 - 07/07/2012	1.09	1.24
28	07/08/2012 - 07/14/2012	1.09	1.24
29	07/15/2012 - 07/21/2012	1.09	1.24
30	07/22/2012 - 07/28/2012	1.10	1.25
31	07/29/2012 - 08/04/2012	1.11	1.27
32	08/05/2012 - 08/11/2012	1.12	1.28
33	08/12/2012 - 08/18/2012	1.14	1.30
34	08/19/2012 - 08/25/2012	1.14	1.30
35	08/26/2012 - 09/01/2012	1.14	1.30
36	09/02/2012 - 09/08/2012	1.14	1.30
37	09/09/2012 - 09/15/2012	1.14	1.30
38	09/16/2012 - 09/22/2012	1.12	1.28
39	09/23/2012 - 09/29/2012	1.11	1.27
40	09/30/2012 - 10/06/2012	1.10	1.25
41	10/07/2012 - 10/13/2012	1.09	1.24
42	10/14/2012 - 10/20/2012	1.07	1.22
43	10/21/2012 - 10/27/2012	1.06	1.21
44	10/28/2012 - 11/03/2012	1.05	1.20
45	11/04/2012 - 11/10/2012	1.04	1.19
46	11/11/2012 - 11/17/2012	1.03	1.17
47	11/18/2012 - 11/24/2012	1.02	1.16
48	11/25/2012 - 12/01/2012	1.02	1.16
49	12/02/2012 - 12/08/2012	1.01	1.15
50	12/09/2012 - 12/15/2012	1.01	1.15
51	12/16/2012 - 12/22/2012	0.99	1.13
52	12/23/2012 - 12/29/2012	0.97	1.11
53	12/30/2012 - 12/31/2012	0.95	1.08

* PEAK SEASON

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 1701 US 41 & US 301

MOCF: 0.88

WEEK	DATES	SF	PSCF
1	01/01/2012 - 01/07/2012	0.96	1.09
2	01/08/2012 - 01/14/2012	0.94	1.07
* 3	01/15/2012 - 01/21/2012	0.93	1.06
* 4	01/22/2012 - 01/28/2012	0.91	1.03
* 5	01/29/2012 - 02/04/2012	0.89	1.01
* 6	02/05/2012 - 02/11/2012	0.88	1.00
* 7	02/12/2012 - 02/18/2012	0.86	0.98
* 8	02/19/2012 - 02/25/2012	0.86	0.98
* 9	02/26/2012 - 03/03/2012	0.85	0.97
*10	03/04/2012 - 03/10/2012	0.85	0.97
*11	03/11/2012 - 03/17/2012	0.84	0.96
*12	03/18/2012 - 03/24/2012	0.86	0.98
*13	03/25/2012 - 03/31/2012	0.88	1.00
*14	04/01/2012 - 04/07/2012	0.90	1.02
*15	04/08/2012 - 04/14/2012	0.92	1.05
16	04/15/2012 - 04/21/2012	0.94	1.07
17	04/22/2012 - 04/28/2012	0.96	1.09
18	04/29/2012 - 05/05/2012	0.99	1.13
19	05/06/2012 - 05/12/2012	1.02	1.16
20	05/13/2012 - 05/19/2012	1.04	1.18
21	05/20/2012 - 05/26/2012	1.06	1.21
22	05/27/2012 - 06/02/2012	1.08	1.23
23	06/03/2012 - 06/09/2012	1.10	1.25
24	06/10/2012 - 06/16/2012	1.12	1.27
25	06/17/2012 - 06/23/2012	1.12	1.27
26	06/24/2012 - 06/30/2012	1.12	1.27
27	07/01/2012 - 07/07/2012	1.12	1.27
28	07/08/2012 - 07/14/2012	1.12	1.27
29	07/15/2012 - 07/21/2012	1.12	1.27
30	07/22/2012 - 07/28/2012	1.13	1.29
31	07/29/2012 - 08/04/2012	1.13	1.29
32	08/05/2012 - 08/11/2012	1.14	1.30
33	08/12/2012 - 08/18/2012	1.15	1.31
34	08/19/2012 - 08/25/2012	1.15	1.31
35	08/26/2012 - 09/01/2012	1.14	1.30
36	09/02/2012 - 09/08/2012	1.14	1.30
37	09/09/2012 - 09/15/2012	1.13	1.29
38	09/16/2012 - 09/22/2012	1.11	1.26
39	09/23/2012 - 09/29/2012	1.10	1.25
40	09/30/2012 - 10/06/2012	1.08	1.23
41	10/07/2012 - 10/13/2012	1.07	1.22
42	10/14/2012 - 10/20/2012	1.05	1.19
43	10/21/2012 - 10/27/2012	1.03	1.17
44	10/28/2012 - 11/03/2012	1.02	1.16
45	11/04/2012 - 11/10/2012	1.00	1.14
46	11/11/2012 - 11/17/2012	0.99	1.13
47	11/18/2012 - 11/24/2012	0.98	1.11
48	11/25/2012 - 12/01/2012	0.97	1.10
49	12/02/2012 - 12/08/2012	0.96	1.09
50	12/09/2012 - 12/15/2012	0.96	1.09
51	12/16/2012 - 12/22/2012	0.95	1.08
52	12/23/2012 - 12/29/2012	0.94	1.07
53	12/30/2012 - 12/31/2012	0.93	1.06

* PEAK SEASON

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 1702 SR 776 & BEACHES

MOCF: 0.87

WEEK	DATES	SF	PSCF
1	01/01/2012 - 01/07/2012	1.06	1.21
2	01/08/2012 - 01/14/2012	1.02	1.17
3	01/15/2012 - 01/21/2012	0.99	1.13
4	01/22/2012 - 01/28/2012	0.96	1.10
* 5	01/29/2012 - 02/04/2012	0.94	1.08
* 6	02/05/2012 - 02/11/2012	0.91	1.04
* 7	02/12/2012 - 02/18/2012	0.88	1.01
* 8	02/19/2012 - 02/25/2012	0.87	1.00
* 9	02/26/2012 - 03/03/2012	0.85	0.97
*10	03/04/2012 - 03/10/2012	0.83	0.95
*11	03/11/2012 - 03/17/2012	0.81	0.93
*12	03/18/2012 - 03/24/2012	0.83	0.95
*13	03/25/2012 - 03/31/2012	0.85	0.97
*14	04/01/2012 - 04/07/2012	0.87	1.00
*15	04/08/2012 - 04/14/2012	0.89	1.02
*16	04/15/2012 - 04/21/2012	0.90	1.03
*17	04/22/2012 - 04/28/2012	0.93	1.06
18	04/29/2012 - 05/05/2012	0.95	1.09
19	05/06/2012 - 05/12/2012	0.98	1.12
20	05/13/2012 - 05/19/2012	1.00	1.14
21	05/20/2012 - 05/26/2012	1.02	1.17
22	05/27/2012 - 06/02/2012	1.03	1.18
23	06/03/2012 - 06/09/2012	1.05	1.20
24	06/10/2012 - 06/16/2012	1.06	1.21
25	06/17/2012 - 06/23/2012	1.05	1.20
26	06/24/2012 - 06/30/2012	1.05	1.20
27	07/01/2012 - 07/07/2012	1.04	1.19
28	07/08/2012 - 07/14/2012	1.03	1.18
29	07/15/2012 - 07/21/2012	1.02	1.17
30	07/22/2012 - 07/28/2012	1.05	1.20
31	07/29/2012 - 08/04/2012	1.08	1.24
32	08/05/2012 - 08/11/2012	1.10	1.26
33	08/12/2012 - 08/18/2012	1.13	1.29
34	08/19/2012 - 08/25/2012	1.13	1.29
35	08/26/2012 - 09/01/2012	1.14	1.30
36	09/02/2012 - 09/08/2012	1.14	1.30
37	09/09/2012 - 09/15/2012	1.14	1.30
38	09/16/2012 - 09/22/2012	1.13	1.29
39	09/23/2012 - 09/29/2012	1.12	1.28
40	09/30/2012 - 10/06/2012	1.11	1.27
41	10/07/2012 - 10/13/2012	1.10	1.26
42	10/14/2012 - 10/20/2012	1.09	1.25
43	10/21/2012 - 10/27/2012	1.08	1.24
44	10/28/2012 - 11/03/2012	1.08	1.24
45	11/04/2012 - 11/10/2012	1.07	1.22
46	11/11/2012 - 11/17/2012	1.07	1.22
47	11/18/2012 - 11/24/2012	1.06	1.21
48	11/25/2012 - 12/01/2012	1.06	1.21
49	12/02/2012 - 12/08/2012	1.06	1.21
50	12/09/2012 - 12/15/2012	1.06	1.21
51	12/16/2012 - 12/22/2012	1.03	1.18
52	12/23/2012 - 12/29/2012	1.01	1.16
53	12/30/2012 - 12/31/2012	0.99	1.13

* PEAK SEASON

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 1703 RURAL SR 72

MOCF: 0.88

WEEK	DATES	SF	PSCF
1	01/01/2012 - 01/07/2012	0.98	1.12
2	01/08/2012 - 01/14/2012	0.96	1.09
3	01/15/2012 - 01/21/2012	0.94	1.07
4	01/22/2012 - 01/28/2012	0.93	1.06
* 5	01/29/2012 - 02/04/2012	0.91	1.04
* 6	02/05/2012 - 02/11/2012	0.89	1.01
* 7	02/12/2012 - 02/18/2012	0.87	0.99
* 8	02/19/2012 - 02/25/2012	0.86	0.98
* 9	02/26/2012 - 03/03/2012	0.86	0.98
*10	03/04/2012 - 03/10/2012	0.85	0.97
*11	03/11/2012 - 03/17/2012	0.84	0.96
*12	03/18/2012 - 03/24/2012	0.85	0.97
*13	03/25/2012 - 03/31/2012	0.87	0.99
*14	04/01/2012 - 04/07/2012	0.88	1.00
*15	04/08/2012 - 04/14/2012	0.90	1.02
*16	04/15/2012 - 04/21/2012	0.91	1.04
*17	04/22/2012 - 04/28/2012	0.93	1.06
18	04/29/2012 - 05/05/2012	0.94	1.07
19	05/06/2012 - 05/12/2012	0.95	1.08
20	05/13/2012 - 05/19/2012	0.97	1.10
21	05/20/2012 - 05/26/2012	1.01	1.15
22	05/27/2012 - 06/02/2012	1.05	1.20
23	06/03/2012 - 06/09/2012	1.09	1.24
24	06/10/2012 - 06/16/2012	1.13	1.29
25	06/17/2012 - 06/23/2012	1.13	1.29
26	06/24/2012 - 06/30/2012	1.14	1.30
27	07/01/2012 - 07/07/2012	1.14	1.30
28	07/08/2012 - 07/14/2012	1.15	1.31
29	07/15/2012 - 07/21/2012	1.15	1.31
30	07/22/2012 - 07/28/2012	1.15	1.31
31	07/29/2012 - 08/04/2012	1.16	1.32
32	08/05/2012 - 08/11/2012	1.16	1.32
33	08/12/2012 - 08/18/2012	1.17	1.33
34	08/19/2012 - 08/25/2012	1.16	1.32
35	08/26/2012 - 09/01/2012	1.16	1.32
36	09/02/2012 - 09/08/2012	1.15	1.31
37	09/09/2012 - 09/15/2012	1.14	1.30
38	09/16/2012 - 09/22/2012	1.13	1.29
39	09/23/2012 - 09/29/2012	1.12	1.27
40	09/30/2012 - 10/06/2012	1.10	1.25
41	10/07/2012 - 10/13/2012	1.09	1.24
42	10/14/2012 - 10/20/2012	1.08	1.23
43	10/21/2012 - 10/27/2012	1.05	1.20
44	10/28/2012 - 11/03/2012	1.03	1.17
45	11/04/2012 - 11/10/2012	1.01	1.15
46	11/11/2012 - 11/17/2012	0.99	1.13
47	11/18/2012 - 11/24/2012	0.98	1.12
48	11/25/2012 - 12/01/2012	0.98	1.12
49	12/02/2012 - 12/08/2012	0.98	1.12
50	12/09/2012 - 12/15/2012	0.98	1.12
51	12/16/2012 - 12/22/2012	0.97	1.10
52	12/23/2012 - 12/29/2012	0.95	1.08
53	12/30/2012 - 12/31/2012	0.94	1.07

* PEAK SEASON

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 1775 SARASOTA I75

MOCF: 0.90

WEEK	DATES	SF	PSCF
1	01/01/2012 - 01/07/2012	0.99	1.10
2	01/08/2012 - 01/14/2012	0.99	1.10
3	01/15/2012 - 01/21/2012	0.99	1.10
* 4	01/22/2012 - 01/28/2012	0.96	1.07
* 5	01/29/2012 - 02/04/2012	0.94	1.05
* 6	02/05/2012 - 02/11/2012	0.92	1.02
* 7	02/12/2012 - 02/18/2012	0.89	0.99
* 8	02/19/2012 - 02/25/2012	0.88	0.98
* 9	02/26/2012 - 03/03/2012	0.87	0.97
*10	03/04/2012 - 03/10/2012	0.86	0.96
*11	03/11/2012 - 03/17/2012	0.85	0.95
*12	03/18/2012 - 03/24/2012	0.86	0.96
*13	03/25/2012 - 03/31/2012	0.88	0.98
*14	04/01/2012 - 04/07/2012	0.90	1.00
*15	04/08/2012 - 04/14/2012	0.92	1.02
*16	04/15/2012 - 04/21/2012	0.94	1.05
17	04/22/2012 - 04/28/2012	0.96	1.07
18	04/29/2012 - 05/05/2012	0.98	1.09
19	05/06/2012 - 05/12/2012	1.00	1.11
20	05/13/2012 - 05/19/2012	1.02	1.14
21	05/20/2012 - 05/26/2012	1.04	1.16
22	05/27/2012 - 06/02/2012	1.05	1.17
23	06/03/2012 - 06/09/2012	1.07	1.19
24	06/10/2012 - 06/16/2012	1.08	1.20
25	06/17/2012 - 06/23/2012	1.08	1.20
26	06/24/2012 - 06/30/2012	1.07	1.19
27	07/01/2012 - 07/07/2012	1.06	1.18
28	07/08/2012 - 07/14/2012	1.06	1.18
29	07/15/2012 - 07/21/2012	1.05	1.17
30	07/22/2012 - 07/28/2012	1.07	1.19
31	07/29/2012 - 08/04/2012	1.09	1.21
32	08/05/2012 - 08/11/2012	1.10	1.23
33	08/12/2012 - 08/18/2012	1.12	1.25
34	08/19/2012 - 08/25/2012	1.12	1.25
35	08/26/2012 - 09/01/2012	1.13	1.26
36	09/02/2012 - 09/08/2012	1.13	1.26
37	09/09/2012 - 09/15/2012	1.13	1.26
38	09/16/2012 - 09/22/2012	1.12	1.25
39	09/23/2012 - 09/29/2012	1.10	1.23
40	09/30/2012 - 10/06/2012	1.08	1.20
41	10/07/2012 - 10/13/2012	1.07	1.19
42	10/14/2012 - 10/20/2012	1.05	1.17
43	10/21/2012 - 10/27/2012	1.03	1.15
44	10/28/2012 - 11/03/2012	1.02	1.14
45	11/04/2012 - 11/10/2012	1.00	1.11
46	11/11/2012 - 11/17/2012	0.99	1.10
47	11/18/2012 - 11/24/2012	0.99	1.10
48	11/25/2012 - 12/01/2012	0.99	1.10
49	12/02/2012 - 12/08/2012	0.99	1.10
50	12/09/2012 - 12/15/2012	0.99	1.10
51	12/16/2012 - 12/22/2012	0.99	1.10
52	12/23/2012 - 12/29/2012	0.99	1.10
53	12/30/2012 - 12/31/2012	0.99	1.10

* PEAK SEASON

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 0044 - SR 93/I 75, SOUTH OF SR 72/CLARK ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	74500 C	N 36500	S 38000	9.00	55.80	10.90
2011	81000 C	N 41000	S 40000	9.00	55.50	8.40
2010	82000 C	N 41000	S 41000	9.78	53.88	9.30
2009	80500 C	N 40500	S 40000	9.49	56.51	9.90
2008	82000 C	N 41000	S 41000	9.80	55.31	9.90
2007	84500 C	N 41000	S 43500	9.29	52.37	13.40
2006	94000 C	N 47000	S 47000	9.57	51.00	15.90
2005	81500 C	N 40500	S 41000	9.60	51.40	14.10
2004	72000 C	N 33500	S 38500	9.60	51.20	14.10
2003	68500 C	N 32000	S 36500	9.60	52.60	14.10
2002	63500 C	N 32500	S 31000	9.80	53.80	10.20
2001	72000 S	N 37000	S 35000	9.70	53.10	12.80
2000	72000 F	N 37000	S 35000	9.90	53.60	14.50
1999	67000 C	N 34500	S 32500	9.90	57.40	16.30
1998	65000 C	N 33000	S 32000	10.20	55.90	12.40
1997	61000 C	N 30500	S 30500	10.60	56.50	12.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 0046 - SR 93/I 75, SOUTH OF SR 780/FRUITVILLE ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	105500 C	N 52000	S 53500	9.00	55.80	9.00
2011	104000 C	N 51500	S 52500	9.00	55.50	6.40
2010	105500 C	N 52500	S 53000	9.78	53.88	7.50
2009	103500 C	N 51500	S 52000	9.49	56.51	7.60
2008	104000 C	N 52000	S 52000	9.80	55.31	9.60
2007	108500 C	N 54500	S 54000	9.29	52.37	9.80
2006	114500 C	N 57000	S 57500	9.57	51.00	9.60
2005	107500 C	N 54000	S 53500	9.60	51.40	8.30
2004	99000 C	N 49500	S 49500	9.60	51.20	8.30
2003	100500 S	N 50500	S 50000	9.60	52.60	13.50
2002	95500 F	N 48000	S 47500	9.80	53.80	10.20
2001	89500 C	N 45000	S 44500	9.70	53.10	13.50
2000	82500 F	N 43000	S 39500	9.90	53.60	16.80
1999	76500 C	N 40000	S 36500	9.70	55.00	14.10
1998	79000 C	N 39000	S 40000	9.20	54.40	11.50
1997	75000 C	N 38500	S 36500	9.60	56.20	10.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 0047 - SR 93/I 75, NORTH OF SR 780/FRUITVILLE ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	111000 C	N 56500	S 54500	9.00	55.80	8.90
2011	109500 C	N 54000	S 55500	9.00	55.50	9.60
2010	109000 C	N 54000	S 55000	9.78	53.88	10.20
2009	107500 C	N 53500	S 54000	9.49	56.51	10.20
2008	105500 C	N 52500	S 53000	9.80	55.31	11.20
2007	116500 C	N 58500	S 58000	9.29	52.37	9.40
2006	127500 C	N 64000	S 63500	9.57	51.00	9.40
2005	119000 C	N 58500	S 60500	9.60	51.40	12.30
2004	107500 C	N 52500	S 55000	9.60	51.20	10.20
2003	101000 F	N 49000	S 52000	9.60	52.60	10.20
2002	95500 C	N 46500	S 49000	9.80	53.80	10.20
2001	92500 C	N 48000	S 44500	9.70	53.10	13.50
2000	85500 F	N 44500	S 41000	9.90	53.60	14.50
1999	79500 C	N 41500	S 38000	9.90	57.40	14.70
1998	80000 C	N 40000	S 40000	10.20	55.90	12.10
1997	72500 C	N 38000	S 34500	10.60	56.50	11.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 0225 - SR-93/I-75,0.7 MI N SR72@PROCTOR RD OP,SARASOTA CO

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	89880 C	N 44818	S 45062	9.00	54.00	9.20
2011	89715 C	N 44710	S 45005	9.00	54.00	9.30
2010	90242 C	N 44960	S 45282	9.76	55.24	9.20
2009	88452 C	N 43597	S 44855	9.40	55.84	9.10
2008	88692 C	N 44321	S 44371	9.82	54.81	10.20
2007	94959 C	N 47422	S 47537	9.29	52.37	10.80
2006	97307 C	N 48545	S 48762	9.57	51.00	11.90
2005	97929 C	N 49178	S 48751	9.60	51.40	12.00
2004	96406 C	N 48306	S 48100	9.60	51.20	11.60
2003	89643 C	N 44780	S 44863	9.60	52.60	10.60
2002	85595 C	N 42732	S 42863	9.80	53.80	18.10
2001	80327 C	N 40076	S 40251	9.70	53.10	16.80
2000	75967 C	N 37769	S 38198	9.90	53.60	12.60
1999	71053 C	N 35743	S 35310	9.70	55.00	16.40
1998	68067 C	N 33635	S 34432	9.20	54.40	2.70
1997	62547 C	N 31007	S 31540	9.60	56.20	5.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 4112 - BEE RIDGE RD, W OF MAUI SC 112

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	29500 C	E 14500	W 15000	9.00	52.70	4.80
2011	29500 S	E 14500	W 15000	9.00	52.90	2.30
2010	29500 F	E 14500	W 15000	10.38	52.56	2.70
2009	30500 C	E 15000	W 15500	10.58	53.66	2.50
2008	29200 E	E 14600	W 14600	10.63	52.82	3.20

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 4215 - CATTLEMEN RD, N OF BEE RIDGE RD - SARASOTA

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	25500 F	N 12500	S 13000	9.00	52.70	3.40
2011	25500 C	N 12500	S 13000	9.00	52.90	3.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 4444 - CATTLEMAN ROAD, NORTH OF PROCTOR ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	15300 F	N 7700	S 7600	9.00	52.70	4.20
2011	15300 C	N 7700	S 7600	9.00	52.90	2.30

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 5074 - SR 758/BEE RIDGE RD, E OF CENTER GATE/WOODMONT DR

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	35000 C	E 17000	W 18000	9.00	52.70	3.90
2011	41500 F	E 20500	W 21000	9.00	52.90	3.40
2010	41500 C	E 20500	W 21000	10.38	52.56	3.40
2009	36500 C	E 18500	W 18000	10.58	53.66	6.90
2008	56000 C	E 29000	W 27000	10.63	52.82	4.10
2007	49500 C	E 24500	W 25000	10.56	53.19	4.10
2006	51000 C	E 25000	W 26000	10.25	53.53	4.10
2005	44000 C	E 21500	W 22500	10.30	53.10	6.80
2004	49000 C	E 23500	W 25500	10.20	52.70	6.80
2003	49000 C	E 24500	W 24500	10.10	52.80	5.80
2002	45000 C	E 22500	W 22500	9.80	63.80	3.00
2001	43500 C	E 22000	W 21500	10.20	52.10	5.20
2000	47000 C	E 24000	W 23000	10.10	52.20	4.30
1999	38500 C	E 19000	W 19500	10.10	51.90	4.20
1998	42500 C	E 21000	W 21500	10.30	51.50	5.50
1997	41500 C	E 20500	W 21000	10.40	53.30	5.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7061 - SR 93/I-75 NB, OFF-RAMP TO SR 72/CLARK RD X205

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	6100	F	0	0	9.00	99.90	9.10
2011	6100	C	N 6100	0	9.00	99.90	7.90
2010	6400	S	0	0	9.78	99.99	8.30
2009	6500	F	0	0	9.49	99.99	8.40
2008	6600	C	N 6600	0	9.80	99.99	9.90
2007	6700	S	0	0	9.29	99.99	14.60
2006	6700	F			9.57	99.99	15.90
2005	6500	C	N 6500		9.60	99.90	12.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7062 - SR 93/I-75 SB, ON-RAMP FROM SR 72/CLARK RD X205

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	6000 F	0	0	9.00	99.90	9.10
2011	6000 C	S 6000	0	9.00	99.90	7.90
2010	6200 S	0	0	9.78	99.99	8.30
2009	6300 F	0	0	9.49	99.99	8.40
2008	6400 C	S 6400	0	9.80	99.99	9.90
2007	6800 S	0	0	9.29	99.99	14.60
2006	6800 F			9.57	99.99	15.90
2005	6600 C	S 6600		9.60	99.90	12.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7063 - SR93/I-75 NB, ON-RAMP FROM SR 72/CLARK RD X205

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	13500 F	0	0	9.00	99.90	9.10
2011	13500 C	N 13500	0	9.00	99.90	7.90
2010	12000 S	0	0	9.78	99.99	8.30
2009	12000 F	0	0	9.49	99.99	8.40
2008	12000 C	N 12000	0	9.80	99.99	9.90
2007	14000 S	0	0	9.29	99.99	14.60
2006	14000 F			9.57	99.99	15.90
2005	13500 C	N 13500		9.60	99.90	12.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7064 - SR 93/I-75 SB, OFF-RAMP TO SR 72/CLARK RD X205

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	13500 F	0	0	9.00	99.90	9.10
2011	13500 C	S 13500	0	9.00	99.90	7.90
2010	12500 S	0	0	9.78	99.99	8.30
2009	12500 F	0	0	9.49	99.99	8.40
2008	12500 C	S 12500	0	9.80	99.99	9.90
2007	14000 S	0	0	9.29	99.99	14.60
2006	14000 F			9.57	99.99	15.90
2005	13500 C	S 13500		9.60	99.90	12.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7071 - SR93/I-75 NB,OFF-RAMP TO SR758/BEE RIDGE RD X207

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	7100	F	0		0	9.00	99.90	5.50
2011	7100	C	N 7100		0	9.00	99.90	5.90
2010	7100	S	0		0	9.78	99.99	6.10
2009	7200	F	0		0	9.49	99.99	5.30
2008	7300	C	N 7300		0	9.80	99.99	6.80
2007	8300	S	0		0	9.29	99.99	10.30
2006	8300	F				9.57	99.99	9.60
2005	8100	C	N 8100			9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7072 - SR93/I-75 SB,ON-RAMP FROM SR758/BEE RIDGE RD X207

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	7400 F	0	0	9.00	99.90	5.50
2011	7400 C	S 7400	0	9.00	99.90	5.90
2010	7100 S	0	0	9.78	99.99	6.10
2009	7200 F	0	0	9.49	99.99	5.30
2008	7300 C	S 7300	0	9.80	99.99	6.80
2007	8500 S	0	0	9.29	99.99	10.30
2006	8500 F			9.57	99.99	9.60
2005	8300 C	S 8300		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7073 - SR93/I-75 NB,ON-RAMP FROM SR758/BEE RIDGE EB X207

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	8400	F	0		0	9.00	99.90	5.50
2011	8400	C	N 8400		0	9.00	99.90	5.90
2010	7900	S	0		0	9.78	99.99	6.10
2009	8000	F	0		0	9.49	99.99	5.30
2008	8200	C	N 8200		0	9.80	99.99	6.80
2007	9900	S	0		0	9.29	99.99	10.30
2006	9900	F				9.57	99.99	9.60
2005	9600	C	N 9600			9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7074 - SR93/I-75 SB,OFF-RAMP TO SR758/BEE RIDGE RD X207

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	11000 F	0	0	9.00	99.90	5.50
2011	11000 C	S 11000	0	9.00	99.90	5.90
2010	10500 S	0	0	9.78	99.99	6.10
2009	10500 F	0	0	9.49	99.99	5.30
2008	10500 C	S 10500	0	9.80	99.99	6.80
2007	13500 S	0	0	9.29	99.99	10.30
2006	13500 F			9.57	99.99	9.60
2005	13000 C	S 13000		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7075 - SR93/I-75 NB,ON-RAMP FROM SR758/BEE RIDGE WB X207

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	2200 F	0	0	9.00	99.90	5.50
2011	2200 C	N 2200	0	9.00	99.90	5.90
2010	2600 S	0	0	9.78	99.99	6.10
2009	2600 F	0	0	9.49	99.99	5.30
2008	2700 C	N 2700	0	9.80	99.99	6.80
2007	3500 S	0	0	9.29	99.99	10.30
2006	3500 F			9.57	99.99	9.60
2005	3400 C	N 3400		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7081 - SR93/I-75 NB,OFF-RAMP TO SR780/FRUITVILLE RD X210

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	11500	F	0		0	9.00	99.90	5.50
2011	11500	C	N 11500		0	9.00	99.90	5.90
2010	11500	S	0		0	9.78	99.99	6.10
2009	11500	F	0		0	9.49	99.99	5.30
2008	11500	C	N 11500		0	9.80	99.99	6.80
2007	14000	S	0		0	9.29	99.99	10.30
2006	14000	F				9.57	99.99	9.60
2005	13500	C	N 13500			9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7082 - SR93/I-75 SB,ON-RAMP FROM SR780/FRUITVILLE EB X210

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	9000	F	0		0	9.00	99.90	5.50
2011	9000	C	S 9000		0	9.00	99.90	5.90
2010	8100	S	0		0	9.78	99.99	6.10
2009	8200	F	0		0	9.49	99.99	5.30
2008	8400	C	S 8400		0	9.80	99.99	6.80
2007	10500	S	0		0	9.29	99.99	10.30
2006	10500	F				9.57	99.99	9.60
2005	10000	C	S 10000			9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7083 - SR93/I-75 NB,ON-RAMP FROM SR780/FRUITIVLLE EB X210

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	11500 F	0	0	9.00	99.90	5.50
2011	11500 C	N 11500	0	9.00	99.90	5.90
2010	10500 S	0	0	9.78	99.99	6.10
2009	10500 F	0	0	9.49	99.99	5.30
2008	10500 C	N 10500	0	9.80	99.99	6.80
2007	12500 S	0	0	9.29	99.99	10.30
2006	12500 F			9.57	99.99	9.60
2005	12000 C	N 12000		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7084 - SR93/I-75 SB,ON-RAMP FROM SR780/FRUITVILLE WB X210

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	2600 F	0	0	9.00	99.90	5.50
2011	2600 C	S 2600	0	9.00	99.90	5.90
2010	2600 S	0	0	9.78	99.99	6.10
2009	2600 F	0	0	9.49	99.99	5.30
2008	2700 C	S 2700	0	9.80	99.99	6.80
2007	3600 S	0	0	9.29	99.99	10.30
2006	3600 F			9.57	99.99	9.60
2005	3500 C	S 3500		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7085 - SR93/I-75 NB,ON-RAMP FROM SR780/FRUITVILLE WB X210

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	3600 F	0	0	9.00	99.90	5.50
2011	3600 C	N 3600	0	9.00	99.90	5.90
2010	3700 S	0	0	9.78	99.99	6.10
2009	3700 F	0	0	9.49	99.99	5.30
2008	3800 C	N 3800	0	9.80	99.99	6.80
2007	4600 S	0	0	9.29	99.99	10.30
2006	4600 F			9.57	99.99	9.60
2005	4500 C	N 4500		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2012 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 7086 - SR93/I-75 SB,OFF-RAMP TO SR780/FRUITVILLE RD X210

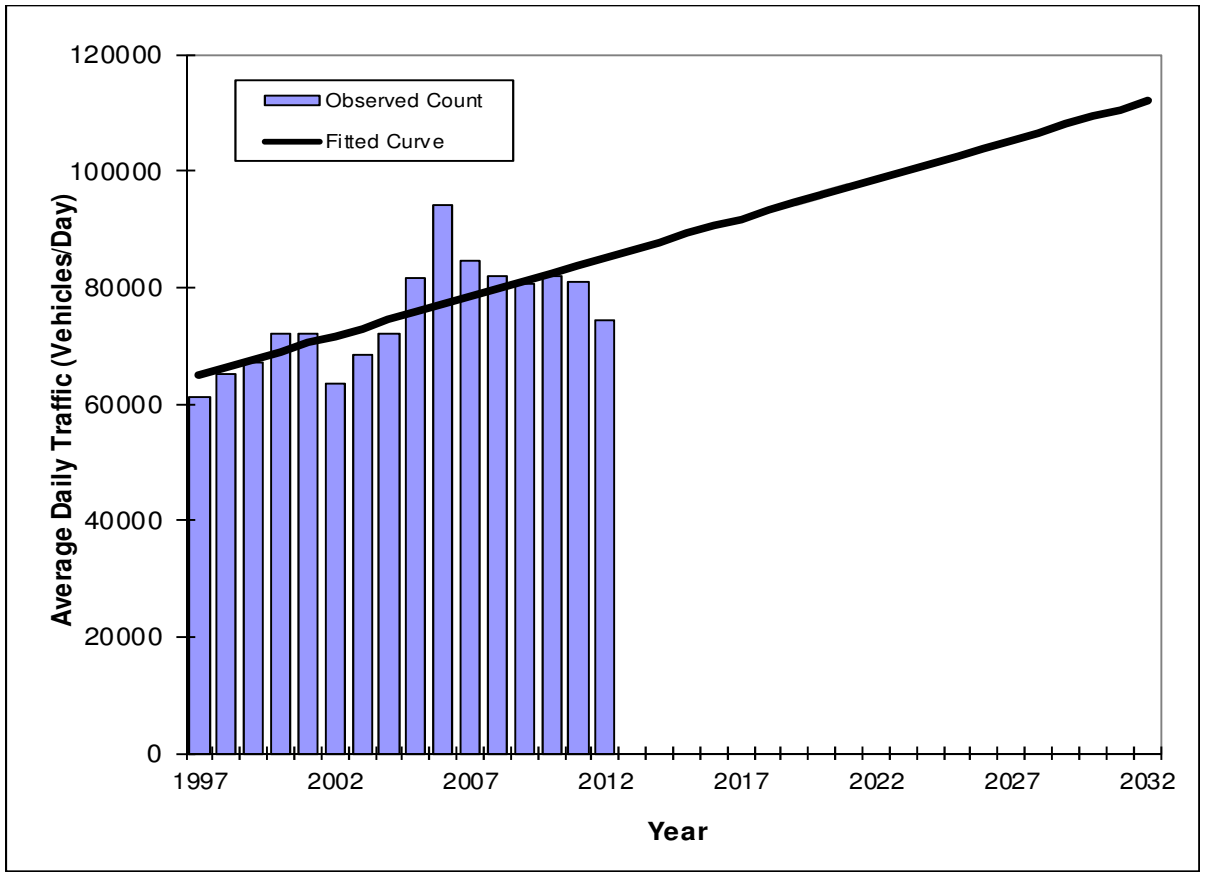
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2012	15500 F	0	0	9.00	99.90	5.50
2011	15500 C	S 15500	0	9.00	99.90	5.90
2010	13000 S	0	0	9.78	99.99	6.10
2009	13000 F	0	0	9.49	99.99	5.30
2008	13500 C	S 13500	0	9.80	99.99	6.80
2007	17000 S	0	0	9.29	99.99	10.30
2006	17000 F			9.57	99.99	9.60
2005	16500 C	S 16500		9.60	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

TRAFFIC TRENDS

-- I-75 South of Clark Road

County:	Sarasota
Station #:	170044
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
1997	61000	65000
1998	65000	66300
1999	67000	67700
2000	72000	69000
2001	72000	70400
2002	63500	71700
2003	68500	73000
2004	72000	74400
2005	81500	75700
2006	94000	77100
2007	84500	78400
2008	82000	79800
2009	80500	81100
2010	82000	82400
2011	81000	83800
2012	74500	85100
2020 Opening Year Trend		
2020	N/A	95900
2030 Mid-Year Trend		
2030	N/A	109300
2040 Design Year Trend		
2040	N/A	122700
TRANPLAN Forecasts/Trends		

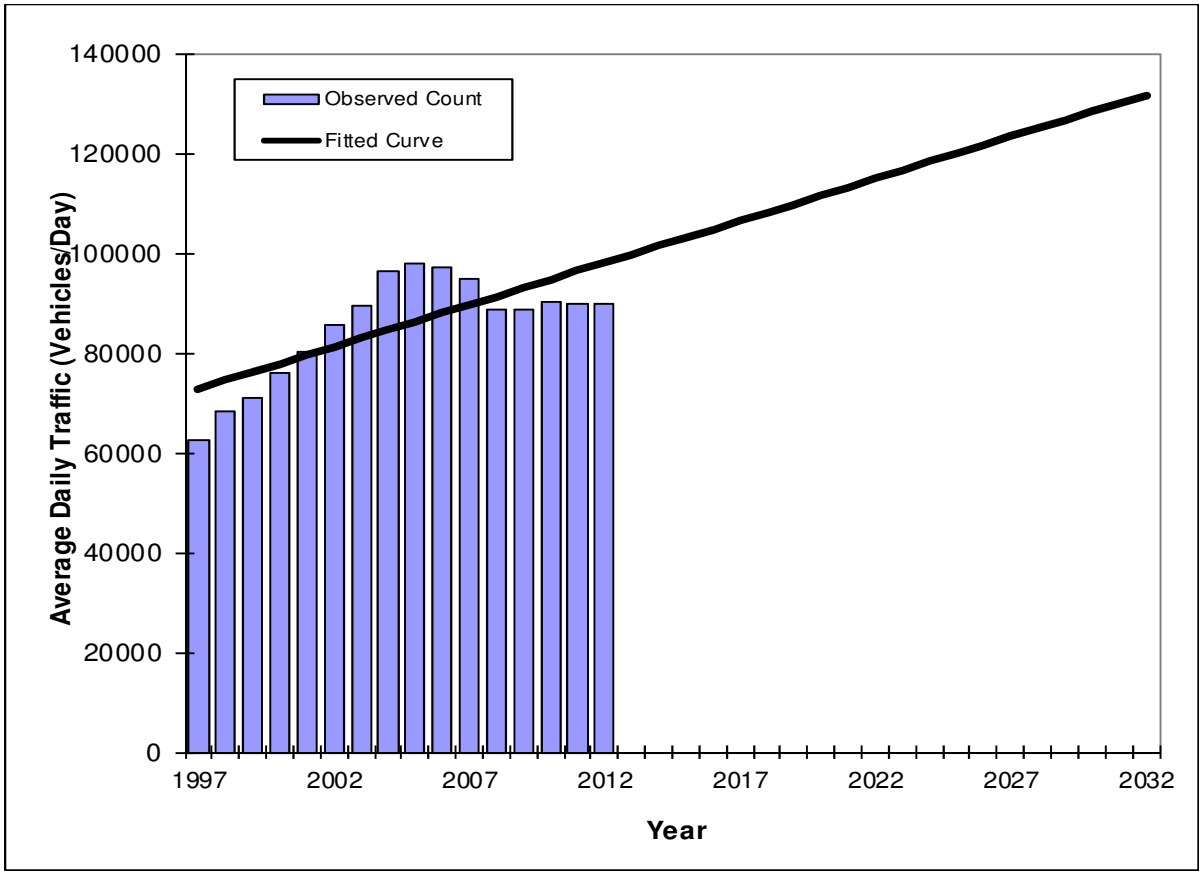
*Axle-Adjusted

** Annual Trend Increase:	1,343
Trend R-squared:	50.3%
Trend Annual Historic Growth Rate:	2.06%
Trend Growth Rate (2012 to Design Year):	1.58%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75 South of Bee Ridge Road

County:	Sarasota
Station #:	170225
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
1997	62500	72800
1998	68100	74500
1999	71100	76200
2000	76000	77800
2001	80300	79500
2002	85600	81200
2003	89600	82900
2004	96400	84600
2005	97900	86300
2006	97300	88000
2007	95000	89600
2008	88700	91300
2009	88500	93000
2010	90200	94700
2011	89700	96400
2012	89900	98100
2020 Opening Year Trend		
2020	N/A	111500
2030 Mid-Year Trend		
2030	N/A	128400
2040 Design Year Trend		
2040	N/A	145200
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

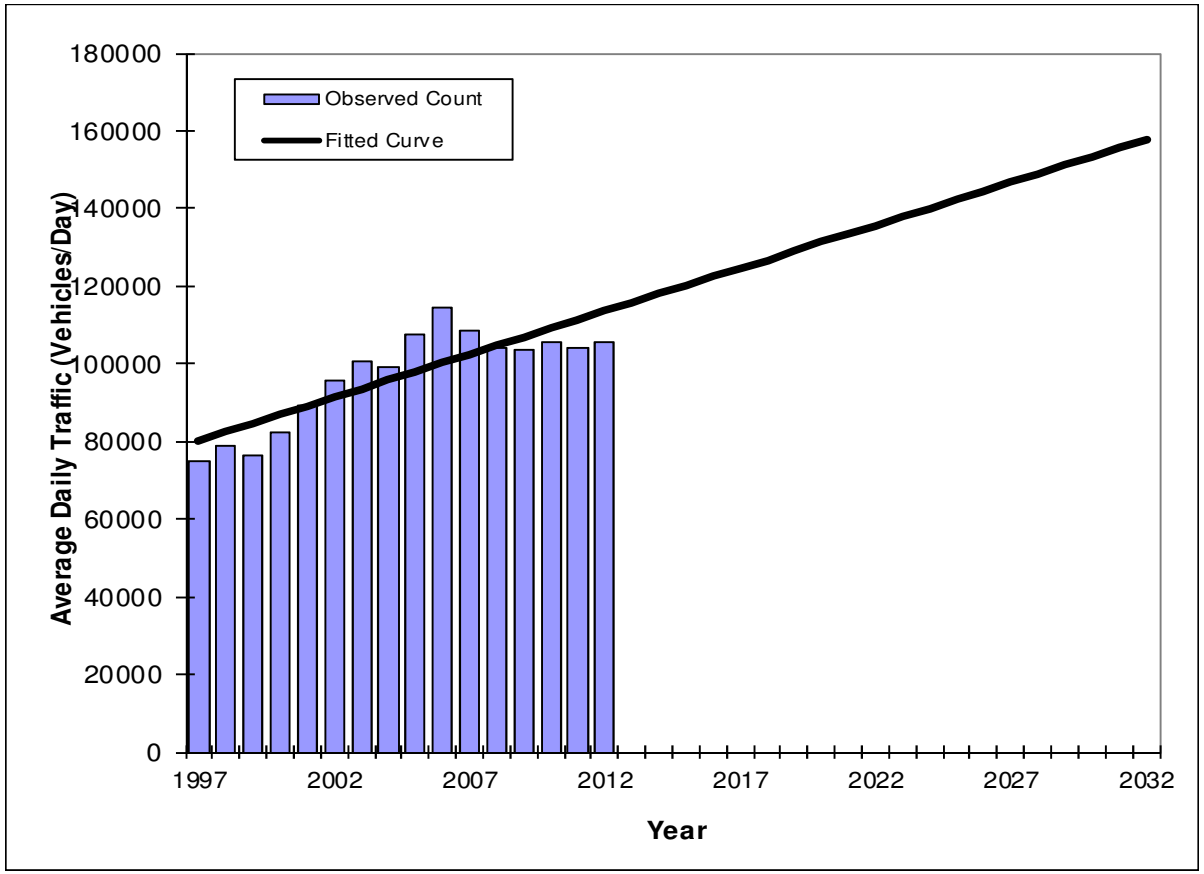
** Annual Trend Increase:	1,684
Trend R-squared:	55.0%
Trend Annual Historic Growth Rate:	2.32%
Trend Growth Rate (2012 to Design Year):	1.71%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75 North of Bee Ridge Road

County:	Sarasota
Station #:	170046
Highway:	0



**** Annual Trend Increase:**	2,217
Trend R-squared:	71.2%
Trend Annual Historic Growth Rate:	2.76%
Trend Growth Rate (2012 to Design Year):	1.95%
Printed:	30-Dec-13

Straight Line Growth Option

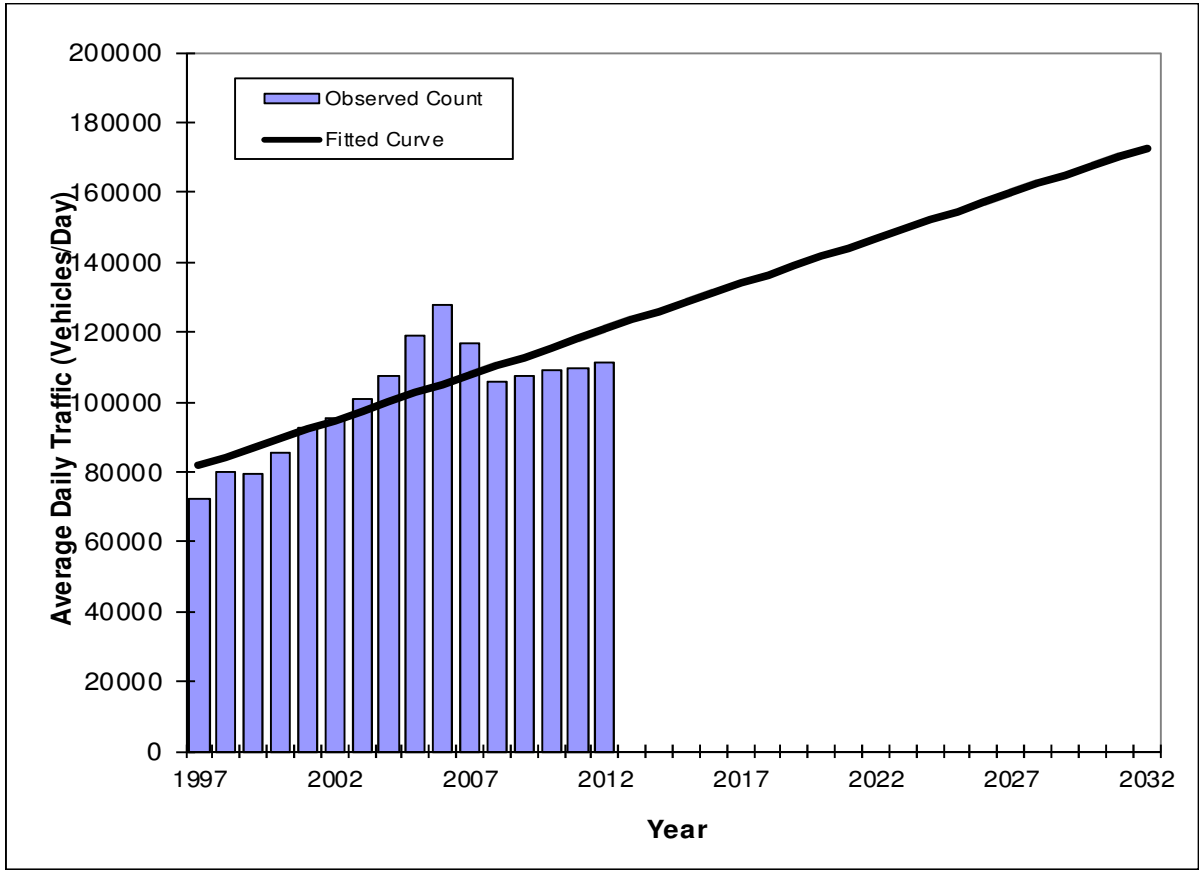
Year	Traffic (ADT/AADT) Count*	Trend**
1997	75000	80300
1998	79000	82500
1999	76500	84700
2000	82500	86900
2001	89500	89100
2002	95500	91400
2003	100500	93600
2004	99000	95800
2005	107500	98000
2006	114500	100200
2007	108500	102400
2008	104000	104700
2009	103500	106900
2010	105500	109100
2011	104000	111300
2012	105500	113500
2020 Opening Year Trend		
2020	N/A	131300
2030 Mid-Year Trend		
2030	N/A	153400
2040 Design Year Trend		
2040	N/A	175600
TRANPLAN Forecasts/Trends		

***Axle-Adjusted**

TRAFFIC TRENDS

-- I-75 North of Fruitville Road

County:	Sarasota
Station #:	170047
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
1997	72500	81700
1998	80000	84300
1999	79500	86900
2000	85500	89500
2001	92500	92100
2002	95500	94700
2003	101000	97300
2004	107500	99900
2005	119000	102500
2006	127500	105100
2007	116500	107700
2008	105500	110300
2009	107500	112900
2010	109000	115500
2011	109500	118100
2012	111000	120700
2020 Opening Year Trend		
2020	N/A	141600
2030 Mid-Year Trend		
2030	N/A	167600
2040 Design Year Trend		
2040	N/A	193600
TRANPLAN Forecasts/Trends		

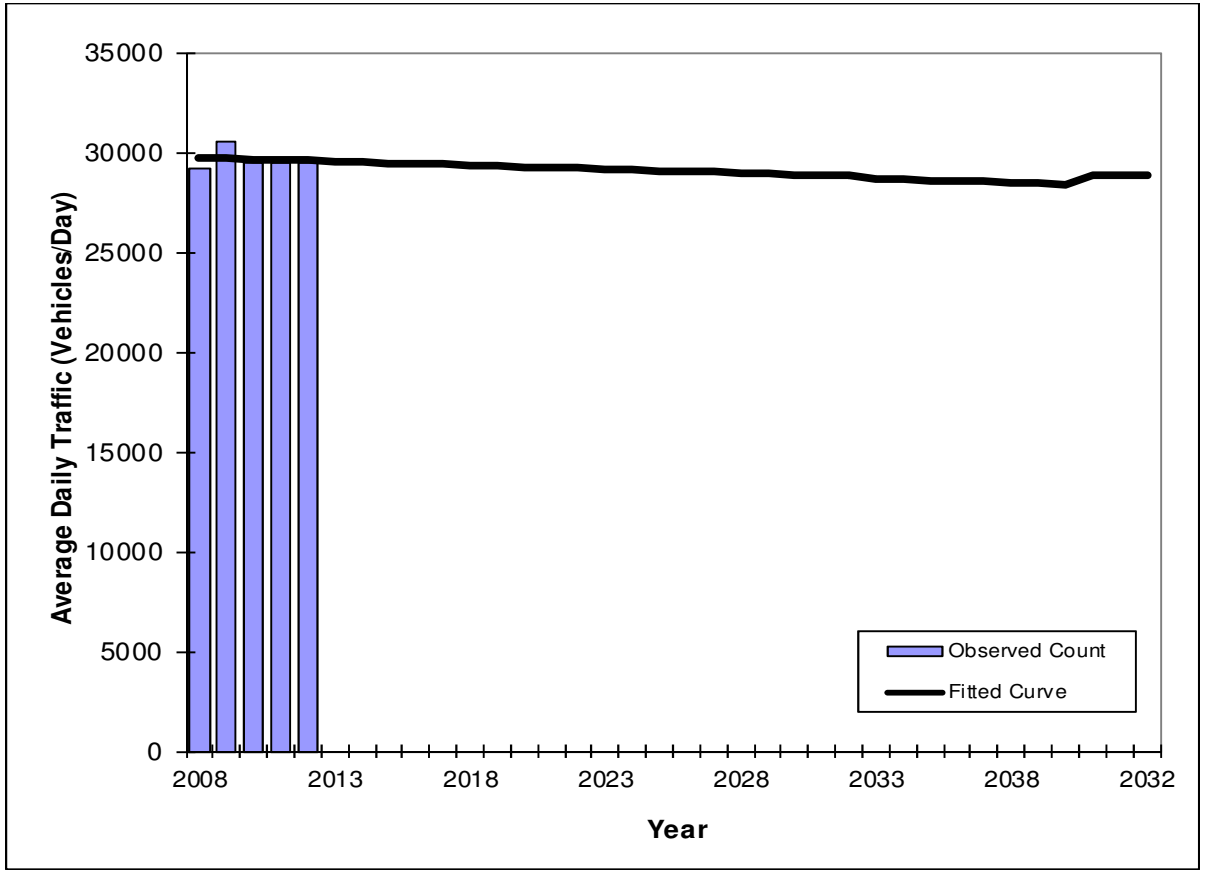
*Axle-Adjusted

** Annual Trend Increase:	2,604
Trend R-squared:	62.9%
Trend Annual Historic Growth Rate:	3.18%
Trend Growth Rate (2012 to Design Year):	2.16%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- Bee Ridge Road W of Maui Way

County:	Sarasota
Station #:	174112
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2008	29200	29700
2009	30500	29700
2010	29500	29600
2011	29500	29600
2012	29500	29600
2020 Opening Year Trend		
2020	N/A	29200
2030 Mid-Year Trend		
2030	N/A	28800
2040 Design Year Trend		
2040	N/A	28400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-40
Trend R-squared:	1.6%
Trend Annual Historic Growth Rate:	-0.08%
Trend Growth Rate (2012 to Design Year):	-0.14%
Printed:	30-Dec-13

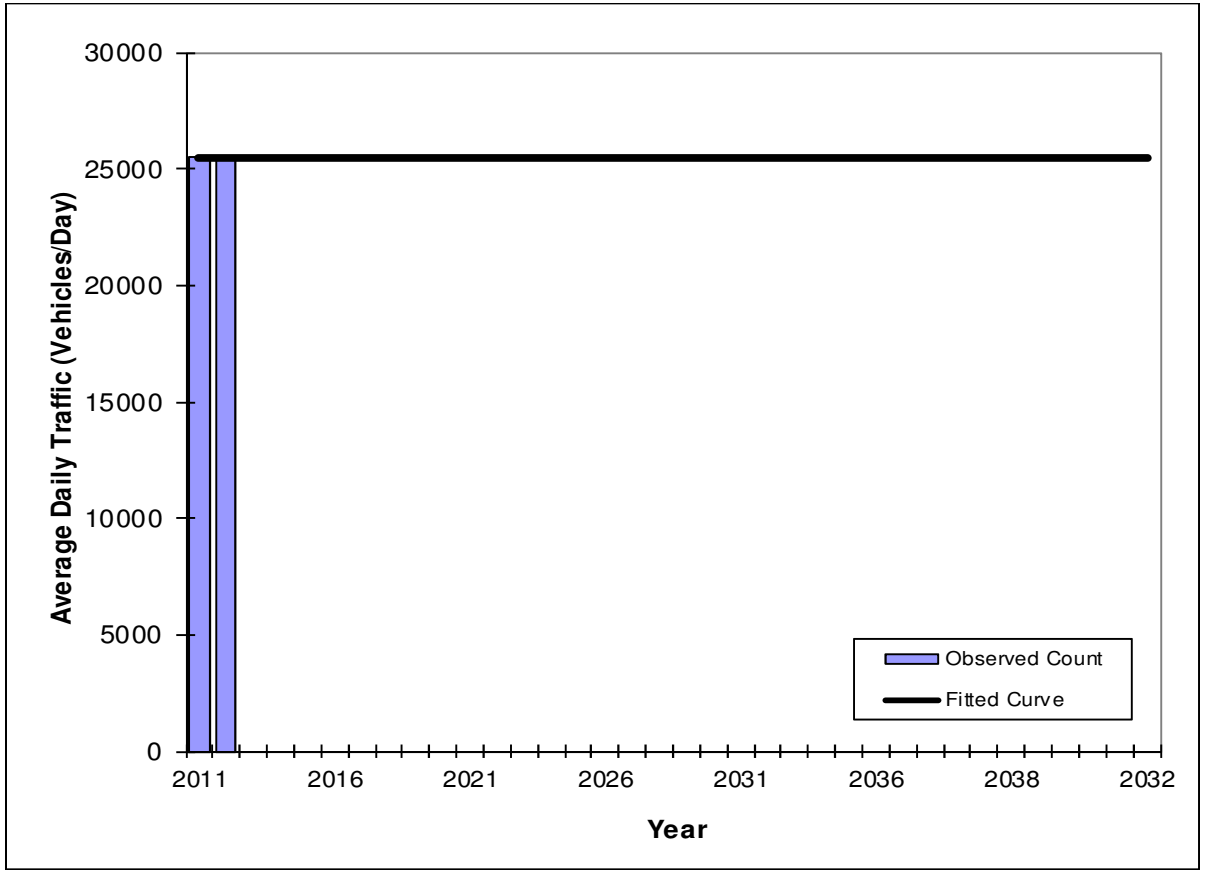
Straight Line Growth Option

***Axle-Adjusted**

TRAFFIC TRENDS

-- Cattlemen Road North of Bee Ridge Road

County:	Sarasota
Station #:	174215
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2011	25500	25500
2012	25500	25500
2020 Opening Year Trend		
2020	N/A	25500
2030 Mid-Year Trend		
2030	N/A	25500
2040 Design Year Trend		
2040	N/A	25500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	0
Trend R-squared:	#DIV/0!
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2012 to Design Year):	0.00%
Printed:	30-Dec-13

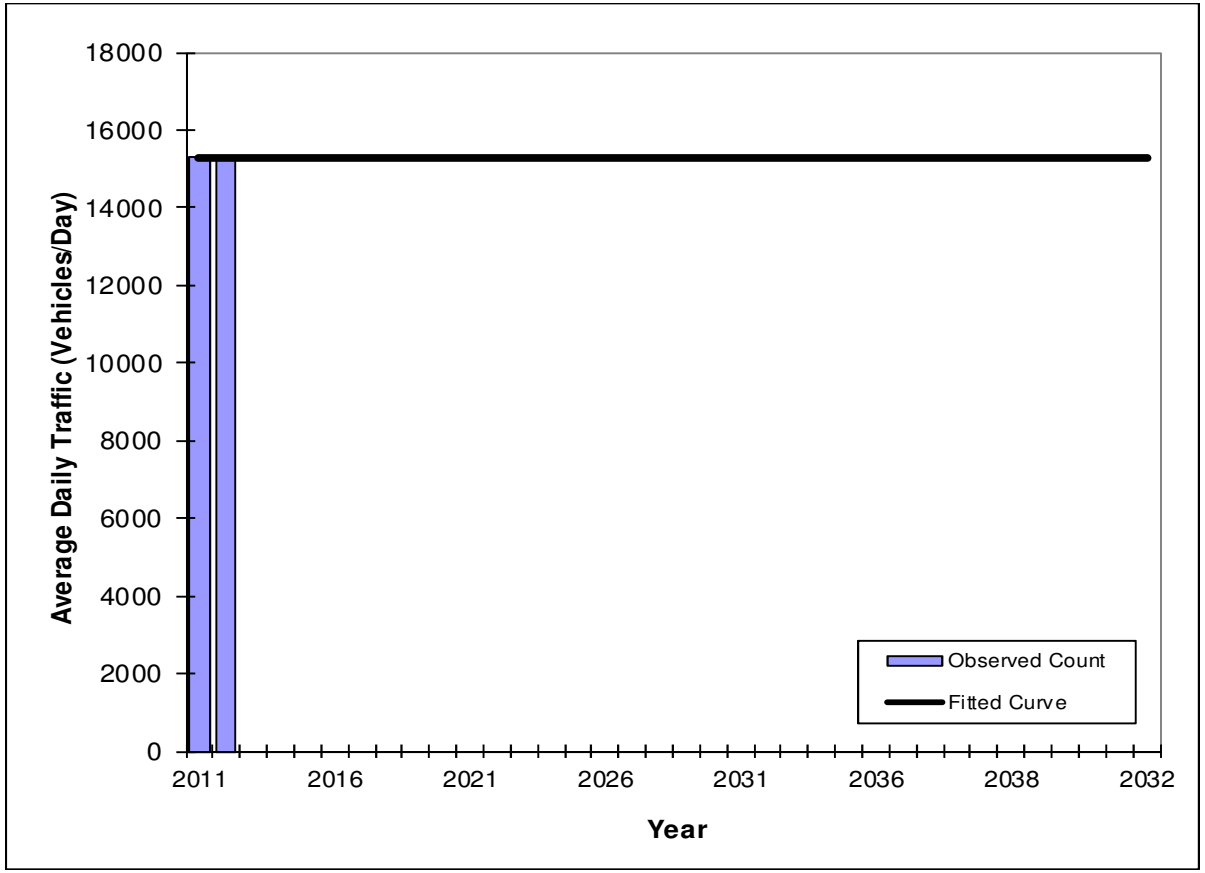
Straight Line Growth Option

***Axle-Adjusted**

TRAFFIC TRENDS

-- Cattlemen Road North of Proctor Road

County:	Sarasota
Station #:	174444
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2011	15300	15300
2012	15300	15300
2020 Opening Year Trend		
2020	N/A	15300
2030 Mid-Year Trend		
2030	N/A	15300
2040 Design Year Trend		
2040	N/A	15300
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	0
Trend R-squared:	#DIV/0!
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2012 to Design Year):	0.00%
Printed:	30-Dec-13

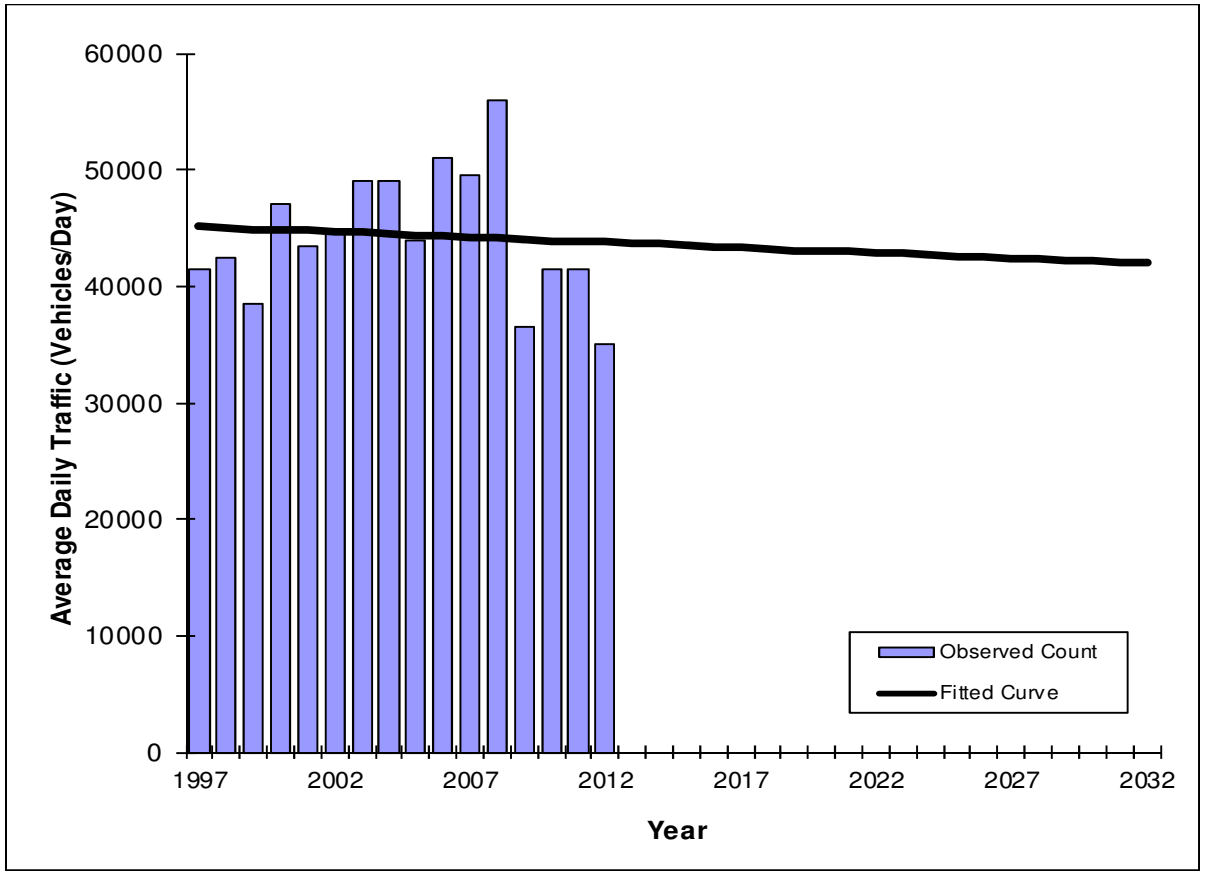
Straight Line Growth Option

***Axle-Adjusted**

TRAFFIC TRENDS

-- Bee Ridge Road East of Center Gate Boulevard/Woodmont Drive

County:	Sarasota
Station #:	175074
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
1997	41500	45100
1998	42500	45000
1999	38500	44900
2000	47000	44800
2001	43500	44800
2002	45000	44700
2003	49000	44600
2004	49000	44500
2005	44000	44400
2006	51000	44300
2007	49500	44200
2008	56000	44100
2009	36500	44000
2010	41500	43900
2011	41500	43900
2012	35000	43800
2020 Opening Year Trend		
2020	N/A	43000
2030 Mid-Year Trend		
2030	N/A	42200
2040 Design Year Trend		
2040	N/A	41300
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

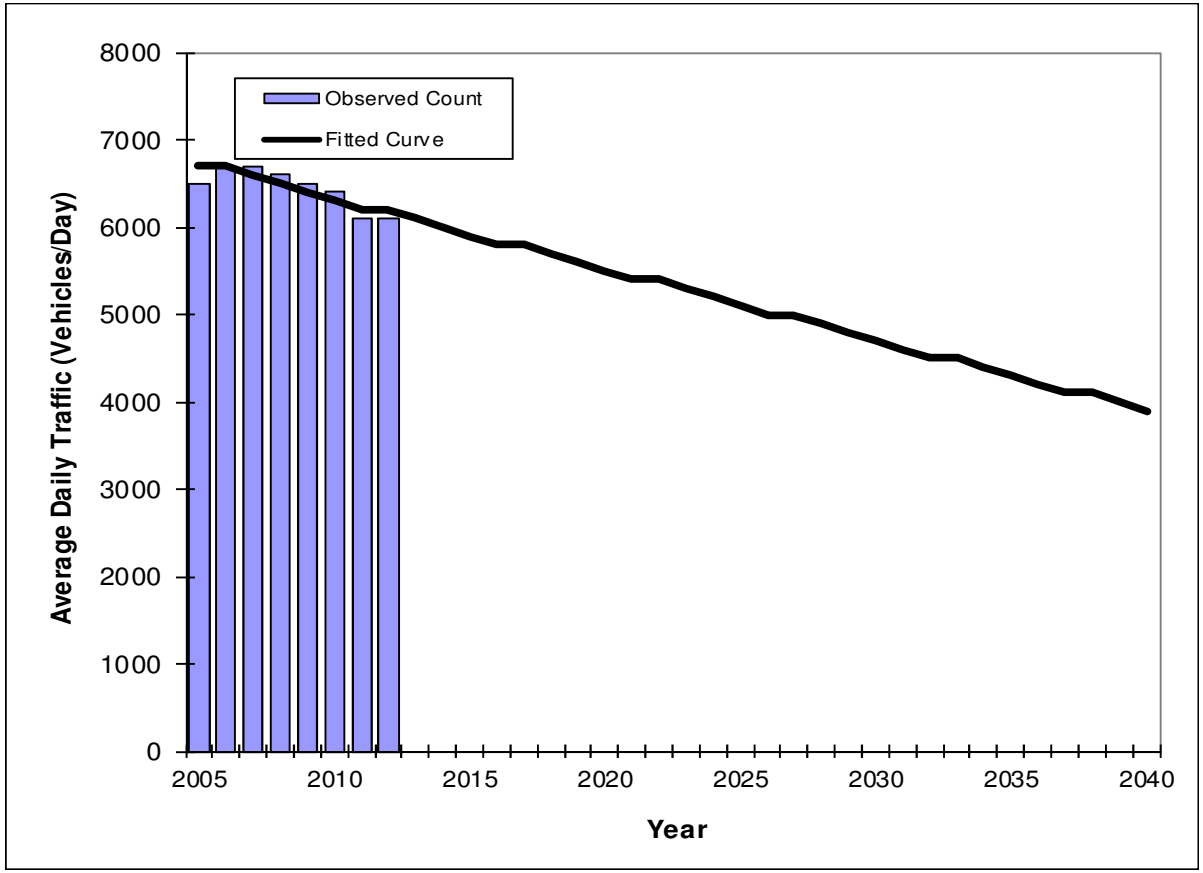
**** Annual Trend Increase:**	-90
Trend R-squared:	0.6%
Trend Annual Historic Growth Rate:	-0.19%
Trend Growth Rate (2012 to Design Year):	-0.20%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Clark Road Northbound Off Ramp

County:	Sarasota
Station #:	177061
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	6500	6700
2006	6700	6700
2007	6700	6600
2008	6600	6500
2009	6500	6400
2010	6400	6300
2011	6100	6200
2012	6100	6200
2020 Opening Year Trend		
2020	N/A	5500
2030 Mid-Year Trend		
2030	N/A	4700
2040 Design Year Trend		
2040	N/A	3900
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

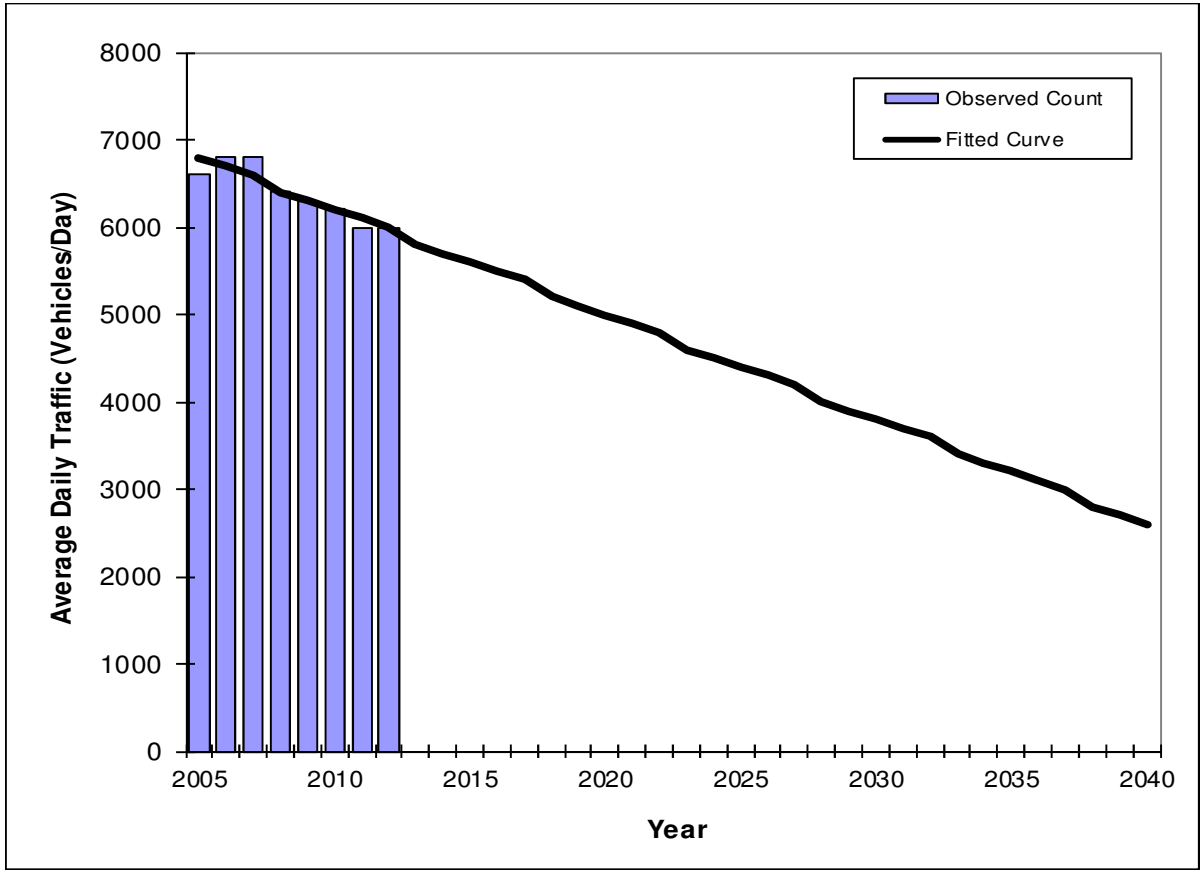
**** Annual Trend Increase:**	-81
Trend R-squared:	68.8%
Trend Annual Historic Growth Rate:	-1.07%
Trend Growth Rate (2012 to Design Year):	-1.32%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Clark Road Southbound On Ramp

County:	Sarasota
Station #:	177062
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	6600	6800
2006	6800	6700
2007	6800	6600
2008	6400	6400
2009	6300	6300
2010	6200	6200
2011	6000	6100
2012	6000	6000
2020 Opening Year Trend		
2020	N/A	5000
2030 Mid-Year Trend		
2030	N/A	3800
2040 Design Year Trend		
2040	N/A	2600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

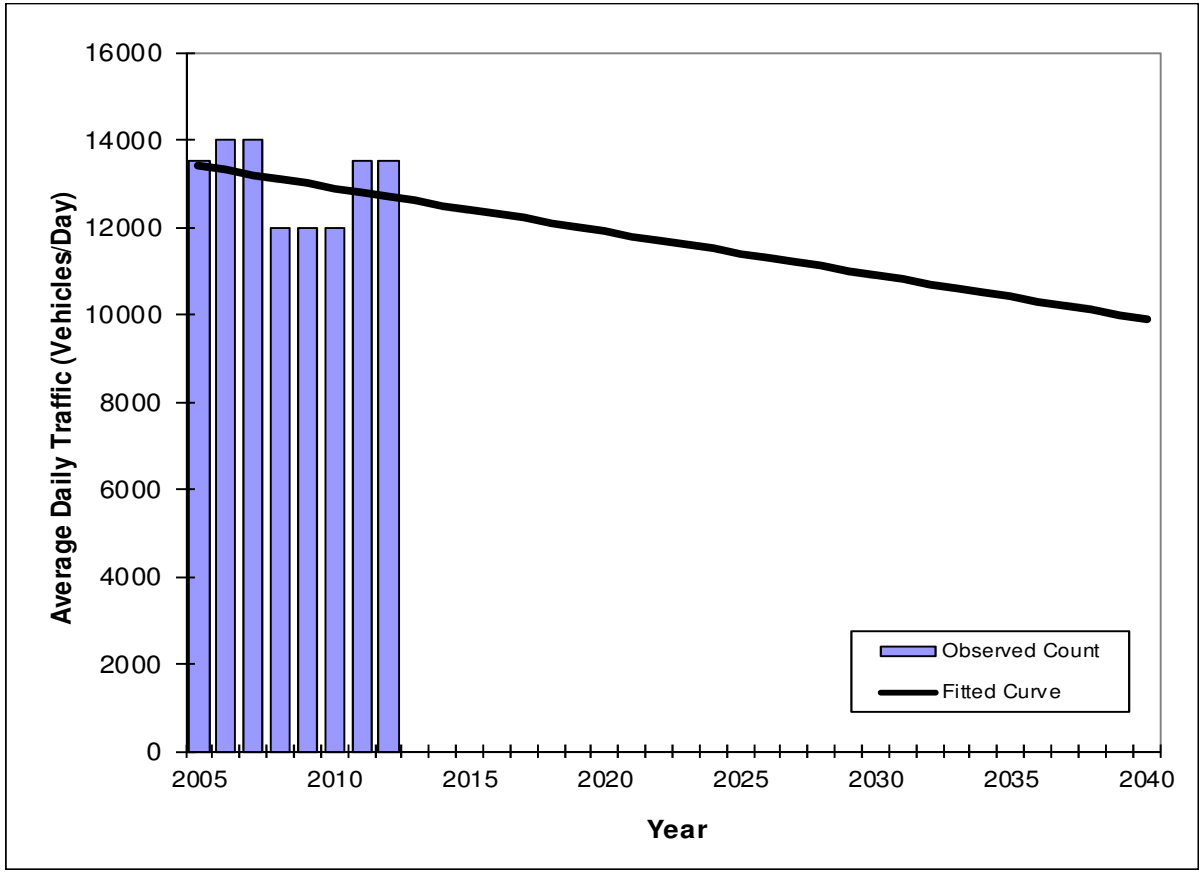
**** Annual Trend Increase:**	-120
Trend R-squared:	83.3%
Trend Annual Historic Growth Rate:	-1.68%
Trend Growth Rate (2012 to Design Year):	-2.02%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Clark Road Northbound On Ramp

County:	Sarasota
Station #:	177063
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	13500	13400
2006	14000	13300
2007	14000	13200
2008	12000	13100
2009	12000	13000
2010	12000	12900
2011	13500	12800
2012	13500	12700
2020 Opening Year Trend		
2020	N/A	11900
2030 Mid-Year Trend		
2030	N/A	10900
2040 Design Year Trend		
2040	N/A	9900
TRANPLAN Forecasts/Trends		

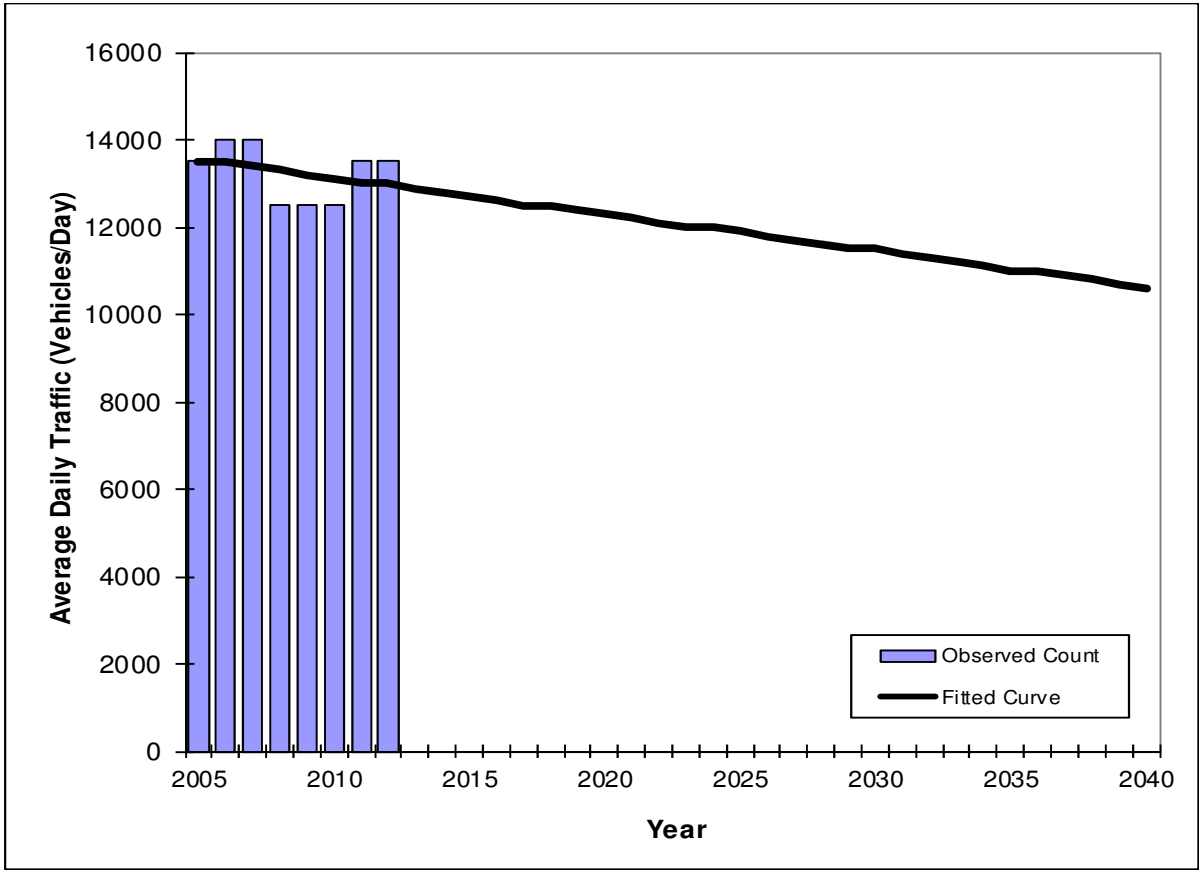
*Axle-Adjusted

**** Annual Trend Increase:**	-101
Trend R-squared:	7.5%
Trend Annual Historic Growth Rate:	-0.75%
Trend Growth Rate (2012 to Design Year):	-0.79%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75/Clark Road Southbound Off Ramp

County:	Sarasota
Station #:	177064
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	13500	13500
2006	14000	13500
2007	14000	13400
2008	12500	13300
2009	12500	13200
2010	12500	13100
2011	13500	13000
2012	13500	13000
2020 Opening Year Trend		
2020	N/A	12300
2030 Mid-Year Trend		
2030	N/A	11500
2040 Design Year Trend		
2040	N/A	10600
TRANPLAN Forecasts/Trends		

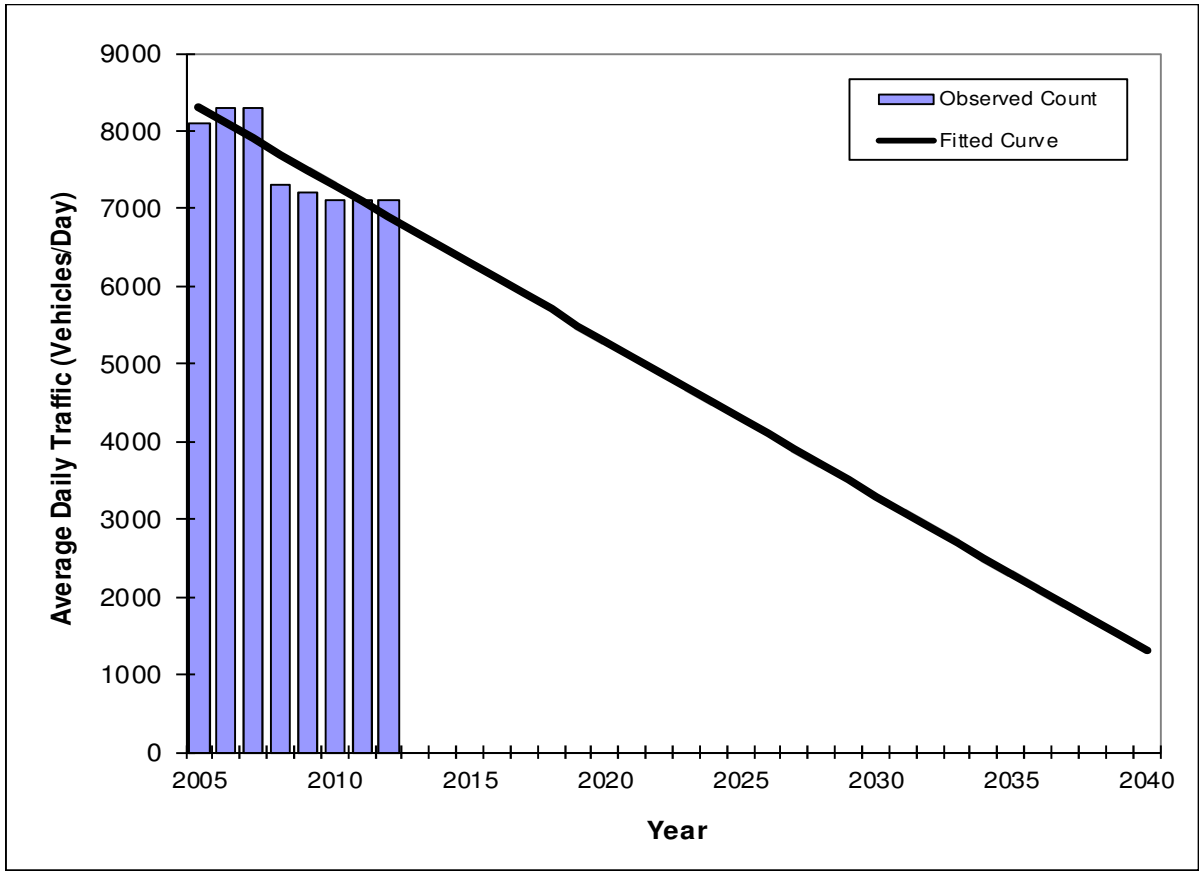
*Axle-Adjusted

**** Annual Trend Increase:**	-83
Trend R-squared:	9.7%
Trend Annual Historic Growth Rate:	-0.53%
Trend Growth Rate (2012 to Design Year):	-0.66%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75/Bee Ridge Road Northbound Off Ramp

County:	Sarasota
Station #:	177071
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	8100	8300
2006	8300	8100
2007	8300	7900
2008	7300	7700
2009	7200	7500
2010	7100	7300
2011	7100	7100
2012	7100	6900
2020 Opening Year Trend		
2020	N/A	5300
2030 Mid-Year Trend		
2030	N/A	3300
2040 Design Year Trend		
2040	N/A	1300
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-199
Trend R-squared:	74.8%
Trend Annual Historic Growth Rate:	-2.41%
Trend Growth Rate (2012 to Design Year):	-2.90%
Printed:	30-Dec-13

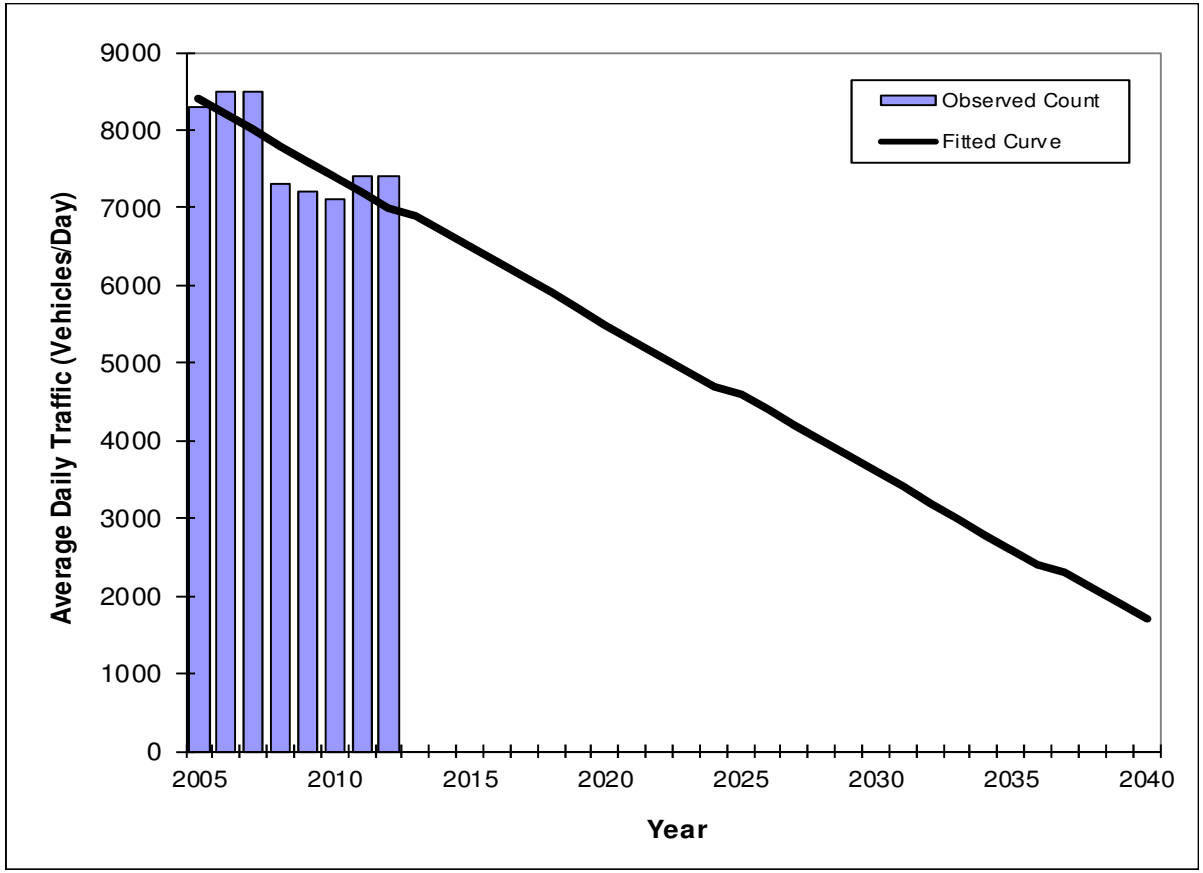
Straight Line Growth Option

***Axle-Adjusted**

TRAFFIC TRENDS

-- I-75/Bee Ridge Road Southbound On Ramp

County:	Sarasota
Station #:	177072
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	8300	8400
2006	8500	8200
2007	8500	8000
2008	7300	7800
2009	7200	7600
2010	7100	7400
2011	7400	7200
2012	7400	7000
2020 Opening Year Trend		
2020	N/A	5500
2030 Mid-Year Trend		
2030	N/A	3600
2040 Design Year Trend		
2040	N/A	1700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

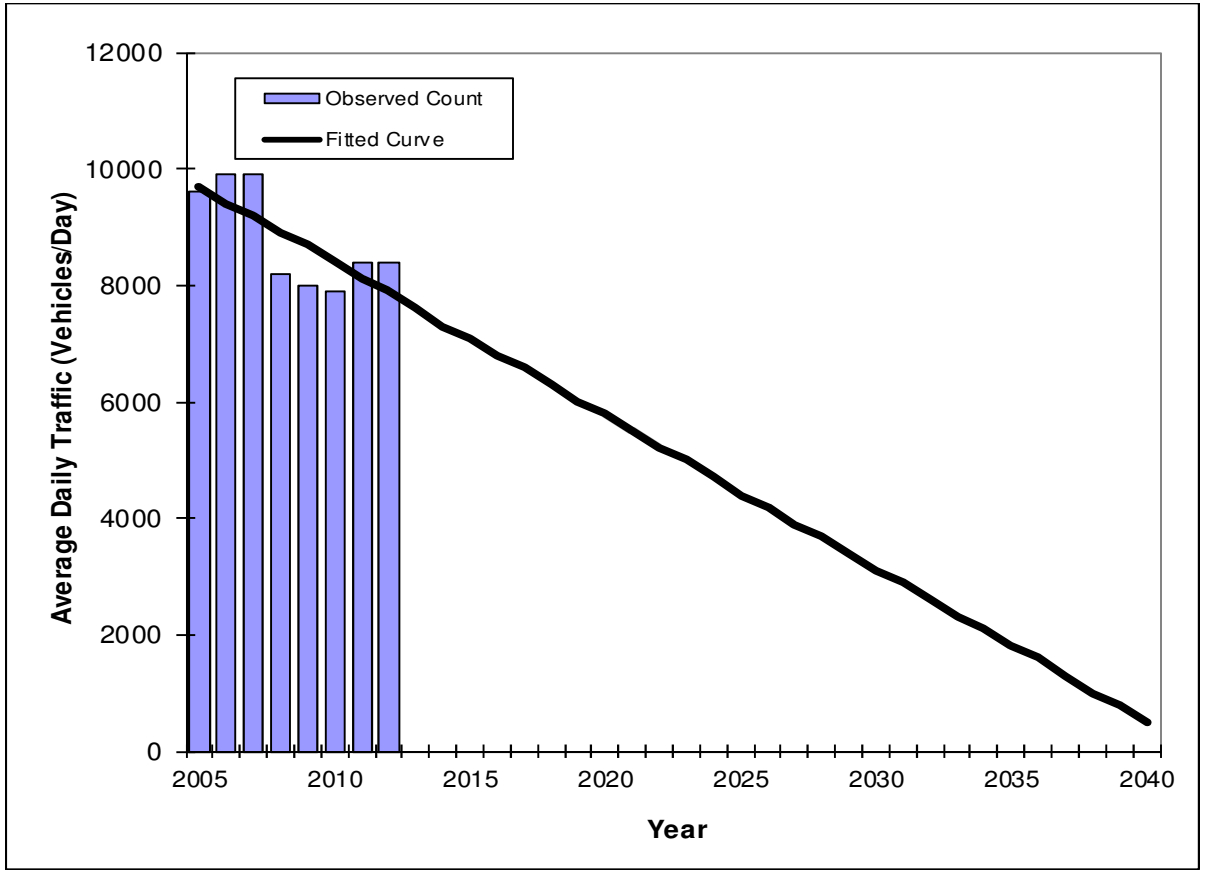
**** Annual Trend Increase:**	-192
Trend R-squared:	59.6%
Trend Annual Historic Growth Rate:	-2.38%
Trend Growth Rate (2012 to Design Year):	-2.70%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Bee Ridge Road Northbound Loop On Ramp

County:	Sarasota
Station #:	177073
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	9600	9700
2006	9900	9400
2007	9900	9200
2008	8200	8900
2009	8000	8700
2010	7900	8400
2011	8400	8100
2012	8400	7900
2020 Opening Year Trend		
2020	N/A	5800
2030 Mid-Year Trend		
2030	N/A	3100
2040 Design Year Trend		
2040	N/A	500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-263
Trend R-squared:	56.0%
Trend Annual Historic Growth Rate:	-2.65%
Trend Growth Rate (2012 to Design Year):	-3.35%
Printed:	30-Dec-13

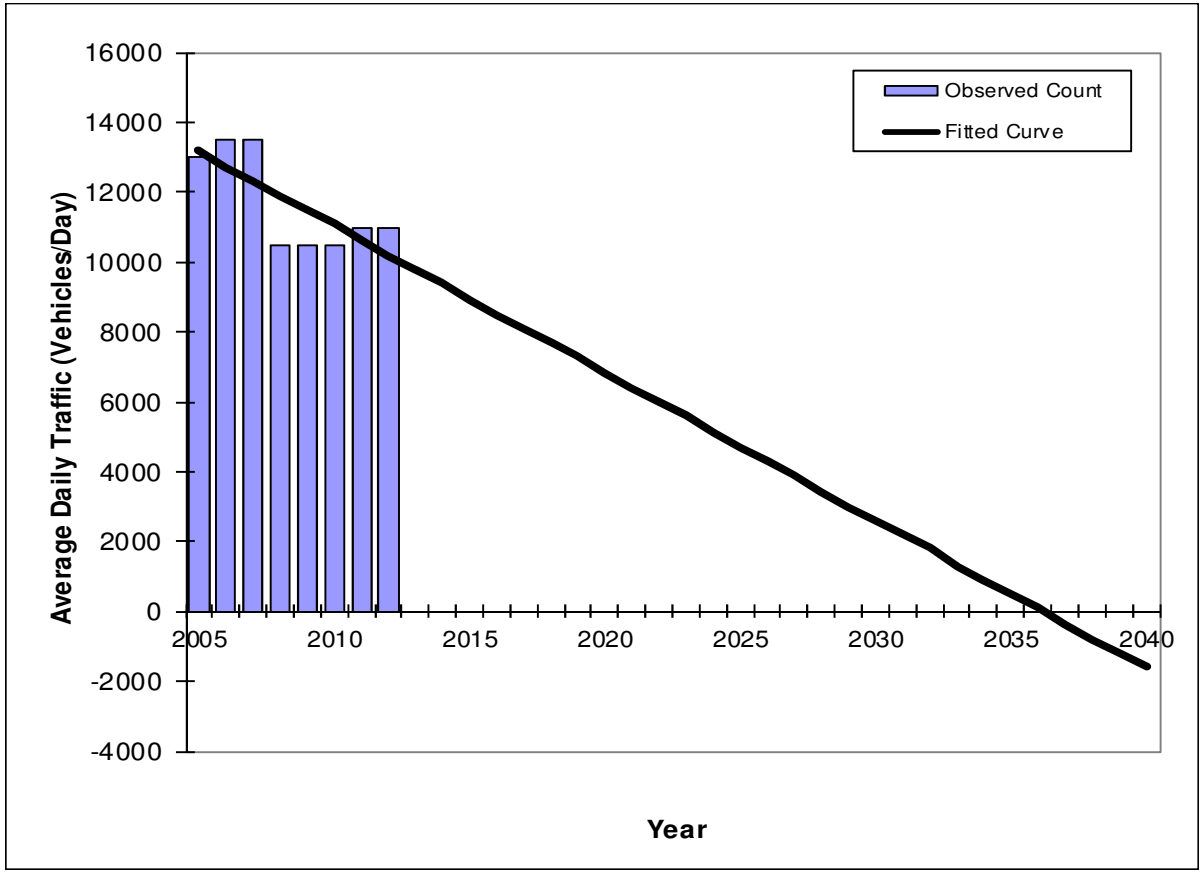
Straight Line Growth Option

***Axle-Adjusted**

TRAFFIC TRENDS

-- I-75/Bee Ridge Road Southbound Off Ramp

County:	Sarasota
Station #:	177074
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	13000	13200
2006	13500	12700
2007	13500	12300
2008	10500	11900
2009	10500	11500
2010	10500	11100
2011	11000	10600
2012	11000	10200
2020 Opening Year Trend		
2020	N/A	6800
2030 Mid-Year Trend		
2030	N/A	2600
2040 Design Year Trend		
2040	N/A	-1600
TRANPLAN Forecasts/Trends		

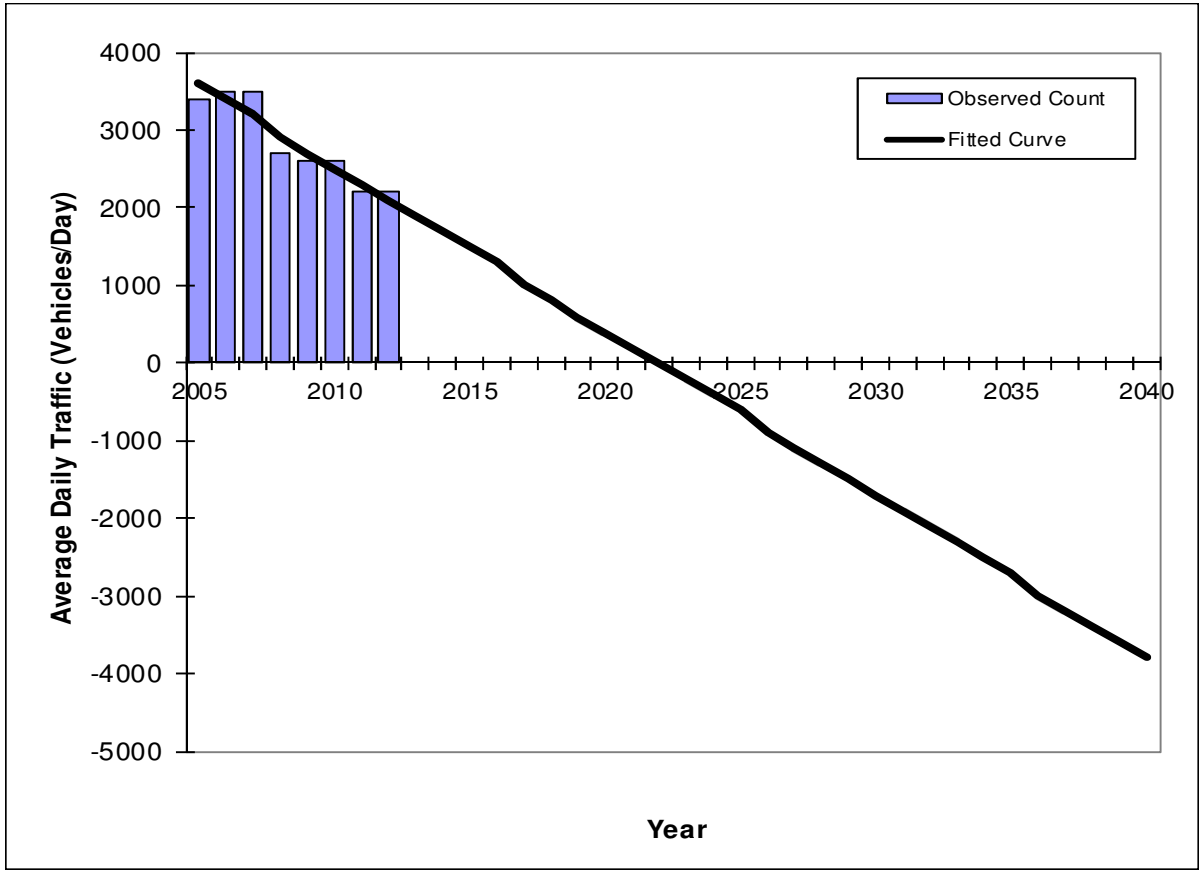
*Axle-Adjusted

**** Annual Trend Increase:**	-423
Trend R-squared:	55.7%
Trend Annual Historic Growth Rate:	-3.25%
Trend Growth Rate (2012 to Design Year):	-4.13%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75/Bee Ridge Road Northbound On Ramp

County:	Sarasota
Station #:	177075
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	3400	3600
2006	3500	3400
2007	3500	3200
2008	2700	2900
2009	2600	2700
2010	2600	2500
2011	2200	2300
2012	2200	2100
2020 Opening Year Trend		
2020	N/A	400
2030 Mid-Year Trend		
2030	N/A	-1700
2040 Design Year Trend		
2040	N/A	-3800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

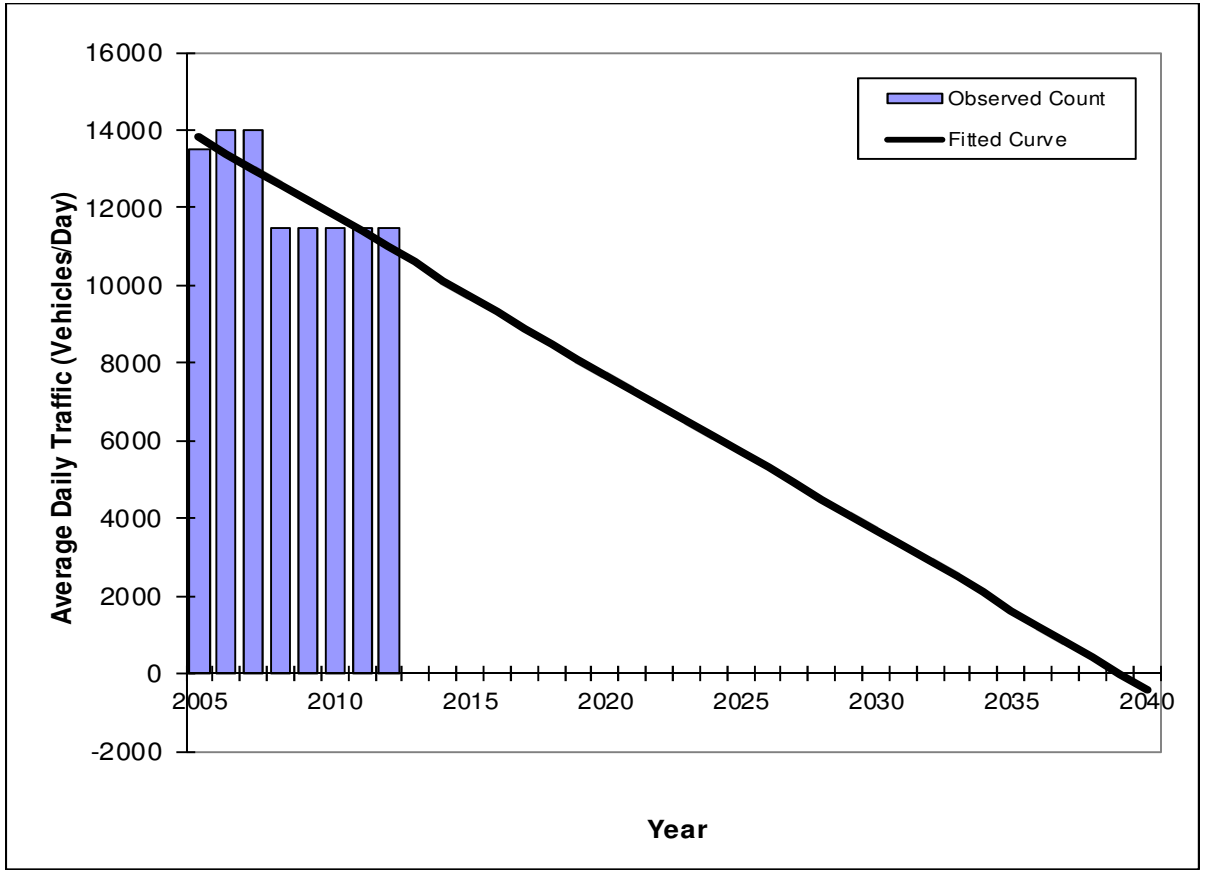
**** Annual Trend Increase:**	-211
Trend R-squared:	87.2%
Trend Annual Historic Growth Rate:	-5.95%
Trend Growth Rate (2012 to Design Year):	-10.03%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Fruitville Road Northbound Off Ramp

County:	Sarasota
Station #:	177081
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	13500	13800
2006	14000	13400
2007	14000	13000
2008	11500	12600
2009	11500	12200
2010	11500	11800
2011	11500	11400
2012	11500	11000
2020 Opening Year Trend		
2020	N/A	7700
2030 Mid-Year Trend		
2030	N/A	3700
2040 Design Year Trend		
2040	N/A	-400
TRANPLAN Forecasts/Trends		

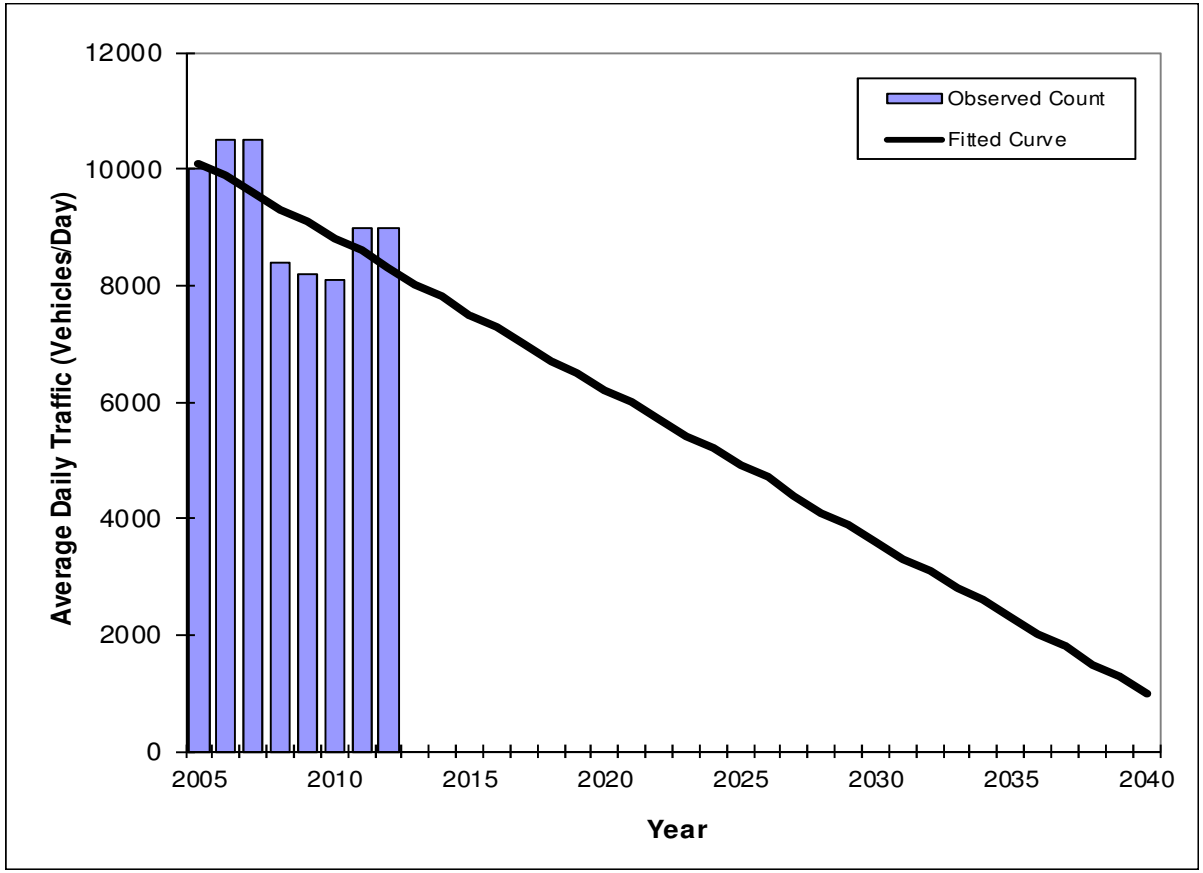
*Axle-Adjusted

**** Annual Trend Increase:**	-405
Trend R-squared:	66.3%
Trend Annual Historic Growth Rate:	-2.90%
Trend Growth Rate (2012 to Design Year):	-3.70%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75/Fruitville Road Southbound On Ramp

County:	Sarasota
Station #:	177082
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	10000	10100
2006	10500	9900
2007	10500	9600
2008	8400	9300
2009	8200	9100
2010	8100	8800
2011	9000	8600
2012	9000	8300
2020 Opening Year Trend		
2020	N/A	6200
2030 Mid-Year Trend		
2030	N/A	3600
2040 Design Year Trend		
2040	N/A	1000
TRANPLAN Forecasts/Trends		

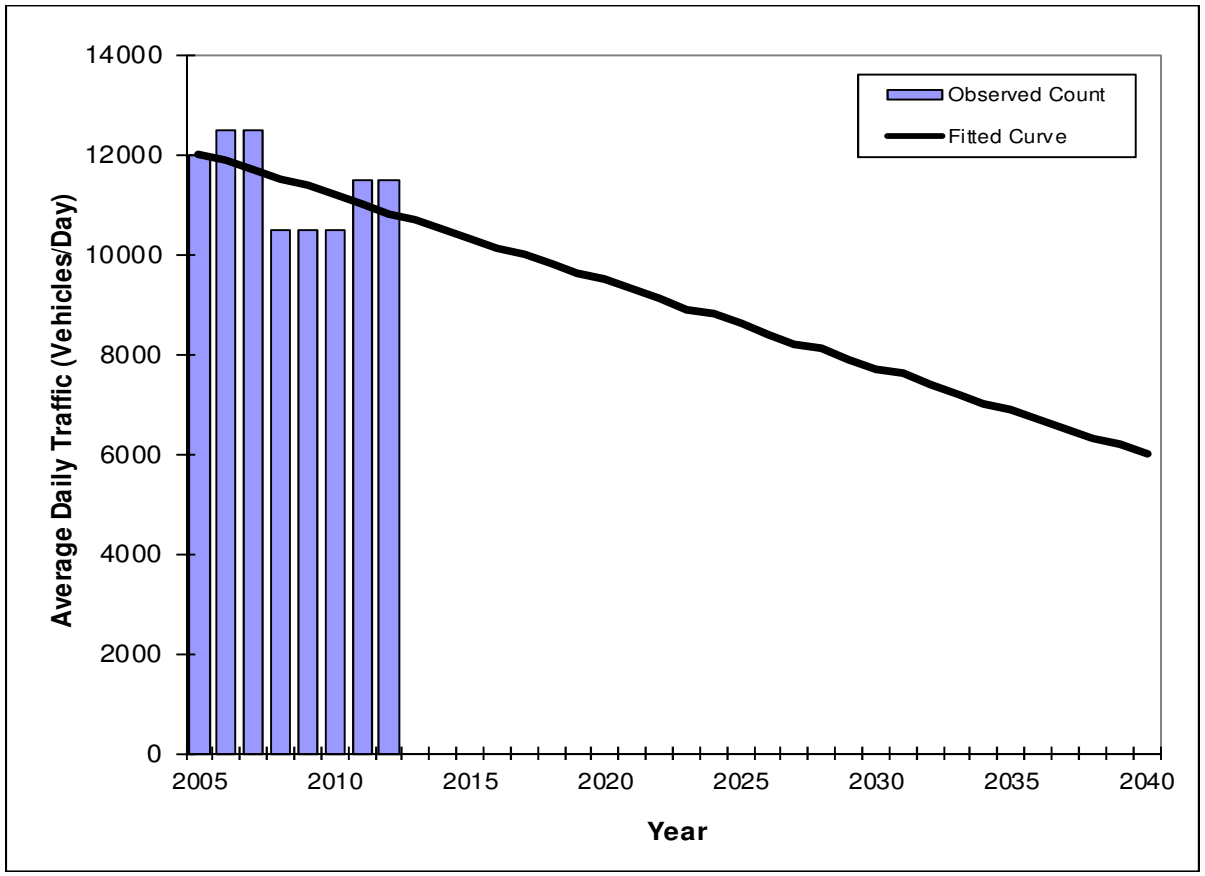
*Axle-Adjusted

**** Annual Trend Increase:**	-261
Trend R-squared:	41.1%
Trend Annual Historic Growth Rate:	-2.55%
Trend Growth Rate (2012 to Design Year):	-3.14%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75/Fruitville Road Northbound Loop On Ramp

County:	Sarasota
Station #:	177083
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	12000	12000
2006	12500	11900
2007	12500	11700
2008	10500	11500
2009	10500	11400
2010	10500	11200
2011	11500	11000
2012	11500	10800
2020 Opening Year Trend		
2020	N/A	9500
2030 Mid-Year Trend		
2030	N/A	7700
2040 Design Year Trend		
2040	N/A	6000
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

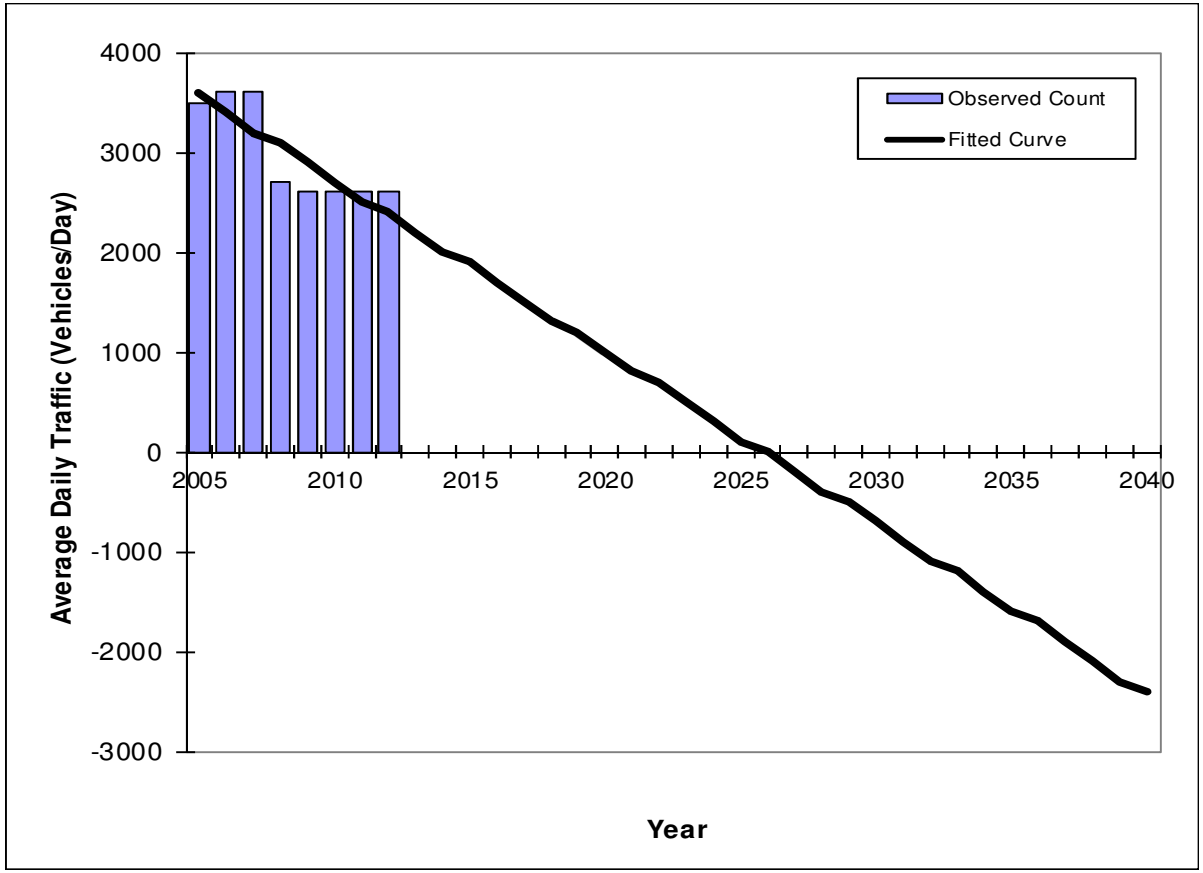
**** Annual Trend Increase:**	-173
Trend R-squared:	24.0%
Trend Annual Historic Growth Rate:	-1.43%
Trend Growth Rate (2012 to Design Year):	-1.59%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Fruitville Road Southbound Loop On Ramp

County:	Sarasota
Station #:	177084
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	3500	3600
2006	3600	3400
2007	3600	3200
2008	2700	3100
2009	2600	2900
2010	2600	2700
2011	2600	2500
2012	2600	2400
2020 Opening Year Trend		
2020	N/A	1000
2030 Mid-Year Trend		
2030	N/A	-700
2040 Design Year Trend		
2040	N/A	-2400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

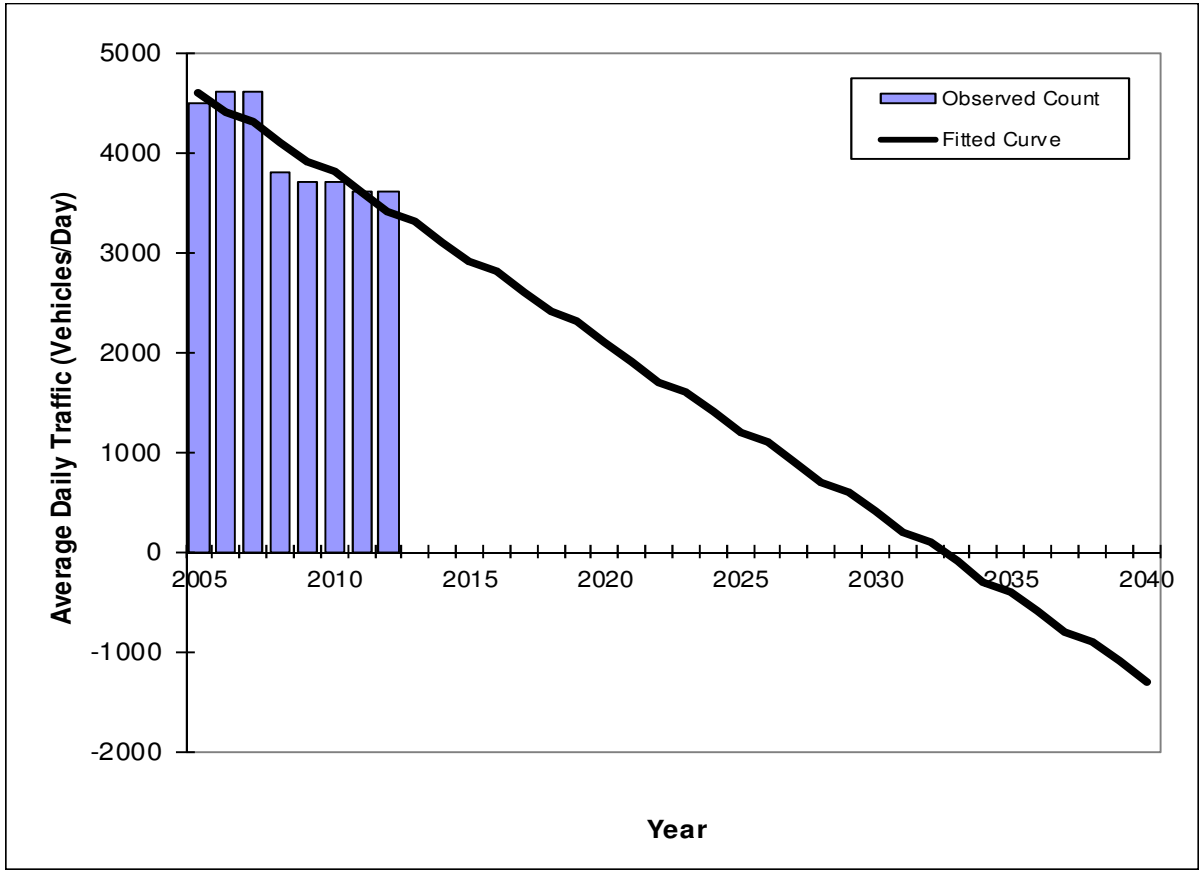
**** Annual Trend Increase:**	-171
Trend R-squared:	72.8%
Trend Annual Historic Growth Rate:	-4.76%
Trend Growth Rate (2012 to Design Year):	-7.14%
Printed:	30-Dec-13

Straight Line Growth Option

TRAFFIC TRENDS

-- I-75/Fruitville Road Northbound On Ramp

County:	Sarasota
Station #:	177085
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	4500	4600
2006	4600	4400
2007	4600	4300
2008	3800	4100
2009	3700	3900
2010	3700	3800
2011	3600	3600
2012	3600	3400
2020 Opening Year Trend		
2020	N/A	2100
2030 Mid-Year Trend		
2030	N/A	400
2040 Design Year Trend		
2040	N/A	-1300
TRANPLAN Forecasts/Trends		

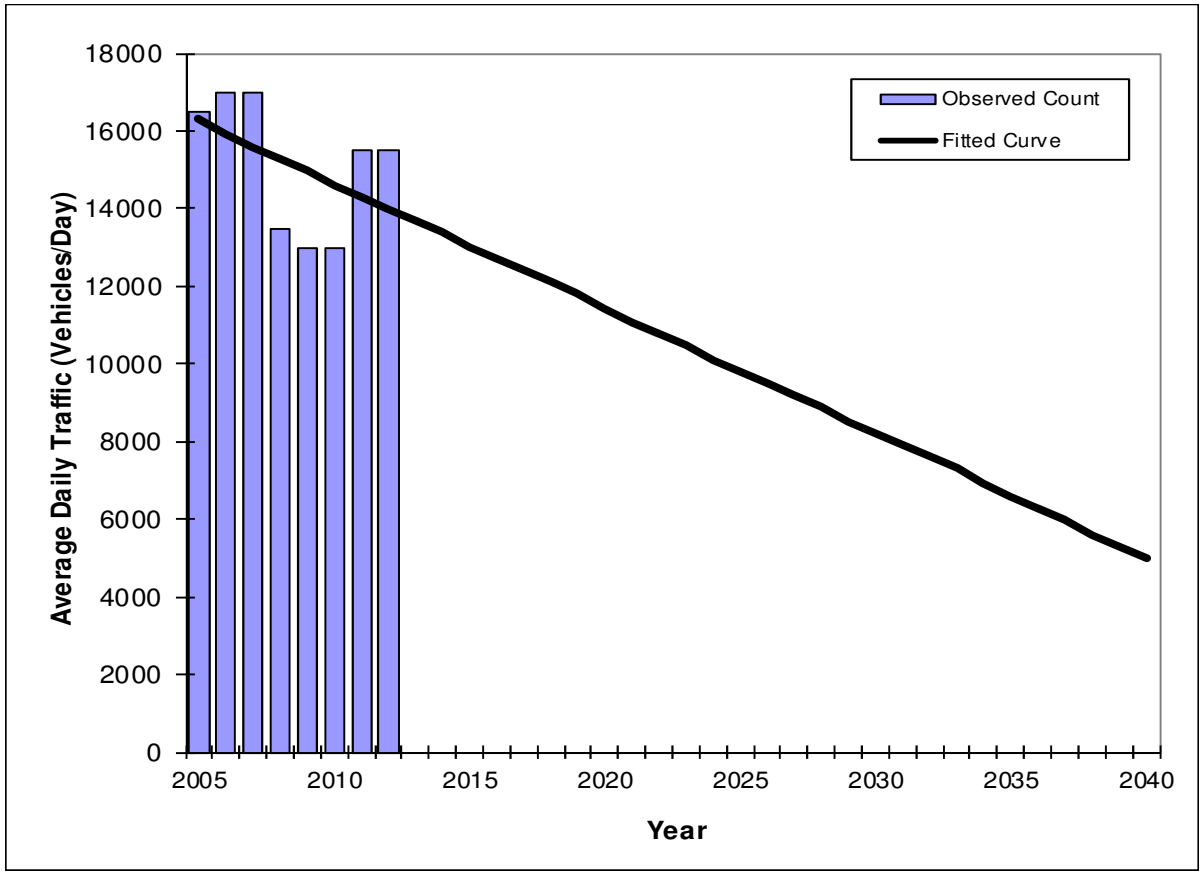
*Axle-Adjusted

**** Annual Trend Increase:**	-168
Trend R-squared:	78.4%
Trend Annual Historic Growth Rate:	-3.73%
Trend Growth Rate (2012 to Design Year):	-4.94%
Printed:	30-Dec-13
Straight Line Growth Option	

TRAFFIC TRENDS

-- I-75/Fruitville Road Southbound Off Ramp

County:	Sarasota
Station #:	177086
Highway:	0



Year	Traffic (ADT/AADT) Count*	Trend**
2005	16500	16300
2006	17000	15900
2007	17000	15600
2008	13500	15300
2009	13000	15000
2010	13000	14600
2011	15500	14300
2012	15500	14000
2020 Opening Year Trend		
2020	N/A	11400
2030 Mid-Year Trend		
2030	N/A	8200
2040 Design Year Trend		
2040	N/A	5000
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	-321
Trend R-squared:	20.8%
Trend Annual Historic Growth Rate:	-2.02%
Trend Growth Rate (2012 to Design Year):	-2.30%
Printed:	30-Dec-13

Straight Line Growth Option

FDOT 2012 FTI Historical Trend Analysis Growth Rate Summary

Station ID	Roadway Segment	Historical Growth Rate
170046	I-75 N of Bee Ridge	2.76%
170225	I-75 S of Bee Ridge	2.32%
170044	I-75 S of Clark	2.06%
170047	I-75 N of Fruitville	3.18%
177081	I-75 Fruitville NB Off Ramp	-2.90%
177082	I-75 Fruitville SB On Ramp	-2.55%
177083	I-75 Fruitville NB Loop On Ramp	-1.43%
177084	I-75 Fruitville SB Loop On Ramp	-4.76%
177085	I-75 Fruitville NB On Ramp	-3.73%
177086	I-75 Fruitville SB Off Ramp	-2.02%
177071	I-75 Bee Ridge NB Off Ramp	-2.41%
177072	I-75 Bee Ridge SB On Ramp	-2.38%
177073	I-75 Bee Ridge NB Loop On Ramp	-2.65%
177074	I-75 Bee Ridge SB Off Ramp	-3.25%
177075	I-75 Bee Ridge NB On Ramp	-5.95%
177061	I-75 Clark NB Off Ramp	-1.07%
177062	I-75 Clark SB On Ramp	-1.68%
177063	I-75 Clark NB On Ramp	-0.75%
177064	I-75 Clark SB Off Ramp	-0.53%
175074	Bee Ridge E of Woodmont	-0.19%
174112	Bee Ridge W of Maui	-0.08%
174444	Cattlemen N of Proctor	0.00%
174215	Cattlemen N of Bee Ridge	0.00%

Appendix E
VISSIM Model Development and Calibration Report

VISSIM Model Development and Calibration Report

Final

FOR I-75 (SR 93) AT SR 758 (BEE RIDGE ROAD) INTERCHANGE

SARASOTA COUNTY, FLORIDA

FINANCIAL PROJECT ID:
201277-5-32-01

November 2015

Contents

Figures

Tables

Attachments

1.0 Introduction

In July 2009, the Florida Department of Transportation (FDOT) conducted a Project Development and Environmental (PD&E) Study[1] to evaluate improvement alternatives along Interstate 75 (I-75) from south of State Route (SR) 681 to north of University Parkway. The recommended improvements at the I-75 and Bee Ridge Road interchange were reanalyzed in May 2012 as part of the Final I-75 Systems Interchange Modification Report[2] (SIMR). Subsequent to the Federal Highway Administration (FHWA) approval of the I-75 SIMR, the FDOT reexamined the I-75 SIMR Build Alternative using updated traffic projections. As part of this reevaluation, an optimal design concept was developed that adequately addresses the traffic operational needs of the I-75/Bee Ridge Road interchange and nearby Bee Ridge Road/Cattlemen Road intersection. This Interchange Modification Report[3] (IMR) was developed to document the benefits of the proposed Build Alternative's geometric improvements, a partial CFI at the Bee Ridge Road/Cattlemen Road intersection and Diverging Diamond Interchange (DDI) variant at the I-75/Bee Ridge Road interchange. This document presents the existing year (2013) simulation model development and calibration results of the existing conditions to support the I-75/Bee Ridge Road interchange IMR.

2.0 Simulation Study Area

The I-75/Bee Ridge Road interchange, at milepost (MP) 36.434, is located in Sarasota County, Florida between the interchanges of I-75/Clark Road to the south and I-75/Fruitville Road to the north. As documented in the I-75 at Bee Ridge Road Methodology Letter of Understanding[4] (MLOU), Highway Capacity Software[5] (HCS) 2010 will be used to analyze the I-75 mainline and ramps and microsimulation modeling will be used to analyze arterial and interchange operations.

For calibration purposes, the simulation study area included all intersections and driveways along Bee Ridge Road from west of Honore Avenue to east of Mauna Loa Boulevard, a distance of approximately 1.5 miles. The study area also included all intersections and driveways along Cattlemen Road from south of Wilkinson Road to north of Countrywood Drive, a distance of approximately 1.25 miles. The operational analysis focused primarily on the following signalized intersections:

- Bee Ridge Road/Maxfield Drive
- Bee Ridge Road/Cattlemen Road
- I-75 West Ramp Terminal/Bee Ridge Road
- I-75 East Ramp Terminal /Bee Ridge Road
- Bee Ridge Road/Mauna Loa Boulevard
- Cattlemen Road/Maxfield Drive
- Cattlemen Road/Center Pointe Drive
- Cattlemen Road/Wilkinson Road

Additional intersections were included in the existing conditions model to more accurately portray the platooning effect of vehicles entering into the study area as a result of the adjacent signalized intersections. The Wilkinson Road intersection was also included as the proposed Build Alternative includes a new ramp connection from southbound I-75 to Cattlemen Road south of Bee Ridge Road.

3.0 Model Development

The existing year (2013) AM and PM peak period VISSIM models for the existing configuration of the I-75/Bee Ridge Road interchange were developed using VISSIM[6] 5.40, a widely-used, behavior-based, multi-purpose traffic microsimulation program. VISSIM was primarily chosen due to the complexity of the signal timing scheme and the unique roadway geometry of the proposed Build Alternative. Model assumptions, parameters, and network coding techniques are discussed in the following sections. All assumptions are based on the traffic conditions collected in the field in September, 2013.

3.1 Data Inputs

Multiple data sources were used to develop the data inputs and calibration targets used in the VISSIM models for the I-75/Bee Ridge Road interchange project. The VISSIM model data inputs, how they were collected, and what they were used for are shown below in **Table 3.1**.

Table 3.1. VISSIM Model Data Inputs

Data	Source	Use
Traffic Volumes	Field Data	Input and Calibration
Origin-Destination	Field Data	Input
Signal Timing Data	Sarasota County	Input
Speed Data	Field Data	Input and Calibration
Saturation Flow Rate	Field Data	Input and Calibration
Travel Time Data	Field Data	Calibration

Detailed information on the development of peak-hour traffic volumes is provided in the I-75/Bee Ridge Road IMR[3]. Traffic volumes used for calibration were based on balanced, raw counts with no adjustment factors.

3.2 Model Geometrics

Scaled aerial photography was utilized to develop a base VISSIM network and establish intersection lane configurations, stop bar locations, and turn bay lengths. The information collected from the aerial photography was verified through field observations.

3.3 Vehicle Inputs

Balanced traffic volumes were summarized in 15-minute intervals to represent the traffic fluctuations during simulated peak hours, which allowed the VISSIM models to more-closely represent traffic arrival patterns and queuing patterns at the study intersections. The VISSIM models used a 30-minute seeding period based on actual count data collected prior to the peak hour. The seeding period allows for vehicles to be loaded into the network before recording simulation results. Passenger car and heavy vehicle distributions were based on the VISSIM North American default vehicle fleet and heavy vehicle percentages for each model input were derived from existing count data.

3.4 Vehicle Routing

Vehicle routing in VISSIM specifies vehicle distribution and is typically achieved by assigning routes between intersections. Vehicle routing through the Cattlemen Road and Bee Ridge Road corridors, where multiple intersections exist, was achieved through the development of an origin-destination (OD) matrix. The OD matrix was determined by performing a detailed OD study around the I-75/Bee Ridge Road interchange using Bluetooth data collection and evaluating permitted/prohibited movements and calculating the ratios of individual turn movements at each intersection throughout the rest of the study area. The Bluetooth OD stations are shown in **Figure 3.1**.

Figure 3.1. Bluetooth OD Stations

A total of five separate OD matrices were developed and combined using the "combine routes" feature in VISSIM. The Bluetooth OD study was used to determine an OD matrix at the I-75/Bee Ridge Road interchange that included the I-75 east and west ramp terminals and the Cattlemen Road/Bee Ridge Road intersection. Four additional OD matrices leading up to the interchange

(Cattlemen Road North, Cattlemen Road South, Bee Ridge Road West, Bee Ridge Road East) were developed using intersection turn ratios. When developing the OD pairs within each OD matrix, it was assumed that driveway to driveway movements were not allowed. Combining routes in VISSIM, however, resulted in driveway to driveway movements between OD areas, but the volumes were very low. The Bluetooth OD reports are provided in **Attachment A**.

3.5 Speed Distributions

Speed decisions were used in the models to generate desired vehicle speeds at various roadway segments. In general, speed limits were used to define the speed decisions. This process made the vehicle operations more realistic during less congested time periods. Desired speed distributions were developed for each roadway/speed variation in the model. The desired speed distributions are shown in **Figure 3.2**.

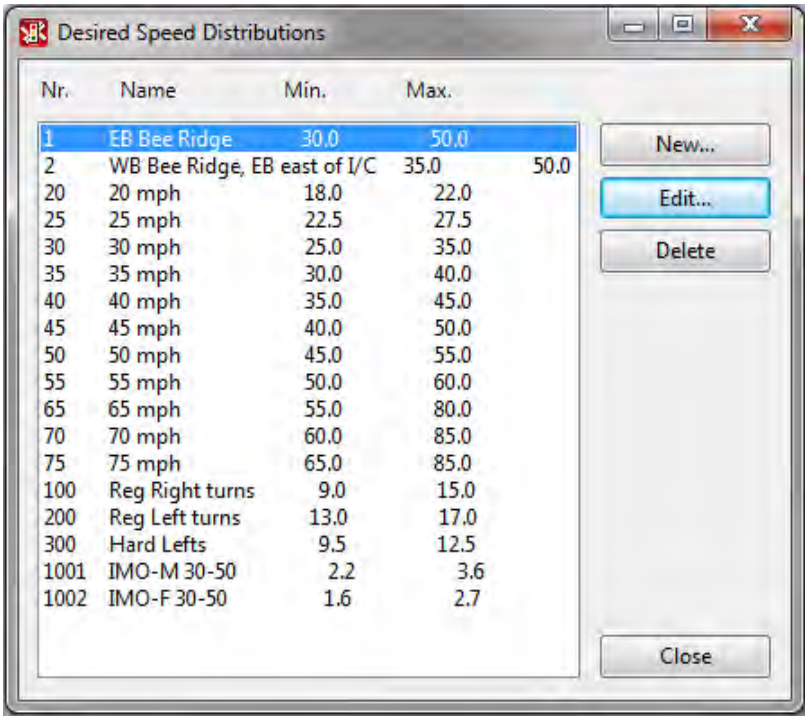


Figure 3.2. VISSIM Desired Speed Distributions

Spot speed data was collected in the field to refine the speed distributions for Bee Ridge Road. Although the speed is posted at 45 miles per hour (mph), drivers were observed traveling as low as 30 mph during off peak periods, particularly in the right-hand lane. This can be attributed to several factors including the numerous driveways along Bee Ridge Road west of the I-75/Bee Ridge Road interchange, an older driver population, and geometry (right-hand entrance ramps for both directions of I-75 for vehicles originating from west of the I-75/Bee Ridge Road interchange). In addition to desired speed decisions, reduced speed areas were strategically placed in locations where vehicles need to reduce their speed due to roadway alignment or for turning movements at intersections or ramp terminals.

3.6 Lane-Change Distance and Emergency Stop Distance

The look-back or lane-change distance defines the distance at which vehicles attempt to change lanes. The longer the distance, the farther back the driver prepares for their next turning movement before making the movement, thus resulting in better lane utilization. Look-back distances were initially set to a default value of 1,000 feet (ft) and adjusted, where necessary, to match field conditions and to calibrate congestion levels. Known decision making patterns and engineering judgment were also used to assess the assumptions and modifications that were made where applicable. Emergency stop is the last possible position where a vehicle can change lanes. The default value for emergency stops is 16.4 ft and was increased to 50 ft at intersections and where diverges occurred in the model.

3.7 Signal Operations and Stop Control

Signal timing and phasing used in the AM and PM peak hour models were provided by Sarasota County and can be found in **Attachment B**. Stop control was also coded in the model for unsignalized intersections, as well as for signalized intersections that permitted right-turn-on-red movements. Minor adjustments were made, where necessary, to the existing signal timing for functionality in the VISSIM ring barrier controllers.

3.8 Multiple Model Runs and Simulation Output

Due to the varying nature of the simulations between runs with different random seed numbers, multiple runs are required to capture variations in results between runs. Using the average network delay and a confidence interval of 95 percent, the calculated minimum number of runs needed to obtain the desired confidence interval is twelve.

4.0 Model Calibration

The calibration process used for the VISSIM models followed Federal Highway Administration (FHWA) guidelines for determining the acceptability of model results as compared to existing operations. A synopsis of the calibration process follows, with emphasis placed on identifying the key decisions and assumptions made in the refinement process. Model calibration is an iterative process that requires parameter modifications to achieve the calibration targets outlined below. Calibration notes for the I-75/Bee Ridge Road interchange are provided in **Attachment C**.

4.1 Field Visits

Prior to calibration, field visits were conducted to observe operations within the study area. The field visits helped identify major lane imbalances, downstream or upstream bottlenecks, major queuing locations, and overall driving behaviors that needed to be accounted for in order for the models to reflect real-world conditions. Key findings are discussed below, with a complete summary of the field visits included in **Attachment D**.

- Multiple cycle failures were observed in the eastbound direction of the Bee Ridge Road/Cattlemen Road intersection during the PM peak period. Vehicles traveling eastbound to access I-75 used the right-most lane, which queued back through multiple upstream intersections. The vehicle queue often blocked access to the right-turn lane to southbound Cattlemen Road.
- During the PM peak period, vehicles in the right-turn lane on northbound Cattlemen Road at Bee Ridge Road consistently queued back and blocked access to the right-most through lane.
- Vehicles on the eastbound departure segment of the I-75 east ramp terminal/Bee Ridge Road intersection predominately used the right lane due to the downstream lane drop at Mauna Loa Boulevard. Few vehicles were observed performing the eastbound-to-northbound left-turn movement at the Bee Ridge Road/Mauna Loa Boulevard intersection during both peak hours.
- Westbound traffic on Bee Ridge Road at the Cattlemen Road intersection was noticeably heavier in the AM peak when compared to eastbound traffic in the PM peak.
- Westbound right-turn vehicle queues were observed at Cattlemen Road to spill back into the I-75 west ramp terminal during the peak 15-minutes of the AM peak hour (7:45-8:00).

4.2 Visual Checking and Error Correction

The error-checking process focused on debugging coding errors before the calibration process began. This process involved reviewing data inputs, VISSIM error reports, and model animations. Although primarily performed during model development, error checking is an important process that should be performed during calibration. When making changes to driver behavior or other model parameters, error checking helps ensure that these changes do not have unintended consequences in the model performance.

Data inputs included network geometry, traffic volumes, signal timing, and route choices and were reviewed for correctness. VISSIM produces an error file after each simulation run with multiple error types. This can include vehicle removal, signal issues, end of link errors, and various others. Critical errors in the model were accounted for and corrected during this step. Visual checking of the animation file was performed to check for abnormal driving behavior or irregular queuing within the network and to identify coding parameters that may have been overlooked or incorrect.

4.3 Calibration Parameters

Calibration parameters included lane change distances, vehicle speeds, priority rules, conflict areas, driver behavior, etc. Driver behavior parameters included safety distance reduction factors, standstill distances, advanced merging, cooperative lane changing, and saturation flow rates. Where necessary, connector lane change distances were modified from the initial value of 1,000 feet to achieve the lane utilization observed in the field, within an appropriate threshold.

4.4 Volume and Travel Time Calibration

The calibration of the existing VISSIM simulation models was made by comparing modeled volumes with the balanced traffic counts. Calibration was also achieved by comparing the modeled average travel times with travel times recorded in the field. Simulation output volumes and travel times from an average of twelve simulation runs were compared with balanced field counts and recorded travel times.

4.5 Calibration Targets and Results

The objective of model calibration is to obtain a percent difference between model performance estimates and the field performance measurements that is within the target thresholds. There are limitations to the accuracy that results from an extensive process of matching the model to the field conditions, since observations on different days naturally yield slightly different results due to normal fluctuations in traffic patterns. For example, queue length observations obtained from the traffic videos provide approximations that can help simulation modelers and reviewers conduct a qualitative assessment of the simulation model. The following calibration targets were used based on the Oregon Department of Transportation[7] (ODOT) VISSIM Protocol and FHWA Traffic Analysis Toolbox[8].

1. Hourly Flows (Model Versus Observed)
    a. Geoffrey E. Havers (GEH) Statistic < 5 for individual turning movements.
2. Visual Audits
    a. Individual link speeds present a visually acceptable speed-flow relationship to the satisfaction of analysts and reviewers.
    b. Critical queue lengths are visually acceptable to the satisfaction of analysts and reviewers.
3. Travel Times (Model Versus Observed)
    a. Directional travel times are within +/- 1 minute.

The GEH statistic used for traffic volume calibration is calculated using the following formula:

$$GEH = \sqrt{\frac{2(m-c)^2}{m+c}}$$

Notes:
m = output traffic volume from the simulation model (vph)
c = input traffic volume (vph)

The GEH is scored using the following classification:

GEH < 5.0	**Acceptable fit**
5.0 <= GEH <= 10.0	Caution: possible model error or bad data
GEH > 10.0	Unacceptable

The results of the VISSIM calibration process were used to validate queue lengths, traffic volumes, and average travel times.

4.6 Queue Length Validation

The modeled maximum approach queue lengths were visually matched to field observed queue lengths. Based on visual observations, the queue lengths in the VISSIM simulation model were within acceptable limits when compared to the queue lengths observed in the field.

4.7 Traffic Volume Validation

A comparison of the AM and PM peak hour modeled traffic volumes and balanced field-collected volumes for all movements at each intersection is included in **Attachment E**. Model volumes were collected for all intersection turn movements using node evaluation. As shown in **Attachment E**, the AM and PM peak hour traffic volumes, as measured in the VISSIM simulation models, correlate well with the balanced volumes collected in the field, with a calculated GEH of 2.0 or less for all movements. Therefore, it is concluded that the volumes in the VISSIM models are a good representation of the existing traffic counts that were measured in the field.

4.8 Travel Time Validation

A comparison of the AM and PM peak hour modeled travel times and field-collected travel times for both Bee Ridge Road and Cattlemen Road is shown below in **Table 4.1**. Travel time measurements were recorded using GPS loggers for both eastbound and westbound Bee Ridge Road between Honore Avenue and Mauna Loa Boulevard as well as northbound and southbound Cattlemen Road between Wilkinson Road and Countrywood Drive. In addition, travel times were manually recorded in the eastbound right lane of Bee Ridge Road between Honore Avenue and the loop ramp to northbound I-75.

As shown in **Table 4.1**, the AM and PM peak hour average travel times, estimated using VISSIM, correlate well with the travel times collected in the field, with 43 seconds (s) or less difference for all travel time sections. Therefore, it is concluded that the average travel times in the VISSIM models are a good representation of the existing travel times that were measured in the field.

Table 4.1. Travel Time Summary

Segment	Field-Measured Travel Time (s)	VISSIM Simulated Travel Time (s)	Difference (s)
AM Peak			
Bee Ridge Road from Honore Avenue to Northbound I-75 Loop On Ramp	211	168	-43
Bee Ridge Road from Honore Avenue to Mauna Loa Boulevard	209	219	10
Bee Ridge Road from Mauna Loa Boulevard to Honore Avenue	243	222	-21
Cattlemen Road from Wilkinson Road to Countrywood Drive	197	174	-23
Cattlemen Road from Countrywood Drive to Wilkinson Road	189	169	-20
PM Peak			
Bee Ridge Road from Honore Avenue to Northbound I-75 Loop On Ramp	233	212	-21
Bee Ridge Road from Honore Avenue to Mauna Loa Boulevard	219	259	40
Bee Ridge Road from Mauna Loa Boulevard to Honore Avenue	240	209	-32
Cattlemen Road from Wilkinson Road to Countrywood Drive	234	194	-41
Cattlemen Road from Countrywood Drive to Wilkinson Road	217	191	-25

5.0 Conclusion

This report documents the VISSIM model development and calibration effort for the existing AM and PM peak periods, which serves as the basis for the design year (2040) and opening year (2020) No Build and Build Alternatives analyses. Overall, the calibration of the existing year (2013) existing conditions VISSIM models produced simulation output that effectively replicated traffic volume and travel times for both the AM and PM peak periods.

Since traffic volumes are anticipated to increase within the study area, the simulation time for the design year (2040) and opening year (2020) No Build and Build Alternatives analyses may need to be extended for the peak period simulation. In addition, it is anticipated that some of the calibration parameters may be modified for the design year (2040) and opening year (2020) Build Alternative analyses if the geometric improvements warrant changes in vehicle speeds or capacity.

6.0 References

1. *I-75 Project Development and Environmental Study from south of SR 681 to north of Bee Ridge Road, Florida Department of Transportation, District One. FPID: 201277-1-22-01.*
2. *I-75 Systems Interchange Modification Report from Laurel Road to Moccasin Wallow Road. FDOT District 1. May, 2012.*
3. *I-75/Bee Ridge Road Final Interchange Modification Report, Florida Department of Transportation, District One. FPID: 201277-5-32-01. November, 2015.*
4. *I-75/Bee Ridge Road Methodology Letter of Understanding. February, 2014.*
5. *M^C Trans. University of Florida. Highway Capacity Software (2010).*
6. *VISSIM 5.40.*
7. *Oregon Department of Transportation VISSIM Protocol.*
8. *FHWA Traffic Analysis Toolbox, Volume III.*

Attachments

Attachment A
Bluetooth Origin-Destination Reports

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (03/26/2014-03/27/2014)

Status of Station Pairs

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	No Segment	No Segment	OK	OK	OK	OK	OK	No Segment
I 75 SB, S of Bee Ridge Rd	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment
Cattlemen Rd, S of Center Pointe Dr	No Segment	OK	No Segment	OK	OK	OK	OK	OK
Bee Ridge Rd, W of Maxfield Dr	No Segment	OK	OK	No Segment	OK	OK	OK	OK
Bee Ridge Rd at Mauna Loa Blvd	No Segment	OK	OK	OK	No Segment	OK	OK	OK
Cattlemen Rd, S of Countrywood Dr	No Segment	OK	OK	OK	OK	No Segment	OK	OK
I 75 NB, N of Bee Ridge Rd	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment
I 75 SB, N of Bee Ridge Rd	No Segment	OK	OK	OK	OK	OK	No Segment	No Segment

ORIGIN-DESTINATION DATA

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	13	45	20	31	796	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	9	-	44	13	37	33	18
Bee Ridge Rd, W of Maxfield Dr	-	33	41	-	33	30	58	34
Bee Ridge Rd at Mauna Loa Blvd	-	19	17	64	-	16	38	20
Cattlemen Rd, S of Countrywood Dr	-	21	40	39	6	-	12	7
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	653	26	90	40	13	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (03/27/2014-03/28/2014)

ORIGIN-DESTINATION DATA

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	10	39	28	29	841	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	7	-	21	11	35	21	13
Bee Ridge Rd, W of Maxfield Dr	-	25	23	-	15	31	40	26
Bee Ridge Rd at Mauna Loa Blvd	-	34	8	38	-	15	54	26
Cattlemen Rd, S of Countrywood Dr	-	20	34	27	16	-	10	7
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	621	21	65	45	13	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (03/28/2014-03/29/2014)

ORIGIN-DESTINATION DATA

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	13	47	19	25	957	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	11	-	22	19	38	22	10
Bee Ridge Rd, W of Maxfield Dr	-	27	23	-	30	28	61	33
Bee Ridge Rd at Mauna Loa Blvd	-	32	7	52	-	18	45	8
Cattlemen Rd, S of Countrywood Dr	-	29	35	31	6	-	5	1
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	405	10	56	19	3	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (03/29/2014-03/30/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	6	29	21	10	850	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	10	-	22	17	24	21	11
Bee Ridge Rd, W of Maxfield Dr	-	34	29	-	38	20	60	26
Bee Ridge Rd at Mauna Loa Blvd	-	28	15	54	-	12	26	9
Cattlemen Rd, S of Countrywood Dr	-	19	19	17	11	-	6	4
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	338	9	27	10	4	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (03/30/2014-03/31/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	7	14	15	4	621	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	4	-	16	12	7	9	2
Bee Ridge Rd, W of Maxfield Dr	-	22	12	-	9	8	29	17
Bee Ridge Rd at Mauna Loa Blvd	-	18	14	22	-	7	35	15
Cattlemen Rd, S of Countrywood Dr	-	10	18	9	3	-	3	3
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	253	6	17	17	1	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (03/31/2014-04/01/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	10	29	26	26	959	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	9	-	21	14	47	25	12
Bee Ridge Rd, W of Maxfield Dr	-	32	21	-	23	16	28	21
Bee Ridge Rd at Mauna Loa Blvd	-	26	15	35	-	13	44	8
Cattlemen Rd, S of Countrywood Dr	-	21	42	18	12	-	8	6
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	352	5	43	13	6	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION
BLUETOOTH ORIGIN-DESTINATION AM PEAK SUMMARY REPORT (04/01/2014-04/02/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	13	46	25	34	965	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	8	-	45	9	31	44	21
Bee Ridge Rd, W of Maxfield Dr	-	39	46	-	35	38	80	29
Bee Ridge Rd at Mauna Loa Blvd	-	21	14	78	-	20	44	11
Cattlemen Rd, S of Countrywood Dr	-	20	32	23	13	-	10	5
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	406	8	47	24	7	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (03/26/2014-03/27/2014)

Status of Station Pairs

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	No Segment	No Segment	OK	OK	OK	OK	OK	No Segment
I 75 SB, S of Bee Ridge Rd	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment
Cattlemen Rd, S of Center Pointe Dr	No Segment	OK	No Segment	OK	OK	OK	OK	OK
Bee Ridge Rd, W of Maxfield Dr	No Segment	OK	OK	No Segment	OK	OK	OK	OK
Bee Ridge Rd at Mauna Loa Blvd	No Segment	OK	OK	OK	No Segment	OK	OK	OK
Cattlemen Rd, S of Countrywood Dr	No Segment	OK	OK	OK	OK	No Segment	OK	OK
I 75 NB, N of Bee Ridge Rd	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment	No Segment
I 75 SB, N of Bee Ridge Rd	No Segment	OK	OK	OK	OK	OK	No Segment	No Segment

ORIGIN-DESTINATION DATA

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	13	48	35	23	660	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	9	-	33	22	33	11	3
Bee Ridge Rd, W of Maxfield Dr	-	61	37	-	51	23	83	48
Bee Ridge Rd at Mauna Loa Blvd	-	29	10	43	-	16	46	27
Cattlemen Rd, S of Countrywood Dr	-	27	37	38	14	-	9	3
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	675	26	59	32	4	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (03/27/2014-03/28/2014)

ORIGIN-DESTINATION DATA

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	9	40	26	18	702	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	13	-	41	14	40	28	17
Bee Ridge Rd, W of Maxfield Dr	-	57	37	-	51	27	97	57
Bee Ridge Rd at Mauna Loa Blvd	-	24	12	48	-	18	47	26
Cattlemen Rd, S of Countrywood Dr	-	21	49	32	19	-	10	4
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	631	31	68	44	5	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (03/28/2014-03/29/2014)

ORIGIN-DESTINATION DATA

BEGIN STATION	END STATION: I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	8	43	20	18	724	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	8	-	36	21	38	15	7
Bee Ridge Rd, W of Maxfield Dr	-	44	47	-	59	31	75	38
Bee Ridge Rd at Mauna Loa Blvd	-	29	19	55	-	16	27	16
Cattlemen Rd, S of Countrywood Dr	-	26	55	37	15	-	9	5
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	640	30	51	26	6	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (03/29/2014-03/30/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	4	25	9	4	470	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	2	-	23	16	20	8	2
Bee Ridge Rd, W of Maxfield Dr	-	32	26	-	33	16	50	25
Bee Ridge Rd at Mauna Loa Blvd	-	9	9	32	-	10	25	12
Cattlemen Rd, S of Countrywood Dr	-	13	15	20	10	-	0	0
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	521	18	58	20	3	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (03/30/2014-03/31/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	4	28	9	16	551	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	3	-	31	19	21	7	2
Bee Ridge Rd, W of Maxfield Dr	-	37	41	-	40	12	52	28
Bee Ridge Rd at Mauna Loa Blvd	-	17	8	31	-	6	25	9
Cattlemen Rd, S of Countrywood Dr	-	11	29	15	5	-	5	4
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	574	18	43	17	9	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (03/31/2014-04/01/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	3	33	22	10	604	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	12	-	23	18	37	20	12
Bee Ridge Rd, W of Maxfield Dr	-	38	23	-	45	30	71	36
Bee Ridge Rd at Mauna Loa Blvd	-	21	10	38	-	12	27	10
Cattlemen Rd, S of Countrywood Dr	-	18	49	32	12	-	5	3
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	573	19	54	30	4	-	-

I 75 (SR 93) AT BEE RIDGE ROAD INTERSECTION

BLUETOOTH ORIGIN-DESTINATION PM PEAK SUMMARY REPORT (04/01/2014-04/02/2014)

ORIGIN-DESTINATION DATA

	END STATION							
BEGIN STATION	I 75 NB, S of Bee Ridge Rd	I 75 SB, S of Bee Ridge Rd	Cattlemen Rd, S of Center Pointe Dr	Bee Ridge Rd, W of Maxfield Dr	Bee Ridge Rd at Mauna Loa Blvd	Cattlemen Rd, S of Countrywood Dr	I 75 NB, N of Bee Ridge Rd	I 75 SB, N of Bee Ridge Rd
I 75 NB, S of Bee Ridge Rd	-	-	9	35	26	15	650	-
I 75 SB, S of Bee Ridge Rd	-	-	-	-	-	-	-	-
Cattlemen Rd, S of Center Pointe Dr	-	12	-	24	23	34	22	15
Bee Ridge Rd, W of Maxfield Dr	-	42	38	-	56	27	95	45
Bee Ridge Rd at Mauna Loa Blvd	-	24	16	52	-	20	43	25
Cattlemen Rd, S of Countrywood Dr	-	24	50	36	20	-	8	4
I 75 NB, N of Bee Ridge Rd	-	-	-	-	-	-	-	-
I 75 SB, N of Bee Ridge Rd	-	600	28	60	29	12	-	-

Attachment B
Traffic Signal Timing Plans

Timing Plans – Bee Ridge Road

Intersection	Splits at PM Peak								Cycle Length at PM Peak (sec)	Offset Synchro
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8		
Bee Ridge and I-75 E (NB Ramp)	0	85	0	65	0	0	0	0	150	34
Bee Ridge and I-75 W (SB Ramp)	17	78	0	55	17	78	0	0	150	22
Bee Ridge and Cattlemen	23	62	41	24	25	60	25	40	150	5
Bee Ridge and Maxfield	19	85	0	26	24	80	0	20	150	11
Bee Ridge and Centergate	16	99	19	16	16	99	19	16	150	12
Bee Ridge and Honore	20	75	15	40	20	75	15	40	150	134

Intersection	Splits at AM Peak								Cycle Length at AM Peak (sec)	Offset Synchro	Time of The Day
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8			
Bee Ridge and I-75 E (NB Ramp)	0	76	0	64	0	0	0	0	140	52	Weekday between 6:30 AM and 7:45 AM
	0	69	0	71	0	0	0	0	140	52	Weekday between 7:45 AM and 9:00 AM
Bee Ridge and I-75 W (SB Ramp)	21	64	0	55	21	64	0	0	140	52	
Bee Ridge and Cattlemen	25	63	27	25	34	54	25	27	140	34	
Bee Ridge and Maxfield	19	84	0	22	19	84	0	15	140	51	
Bee Ridge and Centergate	20	80	20	20	20	80	20	20	140	56	
Bee Ridge and Honore	20	65	25	30	20	65	25	30	140	8	

Timing Plans – Cattlemen Road

Intersection	Splits PM Peak								Cycle Length at PM Peak (sec)	Offset Synchro
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8		
Cattlemen and Proctor	24	91	13	22	24	91	0	0	150	144
Cattlemen and Wilkinson	19	111	0	0	0	130	0	20	150	14
Cattlemen and Countrywood	15	108	0	27	15	108	0	27	150	41
Cattlemen and Cattleridge	15	91	23	21	15	91	23	21	150	102
Cattlemenand Center Pointe	29	61	30	30	29	61	30	30	150	46

Intersection	Splits AM Peak								Cycle Length at PM Peak (sec)	Offset Synchro
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8		
Cattlemen and Proctor	30	69	17	24	30	69	0	0	140	44
Cattlemen and Wilkinson	14	102	0	0	0	116	0	24	140	68
Cattlemen and Countrywood	12	104	0	24	18	98	0	24	140	61
Cattlemen and Cattleridge	16	93	17	14	12	97	17	14	140	122
Cattlemenand Center Pointe	29	59	22	30	29	59	22	30	140	100

Intersection Name: Bee Ridge Rd & Cattlemen Rd. (# 5506) **Date:** 10/1/2010

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Memory		On			On			
Ext Recall		On		On	On			
Max Recall								
Ped Recall								
CNA I		On				On		
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 10 modified **OL B: Ph 6+7**
All lefts are protected **OL C: Ph 1+8**
OL A: Ph 4+5 **OL D: Ph 2+3**

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Min Green	7	20	7	10	7	20	7	10
Passage	3	5	3	3	3	5	3	3
Yellow	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Red	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Max I	25	40	30	40	25	40	20	40
Max II	30	60	35	40	30	60	30	40
Walk		7		7		7		7
Ped Clear		34		32		34		32
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases and Sequence Used								
Phases	1	2	3	4	5	6	7	8
	On	On	On	On	On	On	On	On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash		(0-127 Seconds)
1st All Red After Flash		(0-127 Seconds)

Intersection Name: Bee Ridge Rd & Center Gate Blvd. (#5562)

Date: 9/21/2009

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Memory			On	On			On	On
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I		On				On		
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 10

All lefts Pt/Perm.

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Min Green	7	20	7	7	7	20	7	7
Passage	3	5	3	4	3	5	3	4
Yellow	4.5	4.5	3.5	3.5	4.5	4.5	3.5	3.5
Red	1	1	1	1	1	1	1	1
Max I	20	40	20	25	20	40	20	25
Max II	25	50	25	30	25	50	25	30
Walk		7		7		7		7
Ped Clear		20		22		20		22
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On	On	On	On	On	On	On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash		(0-127 Seconds)
1st All Red After Flash		(0-127 Seconds)

Intersection Name: Bee Ridge Rd & I 75 East. (# 5563) **Date:** 10/1/2010

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval		EB/WB		NB				
Memory		On						
Ext Recall		On						
Max Recall								
Ped Recall								
CNA I		On						
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP special

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval		EB/WB		NB				
Min Green		20		10				
Passage		5		4				
Yellow		4.5		4				
Red		1		1				
Max I		50		60				
Max II		60		85				
Walk		10						
Ped Clear								
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off		On		On				
Sequence	1	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	4	2	
Ring 2 Phase	0	0	0	
Interval	3	1	3	
Power Up / Restart Timings				
Minimum Flash		(0-127 Seconds)		
1st All Red After Flash		(0-127 Seconds)		

Intersection Name: Bee Ridge Rd & Mauna Loa Blvd. (# 55 **Date:** 10/12/2010

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBL	NB	WBLT	EB	NBL	SB
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I		On				On		
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

Detector input# 9 SBRT is switched to Phase 8 in controller

SOP 10 modified

SBL and WBL: Protected / Permissive

NBL and EBL: Protected

OLA: Ph.1+Ph.8

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBL	NB	WBLT	EB	NBL	SB
Min Green	7	20	7	7	7	20	7	7
Passage	3	5	3	3	3	5	3	3
Yellow	4.5	4.5	4	4	4.5	4.5	4	4
Red	1	1	1	1	1	1	1	1
Max I	20	55	20	20	20	55	20	20
Max II	40	127	40	40	40	127	40	20
Walk		7		7		7		7
Ped Clear		36		26		36		26
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On	On	On	On	On	On	On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash		(0-127 Seconds)
1st All Red After Flash		(0-127 Seconds)

Intersection Name: Proctor & Cattlemen (# 5631) **Date:** 10/17/2011

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	NB/ NBLT	SB/ SBLT	WBLT	EB		
Memory								
Ext Recall	On	On				On		
Max Recall								
Ped Recall								
CNA I								
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 9
EBLT and WBLT Protected movements
NB serviced first

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	NB/ NBLT	SB/ SBLT	WBLT	EB		
Min Green	7	20	7	10	7	20		
Passage	5	4	5	4	3	4		
Yellow	4.5	4.5	4	4.5	4.5	4.5		
Red	1	1	1	1	1	1		
Max I	40	30	40	15	15	30		
Max II	40	30	40	15	15	30		
Walk		7	7			7		
Ped Clear		20	20			20		
S/A			3			3		
TBR								
TTR								
Min Gap								
Max VI			9			9		
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On	On	On	On	On		
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	
Power Up / Restart Timings				
Minimum Flash		(0-127 Seconds)		
1st All Red After Flash		(0-127 Seconds)		

Intersection Name: Bee Ridge Rd & Maxfield Pkwy. (# 565 **Date:** 9/21/2009

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB		NB	WBLT	EB		SB
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I		On				On		
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 9
EBLT and WBLT Protected/Permissive
Phase 4 serviced first

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB		NB	WBLT	EB		SB
Min Green	7	20		7	7	20		7
Passage	3	5		3	3	5		3
Yellow	4.5	4.5		4	4.5	4.5		4
Red	1	1		1	1	1		1
Max I	20	35		20	25	35		20
Max II	25	60		25	30	60		25
Walk		7		7		7		7
Ped Clear		24		30		24		30
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On		On	On	On		On
Sequence	3	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash		(0-127 Seconds)
1st All Red After Flash		(0-127 Seconds)

Intersection Name: Cattlemen & Center Point (#5659) **Date:** 1/27/2012

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I								
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 10

All lefts are Protected/Permissive

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
Min Green	7	20	7	7	7	20	7	7
Passage	3	4	3	3	3	4	3	3
Yellow	4.5	4.5	3.5	4	4.5	4.5	3.5	4
Red	1	1	1	1	1	1	1	1
Max I	15	40	15	20	10	40	20	20
Max II	15	40	15	20	10	40	20	20
Walk		7				7		7
Ped Clear		20				20		20
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases and Sequence Used								
	1	2	3	4	5	6	7	8
On/Off	On	On	On	On	On	On	On	On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash		(0-127 Seconds)
1st All Red After Flash		(0-127 Seconds)

Intersection Name: Bee Ridge Rd & I 75 West. (# 5666) **Date:** 10/1/2010

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	WBLT	EB		SBLT		WB		
Memory								
Ext Recall								
Max Recall		On						
Ped Recall								
CNA I		On						
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 13

Phase 1 (WBLT) Prot/Perm.

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	WBLT	EB		SBLT		WB		
Min Green	7	20		10		20		
Passage	3	5		4		5		
Yellow	4.5	4.5		4		4.5		
Red	1	2		1		2		
Max I	15	40		40		40		
Max II	20	60		60		60		
Walk		1				1		
Ped Clear								
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On		On				
Sequence		1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	4	2	
Ring 2 Phase	0	0	0	
Interval	3	1	3	
Power Up / Restart Timings				
Minimum Flash		(0-127 Seconds)		
1st All Red After Flash		(0-127 Seconds)		

Intersection Name: Cattlemen & Wilkinson (# 5673) **Date:** 1/27/2012

Interval	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I								
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

NBLT Protected/Permissive

SOP 13

Interval	Phase Timings							
	1	2	3	4	5	6	7	8
	NBLT	SB/ SBRT				NB		EBLT/ EBRT
Min Green	7	20				20		7
Passage	3	5				5		4
Yellow	4.5	4.5				4.5		4
Red	1	1				1		1
Max I	13	40				40		15
Max II	13	60				60		25
Walk		7				2		7
Ped Clear		15						18
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On				On		On
Sequence		1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	0	2	
Ring 2 Phase	6	8	6	
Interval	3	1	3	
Power Up / Restart Timings				
Minimum Flash		(0-127 Seconds)		
1st All Red After Flash		(0-127 Seconds)		

Intersection Name: Bee Ridge Rd & Honore Ave (#5677) **Date:** 2/6/2012

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I								
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 10

All lefts are Protected/Permissive

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Min Green	7	20	7	10	7	20	7	10
Passage	3	5	3	3	3	5	3	3
Yellow	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Red	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Max I	25	80	25	40	25	80	25	40
Max II								
Walk		7		7		7		7
Ped Clear		24		26		24		26
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
	1	2	3	4	5	6	7	8
On/Off	On	On	On	On	On	On	On	On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash		(0-127 Seconds)
1st All Red After Flash		(0-127 Seconds)

Intersection Name: Cattlemen & Cattleridge (# 5696) **Date:** 1/27/2012

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
Memory								
Ext Recall		On				On		
Max Recall		On				On		
Ped Recall								
CNA I		On				On		
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 10

All lefts are Protected/Permissive

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
Min Green	7	20	7	7	7	20	7	7
Passage	3	4	3	3	3	4	3	3
Yellow	4	4	3.5	4	4	4	3.5	4
Red	1	1	1	1	1	1	1	1
Max I	15	45	15	12	15	45	10	25
Max II	20	60	25	30	20	60	25	30
Walk		7		7		7		7
Ped Clear		20		26		20		26
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases and Sequence Used								
Phases	1	2	3	4	5	6	7	8
	On	On	On	On	On	On	On	On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	
Power Up / Restart Timings				
Minimum Flash		(0-127 Seconds)		
1st All Red After Flash		(0-127 Seconds)		

Intersection Name: Cattlemen & Countrywood (# 5734) **Date:** 3/5/2012

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	NBLT	SB		WB	SBLT	NB		EB
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I		On				On		
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

SOP 7
NBLT and SBLT: Protected/Permissive
OL A: Ph6

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	NBLT	SB		WB	SBLT	NB		EB
Min Green	7	20		7	7	20		7
Passage	3	4		4	3	4		4
Yellow	4	4		4	4	4		4
Red	1	1		1	1	1		1
Max I	15	70		25	20	70		25
Max II	15	70		25	20	70		25
Walk		7		7		7		
Ped Clear		20		20		20		
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Phases Used								
Phases	1	2	3	4	5	6	7	8
	On	On		On	On	On		On
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	
Power Up / Restart Timings				
Minimum Flash		(0-127 Seconds)		
1st All Red After Flash		(0-127 Seconds)		

Attachment C
VISSIM Model Calibration Notes

Traffic Characteristics

- Traffic volumes used for calibration were not seasonally adjusted as the counts were measured simultaneously with the travel time runs. The closest possible replication of the travel time runs and other field conditions is produced by not seasonally adjusting the raw counts. Once the models were calibrated, volumes were then seasonally adjusted to create the existing year (2013) existing conditions AM and PM peak period VISSIM models.
- Saturation flow rates were determined through video observations during the AM and PM peak hour. The first four headways in each cycle were disregarded in order to eliminate the variable of start up lost time and the remaining headways were averaged to find the saturation headway. The saturation flow rate was calculated as 3600 seconds/hour (s/hr) divided by the saturation headway in vehicles/second (veh/s), yielding a saturation flow rate of 1800 vehicles/hour (veh/h). On urban streets, the ODOT VISSIM Protocol recommends using the Wiedemann 74 car-following model to control saturation flow rates. Based on Figure 4-16 in the ODOT VISSIM Protocol (this figure is also in the VISSIM help file), saturation flow rates can be changed by adjusting the additive part of safety distance (bx_add) and multiplicative part of safety distance (bx_mult). Values used in the model were bx_add = 2.50, bx_mult = 3.50.
- Speed studies on Bee Ridge Road indicated a range between 30 and 50 mph west of I-75 and a range between 35 and 50 mph east of I-75. Desired speed decisions on Bee Ridge Road were set up accordingly using linear speed distributions.
- Speed studies on the northbound I-75 loop on ramp indicated an average speed of 33 mph. a linear speed distribution between 30 and 40 mph was assumed for passenger cars and 25 to 35 mph for heavy vehicles as there were not enough data points to establish a minimum and maximum speed.

Network Characteristics

- The default lane change distance was coded to 1000 ft and default emergency stop distance was coded to 50 ft. Lane-change distances were adjusted, where necessary, to match field conditions and to calibrate congestion levels.

Bee Ridge Road at Honore Avenue, Woodmont Drive, and Maxfield Drive

- Conflict areas were coded so that vehicles entering the intersection on their allowed phase would stop and not continue through the intersection if there were vehicles remaining in the intersection from the previous phase that could not continue due to congestion on the departure link.
- Various priority rules were coded to prevent intersection blocking due to downstream queues spilling back into the intersection.

Bee Ridge Road at Cattlemen Road

- At the mall driveway west of Cattlemen Road, a conflict area and priority rule pair were coded so that northbound right-turning traffic would yield to eastbound through traffic, except when the eastbound queue on Bee Ridge Road at the Bee Ridge Road/Cattlemen Road intersection extends back to the mall driveway. The priority rule allows eastbound through traffic to create a gap in the queue for northbound right-turning traffic to enter the traffic stream.
- The eastbound through lanes were divided into two separate links to match the approach signing and striping in the field. Traffic originating from west of I-75 and destined for southbound I-75 uses the rightmost through lane, while the remaining the through traffic uses the middle and leftmost through lanes.
- A conflict area was coded on Cattlemen Road between the northbound through link and the connector leading to the northbound right-turn lane. This allows traffic in the northbound right-turn lane to block northbound through traffic, as observed in the field.
- Two connectors lead into the southbound left-turn lane on Cattlemen Road. The inside connector is used by traffic destined for northbound I-75 or continuing eastbound on Bee Ridge Road, while the outside connector used by traffic destined for southbound I-75. This replicates the signing and striping of the two southbound left-turn lanes in the field. Using the two connectors allows vehicles to choose one lane over the other depending on their route, but they are able to change lanes on the upstream portion of the southbound left-turn lanes if lane utilization is too imbalanced. This method eliminates excessive lane changes that would occur due to traffic destined for the northbound I-75 loop on ramp, while it also mitigates substantial lane imbalance that would occur in the model but not in the field.
- Lane-change distance was changed from the default value of 1000 ft to 2500 ft on the connectors leading into the westbound approach links on westbound Bee Ridge Road in order to reduce the number of lane changes.
- Conflict areas were coded so that vehicles entering the intersection on their allowed phase would stop and not continue through the intersection if there were vehicles remaining in the intersection from the previous phase that could not continue due to congestion on the departure link.

- Priority rules on the eastbound through, southbound left-turn (outside lane), and northbound right-turn movements were coded to prevent intersection blocking due to downstream queues spilling back into the intersection.

Bee Ridge Road at the I-75 West Ramp Terminal

- The southbound I-75 off ramp starts as one lane and transitions into three lanes. It was coded so that the lanes were added to the left side so that the high volume of traffic to northbound Cattlemen Road does not have to make a lane change.
- Vehicles in the model were observed making emergency stops in the middle lane until a gap in the right lane became available with shorter lane change distances coded. Therefore, lane-change distance was changed from the default value of 1000 ft to 3000 ft on the connector leading from eastbound Bee Ridge Road to the southbound I-75 on ramp. This allows vehicles on Bee Ridge Road to have adequate distance to make a lane change due to the extensive queuing on Bee Ridge Road.
- Conflict areas were coded for the eastbound through movement to yield to westbound left-turning traffic and for westbound left-turning traffic to yield to southbound left-turning traffic due to the length of the left turn connectors.

Bee Ridge Road at the I-75 East Ramp Terminal

- Lane-change distance was established at 1125 ft on the connector between eastbound Bee Ridge Road and the northbound I-75 loop on ramp by measuring travel times on a trial-and-error basis.
- A reduced speed area and a desired speed decision were coded on the northbound I-75 loop on ramp so that vehicles would slow down before the curve and would maintain that speed through the curve.
- All signals in the model were timed using signal timing outputs from the existing controllers. At the northbound I-75 loop on ramp, one timing plan is used between 6:30 AM and 7:45 AM, and a separate plan is used between 7:45 AM and 9:00 AM. Since the AM peak hour was observed to occur from 7:45 AM to 8:45 AM, the signal controller at this intersection was set up to operate with the earlier timing plan during the seeding period (0-1800 seconds) and with the later timing plan during the data collection period (1800-5400 seconds).
- The northbound left-turn connector leading from the northbound I-75 off ramp was connected to the middle lane of westbound Bee Ridge Road so that the high volume of traffic turning right at Cattlemen Road would be prealigned for the movement in advance without needing to make two lane changes on the westbound Bee Ridge Road links.
- The reduced speed area on the northbound left-turn connector was coded at 20 mph for passenger cars and 15 mph for heavy vehicles. This was because the turn is gradual and significant queuing was observed on the northbound approach.
- Conflict areas were set up for Bee Ridge Road traffic to yield to northbound left-turning traffic due to the length of the northbound left connector.
- With the above changes, queues on the northbound I-75 off ramp extended back to mainline I-75. Link behavior for the northbound I-75 off ramp was coded with a saturation flow rate of 1950

veh/h by using bx_add = 2.20 and bx_mult = 3.20. With these settings, queues backed up to the high-mast luminaire, which is what was observed in the field.

- On eastbound Bee Ridge Road, The three-lane link for traffic merging from northbound I-75 and the link between the southbound I-75 off-ramp and the northbound I-75 loop on ramp was coded with link behavior type “Lane Change Area” to accommodate merging traffic. Settings for this link behavior type were modified to include cooperative lane changing and a reduction in the safety distance reduction factor.

Bee Ridge Road at Mauna Loa Boulevard

- Lane-change distance was set at 1750 ft on the connectors leading into the eastbound through and eastbound right-turn lanes, approximately the distance to the northbound I-75 loop on ramp. This is where through traffic in the field was observed to begin merging into the right lane. For the connector leading into the eastbound left-turn lane, lane-change distance was set back to Cattlemen Road, which brought the modeled travel time for eastbound Bee Ridge Road slightly closer to the observed.
- Conflict areas were coded so that vehicles entering the intersection on their allowed phase would stop and not continue through the intersection if there were vehicles remaining in the intersection from the previous phase that could not continue due to congestion on the departure link.

Attachment D
Field Observations

Data Collection

Data collection for the I-75/Bee Ridge Road interchange project occurred on Tuesday, September 10, 2013 and Wednesday, September 11, 2013. During the data collection process, the following field observations were made during the AM and PM peak-hour periods.

Tuesday, September 10, 2013 – PM Peak Period (4:30 PM – 6:30 PM)

- Multiple cycle failures occurred in the eastbound direction at the Bee Ridge Road/Cattlemen Road intersection. Vehicles traveling eastbound on Bee Ridge Road towards I-75 use the rightmost lane and traffic queues back through multiple upstream intersections. The queuing often blocks access to the right-turn lane to southbound Cattlemen Road.
- The northbound right-turn lane at Cattlemen Road consistently backs up and blocks access to the rightmost northbound through lane.
- The most congested movements for the Bee Ridge/Cattlemen Road intersection include the rightmost lane of the eastbound through movement, the northbound right-turn lane, and the southbound left-turn lanes.
- Eastbound traffic departing the I-75 interchange predominately uses the right lane due to the lane reduction west of Mauna Loa Boulevard. Few vehicles were observed turning left at Mauna Loa Boulevard.
- The westbound approach at the Bee Ridge Road/Cattlemen Road intersection backs up to the I-75 west ramp terminal. However, the queue was able to dissipate fairly quickly.
- No right-turn-on-red movements were allowed during the peak period at the southbound I-75 off-ramp.

Wednesday, September 11, 2013 – AM Peak Period (7:00 AM – 9:00 AM)

- Heavy westbound traffic volumes were observed at the Bee Ridge Road/Cattlemen Road intersection compared to the eastbound traffic in the PM peak.
- No right-turn-on-red movements were allowed during the peak period at the southbound I-75 off-ramp.
- During the peak 15 minutes of the peak period (approximately 7:45 AM to 8:00 AM), westbound right-turn queue spillover from the Bee Ridge Road/Cattlemen Road intersection was observed at the I-75 west ramp terminal. However, the queue was able to dissipate fairly quickly, although traffic backs up to the I-75 west ramp terminal, including through and left-turning vehicles.
- The rightmost westbound through lane at the Bee Ridge Road/Cattlemen Road intersection is underutilized due to the downstream right-turn only lane.
- The eastbound rightmost through lane backs up beyond Cattlemen Road, but not nearly as far or as consistently as during the PM peak period.
- The northbound right-turn movement at Cattlemen Road is heavy, but not nearly as heavy as during the PM peak period.
- More traffic was observed in the leftmost lane traveling eastbound away from the interchange compared to the PM peak period, but the majority of traffic is in the right lane to prepare for the

downstream single through movement at Mauna Loa Boulevard. Few vehicles were observed turning left at Mauna Loa.

- The FDOT D1 and Sarasota County were on site at the I-75 west ramp terminal. We inquired about their presence and were informed that they were observing ramp queuing patterns at the southbound I-75 off ramp. They mentioned that there are plans to retime the corridor in the near future (possibly early 2014), but were not able to confirm this for certain.

Attachment E
Intersection Calibration Summary

AM Peak Period Intersection Calibration Summary

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Cattlemen Road/Countrywood Drive	EBL	8	9	0.3	-11.1%
	EBR	40	40	0.0	0.0%
	EBT	2	4	1.2	-50.0%
	NBL	21	22	0.2	-4.5%
	NBR	108	111	0.3	-2.7%
	NBT	1022	1044	0.7	-2.1%
	SBL	83	84	0.1	-1.2%
	SBR	3	4	0.5	-25.0%
	SBT	809	819	0.4	-1.2%
	WBL	7	9	0.7	-22.2%
	WBR	7	9	0.7	-22.2%
	WBT	4	4	0.0	0.0%
Cattlemen Road/Maxfield Drive	EBL	82	84	0.2	-2.4%
	EBR	74	75	0.1	-1.3%
	EBT	14	13	0.3	7.7%
	NBL	122	128	0.5	-4.7%
	NBR	141	146	0.4	-3.4%
	NBT	1048	1071	0.7	-2.1%
	SBL	30	31	0.2	-3.2%
	SBR	158	159	0.1	-0.6%
	SBT	670	678	0.3	-1.2%
	WBL	63	66	0.4	-4.5%
	WBR	22	22	0.0	0.0%
	WBT	9	9	0.0	0.0%
Bee Ridge Road/Honore Avenue	EBL	60	62	0.3	-3.2%
	EBR	58	58	0.0	0.0%
	EBT	931	946	0.5	-1.6%
	NBL	153	155	0.2	-1.3%
	NBR	144	142	0.2	1.4%
	NBT	185	186	0.1	-0.5%
	SBL	74	75	0.1	-1.3%
	SBR	84	84	0.0	0.0%
	SBT	165	164	0.1	0.6%
	WBL	110	111	0.1	-0.9%
	WBR	38	44	0.9	-13.6%
	WBT	1377	1434	1.5	-4.0%
Bee Ridge Road/Center Gate Boulevard	EBL	9	9	0.0	0.0%
	EBR	33	35	0.3	-5.7%
	EBT	1115	1119	0.1	-0.4%
	NBL	44	44	0.0	0.0%
	NBR	38	40	0.3	-5.0%
	NBT	4	4	0.0	0.0%
	SBL	64	66	0.2	-3.0%
	SBR	28	27	0.2	3.7%
	SBT	12	13	0.3	-7.7%
	WBL	119	124	0.5	-4.0%
	WBR	34	35	0.2	-2.9%
	WBT	1486	1518	0.8	-2.1%

AM Peak Period Intersection Calibration Summary (Continued)

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Bee Ridge Road/Maxfield Drive	EBL	155	150	0.4	3.3%
	EBR	62	66	0.5	-6.1%
	EBT	999	1009	0.3	-1.0%
	NBL	51	53	0.3	-3.8%
	NBR	21	22	0.2	-4.5%
	NBT	13	13	0.0	0.0%
	SBL	72	71	0.1	1.4%
	SBR	124	124	0.0	0.0%
	SBT	7	9	0.7	-22.2%
	WBL	36	40	0.6	-10.0%
	WBR	21	22	0.2	-4.5%
	WBT	1466	1500	0.9	-2.3%
Bee Ridge Road/Maxfield DriveEast	SBR	57	58	0.1	-1.7%
	WBR	49	49	0.0	0.0%
	WBT	1473	1504	0.8	-2.1%
Bee Ridge Road/Centergate Plaza Driveway	EBR	36	40	0.6	-10.0%
	EBT	1058	1062	0.1	-0.4%
	NBR	72	75	0.3	-4.0%
Bee Ridge Road/Cattlemen Road	EBL	172	177	0.4	-2.8%
	EBR	164	168	0.3	-2.4%
	EBT	786	792	0.2	-0.8%
	NBL	131	137	0.5	-4.4%
	NBR	290	301	0.6	-3.7%
	NBT	385	398	0.7	-3.3%
	SBL	348	345	0.2	0.9%
	SBR	131	137	0.5	-4.4%
	SBT	328	337	0.5	-2.7%
	WBL	329	336	0.4	-2.1%
	WBR	774	783	0.3	-1.1%
	WBT	1255	1279	0.7	-1.9%
Bee Ridge Road/ I-75 West Ramp Terminal	EBR	367	367	0.0	0.0%
	EBT	1057	1071	0.4	-1.3%
	SBL	210	212	0.1	-0.9%
	SBR	954	964	0.3	-1.0%
	WBL	199	199	0.0	0.0%
	WBT	1411	1434	0.6	-1.6%
Bee Ridge Road/ I-75 East Ramp Terminal	EBR	721	726	0.2	-0.7%
	EBT	546	557	0.5	-2.0%
	NBL	706	730	0.9	-3.3%
	NBR	149	146	0.2	2.1%
	WBR	441	447	0.3	-1.3%
	WBT	897	903	0.2	-0.7%

AM Peak Period Intersection Calibration Summary (Continued)

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Bee Ridge Road/Mauna Loa Boulevard	EBL	140	137	0.3	2.2%
	EBR	113	115	0.2	-1.7%
	EBT	457	469	0.6	-2.6%
	NBL	431	438	0.3	-1.6%
	NBR	17	18	0.2	-5.6%
	NBT	4	4	0.0	0.0%
	SBL	4	4	0.0	0.0%
	SBR	52	53	0.1	-1.9%
	SBT	3	4	0.5	-25.0%
	WBL	8	9	0.3	-11.1%
	WBR	3	4	0.5	-25.0%
	WBT	858	859	0.0	-0.1%
Cattlemen Road/ Bee Ridge Square Driveway	EBR	42	44	0.3	-4.5%
	NBL	49	49	0.0	0.0%
	NBR	37	40	0.5	-7.5%
	NBT	714	730	0.6	-2.2%
	SBL	106	114	0.8	-7.0%
	SBR	118	127	0.8	-7.1%
	SBT	593	602	0.4	-1.5%
	WBR	105	106	0.1	-0.9%
Cattlemen Road/Sports Authority Driveway	EBR	6	9	1.1	-33.3%
	NBR	12	13	0.3	-7.7%
	NBT	761	775	0.5	-1.8%
	SBL	78	80	0.2	-2.5%
	SBR	14	13	0.3	7.7%
	SBT	544	553	0.4	-1.6%
	WBR	41	44	0.5	-6.8%
Cattlemen Road/Center Pointe Drive	EBL	29	31	0.4	-6.5%
	EBR	19	22	0.7	-13.6%
	EBT	3	4	0.5	-25.0%
	NBL	47	44	0.4	6.8%
	NBR	51	49	0.3	4.1%
	NBT	667	677	0.4	-1.5%
	SBL	101	102	0.1	-1.0%
	SBR	10	9	0.3	11.1%
	SBT	441	451	0.5	-2.2%
	WBL	74	75	0.1	-1.3%
	WBR	76	80	0.5	-5.0%
	WBT	18	18	0.0	0.0%
Cattlemen Road/ Casa Del Sol Boulevard	EBR	11	13	0.6	-15.4%
	NBR	77	76	0.1	1.3%
	NBT	665	668	0.1	-0.4%
	SBL	143	141	0.2	1.4%
	SBR	8	9	0.3	-11.1%
	SBT	384	398	0.7	-3.5%
	WBR	99	102	0.3	-2.9%

AM Peak Period Intersection Calibration Summary (Continued)

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Cattlemen Road/Walmart Driveway	NBR	71	75	0.5	-5.3%
	NBT	692	695	0.1	-0.4%
	SBT	396	411	0.7	-3.6%
	WBL	48	49	0.1	-2.0%
	WBR	49	49	0.0	0.0%
Cattlemen Road/Wilkinson Road	EBL	69	71	0.2	-2.8%
	EBR	12	13	0.3	-7.7%
	NBL	7	9	0.7	-22.2%
	NBT	694	699	0.2	-0.7%
	SBR	46	44	0.3	4.5%
	SBT	398	416	0.9	-4.3%

PM Peak Period Intersection Calibration Summary

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Cattlemen Road/Countrywood Drive	EBL	3	4	0.5	-25.0%
	EBR	43	44	0.2	-2.3%
	EBT	3	4	0.5	-25.0%
	NBL	61	62	0.1	-1.6%
	NBR	42	44	0.3	-4.5%
	NBT	830	850	0.7	-2.4%
	SBL	34	35	0.2	-2.9%
	SBR	12	13	0.3	-7.7%
	SBT	1101	1106	0.2	-0.5%
	WBL	71	71	0.0	0.0%
	WBR	104	106	0.2	-1.9%
	WBT	3	4	0.5	-25.0%
Cattlemen Road/ Maxfield Drive	EBL	117	119	0.2	-1.7%
	EBR	122	124	0.2	-1.6%
	EBT	8	9	0.3	-11.1%
	NBL	54	53	0.1	1.9%
	NBR	50	53	0.4	-5.7%
	NBT	792	810	0.6	-2.2%
	SBL	52	53	0.1	-1.9%
	SBR	133	137	0.3	-2.9%
	SBT	1029	1031	0.1	-0.2%
	WBL	196	199	0.2	-1.5%
	WBR	24	27	0.6	-11.1%
	WBT	36	35	0.2	2.9%
Bee Ridge Road/ Honore Avenue	EBL	110	111	0.1	-0.9%
	EBR	120	124	0.4	-3.2%
	EBT	1471	1483	0.3	-0.8%
	NBL	85	84	0.1	1.2%
	NBR	98	97	0.1	1.0%
	NBT	208	208	0.0	0.0%
	SBL	69	71	0.2	-2.8%
	SBR	74	75	0.1	-1.3%
	SBT	177	181	0.3	-2.2%
	WBL	138	137	0.1	0.7%
	WBR	68	66	0.2	3.0%
	WBT	1193	1221	0.8	-2.3%
Bee Ridge Road/ Center Gate Boulevard	EBL	17	18	0.2	-5.6%
	EBR	44	49	0.7	-10.2%
	EBT	1551	1584	0.8	-2.1%
	NBL	51	53	0.3	-3.8%
	NBR	48	49	0.1	-2.0%
	NBT	3	4	0.5	-25.0%
	SBL	51	53	0.3	-3.8%
	SBR	39	40	0.2	-2.5%
	SBT	8	9	0.3	-11.1%
	WBL	27	31	0.7	-12.9%
	WBR	111	111	0.0	0.0%
	WBT	1308	1331	0.6	-1.7%

PM Peak Period Intersection Calibration Summary (Continued)

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Bee Ridge Road/Maxfield Drive	EBL	110	115	0.5	-4.3%
	EBR	127	133	0.5	-4.5%
	EBT	1395	1438	1.1	-3.0%
	NBL	131	128	0.3	2.3%
	NBR	83	84	0.1	-1.2%
	NBT	17	18	0.2	-5.6%
	SBL	98	97	0.1	1.0%
	SBR	190	190	0.0	0.0%
	SBT	19	22	0.7	-13.6%
	WBL	90	93	0.3	-3.2%
	WBR	26	27	0.2	-3.7%
	WBT	1130	1155	0.7	-2.2%
Bee Ridge Road/Maxfield Drive East	SBR	47	49	0.3	-4.1%
	WBR	39	39	0.0	0.0%
	WBT	1200	1226	0.7	-2.1%
Bee Ridge Road/Centergate Plaza Driveway	EBR	90	101	1.1	-10.9%
	EBT	1480	1518	1.0	-2.5%
	NBR	173	177	0.3	-2.3%
Bee Ridge Road/Cattlemen Road	EBL	187	199	0.9	-6.0%
	EBR	181	186	0.4	-2.7%
	EBT	1280	1310	0.8	-2.3%
	NBL	173	177	0.3	-2.3%
	NBR	396	403	0.4	-1.7%
	NBT	340	345	0.3	-1.4%
	SBL	622	633	0.4	-1.7%
	SBR	178	181	0.2	-1.7%
	SBT	538	540	0.1	-0.4%
	WBL	343	358	0.8	-4.2%
	WBR	406	407	0.0	-0.2%
	WBT	889	907	0.6	-2.0%
Bee Ridge Road/ I-75 West Ramp Terminal	EBR	646	656	0.4	-1.5%
	EBT	1646	1690	1.1	-2.6%
	SBL	334	332	0.1	0.6%
	SBR	770	791	0.8	-2.7%
	WBL	169	173	0.3	-2.3%
	WBT	870	881	0.4	-1.2%
Bee Ridge Road/ I-75 East Ramp Terminal	EBR	889	907	0.6	-2.0%
	EBT	1088	1115	0.8	-2.4%
	NBL	330	337	0.4	-2.1%
	NBR	157	155	0.2	1.3%
	WBR	247	248	0.1	-0.4%
	WBT	710	717	0.3	-1.0%

PM Peak Period Intersection Calibration Summary (Continued)

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Bee Ridge Road/ Mauna Loa Boulevard	EBL	41	40	0.2	2.5%
	EBR	376	385	0.5	-2.3%
	EBT	816	836	0.7	-2.4%
	NBL	229	235	0.4	-2.6%
	NBR	13	13	0.0	0.0%
	NBT	5	4	0.5	25.0%
	SBL	10	9	0.3	11.1%
	SBR	116	119	0.3	-2.5%
	SBT	4	4	0.0	0.0%
	WBL	9	9	0.0	0.0%
	WBR	3	4	0.5	-25.0%
	WBT	611	611	0.0	0.0%
Cattlemen Road/Bee Ridge Square Driveway	EBR	91	93	0.2	-2.2%
	NBL	49	49	0.0	0.0%
	NBR	20	22	0.4	-9.1%
	NBT	811	819	0.3	-1.0%
	SBL	120	124	0.4	-3.2%
	SBR	99	106	0.7	-6.6%
	SBT	843	854	0.4	-1.3%
	WBR	103	106	0.3	-2.8%
Cattlemen Road/Sports Authority Driveway	EBR	13	13	0.0	0.0%
	NBR	11	13	0.6	-15.4%
	NBT	778	788	0.4	-1.3%
	SBL	119	124	0.5	-4.0%
	SBR	8	9	0.3	-11.1%
	SBT	806	814	0.3	-1.0%
	WBR	102	102	0.0	0.0%
Cattlemen Road/ Center Pointe Drive	EBL	50	49	0.1	2.0%
	EBR	42	44	0.3	-4.5%
	EBT	12	13	0.3	-7.7%
	NBL	90	88	0.2	2.3%
	NBR	52	49	0.4	6.1%
	NBT	648	659	0.4	-1.7%
	SBL	116	111	0.5	4.5%
	SBR	19	21	0.4	-9.5%
	SBT	683	695	0.5	-1.7%
	WBL	110	111	0.1	-0.9%
	WBR	91	93	0.2	-2.2%
	WBT	18	18	0.0	0.0%
Cattlemen Road/ Casa Del Sol Boulevard	EBR	10	13	0.9	-23.1%
	NBR	61	62	0.1	-1.6%
	NBT	622	624	0.1	-0.3%
	SBL	204	208	0.3	-1.9%
	SBR	16	18	0.5	-11.1%
	SBT	616	624	0.3	-1.3%
	WBR	169	172	0.2	-1.7%

PM Peak Period Intersection Calibration Summary (Continued)

Intersection	Movement	Modeled Volume	Field Balanced Volume	GEH	Percent Difference
Cattlemen Road/ Walmart Driveway	NBR	103	107	0.4	-3.7%
	NBT	554	553	0.0	0.2%
	SBT	626	637	0.4	-1.7%
	WBL	112	111	0.1	0.9%
	WBR	129	133	0.3	-3.0%
Cattlemen Road/Wilkinson Road	EBL	79	80	0.1	-1.3%
	EBR	22	22	0.0	0.0%
	NBL	3	4	0.5	-25.0%
	NBT	579	580	0.0	-0.2%
	SBR	87	88	0.1	-1.1%
	SBT	650	660	0.4	-1.5%

Appendix F
VISSIM Output and Animation

VISSIM Intersection Delay Output

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 9.7 211 NBL 11.2 99 NBT 3.1 142 NBR 2.7 31 EBL 61.4 153 EBT 69.4 153 EBR 18.1 118 SBL 13.1 49 SBT 7.5 204 SBR 5.4 49 WBL 62.0 129 WBT 76.9 129 WBR 14.0 89	MVMNT DELAY QUEUE ALL 11.3 265 NBL 62.4 80 NBT 69.1 74 NBR 15.6 32 EBL 18.7 131 EBT 8.5 262 EBR 7.5 241 SBL 65.0 157 SBT 52.4 153 SBR 16.5 133 WBL 11.7 49 WBT 7.1 195 WBR 3.5 0	MVMNT DELAY QUEUE ALL 33.1 500 NBL 60.9 142 NBT 54.1 306 NBR 40.1 399 EBL 77.3 152 EBT 24.8 332 EBR 15.6 127 SBL 53.4 265 SBT 44.6 233 SBR 31.8 178 WBL 58.6 231 WBT 20.1 336 WBR 13.3 417	MVMNT DELAY QUEUE ALL 23.6 586 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 19.3 313 EBR 1.6 0 SBL 41.7 275 SBT 0.0 0 SBR 48.0 575 WBL 22.4 199 WBT 13.1 472 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 717 — 136 555 26 — 79 69 ▲ ▲ 17 11 ▶ **2034** ◀ 7 60 ▼ ▼ 55 **140** — 100 868 126 — 1094	N 165 — 101 7 57 — 1258 123 ▲ ▲ 17 825 ▶ **2502** ◀ 1212 54 ▼ ▼ 29 **1002** — 44 9 17 — 70	N 671 — 107 281 283 — 1955 145 ▲ ▲ 645 644 ▶ **4229** ◀ 1035 135 ▼ ▼ 275 **924** — 112 322 240 — 674	N 972 — 789 0 183 — 1335 0 ▲ ▲ 0 870 ▶ **3477** ◀ 1171 297 ▼ ▼ 164 **1167** — 0 0 0 — 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 7.3 — 5.4 7.5 13.1 — 53.0 61.4 ▲ ▲ 14.0 69.4 ▶ **9.7** ◀ 76.9 18.1 ▼ ▼ 62.0 **43.5** — 11.2 3.1 2.7 — 3.8	N 34.8 — 16.5 52.4 65.0 — 7.1 18.7 ▲ ▲ 3.5 8.5 ▶ **11.3** ◀ 7.1 7.5 ▼ ▼ 11.7 **9.7** — 62.4 69.1 15.6 — 51.9	N 46.3 — 31.8 44.6 53.4 — 23.3 77.3 ▲ ▲ 13.3 24.8 ▶ **33.1** ◀ 20.1 15.6 ▼ ▼ 58.6 **31.7** — 60.9 54.1 40.1 — 50.2	N 46.8 — 48.0 0.0 41.7 — 14.2 0.0 ▲ ▲ 0.0 19.3 ▶ **23.6** ◀ 13.1 1.6 ▼ ▼ 22.4 **14.8** — 0.0 0.0 0.0 — 0.0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road

VISSIM RESULTS

MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
ALL	18.9	1163	ALL	19.7	382	ALL	11.7	174	ALL	5.5	147
NBL	48.7	1163	NBL	40.9	340	NBL	9.1	53	NBL	5.7	17
NBT	0.0	0	NBT	36.4	32	NBT	6.4	148	NBT	2.0	104
NBR	5.3	0	NBR	8.2	0	NBR	2.7	0	NBR	0.0	0
EBL	0.0	0	EBL	44.3	116	EBL	53.8	85	EBL	62.3	145
EBT	14.0	214	EBT	8.9	297	EBT	84.3	51	EBT	0.0	0
EBR	4.9	66	EBR	5.1	5	EBR	10.5	24	EBR	5.5	0
SBL	0.0	0	SBL	28.7	30	SBL	12.2	101	SBL	0.0	0
SBT	0.0	0	SBT	52.4	38	SBT	6.1	144	SBT	2.3	56
SBR	0.0	0	SBR	8.7	4	SBR	6.0	128	SBR	2.3	25
WBL	0.0	0	WBL	10.0	28	WBL	59.5	147	WBL	0.0	0
WBT	19.6	373	WBT	13.7	216	WBT	66.0	143	WBT	0.0	0
WBR	3.0	18	WBR	7.7	170	WBR	19.8	110	WBR	0.0	0

INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)

N	0	0	0	0	1116	N	50	42	4	4	724
	0			376			109			4	
	457		2892	740			387		1750	714	
	600			0			97			6	
1057		594	0	122	716	593		362	4	12	378

N	461	8	368	85	140	N	377	36	341	0	0
	24			65			56			0	
	3		1288	14			0		1031	0	
	17			61			11			0	
44		36	560	41	637	67		6	579	0	585

AVERAGE DELAY (SECONDS/VEHICLE)

N	0.0	0.0	0.0	0.0	14.0	N	13.8	8.7	52.4	28.7	13.6
	0.0			3.0			44.3			7.7	
	14.0		18.9	19.6			8.9		19.7	13.7	
	4.9			0.0			5.1			10.0	
8.8		48.7	0.0	5.3	41.3	14.8		40.9	36.4	8.2	39.8

N	7.2	6.0	6.1	12.2	41.7	N	2.3	2.3	2.3	0.0	0.0
	53.8			19.8			62.3			0.0	
	84.3		11.7	66.0			0.0		5.5	0.0	
	10.5			59.5			5.5			0.0	
39.1		9.1	6.4	2.7	6.3	53.0		5.7	2.0	0.0	2.1

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 11.0 264 NBL 16.0 136 NBT 3.0 167 NBR 2.7 38 EBL 60.2 201 EBT 78.2 201 EBR 24.2 166 SBL 18.8 59 SBT 10.3 262 SBR 6.3 52 WBL 59.6 149 WBT 73.3 149 WBR 16.2 109	MVMNT DELAY QUEUE ALL 16.9 474 NBL 66.4 76 NBT 68.4 105 NBR 21.8 66 EBL 39.5 229 EBT 13.6 413 EBR 11.9 393 SBL 65.8 198 SBT 62.8 231 SBR 24.6 212 WBL 19.3 75 WBT 11.8 381 WBR 4.7 0	MVMNT DELAY QUEUE ALL 36.8 703 NBL 60.2 150 NBT 64.6 643 NBR 46.7 604 EBL 81.3 185 EBT 28.8 464 EBR 17.4 174 SBL 53.6 316 SBT 42.1 291 SBR 30.2 230 WBL 56.1 271 WBT 24.2 521 WBR 22.2 635	MVMNT DELAY QUEUE ALL 36.0 1769 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 26.2 407 EBR 2.4 0 SBL 43.0 337 SBT 0.0 0 SBR 74.9 1769 WBL 53.3 521 WBT 22.1 638 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 963 — 175 ◀ 756 ▼ 32 ▶ 107 95 ▲ — ▲ 25 14 ▶ — 2734 — ◀ 8 84 ▼ — ▼ 74 193 — ◀ 144 ▲ 1162 ▶ 158 — 1464	N 226 — 140 ◀ 10 ▼ 76 ▶ 1756 166 ▲ — ▲ 24 1128 ▶ — 3445 — ◀ 1687 71 ▼ — ▼ 45 1365 — ◀ 55 ▲ 16 ▶ 23 — 94	N 890 — 152 ◀ 369 ▼ 369 ▶ 2671 193 ▲ — ▲ 857 886 ▶ — 5740 — ◀ 1444 191 ▼ — ▼ 370 1270 — ◀ 146 ▲ 428 ▶ 329 — 903	N 1305 — 1073 ◀ 0 ▼ 232 ▶ 1807 0 ▲ — ▲ 0 1189 ▶ — 4705 — ◀ 1592 400 ▼ — ▼ 215 1589 — ◀ 0 ▲ 0 ▶ 0 — 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 9.8 — 6.3 ◀ 10.3 ▼ 18.8 ▶ 50.5 60.2 ▲ — ▲ 16.2 78.2 ▶ — 11.0 — ◀ 73.3 24.2 ▼ — ▼ 59.6 45.8 — ◀ 16.0 ▲ 3.0 ▶ 2.7 — 4.2	N 40.1 — 24.6 ◀ 62.8 ▼ 65.8 ▶ 11.9 39.5 ▲ — ▲ 4.7 13.6 ▶ — 16.9 — ◀ 11.8 11.9 ▼ — ▼ 19.3 16.7 — ◀ 66.4 ▲ 68.4 ▶ 21.8 — 55.8	N 44.8 — 30.2 ◀ 42.1 ▼ 53.6 ▶ 28.0 81.3 ▲ — ▲ 22.2 28.8 ▶ — 36.8 — ◀ 24.2 17.4 ▼ — ▼ 56.1 35.0 — ◀ 60.2 ▲ 64.6 ▶ 46.7 — 57.3	N 69.3 — 74.9 ◀ 0.0 ▼ 43.0 ▶ 25.8 0.0 ▲ — ▲ 0.0 26.2 ▶ — 36.0 — ◀ 22.1 2.4 ▼ — ▼ 53.3 20.2 — ◀ 0.0 ▲ 0.0 ▶ 0.0 — 0.0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 36.1 2855 NBL 97.7 2855 NBT 0.0 0 NBR 54.0 0 EBL 0.0 0 EBT 18.3 254 EBR 8.9 122 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 30.9 743 WBR 6.1 261	MVMNT DELAY QUEUE ALL 27.0 717 NBL 59.8 711 NBT 62.9 48 NBR 25.6 5 EBL 46.5 146 EBT 12.8 514 EBR 7.8 13 SBL 36.8 40 SBT 59.0 30 SBR 10.8 8 WBL 16.4 36 WBT 18.0 352 WBR 16.3 306	MVMNT DELAY QUEUE ALL 14.1 262 NBL 12.0 65 NBT 8.3 231 NBR 3.7 0 EBL 51.0 95 EBT 72.7 62 EBR 10.7 32 SBL 21.2 149 SBT 9.4 223 SBR 8.3 208 WBL 55.8 182 WBT 62.0 185 WBR 20.6 147	MVMNT DELAY QUEUE ALL 6.6 164 NBL 7.0 25 NBT 2.8 125 NBR 0.0 0 EBL 65.4 164 EBT 0.0 0 EBR 5.2 0 SBL 0.0 0 SBT 3.5 98 SBR 3.4 66 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1505 0 ▲ ▲ 491 617 ▶ 3876 ◀ 1014 787 ▼ ▼ 0 1404 | ◀ 799 ▲ 0 ▶ 166 | 965	N 66 | 59 3 4 | 974 149 ▲ ▲ 5 518 ▶ 2349 ◀ 959 121 ▼ ▼ 10 788 | ◀ 491 ▲ 6 ▶ 18 | 515	N 625 | 9 509 107 | 192 36 ▲ ▲ 87 5 ▶ 1738 ◀ 20 21 ▼ ▼ 85 62 | ◀ 48 ▲ 754 ▶ 52 | 854	N 510 | 50 460 0 | 0 78 ▲ ▲ 0 0 ▶ 1401 ◀ 0 15 ▼ ▼ 0 93 | ◀ 9 ▲ 787 ▶ 0 | 796
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 22.8 0.0 ▲ ▲ 6.1 18.3 ▶ 36.1 ◀ 30.9 8.9 ▼ ▼ 0.0 13.1 | ◀ 97.7 ▲ 0.0 ▶ 54.0 | 90.2	N 14.6 | 10.8 59.0 36.8 | 18.0 46.5 ▲ ▲ 16.3 12.8 ▶ 27.0 ◀ 18.0 7.8 ▼ ▼ 16.4 18.4 | ◀ 59.8 ▲ 62.9 ▶ 25.6 | 58.6	N 11.4 | 8.3 9.4 21.2 | 40.5 51.0 ▲ ▲ 20.6 72.7 ▶ 14.1 ◀ 62.0 10.7 ▼ ▼ 55.8 39.1 | ◀ 12.0 ▲ 8.3 ▶ 3.7 | 8.2	N 3.5 | 3.4 3.5 0.0 | 0.0 65.4 ▲ ▲ 0.0 0.0 ▶ 6.6 ◀ 0.0 5.2 ▼ ▼ 0.0 55.7 | ◀ 7.0 ▲ 2.8 ▶ 0.0 | 2.8

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 9.8 223 NBL 13.6 118 NBT 3.0 145 NBR 2.4 20 EBL 60.1 178 EBT 67.0 178 EBR 18.8 144 SBL 15.0 51 SBT 8.3 215 SBR 5.3 41 WBL 58.9 137 WBT 67.9 137 WBR 16.6 98	MVMNT DELAY QUEUE ALL 13.2 303 NBL 63.5 75 NBT 68.3 89 NBR 19.4 44 EBL 28.2 186 EBT 9.7 292 EBR 8.6 272 SBL 66.4 180 SBT 65.2 191 SBR 20.1 172 WBL 14.9 68 WBT 8.5 221 WBR 4.1 0	MVMNT DELAY QUEUE ALL 34.4 561 NBL 60.1 135 NBT 59.2 464 NBR 42.8 433 EBL 76.7 170 EBT 26.8 378 EBR 16.5 185 SBL 52.3 302 SBT 42.7 231 SBR 30.4 214 WBL 57.8 256 WBT 21.6 365 WBR 16.0 499	MVMNT DELAY QUEUE ALL 24.8 642 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 21.7 355 EBR 1.8 0 SBL 38.2 275 SBT 0.0 0 SBR 47.7 620 WBL 29.8 269 WBT 14.8 492 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 789 — 142 ◀ 619 ▼ 28 ▶ 86 78 ▲ ▲ 19 12 ▶ 2291 ◀ 7 66 ▼ ▼ 60 156 — ◀ 119 ▲ 1006 ▶ 129 — 1254	N 187 — 112 ◀ 8 ▼ 67 ▶ 1441 142 ▲ ▲ 20 934 ▶ 2844 ◀ 1383 57 ▼ ▼ 38 1133 — ◀ 47 ▲ 13 ▶ 18 — 78	N 762 — 128 ◀ 315 ▼ 319 ▶ 2241 167 ▲ ▲ 727 727 ▶ 4839 ◀ 1199 156 ▼ ▼ 315 1050 — ◀ 124 ▲ 375 ▶ 281 — 780	N 1092 — 896 ◀ 0 ▼ 196 ▶ 1523 0 ▲ ▲ 0 982 ▶ 3940 ◀ 1339 339 ▼ ▼ 184 1321 — ◀ 0 ▲ 0 ▶ 0 — 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 8.0 — 5.3 ◀ 8.3 ▼ 15.0 ▶ 50.3 60.1 ▲ ▲ 16.6 67.0 ▶ 9.8 ◀ 67.9 18.8 ▼ ▼ 58.9 43.1 — ◀ 13.6 ▲ 3.0 ▶ 2.4 — 3.9	N 38.6 — 20.1 ◀ 65.2 ▼ 66.4 ▶ 8.7 28.2 ▲ ▲ 4.1 9.7 ▶ 13.2 ◀ 8.5 8.6 ▼ ▼ 14.9 11.9 — ◀ 63.5 ▲ 68.3 ▶ 19.4 — 54.1	N 44.7 — 30.4 ◀ 42.7 ▼ 52.3 ▶ 24.9 76.7 ▲ ▲ 16.0 26.8 ▶ 34.4 ◀ 21.6 16.5 ▼ ▼ 57.8 33.2 — ◀ 60.1 ▲ 59.2 ▶ 42.8 — 53.4	N 46.0 — 47.7 ◀ 0.0 ▼ 38.2 ▶ 16.6 0.0 ▲ ▲ 0.0 21.7 ▶ 24.8 ◀ 14.8 1.8 ▼ ▼ 29.8 16.6 — ◀ 0.0 ▲ 0.0 ▶ 0.0 — 0.0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road

VISSIM RESULTS

	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
ALL	23.3	1824	ALL	21.5	446	ALL	11.9	216	ALL	5.8	164
NBL	57.1	1824	NBL	44.3	397	NBL	9.6	57	NBL	6.0	28
NBT	0.0	0	NBT	38.3	41	NBT	6.7	188	NBT	2.3	104
NBR	14.1	0	NBR	13.2	2	NBR	2.7	0	NBR	0.0	0
EBL	0.0	0	EBL	44.2	120	EBL	56.0	82	EBL	61.2	163
EBT	16.0	216	EBT	10.5	392	EBT	60.8	49	EBT	0.0	0
EBR	6.4	77	EBR	5.9	4	EBR	7.9	20	EBR	5.3	0
SBL	0.0	0	SBL	29.9	26	SBL	14.7	125	SBL	0.0	0
SBT	0.0	0	SBT	53.9	32	SBT	5.8	159	SBT	2.7	62
SBR	0.0	0	SBR	8.7	4	SBR	5.4	143	SBR	2.6	26
WBL	0.0	0	WBL	12.4	35	WBL	61.7	178	WBL	0.0	0
WBT	24.5	479	WBT	15.1	258	WBT	61.9	153	WBT	0.0	0
WBR	3.5	75	WBR	9.1	212	WBR	17.9	116	WBR	0.0	0

INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)

N	0	0	0	0	1237	N	54	46	4	4	797
0				409	124				3
507		3251		828	434		1941		786
678				0	105				8
1185				828	663				421
	693	0	135			404	3	14	

N	515	8	415	92	157	N	428	40	388	0	0
28				73	65				0
3		1422		14	0		1155		0
20				70	11				0
51				695	76				648
	39	611	45			8	640	0	

AVERAGE DELAY (SECONDS/VEHICLE)

N	0.0	0.0	0.0	0.0	17.5	N	13.6	8.7	53.9	29.9	15.1
0.0				3.5	44.2				9.1
16.0		23.3		24.5	10.5		21.5		15.1
6.4				0.0	5.9				12.4
10.5				50.1	16.1				43.2
	57.1	0.0	14.1			44.3	38.3	13.2	

N	7.4	5.4	5.8	14.7	41.3	N	2.7	2.6	2.7	0.0	0.0
56.0				17.9	61.2				0.0
60.8		11.9		61.9	0.0		5.8		0.0
7.9				61.7	5.3				0.0
37.5				6.6	53.1				2.3
	9.6	6.7	2.7			6.0	2.3	0.0	

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.3 516 NBL 26.7 74 NBT 6.3 193 NBR 3.4 11 EBL 55.7 238 EBT 77.1 238 EBR 21.3 203 SBL 18.3 65 SBT 21.0 516 SBR 12.1 36 WBL 58.0 225 WBT 70.0 225 WBR 34.3 186	MVMNT DELAY QUEUE ALL 29.4 1131 NBL 67.8 129 NBT 68.1 159 NBR 25.7 119 EBL 37.1 149 EBT 35.7 1131 EBR 34.8 1110 SBL 70.6 261 SBT 72.7 394 SBR 29.5 375 WBL 33.9 161 WBT 11.3 255 WBR 4.1 0	MVMNT DELAY QUEUE ALL 45.4 952 NBL 67.6 164 NBT 72.6 583 NBR 76.9 657 EBL 86.9 180 EBT 38.2 796 EBR 27.4 187 SBL 48.6 560 SBT 38.3 338 SBR 27.2 226 WBL 68.6 295 WBT 33.1 372 WBR 14.2 353	MVMNT DELAY QUEUE ALL 25.4 573 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 20.4 360 EBR 2.3 0 SBL 47.3 472 SBT 0.0 0 SBR 49.4 514 WBL 75.8 446 WBT 12.4 380 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1173 ◀ 133 ▼ 990 ▶ 50 248 116 ▲ ▲ 22 8 ▶ **2517** ◀ 35 117 ▼ ▼ 191 **241** ◀ 49 ▲ 749 ▶ 51 **849**	N 298 ◀ 183 ▼ 22 ▶ 93 1197 106 ▲ ▲ 26 1365 ▶ **3314** ◀ 1087 125 ▼ ▼ 84 **1596** ◀ 122 ▲ 18 ▶ 78 **218**	N 1291 ◀ 173 ▼ 519 ▶ 599 1590 182 ▲ ▲ 389 1237 ▶ **5341** ◀ 859 173 ▼ ▼ 342 **1592** ◀ 162 ▲ 323 ▶ 378 **863**	N 1077 ◀ 749 ▼ 0 ▶ 328 1006 0 ▲ ▲ 0 1583 ▶ **4292** ◀ 843 622 ▼ ▼ 163 **2205** ◀ 0 ▲ 0 ▶ 0 **0**
AVERAGE DELAY (SECONDS/VEHICLE)	N 19.9 ◀ 12.1 ▼ 21.0 ▶ 18.3 57.6 55.7 ▲ ▲ 34.3 77.1 ▶ **21.3** ◀ 70.0 21.3 ▼ ▼ 58.0 **39.7** ◀ 26.7 ▲ 6.3 ▶ 3.4 **7.3**	N 45.5 ◀ 29.5 ▼ 72.7 ▶ 70.6 12.7 37.1 ▲ ▲ 4.1 35.7 ▶ **29.4** ◀ 11.3 34.8 ▼ ▼ 33.9 **35.7** ◀ 67.8 ▲ 68.1 ▶ 25.7 **52.8**	N 41.6 ◀ 27.2 ▼ 38.3 ▶ 48.6 36.1 86.9 ▲ ▲ 14.2 38.2 ▶ **45.4** ◀ 33.1 27.4 ▼ ▼ 68.6 **42.6** ◀ 67.6 ▲ 72.6 ▶ 76.9 **73.5**	N 48.7 ◀ 49.4 ▼ 0.0 ▶ 47.3 22.7 0.0 ▲ ▲ 0.0 20.4 ▶ **25.4** ◀ 12.4 2.3 ▼ ▼ 75.8 **15.3** ◀ 0.0 ▲ 0.0 ▶ 0.0 **0.0**

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 12.9 656 NBL 59.2 656 NBT 0.0 0 NBR 1.4 0 EBL 0.0 0 EBT 10.1 291 EBR 6.4 84 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 9.8 230 WBR 1.4 0	MVMNT DELAY QUEUE ALL 15.8 511 NBL 35.7 161 NBT 34.3 40 NBR 10.9 4 EBL 42.0 55 EBT 15.5 511 EBR 14.0 52 SBL 37.3 40 SBT 43.7 26 SBR 8.8 23 WBL 17.9 30 WBT 8.8 141 WBR 4.9 95	MVMNT DELAY QUEUE ALL 18.5 326 NBL 14.7 82 NBT 11.1 219 NBR 3.5 2 EBL 53.3 119 EBT 68.9 96 EBR 14.4 68 SBL 23.7 139 SBT 15.1 325 SBR 14.0 310 WBL 58.7 206 WBT 69.0 176 WBR 20.9 139	MVMNT DELAY QUEUE ALL 7.7 206 NBL 8.3 19 NBT 2.1 96 NBR 0.0 0 EBL 68.1 175 EBT 0.0 0 EBR 5.9 0 SBL 0.0 0 SBT 6.0 189 SBR 5.9 159 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 / 0 0 0 / 925 0 ▲ ▲ 236 1058 ▶ 3293 ◀ 689 835 ▼ ▼ 0 1893 / 324 0 148 / 472	N 125 / 114 3 8 / 600 36 ▲ ▲ 4 785 ▶ 2163 ◀ 589 371 ▼ ▼ 7 1192 / 227 4 10 / 241	N 785 / 19 660 106 / 209 49 ▲ ▲ 89 11 ▶ 1857 ◀ 17 39 ▼ ▼ 103 99 / 86 627 45 / 758	N 703 / 81 622 0 / 0 74 ▲ ▲ 0 0 ▶ 1364 ◀ 0 22 ▼ ▼ 0 96 / 3 561 0 / 564
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 / 0.0 0.0 0.0 / 7.7 0.0 ▲ ▲ 1.4 10.1 ▶ 12.9 ◀ 9.8 6.4 ▼ ▼ 0.0 8.5 / 59.2 0.0 1.4 / 41.1	N 11.5 / 8.8 43.7 37.3 / 8.9 42.0 ▲ ▲ 4.9 15.5 ▶ 15.8 ◀ 8.8 14.0 ▼ ▼ 17.9 15.9 / 35.7 34.3 10.9 / 34.7	N 16.2 / 14.0 15.1 23.7 / 43.4 53.3 ▲ ▲ 20.9 68.9 ▶ 18.5 ◀ 69.0 14.4 ▼ ▼ 58.7 39.7 / 14.7 11.1 3.5 / 11.0	N 5.9 / 5.9 6.0 0.0 / 0.0 68.1 ▲ ▲ 0.0 0.0 ▶ 7.7 ◀ 0.0 5.9 ▼ ▼ 0.0 53.8 / 8.3 2.1 0.0 / 2.1

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 25.3 680 NBL 31.9 90 NBT 7.1 231 NBR 3.6 15 EBL 57.7 254 EBT 73.3 254 EBR 23.2 220 SBL 23.5 74 SBT 27.6 680 SBR 16.3 42 WBL 63.4 242 WBT 75.6 242 WBR 46.7 202	MVMNT DELAY QUEUE ALL 70.1 5750 NBL 65.0 149 NBT 63.5 190 NBR 31.9 150 EBL 114.2 183 EBT 123.0 5750 EBR 127.0 5730 SBL 71.6 270 SBT 81.6 463 SBR 37.2 444 WBL 38.9 172 WBT 13.1 297 WBR 5.0 0	MVMNT DELAY QUEUE ALL 58.8 1172 NBL 90.6 188 NBT 114.5 1108 NBR 151.3 1172 EBL 89.5 188 EBT 51.6 898 EBR 38.0 194 SBL 57.5 720 SBT 37.2 404 SBR 24.5 243 WBL 81.8 372 WBT 34.2 424 WBR 14.8 475	MVMNT DELAY QUEUE ALL 30.5 788 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 23.9 509 EBR 2.6 0 SBL 46.5 504 SBT 0.0 0 SBR 49.5 547 WBL 142.6 783 WBT 17.3 727 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1363 151 1153 59 287 138 ▲ ▲ 30 10 ▶ **2927** ◀ 38 135 ▼ ▼ 219 **283** 55 879 57 991	N 347 214 23 110 1395 116 ▲ ▲ 29 1434 ▶ **3682** ◀ 1266 130 ▼ ▼ 100 **1680** 143 21 93 257	N 1509 197 610 702 1875 208 ▲ ▲ 461 1336 ▶ **6071** ◀ 1017 185 ▼ ▼ 397 **1729** 181 356 416 953	N 1258 891 0 367 1171 0 ▲ ▲ 0 1762 ▶ **4887** ◀ 985 691 ▼ ▼ 186 **2453** 0 0 0 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 26.2 16.3 27.6 23.5 63.3 57.7 ▲ ▲ 46.7 73.3 ▶ **25.3** ◀ 75.6 23.2 ▼ ▼ 63.4 **41.8** 31.9 7.1 3.6 8.3	N 51.1 37.2 81.6 71.6 14.8 114.2 ▲ ▲ 5.0 123.0 ▶ **70.1** ◀ 13.1 127.0 ▼ ▼ 38.9 **122.7** 65.0 63.5 31.9 52.9	N 44.9 24.5 37.2 57.5 39.5 89.5 ▲ ▲ 14.8 51.6 ▶ **58.8** ◀ 34.2 38.0 ▼ ▼ 81.8 **54.7** 90.6 114.5 151.3 126.0	N 48.7 49.5 0.0 46.5 37.2 0.0 ▲ ▲ 0.0 23.9 ▶ **30.5** ◀ 17.3 2.6 ▼ ▼ 142.6 **17.9** 0.0 0.0 0.0 0.0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 15.0 694 NBL 57.7 694 NBT 0.0 0 NBR 1.9 0 EBL 0.0 0 EBT 13.1 282 EBR 7.7 107 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 13.6 293 WBR 1.9 0	MVMNT DELAY QUEUE ALL 19.5 1105 NBL 37.2 183 NBT 33.1 36 NBR 12.4 0 EBL 45.0 63 EBT 21.6 1105 EBR 18.7 50 SBL 32.5 38 SBT 49.4 31 SBR 9.0 27 WBL 23.5 33 WBT 10.6 186 WBR 7.1 140	MVMNT DELAY QUEUE ALL 21.4 453 NBL 19.8 120 NBT 13.8 269 NBR 4.7 3 EBL 53.2 134 EBT 74.2 121 EBR 20.7 94 SBL 33.0 193 SBT 18.4 449 SBR 17.5 433 WBL 55.0 241 WBT 63.5 223 WBR 22.4 186	MVMNT DELAY QUEUE ALL 8.9 263 NBL 11.1 24 NBT 2.5 114 NBR 0.0 0 EBL 69.1 195 EBT 0.0 0 EBR 5.9 0 SBL 0.0 0 SBT 7.7 261 SBR 7.6 231 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1076 0 ▲ ▲ 280 1186 ▶ 3759 ◀ 796 940 ▼ ▼ 0 2126 | ◀ 380 ▲ 0 ▶ 173 | 553	N 147 | 131 7 9 | 697 40 ▲ ▲ 5 895 ▶ 2471 ◀ 682 407 ▼ ▼ 10 1342 | ◀ 263 ▲ 5 ▶ 13 | 281	N 911 | 22 769 120 | 246 55 ▲ ▲ 103 14 ▶ 2165 ◀ 19 48 ▼ ▼ 124 117 | ◀ 97 ▲ 736 ▶ 53 | 886	N 831 | 102 729 0 | 0 88 ▲ ▲ 0 0 ▶ 1601 ◀ 0 24 ▼ ▼ 0 112 | ◀ 5 ▲ 651 ▶ 0 | 656
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 10.6 0.0 ▲ ▲ 1.9 13.1 ▶ 15.0 ◀ 13.6 7.7 ▼ ▼ 0.0 10.7 | ◀ 57.7 ▲ 0.0 ▶ 1.9 | 40.2	N 12.4 | 9.0 49.4 32.5 | 10.7 45.0 ▲ ▲ 7.1 21.6 ▶ 19.5 ◀ 10.6 18.7 ▼ ▼ 23.5 21.4 | ◀ 37.2 ▲ 33.1 ▶ 12.4 | 35.9	N 20.3 | 17.5 18.4 33.0 | 42.0 53.2 ▲ ▲ 22.4 74.2 ▶ 21.4 ◀ 63.5 20.7 ▼ ▼ 55.0 42.3 | ◀ 19.8 ▲ 13.8 ▶ 4.7 | 13.9	N 7.7 | 7.6 7.7 0.0 | 0.0 69.1 ▲ ▲ 0.0 0.0 ▶ 8.9 ◀ 0.0 5.9 ▼ ▼ 0.0 55.6 | ◀ 11.1 ▲ 2.5 ▶ 0.0 | 2.5

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 20.1 373 NBL 22.7 75 NBT 6.8 209 NBR 3.3 8 EBL 61.9 220 EBT 68.5 220 EBR 17.0 186 SBL 15.1 58 SBT 18.5 373 SBR 11.4 37 WBL 59.4 203 WBT 70.6 203 WBR 34.4 164	MVMNT DELAY QUEUE ALL 50.0 5755 NBL 68.7 109 NBT 70.7 164 NBR 27.3 125 EBL 74.1 155 EBT 76.9 5755 EBR 78.1 5735 SBL 69.0 175 SBT 72.5 304 SBR 26.1 285 WBL 33.4 139 WBT 10.8 242 WBR 3.8 0	MVMNT DELAY QUEUE ALL 48.6 1038 NBL 85.8 173 NBT 88.1 890 NBR 93.9 920 EBL 83.7 167 EBT 39.1 850 EBR 28.2 179 SBL 47.5 451 SBT 38.5 316 SBR 27.4 218 WBL 67.3 291 WBT 34.5 343 WBR 16.1 400	MVMNT DELAY QUEUE ALL 23.9 501 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 18.6 360 EBR 2.3 0 SBL 47.7 413 SBT 0.0 0 SBR 49.1 453 WBL 64.3 428 WBT 11.6 312 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1055 — 125 ◀ 885 ▼ 45 ▶ 221 102 ▲ ▲ 23 8 ▶ **2300** ◀ 31 104 ▼ ▼ 167 **214** — ◀ 47 ▲ 710 ▶ 48 — **805**	N 267 — 167 ◀ 20 ▼ 80 ▶ 1108 110 ▲ ▲ 25 1377 ▶ **3193** ◀ 1002 130 ▼ ▼ 81 **1617** — ◀ 107 ▲ 13 ▶ 75 — **195**	N 1161 — 160 ◀ 460 ▼ 541 ▶ 1454 185 ▲ ▲ 343 1243 ▶ **5039** ◀ 789 175 ▼ ▼ 322 **1603** — ◀ 146 ▲ 307 ▶ 362 — **815**	N 972 — 689 ◀ 0 ▼ 283 ▶ 912 0 ▲ ▲ 0 1565 ▶ **4044** ◀ 759 591 ▼ ▼ 153 **2156** — ◀ 0 ▲ 0 ▶ 0 — **0**
AVERAGE DELAY (SECONDS/VEHICLE)	N 17.5 — 11.4 ◀ 18.5 ▼ 15.1 ▶ 58.4 61.9 ▲ ▲ 34.4 68.5 ▶ **20.1** ◀ 70.6 17.0 ▼ ▼ 59.4 **40.3** — ◀ 22.7 ▲ 6.8 ▶ 3.3 — **7.5**	N 42.5 — 26.1 ◀ 72.5 ▼ 69.0 ▶ 12.3 74.1 ▲ ▲ 3.8 76.9 ▶ **50.0** ◀ 10.8 78.1 ▼ ▼ 33.4 **76.8** — ◀ 68.7 ▲ 70.7 ▶ 27.3 — **52.9**	N 41.1 — 27.4 ◀ 38.5 ▼ 47.5 ▶ 37.4 83.7 ▲ ▲ 16.1 39.1 ▶ **48.6** ◀ 34.5 28.2 ▼ ▼ 67.3 **43.1** — ◀ 85.8 ▲ 88.1 ▶ 93.9 — **90.3**	N 48.7 — 49.1 ◀ 0.0 ▼ 47.7 ▶ 20.4 0.0 ▲ ▲ 0.0 18.6 ▶ **23.9** ◀ 11.6 2.3 ▼ ▼ 64.3 **14.1** — ◀ 0.0 ▲ 0.0 ▶ 0.0 — **0.0**

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 11.5 501 NBL 59.4 501 NBT 0.0 0 NBR 0.8 0 EBL 0.0 0 EBT 7.9 259 EBR 6.2 66 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 8.2 207 WBR 1.2 0	MVMNT DELAY QUEUE ALL 14.2 415 NBL 35.9 131 NBT 36.0 32 NBR 10.2 2 EBL 41.4 58 EBT 12.8 415 EBR 11.5 38 SBL 32.0 33 SBT 52.4 32 SBR 7.9 17 WBL 17.5 26 WBT 8.4 142 WBR 5.2 96	MVMNT DELAY QUEUE ALL 16.9 286 NBL 14.7 75 NBT 9.7 168 NBR 3.2 0 EBL 56.6 101 EBT 62.9 98 EBR 13.5 71 SBL 20.6 110 SBT 12.9 286 SBR 11.2 271 WBL 59.6 202 WBT 68.4 152 WBR 19.9 115	MVMNT DELAY QUEUE ALL 7.6 178 NBL 7.2 23 NBT 2.1 95 NBR 0.0 0 EBL 73.0 170 EBT 0.0 0 EBR 5.6 0 SBL 0.0 0 SBT 5.2 139 SBR 5.1 109 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 — 0 0 0 — 830 0 ▲ ▲ 211 994 ▶ 3109 ◀ 619 861 ▼ ▼ 0 1855 — 288 0 134 — 422	N 112 — 100 4 8 — 538 34 ▲ ▲ 4 747 ▶ 1989 ◀ 527 338 ▼ ▼ 7 1119 — 200 4 12 — 216	N 724 — 17 610 97 — 187 42 ▲ ▲ 80 11 ▶ 1685 ◀ 14 36 ▼ ▼ 93 89 — 75 562 43 — 680	N 655 — 76 579 0 — 0 67 ▲ ▲ 0 0 ▶ 1245 ◀ 0 18 ▼ ▼ 0 85 — 4 498 0 — 502
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 — 0.0 0.0 0.0 — 6.5 0.0 ▲ ▲ 1.2 7.9 ▶ 11.5 ◀ 8.2 6.2 ▼ ▼ 0.0 7.1 — 59.4 0.0 0.8 — 40.8	N 11.3 — 7.9 52.4 32.0 — 8.5 41.4 ▲ ▲ 5.2 12.8 ▶ 14.2 ◀ 8.4 11.5 ▼ ▼ 17.5 13.3 — 35.9 36.0 10.2 — 34.5	N 13.9 — 11.2 12.9 20.6 — 43.3 56.6 ▲ ▲ 19.9 62.9 ▶ 16.9 ◀ 68.4 13.5 ▼ ▼ 59.6 40.0 — 14.7 9.7 3.2 — 9.8	N 5.2 — 5.1 5.2 0.0 — 0.0 73.0 ▲ ▲ 0.0 0.0 ▶ 7.6 ◀ 0.0 5.6 ▼ ▼ 0.0 58.7 — 7.2 2.1 0.0 — 2.1

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 1

Cattlemen Road/Maxfield Drive

VISSIM RESULTS

MVMNT	DELAY	QUEUE
ALL	17.1	325
NBL	74.0	314
NBT	7.7	323
NBR	3.0	0
EBL	62.1	188
EBT	82.4	188
EBR	19.7	200
SBL	14.8	45
SBT	15.0	174
SBR	7.0	32
WBL	67.9	135
WBT	82.7	135
WBR	15.2	97

INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)

N 868	134 ◄	702 ▼	32 ►	100
85 ▲				▲ 36
9 ►		**2347**		◄ 6
57 ▼				▼ 58
151	◄ 106	▲ 996	► 120	1222

AVERAGE DELAY (SECONDS/VEHICLE)

N 13.8	7.0 ◄	15.0 ▼	14.8 ►	49.8
62.1 ▲				▲ 15.2
82.4 ►		**17.1**		◄ 82.7
19.7 ▼				▼ 67.9
47.3	◄ 74.0	▲ 7.7	► 3.0	13.0

Bee Ridge Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	20.5	385
NBL	68.1	73
NBT	75.7	193
NBR	15.8	176
EBL	86.9	282
EBT	18.8	366
EBR	17.8	351
SBL	72.0	189
SBT	66.8	189
SBR	7.6	40
WBL	104.7	143
WBT	9.4	212
WBR	3.6	0

N 181	101 ◄	11 ▼	69 ►	1480
123 ▲				▲ 35
959 ►		**3036**		◄ 1390
112 ▼				▼ 55
1194	◄ 45	▲ 10	► 120	175

N 35.7	7.6 ◄	66.8 ▼	72.0 ►	12.8
86.9 ▲				▲ 3.6
18.8 ►		**20.5**		◄ 9.4
17.8 ▼				▼ 104.7
25.8	◄ 68.1	▲ 75.7	► 15.8	32.6

Bee Ridge Road/Cattlemen Road

MVMNT	DELAY	QUEUE
ALL	38.5	319
NBL	79.8	147
NBT	62.7	228
NBR	39.9	199
EBL	58.0	138
EBT	28.9	291
EBR	17.3	140
SBL	76.8	221
SBT	42.1	174
SBR	23.3	133
WBL	70.8	220
WBT	27.1	308
WBR	10.6	185

N 812	125 ◄	314 ▼	373 ►	2274
155 ▲				▲ 681
833 ►		**5092**		◄ 1234
148 ▼				▼ 359
1136	◄ 140	▲ 396	► 331	867

N 55.1	23.3 ◄	42.1 ▼	76.8 ►	29.1
58.0 ▲				▲ 10.6
28.9 ►		**38.5**		◄ 27.1
17.3 ▼				▼ 70.8
31.4	◄ 79.8	▲ 62.7	► 39.9	56.7

I-75 West Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	25.4	651
NBL	0.0	0
NBT	0.0	0
NBR	0.0	0
EBL	0.0	0
EBT	11.7	276
EBR	1.0	116
SBL	61.7	185
SBT	0.0	0
SBR	39.0	377
WBL	69.0	177
WBT	24.2	651
WBR	0.0	0

N 1128	929 ◄	0 ▼	199 ►	1519
0 ▲				▲ 0
1091 ►		**4186**		◄ 1342
444 ▼				▼ 177
1535	◄ 0	▲ 0	► 0	0

N 43.0	39.0 ◄	0.0 ▼	61.7 ►	29.4
0.0 ▲				▲ 0.0
11.7 ►		**25.4**		◄ 24.2
1.0 ▼				▼ 69.0
8.6	◄ 0.0	▲ 0.0	► 0.0	0.0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.0 536 NBL 47.5 536 NBT 0.0 0 NBR 3.4 71 EBL 0.0 0 EBT 12.1 237 EBR 3.4 54 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 14.3 273 WBR 2.4 16	MVMNT DELAY QUEUE ALL 25.7 403 NBL 56.1 295 NBT 45.5 70 NBR 14.8 26 EBL 58.1 128 EBT 10.9 248 EBR 5.4 41 SBL 50.2 41 SBT 62.3 52 SBR 10.3 15 WBL 14.0 30 WBT 20.7 398 WBR 4.4 0	MVMNT DELAY QUEUE ALL 13.2 270 NBL 9.0 76 NBT 10.5 269 NBR 4.8 3 EBL 65.9 87 EBT 73.9 47 EBR 6.6 18 SBL 14.3 143 SBT 4.8 103 SBR 2.6 103 WBL 64.3 135 WBT 70.2 158 WBR 21.7 121	MVMNT DELAY QUEUE ALL 5.9 155 NBL 5.2 18 NBT 2.7 127 NBR 0.0 0 EBL 68.6 151 EBT 0.0 0 EBR 4.7 0 SBL 0.0 0 SBT 3.0 76 SBR 3.0 46 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N: 0 / 0 0 0 / 1208 0 ▲ ▲ 403 635 ▶ 3354 ◀ 805 649 ▼ ▼ 0 1284 / ◀ 722 ▲ 0 ▶ 137 / 859	N: 62 / 49 7 6 / 821 126 ▲ ▲ 8 526 ▶ 2064 ◀ 804 119 ▼ ▼ 9 771 / ◀ 364 ▲ 4 ▶ 37 / 405	N: 620 / 6 453 161 / 150 29 ▲ ▲ 77 4 ▶ 1630 ◀ 15 18 ▼ ▼ 58 51 / ◀ 84 ▲ 675 ▶ 44 / 803	N: 454 / 42 412 0 / 0 60 ▲ ▲ 0 0 ▶ 1266 ◀ 0 11 ▼ ▼ 0 71 / ◀ 7 ▲ 732 ▶ 0 / 739
AVERAGE DELAY (SECONDS/VEHICLE)	N: 0.0 / 0.0 0.0 0.0 / 10.3 0.0 ▲ ▲ 2.4 12.1 ▶ 17.0 ◀ 14.3 3.4 ▼ ▼ 0.0 7.7 / ◀ 47.5 ▲ 0.0 ▶ 3.4 / 40.4	N: 20.1 / 10.3 62.3 50.2 / 20.5 58.1 ▲ ▲ 4.4 10.9 ▶ 25.7 ◀ 20.7 5.4 ▼ ▼ 14.0 17.8 / ◀ 56.1 ▲ 45.5 ▶ 14.8 / 52.2	N: 7.2 / 2.6 4.8 14.3 / 43.0 65.9 ▲ ▲ 21.7 73.9 ▶ 13.2 ◀ 70.2 6.6 ▼ ▼ 64.3 45.6 / ◀ 9.0 ▲ 10.5 ▶ 4.8 / 10.1	N: 3.0 / 3.0 3.0 0.0 / 0.0 68.6 ▲ ▲ 0.0 0.0 ▶ 5.9 ◀ 0.0 4.7 ▼ ▼ 0.0 58.7 / ◀ 5.2 ▲ 2.7 ▶ 0.0 / 2.7

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 19.4 439 NBL 80.6 433 NBT 8.6 427 NBR 3.8 13 EBL 64.2 247 EBT 76.0 247 EBR 25.7 259 SBL 20.5 58 SBT 18.3 263 SBR 8.2 48 WBL 70.4 174 WBT 81.9 174 WBR 21.4 135	MVMNT DELAY QUEUE ALL 33.0 1242 NBL 67.7 80 NBT 78.3 260 NBR 24.0 243 EBL 194.2 982 EBT 34.8 1151 EBR 33.8 1136 SBL 75.5 253 SBT 74.0 253 SBR 8.3 53 WBL 106.4 182 WBT 14.0 329 WBR 4.9 0	MVMNT DELAY QUEUE ALL 42.8 420 NBL 78.3 173 NBT 76.5 293 NBR 44.5 258 EBL 53.0 146 EBT 36.7 399 EBR 19.3 169 SBL 87.8 277 SBT 42.3 219 SBR 22.6 179 WBL 71.3 277 WBT 28.8 393 WBR 14.9 277	MVMNT DELAY QUEUE ALL 26.2 752 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.4 347 EBR 1.3 164 SBL 61.1 222 SBT 0.0 0 SBR 40.5 478 WBL 69.8 233 WBT 23.5 752 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1173 | 178 946 49 | 136 114 ▲ ▲ 48 14 ▶ **3155** ◀ 9 78 ▼ ▼ 79 **206** | 139 1339 158 | 1636	N 246 | 139 15 92 | 1982 162 ▲ ▲ 48 1281 ▶ **4063** ◀ 1857 152 ▼ ▼ 77 **1595** | 56 12 166 | 234	N 1099 | 169 425 505 | 3047 207 ▲ ▲ 923 1126 ▶ **6840** ◀ 1644 196 ▼ ▼ 480 **1529** | 191 520 450 | 1161	N 1512 | 1242 0 270 | 2058 0 ▲ ▲ 0 1469 ▶ **5651** ◀ 1820 607 ▼ ▼ 238 **2076** | 0 0 0 | 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 16.9 | 8.2 18.3 20.5 | 53.8 64.2 ▲ ▲ 21.4 76.0 ▶ **19.4** ◀ 81.9 25.7 ▼ ▼ 70.4 **50.4** | 80.6 8.6 3.8 | 14.3	N 37.5 | 8.3 74.0 75.5 | 17.4 194.2 ▲ ▲ 4.9 34.8 ▶ **33.0** ◀ 14.0 33.8 ▼ ▼ 106.4 **50.9** | 67.7 78.3 24.0 | 37.2	N 60.2 | 22.6 42.3 87.8 | 31.3 53.0 ▲ ▲ 14.9 36.7 ▶ **42.8** ◀ 28.8 19.3 ▼ ▼ 71.3 **36.7** | 78.3 76.5 44.5 | 64.4	N 44.2 | 40.5 0.0 61.1 | 28.8 0.0 ▲ ▲ 0.0 14.4 ▶ **26.2** ◀ 23.5 1.3 ▼ ▼ 69.8 **10.6** | 0.0 0.0 0.0 | 0.0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 19.7 789 NBL 42.1 780 NBT 0.0 0 NBR 6.5 107 EBL 0.0 0 EBT 18.7 347 EBR 6.1 145 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 21.9 475 WBR 3.9 115	MVMNT DELAY QUEUE ALL 32.9 633 NBL 73.1 568 NBT 63.6 65 NBR 23.7 21 EBL 66.3 170 EBT 14.6 379 EBR 7.2 48 SBL 41.5 49 SBT 68.8 61 SBR 13.5 30 WBL 20.8 51 WBT 26.8 601 WBR 8.1 0	MVMNT DELAY QUEUE ALL 17.3 455 NBL 13.9 109 NBT 15.6 440 NBR 8.9 3 EBL 64.1 112 EBT 68.0 64 EBR 8.9 34 SBL 25.1 281 SBT 7.7 173 SBR 3.4 173 WBL 60.4 170 WBT 68.7 210 WBR 25.0 173	MVMNT DELAY QUEUE ALL 7.3 214 NBL 8.1 28 NBT 3.7 197 NBR 0.0 0 EBL 67.0 188 EBT 0.0 0 EBR 4.7 0 SBL 0.0 0 SBT 5.0 139 SBR 4.6 109 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1640 0 ▲ ▲ 562 855 ▶ 4546 ◀ 1078 882 ▼ ▼ 0 1737 | ◀ 981 ▲ 0 ▶ 186 | 1167	N 85 | 66 9 10 | 1107 169 ▲ ▲ 11 704 ▶ 2781 ◀ 1081 163 ▼ ▼ 15 1036 | ◀ 489 ▲ 5 ▶ 53 | 547	N 836 | 10 618 208 | 200 38 ▲ ▲ 104 5 ▶ 2192 ◀ 20 24 ▼ ▼ 76 67 | ◀ 117 ▲ 909 ▶ 58 | 1084	N 618 | 56 562 0 | 0 83 ▲ ▲ 0 0 ▶ 1717 ◀ 0 15 ▼ ▼ 0 98 | ◀ 9 ▲ 989 ▶ 0 | 998
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 15.7 0.0 ▲ ▲ 3.9 18.7 ▶ 19.7 ◀ 21.9 6.1 ▼ ▼ 0.0 12.3 | ◀ 42.1 ▲ 0.0 ▶ 6.5 | 36.4	N 22.7 | 13.5 68.8 41.5 | 26.5 66.3 ▲ ▲ 8.1 14.6 ▶ 32.9 ◀ 26.8 7.2 ▼ ▼ 20.8 21.9 | ◀ 73.1 ▲ 63.6 ▶ 23.7 | 68.2	N 12.0 | 3.4 7.7 25.1 | 42.8 64.1 ▲ ▲ 25.0 68.0 ▶ 17.3 ◀ 68.7 8.9 ▼ ▼ 60.4 44.6 | ◀ 13.9 ▲ 15.6 ▶ 8.9 | 15.0	N 4.9 | 4.6 5.0 0.0 | 0.0 67.0 ▲ ▲ 0.0 0.0 ▶ 7.3 ◀ 0.0 4.7 ▼ ▼ 0.0 57.4 | ◀ 8.1 ▲ 3.7 ▶ 0.0 | 3.8

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.6 346 NBL 77.4 341 NBT 7.1 345 NBR 3.2 10 EBL 62.4 215 EBT 75.2 215 EBR 19.8 227 SBL 16.4 55 SBT 16.3 187 SBR 7.9 36 WBL 72.6 147 WBT 91.9 147 WBR 19.9 109	MVMNT DELAY QUEUE ALL 29.2 824 NBL 69.4 73 NBT 76.5 209 NBR 19.3 192 EBL 177.3 773 EBT 30.9 721 EBR 25.1 706 SBL 70.7 210 SBT 69.5 210 SBR 7.7 45 WBL 104.8 165 WBT 10.3 213 WBR 4.3 0	MVMNT DELAY QUEUE ALL 39.7 338 NBL 78.0 173 NBT 66.6 241 NBR 40.5 228 EBL 53.6 150 EBT 30.7 315 EBR 17.9 155 SBL 80.7 246 SBT 40.7 173 SBR 22.9 152 WBL 69.3 252 WBT 28.7 324 WBR 12.1 205	MVMNT DELAY QUEUE ALL 24.9 683 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 12.3 294 EBR 1.1 89 SBL 61.8 194 SBT 0.0 0 SBR 39.6 424 WBL 66.8 194 WBT 22.4 683 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 959 — 145 ◀ 779 ▼ 35 ▶ 111 96 ▲ ▲ 38 12 ▶ **2617** ◀ 7 62 ▼ ▼ 66 **170** — ◀ 116 ▲ 1116 ▶ 142 — 1374	N 201 — 110 ◀ 12 ▼ 79 ▶ 1663 146 ▲ ▲ 40 1076 ▶ **3410** ◀ 1558 129 ▼ ▼ 65 **1351** — ◀ 50 ▲ 10 ▶ 132 — 192	N 908 — 140 ◀ 343 ▼ 425 ▶ 2535 182 ▲ ▲ 761 948 ▶ **5699** ◀ 1367 163 ▼ ▼ 407 **1293** — ◀ 156 ▲ 438 ▶ 363 — 957	N 1248 — 1025 ◀ 0 ▼ 223 ▶ 1704 0 ▲ ▲ 0 1232 ▶ **4700** ◀ 1507 513 ▼ ▼ 197 **1745** — ◀ 0 ▲ 0 ▶ 0 — 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 15.0 — 7.9 ◀ 16.3 ▼ 16.4 ▶ 55.8 62.4 ▲ ▲ 19.9 75.2 ▶ **17.6** ◀ 91.9 19.8 ▼ ▼ 72.6 **47.8** — ◀ 77.4 ▲ 7.1 ▶ 3.2 — 12.6	N 36.1 — 7.7 ◀ 69.5 ▼ 70.7 ▶ 13.9 177.3 ▲ ▲ 4.3 30.9 ▶ **29.2** ◀ 10.3 25.1 ▼ ▼ 104.8 **46.2** — ◀ 69.4 ▲ 76.5 ▶ 19.3 — 35.3	N 56.7 — 22.9 ◀ 40.7 ▼ 80.7 ▶ 30.2 53.6 ▲ ▲ 12.1 30.7 ▶ **39.7** ◀ 28.7 17.9 ▼ ▼ 69.3 **32.3** — ◀ 78.0 ▲ 66.6 ▶ 40.5 — 58.6	N 43.6 — 39.6 ◀ 0.0 ▼ 61.8 ▶ 27.5 0.0 ▲ ▲ 0.0 12.3 ▶ **24.9** ◀ 22.4 1.1 ▼ ▼ 66.8 **9.0** — ◀ 0.0 ▲ 0.0 ▶ 0.0 — 0.0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 3

I-75 East Ramp Terminal/Bee Ridge Road

VISSIM RESULTS

MVMNT	DELAY	QUEUE
ALL	18.2	591
NBL	45.7	591
NBT	0.0	0
NBR	3.7	66
EBL	0.0	0
EBT	15.7	246
EBR	4.1	72
SBL	0.0	0
SBT	0.0	0
SBR	0.0	0
WBL	0.0	0
WBT	17.0	277
WBR	2.9	7

INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)

	N	0	0	0	0						1349
		0	▲						▲	460	
		719	▶		3768				◀	889	
		736	▼						▼	0	
	1455										962
			◀	812	▲	0	▶	150			

AVERAGE DELAY (SECONDS/VEHICLE)

	N	0.0	0.0	0.0	0.0						12.2
		0.0	▲						▲	2.9	
		15.7	▶		18.2				◀	17.0	
		4.1	▼						▼	0.0	
	9.8										39.2
			◀	45.7	▲	0.0	▶	3.7			

Bee Ridge Road/Mauna Loa Boulevard

MVMNT	DELAY	QUEUE
ALL	27.9	429
NBL	59.9	326
NBT	41.9	68
NBR	15.9	28
EBL	63.2	167
EBT	11.7	257
EBR	5.7	34
SBL	44.1	50
SBT	67.6	46
SBR	11.7	28
WBL	16.8	40
WBT	23.0	428
WBR	4.9	0

	N	72	55	9	8						908
		146	▲						▲	8	
		592	▶		2303				◀	889	
		132	▼						▼	11	
	870										448
			◀	401	▲	4	▶	43			

	N	22.3	11.7	67.6	44.1						22.7
		63.2	▲						▲	4.9	
		11.7	▶		27.9				◀	23.0	
		5.7	▼						▼	16.8	
	19.5										55.5
			◀	59.9	▲	41.9	▶	15.9			

Cattlemen Road/Center Pointe Drive

MVMNT	DELAY	QUEUE
ALL	14.0	342
NBL	10.5	90
NBT	11.6	338
NBR	5.6	7
EBL	69.3	98
EBT	74.9	64
EBR	7.2	35
SBL	17.0	191
SBT	5.2	103
SBR	3.4	103
WBL	64.9	167
WBT	79.4	160
WBR	20.2	123

	N	690	7	508	175						163
		32	▲						▲	86	
		3	▶		1795				◀	13	
		21	▼						▼	64	
	56										880
			◀	92	▲	742	▶	46			

	N	8.2	3.4	5.2	17.0						42.5
		69.3	▲						▲	20.2	
		74.9	▶		14.0				◀	79.4	
		7.2	▼						▼	64.9	
	46.3										11.2
			◀	10.5	▲	11.6	▶	5.6			

Cattlemen Road/Wilkinson Road

MVMNT	DELAY	QUEUE
ALL	6.3	182
NBL	7.0	28
NBT	3.0	146
NBR	0.0	0
EBL	66.9	172
EBT	0.0	0
EBR	4.7	0
SBL	0.0	0
SBT	3.6	97
SBR	3.2	67
WBL	0.0	0
WBT	0.0	0
WBR	0.0	0

	N	520	47	473	0						0
		67	▲						▲	0	
		0	▶		1417				◀	0	
		12	▼						▼	0	
	79										816
			◀	8	▲	808	▶	0			

	N	3.5	3.2	3.6	0.0						0.0
		66.9	▲						▲	0.0	
		0.0	▶		6.3				◀	0.0	
		4.7	▼						▼	0.0	
	57.5										3.0
			◀	7.0	▲	3.0	▶	0.0			

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.5 415 NBL 78.2 207 NBT 9.7 345 NBR 3.6 0 EBL 53.0 237 EBT 74.9 237 EBR 28.3 250 SBL 21.6 82 SBT 24.8 370 SBR 12.6 32 WBL 67.2 313 WBT 65.7 313 WBR 24.1 274	MVMNT DELAY QUEUE ALL 35.7 1465 NBL 73.4 125 NBT 108.7 558 NBR 48.6 540 EBL 92.2 258 EBT 38.5 1465 EBR 39.4 1450 SBL 84.8 321 SBT 84.4 321 SBR 9.8 76 WBL 71.4 231 WBT 18.3 360 WBR 3.9 0	MVMNT DELAY QUEUE ALL 45.1 569 NBL 72.4 176 NBT 70.3 225 NBR 54.6 326 EBL 74.2 144 EBT 41.2 569 EBR 25.4 283 SBL 78.9 357 SBT 35.4 231 SBR 21.2 181 WBL 70.3 250 WBT 24.8 278 WBR 9.0 135	MVMNT DELAY QUEUE ALL 22.6 529 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 12.1 361 EBR 1.6 272 SBL 61.8 279 SBT 0.0 0 SBR 37.6 361 WBL 68.8 178 WBT 22.3 510 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1307 ◀ 148 ▼ 1095 ▶ 64 → 252 115 ▲ ▲ 28 11 ▶ **2839** ◀ 32 117 ▼ ▼ 192 **243** ◀ 51 ▲ 929 ▶ 52 → 1032	N 296 ◀ 182 ▼ 22 ▶ 92 → 1440 109 ▲ ▲ 41 1460 ▶ **3930** ◀ 1299 226 ▼ ▼ 100 **1795** ◀ 103 ▲ 13 ▶ 280 → 396	N 1394 ◀ 186 ▼ 528 ▶ 680 → 1969 194 ▲ ▲ 476 1407 ▶ **6183** ◀ 1074 195 ▼ ▼ 419 **1796** ◀ 177 ▲ 380 ▶ 461 → 1018	N 1186 ◀ 834 ▼ 0 ▶ 352 → 1311 0 ▲ ▲ 0 1802 ▶ **5048** ◀ 1130 745 ▼ ▼ 181 **2547** ◀ 0 ▲ 0 ▶ 0 → 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 23.3 ◀ 12.6 ▼ 24.8 ▶ 21.6 → 62.2 53.0 ▲ ▲ 24.1 74.9 ▶ **24.5** ◀ 65.7 28.3 ▼ ▼ 67.2 **42.1** ◀ 78.2 ▲ 9.7 ▶ 3.6 → 12.8	N 38.6 ◀ 9.8 ▼ 84.4 ▶ 84.8 → 21.6 92.2 ▲ ▲ 3.9 38.5 ▶ **35.7** ◀ 18.3 39.4 ▼ ▼ 71.4 **41.8** ◀ 73.4 ▲ 108.7 ▶ 48.6 → 57.0	N 54.7 ◀ 21.2 ▼ 35.4 ▶ 78.9 → 30.7 74.2 ▲ ▲ 9.0 41.2 ▶ **45.1** ◀ 24.8 25.4 ▼ ▼ 70.3 **43.0** ◀ 72.4 ▲ 70.3 ▶ 54.6 → 63.6	N 44.8 ◀ 37.6 ▼ 0.0 ▶ 61.8 → 28.7 0.0 ▲ ▲ 0.0 12.1 ▶ **22.6** ◀ 22.3 1.6 ▼ ▼ 68.8 **9.0** ◀ 0.0 ▲ 0.0 ▶ 0.0 → 0.0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.5 503 NBL 52.4 380 NBT 0.0 0 NBR 7.9 136 EBL 0.0 0 EBT 11.6 503 EBR 7.9 224 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 8.9 186 WBR 1.6 0	MVMNT DELAY QUEUE ALL 18.7 390 NBL 45.8 172 NBT 39.3 77 NBR 15.9 29 EBL 48.5 86 EBT 13.4 374 EBR 12.0 221 SBL 35.1 58 SBT 56.2 55 SBR 9.8 43 WBL 17.5 36 WBT 16.7 321 WBR 3.4 0	MVMNT DELAY QUEUE ALL 16.3 360 NBL 18.4 147 NBT 14.1 314 NBR 6.2 5 EBL 57.9 110 EBT 77.4 105 EBR 14.7 77 SBL 22.3 248 SBT 7.1 235 SBR 3.6 235 WBL 59.3 206 WBT 63.9 195 WBR 19.2 157	MVMNT DELAY QUEUE ALL 9.1 225 NBL 11.4 31 NBT 3.8 149 NBR 0.0 0 EBL 65.9 219 EBT 0.0 0 EBR 6.1 6 SBL 0.0 0 SBT 5.8 173 SBR 5.6 143 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 / 0 0 0 / 1076 0 ▲ ▲ 256 1191 ▶ 3908 ◀ 820 958 ▼ ▼ 0 2149 / ◀ 499 ▲ 0 ▶ 182 / 681	N 151 / 116 8 27 / 734 78 ▲ ▲ 7 883 ▶ 2559 ◀ 716 413 ▼ ▼ 11 1374 / ◀ 250 ▲ 8 ▶ 37 / 295	N 1008 / 20 769 219 / 214 43 ▲ ▲ 96 12 ▶ 2214 ◀ 17 39 ▼ ▼ 101 94 / ◀ 129 ▲ 712 ▶ 53 / 894	N 801 / 94 707 0 / 0 108 ▲ ▲ 0 0 ▶ 1618 ◀ 0 42 ▼ ▼ 0 150 / ◀ 16 ▲ 648 ▶ 0 / 664
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 / 0.0 0.0 0.0 / 7.1 0.0 ▲ ▲ 1.6 11.6 ▶ 14.5 ◀ 8.9 7.9 ▼ ▼ 0.0 10.0 / ◀ 52.4 ▲ 0.0 ▶ 7.9 / 40.5	N 16.8 / 9.8 56.2 35.1 / 16.6 48.5 ▲ ▲ 3.4 13.4 ▶ 18.7 ◀ 16.7 12.0 ▼ ▼ 17.5 15.0 / ◀ 45.8 ▲ 39.3 ▶ 15.9 / 41.9	N 10.3 / 3.6 7.1 22.3 / 41.7 57.9 ▲ ▲ 19.2 77.4 ▶ 16.3 ◀ 63.9 14.7 ▼ ▼ 59.3 42.5 / ◀ 18.4 ▲ 14.1 ▶ 6.2 / 14.2	N 5.8 / 5.6 5.8 0.0 / 0.0 65.9 ▲ ▲ 0.0 0.0 ▶ 9.1 ◀ 0.0 6.1 ▼ ▼ 0.0 49.2 / ◀ 11.4 ▲ 3.8 ▶ 0.0 / 3.9

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 27.9 563 NBL 82.9 357 NBT 11.8 416 NBR 4.3 0 EBL 52.2 294 EBT 80.6 294 EBR 42.5 306 SBL 27.7 89 SBT 28.4 528 SBR 13.5 46 WBL 71.2 391 WBT 67.7 391 WBR 28.9 352	MVMNT DELAY QUEUE ALL 64.9 5646 NBL 77.6 233 NBT 148.8 675 NBR 82.1 658 EBL 142.4 265 EBT 95.3 5646 EBR 91.6 5631 SBL 113.2 452 SBT 113.5 452 SBR 18.1 125 WBL 81.1 268 WBT 20.9 427 WBR 4.5 5	MVMNT DELAY QUEUE ALL 47.4 600 NBL 72.9 175 NBT 73.4 242 NBR 61.6 379 EBL 79.1 170 EBT 44.0 600 EBR 25.3 253 SBL 84.9 408 SBT 34.3 232 SBR 22.2 211 WBL 71.1 284 WBT 24.6 299 WBR 9.8 157	MVMNT DELAY QUEUE ALL 23.9 577 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.9 457 EBR 1.9 324 SBL 63.1 308 SBT 0.0 0 SBR 37.4 411 WBL 75.1 204 WBT 21.6 556 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1532 | 170 1285 77 | 297 133 ▲ ▲ 35 14 ▶ **3323** ◀ 38 140 ▼ ▼ 224 **287** | 61 1074 66 | 1201	N 346 | 210 24 112 | 1689 116 ▲ ▲ 50 1545 ▶ **4409** ◀ 1518 249 ▼ ▼ 121 **1910** | 118 14 328 | 460	N 1640 | 221 622 797 | 2294 222 ▲ ▲ 560 1549 ▶ **7112** ◀ 1254 205 ▼ ▼ 480 **1976** | 200 446 550 | 1196	N 1381 | 968 0 413 | 1553 0 ▲ ▲ 0 2053 ▶ **5830** ◀ 1347 839 ▼ ▼ 206 **2892** | 0 0 0 | 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 26.7 | 13.5 28.4 27.7 | 65.7 52.2 ▲ ▲ 28.9 80.6 ▶ **27.9** ◀ 67.7 42.5 ▼ ▼ 71.2 **48.9** | 82.9 11.8 4.3 | 15.0	N 55.5 | 18.1 113.5 113.2 | 24.7 142.4 ▲ ▲ 4.5 95.3 ▶ **64.9** ◀ 20.9 91.6 ▼ ▼ 81.1 **97.7** | 77.6 148.8 82.1 | 83.0	N 57.3 | 22.2 34.3 84.9 | 30.7 79.1 ▲ ▲ 9.8 44.0 ▶ **47.4** ◀ 24.6 25.3 ▼ ▼ 71.1 **46.0** | 72.9 73.4 61.6 | 67.9	N 45.1 | 37.4 0.0 63.1 | 28.7 0.0 ▲ ▲ 0.0 14.9 ▶ **23.9** ◀ 21.6 1.9 ▼ ▼ 75.1 **11.1** | 0.0 0.0 0.0 | 0.0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 16.0 617 NBL 49.2 415 NBT 0.0 0 NBR 11.6 167 EBL 0.0 0 EBT 14.4 617 EBR 9.4 356 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 11.1 235 WBR 2.0 5	MVMNT DELAY QUEUE ALL 21.3 519 NBL 47.1 212 NBT 40.4 80 NBR 18.3 35 EBL 54.6 95 EBT 16.1 519 EBR 15.1 281 SBL 36.9 88 SBT 59.6 52 SBR 11.4 70 WBL 22.3 47 WBT 19.5 348 WBR 4.3 0	MVMNT DELAY QUEUE ALL 21.8 466 NBL 24.1 169 NBT 21.2 450 NBR 9.5 1 EBL 57.8 114 EBT 71.0 134 EBR 15.6 106 SBL 36.7 414 SBT 10.0 314 SBR 4.0 314 WBL 59.8 238 WBT 64.9 220 WBR 23.9 183	MVMNT DELAY QUEUE ALL 10.1 278 NBL 14.5 36 NBT 4.5 174 NBR 0.0 0 EBL 63.9 267 EBT 0.0 0 EBR 6.3 3 SBL 0.0 0 SBT 7.2 202 SBR 6.4 172 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1271 0 ▲ ▲ 304 1395 ▶ 4541 ◀ 967 1082 ▼ ▼ 0 2477 | ◀ 585 ▲ 0 ▶ 206 | 791	N 176 | 137 9 30 | 860 84 ▲ ▲ 10 1020 ▶ 2973 ◀ 835 482 ▼ ▼ 15 1586 | ◀ 295 ▲ 9 ▶ 43 | 347	N 1157 | 25 876 256 | 250 51 ▲ ▲ 110 13 ▶ 2571 ◀ 18 48 ▼ ▼ 122 112 | ◀ 155 ▲ 838 ▶ 55 | 1048	N 923 | 106 817 0 | 0 131 ▲ ▲ 0 0 ▶ 1878 ◀ 0 47 ▼ ▼ 0 178 | ◀ 19 ▲ 756 ▶ 0 | 775
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 8.9 0.0 ▲ ▲ 2.0 14.4 ▶ 16.0 ◀ 11.1 9.4 ▼ ▼ 0.0 12.2 | ◀ 49.2 ▲ 0.0 ▶ 11.6 | 39.4	N 18.2 | 11.4 59.6 36.9 | 19.4 54.6 ▲ ▲ 4.3 16.1 ▶ 21.3 ◀ 19.5 15.1 ▼ ▼ 22.3 17.8 | ◀ 47.1 ▲ 40.4 ▶ 18.3 | 43.4	N 15.8 | 4.0 10.0 36.7 | 44.3 57.8 ▲ ▲ 23.9 71.0 ▶ 21.8 ◀ 64.9 15.6 ▼ ▼ 59.8 41.2 | ◀ 24.1 ▲ 21.2 ▶ 9.5 | 21.0	N 7.1 | 6.4 7.2 0.0 | 0.0 63.9 ▲ ▲ 0.0 0.0 ▶ 10.1 ◀ 0.0 6.3 ▼ ▼ 0.0 48.7 | ◀ 14.5 ▲ 4.5 ▶ 0.0 | 4.8

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.1 387 NBL 82.0 185 NBT 9.3 313 NBR 3.4 0 EBL 54.6 205 EBT 71.3 205 EBR 25.0 217 SBL 19.7 74 SBT 23.8 342 SBR 11.2 22 WBL 68.7 301 WBT 69.1 301 WBR 25.4 262	MVMNT DELAY QUEUE ALL 56.0 5531 NBL 70.3 104 NBT 109.8 464 NBR 46.7 447 EBL 152.8 566 EBT 81.6 5531 EBR 78.8 5516 SBL 80.6 264 SBT 79.3 264 SBR 8.5 51 WBL 69.2 215 WBT 17.0 333 WBR 3.9 0	MVMNT DELAY QUEUE ALL 44.3 558 NBL 72.5 160 NBT 67.0 209 NBR 52.1 286 EBL 79.5 156 EBT 39.4 558 EBR 24.8 274 SBL 78.2 344 SBT 35.0 212 SBR 20.7 140 WBL 68.8 230 WBT 25.0 238 WBR 8.9 136	MVMNT DELAY QUEUE ALL 21.2 457 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 11.6 321 EBR 1.6 218 SBL 62.7 246 SBT 0.0 0 SBR 37.0 349 WBL 72.4 159 WBT 19.0 452 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1172 ◀ 129 ▼ 987 ▶ 56 → 229 103 ▲ ▲ 23 10 ▶ **2579** ◀ 31 107 ▼ ▼ 175 **220** ◀ 49 ▲ 852 ▶ 52 → 953	N 268 ◀ 165 ▼ 19 ▶ 84 → 1308 110 ▲ ▲ 38 1434 ▶ **3708** ◀ 1177 225 ▼ ▼ 93 **1769** ◀ 88 ▲ 11 ▶ 260 → 359	N 1284 ◀ 166 ▼ 483 ▶ 635 → 1784 196 ▲ ▲ 438 1407 ▶ **5796** ◀ 974 194 ▼ ▼ 372 **1797** ◀ 161 ▲ 342 ▶ 424 → 927	N 1064 ◀ 745 ▼ 0 ▶ 319 → 1195 0 ▲ ▲ 0 1750 ▶ **4735** ◀ 1031 722 ▼ ▼ 164 **2472** ◀ 0 ▲ 0 ▶ 0 → 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 22.3 ◀ 11.2 ▼ 23.8 ▶ 19.7 → 64.4 54.6 ▲ ▲ 25.4 71.3 ▶ **24.1** ◀ 69.1 25.0 ▼ ▼ 68.7 **41.0** ◀ 82.0 ▲ 9.3 ▶ 3.4 → 12.7	N 36.2 ◀ 8.5 ▼ 79.3 ▶ 80.6 → 20.3 152.8 ▲ ▲ 3.9 81.6 ▶ **56.0** ◀ 17.0 78.8 ▼ ▼ 69.2 **85.7** ◀ 70.3 ▲ 109.8 ▶ 46.7 → 54.4	N 54.5 ◀ 20.7 ▼ 35.0 ▶ 78.2 → 30.2 79.5 ▲ ▲ 8.9 39.4 ▶ **44.3** ◀ 25.0 24.8 ▼ ▼ 68.8 **42.2** ◀ 72.5 ▲ 67.0 ▶ 52.1 → 61.2	N 44.7 ◀ 37.0 ▼ 0.0 ▶ 62.7 → 26.3 0.0 ▲ ▲ 0.0 11.6 ▶ **21.2** ◀ 19.0 1.6 ▼ ▼ 72.4 **8.6** ◀ 0.0 ▲ 0.0 ▶ 0.0 → 0.0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	14.2	466	ALL	17.7	369	ALL	15.2	299	ALL	8.5	229
	NBL	54.7	339	NBL	44.2	165	NBL	15.1	121	NBL	9.8	31
	NBT	0.0	0	NBT	42.3	69	NBT	12.5	253	NBT	3.5	128
	NBR	7.3	127	NBR	14.9	22	NBR	4.7	0	NBR	0.0	0
	EBL	0.0	0	EBL	49.8	99	EBL	61.8	116	EBL	65.8	229
	EBT	10.8	459	EBT	12.8	366	EBT	74.2	109	EBT	0.0	0
	EBR	7.8	228	EBR	11.2	165	EBR	12.1	81	EBR	5.8	3
	SBL	0.0	0	SBL	34.6	63	SBL	18.8	233	SBL	0.0	0
	SBT	0.0	0	SBT	52.5	43	SBT	6.3	213	SBT	5.0	147
	SBR	0.0	0	SBR	8.7	43	SBR	3.4	213	SBR	4.7	117
	WBL	0.0	0	WBL	14.7	32	WBL	60.6	178	WBL	0.0	0
	WBT	8.0	183	WBT	16.2	277	WBT	68.2	177	WBT	0.0	0
	WBR	1.5	0	WBR	3.5	0	WBR	20.4	138	WBR	0.0	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0	0 0 0	973	N 135	108 6 21	661	N 943	20 715 208	193	N 742	86 656 0	0
	0 ▲		▲ 236	69 ▲		▲ 8	40 ▲		▲ 83	99 ▲		▲ 0
	1137 ▶	3662	◀ 737	841 ▶	2370	◀ 643	10 ▶	2030	◀ 15	0 ▶	1475	◀ 0
	932 ▼		▼ 0	399 ▼		▼ 10	36 ▼		▼ 95	36 ▼		▼ 0
	2069	◀ 454 ▲ 0 ▶ 163	617	1309	◀ 221 ▲ 7 ▶ 32	260	86	◀ 119 ▲ 644 ▶ 41	804	135	◀ 14 ▲ 582 ▶ 0	596
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0	0.0 0.0 0.0	6.4	N 14.7	8.7 52.5 34.6	16.0	N 9.0	3.4 6.3 18.8	43.9	N 4.9	4.7 5.0 0.0	0.0
	0.0 ▲		▲ 1.5	49.8 ▲		▲ 3.5	61.8 ▲		▲ 20.4	65.8 ▲		▲ 0.0
	10.8 ▶	14.2	◀ 8.0	12.8 ▶	17.7	◀ 16.2	74.2 ▶	15.2	◀ 68.2	0.0 ▶	8.5	◀ 0.0
	7.8 ▼		▼ 0.0	11.2 ▼		▼ 14.7	12.1 ▼		▼ 60.6	5.8 ▼		▼ 0.0
	9.5	◀ 54.7 ▲ 0.0 ▶ 7.3	42.2	14.3	◀ 44.2 ▲ 42.3 ▶ 14.9	40.6	42.4	◀ 15.1 ▲ 12.5 ▶ 4.7	12.5	49.8	◀ 9.8 ▲ 3.5 ▶ 0.0	3.6

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.1 387 NBL 11.0 101 NBT 10.5 387 NBR 3.9 39 EBL 61.2 168 EBT 74.2 55 EBR 6.8 0 SBL 12.3 51 SBT 11.0 158 SBR 7.0 0 WBL 67.9 128 WBT 83.3 128 WBR 16.3 109	MVMNT DELAY QUEUE ALL 16.7 276 NBL 72.9 91 NBT 72.2 91 NBR 8.5 9 EBL 75.6 270 EBT 13.8 232 EBR 13.2 202 SBL 79.0 131 SBT 75.6 131 SBR 10.5 23 WBL 78.4 144 WBT 6.3 162 WBR 2.0 0	MVMNT DELAY QUEUE ALL 33.3 390 NBL 49.5 147 NBT 59.2 282 NBR 44.0 251 EBL 58.9 167 EBT 20.3 180 EBR 44.6 235 SBL 61.6 220 SBT 60.0 275 SBR 0.0 0 WBL 1.4 0 WBT 23.8 390 WBR 14.4 322	MVMNT DELAY QUEUE ALL 27.6 451 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 38.6 431 EBT 7.7 173 EBR1 2.9 103 EBR2 9.2 0 SBL 25.9 131 SBT 0.0 0 SBR 34.3 358 WBL1 64.5 161 WBL2 56.0 382 WBT 25.1 326 WBR 0.0 0	MVMNT DELAY QUEUE ALL 15.8 355 NBL 17.1 289 NBT 0.0 0 NBR 28.8 107 EBL 0.0 0 EBT 20.4 209 EBR 0.0 0 SBL 26.5 166 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 26.1 343 WBR 3.4 126
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N ▲ 865 ◀ 129 ▼ 702 ▶ 34 → 110 85 ▲ ▲ 42 10 ▶ **2331** ◀ 7 57 ▼ ▼ 61 152 ◀ 100 ▲ 966 ▶ 133 → 1199	N ▲ 181 ◀ 99 ▼ 11 ▶ 71 → 1469 120 ▲ ▲ 36 1020 ▶ **2955** ◀ 1378 57 ▼ ▼ 55 1197 ◀ 46 ▲ 10 ▶ 44 → 100	N ▲ 698 ◀ 0 ▼ 323 ▶ 375 → 2034 152 ▲ ▲ 666 845 ▶ **4682** ◀ 1222 145 ▼ ▼ 146 1142 ◀ 145 ▲ 386 ▶ 271 → 802	N ▲ 920 ◀ 719 ▼ 0 ▶ 201 → 1515 661 ▲ ▲ 0 434 ▶ **3991** ◀ 1185 394 ▼ ▼ 148 67 ▼ ▼ 182 1556 ◀ 0 ▲ 0 ▶ 0 → 0	N ▲ 201 ◀ 0 ▼ 0 ▶ 201 → 1214 0 ▲ ▲ 408 434 ▶ **3374** ◀ 806 0 ▼ ▼ 0 434 ◀ 723 ▲ 0 ▶ 138 → 861
AVERAGE DELAY (SECONDS/VEHICLE)	N ▲ 10.5 ◀ 7.0 ▼ 11.0 ▶ 12.3 → 49.2 61.2 ▲ ▲ 16.3 74.2 ▶ **14.1** ◀ 83.3 6.8 ▼ ▼ 67.9 41.6 ◀ 11.0 ▲ 10.5 ▶ 3.9 → 9.8	N ▲ 41.3 ◀ 10.5 ▼ 75.6 ▶ 79.0 → 8.9 75.6 ▲ ▲ 2.0 13.8 ▶ **16.7** ◀ 6.3 13.2 ▼ ▼ 78.4 19.9 ◀ 72.9 ▲ 72.2 ▶ 8.5 → 44.5	N ▲ 60.8 ◀ 0.0 ▼ 60.0 ▶ 61.6 → 19.1 58.9 ▲ ▲ 14.4 20.3 ▶ **33.3** ◀ 23.8 44.6 ▼ ▼ 1.4 28.5 ◀ 49.5 ▲ 59.2 ▶ 44.0 → 52.3	N ▲ 32.5 ◀ 34.3 ▼ 0.0 ▶ 25.9 → 32.6 38.6 ▲ ▲ 0.0 7.7 ▶ **27.6** ◀ 25.1 2.9 ▼ ▼ 64.5 9.2 ▼ ▼ 56.0 19.7 ◀ 0.0 ▲ 0.0 ▶ 0.0 → 0.0	N ▲ 26.5 ◀ 0.0 ▼ 0.0 ▶ 26.5 → 18.5 0.0 ▲ ▲ 3.4 20.4 ▶ **15.8** ◀ 26.1 0.0 ▼ ▼ 0.0 20.4 ◀ 17.1 ▲ 0.0 ▶ 28.8 → 18.9

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.3	157	ALL	24.5	382	ALL	10.9	183	ALL	20.3	278
	NBL	0.0	0	NBL	55.1	281	NBL	6.8	78	NBL	16.7	35
	NBT	0.0	0	NBT	55.7	58	NBT	6.9	148	NBT	20.3	278
	NBR	0.0	0	NBR	13.9	15	NBR	5.7	119	NBR	0.0	0
	EBL	25.5	120	EBL	61.0	140	EBL	56.9	86	EBL	15.5	85
	EBT	0.0	0	EBT	9.4	208	EBT	75.5	61	EBT	0.0	0
	EBR	0.0	0	EBR	4.5	12	EBR	7.9	29	EBR	3.9	0
	SBL	0.0	0	SBL	39.5	33	SBL	6.5	74	SBL	0.0	0
	SBT	0.0	0	SBT	67.8	45	SBT	4.3	85	SBT	21.4	173
	SBR	9.1	0	SBR	10.4	8	SBR	2.6	68	SBR	16.2	173
	WBL	0.0	0	WBL	10.8	28	WBL	61.3	132	WBL	34.3	153
	WBT	2.7	143	WBT	18.6	382	WBT	73.4	167	WBT	41.1	69
	WBR	0.0	0	WBR	4.2	0	WBR	22.1	131	WBR	3.0	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 122	122 ◀ 0 ▼ 0 ▶	1365	N 63	50 ◀ 7 ▼ 6 ▶	821	N 435	7 ◀ 328 ▼ 100 ▶	150	N 343	17 ◀ 326 ▼ 0 ▶	206
	151 ▲		▲ 0	129 ▲		▲ 6	27 ▲		▲ 77	60 ▲		▲ 91
	0 ▶	**1639**	◀ 1365	522 ▶	**2060**	◀ 804	4 ▶	**1523**	◀ 16	0 ▶	**1364**	◀ 23
	0 ▼		▼ 0	117 ▼		▼ 11	20 ▼		▼ 57	11 ▼		▼ 92
	151	◀ 0 ▲ 0 ▶ 0	0	768	◀ 361 ▲ 3 ▶ 39	403	51	◀ 138 ▲ 678 ▶ 66	882	71	◀ 7 ▲ 733 ▶ 0	740
AVERAGE DELAY (SECONDS/VEHICLE)	N 9.1	9.1 ◀ 0.0 ▼ 0.0 ▶	2.7	N 19.6	10.4 ◀ 67.8 ▼ 39.5 ▶	18.4	N 4.8	2.6 ◀ 4.3 ▼ 6.5 ▶	42.4	N 21.1	16.2 ◀ 21.4 ▼ 0.0 ▶	21.2
	25.5 ▲		▲ 0.0	61.0 ▲		▲ 4.2	56.9 ▲		▲ 22.1	15.5 ▲		▲ 3.0
	0.0 ▶	**5.3**	◀ 2.7	9.4 ▶	**24.5**	◀ 18.6	75.5 ▶	**10.9**	◀ 73.4	0.0 ▶	**20.3**	◀ 41.1
	0.0 ▼		▼ 0.0	4.5 ▼		▼ 10.8	7.9 ▼		▼ 61.3	3.9 ▼		▼ 34.3
	25.5	◀ 0.0 ▲ 0.0 ▶ 0.0	0.0	17.3	◀ 55.1 ▲ 55.7 ▶ 13.9	51.1	39.1	◀ 6.8 ▲ 6.9 ▶ 5.7	6.8	13.7	◀ 16.7 ▲ 20.3 ▶ 0.0	20.3

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 2

Cattlemen Road/Maxfield Drive

VISSIM RESULTS

MVMNT	DELAY	QUEUE
ALL	16.1	636
NBL	15.7	128
NBT	12.1	636
NBR	5.6	67
EBL	62.6	236
EBT	73.3	68
EBR	7.5	3
SBL	20.5	56
SBT	13.8	177
SBR	9.0	7
WBL	65.9	130
WBT	75.8	130
WBR	21.1	111

INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)

N 1174	178 ◀	950 ▼	46 ▶	150
115 ▲				▲ 60
15 ▶		**3189**		◀ 10
77 ▼				▼ 80
207	◀ 138	▲ 1331	▶ 185	1654

AVERAGE DELAY (SECONDS/VEHICLE)

N 13.4	9.0 ◀	13.8 ▼	20.5 ▶	**48.6**
62.6 ▲				▲ 21.1
73.3 ▶		**16.1**		◀ 75.8
7.5 ▼				▼ 65.9
42.9	◀ 15.7	▲ 12.1	▶ 5.6	**11.7**

Bee Ridge Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	19.5	359
NBL	74.3	99
NBT	69.2	99
NBR	10.6	4
EBL	86.4	357
EBT	16.7	279
EBR	15.9	249
SBL	85.0	152
SBT	85.3	152
SBR	14.2	67
WBL	74.2	172
WBT	8.3	235
WBR	2.6	6

N 245	133 ◀	16 ▼	96 ▶	**1981**
172 ▲				▲ 49
1380 ▶		**3989**		◀ 1859
70 ▼				▼ 73
1622	◀ 64	▲ 13	▶ 58	135

N 46.6	14.2 ◀	85.3 ▼	85.0 ▶	**10.6**
86.4 ▲				▲ 2.6
16.7 ▶		**19.5**		◀ 8.3
15.9 ▼				▼ 74.2
24.0	◀ 74.3	▲ 69.2	▶ 10.6	**46.5**

Bee Ridge Road/Cattlemen Road

MVMNT	DELAY	QUEUE
ALL	34.8	602
NBL	51.1	184
NBT	63.0	385
NBR	47.3	327
EBL	50.1	197
EBT	24.3	212
EBR	44.9	317
SBL	57.7	288
SBT	57.2	384
SBR	0.0	0
WBL	1.8	0
WBT	27.4	557
WBR	15.9	544

N 934	0 ◀	429 ▼	505 ▶	**2776**
206 ▲				▲ 922
1141 ▶		**6333**		◀ 1643
199 ▼				▼ 211
1546	◀ 189	▲ 528	▶ 355	1072

N 57.4	0.0 ◀	57.2 ▼	57.7 ▶	**21.6**
50.1 ▲				▲ 15.9
24.3 ▶		**34.8**		◀ 27.4
44.9 ▼				▼ 1.8
30.4	◀ 51.1	▲ 63.0	▶ 47.3	**55.7**

I-75 West Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	27.9	530
NBL	0.0	0
NBT	0.0	0
NBR	0.0	0
EBL	35.8	500
EBT	8.4	254
EBR1	2.2	123
EBR2	11.4	0
SBL	30.7	182
SBT	0.0	0
SBR	32.4	446
WBL1	62.7	196
WBL2	49.6	457
WBT	29.0	428
WBR	0.0	0

N 1241	967 ◀	0 ▼	274 ▶	**2053**
889 ▲				▲ 0
588 ▶		**5382**		◀ 1604
521 ▼				▼ 212
90 ▼				▼ 237
2088	◀ 0	▲ 0	▶ 0	**0**

N 32.0	32.4 ◀	0.0 ▼	30.7 ▶	**34.8**
35.8 ▲				▲ 0.0
8.4 ▶		**27.9**		◀ 29.0
2.2 ▼				▼ 62.7
11.4 ▼				▼ 49.6
18.6	◀ 0.0	▲ 0.0	▶ 0.0	**0.0**

I-75 East Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	21.1	603
NBL	24.4	420
NBT	0.0	0
NBR	36.5	138
EBL	0.0	0
EBT	24.5	315
EBR	0.0	0
SBL	38.5	255
SBT	0.0	0
SBR	0.0	0
WBL	0.0	0
WBT	32.1	603
WBR	8.0	386

N 273	0 ◀	0 ▼	273 ▶	**1633**
0 ▲				▲ 546
586 ▶		**4546**		◀ 1087
0 ▼				▼ 0
586	◀ 980	▲ 0	▶ 182	**1162**

N 38.5	0.0 ◀	0.0 ▼	38.5 ▶	**24.0**
0.0 ▲				▲ 8.0
24.5 ▶		**21.1**		◀ 32.1
0.0 ▼				▼ 0.0
24.5	◀ 24.4	▲ 0.0	▶ 36.5	**26.3**

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.5	175	ALL	30.3	588	ALL	14.0	273	ALL	18.9	381
	NBL	0.0	0	NBL	63.9	461	NBL	11.0	122	NBL	14.6	38
	NBT	0.0	0	NBT	48.2	71	NBT	10.9	254	NBT	18.2	381
	NBR	0.0	0	NBR	20.0	30	NBR	9.1	218	NBR	0.0	0
	EBL	38.4	160	EBL	63.4	169	EBL	58.0	115	EBL	19.7	115
	EBT	0.0	0	EBT	12.7	325	EBT	72.2	64	EBT	0.0	0
	EBR	0.0	0	EBR	6.1	33	EBR	9.8	36	EBR	3.8	0
	SBL	0.0	0	SBL	42.3	48	SBL	12.2	110	SBL	0.0	0
	SBT	0.0	0	SBT	69.1	61	SBT	7.0	153	SBT	18.8	213
	SBR	11.8	0	SBR	14.3	9	SBR	5.5	140	SBR	17.1	213
	WBL	0.0	0	WBL	12.6	49	WBL	59.9	181	WBL	33.9	171
	WBT	2.4	130	WBT	25.7	559	WBT	66.4	209	WBT	39.4	73
	WBR	0.0	0	WBR	6.6	0	WBR	22.8	173	WBR	5.4	1
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 172	172 ◄	0 ▼	0 ► 1829	N 86	67 ◄	9 ▼	10 ► 1105	N 607	10 ◄	455 ▼	142 ► 201	N 471	24 ◄	447 ▼	0 ► 277
	206 ▲			▲ 0	180 ▲			▲ 10	36 ▲			▲ 104	84 ▲			▲ 119
	0 ►	**2208**		◄ 1829	697 ►	**2780**		◄ 1081	5 ►	**2068**		◄ 20	0 ►	**1850**		◄ 29
	0 ▼			▼ 0	158 ▼			▼ 14	26 ▼			▼ 77	14 ▼			▼ 129
	206	◄ 0	▲ 0	► 0 **0**	**1035**	◄ 490	▲ 5	► 53 **548**	**67**	◄ 183	▲ 911	► 94 **1188**	**98**	◄ 9	▲ 993	► 0 **1002**
AVERAGE DELAY (SECONDS/VEHICLE)	N 11.8	11.8 ◄	0.0 ▼	0.0 ► 2.4	N 23.3	14.3 ◄	69.1 ▼	42.3 ► 25.4	N 8.2	5.5 ◄	7.0 ▼	12.2 ► 41.4	N 18.7	17.1 ◄	18.8 ▼	0.0 ► 22.2
	38.4 ▲			▲ 0.0	63.4 ▲			▲ 6.6	58.0 ▲			▲ 22.8	19.7 ▲			▲ 5.4
	0.0 ►	**6.5**		◄ 2.4	12.7 ►	**30.3**		◄ 25.7	72.2 ►	**14.0**		◄ 66.4	0.0 ►	**18.9**		◄ 39.4
	0.0 ▼			▼ 0.0	6.1 ▼			▼ 12.6	9.8 ▼			▼ 59.9	3.8 ▼			▼ 33.9
	38.4	◄ 0.0	▲ 0.0	► 0.0 **0.0**	**20.5**	◄ 63.9	▲ 48.2	► 20.0 **59.5**	**40.3**	◄ 11.0	▲ 10.9	► 9.1 **10.8**	**17.4**	◄ 14.6	▲ 18.2	► 0.0 **18.1**

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.5 428 NBL 12.0 109 NBT 10.4 428 NBR 4.4 50 EBL 66.0 184 EBT 77.6 56 EBR 7.1 10 SBL 13.8 44 SBT 11.9 159 SBR 7.3 2 WBL 71.6 134 WBT 80.3 134 WBR 18.3 114	MVMNT DELAY QUEUE ALL 17.4 308 NBL 72.7 89 NBT 74.4 89 NBR 9.2 2 EBL 77.9 301 EBT 14.6 238 EBR 12.7 208 SBL 79.1 164 SBT 81.3 164 SBR 11.6 29 WBL 77.1 158 WBT 6.6 171 WBR 2.3 0	MVMNT DELAY QUEUE ALL 33.5 462 NBL 46.4 143 NBT 60.6 336 NBR 44.2 248 EBL 56.9 176 EBT 22.0 198 EBR 43.1 249 SBL 59.8 241 SBT 58.7 310 SBR 0.0 0 WBL 1.5 0 WBT 25.1 423 WBR 14.6 401	MVMNT DELAY QUEUE ALL 27.4 442 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 37.5 424 EBT 6.9 192 EBR1 2.6 111 EBR2 9.8 0 SBL 29.0 148 SBT 0.0 0 SBR 33.3 360 WBL1 62.6 178 WBL2 54.3 396 WBT 26.3 352 WBR 0.0 0	MVMNT DELAY QUEUE ALL 17.5 473 NBL 18.7 324 NBT 0.0 0 NBR 31.6 121 EBL 0.0 0 EBT 22.9 253 EBR 0.0 0 SBL 31.6 178 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 28.1 473 WBR 4.4 256
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 964 · 141 788 35 · 123 89 ▲ ▲ 51 12 ▶ **2623** ◀ 7 67 ▼ ▼ 65 168 · 116 1099 148 · 1363	N 201 · 109 13 79 · 1659 144 ▲ ▲ 39 1128 ▶ **3309** ◀ 1559 60 ▼ ▼ 61 1332 · 51 12 47 · 110	N 783 · 0 354 429 · 2309 168 ▲ ▲ 758 952 ▶ **5248** ◀ 1373 161 ▼ ▼ 178 1281 · 153 434 283 · 870	N 1012 · 789 0 223 · 1713 730 ▲ ▲ 0 486 ▶ **4471** ◀ 1338 453 ▼ ▼ 177 77 ▼ ▼ 198 1746 · 0 0 0 · 0	N 223 · 0 0 223 · 1358 0 ▲ ▲ 464 487 ▶ **3759** ◀ 894 0 ▼ ▼ 0 487 · 805 0 153 · 958
AVERAGE DELAY (SECONDS/VEHICLE)	N 11.3 · 7.3 11.9 13.8 · 50.0 66.0 ▲ ▲ 18.3 77.6 ▶ **14.5** ◀ 80.3 7.1 ▼ ▼ 71.6 43.3 · 12.0 10.4 4.4 · 9.9	N 42.6 · 11.6 81.3 79.1 · 9.1 77.9 ▲ ▲ 2.3 14.6 ▶ **17.4** ◀ 6.6 12.7 ▼ ▼ 77.1 21.3 · 72.7 74.4 9.2 · 45.8	N 59.3 · 0.0 58.7 59.8 · 19.9 56.9 ▲ ▲ 14.6 22.0 ▶ **33.5** ◀ 25.1 43.1 ▼ ▼ 1.5 29.2 · 46.4 60.6 44.2 · 52.8	N 32.3 · 33.3 0.0 29.0 · 33.3 37.5 ▲ ▲ 0.0 6.9 ▶ **27.4** ◀ 26.3 2.6 ▼ ▼ 62.6 9.8 ▼ ▼ 54.3 18.7 · 0.0 0.0 0.0 · 0.0	N 31.6 · 0.0 0.0 31.6 · 20.0 0.0 ▲ ▲ 4.4 22.9 ▶ **17.5** ◀ 28.1 0.0 ▼ ▼ 0.0 22.9 · 18.7 0.0 31.6 · 20.7

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.6	162	ALL	26.0	426	ALL	11.3	215	ALL	19.9	301
	NBL	0.0	0	NBL	56.9	308	NBL	7.3	85	NBL	15.4	30
	NBT	0.0	0	NBT	38.8	55	NBT	7.6	190	NBT	20.1	301
	NBR	0.0	0	NBR	15.0	16	NBR	6.4	155	NBR	0.0	0
	EBL	32.0	138	EBL	61.6	149	EBL	58.8	96	EBL	15.2	106
	EBT	0.0	0	EBT	10.3	235	EBT	69.4	56	EBT	0.0	0
	EBR	0.0	0	EBR	5.1	9	EBR	10.9	30	EBR	3.8	0
	SBL	0.0	0	SBL	46.6	39	SBL	8.1	105	SBL	0.0	0
	SBT	0.0	0	SBT	72.3	48	SBT	4.8	98	SBT	20.8	204
	SBR	9.7	0	SBR	11.4	12	SBR	3.2	86	SBR	16.5	204
	WBL	0.0	0	WBL	10.2	33	WBL	60.4	150	WBL	33.5	138
	WBT	2.4	141	WBT	20.8	425	WBT	70.0	170	WBT	38.3	73
	WBR	0.0	0	WBR	5.0	0	WBR	20.6	133	WBR	3.9	0

INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N	135	135	0	0	1529	N	71	57	7	7	918	N	498	8	369	121	163	N	389	20	369	0	230
	168	▲			▲	0	151	▲			▲	8	30	▲			▲	84	67	▲			▲	103
	0	▶		1833	◀	1529	577	▶		2310	◀	899	4	▶		1692	◀	16	0	▶		1514	◀	23
	0	▼			▼	0	140	▼			▼	11	21	▼			▼	63	12	▼			▼	104
	168					0	868					448	55					971	79					812
		◀	0	▲	0			◀	402	▲	3			◀	156	▲	740			◀	7	▲	805	
		▶	0					▶	43					▶	75					▶	0			

AVERAGE DELAY (SECONDS/VEHICLE)	N	9.7	9.7	0.0	0.0	2.4	N	20.9	11.4	72.3	46.6	20.5	N	5.5	3.2	4.8	8.1	40.8	N	20.5	16.5	20.8	0.0	20.7
	32.0	▲			▲	0.0	61.6	▲			▲	5.0	58.8	▲			▲	20.6	15.2	▲			▲	3.9
	0.0	▶		5.6	◀	2.4	10.3	▶		26.0	◀	20.8	69.4	▶		11.3	◀	70.0	0.0	▶		19.9	◀	38.3
	0.0	▼			▼	0.0	5.1	▼			▼	10.2	10.9	▼			▼	60.4	3.8	▼			▼	33.5
	32.0					0.0	18.4					52.8	41.3					7.5	13.5					20.1
		◀	0.0	▲	0.0			◀	56.9	▲	38.8			◀	7.3	▲	7.6			◀	15.4	▲	20.1	
		▶	0.0					▶	15.0					▶	6.4					▶	0.0			

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 22.5 409 NBL 16.5 80 NBT 11.9 393 NBR 4.5 25 EBL 56.7 217 EBT 68.8 67 EBR 8.8 8 SBL 17.4 65 SBT 21.1 318 SBR 15.8 13 WBL 68.4 252 WBT 73.8 252 WBR 30.8 232	MVMNT DELAY QUEUE ALL 22.4 329 NBL 75.8 147 NBT 72.3 147 NBR 13.7 31 EBL 74.3 242 EBT 20.0 325 EBR 20.9 295 SBL 84.8 167 SBT 87.1 167 SBR 13.0 88 WBL 86.0 237 WBT 7.2 160 WBR 2.1 0	MVMNT DELAY QUEUE ALL 39.4 486 NBL 48.5 173 NBT 64.5 293 NBR 51.5 319 EBL 64.7 205 EBT 28.6 255 EBR 39.9 265 SBL 57.2 397 SBT 66.1 474 SBR 0.0 0 WBL 22.9 168 WBT 19.3 424 WBR 23.7 373	MVMNT DELAY QUEUE ALL 22.9 403 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 8.0 329 EBT 10.6 313 EBR1 7.8 219 EBR2 11.9 0 SBL 60.7 284 SBT 0.0 0 SBR 11.4 203 WBL1 31.8 148 WBL2 27.0 272 WBT 51.7 355 WBR 0.0 0	MVMNT DELAY QUEUE ALL 15.5 456 NBL 20.2 215 NBT 0.0 0 NBR 34.4 141 EBL 0.0 0 EBT 20.3 456 EBR 0.0 0 SBL 26.2 302 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 20.1 310 WBR 2.2 94
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1308 · 140 1103 65 · 283 116 ▲ ▲ 58 13 ▶ 2856 ◀ 33 116 ▼ ▼ 192 245 · 53 863 99 · 1015	N 296 · 179 23 94 · 1429 109 ▲ ▲ 43 1565 ▶ 3771 ◀ 1284 128 ▼ ▼ 102 1802 · 124 15 100 · 239	N 1220 · 0 541 679 · 1724 191 ▲ ▲ 456 1412 ▶ 5676 ◀ 1073 192 ▼ ▼ 195 1795 · 176 376 379 · 931	N 964 · 611 0 353 · 1312 960 ▲ ▲ 0 834 ▶ 4830 ◀ 938 667 ▼ ▼ 197 93 ▼ ▼ 177 2554 · 0 0 0 · 0	N 350 · 0 0 350 · 1078 0 ▲ ▲ 259 831 ▶ 3902 ◀ 819 0 ▼ ▼ 0 831 · 498 0 182 · 680
AVERAGE DELAY (SECONDS/VEHICLE)	N 20.3 · 15.8 21.1 17.4 · 61.4 56.7 ▲ ▲ 30.8 68.8 ▶ 22.5 ◀ 73.8 8.8 ▼ ▼ 68.4 34.6 · 16.5 11.9 4.5 · 11.4	N 41.5 · 13.0 87.1 84.8 · 12.6 74.3 ▲ ▲ 2.1 20.0 ▶ 22.4 ◀ 7.2 20.9 ▼ ▼ 86.0 23.4 · 75.8 72.3 13.7 · 49.6	N 61.1 · 0.0 66.1 57.2 · 20.9 64.7 ▲ ▲ 23.7 28.6 ▶ 39.4 ◀ 19.3 39.9 ▼ ▼ 22.9 33.7 · 48.5 64.5 51.5 · 56.2	N 29.4 · 11.4 0.0 60.7 · 45.4 8.0 ▲ ▲ 0.0 10.6 ▶ 22.9 ◀ 51.7 7.8 ▼ ▼ 31.8 11.9 ▼ ▼ 27.0 8.9 · 0.0 0.0 0.0 · 0.0	N 26.2 · 0.0 0.0 26.2 · 15.8 0.0 ▲ ▲ 2.2 20.3 ▶ 15.5 ◀ 20.1 0.0 ▼ ▼ 0.0 20.3 · 20.2 0.0 34.4 · 24.0

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.0	171	ALL	18.4	470	ALL	15.2	299	ALL	19.1	339
	NBL	0.0	0	NBL	51.9	222	NBL	13.4	140	NBL	16.4	46
	NBT	0.0	0	NBT	48.1	97	NBT	12.9	252	NBT	16.7	265
	NBR	0.0	0	NBR	16.4	51	NBR	9.5	216	NBR	0.0	0
	EBL	25.9	153	EBL	67.3	98	EBL	52.0	106	EBL	19.3	133
	EBT	0.0	0	EBT	11.7	466	EBT	66.1	113	EBT	0.0	0
	EBR	0.0	0	EBR	10.8	154	EBR	16.8	86	EBR	4.3	2
	SBL	0.0	0	SBL	42.9	77	SBL	8.8	82	SBL	0.0	0
	SBT	0.0	0	SBT	63.4	46	SBT	8.4	239	SBT	21.8	328
	SBR	17.1	17	SBR	9.7	37	SBR	7.7	227	SBR	22.2	328
	WBL	0.0	0	WBL	10.8	36	WBL	58.0	201	WBL	33.6	135
	WBT	2.6	123	WBT	14.4	263	WBT	62.4	180	WBT	39.0	71
	WBR	0.0	0	WBR	3.3	0	WBR	19.1	143	WBR	3.1	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 187	187 ◄	0 ▼	0 ►	1243	N 150	118 ◄	8 ▼	24 ►	739	N 800	20 ◄	638 ▼	142 ►	214	N 686	62 ◄	624 ▼	0 ►	217
	191 ▲			▲ 0		76 ▲			▲ 10		40 ▲			▲ 94		108 ▲			▲ 97	
	0 ►		**1622**	◄ 1243		870 ►		**2547**	◄ 717		13 ►		**2090**	◄ 18		0 ►		**1724**	◄ 27	
	0 ▼			▼ 0		414 ▼			▼ 12		40 ▼			▼ 102		41 ▼			▼ 93	
	191	◄ 0	▲ 0	► 0	**0**	**1360**	◄ 249	▲ 9	► 36	**294**	**93**	◄ 189	▲ 715	► 73	**977**	**149**	◄ 16	▲ 652	► 0	**668**
AVERAGE DELAY (SECONDS/VEHICLE)	N 17.1	17.1 ◄	0.0 ▼	0.0 ►	2.6	N 17.9	9.7 ◄	63.4 ▼	42.9 ►	14.2	N 8.5	7.7 ◄	8.4 ▼	8.8 ►	41.3	N 21.9	22.2 ◄	21.8 ▼	0.0 ►	20.6
	25.9 ▲			▲ 0.0		67.3 ▲			▲ 3.3		52.0 ▲			▲ 19.1		19.3 ▲			▲ 3.1	
	0.0 ►		**7.0**	◄ 2.6		11.7 ►		**18.4**	◄ 14.4		66.1 ►		**15.2**	◄ 62.4		0.0 ►		**19.1**	◄ 39.0	
	0.0 ▼			▼ 0.0		10.8 ▼			▼ 10.8		16.8 ▼			▼ 58.0		4.3 ▼			▼ 33.6	
	25.9	◄ 0.0	▲ 0.0	► 0.0	**0.0**	**14.5**	◄ 51.9	▲ 48.1	► 16.4	**47.5**	**38.8**	◄ 13.4	▲ 12.9	► 9.5	**12.7**	**15.2**	◄ 16.4	▲ 16.7	► 0.0	**16.7**

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.3 501 NBL 20.2 87 NBT 10.7 489 NBR 4.8 36 EBL 58.5 256 EBT 73.4 62 EBR 10.0 17 SBL 21.9 73 SBT 23.4 364 SBR 18.1 16 WBL 78.8 345 WBT 77.9 345 WBR 42.6 325	MVMNT DELAY QUEUE ALL 24.4 437 NBL 85.2 186 NBT 74.6 186 NBR 16.4 60 EBL 77.3 262 EBT 22.5 412 EBR 23.0 382 SBL 96.5 290 SBT 108.0 290 SBR 16.1 149 WBL 81.2 242 WBT 7.5 186 WBR 2.3 0	MVMNT DELAY QUEUE ALL 42.0 537 NBL 47.8 163 NBT 65.3 347 NBR 53.2 374 EBL 62.8 225 EBT 35.0 338 EBR 40.6 312 SBL 53.5 472 SBT 62.9 524 SBR 0.0 0 WBL 27.7 193 WBT 24.5 495 WBR 29.5 452	MVMNT DELAY QUEUE ALL 23.1 533 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 9.6 454 EBT 11.5 373 EBR1 8.0 252 EBR2 14.3 0 SBL 56.9 320 SBT 0.0 0 SBR 13.8 231 WBL1 32.7 163 WBL2 30.3 341 WBT 48.7 382 WBR 0.0 0	MVMNT DELAY QUEUE ALL 17.7 593 NBL 23.6 240 NBT 0.0 0 NBR 41.5 158 EBL 0.0 0 EBT 22.2 587 EBR 0.0 0 SBL 28.7 346 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 23.5 422 WBR 3.4 205
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1522 ◀ 166 ▼ 1283 ▶ 73 = 330 138 ▲ ▲ 66 14 ▶ 3379 ◀ 38 136 ▼ ▼ 226 288 ◀ 62 ▲ 1051 ▶ 121 = 1234	N 346 ◀ 209 ▼ 25 ▶ 112 = 1675 129 ▲ ▲ 49 1835 ▶ 4420 ◀ 1512 148 ▼ ▼ 114 2112 ◀ 143 ▲ 20 ▶ 118 = 281	N 1428 ◀ 0 ▼ 632 ▶ 796 = 2034 231 ▲ ▲ 560 1654 ▶ 6650 ◀ 1244 221 ▼ ▼ 230 2106 ◀ 201 ▲ 447 ▶ 430 = 1078	N 1125 ◀ 709 ▼ 0 ▶ 416 = 1548 1131 ▲ ▲ 0 976 ▶ 5671 ◀ 1107 780 ▼ ▼ 234 111 ▼ ▼ 207 2998 ◀ 0 ▲ 0 ▶ 0 = 0	N 413 ◀ 0 ▼ 0 ▶ 413 = 1260 0 ▲ ▲ 303 973 ▶ 4577 ◀ 957 0 ▼ ▼ 0 973 ◀ 591 ▲ 0 ▶ 205 = 796
AVERAGE DELAY (SECONDS/VEHICLE)	N 22.7 ◀ 18.1 ▼ 23.4 ▶ 21.9 = 71.5 58.5 ▲ ▲ 42.6 73.4 ▶ 24.3 ◀ 77.9 10.0 ▼ ▼ 78.8 36.3 ◀ 20.2 ▲ 10.7 ▶ 4.8 = 10.6	N 48.8 ◀ 16.1 ▼ 108.0 ▶ 96.5 = 12.3 77.3 ▲ ▲ 2.3 22.5 ▶ 24.4 ◀ 7.5 23.0 ▼ ▼ 81.2 25.9 ◀ 85.2 ▲ 74.6 ▶ 16.4 = 55.6	N 57.6 ◀ 0.0 ▼ 62.9 ▶ 53.5 = 26.3 62.8 ▲ ▲ 29.5 35.0 ▶ 42.0 ◀ 24.5 40.6 ▼ ▼ 27.7 38.7 ◀ 47.8 ▲ 65.3 ▶ 53.2 = 57.2	N 29.7 ◀ 13.8 ▼ 0.0 ▶ 56.9 = 43.8 9.6 ▲ ▲ 0.0 11.5 ▶ 23.1 ◀ 48.7 8.0 ▼ ▼ 32.7 14.3 ▼ ▼ 30.3 10.0 ◀ 0.0 ▲ 0.0 ▶ 0.0 = 0.0	N 28.7 ◀ 0.0 ▼ 0.0 ▶ 28.7 = 18.7 0.0 ▲ ▲ 3.4 22.2 ▶ 17.7 ◀ 23.5 0.0 ▼ ▼ 0.0 22.2 ◀ 23.6 ▲ 0.0 ▶ 41.5 = 28.2

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	8.3	168	ALL	20.7	497	ALL	18.3	370	ALL	18.6	370
	NBL	0.0	0	NBL	53.4	225	NBL	16.7	188	NBL	15.1	45
	NBT	0.0	0	NBT	50.1	77	NBT	16.3	344	NBT	14.9	252
	NBR	0.0	0	NBR	15.7	28	NBR	12.6	309	NBR	0.0	0
	EBL	32.0	168	EBL	66.6	117	EBL	52.1	112	EBL	23.0	166
	EBT	0.0	0	EBT	13.9	495	EBT	72.9	141	EBT	0.0	0
	EBR	0.0	0	EBR	13.9	218	EBR	21.4	114	EBR	5.0	0
	SBL	0.0	0	SBL	43.3	73	SBL	12.2	115	SBL	0.0	0
	SBT	0.0	0	SBT	70.3	62	SBT	11.1	338	SBT	21.1	370
	SBR	20.6	2	SBR	11.1	44	SBR	10.0	326	SBR	24.1	370
	WBL	0.0	0	WBL	13.3	34	WBL	55.6	244	WBL	33.3	159
	WBT	2.6	110	WBT	17.0	353	WBT	71.5	205	WBT	39.1	104
	WBR	0.0	0	WBR	3.4	0	WBR	24.3	168	WBR	3.6	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 217	217 ◀	0 ▼	0 ▶	1445	N 176	138 ◀	10 ▼	28 ▶	858	N 938	23 ◀	747 ▼	168 ▶	252	N 808	77 ◀	731 ▼	0 ▶	254
	233 ▲			▲ 0		89 ▲			▲ 10		50 ▲			▲ 109		132 ▲			▲ 110	
	0 ▶	**1895**		◀ 1445		1018 ▶	**2976**		◀ 834		17 ▶	**2442**		◀ 20		0 ▶	**2020**		◀ 31	
	0 ▼			▼ 0		486 ▼			▼ 14		46 ▼			▼ 123		47 ▼			▼ 113	
	233	◀ 0	▲ 0	▶ 0	0	1593	◀ 291	▲ 9	▶ 43	343	113	◀ 217	▲ 829	▶ 89	1135	179	◀ 19	▲ 757	▶ 0	776
AVERAGE DELAY (SECONDS/VEHICLE)	N 20.6	20.6 ◀	0.0 ▼	0.0 ▶	2.6	N 19.6	11.1 ◀	70.3 ▼	43.3 ▶	16.8	N 11.2	10.0 ◀	11.1 ▼	12.2 ▶	43.3	N 21.4	24.1 ◀	21.1 ▼	0.0 ▶	21.1
	32.0 ▲			▲ 0.0		66.6 ▲			▲ 3.4		52.1 ▲			▲ 24.3		23.0 ▲			▲ 3.6	
	0.0 ▶	**8.3**		◀ 2.6		13.9 ▶	**20.7**		◀ 17.0		72.9 ▶	**18.3**		◀ 71.5		0.0 ▶	**18.6**		◀ 39.1	
	0.0 ▼			▼ 0.0		13.9 ▼			▼ 13.3		21.4 ▼			▼ 55.6		5.0 ▼			▼ 33.3	
	32.0	◀ 0.0	▲ 0.0	▶ 0.0	0.0	16.8	◀ 53.4	▲ 50.1	▶ 15.7	48.6	42.8	◀ 16.7	▲ 16.3	▶ 12.6	16.1	18.3	◀ 15.1	▲ 14.9	▶ 0.0	14.9

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.5 441 NBL 13.4 66 NBT 11.7 441 NBR 4.4 34 EBL 57.3 191 EBT 76.6 60 EBR 8.2 12 SBL 16.2 71 SBT 20.0 276 SBR 13.4 0 WBL 66.5 261 WBT 76.4 261 WBR 33.6 241	MVMNT DELAY QUEUE ALL 21.2 292 NBL 74.7 128 NBT 64.4 128 NBR 11.8 27 EBL 76.0 216 EBT 18.7 292 EBR 18.9 262 SBL 82.5 154 SBT 86.2 154 SBR 11.6 65 WBL 84.7 205 WBT 6.5 139 WBR 2.1 0	MVMNT DELAY QUEUE ALL 38.3 428 NBL 45.4 138 NBT 63.1 282 NBR 49.9 280 EBL 67.0 189 EBT 27.1 239 EBR 39.1 237 SBL 58.3 337 SBT 67.5 416 SBR 0.0 0 WBL 21.8 160 WBT 17.9 363 WBR 22.1 341	MVMNT DELAY QUEUE ALL 22.5 334 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 7.6 246 EBT 10.3 278 EBR1 7.1 206 EBR2 11.0 0 SBL 60.7 261 SBT 0.0 0 SBR 10.1 167 WBL1 31.8 142 WBL2 27.8 236 WBT 52.7 314 WBR 0.0 0	MVMNT DELAY QUEUE ALL 14.3 395 NBL 19.3 184 NBT 0.0 0 NBR 32.8 122 EBL 0.0 0 EBT 18.3 387 EBR 0.0 0 SBL 22.2 286 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 19.5 311 WBR 1.9 94
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1181 ◀ 126 ▼ 998 ▶ 57 → 253 103 ▲ → ▲ 52 10 ▶ 2625 ◀ 29 106 ▼ → ▼ 172 219 ◀ 49 ▲ 821 ▶ 96 → 966	N 264 ◀ 160 ▼ 19 ▶ 85 → 1315 97 ▲ → ▲ 36 1417 ▶ 3431 ◀ 1186 118 ▼ → ▼ 93 1632 ◀ 110 ▲ 13 ▶ 89 → 212	N 1107 ◀ 0 ▼ 477 ▶ 630 → 1614 178 ▲ → ▲ 443 1324 ▶ 5231 ◀ 987 169 ▼ → ▼ 184 1671 ◀ 155 ▲ 344 ▶ 336 → 835	N 872 ◀ 557 ▼ 0 ▶ 315 → 1201 899 ▲ → ▲ 0 766 ▶ 4445 ◀ 856 624 ▼ → ▼ 180 83 ▼ → ▼ 165 2372 ◀ 0 ▲ 0 ▶ 0 → 0	N 320 ◀ 0 ▼ 0 ▶ 320 → 977 0 ▲ → ▲ 226 768 ▶ 3576 ◀ 751 0 ▼ → ▼ 0 768 ◀ 448 ▲ 0 ▶ 165 → 613
AVERAGE DELAY (SECONDS/VEHICLE)	N 19.1 ◀ 13.4 ▼ 20.0 ▶ 16.2 → 60.9 57.3 ▲ → ▲ 33.6 76.6 ▶ 21.5 ◀ 76.4 8.2 ▼ → ▼ 66.5 34.4 ◀ 13.4 ▲ 11.7 ▶ 4.4 → 11.1	N 39.8 ◀ 11.6 ▼ 86.2 ▶ 82.5 → 11.9 76.0 ▲ → ▲ 2.1 18.7 ▶ 21.2 ◀ 6.5 18.9 ▼ → ▼ 84.7 22.1 ◀ 74.7 ▲ 64.4 ▶ 11.8 → 47.7	N 62.3 ◀ 0.0 ▼ 67.5 ▶ 58.3 → 19.5 67.0 ▲ → ▲ 22.1 27.1 ▶ 38.3 ◀ 17.9 39.1 ▼ → ▼ 21.8 32.6 ◀ 45.4 ▲ 63.1 ▶ 49.9 → 54.5	N 28.4 ◀ 10.1 ▼ 0.0 ▶ 60.7 → 46.2 7.6 ▲ → ▲ 0.0 10.3 ▶ 22.5 ◀ 52.7 7.1 ▼ → ▼ 31.8 11.0 ▼ → ▼ 27.8 8.4 ◀ 0.0 ▲ 0.0 ▶ 0.0 → 0.0	N 22.2 ◀ 0.0 ▼ 0.0 ▶ 22.2 → 15.4 0.0 ▲ → ▲ 1.9 18.3 ▶ 14.3 ◀ 19.5 0.0 ▼ → ▼ 0.0 18.3 ◀ 19.3 ▲ 0.0 ▶ 32.8 → 22.9

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.4	158	ALL	17.6	380	ALL	14.4	243	ALL	19.5	281
	NBL	0.0	0	NBL	50.0	189	NBL	11.8	121	NBL	15.5	38
	NBT	0.0	0	NBT	48.8	73	NBT	11.4	207	NBT	17.4	210
	NBR	0.0	0	NBR	14.0	28	NBR	8.8	171	NBR	0.0	0
	EBL	23.5	132	EBL	65.5	98	EBL	53.7	95	EBL	17.0	123
	EBT	0.0	0	EBT	11.0	371	EBT	75.7	106	EBT	0.0	0
	EBR	0.0	0	EBR	9.6	126	EBR	16.6	79	EBR	3.9	2
	SBL	0.0	0	SBL	42.5	72	SBL	7.2	88	SBL	0.0	0
	SBT	0.0	0	SBT	67.8	47	SBT	7.5	215	SBT	22.5	281
	SBR	13.8	0	SBR	9.2	26	SBR	8.2	202	SBR	21.9	281
	WBL	0.0	0	WBL	10.0	36	WBL	59.1	195	WBL	33.5	135
	WBT	2.6	128	WBT	13.4	268	WBT	67.6	137	WBT	40.8	70
	WBR	0.0	0	WBR	3.2	0	WBR	18.6	101	WBR	2.5	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 171	171	0	0	1145	N 136	105	8	23	660	N 725	18	579	128	190	N 623	65	558	0	194
	177				0	71			8	38				81	99				86
	0		1494		1145	803		2321		641	13		1882		14	0		1549		23
	0				0	381				11	32				95	36				85
	177	0	0	0	0	1255	229	6	29	264	83	173	638	67	878	135	15	579	0	594
AVERAGE DELAY (SECONDS/VEHICLE)	N 13.8	13.8	0.0	0.0	2.6	N 18.3	9.2	67.8	42.5	13.2	N 7.5	8.2	7.5	7.2	42.5	N 22.5	21.9	22.5	0.0	20.6
	23.5				0.0	65.5				3.2	53.7				18.6	17.0				2.5
	0.0		6.4		2.6	11.0		17.6		13.4	75.7		14.4		67.6	0.0		19.5		40.8
	0.0				0.0	9.6				10.0	16.6				59.1	3.9				33.5
	23.5	0.0	0.0	0.0	0.0	13.7	50.0	48.8	14.0	46.0	42.9	11.8	11.4	8.8	11.3	13.5	15.5	17.4	0.0	17.4

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 18.6 436 NBL 75.6 360 NBT 7.8 361 NBR 3.4 2 EBL 72.1 290 EBT 75.3 290 EBR 23.3 303 SBL 20.0 69 SBT 18.2 384 SBR 8.5 38 WBL 65.6 174 WBT 83.4 174 WBR 25.6 135	MVMNT DELAY QUEUE ALL 30.9 1468 NBL 68.6 88 NBT 83.0 333 NBR 32.9 316 EBL 95.2 280 EBT 37.7 1468 EBR 39.0 1453 SBL 76.2 259 SBT 75.0 259 SBR 8.0 35 WBL 110.0 268 WBT 13.2 285 WBR 5.3 0	MVMNT DELAY QUEUE ALL 46.4 477 NBL 75.8 212 NBT 83.3 305 NBR 49.5 327 EBL 56.4 139 EBT 42.2 471 EBR 20.6 157 SBL 90.1 353 SBT 42.9 228 SBR 24.2 155 WBL 71.5 327 WBT 27.8 411 WBR 11.6 221	MVMNT DELAY QUEUE ALL 25.8 714 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.4 352 EBR 1.6 144 SBL 60.6 221 SBT 0.0 0 SBR 41.2 543 WBL 73.4 218 WBT 26.1 714 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1299 ◀ 139 ▼ 1107 ▶ 53 → 161 122 ▲ ▲ 89 10 ▶ **3182** ◀ 11 58 ▼ ▼ 61 **190** ◀ 103 ▲ 1299 ▶ 123 → 1525	N 214 ◀ 99 ▼ 19 ▶ 96 → 2007 123 ▲ ▲ 93 1426 ▶ **4235** ◀ 1801 166 ▼ ▼ 113 **1715** ◀ 59 ▲ 14 ▶ 220 → 293	N 1218 ◀ 151 ▼ 433 ▶ 634 → 3079 177 ▲ ▲ 790 1383 ▶ **7368** ◀ 1682 164 ▼ ▼ 607 **1724** ◀ 223 ▲ 567 ▶ 553 → 1343	N 1547 ◀ 1279 ▼ 0 ▶ 268 → 2019 0 ▲ ▲ 0 1681 ▶ **6140** ◀ 1792 890 ▼ ▼ 227 **2571** ◀ 0 ▲ 0 ▶ 0 → 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 17.3 ◀ 8.5 ▼ 18.2 ▶ 20.0 → 44.7 72.1 ▲ ▲ 25.6 75.3 ▶ **18.6** ◀ 83.4 23.3 ▼ ▼ 65.6 **57.4** ◀ 75.6 ▲ 7.8 ▶ 3.4 → 12.0	N 44.5 ◀ 8.0 ▼ 75.0 ▶ 76.2 → 18.3 95.2 ▲ ▲ 5.3 37.7 ▶ **30.9** ◀ 13.2 39.0 ▼ ▼ 110.0 **41.9** ◀ 68.6 ▲ 83.0 ▶ 32.9 → 42.5	N 65.1 ◀ 24.2 ▼ 42.9 ▶ 90.1 → 32.3 56.4 ▲ ▲ 11.6 42.2 ▶ **46.4** ◀ 27.8 20.6 ▼ ▼ 71.5 **41.6** ◀ 75.8 ▲ 83.3 ▶ 49.5 → 68.1	N 44.6 ◀ 41.2 ▼ 0.0 ▶ 60.6 → 31.5 0.0 ▲ ▲ 0.0 14.4 ▶ **25.8** ◀ 26.1 1.6 ▼ ▼ 73.4 **9.9** ◀ 0.0 ▲ 0.0 ▶ 0.0 → 0.0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 20.5 728 NBL 41.2 728 NBT 0.0 0 NBR 9.0 135 EBL 0.0 0 EBT 22.6 556 EBR 4.8 266 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 19.8 274 WBR 3.1 2	MVMNT DELAY QUEUE ALL 28.3 613 NBL 58.7 307 NBT 45.7 82 NBR 17.6 33 EBL 64.3 160 EBT 18.3 528 EBR 9.7 42 SBL 49.6 67 SBT 74.5 61 SBR 11.8 20 WBL 22.6 56 WBT 25.1 530 WBR 6.2 0	MVMNT DELAY QUEUE ALL 18.2 621 NBL 16.9 114 NBT 17.5 621 NBR 10.2 0 EBL 61.8 120 EBT 71.2 73 EBR 10.1 44 SBL 30.8 276 SBT 8.1 163 SBR 4.2 163 WBL 60.4 131 WBT 74.2 172 WBR 25.5 134	MVMNT DELAY QUEUE ALL 6.6 240 NBL 10.0 25 NBT 3.8 237 NBR 0.0 0 EBL 68.1 172 EBT 0.0 0 EBR 5.3 3 SBL 0.0 0 SBT 4.9 153 SBR 4.8 123 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1482 0 ▲ ▲ 511 1135 ▶ 4679 ◀ 971 808 ▼ ▼ 0 1943 | 1058 0 194 | 1252	N 93 | 64 14 15 | 1092 168 ▲ ▲ 9 975 ▶ 2925 ◀ 1063 177 ▼ ▼ 20 1320 | 364 7 45 | 416	N 918 | 9 722 187 | 178 45 ▲ ▲ 102 6 ▶ 2437 ◀ 15 23 ▼ ▼ 61 74 | 114 1105 43 | 1262	N 741 | 54 687 0 | 0 71 ▲ ▲ 0 0 ▶ 1977 ◀ 0 16 ▼ ▼ 0 87 | 10 1136 0 | 1146
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 14.0 0.0 ▲ ▲ 3.1 22.6 ▶ 20.5 ◀ 19.8 4.8 ▼ ▼ 0.0 15.2 | 41.2 0.0 9.0 | 36.2	N 27.3 | 11.8 74.5 49.6 | 24.9 64.3 ▲ ▲ 6.2 18.3 ▶ 28.3 ◀ 25.1 9.7 ▼ ▼ 22.6 23.0 | 58.7 45.7 17.6 | 54.0	N 12.7 | 4.2 8.1 30.8 | 41.5 61.8 ▲ ▲ 25.5 71.2 ▶ 18.2 ◀ 74.2 10.1 ▼ ▼ 60.4 46.5 | 16.9 17.5 10.2 | 17.2	N 4.9 | 4.8 4.9 0.0 | 0.0 68.1 ▲ ▲ 0.0 0.0 ▶ 6.6 ◀ 0.0 5.3 ▼ ▼ 0.0 56.6 | 10.0 3.8 0.0 | 3.9

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 40.8 1937 NBL 87.1 532 NBT 9.8 530 NBR 4.3 0 EBL 72.5 348 EBT 104.4 348 EBR 82.8 361 SBL 63.3 118 SBT 66.3 1937 SBR 15.4 42 WBL 78.2 247 WBT 106.0 247 WBR 40.1 209	MVMNT DELAY QUEUE ALL 77.7 5957 NBL 68.5 106 NBT 105.7 502 NBR 56.0 485 EBL 163.2 778 EBT 111.0 5957 EBR 104.3 5942 SBL 100.9 449 SBT 97.6 449 SBR 15.7 51 WBL 119.7 423 WBT 53.5 1058 WBR 17.7 11	MVMNT DELAY QUEUE ALL 76.7 1012 NBL 79.5 264 NBT 174.4 864 NBR 74.1 423 EBL 62.5 162 EBT 46.7 555 EBR 21.4 192 SBL 145.3 682 SBT 45.6 286 SBR 27.0 214 WBL 74.5 410 WBT 83.1 774 WBR 21.5 351	MVMNT DELAY QUEUE ALL 53.9 3319 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 17.5 412 EBR 1.9 205 SBL 109.2 316 SBT 0.0 0 SBR 117.1 3319 WBL 74.8 259 WBT 54.5 818 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1718 | 176 1468 74 | 221 172 ▲ ▲ 123 15 ▶ 4033 ◀ 14 71 ▼ ▼ 84 258 | 125 1559 147 | 1831	N 289 | 138 27 124 | 2463 131 ▲ ▲ 117 1508 ▶ 4971 ◀ 2202 179 ▼ ▼ 144 1818 | 80 17 299 | 396	N 1590 | 201 577 812 | 3683 197 ▲ ▲ 914 1544 ▶ 8955 ◀ 2030 177 ▼ ▼ 739 1918 | 298 726 734 | 1758	N 1977 | 1621 0 356 | 2378 0 ▲ ▲ 0 2011 ▶ 7447 ◀ 2111 1077 ▼ ▼ 267 3088 | 0 0 0 | 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 60.9 | 15.4 66.3 63.3 | 58.8 72.5 ▲ ▲ 40.1 104.4 ▶ 40.8 ◀ 106.0 82.8 ▼ ▼ 78.2 77.2 | 87.1 9.8 4.3 | 14.6	N 59.9 | 15.7 97.6 100.9 | 55.7 163.2 ▲ ▲ 17.7 111.0 ▶ 77.7 ◀ 53.5 104.3 ▼ ▼ 119.7 114.1 | 68.5 105.7 56.0 | 60.7	N 94.1 | 27.0 45.6 145.3 | 66.1 62.5 ▲ ▲ 21.5 46.7 ▶ 76.7 ◀ 83.1 21.4 ▼ ▼ 74.5 46.0 | 79.5 174.4 74.1 | 116.4	N 115.7 | 117.1 0.0 109.2 | 56.7 0.0 ▲ ▲ 0.0 17.5 ▶ 53.9 ◀ 54.5 1.9 ▼ ▼ 74.8 12.0 | 0.0 0.0 0.0 | 0.0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 66.6 3935 NBL 127.2 3935 NBT 0.0 0 NBR 85.6 245 EBL 0.0 0 EBT 31.3 731 EBR 6.4 404 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 76.2 1878 WBR 88.1 1416	MVMNT DELAY QUEUE ALL 76.3 2549 NBL 197.0 1090 NBT 128.6 74 NBR 93.5 30 EBL 71.3 211 EBT 23.1 810 EBR 13.5 74 SBL 45.7 63 SBT 69.0 71 SBR 29.4 98 WBL 91.8 76 WBT 101.5 2549 WBR 79.2 0	MVMNT DELAY QUEUE ALL 39.4 1183 NBL 45.0 704 NBT 47.8 1182 NBR 30.0 2 EBL 63.6 138 EBT 72.1 92 EBR 12.8 64 SBL 67.7 508 SBT 14.9 384 SBR 4.0 384 WBL 57.0 184 WBT 76.4 251 WBR 39.0 213	MVMNT DELAY QUEUE ALL 9.3 358 NBL 12.6 23 NBT 5.5 356 NBR 0.0 0 EBL 66.0 200 EBT 0.0 0 EBR 5.7 3 SBL 0.0 0 SBT 9.7 259 SBR 8.1 229 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1722 0 ▲ ▲ 597 1405 ▶ 5633 ◀ 1125 957 ▼ ▼ 0 2362 | ◀ 1307 ▲ 0 ▶ 239 | 1546	N 126 | 86 21 19 | 1370 217 ▲ ▲ 14 1190 ▶ 3576 ◀ 1332 216 ▼ ▼ 24 1623 | ◀ 394 ▲ 7 ▶ 51 | 452	N 1141 | 8 895 238 | 239 62 ▲ ▲ 139 9 ▶ 3168 ◀ 18 31 ▼ ▼ 82 102 | ◀ 150 ▲ 1470 ▶ 61 | 1681	N 932 | 61 871 0 | 0 98 ▲ ▲ 0 0 ▶ 2600 ◀ 0 20 ▼ ▼ 0 118 | ◀ 14 ▲ 1533 ▶ 0 | 1547
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 80.3 0.0 ▲ ▲ 88.1 31.3 ▶ 66.6 ◀ 76.2 6.4 ▼ ▼ 0.0 21.2 | ◀ 127.2 ▲ 0.0 ▶ 85.6 | 120.8	N 38.4 | 29.4 69.0 45.7 | 101.1 71.3 ▲ ▲ 79.2 23.1 ▶ 76.3 ◀ 101.5 13.5 ▼ ▼ 91.8 28.3 | ◀ 197.0 ▲ 128.6 ▶ 93.5 | 184.3	N 25.8 | 4.0 14.9 67.7 | 48.0 63.6 ▲ ▲ 39.0 72.1 ▶ 39.4 ◀ 76.4 12.8 ▼ ▼ 57.0 48.9 | ◀ 45.0 ▲ 47.8 ▶ 30.0 | 46.9	N 9.6 | 8.1 9.7 0.0 | 0.0 66.0 ▲ ▲ 0.0 0.0 ▶ 9.3 ◀ 0.0 5.7 ▼ ▼ 0.0 55.7 | ◀ 12.6 ▲ 5.5 ▶ 0.0 | 5.5

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 30.8 1597 NBL 87.1 530 NBT 10.7 529 NBR 4.2 2 EBL 64.8 262 EBT 86.5 262 EBR 53.3 275 SBL 49.2 186 SBT 46.0 1596 SBR 12.0 33 WBL 69.7 190 WBT 93.8 190 WBR 32.8 152	MVMNT DELAY QUEUE ALL 73.2 5955 NBL 69.7 85 NBT 81.1 360 NBR 34.0 343 EBL 193.1 1751 EBT 120.9 5955 EBR 112.3 5940 SBL 81.6 329 SBT 77.4 329 SBR 9.7 41 WBL 113.8 328 WBT 35.7 1024 WBR 12.4 17	MVMNT DELAY QUEUE ALL 64.1 1032 NBL 77.2 226 NBT 159.1 890 NBR 61.0 381 EBL 59.0 147 EBT 47.2 567 EBR 22.4 170 SBL 129.5 659 SBT 42.3 241 SBR 23.8 170 WBL 74.3 391 WBT 51.4 744 WBR 19.3 374	MVMNT DELAY QUEUE ALL 35.6 2103 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 15.7 360 EBR 1.8 169 SBL 73.0 283 SBT 0.0 0 SBR 61.1 2102 WBL 69.9 252 WBT 42.6 760 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1481 ◀ 148 ▼ 1269 ▶ 64 → 179 135 ▲ ▲ 101 14 ▶ **3759** ◀ 12 67 ▼ ▼ 66 **216** ◀ 138 ▲ 1596 ▶ 145 → 1879	N 239 ◀ 115 ▼ 19 ▶ 105 → 2420 139 ▲ ▲ 112 1577 ▶ **4870** ◀ 2171 174 ▼ ▼ 137 **1890** ◀ 64 ▲ 13 ▶ 240 → 317	N 1427 ◀ 168 ▼ 491 ▶ 768 → 3726 205 ▲ ▲ 1004 1532 ▶ **8635** ◀ 2012 190 ▼ ▼ 710 **1927** ◀ 254 ▲ 677 ▶ 620 → 1551	N 1782 ◀ 1471 ▼ 0 ▶ 311 → 2458 0 ▲ ▲ 0 1891 ▶ **7167** ◀ 2221 1033 ▼ ▼ 237 **2924** ◀ 0 ▲ 0 ▶ 0 → 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 42.7 ◀ 12.0 ▼ 46.0 ▶ 49.2 → 50.5 64.8 ▲ ▲ 32.8 86.5 ▶ **30.8** ◀ 93.8 53.3 ▼ ▼ 69.7 **62.6** ◀ 87.1 ▲ 10.7 ▶ 4.2 → 15.8	N 46.7 ◀ 9.7 ▼ 77.4 ▶ 81.6 → 39.0 193.1 ▲ ▲ 12.4 120.9 ▶ **73.2** ◀ 35.7 112.3 ▼ ▼ 113.8 **125.4** ◀ 69.7 ▲ 81.1 ▶ 34.0 → 43.1	N 87.1 ◀ 23.8 ▼ 42.3 ▶ 129.5 → 47.1 59.0 ▲ ▲ 19.3 47.2 ▶ **64.1** ◀ 51.4 22.4 ▼ ▼ 74.3 **46.0** ◀ 77.2 ▲ 159.1 ▶ 61.0 → 106.5	N 63.2 ◀ 61.1 ▼ 0.0 ▶ 73.0 → 45.2 0.0 ▲ ▲ 0.0 15.7 ▶ **35.6** ◀ 42.6 1.8 ▼ ▼ 69.9 **10.8** ◀ 0.0 ▲ 0.0 ▶ 0.0 → 0.0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 67.6 3869 NBL 116.8 3869 NBT 0.0 0 NBR 77.7 267 EBL 0.0 0 EBT 29.4 680 EBR 5.5 353 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 82.3 1920 WBR 103.8 1459	MVMNT DELAY QUEUE ALL 103.6 2956 NBL 239.6 1105 NBT 180.5 97 NBR 165.7 50 EBL 70.0 208 EBT 21.2 726 EBR 12.5 64 SBL 45.6 61 SBT 69.8 74 SBR 43.8 102 WBL 146.6 68 WBT 163.2 2956 WBR 168.5 0	MVMNT DELAY QUEUE ALL 24.0 887 NBL 22.4 295 NBT 25.0 886 NBR 16.9 0 EBL 63.5 136 EBT 66.4 65 EBR 8.0 37 SBL 43.1 351 SBT 11.2 251 SBR 3.9 251 WBL 62.5 148 WBT 72.1 185 WBR 27.4 147	MVMNT DELAY QUEUE ALL 7.4 265 NBL 15.2 28 NBT 4.3 253 NBR 0.0 0 EBL 65.2 170 EBT 0.0 0 EBR 5.8 0 SBL 0.0 0 SBT 6.4 226 SBR 5.9 196 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1713 0 ▲ ▲ 611 1298 ▶ 5466 ◀ 1102 898 ▼ ▼ 0 2196 | ◀ 1310 ▲ 0 ▶ 244 | 1554	N 105 | 72 17 16 | 1218 216 ▲ ▲ 13 1145 ▶ 3318 ◀ 1185 207 ▼ ▼ 20 1568 | ◀ 370 ▲ 8 ▶ 46 | 424	N 1072 | 8 835 229 | 197 53 ▲ ▲ 114 7 ▶ 2755 ◀ 16 25 ▼ ▼ 67 85 | ◀ 123 ▲ 1221 ▶ 53 | 1397	N 855 | 59 796 0 | 0 81 ▲ ▲ 0 0 ▶ 2223 ◀ 0 14 ▼ ▼ 0 95 | ◀ 11 ▲ 1260 ▶ 0 | 1271
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 90.0 0.0 ▲ ▲ 103.8 29.4 ▶ 67.6 ◀ 82.3 5.5 ▼ ▼ 0.0 19.6 | ◀ 116.8 ▲ 0.0 ▶ 77.7 | 110.7	N 48.3 | 43.8 69.8 45.6 | 163.0 70.0 ▲ ▲ 168.5 21.2 ▶ 103.6 ◀ 163.2 12.5 ▼ ▼ 146.6 26.8 | ◀ 239.6 ▲ 180.5 ▶ 165.7 | 230.5	N 18.0 | 3.9 11.2 43.1 | 43.0 63.5 ▲ ▲ 27.4 66.4 ▶ 24.0 ◀ 72.1 8.0 ▼ ▼ 62.5 47.4 | ◀ 22.4 ▲ 25.0 ▶ 16.9 | 24.5	N 6.4 | 5.9 6.4 0.0 | 0.0 65.2 ▲ ▲ 0.0 0.0 ▶ 7.4 ◀ 0.0 5.8 ▼ ▼ 0.0 56.4 | ◀ 15.2 ▲ 4.3 ▶ 0.0 | 4.4

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 27.8 642 NBL 84.9 394 NBT 12.3 490 NBR 5.0 0 EBL 47.4 295 EBT 86.6 295 EBR 50.7 307 SBL 40.8 140 SBT 30.6 634 SBR 14.4 49 WBL 64.4 296 WBT 68.0 296 WBR 27.3 257	MVMNT DELAY QUEUE ALL 61.8 5948 NBL 74.3 135 NBT 120.6 543 NBR 55.5 526 EBL 138.7 230 EBT 99.2 5948 EBR 96.4 5933 SBL 84.5 295 SBT 79.6 295 SBR 9.8 71 WBL 82.8 318 WBT 26.2 534 WBR 5.8 9	MVMNT DELAY QUEUE ALL 50.3 655 NBL 71.5 184 NBT 80.0 282 NBR 71.4 478 EBL 71.8 136 EBT 46.1 652 EBR 24.6 242 SBL 88.3 509 SBT 33.8 205 SBR 22.9 196 WBL 89.3 383 WBT 26.4 376 WBR 11.2 243	MVMNT DELAY QUEUE ALL 25.9 751 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 18.0 601 EBR 2.4 369 SBL 64.8 348 SBT 0.0 0 SBR 38.8 409 WBL 75.3 208 WBT 26.1 728 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1683 ◀ 181 ▼ 1404 ▶ 98 = 261 122 ▲ ▲ 33 28 ▶ 3640 ◀ 37 119 ▼ ▼ 191 269 ◀ 61 ▲ 1298 ▶ 63 = 1422	N 297 ◀ 183 ▼ 22 ▶ 92 = 2054 97 ▲ ▲ 93 1607 ▶ 4649 ◀ 1832 191 ▼ ▼ 129 1895 ◀ 103 ▲ 13 ▶ 284 = 400	N 1698 ◀ 224 ▼ 583 ▶ 891 = 3006 171 ▲ ▲ 739 1596 ▶ 8067 ◀ 1647 185 ▼ ▼ 620 1952 ◀ 193 ▲ 514 ▶ 699 = 1406	N 1478 ◀ 1034 ▼ 0 ▶ 444 = 2186 0 ▲ ▲ 0 2144 ▶ 6846 ◀ 1979 1035 ▼ ▼ 207 3179 ◀ 0 ▲ 0 ▶ 0 = 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 29.4 ◀ 14.4 ▼ 30.6 ▶ 40.8 = 60.2 47.4 ▲ ▲ 27.3 86.6 ▶ 27.8 ◀ 68.0 50.7 ▼ ▼ 64.4 52.9 ◀ 84.9 ▲ 12.3 ▶ 5.0 = 15.1	N 38.1 ◀ 9.8 ▼ 79.6 ▶ 84.5 = 28.8 138.7 ▲ ▲ 5.8 99.2 ▶ 61.8 ◀ 26.2 96.4 ▼ ▼ 82.8 101.0 ◀ 74.3 ▲ 120.6 ▶ 55.5 = 62.5	N 60.9 ◀ 22.9 ▼ 33.8 ▶ 88.3 = 35.6 71.8 ▲ ▲ 11.2 46.1 ▶ 50.3 ◀ 26.4 24.6 ▼ ▼ 89.3 46.3 ◀ 71.5 ▲ 80.0 ▶ 71.4 = 74.6	N 46.6 ◀ 38.8 ▼ 0.0 ▶ 64.8 = 30.8 0.0 ▲ ▲ 0.0 18.0 ▶ 25.9 ◀ 26.1 2.4 ▼ ▼ 75.3 13.0 ◀ 0.0 ▲ 0.0 ▶ 0.0 = 0.0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 22.0 847 NBL 42.1 746 NBT 0.0 0 NBR 16.0 239 EBL 0.0 0 EBT 24.9 814 EBR 9.9 489 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 19.7 398 WBR 2.6 31	MVMNT DELAY QUEUE ALL 26.3 848 NBL 51.4 245 NBT 46.5 143 NBR 20.9 98 EBL 51.8 152 EBT 20.2 800 EBR 17.5 332 SBL 37.0 134 SBT 53.7 48 SBR 14.7 87 WBL 27.4 56 WBT 25.5 556 WBR 6.9 0	MVMNT DELAY QUEUE ALL 23.0 671 NBL 30.3 285 NBT 24.9 671 NBR 14.3 4 EBL 58.5 130 EBT 72.7 106 EBR 15.2 78 SBL 49.5 368 SBT 9.7 368 SBR 4.2 368 WBL 57.1 218 WBT 65.4 189 WBR 23.4 151	MVMNT DELAY QUEUE ALL 13.2 398 NBL 22.0 71 NBT 6.7 233 NBR 0.0 0 EBL 61.9 392 EBT 0.0 0 EBR 9.7 20 SBL 0.0 0 SBT 9.2 325 SBR 9.5 295 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1519 0 ▲ ▲ 317 1470 ▶ 5366 ◀ 1202 1116 ▼ ▼ 0 2586 | ◀ 991 ▲ 0 ▶ 267 | 1258	N 215 | 132 12 71 | 1114 172 ▲ ▲ 15 1089 ▶ 3457 ◀ 1079 457 ▼ ▼ 20 1718 | ◀ 314 ▲ 15 ▶ 73 | 402	N 1299 | 19 1070 210 | 226 53 ▲ ▲ 106 11 ▶ 2896 ◀ 17 42 ▼ ▼ 103 106 | ◀ 139 ▲ 1077 ▶ 46 | 1262	N 1083 | 115 968 0 | 0 205 ▲ ▲ 0 0 ▶ 2339 ◀ 0 93 ▼ ▼ 0 298 | ◀ 48 ▲ 908 ▶ 0 | 956
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 16.1 0.0 ▲ ▲ 2.6 24.9 ▶ 22.0 ◀ 19.7 9.9 ▼ ▼ 0.0 18.4 | ◀ 42.1 ▲ 0.0 ▶ 16.0 | 36.6	N 24.2 | 14.7 53.7 37.0 | 25.3 51.8 ▲ ▲ 6.9 20.2 ▶ 26.3 ◀ 25.5 17.5 ▼ ▼ 27.4 22.7 | ◀ 51.4 ▲ 46.5 ▶ 20.9 | 45.7	N 16.1 | 4.2 9.7 49.5 | 41.9 58.5 ▲ ▲ 23.4 72.7 ▶ 23.0 ◀ 65.4 15.2 ▼ ▼ 57.1 42.8 | ◀ 30.3 ▲ 24.9 ▶ 14.3 | 25.1	N 9.3 | 9.5 9.2 0.0 | 0.0 61.9 ▲ ▲ 0.0 0.0 ▶ 13.2 ◀ 0.0 9.7 ▼ ▼ 0.0 45.6 | ◀ 22.0 ▲ 6.7 ▶ 0.0 | 7.5

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 50.1 2283 NBL 88.1 530 NBT 16.1 568 NBR 7.0 25 EBL 50.7 523 EBT 134.7 523 EBR 114.2 536 SBL 78.8 692 SBT 71.8 2283 SBR 22.4 72 WBL 76.0 377 WBT 64.1 377 WBR 30.9 338	MVMNT DELAY QUEUE ALL 77.7 5962 NBL 79.8 236 NBT 156.2 678 NBR 93.6 660 EBL 162.4 211 EBT 127.2 5962 EBR 116.1 5947 SBL 115.9 483 SBT 118.9 483 SBR 20.1 171 WBL 104.4 463 WBT 34.6 717 WBR 9.3 31	MVMNT DELAY QUEUE ALL 64.3 900 NBL 77.8 190 NBT 106.7 353 NBR 94.3 731 EBL 73.9 142 EBT 53.6 684 EBR 27.6 273 SBL 98.3 649 SBT 41.8 268 SBR 27.6 260 WBL 166.4 762 WBT 30.5 432 WBR 13.3 268	MVMNT DELAY QUEUE ALL 35.9 1863 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 23.7 698 EBR 3.1 450 SBL 107.9 673 SBT 0.0 0 SBR 63.5 1584 WBL 83.3 248 WBT 31.6 753 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1945 | 203 1637 105 | 304 138 ▲ ▲ 40 32 ▶ **4167** ◀ 43 140 ▼ ▼ 221 **310** | 68 1466 70 | 1604	N 346 | 210 25 111 | 2359 94 ▲ ▲ 113 1604 ▶ **5052** ◀ 2100 191 ▼ ▼ 146 **1889** | 118 14 323 | 455	N 1981 | 269 676 1036 | 3376 173 ▲ ▲ 853 1668 ▶ **8996** ◀ 1857 191 ▼ ▼ 666 **2032** | 220 581 801 | 1602	N 1594 | 1112 0 482 | 2524 0 ▲ ▲ 0 2346 ▶ **7616** ◀ 2289 1150 ▼ ▼ 235 **3496** | 0 0 0 | 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 67.0 | 22.4 71.8 78.8 | 68.4 50.7 ▲ ▲ 30.9 134.7 ▶ **50.1** ◀ 64.1 114.2 ▼ ▼ 76.0 **88.1** | 88.1 16.1 7.0 | 18.7	N 58.0 | 20.1 118.9 115.9 | 37.7 162.4 ▲ ▲ 9.3 127.2 ▶ **77.7** ◀ 34.6 116.1 ▼ ▼ 104.4 **127.8** | 79.8 156.2 93.6 | 91.9	N 69.4 | 27.6 41.8 98.3 | 53.0 73.9 ▲ ▲ 13.3 53.6 ▶ **64.3** ◀ 30.5 27.6 ▼ ▼ 166.4 **52.9** | 77.8 106.7 94.3 | 96.5	N 76.9 | 63.5 0.0 107.9 | 36.4 0.0 ▲ ▲ 0.0 23.7 ▶ **35.9** ◀ 31.6 3.1 ▼ ▼ 83.3 **16.9** | 0.0 0.0 0.0 | 0.0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 29.5 1316 NBL 51.2 1289 NBT 0.0 0 NBR 26.8 287 EBL 0.0 0 EBT 31.4 869 EBR 10.5 550 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 33.0 747 WBR 5.1 307	MVMNT DELAY QUEUE ALL 31.1 905 NBL 55.8 303 NBT 47.8 142 NBR 22.0 98 EBL 55.6 181 EBT 24.2 876 EBR 21.1 645 SBL 36.7 127 SBT 58.3 59 SBR 19.0 112 WBL 41.5 60 WBT 32.1 728 WBR 12.0 0	MVMNT DELAY QUEUE ALL 59.6 1177 NBL 55.9 850 NBT 47.1 968 NBR 25.1 2 EBL 61.5 141 EBT 71.9 106 EBR 14.5 78 SBL 121.8 1056 SBT 62.1 1106 SBR 27.9 1106 WBL 108.9 276 WBT 71.0 208 WBR 33.6 171	MVMNT DELAY QUEUE ALL 15.8 496 NBL 30.0 102 NBT 8.0 301 NBR 0.0 0 EBL 63.0 466 EBT 0.0 0 EBR 11.3 30 SBL 0.0 0 SBT 13.3 400 SBR 12.4 370 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 0 | 0 0 0 | 1777 0 ▲ ▲ 382 1615 ▶ 6084 ◀ 1395 1215 ▼ ▼ 0 2830 | ◀ 1162 ▲ 0 ▶ 312 | 1474	N 249 | 158 15 76 | 1308 193 ▲ ▲ 20 1227 ▶ 3955 ◀ 1264 499 ▼ ▼ 24 1919 | ◀ 373 ▲ 13 ▶ 88 | 474	N 1423 | 23 1160 240 | 246 61 ▲ ▲ 113 13 ▶ 3250 ◀ 17 50 ▼ ▼ 116 124 | ◀ 153 ▲ 1246 ▶ 54 | 1453	N 1202 | 126 1076 0 | 0 235 ▲ ▲ 0 0 ▶ 2672 ◀ 0 113 ▼ ▼ 0 348 | ◀ 57 ▲ 1063 ▶ 0 | 1120
AVERAGE DELAY (SECONDS/VEHICLE)	N 0.0 | 0.0 0.0 0.0 | 27.0 0.0 ▲ ▲ 5.1 31.4 ▶ 29.5 ◀ 33.0 10.5 ▼ ▼ 0.0 22.4 | ◀ 51.2 ▲ 0.0 ▶ 26.8 | 46.0	N 26.8 | 19.0 58.3 36.7 | 31.9 55.6 ▲ ▲ 12.0 24.2 ▶ 31.1 ◀ 32.1 21.1 ▼ ▼ 41.5 26.6 | ◀ 55.8 ▲ 47.8 ▶ 22.0 | 49.3	N 71.6 | 27.9 62.1 121.8 | 71.7 61.5 ▲ ▲ 33.6 71.9 ▶ 59.6 ◀ 71.0 14.5 ▼ ▼ 108.9 43.6 | ◀ 55.9 ▲ 47.1 ▶ 25.1 | 47.2	N 13.2 | 12.4 13.3 0.0 | 0.0 63.0 ▲ ▲ 0.0 0.0 ▶ 15.8 ◀ 0.0 11.3 ▼ ▼ 0.0 46.2 | ◀ 30.0 ▲ 8.0 ▶ 0.0 | 9.1

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 30.1 1482 NBL 87.6 367 NBT 11.6 461 NBR 4.4 0 EBL 49.3 342 EBT 93.0 342 EBR 60.6 355 SBL 37.0 131 SBT 35.5 1478 SBR 14.7 45 WBL 67.6 336 WBT 71.1 336 WBR 29.4 297	MVMNT DELAY QUEUE ALL 72.2 5952 NBL 71.0 112 NBT 122.4 527 NBR 57.2 510 EBL 157.8 199 EBT 124.0 5952 EBR 119.1 5937 SBL 79.8 243 SBT 77.0 243 SBR 8.6 53 WBL 85.3 340 WBT 23.9 516 WBR 5.8 19	MVMNT DELAY QUEUE ALL 52.7 818 NBL 74.8 178 NBT 80.7 267 NBR 71.0 557 EBL 71.0 149 EBT 44.2 635 EBR 24.1 258 SBL 88.2 553 SBT 33.8 200 SBR 21.9 205 WBL 117.3 631 WBT 27.5 357 WBR 10.5 205	MVMNT DELAY QUEUE ALL 32.9 1474 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 16.2 515 EBR 2.2 328 SBL 98.7 377 SBT 0.0 0 SBR 80.4 1308 WBL 88.3 252 WBT 24.6 698 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1549 | 159 1304 86 | 237 112 ▲ ▲ 27 27 ▶ **3355** ◀ 33 110 ▼ ▼ 177 **249** | 57 1199 60 | 1316	N 268 | 166 19 83 | 1934 92 ▲ ▲ 87 1611 ▶ **4463** ◀ 1718 194 ▼ ▼ 129 **1897** | 88 12 259 | 359	N 1615 | 213 532 870 | 2806 174 ▲ ▲ 680 1607 ▶ **7683** ◀ 1518 184 ▼ ▼ 608 **1965** | 181 469 643 | 1293	N 1347 | 937 0 410 | 2043 0 ▲ ▲ 0 2115 ▶ **6529** ◀ 1849 1022 ▼ ▼ 194 **3137** | 0 0 0 | 0
AVERAGE DELAY (SECONDS/VEHICLE)	N 33.4 | 14.7 35.5 37.0 | 63.7 49.3 ▲ ▲ 29.4 93.0 ▶ **30.1** ◀ 71.1 60.6 ▼ ▼ 67.6 **59.1** | 87.6 11.6 4.4 | 14.6	N 35.5 | 8.6 77.0 79.8 | 27.1 157.8 ▲ ▲ 5.8 124.0 ▶ **72.2** ◀ 23.9 119.1 ▼ ▼ 85.3 **125.1** | 71.0 122.4 57.2 | 62.8	N 61.5 | 21.9 33.8 88.2 | 42.8 71.0 ▲ ▲ 10.5 44.2 ▶ **52.7** ◀ 27.5 24.1 ▼ ▼ 117.3 **44.7** | 74.8 80.7 71.0 | 75.1	N 86.0 | 80.4 0.0 98.7 | 30.6 0.0 ▲ ▲ 0.0 16.2 ▶ **32.9** ◀ 24.6 2.2 ▼ ▼ 88.3 **11.7** | 0.0 0.0 0.0 | 0.0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 25.2 1076 NBL 50.6 906 NBT 0.0 0 NBR 19.9 231 EBL 0.0 0 EBT 24.1 798 EBR 9.8 481 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 27.6 527 WBR 5.3 178	MVMNT DELAY QUEUE ALL 25.1 673 NBL 53.6 285 NBT 44.8 108 NBR 20.3 62 EBL 52.8 152 EBT 18.2 616 EBR 16.4 300 SBL 38.4 120 SBT 51.8 56 SBR 12.2 61 WBL 26.2 50 WBT 24.1 465 WBR 5.7 0	MVMNT DELAY QUEUE ALL 22.7 821 NBL 26.4 200 NBT 21.1 669 NBR 12.0 6 EBL 60.1 121 EBT 74.1 93 EBR 12.2 64 SBL 40.1 638 SBT 13.9 592 SBR 6.7 592 WBL 71.6 203 WBT 65.6 175 WBR 23.7 138	MVMNT DELAY QUEUE ALL 12.1 357 NBL 20.1 65 NBT 5.9 209 NBR 0.0 0 EBL 61.7 330 EBT 0.0 0 EBR 8.1 13 SBL 0.0 0 SBT 8.6 298 SBR 8.2 268 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N: 0 / 0 0 0 / 1403 0 ▲ ▲ 302 1421 ▶ 5090 ◀ 1101 1103 ▼ ▼ 0 2524 / ◀ 916 ▲ 0 ▶ 245 / 1161	N: 193 / 122 12 59 / 1005 169 ▲ ▲ 14 1055 ▶ 3249 ◀ 973 458 ▼ ▼ 18 1682 / ◀ 287 ▲ 13 ▶ 65 / 365	N: 1268 / 19 1035 214 / 202 46 ▲ ▲ 91 9 ▶ 2696 ◀ 15 39 ▼ ▼ 96 94 / ◀ 115 ▲ 967 ▶ 45 / 1127	N: 1047 / 110 937 0 / 0 176 ▲ ▲ 0 0 ▶ 2174 ◀ 0 88 ▼ ▼ 0 264 / ◀ 44 ▲ 816 ▶ 0 / 860
AVERAGE DELAY (SECONDS/VEHICLE)	N: 0.0 / 0.0 0.0 0.0 / 22.8 0.0 ▲ ▲ 5.3 24.1 ▶ 25.2 ◀ 27.6 9.8 ▼ ▼ 0.0 17.8 / ◀ 50.6 ▲ 0.0 ▶ 19.9 / 44.1	N: 22.7 / 12.2 51.8 38.4 / 23.9 52.8 ▲ ▲ 5.7 18.2 ▶ 25.1 ◀ 24.1 16.4 ▼ ▼ 26.2 21.2 / ◀ 53.6 ▲ 44.8 ▶ 20.3 / 47.4	N: 18.2 / 6.7 13.9 40.1 / 49.6 60.1 ▲ ▲ 23.7 74.1 ▶ 22.7 ◀ 65.6 12.2 ▼ ▼ 71.6 41.6 / ◀ 26.4 ▲ 21.1 ▶ 12.0 / 21.3	N: 8.5 / 8.2 8.6 0.0 / 0.0 61.7 ▲ ▲ 0.0 0.0 ▶ 12.1 ◀ 0.0 8.1 ▼ ▼ 0.0 43.8 / ◀ 20.1 ▲ 5.9 ▶ 0.0 / 6.6

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.2 649 NBL 17.7 119 NBT 13.6 649 NBR 5.8 51 EBL 62.9 233 EBT 70.3 66 EBR 6.9 0 SBL 17.5 57 SBT 14.1 231 SBR 8.3 0 WBL 65.3 184 WBT 86.9 184 WBR 28.5 164	MVMNT DELAY QUEUE ALL 20.0 316 NBL 71.6 96 NBT 68.9 96 NBR 15.6 52 EBL 75.5 258 EBT 20.4 301 EBR 21.8 271 SBL 80.0 161 SBT 88.6 161 SBR 12.3 28 WBL 73.5 246 WBT 7.8 215 WBR 2.9 0	MVMNT DELAY QUEUE ALL 36.1 656 NBL 49.4 192 NBT 66.4 434 NBR 51.1 416 EBL 53.9 178 EBT 26.1 237 EBR 41.1 243 SBL 54.9 338 SBT 55.4 370 SBR 0.0 0 WBL 2.3 2 WBT 30.4 656 WBR 14.5 389	MVMNT DELAY QUEUE ALL 26.3 501 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 36.2 484 EBT 8.7 397 EBR1 3.3 236 EBR2 13.2 0 SBL 29.4 164 SBT 0.0 0 SBR 34.2 466 WBL1 61.8 269 WBL2 41.6 410 WBT 28.4 391 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.8 553 NBL 26.7 479 NBT 0.0 0 NBR 40.7 149 EBL 0.0 0 EBT 27.4 485 EBR 0.0 0 SBL 38.5 211 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 29.9 516 WBR 4.7 298
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1295 | 129 1112 54 | 175 124 ▲ ▲ 100 11 ▶ **3176** ◀ 12 58 ▼ ▼ 63 **193** | 100 1270 138 | 1508	N 213 | 99 19 95 | 2004 123 ▲ ▲ 95 1545 ▶ **4116** ◀ 1794 61 ▼ ▼ 115 **1729** | 62 13 89 | 164	N 1080 | 0 445 635 | 2772 172 ▲ ▲ 780 1392 ▶ **6823** ◀ 1671 171 ▼ ▼ 321 **1735** | 224 565 443 | 1232	N 1263 | 993 0 270 | 2010 821 ▲ ▲ 0 859 ▶ **5859** ◀ 1468 795 ▼ ▼ 321 111 ▼ ▼ 221 **2586** | 0 0 0 | 0	N 267 | 0 0 267 | 1480 0 ▲ ▲ 520 854 ▶ **4683** ◀ 960 0 ▼ ▼ 0 **854** | 1066 0 192 | 1258
AVERAGE DELAY (SECONDS/VEHICLE)	N 13.7 | 8.3 14.1 17.5 | 45.7 62.9 ▲ ▲ 28.5 70.3 ▶ **17.2** ◀ 86.9 6.9 ▼ ▼ 65.3 **46.5** | 17.7 13.6 5.8 | 13.2	N 49.3 | 12.3 88.6 80.0 | 11.3 75.5 ▲ ▲ 2.9 20.4 ▶ **20.0** ◀ 7.8 21.8 ▼ ▼ 73.5 **24.4** | 71.6 68.9 15.6 | 41.0	N 55.1 | 0.0 55.4 54.9 | 22.7 53.9 ▲ ▲ 14.5 26.1 ▶ **36.1** ◀ 30.4 41.1 ▼ ▼ 2.3 **30.3** | 49.4 66.4 51.1 | 57.8	N 33.2 | 34.2 0.0 29.4 | 35.2 36.2 ▲ ▲ 0.0 8.7 ▶ **26.3** ◀ 28.4 3.3 ▼ ▼ 61.8 13.2 ▼ ▼ 41.6 **16.0** | 0.0 0.0 0.0 | 0.0	N 38.5 | 0.0 0.0 38.5 | 21.1 0.0 ▲ ▲ 4.7 27.4 ▶ **21.8** ◀ 29.9 0.0 ▼ ▼ 0.0 **27.4** | 26.7 0.0 40.7 | 28.8

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.8	164	ALL	26.4	554	ALL	14.8	351	ALL	18.3	398
	NBL	0.0	0	NBL	57.1	283	NBL	11.8	135	NBL	14.0	32
	NBT	0.0	0	NBT	55.9	105	NBT	12.2	350	NBT	17.0	398
	NBR	0.0	0	NBR	18.1	61	NBR	10.7	314	NBR	0.0	0
	EBL	37.6	154	EBL	65.6	171	EBL	54.6	116	EBL	20.7	100
	EBT	0.0	0	EBT	14.9	515	EBT	74.2	63	EBT	0.0	0
	EBR	0.0	0	EBR	8.8	24	EBR	12.2	37	EBR	4.6	4
	SBL	0.0	0	SBL	48.1	58	SBL	15.5	134	SBL	0.0	0
	SBT	0.0	0	SBT	73.5	63	SBT	9.8	199	SBT	19.4	277
	SBR	11.6	0	SBR	12.2	23	SBR	7.6	186	SBR	19.1	277
	WBL	0.0	0	WBL	15.0	38	WBL	59.5	138	WBL	33.3	184
	WBT	2.4	149	WBT	23.6	516	WBT	68.8	186	WBT	38.7	89
	WBR	0.0	0	WBR	6.6	0	WBR	21.4	149	WBR	6.4	3
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 152	152 ◀	0 ▼	0 ▶	1888	N 93	66 ◀	13 ▼	14 ▶	1091	N 687	7 ◀	558 ▼	122 ▶	177	N 595	20 ◀	575 ▼	0 ▶	279
	173 ▲			▲ 0		172 ▲			▲ 9		45 ▲			▲ 102		71 ▲			▲ 124	
	0 ▶		**2214**	◀ 1888		962 ▶		**2914**	◀ 1064		8 ▶		**2312**	◀ 14		0 ▶		**2113**	◀ 31	
	0 ▼			▼ 0		176 ▼			▼ 18		23 ▼			▼ 61		15 ▼			▼ 124	
	173	◀ 0	▲ 0	▶ 0	0	1310	◀ 360	▲ 8	▶ 47	415	76	◀ 182	▲ 1098	▶ 88	1368	86	◀ 10	▲ 1140	▶ 0	1150
AVERAGE DELAY (SECONDS/VEHICLE)	N 11.6	11.6 ◀	0.0 ▼	0.0 ▶	2.4	N 26.2	12.2 ◀	73.5 ▼	48.1 ▶	23.3	N 10.8	7.6 ◀	9.8 ▼	15.5 ▶	38.3	N 19.4	19.1 ◀	19.4 ▼	0.0 ▶	21.9
	37.6 ▲			▲ 0.0		65.6 ▲			▲ 6.6		54.6 ▲			▲ 21.4		20.7 ▲			▲ 6.4	
	0.0 ▶		**5.8**	◀ 2.4		14.9 ▶		**26.4**	◀ 23.6		74.2 ▶		**14.8**	◀ 68.8		0.0 ▶		**18.3**	◀ 38.7	
	0.0 ▼			▼ 0.0		8.8 ▼			▼ 15.0		12.2 ▼			▼ 59.5		4.6 ▼			▼ 33.3	
	37.6	◀ 0.0	▲ 0.0	▶ 0.0	0.0	20.7	◀ 57.1	▲ 55.9	▶ 18.1	52.7	43.8	◀ 11.8	▲ 12.2	▶ 10.7	12.1	17.9	◀ 14.0	▲ 17.0	▶ 0.0	16.9

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 23.1 796 NBL 33.0 190 NBT 14.7 695 NBR 8.1 46 EBL 64.1 313 EBT 84.0 68 EBR 9.5 18 SBL 36.2 89 SBT 23.5 482 SBR 14.1 14 WBL 65.8 264 WBT 102.5 264 WBR 52.8 244	MVMNT DELAY QUEUE ALL 27.8 509 NBL 76.0 118 NBT 74.3 118 NBR 24.1 90 EBL 93.5 404 EBT 28.2 436 EBR 29.7 406 SBL 109.3 291 SBT 126.9 291 SBR 25.3 135 WBL 72.4 343 WBT 14.1 417 WBR 4.4 0	MVMNT DELAY QUEUE ALL 44.6 1039 NBL 68.8 256 NBT 101.6 1014 NBR 64.5 973 EBL 48.3 232 EBT 34.2 321 EBR 43.1 296 SBL 67.0 561 SBT 50.5 521 SBR 0.0 0 WBL 3.0 26 WBT 35.0 720 WBR 19.4 652	MVMNT DELAY QUEUE ALL 32.3 777 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 38.1 625 EBT 12.8 598 EBR1 4.7 460 EBR2 23.8 0 SBL 34.1 230 SBT 0.0 0 SBR 40.7 756 WBL1 56.2 329 WBL2 48.6 545 WBT 42.3 633 WBR 0.0 0	MVMNT DELAY QUEUE ALL 30.3 889 NBL 36.2 654 NBT 0.0 0 NBR 52.5 226 EBL 0.0 0 EBT 37.5 813 EBR 0.0 0 SBL 57.6 319 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 38.8 882 WBR 13.2 665
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1758 — 173 1513 72 — 241 171 ▲ — ▲ 143 15 ► — 4311 — ◄ 15 76 ▼ — ▼ 83 262 — 141 1721 184 — 2046	N 288 — 134 27 127 — 2711 168 ▲ — ▲ 129 2092 ► — 5561 — ◄ 2429 75 ▼ — ▼ 153 2335 — 86 19 116 — 221	N 1460 — 0 591 869 — 3738 239 ▲ — ▲ 1061 1870 ► — 9168 — ◄ 2246 217 ▼ — ▼ 431 2326 — 301 753 585 — 1639	N 1705 — 1335 0 370 — 2716 1095 ▲ — ▲ 0 1162 ► — 7908 — ◄ 1989 1073 ▼ — ▼ 431 157 ▼ — ▼ 296 3487 — 0 0 0 — 0	N 368 — 0 0 368 — 2012 0 ▲ — ▲ 691 1156 ► — 6324 — ◄ 1321 0 ▼ — ▼ 0 1156 — 1427 0 263 — 1690
AVERAGE DELAY (SECONDS/VEHICLE)	N 23.1 — 14.1 23.5 36.2 — 60.4 64.1 ▲ — ▲ 52.8 84.0 ► — 23.1 — ◄ 102.5 9.5 ▼ — ▼ 65.8 49.4 — 33.0 14.7 8.1 — 15.4	N 71.8 — 25.3 126.9 109.3 — 16.9 93.5 ▲ — ▲ 4.4 28.2 ► — 27.8 — ◄ 14.1 29.7 ▼ — ▼ 72.4 32.9 — 76.0 74.3 24.1 — 48.6	N 60.3 — 0.0 50.5 67.0 — 26.9 48.3 ▲ — ▲ 19.4 34.2 ► — 44.6 — ◄ 35.0 43.1 ▼ — ▼ 3.0 36.4 — 68.8 101.6 64.5 — 82.4	N 39.3 — 40.7 0.0 34.1 — 45.2 38.1 ▲ — ▲ 0.0 12.8 ► — 32.3 — ◄ 42.3 4.7 ▼ — ▼ 56.2 23.8 ▼ — ▼ 48.6 18.8 — 0.0 0.0 0.0 — 0.0	N 57.6 — 0.0 0.0 57.6 — 30.0 0.0 ▲ — ▲ 13.2 37.5 ► — 30.3 — ◄ 38.8 0.0 ▼ — ▼ 0.0 37.5 — 36.2 0.0 52.5 — 38.7

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.6	234	ALL	36.7	1128	ALL	25.0	885	ALL	19.0	556
	NBL	0.0	0	NBL	70.2	524	NBL	22.2	263	NBL	16.9	34
	NBT	0.0	0	NBT	57.6	98	NBT	25.4	885	NBT	17.2	556
	NBR	0.0	0	NBR	28.7	52	NBR	21.1	850	NBR	0.0	0
	EBL	46.1	182	EBL	79.7	230	EBL	53.3	126	EBL	24.3	126
	EBT	0.0	0	EBT	20.5	1095	EBT	68.0	94	EBT	0.0	0
	EBR	0.0	0	EBR	14.1	58	EBR	16.4	67	EBR	4.6	0
	SBL	0.0	0	SBL	46.9	70	SBL	30.0	215	SBL	0.0	0
	SBT	0.0	0	SBT	73.1	80	SBT	16.9	345	SBT	19.5	401
	SBR	17.6	6	SBR	23.0	45	SBR	13.4	333	SBR	20.7	401
	WBL	0.0	0	WBL	27.7	52	WBL	53.4	176	WBL	36.3	236
	WBT	3.2	233	WBT	36.9	976	WBT	68.4	238	WBT	35.1	89
	WBR	0.0	0	WBR	18.7	0	WBR	31.0	201	WBR	11.1	17
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 207	207 ◄	0 ▼	0 ► 2543	N 127	89 ◄	18 ▼	20 ► 1469	N 908	10 ◄	739 ▼	159 ► 241	N 795	30 ◄	765 ▼	0 ► 376
	239 ▲			▲ 0	243 ▲			▲ 14	60 ▲			▲ 139	97 ▲			▲ 166
	0 ►	**2990**		◄ 2543	1278 ►	**3924**		◄ 1430	11 ►	**3083**		◄ 20	0 ►	**2846**		◄ 38
	0 ▼			▼ 0	240 ▼			▼ 25	32 ▼			▼ 82	20 ▼			▼ 172
	239	◄ 0	▲ 0	► 0 0	1761	◄ 492	▲ 11	► 59 562	103	◄ 241	▲ 1464	► 123 1828	117	◄ 14	▲ 1539	► 0 1553
AVERAGE DELAY (SECONDS/VEHICLE)	N 17.6	17.6 ◄	0.0 ▼	0.0 ► 3.2	N 33.9	23.0 ◄	73.1 ▼	46.9 ► 36.6	N 19.2	13.4 ◄	16.9 ▼	30.0 ► 41.7	N 19.5	20.7 ◄	19.5 ▼	0.0 ► 25.1
	46.1 ▲			▲ 0.0	79.7 ▲			▲ 18.7	53.3 ▲			▲ 31.0	24.3 ▲			▲ 11.1
	0.0 ►	**7.6**		◄ 3.2	20.5 ►	**36.7**		◄ 36.9	68.0 ►	**25.0**		◄ 68.4	0.0 ►	**19.0**		◄ 35.1
	0.0 ▼			▼ 0.0	14.1 ▼			▼ 27.7	16.4 ▼			▼ 53.4	4.6 ▼			▼ 36.3
	46.1	◄ 0.0	▲ 0.0	► 0.0 0.0	27.8	◄ 70.2	▲ 57.6	► 28.7 65.6	43.4	◄ 22.2	▲ 25.4	► 21.1 24.7	21.0	◄ 16.9	▲ 17.2	► 0.0 17.2

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 18.0 669 NBL 22.0 106 NBT 13.5 669 NBR 6.9 46 EBL 64.8 256 EBT 77.1 55 EBR 7.6 7 SBL 22.0 77 SBT 15.4 251 SBR 9.8 12 WBL 65.3 191 WBT 84.8 191 WBR 31.1 172	MVMNT DELAY QUEUE ALL 21.9 384 NBL 71.1 107 NBT 68.2 107 NBR 16.0 29 EBL 79.2 281 EBT 22.4 338 EBR 23.3 308 SBL 89.1 242 SBT 101.5 242 SBR 15.9 51 WBL 75.7 301 WBT 8.7 291 WBR 3.2 0	MVMNT DELAY QUEUE ALL 37.6 757 NBL 52.8 208 NBT 74.0 661 NBR 53.3 605 EBL 51.9 212 EBT 28.9 267 EBR 40.4 273 SBL 54.9 384 SBT 53.4 397 SBR 0.0 0 WBL 2.5 8 WBT 31.5 687 WBR 15.1 474	MVMNT DELAY QUEUE ALL 27.1 574 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 36.4 538 EBT 9.3 505 EBR1 3.5 340 EBR2 16.0 0 SBL 31.2 192 SBT 0.0 0 SBR 33.5 527 WBL1 59.4 300 WBL2 36.8 442 WBT 32.6 476 WBR 0.0 0	MVMNT DELAY QUEUE ALL 24.2 706 NBL 29.0 519 NBT 0.0 0 NBR 45.5 172 EBL 0.0 0 EBT 30.8 643 EBR 0.0 0 SBL 42.2 257 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 32.7 661 WBR 7.0 443
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1440 — 142 1240 58 — 195 135 ▲ ▲ 116 11 ▶ 3583 ◀ 11 67 ▼ ▼ 68 213 — 124 1447 158 — 1729	N 238 — 107 19 112 — 2268 144 ▲ ▲ 104 1721 ▶ 4623 ◀ 2025 67 ▼ ▼ 139 1932 — 64 16 98 — 178	N 1214 — 0 490 724 — 3140 199 ▲ ▲ 886 1606 ▶ 7714 ◀ 1897 183 ▼ ▼ 357 1988 — 248 637 482 — 1367	N 1401 — 1101 0 300 — 2277 922 ▲ ▲ 0 979 ▶ 6611 ◀ 1668 905 ▼ ▼ 357 127 ▼ ▼ 252 2933 — 0 0 0 — 0	N 302 — 0 0 302 — 1656 0 ▲ ▲ 587 981 ▶ 5271 ◀ 1069 0 ▼ ▼ 0 981 — 1186 0 222 — 1408
AVERAGE DELAY (SECONDS/VEHICLE)	N 15.1 — 9.8 15.4 22.0 — 46.1 64.8 ▲ ▲ 31.1 77.1 ▶ 18.0 ◀ 84.8 7.6 ▼ ▼ 65.3 47.4 — 22.0 13.5 6.9 — 13.5	N 57.2 — 15.9 101.5 89.1 — 12.6 79.2 ▲ ▲ 3.2 22.4 ▶ 21.9 ◀ 8.7 23.3 ▼ ▼ 75.7 26.7 — 71.1 68.2 16.0 — 40.5	N 54.3 — 0.0 53.4 54.9 — 23.6 51.9 ▲ ▲ 15.1 28.9 ▶ 37.6 ◀ 31.5 40.4 ▼ ▼ 2.5 32.3 — 52.8 74.0 53.3 — 62.9	N 33.0 — 33.5 0.0 31.2 — 37.2 36.4 ▲ ▲ 0.0 9.3 ▶ 27.1 ◀ 32.6 3.5 ▼ ▼ 59.4 16.0 ▼ ▼ 36.8 16.3 — 0.0 0.0 0.0 — 0.0	N 42.2 — 0.0 0.0 42.2 — 23.6 0.0 ▲ ▲ 7.0 30.8 ▶ 24.2 ◀ 32.7 0.0 ▼ ▼ 0.0 30.8 — 29.0 0.0 45.5 — 31.6

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.4	192	ALL	30.3	785	ALL	16.8	487	ALL	18.3	434
	NBL	0.0	0	NBL	60.7	350	NBL	14.1	136	NBL	15.5	37
	NBT	0.0	0	NBT	45.8	87	NBT	14.5	487	NBT	16.8	434
	NBR	0.0	0	NBR	20.0	42	NBR	12.5	452	NBR	0.0	0
	EBL	42.6	174	EBL	73.3	192	EBL	55.3	116	EBL	22.1	119
	EBT	0.0	0	EBT	18.2	757	EBT	76.4	87	EBT	0.0	0
	EBR	0.0	0	EBR	11.6	29	EBR	15.7	59	EBR	4.6	0
	SBL	0.0	0	SBL	50.1	68	SBL	18.5	155	SBL	0.0	0
	SBT	0.0	0	SBT	70.8	76	SBT	11.4	256	SBT	18.9	312
	SBR	12.8	0	SBR	14.2	26	SBR	7.9	243	SBR	18.7	312
	WBL	0.0	0	WBL	18.5	42	WBL	59.0	154	WBL	34.7	208
	WBT	2.5	175	WBT	28.0	661	WBT	65.5	191	WBT	37.0	83
	WBR	0.0	0	WBR	8.4	0	WBR	22.8	154	WBR	7.0	2
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 165	165 ◄	0 ▼	0 ►	2148	N 103	71 ◄	17 ▼	15 ►	1218	N 760	6 ◄	614 ▼	140 ►	197	N 657	24 ◄	633 ▼	0 ►	310
	197 ▲			▲ 0		205 ▲			▲ 12		49 ▲			▲ 114		81 ▲			▲ 134	
	0 ►		**2512**	◄ 2148		1117 ►		**3312**	◄ 1186		8 ►		**2554**	◄ 14		0 ►		**2332**	◄ 33	
	0 ▼			▼ 0		203 ▼			▼ 20		24 ▼			▼ 69		15 ▼			▼ 143	
	197	◄ 0	▲ 0	► 0	0	1525	◄ 402	▲ 8	► 51	461	81	◄ 205	▲ 1207	► 99	1511	96	◄ 11	▲ 1256	► 0	1267
AVERAGE DELAY (SECONDS/VEHICLE)	N 12.8	12.8 ◄	0.0 ▼	0.0 ►	2.5	N 28.8	14.2 ◄	70.8 ▼	50.1 ►	27.7	N 12.7	7.9 ◄	11.4 ▼	18.5 ►	38.5	N 18.9	18.7 ◄	18.9 ▼	0.0 ►	23.0
	42.6 ▲			▲ 0.0		73.3 ▲			▲ 8.4		55.3 ▲			▲ 22.8		22.1 ▲			▲ 7.0	
	0.0 ►		**6.4**	◄ 2.5		18.2 ►		**30.3**	◄ 28.0		76.4 ►		**16.8**	◄ 65.5		0.0 ►		**18.3**	◄ 37.0	
	0.0 ▼			▼ 0.0		11.6 ▼			▼ 18.5		15.7 ▼			▼ 59.0		4.6 ▼			▼ 34.7	
	42.6	◄ 0.0	▲ 0.0	► 0.0	0.0	24.7	◄ 60.7	▲ 45.8	► 20.0	56.0	45.7	◄ 14.1	▲ 14.5	► 12.5	14.3	19.4	◄ 15.5	▲ 16.8	► 0.0	16.8

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 23.2 549 NBL 22.6 78 NBT 10.3 549 NBR 4.9 27 EBL 53.5 210 EBT 69.4 100 EBR 9.7 13 SBL 29.1 88 SBT 23.4 389 SBR 17.9 0 WBL 80.2 307 WBT 85.1 307 WBR 44.2 287	MVMNT DELAY QUEUE ALL 23.9 505 NBL 78.5 164 NBT 69.3 164 NBR 21.6 84 EBL 78.5 247 EBT 26.9 505 EBR 28.9 475 SBL 82.7 165 SBT 87.5 165 SBR 17.1 122 WBL 79.5 258 WBT 6.7 190 WBR 2.9 0	MVMNT DELAY QUEUE ALL 42.4 743 NBL 45.2 165 NBT 69.0 425 NBR 59.4 599 EBL 57.3 212 EBT 39.1 454 EBR 39.7 275 SBL 51.2 504 SBT 62.1 537 SBR 0.0 0 WBL 31.0 285 WBT 27.1 654 WBR 28.7 600	MVMNT DELAY QUEUE ALL 25.6 678 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 14.5 644 EBT 12.5 514 EBR1 10.6 337 EBR2 19.6 0 SBL 47.6 307 SBT 0.0 0 SBR 20.0 296 WBL1 37.0 258 WBL2 28.4 347 WBT 46.4 564 WBR 0.0 0	MVMNT DELAY QUEUE ALL 23.2 720 NBL 29.1 387 NBT 0.0 0 NBR 49.3 219 EBL 0.0 0 EBT 27.9 720 EBR 0.0 0 SBL 36.9 348 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 29.8 577 WBR 7.5 360
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1669 · 171 1404 94 · 306 120 ▲ ▲ 78 29 ▶ **3665** ◀ 37 120 ▼ ▼ 191 **269** · 57 1252 107 · 1416	N 295 · 180 22 93 · 2063 110 ▲ ▲ 98 2093 ▶ **4930** ◀ 1835 128 ▼ ▼ 130 **2331** · 123 16 95 · 234	N 1486 · 0 592 894 · 2700 197 ▲ ▲ 715 1889 ▶ **7749** ◀ 1635 224 ▼ ▼ 350 **2310** · 199 504 547 · 1250	N 1202 · 757 0 445 · 2195 1251 ▲ ▲ 0 1093 ▶ **6890** ◀ 1632 984 ▼ ▼ 357 165 ▼ ▼ 206 **3493** · 0 0 0 · 0	N 440 · 0 0 440 · 1528 0 ▲ ▲ 319 1088 ▶ **5574** ◀ 1209 0 ▼ ▼ 0 **1088** · 998 0 265 · 1263
AVERAGE DELAY (SECONDS/VEHICLE)	N 23.2 · 17.9 23.4 29.1 · 71.6 53.5 ▲ ▲ 44.2 69.4 ▶ **23.2** ◀ 85.1 9.7 ▼ ▼ 80.2 **35.7** · 22.6 10.3 4.9 · 10.4	N 43.0 · 17.1 87.5 82.7 · 11.1 78.5 ▲ ▲ 2.9 26.9 ▶ **23.9** ◀ 6.7 28.9 ▼ ▼ 79.5 **29.5** · 78.5 69.3 21.6 · 54.8	N 55.6 · 0.0 62.1 51.2 · 28.0 57.3 ▲ ▲ 28.7 39.1 ▶ **42.4** ◀ 27.1 39.7 ▼ ▼ 31.0 **40.7** · 45.2 69.0 59.4 · 61.0	N 30.2 · 20.0 0.0 47.6 · 43.1 14.5 ▲ ▲ 0.0 12.5 ▶ **25.6** ◀ 46.4 10.6 ▼ ▼ 37.0 19.6 ▼ ▼ 28.4 **13.0** · 0.0 0.0 0.0 · 0.0	N 36.9 · 0.0 0.0 36.9 · 25.2 0.0 ▲ ▲ 7.5 27.9 ▶ **23.2** ◀ 29.8 0.0 ▼ ▼ 0.0 **27.9** · 29.1 0.0 49.3 · 33.4

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.5	170	ALL	26.1	837	ALL	16.9	462	ALL	21.0	474
	NBL	0.0	0	NBL	55.0	271	NBL	19.3	179	NBL	16.5	69
	NBT	0.0	0	NBT	60.0	125	NBT	15.7	394	NBT	13.7	279
	NBR	0.0	0	NBR	18.4	81	NBR	13.0	359	NBR	0.0	0
	EBL	39.7	168	EBL	67.2	175	EBL	50.1	116	EBL	29.1	244
	EBT	0.0	0	EBT	17.9	837	EBT	65.1	127	EBT	0.0	0
	EBR	0.0	0	EBR	15.3	240	EBR	17.3	100	EBR	5.7	2
	SBL	0.0	0	SBL	46.4	126	SBL	13.5	126	SBL	0.0	0
	SBT	0.0	0	SBT	69.9	57	SBT	10.4	422	SBT	27.4	474
	SBR	20.4	21	SBR	14.4	74	SBR	10.1	409	SBR	29.7	474
	WBL	0.0	0	WBL	17.8	39	WBL	58.5	193	WBL	33.4	164
	WBT	2.4	131	WBT	24.5	568	WBT	59.3	200	WBT	38.9	75
	WBR	0.0	0	WBR	5.7	0	WBR	21.4	164	WBR	4.4	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 228	228 ◀	0 ▼	0 ▶	1823	N 215	136 ◀	12 ▼	67 ▶	1117	N 1107	19 ◀	933 ▼	155 ▶	224	N 972	84 ◀	888 ▼	0 ▶	266
	197 ▲			▲ 0		177 ▲			▲ 17		47 ▲			▲ 104		202 ▲			▲ 117	
	0 ▶	**2249**		◀ 1823		1129 ▶	**3522**		◀ 1080		14 ▶	**2803**		◀ 18		0 ▶	**2501**		◀ 31	
	0 ▼			▼ 0		476 ▼			▼ 20		45 ▼			▼ 102		93 ▼			▼ 118	
	197	◀ 0	▲ 0	▶ 0	**0**	**1782**	◀ 319	▲ 12	▶ 74	**405**	**106**	◀ 202	▲ 1063	▶ 96	**1361**	**295**	◀ 48	▲ 916	▶ 0	**964**
AVERAGE DELAY (SECONDS/VEHICLE)	N 20.4	20.4 ◀	0.0 ▼	0.0 ▶	2.4	N 27.4	14.4 ◀	69.9 ▼	46.4 ▶	24.1	N 10.8	10.1 ◀	10.4 ▼	13.5 ▶	41.4	N 27.6	29.7 ◀	27.4 ▼	0.0 ▶	21.3
	39.7 ▲			▲ 0.0		67.2 ▲			▲ 5.7		50.1 ▲			▲ 21.4		29.1 ▲			▲ 4.4	
	0.0 ▶	**7.5**		◀ 2.4		17.9 ▶	**26.1**		◀ 24.5		65.1 ▶	**16.9**		◀ 59.3		0.0 ▶	**21.0**		◀ 38.9	
	0.0 ▼			▼ 0.0		15.3 ▼			▼ 17.8		17.3 ▼			▼ 58.5		5.7 ▼			▼ 33.4	
	39.7	◀ 0.0	▲ 0.0	▶ 0.0	**0.0**	**22.1**	◀ 55.0	▲ 60.0	▶ 18.4	**48.5**	**38.2**	◀ 19.3	▲ 15.7	▶ 13.0	**16.1**	**21.7**	◀ 16.5	▲ 13.7	▶ 0.0	**13.9**

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 28.1 773 NBL 35.1 99 NBT 8.9 585 NBR 4.7 30 EBL 58.0 279 EBT 66.6 112 EBR 13.5 46 SBL 38.7 133 SBT 30.8 719 SBR 23.3 0 WBL 107.3 399 WBT 88.7 399 WBR 56.5 380	MVMNT DELAY QUEUE ALL 33.5 1446 NBL 85.0 185 NBT 75.4 185 NBR 30.3 110 EBL 89.0 263 EBT 44.6 1446 EBR 47.4 1416 SBL 98.7 318 SBT 110.4 318 SBR 22.8 153 WBL 80.6 315 WBT 8.1 217 WBR 3.3 3	MVMNT DELAY QUEUE ALL 53.6 957 NBL 51.1 184 NBT 79.0 562 NBR 67.9 786 EBL 58.1 239 EBT 68.0 902 EBR 45.3 282 SBL 56.9 637 SBT 56.3 608 SBR 0.0 0 WBL 38.6 346 WBT 36.7 721 WBR 29.6 645	MVMNT DELAY QUEUE ALL 33.2 784 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 18.9 748 EBT 18.1 754 EBR1 12.8 571 EBR2 28.0 2 SBL 43.5 332 SBT 0.0 0 SBR 26.2 362 WBL1 42.8 281 WBL2 29.7 404 WBT 65.8 725 WBR 0.0 0	MVMNT DELAY QUEUE ALL 27.1 864 NBL 33.6 504 NBT 0.0 0 NBR 56.0 236 EBL 0.0 0 EBT 33.1 861 EBR 0.0 0 SBL 42.8 425 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 33.8 675 WBR 11.9 458
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1968 — 196 ◀ 1665 ▼ 107 ▶ — 356 145 ▲ — ▲ 91 32 ▶ — **4337** — ◀ 43 141 ▼ — ▼ 222 **318** — 76 ◀ 1481 ▲ 131 ▶ — 1688	N 347 — 209 ◀ 25 ▼ 113 ▶ — 2406 127 ▲ — ▲ 110 2409 ▶ — **5714** — ◀ 2148 144 ▼ — ▼ 148 **2680** — 142 ◀ 22 ▲ 112 ▶ — 276	N 1762 — 0 ◀ 690 ▼ 1072 ▶ — 3180 228 ▲ — ▲ 865 2180 ▶ — **9062** — ◀ 1901 262 ▼ — ▼ 414 **2670** — 225 ◀ 600 ▲ 621 ▶ — 1446	N 1405 — 879 ◀ 0 ▼ 526 ▶ — 2571 1448 ▲ — ▲ 0 1276 ▶ — **8038** — ◀ 1910 1150 ▼ — ▼ 419 188 ▼ — ▼ 242 **4062** — 0 ◀ 0 ▲ 0 ▶ — 0	N 519 — 0 ◀ 0 ▼ 519 ▶ — 1782 0 ▲ — ▲ 369 1279 ▶ — **6513** — ◀ 1413 0 ▼ — ▼ 0 **1279** — 1170 ◀ 0 ▲ 311 ▶ — 1481
AVERAGE DELAY (SECONDS/VEHICLE)	N 30.5 — 23.3 ◀ 30.8 ▼ 38.7 ▶ — 92.1 58.0 ▲ — ▲ 56.5 66.6 ▶ — **28.1** — ◀ 88.7 13.5 ▼ — ▼ 107.3 **39.1** — 35.1 ◀ 8.9 ▲ 4.7 ▶ — 9.7	N 53.9 — 22.8 ◀ 110.4 ▼ 98.7 ▶ — 12.3 89.0 ▲ — ▲ 3.3 44.6 ▶ — **33.5** — ◀ 8.1 47.4 ▼ — ▼ 80.6 **46.9** — 85.0 ◀ 75.4 ▲ 30.3 ▶ — 62.0	N 56.7 — 0.0 ◀ 56.3 ▼ 56.9 ▶ — 35.1 58.1 ▲ — ▲ 29.6 68.0 ▶ — **53.6** — ◀ 36.7 45.3 ▼ — ▼ 38.6 **64.9** — 51.1 ◀ 79.0 ▲ 67.9 ▶ — 69.9	N 32.7 — 26.2 ◀ 0.0 ▼ 43.5 ▶ — 58.7 18.9 ▲ — ▲ 0.0 18.1 ▶ — **33.2** — ◀ 65.8 12.8 ▼ — ▼ 42.8 28.0 ▼ — ▼ 29.7 **17.3** — 0.0 ◀ 0.0 ▲ 0.0 ▶ — 0.0	N 42.8 — 0.0 ◀ 0.0 ▼ 42.8 ▶ — 29.3 0.0 ▲ — ▲ 11.9 33.1 ▶ — **27.1** — ◀ 33.8 0.0 ▼ — ▼ 0.0 **33.1** — 33.6 ◀ 0.0 ▲ 56.0 ▶ — 38.3

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 2	Bee Ridge Road/Eastbound Crossover	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 8.3 227 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 44.9 194 EBT 0.0 0 EBR 0.0 0 SBL 0.0 0 SBT 0.0 0 SBR 23.1 64 WBL 0.0 0 WBT 2.5 195 WBR 0.0 0	MVMNT DELAY QUEUE ALL 30.4 1125 NBL 59.3 343 NBT 62.9 154 NBR 22.8 110 EBL 76.0 205 EBT 21.7 1125 EBR 19.5 438 SBL 44.2 146 SBT 68.8 63 SBR 18.2 90 WBL 22.9 57 WBT 29.1 695 WBR 10.4 0	MVMNT DELAY QUEUE ALL 23.4 705 NBL 31.0 361 NBT 22.4 705 NBR 19.0 670 EBL 52.3 120 EBT 75.2 152 EBR 23.5 125 SBL 23.2 216 SBT 16.4 556 SBR 15.0 544 WBL 55.1 234 WBT 66.9 242 WBR 26.9 206	MVMNT DELAY QUEUE ALL 23.0 560 NBL 19.5 86 NBT 13.4 333 NBR 0.0 0 EBL 33.3 285 EBT 0.0 0 EBR 6.4 2 SBL 0.0 0 SBT 31.3 560 SBR 37.2 560 WBL 33.4 173 WBT 38.2 81 WBR 5.8 0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 266: 266 ◀ 0 ▼ 0 ▶ 2127 231 ▲ ▲ 0 0 ▶ **2625** ◀ 2127 0 ▼ ▼ 0 231: ◀ 0 ▲ 0 ▶ 0	N 250: 156 ◀ 16 ▼ 78 ▶ 1309 212 ▲ ▲ 22 1332 ▶ **4137** ◀ 1262 556 ▼ ▼ 25 2100: ◀ 372 ▲ 13 ▶ 89 474	N 1298: 25 ◀ 1095 ▼ 178 ▶ 262 55 ▲ ▲ 118 18 ▶ **3266** ◀ 19 51 ▼ ▼ 125 124: ◀ 237 ▲ 1223 ▶ 117 1577	N 1143: 103 ◀ 1040 ▼ 0 ▶ 315 235 ▲ ▲ 137 0 ▶ **2931** ◀ 33 113 ▼ ▼ 145 348: ◀ 57 ▲ 1065 ▶ 0 1122
AVERAGE DELAY (SECONDS/VEHICLE)	N 23.1: 23.1 ◀ 0.0 ▼ 0.0 ▶ 2.5 44.9 ▲ ▲ 0.0 0.0 ▶ **8.3** ◀ 2.5 0.0 ▼ ▼ 0.0 44.9: ◀ 0.0 ▲ 0.0 ▶ 0.0	N 29.6: 18.2 ◀ 68.8 ▼ 44.2 ▶ 28.6 76.0 ▲ ▲ 10.4 21.7 ▶ **30.4** ◀ 29.1 19.5 ▼ ▼ 22.9 26.6: ◀ 59.3 ▲ 62.9 ▶ 22.8 52.5	N 17.3: 15.0 ◀ 16.4 ▼ 23.2 ▶ 43.3 52.3 ▲ ▲ 26.9 75.2 ▶ **23.4** ◀ 66.9 23.5 ▼ ▼ 55.1 43.8: ◀ 31.0 ▲ 22.4 ▶ 19.0 23.5	N 31.8: 37.2 ◀ 31.3 ▼ 0.0 ▶ 21.9 33.3 ▲ ▲ 5.8 0.0 ▶ **23.0** ◀ 38.2 6.4 ▼ ▼ 33.4 24.5: ◀ 19.5 ▲ 13.4 ▶ 0.0 13.7

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.9 568 NBL 18.1 65 NBT 10.5 550 NBR 4.7 38 EBL 57.1 200 EBT 75.5 93 EBR 9.4 9 SBL 24.6 76 SBT 22.4 422 SBR 17.3 2 WBL 73.6 260 WBT 71.9 260 WBR 32.8 241	MVMNT DELAY QUEUE ALL 23.2 641 NBL 76.6 133 NBT 65.2 133 NBR 17.1 35 EBL 77.4 235 EBT 26.5 641 EBR 28.9 611 SBL 80.7 158 SBT 84.5 158 SBR 14.5 88 WBL 80.5 270 WBT 6.3 173 WBR 2.8 0	MVMNT DELAY QUEUE ALL 40.8 710 NBL 41.8 161 NBT 67.0 388 NBR 55.9 450 EBL 59.9 182 EBT 37.0 540 EBR 38.3 289 SBL 53.6 481 SBT 62.8 488 SBR 0.0 0 WBL 28.2 299 WBT 24.5 642 WBR 27.3 562	MVMNT DELAY QUEUE ALL 25.0 666 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 13.2 648 EBT 12.6 511 EBR1 10.0 301 EBR2 15.1 0 SBL 48.5 282 SBT 0.0 0 SBR 17.6 285 WBL1 36.7 255 WBL2 29.0 355 WBT 46.8 493 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.6 687 NBL 27.1 366 NBT 0.0 0 NBR 46.0 184 EBL 0.0 0 EBT 26.1 680 EBR 0.0 0 SBL 35.4 334 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 28.1 549 WBR 6.0 332
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 1526 — 154 ◀ 1291 ▼ 81 ▶ 279 105 ▲ — ▲ 73 25 ▶ — 3378 — ◀ 32 111 ▼ — ▼ 174 241 — ◀ 56 ▲ 1168 ▶ 103 — 1327	N 264 — 161 ◀ 18 ▼ 85 ▶ 1918 111 ▲ — ▲ 94 1927 ▶ — 4556 — ◀ 1703 118 ▼ — ▼ 121 2156 — ◀ 110 ▲ 14 ▶ 86 — 210	N 1371 — 0 ◀ 535 ▼ 836 ▶ 2557 181 ▲ — ▲ 677 1806 ▶ — 7250 — ◀ 1541 202 ▼ — ▼ 339 2189 — ◀ 175 ▲ 467 ▶ 486 — 1128	N 1080 — 685 ◀ 0 ▼ 395 ▶ 2020 1193 ▲ — ▲ 0 1017 ▶ — 6368 — ◀ 1502 920 ▼ — ▼ 331 138 ▼ — ▼ 187 3268 — ◀ 0 ▲ 0 ▶ 0 — 0	N 401 — 0 ◀ 0 ▼ 401 ▶ 1393 0 ▲ — ▲ 286 1022 ▶ — 5154 — ◀ 1107 0 ▼ — ▼ 0 1022 — ◀ 898 ▲ 0 ▶ 247 — 1145
AVERAGE DELAY (SECONDS/VEHICLE)	N 22.0 — 17.3 ◀ 22.4 ▼ 24.6 ▶ 62.8 57.1 ▲ — ▲ 32.8 75.5 ▶ — 21.9 — ◀ 71.9 9.4 ▼ — ▼ 73.6 37.1 — ◀ 18.1 ▲ 10.5 ▶ 4.7 — 10.3	N 40.6 — 14.5 ◀ 84.5 ▼ 80.7 ▶ 10.8 77.4 ▲ — ▲ 2.8 26.5 ▶ — 23.2 — ◀ 6.3 28.9 ▼ — ▼ 80.5 29.2 — ◀ 76.6 ▲ 65.2 ▶ 17.1 — 51.5	N 57.2 — 0.0 ◀ 62.8 ▼ 53.6 ▶ 25.8 59.9 ▲ — ▲ 27.3 37.0 ▶ — 40.8 — ◀ 24.5 38.3 ▼ — ▼ 28.2 39.0 — ◀ 41.8 ▲ 67.0 ▶ 55.9 — 58.3	N 28.9 — 17.6 ◀ 0.0 ▼ 48.5 ▶ 43.5 13.2 ▲ — ▲ 0.0 12.6 ▶ — 25.0 — ◀ 46.8 10.0 ▼ — ▼ 36.7 15.1 ▼ — ▼ 29.0 12.2 — ◀ 0.0 ▲ 0.0 ▶ 0.0 — 0.0	N 35.4 — 0.0 ◀ 0.0 ▼ 35.4 ▶ 23.6 0.0 ▲ — ▲ 6.0 26.1 ▶ — 21.6 — ◀ 28.1 0.0 ▼ — ▼ 0.0 26.1 — ◀ 27.1 ▲ 0.0 ▶ 46.0 — 31.2

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.6	192	ALL	24.1	655	ALL	15.0	354	ALL	20.4	458
	NBL	0.0	0	NBL	55.4	253	NBL	15.6	149	NBL	16.7	67
	NBT	0.0	0	NBT	55.7	133	NBT	13.4	299	NBT	13.8	268
	NBR	0.0	0	NBR	17.1	88	NBR	10.9	264	NBR	0.0	0
	EBL	36.2	149	EBL	67.0	159	EBL	54.8	119	EBL	24.8	211
	EBT	0.0	0	EBT	15.8	636	EBT	68.9	104	EBT	0.0	0
	EBR	0.0	0	EBR	13.0	120	EBR	15.1	76	EBR	5.2	2
	SBL	0.0	0	SBL	46.9	129	SBL	12.1	127	SBL	0.0	0
	SBT	0.0	0	SBT	70.7	54	SBT	8.6	307	SBT	27.0	458
	SBR	17.0	30	SBR	11.6	48	SBR	8.1	295	SBR	28.7	458
	WBL	0.0	0	WBL	15.4	41	WBL	58.9	185	WBL	32.7	157
	WBT	2.3	162	WBT	21.5	453	WBT	63.9	160	WBT	37.2	78
	WBR	0.0	0	WBR	5.4	0	WBR	20.5	123	WBR	3.7	0
INTERSECTION TURNING MOVEMENT VOLUMES (VEHICLES/HOUR)	N 207	207	0	0	1717	N 194	119	10	65	1003	N 1018	18	854	146	199	N 889	81	808	0	242
	178			0		168			14		43			91		177			106	
	0		2104	1717		1070		3246	971		12		2527	14		0		2255	24	
	0			0		441			18		37			94		88			112	
	178	0	0	0	0	1679	292	11	63	366	92	184	944	85	1213	265	43	811	0	854
AVERAGE DELAY (SECONDS/VEHICLE)	N 17.0	17.0	0.0	0.0	2.3	N 26.5	11.6	70.7	46.9	21.2	N 9.1	8.1	8.6	12.1	41.7	N 27.2	28.7	27.0	0.0	20.5
	36.2			0.0		67.0			5.4		54.8			20.5		24.8			3.7	
	0.0		6.6	2.3		15.8		24.1	21.5		68.9		15.0	63.9		0.0		20.4	37.2	
	0.0			0.0		13.0			15.4		15.1			58.9		5.2			32.7	
	36.2	0.0	0.0	0.0	0.0	20.2	55.4	55.7	17.1	48.8	40.7	15.6	13.4	10.9	13.6	18.3	16.7	13.8	0.0	13.9

VISSIM Maximum Queue Length Output

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 9.7 211 NBL 11.2 99 NBT 3.1 142 NBR 2.7 31 EBL 61.4 153 EBT 69.4 153 EBR 18.1 118 SBL 13.1 49 SBT 7.5 204 SBR 5.4 49 WBL 62.0 129 WBT 76.9 129 WBR 14.0 89	MVMNT DELAY QUEUE ALL 11.3 265 NBL 62.4 80 NBT 69.1 74 NBR 15.6 32 EBL 18.7 131 EBT 8.5 262 EBR 7.5 241 SBL 65.0 157 SBT 52.4 153 SBR 16.5 133 WBL 11.7 49 WBT 7.1 195 WBR 3.5 0	MVMNT DELAY QUEUE ALL 33.1 500 NBL 60.9 142 NBT 54.1 306 NBR 40.1 399 EBL 77.3 152 EBT 24.8 332 EBR 15.6 127 SBL 53.4 265 SBT 44.6 233 SBR 31.8 178 WBL 58.6 231 WBT 20.1 336 WBR 13.3 417	MVMNT DELAY QUEUE ALL 23.6 586 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 19.3 313 EBR 1.6 0 SBL 41.7 275 SBT 0.0 0 SBR 48.0 575 WBL 22.4 199 WBT 13.1 472 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 204 | 49 ◀ 204 ▼ 49 ▶ | 129 153 ▲ ▲ 89 153 ▶ ◀ 129 118 ▼ ▼ 129 153 | 99 ◀ 142 ▲ 31 ▶ | 142	N 157 | 133 ◀ 153 ▼ 157 ▶ | 195 131 ▲ ▲ 0 262 ▶ ◀ 195 241 ▼ ▼ 49 262 | 80 ◀ 74 ▲ 32 ▶ | 80	N 265 | 178 ◀ 233 ▼ 265 ▶ | 417 152 ▲ ▲ 417 332 ▶ ◀ 336 127 ▼ ▼ 231 332 | 142 ◀ 306 ▲ 399 ▶ | 399	N 575 | 575 ◀ 0 ▼ 275 ▶ | 472 0 ▲ ▲ 0 313 ▶ ◀ 472 0 ▼ ▼ 199 313 | 0 ◀ 0 ▲ 0 ▶ | 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 225 | 50 ◀ 225 ▼ 50 ▶ | 150 175 ▲ ▲ 100 175 ▶ ◀ 150 125 ▼ ▼ 150 175 | 100 ◀ 150 ▲ 50 ▶ | 150	N 175 | 150 ◀ 175 ▼ 175 ▶ | 200 150 ▲ ▲ 0 275 ▶ ◀ 200 250 ▼ ▼ 50 275 | 100 ◀ 75 ▲ 50 ▶ | 100	N 275 | 200 ◀ 250 ▼ 275 ▶ | 425 175 ▲ ▲ 425 350 ▶ ◀ 350 150 ▼ ▼ 250 350 | 150 ◀ 325 ▲ 400 ▶ | 400	N 600 | 600 ◀ 0 ▼ 275 ▶ | 475 0 ▲ ▲ 0 325 ▶ ◀ 475 0 ▼ ▼ 200 325 | 0 ◀ 0 ▲ 0 ▶ | 0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	18.9	1163	ALL	19.7	382	ALL	11.7	174	ALL	5.5	147
	NBL	48.7	1163	NBL	40.9	340	NBL	9.1	53	NBL	5.7	17
	NBT	0.0	0	NBT	36.4	32	NBT	6.4	148	NBT	2.0	104
	NBR	5.3	0	NBR	8.2	0	NBR	2.7	0	NBR	0.0	0
	EBL	0.0	0	EBL	44.3	116	EBL	53.8	85	EBL	62.3	145
	EBT	14.0	214	EBT	8.9	297	EBT	84.3	51	EBT	0.0	0
	EBR	4.9	66	EBR	5.1	5	EBR	10.5	24	EBR	5.5	0
	SBL	0.0	0	SBL	28.7	30	SBL	12.2	101	SBL	0.0	0
	SBT	0.0	0	SBT	52.4	38	SBT	6.1	144	SBT	2.3	56
	SBR	0.0	0	SBR	8.7	4	SBR	6.0	128	SBR	2.3	25
	WBL	0.0	0	WBL	10.0	28	WBL	59.5	147	WBL	0.0	0
	WBT	19.6	373	WBT	13.7	216	WBT	66.0	143	WBT	0.0	0
	WBR	3.0	18	WBR	7.7	170	WBR	19.8	110	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 373			N 38 / 4 ◀ 38 ▼ 30 ▶ / 216			N 144 / 128 ◀ 144 ▼ 101 ▶ / 147			N 56 / 25 ◀ 56 ▼ 0 ▶ / 0		
	0 ▲		▲ 18	116 ▲		▲ 170	85 ▲		▲ 110	145 ▲		▲ 0
	214 ▶		◀ 373	297 ▶		◀ 216	51 ▶		◀ 143	0 ▶		◀ 0
	66 ▼		▼ 0	5 ▼		▼ 28	24 ▼		▼ 147	0 ▼		▼ 0
	214 / 1163 ◀ 0 ▲ 0 ▶ / 1163			297 / 340 ◀ 32 ▲ 0 ▶ / 340			85 / 53 ◀ 148 ▲ 0 ▶ / 148			145 / 17 ◀ 104 ▲ 0 ▶ / 104		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 375			N 50 / 25 ◀ 50 ▼ 50 ▶ / 225			N 150 / 150 ◀ 150 ▼ 125 ▶ / 150			N 75 / 25 ◀ 75 ▼ 0 ▶ / 0		
	0 ▲		▲ 25	125 ▲		▲ 175	100 ▲		▲ 125	150 ▲		▲ 0
	225 ▶		◀ 375	300 ▶		◀ 225	75 ▶		◀ 150	0 ▶		◀ 0
	75 ▼		▼ 0	25 ▼		▼ 50	25 ▼		▼ 150	0 ▼		▼ 0
	225 / 1175 ◀ 0 ▲ 0 ▶ / 1175			300 / 350 ◀ 50 ▲ 0 ▶ / 350			100 / 75 ◀ 150 ▲ 0 ▶ / 150			150 / 25 ◀ 125 ▲ 0 ▶ / 125		

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 11.0 264 NBL 16.0 136 NBT 3.0 167 NBR 2.7 38 EBL 60.2 201 EBT 78.2 201 EBR 24.2 166 SBL 18.8 59 SBT 10.3 262 SBR 6.3 52 WBL 59.6 149 WBT 73.3 149 WBR 16.2 109	MVMNT DELAY QUEUE ALL 16.9 474 NBL 66.4 76 NBT 68.4 105 NBR 21.8 66 EBL 39.5 229 EBT 13.6 413 EBR 11.9 393 SBL 65.8 198 SBT 62.8 231 SBR 24.6 212 WBL 19.3 75 WBT 11.8 381 WBR 4.7 0	MVMNT DELAY QUEUE ALL 36.8 703 NBL 60.2 150 NBT 64.6 643 NBR 46.7 604 EBL 81.3 185 EBT 28.8 464 EBR 17.4 174 SBL 53.6 316 SBT 42.1 291 SBR 30.2 230 WBL 56.1 271 WBT 24.2 521 WBR 22.2 635	MVMNT DELAY QUEUE ALL 36.0 1769 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 26.2 407 EBR 2.4 0 SBL 43.0 337 SBT 0.0 0 SBR 74.9 1769 WBL 53.3 521 WBT 22.1 638 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 262 ◀ 52 ▼ 262 ▶ 59 → 149 201 ▲ ▲ 109 201 ▶ ◀ 149 166 ▼ ▼ 149 201 ◀ 136 ▲ 167 ▶ 38 → 167	N 231 ◀ 212 ▼ 231 ▶ 198 → 381 229 ▲ ▲ 0 413 ▶ ◀ 381 393 ▼ ▼ 75 413 ◀ 76 ▲ 105 ▶ 66 → 105	N 316 ◀ 230 ▼ 291 ▶ 316 → 635 185 ▲ ▲ 635 464 ▶ ◀ 521 174 ▼ ▼ 271 464 ◀ 150 ▲ 643 ▶ 604 → 643	N 1769 ◀ 1769 ▼ 0 ▶ 337 → 638 0 ▲ ▲ 0 407 ▶ ◀ 638 0 ▼ ▼ 521 407 ◀ 0 ▲ 0 ▶ 0 → 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 275 ◀ 75 ▼ 275 ▶ 75 → 150 225 ▲ ▲ 125 225 ▶ ◀ 150 175 ▼ ▼ 150 225 ◀ 150 ▲ 175 ▶ 50 → 175	N 250 ◀ 225 ▼ 250 ▶ 200 → 400 250 ▲ ▲ 0 425 ▶ ◀ 400 400 ▼ ▼ 100 425 ◀ 100 ▲ 125 ▶ 75 → 125	N 325 ◀ 250 ▼ 300 ▶ 325 → 650 200 ▲ ▲ 650 475 ▶ ◀ 525 175 ▼ ▼ 275 475 ◀ 150 ▲ 650 ▶ 625 → 650	N 1775 ◀ 1775 ▼ 0 ▶ 350 → 650 0 ▲ ▲ 0 425 ▶ ◀ 650 0 ▼ ▼ 525 425 ◀ 0 ▲ 0 ▶ 0 → 0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 36.1 2855 NBL 97.7 2855 NBT 0.0 0 NBR 54.0 0 EBL 0.0 0 EBT 18.3 254 EBR 8.9 122 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 30.9 743 WBR 6.1 261	MVMNT DELAY QUEUE ALL 27.0 717 NBL 59.8 711 NBT 62.9 48 NBR 25.6 5 EBL 46.5 146 EBT 12.8 514 EBR 7.8 13 SBL 36.8 40 SBT 59.0 30 SBR 10.8 8 WBL 16.4 36 WBT 18.0 352 WBR 16.3 306	MVMNT DELAY QUEUE ALL 14.1 262 NBL 12.0 65 NBT 8.3 231 NBR 3.7 0 EBL 51.0 95 EBT 72.7 62 EBR 10.7 32 SBL 21.2 149 SBT 9.4 223 SBR 8.3 208 WBL 55.8 182 WBT 62.0 185 WBR 20.6 147	MVMNT DELAY QUEUE ALL 6.6 164 NBL 7.0 25 NBT 2.8 125 NBR 0.0 0 EBL 65.4 164 EBT 0.0 0 EBR 5.2 0 SBL 0.0 0 SBT 3.5 98 SBR 3.4 66 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 743 0 ▲ ▲ 261 254 ▶ ◀ 743 122 ▼ ▼ 0 254 ◀ 2855 ▲ 0 ▶ 0 → 2855	N 40 ◀ 8 ▼ 30 ▶ 40 → 352 146 ▲ ▲ 306 514 ▶ ◀ 352 13 ▼ ▼ 36 514 ◀ 711 ▲ 48 ▶ 5 → 711	N 223 ◀ 208 ▼ 223 ▶ 149 → 185 95 ▲ ▲ 147 62 ▶ ◀ 185 32 ▼ ▼ 182 95 ◀ 65 ▲ 231 ▶ 0 → 231	N 98 ◀ 66 ▼ 98 ▶ 0 → 0 164 ▲ ▲ 0 0 ▶ ◀ 0 0 ▼ ▼ 0 164 ◀ 25 ▲ 125 ▶ 0 → 125
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 750 0 ▲ ▲ 275 275 ▶ ◀ 750 125 ▼ ▼ 0 275 ◀ 2875 ▲ 0 ▶ 0 → 2875	N 50 ◀ 25 ▼ 50 ▶ 50 → 375 150 ▲ ▲ 325 525 ▶ ◀ 375 25 ▼ ▼ 50 525 ◀ 725 ▲ 50 ▶ 25 → 725	N 225 ◀ 225 ▼ 225 ▶ 150 → 200 100 ▲ ▲ 150 75 ▶ ◀ 200 50 ▼ ▼ 200 100 ◀ 75 ▲ 250 ▶ 0 → 250	N 100 ◀ 75 ▼ 100 ▶ 0 → 0 175 ▲ ▲ 0 0 ▶ ◀ 0 0 ▼ ▼ 0 175 ◀ 25 ▲ 125 ▶ 0 → 125

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 9.8 223 NBL 13.6 118 NBT 3.0 145 NBR 2.4 20 EBL 60.1 178 EBT 67.0 178 EBR 18.8 144 SBL 15.0 51 SBT 8.3 215 SBR 5.3 41 WBL 58.9 137 WBT 67.9 137 WBR 16.6 98	MVMNT DELAY QUEUE ALL 13.2 303 NBL 63.5 75 NBT 68.3 89 NBR 19.4 44 EBL 28.2 186 EBT 9.7 292 EBR 8.6 272 SBL 66.4 180 SBT 65.2 191 SBR 20.1 172 WBL 14.9 68 WBT 8.5 221 WBR 4.1 0	MVMNT DELAY QUEUE ALL 34.4 561 NBL 60.1 135 NBT 59.2 464 NBR 42.8 433 EBL 76.7 170 EBT 26.8 378 EBR 16.5 185 SBL 52.3 302 SBT 42.7 231 SBR 30.4 214 WBL 57.8 256 WBT 21.6 365 WBR 16.0 499	MVMNT DELAY QUEUE ALL 24.8 642 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 21.7 355 EBR 1.8 0 SBL 38.2 275 SBT 0.0 0 SBR 47.7 620 WBL 29.8 269 WBT 14.8 492 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 215 | 41 215 51 | 137 178 ▲ 98 178 ▶ 137 144 ▼ 137 178 | 118 145 20 | 145	N 191 | 172 191 180 | 221 186 ▲ 0 292 ▶ 221 272 ▼ 68 292 | 75 89 44 | 89	N 302 | 214 231 302 | 499 170 ▲ 499 378 ▶ 365 185 ▼ 256 378 | 135 464 433 | 464	N 620 | 620 0 275 | 492 0 ▲ 0 355 ▶ 492 0 ▼ 269 355 | 0 0 0 | 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 225 | 50 225 75 | 150 200 ▲ 100 200 ▶ 150 150 ▼ 150 200 | 125 150 25 | 150	N 200 | 175 200 200 | 225 200 ▲ 0 300 ▶ 225 275 ▼ 75 300 | 75 100 50 | 100	N 325 | 225 250 325 | 500 175 ▲ 500 400 ▶ 375 200 ▼ 275 400 | 150 475 450 | 475	N 625 | 625 0 300 | 500 0 ▲ 0 375 ▶ 500 0 ▼ 275 375 | 0 0 0 | 0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	23.3	1824	ALL	21.5	446	ALL	11.9	216	ALL	5.8	164
	NBL	57.1	1824	NBL	44.3	397	NBL	9.6	57	NBL	6.0	28
	NBT	0.0	0	NBT	38.3	41	NBT	6.7	188	NBT	2.3	104
	NBR	14.1	0	NBR	13.2	2	NBR	2.7	0	NBR	0.0	0
	EBL	0.0	0	EBL	44.2	120	EBL	56.0	82	EBL	61.2	163
	EBT	16.0	216	EBT	10.5	392	EBT	60.8	49	EBT	0.0	0
	EBR	6.4	77	EBR	5.9	4	EBR	7.9	20	EBR	5.3	0
	SBL	0.0	0	SBL	29.9	26	SBL	14.7	125	SBL	0.0	0
	SBT	0.0	0	SBT	53.9	32	SBT	5.8	159	SBT	2.7	62
	SBR	0.0	0	SBR	8.7	4	SBR	5.4	143	SBR	2.6	26
	WBL	0.0	0	WBL	12.4	35	WBL	61.7	178	WBL	0.0	0
	WBT	24.5	479	WBT	15.1	258	WBT	61.9	153	WBT	0.0	0
	WBR	3.5	75	WBR	9.1	212	WBR	17.9	116	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 479			N 32 / 4 ◀ 32 ▼ 26 ▶ / 258			N 159 / 143 ◀ 159 ▼ 125 ▶ / 178			N 62 / 26 ◀ 62 ▼ 0 ▶ / 0		
	0 ▲		▲ 75	120 ▲		▲ 212	82 ▲		▲ 116	163 ▲		▲ 0
	216 ▶		◀ 479	392 ▶		◀ 258	49 ▶		◀ 153	0 ▶		◀ 0
	77 ▼		▼ 0	4 ▼		▼ 35	20 ▼		▼ 178	0 ▼		▼ 0
	216 / 1824 ◀ 0 ▲ 0 ▶ / 1824			392 / 397 ◀ 41 ▲ 2 ▶ / 397			82 / 57 ◀ 188 ▲ 0 ▶ / 188			163 / 28 ◀ 104 ▲ 0 ▶ / 104		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 500			N 50 / 25 ◀ 50 ▼ 50 ▶ / 275			N 175 / 150 ◀ 175 ▼ 150 ▶ / 200			N 75 / 50 ◀ 75 ▼ 0 ▶ / 0		
	0 ▲		▲ 75	125 ▲		▲ 225	100 ▲		▲ 125	175 ▲		▲ 0
	225 ▶		◀ 500	400 ▶		◀ 275	50 ▶		◀ 175	0 ▶		◀ 0
	100 ▼		▼ 0	25 ▼		▼ 50	25 ▼		▼ 200	0 ▼		▼ 0
	225 / 1825 ◀ 0 ▲ 0 ▶ / 1825			400 / 400 ◀ 50 ▲ 25 ▶ / 400			100 / 75 ◀ 200 ▲ 0 ▶ / 200			175 / 50 ◀ 125 ▲ 0 ▶ / 125		

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.3 516 NBL 26.7 74 NBT 6.3 193 NBR 3.4 11 EBL 55.7 238 EBT 77.1 238 EBR 21.3 203 SBL 18.3 65 SBT 21.0 516 SBR 12.1 36 WBL 58.0 225 WBT 70.0 225 WBR 34.3 186	MVMNT DELAY QUEUE ALL 29.4 1131 NBL 67.8 129 NBT 68.1 159 NBR 25.7 119 EBL 37.1 149 EBT 35.7 1131 EBR 34.8 1110 SBL 70.6 261 SBT 72.7 394 SBR 29.5 375 WBL 33.9 161 WBT 11.3 255 WBR 4.1 0	MVMNT DELAY QUEUE ALL 45.4 952 NBL 67.6 164 NBT 72.6 583 NBR 76.9 657 EBL 86.9 180 EBT 38.2 796 EBR 27.4 187 SBL 48.6 560 SBT 38.3 338 SBR 27.2 226 WBL 68.6 295 WBT 33.1 372 WBR 14.2 353	MVMNT DELAY QUEUE ALL 25.4 573 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 20.4 360 EBR 2.3 0 SBL 47.3 472 SBT 0.0 0 SBR 49.4 514 WBL 75.8 446 WBT 12.4 380 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N ▲ 516 ◀ 36 ▼ 516 ▶ 65 225 238 ▲ ▲ 186 238 ▶ ◀ 225 203 ▼ ▼ 225 238 ◀ 74 ▲ 193 ▶ 11 193	N ▲ 394 ◀ 375 ▼ 394 ▶ 261 255 149 ▲ ▲ 0 1131 ▶ ◀ 255 1110 ▼ ▼ 161 1131 ◀ 129 ▲ 159 ▶ 119 159	N ▲ 560 ◀ 226 ▼ 338 ▶ 560 372 180 ▲ ▲ 353 796 ▶ ◀ 372 187 ▼ ▼ 295 796 ◀ 164 ▲ 583 ▶ 657 657	N ▲ 514 ◀ 514 ▼ 0 ▶ 472 446 0 ▲ ▲ 0 360 ▶ ◀ 380 0 ▼ ▼ 446 360 ◀ 0 ▲ 0 ▶ 0 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N ▲ 525 ◀ 50 ▼ 525 ▶ 75 250 250 ▲ ▲ 200 250 ▶ ◀ 250 225 ▼ ▼ 250 250 ◀ 75 ▲ 200 ▶ 25 200	N ▲ 400 ◀ 375 ▼ 400 ▶ 275 275 150 ▲ ▲ 0 1150 ▶ ◀ 275 1125 ▼ ▼ 175 1150 ◀ 150 ▲ 175 ▶ 125 175	N ▲ 575 ◀ 250 ▼ 350 ▶ 575 375 200 ▲ ▲ 375 800 ▶ ◀ 375 200 ▼ ▼ 300 800 ◀ 175 ▲ 600 ▶ 675 675	N ▲ 525 ◀ 525 ▼ 0 ▶ 475 450 0 ▲ ▲ 0 375 ▶ ◀ 400 0 ▼ ▼ 450 375 ◀ 0 ▲ 0 ▶ 0 0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	12.9	656	ALL	15.8	511	ALL	18.5	326	ALL	7.7	206
	NBL	59.2	656	NBL	35.7	161	NBL	14.7	82	NBL	8.3	19
	NBT	0.0	0	NBT	34.3	40	NBT	11.1	219	NBT	2.1	96
	NBR	1.4	0	NBR	10.9	4	NBR	3.5	2	NBR	0.0	0
	EBL	0.0	0	EBL	42.0	55	EBL	53.3	119	EBL	68.1	175
	EBT	10.1	291	EBT	15.5	511	EBT	68.9	96	EBT	0.0	0
	EBR	6.4	84	EBR	14.0	52	EBR	14.4	68	EBR	5.9	0
	SBL	0.0	0	SBL	37.3	40	SBL	23.7	139	SBL	0.0	0
	SBT	0.0	0	SBT	43.7	26	SBT	15.1	325	SBT	6.0	189
	SBR	0.0	0	SBR	8.8	23	SBR	14.0	310	SBR	5.9	159
	WBL	0.0	0	WBL	17.9	30	WBL	58.7	206	WBL	0.0	0
	WBT	9.8	230	WBT	8.8	141	WBT	69.0	176	WBT	0.0	0
	WBR	1.4	0	WBR	4.9	95	WBR	20.9	139	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► / 230			N 40 / 23 ◄ 26 ▼ 40 ► / 141			N 325 / 310 ◄ 325 ▼ 139 ► / 206			N 189 / 159 ◄ 189 ▼ 0 ► / 0		
	0 ▲		▲ 0	55 ▲		▲ 95	119 ▲		▲ 139	175 ▲		▲ 0
	291 ►		◄ 230	511 ►		◄ 141	96 ►		◄ 176	0 ►		◄ 0
	84 ▼		▼ 0	52 ▼		▼ 30	68 ▼		▼ 206	0 ▼		▼ 0
	291 / ◄ 656 ▲ 0 ► 0 / 656			511 / ◄ 161 ▲ 40 ► 4 / 161			119 / ◄ 82 ▲ 219 ► 2 / 219			175 / ◄ 19 ▲ 96 ► 0 / 96		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► / 250			N 50 / 25 ◄ 50 ▼ 50 ► / 150			N 350 / 325 ◄ 350 ▼ 150 ► / 225			N 200 / 175 ◄ 200 ▼ 0 ► / 0		
	0 ▲		▲ 0	75 ▲		▲ 100	125 ▲		▲ 150	175 ▲		▲ 0
	300 ►		◄ 250	525 ►		◄ 150	100 ►		◄ 200	0 ►		◄ 0
	100 ▼		▼ 0	75 ▼		▼ 50	75 ▼		▼ 225	0 ▼		▼ 0
	300 / ◄ 675 ▲ 0 ► 0 / 675			525 / ◄ 175 ▲ 50 ► 25 / 175			125 / ◄ 100 ▲ 225 ► 25 / 225			175 / ◄ 25 ▲ 100 ► 0 / 100		

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 25.3 680 NBL 31.9 90 NBT 7.1 231 NBR 3.6 15 EBL 57.7 254 EBT 73.3 254 EBR 23.2 220 SBL 23.5 74 SBT 27.6 680 SBR 16.3 42 WBL 63.4 242 WBT 75.6 242 WBR 46.7 202	MVMNT DELAY QUEUE ALL 70.1 5750 NBL 65.0 149 NBT 63.5 190 NBR 31.9 150 EBL 114.2 183 EBT 123.0 5750 EBR 127.0 5730 SBL 71.6 270 SBT 81.6 463 SBR 37.2 444 WBL 38.9 172 WBT 13.1 297 WBR 5.0 0	MVMNT DELAY QUEUE ALL 58.8 1172 NBL 90.6 188 NBT 114.5 1108 NBR 151.3 1172 EBL 89.5 188 EBT 51.6 898 EBR 38.0 194 SBL 57.5 720 SBT 37.2 404 SBR 24.5 243 WBL 81.8 372 WBT 34.2 424 WBR 14.8 475	MVMNT DELAY QUEUE ALL 30.5 788 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 23.9 509 EBR 2.6 0 SBL 46.5 504 SBT 0.0 0 SBR 49.5 547 WBL 142.6 783 WBT 17.3 727 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 680 ◀ 42 ▼ 680 ▶ 74 → 242 254 ▲ → ▲ 202 254 ▶ → ◀ 242 220 ▼ → ▼ 242 254 ◀ 90 ▲ 231 ▶ 15 → 231	N 463 ◀ 444 ▼ 463 ▶ 270 → 297 183 ▲ → ▲ 0 5750 ▶ → ◀ 297 5730 ▼ → ▼ 172 5750 ◀ 149 ▲ 190 ▶ 150 → 190	N 720 ◀ 243 ▼ 404 ▶ 720 → 475 188 ▲ → ▲ 475 898 ▶ → ◀ 424 194 ▼ → ▼ 372 898 ◀ 188 ▲ 1108 ▶ 1172 → 1172	N 547 ◀ 547 ▼ 0 ▶ 504 → 783 0 ▲ → ▲ 0 509 ▶ → ◀ 727 0 ▼ → ▼ 783 509 ◀ 0 ▲ 0 ▶ 0 → 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 700 ◀ 50 ▼ 700 ▶ 75 → 250 275 ▲ → ▲ 225 275 ▶ → ◀ 250 225 ▼ → ▼ 250 275 ◀ 100 ▲ 250 ▶ 25 → 250	N 475 ◀ 450 ▼ 475 ▶ 275 → 300 200 ▲ → ▲ 0 5775 ▶ → ◀ 300 5750 ▼ → ▼ 175 5775 ◀ 150 ▲ 200 ▶ 175 → 200	N 725 ◀ 250 ▼ 425 ▶ 725 → 500 200 ▲ → ▲ 500 900 ▶ → ◀ 425 200 ▼ → ▼ 375 900 ◀ 200 ▲ 1125 ▶ 1175 → 1175	N 550 ◀ 550 ▼ 0 ▶ 525 → 800 0 ▲ → ▲ 0 525 ▶ → ◀ 750 0 ▼ → ▼ 800 525 ◀ 0 ▲ 0 ▶ 0 → 0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	15.0	694	ALL	19.5	1105	ALL	21.4	453	ALL	8.9	263
	NBL	57.7	694	NBL	37.2	183	NBL	19.8	120	NBL	11.1	24
	NBT	0.0	0	NBT	33.1	36	NBT	13.8	269	NBT	2.5	114
	NBR	1.9	0	NBR	12.4	0	NBR	4.7	3	NBR	0.0	0
	EBL	0.0	0	EBL	45.0	63	EBL	53.2	134	EBL	69.1	195
	EBT	13.1	282	EBT	21.6	1105	EBT	74.2	121	EBT	0.0	0
	EBR	7.7	107	EBR	18.7	50	EBR	20.7	94	EBR	5.9	0
	SBL	0.0	0	SBL	32.5	38	SBL	33.0	193	SBL	0.0	0
	SBT	0.0	0	SBT	49.4	31	SBT	18.4	449	SBT	7.7	261
	SBR	0.0	0	SBR	9.0	27	SBR	17.5	433	SBR	7.6	231
	WBL	0.0	0	WBL	23.5	33	WBL	55.0	241	WBL	0.0	0
	WBT	13.6	293	WBT	10.6	186	WBT	63.5	223	WBT	0.0	0
	WBR	1.9	0	WBR	7.1	140	WBR	22.4	186	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N: 0; ◀ 0; ▼ 0; ▶ 0; 293			N: 38; ◀ 27; ▼ 31; ▶ 38; 186			N: 449; ◀ 433; ▼ 449; ▶ 193; 241			N: 261; ◀ 231; ▼ 261; ▶ 0; 0		
	▲ 0		▲ 0	▲ 63		▲ 140	▲ 134		▲ 186	▲ 195		▲ 0
	▶ 282		◀ 293	▶ 1105		◀ 186	▶ 121		◀ 223	▶ 0		◀ 0
	▼ 107		▼ 0	▼ 50		▼ 33	▼ 94		▼ 241	▼ 0		▼ 0
	282; ◀ 694; ▲ 0; ▶ 0; 694			1105; ◀ 183; ▲ 36; ▶ 0; 183			134; ◀ 120; ▲ 269; ▶ 3; 269			195; ◀ 24; ▲ 114; ▶ 0; 114		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N: 0; ◀ 0; ▼ 0; ▶ 0; 300			N: 50; ◀ 50; ▼ 50; ▶ 50; 200			N: 450; ◀ 450; ▼ 450; ▶ 200; 250			N: 275; ◀ 250; ▼ 275; ▶ 0; 0		
	▲ 0		▲ 0	▲ 75		▲ 150	▲ 150		▲ 200	▲ 200		▲ 0
	▶ 300		◀ 300	▶ 1125		◀ 200	▶ 125		◀ 225	▶ 0		◀ 0
	▼ 125		▼ 0	▼ 75		▼ 50	▼ 100		▼ 250	▼ 0		▼ 0
	300; ◀ 700; ▲ 0; ▶ 0; 700			1125; ◀ 200; ▲ 50; ▶ 0; 200			150; ◀ 125; ▲ 275; ▶ 25; 275			200; ◀ 25; ▲ 125; ▶ 0; 125		

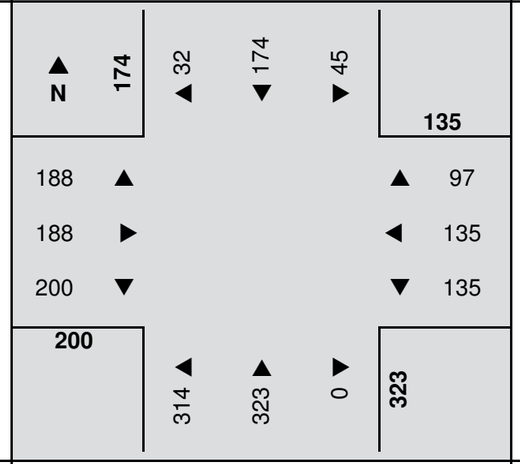
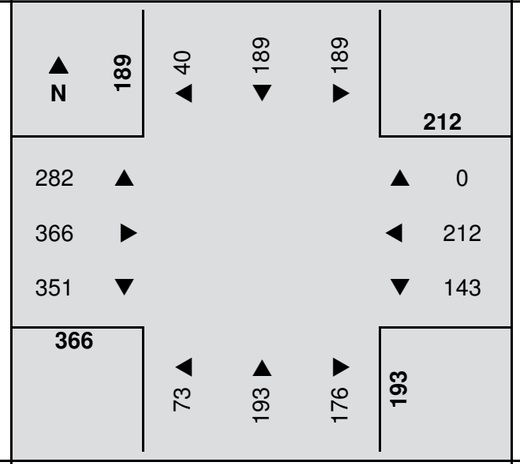
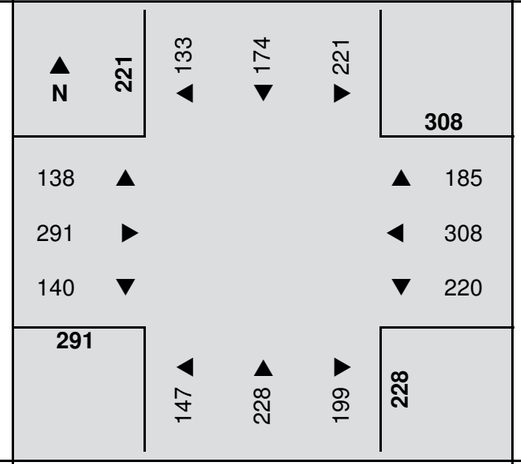
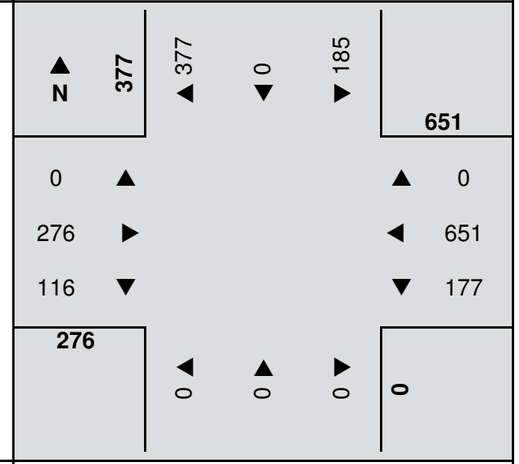
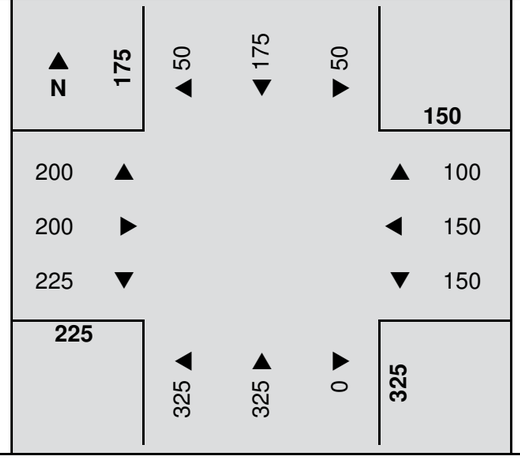
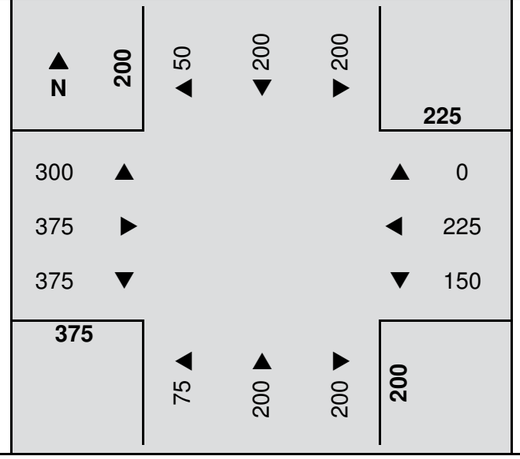
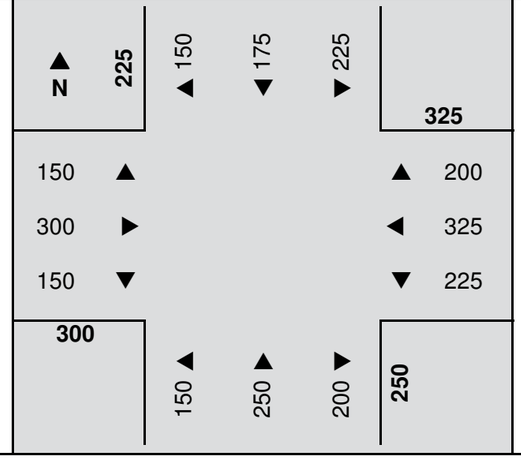
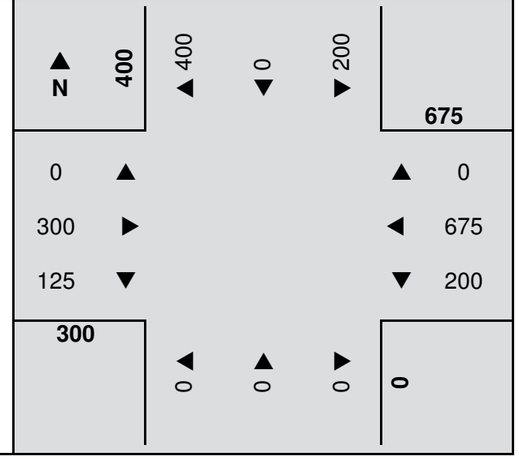
VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 20.1 373 NBL 22.7 75 NBT 6.8 209 NBR 3.3 8 EBL 61.9 220 EBT 68.5 220 EBR 17.0 186 SBL 15.1 58 SBT 18.5 373 SBR 11.4 37 WBL 59.4 203 WBT 70.6 203 WBR 34.4 164	MVMNT DELAY QUEUE ALL 50.0 5755 NBL 68.7 109 NBT 70.7 164 NBR 27.3 125 EBL 74.1 155 EBT 76.9 5755 EBR 78.1 5735 SBL 69.0 175 SBT 72.5 304 SBR 26.1 285 WBL 33.4 139 WBT 10.8 242 WBR 3.8 0	MVMNT DELAY QUEUE ALL 48.6 1038 NBL 85.8 173 NBT 88.1 890 NBR 93.9 920 EBL 83.7 167 EBT 39.1 850 EBR 28.2 179 SBL 47.5 451 SBT 38.5 316 SBR 27.4 218 WBL 67.3 291 WBT 34.5 343 WBR 16.1 400	MVMNT DELAY QUEUE ALL 23.9 501 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 18.6 360 EBR 2.3 0 SBL 47.7 413 SBT 0.0 0 SBR 49.1 453 WBL 64.3 428 WBT 11.6 312 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 373 ◀ 37 ▼ 373 ▶ 58 → 203 220 ▲ ▲ 164 220 ▶ ◀ 203 186 ▼ ▼ 203 220 ◀ 75 ▲ 209 ▶ 8 → 209	N 304 ◀ 285 ▼ 304 ▶ 175 → 242 155 ▲ ▲ 0 5755 ▶ ◀ 242 5735 ▼ ▼ 139 5755 ◀ 109 ▲ 164 ▶ 125 → 164	N 451 ◀ 218 ▼ 316 ▶ 451 → 400 167 ▲ ▲ 400 850 ▶ ◀ 343 179 ▼ ▼ 291 850 ◀ 173 ▲ 890 ▶ 920 → 920	N 453 ◀ 453 ▼ 0 ▶ 413 → 428 0 ▲ ▲ 0 360 ▶ ◀ 312 0 ▼ ▼ 428 360 ◀ 0 ▲ 0 ▶ 0 → 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 375 ◀ 50 ▼ 375 ▶ 75 → 225 225 ▲ ▲ 175 225 ▶ ◀ 225 200 ▼ ▼ 225 225 ◀ 75 ▲ 225 ▶ 25 → 225	N 325 ◀ 300 ▼ 325 ▶ 200 → 250 175 ▲ ▲ 0 5775 ▶ ◀ 250 5750 ▼ ▼ 150 5775 ◀ 125 ▲ 175 ▶ 125 → 175	N 475 ◀ 225 ▼ 325 ▶ 475 → 400 175 ▲ ▲ 400 875 ▶ ◀ 350 200 ▼ ▼ 300 875 ◀ 175 ▲ 900 ▶ 925 → 925	N 475 ◀ 475 ▼ 0 ▶ 425 → 450 0 ▲ ▲ 0 375 ▶ ◀ 325 0 ▼ ▼ 450 375 ◀ 0 ▲ 0 ▶ 0 → 0

VISSIM Results Existing Year (2013) Existing Configuration

Existing 2013 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	11.5	501	ALL	14.2	415	ALL	16.9	286	ALL	7.6	178
	NBL	59.4	501	NBL	35.9	131	NBL	14.7	75	NBL	7.2	23
	NBT	0.0	0	NBT	36.0	32	NBT	9.7	168	NBT	2.1	95
	NBR	0.8	0	NBR	10.2	2	NBR	3.2	0	NBR	0.0	0
	EBL	0.0	0	EBL	41.4	58	EBL	56.6	101	EBL	73.0	170
	EBT	7.9	259	EBT	12.8	415	EBT	62.9	98	EBT	0.0	0
	EBR	6.2	66	EBR	11.5	38	EBR	13.5	71	EBR	5.6	0
	SBL	0.0	0	SBL	32.0	33	SBL	20.6	110	SBL	0.0	0
	SBT	0.0	0	SBT	52.4	32	SBT	12.9	286	SBT	5.2	139
	SBR	0.0	0	SBR	7.9	17	SBR	11.2	271	SBR	5.1	109
	WBL	0.0	0	WBL	17.5	26	WBL	59.6	202	WBL	0.0	0
	WBT	8.2	207	WBT	8.4	142	WBT	68.4	152	WBT	0.0	0
	WBR	1.2	0	WBR	5.2	96	WBR	19.9	115	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N: 0 / 0 ◄ 0 ▼ 0 ► / 207			N: 33 / 17 ◄ 32 ▼ 33 ► / 142			N: 286 / 271 ◄ 286 ▼ 110 ► / 202			N: 139 / 109 ◄ 139 ▼ 0 ► / 0		
	0 ▲		▲ 0	58 ▲		▲ 96	101 ▲		▲ 115	170 ▲		▲ 0
	259 ►		◄ 207	415 ►		◄ 142	98 ►		◄ 152	0 ►		◄ 0
	66 ▼		▼ 0	38 ▼		▼ 26	71 ▼		▼ 202	0 ▼		▼ 0
	259 / ◄ 501 ▲ 0 ► 0 / 501			415 / ◄ 131 ▲ 32 ► 2 / 131			101 / ◄ 75 ▲ 168 ► 0 / 168			170 / ◄ 23 ▲ 95 ► 0 / 95		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N: 0 / 0 ◄ 0 ▼ 0 ► / 225			N: 50 / 25 ◄ 50 ▼ 50 ► / 150			N: 300 / 275 ◄ 300 ▼ 125 ► / 225			N: 150 / 125 ◄ 150 ▼ 0 ► / 0		
	0 ▲		▲ 0	75 ▲		▲ 100	125 ▲		▲ 125	175 ▲		▲ 0
	275 ►		◄ 225	425 ►		◄ 150	100 ►		◄ 175	0 ►		◄ 0
	75 ▼		▼ 0	50 ▼		▼ 50	75 ▼		▼ 225	0 ▼		▼ 0
	275 / ◄ 525 ▲ 0 ► 0 / 525			425 / ◄ 150 ▲ 50 ► 25 / 150			125 / ◄ 100 ▲ 175 ► 0 / 175			175 / ◄ 25 ▲ 100 ► 0 / 100		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.1 325 NBL 74.0 314 NBT 7.7 323 NBR 3.0 0 EBL 62.1 188 EBT 82.4 188 EBR 19.7 200 SBL 14.8 45 SBT 15.0 174 SBR 7.0 32 WBL 67.9 135 WBT 82.7 135 WBR 15.2 97	MVMNT DELAY QUEUE ALL 20.5 385 NBL 68.1 73 NBT 75.7 193 NBR 15.8 176 EBL 86.9 282 EBT 18.8 366 EBR 17.8 351 SBL 72.0 189 SBT 66.8 189 SBR 7.6 40 WBL 104.7 143 WBT 9.4 212 WBR 3.6 0	MVMNT DELAY QUEUE ALL 38.5 319 NBL 79.8 147 NBT 62.7 228 NBR 39.9 199 EBL 58.0 138 EBT 28.9 291 EBR 17.3 140 SBL 76.8 221 SBT 42.1 174 SBR 23.3 133 WBL 70.8 220 WBT 27.1 308 WBR 10.6 185	MVMNT DELAY QUEUE ALL 25.4 651 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 11.7 276 EBR 1.0 116 SBL 61.7 185 SBT 0.0 0 SBR 39.0 377 WBL 69.0 177 WBT 24.2 651 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)				
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)				

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	17.0	536	ALL	25.7	403	ALL	13.2	270	ALL	5.9	155
	NBL	47.5	536	NBL	56.1	295	NBL	9.0	76	NBL	5.2	18
	NBT	0.0	0	NBT	45.5	70	NBT	10.5	269	NBT	2.7	127
	NBR	3.4	71	NBR	14.8	26	NBR	4.8	3	NBR	0.0	0
	EBL	0.0	0	EBL	58.1	128	EBL	65.9	87	EBL	68.6	151
	EBT	12.1	237	EBT	10.9	248	EBT	73.9	47	EBT	0.0	0
	EBR	3.4	54	EBR	5.4	41	EBR	6.6	18	EBR	4.7	0
	SBL	0.0	0	SBL	50.2	41	SBL	14.3	143	SBL	0.0	0
	SBT	0.0	0	SBT	62.3	52	SBT	4.8	103	SBT	3.0	76
	SBR	0.0	0	SBR	10.3	15	SBR	2.6	103	SBR	3.0	46
	WBL	0.0	0	WBL	14.0	30	WBL	64.3	135	WBL	0.0	0
	WBT	14.3	273	WBT	20.7	398	WBT	70.2	158	WBT	0.0	0
	WBR	2.4	16	WBR	4.4	0	WBR	21.7	121	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 / 0 / 0 / 273			N 52 / 15 / 52 / 41 / 398			N 143 / 103 / 103 / 143 / 158			N 76 / 46 / 76 / 0 / 0		
	0 ▲		▲ 16	128 ▲		▲ 0	87 ▲		▲ 121	151 ▲		▲ 0
	237 ▶		◀ 273	248 ▶		◀ 398	47 ▶		◀ 158	0 ▶		◀ 0
	54 ▼		▼ 0	41 ▼		▼ 30	18 ▼		▼ 135	0 ▼		▼ 0
	237 / ◀ 536 / ▲ 0 / ▶ 71 / 536			248 / ◀ 295 / ▲ 70 / ▶ 26 / 295			87 / ◀ 76 / ▲ 269 / ▶ 3 / 269			151 / ◀ 18 / ▲ 127 / ▶ 0 / 127		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 / 0 / 0 / 275			N 75 / 25 / 75 / 50 / 400			N 150 / 125 / 125 / 150 / 175			N 100 / 50 / 100 / 0 / 0		
	0 ▲		▲ 25	150 ▲		▲ 0	100 ▲		▲ 125	175 ▲		▲ 0
	250 ▶		◀ 275	250 ▶		◀ 400	50 ▶		◀ 175	0 ▶		◀ 0
	75 ▼		▼ 0	50 ▼		▼ 50	25 ▼		▼ 150	0 ▼		▼ 0
	250 / ◀ 550 / ▲ 0 / ▶ 75 / 550			250 / ◀ 300 / ▲ 75 / ▶ 50 / 300			100 / ◀ 100 / ▲ 275 / ▶ 25 / 275			175 / ◀ 25 / ▲ 150 / ▶ 0 / 150		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 19.4 439 NBL 80.6 433 NBT 8.6 427 NBR 3.8 13 EBL 64.2 247 EBT 76.0 247 EBR 25.7 259 SBL 20.5 58 SBT 18.3 263 SBR 8.2 48 WBL 70.4 174 WBT 81.9 174 WBR 21.4 135	MVMNT DELAY QUEUE ALL 33.0 1242 NBL 67.7 80 NBT 78.3 260 NBR 24.0 243 EBL 194.2 982 EBT 34.8 1151 EBR 33.8 1136 SBL 75.5 253 SBT 74.0 253 SBR 8.3 53 WBL 106.4 182 WBT 14.0 329 WBR 4.9 0	MVMNT DELAY QUEUE ALL 42.8 420 NBL 78.3 173 NBT 76.5 293 NBR 44.5 258 EBL 53.0 146 EBT 36.7 399 EBR 19.3 169 SBL 87.8 277 SBT 42.3 219 SBR 22.6 179 WBL 71.3 277 WBT 28.8 393 WBR 14.9 277	MVMNT DELAY QUEUE ALL 26.2 752 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.4 347 EBR 1.3 164 SBL 61.1 222 SBT 0.0 0 SBR 40.5 478 WBL 69.8 233 WBT 23.5 752 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 263 ◄ 48 ▼ 263 ► 58 **174** 247 ▲ ▲ 135 247 ► ◄ 174 259 ▼ ▼ 174 **259** ◄ 433 ▲ 427 ► 13 **433**	N 253 ◄ 53 ▼ 253 ► 253 **329** 982 ▲ ▲ 0 1151 ► ◄ 329 1136 ▼ ▼ 182 **1151** ◄ 80 ▲ 260 ► 243 **260**	N 277 ◄ 179 ▼ 219 ► 277 **393** 146 ▲ ▲ 277 399 ► ◄ 393 169 ▼ ▼ 277 **399** ◄ 173 ▲ 293 ► 258 **293**	N 478 ◄ 478 ▼ 0 ► 222 **752** 0 ▲ ▲ 0 347 ► ◄ 752 164 ▼ ▼ 233 **347** ◄ 0 ▲ 0 ► 0 **0**
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 275 ◄ 50 ▼ 275 ► 75 **175** 250 ▲ ▲ 150 250 ► ◄ 175 275 ▼ ▼ 175 **275** ◄ 450 ▲ 450 ► 25 **450**	N 275 ◄ 75 ▼ 275 ► 275 **350** 1000 ▲ ▲ 0 1175 ► ◄ 350 1150 ▼ ▼ 200 **1175** ◄ 100 ▲ 275 ► 250 **275**	N 300 ◄ 200 ▼ 225 ► 300 **400** 150 ▲ ▲ 300 400 ► ◄ 400 175 ▼ ▼ 300 **400** ◄ 175 ▲ 300 ► 275 **300**	N 500 ◄ 500 ▼ 0 ► 225 **775** 0 ▲ ▲ 0 350 ► ◄ 775 175 ▼ ▼ 250 **350** ◄ 0 ▲ 0 ► 0 **0**

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	19.7	789	ALL	32.9	633	ALL	17.3	455	ALL	7.3	214
	NBL	42.1	780	NBL	73.1	568	NBL	13.9	109	NBL	8.1	28
	NBT	0.0	0	NBT	63.6	65	NBT	15.6	440	NBT	3.7	197
	NBR	6.5	107	NBR	23.7	21	NBR	8.9	3	NBR	0.0	0
	EBL	0.0	0	EBL	66.3	170	EBL	64.1	112	EBL	67.0	188
	EBT	18.7	347	EBT	14.6	379	EBT	68.0	64	EBT	0.0	0
	EBR	6.1	145	EBR	7.2	48	EBR	8.9	34	EBR	4.7	0
	SBL	0.0	0	SBL	41.5	49	SBL	25.1	281	SBL	0.0	0
	SBT	0.0	0	SBT	68.8	61	SBT	7.7	173	SBT	5.0	139
	SBR	0.0	0	SBR	13.5	30	SBR	3.4	173	SBR	4.6	109
	WBL	0.0	0	WBL	20.8	51	WBL	60.4	170	WBL	0.0	0
	WBT	21.9	475	WBT	26.8	601	WBT	68.7	210	WBT	0.0	0
	WBR	3.9	115	WBR	8.1	0	WBR	25.0	173	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 475 0 ▲ → ▲ 115 347 ▶ → ◀ 475 145 ▼ → ▼ 0 347 ◀ 780 ▲ 0 ▶ 107 → 780			N 61 ◀ 30 ▼ 61 ▶ 49 → 601 170 ▲ → ▲ 0 379 ▶ → ◀ 601 48 ▼ → ▼ 51 379 ◀ 568 ▲ 65 ▶ 21 → 568			N 281 ◀ 173 ▼ 173 ▶ 281 → 210 112 ▲ → ▲ 173 64 ▶ → ◀ 210 34 ▼ → ▼ 170 112 ◀ 109 ▲ 440 ▶ 3 → 440			N 139 ◀ 109 ▼ 139 ▶ 0 → 0 188 ▲ → ▲ 0 0 ▶ → ◀ 0 0 ▼ → ▼ 0 188 ◀ 28 ▲ 197 ▶ 0 → 197		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 475 0 ▲ → ▲ 125 350 ▶ → ◀ 475 150 ▼ → ▼ 0 350 ◀ 800 ▲ 0 ▶ 125 → 800			N 75 ◀ 50 ▼ 75 ▶ 50 → 625 175 ▲ → ▲ 0 400 ▶ → ◀ 625 50 ▼ → ▼ 75 400 ◀ 575 ▲ 75 ▶ 25 → 575			N 300 ◀ 175 ▼ 175 ▶ 300 → 225 125 ▲ → ▲ 175 75 ▶ → ◀ 225 50 ▼ → ▼ 175 125 ◀ 125 ▲ 450 ▶ 25 → 450			N 150 ◀ 125 ▼ 150 ▶ 0 → 0 200 ▲ → ▲ 0 0 ▶ → ◀ 0 0 ▼ → ▼ 0 200 ◀ 50 ▲ 200 ▶ 0 → 200		

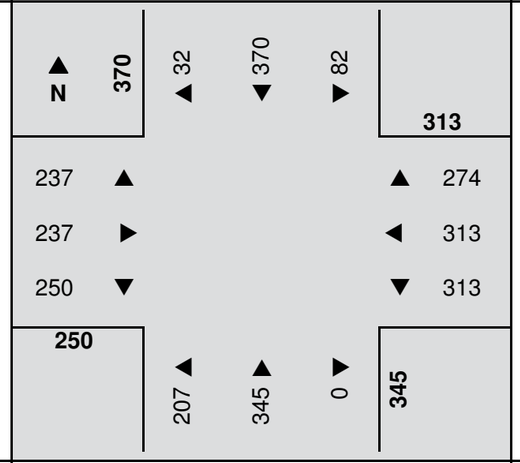
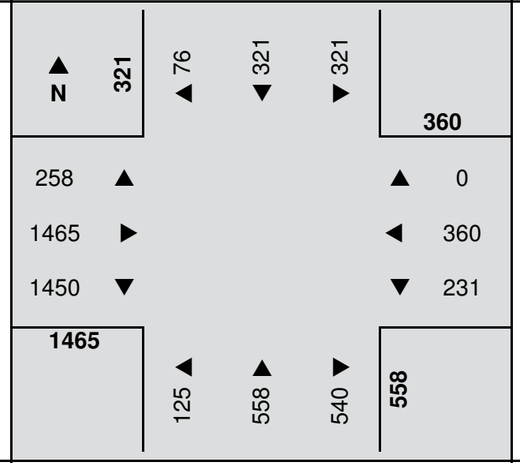
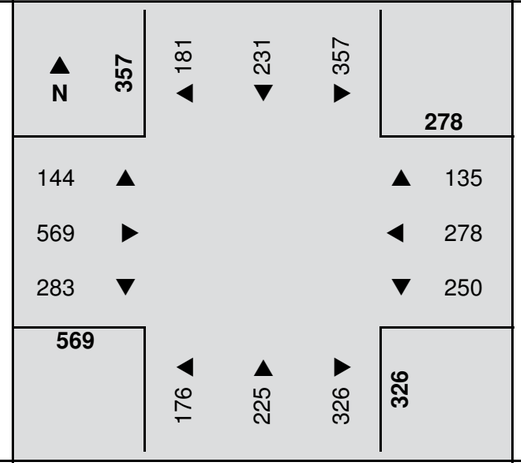
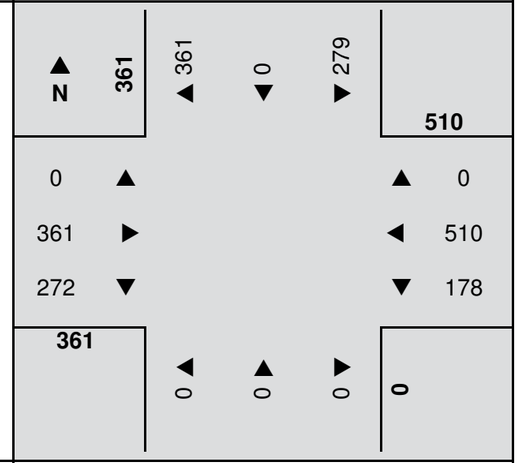
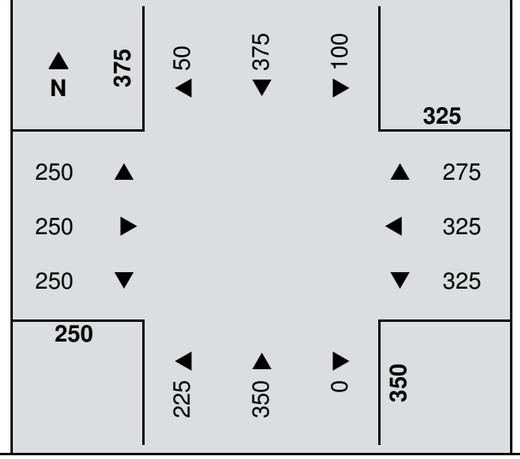
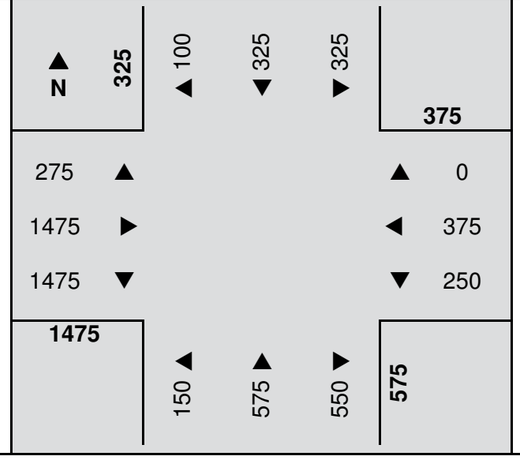
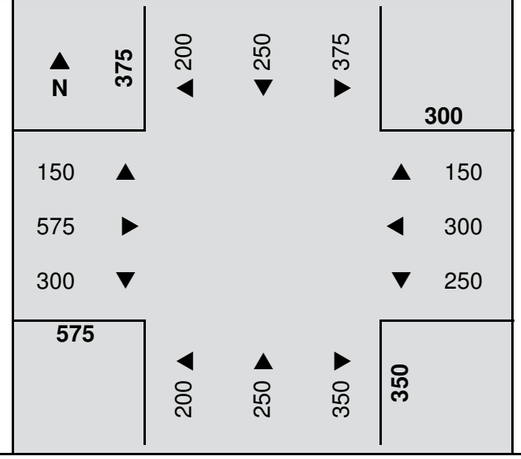
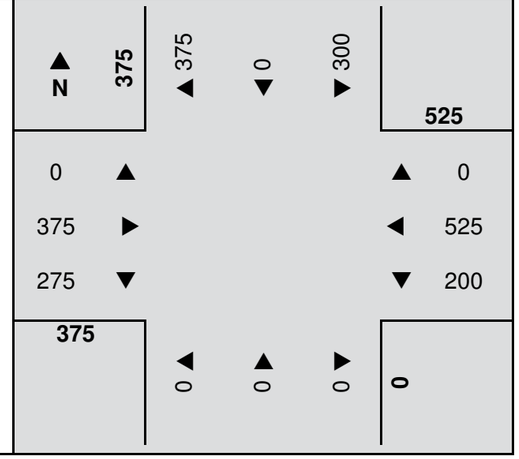
VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.6 346 NBL 77.4 341 NBT 7.1 345 NBR 3.2 10 EBL 62.4 215 EBT 75.2 215 EBR 19.8 227 SBL 16.4 55 SBT 16.3 187 SBR 7.9 36 WBL 72.6 147 WBT 91.9 147 WBR 19.9 109	MVMNT DELAY QUEUE ALL 29.2 824 NBL 69.4 73 NBT 76.5 209 NBR 19.3 192 EBL 177.3 773 EBT 30.9 721 EBR 25.1 706 SBL 70.7 210 SBT 69.5 210 SBR 7.7 45 WBL 104.8 165 WBT 10.3 213 WBR 4.3 0	MVMNT DELAY QUEUE ALL 39.7 338 NBL 78.0 173 NBT 66.6 241 NBR 40.5 228 EBL 53.6 150 EBT 30.7 315 EBR 17.9 155 SBL 80.7 246 SBT 40.7 173 SBR 22.9 152 WBL 69.3 252 WBT 28.7 324 WBR 12.1 205	MVMNT DELAY QUEUE ALL 24.9 683 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 12.3 294 EBR 1.1 89 SBL 61.8 194 SBT 0.0 0 SBR 39.6 424 WBL 66.8 194 WBT 22.4 683 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 187 ▲ 36 ◀ 187 ▼ 55 ▶ 147 215 ▲ 109 ▲ 215 ▶ ◀ 147 227 ▼ ▼ 147 227 341 ◀ 345 ▲ 10 ▶ 345	N 210 ▲ 45 ◀ 210 ▼ 210 ▶ 213 773 ▲ 0 ▲ 721 ▶ ◀ 213 706 ▼ ▼ 165 773 73 ◀ 209 ▲ 192 ▶ 209	N 246 ▲ 152 ◀ 173 ▼ 246 ▶ 324 150 ▲ 205 ▲ 315 ▶ ◀ 324 155 ▼ ▼ 252 315 173 ◀ 241 ▲ 228 ▶ 241	N 424 ▲ 424 ◀ 0 ▼ 194 ▶ 683 0 ▲ 0 ▲ 294 ▶ ◀ 683 89 ▼ ▼ 194 294 0 ◀ 0 ▲ 0 ▶ 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 200 ▲ 50 ◀ 200 ▼ 75 ▶ 150 225 ▲ 125 ▲ 225 ▶ ◀ 150 250 ▼ ▼ 150 250 350 ◀ 350 ▲ 25 ▶ 350	N 225 ▲ 50 ◀ 225 ▼ 225 ▶ 225 775 ▲ 0 ▲ 725 ▶ ◀ 225 725 ▼ ▼ 175 775 75 ◀ 225 ▲ 200 ▶ 225	N 250 ▲ 175 ◀ 175 ▼ 250 ▶ 325 175 ▲ 225 ▲ 325 ▶ ◀ 325 175 ▼ ▼ 275 325 175 ◀ 250 ▲ 250 ▶ 250	N 425 ▲ 425 ◀ 0 ▼ 200 ▶ 700 0 ▲ 0 ▲ 300 ▶ ◀ 700 100 ▼ ▼ 200 300 0 ◀ 0 ▲ 0 ▶ 0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	18.2	591	ALL	27.9	429	ALL	14.0	342	ALL	6.3	182
	NBL	45.7	591	NBL	59.9	326	NBL	10.5	90	NBL	7.0	28
	NBT	0.0	0	NBT	41.9	68	NBT	11.6	338	NBT	3.0	146
	NBR	3.7	66	NBR	15.9	28	NBR	5.6	7	NBR	0.0	0
	EBL	0.0	0	EBL	63.2	167	EBL	69.3	98	EBL	66.9	172
	EBT	15.7	246	EBT	11.7	257	EBT	74.9	64	EBT	0.0	0
	EBR	4.1	72	EBR	5.7	34	EBR	7.2	35	EBR	4.7	0
	SBL	0.0	0	SBL	44.1	50	SBL	17.0	191	SBL	0.0	0
	SBT	0.0	0	SBT	67.6	46	SBT	5.2	103	SBT	3.6	97
	SBR	0.0	0	SBR	11.7	28	SBR	3.4	103	SBR	3.2	67
	WBL	0.0	0	WBL	16.8	40	WBL	64.9	167	WBL	0.0	0
	WBT	17.0	277	WBT	23.0	428	WBT	79.4	160	WBT	0.0	0
	WBR	2.9	7	WBR	4.9	0	WBR	20.2	123	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 / 0 / 0 / 277			N 50 / 28 / 46 / 50 / 428			N 191 / 103 / 103 / 191 / 167			N 97 / 67 / 97 / 0 / 0		
	0 ▲		▲ 7	167 ▲		▲ 0	98 ▲		▲ 123	172 ▲		▲ 0
	246 ▶		◀ 277	257 ▶		◀ 428	64 ▶		◀ 160	0 ▶		◀ 0
	72 ▼		▼ 0	34 ▼		▼ 40	35 ▼		▼ 167	0 ▼		▼ 0
	246 / ◀ 591 / ▲ 0 / ▶ 66 / 591			257 / ◀ 326 / ▲ 68 / ▶ 28 / 326			98 / ◀ 90 / ▲ 338 / ▶ 7 / 338			172 / ◀ 28 / ▲ 146 / ▶ 0 / 146		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 / 0 / 0 / 300			N 50 / 50 / 50 / 50 / 450			N 200 / 125 / 125 / 200 / 175			N 100 / 75 / 100 / 0 / 0		
	0 ▲		▲ 25	175 ▲		▲ 0	100 ▲		▲ 125	175 ▲		▲ 0
	250 ▶		◀ 300	275 ▶		◀ 450	75 ▶		◀ 175	0 ▶		◀ 0
	75 ▼		▼ 0	50 ▼		▼ 50	50 ▼		▼ 175	0 ▼		▼ 0
	250 / ◀ 600 / ▲ 0 / ▶ 75 / 600			275 / ◀ 350 / ▲ 75 / ▶ 50 / 350			100 / ◀ 100 / ▲ 350 / ▶ 25 / 350			175 / ◀ 50 / ▲ 150 / ▶ 0 / 150		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.5 415 NBL 78.2 207 NBT 9.7 345 NBR 3.6 0 EBL 53.0 237 EBT 74.9 237 EBR 28.3 250 SBL 21.6 82 SBT 24.8 370 SBR 12.6 32 WBL 67.2 313 WBT 65.7 313 WBR 24.1 274	MVMNT DELAY QUEUE ALL 35.7 1465 NBL 73.4 125 NBT 108.7 558 NBR 48.6 540 EBL 92.2 258 EBT 38.5 1465 EBR 39.4 1450 SBL 84.8 321 SBT 84.4 321 SBR 9.8 76 WBL 71.4 231 WBT 18.3 360 WBR 3.9 0	MVMNT DELAY QUEUE ALL 45.1 569 NBL 72.4 176 NBT 70.3 225 NBR 54.6 326 EBL 74.2 144 EBT 41.2 569 EBR 25.4 283 SBL 78.9 357 SBT 35.4 231 SBR 21.2 181 WBL 70.3 250 WBT 24.8 278 WBR 9.0 135	MVMNT DELAY QUEUE ALL 22.6 529 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 12.1 361 EBR 1.6 272 SBL 61.8 279 SBT 0.0 0 SBR 37.6 361 WBL 68.8 178 WBT 22.3 510 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)				
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)				

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	14.5	503	ALL	18.7	390	ALL	16.3	360	ALL	9.1	225
	NBL	52.4	380	NBL	45.8	172	NBL	18.4	147	NBL	11.4	31
	NBT	0.0	0	NBT	39.3	77	NBT	14.1	314	NBT	3.8	149
	NBR	7.9	136	NBR	15.9	29	NBR	6.2	5	NBR	0.0	0
	EBL	0.0	0	EBL	48.5	86	EBL	57.9	110	EBL	65.9	219
	EBT	11.6	503	EBT	13.4	374	EBT	77.4	105	EBT	0.0	0
	EBR	7.9	224	EBR	12.0	221	EBR	14.7	77	EBR	6.1	6
	SBL	0.0	0	SBL	35.1	58	SBL	22.3	248	SBL	0.0	0
	SBT	0.0	0	SBT	56.2	55	SBT	7.1	235	SBT	5.8	173
	SBR	0.0	0	SBR	9.8	43	SBR	3.6	235	SBR	5.6	143
	WBL	0.0	0	WBL	17.5	36	WBL	59.3	206	WBL	0.0	0
	WBT	8.9	186	WBT	16.7	321	WBT	63.9	195	WBT	0.0	0
	WBR	1.6	0	WBR	3.4	0	WBR	19.2	157	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 186			N 58 ◀ 43 ▼ 55 ▶ 58 → 321			N 248 ◀ 235 ▼ 235 ▶ 248 → 206			N 173 ◀ 143 ▼ 173 ▶ 0 → 0		
	0 ▲		▲ 0	86 ▲		▲ 0	110 ▲		▲ 157	219 ▲		▲ 0
	503 ▶		◀ 186	374 ▶		◀ 321	105 ▶		◀ 195	0 ▶		◀ 0
	224 ▼		▼ 0	221 ▼		▼ 36	77 ▼		▼ 206	6 ▼		▼ 0
	503 ◀ 380 ▲ 0 ▶ 136 → 380			374 ◀ 172 ▲ 77 ▶ 29 → 172			110 ◀ 147 ▲ 314 ▶ 5 → 314			219 ◀ 31 ▲ 149 ▶ 0 → 149		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 200			N 75 ◀ 50 ▼ 75 ▶ 75 → 325			N 250 ◀ 250 ▼ 250 ▶ 250 → 225			N 175 ◀ 150 ▼ 175 ▶ 0 → 0		
	0 ▲		▲ 0	100 ▲		▲ 0	125 ▲		▲ 175	225 ▲		▲ 0
	525 ▶		◀ 200	375 ▶		◀ 325	125 ▶		◀ 200	0 ▶		◀ 0
	225 ▼		▼ 0	225 ▼		▼ 50	100 ▼		▼ 225	25 ▼		▼ 0
	525 ◀ 400 ▲ 0 ▶ 150 → 400			375 ◀ 175 ▲ 100 ▶ 50 → 175			125 ◀ 150 ▲ 325 ▶ 25 → 325			225 ◀ 50 ▲ 150 ▶ 0 → 150		

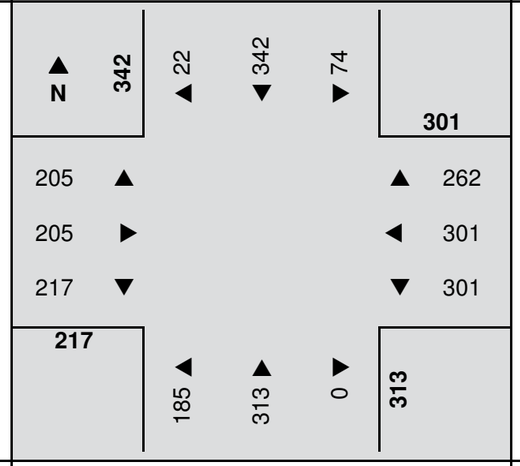
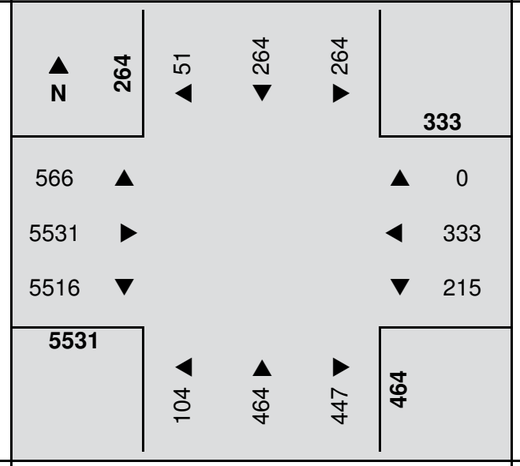
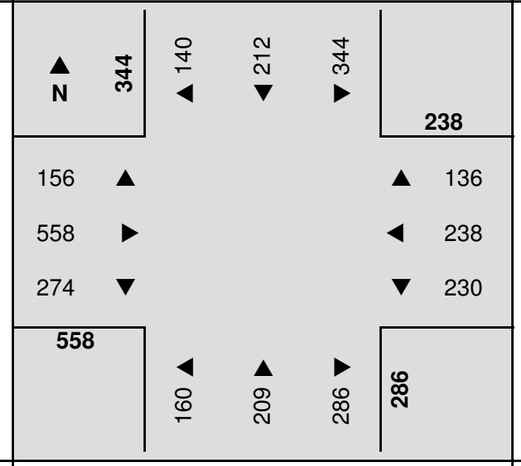
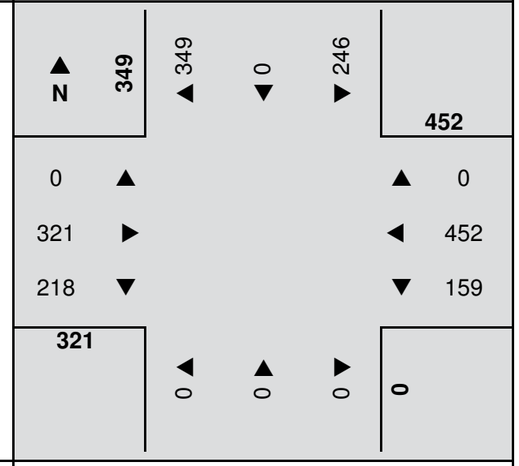
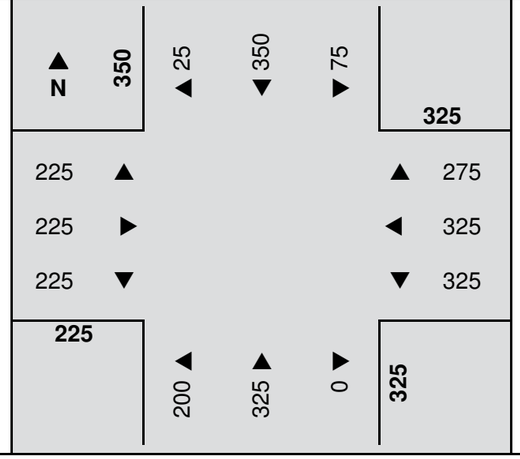
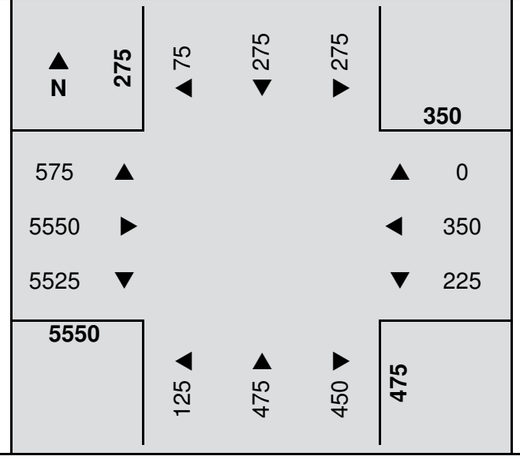
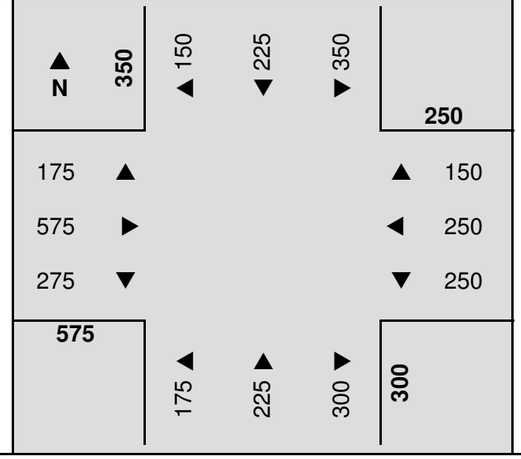
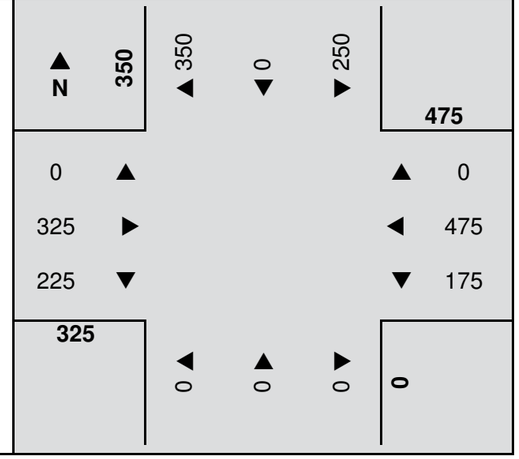
VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 27.9 563 NBL 82.9 357 NBT 11.8 416 NBR 4.3 0 EBL 52.2 294 EBT 80.6 294 EBR 42.5 306 SBL 27.7 89 SBT 28.4 528 SBR 13.5 46 WBL 71.2 391 WBT 67.7 391 WBR 28.9 352	MVMNT DELAY QUEUE ALL 64.9 5646 NBL 77.6 233 NBT 148.8 675 NBR 82.1 658 EBL 142.4 265 EBT 95.3 5646 EBR 91.6 5631 SBL 113.2 452 SBT 113.5 452 SBR 18.1 125 WBL 81.1 268 WBT 20.9 427 WBR 4.5 5	MVMNT DELAY QUEUE ALL 47.4 600 NBL 72.9 175 NBT 73.4 242 NBR 61.6 379 EBL 79.1 170 EBT 44.0 600 EBR 25.3 253 SBL 84.9 408 SBT 34.3 232 SBR 22.2 211 WBL 71.1 284 WBT 24.6 299 WBR 9.8 157	MVMNT DELAY QUEUE ALL 23.9 577 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.9 457 EBR 1.9 324 SBL 63.1 308 SBT 0.0 0 SBR 37.4 411 WBL 75.1 204 WBT 21.6 556 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 528 ◀ 46 ▼ 528 ▶ 89 391 294 ▲ ▲ 352 294 ▶ ◀ 391 306 ▼ ▼ 391 306 ◀ 357 ▲ 416 ▶ 0 416	N 452 ◀ 125 ▼ 452 ▶ 452 427 265 ▲ ▲ 5 5646 ▶ ◀ 427 5631 ▼ ▼ 268 5646 ◀ 233 ▲ 675 ▶ 658 675	N 408 ◀ 211 ▼ 232 ▶ 408 299 170 ▲ ▲ 157 600 ▶ ◀ 299 253 ▼ ▼ 284 600 ◀ 175 ▲ 242 ▶ 379 379	N 411 ◀ 411 ▼ 0 ▶ 308 556 0 ▲ ▲ 0 457 ▶ ◀ 556 324 ▼ ▼ 204 457 ◀ 0 ▲ 0 ▶ 0 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 550 ◀ 50 ▼ 550 ▶ 100 400 300 ▲ ▲ 375 300 ▶ ◀ 400 325 ▼ ▼ 400 325 ◀ 375 ▲ 425 ▶ 0 425	N 475 ◀ 125 ▼ 475 ▶ 475 450 275 ▲ ▲ 25 5650 ▶ ◀ 450 5650 ▼ ▼ 275 5650 ◀ 250 ▲ 700 ▶ 675 700	N 425 ◀ 225 ▼ 250 ▶ 425 300 175 ▲ ▲ 175 600 ▶ ◀ 300 275 ▼ ▼ 300 600 ◀ 175 ▲ 250 ▶ 400 400	N 425 ◀ 425 ▼ 0 ▶ 325 575 0 ▲ ▲ 0 475 ▶ ◀ 575 325 ▼ ▼ 225 475 ◀ 0 ▲ 0 ▶ 0 0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	16.0	617	ALL	21.3	519	ALL	21.8	466	ALL	10.1	278
	NBL	49.2	415	NBL	47.1	212	NBL	24.1	169	NBL	14.5	36
	NBT	0.0	0	NBT	40.4	80	NBT	21.2	450	NBT	4.5	174
	NBR	11.6	167	NBR	18.3	35	NBR	9.5	1	NBR	0.0	0
	EBL	0.0	0	EBL	54.6	95	EBL	57.8	114	EBL	63.9	267
	EBT	14.4	617	EBT	16.1	519	EBT	71.0	134	EBT	0.0	0
	EBR	9.4	356	EBR	15.1	281	EBR	15.6	106	EBR	6.3	3
	SBL	0.0	0	SBL	36.9	88	SBL	36.7	414	SBL	0.0	0
	SBT	0.0	0	SBT	59.6	52	SBT	10.0	314	SBT	7.2	202
	SBR	0.0	0	SBR	11.4	70	SBR	4.0	314	SBR	6.4	172
	WBL	0.0	0	WBL	22.3	47	WBL	59.8	238	WBL	0.0	0
	WBT	11.1	235	WBT	19.5	348	WBT	64.9	220	WBT	0.0	0
	WBR	2.0	5	WBR	4.3	0	WBR	23.9	183	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 / 0 / 0 / 235			N 88 / 70 / 52 / 88 / 348			N 414 / 314 / 314 / 414 / 238			N 202 / 172 / 202 / 0 / 0		
	0 ▲		▲ 5	95 ▲		▲ 0	114 ▲		▲ 183	267 ▲		▲ 0
	617 ▶		◀ 235	519 ▶		◀ 348	134 ▶		◀ 220	0 ▶		◀ 0
	356 ▼		▼ 0	281 ▼		▼ 47	106 ▼		▼ 238	3 ▼		▼ 0
	617 / 415 ◀ / 0 ▲ / 167 ▶ / 415			519 / 212 ◀ / 80 ▲ / 35 ▶ / 212			134 / 169 ◀ / 450 ▲ / 1 ▶ / 450			267 / 36 ◀ / 174 ▲ / 0 ▶ / 174		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 / 0 / 0 / 250			N 100 / 75 / 75 / 100 / 350			N 425 / 325 / 325 / 425 / 250			N 225 / 175 / 225 / 0 / 0		
	0 ▲		▲ 25	100 ▲		▲ 0	125 ▲		▲ 200	275 ▲		▲ 0
	625 ▶		◀ 250	525 ▶		◀ 350	150 ▶		◀ 225	0 ▶		◀ 0
	375 ▼		▼ 0	300 ▼		▼ 50	125 ▼		▼ 250	25 ▼		▼ 0
	625 / 425 ◀ / 0 ▲ / 175 ▶ / 425			525 / 225 ◀ / 100 ▲ / 50 ▶ / 225			150 / 175 ◀ / 475 ▲ / 25 ▶ / 475			275 / 50 ◀ / 175 ▲ / 0 ▶ / 175		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.1 387 NBL 82.0 185 NBT 9.3 313 NBR 3.4 0 EBL 54.6 205 EBT 71.3 205 EBR 25.0 217 SBL 19.7 74 SBT 23.8 342 SBR 11.2 22 WBL 68.7 301 WBT 69.1 301 WBR 25.4 262	MVMNT DELAY QUEUE ALL 56.0 5531 NBL 70.3 104 NBT 109.8 464 NBR 46.7 447 EBL 152.8 566 EBT 81.6 5531 EBR 78.8 5516 SBL 80.6 264 SBT 79.3 264 SBR 8.5 51 WBL 69.2 215 WBT 17.0 333 WBR 3.9 0	MVMNT DELAY QUEUE ALL 44.3 558 NBL 72.5 160 NBT 67.0 209 NBR 52.1 286 EBL 79.5 156 EBT 39.4 558 EBR 24.8 274 SBL 78.2 344 SBT 35.0 212 SBR 20.7 140 WBL 68.8 230 WBT 25.0 238 WBR 8.9 136	MVMNT DELAY QUEUE ALL 21.2 457 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 11.6 321 EBR 1.6 218 SBL 62.7 246 SBT 0.0 0 SBR 37.0 349 WBL 72.4 159 WBT 19.0 452 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)				
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)				

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	14.2	466	ALL	17.7	369	ALL	15.2	299	ALL	8.5	229
	NBL	54.7	339	NBL	44.2	165	NBL	15.1	121	NBL	9.8	31
	NBT	0.0	0	NBT	42.3	69	NBT	12.5	253	NBT	3.5	128
	NBR	7.3	127	NBR	14.9	22	NBR	4.7	0	NBR	0.0	0
	EBL	0.0	0	EBL	49.8	99	EBL	61.8	116	EBL	65.8	229
	EBT	10.8	459	EBT	12.8	366	EBT	74.2	109	EBT	0.0	0
	EBR	7.8	228	EBR	11.2	165	EBR	12.1	81	EBR	5.8	3
	SBL	0.0	0	SBL	34.6	63	SBL	18.8	233	SBL	0.0	0
	SBT	0.0	0	SBT	52.5	43	SBT	6.3	213	SBT	5.0	147
	SBR	0.0	0	SBR	8.7	43	SBR	3.4	213	SBR	4.7	117
	WBL	0.0	0	WBL	14.7	32	WBL	60.6	178	WBL	0.0	0
	WBT	8.0	183	WBT	16.2	277	WBT	68.2	177	WBT	0.0	0
	WBR	1.5	0	WBR	3.5	0	WBR	20.4	138	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N: 0; 0 ◀, 0 ▼, 0 ▶; 183 0 ▲, ▲ 0 459 ▶, ◀ 183 228 ▼, ▼ 0 459; 339 ◀, 0 ▲, 127 ▶; 339			N: 63; 43 ◀, 43 ▼, 63 ▶; 277 99 ▲, ▲ 0 366 ▶, ◀ 277 165 ▼, ▼ 32 366; 165 ◀, 69 ▲, 22 ▶; 165			N: 233; 213 ◀, 213 ▼, 233 ▶; 178 116 ▲, ▲ 138 109 ▶, ◀ 177 81 ▼, ▼ 178 116; 121 ◀, 253 ▲, 0 ▶; 253			N: 147; 117 ◀, 147 ▼, 0 ▶; 0 229 ▲, ▲ 0 0 ▶, ◀ 0 3 ▼, ▼ 0 229; 31 ◀, 128 ▲, 0 ▶; 128		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N: 0; 0 ◀, 0 ▼, 0 ▶; 200 0 ▲, ▲ 0 475 ▶, ◀ 200 250 ▼, ▼ 0 475; 350 ◀, 0 ▲, 150 ▶; 350			N: 75; 50 ◀, 50 ▼, 75 ▶; 300 100 ▲, ▲ 0 375 ▶, ◀ 300 175 ▼, ▼ 50 375; 175 ◀, 75 ▲, 25 ▶; 175			N: 250; 225 ◀, 225 ▼, 250 ▶; 200 125 ▲, ▲ 150 125 ▶, ◀ 200 100 ▼, ▼ 200 125; 125 ◀, 275 ▲, 0 ▶; 275			N: 150; 125 ◀, 150 ▼, 0 ▶; 0 250 ▲, ▲ 0 0 ▶, ◀ 0 25 ▼, ▼ 0 250; 50 ◀, 150 ▲, 0 ▶; 150		

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.1 387 NBL 11.0 101 NBT 10.5 387 NBR 3.9 39 EBL 61.2 168 EBT 74.2 55 EBR 6.8 0 SBL 12.3 51 SBT 11.0 158 SBR 7.0 0 WBL 67.9 128 WBT 83.3 128 WBR 16.3 109	MVMNT DELAY QUEUE ALL 16.7 276 NBL 72.9 91 NBT 72.2 91 NBR 8.5 9 EBL 75.6 270 EBT 13.8 232 EBR 13.2 202 SBL 79.0 131 SBT 75.6 131 SBR 10.5 23 WBL 78.4 144 WBT 6.3 162 WBR 2.0 0	MVMNT DELAY QUEUE ALL 33.3 390 NBL 49.5 147 NBT 59.2 282 NBR 44.0 251 EBL 58.9 167 EBT 20.3 180 EBR 44.6 235 SBL 61.6 220 SBT 60.0 275 SBR 0.0 0 WBL 1.4 0 WBT 23.8 390 WBR 14.4 322	MVMNT DELAY QUEUE ALL 27.6 451 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 38.6 431 EBT 7.7 173 EBR1 2.9 103 EBR2 9.2 0 SBL 25.9 131 SBT 0.0 0 SBR 34.3 358 WBL1 64.5 161 WBL2 56.0 382 WBT 25.1 326 WBR 0.0 0	MVMNT DELAY QUEUE ALL 15.8 355 NBL 17.1 289 NBT 0.0 0 NBR 28.8 107 EBL 0.0 0 EBT 20.4 209 EBR 0.0 0 SBL 26.5 166 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 26.1 343 WBR 3.4 126
MAX APPROACH QUEUE LENGTH (FEET)	N 158 ◄ 0 ▼ 158 ► 51 → 128 168 ▲ ▲ 109 55 ► ◄ 128 0 ▼ ▼ 128 168 ◄ 101 ▲ 387 ► 39 → 387	N 131 ◄ 23 ▼ 131 ► 131 → 162 270 ▲ ▲ 0 232 ► ◄ 162 202 ▼ ▼ 144 270 ◄ 91 ▲ 91 ► 9 → 91	N 275 ◄ 0 ▼ 275 ► 220 → 390 167 ▲ ▲ 322 180 ► ◄ 390 235 ▼ ▼ 0 235 ◄ 147 ▲ 282 ► 251 → 282	N 358 ◄ 358 ▼ 0 ► 131 → 382 431 ▲ ▲ 0 173 ► ◄ 326 103 ▼ ▼ 161 0 ▼ ▼ 382 431 ◄ 0 ▲ 0 ► 0 → 0	N 166 ◄ 0 ▼ 0 ► 166 → 343 0 ▲ ▲ 126 209 ► ◄ 343 0 ▼ ▼ 0 209 ◄ 289 ▲ 0 ► 107 → 289
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 175 ◄ 0 ▼ 175 ► 75 → 150 175 ▲ ▲ 125 75 ► ◄ 150 0 ▼ ▼ 150 175 ◄ 125 ▲ 400 ► 50 → 400	N 150 ◄ 25 ▼ 150 ► 150 → 175 275 ▲ ▲ 0 250 ► ◄ 175 225 ▼ ▼ 150 275 ◄ 100 ▲ 100 ► 25 → 100	N 300 ◄ 0 ▼ 300 ► 225 → 400 175 ▲ ▲ 325 200 ► ◄ 400 250 ▼ ▼ 0 250 ◄ 150 ▲ 300 ► 275 → 300	N 375 ◄ 375 ▼ 0 ► 150 → 400 450 ▲ ▲ 0 175 ► ◄ 350 125 ▼ ▼ 175 0 ▼ ▼ 400 450 ◄ 0 ▲ 0 ► 0 → 0	N 175 ◄ 0 ▼ 0 ► 175 → 350 0 ▲ ▲ 150 225 ► ◄ 350 0 ▼ ▼ 0 225 ◄ 300 ▲ 0 ► 125 → 300

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.3	157	ALL	24.5	382	ALL	10.9	183	ALL	20.3	278
	NBL	0.0	0	NBL	55.1	281	NBL	6.8	78	NBL	16.7	35
	NBT	0.0	0	NBT	55.7	58	NBT	6.9	148	NBT	20.3	278
	NBR	0.0	0	NBR	13.9	15	NBR	5.7	119	NBR	0.0	0
	EBL	25.5	120	EBL	61.0	140	EBL	56.9	86	EBL	15.5	85
	EBT	0.0	0	EBT	9.4	208	EBT	75.5	61	EBT	0.0	0
	EBR	0.0	0	EBR	4.5	12	EBR	7.9	29	EBR	3.9	0
	SBL	0.0	0	SBL	39.5	33	SBL	6.5	74	SBL	0.0	0
	SBT	0.0	0	SBT	67.8	45	SBT	4.3	85	SBT	21.4	173
	SBR	9.1	0	SBR	10.4	8	SBR	2.6	68	SBR	16.2	173
	WBL	0.0	0	WBL	10.8	28	WBL	61.3	132	WBL	34.3	153
	WBT	2.7	143	WBT	18.6	382	WBT	73.4	167	WBT	41.1	69
	WBR	0.0	0	WBR	4.2	0	WBR	22.1	131	WBR	3.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ 143			N 45 / 8 ◀ 45 ▼ 33 ▶ 382			N 85 / 68 ◀ 85 ▼ 74 ▶ 167			N 173 / 173 ◀ 173 ▼ 0 ▶ 153		
	120 ▲		▲ 0	140 ▲		▲ 0	86 ▲		▲ 131	85 ▲		▲ 0
	0 ▶		◀ 143	208 ▶		◀ 382	61 ▶		◀ 167	0 ▶		◀ 69
	0 ▼		▼ 0	12 ▼		▼ 28	29 ▼		▼ 132	0 ▼		▼ 153
	120 / 0 ◀ 0 ▲ 0 ▶ 0			208 / 281 ◀ 58 ▲ 15 ▶ 281			86 / 78 ◀ 148 ▲ 119 ▶ 148			85 / 35 ◀ 278 ▲ 0 ▶ 278		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ 150			N 50 / 25 ◀ 50 ▼ 50 ▶ 400			N 100 / 75 ◀ 100 ▼ 75 ▶ 175			N 175 / 175 ◀ 175 ▼ 0 ▶ 175		
	125 ▲		▲ 0	150 ▲		▲ 0	100 ▲		▲ 150	100 ▲		▲ 0
	0 ▶		◀ 150	225 ▶		◀ 400	75 ▶		◀ 175	0 ▶		◀ 75
	0 ▼		▼ 0	25 ▼		▼ 50	50 ▼		▼ 150	0 ▼		▼ 175
	125 / 0 ◀ 0 ▲ 0 ▶ 0			225 / 300 ◀ 75 ▲ 25 ▶ 300			100 / 100 ◀ 150 ▲ 125 ▶ 150			100 / 50 ◀ 300 ▲ 0 ▶ 300		

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 16.1 636 NBL 15.7 128 NBT 12.1 636 NBR 5.6 67 EBL 62.6 236 EBT 73.3 68 EBR 7.5 3 SBL 20.5 56 SBT 13.8 177 SBR 9.0 7 WBL 65.9 130 WBT 75.8 130 WBR 21.1 111	MVMNT DELAY QUEUE ALL 19.5 359 NBL 74.3 99 NBT 69.2 99 NBR 10.6 4 EBL 86.4 357 EBT 16.7 279 EBR 15.9 249 SBL 85.0 152 SBT 85.3 152 SBR 14.2 67 WBL 74.2 172 WBT 8.3 235 WBR 2.6 6	MVMNT DELAY QUEUE ALL 34.8 602 NBL 51.1 184 NBT 63.0 385 NBR 47.3 327 EBL 50.1 197 EBT 24.3 212 EBR 44.9 317 SBL 57.7 288 SBT 57.2 384 SBR 0.0 0 WBL 1.8 0 WBT 27.4 557 WBR 15.9 544	MVMNT DELAY QUEUE ALL 27.9 530 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 35.8 500 EBT 8.4 254 EBR1 2.2 123 EBR2 11.4 0 SBL 30.7 182 SBT 0.0 0 SBR 32.4 446 WBL1 62.7 196 WBL2 49.6 457 WBT 29.0 428 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.1 603 NBL 24.4 420 NBT 0.0 0 NBR 36.5 138 EBL 0.0 0 EBT 24.5 315 EBR 0.0 0 SBL 38.5 255 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 32.1 603 WBR 8.0 386
MAX APPROACH QUEUE LENGTH (FEET)	N ▲ 177 ◄ 7 ▼ 177 ► 56 → 130 236 ▲ ▲ 111 68 ► ◄ 130 3 ▼ ▼ 130 236 ◄ 128 ▲ 636 ► 67 → 636	N ▲ 152 ◄ 67 ▼ 152 ► 152 → 235 357 ▲ ▲ 6 279 ► ◄ 235 249 ▼ ▼ 172 357 ◄ 99 ▲ 99 ► 4 → 99	N ▲ 384 ◄ 0 ▼ 384 ► 288 → 557 197 ▲ ▲ 544 212 ► ◄ 557 317 ▼ ▼ 0 317 ◄ 184 ▲ 385 ► 327 → 385	N ▲ 446 ◄ 446 ▼ 0 ► 182 → 457 500 ▲ ▲ 0 254 ► ◄ 428 123 ▼ ▼ 196 0 ▼ ▼ 457 500 ◄ 0 ▲ 0 ► 0 → 0	N ▲ 255 ◄ 0 ▼ 0 ► 255 → 603 0 ▲ ▲ 386 315 ► ◄ 603 0 ▼ ▼ 0 315 ◄ 420 ▲ 0 ► 138 → 420
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N ▲ 200 ◄ 25 ▼ 200 ► 75 → 150 250 ▲ ▲ 125 75 ► ◄ 150 25 ▼ ▼ 150 250 ◄ 150 ▲ 650 ► 75 → 650	N ▲ 175 ◄ 75 ▼ 175 ► 175 → 250 375 ▲ ▲ 25 300 ► ◄ 250 250 ▼ ▼ 175 375 ◄ 100 ▲ 100 ► 25 → 100	N ▲ 400 ◄ 0 ▼ 400 ► 300 → 575 200 ▲ ▲ 550 225 ► ◄ 575 325 ▼ ▼ 0 325 ◄ 200 ▲ 400 ► 350 → 400	N ▲ 450 ◄ 450 ▼ 0 ► 200 → 475 525 ▲ ▲ 0 275 ► ◄ 450 125 ▼ ▼ 200 0 ▼ ▼ 475 525 ◄ 0 ▲ 0 ► 0 → 0	N ▲ 275 ◄ 0 ▼ 0 ► 275 → 625 0 ▲ ▲ 400 325 ► ◄ 625 0 ▼ ▼ 0 325 ◄ 425 ▲ 0 ► 150 → 425

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.5	175	ALL	30.3	588	ALL	14.0	273	ALL	18.9	381
	NBL	0.0	0	NBL	63.9	461	NBL	11.0	122	NBL	14.6	38
	NBT	0.0	0	NBT	48.2	71	NBT	10.9	254	NBT	18.2	381
	NBR	0.0	0	NBR	20.0	30	NBR	9.1	218	NBR	0.0	0
	EBL	38.4	160	EBL	63.4	169	EBL	58.0	115	EBL	19.7	115
	EBT	0.0	0	EBT	12.7	325	EBT	72.2	64	EBT	0.0	0
	EBR	0.0	0	EBR	6.1	33	EBR	9.8	36	EBR	3.8	0
	SBL	0.0	0	SBL	42.3	48	SBL	12.2	110	SBL	0.0	0
	SBT	0.0	0	SBT	69.1	61	SBT	7.0	153	SBT	18.8	213
	SBR	11.8	0	SBR	14.3	9	SBR	5.5	140	SBR	17.1	213
	WBL	0.0	0	WBL	12.6	49	WBL	59.9	181	WBL	33.9	171
	WBT	2.4	130	WBT	25.7	559	WBT	66.4	209	WBT	39.4	73
	WBR	0.0	0	WBR	6.6	0	WBR	22.8	173	WBR	5.4	1
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ▲ ◀ 0 ▼ 0 ▶ 0 → 130			N 61 ▲ ◀ 9 ▼ 61 ▶ 48 → 559			N 153 ▲ ◀ 140 ▼ 153 ▶ 110 → 209			N 213 ▲ ◀ 213 ▼ 213 ▶ 0 → 171		
	160 ▲		▲ 0	169 ▲		▲ 0	115 ▲		▲ 173	115 ▲		▲ 1
	0 ▶		◀ 130	325 ▶		◀ 559	64 ▶		◀ 209	0 ▶		◀ 73
	0 ▼		▼ 0	33 ▼		▼ 49	36 ▼		▼ 181	0 ▼		▼ 171
	160 → ◀ 0 ▲ 0 ▶ 0 → 0			325 → ◀ 461 ▲ 71 ▶ 30 → 461			115 → ◀ 122 ▲ 254 ▶ 218 → 254			115 → ◀ 38 ▲ 381 ▶ 0 → 381		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ▲ ◀ 0 ▼ 0 ▶ 0 → 150			N 75 ▲ ◀ 25 ▼ 75 ▶ 50 → 575			N 175 ▲ ◀ 150 ▼ 175 ▶ 125 → 225			N 225 ▲ ◀ 225 ▼ 225 ▶ 0 → 175		
	175 ▲		▲ 0	175 ▲		▲ 0	125 ▲		▲ 175	125 ▲		▲ 25
	0 ▶		◀ 150	325 ▶		◀ 575	75 ▶		◀ 225	0 ▶		◀ 75
	0 ▼		▼ 0	50 ▼		▼ 50	50 ▼		▼ 200	0 ▼		▼ 175
	175 → ◀ 0 ▲ 0 ▶ 0 → 0			325 → ◀ 475 ▲ 75 ▶ 50 → 475			125 → ◀ 125 ▲ 275 ▶ 225 → 275			125 → ◀ 50 ▲ 400 ▶ 0 → 400		

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.5 428 NBL 12.0 109 NBT 10.4 428 NBR 4.4 50 EBL 66.0 184 EBT 77.6 56 EBR 7.1 10 SBL 13.8 44 SBT 11.9 159 SBR 7.3 2 WBL 71.6 134 WBT 80.3 134 WBR 18.3 114	MVMNT DELAY QUEUE ALL 17.4 308 NBL 72.7 89 NBT 74.4 89 NBR 9.2 2 EBL 77.9 301 EBT 14.6 238 EBR 12.7 208 SBL 79.1 164 SBT 81.3 164 SBR 11.6 29 WBL 77.1 158 WBT 6.6 171 WBR 2.3 0	MVMNT DELAY QUEUE ALL 33.5 462 NBL 46.4 143 NBT 60.6 336 NBR 44.2 248 EBL 56.9 176 EBT 22.0 198 EBR 43.1 249 SBL 59.8 241 SBT 58.7 310 SBR 0.0 0 WBL 1.5 0 WBT 25.1 423 WBR 14.6 401	MVMNT DELAY QUEUE ALL 27.4 442 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 37.5 424 EBT 6.9 192 EBR1 2.6 111 EBR2 9.8 0 SBL 29.0 148 SBT 0.0 0 SBR 33.3 360 WBL1 62.6 178 WBL2 54.3 396 WBT 26.3 352 WBR 0.0 0	MVMNT DELAY QUEUE ALL 17.5 473 NBL 18.7 324 NBT 0.0 0 NBR 31.6 121 EBL 0.0 0 EBT 22.9 253 EBR 0.0 0 SBL 31.6 178 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 28.1 473 WBR 4.4 256
MAX APPROACH QUEUE LENGTH (FEET)	N 159 ▲ | 2 ◄ 159 ▼ 44 ► | 134 184 ▲ ▲ 114 56 ► ◄ 134 10 ▼ ▼ 134 184 | 109 ◄ 428 ▲ 50 ► | 428	N 164 ▲ | 29 ◄ 164 ▼ 164 ► | 171 301 ▲ ▲ 0 238 ► ◄ 171 208 ▼ ▼ 158 301 | 89 ◄ 89 ▲ 2 ► | 89	N 310 ▲ | 0 ◄ 310 ▼ 241 ► | 423 176 ▲ ▲ 401 198 ► ◄ 423 249 ▼ ▼ 0 249 | 143 ◄ 336 ▲ 248 ► | 336	N 360 ▲ | 360 ◄ 0 ▼ 148 ► | 396 424 ▲ ▲ 0 192 ► ◄ 352 111 ▼ ▼ 178 0 ▼ ▼ 396 424 | 0 ◄ 0 ▲ 0 ► | 0	N 178 ▲ | 0 ◄ 0 ▼ 178 ► | 473 0 ▲ ▲ 256 253 ► ◄ 473 0 ▼ ▼ 0 253 | 324 ◄ 0 ▲ 121 ► | 324
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 175 ▲ | 25 ◄ 175 ▼ 50 ► | 150 200 ▲ ▲ 125 75 ► ◄ 150 25 ▼ ▼ 150 200 | 125 ◄ 450 ▲ 50 ► | 450	N 175 ▲ | 50 ◄ 175 ▼ 175 ► | 175 325 ▲ ▲ 0 250 ► ◄ 175 225 ▼ ▼ 175 325 | 100 ◄ 100 ▲ 25 ► | 100	N 325 ▲ | 0 ◄ 325 ▼ 250 ► | 425 200 ▲ ▲ 425 200 ► ◄ 425 250 ▼ ▼ 0 250 | 150 ◄ 350 ▲ 250 ► | 350	N 375 ▲ | 375 ◄ 0 ▼ 150 ► | 400 425 ▲ ▲ 0 200 ► ◄ 375 125 ▼ ▼ 200 0 ▼ ▼ 400 425 | 0 ◄ 0 ▲ 0 ► | 0	N 200 ▲ | 0 ◄ 0 ▼ 200 ► | 475 0 ▲ ▲ 275 275 ► ◄ 475 0 ▼ ▼ 0 275 | 325 ◄ 0 ▲ 125 ► | 325

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.6	162	ALL	26.0	426	ALL	11.3	215	ALL	19.9	301
	NBL	0.0	0	NBL	56.9	308	NBL	7.3	85	NBL	15.4	30
	NBT	0.0	0	NBT	38.8	55	NBT	7.6	190	NBT	20.1	301
	NBR	0.0	0	NBR	15.0	16	NBR	6.4	155	NBR	0.0	0
	EBL	32.0	138	EBL	61.6	149	EBL	58.8	96	EBL	15.2	106
	EBT	0.0	0	EBT	10.3	235	EBT	69.4	56	EBT	0.0	0
	EBR	0.0	0	EBR	5.1	9	EBR	10.9	30	EBR	3.8	0
	SBL	0.0	0	SBL	46.6	39	SBL	8.1	105	SBL	0.0	0
	SBT	0.0	0	SBT	72.3	48	SBT	4.8	98	SBT	20.8	204
	SBR	9.7	0	SBR	11.4	12	SBR	3.2	86	SBR	16.5	204
	WBL	0.0	0	WBL	10.2	33	WBL	60.4	150	WBL	33.5	138
	WBT	2.4	141	WBT	20.8	425	WBT	70.0	170	WBT	38.3	73
	WBR	0.0	0	WBR	5.0	0	WBR	20.6	133	WBR	3.9	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 141			N 48 / 12 48 39 / 425			N 105 / 86 98 105 / 170			N 204 / 204 204 0 / 138		
	138 ▲		▲ 0	149 ▲		▲ 0	96 ▲		▲ 133	106 ▲		▲ 0
	0 ▶		◀ 141	235 ▶		◀ 425	56 ▶		◀ 170	0 ▶		◀ 73
	0 ▼		▼ 0	9 ▼		▼ 33	30 ▼		▼ 150	0 ▼		▼ 138
	138 / 0 0 0 / 0			235 / 308 55 16 / 308			96 / 85 190 155 / 190			106 / 30 301 0 / 301		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 150			N 50 / 25 50 50 / 425			N 125 / 100 100 125 / 175			N 225 / 225 225 0 / 150		
	150 ▲		▲ 0	150 ▲		▲ 0	100 ▲		▲ 150	125 ▲		▲ 0
	0 ▶		◀ 150	250 ▶		◀ 425	75 ▶		◀ 175	0 ▶		◀ 75
	0 ▼		▼ 0	25 ▼		▼ 50	50 ▼		▼ 150	0 ▼		▼ 150
	150 / 0 0 0 / 0			250 / 325 75 25 / 325			100 / 100 200 175 / 200			125 / 50 325 0 / 325		

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 1

VISSIM RESULTS

Cattlemen Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	22.5	409
NBL	16.5	80
NBT	11.9	393
NBR	4.5	25
EBL	56.7	217
EBT	68.8	67
EBR	8.8	8
SBL	17.4	65
SBT	21.1	318
SBR	15.8	13
WBL	68.4	252
WBT	73.8	252
WBR	30.8	232

Bee Ridge Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	22.4	329
NBL	75.8	147
NBT	72.3	147
NBR	13.7	31
EBL	74.3	242
EBT	20.0	325
EBR	20.9	295
SBL	84.8	167
SBT	87.1	167
SBR	13.0	88
WBL	86.0	237
WBT	7.2	160
WBR	2.1	0

Bee Ridge Road/Cattlemen Road

MVMNT	DELAY	QUEUE
ALL	39.4	486
NBL	48.5	173
NBT	64.5	293
NBR	51.5	319
EBL	64.7	205
EBT	28.6	255
EBR	39.9	265
SBL	57.2	397
SBT	66.1	474
SBR	0.0	0
WBL	22.9	168
WBT	19.3	424
WBR	23.7	373

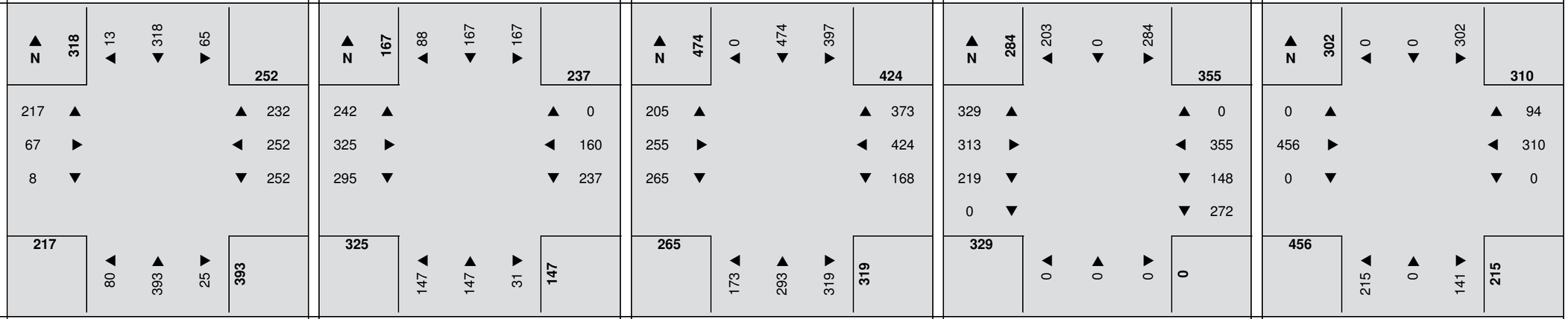
I-75 West Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	22.9	403
NBL	0.0	0
NBT	0.0	0
NBR	0.0	0
EBL	8.0	329
EBT	10.6	313
EBR1	7.8	219
EBR2	11.9	0
SBL	60.7	284
SBT	0.0	0
SBR	11.4	203
WBL1	31.8	148
WBL2	27.0	272
WBT	51.7	355
WBR	0.0	0

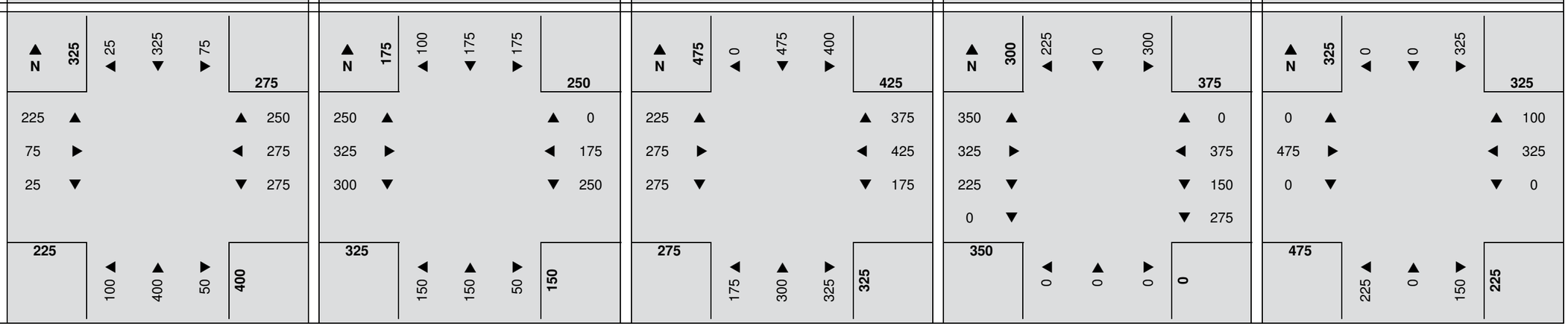
I-75 East Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	15.5	456
NBL	20.2	215
NBT	0.0	0
NBR	34.4	141
EBL	0.0	0
EBT	20.3	456
EBR	0.0	0
SBL	26.2	302
SBT	0.0	0
SBR	0.0	0
WBL	0.0	0
WBT	20.1	310
WBR	2.2	94

MAX APPROACH QUEUE LENGTH (FEET)



MAX APPROACH QUEUE LENGTH ROUNDED (FEET)



VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.0	171	ALL	18.4	470	ALL	15.2	299	ALL	19.1	339
	NBL	0.0	0	NBL	51.9	222	NBL	13.4	140	NBL	16.4	46
	NBT	0.0	0	NBT	48.1	97	NBT	12.9	252	NBT	16.7	265
	NBR	0.0	0	NBR	16.4	51	NBR	9.5	216	NBR	0.0	0
	EBL	25.9	153	EBL	67.3	98	EBL	52.0	106	EBL	19.3	133
	EBT	0.0	0	EBT	11.7	466	EBT	66.1	113	EBT	0.0	0
	EBR	0.0	0	EBR	10.8	154	EBR	16.8	86	EBR	4.3	2
	SBL	0.0	0	SBL	42.9	77	SBL	8.8	82	SBL	0.0	0
	SBT	0.0	0	SBT	63.4	46	SBT	8.4	239	SBT	21.8	328
	SBR	17.1	17	SBR	9.7	37	SBR	7.7	227	SBR	22.2	328
	WBL	0.0	0	WBL	10.8	36	WBL	58.0	201	WBL	33.6	135
	WBT	2.6	123	WBT	14.4	263	WBT	62.4	180	WBT	39.0	71
	WBR	0.0	0	WBR	3.3	0	WBR	19.1	143	WBR	3.1	0
MAX APPROACH QUEUE LENGTH (FEET)	N 17 ◀ 17 ▼ 0 ▶ 0 → 123			N 77 ◀ 37 ▼ 46 ▶ 77 → 263			N 239 ◀ 227 ▼ 239 ▶ 82 → 201			N 328 ◀ 328 ▼ 328 ▶ 0 → 135		
	153 ▲		▲ 0	98 ▲		▲ 0	106 ▲		▲ 143	133 ▲		▲ 0
	0 ▶		◀ 123	466 ▶		◀ 263	113 ▶		◀ 180	0 ▶		◀ 71
	0 ▼		▼ 0	154 ▼		▼ 36	86 ▼		▼ 201	2 ▼		▼ 135
	153	0 ◀ 0 ▲ 0 ▶	0	466	222 ◀ 97 ▲ 51 ▶	222	113	140 ◀ 252 ▲ 216 ▶	252	133	46 ◀ 265 ▲ 0 ▶	265
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 25 ◀ 25 ▼ 0 ▶ 0 → 125			N 100 ◀ 50 ▼ 50 ▶ 100 → 275			N 250 ◀ 250 ▼ 250 ▶ 100 → 225			N 350 ◀ 350 ▼ 350 ▶ 0 → 150		
	175 ▲		▲ 0	100 ▲		▲ 0	125 ▲		▲ 150	150 ▲		▲ 0
	0 ▶		◀ 125	475 ▶		◀ 275	125 ▶		◀ 200	0 ▶		◀ 75
	0 ▼		▼ 0	175 ▼		▼ 50	100 ▼		▼ 225	25 ▼		▼ 150
	175	0 ◀ 0 ▲ 0 ▶	0	475	225 ◀ 100 ▲ 75 ▶	225	125	150 ◀ 275 ▲ 225 ▶	275	150	50 ◀ 275 ▲ 0 ▶	275

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.3 501 NBL 20.2 87 NBT 10.7 489 NBR 4.8 36 EBL 58.5 256 EBT 73.4 62 EBR 10.0 17 SBL 21.9 73 SBT 23.4 364 SBR 18.1 16 WBL 78.8 345 WBT 77.9 345 WBR 42.6 325	MVMNT DELAY QUEUE ALL 24.4 437 NBL 85.2 186 NBT 74.6 186 NBR 16.4 60 EBL 77.3 262 EBT 22.5 412 EBR 23.0 382 SBL 96.5 290 SBT 108.0 290 SBR 16.1 149 WBL 81.2 242 WBT 7.5 186 WBR 2.3 0	MVMNT DELAY QUEUE ALL 42.0 537 NBL 47.8 163 NBT 65.3 347 NBR 53.2 374 EBL 62.8 225 EBT 35.0 338 EBR 40.6 312 SBL 53.5 472 SBT 62.9 524 SBR 0.0 0 WBL 27.7 193 WBT 24.5 495 WBR 29.5 452	MVMNT DELAY QUEUE ALL 23.1 533 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 9.6 454 EBT 11.5 373 EBR1 8.0 252 EBR2 14.3 0 SBL 56.9 320 SBT 0.0 0 SBR 13.8 231 WBL1 32.7 163 WBL2 30.3 341 WBT 48.7 382 WBR 0.0 0	MVMNT DELAY QUEUE ALL 17.7 593 NBL 23.6 240 NBT 0.0 0 NBR 41.5 158 EBL 0.0 0 EBT 22.2 587 EBR 0.0 0 SBL 28.7 346 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 23.5 422 WBR 3.4 205
MAX APPROACH QUEUE LENGTH (FEET)	N 364 | 16 ◄ 364 ▼ 73 ► 345 256 ▲ ▲ 325 62 ► ◄ 345 17 ▼ ▼ 345 256 | ◄ 87 ▲ 489 ► 36 | 489	N 290 | 149 ◄ 290 ▼ 290 ► 242 262 ▲ ▲ 0 412 ► ◄ 186 382 ▼ ▼ 242 412 | ◄ 186 ▲ 186 ► 60 | 186	N 524 | 0 ◄ 524 ▼ 472 ► 495 225 ▲ ▲ 452 338 ► ◄ 495 312 ▼ ▼ 193 338 | ◄ 163 ▲ 347 ► 374 | 374	N 320 | 231 ◄ 0 ▼ 320 ► 382 454 ▲ ▲ 0 373 ► ◄ 382 252 ▼ ▼ 163 0 ▼ ▼ 341 454 | ◄ 0 ▲ 0 ► 0 | 0	N 346 | 0 ◄ 0 ▼ 346 ► 422 0 ▲ ▲ 205 587 ► ◄ 422 0 ▼ ▼ 0 587 | ◄ 240 ▲ 0 ► 158 | 240
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 375 | 25 ◄ 375 ▼ 75 ► 350 275 ▲ ▲ 350 75 ► ◄ 350 25 ▼ ▼ 350 275 | ◄ 100 ▲ 500 ► 50 | 500	N 300 | 150 ◄ 300 ▼ 300 ► 250 275 ▲ ▲ 0 425 ► ◄ 200 400 ▼ ▼ 250 425 | ◄ 200 ▲ 200 ► 75 | 200	N 525 | 0 ◄ 525 ▼ 475 ► 500 250 ▲ ▲ 475 350 ► ◄ 500 325 ▼ ▼ 200 350 | ◄ 175 ▲ 350 ► 375 | 375	N 325 | 250 ◄ 0 ▼ 325 ► 400 475 ▲ ▲ 0 375 ► ◄ 400 275 ▼ ▼ 175 0 ▼ ▼ 350 475 | ◄ 0 ▲ 0 ► 0 | 0	N 350 | 0 ◄ 0 ▼ 350 ► 425 0 ▲ ▲ 225 600 ► ◄ 425 0 ▼ ▼ 0 600 | ◄ 250 ▲ 0 ► 175 | 250

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	8.3	168	ALL	20.7	497	ALL	18.3	370	ALL	18.6	370
	NBL	0.0	0	NBL	53.4	225	NBL	16.7	188	NBL	15.1	45
	NBT	0.0	0	NBT	50.1	77	NBT	16.3	344	NBT	14.9	252
	NBR	0.0	0	NBR	15.7	28	NBR	12.6	309	NBR	0.0	0
	EBL	32.0	168	EBL	66.6	117	EBL	52.1	112	EBL	23.0	166
	EBT	0.0	0	EBT	13.9	495	EBT	72.9	141	EBT	0.0	0
	EBR	0.0	0	EBR	13.9	218	EBR	21.4	114	EBR	5.0	0
	SBL	0.0	0	SBL	43.3	73	SBL	12.2	115	SBL	0.0	0
	SBT	0.0	0	SBT	70.3	62	SBT	11.1	338	SBT	21.1	370
	SBR	20.6	2	SBR	11.1	44	SBR	10.0	326	SBR	24.1	370
	WBL	0.0	0	WBL	13.3	34	WBL	55.6	244	WBL	33.3	159
	WBT	2.6	110	WBT	17.0	353	WBT	71.5	205	WBT	39.1	104
	WBR	0.0	0	WBR	3.4	0	WBR	24.3	168	WBR	3.6	0
MAX APPROACH QUEUE LENGTH (FEET)	N 2 / 2 0 0 / 110			N 73 / 44 62 73 / 353			N 338 / 326 338 115 / 244			N 370 / 370 370 0 / 159		
	168 ▲		▲ 0	117 ▲		▲ 0	112 ▲		▲ 168	166 ▲		▲ 0
	0 ▶		◀ 110	495 ▶		◀ 353	141 ▶		◀ 205	0 ▶		◀ 104
	0 ▼		▼ 0	218 ▼		▼ 34	114 ▼		▼ 244	0 ▼		▼ 159
	168 / 0 0 0 / 0			495 / 225 77 28 / 225			141 / 188 344 309 / 344			166 / 45 252 0 / 252		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 25 / 25 0 0 / 125			N 75 / 50 75 75 / 375			N 350 / 350 350 125 / 250			N 375 / 375 375 0 / 175		
	175 ▲		▲ 0	125 ▲		▲ 0	125 ▲		▲ 175	175 ▲		▲ 0
	0 ▶		◀ 125	500 ▶		◀ 375	150 ▶		◀ 225	0 ▶		◀ 125
	0 ▼		▼ 0	225 ▼		▼ 50	125 ▼		▼ 250	0 ▼		▼ 175
	175 / 0 0 0 / 0			500 / 250 100 50 / 250			150 / 200 350 325 / 350			175 / 50 275 0 / 275		

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.5 441 NBL 13.4 66 NBT 11.7 441 NBR 4.4 34 EBL 57.3 191 EBT 76.6 60 EBR 8.2 12 SBL 16.2 71 SBT 20.0 276 SBR 13.4 0 WBL 66.5 261 WBT 76.4 261 WBR 33.6 241	MVMNT DELAY QUEUE ALL 21.2 292 NBL 74.7 128 NBT 64.4 128 NBR 11.8 27 EBL 76.0 216 EBT 18.7 292 EBR 18.9 262 SBL 82.5 154 SBT 86.2 154 SBR 11.6 65 WBL 84.7 205 WBT 6.5 139 WBR 2.1 0	MVMNT DELAY QUEUE ALL 38.3 428 NBL 45.4 138 NBT 63.1 282 NBR 49.9 280 EBL 67.0 189 EBT 27.1 239 EBR 39.1 237 SBL 58.3 337 SBT 67.5 416 SBR 0.0 0 WBL 21.8 160 WBT 17.9 363 WBR 22.1 341	MVMNT DELAY QUEUE ALL 22.5 334 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 7.6 246 EBT 10.3 278 EBR1 7.1 206 EBR2 11.0 0 SBL 60.7 261 SBT 0.0 0 SBR 10.1 167 WBL1 31.8 142 WBL2 27.8 236 WBT 52.7 314 WBR 0.0 0	MVMNT DELAY QUEUE ALL 14.3 395 NBL 19.3 184 NBT 0.0 0 NBR 32.8 122 EBL 0.0 0 EBT 18.3 387 EBR 0.0 0 SBL 22.2 286 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 19.5 311 WBR 1.9 94
MAX APPROACH QUEUE LENGTH (FEET)	N 276 | 0 276 71 | 261 191 ▲ 241 60 ► 261 12 ▼ 261 191 | 66 441 34 | 441	N 154 | 65 154 154 | 205 216 ▲ 0 292 ► 139 262 ▼ 205 292 | 128 128 27 | 128	N 416 | 0 416 337 | 363 189 ▲ 341 239 ► 363 237 ▼ 160 239 | 138 282 280 | 282	N 261 | 167 0 261 | 314 246 ▲ 0 278 ► 314 206 ▼ 142 0 ▼ 236 278 | 0 0 0 | 0	N 286 | 0 0 286 | 311 0 ▲ 94 387 ► 311 0 ▼ 0 387 | 184 0 122 | 184
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 300 | 0 300 75 | 275 200 ▲ 250 75 ► 275 25 ▼ 275 200 | 75 450 50 | 450	N 175 | 75 175 175 | 225 225 ▲ 0 300 ► 150 275 ▼ 225 300 | 150 150 50 | 150	N 425 | 0 425 350 | 375 200 ▲ 350 250 ► 375 250 ▼ 175 250 | 150 300 300 | 300	N 275 | 175 0 275 | 325 250 ▲ 0 300 ► 325 225 ▼ 150 0 ▼ 250 300 | 0 0 0 | 0	N 300 | 0 0 300 | 325 0 ▲ 100 400 ► 325 0 ▼ 0 400 | 200 0 125 | 200

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.4	158	ALL	17.6	380	ALL	14.4	243	ALL	19.5	281
	NBL	0.0	0	NBL	50.0	189	NBL	11.8	121	NBL	15.5	38
	NBT	0.0	0	NBT	48.8	73	NBT	11.4	207	NBT	17.4	210
	NBR	0.0	0	NBR	14.0	28	NBR	8.8	171	NBR	0.0	0
	EBL	23.5	132	EBL	65.5	98	EBL	53.7	95	EBL	17.0	123
	EBT	0.0	0	EBT	11.0	371	EBT	75.7	106	EBT	0.0	0
	EBR	0.0	0	EBR	9.6	126	EBR	16.6	79	EBR	3.9	2
	SBL	0.0	0	SBL	42.5	72	SBL	7.2	88	SBL	0.0	0
	SBT	0.0	0	SBT	67.8	47	SBT	7.5	215	SBT	22.5	281
	SBR	13.8	0	SBR	9.2	26	SBR	8.2	202	SBR	21.9	281
	WBL	0.0	0	WBL	10.0	36	WBL	59.1	195	WBL	33.5	135
	WBT	2.6	128	WBT	13.4	268	WBT	67.6	137	WBT	40.8	70
	WBR	0.0	0	WBR	3.2	0	WBR	18.6	101	WBR	2.5	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 128			N 72 / 26 47 72 / 268			N 215 / 202 215 88 / 195			N 281 / 281 281 0 / 135		
	132 ▲		▲ 0	98 ▲		▲ 0	95 ▲		▲ 101	123 ▲		▲ 0
	0 ▶		◀ 128	371 ▶		◀ 268	106 ▶		◀ 137	0 ▶		◀ 70
	0 ▼		▼ 0	126 ▼		▼ 36	79 ▼		▼ 195	2 ▼		▼ 135
	132 / 0 0 0 / 0			371 / 189 73 28 / 189			106 / 121 207 171 / 207			123 / 38 210 0 / 210		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 150			N 75 / 50 50 75 / 275			N 225 / 225 225 100 / 200			N 300 / 300 300 0 / 150		
	150 ▲		▲ 0	100 ▲		▲ 0	100 ▲		▲ 125	125 ▲		▲ 0
	0 ▶		◀ 150	375 ▶		◀ 275	125 ▶		◀ 150	0 ▶		◀ 75
	0 ▼		▼ 0	150 ▼		▼ 50	100 ▼		▼ 200	25 ▼		▼ 150
	150 / 0 0 0 / 0			375 / 200 75 50 / 200			125 / 125 225 175 / 225			125 / 50 225 0 / 225		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 18.6 436 NBL 75.6 360 NBT 7.8 361 NBR 3.4 2 EBL 72.1 290 EBT 75.3 290 EBR 23.3 303 SBL 20.0 69 SBT 18.2 384 SBR 8.5 38 WBL 65.6 174 WBT 83.4 174 WBR 25.6 135	MVMNT DELAY QUEUE ALL 30.9 1468 NBL 68.6 88 NBT 83.0 333 NBR 32.9 316 EBL 95.2 280 EBT 37.7 1468 EBR 39.0 1453 SBL 76.2 259 SBT 75.0 259 SBR 8.0 35 WBL 110.0 268 WBT 13.2 285 WBR 5.3 0	MVMNT DELAY QUEUE ALL 46.4 477 NBL 75.8 212 NBT 83.3 305 NBR 49.5 327 EBL 56.4 139 EBT 42.2 471 EBR 20.6 157 SBL 90.1 353 SBT 42.9 228 SBR 24.2 155 WBL 71.5 327 WBT 27.8 411 WBR 11.6 221	MVMNT DELAY QUEUE ALL 25.8 714 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.4 352 EBR 1.6 144 SBL 60.6 221 SBT 0.0 0 SBR 41.2 543 WBL 73.4 218 WBT 26.1 714 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N ▲ 384 ◀ 38 ▼ 384 ▶ 69 → 174 290 ▲ → ▲ 135 290 ▶ → ◀ 174 303 ▼ → ▼ 174 303 ◀ 360 ▲ 361 ▶ 2 → 361	N ▲ 259 ◀ 35 ▼ 259 ▶ 259 → 285 280 ▲ → ▲ 0 1468 ▶ → ◀ 285 1453 ▼ → ▼ 268 1468 ◀ 88 ▲ 333 ▶ 316 → 333	N ▲ 353 ◀ 155 ▼ 228 ▶ 353 → 411 139 ▲ → ▲ 221 471 ▶ → ◀ 411 157 ▼ → ▼ 327 471 ◀ 212 ▲ 305 ▶ 327 → 327	N ▲ 543 ◀ 543 ▼ 0 ▶ 221 → 714 0 ▲ → ▲ 0 352 ▶ → ◀ 714 144 ▼ → ▼ 218 352 ◀ 0 ▲ 0 ▶ 0 → 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N ▲ 400 ◀ 50 ▼ 400 ▶ 75 → 175 300 ▲ → ▲ 150 300 ▶ → ◀ 175 325 ▼ → ▼ 175 325 ◀ 375 ▲ 375 ▶ 25 → 375	N ▲ 275 ◀ 50 ▼ 275 ▶ 275 → 300 300 ▲ → ▲ 0 1475 ▶ → ◀ 300 1475 ▼ → ▼ 275 1475 ◀ 100 ▲ 350 ▶ 325 → 350	N ▲ 375 ◀ 175 ▼ 250 ▶ 375 → 425 150 ▲ → ▲ 225 475 ▶ → ◀ 425 175 ▼ → ▼ 350 475 ◀ 225 ▲ 325 ▶ 350 → 350	N ▲ 550 ◀ 550 ▼ 0 ▶ 225 → 725 0 ▲ → ▲ 0 375 ▶ → ◀ 725 150 ▼ → ▼ 225 375 ◀ 0 ▲ 0 ▶ 0 → 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	20.5	728	ALL	28.3	613	ALL	18.2	621	ALL	6.6	240
	NBL	41.2	728	NBL	58.7	307	NBL	16.9	114	NBL	10.0	25
	NBT	0.0	0	NBT	45.7	82	NBT	17.5	621	NBT	3.8	237
	NBR	9.0	135	NBR	17.6	33	NBR	10.2	0	NBR	0.0	0
	EBL	0.0	0	EBL	64.3	160	EBL	61.8	120	EBL	68.1	172
	EBT	22.6	556	EBT	18.3	528	EBT	71.2	73	EBT	0.0	0
	EBR	4.8	266	EBR	9.7	42	EBR	10.1	44	EBR	5.3	3
	SBL	0.0	0	SBL	49.6	67	SBL	30.8	276	SBL	0.0	0
	SBT	0.0	0	SBT	74.5	61	SBT	8.1	163	SBT	4.9	153
	SBR	0.0	0	SBR	11.8	20	SBR	4.2	163	SBR	4.8	123
	WBL	0.0	0	WBL	22.6	56	WBL	60.4	131	WBL	0.0	0
	WBT	19.8	274	WBT	25.1	530	WBT	74.2	172	WBT	0.0	0
	WBR	3.1	2	WBR	6.2	0	WBR	25.5	134	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 274			N 67 / 20 ◀ 61 ▼ 67 ▶ / 530			N 276 / 163 ◀ 163 ▼ 276 ▶ / 172			N 153 / 123 ◀ 153 ▼ 0 ▶ / 0		
	0 ▲		▲ 2	160 ▲		▲ 0	120 ▲		▲ 134	172 ▲		▲ 0
	556 ▶		◀ 274	528 ▶		◀ 530	73 ▶		◀ 172	0 ▶		◀ 0
	266 ▼		▼ 0	42 ▼		▼ 56	44 ▼		▼ 131	3 ▼		▼ 0
	556 / ◀ 728 ▲ 0 ▶ 135 / 728			528 / ◀ 307 ▲ 82 ▶ 33 / 307			120 / ◀ 114 ▲ 621 ▶ 0 / 621			172 / ◀ 25 ▲ 237 ▶ 0 / 237		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 275			N 75 / 25 ◀ 75 ▼ 75 ▶ / 550			N 300 / 175 ◀ 175 ▼ 300 ▶ / 175			N 175 / 125 ◀ 175 ▼ 0 ▶ / 0		
	0 ▲		▲ 25	175 ▲		▲ 0	125 ▲		▲ 150	175 ▲		▲ 0
	575 ▶		◀ 275	550 ▶		◀ 550	75 ▶		◀ 175	0 ▶		◀ 0
	275 ▼		▼ 0	50 ▼		▼ 75	50 ▼		▼ 150	25 ▼		▼ 0
	575 / ◀ 750 ▲ 0 ▶ 150 / 750			550 / ◀ 325 ▲ 100 ▶ 50 / 325			125 / ◀ 125 ▲ 625 ▶ 0 / 625			175 / ◀ 25 ▲ 250 ▶ 0 / 250		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 40.8 1937 NBL 87.1 532 NBT 9.8 530 NBR 4.3 0 EBL 72.5 348 EBT 104.4 348 EBR 82.8 361 SBL 63.3 118 SBT 66.3 1937 SBR 15.4 42 WBL 78.2 247 WBT 106.0 247 WBR 40.1 209	MVMNT DELAY QUEUE ALL 77.7 5957 NBL 68.5 106 NBT 105.7 502 NBR 56.0 485 EBL 163.2 778 EBT 111.0 5957 EBR 104.3 5942 SBL 100.9 449 SBT 97.6 449 SBR 15.7 51 WBL 119.7 423 WBT 53.5 1058 WBR 17.7 11	MVMNT DELAY QUEUE ALL 76.7 1012 NBL 79.5 264 NBT 174.4 864 NBR 74.1 423 EBL 62.5 162 EBT 46.7 555 EBR 21.4 192 SBL 145.3 682 SBT 45.6 286 SBR 27.0 214 WBL 74.5 410 WBT 83.1 774 WBR 21.5 351	MVMNT DELAY QUEUE ALL 53.9 3319 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 17.5 412 EBR 1.9 205 SBL 109.2 316 SBT 0.0 0 SBR 117.1 3319 WBL 74.8 259 WBT 54.5 818 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 1937 ◀ 42 ▼ 1937 ▶ 118 → 247 348 ▲ ▲ 209 348 ▶ ◀ 247 361 ▼ ▼ 247 361 ◀ 532 ▲ 530 ▶ 0 → 532	N 449 ◀ 51 ▼ 449 ▶ 449 → 1058 778 ▲ ▲ 11 5957 ▶ ◀ 1058 5942 ▼ ▼ 423 5957 ◀ 106 ▲ 502 ▶ 485 → 502	N 682 ◀ 214 ▼ 286 ▶ 682 → 774 162 ▲ ▲ 351 555 ▶ ◀ 774 192 ▼ ▼ 410 555 ◀ 264 ▲ 864 ▶ 423 → 864	N 3319 ◀ 3319 ▼ 0 ▶ 316 → 818 0 ▲ ▲ 0 412 ▶ ◀ 818 205 ▼ ▼ 259 412 ◀ 0 ▲ 0 ▶ 0 → 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 1950 ◀ 50 ▼ 1950 ▶ 125 → 250 350 ▲ ▲ 225 350 ▶ ◀ 250 375 ▼ ▼ 250 375 ◀ 550 ▲ 550 ▶ 0 → 550	N 450 ◀ 75 ▼ 450 ▶ 450 → 1075 800 ▲ ▲ 25 5975 ▶ ◀ 1075 5950 ▼ ▼ 425 5975 ◀ 125 ▲ 525 ▶ 500 → 525	N 700 ◀ 225 ▼ 300 ▶ 700 → 775 175 ▲ ▲ 375 575 ▶ ◀ 775 200 ▼ ▼ 425 575 ◀ 275 ▲ 875 ▶ 425 → 875	N 3325 ◀ 3325 ▼ 0 ▶ 325 → 825 0 ▲ ▲ 0 425 ▶ ◀ 825 225 ▼ ▼ 275 425 ◀ 0 ▲ 0 ▶ 0 → 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	66.6	3935	ALL	76.3	2549	ALL	39.4	1183	ALL	9.3	358
	NBL	127.2	3935	NBL	197.0	1090	NBL	45.0	704	NBL	12.6	23
	NBT	0.0	0	NBT	128.6	74	NBT	47.8	1182	NBT	5.5	356
	NBR	85.6	245	NBR	93.5	30	NBR	30.0	2	NBR	0.0	0
	EBL	0.0	0	EBL	71.3	211	EBL	63.6	138	EBL	66.0	200
	EBT	31.3	731	EBT	23.1	810	EBT	72.1	92	EBT	0.0	0
	EBR	6.4	404	EBR	13.5	74	EBR	12.8	64	EBR	5.7	3
	SBL	0.0	0	SBL	45.7	63	SBL	67.7	508	SBL	0.0	0
	SBT	0.0	0	SBT	69.0	71	SBT	14.9	384	SBT	9.7	259
	SBR	0.0	0	SBR	29.4	98	SBR	4.0	384	SBR	8.1	229
	WBL	0.0	0	WBL	91.8	76	WBL	57.0	184	WBL	0.0	0
	WBT	76.2	1878	WBT	101.5	2549	WBT	76.4	251	WBT	0.0	0
	WBR	88.1	1416	WBR	79.2	0	WBR	39.0	213	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 1878			N 98 ◀ 98 ▼ 71 ▶ 63 → 2549			N 508 ◀ 384 ▼ 384 ▶ 508 → 251			N 259 ◀ 229 ▼ 259 ▶ 0 → 0		
	0 ▲		▲ 1416	211 ▲		▲ 0	138 ▲		▲ 213	200 ▲		▲ 0
	731 ▶		◀ 1878	810 ▶		◀ 2549	92 ▶		◀ 251	0 ▶		◀ 0
	404 ▼		▼ 0	74 ▼		▼ 76	64 ▼		▼ 184	3 ▼		▼ 0
	731 ◀ 3935 ▲ 0 ▶ 245 → 3935			810 ◀ 1090 ▲ 74 ▶ 30 → 1090			138 ◀ 704 ▲ 1182 ▶ 2 → 1182			200 ◀ 23 ▲ 356 ▶ 0 → 356		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 1900			N 100 ◀ 100 ▼ 75 ▶ 75 → 2550			N 525 ◀ 400 ▼ 400 ▶ 525 → 275			N 275 ◀ 250 ▼ 275 ▶ 0 → 0		
	0 ▲		▲ 1425	225 ▲		▲ 0	150 ▲		▲ 225	225 ▲		▲ 0
	750 ▶		◀ 1900	825 ▶		◀ 2550	100 ▶		◀ 275	0 ▶		◀ 0
	425 ▼		▼ 0	75 ▼		▼ 100	75 ▼		▼ 200	25 ▼		▼ 0
	750 ◀ 3950 ▲ 0 ▶ 250 → 3950			825 ◀ 1100 ▲ 75 ▶ 50 → 1100			150 ◀ 725 ▲ 1200 ▶ 25 → 1200			225 ◀ 25 ▲ 375 ▶ 0 → 375		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 30.8 1597 NBL 87.1 530 NBT 10.7 529 NBR 4.2 2 EBL 64.8 262 EBT 86.5 262 EBR 53.3 275 SBL 49.2 186 SBT 46.0 1596 SBR 12.0 33 WBL 69.7 190 WBT 93.8 190 WBR 32.8 152	MVMNT DELAY QUEUE ALL 73.2 5955 NBL 69.7 85 NBT 81.1 360 NBR 34.0 343 EBL 193.1 1751 EBT 120.9 5955 EBR 112.3 5940 SBL 81.6 329 SBT 77.4 329 SBR 9.7 41 WBL 113.8 328 WBT 35.7 1024 WBR 12.4 17	MVMNT DELAY QUEUE ALL 64.1 1032 NBL 77.2 226 NBT 159.1 890 NBR 61.0 381 EBL 59.0 147 EBT 47.2 567 EBR 22.4 170 SBL 129.5 659 SBT 42.3 241 SBR 23.8 170 WBL 74.3 391 WBT 51.4 744 WBR 19.3 374	MVMNT DELAY QUEUE ALL 35.6 2103 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 15.7 360 EBR 1.8 169 SBL 73.0 283 SBT 0.0 0 SBR 61.1 2102 WBL 69.9 252 WBT 42.6 760 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 1596 | 33 ◀ 1596 ▼ 186 ▶ | 190 262 ▲ ▲ 152 262 ▶ ◀ 190 275 ▼ ▼ 190 275 | 530 ◀ 529 ▲ 2 ▶ | 530	N 329 | 41 ◀ 329 ▼ 329 ▶ | 1024 1751 ▲ ▲ 17 5955 ▶ ◀ 1024 5940 ▼ ▼ 328 5955 | 85 ◀ 360 ▲ 343 ▶ | 360	N 659 | 170 ◀ 241 ▼ 659 ▶ | 744 147 ▲ ▲ 374 567 ▶ ◀ 744 170 ▼ ▼ 391 567 | 226 ◀ 890 ▲ 381 ▶ | 890	N 2102 | 2102 ◀ 0 ▼ 283 ▶ | 760 0 ▲ ▲ 0 360 ▶ ◀ 760 169 ▼ ▼ 252 360 | 0 ◀ 0 ▲ 0 ▶ | 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 1600 | 50 ◀ 1600 ▼ 200 ▶ | 200 275 ▲ ▲ 175 275 ▶ ◀ 200 275 ▼ ▼ 200 275 | 550 ◀ 550 ▲ 25 ▶ | 550	N 350 | 50 ◀ 350 ▼ 350 ▶ | 1025 1775 ▲ ▲ 25 5975 ▶ ◀ 1025 5950 ▼ ▼ 350 5975 | 100 ◀ 375 ▲ 350 ▶ | 375	N 675 | 175 ◀ 250 ▼ 675 ▶ | 750 150 ▲ ▲ 375 575 ▶ ◀ 750 175 ▼ ▼ 400 575 | 250 ◀ 900 ▲ 400 ▶ | 900	N 2125 | 2125 ◀ 0 ▼ 300 ▶ | 775 0 ▲ ▲ 0 375 ▶ ◀ 775 175 ▼ ▼ 275 375 | 0 ◀ 0 ▲ 0 ▶ | 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	67.6	3869	ALL	103.6	2956	ALL	24.0	887	ALL	7.4	265
	NBL	116.8	3869	NBL	239.6	1105	NBL	22.4	295	NBL	15.2	28
	NBT	0.0	0	NBT	180.5	97	NBT	25.0	886	NBT	4.3	253
	NBR	77.7	267	NBR	165.7	50	NBR	16.9	0	NBR	0.0	0
	EBL	0.0	0	EBL	70.0	208	EBL	63.5	136	EBL	65.2	170
	EBT	29.4	680	EBT	21.2	726	EBT	66.4	65	EBT	0.0	0
	EBR	5.5	353	EBR	12.5	64	EBR	8.0	37	EBR	5.8	0
	SBL	0.0	0	SBL	45.6	61	SBL	43.1	351	SBL	0.0	0
	SBT	0.0	0	SBT	69.8	74	SBT	11.2	251	SBT	6.4	226
	SBR	0.0	0	SBR	43.8	102	SBR	3.9	251	SBR	5.9	196
	WBL	0.0	0	WBL	146.6	68	WBL	62.5	148	WBL	0.0	0
	WBT	82.3	1920	WBT	163.2	2956	WBT	72.1	185	WBT	0.0	0
	WBR	103.8	1459	WBR	168.5	0	WBR	27.4	147	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 1920			N 102 ◀ 102 ▼ 74 ▶ 61 → 2956			N 351 ◀ 251 ▼ 251 ▶ 351 → 185			N 226 ◀ 196 ▼ 226 ▶ 0 → 0		
	0 ▲		▲ 1459	208 ▲		▲ 0	136 ▲		▲ 147	170 ▲		▲ 0
	680 ▶		◀ 1920	726 ▶		◀ 2956	65 ▶		◀ 185	0 ▶		◀ 0
	353 ▼		▼ 0	64 ▼		▼ 68	37 ▼		▼ 148	0 ▼		▼ 0
	680 ◀ 3869 ▲ 0 ▶ 267 → 3869			726 ◀ 1105 ▲ 97 ▶ 50 → 1105			136 ◀ 295 ▲ 886 ▶ 0 → 886			170 ◀ 28 ▲ 253 ▶ 0 → 253		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ◀ 0 ▼ 0 ▶ 0 → 1925			N 125 ◀ 125 ▼ 75 ▶ 75 → 2975			N 375 ◀ 275 ▼ 275 ▶ 375 → 200			N 250 ◀ 200 ▼ 250 ▶ 0 → 0		
	0 ▲		▲ 1475	225 ▲		▲ 0	150 ▲		▲ 150	175 ▲		▲ 0
	700 ▶		◀ 1925	750 ▶		◀ 2975	75 ▶		◀ 200	0 ▶		◀ 0
	375 ▼		▼ 0	75 ▼		▼ 75	50 ▼		▼ 150	0 ▼		▼ 0
	700 ◀ 3875 ▲ 0 ▶ 275 → 3875			750 ◀ 1125 ▲ 100 ▶ 50 → 1125			150 ◀ 300 ▲ 900 ▶ 0 → 900			175 ◀ 50 ▲ 275 ▶ 0 → 275		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 27.8 642 NBL 84.9 394 NBT 12.3 490 NBR 5.0 0 EBL 47.4 295 EBT 86.6 295 EBR 50.7 307 SBL 40.8 140 SBT 30.6 634 SBR 14.4 49 WBL 64.4 296 WBT 68.0 296 WBR 27.3 257	MVMNT DELAY QUEUE ALL 61.8 5948 NBL 74.3 135 NBT 120.6 543 NBR 55.5 526 EBL 138.7 230 EBT 99.2 5948 EBR 96.4 5933 SBL 84.5 295 SBT 79.6 295 SBR 9.8 71 WBL 82.8 318 WBT 26.2 534 WBR 5.8 9	MVMNT DELAY QUEUE ALL 50.3 655 NBL 71.5 184 NBT 80.0 282 NBR 71.4 478 EBL 71.8 136 EBT 46.1 652 EBR 24.6 242 SBL 88.3 509 SBT 33.8 205 SBR 22.9 196 WBL 89.3 383 WBT 26.4 376 WBR 11.2 243	MVMNT DELAY QUEUE ALL 25.9 751 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 18.0 601 EBR 2.4 369 SBL 64.8 348 SBT 0.0 0 SBR 38.8 409 WBL 75.3 208 WBT 26.1 728 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 634 ◀ 49 ▼ 634 ▶ 140 → 296 295 ▲ → ▲ 257 295 ▶ → ◀ 296 307 ▼ → ▼ 296 307 ◀ 394 ▲ 490 ▶ 0 → 490 N 650 ◀ 50 ▼ 650 ▶ 150 → 300 300 ▲ → ▲ 275 300 ▶ → ◀ 300 325 ▼ → ▼ 300 325 ◀ 400 ▲ 500 ▶ 0 → 500	N 295 ◀ 71 ▼ 295 ▶ 295 → 534 230 ▲ → ▲ 9 5948 ▶ → ◀ 534 5933 ▼ → ▼ 318 5948 ◀ 135 ▲ 543 ▶ 526 → 543 N 300 ◀ 75 ▼ 300 ▶ 300 → 550 250 ▲ → ▲ 25 5950 ▶ → ◀ 550 5950 ▼ → ▼ 325 5950 ◀ 150 ▲ 550 ▶ 550 → 550	N 509 ◀ 196 ▼ 205 ▶ 509 → 383 136 ▲ → ▲ 243 652 ▶ → ◀ 376 242 ▼ → ▼ 383 652 ◀ 184 ▲ 282 ▶ 478 → 478 N 525 ◀ 200 ▼ 225 ▶ 525 → 400 150 ▲ → ▲ 250 675 ▶ → ◀ 400 250 ▼ → ▼ 400 675 ◀ 200 ▲ 300 ▶ 500 → 500	N 409 ◀ 409 ▼ 0 ▶ 348 → 728 0 ▲ → ▲ 0 601 ▶ → ◀ 728 369 ▼ → ▼ 208 601 ◀ 0 ▲ 0 ▶ 0 → 0 N 425 ◀ 425 ▼ 0 ▶ 350 → 750 0 ▲ → ▲ 0 625 ▶ → ◀ 750 375 ▼ → ▼ 225 625 ◀ 0 ▲ 0 ▶ 0 → 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)				

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	22.0	847	ALL	26.3	848	ALL	23.0	671	ALL	13.2	398
	NBL	42.1	746	NBL	51.4	245	NBL	30.3	285	NBL	22.0	71
	NBT	0.0	0	NBT	46.5	143	NBT	24.9	671	NBT	6.7	233
	NBR	16.0	239	NBR	20.9	98	NBR	14.3	4	NBR	0.0	0
	EBL	0.0	0	EBL	51.8	152	EBL	58.5	130	EBL	61.9	392
	EBT	24.9	814	EBT	20.2	800	EBT	72.7	106	EBT	0.0	0
	EBR	9.9	489	EBR	17.5	332	EBR	15.2	78	EBR	9.7	20
	SBL	0.0	0	SBL	37.0	134	SBL	49.5	368	SBL	0.0	0
	SBT	0.0	0	SBT	53.7	48	SBT	9.7	368	SBT	9.2	325
	SBR	0.0	0	SBR	14.7	87	SBR	4.2	368	SBR	9.5	295
	WBL	0.0	0	WBL	27.4	56	WBL	57.1	218	WBL	0.0	0
	WBT	19.7	398	WBT	25.5	556	WBT	65.4	189	WBT	0.0	0
	WBR	2.6	31	WBR	6.9	0	WBR	23.4	151	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► / 398			N 134 / 87 ◄ 48 ▼ 134 ► / 556			N 368 / 368 ◄ 368 ▼ 368 ► / 218			N 325 / 295 ◄ 325 ▼ 0 ► / 0		
	0 ▲		▲ 31	152 ▲		▲ 0	130 ▲		▲ 151	392 ▲		▲ 0
	814 ►		◄ 398	800 ►		◄ 556	106 ►		◄ 189	0 ►		◄ 0
	489 ▼		▼ 0	332 ▼		▼ 56	78 ▼		▼ 218	20 ▼		▼ 0
	814 / ◄ 746 ▲ 0 ► 239 / 746			800 / ◄ 245 ▲ 143 ► 98 / 245			130 / ◄ 285 ▲ 671 ► 4 / 671			392 / ◄ 71 ▲ 233 ► 0 / 233		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► / 400			N 150 / 100 ◄ 50 ▼ 150 ► / 575			N 375 / 375 ◄ 375 ▼ 375 ► / 225			N 350 / 300 ◄ 350 ▼ 0 ► / 0		
	0 ▲		▲ 50	175 ▲		▲ 0	150 ▲		▲ 175	400 ▲		▲ 0
	825 ►		◄ 400	800 ►		◄ 575	125 ►		◄ 200	0 ►		◄ 0
	500 ▼		▼ 0	350 ▼		▼ 75	100 ▼		▼ 225	25 ▼		▼ 0
	825 / ◄ 750 ▲ 0 ► 250 / 750			800 / ◄ 250 ▲ 150 ► 100 / 250			150 / ◄ 300 ▲ 675 ► 25 / 675			400 / ◄ 75 ▲ 250 ► 0 / 250		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 2

VISSIM RESULTS

Cattlemen Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	50.1	2283
NBL	88.1	530
NBT	16.1	568
NBR	7.0	25
EBL	50.7	523
EBT	134.7	523
EBR	114.2	536
SBL	78.8	692
SBT	71.8	2283
SBR	22.4	72
WBL	76.0	377
WBT	64.1	377
WBR	30.9	338

Bee Ridge Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	77.7	5962
NBL	79.8	236
NBT	156.2	678
NBR	93.6	660
EBL	162.4	211
EBT	127.2	5962
EBR	116.1	5947
SBL	115.9	483
SBT	118.9	483
SBR	20.1	171
WBL	104.4	463
WBT	34.6	717
WBR	9.3	31

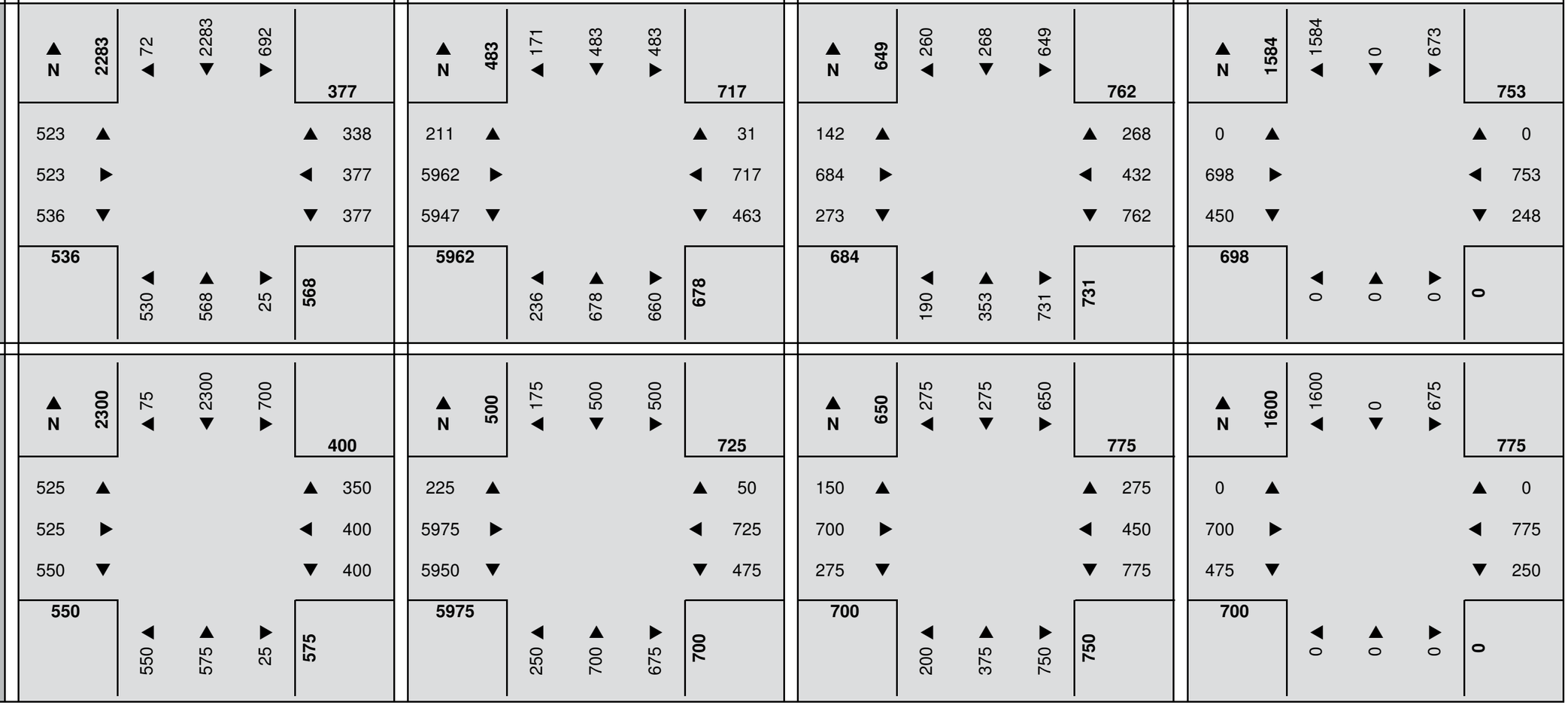
Bee Ridge Road/Cattlemen Road

MVMNT	DELAY	QUEUE
ALL	64.3	900
NBL	77.8	190
NBT	106.7	353
NBR	94.3	731
EBL	73.9	142
EBT	53.6	684
EBR	27.6	273
SBL	98.3	649
SBT	41.8	268
SBR	27.6	260
WBL	166.4	762
WBT	30.5	432
WBR	13.3	268

I-75 West Ramp Terminal/Bee Ridge Road

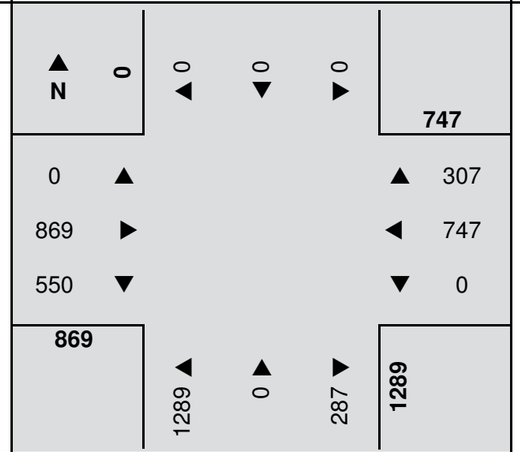
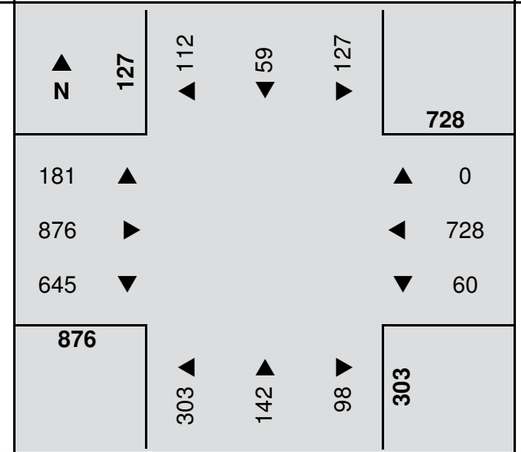
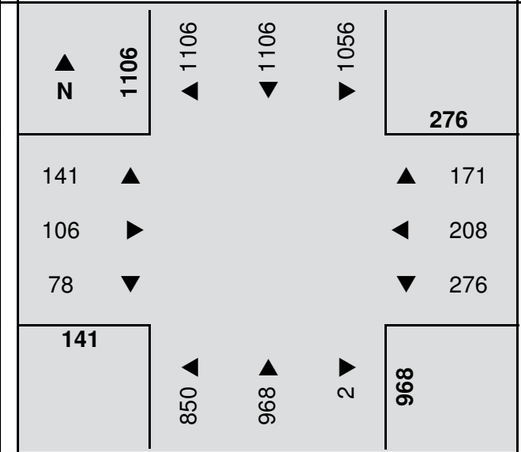
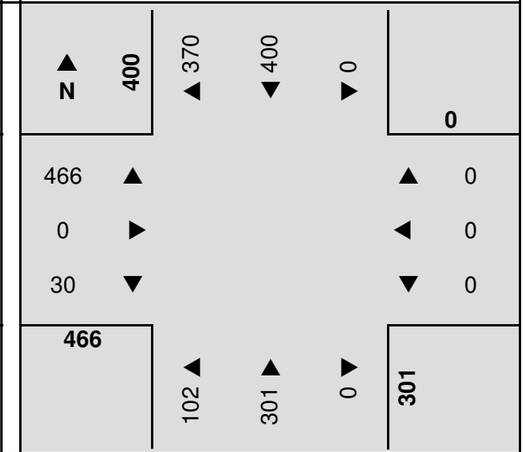
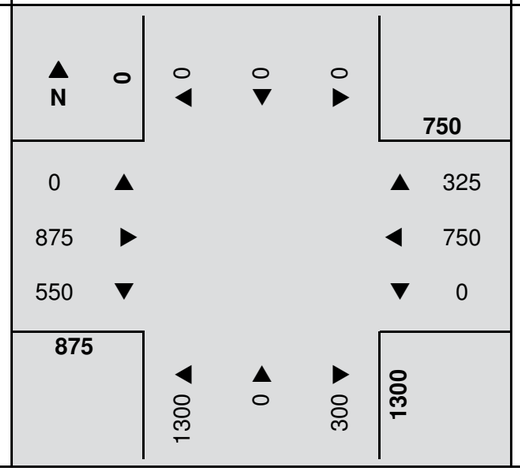
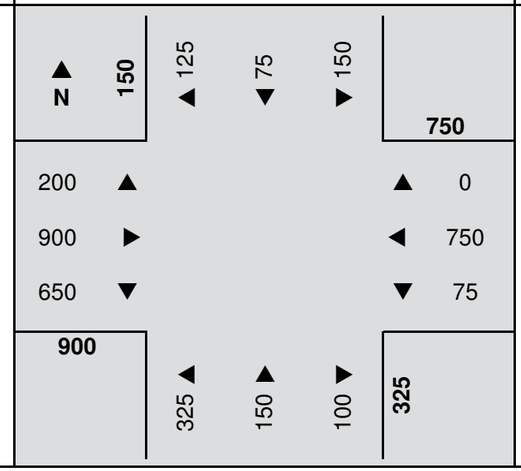
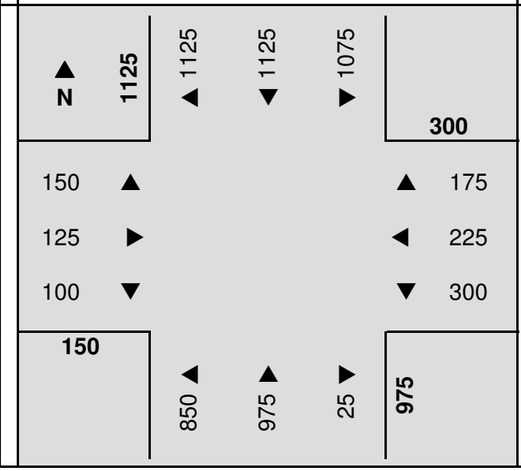
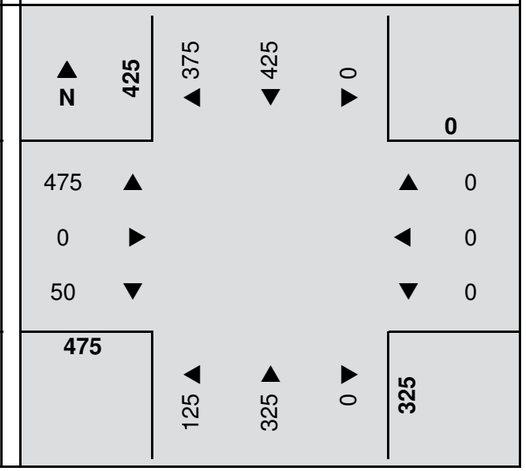
MVMNT	DELAY	QUEUE
ALL	35.9	1863
NBL	0.0	0
NBT	0.0	0
NBR	0.0	0
EBL	0.0	0
EBT	23.7	698
EBR	3.1	450
SBL	107.9	673
SBT	0.0	0
SBR	63.5	1584
WBL	83.3	248
WBT	31.6	753
WBR	0.0	0

MAX APPROACH QUEUE LENGTH (FEET)



MAX APPROACH QUEUE LENGTH ROUNDED (FEET)

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 29.5 1316 NBL 51.2 1289 NBT 0.0 0 NBR 26.8 287 EBL 0.0 0 EBT 31.4 869 EBR 10.5 550 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 33.0 747 WBR 5.1 307	MVMNT DELAY QUEUE ALL 31.1 905 NBL 55.8 303 NBT 47.8 142 NBR 22.0 98 EBL 55.6 181 EBT 24.2 876 EBR 21.1 645 SBL 36.7 127 SBT 58.3 59 SBR 19.0 112 WBL 41.5 60 WBT 32.1 728 WBR 12.0 0	MVMNT DELAY QUEUE ALL 59.6 1177 NBL 55.9 850 NBT 47.1 968 NBR 25.1 2 EBL 61.5 141 EBT 71.9 106 EBR 14.5 78 SBL 121.8 1056 SBT 62.1 1106 SBR 27.9 1106 WBL 108.9 276 WBT 71.0 208 WBR 33.6 171	MVMNT DELAY QUEUE ALL 15.8 496 NBL 30.0 102 NBT 8.0 301 NBR 0.0 0 EBL 63.0 466 EBT 0.0 0 EBR 11.3 30 SBL 0.0 0 SBT 13.3 400 SBR 12.4 370 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)				
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)				

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 30.1 1482 NBL 87.6 367 NBT 11.6 461 NBR 4.4 0 EBL 49.3 342 EBT 93.0 342 EBR 60.6 355 SBL 37.0 131 SBT 35.5 1478 SBR 14.7 45 WBL 67.6 336 WBT 71.1 336 WBR 29.4 297	MVMNT DELAY QUEUE ALL 72.2 5952 NBL 71.0 112 NBT 122.4 527 NBR 57.2 510 EBL 157.8 199 EBT 124.0 5952 EBR 119.1 5937 SBL 79.8 243 SBT 77.0 243 SBR 8.6 53 WBL 85.3 340 WBT 23.9 516 WBR 5.8 19	MVMNT DELAY QUEUE ALL 52.7 818 NBL 74.8 178 NBT 80.7 267 NBR 71.0 557 EBL 71.0 149 EBT 44.2 635 EBR 24.1 258 SBL 88.2 553 SBT 33.8 200 SBR 21.9 205 WBL 117.3 631 WBT 27.5 357 WBR 10.5 205	MVMNT DELAY QUEUE ALL 32.9 1474 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 16.2 515 EBR 2.2 328 SBL 98.7 377 SBT 0.0 0 SBR 80.4 1308 WBL 88.3 252 WBT 24.6 698 WBR 0.0 0
MAX APPROACH QUEUE LENGTH (FEET)	N 1478 | 45 ◀ 1478 ▼ 131 ▶ | 336 342 ▲ ▲ 297 342 ▶ ◀ 336 355 ▼ ▼ 336 355 | ◀ 367 ▲ 461 ▶ 0 | 461	N 243 | 53 ◀ 243 ▼ 243 ▶ | 516 199 ▲ ▲ 19 5952 ▶ ◀ 516 5937 ▼ ▼ 340 5952 | ◀ 112 ▲ 527 ▶ 510 | 527	N 553 | 205 ◀ 200 ▼ 553 ▶ | 631 149 ▲ ▲ 205 635 ▶ ◀ 357 258 ▼ ▼ 631 635 | ◀ 178 ▲ 267 ▶ 557 | 557	N 1308 | 1308 ◀ 0 ▼ 377 ▶ | 698 0 ▲ ▲ 0 515 ▶ ◀ 698 328 ▼ ▼ 252 515 | ◀ 0 ▲ 0 ▶ 0 | 0
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 1500 | 50 ◀ 1500 ▼ 150 ▶ | 350 350 ▲ ▲ 300 350 ▶ ◀ 350 375 ▼ ▼ 350 375 | ◀ 375 ▲ 475 ▶ 0 | 475	N 250 | 75 ◀ 250 ▼ 250 ▶ | 525 200 ▲ ▲ 25 5975 ▶ ◀ 525 5950 ▼ ▼ 350 5975 | ◀ 125 ▲ 550 ▶ 525 | 550	N 575 | 225 ◀ 200 ▼ 575 ▶ | 650 150 ▲ ▲ 225 650 ▶ ◀ 375 275 ▼ ▼ 650 650 | ◀ 200 ▲ 275 ▶ 575 | 575	N 1325 | 1325 ◀ 0 ▼ 400 ▶ | 700 0 ▲ ▲ 0 525 ▶ ◀ 700 350 ▼ ▼ 275 525 | ◀ 0 ▲ 0 ▶ 0 | 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	25.2	1076	ALL	25.1	673	ALL	22.7	821	ALL	12.1	357
	NBL	50.6	906	NBL	53.6	285	NBL	26.4	200	NBL	20.1	65
	NBT	0.0	0	NBT	44.8	108	NBT	21.1	669	NBT	5.9	209
	NBR	19.9	231	NBR	20.3	62	NBR	12.0	6	NBR	0.0	0
	EBL	0.0	0	EBL	52.8	152	EBL	60.1	121	EBL	61.7	330
	EBT	24.1	798	EBT	18.2	616	EBT	74.1	93	EBT	0.0	0
	EBR	9.8	481	EBR	16.4	300	EBR	12.2	64	EBR	8.1	13
	SBL	0.0	0	SBL	38.4	120	SBL	40.1	638	SBL	0.0	0
	SBT	0.0	0	SBT	51.8	56	SBT	13.9	592	SBT	8.6	298
	SBR	0.0	0	SBR	12.2	61	SBR	6.7	592	SBR	8.2	268
	WBL	0.0	0	WBL	26.2	50	WBL	71.6	203	WBL	0.0	0
	WBT	27.6	527	WBT	24.1	465	WBT	65.6	175	WBT	0.0	0
	WBR	5.3	178	WBR	5.7	0	WBR	23.7	138	WBR	0.0	0
MAX APPROACH QUEUE LENGTH (FEET)	N 0 ◄ 0 ▼ 0 ► 527			N 120 ◄ 61 ▼ 56 ► 120 465			N 638 ◄ 592 ▼ 592 ► 638 203			N 298 ◄ 268 ▼ 298 ► 0 0		
	0 ▲		▲ 178	152 ▲		▲ 0	121 ▲		▲ 138	330 ▲		▲ 0
	798 ►		◄ 527	616 ►		◄ 465	93 ►		◄ 175	0 ►		◄ 0
	481 ▼		▼ 0	300 ▼		▼ 50	64 ▼		▼ 203	13 ▼		▼ 0
	798 ◄ 906 ▲ 0 ► 231 906			616 ◄ 285 ▲ 108 ► 62 285			121 ◄ 200 ▲ 669 ► 6 669			330 ◄ 65 ▲ 209 ► 0 209		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 ◄ 0 ▼ 0 ► 550			N 125 ◄ 75 ▼ 75 ► 125 475			N 650 ◄ 600 ▼ 600 ► 650 225			N 300 ◄ 275 ▼ 300 ► 0 0		
	0 ▲		▲ 200	175 ▲		▲ 0	125 ▲		▲ 150	350 ▲		▲ 0
	800 ►		◄ 550	625 ►		◄ 475	100 ►		◄ 200	0 ►		◄ 0
	500 ▼		▼ 0	325 ▼		▼ 75	75 ▼		▼ 225	25 ▼		▼ 0
	800 ◄ 925 ▲ 0 ► 250 925			625 ◄ 300 ▲ 125 ► 75 300			125 ◄ 225 ▲ 675 ► 25 675			350 ◄ 75 ▲ 225 ► 0 225		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.2 649 NBL 17.7 119 NBT 13.6 649 NBR 5.8 51 EBL 62.9 233 EBT 70.3 66 EBR 6.9 0 SBL 17.5 57 SBT 14.1 231 SBR 8.3 0 WBL 65.3 184 WBT 86.9 184 WBR 28.5 164	MVMNT DELAY QUEUE ALL 20.0 316 NBL 71.6 96 NBT 68.9 96 NBR 15.6 52 EBL 75.5 258 EBT 20.4 301 EBR 21.8 271 SBL 80.0 161 SBT 88.6 161 SBR 12.3 28 WBL 73.5 246 WBT 7.8 215 WBR 2.9 0	MVMNT DELAY QUEUE ALL 36.1 656 NBL 49.4 192 NBT 66.4 434 NBR 51.1 416 EBL 53.9 178 EBT 26.1 237 EBR 41.1 243 SBL 54.9 338 SBT 55.4 370 SBR 0.0 0 WBL 2.3 2 WBT 30.4 656 WBR 14.5 389	MVMNT DELAY QUEUE ALL 26.3 501 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 36.2 484 EBT 8.7 397 EBR1 3.3 236 EBR2 13.2 0 SBL 29.4 164 SBT 0.0 0 SBR 34.2 466 WBL1 61.8 269 WBL2 41.6 410 WBT 28.4 391 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.8 553 NBL 26.7 479 NBT 0.0 0 NBR 40.7 149 EBL 0.0 0 EBT 27.4 485 EBR 0.0 0 SBL 38.5 211 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 29.9 516 WBR 4.7 298
MAX APPROACH QUEUE LENGTH (FEET)	N 231 ▲ / 0 ◀ 231 ▼ 57 ▶ 184 233 ▲ ▲ 164 66 ▶ ◀ 184 0 ▼ ▼ 184 233 ◀ 119 ▲ 649 ▶ 51 649	N 161 ▲ / 28 ◀ 161 ▼ 161 ▶ 246 258 ▲ ▲ 0 301 ▶ ◀ 215 271 ▼ ▼ 246 301 ◀ 96 ▲ 96 ▶ 52 96	N 370 ▲ / 0 ◀ 370 ▼ 338 ▶ 656 178 ▲ ▲ 389 237 ▶ ◀ 656 243 ▼ ▼ 2 243 ◀ 192 ▲ 434 ▶ 416 434	N 466 ▲ / 466 ◀ 0 ▼ 164 ▶ 410 484 ▲ ▲ 0 397 ▶ ◀ 391 236 ▼ ▼ 269 0 ▼ ▼ 410 484 ◀ 0 ▲ 0 ▶ 0 0	N 211 ▲ / 0 ◀ 0 ▼ 211 ▶ 516 0 ▲ ▲ 298 485 ▶ ◀ 516 0 ▼ ▼ 0 485 ◀ 479 ▲ 0 ▶ 149 479
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 250 ▲ / 0 ◀ 250 ▼ 75 ▶ 200 250 ▲ ▲ 175 75 ▶ ◀ 200 0 ▼ ▼ 200 250 ◀ 125 ▲ 650 ▶ 75 650	N 175 ▲ / 50 ◀ 175 ▼ 175 ▶ 250 275 ▲ ▲ 0 325 ▶ ◀ 225 275 ▼ ▼ 250 325 ◀ 100 ▲ 100 ▶ 75 100	N 375 ▲ / 0 ◀ 375 ▼ 350 ▶ 675 200 ▲ ▲ 400 250 ▶ ◀ 675 250 ▼ ▼ 25 250 ◀ 200 ▲ 450 ▶ 425 450	N 475 ▲ / 475 ◀ 0 ▼ 175 ▶ 425 500 ▲ ▲ 0 400 ▶ ◀ 400 250 ▼ ▼ 275 0 ▼ ▼ 425 500 ◀ 0 ▲ 0 ▶ 0 0	N 225 ▲ / 0 ◀ 0 ▼ 225 ▶ 525 0 ▲ ▲ 300 500 ▶ ◀ 525 0 ▼ ▼ 0 500 ◀ 500 ▲ 0 ▶ 150 500

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.8	164	ALL	26.4	554	ALL	14.8	351	ALL	18.3	398
	NBL	0.0	0	NBL	57.1	283	NBL	11.8	135	NBL	14.0	32
	NBT	0.0	0	NBT	55.9	105	NBT	12.2	350	NBT	17.0	398
	NBR	0.0	0	NBR	18.1	61	NBR	10.7	314	NBR	0.0	0
	EBL	37.6	154	EBL	65.6	171	EBL	54.6	116	EBL	20.7	100
	EBT	0.0	0	EBT	14.9	515	EBT	74.2	63	EBT	0.0	0
	EBR	0.0	0	EBR	8.8	24	EBR	12.2	37	EBR	4.6	4
VISSIM RESULTS	SBL	0.0	0	SBL	48.1	58	SBL	15.5	134	SBL	0.0	0
	SBT	0.0	0	SBT	73.5	63	SBT	9.8	199	SBT	19.4	277
	SBR	11.6	0	SBR	12.2	23	SBR	7.6	186	SBR	19.1	277
	WBL	0.0	0	WBL	15.0	38	WBL	59.5	138	WBL	33.3	184
	WBT	2.4	149	WBT	23.6	516	WBT	68.8	186	WBT	38.7	89
	WBR	0.0	0	WBR	6.6	0	WBR	21.4	149	WBR	6.4	3
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 149			N 63 / 23 63 58 / 516			N 199 / 186 199 134 / 186			N 277 / 277 277 0 / 184		
	154 ▲		▲ 0	171 ▲		▲ 0	116 ▲		▲ 149	100 ▲		▲ 3
	0 ▶		◀ 149	515 ▶		◀ 516	63 ▶		◀ 186	0 ▶		◀ 89
	0 ▼		▼ 0	24 ▼		▼ 38	37 ▼		▼ 138	4 ▼		▼ 184
	154 / ◀ 0 ▲ 0 ▶ 0 / 0			515 / ◀ 283 ▲ 105 ▶ 61 / 283			116 / ◀ 135 ▲ 350 ▶ 314 / 350			100 / ◀ 32 ▲ 398 ▶ 0 / 398		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 150			N 75 / 25 75 75 / 525			N 200 / 200 200 150 / 200			N 300 / 300 300 0 / 200		
	175 ▲		▲ 0	175 ▲		▲ 0	125 ▲		▲ 150	100 ▲		▲ 25
	0 ▶		◀ 150	525 ▶		◀ 525	75 ▶		◀ 200	0 ▶		◀ 100
	0 ▼		▼ 0	25 ▼		▼ 50	50 ▼		▼ 150	25 ▼		▼ 200
	175 / ◀ 0 ▲ 0 ▶ 0 / 0			525 / ◀ 300 ▲ 125 ▶ 75 / 300			125 / ◀ 150 ▲ 350 ▶ 325 / 350			100 / ◀ 50 ▲ 400 ▶ 0 / 400		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 2

VISSIM RESULTS

Cattlemen Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	23.1	796
NBL	33.0	190
NBT	14.7	695
NBR	8.1	46
EBL	64.1	313
EBT	84.0	68
EBR	9.5	18
SBL	36.2	89
SBT	23.5	482
SBR	14.1	14
WBL	65.8	264
WBT	102.5	264
WBR	52.8	244

Bee Ridge Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	27.8	509
NBL	76.0	118
NBT	74.3	118
NBR	24.1	90
EBL	93.5	404
EBT	28.2	436
EBR	29.7	406
SBL	109.3	291
SBT	126.9	291
SBR	25.3	135
WBL	72.4	343
WBT	14.1	417
WBR	4.4	0

Bee Ridge Road/Cattlemen Road

MVMNT	DELAY	QUEUE
ALL	44.6	1039
NBL	68.8	256
NBT	101.6	1014
NBR	64.5	973
EBL	48.3	232
EBT	34.2	321
EBR	43.1	296
SBL	67.0	561
SBT	50.5	521
SBR	0.0	0
WBL	3.0	26
WBT	35.0	720
WBR	19.4	652

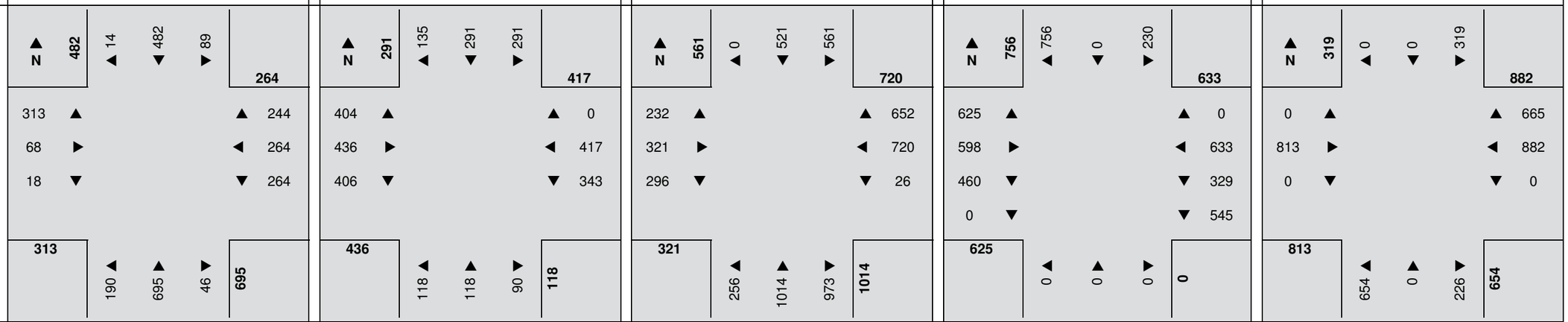
I-75 West Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	32.3	777
NBL	0.0	0
NBT	0.0	0
NBR	0.0	0
EBL	38.1	625
EBT	12.8	598
EBR1	4.7	460
EBR2	23.8	0
SBL	34.1	230
SBT	0.0	0
SBR	40.7	756
WBL1	56.2	329
WBL2	48.6	545
WBT	42.3	633
WBR	0.0	0

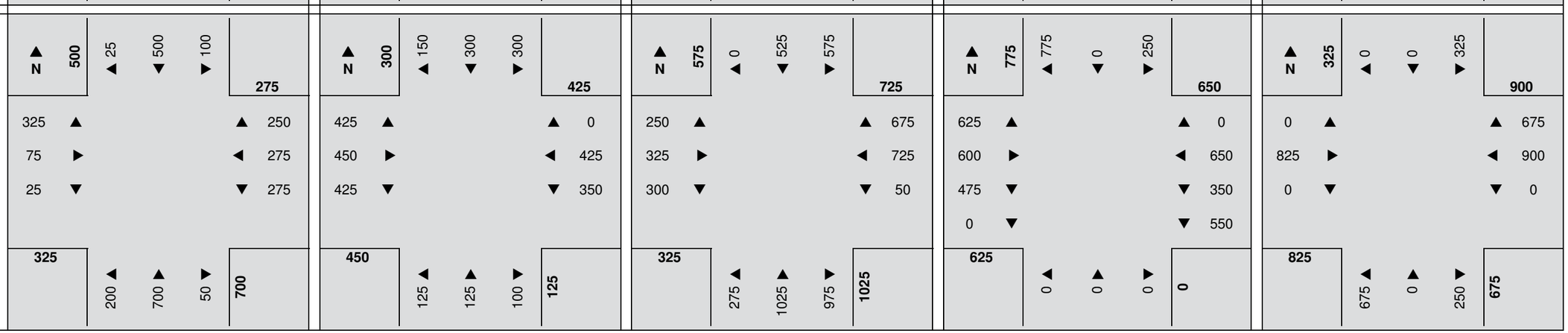
I-75 East Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	30.3	889
NBL	36.2	654
NBT	0.0	0
NBR	52.5	226
EBL	0.0	0
EBT	37.5	813
EBR	0.0	0
SBL	57.6	319
SBT	0.0	0
SBR	0.0	0
WBL	0.0	0
WBT	38.8	882
WBR	13.2	665

MAX APPROACH QUEUE LENGTH (FEET)



MAX APPROACH QUEUE LENGTH ROUNDED (FEET)



VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.6	234	ALL	36.7	1128	ALL	25.0	885	ALL	19.0	556
	NBL	0.0	0	NBL	70.2	524	NBL	22.2	263	NBL	16.9	34
	NBT	0.0	0	NBT	57.6	98	NBT	25.4	885	NBT	17.2	556
	NBR	0.0	0	NBR	28.7	52	NBR	21.1	850	NBR	0.0	0
	EBL	46.1	182	EBL	79.7	230	EBL	53.3	126	EBL	24.3	126
	EBT	0.0	0	EBT	20.5	1095	EBT	68.0	94	EBT	0.0	0
	EBR	0.0	0	EBR	14.1	58	EBR	16.4	67	EBR	4.6	0
VISSIM RESULTS	SBL	0.0	0	SBL	46.9	70	SBL	30.0	215	SBL	0.0	0
	SBT	0.0	0	SBT	73.1	80	SBT	16.9	345	SBT	19.5	401
	SBR	17.6	6	SBR	23.0	45	SBR	13.4	333	SBR	20.7	401
	WBL	0.0	0	WBL	27.7	52	WBL	53.4	176	WBL	36.3	236
	WBT	3.2	233	WBT	36.9	976	WBT	68.4	238	WBT	35.1	89
	WBR	0.0	0	WBR	18.7	0	WBR	31.0	201	WBR	11.1	17
	N ▲ 6 ◀ 6 ▼ 0 ▶ 0 → 233			N ▲ 80 ◀ 45 ▼ 80 ▶ 70 → 976			N ▲ 345 ◀ 333 ▼ 345 ▶ 215 → 238			N ▲ 401 ◀ 401 ▼ 401 ▶ 0 → 236		
	182 ▲		▲ 0	230 ▲		▲ 0	126 ▲		▲ 201	126 ▲		▲ 17
	0 ▶		◀ 233	1095 ▶		◀ 976	94 ▶		◀ 238	0 ▶		◀ 89
MAX APPROACH QUEUE LENGTH (FEET)	0 ▼		▼ 0	58 ▼		▼ 52	67 ▼		▼ 176	0 ▼		▼ 236
	182 → ◀ 0 ▲ 0 ▶ 0 → 0			1095 → ◀ 524 ▲ 98 ▶ 52 → 524			126 → ◀ 263 ▲ 885 ▶ 850 → 885			126 → ◀ 34 ▲ 556 ▶ 0 → 556		
	N ▲ 25 ◀ 25 ▼ 0 ▶ 0 → 250			N ▲ 100 ◀ 50 ▼ 100 ▶ 75 → 1000			N ▲ 350 ◀ 350 ▼ 350 ▶ 225 → 250			N ▲ 425 ◀ 425 ▼ 425 ▶ 0 → 250		
	200 ▲		▲ 0	250 ▲		▲ 0	150 ▲		▲ 225	150 ▲		▲ 25
	0 ▶		◀ 250	1100 ▶		◀ 1000	100 ▶		◀ 250	0 ▶		◀ 100
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	0 ▼		▼ 0	75 ▼		▼ 75	75 ▼		▼ 200	0 ▼		▼ 250
	200 → ◀ 0 ▲ 0 ▶ 0 → 0			1100 → ◀ 525 ▲ 100 ▶ 75 → 525			150 → ◀ 275 ▲ 900 ▶ 850 → 900			150 → ◀ 50 ▲ 575 ▶ 0 → 575		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 3

VISSIM RESULTS

Cattlemen Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	18.0	669
NBL	22.0	106
NBT	13.5	669
NBR	6.9	46
EBL	64.8	256
EBT	77.1	55
EBR	7.6	7
SBL	22.0	77
SBT	15.4	251
SBR	9.8	12
WBL	65.3	191
WBT	84.8	191
WBR	31.1	172

Bee Ridge Road/Maxfield Drive

MVMNT	DELAY	QUEUE
ALL	21.9	384
NBL	71.1	107
NBT	68.2	107
NBR	16.0	29
EBL	79.2	281
EBT	22.4	338
EBR	23.3	308
SBL	89.1	242
SBT	101.5	242
SBR	15.9	51
WBL	75.7	301
WBT	8.7	291
WBR	3.2	0

Bee Ridge Road/Cattlemen Road

MVMNT	DELAY	QUEUE
ALL	37.6	757
NBL	52.8	208
NBT	74.0	661
NBR	53.3	605
EBL	51.9	212
EBT	28.9	267
EBR	40.4	273
SBL	54.9	384
SBT	53.4	397
SBR	0.0	0
WBL	2.5	8
WBT	31.5	687
WBR	15.1	474

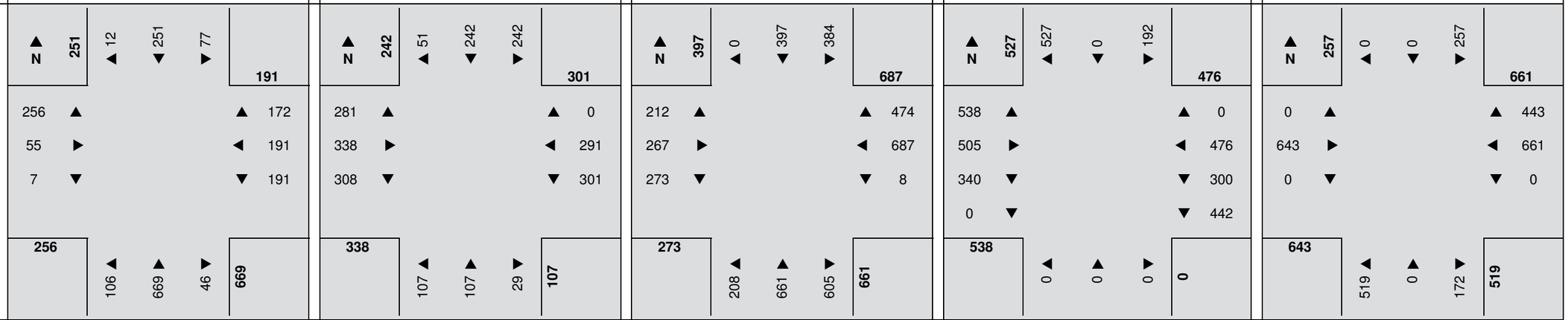
I-75 West Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	27.1	574
NBL	0.0	0
NBT	0.0	0
NBR	0.0	0
EBL	36.4	538
EBT	9.3	505
EBR1	3.5	340
EBR2	16.0	0
SBL	31.2	192
SBT	0.0	0
SBR	33.5	527
WBL1	59.4	300
WBL2	36.8	442
WBT	32.6	476
WBR	0.0	0

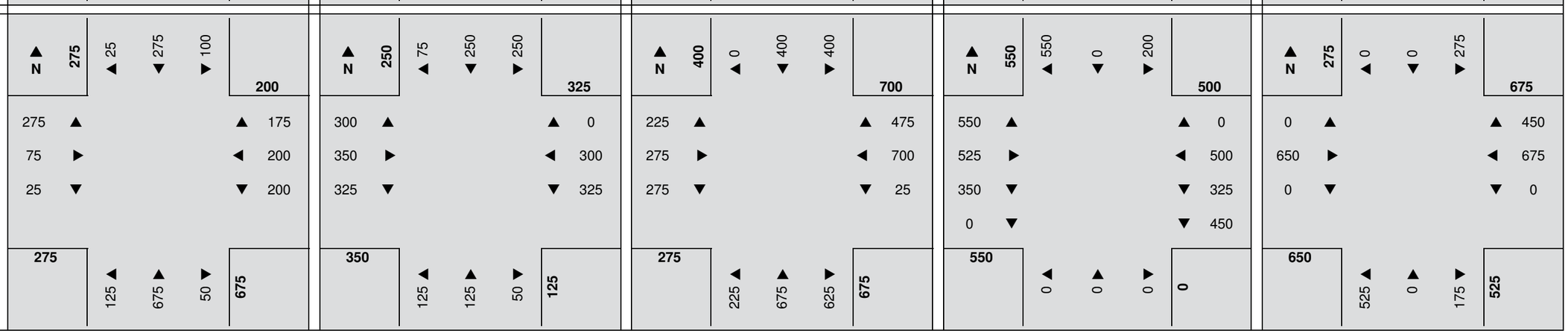
I-75 East Ramp Terminal/Bee Ridge Road

MVMNT	DELAY	QUEUE
ALL	24.2	706
NBL	29.0	519
NBT	0.0	0
NBR	45.5	172
EBL	0.0	0
EBT	30.8	643
EBR	0.0	0
SBL	42.2	257
SBT	0.0	0
SBR	0.0	0
WBL	0.0	0
WBT	32.7	661
WBR	7.0	443

MAX APPROACH QUEUE LENGTH (FEET)



MAX APPROACH QUEUE LENGTH ROUNDED (FEET)



VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.4	192	ALL	30.3	785	ALL	16.8	487	ALL	18.3	434
	NBL	0.0	0	NBL	60.7	350	NBL	14.1	136	NBL	15.5	37
	NBT	0.0	0	NBT	45.8	87	NBT	14.5	487	NBT	16.8	434
	NBR	0.0	0	NBR	20.0	42	NBR	12.5	452	NBR	0.0	0
	EBL	42.6	174	EBL	73.3	192	EBL	55.3	116	EBL	22.1	119
	EBT	0.0	0	EBT	18.2	757	EBT	76.4	87	EBT	0.0	0
	EBR	0.0	0	EBR	11.6	29	EBR	15.7	59	EBR	4.6	0
VISSIM RESULTS	SBL	0.0	0	SBL	50.1	68	SBL	18.5	155	SBL	0.0	0
	SBT	0.0	0	SBT	70.8	76	SBT	11.4	256	SBT	18.9	312
	SBR	12.8	0	SBR	14.2	26	SBR	7.9	243	SBR	18.7	312
	WBL	0.0	0	WBL	18.5	42	WBL	59.0	154	WBL	34.7	208
	WBT	2.5	175	WBT	28.0	661	WBT	65.5	191	WBT	37.0	83
	WBR	0.0	0	WBR	8.4	0	WBR	22.8	154	WBR	7.0	2
MAX APPROACH QUEUE LENGTH (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 175			N 76 / 26 ◀ 76 ▼ 68 ▶ / 661			N 256 / 243 ◀ 256 ▼ 155 ▶ / 191			N 312 / 312 ◀ 312 ▼ 0 ▶ / 208		
	174 ▲		▲ 0	192 ▲		▲ 0	116 ▲		▲ 154	119 ▲		▲ 2
	0 ▶		◀ 175	757 ▶		◀ 661	87 ▶		◀ 191	0 ▶		◀ 83
	0 ▼		▼ 0	29 ▼		▼ 42	59 ▼		▼ 154	0 ▼		▼ 208
	174 / 0 ◀ 0 ▲ 0 ▶ / 0			757 / 350 ◀ 87 ▲ 42 ▶ / 350			116 / 136 ◀ 487 ▲ 452 ▶ / 487			119 / 37 ◀ 434 ▲ 0 ▶ / 434		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 0 / 0 ◀ 0 ▼ 0 ▶ / 200			N 100 / 50 ◀ 100 ▼ 75 ▶ / 675			N 275 / 250 ◀ 275 ▼ 175 ▶ / 200			N 325 / 325 ◀ 325 ▼ 0 ▶ / 225		
	175 ▲		▲ 0	200 ▲		▲ 0	125 ▲		▲ 175	125 ▲		▲ 25
	0 ▶		◀ 200	775 ▶		◀ 675	100 ▶		◀ 200	0 ▶		◀ 100
	0 ▼		▼ 0	50 ▼		▼ 50	75 ▼		▼ 175	0 ▼		▼ 225
	175 / 0 ◀ 0 ▲ 0 ▶ / 0			775 / 350 ◀ 100 ▲ 50 ▶ / 350			125 / 150 ◀ 500 ▲ 475 ▶ / 500			125 / 50 ◀ 450 ▲ 0 ▶ / 450		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 23.2 549 NBL 22.6 78 NBT 10.3 549 NBR 4.9 27 EBL 53.5 210 EBT 69.4 100 EBR 9.7 13 SBL 29.1 88 SBT 23.4 389 SBR 17.9 0 WBL 80.2 307 WBT 85.1 307 WBR 44.2 287	MVMNT DELAY QUEUE ALL 23.9 505 NBL 78.5 164 NBT 69.3 164 NBR 21.6 84 EBL 78.5 247 EBT 26.9 505 EBR 28.9 475 SBL 82.7 165 SBT 87.5 165 SBR 17.1 122 WBL 79.5 258 WBT 6.7 190 WBR 2.9 0	MVMNT DELAY QUEUE ALL 42.4 743 NBL 45.2 165 NBT 69.0 425 NBR 59.4 599 EBL 57.3 212 EBT 39.1 454 EBR 39.7 275 SBL 51.2 504 SBT 62.1 537 SBR 0.0 0 WBL 31.0 285 WBT 27.1 654 WBR 28.7 600	MVMNT DELAY QUEUE ALL 25.6 678 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 14.5 644 EBT 12.5 514 EBR1 10.6 337 EBR2 19.6 0 SBL 47.6 307 SBT 0.0 0 SBR 20.0 296 WBL1 37.0 258 WBL2 28.4 347 WBT 46.4 564 WBR 0.0 0	MVMNT DELAY QUEUE ALL 23.2 720 NBL 29.1 387 NBT 0.0 0 NBR 49.3 219 EBL 0.0 0 EBT 27.9 720 EBR 0.0 0 SBL 36.9 348 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 29.8 577 WBR 7.5 360
MAX APPROACH QUEUE LENGTH (FEET)	N 389 ◄ 0 ▼ 389 ► 88 307 210 ▲ ▲ 287 100 ► ◄ 307 13 ▼ ▼ 307 210 ◄ 78 ▲ 549 ► 27 549	N 165 ◄ 122 ▼ 165 ► 165 258 247 ▲ ▲ 0 505 ► ◄ 190 475 ▼ ▼ 258 505 ◄ 164 ▲ 164 ► 84 164	N 537 ◄ 0 ▼ 537 ► 504 654 212 ▲ ▲ 600 454 ► ◄ 654 275 ▼ ▼ 285 454 ◄ 165 ▲ 425 ► 599 599	N 307 ◄ 296 ▼ 0 ► 307 564 644 ▲ ▲ 0 514 ► ◄ 564 337 ▼ ▼ 258 0 ▼ ▼ 347 644 ◄ 0 ▲ 0 ► 0 0	N 348 ◄ 0 ▼ 0 ► 348 577 0 ▲ ▲ 360 720 ► ◄ 577 0 ▼ ▼ 0 720 ◄ 387 ▲ 0 ► 219 387
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 400 ◄ 0 ▼ 400 ► 100 325 225 ▲ ▲ 300 100 ► ◄ 325 25 ▼ ▼ 325 225 ◄ 100 ▲ 550 ► 50 550	N 175 ◄ 125 ▼ 175 ► 175 275 250 ▲ ▲ 0 525 ► ◄ 200 500 ▼ ▼ 275 525 ◄ 175 ▲ 175 ► 100 175	N 550 ◄ 0 ▼ 550 ► 525 675 225 ▲ ▲ 625 475 ► ◄ 675 300 ▼ ▼ 300 475 ◄ 175 ▲ 425 ► 600 600	N 325 ◄ 300 ▼ 0 ► 325 575 650 ▲ ▲ 0 525 ► ◄ 575 350 ▼ ▼ 275 0 ▼ ▼ 350 650 ◄ 0 ▲ 0 ► 0 0	N 350 ◄ 0 ▼ 0 ► 350 600 0 ▲ ▲ 375 725 ► ◄ 600 0 ▼ ▼ 0 725 ◄ 400 ▲ 0 ► 225 400

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.5	170	ALL	26.1	837	ALL	16.9	462	ALL	21.0	474
	NBL	0.0	0	NBL	55.0	271	NBL	19.3	179	NBL	16.5	69
	NBT	0.0	0	NBT	60.0	125	NBT	15.7	394	NBT	13.7	279
	NBR	0.0	0	NBR	18.4	81	NBR	13.0	359	NBR	0.0	0
	EBL	39.7	168	EBL	67.2	175	EBL	50.1	116	EBL	29.1	244
	EBT	0.0	0	EBT	17.9	837	EBT	65.1	127	EBT	0.0	0
	EBR	0.0	0	EBR	15.3	240	EBR	17.3	100	EBR	5.7	2
VISSIM RESULTS	SBL	0.0	0	SBL	46.4	126	SBL	13.5	126	SBL	0.0	0
	SBT	0.0	0	SBT	69.9	57	SBT	10.4	422	SBT	27.4	474
	SBR	20.4	21	SBR	14.4	74	SBR	10.1	409	SBR	29.7	474
	WBL	0.0	0	WBL	17.8	39	WBL	58.5	193	WBL	33.4	164
	WBT	2.4	131	WBT	24.5	568	WBT	59.3	200	WBT	38.9	75
	WBR	0.0	0	WBR	5.7	0	WBR	21.4	164	WBR	4.4	0
MAX APPROACH QUEUE LENGTH (FEET)	N 21 / 21 ◀ 0 ▼ 0 ▶ / 131			N 126 / 74 ◀ 57 ▼ 126 ▶ / 568			N 422 / 409 ◀ 422 ▼ 126 ▶ / 200			N 474 / 474 ◀ 474 ▼ 0 ▶ / 164		
	168 ▲		▲ 0	175 ▲		▲ 0	116 ▲		▲ 164	244 ▲		▲ 0
	0 ▶		◀ 131	837 ▶		◀ 568	127 ▶		◀ 200	0 ▶		◀ 75
	0 ▼		▼ 0	240 ▼		▼ 39	100 ▼		▼ 193	2 ▼		▼ 164
	168 / ◀ 0 ▲ 0 ▶ 0 / 0			837 / ◀ 271 ▲ 125 ▶ 81 / 271			127 / ◀ 179 ▲ 394 ▶ 359 / 394			244 / ◀ 69 ▲ 279 ▶ 0 / 279		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 25 / 25 ◀ 0 ▼ 0 ▶ / 150			N 150 / 75 ◀ 75 ▼ 150 ▶ / 575			N 425 / 425 ◀ 425 ▼ 150 ▶ / 225			N 475 / 475 ◀ 475 ▼ 0 ▶ / 175		
	175 ▲		▲ 0	200 ▲		▲ 0	125 ▲		▲ 175	250 ▲		▲ 0
	0 ▶		◀ 150	850 ▶		◀ 575	150 ▶		◀ 225	0 ▶		◀ 75
	0 ▼		▼ 0	250 ▼		▼ 50	125 ▼		▼ 200	25 ▼		▼ 175
	175 / ◀ 0 ▲ 0 ▶ 0 / 0			850 / ◀ 275 ▲ 150 ▶ 100 / 275			150 / ◀ 200 ▲ 400 ▶ 375 / 400			250 / ◀ 75 ▲ 300 ▶ 0 / 300		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 28.1 773 NBL 35.1 99 NBT 8.9 585 NBR 4.7 30 EBL 58.0 279 EBT 66.6 112 EBR 13.5 46 SBL 38.7 133 SBT 30.8 719 SBR 23.3 0 WBL 107.3 399 WBT 88.7 399 WBR 56.5 380	MVMNT DELAY QUEUE ALL 33.5 1446 NBL 85.0 185 NBT 75.4 185 NBR 30.3 110 EBL 89.0 263 EBT 44.6 1446 EBR 47.4 1416 SBL 98.7 318 SBT 110.4 318 SBR 22.8 153 WBL 80.6 315 WBT 8.1 217 WBR 3.3 3	MVMNT DELAY QUEUE ALL 53.6 957 NBL 51.1 184 NBT 79.0 562 NBR 67.9 786 EBL 58.1 239 EBT 68.0 902 EBR 45.3 282 SBL 56.9 637 SBT 56.3 608 SBR 0.0 0 WBL 38.6 346 WBT 36.7 721 WBR 29.6 645	MVMNT DELAY QUEUE ALL 33.2 784 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 18.9 748 EBT 18.1 754 EBR1 12.8 571 EBR2 28.0 2 SBL 43.5 332 SBT 0.0 0 SBR 26.2 362 WBL1 42.8 281 WBL2 29.7 404 WBT 65.8 725 WBR 0.0 0	MVMNT DELAY QUEUE ALL 27.1 864 NBL 33.6 504 NBT 0.0 0 NBR 56.0 236 EBL 0.0 0 EBT 33.1 861 EBR 0.0 0 SBL 42.8 425 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 33.8 675 WBR 11.9 458
MAX APPROACH QUEUE LENGTH (FEET)	N 719 | 0 719 133 | 399 279 ▲ 380 112 ▶ 399 46 ▼ 399 279 | 99 585 30 | 585	N 318 | 153 318 318 | 315 263 ▲ 3 1446 ▶ 217 1416 ▼ 315 1446 | 185 185 110 | 185	N 637 | 0 608 637 | 721 239 ▲ 645 902 ▶ 721 282 ▼ 346 902 | 184 562 786 | 786	N 362 | 362 0 332 | 725 748 ▲ 0 754 ▶ 725 571 ▼ 281 2 ▼ 404 754 | 0 0 0 | 0	N 425 | 0 0 425 | 675 0 ▲ 458 861 ▶ 675 0 ▼ 0 861 | 504 0 236 | 504
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 725 | 0 725 150 | 400 300 ▲ 400 125 ▶ 400 50 ▼ 400 300 | 100 600 50 | 600	N 325 | 175 325 325 | 325 275 ▲ 25 1450 ▶ 225 1425 ▼ 325 1450 | 200 200 125 | 200	N 650 | 0 625 650 | 725 250 ▲ 650 925 ▶ 725 300 ▼ 350 925 | 200 575 800 | 800	N 375 | 375 0 350 | 750 750 ▲ 0 775 ▶ 750 575 ▼ 300 25 ▼ 425 775 | 0 0 0 | 0	N 425 | 0 0 425 | 675 0 ▲ 475 875 ▶ 675 0 ▼ 0 875 | 525 0 250 | 525

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	8.3	227	ALL	30.4	1125	ALL	23.4	705	ALL	23.0	560
	NBL	0.0	0	NBL	59.3	343	NBL	31.0	361	NBL	19.5	86
	NBT	0.0	0	NBT	62.9	154	NBT	22.4	705	NBT	13.4	333
	NBR	0.0	0	NBR	22.8	110	NBR	19.0	670	NBR	0.0	0
	EBL	44.9	194	EBL	76.0	205	EBL	52.3	120	EBL	33.3	285
	EBT	0.0	0	EBT	21.7	1125	EBT	75.2	152	EBT	0.0	0
	EBR	0.0	0	EBR	19.5	438	EBR	23.5	125	EBR	6.4	2
	SBL	0.0	0	SBL	44.2	146	SBL	23.2	216	SBL	0.0	0
	SBT	0.0	0	SBT	68.8	63	SBT	16.4	556	SBT	31.3	560
	SBR	23.1	64	SBR	18.2	90	SBR	15.0	544	SBR	37.2	560
	WBL	0.0	0	WBL	22.9	57	WBL	55.1	234	WBL	33.4	173
	WBT	2.5	195	WBT	29.1	695	WBT	66.9	242	WBT	38.2	81
	WBR	0.0	0	WBR	10.4	0	WBR	26.9	206	WBR	5.8	0
MAX APPROACH QUEUE LENGTH (FEET)	N 64 / 64 ◀ 0 ▼ 0 ▶ / 195			N 146 / 90 ◀ 63 ▼ 146 ▶ / 695			N 556 / 544 ◀ 556 ▼ 216 ▶ / 242			N 560 / 560 ◀ 560 ▼ 0 ▶ / 173		
	194 ▲		▲ 0	205 ▲		▲ 0	120 ▲		▲ 206	285 ▲		▲ 0
	0 ▶		◀ 195	1125 ▶		◀ 695	152 ▶		◀ 242	0 ▶		◀ 81
	0 ▼		▼ 0	438 ▼		▼ 57	125 ▼		▼ 234	2 ▼		▼ 173
	194 / 0 ◀ 0 ▲ 0 ▶ / 0			1125 / 343 ◀ 154 ▲ 110 ▶ / 343			152 / 361 ◀ 705 ▲ 670 ▶ / 705			285 / 86 ◀ 333 ▲ 0 ▶ / 333		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 75 / 75 ◀ 0 ▼ 0 ▶ / 200			N 150 / 100 ◀ 75 ▼ 150 ▶ / 700			N 575 / 550 ◀ 575 ▼ 225 ▶ / 250			N 575 / 575 ◀ 575 ▼ 0 ▶ / 175		
	200 ▲		▲ 0	225 ▲		▲ 0	125 ▲		▲ 225	300 ▲		▲ 0
	0 ▶		◀ 200	1125 ▶		◀ 700	175 ▶		◀ 250	0 ▶		◀ 100
	0 ▼		▼ 0	450 ▼		▼ 75	125 ▼		▼ 250	25 ▼		▼ 175
	200 / 0 ◀ 0 ▲ 0 ▶ / 0			1125 / 350 ◀ 175 ▲ 125 ▶ / 350			175 / 375 ◀ 725 ▲ 675 ▶ / 725			300 / 100 ◀ 350 ▲ 0 ▶ / 350		

VISSIM Results Design Year (2040) Proposed Build Alternative

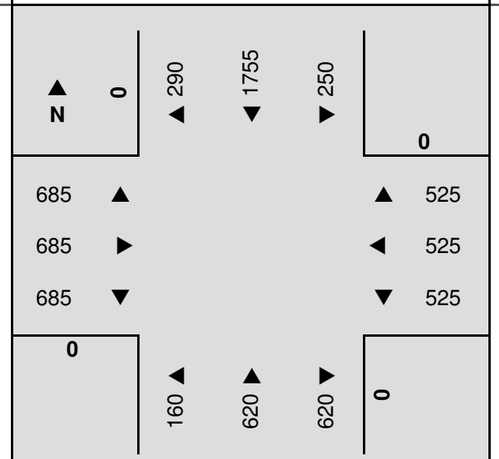
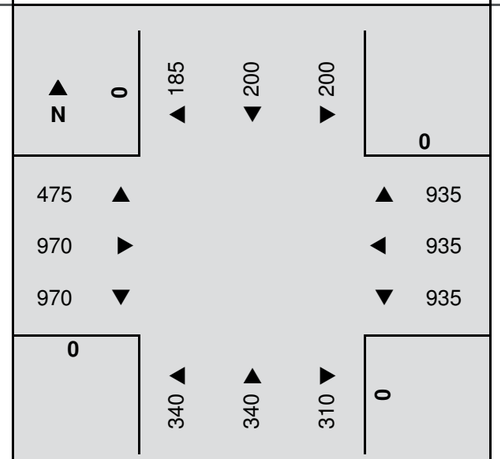
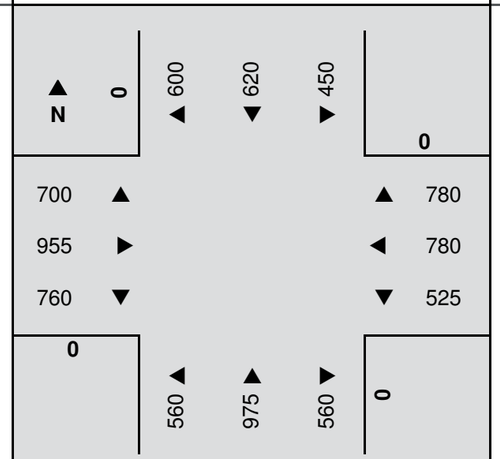
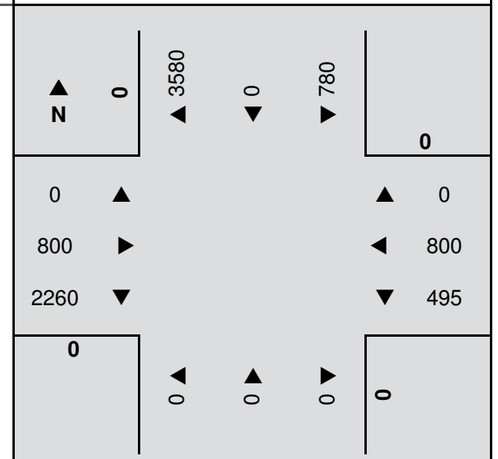
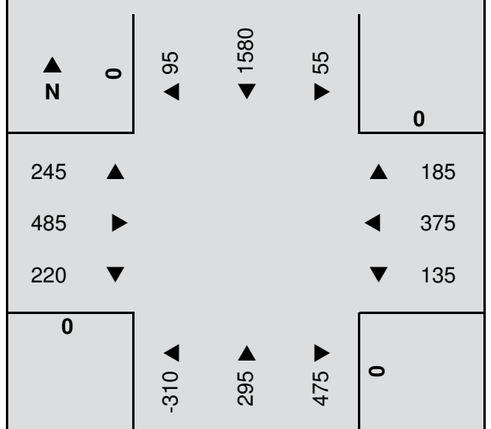
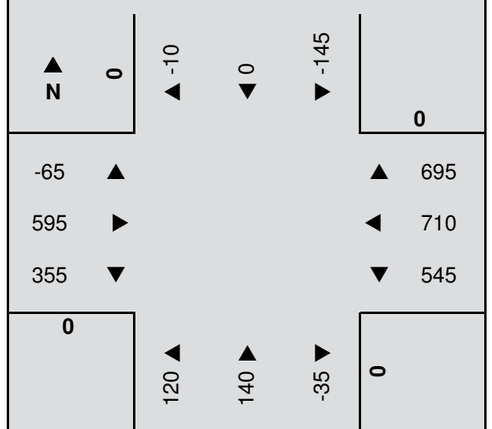
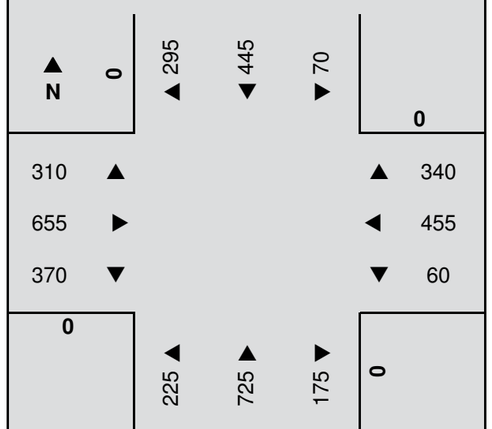
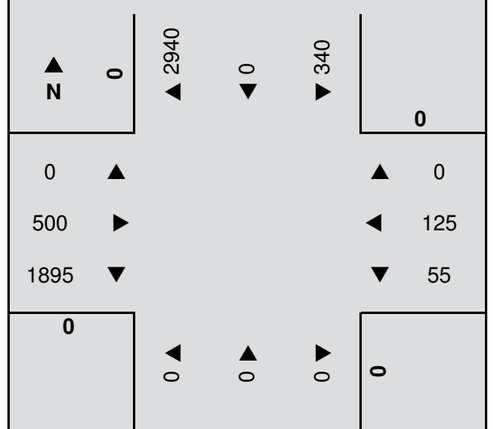
Build 2040 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.9 568 NBL 18.1 65 NBT 10.5 550 NBR 4.7 38 EBL 57.1 200 EBT 75.5 93 EBR 9.4 9 SBL 24.6 76 SBT 22.4 422 SBR 17.3 2 WBL 73.6 260 WBT 71.9 260 WBR 32.8 241	MVMNT DELAY QUEUE ALL 23.2 641 NBL 76.6 133 NBT 65.2 133 NBR 17.1 35 EBL 77.4 235 EBT 26.5 641 EBR 28.9 611 SBL 80.7 158 SBT 84.5 158 SBR 14.5 88 WBL 80.5 270 WBT 6.3 173 WBR 2.8 0	MVMNT DELAY QUEUE ALL 40.8 710 NBL 41.8 161 NBT 67.0 388 NBR 55.9 450 EBL 59.9 182 EBT 37.0 540 EBR 38.3 289 SBL 53.6 481 SBT 62.8 488 SBR 0.0 0 WBL 28.2 299 WBT 24.5 642 WBR 27.3 562	MVMNT DELAY QUEUE ALL 25.0 666 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 13.2 648 EBT 12.6 511 EBR1 10.0 301 EBR2 15.1 0 SBL 48.5 282 SBT 0.0 0 SBR 17.6 285 WBL1 36.7 255 WBL2 29.0 355 WBT 46.8 493 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.6 687 NBL 27.1 366 NBT 0.0 0 NBR 46.0 184 EBL 0.0 0 EBT 26.1 680 EBR 0.0 0 SBL 35.4 334 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 28.1 549 WBR 6.0 332
MAX APPROACH QUEUE LENGTH (FEET)	N 422 / 2 ◄ 422 ▼ 76 ► / 260 200 ▲ ▲ 241 93 ► ◄ 260 9 ▼ ▼ 260 200 / 65 ◄ 550 ▲ 38 ► / 550	N 158 / 88 ◄ 158 ▼ 158 ► / 270 235 ▲ ▲ 0 641 ► ◄ 173 611 ▼ ▼ 270 641 / 133 ◄ 133 ▲ 35 ► / 133	N 488 / 0 ◄ 488 ▼ 481 ► / 642 182 ▲ ▲ 562 540 ► ◄ 642 289 ▼ ▼ 299 540 / 161 ◄ 388 ▲ 450 ► / 450	N 285 / 285 ◄ 0 ▼ 282 ► / 493 648 ▲ ▲ 0 511 ► ◄ 493 301 ▼ ▼ 255 0 ▼ ▼ 355 648 / 0 ◄ 0 ▲ 0 ► / 0	N 334 / 0 ◄ 0 ▼ 334 ► / 549 0 ▲ ▲ 332 680 ► ◄ 549 0 ▼ ▼ 0 680 / 366 ◄ 0 ▲ 184 ► / 366
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N 425 / 25 ◄ 425 ▼ 100 ► / 275 225 ▲ ▲ 250 100 ► ◄ 275 25 ▼ ▼ 275 225 / 75 ◄ 575 ▲ 50 ► / 575	N 175 / 100 ◄ 175 ▼ 175 ► / 275 250 ▲ ▲ 0 650 ► ◄ 175 625 ▼ ▼ 275 650 / 150 ◄ 150 ▲ 50 ► / 150	N 500 / 0 ◄ 500 ▼ 500 ► / 650 200 ▲ ▲ 575 550 ► ◄ 650 300 ▼ ▼ 300 550 / 175 ◄ 400 ▲ 450 ► / 450	N 300 / 300 ◄ 0 ▼ 300 ► / 500 650 ▲ ▲ 0 525 ► ◄ 500 325 ▼ ▼ 275 0 ▼ ▼ 375 650 / 0 ◄ 0 ▲ 0 ► / 0	N 350 / 0 ◄ 0 ▼ 350 ► / 550 0 ▲ ▲ 350 700 ► ◄ 550 0 ▼ ▼ 0 700 / 375 ◄ 0 ▲ 200 ► / 375

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.6	192	ALL	24.1	655	ALL	15.0	354	ALL	20.4	458
	NBL	0.0	0	NBL	55.4	253	NBL	15.6	149	NBL	16.7	67
	NBT	0.0	0	NBT	55.7	133	NBT	13.4	299	NBT	13.8	268
	NBR	0.0	0	NBR	17.1	88	NBR	10.9	264	NBR	0.0	0
	EBL	36.2	149	EBL	67.0	159	EBL	54.8	119	EBL	24.8	211
	EBT	0.0	0	EBT	15.8	636	EBT	68.9	104	EBT	0.0	0
	EBR	0.0	0	EBR	13.0	120	EBR	15.1	76	EBR	5.2	2
VISSIM RESULTS	SBL	0.0	0	SBL	46.9	129	SBL	12.1	127	SBL	0.0	0
	SBT	0.0	0	SBT	70.7	54	SBT	8.6	307	SBT	27.0	458
	SBR	17.0	30	SBR	11.6	48	SBR	8.1	295	SBR	28.7	458
	WBL	0.0	0	WBL	15.4	41	WBL	58.9	185	WBL	32.7	157
	WBT	2.3	162	WBT	21.5	453	WBT	63.9	160	WBT	37.2	78
	WBR	0.0	0	WBR	5.4	0	WBR	20.5	123	WBR	3.7	0
MAX APPROACH QUEUE LENGTH (FEET)	N: 30 / ◀ 30 / ▼ 0 / ▶ 0 / 162 149 ▲ ▲ 0 0 ▶ ◀ 162 0 ▼ ▼ 0 149 / ◀ 0 / ▲ 0 / ▶ 0 / 0			N: 129 / ◀ 48 / ▼ 54 / ▶ 129 / 453 159 ▲ ▲ 0 636 ▶ ◀ 453 120 ▼ ▼ 41 636 / ◀ 253 / ▲ 133 / ▶ 88 / 253			N: 307 / ◀ 295 / ▼ 307 / ▶ 127 / 185 119 ▲ ▲ 123 104 ▶ ◀ 160 76 ▼ ▼ 185 119 / ◀ 149 / ▲ 299 / ▶ 264 / 299			N: 458 / ◀ 458 / ▼ 458 / ▶ 0 / 157 211 ▲ ▲ 0 0 ▶ ◀ 78 2 ▼ ▼ 157 211 / ◀ 67 / ▲ 268 / ▶ 0 / 268		
MAX APPROACH QUEUE LENGTH ROUNDED (FEET)	N: 50 / ◀ 50 / ▼ 0 / ▶ 0 / 175 150 ▲ ▲ 0 0 ▶ ◀ 175 0 ▼ ▼ 0 150 / ◀ 0 / ▲ 0 / ▶ 0 / 0			N: 150 / ◀ 50 / ▼ 75 / ▶ 150 / 475 175 ▲ ▲ 0 650 ▶ ◀ 475 125 ▼ ▼ 50 650 / ◀ 275 / ▲ 150 / ▶ 100 / 275			N: 325 / ◀ 300 / ▼ 325 / ▶ 150 / 200 125 ▲ ▲ 125 125 ▶ ◀ 175 100 ▼ ▼ 200 125 / ◀ 150 / ▲ 300 / ▶ 275 / 300			N: 475 / ◀ 475 / ▼ 475 / ▶ 0 / 175 225 ▲ ▲ 0 0 ▶ ◀ 100 25 ▼ ▼ 175 225 / ◀ 75 / ▲ 275 / ▶ 0 / 275		

Queue Storage Lengths

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.1 325 NBL 74.0 314 NBT 7.7 323 NBR 3.0 0 EBL 62.1 188 EBT 82.4 188 EBR 19.7 200 SBL 14.8 45 SBT 15.0 174 SBR 7.0 32 WBL 67.9 135 WBT 82.7 135 WBR 15.2 97	MVMNT DELAY QUEUE ALL 20.5 385 NBL 68.1 73 NBT 75.7 193 NBR 15.8 176 EBL 86.9 282 EBT 18.8 366 EBR 17.8 351 SBL 72.0 189 SBT 66.8 189 SBR 7.6 40 WBL 104.7 143 WBT 9.4 212 WBR 3.6 0	MVMNT DELAY QUEUE ALL 38.5 319 NBL 79.8 147 NBT 62.7 228 NBR 39.9 199 EBL 58.0 138 EBT 28.9 291 EBR 17.3 140 SBL 76.8 221 SBT 42.1 174 SBR 23.3 133 WBL 70.8 220 WBT 27.1 308 WBR 10.6 185	MVMNT DELAY QUEUE ALL 25.4 651 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 11.7 276 EBR 1.0 116 SBL 61.7 185 SBT 0.0 0 SBR 39.0 377 WBL 69.0 177 WBT 24.2 651 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)				
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)				

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	17.0	536	ALL	25.7	403	ALL	13.2	270	ALL	5.9	155
	NBL	47.5	536	NBL	56.1	295	NBL	9.0	76	NBL	5.2	18
	NBT	0.0	0	NBT	45.5	70	NBT	10.5	269	NBT	2.7	127
	NBR	3.4	71	NBR	14.8	26	NBR	4.8	3	NBR	0.0	0
	EBL	0.0	0	EBL	58.1	128	EBL	65.9	87	EBL	68.6	151
	EBT	12.1	237	EBT	10.9	248	EBT	73.9	47	EBT	0.0	0
	EBR	3.4	54	EBR	5.4	41	EBR	6.6	18	EBR	4.7	0
	SBL	0.0	0	SBL	50.2	41	SBL	14.3	143	SBL	0.0	0
	SBT	0.0	0	SBT	62.3	52	SBT	4.8	103	SBT	3.0	76
	SBR	0.0	0	SBR	10.3	15	SBR	2.6	103	SBR	3.0	46
	WBL	0.0	0	WBL	14.0	30	WBL	64.3	135	WBL	0.0	0
	WBT	14.3	273	WBT	20.7	398	WBT	70.2	158	WBT	0.0	0
	WBR	2.4	16	WBR	4.4	0	WBR	21.7	121	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► 0			N 0 / 535 ◄ 1180 ▼ 310 ► 0			N 0 / 230 ◄ 230 ▼ 275 ► 0			N 0 / 1005 ◄ 1005 ▼ 0 ► 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ►		◄ 1790	1780 ►		◄ 820	735 ►		◄ 275	0 ►		◄ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0 / 4530 ◄ 0 ▲ 575 ► 0			0 / 1000 ◄ 235 ▲ 255 ► 0			0 / 210 ◄ 610 ▲ 250 ► 0			0 / 245 ◄ 825 ▲ 0 ► 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► 0			N 0 / 365 ◄ 1105 ▼ 115 ► 0			N 0 / -40 ◄ 105 ▼ -20 ► 0			N 0 / 770 ◄ 905 ▼ 0 ► 0		
	0 ▲		▲ 1525	1390 ▲		▲ 125	-170 ▲		▲ -130	-165 ▲		▲ 0
	550 ►		◄ 1515	1530 ►		◄ 420	685 ►		◄ 100	0 ►		◄ 0
	1365 ▼		▼ 0	120 ▼		▼ 25	470 ▼		▼ -115	900 ▼		▼ 0
	0 / 3740 ◄ 0 ▲ 260 ► 0			0 / 555 ◄ 160 ▲ 60 ► 0			0 / -35 ◄ 335 ▲ 80 ► 0			0 / 35 ◄ 675 ▲ 0 ► 0		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 19.4 439 NBL 80.6 433 NBT 8.6 427 NBR 3.8 13 EBL 64.2 247 EBT 76.0 247 EBR 25.7 259 SBL 20.5 58 SBT 18.3 263 SBR 8.2 48 WBL 70.4 174 WBT 81.9 174 WBR 21.4 135	MVMNT DELAY QUEUE ALL 33.0 1242 NBL 67.7 80 NBT 78.3 260 NBR 24.0 243 EBL 194.2 982 EBT 34.8 1151 EBR 33.8 1136 SBL 75.5 253 SBT 74.0 253 SBR 8.3 53 WBL 106.4 182 WBT 14.0 329 WBR 4.9 0	MVMNT DELAY QUEUE ALL 42.8 420 NBL 78.3 173 NBT 76.5 293 NBR 44.5 258 EBL 53.0 146 EBT 36.7 399 EBR 19.3 169 SBL 87.8 277 SBT 42.3 219 SBR 22.6 179 WBL 71.3 277 WBT 28.8 393 WBR 14.9 277	MVMNT DELAY QUEUE ALL 26.2 752 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.4 347 EBR 1.3 164 SBL 61.1 222 SBT 0.0 0 SBR 40.5 478 WBL 69.8 233 WBT 23.5 752 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 ▲ 525 ▲ 685 ▶ 525 ◀ 685 ▼ 525 ▼ 0 160 620 620 0	N 0 185 200 200 0 475 ▲ 935 ▲ 970 ▶ 935 ◀ 970 ▼ 935 ▼ 0 340 340 310 0	N 0 600 620 450 0 700 ▲ 780 ▲ 955 ▶ 780 ◀ 760 ▼ 525 ▼ 0 560 975 560 0	N 0 3580 0 780 0 0 ▲ 0 ▲ 800 ▶ 800 ◀ 2260 ▼ 495 ▼ 0 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 95 1480 30 0 195 ▲ 135 ▲ 435 ▶ 350 ◀ 170 ▼ 110 ▼ 0 -435 170 450 0	N 0 -35 -75 -220 0 -765 ▲ 695 ▲ -205 ▶ 585 ◀ -420 ▼ 495 ▼ 0 95 65 -85 0	N 0 245 395 -5 0 310 ▲ 240 ▲ 555 ▶ 380 ◀ 345 ▼ -15 ▼ 0 200 675 100 0	N 0 2840 0 315 0 0 ▲ 0 ▲ 450 ▶ 25 ◀ 1845 ▼ 5 ▼ 0 0 0 0 0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	19.7	789	ALL	32.9	633	ALL	17.3	455	ALL	7.3	214
	NBL	42.1	780	NBL	73.1	568	NBL	13.9	109	NBL	8.1	28
	NBT	0.0	0	NBT	63.6	65	NBT	15.6	440	NBT	3.7	197
	NBR	6.5	107	NBR	23.7	21	NBR	8.9	3	NBR	0.0	0
	EBL	0.0	0	EBL	66.3	170	EBL	64.1	112	EBL	67.0	188
	EBT	18.7	347	EBT	14.6	379	EBT	68.0	64	EBT	0.0	0
	EBR	6.1	145	EBR	7.2	48	EBR	8.9	34	EBR	4.7	0
	SBL	0.0	0	SBL	41.5	49	SBL	25.1	281	SBL	0.0	0
	SBT	0.0	0	SBT	68.8	61	SBT	7.7	173	SBT	5.0	139
	SBR	0.0	0	SBR	13.5	30	SBR	3.4	173	SBR	4.6	109
	WBL	0.0	0	WBL	20.8	51	WBL	60.4	170	WBL	0.0	0
	WBT	21.9	475	WBT	26.8	601	WBT	68.7	210	WBT	0.0	0
	WBR	3.9	115	WBR	8.1	0	WBR	25.0	173	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ▶		◀ 1790	1780 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0 / 4530 0 575 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 0			N 0 / 340 1105 115 / 0			N 0 / -90 55 -170 / 0			N 0 / 695 855 0 / 0		
	0 ▲		▲ 1425	1365 ▲		▲ 125	-195 ▲		▲ -180	-190 ▲		▲ 0
	450 ▶		◀ 1315	1380 ▶		◀ 195	660 ▶		◀ 50	0 ▶		◀ 0
	1290 ▼		▼ 0	120 ▼		▼ 0	445 ▼		▼ -140	900 ▼		▼ 0
	0 / 3490 0 210 / 0			0 / 280 160 85 / 0			0 / -60 160 80 / 0			0 / 10 625 0 / 0		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.6 346 NBL 77.4 341 NBT 7.1 345 NBR 3.2 10 EBL 62.4 215 EBT 75.2 215 EBR 19.8 227 SBL 16.4 55 SBT 16.3 187 SBR 7.9 36 WBL 72.6 147 WBT 91.9 147 WBR 19.9 109	MVMNT DELAY QUEUE ALL 29.2 824 NBL 69.4 73 NBT 76.5 209 NBR 19.3 192 EBL 177.3 773 EBT 30.9 721 EBR 25.1 706 SBL 70.7 210 SBT 69.5 210 SBR 7.7 45 WBL 104.8 165 WBT 10.3 213 WBR 4.3 0	MVMNT DELAY QUEUE ALL 39.7 338 NBL 78.0 173 NBT 66.6 241 NBR 40.5 228 EBL 53.6 150 EBT 30.7 315 EBR 17.9 155 SBL 80.7 246 SBT 40.7 173 SBR 22.9 152 WBL 69.3 252 WBT 28.7 324 WBR 12.1 205	MVMNT DELAY QUEUE ALL 24.9 683 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 12.3 294 EBR 1.1 89 SBL 61.8 194 SBT 0.0 0 SBR 39.6 424 WBL 66.8 194 WBT 22.4 683 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 ▲ 525 ▲ 685 ▶ 525 ◀ 685 ▼ 525 ▼ 0 160 620 620 0	N 0 185 200 200 0 475 ▲ 935 ▲ 970 ▶ 935 ◀ 970 ▼ 935 ▼ 0 340 340 310 0	N 0 600 620 450 0 700 ▲ 780 ▲ 955 ▶ 780 ◀ 760 ▼ 525 ▼ 0 560 975 560 0	N 0 3580 0 780 0 0 ▲ 0 ▲ 800 ▶ 800 ◀ 2260 ▼ 495 ▼ 0 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 95 1555 30 0 220 ▲ 160 ▲ 460 ▶ 375 ◀ 195 ▼ 135 ▼ 0 -335 270 450 0	N 0 -10 -25 -170 0 -540 ▲ 695 ▲ 245 ▶ 710 ◀ 5 ▼ 520 ▼ 0 120 115 -35 0	N 0 270 445 45 0 285 ▲ 315 ▲ 630 ▶ 455 ◀ 345 ▼ 10 ▼ 0 200 725 125 0	N 0 2915 0 340 0 0 ▲ 0 ▲ 500 ▶ 100 ◀ 1920 ▼ 55 ▼ 0 0 0 0 0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	18.2	591	ALL	27.9	429	ALL	14.0	342	ALL	6.3	182
	NBL	45.7	591	NBL	59.9	326	NBL	10.5	90	NBL	7.0	28
	NBT	0.0	0	NBT	41.9	68	NBT	11.6	338	NBT	3.0	146
	NBR	3.7	66	NBR	15.9	28	NBR	5.6	7	NBR	0.0	0
	EBL	0.0	0	EBL	63.2	167	EBL	69.3	98	EBL	66.9	172
	EBT	15.7	246	EBT	11.7	257	EBT	74.9	64	EBT	0.0	0
	EBR	4.1	72	EBR	5.7	34	EBR	7.2	35	EBR	4.7	0
	SBL	0.0	0	SBL	44.1	50	SBL	17.0	191	SBL	0.0	0
	SBT	0.0	0	SBT	67.6	46	SBT	5.2	103	SBT	3.6	97
	SBR	0.0	0	SBR	11.7	28	SBR	3.4	103	SBR	3.2	67
	WBL	0.0	0	WBL	16.8	40	WBL	64.9	167	WBL	0.0	0
	WBT	17.0	277	WBT	23.0	428	WBT	79.4	160	WBT	0.0	0
	WBR	2.9	7	WBR	4.9	0	WBR	20.2	123	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ▶		◀ 1790	1780 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0 / 4530 0 575 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 0			N 0 / 340 1130 115 / 0			N 0 / -40 105 -70 / 0			N 0 / 745 905 0 / 0		
	0 ▲		▲ 1525	1365 ▲		▲ 125	-170 ▲		▲ -130	-165 ▲		▲ 0
	550 ▶		◀ 1490	1505 ▶		◀ 370	660 ▶		◀ 100	0 ▶		◀ 0
	1365 ▼		▼ 0	120 ▼		▼ 25	445 ▼		▼ -140	900 ▼		▼ 0
	0 / 3690 0 260 / 0			0 / 505 160 60 / 0			0 / -35 260 80 / 0			0 / 10 675 0 / 0		

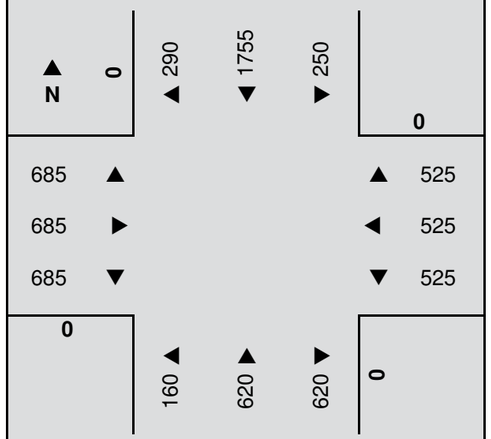
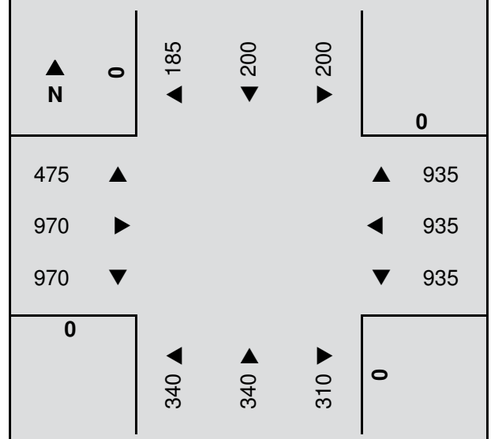
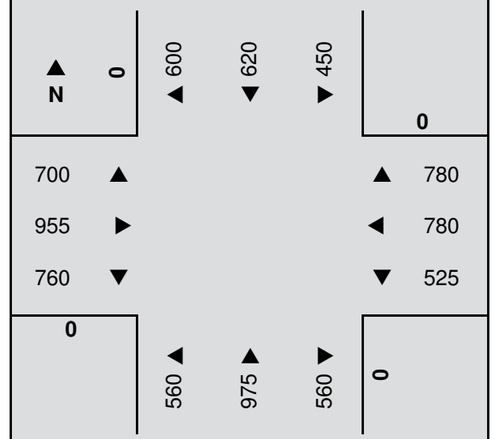
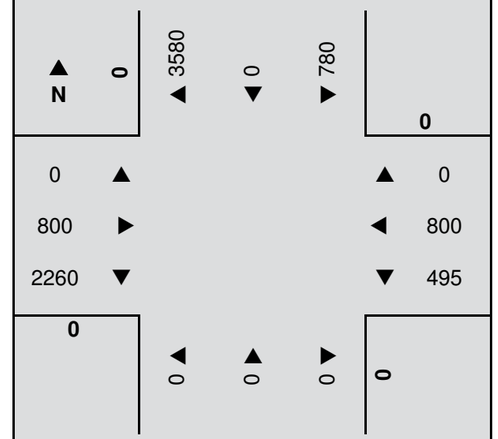
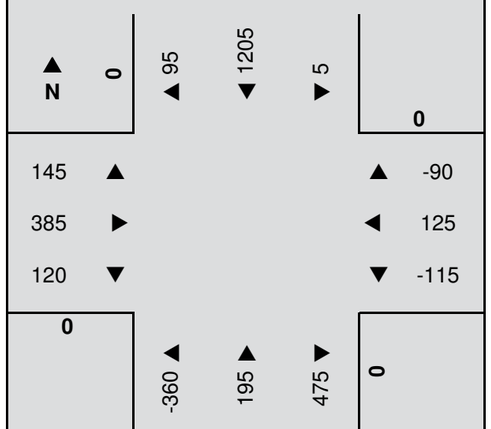
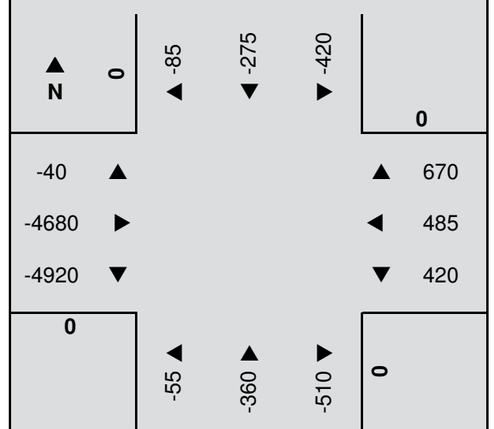
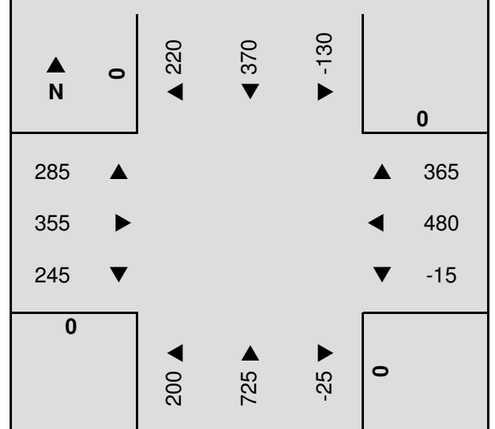
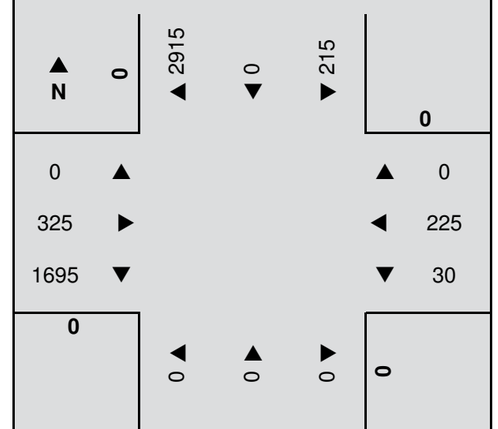
VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 1	Cattlemen Road/Maxfield Drive			Bee Ridge Road/Maxfield Drive			Bee Ridge Road/Cattlemen Road			I-75 West Ramp Terminal/Bee Ridge Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	24.5	415	ALL	35.7	1465	ALL	45.1	569	ALL	22.6	529
	NBL	78.2	207	NBL	73.4	125	NBL	72.4	176	NBL	0.0	0
	NBT	9.7	345	NBT	108.7	558	NBT	70.3	225	NBT	0.0	0
	NBR	3.6	0	NBR	48.6	540	NBR	54.6	326	NBR	0.0	0
	EBL	53.0	237	EBL	92.2	258	EBL	74.2	144	EBL	0.0	0
	EBT	74.9	237	EBT	38.5	1465	EBT	41.2	569	EBT	12.1	361
	EBR	28.3	250	EBR	39.4	1450	EBR	25.4	283	EBR	1.6	272
	SBL	21.6	82	SBL	84.8	321	SBL	78.9	357	SBL	61.8	279
	SBT	24.8	370	SBT	84.4	321	SBT	35.4	231	SBT	0.0	0
	SBR	12.6	32	SBR	9.8	76	SBR	21.2	181	SBR	37.6	361
	WBL	67.2	313	WBL	71.4	231	WBL	70.3	250	WBL	68.8	178
	WBT	65.7	313	WBT	18.3	360	WBT	24.8	278	WBT	22.3	510
	WBR	24.1	274	WBR	3.9	0	WBR	9.0	135	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 290 1755 250 / 0			N 0 / 185 200 200 / 0			N 0 / 600 620 450 / 0			N 0 / 3580 0 780 / 0		
	685 ▲		▲ 525	475 ▲		▲ 935	700 ▲		▲ 780	0 ▲		▲ 0
	685 ▶		◀ 525	970 ▶		◀ 935	955 ▶		◀ 780	800 ▶		◀ 800
	685 ▼		▼ 525	970 ▼		▼ 935	760 ▼		▼ 525	2260 ▼		▼ 495
	0 / 160 620 620 / 0			0 / 340 340 310 / 0			0 / 560 975 560 / 0			0 / 0 0 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 95 1380 5 / 0			N 0 / -60 -125 -270 / 0			N 0 / 245 370 -80 / 0			N 0 / 2965 0 240 / 0		
	195 ▲		▲ 10	-40 ▲		▲ 695	310 ▲		▲ 390	0 ▲		▲ 0
	435 ▶		◀ 200	-505 ▶		◀ 560	380 ▶		◀ 480	425 ▶		◀ 275
	195 ▼		▼ -40	-745 ▼		▼ 445	220 ▼		▼ 35	1745 ▼		▼ 55
	0 / -210 270 475 / 0			0 / 45 -235 -385 / 0			0 / 175 725 25 / 0			0 / 0 0 0 / 0		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	14.5	503	ALL	18.7	390	ALL	16.3	360	ALL	9.1	225
	NBL	52.4	380	NBL	45.8	172	NBL	18.4	147	NBL	11.4	31
	NBT	0.0	0	NBT	39.3	77	NBT	14.1	314	NBT	3.8	149
	NBR	7.9	136	NBR	15.9	29	NBR	6.2	5	NBR	0.0	0
	EBL	0.0	0	EBL	48.5	86	EBL	57.9	110	EBL	65.9	219
	EBT	11.6	503	EBT	13.4	374	EBT	77.4	105	EBT	0.0	0
	EBR	7.9	224	EBR	12.0	221	EBR	14.7	77	EBR	6.1	6
	SBL	0.0	0	SBL	35.1	58	SBL	22.3	248	SBL	0.0	0
	SBT	0.0	0	SBT	56.2	55	SBT	7.1	235	SBT	5.8	173
	SBR	0.0	0	SBR	9.8	43	SBR	3.6	235	SBR	5.6	143
	WBL	0.0	0	WBL	17.5	36	WBL	59.3	206	WBL	0.0	0
	WBT	8.9	186	WBT	16.7	321	WBT	63.9	195	WBT	0.0	0
	WBR	1.6	0	WBR	3.4	0	WBR	19.2	157	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ▶		◀ 1790	1780 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0 / 4530 0 575 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 0			N 0 / 340 1105 90 / 0			N 0 / -165 -20 -120 / 0			N 0 / 670 830 0 / 0		
	0 ▲		▲ 1550	1440 ▲		▲ 125	-195 ▲		▲ -180	-215 ▲		▲ 0
	275 ▶		◀ 1590	1405 ▶		◀ 495	610 ▶		◀ 75	0 ▶		◀ 0
	1215 ▼		▼ 0	-55 ▼		▼ 25	395 ▼		▼ -190	875 ▼		▼ 0
	0 / 3890 0 185 / 0			0 / 680 135 60 / 0			0 / -85 285 80 / 0			0 / 10 675 0 / 0		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 27.9 563 NBL 82.9 357 NBT 11.8 416 NBR 4.3 0 EBL 52.2 294 EBT 80.6 294 EBR 42.5 306 SBL 27.7 89 SBT 28.4 528 SBR 13.5 46 WBL 71.2 391 WBT 67.7 391 WBR 28.9 352	MVMNT DELAY QUEUE ALL 64.9 5646 NBL 77.6 233 NBT 148.8 675 NBR 82.1 658 EBL 142.4 265 EBT 95.3 5646 EBR 91.6 5631 SBL 113.2 452 SBT 113.5 452 SBR 18.1 125 WBL 81.1 268 WBT 20.9 427 WBR 4.5 5	MVMNT DELAY QUEUE ALL 47.4 600 NBL 72.9 175 NBT 73.4 242 NBR 61.6 379 EBL 79.1 170 EBT 44.0 600 EBR 25.3 253 SBL 84.9 408 SBT 34.3 232 SBR 22.2 211 WBL 71.1 284 WBT 24.6 299 WBR 9.8 157	MVMNT DELAY QUEUE ALL 23.9 577 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.9 457 EBR 1.9 324 SBL 63.1 308 SBT 0.0 0 SBR 37.4 411 WBL 75.1 204 WBT 21.6 556 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)				
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)				

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	16.0	617	ALL	21.3	519	ALL	21.8	466	ALL	10.1	278
	NBL	49.2	415	NBL	47.1	212	NBL	24.1	169	NBL	14.5	36
	NBT	0.0	0	NBT	40.4	80	NBT	21.2	450	NBT	4.5	174
	NBR	11.6	167	NBR	18.3	35	NBR	9.5	1	NBR	0.0	0
	EBL	0.0	0	EBL	54.6	95	EBL	57.8	114	EBL	63.9	267
	EBT	14.4	617	EBT	16.1	519	EBT	71.0	134	EBT	0.0	0
	EBR	9.4	356	EBR	15.1	281	EBR	15.6	106	EBR	6.3	3
	SBL	0.0	0	SBL	36.9	88	SBL	36.7	414	SBL	0.0	0
	SBT	0.0	0	SBT	59.6	52	SBT	10.0	314	SBT	7.2	202
	SBR	0.0	0	SBR	11.4	70	SBR	4.0	314	SBR	6.4	172
	WBL	0.0	0	WBL	22.3	47	WBL	59.8	238	WBL	0.0	0
	WBT	11.1	235	WBT	19.5	348	WBT	64.9	220	WBT	0.0	0
	WBR	2.0	5	WBR	4.3	0	WBR	23.9	183	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 0 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ▶		◀ 1790	1780 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0 / 4530 0 575 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 0 0 0 / 0			N 0 / 315 1105 65 / 0			N 0 / -240 -95 -295 / 0			N 0 / 645 780 0 / 0		
	0 ▲		▲ 1525	1440 ▲		▲ 125	-195 ▲		▲ -205	-265 ▲		▲ 0
	175 ▶		◀ 1540	1255 ▶		◀ 470	585 ▶		◀ 50	0 ▶		◀ 0
	1065 ▼		▼ 0	-130 ▼		▼ 25	370 ▼		▼ -215	875 ▼		▼ 0
	0 / 3865 0 160 / 0			0 / 630 135 60 / 0			0 / -110 135 80 / 0			0 / 10 650 0 / 0		

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.1 387 NBL 82.0 185 NBT 9.3 313 NBR 3.4 0 EBL 54.6 205 EBT 71.3 205 EBR 25.0 217 SBL 19.7 74 SBT 23.8 342 SBR 11.2 22 WBL 68.7 301 WBT 69.1 301 WBR 25.4 262	MVMNT DELAY QUEUE ALL 56.0 5531 NBL 70.3 104 NBT 109.8 464 NBR 46.7 447 EBL 152.8 566 EBT 81.6 5531 EBR 78.8 5516 SBL 80.6 264 SBT 79.3 264 SBR 8.5 51 WBL 69.2 215 WBT 17.0 333 WBR 3.9 0	MVMNT DELAY QUEUE ALL 44.3 558 NBL 72.5 160 NBT 67.0 209 NBR 52.1 286 EBL 79.5 156 EBT 39.4 558 EBR 24.8 274 SBL 78.2 344 SBT 35.0 212 SBR 20.7 140 WBL 68.8 230 WBT 25.0 238 WBR 8.9 136	MVMNT DELAY QUEUE ALL 21.2 457 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 11.6 321 EBR 1.6 218 SBL 62.7 246 SBT 0.0 0 SBR 37.0 349 WBL 72.4 159 WBT 19.0 452 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 ▲ 525 ▲ 685 ▶ 525 ◀ 685 ▼ 525 ▼ 0 160 620 620 0	N 0 185 200 200 0 475 ▲ 935 ▲ 970 ▶ 935 ◀ 970 ▼ 935 ▼ 0 340 340 310 0	N 0 600 620 450 0 700 ▲ 780 ▲ 955 ▶ 780 ◀ 760 ▼ 525 ▼ 0 560 975 560 0	N 0 3580 0 780 0 0 ▲ 0 ▲ 800 ▶ 800 ◀ 2260 ▼ 495 ▼ 0 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 120 1405 30 0 220 ▲ 10 ▲ 460 ▶ 200 ◀ 220 ▼ -40 ▼ 0 -185 295 475 0	N 0 -35 -75 -220 0 -340 ▲ 695 ▲ -4580 ▶ 585 ◀ -4795 ▼ 470 ▼ 0 70 -135 -285 0	N 0 295 395 -55 0 285 ▲ 390 ▲ 380 ▶ 530 ◀ 245 ▼ 35 ▼ 0 200 750 75 0	N 0 2990 0 290 0 0 ▲ 0 ▲ 475 ▶ 325 ◀ 1795 ▼ 80 ▼ 0 0 0 0 0

VISSIM Results Opening Year (2020) I-75 SIMR Alternative

No Build 2020 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	14.2	466	ALL	17.7	369	ALL	15.2	299	ALL	8.5	229
	NBL	54.7	339	NBL	44.2	165	NBL	15.1	121	NBL	9.8	31
	NBT	0.0	0	NBT	42.3	69	NBT	12.5	253	NBT	3.5	128
	NBR	7.3	127	NBR	14.9	22	NBR	4.7	0	NBR	0.0	0
	EBL	0.0	0	EBL	49.8	99	EBL	61.8	116	EBL	65.8	229
	EBT	10.8	459	EBT	12.8	366	EBT	74.2	109	EBT	0.0	0
	EBR	7.8	228	EBR	11.2	165	EBR	12.1	81	EBR	5.8	3
	SBL	0.0	0	SBL	34.6	63	SBL	18.8	233	SBL	0.0	0
	SBT	0.0	0	SBT	52.5	43	SBT	6.3	213	SBT	5.0	147
	SBR	0.0	0	SBR	8.7	43	SBR	3.4	213	SBR	4.7	117
	WBL	0.0	0	WBL	14.7	32	WBL	60.6	178	WBL	0.0	0
	WBT	8.0	183	WBT	16.2	277	WBT	68.2	177	WBT	0.0	0
	WBR	1.5	0	WBR	3.5	0	WBR	20.4	138	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0	0 ◄	0 ▼	0 ►	0	N 0	535 ◄	1180 ▼	310 ►	0	N 0	230 ◄	230 ▼	275 ►	0	N 0	1005 ◄	1005 ▼	0 ►	0
	0 ▲			▲ 1790	1780 ▲			▲ 365	170 ▲			▲ 235	250 ▲			▲ 0				
	800 ►			◄ 1790	1780 ►			◄ 820	735 ►			◄ 275	0 ►			◄ 0				
	1680 ▼			▼ 0	410 ▼			▼ 315	735 ▼			▼ 275	1140 ▼			▼ 0				
	0	4530 ◄	0 ▲	575 ►	0	0	1000 ◄	235 ▲	255 ►	0	0	210 ◄	610 ▲	250 ►	0	0	245 ◄	825 ▲	0 ►	0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0	0 ◄	0 ▼	0 ►	0	N 0	340 ◄	1130 ▼	90 ►	0	N 0	-140 ◄	5 ▼	-120 ►	0	N 0	695 ◄	855 ▼	0 ►	0
	0 ▲			▲ 1550	1440 ▲			▲ 125	-195 ▲			▲ -155	-240 ▲			▲ 0				
	325 ►			◄ 1590	1405 ►			◄ 520	610 ►			◄ 75	0 ►			◄ 0				
	1190 ▼			▼ 0	-5 ▼			▼ 25	395 ▼			▼ -165	875 ▼			▼ 0				
	0	3940 ◄	0 ▲	185 ►	0	0	680 ◄	160 ▲	85 ►	0	0	-60 ◄	335 ▲	105 ►	0	0	10 ◄	675 ▲	0 ►	0

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.1 387 NBL 11.0 101 NBT 10.5 387 NBR 3.9 39 EBL 61.2 168 EBT 74.2 55 EBR 6.8 0 SBL 12.3 51 SBT 11.0 158 SBR 7.0 0 WBL 67.9 128 WBT 83.3 128 WBR 16.3 109	MVMNT DELAY QUEUE ALL 16.7 276 NBL 72.9 91 NBT 72.2 91 NBR 8.5 9 EBL 75.6 270 EBT 13.8 232 EBR 13.2 202 SBL 79.0 131 SBT 75.6 131 SBR 10.5 23 WBL 78.4 144 WBT 6.3 162 WBR 2.0 0	MVMNT DELAY QUEUE ALL 33.3 390 NBL 49.5 147 NBT 59.2 282 NBR 44.0 251 EBL 58.9 167 EBT 20.3 180 EBR 44.6 235 SBL 61.6 220 SBT 60.0 275 SBR 0.0 0 WBL 1.4 0 WBT 23.8 390 WBR 14.4 322	MVMNT DELAY QUEUE ALL 27.6 451 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 38.6 431 EBT 7.7 173 EBR1 2.9 103 EBR2 9.2 0 SBL 25.9 131 SBT 0.0 0 SBR 34.3 358 WBL1 64.5 161 WBL2 56.0 382 WBT 25.1 326 WBR 0.0 0	MVMNT DELAY QUEUE ALL 15.8 355 NBL 17.1 289 NBT 0.0 0 NBR 28.8 107 EBL 0.0 0 EBT 20.4 209 EBR 0.0 0 SBL 26.5 166 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 26.1 343 WBR 3.4 126
STORAGE LENGTH ROUNDED (FEET)	N 0 ◀ 260 ▼ 1755 ▶ 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 ◀ 225 ▲ 560 ▶ 355 0	N 0 ◀ 165 ▼ 545 ▶ 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 ◀ 185 ▲ 385 ▶ 145 0	N 0 ◀ 0 ▼ 545 ▶ 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 ◀ 375 ▲ 405 ▶ 390 0	N 0 ◀ 3580 ▼ 0 ▶ 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 ◀ 4530 ▲ 0 ▶ 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◀ 115 ▼ 1580 ▶ 95 0 -130 ▲ ▲ 160 610 ▶ ◀ 375 30 ▼ ▼ -210 0 ◀ -45 ▲ 160 ▶ 160 0	N 0 ◀ -5 ▼ 395 ▶ -110 0 -40 ▲ ▲ 85 720 ▶ ◀ 150 -45 ▼ ▼ -65 0 ◀ -60 ▲ 285 ▶ -25 0	N 0 ◀ 0 ▼ 245 ▶ -40 0 -90 ▲ ▲ 50 755 ▶ ◀ 280 60 ▼ ▼ 390 0 ◀ 40 ▲ 105 ▶ -70 0	N 0 ◀ 2965 ▼ 0 ▶ 185 0 10 ▲ ▲ 0 525 ▶ ◀ 525 250 ▼ ▼ 225 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 455 0 0 ▲ ▲ 1220 710 ▶ ◀ 1260 0 ▼ ▼ 0 0 ◀ 3990 ▲ 0 ▶ 4165 0

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 AM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.3	157	ALL	24.5	382	ALL	10.9	183	ALL	20.3	278
	NBL	0.0	0	NBL	55.1	281	NBL	6.8	78	NBL	16.7	35
	NBT	0.0	0	NBT	55.7	58	NBT	6.9	148	NBT	20.3	278
	NBR	0.0	0	NBR	13.9	15	NBR	5.7	119	NBR	0.0	0
	EBL	25.5	120	EBL	61.0	140	EBL	56.9	86	EBL	15.5	85
	EBT	0.0	0	EBT	9.4	208	EBT	75.5	61	EBT	0.0	0
	EBR	0.0	0	EBR	4.5	12	EBR	7.9	29	EBR	3.9	0
	SBL	0.0	0	SBL	39.5	33	SBL	6.5	74	SBL	0.0	0
	SBT	0.0	0	SBT	67.8	45	SBT	4.3	85	SBT	21.4	173
	SBR	9.1	0	SBR	10.4	8	SBR	2.6	68	SBR	16.2	173
	WBL	0.0	0	WBL	10.8	28	WBL	61.3	132	WBL	34.3	153
	WBT	2.7	143	WBT	18.6	382	WBT	73.4	167	WBT	41.1	69
	WBR	0.0	0	WBR	4.2	0	WBR	22.1	131	WBR	3.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 650 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	480		0	335		365	170		235	240		240
	0		300	1465		820	735		275	0		5370
	0		0	270		315	735		275	1140		240
	0 / 0 0 0 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 650 0 0 / 0			N 0 / 365 1130 115 / 0			N 0 / 10 130 55 / 0			N 0 / 645 830 0 / 0		
	115		0	-55		125	-170		-155	-100		0
	0		150	1240		420	660		100	0		5295
	0		0	5		25	445		-115	900		-175
	0 / 0 0 0 / 0			0 / 555 160 85 / 0			0 / -35 460 -20 / 0			0 / 10 525 0 / 0		

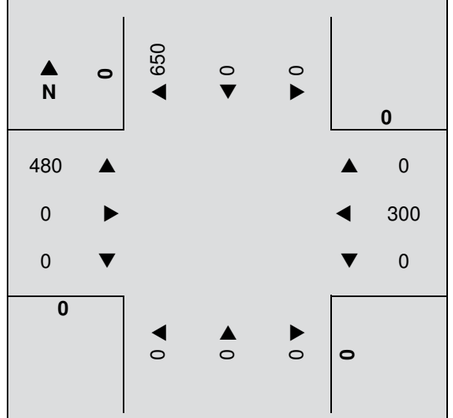
VISSIM Results Opening Year (2020) Proposed Build Alternative

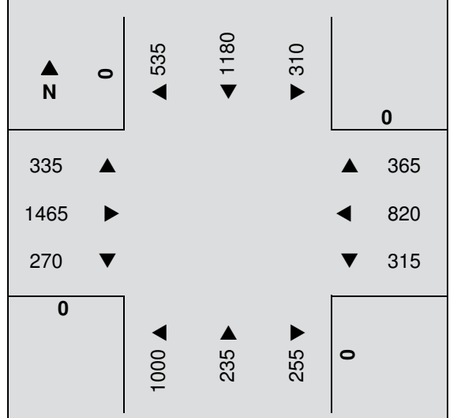
Build 2020 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 16.1 636 NBL 15.7 128 NBT 12.1 636 NBR 5.6 67 EBL 62.6 236 EBT 73.3 68 EBR 7.5 3 SBL 20.5 56 SBT 13.8 177 SBR 9.0 7 WBL 65.9 130 WBT 75.8 130 WBR 21.1 111	MVMNT DELAY QUEUE ALL 19.5 359 NBL 74.3 99 NBT 69.2 99 NBR 10.6 4 EBL 86.4 357 EBT 16.7 279 EBR 15.9 249 SBL 85.0 152 SBT 85.3 152 SBR 14.2 67 WBL 74.2 172 WBT 8.3 235 WBR 2.6 6	MVMNT DELAY QUEUE ALL 34.8 602 NBL 51.1 184 NBT 63.0 385 NBR 47.3 327 EBL 50.1 197 EBT 24.3 212 EBR 44.9 317 SBL 57.7 288 SBT 57.2 384 SBR 0.0 0 WBL 1.8 0 WBT 27.4 557 WBR 15.9 544	MVMNT DELAY QUEUE ALL 27.9 530 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 35.8 500 EBT 8.4 254 EBR1 2.2 123 EBR2 11.4 0 SBL 30.7 182 SBT 0.0 0 SBR 32.4 446 WBL1 62.7 196 WBL2 49.6 457 WBT 29.0 428 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.1 603 NBL 24.4 420 NBT 0.0 0 NBR 36.5 138 EBL 0.0 0 EBT 24.5 315 EBR 0.0 0 SBL 38.5 255 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 32.1 603 WBR 8.0 386
STORAGE LENGTH ROUNDED (FEET)	N 0 ◀ 260 ▼ 1755 ▶ 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 ◀ 225 ▲ 560 ▶ 355 0	N 0 ◀ 165 ▼ 545 ▶ 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 ◀ 185 ▲ 385 ▶ 145 0	N 0 ◀ 0 ▼ 545 ▶ 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 ◀ 375 ▲ 405 ▶ 390 0	N 0 ◀ 3580 ▼ 0 ▶ 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 ◀ 4530 ▲ 0 ▶ 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◀ 90 ▼ 1555 ▶ 95 0 -205 ▲ ▲ 160 610 ▶ ◀ 375 5 ▼ ▼ -210 0 ◀ -70 ▲ -90 ▶ 135 0	N 0 ◀ -55 ▼ 370 ▶ -135 0 -140 ▲ ▲ 60 670 ▶ ◀ 75 -70 ▼ ▼ -90 0 ◀ -60 ▲ 285 ▶ -25 0	N 0 ◀ 0 ▼ 145 ▶ -115 0 -115 ▲ ▲ -175 730 ▶ ◀ 105 -15 ▼ ▼ 390 0 ◀ -10 ▲ 5 ▶ -145 0	N 0 ◀ 2890 ▼ 0 ▶ 135 0 -65 ▲ ▲ 0 425 ▶ ◀ 425 250 ▼ ▼ 200 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 355 0 0 ▲ ▲ 970 610 ▶ ◀ 985 0 ▼ ▼ 0 0 ◀ 3865 ▲ 0 ▶ 4140 0

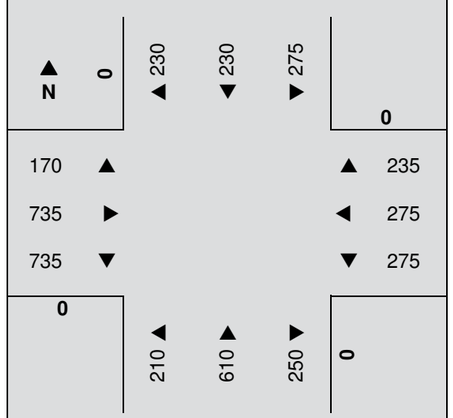
VISSIM Results Opening Year (2020) Proposed Build Alternative

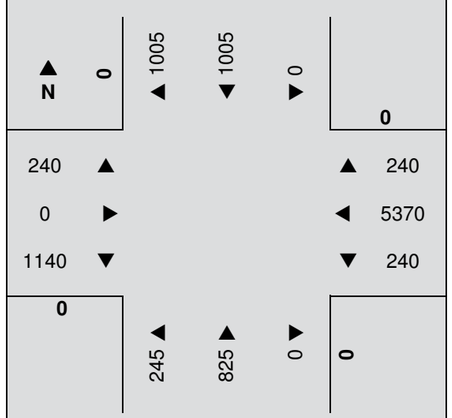
Build 2020 AM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.5	175	ALL	30.3	588	ALL	14.0	273	ALL	18.9	381
	NBL	0.0	0	NBL	63.9	461	NBL	11.0	122	NBL	14.6	38
	NBT	0.0	0	NBT	48.2	71	NBT	10.9	254	NBT	18.2	381
	NBR	0.0	0	NBR	20.0	30	NBR	9.1	218	NBR	0.0	0
	EBL	38.4	160	EBL	63.4	169	EBL	58.0	115	EBL	19.7	115
	EBT	0.0	0	EBT	12.7	325	EBT	72.2	64	EBT	0.0	0
	EBR	0.0	0	EBR	6.1	33	EBR	9.8	36	EBR	3.8	0
	SBL	0.0	0	SBL	42.3	48	SBL	12.2	110	SBL	0.0	0
	SBT	0.0	0	SBT	69.1	61	SBT	7.0	153	SBT	18.8	213
	SBR	11.8	0	SBR	14.3	9	SBR	5.5	140	SBR	17.1	213
	WBL	0.0	0	WBL	12.6	49	WBL	59.9	181	WBL	33.9	171
	WBT	2.4	130	WBT	25.7	559	WBT	66.4	209	WBT	39.4	73
	WBR	0.0	0	WBR	6.6	0	WBR	22.8	173	WBR	5.4	1

STORAGE LENGTH ROUNDED (FEET)

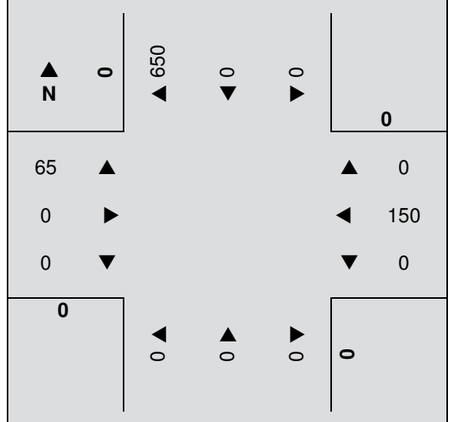


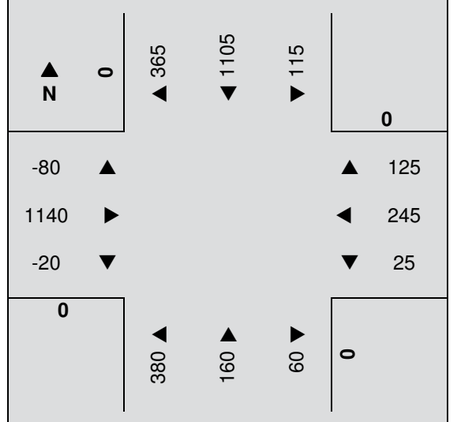


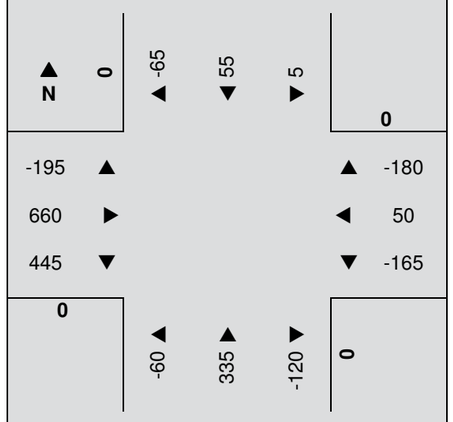


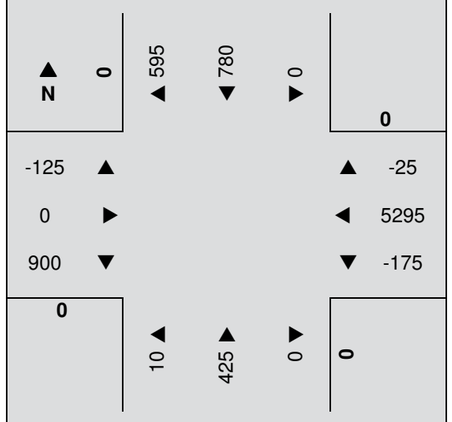


STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)









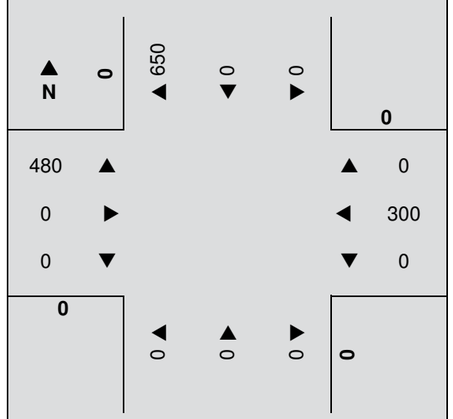
VISSIM Results Opening Year (2020) Proposed Build Alternative

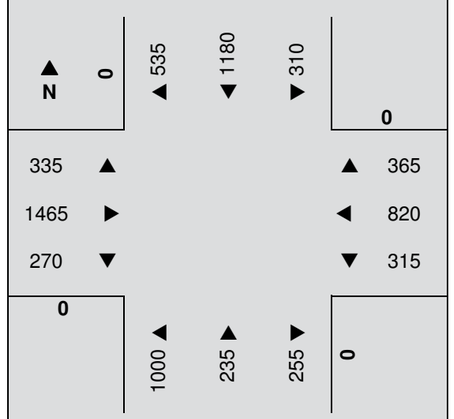
Build 2020 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 14.5 428 NBL 12.0 109 NBT 10.4 428 NBR 4.4 50 EBL 66.0 184 EBT 77.6 56 EBR 7.1 10 SBL 13.8 44 SBT 11.9 159 SBR 7.3 2 WBL 71.6 134 WBT 80.3 134 WBR 18.3 114	MVMNT DELAY QUEUE ALL 17.4 308 NBL 72.7 89 NBT 74.4 89 NBR 9.2 2 EBL 77.9 301 EBT 14.6 238 EBR 12.7 208 SBL 79.1 164 SBT 81.3 164 SBR 11.6 29 WBL 77.1 158 WBT 6.6 171 WBR 2.3 0	MVMNT DELAY QUEUE ALL 33.5 462 NBL 46.4 143 NBT 60.6 336 NBR 44.2 248 EBL 56.9 176 EBT 22.0 198 EBR 43.1 249 SBL 59.8 241 SBT 58.7 310 SBR 0.0 0 WBL 1.5 0 WBT 25.1 423 WBR 14.6 401	MVMNT DELAY QUEUE ALL 27.4 442 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 37.5 424 EBT 6.9 192 EBR1 2.6 111 EBR2 9.8 0 SBL 29.0 148 SBT 0.0 0 SBR 33.3 360 WBL1 62.6 178 WBL2 54.3 396 WBT 26.3 352 WBR 0.0 0	MVMNT DELAY QUEUE ALL 17.5 473 NBL 18.7 324 NBT 0.0 0 NBR 31.6 121 EBL 0.0 0 EBT 22.9 253 EBR 0.0 0 SBL 31.6 178 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 28.1 473 WBR 4.4 256
STORAGE LENGTH ROUNDED (FEET)	N 0 ◀ 260 ▼ 1755 ▶ 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 ◀ 225 ▲ 560 ▶ 355 0	N 0 ◀ 165 ▼ 545 ▶ 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 ◀ 185 ▲ 385 ▶ 145 0	N 0 ◀ 0 ▼ 545 ▶ 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 ◀ 375 ▲ 405 ▶ 390 0	N 0 ◀ 3580 ▼ 0 ▶ 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 ◀ 4530 ▲ 0 ▶ 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◀ 90 ▼ 1580 ▶ 120 0 -155 ▲ ▲ 160 610 ▶ ◀ 375 5 ▼ ▼ -210 0 ◀ -45 ▲ 110 ▶ 160 0	N 0 ◀ -30 ▼ 370 ▶ -135 0 -90 ▲ ▲ 85 720 ▶ ◀ 150 -45 ▼ ▼ -90 0 ◀ -60 ▲ 285 ▶ -25 0	N 0 ◀ 0 ▼ 220 ▶ -65 0 -115 ▲ ▲ -50 755 ▶ ◀ 255 60 ▼ ▼ 390 0 ◀ 40 ▲ 55 ▶ -45 0	N 0 ◀ 2965 ▼ 0 ▶ 185 0 35 ▲ ▲ 0 500 ▶ ◀ 500 250 ▼ ▼ 200 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 430 0 0 ▲ ▲ 1095 660 ▶ ◀ 1135 0 ▼ ▼ 0 0 ◀ 3965 ▲ 0 ▶ 4165 0

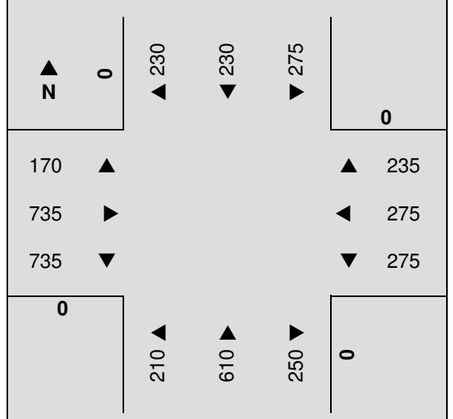
VISSIM Results Opening Year (2020) Proposed Build Alternative

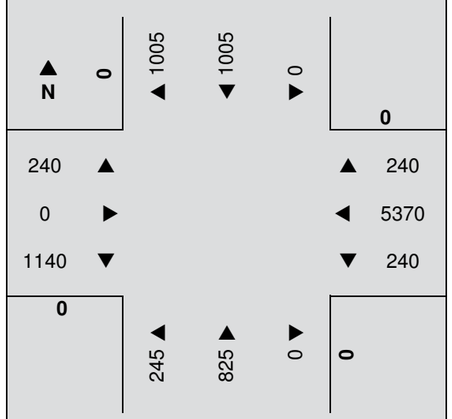
Build 2020 AM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.6	162	ALL	26.0	426	ALL	11.3	215	ALL	19.9	301
	NBL	0.0	0	NBL	56.9	308	NBL	7.3	85	NBL	15.4	30
	NBT	0.0	0	NBT	38.8	55	NBT	7.6	190	NBT	20.1	301
	NBR	0.0	0	NBR	15.0	16	NBR	6.4	155	NBR	0.0	0
	EBL	32.0	138	EBL	61.6	149	EBL	58.8	96	EBL	15.2	106
	EBT	0.0	0	EBT	10.3	235	EBT	69.4	56	EBT	0.0	0
	EBR	0.0	0	EBR	5.1	9	EBR	10.9	30	EBR	3.8	0
	SBL	0.0	0	SBL	46.6	39	SBL	8.1	105	SBL	0.0	0
	SBT	0.0	0	SBT	72.3	48	SBT	4.8	98	SBT	20.8	204
	SBR	9.7	0	SBR	11.4	12	SBR	3.2	86	SBR	16.5	204
	WBL	0.0	0	WBL	10.2	33	WBL	60.4	150	WBL	33.5	138
	WBT	2.4	141	WBT	20.8	425	WBT	70.0	170	WBT	38.3	73
	WBR	0.0	0	WBR	5.0	0	WBR	20.6	133	WBR	3.9	0

STORAGE LENGTH ROUNDED (FEET)

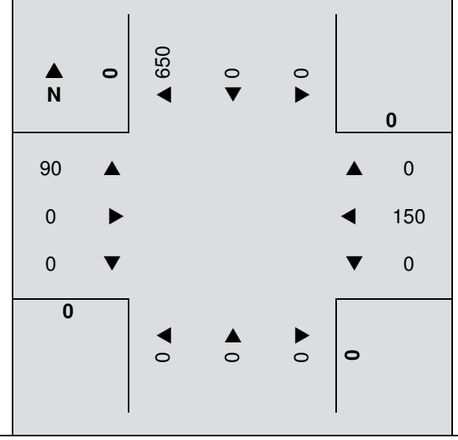


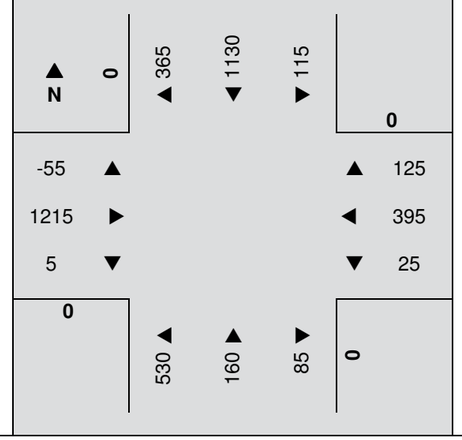


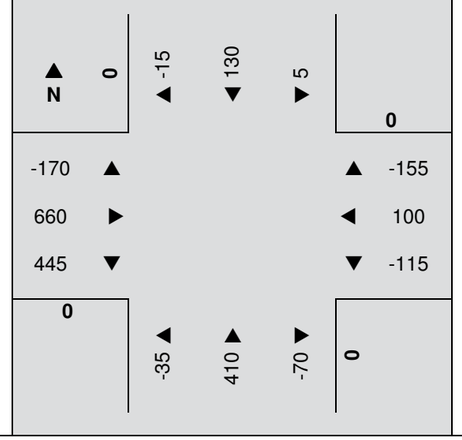


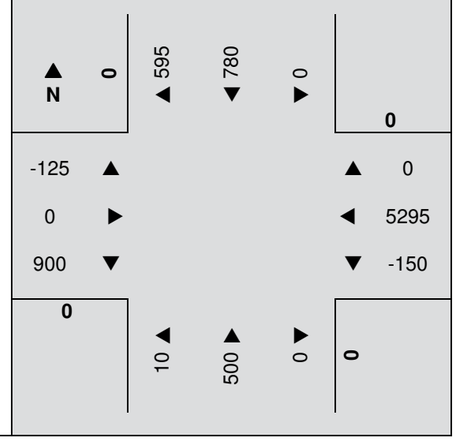


STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)









VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 22.5 409 NBL 16.5 80 NBT 11.9 393 NBR 4.5 25 EBL 56.7 217 EBT 68.8 67 EBR 8.8 8 SBL 17.4 65 SBT 21.1 318 SBR 15.8 13 WBL 68.4 252 WBT 73.8 252 WBR 30.8 232	MVMNT DELAY QUEUE ALL 22.4 329 NBL 75.8 147 NBT 72.3 147 NBR 13.7 31 EBL 74.3 242 EBT 20.0 325 EBR 20.9 295 SBL 84.8 167 SBT 87.1 167 SBR 13.0 88 WBL 86.0 237 WBT 7.2 160 WBR 2.1 0	MVMNT DELAY QUEUE ALL 39.4 486 NBL 48.5 173 NBT 64.5 293 NBR 51.5 319 EBL 64.7 205 EBT 28.6 255 EBR 39.9 265 SBL 57.2 397 SBT 66.1 474 SBR 0.0 0 WBL 22.9 168 WBT 19.3 424 WBR 23.7 373	MVMNT DELAY QUEUE ALL 22.9 403 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 8.0 329 EBT 10.6 313 EBR1 7.8 219 EBR2 11.9 0 SBL 60.7 284 SBT 0.0 0 SBR 11.4 203 WBL1 31.8 148 WBL2 27.0 272 WBT 51.7 355 WBR 0.0 0	MVMNT DELAY QUEUE ALL 15.5 456 NBL 20.2 215 NBT 0.0 0 NBR 34.4 141 EBL 0.0 0 EBT 20.3 456 EBR 0.0 0 SBL 26.2 302 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 20.1 310 WBR 2.2 94
STORAGE LENGTH ROUNDED (FEET)	N 0 ◀ 260 ▼ 1755 ▶ 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 ◀ 225 ▲ 560 ▶ 355 0	N 0 ◀ 165 ▼ 545 ▶ 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 ◀ 185 ▲ 385 ▶ 145 0	N 0 ◀ 0 ▼ 545 ▶ 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 ◀ 375 ▲ 405 ▶ 390 0	N 0 ◀ 3580 ▼ 0 ▶ 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 ◀ 4530 ▲ 0 ▶ 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◀ 90 ▼ 1430 ▶ 95 0 -180 ▲ ▲ 35 610 ▶ ◀ 250 5 ▼ ▼ -335 0 ◀ -20 ▲ 160 ▶ 160 0	N 0 ◀ -80 ▼ 370 ▶ -135 0 -15 ▲ ▲ 85 645 ▶ ◀ 150 -120 ▼ ▼ -165 0 ◀ -110 ▲ 235 ▶ -50 0	N 0 ◀ 0 ▼ 70 ▶ -215 0 -140 ▲ ▲ 0 680 ▶ ◀ 255 35 ▼ ▼ 215 0 ◀ 15 ▲ 105 ▶ -120 0	N 0 ◀ 3115 ▼ 0 ▶ 35 0 110 ▲ ▲ 0 375 ▶ ◀ 500 150 ▼ ▼ 250 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 305 0 0 ▲ ▲ 1270 460 ▶ ◀ 1285 0 ▼ ▼ 0 0 ◀ 4065 ▲ 0 ▶ 4140 0

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.0	171	ALL	18.4	470	ALL	15.2	299	ALL	19.1	339
	NBL	0.0	0	NBL	51.9	222	NBL	13.4	140	NBL	16.4	46
	NBT	0.0	0	NBT	48.1	97	NBT	12.9	252	NBT	16.7	265
	NBR	0.0	0	NBR	16.4	51	NBR	9.5	216	NBR	0.0	0
	EBL	25.9	153	EBL	67.3	98	EBL	52.0	106	EBL	19.3	133
	EBT	0.0	0	EBT	11.7	466	EBT	66.1	113	EBT	0.0	0
	EBR	0.0	0	EBR	10.8	154	EBR	16.8	86	EBR	4.3	2
	SBL	0.0	0	SBL	42.9	77	SBL	8.8	82	SBL	0.0	0
	SBT	0.0	0	SBT	63.4	46	SBT	8.4	239	SBT	21.8	328
	SBR	17.1	17	SBR	9.7	37	SBR	7.7	227	SBR	22.2	328
	WBL	0.0	0	WBL	10.8	36	WBL	58.0	201	WBL	33.6	135
	WBT	2.6	123	WBT	14.4	263	WBT	62.4	180	WBT	39.0	71
	WBR	0.0	0	WBR	3.3	0	WBR	19.1	143	WBR	3.1	0

STORAGE LENGTH ROUNDED (FEET)

N	0	650	0	0	0			N	0	535	1180	310	0			N	0	230	230	275	0			N	0	1005	1005	0	0	
	480	▲			▲	0			335	▲			▲	365			170	▲			▲	235			240	▲			▲	240	
	0	▶			◀	300			1465	▶			◀	820			735	▶			◀	275			0	▶			◀	5370	
	0	▼			▼	0			270	▼			▼	315			735	▼			▼	275			1140	▼			▼	240	
0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0
		0	0	0						1000	235	255						210	610	250						245	825	0			

STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)

N	0	625	0	0	0			N	0	340	1130	65	0			N	0	-165	-20	30	0			N	0	470	655	0	0	
	65	▲			▲	0			-5	▲			▲	125			-195	▲			▲	-155			-150	▲			▲	0	
	0	▶			◀	175			990	▶			◀	545			610	▶			◀	75			0	▶			◀	5295	
	0	▼			▼	0			-145	▼			▼	25			395	▼			▼	-190			875	▼			▼	-150	
0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0
		0	0	0						630	135	35						-85	335	-120						10	550	0			

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 24.3 501 NBL 20.2 87 NBT 10.7 489 NBR 4.8 36 EBL 58.5 256 EBT 73.4 62 EBR 10.0 17 SBL 21.9 73 SBT 23.4 364 SBR 18.1 16 WBL 78.8 345 WBT 77.9 345 WBR 42.6 325	MVMNT DELAY QUEUE ALL 24.4 437 NBL 85.2 186 NBT 74.6 186 NBR 16.4 60 EBL 77.3 262 EBT 22.5 412 EBR 23.0 382 SBL 96.5 290 SBT 108.0 290 SBR 16.1 149 WBL 81.2 242 WBT 7.5 186 WBR 2.3 0	MVMNT DELAY QUEUE ALL 42.0 537 NBL 47.8 163 NBT 65.3 347 NBR 53.2 374 EBL 62.8 225 EBT 35.0 338 EBR 40.6 312 SBL 53.5 472 SBT 62.9 524 SBR 0.0 0 WBL 27.7 193 WBT 24.5 495 WBR 29.5 452	MVMNT DELAY QUEUE ALL 23.1 533 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 9.6 454 EBT 11.5 373 EBR1 8.0 252 EBR2 14.3 0 SBL 56.9 320 SBT 0.0 0 SBR 13.8 231 WBL1 32.7 163 WBL2 30.3 341 WBT 48.7 382 WBR 0.0 0	MVMNT DELAY QUEUE ALL 17.7 593 NBL 23.6 240 NBT 0.0 0 NBR 41.5 158 EBL 0.0 0 EBT 22.2 587 EBR 0.0 0 SBL 28.7 346 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 23.5 422 WBR 3.4 205
STORAGE LENGTH ROUNDED (FEET)	N 0 260 1755 315 285 525 685 525 270 180 0 225 560 355 0	N 0 165 545 185 475 325 970 325 420 325 0 185 385 145 0	N 0 0 545 340 325 615 955 680 550 630 0 375 405 390 0	N 0 3580 0 575 700 0 700 875 615 640 0 0 0 0 0	N 0 0 0 870 0 1610 935 1610 0 0 0 4530 0 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 90 1380 95 -230 -65 610 175 5 -410 0 -20 60 160 0	N 0 -130 245 -260 -40 85 545 125 -220 -165 0 -160 185 -75 0	N 0 0 20 -290 -165 -100 605 180 -15 190 0 15 55 -170 0	N 0 3090 0 10 -15 0 325 475 100 225 0 0 0 0 0	N 0 0 0 280 0 1145 335 1185 0 0 0 4040 0 4115 0

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	8.3	168	ALL	20.7	497	ALL	18.3	370	ALL	18.6	370
	NBL	0.0	0	NBL	53.4	225	NBL	16.7	188	NBL	15.1	45
	NBT	0.0	0	NBT	50.1	77	NBT	16.3	344	NBT	14.9	252
	NBR	0.0	0	NBR	15.7	28	NBR	12.6	309	NBR	0.0	0
	EBL	32.0	168	EBL	66.6	117	EBL	52.1	112	EBL	23.0	166
	EBT	0.0	0	EBT	13.9	495	EBT	72.9	141	EBT	0.0	0
	EBR	0.0	0	EBR	13.9	218	EBR	21.4	114	EBR	5.0	0
	SBL	0.0	0	SBL	43.3	73	SBL	12.2	115	SBL	0.0	0
	SBT	0.0	0	SBT	70.3	62	SBT	11.1	338	SBT	21.1	370
	SBR	20.6	2	SBR	11.1	44	SBR	10.0	326	SBR	24.1	370
	WBL	0.0	0	WBL	13.3	34	WBL	55.6	244	WBL	33.3	159
	WBT	2.6	110	WBT	17.0	353	WBT	71.5	205	WBT	39.1	104
	WBR	0.0	0	WBR	3.4	0	WBR	24.3	168	WBR	3.6	0

STORAGE LENGTH ROUNDED (FEET)

N	0	650	0	0	0			N	0	535	1180	310	0			N	0	230	230	275	0			N	0	1005	1005	0	0	
480	▲				▲	0		335	▲				▲	365		170	▲				▲	235		240	▲				▲	240
0	▶				◀	300		1465	▶				◀	820		735	▶				◀	275		0	▶				◀	5370
0	▼				▼	0		270	▼				▼	315		735	▼				▼	275		1140	▼				▼	240
0		0	0	0	0			0		1000	235	255	0			0		210	610	250	0			0		245	825	0	0	

STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)

N	0	625	0	0	0			N	0	340	1105	90	0			N	0	-265	-120	5	0			N	0	445	630	0	0	
65	▲				▲	0		-30	▲				▲	125		-195	▲				▲	-180		-175	▲				▲	0
0	▶				◀	175		965	▶				◀	445		585	▶				◀	50		0	▶				◀	5245
0	▼				▼	0		-195	▼				▼	25		370	▼				▼	-215		900	▼				▼	-175
0		0	0	0	0			0		605	135	60	0			0		-135	260	-220	0			0		10	550	0	0	

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.5 441 NBL 13.4 66 NBT 11.7 441 NBR 4.4 34 EBL 57.3 191 EBT 76.6 60 EBR 8.2 12 SBL 16.2 71 SBT 20.0 276 SBR 13.4 0 WBL 66.5 261 WBT 76.4 261 WBR 33.6 241	MVMNT DELAY QUEUE ALL 21.2 292 NBL 74.7 128 NBT 64.4 128 NBR 11.8 27 EBL 76.0 216 EBT 18.7 292 EBR 18.9 262 SBL 82.5 154 SBT 86.2 154 SBR 11.6 65 WBL 84.7 205 WBT 6.5 139 WBR 2.1 0	MVMNT DELAY QUEUE ALL 38.3 428 NBL 45.4 138 NBT 63.1 282 NBR 49.9 280 EBL 67.0 189 EBT 27.1 239 EBR 39.1 237 SBL 58.3 337 SBT 67.5 416 SBR 0.0 0 WBL 21.8 160 WBT 17.9 363 WBR 22.1 341	MVMNT DELAY QUEUE ALL 22.5 334 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 7.6 246 EBT 10.3 278 EBR1 7.1 206 EBR2 11.0 0 SBL 60.7 261 SBT 0.0 0 SBR 10.1 167 WBL1 31.8 142 WBL2 27.8 236 WBT 52.7 314 WBR 0.0 0	MVMNT DELAY QUEUE ALL 14.3 395 NBL 19.3 184 NBT 0.0 0 NBR 32.8 122 EBL 0.0 0 EBT 18.3 387 EBR 0.0 0 SBL 22.2 286 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 19.5 311 WBR 1.9 94
STORAGE LENGTH ROUNDED (FEET)	N 0 ◀ 260 ▼ 1755 ▶ 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 ◀ 225 ▲ 560 ▶ 355 0	N 0 ◀ 165 ▼ 545 ▶ 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 ◀ 185 ▲ 385 ▶ 145 0	N 0 ◀ 0 ▼ 545 ▶ 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 ◀ 375 ▲ 405 ▶ 390 0	N 0 ◀ 3580 ▼ 0 ▶ 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 ◀ 4530 ▲ 0 ▶ 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◀ 115 ▼ 1455 ▶ 95 0 -155 ▲ ▲ 35 610 ▶ ◀ 250 5 ▼ ▼ -335 0 ◀ 5 ▲ 110 ▶ 160 0	N 0 ◀ -55 ▼ 370 ▶ -135 0 10 ▲ ▲ 85 670 ▶ ◀ 175 -95 ▼ ▼ -140 0 ◀ -110 ▲ 235 ▶ -50 0	N 0 ◀ 0 ▼ 120 ▶ -165 0 -115 ▲ ▲ 25 705 ▶ ◀ 305 60 ▼ ▼ 215 0 ◀ 40 ▲ 105 ▶ -95 0	N 0 ◀ 3165 ▼ 0 ▶ 60 0 210 ▲ ▲ 0 400 ▶ ◀ 550 150 ▼ ▼ 250 0 ◀ 0 ▲ 0 ▶ 0 0	N 0 ◀ 0 ▼ 0 ▶ 330 0 0 ▲ ▲ 1270 535 ▶ ◀ 1285 0 ▼ ▼ 0 0 ◀ 4090 ▲ 0 ▶ 4165 0

VISSIM Results Opening Year (2020) Proposed Build Alternative

Build 2020 PM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.4	158	ALL	17.6	380	ALL	14.4	243	ALL	19.5	281
	NBL	0.0	0	NBL	50.0	189	NBL	11.8	121	NBL	15.5	38
	NBT	0.0	0	NBT	48.8	73	NBT	11.4	207	NBT	17.4	210
	NBR	0.0	0	NBR	14.0	28	NBR	8.8	171	NBR	0.0	0
	EBL	23.5	132	EBL	65.5	98	EBL	53.7	95	EBL	17.0	123
	EBT	0.0	0	EBT	11.0	371	EBT	75.7	106	EBT	0.0	0
	EBR	0.0	0	EBR	9.6	126	EBR	16.6	79	EBR	3.9	2
	SBL	0.0	0	SBL	42.5	72	SBL	7.2	88	SBL	0.0	0
	SBT	0.0	0	SBT	67.8	47	SBT	7.5	215	SBT	22.5	281
	SBR	13.8	0	SBR	9.2	26	SBR	8.2	202	SBR	21.9	281
	WBL	0.0	0	WBL	10.0	36	WBL	59.1	195	WBL	33.5	135
	WBT	2.6	128	WBT	13.4	268	WBT	67.6	137	WBT	40.8	70
	WBR	0.0	0	WBR	3.2	0	WBR	18.6	101	WBR	2.5	0

STORAGE LENGTH ROUNDED (FEET)

N	0	650	0	0	0			N	0	535	1180	310	0			N	0	230	230	275	0			N	0	1005	1005	0	0	
	480	▲			▲	0			335	▲			▲	365			170	▲			▲	235			240	▲			▲	240	
	0	▶			◀	300			1465	▶			◀	820			735	▶			◀	275			0	▶			◀	5370	
	0	▼			▼	0			270	▼			▼	315			735	▼			▼	275			1140	▼			▼	240	
0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0
		0	0	0						1000	235	255						210	610	250						245	825	0			

STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)

N	0	650	0	0	0			N	0	340	1130	90	0			N	0	-140	5	30	0			N	0	520	705	0	0	
	90	▲			▲	0			-5	▲			▲	125			-170	▲			▲	-130			-125	▲			▲	0	
	0	▶			◀	150			1090	▶			◀	545			610	▶			◀	125			0	▶			◀	5295	
	0	▼			▼	0			-120	▼			▼	25			395	▼			▼	-165			875	▼			▼	-150	
0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0	0		◀	▲	▶		0	0
		0	0	0						655	160	60						-60	385	-70						10	600	0			

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 18.6 436 NBL 75.6 360 NBT 7.8 361 NBR 3.4 2 EBL 72.1 290 EBT 75.3 290 EBR 23.3 303 SBL 20.0 69 SBT 18.2 384 SBR 8.5 38 WBL 65.6 174 WBT 83.4 174 WBR 25.6 135	MVMNT DELAY QUEUE ALL 30.9 1468 NBL 68.6 88 NBT 83.0 333 NBR 32.9 316 EBL 95.2 280 EBT 37.7 1468 EBR 39.0 1453 SBL 76.2 259 SBT 75.0 259 SBR 8.0 35 WBL 110.0 268 WBT 13.2 285 WBR 5.3 0	MVMNT DELAY QUEUE ALL 46.4 477 NBL 75.8 212 NBT 83.3 305 NBR 49.5 327 EBL 56.4 139 EBT 42.2 471 EBR 20.6 157 SBL 90.1 353 SBT 42.9 228 SBR 24.2 155 WBL 71.5 327 WBT 27.8 411 WBR 11.6 221	MVMNT DELAY QUEUE ALL 25.8 714 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 14.4 352 EBR 1.6 144 SBL 60.6 221 SBT 0.0 0 SBR 41.2 543 WBL 73.4 218 WBT 26.1 714 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 ▲ ▲ 525 685 ▶ ◀ 525 685 ▼ ▼ 525 0 160 620 620 0	N 0 185 200 200 0 475 ▲ ▲ 935 970 ▶ ◀ 935 970 ▼ ▼ 935 0 340 340 310 0	N 0 600 620 450 0 700 ▲ ▲ 780 955 ▶ ◀ 780 760 ▼ ▼ 525 0 560 975 560 0	N 0 3580 0 780 0 0 ▲ ▲ 0 800 ▶ ◀ 800 2260 ▼ ▼ 495 0 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 95 1355 30 0 145 ▲ ▲ 135 385 ▶ ◀ 350 120 ▼ ▼ 110 0 -360 245 450 0	N 0 -10 -75 -220 0 -65 ▲ ▲ 695 -505 ▶ ◀ 635 -745 ▼ ▼ 420 0 95 -10 -160 0	N 0 270 370 -80 0 310 ▲ ▲ 315 480 ▶ ◀ 355 345 ▼ ▼ -65 0 150 650 25 0	N 0 2790 0 315 0 0 ▲ ▲ 0 425 ▶ ◀ 75 1870 ▼ ▼ 30 0 0 0 0 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	20.5	728	ALL	28.3	613	ALL	18.2	621	ALL	6.6	240
	NBL	41.2	728	NBL	58.7	307	NBL	16.9	114	NBL	10.0	25
	NBT	0.0	0	NBT	45.7	82	NBT	17.5	621	NBT	3.8	237
	NBR	9.0	135	NBR	17.6	33	NBR	10.2	0	NBR	0.0	0
	EBL	0.0	0	EBL	64.3	160	EBL	61.8	120	EBL	68.1	172
	EBT	22.6	556	EBT	18.3	528	EBT	71.2	73	EBT	0.0	0
	EBR	4.8	266	EBR	9.7	42	EBR	10.1	44	EBR	5.3	3
	SBL	0.0	0	SBL	49.6	67	SBL	30.8	276	SBL	0.0	0
	SBT	0.0	0	SBT	74.5	61	SBT	8.1	163	SBT	4.9	153
	SBR	0.0	0	SBR	11.8	20	SBR	4.2	163	SBR	4.8	123
	WBL	0.0	0	WBL	22.6	56	WBL	60.4	131	WBL	0.0	0
	WBT	19.8	274	WBT	25.1	530	WBT	74.2	172	WBT	0.0	0
	WBR	3.1	2	WBR	6.2	0	WBR	25.5	134	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 535 / ▼ 1180 / ► 310 / 0			N: 0 / ◄ 230 / ▼ 230 / ► 275 / 0			N: 0 / ◄ 1005 / ▼ 1005 / ► 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ►		◄ 1790	1780 ►		◄ 820	735 ►		◄ 275	0 ►		◄ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0: ◄ 4530 / ▲ 0 / ► 575 / 0			0: ◄ 1000 / ▲ 235 / ► 255 / 0			0: ◄ 210 / ▲ 610 / ► 250 / 0			0: ◄ 245 / ▲ 825 / ► 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 365 / ▼ 1105 / ► 90 / 0			N: 0 / ◄ -90 / ▼ 55 / ► -170 / 0			N: 0 / ◄ 695 / ▼ 830 / ► 0 / 0		
	0 ▲		▲ 1525	1365 ▲		▲ 125	-195 ▲		▲ -155	-165 ▲		▲ 0
	225 ►		◄ 1515	1230 ►		◄ 270	660 ►		◄ 100	0 ►		◄ 0
	1165 ▼		▼ 0	120 ▼		▼ 0	445 ▼		▼ -115	875 ▼		▼ 0
	0: ◄ 3540 / ▲ 0 / ► 185 / 0			0: ◄ 530 / ▲ 135 / ► 60 / 0			0: ◄ -60 / ▲ -15 / ► 105 / 0			0: ◄ 35 / ▲ 575 / ► 0 / 0		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 40.8 1937 NBL 87.1 532 NBT 9.8 530 NBR 4.3 0 EBL 72.5 348 EBT 104.4 348 EBR 82.8 361 SBL 63.3 118 SBT 66.3 1937 SBR 15.4 42 WBL 78.2 247 WBT 106.0 247 WBR 40.1 209	MVMNT DELAY QUEUE ALL 77.7 5957 NBL 68.5 106 NBT 105.7 502 NBR 56.0 485 EBL 163.2 778 EBT 111.0 5957 EBR 104.3 5942 SBL 100.9 449 SBT 97.6 449 SBR 15.7 51 WBL 119.7 423 WBT 53.5 1058 WBR 17.7 11	MVMNT DELAY QUEUE ALL 76.7 1012 NBL 79.5 264 NBT 174.4 864 NBR 74.1 423 EBL 62.5 162 EBT 46.7 555 EBR 21.4 192 SBL 145.3 682 SBT 45.6 286 SBR 27.0 214 WBL 74.5 410 WBT 83.1 774 WBR 21.5 351	MVMNT DELAY QUEUE ALL 53.9 3319 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 17.5 412 EBR 1.9 205 SBL 109.2 316 SBT 0.0 0 SBR 117.1 3319 WBL 74.8 259 WBT 54.5 818 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 ▲ ▲ 525 685 ▶ ◀ 525 685 ▼ ▼ 525 0 160 620 620 0	N 0 185 200 200 0 475 ▲ ▲ 935 970 ▶ ◀ 935 970 ▼ ▼ 935 0 340 340 310 0	N 0 600 620 450 0 700 ▲ ▲ 780 955 ▶ ◀ 780 760 ▼ ▼ 525 0 560 975 560 0	N 0 3580 0 780 0 0 ▲ ▲ 0 800 ▶ ◀ 800 2260 ▼ ▼ 495 0 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 95 -195 -20 0 95 ▲ ▲ 60 335 ▶ ◀ 275 70 ▼ ▼ 35 0 -535 70 475 0	N 0 -35 -250 -395 0 -565 ▲ ▲ 670 -5005 ▶ ◀ -140 -5220 ▼ ▼ 270 0 70 -185 -335 0	N 0 220 320 -405 0 285 ▲ ▲ 165 380 ▶ ◀ 5 320 ▼ ▼ -140 0 100 100 -50 0	N 0 15 0 215 0 0 ▲ ▲ 0 375 ▶ ◀ -25 1795 ▼ ▼ -20 0 0 0 0 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road	Bee Ridge Road/Mauna Loa Boulevard	Cattlemen Road/Center Pointe Drive	Cattlemen Road/Wilkinson Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 66.6 3935 NBL 127.2 3935 NBT 0.0 0 NBR 85.6 245 EBL 0.0 0 EBT 31.3 731 EBR 6.4 404 SBL 0.0 0 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 76.2 1878 WBR 88.1 1416	MVMNT DELAY QUEUE ALL 76.3 2549 NBL 197.0 1090 NBT 128.6 74 NBR 93.5 30 EBL 71.3 211 EBT 23.1 810 EBR 13.5 74 SBL 45.7 63 SBT 69.0 71 SBR 29.4 98 WBL 91.8 76 WBT 101.5 2549 WBR 79.2 0	MVMNT DELAY QUEUE ALL 39.4 1183 NBL 45.0 704 NBT 47.8 1182 NBR 30.0 2 EBL 63.6 138 EBT 72.1 92 EBR 12.8 64 SBL 67.7 508 SBT 14.9 384 SBR 4.0 384 WBL 57.0 184 WBT 76.4 251 WBR 39.0 213	MVMNT DELAY QUEUE ALL 9.3 358 NBL 12.6 23 NBT 5.5 356 NBR 0.0 0 EBL 66.0 200 EBT 0.0 0 EBR 5.7 3 SBL 0.0 0 SBT 9.7 259 SBR 8.1 229 WBL 0.0 0 WBT 0.0 0 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► / 0 0 ▲ ▲ 1790 800 ► ◄ 1790 1680 ▼ ▼ 0 0 / ◄ 4530 ▲ 0 ► 575 / 0	N 0 / 535 ◄ 1180 ▼ 310 ► / 0 1780 ▲ ▲ 365 1780 ► ◄ 820 410 ▼ ▼ 315 0 / ◄ 1000 ▲ 235 ► 255 / 0	N 0 / 230 ◄ 230 ▼ 275 ► / 0 170 ▲ ▲ 235 735 ► ◄ 275 735 ▼ ▼ 275 0 / ◄ 210 ▲ 610 ► 250 / 0	N 0 / 1005 ◄ 1005 ▼ 0 ► / 0 250 ▲ ▲ 0 0 ► ◄ 0 1140 ▼ ▼ 0 0 / ◄ 245 ▲ 825 ► 0 / 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 0 ◄ 0 ▼ 0 ► / 0 0 ▲ ▲ 125 50 ► ◄ -110 1015 ▼ ▼ 0 0 / ◄ 340 ▲ 0 ► 85 / 0	N 0 / 290 ◄ 1105 ▼ 90 ► / 0 1315 ▲ ▲ 125 955 ► ◄ -1730 95 ▼ ▼ -25 0 / ◄ -245 ▲ 160 ► 60 / 0	N 0 / -315 ◄ -170 ▼ -395 ► / 0 -220 ▲ ▲ -230 635 ► ◄ 0 420 ▼ ▼ -165 0 / ◄ -660 ▲ -590 ► 80 / 0	N 0 / 570 ◄ 730 ▼ 0 ► / 0 -215 ▲ ▲ 0 0 ► ◄ 0 875 ▼ ▼ 0 0 / ◄ 35 ▲ 450 ► 0 / 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 30.8 1597 NBL 87.1 530 NBT 10.7 529 NBR 4.2 2 EBL 64.8 262 EBT 86.5 262 EBR 53.3 275 SBL 49.2 186 SBT 46.0 1596 SBR 12.0 33 WBL 69.7 190 WBT 93.8 190 WBR 32.8 152	MVMNT DELAY QUEUE ALL 73.2 5955 NBL 69.7 85 NBT 81.1 360 NBR 34.0 343 EBL 193.1 1751 EBT 120.9 5955 EBR 112.3 5940 SBL 81.6 329 SBT 77.4 329 SBR 9.7 41 WBL 113.8 328 WBT 35.7 1024 WBR 12.4 17	MVMNT DELAY QUEUE ALL 64.1 1032 NBL 77.2 226 NBT 159.1 890 NBR 61.0 381 EBL 59.0 147 EBT 47.2 567 EBR 22.4 170 SBL 129.5 659 SBT 42.3 241 SBR 23.8 170 WBL 74.3 391 WBT 51.4 744 WBR 19.3 374	MVMNT DELAY QUEUE ALL 35.6 2103 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 15.7 360 EBR 1.8 169 SBL 73.0 283 SBT 0.0 0 SBR 61.1 2102 WBL 69.9 252 WBT 42.6 760 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 ▲ 525 ▲ 685 ▶ 525 ◀ 685 ▼ 525 ▼ 0 160 620 620 0	N 0 185 200 200 0 475 ▲ 935 ▲ 970 ▶ 935 ◀ 970 ▼ 935 ▼ 0 340 340 310 0	N 0 600 620 450 0 700 ▲ 780 ▲ 955 ▶ 780 ◀ 760 ▼ 525 ▼ 0 560 975 560 0	N 0 3580 0 780 0 0 ▲ 0 ▲ 800 ▶ 800 ◀ 2260 ▼ 495 ▼ 0 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 95 155 -95 0 170 ▲ 110 ▲ 410 ▶ 325 ◀ 170 ▼ 85 ▼ 0 -535 70 450 0	N 0 -10 -150 -295 0 -1540 ▲ 670 ▲ -5005 ▶ -90 ◀ -5220 ▼ 345 ▼ 0 95 -35 -185 0	N 0 270 370 -380 0 310 ▲ 165 ▲ 380 ▶ 30 ◀ 345 ▼ -115 ▼ 0 125 75 -25 0	N 0 1215 0 240 0 0 ▲ 0 ▲ 425 ▶ 25 ◀ 1845 ▼ -20 ▼ 0 0 0 0 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 AM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	67.6	3869	ALL	103.6	2956	ALL	24.0	887	ALL	7.4	265
	NBL	116.8	3869	NBL	239.6	1105	NBL	22.4	295	NBL	15.2	28
	NBT	0.0	0	NBT	180.5	97	NBT	25.0	886	NBT	4.3	253
	NBR	77.7	267	NBR	165.7	50	NBR	16.9	0	NBR	0.0	0
	EBL	0.0	0	EBL	70.0	208	EBL	63.5	136	EBL	65.2	170
	EBT	29.4	680	EBT	21.2	726	EBT	66.4	65	EBT	0.0	0
	EBR	5.5	353	EBR	12.5	64	EBR	8.0	37	EBR	5.8	0
	SBL	0.0	0	SBL	45.6	61	SBL	43.1	351	SBL	0.0	0
	SBT	0.0	0	SBT	69.8	74	SBT	11.2	251	SBT	6.4	226
	SBR	0.0	0	SBR	43.8	102	SBR	3.9	251	SBR	5.9	196
	WBL	0.0	0	WBL	146.6	68	WBL	62.5	148	WBL	0.0	0
	WBT	82.3	1920	WBT	163.2	2956	WBT	72.1	185	WBT	0.0	0
	WBR	103.8	1459	WBR	168.5	0	WBR	27.4	147	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 535 / ▼ 1180 / ► 310 / 0			N: 0 / ◄ 230 / ▼ 230 / ► 275 / 0			N: 0 / ◄ 1005 / ▼ 1005 / ► 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ►		◄ 1790	1780 ►		◄ 820	735 ►		◄ 275	0 ►		◄ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0: ◄ 4530 / ▲ 0 / ► 575 / 0			0: ◄ 1000 / ▲ 235 / ► 255 / 0			0: ◄ 210 / ▲ 610 / ► 250 / 0			0: ◄ 245 / ▲ 825 / ► 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 265 / ▼ 1105 / ► 90 / 0			N: 0 / ◄ -190 / ▼ -45 / ► -245 / 0			N: 0 / ◄ 620 / ▼ 755 / ► 0 / 0		
	0 ▲		▲ 75	1315 ▲		▲ 125	-220 ▲		▲ -155	-165 ▲		▲ 0
	100 ►		◄ -135	1030 ►		◄ -2155	660 ►		◄ 75	0 ►		◄ 0
	1065 ▼		▼ 0	95 ▼		▼ 0	445 ▼		▼ -115	900 ▼		▼ 0
	0: ◄ 415 / ▲ 0 / ► 60 / 0			0: ◄ -270 / ▲ 135 / ► 60 / 0			0: ◄ -235 / ▲ -290 / ► 105 / 0			0: ◄ 10 / ▲ 550 / ► 0 / 0		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 1	Cattlemen Road/Maxfield Drive			Bee Ridge Road/Maxfield Drive			Bee Ridge Road/Cattlemen Road			I-75 West Ramp Terminal/Bee Ridge Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	27.8	642	ALL	61.8	5948	ALL	50.3	655	ALL	25.9	751
	NBL	84.9	394	NBL	74.3	135	NBL	71.5	184	NBL	0.0	0
	NBT	12.3	490	NBT	120.6	543	NBT	80.0	282	NBT	0.0	0
	NBR	5.0	0	NBR	55.5	526	NBR	71.4	478	NBR	0.0	0
	EBL	47.4	295	EBL	138.7	230	EBL	71.8	136	EBL	0.0	0
	EBT	86.6	295	EBT	99.2	5948	EBT	46.1	652	EBT	18.0	601
	EBR	50.7	307	EBR	96.4	5933	EBR	24.6	242	EBR	2.4	369
	SBL	40.8	140	SBL	84.5	295	SBL	88.3	509	SBL	64.8	348
	SBT	30.6	634	SBT	79.6	295	SBT	33.8	205	SBT	0.0	0
	SBR	14.4	49	SBR	9.8	71	SBR	22.9	196	SBR	38.8	409
	WBL	64.4	296	WBL	82.8	318	WBL	89.3	383	WBL	75.3	208
	WBT	68.0	296	WBT	26.2	534	WBT	26.4	376	WBT	26.1	728
	WBR	27.3	257	WBR	5.8	9	WBR	11.2	243	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 ◄ 290 ▼ 1755 ► 250 0			N 0 ◄ 185 ▼ 200 ► 200 0			N 0 ◄ 600 ▼ 620 ► 450 0			N 0 ◄ 3580 ▼ 0 ► 780 0		
	685 ▲		▲ 525	475 ▲		▲ 935	700 ▲		▲ 780	0 ▲		▲ 0
	685 ►		◄ 525	970 ►		◄ 935	955 ►		◄ 780	800 ►		◄ 800
	685 ▼		▼ 525	970 ▼		▼ 935	760 ▼		▼ 525	2260 ▼		▼ 495
	0 ◄ 160 ▲ 620 ► 620 0			0 ◄ 340 ▲ 340 ► 310 0			0 ◄ 560 ▲ 975 ► 560 0			0 ◄ 0 ▲ 0 ► 0 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◄ 95 ▼ 1105 ► -45 0			N 0 ◄ -35 ▼ -100 ► -245 0			N 0 ◄ 245 ▼ 395 ► -230 0			N 0 ◄ 2915 ▼ 0 ► 190 0		
	145 ▲		▲ 10	-15 ▲		▲ 670	310 ▲		▲ 290	0 ▲		▲ 0
	385 ►		◄ 225	-4980 ►		◄ 385	280 ►		◄ 380	175 ►		◄ 50
	120 ▼		▼ -15	-5220 ▼		▼ 370	270 ▼		▼ -115	1645 ▼		▼ 30
	0 ◄ -385 ▲ 120 ► 475 0			0 ◄ 45 ▲ -210 ► -385 0			0 ◄ 175 ▲ 675 ► -125 0			0 ◄ 0 ▲ 0 ► 0 0		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 1	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	22.0	847	ALL	26.3	848	ALL	23.0	671	ALL	13.2	398
	NBL	42.1	746	NBL	51.4	245	NBL	30.3	285	NBL	22.0	71
	NBT	0.0	0	NBT	46.5	143	NBT	24.9	671	NBT	6.7	233
	NBR	16.0	239	NBR	20.9	98	NBR	14.3	4	NBR	0.0	0
	EBL	0.0	0	EBL	51.8	152	EBL	58.5	130	EBL	61.9	392
	EBT	24.9	814	EBT	20.2	800	EBT	72.7	106	EBT	0.0	0
	EBR	9.9	489	EBR	17.5	332	EBR	15.2	78	EBR	9.7	20
	SBL	0.0	0	SBL	37.0	134	SBL	49.5	368	SBL	0.0	0
	SBT	0.0	0	SBT	53.7	48	SBT	9.7	368	SBT	9.2	325
	SBR	0.0	0	SBR	14.7	87	SBR	4.2	368	SBR	9.5	295
	WBL	0.0	0	WBL	27.4	56	WBL	57.1	218	WBL	0.0	0
	WBT	19.7	398	WBT	25.5	556	WBT	65.4	189	WBT	0.0	0
	WBR	2.6	31	WBR	6.9	0	WBR	23.4	151	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 535 / ▼ 1180 / ► 310 / 0			N: 0 / ◄ 230 / ▼ 230 / ► 275 / 0			N: 0 / ◄ 1005 / ▼ 1005 / ► 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ►		◄ 1790	1780 ►		◄ 820	735 ►		◄ 275	0 ►		◄ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0: ◄ 4530 / ▲ 0 / ► 575 / 0			0: ◄ 1000 / ▲ 235 / ► 255 / 0			0: ◄ 210 / ▲ 610 / ► 250 / 0			0: ◄ 245 / ▲ 825 / ► 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 290 / ▼ 1130 / ► 15 / 0			N: 0 / ◄ -290 / ▼ -145 / ► -245 / 0			N: 0 / ◄ 520 / ▼ 655 / ► 0 / 0		
	0 ▲		▲ 1500	1365 ▲		▲ 125	-220 ▲		▲ -180	-390 ▲		▲ 0
	-25 ►		◄ 1390	980 ►		◄ 245	610 ►		◄ 75	0 ►		◄ 0
	940 ▼		▼ 0	-180 ▼		▼ 0	395 ▼		▼ -190	875 ▼		▼ 0
	0: ◄ 3540 / ▲ 0 / ► 85 / 0			0: ◄ 605 / ▲ 85 / ► 10 / 0			0: ◄ -235 / ▲ -65 / ► 80 / 0			0: ◄ -15 / ▲ 575 / ► 0 / 0		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 2	Cattlemen Road/Maxfield Drive			Bee Ridge Road/Maxfield Drive			Bee Ridge Road/Cattlemen Road			I-75 West Ramp Terminal/Bee Ridge Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	50.1	2283	ALL	77.7	5962	ALL	64.3	900	ALL	35.9	1863
	NBL	88.1	530	NBL	79.8	236	NBL	77.8	190	NBL	0.0	0
	NBT	16.1	568	NBT	156.2	678	NBT	106.7	353	NBT	0.0	0
	NBR	7.0	25	NBR	93.6	660	NBR	94.3	731	NBR	0.0	0
	EBL	50.7	523	EBL	162.4	211	EBL	73.9	142	EBL	0.0	0
	EBT	134.7	523	EBT	127.2	5962	EBT	53.6	684	EBT	23.7	698
	EBR	114.2	536	EBR	116.1	5947	EBR	27.6	273	EBR	3.1	450
	SBL	78.8	692	SBL	115.9	483	SBL	98.3	649	SBL	107.9	673
	SBT	71.8	2283	SBT	118.9	483	SBT	41.8	268	SBT	0.0	0
	SBR	22.4	72	SBR	20.1	171	SBR	27.6	260	SBR	63.5	1584
	WBL	76.0	377	WBL	104.4	463	WBL	166.4	762	WBL	83.3	248
	WBT	64.1	377	WBT	34.6	717	WBT	30.5	432	WBT	31.6	753
	WBR	30.9	338	WBR	9.3	31	WBR	13.3	268	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0			N 0 185 200 200 0			N 0 600 620 450 0			N 0 3580 0 780 0		
	685 ▲		▲ 525	475 ▲		▲ 935	700 ▲		▲ 780	0 ▲		▲ 0
	685 ▶		◀ 525	970 ▶		◀ 935	955 ▶		◀ 780	800 ▶		◀ 800
	685 ▼		▼ 525	970 ▼		▼ 935	760 ▼		▼ 525	2260 ▼		▼ 495
	0 160 620 620 0			0 340 340 310 0			0 560 975 560 0			0 0 0 0 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 70 -545 -595 0			N 0 -135 -300 -445 0			N 0 170 345 -355 0			N 0 1740 0 -135 0		
	-80 ▲		▲ -65	10 ▲		▲ 645	310 ▲		▲ 265	0 ▲		▲ 0
	160 ▶		◀ 125	-5005 ▶		◀ 210	255 ▶		◀ 330	100 ▶		◀ 25
	-105 ▼		▼ -115	-5220 ▼		▼ 220	245 ▼		▼ -490	1545 ▼		▼ 5
	0 -535 45 450 0			0 -55 -360 -510 0			0 175 600 -375 0			0 0 0 0 0		

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 2	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	29.5	1316	ALL	31.1	905	ALL	59.6	1177	ALL	15.8	496
	NBL	51.2	1289	NBL	55.8	303	NBL	55.9	850	NBL	30.0	102
	NBT	0.0	0	NBT	47.8	142	NBT	47.1	968	NBT	8.0	301
	NBR	26.8	287	NBR	22.0	98	NBR	25.1	2	NBR	0.0	0
	EBL	0.0	0	EBL	55.6	181	EBL	61.5	141	EBL	63.0	466
	EBT	31.4	869	EBT	24.2	876	EBT	71.9	106	EBT	0.0	0
	EBR	10.5	550	EBR	21.1	645	EBR	14.5	78	EBR	11.3	30
	SBL	0.0	0	SBL	36.7	127	SBL	121.8	1056	SBL	0.0	0
	SBT	0.0	0	SBT	58.3	59	SBT	62.1	1106	SBT	13.3	400
	SBR	0.0	0	SBR	19.0	112	SBR	27.9	1106	SBR	12.4	370
	WBL	0.0	0	WBL	41.5	60	WBL	108.9	276	WBL	0.0	0
	WBT	33.0	747	WBT	32.1	728	WBT	71.0	208	WBT	0.0	0
	WBR	5.1	307	WBR	12.0	0	WBR	33.6	171	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N: 0	W: 0	E: 0	N: 0	W: 535	E: 1180	N: 0	W: 230	E: 230	N: 0	W: 1005	E: 1005
		S: 0			S: 310			S: 275			S: 0	
			0			0			0			0
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ▶		◀ 1790	1780 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0		0	0		0	0		0	0		0
		W: 4530			W: 1000			W: 210			W: 245	
		N: 0			N: 235			N: 610			N: 825	
		E: 575			E: 255			E: 250			E: 0	
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N: 0	W: 0	E: 0	N: 0	W: 265	E: 1105	N: 0	W: -1040	E: -895	N: 0	W: 445	E: 580
		S: 0			S: 15			S: -945			S: 0	
			0			0			0			0
	0 ▲		▲ 1225	1340 ▲		▲ 125	-220 ▲		▲ -180	-465 ▲		▲ 0
	-75 ▶		◀ 1040	880 ▶		◀ 70	610 ▶		◀ 50	0 ▶		◀ 0
	890 ▼		▼ 0	-480 ▼		▼ 0	395 ▼		▼ -265	850 ▼		▼ 0
	0		0	0		0	0		0	0		0
		W: 2990			W: 530			W: -785			W: -65	
		N: 0			N: 85			N: -365			N: 500	
		E: 35			E: 10			E: 80			E: 0	

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 30.1 1482 NBL 87.6 367 NBT 11.6 461 NBR 4.4 0 EBL 49.3 342 EBT 93.0 342 EBR 60.6 355 SBL 37.0 131 SBT 35.5 1478 SBR 14.7 45 WBL 67.6 336 WBT 71.1 336 WBR 29.4 297	MVMNT DELAY QUEUE ALL 72.2 5952 NBL 71.0 112 NBT 122.4 527 NBR 57.2 510 EBL 157.8 199 EBT 124.0 5952 EBR 119.1 5937 SBL 79.8 243 SBT 77.0 243 SBR 8.6 53 WBL 85.3 340 WBT 23.9 516 WBR 5.8 19	MVMNT DELAY QUEUE ALL 52.7 818 NBL 74.8 178 NBT 80.7 267 NBR 71.0 557 EBL 71.0 149 EBT 44.2 635 EBR 24.1 258 SBL 88.2 553 SBT 33.8 200 SBR 21.9 205 WBL 117.3 631 WBT 27.5 357 WBR 10.5 205	MVMNT DELAY QUEUE ALL 32.9 1474 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 0.0 0 EBT 16.2 515 EBR 2.2 328 SBL 98.7 377 SBT 0.0 0 SBR 80.4 1308 WBL 88.3 252 WBT 24.6 698 WBR 0.0 0
STORAGE LENGTH ROUNDED (FEET)	N 0 290 1755 250 0 685 525 685 525 685 525 0 160 620 620 0	N 0 185 200 200 0 475 935 970 935 970 935 0 340 340 310 0	N 0 600 620 450 0 700 780 955 780 760 525 0 560 975 560 0	N 0 3580 0 780 0 0 0 800 800 2260 495 0 0 0 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 95 255 -45 0 95 -15 335 175 70 -65 0 -360 145 475 0	N 0 -35 -50 -195 0 35 670 -5005 410 -5220 345 0 70 -210 -360 0	N 0 220 420 -280 0 310 315 305 405 245 -365 0 175 700 -200 0	N 0 2015 0 140 0 0 0 275 100 1670 -20 0 0 0 0

VISSIM Results Design Year (2040) I-75 SIMR Alternative

No Build 2040 PM Hour 3	I-75 East Ramp Terminal/Bee Ridge Road			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	25.2	1076	ALL	25.1	673	ALL	22.7	821	ALL	12.1	357
	NBL	50.6	906	NBL	53.6	285	NBL	26.4	200	NBL	20.1	65
	NBT	0.0	0	NBT	44.8	108	NBT	21.1	669	NBT	5.9	209
	NBR	19.9	231	NBR	20.3	62	NBR	12.0	6	NBR	0.0	0
	EBL	0.0	0	EBL	52.8	152	EBL	60.1	121	EBL	61.7	330
	EBT	24.1	798	EBT	18.2	616	EBT	74.1	93	EBT	0.0	0
	EBR	9.8	481	EBR	16.4	300	EBR	12.2	64	EBR	8.1	13
	SBL	0.0	0	SBL	38.4	120	SBL	40.1	638	SBL	0.0	0
	SBT	0.0	0	SBT	51.8	56	SBT	13.9	592	SBT	8.6	298
	SBR	0.0	0	SBR	12.2	61	SBR	6.7	592	SBR	8.2	268
	WBL	0.0	0	WBL	26.2	50	WBL	71.6	203	WBL	0.0	0
	WBT	27.6	527	WBT	24.1	465	WBT	65.6	175	WBT	0.0	0
	WBR	5.3	178	WBR	5.7	0	WBR	23.7	138	WBR	0.0	0
STORAGE LENGTH ROUNDED (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 535 / ▼ 1180 / ► 310 / 0			N: 0 / ◄ 230 / ▼ 230 / ► 275 / 0			N: 0 / ◄ 1005 / ▼ 1005 / ► 0 / 0		
	0 ▲		▲ 1790	1780 ▲		▲ 365	170 ▲		▲ 235	250 ▲		▲ 0
	800 ►		◄ 1790	1780 ►		◄ 820	735 ►		◄ 275	0 ►		◄ 0
	1680 ▼		▼ 0	410 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 0
	0: ◄ 4530 / ▲ 0 / ► 575 / 0			0: ◄ 1000 / ▲ 235 / ► 255 / 0			0: ◄ 210 / ▲ 610 / ► 250 / 0			0: ◄ 245 / ▲ 825 / ► 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N: 0 / ◄ 0 / ▼ 0 / ► 0 / 0			N: 0 / ◄ 315 / ▼ 1105 / ► 40 / 0			N: 0 / ◄ -515 / ▼ -370 / ► -520 / 0			N: 0 / ◄ 545 / ▼ 705 / ► 0 / 0		
	0 ▲		▲ 1350	1365 ▲		▲ 125	-195 ▲		▲ -155	-340 ▲		▲ 0
	0 ►		◄ 1240	1155 ►		◄ 345	635 ►		◄ 75	0 ►		◄ 0
	940 ▼		▼ 0	-155 ▼		▼ 0	420 ▼		▼ -190	875 ▼		▼ 0
	0: ◄ 3365 / ▲ 0 / ► 85 / 0			0: ◄ 555 / ▲ 110 / ► 35 / 0			0: ◄ -160 / ▲ -65 / ► 80 / 0			0: ◄ -15 / ▲ 600 / ► 0 / 0		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 17.2 649 NBL 17.7 119 NBT 13.6 649 NBR 5.8 51 EBL 62.9 233 EBT 70.3 66 EBR 6.9 0 SBL 17.5 57 SBT 14.1 231 SBR 8.3 0 WBL 65.3 184 WBT 86.9 184 WBR 28.5 164	MVMNT DELAY QUEUE ALL 20.0 316 NBL 71.6 96 NBT 68.9 96 NBR 15.6 52 EBL 75.5 258 EBT 20.4 301 EBR 21.8 271 SBL 80.0 161 SBT 88.6 161 SBR 12.3 28 WBL 73.5 246 WBT 7.8 215 WBR 2.9 0	MVMNT DELAY QUEUE ALL 36.1 656 NBL 49.4 192 NBT 66.4 434 NBR 51.1 416 EBL 53.9 178 EBT 26.1 237 EBR 41.1 243 SBL 54.9 338 SBT 55.4 370 SBR 0.0 0 WBL 2.3 2 WBT 30.4 656 WBR 14.5 389	MVMNT DELAY QUEUE ALL 26.3 501 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 36.2 484 EBT 8.7 397 EBR1 3.3 236 EBR2 13.2 0 SBL 29.4 164 SBT 0.0 0 SBR 34.2 466 WBL1 61.8 269 WBL2 41.6 410 WBT 28.4 391 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.8 553 NBL 26.7 479 NBT 0.0 0 NBR 40.7 149 EBL 0.0 0 EBT 27.4 485 EBR 0.0 0 SBL 38.5 211 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 29.9 516 WBR 4.7 298
STORAGE LENGTH ROUNDED (FEET)	N 0 260 1755 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 225 560 355 0	N 0 165 545 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 185 385 145 0	N 0 0 545 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 375 405 390 0	N 0 3580 0 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 0 0 0 0	N 0 0 0 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 4530 0 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 115 1505 95 0 -205 ▲ ▲ 110 610 ▶ ◀ 325 30 ▼ ▼ -260 0 -45 -90 135 0	N 0 -30 370 -135 0 -40 ▲ ▲ 85 645 ▶ ◀ 100 -95 ▼ ▼ -165 0 -60 285 -75 0	N 0 0 170 -165 0 -115 ▲ ▲ -25 705 ▶ ◀ 5 60 ▼ ▼ 365 0 -10 -45 -220 0	N 0 2865 0 160 0 -40 ▲ ▲ 0 300 ▶ ◀ 475 125 ▼ ▼ 125 0 0 0 0 0	N 0 0 0 405 0 0 ▲ ▲ 1070 435 ▶ ◀ 1085 0 ▼ ▼ 0 0 3790 0 4140 0

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	5.8	164	ALL	26.4	554	ALL	14.8	351	ALL	18.3	398
	NBL	0.0	0	NBL	57.1	283	NBL	11.8	135	NBL	14.0	32
	NBT	0.0	0	NBT	55.9	105	NBT	12.2	350	NBT	17.0	398
	NBR	0.0	0	NBR	18.1	61	NBR	10.7	314	NBR	0.0	0
	EBL	37.6	154	EBL	65.6	171	EBL	54.6	116	EBL	20.7	100
	EBT	0.0	0	EBT	14.9	515	EBT	74.2	63	EBT	0.0	0
	EBR	0.0	0	EBR	8.8	24	EBR	12.2	37	EBR	4.6	4
	SBL	0.0	0	SBL	48.1	58	SBL	15.5	134	SBL	0.0	0
	SBT	0.0	0	SBT	73.5	63	SBT	9.8	199	SBT	19.4	277
	SBR	11.6	0	SBR	12.2	23	SBR	7.6	186	SBR	19.1	277
	WBL	0.0	0	WBL	15.0	38	WBL	59.5	138	WBL	33.3	184
	WBT	2.4	149	WBT	23.6	516	WBT	68.8	186	WBT	38.7	89
	WBR	0.0	0	WBR	6.6	0	WBR	21.4	149	WBR	6.4	3
STORAGE LENGTH ROUNDED (FEET)	N 0 ◄ 650 ▼ 0 ► 0 → 0			N 0 ◄ 535 ▼ 1180 ► 310 → 0			N 0 ◄ 230 ▼ 230 ► 275 → 0			N 0 ◄ 1005 ▼ 1005 ► 0 → 0		
	480 ▲		▲ 0	335 ▲		▲ 365	170 ▲		▲ 235	240 ▲		▲ 240
	0 ►		◄ 300	1465 ►		◄ 820	735 ►		◄ 275	0 ►		◄ 5370
	0 ▼		▼ 0	270 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 240
	0 ◄ 0 ▲ 0 ► 0 → 0			0 ◄ 1000 ▲ 235 ► 255 → 0			0 ◄ 210 ▲ 610 ► 250 → 0			0 ◄ 245 ▲ 825 ► 0 → 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 ◄ 650 ▼ 0 ► 0 → 0			N 0 ◄ 365 ▼ 1105 ► 90 → 0			N 0 ◄ -115 ▼ 30 ► -20 → 0			N 0 ◄ 520 ▼ 705 ► 0 → 0		
	65 ▲		▲ 0	-80 ▲		▲ 125	-195 ▲		▲ -155	-100 ▲		▲ -25
	0 ►		◄ 150	940 ►		◄ 295	660 ►		◄ 75	0 ►		◄ 5270
	0 ▼		▼ 0	5 ▼		▼ 25	445 ▼		▼ -115	875 ▼		▼ -200
	0 ◄ 0 ▲ 0 ► 0 → 0			0 ◄ 555 ▲ 110 ► 35 → 0			0 ◄ -85 ▲ 260 ► -220 → 0			0 ◄ 10 ▲ 425 ► 0 → 0		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 2	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 23.1 796 NBL 33.0 190 NBT 14.7 695 NBR 8.1 46 EBL 64.1 313 EBT 84.0 68 EBR 9.5 18 SBL 36.2 89 SBT 23.5 482 SBR 14.1 14 WBL 65.8 264 WBT 102.5 264 WBR 52.8 244	MVMNT DELAY QUEUE ALL 27.8 509 NBL 76.0 118 NBT 74.3 118 NBR 24.1 90 EBL 93.5 404 EBT 28.2 436 EBR 29.7 406 SBL 109.3 291 SBT 126.9 291 SBR 25.3 135 WBL 72.4 343 WBT 14.1 417 WBR 4.4 0	MVMNT DELAY QUEUE ALL 44.6 1039 NBL 68.8 256 NBT 101.6 1014 NBR 64.5 973 EBL 48.3 232 EBT 34.2 321 EBR 43.1 296 SBL 67.0 561 SBT 50.5 521 SBR 0.0 0 WBL 3.0 26 WBT 35.0 720 WBR 19.4 652	MVMNT DELAY QUEUE ALL 32.3 777 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 38.1 625 EBT 12.8 598 EBR1 4.7 460 EBR2 23.8 0 SBL 34.1 230 SBT 0.0 0 SBR 40.7 756 WBL1 56.2 329 WBL2 48.6 545 WBT 42.3 633 WBR 0.0 0	MVMNT DELAY QUEUE ALL 30.3 889 NBL 36.2 654 NBT 0.0 0 NBR 52.5 226 EBL 0.0 0 EBT 37.5 813 EBR 0.0 0 SBL 57.6 319 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 38.8 882 WBR 13.2 665
STORAGE LENGTH ROUNDED (FEET)	N 0 260 1755 315 0 285 ▲ 525 ▲ 685 ► 525 ◄ 270 ▼ 180 ▼ 0 225 560 355 0	N 0 165 545 185 0 475 ▲ 325 ▲ 970 ► 325 ◄ 420 ▼ 325 ▼ 0 185 385 145 0	N 0 0 545 340 0 325 ▲ 615 ▲ 955 ► 680 ◄ 550 ▼ 630 ▼ 0 375 405 390 0	N 0 3580 0 575 0 700 ▲ 0 ▲ 700 ► 875 ◄ 615 ▼ 640 ▼ 0 0 0 0 0	N 0 0 0 870 0 0 ▲ 1610 ▲ 935 ► 1610 ◄ 0 ▼ 0 ▼ 0 4530 0 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 90 1255 70 0 -280 ▲ 35 ▲ 610 ► 250 ◄ 5 ▼ -335 ▼ 0 -120 -140 160 0	N 0 -130 245 -260 0 -190 ▲ 85 ▲ 520 ► -100 ◄ -245 ▼ -265 ▼ 0 -85 260 -100 0	N 0 0 20 -390 0 -165 ▲ -300 ▲ 630 ► -45 ◄ 10 ▼ 340 ▼ 0 -85 -620 -770 0	N 0 2565 0 85 0 -165 ▲ 0 ▲ 100 ► 225 ◄ -100 ▼ 50 ▼ 0 0 0 0 0	N 0 0 0 305 0 0 ▲ 695 ▲ 110 ► 710 ◄ 0 ▼ 0 ▼ 0 3615 0 4040 0

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.6	234	ALL	36.7	1128	ALL	25.0	885	ALL	19.0	556
	NBL	0.0	0	NBL	70.2	524	NBL	22.2	263	NBL	16.9	34
	NBT	0.0	0	NBT	57.6	98	NBT	25.4	885	NBT	17.2	556
	NBR	0.0	0	NBR	28.7	52	NBR	21.1	850	NBR	0.0	0
	EBL	46.1	182	EBL	79.7	230	EBL	53.3	126	EBL	24.3	126
	EBT	0.0	0	EBT	20.5	1095	EBT	68.0	94	EBT	0.0	0
	EBR	0.0	0	EBR	14.1	58	EBR	16.4	67	EBR	4.6	0
	SBL	0.0	0	SBL	46.9	70	SBL	30.0	215	SBL	0.0	0
	SBT	0.0	0	SBT	73.1	80	SBT	16.9	345	SBT	19.5	401
	SBR	17.6	6	SBR	23.0	45	SBR	13.4	333	SBR	20.7	401
	WBL	0.0	0	WBL	27.7	52	WBL	53.4	176	WBL	36.3	236
	WBT	3.2	233	WBT	36.9	976	WBT	68.4	238	WBT	35.1	89
	WBR	0.0	0	WBR	18.7	0	WBR	31.0	201	WBR	11.1	17
STORAGE LENGTH ROUNDED (FEET)	N 0 / 650 0 0 / 0	480 ▲ 0	0 ◀ 300	N 0 / 535 1180 310 / 0	335 ▲ 365	1465 ▶ 820	N 0 / 230 230 275 / 0	170 ▲ 235	735 ▶ 275	N 0 / 1005 1005 0 / 0	240 ▲ 240	0 ▶ 5370
	0	0 ▼	0	270 ▼	315		735 ▼	275		1140 ▼	240	
	0 / 0 0 0 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 625 0 0 / 0	40 ▲ 0	0 ◀ 50	N 0 / 340 1080 90 / 0	-155 ▲ 125	365 ▶ -180	N 0 / -265 -120 -95 / 0	-220 ▲ -230	635 ▶ 25	N 0 / 395 580 0 / 0	-150 ▲ -25	0 ▶ 5270
	0	0 ▼	0	-45 ▼	0		420 ▼	-165		900 ▼	-250	
	0 / 0 0 0 / 0			0 / 330 135 35 / 0			0 / -210 -290 -745 / 0			0 / 10 250 0 / 0		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 18.0 669 NBL 22.0 106 NBT 13.5 669 NBR 6.9 46 EBL 64.8 256 EBT 77.1 55 EBR 7.6 7 SBL 22.0 77 SBT 15.4 251 SBR 9.8 12 WBL 65.3 191 WBT 84.8 191 WBR 31.1 172	MVMNT DELAY QUEUE ALL 21.9 384 NBL 71.1 107 NBT 68.2 107 NBR 16.0 29 EBL 79.2 281 EBT 22.4 338 EBR 23.3 308 SBL 89.1 242 SBT 101.5 242 SBR 15.9 51 WBL 75.7 301 WBT 8.7 291 WBR 3.2 0	MVMNT DELAY QUEUE ALL 37.6 757 NBL 52.8 208 NBT 74.0 661 NBR 53.3 605 EBL 51.9 212 EBT 28.9 267 EBR 40.4 273 SBL 54.9 384 SBT 53.4 397 SBR 0.0 0 WBL 2.5 8 WBT 31.5 687 WBR 15.1 474	MVMNT DELAY QUEUE ALL 27.1 574 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 36.4 538 EBT 9.3 505 EBR1 3.5 340 EBR2 16.0 0 SBL 31.2 192 SBT 0.0 0 SBR 33.5 527 WBL1 59.4 300 WBL2 36.8 442 WBT 32.6 476 WBR 0.0 0	MVMNT DELAY QUEUE ALL 24.2 706 NBL 29.0 519 NBT 0.0 0 NBR 45.5 172 EBL 0.0 0 EBT 30.8 643 EBR 0.0 0 SBL 42.2 257 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 32.7 661 WBR 7.0 443
STORAGE LENGTH ROUNDED (FEET)	N 0 260 1755 315 0 285 ▲ ▲ 525 685 ▶ ◀ 525 270 ▼ ▼ 180 0 225 560 355 0	N 0 165 545 185 0 475 ▲ ▲ 325 970 ▶ ◀ 325 420 ▼ ▼ 325 0 185 385 145 0	N 0 0 545 340 0 325 ▲ ▲ 615 955 ▶ ◀ 680 550 ▼ ▼ 630 0 375 405 390 0	N 0 3580 0 575 0 700 ▲ ▲ 0 700 ▶ ◀ 875 615 ▼ ▼ 640 0 0 0 0 0	N 0 0 0 870 0 0 ▲ ▲ 1610 935 ▶ ◀ 1610 0 ▼ ▼ 0 0 4530 0 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 90 1480 70 0 -230 ▲ ▲ 110 610 ▶ ◀ 325 5 ▼ ▼ -260 0 -45 -115 160 0	N 0 -55 295 -210 0 -65 ▲ ▲ 85 620 ▶ ◀ 25 -145 ▼ ▼ -240 0 -85 260 -50 0	N 0 0 145 -215 0 -140 ▲ ▲ -100 680 ▶ ◀ -20 35 ▼ ▼ 365 0 -35 -270 -420 0	N 0 2790 0 135 0 -90 ▲ ▲ 0 175 ▶ ◀ 375 25 ▼ ▼ 75 0 0 0 0 0	N 0 0 0 355 0 0 ▲ ▲ 920 285 ▶ ◀ 935 0 ▼ ▼ 0 0 3765 0 4115 0

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 AM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.4	192	ALL	30.3	785	ALL	16.8	487	ALL	18.3	434
	NBL	0.0	0	NBL	60.7	350	NBL	14.1	136	NBL	15.5	37
	NBT	0.0	0	NBT	45.8	87	NBT	14.5	487	NBT	16.8	434
	NBR	0.0	0	NBR	20.0	42	NBR	12.5	452	NBR	0.0	0
	EBL	42.6	174	EBL	73.3	192	EBL	55.3	116	EBL	22.1	119
	EBT	0.0	0	EBT	18.2	757	EBT	76.4	87	EBT	0.0	0
	EBR	0.0	0	EBR	11.6	29	EBR	15.7	59	EBR	4.6	0
	SBL	0.0	0	SBL	50.1	68	SBL	18.5	155	SBL	0.0	0
	SBT	0.0	0	SBT	70.8	76	SBT	11.4	256	SBT	18.9	312
	SBR	12.8	0	SBR	14.2	26	SBR	7.9	243	SBR	18.7	312
	WBL	0.0	0	WBL	18.5	42	WBL	59.0	154	WBL	34.7	208
	WBT	2.5	175	WBT	28.0	661	WBT	65.5	191	WBT	37.0	83
	WBR	0.0	0	WBR	8.4	0	WBR	22.8	154	WBR	7.0	2
STORAGE LENGTH ROUNDED (FEET)	N 0 / 650 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	480 ▲		▲ 0	335 ▲		▲ 365	170 ▲		▲ 235	240 ▲		▲ 240
	0 ▶		◀ 300	1465 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 5370
	0 ▼		▼ 0	270 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 240
	0 / 0 0 0 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 650 0 0 / 0			N 0 / 340 1080 90 / 0			N 0 / -165 -45 -45 / 0			N 0 / 495 680 0 / 0		
	65 ▲		▲ 0	-105 ▲		▲ 125	-195 ▲		▲ -180	-125 ▲		▲ -25
	0 ▶		◀ 100	690 ▶		◀ 145	635 ▶		◀ 75	0 ▶		◀ 5270
	0 ▼		▼ 0	-20 ▼		▼ 25	420 ▼		▼ -140	900 ▼		▼ -225
	0 / 0 0 0 / 0			0 / 505 135 60 / 0			0 / -85 110 -370 / 0			0 / 10 375 0 / 0		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 1	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 23.2 549 NBL 22.6 78 NBT 10.3 549 NBR 4.9 27 EBL 53.5 210 EBT 69.4 100 EBR 9.7 13 SBL 29.1 88 SBT 23.4 389 SBR 17.9 0 WBL 80.2 307 WBT 85.1 307 WBR 44.2 287	MVMNT DELAY QUEUE ALL 23.9 505 NBL 78.5 164 NBT 69.3 164 NBR 21.6 84 EBL 78.5 247 EBT 26.9 505 EBR 28.9 475 SBL 82.7 165 SBT 87.5 165 SBR 17.1 122 WBL 79.5 258 WBT 6.7 190 WBR 2.9 0	MVMNT DELAY QUEUE ALL 42.4 743 NBL 45.2 165 NBT 69.0 425 NBR 59.4 599 EBL 57.3 212 EBT 39.1 454 EBR 39.7 275 SBL 51.2 504 SBT 62.1 537 SBR 0.0 0 WBL 31.0 285 WBT 27.1 654 WBR 28.7 600	MVMNT DELAY QUEUE ALL 25.6 678 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 14.5 644 EBT 12.5 514 EBR1 10.6 337 EBR2 19.6 0 SBL 47.6 307 SBT 0.0 0 SBR 20.0 296 WBL1 37.0 258 WBL2 28.4 347 WBT 46.4 564 WBR 0.0 0	MVMNT DELAY QUEUE ALL 23.2 720 NBL 29.1 387 NBT 0.0 0 NBR 49.3 219 EBL 0.0 0 EBT 27.9 720 EBR 0.0 0 SBL 36.9 348 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 29.8 577 WBR 7.5 360
STORAGE LENGTH ROUNDED (FEET)	N 0 260 1755 315 0 285 ▲ ▲ 525 685 ► ◄ 525 270 ▼ ▼ 180 0 225 560 355 0	N 0 165 545 185 0 475 ▲ ▲ 325 970 ► ◄ 325 420 ▼ ▼ 325 0 185 385 145 0	N 0 0 545 340 0 325 ▲ ▲ 615 955 ► ◄ 680 550 ▼ ▼ 630 0 375 405 390 0	N 0 3580 0 575 0 700 ▲ ▲ 0 700 ► ◄ 875 615 ▼ ▼ 640 0 0 0 0 0	N 0 0 0 870 0 0 ▲ ▲ 1610 935 ► ◄ 1610 0 ▼ ▼ 0 0 4530 0 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 115 1355 70 0 -180 ▲ ▲ -15 585 ► ◄ 200 5 ▼ ▼ -385 0 -20 10 160 0	N 0 -105 370 -135 0 -15 ▲ ▲ 85 445 ► ◄ 125 -320 ▼ ▼ -190 0 -135 210 -100 0	N 0 0 -5 -340 0 -140 ▲ ▲ -250 480 ► ◄ 5 10 ▼ ▼ 90 0 15 -20 -395 0	N 0 3040 0 10 0 -190 ▲ ▲ 0 175 ► ◄ 300 25 ▼ ▼ 125 0 0 0 0 0	N 0 0 0 280 0 0 ▲ ▲ 995 210 ► ◄ 1010 0 ▼ ▼ 0 0 3890 0 4065 0

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 1	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	7.5	170	ALL	26.1	837	ALL	16.9	462	ALL	21.0	474
	NBL	0.0	0	NBL	55.0	271	NBL	19.3	179	NBL	16.5	69
	NBT	0.0	0	NBT	60.0	125	NBT	15.7	394	NBT	13.7	279
	NBR	0.0	0	NBR	18.4	81	NBR	13.0	359	NBR	0.0	0
	EBL	39.7	168	EBL	67.2	175	EBL	50.1	116	EBL	29.1	244
	EBT	0.0	0	EBT	17.9	837	EBT	65.1	127	EBT	0.0	0
	EBR	0.0	0	EBR	15.3	240	EBR	17.3	100	EBR	5.7	2
	SBL	0.0	0	SBL	46.4	126	SBL	13.5	126	SBL	0.0	0
	SBT	0.0	0	SBT	69.9	57	SBT	10.4	422	SBT	27.4	474
	SBR	20.4	21	SBR	14.4	74	SBR	10.1	409	SBR	29.7	474
	WBL	0.0	0	WBL	17.8	39	WBL	58.5	193	WBL	33.4	164
	WBT	2.4	131	WBT	24.5	568	WBT	59.3	200	WBT	38.9	75
	WBR	0.0	0	WBR	5.7	0	WBR	21.4	164	WBR	4.4	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 650 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	480 ▲		▲ 0	335 ▲		▲ 365	170 ▲		▲ 235	240 ▲		▲ 240
	0 ▶		◀ 300	1465 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 5370
	0 ▼		▼ 0	270 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 240
	0 / 0 0 0 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 625 0 0 / 0			N 0 / 315 1105 15 / 0			N 0 / -340 -195 -20 / 0			N 0 / 345 530 0 / 0		
	65 ▲		▲ 0	-105 ▲		▲ 125	-195 ▲		▲ -180	-250 ▲		▲ 0
	0 ▶		◀ 150	615 ▶		◀ 245	585 ▶		◀ 50	0 ▶		◀ 5295
	0 ▼		▼ 0	-220 ▼		▼ 25	370 ▼		▼ -165	875 ▼		▼ -175
	0 / 0 0 0 / 0			0 / 580 85 10 / 0			0 / -135 210 -270 / 0			0 / -15 525 0 / 0		

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 2	Cattlemen Road/Maxfield Drive			Bee Ridge Road/Maxfield Drive			Bee Ridge Road/Cattlemen Road			I-75 West Ramp Terminal/Bee Ridge Road			I-75 East Ramp Terminal/Bee Ridge Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	28.1	773	ALL	33.5	1446	ALL	53.6	957	ALL	33.2	784	ALL	27.1	864
	NBL	35.1	99	NBL	85.0	185	NBL	51.1	184	NBL	0.0	0	NBL	33.6	504
	NBT	8.9	585	NBT	75.4	185	NBT	79.0	562	NBT	0.0	0	NBT	0.0	0
	NBR	4.7	30	NBR	30.3	110	NBR	67.9	786	NBR	0.0	0	NBR	56.0	236
	EBL	58.0	279	EBL	89.0	263	EBL	58.1	239	EBL	18.9	748	EBL	0.0	0
	EBT	66.6	112	EBT	44.6	1446	EBT	68.0	902	EBT	18.1	754	EBT	33.1	861
	EBR	13.5	46	EBR	47.4	1416	EBR	45.3	282	EBR1	12.8	571	EBR	0.0	0
										EBR2	28.0	2			
	SBL	38.7	133	SBL	98.7	318	SBL	56.9	637	SBL	43.5	332	SBL	42.8	425
	SBT	30.8	719	SBT	110.4	318	SBT	56.3	608	SBT	0.0	0	SBT	0.0	0
	SBR	23.3	0	SBR	22.8	153	SBR	0.0	0	SBR	26.2	362	SBR	0.0	0
	WBL	107.3	399	WBL	80.6	315	WBL	38.6	346	WBL1	42.8	281	WBL	0.0	0
										WBL2	29.7	404			
	WBT	88.7	399	WBT	8.1	217	WBT	36.7	721	WBT	65.8	725	WBT	33.8	675
	WBR	56.5	380	WBR	3.3	3	WBR	29.6	645	WBR	0.0	0	WBR	11.9	458

STORAGE LENGTH ROUNDED (FEET)

N	0	260	1755	315	0					N	0	165	545	185	0					N	0	0	545	340	0					N	0	3580	0	575	0					N	0	0	0	870	0				
285	▲				▲	525				475	▲				▲	325				325	▲				▲	615				700	▲				▲	0				0	▲				▲	1610			
685	▶				◀	525				970	▶				◀	325				955	▶				◀	680				700	▶				◀	875				935	▶				◀	1610			
270	▼				▼	180				420	▼				▼	325				550	▼				▼	630				615	▼				▼	640				0	▼				▼	0			
0		225	560	355	0					0		185	385	145	0					0		375	405	390	0					0		0	0	0	0					0		4530	0	4530	0				

STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)

N	0	115	1030	20	0					N	0	-155	220	-285	0					N	0	0	-80	-465	0					N	0	2965	0	-15	0					N	0	0	0	205	0				
-255	▲				▲	-115				-40	▲				▲	60				-165	▲				▲	-275				-290	▲				▲	0				0	▲				▲	895			
560	▶				◀	125				-480	▶				◀	100				30	▶				◀	-45				-75	▶				◀	125				60	▶				◀	935			
-20	▼				▼	-460				-1245	▼				▼	-240				10	▼				▼	40				-200	▼				▼	100				0	▼				▼	0			
0		-20	-40	160	0					0		-160	185	-125	0					0		-10	-170	-595	0					0		0	0	0	0					0		3765	0	4040	0				

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 2	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	8.3	227	ALL	30.4	1125	ALL	23.4	705	ALL	23.0	560
	NBL	0.0	0	NBL	59.3	343	NBL	31.0	361	NBL	19.5	86
	NBT	0.0	0	NBT	62.9	154	NBT	22.4	705	NBT	13.4	333
	NBR	0.0	0	NBR	22.8	110	NBR	19.0	670	NBR	0.0	0
	EBL	44.9	194	EBL	76.0	205	EBL	52.3	120	EBL	33.3	285
	EBT	0.0	0	EBT	21.7	1125	EBT	75.2	152	EBT	0.0	0
	EBR	0.0	0	EBR	19.5	438	EBR	23.5	125	EBR	6.4	2
	SBL	0.0	0	SBL	44.2	146	SBL	23.2	216	SBL	0.0	0
	SBT	0.0	0	SBT	68.8	63	SBT	16.4	556	SBT	31.3	560
	SBR	23.1	64	SBR	18.2	90	SBR	15.0	544	SBR	37.2	560
	WBL	0.0	0	WBL	22.9	57	WBL	55.1	234	WBL	33.4	173
	WBT	2.5	195	WBT	29.1	695	WBT	66.9	242	WBT	38.2	81
	WBR	0.0	0	WBR	10.4	0	WBR	26.9	206	WBR	5.8	0

STORAGE LENGTH ROUNDED (FEET)

N	0	650	0	0	0			N	0	535	1180	310	0			N	0	230	230	275	0			N	0	1005	1005	0	0	
480	▲				▲	0		335	▲				▲	365		170	▲				▲	235		240	▲				▲	240
0	▶				◀	300		1465	▶				◀	820		735	▶				◀	275		0	▶				◀	5370
0	▼				▼	0		270	▼				▼	315		735	▼				▼	275		1140	▼				▼	240
0		0	0	0	0			0		1000	235	255	0			0		210	610	250	0			0		245	825	0	0	

STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)

N	0	575	0	0	0			N	0	290	1105	15	0			N	0	-465	-345	-95	0			N	0	245	430	0	0	
40	▲				▲	0		-130	▲				▲	125		-195	▲				▲	-230		-300	▲				▲	0
0	▶				◀	100		340	▶				◀	120		560	▶				◀	25		0	▶				◀	5270
0	▼				▼	0		-420	▼				▼	0		370	▼				▼	-215		875	▼				▼	-175
0		0	0	0	0			0		505	60	-15	0			0		-310	-115	-570	0			0		-40	475	0	0	

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 3	Cattlemen Road/Maxfield Drive	Bee Ridge Road/Maxfield Drive	Bee Ridge Road/Cattlemen Road	I-75 West Ramp Terminal/Bee Ridge Road	I-75 East Ramp Terminal/Bee Ridge Road
VISSIM RESULTS	MVMNT DELAY QUEUE ALL 21.9 568 NBL 18.1 65 NBT 10.5 550 NBR 4.7 38 EBL 57.1 200 EBT 75.5 93 EBR 9.4 9 SBL 24.6 76 SBT 22.4 422 SBR 17.3 2 WBL 73.6 260 WBT 71.9 260 WBR 32.8 241	MVMNT DELAY QUEUE ALL 23.2 641 NBL 76.6 133 NBT 65.2 133 NBR 17.1 35 EBL 77.4 235 EBT 26.5 641 EBR 28.9 611 SBL 80.7 158 SBT 84.5 158 SBR 14.5 88 WBL 80.5 270 WBT 6.3 173 WBR 2.8 0	MVMNT DELAY QUEUE ALL 40.8 710 NBL 41.8 161 NBT 67.0 388 NBR 55.9 450 EBL 59.9 182 EBT 37.0 540 EBR 38.3 289 SBL 53.6 481 SBT 62.8 488 SBR 0.0 0 WBL 28.2 299 WBT 24.5 642 WBR 27.3 562	MVMNT DELAY QUEUE ALL 25.0 666 NBL 0.0 0 NBT 0.0 0 NBR 0.0 0 EBL 13.2 648 EBT 12.6 511 EBR1 10.0 301 EBR2 15.1 0 SBL 48.5 282 SBT 0.0 0 SBR 17.6 285 WBL1 36.7 255 WBL2 29.0 355 WBT 46.8 493 WBR 0.0 0	MVMNT DELAY QUEUE ALL 21.6 687 NBL 27.1 366 NBT 0.0 0 NBR 46.0 184 EBL 0.0 0 EBT 26.1 680 EBR 0.0 0 SBL 35.4 334 SBT 0.0 0 SBR 0.0 0 WBL 0.0 0 WBT 28.1 549 WBR 6.0 332
STORAGE LENGTH ROUNDED (FEET)	N 0 260 1755 315 0 285 525 685 525 270 180 0 225 560 355 0	N 0 165 545 185 0 475 325 970 325 420 325 0 185 385 145 0	N 0 0 545 340 0 325 615 955 680 550 630 0 375 405 390 0	N 0 3580 0 575 0 700 0 700 875 615 640 0 0 0 0 0	N 0 0 0 870 0 0 1610 935 1610 0 0 0 4530 0 4530 0
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 90 1330 70 0 -180 35 585 250 5 -335 0 5 -15 160 0	N 0 -80 370 -135 0 -15 85 320 150 -445 -190 0 -110 235 -50 0	N 0 0 45 -315 0 -115 -200 405 30 10 90 0 15 5 -245 0	N 0 3040 0 35 0 -190 0 175 375 50 125 0 0 0 0 0	N 0 0 0 280 0 0 1020 235 1060 0 0 0 3915 0 4090 0

VISSIM Results Design Year (2040) Proposed Build Alternative

Build 2040 PM Hour 3	Bee Ridge Road/Eastbound Crossover			Bee Ridge Road/Mauna Loa Boulevard			Cattlemen Road/Center Pointe Drive			Cattlemen Road/Wilkinson Road		
VISSIM RESULTS	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE	MVMNT	DELAY	QUEUE
	ALL	6.6	192	ALL	24.1	655	ALL	15.0	354	ALL	20.4	458
	NBL	0.0	0	NBL	55.4	253	NBL	15.6	149	NBL	16.7	67
	NBT	0.0	0	NBT	55.7	133	NBT	13.4	299	NBT	13.8	268
	NBR	0.0	0	NBR	17.1	88	NBR	10.9	264	NBR	0.0	0
	EBL	36.2	149	EBL	67.0	159	EBL	54.8	119	EBL	24.8	211
	EBT	0.0	0	EBT	15.8	636	EBT	68.9	104	EBT	0.0	0
	EBR	0.0	0	EBR	13.0	120	EBR	15.1	76	EBR	5.2	2
	SBL	0.0	0	SBL	46.9	129	SBL	12.1	127	SBL	0.0	0
	SBT	0.0	0	SBT	70.7	54	SBT	8.6	307	SBT	27.0	458
	SBR	17.0	30	SBR	11.6	48	SBR	8.1	295	SBR	28.7	458
	WBL	0.0	0	WBL	15.4	41	WBL	58.9	185	WBL	32.7	157
	WBT	2.3	162	WBT	21.5	453	WBT	63.9	160	WBT	37.2	78
	WBR	0.0	0	WBR	5.4	0	WBR	20.5	123	WBR	3.7	0
STORAGE LENGTH ROUNDED (FEET)	N 0 / 650 0 0 / 0			N 0 / 535 1180 310 / 0			N 0 / 230 230 275 / 0			N 0 / 1005 1005 0 / 0		
	480 ▲		▲ 0	335 ▲		▲ 365	170 ▲		▲ 235	240 ▲		▲ 240
	0 ▶		◀ 300	1465 ▶		◀ 820	735 ▶		◀ 275	0 ▶		◀ 5370
	0 ▼		▼ 0	270 ▼		▼ 315	735 ▼		▼ 275	1140 ▼		▼ 240
	0 / 0 0 0 / 0			0 / 1000 235 255 / 0			0 / 210 610 250 / 0			0 / 245 825 0 / 0		
STORAGE LENGTH MINUS DECELERATION LENGTH MINUS QUEUE LENGTH (FEET)	N 0 / 600 0 0 / 0			N 0 / 340 1105 15 / 0			N 0 / -215 -95 -20 / 0			N 0 / 345 530 0 / 0		
	90 ▲		▲ 0	-80 ▲		▲ 125	-195 ▲		▲ -130	-225 ▲		▲ 0
	0 ▶		◀ 125	815 ▶		◀ 345	610 ▶		◀ 100	0 ▶		◀ 5270
	0 ▼		▼ 0	-95 ▼		▼ 25	395 ▼		▼ -165	875 ▼		▼ -175
	0 / 0 0 0 / 0			0 / 580 85 10 / 0			0 / -85 310 -170 / 0			0 / -15 550 0 / 0		

Appendix G
HCS 2010 Freeway and Ramp Output

HCS 2010 Freeway Output

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4765*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1714*	pc/h/ln
S	*66.9*	mph
D = v_p / S	*25.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*AM Existing Configuration*	Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5100*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1834*	pc/h/ln
S	*65.3*	mph
D = v_p / S	*28.1*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*AM Existing Configuration*	Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4690*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1687*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*25.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4000*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1439*	pc/h/ln
S	*69.3*	mph
D = v_p / S	*20.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6180*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2223*	pc/h/ln
S	*57.9*	mph
D = v_p / S	*38.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Bee Ridge Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6465*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2325*	pc/h/ln
S	*55.3*	mph
D = v_p / S	*42.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Fruitville Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5845*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2102*	pc/h/ln
S	*60.6*	mph
D = v_p / S	*34.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5185*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1865*	pc/h/ln
S	*64.9*	mph
D = v_p / S	*28.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6180*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1667*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*24.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*AM Interim Build*	Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6465*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1744*	pc/h/ln
S	*66.6*	mph
D = v_p / S	*26.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Fruitville Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5845*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1577*	pc/h/ln
S	*68.4*	mph
D = v_p / S	*23.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5185*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1399*	pc/h/ln
S	*69.5*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10410*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3744*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Bee Ridge Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10530*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3787*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*AM Existing Configuration*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9195*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3307*	pc/h/ln
S	*18.5*	mph
D = v_p / S	*178.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8640*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3107*	pc/h/ln
S	*27.8*	mph
D = v_p / S	*111.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10410*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2808*	pc/h/ln
S	*40.0*	mph
D = v_p / S	*70.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Bee Ridge Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10530*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2840*	pc/h/ln
S	*38.8*	mph
D = v_p / S	*73.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*AM Interim Build*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9195*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2480*	pc/h/ln
S	*51.0*	mph
D = v_p / S	*48.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8640*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2331*	pc/h/ln
S	*55.2*	mph
D = v_p / S	*42.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Ultimate Build GUL*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6795*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1833*	pc/h/ln
S	*65.4*	mph
D = v_p / S	*28.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*AM Ultimate Build GUL*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6915*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1865*	pc/h/ln
S	*64.9*	mph
D = v_p / S	*28.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Ultimate Build GUL*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Fruitville Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6115*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1649*	pc/h/ln
S	*67.7*	mph
D = v_p / S	*24.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Ultimate Build GUL*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5560*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1500*	pc/h/ln
S	*69.0*	mph
D = v_p / S	*21.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Ultimate Build SUL*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3615*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1950*	pc/h/ln
S	*63.5*	mph
D = v_p / S	*30.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*AM Ultimate Build SUL*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Clark Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3080*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1662*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*24.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4000*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1439*	pc/h/ln
S	*69.3*	mph
D = v_p / S	*20.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Existing Configuration*	Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4750*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1708*	pc/h/ln
S	*67.0*	mph
D = v_p / S	*25.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Existing Configuration*	Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5040*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1813*	pc/h/ln
S	*65.6*	mph
D = v_p / S	*27.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2013*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4705*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1692*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*25.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5220*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1877*	pc/h/ln
S	*64.7*	mph
D = v_p / S	*29.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Bee Ridge Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5875*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2113*	pc/h/ln
S	*60.3*	mph
D = v_p / S	*35.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Existing Configuration*	Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6645*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2390*	pc/h/ln
S	*53.6*	mph
D = v_p / S	*44.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6360*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2287*	pc/h/ln
S	*56.3*	mph
D = v_p / S	*40.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5220*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1408*	pc/h/ln
S	*69.5*	mph
D = v_p / S	*20.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Bee Ridge Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5875*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1585*	pc/h/ln
S	*68.3*	mph
D = v_p / S	*23.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Interim Build*	Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6645*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1792*	pc/h/ln
S	*65.9*	mph
D = v_p / S	*27.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2020*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6360*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1716*	pc/h/ln
S	*66.9*	mph
D = v_p / S	*25.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8470*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3046*	pc/h/ln
S	*30.5*	mph
D = v_p / S	*100.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Existing Configuration*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8860*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3186*	pc/h/ln
S	*24.2*	mph
D = v_p / S	*131.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Existing Configuration*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10450*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3758*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Existing Configuration*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10315*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3710*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8470*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2285*	pc/h/ln
S	*56.3*	mph
D = v_p / S	*40.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Interim Build*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8860*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2390*	pc/h/ln
S	*53.6*	mph
D = v_p / S	*44.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Interim Build*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10450*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2819*	pc/h/ln
S	*39.6*	mph
D = v_p / S	*71.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Interim Build*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*10315*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2782*	pc/h/ln
S	*41.0*	mph
D = v_p / S	*67.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Ultimate Build GUL*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Bee Ridge Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5390*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1454*	pc/h/ln
S	*69.3*	mph
D = v_p / S	*21.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Northbound*
Agency or Company	*HDR*	From/To	*Bee Ridge Rd to Fruitville Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Ultimate Build GUL*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5780*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1559*	pc/h/ln
S	*68.5*	mph
D = v_p / S	*22.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)		
Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*HEH*	Highway/Direction of Travel	*I-75 Southbound*
Agency or Company	*HDR*	From/To	*Fruitville Rd to Bee Ridge Rd*
Date Performed	*6/17/2015 3:42:11 PM*	Jurisdiction	*FDOT*
Analysis Time Period	*PM Ultimate Build GUL*	Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6835*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1844*	pc/h/ln
S	*65.2*	mph
D = v_p / S	*28.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Ultimate Build GUL*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Bee Ridge Rd to Clark Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6700*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1807*	pc/h/ln
S	*65.7*	mph
D = v_p / S	*27.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Ultimate Build SUL*

Site Information

Highway/Direction of Travel	*I-75 Northbound*
From/To	*Clark Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3080*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1662*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*24.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*HEH*
Agency or Company	*HDR*
Date Performed	*6/17/2015 3:42:11 PM*
Analysis Time Period	*PM Ultimate Build SUL*

Site Information

Highway/Direction of Travel	*I-75 Southbound*
From/To	*Clark Rd to Fruitville Rd*
Jurisdiction	*FDOT*
Analysis Year	*2040*

Project Description *I-75/Bee Ridge Road Interchange Improvement*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3615*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1950*	pc/h/ln
S	*63.5*	mph
D = v_p / S	*30.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

HCS 2010 Ramp Output

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6075 ft	Deceleration Lane Length L_D	300	L_{down} =	ft
V_u =	1310 veh/h	Freeway Volume, V_F	4765	V_D =	veh/h
		Ramp Volume, V_R	990		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4765	0.95	Level	5	0	0.976	1.00	5141
Ramp	990	0.95	Level	3	0	0.985	1.00	1058
UpStream	1310	0.95	Level	3	0	0.985	1.00	1400
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 12863.51 (Equation 13-12 or 13-13)

P_{FD} = 0.583 using Equation (Exhibit 13-7)

V_{12} = 3438 pc/h

V_3 or V_{av34} 1703 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5141	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4083	Exhibit 13-8	7200	No
V_R	1058	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3438	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 31.1 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.328 (Exhibit 13-12)

S_R= 60.8 mph (Exhibit 13-12)

S_0= 74.0 mph (Exhibit 13-12)

S = 64.6 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp from West
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1320	L_{down} = 2045 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 505 veh/h
	Freeway Volume, V_F: 3775	
	Ramp Volume, V_R: 820	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 35.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3775	0.95	Level	5	0	0.976	1.00	4073
Ramp	820	0.95	Level	3	0	0.985	1.00	876
UpStream								
DownStream	505	0.95	Level	3	0	0.985	1.00	540

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.614 using Equation (Exhibit 13-6)

V_{12} = 2503 pc/h

V_3 or V_{av34} = 1570 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2503 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4949	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3379	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 23.2 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.343 (Exibit 13-11)

S_R = 60.4 mph (Exhibit 13-11)

S_0 = 66.1 mph (Exhibit 13-11)

S = 62.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} = pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp from East
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4595	
	Ramp Volume, V_R: 505	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	4595	0.95	Level	5	0	0.976	1.00	4958
Ramp	505	0.95	Level	3	0	0.985	1.00	540
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.591 using Equation (Exhibit 13-6)

V_{12} = 2933 pc/h

V_3 or V_{av34} = 2025 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2933 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5498	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3473	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 29.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.397 (Exibit 13-11)

S_R = 58.9 mph (Exhibit 13-11)

S_0 = 64.5 mph (Exhibit 13-11)

S = 60.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	270	L_{down} =	ft
V_u =	veh/h	Freeway Volume, V_F	4690	V_D =	veh/h
		Ramp Volume, V_R	1330		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	4690	0.95	Level	5	0	0.976	1.00	5060
Ramp	1330	0.95	Level	3	0	0.985	1.00	1421
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.568 using Equation (Exhibit 13-7)

V_{12} = 3488 pc/h

V_3 or V_{av34} 1572 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5060	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3639	Exhibit 13-8	7200	No
V_R	1421	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3488	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 31.8 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.361 (Exhibit 13-12)

S_R = 59.9 mph (Exhibit 13-12)

S_0 = 74.6 mph (Exhibit 13-12)

S = 63.8 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☑ Off
L_{up} = ft	Acceleration Lane Length, L_A: 440	L_{down} = 7330 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 1120 veh/h
	Freeway Volume, V_F: 3360	
	Ramp Volume, V_R: 640	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3360	0.95	Level	5	0	0.976	1.00	3625
Ramp	640	0.95	Level	3	0	0.985	1.00	684
UpStream								
DownStream	1120	0.95	Level	3	0	0.985	1.00	1197

Merge Areas | **Diverge Areas**

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 7639.78 (Equation 13-6 or 13-7)

P_{FM} = 0.592 using Equation (Exhibit 13-6)

V_{12} = 2145 pc/h

V_3 or V_{av34} 1480 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2145 pc/h (Equation 13-16, 13-18, or 13-19)

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4309	Exhibit 13-8		No

Capacity Checks

	Actual	Capacity		
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2829	Exhibit 13-8	4600:All	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 24.5 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = 0.343 (Exibit 13-11)

S_R = 60.4 mph (Exhibit 13-11)

S_0 = 66.5 mph (Exhibit 13-11)

S = 62.4 mph (Exhibit 13-13)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp

☑ Yes ☑ On

☐ No ☐ Off

L_{up} = 5700 ft

V_u = 1545 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	6180
Ramp Volume, V_R	1175
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{down} = ft

V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6180	0.95	Level	5	0	0.976	1.00	6668
Ramp	1175	0.95	Level	3	0	0.985	1.00	1255
UpStream	1545	0.95	Level	3	0	0.985	1.00	1651
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3691 pc/h

V_3 or V_{av34} 2977 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3968 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6668	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	5413	Exhibit 13-8	7200	No
V_R	1255	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3691	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 11.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.346 (Exhibit 13-12)

S_R= 60.3 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 63.9 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5005	
	Ramp Volume, V_R: 1460	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5005	0.95	Level	5	0	0.976	1.00	5400
Ramp	1460	0.95	Level	3	0	0.985	1.00	1560
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 3345 pc/h

V_3 or V_{av34} = 2055 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3345 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6960	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4905	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 33.6 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.697 (Exibit 13-11)

S_R = 50.5 mph (Exhibit 13-11)

S_0 = 64.4 mph (Exhibit 13-11)

S = 53.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5800 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	915 veh/h	Freeway Volume, V_F	5845	V_D =	veh/h
		Ramp Volume, V_R	1530		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5845	0.95	Level	5	0	0.976	1.00	6306
Ramp	1530	0.95	Level	3	0	0.985	1.00	1635
UpStream	915	0.95	Level	3	0	0.985	1.00	978
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3737 pc/h

V_3 or V_{av34} 2569 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6306	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4671	Exhibit 13-8	7200	No
V_R	1635	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3737	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 9.4 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

D_s = 0.380 (Exhibit 13-12)

S_R= 59.4 mph (Exhibit 13-12)

S_0= 70.7 mph (Exhibit 13-12)

S = 63.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 420	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4315	
	Ramp Volume, V_R: 870	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	4315	0.95	Level	5	0	0.976	1.00	4656
Ramp	870	0.95	Level	3	0	0.985	1.00	930
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2584 pc/h

V_3 or V_{av34} = 2072 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2660 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5586	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3590	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 18.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.228 (Exibit 13-11)

S_R = 63.6 mph (Exhibit 13-11)

S_0 = 64.6 mph (Exhibit 13-11)

S = 64.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6715 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1545 veh/h	Freeway Volume, V_F	6180	V_D =	veh/h
		Ramp Volume, V_R	1175		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6180	0.95	Level	5	0	0.976	1.00	6668
Ramp	1175	0.95	Level	3	0	0.985	1.00	1255
UpStream	1545	0.95	Level	3	0	0.985	1.00	1651
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3691 pc/h

V_3 or V_{av34} 2977 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3968 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6668	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	5413	Exhibit 13-8	7200	No
V_R	1255	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3691	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 11.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.346 (Exhibit 13-12)

S_R= 60.3 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 63.9 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5005	
	Ramp Volume, V_R: 1460	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5005	0.95	Level	5	0	0.976	1.00	5400
Ramp	1460	0.95	Level	3	0	0.985	1.00	1560
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2997 pc/h

V_3 or V_{av34} = 2403 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3085 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6960	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4645	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 12.8 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.277 (Exibit 13-11)

S_R = 62.2 mph (Exhibit 13-11)

S_0 = 63.4 mph (Exhibit 13-11)

S = 62.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 9040 ft
V_u = 915 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	5845
Ramp Volume, V_R	1530
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5845	0.95	Level	5	0	0.976	1.00	6306
Ramp	1530	0.95	Level	3	0	0.985	1.00	1635
UpStream	915	0.95	Level	3	0	0.985	1.00	978
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R = mph (Exhibit 13-11)
S_0 = mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.450 using Equation (Exhibit 13-7)
V_{12} = 3737 pc/h
V_3 or V_{av34} 2569 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6306	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4671	Exhibit 13-8	7200	No
V_R	1635	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3737	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 9.4 (pc/mi/ln)
LOS = A (Exhibit 13-2)

Speed Determination

D_s = 0.380 (Exhibit 13-12)
S_R = 59.4 mph (Exhibit 13-12)
S_0 = 70.7 mph (Exhibit 13-12)
S = 63.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Wilkinson Rd Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	2	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	245	L_{down} =	ft
V_u =	veh/h	Freeway Volume, V_F	1530	V_D =	veh/h
		Ramp Volume, V_R	280		
		Freeway Free-Flow Speed, S_{FF}	55.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	1530	0.95	Level	3	0	0.985	1.00	1635
Ramp	280	0.95	Level	3	0	0.985	1.00	299
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 1635 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	1635	Exhibit 13-8	4500	No
$V_{FO} = V_F - V_R$	1336	Exhibit 13-8	4500	No
V_R	299	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	1635	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 16.1 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.260 (Exhibit 13-12)

S_R = 51.6 mph (Exhibit 13-12)

S_0 = N/A mph (Exhibit 13-12)

S = 51.6 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4315	
	Ramp Volume, V_R: 870	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	4315	0.95	Level	5	0	0.976	1.00	4656
Ramp	870	0.95	Level	3	0	0.985	1.00	930
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2584 pc/h

V_3 or V_{av34} = 2072 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2660 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5586	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3590	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 4.8 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

M_S = 0.012 (Exibit 13-11)

S_R = 69.7 mph (Exhibit 13-11)

S_0 = 64.6 mph (Exhibit 13-11)

S = 67.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5700 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	2195 veh/h	Freeway Volume, V_F	10410	V_D =	veh/h
		Ramp Volume, V_R	1715		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	10410	0.95	Level	5	0	0.976	1.00	11232
Ramp	1715	0.95	Level	3	0	0.985	1.00	1832
UpStream	2195	0.95	Level	3	0	0.985	1.00	2345
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 6062 pc/h

V_3 or V_{av34} 5170 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 8532 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11232	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	9400	Exhibit 13-8	7200	Yes
V_R	1832	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6062	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 50.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.398 (Exhibit 13-12)

S_R= 58.9 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 61.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 8695	
	Ramp Volume, V_R: 1835	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8695	0.95	Level	5	0	0.976	1.00	9381
Ramp	1835	0.95	Level	3	0	0.985	1.00	1961
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 5812 pc/h

V_3 or V_{av34} = 3569 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 6681 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11342	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8642	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 62.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 22.263 (Exibit 13-11)

S_R = -553.4 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = 396.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5800 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1425 veh/h	Freeway Volume, V_F	9195	V_D =	veh/h
		Ramp Volume, V_R	2100		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9195	0.95	Level	5	0	0.976	1.00	9921
Ramp	2100	0.95	Level	3	0	0.985	1.00	2244
UpStream	1425	0.95	Level	3	0	0.985	1.00	1523
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 5699 pc/h

V_3 or V_{av34} 4222 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 7221 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9921	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	7677	Exhibit 13-8	7200	Yes
V_R	2244	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5699	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 39.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.435 (Exhibit 13-12)

S_R= 57.8 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 60.7 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 420	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 7095	
	Ramp Volume, V_R: 1545	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7095	0.95	Level	5	0	0.976	1.00	7655
Ramp	1545	0.95	Level	3	0	0.985	1.00	1651
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 4249 pc/h

V_3 or V_{av34} = 3406 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 4955 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9306	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6606	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 41.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.971 (Exibit 13-11)

S_R = -13.2 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6715 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	2195 veh/h	Freeway Volume, V_F	10410	V_D =	veh/h
		Ramp Volume, V_R	1715		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	10410	0.95	Level	5	0	0.976	1.00	11232
Ramp	1715	0.95	Level	3	0	0.985	1.00	1832
UpStream	2195	0.95	Level	3	0	0.985	1.00	2345
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 6062 pc/h

V_3 or V_{av34} 5170 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 8532 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11232	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	9400	Exhibit 13-8	7200	Yes
V_R	1832	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6062	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 50.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.398 (Exhibit 13-12)

S_R= 58.9 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 61.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = 4200 ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = 1715 veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 8695	
	Ramp Volume, V_R: 1835	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8695	0.95	Level	5	0	0.976	1.00	9381
Ramp	1835	0.95	Level	3	0	0.985	1.00	1961
UpStream	1715	0.95	Level	3	0	0.985	1.00	1832
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 5206 pc/h

V_3 or V_{av34} 4175 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 6681 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11342	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8642	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 43.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 21.963 (Exibit 13-11)

S_R = -545.0 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = 400.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	9040 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1425 veh/h	Freeway Volume, V_F	9195	V_D =	veh/h
		Ramp Volume, V_R	2100		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9195	0.95	Level	5	0	0.976	1.00	9921
Ramp	2100	0.95	Level	3	0	0.985	1.00	2244
UpStream	1425	0.95	Level	3	0	0.985	1.00	1523
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 5699 pc/h

V_3 or V_{av34} 4222 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 7221 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9921	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	7677	Exhibit 13-8	7200	Yes
V_R	2244	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5699	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 39.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.435 (Exhibit 13-12)

S_R= 57.8 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 60.7 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Wilkinson Rd Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	2	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	245	L_{down} =	ft
V_u =	veh/h	Freeway Volume, V_F	2100	V_D =	veh/h
		Ramp Volume, V_R	380		
		Freeway Free-Flow Speed, S_{FF}	55.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	2100	0.95	Level	3	0	0.985	1.00	2244
Ramp	380	0.95	Level	3	0	0.985	1.00	406
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 2244 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	2244	Exhibit 13-8	4500	No
$V_{FO} = V_F - V_R$	1838	Exhibit 13-8	4500	No
V_R	406	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	2244	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 21.3 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

D_s = 0.270 (Exhibit 13-12)

S_R = 51.5 mph (Exhibit 13-12)

S_0 = N/A mph (Exhibit 13-12)

S = 51.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 7095	
	Ramp Volume, V_R: 1545	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7095	0.95	Level	5	0	0.976	1.00	7655
Ramp	1545	0.95	Level	3	0	0.985	1.00	1651
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 4249 pc/h

V_3 or V_{av34} 3406 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 4955 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9306	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6606	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 28.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.755 (Exibit 13-11)

S_R= -7.1 mph (Exhibit 13-11)

S_0= 61.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5700 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	2195 veh/h	Freeway Volume, V_F	6795	V_D =	veh/h
		Ramp Volume, V_R	1715		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6795	0.95	Level	5	0	0.976	1.00	7331
Ramp	1715	0.95	Level	3	0	0.985	1.00	1832
UpStream	2195	0.95	Level	3	0	0.985	1.00	2345
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4307 pc/h

V_3 or V_{av34} 3024 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 4631 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7331	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	5499	Exhibit 13-8	7200	No
V_R	1832	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4307	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 17.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.398 (Exhibit 13-12)

S_R= 58.9 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 62.6 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5080	
	Ramp Volume, V_R: 1835	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5080	0.95	Level	5	0	0.976	1.00	5481
Ramp	1835	0.95	Level	3	0	0.985	1.00	1961
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 3395 pc/h

V_3 or V_{av34} = 2086 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3395 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7442	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5356	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 36.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.997 (Exibit 13-11)

S_R = 42.1 mph (Exhibit 13-11)

S_0 = 64.3 mph (Exhibit 13-11)

S = 46.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = 5800 ft	Acceleration Lane Length, L_A:	L_{down} = ft
V_u = 1425 veh/h	Deceleration Lane Length L_D: 1500	V_D = veh/h
	Freeway Volume, V_F: 6115	
	Ramp Volume, V_R: 2100	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6115	0.95	Level	5	0	0.976	1.00	6598
Ramp	2100	0.95	Level	3	0	0.985	1.00	2244
UpStream	1425	0.95	Level	3	0	0.985	1.00	1523
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4203 pc/h

V_3 or V_{av34} 2395 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6598	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4354	Exhibit 13-8	7200	No
V_R	2244	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4203	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 13.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.435 (Exhibit 13-12)

S_R = 57.8 mph (Exhibit 13-12)

S_0 = 71.3 mph (Exhibit 13-12)

S = 62.1 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 420	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4015	
	Ramp Volume, V_R: 1545	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4015	0.95	Level	5	0	0.976	1.00	4332
Ramp	1545	0.95	Level	3	0	0.985	1.00	1651
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2404 pc/h

V_3 or V_{av34} = 1928 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2475 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5983	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4126	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 22.2 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.329 (Exibit 13-11)

S_R = 60.8 mph (Exhibit 13-11)

S_0 = 65.1 mph (Exhibit 13-11)

S = 62.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} = pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6715 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	2195 veh/h	Freeway Volume, V_F	6795	V_D =	veh/h
		Ramp Volume, V_R	1715		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6795	0.95	Level	5	0	0.976	1.00	7331
Ramp	1715	0.95	Level	3	0	0.985	1.00	1832
UpStream	2195	0.95	Level	3	0	0.985	1.00	2345
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4307 pc/h

V_3 or V_{av34} 3024 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 4631 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7331	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	5499	Exhibit 13-8	7200	No
V_R	1832	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4307	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 17.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.398 (Exhibit 13-12)

S_R= 58.9 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 62.6 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5080	
	Ramp Volume, V_R: 1835	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	5080	0.95	Level	5	0	0.976	1.00	5481
Ramp	1835	0.95	Level	3	0	0.985	1.00	1961
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3042 pc/h

V_3 or V_{av34} = 2439 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3132 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7442	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5093	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 16.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.506 (Exibit 13-11)

S_R = 55.8 mph (Exhibit 13-11)

S_0 = 63.2 mph (Exhibit 13-11)

S = 58.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	9040 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1425 veh/h	Freeway Volume, V_F	6115	V_D =	veh/h
		Ramp Volume, V_R	2100		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6115	0.95	Level	5	0	0.976	1.00	6598
Ramp	2100	0.95	Level	3	0	0.985	1.00	2244
UpStream	1425	0.95	Level	3	0	0.985	1.00	1523
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4203 pc/h

V_3 or V_{av34} 2395 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6598	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4354	Exhibit 13-8	7200	No
V_R	2244	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4203	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 13.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.435 (Exhibit 13-12)

S_R= 57.8 mph (Exhibit 13-12)

S_0= 71.3 mph (Exhibit 13-12)

S = 62.1 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Wilkinson Rd Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	2	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	245	L_{down} =	ft
V_u =	veh/h	Freeway Volume, V_F	2100	V_D =	veh/h
		Ramp Volume, V_R	380		
		Freeway Free-Flow Speed, S_{FF}	55.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	2100	0.95	Level	3	0	0.985	1.00	2244
Ramp	380	0.95	Level	3	0	0.985	1.00	406
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 2244 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	2244	Exhibit 13-8	4500	No
$V_{FO} = V_F - V_R$	1838	Exhibit 13-8	4500	No
V_R	406	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	2244	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 21.3 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

D_s = 0.270 (Exhibit 13-12)

S_R = 51.5 mph (Exhibit 13-12)

S_0 = N/A mph (Exhibit 13-12)

S = 51.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	AM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4015	
	Ramp Volume, V_R: 1545	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4015	0.95	Level	5	0	0.976	1.00	4332
Ramp	1545	0.95	Level	3	0	0.985	1.00	1651
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2404 pc/h

V_3 or V_{av34} = 1928 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2475 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5983	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4126	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 8.7 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

M_S = 0.113 (Exibit 13-11)

S_R = 66.8 mph (Exhibit 13-11)

S_0 = 65.1 mph (Exhibit 13-11)

S = 66.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6075 ft	Deceleration Lane Length L_D	300	L_{down} =	ft
V_u =	1120 veh/h	Freeway Volume, V_F	4000	V_D =	veh/h
		Ramp Volume, V_R	555		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4000	0.95	Level	5	0	0.976	1.00	4316
Ramp	555	0.95	Level	3	0	0.985	1.00	593
UpStream	1120	0.95	Level	3	0	0.985	1.00	1197
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 9560.70 (Equation 13-12 or 13-13)

P_{FD} = 0.668 using Equation (Exhibit 13-7)

V_{12} = 3079 pc/h

V_3 or V_{av34} 1237 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	4316	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3723	Exhibit 13-8	7200	No
V_R	593	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3079	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 28.0 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.286 (Exhibit 13-12)

S_R= 62.0 mph (Exhibit 13-12)

S_0= 75.9 mph (Exhibit 13-12)

S = 65.4 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp from West
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1320	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 3445	
	Ramp Volume, V_R: 1025	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 35.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3445	0.95	Level	5	0	0.976	1.00	3717
Ramp	1025	0.95	Level	3	0	0.985	1.00	1095
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.614 using Equation (Exhibit 13-6)

V_{12} = 2284 pc/h

V_3 or V_{av34} = 1433 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2284 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4812	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3379	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 23.1 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.343 (Exibit 13-11)

S_R = 60.4 mph (Exhibit 13-11)

S_0 = 66.6 mph (Exhibit 13-11)

S = 62.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp from East
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4470	
	Ramp Volume, V_R: 280	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4470	0.95	Level	5	0	0.976	1.00	4823
Ramp	280	0.95	Level	3	0	0.985	1.00	299
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.591 using Equation (Exhibit 13-6)

V_{12} = 2853 pc/h

V_3 or V_{av34} = 1970 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2853 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5122	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3152	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 26.8 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.362 (Exibit 13-11)

S_R = 59.9 mph (Exhibit 13-11)

S_0 = 64.7 mph (Exhibit 13-11)

S = 61.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	9999 ft	Deceleration Lane Length L_D	270	L_{down} =	ft
V_u =	875 veh/h	Freeway Volume, V_F	5040	V_D =	veh/h
		Ramp Volume, V_R	1270		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5040	0.95	Level	5	0	0.976	1.00	5438
Ramp	1270	0.95	Level	3	0	0.985	1.00	1357
UpStream	875	0.95	Level	3	0	0.985	1.00	935
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 10060.04 (Equation 13-12 or 13-13)

P_{FD} = 0.561 using Equation (Exhibit 13-7)

V_{12} = 3648 pc/h

V_3 or V_{av34} 1790 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5438	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4081	Exhibit 13-8	7200	No
V_R	1357	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3648	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 33.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.355 (Exhibit 13-12)

S_R= 60.1 mph (Exhibit 13-12)

S_0= 73.7 mph (Exhibit 13-12)

S = 64.0 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Existing Configuration	Analysis Year	2013

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☑ Off
L_{up} = ft	Acceleration Lane Length, L_A: 440	L_{down} = 7330 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 1310 veh/h
	Freeway Volume, V_F: 3770	
	Ramp Volume, V_R: 935	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3770	0.95	Level	5	0	0.976	1.00	4068
Ramp	935	0.95	Level	3	0	0.985	1.00	999
UpStream								
DownStream	1310	0.95	Level	3	0	0.985	1.00	1400

Merge Areas | **Diverge Areas**

Estimation of v_{12} (Merge Areas)

$V_{12} = V_F (P_{FM})$

L_{EQ} = 8935.41 (Equation 13-6 or 13-7)

P_{FM} = 0.599 using Equation (Exhibit 13-6)

V_{12} = 2436 pc/h

V_3 or V_{av34} 1632 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2436 pc/h (Equation 13-16, 13-18, or 13-19)

Estimation of v_{12} (Diverge Areas)

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks (Merge Areas)

	Actual	Capacity		LOS F?
V_{FO}	5067	Exhibit 13-8		No

Capacity Checks (Diverge Areas)

	Actual	Capacity		
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3435	Exhibit 13-8	4600:All	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F) (Merge Areas)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 29.0 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Level of Service Determination (if not F) (Diverge Areas)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination (Merge Areas)

M_S = 0.398 (Exibit 13-11)

S_R = 58.9 mph (Exhibit 13-11)

S_0 = 65.9 mph (Exhibit 13-11)

S = 61.0 mph (Exhibit 13-13)

Speed Determination (Diverge Areas)

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5700 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1315 veh/h	Freeway Volume, V_F	5220	V_D =	veh/h
		Ramp Volume, V_R	800		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5220	0.95	Level	5	0	0.976	1.00	5632
Ramp	800	0.95	Level	3	0	0.985	1.00	855
UpStream	1315	0.95	Level	3	0	0.985	1.00	1405
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3005 pc/h

V_3 or V_{av34} 2627 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3218 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5632	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4777	Exhibit 13-8	7200	No
V_R	855	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3005	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 4.9 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

D_s = 0.310 (Exhibit 13-12)

S_R= 61.3 mph (Exhibit 13-12)

S_0= 71.3 mph (Exhibit 13-12)

S = 65.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4420	
	Ramp Volume, V_R: 1455	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4420	0.95	Level	5	0	0.976	1.00	4769
Ramp	1455	0.95	Level	3	0	0.985	1.00	1555
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 2954 pc/h

V_3 or V_{av34} = 1815 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2954 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6324	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4509	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 30.5 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.525 (Exibit 13-11)

S_R = 55.3 mph (Exhibit 13-11)

S_0 = 65.3 mph (Exhibit 13-11)

S = 57.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5800 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1080 veh/h	Freeway Volume, V_F	6645	V_D =	veh/h
		Ramp Volume, V_R	1390		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6645	0.95	Level	5	0	0.976	1.00	7170
Ramp	1390	0.95	Level	3	0	0.985	1.00	1485
UpStream	1080	0.95	Level	3	0	0.985	1.00	1154
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4043 pc/h

V_3 or V_{av34} 3127 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 4470 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7170	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	5685	Exhibit 13-8	7200	No
V_R	1485	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4043	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 15.7 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.367 (Exhibit 13-12)

S_R= 59.7 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 63.3 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 420	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5255	
	Ramp Volume, V_R: 1105	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	5255	0.95	Level	5	0	0.976	1.00	5670
Ramp	1105	0.95	Level	3	0	0.985	1.00	1181
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3147 pc/h

V_3 or V_{av34} = 2523 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3240 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6851	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4421	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 24.7 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.411 (Exibit 13-11)

S_R = 58.5 mph (Exhibit 13-11)

S_0 = 62.7 mph (Exhibit 13-11)

S = 59.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6715 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1315 veh/h	Freeway Volume, V_F	5220	V_D =	veh/h
		Ramp Volume, V_R	800		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5220	0.95	Level	5	0	0.976	1.00	5632
Ramp	800	0.95	Level	3	0	0.985	1.00	855
UpStream	1315	0.95	Level	3	0	0.985	1.00	1405
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3005 pc/h

V_3 or V_{av34} 2627 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3218 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5632	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4777	Exhibit 13-8	7200	No
V_R	855	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3005	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 4.9 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

D_s = 0.310 (Exhibit 13-12)

S_R= 61.3 mph (Exhibit 13-12)

S_0= 71.3 mph (Exhibit 13-12)

S = 65.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 4420	
	Ramp Volume, V_R: 1455	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	4420	0.95	Level	5	0	0.976	1.00	4769
Ramp	1455	0.95	Level	3	0	0.985	1.00	1555
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2647 pc/h

V_3 or V_{av34} = 2122 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2725 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6324	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4280	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 9.9 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

M_S = 0.153 (Exibit 13-11)

S_R = 65.7 mph (Exhibit 13-11)

S_0 = 64.4 mph (Exhibit 13-11)

S = 65.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp

☑ Yes ☑ On

☐ No ☐ Off

L_{up} = 9040 ft

V_u = 1080 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	6645
Ramp Volume, V_R	1390
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{down} = ft

V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6645	0.95	Level	5	0	0.976	1.00	7170
Ramp	1390	0.95	Level	3	0	0.985	1.00	1485
UpStream	1080	0.95	Level	3	0	0.985	1.00	1154
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4043 pc/h

V_3 or V_{av34} 3127 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 4470 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7170	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	5685	Exhibit 13-8	7200	No
V_R	1485	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4043	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 15.7 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.367 (Exhibit 13-12)

S_R= 59.7 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 63.3 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Wilkinson Rd Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 2	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A:	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D: 245	V_D = veh/h
	Freeway Volume, V_F: 1390	
	Ramp Volume, V_R: 255	
	Freeway Free-Flow Speed, S_{FF}: 55.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	1390	0.95	Level	3	0	0.985	1.00	1485
Ramp	255	0.95	Level	3	0	0.985	1.00	272
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 1485 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	1485	Exhibit 13-8	4500	No
$V_{FO} = V_F - V_R$	1213	Exhibit 13-8	4500	No
V_R	272	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	1485	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 14.8 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.257 (Exhibit 13-12)

S_R = 51.7 mph (Exhibit 13-12)

S_0 = N/A mph (Exhibit 13-12)

S = 51.7 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2020

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5255	
	Ramp Volume, V_R: 1105	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5255	0.95	Level	5	0	0.976	1.00	5670
Ramp	1105	0.95	Level	3	0	0.985	1.00	1181
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3147 pc/h

V_3 or V_{av34} = 2523 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 3240 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6851	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4421	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 11.2 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.195 (Exibit 13-11)

S_R = 64.5 mph (Exhibit 13-11)

S_0 = 62.7 mph (Exhibit 13-11)

S = 63.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp

☑ Yes ☑ On

☐ No ☐ Off

L_{up} = 5700 ft

V_u = 1870 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	8470
Ramp Volume, V_R	1490
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{down} = ft

V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8470	0.95	Level	5	0	0.976	1.00	9139
Ramp	1490	0.95	Level	3	0	0.985	1.00	1592
UpStream	1870	0.95	Level	3	0	0.985	1.00	1998
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4988 pc/h

V_3 or V_{av34} 4151 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 6439 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9139	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	7547	Exhibit 13-8	7200	Yes
V_R	1592	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4988	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 32.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.376 (Exhibit 13-12)

S_R= 59.5 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 62.3 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 6980	
	Ramp Volume, V_R: 1880	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	6980	0.95	Level	5	0	0.976	1.00	7531
Ramp	1880	0.95	Level	3	0	0.985	1.00	2009
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 4665 pc/h

V_3 or V_{av34} = 2866 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 4831 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9540	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6840	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 48.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 3.816 (Exibit 13-11)

S_R = -36.8 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5800 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1670 veh/h	Freeway Volume, V_F	10450	V_D =	veh/h
		Ramp Volume, V_R	1730		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	10450	0.95	Level	5	0	0.976	1.00	11275
Ramp	1730	0.95	Level	3	0	0.985	1.00	1848
UpStream	1670	0.95	Level	3	0	0.985	1.00	1784
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 6090 pc/h

V_3 or V_{av34} 5185 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 8575 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11275	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	9427	Exhibit 13-8	7200	Yes
V_R	1848	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6090	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 51.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.399 (Exhibit 13-12)

S_R= 58.8 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 61.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☐ No ☑ Off
L_{up} = ft	Acceleration Lane Length, L_A: 420	L_{down} = 5900 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 2195 veh/h
	Freeway Volume, V_F: 8720	
	Ramp Volume, V_R: 1595	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8720	0.95	Level	5	0	0.976	1.00	9408
Ramp	1595	0.95	Level	3	0	0.985	1.00	1704
UpStream								
DownStream	2195	0.95	Level	3	0	0.985	1.00	2345

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 5221 pc/h

V_3 or V_{av34} 4187 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 6708 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11112	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8412	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 55.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 17.640 (Exibit 13-11)

S_R = -423.9 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = 456.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	6715 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1870 veh/h	Freeway Volume, V_F	8470	V_D =	veh/h
		Ramp Volume, V_R	1490		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8470	0.95	Level	5	0	0.976	1.00	9139
Ramp	1490	0.95	Level	3	0	0.985	1.00	1592
UpStream	1870	0.95	Level	3	0	0.985	1.00	1998
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4988 pc/h

V_3 or V_{av34} 4151 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 6439 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9139	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	7547	Exhibit 13-8	7200	Yes
V_R	1592	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4988	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 32.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.376 (Exhibit 13-12)

S_R= 59.5 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 62.3 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = 4200 ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = 1490 veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 6980	
	Ramp Volume, V_R: 1880	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	6980	0.95	Level	5	0	0.976	1.00	7531
Ramp	1880	0.95	Level	3	0	0.985	1.00	2009
UpStream	1490	0.95	Level	3	0	0.985	1.00	1592
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 4180 pc/h

V_3 or V_{av34} 3351 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 4831 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9540	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6840	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 29.7 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 3.516 (Exibit 13-11)

S_R = -28.4 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 9040 ft
V_u = 1670 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	10450
Ramp Volume, V_R	1730
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	10450	0.95	Level	5	0	0.976	1.00	11275
Ramp	1730	0.95	Level	3	0	0.985	1.00	1848
UpStream	1670	0.95	Level	3	0	0.985	1.00	1784
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R= mph (Exhibit 13-11)
S_0= mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.450 using Equation (Exhibit 13-7)
V_{12} = 6090 pc/h
V_3 or V_{av34} 5185 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No
If Yes, V_{12a} = 8575 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11275	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	9427	Exhibit 13-8	7200	Yes
V_R	1848	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6090	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 51.0 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.399 (Exhibit 13-12)
S_R= 58.8 mph (Exhibit 13-12)
S_0= 70.2 mph (Exhibit 13-12)
S = 61.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Wilkinson Rd Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	2	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	245	L_{down} =	ft
V_u =	veh/h	Freeway Volume, V_F	1730	V_D =	veh/h
		Ramp Volume, V_R	315		
		Freeway Free-Flow Speed, S_{FF}	55.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	1730	0.95	Level	3	0	0.985	1.00	1848
Ramp	315	0.95	Level	3	0	0.985	1.00	337
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 1848 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	1848	Exhibit 13-8	4500	No
$V_{FO} = V_F - V_R$	1511	Exhibit 13-8	4500	No
V_R	337	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	1848	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 17.9 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.263 (Exhibit 13-12)

S_R = 51.6 mph (Exhibit 13-12)

S_0 = N/A mph (Exhibit 13-12)

S = 51.6 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 8720	
	Ramp Volume, V_R: 1595	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8720	0.95	Level	5	0	0.976	1.00	9408
Ramp	1595	0.95	Level	3	0	0.985	1.00	1704
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 5221 pc/h

V_3 or V_{av34} = 4187 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 6708 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11112	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8412	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 42.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 17.424 (Exibit 13-11)

S_R = -417.9 mph (Exhibit 13-11)

S_0 = 61.1 mph (Exhibit 13-11)

S = 461.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = 5700 ft	Acceleration Lane Length, L_A:	L_{down} = ft
V_u = 1870 veh/h	Deceleration Lane Length L_D: 1500	V_D = veh/h
	Freeway Volume, V_F: 5390	
	Ramp Volume, V_R: 1490	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5390	0.95	Level	5	0	0.976	1.00	5816
Ramp	1490	0.95	Level	3	0	0.985	1.00	1592
UpStream	1870	0.95	Level	3	0	0.985	1.00	1998
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3493 pc/h

V_3 or V_{av34} 2323 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5816	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4224	Exhibit 13-8	7200	No
V_R	1592	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3493	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 7.3 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

D_s = 0.376 (Exhibit 13-12)

S_R= 59.5 mph (Exhibit 13-12)

S_0= 71.6 mph (Exhibit 13-12)

S = 63.8 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 3900	
	Ramp Volume, V_R: 1880	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3900	0.95	Level	5	0	0.976	1.00	4208
Ramp	1880	0.95	Level	3	0	0.985	1.00	2009
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 2607 pc/h

V_3 or V_{av34} = 1601 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2607 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6217	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4616	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 31.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.565 (Exibit 13-11)

S_R = 54.2 mph (Exhibit 13-11)

S_0 = 66.0 mph (Exhibit 13-11)

S = 56.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	2	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	5800 ft	Deceleration Lane Length L_D	1500	L_{down} =	ft
V_u =	1670 veh/h	Freeway Volume, V_F	6835	V_D =	veh/h
		Ramp Volume, V_R	1730		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6835	0.95	Level	5	0	0.976	1.00	7375
Ramp	1730	0.95	Level	3	0	0.985	1.00	1848
UpStream	1670	0.95	Level	3	0	0.985	1.00	1784
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4335 pc/h

V_3 or V_{av34} 3040 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 4675 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7375	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	5527	Exhibit 13-8	7200	No
V_R	1848	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4335	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 17.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.399 (Exhibit 13-12)

S_R= 58.8 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 62.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM I-75 SIMR Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☐ No ☑ Off
L_{up} = ft	Acceleration Lane Length, L_A: 420	L_{down} = 5900 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 2195 veh/h
	Freeway Volume, V_F: 5105	
	Ramp Volume, V_R: 1595	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5105	0.95	Level	5	0	0.976	1.00	5508
Ramp	1595	0.95	Level	3	0	0.985	1.00	1704
UpStream								
DownStream	2195	0.95	Level	3	0	0.985	1.00	2345

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3057 pc/h

V_3 or V_{av34} 2451 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 3147 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7212	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4851	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 27.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.586 (Exibit 13-11)

S_R = 53.6 mph (Exhibit 13-11)

S_0 = 63.1 mph (Exhibit 13-11)

S = 56.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp

☑ Yes ☑ On

☐ No ☐ Off

L_{up} = 6715 ft

V_u = 1870 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	5390
Ramp Volume, V_R	1490
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{down} = ft

V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5390	0.95	Level	5	0	0.976	1.00	5816
Ramp	1490	0.95	Level	3	0	0.985	1.00	1592
UpStream	1870	0.95	Level	3	0	0.985	1.00	1998
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 3493 pc/h

V_3 or V_{av34} 2323 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5816	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4224	Exhibit 13-8	7200	No
V_R	1592	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3493	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 7.3 (pc/mi/ln)

LOS = A (Exhibit 13-2)

Speed Determination

D_s = 0.376 (Exhibit 13-12)

S_R = 59.5 mph (Exhibit 13-12)

S_0 = 71.6 mph (Exhibit 13-12)

S = 63.8 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 NB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 3900	
	Ramp Volume, V_R: 1880	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3900	0.95	Level	5	0	0.976	1.00	4208
Ramp	1880	0.95	Level	3	0	0.985	1.00	2009
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2335 pc/h

V_3 or V_{av34} = 1873 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2404 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6217	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4413	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 10.8 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.193 (Exibit 13-11)

S_R = 64.6 mph (Exhibit 13-11)

S_0 = 65.3 mph (Exhibit 13-11)

S = 64.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Off Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp

☑ Yes ☑ On

☐ No ☐ Off

L_{up} = 9040 ft

V_u = 1670 veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	2
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1500
Freeway Volume, V_F	6835
Ramp Volume, V_R	1730
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	50.0

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{down} = ft

V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6835	0.95	Level	5	0	0.976	1.00	7375
Ramp	1730	0.95	Level	3	0	0.985	1.00	1848
UpStream	1670	0.95	Level	3	0	0.985	1.00	1784
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4335 pc/h

V_3 or V_{av34} 3040 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 4675 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7375	Exhibit 13-8	7200	Yes
$V_{FO} = V_F - V_R$	5527	Exhibit 13-8	7200	No
V_R	1848	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4335	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 17.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.399 (Exhibit 13-12)

S_R= 58.8 mph (Exhibit 13-12)

S_0= 70.2 mph (Exhibit 13-12)

S = 62.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB Wilkinson Rd Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	2	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☑ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	245	L_{down} =	ft
V_u =	veh/h	Freeway Volume, V_F	1730	V_D =	veh/h
		Ramp Volume, V_R	315		
		Freeway Free-Flow Speed, S_{FF}	55.0		
		Ramp Free-Flow Speed, S_{FR}	50.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	1730	0.95	Level	3	0	0.985	1.00	1848
Ramp	315	0.95	Level	3	0	0.985	1.00	337
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 1848 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	1848	Exhibit 13-8	4500	No
$V_{FO} = V_F - V_R$	1511	Exhibit 13-8	4500	No
V_R	337	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	1848	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 17.9 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

D_s = 0.263 (Exhibit 13-12)

S_R = 51.6 mph (Exhibit 13-12)

S_0 = N/A mph (Exhibit 13-12)

S = 51.6 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	HEH	Freeway/Dir of Travel	I-75 SB On Ramp
Agency or Company	HDR	Junction	Bee Ridge Rd
Date Performed	6/19/2015 2:28:43 PM	Jurisdiction	FDOT
Analysis Time Period	PM Proposed Build GUL	Analysis Year	2040

Project Description I-75/Bee Ridge Road Interchange Improvement

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☑ No ☐ Off	Ramp Number of Lanes, N: 2	☑ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1500	L_{down} = ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 5105	
	Ramp Volume, V_R: 1595	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 50.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5105	0.95	Level	5	0	0.976	1.00	5508
Ramp	1595	0.95	Level	3	0	0.985	1.00	1704
UpStream								
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3057 pc/h

V_3 or V_{av34} 2451 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 3147 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7212	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4851	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 14.3 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.370 (Exibit 13-11)

S_R= 59.6 mph (Exhibit 13-11)

S_0= 63.1 mph (Exhibit 13-11)

S = 60.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

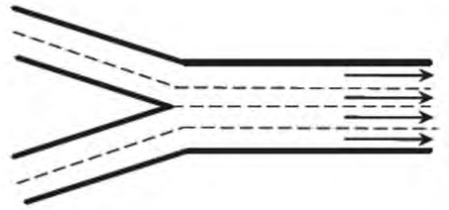
S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

Major Merge Capacity Checks

Approximate Capacity of Freeways (HCM 2010 Exhibit 13-8)

Freeway Free-Flow Speed (mph)	Capacity (pc/h)			
	2 Lanes	3 Lanes	4 Lanes	>4 Lanes
≥70	4800	7200	9600	2400/ln
65	4700	7050	9400	2350/ln
60	4600	6900	9200	2300/ln
55	4500	6750	9000	2250/ln



From HCM 2010 Exhibit 13-18

Approximate Capacity of Ramp Roadways (HCM 2010 Exhibit 13-10)

Ramp Free-Flow Speed (mph)	Capacity (pc/h)	
	1-Lane Ramp	2-Lane Ramp
>50	2200	4400
>40-50	2100	4200
>30-40	2000	4000
≥20-30	1900	3800
<20	1800	3600

Northbound I-75 On Ramp

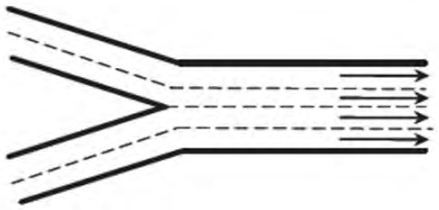
Scenario	Segment Type	Number of Lanes	FFS (mph)	%Trucks	PHF	E_T	f_{HV}	f_P	AM Volume (veh/h)	PM Volume (veh/h)	Capacity (pc/h)	AM Flow Rate (pc/h)	PM Flow Rate (pc/h)	*AM v/c	*PM v/c
2020 I-75 SIMR Build	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	5005	4420	7200	5400	4769	0.750	0.662
2020 I-75 SIMR Build	Ramp	1	50	3.0%	0.95	1.5	0.985	1.00	1460	1455	2100	1560	1555	0.743	0.740
2020 I-75 SIMR Build	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	6465	5875	9600	6960	6324	0.725	0.659
2020 Proposed Build	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	5005	4420	7200	5400	4769	0.750	0.662
2020 Proposed Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1460	1455	4200	1560	1555	0.371	0.370
2020 Proposed Build	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	6465	5875	9600	6960	6324	0.725	0.659
2040 I-75 SIMR Build without SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	8695	6980	7200	9381	7531	1.303	1.046
2040 I-75 SIMR Build without SULs	Ramp	1	50	3.0%	0.95	1.5	0.985	1.00	1835	1880	2100	1961	2009	0.934	0.956
2040 I-75 SIMR Build without SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	10530	8860	9600	11342	9540	1.181	0.994
2040 Proposed Build without SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	8695	6980	7200	9381	7531	1.303	1.046
2040 Proposed Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1835	1880	4200	1961	2009	0.467	0.478
2040 Proposed Build without SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	10530	8860	9600	11342	9540	1.181	0.994
2040 I-75 SIMR Build with SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	5080	3900	7200	5481	4208	0.761	0.584
2040 I-75 SIMR Build with SULs	Ramp	1	50	3.0%	0.95	1.5	0.985	1.00	1835	1880	2100	1961	2009	0.934	0.956
2040 I-75 SIMR Build with SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	6915	5780	9600	7442	6217	0.775	0.648
2040 Proposed Build with SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	5080	3900	7200	5481	4208	0.761	0.584
2040 Proposed Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1835	1880	4200	1961	2009	0.467	0.478
2040 Proposed Build with SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	6915	5780	9600	7442	6217	0.775	0.648

*v/c > 1.000 indicates a failing merge area

Major Merge Capacity Checks

Approximate Capacity of Freeways (HCM 2010 Exhibit 13-8)

Freeway Free-Flow Speed (mph)	Capacity (pc/h)			
	2 Lanes	3 Lanes	4 Lanes	>4 Lanes
≥70	4800	7200	9600	2400/ln
65	4700	7050	9400	2350/ln
60	4600	6900	9200	2300/ln
55	4500	6750	9000	2250/ln



From HCM 2010 Exhibit 13-18

Approximate Capacity of Ramp Roadways (HCM 2010 Exhibit 13-10)

Ramp Free-Flow Speed (mph)	Capacity (pc/h)	
	1-Lane Ramp	2-Lane Ramp
>50	2200	4400
>40-50	2100	4200
>30-40	2000	4000
≥20-30	1900	3800
<20	1800	3600

Southbound I-75 On Ramp

Scenario	Segment Type	Number of Lanes	FFS (mph)	%Trucks	PHF	E_T	f_{HV}	f_P	AM Volume (veh/h)	PM Volume (veh/h)	Capacity (pc/h)	AM Flow Rate (pc/h)	PM Flow Rate (pc/h)	*AM v/c	*PM v/c
2020 I-75 SIMR Build	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	4315	5255	7200	4656	5670	0.647	0.787
2020 I-75 SIMR Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	870	1105	2100	930	1181	0.443	0.562
2020 I-75 SIMR Build	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	5185	6360	9600	5585	6850	0.582	0.714
2020 Proposed Build	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	4315	5255	7200	4656	5670	0.647	0.787
2020 Proposed Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	870	1105	4200	930	1181	0.221	0.281
2020 Proposed Build	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	5185	6360	9600	5585	6850	0.582	0.714
2040 I-75 SIMR Build without SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	7095	8720	7200	7655	9408	1.063	1.307
2040 I-75 SIMR Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1545	1595	2100	1651	1704	0.786	0.811
2040 I-75 SIMR Build without SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	8640	10315	9600	9306	11113	0.969	1.158
2040 Proposed Build without SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	7095	8720	7200	7655	9408	1.063	1.307
2040 Proposed Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1545	1595	4200	1651	1704	0.393	0.406
2040 Proposed Build without SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	8640	10315	9600	9306	11113	0.969	1.158
2040 I-75 SIMR Build with SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	4015	5105	7200	4332	5508	0.602	0.765
2040 I-75 SIMR Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1545	1595	2100	1651	1704	0.786	0.811
2040 I-75 SIMR Build with SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	5560	6700	9600	5983	7212	0.623	0.751
2040 Proposed Build with SULs	Upstream	3	70	5.0%	0.95	1.5	0.976	1.00	4015	5105	7200	4332	5508	0.602	0.765
2040 Proposed Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1545	1595	4200	1651	1704	0.393	0.406
2040 Proposed Build with SULs	Downstream	4	70	5.0%	0.95	1.5	0.976	1.00	5560	6700	9600	5983	7212	0.623	0.751

*v/c > 1.000 indicates a failing merge area

Major Diverge Capacity Check and Density/LOS Calculation

Approximate Capacity of Freeways (HCM 2010 Exhibit 13-8)

	Capacity (pc/h)			
Freeway Free-Flow Speed (mph)	2 Lanes	3 Lanes	4 Lanes	>4 Lanes
≥70	4800	7200	9600	2400/ln
65	4700	7050	9400	2350/ln
60	4600	6900	9200	2300/ln
55	4500	6750	9000	2250/ln

From HCM 2010 Exhibit 13-19

Approximate Capacity of Ramp Roadways (HCM 2010 Exhibit 13-10)

	Capacity (pc/h)	
Ramp Free-Flow Speed (mph)	1-Lane Ramp	2-Lane Ramp
>50	2200	4400
>40-50	2100	4200
>30-40	2000	4000
≥20-30	1900	3800
<20	1800	3600

Northbound I-75 Off Ramp

Scenario	Segment Type	Number of Lanes	FFS (mph)	%Trucks	PHF	E_T	f_{HV}	f_P	AM Volume (veh/h)	PM Volume (veh/h)	Capacity (pc/h)	AM Flow Rate (pc/h)	PM Flow Rate (pc/h)	AM v/c	PM v/c	*AM Density (pc/mi/ln)	*PM Density (pc/mi/ln)	AM LOS	PM LOS
2020 I-75 SIMR Build	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	6180	5220	9600	6668	5632	0.695	0.587	29.2	24.6	D	C
2020 I-75 SIMR Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1175	800	4200	1255	855	0.299	0.204				
2020 I-75 SIMR Build	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	5005	4420	7200	5413	4777	0.752	0.664				
2020 Proposed Build	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	6180	5220	9600	6668	5632	0.695	0.587	29.2	24.6	D	C
2020 Proposed Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1175	800	4200	1255	855	0.299	0.204				
2020 Proposed Build	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	5005	4420	7200	5413	4777	0.752	0.664				
2040 I-75 SIMR Build without SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	10410	8470	9600	11232	9139	1.170	0.952	49.1	40.0	F	E
2040 I-75 SIMR Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1715	1490	4200	1832	1592	0.436	0.379				
2040 I-75 SIMR Build without SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	8695	6980	7200	9400	7547	1.305	1.048				
2040 Proposed Build without SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	10410	8470	9600	11232	9139	1.170	0.952	49.1	40.0	F	E
2040 Proposed Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1715	1490	4200	1832	1592	0.436	0.379				
2040 Proposed Build without SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	8695	6980	7200	9400	7547	1.305	1.048				
2040 I-75 SIMR Build with SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	6795	5390	9600	7331	5816	0.764	0.606	32.1	25.4	D	C
2040 I-75 SIMR Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1715	1490	4200	1832	1592	0.436	0.379				
2040 I-75 SIMR Build with SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	5080	3900	7200	5499	4224	0.764	0.587				
2040 Proposed Build with SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	6795	5390	9600	7331	5816	0.764	0.606	32.1	25.4	D	C
2040 Proposed Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1715	1490	4200	1832	1592	0.436	0.379				
2040 Proposed Build with SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	5080	3900	7200	5499	4224	0.764	0.587				

*Density check upstream of the diverge area (HCM 2010 Equation 13-26 = 0.0175*Upstream Flow Rate/Number of Lanes). It is likely that if the freeway segment upstream of the diverge area is operating at an acceptable LOS (thresholds based on HCM 2010 Exhibit 13-2), then the off ramp and downstream segments will also operate at an acceptable LOS since each of those segments have less volume than the upstream segment.

Major Diverge Capacity Check and Density/LOS Calculation

Approximate Capacity of Freeways (HCM 2010 Exhibit 13-8)

	Capacity (pc/h)			
Freeway Free-Flow Speed (mph)	2 Lanes	3 Lanes	4 Lanes	>4 Lanes
≥70	4800	7200	9600	2400/ln
65	4700	7050	9400	2350/ln
60	4600	6900	9200	2300/ln
55	4500	6750	9000	2250/ln

From HCM 2010 Exhibit 13-19

Approximate Capacity of Ramp Roadways (HCM 2010 Exhibit 13-10)

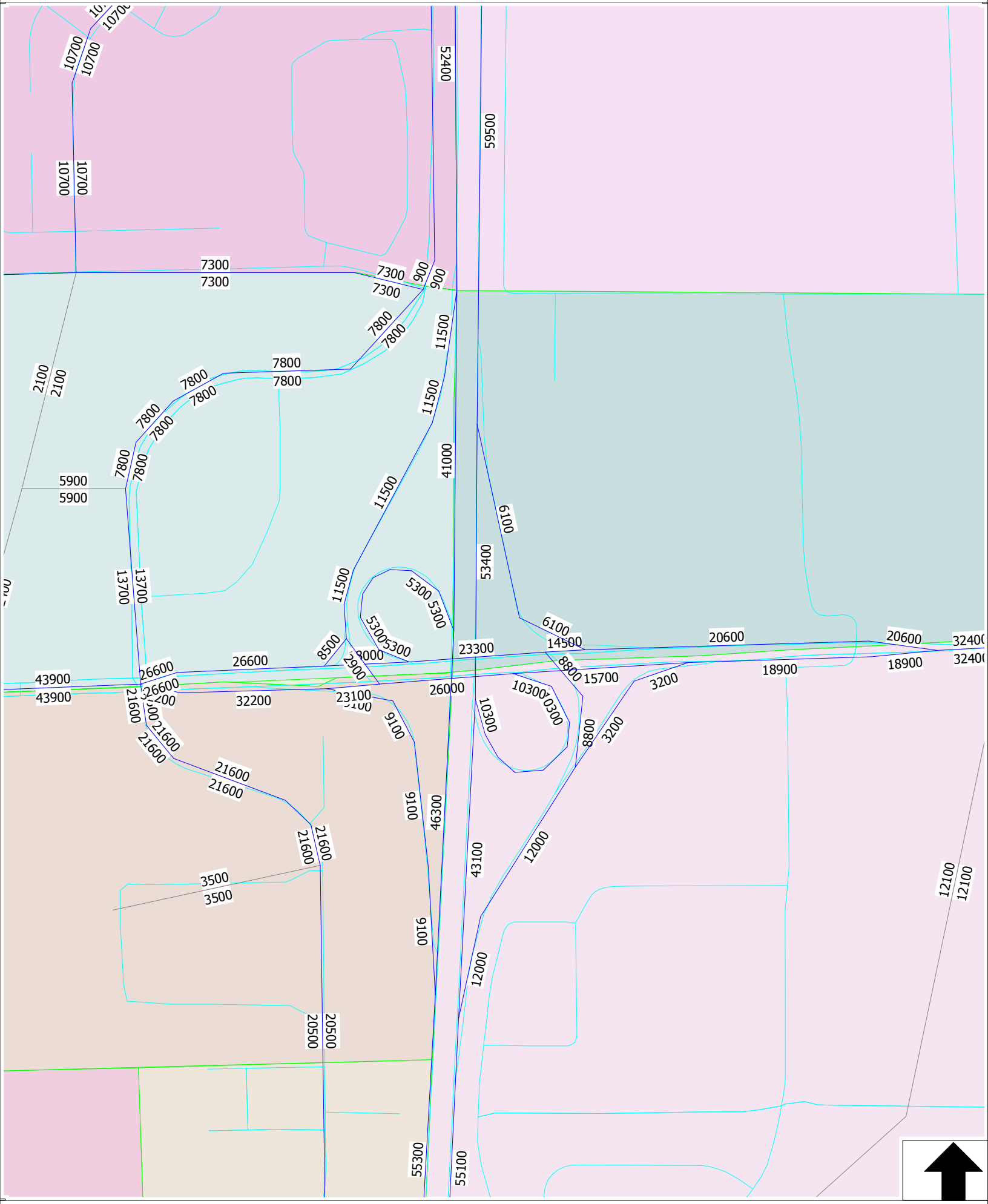
	Capacity (pc/h)	
Ramp Free-Flow Speed (mph)	1-Lane Ramp	2-Lane Ramp
>50	2200	4400
>40-50	2100	4200
>30-40	2000	4000
≥20-30	1900	3800
<20	1800	3600

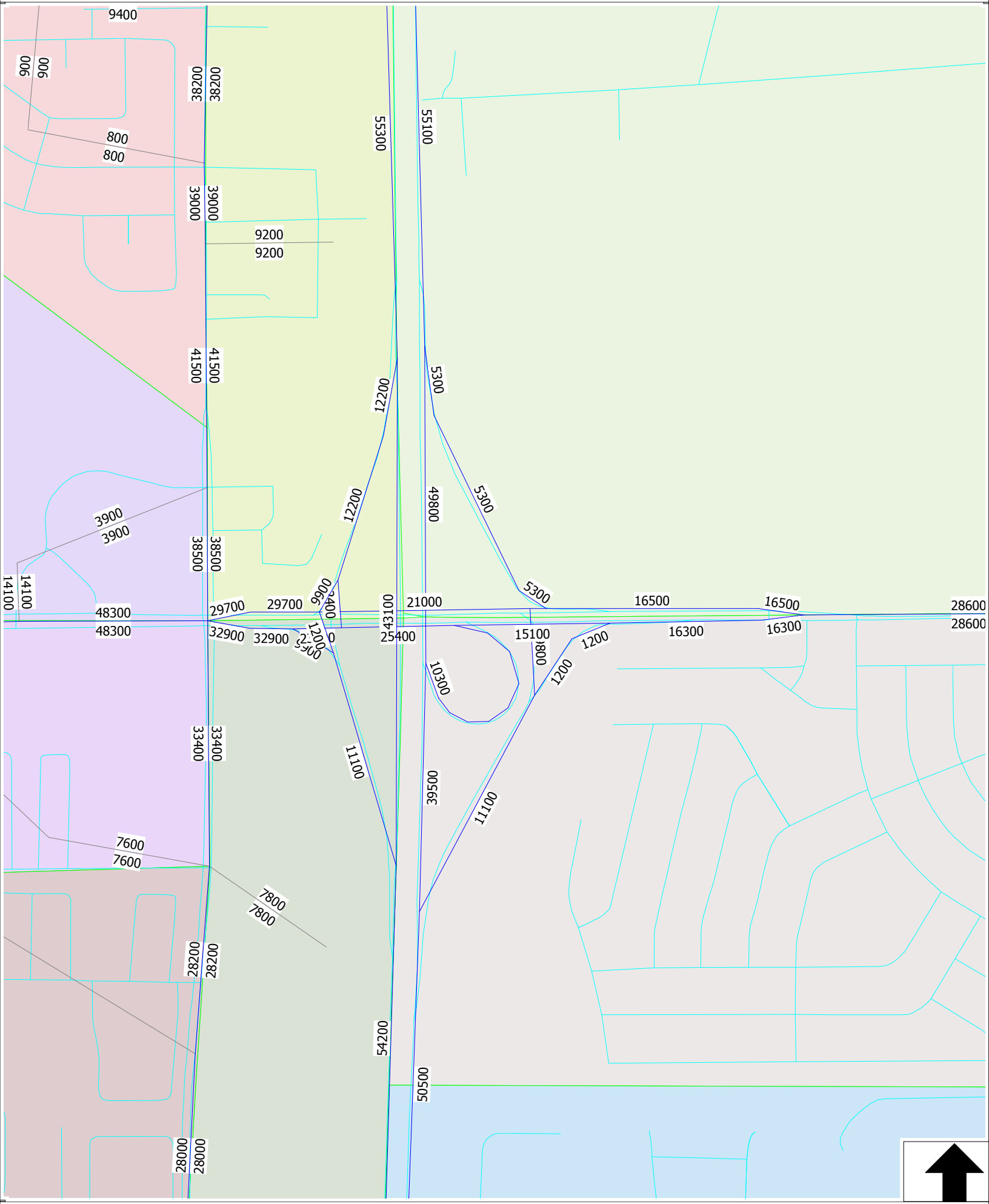
Southbound I-75 Off Ramp

Scenario	Segment Type	Number of Lanes	FFS (mph)	%Trucks	PHF	E_T	f_{HV}	f_P	AM Volume (veh/h)	PM Volume (veh/h)	Capacity (pc/h)	AM Flow Rate (pc/h)	PM Flow Rate (pc/h)	AM v/c	PM v/c	*AM Density (pc/mi/ln)	*PM Density (pc/mi/ln)	AM LOS	PM LOS
2020 I-75 SIMR Build	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	5845	6645	9600	6306	7170	0.657	0.747	27.6	31.4	C	D
2020 I-75 SIMR Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1530	1390	4200	1635	1485	0.389	0.354				
2020 I-75 SIMR Build	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	4315	5255	7200	4672	5685	0.649	0.790				
2020 Proposed Build	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	5845	6645	9600	6306	7170	0.657	0.747	27.6	31.4	C	D
2020 Proposed Build	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	1530	1390	4200	1635	1485	0.389	0.354				
2020 Proposed Build	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	4315	5255	7200	4672	5685	0.649	0.790				
2040 I-75 SIMR Build without SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	9195	10450	9600	9921	11275	1.033	1.174	43.4	49.3	F	F
2040 I-75 SIMR Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	2100	1730	4200	2244	1848	0.534	0.440				
2040 I-75 SIMR Build without SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	7095	8720	7200	7677	9427	1.066	1.309				
2040 Proposed Build without SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	9195	10450	9600	9921	11275	1.033	1.174	43.4	49.3	F	F
2040 Proposed Build without SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	2100	1730	4200	2244	1848	0.534	0.440				
2040 Proposed Build without SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	7095	8720	7200	7677	9427	1.066	1.309				
2040 I-75 SIMR Build with SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	6115	6835	9600	6598	7375	0.687	0.768	28.9	32.3	D	D
2040 I-75 SIMR Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	2100	1730	4200	2244	1848	0.534	0.440				
2040 I-75 SIMR Build with SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	4015	5105	7200	4354	5526	0.605	0.768				
2040 Proposed Build with SULs	Upstream	4	70	5.0%	0.95	1.5	0.976	1.00	6115	6835	9600	6598	7375	0.687	0.768	28.9	32.3	D	D
2040 Proposed Build with SULs	Ramp	2	50	3.0%	0.95	1.5	0.985	1.00	2100	1730	4200	2244	1848	0.534	0.440				
2040 Proposed Build with SULs	Downstream	3	70	5.0%	0.95	1.5	0.976	1.00	4015	5105	7200	4354	5526	0.605	0.768				

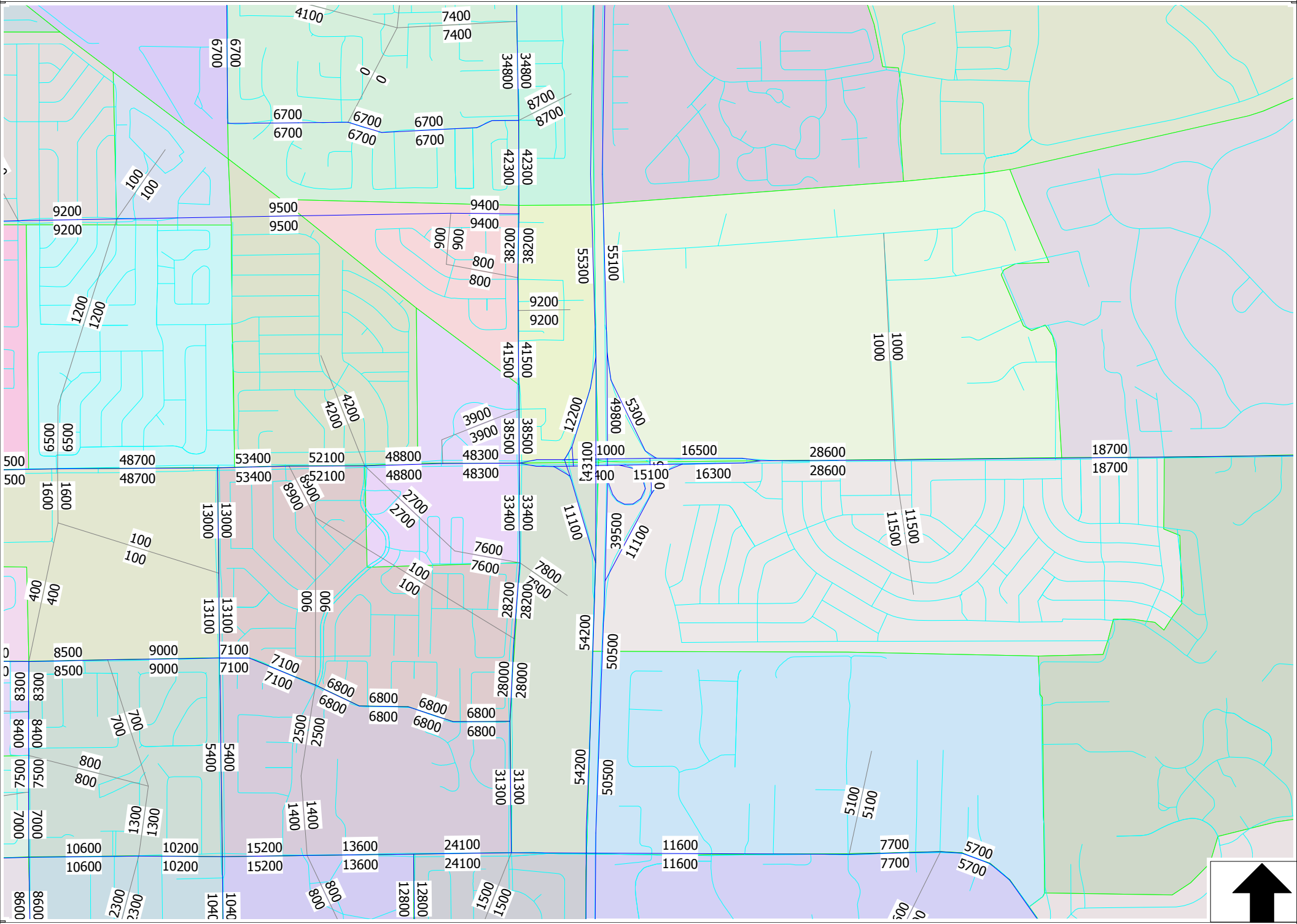
*Density check upstream of the diverge area (HCM 2010 Equation 13-26 = 0.0175*Upstream Flow Rate/Number of Lanes). It is likely that if the freeway segment upstream of the diverge area is operating at an acceptable LOS (thresholds based on HCM 2010 Exhibit 13-2), then the off ramp and downstream segments will also operate at an acceptable LOS since each of those segments have less volume than the upstream segment.

Appendix H
Sarasota-Manatee-Charlotte Model Plots

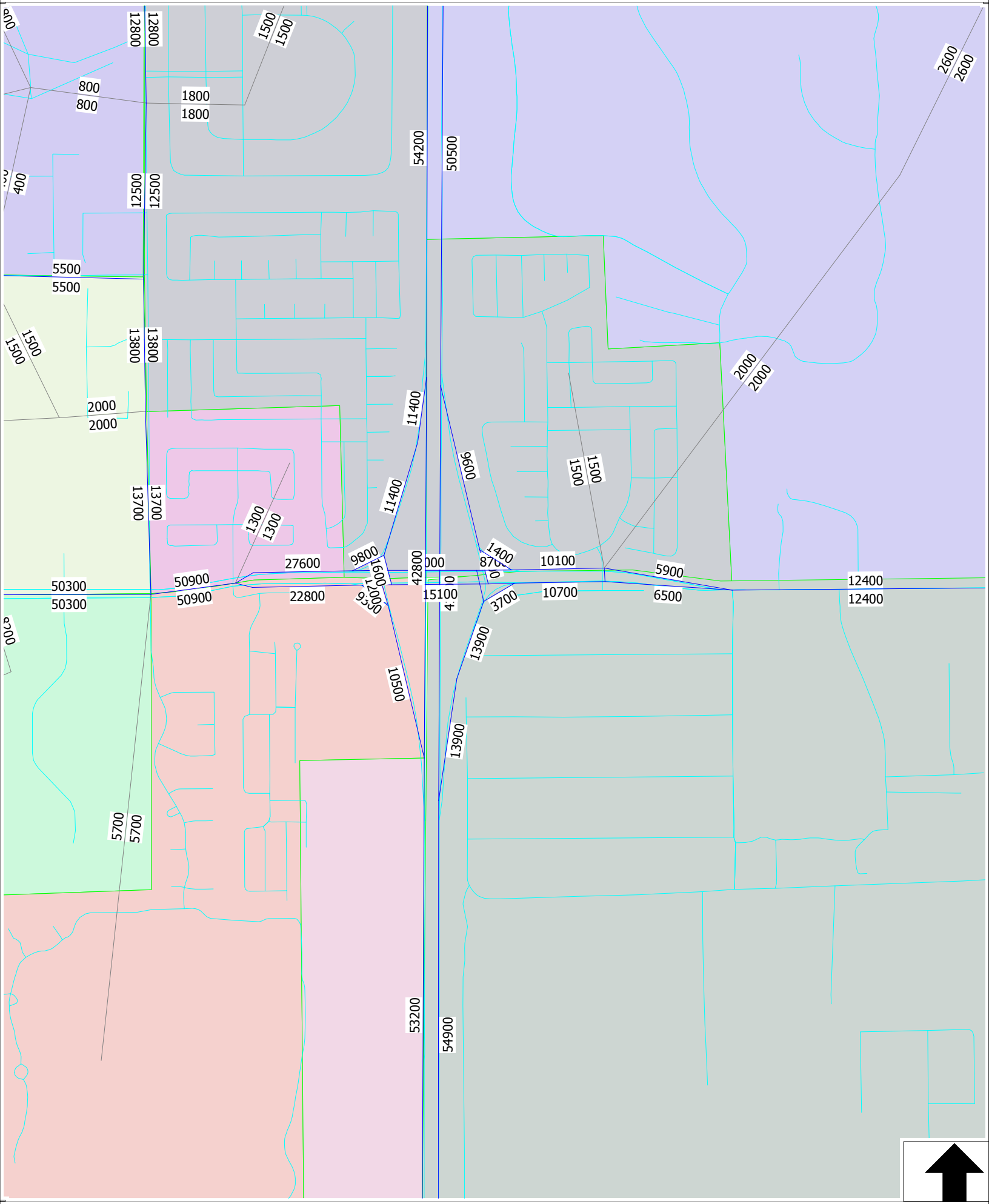




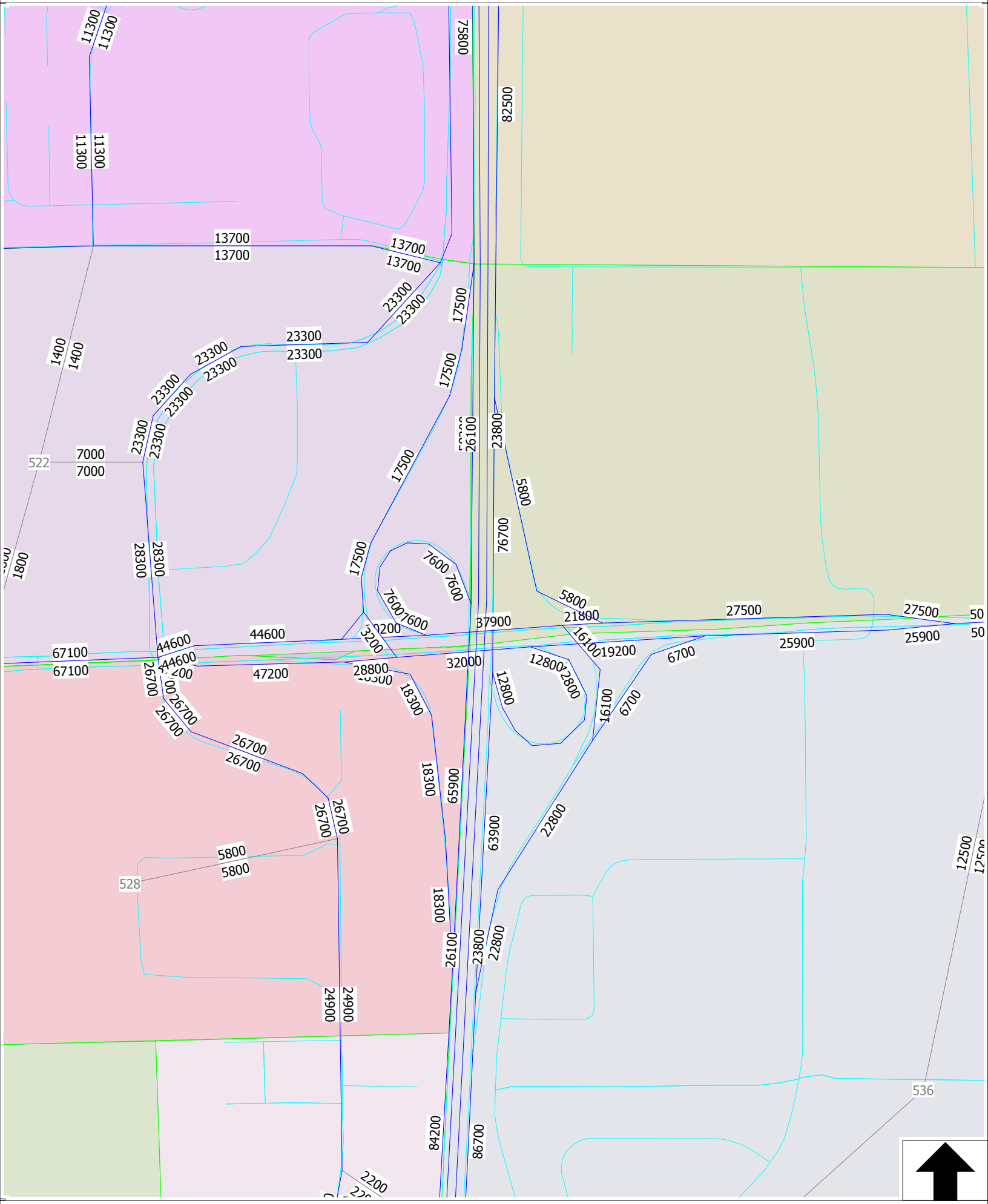
Rev 2007 SMC Model (Modified Centriod Connectors)

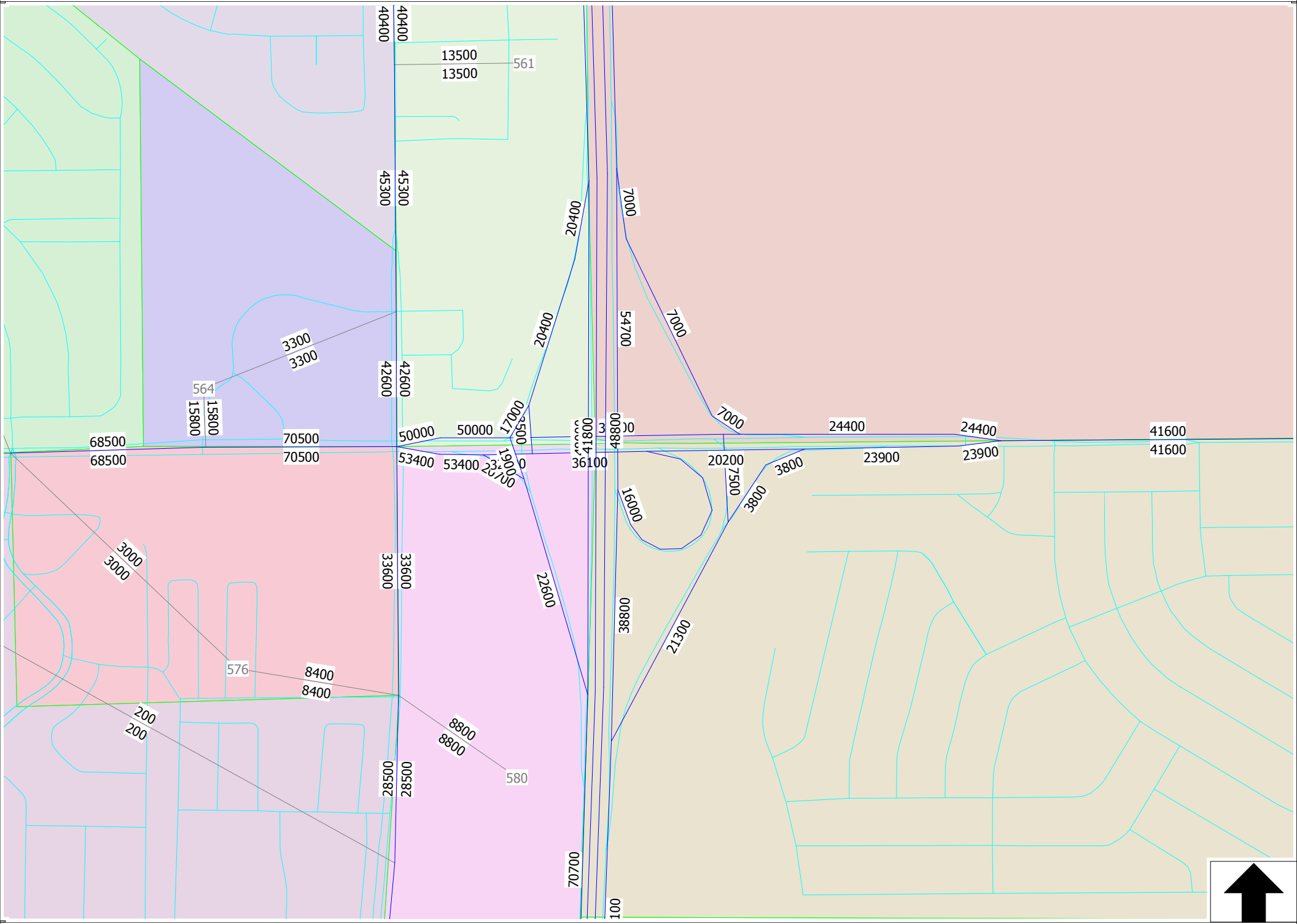


Rev 2007 SMC Model (Modified Centriod Connectors)

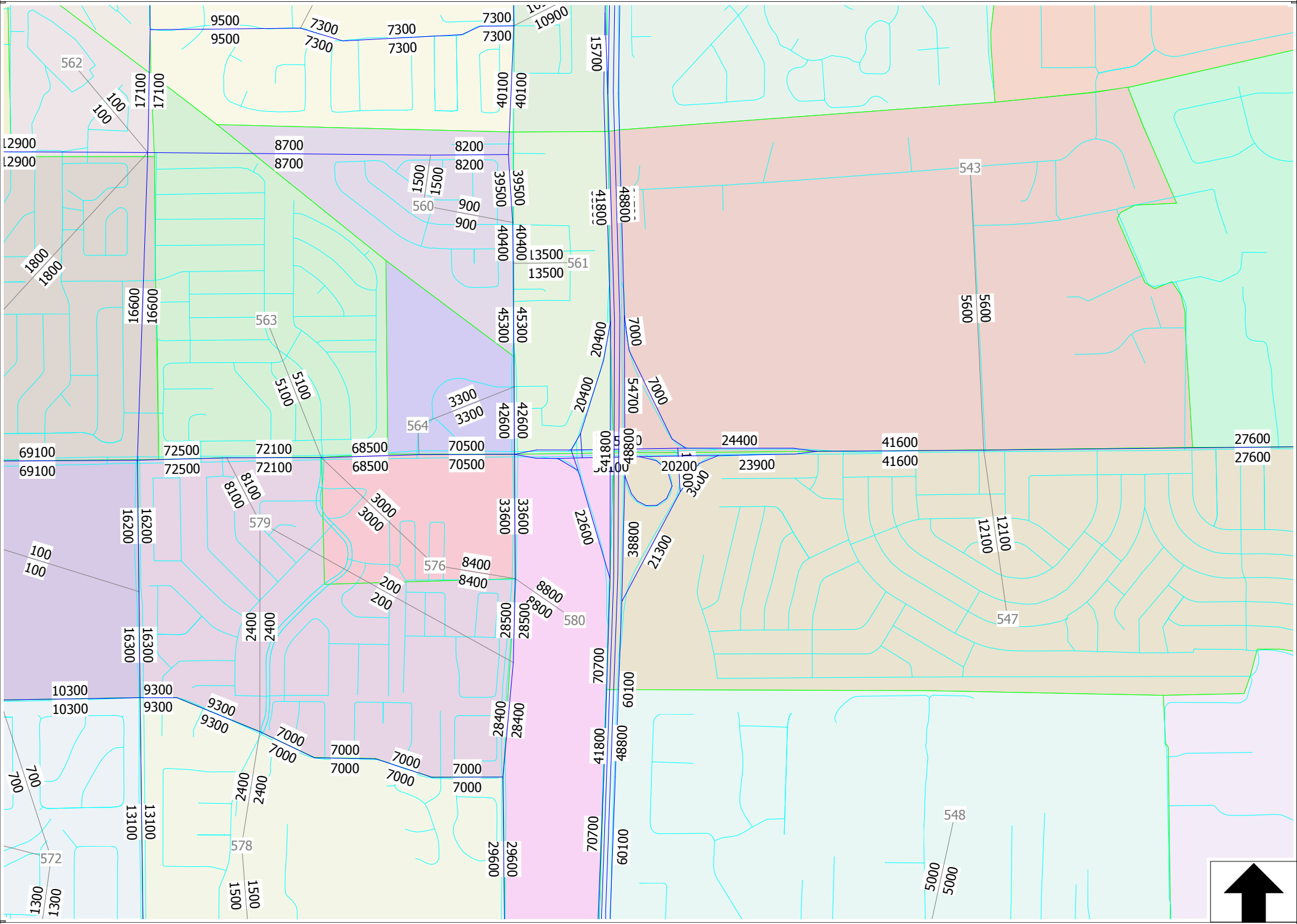


Rev 2007 SMC Model (Modified Centriod Connectors)

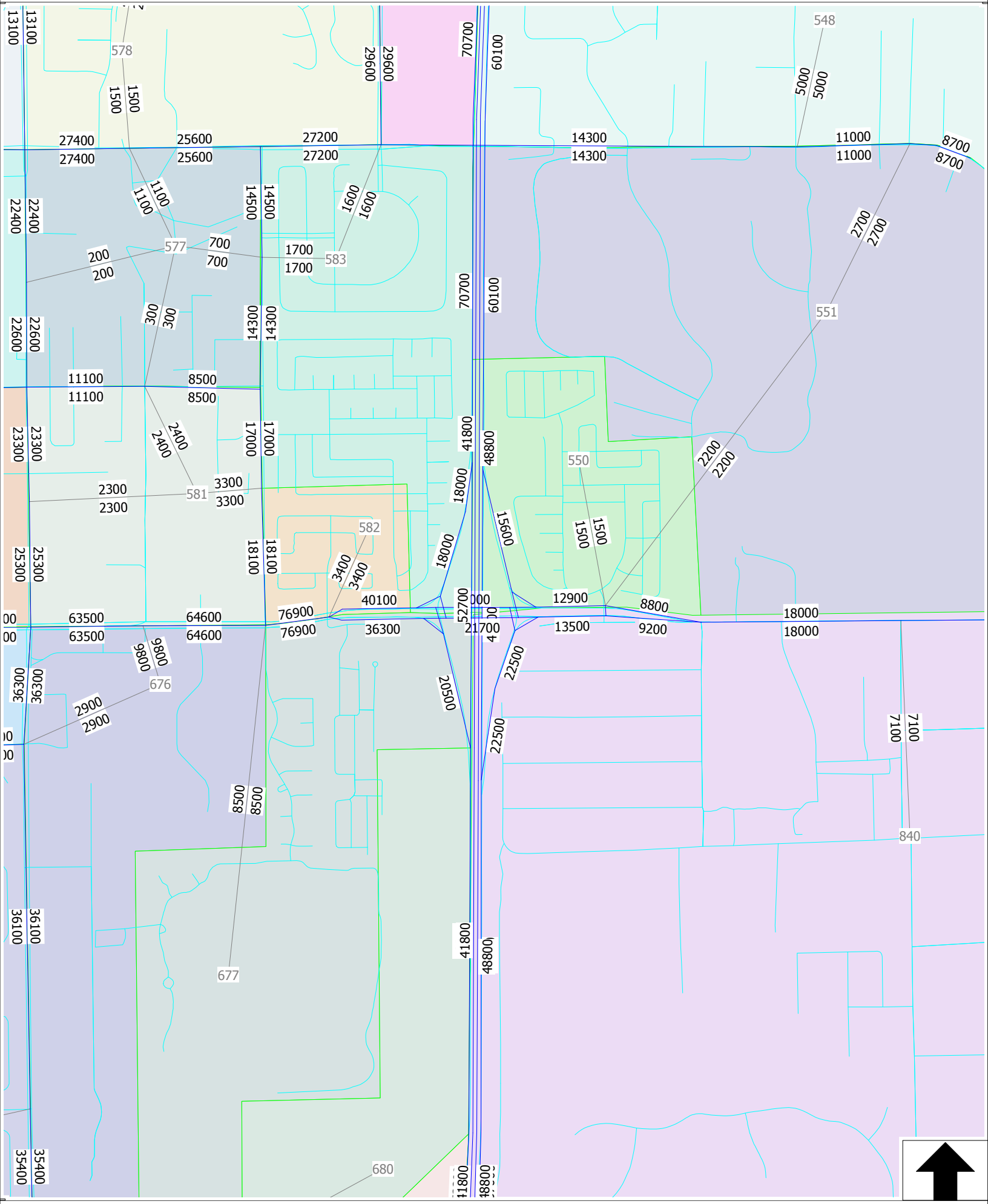


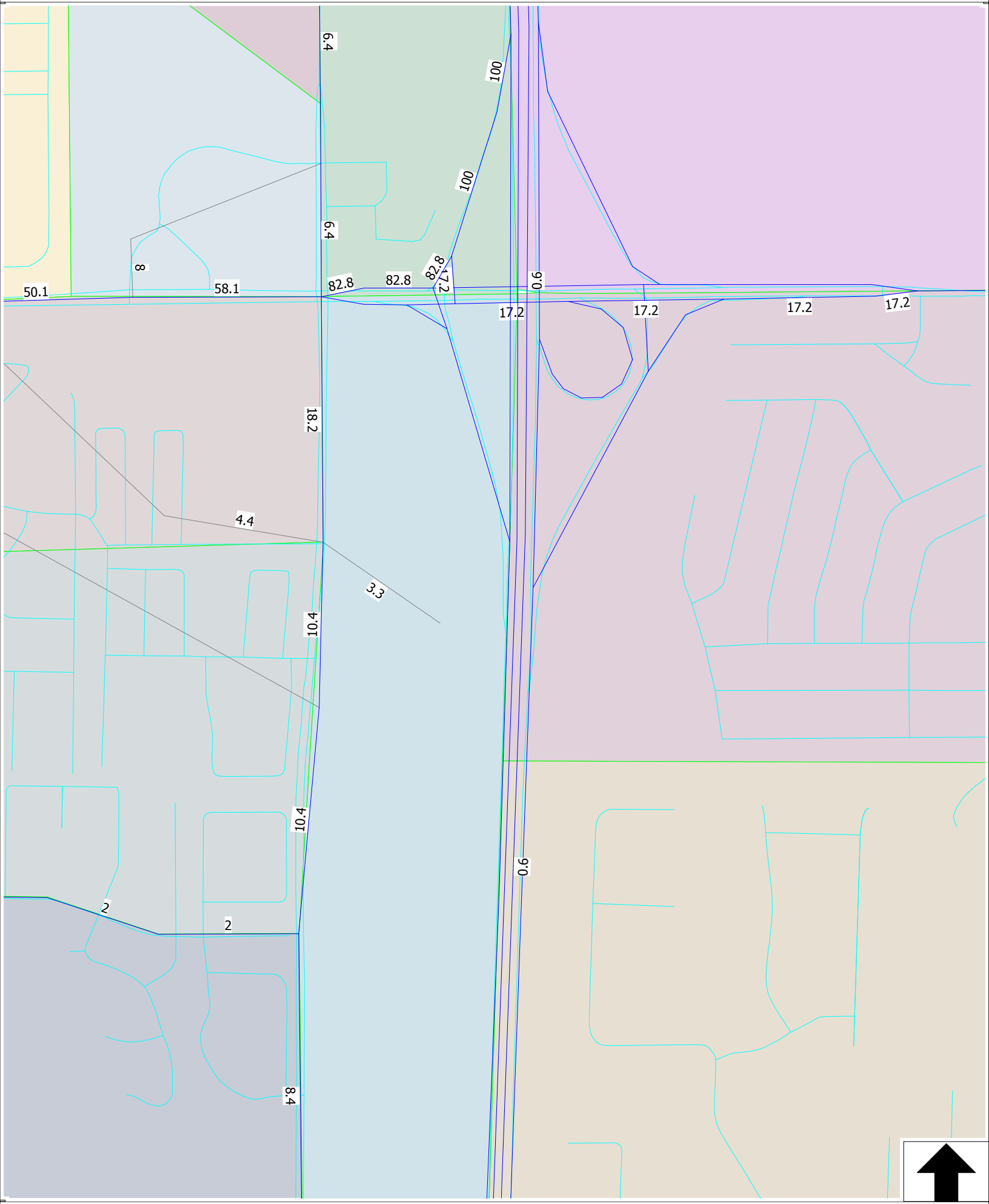


2035 SMC Model



2035 SMC Model





Appendix I
TURNS Output

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Honore Avenue
Intersection:	Bee Ridge Road
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	38800	42100	8900	10400	100200
2040	65400	68600	15700	15400	165100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	6%	70	
(EB THRU)	*West-to-East*	88%	1070	
(EB RT)	*West-to-South*	6%	65	
(WB LT)	*East-to-South*	7%	125	(must be done manually)
(WB THRU)	*East-to-West*	90%	1620	
(WB RT)	*East-to-North*	3%	55	
(SB LT)	*North-to-East*	23%	85	
(SB THRU)	*North-to-South*	51%	185	
(SB RT)	*North-to-West*	26%	95	
(NB LT)	*South-to-West*	32%	175	
(NB THRU)	*South-to-North*	39%	210	
(NB RT)	*South-to-East*	29%	155	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

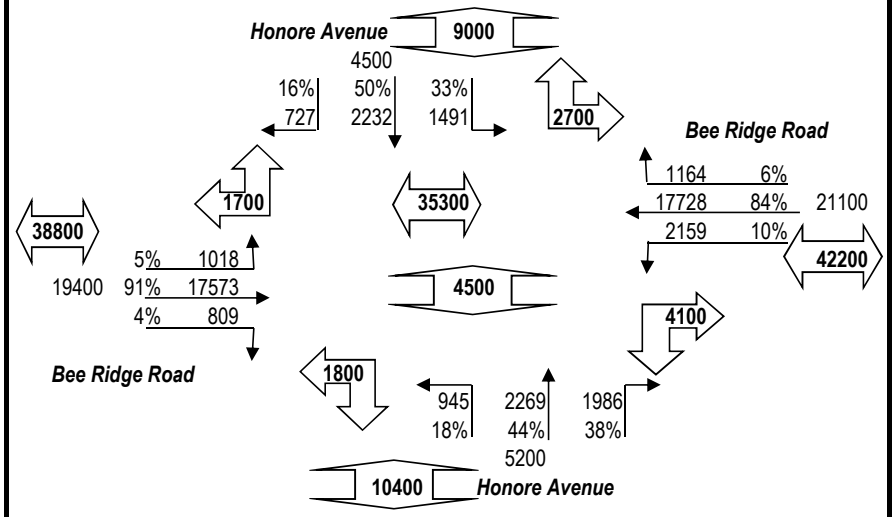
Highway:	Honore Avenue	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.06	0.052	1000	0.057	1300	0.063	1700	0.067	2200
West-To-East (Thru)	0.88	0.906	17600	0.902	20600	0.897	24900	0.894	29200
West-To-South (RT)	0.06	0.042	800	0.041	900	0.040	1100	0.039	1300
Total Flow From West:			**19400**		**22800**		**27700**		**32700**
East-To-South (LT)	0.07	0.103	2200	0.094	2300	0.085	2500	0.079	2700
East-To-West (Thru)	0.90	0.842	17700	0.850	20800	0.858	25200	0.863	29600
East-To-North (RT)	0.03	0.055	1200	0.056	1400	0.057	1700	0.058	2000
Total Flow From East:			**21100**		**24500**		**29400**		**34300**
North-To-East (LT)	0.23	0.335	1500	0.332	1800	0.330	2200	0.328	2600
North-To-South (Thru)	0.51	0.502	2200	0.491	2600	0.479	3200	0.470	3700
North-To-West (RT)	0.26	0.163	700	0.177	900	0.191	1300	0.203	1600
Total Flow From North:			**4400**		**5300**		**6700**		**7900**
South-To-West (LT)	0.32	0.182	900	0.187	1100	0.192	1300	0.196	1500
South-To-North (Thru)	0.39	0.436	2300	0.452	2600	0.468	3200	0.479	3700
South-To-East (RT)	0.29	0.382	2000	0.361	2100	0.340	2300	0.325	2500
Total Flow From South:			**5200**		**5800**		**6800**		**7700**

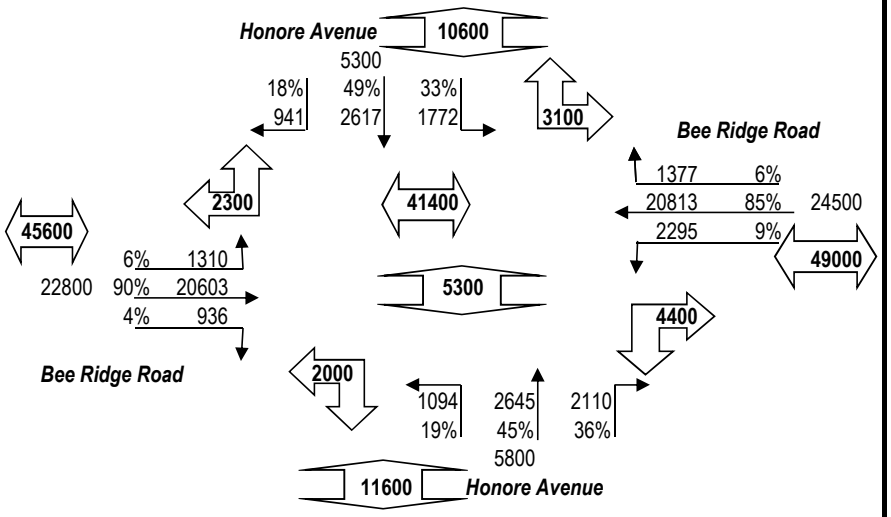
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO AM Peak

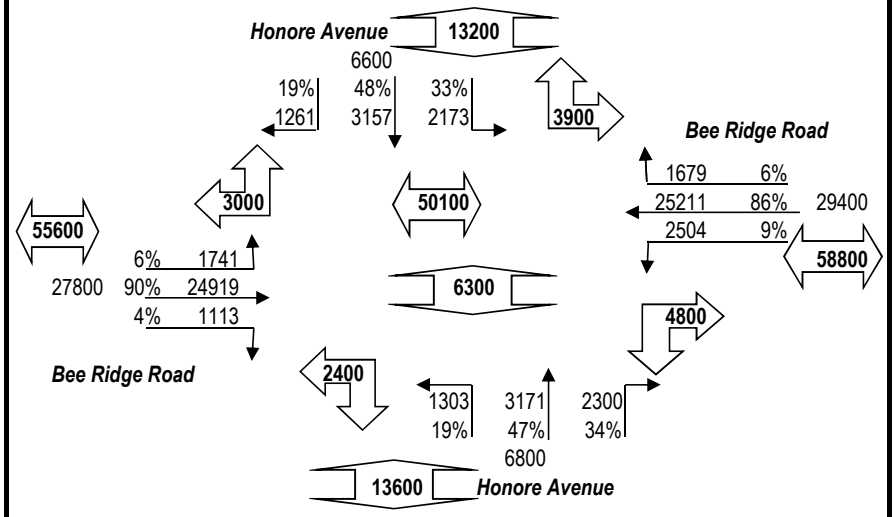
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



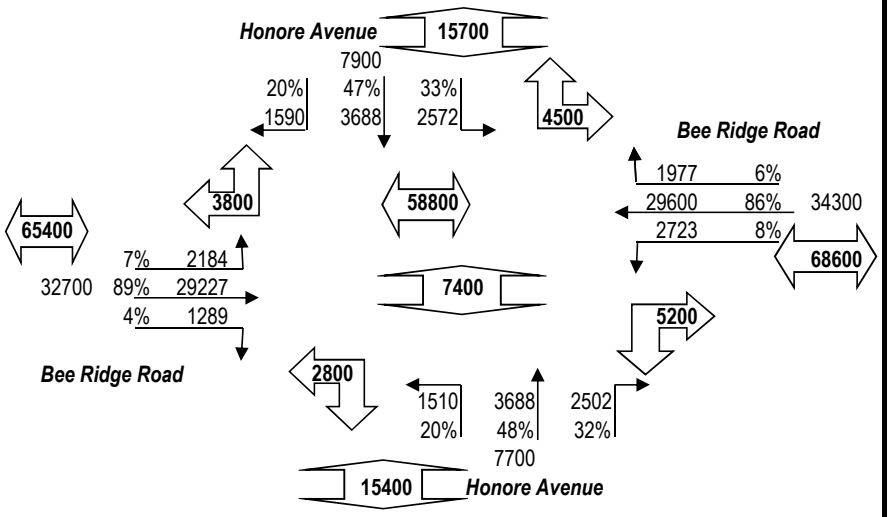
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

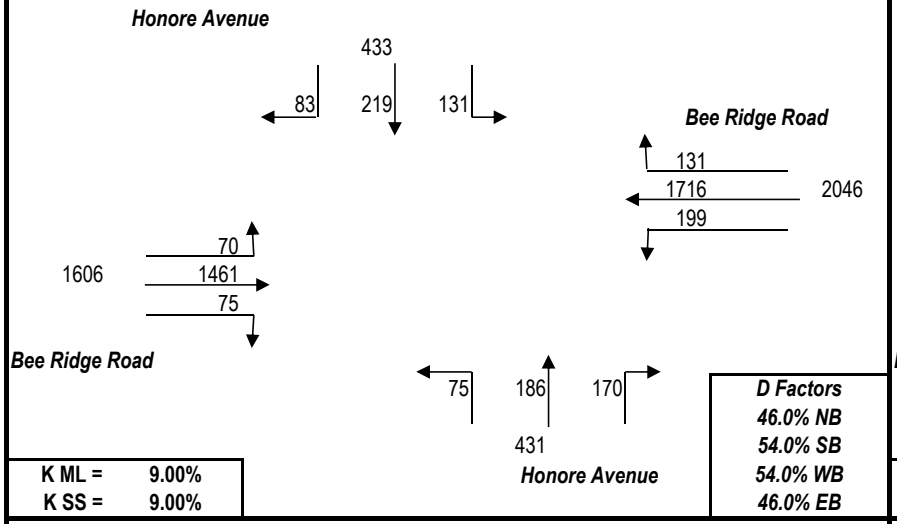


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO AM Peak

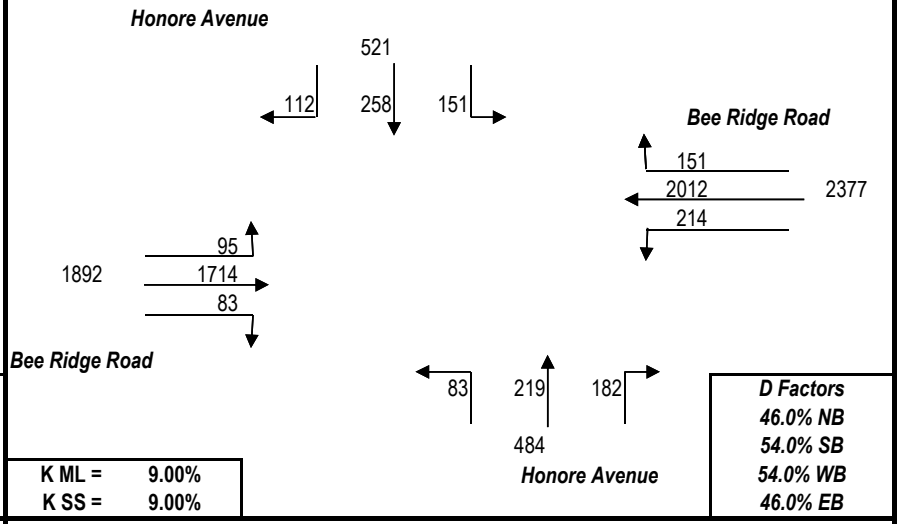
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

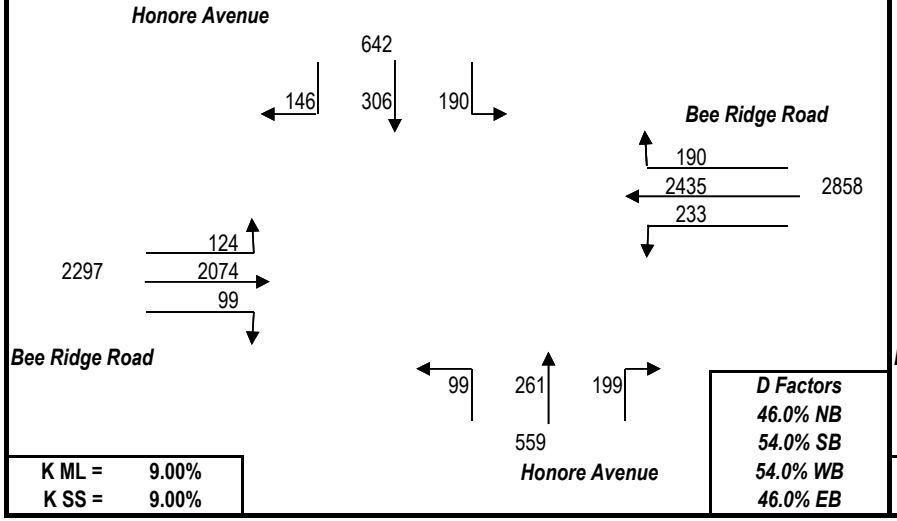
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

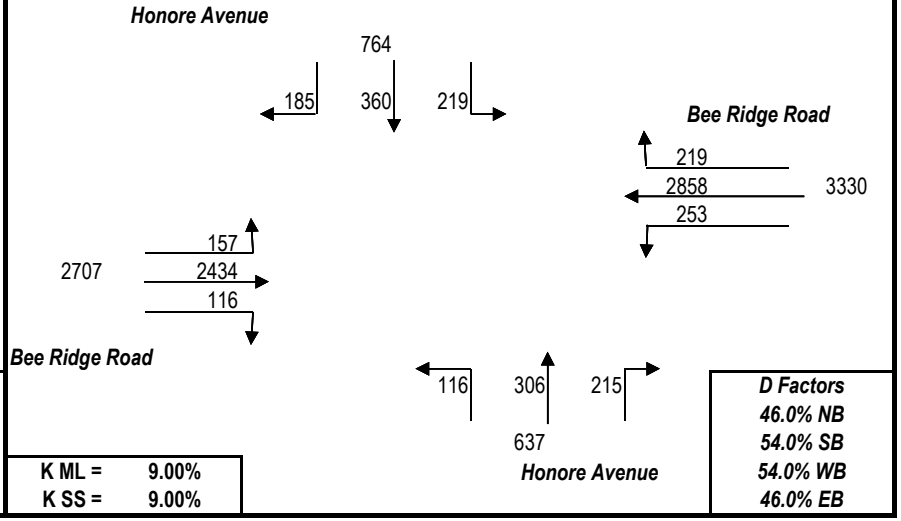
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

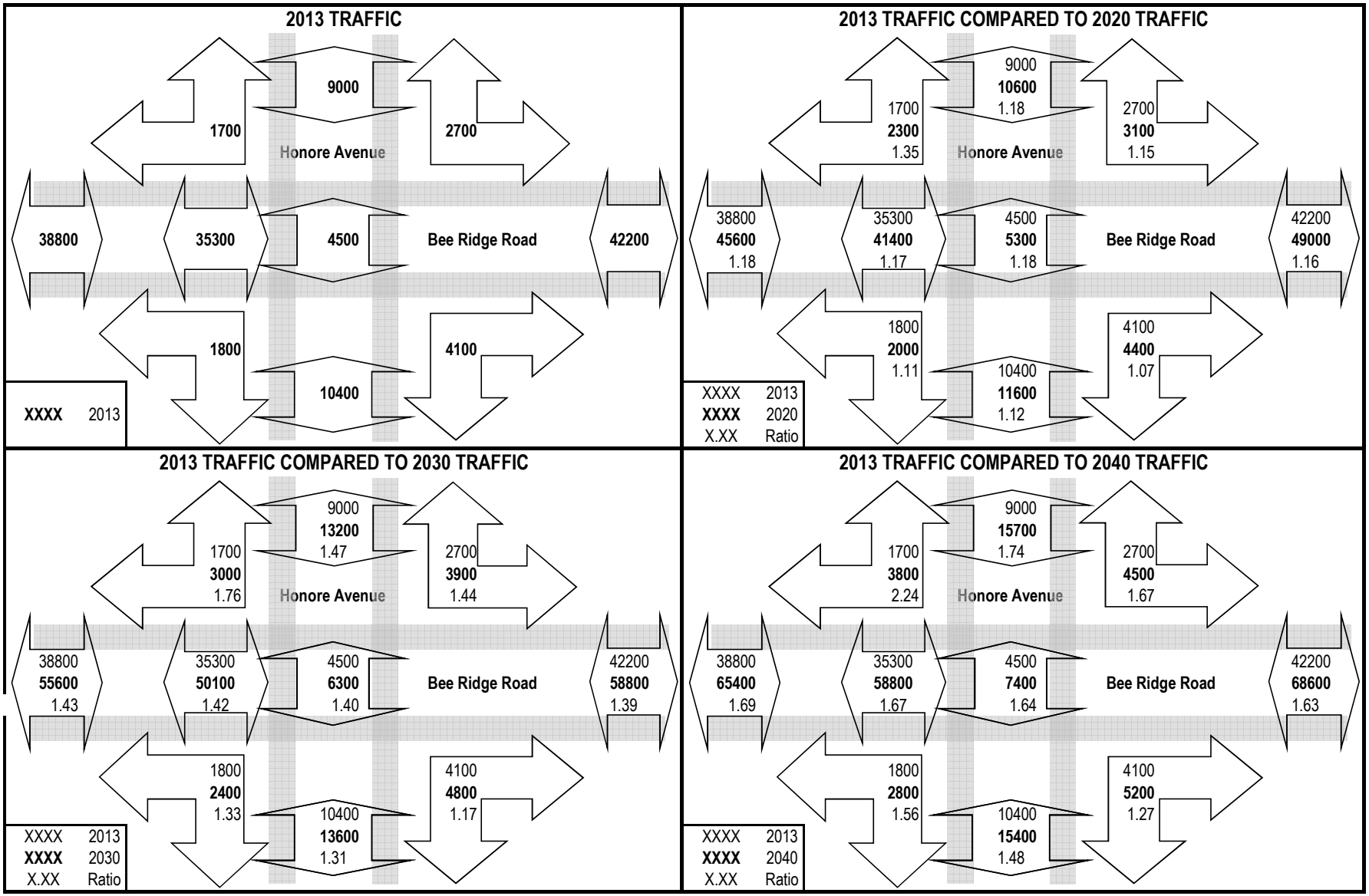
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

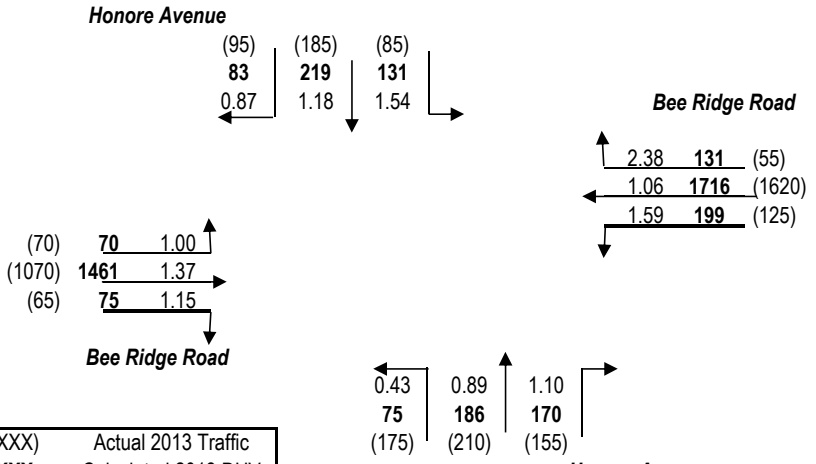
D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO AM Peak

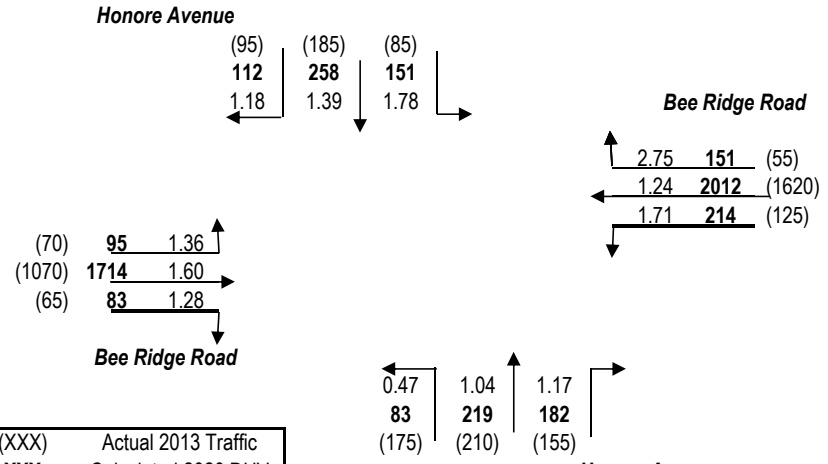


PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO AM Peak

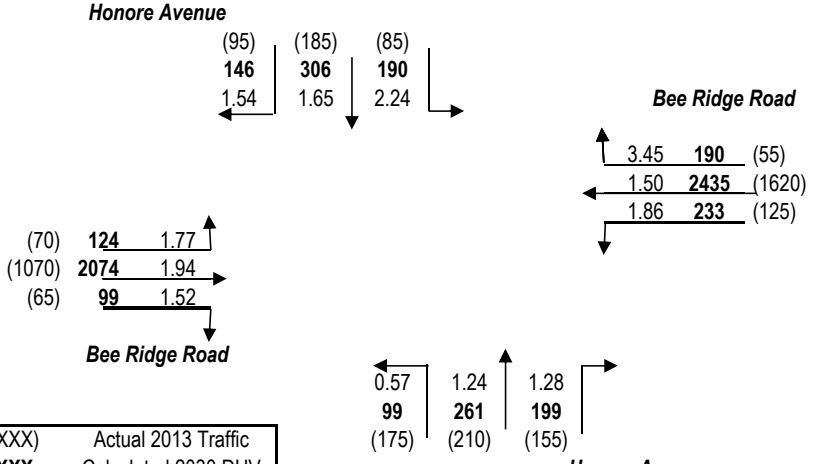
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



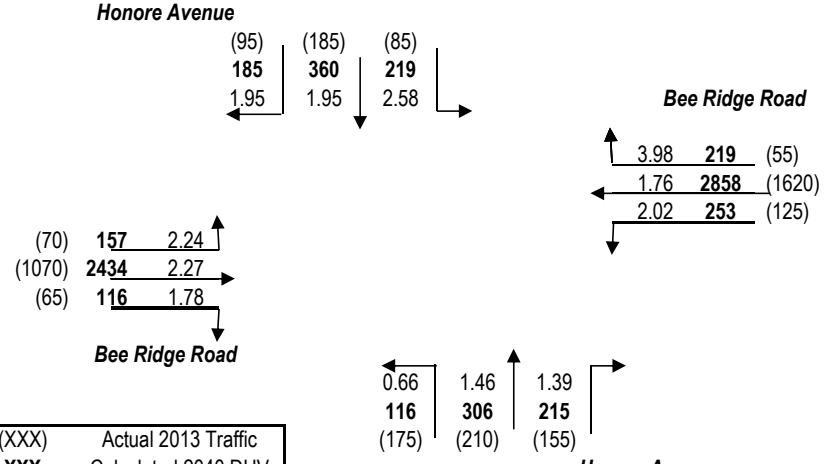
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Woodmont Drive-Center Gate Boulevard
Intersection:	Bee Ridge Road
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	42100	43300	2800	2500	90700
2040	68600	64800	2800	3200	139400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**
(EB LT)	*West-to-North*	1%	10
(EB THRU)	*West-to-East*	96%	1265
(EB RT)	*West-to-South*	3%	40
(WB LT)	*East-to-South*	7%	140
(WB THRU)	*East-to-West*	91%	1715
(WB RT)	*East-to-North*	2%	40
(SB LT)	*North-to-East*	61%	75
(SB THRU)	*North-to-South*	13%	15
(SB RT)	*North-to-West*	26%	30
(NB LT)	*South-to-West*	52%	50
(NB THRU)	*South-to-North*	5%	5
(NB RT)	*South-to-East*	43%	40

(must be done manually)

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

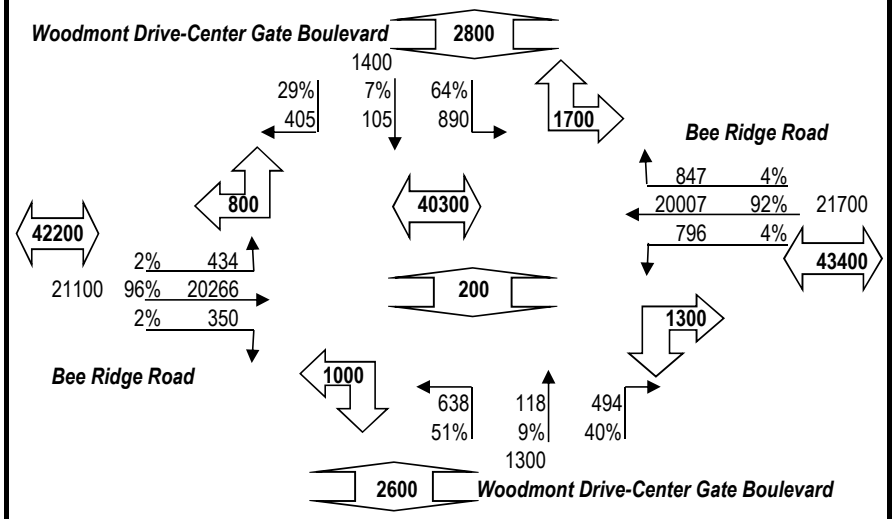
Highway:	Woodmont Drive-Center Gate Boulevard	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.01	0.021	400	0.025	600	0.029	900	0.032	1100
West-To-East (Thru)	0.96	0.963	20300	0.953	23300	0.942	27700	0.933	32000
West-To-South (RT)	0.03	0.017	300	0.022	500	0.029	800	0.035	1200
Total Flow From West:			**21000**		**24400**		**29400**		**34300**
East-To-South (LT)	0.07	0.037	800	0.028	700	0.018	500	0.010	300
East-To-West (Thru)	0.91	0.924	20000	0.944	23100	0.965	27400	0.982	31800
East-To-North (RT)	0.02	0.039	800	0.028	700	0.016	500	0.008	300
Total Flow From East:			**21600**		**24500**		**28400**		**32400**
North-To-East (LT)	0.61	0.636	900	0.512	700	0.348	500	0.195	300
North-To-South (Thru)	0.13	0.075	100	0.080	100	0.072	100	0.050	100
North-To-West (RT)	0.26	0.289	400	0.408	600	0.580	800	0.755	1100
Total Flow From North:			**1400**		**1400**		**1400**		**1500**
South-To-West (LT)	0.52	0.510	600	0.636	900	0.779	1100	0.888	1400
South-To-North (Thru)	0.05	0.095	100	0.082	100	0.057	100	0.031	0
South-To-East (RT)	0.43	0.395	500	0.282	400	0.164	200	0.081	100
Total Flow From South:			**1200**		**1400**		**1400**		**1500**

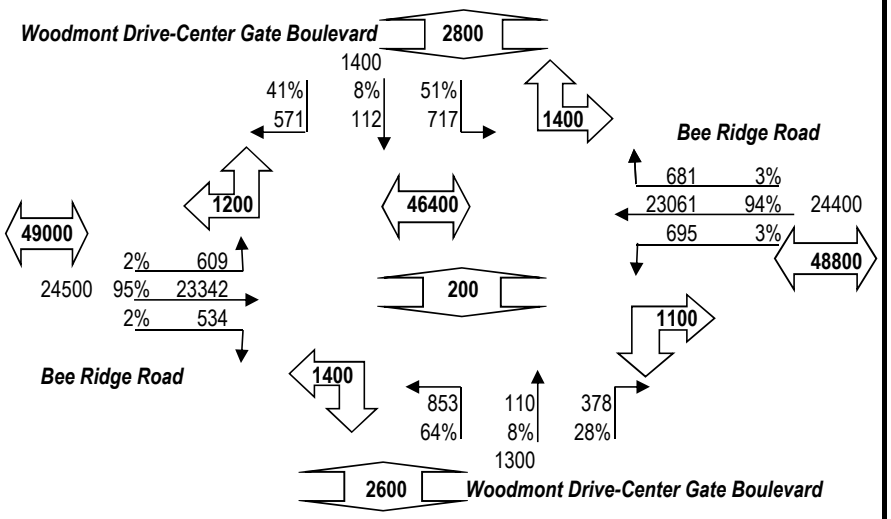
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO AM Peak

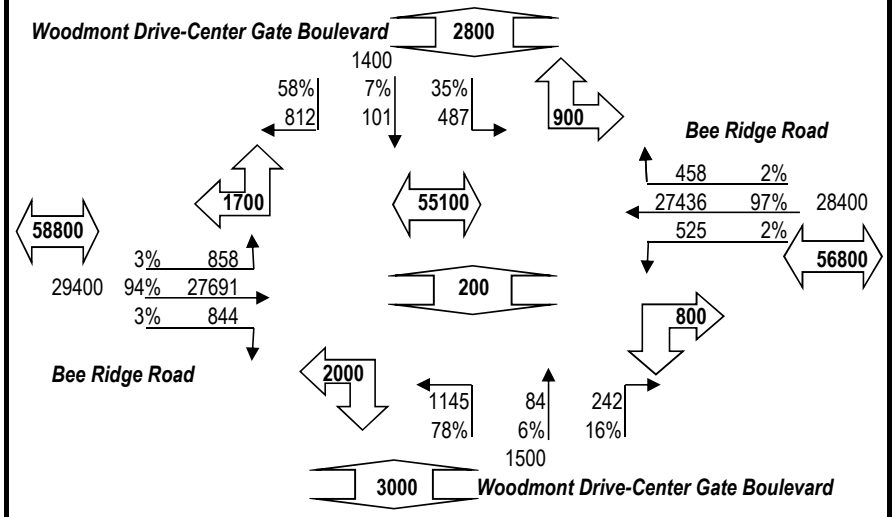
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



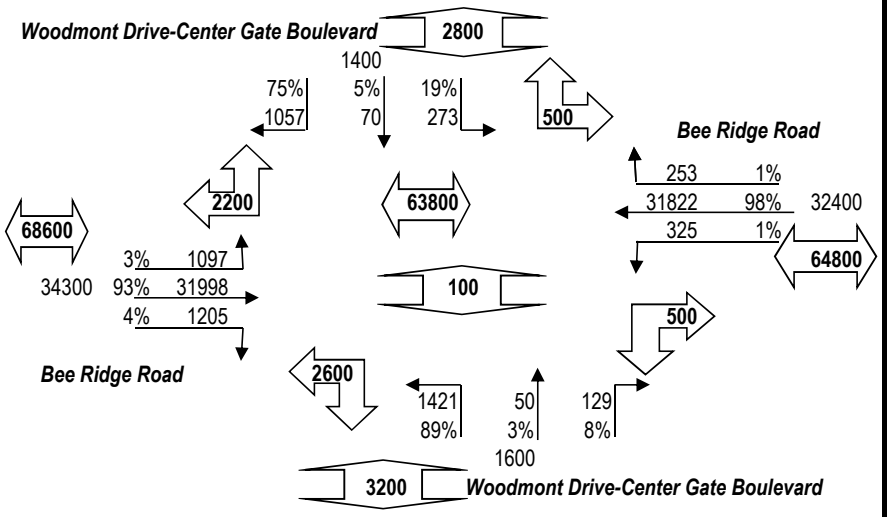
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

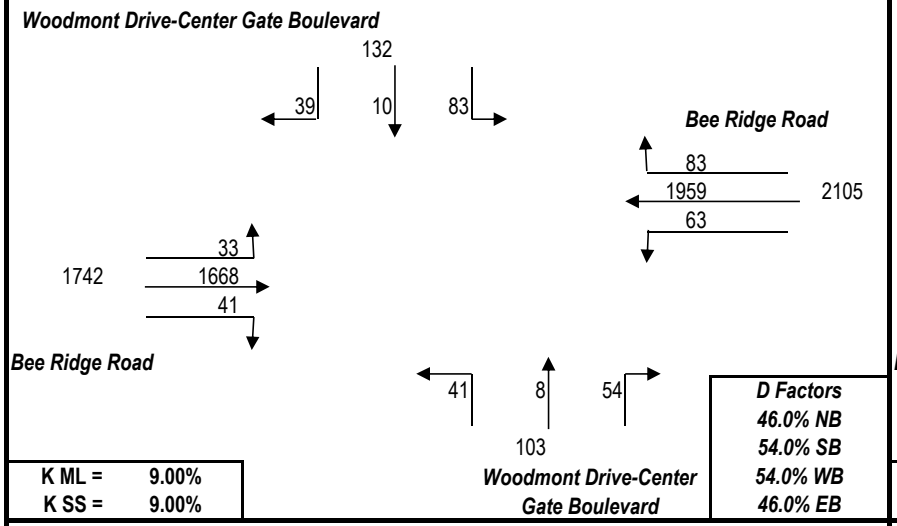


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO AM Peak

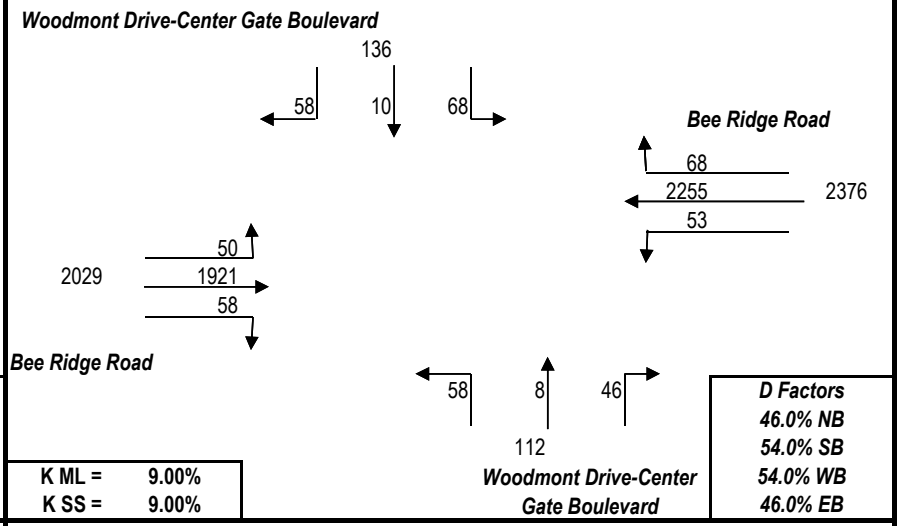
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

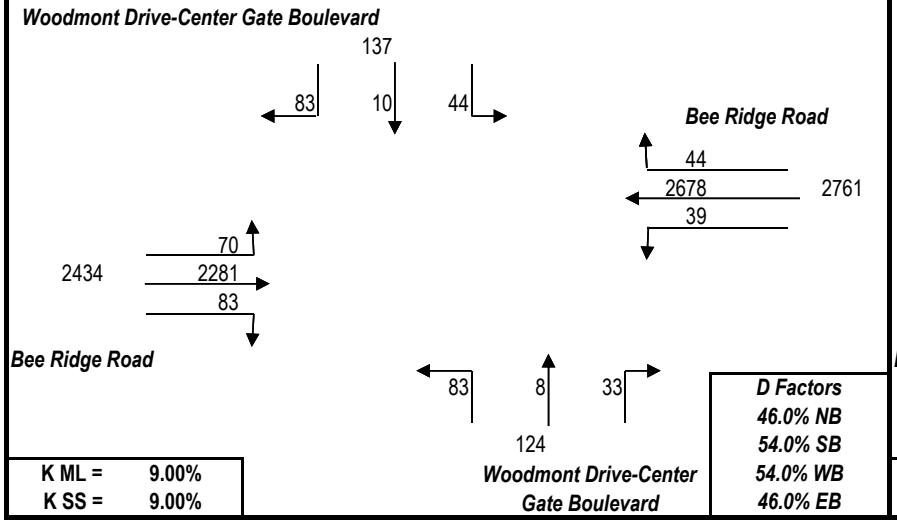
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

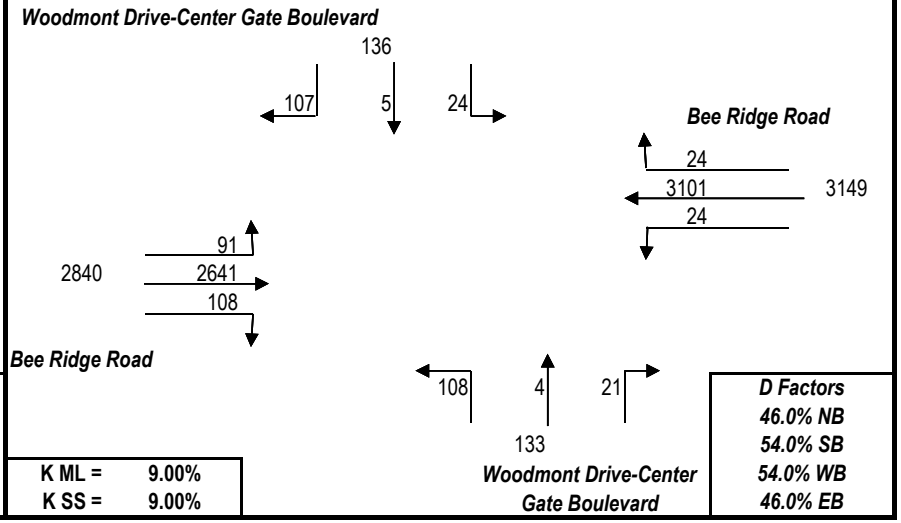
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

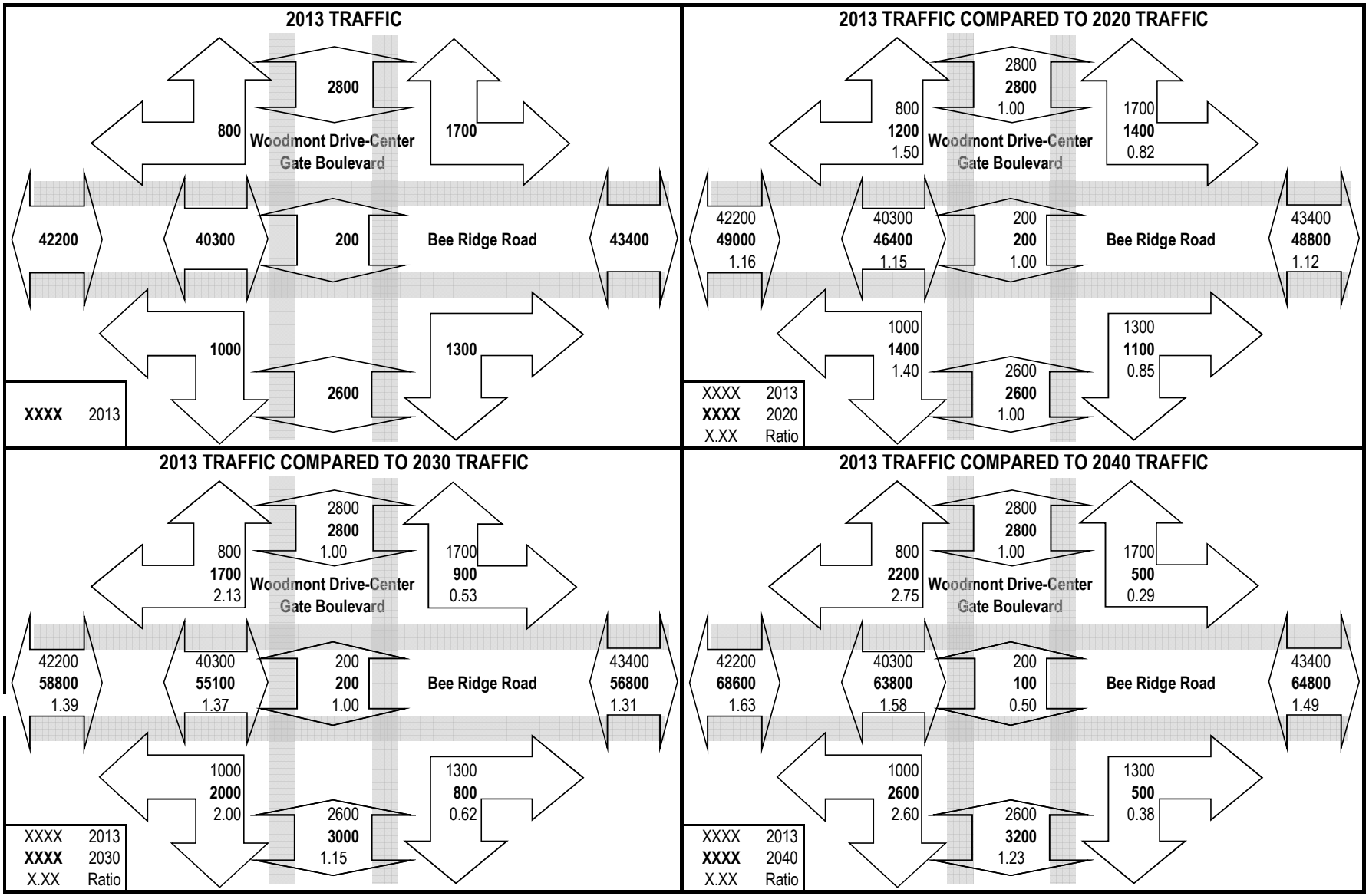
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

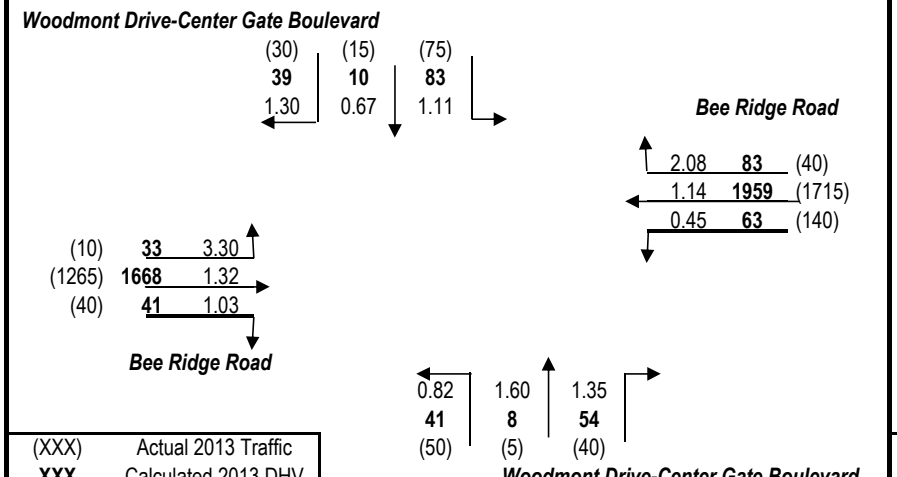
D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO AM Peak

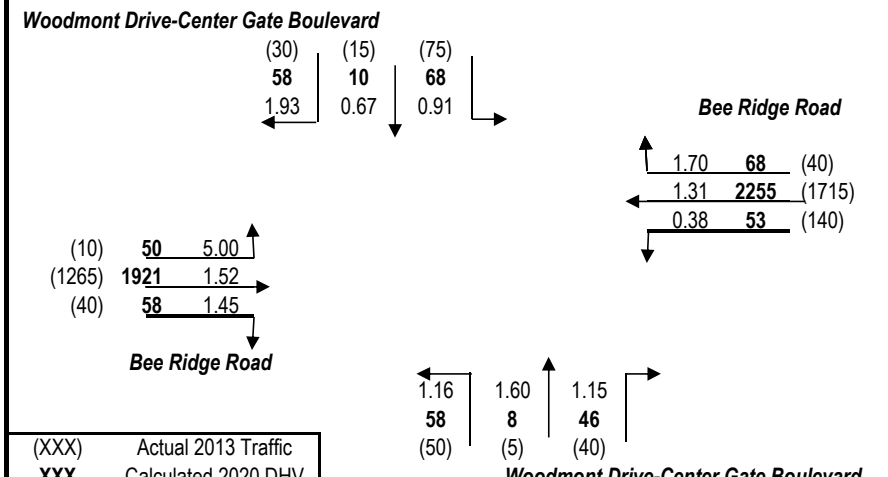


PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO AM Peak

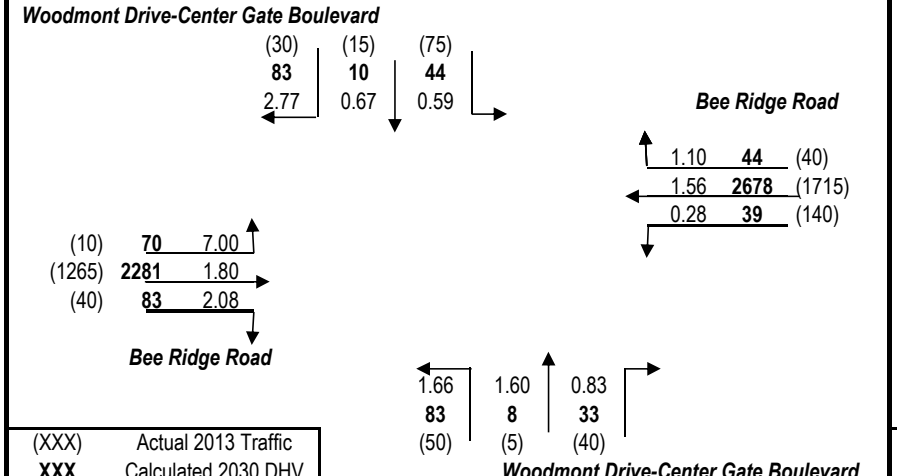
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



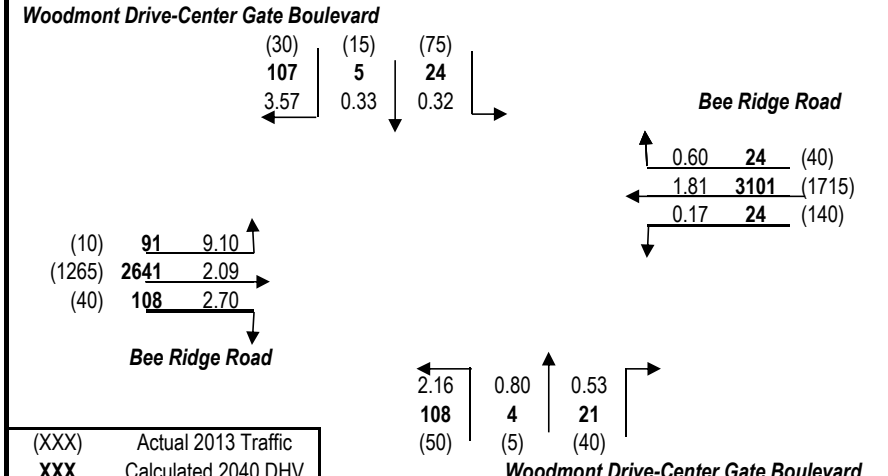
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Maxfield Drive-Bee Ridge Square
Intersection:	Bee Ridge Road
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	43300	38000	5900	6000	93200
2040	64800	66700	5900	6000	143400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**
(EB LT)	*West-to-North*	12%	170
(EB THRU)	*West-to-East*	83%	1140
(EB RT)	*West-to-South*	5%	75
(WB LT)	*East-to-South*	3%	45
(WB THRU)	*East-to-West*	95%	1695
(WB RT)	*East-to-North*	2%	25
(SB LT)	*North-to-East*	35%	80
(SB THRU)	*North-to-South*	3%	10
(SB RT)	*North-to-West*	62%	140
(NB LT)	*South-to-West*	58%	60
(NB THRU)	*South-to-North*	15%	15
(NB RT)	*South-to-East*	27%	25

(must be done manually)

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

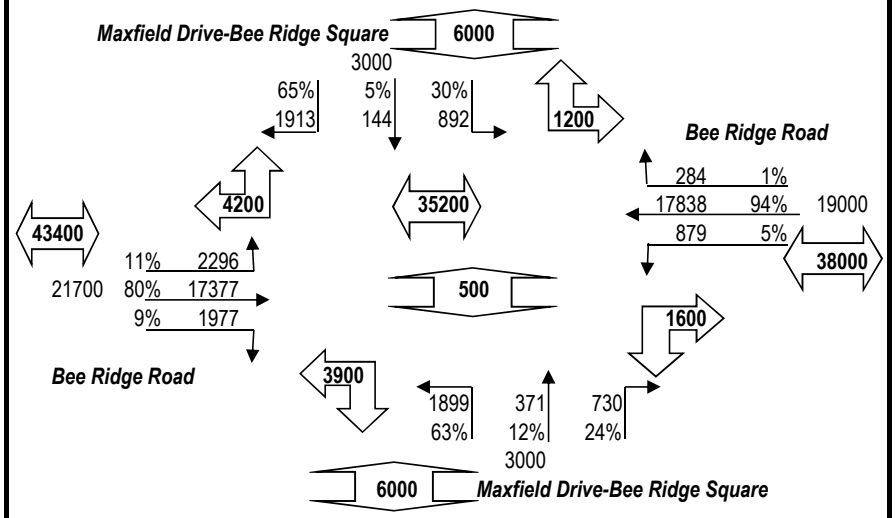
Highway:	Maxfield Drive-Bee Ridge Square	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.12	0.106	2300	0.088	2200	0.068	1900	0.052	1700
West-To-East (Thru)	0.83	0.803	17400	0.842	20600	0.885	25200	0.918	29800
West-To-South (RT)	0.05	0.091	2000	0.070	1700	0.047	1300	0.030	1000
Total Flow From West:			**21700**		**24500**		**28400**		**32500**
East-To-South (LT)	0.03	0.046	900	0.051	1200	0.055	1600	0.058	1900
East-To-West (Thru)	0.95	0.939	17800	0.931	21200	0.922	25900	0.914	30500
East-To-North (RT)	0.02	0.015	300	0.018	400	0.022	600	0.028	900
Total Flow From East:			**19000**		**22800**		**28100**		**33300**
North-To-East (LT)	0.35	0.302	900	0.397	1200	0.529	1600	0.655	1900
North-To-South (Thru)	0.03	0.049	100	0.047	100	0.040	100	0.031	100
North-To-West (RT)	0.62	0.649	1900	0.556	1600	0.431	1300	0.315	900
Total Flow From North:			**2900**		**2900**		**3000**		**2900**
South-To-West (LT)	0.58	0.633	1900	0.548	1600	0.433	1300	0.324	1000
South-To-North (Thru)	0.15	0.124	400	0.130	400	0.129	400	0.120	400
South-To-East (RT)	0.27	0.243	700	0.322	1000	0.438	1300	0.556	1700
Total Flow From South:			**3000**		**3000**		**3000**		**3100**

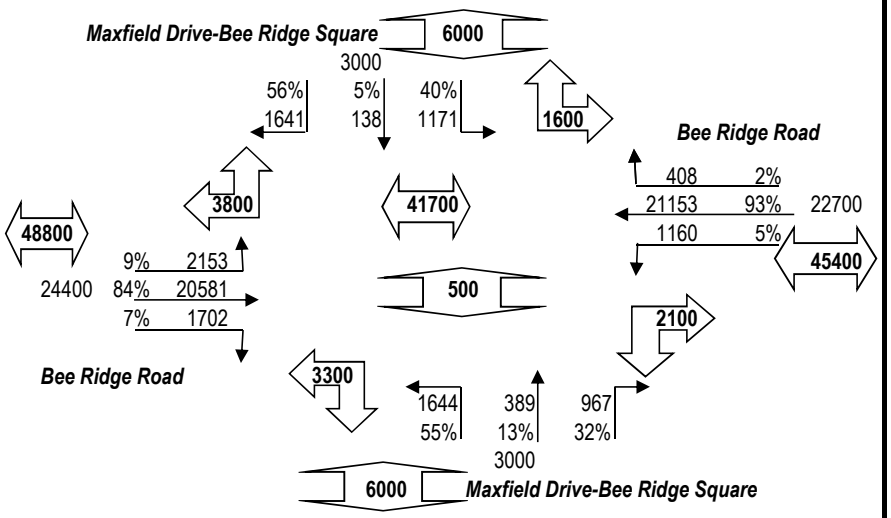
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO AM Peak

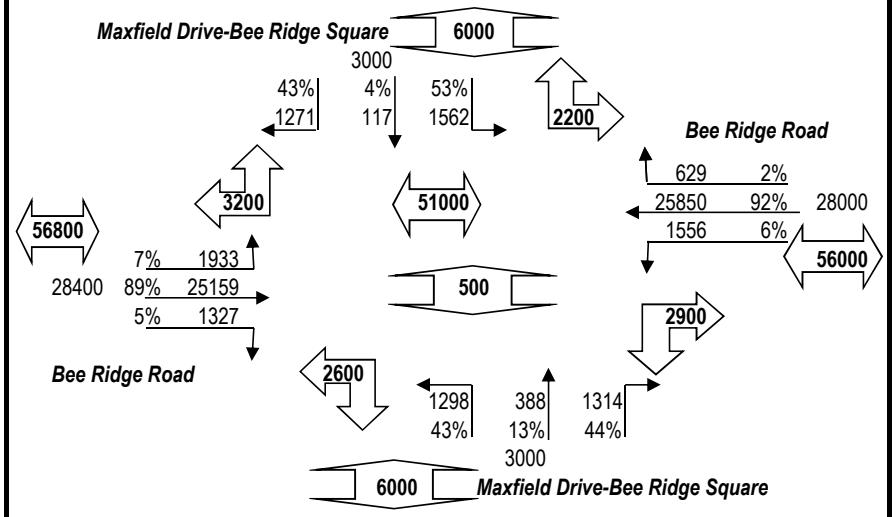
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



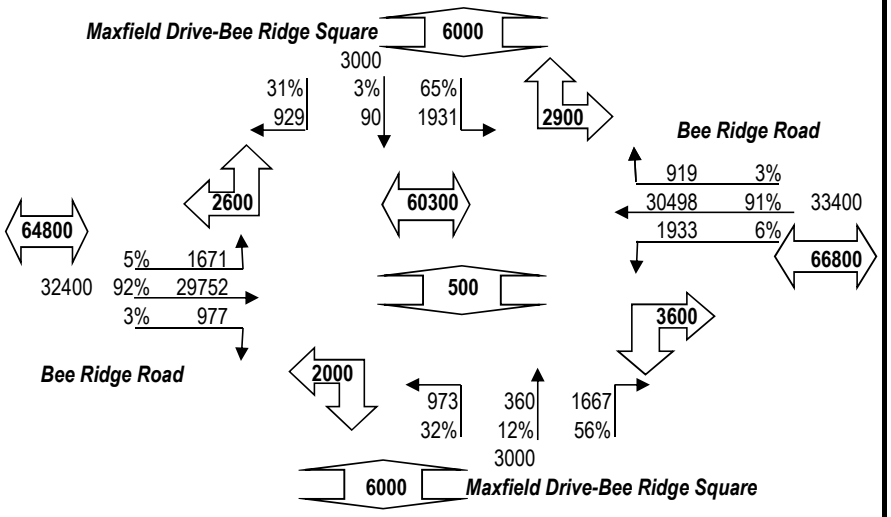
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

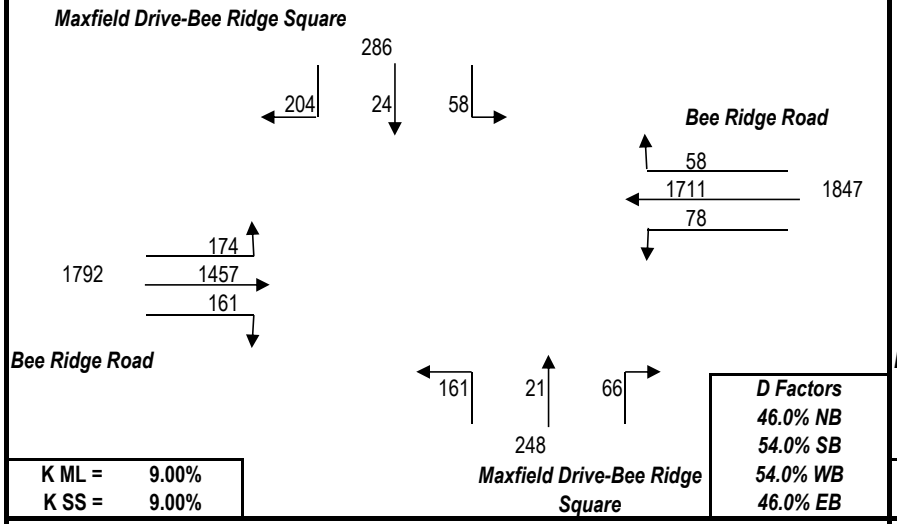


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO AM Peak

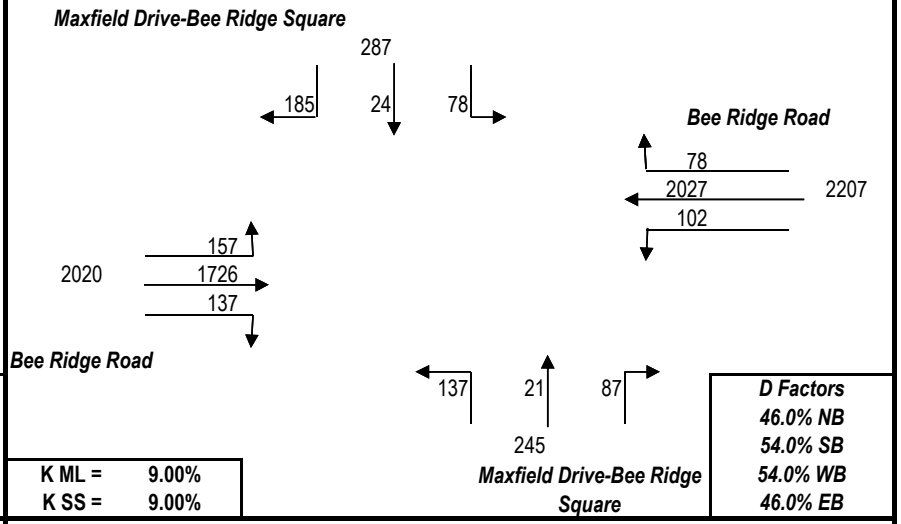
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

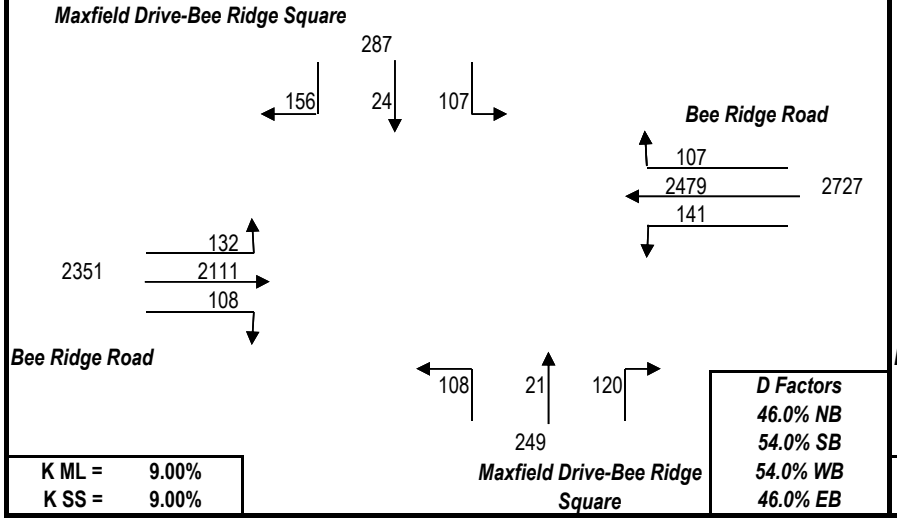
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

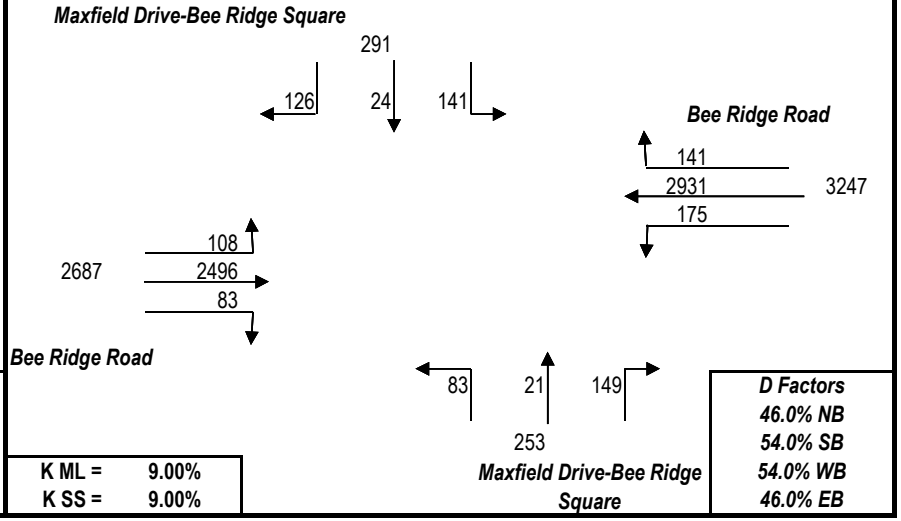
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

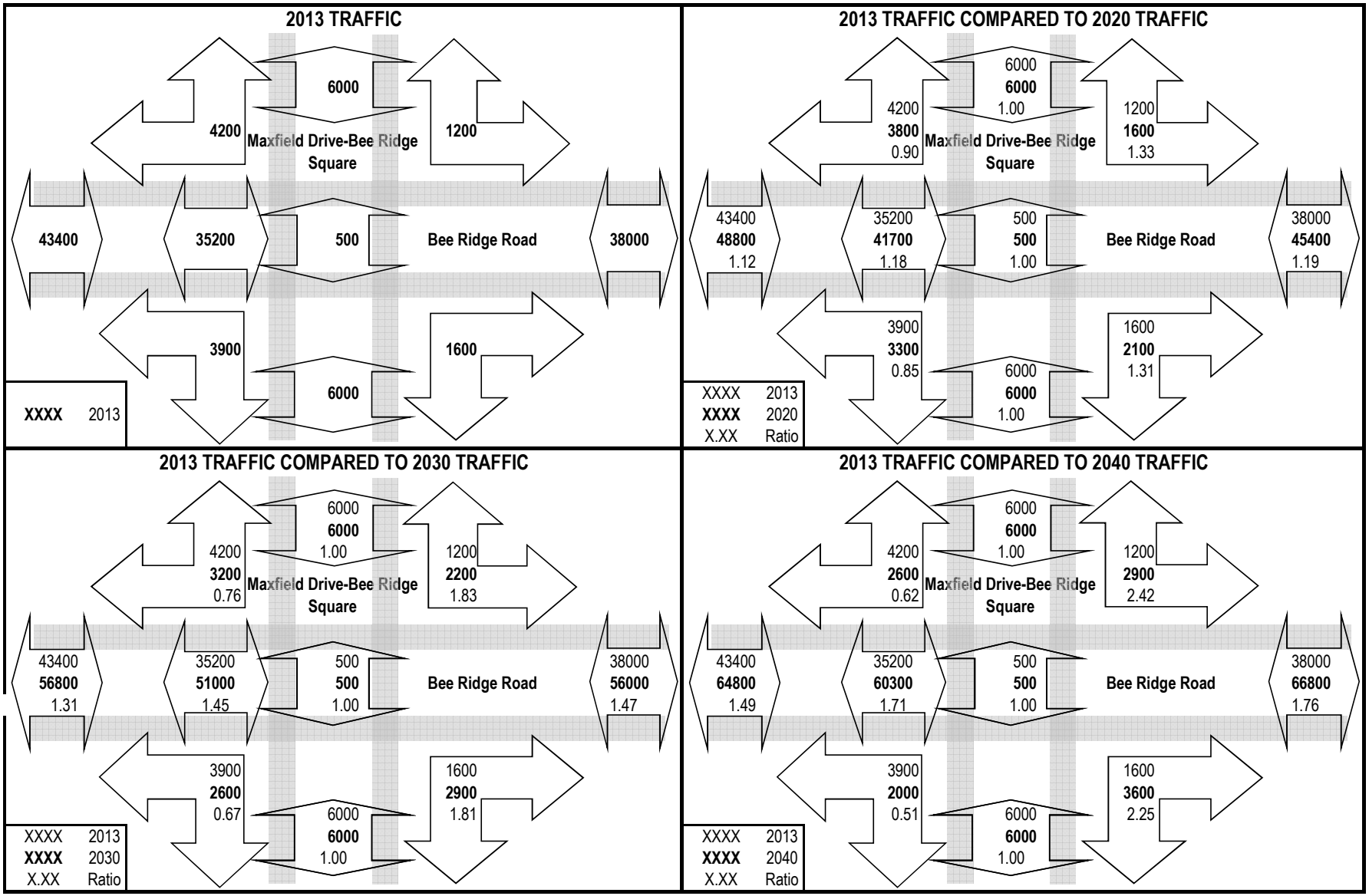
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

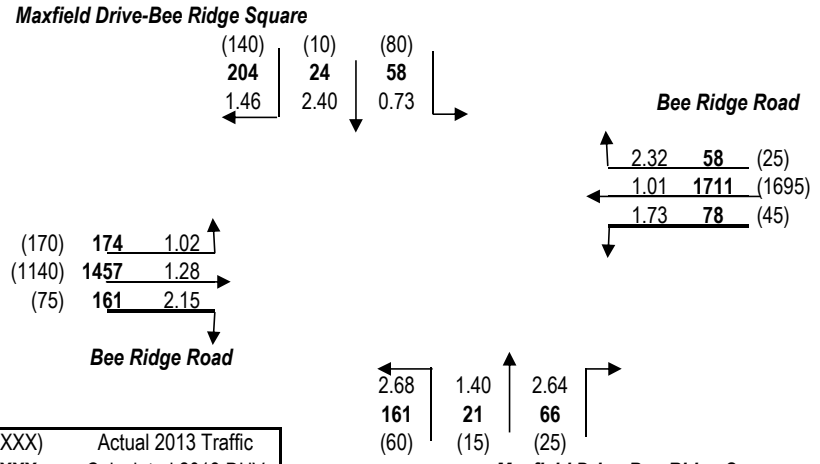
D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO AM Peak



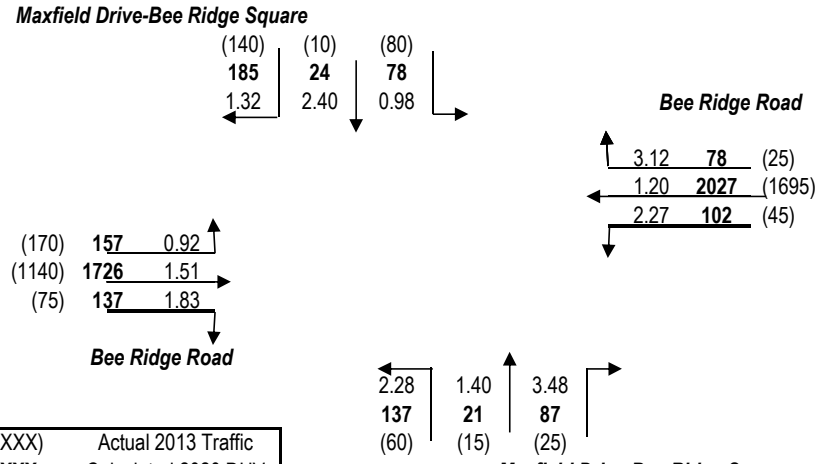
PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO AM Peak

2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



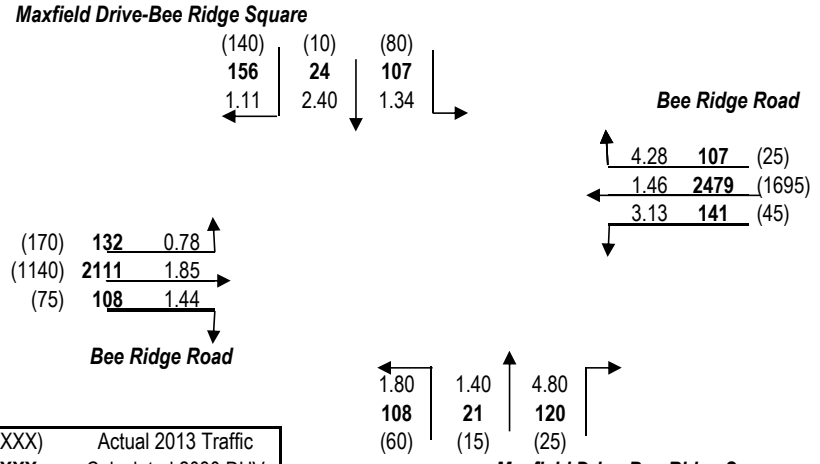
(XXX) Actual 2013 Traffic
XXX Calculated 2013 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



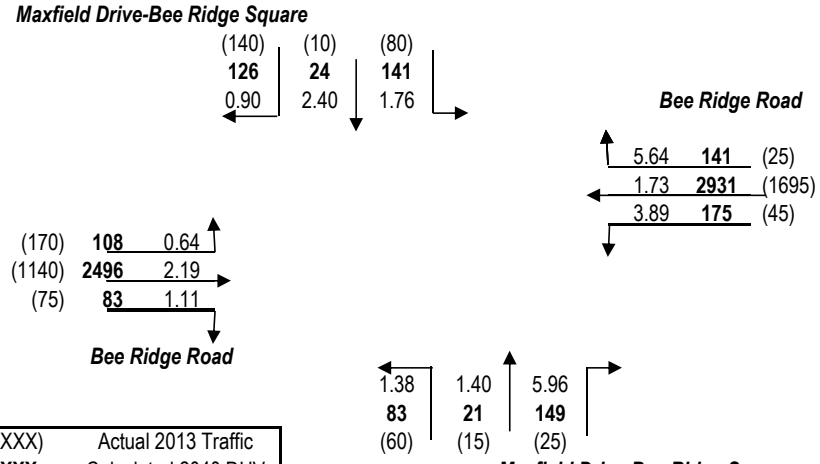
(XXX) Actual 2013 Traffic
XXX Calculated 2020 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



(XXX) Actual 2013 Traffic
XXX Calculated 2030 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



(XXX) Actual 2013 Traffic
XXX Calculated 2040 DHV
X.XX Ratio

TURNS5 ANALYSIS SHEET - INPUT

Analyst: HDR, Inc.
Date: 7-Feb-14
Highway: Cattlemen Road
Intersection: Bee Ridge Road
From:
To: AM Peak
County: Sarasota

Enter Yes or No

Is the Mainline Oriented North/South? (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
54.0%	Northbound (NB)
46.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Rate (1.0% = 0.01)

	Year	**Mainline**	**Side Street**
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	37100	52800	31100	28600	149600
2040	66700	97800	44900	41400	250800

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**
(EB LT)	*West-to-North*	16%	200
(EB THRU)	*West-to-East*	69%	895
(EB RT)	*West-to-South*	15%	190
(WB LT)	*East-to-South*	14%	380
(WB THRU)	*East-to-West*	53%	1445
(WB RT)	*East-to-North*	33%	885
(SB LT)	*North-to-East*	42%	390
(SB THRU)	*North-to-South*	41%	380
(SB RT)	*North-to-West*	17%	155
(NB LT)	*South-to-West*	16%	155
(NB THRU)	*South-to-North*	48%	450
(NB RT)	*South-to-East*	36%	340

(must be done manually)

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

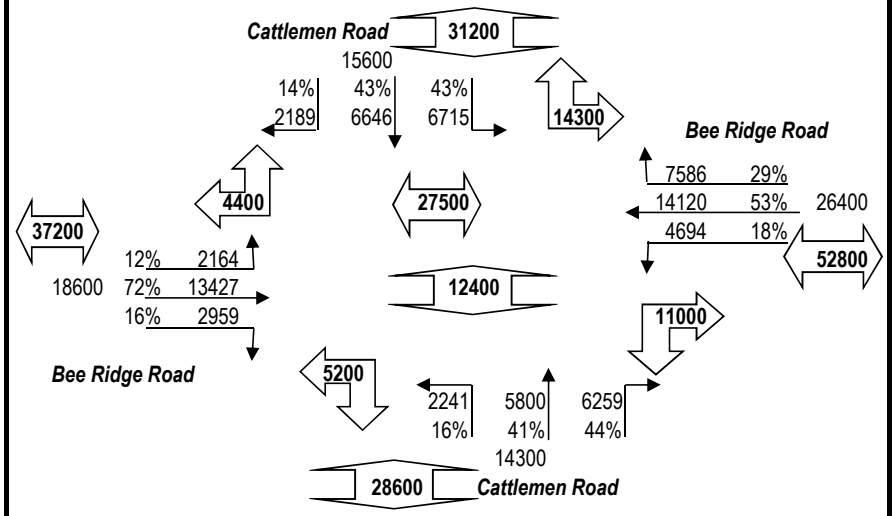
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.16	0.117	2200	0.105	2300	0.093	2600	0.085	2800
West-To-East (Thru)	0.69	0.724	13400	0.749	16800	0.774	21600	0.792	26400
West-To-South (RT)	0.15	0.160	3000	0.146	3300	0.133	3700	0.124	4100
Total Flow From West:			**18600**		**22400**		**27900**		**33300**
East-To-South (LT)	0.14	0.178	4700	0.176	5700	0.175	7100	0.174	8500
East-To-West (Thru)	0.53	0.535	14100	0.545	17600	0.555	22500	0.562	27500
East-To-North (RT)	0.33	0.287	7600	0.279	9000	0.270	10900	0.263	12900
Total Flow From East:			**26400**		**32300**		**40500**		**48900**
North-To-East (LT)	0.42	0.432	6700	0.460	8000	0.490	9800	0.513	11500
North-To-South (Thru)	0.41	0.427	6600	0.404	7000	0.378	7500	0.360	8100
North-To-West (RT)	0.17	0.141	2200	0.137	2400	0.132	2600	0.127	2900
Total Flow From North:			**15500**		**17400**		**19900**		**22500**
South-To-West (LT)	0.16	0.157	2200	0.153	2400	0.149	2700	0.144	3000
South-To-North (Thru)	0.48	0.406	5800	0.377	6000	0.347	6400	0.326	6700
South-To-East (RT)	0.36	0.438	6300	0.470	7500	0.504	9200	0.530	11000
Total Flow From South:			**14300**		**15900**		**18300**		**20700**

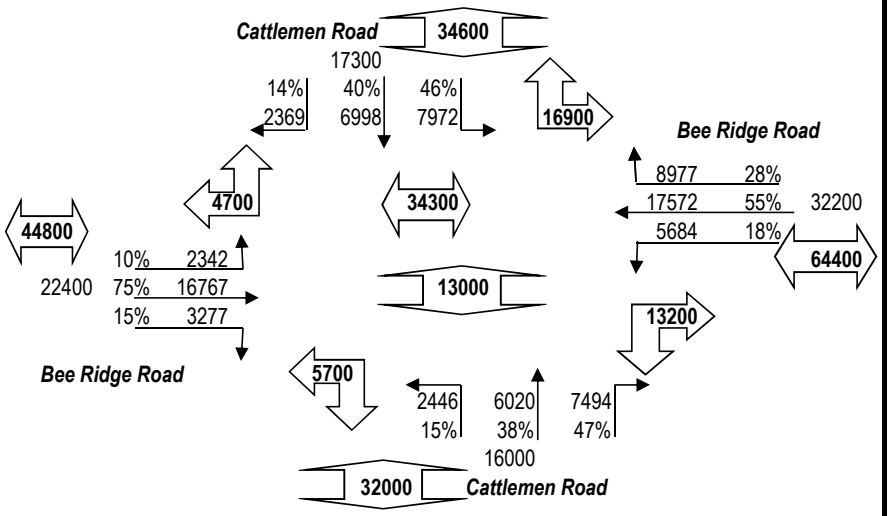
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO AM Peak

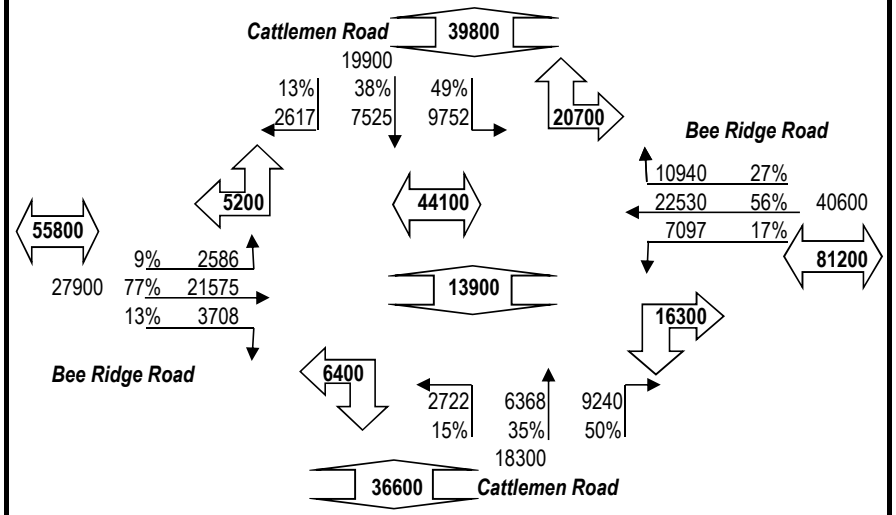
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



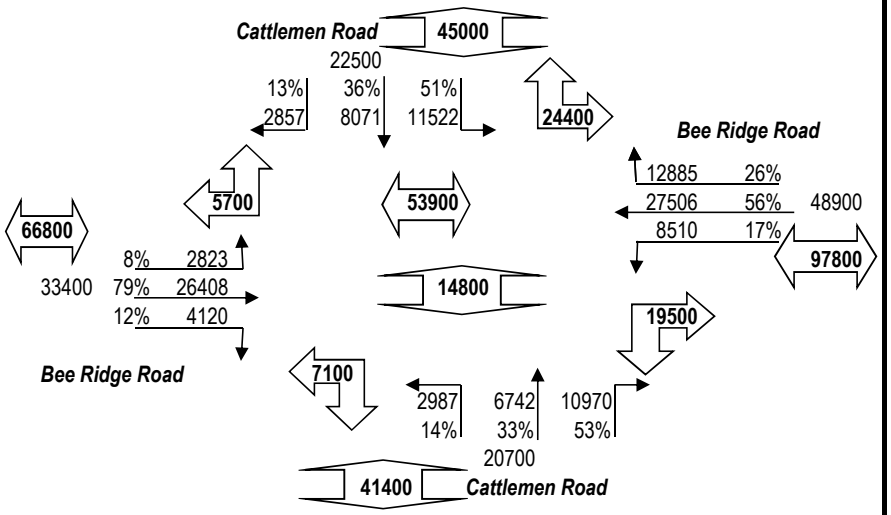
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

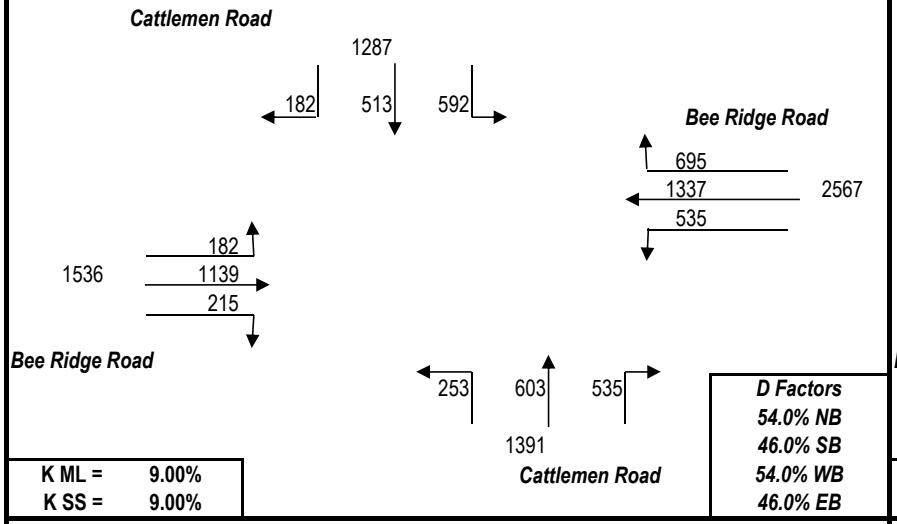


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO AM Peak

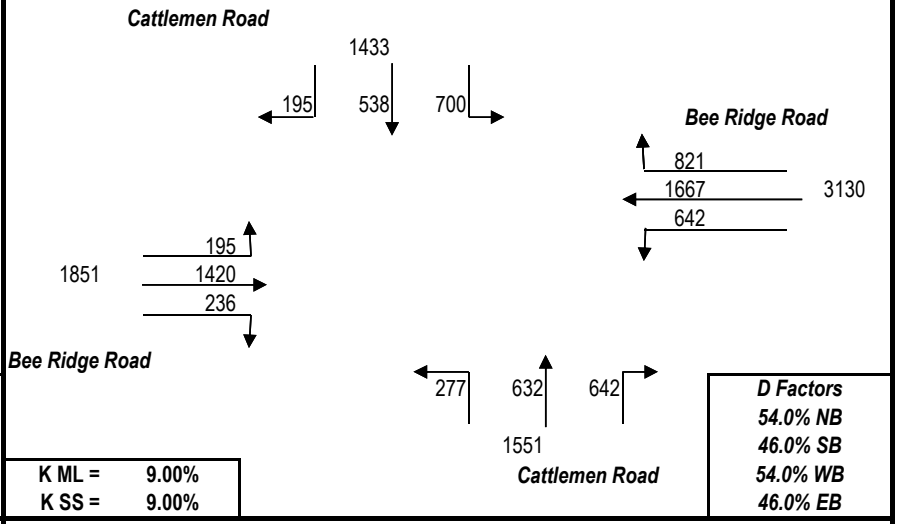
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

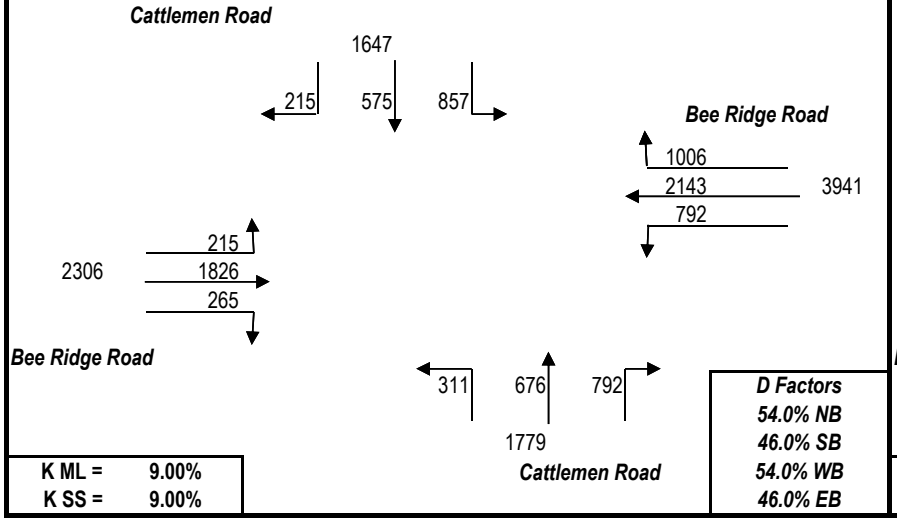
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

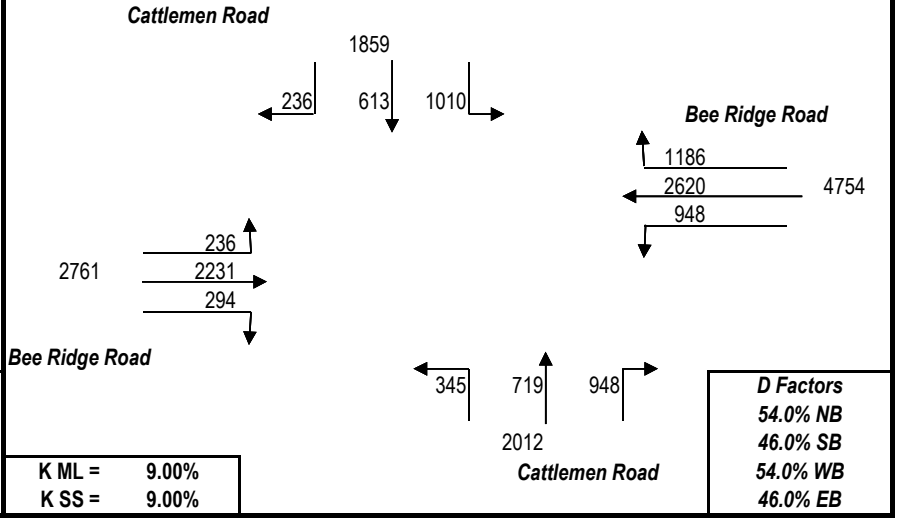
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

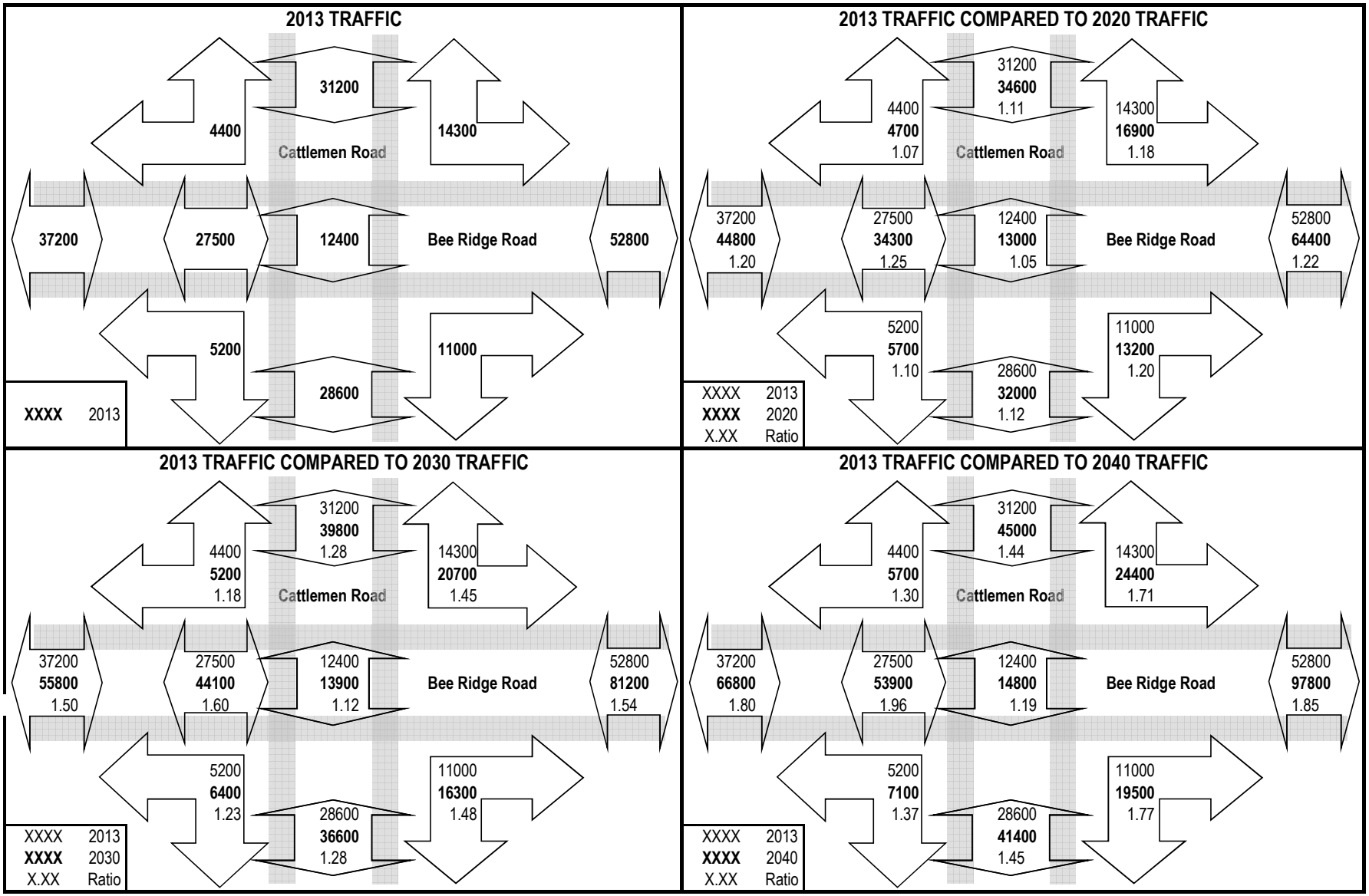
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

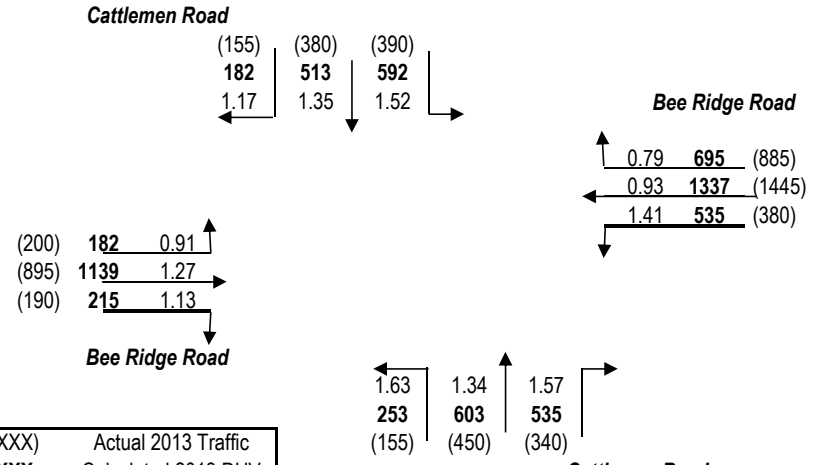
D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO AM Peak

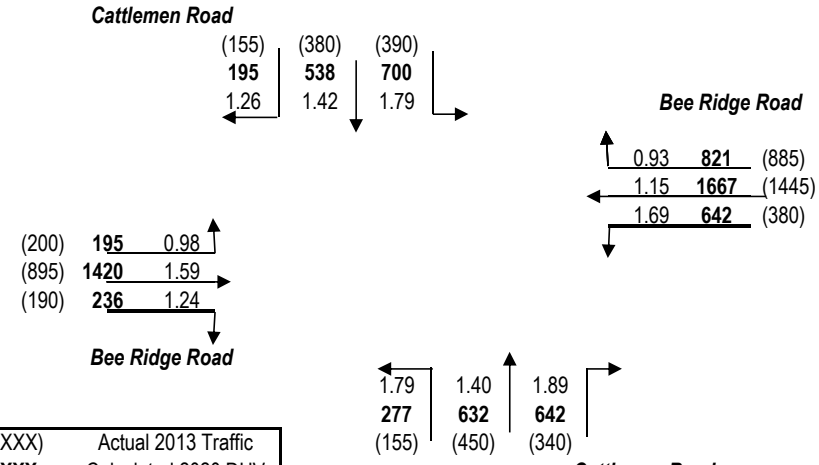


PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO AM Peak

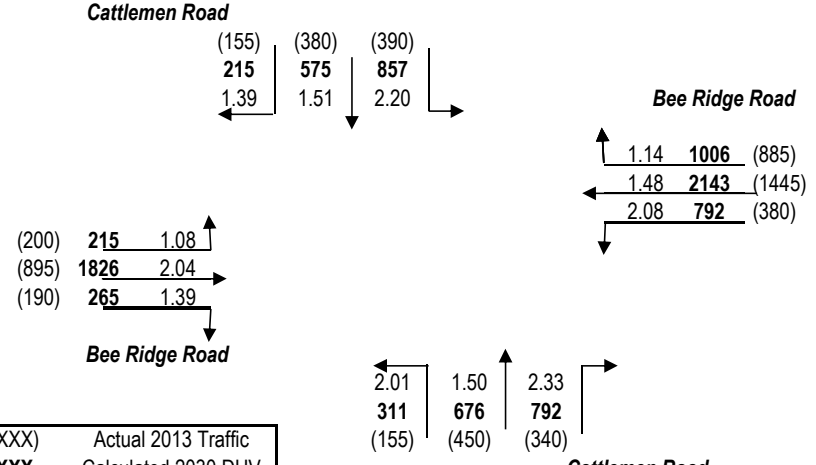
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



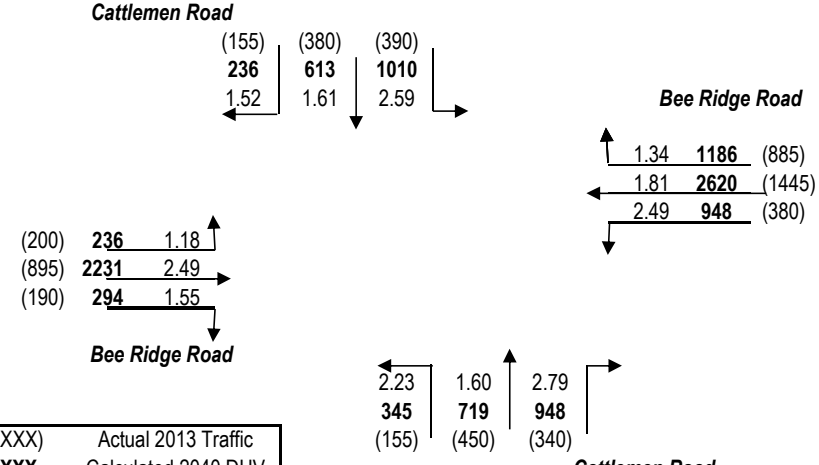
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	I-75 Interchange
Intersection:	Bee Ridge Road
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline	Sidestreet
9.00%	9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	52800	29200	28500	17500	128000
2040	97800	45000	42900	37600	223300

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	51%	820	
(EB THRU)	*West-to-East*	24%	390	
(EB RT)	*West-to-South*	25%	410	
(WB LT)	*East-to-South*	15%	225	(must be done manually)
(WB THRU)	*East-to-West*	52%	795	
(WB RT)	*East-to-North*	33%	505	
(SB LT)	*North-to-East*	18%	240	
(SB THRU)	*North-to-South*	0%	0	
(SB RT)	*North-to-West*	82%	1090	
(NB LT)	*South-to-West*	83%	825	
(NB THRU)	*South-to-North*	0%	0	
(NB RT)	*South-to-East*	17%	165	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

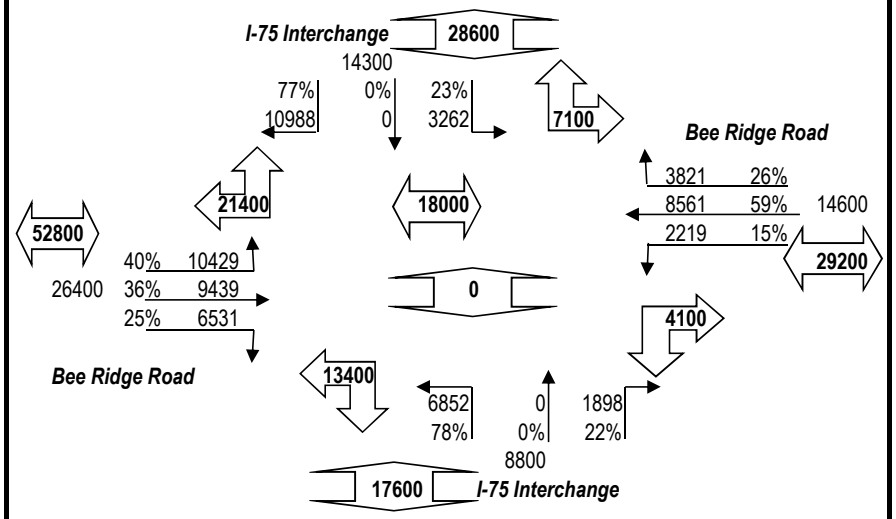
Highway:	I-75 Interchange	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.51	0.395	10400	0.380	12200	0.365	14800	0.354	17300
West-To-East (Thru)	0.24	0.358	9400	0.347	11200	0.338	13700	0.332	16200
West-To-South (RT)	0.25	0.247	6500	0.273	8800	0.297	12100	0.315	15400
Total Flow From West:			**26300**		**32200**		**40600**		**48900**
East-To-South (LT)	0.15	0.152	2200	0.154	2600	0.154	3000	0.152	3400
East-To-West (Thru)	0.52	0.586	8600	0.613	10200	0.642	12600	0.664	14900
East-To-North (RT)	0.33	0.262	3800	0.232	3900	0.204	4000	0.184	4100
Total Flow From East:			**14600**		**16700**		**19600**		**22400**
North-To-East (LT)	0.18	0.229	3300	0.203	3300	0.178	3300	0.160	3400
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.82	0.771	11000	0.797	12800	0.822	15400	0.840	18000
Total Flow From North:			**14300**		**16100**		**18700**		**21400**
South-To-West (LT)	0.83	0.783	6900	0.808	9200	0.832	12500	0.849	16000
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.17	0.217	1900	0.192	2200	0.168	2500	0.151	2800
Total Flow From South:			**8800**		**11400**		**15000**		**18800**

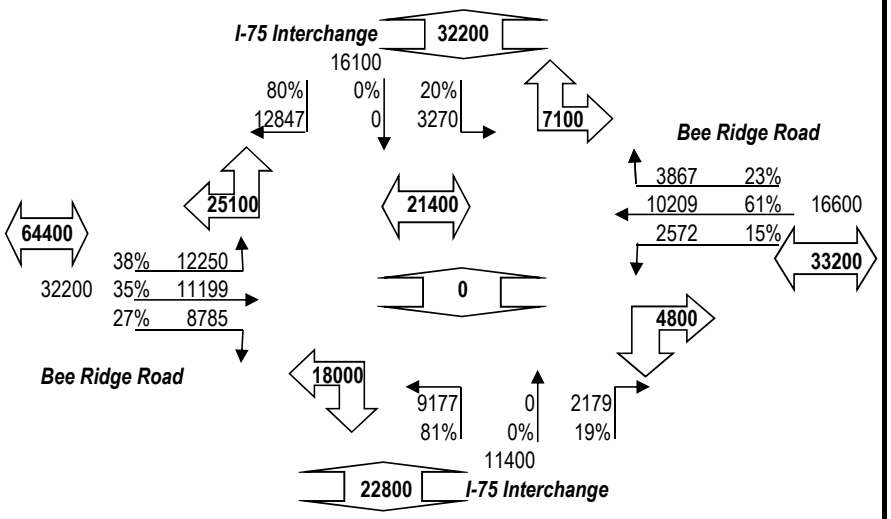
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO AM Peak

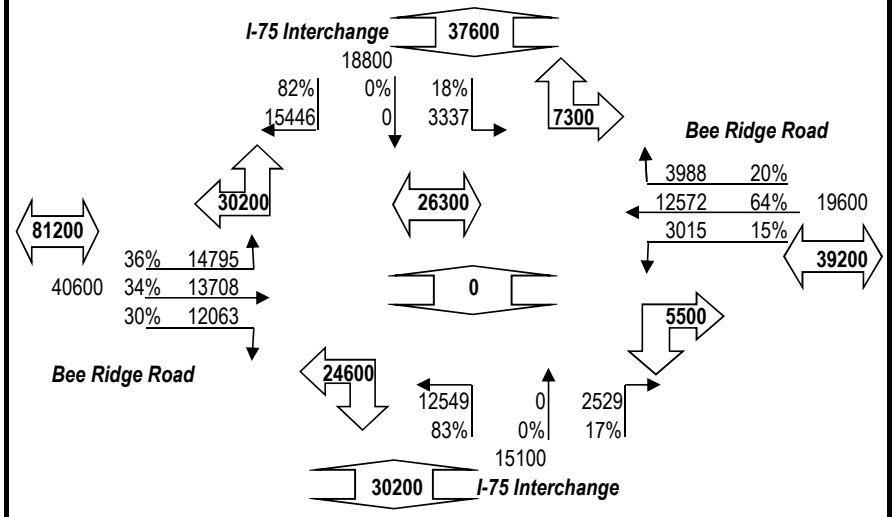
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



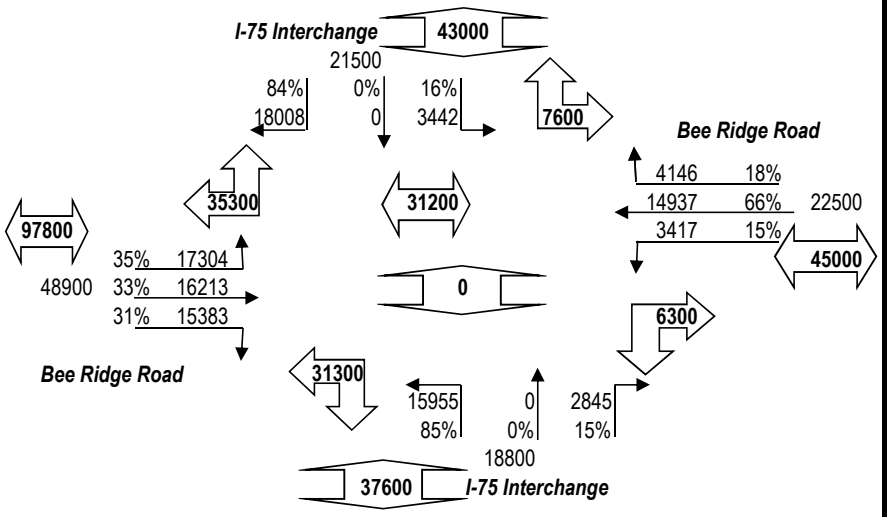
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

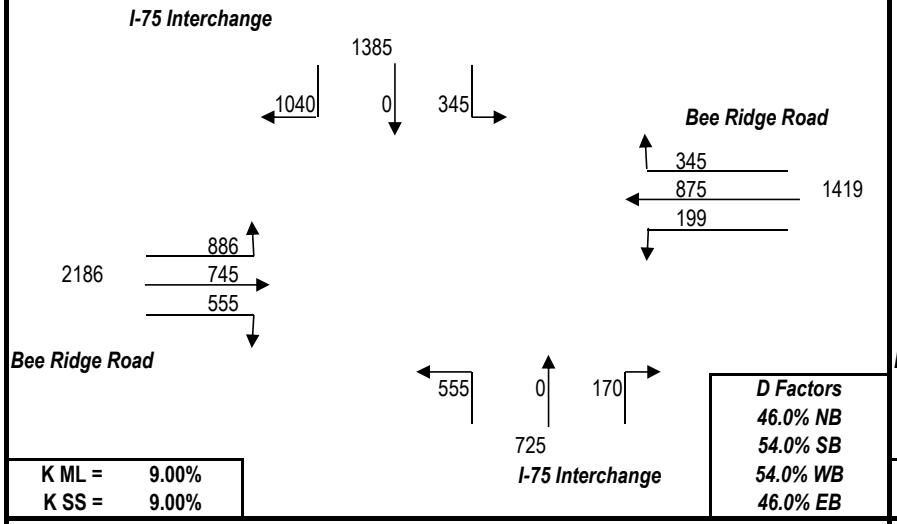


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO AM Peak

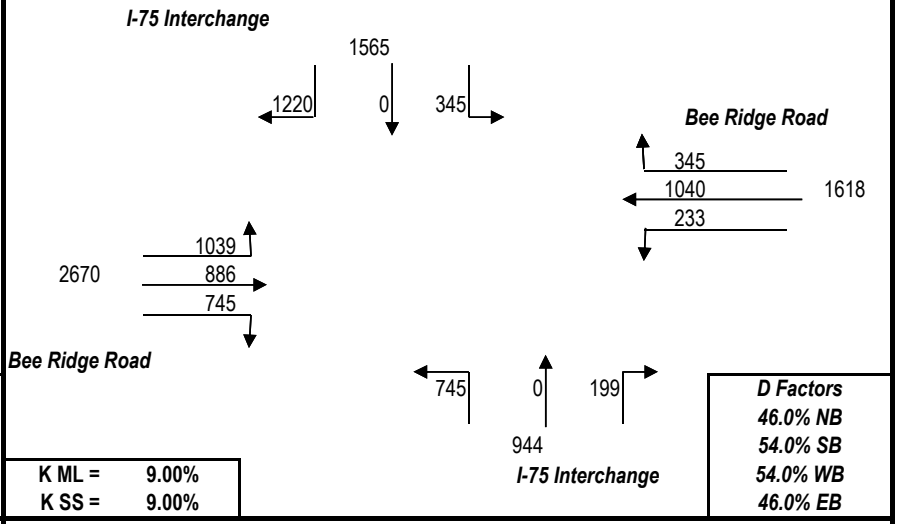
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

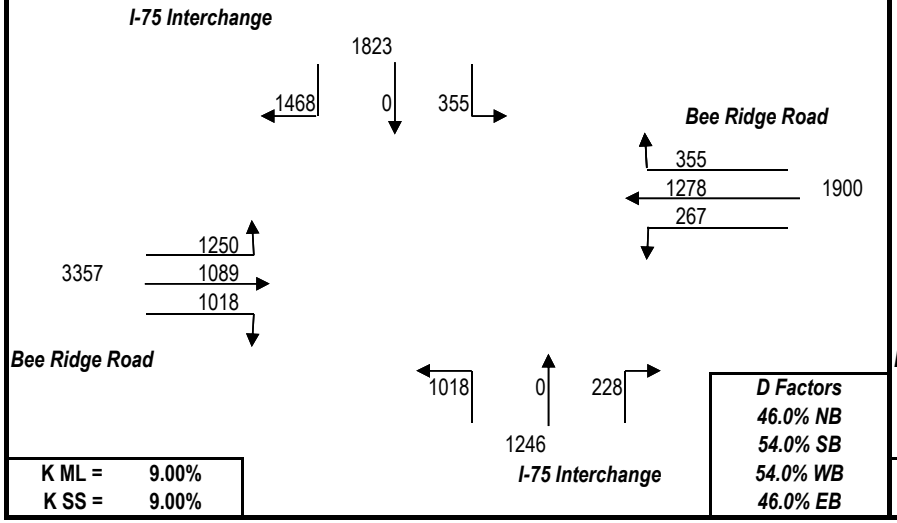
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

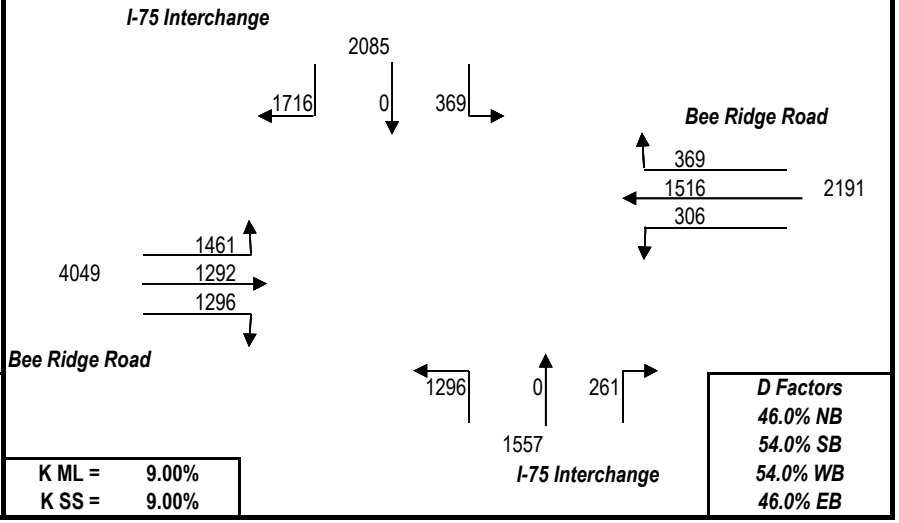
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

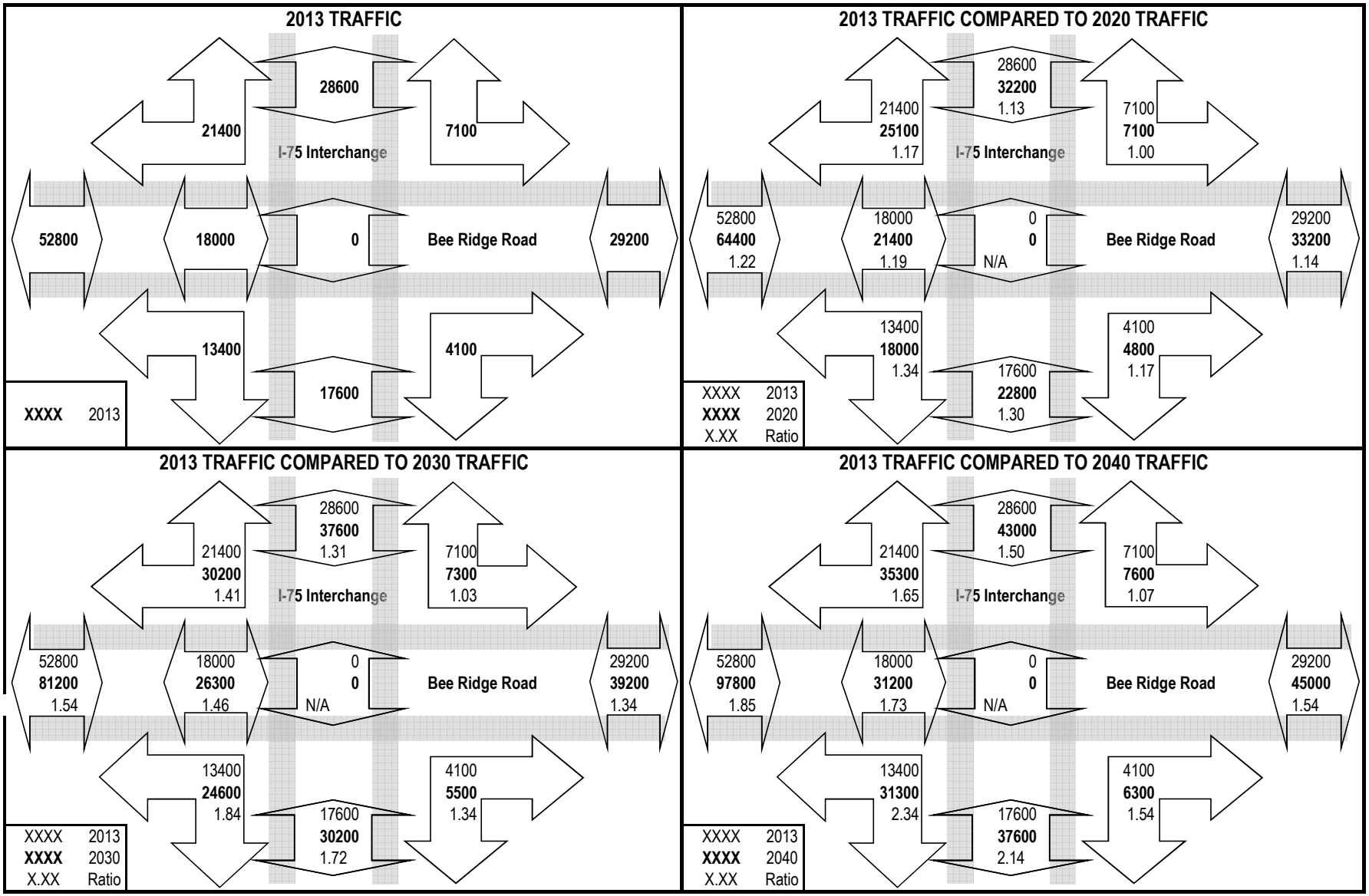
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

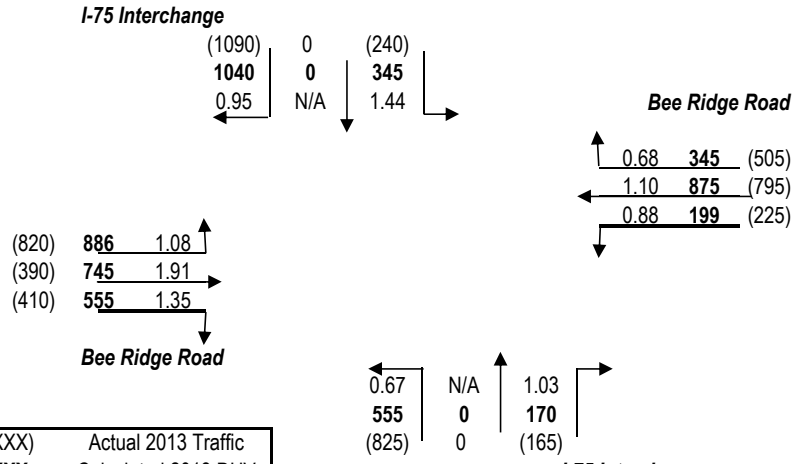
D Factors
46.0% NB
54.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO AM Peak

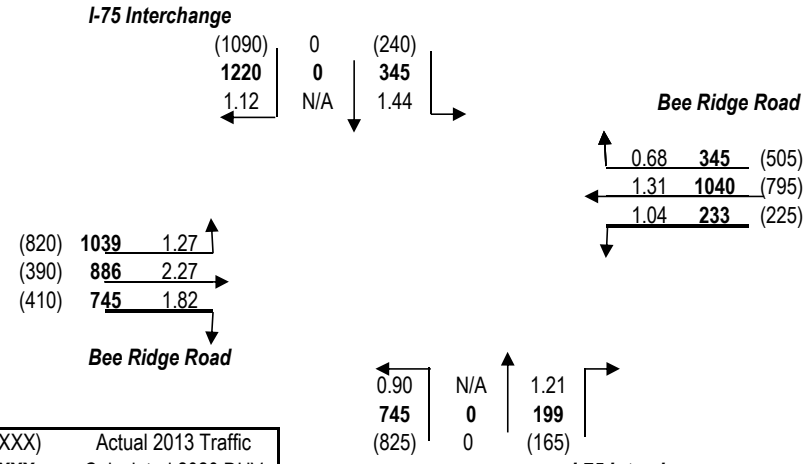


PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO AM Peak

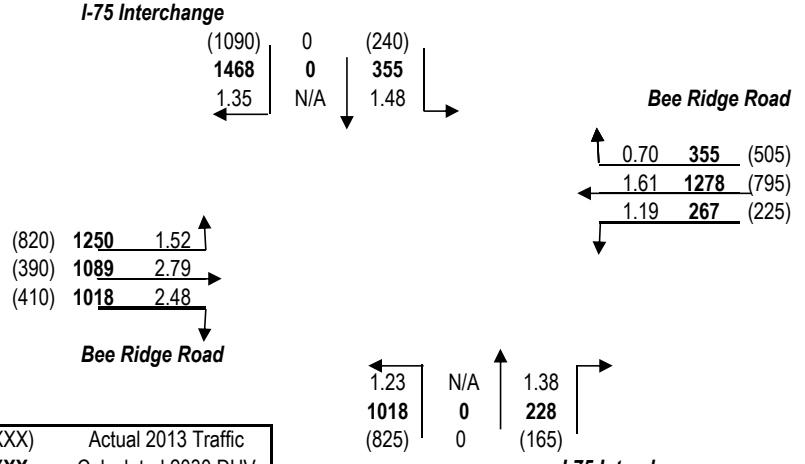
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



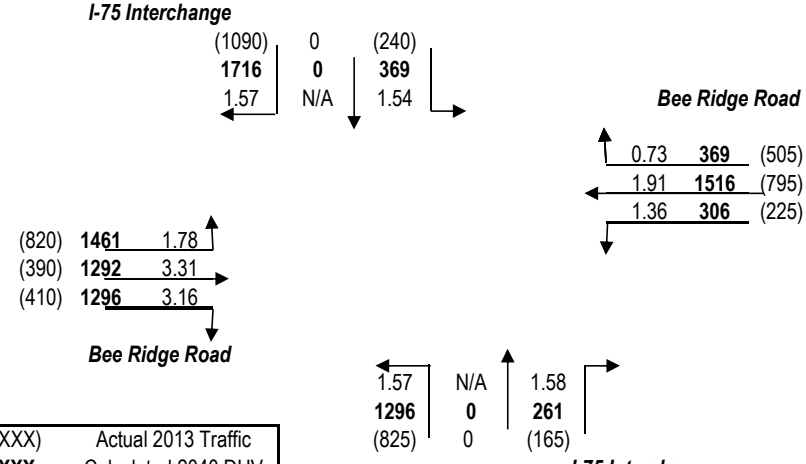
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Mauna Loa Boulevard
Intersection:	Bee Ridge Road
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
54.0%	Northbound (NB)
46.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	27900	18600	2600	8200	57300
2040	40300	26900	2600	8200	78000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	19%	155	
(EB THRU)	*West-to-East*	65%	530	
(EB RT)	*West-to-South*	16%	130	
(WB LT)	*East-to-South*	1%	10	(must be done manually)
(WB THRU)	*East-to-West*	98%	975	
(WB RT)	*East-to-North*	1%	5	
(SB LT)	*North-to-East*	8%	5	
(SB THRU)	*North-to-South*	8%	5	
(SB RT)	*North-to-West*	84%	60	
(NB LT)	*South-to-West*	95%	495	
(NB THRU)	*South-to-North*	1%	5	
(NB RT)	*South-to-East*	4%	20	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

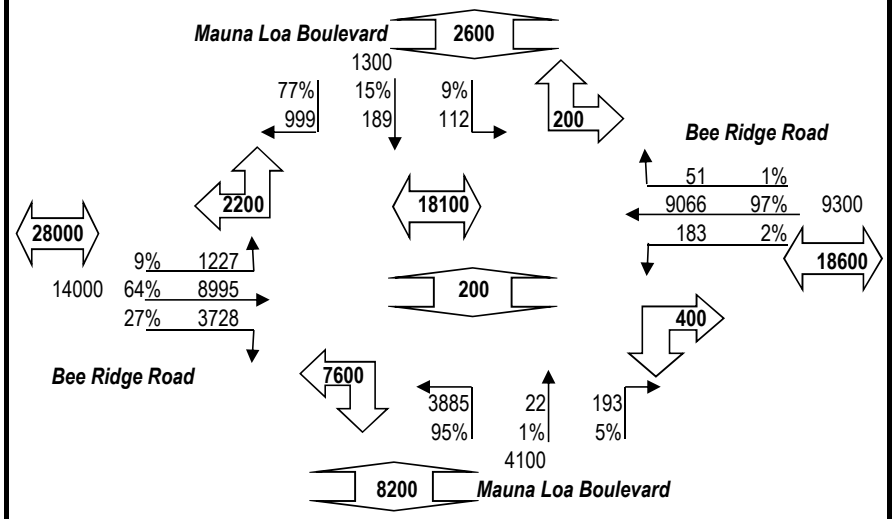
Highway:	Mauna Loa Boulevard	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.19	0.088	1200	0.082	1300	0.080	1400	0.073	1500
West-To-East (Thru)	0.65	0.645	9000	0.661	10300	0.724	12900	0.747	15100
West-To-South (RT)	0.16	0.267	3700	0.257	4000	0.195	3500	0.180	3600
Total Flow From West:			**13900**		**15600**		**17800**		**20200**
East-To-South (LT)	0.01	0.020	200	0.005	100	0.025	300	0.022	300
East-To-West (Thru)	0.98	0.975	9100	0.994	10300	0.966	11500	0.970	13000
East-To-North (RT)	0.01	0.005	100	0.001	0	0.009	100	0.008	100
Total Flow From East:			**9400**		**10400**		**11900**		**13400**
North-To-East (LT)	0.08	0.086	100	0.028	0	0.151	200	0.153	200
North-To-South (Thru)	0.08	0.145	200	0.044	100	0.165	200	0.149	200
North-To-West (RT)	0.84	0.769	1000	0.928	1200	0.684	900	0.698	900
Total Flow From North:			**1300**		**1300**		**1300**		**1300**
South-To-West (LT)	0.95	0.948	3900	0.986	4000	0.904	3700	0.905	3700
South-To-North (Thru)	0.01	0.005	0	0.001	0	0.008	0	0.007	0
South-To-East (RT)	0.04	0.047	200	0.013	100	0.088	400	0.088	400
Total Flow From South:			**4100**		**4100**		**4100**		**4100**

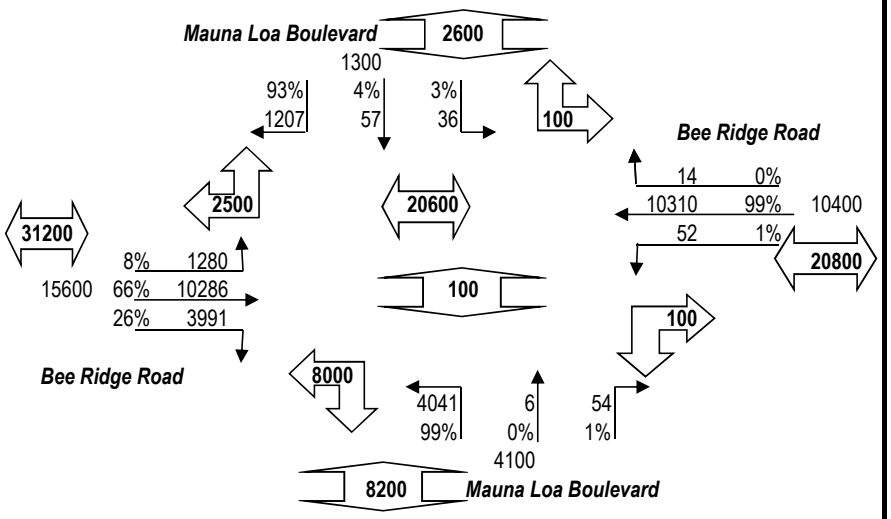
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO AM Peak

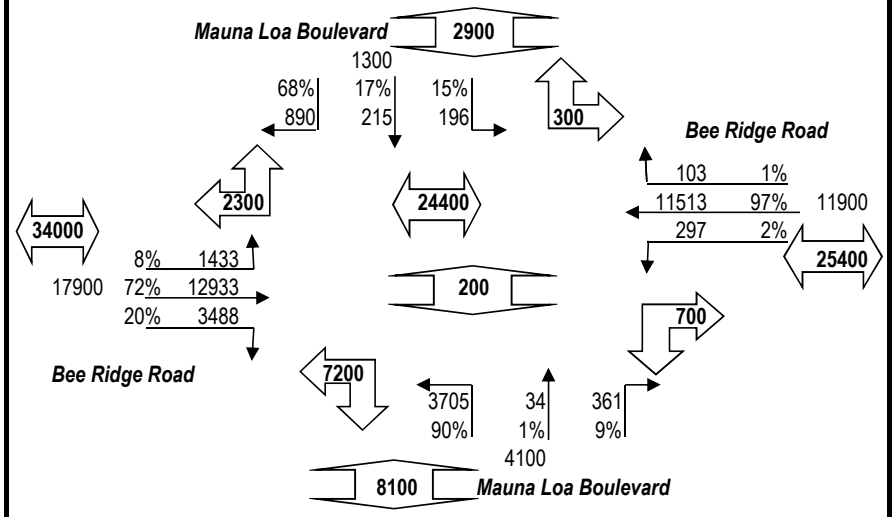
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



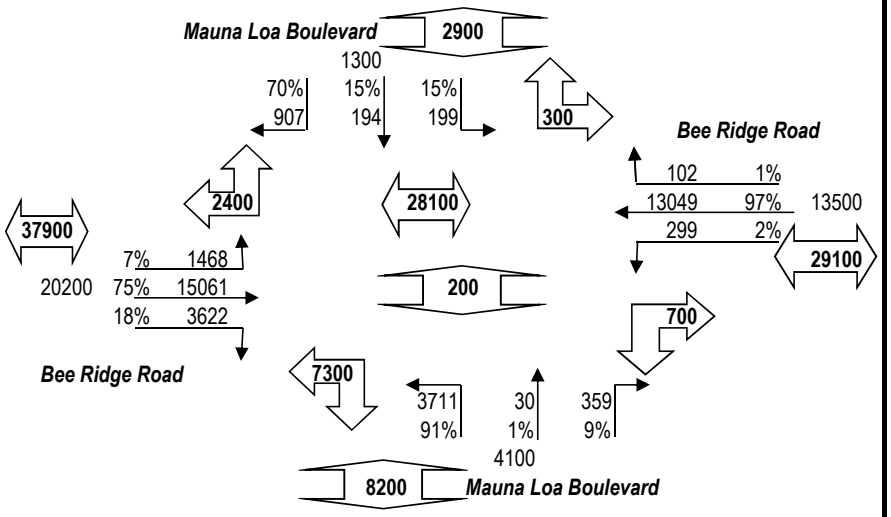
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

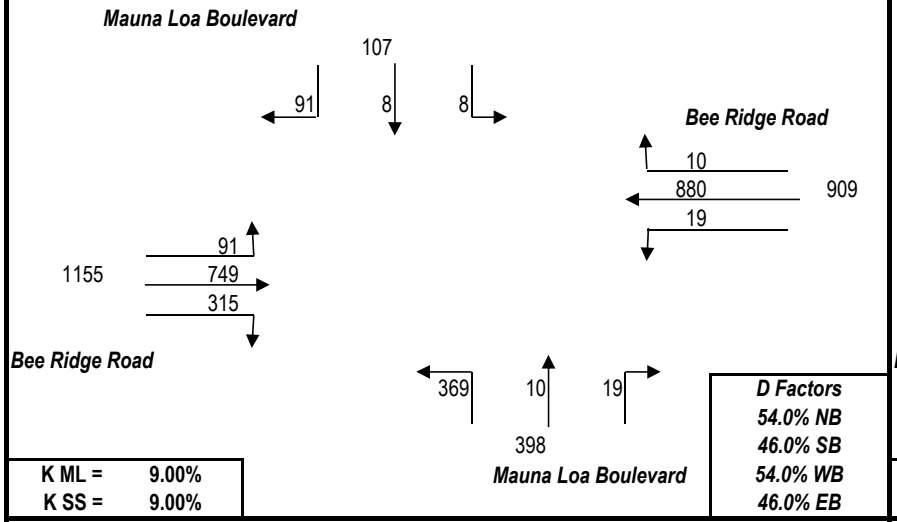


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO AM Peak

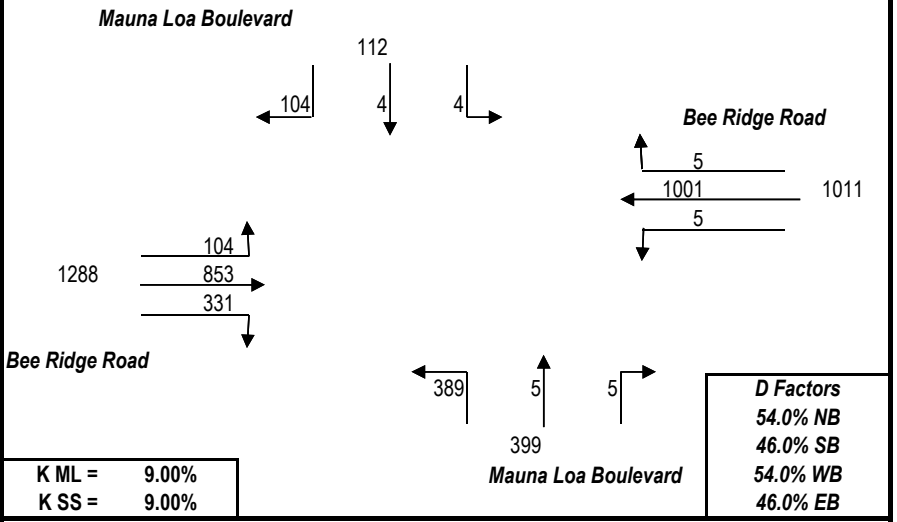
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

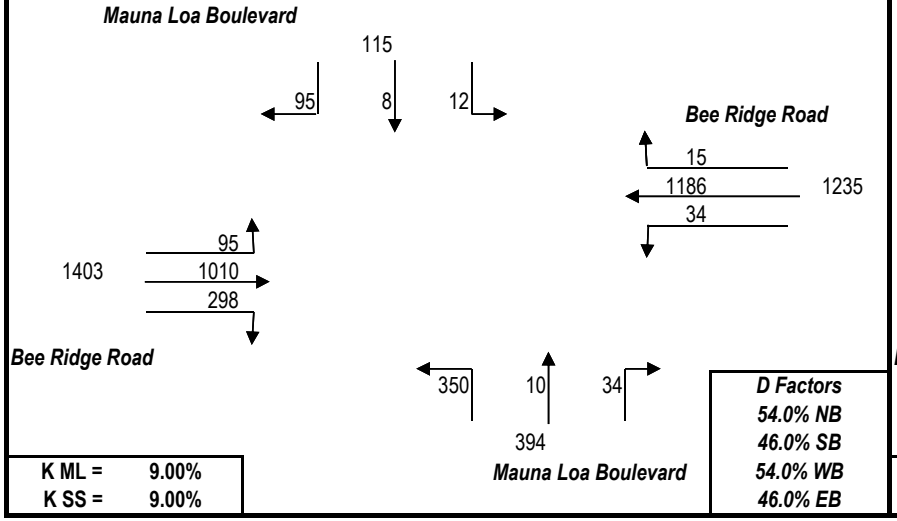
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

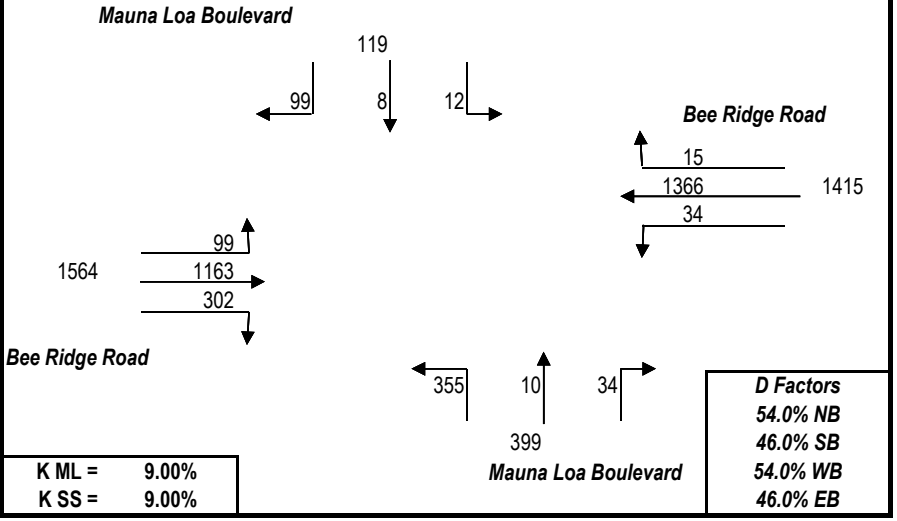
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

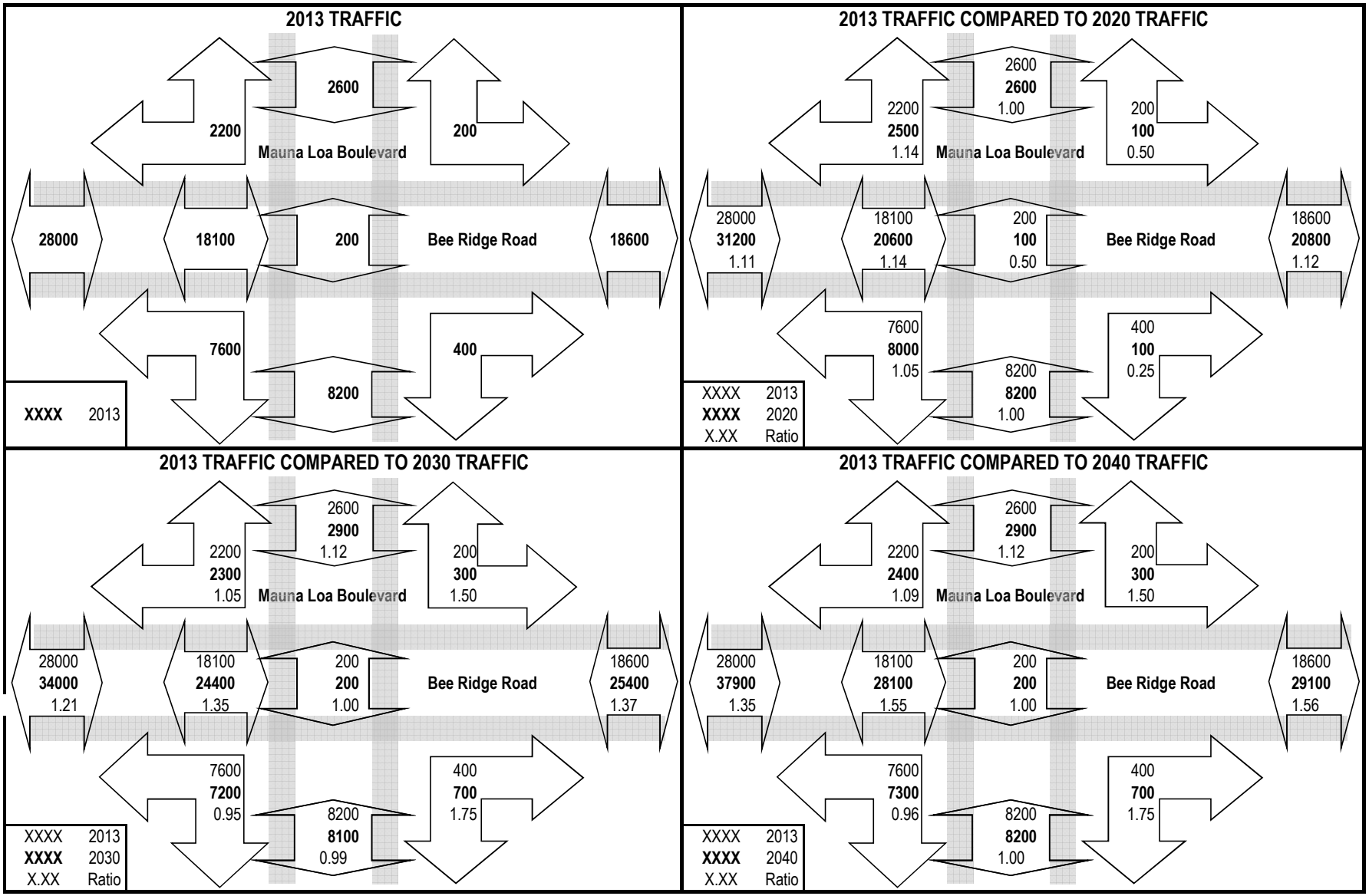
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

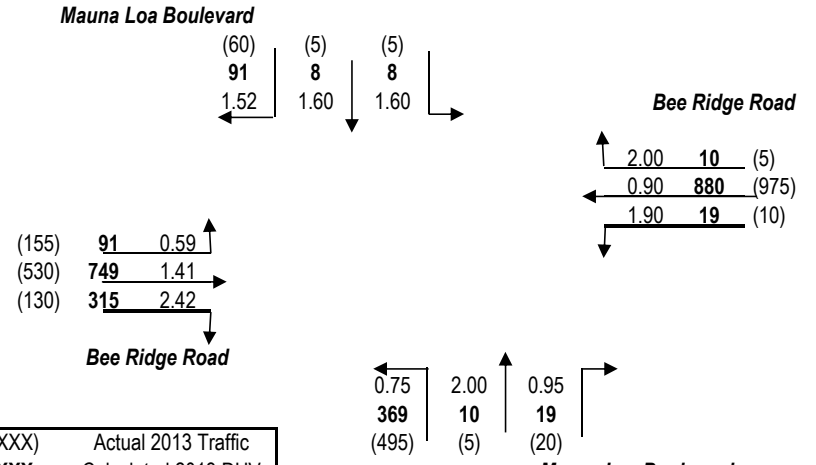
D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO AM Peak



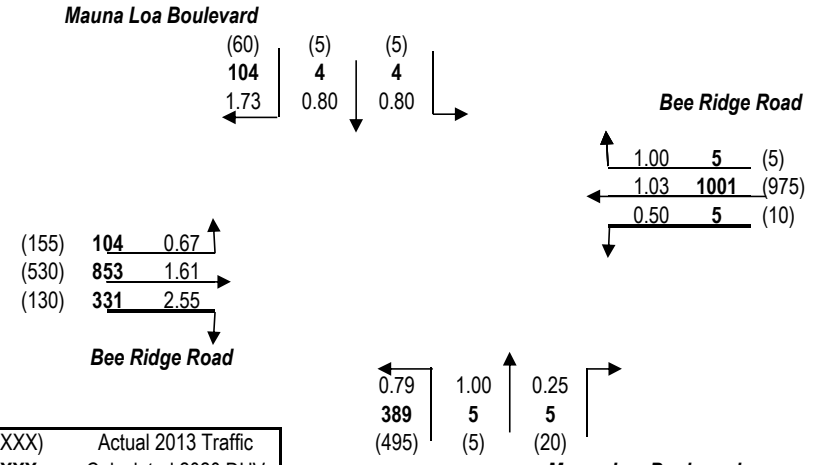
PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO AM Peak

2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



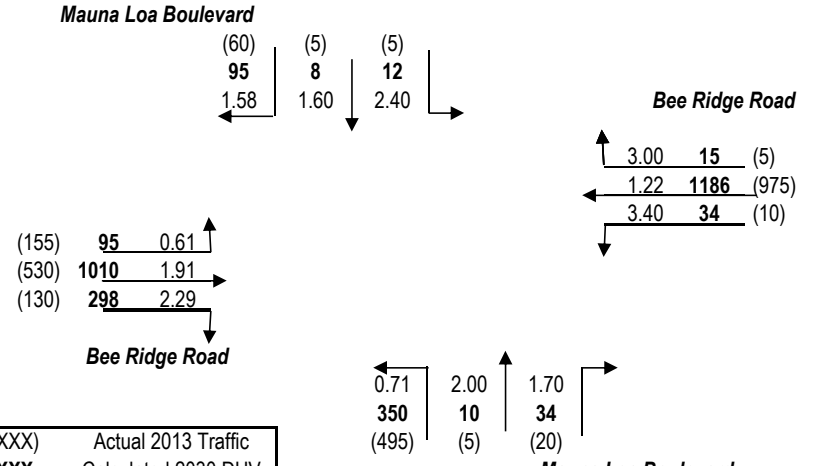
(XXX)	Actual 2013 Traffic
XXX	Calculated 2013 DHV
X.XX	Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



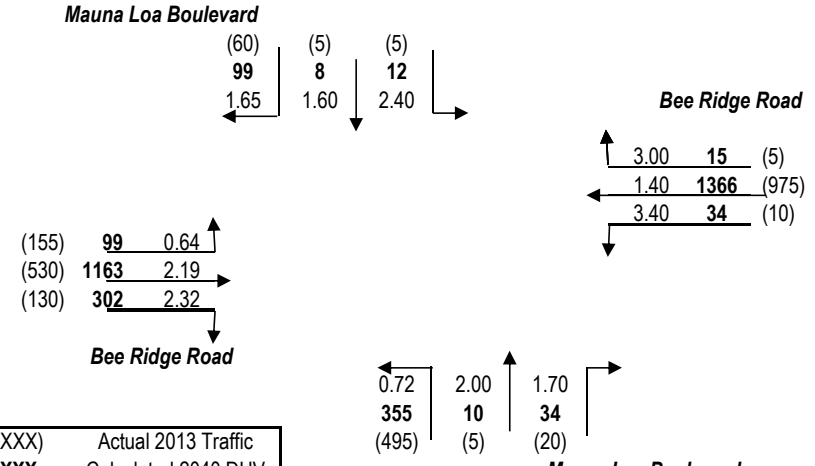
(XXX)	Actual 2013 Traffic
XXX	Calculated 2020 DHV
X.XX	Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



(XXX)	Actual 2013 Traffic
XXX	Calculated 2030 DHV
X.XX	Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



(XXX)	Actual 2013 Traffic
XXX	Calculated 2040 DHV
X.XX	Ratio

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	6-Feb-14
Highway:	Cattlemen Road
Intersection:	Center Pointe Drive
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
54.0%	Northbound (NB)
46.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	2900	4900	20400	22400	50600
2040	2900	4900	31800	32400	72000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	53%	35	
(EB THRU)	*West-to-East*	7%	5	
(EB RT)	*West-to-South*	40%	25	
(WB LT)	*East-to-South*	42%	80	(must be done manually)
(WB THRU)	*East-to-West*	10%	20	
(WB RT)	*East-to-North*	48%	95	
(SB LT)	*North-to-East*	18%	115	
(SB THRU)	*North-to-South*	81%	510	
(SB RT)	*North-to-West*	1%	10	
(NB LT)	*South-to-West*	6%	50	
(NB THRU)	*South-to-North*	87%	765	
(NB RT)	*South-to-East*	7%	55	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

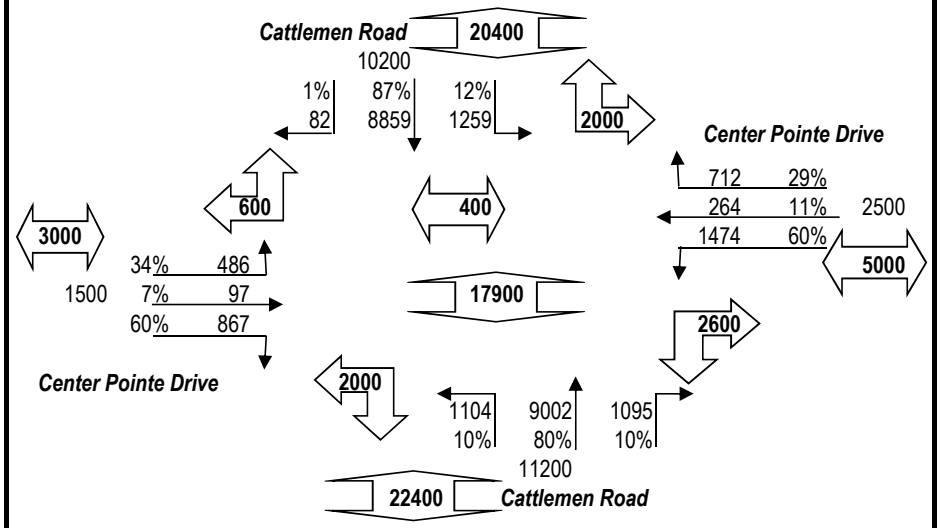
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Center Pointe Drive		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	6-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.53	0.335	500	0.366	500	0.409	600	0.452	700
West-To-East (Thru)	0.07	0.067	100	0.059	100	0.050	100	0.043	100
West-To-South (RT)	0.40	0.598	900	0.575	800	0.540	800	0.504	700
Total Flow From West:			**1500**		**1400**		**1500**		**1500**
East-To-South (LT)	0.42	0.601	1500	0.579	1400	0.546	1300	0.512	1300
East-To-West (Thru)	0.10	0.108	300	0.102	300	0.096	200	0.092	200
East-To-North (RT)	0.48	0.291	700	0.318	800	0.357	900	0.396	1000
Total Flow From East:			**2500**		**2500**		**2400**		**2500**
North-To-East (LT)	0.18	0.123	1300	0.115	1300	0.105	1500	0.098	1600
North-To-South (Thru)	0.81	0.869	8900	0.877	10200	0.887	12200	0.894	14200
North-To-West (RT)	0.01	0.008	100	0.008	100	0.008	100	0.008	100
Total Flow From North:			**10300**		**11600**		**13800**		**15900**
South-To-West (LT)	0.06	0.099	1100	0.088	1100	0.077	1100	0.067	1100
South-To-North (Thru)	0.87	0.804	9000	0.830	10400	0.859	12300	0.881	14300
South-To-East (RT)	0.07	0.098	1100	0.082	1000	0.065	900	0.051	800
Total Flow From South:			**11200**		**12500**		**14300**		**16200**

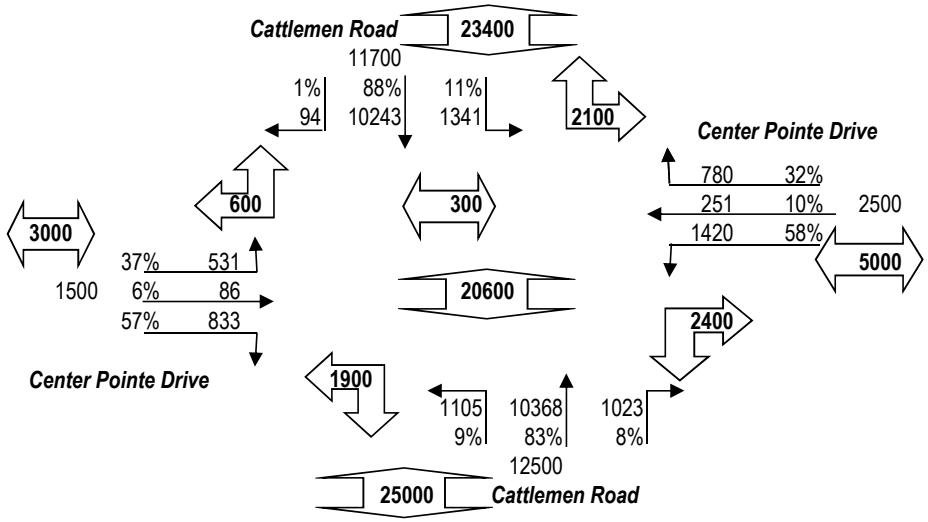
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO AM Peak

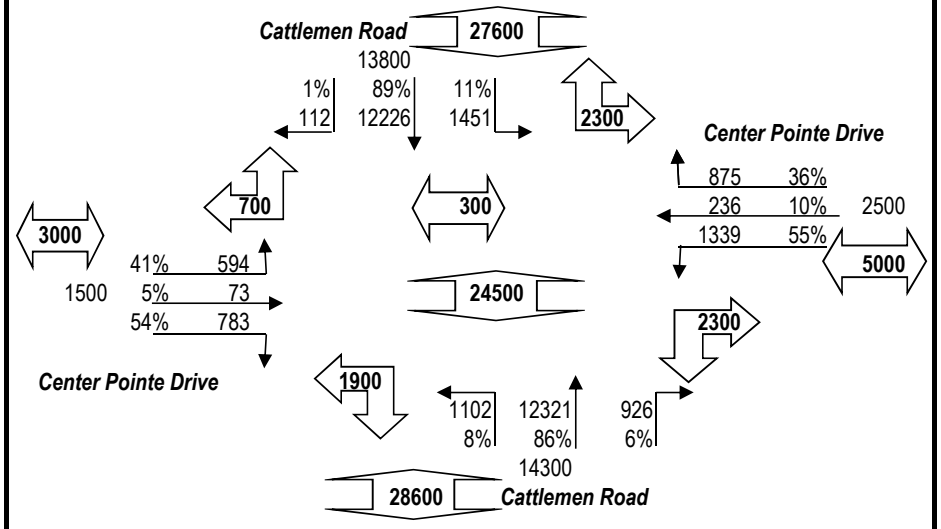
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



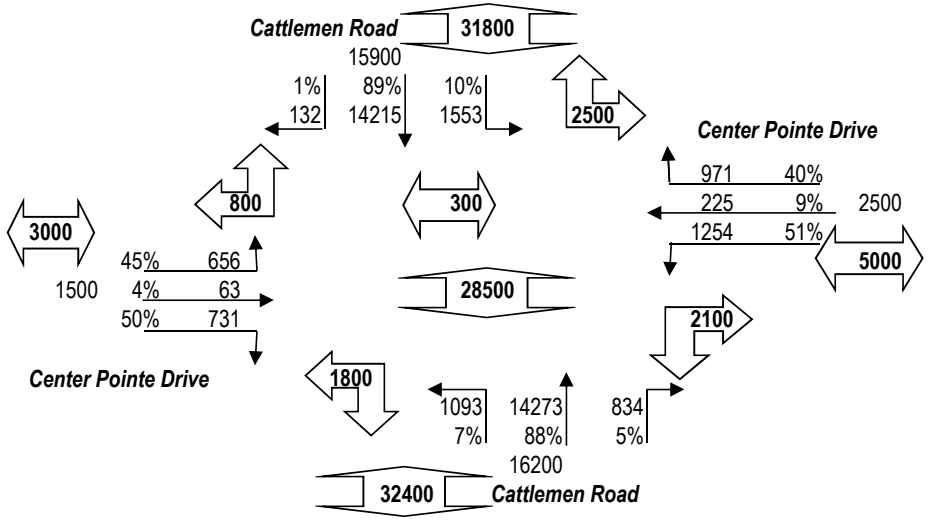
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

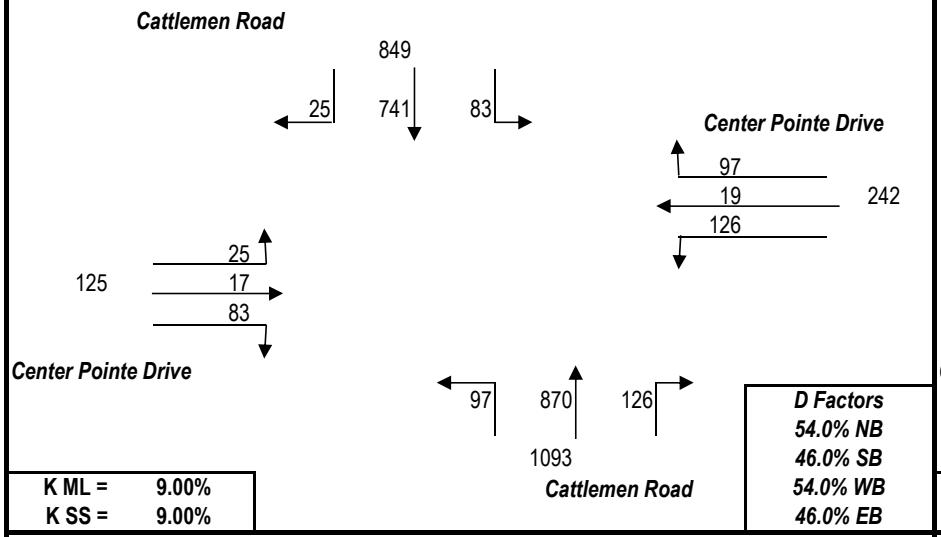


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO AM Peak

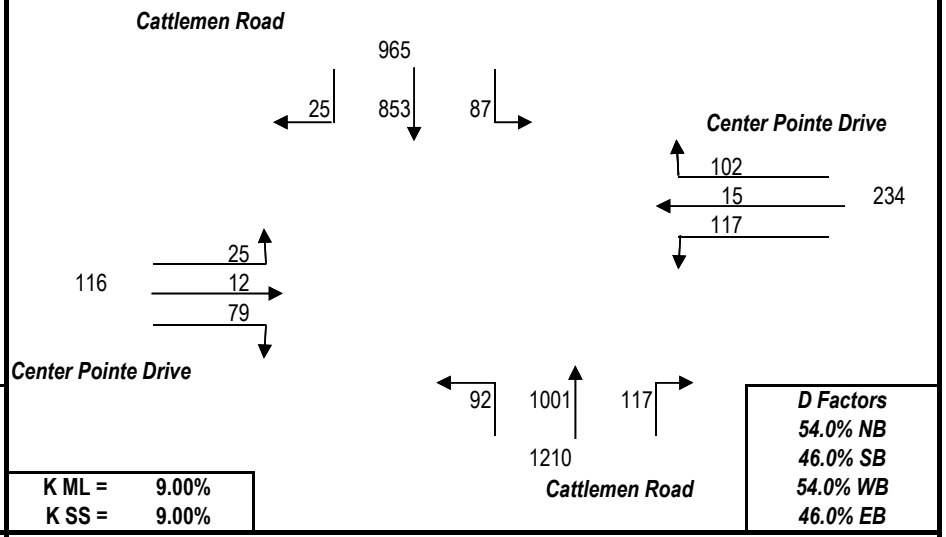
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

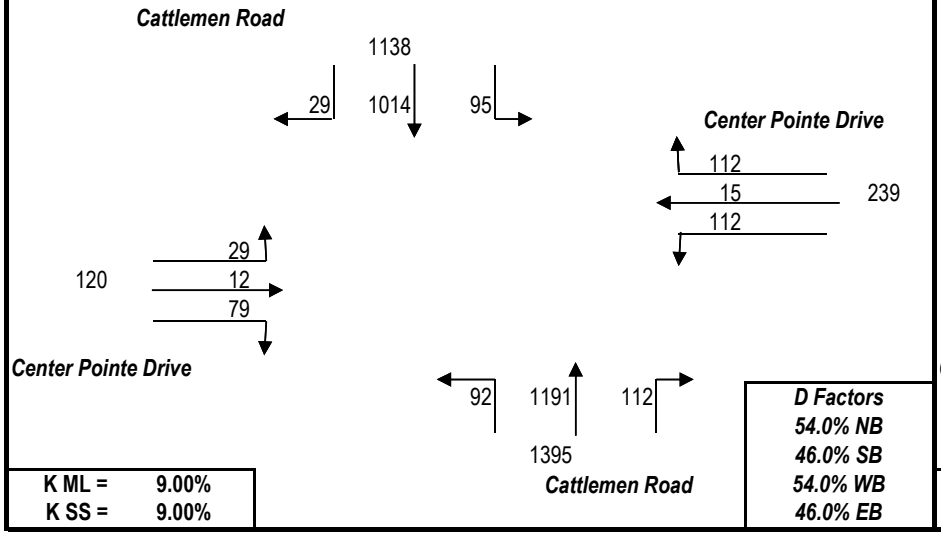
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

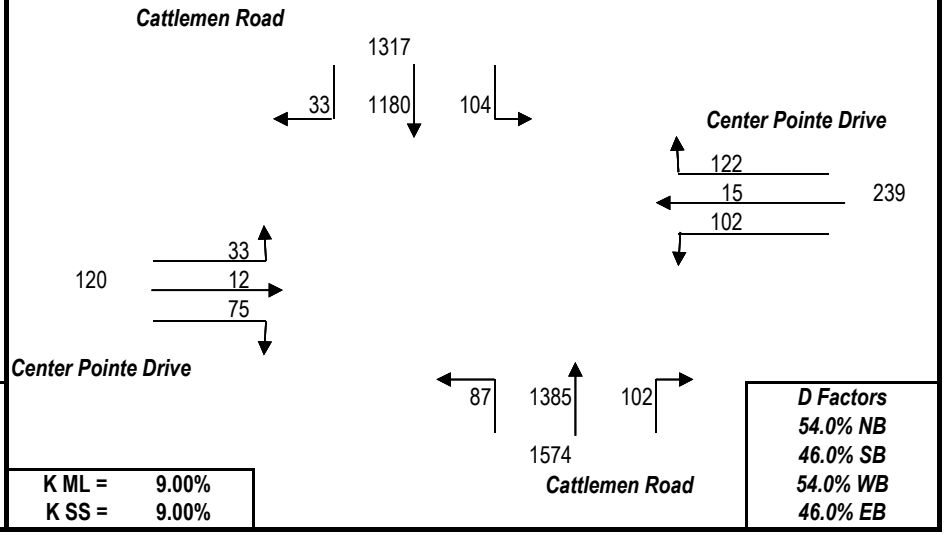
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040

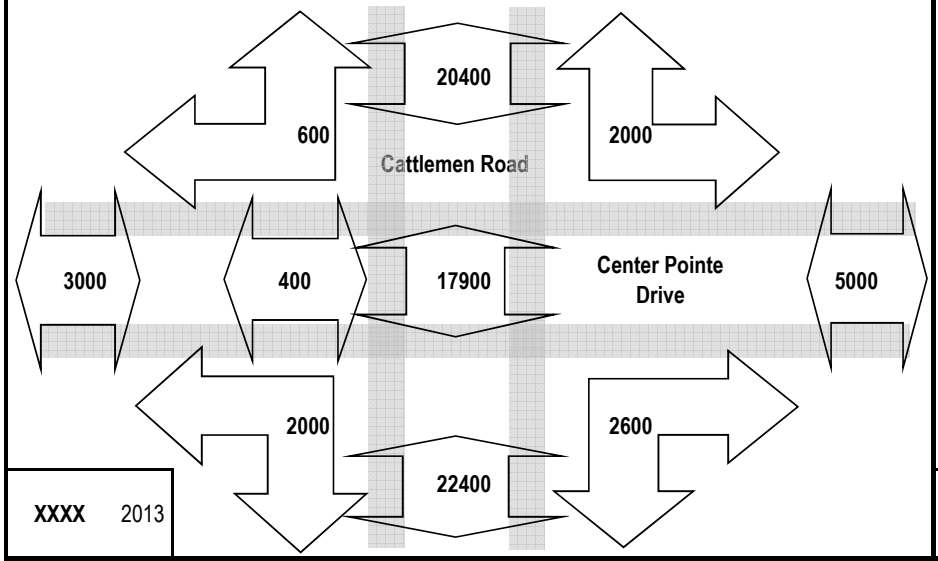


K ML =	9.00%
K SS =	9.00%

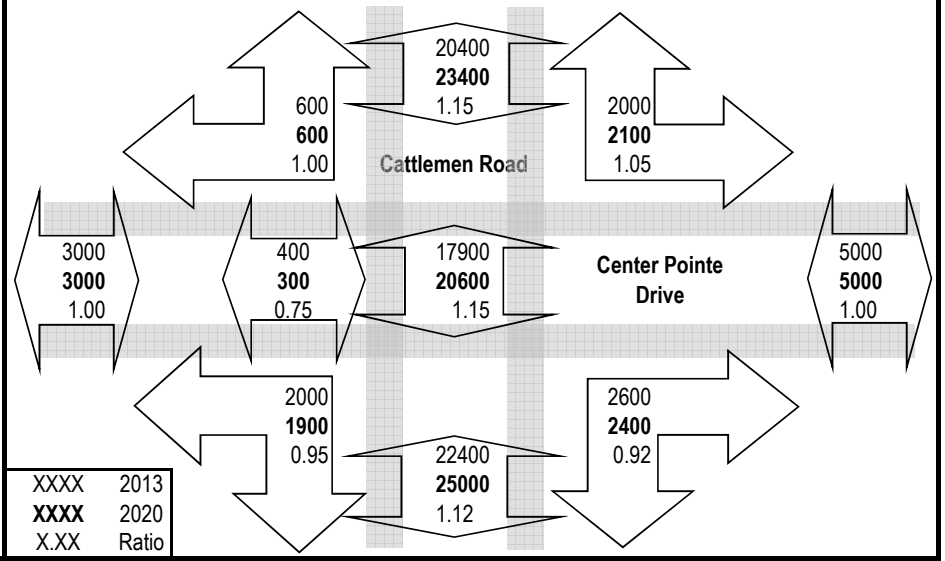
D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO AM Peak

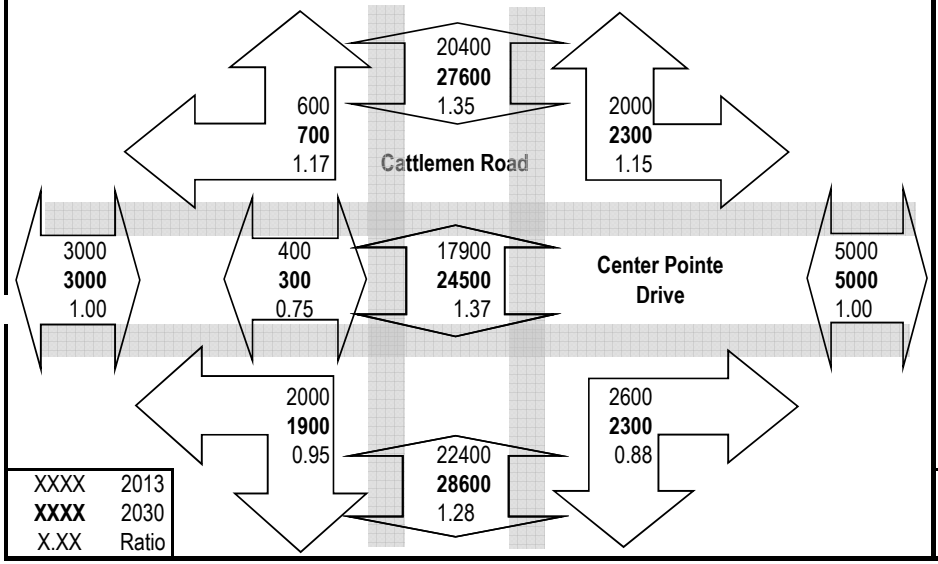
2013 TRAFFIC



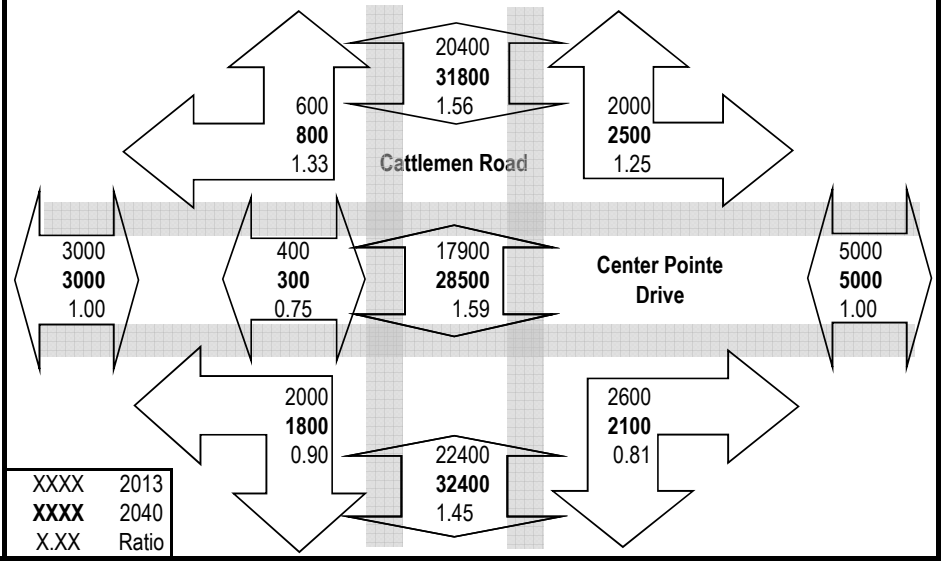
2013 TRAFFIC COMPARED TO 2020 TRAFFIC



2013 TRAFFIC COMPARED TO 2030 TRAFFIC

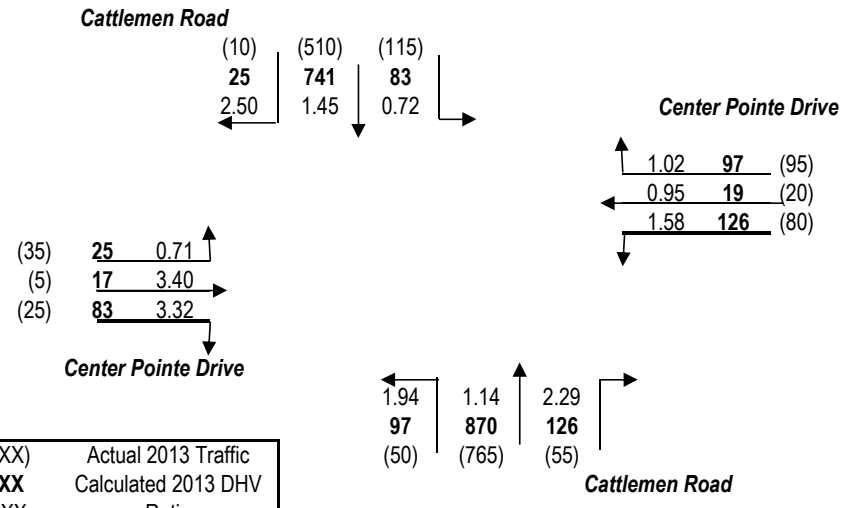


2013 TRAFFIC COMPARED TO 2040 TRAFFIC



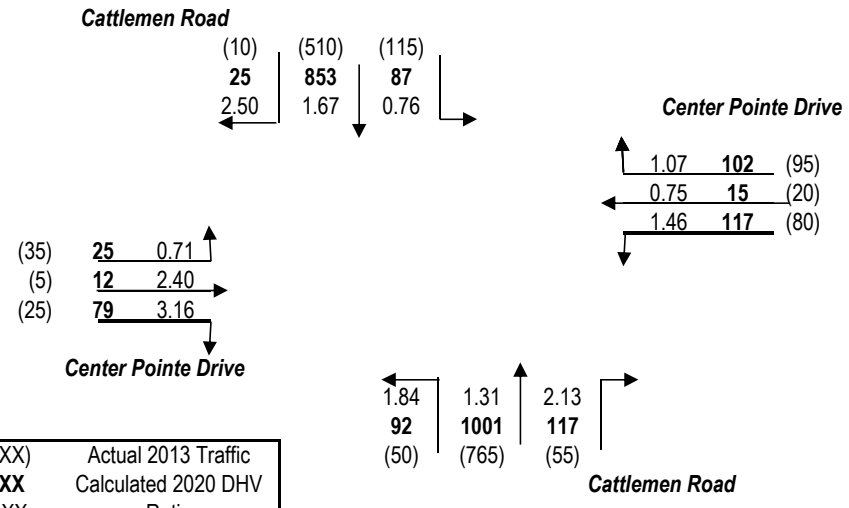
PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO AM Peak

2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



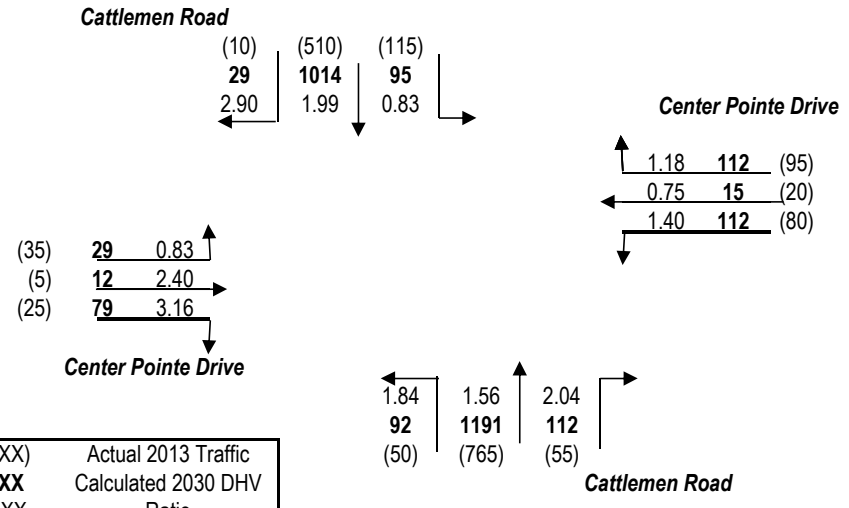
(XXX)	Actual 2013 Traffic
XXX	Calculated 2013 DHV
X.XX	Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



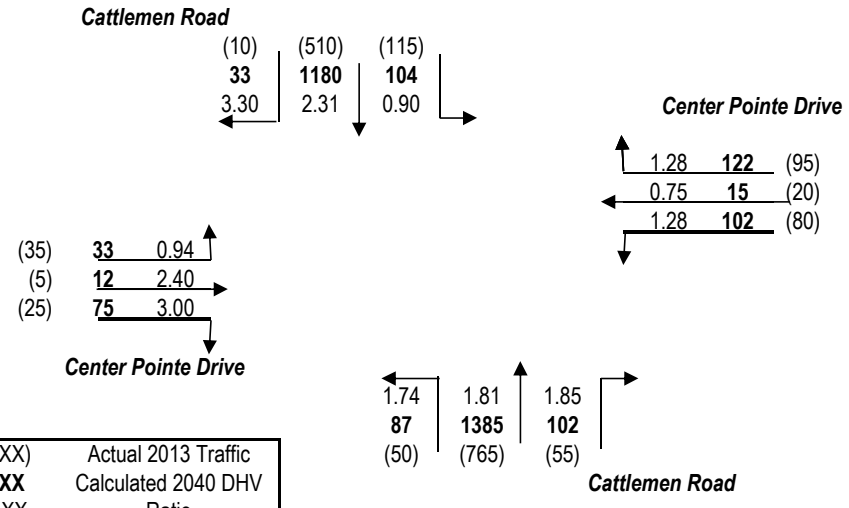
(XXX)	Actual 2013 Traffic
XXX	Calculated 2020 DHV
X.XX	Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



(XXX)	Actual 2013 Traffic
XXX	Calculated 2030 DHV
X.XX	Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



(XXX)	Actual 2013 Traffic
XXX	Calculated 2040 DHV
X.XX	Ratio

TURNS5 ANALYSIS SHEET - INPUT

Analyst: HDR, Inc.
Date: 7-Feb-14
Highway: Cattlemen Road
Intersection: Maxfield Drive
From:
To: AM Peak
County: Sarasota

Enter Yes or No
Is the Mainline Oriented North/South? (•) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
54.0%	Northbound (NB)
46.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No: (•) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Rate (1.0% = 0.01)

	Year	**Mainline**	**Side Street**
Base	2013		
Opening	2020		
Mid	2030	0.00%	0.00%
Design	2040		

Mainline Growth Function: (•) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (•) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	6000	4700	27100	28500	66300
2040	6000	4700	42900	41200	94800

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	49%	95	
(EB THRU)	*West-to-East*	9%	15	
(EB RT)	*West-to-South*	42%	80	
(WB LT)	*East-to-South*	66%	75	(must be done manually)
(WB THRU)	*East-to-West*	10%	10	
(WB RT)	*East-to-North*	24%	25	
(SB LT)	*North-to-East*	4%	35	
(SB THRU)	*North-to-South*	78%	765	
(SB RT)	*North-to-West*	18%	180	
(NB LT)	*South-to-West*	10%	145	
(NB THRU)	*South-to-North*	79%	1205	
(NB RT)	*South-to-East*	11%	165	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

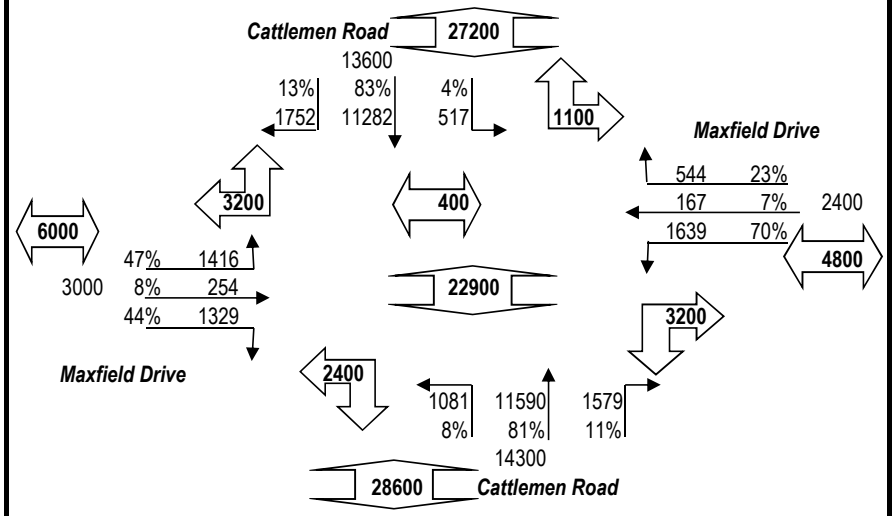
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Maxfield Drive		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.49	0.472	1400	0.518	1600	0.582	1700	0.642	1900
West-To-East (Thru)	0.09	0.085	300	0.077	200	0.068	200	0.059	200
West-To-South (RT)	0.42	0.443	1300	0.404	1200	0.350	1100	0.299	900
Total Flow From West:			**3000**		**3000**		**3000**		**3000**
East-To-South (LT)	0.66	0.697	1600	0.669	1600	0.624	1500	0.572	1300
East-To-West (Thru)	0.10	0.071	200	0.063	100	0.054	100	0.045	100
East-To-North (RT)	0.24	0.232	500	0.267	600	0.323	800	0.383	900
Total Flow From East:			**2300**		**2300**		**2400**		**2300**
North-To-East (LT)	0.04	0.038	500	0.038	600	0.039	700	0.041	900
North-To-South (Thru)	0.78	0.833	11300	0.841	13100	0.849	15700	0.856	18400
North-To-West (RT)	0.18	0.129	1800	0.121	1900	0.111	2100	0.104	2200
Total Flow From North:			**13600**		**15600**		**18500**		**21500**
South-To-West (LT)	0.10	0.076	1100	0.061	1000	0.044	800	0.033	700
South-To-North (Thru)	0.79	0.813	11600	0.844	13400	0.878	16000	0.904	18600
South-To-East (RT)	0.11	0.111	1600	0.095	1500	0.078	1400	0.063	1300
Total Flow From South:			**14300**		**15900**		**18200**		**20600**

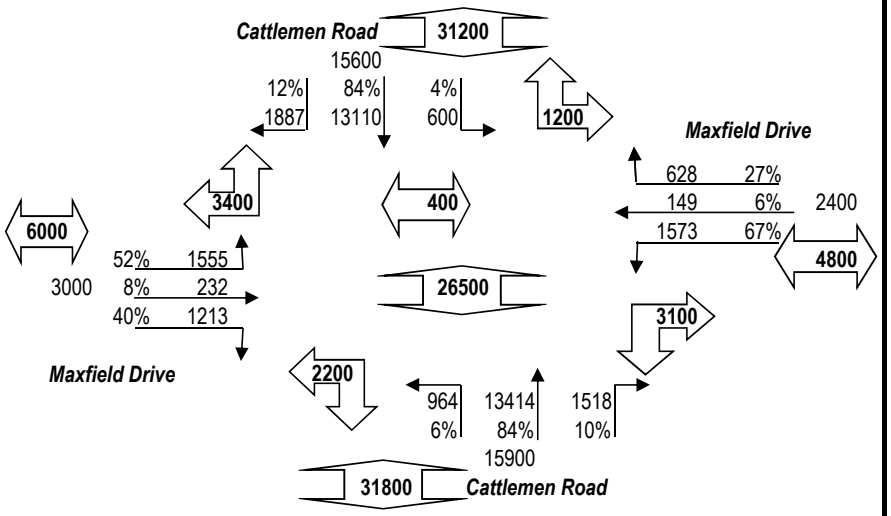
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO AM Peak

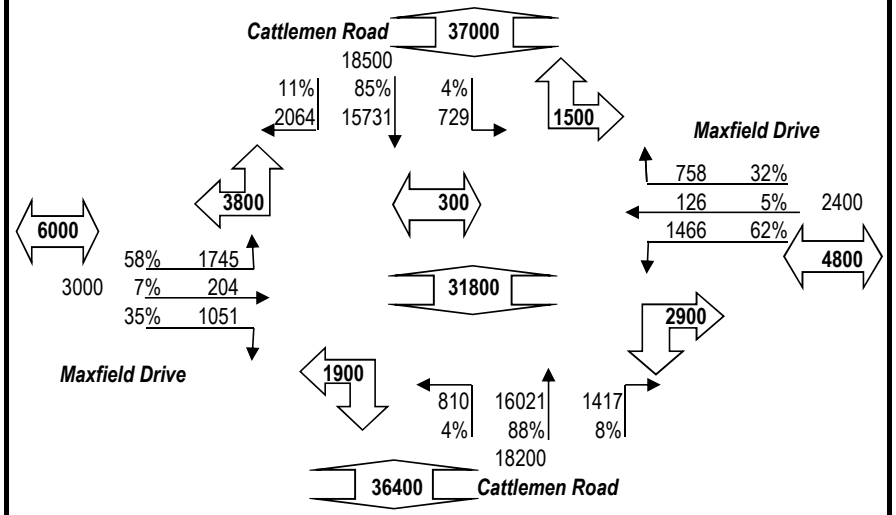
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



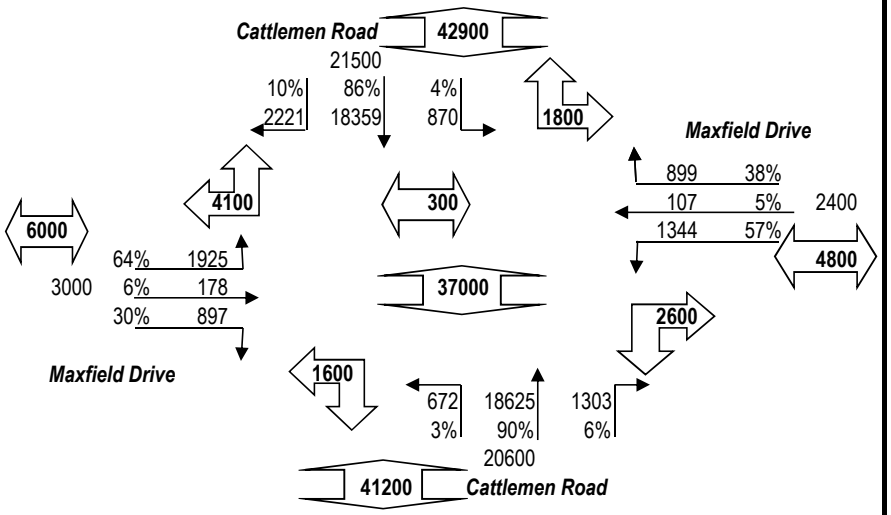
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

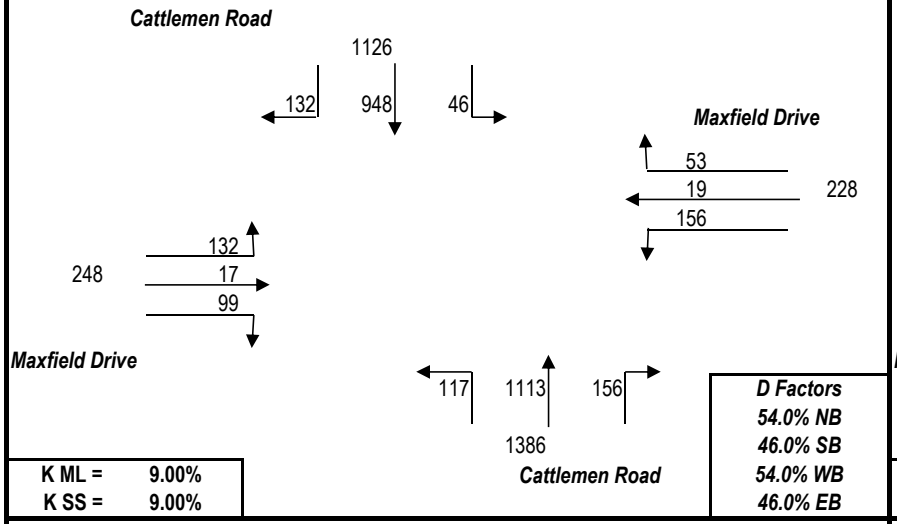


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO AM Peak

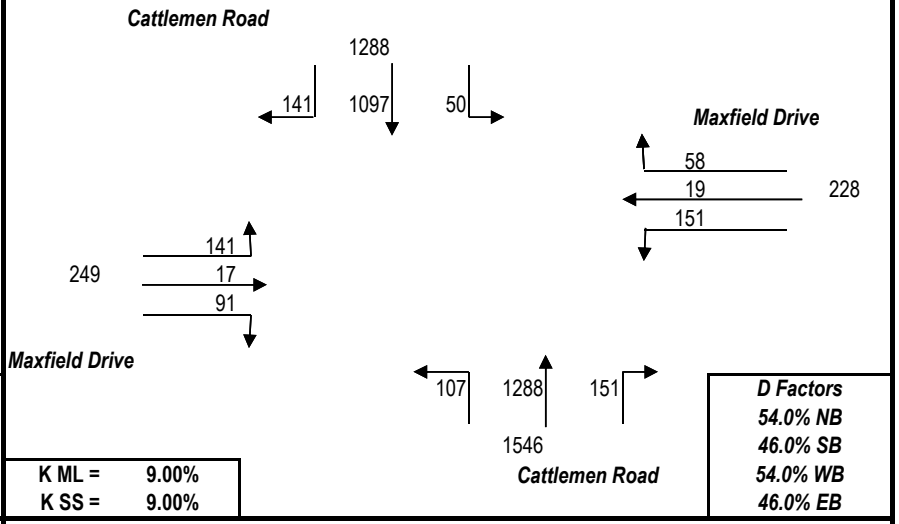
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

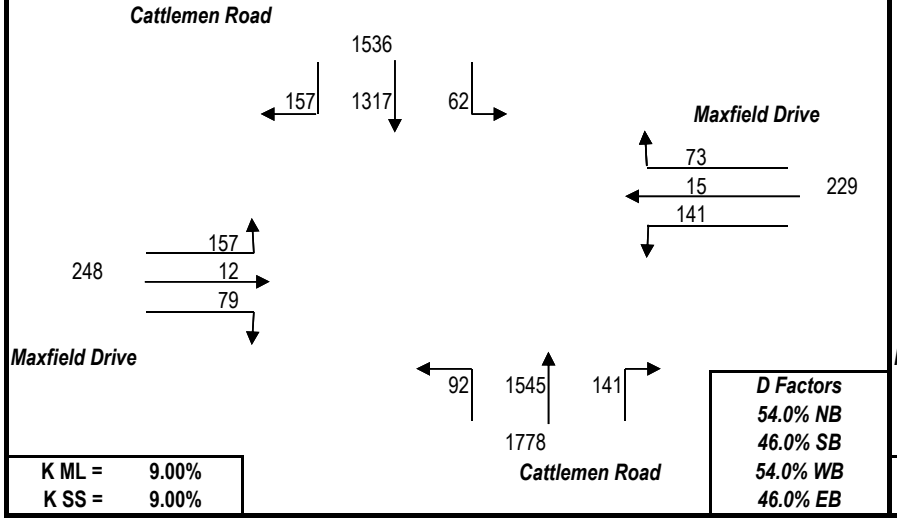
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

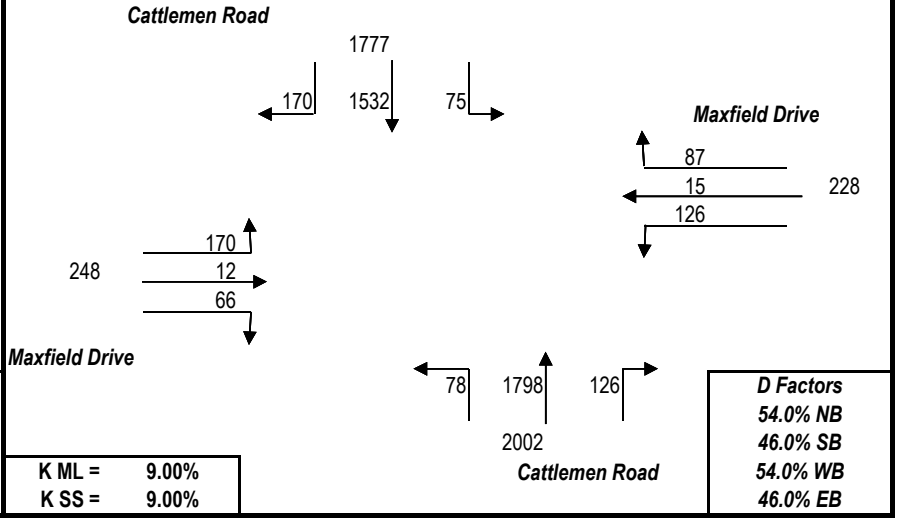
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

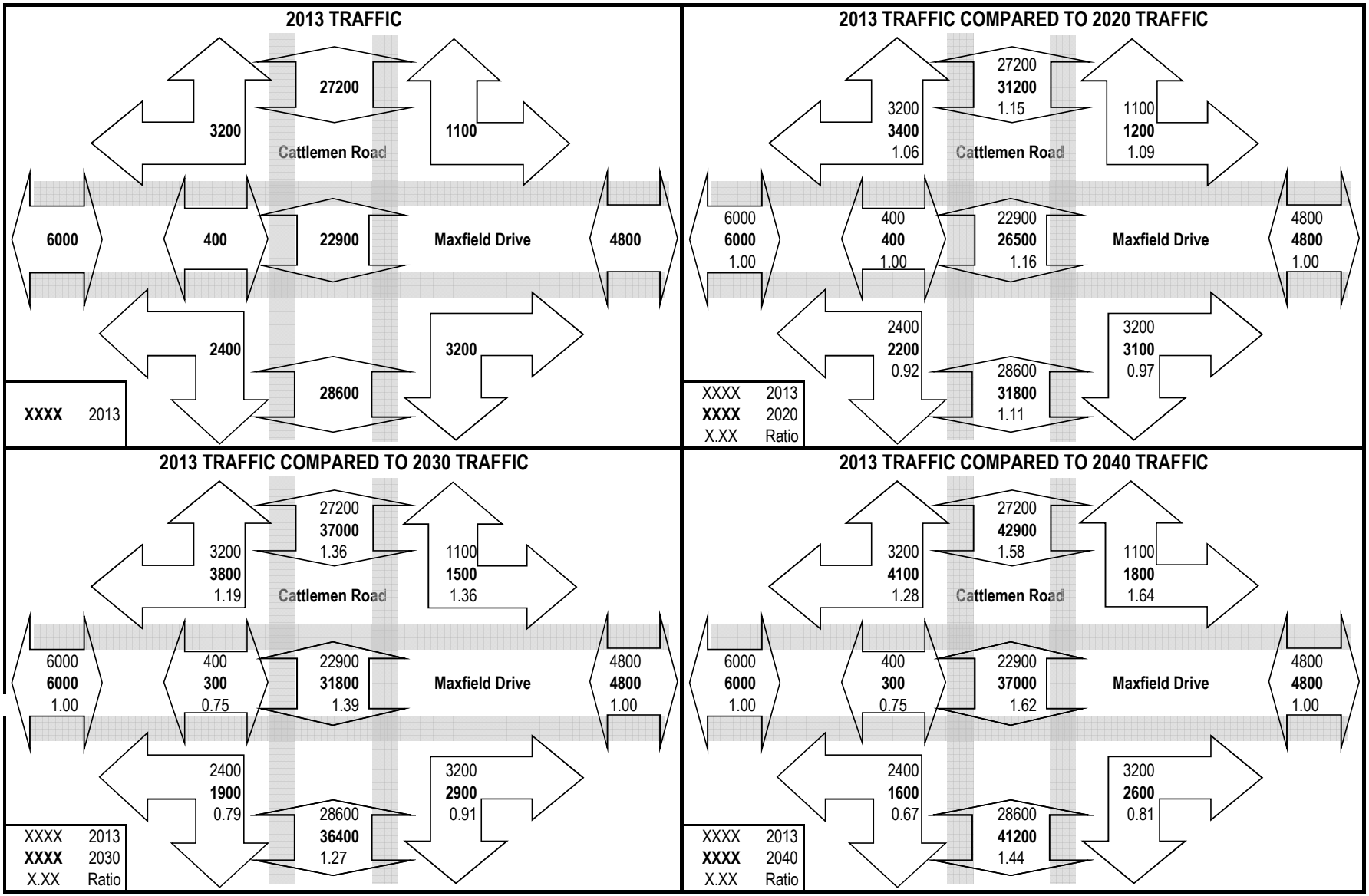
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

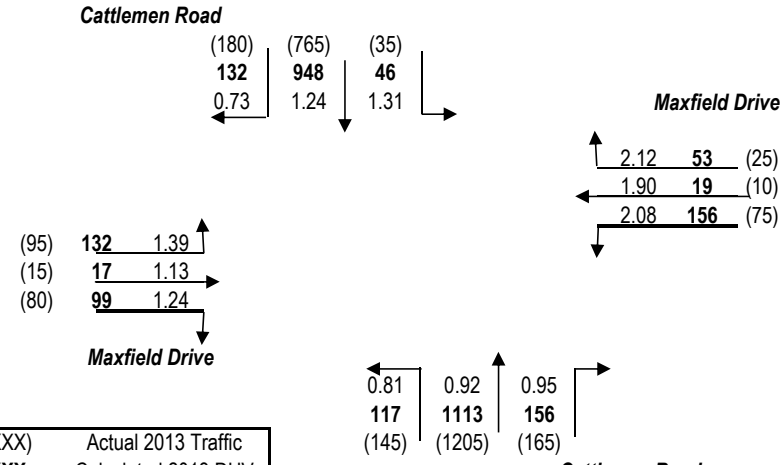
D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO AM Peak



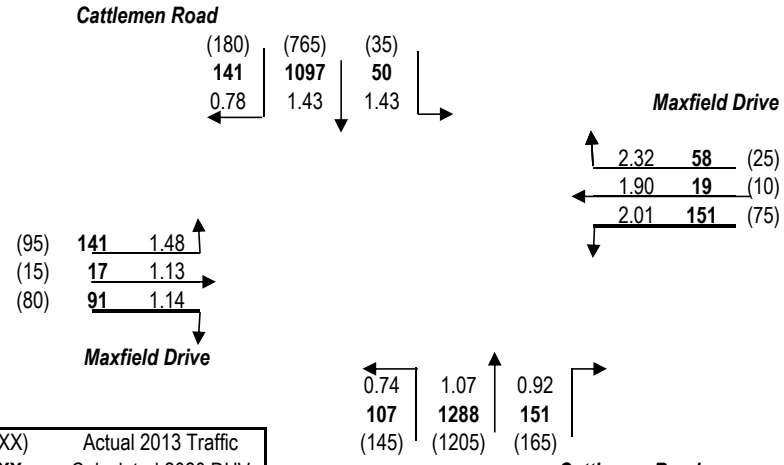
PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO AM Peak

2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



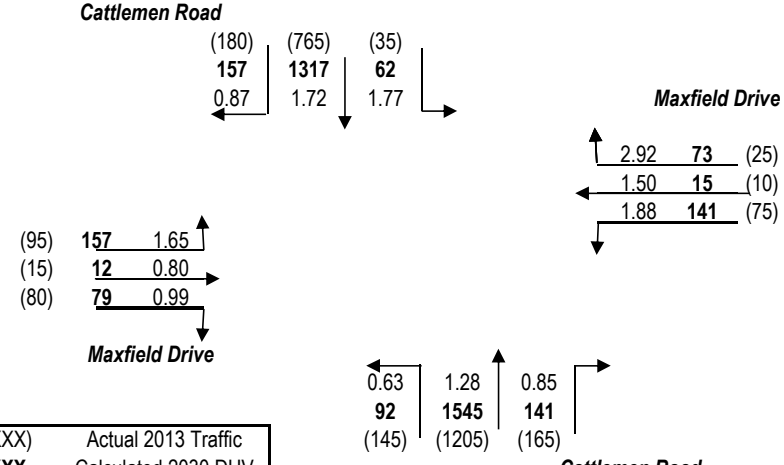
(XXX) Actual 2013 Traffic
XXX Calculated 2013 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



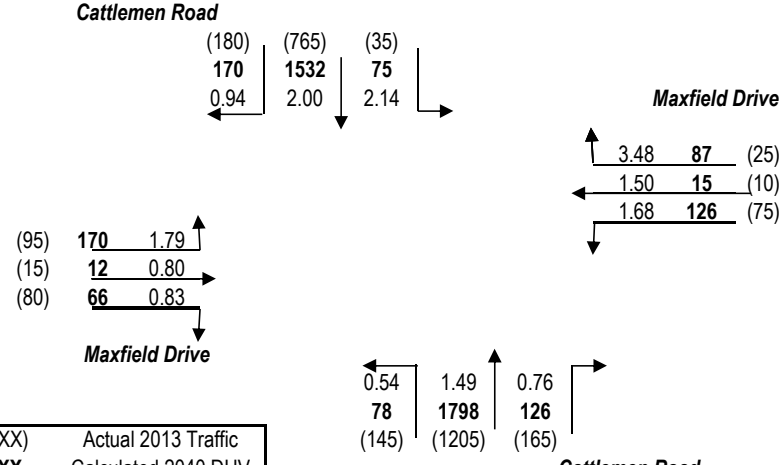
(XXX) Actual 2013 Traffic
XXX Calculated 2020 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



(XXX) Actual 2013 Traffic
XXX Calculated 2030 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



(XXX) Actual 2013 Traffic
XXX Calculated 2040 DHV
X.XX Ratio

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Cattlemen Road
Intersection:	Countrywood Drive
From:	
To:	AM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
54.0%	Northbound (NB)
46.0%	Southbound (SB)
Sidestreet	
54.0%	Westbound (WB)
46.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function — (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function — (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	1500	3200	26600	27100	58400
2040	1500	3200	38500	42900	86100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	16%	10	
(EB THRU)	*West-to-East*	0%	0	
(EB RT)	*West-to-South*	84%	45	
(WB LT)	*East-to-South*	42%	10	(must be done manually)
(WB THRU)	*East-to-West*	0%	0	
(WB RT)	*East-to-North*	58%	10	
(SB LT)	*North-to-East*	9%	95	
(SB THRU)	*North-to-South*	90%	925	
(SB RT)	*North-to-West*	1%	5	
(NB LT)	*South-to-West*	2%	25	
(NB THRU)	*South-to-North*	89%	1180	
(NB RT)	*South-to-East*	9%	125	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

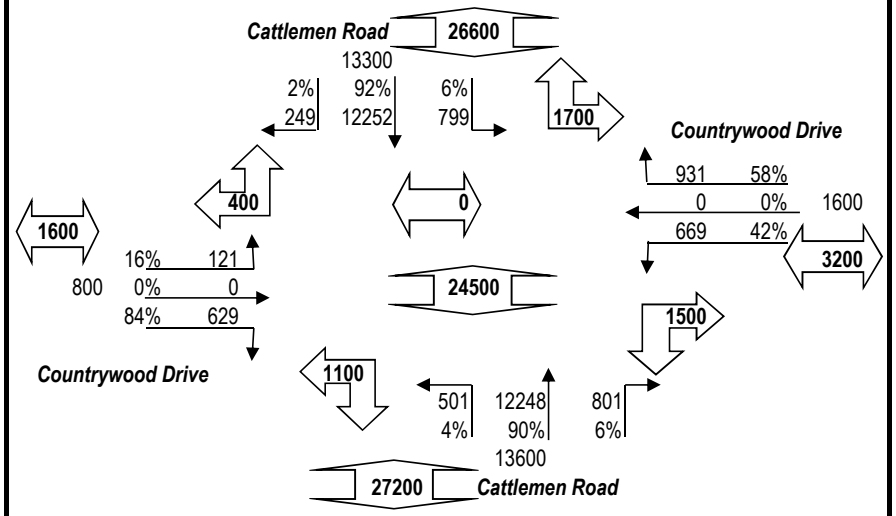
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Countrywood Drive		
From:	0	**Analyst:**	HDR, Inc.
To:	AM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.16	0.161	100	0.105	100	0.047	0	0.007	0
West-To-East (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.84	0.839	600	0.895	700	0.953	700	0.993	700
Total Flow From West:			**700**		**800**		**700**		**700**
East-To-South (LT)	0.42	0.418	700	0.541	900	0.736	1200	0.952	1500
East-To-West (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.58	0.582	900	0.459	700	0.264	400	0.048	100
Total Flow From East:			**1600**		**1600**		**1600**		**1600**
North-To-East (LT)	0.09	0.060	800	0.041	600	0.019	300	0.003	100
North-To-South (Thru)	0.90	0.921	12300	0.947	14100	0.976	16600	0.996	19200
North-To-West (RT)	0.01	0.019	200	0.012	200	0.005	100	0.001	0
Total Flow From North:			**13300**		**14900**		**17000**		**19300**
South-To-West (LT)	0.02	0.037	500	0.037	600	0.036	700	0.034	700
South-To-North (Thru)	0.89	0.904	12200	0.899	14000	0.895	16600	0.894	19200
South-To-East (RT)	0.09	0.059	800	0.064	1000	0.069	1300	0.072	1500
Total Flow From South:			**13500**		**15600**		**18600**		**21400**

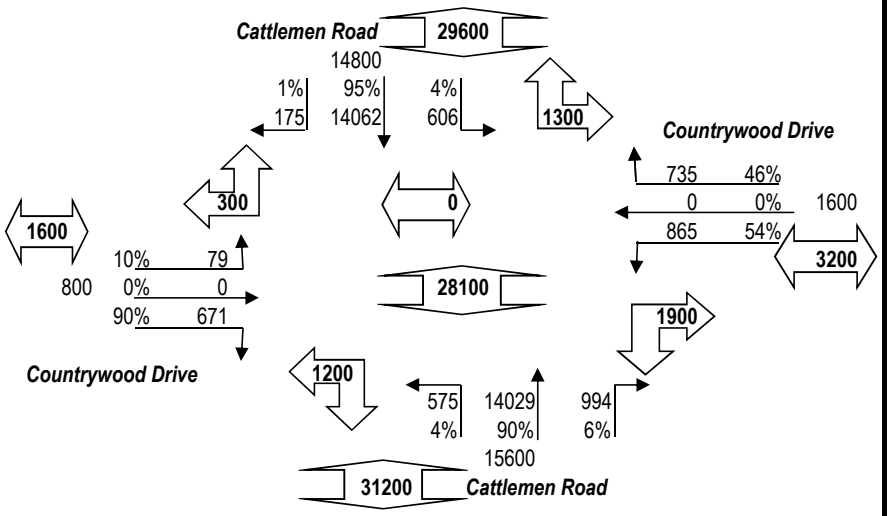
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO AM Peak

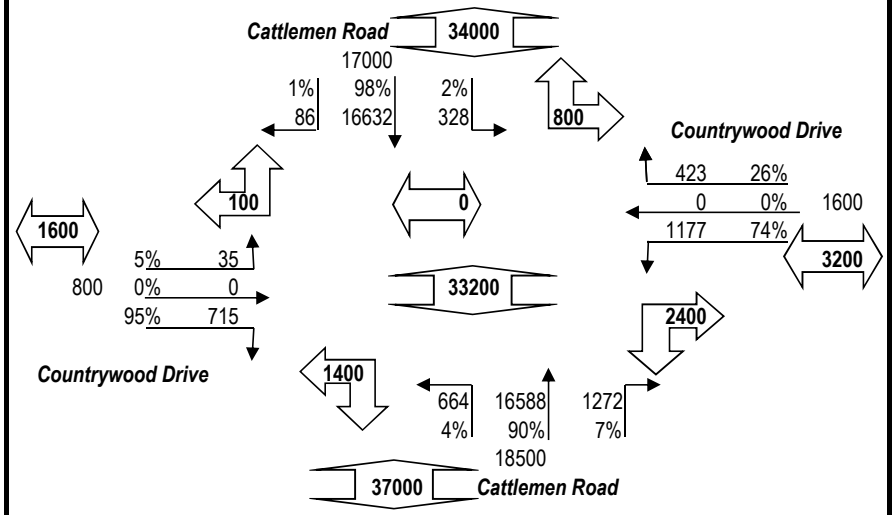
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



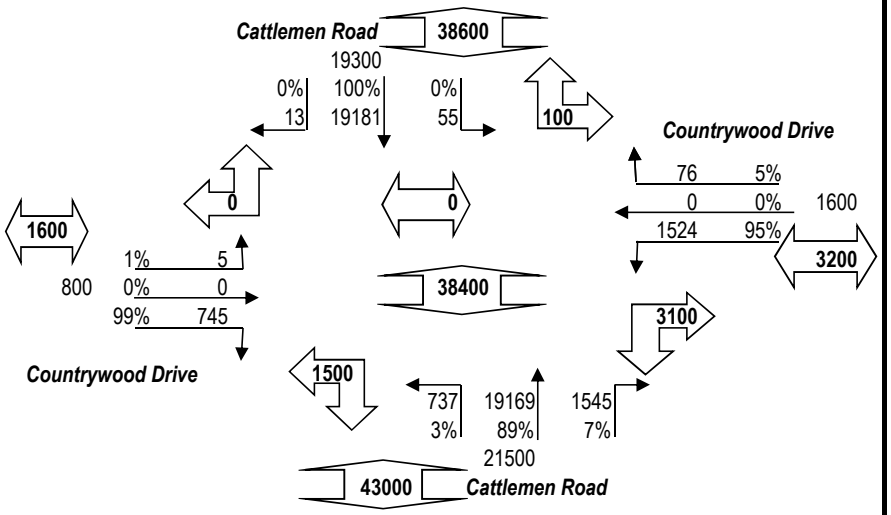
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

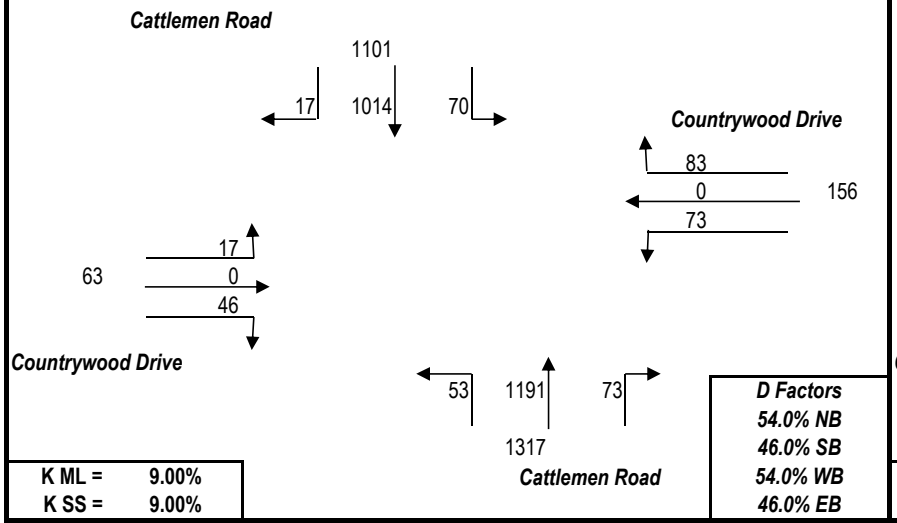


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO AM Peak

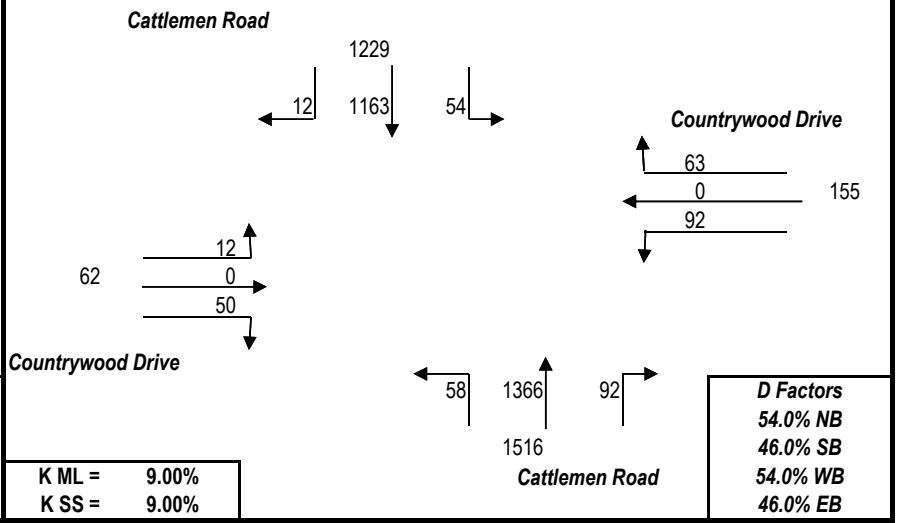
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

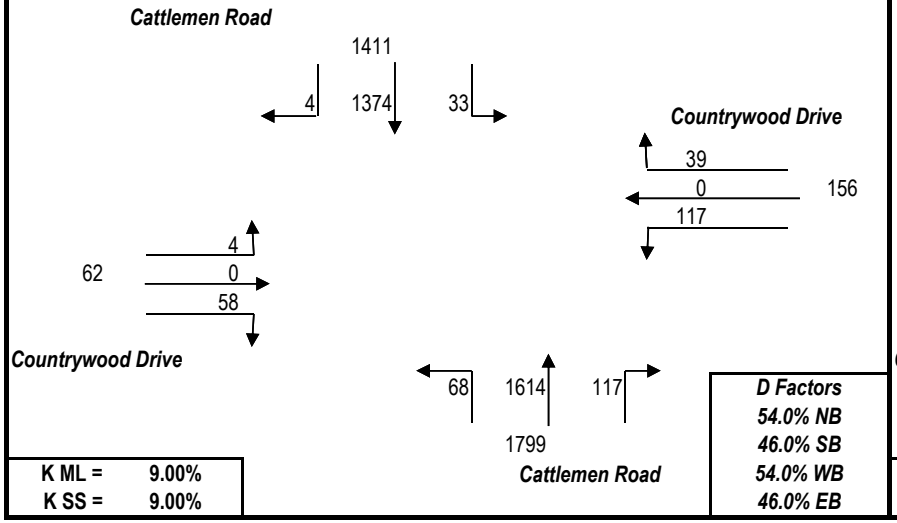
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

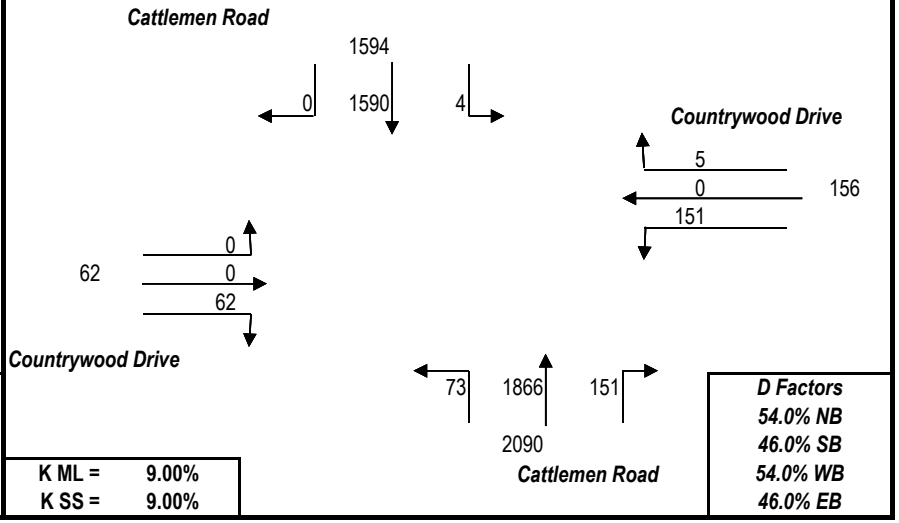
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

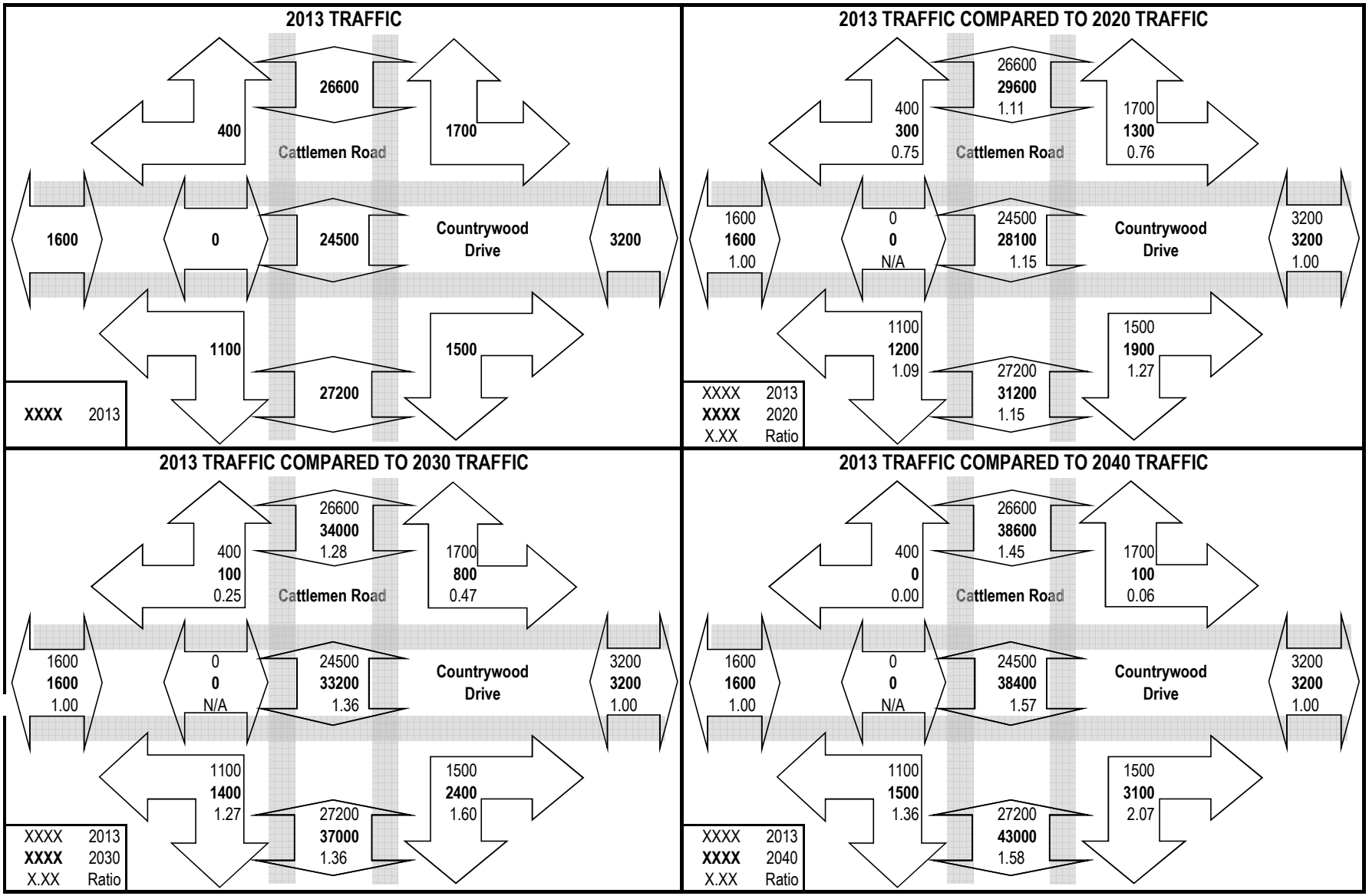
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

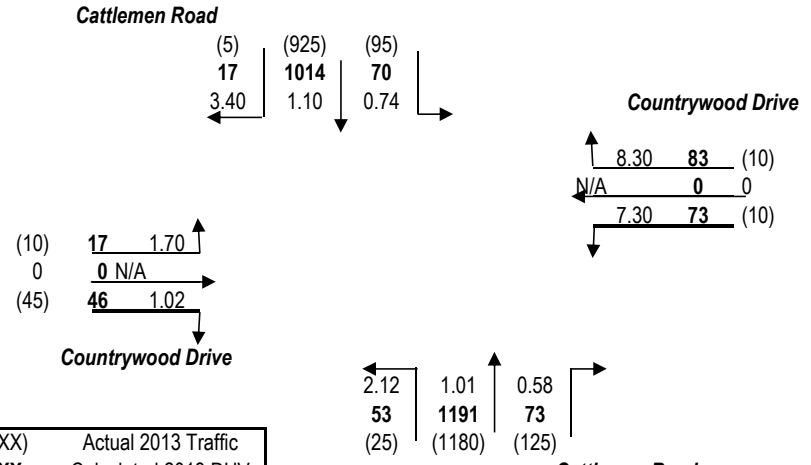
D Factors
54.0% NB
46.0% SB
54.0% WB
46.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO AM Peak

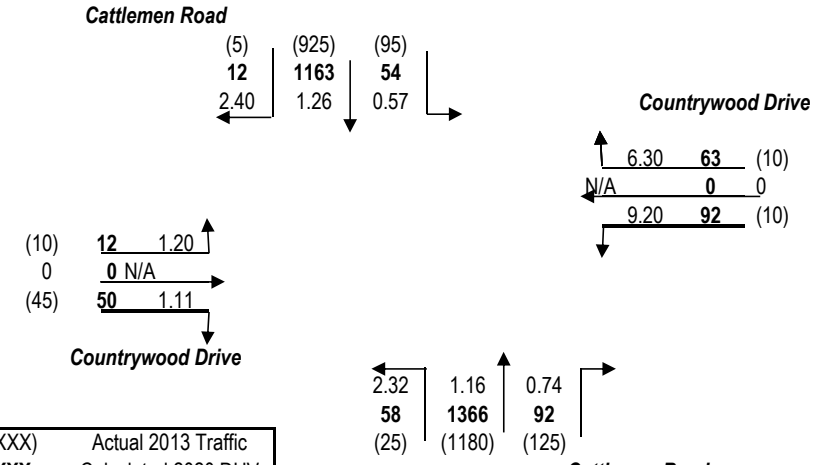


PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO AM Peak

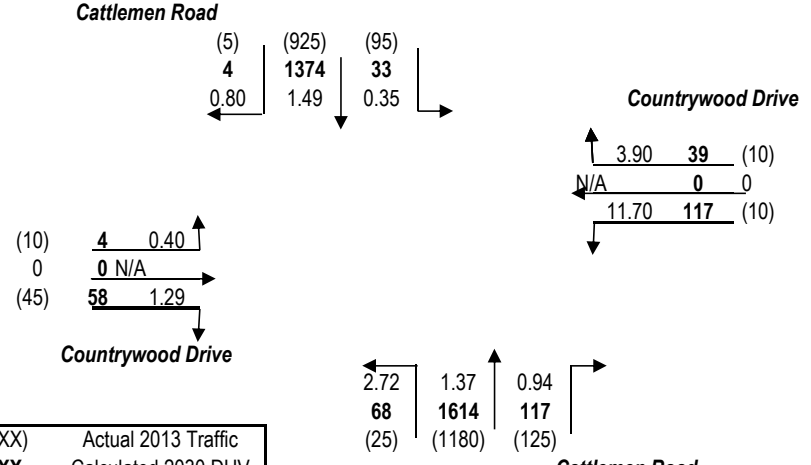
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



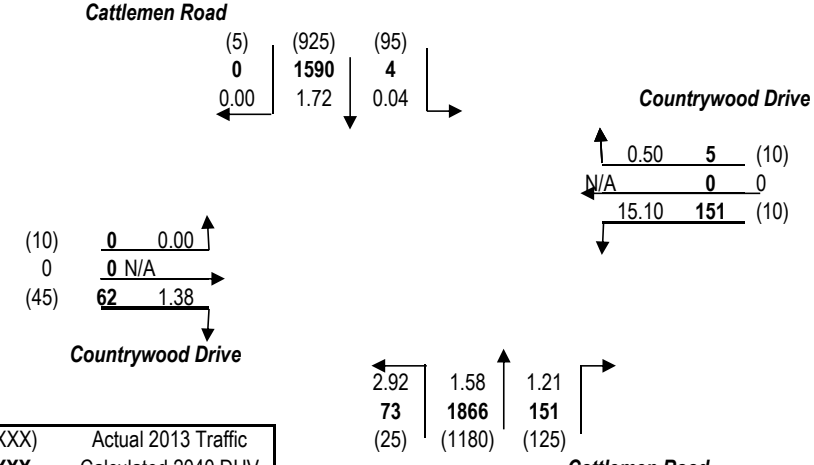
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Honore Avenue
Intersection:	Bee Ridge Road
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	38800	42100	8900	10400	100200
2040	65400	68600	15700	15400	165100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**
(EB LT)	*West-to-North*	6%	125
(EB THRU)	*West-to-East*	87%	1675
(EB RT)	*West-to-South*	7%	135
(WB LT)	*East-to-South*	10%	155
(WB THRU)	*East-to-West*	85%	1380
(WB RT)	*East-to-North*	5%	75
(SB LT)	*North-to-East*	21%	80
(SB THRU)	*North-to-South*	55%	205
(SB RT)	*North-to-West*	24%	85
(NB LT)	*South-to-West*	22%	95
(NB THRU)	*South-to-North*	53%	235
(NB RT)	*South-to-East*	25%	110

(must be done manually)

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

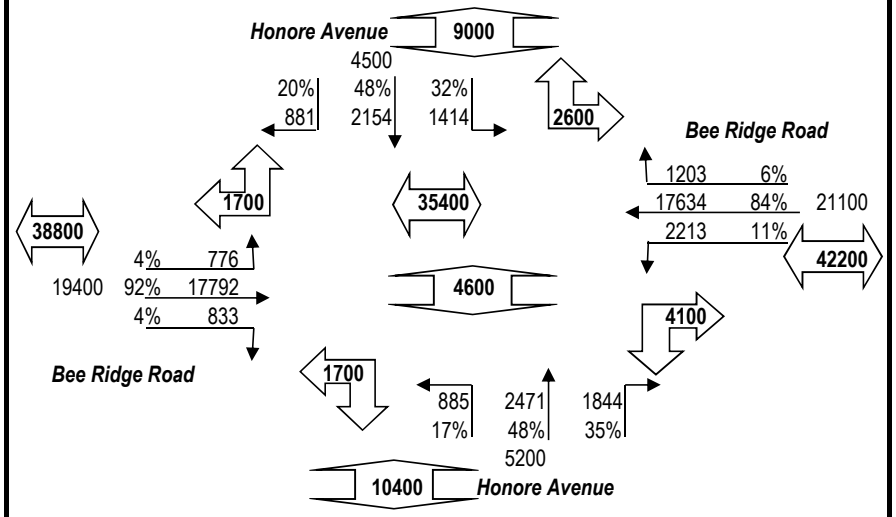
Highway:	Honore Avenue	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.06	0.040	800	0.044	1000	0.049	1400	0.053	1700
West-To-East (Thru)	0.87	0.917	17800	0.913	20900	0.909	25300	0.906	29600
West-To-South (RT)	0.07	0.043	800	0.042	1000	0.042	1200	0.041	1300
Total Flow From West:			**19400**		**22900**		**27900**		**32600**
East-To-South (LT)	0.10	0.105	2200	0.096	2400	0.088	2600	0.082	2800
East-To-West (Thru)	0.85	0.838	17600	0.845	20700	0.852	25100	0.857	29400
East-To-North (RT)	0.05	0.057	1200	0.059	1400	0.060	1800	0.061	2100
Total Flow From East:			**21000**		**24500**		**29500**		**34300**
North-To-East (LT)	0.21	0.318	1400	0.314	1700	0.309	2000	0.305	2400
North-To-South (Thru)	0.55	0.484	2200	0.473	2500	0.461	3000	0.452	3500
North-To-West (RT)	0.24	0.198	900	0.213	1100	0.230	1500	0.243	1900
Total Flow From North:			**4500**		**5300**		**6500**		**7800**
South-To-West (LT)	0.22	0.170	900	0.174	1000	0.178	1200	0.180	1400
South-To-North (Thru)	0.53	0.475	2500	0.494	2900	0.512	3500	0.525	4000
South-To-East (RT)	0.25	0.355	1800	0.332	1900	0.310	2100	0.295	2300
Total Flow From South:			**5200**		**5800**		**6800**		**7700**

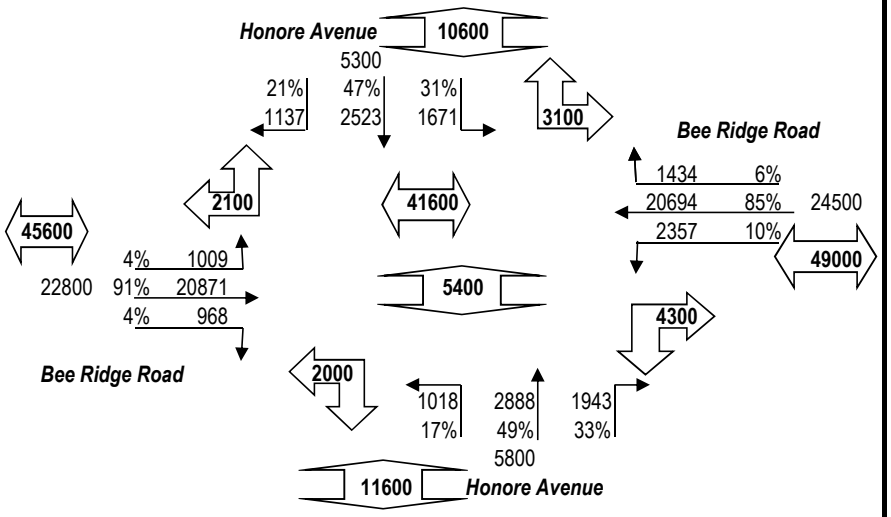
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO PM Peak

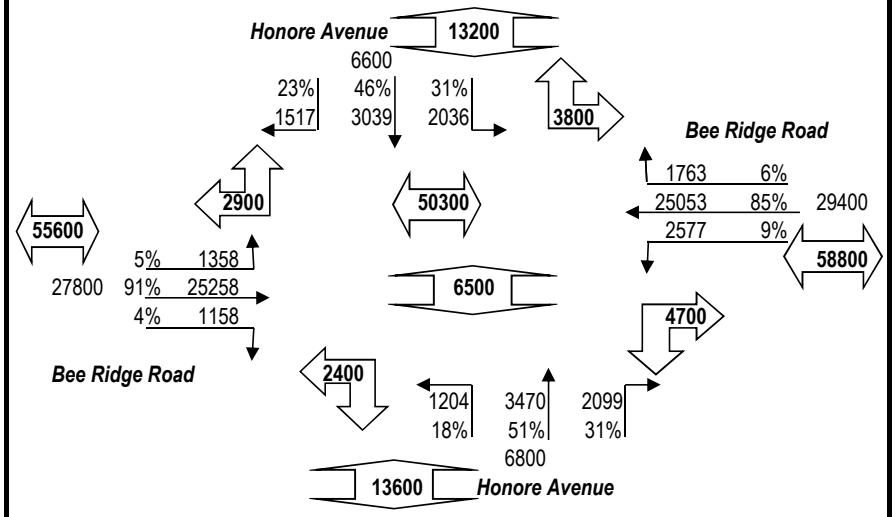
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



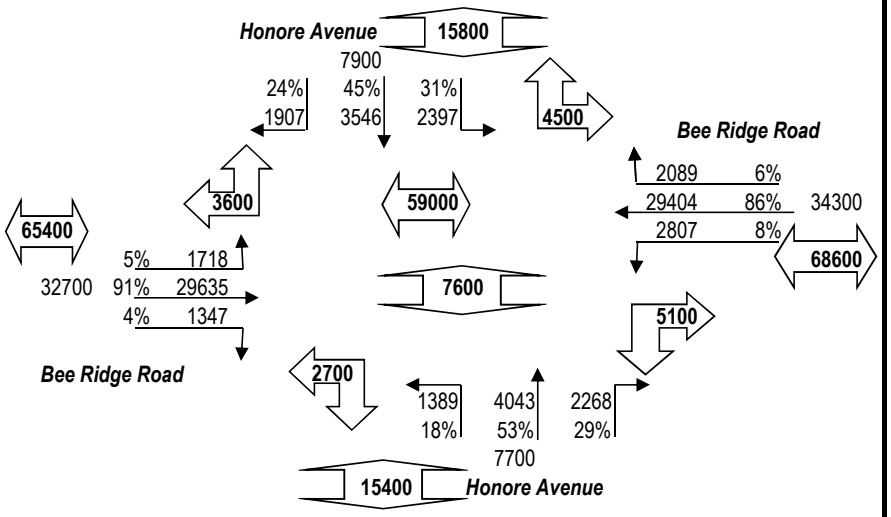
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

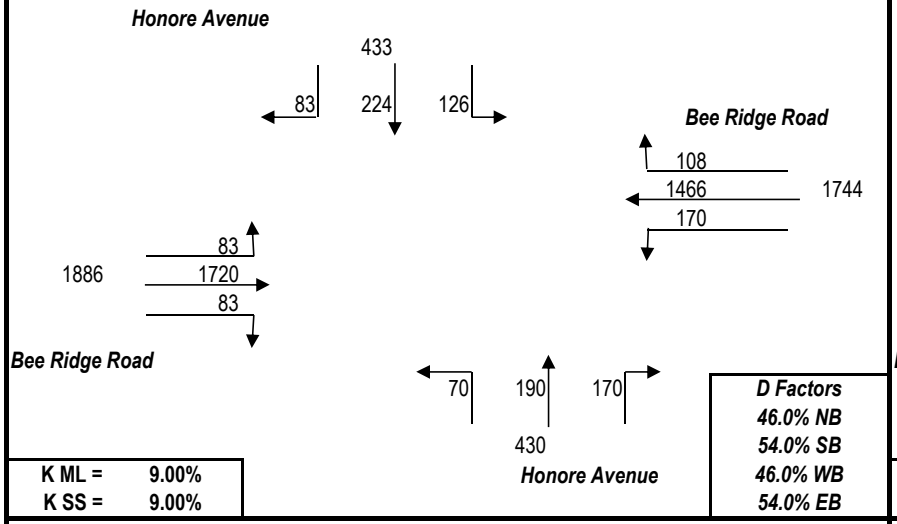


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO PM Peak

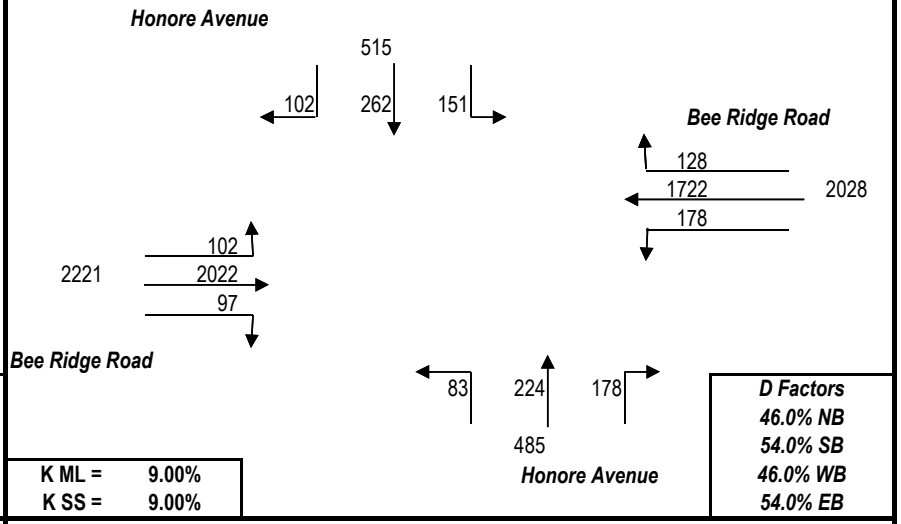
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

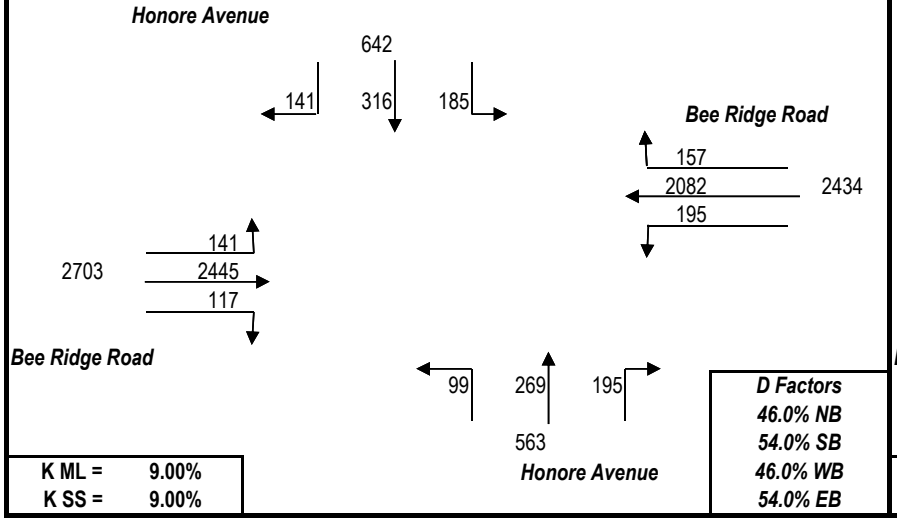
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

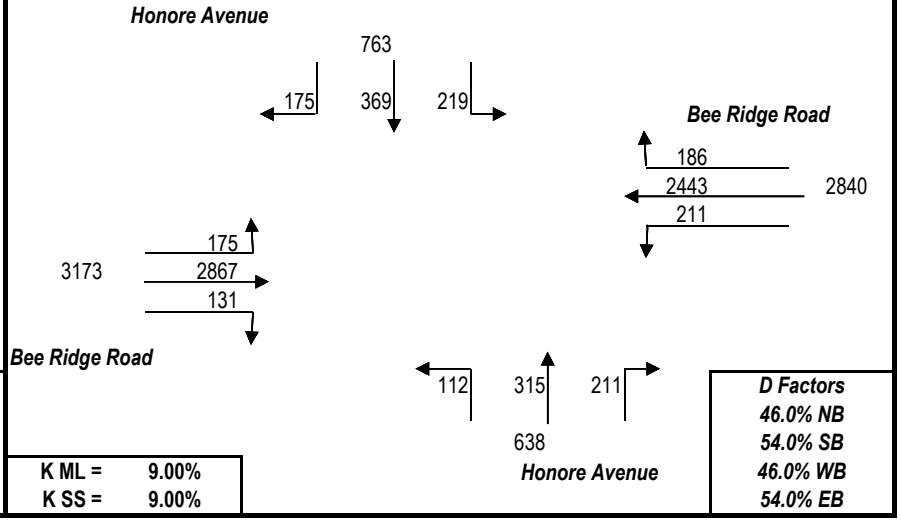
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

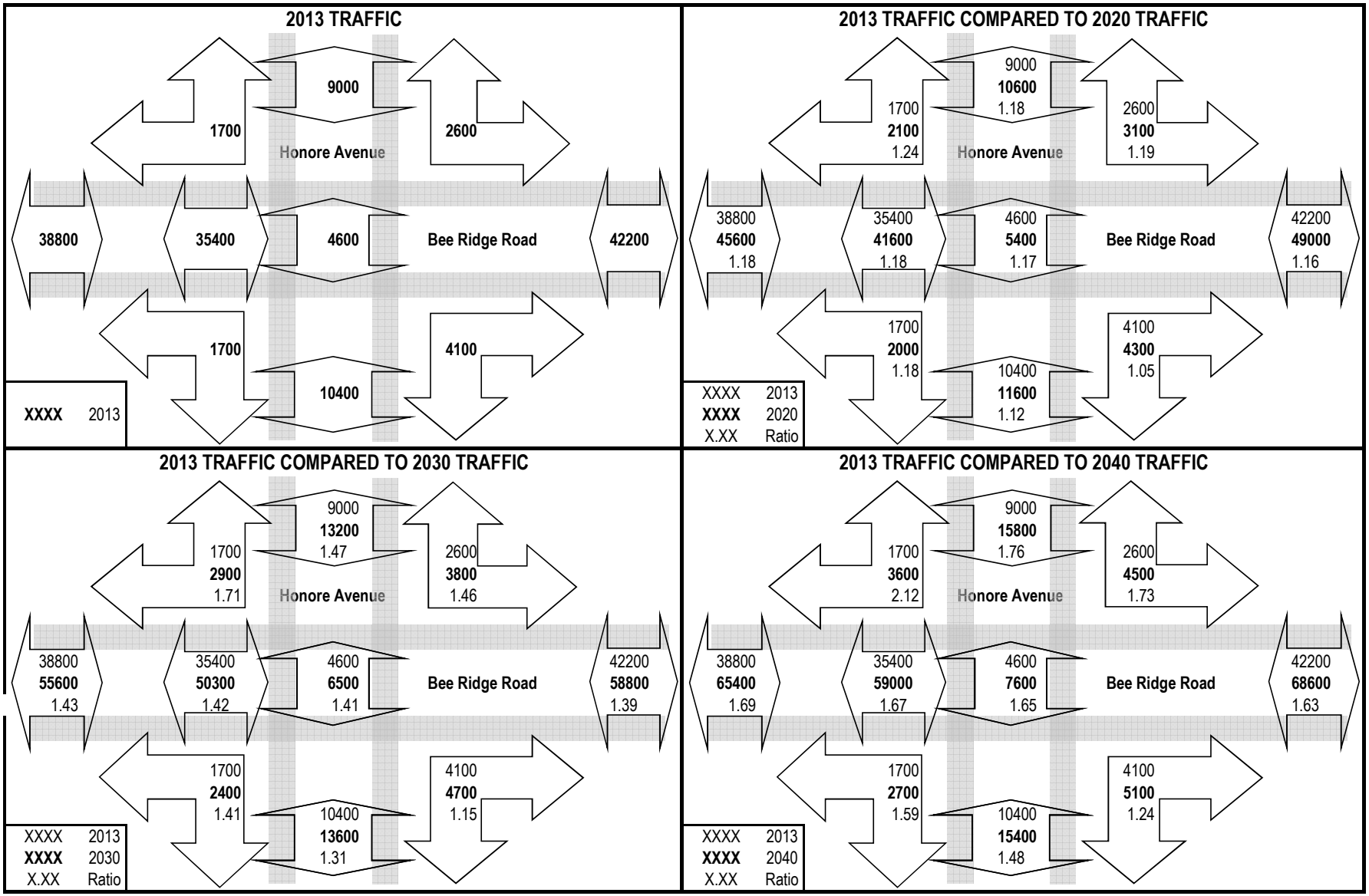
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

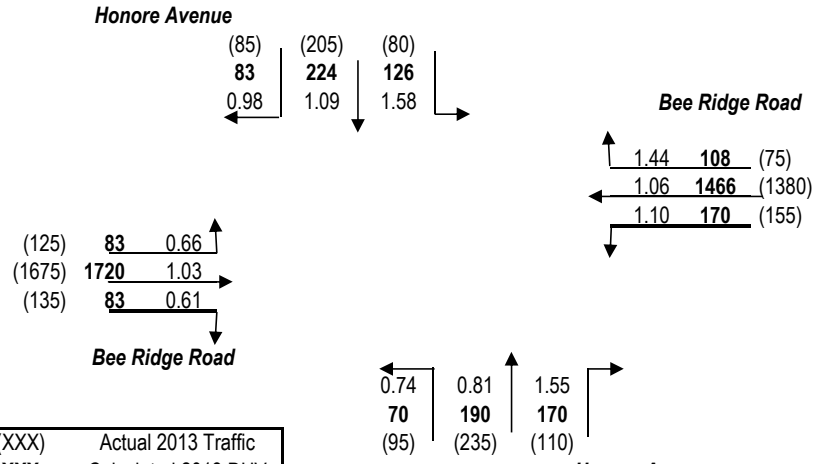
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO PM Peak

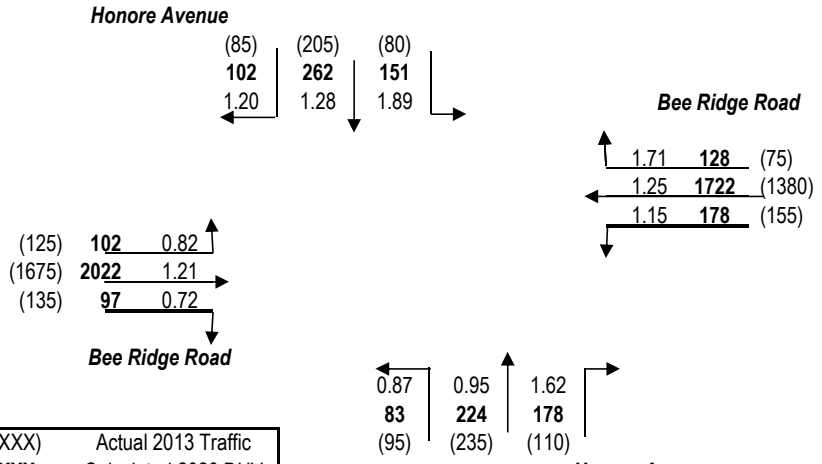


PROJECT TRAFFIC FOR Honore Avenue AT Bee Ridge Road: TO PM Peak

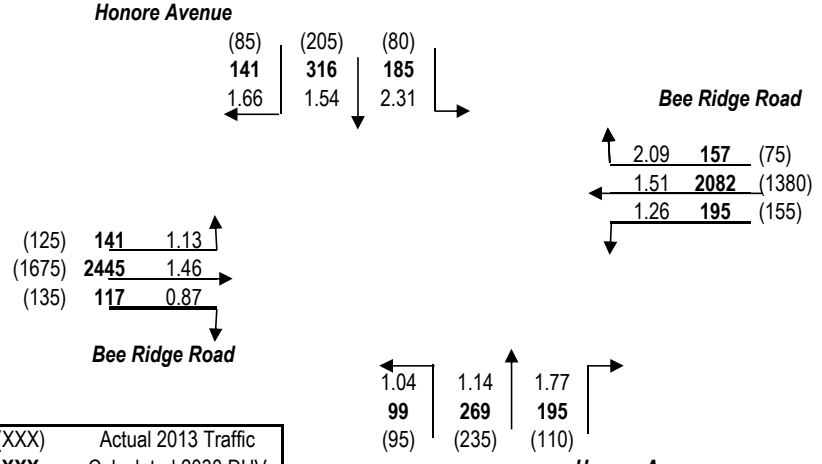
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



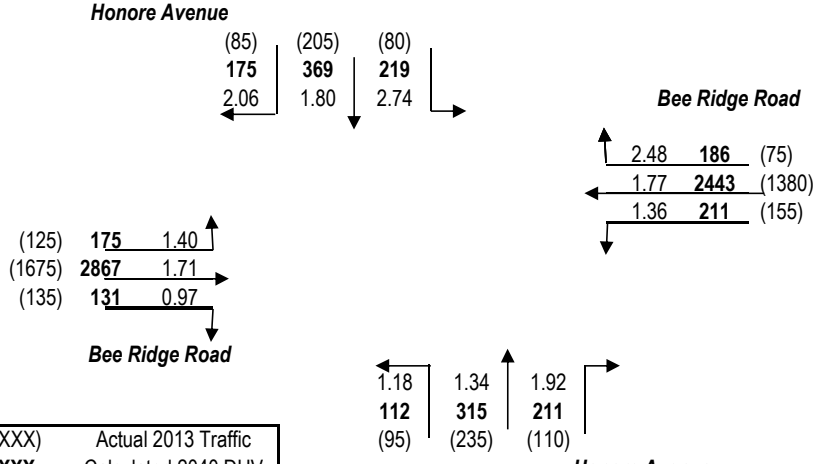
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Woodmont Drive-Center Gate Boulevard
Intersection:	Bee Ridge Road
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	42100	43300	2800	2500	90700
2040	68600	64800	2800	3200	139400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	1%	20	
(EB THRU)	*West-to-East*	96%	1790	
(EB RT)	*West-to-South*	3%	55	
(WB LT)	*East-to-South*	2%	35	(must be done manually)
(WB THRU)	*East-to-West*	91%	1505	
(WB RT)	*East-to-North*	7%	125	
(SB LT)	*North-to-East*	53%	55	
(SB THRU)	*North-to-South*	8%	10	
(SB RT)	*North-to-West*	39%	40	
(NB LT)	*South-to-West*	49%	60	
(NB THRU)	*South-to-North*	4%	5	
(NB RT)	*South-to-East*	47%	60	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

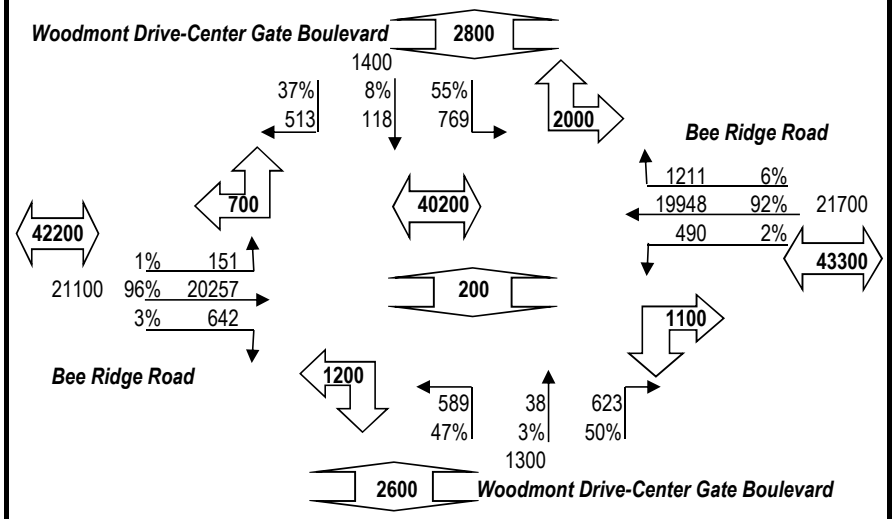
Highway:	Woodmont Drive-Center Gate Boulevard	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.01	0.007	200	0.010	200	0.016	500	0.022	800
West-To-East (Thru)	0.96	0.962	20300	0.954	23400	0.945	27800	0.935	32100
West-To-South (RT)	0.03	0.030	600	0.035	900	0.040	1200	0.042	1500
Total Flow From West:			**21100**		**24500**		**29500**		**34400**
East-To-South (LT)	0.02	0.023	500	0.015	400	0.008	200	0.003	100
East-To-West (Thru)	0.91	0.921	19900	0.940	23000	0.960	27300	0.978	31700
East-To-North (RT)	0.07	0.056	1200	0.045	1100	0.032	900	0.019	600
Total Flow From East:			**21600**		**24500**		**28400**		**32400**
North-To-East (LT)	0.53	0.549	800	0.420	600	0.257	400	0.124	200
North-To-South (Thru)	0.08	0.084	100	0.075	100	0.052	100	0.027	0
North-To-West (RT)	0.39	0.366	500	0.504	700	0.691	1000	0.849	1200
Total Flow From North:			**1400**		**1400**		**1500**		**1400**
South-To-West (LT)	0.49	0.471	600	0.610	800	0.771	1100	0.890	1400
South-To-North (Thru)	0.04	0.030	0	0.031	0	0.027	0	0.018	0
South-To-East (RT)	0.47	0.499	600	0.359	500	0.202	300	0.092	100
Total Flow From South:			**1200**		**1300**		**1400**		**1500**

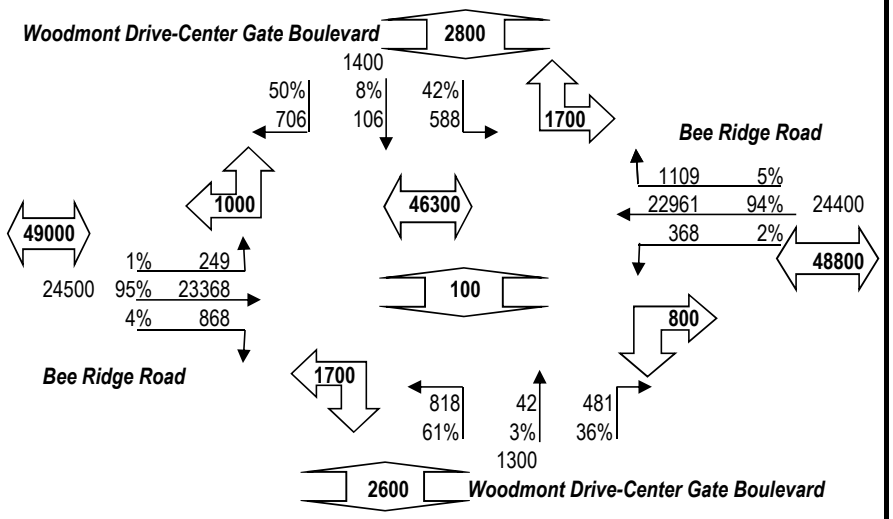
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO PM Peak

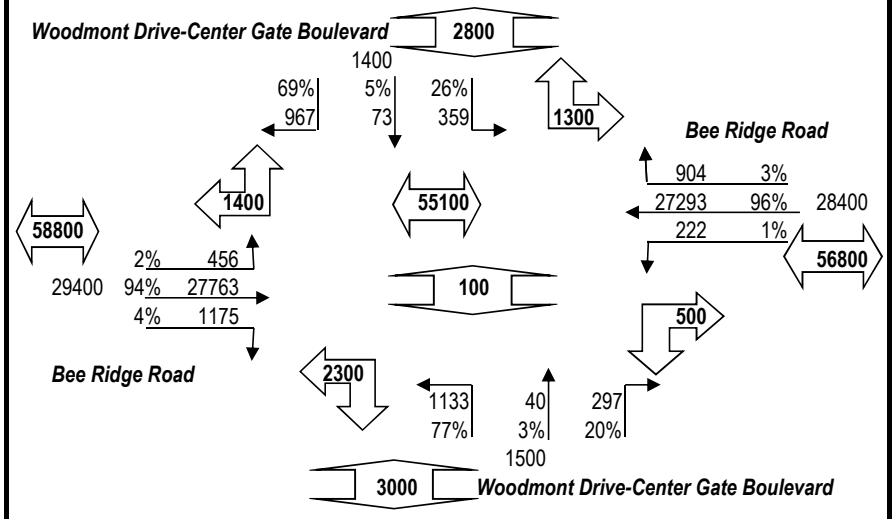
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



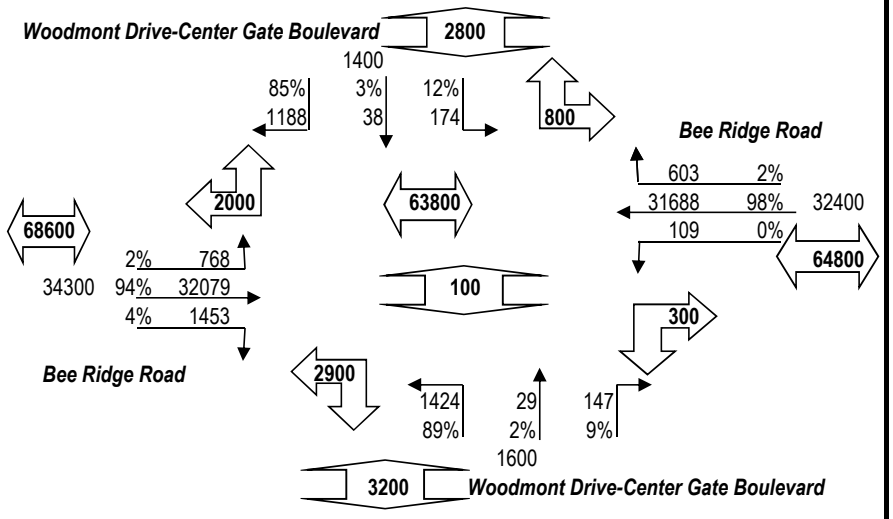
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

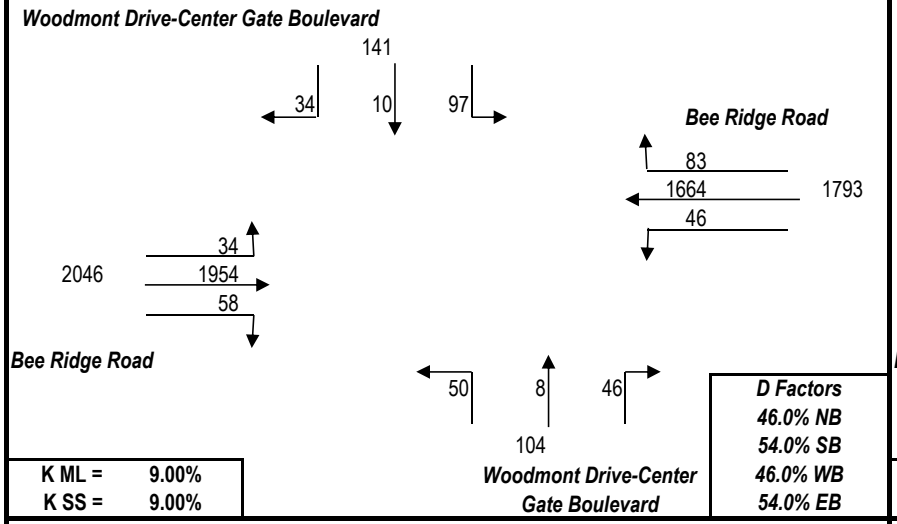


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO PM Peak

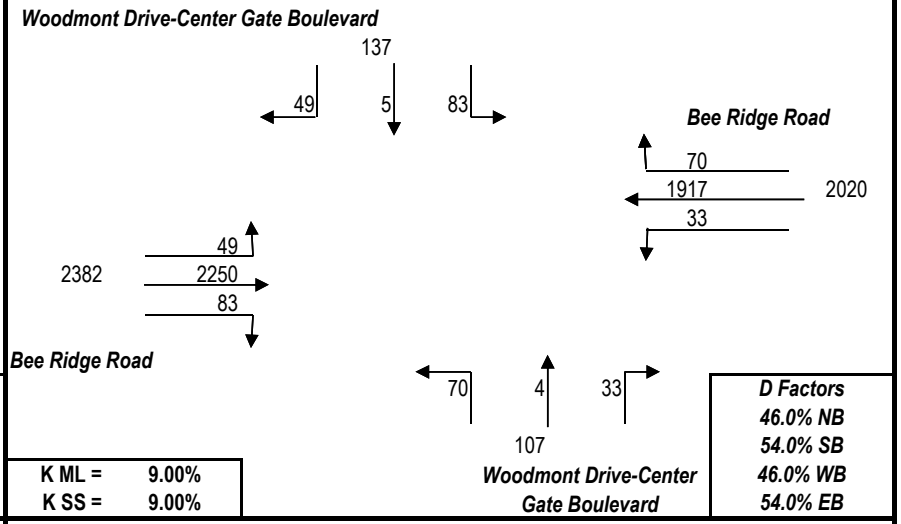
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

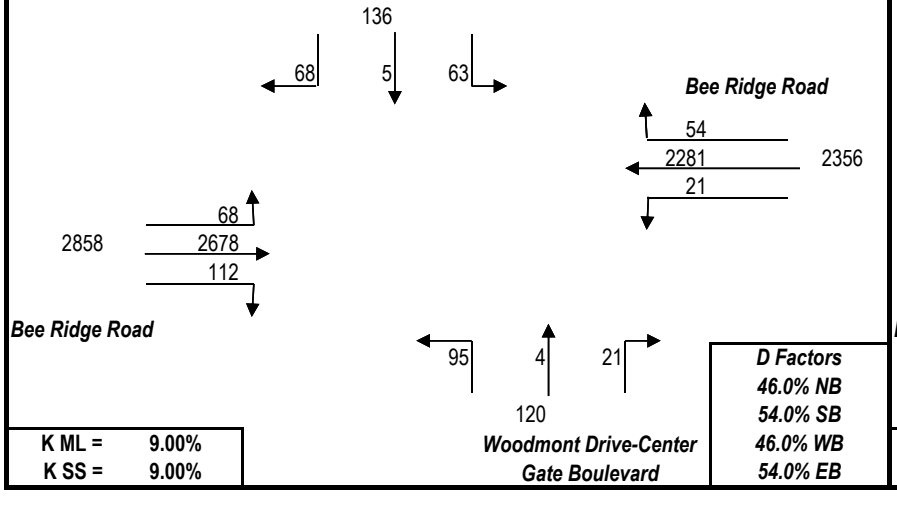
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

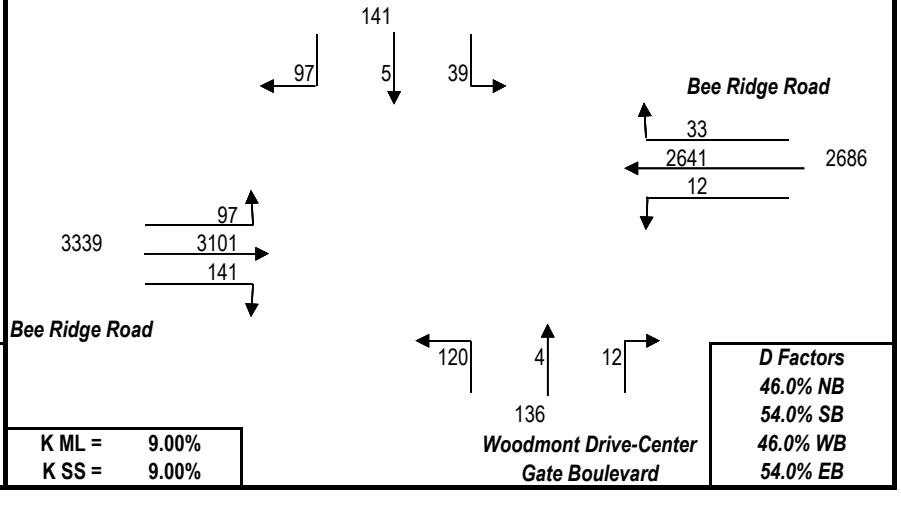
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

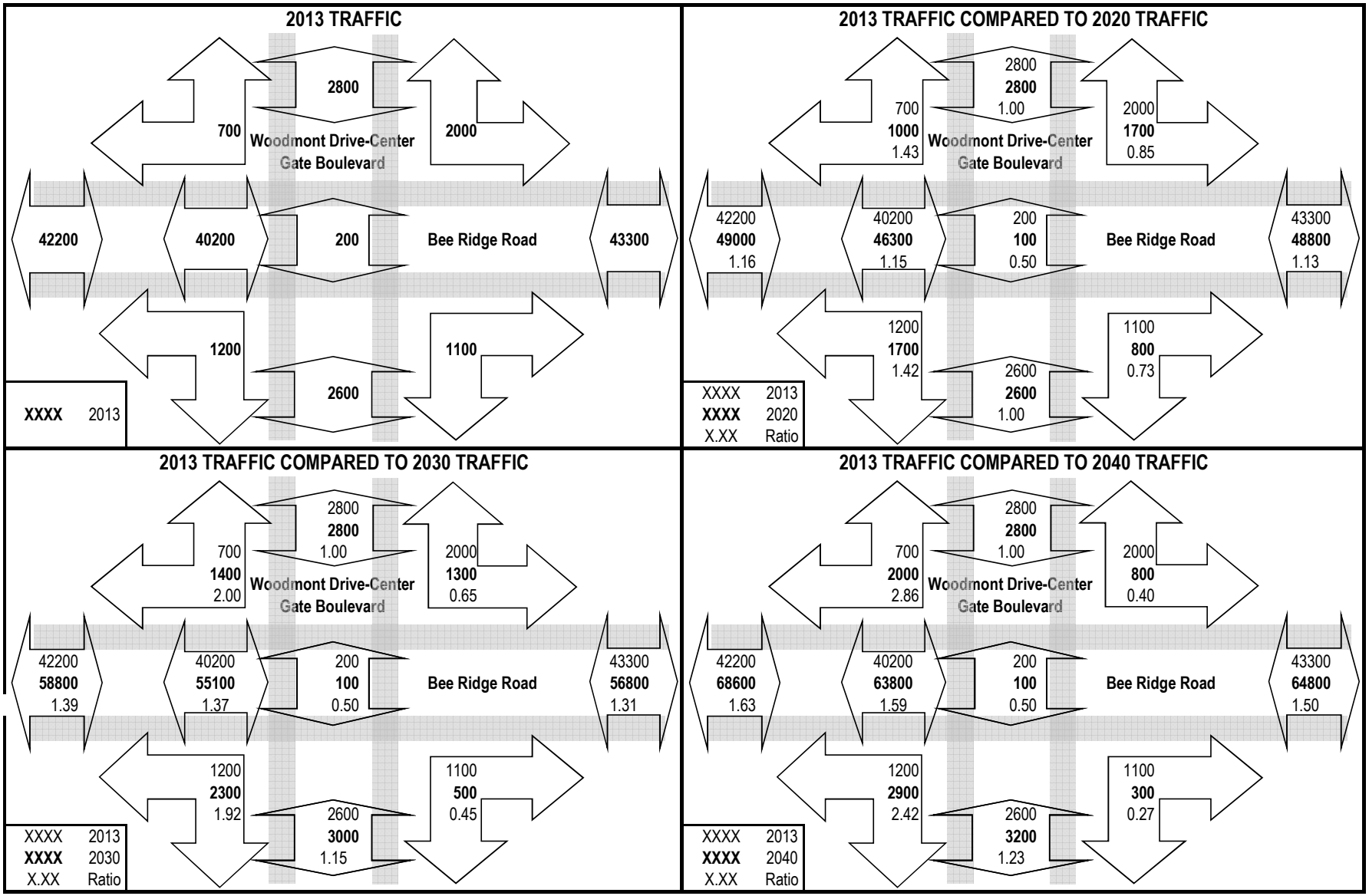
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

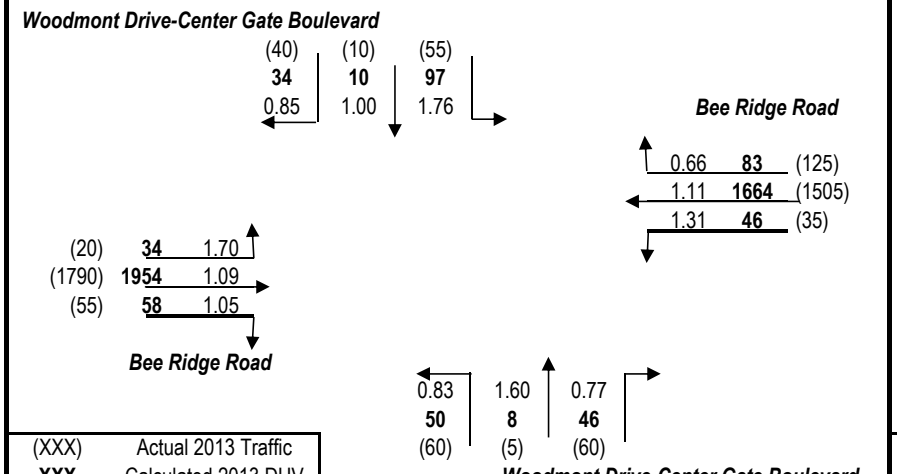
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO PM Peak



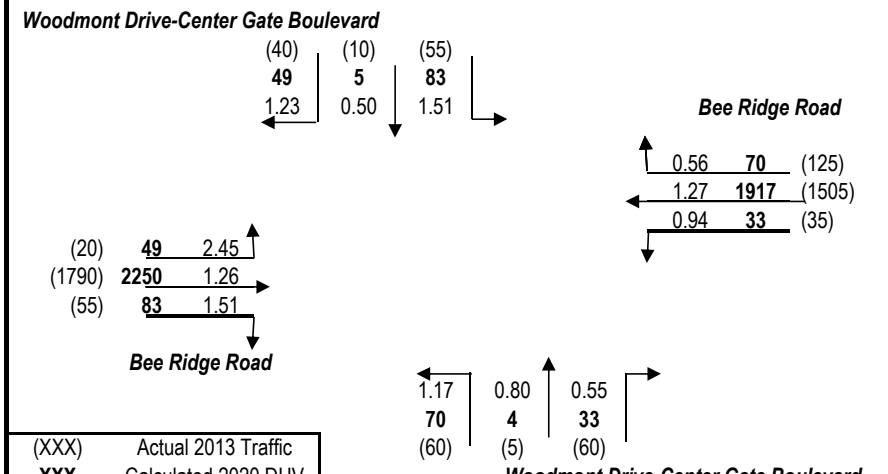
PROJECT TRAFFIC FOR Woodmont Drive-Center Gate Boulevard AT Bee Ridge Road: TO PM Peak

2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



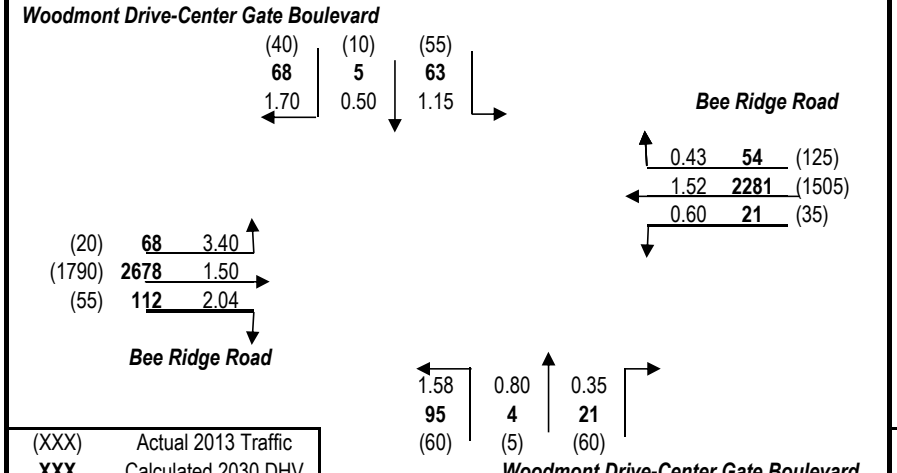
(XXX) Actual 2013 Traffic
XXX Calculated 2013 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



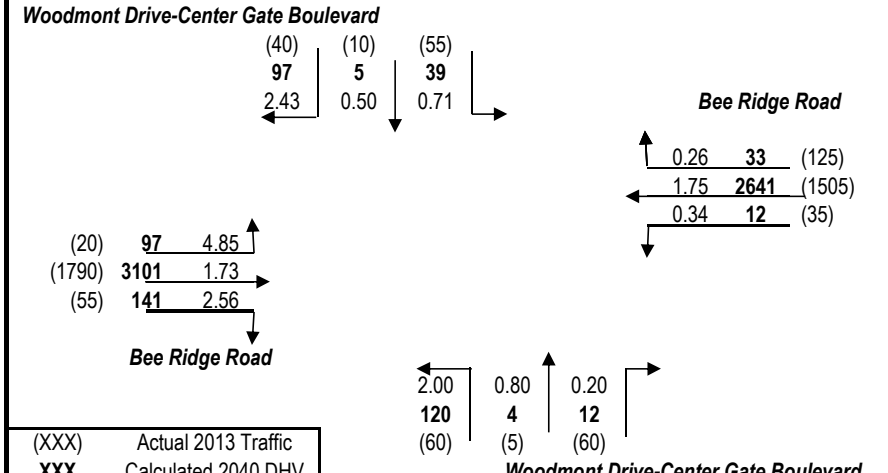
(XXX) Actual 2013 Traffic
XXX Calculated 2020 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



(XXX) Actual 2013 Traffic
XXX Calculated 2030 DHV
X.XX Ratio

2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



(XXX) Actual 2013 Traffic
XXX Calculated 2040 DHV
X.XX Ratio

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Maxfield Drive-Bee Ridge Square
Intersection:	Bee Ridge Road
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Mainline Growth Function — (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function — (●) Linear ( ) Exponential ( ) Decaying

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	43300	38000	5900	6000	93200
2040	64800	66700	5900	6000	143400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	7%	130	
(EB THRU)	*West-to-East*	85%	1625	
(EB RT)	*West-to-South*	8%	150	
(WB LT)	*East-to-South*	7%	105	(must be done manually)
(WB THRU)	*East-to-West*	91%	1305	
(WB RT)	*East-to-North*	2%	30	
(SB LT)	*North-to-East*	32%	110	
(SB THRU)	*North-to-South*	6%	25	
(SB RT)	*North-to-West*	62%	215	
(NB LT)	*South-to-West*	56%	145	
(NB THRU)	*South-to-North*	8%	20	
(NB RT)	*South-to-East*	36%	95	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

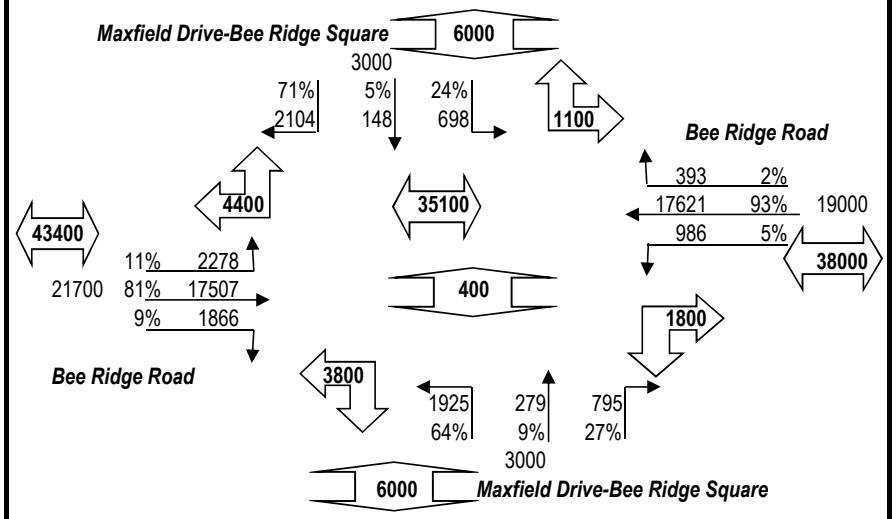
Highway:	Maxfield Drive-Bee Ridge Square	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.07	0.105	2300	0.086	2100	0.065	1900	0.048	1600
West-To-East (Thru)	0.85	0.809	17500	0.849	20700	0.892	25300	0.924	29900
West-To-South (RT)	0.08	0.086	1900	0.065	1600	0.043	1200	0.028	900
Total Flow From West:			**21700**		**24400**		**28400**		**32400**
East-To-South (LT)	0.07	0.052	1000	0.056	1300	0.059	1700	0.060	2000
East-To-West (Thru)	0.91	0.927	17600	0.920	20900	0.912	25600	0.906	30200
East-To-North (RT)	0.02	0.021	400	0.024	600	0.029	800	0.034	1100
Total Flow From East:			**19000**		**22800**		**28100**		**33300**
North-To-East (LT)	0.32	0.237	700	0.318	900	0.439	1300	0.563	1700
North-To-South (Thru)	0.06	0.050	100	0.048	100	0.042	100	0.034	100
North-To-West (RT)	0.62	0.713	2100	0.634	1900	0.519	1500	0.403	1200
Total Flow From North:			**2900**		**2900**		**2900**		**3000**
South-To-West (LT)	0.56	0.642	1900	0.557	1700	0.442	1300	0.335	1000
South-To-North (Thru)	0.08	0.093	300	0.096	300	0.092	300	0.082	200
South-To-East (RT)	0.36	0.265	800	0.348	1000	0.466	1400	0.583	1700
Total Flow From South:			**3000**		**3000**		**3000**		**2900**

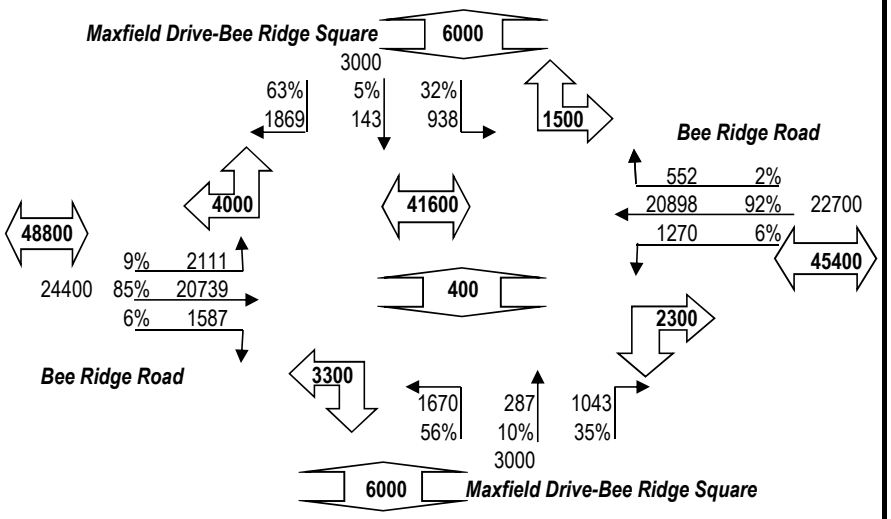
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO PM Peak

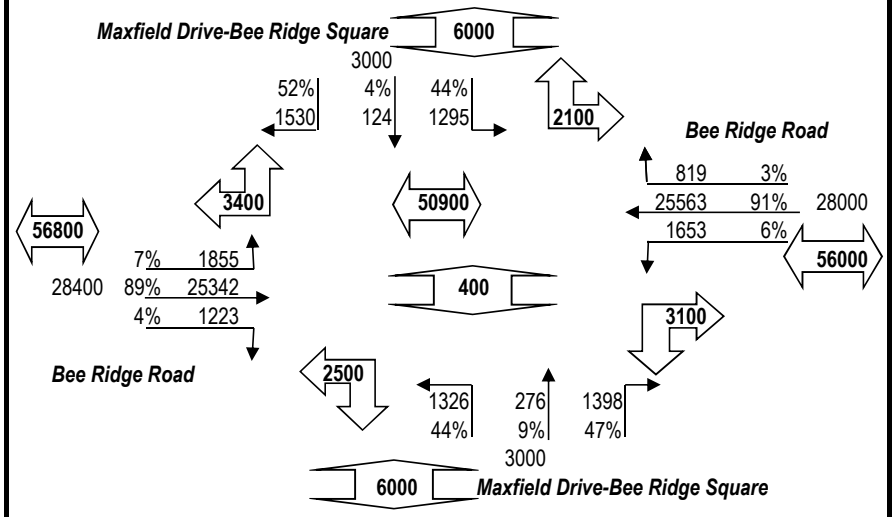
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



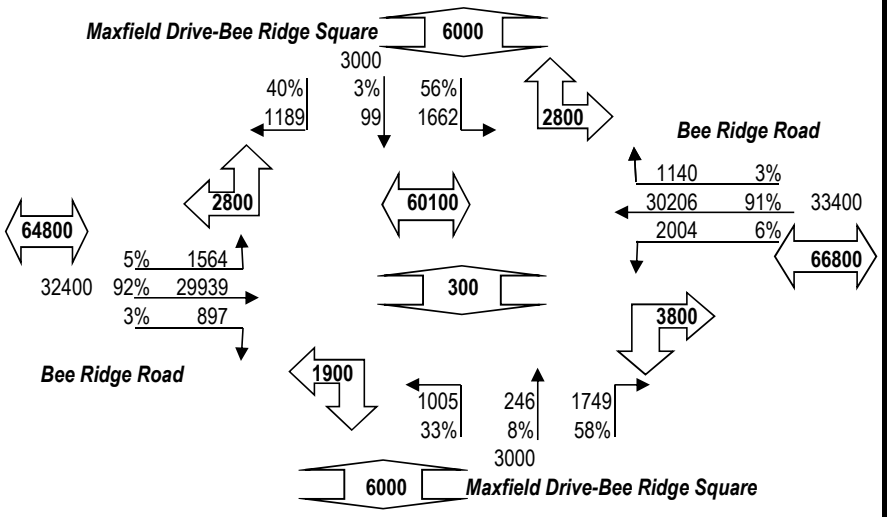
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

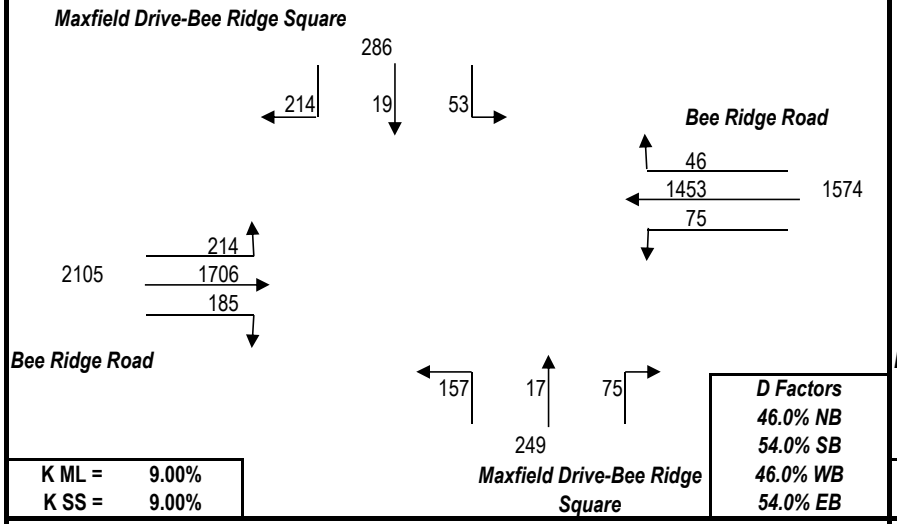


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO PM Peak

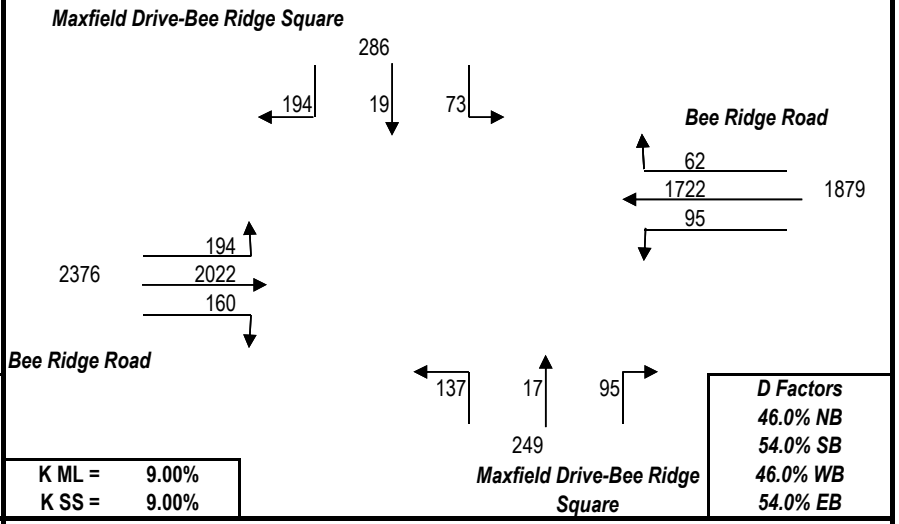
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

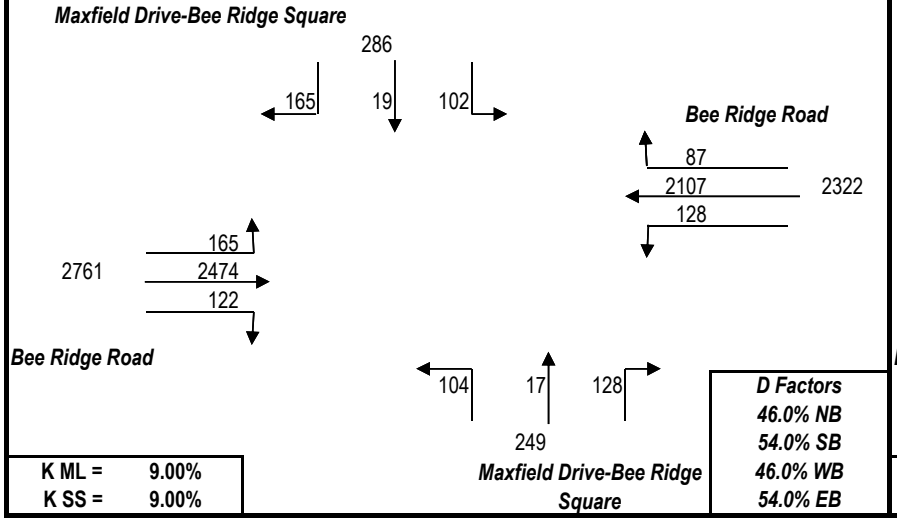
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

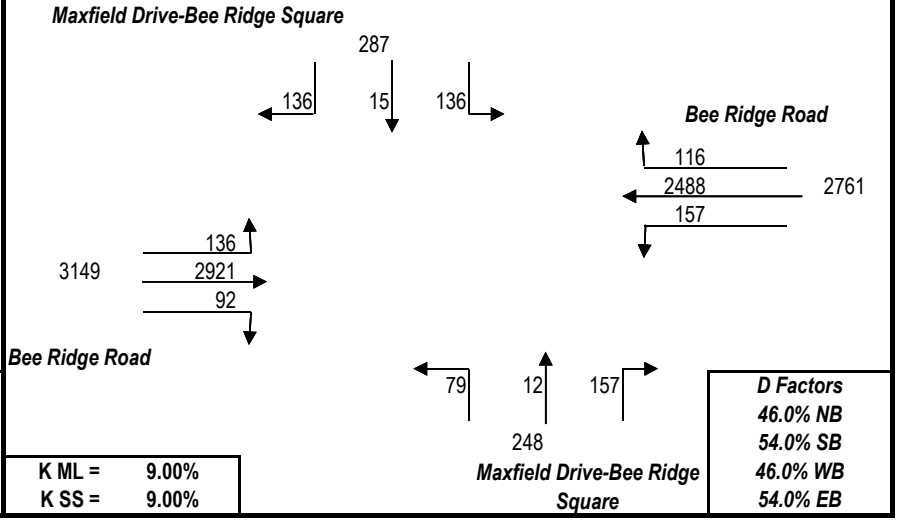
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

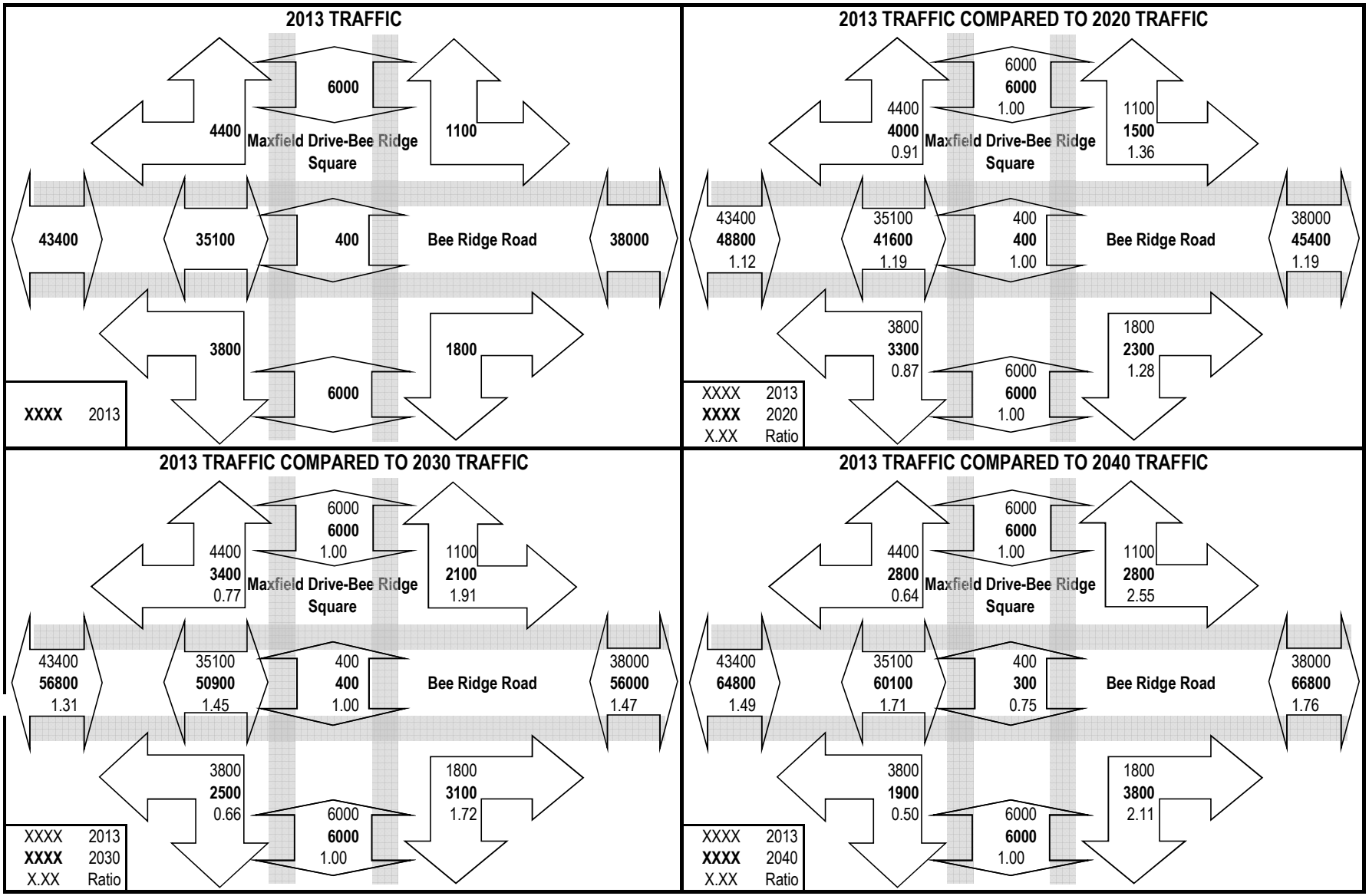
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

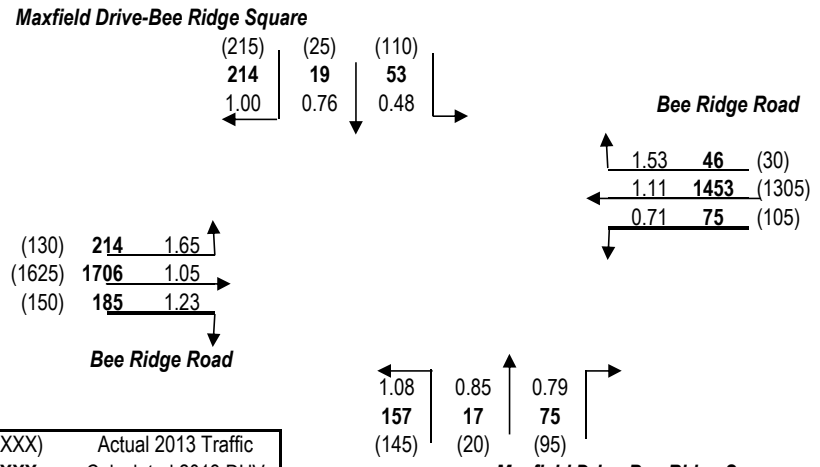
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO PM Peak

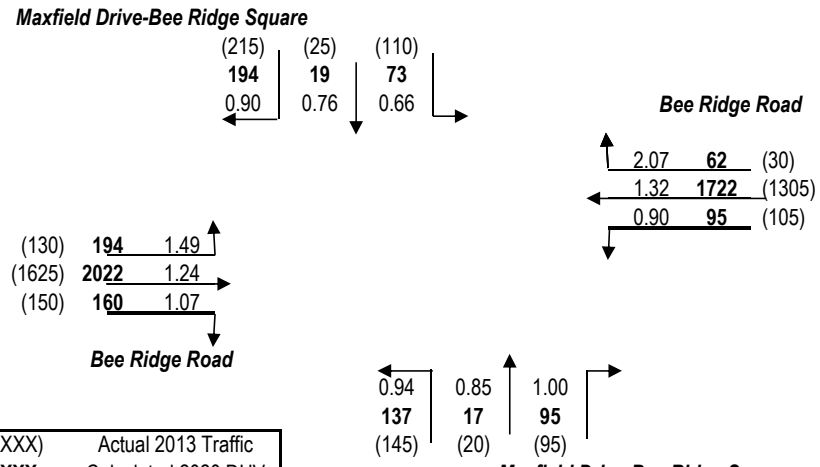


PROJECT TRAFFIC FOR Maxfield Drive-Bee Ridge Square AT Bee Ridge Road: TO PM Peak

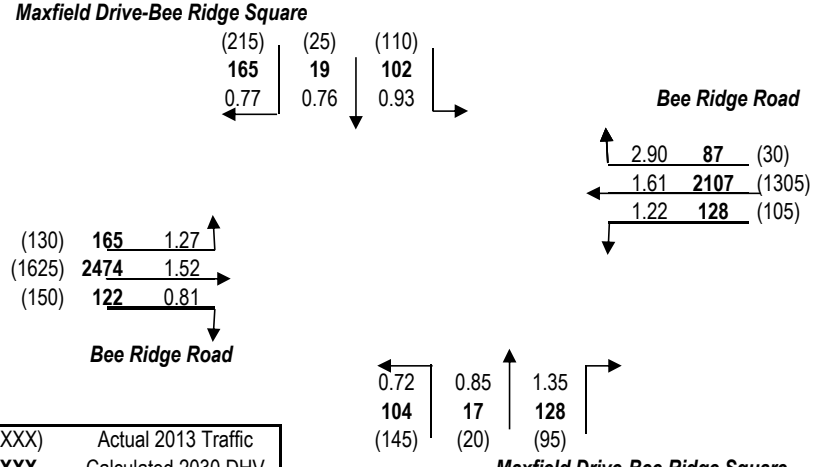
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



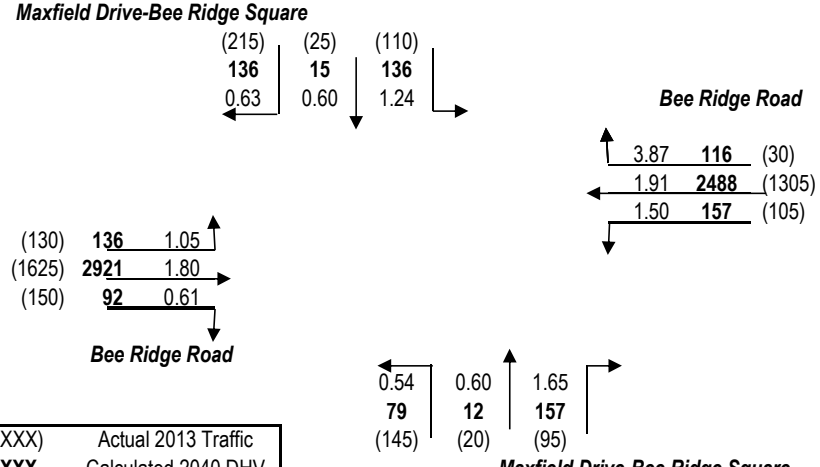
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Cattlemen Road
Intersection:	Bee Ridge Road
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	37100	52800	31100	28600	149600
2040	66700	97800	44900	41400	250800

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	12%	225	
(EB THRU)	*West-to-East*	77%	1480	
(EB RT)	*West-to-South*	11%	210	
(WB LT)	*East-to-South*	22%	405	(must be done manually)
(WB THRU)	*East-to-West*	54%	1025	
(WB RT)	*East-to-North*	24%	460	
(SB LT)	*North-to-East*	47%	715	
(SB THRU)	*North-to-South*	40%	610	
(SB RT)	*North-to-West*	13%	200	
(NB LT)	*South-to-West*	19%	200	
(NB THRU)	*South-to-North*	37%	390	
(NB RT)	*South-to-East*	44%	455	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

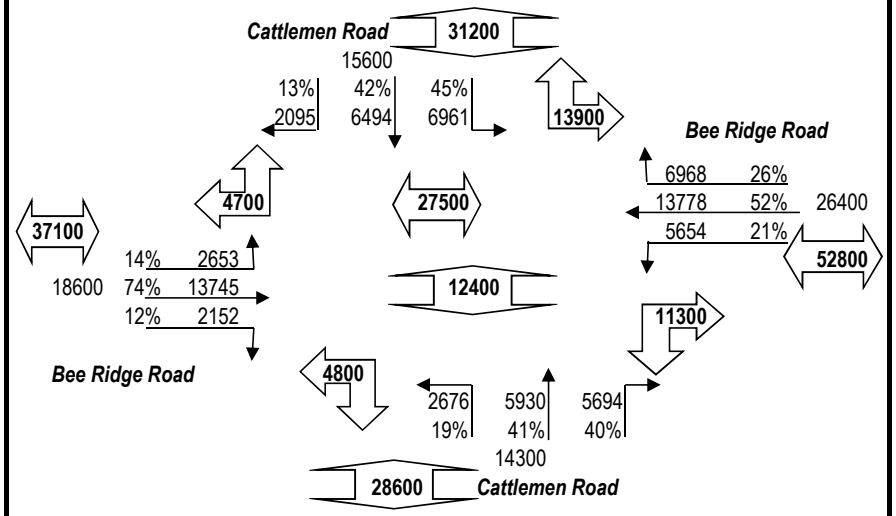
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.12	0.143	2700	0.129	2900	0.115	3200	0.105	3500
West-To-East (Thru)	0.77	0.741	13700	0.766	17100	0.790	22000	0.807	26900
West-To-South (RT)	0.11	0.116	2200	0.106	2400	0.095	2700	0.088	2900
Total Flow From West:			**18600**		**22400**		**27900**		**33300**
East-To-South (LT)	0.22	0.214	5700	0.211	6800	0.207	8400	0.205	10000
East-To-West (Thru)	0.54	0.522	13800	0.533	17200	0.544	22100	0.551	27000
East-To-North (RT)	0.24	0.264	7000	0.256	8300	0.249	10100	0.244	11900
Total Flow From East:			**26500**		**32300**		**40600**		**48900**
North-To-East (LT)	0.47	0.448	7000	0.477	8300	0.508	10100	0.532	11900
North-To-South (Thru)	0.40	0.418	6500	0.392	6800	0.365	7300	0.345	7800
North-To-West (RT)	0.13	0.135	2100	0.131	2300	0.127	2500	0.123	2800
Total Flow From North:			**15600**		**17400**		**19900**		**22500**
South-To-West (LT)	0.19	0.187	2700	0.184	2900	0.179	3300	0.175	3600
South-To-North (Thru)	0.37	0.415	5900	0.388	6200	0.360	6600	0.340	7000
South-To-East (RT)	0.44	0.398	5700	0.428	6800	0.460	8400	0.485	10000
Total Flow From South:			**14300**		**15900**		**18300**		**20600**

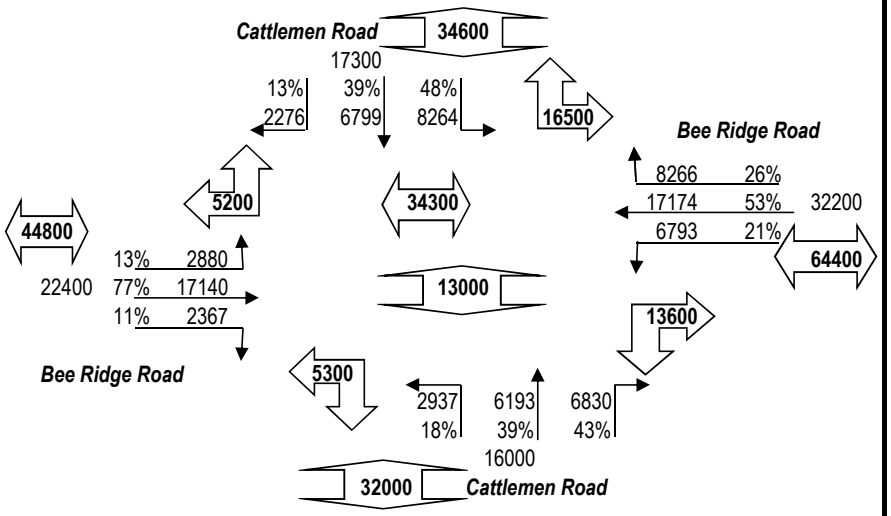
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO PM Peak

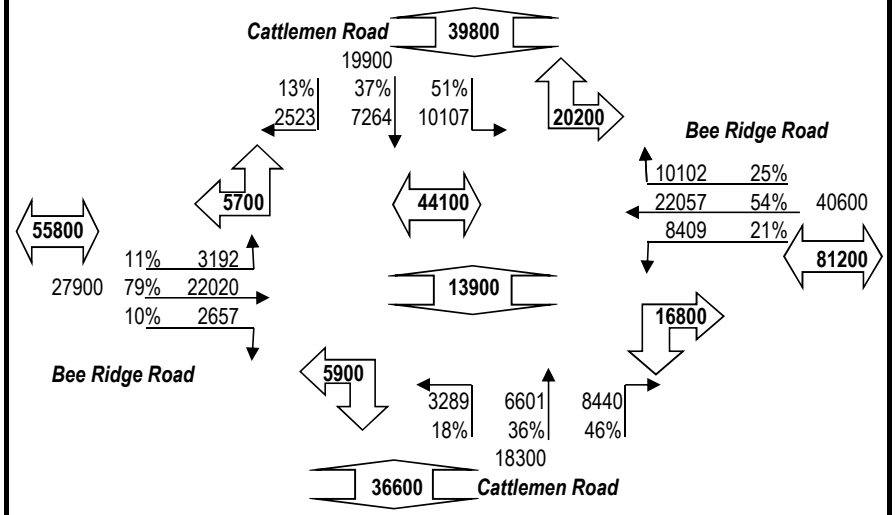
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



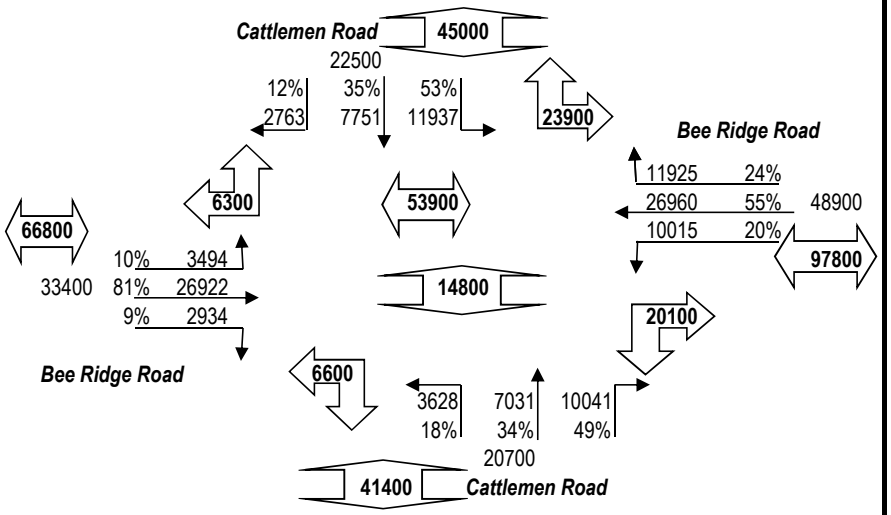
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

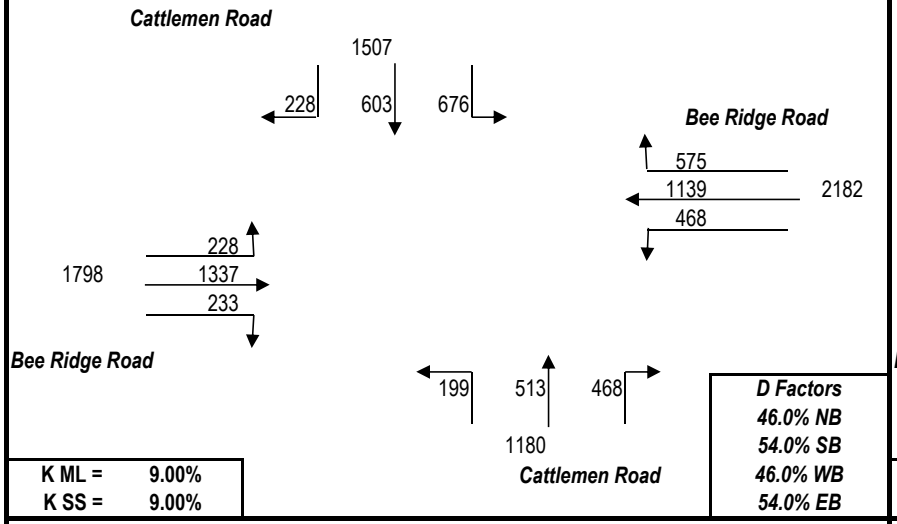


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO PM Peak

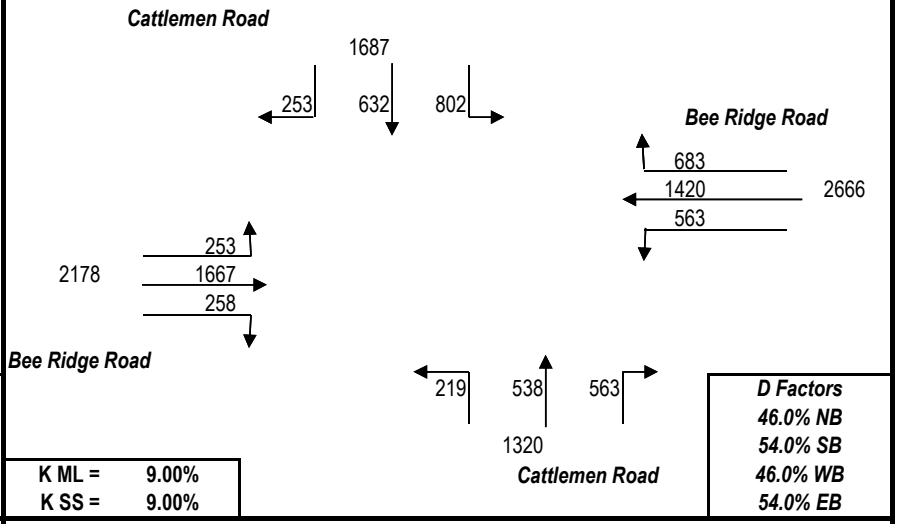
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

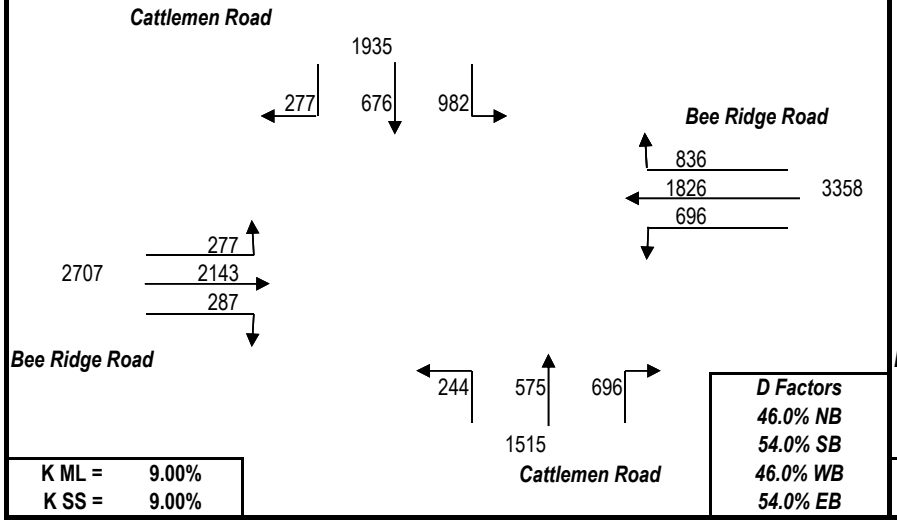
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

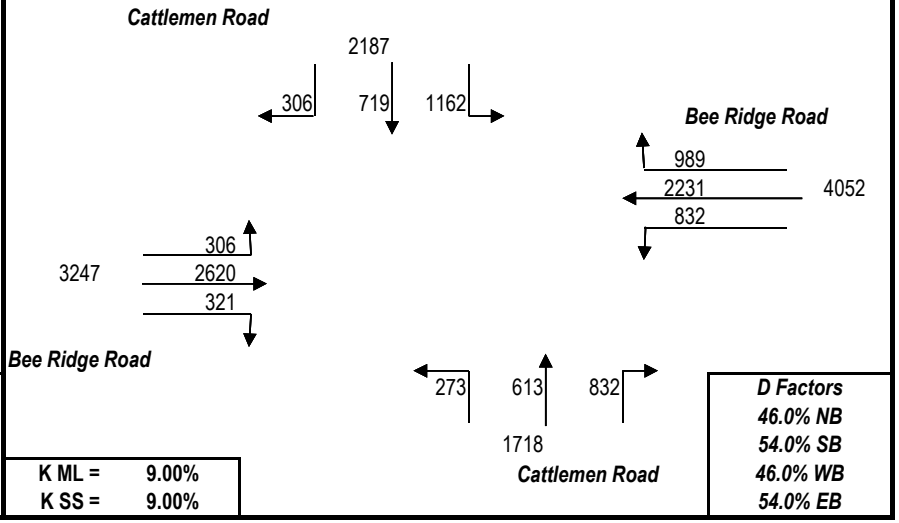
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

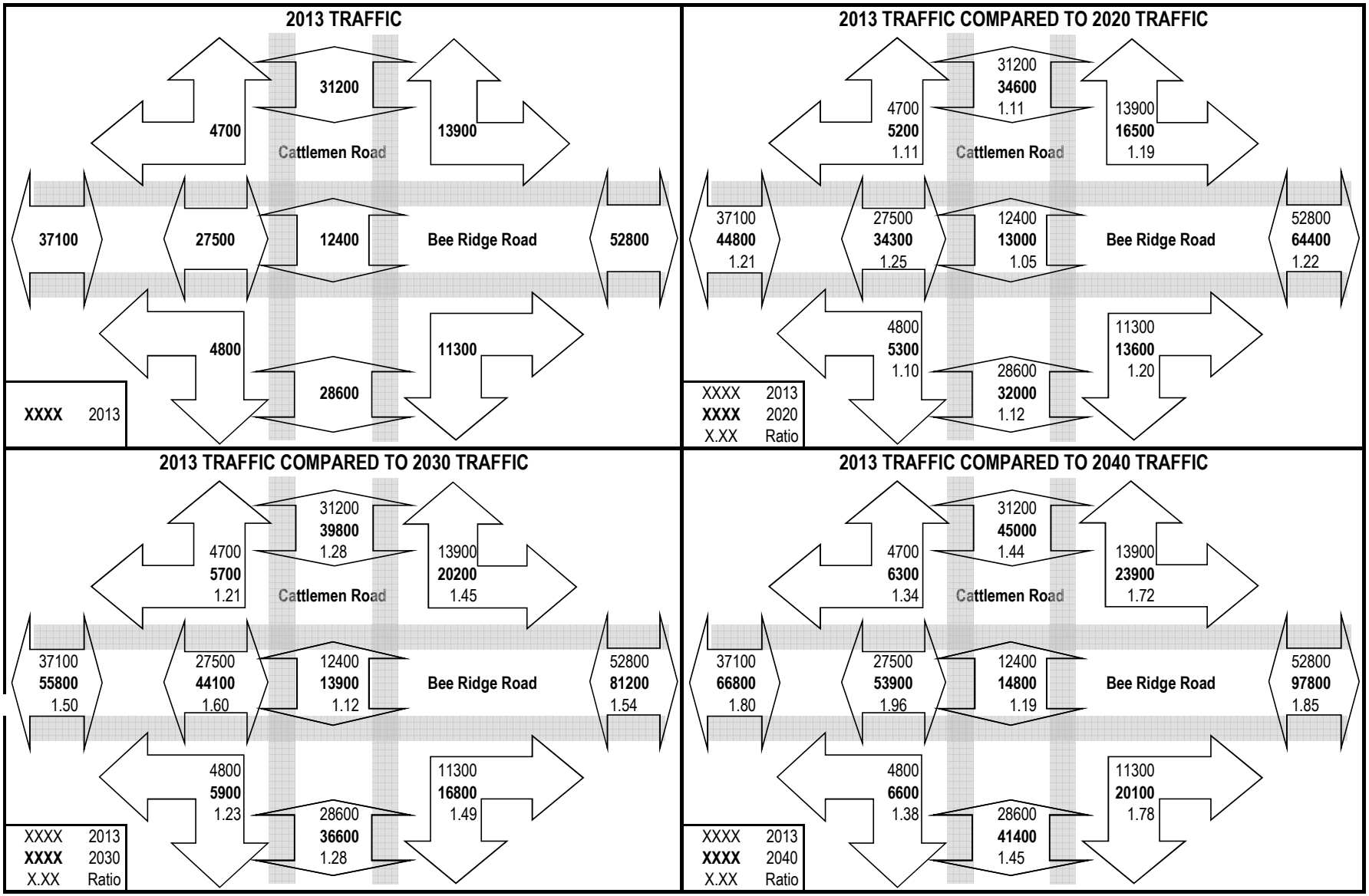
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

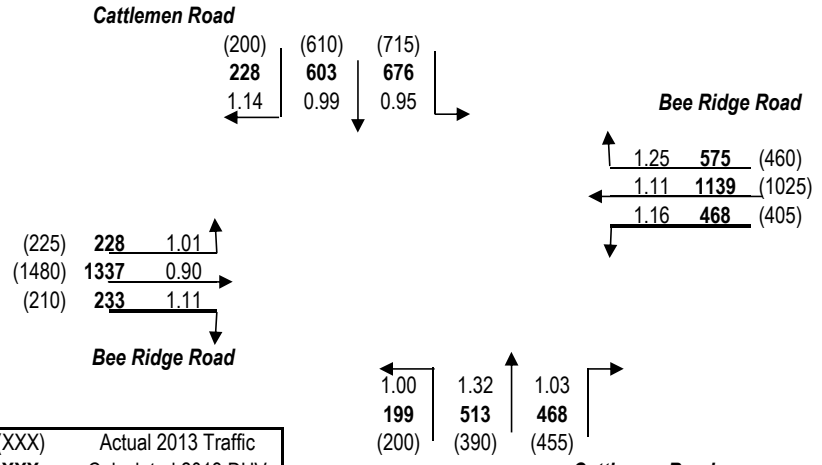
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO PM Peak

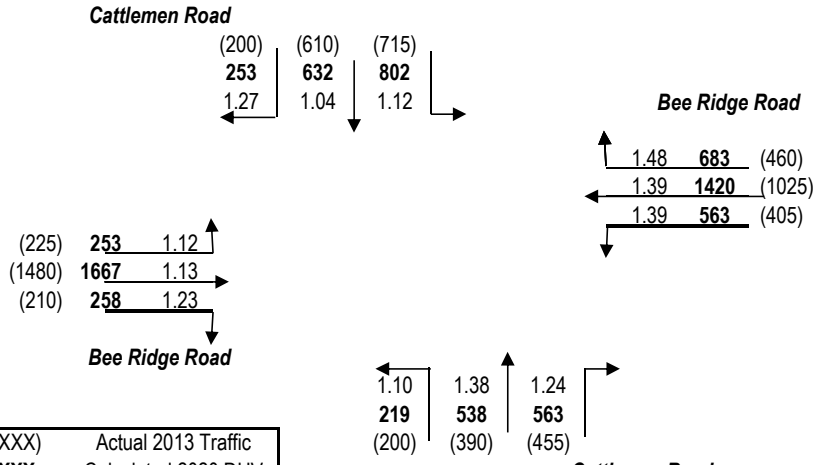


PROJECT TRAFFIC FOR Cattlemen Road AT Bee Ridge Road: TO PM Peak

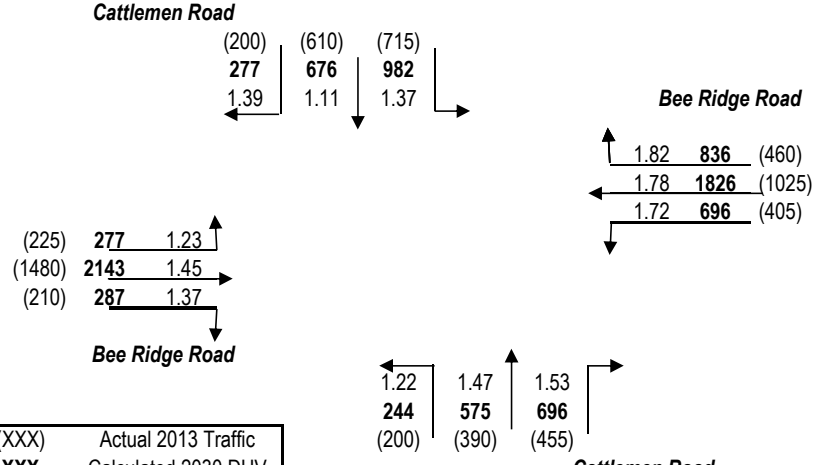
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



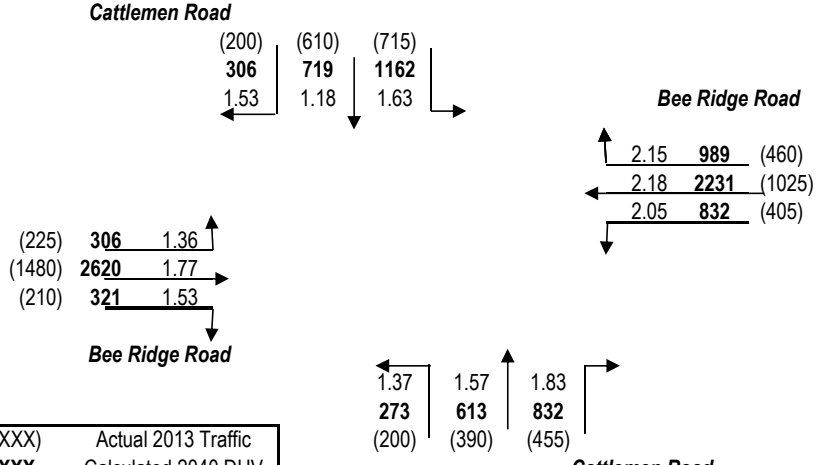
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	I-75 Interchange
Intersection:	Bee Ridge Road
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline	Sidestreet
9.00%	9.00%

D Factors

Mainline	
54.0%	Northbound (NB)
46.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020		
Mid	2030	0.00%	0.00%
Design	2040		

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	52800	29200	28500	17500	128000
2040	97800	45000	42900	37600	223300

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	39%	915	
(EB THRU)	*West-to-East*	33%	790	
(EB RT)	*West-to-South*	28%	656	
(WB LT)	*East-to-South*	18%	174	(must be done manually)
(WB THRU)	*East-to-West*	56%	524	
(WB RT)	*East-to-North*	26%	243	
(SB LT)	*North-to-East*	30%	332	
(SB THRU)	*North-to-South*	0%	0	
(SB RT)	*North-to-West*	70%	790	
(NB LT)	*South-to-West*	67%	328	
(NB THRU)	*South-to-North*	0%	0	
(NB RT)	*South-to-East*	33%	159	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

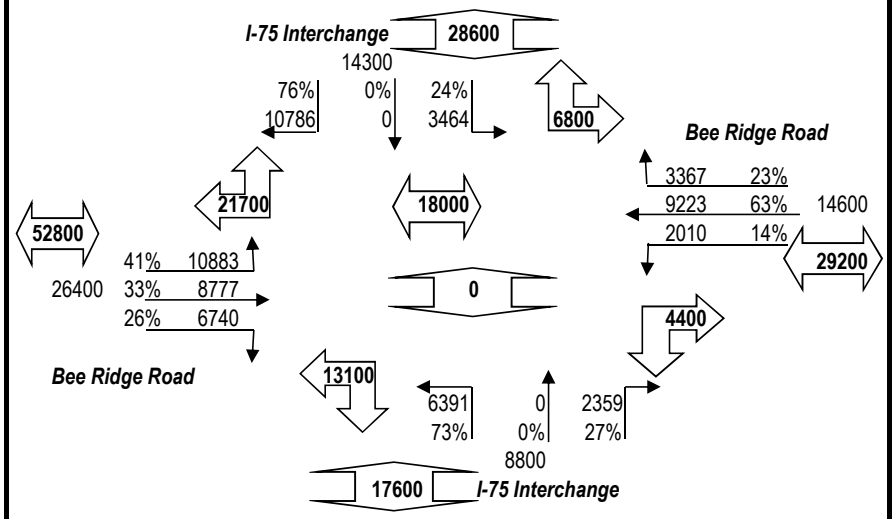
Highway:	I-75 Interchange	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.39	0.412	10900	0.395	12700	0.378	15300	0.366	17900
West-To-East (Thru)	0.33	0.332	8800	0.324	10400	0.316	12800	0.311	15200
West-To-South (RT)	0.28	0.255	6700	0.281	9000	0.306	12400	0.323	15800
Total Flow From West:			**26400**		**32100**		**40500**		**48900**
East-To-South (LT)	0.18	0.138	2000	0.139	2300	0.137	2700	0.134	3000
East-To-West (Thru)	0.56	0.632	9200	0.659	11000	0.687	13500	0.708	15900
East-To-North (RT)	0.26	0.231	3400	0.203	3400	0.176	3400	0.158	3600
Total Flow From East:			**14600**		**16700**		**19600**		**22500**
North-To-East (LT)	0.30	0.243	3500	0.216	3500	0.189	3600	0.171	3700
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.70	0.757	10800	0.784	12600	0.811	15200	0.829	17800
Total Flow From North:			**14300**		**16100**		**18800**		**21500**
South-To-West (LT)	0.67	0.730	6400	0.760	8600	0.788	11900	0.808	15200
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.33	0.270	2400	0.240	2700	0.212	3200	0.192	3600
Total Flow From South:			**8800**		**11300**		**15100**		**18800**

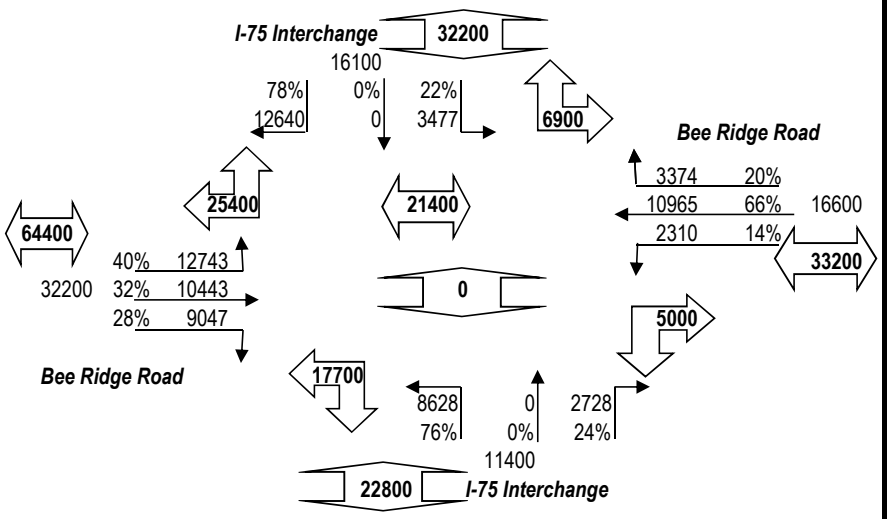
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO PM Peak

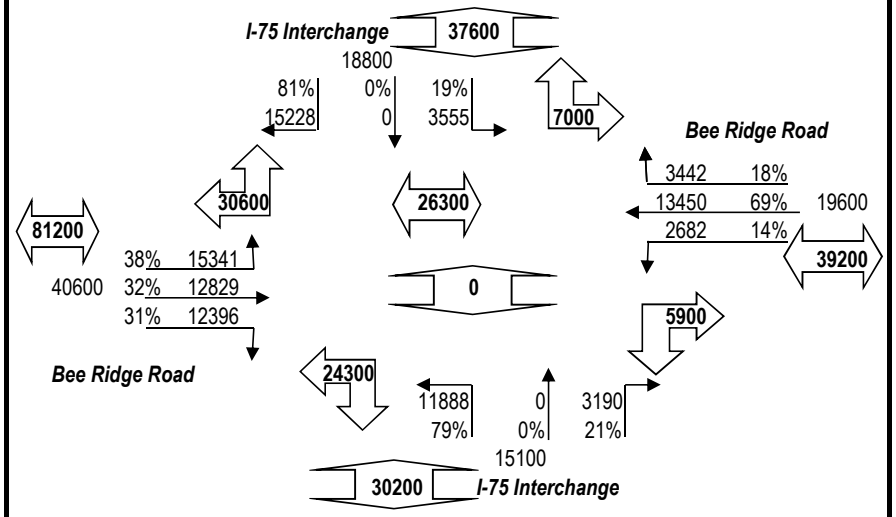
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



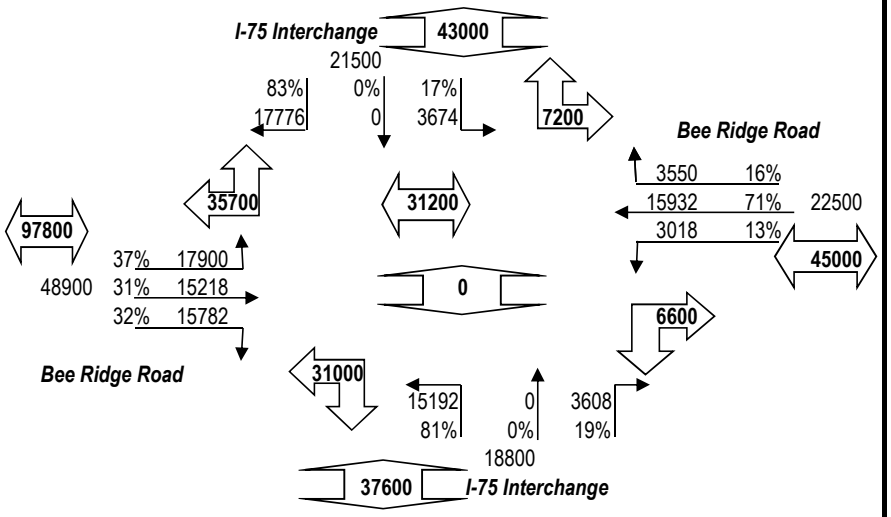
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

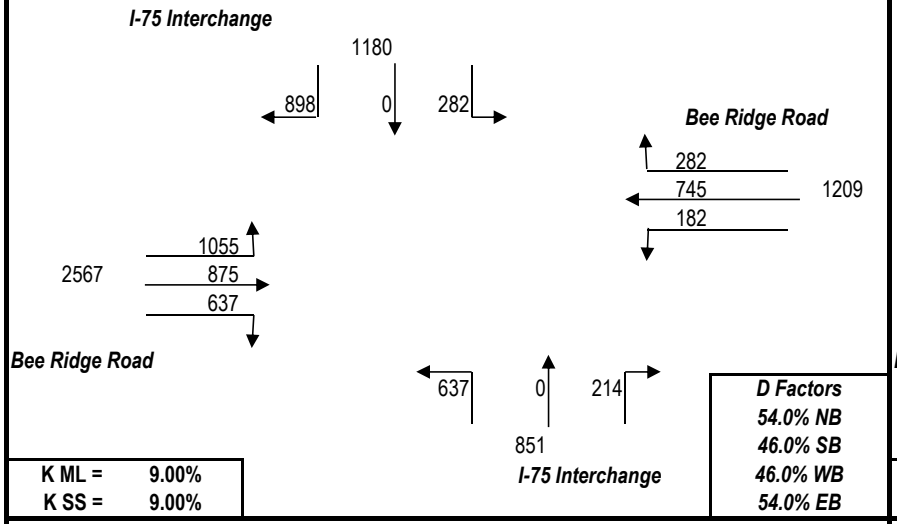


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO PM Peak

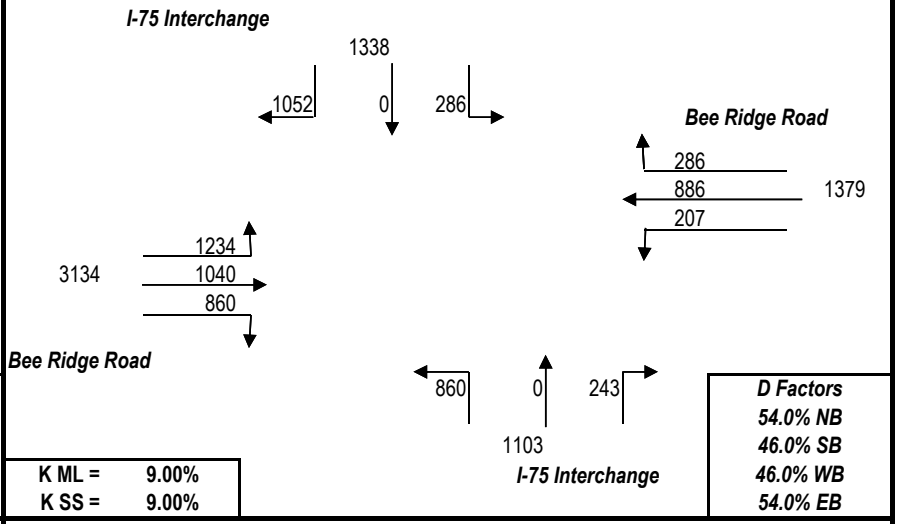
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
46.0% WB
54.0% EB

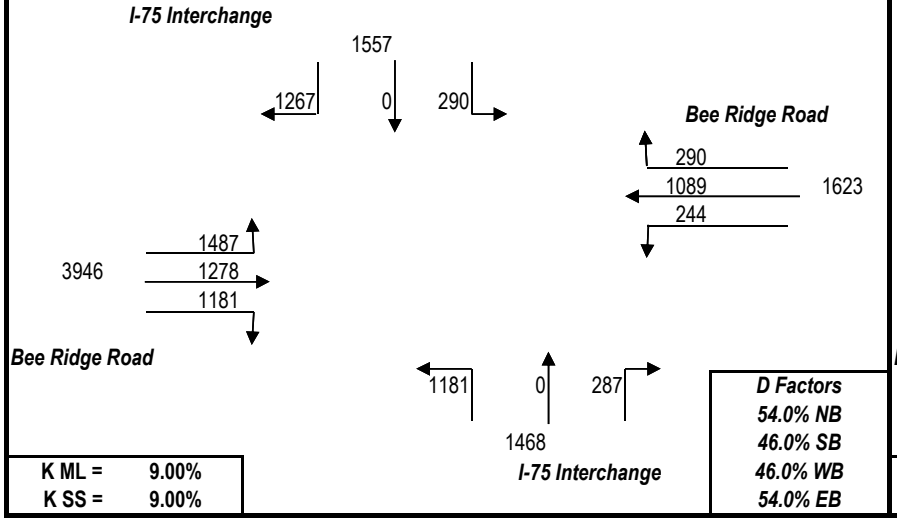
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
46.0% WB
54.0% EB

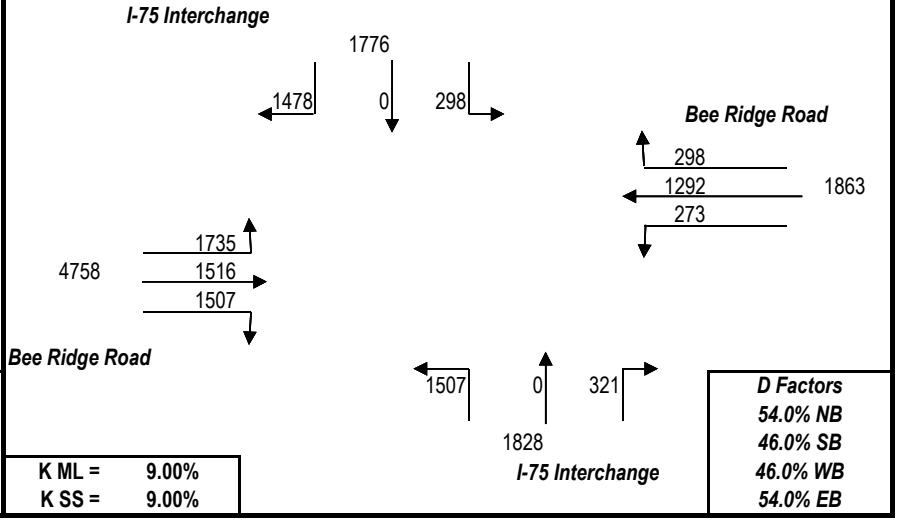
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
54.0% NB
46.0% SB
46.0% WB
54.0% EB

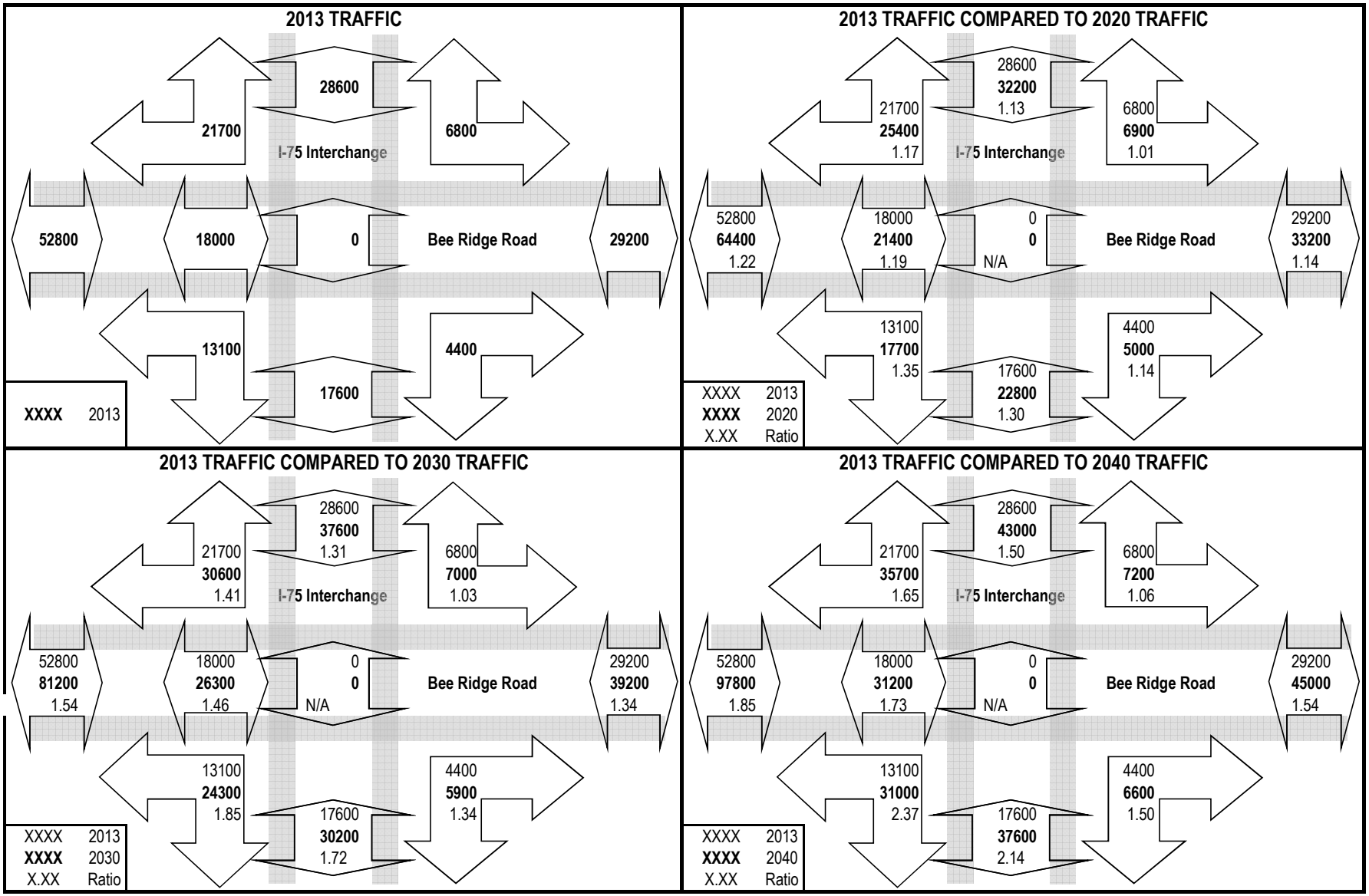
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

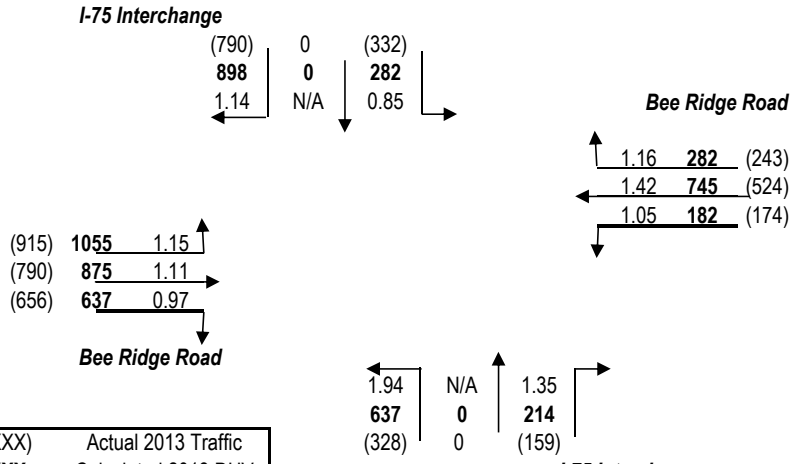
D Factors
54.0% NB
46.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO PM Peak

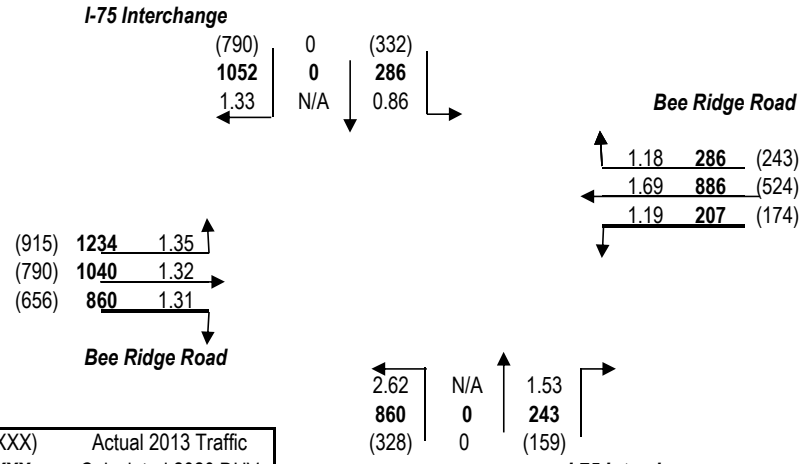


PROJECT TRAFFIC FOR I-75 Interchange AT Bee Ridge Road: TO PM Peak

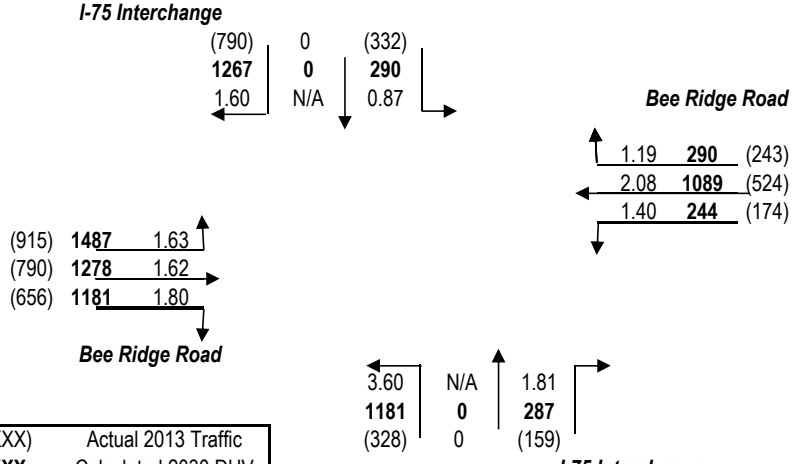
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



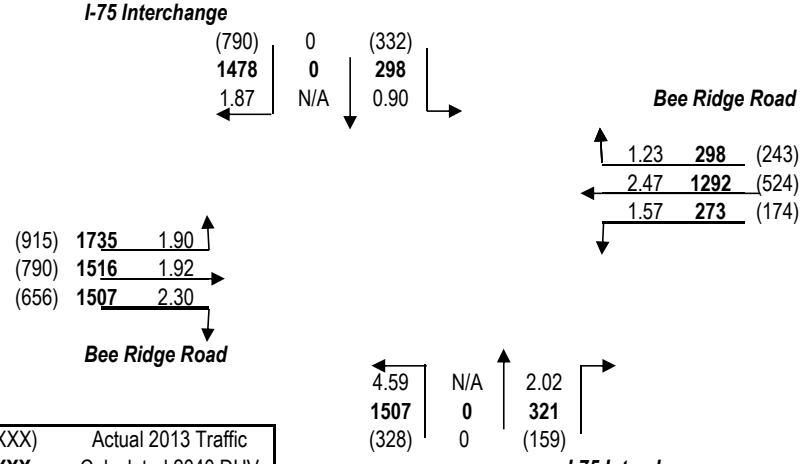
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Mauna Loa Boulevard
Intersection:	Bee Ridge Road
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	27900	18600	2600	8200	57300
2040	40300	26900	2600	8200	78000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	3%	45	
(EB THRU)	*West-to-East*	66%	945	
(EB RT)	*West-to-South*	31%	435	
(WB LT)	*East-to-South*	1%	10	(must be done manually)
(WB THRU)	*East-to-West*	98%	690	
(WB RT)	*East-to-North*	1%	5	
(SB LT)	*North-to-East*	5%	10	
(SB THRU)	*North-to-South*	3%	5	
(SB RT)	*North-to-West*	92%	135	
(NB LT)	*South-to-West*	93%	265	
(NB THRU)	*South-to-North*	2%	5	
(NB RT)	*South-to-East*	5%	15	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

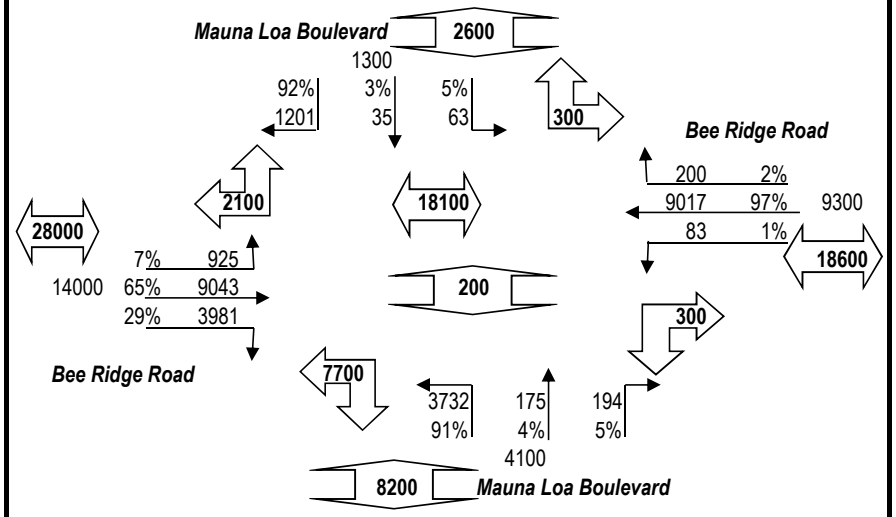
Highway:	Mauna Loa Boulevard	**County:**	Sarasota
Intersection:	Bee Ridge Road		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.03	0.066	900	0.076	1200	0.046	800	0.042	800
West-To-East (Thru)	0.66	0.648	9000	0.662	10300	0.712	12700	0.737	14800
West-To-South (RT)	0.31	0.285	4000	0.262	4100	0.242	4300	0.221	4500
Total Flow From West:			**13900**		**15600**		**17800**		**20100**
East-To-South (LT)	0.01	0.009	100	0.002	0	0.017	200	0.015	200
East-To-West (Thru)	0.98	0.970	9000	0.992	10300	0.951	11300	0.957	12900
East-To-North (RT)	0.01	0.022	200	0.006	100	0.032	400	0.029	400
Total Flow From East:			**9300**		**10400**		**11900**		**13500**
North-To-East (LT)	0.05	0.049	100	0.013	0	0.109	100	0.108	100
North-To-South (Thru)	0.03	0.027	0	0.007	0	0.047	100	0.042	100
North-To-West (RT)	0.92	0.924	1200	0.980	1300	0.844	1100	0.850	1100
Total Flow From North:			**1300**		**1300**		**1300**		**1300**
South-To-West (LT)	0.93	0.910	3700	0.974	4000	0.834	3400	0.841	3400
South-To-North (Thru)	0.02	0.043	200	0.013	100	0.060	200	0.053	200
South-To-East (RT)	0.05	0.047	200	0.013	100	0.106	400	0.106	400
Total Flow From South:			**4100**		**4200**		**4000**		**4000**

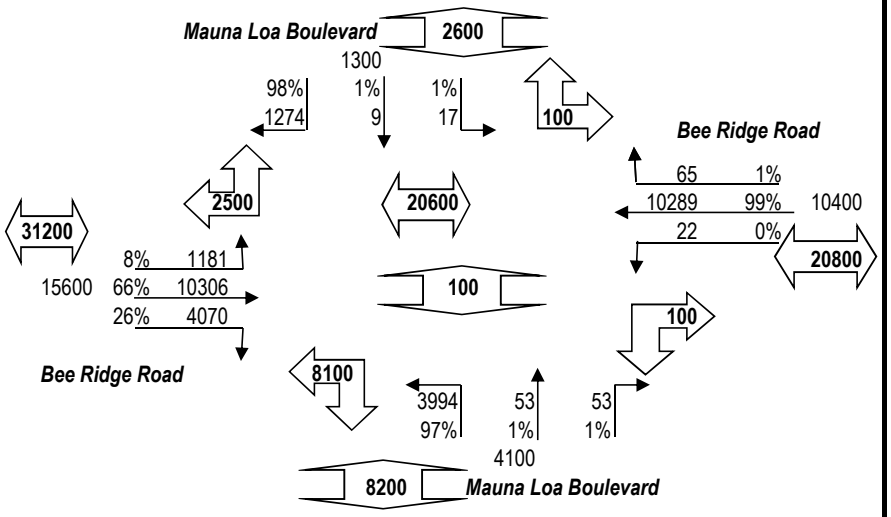
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO PM Peak

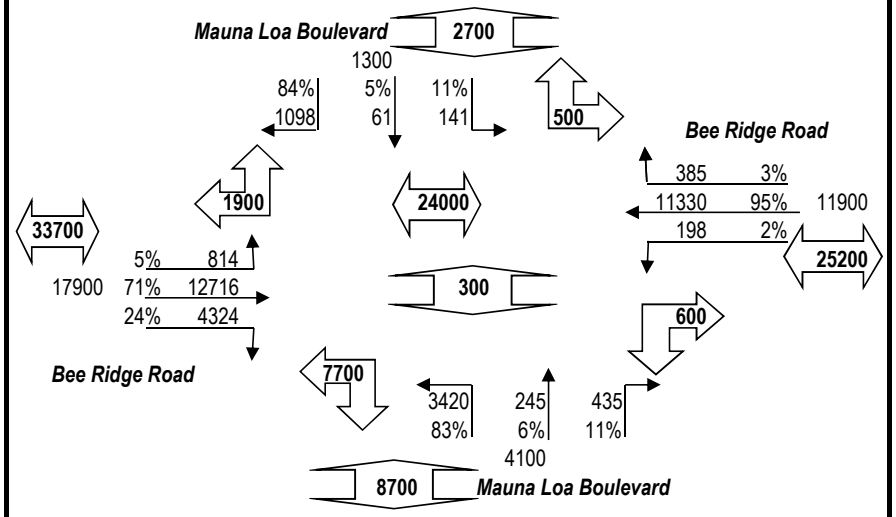
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



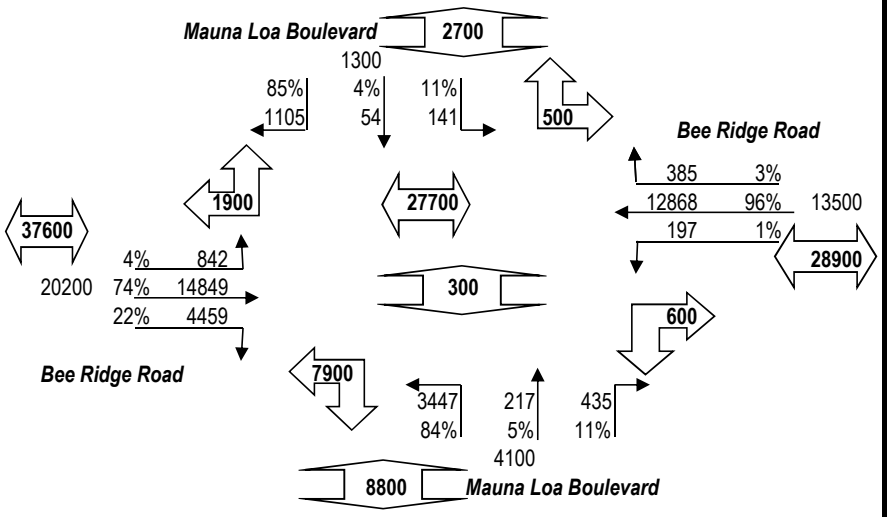
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

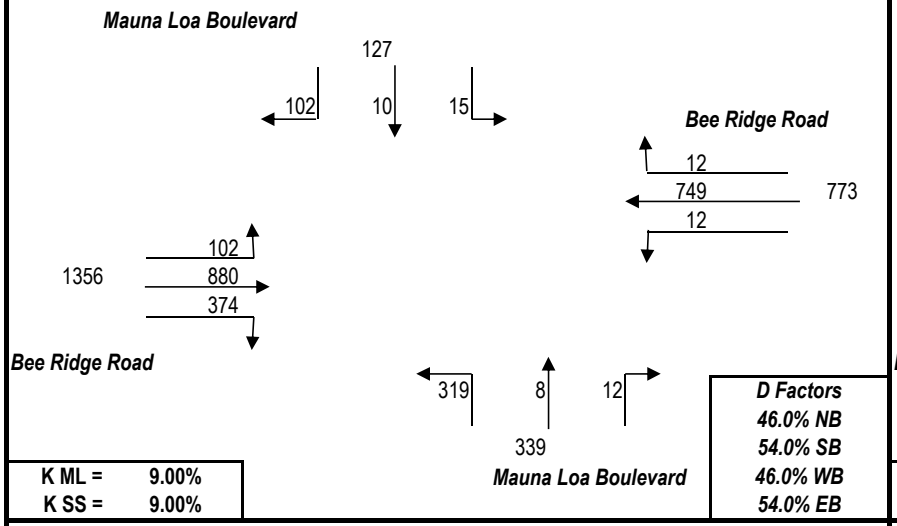


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO PM Peak

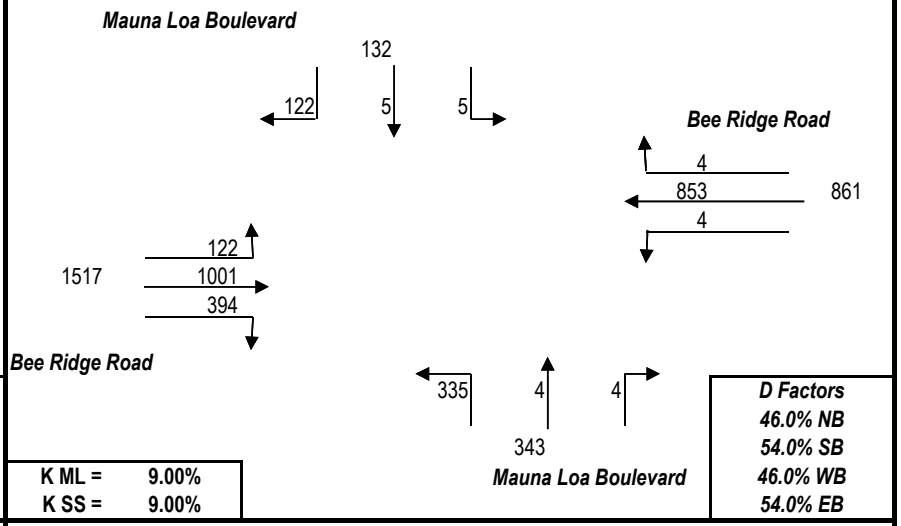
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

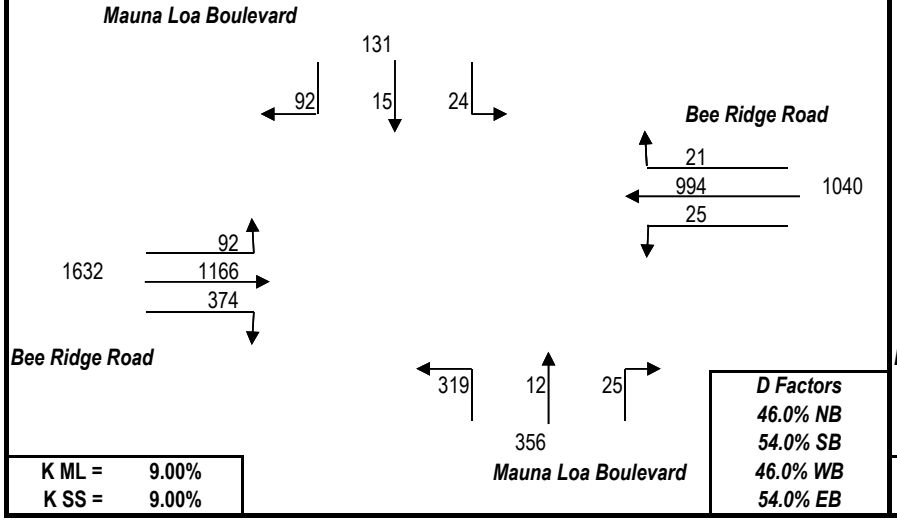
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

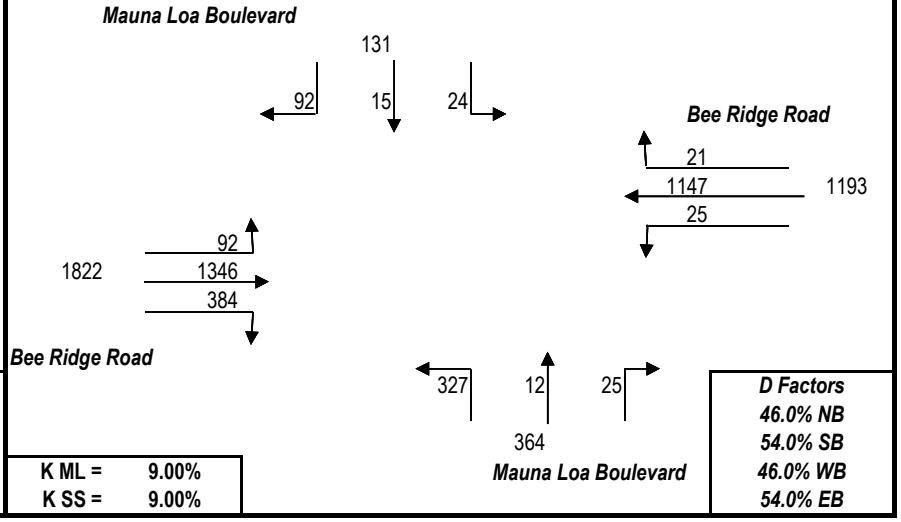
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

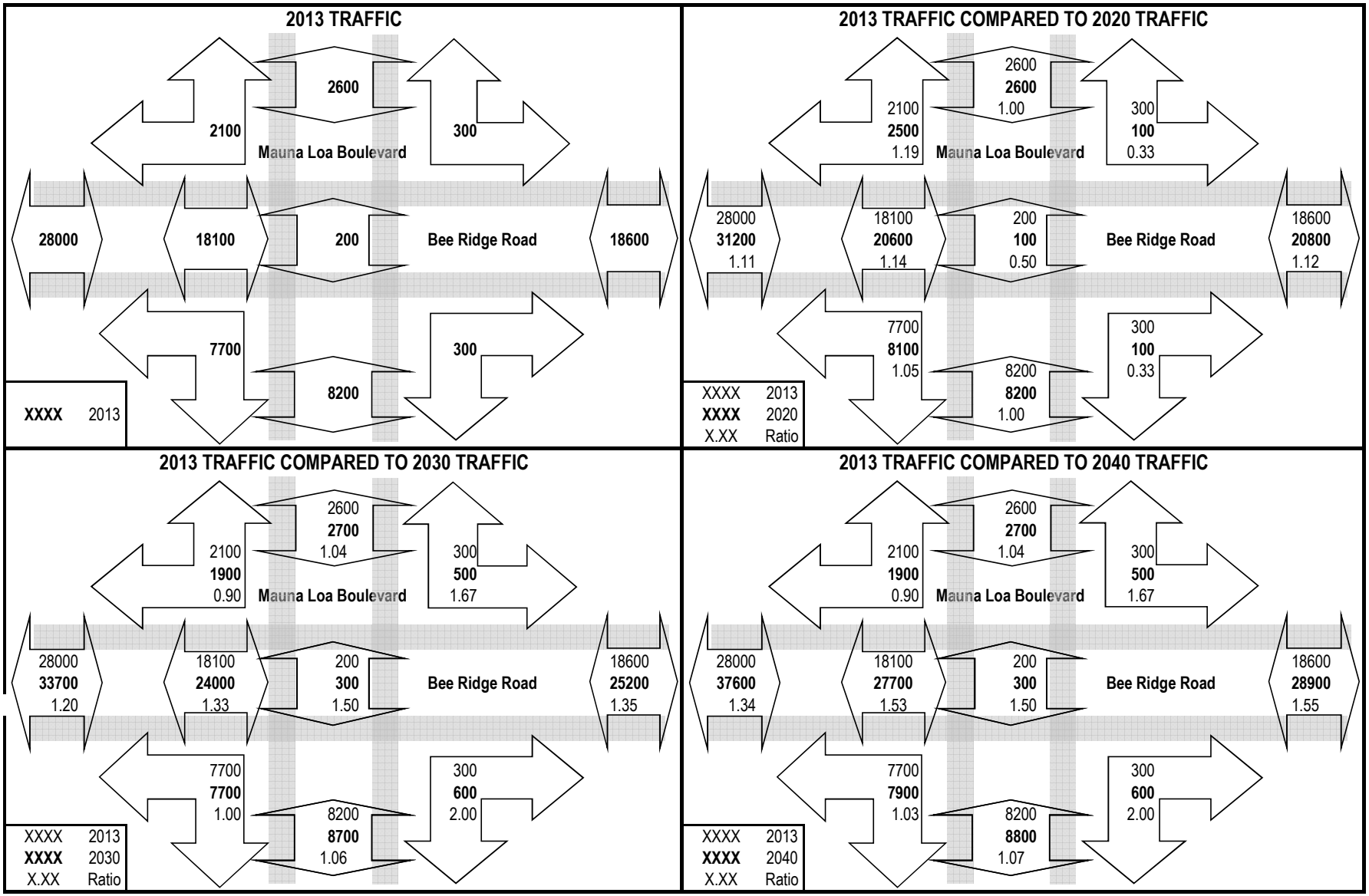
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

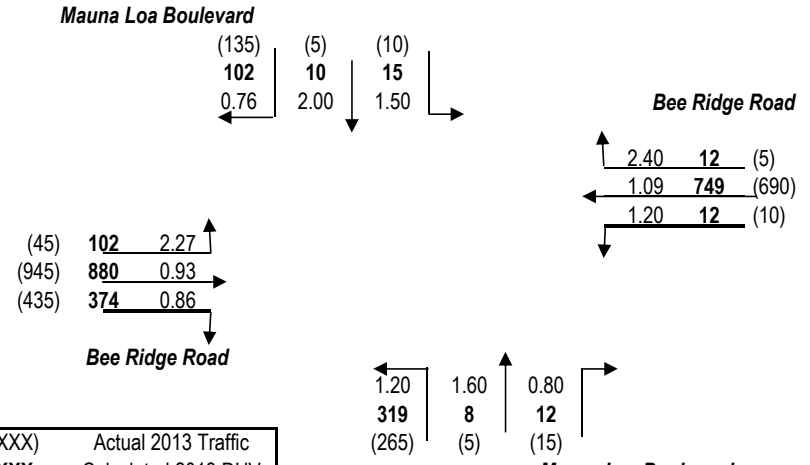
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO PM Peak

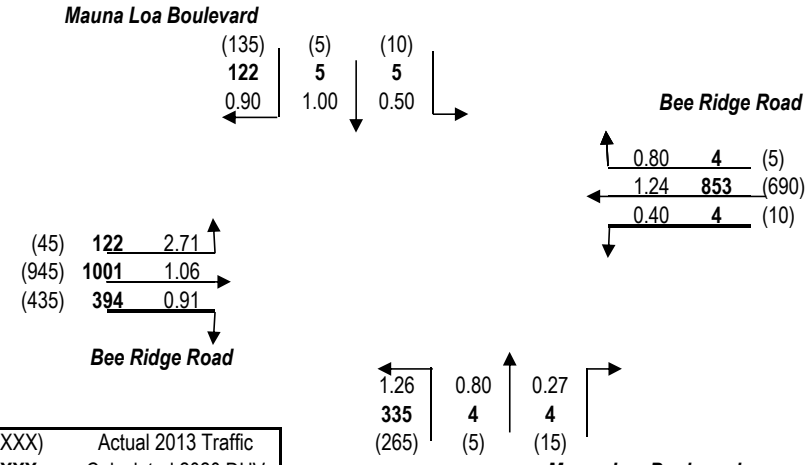


PROJECT TRAFFIC FOR Mauna Loa Boulevard AT Bee Ridge Road: TO PM Peak

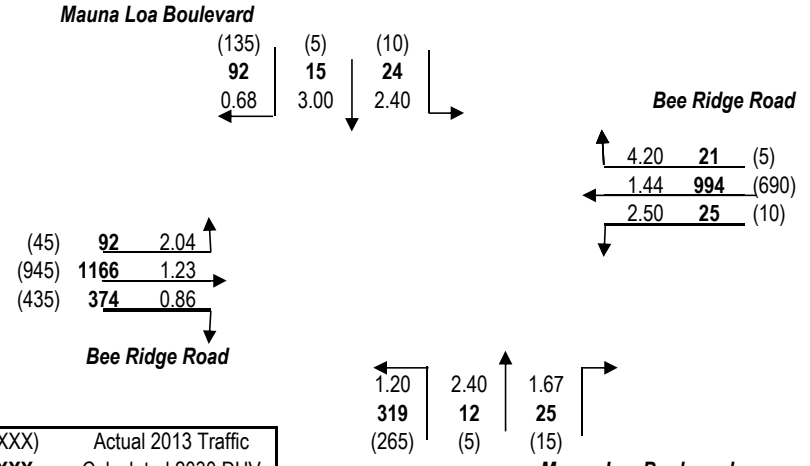
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



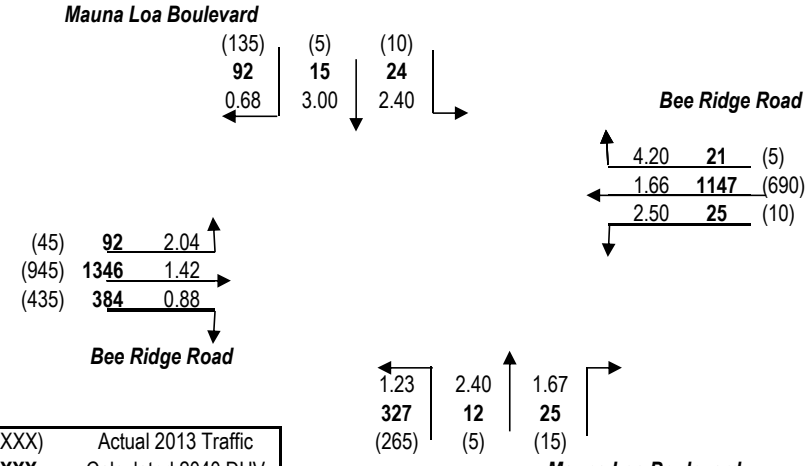
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Cattlemen Road
Intersection:	Center Pointe Drive
From:	
To:	PM Peak
County:	Sarasota

Enter Yes or No

Is the Mainline Oriented North/South? (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020		
Mid	2030	0.00%	0.00%
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	2900	4900	20400	22400	50600
2040	2900	4900	31800	32400	72000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	48%	55	
(EB THRU)	*West-to-East*	12%	15	
(EB RT)	*West-to-South*	40%	45	
(WB LT)	*East-to-South*	50%	125	(must be done manually)
(WB THRU)	*East-to-West*	9%	20	
(WB RT)	*East-to-North*	41%	105	
(SB LT)	*North-to-East*	13%	125	
(SB THRU)	*North-to-South*	84%	785	
(SB RT)	*North-to-West*	3%	25	
(NB LT)	*South-to-West*	11%	100	
(NB THRU)	*South-to-North*	83%	745	
(NB RT)	*South-to-East*	6%	55	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

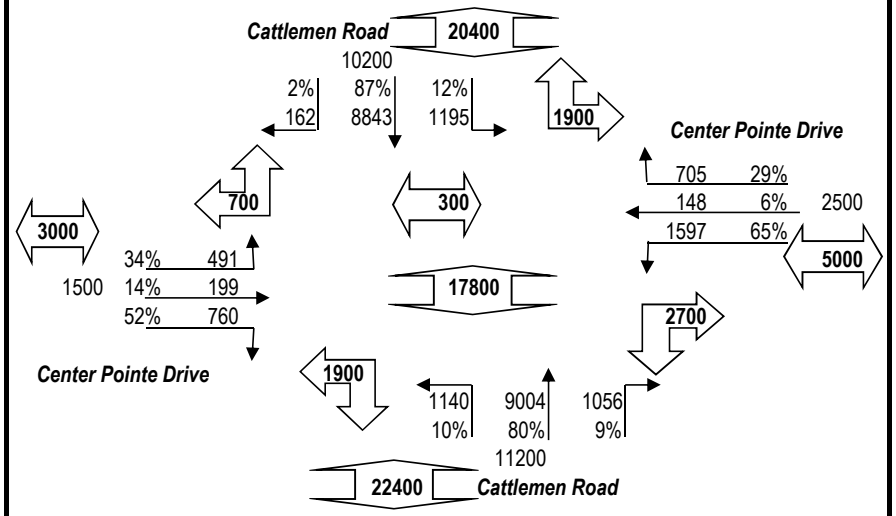
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Center Pointe Drive		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.48	0.339	500	0.370	500	0.414	600	0.457	700
West-To-East (Thru)	0.12	0.137	200	0.123	200	0.106	200	0.092	100
West-To-South (RT)	0.40	0.524	800	0.507	700	0.480	700	0.451	700
Total Flow From West:			**1500**		**1400**		**1500**		**1500**
East-To-South (LT)	0.50	0.652	1600	0.629	1500	0.596	1500	0.562	1400
East-To-West (Thru)	0.09	0.060	100	0.057	100	0.052	100	0.049	100
East-To-North (RT)	0.41	0.288	700	0.314	800	0.351	900	0.389	1000
Total Flow From East:			**2400**		**2400**		**2500**		**2500**
North-To-East (LT)	0.13	0.117	1200	0.109	1300	0.100	1400	0.094	1500
North-To-South (Thru)	0.84	0.867	8800	0.875	10200	0.884	12200	0.891	14200
North-To-West (RT)	0.03	0.016	200	0.016	200	0.015	200	0.015	200
Total Flow From North:			**10200**		**11700**		**13800**		**15900**
South-To-West (LT)	0.11	0.102	1100	0.090	1100	0.077	1100	0.067	1100
South-To-North (Thru)	0.83	0.804	9000	0.830	10400	0.859	12300	0.882	14300
South-To-East (RT)	0.06	0.094	1100	0.080	1000	0.063	900	0.051	800
Total Flow From South:			**11200**		**12500**		**14300**		**16200**

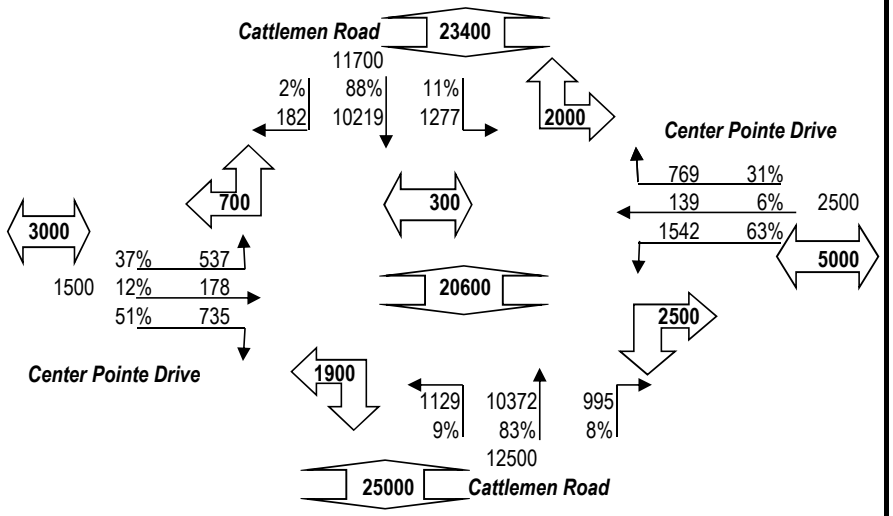
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO PM Peak

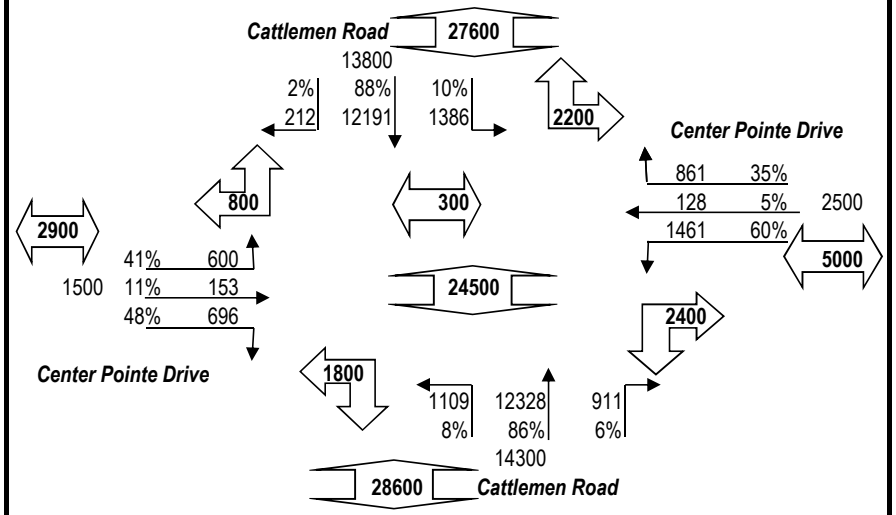
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



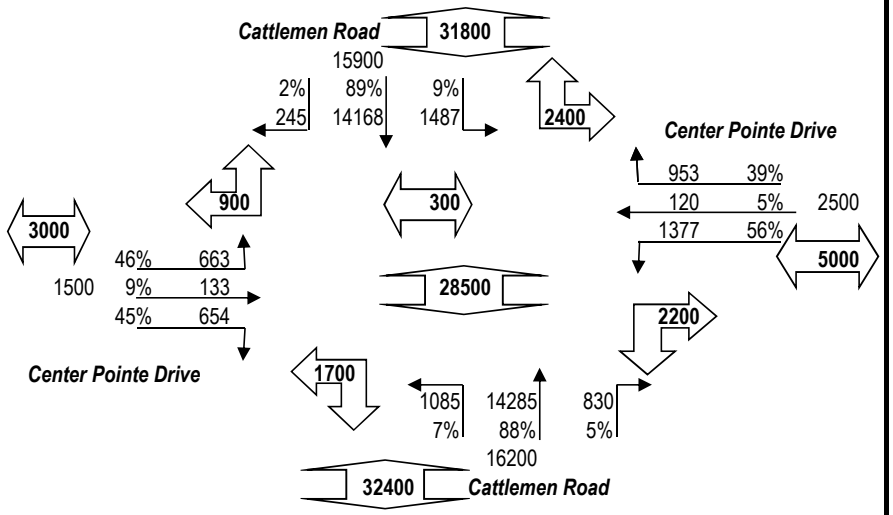
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

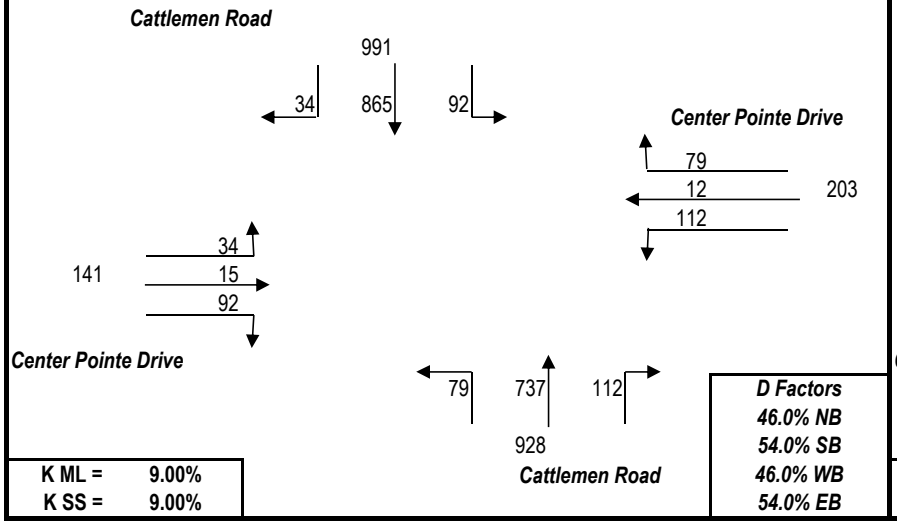


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO PM Peak

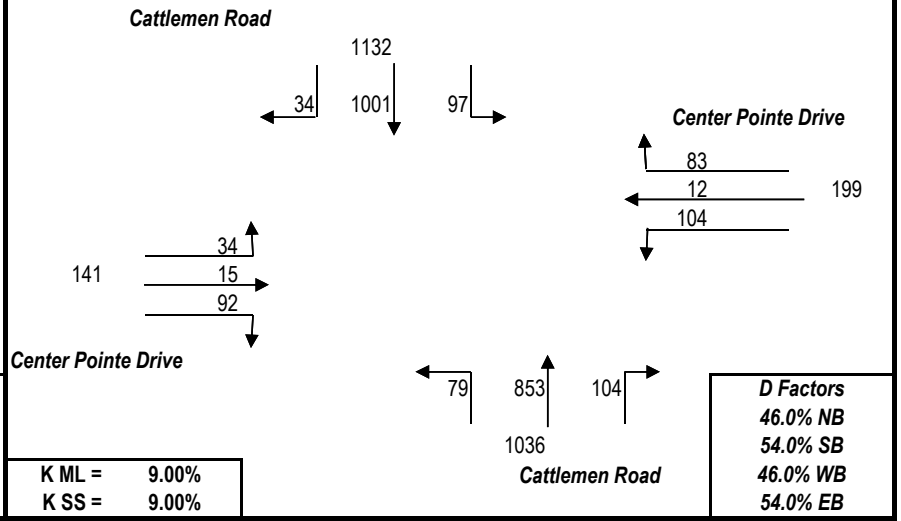
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

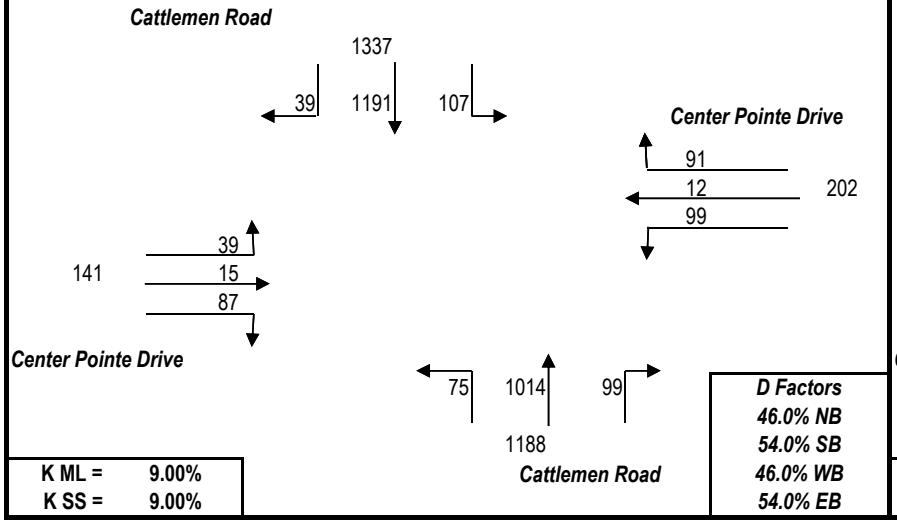
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

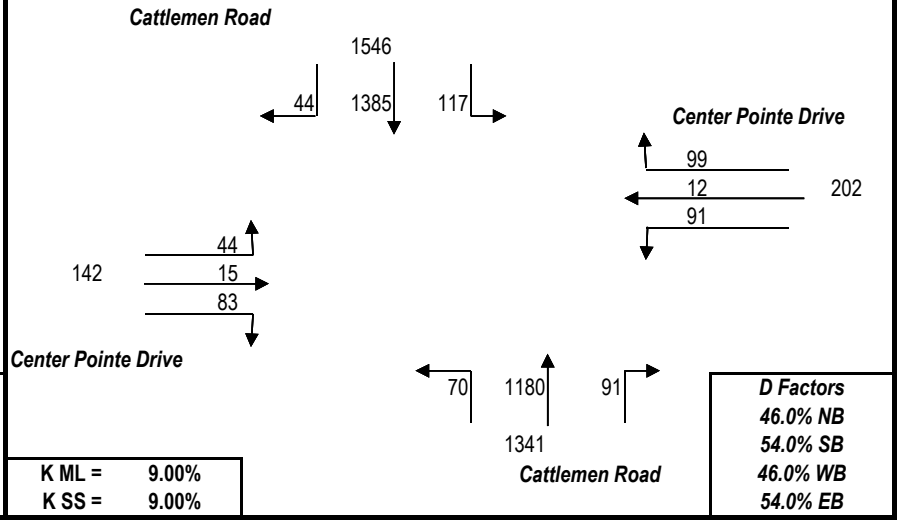
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

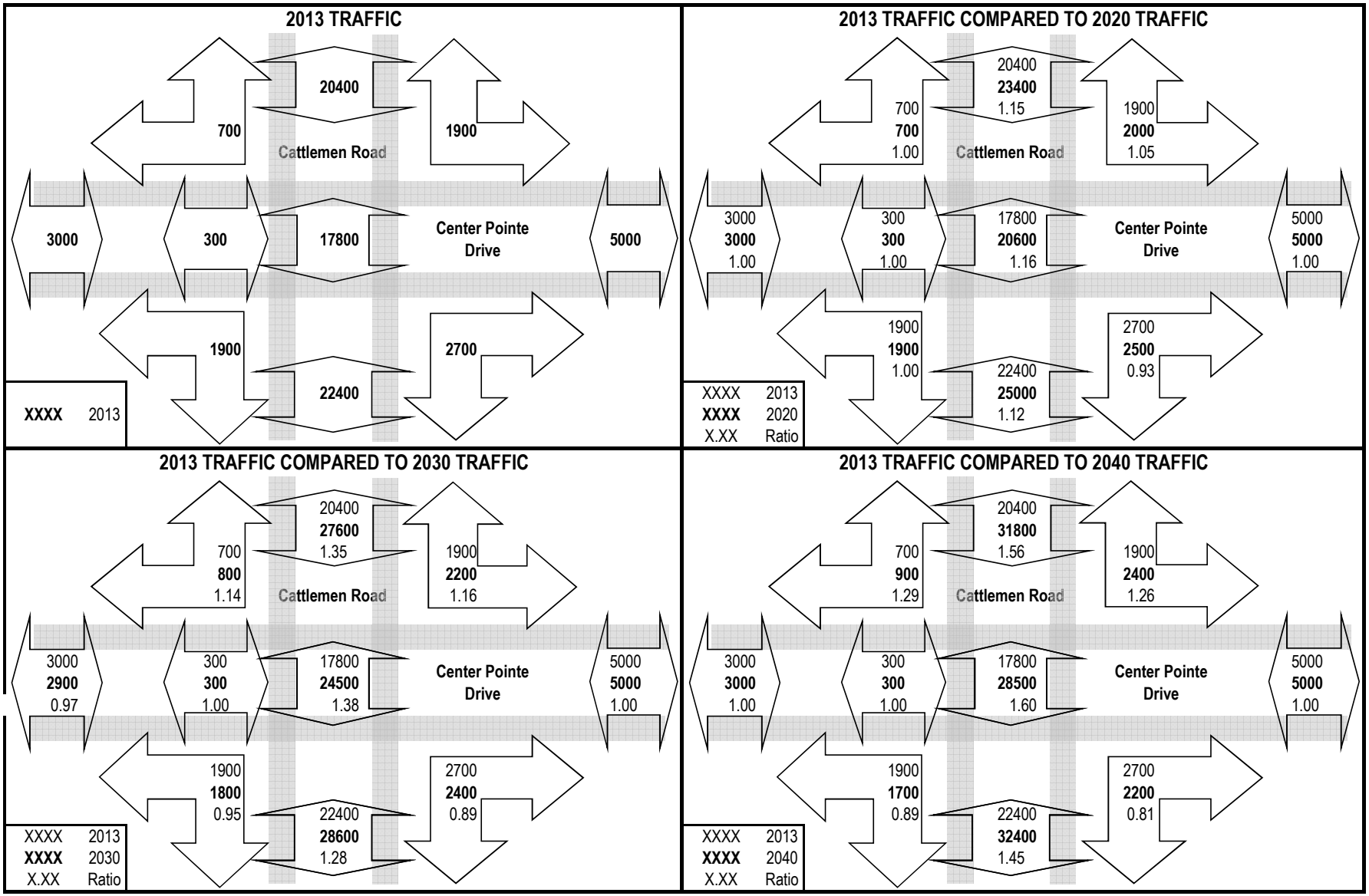
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

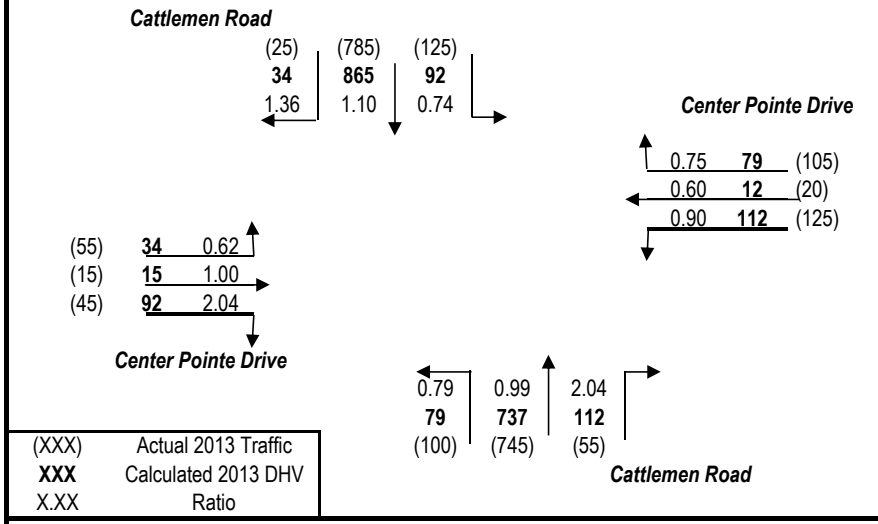
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO PM Peak

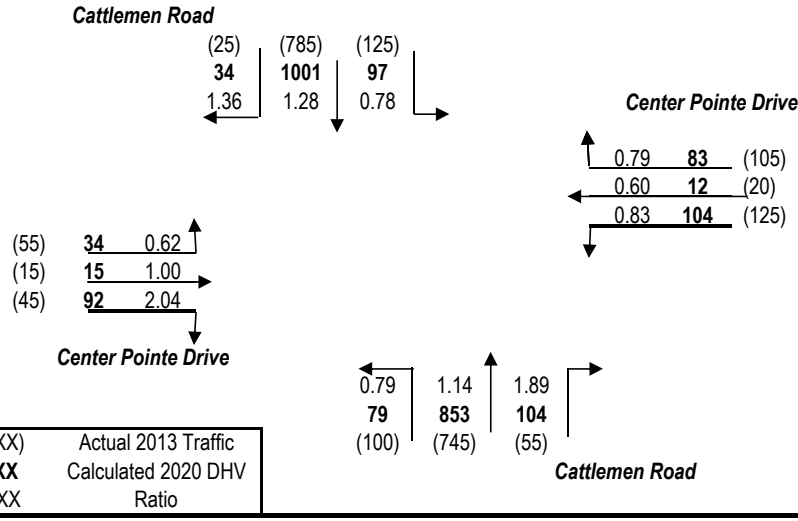


PROJECT TRAFFIC FOR Cattlemen Road AT Center Pointe Drive: TO PM Peak

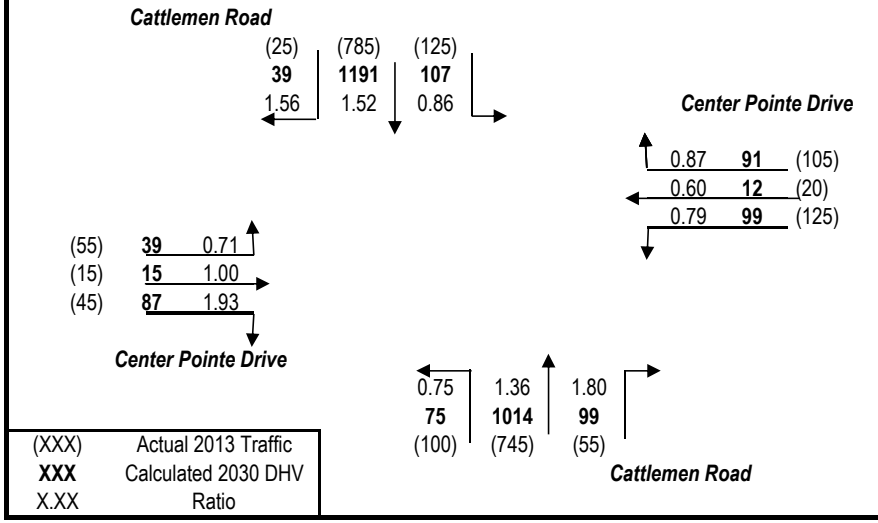
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



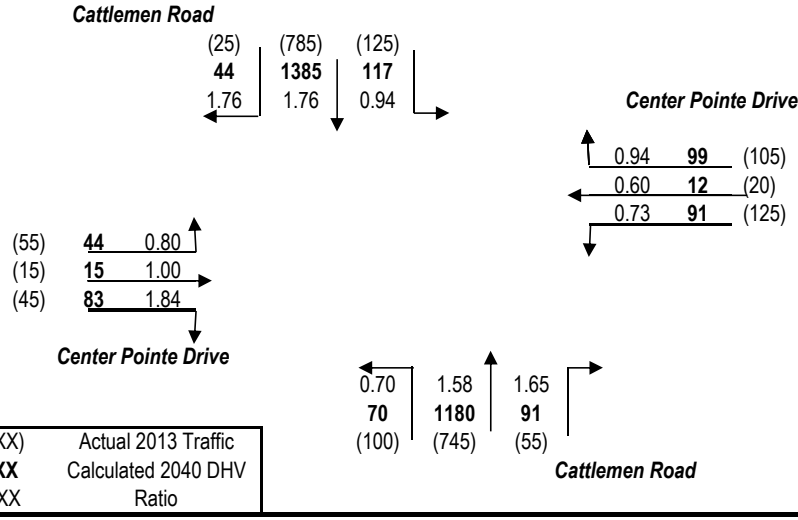
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Cattlemen Road
Intersection:	Maxfield Drive
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline
9.00%
Sidestreet
9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	6000	4700	27100	28500	66300
2040	6000	4700	42900	41200	94800

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	47%	135	
(EB THRU)	*West-to-East*	4%	10	
(EB RT)	*West-to-South*	49%	140	
(WB LT)	*East-to-South*	76%	225	(must be done manually)
(WB THRU)	*East-to-West*	14%	40	
(WB RT)	*East-to-North*	10%	30	
(SB LT)	*North-to-East*	4%	60	
(SB THRU)	*North-to-South*	85%	1165	
(SB RT)	*North-to-West*	11%	155	
(NB LT)	*South-to-West*	6%	60	
(NB THRU)	*South-to-North*	88%	915	
(NB RT)	*South-to-East*	6%	60	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

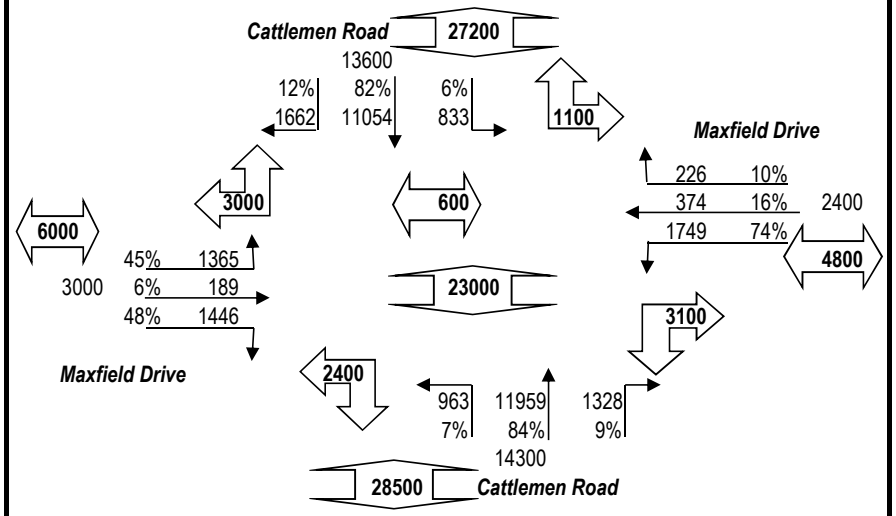
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Maxfield Drive		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

Approach-To-Approach	2013 Initial Estimate	2013 Final Estimate	2013 Turning Volume	2020 Final Estimate	2020 Calculated Volume	2030 Final Estimate	2030 Turning Volume	2040 Final Estimate	2040 Calculated Volume
West-To-North (LT)	0.47	0.455	1400	0.505	1500	0.574	1700	0.641	1900
West-To-East (Thru)	0.04	0.063	200	0.056	200	0.048	100	0.040	100
West-To-South (RT)	0.49	0.482	1400	0.439	1300	0.379	1100	0.320	1000
Total Flow From West:			**3000**		**3000**		**2900**		**3000**
East-To-South (LT)	0.76	0.744	1700	0.737	1700	0.719	1700	0.692	1600
East-To-West (Thru)	0.14	0.159	400	0.147	300	0.132	300	0.118	300
East-To-North (RT)	0.10	0.096	200	0.116	300	0.149	400	0.190	400
Total Flow From East:			**2300**		**2300**		**2400**		**2300**
North-To-East (LT)	0.04	0.061	800	0.061	900	0.060	1100	0.060	1300
North-To-South (Thru)	0.85	0.816	11100	0.824	12800	0.833	15400	0.840	18000
North-To-West (RT)	0.11	0.123	1700	0.116	1800	0.107	2000	0.100	2100
Total Flow From North:			**13600**		**15500**		**18500**		**21400**
South-To-West (LT)	0.06	0.068	1000	0.054	900	0.039	700	0.028	600
South-To-North (Thru)	0.88	0.839	12000	0.869	13800	0.902	16500	0.926	19100
South-To-East (RT)	0.06	0.093	1300	0.078	1200	0.060	1100	0.046	900
Total Flow From South:			**14300**		**15900**		**18300**		**20600**

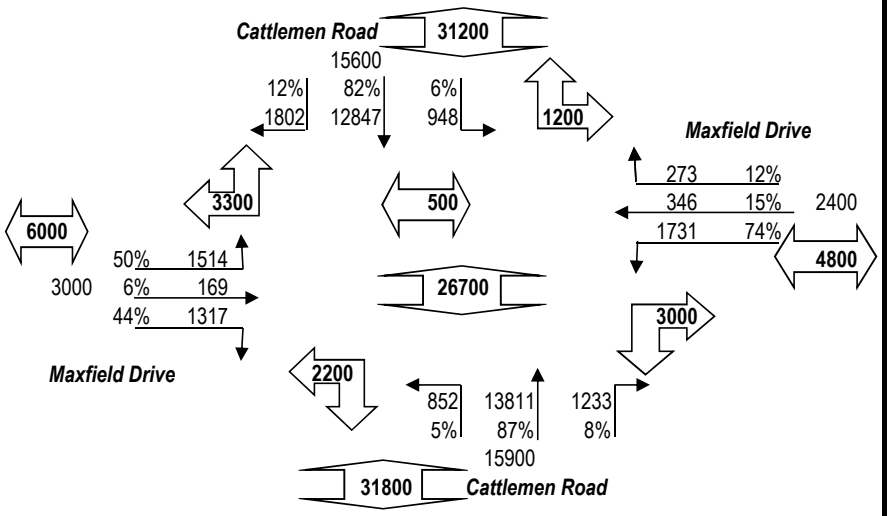
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO PM Peak

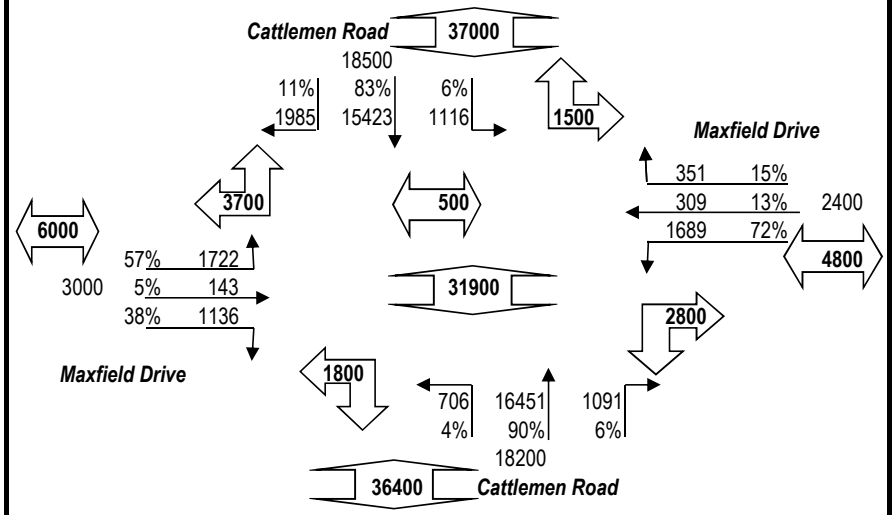
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



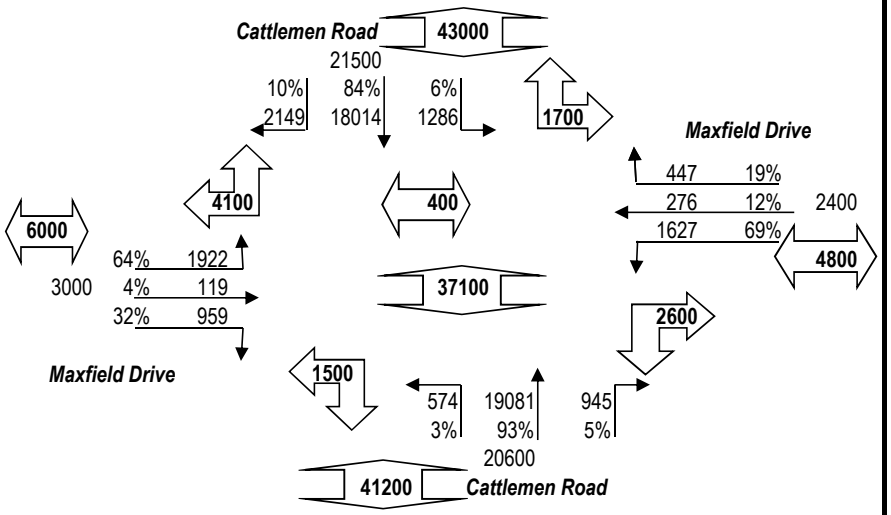
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

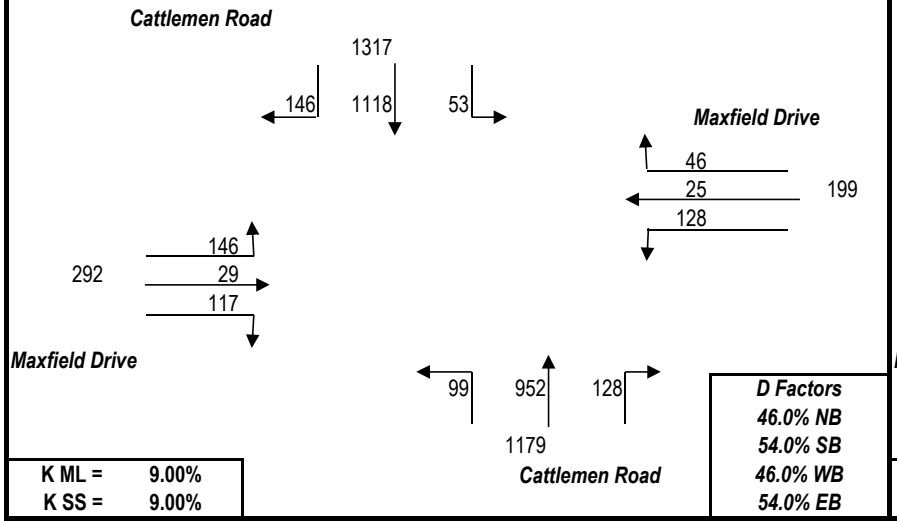


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO PM Peak

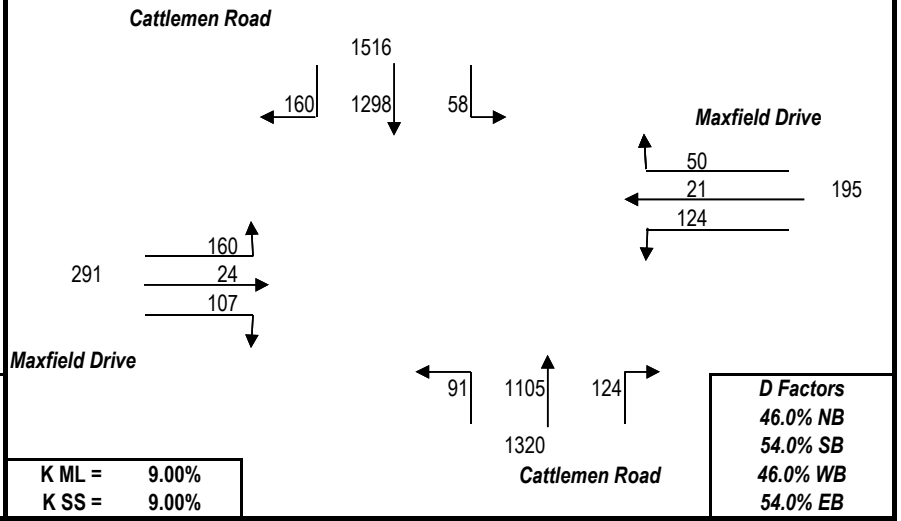
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

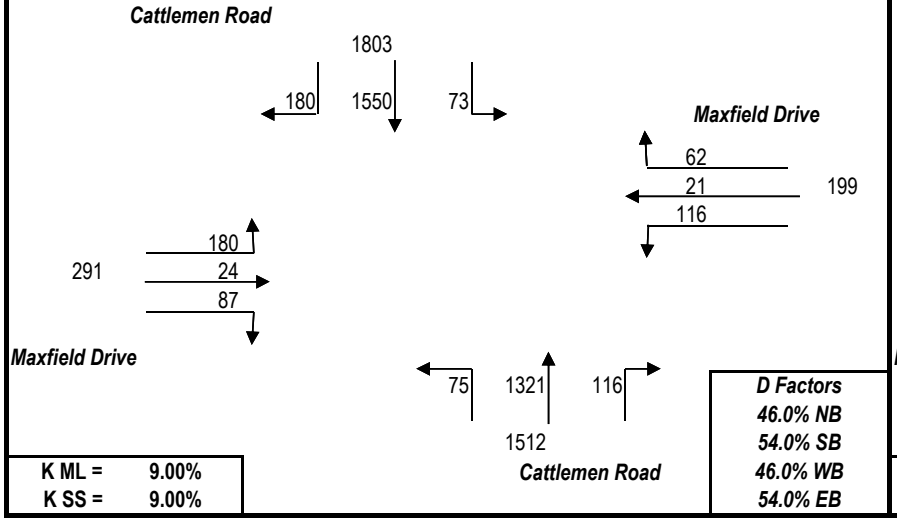
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

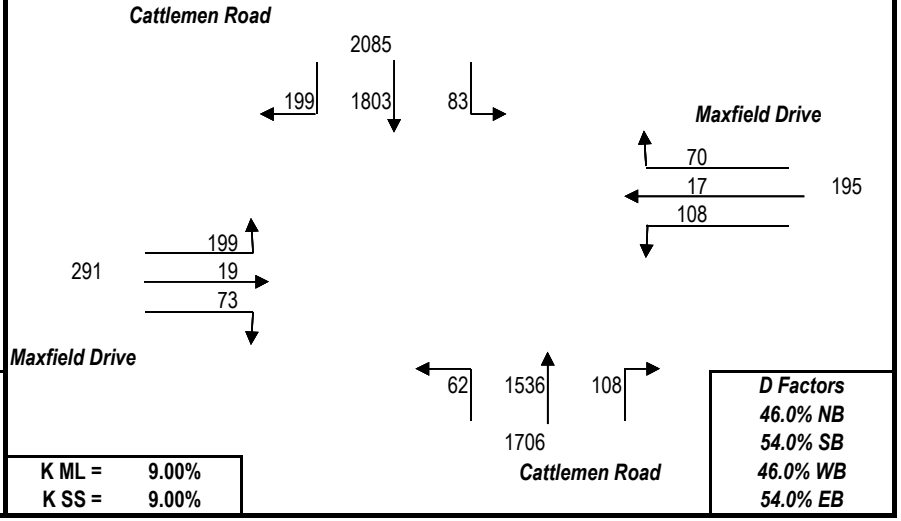
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

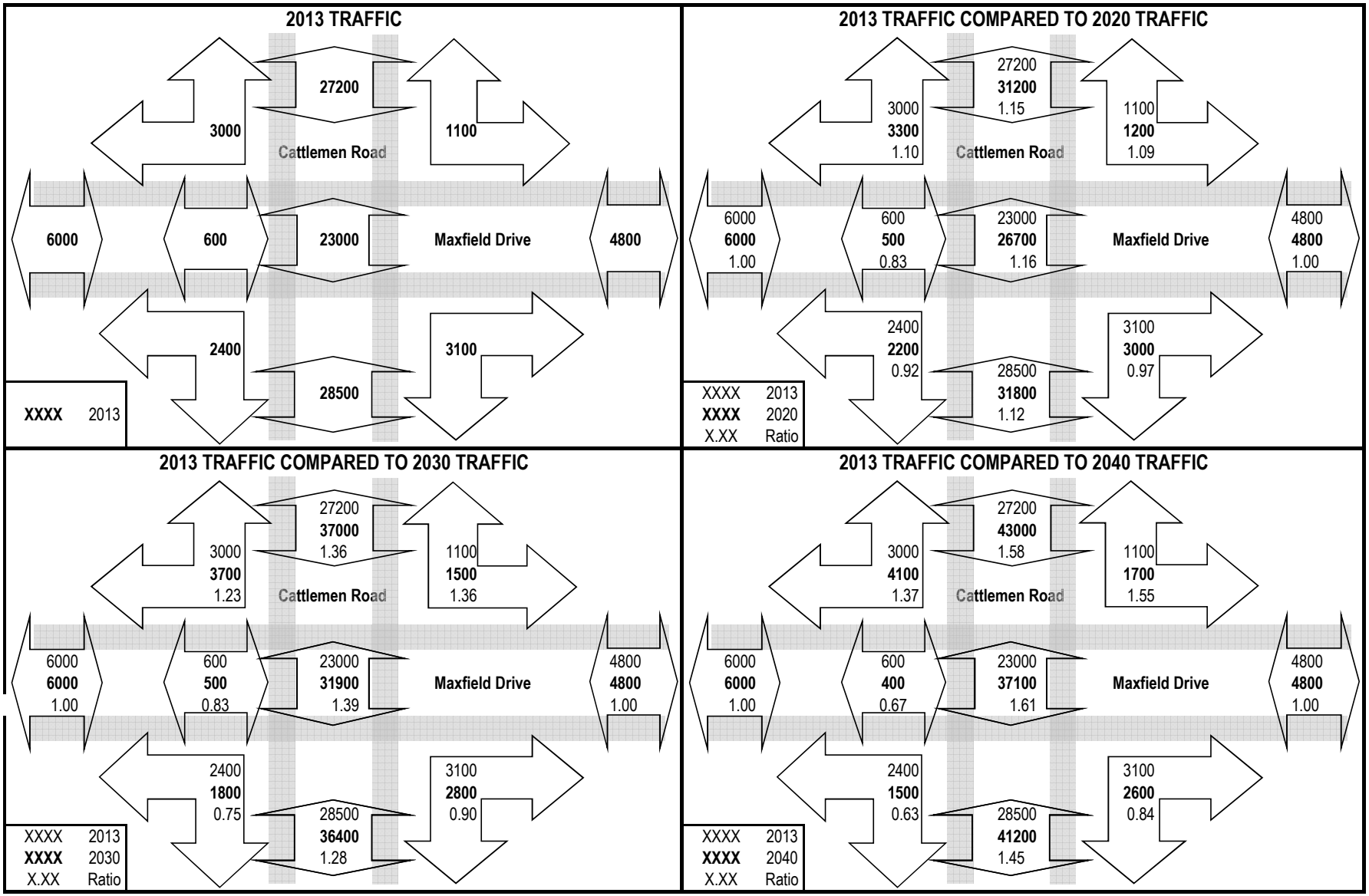
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

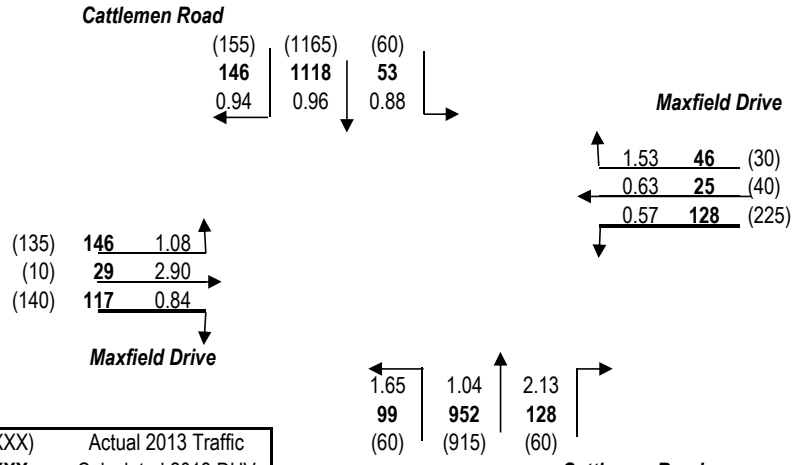
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO PM Peak

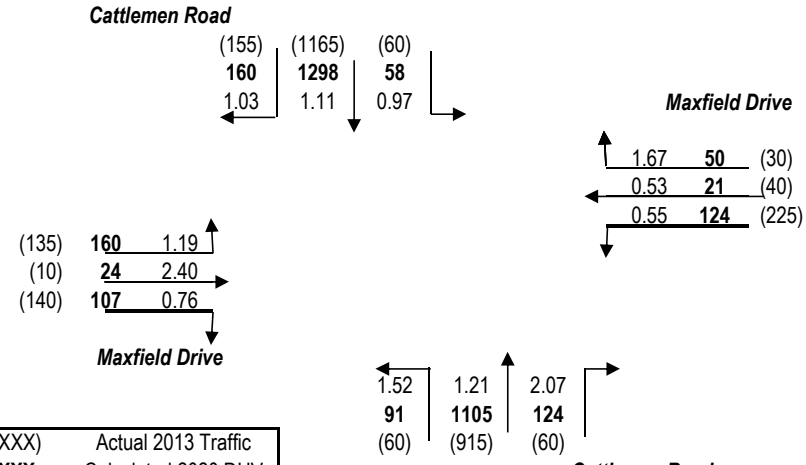


PROJECT TRAFFIC FOR Cattlemen Road AT Maxfield Drive: TO PM Peak

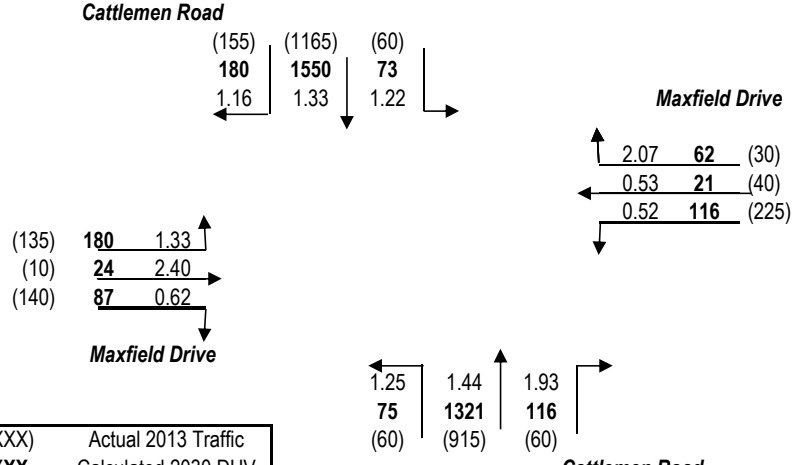
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



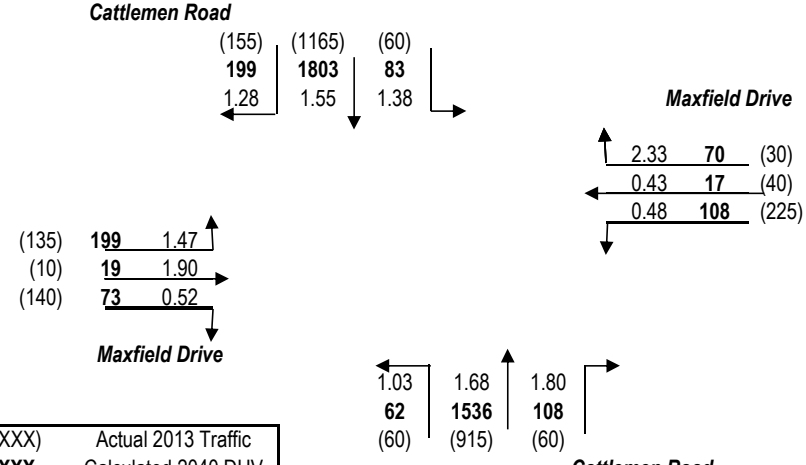
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	HDR, Inc.
Date:	7-Feb-14
Highway:	Cattlemen Road
Intersection:	Countrywood Drive
From:	
To:	PM Peak
County:	Sarasota

Is the Mainline Oriented North/South? (Enter Yes or No) — (●) Yes ( ) No

K Factors

Mainline	Sidestreet
9.00%	9.00%

D Factors

Mainline	
46.0%	Northbound (NB)
54.0%	Southbound (SB)
Sidestreet	
46.0%	Westbound (WB)
54.0%	Eastbound (EB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) (Enter Yes or No) — (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base	2013		
Opening	2020	0.00%	0.00%
Mid	2030		
Design	2040		

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
				0

Enter Project and Model Years

	Year
Base	2013
Opening	2020
Mid	2030
Design	2040
Model	2040

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2013	1500	3200	26600	27100	58400
2040	1500	3200	38500	42900	86100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2013**	
(EB LT)	*West-to-North*	12%	5	
(EB THRU)	*West-to-East*	4%	0	
(EB RT)	*West-to-South*	84%	45	
(WB LT)	*East-to-South*	40%	80	(must be done manually)
(WB THRU)	*East-to-West*	0%	0	
(WB RT)	*East-to-North*	60%	120	
(SB LT)	*North-to-East*	3%	40	
(SB THRU)	*North-to-South*	96%	1250	
(SB RT)	*North-to-West*	1%	15	
(NB LT)	*South-to-West*	6%	70	
(NB THRU)	*South-to-North*	89%	960	
(NB RT)	*South-to-East*	5%	50	

Desired Closure: 0.00

TURNS5 INITIAL TURNING VOLUME SUMMARY

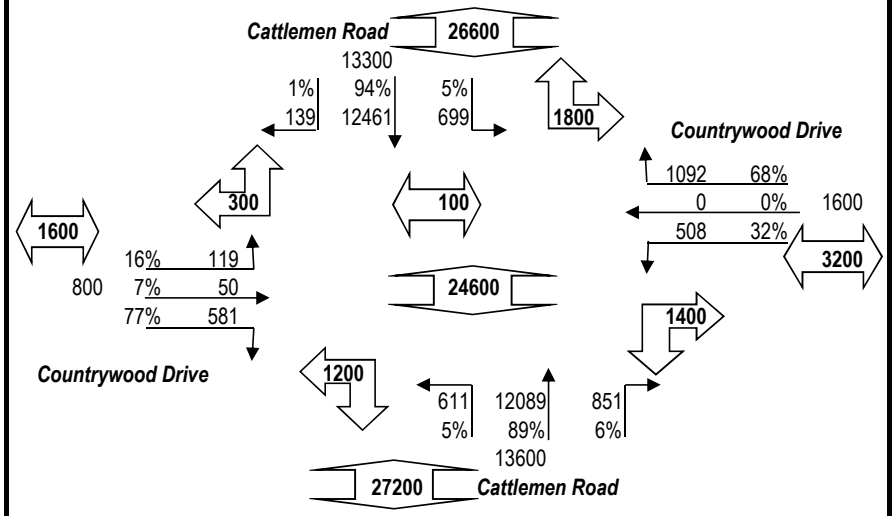
Highway:	Cattlemen Road	**County:**	Sarasota
Intersection:	Countrywood Drive		
From:	0	**Analyst:**	HDR, Inc.
To:	PM Peak	**Date:**	7-Feb-14

	2013	2013		2020		2030		2040	
Approach-To-Approach	**Initial Estimate**	**Final Estimate**	**Turning Volume**	**Final Estimate**	**Calculated Volume**	**Final Estimate**	**Turning Volume**	**Final Estimate**	**Calculated Volume**
West-To-North (LT)	0.12	0.159	100	0.102	100	0.045	0	0.006	0
West-To-East (Thru)	0.04	0.066	0	0.046	0	0.021	0	0.003	0
West-To-South (RT)	0.84	0.775	600	0.852	600	0.934	700	0.991	700
Total Flow From West:			**700**		**700**		**700**		**700**
East-To-South (LT)	0.40	0.317	500	0.444	700	0.666	1100	0.938	1500
East-To-West (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.60	0.683	1100	0.556	900	0.334	500	0.062	100
Total Flow From East:			**1600**		**1600**		**1600**		**1600**
North-To-East (LT)	0.03	0.053	700	0.034	500	0.015	300	0.002	0
North-To-South (Thru)	0.96	0.937	12500	0.960	14200	0.983	16800	0.998	19200
North-To-West (RT)	0.01	0.010	100	0.006	100	0.002	0	0.000	0
Total Flow From North:			**13300**		**14800**		**17100**		**19200**
South-To-West (LT)	0.06	0.045	600	0.042	700	0.038	700	0.035	700
South-To-North (Thru)	0.89	0.892	12100	0.890	13900	0.890	16500	0.893	19100
South-To-East (RT)	0.05	0.063	900	0.068	1100	0.072	1300	0.073	1600
Total Flow From South:			**13600**		**15700**		**18500**		**21400**

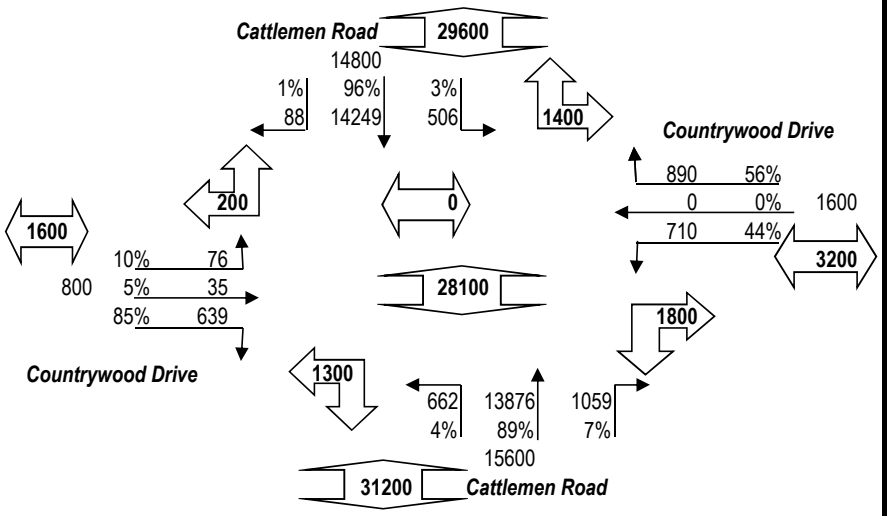
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.
The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO PM Peak

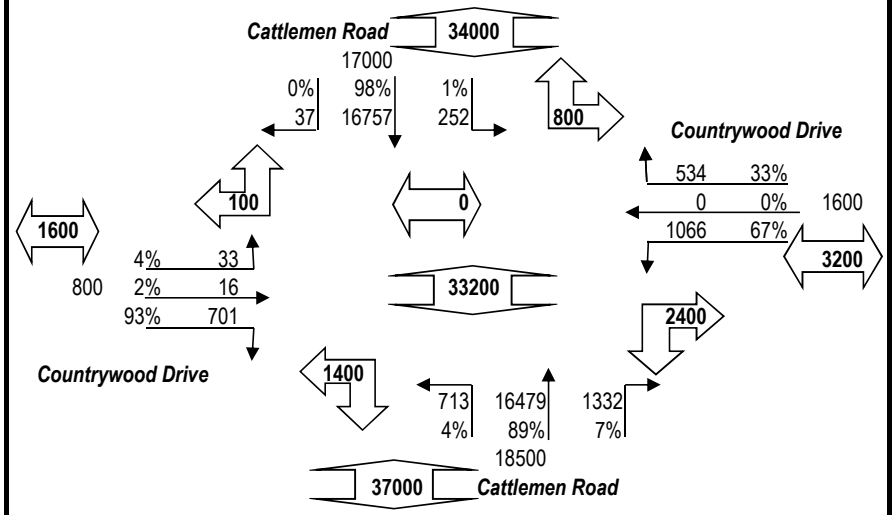
2-WAY AADT TURNING MOVEMENTS IN YEAR 2013



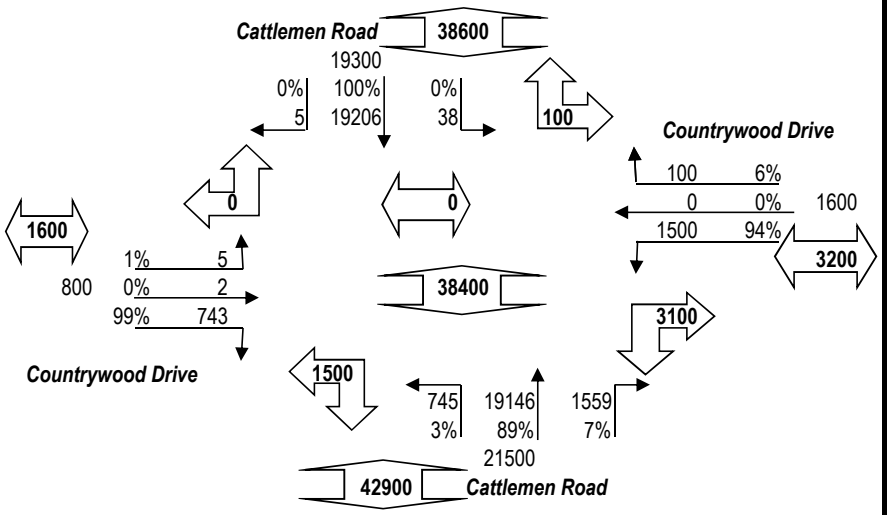
2-WAY AADT TURNING MOVEMENTS IN YEAR 2020



2-WAY AADT TURNING MOVEMENTS IN YEAR 2030

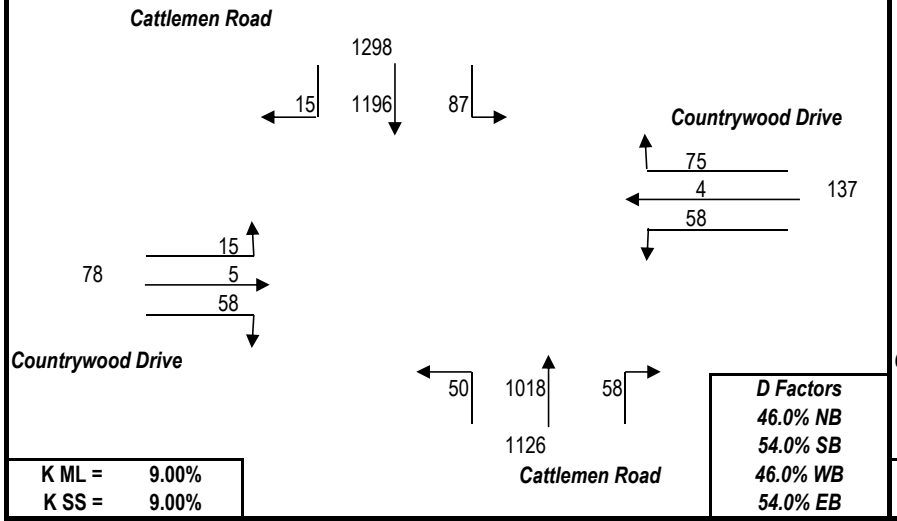


2-WAY AADT TURNING MOVEMENTS IN YEAR 2040



PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO PM Peak

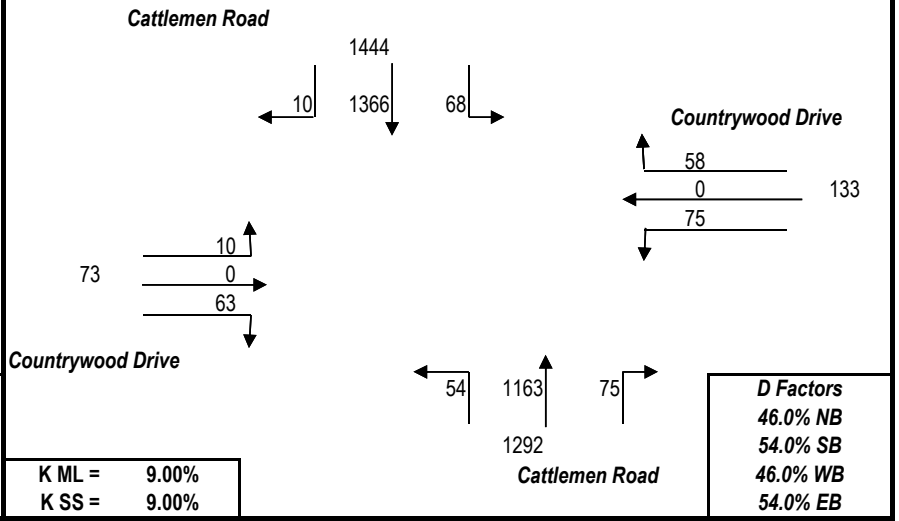
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2013



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

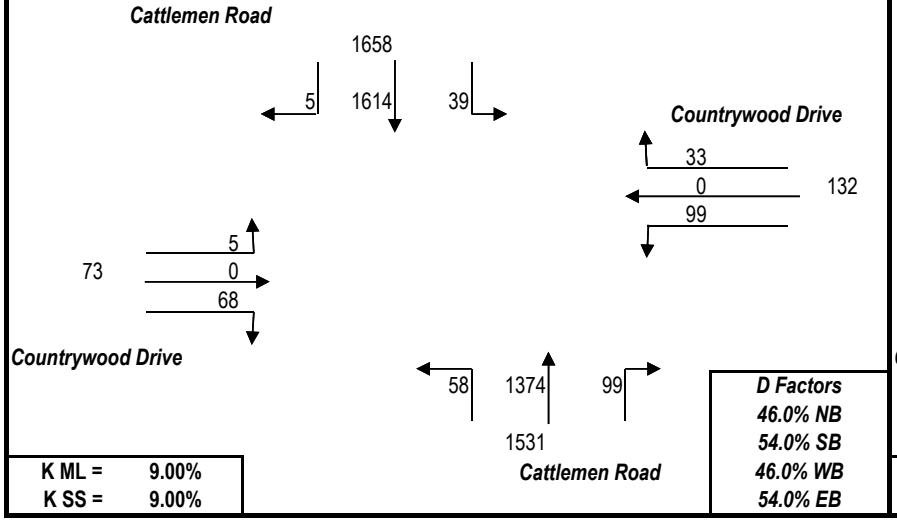
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2020



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

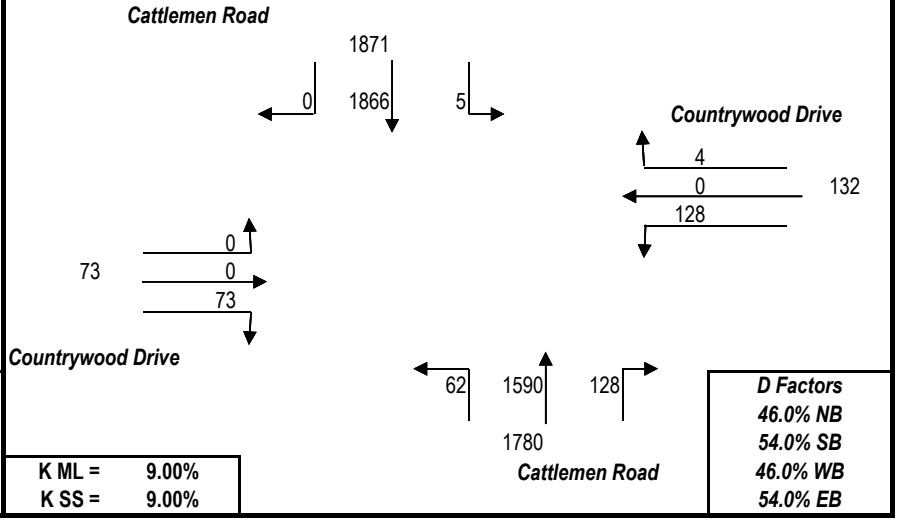
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2030



K ML =	9.00%
K SS =	9.00%

D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

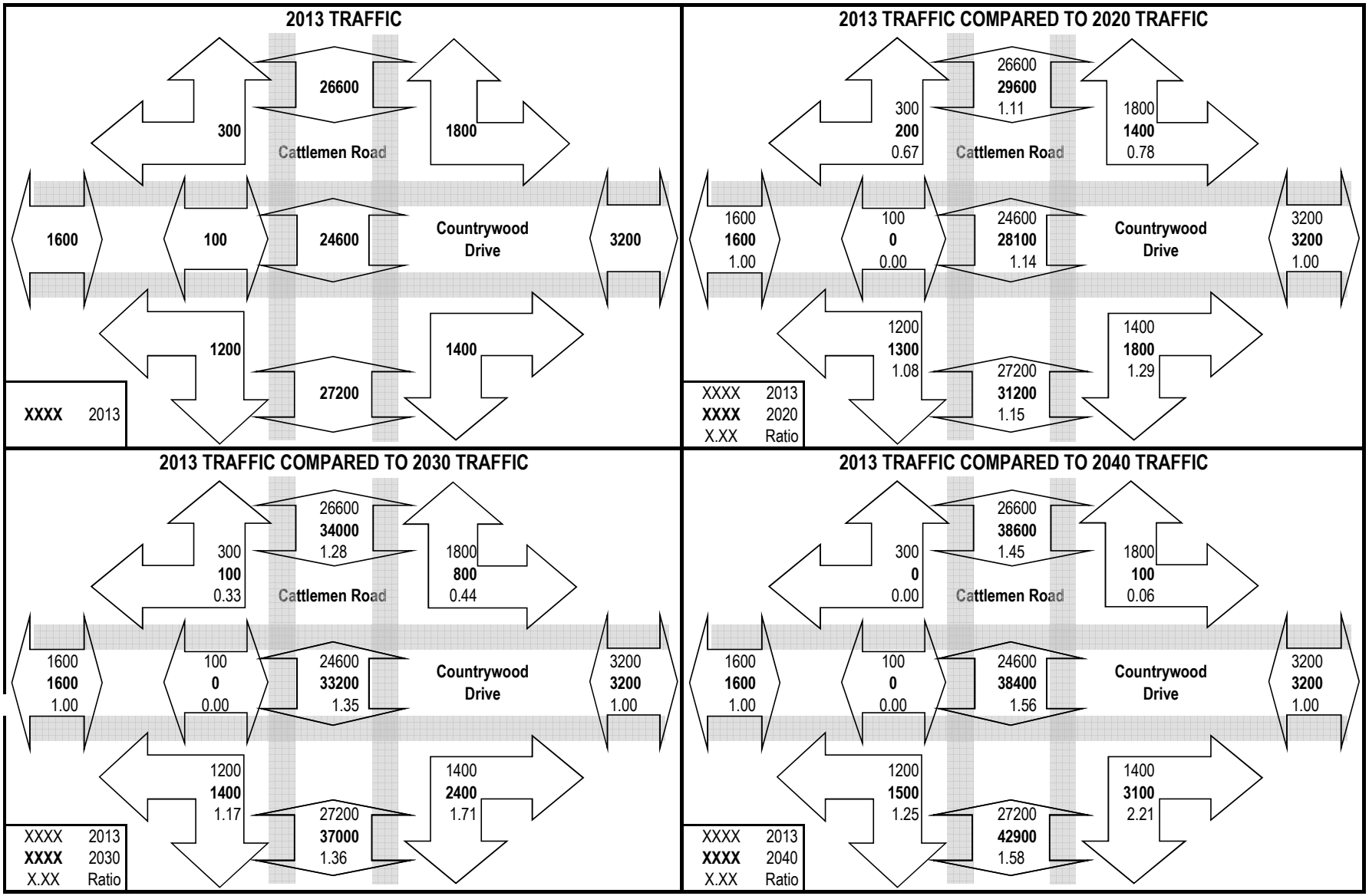
1-WAY DESIGN HOUR TURNING MOVEMENTS IN YEAR 2040



K ML =	9.00%
K SS =	9.00%

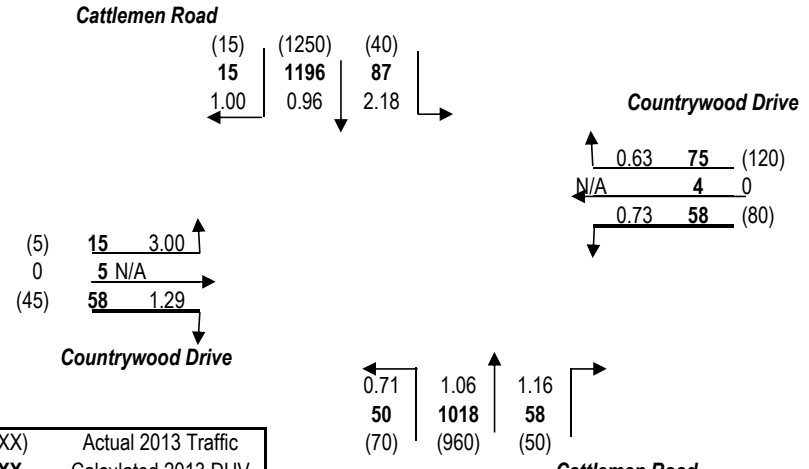
D Factors
46.0% NB
54.0% SB
46.0% WB
54.0% EB

PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO PM Peak

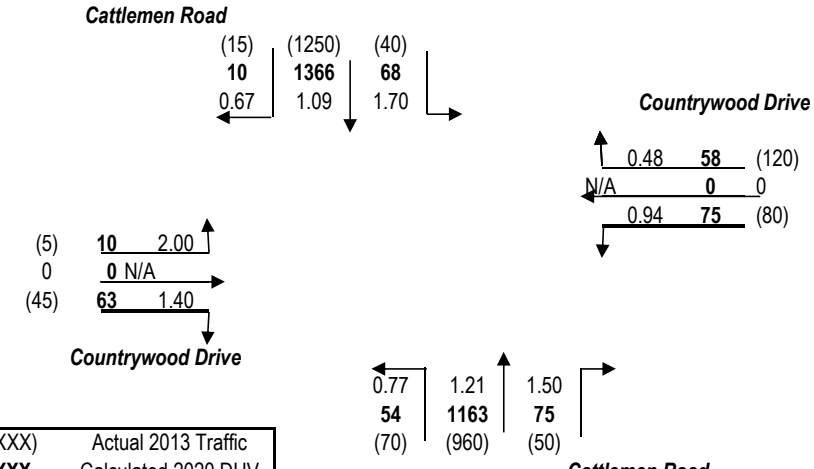


PROJECT TRAFFIC FOR Cattlemen Road AT Countrywood Drive: TO PM Peak

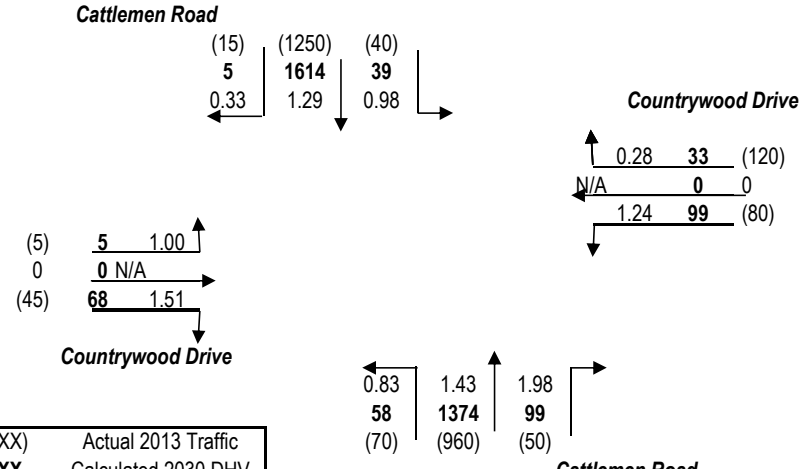
2013 ACTUAL TRAFFIC COMPARED TO 2013 DHV



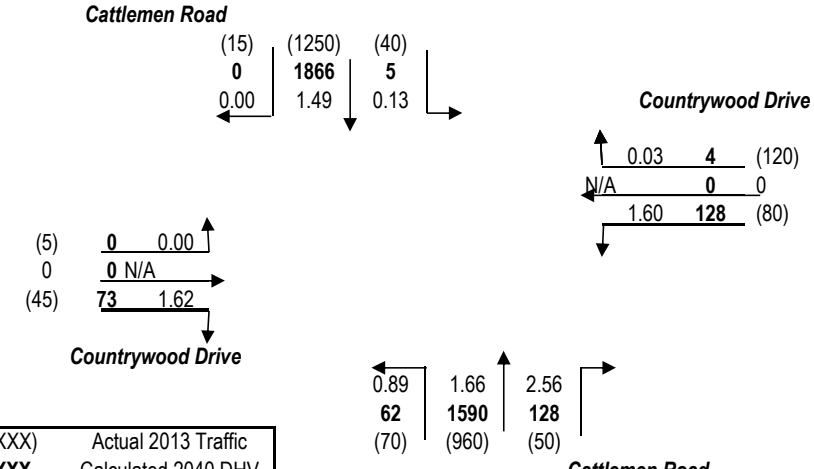
2013 ACTUAL TRAFFIC COMPARED TO 2020 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2030 DHV



2013 ACTUAL TRAFFIC COMPARED TO 2040 DHV



Appendix J
LRE Cost Estimates

I-75 SIMR Alternative LRE Cost Estimates

Sequence: 8 MIS - Miscellaneous Construction **Net Length:** 0.000 MI
Description: PONDS BEE RIDGE ROAD

DRAINAGE COMPONENT

Retention Basin 1

Description	Value
Size	15 AC
Multiplier	1
Depth	5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	15.00	AC	$25,000.00	$375,000.00
120-1	REGULAR EXCAVATION	121,000.00	CY	$7.00	$847,000.00
400-2-2	CONC CLASS II, ENDWALLS	48.00	CY	$1,300.00	$62,400.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	2.00	EA	$2,034.87	$4,069.74
425-2-71	MANHOLES, J-7, <10'	3.00	EA	$6,027.72	$18,083.16
550-10-220	FENCING, TYPE B, 5.1-6.0, STANDARD	3,600.00	LF	$12.48	$44,928.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	4.00	EA	$2,991.38	$11,965.52
570-1-2	PERFORMANCE TURF, SOD	72,600.00	SY	$2.00	$145,200.00

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48" S/CD	104.00	LF	$108.56	$11,290.24
430-175-104	PIPE CULV, OPT MATL, ROUND, 49-60" S/CD	600.00	LF	$156.24	$93,744.00

Retention Basin 2

Description	Value
Size	5 AC
Multiplier	1
Depth	5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$25,000.00	$125,000.00
120-1	REGULAR EXCAVATION	40,333.33	CY	$7.00	$282,333.31
400-2-2	CONC CLASS II, ENDWALLS	30.00	CY	$1,300.00	$39,000.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$2,034.87	$2,034.87
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,027.72	$12,055.44
550-10-220	FENCING, TYPE B, 5.1-6.0, STANDARD	1,860.00	LF	$12.48	$23,212.80
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$2,991.38	$5,982.76
570-1-2	PERFORMANCE TURF, SOD	24,200.00	SY	$2.00	$48,400.00

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48" S/CD	56.00	LF	$108.56	$6,079.36

430-175-104	PIPE CULV, OPT MATL, ROUND, 49-60" S/CD	400.00 LF	$156.24	$62,496.00

Retention Basin 4

Description	Value
Size	5 AC
Multiplier	1
Depth	5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$25,000.00	$125,000.00
120-1	REGULAR EXCAVATION	40,333.33	CY	$7.00	$282,333.31
400-2-2	CONC CLASS II, ENDWALLS	30.00	CY	$1,300.00	$39,000.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$2,034.87	$2,034.87
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,027.72	$12,055.44
550-10-220	FENCING, TYPE B, 5.1-6.0, STANDARD	1,860.00	LF	$12.48	$23,212.80
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$2,991.38	$5,982.76
570-1-2	PERFORMANCE TURF, SOD	24,200.00	SY	$2.00	$48,400.00

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48" S/CD	56.00	LF	$108.56	$6,079.36
430-175-104	PIPE CULV, OPT MATL, ROUND, 49-60" S/CD	400.00	LF	$156.24	$62,496.00

Drainage Component Total $2,826,869.74

Sequence 8 Total $2,826,869.74

Date: 7/7/2009 11:17:52 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 201277-1-22-01 **Letting Date:** 01/2099

Description: I-75 FROM SR 681 TO UNIVERSITY PARKWAY

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English
Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 13.770 MI

Project Manager: MGR-RLC-MJB

Version 60 Project Grand Total **$136,163,385.39**
Description: Bee Ridge URS Alternative - Unit Cost Update April 2009 - (From Version 46)

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 0.981 MI
Description: I-75 Mainline 10-lane
Special Conditions: Includes I-75 bridges over Bee Ridge Road and Main A Canal

---

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.697
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00

Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	47.56	AC	$25,000.00	$1,189,000.00
120-6	EMBANKMENT	548,934.73	CY	$16.29	$8,942,146.75
	Earthwork Component Total				$10,131,146.75

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	14
Roadway Pavement Width L/R	84.00 / 84.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	124,312.32	SY	$6.00	$745,873.92
285-712	OPTIONAL BASE,BASE GROUP 12	97,447.05	SY	$49.45	$4,818,756.62
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	21,271.22	TN	$128.25	$2,728,033.96
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	3,867.49	TN	$129.60	$501,226.70

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	5,182.00	LF	$3.67	$19,017.94
544-75-40	CRASH CUSHION - VEH IMPACT ATTEN, OPT	2.00	EA	$23,343.61	$46,687.22

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	12
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,722.00	EA	$4.78	$8,231.16
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	7.85	NM	$1,164.77	$9,143.44
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	11.77	GM	$402.72	$4,740.01

711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	7.85	NM	$3,741.79	$29,373.05
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	11.77	GM	$1,202.83	$14,157.31

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	172.73	TN	$216.09	$37,325.23
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	5,182.00	LF	$37.38	$193,703.16

Roadway Component Total $9,156,269.73

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	14,192.32	SY	$25.00	$354,808.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,519.37	TN	$128.25	$194,859.20
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	552.50	TN	$129.60	$71,604.00
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.96	PM	$2,700.00	$5,292.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-1	CONC TRAF RAIL BAR,RET WALL SYS,32"F SHP	2,502.00	LF	$230.22	$576,010.44

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	1,035.94	LF	$9.53	$9,872.51

104-11	FLOATING TURBIDITY BARRIER	245.25	LF	$9.48	$2,324.97
104-12	STAKED TURBIDITY BARRIER	245.25	LF	$5.06	$1,240.96
104-13-1	STAKED SILT FENCE, TYPE III	10,359.36	LF	$0.89	$9,219.83
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$1,227,250.72

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	64.00
Performance Turf Width	44.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	11,890.24	SY	$25.00	$297,256.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,266.14	TN	$128.25	$162,382.45
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	460.42	TN	$129.60	$59,670.43
521-1	MEDIAN CONC BARRIER WALL	13,976.00	LF	$122.17	$1,707,447.92
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	2.00	PM	$2,700.00	$5,400.00
570-1-2	PERFORMANCE TURF, SOD	25,322.88	SY	$2.00	$50,645.76
	Median Component Total				$2,282,802.57

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	17.66	CY	$1,300.00	$22,958.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	6.00	EA	$2,098.49	$12,590.94
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	784.00	LF	$55.56	$43,559.04
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	40.00	EA	$1,317.51	$52,700.40
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,962.00	SY	$71.40	$140,086.80
570-1-2	PERFORMANCE TURF, SOD	690.62	SY	$2.00	$1,381.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	336.00	LF	$40.48	$13,601.28
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	296.00	LF	$70.38	$20,832.48

	Drainage Component Total	$307,710.18

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00	AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	24.00	AS	$923.06	$22,153.44
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00	AS	$4,089.43	$8,178.86
700-21-12	MULTI- POST SIGN, F&I, 51-100	6.00	AS	$4,808.00	$28,848.00
	Signing Component Total				$59,744.98

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$324,350.83

BRIDGES COMPONENT

Bridge 170079

Description	Value
Length	181.00
Width	56.00
Type	Low Level, Widen
Substructure Type	Pile Bents
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	1,086.00
Default Cost per SF	$120.00
Factored Cost per SF	$210.00
Final Cost per SF	$219.62
Basic Bridge Cost	$2,128,560.00
Description	I-75 BRIDGE OVER MAIN A CANAL

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	1,086.00	SF	$36.00	$39,096.00
400-2-10	CONC CLASS II, APPROACH SLABS	124.44	CY	$600.00	$74,664.00
415-1-9	REINF STEEL- APPROACH SLABS	21,777.00	LB	$1.05	$22,865.85
	Bridge 170079 Total				$2,265,185.85

Bridge 170080

Description	Value
Length	181.00

Width	56.00
Type	Low Level, Widen
Substructure Type	Pile Bents
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	1,086.00
Default Cost per SF	$120.00
Factored Cost per SF	$210.00
Final Cost per SF	$219.62
Basic Bridge Cost	$2,128,560.00
Description	I-75 BRIDGE OVER MAIN A CANAL

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	1,086.00 SF	$36.00	$39,096.00
400-2-10	CONC CLASS II, APPROACH SLABS	124.44 CY	$600.00	$74,664.00
415-1-9	REINF STEEL- APPROACH SLABS	21,777.00 LB	$1.05	$22,865.85
	Bridge 170080 Total			$2,265,185.85

Bridge 170145

Description	Value
Length	178.00
Width	113.00
Type	Overpass Bridge
Substructure Type	Multi Columns
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	11,600.00
Default Cost per SF	$122.00
Factored Cost per SF	$213.50
Final Cost per SF	$223.28
Basic Bridge Cost	$4,294,339.00
Description	I-75 BRIDGE OVER BEE RIDGE ROAD

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	11,600.00 SF	$36.00	$417,600.00
400-2-10	CONC CLASS II, APPROACH SLABS	251.11 CY	$600.00	$150,666.00
415-1-9	REINF STEEL- APPROACH SLABS	43,944.25 LB	$1.05	$46,141.46
	Bridge 170145 Total			$4,908,746.46

Bridge 170146

Description	Value
Length	178.00
Width	158.00
Type	Overpass Bridge
Substructure Type	Multi Columns
Superstructure Type	AASHTO Girder
Cost Factor	1.25
Removal of existing structures area	11,600.00
Default Cost per SF	$122.00

Factored Cost per SF	$152.50
Final Cost per SF	$162.28
Basic Bridge Cost	$4,288,910.00
Description	I-75 BRIDGE OVER BEE RIDGE ROAD

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	11,600.00	SF	$36.00	$417,600.00
400-2-10	CONC CLASS II, APPROACH SLABS	351.11	CY	$600.00	$210,666.00
415-1-9	REINF STEEL- APPROACH SLABS	61,444.25	LB	$1.05	$64,516.46
	Bridge 170146 Total				$4,981,692.46
	Bridges Component Total				$14,420,810.62

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Wall 2

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Wall 3

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Wall 4

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88
	Retaining Walls Component Total				$1,678,687.52

Sequence 1 Total $39,588,773.90

Sequence: 2 NDR - New Construction, Divided, Rural **Net Length:** 0.684 MI
Description: I-75 Mainline 11-lane

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.684
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	33.16	AC	$25,000.00	$829,000.00
120-6	EMBANKMENT	113,959.51	CY	$16.29	$1,856,400.42
	Earthwork Component Total				$2,685,400.42

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	15
Roadway Pavement Width L/R	96.00 / 84.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	91,491.84	SY	$6.00	$548,951.04
285-712	OPTIONAL BASE,BASE GROUP 12	72,760.09	SY	$49.45	$3,597,986.45
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	15,890.69	TN	$128.25	$2,037,980.99
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	2,889.22	TN	$129.60	$374,442.91

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	3,614.00	LF	$3.67	$13,263.38

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8

Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	13
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,293.00	EA	$4.78	$6,180.54
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	5.47	NM	$1,164.77	$6,371.29
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	8.89	GM	$402.72	$3,580.18
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	5.47	NM	$3,741.79	$20,467.59
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	8.89	GM	$1,202.83	$10,693.16

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	120.47	TN	$216.09	$26,032.36
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	3,614.00	LF	$37.38	$135,091.32
	Roadway Component Total				$6,781,041.21

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	8,290.44	SY	$25.00	$207,261.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	882.82	TN	$128.25	$113,221.66
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	321.02	TN	$129.60	$41,604.19

546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.37	PM	$2,700.00	$3,699.00
570-1-2	PERFORMANCE TURF, SOD	1,605.12	SY	$2.00	$3,210.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	370.00	CY	$1,025.00	$379,250.00

Erosion Control Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	722.30	LF	$9.53	$6,883.52
104-11	FLOATING TURBIDITY BARRIER	171.00	LF	$9.48	$1,621.08
104-12	STAKED TURBIDITY BARRIER	171.00	LF	$5.06	$865.26
104-13-1	STAKED SILT FENCE, TYPE III	7,223.04	LF	$0.89	$6,428.51
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$766,063.27

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	64.00
Performance Turf Width	44.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	8,290.44	SY	$25.00	$207,261.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	882.82	TN	$128.25	$113,221.66
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	321.02	TN	$129.60	$41,604.19
521-1	MEDIAN CONC BARRIER WALL	7,228.00	LF	$122.17	$883,044.76
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.00	PM	$2,700.00	$2,700.00
570-1-2	PERFORMANCE TURF, SOD	17,656.32	SY	$2.00	$35,312.64
	Median Component Total				$1,283,144.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	12.31	CY	$1,300.00	$16,003.00

425-1-551	INLETS, DT BOT, TYPE E, <10'	5.00	EA	$2,098.49	$10,492.45
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	552.00	LF	$55.56	$30,669.12
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	28.00	EA	$1,317.51	$36,890.28
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,368.00	SY	$71.40	$97,675.20
570-1-2	PERFORMANCE TURF, SOD	481.54	SY	$2.00	$963.08

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	232.00	LF	$40.48	$9,391.36
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	208.00	LF	$70.38	$14,639.04

Drainage Component Total $216,723.53

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00	AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	17.00	AS	$923.06	$15,692.02
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00	AS	$4,089.43	$8,178.86
700-21-12	MULTI- POST SIGN, F&I, 51-100	5.00	AS	$4,808.00	$24,040.00

Signing Component Total $48,475.56

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $226,174.31

Sequence 2 Total $12,007,022.56

Sequence: 3 NDR - New Construction, Divided, Rural **Net Length:** 0.539 MI
Description: I-75 Mainline 12-lane

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.539
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	26.13	AC	$25,000.00	$653,250.00
120-6	EMBANKMENT	91,628.08	CY	$16.29	$1,492,621.42
	Earthwork Component Total				$2,145,871.42

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	16
Roadway Pavement Width L/R	96.00 / 96.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	75,891.20	SY	$6.00	$455,347.20
285-712	OPTIONAL BASE,BASE GROUP 12	61,130.36	SY	$49.45	$3,022,896.30
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	13,356.85	TN	$128.25	$1,713,016.01
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	2,428.52	TN	$129.60	$314,736.19

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	2,846.00	LF	$3.67	$10,444.82

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8

Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	14
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,091.00	EA	$4.78	$5,214.98
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	4.31	NM	$1,164.77	$5,020.16
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	7.55	GM	$402.72	$3,040.54
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	4.31	NM	$3,741.79	$16,127.11
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	7.55	GM	$1,202.83	$9,081.37

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	94.87	TN	$216.09	$20,500.46
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	2,846.00	LF	$37.38	$106,383.48
	Roadway Component Total				$5,681,808.62

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	6,532.97	SY	$25.00	$163,324.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	695.67	TN	$128.25	$89,219.68
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	252.97	TN	$129.60	$32,784.91

546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.08	PM	$2,700.00	$2,916.00
570-1-2	PERFORMANCE TURF, SOD	1,264.85	SY	$2.00	$2,529.70

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	355.00	CY	$1,025.00	$363,875.00

Erosion Control Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	569.18	LF	$9.53	$5,424.29
104-11	FLOATING TURBIDITY BARRIER	134.75	LF	$9.48	$1,277.43
104-12	STAKED TURBIDITY BARRIER	134.75	LF	$5.06	$681.84
104-13-1	STAKED SILT FENCE, TYPE III	5,691.84	LF	$0.89	$5,065.74
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$669,117.64

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	64.00
Performance Turf Width	44.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	6,532.97	SY	$25.00	$163,324.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	695.67	TN	$128.25	$89,219.68
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	252.97	TN	$129.60	$32,784.91
521-1	MEDIAN CONC BARRIER WALL	5,692.00	LF	$122.17	$695,391.64
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.00	PM	$2,700.00	$2,700.00
570-1-2	PERFORMANCE TURF, SOD	13,913.39	SY	$2.00	$27,826.78
	Median Component Total				$1,011,247.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	9.70	CY	$1,300.00	$12,610.00

425-1-551	INLETS, DT BOT, TYPE E, <10'	4.00	EA	$2,098.49	$8,393.96
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	432.00	LF	$55.56	$24,001.92
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	22.00	EA	$1,317.51	$28,985.22
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,078.00	SY	$71.40	$76,969.20
570-1-2	PERFORMANCE TURF, SOD	379.46	SY	$2.00	$758.92

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	184.00	LF	$40.48	$7,448.32
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	160.00	LF	$70.38	$11,260.80
	Drainage Component Total				$170,428.34

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00	AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	13.00	AS	$923.06	$11,999.78
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00	AS	$4,089.43	$8,178.86
700-21-12	MULTI- POST SIGN, F&I, 51-100	4.00	AS	$4,808.00	$19,232.00
	Signing Component Total				$39,975.32

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$188,315.05

Sequence 3 Total	$9,906,763.65

Sequence: 4 NDU - New Construction, Divided, Urban **Net Length:** 0.438 MI
Description: Bee Ridge 8-lane section

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.438
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	11.15	AC	$25,000.00	$278,750.00
120-6	EMBANKMENT	66,364.20	CY	$16.29	$1,081,072.82
	Earthwork Component Total				$1,359,822.82

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	8
Roadway Pavement Width L/R	48.00 / 48.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	27,319.99	SY	$6.00	$163,919.94
285-710	OPTIONAL BASE,BASE GROUP 10	24,668.16	SY	$51.75	$1,276,577.28
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	4,070.25	TN	$108.00	$439,587.00
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	986.73	TN	$129.60	$127,880.21

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	6
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	414.00	EA	$4.78	$1,978.92
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.75	NM	$1,164.77	$2,038.35
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.63	GM	$402.72	$1,059.15
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.75	NM	$3,741.79	$6,548.13
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	2.63	GM	$1,202.83	$3,163.44
	Roadway Component Total				$2,022,752.42

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,312.64	LF	$12.28	$28,399.22
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,312.64	LF	$12.28	$28,399.22
522-1	SIDEWALK CONC, 4" THICK	2,569.60	SY	$24.05	$61,798.88
570-1-2	PERFORMANCE TURF, SOD	2,569.60	SY	$2.00	$5,139.20

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	109.50	LF	$9.48	$1,038.06
104-12	STAKED TURBIDITY BARRIER	109.50	LF	$5.06	$554.07
104-13-1	STAKED SILT FENCE, TYPE III	4,625.28	LF	$0.89	$4,116.50
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	463.00	EA	$7.08	$3,278.04
	Shoulder Component Total				$134,741.99

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	36.00
Performance Turf Width	36.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	4,625.28	LF	$12.40	$57,353.47

570-1-2	PERFORMANCE TURF, SOD	9,250.56 SY	$2.00	$18,501.12
	Median Component Total			$75,854.59

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	7.88	CY	$1,300.00	$10,244.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	16.00	EA	$2,940.07	$47,041.12
425-1-451	INLETS, CURB, TYPE J-5, <10'	5.00	EA	$4,428.41	$22,142.05
425-1-521	INLETS, DT BOT, TYPE C, <10'	3.00	EA	$2,175.41	$6,526.23
425-2-41	MANHOLES, P-7, <10'	3.00	EA	$2,210.69	$6,632.07
570-1-2	PERFORMANCE TURF, SOD	133.15	SY	$2.00	$266.30

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	1,160.00	LF	$40.48	$46,956.80
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	104.00	LF	$70.38	$7,319.52
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	2,192.00	LF	$108.58	$238,007.36
	Drainage Component Total				$385,135.45

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	11.00	AS	$282.34	$3,105.74
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$12,926.23

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	700.00	LF	$3.05	$2,135.00
630-1-14	CONDUIT-SIGNALS,F& I, UG JACKED	300.00	LF	$15.72	$4,716.00
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	1.00	PI	$6,253.28	$6,253.28

635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	22.00 EA	$528.55	$11,628.10
639-1-22	SIGNAL,ELECT POWER SERV,UG,PUR CONT	1.00 AS	$1,712.57	$1,712.57
639-2-1	SIGNAL,ELECTRICAL SERVICE WIRE	60.00 LF	$1.79	$107.40
649-417-006	M/ARM,F&I/HL,1ST-B7,2ND-0,POLE-Q6	4.00 EA	$27,500.00	$110,000.00
650-51-311	TRAFFIC SIGNAL, F&I, 3 SECT, 1 WAY, STD	16.00 AS	$855.21	$13,683.36
653-111	PEDESTRIAN SIGNAL, 12 IN, INCANDES,1 WAY	8.00 AS	$400.00	$3,200.00
659-101	SGNL HEAD AUXIL, F&I, BACK PLT 3 SECT	10.00 EA	$111.35	$1,113.50
659-108	SGNL HEAD AUXILIARIES,F&I,STEEL PEDESTAL	4.00 EA	$1,216.84	$4,867.36
659-109	SGNL HEAD AUXIL, F&I, CONC PED TYP II	1.00 EA	$862.53	$862.53
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00 EA	$180.58	$3,611.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00 AS	$1,035.11	$20,702.20
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00 EA	$141.79	$1,134.32
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$26,581.94	$26,581.94
699-1-1	INTERNAL ILLUM SIGN, FURNISH & INST, NA	4.00 EA	$4,304.96	$17,219.84
700-48-19	SIGN PANELS, F & I, 16 - 100	4.00 EA	$1,284.00	$5,136.00

Signalization 2

Description	Value
Type	6 Lane Mast Arm
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	700.00	LF	$3.05	$2,135.00
630-1-14	CONDUIT-SIGNALS,F& I, UG JACKED	300.00	LF	$15.72	$4,716.00
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	1.00	PI	$6,253.28	$6,253.28
635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	22.00	EA	$528.55	$11,628.10
639-1-22	SIGNAL,ELECT POWER SERV,UG,PUR CONT	1.00	AS	$1,712.57	$1,712.57
639-2-1	SIGNAL,ELECTRICAL SERVICE WIRE	60.00	LF	$1.79	$107.40
649-417-006	M/ARM,F&I/HL,1ST-B7,2ND-0,POLE-Q6	4.00	EA	$27,500.00	$110,000.00
650-51-311	TRAFFIC SIGNAL, F&I, 3 SECT, 1 WAY, STD	16.00	AS	$855.21	$13,683.36
653-111	PEDESTRIAN SIGNAL, 12 IN, INCANDES,1 WAY	8.00	AS	$400.00	$3,200.00
659-101	SGNL HEAD AUXIL, F&I, BACK PLT 3 SECT	10.00	EA	$111.35	$1,113.50

659-108	SGNL HEAD AUXILIARIES,F&I,STEEL PEDESTAL	4.00	EA	$1,216.84	$4,867.36
659-109	SGNL HEAD AUXIL, F&I, CONC PED TYP II	1.00	EA	$862.53	$862.53
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$180.58	$3,611.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,035.11	$20,702.20
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00	EA	$141.79	$1,134.32
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$26,581.94	$26,581.94
699-1-1	INTERNAL ILLUM SIGN, FURNISH & INST, NA	4.00	EA	$4,304.96	$17,219.84
700-48-19	SIGN PANELS, F & I, 16 - 100	4.00	EA	$1,284.00	$5,136.00

Signalization 3

Description	Value
Type	6 Lane Mast Arm
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	700.00	LF	$3.05	$2,135.00
630-1-14	CONDUIT-SIGNALS,F& I, UG JACKED	300.00	LF	$15.72	$4,716.00
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	1.00	PI	$6,253.28	$6,253.28
635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	22.00	EA	$528.55	$11,628.10
639-1-22	SIGNAL,ELECT POWER SERV,UG,PUR CONT	1.00	AS	$1,712.57	$1,712.57
639-2-1	SIGNAL,ELECTRICAL SERVICE WIRE	60.00	LF	$1.79	$107.40
649-417-006	M/ARM,F&I/HL,1ST-B7,2ND-0,POLE-Q6	4.00	EA	$27,500.00	$110,000.00
650-51-311	TRAFFIC SIGNAL, F&I, 3 SECT, 1 WAY, STD	16.00	AS	$855.21	$13,683.36
653-111	PEDESTRIAN SIGNAL, 12 IN, INCANDES,1 WAY	8.00	AS	$400.00	$3,200.00
659-101	SGNL HEAD AUXIL, F&I, BACK PLT 3 SECT	10.00	EA	$111.35	$1,113.50
659-108	SGNL HEAD AUXILIARIES,F&I,STEEL PEDESTAL	4.00	EA	$1,216.84	$4,867.36
659-109	SGNL HEAD AUXIL, F&I, CONC PED TYP II	1.00	EA	$862.53	$862.53
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$180.58	$3,611.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,035.11	$20,702.20
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00	EA	$141.79	$1,134.32
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$26,581.94	$26,581.94
699-1-1	INTERNAL ILLUM SIGN, FURNISH & INST, NA	4.00	EA	$4,304.96	$17,219.84

700-48-19	SIGN PANELS, F & I, 16 - 100	4.00 EA	$1,284.00	$5,136.00
	Signalizations Component Total			$703,995.00

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	8,446.39 LF	$1.91	$16,132.60
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	2,312.64 LF	$5.13	$11,863.84
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	459.02 LF	$15.32	$7,032.19
715-14-11	LIGHTING - PULL BOX,F&I,ROADSIDE-MOULDED	16.00 EA	$327.28	$5,236.48
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	16.00 EA	$363.52	$5,816.32
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	16.00 EA	$2,702.55	$43,240.80
	Lighting Component Total			$89,322.23

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$65,462.11
Sequence 4 Total		$4,850,012.84

Sequence: 5 NDU - New Construction, Divided, Urban **Net Length:** 0.120 MI
Description: Bee Ridge 9-lane section

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.120
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.05	AC	$25,000.00	$76,250.00
120-6	EMBANKMENT	18,751.98	CY	$16.29	$305,469.75
	Earthwork Component Total				$381,719.75

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	9
Roadway Pavement Width L/R	60.00 / 48.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,329.73	SY	$6.00	$49,978.38
285-710	OPTIONAL BASE,BASE GROUP 10	7,603.20	SY	$51.75	$393,465.60
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,254.53	TN	$108.00	$135,489.24
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	304.13	TN	$129.60	$39,415.25

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	7
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	130.00	EA	$4.78	$621.40
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.48	NM	$1,164.77	$559.09
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.84	GM	$402.72	$338.28
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.48	NM	$3,741.79	$1,796.06
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.84	GM	$1,202.83	$1,010.38
	Roadway Component Total				$622,673.68

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	633.60	LF	$12.28	$7,780.61
520-1-10	CONCRETE CURB & GUTTER, TYPE F	633.60	LF	$12.28	$7,780.61
522-1	SIDEWALK CONC, 4" THICK	704.00	SY	$24.05	$16,931.20
570-1-2	PERFORMANCE TURF, SOD	704.00	SY	$2.00	$1,408.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	30.00	LF	$9.48	$284.40
104-12	STAKED TURBIDITY BARRIER	30.00	LF	$5.06	$151.80
104-13-1	STAKED SILT FENCE, TYPE III	1,267.20	LF	$0.89	$1,127.81
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	127.00	EA	$7.08	$899.16
	Shoulder Component Total				$38,382.39

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	36.00
Performance Turf Width	36.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	1,267.20	LF	$12.40	$15,713.28

570-1-2	PERFORMANCE TURF, SOD	2,534.40 SY	$2.00	$5,068.80
	Median Component Total			$20,782.08

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.16	CY	$1,300.00	$2,808.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	5.00	EA	$2,940.07	$14,700.35
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$4,428.41	$8,856.82
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00	EA	$2,175.41	$2,175.41
425-2-41	MANHOLES, P-7, <10'	1.00	EA	$2,210.69	$2,210.69
570-1-2	PERFORMANCE TURF, SOD	36.48	SY	$2.00	$72.96

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	320.00	LF	$40.48	$12,953.60
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	32.00	LF	$70.38	$2,252.16
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	600.00	LF	$108.58	$65,148.00
	Drainage Component Total				$111,177.99

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	3.00	AS	$282.34	$847.02
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$10,667.51

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,314.08	LF	$1.91	$4,419.89
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	633.60	LF	$5.13	$3,250.37
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	125.76	LF	$15.32	$1,926.64
715-14-11	LIGHTING - PULL	5.00	EA	$327.28	$1,636.40

	BOX,F&I,ROADSIDE-MOULDED			
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00 EA	$363.52	$1,817.60
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	5.00 EA	$2,702.55	$13,512.75
	Lighting Component Total			$26,563.65

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$19,825.40

Sequence 5 Total $1,231,792.45

Sequence: 6 NDU - New Construction, Divided, Urban **Net Length:** 0.159 MI
Description: Bee Ridge 10-lane section

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.159
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.05	AC	$25,000.00	$101,250.00
120-6	EMBANKMENT	25,792.54	CY	$16.29	$420,160.48
	Earthwork Component Total				$521,410.48

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	10
Roadway Pavement Width L/R	60.00 / 60.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	12,156.25	SY	$6.00	$72,937.50
285-710	OPTIONAL BASE,BASE GROUP 10	11,193.60	SY	$51.75	$579,268.80
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,846.94	TN	$108.00	$199,469.52
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	447.74	TN	$129.60	$58,027.10

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	8
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	193.00	EA	$4.78	$922.54
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.64	NM	$1,164.77	$745.45
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.27	GM	$402.72	$511.45
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.64	NM	$3,741.79	$2,394.75
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.27	GM	$1,202.83	$1,527.59
	Roadway Component Total				$915,804.70

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	839.52	LF	$12.28	$10,309.31
520-1-10	CONCRETE CURB & GUTTER, TYPE F	839.52	LF	$12.28	$10,309.31
522-1	SIDEWALK CONC, 4" THICK	932.80	SY	$24.05	$22,433.84
570-1-2	PERFORMANCE TURF, SOD	932.80	SY	$2.00	$1,865.60

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	178.00	CY	$1,025.00	$182,450.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	39.75	LF	$9.48	$376.83
104-12	STAKED TURBIDITY BARRIER	39.75	LF	$5.06	$201.14
104-13-1	STAKED SILT FENCE, TYPE III	1,679.04	LF	$0.89	$1,494.35
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	168.00	EA	$7.08	$1,189.44
	Shoulder Component Total				$232,648.62

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	37.00
Performance Turf Width	37.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	1,679.04	LF	$12.40	$20,820.10
570-1-2	PERFORMANCE TURF, SOD	3,451.36	SY	$2.00	$6,902.72
	Median Component Total				$27,722.82

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.86	CY	$1,300.00	$3,718.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	6.00	EA	$2,940.07	$17,640.42
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$4,428.41	$8,856.82
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00	EA	$2,175.41	$2,175.41
425-2-41	MANHOLES, P-7, <10'	1.00	EA	$2,210.69	$2,210.69
570-1-2	PERFORMANCE TURF, SOD	48.34	SY	$2.00	$96.68

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	424.00	LF	$40.48	$17,163.52
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	40.00	LF	$70.38	$2,815.20
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	800.00	LF	$108.58	$86,864.00
	Drainage Component Total				$141,540.74

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	4.00	AS	$282.34	$1,129.36
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$10,949.85

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I,	3,066.16	LF	$1.91	$5,856.37

	INSUL, NO.4-2			
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	839.52 LF	$5.13	$4,306.74
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	166.63 LF	$15.32	$2,552.77
715-14-11	LIGHTING - PULL BOX,F&I,ROADSIDE-MOULDED	6.00 EA	$327.28	$1,963.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	6.00 EA	$363.52	$2,181.12
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	6.00 EA	$2,702.55	$16,215.30
	Lighting Component Total			$33,075.98

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$32,942.92

Sequence 6 Total	$1,916,096.11

Sequence: 7 NUR - New Construction, Undivided, Rural **Net Length:** 0.971 MI
Description: SINGLE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.971
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	11.77	AC	$25,000.00	$294,250.00
120-6	EMBANKMENT	43,768.36	CY	$16.29	$712,986.58
	Earthwork Component Total				$1,007,236.58

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	15,380.64	SY	$6.00	$92,283.84
285-710	OPTIONAL BASE,BASE GROUP 10	8,920.77	SY	$51.75	$461,649.85
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,409.89	TN	$128.25	$180,818.39
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	341.79	TN	$129.60	$44,295.98

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	0
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.94	NM	$1,164.77	$2,259.65
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.94	NM	$3,741.79	$7,259.07
	Roadway Component Total				$788,566.78

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	3,793.89	SY	$25.00	$94,847.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	375.97	TN	$128.25	$48,218.15
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	136.72	TN	$129.60	$17,718.91
570-1-2	PERFORMANCE TURF, SOD	3,417.92	SY	$2.00	$6,835.84

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	267.00	CY	$1,025.00	$273,675.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	1,025.38	LF	$9.53	$9,771.87
104-11	FLOATING TURBIDITY BARRIER	242.75	LF	$9.48	$2,301.27
104-12	STAKED TURBIDITY BARRIER	242.75	LF	$5.06	$1,228.32
104-13-1	STAKED SILT FENCE, TYPE III	10,253.76	LF	$0.89	$9,125.85
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$465,741.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	17.48	CY	$1,300.00	$22,724.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	776.00	LF	$55.56	$43,114.56
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	39.00	EA	$1,317.51	$51,382.89

570-1-2	PERFORMANCE TURF, SOD	683.58 SY	$2.00	$1,367.16

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	168.00 LF	$70.38	$11,823.84
	Drainage Component Total			$130,412.45

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00 AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	20.00 AS	$923.06	$18,461.20
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00 AS	$4,089.43	$8,178.86
	Signing Component Total			$27,204.74

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$34,618.01

Sequence 7 Total $2,453,779.82

Sequence: 8 NUR - New Construction, Undivided, Rural **Net Length:** 1.977 MI
Description: TWO-LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.977
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	23.96	AC	$25,000.00	$599,000.00
120-6	EMBANKMENT	106,539.04	CY	$16.29	$1,735,520.96
	Earthwork Component Total				$2,334,520.96

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	51,032.96	SY	$6.00	$306,197.76
285-710	OPTIONAL BASE,BASE GROUP 10	28,601.65	SY	$51.75	$1,480,135.39
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	4,592.97	TN	$128.25	$589,048.40
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	1,113.45	TN	$129.60	$144,303.12

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	1
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	267.00	EA	$4.78	$1,276.26
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.95	NM	$1,164.77	$4,600.84
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.98	GM	$402.72	$797.39
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	3.95	NM	$3,741.79	$14,780.07
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.98	GM	$1,202.83	$2,381.60
	Roadway Component Total				$2,543,520.83

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	17,003.25	SY	$25.00	$425,081.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,786.15	TN	$128.25	$229,073.74
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	649.51	TN	$129.60	$84,176.50
570-1-2	PERFORMANCE TURF, SOD	6,959.04	SY	$2.00	$13,918.08

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	2,136.00	CY	$1,025.00	$2,189,400.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	2,087.71	LF	$9.53	$19,895.88
104-11	FLOATING TURBIDITY BARRIER	494.25	LF	$9.48	$4,685.49
104-12	STAKED TURBIDITY BARRIER	494.25	LF	$5.06	$2,500.91
104-13-1	STAKED SILT FENCE, TYPE III	20,877.12	LF	$0.89	$18,580.64
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$2,018.80	$4,037.60
	Shoulder Component Total				$2,991,350.09

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	35.59	CY	$1,300.00	$46,267.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	1,584.00	LF	$55.56	$88,007.04
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	80.00	EA	$1,317.51	$105,400.80
570-1-2	PERFORMANCE TURF, SOD	1,391.81	SY	$2.00	$2,783.62

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	336.00	LF	$70.38	$23,647.68

Drainage Component Total $266,106.14

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	4.00	AS	$282.34	$1,129.36
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	40.00	AS	$923.06	$36,922.40
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	4.00	AS	$4,089.43	$16,357.72

Signing Component Total $54,409.48

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $145,024.43

Sequence 8 Total $8,334,931.93

Sequence: 9 NUR - New Construction, Undivided, Rural **Net Length:** 0.433 MI
Description: CLIMBING-SINGLE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.214
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.042
Top of Structural Course For Begin Section	126.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.035
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	4
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.25 AC	$25,000.00	$131,250.00
120-6	EMBANKMENT	341,668.64 CY	$16.29	$5,565,782.15
	Earthwork Component Total			$5,697,032.15

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	6,858.72	SY	$6.00	$41,152.32
285-710	OPTIONAL BASE,BASE GROUP 10	3,978.06	SY	$51.75	$205,864.60
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	628.72	TN	$128.25	$80,633.34
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	152.42	TN	$129.60	$19,753.63

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	0
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.87	NM	$1,164.77	$1,013.35
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.87	NM	$3,741.79	$3,255.36
	Roadway Component Total				$351,672.61

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	3,215.98	SY	$25.00	$80,399.50
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	335.32	TN	$128.25	$43,004.79
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	121.93	TN	$129.60	$15,802.13

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	457.25	LF	$9.53	$4,357.59
104-11	FLOATING TURBIDITY BARRIER	108.25	LF	$9.48	$1,026.21
104-12	STAKED TURBIDITY BARRIER	108.25	LF	$5.06	$547.74
104-13-1	STAKED SILT FENCE, TYPE III	4,572.48	LF	$0.89	$4,069.51
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$151,226.28

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	7.79	CY	$1,300.00	$10,127.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	352.00	LF	$55.56	$19,557.12
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	18.00	EA	$1,317.51	$23,715.18
570-1-2	PERFORMANCE TURF, SOD	304.83	SY	$2.00	$609.66

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	72.00	LF	$70.38	$5,067.36
	Drainage Component Total				$59,076.32

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	9.00	AS	$923.06	$8,307.54
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
	Signing Component Total				$12,679.31

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$14,049.38

Sequence 9 Total	$6,285,736.05

Sequence: 10 NUR - New Construction, Undivided, Rural **Net Length:** 0.170 MI

Description: THREE-LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.170
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.06	AC	$25,000.00	$51,500.00
120-6	EMBANKMENT	10,307.77	CY	$16.29	$167,913.57
	Earthwork Component Total				$219,413.57

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	24.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,585.07	SY	$6.00	$33,510.42
285-710	OPTIONAL BASE,BASE GROUP 10	3,656.22	SY	$51.75	$189,209.38
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	592.42	TN	$128.25	$75,977.87
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	143.62	TN	$129.60	$18,613.15

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	2
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	92.00	EA	$4.78	$439.76
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.34	NM	$1,164.77	$396.02
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.34	GM	$402.72	$136.92
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.34	NM	$3,741.79	$1,272.21
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.34	GM	$1,202.83	$408.96
	Roadway Component Total				$319,964.70

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,462.09	SY	$25.00	$36,552.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	153.59	TN	$128.25	$19,697.92
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	55.85	TN	$129.60	$7,238.16
570-1-2	PERFORMANCE TURF, SOD	598.40	SY	$2.00	$1,196.80

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	178.00	CY	$1,025.00	$182,450.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	179.52	LF	$9.53	$1,710.83
104-11	FLOATING TURBIDITY BARRIER	42.50	LF	$9.48	$402.90
104-12	STAKED TURBIDITY BARRIER	42.50	LF	$5.06	$215.05
104-13-1	STAKED SILT FENCE, TYPE III	1,795.20	LF	$0.89	$1,597.73
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$253,080.44

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	3.06	CY	$1,300.00	$3,978.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	136.00	LF	$55.56	$7,556.16
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	7.00	EA	$1,317.51	$9,222.57
570-1-2	PERFORMANCE TURF, SOD	119.68	SY	$2.00	$239.36

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	32.00	LF	$70.38	$2,252.16

Drainage Component Total $23,248.25

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	4.00	AS	$923.06	$3,692.24
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43

Signing Component Total $8,064.01

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $14,907.33

Sequence 10 Total $838,678.30

Sequence: 11 NUR - New Construction, Undivided, Rural **Net Length:** 0.100 MI

Description: 4-Four LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.100
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.21	AC	$25,000.00	$30,250.00
120-6	EMBANKMENT	6,725.94	CY	$16.29	$109,565.56
	Earthwork Component Total				$139,815.56

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,989.33	SY	$6.00	$23,935.98
285-710	OPTIONAL BASE,BASE GROUP 10	2,854.72	SY	$51.75	$147,731.76
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	464.64	TN	$128.25	$59,590.08
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	112.64	TN	$129.60	$14,598.14

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	3
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	68.00	EA	$4.78	$325.04
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.20	NM	$1,164.77	$232.95
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.30	GM	$402.72	$120.82
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.20	NM	$3,741.79	$748.36
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.30	GM	$1,202.83	$360.85
	Roadway Component Total				$247,643.98

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	860.05	SY	$25.00	$21,501.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	90.35	TN	$128.25	$11,587.39
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	32.85	TN	$129.60	$4,257.36
570-1-2	PERFORMANCE TURF, SOD	352.00	SY	$2.00	$704.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	105.60	LF	$9.53	$1,006.37
104-11	FLOATING TURBIDITY BARRIER	25.00	LF	$9.48	$237.00
104-12	STAKED TURBIDITY BARRIER	25.00	LF	$5.06	$126.50
104-13-1	STAKED SILT FENCE, TYPE III	1,056.00	LF	$0.89	$939.84
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$42,378.51

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	1.80	CY	$1,300.00	$2,340.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	80.00	LF	$55.56	$4,444.80

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00 EA	$1,317.51	$5,270.04
570-1-2	PERFORMANCE TURF, SOD	70.40 SY	$2.00	$140.80

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	16.00	LF	$70.38	$1,126.08

Drainage Component Total $13,321.72

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	2.00	AS	$923.06	$1,846.12
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43

Signing Component Total $6,217.89

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $7,583.61

Sequence 11 Total $456,961.27

Sequence: 12 NUR - New Construction, Undivided, Rural **Net Length:** 0.155 MI

Description: 5-FIVE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.155
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.88	AC	$25,000.00	$47,000.00
120-6	EMBANKMENT	11,393.95	CY	$16.29	$185,607.45
	Earthwork Component Total				$232,607.45

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Roadway Pavement Width L/R	36.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	7,274.67	SY	$6.00	$43,648.02
285-710	OPTIONAL BASE,BASE GROUP 10	5,516.02	SY	$51.75	$285,454.03
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	900.24	TN	$128.25	$115,455.78
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	218.24	TN	$129.60	$28,283.90

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	4
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	126.00	EA	$4.78	$602.28
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.31	NM	$1,164.77	$361.08
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.62	GM	$402.72	$249.69
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.31	NM	$3,741.79	$1,159.95
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.62	GM	$1,202.83	$745.75
	Roadway Component Total				$475,960.49

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,333.08	SY	$25.00	$33,327.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	140.04	TN	$128.25	$17,960.13
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	50.92	TN	$129.60	$6,599.23
570-1-2	PERFORMANCE TURF, SOD	545.60	SY	$2.00	$1,091.20

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	163.68	LF	$9.53	$1,559.87
104-11	FLOATING TURBIDITY BARRIER	38.75	LF	$9.48	$367.35
104-12	STAKED TURBIDITY BARRIER	38.75	LF	$5.06	$196.08
104-13-1	STAKED SILT FENCE, TYPE III	1,636.80	LF	$0.89	$1,456.75
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$64,576.41

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.79	CY	$1,300.00	$3,627.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	128.00	LF	$55.56	$7,111.68

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	7.00 EA	$1,317.51	$9,222.57
570-1-2	PERFORMANCE TURF, SOD	109.12 SY	$2.00	$218.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	32.00	LF	$70.38	$2,252.16

Drainage Component Total $22,431.65

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	4.00	AS	$923.06	$3,692.24
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43

Signing Component Total $8,064.01

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $14,074.21

Sequence 12 Total $817,714.22

Sequence: 13 NUR - New Construction, Undivided, Rural **Net Length:** 0.777 MI

Description: AUXILIARY (TURN) LANE

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.777
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.42	AC	$25,000.00	$235,500.00
120-6	EMBANKMENT	21,170.73	CY	$16.29	$344,871.19
	Earthwork Component Total				$580,371.19

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	14,586.88	SY	$6.00	$87,521.28
285-710	OPTIONAL BASE,BASE GROUP 10	5,620.51	SY	$51.75	$290,861.39
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	902.56	TN	$108.00	$97,476.48
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	218.80	TN	$129.60	$28,356.48

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	1
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	0
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.78	NM	$1,164.77	$908.52
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.78	NM	$3,741.79	$2,918.60
	Roadway Component Total				$508,042.75

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	160
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	2,434.19	SY	$2.00	$4,868.38
	Shoulder Component Total				$4,868.38

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	13.99	CY	$1,300.00	$18,187.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	624.00	LF	$55.56	$34,669.44
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	32.00	EA	$1,317.51	$42,160.32
570-1-2	PERFORMANCE TURF, SOD	547.01	SY	$2.00	$1,094.02

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	136.00	LF	$70.38	$9,571.68
	Drainage Component Total				$105,682.46

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00	AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	16.00	AS	$923.06	$14,768.96
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00	AS	$4,089.43	$8,178.86

Signing Component Total	$23,512.50

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$15,464.84
Sequence 13 Total	$1,237,942.12

Date: 7/7/2009 11:17:55 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 201277-1-22-01 **Letting Date:** 01/2099

Description: I-75 FROM SR 681 TO UNIVERSITY PARKWAY

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English

Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 13.770 MI

Project Manager: MGR-RLC-MJB

Version 60 Project Grand Total **$136,163,385.39**

Description: Bee Ridge URS Alternative - Unit Cost Update April 2009 - (From Version 46)

Project Sequences Subtotal			**$89,926,205.22**
102-1	Maintenance of Traffic	10.00 %	$8,992,620.52
101-1	Mobilization	10.00 %	$9,891,882.57
Project Sequences Total			**$108,810,708.31**
Project Unknowns		25.00 %	$27,202,677.08
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 60 Project Grand Total					**$136,163,385.39**

Proposed Build Alternative LRE Cost Estimates

Date: 1/16/2015 12:30:45 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 201277-5-52-01 **Letting Date:** 01/2023

Description: I-75 (SR93) AT BEE RIDGE ROAD

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.750 MI

Project Manager: CES-NEM-KSI

Version 5 Project Grand Total **$74,319,825.10**

Description: January 2015 Unit Cost Update from Version 4P - 1/16/15

Sequence: 1 WDR - Widen/Resurface, Divided, Rural **Net Length:** 1.882 MI 9,937 LF

Description: I-75 Milling and Resurfacing from from station 139+50 to station 165+00, 215+00 to 288+85

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	64.00 / 64.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.882
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	29.20 AC	$10,000.00	$292,000.00

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	71,259.04 CY	$4.23	$301,425.74

Earthwork Component Total $593,425.74

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	8
Existing Roadway Pavement Width L/R	48.00 / 48.00
Structural Spread Rate	440
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 0.00
Widened Inside Pavement Width L/R	12.00 / 12.00
Widened Structural Spread Rate	715
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	79,495.68	SY	$3.30	$262,335.74
285-712	OPTIONAL BASE,BASE GROUP 12	27,227.27	SY	$14.21	$386,899.51
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	105,994.24	SY	$2.39	$253,326.23
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	23,318.73	TN	$95.37	$2,223,907.28
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	9,473.24	TN	$95.37	$903,462.90
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	4,239.77	TN	$130.88	$554,901.10
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,059.94	TN	$130.88	$138,724.95

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,100.00	SY	$3.30	$6,930.00
	Comment: for taper				
285-712	OPTIONAL BASE,BASE GROUP 12	2,000.00	SY	$14.21	$28,420.00
	Comment: for taper				
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	715.00	TN	$95.37	$68,189.55
	Comment: for taper				
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	80.00	TN	$130.88	$10,470.40
	Comment: for taper				
536-73	GUARDRAIL REMOVAL	9,925.00	LF	$2.69	$26,698.25

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,778.00	EA	$3.25	$5,778.50
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	7.53	NM	$863.24	$6,500.20
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	11.29	GM	$377.13	$4,257.80
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	7.53	NM	$4,084.65	$30,757.41
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	11.29	GM	$1,155.60	$13,046.72
	Roadway Component Total				$4,924,606.54

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	12.00 / 12.00
New Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Existing Paved Outside Shoulder Width L/R	10.00 / 10.00
New Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	22,082.13	SY	$1.77	$39,085.37
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,429.03	TN	$85.56	$207,827.81
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	58.30	TN	$130.88	$7,630.30
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	3.76	PM	$598.57	$2,250.62
570-1-2	PERFORMANCE TURF, SOD	4,416.43	SY	$1.84	$8,126.23

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	22,855.01	LF	$1.26	$28,797.31
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$1,606.20	$3,212.40
107-1	LITTER REMOVAL	13.68	AC	$25.30	$346.10
107-2	MOWING	13.68	AC	$30.22	$413.41
	Shoulder Component Total				$297,689.55

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	102.50
Performance Turf Width	82.50
New Total Median Shoulder Width L/R	12.00 / 12.00
New Paved Median Shoulder Width L/R	10.00 / 10.00
Existing Total Median Shoulder Width L/R	12.00 / 12.00
Existing Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	715
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-712	OPTIONAL BASE,BASE GROUP 12	22,810.84	SY	$14.21	$324,142.04
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	7,894.36	TN	$100.93	$796,777.75
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	58.30	TN	$130.88	$7,630.30
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	4.00	PM	$598.57	$2,394.28
570-1-2	PERFORMANCE TURF, SOD	91,088.80	SY	$1.84	$167,603.39
	Median Component Total				$1,298,547.76

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	38.00	CY	$1,386.70	$52,694.60
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,088.00	LF	$54.30	$59,078.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	329.00	CY	$1,394.43	$458,767.47
415-1-6	REINF STEEL- MISCELLANEOUS	72,851.00	LB	$1.06	$77,222.06
425-1-551	INLETS, DT BOT, TYPE E, <10'	54.00	EA	$3,298.09	$178,096.86
430-175-118	PIPE CULV, OPT MATL, ROUND, 18"S/CD	904.00	LF	$48.45	$43,798.80
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	904.00	LF	$57.84	$52,287.36
430-175-130	PIPE CULV, OPT MATL, ROUND, 30"S/CD	904.00	LF	$77.78	$70,313.12
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	54.00	EA	$1,310.66	$70,775.64
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,472.00	SY	$30.31	$44,616.32

570-1-2	PERFORMANCE TURF, SOD	1,424.00 SY	$1.84	$2,620.16
	Drainage Component Total			$1,110,270.79

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	6.00	AS	$329.84	$1,979.04
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	47.00	AS	$805.27	$37,847.69
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	6.00	AS	$4,065.94	$24,395.64

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	14.00	AS	$4,600.05	$64,400.70
700-3-207	SIGN PANEL, F&I OM, 201-300 SF	6.00	EA	$7,386.46	$44,318.76
700-4-125	OH STATIC SIGN STR, F&I, S 51-100 FT	4.00	EA	$120,383.77	$481,535.08
700-4-126	OH STATIC SIGN STR, F&I, S 101-150 FT	2.00	EA	$195,000.00	$390,000.00
	Signing Component Total				$1,044,476.91

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$190,777.87

Sequence 1 Total $9,459,795.16

Sequence: 2 NDR - New Construction, Divided, Rural **Net Length:** 0.950 MI 5,016 LF

Description: I-75 Mainline: New Construction from Station 165+00 to Station 215+00- 6 lanes

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.950

Top of Structural Course For Begin Section	110.00
Top of Structural Course For End Section	110.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	46.06 AC	$10,000.00	$460,600.00
120-6	EMBANKMENT	391,905.65 CY	$4.23	$1,657,760.90
	Earthwork Component Total			$2,118,360.90

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	36.00 / 36.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	66,880.00 SY	$3.30	$220,704.00
285-712	OPTIONAL BASE,BASE GROUP 12	40,863.68 SY	$14.21	$580,672.89
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	14,345.76 TN	$100.93	$1,447,917.56
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,605.12 TN	$130.88	$210,078.11

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	183.33 TN	$177.02	$32,453.08
536-73	GUARDRAIL REMOVAL	9,925.00 LF	$2.69	$26,698.25
904-540-2	HI TENSION CABLE BAR SYS-SOCKETED POST	5,000.00 LF	$19.17	$95,850.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	641.00 EA	$3.25	$2,083.25
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.80 NM	$863.24	$3,280.31
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.80 GM	$377.13	$1,433.09
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	3.80 NM	$4,084.65	$15,521.67
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	3.80 GM	$1,064.69	$4,045.82
	Roadway Component Total			$2,640,738.03

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-712	OPTIONAL BASE,BASE GROUP 12	11,514.51 SY	$14.21	$163,621.19
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,839.20 TN	$100.93	$185,630.46
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	29.43 TN	$130.88	$3,851.80
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.90 PM	$598.57	$1,137.28
570-1-2	PERFORMANCE TURF, SOD	2,229.33 SY	$1.84	$4,101.97

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	13,041.60 LF	$1.26	$16,432.42
104-15	SOIL TRACKING PREVENTION DEVICE	2.00 EA	$1,606.20	$3,212.40
107-1	LITTER REMOVAL	23.03 AC	$25.30	$582.66
107-2	MOWING	23.03 AC	$30.22	$695.97
	Shoulder Component Total			$379,266.15

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	102.00
Performance Turf Width	82.50
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	715
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-712	OPTIONAL BASE,BASE GROUP 12	11,514.51	SY	$14.21	$163,621.19
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	3,984.93	TN	$100.93	$402,198.98
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	29.43	TN	$130.88	$3,851.80
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	2.00	PM	$598.57	$1,197.14
570-1-2	PERFORMANCE TURF, SOD	45,980.00	SY	$1.84	$84,603.20
	Median Component Total				$655,472.31

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	17.10	CY	$1,386.70	$23,712.57
425-1-551	INLETS, DT BOT, TYPE E, <10'	6.00	EA	$3,298.09	$19,788.54
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	760.00	LF	$54.30	$41,268.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	328.00	LF	$57.84	$18,971.52
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	288.00	LF	$102.68	$29,571.84
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	38.00	EA	$1,310.66	$49,805.08
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,900.00	SY	$30.31	$57,589.00
570-1-1	PERFORMANCE TURF	668.80	SY	$0.68	$454.78
	Drainage Component Total				$241,161.33

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$329.84	$659.68
700-1-12	SINGLE POST SIGN, F&I GM, 12-20	23.00	AS	$805.27	$18,521.21

	SF			
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00 AS	$4,065.94	$8,131.88
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	6.00 AS	$4,600.05	$27,600.30
	Signing Component Total			$54,913.07

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

Landscaping Component Total $97,915.95

Sequence 2 Total $6,187,827.74

Sequence: 3 MIS - Miscellaneous Construction **Net Length:** 0.189 MI 1,000 LF

Description: Bridges and Retaining Walls

BRIDGES COMPONENT

Bridge 1

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	212.00
Width (LF)	61.54
Type	Overpass Bridge
Cost Factor	1.00
Structure No.	170745
Removal of Existing Structures area	11,202.00
Default Cost per SF	$122.00
Factored Cost per SF	$122.00
Final Cost per SF	**$128.27**
Basic Bridge Cost	**$1,591,670.56**
Description	SB I-75 OVER BEE RIDGE ROAD

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	11,202.00 SF	$21.82	$244,427.64
400-2-10	CONC CLASS II, APPROACH SLABS	136.76 CY	$388.30	$53,103.91
415-1-9	REINF STEEL- APPROACH SLABS	23,933.00 LB	$1.20	$28,719.60
	Bridge 1 Total			$1,917,921.71

Bridge 2

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	212.00
Width (LF)	61.54
Type	Overpass Bridge
Cost Factor	1.00
Structure No.	170146
Removal of Existing Structures area	12,727.00
Default Cost per SF	$122.00
Factored Cost per SF	$122.00
Final Cost per SF	**$128.27**
Basic Bridge Cost	**$1,591,670.56**
Description	NB I-75 OVER BEE RIDGE ROAD

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	12,727.00 SF	$21.82	$277,703.14
400-2-10	CONC CLASS II, APPROACH SLABS	136.76 CY	$388.30	$53,103.91
415-1-9	REINF STEEL- APPROACH SLABS	23,933.00 LB	$1.20	$28,719.60
	Bridge 2 Total			$1,951,197.21

Bridge NEWBR1

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	462.00
Width (LF)	30.08
Type	Overpass Bridge
Cost Factor	1.25
Structure No.	000001
Removal of Existing Structures area	0.00
Default Cost per SF	$122.00
Factored Cost per SF	$152.50
Final Cost per SF	**$155.38**
Basic Bridge Cost	**$2,119,286.40**
Description	SB I-75 OFF RAMP - STEEL BRIDGE

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.84 CY	$388.30	$25,953.97
415-1-9	REINF STEEL- APPROACH SLABS	11,697.00 LB	$1.20	$14,036.40

	Bridge NEWBR1 Total	$2,159,276.77

Bridge 3

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	181.00
Width (LF)	15.08
Type	Low Level, Widen
Cost Factor	1.00
Structure No.	170079
Removal of Existing Structures area	528.00
Default Cost per SF	$120.00
Factored Cost per SF	$120.00
Final Cost per SF	**$127.35**
Basic Bridge Cost	**$327,537.60**
Description	SB I-75 BRIDGE OVER MAIN A CANAL

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	528.00 SF	$21.82	$11,520.96
400-2-10	CONC CLASS II, APPROACH SLABS	33.51 CY	$388.30	$13,011.93
415-1-9	REINF STEEL- APPROACH SLABS	5,864.25 LB	$1.20	$7,037.10
	Bridge 3 Total			$359,107.59

Bridge 4

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	181.00
Width (LF)	30.16
Type	Low Level, Widen
Cost Factor	1.00
Structure No.	170080
Removal of Existing Structures area	528.00
Default Cost per SF	$120.00
Factored Cost per SF	$120.00
Final Cost per SF	**$127.35**
Basic Bridge Cost	**$655,075.20**
Description	NB I-75 BRIDGE OVER MAIN A CANAL

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	528.00 SF	$21.82	$11,520.96
400-2-10	CONC CLASS II, APPROACH	67.02 CY	$388.30	$26,023.87

	SLABS			
415-1-9	REINF STEEL- APPROACH SLABS	11,728.50 LB	$1.20	$14,074.20
	Bridge 4 Total			$706,694.23

Bridge 5

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	135.50
Width (LF)	83.08
Type	Overpass Bridge
Cost Factor	1.00
Structure No.	170081
Removal of Existing Structures area	8,005.79
Default Cost per SF	$122.00
Factored Cost per SF	$122.00
Final Cost per SF	**$131.81**
Basic Bridge Cost	**$1,373,395.48**
Description	SB I-75 BRIDGE OVER PALMER BLVD

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	8,005.79 SF	$21.82	$174,686.34
400-2-10	CONC CLASS II, APPROACH SLABS	184.62 CY	$388.30	$71,687.95
415-1-9	REINF STEEL- APPROACH SLABS	32,308.50 LB	$1.20	$38,770.20
	Bridge 5 Total			$1,658,539.97

Bridge 6

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	135.50
Width (LF)	15.04
Type	Low Level, Widen
Cost Factor	1.00
Structure No.	170082
Removal of Existing Structures area	390.00
Default Cost per SF	$120.00
Factored Cost per SF	$120.00
Final Cost per SF	**$129.81**
Basic Bridge Cost	**$244,550.40**
Description	NB I-75 BRIDGE OVER PALMER BLVD

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount

110-3	REMOVAL OF EXISTING STRUCTURE	390.00 SF	$21.82	$8,509.80
400-2-10	CONC CLASS II, APPROACH SLABS	33.42 CY	$388.30	$12,976.99
415-1-9	REINF STEEL- APPROACH SLABS	5,848.50 LB	$1.20	$7,018.20
	Bridge 6 Total			$273,055.39
	Bridges Component Total			$9,025,792.87

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	1,440.00
Begin height	10.00
End Height	10.00
Multiplier	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	14,400.00 SF	$33.83	$487,152.00

Retaining Wall 2

Description	Value
Length	300.00
Begin height	9.00
End Height	9.00
Multiplier	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,700.00 SF	$33.83	$91,341.00

Retaining Wall 3

Description	Value
Length	1,000.00
Begin height	9.40
End Height	9.40
Multiplier	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	9,400.00 SF	$33.83	$318,002.00

Retaining Wall 4

Description	Value
Length	1,000.00
Begin height	7.10
End Height	7.10
Multiplier	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	7,100.00 SF	$33.83	$240,193.00
	Retaining Walls Component Total			$1,136,688.00

Sequence 3 Total $10,162,480.87

Sequence: 4 MIS - Miscellaneous Construction **Net Length:** 1.000 MI 5,280 LF

Description: Retention Ponds

DRAINAGE COMPONENT

Retention Basin 1

Description	Value
Size	20 AC
Multiplier	2
Depth	3.50
Description	L-1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	40.00 AC	$10,000.00	$400,000.00
120-1	REGULAR EXCAVATION	225,866.66 CY	$4.93	$1,113,522.63
400-2-2	CONC CLASS II, ENDWALLS	108.00 CY	$1,386.70	$149,763.60
425-1-541	INLETS, DT BOT, TYPE D, <10'	6.00 EA	$3,190.73	$19,144.38
425-2-71	MANHOLES, J-7, <10'	6.00 EA	$6,326.46	$37,958.76
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	304.00 LF	$123.65	$37,589.60
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	1,200.00 LF	$260.76	$312,912.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	8,840.00 LF	$10.40	$91,936.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	12.00 EA	$2,671.64	$32,059.68
570-1-1	PERFORMANCE TURF	193,600.00 SY	$0.68	$131,648.00

Retention Basin 2

Description	Value
Size	2 AC

Multiplier	1
Depth	3.00
Description	New Pond For Flyover Ramp:

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00 AC	$10,000.00	$20,000.00
120-1	REGULAR EXCAVATION	9,680.00 CY	$4.93	$47,722.40
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	$1,386.70	$24,960.60
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	$3,190.73	$3,190.73
425-2-71	MANHOLES, J-7, <10'	1.00 EA	$6,326.46	$6,326.46
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	$123.65	$6,924.40
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00 LF	$260.76	$52,152.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00 LF	$10.40	$12,272.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	$2,671.64	$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00 SY	$0.68	$6,582.40

Retention Basin 3

Description	Value
Size	2.5 AC
Multiplier	3
Depth	3.00
Description	1.5 Miles of Linear Pond:

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.50 AC	$10,000.00	$75,000.00
120-1	REGULAR EXCAVATION	36,300.00 CY	$4.93	$178,959.00
570-1-1	PERFORMANCE TURF	36,300.00 SY	$0.68	$24,684.00

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
440-1-50	UNDERDRAIN, TYPE V	7,920.00 LF	$58.00	$459,360.00
514-72	LINER IMPERMEABLE PVC	36,080.01 SY	$11.95	$431,156.12

Drainage Component Total $3,678,496.40

Sequence 4 Total $3,678,496.40

Sequence: 5 NDR - New Construction, Divided, Rural **Net Length:** 0.369 MI 1,948 LF

Description: SB On Ramp - Ramp A, 2 lanes ramp from EB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.369
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.47 AC	$10,000.00	$44,700.00
120-6	EMBANKMENT	17,850.22 CY	$4.23	$75,506.43
	Earthwork Component Total			$120,206.43

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	24.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	13,854.72 SY	$3.30	$45,720.58
285-712	OPTIONAL BASE,BASE GROUP 12	5,338.40 SY	$14.21	$75,858.66
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,857.40 TN	$94.07	$174,725.62
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	207.82 TN	$144.75	$30,081.94

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.37 NM	$863.24	$319.40
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.74 GM	$377.13	$279.08
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.74 GM	$1,155.60	$855.14

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	50.00 EA	$3.25	$162.50
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.74 NM	$4,084.65	$3,022.64
	Roadway Component Total			$331,025.57

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	4,472.48 SY	$10.60	$47,408.29
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	714.38 TN	$100.93	$72,102.37
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.37 PM	$598.57	$221.47
570-1-2	PERFORMANCE TURF, SOD	865.92 SY	$1.84	$1,593.29

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	244.00 LF	$24.53	$5,985.32

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended

				Amount
104-10-3	SEDIMENT BARRIER	5,065.63 LF	$1.26	$6,382.69
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
107-1	LITTER REMOVAL	8.94 AC	$25.30	$226.18
107-2	MOWING	8.94 AC	$30.22	$270.17
	Shoulder Component Total			$135,795.98

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	8.00 / 8.00
Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	267.00 LF	$24.53	$6,549.51
	Median Component Total			$6,549.51

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	6.64 CY	$1,386.70	$9,207.69
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00 EA	$3,298.09	$9,894.27
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	296.00 LF	$54.30	$16,072.80
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	128.00 LF	$57.84	$7,403.52
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	15.00 EA	$1,310.66	$19,659.90
524-1-1	CONCRETE DITCH PAVT, NR, 3"	738.00 SY	$30.31	$22,368.78
570-1-2	PERFORMANCE TURF, SOD	259.78 SY	$1.84	$478.00
	Drainage Component Total			$85,084.96

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$329.84	$329.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00 AS	$805.27	$7,247.43
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$4,065.94	$4,065.94
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00 AS	$4,600.05	$13,800.15
	Signing Component Total			$25,443.36

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$13,961.40

Sequence 5 Total	$718,067.21

Sequence: 6 NDR - New Construction, Divided, Rural **Net Length:** 0.267 MI 1,410 LF

Description: SB On Ramp - Ramp A1, 2 lanes ramp from WB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	36.00 / 36.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.267
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.33 AC	$10,000.00	$23,300.00
120-6	EMBANKMENT	12,916.01 CY	$4.23	$54,634.72

	Earthwork Component Total	$77,934.72

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	24.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,024.96	SY	$3.30	$33,082.37
285-712	OPTIONAL BASE,BASE GROUP 12	3,862.74	SY	$14.21	$54,889.54
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,343.97	TN	$94.07	$126,427.26
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	150.37	TN	$144.75	$21,766.06

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.27	NM	$863.24	$233.07
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.53	GM	$377.13	$199.88
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.27	NM	$4,084.65	$1,102.86
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.53	GM	$1,155.60	$612.47

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	36.00	EA	$3.25	$117.00

	Roadway Component Total	$238,430.51

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,236.18	SY	$10.60	$34,303.51
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	516.91	TN	$100.93	$52,171.73
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	8.27	TN	$144.75	$1,197.08
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.27	PM	$598.57	$161.61
570-1-2	PERFORMANCE TURF, SOD	626.56	SY	$1.84	$1,152.87

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	60.00	LF	$24.53	$1,471.80

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,665.38	LF	$1.26	$4,618.38
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,606.20	$1,606.20
107-1	LITTER REMOVAL	6.47	AC	$25.30	$163.69
107-2	MOWING	6.47	AC	$30.22	$195.52
	Shoulder Component Total				$97,042.39

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	5.34
Total Median Shoulder Width L/R	8.00 / 8.00
Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	836.46 SY	$0.68	$568.79

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	261.00 LF	$24.53	$6,402.33
	Median Component Total			$6,971.12

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.81 CY	$1,386.70	$6,670.03
425-1-551	INLETS, DT BOT, TYPE E, <10'	2.00 EA	$3,298.09	$6,596.18
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	216.00 LF	$54.30	$11,728.80
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	96.00 LF	$57.84	$5,552.64
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	11.00 EA	$1,310.66	$14,417.26
524-1-1	CONCRETE DITCH PAVT, NR, 3"	534.00 SY	$30.31	$16,185.54
570-1-2	PERFORMANCE TURF, SOD	187.97 SY	$1.84	$345.86
	Drainage Component Total			$61,496.31

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$329.84	$329.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	7.00 AS	$805.27	$5,636.89
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$4,065.94	$4,065.94
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00 AS	$4,600.05	$9,200.10
	Signing Component Total			$19,232.77

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $10,098.51

Sequence 6 Total $511,206.33

Sequence: 7 NDR - New Construction, Divided, Rural **Net Length:** 0.586 MI 3,094 LF

Description: NB Off Ramp - Ramp B - 2 lanes ramp, reduce to 1-lane ramp connect to EB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.586
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.10 AC	$10,000.00	$71,000.00
120-6	EMBANKMENT	39,145.84 CY	$4.23	$165,586.90

Earthwork Component Total $236,586.90

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	22,002.35 SY	$3.30	$72,607.76
285-712	OPTIONAL BASE,BASE GROUP 12	8,704.68 SY	$14.21	$123,693.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,949.69 TN	$94.07	$277,477.34
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	330.04 TN	$144.75	$47,773.29

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.59 GM	$377.13	$222.51
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.59 GM	$1,155.60	$681.80

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	79.00 EA	$3.25	$256.75
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.17 NM	$863.24	$1,009.99
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.17 NM	$4,084.65	$4,779.04
	Roadway Component Total			$528,501.98

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	7,102.63 SY	$10.60	$75,287.88
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,134.50 TN	$100.93	$114,505.08

337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	275.03 TN	$144.75	$39,810.59
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.59 PM	$598.57	$353.16
570-1-2	PERFORMANCE TURF, SOD	1,375.15 SY	$1.84	$2,530.28

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	249.00 LF	$24.53	$6,107.97

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	8,044.61 LF	$1.26	$10,136.21
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
107-1	LITTER REMOVAL	14.20 AC	$25.30	$359.26
107-2	MOWING	14.20 AC	$30.22	$429.12
	Shoulder Component Total			$251,125.76

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	16.00
Performance Turf Width	5.34
Total Median Shoulder Width L/R	8.00 / 8.00
Paved Median Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	715
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	18.15 TN	$144.75	$2,627.21
570-1-2	PERFORMANCE TURF, SOD	1,835.82 SY	$1.84	$3,377.91

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,155.00 SY	$10.60	$12,243.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	158.77 TN	$100.93	$16,024.66
	Median Component Total			$34,272.78

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	10.55 CY	$1,386.70	$14,629.69
425-1-551	INLETS, DT BOT, TYPE E, <10'	4.00 EA	$3,298.09	$13,192.36
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	472.00 LF	$54.30	$25,629.60
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	208.00 LF	$57.84	$12,030.72
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	24.00 EA	$1,310.66	$31,455.84
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,172.00 SY	$30.31	$35,523.32
570-1-2	PERFORMANCE TURF, SOD	412.54 SY	$1.84	$759.07
	Drainage Component Total			$133,220.60

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00 AS	$329.84	$659.68
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	15.00 AS	$805.27	$12,079.05
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00 AS	$4,065.94	$8,131.88
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	4.00 AS	$4,600.05	$18,400.20
	Signing Component Total			$39,270.81

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$23,678.03
Sequence 7 Total		$1,246,656.86

Sequence: 8 NDR - New Construction, Divided, Rural **Net Length:** 0.110 MI 581 LF

Description: NB Off Ramp - Ramp B1 - 1-lane ramp becomes 3-lane ramp connect to WB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	36.00 / 36.00
Incidental Clearing and Grubbing Area	0.00

Alignment Number	1
Distance	0.110
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.96 AC	$10,000.00	$9,600.00
120-6	EMBANKMENT	9,502.32 CY	$4.23	$40,194.81
	Earthwork Component Total			$49,794.81

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	24.00 / 12.00
Structural Spread Rate	715
Friction Course Spread Rate	80

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,412.00 SY	$3.30	$11,259.60
285-712	OPTIONAL BASE,BASE GROUP 12	1,863.00 SY	$14.21	$26,473.23
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	512.30 TN	$94.07	$48,192.06
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	74.50 TN	$144.75	$10,783.88

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended

				Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	30.00 EA	$3.25	$97.50
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.22 NM	$863.24	$189.91
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.11 GM	$377.13	$41.48
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.22 NM	$4,084.65	$898.62
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.11 GM	$1,155.60	$127.12
	Roadway Component Total			$98,063.40

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	212.96 TN	$100.93	$21,494.05
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	3.41 TN	$144.75	$493.60
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.11 PM	$598.57	$65.84

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	775.00 SY	$10.60	$8,215.00
570-1-2	PERFORMANCE TURF, SOD	2,324.00 SY	$1.84	$4,276.16

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,510.08 LF	$1.26	$1,902.70
107-1	LITTER REMOVAL	2.67 AC	$25.30	$67.55
107-2	MOWING	2.67 AC	$30.22	$80.69
	Shoulder Component Total			$36,595.59

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	36.00
Performance Turf Width	30.00
Total Median Shoulder Width L/R	8.00 / 0.00
Paved Median Shoulder Width L/R	6.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	408.50	SY	$10.60	$4,330.10
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	138.42	TN	$100.93	$13,970.73
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	1.70	TN	$144.75	$246.08
570-1-2	PERFORMANCE TURF, SOD	1,936.00	SY	$1.84	$3,562.24
	Median Component Total				$22,109.15

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	1.98	CY	$1,386.70	$2,745.67
425-1-551	INLETS, DT BOT, TYPE E, <10'	1.00	EA	$3,298.09	$3,298.09
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	88.00	LF	$54.30	$4,778.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	40.00	LF	$57.84	$2,313.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00	EA	$1,310.66	$6,553.30
524-1-1	CONCRETE DITCH PAVT, NR, 3"	220.00	SY	$30.31	$6,668.20
570-1-2	PERFORMANCE TURF, SOD	77.44	SY	$1.84	$142.49
	Drainage Component Total				$26,499.75

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$329.84	$329.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20	3.00	AS	$805.27	$2,415.81

	SF			
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$4,065.94	$4,065.94
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00 AS	$4,600.05	$4,600.05
	Signing Component Total			$11,411.64

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$4,581.70

Sequence 8 Total	$249,056.04

Sequence: 9 NDR - New Construction, Divided, Rural **Net Length:** 0.582 MI 3,073 LF

Description: NB On Ramp - Ramp C, 1-lane ramp from WB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.582
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.05 AC	$10,000.00	$70,500.00
120-6	EMBANKMENT	23,678.86 CY	$4.23	$100,161.58
	Earthwork Component Total			$170,661.58

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	110

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	13,316.16 SY	$3.30	$43,943.33
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	281.69 TN	$144.75	$40,774.63

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-712	OPTIONAL BASE,BASE GROUP 12	7,019.00 SY	$14.21	$99,739.99
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,930.20 TN	$94.07	$181,573.91

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.16 NM	$863.24	$1,001.36
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.16 NM	$4,084.65	$4,738.19
	Roadway Component Total			$371,771.41

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O

Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	4,322.63	SY	$10.60	$45,819.88
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	676.05	TN	$100.93	$68,233.73
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	18.03	TN	$144.75	$2,609.84
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.58	PM	$598.57	$347.17
570-1-2	PERFORMANCE TURF, SOD	1,365.76	SY	$1.84	$2,513.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	7,989.70	LF	$1.26	$10,067.02
104-11	FLOATING TURBIDITY BARRIER	145.50	LF	$11.26	$1,638.33
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	145.50	LF	$3.54	$515.07
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,606.20	$1,606.20
107-1	LITTER REMOVAL	14.11	AC	$25.30	$356.98
107-2	MOWING	14.11	AC	$30.22	$426.40
	Shoulder Component Total				$134,133.62

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	36.00
Performance Turf Width	30.00
Total Median Shoulder Width L/R	8.00 / 0.00
Paved Median Shoulder Width L/R	6.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	2,161.32	SY	$10.60	$22,909.99
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	732.39	TN	$100.93	$73,920.12
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	9.01	TN	$144.75	$1,304.20
570-1-2	PERFORMANCE TURF, SOD	10,243.20	SY	$1.84	$18,847.49

	Median Component Total	$116,981.80

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	10.48	CY	$1,386.70	$14,532.62
425-1-551	INLETS, DT BOT, TYPE E, <10'	4.00	EA	$3,298.09	$13,192.36
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	472.00	LF	$54.30	$25,629.60
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	208.00	LF	$57.84	$12,030.72
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	24.00	EA	$1,310.66	$31,455.84
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,164.00	SY	$30.31	$35,280.84
570-1-2	PERFORMANCE TURF, SOD	409.73	SY	$1.84	$753.90
	Drainage Component Total				$132,875.88

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$329.84	$659.68
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	14.00	AS	$805.27	$11,273.78
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$4,065.94	$8,131.88
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	4.00	AS	$4,600.05	$18,400.20
	Signing Component Total				$38,465.54

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$18,894.07
Sequence 9 Total		$983,783.90

Sequence: 10 NDR - New Construction, Divided, Rural — **Net Length:** 0.235 MI / 1,241 LF

Description: NB On Ramp - Ramp C1, 2-lane ramp from EB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.235
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.85 AC	$10,000.00	$28,500.00
120-6	EMBANKMENT	18,173.58 CY	$4.23	$76,874.24
	Earthwork Component Total			$105,374.24

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	6,617.60 SY	$3.30	$21,838.08
285-712	OPTIONAL BASE,BASE GROUP 12	3,490.78 SY	$14.21	$49,603.98
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,182.90 TN	$94.07	$111,275.40
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	132.35 TN	$144.75	$19,157.66

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.24 GM	$377.13	$90.51

711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.24 GM	$1,155.60	$277.34

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	32.00 EA	$3.25	$104.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.47 NM	$863.24	$405.72
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.47 NM	$4,084.65	$1,919.79
	Roadway Component Total			$204,672.48

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	7.28 TN	$144.75	$1,053.78
570-1-2	PERFORMANCE TURF, SOD	551.47 SY	$1.84	$1,014.70

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	913.00 SY	$10.60	$9,677.80
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	125.58 TN	$100.93	$12,674.79
520-1-10	CONCRETE CURB & GUTTER, TYPE F	142.00 LF	$24.53	$3,483.26
546-72-51	RUMBLE STRIPS, GROUND-IN, 16"	0.13 PM	$598.57	$77.81

MIN. WIDTH

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,226.08 LF	$1.26	$4,064.86
104-11	FLOATING TURBIDITY BARRIER	58.75 LF	$11.26	$661.52
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	58.75 LF	$3.54	$207.98
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
107-1	LITTER REMOVAL	5.70 AC	$25.30	$144.21
107-2	MOWING	5.70 AC	$30.22	$172.25
	Shoulder Component Total			$34,839.17

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	36.00
Performance Turf Width	30.00
Total Median Shoulder Width L/R	8.00 / 0.00
Paved Median Shoulder Width L/R	6.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	872.70 SY	$10.60	$9,250.62
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	295.72 TN	$100.93	$29,847.02
570-1-2	PERFORMANCE TURF, SOD	4,136.00 SY	$1.84	$7,610.24

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	185.00 LF	$24.53	$4,538.05
	Median Component Total			$51,245.93

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount

400-2-2	CONC CLASS II, ENDWALLS	4.23 CY	$1,386.70	$5,865.74
425-1-551	INLETS, DT BOT, TYPE E, <10'	2.00 EA	$3,298.09	$6,596.18
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	192.00 LF	$54.30	$10,425.60
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	80.00 LF	$57.84	$4,627.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	10.00 EA	$1,310.66	$13,106.60
524-1-1	CONCRETE DITCH PAVT, NR, 3"	470.00 SY	$30.31	$14,245.70
570-1-2	PERFORMANCE TURF, SOD	165.44 SY	$1.84	$304.41
	Drainage Component Total			$55,171.43

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$329.84	$329.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	6.00 AS	$805.27	$4,831.62
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$4,065.94	$4,065.94
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00 AS	$4,600.05	$9,200.10
	Signing Component Total			$18,427.50

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$8,648.23

Sequence 10 Total	$478,378.98

Sequence: 11 NDR - New Construction, Divided, Rural — **Net Length:** 0.246 MI / 1,299 LF

Description: SB Off Ramp - Ramp D, 2-lane ramp connect to Ramp E and WB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00

Alignment Number	1
Distance	0.246
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.98 AC	$10,000.00	$29,800.00
120-6	EMBANKMENT	16,022.41 CY	$4.23	$67,774.79
	Earthwork Component Total			$97,574.79

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	715
Friction Course Spread Rate	80

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,727.00 SY	$3.30	$32,099.10
285-712	OPTIONAL BASE,BASE GROUP 12	5,616.00 SY	$14.21	$79,803.36
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,544.40 TN	$94.07	$145,281.71
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	224.60 TN	$144.75	$32,510.85
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.25 GM	$377.13	$94.28
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.25 GM	$1,155.60	$288.90

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	33.00 EA	$3.25	$107.25
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.49 NM	$863.24	$422.99
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.49 NM	$4,084.65	$2,001.48
	Roadway Component Total			$292,609.92

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	7.62 TN	$144.75	$1,103.00
570-1-2	PERFORMANCE TURF, SOD	577.28 SY	$1.84	$1,062.20

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	2,456.00 SY	$10.60	$26,033.60
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	337.70 TN	$100.93	$34,084.06
520-1-10	CONCRETE CURB & GUTTER, TYPE F	84.00 LF	$24.53	$2,060.52
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.35 PM	$598.57	$209.50

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,377.09 LF	$1.26	$4,255.13
104-11	FLOATING TURBIDITY BARRIER	61.50 LF	$11.26	$692.49
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	61.50 LF	$3.54	$217.71

104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
107-1	LITTER REMOVAL	5.96 AC	$25.30	$150.79
107-2	MOWING	5.96 AC	$30.22	$180.11
	Shoulder Component Total			$71,655.31

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	18.00
Performance Turf Width	12.00
Total Median Shoulder Width L/R	8.00 / 0.00
Paved Median Shoulder Width L/R	6.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	913.55 SY	$10.60	$9,683.63
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	309.57 TN	$100.93	$31,244.90
570-1-2	PERFORMANCE TURF, SOD	1,731.84 SY	$1.84	$3,186.59

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	150.00 LF	$24.53	$3,679.50
	Median Component Total			$47,794.62

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.43 CY	$1,386.70	$6,143.08
425-1-551	INLETS, DT BOT, TYPE E, <10'	2.00 EA	$3,298.09	$6,596.18
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	200.00 LF	$54.30	$10,860.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	88.00 LF	$57.84	$5,089.92
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	10.00 EA	$1,310.66	$13,106.60
524-1-1	CONCRETE DITCH PAVT, NR, 3"	492.00 SY	$30.31	$14,912.52
570-1-2	PERFORMANCE TURF, SOD	173.18 SY	$1.84	$318.65

	Drainage Component Total	$57,026.95

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$329.84	$329.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	6.00 AS	$805.27	$4,831.62
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$4,065.94	$4,065.94
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00 AS	$4,600.05	$9,200.10
	Signing Component Total			$18,427.50

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$11,727.17
Sequence 11 Total		$596,816.26

Sequence: 12 NDR - New Construction, Divided, Rural — **Net Length:** 0.186 MI / 982 LF

Description: SB Off Ramp - Ramp D1, 2-lane ramp connect to EB Bee Ridge

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.186
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.25 AC	$10,000.00	$22,500.00
120-6	EMBANKMENT	10,519.90 CY	$4.23	$44,499.18
	Earthwork Component Total			$66,999.18

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,237.76 SY	$3.30	$17,284.61
285-712	OPTIONAL BASE,BASE GROUP 12	2,762.92 SY	$14.21	$39,261.09
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	936.25 TN	$94.07	$88,073.04
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	104.76 TN	$144.75	$15,164.01

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.19 GM	$377.13	$71.65
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.19 GM	$1,155.60	$219.56

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	25.00 EA	$3.25	$81.25
710-11-111	PAINTED PAVT	0.37 NM	$863.24	$319.40

	MARK,STD,WHITE,SOLID,6"			
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.37 NM	$4,084.65	$1,511.32
	Roadway Component Total			$161,985.93

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,381.46	SY	$10.60	$14,643.48
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	216.06	TN	$100.93	$21,806.94
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	5.76	TN	$144.75	$833.76
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.19	PM	$598.57	$113.73
570-1-2	PERFORMANCE TURF, SOD	436.48	SY	$1.84	$803.12

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	128.00	LF	$24.53	$3,139.84

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,553.41	LF	$1.26	$3,217.30
104-11	FLOATING TURBIDITY BARRIER	46.50	LF	$11.26	$523.59
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	46.50	LF	$3.54	$164.61
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,606.20	$1,606.20
104-18	INLET PROTECTION SYSTEM	2.00	EA	$81.08	$162.16
107-1	LITTER REMOVAL	4.51	AC	$25.30	$114.10
107-2	MOWING	4.51	AC	$30.22	$136.29
	Shoulder Component Total				$47,265.12

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	8.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	8.00 / 0.00
Paved Median Shoulder Width L/R	6.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	168.00 LF	$24.53	$4,121.04
	Median Component Total			$4,121.04

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	3.35 CY	$1,386.70	$4,645.45
425-1-551	INLETS, DT BOT, TYPE E, <10'	2.00 EA	$3,298.09	$6,596.18
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	152.00 LF	$54.30	$8,253.60
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	64.00 LF	$57.84	$3,701.76
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	56.00 LF	$102.68	$5,750.08
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	8.00 EA	$1,310.66	$10,485.28
524-1-1	CONCRETE DITCH PAVT, NR, 3"	372.00 SY	$30.31	$11,275.32
570-1-2	PERFORMANCE TURF, SOD	130.94 SY	$1.84	$240.93
	Drainage Component Total			$50,948.60

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$329.84	$329.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00 AS	$805.27	$4,026.35
700-2-14	MULTI- POST SIGN, F&I GM, 31-50	1.00 AS	$4,065.94	$4,065.94

	SF			
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00 AS	$4,600.05	$9,200.10
	Signing Component Total			$17,622.23

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $6,608.02

Sequence 12 Total $355,550.12

Sequence: 13 NDR - New Construction, Divided, Rural **Net Length:** 0.935 MI 4,937 LF

Description: SB Off Ramp - Ramp E, 1-lane fly-over ramp connect to ramp D and Wilkinson Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.935
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	11.33 AC	$10,000.00	$113,300.00
120-6	EMBANKMENT	38,040.79 CY	$4.23	$160,912.54
	Earthwork Component Total			$274,212.54

ROADWAY COMPONENT

User Input Data

Description	Value

Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	21,392.80 SY	$3.30	$70,596.24
285-712	OPTIONAL BASE,BASE GROUP 12	8,590.03 SY	$14.21	$122,064.33
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,941.51 TN	$94.07	$276,707.85
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	329.12 TN	$144.75	$47,640.12

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.87 NM	$863.24	$1,614.26
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.87 NM	$4,084.65	$7,638.30
	Roadway Component Total			$526,261.10

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	6,944.43 SY	$10.60	$73,610.96
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,086.10 TN	$100.93	$109,620.07
337-7-24	ASPH CONC FC, FC-5, PG 76-22, ARB	28.96 TN	$144.75	$4,191.96

546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.94 PM	$598.57	$562.66
570-1-2	PERFORMANCE TURF, SOD	2,194.13 SY	$1.84	$4,037.20

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	12,835.68 LF	$1.26	$16,172.96
104-11	FLOATING TURBIDITY BARRIER	233.75 LF	$11.26	$2,632.02
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	233.75 LF	$3.54	$827.48
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
104-18	INLET PROTECTION SYSTEM	6.00 EA	$81.08	$486.48
107-1	LITTER REMOVAL	22.66 AC	$25.30	$573.30
107-2	MOWING	22.66 AC	$30.22	$684.79
	Shoulder Component Total			$215,006.09

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	36.00
Performance Turf Width	24.00
Total Median Shoulder Width L/R	8.00 / 0.00
Paved Median Shoulder Width L/R	6.00 / 0.00
Structural Spread Rate	715
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,472.22 SY	$10.60	$36,805.53
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,176.60 TN	$100.93	$118,754.24
570-1-2	PERFORMANCE TURF, SOD	13,164.80 SY	$1.84	$24,223.23
	Median Component Total			$179,783.00

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	16.83 CY	$1,386.70	$23,338.16
425-1-551	INLETS, DT BOT, TYPE E, <10'	6.00 EA	$3,298.09	$19,788.54
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	752.00 LF	$54.30	$40,833.60
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	328.00 LF	$57.84	$18,971.52

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	38.00 EA	$1,310.66	$49,805.08
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,870.00 SY	$30.31	$56,679.70
570-1-2	PERFORMANCE TURF, SOD	658.24 SY	$1.84	$1,211.16
	Drainage Component Total			$210,627.76

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00 AS	$329.84	$659.68
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	23.00 AS	$805.27	$18,521.21
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00 AS	$4,065.94	$8,131.88
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	6.00 AS	$4,600.05	$27,600.30
	Signing Component Total			$54,913.07

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$28,291.95
Sequence 13 Total		$1,489,095.51

Sequence: 14 NDU - New Construction, Divided, Urban — **Net Length:** 0.983 MI / 5,190 LF

Description: Cattlemen Road - 6 lanes plus auxilary lanes connect to ramps and Cattleman Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	113.00 / 113.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.983
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1

Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	26.93	AC	$10,000.00	$269,300.00
120-6	EMBANKMENT	118,295.18	CY	$4.23	$500,388.61
	Earthwork Component Total				$769,688.61

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	36.00 / 36.00
Structural Spread Rate	495
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	47,473.40	SY	$3.30	$156,662.22
285-711	OPTIONAL BASE,BASE GROUP 11	41,521.92	SY	$14.22	$590,441.70
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	10,276.68	TN	$85.56	$879,272.74
337-7-74	ASPH CONC FC,TRAF C,FC-12.5,PG 76-22,ARB	3,425.56	TN	$124.06	$424,974.97

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	21,104.00	SY	$3.30	$69,643.20
	Comment: AUXILARY LANE COMPONENT				
285-710	OPTIONAL BASE,BASE GROUP 10	21,104.00	SY	$13.67	$288,491.68
	Comment: AUXILARY LANE COMPONENT				
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,223.24	TN	$94.07	$491,350.19
	Comment: AUXILARY LANE COMPONENT				
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,741.08	TN	$130.88	$227,872.55
	Comment: AUXILARY LANE COMPONENT				
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	6.00	NM	$863.24	$5,179.44
	Comment: AUXILARY LANE COMPONENT				
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	6.00	GM	$377.13	$2,262.78
	Comment: AUXILARY LANE COMPONENT				

Pavement Marking Subcomponent

Description	Value

Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	664.00	EA	$3.25	$2,158.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.93	NM	$863.24	$3,392.53
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.93	GM	$377.13	$1,482.12
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	3.93	NM	$4,084.65	$16,052.67
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	3.93	GM	$1,064.69	$4,184.23
	Roadway Component Total				$3,163,421.02

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 4.00
Sidewalk Width L/R	6.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	5,190.24	LF	$24.53	$127,316.59
520-1-10	CONCRETE CURB & GUTTER, TYPE F	5,190.24	LF	$24.53	$127,316.59
570-1-2	PERFORMANCE TURF, SOD	4,613.55	SY	$1.84	$8,488.93

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	3,461.33	SY	$23.46	$81,202.80
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	9,003.00	SY	$39.75	$357,869.25

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	10,380.48	LF	$1.26	$13,079.40
104-11	FLOATING TURBIDITY BARRIER	245.75	LF	$11.26	$2,767.14
104-12	STAKED TURBIDITY BARRIER-	245.75	LF	$3.54	$869.96

	NYL REINF PVC			
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
104-18	INLET PROTECTION SYSTEM	51.00 EA	$81.08	$4,135.08
107-1	LITTER REMOVAL	25.02 AC	$25.30	$633.01
107-2	MOWING	25.02 AC	$30.22	$756.10
	Shoulder Component Total			$726,041.06

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	20.00
Performance Turf Width	20.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	1,465.00	LF	$24.55	$35,965.75
570-1-2	PERFORMANCE TURF, SOD	11,533.87	SY	$1.84	$21,222.32

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	14,152.00	LF	$10.63	$150,435.76
	Median Component Total				$207,623.83

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	28.00	CY	$1,386.70	$38,827.60
425-1-351	INLETS, CURB, TYPE P-5, <10'	27.00	EA	$4,179.95	$112,858.65
425-1-451	INLETS, CURB, TYPE J-5, <10'	9.00	EA	$6,699.79	$60,298.11
425-1-521	INLETS, DT BOT, TYPE C, <10'	5.00	EA	$2,251.39	$11,256.95
425-2-41	MANHOLES, P-7, <10'	5.00	EA	$3,417.68	$17,088.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,896.00	LF	$57.84	$109,664.64
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	224.00	LF	$102.68	$23,000.32
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	2,696.00	LF	$162.57	$438,288.72
570-1-2	PERFORMANCE TURF, SOD	768.00	SY	$1.84	$1,413.12

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	32.00	EA	$1,310.66	$41,941.12

	Drainage Component Total	$854,637.63

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	25.00 AS	$329.84	$8,246.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	10.00 AS	$805.27	$8,052.70
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	5.00 AS	$4,600.05	$23,000.25

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	5.00 AS	$4,065.94	$20,329.70
700-3-206	SIGN PANEL, F&I OM, 101-200 SF	2.00 EA	$5,682.43	$11,364.86
700-3-207	SIGN PANEL, F&I OM, 201-300 SF	4.00 EA	$7,386.46	$29,545.84
700-3-210	SIGN PANEL, F&I OM, 501-600 SF	1.00 EA	$15,000.00	$15,000.00
700-4-114	OH STATIC SIGN STR, F&I, C 41-50 FT	2.00 EA	$82,634.72	$165,269.44
700-4-126	OH STATIC SIGN STR, F&I, S 101-150 FT	4.00 EA	$195,000.00	$780,000.00
700-4-127	OH STATIC SIGN STR, F&I, S 151-200 FT	2.00 EA	$179,719.00	$359,438.00
700-4-140	OH STATIC SIGN STR, F&I, O BR MOUNT	4.00 EA	$7,615.81	$30,463.24

	Signing Component Total	$1,450,710.03

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	Bee Ridge Rd / Cattleman intersection - on Bee Ridge Rd, SW corner

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00 LF	$6.83	$4,781.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00 LF	$15.74	$4,722.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00 PI	$5,308.61	$5,308.61
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00 EA	$557.55	$12,266.10
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00 AS	$1,948.82	$1,948.82
639-2-1	ELECTRICAL SERVICE WIRE	60.00 LF	$4.59	$275.40

641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00 EA	$872.43	$872.43
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00 EA	$760.46	$760.46
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00 EA	$39,020.00	$156,080.00
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00 AS	$854.31	$17,086.20
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00 AS	$592.96	$4,743.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00 EA	$188.41	$3,768.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00 AS	$1,036.68	$20,733.60
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00 EA	$180.67	$1,445.36
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$22,358.86	$22,358.86
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00 EA	$199.45	$797.80

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Bee Ridge Rd / Cattleman intersection - on Bee Ridge Rd, NE corner

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$6.83	$5,122.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$15.74	$3,935.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,308.61	$5,308.61
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$557.55	$8,920.80
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,948.82	$1,948.82
639-2-1	ELECTRICAL SERVICE WIRE	60.00	LF	$4.59	$275.40
649-31-103	M/ARM,F&I, WS-150,SING ARM,W/0 LUM-60	4.00	EA	$33,450.00	$133,800.00
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	12.00	AS	$854.31	$10,251.72
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$592.96	$4,743.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$188.41	$2,260.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,036.68	$12,440.16
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$180.67	$1,445.36
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$22,358.86	$22,358.86
700-3-101	SIGN PANEL, F&I GM, UP TO 12	4.00	EA	$199.45	$797.80

SF

Signalization 3

Description	Value
Type	2 Lane Mast Arm
Multiplier	4
Description	Bee Ridge Rd / Cattleman intersection - on Bee Ridge Rd, NW and SE corner

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,200.00	LF	$6.83	$21,856.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	800.00	LF	$15.74	$12,592.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	4.00	PI	$5,308.61	$21,234.44
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	48.00	EA	$557.55	$26,762.40
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	4.00	AS	$1,948.82	$7,795.28
639-2-1	ELECTRICAL SERVICE WIRE	240.00	LF	$4.59	$1,101.60
649-31-111	M/ARM,F&I, WS-150,DBL ARM,W/0 LU 36-46	16.00	EA	$34,061.30	$544,980.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	32.00	AS	$854.31	$27,337.92
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	32.00	AS	$592.96	$18,974.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	32.00	EA	$188.41	$6,029.12
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	32.00	AS	$1,036.68	$33,173.76
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	32.00	EA	$180.67	$5,781.44
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	4.00	AS	$22,358.86	$89,435.44
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	16.00	EA	$199.45	$3,191.20

Signalization 4

Description	Value
Type	4 Lane Mast Arm
Multiplier	8
Description	On Bee Ridge Road

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	6,000.00	LF	$6.83	$40,980.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	2,000.00	LF	$15.74	$31,480.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	8.00	PI	$5,308.61	$42,468.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	128.00	EA	$557.55	$71,366.40

639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	8.00 AS	$1,948.82	$15,590.56
639-2-1	ELECTRICAL SERVICE WIRE	480.00 LF	$4.59	$2,203.20
649-31-103	M/ARM,F&I, WS-150,SING ARM,W/0 LUM-60	32.00 EA	$33,450.00	$1,070,400.00
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	96.00 AS	$854.31	$82,013.76
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	64.00 AS	$592.96	$37,949.44
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	96.00 EA	$188.41	$18,087.36
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	96.00 AS	$1,036.68	$99,521.28
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	64.00 EA	$180.67	$11,562.88
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	8.00 AS	$22,358.86	$178,870.88
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	32.00 EA	$199.45	$6,382.40

Signalization 5

Description	Value
Type	2 Lane Mast Arm
Multiplier	2
Description	On Bee Ridge Road

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,600.00 LF	$6.83	$10,928.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	400.00 LF	$15.74	$6,296.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	2.00 PI	$5,308.61	$10,617.22
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	24.00 EA	$557.55	$13,381.20
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	2.00 AS	$1,948.82	$3,897.64
639-2-1	ELECTRICAL SERVICE WIRE	120.00 LF	$4.59	$550.80
649-31-111	M/ARM,F&I, WS-150,DBL ARM,W/0 LU 36-46	8.00 EA	$34,061.30	$272,490.40
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	16.00 AS	$854.31	$13,668.96
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	16.00 AS	$592.96	$9,487.36
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	16.00 EA	$188.41	$3,014.56
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	16.00 AS	$1,036.68	$16,586.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	16.00 EA	$180.67	$2,890.72
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	2.00 AS	$22,358.86	$44,717.72
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	8.00 EA	$199.45	$1,595.60

Signalization 6

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	At Wilkinson Dr.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$6.83	$5,122.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$15.74	$3,935.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,308.61	$5,308.61
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$557.55	$8,920.80
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,948.82	$1,948.82
639-2-1	ELECTRICAL SERVICE WIRE	60.00	LF	$4.59	$275.40
649-31-103	M/ARM,F&I, WS-150,SING ARM,W/0 LUM-60	4.00	EA	$33,450.00	$133,800.00
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	12.00	AS	$854.31	$10,251.72
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$592.96	$4,743.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$188.41	$2,260.92
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,036.68	$12,440.16
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$180.67	$1,445.36
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$22,358.86	$22,358.86
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$199.45	$797.80

Signalization 7

Description	Value
Type	2 Lane Mast Arm
Multiplier	4
Description	Ramps

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,200.00	LF	$6.83	$21,856.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	800.00	LF	$15.74	$12,592.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	4.00	PI	$5,308.61	$21,234.44
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	48.00	EA	$557.55	$26,762.40
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	4.00	AS	$1,948.82	$7,795.28
639-2-1	ELECTRICAL SERVICE WIRE	240.00	LF	$4.59	$1,101.60
649-31-111	M/ARM,F&I, WS-150,DBL ARM,W/0	16.00	EA	$34,061.30	$544,980.80

	LU 36-46				
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	32.00	AS	$854.31	$27,337.92
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	32.00	AS	$592.96	$18,974.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	32.00	EA	$188.41	$6,029.12
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	32.00	AS	$1,036.68	$33,173.76
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	32.00	EA	$180.67	$5,781.44
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	4.00	AS	$22,358.86	$89,435.44
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	16.00	EA	$199.45	$3,191.20
	Signalizations Component Total				$4,444,660.12

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	5,190.24	LF	$6.83	$35,449.34
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	1,030.18	LF	$15.74	$16,215.03
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	35.00	EA	$557.55	$19,514.25
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	18,956.17	LF	$1.89	$35,827.16
715-4-111	LIGHT POLE COMP, F&I, WS150, 40'	35.00	EA	$3,715.91	$130,056.85
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	35.00	EA	$915.12	$32,029.20
	Subcomponent Total				$269,091.83

High Mast Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	20

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	10,000.00	LF	$6.83	$68,300.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	40.00	EA	$557.55	$22,302.00
715-1-12	LIGHTING CONDUCTORS, F&I, INSUL,NO.8-6	10,000.00	LF	$2.05	$20,500.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	30,000.00	LF	$1.89	$56,700.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	1.00	EA	$8,803.13	$8,803.13
715-19-113	HIGH MAST LIGHT POLE,F&I,WS-150,120'	20.00	EA	$47,977.46	$959,549.20

715-500-2	POLE CABLE DISTRIBUTION SYS, HIGH MAST	20.00 EA	$265.21	$5,304.20
	Subcomponent Total			$1,141,458.53
	Lighting Component Total			$1,410,550.36

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $123,793.09

Sequence 14 Total $13,151,125.75

Sequence: 15 NDU - New Construction, Divided, Urban — **Net Length:** 0.384 MI / 2,028 LF

Description: Bee Ridge Road - 6 lanes plus auxilary lanes connect to ramps and Cattleman Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	89.00 / 89.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.384
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	8.29	AC	$10,000.00	$82,900.00
120-6	EMBANKMENT	42,098.82	CY	$4.23	$178,078.01
	Earthwork Component Total				$260,978.01

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4

Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	495
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	13,138.33	SY	$3.30	$43,356.49
285-711	OPTIONAL BASE,BASE GROUP 11	10,813.44	SY	$14.22	$153,767.12
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,676.33	TN	$85.56	$228,986.79
337-7-72	ASPH CONC FC,TRAF B,FC-12.5,PG 76-22,ARB	892.11	TN	$107.91	$96,267.59

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,637.33	SY	$3.30	$28,503.19
	Comment: AUXILARY LANE COMPONENT				
285-710	OPTIONAL BASE,BASE GROUP 10	8,637.33	SY	$13.67	$118,072.30
	Comment: AUXILARY LANE COMPONENT				
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,137.74	TN	$94.07	$201,097.20
	Comment: AUXILARY LANE COMPONENT				
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	712.58	TN	$130.88	$93,262.47
	Comment: AUXILARY LANE COMPONENT				
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.23	NM	$863.24	$1,061.79
	Comment: AUXILARY LANE COMPONENT				
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.23	GM	$377.13	$463.87
	Comment: AUXILARY LANE COMPONENT				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	156.00	EA	$3.25	$507.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.54	NM	$863.24	$1,329.39
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.77	GM	$377.13	$290.39
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.54	NM	$4,084.65	$6,290.36

711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.77 GM	$1,064.69	$819.81

Roadway Component Total $974,075.76

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 4.00
Sidewalk Width L/R	6.00 / 6.00

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,027.52 LF	$24.53	$49,735.07
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,027.52 LF	$24.53	$49,735.07

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	1,350.67 SY	$23.46	$31,686.72
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	812.00 SY	$39.75	$32,277.00

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,055.04 LF	$1.26	$5,109.35
104-11	FLOATING TURBIDITY BARRIER	96.00 LF	$11.26	$1,080.96
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	96.00 LF	$3.54	$339.84
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$1,606.20	$1,606.20
104-18	INLET PROTECTION SYSTEM	20.00 EA	$81.08	$1,621.60
107-1	LITTER REMOVAL	9.77 AC	$25.30	$247.18
107-2	MOWING	9.77 AC	$30.22	$295.25

Shoulder Component Total $173,734.24

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	20.00
Performance Turf Width	20.00

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	377.00 LF	$24.55	$9,255.35
570-1-1	PERFORMANCE TURF	4,505.60 SY	$0.68	$3,063.81

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	2,147.00 LF	$10.63	$22,822.61

Median Component Total $35,141.77

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	20.00 CY	$1,386.70	$27,734.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	20.00 EA	$4,179.95	$83,599.00
425-1-451	INLETS, CURB, TYPE J-5, <10'	9.00 EA	$6,699.79	$60,298.11
425-1-521	INLETS, DT BOT, TYPE C, <10'	5.00 EA	$2,251.39	$11,256.95
425-2-41	MANHOLES, P-7, <10'	5.00 EA	$3,417.68	$17,088.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,504.00 LF	$57.84	$86,991.36
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	1,504.00 LF	$102.68	$154,430.72
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	1,504.00 LF	$162.57	$244,505.28
570-1-2	PERFORMANCE TURF, SOD	1,100.00 SY	$1.84	$2,024.00

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	50.00 EA	$1,310.66	$65,533.00

Drainage Component Total $753,460.82

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	25.00 AS	$329.84	$8,246.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	10.00 AS	$805.27	$8,052.70
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	5.00 AS	$4,600.05	$23,000.25
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	5.00 AS	$7,370.76	$36,853.80

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount

700-3-207	SIGN PANEL, F&I OM, 201-300 SF	2.00 EA	$7,386.46	$14,772.92
700-4-126	OH STATIC SIGN STR, F&I, S 101-150 FT	5.00 EA	$195,000.00	$975,000.00
	Signing Component Total			$1,065,925.67

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	2 Lane Mast Arm
Multiplier	3
Description	On Bee Ridge Road

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	2,400.00	LF	$6.83	$16,392.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	600.00	LF	$15.74	$9,444.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	3.00	PI	$5,308.61	$15,925.83
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	36.00	EA	$557.55	$20,071.80
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	3.00	AS	$1,948.82	$5,846.46
639-2-1	ELECTRICAL SERVICE WIRE	180.00	LF	$4.59	$826.20
649-31-111	M/ARM,F&I, WS-150,DBL ARM,W/0 LU 36-46	12.00	EA	$34,061.30	$408,735.60
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	24.00	AS	$854.31	$20,503.44
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	24.00	AS	$592.96	$14,231.04
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	24.00	EA	$188.41	$4,521.84
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	24.00	AS	$1,036.68	$24,880.32
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	24.00	EA	$180.67	$4,336.08
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	3.00	AS	$22,358.86	$67,076.58
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	12.00	EA	$199.45	$2,393.40
	Signalizations Component Total				$615,184.59

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	2,027.52	LF	$6.83	$13,847.96

630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	402.43	LF	$15.74	$6,334.25
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	14.00	EA	$557.55	$7,805.70
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	7,405.06	LF	$1.89	$13,995.56
715-4-111	LIGHT POLE COMP, F&I, WS150, 40'	14.00	EA	$3,715.91	$52,022.74
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	14.00	EA	$915.12	$12,811.68
	Subcomponent Total				$106,817.89
	Lighting Component Total				$106,817.89

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

Landscaping Component Total	$48,410.31
Sequence 15 Total	$4,033,729.06

Date: 1/16/2015 12:30:49 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 201277-5-52-01 **Letting Date:** 01/2023

Description: I-75 (SR93) AT BEE RIDGE ROAD

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.750 MI

Project Manager: CES-NEM-KSI

Version 5 Project Grand Total **$74,319,825.10**

Description: January 2015 Unit Cost Update from Version 4P - 1/16/15

Project Sequences Subtotal **$53,302,066.19**

102-1	Maintenance of Traffic	15.00 %	$7,995,309.93
101-1	Mobilization	10.00 %	$6,129,737.61

Project Sequences Total **$67,427,113.73**

Project Unknowns		10.00 %	$6,742,711.37
Justification for high %:	High %'s due to complex bridge construction and use of temporary bridge.		
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00

Project Non-Bid Subtotal **$150,000.00**

Version 5 Project Grand Total **$74,319,825.10**

Appendix K
Conceptual Signing and Pavement Marking Plans

1900+00.00

CLARK ROAD

I-75 (SR 93)

CLARK ROAD

EXIT 205
CLARK RD
72
Siesta Key
Arcadia

NORTH
75
Tampa
758
BEE RIDGE RD
EXIT
ONLY
Sarasota
1 ¼ MILE
EXIT 207

N

100+89.00

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

elanier 9/24/2015 7:47:08 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH1.dgn

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

elanier 9/24/2015 7:47:25 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH2.dgn

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

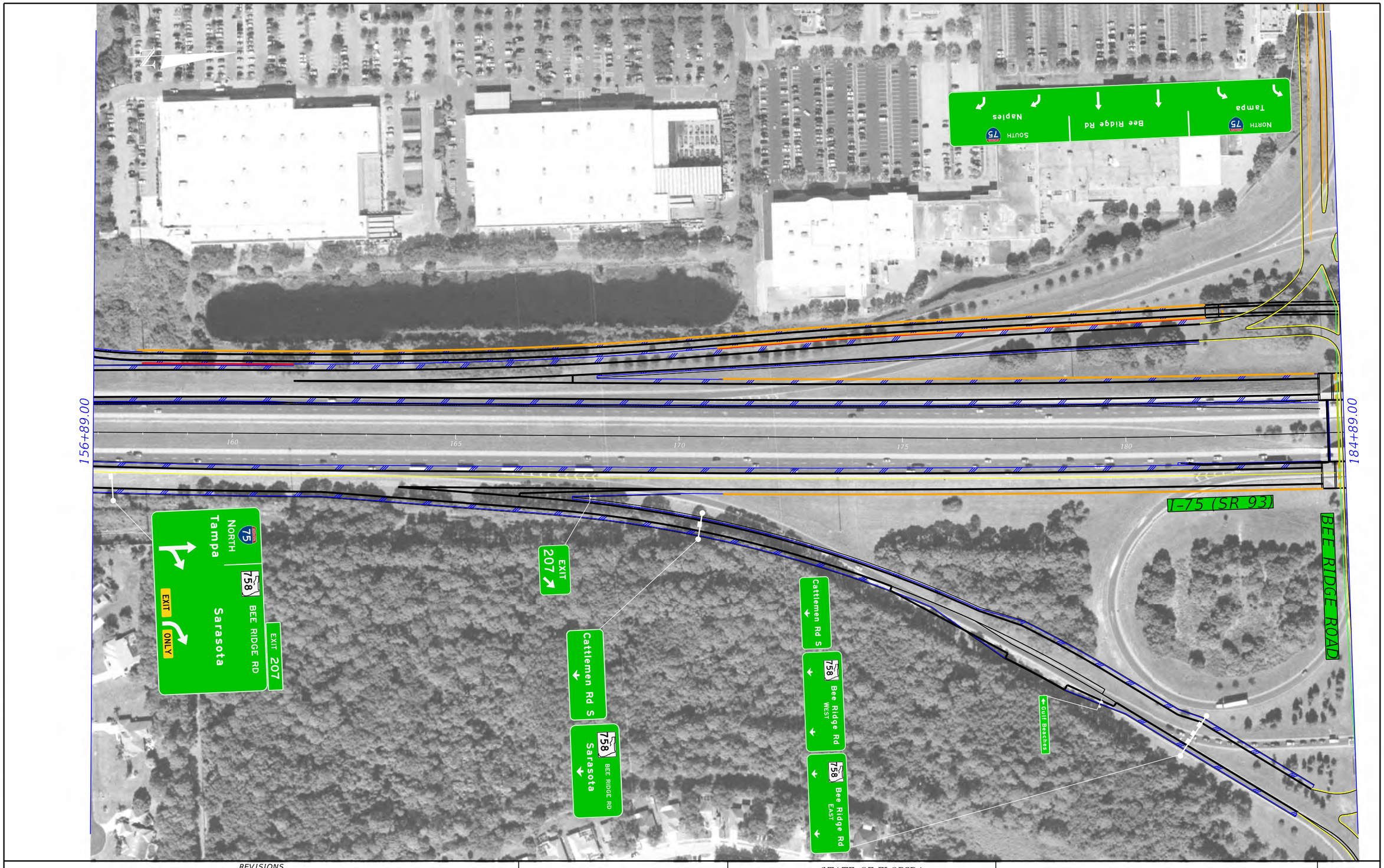
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

elanier 9/24/2015 7:47:41 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH3.dgn

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

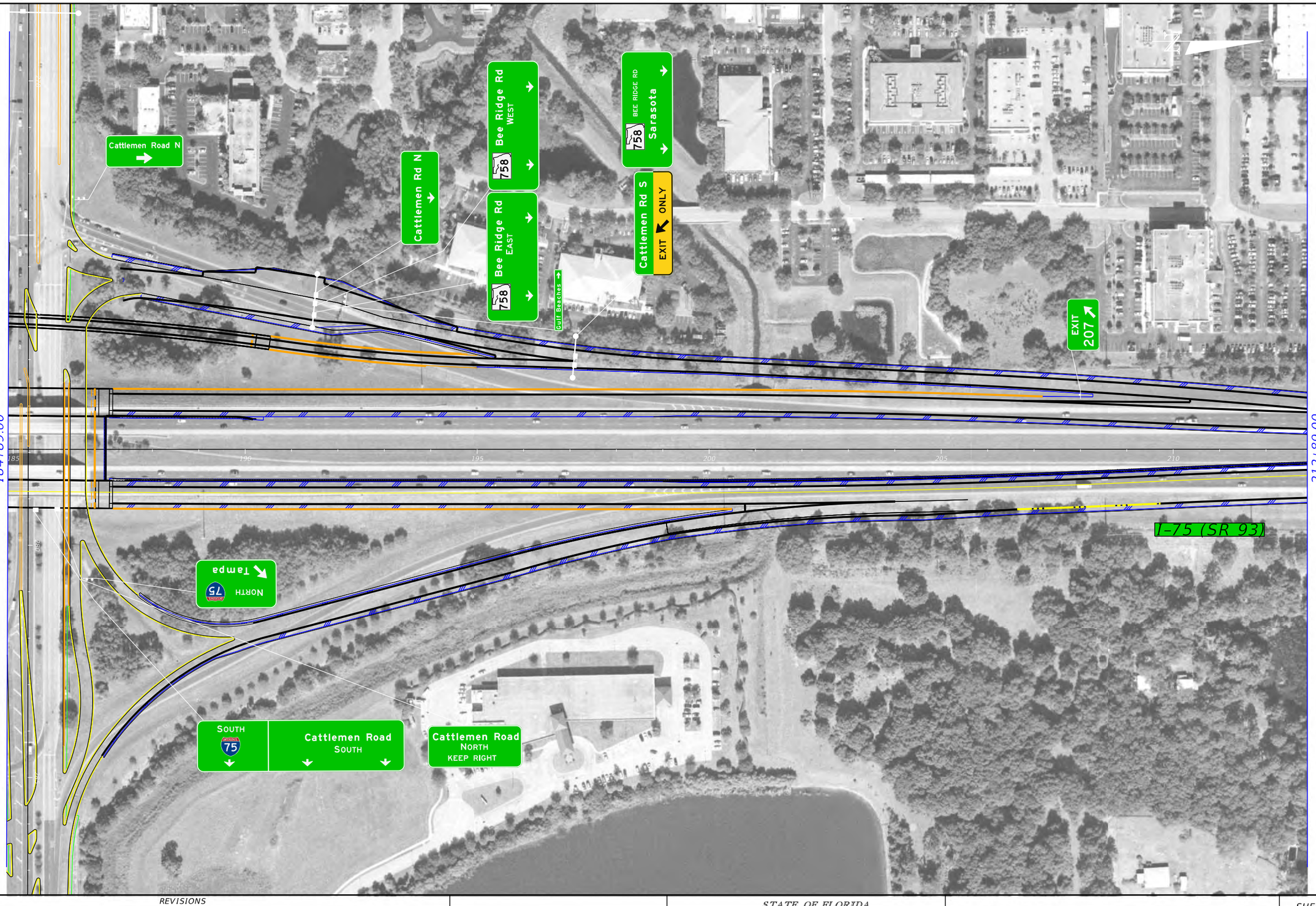
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

elanier 9/24/2015 7:47:58 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH4.dgn



NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

elanier 9/24/2015 7:48:16 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH5.dgn

REVISIONS					STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MASTER SIGNING PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					93	SARASOTA	201277-5-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

elanier 9/24/2015 7:48:34 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH6.dgn

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

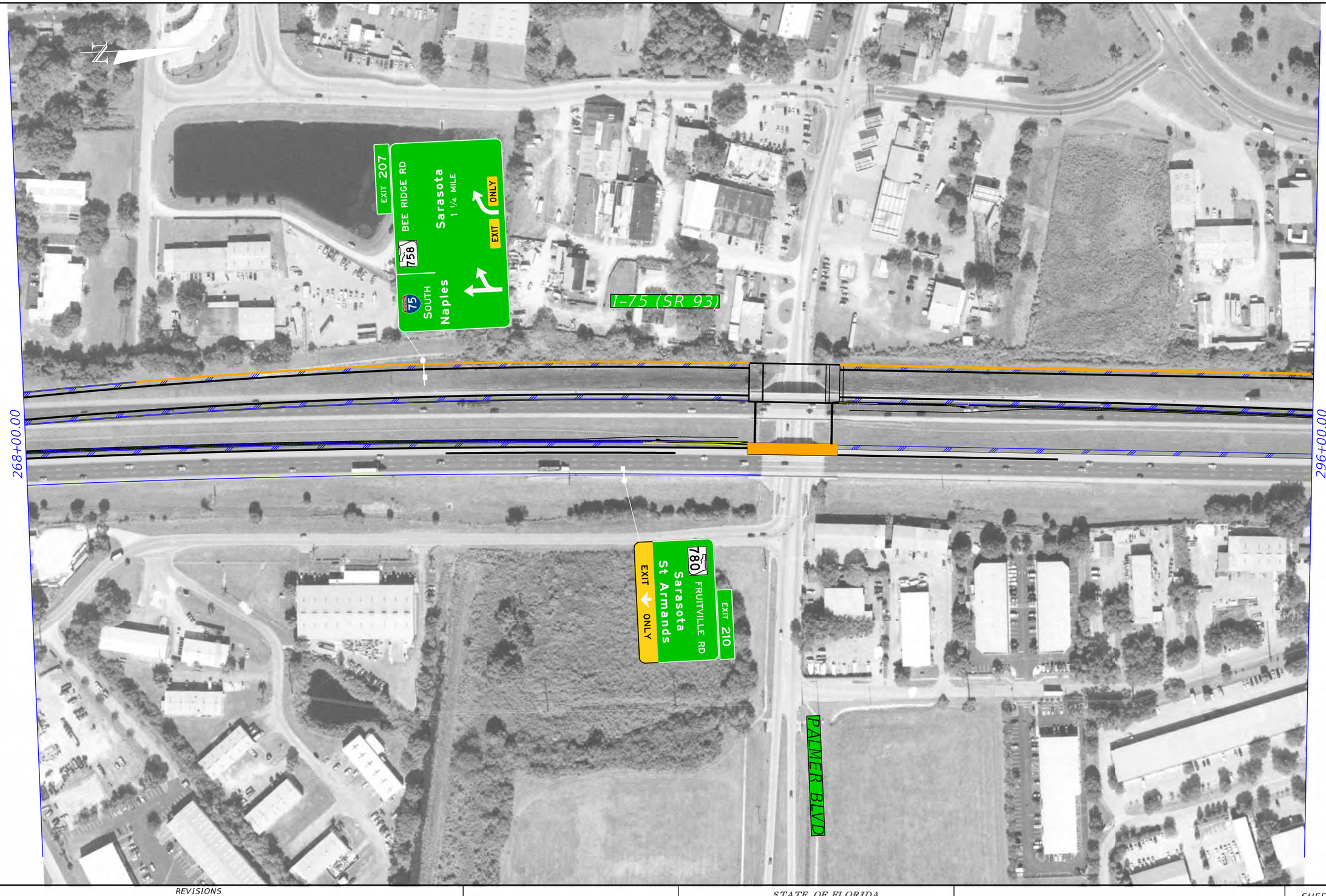
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

elanier 9/24/2015 7:48:51 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH7.dgn



NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

elanier 9/24/2015 7:49:07 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH8.dgn

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

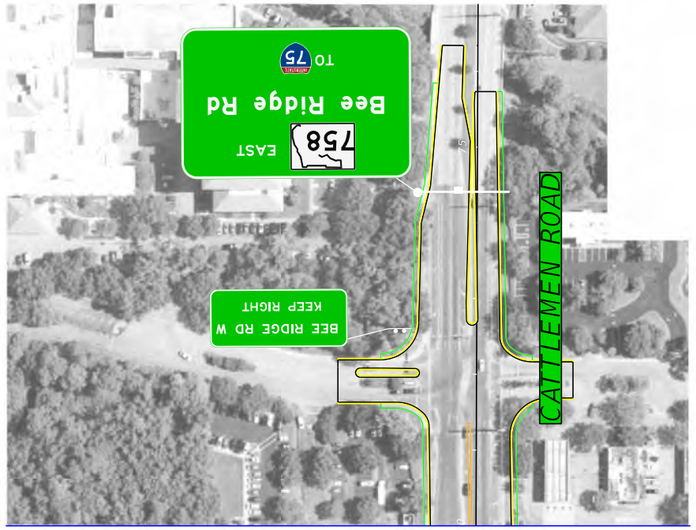
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

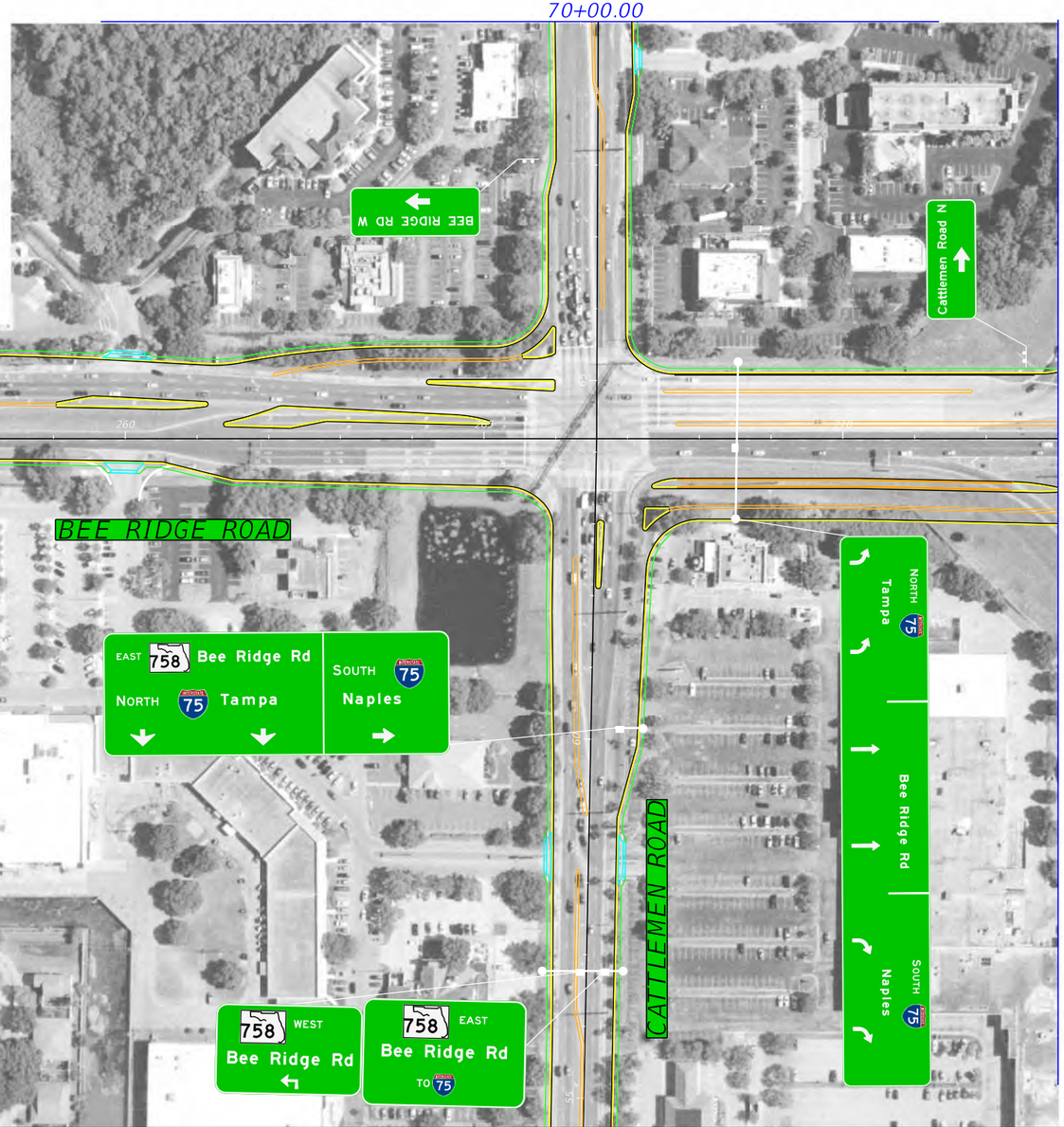
SHEET NO.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

elanier 9/24/2015 7:49:24 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH9.dgn



70+00.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

elanier 9/24/2015 7:49:40 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH10.dg

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	SARASOTA	201277-5-52-01

MASTER SIGNING PLAN

SHEET NO.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

elanier 9/24/2015 7:49:59 AM PW:\007275\000000000212267\13.00_CAD\20127755201\zzworking\signing\PLANHHH11.dg