Town Council Meeting

February 26, 2024 at 6:00 PM
Howey-in the-Hills Town Hall
101 N. Palm Ave.,
Howey-in-the-Hills, FL 34737

Join Zoom Meeting: https://us06web.zoom.us/j/86412249492?pwd=ICsLIOvrfvd2TRIp70X7ggTH7Ggc5u.1
Meeting ID: 864 1224 9492 | **Passcode:** 660238

AGENDA

Call the Town Council Meeting to order
Pledge of Allegiance to the Flag
Invocation by Councilor Reneé Lannamañ

ROLL CALL
Acknowledgement of Quorum

AGENDA APPROVAL/REVIEW

CONSENT AGENDA
Routine items are placed on the Consent Agenda to expedite the meeting. If Town Council/Staff wish to discuss any item, the procedure is as follows: (1) Pull the item(s) from the Consent Agenda; (2) Vote on the remaining item(s); and (3) Discuss each pulled item and vote.

1. The approval of the minutes and ratification and confirmation of all Town Council actions at the January 22, 2024 Town Council Meeting.

2. The approval of the minutes and ratification and confirmation of all Town Council actions at the January 22, 2024 Town Council Workshop Meeting.

PUBLIC HEARING

3. Consideration and Approval: (transmittal hearing) **Ordinance 2023-013 - Comprehensive Plan Amendment - Future Land Use Element**

   AN ORDINANCE OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA, PERTAINING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE ELEMENT (FLUE) OF THE TOWN'S ADOPTED COMPREHENSIVE PLAN PURSUANT TO SECTION 163.3184 OF FLORIDA STATUTES; DESCRIBING THE ANALYSIS AND REEVALUATION UNDERTAKEN BY TOWN COUNCIL REGARDING RESIDENTIAL DENSITIES AND LOT SIZES IN POST-2010 RESIDENTIAL DEVELOPMENT IN THE TOWN; AMENDING CERTAIN FLUE POLICIES TO MODIFY THE REQUIREMENTS IN THE "VILLAGE TOWN CENTER" AND "MEDIUM DENSITY RESIDENTIAL" LAND-USE DESIGNATIONS REGARDING DWELLING UNITS PER ACRE, LOT SIZES, AND OPEN SPACE; AMENDING

OTHER RELATED REQUIREMENTS FOR THE TWO LAND-USE DESIGNATIONS; AMENDING POLICY 1.2.6 OF THE FUTURE LAND USE ELEMENT TO SPECIFY AREAS WHERE THE TOWN MAY ALLOW LOTS SMALLER THAN ONE-FOURTH ACRE (10,890 SQ. FT.); PROVIDING FOR CODIFICATION, SEVERABILITY, AND AN EFFECTIVE DATE.

- Mayor MacFarlane will read the Ordinance title.
- Town Planner will explain Ordinance 2023-013.
- Mayor MacFarlane will open Public Comment and Questions for this item only.
- Mayor MacFarlane will close Public Comment.
- Motion to approve Ordinance 2023-013.
- Council Discussion.
- Roll Call Vote.

4. Discussion: (second reading) **Ordinance 2024-001 Mission Rise PUD Rezoning**

AN ORDINANCE OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA, PERTAINING TO LAND USE; REZONING FOUR PARCELS OF LAND LOCATED GENERALLY IN THE SOUTHWEST PART OF THE TOWN AND COMPRISING THE PROPOSED PLANNED UNIT DEVELOPMENT TO BE KNOWN AS "MISSION RISE" ON AN L-SHAPED AGGREGATE OF ABOUT 243.3 ACRES WEST AND SOUTH OF THE DEVELOPMENT KNOWN AS "THE RESERVE AT HOWEY-IN-THE-HILLS" (NOW ALSO KNOWN AS "HILLSIDE GROVES"), WITH PART OF THE LANDS BEING SOUTH OF NUMBER TWO ROAD AND EAST OF SILVERWOOD LANE AND OTHER PARTS OF THE LAND BEING WEST OF STATE ROAD 19 AND SOUTH OF REVELS ROAD, THE FOUR PARCELS BEING IDENTIFIED WITH LAKE COUNTY PROPERTY APPRAISER ALTERNATE KEY NUMBERS 1780616, 1780811, 1030421, AND 3835991; AMENDING THE TOWN'S ZONING MAP TO APPROVE PLANNED-UNIT-DEVELOPMENT (PUD) ZONING FOR THE PARCELS; PROVIDING FINDINGS OF THE TOWN COUNCIL; APPROVING PUD ZONING FOR THE PARCELS, WITH DEVELOPMENT TO BE GOVERNED BY A DEVELOPMENT AGREEMENT AND A REVISED CONCEPTUAL LAND USE PLAN AND BY THE TOWN'S LAND DEVELOPMENT CODE AND OTHER TOWN ORDINANCES GOVERNING THE DEVELOPMENT OF LAND; REPEALING PRIOR ORDINANCES AND SUPERSEDING CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY, CODIFICATION AND AN EFFECTIVE DATE.

- Mayor MacFarlane will read the Ordinance title
- Town Planner will explain Ordinance 2024-001
- Mayor MacFarlane will open Public Comment for this item only.
- Mayor MacFarlane will close Public Comment.
- Council Discussion

OLD BUSINESS

5. Consideration and Approval: **Hillside Groves Intersection Roundabout Requirement**

NEW BUSINESS

6. Consideration and Approval: **Removal of Board Member Ellen Yarckin from the Planning and Zoning Board**

7. Consideration and Approval: **Sara Maude Mason Boardwalk Revitalization Contract**

DEPARTMENT REPORTS

8. Town Manager

COUNCIL MEMBER REPORTS

9. Mayor Pro Tem Gallelli

10. Councilor Lehning

11. Councilor Miles

12. Councilor Lannamañ

13. Mayor MacFarlane

PUBLIC COMMENTS

Any person wishing to address the Mayor and Town Council and who is not on the agenda is asked to speak their name and address. Three (3) minutes is allocated per speaker.

ADJOURNMENT

To Comply with Title II of the Americans with Disabilities Act (ADA):

Qualified individuals may get assistance through the Florida Relay Service by dialing 7-1-1. Florida Relay is a service provided to residents in the State of Florida who are Deaf, Hard of Hearing, Deaf/Blind, or Speech Disabled that connects them to standard (voice) telephone users. They utilize a wide array of technologies, such as Text Telephone (TTYs) and ASCII, Voice Carry-Over (VCO), Speech to Speech (STS), Relay Conference Captioning (RCC), CapTel, Voice, Hearing Carry-Over (HCO), Video Assisted Speech to Speech (VA-STS) and Enhanced Speech to Speech.

Howey Town Hall is inviting you to a scheduled Zoom meeting.
Topic: **Town Council Meeting**
Time: **Feb 26, 2024 06:00 PM Eastern Time** (US and Canada)
Join Zoom Meeting
https://us06web.zoom.us/j/86412249492?pwd=ICsLIOvrfvd2TRIp70X7ggTH7Ggc5u.1
Meeting ID: 864 1224 9492
Passcode: 660238
Dial by your location
+1 646 558 8656 US (New York)
+1 346 248 7799 US (Houston)
Meeting ID: 864 1224 9492
Passcode: 660238
Find your local number: https://us06web.zoom.us/u/kdehVhBl3F

Please Note: In accordance with F.S. 286.0105: Any person who desires to appeal any decision or recommendation at this meeting will need a record of the proceedings, and that for such purposes may need to ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is based. The Town of Howey-in-the-Hills does not prepare or provide this verbatim record. Note: In accordance with the F.S. 286.26: Persons with disabilities needing assistance to participate in any of these proceedings should contact Town Hall, 101 N. Palm Avenue, Howey-in-the-Hills, FL 34737, (352) 324-2290 at least 48 business hours in advance of the meeting.

Town Council Meeting

January 22, 2024 at 6:00 PM

Howey-in the-Hills Town Hall
101 N. Palm Ave.,
Howey-in-the-Hills, FL 34737

MINUTES

Mayor MacFarlane called the Town Council Meeting to order at 6:00 p.m.
Mayor MacFarlane led the attendees in the Pledge of Allegiance to the Flag.
Mayor MacFarlane asked for a moment of silence.

ROLL CALL

Acknowledgement of Quorum

MEMBERS PRESENT:
Councilor Reneé Lannamañ (via Zoom) | Councilor David Miles (via Zoom) | Councilor George Lehning | Mayor Pro Tem Marie V. Gallelli | Mayor Martha MacFarlane

STAFF PRESENT:
Sean O'Keefe, Town Manager | Tom Harowski, Town Planner | Tom Wilkes, Town Attorney | Tara Hall, Library Director | John Brock, Town Clerk

Motion made by Mayor Pro Tem Gallelli to allow Councilor Miles and Councilor Lannamañ to participate and vote in the meeting remotely via Zoom; seconded by Councilor Lehning. Motion passed unanimously by voice-vote.

Voting
Yea: Councilor Lehning, Mayor Pro Tem Gallelli, Mayor MacFarlane
Nay: None

AGENDA APPROVAL/REVIEW

Motion made by Councilor Lehning to approve the meeting's agenda; seconded by Mayor Pro Tem Gallelli. Motion passed unanimously by voice-cote.

Voting
Yea: Councilor Lannamañ, Councilor Miles, Councilor Lehning, Mayor Pro Tem Gallelli, Mayor MacFarlane
Nay: None

CONSENT AGENDA

Routine items are placed on the Consent Agenda to expedite the meeting. If Town Council/Staff wish to discuss

any item, the procedure is as follows: (1) Pull the item(s) from the Consent Agenda; (2) Vote on the remaining item(s); and (3) Discuss each pulled item and vote.

1. The approval of the minutes and ratification and confirmation of all Town Council actions at the January 08, 2024, Town Council Meeting.

2. Consideration and Approval: **Water Treatment Plant Design Proposal - Halff Contract**

Motion made by Councilor Lehning to approve the Consent Agenda; seconded by Mayor Pro Tem Gallelli. Motion approved unanimously by voice-vote.

Voting
Yea: Councilor Lannamañ, Councilor Miles, Councilor Lehning, Mayor Pro Tem Gallelli, Mayor MacFarlane
Nay: None

PUBLIC HEARING

3. Discussion: (first reading) **Ordinance 2024-001 Mission Rise PUD Rezoning**

   Mayor MacFarlane read Ordinance 2024-001 out loud by title only:

   AN ORDINANCE OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA, PERTAINING TO LAND USE; REZONING FOUR PARCELS OF LAND LOCATED GENERALLY IN THE SOUTHWEST PART OF THE TOWN AND COMPRISING THE PROPOSED PLANNED UNIT DEVELOPMENT TO BE KNOWN AS "MISSION RISE" ON AN L-SHAPED AGGREGATE OF ABOUT 243.3 ACRES WEST AND SOUTH OF THE DEVELOPMENT KNOWN AS "THE RESERVE AT HOWEY-IN-THE-HILLS" (NOW ALSO KNOWN AS "HILLSIDE GROVES"), WITH PART OF THE LANDS BEING SOUTH OF NUMBER TWO ROAD AND EAST OF SILVERWOOD LANE AND OTHER PARTS OF THE LAND BEING WEST OF STATE ROAD 19 AND SOUTH OF REVELS ROAD, THE FOUR PARCELS BEING IDENTIFIED WITH LAKE COUNTY PROPERTY APPRAISER ALTERNATE KEY NUMBERS 1780616, 1780811, 1030421, AND 3835991; AMENDING THE TOWN'S ZONING MAP TO APPROVE PLANNED-UNIT-DEVELOPMENT (PUD) ZONING FOR THE PARCELS; PROVIDING FINDINGS OF THE TOWN COUNCIL; APPROVING PUD ZONING FOR THE PARCELS, WITH DEVELOPMENT TO BE GOVERNED BY A DEVELOPMENT AGREEMENT AND A REVISED CONCEPTUAL LAND USE PLAN AND BY THE TOWN'S LAND DEVELOPMENT CODE AND OTHER TOWN ORDINANCES GOVERNING THE DEVELOPMENT OF LAND; REPEALING PRIOR ORDINANCES AND SUPERSEDING CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY, CODIFICATION AND AN EFFECTIVE DATE.

   Mayor MacFarlane asked Town Planner, Tom Harowski, to introduce and explain this item. Mr. Harowski reviewed his staff report that was included in the meeting's packet.

   Mr. Harowski reviewed the Planning and Zoning Board's recommendations for this proposed Development. The Planning and Zoning Board's recommendation included approval of Ordinance 2024-001 and the Village Mixed Use PUD for Mission Rise only if the proposed Development Agreement was modified to include:

   1) 80% of the residential lots can be no smaller than 1/4 acre in size (10,890 sq feet) – the remainder of the lots can be 75' lots as proposed by the applicant.

   2) Access to Number Two Rd can be constructed but cannot be open to access until Phases 1 and 2 have been completed and access to Number Two Rd shall be constructed and ready to open before a certificate of occupancy is issued for 50% of the lots in Phase 3.

3) The open space area between Phase 2 and Phase 3 shall be redesigned to eliminate the drainage ponds (as recommended in the Town Planner's staff report).

Mayor MacFarlane asked the representatives for the applicant to introduce themselves and give their presentation to the Town Council. Jonathan Huel, applicant's Land Use Attorney, introduced the applicant's project team, which included: Rhea Lopes (Project Planner), Jason Humm (owner representative), Mike Ripley (from Land Advisors), Jacque St. Juste (from Atwell), Charlotte Davidson (Traffic Mobility Consultants), and Mark Ausley (Bio-Tech Consulting).

Ms. Lopes gave a PowerPoint presentation to Councilors in support of the proposed Mission Rise development. Ms. Lopes stated that the submitted development agreement and concept plans for Mission Rise were the Town's current Comprehensive Plan. Ms. Lopes stated that certain conditions that the Planning and Zoning Board had made on their recommendation were not feasible, that the stormwater area was required as it was and that requested larger lots would not be feasible due to the additional cost.

Mayor MacFarlane opened Public Comment for this item only.

Eric Gunesch, 448 Avila Pl. – Mr. Gunesch stated that the developer obviously did not listen to the Planning and Zoning Board, and he wanted fifteen-foot side setbacks between homes.

Tim Everline, 1012 N Lakeshore Blvd. – Mr. Everline stated that he was frustrated with developers that said that developments would "fit in" within the Town's current homes. He did not agree and wanted the owners of the Mission Rise land to drive around the town and see what the town was really like. Mr. Everline stated that he did not believe the Mission Rise traffic study included Venezia Townhomes trips in its study.

Frances O'Keefe Wagler, 409 W. Central Ave. – Mrs. Wagler identified herself as a Planning and Zoning Board member and reminded everyone that the Mission Rise development was recommended only with certain conditions, which the developer was not implementing.

Ken Dunsmoor, 9950 Orange Blossom Rd (unincorporated Lake County) – Mr. Dunsmoor wanted to know how the developer would discourage people from driving down Orange Blossom Rd.

Mayor MacFarlane closed Public Comment for this item.

Mayor Pro Tem Gallelli asked why there were changes in proposed lots from what the developer had shown her during the previous week. Mr. Huel apologized for the confusion but explained that this was what had been proposed to the Planning and Zoning Board and what had previously been shown to her was showing a willingness for the plan to evolve and a willingness to negotiate with the Town. Mr. Huel stated that the applicants' message to the Town was that they are willing to work with the Town and wanted to find conditions that could be met that would work for the Town and the developer.

Mayor Pro Tem Gallelli stated that, in the current proposal from the developer, 83% of the lots were small 55' width lots and that was much too large of a percentage for small width lots. Mayor Pro Tem Gallelli stated that the developer needed to get rid of the 55' width lots.

Councilor Lannamañ stated that she thought 55' width lots were too small for the Town.

Councilor Miles stated that he had been muted during the last 10 minutes of the previous workshop. Councilor Miles stated that the Councilors had received a 300-page packet for the Town Council meeting, the Friday evening before the meeting and he did not think that was enough time to review the items in the packet.

Councilor Miles asked Mr. Harowski about the Hillside Groves Road upgrade area of Number Two Rd. and those road upgrades, along with the upgrades that Mission Rise would have to do, and if those upgrades would make the portion of Number Two Rd, which was within the Town's borders, up to standard. Mr. Harowski explained what would be required of the developer and that it was his expectation that the area that the developers would be required to upgrade would be within standards. Mr. Harowski stated that Hillside Groves and Mission Rise were only upgrading the portion of Number Two Road adjacent to their property, if there were other areas of Number Two Road (such as in front of the Town's 9 acres of land), they would need other funding sources to be upgraded.

Councilor Miles stated that he could not hear or understand Ms. Rhea Lopes' presentation, nor could he see it since he was on the phone and not attending in-person.

Councilor Miles corrected Ms. Lopes' presentation in which Ms. Lopes stated that Hillside Groves was approved for 740 units, when she should have stated that they were approved for 728 units and that the initial approval for this was made in 2005, not recently.

Councilor Miles stated he was concerned about the size of the two proposed parks in Mission Rise. Mr. Huel stated that two parks would be approximately 16.9 acres and that future plans could be specific for the two sizes. Councilor Miles stated that he would need to know the specific proposed size for each park.

Councilor Miles stated that developers were using the old, approved density of 4 units per acre, but the Town was in the process of lowering the amount that would be approved to 3 units per acre. Councilor Miles stated that they would need to lower their density to a max of 3 units per acre.

Councilor Miles stated that the development only had 129.3 acres of residential area, but in the developer's density calculation they included 153 acres (this included non-residential areas). Councilor Miles stated that he disagreed with the method of calculating and that 129.3 acres should be used to calculate the density.

Councilor Miles stated that the original approval (which was no longer in effect) for Mission Rise was for only 400 units. Currently the developer was asking for 499 units, and Councilor Miles stated that he would only allow the original number of units.

Councilor Miles stated that his vote for this Ordinance and proposed development, as it stands, would be for denial. Councilor Miles asked the Town Attorney if he could make a motion for denial during the current meeting, or to table the first reading to a time when he could attend in person.

Town Attorney, Tom Wilkes, stated that State law allowed for the developer to have two readings for their proposed development, so there was no cutting it off during this meeting.

Councilor Miles asked Mr. O'Keefe to read out loud text comments into the meeting's record. Mr. O'Keefe read out:

> *"Sean,*
>
> *I have provided John and you my four comments on the minutes from Jan 8 and also two messages with three comments on the ordinance on the comp plan for the workshop. I will attend by Zoom.*
>
> *I am going through the very length info for the Monday night meeting. Just got this long agenda yesterday. I am limited in reading it as only have iPhone here.*

I am going to ask to table the Mission Rise item until first meeting in Feb. to give us more adequate time to review and adequately comment on their proposal. I will say the idea of having 80% of their lots being 55x120 is a non-starter with me. Even the remaining 20% at 75x120 are too small. I am not happy with set backs either. Minimum front needs to be 25 feet, minimum rear needs to be 30 feet, minimum side needs to be 12.5 feet. Minimum side street needs to be 15 feet. Maximum house size under air sb 3,500 sq ft and minimum s/b 1,600 sq ft. Minimum garage size is 21x21= 441 sq ft, 2 car. Require all garages to be side entrance. I would support 90x120 lots (10,800 sq ft) and 80 x 135 lots (also 10,800 sq ft). Maximum number of lots for 129.3 acres of residences is 388, the max Number of single-family houses I would support. If they move 4 acres from the nonresidential category to residential category, I would support that, which would allow a max of 400 lots. That by the way, I believe, was the max that was approved in their expired PUD previously in place. 400 lots is my maximum and all lots must be 10,800 sq ft or larger. That gives them 90 square feet per lot or 36,000 square feet of benefit for a 400-lot development. Their 499 units is a non-starter for me.

Also I don't want any 22' width alleys. All streets should be 24' widths on 50' width ROW's.

I have more, but that is enough for now.

Sean,

Also all streets, all water and all wastewater lines, pumps and lift stations to be dedicated to Town. All storm water drainage facilities can be dedicated to HOA. Electric facilities dedicated to Duke. Natural Gas to Teco. Would like community to offer natural gas to all lots.

Sean,

One more issue with the Mission Rise proposal. They state they are reducing their density request from 592 lot units to 499 lot units, as if this is a decrease. In fact their previous PUD approval that expired in 2017 was for only 400 lot units! Thus this new proposal actually is asking to increase density over their previous proposal by 99 lot units to 499, that's almost a 25% increase in density for this property. I will not vote for any proposal on this property unless it is 400 lot units or less."

Councilor Miles stated that a developer should not look at Hillside Groves as a precedent that the Town will allow in other new developments.

Mayor MacFarlane stated that she would like to see natural gas added to the community. Mayor MacFarlane noted that all the parks were listed as passive parks (such as trails and trailheads); she would like to see more active parks (such as Pickle Ball courts) in the development.

Mayor MacFarlane said that, while she loved seeing alleys in communities (with garages not facing the main road), they needed to be careful that they did not make them too small, due to emergency needs and bottlenecks. Mayor MacFarlane was concerned about a lack of off-street parking.

Mayor MacFarlane stated that 55' lots would be a non-starter for the community.

Councilor Miles made a motion to table the 1st reading of this item to the first meeting in February, so that there would be an additional 1st reading on this item. There was no second for this motion. This concluded the first reading of this item.

OLD BUSINESS

4. Discussion: **Wastewater Options**

Sean O'Keefe, Town Manager, stated that Woodard and Currann had notified the Town about a grant opportunity that would allow the Town to get funding for a Wastewater Study. Mr. O'Keefe stated that, with the assistance of Woodard and Curran, the Town had submitted a grant for the Clean Water Facility Planning study. Mr. O'Keefe stated that Justin deMello, Project Manager for Woodard and Curran, was at the meeting to answer questions. Mr. O'Keefe then reviewed the PowerPoint presentation that had previously been presented to the Town Council during the December 12, 2023, Town Council Workshop.

Mr. O'Keefe explained that a gap in the previous presentation had been the estimated Operating Cost of a Town-owned wastewater treatment facility. Mr. O'Keefe stated that, based off of the cost of other municipalities' costs, the estimated operating cost would be roughly $2.33 million (this was created by prorating the cost of a wastewater treatment plant in the city of Tavares).

Councilor Lehning did not agree with the estimated cost that the Town Manager had come up with and believed there were better ways to come up with an estimated cost.

Councilor Miles stated that there were three things that would go into the operating cost of a treatment facility. They were electricity, chemicals, and labor costs. Councilor Miles believes that the staffing for a Town-run plant would be one person for 8 hours a day for only 5 days a week. Councilor Miles stated that, given additional time, he can come up with a better estimated operating cost.

Mr. O'Keefe stated that, based off of the Mayor's feedback in the last meeting, he had removed the proposed Wastewater Improvement fee from the Talichet and Venezia neighborhoods.

Mayor MacFarlane stated that, if the Town goes through with the proposed changes to the Land Development Code and the Comprehensive Plan, it will create a situation with even less proposed new homes utilizing a Town-owned wastewater treatment facility. This would increase the cost per person to operate the treatment plant.

Mr. O'Keefe stated that the next step for the Town would be to contract out for a study that would create a Clean Water Facility Planning document. Mr. O'Keefe stated that the Town should get the results from the Florida Department of Environmental Protection (FDEP) on whether the Town was selected to get a grant to pay for the necessary study.

Justin deMello from Woodard and Curran was asked how long it would take to conduct the Clean Water Facility Planning document. Mr. deMello stated that it would take at least 6 to 9 months to conduct the study. Mr. deMello stated that, if the State were going to assist with the funding of the proposed Wastewater Treatment Plant, they would require that the Town submit the Clean Water Treatment Planning document with the request for assistance.

Councilor Miles asked Mr. deMello to describe what services Woodard and Curran provides for the City of Tavares and the City of Groveland and how much Woodward and Curran charges each municipality. Mr. deMello stated that Woodard and Curran has a general engineering contract for the City of Tavares and is paid roughly $200,000 to $300,000 annually. Mr. deMello stated that Woodard and Curran

operates the wastewater plants for the City of Groveland and that the contract would be worth roughly $3 to $5 million a year.

Councilor Miles noted that the rate that the City of Groveland is currently charging the City of Mascotte for wastewater treatment services was $18.18 per 1,000 gallons. Councilor Miles also noted that the Central Lake CDD was currently charging the Town of Howey-in-the-Hills $24.00 per 1,000 gallons for the treatment of wastewater and that rate had been in place since 2006.

Mr. O'Keefe stated that he recommended that the Town Council hold off till March (when it will find out from FDEP if its grant submission was approved) before making any further decisions on the Wastewater options. Mayor MacFarlane agreed with Mr. O'Keefe.

Councilor Miles asked Mr. deMello if it would really take 6 to 9 months to complete the study. Mr. deMello stated that it would, and sometimes it takes up to 12 months.

Mayor MacFarlane suggested that, while the Town was waiting to see if it was selected to receive the grant from FDEP, that the Town Manager should research getting an SRF loan to pay for the study if the Town is not selected for the grant.

Mayor MacFarlane opened Public Comment for this item only.

Tim Everline, 1012 N. Lakeshore Blvd. – Mr. Everline stated that he had seen this analysis a few times already and would like the Central Lake CDD to be invited to come make a wastewater presentation before the Town Council.

Mayor MacFarlane closed Public Comment for this item.

NEW BUSINESS

5. Discussion: **Potential Library Expansion**

Tara Hall, Library Director, explained that the last expansion of the Town's library was four years ago and it added the Library Education Center (LEC) space that was used for library programming. Mrs. Hall stated that the next expansion of the Town Library should be for study rooms, quiet rooms, and additional stack space for children's literature and fiction. The first step of this expansion would be planning and drawing out designs for the space. The last time that the library was expanded, it took five years of creating impact fee submissions to the County prior to getting funding.

Councilor Miles stated that he wanted to see this in writing on a CIP form, so that it would explain what the library was attempting to do. Councilor Miles wanted Mrs. Hall to come back during the CIP to explain what her request was. Councilor Miles stated that the world was evolving and that a lot of books could be attained through electronic media and Councilor Miles wondered if more electronic format books would reduce the need for space in the library.

Mayor MacFarlane opened Public Comment for this item only.

Tim Everline, 1012 N. Lakeshore Blvd. – Mr. Everline wanted to know how specifically the LEC was used and for what age groups the programming in the LEC was created for. Mr. Everline wanted people to be quieter in the main library.

Hannah VanWagner, Town Library Assistant - Ms. VanWagner stated that the programming in the LEC was typically for all ages and that study rooms were a common addition to libraries.

DEPARTMENT REPORTS

6. Town Manager

Sean O'Keefe, Town Manager, reminded all that were attending the meeting that there would be a CIP workshop at 4pm on Monday February 12, 2024, directly before the 6pm regular Town Council meeting.

COUNCIL MEMBER REPORTS

7. Mayor Pro Tem Gallelli

Mayor Pro Tem Gallelli stated that she was working on the Town's fire truck restoration project but did not currently have an update. Mayor Pro Tem Gallelli thanked the residents for coming to the Town Council meetings.

8. Councilor Lehning

Councilor Lehning wanted to know the status of the well drilling project. Mr. O'Keefe stated that he didn't know the current depth of the second well.

Councilor Lehning wanted the non-emergency phone number for the Town's Police Department placed on the Town's electronic sign board.

Councilor Lehning also wanted a Development Status document added to the Town's reports each month.

9. Councilor Miles

Councilor Miles stated that he thought Councilor Lannamañ's idea of fixing up and painting the Town retired water tower for the Town's 100th anniversary was a good idea and he volunteered to create the CIP form for this project.

10. Councilor Lannamañ

Councilor Lannamañ stated that she would want to see all the required information before she would be comfortable making a decision about the Town's wastewater future.

11. Mayor MacFarlane

Mayor MacFarlane mentioned a House Bill that was going through the State Legislature this session, that, if passed, would have the effect of reducing the Town's Ad Valorem tax base.

Mayor MacFarlane told everyone that there was a Fish and Wildlife meeting set for January 24, 2024, from 3pm to 8pm in the Leesburg Venetian Garden building that would let the public know how the State was going to be chemically treating the Harris Chain of Lakes to reduce weed growth. Mayor MacFarlane asked interested or concerned individuals to attend that meeting.

Mayor MacFarlane stated that all of the proposed changes to the Town's Land Development Code and Comprehensive Plan would slow down or stop certain development, and that the State and County would still be making rules and demands on the Town that would be increasing costs. The Town would still need to pay for the cost increases by some means and, if the Town was not growing, it would still need to cover these costs by whatever means was necessary.

Mayor MacFarlane asked the Town Manager again to please have the empty cabinets at the back of the meeting room removed.

Councilor Lehning stated the Mayor was correct about costs going up and that Town's taxes would have to go up to cover these costs.

PUBLIC COMMENTS

Any person wishing to address the Mayor and Town Council and who is not on the agenda is asked to speak their name and address. Three (3) minutes is allocated per speaker.

Tom Ballou, 1105 N. Tangerine Ave. – Mr. Ballou stated that he would like to see the Town Hall meeting room's speaker system fixed.

Banks Helfrich, 9100 Sams Lake Rd., Clermont – Mr. Helfrich spoke about the purpose of groups.

ADJOURNMENT

There being no further business to discuss, a motion was made by Councilor Lannamañ to adjourn the meeting; Mayor Pro Tem Gallelli seconded the motion. Motion was approved unanimously by voice vote.

The Meeting adjourned at 8:57 p.m. | **Attendees: 42**

_____

Mayor Martha MacFarlane

ATTEST:

_____

John Brock, Town Clerk

Town Council Workshop

January 22, 2024 at 4:00 PM

Howey-in the-Hills Town Hall
101 N. Palm Ave.,
Howey-in-the-Hills, FL 34737

MINUTES

Mayor MacFarlane called the Town Council Workshop to order at 4:00 p.m.

ROLL CALL

Acknowledgement of Quorum

MEMBERS PRESENT:
Councilor Reneé Lannamañ (via Zoom) | Councilor David Miles (Zia Zoom) | Councilor George Lehning | Mayor Pro Tem Marie V. Gallelli | Mayor Martha MacFarlane

STAFF PRESENT:
Sean O'Keefe, Town Manager | Tom Wilkes, Town Attorney | John Brock, Town Clerk

Motion made by Mayor MacFarlane to allow Councilor Miles and Councilor Lannamañ to participate and vote remotely via Zoom; seconded by Mayor Pro Tem Gallelli. Motion passed unanimously by voice-vote.

Voting
Yea: Councilor Lehning, Mayor Pro Tem Gallelli, Mayor MacFarlane
Nay: None

OLD BUSINESS

1. Discussion: **Ordinance 2023-013 - Comprehensive Plan Amendment - Future Land Use Element**

   AN ORDINANCE OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA, PERTAINING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE ELEMENT (FLUE) OF THE TOWN'S ADOPTED COMPREHENSIVE PLAN PURSUANT TO SECTION 163.3184 OF FLORIDA STATUTES; DESCRIBING THE ANALYSIS AND REEVALUATION UNDERTAKEN BY TOWN COUNCIL REGARDING RESIDENTIAL DENSITIES AND LOT SIZES IN POST-2010 RESIDENTIAL DEVELOPMENT IN THE TOWN; AMENDING CERTAIN FLUE POLICIES TO MODIFY THE REQUIREMENTS IN THE "VILLAGE TOWN CENTER" AND "MEDIUM DENSITY RESIDENTIAL" LAND-USE DESIGNATIONS REGARDING DWELLING UNITS PER ACRE, LOT SIZES, AND OPEN SPACE; AMENDING OTHER RELATED REQUIREMENTS FOR THE TWO LAND-USE DESIGNATIONS; AMENDING POLICY 1.2.6 OF THE FUTURE LAND USE ELEMENT TO SPECIFY AREAS WHERE THE TOWN MAY ALLOW LOTS SMALLER THAN ONE-

FOURTH ACRE (10,890 SQ. FT.); PROVIDING FOR CODIFICATION, SEVERABILITY, AND AN EFFECTIVE DATE.

Mayor MacFarlane asked the Town Manager to read out loud the comments on the Comprehensive Plan amendments that Councilor Miles had emailed the Town Manager. Sean O'Keefe, Town Manager, read out the comments that had been submitted to him. Mr. O'Keefe read out loud:

Message 1

Just to be sure I have two changes to the attachment to Ordinance 2023-013 that I would like to see as follows:

1. Page I-29, 3rd paragraph: Change minimum lot area from "10,800 square feet" to "10,890 square feet" for consistency throughout the rest of the document.

2. Page I-37, policy 1.2.6 starting after the colon change to read: "areas in or adjacent to the Town Center (e.g. the Town central commercial district) and areas abutting major arterial and collector road corridors such as state roads, county roads, and major Town collector roads, such as Central Avenue and N. Citrus Avenue, but not neighborhood roads…"

Message 2

Page I-29, 3rd paragraph: Change to read as follows; "One hundred percent (100%) of single family lots must have a minimum lot area of 10,890 square feet, exclusive of any wetlands or waterbodies that might be included with the lot.":

Mayor MacFarlane stated that her recollection was that the Town Council wanted to go from 40% to 50% of single family lots must have a minimum lot area of 10,890, not 100%. Mr. O'Keefe stated that he believed that confusion comes from different statements being made at different times. Councilor Miles stated that the discussion in December was that all lots were to be 10,890 square feet. Mayor MacFarlane then agreed with Councilor Miles.

Councilor Lehning stated that on page I-9 of the proposed ordinance, under the Village Mixed Use (VMU) section, he wanted the section that states "*town council may allow up to four dwelling units per acre if the development includes substantial recreation facilities for field sports, court games, and/or indoor recreation facilities.*" to be removed. Councilor Lehning stated that after that section was removed, he would like a sentence added that would describe what sort of parks and recreation facilities he would like to see added into VMU developments. Councilor Lehning stated that, after that sentence, he would like an addition of a requirement that 10% of all land would need to be set aside for parks and recreational facilities.

Councilor Lehning stated that he would like to see something regulating the minimum width of roads and parking added to the Comprehensive Plan. Councilor Lehning stated that he knows these regulations are in other areas of Town Code, but his fear is that the Town Council will never get around to changing those sections. Councilor Lehning said that he wanted to see 24' width roads, with additional parking space on both sides of the road, added into all zoning categories. Mayor MacFarlane stated that the Town Clerk had noted that road sizes and parking requirements were in the Land Development Code (LDC). Councilor Lehning said that he feared that the Council would not get around to changing the LDC.

Town Attorney, Tom Wilkes, said that he was just about completed with another ordinance that would be making the requested changes to the LDC, which would include the road widths and parking requirements in the Ordinance. Mr. Wilkes stated that a draft of the ordinance, which would make the

requested changes to the LDC, would be sent to the Town Councilors for review within the next two weeks. Mr. Wilkes stated that the Town Councilors should be able to vote on the ordinance to amend the LDC even earlier than they will be able to adopt any amendments to the Town's Comprehensive Plan.

Councilor Lannamañ said that all Town Councilors should keep in mind that HOAs will have their own declarations. As an example, Councilor Lannamañ stated the Venezia HOA declaration does not allow any parking on the roads overnight.

Councilor Miles stated that he did not see the necessity to put road widths and parking within the Comprehensive Plan, that they should stay in the LDC. It was decided that the road widths and parking requirements would be left within the LDC.

Councilor Lehning stated that he would like to identify what sort of recreational facilities he wanted to see in the VMU developments, and not leave it up to the developers. Councilor Lehning stated that when there is an area identified as a park, he wants it to be a larger size, not just the size of a leftover lot. Councilor Miles suggested that prior to construction, or the issuance of any permits, the developer must get approval of all recreational facilities in those parks. Mr. Wilkes stated that, in anticipation of that request, he had already added that into the proposed LDC amendment ordinance.

Councilor Lehning stated that he believed that the Council should state what a minimum size for a park should be. Councilor Lehning stated that he was open to discussion from other Councilors, but that 2 acres was what he thought the minimum size of a park should be. Mayor MacFarlane stated that she was concerned that too much of the Town's park space was dedicated to passive parks, and she wanted to see more active areas.

Councilor Miles reiterated that, prior to construction, or the issuance of any permits, the developer has to get approval of all recreational facilities in those parks.

Mr. Wilkes stated that he had already placed in the proposed LDC amendment that the Town Council would need to approve the plans for the developments prior to the approval of the first final plat for a development.

Councilor Lehning stated that he wanted to require developers to get a bond for the construction of parks and recreational facilities that were to be built in later phases.

Councilor Lehning summarized that what he was looking for was larger lots, bigger setbacks, wider roads, more parks.

Councilor Lannamañ stated that she agreed with Councilor Lehning and wanted to know what parks would look like prior to approval.

Mayor MacFarlane asked the Town Council to do their due diligence more, and if they know that an item is coming before the Council, that has been noticed, to get with the staff ahead of time if they want changes to the ordinance. This was so that the cost of noticing the hearing is not wasted.

Councilor Miles stated that he wanted the staff to follow the Town Council's directions more closely.

PUBLIC COMMENTS

Any person wishing to address the Mayor and Town Council and who is not on the agenda is asked to speak their name and address. Three (3) minutes is allocated per speaker.

Eric Gunesch, 448 Avila Pl. – Mr. Gunesch suggested changes to Councilor Lehning's wording of the 10% requirement for park space and recreation facilities. Mr. Gunesch stated that he would like to see the open space

requirement for VMU be increased from 25% to 30%, reduce the residential area to a minimum of 60% to a maximum of 70%, and remove all refence to any wetlands being used as open space. Mr. Gunesch stated that all the changes that were just recommended would also need to be changed on I-29.

Tim Everline, 1012 N Lakeshore Blvd. – Mr. Everline stated that the Town should know the plan for the parks even earlier, prior to grading, not the issuance of building permits. Mr. Everline had questions about Councilor Miles' other suggestions that were read out earlier.

Joshua Huseman, 671 Avila Pl. – Mr. Huseman suggested that the Town specify how much park space would have to be active versus passive park space.,

Mayor MacFarlane suggested that half of the required 10% area set aside for parks and recreation facilities needed to be active parks. There was a consensus from the Town Council that half of the required 10% had to be structured, active parks.

Tom Ballou, 1105 N. Tangerine Ave. – Mr. Ballou thanked the Town Councilors for their hard work.

Councilor Lehning said that the staff was much too slow with this amendment process.

ADJOURNMENT

There being no further business to discuss, a motion was made by Mayor Pro Tem Gallelli to adjourn the meeting; Councilor Lehning seconded the motion. Motion was approved unanimously by voice vote.

The Meeting adjourned at 5:02 p.m. | **Attendees: 18**

_____

Mayor Martha MacFarlane

ATTEST:

_____

John Brock, Town Clerk

TMH CONSULTING, INC.
Community Planning Services

TMHConsulting@cfl.rr.com
97 N. Saint Andrews Dr.
Ormond Beach, FL 32174
PH: 386.316.8426

MEMORANDUM

TO: Howey-in-the-Hills Town Council
CC: J. Brock, Town Clerk, T. Wilkes, Town Attorney
FROM: Thomas Harowski, AICP, Planning Consultant
SUBJECT: Ordinance 2023-013 Comprehensive Plan Amendment
DATE: January 26, 2024

I was unable to fully participate in the workshop where the provisions for Ordinance 2013-013 were reviewed in preparation for the transmittal hearing. After reviewing the proposed amendments, there are two items that give me some concern, and I wish to call these to the Council's attention to consider modification to the policy amendments as current constructed.

Policy 1.2.6

The first item is with the revised Policy 1.2.6, page I-39, lines 20 and 21. This proposed amendment allows the Town to consider smaller lot sizes in areas supporting the Central Avenue commercial district, but the specific area cited is the Town Center Commercial (TC-C) district. Except for some provisions for existing single-family lots, the TC-C district does not allow single-family housing. Dwelling units added to this area must be done in conjunction with commercial development with the residential use located above the commercial space. Other than a handfull of existing homes there will be no single-family located in the Town Center Commercial area.

A more appropriate area for designation is the Town Center Overlay. The overlay includes the Town Center Residential (TC-R) and Town Center Flex (TC-F) which do include single-family development and will allow new single-family as infill or redevelopment. If any efforts are to be made to employ single-family housing in support of the Town Center Commercial area, the Town Center Overlay area is the best option to do that.

As a practical matter nearly all of the area encompassed by the Town Center Overlay is platted and substantially developed, so the proposed policy amendment is likely to have minimal impact on the built environment. There may be a few instances where lot splits or replacement units might result in some additional units supporting the Central Avenue commercial area and limiting the lot size options to the TC-C district will exclude these opportunities.

Policy 1.1.1 Active Recreation Requirement

Policy 1.1.1 on page I-31 proposes some new rules for recreation facilities in Village Mixed Use projects. I have a concern that the wording as proposed may result in less overall recreation opportunity in these larger projects and the prospect of under-utilized and poorly maintained facilities. I understand the Council's desire to include more items such as court games, swimming pools, playfields, playgrounds, and perhaps indoor activities in community buildings as a component of the recreation options offered in the larger communities. Facilities such as walking trails should be considered more passive recreation or they will continue to dominate the recreation provided. We presume the Council will desire a project to offer both active and passive recreation opportunities.

It is important to understand that active recreation facilities are going to be more expensive to build than passive recreation, and therefore developers are going to want to limit the active recreation insofar as possible. Passive recreation facilities tend to be large by their nature. While a project may be willing to provide an extensive area for passive recreation they will not do that if every additional passive recreation acre needs to be matched by an active facility acre. This situation creates a disincentive for including passive recreation facities and drives the project toward the minimum level of recreation, both passive and active, required by the policy.

The current policy directs that active recreation to be 50% of the minimum park area. If we use a minimum VMU project of 100 acres, then the project is obligated to a recreation component of 10 acres (10% of the area), of which five acres are active and five acres are passive. Five acres of active recreation facility can accommodate a lot of facilities. The following table shows some comparisons for various facilities based on recommended sizes.

Facility	Size	Acres
Minimum Requirement	217,800 s.f.	5.00
Tennis Court	2,808 s.f.	0.06
Pickleball Court	880 s.f.	0.02
Basketball Court	4,700 s.f.	0.11
Swimming Pool	4,860 s.f.	0.11
Baseball Field	160,000 s.f.	3.67
Soccer Field	81,000 s.f.	1.88

Based on a minimum active requirement of five acres, the development could easily accommodate a major playfield area and a grouping and variety of play courts. We can expect a development to select active recreation facilities based on their projected

As a side note we have been very successful in negotiating the inclusion of walking trails and bicycle facilities in our village mixed use projects, including projects where active recreation facilities are included. Both Watermark and Hilltop Groves include trail networks along with active recreation opportunities. The Lake Hills development agreement also calls for both active and passive recreation opportunities while the proposed Mission Rise plan has a robust recreation component.

market. A development targeting seniors is more likely to include courts, pools and community centers than field play areas, while a family oriented developmen may chose more of a mixture.

In this example, the five acres for passive recreation is not a lot of area in a 100-acre development, but anytime the developer adds area for walking trails he has to also increase the active recreation component, and as more active facilities are added the active component can quickly outgrow the demand. At some point, more tennis courts or pickleball courts will go unused as there is insufficent demand.

Our Recreation and Open Space Element includes a population served factor for a variety of recreation facilities. This table is reproduced below.

Population Guidelines for User-Oriented Outdoor Recreation Activities

Activity	Resource* Facility	Population Served
Golf	9-hole golf course	25,000
Golf	18-hole golf course	50,000
Tennis	Tennis court	2,000
Baseball/softball	Baseball/softball field	3,000
Football/soccer	Football/soccer field	4,000
Handball/racquetball	Handball/racquetball court	10,000
Basketball	Basketball court	5,000
Swimming (Pool)	Swimming (Pool)*	8,700
Shuffleboard	Shuffleboard court	1,000
Freshwater fishing non-boat	800 feet of Fishing pier	5,000
Freshwater fishing power boating, water skiing, and sailing	Boat ramp lane	1,500

* Based on a standard community swimming pool measuring 81 ft x 60 ft (4,860 ft).

In the example used here of a minimum sized Village Mixed Use project, the expected population is 717 people. (100 acres x 3units/acre x 2.39 people/unit) As is seen from a comparison of project population to the service capacity of the facilities cited above, the minimum village mixed use project would not trigger a service demand for more than one of any of these facilities. When compared to the sizes of each type of active recreation facilities in the previous table, the active recreation demand can be met in a far smaller area than the minimum five acres required by the proposed policy. Essentially the proposed policy is demanding much more in active recreation than our comprehensive plan policies would expect from any development. A smaller active recreation requirement will enable the Town to meet active recreation needs and still negotiate for larger passive recreation areas.

Summary

The requirement for an active recreation component in the VMU development is a laudable effort. This analysis, however, suggests that the 50% minimum for active recreation, may result in facilities that exceed the probable demand. The currently proposed rule is likely to result in facilities that will be under-utilized and likely poorly maintained as a result. As structured, the requirement also serves as a disincentive to provide any recreation facilities above the minimum level required or to provide more passive recreation than the minimum requirement. The culprit seems to be the 50% active recreation requirement rather than the 10% total area requirement.

If the active recreation component were set at 30%, the project could still accommodate a soccer field, a basketball court, four tennis courts and four pickleball courts (2.42 acres) in the three acre minimum with some space left over. The policy may also need some room to negotiate a total area devoted to active recreation facilities relative to passive recreation uses. I suggest the Council consider a lesser minimum percentage for active recreation and provide a more flexible opportunity to negotiate for these types of facilities in the Village Mixed Use projects.

ORDINANCE NO. 2023-013

AN ORDINANCE OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA, PERTAINING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE ELEMENT (FLUE) OF THE TOWN'S ADOPTED COMPREHENSIVE PLAN PURSUANT TO SECTION 163.3184 OF FLORIDA STATUTES; DESCRIBING THE ANALYSIS AND REEVALUATION UNDERTAKEN BY TOWN COUNCIL REGARDING RESIDENTIAL DENSITIES AND LOT SIZES IN POST-2010 RESIDENTIAL DEVELOPMENT IN THE TOWN; AMENDING CERTAIN FLUE POLICIES TO MODIFY THE REQUIREMENTS IN THE "VILLAGE TOWN CENTER" AND "MEDIUM DENSITY RESIDENTIAL" LAND-USE DESIGNATIONS REGARDING DWELLING UNITS PER ACRE, LOT SIZES, OPEN SPACE REQUIRMENTS, AND PARKS AND RECREATION SPACE REQUIREMENTS; AMENDING OTHER RELATED REQUIREMENTS FOR THE TWO LAND-USE DESIGNATIONS; AMENDING POLICY 1.2.6 OF THE FUTURE LAND USE ELEMENT TO LIMIT THE AREAS WHERE THE TOWN MAY ALLOW LOTS SMALLER THAN ONE-FOURTH ACRE (10,890 SQ. FT.); PROVIDING FOR CODIFICATION, SEVERABILITY, AND AN EFFECTIVE DATE.

Be it ordained by the Town Council of the Town of Howey-in-the-Hills, Florida:

Section 1. Findings. In adopting this ordinance, the Town Council of the Town of Howey-in-the-Hills, Florida finds and declares the following:

(1) Under Section 163.3184 of Florida Statutes, the Town Council adopted a comprehensive plan, which includes the statutorily required Future Land Use Element (FLUE). Among other things the FLUE sets requirements and provides certain allowances for residential development in the Town.

(2) After 2010, substantial amounts of approved residential development were constructed at substantially increased densities and substantially smaller lot sizes than were prevalent in the Town's development from its incorporation in 1925 to 2010.

(3) In 2022 and 2023 the Town Council and its Planning and Zoning Board undertook an analysis and reevaluation of the post 2010 densities and lot sizes, with robust public participation in the reevaluation.

(4) The consensus on Town Council, at the Planning and Zoning Board, and among Town residents was that the increased densities and smaller lot sizes are inconsistent with the

development pattern, character, and ambiance of the Town's historical neighborhoods. For that reason, the Town Council determines that adjustment of density and open-space requirements in the Future Land Use Element of the Town's adopted Comprehensive Plan is justified and desirable.

(5) Under Section 163.3184 of the Florida Statutes, on _____, 2024, the Town approved the transmittal to the Florida Department of Commerce and other required review agencies of the proposed amendments to the Future Land Use Element. The Town held a second public hearing for adoption on the comprehensive plan amendments on _____, 2024, after the Town received responsive comments from the Florida Department of Commerce.

(6) The Town Council has determined that it is in the interest of the citizens, residents, and property owners of the Town to adopt the proposed amendments to the Future Land Use Element of the Town's adopted Comprehensive Plan.

Section 2. Adoption of Amendments to the Future Land Use Element. The amendments to the Future Land Use Element of the Town's adopted Comprehensive Plan, as contained in **Attachment A** to this ordinance with the underscore and strike-through format, are hereby approved and adopted by the Town Council.

Section 3. Codification. The amendments to the Future Land Use Element are hereafter part of the Town's adopted Comprehensive Plan and are to be codified and posted on the Town's website accordingly. Goals, objectives, and policies of the Future Land Use Plan may be renumbered or reorganized for editorial or codification purposes. Such renumbering or reorganization shall not constitute or be deemed a substantive change to the adopted Future Land Use Element.

Section 4. Severability. If any provision or portion of this ordinance is declared by a court of competent jurisdiction to be void, unconstitutional, or unenforceable, then all remaining provisions and portions of this ordinance shall remain in full effect. To that end, this ordinance is declared to be severable.

Section 5. Effective Date. This ordinance shall become effective 31 days after its passage and approval as a non-emergency ordinance at two regular meetings of the Town Council. If challenged timely pursuant to section 163.3187(5) of the Florida Statutes, the amendments shall take effect when the state land planning agency or the Administration Commission, as appropriate, issues a final order.

[signatures on the following page]

ORDAINED AND ENACTED this ____ day of _____, 2024, by the Town Council of the Town of Howey-in-the-Hills, Florida.

TOWN OF HOWEY-IN-THE-HILLS, FLORIDA
By: its Town Council

By:_____
Hon. Martha MacFarlane, Mayor

ATTEST:

_____
John Brock, Town Clerk

APPROVED AS TO FORM AND LEGALITY
(for the use and reliance of the Town only)

_____
Thomas J. Wilkes, Town Attorney

Planning and Zoning Board hearing(s) held December 21, 2023
LPA public hearing and transmittal public hearing held _____
Second reading and adoption public hearing held _____

Attachment A

Amendments
to
Future Land Use Element

FUTURE LAND USE ELEMENT

TOWN OF HOWEY-IN-THE-HILLS

LAKE COUNTY, FLORIDA

ADOPTED ON OCTOBER 11, 2010

AMENDED:
APRIL 22, 2020
_____, 2024

FUTURE LAND USE ELEMENT
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CHAPTER 1
FUTURE LAND USE ELEMENT

The data and analysis presented in the Future Land Use Element and other elements of the comprehensive plan is updated from the information used to develop the 2010 Comprehensive Plan Update. Some of the data was developed in 2017 as part of the Evaluation and Appraisal Review of the comprehensive plan. Where appropriate additional data has been included in the 2018 analysis.

A. INTRODUCTION

1. Purpose

The purpose of the *Future Land Use Element* is the designation of future land use patterns as reflected in the goals, objectives and policies of the local government comprehensive plan elements.

The *Future Land Use Element* sets forth the physical plan for the future development of the Town. The *Future Land Use Element* describes the appropriate location for the future land uses and promulgates the policies regulating the location and development of all land uses. The *Future Land Use Element* sets forth not only the density and intensity of land uses, but also considers other factors affecting land use development, such as timing, cost, and current development trends.

While each *Element* within the *Comprehensive Plan* is important, the *Future Land Use Element* is arguably the most important as it must be consistent with all other *Comprehensive Plan Elements* and articulate the *Goals, Objectives and Policies* of these other *Elements* in the form of specific land use policies.

The *Existing Land Use Map* included as part of this *Element*, describes the location and distribution of land uses in Howey-in-the-Hills in 2018. The *Future Land Use Map* (also included in this *Element*) is the focus of the *Comprehensive Plan*. It indicates the proposed location and distribution of land uses in the year 2035. All policies contained within this *Plan* must be consistent with the *Comprehensive Plan* and the *Future Land Use Map*. All land development regulations in effect subsequent to the adoption of this *Plan* must be consistent with the *Future Land Use Map* and the goals, objectives and policies of the *Comprehensive Plan*.

This *Future Land Use Element* is a required element; the minimum criteria for its contents are established in Florida Statutes Chapter 163. This *Plan Element* was formulated to be consistent with relevant sections of Chapter 163, Part II, F.S., the State *Comprehensive Plan*, and the *Comprehensive East Central Florida Regional Policy Plan*.

B. Population Estimates and Forecasts

In order to plan for growth, it is first necessary to project the number of persons that will reside

in the Town. The effectiveness of a local government's comprehensive plan depends principally on the accuracy of population projections for both resident and seasonal populations. These predictions for the future are the basis of planning for future land use, housing, recreation and open space, and public services and infrastructure needs.

A population projection to 2035 has been prepared to coordinate with long-range utility planning for water and sewer services. This estimate assumes the Town will continue to undergo a steady residential development pattern based on single-family homes as the predominant housing type. Projections for small populations are notoriously tricky given the small base size of the population and the ability for a single project to significantly affect total population and the timing of housing production. Therefore, a table presenting the major approved projects with total approved unit count has been included.

The table also indicates which projects have met concurrency requirements and which projects still must meet concurrency tests for water and sewer service at the time subdivision or site plan approval is sought. In theory, the projects without concurrency approval are vulnerable to development denial if necessary public services are not available. This "check process" should provide a safety valve should the water and/or sewer demand be out of line with system capacity at the time the development seeks approval. The projection for resident and seasonal populations is provided below.

TABLE 1: POPULATION ESTIMATES AND PROJECTIONS 2010 -2035

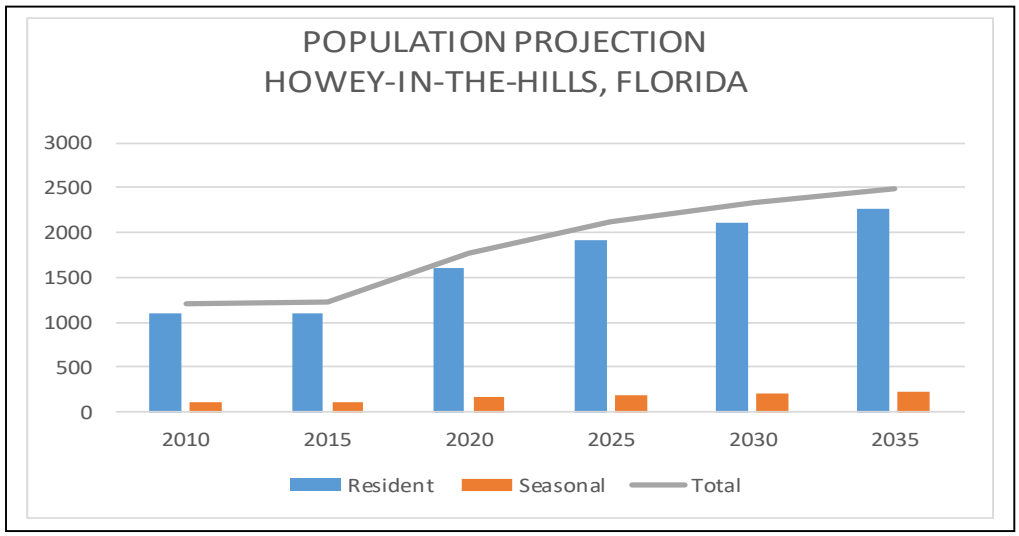
POPULATION PROJECTION
HOWEY-IN-THE-HILLS, FLORIDA

Year	Resident	Seasonal	Total
2010	1098	110	1208
2015	1106	111	1217
2020	1604	160	1764
2025	1925	193	2118
2030	2118	212	2330
2035	2266	227	2493

Source: US Census, BEBR and TMH Consulting projections.

Since 2015, the Town has seen the impact of development in the Venezia South subdivision with the 2017 BEBR estimate being set at 1,355 people. The projections assume this rate of development will continue to 2020 resulting in a total population increase of about 45%. This rate of growth is likely unsustainable over the long term, but it is also likely that at least one of pending major projects will move forward as the rater of development in Venezia South slows. The projections assume a declining rate of growth over the succeeding time increments, while still projecting a significant increase. If multiple large projects move forward at the same time or if significant levels of multi-family housing enter the market, population growth will be

accelerated over these projections. The graph below offers a visual representation of this data.



The following table provides a summary of major developments that have received some level of approval through the Town's planning and development review process. The approved projects with 2018 concurrency certifications are Venezia South and Whispering Hills. The other projects have received planning level approval but must still pass a concurrency review at the time development in the form of subdivision or site plan review is proposed. Venezia North (Talichet) is currently pursuing a new development agreement to increase the project size from 93 to 139 units.

TABLE 2: SIGNIFICANT DEVELOPMENT PROJECTS

PROJECT	SFR	MFR	TOTAL	NOTES
Venezia South	172	113	285	Already connected to systems
Talichet	93		93	
Whispering Hills	156		156	
Lake Hills			780	No SFR/MFR split available
Mission Rise	400		400	
The Reserve	403	330	733	
Total	1224	443	2447	

C. Existing Conditions

1. Existing Land Use

The amount of acreage located within the Town's current boundaries is presented in Table 3 by the existing land use categories. The Town has had no annexations since 2010, and the only change in existing land use is the development of 129.31 acres of

single-family residential in the Venezia South Village Mixed Use classification. This area has been deducted from the vacant Village Mixed Use Category and added to the single-family residential totals.

Table 3: Acreage within Existing Land Use Categories, 2017

Existing Land Use	Acreage	Percentage of Total
Residential (includes all residential uses except vacant Village Mixed Use)	673.63	28.71%
Single-family Residential	321.69	13.71%
Condominium	14.10	0.60%
Multi-family less than 10 units	1.07	0.05%
Vacant Residential	336.44	14.34%
Vacant Lakefront Residential	0.33	0.01%
Commercial (except Village Mixed Use)	120.09	5.12%
Vacant Commercial	114.53	4.88%
Recreation (includes golf courses, recreation other, and vacant preserve/passive park)	4.50	0.19%
Golf Courses (Mission Inn golf course is included in the Vacant Planned Unit Development/Mixed Use acreage)	1.06	0.05%
Recreation (other)	218.85	9.33%
Vacant Preserve/Passive Park (Sarah Maude Mason Preserve of 54 acres included in Conservation acreage)	0.95	0.04%
Public Use (includes utilities, roads, ROWs, educational facilities, institutional, and government facilities)	165.29	7.05%
Utilities	37.15	1.58%
Roads	4.14	0.18%
Educational Facilities	6.99	0.30%
Government Facilities	4.34	0.19%
Institutional	6.48	0.28%
Vacant Institutional	2.36	0.10%
Conservation	517.58	22.06%
Industrial	24.27	1.03%
Vacant Planned Unit Development/Village Mixed Use	780.69	33.28%
Total	**2,345.94**	**100.00%**

Source: TMH Consulting update of 2010 tabulations.

Residential - This category on the *Existing Land Use Map* denotes all land used for residential purposes, including single family, accessory apartments, rectories, and mobile home structures, but specifically excludes recreational vehicles, travel trailers, or similar vehicles. Single family residential use is permitted in all areas of the Town except the public use, recreational, industrial, and conservation areas in Town. The permitted density for residential lands in Howey-in-the-Hills as of the Town's 2023 reevaluation and analysis of residential land uses is featured in Table 4.

Commercial - This category on the *Existing Land Use Map* denotes all land used for retail and wholesale trade, offices, restaurants, hotels and motels, and professional services. Most of the commercial uses in Town are found along Central Avenue. Commercial land use is permitted in the Town Center Overlay, Town Center Mixed Use, Village Center Mixed Use, and Neighborhood Commercial. The maximum intensity for commercial uses in Town is presented in Table 4.

Industrial – This category on the *Existing Land Use Map* denotes all land used for warehousing, assembly and distribution of goods, light processing, heavy equipment, large durable goods, or other land uses requiring heavy truck traffic. The Town permits industrial uses on Light Industrial lots with conditions. Cell towers are also permitted in this land use under certain conditions. The intensity of industrial uses permitted in Town is featured in Table 4.

Public Use - This category on the *Existing Land Use Map* denotes all land used for public service activities, water plants, electric sub-stations and telephone facilities except for cell towers. On the *Existing Land Use Map*, this category includes and is used for utilities, government owned facilities, and institutional facilities such as educational facilities, day care facilities, churches or residential care facilities. The Town permits an intensity of 0.50 impervious surface ratio or 0.25 floor area ratio (see Table 4).

Recreation - This category on the *Existing Land Use Map* denotes all land primarily used for outdoor recreational activities such as picnicking, jogging, cycling, outdoor courts, golf courses, and playing fields. These lands include both private and public recreational facilities. The Town permits an impervious surface ratio of 0.30 on recreational land uses (see Table 4).

Conservation - This category on the *Existing Land Use Map* denotes all land used for wetlands, some uplands, public managed lands, floodplains, flood prone areas, and other areas in which valuable natural resources are found. No buildings are allowed on conservation lands in Town except for boardwalks, docks, observation decks, or similar facilities allowed by the Town and all regulatory agencies.

Planned Unit Development(PUD)/Village Mixed Use - In 1992, the Town approved a *Planned Unit Development Mixed Use District Ordinance* which permits a variety of residential structures and a diversity of building arrangements as well as complementary and compatible commercial uses and public or quasi-public facilities developed in accordance with an approved development plan. A large percentage of the lots in this category on the *Existing Land Use Map* are vacant. The permitted maximum density and intensity standards for planned unit development/mixed use are presented in Table 4.

2. Availability of Public Facilities and Services

The following data and analysis describes the availability of services and facilities to support development.

a. Sanitary Sewer

The Town has entered into an agreement with the Central Lake Community Development District to provide wastewater treatment for the Town. New Village Mixed Use development is required to connect to sanitary sewer, and the Town has begun the process of providing sanitary sewer on Central Avenue. Infill development in the largely developed portions of the Town will continue to use septic tanks until sanitary sewer service can be made available. The Town will own and maintain the collection system (mains, lift stations, etc.) within the Town limits.

b. Potable Water

The Town currently owns, operates and maintains a central potable water treatment and distribution system. The Town's potable water system provides water for both residential and non-residential purposes, including fire-fighting demands. The Town's water system consists of two water plants located approximately one mile apart with a total of three active wells, one out-of-service well, one 500,000-gallon ground storage tank and one 15,000-gallon hydropneumatic tank. The elevated storage tank remains in place but is not active.

The *Comprehensive Plan* sets two different levels of service for potable water usage. The first LOS standard is 242.0 gallons per day per capita for the overall customer usage and the second LOS standard is 150.8 gallons per day per resident for the residential customers.

The Town currently holds a consumptive use permit for 10-MGD. The permit is in the process of being revised as the Town has exceeded the consumption level. The permit revision is part of a larger planning process for master plans for both water and sewer. These plans are expected to be completed by the end of 2018, and once completed will identify projects for inclusion in the capital improvements program.

Table 4: Permitted Maximum Density/Intensity within Land Use Categories
(as of amendments approved _____, 202___)

Future Land Use	Maximum Density/Intensity	Description
Rural Lifestyle (RL)	Must have a minimum of 2 acres for this land use. 1 dwelling unit per 2 acres; all buildings not to exceed .15 FAR; 20% max. impervious surface coverage; 50% open space required.	Primarily single-family detached homes with agricultural uses.
Low Density Residential (LDR)	2 dwelling units per acre	Primarily single-family detached homes.
Medium Density Residential (MDR)	~~4~~ 3 dwelling units per acre; 25% minimum open space required Developments with 100 units or more shall be required to have a public recreation component. Developments with either more than 300 proposed dwelling units or more than 100 acres must use the Village Mixed Use designation.	Single-family detached homes, townhomes, etc.; this category may also include support community facilities and elementary schools.

Town Center Mixed Use (TCMU)	The Town Center Overlay District denotes where specific uses are permitted within the Town Center (see the Town's *Town Center Overlay Map*). For areas designated Commercial Core, all new buildings must be 2 stories or provide a minimum street façade elevation of at least 15-feet to create a vertical enclosure along Central Avenue. A max. 2.0 FAR is permitted if parking requirements are achieved. Where new residential uses are constructed in the Commercial Core, these uses shall be located on the second floor of buildings. (Existing single-family units on Central Avenue west of Dixie Drive and units fronting on Oak street and Holly Street are considered permitted uses. Single-family residences may not be constructed elsewhere within the Town Center Commercial area. Properties in the Town Center Commercial Area within the designated sections of W. Central Avenue, Oak street and Holly Street may be converted to non-residential uses, and once converted, may not revert to single-family residential use.) For areas designated Office/Services or Residential, 40% max. impervious surface coverage. May live and/or work in these areas. For areas designated Residential, a max. of 4 units per acre. There is a total of 81.73 acres in the Town Center Overlay. About 23.3% of the Town Center Overlay is comprised of roads which are laid out in a grid system. About 52.5% of the Town Center Overlay area is designated for residential use. About 16% of the Town Center is designated for commercial/office/professional services use (with the possibility of residential on the second floor) and about 8.2% is designated as flex space, where either office, professional services, or residential uses – or a live/work combination of those uses is permitted. Open space within the Town Center will not be defined as it is for other areas	The size of each individual business shall be regulated through the Land Development Regulations.

Future Land Use	Maximum Density/Intensity	Description
	within the Town. Rather, the Town has established maximum impervious surface coverage standards that may not be surpassed within the various uses in the Town Center. The areas designated as Commercial Core have a maximum impervious surface coverage of 100%. Areas designed office/professional services and/or residential shall have a maximum impervious surface coverage of 40% and areas designated as residential in the Town Center shall have a maximum impervious surface of 50%. In the commercial core of the Town Center, the Town anticipates a master stormwater system which will allow maximum coverage for buildings and surface parking.	

Village Mixed Use (VMU)	Must have a minimum of ~~25~~ 100 acres for this land use. Maximum of three ~~four~~ dwelling units per acre; ~~May be increased to 6 dwelling units per acre if the development includes 20% usable public open space (no wetlands)~~. All single-family lots must have a minimum lot area of 10,890 square feet (1/4 acre) exclusive of any wetlands or waterbodies that might be included with the lot. Residential areas shall comprise a minimum of 70% of the Net Land Area and a max. of 85% of the Net Land Area. Commercial/non-residential areas shall comprise a minimum of 15% of the Net Land Area and a maximum of 30% of the Net Land Area. This includes community facilities and schools. ~~For developments with more than 100 acres, 5%~~ Five percent (5%) of the non-res. land shall be dedicated for public/civic buildings. Commercial/non-residential may be 2 stories with 50% coverage as long as parking and other support facilities (stormwater) are met. Public recreational uses must occupy a minimum of 10% of the useable open space (no wetlands). A minimum of 25% open space and a minimum of 10% dedicated to park and recreation uses is required. Park and recreation areas count toward the 25% open-space requirement. No less than 50% of areas dedicated to park and recreation uses must contain active recreation uses. To be counted against the 10% park/recreation requirement, parcels dedicated to park uses may be no smaller than ____ ac. The	A mix of uses is permitted and required in this category in order to promote sustainable development, including the provisions of reducing dependence ~~the dependability~~ on the automobile, protecting more open land, and providing quality of life by allowing people to live, work, socialize, and recreate in close proximity. Elementary, middle, and high schools are also permitted in this category.

Future Land Use	Maximum Density/Intensity	Description
	Land Development Code must require that plans for active recreation uses be submitted for approval by Town Council no later than application for final plat approval. Town Council may require a performance surety bond for park and recreation improvements.	
Neighborhood Commercial (NC)	0.50 floor area ratio; 70% max. impervious surface coverage	Commercial uses to support Town residents are permitted in this category. The size of each individual business shall be regulated through the Land Development Regulations. Elementary and middle schools are also permitted in this category.
Light Industrial (LI)	70% max. impervious surface coverage; 0.6 floor area ratio	Manufacturing, distribution High schools are also permitted in this category.
Institutional (INST)	0.25 floor area ratio; 40% max. impervious surface coverage; 25% open space required	Educational facilities (public or private), religious facilities, day care (child and adult), government buildings (including fire and police), cemeteries, group homes, nursing homes, or community residential facilities, hospitals (general and emergency care).

Future Land Use	Maximum Density/Intensity	Description
Recreation (REC)	Max. 30% impervious surface coverage	Public or private recreational facilities.
Conservation (CON)	No buildings	Boardwalks, docks, observation decks, and similar facilities as allowed by the Town and all regulatory agencies.
Public/Utilities (PUB)	0.25 floor area ratio; max. impervious surface coverage of 50%	Government buildings and essential utilities, with cell towers being a special exception or conditional use.

Notes: Open Space: Open space is figured on the Gross Land Area. Up to ~~50%~~ 25% of the open space requirement may be met with wetlands. Open space may include landscaped buffers and stormwater facilities if they are designed to be a park-like setting with pedestrian amenities and free form ponds. Open space may be passive or active. Open space may include public recreational components of developments. Most of the open space shall be permeable; however, up to 10% may be impervious (plazas, recreational facilities, etc.). Wet ponds are not counted as part of that 10%.

Densities shall be determined by the Net Land Area. The Net Land Area is figured by taking the Gross Land Area (total property less any lakes or water bodies), then subtracting from that any open space requirements, then subtracting from that any remaining unbuildable acreage (remaining wetlands).

c. Stormwater Drainage

Stormwater drainage within the Town is currently accommodated by both natural and man-made drainage features. Although culverts and drainage pipes comprise a large portion of the stormwater system, the Town does not know where the underground pipes lead and where their outfalls are located. This system was installed decades ago and no engineering studies or plans for the drainage system are available to determine the design capacity of the system. In addition to these features, there are private retention/detention areas which were constructed to provide fill for the Mission Inn Complex. These ponds provide on-site retention/detention and a certain amount of percolation of runoff to the aquifer.

Increased development and land coverage could increase the need to construct additional drainage facilities to protect Little Lake Harris from nutrient runoff. Drainage problems do exist with stormwater runoff believed to be discharging directly from State Road 19 into Little Lake Harris. The Town has received one grant for a baffle box system to address this issue and plans to continue to seek funds to address the concern. There are no major flooding problems associated with stormwater runoff.

Level of service standards established in the *Comprehensive Plan* will continue to remain consistent with State statutes pertaining to the performance of the drainage system. The Town ensures the provision of adequate stormwater drainage systems through the development review process. Permits are also required from all applicable State, Federal, and local agencies regarding stormwater. No development is approved or is allowed to begin construction until all such permits are received by the Town.

d. Solid Waste

Solid waste disposal is achieved through franchise agreements with one solid waste hauler. The Town will continue to dispose refuse at the County's incinerator facility approximately 10 miles west of Town. The County will deposit waste ash in an ash monofill south of the incinerator near the Sumter County Line. There is a separate disposal area for construction and demolition debris.

e. Transportation

Only two major roads provide access into Town: (1) County Road 48 and (2)

State Road 19. County Road 48 provides a direct connection to the City of Leesburg and US 27. State Road 19 provides direct access to the Florida Turnpike, cities of Groveland and Tavares. All the streets in Howey-in-the-Hills are paved.

The Town's adopted level of service is D for minor arterials, collector roadways, and local roads. There are no roads in Town that are over capacity. The Town requires all development to provide adequate analysis of its impact on the roads in the Town to determine if the adopted LOS will be maintained. The capacities or deficiencies for the Town's road network is featured in the *Transportation Element*.

f. Recreation and Open Space

Overall, there are about 174 acres (115 acres of golf courses, 54 acres of preserve in Sarah Maude Nature Preserve, and 5 acres of other recreational facilities) of recreational land available to meet the recreational needs of Howey-in-the-Hills' residents and visitors.

The Town has adopted a level of service standard of 6.5 acres of park land for every 1,000 residents. There are 22.93 acres of parkland in Howey-in-the-Hills. The largest park in Town is the Sarah Maude Nature Preserve, which is about 54 acres of preserve and 17 acres of upland (the Town only includes the upland acres in the overall parkland acres) and the smallest Town park is Tangerine Point Park at 0.1 acres.

There is 4.5 acres designated as Recreation lands on the Town's *Future Land Use Map,* almost all this land is considered to be open spaces. Most of these open spaces is adjacent to the lakes in Town and lack the space needed to accommodate development other than small recreational uses.

There are no major public open spaces or natural preservations within a half mile of the Town limits. Recreational lands within the Town are depicted on the *Existing Land Use Map* and *Future Land Use Map*.

g. Public School Facilities

The Town continues to support public school concurrency and participates in an interlocal agreement with the School district and other local governments in Lake County. School concurrency is reviewed as part of the development approval process.

3. Land Available for Development

There are about 1640 acres of vacant land (about 516 of those acres are Conservation land uses) in the Town (see the Town's *Vacant Land Map*). Most of this land does not have any major environmental constraints and is very suitable for development. Also, most of the vacant lands in the Town currently have a *Village Mixed Use Future Land Use* category.

4. Soils and Topography

Soils are an important aspect in land development. The physical and chemical properties of soils restrict the intensity of development through limitations on road construction, septic tank operation, and building placement.

There are a variety of soil types in Howey-in-the-Hills (see the Town's *Soils Map*). The general descriptions of the soils in the Town are found below in Table 5. All upland soils are suitable for development and show little limitation for the use of septic tanks.

The Town lies on the Lake Wales Ridge, a physiographic high that has a high potential for aquifer recharge to the Floridan Aquifer. There is little topographic relief within the Town (90 feet). The upper limit is approximately 170 feet above sea level located south of E. Revels Road, west of Sunset Drive, and east of State Road 19. Around this area, there is a difference of about 80 feet in elevation (see the Town's *Contour Map*). This topographic relief poses little, if any, limitations to development of vacant lands. See *Conservation Element* for a further discussion of soils and soil limitations.

Table 5: Soils

Map Unit Name	Hydric Soil	Drainage Class	Steel Corrosion	Concrete Corrosion	Acres
Anclote and Myakka Soils	Yes	Very Poorly Drained	High	Moderate	14.34
Apopka Sand, 0 to 5 Percent Slopes	No	Well Drained	Moderate	High	51.88
Apopka Sand, 5 to 12 Percent Slopes	No	Well Drained	Moderate	High	28.00
Arents	No	Somewhat Poorly Drained	Unranked	Unranked	141.21
Borrow Pits	Partially Hydric	Unranked	Unranked	Unranked	2.82

Map Unit Name	Hydric Soil	Drainage Class	Steel Corrosion	Concrete Corrosion	Acres
Candler Sand, 0 to 5 Percent Slopes	No	Excessively Drained	Low	High	760.47
Candler Sand, 12 to 40 Percent Slopes	No	Excessively Drained	Low	High	3.16
Candler Sand, 5 to 12 Percent Slopes	No	Excessively Drained	Low	High	299.71
Immokalee Sand	Partially Hydric	Poorly Drained	High	High	32.30
Kendrick Sand, 5 to 8 Percent Slopes	No	Well Drained	Moderate	High	6.24
Lake Sand, 0 to 5 Percent Slopes	No	Excessively Drained	Low	High	114.40
Lake Sand, 5 to 12 Percent Slopes	No	Excessively Drained	Low	High	12.98
Lochloosa Sand	No	Somewhat Poorly Drained	High	High	11.98
Myakka Sand	Partially Hydric	Poorly Drained	High	High	95.48
Ocoee Mucky Peat	Yes	Very Poorly Drained	High	High	4.11
Oklawaha Muck	Yes	Very Poorly Drained	High	Low	6.14
Paola Sand, 0 to 5 Percent Slopes	No	Excessively Drained	Low	High	1.97
Placid and Myakka Sands, Depressional	Yes	Very Poorly Drained	High	High	23.83
Pompano Sand	Partially Hydric	Poorly Drained	High	Moderate	13.86
Sparr Sand, 0 to 5 Percent Slopes	No	Somewhat Poorly Drained	Moderate	High	18.44
Swamp	Yes	Very Poorly Drained	Unranked	Unranked	55.94
Tavares Sand, 0 to 5 Percent Slopes	No	Moderately Well Drained	Low	High	309.40
Water	Unranked	Unranked	Unranked	Unranked	317.67
Wauchula Sand	Partially Hydric	Poorly Drained	High	High	19.59

Notes: Drainage Class - Identifies the natural drainage conditions of the soil and refers to the frequency and duration of wet periods.
Concrete Corrosion - Susceptibility of concrete to corrosion when in contact with the soil.
Steel Corrosion - Susceptibility of uncoated steel to corrosion when in contact with the soil.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service's Lake County Soils Geographic Information Systems database.

5. Natural Resource Management

In this section, natural resource protection which is applicable to Howey-in-the-Hills is discussed. The Town contains no Areas of Critical State Concern as established in Chapter 380.05, Florida Statutes. According to SJRWMD and the Army Corps of Engineers, there are no dredge spoil disposal sites within the Town.

a. Surface Waters

Lake Illinois and several unnamed lakes are within the Town limits. Additionally, the Town is adjacent to Little Lake Harris. Most of these lakes are maintained by the County. There are no lakes in Town classified as "A Florida Outstanding Water". The lakes are used for boating, swimming, fishing and other water activities.

b. Floodplains

Floodplains are valuable resources which provide a rich diversity of vegetation and wildlife. These areas are sources for groundwater recharge that filters through soils during high water levels. The 100-year floodplains are also subject to inundation during a 100-year storm, causing potential loss of life and property, disruption of services, and economic loss. These areas cannot tolerate continued development which, in effect, retards their ability to absorb water and restrict the flow of water from adjacent higher elevation areas.

The County's Geographic Information Systems (GIS) database shows that there are 100-year floodplains in the Town (see the Town's *Floodplains Map*). The FEMA flood zone designations in Howey-in-the-Hills are as follows:

- Zone A – Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are

not performed for such areas; no depths or base flood elevations are shown within these zones.

- Zone AE - The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.

Development within floodplains will continue to be closely scrutinized to ensure compliance with established regulations.

c. Wetlands

Wetlands by definition are transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered with shallow waters. Wetland functions are interconnected with the hydrology of the area. This connection determines the presence, extent, movement, and quality of water in the wetland. It is estimated that wetlands account for about 515 acres in the Town (see the Town's *Wetlands Map*).

d. Natural Groundwater Aquifer Recharge Areas

The Floridan aquifer is the principal source of drinking water for Lake County. Currently almost all the ground water pumped in Lake County comes from the Upper Floridan but the potential for utilizing the lower Floridan aquifer is just beginning to be explored in Lake County.

Aquifer recharge is the process whereby rainfall percolates downward through the soil to reach the underlying aquifers. Recharge to the Floridan aquifer occurs in areas of the County where the elevation of the water table of the surficial aquifer is higher than the elevation of the potentiometric surface of the Floridan aquifer. In these areas, water moves from the surficial aquifer in a downward direction through the upper confining unit to the Floridan aquifer. The surficial aquifer system in the County is recharged by rainfall. Recharge is augmented locally by artificial recharge - wastewater or reuse water land application, rapid-infiltration basins, and septic systems.

Howey-in-the-Hills is in a recharge area with a recharge rate of 1 to 10 inches per year and discharge rate of less than 1 inch per year.

e. Cone of Influence

Cone of influence is defined as an area around one or more major wellfields, the boundary of which is determined by the government agency having specific statutory authority to make such a determination based on groundwater travel or

drawdown depth. The term waterwell is defined by Rule 9J-5, F.A.C., as a well excavated, drilled, dug, or driven for the supply of industrial, agricultural, or potable water for general public consumption.

Generally, the term cone of influence can be defined as the land area surrounding a well on which a present or future land use has the potential to negatively impact an aquifer as a result of the induced recharge from that well's cone of depression. The purpose of delineating a cone of influence is to protect the current and future water supply.

The Town restricts development (except facilities related to the public water system) from occurring within a 150-foot radius of any existing or proposed public well (Primary Protection Zone). No septic tanks, sanitary sewer facilities, or solid waste or disposal facilities are permitted within a 200-foot radius of any existing or proposed public well (Secondary Protection Zone). The Town also has established a 500-foot radius wellhead protection area within which manufacturing or light industrial uses are prohibited. The wellhead protection areas for the Town's potable water supply wells are shown on the *Existing* and *Future Land Use Maps*.

f. Air Quality

Air quality is another example of a natural resource that impacts the Town's and surrounding areas quality of life. The Florida Department of Environmental Protection and the United States Environmental Protection Agency monitor air quality data in Lake County. Lake County does not have an established program dedicated to monitoring air quality. Overall, Lake County's air quality can be considered good.

6. Historic Resources

The Florida Division of Historical Resources maintains and regularly updates the *Florida Master Site File*. The *Florida Master Site File* is a paper file archive and computer database of recorded historical cultural resources in Florida. Categories of resources recorded at the Site File include archaeological sites, historical structures, historical cemeteries, historical bridges and historic districts. The *Site File* also holds copies of survey reports and other manuscripts relevant to Florida history and prehistory. As of March 2010, there were 7 historic structures or sites in the Town that were added to the State's *Master Site File*. The Howey House was listed in the National Register of Historic Places (see Table 5 and the Town's *National Register of Historic Resources Map*).

Table 6: Historic Sites and Structures

Site Name	Address/Site Type	Year Built	Architectural Style/ Archaeological culture	Date Certified
TOM Line	Pre-historic Mound		St. Johns, 700 B.C. – A.D. 1500	
Flagship 1	Land-terrestrial		Prehistoric	
Flagship 2	Land-terrestrial		20th Century American, 1900-present	
Howey Water Tower	316 Grant Street	1926	Unspecified	
Howey Academy		1923	Unspecified	
Howey House	Citrus Street	1925	Mediterranean Revival ca. 1880-1940	1/27/1983
Griffin Airways Landing Strip	Designed Historic Landscape	1950s-1960s	Griffin Airways Landing Strip is not a man-made construction. It was a cleared dirt strip of land that served as an airstrip for Prop planes. C.V. Griffin used the strip to fly in investors to the area as he tried to foster industrial development.	

Source: Florida Department of Historical Resources, Florida Master Site File – March 2010.

D. ANALYSIS

1. Economic Vitality

The Town is now and plans to continue primarily as a residential community with commercial support to serve the residents and visitors. The small downtown business district along Central Avenue from Lakeshore Boulevard to S. Mare Avenue, primarily serves the immediate convenience needs of the Town's residents. The Town has prepared a redevelopment plan for this area to include a land use plan, master stormwater system and public parking areas. Various cities and towns in Lake County provide additional employment and needed services within reasonable commuting areas of the Town. As future development occurs in the Village Mixed Use areas, additional employment and service opportunities will be made available for the Town's residents and others. This will provide for much improved sustainability for the Town over the planning period.

2. Nonconforming and Incompatible Uses

Land use conflicts arise when uses are introduced in dissimilar areas without proper buffering. The *Future Land Use Map* and the Howey-in-the-Hills Land Development Regulations set forth the appropriate locations for land uses in the Town in order to eliminate existing land use conflicts. The Town's Land Development Regulations addresses incompatibilities through control of nonconforming uses.

3. Availability of Facilities and Services

This section provides an overview of the availability of public facilities and services in Howey-in-the-Hills during the planning period.

As previously mentioned, the Town of Howey-in-the-Hills currently has a limited central wastewater system. The Wastewater Treatment Facility (WWTF) is owned by the Central Lake Community Development District with the Town owning and maintaining the collection system up to the CDD facility. In 2006, through a wastewater impact fee study performed in anticipation of possible creation of a Town-owned wastewater collection and treatment system, the Town established a wastewater Level of Service value of 120 gallons per person per day.

As previously mentioned, the Town's potable water system provides water for both residential and non-residential purposes, including fire-fighting demands. The system has enough capacity to support the population demand during the planning period of this *Comprehensive Plan* (2025).

The Town's solid waste level of service standard for solid waste is 6 pounds per person

per day. There is enough capacity in the County's landfill to support the population demand during the short-range (2011-2015) and long-range (2025) planning period.

The Town shall continue to require development to provide for the 100-year, 24-hour rainfall event and provide retention for water quality consistent with new and innovative techniques. The Town shall also continue to require that all new development provide evidence to show that LOS ratings in stormwater conveyances serving the new development will not be degraded to an LOS lower than currently exists as a result of the new development's construction and stormwater runoff contribution.

There are more than adequate recreational facilities and open spaces readily available and accessible to the residents and guests of Howey-in-the-Hills. The Town shall continue to coordinate with the County on establishing measures to enhance the recreation and open space opportunities in and around Town. The Town will also continue to solicit grants from public and private agencies and collect park impact fees to fund future parks and facilities.

There are no public school facilities planned in the Town during the planning period.

4. Groundwater Recharge

As previously mentioned, Howey-in-the-Hills is in a recharge area with a recharge rate of 1 to 10 inches per year and discharge rate of less than 1 inch per year. There are no known groundwater recharge problems in Howey-in-the-Hills. The Town shall continue to protect the quality of groundwater recharge through enforcing the Town's Land Development Regulations and the guidelines established in this *Comprehensive Plan*. The quality of groundwater recharge shall also be protected by ensuring that all stormwater conveyances serving new development does not degrade the level of service lower than currently exists as a result of the new development's construction and stormwater runoff contribution.

5. Analysis of Existing Vacant Lands

As previously mentioned, there are 1,769 acres of vacant land (516 acres of this land is Conservation land use) in Town. About 51% (909 acres) of the vacant lands is in the Village Mixed Use Future Land Use category and 19% (335 acres) is designated for Residential uses (see the Town's *Vacant Lands Map)*. The soils on these vacant lands are overall suitable for development. The elevation on these vacant lands range from 75 feet mean sea level (MSL) to 170 feet MSL. There are no known sinkholes located on these vacant lands. There are also no known environmentally sensitive lands or significant natural resources located on these vacant lands that will prevent any development.

6. Analysis of Land Needed to Accommodate Projected Population

Most of the vacant land in the Town is in Village Mixed Use planned communities. The Town has approved conceptual developments for all but one of the Village Mixed Use properties. These properties contain enough land area for residential, commercial, civic and recreational uses for the projected population to the end of the planning period. These projects are summarized in Table 2.

7. 2023 Analysis and Reevaluation of Residential Densities and Lot Sizes

In 2023 the Town Council and the Town's Planning and Zoning Board analyzed and reevaluated post-2010 residential development in the Town. Residential development under the Village Mixed Use designation resulted after 2010 in substantially increased housing densities and substantially smaller residential lots than were prevalent in the Town's historical development.

The evaluation and analysis was accompanied by robust public participation. Public sentiment agreed overwhelmingly with Town Council: the increased densities and downsized lots after 2010 were inconsistent with the character, appearance, and ambiance of the Town's historical neighborhoods. Contrary to FLUE Policy 1.1.2, development in Village Mixed Use had failed to "maintain the unique charm of the Town."

Consequently, the Town Council determined that amendments to this Future Land Use Element to redirect future residential densities and lot sizes were warranted and desirable.

8. Analysis of Need for Redevelopment

The Town Center Overlay District needs redevelopment. The Town has completed a redevelopment plan for the Central Avenue business core and made recommended changes to selected comprehensive plan policies in support of this plan. The Town is currently working on a program for installation of sanitary sewer on Central Avenue as an essential precursor to broader redevelopment proposals. Howey-in-the-Hills will promote a live-work environment as well as shopping and restaurants to serve the local area.

9. Analysis of Flood Prone Areas

The Town shall continue to ensure that development within floodplains will be closely scrutinized to ensure compliance with established Land Development Regulations. Most vacant lots in Town are very suitable for building.

10. An analysis of Land Use Problems and Potential Use Problems

No major current or potential land use problems are seen within the Town.

11. Urban Sprawl

The Town does not and will continue not to promote the approval of development that will contribute to "urban sprawl." An analysis corresponding to measures the Town implements to discourage a proliferation of urban sprawl is featured in this section

1. Promotes, allows or designates for development substantial areas of the jurisdiction to develop as low-intensity, low-density, or single-use development or uses in excess of demonstrated need.

   The Town has adopted a Planned Unit Development ordinance and Village Mixed Use and Town Center Mixed Use land uses. There has not been any significant development of low intensity single family subdivisions. The Town's Concurrency Management System, subdivision regulations, and zoning regulations discourages this type of development.

2. Promotes, allows or designates significant amounts of urban development to occur in rural areas at substantial distances from existing urban areas while leaping over undeveloped lands which are available and suitable for development.

   All new development must prove that it will be served by adequate public facilities prior to the issuance of a development order. The new development must also demonstrate that it will not degrade the level of service beyond the adopted standard.

3. Promotes, allows or designates urban development in radial, strip, isolated or ribbon patterns generally emanating from existing urban developments.

   The Town's Village Mixed Use and Town Center Overlay Mixed Use categories preclude strip commercial-type development and isolated single uses.

4. As a result of premature or poorly planned conversion of rural land to other uses, fails adequately to protect and conserve natural resources, such as wetlands, floodplains, native vegetation, environmentally sensitive areas, natural groundwater aquifer recharge areas, lakes, rivers, shorelines, beaches, bays, estuarine systems, and other significant natural systems.

The Town protects and conserves all natural resources by enforcing the requirements of this *Comprehensive Plan* and the Town's Land Development Regulations. The Town delineates wetlands and other environmentally sensitive lands as Conservation on the Town's *Existing* and *Future Land Use Maps*. No buildings are permitted on Conservation lots in Town except for boardwalks, docks, observation decks, and similar facilities as allowed by the Town and all regulatory agencies.

5. Fails adequately to protect adjacent agricultural areas and activities, including silviculture, and including active agricultural and silvicultural activities as well as passive agricultural activities and dormant, unique and prime farmlands and soils.

The Town has adopted a Rural Lifestyle land use category on the *Future Land Use Map*. This land use is primarily for single-family detached homes with allowable agricultural practices. There is a minimum of 2 acres required for this land use. There is a maximum density of 1 dwelling unit per 2 acres, 0.15 floor area ratio, 20% maximum impervious surface coverage, and 50% open space requirement on the Rural Residential lots in Town. The Town feels that the adopted standard is adequate to protect these agricultural areas in Town to serve as a buffer for nearby rural areas.

6. Fails to maximize use of existing public facilities and services.

The Town annually updates and adopts a Concurrency Management System Report to ensure that existing public facilities and services have enough capacity to support the population demand. All deficiencies are identified along with capital plans to address those deficiencies. Any deficiencies are incorporated in the *Capital Improvements Element*.

7. Fails to maximize use of future public facilities and services.

The Town annually updates and adopts a *Concurrency Management System Report* to ensure that future public facilities and services are adequately signed to address future needs.

8. Allows for land use patterns or timing which disproportionately increase the cost in time, money and energy, of providing and maintaining facilities and services, including roads, potable water, sanitary sewer, stormwater

management, law enforcement, education, health care, fire and emergency response, and general government.

The Town has concurrency requirements for potable water, sewer, solid waste, drainage, parks and recreation, roads, and public schools.

9. Fails to provide a clear separation between rural and urban uses.

The Town feels that the adopted open space, and minimum development intensity and density standards are sufficient to ensure a clear separation between rural and urban uses.

10. Discourages or inhibits infill development or the redevelopment of existing neighborhoods and communities.

The Town promotes infill development or redevelopment of existing neighborhoods and communities and has created a Town Center Overlay to address infill and redevelopment in the historic Town Center.

11. Fails to encourage an attractive and functional mix of uses.

The Town has adopted a Planned Unit Development Ordinance which would permit an attractive and functional mix of uses in appropriate areas of the Town. There are about 855 acres of land designated as Village Mixed Use on the Town's *Future Land Use Map* and majority of this land is vacant.

12. Results in poor accessibility among linked or related land uses.

Solutions to better manage traffic within the historic downtown area and to discourage additional traffic have been implemented. Uses have also been linked with bicycle paths and sidewalks. The Town requires new subdivisions or developments to address circulation, access control, off-street parking and landscaping of median strips and rights-of-way.

13. Results in the loss of significant amounts of functional open space.

The Town requires that levels of service be met for park land and open space. Each new development will include open space and recreational components.

The Town shall continue to discourage the approval of any development or redevelopment projects that will promote urban sprawl.

12. Energy Efficiency, Energy Conservation, and Greenhouse Gas Emission

The Town has identified strategies for producing energy efficient land use patterns, increasing energy conservation, and reducing greenhouse gas emissions. This section provides an overview of the energy related strategies implemented by the Town.

a. Producing Energy Efficient Land Use Patterns

The Town has adopted the Village Mixed Use and Town Center Mixed Use land uses as a tool to produce energy efficient land use patterns in Howey-in-the-Hills. The Town will ensure that developments within these mixed-use areas are compact, walkable neighborhoods.

The Town has also established a "build-out" area (the Town's Utility Service Area) to determine the maximum extent of where urban development will be approved by Town Council. During the preparation of the *Future Land Use Map*, the Town reviewed all land uses to ensure that the higher gross density and intensity standards were appropriately established in all areas planned for urban development within the "build-out" area.

The Town's minimum density and intensity standards apply to all areas planned for urban development and redevelopment. These standards and the buffering requirements established in the Land Development Regulations ensure that the land uses in Howey-in-the-Hills will remain compatible and consistent with the surrounding land uses.

b. Increasing Energy Conservation

The Town is in the process of establishing an *Energy Management Plan* to increase energy conservation (see Policy 1.17.3 of this *Element*). The *Energy Management Plan* will be used as a tool to minimize electric, fuel and water resources in Town buildings, fleet vehicles and on public properties.

The Town promotes "green" development in both private and municipally-supported housing. Green development specifically relates to the environmental implications of development. Green building integrates the built environment with natural systems, using site orientation, local sources, sustainable material selection and window placement to reduce energy demand and greenhouse gas emissions. The Town is in the process of amending the Land Development

Regulations to establish green building practices and sustainability development guidelines.

The Town requires energy-efficient and water saving measures to be implemented in all new construction and redevelopment projects.

c. Reducing Greenhouse Gas Emissions

The Village Mixed Use and Town Center Mixed Use land uses will serve as a tool to reduce vehicle miles traveled in Town, which will reduce the greenhouse gas emissions. Residents and guests of Howey-in-the-Hills can easily access the historical downtown or Little Lake Harris area by walking or biking. The Town is actively involved with the Lake-Sumter MPO regarding expanding the pedestrian and bicycle facilities in Town. The Town will continue to promote mixed-use developments, bicycling, and walking as a tool to reduce the greenhouse gas emissions in the Howey-in-the-Hills area.

The Town is amending its Land Development Regulations to ensure that the removal of regulatory barriers and establishment of incentives to promote energy efficiency and conservation is implemented in Howey-in-the-Hills.

E. Future Land Use Goals, Objectives, and Policies

Upon the effective date of the ordinance adopting this *Comprehensive Plan*, all rules, regulations, criteria, and principles set forth in the *Plan* become effective. Where a policy refers to the Land Development Regulations, the intent of the policy and its contents remain effective with the *Plan* adoption date. Regulations established by State or Federal statutes or administrative codes referenced in objectives or policies shall pertain to the most recent adopted regulation or code as may be amended by said parties from time to time without immediate notice to the Town.

GOAL 1: Retention of the quaint distinctive residential character of the Town by promotion of high quality residential development together with an appropriate level of supporting service and retail opportunities and live-work environments as well as preserving the natural features of the area and minimizing threats to the citizens caused by hazards, nuisances, incompatible land uses or environmental degradation while providing a sense of place and history.

OBJECTIVE 1.1: ***Identifying Land Use Patterns and Permitted Densities and Intensities.*** To identify the appropriate land use patterns, residential densities, and non-residential intensities of land use permitted in Howey-in-the-Hills.

POLICY 1.1.1: ***Land Use Designations.*** The Town shall establish, adopt and implement density and intensity standards for all future land uses, as applicable, and as indicated on the *Future Land Use Map* and the adopted Town Zoning Map.

Density and intensity standards for land uses in Howey-in-the-Hills are featured below

Land Use	Maximum Residential Density
Residential:	
Low Density Residential (LDR)	Up to 2.0 dwelling units per acre. Maximum building height is 2-1/2 stories and no higher than 30 feet.
Medium Density Residential (MDR)	Up to ~~4.0~~ 3.0 dwelling units per acre. A 25% minimum open space is required. Developments with 100 units or more shall be required to have a public recreation component. Developments with either more than 300 proposed dwelling units or more than 100 acres must use the Village Mixed Use designation. May include support community facilities and elementary schools. Maximum building height is ~~2-1/2 stories and no higher than~~ 30 feet.

Rural Lifestyle (RL)	Up to 1.0 per 2 acres. Must have a minimum of 2 acres for this land use. A 50% minimum open space is required. All buildings shall not exceed a 0.15 floor area ratio. The maximum impervious surface coverage is 0.20. Maximum building height is 2-1/2 stories and no higher than 30 feet.
Land Use	**Maximum Land Intensity**
Neighborhood Commercial (NC)	The maximum floor area ratio is 0.50. The maximum impervious surface coverage is 0.70. The maximum building height is 35 feet and limited to two-stories. The maximum building size is 5,000 sq. ft. unless a special exception is granted to the developer by the Town Council. Elementary and middle schools are also permitted in this category.
Light Industrial (LI)	The maximum impervious surface is 0.70. The maximum floor area ratio is 0.60. High schools are permitted in this category.
Institutional (INST)	The maximum floor area ratio is 0.25. The maximum impervious surface coverage is 0.40. A 25% minimum open space is required. Maximum building height is 2-1/2 stories and no higher than 30 feet.
Recreation (REC)	Maximum impervious surface coverage is 0.30. Restricted to passive or active recreational facilities as established in the *Recreation and Open Space Element* or by the Town Council.
Conservation (CON)	No buildings. Restricted to boardwalks, docks, observation decks, and similar facilities as allowed by the Town and all regulatory agencies.
Public/Utility (PUB)	The maximum floor area ratio is 0.25. The maximum impervious surface coverage is 0.50. For utilities, the maximum building height is 1 story or no higher than 20 feet for building; 2 story and 35 feet for other facilities.

Village Mixed Use (VMU)	Minimum of ~~25~~ 100 acres to apply for this land use. Maximum density of ~~4~~ 3.0 dwelling units per acre.~~, which may be increased to 6 dwelling units per acre if the development includes 20% usable public open space (no wetlands).~~ Residential areas shall comprise a minimum of 70% of the net land area and a maximum of 85% of the net land area. Commercial/non-residential areas shall comprise a minimum of 15% of the net land area and a maximum of 30% of the net land area. This includes community facilities and schools. All single-family lots must have a minimum lot area of 10,890 square feet (1/4 acre) exclusive of any wetlands or waterbodies that might be included with the lot. ~~For developments with more than 100 acres,~~ Five percent (5%) of the non-residential land shall be dedicated for public/civic buildings. Commercial/non-residential may be 2 stories with 50% coverage as long as parking and other support facilities (stormwater) are met. The maximum building height is 35 feet. Public recreational uses must occupy a minimum of 10% of the useable open space (no wetlands). A minimum of 25% open space and a minimum of 10% dedicated to park and recreation uses is required. Park and recreation areas count toward the 25% open-space requirement. No less than 50% of areas dedicated to park and recreation uses must contain active recreation uses. To be counted against the 10% park/recreation requirement, parcels dedicated to park uses may be no smaller than ___ ac. The Land Development Code must require that plans for active recreation uses be submitted for approval by Town Council no later than application for final plat approval. Town Council may require a performance surety bond for park and recreation improvements. The maximum building size is 30,000 sq. ft.; unless a special exception is granted to the developer by the Town Council.

Town Center Mixed Use (TCMU)	The Town Center Overlay Map denotes where specific uses are permitted within the Town Center (see the Town's *Town Center Overlay Map*). For areas designated Commercial Core, all new buildings must be 2 stories or provide a minimum street façade elevation of at least 15-feet to create a vertical enclosure along Central Avenue. The maximum building height is 35 feet. In order to maintain the historic character of the downtown area, the Land Development Regulations will cap the maximum size of any one business in the Town Center Overlay at 5,000 square feet. A maximum 2.0 floor area ratio is permitted if parking requirements are achieved. Where new residential uses are constructed in the commercial core, these uses shall be located on the second floor of buildings. (Existing single-family units on Central Avenue west of Dixie Drive and units fronting on Oak Street and Holly Street are considered permitted uses. Single-family residences may not be constructed elsewhere within the Town Center Commercial Area. Properties in the Town Center Commercial Area within the designated sections of W. Central Avenue, oak Street and Holly Street may be converted to non-residential uses, and once converted, may not revert to single-family residential use. For areas designated Office/Services or Residential, the maximum impervious surface coverage is 0.40. May live and/or work in these areas. For areas designated Residential, the maximum density is 4 units per acre. There is a total of 81.73 acres in the Town Center Overlay. About 23.3% of the Town Center Overlay is comprised of roads which are laid out in a grid system. About 52.5% of the Town Center Overlay area is designated for residential use. About 16% of the Town Center is designated for commercial/office/professional services use (with the possibility of residential on the second floor) and about 8.2% is designated as flex space, where either office, professional services, or residential uses – or a live/work combination of those uses is permitted. Open space within the Town Center will not be defined as it is for other areas within the Town. Rather, the Town has established maximum impervious surface coverage standards that may not be

	surpassed within the various uses in the Town Center. The areas designated as Commercial Core have a maximum impervious surface coverage of 100%. Areas designed office/professional services and/or residential shall have a maximum impervious surface coverage of 40% and areas designated as residential in the Town Center shall have a maximum impervious surface of 50%. In the commercial core of the Town Center, the Town anticipates a master stormwater system which will allow maximum coverage for buildings and surface parking.

POLICY 1.1.2: ***Land Use Categories.*** The land use categories, as depicted on the Town's *2035 Future Land Use Map (FLUM)* shall permit the following uses and activities.

Conservation - Conservation lands shall include those lands so designated on the *FLUM*. These areas are generally composed of open land, water, marsh and wetlands and environmentally sensitive areas. Conservation lands may be either publicly or privately owned. It is intended that the natural and open character of these areas be retained and that adverse impacts, which may result from development, shall be prohibited or minimized. Adverse impacts shall be presumed to result from activities, which contaminate or degrade wetlands and environmentally sensitive areas, or natural functions and systems associated with such areas. Permitted uses within the Conservation category shall be limited to the following and shall be further controlled by the Land Development Regulations.

- Activities intended for the conservation, re-establishment and re-nourishment, or protection of natural resources.
- Recreation uses and facilities that are customarily described as passive in nature including, but not limited to, fishing, hiking and biking, canoeing, kayaking, and the use of other similar small, quiet low-speed watercraft.
- Very low intensity outdoor or water-dependent recreational related uses (excluding commercial marinas) that are determined not to conflict with the intent of the Conservation category, subject to applicable

Federal, State and local policies and permitting requirements.

Neighborhood Commercial - The Neighborhood Commercial land use category is intended to provide appropriate locations for neighborhood and community businesses providing services and retail sales for the Town and the nearby communities. Permitted uses within the Neighborhood Commercial category shall be limited to the following uses unless a special exception is granted to applicant by the Town Council.

- **General Commercial.** These areas shall include those businesses that provide retail goods and services, which serve the routine and daily needs of residents, including banks and professional services, grocery and convenience stores, retail shops, and restaurants. Public and private elementary and middle schools are also allowed.
- **Limited Commercial.** These areas shall include low intensity office, service and retail businesses that are compatible when located in close proximity to neighborhoods. These uses are intended primarily to serve the needs of the closely surrounding neighborhood.
- **Professional and Office.** These areas shall be limited to small neighborhood scale businesses and professional offices that are compatible with, and have no measurable or noticeable adverse impacts, upon surrounding residential uses. Such uses include offices for doctors and dentists (but not clinics or hospitals), accountants, architects, attorneys, engineers, land surveyors, real estate brokers, financial planners, insurance and real estate agents and the like.

Light Industrial – The Light Industrial category shall be limited to light manufacturing and production, storage, warehousing and distribution uses as further controlled by the Land Development Regulations. Light industrial uses may have outdoor storage and business-related activity, but such uses shall not include processes that create negative effects to surrounding properties due to noise, heat, fumes, debris, chemicals or hazardous materials. High schools are permitted in this category.

Rural Lifestyle – The Rural Lifestyle category shall be primarily limited to single-family detached homes with agricultural uses. Limited commercial activities are permitted such as bed and breakfast establishments, horseback riding facilities, and farm stands for fruits and vegetables grown on that location.

Low Density Residential – The Low Density Residential category shall be primarily limited to single-family detached homes. Residential uses in this category shall be permitted in those areas so designated in accordance with the applicable permitted density and as further controlled by the Land Development Regulations and the Florida Building Code.

Medium Density Residential - The Medium Density Residential category ~~shall be primarily~~ is limited to single-family detached homes~~, townhomes, or similar type of uses~~. Support community facilities and elementary schools are also permitted in this category. Residential uses in this category shall be permitted in those areas so designated in accordance with the applicable permitted density and as further controlled by the Land Development Regulations and the Florida Building Code.

Institutional – The Institutional category shall be primarily limited to schools, religious facilities, day care facilities (child and adult), government buildings, cemeteries, or similar uses as identified by the Town Council.

Recreation – These areas generally include public parks or private parks that are open and available to the public. Note: Some park and open space lands may be more appropriately designated as Conservation, such as lands with wetlands or other environmentally sensitive areas. Permitted uses shall include active and passive recreation activities including bikeways and pedestrian trails, or other similar facilities as identified by the Town Council.

Public/Utility - These areas include uses such as government facilities and essential utilities, including police, fire and Town Hall buildings and wastewater facilities.

Town Center Mixed Use – Primarily intended for mixed-use development in the historical downtown area. The historical downtown area is an economic, cultural, social, historic and architectural anchor of the Town. In order to sustain these qualities, new development and redevelopment within the Town Center Mixed Use District shall be reflective of the architectural styles and fabric of the area. Consistency and compatibility with the existing built environment shall be considered in the review and issuance of development permits within the Town Center Mixed Use District. In order to preserve the quaint character of downtown Howey-in-the-Hills, size limitations will also be placed on individual businesses. Redevelopment will focus on orienting buildings and roadways to a pedestrian scale.

Village Mixed Use – Primarily intended to create sustainability and maintain the unique charm of the Town, including the provisions of reducing ~~the dependability~~ dependence on the automobile, protecting more open land, and providing quality of life by allowing people to live, work, socialize, and recreate in close proximity. Elementary, middle, and high schools are also permitted in this category. Village Mixed Use parcels less than 100 acres shall use a planned unit development format and are not required to meet the non-residential and civic use requirements. Public recreation and open space requirements shall still apply.

POLICY 1.1.3: ***Consideration of Community Facilities.*** Necessary community facilities shall be permitted within any future land use designation except Conservation if such activity satisfies established criteria of the *Comprehensive Plan* and the Town's Code of Ordinances.

POLICY 1.1.4: ***Interpretation of Open Space and Density Designations.*** Open space ~~is~~ and parks/recreation requirements are figured on the Gross Land Area. Up to ~~50%~~ 25% of the open space requirement may be met with wetlands. Open space may include landscaped buffers and stormwater facilities if they are designed to be a park-like setting with pedestrian amenities and free form ponds. Open space may be passive or active. Open space may include public recreational components of developments. The majority of the open space shall be permeable; however, up to 10% may be impervious (plazas, recreational facilities, etc.). Wet ponds are not counted as part of that 10%.

Densities would be determined by the Net Land Area. The Net Land Area is figured by taking the Gross Land Area (total property less any lakes or water bodies), then subtracting from that any open space requirements, then subtracting from that any remaining unbuildable acreage (remaining wetlands).

OBJECTIVE 1.2: ***Residential Quality and Neighborhood Cohesiveness.*** Designate and promote sufficient areas for quality residential development and neighborhood cohesiveness and require the availability of adequate facilities to support demands necessitated by existing and future housing development and associated populations.

POLICY 1.2.1: ***Adequate Residential Land Area.*** The Town shall ensure that adequate residential land uses needed to support the population during the planning period shall be designated on the *Future Land Use Map.* The residential land uses shall continue to reflect a pattern that promotes neighborhood cohesiveness and identity. All residential uses shall be subject to the requirements established in the Town's Land Development Regulations.

POLICY 1.2.2: ***Open Space Requirements.*** The Town shall continue to ensure that residential development is consistent with the open space requirements established below:

	Minimum open space requirements
Rural Lifestyle	50%
Low Density Residential	2 dwelling units per acre
Medium Density Residential	25%
Town Center Mixed Use	Within the Town Center Overlay, open space as defined herein is not required. The areas designated as Commercial Core have a maximum impervious surface coverage of 100%. Areas designed office/professional services and/or residential shall have a maximum impervious surface coverage of 40% and areas designated as residential in the Town

	Center shall have a maximum impervious surface of 50%.
Village Mixed Use	25%
Neighborhood Commercial	0.50 floor area ratio; 70% max. impervious surface coverage
Light Industrial	70% max. impervious surface coverage; .6 FAR
Institutional	25%
Recreation	Max. 30% impervious surface coverage
Conservation	No buildings except boardwalks, docks, observation decks, and similar facilities as allowed by the Town and all regulatory agencies.
Public/Utilities	0.25 FAR; max. impervious surface coverage of 50%

Open Space: Open space is figured on the Gross Land Area. No greater than ~~50%~~ 25% of the open space requirement may be met with wetlands. Open space may include landscaped buffers and stormwater facilities if they are designed to be a park-like setting with pedestrian amenities and free form ponds. Open space may be passive or active. Open space may include public recreational components of developments. The majority of the open space shall be permeable; however, up to 10% may be impervious (plazas, recreational facilities, etc.). Wet ponds are not counted as part of that 10%.

POLICY 1.2.3: ***Encroachment of Incompatible Non-residential Development.*** Residential areas delineated on the *Future Land Use Map* shall be protected from the encroachment of incompatible non-residential development. Community facilities and services which best serve the health, safety, and welfare of citizens when located in residential areas, shall be permitted uses therein so long as the activity complies with criteria established in this *Plan* and those in the Town's Code of Ordinances.

POLICY 1.2.4: ***Residential Screening Techniques.*** The Town shall require new commercial, light industrial, and manufacturing development to install landscaping, visually obstructive fencing or man-made

berms, or other appropriate screening techniques obstructing view of the commercial, light industrial, or manufacturing site from areas designated for low or medium density residential if the proposed commercial, light industrial, or manufacturing building is incompatible with the residential area.

POLICY 1.2.5: ***Access to and Circulation within Residential Areas.*** Transportation systems within designated residential areas delineated on the *Future Land Use Map* shall be designed to accommodate traffic conditions that maintain public safety, encourage alternative modes of transportation, and limit nuisances. Access to residential areas shall comply with policies established within the *Transportation Element*.

POLICY 1.2.6: ~~***Transition of Residential Densities.*** The Town shall continue to orient the transition of residential densities on the *Future Land Use Map* toward higher densities along major transportation corridors and areas adjacent to commercial or other intensive land uses, while lower residential densities shall be directed towards areas further from the Town center (i.e., the central commercial district) and in areas adjacent to agricultural lands.~~

Reorientation of Residential Densities. For residential development of ten homes or more, the Town may allow lot sizes smaller than one-fourth acre (10,890 sq. ft.) only in the following locations:

i. areas in or adjacent to the Town center (that is, the Town central commercial district);
ii. areas abutting major arterial and collector road corridors such as state roads, county roads, and major Town collector roads such as Central Avenue and North Citrus Avenue, but not just neighborhood roads with higher traffic counts, and
iii. areas abutting commercial or industrial land uses.

The Town shall require single family residential lots in all other areas to be one-fourth of an acre (10,890 sq. ft.) or larger.

POLICY 1.2.7: ***Compatibility of Residential Densities and Public Facilities.*** Residential densities shall be compatible with available public facilities and their capacity to serve development. Residential

areas designated on the *Future Land Use Map* shall be allocated according to a pattern that promotes efficiency in the provision of public facilities and services and furthers the conservation of natural resources. Public facilities shall be required to be in place concurrent within the impacts of development.

POLICY 1.2.8: ***Concurrency Management System Criteria.*** All public facilities and services must be in place consistent with the criteria established within the Town's Concurrency Management System. Development applications for new residential development shall not be approved unless water, sewer, drainage, park, transportation, solid waste, and public school capacities are available consistent with level of service standards and according to deadlines established within the Concurrency Management System.

POLICY 1.2.9: ***Residential Density and the Future Land Use Map.*** The Town shall ensure that residential density on the *Future Land Map* is based on the following considerations:

- past and anticipated future population and housing trends and characteristics;
- provision and maintenance of quality residential neighborhoods and preservation of cohesive neighborhoods;
- protection of environmentally sensitive lands; and
- transition of density between low, medium and high residential districts.

POLICY 1.2.10: ***Group Home and Foster Care Facilities.*** The Town shall continue to allow the location of group homes and foster care facilities in residential areas. These facilities shall serve as alternatives to institutionalization.

OBJECTIVE 1.3: ***Conservation of Environmentally Sensitive Lands, Other Natural Resources, Historically Significant Sites.*** Manage and control existing and future land uses located within or adjacent to environmentally sensitive lands, open space, other significant natural resources, and historically significant sites.

POLICY 1.3.1: ***Limiting Development in Wetland Areas.*** The Town shall limit development within all wetland areas to land uses supporting conservation facilities and water-related passive recreation activities, as defined in the *Recreation and Open Space Element*.

Wetlands shall be identified on the *Future Land Use Map* Series as Conservation lands. No development shall be permitted in wetlands except for conservation or passive recreation uses as defined within policies cited herein.

POLICY 1.3.2: ***Wetlands and Natural Buffer Zones.*** Wetlands shall be protected from impacts generated by adjacent land uses through natural buffer zones.

1. No development of disturbance of area is permitted within 25 feet of a designated wetland area. These areas shall be marked with appropriate signage as conservation areas.

2. No building or impervious surface area (with the exception of wet retention areas) is permitted within 50 feet of a designated wetland area.

POLICY 1.3.3: ***Protection of Floodplains.*** Development within the 100 Year Floodplain shall provide necessary mitigation to maintain the natural stormwater flow regime. The 100 Year Floodplain Zone shall be delineated within the *Future Land Use Map* series. The boundary of the 100 Year Floodplain Zone shall be determined by the most recent Flood Insurance Maps prepared by the Federal Emergency Management Agency.

POLICY 1.3.4: ***Floodplain Mitigation.*** All development within the 100 Year Floodplain shall adhere to the following:

a. ***Prohibited Land Uses and Activities.*** Storing or processing materials that would, in the event of a 100 Year Storm, be buoyant, flammable, explosive, or potentially injurious to human, animal or plant life is prohibited. Material or equipment immune to substantial damage by flooding may be stored if securely anchored to prevent flotation or if readily removable from the area upon receipt of a flood warning. Manufacturing and light industrial land uses shall be prohibited from encroaching into the 100 Year Floodplain Zone.

b. ***Minimum Floor Height Elevation.*** All new construction and substantial improvements of existing construction

occurring within a 100 Year Flood Zone must have the first-floor elevation for all enclosed areas at eighteen inches above the 100-year flood elevation.

c. ***Construction Materials and Methods.*** All new construction and substantial improvements of existing construction shall be constructed with material and utility equipment resistant to flood damage and using methods and practices that will minimize flood damage and prevent the pollution of surface waters during a 100-year flood event.

d. ***Service Facilities and Utilities.*** Electrical heating, ventilation, plumbing, air conditioning, and other service facilities shall be designed or located to prevent water from entering or accumulating within the components during a base flood. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate both infiltration of flood water into the systems and discharges from the systems into flood waters.

e. ***Residential Subdivision Plans and Design.*** Plans for subdivisions shall minimize potential flood damage by locating recreation and conservation uses, if included in the plans, to areas within the Flood Zone, reserving as much land as possible outside the flood zone for other land uses. Also, 100-Year Flood Zones shall be identified on all final development plans submitted to the Town.

f. ***Stormwater Facilities.*** The Town shall require development to have drainage facilities in place and functioning concurrent with the impacts of development, as stipulated by deadlines established within its Concurrency Management System. Such drainage facilities shall be designed to comply with the Town's established level of service standard.

POLICY 1.3.5: ***Aquifer Recharge.*** The Town rests on an area possessing high aquifer recharge potential. To maintain the natural rate of percolation within aquifer recharge areas, the Town shall enforce the following:

a. ***Impervious Surface Ratio and Open Space.*** Enforce the impervious surface ratios and open space standards established in this *Comprehensive Plan*.

b. ***Manufacturing or Light Industrial Uses and Recharge Areas.*** Ensure that the *Future Land Use Element* does not allocate any manufacturing or light industrial land use activities adjacent to lake front areas or within high recharge groundwater aquifer areas that generate pollutants that may adversely impact the quality of surface and ground waters. The guidelines established in the Town's Land Development Regulations regarding manufacturing uses permitted within commercial districts and light industrial uses shall serve as a guide to monitor the type and intensity of such uses in the Town.

c. ***Permeable Parking Lots.*** Promote the application of permeable parking lot surfaces for commercial developments proposed within high recharge areas.

d. ***Land Use Activities and Densities.*** Promote land use activities and development densities which are compatible to high recharge potential percolation rates.

POLICY 1.3.6: ***Lake Shore Protection.*** To protect the lake front areas from the encroachment of development, a shoreline protection zone shall be delineated. There shall be no disturbance within 50 feet of the landward extent of wetlands as set forth in Rule 62-340, except for pilings for docks or piers. There shall be no buildings, pools, ponds, or other structures in this protection zone. There shall be no septic tanks within 75 feet of the landward extent of wetlands as set forth in Rule 62-340. All development shall be subject to the building setback requirements regarding the shoreline protection zone established in the Town's Land Development Regulations.

POLICY 1.3.7: ***Upland Vegetative and Wildlife Habitat Protection.*** Upland vegetative communities and wildlife habitats (particularly those identified as primary habitat for endangered or threatened species) for which the Town or State deems environmentally significant shall be protected from adverse impacts associated with development. Upland areas identified within the *Conservation*

Element as essential breeding, feeding or habitat sites for endangered or threatened flora or fauna creatures shall be protected according to the following activities:

a. ***Conservation Designation.*** Important upland habitat may be designated as conservation under the following circumstances:

1. The site is owned by a government body or agency;
2. The site is programmed for purchase by a government agency within the first three years of the *Five-Year Schedule of Capital improvements*; and
3. A request to designate the site as conservation is made by the land owner.
4. The Town requires the designation as a part of the development review process.

Development proposed to occur within areas designated as Conservation are subject to all policies pertaining to open space requirements and development restrictions.

b. ***Sites with Endangered or Threatened Species.*** Any areas identified within the *Conservation Element* as refuge, breeding, feeding, or habitat areas of endangered or threatened species shall be subject to the following activities:

1. An applicant of a property designated for development shall prepare a Critical Habitat Management Plan prepared by a professional biologist, ecologist, or other related professional. As a minimum, this Plan shall analyze the following issues:

a.) Affected species;
b.) Land needs to support continued on-site presence of the species;
c.) Impacts of proposed development which will disturb the species;
d.) Recommended management plans and measures necessary to protect the subject species; and
e.) Cost to developer to implement the recommended management plan.

The adequacy of the study shall be determined by the Town of Howey-in-the-Hills. The final development plan shall conform to recommendations determined within the study as approved by the Town Council. The Town will reserve the right to have a State agency review the Critical Habitat Management Plan and provide a written response.

POLICY 1.3.8: ***Historically Significant Sites.*** The Town shall use the Florida Master Site File as a resource to identify archeological resources and historically significant structures. The Howey House and any other historically significant sites listed on the Florida Master File or the National Register of Historic Places shall be identified on the *Future Land Use Map* Series. In addition, the Town shall also distinguish buildings as historic if the following criteria are met:

a. The age of the subject site exceeds fifty years;
b. Whether the building, structure, or object represents the last remaining example of its kind in the neighborhood or Town;
c. Whether documented proof indicates that the site played a significant role in the history of Howey-in-the-Hills, Lake County or the State of Florida.

If type, density and intensity of adjacent land use shown on the *Future Land Use Map* is not compatible to the preservation of the historic site, then appropriate buffering and screening techniques shall be requirements imposed on encroaching adjacent new development. Such requirements shall be stipulated within the Land Development Regulations.

POLICY 1.3.9: ***Rehabilitating, Relocating, or Demolition of Historic Sites.*** Criteria established in the Land Development Regulations pertaining to the rehabilitation or relocation of a designated historic structure shall follow the U.S. Secretary of the Interior's "Illustrated Guidelines for Rehabilitating Historic Buildings". Additional criteria for approving the relocation, demolition, or rehabilitation of a historic structure shall include the following factors:

a. the historic character and aesthetic interest the building, structure, or object and how it contributes to its present setting;

b. whether there are definite plans for the area to be vacated and the effect of those plans on the character of the surrounding neighborhood;
c. whether the building, structure, or object can be moved without significant and irreversible damage to its physical integrity;
d. whether the building, structure, or object represents the last remaining example of its kind in the neighborhood or Town;
e. whether definite plans exist to reuse the subject property if a proposed demolition is carried out, and the effect of those plans on the character of the surroundings; and
f. whether reasonable measures can be taken to save the building, structure, or object to a level safe for occupation.

POLICY 1.3.10: ***Preventing Destruction of Discovered Archaeological Sites.*** Development shall cease construction activities on a development site when artifacts are uncovered during either land preparation or construction. The developer shall notify the Town of such potential discovery, and the Town and / or developer shall contact the Florida Department of State of such discovery. Construction shall not begin until the State has determined the archaeological significance of the discovery and the restrictions which shall be imposed on development. Development may continue in areas which will not impact the site of the discovery.

OBJECTIVE 1.4: ***Commercial Planning Activities.*** Ensure the Town's sustainability by allocating sufficient land area to accommodate commercial activities which provide a level of employment as well as goods and services demanded by local residents and guest with consideration to fiscal and environmental impacts to the Town of Howey-in-the-Hills.

POLICY 1.4.1: ***Location and Distribution of Commercial Sites.*** The location and distribution of commercial land use districts delineated on the *Future Land Use Map* shall be determined according to the following criteria:

a. Promote mixed use land use categories to prevent strip commercial centers and reduce the dependability on the automobile;
b. Promote the integration of uses to include live-work environments;

c. Ability to comply with adopted performance standards for preventing or minimizing nuisance impacts, such as emission of air pollutants, noise, odor, and generation of hazardous waste or products;
d. Impact to the conservation and preservation of natural resources;
e. Demand on existing and planned public services, utilities, water resources and energy resources;
f. Impact on designated scenic and aesthetic transportation corridors;
g. Compatibility with surrounding land uses;
h. The size of each individual business permitted in the Neighborhood Commercial, Village Mixed Use, or Town Center Mixed Use land uses shall comply with the guidelines established within the Policy 1.4.6; and
i. The height of each business permitted in the Neighborhood Commercial, Village Mixed Use, or Town Center Mixed Use land uses shall comply with the guidelines established in Policy 1.4.7 of this *Element*.

POLICY 1.4.2: ***Screening Requirement.*** The Town shall require new commercial, light industrial, and manufacturing development to install landscaping, visually obstructive fencing or man-made berms, or other appropriate screening techniques concealing the commercial, light industrial, or manufacturing site from areas designated for low or medium density residential if the proposed commercial, light industrial, or manufacturing building is not compatible.

POLICY 1.4.3: ***Availability of Facilities to Support Commercial Development.*** The density and intensity of commercial uses shall be compatible with the ability of public facilities to provide adequate services according to adopted level of service standards.

POLICY 1.4.4: ***Provision of Open Space.*** All new commercial development shall be subject to the open space standards established in Policy 1.2.2 of this *Element*.

POLICY 1.4.5: ***Maximum Intensity of Commercial Uses.*** Maximum intensity of use for commercial development is outlined within the respective land use categories and further refined in the Land Development Regulations.

POLICY 1.4.6: ***Commercial Building Size Limitations.*** Individual businesses within the Town Center Mixed Use and Neighborhood Commercial shall be limited to 5,000 sq. ft. unless a waiver is granted to the developer by the Town Council. Individual businesses within the Village Mixed Use land uses shall be limited to 30,000 sq. ft. unless a waiver is granted to the developer by the Town Council. These guidelines shall be used to determine the maximum allowable size for all new commercial buildings in Town. Waivers shall be based on the particular needs of the individual business, the compatibility of the proposed building and business with the business site and other affected development, enhanced architectural design of the proposed building, and other factors which the Town Council determines as relevant to development of the proposed site and impacts to the general area.

POLICY 1.4.7: ***Commercial Building Height Limitations.*** Commercial buildings within the Town Center Mixed Use, Village Mixed Use, and Neighborhood Commercial land uses shall be limited to a maximum of 35 feet in height.

POLICY 1.4.8: ***Acceptable Uses within Commercial Areas.*** Activities allowed within areas designated for commercial uses established in the Town Center Mixed Use, Village Mixed Use, or Neighborhood Commercial land uses shall be limited to the following:

1. Retail business (drive-thru establishments in the Town Center Mixed Use shall be located to the rear of properties fronting on Central Avenue)
2. Community centers and fraternal lodges;
3. Hotels or motels;
4. Marinas;
5. Service businesses, Personal Services such as barber/beauty, personal training, spa, salons, pottery shops, art/painting galleries or studios, dance studios, etc.;
6. Professional and Business offices;
7. Veterinarian offices, provided the facility has no outside kennels;
8. Financial Institutions and banks;
9. Residential development, low, medium, or high density (second story);

10. Recreation and Parks;
11. Manufacturing, as permitted according to policies cited in this *Element*;
12. Elementary and middle schools in the Neighborhood Commercial land use; and
13. Elementary, middle, and high schools in the Village Mixed Use land use.

A more detailed matrix is available in the Land Development Regulations.

POLICY 1.4.9: ***Strip Commercial Development and State Road 19 and County Road 48.*** The Town shall discourage strip commercial style development from occurring along State Road 19 and County Road 48. Prior to the approval of each proposed annexations along the State Road 19 and County Road 48 corridors, the Town shall consider the potential of a strip commercial style development being established as a direct result of such annexation.

POLICY 1.4.10: ***Adequate Commercial Land and the Future Land Use Map.*** The Town will ensure that adequate land is designated on the *Future Land Use Map* to support the commercial needs of the residents and guests of Howey-in-the-Hills during the planning period. All such lands shall be compatible and consistent with the surrounding land uses.

OBJECTIVE 1.5: ***Limiting Manufacturing Land Uses.*** Limit manufacturing land uses within the Town due to the presence of high aquifer recharge areas and lack of central sanitary sewer facilities.

POLICY 1.5.1: ***Manufacturing as a Conditional Use in Light Industrial Designations.*** The Town shall permit non-polluting manufacturing land uses within Light Industrial land use designations on a conditional basis.

POLICY 1.5.2: ***Acceptable Manufacturing Uses.*** Manufacturing uses allowed within Light Industrial designations shall be limited to those primarily involved with the assembly of goods and products processed without the use of excessive chemicals, heat, or machinery. Activities which might be obnoxious or offensive by

reason of emission of odor, dust, smoke, gas or noise beyond the building are prohibited.

POLICY 1.5.3: ***Maximum Intensity of Use.*** Maximum intensity of use for manufacturing uses shall be 0.70 for the impervious surface coverage and 0.60 for the floor area ratio.

OBJECTIVE 1.6: ***Public Services and Facilities.*** To assure that needed public services and facilities are developed concurrent with the impact of new development.

POLICY 1.6.1: ***Coordinating Public Facilities with Land Use.*** The Town shall extend public facilities only to existing and proposed land use activities, as shown on the *Future Land Use Map*, which shall require and demand such services. Undeveloped land shall not be designated for development without assurance through the *Comprehensive Plan* that public facilities shall be available concurrently with the impacts of development. The impacts of land uses, including their densities and intensities, shall be coordinated with the Town's ability to finance or require provision of necessary public facilities at conditions at or exceeding the adopted minimum level of service standards.

POLICY 1.6.2: ***Coordinating Public Facilities with Concurrency Management System.*** The timing and location of public facilities shall be coordinated with the Town's Concurrency Management System to assure that development occurs in an orderly and timely manner consistent with the availability of facility capacities.

POLICY 1.6.3: ***Land Use Allowed within Wellfield Protection Zones.*** A wellfield protection zone shall be established within a radius distance of seventy-five, two hundred, and five hundred feet from potable water wells. The following guidelines apply to the wellhead protection zone:

a. No new development (except facilities related to the public water system) shall be permitted within one-hundred and fifty feet from a well.

b. Within a two-hundred-foot radius distance, septic tanks, sanitary sewer facilities, or solid waste or disposal facilities shall be prohibited.

c. Within a five-hundred-foot radius of a well, manufacturing or light industrial uses shall be prohibited, including activities that require the storage, use handling, production or transportation of restricted substances; agricultural chemicals, petroleum products, hazardous/toxic wastes, industrial chemicals, etc. In addition, wastewater treatment plants, percolation ponds, mining activities and similar activities are prohibited. Low density single family, commercial, retail, and office land uses shall be allowed within the 500-foot zone for potable water wells.

d. All wells and wellhead protection zones shall be delineated on the Town's *Existing* and *Future Land Use Maps*.

POLICY 1.6.4: ***Public Facility and Service Standards.*** The Town shall continue to ensure that public facilities and services meet or exceed the standards established in the *Capital Improvements Element* required by Chapter 163.3177, F.S. and are available when needed for the development, or that development orders and permits are conditioned on the availability of these public facilities and services necessary to serve the proposed development.

POLICY 1.6.5: ***Meeting LOS Standards.*** The Town shall require, prior to approval of a building permit and/or development order, that the locally established "Level of Service of Standards" are being met or that facility improvements will be available concurrently with the impact of new construction or development such that level of service standards are maintained.

OBJECTIVE 1.7: ***Land Use Coordination and Soils and Topography.*** To require that soil conditions, topography, and availability of facilities and services be coordinated with land uses.

POLICY 1.7.1: ***Coordinating Future Land Uses with Soil Conditions.*** Land use activities, including their densities and intensities, shall be compatible to soil types whose properties are capable of supporting the structures, parking areas, ancillary uses, and facilities proposed to be placed on them.

In the event the *Future Land Use Map* identifies a land use allowed

within an incompatible soil type, a field study may be performed on the site by a professional hydrologist, registered engineer, or other similar profession to delineate actual boundaries and soil types exhibited on the subject site. The Town shall reserve the right to have such a field study verified by the local U.S. Soil Conservation Office or a comparable State agency.

POLICY 1.7.2: ***Engineering Practices, Topography, and Soils.*** The Town shall maintain a unified Land Development Code and continue to require that sound engineering practices be required with respect to the topography and soil conditions, prior to the approval of development activities in Town.

OBJECTIVE 1.8: ***Coordination of Land Patterns, New Development, and the Concurrency Management System.*** Assure that future land use patterns and new development in Howey-in-the-Hills are coordinated consistently with the Town's Concurrency Management System.

POLICY 1.8.1: ***Availability of Public Facilities.*** Development orders and permits shall not be issued unless the necessary facilities and services are available concurrent with the impacts of development. Future land use allocations, including their related densities and intensities, shall not exceed the financial and legal ability of the Town to provide or require provision of public facilities to serve those land uses delineated on the *Future Land Use Map*. The Town's Concurrency Management System shall be used to determine whether adequate public facility capacities are available to meet the demands generated by new development and redevelopment.

POLICY 1.8.2: ***Efficiency in the Provision of Public Facilities.*** Allocation of future land use shall occur in a manner which promotes efficient distribution and provision of public facilities. Land use allocations shall assure that future sites can be acquired for public facilities programmed within the *Five-Year Schedule of Capital Improvements* or determined necessary to meet demands generated by growth and development anticipated during the planning period.

POLICY 1.8.3: ***Mandatory Compliance with the Concurrency Management System.*** The Town shall issue no development order or permit for development unless the applicant demonstrates that impacts associated with the proposed development meet criteria set forth

within the Town's Concurrency Management System. All applicants of development shall demonstrate through narrative and graphic information that:

1.) necessary facilities and resources are in place and functional concurrent with the impacts of development; and

2.) the subject development shall not reduce the levels of service below the minimum adopted standard established in the *Public Facilities Element* policy for each applicable public facility.

For proposed developments which shall require public facilities or services provided by the Town, no development order or permit for development shall be issued until a maximum capacity for a public facility is assigned to and reserved for the subject development. The reservation of capacity for a public facility shall be granted to an applicant of development only upon satisfactory compliance with the Town's Concurrency Management System and other applicable ordinances. All rights pertaining to the assignment and forfeit of capacity allocations shall be defined within the Town's Concurrency Management System.

POLICY 1.8.4: ***Amendments to the Comprehensive Plan.*** The Town shall require all applicants pursuing an amendment to the *Future Land Use Map* to demonstrate that all facilities or service capacities are currently available and shall be available concurrent with the impacts of development. Any necessary facilities or services shall be part of the *5-year CIP* or the *Long-range Capital Plan*. An amendment to the *Future Land Use Map* shall not constitute the reservation of capacity for any public facility. Reservation of capacities shall only be granted to development orders or permits which demonstrate specific impacts which a development will place on public capacities. The Town shall consult with the St. Johns River Water Management District, prior to the approval of a building permit or its functional equivalent, to determine whether adequate water supplies and related facilities to serve new development will be available no later than the anticipated date of issuance by the Town a certificate of occupancy or its functional equivalent.

OBJECTIVE 1.9: ***Blighted Areas.*** Blighted areas shall be redeveloped, and the Town shall take the necessary action to prevent or limit their occurrence.

POLICY 1.9.1: ***Amending the Comprehensive Plan to Address Blighted Areas.*** At the time blighted areas are identified within Howey-in-the-Hills, the Town shall amend the *Comprehensive Plan* to include appropriate policies which address the redevelopment needs of that area. Such policies shall be based on an evaluation and analysis which shall be prepared within the Date Inventory and Analysis Section. The Town shall also re-evaluate the future land use designation for the blighted area to determine if a more appropriate designation, density and intensity of development would better encourage the private section to invest in redevelopment.

POLICY 1.9.2: ***Identifying Blighted Areas.*** The Town shall annually survey all areas of the Town to determine if blighted areas are occurring.

POLICY 1.9.3: ***Code Enforcement.*** The Town shall enforce its Codes to require needed improvements within the Town and discourage the creation of blighted areas in Town.

OBJECTIVE 1.10: ***Urban Sprawl.*** Discourage urban sprawl through a future land use pattern which promotes orderly, compact development.

POLICY 1.10.1: ***Promote Orderly, Compact Growth.*** Land use patterns delineated on the *Future Land Use Map* shall promote orderly, compact growth. The Town shall encourage growth and development in developed areas where public facilities and services are presently in place, and in those areas which public facilities can provide the most efficient service.

POLICY 1.10.3: ***Coordination with Lake County.*** The Town of Howey-in-the-Hills shall coordinate with Lake County to promote a regional development concept that directs future growth to urbanized or urban/rural transitional areas where public facilities and services are available or proposed to be available as required in the Town's Concurrency Management System.

OBJECTIVE 1.11: ***Innovative Land Development Applications.*** Future growth and development shall be managed through the preparation, adoption, implementation and

enforcement of innovative land development regulations.

POLICY 1.11.1: ***Use of Mixed Use Developments.*** To discourage urban sprawl and to maximize existing and planned public facilities, the Town has adopted the Village Mixed Use and Town Center Mixed Use land uses.

Mixed Use designations may include single family, multiple family, commercial, recreation, open space and institutional land uses not to exceed development densities and intensities of use established for these land uses in this *Element*.

POLICY 1.11.2: ***Use of Cluster Developments.*** To promote the conservation of permeable surface area and maintain the Town's rural character, cluster developments shall be promoted by the Town during the development review process. Developers of Mixed Use/Planned Unit Developments and residential subdivisions shall be encouraged to cluster development in order to preserve open space.

POLICY 1.11.3: ***Maintaining Innovative Land Development Regulations.*** The Town shall maintain innovative land development regulations that encourage mixed-use developments and incorporate site design planning techniques that will enhance the quality of large scale developments or redevelopment area(s).

POLICY 1.11.4: ***Establishing Architectural Guidelines.*** The Town shall apply the architectural standards in the Land Development Regulations to the Town Center Mixed Use and Village Mixed Use land uses to maintain the unique and hometown charm of Howey-in-the-Hills. The Town shall encourage historical and traditional styles native to the Howey-in-the-Hills area and new and innovative architectural design when appropriate.

POLICY 1.11.5: ***Requiring Underground Utilities.*** The Town shall require all new subdivisions, residential and commercial developments, approved after the adoption of this *Comprehensive Plan*, to have underground telephone, cable and electrical utility lines to provide a more attractive, efficient, and safer development.

POLICY 1.11.6: ***Promoting Interconnected neighborhoods.*** The Town shall encourage the development of interconnected neighborhoods using pedestrian linkages, bicycle facilities, and golf carts.

POLICY 1.11.7 ***Multiple access to subdivisions***. The Town shall require new developments consisting of 50 lots or more to have a minimum of two points of vehicular access. This policy shall not be construed as prohibiting private streets or prohibiting the use of emergency access only points in addition to the standard vehicular access point.

OBJECTIVE 1.12*:* ***Identifying a Defined Planning Area.*** To identify an area surrounding the existing Town limits as the defined planning area for the Town.

POLICY 1.12.1: ***Defined Planning Area Definition.*** To protect the Town's unique charm and hometown character, the Town hereby adopts the Utility Service Area as the maximum planning area (see the Town's *Utility Service Area Map*). The Town shall not annex outside this boundary.

POLICY 1.12.2: ***Defined Planning Area and Concurrency.*** All land within the defined planning area established in Policy 1.12.1 that annexes into the Town shall be subject to the Town's adopted Concurrency Management System and level of service standards. Prior to the approval of annexing land within the defined planning area, the Town shall ensure that timely development occurs before the annexation and connection to the Town's utility service system is made available. The Town shall also ensure that the availability of public infrastructure is made only to proposed developments that are adjacent to existing developments within the Town as opposed to sporadic "leap frog" development resulting in urban sprawl.

OBJECTIVE 1.13: ***Electric Infrastructure.*** To maintain, encourage, and ensure adequate and reliable electric infrastructure is readily available in the Town.

POLICY 1.13.1: ***Permitting New Electric Distribution Substations.*** The Town shall allow new electric distribution substations in all land use categories except Conservation. The Town shall, if possible, avoid locating substations where they would be incompatible with adjacent land uses.

POLICY 1.13.2: ***Compatibility of New Electric Distribution Substations.*** The Town shall require the compatibility of new electric distribution

substations with surrounding land uses (including heightened setback, landscaping, buffering, screening, lighting, etc.) as part of a joint public/private site planning effort.

POLICY 1.13.3: ***New Electric Distribution Substation Standards.*** The following standards shall apply to new distribution electric substations:

In nonresidential areas, the substation must comply with the setback and landscaped buffer area criteria applicable to other similar uses in that district, if any.

Unless the Town Council approves a lesser setback or landscape requirement, in residential areas, a setback of up to 100 feet between the substation property boundary and permanent equipment structures shall be maintained as follows:

1. For setbacks between 100 feet and 50 feet, an open green space shall be formed by installing native landscaping, including trees and shrub material, consistent with the relevant local government's land development regulations. Substation equipment shall be protected by a security fence consistent with the Town's Land Development Regulations.

2. For setbacks of less than 50 feet, a buffer wall 8-feet high or a fence 8-feet high with native landscaping consistent with the relevant local government's regulations shall be installed around the substation.

POLICY 1.13.4: ***New Electric Distribution Substation Compliance.*** All new distribution electric substations in Town shall comply with the guidelines and standards established in Chapter 163.3208, F.S.

OBJECTIVE 1.14: ***Consistency and Compatibility with the Adopted Comprehensive Plan.*** To ensure the Town's Land Development Regulations, Zoning Districts, and Performance Standards are consistent with and compatible to the adopted *Comprehensive Plan*.

POLICY 1.14.1: ***Land Development Regulations Consistency.***

The Land Development Regulations for the Town of Howey-in-the-Hills shall be consistent with, and serve to implement the goals, objectives and policies established within the *adopted Comprehensive Plan*. To implement the goals, objectives and policies of the *adopted Comprehensive Plan*, provisions shall be incorporated into the Land Development Regulations, and shall contain specific and detailed provisions which as a minimum:

a. Regulate the subdivision of land;

b. Regulate the use of land and water consistent with this Element, ensure the compatibility of adjacent land uses, and

provide for open space;

c. Protect the environmentally sensitive lands designated in the *Comprehensive Plan*, particularly those identified in the *Future Land Use Map* series;

d. Regulate development within areas which experience seasonal and periodic flooding;

e. Specify drainage and stormwater management requirements;

f. Protect potable water wellfields and aquifer recharge areas;

g. Specify minimum design standards for sanitary sewer and septic tank systems;

h. Regulate signage;

i. Ensure safe and convenient on-site and off-site traffic flow and parking needs of motorized and non-motorized transportation;

j. Require that development meet all appropriate provisions of the Town's Concurrency Management System, including level of service standards adopted by the Town Council, prior to the issuance of a development order or permit; and

k. Provide that public facilities and services meet or exceed the standards established in the capital improvements element required by ~~Chapter~~section 163.3177 of Florida Statutes~~, F.S.~~ and are available when needed for the development, or that development orders and permits are conditioned on the availability of these public facilities and services necessary to serve the proposed development.

POLICY 1.14.2: ***Consistency of Zoning Districts with the Future Land Use Map.*** The Town may elect to further regulate land use activities within land use districts shown on the *Future Land Use Map* through the establishment of zoning districts. Such zoning districts shall be defined within the Land Development Regulations, and a Zoning Map shall illustrate the demarcations of each district. The density and intensity of land use activities established for each zoning district shall be consistent with density and intensity qualitative

standards set forth on the *Future Land Use Map* for the associated land use district.

Land development regulations adopted to implement this *Comprehensive Plan* shall be based on and be consistent with the residential densities and non-residential intensities established herein.

POLICY 1.14.3: ***Consistency with Performance Standards.*** Performance standards established within the Land Development Regulations shall be consistent with the goals, objectives and policies established within the *adopted Comprehensive Plan*. By December 2012, the Land Development Regulations shall be amended to ensure that the performance standards comply with the adopted *Comprehensive Plan*.

OBJECTIVE 1.15: ***Protection of Natural Resources.*** To ensure the protection of natural resources in the Howey-in-the-Hills area.

POLICY 1.15.1: ***Policies for Managing Environmentally Sensitive Areas.*** Policies in the *Conservation Element* for managing environmentally sensitive natural systems, including but not limited to Little Lake Harris, Lake Illinois, wetlands, floodplain areas, significant vegetative communities and wildlife habitats of endangered and threatened species, shall be implemented through performance standards stipulated in the Land Development Regulations.

POLICY 1.15.2: ***Intergovernmental Coordination and Natural Resource Management.*** The Town shall coordinate with State agencies including, the St. Johns River Water Management District, the Florida Department of Environmental Protection, and the East Central Florida Regional Planning Council as well as Lake County and other agencies concerned with managing natural resources for the purpose of protecting the function and existence of natural systems.

POLICY 1.15.3: ***Protection of Endangered and Threatened Animal and Plant Species.*** The Town shall protect endangered and threatened animal and plant species by assuring the preservation of native habitat required for their propagation and survival. Policies pertaining to the adoption of performance standards and development regulations, as herein cited in this *Comprehensive Plan* shall implement the protection of habitat used by these species.

OBJECTIVE 1.16: ***Compatible and Consistent Land Uses.*** To ensure that land uses are compatible and consistent with surrounding land uses.

POLICY 1.16.1: ***Existing Non-Compatible Land Uses.*** The Town shall reduce or eliminate existing non-complying land use activities to the greatest reasonable and practical extent without intruding on the constitutional rights of the effected landowners. No existing non-conforming structure shall be increased or expanded. The Land Development Regulations shall define circumstances under which the existing non-conforming use shall be eliminated or reduced in intensity and shall provide principles for regulating improvements to existing non-complying structures as well as changes to non-conforming uses.

POLICY 1.16.2: ***Managing Future Land Use.*** The *Future Land Use Map* and related policies together with the Land Development Code shall be applied as a planning and management tool in order to prevent development of land uses which do not conform to the Town's character as reflected in the Town's adopted *Future Land Use Map*, *Zoning Map*, and other applicable laws, ordinances, and administrative rules.

OBJECTIVE 1.17: ***Renewable Energy Resources.*** To encourage the development and use of renewable energy resources, efficient land use patterns, and reducing greenhouse gas emissions in order to conserve and protect the value of land, buildings, and resources, and to promote the good health of the Town's residents.

POLICY 1.17.1: ***Energy Efficient Land Use Pattern.*** The Town shall maintain an energy efficient land use pattern and shall continue to promote the use of transit and alternative methods of transportation that decrease reliance on the automobile.

POLICY 1.17.2: ***Promoting Walking and Bicycling.*** The Town shall continue to encourage and develop the "walk-ability and bike-ability" of the Town as a means to promote the physical health of the Town's residents, access to recreational and natural resources, and as a means to reduce greenhouse gas emissions.

POLICY 1.17.3: ***Establishing an Energy Management Plan.*** By December 2012, the Town shall develop and implement an Energy Management Plan to minimize electric, fuel and water resources in Town buildings, fleet vehicles and on public properties.

POLICY 1.17.4: ***Solar Collectors.*** No action of the Town shall prohibit or have the effect of prohibiting solar collectors, or other energy devices based on renewable resources from being installed on a building and as further set forth within Section 163.04, Florida Statutes.

POLICY 1.17.5: ***Construction of Public Facilities and Buildings.*** Public buildings and facilities shall be constructed and adapted where reasonably feasible to incorporate energy efficient designs and appropriate "green" building standards. Green Building standards that should be observed are contained in the Green Commercial Buildings Designation Standard, Version 1.0, published by the Florida Green Building Coalition, Inc.

POLICY 1.17.6: ***Energy Efficient Design and Construction Standards.*** The Town shall continue to promote and enforce energy efficient design and construction standards as these become adopted as part of the State Building Codes. The Town shall also promote commercial and residential standards that are promulgated from time to time by the Florida Green Building Coalition, Inc.

POLICY 1.17.7: ***Promoting Mixed Use Developments.*** The Town shall continue to promote mixed-use developments in areas planning for urban development or redevelopment as a mean to produce energy efficient land use patterns and reduce greenhouse gas emissions.

POLICY 1.17.8: ***Development Incentives for Smart Growth Development*****.** The Town shall revise its Land Development Regulations by December 2012 to offer incentives and flexibility for development projects that will make development application, review and approval processes easier, faster and more cost effective for projects that are consistent with the Smart Growth Principles of the C*omprehensive Plan* and that can be demonstrated to reduce infrastructure costs, promote the preservation of open space and habitat lands, provide energy efficient land use patterns, and reduce greenhouse gas emissions. Other incentives shall also be evaluated for projects that participate in energy-efficient development programs such as:

- U.S. Environmental Protection Agency's Energy Star Buildings and Green Lights Program to increase energy efficiency through lighting upgrades in buildings;
- Rebuild America;
- Building for the 21st Century;
- Energy Smart Schools;
- National Industrial Competitiveness through Energy;

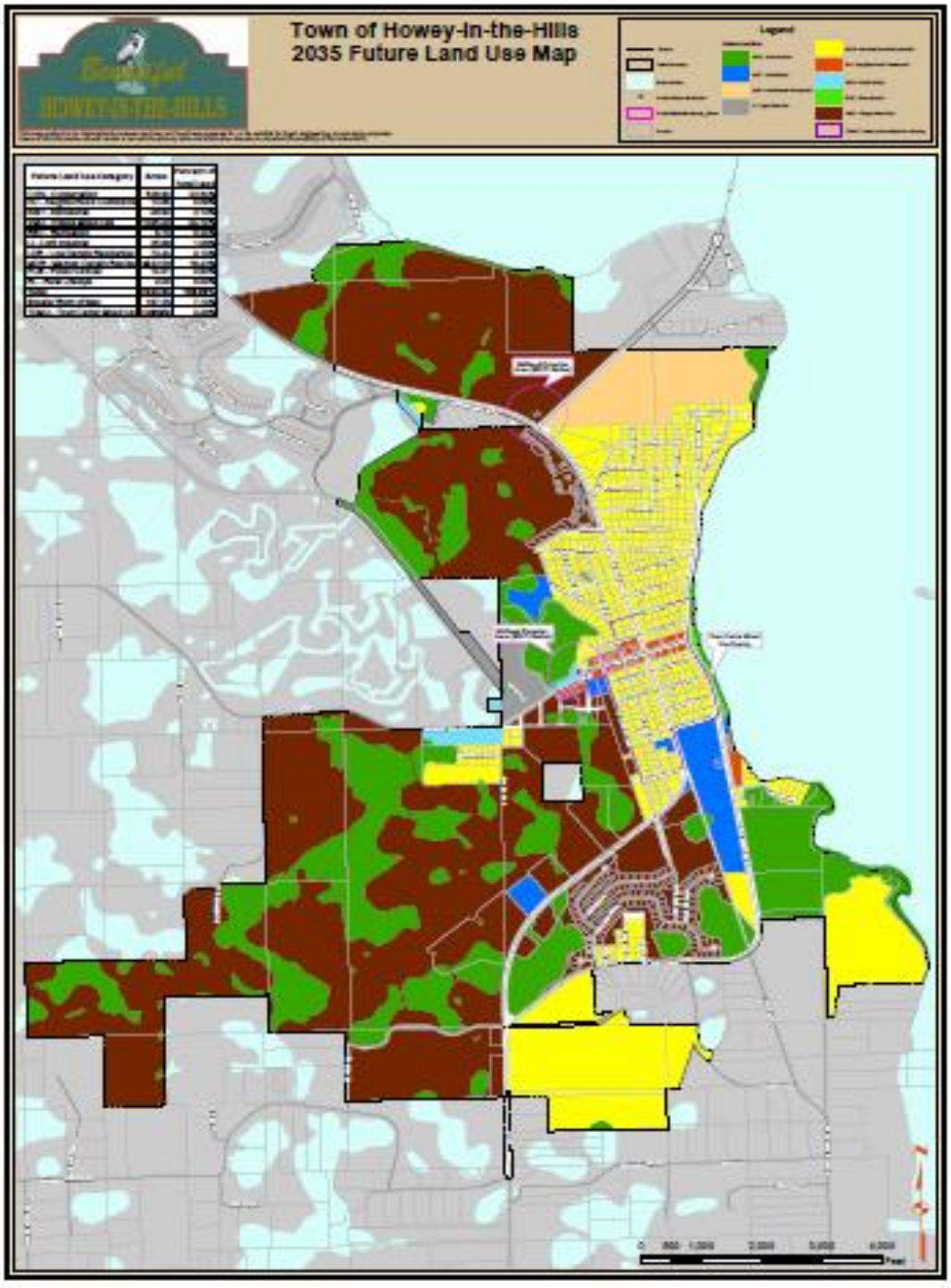
- U.S. Department of Environmental Protection's Pollution Prevention (P2) Program;
- U.S. Green Building Council (LEED);
- Florida Water Star[SM] Program; or
- Florida Green Building Coalition (FGBC), including pursuing certification as a Green Government.

OBJECTIVE 1.18: ***Mechanism to Manage Growth and Development.*** To ensure that the *Comprehensive Plan* represents the primary mechanism which manages growth and development within the Town of Howey-in-the-Hills.

POLICY 1.18.1: ***Precedence Over Other Land Use Control Mechanisms.*** Growth management and land use controls stipulated in the adopted *Comprehensive Plan* through goals, objectives and policies shall take precedence over all other land use policies established in other land use control mechanisms adopted by the Town of Howey-in-the-Hills, including but not limited to the Land Development Regulations and other components of the Code of Ordinances.

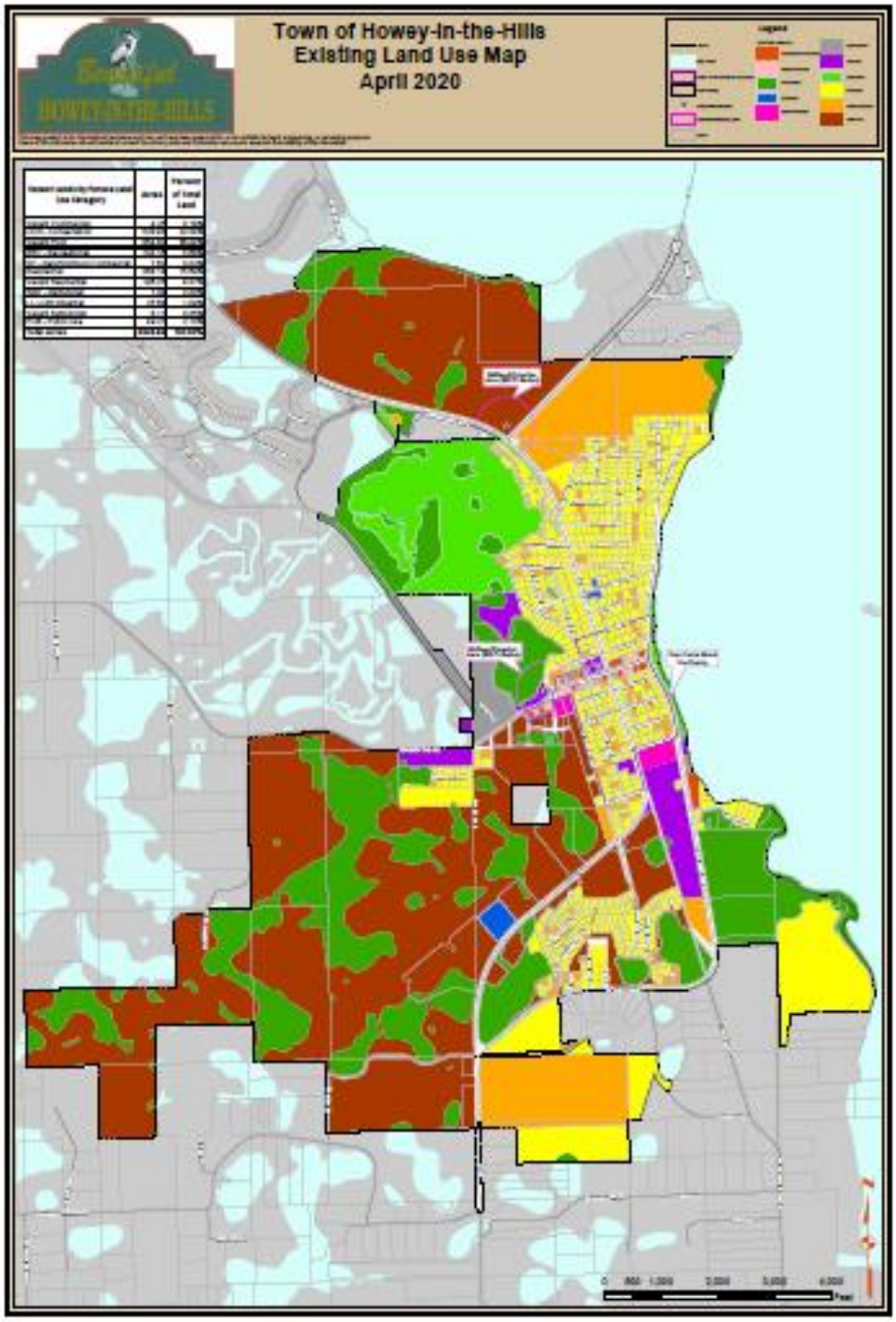
POLICY 1.18.2: ***Growth Management through Maintenance of Land Development Regulations.*** The Town shall maintain the Land Development Regulations to reflect growth management controls established within the updated *Comprehensive Plan*.

POLICY 1.18.3: ***Compliance with State and Federal Laws.*** The *Comprehensive Plan* shall not violate Statutes established in Florida Law or Administrative Rule, nor shall it violate the Constitution of the State of Florida or that of the United States of America.


Town of Howey-in-the-Hills
2035 Future Land Use Map
Legend


TOWN OF HOWEY-IN-THE-HILLS
TOWN CENTER OVERLAY MAP
SEPTEMBER 2010
LEGEND

Draft only
1-24-2024



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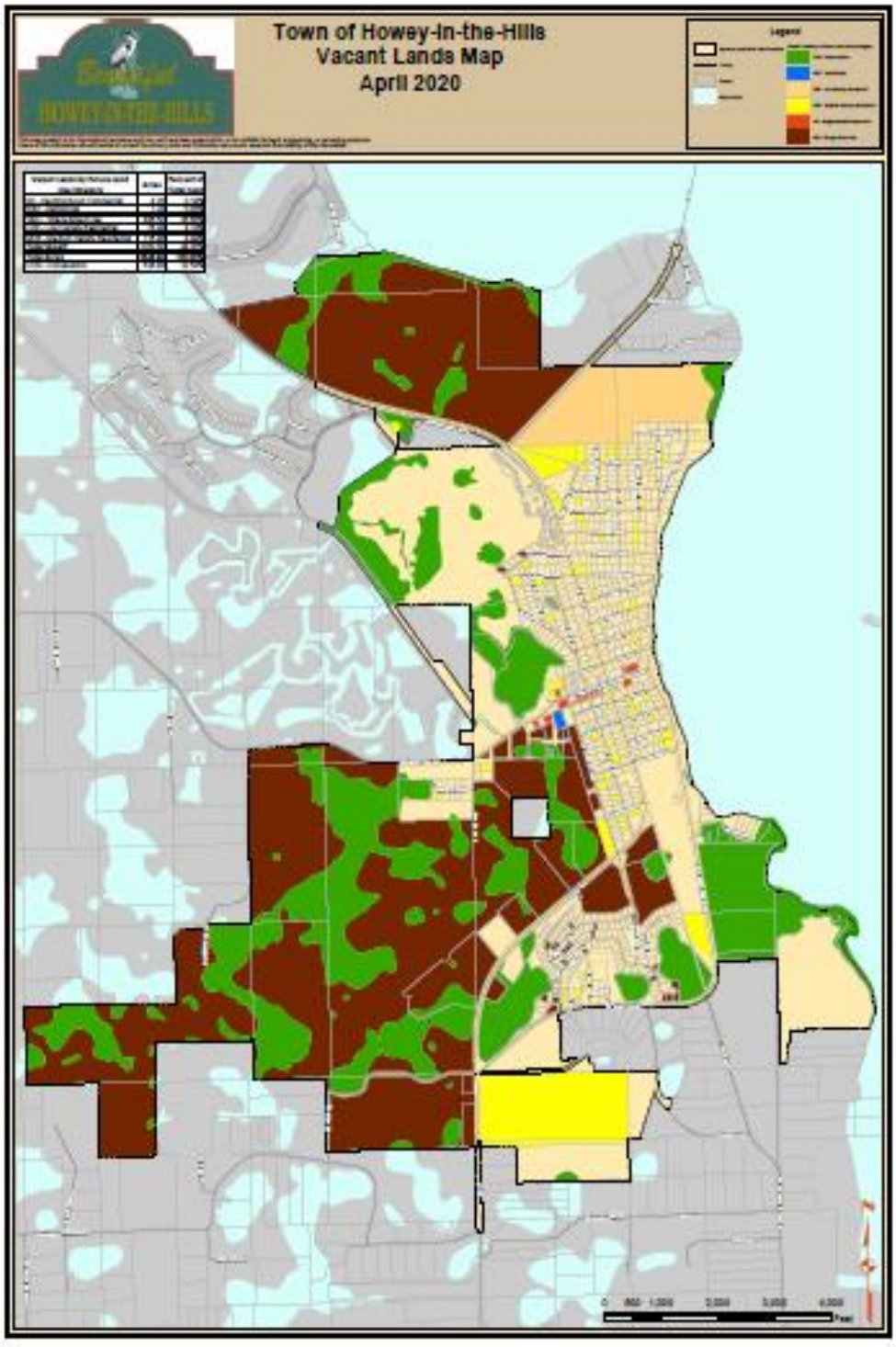

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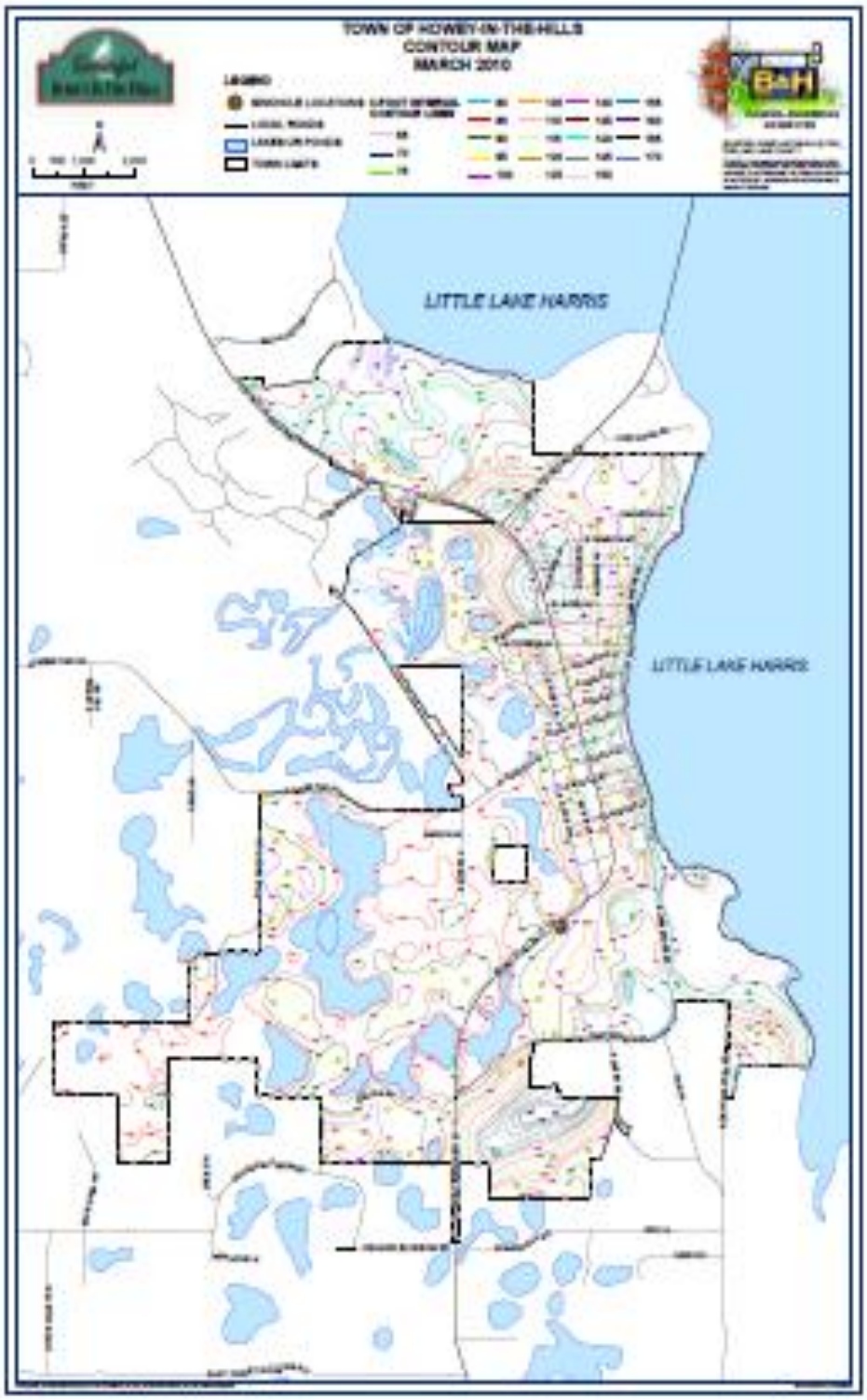

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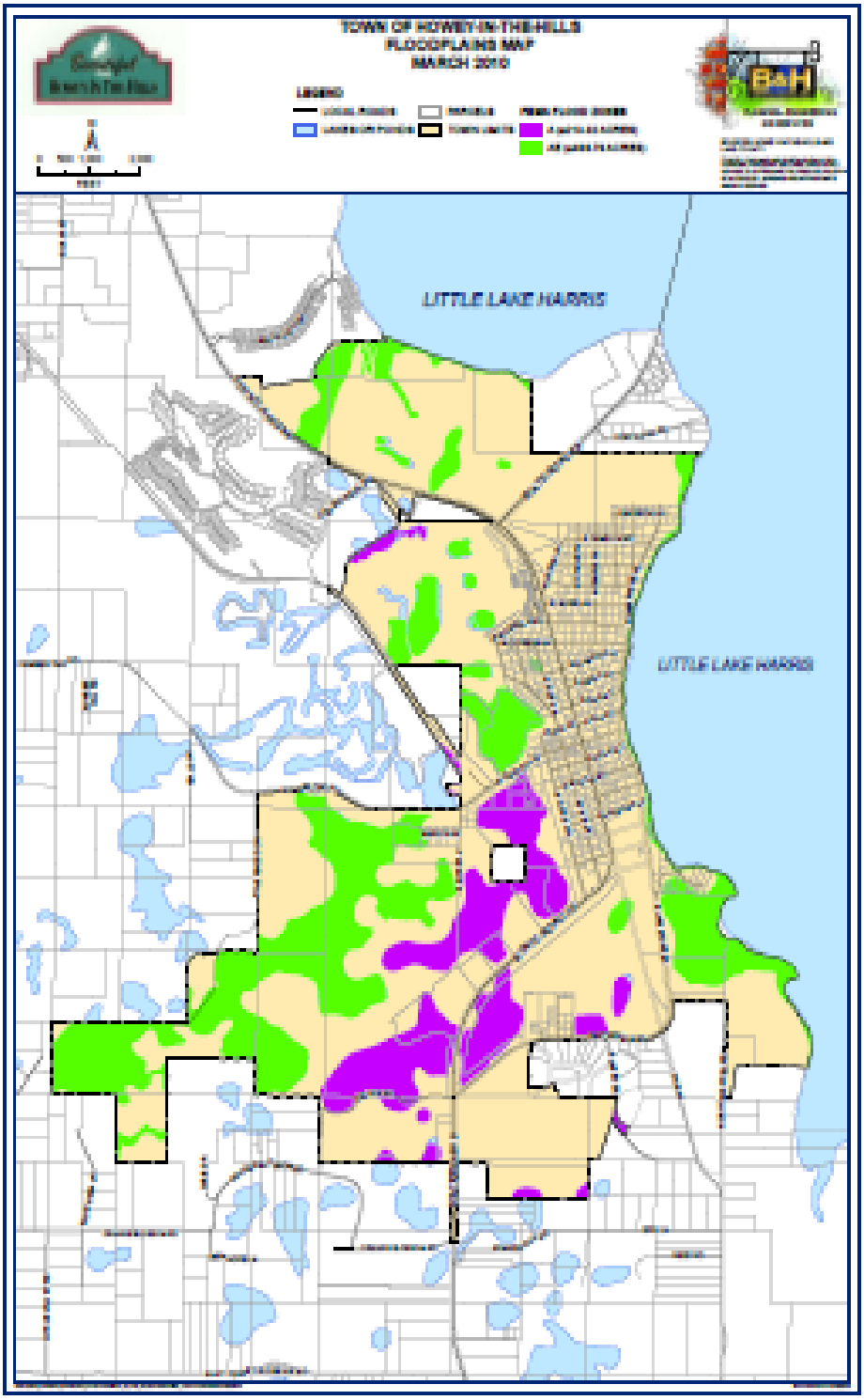

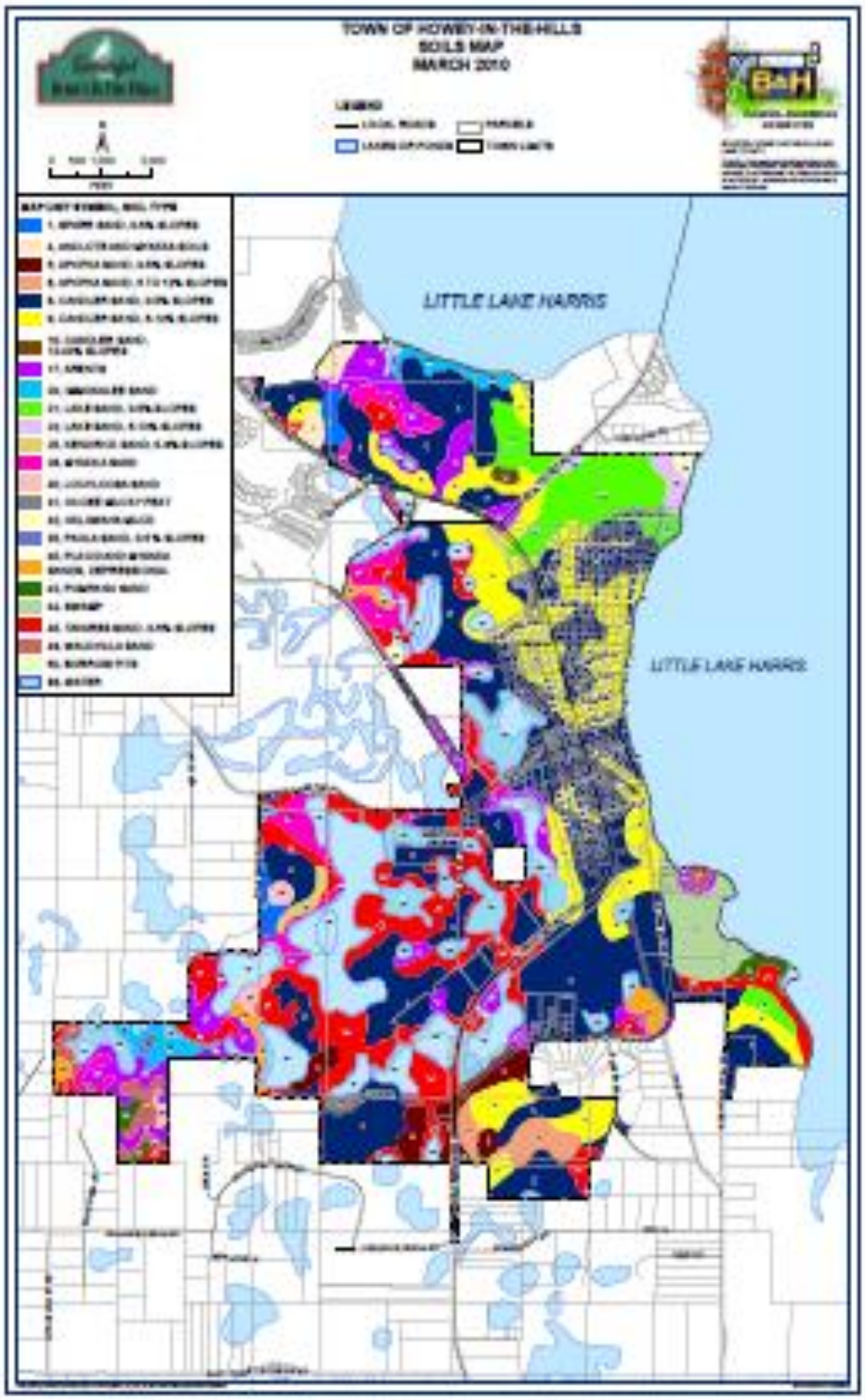
TOWN OF HOWEY-IN-THE-HILLS
SOILS MAP
MARCH 2010
LITTLE LAKE HARRIS
LITTLE LAKE HARRIS

Draft only
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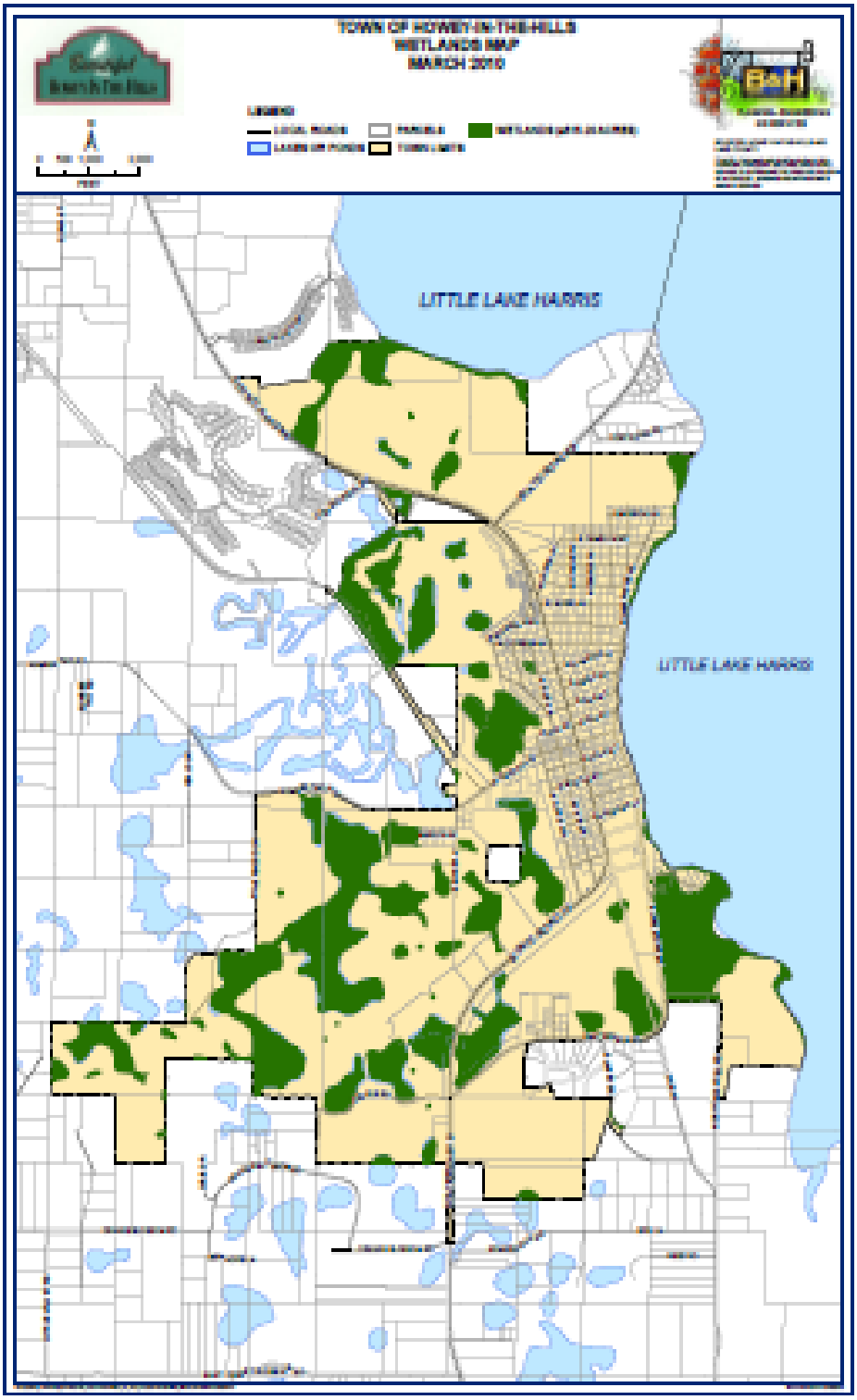

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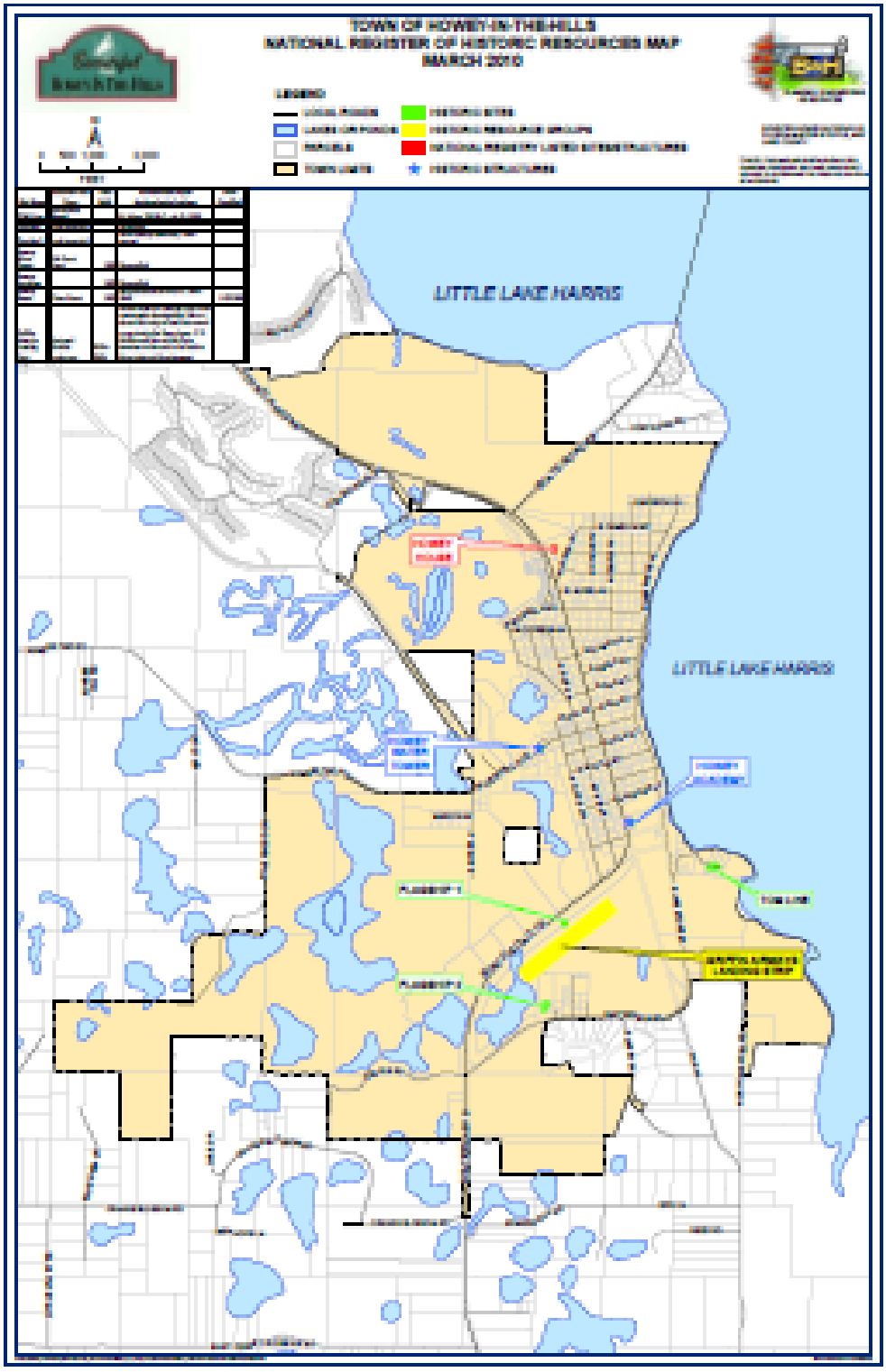

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Ormond Beach, FL 32174
PH: 386.316.8426

MEMORANDUM

TO: Howey-in-the-Hills Town Council
CC: J. Brock, Town Clerk
FROM: Thomas Harowski, AICP, Planning Consultant
SUBJECT: Mission Rise Planned Development Proposal
DATE: January 12, 2024

The Town has received an application for approval of a planned unit development agreement for the Mission Rise parcel which lies south of and west of The Reserve (Hilltop Groves) development. The request is a zoning action which requires the Town Council to consider a proposed development agreement that will govern development of the parcel. The applicant has submitted a conceptual development plan and draft development agreement along with a traffic study and required application forms. The project has been reviewed by the Development Review Committee (DRC) on several occasions. While not all of the comments offered by the DRC have been adopted, the project has reached the stage where it needs to move to the policy decision stage.

Project Description

The project is requesting approval for 499 single-family homes with lots measuring 55 x 120 and 75 x 120. The larger lots are located at the perimeter of the project and the smaller lots are located toward the interior of the project site. The project will access from SR-19 via Revels Road on the eastern side and access from Number Two Road on the north side. There is also a minor connection to Orange Blossom Road on the south. The site design provides for connections to the Hilltop Groves portion of The Reserve on the east and to Silverwood Lane on the west.

The residential portion of the project proposes three phases as shown on the graphic submitted with the application. The units by phase are as follows:

Proposed Development Phasing			
Phase	**55-foot lots**	**75-foot lots**	**Total**
Phase 1	150	41	191
Phase 2	100	13	113
Phase 3	166	29	195
Total	416	83	499

The project contains about 60 acres of wetlands with half of the total being credited to the required project open space and the balance identified as additional open space. The proposed plan will impact 0.3 acres which is for a road and utility crossing. The site includes an active eagles nest location, and the plan identifies 330 foot and 660 foot protection zones. No development activity is permitted within the 330 foot protection zone, but some development is proposed within the 660 foot protection zone. The development outside the 330 foot protection zone but within the 660 foot protection zone consists of single-family homes and roads. Some development within the outer protection zone is allowed.

Community facilities and parks are provided. Phase 1 and Phase 3 each include an amenity center including a cabana and pool. The project includes a multi-use trail along the central collector road to join with the Town's overall trail system, including a trail head adjacent to the Phase 1 amenity center. Phase 2 and Phase 3 each include smaller active miniparks, and Phase 2 includes a larger and more passive neighborhood park area. The neighborhood park area includes walking trails that connect to the multi-use trail.

Village Mixed Use Policy Assessment

The project is required to meet the village mixed use land use criteria as presented in Policy 1.1.1 of the future land use element. As a threshold requirement the project must comply with these criteria.

Maximum density is four units per net acre:
The net land area is identified as 153.1 acres which would allow a maximum of 612 units. The proposed project size is 499 units.

Residential land use maximum is 85%
Maximum allowable residential acreage is 130 acres and the propsoed project will apply 129.3 acreas to residential use.

Non-Residential land use minimum is 15%
Non-Residential land use will occupy 23.1 acres including the amenity centers, park areas, and multi-use trail area outside the right-of-way. The application includes a graphic identifying the non-residential land assignments.

Five percent of the non-residential land is to be applied to public/civic uses
Public and civic land use minimum is 1.16 acres. The two amenity centers will occupy 2.6 acres as civic land uses.

Public recreational uses must be at least 10% of the usable open space
Ten percent of the usable open space is 3.0 acres. Passive and active park areas are reported as 16.9 acres.

Total open space is 25% of the gross project area.
Total open space required is 60.8 acres which may include up to 50% of wetlands on the site. Total wetlands are reported as 60.1 acres, and when applied to the open space calculation the total site open space comes to 90.2 acres. Note that 0.3 acres of wetland will be impact by road construction.

Comprehensive Plan Assessment

The proposed project has been reviewed in comparison to the applicable comprehensive plan policies. The applicant has submitted a project narrative that offers their view on compliance with the goals, objectives and policies laid out in the comprehensive plan. The primary policy relating to Village Mixed Use development is Policy 1.1.1 of the Future Land Use Element. This policy lays out the minimum standards that a village mixed use project must meet including the percentage of land allocated to various uses, including open space, and associated activities such as civic activities and recreation. As noted in the preceeding section, the application meets these basic requirements. Additionally, the applicant cites compliance with Policy 1.11.2 encouraging cluster development.

The applicant also cites compliance with Policy 1.3.1 regarding wetlands protection. The plan as proposed does include wetland areas in the designated open space areas. There is a minor wetland impact in the central area of the project where there is some disturbance, about 0.3 acres for a road and utility crossing. This type of limited wetland impact has been approved in other developments. The open space preservation areas also include the flood prone areas in Zone AE. The project will be required to provide the 25-foot wetland buffer and 50 foot setback from wetlands to upland structures as part of the Preliminary Subdivision Plan should the zoning package be approved. This action is required by Conservation Element Policy 1.2.3 as well as Future Land Use Policy 1.3.1.

Policy 1.2.6 encourages the allocation of more dense residential development along the major road corridors and in areas that support the Central Avenue commercial area. The proposed central collector is part of the recommended traffic network and could support some increased density. Serving as a parallel facility to SR-19 it can help direct traffic to the Central Avenue commercial area as that portion of the Town develops. Compiance with the policy might benefit from a reduced density and/or larger lot sizes at the western and southern perimeter of the project.

For evaluation of the proposed project design, Policy 1.1.2 as it relates to Village Mixed Use areas may be the key determinant. The effective portions of the policy read as follows:

POLICY 1.1.2: ***Land Use Categories.*** The land use categories, as depicted on the Town's *2035 Future Land Use Map (FLUM)* shall permit the following uses and activities.

Village Mixed Use – Primarily intended to create sustainability and maintain the unique charm of the Town, including the provisions of reducing the dependability on the automobile, protecting more open land, and providing quality of life by allowing people to live, work, socialize, and recreate in close proximity. Elementary, middle, and high schools are also permitted in this category.

The applicant has submitted a statement with the project narrative offering their position on how the plan complies with the policy. The Town is deep into a process of assessing how other village mixed use projects have performed relative to the policy. The recent summary of this village mixed use evaluation is captured in the draft amendments to the comprehensive plan that have emerged from the recent series of workshops and public discussions. The Town Attorney framed the findings from this process as follows:

7. 2023 Analysis and Reevaluation of Residential Densities and Lot Sizes

In 2023 the Town Council and the Town's Planning and Zoning Board analyzed and reevaluated post-2010 residential development in the Town. Residential development under the Village Mixed Use designation resulted after 2010 in substantially increased housing densities and substantially smaller residential lots than were prevalent in the Town's historical development.

The evaluation and analysis was accompanied by robust public participation. Public sentiment agreed overwhelmingly with Town Council: the increased densities and downsized lots after 2010 were inconsistent with the character, appearance, and ambiance of the Town's historical neighborhoods. Contrary to FLUE Policy 1.1.2, development in Village Mixed Use had failed to "maintain the unique charm of the Town."

Consequently, the Town Council determined that amendments to this Future Land Use Element to redirect future residential densities and lot sizes were warranted and desirable.

As the Town Coouncil is well aware, the discussion about consistency of character, appearance and ambiance has focused on lot sizes. Newer developments have represented current housing markets as demanding smaller and narrower lots than is typical for the older neighborhoods in Howey. The Reserve located adjacent to the subject property on the east includes the Hilltop Groves residential development that includes single-family lots with 50-foot widths and groupings of townhouse units. This project was approved in the 2006 time frame and amended in 2018 including a redesign that stressed a higher percentage of owner-occupied units. The first phase final plat has recently been approved by the Town, and the Town will be able to assess the design impacts and contributions once construction begins.

The Venezia and Talichet developments are the most recent large scale developments including lot sizes ranging from 60-foot wide lots to 75-foot and 85-foot wide lots. Reaction to these developments has been mixed with the primary concern being the visual massing of large houses on smaller lots and lesser setbacks than the

Town's traditional neighborhoods. These projects have also been called out as lacking some public recreation elements. The proposed Mission Rise project includes a fairly robust recreation and civic facility support. The Watermark development has been approved with somewhat larger lots as a minimum of 50% of the 225 lots required to be 80-feet wide and the balance are allowed at 70-feet.

During the Development Review Committee phase of the Mission Rise project review, the applicants were clearly advised of the ongoing community debate regarding lot sizes and dimensions so these factors could be considered in their development proposal. The town Council now has the task of assessing the current application in comparison to Policy 1.1.2 as addressed by the applicant and as considered within the context of the ongoing policy review.

Conceptual Development Plan Review

The conceptual development plan includes a series of graphics and a written development agreement. The conceptual plan has done a good job of identifying wetland and flood prone areas and including them in the open space areas of the project. The residential development areas clearly break out into three sub-areas that form the three project phases, and each phase is supported by recreation and/or civic facilities and an integrated bicycle and pedestrian network. The bicycle network will tie into the bicycle facilities in the adjacent Hilltop Groves development to provide a loop system connecting cyclists from both projects and offering a high quality cycling opportunity for Howey citizens generally.

The project design includes connected open space areas between Phase 1 and Phase 2 and again between Phase 2 and Phase 3. The staff has requested the applicant eliminate the stormwater retention area in the open space area between Phase 2 and Phase 3 in order to preserve more trees in this upland area and to maximize the open space connectivity. The staff believes that the stormwater retention is a residential support activity and should be located in the residential portions of the project. The applicants have been responsive to a number of other design suggestions, but have chosen to keep the stormwater retention area in the open space corridor.

The conceptual development plan package includes layouts for both the proposed 55-foot and 75-foot wide lots showing a minimum of 20 feet from the front property line to the garage and rear setbacks for the principal structure of 25-feet. The Town has been asking for these setbacks to provide for adequate off-street parking and to allow for accessory structures like swimming pools while meeting thesetbacks for accessory structures.

Concurrency Considerations

Concurrency issues relate to the provision of necessary public services to support new developments. There are two concurrency issues related to the Mission Rise project, sanitary sewer service and traffic.

Sanitary Sewer: The project does not currently have an agreement with the Central Lake Community Development District, which is the current provider for the Town. The CLCDD reports that they do not have currently available capacity. The applicants will need to reach an agreement with the CLCDD on service or arrange for service from an alternate provider. The Town is currently reviewing options for alternative treatment sources to provide options to the CLCDD.

The applicant has addressed the sewage treatment issue in the development agreement by linking the project approval to the acquistion of treatment service. Section 10 of the development agreement provides a two year window from the date of approval of the agreement for the applicants to obtain a commitment for sewage treatment. If the commitment is obtained, the project may move forward to submit plans for constuction. If a commitment is not obtained within the prescribed time period, the Town Council may vacate the agreement.

Traffic Considerations: The applicants prepared a traffic analysis which projected traffic based on current conditions, anticipated traffic from the proposed development, and anticipated traffic from other projects which have been approved, but not yet constructed. Planned traffic improvements were considered, and given the concerns related to Number 2 Road, the capacity for Number 2 Road was reduced by 25%. The study reported two roadway links and three intersections that will have capacity concerns. The affected links are on SR -19 The first is from Lane Park Road to Central Avenue, and the second is from CR 455 to CR 478. Both of these segments will have capacity issues without the Mission Rise project, and both may be affected by re-classification of the roadway capacities to more accurately reflect currnt conditions.

The affected intersections are also on SR 19 and include the intersections at CR 48, Central Avenue and Revels Road. Typically the project is required to contribute a “fair share” amount to the improvements at each intersection. The applicant has proposed an alternative of paying for the full upgrade of the SR 19 and Revels road intersection. The upgrade may be a traffic signal if warranted or a roundabout. After discussion with the town’s traffic engineer, this alternative is preferred as it will result in an actual physical improvement addressing one of the potential impact sites. The standard approach would likely result in a fair share payment sitting idle until sufficient funding is found to complete an improvement.

On Number 2 Road the project will provide additional right-of-way to help bring the right-of-way up to standard. The project will also provide turn lanes and bring the current lane width up to standard for the length of the project frontage. Combined with the approved upgrades from Hilltop Groves, the combined project will bring the road close to standard from the western terminus of the project to approximately Mare Avenue. Based on the timing for the proposed development as stated in the termination provisions, it may be up to four years before units in Phase 1 appear and another three years before Phase 2 units begin construction. The proposal for the collector road is to built the road with each residential phase, the actual connection to Number 2 Road could be five to ten years in the future.

The project design includes a connection to the Hilltop Groves project in Phase 2 of Mission Rise. The model predicts this connection willdraw up to 10% of the project traffic primarily as a link to the commercial area in The Reserve development. This link also offers an indirect connection to SR-19. Lake County is discouraging use of the southerly connection to Orange Blossom Road due to the poor condition of that roadway.

Summary of Findings

The list of findings presented below is offered to summarize for the Town Council the most salient points from the discussion to this point.

- The applicants have presented a conceptual plan that meets the minimum Village Mixed Use requirements as presented in Future Land Use Policy 1.1.1.
- The development agreement includes setbacks that address the issues related to onsite parking and adequate area to accommodate accessory structures.
- The conceptual plan includes recreation and civic components that have been issues for other VMU projects.
- The development agreement includes minimum and maximum dwelling unit sizes in an effort to address the building mass concerns from other VMU projects.
- The conceptual development provides some larger lots at the project periphery, but the project is dominated by 50 x 120 lots.
- Compliance with Future Land Use Policy 1.1.2 relating to community character is an open discussion item.
- The project development agreement provides a tiered termination clause so that the project has specific sunset action points.
- The project needs to obtain sanitary sewer service sufficient to serve the project.
- The project traffic will impact three intersections on SR 19, and the applicant has proposed full improvement of the SR-19 and Revels Road intersection as a “fair share” contribution.
- While the traffic study shows that Number 2 Roard and most segments on SR-19 will operate within the designated level of service, there will be additional traffic added to each facility.
- The project will provide limited improvements to Number 2 Road.
- Based on the timing for phased development the actual connection of the central collector road to Number 2 Road is expected to occur between five and ten years from the project start.

Planning Board Analysis and Recommendation

The Town's planning board considered the application at their December 21, 2023 regular meeting. The Board review the planning staff report and heard an extensive presentation from the applicant. Public testimony was also considered. The Planning Board found that the project as presented did not adequately support Future Land Use Policy 1.1.2, but could support the policy with specific changes. The Planning Board recommended a conditional approval of the project including the following conditions:

1. Eighty percent of the single-family lots meet a minimum lot size of 10,840 square feet.
2. Up to 20% of the residential lots may have lot widths of 75 feet as proposed by the applicant.
3. Access connection to Number 2 Road cannot be opened until after Phase 1 and Phase 2 have been completed, but should be opened when 50% of the units in Phase 3 have received a certificate of occupancy.
4. The open space area between Phase 2 and Phase 3 shall be redesigned to eliminate stormwater retention ponds from this area.

Action Options

The Town Council has received the recommendation from the Planning Board and has the opportunity to consider:

- Whether to approve the project based on the conditions proposed by the Planning Board;
- Approve the project with other conditions either in place of or supplementary to the Planning Board recommendation;
- Approve the project as submitted; or
- Deny project.

An action to deny the project needs to be accompanied by a statement as to why the project fails to meet the conditions for approval either through the comprehensive plan goals, objectives, and policies or through the failure to comply with other elements of the land development regulations.

If the Town Council takes an action including conditions recommended by the Planning Board or other conditions that will result in changes to the lot patterns proposed in the development, the project will need to undergo a revision to the conceptual development plan that conforms to these conditions. If the applicant elects to redesign the project in line with the Planning Board recommendations or meeting other conditions that the Town Council may apply, some work will need to done to clarify the conditions to be certain about how and when they would be satisfied.

Planning & Zoning Board Meeting

December 21, 2023 at 6:00 PM

Howey-in the-Hills Town Hall
101 N. Palm Ave.,
Howey-in-the-Hills, FL 34737

MINUTES

CALL TO ORDER
ROLL CALL

BOARD MEMBERS PRESENT:
Board Member Alan Hayes | Board Member Richard Mulvany | Board Member Ellen Yarckin | Board Member Shawn Johnson | Board Member Frances Wagler | Vice-Chair Ron Francis III | Chair Tina St. Clair

STAFF PRESENT:
Sean O'Keefe, Town Manager | John Brock, Town Clerk | Tom Harowski, Town Planner | Tom Wilkes, Town Attorney

CONSENT AGENDA

Routine items are placed on the Consent Agenda to expedite the meeting. If a Planning & Zoning Board Member wishes to discuss any item, the procedure is as follows: (1) Pull the item(s) from the Consent Agenda; (2) Vote on the remaining item(s); and (3) Discuss each pulled item and vote.

1. Consideration and Approval of the November 16, 2023, Planning and Zoning Board Meeting minutes.

Motion made by Board Member Johnson to approve the Consent Agenda; seconded by Board Member Mulvany. Motion approved unanimously by voice-vote.

Voting
Yea: Board Member Hayes, Board Member Mulvany, Board Member Yarckin, Board Member Johnson, Board Member Wagler, Vice-Chair Francis III, Chair St. Clair
Nay: None

PUBLIC HEARING

2. Consideration and Recommendation: **Mission Rise Development PUD Rezoning Submittal**

   Town Planner, Tom Harowski, introduced and explained this item. Mr. Harowski reviewed his staff report with the Board. Mr. Harowski explained that the project included 499 single-family homes with lots measuring 55' x 120' and 75' x 120'.

Mr. Harowski summarized that the applicants have presented a conceptual plan that meets the minimum Village Mixed Use requirements as presented in Future Land Use Policy 1.1.1 and that the proposed development agreement includes setbacks that address the issues related to onsite parking and adequate area to accommodate accessory structures.

Mr. Harowski explained to the Board that there were three options before the Board. Those options included: recommending approval of the proposed development as submitted; recommending denial of the proposed application (based on a failure to comply with Policy 1.1.2 regarding community character, the addition of traffic to road segments that are projected to fall below the level of service standard [even though the road segments will still fail without the project], failure to comply with Policy 1.2.6 on the allocation of residential density in the community, and/or other findings that the Planning Board may determine); or recommending a conditional approval providing the project make some changes.

Chair St. Clair asked the applicant to introduce themselves and give their presentation to the Board. Jonathan Huels (Attorney for the applicant) introduced himself and the group of applicant representatives. They included Jason Humm (Owner Representative), Jacqueline St. Juste (Engineer), Charlotte Davidson (Transportation Planner), Mark Ausley (Biologist), Jack Caldwell (Landscape Architect), and Alexis Crespo (Planner). Ms. Crespo gave the applicant's presentation to the Board.

Board Member Yarckin quoted proposed changes to the Town's Comprehensive Plan that would require developers to have at least 50% of all Single-Family Residences to have a minimum area of 10,800 square feet and the applicant's biggest lots were only 9,000 square feet. Mr. Huels stated that this is a policy under consideration and has not yet been adopted and the applicant has been working with the existing regulations.

Chair St. Clair open Public Comment for this item only.

Eric Gunesch, 448 Avila Place – Mr. Gunesch stated that he wanted a recommendation of denial until the applicant comes back with a site plan that follows the Town's MDR-2 zoning requirements.

Greg Kiffer, 11348 Valley View Dr., Howey-in-the-Hills (unincorporated Lake County) – Mr. Kiffer had questions about school concurrency. Mr. Kiffer was concerned about the traffic getting worse in the area.

Frank Martinez, 10400 Woodland Hills Ct., Howey-in-the-Hills (unincorporated Lake County) – Mr. Martinez stated that he appreciated the applicant's consideration as it relates to the connection to Orange Blossom on the south side of the project but does not think it is enough. Mr. Martinez stated that he wanted a recommendation for denial.

Nathaniel White, Owner of Contours Landscaping Solutions – Mr. White was concerned about the flow of traffic around his business and wanted an access to the neighborhood through the south side of his property.

Janice McLain, 109 S Lakeshore Blvd. – Ms. McLain stated that she thought her 65' wide lot that she lives on is too small and that she wanted the Board to make a recommendation of denial.

Tim Everline, 1012 N Lakeshore Blvd. – Mr. Everline stated that Florida is no longer a paradise due to growth. Mr. Everline stated that he believed the lots were too small and that Number Two Rd. may not be fixed in 10 years. Mr. Everline stated that he wanted a recommendation for denial.

Ken Dunsmoor, 9950 Orange Blossom Rd., Howey-in-the-Hills (unincorporated Lake County) – Mr. Dunsmore stated that he did not think they could stop people from exiting out onto Orange Blossom Rd. and he was not in favor of this proposed development.

David Miles (Town Councilor), 500 E Camelia Way – Councilor Miles stated that he thinks 100% of all future lots should be at least 10,800 square feet and reminded the audience that he had stated this in a recent Town Council Meeting. Councilor Miles stated that he thought the Town's staff was dragging their feet on getting the Town's Comprehensive Plan amended.

Councilor Miles stated that he will make a motion in a future Town Council meeting to put a moratorium on building within the Town if they cannot come get this developer to change their path.

Councilor Miles asked the Planning and Zoning Board to reject this proposal. Councilor Miles stated that this proposal would not get his vote and that it would not get several other Councilors' votes.

Sandy Russ, 6813 Lakeview Dr. Yalaha, FL. – Mrs. Russ stated that she did not think Number Two Road could handle more traffic. Mrs. Russ wanted to know what employment opportunities this development would bring. Mrs. Russ stated that the board should not recommend approval.

Chair St. Clair closed Public Comment for this item.

Mr. Huels addressed several points from the public's comments.

Board Member Wagler stated that Number Two Rd was a major concern and was dangerous. Board Member Wagler stated the Planning and Zoning Board and Town Council were in favor of restoring larger lot sizes for the Town.

Board Member Mulvany said that the Town Planner has told developers to look at lot sizes and to look at keeping traffic off of Number Two Rd. and developers have yet to come back with larger lots. Board Member Mulvany stated that 55' x 120' was an unacceptable size for a lot.

Vice-Chair Francis stated that his 1/4-acre lot was too small and 55' x 120' lot was also too small.

Mr. Wilkes explained that the property that the Board was reviewing was currently zoned as PUD and without an active Development Agreement the owners could not develop their land. Mr. Wilkes explained that there had to be a negotiated agreement between the Town and the landowner. Mr. Wilkes explained that the Town cannot refuse to give the landowners a Development Agreement, and that there needed to be a reasonable negotiation. The Planning and Zoning Board was tasked with making a recommendation to the Town Council.

Board Member Wagler asked if the applicant had secured wastewater rights yet. Mr. Huels stated that they had not yet, but that the Development Agreement would have a time frame to allow for them to secure the rights.

Board Member Yarckin stated that she liked the clubhouse and the trail head, but she only wanted to allow them to have 250 homes in the development.

Board Member Wagler made a motion that was seconded by Board Member Yarckin. Board Member Wagler moved that the Planning and Zoning Board recommend approval of Ordinance 2024-001 and the Village Mixed Use PUD for Mission Rise only if the proposed Development Agreement is modified to include:

1) 80% of the residential lots can be no smaller than 1/4 acre in size (10,890 sq feet) – the remainder of the lots can be 75' lots as proposed by the applicant.

2) Access to Number Two Rd can be constructed but cannot be open to access until Phases 1 and 2 have been completed and access to Number Two Rd shall be constructed and ready to open before a certificate of occupancy is issued for 50% of the lots in Phase 3.

3) The open space area between Phase 2 and Phase 3 shall be redesigned to eliminate the drainage ponds (as recommended in the Town Planner's staff report).

Board Member Hayes made a motion to amend the current motion to require 100% of all the residential lots to be 1/4 acre lots. There was no second to his motion to amend the standing motion, so the motion to amend died.

Motion made by Board Member Wagler; seconded by Board Member Yarckin. Board Member Wagler moved that the Planning and Zoning Board recommend approval of Ordinance 2024-001 and the Village Mixed Use PUD for Mission Rise only if the proposed Development Agreement is modified to include:

1) 80% of the residential lots can be no smaller than 1/4 acre in size (10,890 sq feet) – the remainder of the lots can be 75' lots as proposed by the applicant.

2) Access to Number Two Rd can be constructed but cannot be open to access until Phases 1 and 2 have been completed and access to Number Two Rd shall be constructed and ready to open before a certificate of occupancy is issued for 50% of the lots in Phase 3.

3) The open space area between Phase 2 and Phase 3 shall be redesigned to eliminate the drainage ponds (as recommended in the Town Planner's staff report).

Motion was approved by roll call vote.

Voting
Yea: Board Member Mulvany, Board Member Yarckin, Board Member Johnson, Board Member Wagler, Vice-Chair Francis III, Chair St. Clair
Nay: Board Member Hayes

3. Consideration and Recommendation: **Ordinance 2023-013 Comprehensive Plan Amendment - Future Land Use Element**

Town Planner, Tom Harowski, introduced and explained this item. Mr. Harowski reviewed his staff report with the Board. Town Attorney, Tom Wilkes, explained that this Ordinance would amend the Town Comprehensive Plan and would create limitations on future Town Councils.

Mr. Harowski said that, if you limit the lot size too much, the developers would not be able to create amenities to their developments.

Board Member Yarckin stated that she wanted a moratorium on all development within the Town until after the Town changes its Comprehensive Plan and LDC.

Chair St. Clair open Public Comment for this item only.

David Miles (Town Councilor), 500 E Camelia Way – Councilor Miles stated that three developers had already taken advantage of the Town. Those three developments were filled with affordable housing due to the small lot sizes. Councilor Miles stated that he had provided 12 pages of recommendations for amendments to the Comprehensive Plan and LDC. Councilor Miles submitted those recommendations in June of 2023. Councilor Miles had stated that many of the recommendations were designed to create larger setbacks.

Councilor Miles reminded everyone that the Talichet neighborhood had no amenities and narrow streets. Councilor Miles also stated that he wanted to get rid of PUDs in the Town.

Tim Everline, 1012 N. Lakeshore Blvd. – Mr. Everline stated that Mission Inn was not what it was, people do not like the small lots in Las Colinas and people cannot get tee times on the golf course because there are too many people living there. Mr. Everline stated he had met with a Talichet resident that told him that they didn't like cars parked on the street in their neighborhood.

David Miles (Town Councilor), 500 E Camelia Way – Councilor Miles stated he wanted a High Density Residential (HDR)-1 and a HDR-2 zoning category to be created. Councilor Miles wanted to know if the Planning and Zoning Board had received all of the Comprehensive Plan and Land Development Code (LDC) comments that the Town Councilors had created and submitted to Mr. Harowski. Many of the Planning and Zoning Board members stated that they had not and would like a copy of them.

Joshua Husemann, 671 Avila Pl. – Mr. Husemann suggested that the Town should create rules that only allow parking on one side of the road to make it easier for emergency vehicles to travel through the Town. Mr. Husemann was also concerned that, if the Town did not allow PUDs in the future, it would remove potential for new parks.

Greg Kiffer, 11348 Valley View Dr., Howey-in-the-Hills (unincorporated Lake County) – Mr. Kiffer stated that, with the size of homes these days, 1/4 of an acre lot may not be big enough.

Chair St. Clair closed Public Comment for this item.

Board Member Wagler reviewed Policy 1.2.6 and recommended striking the current version and rewriting it. After discussion by the Board, it was decided Policy 1.2.6 should be changed to the following:

Reorientation of Residential Densities*. The Town may allow lot sizes smaller than one-fourth acre (10,890 sq. ft.) only in the following locations: areas in or adjacent to the Town center (e.g., the Town central commercial district) and areas abutting major arterial road corridors such as state roads and county roads, not neighborhood roads with higher traffic counts and areas abutting commercial or industrial land uses. The Town shall require single family residential lots in all other areas to be one-fourth of an acre (10,890 sq. ft.) or larger.*

Motion made by Board Member Wagler to strike through the original Policy 1.2.6 and amend it to the above listed policy; seconded by Board Member Hayes. Motion approved unanimously by roll call vote.

Voting
Yea: Board Member Hayes, Board Member Mulvany, Board Member Yarckin, Board Member Johnson, Board Member Wagler, Vice-Chair Francis III, Chair St. Clair
Nay: None

Motion made by Board Member Hayes recommend approval of the amended Ordinance 2023-013; seconded by Board Member Johnson. Motion approved unanimously by roll call vote.

Voting
Yea: Board Member Hayes, Board Member Mulvany, Board Member Yarckin, Board Member Johnson, Board Member Wagler, Vice-Chair Francis III, Chair St. Clair
Nay: None

OLD BUSINESS

None

NEW BUSINESS

None

PUBLIC COMMENTS

Any person wishing to address the Planning and Zoning Board and who is not on the agenda is asked to speak their name and address. Three (3) minutes is allocated per speaker.

David Miles (Town Councilor), 500 E Camelia Way – Councilor Miles thanked the Planning and Zoning Board for their hard work.

Janice McLain, 109 S Lakeshore Blvd - Mrs. McLain stated that there was a stop sign and a Do Not Enter sign posted before an alleyway in front of her house. Mrs. McLain stated that no one pays attention to the signs, and she wanted them removed. Sean O'Keefe, Town Manager, said that he would speak with Mrs. McLain after the meeting.

BOARD COMMENTS

Board Member Mulvany stated that he wanted the Board to discuss a letter that the Town had received from Lake County in reference to Number Two Road and he wanted it added to the next Board Meeting's agenda.

ADJOURNMENT

There being no further business to discuss, a motion was made by Board Member Yarckin to adjourn the meeting; Vice-Chair Francis III seconded the motion. Motion was approved unanimously by voice vote.

The Meeting adjourned at 9:12 p.m. | **Attendees: 38**

_____

Tina St. Clair Chairperson

ATTEST:

_____

John Brock, Town Clerk

ORDINANCE NO. 2024 - 001

AN ORDINANCE OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA, PERTAINING TO LAND USE; REZONING FOUR PARCELS OF LAND LOCATED GENERALLY IN THE SOUTHWEST PART OF THE TOWN AND COMPRISING THE PROPOSED PLANNED UNIT DEVELOPMENT TO BE KNOWN AS "MISSION RISE" ON AN L-SHAPED AGGREGATE OF ABOUT 243.3 ACRES WEST AND SOUTH OF THE DEVELOPMENT KNOWN AS "THE RESERVE AT HOWEY-IN-THE-HILLS" (NOW ALSO KNOWN AS "HILLSIDE GROVES"), WITH PART OF THE LANDS BEING SOUTH OF NUMBER TWO ROAD AND EAST OF SILVERWOOD LANE AND OTHER PARTS OF THE LAND BEING WEST OF STATE ROAD 19 AND SOUTH OF REVELS ROAD, THE FOUR PARCELS BEING IDENTIFIED WITH LAKE COUNTY PROPERTY APPRAISER ALTERNATE KEY NUMBERS 1780616, 1780811, 1030421, AND 3835991; AMENDING THE TOWN'S ZONING MAP TO APPROVE PLANNED-UNIT-DEVELOPMENT (PUD) ZONING FOR THE PARCELS; PROVIDING FINDINGS OF THE TOWN COUNCIL; APPROVING PUD ZONING FOR THE PARCELS, WITH DEVELOPMENT TO BE GOVERNED BY A DEVELOPMENT AGREEMENT AND A REVISED CONCEPTUAL LAND USE PLAN AND BY THE TOWN'S LAND DEVELOPMENT CODE AND OTHER TOWN ORDINANCES GOVERNING THE DEVELOPMENT OF LAND; REPEALING PRIOR ORDINANCES AND SUPERSEDING CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY, CODIFICATION AND AN EFFECTIVE DATE.

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF HOWEY-IN-THE-HILLS, FLORIDA:

Section 1. Findings. In enacting this ordinance, the Town Council of the Town of Howey-in-the-Hills, Florida declares the following findings, purposes, and intent:

A. Approximately 243.3 acres of land more specifically described in **Attachment A** and generally located in southwest Howey-in-the-Hills on an L-shaped group of lands west and south of the land development known as "The Reserve at Howey-in-the-Hills (now also known as "Hillside Groves"), with part of the subject lands being south of No. 2 Road and east of Silverwood Lane and other parts of the

subject lands being west of State Road 19 and south of Revels Road (**Property**), are currently designated on the Future Land Use Map of the Town's Comprehensive land for Village Mixed Use. Planned Unit Development (**PUD**) zoning is required to develop land designated for Village Mixed Use.

B. The current PUD zoning was approved by Town Council through the enactment of Ordinances 2005-353, 2005-354, 2005-355, 2005-356, and 2005-357 and by that certain Mission Rise Developer's Agreement between the Town and the then-owners, Richard H. Langley and Roxbury Ventures, LLC, dated February 6, 2007. No development occurred on the Property under those 2005 ordinances and the 2007 development agreement. The current PUD zoning and the 2007 development agreement have both expired under the terms of the development agreement.

C. The owners of the Property have applied for PUD zoning to develop the Property with a mix of single-family residential, institutional, and recreational land uses in a Planned Unit Development to be known as "Mission Rise." The Owners have requested Town Council approval of the PUD zoning subject to a new Development Agreement in the form in **Attachment B**, including its conceptual land use plan for the Property.

D. The Town Council has determined that approval of the PUD zoning on the Property as requested by the owners and subject to the requirements and restrictions of the Development Agreement would be consistent with the Town's Comprehensive Plan and the Town's Land Development Code (**LDC**) and will not adversely affect the public health, safety, and welfare of the Town.

Section 2. Amendment of the Official Zoning Map. The Town Council hereby approves the PUD – planned unit development zoning for the Property. Development and use of the Property under its PUD zoning is subject to the conditions, requirements, restrictions, and other terms of the following:

A. This Ordinance 2024-001. Ordinances 2005-353, 2005-354, 2005-355, 2005-356, and 2005-357 are repealed.

B. The Development Agreement for Mission Rise PUD between the Town and ASF TAP FL I, LLC (**Owner**). The Development Agreement is approved for execution and delivery by the Mayor and Town Clerk in the form and substance contained in Attachment B, subject to such changes, if any, approved by Town Council. The Mission Rise Developer's Agreement dated February 6, 2007, is

rescinded and superseded in its entirety by the Development Agreement approved hereby.

C. The Town's Land Development Code.

D. All other Town ordinances governing the development of land.

Section 3. Severability. If any part of this ordinance is declared by a court of competent jurisdiction to be void, unconstitutional, or unenforceable, the remaining parts of this ordinance shall remain in full effect. To that end, this ordinance is declared to be severable.

Section 4. Conflicts. In a conflict between this ordinance and other existing ordinances, this ordinance shall control and supersede.

Section 5. Codification. The PUD zoning for the Property, as approved in Section 2, may be codified and made part of the Town's Official Zoning Map.

Section 6. Effective Date. This ordinance shall take effect upon the later of (i) its enactment by the Town Council or (ii) the date on which the Development Agreement in Attachment B takes effect.

ORDAINED AND ENACTED this ____ day of _____, 2024, by the Town Council of the Town of Howey-in-the-Hills, Florida.

TOWN OF HOWEY-IN-THE-HILLS, FLORIDA
By: its Town Council

By:_____
Hon. Martha MacFarlane, Mayor

ATTEST:

_____
John Brock, Town Clerk

APPROVED AS TO FORM AND LEGALITY:
(for the use and reliance of the Town only)

_____
Thomas J. Wilkes, Town Attorney

Planning and Zoning hearing held _____, **2023**
First Reading held _____**, 2024**
Second Reading and hearing held _____**, 2024**
Advertised _____**, 202__**

ATTACHMENT A

Legal Description of the Property

Lake County Property Appraiser
Alternate Key No.'s: 1780616, 1780811, 1030421, and 3835991

CONTAINING 243.3± ACRES

[insert legal description]

ATTACHMENT B

Mission Rise PUD
Development Agreement

[insert form of development agreement]

#52366265 v2

This instrument prepared by and should be returned to:
Thomas J. Wilkes
GrayRobinson
301 East Pine Street, Suite 1400
Orlando, Florida 32801

MISSION RISE PUD
DEVELOPMENT AGREEMENT

This **MISSION RISE PUD DEVELOPMENT AGREEMENT** ("Agreement") is made as of the _____ day of _____, 2023 ("Effective Date"), between the **Town of Howey-in-the-Hills**, Florida, a Florida municipal corporation (the "Town"), and **ASF TAP FL I, LLC,** a Delaware limited liability company (the "Owner").

RECITALS

A. The Owner owns approximately 243 acres of property more particularly described in Attachment A to this Agreement ("the Property").

B. The Property is within the corporate limits of the Town. The Town has assigned the Property a future-land-use designation of Village Mixed Use. To be developed the Property must be zoned PUD - Planned Unit Development.

C. The Property was zoned PUD in or about 2010, but the PUD zoning and its related development agreement expired.

D. The Owner intends to develop and use the Property as a mixed-use planned development consisting of single-family residential, civic and public uses more specifically set forth herein ("the Project"), to be known as the "Mission Rise PUD."

E. In connection with the Owner's request for Village Mixed Use PUD zoning, the Town and the Owner now enter into this Agreement to set forth the terms and conditions of approval negotiated between them for the development and use of the Property as the Mission Rise PUD.

NOW, THEREFORE, the Town and the Owner agree as follows:

Section 1. Land development and uses. Development and use of the Property is subject to the following conditions, requirements, restrictions, and terms:

(a) **General**. Development of the Project and use of the Property shall be governed by this Agreement, the Town's Comprehensive Plan, the Town's Land Development Code ("LDC") and Code of Ordinances ("Town Code"), and all other applicable state laws and regulations and Town ordinances and rules.

Unless otherwise noted, the definition of terms in this Agreement shall be the same as the definitions set forth in the LDC. Where in conflict, the terms of this Agreement shall supersede and prevail over the LDC and Town Code, but only to the extent of the conflict.

The Conceptual Land Use Plan, or Conceptual Plan, is contained in Attachment B to this Agreement and consists of seven pages of the following graphics:

i. Conceptual Plan;

ii. Phasing Plan;

iii. Parks, Trails & Open Space Plan;

iv. Non-Residential Areas;

v. Buffer Typicals;

vi. Street Cross Sections; and

vii. Lot Fit.

In the Conceptual Land Use Plan for the Project the term "conceptual" means the location of land uses on the site, including areas for residential development, open space, stormwater management, parks, and roads in relation to the site area and other uses on the site. Subsequent plan development may refine the details based on detailed engineering design. "Conceptual" does not mean or contemplate the modification of proposed housing types or the relocation of land uses and roads other than minor adjustments dictated by engineering needs and best practices.

(b) **Phasing**. The Project will be developed in three phases, as shown on the Conceptual Land Use Plan or "Conceptual Plan" in Attachment B to this Agreement. Each phase must be designed and built to operate independently with all necessary public services and utilities infrastructure, including roads, multimodal trails, and master stormwater systems, consistent with Conceptual Land Use Plan. Building permits for residential units in Phase 2 will not be issued until permits for residential units have been issued for Phase 1. Building permits for residential units in Phase 3 will not be issued until permits for residential units have been issued for Phase 2. Revisions to the phasing schedule shall be considered as minor amendments to this Agreement that may be approved by Town Council with no formal amendment to this Agreement required.

(c) **Purpose**. The purpose of the Mission Rise PUD is to:

1. Create an attractive and high-quality single-family housing development compatible with the scale and character of existing residential development and land uses in the Town;
2. Develop a residential area that is safe, comfortable and attractive for and to pedestrians;

3. Create a community with direct visual and physical access to open land, with a strong community identity, and with amenities in the form of community open space;
4. Provide a network of open space for future homeowners; and
5. Provide a variety of lot sizes and housing choices for diverse age and income groups and residential preferences.

(d) **Land uses**. The Conceptual Land Use Plan for the Project in Attachment B is an integral part of the approval of the Project. Elements in the Concept Plan include single-family detached homes, civic uses, multimodal trails and approximately 90 [??] acres of open space. No manufactured or modular homes are allowed. Uses that would be prohibited under the LDC for SFR, MDR-1, or MDR-2 zoning are likewise prohibited in residential areas of the Project.

(e) **Development standards**.

Lot Size
A range of lot sizes shall be provided in order to create variety and offer opportunity for different income households. Minimum lot size will be 55' x 120'. The Project may consist of up to 499 total single-family residential detached lots of 55' x 120' and 75' x 120'.

Setbacks
The setbacks for single family residential lots shall be as follows:

Front:	20 feet / 15 feet (w/ recessed garage)
Rear:	25 feet
Side:	7.5 feet
Corner:	12.5 feet
Pool / Accessory	10 feet

Dwelling Size
The minimum dwelling size for all single-family residences shall be 1,400 square feet of heated/air-conditioned space under roof plus a two-car garage with a minimum of 400 square feet. Maximum dwelling size shall be 4,600 square feet of heated/air-conditioned space under roof.

Lot Width
The minimum lot width at building line shall be 55 feet for 55-foot wide lots and 75 feet for 75-foot wide lots, with a minimum street frontage for all lots of 30 feet.

Lot Coverage
Lots may have a maximum lot coverage of 60%, to include principal dwelling, all paved areas, and swimming pools.

Height of Structures
No residential structure may exceed 35 feet in height.

Building Design
If and to the extent not inconsistent with Florida law, building design shall be in accordance with the Architectural Requirements of the Town's LDC and will comply specifically with the design requirements of LDC Sections 4.06.02 and 4.06.03.

The following principles seek to promote a high-quality development that will create a sense of place and community through the development of the site.

- If and to the extent not inconsistent with Florida law, housing styles, shapes and materials shall meet the Towns Land Development Regulations.
- The different housing types shall be integrated architecturally in order to give the development a harmonious appearance.
- The creation of visual richness shall be considered when choosing materials and details. Local characteristics are encouraged.
- Side entrances for garages are encouraged.
- A variety of roof heights, pitches and materials are encouraged.
- Landscaping shall be incorporated into the overall design as a means of linking the development areas with the open spaces.
- Each exterior wall for a single-family home must be a minimum of two materials and a minimum of two colors. Primary facades must have one base color and a complementary wall material may be used to meet the second color requirement.
- Block face restrictions may be reduced to 300 linear feet. The same house model may not be used more than three times within a single block face. For purposes of this requirement, a different house model is a different floor plan, not the same floor plan flipped in a different direction and not the same floor plan with a different exterior treatment.

(f) **Wetlands**. Impacts to wetlands, if any, and wetland buffering shall be subject to the Town's Land Development Regulations, as well as St. Johns River Water Management District regulations.

(g) **Potable water, wastewater, and reclaimed water**. For potable water and wastewater service, well and septic systems are not allowed. The Project must be connected to and served by the Town's potable-water and wastewater systems prior to a certificate of occupancy being issued for a structure in the Project (except temporary construction uses).

Except as may be set forth otherwise in this Agreement, the Owner must install all on-site potable-water, wastewater, and reclaimed-water infrastructure and connect to central water and wastewater systems, and to the Town's reclaimed-water system when available at the Property boundary, all at no cost to the Town. The Owner must pay potable-water, wastewater, and reclaimed-water capital and connection charges, impact fees, and other Town rates, fees, and charges, either applicable currently or in the future.

1. *Potable Water*. The Town will provide potable water, and may in the future provide reclaimed water, to the Project in accordance with its applicable ordinances, resolutions, operating regulations, policies and procedures. The Town will provide potable water to the Property in sufficient quantities for development of the Project as contemplated herein,

subject to the limitations and requirements of permits issued to the Town from time to time by the St. John's River Water Management District in connection with water consumption.

The Owner shall construct, at no expense to the Town, all off-site potable-water-system facilities, lines, pumps, valves, control structures, and appurtenances (other than water-treatment plants) necessary to serve the Project. The construction and route of off-site lines and other structures shall be done according to engineering plans prepared by the Owner and approved by the Town Manager. Potable water shall not be used for irrigation.

2. *Wastewater*. The Town will provide wastewater-collection and transmission service to the Project, transmitting Project wastewater either to the Central Lake Community Development District ("CDD") or to another wastewater utility service provider of the Town's choosing with available capacity to treat and dispose the Project's wastewater ("Wastewater Utility"). The Owner must obtain from the CDD or Wastewater Utility a contract right for the Project to receive treatment and disposal of its wastewater at such provider's treatment and disposal facilities.

The Owner shall construct, at no expense to the Town, all off-site wastewater-system transmission and disposal facilities, lines, lift stations, pumps, valves, control structures, and appurtenances (other than wastewater-treatment plants) necessary to serve the Project. The construction and route of off-site lines, lift stations, pumps, and other structures shall be done according to engineering plans prepared by the Owner and approved by the Town Manager.

3. *Town Option to Oversize Water and Wastewater Lines*. In its review and processing of the preliminary subdivision plans for each phase of the Project, the Town may elect to oversize the off-site lines, pumps, improvements, or other facilities or appurtenances for the Town's water or wastewater system, or for both, necessary to serve such phase. If the Town elects to oversize one or both systems, it must inform the Owner in writing of the specifications for the oversizing(s) prior to or as part of the Town's first round of review comments on the preliminary subdivision plan application. The Town shall reimburse the Owner for the difference in the increase in cost of design, materials and construction to oversize the improvements based on plans and cost estimates provided by the Owner to the Town and approved by the Town Manager, which approval shall not be unreasonably withheld, conditioned or delayed. The Town shall reimburse the Owners for the difference in the costs within 60 days following (i) completion of the improvements and (ii) receipt by the Town of documentation reasonably demonstrating that the Owner has completed the work and has incurred the costs attributable to the over-sizing, all in keeping with the plans and cost estimate previously approved by the Town Manager.

4. *Permit-Induced Costs, Restrictions, Requirements, and Risks.* Under state and federal laws and regulations, the Town may provide its potable-water and wastewater services to the Property and the Owner and its successors only if the Town first has been issued certain required permits. The Owner acknowledges that the permits are inevitably conditioned with requirements and restrictions that typically impose costs and risks. The Owner further acknowledges that, for the Town to operate its potable-water and wastewater systems in an orderly, dependable, and cost-effective manner, the Town must have the ability legally to spread the costs and risks among customers and property owners benefiting from the services. The

Owner acknowledges, therefore, that (i) from time to time the Town may impose rates, fees, and charges and may issue potable-water system and wastewater-system regulations and policies that impose restrictions and requirements on its customers and benefiting property owners, such as the Owner and it successors, and (ii) so long as the Owner or successors are required to pay only their fair share for such rates, fees, and charges, then the imposition of such rates, fees, and charges and the issuance of such system regulations are not prohibited by or otherwise a breach of this Agreement.

5. *Reclaimed Water*. The Owner must install reclaimed water lines, both on-site and off-site as directed by the Town and as required by the Town's Code of Ordinances. Until such time as reclaimed water is available to the Property the Owner and its successors shall use the reclaimed water lines to irrigate properties within the Project boundaries, but only with stormwater from on-site stormwater-retention ponds or with sources other than potable water as may be approved by the Town and St. John's River Water Management District. Except for installation of reclaimed lines at the time of development as noted above, connection to reclaimed water after the development of the Project may not result in additional costs to the Owner or developer.

(h) **Solid Waste**. Solid Waste collection shall be pursuant to Town regulations.

(i) **Drainage**. The maintenance, repair, and replacement of the drainage system shall be the responsibility of the homeowners association(s).

(j) **Transportation**

1. Roadways

A. The Project must have a connected street system that serves vehicles, pedestrians and bicycles and that connects to recreation facilities and adjacent residential/community areas.

B. There must be ingress and egress points at Revels Road, County Number Two Road and Orange Blossom Road in the approximate location shown on the Conceptual Land Use Plan.

C. The access at County Road Number Two must be a full intersection, with dedication of right-of-way sufficient for both (i) construction of turn lanes and (ii) reconstruction of No. 2 Road lanes along the Project frontage with 12-foot travel lanes, 4-foot curb lanes, and 2-foot curb and gutter. Otherwise, design of the No. 2 Road improvements are subject to review and approval by Lake County.

D. Ingress and egress points at the western and eastern boundaries of the Property must also be provided, as shown on the Conceptual Land Use Plan. On the west the Project internal roads must connect to Silverwood Lane. On the east the internal roads must connect to Road DD shown on the Master Site Plan for The Reserve at Howey-in-the-Hills PUD that is to be stubbed to the boundary of the Property. If for whatever reason the internal roads

cannot be connected by the Owner to Silverwood Lane on the west or to Road DD in The Reserve on the east, the Owner must stub the Project roads to the Property boundary for future connection.

E. Revels Road and the north-south Spine Road must be constructed in phases consistent with the phasing plan shown on the Conceptual Land Use Plan. Revels Road and the Spine Road must be public, dedicated to and maintained by the Town. Revels Road and the Spine Road must have a minimum 90-foot right-of-way, 2-foot curb and gutter, and a minimum 32-foot-wide pavement with minimum 12-foot travel lanes and 4-foot curb lanes.

F. All other internal neighborhood roads must have a minimum 50-foot right-of-way, curb and gutter, and a minimum 24-foot-wide pavement with minimum 12-foot travel lanes, which may be reduced to 11-foot travel lanes when adjacent to on-street parking. All alley roads must have a minimum 22-foot right-of-way, curb and gutter, and a minimum 20-foot-wide pavement. Provision must be made in the rights-of-way for underground utilities.

2. Sidewalks and trails.

All portions of the development must be accessible by a direct, convenient, attractive, safe, and comfortable system of pedestrian facilities. The development must provide appropriate pedestrian amenities. A multimodal trail with minimum width of twelve feet must be constructed within each phase of the Project consistent with Conceptual Land Use Plan and the Town's bicycle/pedestrian plan. The multimodal trail and all sidewalks within rights-of-way must be dedicated to and will be maintained by the Town.

2. Intersection Improvements in Lieu of Proportionate Fair Share Mitigation

The Owner has offered, and the Town accepts the Owner's offer , (i) to undertake and complete at no cost to the Town the reconstruction of the intersection at Revels Road and State Road 19 as a roundabout facility, in return for (ii) the Town waiving its customary transportation-concurrency review and a proportionate fair-share payment by the Owner. The intersection and its design are subject to required approval and permits from the Florida Department of Transportation (FDOT).

The intersection construction must be complete before the issuance of the 51st residential building permit in Phase 2 of the Project.

If the Owner cannot obtain required state permits for an intersection roundabout, the Owner shall undertake and complete construction of the intersection with a traffic signal if allowed by FDOT. For either intersection type both Revels Road and State Road 19 must be constructed in the intersection as four-lane roads.

If the Owner obtains the required state permits for the roundabout intersection or, alternatively, the signalized intersection, the Town will be deemed to have waived its

transportation-concurrency review. If the Owner cannot obtain required state permits for reconstruction of the intersection in either configuration, the Project must undergo transportation-concurrency review. The Owner must complete and submit for review prior to final development order a traffic-impact analysis.

If the results of the traffic-impact analysis require any mitigation for traffic generation, the Town and the Owner will work together and with any other applicable jurisdiction as required by applicable law to address such mitigation requirements through Owner's funding of its proportionate fair share of traffic improvements. Payment of the Owner's fair share must be made in pro-rata amounts upon the issuance of each building permit.

(k) **Schools**. The Project must apply for concurrency review at Lake County Public Schools. The school district has a specific application process. The Project must be shown to have appropriate school concurrency before building permits are issued.

(l) **Landscaping Requirements**. All landscaping and buffer requirements shall be in accordance with the LDC and as illustrated on the Conceptual Land Use Plan with the exception of the following:

1. All buffer, street, and canopy trees planted at the Project will be a minimum of a 2" caliper;
2. the Owner shall require homebuilders to plant at least one canopy tree for each single-family lot of at least 3" DBH; and
3. the developer will replace the equivalent of 30% of total tree-inches removed.

All trees planted at the Project shall adhere to the current guidelines established by the Florida Grades and Standards for nursery-grown trees and must be Florida grade #1 or better.

Developer must install street trees along each roadway where a common areaabuts the road as required by the LDC.

(m) **Tree Protection**. Under no circumstances may any tree, regardless of size or species, be removed from any designated wetland or conservation easement. Trees proposed to be maintained on-site must comply with LDC requirements. No construction activity, equipment or material is permitted inside a tree protection barrier.

(n) **Lighting**. Decorative street lighting (Sanibel fixture, a Duke Energy standard fixture) must be installed (i) at every intersection, (ii) at the end of each cul-de-sac, and (iii) at intervals of 300 feet or as approved otherwise by the Town Manager. Street lighting must be installed by the Owner. All lighting must be directional, shielded lighting designed to minimize light pollution. All lighting must be maintained by the HOA.

(o) **Utilities**. All utilities must be underground.

(p) **Signage**. Entrance signs and informational signage may be located in buffers, setbacks/and or signage easements as approved by the Planning and Zoning Board. Unless stated otherwise in this Agreement all signage must comply with requirements and restrictions in the

LDC. The Owner shall present a sign plan for review and approval by the Planning and Zoning Board with the final site plan for each phase of the Project.

The Owner and/or builder(s) may erect temporary vertical marketing flags, also known as feather banners, with the following stipulations:

1. Feather banners must be placed no less than 200 feet apart.
2. A maximum of 10 feather banners, in total.
3. Feather banners cannot be placed within the right of way.
4. Feather banners cannot be located offsite of PUD property.
5. Feather banners cannot exceed 12 feet in height.
6. Feather banners must be replaced or removed if they become faded, torn, or tattered.
7. Feather banners must be removed when 90% of the homes in the development have received building permit approval.

Billboards and pole signs are prohibited. Unless defined differently in the LDC, a pole sign is a permanent sign supported by at least one upright pole, pylon, or post secured to the ground, with the bottom of the sign face four feet or higher above the finished grade.

(q) **Maintenance of Common Areas**. Maintenance of each common area within the Project is the responsibility of the homeowners' association(s) for the affected subdivision.

(r) **Parks, Trails, and Open Spaces.** Each phase of the Project must include (i) the recreation and civic facilities for the phase and (ii) an integrated bicycle network that ties into the bicycle facilities in The Reserve PUD so as to loop the system to connect cyclists from both developments. Structures, facilities, and other improvements to be constructed and installed at the sites designated on the Conceptual Land Use Plan as parks, trails and open spaces must be included for review and approval as part of the final site plan approval for each phase or subdivision of each phase. Plans submitted must be in sufficient detail to provide reasonable understanding and certainty of the improvements, facilities, and uses to be made at each such site..

Section 2. Amendments. Amendments to the Conceptual Land Use Plan that occur after the effective date of this Agreement shall take effect only if and when approved by the Town Council or Town staff as applicable. Major amendments include material changes such as:

- changes to the location of individual land uses;
- any increase in the total number of residential units; and
- relocation and realignment of roads and routes for pedestrian and bicycle facilities.

Major amendments take effect only if approved by the Town Council in the manner required by law or otherwise as determined by Town Council, which may include public notice(s) and hearing(s).

Minor amendments shall include lesser changes such as:

- minor adjustments of roads, trails and pedestrian ways based on more detailed site-specific data;
- modifications to the phasing schedule;
- adjustments to utility locations based on more detailed engineering data; or
- adjustments to parks and open space based on more detailed subdivision design.

Minor amendments may be approved by the Town Manager without referral to the Planning and Zoning Board or Town Council. Whether a proposed amendment is major or minor will be determined by the Town Manager. Minor amendments to the Conceptual Land Use Plan shall be deemed incorporated into this Agreement and shall modify or replace the Conceptual Land Use Plan in Attachment B to the extent of such amendment to the Conceptual Land Use Plan, without the necessity for an amendment to this Agreement.

Section 3. Notices. All notices or payments required to be made hereunder shall be made at the following addresses:

To Town:	Sean O'Keefe, Town Manager Town of Howey-in-the-Hills 101 North Palm Avenue Howey-in-the-Hills, FL 34737 sokeefe@howey.org
With copies to:	John Brock, CMC, Town Clerk Town of Howey-in-the-Hills 101 North Palm Avenue Howey-in-the-Hills, FL 34737 jbrock@howey.org Thomas J. Wilkes, Town Attorney Gray Robinson, P.A. 301 East Pine Street, Suite 1400 Orlando, FL 32801 twilkes@gray-robinson.com
To Owner:	Jason Humm 1170 Peachtree Street NE, Suite 1150 Atlanta, GA 30309 jhumm@turnstonegroup.com

With copies to:

Rhea Lopes, AICP
RVI Planning + Landscape Architecture
10150 Highland Manor Dr, Suite 450
Tampa FL 33610
rlopes@rviplanning.com

Mike Ripley
Land Advisors
399 Carolina Ave, Suite 200
Winter Park, Florida 32789
MRipley@landadvisors.com

Jonathan Huels
Lowndes
215 North Eola Drive
Orlando, Florida 32801
Jonathan.huels@lowndes-law.com

Section 4. Severability. If any provision or portion of this Agreement is declared by a court of competent jurisdiction to be void, unconstitutional, or unenforceable, then all remaining provisions and portions of this Agreement shall remain in full force and effect. To that end, this Agreement is declared to be severable.

Section 5. Binding Effect. This Agreement runs with the land and is binding on and enforceable by and against the parties hereto and all their successors in interest. However, no Lot Owner shall have the obligations imposed on the Owner as the developer of the Project under this Agreement. For that purpose, a "Lot Owner" means an end-user of a lot created within the Property with a completed residential unit constructed thereon, for which a certificate of occupancy has been issued. Each party covenants to each other party that this Agreement is a legal, valid, and binding agreement, enforceable against the party in accordance with its terms.

Section 6. Negotiated Agreement. The land uses, densities, intensities, and other conditions of approval of the Project have been negotiated and agreed to by the Owner and the Town. The Conceptual Land Use Plan and this Agreement together constitute an agreement between the parties with the knowledge that the Owner's successors in title, the future homeowners, and other landowners within the Property, as well as the Town and its affected property owners and residents, all will rely justifiably on the agreed-to land uses, densities, and intensities authorized hereby for the Property. For that reason, the Owner and the Owner's successors in interest have the contract right to develop the PUD with the uses, densities, and intensities approved by the Town, subject to the restrictions and requirements in the conditions of approval set forth in this Agreement. Neither the Owner (and its successors in interest) nor the Town shall have the right in the future to rezone or downzone the property, or otherwise alter the uses, densities and intensities, or delete, waive or amend any conditions of approval except through an amendment to the Plan negotiated and approved by the Town Council and the owner or owners of the then-

subject parcel or parcels. This section shall survive the termination and expiration of this Agreement.

Section 7. Homeowners' Association(s).

(a) **Association Responsibilities**. A homeowner's association and/or a property owner's association ("HOA") must be created by the Owner. Membership in the HOA shall be mandatory for all property owners within the Project. The HOA, not the Town, must maintain, repair, and replace all parks, open-space and buffer areas, streetlights, stormwater-management areas and drainage systems, entrance features, boundary walls and/or fences, access tracts, and landscaped tracts within the Project. The Town may opt, however, to undertake any such project of maintenance, repair, and replacement of those structures, facilities and systems. If the Town exercises its option, it may charge or assess either the HOA or its homeowners and property owners to recover the cost of the project.

(b) **Requirement for Plat Recording**. Before a plat may be recorded for the Property and the Project, the Owner shall furnish to the Town copies of the pertinent documents for the homeowners' or property owners' association or associations, which documents must contain the covenants, conditions and restrictions for the Property and must set forth the requirements and restrictions imposed on the HOA and its homeowners and property owners as enumerated in this section 7 and other applicable parts of this Agreement.

Section 8. Additional Requirements.

(a) **Letter of credit**. Construction and dedication to the Town of the public facilities and improvements required under this Agreement and the LDC for each phase of the Project is a condition precedent to final plat approval for such phase. In lieu of construction and dedication, however, the Owner may post a letter of credit or performance bond with the Town for 125% of the cost of such improvements not completed at the time of plat, in which event this condition precedent to final plat approval (but not the requirement to complete construction and to dedicate the public facilities and improvements required under this Agreement and the LDC) will be deemed satisfied.

(b) **Conveyances to the Town**. Property dedicated or otherwise conveyed to the Town under this Agreement must be free and clear of encumbrances unless and to the extent an encumbrance is acceptable to the Town. Encumbrances discovered after the Effective Date of this Agreement must be removed or resolved by the Owner or its successor developer prior to dedication or conveyance of the affected property to the Town.

(c) **Changes in status of land**. Until completion of the Project, the Owner or its successor developer of the Project has a continuing duty (i) to disclose promptly to the Town all changes in ownership, encumbrances, and other matters of record affecting the Property and (ii) to resolve all issues, title or otherwise, that may be identified by the Town as a result of such changes. Failure to disclose such changes or to resolve resulting issues may result in delay in issuance of building and other development permits.

(d) **Developer representations binding**. If at Town Council hearings on the approval of the Project the Owner makes a written or oral promise or representation, and if the

promise or representation was relied upon by Town Council in approving the Project or otherwise acted to induce or materially influence Town Council in its vote to approve the Project, the promise or representation is a condition of approval of the Project. The promise or representation is binding on the Owner and its successors and enforceable by the Town against the Owner and its successors as if set forth fully in this Agreement.

Section 9. Governing Law. This Agreement shall be governed by the laws of the State of Florida. Venue for any judicial proceeding pertaining to the Agreement shall be in the Fifth Judicial Circuit of Florida, in Lake County, Florida.

Section 10. Effective Date; Termination.

(a) **Effective Date**. This Agreement shall take effect upon the Effective Date above, or on the date when it has been executed by both the Town Council and the Owner, whichever is later.

(b) **Termination**. This Agreement shall remain in effect unless and until terminated under one of the following conditions:

1. If as of the second anniversary of the Effective Date of this Agreement an Owner's contract right to treatment and disposal services by the CDD or Wastewater Utility, as required under Section 1(g) above, has not taken effect, the Town may terminate this Agreement by vote of its Town Council. The vote must occur no later than (i) the third anniversary of the Effective Date or (ii) the CDD or Wastewater Utility Contract Date, whichever occurs first. The "Contract Date" is the date on which the Owner's contract right to treatment and disposal services by the CDD or Wastewater Utility takes effect.

2. If as of the second anniversary of the Contract Date no building permit for a residential unit in the Project has been issued, the Town may terminate this Agreement by vote of its Town Council. The vote must occur no later than (i) the third anniversary of the Contract Date or (ii) the date a building permit is issued, whichever occurs first.

3. If as of the fifth anniversary of the Contract Date no building permit for a residential unit in the second phase of the Project has been issued, the Town may terminate this Agreement by vote of its Town Council, but only as it applies to development of the second phase. The vote must occur no later than (i) the sixth anniversary of the Contract Date or (ii) the date a building permit is issued for a residential unit in the second phase, whichever occurs first. Termination of the Agreement for this reason will not act to preclude the Owner or its successor from completing the first phase of the Project.

4. If as of the tenth anniversary of the Contract Date no building permit for a residential unit in the third phase of the Project has been issued, the Town may terminate this Agreement by vote of its Town Council, but only as it applies to development of the third phase. The vote must occur no later than (i) the eleventh anniversary of the Contract Date or (ii) the date a building permit is issued for a residential unit in the third phase, whichever occurs first. Termination of the Agreement for this reason will not act to preclude the Owner or its successor from completing the first or second phase of the Project.

Termination of this Agreement, in whole or in part, under this section shall be without prejudice to the Owner or its successor to apply for Town approvals to undertake or continue development of the Property in light of the circumstances and subject to the land-development regulations then existing in the Town.

Section 11. Recording. This Agreement shall be recorded by the Town, at the Owner's expense, in the Public Records of Lake County, Florida, and shall constitute a covenant running with the land.

Section 12. Authority. This Agreement is entered into by the Town under the home-rule powers granted to it by the Florida constitution (including specifically Article VIII, Section 2(b) thereof), the home-rule powers granted municipalities by statute (including specifically Chapter 166, Florida Statutes), and the Town's Charter. This Agreement does not constitute a "development agreement" under the Florida Local Government Development Agreement Act.

Section 13. Entire Agreement. This Agreement constitutes the entire agreement of the parties with respect to the transactions contemplated herein. It supersedes all prior understandings or agreements between the parties relating to the Property and the Project. No amendment to the terms of this Agreement shall be effective unless in writing signed by all parties hereto. Amendments to this Agreement will take effect and will be binding against the Town only if approved by a vote of the Town Council.

Section 14. Waiver. The failure of a party hereto to insist upon or enforce any right or privilege granted hereunder shall not constitute or operate as a waiver thereof and nothing shall constitute a waiver of any party's right to insist upon strict compliance with the terms hereof. However, any party may waive in writing the benefit of any provision or condition for its benefit which is contained herein. Waivers of material provisions of either this Agreement or the Town's LDC will be valid and binding against the Town only if approved by a vote of the Town Council.

[Signature pages follow]

IN WITNESS WHEREOF, the parties are signing this Agreement as of the Effective Date or, if later, the date by which both parties have fully executed this Agreement.

TOWN OF HOWEY-IN-THE-HILLS, FLORIDA
By: its Town Council

By: _____
Hon. Martha McFarlane, Mayor

Attest:

By: _____
John Brock, CMC, Town Clerk

Approved as to form and legality:
(for the use and reliance of the Town only)

_____
Thomas J. Wilkes, Town Attorney

STATE OF FLORIDA
COUNTY OF LAKE

The foregoing instrument was executed, sworn to and acknowledged before me this ____ day of _____, 2023, by Martha McFarlane, personally known to me to be the Mayor of the Town of Howey in the Hills.

(SEAL)

_____
Signature of Notary

_____
Name of Notary Public
(Typed, Printed or stamped)

Signed, sealed and delivered
in the presence of:

WITNESSES

_____
Printed Name: _____

"OWNER"

ASF TAP FL I, LLC, a Delaware limited liability company

By: _____
Printed Name: _____
As its: _____

_____
Printed Name: _____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was executed, sworn to and acknowledged before me by means of ____ physical presence or _____ online notarization, this _____ day of _____, 2022, by _____, as _____ of **ASF TAP FL I, LLC.**, a Delaware limited liability company, on its behalf.

(SEAL)

_____
Signature of Notary Public

_____
Name of Notary Public
(Typed, Printed or stamped)

Personally Known ____ ***OR*** Produced Identification _____
(Type of Identification Produced)

Attachment A
To
MISSION RISE PUD DEVELOPMENT AGREEMENT

LEGAL DESCRIPTION

Attachment B
To
MISSION RISE PUD DEVELOPMENT AGREEMENT

CONCEPTUAL LAND USE PLAN

Including the following graphics:

1. Conceptual Plan;
2. Phasing Plan;
3. Parks, Trails & Open Space Plan;
4. Non-Residential Areas;
5. Buffer Typicals;
6. Street Cross Sections; and
7. Lot Fit.

[insert Conceptual Land Use Plan]

#52338764 v3

DEVELOPMENT SUMMARY

Total Property Acreage	**+/- 243.3 Ac**
Total Wetlands	**+/- 60.1 Ac**
Impacted Wetlands	+/- 0.3 Ac
Preserved Wetlands	+/- 59.8 Ac
Required Open Space (25%)	**+/- 60.8 Ac**
Additional Wetlands	**+/- 29.4 Ac**
Developable (Net Land Area)	**+/- 153.1 Ac**

Max. Number of Residential Units	**499 du**
Unit Type:	**Single Family - Detached**
Unit Sizes:	
55′ x 120′	
75′ x 120′	

OPEN SPACE ACREAGE [1]

Required (Min 25%)	**+/- 60.8 Ac**
Provided (28.5%)	**+/- 69.4 Ac**
Stormwater	+/- 26.8 Ac
Misc. Open Space	+/- 12.2 Ac
Wetlands[2]	+/- 30.4 Ac
Public Recreation[3]	**+/- 6.8 Ac**

RESIDENTIAL ACREAGE

Required (Max. 85%)	**+/- 130.0 Ac**
Provided (84.5%)	**+/- 129.3 Ac**

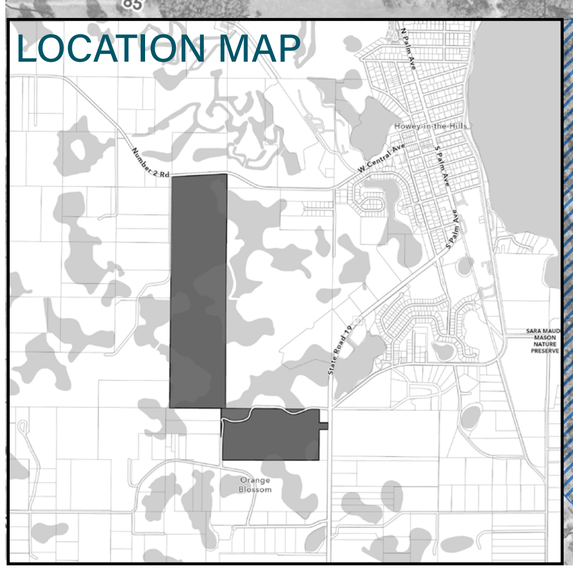
NOTES:

1. Amenities, multimodal trail, and additional open space areas located in Non-Residential tracts are not included in required Open Space calculations. acreage.
2. Up to 50% of required Open Space can be from Preserved Wetland.
3. Min. 10% of usable Open Space has to be designated as Public Recreation.
4. The community will feature complimentary architectural styles including craftsman, bungalow, Florida cracker, low country, Florida vernacular, or similar.
5. Trees preservation will be in accordance with LDC 7.11.02 and 7.11.03

* Future Potential Access Connections will be provided subject to obtaining legal access from adjacent parcels.

Access
Cabana / Pool Amenity 1.2 Ac
25′ Landscaped Berm / 15′ Landscaped Buffer with 6′ Wall
Number Two Rd ROW Reservation up to 40′ from Centerline
25′ Landscaped Berm / 15′ Landscaped Buffer with 6′ Wall
10′ Landscaped Tract
Future Potential Access Connections*
Pond
Wetland
NUMBER 2 RD
Neighborhood Park
Property Boundary
SILVERWOOD LN
Mini Park 0.4 Ac
Pond
10′ Landscaped Buffer
Alley-Loaded Lots
10′ Landscaped Buffer
Pond
Wetland
660′ Buffer
330′ Buffer
Wetland
Pond
Eagle Nest
Neighborhood Park
Pond
Future Potential Access Connections*
90′ ROW Connector #1
Alley-Loaded Lots
Future Potential Access Connections*
10′ Landscaped Buffer
Alley-Loaded Lots
22′ Alley
Mini Park 0.6 Ac
Wetland
Pond
Pond
Neighborhood Park
10′ Landscaped Tract
Access
REVELS RD
Wetland
Cabana / Pool Amenity 1.4 Ac
Trail Head Site Access Road
Trail Head Site 1.3 Ac
15′ Landscaped Non-Residential Buffer
Pond
25′ Landscaped Berm / 15′ Landscaped Buffer with 6′ Wall
Pond
Pond
Wetland
Wetland
Pond
Access
ORANGE BLOSSOM RD
10′ Landscaped Buffer
S PALM AVE

LOCATION MAP



LEGEND

- Public Recreation Area
- Pedestrian Paths
- Multimodal Trail
- End-cap Parallel Parking
- ROW Reservation
- Trail Head Site (Civic)
- Amenity/Mini Parks
- Neighborhood Park
- Stormwater
- Wetlands
- Mis. Open Space

FLOOD ZONE

- A
- AE

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MISSION RISE • **CONCEPTUAL PLAN**

Town of Howey Hills, FL
September 22, 2023
22003786
Turnstone Group / ASF TAP FL I LLC.

0 300′ 600′
SCALE: 1" = 300′

The plan is conceptual in nature. Final densities, layout, development parameters, calculations, and site conditions may change upon further development of the Preliminary and/or Master Site Plan, and upon evaluation of topographic survey, water management and existing historic and specimen trees to remain.

DEVELOPMENT SUMMARY

Total Property Acreage	**+/- 243.3 Ac**
Phase 1	+/- 69.1 Ac
Phase 2	+/- 97.6 Ac
Phase 3	+/- 76.6 Ac

PHASE DEVELOPMENT

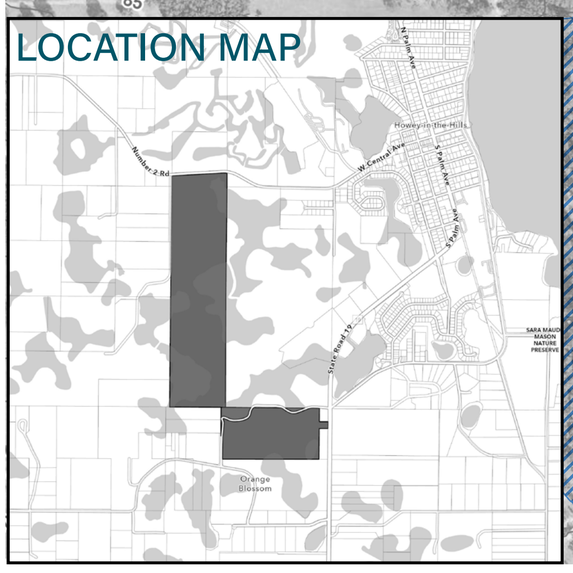
	55′ Lots	75′ Lots	Total
Phase 1	150	41	191
Phase 2	100	13	113
Phase 3	166	29	195
Total	416	83	499

Phase 3

Phase 2

Phase 1

LOCATION MAP



LEGEND

- Public Recreation
- Pedestrian Paths
- End-cap Parallel Parking
- Multimodal Trail

FLOOD ZONE

- A
- AE

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MISSION RISE • **PHASING PLAN**

- Town of Howey Hills, FL
- September 22, 2023
- # 22003786
- Turnstone Group / ASF TAP FL I LLC.

0 300’ 600’

SCALE: 1” = 300’

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PARKS & TRAILS PROGRAM

TRAIL HEAD SITE

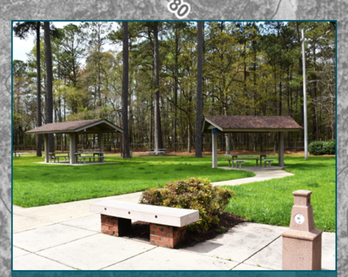
MULTIMODAL TRAIL

WETLAND ENGAGEMENT

BIKE MAINTENANCE STATION

COOLING STATION

WATER STATION



PICNIC AREA

GATHERING AREAS

NOTES:

1. Planned facilities/amenities within parks are conceptual and may change during the subdivision plan process.

Cabana / Pool Amenity

Pond

Wetland

NUMBER 2 RD

Neighborhood Park with benches, picnic tables, cooling stations, pathways, bike maintenance stations, pet stations, exercise stations, flex fields and/or gathering areas.

SILVERWOOD LN

Mini Park with benches, picnic tables, exercise stations, flex fields, gathering areas, tot lot, and/or dog park.

Future Hillside Groves Multimodal Trail

Neighborhood Park with benches, picnic tables, cooling stations, pathways, bike maintenance stations, pet stations, exercise stations, flex fields and/or gathering areas.

Mini Park with benches, picnic tables, exercise stations, flex fields, gathering areas, tot lot, and/or dog park.

Neighborhood Park with benches, picnic tables, cooling stations, pathways, bike maintenance stations, pet stations, exercise stations, flex fields and/or gathering areas.

REVELS RD

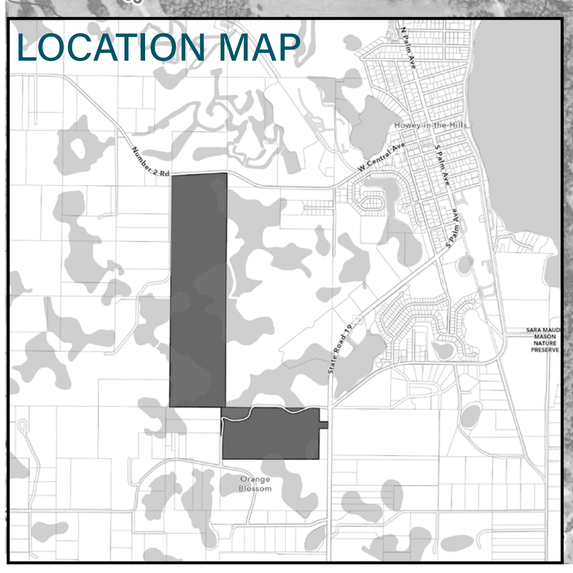
Cabana / Pool Amenity

Trail Head Site Access Road

Trail Head Site

S PALM AVE

LOCATION MAP



LEGEND

- Pedestrian Paths
- Multimodal Trail
- Trail Head Site (Civic)
- Amenity/Mini Parks
- Neighborhood Park
- Stormwater
- Wetlands
- Mis. Open Space

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MISSION RISE • **PARKS, TRAILS & OPEN SPACE PLAN**

- Town of Howey Hills, FL
- September 22, 2023
- # 22003786
- Turnstone Group / ASF TAP FL I LLC.

0 300’ 600’

SCALE: 1” = 300’

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NON-RESIDENTIAL ACREAGE

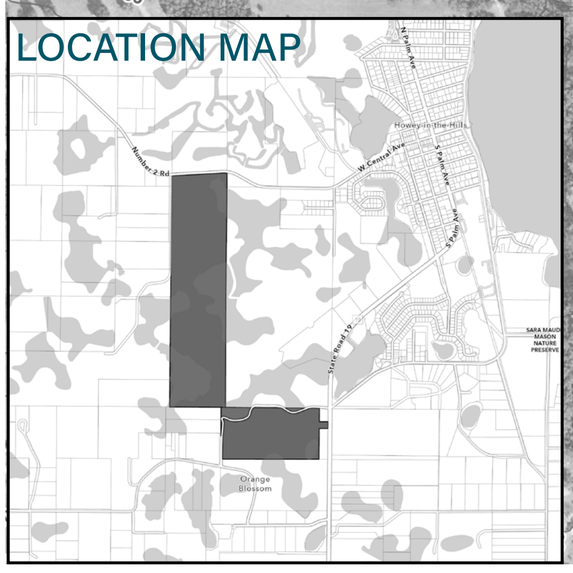
Required (Min 15%)	**+/- 23.0 Ac**
Provided (15.2%)	**+/- 23.2 Ac**
Civic (Required 5%)	+/- 1.3 Ac
Amenities[1]	+/- 3.5 Ac
Neighborhood Park System	+/- 16.9 Ac
Regional Multimodal Trail	+/- 1.5 Ac

NOTES:

1. Amenities, multimodal trail, and additional open space areas located in Non-Residential tracts are not included in required Open Space calculations.
2. Ponds located inside Neighborhood Parks are not included in the Non-Residential acreage.

Cabana / Pool Amenity 1.2 Ac
Pond
Wetland
NUMBER 2 RD
Neighborhood Park
SILVERWOOD LN
Future Hillside Groves Multimodal Trail
Mini Park 0.4 Ac
Pond
Pond
Wetland
Wetland
Pond
Neighborhood Park
Pond
Wetland
Pond
Mini Park 0.6 Ac
Pond
Neighborhood Park
Wetland
REVELS RD
Cabana / Pool Amenity 1.4 Ac
Trail Head Site Access Road
Trail Head Site
Pond
Pond
Pond
Wetland
Wetland
S PALM AVE

LOCATION MAP



LEGEND

- Non-Residential Area
- Pedestrian Paths
- Multimodal Trail
- Trail Head Site (Civic)
- Amenity/Mini Parks
- Neighborhood Park

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MISSION RISE • **NON-RESIDENTIAL AREAS**

Town of Howey Hills, FL
September 22, 2023
22003786
Turnstone Group / ASF TAP FL I LLC.

0 300’ 600’
SCALE: 1” = 300’

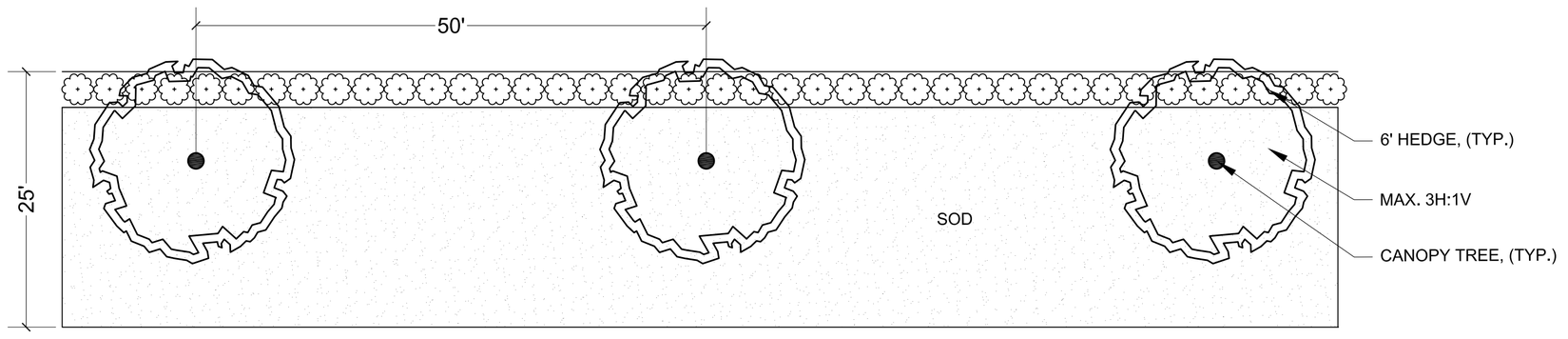
The plan is conceptual in nature. Final densities, layout, development parameters, calculations, and site conditions may change upon further development of the Preliminary and/or Master Site Plan, and upon evaluation of topographic survey, water management and existing historic and specimen trees to remain.

RESIDENTIAL BUFFERS

25’ LANDSCAPE BUFFER, TYPICAL

A landscaped berm with a total depth of at least 25 feet and no steeper than 3H:1V. The berm shall be at least three feet (3’) in height and the berm together with the landscaping, shall comprise a continuous screen of at least 5 and one half feet (5.5’) at time of planting and six feet (6’) within one year of planting. Canopy trees shall also be planted every 50 feet along the berm.

For single family subdivisions, these buffers shall be on common property and dedicated to the homeowners’ association for ownership and maintenance responsibilities.

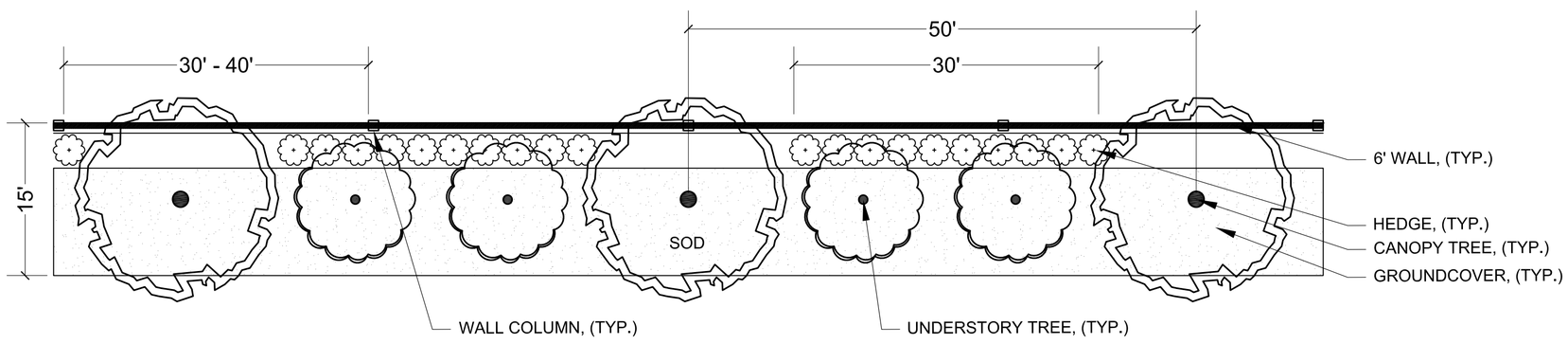


15’ LANDSCAPE BUFFER, TYPICAL

A landscaped wall buffer with a minimum depth of 15 feet. The wall shall maintain a height of six feet (6’) from grade on highest side and all walls shall have a decorative exterior (no exposed block). Acceptable materials for wall faces are brick, stucco or stone or a combination of those materials. Wall columns shall have a maximum spacing of thirty feet (30’) on walls up to two hundred feet (200’) in length and forty feet (40’) on walls more than two hundred feet (200’) in length. Wall columns may extend up to two feet (2’) above the height of the wall.

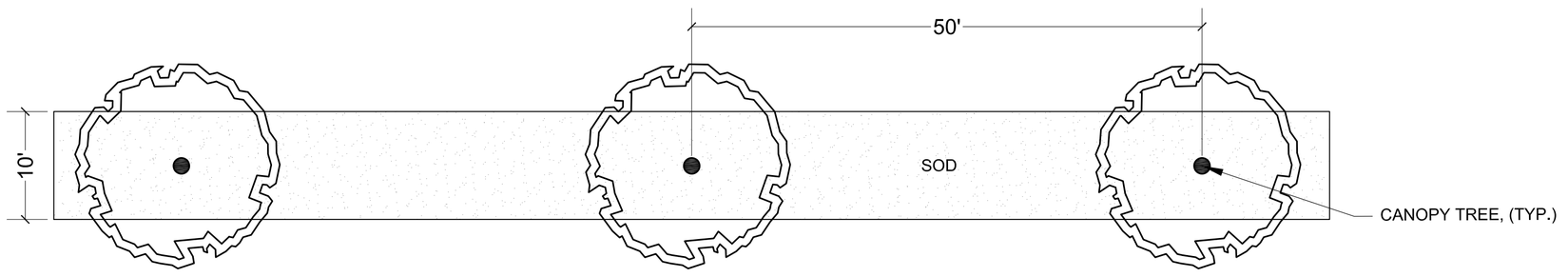
Within each fifty-foot (50’) increment along the wall, two (2) canopy trees, two (2) understory trees, and 30 linear feet of shrubs shall be planted. The trees shall not be closer than five feet (5’) to a walk or wall. The shrubs shall be at least 30” in height at time of planting.

For single family subdivisions, these buffers shall be on common property and dedicated to the homeowners’ association for ownership and maintenance responsibilities.



10’ LANDSCAPE BUFFER, TYPICAL

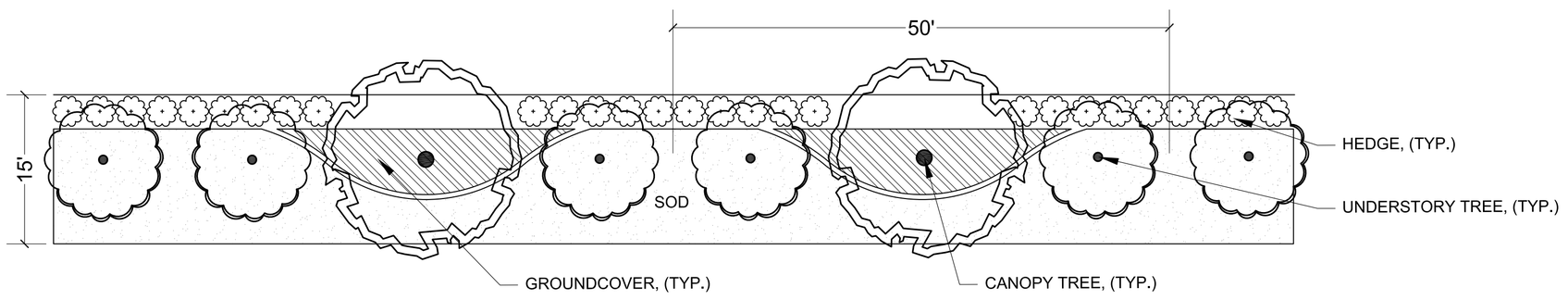
Ten-foot-wide (10’) landscaped buffer with trees spaced no more than 50 feet on center.



NON-RESIDENTIAL BUFFERS

15’ LANDSCAPE BUFFER, TYPICAL

The landscaped buffer shall contain at least one (1) canopy tree, two understory trees and 30 linear feet of shrubs and ground cover for each 50 linear feet of buffer. Canopy tress shall be located no less than five feet (5’) and no more than eight feet (8’) from sidewalks and other walkways in order to provide shade while minimizing conflicts between tree roots and sidewalks. Similarly, canopy trees shall be used to shade parking areas that adjoin buffers. Understory trees may be planted in groupings and palms may be planted in place of understory trees when clustered in groupings of three or more trees.



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MISSION RISE • **BUFFER TYPICALS**

Town of Howey Hills, FL

September 22, 2023

22003786

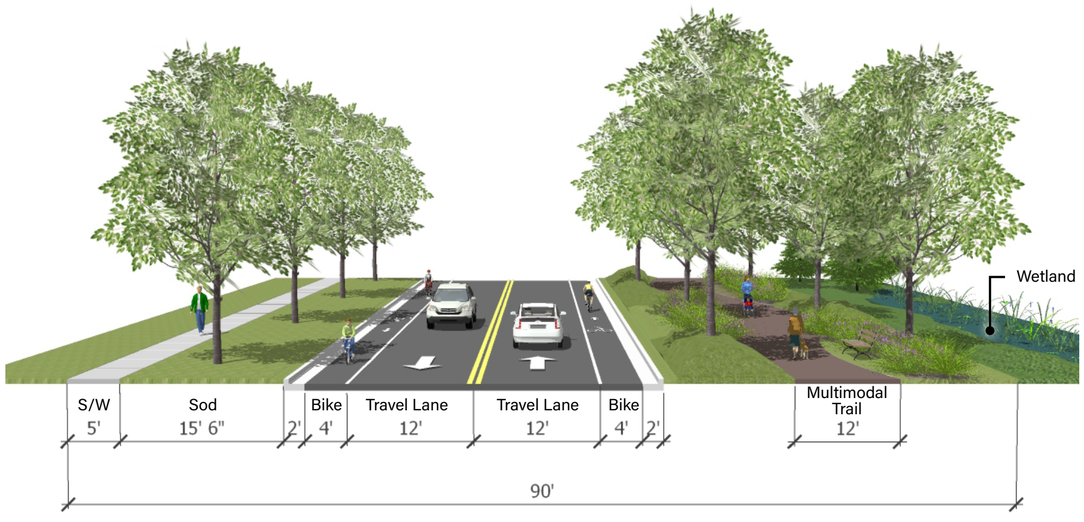
Turnstone Group / ASF TAP FL I LLC.

0 10’ 20’

SCALE: 1” = 10’

The plan is conceptual in nature. Final densities, layout, development parameters, calculations, and site conditions may change upon further development of the Preliminary and/or Master Site Plan, and upon evaluation of topographic survey, water management and existing historic and specimen trees to remain.

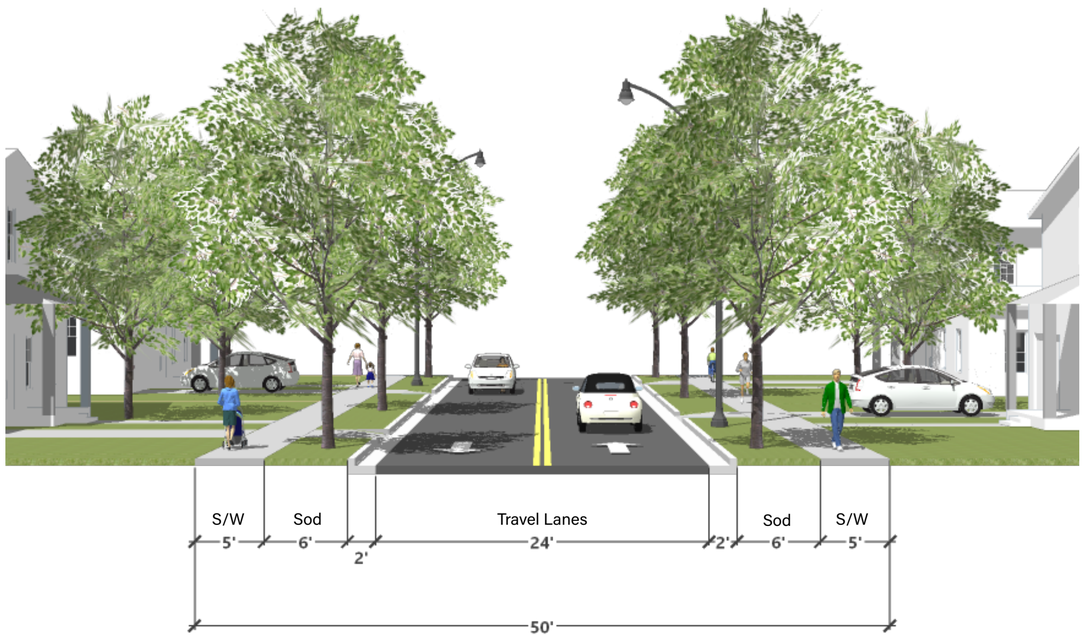
SPINE ROAD
90′ ROW WITH BIKE LANE & 12′ MULTIMODAL TRAIL



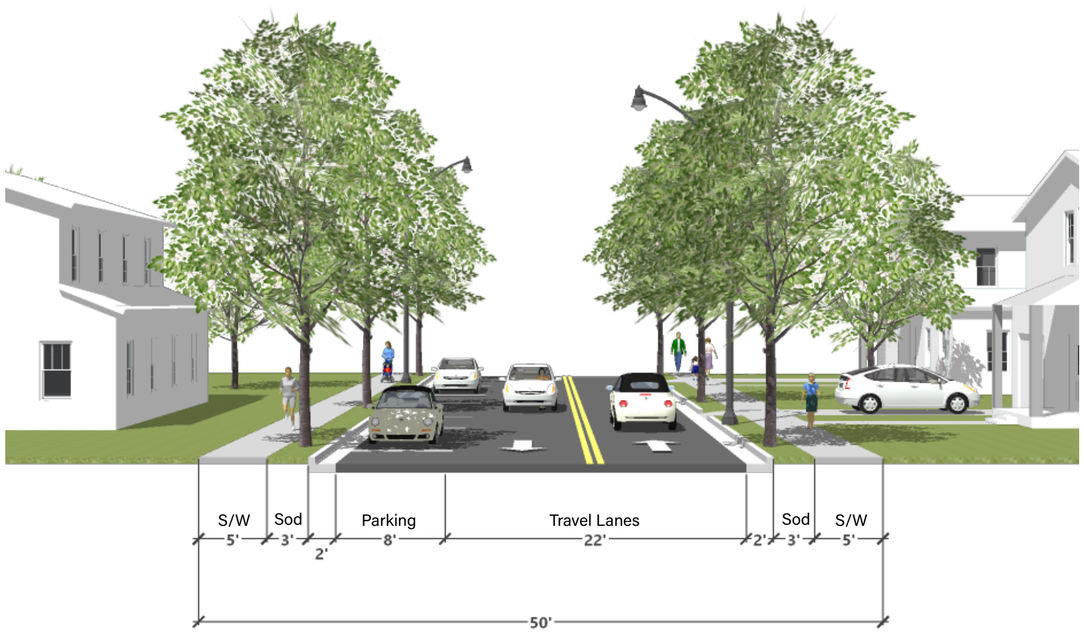
NOTE:

Multimodal Trail is intended to meander in and out of the proposed ROW. Final location may vary based on grading, utilities & final engineering.

NEIGHBORHOOD ROAD
OPTION 1 - 50′ ROW

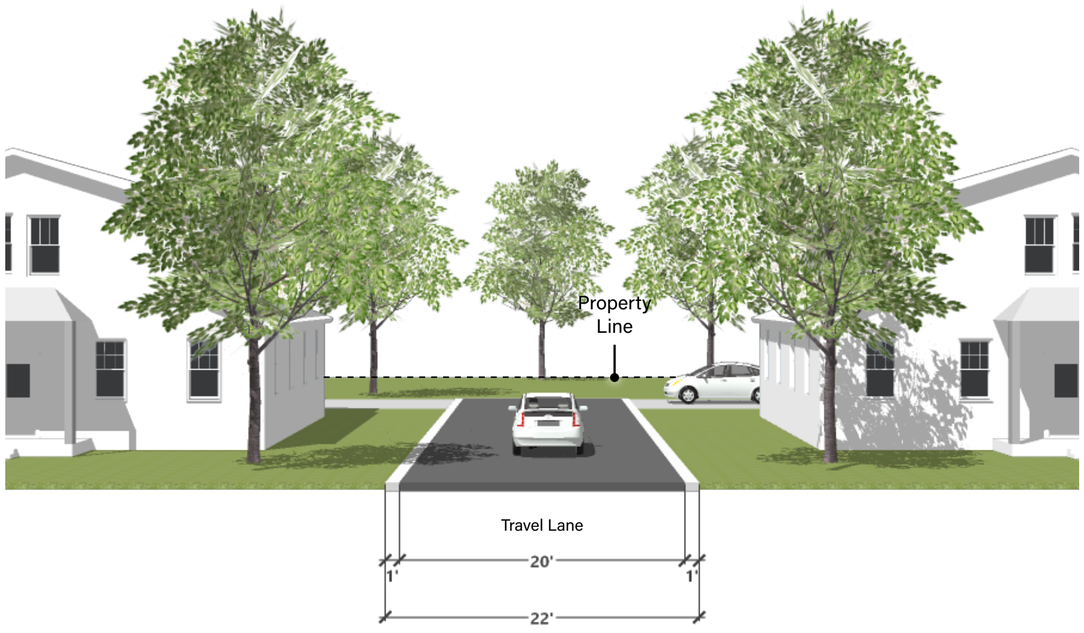


OPTION 2 - 50′ ROW WITH PARKING ON ONE SIDE

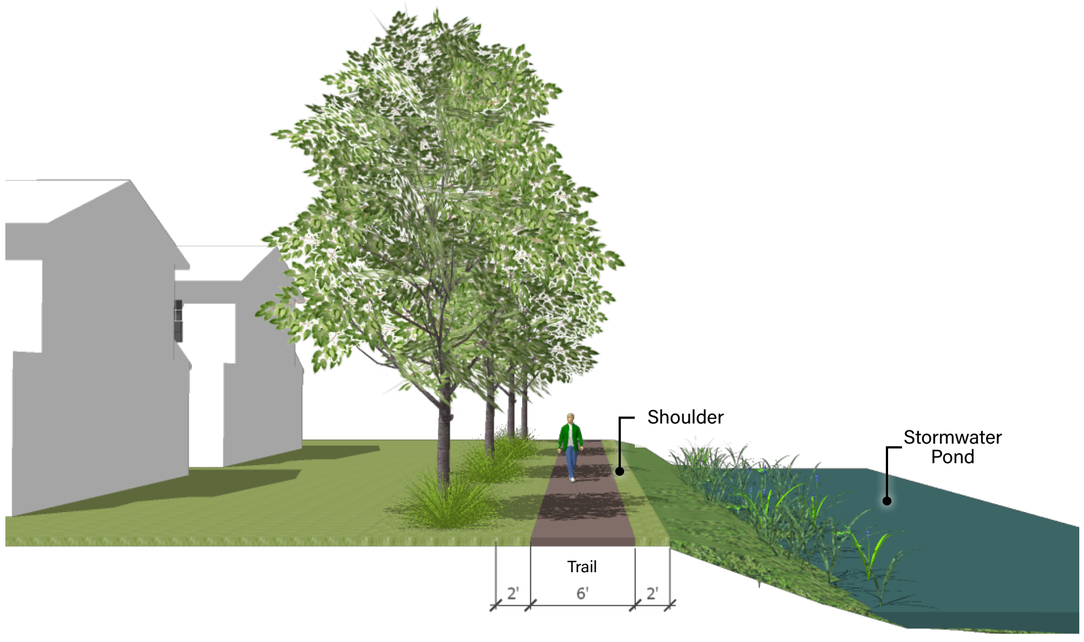


ALLEY ROAD
OPTION 1 - PARALLEL 22′ ROW

OPTION 2 - PAIRED 22′ ROW



PEDESTRIAN PATH
6′ TRAIL



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MISSION RISE • **STREET CROSS SECTIONS**

Town of Howey Hills, FL
September 22, 2023
22003786
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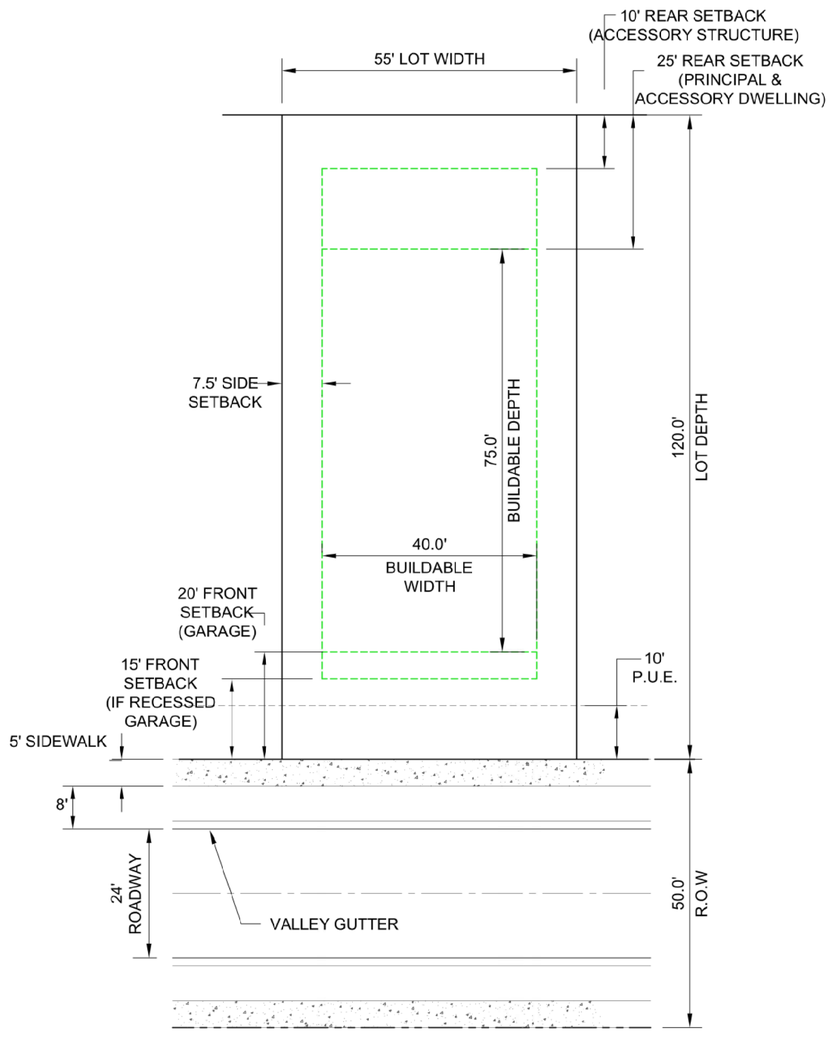
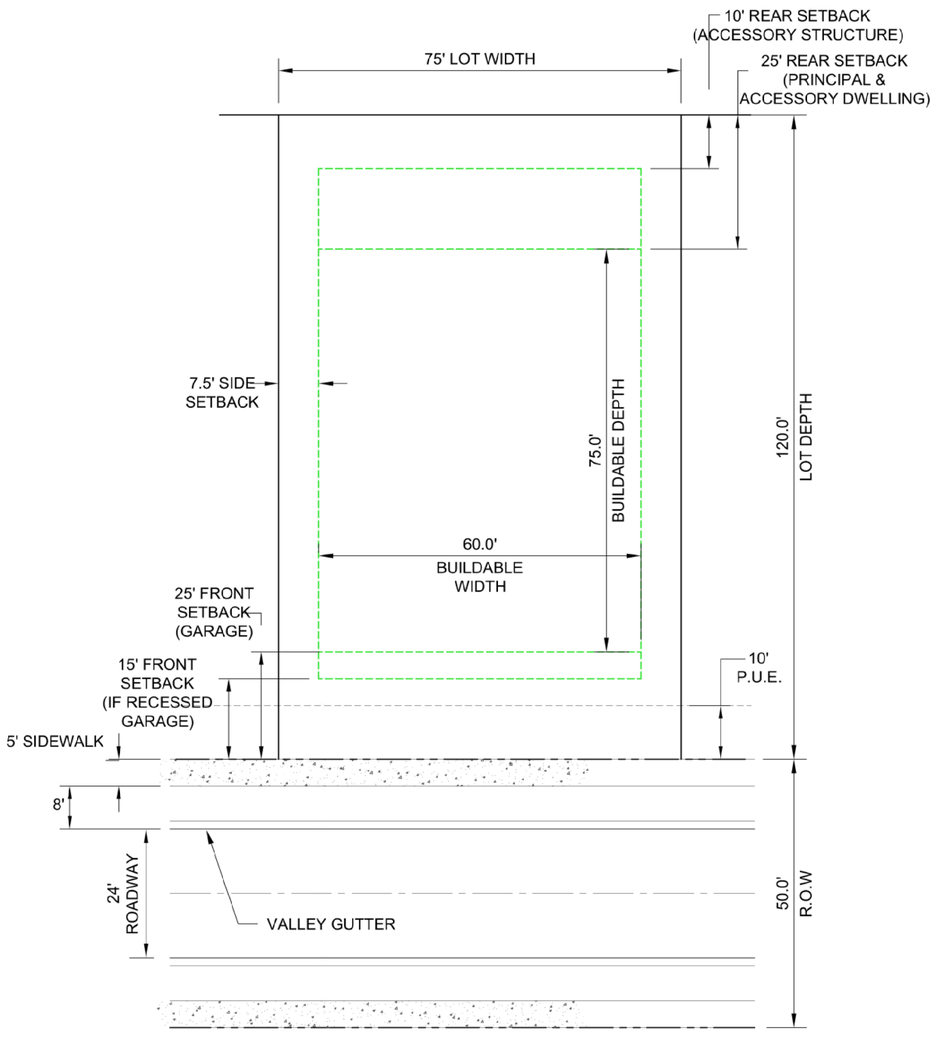
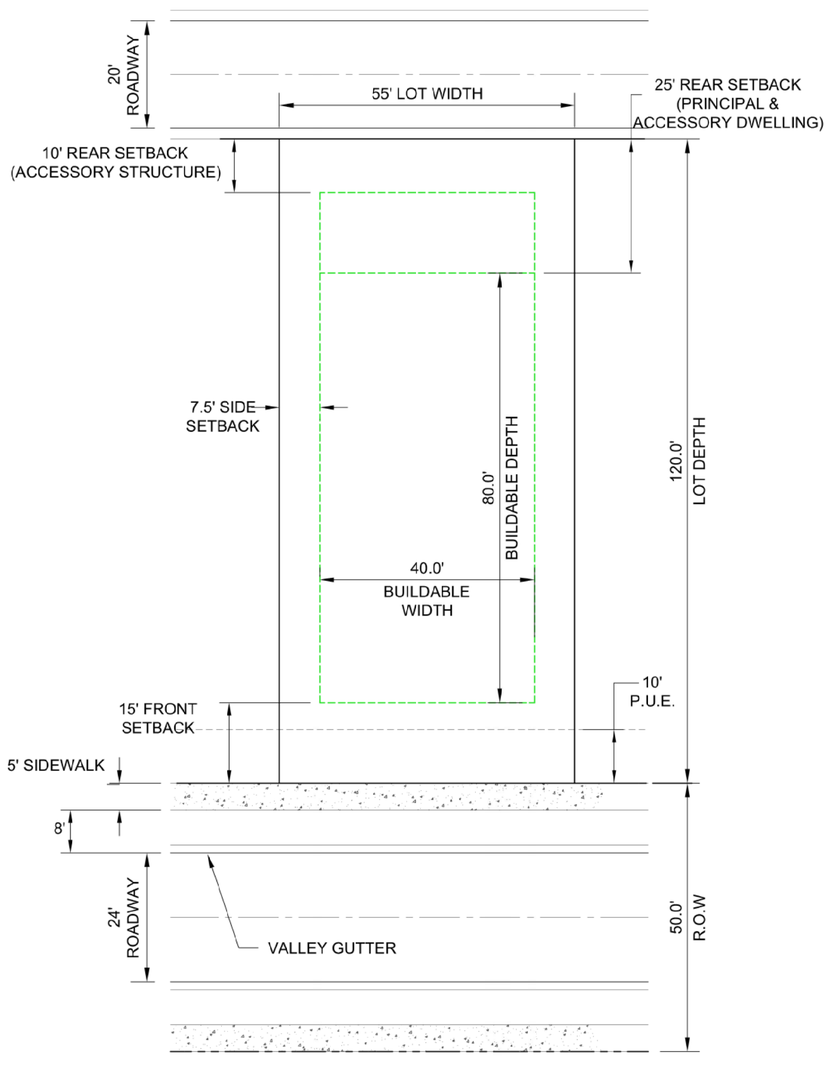
55′ LOT
FRONT LOAD GARAGE



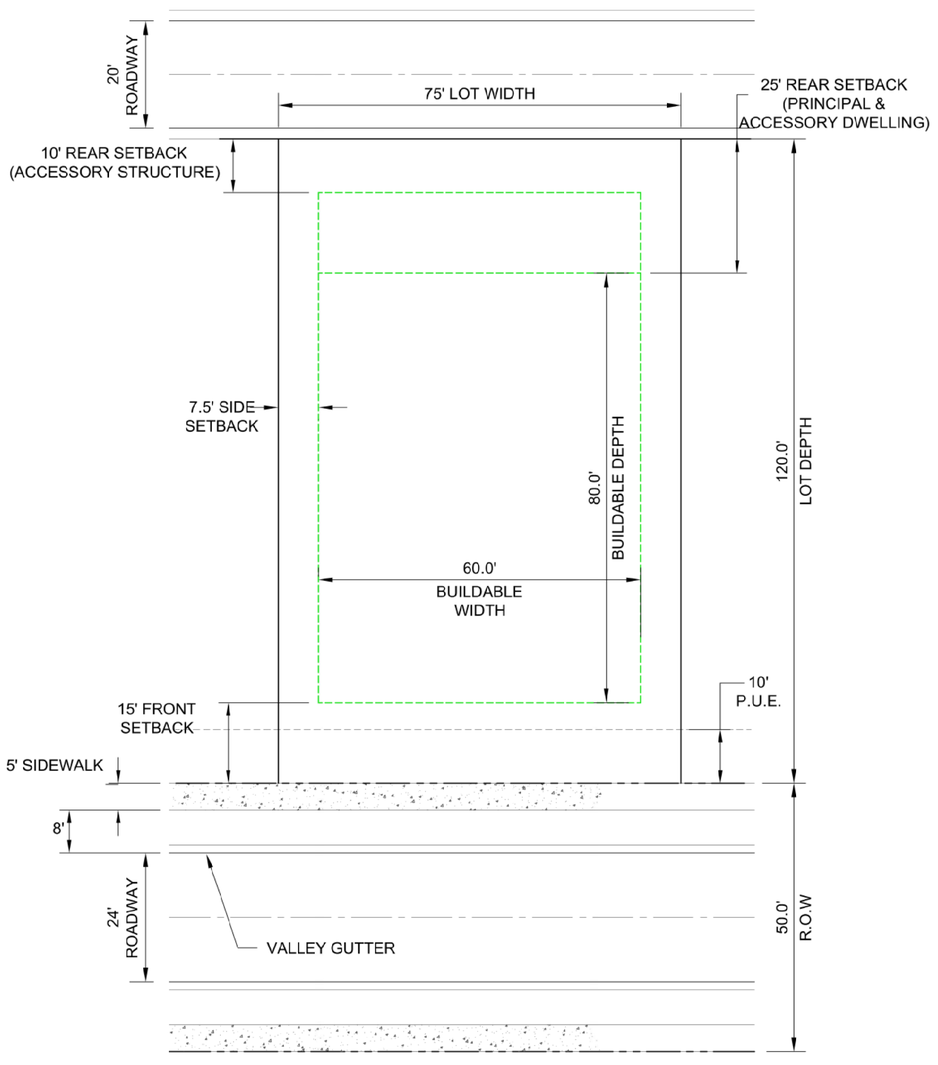
75′ LOT
FRONT LOAD GARAGE



55′ LOT
REAR LOAD GARAGE



75′ LOT
REAR LOAD GARAGE



111 N Magnolia Ave
Suite 1350
Orlando, Florida 32801
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www.rviplanning.com

MISSION RISE • **LOT FIT**

Town of Howey Hills, FL

September 22, 2023

22003786

Turnstone Group / ASF TAP FL I LLC.

0 20' 40'

SCALE: 1" = 20'

The plan is conceptual in nature. Final densities, layout, development parameters, calculations, and site conditions may change upon further development of the Preliminary and/or Master Site Plan, and upon evaluation of topographic survey, water management and existing historic and specimen trees to remain.

MISSION RISE
Project № 23017.1, v1.3
October 2023

TRAFFIC IMPACT ANALYSIS
TOWN OF HOWEY-IN-THE HILLS
FLORIDA

Prepared by:

Traffic & Mobility Consultants
3101 Maguire Boulevard, Suite 265
Orlando, Florida 32803
www.trafficmobility.com
(407) 531-5332

Prepared for:
ASF TAP Florida I, LLC
1170 Peachtree Street Northeast, Suite 1150
Atlanta, Georgia 30309

EXECUTIVE SUMMARY

Project Information

Name:	Mission Rise
Location:	West of SR 19 (South Palm Avenue), east of Silverwood Lane, and south of Number 2 Road in the Town of Howey-in-the-Hills, Lake County, Florida
Description:	499 Single Family Residential Units
Access Plan:	One (1) full access at the intersection of Number 2 Road and Spine Road One (1) full access at the intersection of SR 19 and Revels Road One (1) full access at the intersection of Revels Road and Orange Blossom Road (expected to carry limited traffic)

Findings

Trip Generation:	4,428 Daily Trips / 322 AM Peak Hour Trips / 451 PM Peak Hour Trips
Roadway Capacity:	The segments of SR 19, from Lane Park Road to Central Avenue and from CR 455 to CR 478 are projected to operate over their capacities at the project buildout.
Intersection Capacity:	The intersections of SR 19 and CR 48, SR 19 and Central Avenue, SR 19 and Revels Road, and SR 19 and CR 455 are projected to experience delays in the buildout condition. The project does not have a significant impact on the intersections.

Recommendations

Intersection Improvements:	Retime the signal or construct a roundabout at the intersections of SR 19 and CR 48 to maintain LOS standards. Provide traffic signals on SR 19 at Central Avenue, Revels Road, and CR 455 to maintain LOS standards. A signal warrant analysis is recommended and should be provided in separate reports. Construct a 430-foot northbound left turn lane and a 405-foot southbound right turn lane at the intersection of SR 19 and Revels Road. Construct a 655-foot westbound left turn lane and a 420-foot eastbound right turn lane at the intersection of Number 2 Road and Spine Road.

PROFESSIONAL ENGINEERING CERTIFICATION

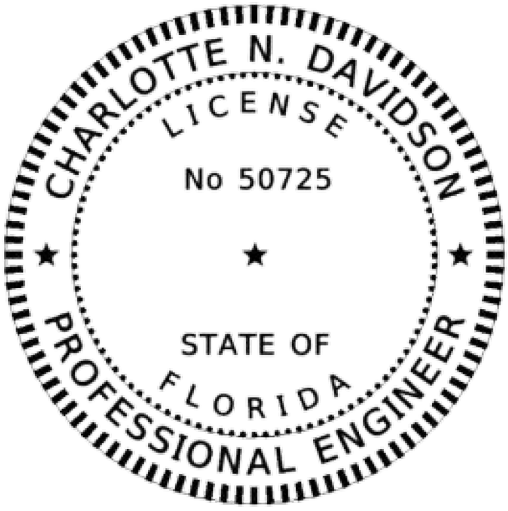
I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic & Mobility Consultants LLC, a corporation authorized to operate as an engineering business, CA-30024, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Mission Rise

LOCATION: Town of Howey-in-the-Hills, Florida

CLIENT: ASF TAP Florida, LLC

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.



THIS ITEM HAS BEN DIGITALLY SIGNED AND SEALED BY
Charlotte N Davidson
Digitally signed by Charlotte N Davidson
Date: 2023.10.18 13:47:46 -04'00'
ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BOULEVARD, SUITE 265
ORLANDO, FLORIDA 32803
CERTIFICATE OF AUTHORIZATION CA-30024
CHARLOTTE N. DAVIDSON, P.E. NO 50725

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1.0 INTRODUCTION

This Traffic Impact Analysis (TIA) was conducted to assess the impact of the proposed Mission Rise development in the town of Howey-in-the-Hills, Florida. The proposed development consists of 499 single-family units with an anticipated buildout year of 2033. This study conforms to the Tier 2 TIA requirements of the Town of Howey-in-the-Hills and Lake County. The analysis was prepared in accordance with the approved methodology. The study has been updated to incorporate comments received from the Town of Howey-in-the-Hills. The methodology and the response to comments letter are included in **Appendix A**.

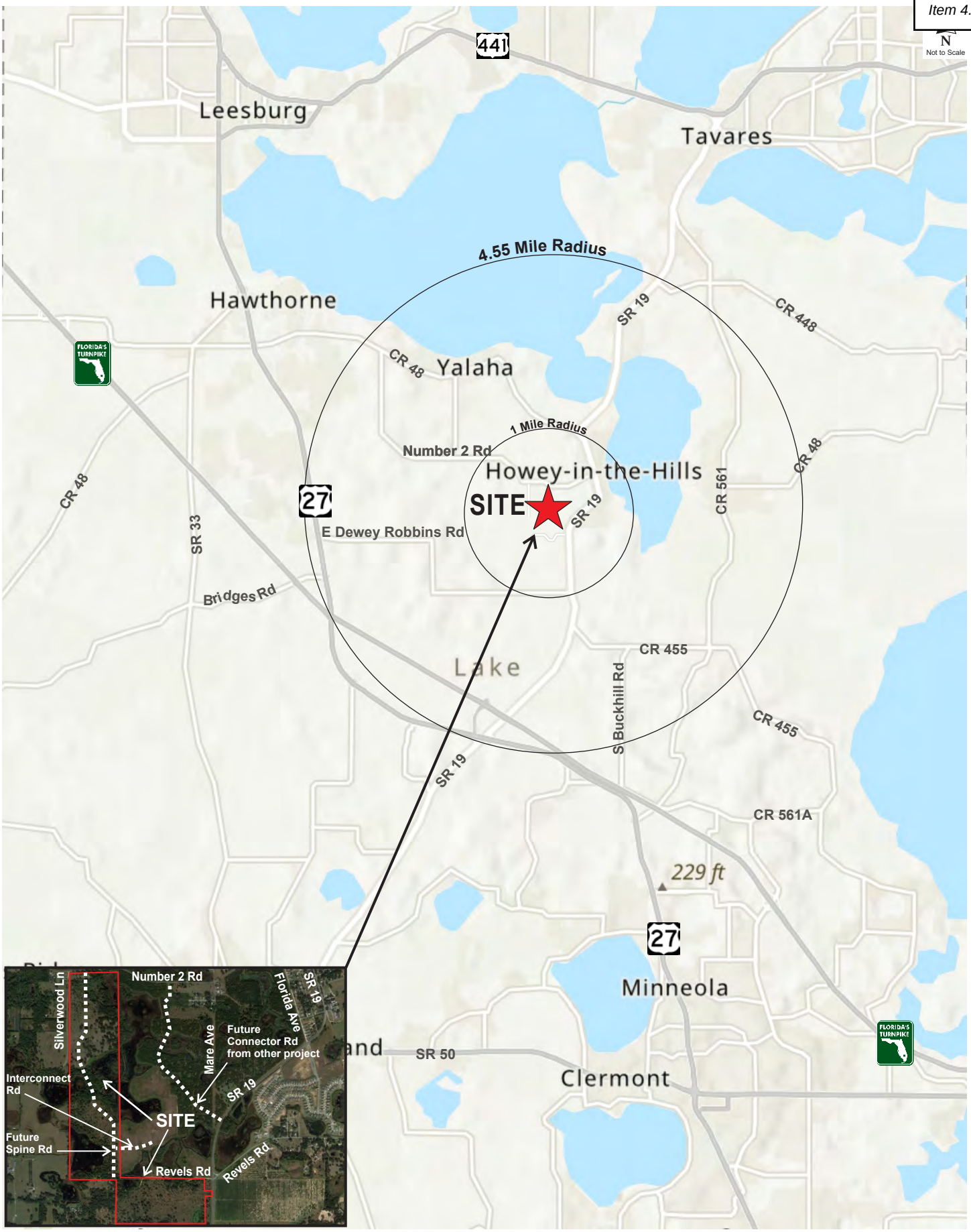
The site is located east of Silverwood Lane, west of SR 19 (South Palm Avenue), and south of Number 2 Road. **Figure 1** depicts the site location and the surrounding transportation network.

The development will be accessed via the intersections of Number 2 Road and Spine Road (future road), SR 19 and Revels Road, and Revels Road and Orange Blossom Road. The preliminary development site plan is provided in **Appendix B**.

Data used in the analysis consisted of site plan/development information provided by the project engineers, AM and PM peak hour intersection traffic counts obtained by Traffic & Mobility Consultants LLC, FDOT's *2023 Multimodal Quality/Level of Service (MQ/LOS) Handbook* and roadway capacities obtained from the *2022 Lake County Congestion Management Process (CMP) Database*.

1.1 Study Area

The project study area was established based on the standard requirements of the Lake Sumter Metropolitan Planning Organization (LSMPO) methodology and the Town of Howey-in-the-Hills *Land Development Code* (*LDC*). In accordance with the requirements of Tier 2 TIA methodology, the impact area includes roadway segments and intersections within a 4.55-mile radius of the site in addition to roadways where the development traffic is expected to consume 5% or more of their adopted Level of Service (LOS) capacities. The roadway segments characteristics were obtained from the *2022 Lake County Congestion Management Process (CMP) Database* and 2023 *FDOT Multimodal Quality/Level of Service (Q/LOS) Handbook Appendix B,* included in **Appendix C**. The project study area determination is provided in **Table 1,** as determined in the approved methodology.



Site Location Map
Mission Rise
23017.1, v1.3

Figure 152

Table 1
Study Area

Roadway Segment	SEG ID	No Lns	Area Type	Median Type	Speed Limit	LOS Std	Pk Dir Cap	Dir	Project Dist	Project Trips	Within 1-Mile? **	% Cap	In Study?
CR 455													
SR 19 to CR 561	950	2	R	Undivided	45	C	740	EB	10%	17	NO	2.3%	NO
								WB		28		3.8%	
CR 561 to CR 561A	960	2	R	Undivided	25	C	410	EB	5%	8	NO	2.0%	NO
								WB		14		3.4%	
CR 48													
US 27 to Lime Ave	1240	2	U	Undivided	40	D	1,080	EB	15%	43	NO	4.0%	NO
								WB		25		2.3%	
Lime Ave to SR 19	1250	2	U	Undivided	40	D	1,080	EB	2%	6	NO	0.6%	NO
								WB		3		0.3%	
CR 561 to Ranch Rd	1260	2	U	Undivided	40	D	840	EB	3%	5	NO	0.6%	NO
								WB		9		1.1%	
Ranch Rd to CR 448A	1270	2	R	Undivided	40	C	410	EB	3%	5	NO	1.2%	NO
								WB		9		2.2%	
CR 561													
CR 448 to CR 48	1410	2	U	Undivided	50	D	1,080	NB	0%	0	NO	0.0%	NO
								SB		0		0.0%	
CR 48 to South Astatula City Limit	1420	2	U	Undivided	40	D	620	NB	3%	9	NO	1.5%	NO
								SB		5		0.8%	
South Astatula City Limit to CR 455	1430	2	U	Undivided	40	D	1,080	NB	3%	9	NO	0.8%	NO
								SB		5		0.5%	
CR 455 to Howey Cross Rd	1440	2	R	Undivided	35	C	470	NB	2%	6	NO	1.3%	NO
								SB		3		0.6%	
Howey CRoss Rd to Turnpike Rd / CR 561A	1450	2	R	Undivided	40	C	640	NB	2%	6	NO	0.9%	NO
								SB		3		0.5%	
SR 19													
Lane Park Rd to CR 48	3040	2	U	Undivided	55	D	920	NB	23%	38	NO	4.1%	**YES**
								SB		65		**7.1%**	
CR 48 to Central Ave	3050	2	U	Undivided	40	D	700	NB	25%	42	NO	**6.0%**	**YES**
								SB		71		**10.1%**	
Central Ave to CR 455	3060	2	U	Undivided	35	D	1,200	NB	50%	142	**YES**	**11.8%**	**YES**
								SB		84		**7.0%**	
CR 455 to US 27 / SR 25	3070	2	R	Undivided	55	C	450	NB	35%	99	NO	**22.0%**	**YES**
								SB		58		**12.9%**	
US 27 / SR 25 to CR 478	3080	2	R	Undivided	55	C	450	NB	20%	57	NO	**12.7%**	**YES**
								SB		33		**7.3%**	
SR 91 (Florida Turnpike)													
US 27/SR 25 to US 27/SR 25/SR 19 Interchange	3566	4	U	Freeway	70	B	2,230	EB	10%	17	NO	0.8%	NO
								WB		28		1.3%	
US 27/SR 25													
SR 19 to CR 561	3830	4	U	Divided	55	D	3,280	EB	15%	25	NO	0.8%	NO
								WB		43		1.3%	
Central Ave													
SR 19 to Mare Ave	N/A	2	U	Undivided	30	D	770 *	EB	10%	17	**YES**	2.2%	**YES**
								WB		28		3.6%	
Number 2 Rd													
Mare Ave to Silverwood Ln	N/A	2	U	Undivided	30	D	730 *	EB	35%	58	**YES**	**7.9%**	**YES**
								WB		99		**13.6%**	
Silverwood Ln to CR 48	N/A	2	U	Undivided	45	D	730 *	EB	15%	25	**YES**	3.4%	**YES**
								WB		43		**5.9%**	

Source: 2022 Lake County CMP Database

** 2023 FDOT Multimodal Quality/Level of Service Handbook, Appendix B: Florida's Generalized Service Volume Tables*

Bold numbers represent capacity equal or higher than 5%.

Based on the study area analysis presented in **Table 1**, the following roadway segments were analyzed for the PM peak hour:

- SR 19
  - Lane Park Road to CR 48
  - CR 48 to Central Avenue
  - Central Avenue to CR 455
  - CR 455 to US 27 / SR 25
  - US 27 / SR 25 to CR 478

- Central Avenue
  - SR 19 to Mare Avenue

- Number 2 Road
  - Mare Avenue to Silverwood Lane
  - Silverwood Lane to CR 48

The following intersections were analyzed for the AM and PM peak hours:

- SR 19 and CR 48 (Signalized)
- SR 19 and Central Avenue (Unsignalized)
- Central Avenue and South Florida Avenue (Unsignalized)
- SR 19 and Revels Road (Unsignalized) (East Project Access)
- SR 19 and CR 455 (Unsignalized)
- Spine Road and Interconnect Road (Proposed)
- Number 2 Road and Spine Road (North Project Access) (Proposed)
- Revels Road and Spine Road (Proposed)
- Revels Road and Orange Blossom Road (South Project Access)

2.0 EXISTING CONDITIONS ANALYSIS

Existing conditions in the vicinity of the site were analyzed to establish a baseline for the traffic conditions prevailing in the vicinity of the proposed development. The analysis included a review of existing roadway segment capacity and analysis of the intersection operations at the study intersections.

2.1 Roadway Segment Capacity

Existing roadway conditions were analyzed by comparing the existing traffic volumes within the study area and the adopted level of service (LOS) standards for the roadway segments. **Table 2** summarizes the roadway segment capacity analysis.

Table 2
Existing Roadway Segment Capacity Analysis

Roadway Segment	Seg ID	No Lns	LOS Std	Pk Dir Cap	Dir	Existing Vol	LOS	V/C	Deficient?
***Central Ave**									
SR 19 to Mare Ave	N/A	2	D	530	EB	57	C	0.11	NO
					WB	59	C	0.11	NO
SR 19									
Lane Park Rd to CR 48	3040	2	D	920	NB	610	C	0.66	NO
					SB	656	C	0.71	NO
CR 48 to Central Ave	3050	2	D	700	NB	433	C	0.62	NO
					SB	372	C	0.53	NO
Central Ave to CR 455	3060	2	D	1,200	NB	433	B	0.36	NO
					SB	372	B	0.31	NO
CR 455 to US 27 / SR 25	3070	2	C	450	NB	507	D	1.13	YES
					SB	435	C	0.97	NO
US 27 / SR 25 to CR 478	3080	2	C	450	NB	466	D	1.04	YES
					SB	519	D	1.15	YES
Number 2 Rd									
Mare Avenue to Silverwood Ln	N/A	2	D	400	EB	57	C	0.14	NO
					WB	59	C	0.15	NO
Silverwood Ln to CR 48	N/A	2	D	400	EB	57	C	0.14	NO
					WB	59	C	0.15	NO

Source: 2022 Lake County CMP Database
** Counts were obtained from PM Peak Turning Movement Counts*
***A reduction of 25% was applied to the Peak Hour Directional Capacity of 530, as Number 2 Road is a substandard road*

The analysis indicates that all study roadway segments currently operate adequately within their capacities except the segments of SR 19 from CR 455 to CR 478 which currently operate over capacity.

2.2 Intersection Capacity

The intersection capacity analysis was performed for the AM and PM peak hour periods. The capacity analysis was performed using *Synchro* and the methods of the *Highway Capacity Manual (HCM)*. Turning movement volumes obtained during the AM and PM peak hour are displayed in **Figure 2** and **Figure 3**, respectively. The counts at SR 19 and CR 455 were collected on January 24, 2023, which coincides with a seasonal factor of 1.0. The remaining intersection turning movement counts were collected on July 19, 2023, during the off-peak season; therefore, a seasonal factor of 1.06 was applied to these counts. The turning movement counts and the seasonal factor report are included in **Appendix D**.

The results of the intersection capacity analysis, summarized in **Table 3,** reveal that all study intersections are currently operating at adequate LOS. Detailed *HCM* analysis worksheets are included in **Appendix E**.

Table 3
Existing Intersection Capacity Analysis

Intersection	Traffic Control	Time Period	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 19 & CR 48	Signal	AM	--	--	50.7	D	20.3	C	11.2	B	29.5	C
		PM	--	--	87.5	F	17.1	B	10.7	B	55.7	E
SR 19 & Central Ave	TWSC	AM	20.7	C	15.1	C	8.9	A	8.8	A	--	--
		PM	22.6	C	17.9	C	9.0	A	8.8	A	--	--
W Central Ave & S Florida Ave	TWSC	AM	7.3	A	7.3	A	8.8	A	0.0	A	--	--
		PM	0.0	A	7.3	A	8.8	A	9.4	A	--	--
SR 19 & Revels Rd	TWSC	AM	13.3	B	15.0	C	8.3	A	8.0	A	--	--
		PM	14.0	B	16.1	C	8.1	A	8.2	A	--	--
SR 19 & CR 455	TWSC	AM	--	--	25.1	D	--	--	8.9	A	--	--
		PM	--	--	26.7	D	--	--	9.0	A	--	--

Average delay is in seconds

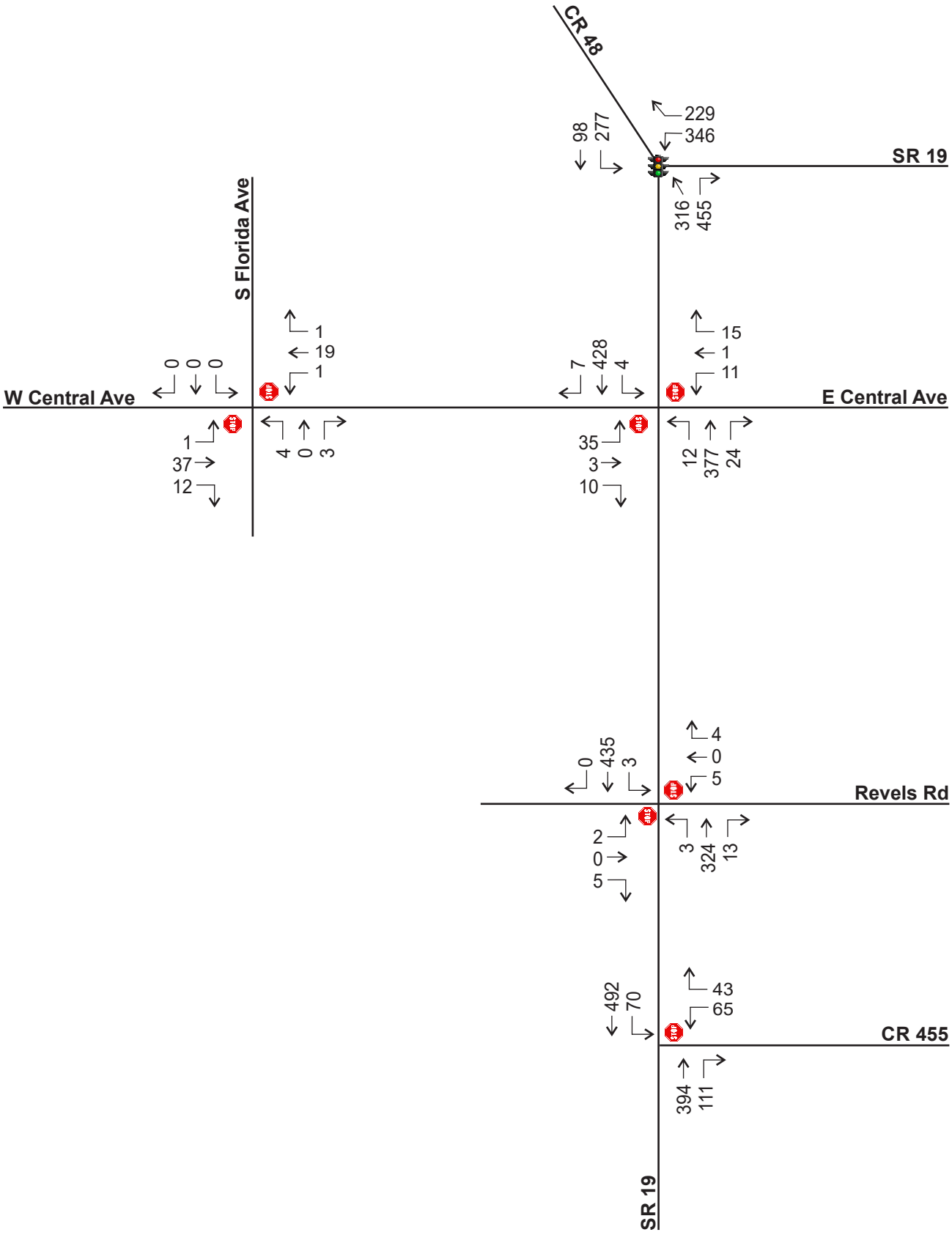
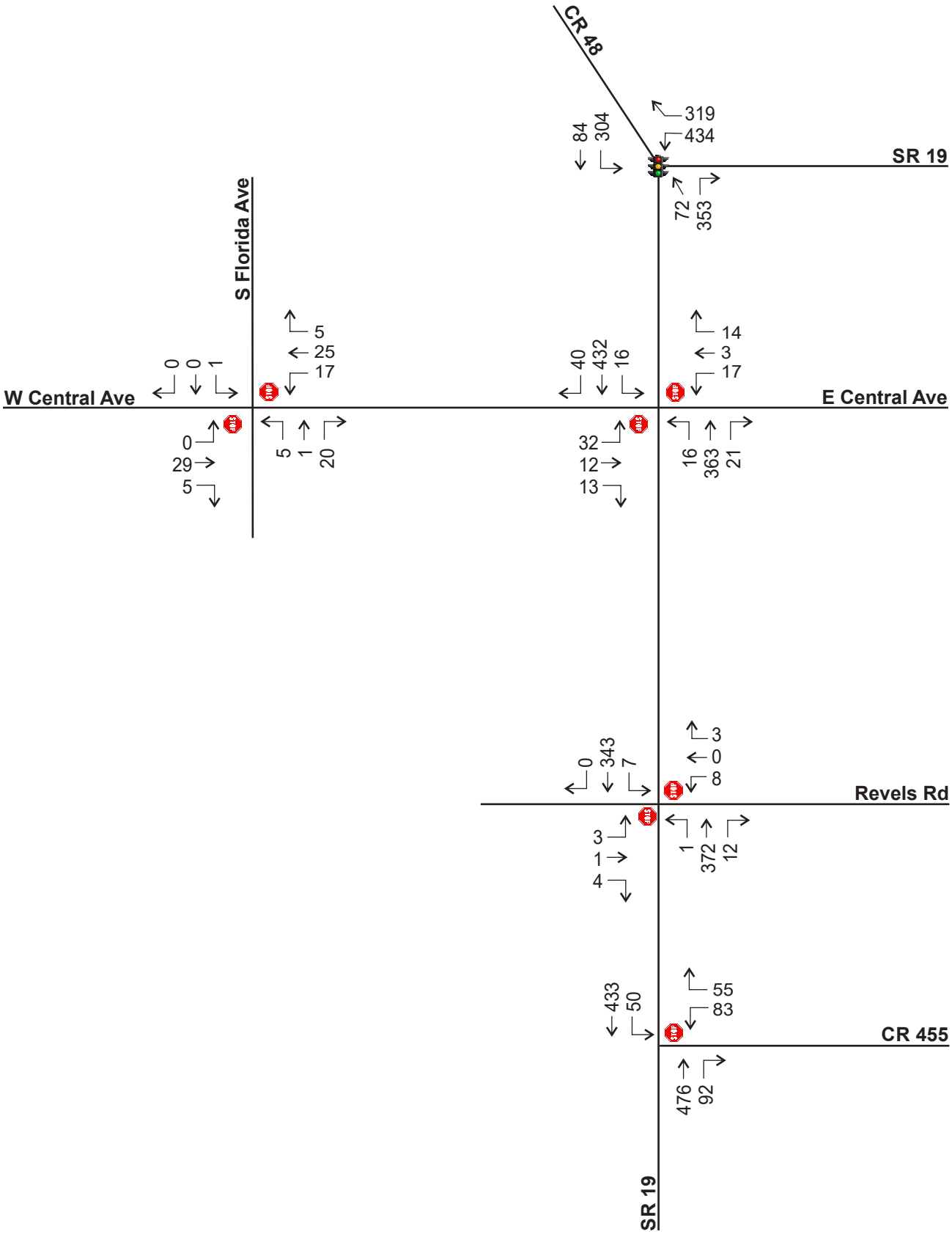


Figure 2

Existing AM Peak Hour Intersection Volumes

Mission Rise
23017.1, v1.3



Existing PM Peak Intersection Volumes
Mission Rise
23017.1, v1.3

Figure 3

3.0 PROJECT TRAFFIC

3.1 Trip Generation

The Trip Generation Analysis was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*. The ITE Information sheets are included in **Appendix F**. **Table 4** summarizes the resulting trip generation analysis.

Table 4
Trip Generation Analysis

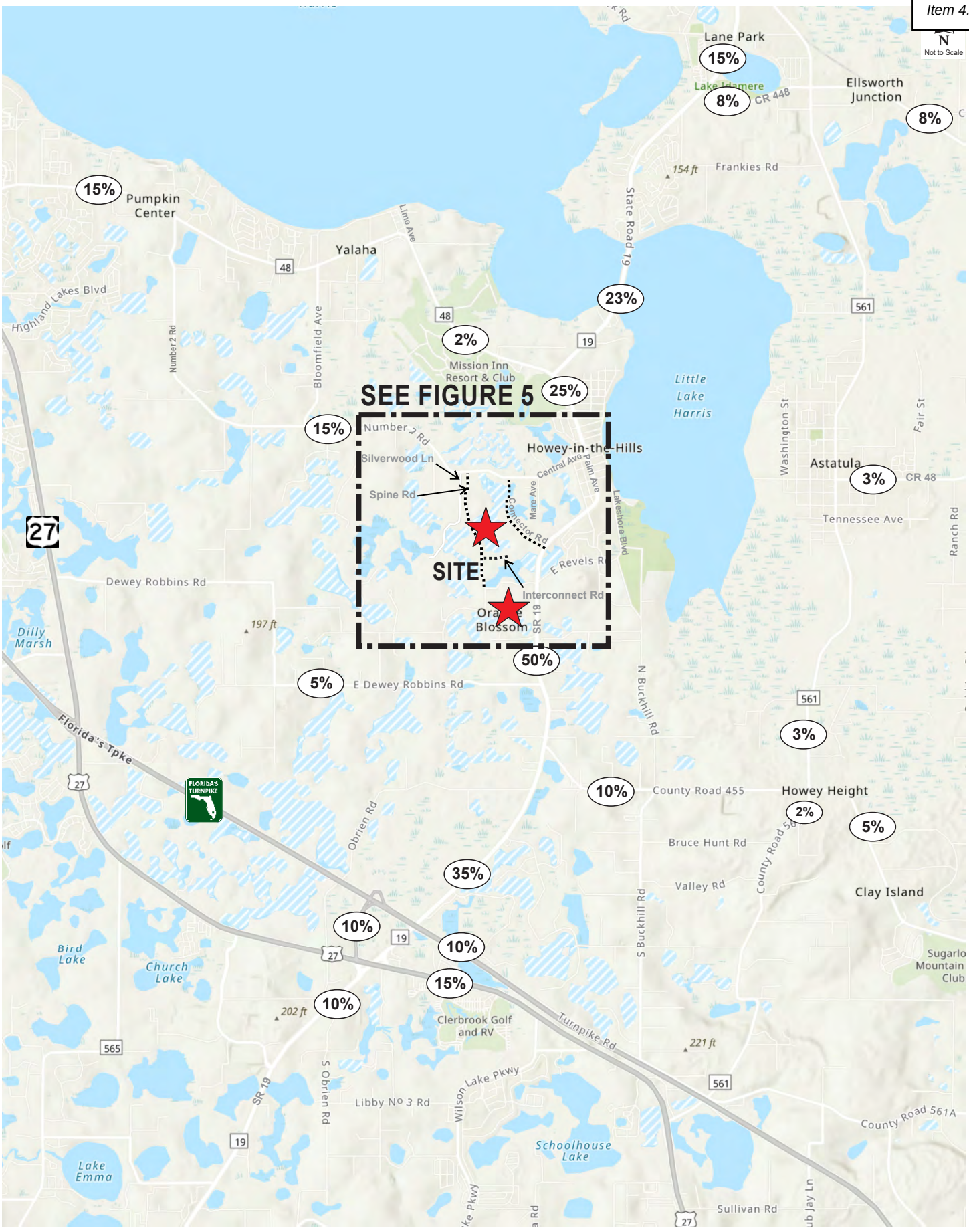
ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single Family Residential (Detached)	499 DU	8.87	4,428	0.64	322	81	241	0.90	451	284	167

Trip Generation analysis based on ITE Trip Generation Manual, 11th Edition.

The proposed development is projected to generate 4,428 new daily trips, of which 322 trips occur during the AM peak hour and 451 trips occur during the PM peak hour.

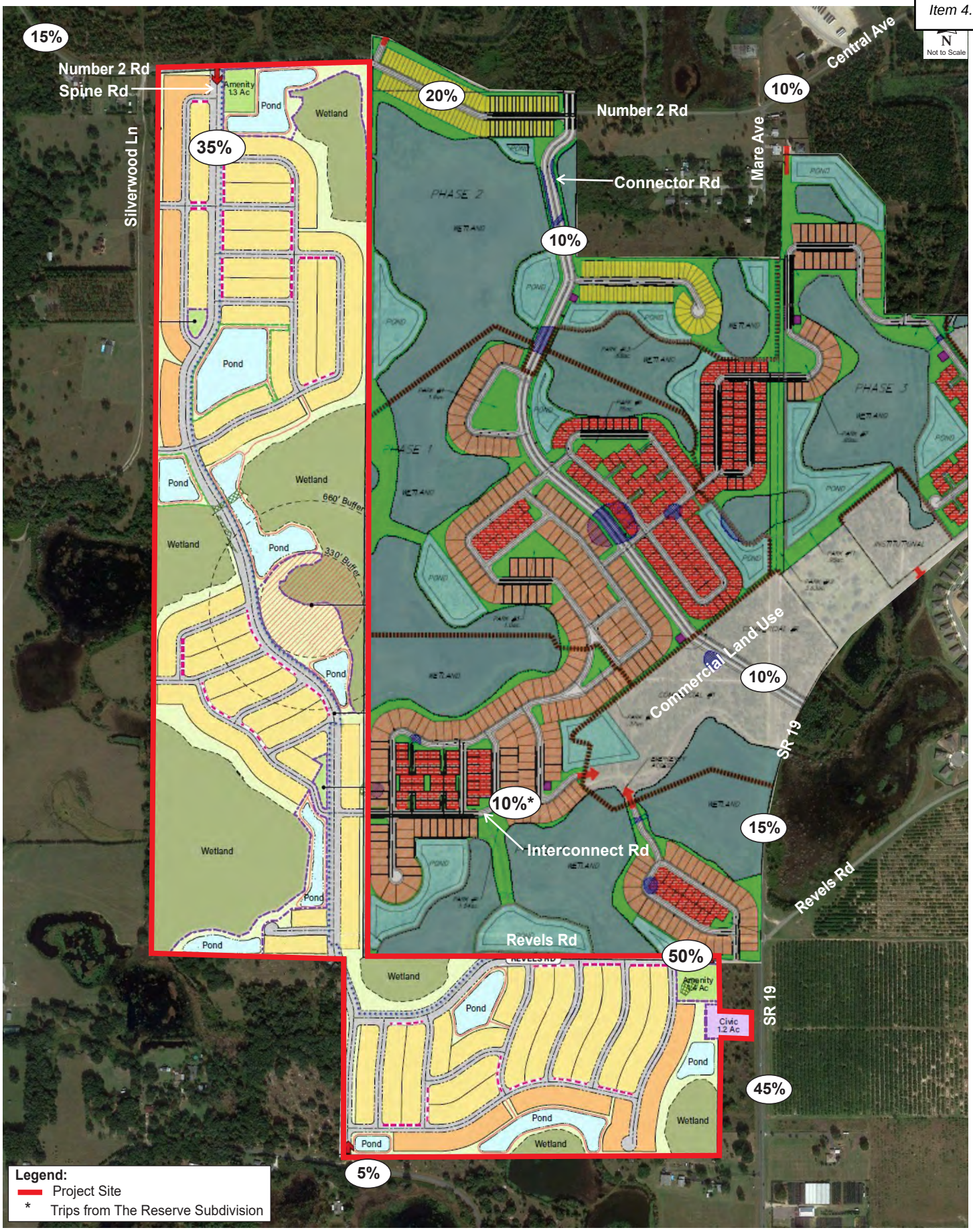
3.2 Trip Distribution

A trip distribution pattern was developed using the *Central Florida Regional Planning Model (CFRPMv7).* The model distribution was slightly adjusted based on local knowledge, professional engineering judgement, and the location of the development with respect to the study area attractions and activity centers to reflect the prevailing travel patterns in the study area and the surrounding transportation network. The raw model plots are provided in **Appendix G**, and the project trip distribution pattern is shown in **Figure 4.** Detailed trip distribution near the project site is shown in **Figure 5.**



Project Trip Distribution
Mission Rise
23017.1, v1.3

Figure 4



TMC Traffic & Mobility Consultants

Project Trip Distribution Near Project Site

Mission Rise
23017.1, v1.3

Figure 5

4.0 PROJECTED CONDITIONS ANALYSIS

An analysis of projected conditions was conducted to determine the impact of the proposed development on the roadway segments capacity, as well as the proposed access connections and intersections to the site. The project buildout year for the analysis is 2033.

4.1 Planned and Programmed Improvements

The *Lake-Sumter Metropolitan Planning Organization (LSMPO) 2023-2027 Transportation Improvement Program (TIP),* as well as *LSMPO 2022 List of Priority Projects (LOPP)* were reviewed to identify any planned or programmed improvements to the transportation facilities in this area. The improvements are listed in **Table 5**. Construction is not planned to be completed within the next three (3) years for either improvement. Excerpts from the *LSMPO TIP* and *LSMPO LOPP* are provided in **Appendix H**.

Table 5
Planned and Programmed Improvements

FM #	Project Name	From	To	Proposed Phase	Proposed Phase FY	Description of Improvement
2383191	SR 19 *	CR 48	CR 561	PDE-PE-ENV	2023	Add Lanes & Reconstruct
238319-1	SR 19 **	Howey Bridge	CR 561	-	-	Road Widening

** LSMPO TIP Fiscal Year 2023-2027*
*** LSMPO 2022 LOPP Tier 2 project*

4.2 Background Traffic Projection

Projected traffic includes background traffic volumes, the project trips, and committed trips. Projected background traffic for the buildout year of 2033 was estimated by applying the growth rates obtained from *2022 Lake County CMP Database* to the existing traffic volumes. A minimum of 2% annual growth rate was applied to existing traffic volumes for which published annual growth rates are below 2%. The committed trips for the following approved developments within the study area are included in **Appendix I**:

- Whispering Hills
- Talichet Phase 1 and Phase 2
- The Reserve at Howey in the Hills
- Lake Hills (Four Seasons). Trips were estimated based on the trip generation analysis and the trip distribution obtained from the methodology.
- Watermark (Simpson)

4.3 Roadway Segment Capacity

Projected roadway conditions were analyzed by comparing the projected traffic volumes on the study segments to their service volumes and adopted LOS standards. The total projected traffic volume is composed of background traffic, vested trips and project trips. **Table 6** summarizes the roadway segment capacity analysis, which reveals the following:

- SR 19 from Lane Park Road to Central Avenue and from CR 455 to CR 478 are projected to operate over their capacities due to background traffic.
- All remaining roadway segments are projected to continue to operate adequately at project buildout.

Roadway Segment Capacity Analysis with Recommended Mitigation

Number 2 Road is a substandard road with reduced capacity. It is projected to operate at an acceptable LOS; however, operational safety is a concern due to its narrow width. Lake County would need to improve it in the future to achieve safety.

SR 19 from CR 48 to CR 561 is programmed in the *TIP* to be widened to four (4) lanes. The roadway segment capacity analysis reveals that the widening of SR 19 to 4-lanes is projected to improve the capacity of the segment from Lane Park Road to CR 48. The segments of SR 19 from CR 48 to Central Avenue and from CR 455 to CR 478 would need to be widened to 4-lanes to achieve acceptable LOS conditions at project buildout, as summarized in **Table 7**.

Table 6
Projected Roadway Segment Capacity Analysis

Roadway Segment	No Lns	LOS Std	PH Dir Capacity	Dir	Exist Vol	Growth Rate	2033 Backg'd	Vested Trips	Total Backg'd Volume	Backg'd LOS	Backg'd V/C	Trip Distr	Proj Dir	Project Volume	Total Volume	Final LOS	Final V/C
***Central Ave**																	
SR 19 to Mare Ave	2	D	530	NB/EB SB/WB	57 59	2.00%	70 72	53 85	123 157	C C	0.23 0.30	10%	OUT IN	17 28	140 185	C C	0.26 0.35
SR 19																	
Lane Park Rd to CR 48	2	D	920	NB/EB SB/WB	610 656	2.00%	744 800	125 264	869 1,064	C F	0.94 1.16	23%	OUT IN	38 65	907 1,129	D F	0.99 1.23
CR 48 to Central Ave	2	D	700	NB/EB SB/WB	433 372	2.00%	528 454	266 355	794 809	F F	1.13 1.16	25%	OUT IN	42 71	836 880	F F	1.19 1.26
Central Ave to CR 455	2	D	1,200	NB/EB SB/WB	433 372	2.00%	528 454	437 272	965 726	D C	0.80 0.61	50%	IN OUT	142 84	1,107 810	D C	0.92 0.68
CR 455 to US 27/ SR 25	2	C	450	NB/EB SB/WB	507 435	2.00%	619 531	286 178	905 709	E D	2.01 1.58	35%	IN OUT	99 58	1,004 767	E E	2.23 1.70
US 27/ SR 25 to CR 478	2	C	450	NB/EB SB/WB	466 519	2.00%	569 633	286 178	855 811	E E	1.90 1.80	10%	IN OUT	28 17	883 828	E E	1.96 1.84
****Number 2 Rd**																	
Mare Ave to Silverwood Ln	2	D	400	NB/EB SB/WB	57 59	2.00%	70 72	53 53	123 125	C C	0.31 0.31	35%	OUT IN	58 99	181 224	C D	0.45 0.56
Silverwood Ln to CR 48	2	D	400	NB/EB SB/WB	57 59	2.00%	70 72	53 53	123 125	C C	0.31 0.31	15%	IN OUT	43 25	166 150	C C	0.42 0.38

Source: 2022 Lake County Annual Traffic Counts
**Exiting Counts were obtained from PM Peak Turning Movement Counts*
***A reduction of 25% was applied to the Peak Hour Directional Capacity of 530, as Number 2 Road is a substandard road*

Table 7
Projected Roadway Segment Capacity Analysis with Mitigation

Roadway Segment	No Lns	LOS Std	PH Dir Capacity	Dir	Exist Vol	Growth Rate	2033 Backg'd	Vested Trips	Total Backg'd Volume	Backg'd LOS	Backg'd V/C	Trip Distr	Proj Dir	Project Volume	Total Volume	Final LOS	Final V/C	Project Responsible ?
SR 19																		
Lane Park Rd to CR 48	4	D	1,480	NB/EB SB/WB	610 656	2.00%	744 800	125 264	869 1,064	C D	0.59 0.72	23%	OUT IN	38 65	907 1,129	D D	0.61 0.76	NO NO
CR 48 to Central Ave	4	D	1,480	NB/EB SB/WB	433 372	2.00%	528 454	266 355	794 809	D D	0.54 0.55	25%	OUT IN	42 71	836 880	D D	0.56 0.59	NO NO
CR 455 to US 27/ SR 25	4	C	1,360	NB/EB SB/WB	507 435	2.00%	619 531	286 178	905 709	C C	0.67 0.52	35%	IN OUT	99 58	1,004 767	C C	0.74 0.56	NO NO
US 27/ SR 25 to CR 478	4	C	1,360	NB/EB SB/WB	466 519	2.00%	569 633	286 178	855 811	C C	0.63 0.60	10%	IN OUT	28 17	883 828	C C	0.65 0.61	NO NO
****Number 2 Rd**																		
Mare Ave to Silverwood Ln	2	D	530	NB/EB SB/WB	57 59	2.00%	70 72	53 53	123 125	C C	0.23 0.24	35%	OUT IN	58 99	181 224	C D	0.34 0.42	NO NO
Silverwood Ln to CR 48	2	D	530	NB/EB SB/WB	57 59	2.00%	70 72	53 53	123 125	C C	0.23 0.24	15%	IN OUT	43 25	166 150	C C	0.31 0.28	NO NO

Source: 2022 Lake County Annual Traffic Counts
**Exiting Counts were obtained from PM Peak Turning Movement Counts*
***A reduction of 25% was applied to the Peak Hour Directional Capacity of 530, as Number 2 Road is a substandard road*

Note: Roadway mitigations are necessitated by background traffic. Number 2 Road is an existing substandard facility.
The development is not responsible for these improvements, per Florida Statutes.

4.4 Intersection Capacity Analysis

The projected volumes for the intersection capacity and operations analysis were calculated by assigning the project trips to the project driveways and adding those volumes to the background volumes and vested trips at the study intersections. Projected background traffic was estimated as discussed in the previous section. Projected background traffic on the proposed Spine Road and Revels Road were estimated based on the *CFRPMv7* model daily volumes. The AADT model plots are included in **Appendix J**.

Intersection Capacity Analysis

The projected AM and PM peak hour volumes are illustrated in **Figure 6** and **Figure 7**, respectively. The analysis includes right and left turn lanes on SR 19, and a right turn lane on Revels Road at the intersection of SR 19 and Revels Road. It also includes right and left turn lanes on Number 2 Road at the intersection of Spine Road and Number 2 Road. The results of the analysis are summarized in **Table 8,** and the analysis worksheets are included in **Appendix K**. The intersection volume projection sheets are included in **Appendix L**.

Table 8
Projected Intersection Capacity Analysis

Intersection	Traffic Control	Time Period	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 19 & CR 48	Signal	AM	--	--	177.1	**F**	29.7	C	22.1	C	87.2	**F**
		PM	--	--	>300	**F**	21.5	B	12.1	B	234.3	**F**
SR 19 & Central Ave	TWSC	AM	>300	**F**	26.5	D	10.1	B	10.3	B	--	--
		PM	>300	**F**	89.7	**F**	11.4	B	10.3	B	--	--
W Central Ave & S Florida Ave	TWSC	AM	7.3	A	7.4	A	9.2	A	0.0	A	--	--
		PM	0.0	A	7.4	A	9.3	A	10.6	B	--	--
SR 19 & Revels Rd / Project Entrance	TWSC	AM	51.2	**F**	>300	**F**	10.1	B	8.8	A	--	--
		PM	135.1	**F**	>300	**F**	9.9	A	10.7	B	--	--
SR 19 & CR 455	TWSC	AM	--	--	>300	**F**	--	--	10.7	B	--	--
		PM	--	--	>300	**F**	--	--	12.7	B	--	--
Spine Rd & Interconnect Rd / Proposed	TWSC	AM	--	--	8.8	A	--	--	7.4	A	--	--
		PM	--	--	8.8	A	--	--	7.4	A	--	--
Number 2 Rd and Spine Rd / Project Entrance	TWSC	AM	--	--	7.5	A	9.8	A	--	--	--	--
		PM	--	--	7.6	A	9.9	A	--	--	--	--
Spine Rd & Revels Rd	TWSC	AM	--	--	9.1	A	--	--	7.5	A	--	--
		PM	--	--	9.3	A	--	--	7.5	A	--	--
Revels Rd & Orange Blossom Rd / Project Entrance	TWSC	AM	7.2	A	--	--	--	--	8.6	A	--	--
		PM	7.3	A	--	--	--	--	8.6	A	--	--

Average delay is in seconds

N
Not to Scale

Number 2 Rd
Central Ave
S Florida Ave
CR 48
SR 19
Access 1
Connector Rd
Spine Rd
Interconnect Rd
Revels Rd
Orange Blossom Rd
CR 455
SITE
SITE

28+{5}=33
30+(16)=46
59+{3}=62
15+(11)=26
15+(37)=52
30+(48)=78
(24)
(8)
0
0
0
1
44+(24)=68
14+{3}=17
1
23+(8)=31
1+{9}=10
5+{5}=10
0
4+{16}=20
8+{33}+(8)=49
514+{137}+(12)=663
5+{32}=37
42+{78}+(24)=144
4
12
118+{60}+(2)=180
332+{81}=413
275+{59}=334
415+{89}+(18)=522
379+{71}+(5)=455
546+{139}+(55)=740
18+{47}=65
1
13
14
452+{184}+(36)=672
29
25+(17)=42
20+(24)=44
25+(8)=33
(0)
20+(51)=71
{2}+(12)=14
522+{244}+(24)=790
4+{17}=21
5+{48}=53
0
6+{118}=124
2+{3}+(36)=41
0
6+{30}+(84)=120
4+{12}+(28)=44
389+{93}+(8)=490
16+{50}=66
4+(5)=9
74+(68)=142
62+(46)=108
3+(7)=10
4+(2)=6
3+(2)=5
7
(12)
7
(4)
590+{253}+(84)=927
84+{75}+(24)=183
52+{28}+(8)=88
78
473+{95}+(28)=596
133

Legend:
Background + {Vested} + (Project) = Total

N
Not to Scale

Number 2 Rd
Central Ave
S Florida Ave
CR 48
SR 19
Connector Rd
Interconnect Rd
Revels Rd
CR 455
Orange Blossom Rd
Spine Rd
Access 1
SITE
SITE

41+{5}=46
15+(44)=59
36+{3}=39
30+(57)=87
15+(26)=41
30+(34)=64
(17)
(28)
0
0
1
35+(17)=52
6+{5}=11
6
30+(29)=59
20+{16}=36
6+{3}=9
1
24+{9}=33
48+{85}+(29)=162
518+{223}+(43)=784
19+{47}=66
38+{53}+(17)=108
14
16
101+{87}+(6)=194
365+{86}=451
383+{100}=483
521+{164}+(66)=751
86+{75}+(3)=164
424+{125}+(39)=588
17+{32}=49
4
20
19
436+{181}+(25)=642
25
20+(60)=80
25+(17)=42
20+(28)=48
(0)
25+(35)=60
3+(2)=5
62+(72)=134
74+(89)=163
4+(6)=10
3+(6)=9
4+(8)=12
7
(8)
(13)
7
{2}+(43)=45
412+{173}+(17)=602
8+{56}=64
4+{32}=36
0
10+{78}=88
4+{1}+(25)=30
1
5+{21}+(57)=83
1+{35}+(99)=135
446+{270}+(28)=744
14+{132}=146
520+{178}+(58)=756
60+{53}+(17)=130
66+{85}+(28)=179
100
571+{286}+(99)=956
110

Legend:
Background + {Vested} + (Project) = Total

Projected PM Peak Hour Intersection Volumes
Mission Rise
23017, v1.3

Figure 7

The analysis reveals the following:

- The intersection of SR 19 and CR 48 is projected to operate with delay during the AM and the PM peak hour. Further review is needed.
- The intersection of SR 19 and Central Avenue is projected to operate with delay in the eastbound and westbound directions. The westbound movement does not carry any project traffic and it is projected to operate at volume to capacity ratio less than 1.0. Further review is needed.
- The intersection of SR 19 and Revels Road is projected to operate with delay in the eastbound and westbound directions. The westbound movement does not carry any project traffic. Further review is needed.
- The intersection of SR 19 and CR 455 is projected to operate with delay for the westbound left movement. Project trips contribute no traffic to the movement. Further review is needed.

The remaining study intersections are projected to operate adequately at the project buildout.

Intersection Capacity Analysis with Recommended Mitigation

The proposed project does not significantly impact study area intersections. Four (4) intersections have been reviewed further. The intersections are determined to need the following improvements to achieve acceptable LOS conditions at project buildout:

- Retiming the signal is recommended at the intersection of SR 19 and CR 48 OR constructing a 2-lane roundabout at the intersection of SR 19 and CR 48.
- Installing a signal is recommended at the intersection of SR 19 and Central Avenue.
- Installing a signal is recommended at the intersection of SR 19 and Revels Road.
- Installing a signal is recommended at the intersection of SR 19 and CR 455.

The traffic operations for the mitigated intersections are projected to have acceptable LOS, as detailed in **Table 9**. The background conditions and the buildout conditions with the mitigation analysis worksheets are included in **Appendix M**.

Table 9
Projected Intersection Capacity Analysis with Mitigation

Intersection	Traffic Control	Peak Period	Scenario	EB		WB		NB		SB		Overall	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 19 & CR 48	Option 1: Retiming Signal	AM	Background	--	--	161.9	F	29.5	C	21.8	C	80.1	F
			Buildout	--	--	177.1	F	29.7	C	22.1	C	87.2	F
			Mitigation	--	--	59.4	E	72.4	E	54.1	D	60.9	D
		PM	Background	--	--	>300	F	21.5	C	12.1	B	187.5	F
			Buildout	--	--	>300	F	21.5	C	12.1	B	233.7	F
			Mitigation	--	--	48.7	D	56.5	E	58.2	E	52.6	D
SR 19 & CR 48	Option 2: Roundabout	AM	Background	--	--	161.9	F	29.5	C	21.8	C	80.1	F
			Buildout	--	--	177.1	F	29.7	C	22.1	C	87.2	F
			Mitigation	--	--	14.2	B	23.0	C	11.9	B	17.7	C
		PM	Background	--	--	>300	F	21.5	C	12.1	B	187.5	F
			Buildout	--	--	>300	F	21.5	C	12.1	B	233.7	F
			Mitigation	--	--	12.6	B	15.7	C	23.4	C	16.1	C
SR 19 & Central Ave	Signal	AM	Background	>300	F	24.5	C	9.9	A	10.1	A	--	--
			Buildout	>300	F	26.5	D	10.1	B	10.3	B	--	--
			Mitigation	21.0	C	18.3	B	8.2	A	8.2	A	9.9	A
		PM	Background	>300	F	65.2	E	11.0	B	10.2	B	--	--
			Buildout	>300	F	89.7	F	11.4	B	10.3	A	--	--
			Mitigation	13.3	B	12.0	B	6.8	A	24.7	C	16.9	B
SR 19 & Revels Road	Signal	AM	Background	22.5	C	>300	F	9.7	A	8.8	A	--	--
			Buildout	51.2	F	>300	F	10.1	B	8.8	A	--	--
			Mitigation	18.2	B	16.0	B	5.0	A	6.2	A	7.3	A
		PM	Background	30.0	D	>300	F	9.0	A	10.6	B	--	--
			Buildout	135.1	F	>300	F	9.9	A	10.7	B	--	--
			Mitigation	30.0	C	26.7	C	6.5	A	3.8	A	7.3	A
SR 19 & CR 455	Signal	AM	Background	--	--	>300	F	--	--	10.3	B	--	--
			Buildout	--	--	>300	F	--	--	10.7	B	--	--
			Mitigation	--	--	78.2	E	2.3	A	30.8	C	24.3	C
		PM	Background	--	--	>300	F	--	--	11.6	B	--	--
			Buildout	--	--	>300	F	--	--	12.7	B	--	--
			Mitigation	--	--	130.1	F	6.4	A	62.3	E	44.1	D

Average delay is in seconds

The analysis reveals the following:

- The intersection of SR 19 and CR 48 is projected to operate at an acceptable overall LOS by optimizing the signal timing or by constructing a 2-lane roundabout. Since the intersection can operate adequately by retiming the traffic signal; the project is not responsible to add a roundabout.
- The intersection of SR 19 and Central Avenue is projected to operate adequately at buildout with a signal. The westbound movement does not carry any project traffic. Project contribute 5.9% of the total traffic.
- The intersection of SR 19 and Revels Road is projected to operate adequately at buildout with a signal. The westbound movement does not carry any project traffic. Project contributes 13.6% of the total traffic.
- The intersection of SR 19 and CR 455 is projected to operate adequately at buildout with a signal. The westbound movement does not carry any project traffic. Project contribute 9.0% of the total traffic.

In lieu of contributing a proportionate share to the three (3) intersections needing new traffic signals, the developer is recommending to construct the new traffic signal at SR 19 and Revels Road, which serves as the main access to the project.

5.0 ACCESS REVIEW

The development will be accessed via the intersections of Number 2 Road and Spine Road (future road), SR 19 and Revels Road, and Revels Road and Orange Blossom Road. SR 19 is a 2-lane undivided facility with a posted speed limit of 55 miles per hour (mph) near the project entrance. Number 2 Road is a 2-lane undivided facility with a posted speed limit of 30 mph in the east direction and 45 mph in the west direction near the project entrance. Orange Blossom Road is a 2-lane undivided facility with a posted speed limit of 30 mph near the project entrance.

5.1 Turn Lane Review

A review of the need for turn lanes at the project entrance intersections was conducted based on the Lake County *Land Development Code (LDC)* guidelines, which are provided in **Appendix N**. In accordance with the *LDC* guidelines, right and left turn lanes are warranted at the intersections of SR 19 and Revels Road, and at Number 2 Road and Spine Road. The intersection of Orange Blossom Road and Revels Road is expected to carry limited traffic; therefore, exclusive turn lanes are not recommended.

The recommended lengths of the turn lanes on SR 19 were calculated based on the requirements of the *FDOT Design Manual Exhibit 212-1*, provided in **Appendix O**, and the recommended lengths of the turn lanes on Number 2 Road were calculated based on the Lake County *LDC* guidelines. Per Lake County requirement for turn lane widening on Number 2 Road, the length of tapers will need to be twice the standard length. The calculations are provided as follows:

SR 19 and Revels Road

Left Turn Lane Length = Deceleration Distance + Queue Length
Deceleration at 60 mph (design speed) = 405 feet
95th Percentile Queue Length = 1 x 25 = 25 feet
Northbound Left Turn Lane = 405 feet + 25 feet = 430 feet (including a 50-foot taper)

Right Turn Lane Length = Deceleration Distance
Deceleration at 60 mph (design speed) = 405 feet
Southbound Right Turn Lane = 405 feet

Number 2 Road and Spine Road

Left Turn Lane Length = Taper Length + Storage Length
Taper Length at 50 mph (design speed) = 230 feet x 2 = 460 feet
Storage Length at 50 mph (design speed) = 195 feet
Westbound Left Turn Lane = 460 feet + 195 feet = 655 feet

Right Turn Lane Length = Taper Length + Storage Length
Taper Length at 35 mph (design speed) = 170 feet x 2 = 340 feet
Storage Length at 35 mph (design speed) = 80 feet
Eastbound Right Turn Lane = 340 feet + 80 feet = 420 feet

6.0 STUDY CONCLUSIONS

This traffic analysis was conducted to assess the impact of the proposed Mission Rise development in the Town of Howey-in-the-Hills, Florida. The project will include 499 single family residential units. The analysis included a determination of project trip generation, a review of existing and projected roadway and intersection capacity.

The results of the traffic analysis are summarized as follows:

- The proposed development is projected to generate 4,428 trips per day, of which 322 trips occur during the AM peak hour and 451 trips occur during the PM peak hour.

- SR 19 SR 19 from Lane Park Road to Central Avenue and from CR 455 to CR 478 are projected to operate over their capacities due to background traffic. The development is not responsible for mitigating background deficiencies, per Florida's Statutes.

- SR 19 from CR 48 to CR 561 is programmed in the *TIP* to be widened to 4 lanes.

- All remaining roadway segments are projected to continue to operate adequately at project buildout.

- The intersection of SR 19 and CR 48 is projected to operate with delay during the AM and the PM peak hour. It is recommended to retime the signal or implement a 2-lane roundabout to maintain LOS standards. The development is not responsible to implement a roundabout.

- The intersection of SR 19 and Central Avenue is projected to operate with delay in the eastbound and the westbound movement. The westbound movement does not carry any project traffic.

- The intersection of SR 19 and Revels Road is projected to operate with delay in the eastbound and westbound directions. The westbound movement does not carry any project traffic.

- The intersection of SR 19 and CR 455 is projected to operate with delay for the westbound left movement. Project trips contribute no traffic to the movement.

- In lieu of contributing a proportional share to the three (3) intersections where traffic signals are projected to be needed, the developer is recommending to construct the traffic signal at the intersection of SR 19 and Revels Road.

- A traffic signal at SR 19 and Revels Road traffic signal needs to be warranted based on a signal warrant study of the in-field traffic volumes. An Intersection Control Evaluation (ICE) study will also need to be coordinated with FDOT.

- All remaining study intersections are projected to operate adequately at project buildout.

- The turn lane recommendations are as follows:
    - Construct a 430-foot northbound left turn lane and a 405-foot southbound right turn lane at the intersection of SR 19 and Revels Road.
    - Construct a 655-foot westbound left turn lane and a 420-foot eastbound right turn lane at the intersection of Number 2 Road and Spine Road.

APPENDICES

Appendix A
Study Methodology and Response to Comments Letter

MEMORANDUM

May 23, 2023

Re: Mission Rise
Traffic Impact Analysis Methodology, v1.1
Town of Howey-In-The-Hills, Florida
Project № 23017.1

This methodology outlines the proposed Traffic Impact Analysis (TIA) for the above referenced project. This methodology was prepared in accordance with the requirements of the Town of Howey-In-The-Hills and the Lake~Sumter Metropolitan Planning Organization (LSMPO) TIA guidelines for a Tier 2 TIA. This methodology has been revised in accordance with the comments provided by the Town of Howey-In-The-Hills. The comments and response to comments letter are included in the **Attachments**.

Project Description

The ±243.3-acre site is a single-family residential development consisting of 592 dwelling units. The project site consists of parcels 34-20-25-0001-000-00100, 34-20-25-0004-000-01003, 02-21-25-0002-000-04800, and 27-20-25-0004-000-01200. The anticipated buildout year is 2033. A preliminary site plan is included in the **Attachments**.

Project Location

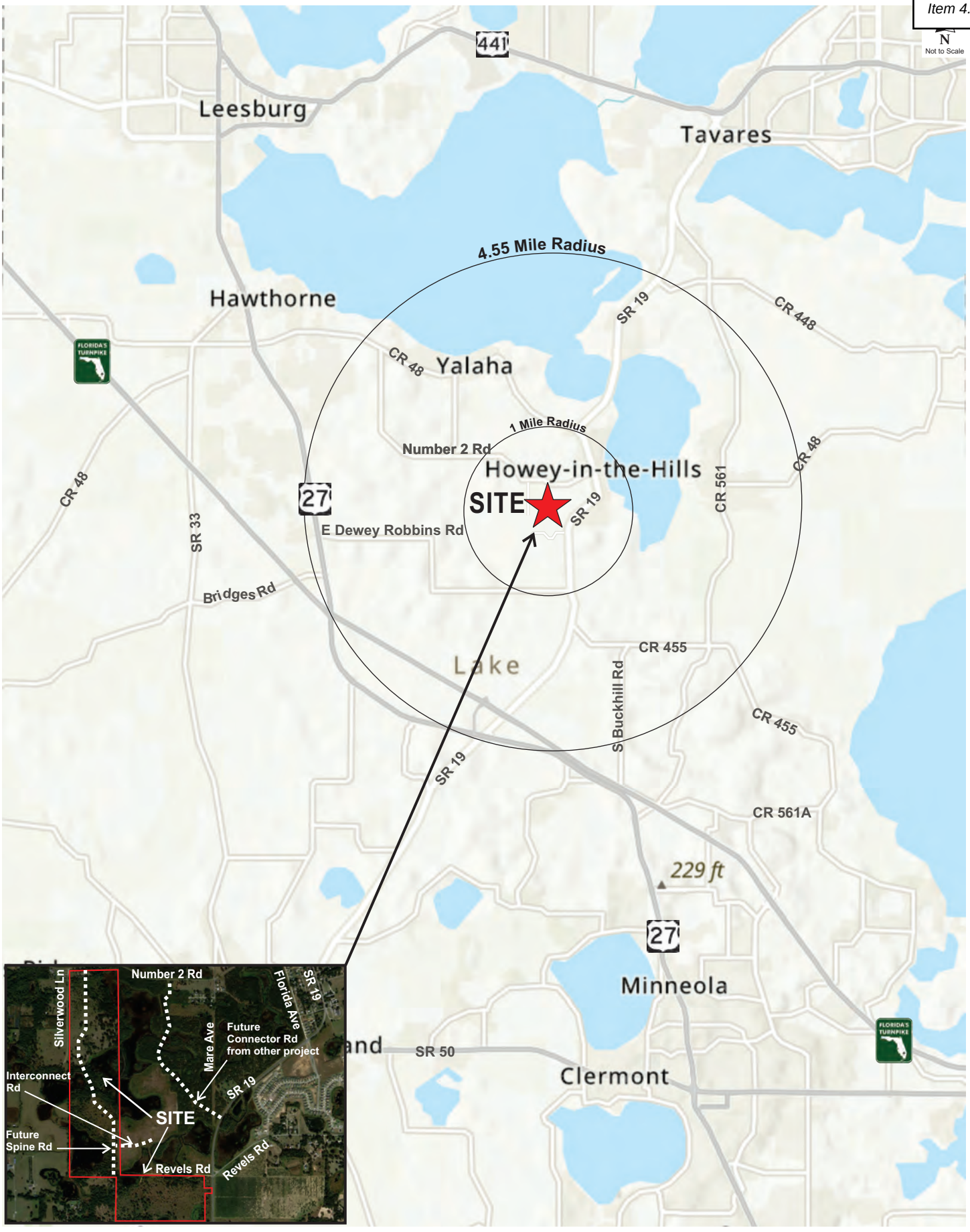
The site is located east of Silverwood Lane, west of SR 19 (South Palm Avenue), and south of Number 2 Road in the Town of Howey-in-the-Hills, Florida. The site will be crossed from north to south by a future two-lane spine road that will connect Number 2 Roadway with Revels Road, as shown in **Figure 1**.

Project Access

The project has access to the external network via one (1) full access driveway on Number 2 Road and one (1) full access driveway on SR 19. In addition, there is an emergency access to the south via Orange Blossom Road. The access configuration is depicted in the preliminary site plan included in the **Attachments**.

Trip Generation

A trip generation analysis was performed for the development using the trip generation information from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition.* The ITE information sheets are included in the **Attachments**. The trip generation of the proposed development is summarized in **Table 1**.



Site Location Map
Mission Rise v1.1
23017.1

Figure

Table 1
Trip Generation Analysis

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Eqvlt Rate	Trips	Eqvlt Rate	Total	Enter	Exit	Eqvlt Rate	Total	Enter	Exit
210	Single Family Residential (Detached)	592 DU	8.75	5,181	0.63	376	94	282	0.89	529	333	196

Trip Generation analysis based on ITE Trip Generation Manual, 11th Edition.

The proposed development at project buildout is projected to generate 5,181 new daily trips of which 376 trips occur during the AM peak hour, and 529 trips occur during the PM peak hour.

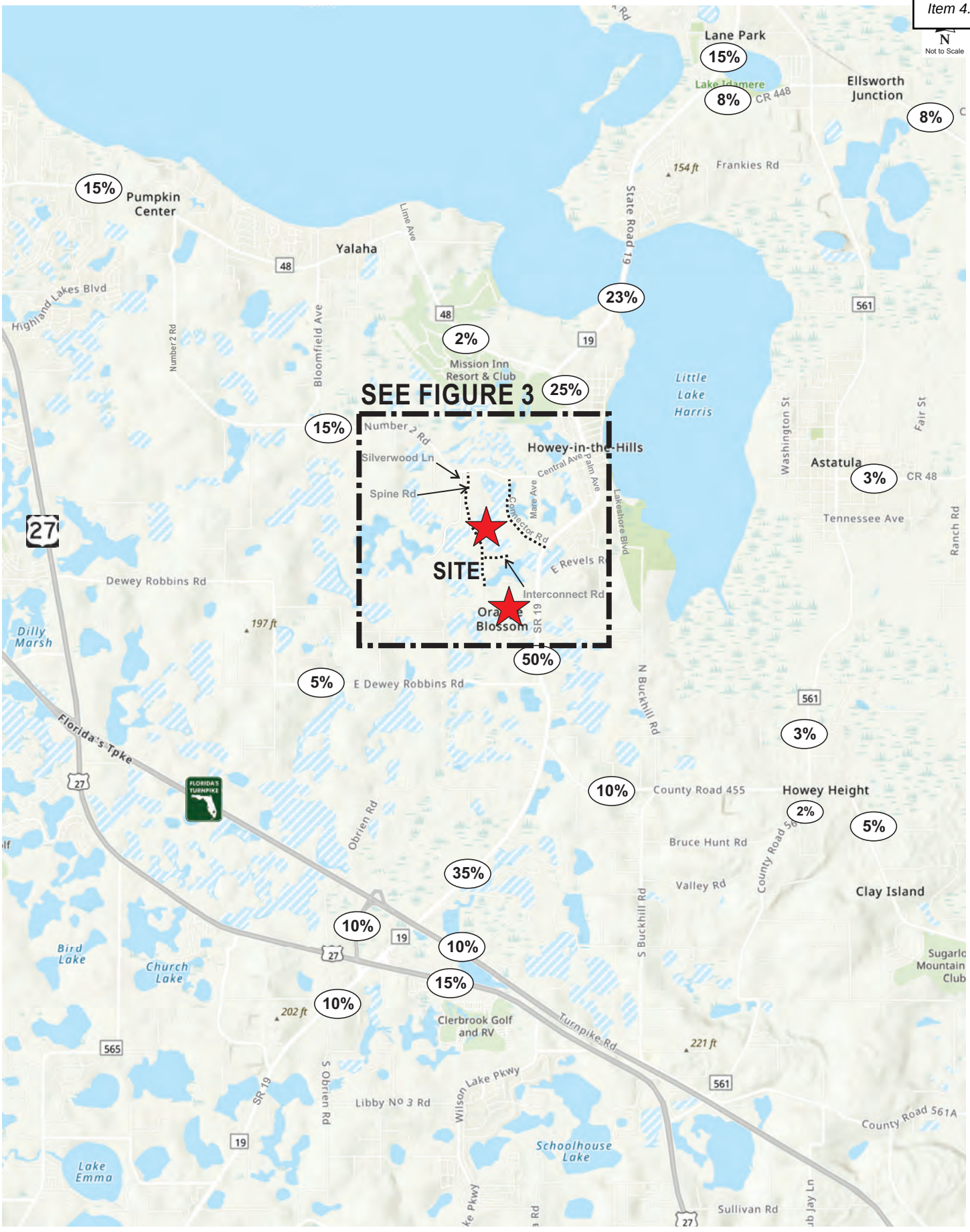
Trip Distribution

A trip distribution pattern in the general vicinity of the project site was initially determined based on the *Central Florida Regional Planning Model (CFRPM v7)*. Two (2) future connections (Spine Road and Connector Road) from SR 19 to Number 2 Road were included in the model for this project. The model distribution was modified to reflect the local network and prevailing traffic patterns. The proposed trip distribution pattern is provided in **Figure 2**. Detailed trip distribution near the project site is shown in **Figure 3**. The model distribution plots are included in the **Attachments**.

Study Area

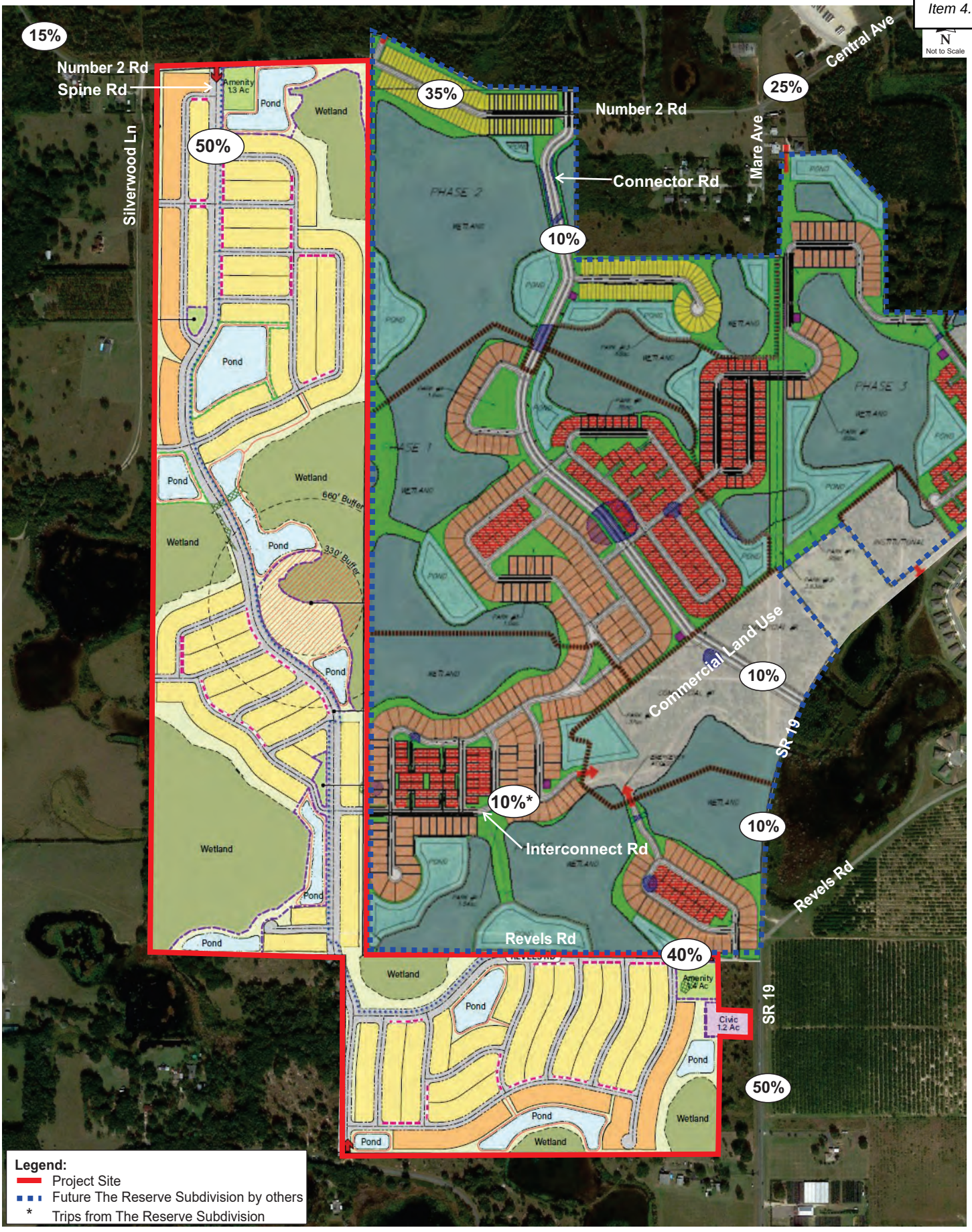
In accordance with the LSMPO requirements for a Tier 2 TIA methodology, the study area will include a minimum 1-mile radius plus all roadway segments within a 4.55-mile radius in addition to roadways where the development is projected to consume 5% or more of their adopted Level of Service (LOS), unless otherwise specified by the City/LSMPO.

The extent of the study impact area shall be determined by the area of influence of the project. The area of influence shall be established as one-half (½) the total trip length associated with the land use of the proposed development, based upon the *2021 Lake County Transportation Impact Fee Update Study Final Report*. The total trip length for single-family is 9.1-miles. Accordingly, the area of influence will encompass all roadway segments within 4.55-mile radius. Excerpts of the *2022 Lake County Congestion Management Process (CMP) Database*, the *2021 Lake County Transportation Impact Fee Update Study Final Report*, and the *2023 FDOT Multimodal Quality/Level of Service (Q/LOS) Handbook Appendix B* are included in the **Attachments**. **Table 2** lists all roadway segments within the area of influence along with their capacities and percentages consumed by the project trips.



Project Trip Distribution
Mission Rise v1.1
23017.1

Figure 2



TMC Traffic & Mobility Consultants

Project Trip Distribution Near the Project Site

Mission Rise v1.1
23017.1

Figure 3

Table 2
Study Area

Roadway Segment	SEG ID	No Lns	Area Type	Median Type	Speed Limit	LOS Std	Pk Dir Cap	Dir	Project Dist	Project Trips	Within 1-Mile? **	% Cap	In Study?
CR 455													
SR 19 to	950	2	R	Undivided	45	C	740	EB	10%	20	NO	2.7%	NO
CR 561								WB		33		4.5%	
CR 561 to	960	2	R	Undivided	25	C	410	EB	5%	10	NO	2.4%	NO
CR 561A								WB		17		4.1%	
CR 48													
US 27 to	1240	2	U	Undivided	40	D	1,080	EB	15%	50	NO	4.6%	NO
Lime Ave								WB		29		2.7%	
Lime Ave to	1250	2	U	Undivided	40	D	1,080	EB	2%	7	NO	0.6%	NO
SR 19								WB		4		0.4%	
CR 561 to	1260	2	U	Undivided	40	D	840	EB	3%	6	NO	0.7%	NO
Ranch Rd								WB		10		1.2%	
Ranch Rd to	1270	2	R	Undivided	40	C	410	EB	3%	6	NO	1.5%	NO
CR 448A								WB		10		2.4%	
CR 561													
CR 448 to	1410	2	U	Undivided	50	D	1,080	NB	0%	0	NO	0.0%	NO
CR 48								SB		0		0.0%	
CR 48 to	1420	2	U	Undivided	40	D	620	NB	3%	10	NO	1.6%	NO
South Astatula City Limit								SB		6		1.0%	
South Astatula City Limit	1430	2	U	Undivided	40	D	1,080	NB	3%	10	NO	0.9%	NO
to CR 455								SB		6		0.6%	
CR 455 to	1440	2	R	Undivided	35	C	470	NB	2%	7	NO	1.5%	NO
Howey Cross Rd								SB		4		0.9%	
Howey CRoss Rd to	1450	2	R	Undivided	40	C	640	NB	2%	7	NO	1.1%	NO
Turnpike Rd / CR 561A								SB		4		0.6%	
SR 19													
Lane Park Rd to	3040	2	U	Undivided	55	D	920	NB	23%	45	NO	4.9%	**YES**
CR 48								SB		77		**8.4%**	
CR 48 to	3050	2	U	Undivided	40	D	700	NB	25%	49	NO	**7.0%**	**YES**
Central Ave								SB		83		**11.9%**	
Central Ave to	3060	2	U	Undivided	35	D	1,200	NB	50%	167	**YES**	**13.9%**	**YES**
CR 455								SB		98		**8.2%**	
CR 455 to	3070	2	R	Undivided	55	C	450	NB	35%	117	NO	**26.0%**	**YES**
US 27 / SR 25								SB		69		**15.3%**	
US 27 / SR 25	3080	2	R	Undivided	55	C	450	NB	20%	67	NO	**14.9%**	**YES**
to CR 478								SB		39		**8.7%**	
SR 91 (Florida Turnpike)													
US 27/SR 25 to	3566	4	U	Freeway	70	B	2,230	EB	10%	20	NO	0.9%	NO
US 27/SR 25/SR 19 Interchange								WB		33		1.5%	
US 27/SR 25													
SR 19 to	3830	4	U	Divided	55	D	3,280	EB	15%	29	NO	0.9%	NO
CR 561								WB		50		1.5%	
Central Ave													
SR 19 to	N/A	2	U	Undivided	30	D	770 *	EB	25%	49	**YES**	**6.4%**	**YES**
Mare Ave								WB		83		**10.8%**	
Number 2 Rd													
Mare Ave to	N/A	2	U	Undivided	30	D	730 *	EB	35%	69	**YES**	**9.5%**	**YES**
Silverwood Ln								WB		117		**16.0%**	
Silverwood Ln to	N/A	2	U	Undivided	45	D	730 *	EB	15%	29	**YES**	4.0%	**YES**
CR 48								WB		50		**6.8%**	

Source: 2022 Lake County CMP Database
** 2023 FDOT Multimodal Quality/Level of Service Handbook, Appendix B: Florida's Generalized Service Volume Tables*
Bold numbers represent capacity equal or higher than 5%.

Based on the study area analysis, the following roadway segments will be analyzed for the PM peak hour:

- SR 19
  - Lane Park Road to CR 48
  - CR 48 to Central Avenue
  - Central Avenue to CR 455
  - CR 455 to US 27 / SR 25
  - US 27 / SR 25 to CR 478

- Central Avenue
  - SR 19 to Mare Avenue

- Number 2 Road
  - Mare Avenue to Silverwood Lane
  - Silverwood Lane to CR 48

The following intersections will be analyzed for the AM and PM peak hours:

- SR 19 and CR 48 (Signalized)
- SR 19 and Central Avenue (Unsignalized)
- SR 19 and South Florida Avenue (Unsignalized)
- SR 19 and Revels Road (Unsignalized)
- SR 19 and CR 455 (Unsignalized)
- Spine Road and Interconnect Road (Proposed)
- Number 2 Road and Spine Road (North Project Access) (Proposed)
- Revels Road and Spine Road (South Project Access) (Proposed)

Projected Traffic

Projected traffic includes background traffic volumes, the project trips, and committed trips. Projected background traffic will be calculated using the historical growth rates obtained from the *Lake County CMP* database and *FDOT Florida Traffic Online* web-based database. A 2%, minimum growth rate will be applied if the calculated growth rates are lower than 2%. The committed trips for the following approved developments within the study area will be added to the background traffic:

- The Reserve (traffic study obtained)
- Talichet Phase 2 (traffic study obtained)
- Whispering Hills (traffic study obtained)
- Lake Hills (City to provide traffic study)
- Watermark (City to provide traffic study)

Planned and Programmed Improvements

The *Lake-Sumter Metropolitan Planning Organization (LSMPO) 2023-2027 Transportation Improvement Program (TIP),* as well as *LSMPO 2022 List of Priority Projects (LOPP)* were reviewed to identify any planned or programmed improvements to the transportation facilities in this area. As shown in **Table 3**, construction is not planned to be completed within the next three (3) years for either improvement. Excerpts from the *LSMPO TIP* and *LSMPO LOPP* are provided in the **Attachments**.

Table 3
Planned and Programmed Improvements

FM #	Project Name	From	To	Proposed Phase	Proposed Phase FY	Description of Improvement
2383191	SR 19 *	CR 48	CR 561	PDE-PE-ENV	2023	Add Lanes & Reconstruct
238319-1	SR 19 **	Howey Bridge	CR 561	-	-	Road Widening

** LSMPO TIP Fiscal Year 2023-2027*
*** LSMPO 2022 LOPP Tier 2 project*

Capacity Analysis

The traffic study will include existing and 2033 buildout conditions for the roadway segment and intersection capacity analyses. A capacity analysis of the study roadway segments will be conducted for the PM peak hour under existing and projected conditions. The capacity analysis will be based on service volumes, capacities, and existing volumes, as documented in *2022 Lake County CMP Database* and the *FDOT's 2023 Multimodal Quality/Level of Service (MQ/LOS) Handbook,* included in the **Attachments***.*

The intersection turning movement counts will be seasonally adjusted, if needed, using the *2022 FDOT Peak Season Factor Category Report* obtained from the *Florida Traffic Online (FTO)* website.

Right and left turn lane warrant reviews will be performed at the Spine Road accesses on Number 2 Road and at SR 19 and Revels Road in accordance with the Lake County requirements for turn lanes.

In cases where projected conditions require mitigation as a result of the proposed development, an analysis including the recommended mitigation will be conducted.

Alternative Mode Analysis

A review of transit, pedestrian, and bicycle facilities will be conducted in accordance with the LSMPO requirements.

Report

A TIA report detailing the methods and findings of the study, including all associated graphics, tables, calculations, and supporting information will be prepared for submittal to the Town of Howey-In-The-Hills.

ATTACHMENTS

Traffic & Mobility Consultants

May 23, 2023

Mr. John Brock
Town Clerk
PO Box 125
Howey-In-The-Hills, Florida 34737
jbrock@howey.org

Re: Mission Rise
Response to Methodology Comments
TMC Project № 23017.1
Town Howey-In-The-Hills, Florida

Dear Mr. Brock,

Please find below our responses to the review comments prepared on behalf of The Town of Howey-In-The-Hills by TMH Consulting Inc dated May 8, 2023, regarding the above referenced Methodology dated April 28, 2023. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised Methodology is provided under cover reflecting the changes resulting from these comments.

1. **The Revels Road access to the south cannot be limited to emergency access as this is a public road now. Since we have received comments from residents to the south, it will be very useful to get some type of prediction about how many trips are likely to use this access point as opposed to SR 19 and Number 2 Road.**

   TMC Response: The emergency access on Orange Blossom Road will be restricted to emergency vehicles only; therefore, no trips were assigned to that access.

2. **There is an interconnect between the Mission Rise parcel and The Reserve parcel. Is the model sensitive enough to determine if this interconnect will impact trip assignments? The Reserve has an approved connecting road which is discussed in the TMC methodology. The Reserve also includes a future commercial development area that might be an attractor.**

   TMC Response: Noted. The Reserve Subdivision includes a future commercial development, therefore, 10% of the trips are assumed to originate from The Reserve's commercial development and use the interconnect road to access the project site.

3. **The study needs to include those projects that have some level of approval. TMC has done the traffic studies for several of these and been provided with traffic studies from others. The projects that need to be included are:**

   - **The Reserve**
   - **Watermark**
   - **Talichet Phase 2 (Phase 1 is mostly in the background traffic by now.)**
   - **Whispering Heights**
   - **Lake Hills**

TMC Response: Noted. The vested trips from The Reserve, Watermark, Talichet Phase 2, Whispering Heights [Whispering Hills], and Lake Hills will be included in the traffic study as indicated in the revised methodology (attached).

4. **The study needs to include CFRPM distributions that show the percentages of future background through traffic that will use the new roads in Mission Rise and The Reserve that link No 2 Road to SR 19. Use that data to project future background traffic volumes on those links.**

   TMC Response: Noted. As reflected in Figure 2, the future Spine Road, which transverses the project site from north to south and connects Number 2 Road with Revels Road, and the future Connector Road, which connects SR 19 and Number 2 Road are included in the project trip distribution Figure 2 in the revised methodology (attached).

5. **The project trip distribution map is basically unreadable. They need to provide a graphic that someone can review and understand.**

   TMC Response: Noted. The distribution map has been revised to show an inset with the detail project distribution within the project site. See Figure 2 in the revised methodology (attached).

6. **SR 19 at Central Avenue is listed as signalized, but it is only a flashing light. The analysis cannot assume it is a true signal.**

   TMC Response: Noted. SR 19 at Central Avenue intersection is listed as an unsignalized intersection in the revised methodology (attached).

7. **The ITE land use, code 210, shows traffic generation as 9.43 trips per unit with 0.70% for the AM Peak and 0.94% for the PM Peak. Why did they use 8.75, 0.63 and 0.89 respectively for the project traffic generation?**

   TMC Response: Per the Trip Generation Handbook, 3rd Edition Figure 4.2 (Process for selecting average rate or equation in trip generation manual data) linear curve equations should be used for the weekday, AM, and PM peak period trip generation calculation. The linear curve equations have an R^2 equal to 0.75 or greater, therefore, the fitted curve equations were used instead of average rate.

   The linear curve equations used for the 592 dwelling residential units corresponding to the weekday, AM, and PM trips are as follows:

   Weekday: Ln(T)=0.92 Ln(X)+2.68 which is equivalent to an average rate of 8.75 (5,181/592).
   AM: Ln(T)=0.91 Ln(X)+0.12 which is equivalent to an average rate of 0.63 (376/592).
   PM: Ln(T)=0.94 Ln(X)+0.27 which is equivalent to an average rate of 0.89 (529/592).

END OF COMMENTS

We trust these responses and the revised Methodology adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC

Charlotte N. Davidson, PE
Senior Transportation Engineer

Traffic & Mobility Consultants

October 17, 2023

Mr. J. Brock
Town Clerk
Howey-in-the-Hills/Development Review Committee
101 North Palm Avenue
Howey-in-the-Hills, FL 34737
jbrock@howey.prg

Re: Mission Rise
Response to Traffic Impact Analysis Comments
TMC Project № 23017.1
Howey-in-the-Hills, Florida

Dear Mr. Brock,

Please find below our responses to the review comments prepared by Griffey Engineering Inc. on behalf of The Town of Howey-in-the-Hills, dated October 9, 2023, regarding the above referenced Traffic Impact Analysis dated August 2023. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised Traffic Impact Analysis is provided under cover reflecting the changes resulting from these comments.

Traffic Study

1. **Figures in the report are missing. They need to be included.**

   TMC Response: Figures have been included in the report.

2. **For the future condition analysis of the intersection of SR 19 & CR 48, evaluate for a roundabout as well as signal timing adjustment.**

   TMC Response: A roundabout at the intersection of SR19 & CR 48 has been evaluated and the results of the analysis have been included in the TIA v1.3 report.

Recommended Improvements

3. **The traffic study identifies three intersections along SR 19 that will need to be signalized in the future (SR 19 & Central Ave., SR 19 & Revels Rd., and SR 19 & CR 455). The Development Agreement has a section that addresses proportionate share payment for off-site impacts. In the study's mitigation analysis it states: "In lieu of contributing a proportionate share to the three (3) intersections needing new traffic signals, the developer is recommending to construct the new traffic signal at SR 19 and Revels Road, which serves as the main access to the project." This is a reasonable mitigation alternative provided that there is a binding commitment for the developer to construct (or fund) the signal when it is deemed warranted by FDOT. This would be in addition to the turn lanes that the development will need to install at the intersection (right & left on SR 19, and right & through/left on EB Revels).**

   TMC Response: Acknowledged.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC

Charlotte N. Davidson, PE
Senior Transportation Engineer

Appendix B
Preliminary Development Plan

PRELIMINARY AREA SUMMARY

Total Property Acreage	**+/- 241.3 Ac**
Required Open Space	+/- 60.3 Ac
Additional Wetlands	+/- 31.0 Ac
Developable (Net Land Area)	**+/- 148.0 Ac**

OPEN SPACE ACREAGE

Required (Min 25%)	**+/- 60.3 Ac**
Provided (27.3%)	**+/- 66.0 Ac**
Stormwater (15.4%)	+/- 17.8 Ac
Misc. Open Space	+/- 18.1 Ac
Wetlands (50% Allowed)	+/- 30.1 Ac

DEVELOPMENT SUMMARY

Total Site Parcel Length	**+/- 29,080 LF**
Total Buildable Parcel	+/- 27,626 LF*
Total SFD 55'x120' Parcel	**+/- 23,590 LF**
Total Buildable SFD	+/- 22,410 LF*
Total 55' Units	**407 Lots (86%)**
Total SFD 75'x120' Parcel	**+/- 5,490 LF**
Total Buildable SFD	+/- 5,215 LF*
Total 75' Units	**69 Lots (14%)**
Total SFD Units	**476 Units**
Development Density	**3.2 du/ac**

*Assumes a 5% loss of developable area

NON-RESIDENTIAL ACREAGE

Required (Min 15%)	**+/- 22.2 Ac**
Provided (15%)	**+/- 22.2 Ac**
Civic (5%)	+/- 1.1 Ac
Amenities	+/- 4.2 Ac
Mis. Open Space	+/- 6.6 Ac
Stormwater	+/- 4.7 Ac
Bike Trail	+/- 5.6 Ac

LEGEND

- Non-Residential
- Endcap Parallel Parking
- Pedestrian Path
- Bike Trail

SILVERWOOD LN.
NUMBER 2 RD.
REVELS RD.
S. PALM AVE.
Access
Property Boundary
25' Landscaped Berm / 15' Landscaped Buffer with 6' Wall
Amenity 1.3 Ac
Wetland W3
Wetland W2
Wetland W1
Wetland W6
Wetland W5
Wetland W4
Civic 1.1 Ac
PHASE 1
PHASE 2
PHASE 4
POND
WETLAND
PARK #1 .55ac.
PARK #2 .37ac.
PARK #3 1.0ac.
PARK #4 1.6ac.
PARK #5 .26ac.
PARK #6 .76ac.
PARK #7 .80ac.
COMMERCIAL
EMERGENCY ACCESS
TO CITY PROPERTY

RVi
111 N Magnolia Ave
Suite 1350
Orlando, Florida 32801
Tel: 407.680.0650
www.rviplanning.com

MISSION RISE • **CONCEPTUAL PLAN**

- Town of Howey Hills, FL
- December 22, 2022
- # 22003786
- Turnstone Group

0 300' 600'

SCALE: 1" = 300'

The plan is conceptual in nature. Final densities, layout, development parameters, calculations, and site conditions may change upon further development of the Preliminary and/or Master Site Plan, and upon evaluation of topographic survey, water management and existing historic and specimen trees to remain.

Appendix C
Lake County CMP Database and 2023 FDOT Q/LOS

Lake County CMP Database

SEGMENT ID	COUNTY STATION	FDOT STATION	DATA SOURCE	SPEED LIMIT	SEGMENT LENGTH (MI)	ROAD NAME	FROM	TO	LANES (2022)	LANES (2027)	URBAN / RURAL	DIVIDED / UNDIVIDED	MAINTAINING AGENCY	JURISDICTION	ADOPTED LOS STANDARD	DAILY SERVICE VOLUME	2022 AADT	2022 DAILY V/C	2022 DAILY LOS	PEAK HOUR DIRECTIONAL SERVICE VOLUME	2022 PEAK HOUR NB/EB VOLUME	2022 PEAK HOUR SB/WB VOLUME	2022 PEAK HOUR V/C	2022 PEAK HOUR LOS	GROWTH RATE	DAILY SERVICE VOLUME (2027)	2027 AADT	2027 DAILY V/C	2027 DAILY LOS	PEAK HOUR DIRECTIONAL SERVICE VOLUME (2027)	2027 PEAK HOUR NB/EB VOLUME	2027 PEAK HOUR SB/WB VOLUME	2027 PEAK HOUR V/C	2027 PEAK HOUR LOS
1100	497		County	35	1.75	C.R. 466B	EAGLE NEST ROAD	CR 466A	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	10,360	5,060	0.49	C	530	193	233	0.44	C	1.25%	10,360	5,385	0.52	D	530	205	248	0.47	C
1110	490		County	35	0.55	C.R. 468	CR 466A	PINE RIDGE DAIRY ROAD	2	2	URBAN	UNDIVIDED	COUNTY	FRUITLAND PARK	D	10,360	4,719	0.46	C	530	190	213	0.40	C	1.25%	10,360	5,021	0.48	C	530	202	227	0.43	C
1120	480		County	35	1.80	C.R. 468	PINE RIDGE DAIRY ROAD	GRIFFIN ROAD	2	2	URBAN	UNDIVIDED	COUNTY	FRUITLAND PARK	D	13,320	7,736	0.58	D	680	343	384	0.56	D	3.00%	13,320	8,968	0.67	D	680	398	445	0.65	D
1130	436		County	45	1.13	C.R. 468	GRIFFIN ROAD	SR 44	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	9,173	0.74	C	620	440	404	0.71	C	1.75%	12,390	10,005	0.81	C	620	480	440	0.77	C
1145	612		County	55	3.65	C.R. 46A REALIGNMENT	SR 44	SR 46	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	16,576	2.14	E	410	663	857	2.09	E	3.50%	7,740	19,687	2.54	E	410	788	1,018	2.48	E
1150	267		County	55	0.94	C.R. 470	SUMTER COUNTY LINE	FLORIDA TURNPIKE	2	4	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	13,300	11,303	0.85	D	690	530	376	0.77	D	8.50%	28,880	16,996	0.59	C	1,500	797	566	0.53	C
1155	266		County	55	2.39	C.R. 470	FLORIDA TURNPIKE	BAY AVENUE	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,600	8,826	0.70	D	660	436	278	0.66	D	1.00%	12,600	9,276	0.74	D	660	458	292	0.69	D
1160	266		ADJACENT	55	0.54	C.R. 470	BAY AVENUE	CR 33	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	8,826	0.71	C	620	436	278	0.70	C	1.00%	12,390	9,276	0.75	C	620	458	292	0.74	C
1170	499		County	35	2.99	C.R. 473	CR 44	FOUNTAIN LAKE BOULEVARD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	14,060	6,957	0.49	D	710	322	242	0.45	C	1.00%	14,060	7,312	0.52	D	710	338	255	0.48	C
1180	443		County	40	1.03	C.R. 473	FOUNTAIN LAKE BOULEVARD	US 441	4	4	URBAN	DIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	35,820	14,713	0.41	C	1,800	811	461	0.45	C	1.00%	35,820	15,464	0.43	C	1,800	852	485	0.47	C
1190	4		County	55	5.21	C.R. 474	SR 33	GREEN SWAMP ROAD	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	5,962	0.77	C	410	151	240	0.59	C	2.50%	7,740	6,745	0.87	C	410	171	272	0.66	C
1200	3		County	55	3.35	C.R. 474	GREEN SWAMP ROAD	US 27	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	5,436	0.70	C	410	173	202	0.49	B	1.00%	7,740	5,713	0.74	C	410	182	212	0.52	B
1210	222		County	45	5.99	C.R. 478	SR 19	JAMARLY ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF GROVELAND	D	21,780	2,244	0.10	B	1,080	112	93	0.10	B	7.75%	21,780	3,259	0.15	B	1,080	162	135	0.15	B
1220	259		County	55	3.17	C.R. 48	SUMTER COUNTY LINE	CLEARWATER LAKE RD	2	2	RURAL	UNDIVIDED	COUNTY	CITY OF LEESBURG	C	7,740	3,504	0.45	B	410	112	180	0.44	B	4.25%	7,740	4,315	0.56	C	410	138	222	0.54	C
1225	248		County	55	2.41	C.R. 48	CLEARWATER LAKE RD	CR 33	2	2	RURAL	UNDIVIDED	COUNTY	CITY OF LEESBURG	C	7,740	3,327	0.43	B	410	123	206	0.50	B	1.75%	7,740	3,629	0.47	B	410	134	224	0.55	C
1230	263		County	45	0.46	C.R. 48	CR 33	HAYWOOD WORM FARM RD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	15,930	8,836	0.55	C	790	370	297	0.47	C	2.75%	15,930	10,120	0.64	C	790	424	340	0.54	C
1235	262		County	45	0.68	C.R. 48	HAYWOOD WORM FARM RD	US 27	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	16,820	9,073	0.54	C	840	401	375	0.48	C	1.00%	16,820	9,536	0.57	C	840	421	394	0.50	C
1240	264		County	40	4.89	C.R. 48	US 27	LIME AVENUE	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	21,780	9,821	0.45	B	1,080	420	380	0.39	B	4.00%	21,780	11,949	0.55	C	1,080	511	462	0.47	B
1250	255		County	40	2.04	C.R. 48	LIME AVENUE	SR 19	2	2	URBAN	UNDIVIDED	COUNTY	HOWEY-IN-THE-HILLS	D	21,780	9,982	0.46	B	1,080	429	404	0.40	B	1.50%	21,780	10,754	0.49	C	1,080	462	435	0.43	B
1260	253		County	40	1.14	C.R. 48	CR 561	RANCH ROAD	2	2	URBAN	UNDIVIDED	COUNTY	TOWN OF ASTATULA	D	16,820	6,515	0.39	C	840	310	292	0.37	C	1.00%	16,820	6,847	0.41	C	840	326	307	0.39	C
1270	253		ADJACENT	40	3.17	C.R. 48	RANCH ROAD	CR 448A	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	6,515	0.84	C	410	310	292	0.76	C	1.00%	7,740	6,847	0.88	C	410	326	307	0.80	C
1280	217		County	30	0.71	C.R. 50 (SUNSET AVENUE)	CR 33	SR 50	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MASCOTTE	D	10,360	1,592	0.15	C	530	66	95	0.18	C	1.75%	10,360	1,736	0.17	C	530	72	104	0.20	C
1290	210		County	45	1.74	C.R. 50	US 27	N HANCOCK ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MINNEOLA	D	16,820	6,981	0.42	C	840	285	346	0.41	C	1.00%	16,820	7,337	0.44	C	840	299	363	0.43	C
1300	202		County	45	2.47	C.R. 50	N HANCOCK ROAD	CR 455	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	21,780	6,877	0.32	B	1,080	228	491	0.45	B	2.00%	21,780	7,593	0.35	B	1,080	251	542	0.50	C
1310	42		County	45	1.92	C.R. 50	CR 455	ORANGE COUNTY LINE	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	16,820	6,828	0.41	C	840	195	557	0.66	C	1.00%	16,820	7,176	0.43	C	840	205	585	0.70	C
1320	417		County	35	1.08	C.R. 500A/ OLD 441	SR 19	DORA AVENUE	2	2	URBAN	DIVIDED	COUNTY	CITY OF TAVARES	D	8,390	9,907	1.18	F	870	367	450	0.52	D	1.00%	8,390	10,412	1.24	F	870	386	473	0.54	D
1325	417		County	35	1.08	C.R. 500A/ OLD 441	DORA AVENUE	SR 19	2	2	URBAN	DIVIDED	COUNTY	CITY OF TAVARES	D	8,390	9,907	1.18	F	870	367	450	0.52	D	1.00%	8,390	10,412	1.24	F	870	386	473	0.54	D
1330	413	115084	County	45	1.94	C.R. 500A/OLD 441/ALFRED ST	DORA AVENUE	BAY ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF TAVARES	D	16,820	9,558	0.57	C	840	489	424	0.58	C	1.00%	16,820	10,045	0.60	C	840	514	446	0.61	C
1340	420		County	35	0.79	C.R. 500A/OLD 441	BAY ROAD	CR 44C / EUDORA AVENUE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MOUNT DORA	D	10,360	9,917	0.96	D	530	465	458	0.88	D	2.50%	10,360	11,220	1.08	F	530	526	518	0.99	D
1350	421		County	35	1.06	C.R. 500A/OLD 441	CR 44C / EUDORA DRIVE	LAKESHORE DRIVE	2	2	URBAN	DIVIDED	COUNTY	CITY OF MOUNT DORA	D	14,760	16,591	1.12	F	750	725	761	1.01	E	4.25%	14,760	20,430	1.38	F	750	893	937	1.25	F
1360	415		County	35	0.79	C.R. 500A/OLD 441	LAKESHORE DRIVE	5TH AVENUE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MOUNT DORA	D	10,360	11,207	1.08	F	530	469	505	0.95	D	4.25%	10,360	13,800	1.33	F	530	577	621	1.17	F
1370	415		ADJACENT	25	0.63	C.R. 500A/ 5TH AVENUE	OLD 441	N HIGHLAND STREET	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MOUNT DORA	D	10,360	11,207	1.08	F	530	469	505	0.95	D	4.25%	10,360	13,800	1.33	F	530	577	621	1.17	F
1380	605		ADJACENT	30	0.26	C.R. 500A (HIGHLAND STREET)	5TH AVENUE	SR 46	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MOUNT DORA	D	13,320	2,792	0.21	C	680	179	127	0.26	C	3.50%	13,320	3,316	0.25	C	680	213	150	0.31	C
1390	602	115004	County	35	0.75	C.R. 500A/ OLD 441	SR 46	ORANGE COUNTY LINE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MOUNT DORA	D	10,360	5,849	0.56	D	530	325	244	0.61	D	5.25%	10,360	7,555	0.73	D	530	419	316	0.79	D
1400	401		County	45	1.62	C.R. 561	SR 19	CR 448	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF TAVARES	D	16,820	16,583	0.99	D	840	622	825	0.98	D	4.75%	16,820	20,914	1.24	F	840	784	1,041	1.24	F
1410	257		County	50	3.93	C.R. 561	CR 448	CR 48	2	2	URBAN	UNDIVIDED	COUNTY	ASTATULA/TAVARES	D	21,780	10,160	0.47	B	1,080	507	590	0.55	C	1.00%	21,780	10,678	0.49	C	1,080	533	620	0.57	C
1420	252		County	40	0.63	C.R. 561	CR 48	SOUTH ASTATULA CITY LIMIT	2	2	URBAN	UNDIVIDED	COUNTY	TOWN OF ASTATULA	D	12,390	11,947	0.96	D	620	570	558	0.92	C	1.00%	12,390	12,556	1.01	F	620	599	586	0.97	D
1430	252		ADJACENT	40	2.49	C.R. 561	SOUTH ASTATULA CITY LIMIT	CR 455	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	21,780	11,947	0.55	C	1,080	570	558	0.53	C	1.00%	21,780	12,556	0.58	C	1,080	599	586	0.55	C
1440	242		County	35	1.74	C.R. 561	CR 455	HOWEY CROSS ROAD	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	9,030	7,697	0.85	C	470	369	364	0.78	C	1.00%	9,030	8,090	0.90	C	470	387	382	0.82	C
1450	238		County	40	1.77	C.R. 561	HOWEY CROSS ROAD	TURNPIKE ROAD / CR 561A	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	12,260	8,115	0.66	C	640	328	385	0.60	C	1.00%	12,260	8,529	0.70	C	640	345	405	0.63	C
1460	235		County	45	0.46	C.R. 561 / C.R. 561A	TURNPIKE ROAD / CR 561A	US 27	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	9,075	0.73	C	620	403	385	0.65	C	1.00%	12,390	9,538	0.77	C	620	423	405	0.68	C
1470	214		County	30	1.78	EAST AVE/LAKE MINNEOLA DR/MAIN AVE	US 27	EAST AVENUE	2	2	URBAN	UNDIVIDED	COUNTY	CLERMONT/MINNEOLA	D	14,060	2,151	0.15	C	710	108	124	0.17	C	3.50%	14,060	2,555	0.18	C	710	128	147	0.21	C
1480	214		ADJACENT	30	1.05	8TH ST/OSCEOLA ST/4TH ST/CARROL ST/3RD S	EAST AVENUE	W MINNEOLA AVENUE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	10,360	2,151	0.21	C	530	108	124	0.23	C	3.50%	10,360	2,555	0.25	C	530	128	147	0.28	C
1490	115065	115065	State	-	0.42	C.R. 561 (W MINNEOLA AVENUE)	8TH STREET	C.R. 561A	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	12,390	1,085	0.09	C	620	179	186	0.30	C	1.00%	12,390	1,140	0.09	C	620	188	195	0.31	C
1500	203		ADJACENT	35	0.23	C.R. 561	C.R. 561A	SR 50	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	14,060	5,175	0.37	C	710	278	212	0.39	C	6.50%	14,060	7,090	0.50	D	710	381	290	0.54	D
1510	45		County	25	4.31	C.R. 561	SR 50	LOG HOUSE ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	14,060	6,597	0.47	C	710	326	276	0.46	C	1.00%	14,060	6,934	0.49	C	710	342	290	0.48	C
1520	10		County	55	1.56	C.R. 561	LOG HOUSE ROAD	FLORIDA BOYS RANCH ROAD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	16,820	3,767	0.22	C	840	159	156	0.19	C	2.00%	16,820	4,159	0.25	C	840	175	172	0.21	C
1530	6		County	55	5.87	C.R. 561	FLORIDA BOYS RANCH ROAD	SR 33	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	2,228	0.29	B	410	106	100	0.26	B	2.25%	7,740	2,491	0.32	B	410	118	112	0.29	B
1540	237		County	55	1.16	C.R. 561A	TURNPIKE ROAD / CR 561	SCRUB JAY LN	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	5,274	0.43	C	620	199	308	0.50	C	1.25%	12,390	5,612	0.45	C	620	212	327	0.53	C
1545	234		County	55	0.69	C.R. 561A	SCRUB JAY LN	N HANCOCK ROAD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	21,780	5,529	0.25	B	1,080	201	307	0.28	B	1.00%	21,780	5,811	0.27	B	1,080	211	322	0.30	B
1546	234		ADJACENT	55	1.37	C.R. 561A	N HANCOCK ROAD	CR 455	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	21,780	5,529	0.25	B	1,080	201	307	0.28	B	1.00%	21,780	5,811	0.27	B	1,080	211	322	0.30	B
1550	203		County	35	1.69	C.R. 561	W MINNEOLA AVE	C.R. 565A	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	13,320	5,175	0.39	C	680	278	212	0.41	C	6.50%	13,320	7,090	0.53	D	680	381	290	0.56	D
1560	213		County	40	1.67	C.R. 561A	CR 565A	JALARMY ROAD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	16,820	6,485	0.39	C	840	316	258	0.38	C	4.50%	16,820	8,081	0.48	C	840	393	322	0.47	C
1570	223		County	40	1.11	C.R. 561 (LAKE MINNEOLA SHORES)	JALARMY ROAD	US 27	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MINNEOLA	D	16,820	11,066	0.66	C	840	397	491	0.58	C	3.00%	16,820	12,829	0.76	C	840	460	569	0.68	C
1580	241		County	55	7.01	C.R. 565	US 27	KJELLSTROM LANE	2	2	RURAL	UNDIVIDED	COUNTY	GROVELAND/MASCOTTE	C	14,130	2,347	0.17	B	740	167	70	0.23	B	5.25%	14,130	3,032	0.21	B	740	215	90	0.29	B
1590	208		County	40	0.63	C.R. 565 (VILLA CITY ROAD)	KJELLSTROM LANE	SR 50	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF GROVELAND	D	16,820	5,367	0.32	C	840	247	249	0.30	C	4.25%	16,820	6,608	0.39	C	840	305	307	0.37	C
1600	118063	118063	ADJACENT	45	1.96	C.R. 565	SR 50	SLOANS RIDGE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MASCOTTE	D	16,820	865	0.05	C	840	44	42	0.05	C	2.00%	16,820	955	0.06	C	840	49	46	0.06	C
1610	118063	118063	State	45	5.44	C.R. 565	SLOANS RIDGE	LAKE ERIE ROAD	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	865	0.11	B	410	44	42	0.11	B	2.00%	7,740	955	0.12	B	410	49	46	0.12	B
1620	201		County	40	2.78	C.R. 565A	SR 50	CR 561A	2	2	URBAN	UNDIVIDED	COUNTY	CLERMONT/GROVELAND	D	16,820	9,917	0.59	C	840	407	348	0.48	C	2.25%	16,820	11,084	0.66	C	840	454	389	0.54	C
1630	47		County	55	4.60	C.R. 565A	SR 50	CR 565B	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF GROVELAND	D	21,780	2,549	0.12	B	1,080	82	133	0.12	B	3.25%	21,780	2,991	0.14	B	1,080	96	156	0.14	B
1640	18		County	45	3.66	C.R. 565B	SR 33	CR 561	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	2,796	0.36	B	410	135	152	0.37	B	4.00%	7,740	3,401	0.44	B	410	164	185	0.45	B
1650	434		County	25	0.30	CANAL STREET	US 441	MAIN STREET	2	2	URBAN	DIVIDED	CITY OF LEESBURG	CITY OF LEESBURG	D	13,990	3,765	0.27	C	710	201	137	0.28	C	1.00%	13,990	3,957	0.28	C	710	211	144	0.30	C
1660	426		County	25	0.31	CANAL STREET	MAIN STREET	SR 44	2	2	URBAN	UNDIVIDED	CITY OF LEESBURG	CITY OF LEESBURG	D	13,320	3,169	0.24	C	680	144	127	0.21	C	1.00%	13,320	3,331	0.25	C	680	151	134	0.22	C
1670	205		County	35	1.80	CITRUS TOWER BOULEVARD	US 27	OAKLEY SEAVER DRIVE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	14,060	12,296	0.87	D	710	651	446	0.92	D	1.00%	14,060	12,923	0.92	D	710	684	469	0.96	D
1680	44		County	30	0.47	CITRUS TOWER BOULEVARD	OAKLEY SEAVER DRIVE	SR 50	4	4	URBAN	DIVIDED	COUNTY	CITY OF CLERMONT	D	29,160	16,240	0.56	D	1,470	561	715	0.49	D	1.00%	29,160	17,068	0.59	D	1,470	590	752	0.51	D
1690	28		County	40	0.28	CITRUS TOWER BOULEVARD	SR 50	HOOKS STREET	4	4	URBAN	DIVIDED	COUNTY	CITY OF CLERMONT	D	35,820	21,470	0.60	C	1,800	798	1,065	0.59	C	1.25%	35,820	22,846	0.64	C	1,800	849	1,134	0.63	C
1692	36		County	30	1.16	CITRUS TOWER BOULEVARD	HOOKS STREET	JOHNS LAKE ROAD	4	4	URBAN	DIVIDED	COUNTY	CITY OF CLERMONT	D	30,780	20,251	0.66	D	1,550	740	901	0.58	D	1.00%	30,780	21,284	0.69	D	1,550	778	947	0.61	D
1695	24		County	40	0.60	CITRUS TOWER BOULEVARD	JOHNS LAKE ROAD	US 27	4	4	URBAN	DIVIDED	COUNTY	CITY OF CLERMONT	D	37,810	17,725	0.47	C	1,900	738	629	0.39	C	1.50%	37,810	19,095	0.51	C	1,900	795	678	0.42	C
1700	442		ADJACENT	35	0.95	DAVID WALKER DRIVE	OLD US 441 / CR 500A	CR 19A	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF TAVARES	D	14,060	8,553	0.61	D	710	388	367	0.55	D	1.00%	14,060	8,989	0.64	D	710	408	386	0.57	D
1710	442		County	35	0.44	DAVID WALKER DRIVE	CR 19A	US 441	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	14,060	8,553	0.61	D	710	388	367	0.55	D	1.00%	14,060	8,989	0.64	D	710	408	386	0.57	D
1720	449		County	35	0.53	DAVID WALKER DRIVE	US 441	MOUNT HOMER ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF EUSTIS	D	14,060	5,694	0.40	C	710	214	265	0.37	C	1.00%	14,060	5,984	0.43	C	710	225	279	0.39	C
1730	471		County	20	0.74	DAVID WALKER DRIVE	MOUNT HOMER ROAD	FLINKS AVE/KURT AVE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF EUSTIS	D	10,360	6,537	0.63	D	530	334	277	0.63	D	3.50%	10,360	7,763	0.75	D	530	397	329	0.75	D
1740	406	117014	County	35	2.29	DEAD RIVER ROAD	WEST TERMINI	SR 19	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF TAVARES	D	21,780	6,785	0.31	B	1,080	276	355	0.33	B	1.00%	21,780	7,131	0.33	B	1,080	291	373	0.35	B
1750	617		County	35	1.25	DONNELLY STREET	US 441	11TH AVENUE	2	2	URBAN	DIVIDED	CITY OF MT. DORA	CITY OF MOUNT DORA	D	14,760	11,220	0.76	D	750	535	474	0.71	D	1.00%	14,760	11,792	0.80	D	750	563	498	0.75	D
1760	617		ADJACENT	35	0.38	DONNELLY STREET	11TH AVENUE	5TH AVENUE	2	2	URBAN	UNDIVIDED	CITY OF MT. DORA	CITY OF MOUNT DORA	D	10,360	11,220	1.08	F	530	535	474	1.01	E	1.00%	10,360	11,792	1.14	F	530	563	498	1.06	F
1770	258		County	55	0.64	DUDA ROAD	CR 448A	ORANGE COUNTY LINE	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	9,030	7,250	0.80	C	470	293	323	0.69	C	1.50%	9,030	7,810	0.86	C	470	316	348	0.74	C
1780	510		County	40	1.43	EAGLES NEST ROAD	US 27	CR 466B	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	4,271	0.34	C	620	198	133	0.32	C	3.75%	12,390	5,134	0.41	C	620	238	160	0.38	C
1790	46		County	30	0.73	EAST AVENUE	CR 561	SR 50	2	2	URBAN	UNDIVIDED	CITY OF CLERMONT	CITY OF CLERMONT	D	10,360	5,841	0.56	D	530	-	-	-	-	1.00%	10,360	6,139	0.59	D	530	-	-	-	-
1800	454		ADJACENT	25	0.85	EAST CROOKED LAKE ROAD	LAKEVIEW DRIVE	BROADVIEW AVENUE	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF EUSTIS	D	10,360	5,153	0.50	D	530	273	167	0.52	D	1.00%	10,360	5,416	0.52	D	530	287	176	0.54	D
1810	454		County	25	0.78	EAST CROOKED LAKE ROAD	BROADVIEW AVENUE	US 441	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF EUSTIS	D	10,360	5,153	0.50	D	530	273	167	0.52	D	1.00%	10,360	5,416	0.52	D	530	287	176	0.54	D
1820	501		County	35	0.77	EMERALDA AVENUE	EMERALDA ISLAND ROAD	CR 44	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	13,320	4,265	0.32	C	680	266	149	0.39	C	2.50%	13,320	4,826	0.36	C	680	301	168	0.44	C
1830	41		County	40	4.26	EMPIRE CHURCH ROAD	CR 565	ANDERSON ROAD	2	2	RURAL	UNDIVIDED	COUNTY	CITY OF GROVELAND	C	7,740	1,442	0.19	B	410	-	-	-	-	1.00%	7,740	1,516	0.20	B	410	-	-	-	-
1840	622		ADJACENT	40	0.76	ESTES ROAD	CR 44A	LAKE LINCOLN LANE	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	15,930	4,384	0.28	C	790	146	262	0.33	C	2.75%	15,930	5,021	0.32	C	790	168	300	0.38	C
1850	622		County	40	0.49	ESTES ROAD	LAKE LINCOLN LANE	SR 44	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	16,820	4,384	0.26	C	840	146	262	0.31	C	2.75%	16,820	5,021	0.30	C	840	168	300	0.36	C
1860	452		County	35	0.52	EUDORA ROAD	OLD MT DORA ROAD	US 441	2	2	URBAN	UNDIVIDED	CITY OF EUSTIS	CITY OF EUSTIS	D	10,360	2,998	0.29	C	530	-	-	-	-	1.00%	10,360	3,151	0.30	C	530	-	-	-	-
1865	30		County	35	0.73	EXCALLIBUR ROAD	HOOKS STREET	CITRUS TOWER BOULEVARD	2	2	URBAN	DIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	14,760	5,301	0.36	C	750	346	219	0.46	C	1.00%	14,760	5,572	0.38	C	750	364	230	0.49	C
1870	508		County	35	0.63	FISH CAMP ROAD	CR 452	CR 44	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	10,360	1,521	0.15	C	530	83	72	0.16	C	2.50%	10,360	1,721	0.17	C	530	94	82	0.18	C
1875	221		County	40	1.69	GRASSY LAKE ROAD/FOSGATE ROAD	CR 50 (WASHINGTON STREET)	HANCOCK ROAD	2	2	URBAN	UNDIVIDED	CITY OF CLERMONT	UNINCORPORATED LAKE COUNTY	D	16,820	5,995	0.36	C	840	288	350	0.42	C	7.50%	16,820	8,606	0.51	C	840	414	503	0.60	C
1880	470		County	30	0.39	GOLFLINKS AVENUE	KURT STREET	SR 19 / BAY STREET	2	2	URBAN	UNDIVIDED	CITY OF EUSTIS	CITY OF EUSTIS	D	10,360	940	0.09	C	530	45	49	0.09	C	1.00%	10,360	988	0.10	C	530	47	52	0.10	C
1890	0		NO COUNT	-	0.38	GOLFLINKS AVENUE	SR 19 / BAY STREET	MARY STREET	2	2	URBAN	UNDIVIDED	CITY OF EUSTIS	CITY OF EUSTIS	D	12,390	-	-	-	620	-	-	-	-	N/A	12,390	-	-	-	620	-	-	-	-
1900	514		County	45	1.86	GOOSE PRAIRIE ROAD	EMERALDA AVENUE	CR 452	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	3,168	0.26	C	620	196	111	0.32	C	3.25%	12,390	3,718	0.30	C	620	230	130	0.37	C
1910	40		County	35	1.23	GRAND HIGHWAY	CITRUS TOWER BOULEVARD	SR 50	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	14,060	6,479	0.46	C	710	268	273	0.39	C	1.00%	14,060	6,809	0.48	C	710	282	287	0.40	C
1915	37		County	25	0.26	S. GRAND HIGHWAY	SR 50	HOOKS STREET	4	4	URBAN	DIVIDED	COUNTY	CITY OF CLERMONT	D	29,160	5,203	0.18	C	1,470	261	203	0.18	C	1.00%	29,160	5,469	0.19	C	1,470	275	213	0.19	C
1920	226		County	40	1.66	CITRUS GROVE ROAD	US 27	GRASSY LAKE ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MINNEOLA	D	12,390	5,319	0.43	C	620	270	173	0.44	C	12.00%	12,390	9,373	0.76	C	620	476	305	0.77	C
1930	517	117007	ADJACENT	45	1.76	GRAYS AIRPORT ROAD	MARION COUNTY ROAD	CR 466	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	2,911	0.23	C	620	173	118	0.28	C	3.25%	12,390	3,416	0.28	C	620	203	138	0.33	C
1940	517	117007	County	45	1.25	GRAYS AIRPORT ROAD	CR 466	GRIFFIN VIEW DRIVE	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	2,911	0.23	C	620	173	118	0.28	C	3.25%	12,390	3,416	0.28	C	620	203	138	0.33	C
1950	512	117007	County	45	1.75	S GRAYS AIRPORT ROAD	GRIFFIN VIEW DRIVE	EAGLES NEST ROAD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	12,390	2,966	0.24	C	620	115	174	0.28	C	5.50%	12,390	3,877	0.31	C	620	150	228	0.37	C
1960	505		County	45	1.43	S GRAYS AIRPORT ROAD	EAGLES NEST ROAD	US 27 / US 412	2	2	URBAN	UNDIVIDED	COUNTY	FRUITLAND PARK	D	12,390	786	0.06	C	620	55	28	0.09	C	1.00%	12,390	826	0.07	C	620	58	30	0.09	C
1970	536	117008	County	35	0.85	GRIFFIN AVENUE	US 27 / US 411	CR 25	2	2	URBAN	UNDIVIDED	COUNTY	TOWN OF LADY LAKE	D	13,320	11,009	0.83	D	680	599	378	0.88	D	1.75%	13,320	12,007	0.90	D	680	653	412	0.96	D
1980	535		County	35	1.19	GRIFFIN AVENUE	CR 25	UNCLE DONALDS LANE	2	2	URBAN	UNDIVIDED	COUNTY	TOWN OF LADY LAKE	D	10,360	3,469	0.33	C	530	214	108	0.40	C	1.50%	10,360	3,737	0.36	C	530	230	116	0.43	C
1990	535		ADJACENT	35	1.66	GRIFFIN AVENUE	UNCLE DONALDS LANE	GRAYS AIRPORT ROAD	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	10,360	3,469	0.33	C	530	214	108	0.40	C	1.50%	10,360	3,737	0.36	C	530	230	116	0.43	C
2000	462		County	25	0.51	GRIFFIN ROAD	US 27	LEE STREET	2	2	URBAN	UNDIVIDED	CITY OF LEESBURG	CITY OF LEESBURG	D	13,320	2,061	0.15	C	680	-	-	-	-	1.00%	13,320	2,166	0.16	C	680	-	-	-	-
2010	515		County	45	1.85	GRIFFIN VIEW DRIVE	US 27	GRAYS AIRPORT ROAD	2	2	URBAN	UNDIVIDED	COUNTY	TOWN OF LADY LAKE	D	12,390	3,498	0.28	C	620	202	124	0.33	C	1.00%	12,390	3,676	0.30	C	620	212	130	0.34	C
2020	516		County	45	1.64	GRIFFIN VIEW DRIVE	GRAYS AIRPORT ROAD	SULEN ROAD	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	9,030	1,715	0.19	C	470	113	75	0.24	C	1.00%	9,030	1,802	0.20	C	470	118	78	0.25	C
2030	479		County	30	0.36	GROVE STREET	SR 19 (BADGER AVENUE)	LAKEVIEW AVENUE	2	2	URBAN	UNDIVIDED	CITY OF EUSTIS	CITY OF EUSTIS	D	10,360	1,475	0.14	C	530	24	106	0.20	C	1.00%	10,360	1,550	0.15	C	530	25	111	0.21	C
2040	472		County	30	0.37	GROVE STREET	LAKEVIEW AVENUE	GOLFLINKS AVENUE	2	2	URBAN	UNDIVIDED	CITY OF EUSTIS	CITY OF EUSTIS	D	10,360	2,561	0.25	C	530	160	71	0.30	C	1.00%	10,360	2,692	0.26	C	530	168	75	0.32	C
2045	465	117017	County	25	0.50	GROVE STREET	GOLFLINKS AVENUE	OLD MT DORA ROAD	2	2	URBAN	UNDIVIDED	CITY OF EUSTIS	CITY OF EUSTIS	D	10,360	3,733	0.36	C	530	140	250	0.47	C	1.00%	10,360	3,923	0.38	C	530	148	263	0.50	D
2050	21		County	35	2.14	HAMMOCK RIDGE	LAKE SHORE DRIVE	US 27	4	4	URBAN	DIVIDED	COUNTY	CITY OF CLERMONT	D	59,580	18,440	0.31	B	2,950	479	1,149	0.39	B	2.25%	59,580	20,610	0.35	B	2,950	536	1,284	0.44	B

Lake County CMP Database

SEGMENT ID	COUNTY STATION	FDOT STATION	DATA SOURCE	SPEED LIMIT	SEGMENT LENGTH (MI)	ROAD NAME	FROM	TO	LANES (2022)	LANES (2027)	URBAN / RURAL	DIVIDED / UNDIVIDED	MAINTAINING AGENCY	JURISDICTION	ADOPTED LOS STANDARD	DAILY SERVICE VOLUME	2022 AADT	2022 DAILY V/C	2022 DAILY LOS	PEAK HOUR DIRECTIONAL SERVICE VOLUME	2022 PEAK HOUR NB/EB VOLUME	2022 PEAK HOUR SB/WB VOLUME	2022 PEAK HOUR V/C	2022 PEAK HOUR LOS	GROWTH RATE	DAILY SERVICE VOLUME (2027)	2027 AADT	2027 DAILY V/C	2027 DAILY LOS	PEAK HOUR DIRECTIONAL SERVICE VOLUME (2027)	2027 PEAK HOUR NB/EB VOLUME	2027 PEAK HOUR SB/WB VOLUME	2027 PEAK HOUR V/C	2027 PEAK HOUR LOS
3020	110049	110049	State	45	1.38	SR 19	CR 452 (MAIN STREET)	CR 561	4	4	URBAN	DIVIDED	STATE	CITY OF TAVARES	D	41,790	45,500	1.09	F	2,100	2,203	1,892	1.05	F	4.50%	41,790	56,701	1.36	F	2,100	2,745	2,358	1.31	F
3030	110049	110049	ADJACENT	45	0.90	SR 19	CR 561	LANE PARK ROAD	2	2	URBAN	UNDIVIDED	STATE	CITY OF TAVARES	D	18,590	45,500	2.45	F	920	2,203	1,892	2.39	F	4.50%	18,590	56,701	3.05	F	920	2,745	2,358	2.98	F
3040	110494	110494	State	55	3.87	SR 19	LANE PARK ROAD	CR 48	2	2	URBAN	UNDIVIDED	STATE	HOWEY-IN-THE-HILLS/TAVARES	D	18,590	15,980	0.86	C	920	610	656	0.71	C	1.00%	18,590	16,795	0.90	C	920	641	689	0.75	C
3050	110495	110495	State	40	0.84	SR 19	CR 48	CENTRAL AVENUE	2	2	URBAN	UNDIVIDED	STATE	HOWEY-IN-THE-HILLS	D	14,160	8,950	0.63	C	700	433	372	0.62	C	1.00%	14,160	9,407	0.66	C	700	455	391	0.65	C
3060	110495	110495	ADJACENT	35	3.09	SR 19	CENTRAL AVENUE	CR 455	2	2	URBAN	UNDIVIDED	STATE	HOWEY-IN-THE-HILLS	D	24,200	8,950	0.37	B	1,200	433	372	0.36	B	1.00%	24,200	9,407	0.39	B	1,200	455	391	0.38	B
3070	110255	110255	State	55	2.72	SR 19	CR 455	US 27 / SR 25	2	2	RURAL	UNDIVIDED	STATE	CITY OF GROVELAND	C	8,600	9,910	1.15	D	450	507	435	1.13	D	1.00%	8,600	10,416	1.21	D	450	533	457	1.18	D
3080	110376	110376	State	55	4.73	SR 19	US 27 / SR 25	CR 478	2	2	RURAL	UNDIVIDED	STATE	CITY OF GROVELAND	C	8,600	9,350	1.09	D	450	466	519	1.15	D	1.00%	8,600	9,827	1.14	D	450	490	545	1.21	D
3090	110376	110376	ADJACENT	55	1.22	SR 19	CR 478	LAKE CATHERINE ROAD	2	2	URBAN	UNDIVIDED	STATE	CITY OF GROVELAND	D	17,700	9,350	0.53	C	880	466	519	0.59	C	1.00%	17,700	9,827	0.56	C	880	490	545	0.62	C
3100	110097	110097	State	45	0.70	SR 19	LAKE CATHERINE ROAD	SR 50/ SR 33	2	2	URBAN	UNDIVIDED	STATE	CITY OF GROVELAND	D	17,700	12,950	0.73	C	880	449	533	0.61	C	1.50%	17,700	13,951	0.79	C	880	484	574	0.65	C
3110	115072	115072	State	40	0.52	SR 33	SR 50/ SR 33	ANDERSON ROAD	2	2	URBAN	UNDIVIDED	STATE	CITY OF GROVELAND	D	18,590	14,760	0.79	C	920	470	667	0.73	C	4.25%	18,590	18,175	0.98	D	920	579	821	0.89	C
3120	110497	110497	State	60	3.16	SR 33	ANDERSON ROAD	CR 565B	2	2	RURAL	UNDIVIDED	STATE	CITY OF GROVELAND	C	8,600	10,428	1.21	D	450	533	458	1.18	D	3.75%	8,600	12,535	1.46	D	450	641	551	1.42	D
3130	111002	111002	State	60	6.76	SR 33	CR 565B	CR 561	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	8,600	8,242	0.96	C	450	421	362	0.94	C	1.75%	8,600	8,988	1.05	D	450	459	395	1.02	D
3140	5		County	60	2.33	SR 33	CR 561	CR 474	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	8,600	13,084	1.52	D	450	452	415	1.00	D	1.25%	8,600	13,923	1.62	D	450	480	441	1.07	D
3150	2		County	60	1.04	SR 33	CR 474	POLK COUNTY LINE	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	10,320	10,821	1.05	D	540	352	544	1.01	D	4.50%	10,320	13,485	1.31	F	540	438	678	1.26	F
3160	808		County	45	4.71	SR 40	MARION COUNTY LINE	CR 445A	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	8,600	5,068	0.59	C	450	169	217	0.48	B	2.75%	8,600	5,805	0.68	C	450	193	248	0.55	C
3170	110503	110503	State	55	1.61	SR 40	CR 445A	RIVER ROAD	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	10,320	5,370	0.52	C	540	274	236	0.51	C	1.00%	10,320	5,644	0.55	C	540	288	248	0.53	C
3180	110050	110050	State	45	1.43	SR 40	RIVER ROAD	VOLUSIA COUNTY LINE	2	2	RURAL	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	14,220	10,180	0.72	C	740	401	406	0.55	C	4.75%	14,220	12,839	0.90	C	740	506	512	0.69	C
3190	110496	110496	State	55	2.38	SR 44	SUMTER COUNTY LINE	CR 468	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	39,800	21,800	0.55	C	2,000	1,071	964	0.54	C	1.00%	39,800	22,912	0.58	C	2,000	1,126	1,013	0.56	C
3200	110487	110487	State	45	1.54	SR 44	CR 468	S LONE OAK DRIVE	4	4	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	39,800	16,540	0.42	C	2,000	610	720	0.36	C	1.00%	39,800	17,384	0.44	C	2,000	641	757	0.38	C
3210	115147	115147	State	35	0.76	SR 44	S LONE OAK DRIVE	US 27	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	19,480	0.60	D	1,630	835	769	0.51	D	1.00%	32,400	20,474	0.63	D	1,630	878	808	0.54	D
3220	115179	115179	State	35	0.57	SR 44 (DIXIE AVENUE)	US 27	S 9TH STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	27,300	0.84	D	1,630	1,322	1,135	0.81	D	1.25%	32,400	29,049	0.90	D	1,630	1,407	1,208	0.86	D
3230	115143	115143	ADJACENT	35	0.34	SR 44 (DIXIE AVENUE)	S 9TH STREET	CANAL STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	23,200	0.72	D	1,630	922	928	0.57	D	1.00%	32,400	24,383	0.75	D	1,630	969	975	0.60	D
3240	115143	115143	State	40	0.41	SR 44 (DIXIE AVENUE)	CANAL STREET	S LAKE STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	39,800	23,200	0.58	C	2,000	922	928	0.46	C	1.00%	39,800	24,383	0.61	C	2,000	969	975	0.49	C
3250	115142	115142	State	40	0.79	SR 44 (DIXIE AVENUE)	S LAKE STREET	E MAIN STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	39,800	18,760	0.47	C	2,000	908	780	0.45	C	1.00%	39,800	19,717	0.50	C	2,000	954	820	0.48	C
3260	115183	115183	State	40	0.11	SR 44 (DIXIE AVENUE)	E MAIN STREET	US 441	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	41,790	18,760	0.45	C	2,100	908	780	0.43	C	1.00%	41,790	19,717	0.47	C	2,100	954	820	0.45	C
3262	110005	110005	State	45	0.45	SR 44 (OLD C.R. 44B)	US 441	WAYCROSS AVENUE	2	2	URBAN	DIVIDED	STATE	CITY OF MOUNT DORA	D	19,510	25,500	1.31	F	970	1,235	1,060	1.27	F	1.00%	19,510	26,801	1.37	F	970	1,298	1,114	1.34	F
3268	110006	110006	State	45	1.65	SR 44 (OLD C.R. 44B)	WAYCROSS AVENUE	ORANGE AVENUE	2	2	URBAN	UNDIVIDED	STATE	EUSTIS/MOUNT DORA	D	18,590	17,880	0.96	D	920	907	637	0.99	D	1.00%	18,590	18,792	1.01	F	920	953	669	1.04	F
3270	110500	110500	ADJACENT	55	2.27	SR 44	ABRAMS ROAD	THRILL HILL ROAD	2	2	URBAN	UNDIVIDED	STATE	CITY OF EUSTIS	D	18,590	13,810	0.74	C	920	706	606	0.77	C	1.00%	18,590	14,514	0.78	C	920	742	637	0.81	C
3280	110500	110500	ADJACENT	55	1.14	SR 44	THRILL HILL ROAD	CR 439	2	2	URBAN	UNDIVIDED	STATE	CITY OF MOUNT DORA	D	17,700	13,810	0.78	C	880	706	606	0.80	C	1.00%	17,700	14,514	0.82	C	880	742	637	0.84	C
3290	110500	110500	State	55	3.03	SR 44	CR 439	CR 437	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	15,700	13,810	0.88	C	820	706	606	0.86	C	1.00%	15,700	14,514	0.92	C	820	742	637	0.90	C
3300	110500	110500	ADJACENT	55	1.15	SR 44	CR 437	CR 46A	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	13,550	13,810	1.02	D	700	706	606	1.01	D	1.00%	13,550	14,514	1.07	D	700	742	637	1.06	D
3310	110010	110010	ADJACENT	55	3.43	SR 44	CR 46A	CR 44A	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	8,600	9,383	1.09	D	450	480	412	1.07	D	1.00%	8,600	9,861	1.15	D	450	504	433	1.12	D
3320	110010	110010	ADJACENT	55	5.34	SR 44	CR 44A	OVERLOOK DRIVE	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	8,600	9,383	1.09	D	450	480	412	1.07	D	1.00%	8,600	9,861	1.15	D	450	504	433	1.12	D
3330	110010	110010	State	55	5.64	SR 44	OVERLOOK DRIVE	CR 42	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	15,700	9,383	0.60	B	820	480	412	0.59	B	1.00%	15,700	9,861	0.63	B	820	504	433	0.61	B
3340	110010	110010	ADJACENT	55	0.26	SR 44	CR 42	VOLUSIA COUNTY LINE	2	2	RURAL	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	C	13,550	9,383	0.69	C	700	480	412	0.69	C	1.00%	13,550	9,861	0.73	C	700	504	433	0.72	C
3344	110200	110200	State	-	1.80	SR 429 (WEKIVA PKWY)	ORANGE C/L	CR 46A (REALIGNED)	4	4	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	66,200	6,200	0.09	B	3,280	422	322	0.13	B	4.25%	66,200	7,634	0.12	B	3,280	519	396	0.16	B
3345	610		County	-	5.54	SR 46	CR 46A (REALIGNED)	SEMINOLE C/L	4	4	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	66,200	17,646	0.27	B	3,280	657	874	0.27	B	1.00%	66,200	18,547	0.28	B	3,280	691	919	0.28	B
3350	110501	110501	ADJACENT	45	1.08	SR 46	US 441	VISTA VIEW	6	6	URBAN	DIVIDED	STATE	CITY OF MOUNT DORA	D	62,900	13,420	0.21	C	3,170	650	558	0.21	C	3.25%	62,900	15,747	0.25	C	3,170	763	655	0.24	C
3360	110501	110501	State	55	0.94	SR 46	VISTA VIEW	ROUND LAKE ROAD	6	6	URBAN	DIVIDED	STATE	CITY OF MOUNT DORA	D	62,900	13,420	0.21	C	3,170	650	558	0.21	C	3.25%	62,900	15,747	0.25	C	3,170	763	655	0.24	C
3370	110001	110001	ADJACENT	55	2.11	SR 46	ROUND LAKE ROAD	CR 437 SOUTH	2	2	URBAN	UNDIVIDED	STATE	CITY OF MOUNT DORA	D	24,200	14,950	0.62	C	1,200	600	600	0.50	C	1.50%	24,200	16,105	0.67	C	1,200	646	646	0.54	C
3380	110001	110001	State	45	0.51	SR 46	CR 437 SOUTH	CR 437 NORTH	2	2	URBAN	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	17,700	14,950	0.84	C	880	600	600	0.68	C	1.50%	17,700	16,105	0.91	C	880	646	646	0.73	C
3390	111019	111019	State	45	1.11	SR 46	CR 437 NORTH	CR 435	2	2	URBAN	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	17,700	13,230	0.75	C	880	641	550	0.73	C	1.00%	17,700	13,905	0.79	C	880	674	578	0.77	C
3395	611	118115	County	45	0.87	SR 46	CR 435	CR 46A (REALIGNED)	2	2	URBAN	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	17,700	10,963	0.62	C	880	467	480	0.54	C	1.00%	17,700	11,522	0.65	C	880	490	504	0.57	C
3420	110319	110319	State	55	3.64	SR 50	SUMTER COUNTY LINE	CR 565 / BAY LAKE ROAD	2	2	URBAN	UNDIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	24,200	14,320	0.59	C	1,200	591	649	0.54	C	1.50%	24,200	15,427	0.64	C	1,200	637	699	0.58	C
3430	110319	110319	ADJACENT	35	0.77	SR 50	CR 565 / BAY LAKE ROAD	CR 33	2	2	URBAN	UNDIVIDED	STATE	CITY OF MASCOTTE	D	14,800	14,320	0.97	D	750	591	649	0.87	D	1.50%	14,800	15,427	1.04	E	750	637	699	0.93	D
3440	110241	110241	State	45	0.96	SR 50	CR 33	GROVELAND FARMS ROAD	4	4	URBAN	DIVIDED	STATE	CITY OF MASCOTTE	D	39,800	26,000	0.65	C	2,000	942	1,013	0.51	C	1.00%	39,800	27,326	0.69	C	2,000	990	1,065	0.53	C
3450	110241	110241	ADJACENT	45	0.63	SR 50	GROVELAND FARMS ROAD	SR 50 ONE WAY PAIRS	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	41,790	26,000	0.62	C	2,100	942	1,013	0.48	C	1.00%	41,790	27,326	0.65	C	2,100	990	1,065	0.51	C
3460	115182	115182	State	35	0.44	SR 50 (E)	SR 50 ONE WAY PAIRS	SR 19	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	19,440	12,350	0.64	D	1,960	1,110	0	0.57	D	1.00%	19,440	12,980	0.67	D	1,960	1,167	0	0.60	D
3470	115077	115077	State	35	0.44	SR 50 (W)	SR 19	SR 50 ONE WAY PAIRS	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	19,440	16,800	0.86	D	1,960	0	1,510	0.77	D	1.75%	19,440	18,322	0.94	D	1,960	0	1,647	0.84	D
3481	115181	115181	State	35	0.33	SR 50 (E)	SR 19	SR 33 SOUTH	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	19,440	12,750	0.66	D	1,960	1,146	0	0.58	D	1.00%	19,440	13,400	0.69	D	1,960	1,204	0	0.61	D
3491	115076	115076	State	35	0.34	SR 50 (W)	SR 33 SOUTH	SR 19	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	19,440	14,700	0.76	D	1,960	0	1,322	0.67	D	1.00%	19,440	15,450	0.79	D	1,960	0	1,389	0.71	D
3500	115134	115134	State	55	1.53	SR 50	SR 33 SOUTH	CR 565A NORTH	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	41,790	30,314	0.73	C	2,100	1,468	1,260	0.70	C	1.00%	41,790	31,861	0.76	C	2,100	1,543	1,324	0.73	C
3510	110396	110396	State	55	3.15	SR 50	CR 565A NORTH	CR 561	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	41,790	29,500	0.71	C	2,100	1,059	2,242	1.07	F	1.00%	41,790	31,005	0.74	C	2,100	1,113	2,356	1.12	F
3520	115057	115057	State	40	1.19	SR 50	CR 561	EAST AVENUE	4	4	URBAN	DIVIDED	STATE	CITY OF CLERMONT	D	39,800	35,600	0.89	C	2,000	1,724	1,480	0.86	C	1.50%	39,800	38,351	0.96	D	2,000	1,857	1,594	0.93	C
3530	115050	115050	State	40	0.92	SR 50	EAST AVENUE	US 27	4	4	URBAN	DIVIDED	STATE	CITY OF CLERMONT	D	41,790	32,650	0.78	C	2,100	1,581	1,358	0.75	C	1.00%	41,790	34,315	0.82	C	2,100	1,662	1,427	0.79	C
3540	110390	110390	State	55	2.14	SR 50	US 27	HANCOCK ROAD	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	54,629	0.87	C	3,170	2,645	2,271	0.83	C	1.00%	62,900	57,415	0.91	C	3,170	2,780	2,387	0.88	C
3550	110390	110390	ADJACENT	55	1.49	SR 50	HANCOCK ROAD	CR 455	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	54,629	0.87	C	3,170	2,645	2,271	0.83	C	1.00%	62,900	57,415	0.91	C	3,170	2,780	2,387	0.88	C
3560	750572	750572	State	50	1.53	SR 50	CR 455	ORANGE COUNTY LINE	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	53,750	0.85	C	3,170	2,574	2,264	0.81	C	1.00%	62,900	56,492	0.90	C	3,170	2,705	2,379	0.85	C
3562	972200	972200	State	70	1.38	SR 91 (FLORIDA TURNPIKE)	SUMTER COUNTY LINE	CR 470	4	4	URBAN	FREEWAY	STATE	UNINCORPORATED LAKE COUNTY	B	47,600	46,882	0.98	B	2,230	2,648	2,274	1.19	C	1.00%	47,600	49,273	1.04	C	2,230	2,783	2,390	1.25	C
3564	972160	972160	State	70	7.50	SR 91 (FLORIDA TURNPIKE)	CR 470	US 27/SR 25	4	4	URBAN	FREEWAY	STATE	UNINCORPORATED LAKE COUNTY	B	47,600	49,600	1.04	C	2,230	2,661	1,803	1.19	C	1.00%	47,600	52,130	1.10	C	2,230	2,797	1,895	1.25	C
3566	972006	972006	State	70	3.72	SR 91 (FLORIDA TURNPIKE)	US 27/SR 25	US 27/SR 25/SR 19 INTERCHANGE	4	8	URBAN	FREEWAY	STATE	UNINCORPORATED LAKE COUNTY	B	47,600	43,670	0.92	B	2,230	2,733	1,852	1.23	C	1.00%	92,200	45,898	0.50	B	4,310	2,872	1,946	0.67	B
3568	972005	972005	State	70	10.82	SR 91 (FLORIDA TURNPIKE)	US 27/SR 25/SR 19 INTERCHANGE	ORANGE COUNTY LINE	4	8	URBAN	FREEWAY	STATE	UNINCORPORATED LAKE COUNTY	C	66,400	66,200	1.00	C	3,100	3,551	2,407	1.15	D	1.00%	128,900	69,577	0.54	B	6,030	3,732	2,530	0.62	B
3569	29		County	30	0.84	STEVES ROAD	US 27	CITRUS TOWER BOULEVARD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF CLERMONT	D	14,060	7,625	0.54	D	710	335	441	0.62	D	2.00%	14,060	8,418	0.60	D	710	370	487	0.69	D
3570	429		County	20	1.46	SUNNYSIDE DRIVE	MAIN STREET/DR NICHOLS DRIVE	SLEEPY HOLLOW ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF LEESBURG	D	14,060	4,411	0.31	C	710	163	254	0.36	C	2.50%	14,060	4,990	0.35	C	710	184	288	0.41	C
3580	423	117012	County	35	3.31	SUNNYSIDE DRIVE	SLEEPY HOLLOW ROAD	BRIDGEWATER COURT	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF LEESBURG	D	21,780	2,640	0.12	B	1,080	182	98	0.17	B	2.00%	21,780	2,915	0.13	B	1,080	201	108	0.19	B
3590	414	117013	County	35	1.14	SUNNYSIDE DRIVE	BRIDGEWATER COURT	SUNNYSIDE DRIVE	2	2	URBAN	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	D	10,360	1,523	0.15	C	530	53	70	0.13	C	1.00%	10,360	1,601	0.15	C	530	56	74	0.14	C
3600	466		County	35	0.79	THOMAS AVENUE	CR 460	CR 44A	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF LEESBURG	D	10,360	9,755	0.94	D	530	405	529	1.00	D	1.00%	10,360	10,253	0.99	D	530	426	556	1.05	E
3610	457		County	35	1.07	THOMAS AVENUE	GRIFFIN ROAD (CR 44A)	MAIN STREET	2	2	URBAN	UNDIVIDED	CITY OF LEESBURG	CITY OF LEESBURG	D	10,360	7,696	0.74	D	530	393	340	0.74	D	1.00%	10,360	8,089	0.78	D	530	413	358	0.78	D
3620	211		County	30	0.32	TURKEY FARM ROAD	OLD HWY 50	BRIMMING LAKE ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MINNEOLA	D	10,360	209	0.02	C	530	11	13	0.02	C	1.00%	10,360	220	0.02	C	530	11	13	0.02	C
3630	0		NO COUNT	35	4.19	TUSCANOOGA ROAD	SUMTER COUNTY LINE	EGG ROAD	2	2	RURAL	UNDIVIDED	COUNTY	UNINCORPORATED LAKE COUNTY	C	7,740	-	-	-	410	-	-	-	-	N/A	7,740	-	-	-	410	-	-	-	-
3640	216		County	40	0.54	TUSCANOOGA ROAD	EGG ROAD	SR 50	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MASCOTTE	C	15,960	2,543	0.16	C	790	157	101	0.20	C	2.00%	15,960	2,807	0.18	C	790	174	111	0.22	C
3650	219		County	40	0.31	UNDERPASS ROAD	CR 33	AMERICAN LEGION ROAD	2	2	URBAN	UNDIVIDED	COUNTY	CITY OF MASCOTTE	D	16,820	1,080	0.06	C	840	61	60	0.07	C	2.00%	16,820	1,193	0.07	C	840	68	67	0.08	C
3660	110470	110470	State	55	1.01	US 192	US 27	ORANGE COUNTY LINE	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	47,750	0.76	C	3,170	2,312	1,985	0.73	C	1.00%	62,900	50,186	0.80	C	3,170	2,430	2,086	0.77	C
3670	538		County	45	1.11	US 27/US441	SUMTER COUNTY LINE	GRIFFIN AVENUE	6	6	URBAN	DIVIDED	STATE	TOWN OF LADY LAKE	D	59,900	35,295	0.59	C	3,020	1,446	1,484	0.49	C	1.00%	59,900	37,095	0.62	C	3,020	1,519	1,560	0.52	C
3680	111012	111012	State	45	1.12	US 27/US441	GRIFFIN AVENUE	ALT US 441 / ALT US 27	4	8	URBAN	DIVIDED	STATE	TOWN OF LADY LAKE	D	41,790	30,300	0.73	C	2,100	1,467	1,260	0.70	C	1.50%	84,110	32,642	0.39	C	4,240	1,580	1,357	0.37	C
3690	111012	111012	ADJACENT	40	0.79	US 27/US441	ALT US 441 / ALT US 27	CR 466	4	6	URBAN	DIVIDED	STATE	TOWN OF LADY LAKE	D	41,790	30,300	0.73	C	2,100	1,467	1,260	0.70	C	1.50%	62,900	32,642	0.52	C	3,170	1,580	1,357	0.50	C
3700	111021	111021	State	55	2.27	US 27/US441	CR 466	LAKE ELLA ROAD	4	6	URBAN	DIVIDED	STATE	TOWN OF LADY LAKE	D	41,790	29,800	0.71	C	2,100	1,400	1,200	0.67	C	1.00%	62,900	31,320	0.50	C	3,170	1,471	1,261	0.46	C
3710	110430	110430	State	55	1.89	US 27/US441	LAKE ELLA ROAD	CR 466A / MILLER BOULEVARD	6	6	URBAN	DIVIDED	STATE	FRUITLAND PARK	D	59,900	29,350	0.49	C	3,020	1,421	1,220	0.47	C	1.00%	59,900	30,847	0.51	C	3,020	1,493	1,282	0.49	C
3720	110431	110431	State	45	1.35	US 27/US441	CR 466A / MILLER BOULEVARD	CR 460 (MARTIN LUTHER KING BLVD)	6	6	URBAN	DIVIDED	STATE	FRUITLAND PARK	D	59,900	37,800	0.63	C	3,020	1,830	1,572	0.61	C	1.00%	59,900	39,728	0.66	C	3,020	1,923	1,652	0.64	C
3730	110109	110109	ADJACENT	45	0.51	US 27/US441	CR 460 (MARTIN LUTHER KING BLVD)	CR 466A (LEE ROAD)	6	6	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	59,900	41,600	0.69	C	3,020	2,014	1,730	0.67	C	1.00%	59,900	43,722	0.73	C	3,020	2,117	1,818	0.70	C
3740	110109	110109	State	45	0.67	US 27/US441	CR 466A (LEE ROAD)	CR 44A/ GRIFFIN ROAD	6	6	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	59,900	41,600	0.69	C	3,020	2,014	1,730	0.67	C	1.00%	59,900	43,722	0.73	C	3,020	2,117	1,818	0.70	C
3750	110109	110109	ADJACENT	35	0.15	US 27/US441	CR 44A/ GRIFFIN ROAD	US 27/US441 SPLIT	6	6	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	50,000	41,600	0.83	D	2,520	2,014	1,730	0.80	D	1.00%	50,000	43,722	0.87	D	2,520	2,117	1,818	0.84	D
3760	115120	115120	State	35	1.04	US 27/SR 25	US 27/US441 SPLIT	MAIN STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	28,300	0.87	D	1,630	1,370	1,177	0.84	D	1.00%	32,400	29,744	0.92	D	1,630	1,440	1,237	0.88	D
3770	115119	115119	State	35	0.57	US 27/SR 25	MAIN STREET	SR 44	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	29,100	0.90	D	1,630	1,409	1,210	0.86	D	2.00%	32,400	32,129	0.99	D	1,630	1,556	1,336	0.95	D
3780	115116	115116	State	35	0.63	US 27/SR 25	SR 44	CR 25A (NORTH)	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	44,350	1.37	F	1,630	2,147	1,844	1.32	F	1.50%	32,400	47,778	1.47	F	1,630	2,313	1,987	1.42	F
3785	110014	110014	State	55	2.16	US 27/SR 25	CR 25A (NORTH)	CR 33	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	41,790	35,700	0.85	C	2,100	1,729	1,484	0.82	C	1.00%	41,790	37,521	0.90	C	2,100	1,817	1,560	0.87	C
3790	110014	110014	ADJACENT	55	1.12	US 27/SR 25	CR 33	CR 48	4	4	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	41,790	35,700	0.85	C	2,100	1,729	1,484	0.82	C	1.00%	41,790	37,521	0.90	C	2,100	1,817	1,560	0.87	C
3800	110362	110362	State	55	2.54	US 27/SR 25	CR 48	PLANTATION BOULEVARD	4	4	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	66,200	29,750	0.45	B	3,280	1,222	1,260	0.38	B	1.75%	66,200	32,446	0.49	B	3,280	1,333	1,374	0.42	B
3810	110362	110362	ADJACENT	55	2.67	US 27/SR 25	PLANTATION BOULERVARD	FLORIDA TURNPIKE	4	4	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	66,200	29,750	0.45	B	3,280	1,222	1,260	0.38	B	1.75%	66,200	32,446	0.49	B	3,280	1,333	1,374	0.42	B
3820	240	110364	County	55	4.08	US 27/SR 25	FLORIDA TURNPIKE	SR 19	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	41,790	26,086	0.62	C	2,100	1,059	989	0.50	C	1.00%	41,790	27,417	0.66	C	2,100	1,113	1,040	0.53	C
3830	110363	110363	State	55	3.36	US 27/SR 25	SR 19	CR 561	4	4	URBAN	DIVIDED	STATE	CITY OF GROVELAND	D	66,200	21,120	0.32	B	3,280	925	963	0.29	B	1.50%	66,200	22,752	0.34	B	3,280	996	1,037	0.32	B
3840	110468	110468	State	55	2.14	US 27/SR 25	CR 561	CR 561A	4	4	URBAN	DIVIDED	STATE	CITY OF MINNEOLA	D	41,790	32,150	0.77	C	2,100	1,380	1,563	0.74	C	1.00%	41,790	33,790	0.81	C	2,100	1,450	1,643	0.78	C
3850	110163	110163	State	50	0.38	US 27/SR 25	CR 561A	CR 561/ MAIN AVENUE	6	6	URBAN	DIVIDED	STATE	CITY OF MINNEOLA	D	62,900	41,100	0.65	C	3,170	1,990	1,709	0.63	C	1.00%	62,900	43,197	0.69	C	3,170	2,092	1,796	0.66	C
3860	110163	110163	ADJACENT	50	0.68	US 27/SR 25	CR 561/ MAIN AVENUE	CR 50	6	6	URBAN	DIVIDED	STATE	CITY OF MINNEOLA	D	59,900	41,100	0.69	C	3,020	1,990	1,709	0.66	C	1.00%	59,900	43,197	0.72	C	3,020	2,092	1,796	0.69	C
3870	110423	110423	State	50	0.79	US 27/SR 25	CR 50	GRAND HIGHWAY	6	6	URBAN	DIVIDED	STATE	CITY OF MINNEOLA	D	59,900	29,000	0.48	C	3,020	1,084	1,040	0.36	C	1.00%	59,900	30,479	0.51	C	3,020	1,139	1,093	0.38	C
3880	115047	115047	State	50	1.22	US 27/SR 25	GRAND HIGHWAY	SR 50	6	6	URBAN	DIVIDED	STATE	CITY OF CLERMONT	D	62,900	31,500	0.50	C	3,170	1,322	1,455	0.46	C	4.00%	62,900	38,325	0.61	C	3,170	1,608	1,770	0.56	C
3890	110012	110012	State	55	1.54	US 27/SR 25	SR 50	JOHNS LAKE ROAD	6	6	URBAN	DIVIDED	STATE	CITY OF CLERMONT	D	62,900	31,740	0.50	C	3,170	1,537	1,320	0.48	C	1.00%	62,900	33,359	0.53	C	3,170	1,615	1,387	0.51	C
3900	110011	110011	State	55	2.06	US 27/SR 25	JOHNS LAKE ROAD	HARDWOOD MARSH ROAD	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	36,900	0.59	C	3,170	1,787	1,534	0.56	C	1.00%	62,900	38,782	0.62	C	3,170	1,878	1,612	0.59	C
3910	110311	110311	State	55	0.95	US 27/SR 25	HARDWOOD MARSH ROAD	LAKE LOUISA ROAD	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	24,200	0.38	C	3,170	1,247	1,378	0.43	C	1.00%	62,900	25,434	0.40	C	3,170	1,311	1,448	0.46	C
3920	110007	110007	State	65	6.51	US 27/SR 25	LAKE LOUISA ROAD	BOGGY MARSH RD	6	6	RURAL	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	48,090	21,400	0.44	C	2,520	1,094	939	0.43	C	1.00%	48,090	22,492	0.47	C	2,520	1,150	987	0.46	C
3927	110007	110007	ADJACENT	65	2.01	US 27/SR 25	BOGGY MARSH RD	CR 474	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	21,400	0.34	C	3,170	1,094	939	0.35	C	1.00%	62,900	22,492	0.36	C	3,170	1,150	987	0.36	C
3930	1		County	55	1.72	US 27/SR 25	CR 474	US 192	6	6	URBAN	DIVIDED	STATE	UNINCORPORATED LAKE COUNTY	D	62,900	55,383	0.88	C	3,170	1,945	1,878	0.61	C	1.00%	62,900	58,208	0.93	C	3,170	2,045	1,974	0.65	C
3940	115096	115096	State	35	0.75	US 441/ SR 500	US 27/US441 SPLIT	LEE STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	34,020	29,150	0.86	D	1,710	1,411	1,212	0.83	D	1.00%	34,020	30,637	0.90	D	1,710	1,483	1,274	0.87	D
3950	110492	110492	State	35	0.42	US 441/ SR 500	LEE STREET	N CANAL STREET	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	32,400	31,850	0.98	D	1,630	1,542	1,324	0.95	D	1.00%	32,400	33,475	1.03	E	1,630	1,621	1,392	0.99	D
3960	115093	115093	State	45	1.06	US 441/ SR 500	N CANAL STREET	E DIXIE AVENUE	4	4	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	41,790	33,850	0.81	C	2,100	1,386	1,158	0.66	C	1.00%	41,790	35,577	0.85	C	2,100	1,457	1,217	0.69	C
3970	115092	115092	State	45	0.25	US 441/ SR 500	E DIXIE AVENUE	E MAIN STREET	6	6	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	59,900	44,550	0.74	C	3,020	2,157	1,852	0.71	C	1.00%	59,900	46,822	0.78	C	3,020	2,267	1,946	0.75	C
3980	110177	110177	State	45	1.41	US 441/ SR 500	E MAIN STREET	CR 44	6	6	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	59,900	34,100	0.57	C	3,020	1,654	1,415	0.55	C	1.00%	59,900	35,839	0.60	C	3,020	1,738	1,487	0.58	C
3990	110177	110177	ADJACENT	45	3.07	US 441/ SR 500	CR 44	RADIO ROAD	6	6	URBAN	DIVIDED	STATE	CITY OF LEESBURG	D	62,900	34,100	0.54	C	3,170	1,654	1,415	0.52	C	1.00%	62,900	35,839	0.57	C	3,170	1,738	1,487	0.55	C

C3C & C3R

Motor Vehicle Arterial Generalized Service Volume Tables

(C3C-Suburban Commercial)

Peak Hour Directional

	B	C	D	E
1 Lane	*	760	1,070	**
2 Lane	*	1,520	1,810	**
3 Lane	*	2,360	2,680	**
4 Lane	*	3,170	3,180	**

Peak Hour Two-Way

	B	C	D	E
2 Lane	*	1,380	1,950	**
4 Lane	*	2,760	3,290	**
6 Lane	*	4,290	4,870	**
8 Lane	*	5,760	5,780	**

AADT

	B	C	D	E
2 Lane	*	15,300	21,700	**
4 Lane	*	30,700	36,600	**
6 Lane	*	47,700	54,100	**
8 Lane	*	64,000	64,200	**

(C3R-Suburban Residential)

	B	C	D	E
1 Lane	*	970	1,110	**
2 Lane	*	1,700	1,850	**
3 Lane	*	2,620	2,730	**

	B	C	D	E
2 Lane	*	1,760	2,020	**
4 Lane	*	3,090	3,360	**
6 Lane	*	4,760	4,960	**

	B	C	D	E
2 Lane	*	19,600	22,400	**
4 Lane	*	34,300	37,300	**
6 Lane	*	52,900	55,100	**

Adjustment Factors

The peak hour directional service volumes should be adjust by multiplying by 1.2 for one-way facilities
The AADT service volumes should be adjusted by multiplying 0.6 for one way facilities 2 Lane Divided Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05
2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80

Exclusive right turn lane(s): Multiply by 1.05
Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95
Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75
Non-State Signalized Roadway: Multiply by 0.90

This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.
* Cannot be achieved using table input value defaults.
** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.

C1 & C2

Motor Vehicle Highway Generalized Service Volume Tables

(C1-Natural & C2-Rural)

Peak Hour Directional

	B	C	D	E
1 Lane	240	430	730	1,490
2 Lane	1,670	2,390	2,910	3,340
3 Lane	2,510	3,570	4,370	5,010

Peak Hour Two-Way

	B	C	D	E
2 Lane	440	780	1,330	2,710
4 Lane	3,040	4,350	5,290	6,070
6 Lane	4,560	6,490	7,950	9,110

AADT

	B	C	D	E
2 Lane	4,600	8,200	14,000	28,500
4 Lane	32,000	45,800	55,700	63,900
6 Lane	48,000	68,300	83,700	95,900

Adjustment Factors

2 Lane Divided Roadway with Exclusive Left Turn Adjustment: Multiply by 1.05
Multilane Undivided Highway with Exclusive Left Turn Adjustment: Multiply by 0.95
Multilane Undivided Highway without Exclusive Left Turn Adjustment:: Multiply by 0.75

This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.

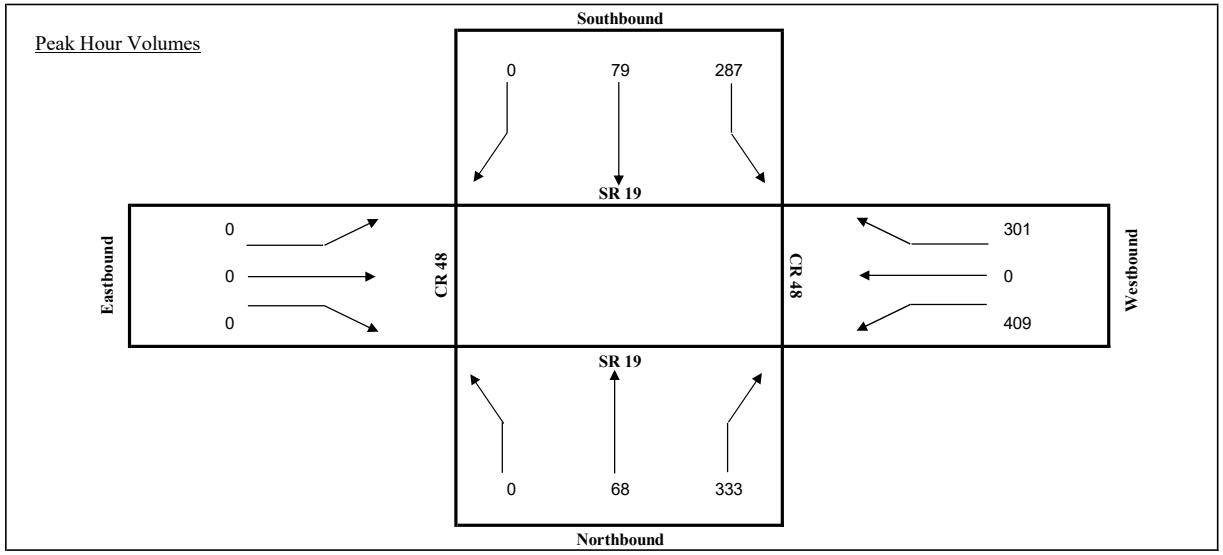
Appendix D
Turning Movement Counts and Seasonal Factor Data

TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): CR 48
Date: 7/19/2023

		SR 19			SR 19			CR 48			CR 48			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	0	19	82	68	13	0	0	0	0	84	0	65	331
4:15 PM	4:30 PM	0	24	91	71	13	0	0	0	0	83	0	79	361
4:30 PM	4:45 PM	0	18	72	68	17	0	0	0	0	93	0	76	344
4:45 PM	5:00 PM	0	23	90	85	15	0	0	0	0	92	0	61	366
5:00 PM	5:15 PM	0	18	71	73	23	0	0	0	0	88	0	73	346
5:15 PM	5:30 PM	0	15	80	71	19	0	0	0	0	114	0	80	379
5:30 PM	5:45 PM	0	12	92	58	22	0	0	0	0	115	0	87	386
5:45 PM	6:00 PM	0	16	70	54	14	0	0	0	0	94	0	72	320
Total for:	4:00 PM	5:00 PM	0	84	335	292	58	0	0	0	0	352	0	281	1402
Total for:	5:00 PM	6:00 PM	0	61	313	256	78	0	0	0	0	411	0	312	1431
Tota Peak Hour:	4:45 PM	5:45 PM	0	68	333	287	79	0	0	0	0	409	0	301	1477
Overall PHF:	0.96														

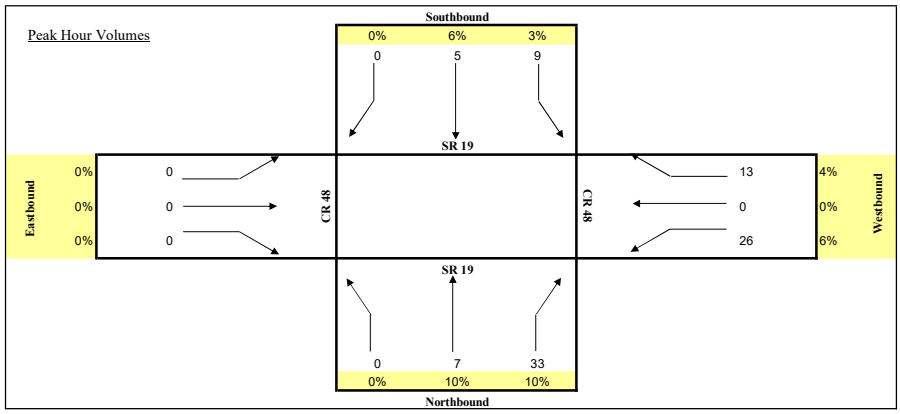


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): CR 48
Date: 7/19/2023

		SR 19 NB			SR 19 SB			CR 48 EB			CR 48 WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
4:00 PM	4:15 PM	0	3	10	5	0	0	0	0	0	4	0	6	28
4:15 PM	4:30 PM	0	4	11	1	3	0	0	0	0	8	0	2	29
4:30 PM	4:45 PM	0	0	8	2	1	0	0	0	0	7	0	4	22
4:45 PM	5:00 PM	0	0	4	1	1	0	0	0	0	7	0	1	14
5:00 PM	5:15 PM	0	1	7	2	2	0	0	0	0	6	0	0	18
5:15 PM	5:30 PM	0	0	7	2	0	0	0	0	0	6	0	0	15
5:30 PM	5:45 PM	0	0	2	0	0	0	0	0	0	2	0	1	5
5:45 PM	6:00 PM	0	2	4	2	1	0	0	0	0	5	0	1	15
Total for:	4:00 PM	5:00 PM	0	7	33	9	5	0	0	0	0	26	0	13	93
Total for:	5:00 PM	6:00 PM	0	3	20	6	3	0	0	0	0	19	0	2	53
Tota Peak Hour:	4:00 PM	5:00 PM	0	7	33	9	5	0	0	0	0	26	0	13	93
Overall PHF:	0.80														

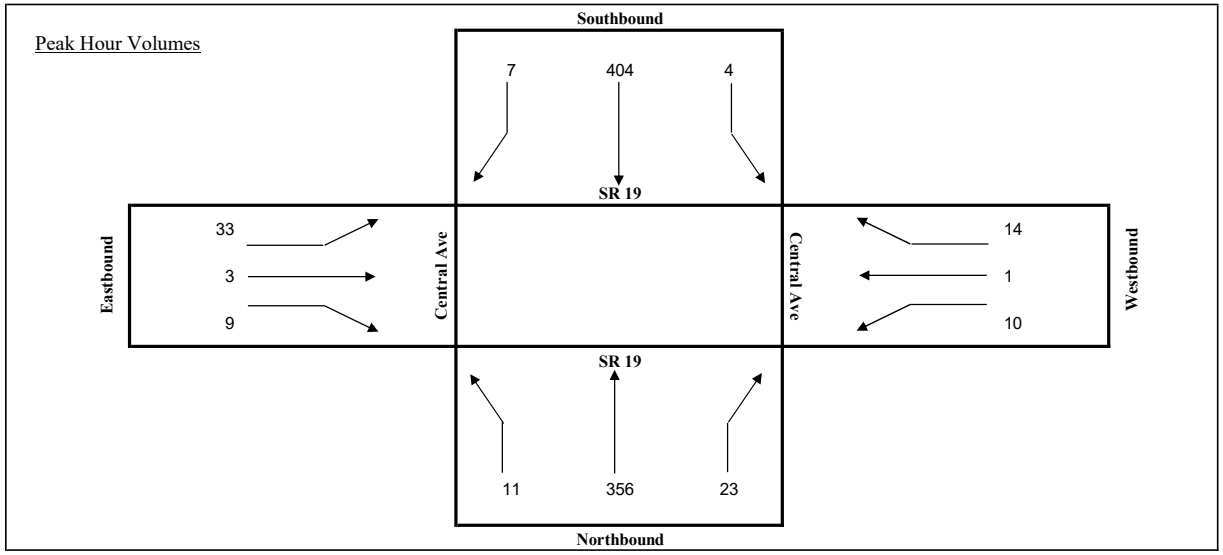


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): Central Ave
Date: 7/19/2023

			SR 19 NB			SR 19 SB			Central Ave EB			Central Ave WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	7	76	6	1	88	3	5	0	4	3	1	3	197
7:15 AM	7:30 AM	3	92	4	1	101	0	15	1	1	1	0	2	221
7:30 AM	7:45 AM	1	96	4	1	106	2	9	0	1	2	0	4	226
7:45 AM	8:00 AM	5	85	4	2	93	2	4	1	4	4	0	3	207
8:00 AM	8:15 AM	2	83	11	0	104	3	5	1	3	3	1	5	221
8:15 AM	8:30 AM	8	70	1	1	91	5	7	2	0	0	0	4	189
8:30 AM	8:45 AM	3	96	5	1	101	5	5	2	6	2	0	1	227
8:45 AM	9:00 AM	3	77	10	4	68	2	13	0	1	2	0	4	184
Total for:	7:00 AM	8:00 AM	16	349	18	5	388	7	33	2	10	10	1	12	851
Total for:	8:00 AM	9:00 AM	16	326	27	6	364	15	30	5	10	7	1	14	821
Tota Peak Hour:	7:15 AM	8:15 AM	11	356	23	4	404	7	33	3	9	10	1	14	875
Overall PHF:	0.97														

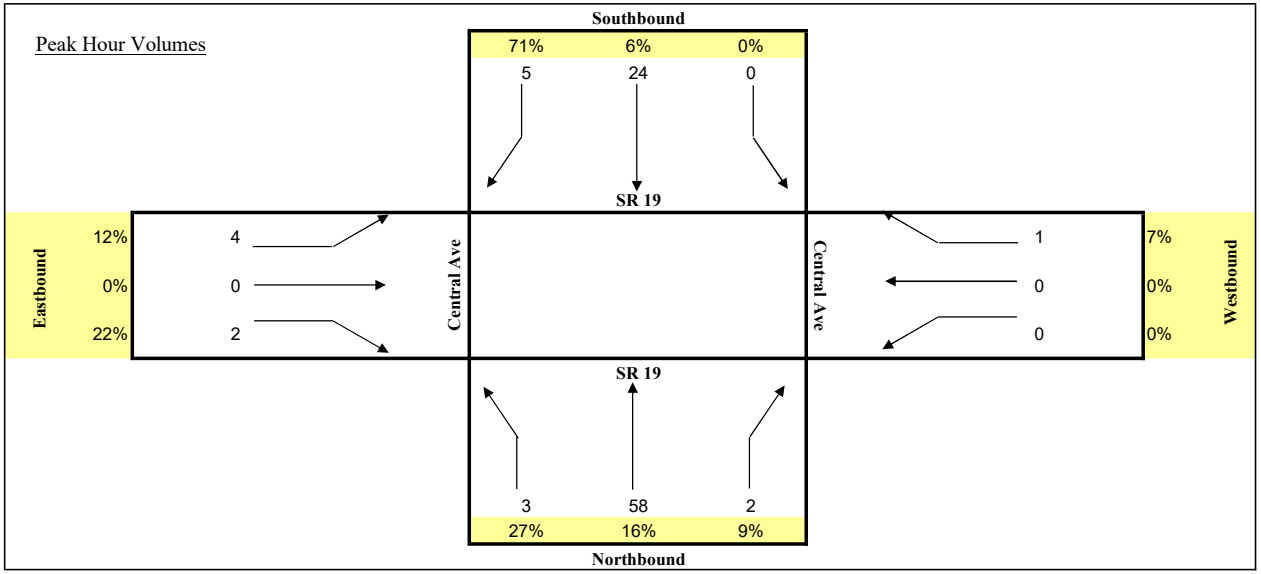


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): Central Ave
Date: 7/19/2023

		SR 19			SR 19			Central Ave			Central Ave			
		NB			SB			EB			WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
7:00 AM	7:15 AM	1	13	0	0	10	0	1	0	0	0	0	0	25
7:15 AM	7:30 AM	1	15	1	1	13	0	1	0	0	0	0	0	32
7:30 AM	7:45 AM	0	9	0	0	7	0	0	0	0	0	0	2	18
7:45 AM	8:00 AM	1	12	1	0	2	0	0	0	0	1	0	0	17
8:00 AM	8:15 AM	0	14	1	0	5	0	0	0	0	0	0	1	21
8:15 AM	8:30 AM	2	7	1	0	8	1	2	0	0	0	0	0	21
8:30 AM	8:45 AM	1	19	0	0	6	2	0	0	2	0	0	0	30
8:45 AM	9:00 AM	0	18	0	0	5	2	2	0	0	0	0	0	27
Total for:	7:00 AM	8:00 AM	3	49	2	1	32	0	2	0	0	1	0	2	92
Total for:	8:00 AM	9:00 AM	3	58	2	0	24	5	4	0	2	0	0	1	99
Tota Peak Hour:	8:00 AM	9:00 AM	3	58	2	0	24	5	4	0	2	0	0	1	99
Overall PHF:	0.83														

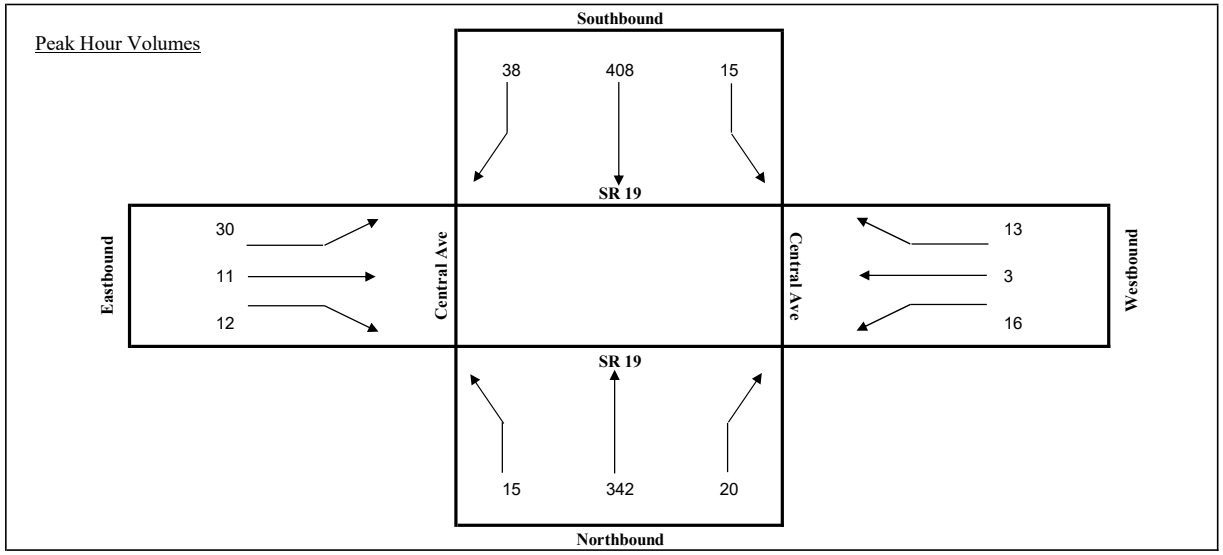


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): Central Ave
Date: 7/19/2023

			SR 19 NB			SR 19 SB			Central Ave EB			Central Ave WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	2	88	5	3	81	10	7	1	2	1	0	4	204
4:15 PM	4:30 PM	2	98	3	1	79	9	12	0	4	1	3	3	215
4:30 PM	4:45 PM	2	75	7	6	89	10	11	3	4	4	1	1	213
4:45 PM	5:00 PM	2	102	7	4	90	6	6	1	3	1	0	2	224
5:00 PM	5:15 PM	5	66	5	0	96	10	12	5	5	5	0	6	215
5:15 PM	5:30 PM	4	84	4	3	113	8	5	1	1	6	3	2	234
5:30 PM	5:45 PM	4	90	4	8	109	14	7	4	3	4	0	3	250
5:45 PM	6:00 PM	1	71	6	1	86	9	7	1	1	0	2	3	188
Total for:	4:00 PM	5:00 PM	8	363	22	14	339	35	36	5	13	7	4	10	856
Total for:	5:00 PM	6:00 PM	14	311	19	12	404	41	31	11	10	15	5	14	887
Tota Peak Hour:	4:45 PM	5:45 PM	15	342	20	15	408	38	30	11	12	16	3	13	923
Overall PHF:	0.92														

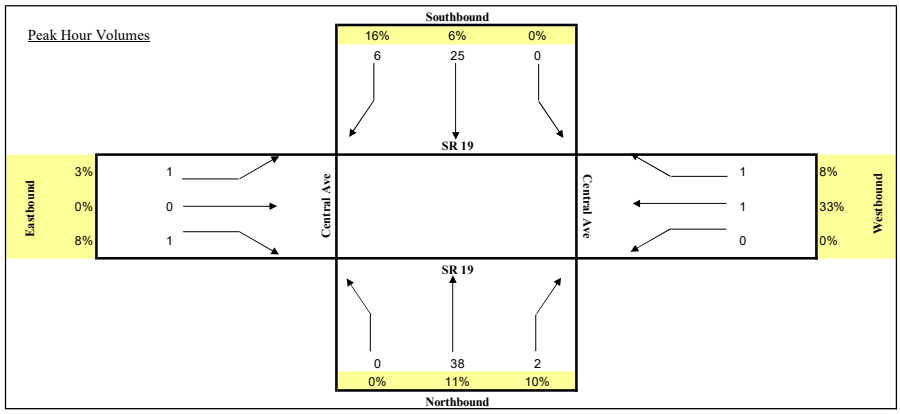


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): Central Ave
Date: 7/19/2023

		SR 19 NB			SR 19 SB			Central Ave EB			Central Ave WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
4:00 PM	4:15 PM	0	13	2	0	2	2	0	0	0	0	0	0	19
4:15 PM	4:30 PM	0	14	0	0	9	2	0	0	0	0	1	1	27
4:30 PM	4:45 PM	0	8	0	0	8	0	0	0	0	0	0	0	16
4:45 PM	5:00 PM	0	3	0	0	6	2	1	0	1	0	0	0	13
5:00 PM	5:15 PM	1	7	0	0	8	0	1	0	0	0	0	0	17
5:15 PM	5:30 PM	0	7	0	0	6	0	0	0	1	0	0	0	14
5:30 PM	5:45 PM	1	2	0	1	0	1	0	0	1	1	0	0	7
5:45 PM	6:00 PM	0	6	0	0	6	0	0	0	0	0	1	0	13
Total for:	4:00 PM	5:00 PM	0	38	2	0	25	6	1	0	1	0	1	1	75
Total for:	5:00 PM	6:00 PM	2	22	0	1	20	1	1	0	2	1	1	0	51
Tota Peak Hour:	4:00 PM	5:00 PM	0	38	2	0	25	6	1	0	1	0	1	1	75
Overall PHF:	0.69														

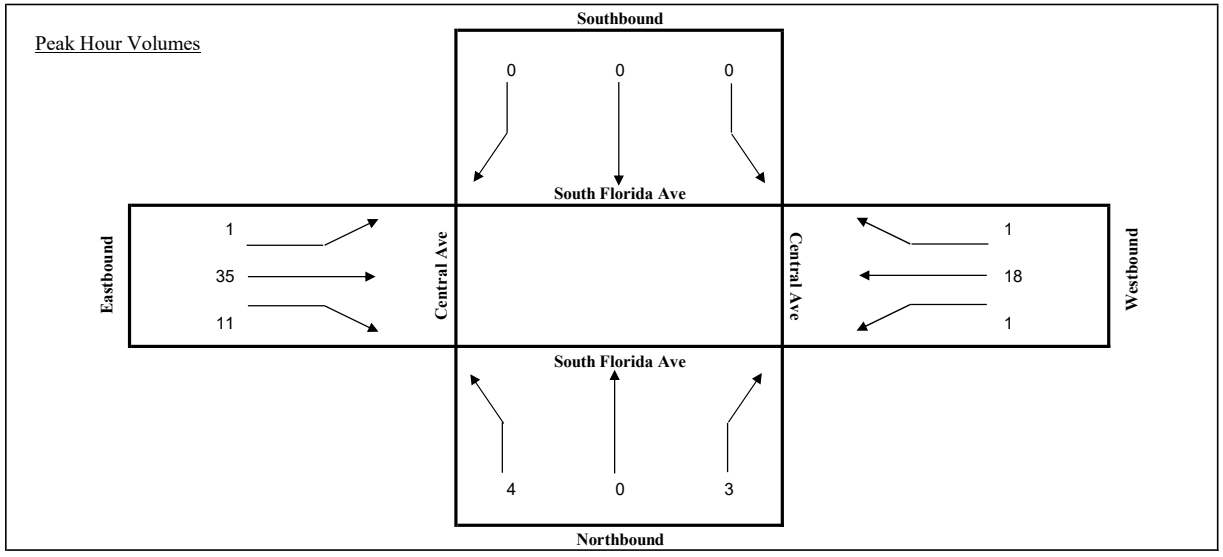


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): South Florida Ave
Intersection (E/W): Central Ave
Date: 7/19/2023

			South Florida Ave			South Florida Ave			Central Ave			Central Ave			
			NB			SB			EB			WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM		0	0	0	0	0	0	0	6	4	0	8	1	19
7:15 AM	7:30 AM		2	0	1	0	0	0	1	13	2	0	4	0	23
7:30 AM	7:45 AM		2	0	1	0	0	0	0	9	4	1	1	0	18
7:45 AM	8:00 AM		0	0	1	0	0	0	0	7	1	0	5	0	14
8:00 AM	8:15 AM		0	0	2	0	0	0	0	5	0	2	5	0	14
8:15 AM	8:30 AM		0	0	3	0	0	0	0	8	2	1	3	2	19
8:30 AM	8:45 AM		0	0	1	1	0	1	0	3	1	3	7	0	17
8:45 AM	9:00 AM		1	0	2	0	0	0	0	7	2	1	6	1	20
Total for:	7:00 AM	8:00 AM	4	0	3	0	0	0	1	35	11	1	18	1	74
Total for:	8:00 AM	9:00 AM	1	0	8	1	0	1	0	23	5	7	21	3	70
Tota Peak Hour:	7:00 AM	8:00 AM	4	0	3	0	0	0	1	35	11	1	18	1	74
Overall PHF:	0.80														

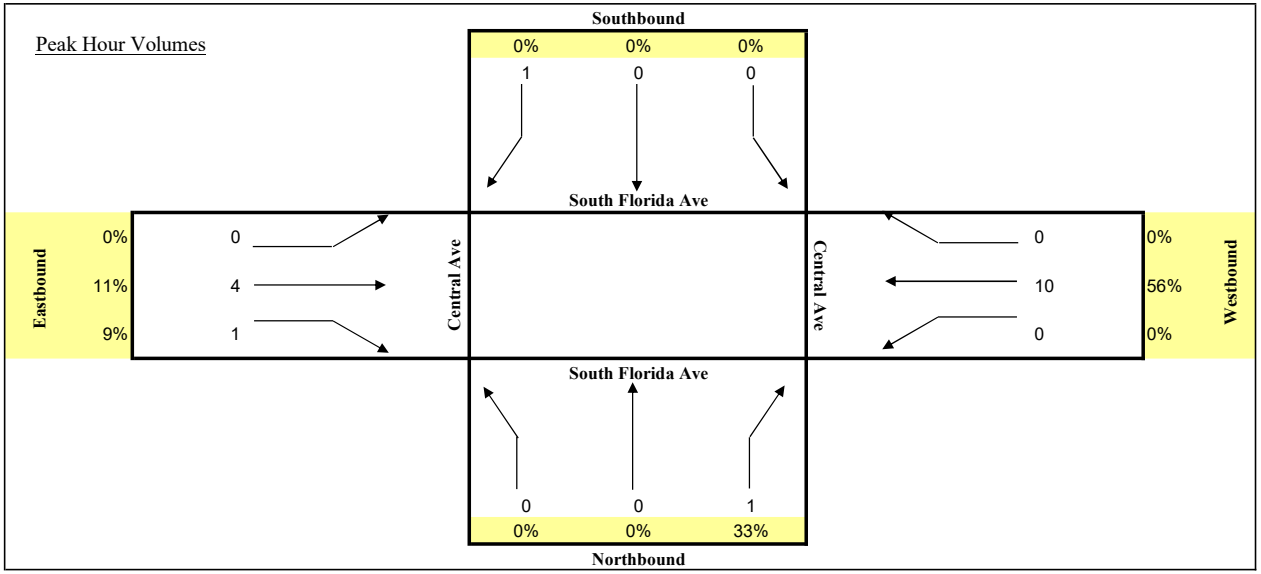


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): South Florida Ave
Intersection (E/W): Central Ave
Date: 7/19/2023

		South Florida Ave			South Florida Ave			Central Ave			Central Ave			
		NB			SB			EB			WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
7:00 AM	7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
7:15 AM	7:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
7:30 AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	8:30 AM	0	0	1	0	0	0	0	2	0	0	2	0	5
8:30 AM	8:45 AM	0	0	0	0	0	1	0	1	0	0	3	0	5
8:45 AM	9:00 AM	0	0	0	0	0	0	0	1	1	0	5	0	7
Total for:	7:00 AM	8:00 AM	0	0	0	0	0	0	0	2	0	0	3	0	5
Total for:	8:00 AM	9:00 AM	0	0	1	0	0	1	0	4	1	0	10	0	17
Tota Peak Hour:	8:00 AM	9:00 AM	0	0	1	0	0	1	0	4	1	0	10	0	17
Overall PHF:	0.61														

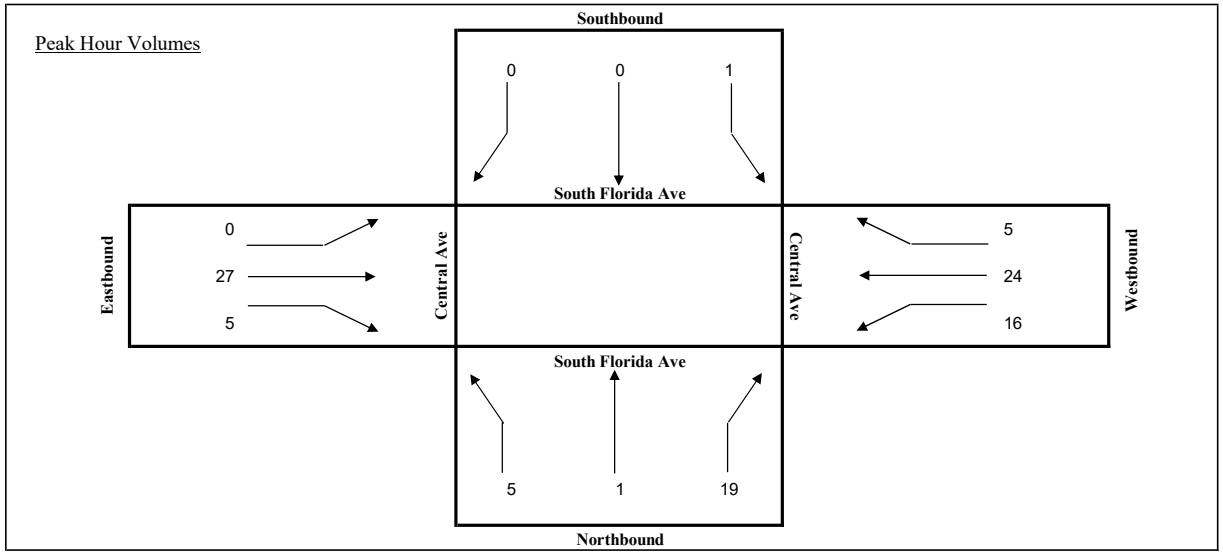


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): South Florida Ave
Intersection (E/W): Central Ave
Date: 7/19/2023

		South Florida Ave			South Florida Ave			Central Ave			Central Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	3	0	3	0	0	0	0	3	0	4	5	0	18
4:15 PM	4:30 PM	3	0	5	0	0	0	0	6	2	4	8	0	28
4:30 PM	4:45 PM	2	0	6	0	0	0	0	2	3	3	7	0	23
4:45 PM	5:00 PM	1	0	4	0	0	0	0	5	1	1	4	0	16
5:00 PM	5:15 PM	1	1	7	0	0	0	0	10	2	5	6	0	32
5:15 PM	5:30 PM	1	0	4	0	0	0	0	5	1	0	4	4	19
5:30 PM	5:45 PM	1	0	4	1	0	0	0	6	2	5	9	0	28
5:45 PM	6:00 PM	2	0	4	0	0	0	0	6	0	6	5	1	24
Total for:	4:00 PM	5:00 PM	9	0	18	0	0	0	0	16	6	12	24	0	85
Total for:	5:00 PM	6:00 PM	5	1	19	1	0	0	0	27	5	16	24	5	103
Tota Peak Hour:	5:00 PM	6:00 PM	5	1	19	1	0	0	0	27	5	16	24	5	103
Overall PHF:	0.80														

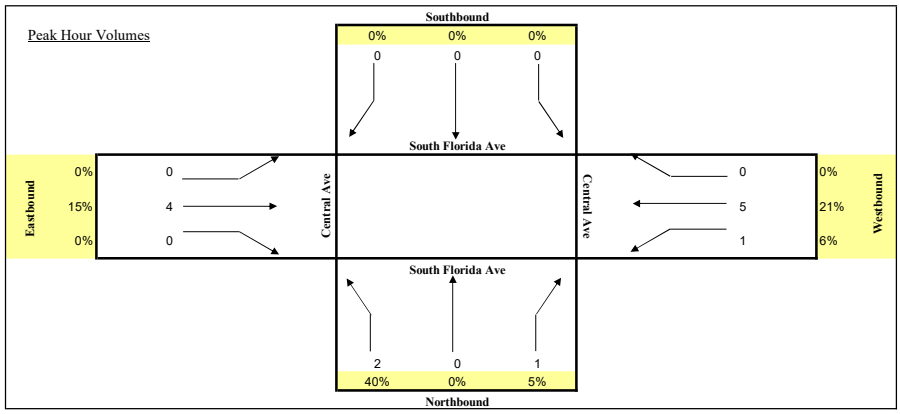


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): South Florida Ave
Intersection (E/W): Central Ave
Date: 7/19/2023

		South Florida Ave			South Florida Ave			Central Ave			Central Ave			
		NB			SB			EB			WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
4:00 PM	4:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
4:15 PM	4:30 PM	1	0	0	0	0	0	0	0	0	1	2	0	4
4:30 PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	5:00 PM	1	0	0	0	0	0	0	2	0	1	1	0	5
5:00 PM	5:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	2
5:15 PM	5:30 PM	1	0	0	0	0	0	0	2	0	0	1	0	4
5:30 PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:45 PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for:	4:00 PM	5:00 PM	2	0	0	0	0	0	0	2	0	3	4	0	11
Total for:	5:00 PM	6:00 PM	1	0	1	0	0	0	0	2	0	0	4	0	8
Tota Peak Hour:	4:45 PM	5:45 PM	2	0	1	0	0	0	0	4	0	1	5	0	13
Overall PHF:	0.65														

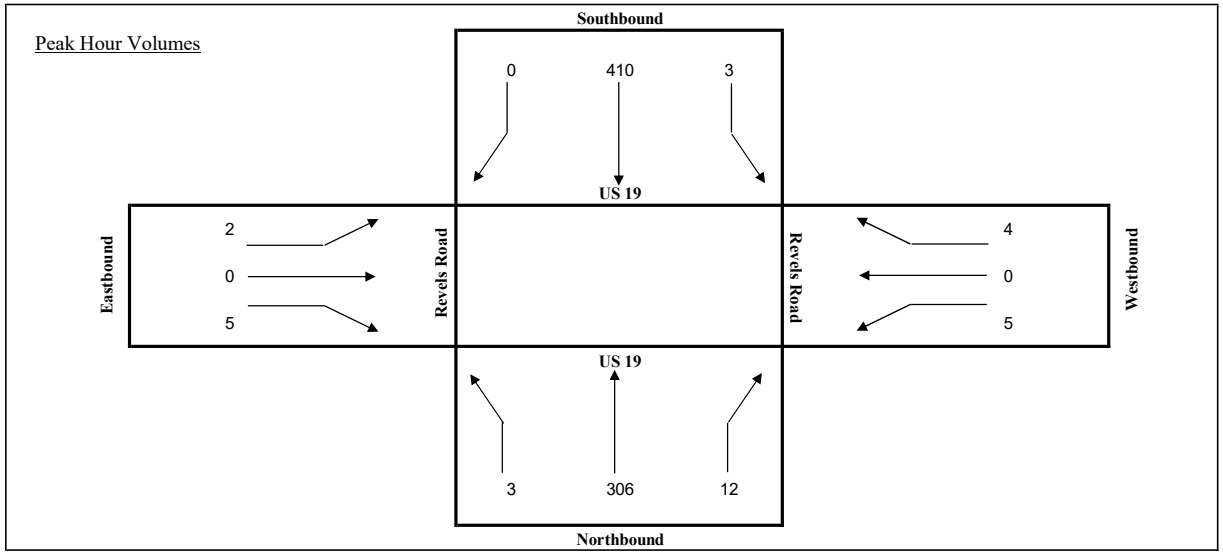


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): US 19
Intersection (E/W): Revels Road
Date: 7/19/2023

			US 19 NB			US 19 SB			Revels Road EB			Revels Road WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM		3	80	1	0	74	2	0	0	0	3	0	2	165
7:15 AM	7:30 AM		2	60	1	1	94	1	1	0	0	0	1	0	161
7:30 AM	7:45 AM		1	72	0	1	107	0	0	0	2	1	0	1	185
7:45 AM	8:00 AM		1	97	5	0	100	0	0	0	2	2	0	1	208
8:00 AM	8:15 AM		0	71	2	2	110	0	2	0	0	2	0	2	191
8:15 AM	8:30 AM		1	66	5	0	93	0	0	0	1	0	0	0	166
8:30 AM	8:45 AM		0	58	1	0	60	1	1	0	2	4	0	2	129
8:45 AM	9:00 AM		0	57	3	1	63	2	0	0	1	1	0	2	130
Total for:	7:00 AM	8:00 AM	7	309	7	2	375	3	1	0	4	6	1	4	719
Total for:	8:00 AM	9:00 AM	1	252	11	3	326	3	3	0	4	7	0	6	616
Tota Peak Hour:	7:30 AM	8:30 AM	3	306	12	3	410	0	2	0	5	5	0	4	750
Overall PHF:	0.90														

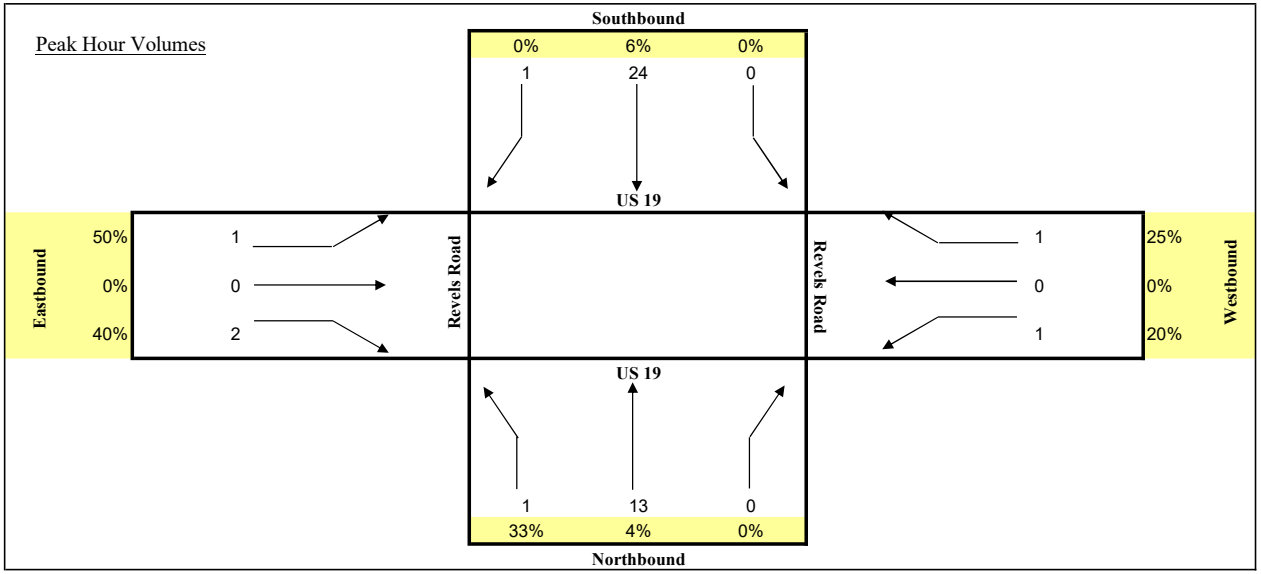


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): US 19
Intersection (E/W): Revels Road
Date: 7/19/2023

			US 19 NB			US 19 SB			Revels Road EB			Revels Road WB			
	Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
	7:00 AM	7:15 AM	1	3	0	0	5	0	0	0	0	0	0	0	9
	7:15 AM	7:30 AM	0	1	0	0	6	0	0	0	0	0	0	0	7
	7:30 AM	7:45 AM	0	2	0	0	5	0	0	0	0	0	0	0	7
	7:45 AM	8:00 AM	1	6	0	0	3	0	0	0	0	0	0	1	11
	8:00 AM	8:15 AM	0	1	0	0	8	0	0	0	0	0	0	0	9
	8:15 AM	8:30 AM	0	3	0	0	6	0	0	0	1	0	0	0	10
	8:30 AM	8:45 AM	0	3	0	0	7	1	1	0	1	1	0	0	14
	8:45 AM	9:00 AM	0	1	0	0	3	1	0	0	0	0	0	0	5
Total for:	7:00 AM	8:00 AM	2	12	0	0	19	0	0	0	0	0	0	1	34
Total for:	8:00 AM	9:00 AM	0	8	0	0	24	2	1	0	2	1	0	0	38
Tota Peak Hour:	7:45 AM	8:45 AM	1	13	0	0	24	1	1	0	2	1	0	1	44
Overall PHF:	0.79														

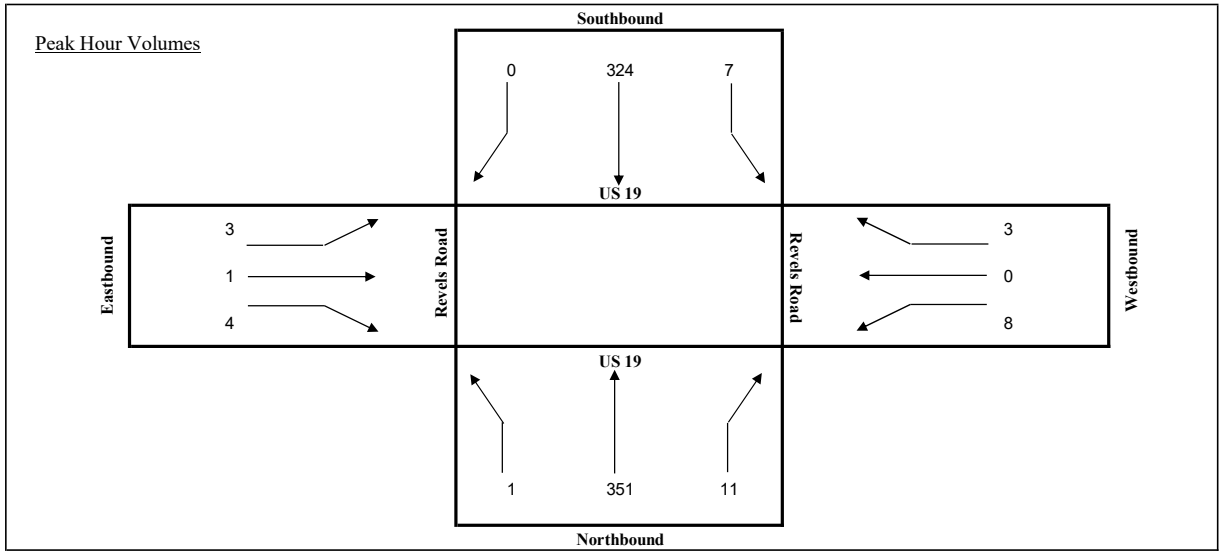


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): US 19
Intersection (E/W): Revels Road
Date: 7/19/2023

			US 19 NB			US 19 SB			Revels Road EB			Revels Road WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM		2	89	6	5	61	3	1	0	0	1	1	2	171
4:15 PM	4:30 PM		0	76	3	0	74	1	1	0	1	3	0	1	160
4:30 PM	4:45 PM		1	78	1	2	88	0	0	0	1	2	0	0	173
4:45 PM	5:00 PM		0	93	6	1	91	0	0	0	0	2	0	2	195
5:00 PM	5:15 PM		0	88	3	2	70	0	1	0	2	2	0	0	168
5:15 PM	5:30 PM		0	92	1	2	75	0	2	1	1	2	0	1	177
5:30 PM	5:45 PM		0	92	2	1	70	0	0	0	1	0	0	0	166
5:45 PM	6:00 PM		0	86	3	0	72	0	1	0	0	2	0	1	165
Total for:	4:00 PM	5:00 PM	3	336	16	8	314	4	2	0	2	8	1	5	699
Total for:	5:00 PM	6:00 PM	0	358	9	5	287	0	4	1	4	6	0	2	676
Tota Peak Hour:	4:30 PM	5:30 PM	1	351	11	7	324	0	3	1	4	8	0	3	713
Overall PHF:	0.91														

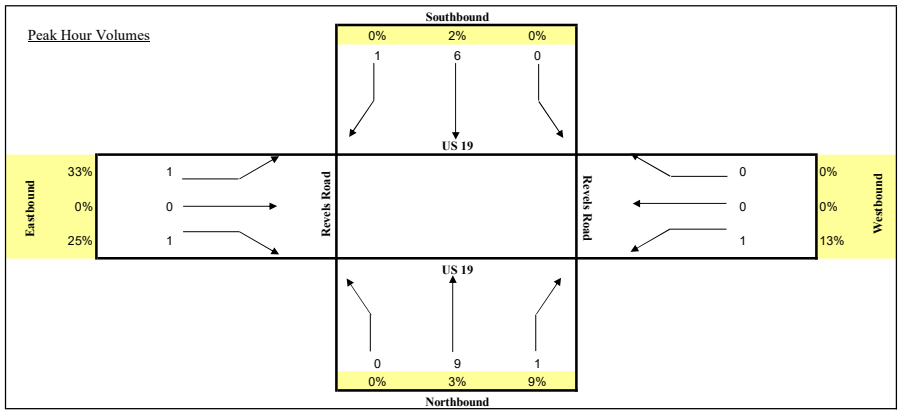


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): US 19
Intersection (E/W): Revels Road
Date: 7/19/2023

		US 19 NB			US 19 SB			Revels Road EB			Revels Road WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
4:00 PM	4:15 PM	0	1	0	0	1	1	0	0	0	0	0	0	3
4:15 PM	4:30 PM	0	4	1	0	2	0	1	0	0	0	0	0	8
4:30 PM	4:45 PM	0	1	0	0	0	0	0	0	1	1	0	0	3
4:45 PM	5:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	6
5:00 PM	5:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
5:15 PM	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
5:30 PM	5:45 PM	0	5	0	0	2	0	0	0	0	0	0	0	7
5:45 PM	6:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total for:	4:00 PM	5:00 PM	0	9	1	0	6	1	1	0	1	1	0	0	20
Total for:	5:00 PM	6:00 PM	0	9	0	0	4	0	0	0	0	0	0	0	13
Tota Peak Hour:	4:00 PM	5:00 PM	0	9	1	0	6	1	1	0	1	1	0	0	20
Overall PHF:	0.63														

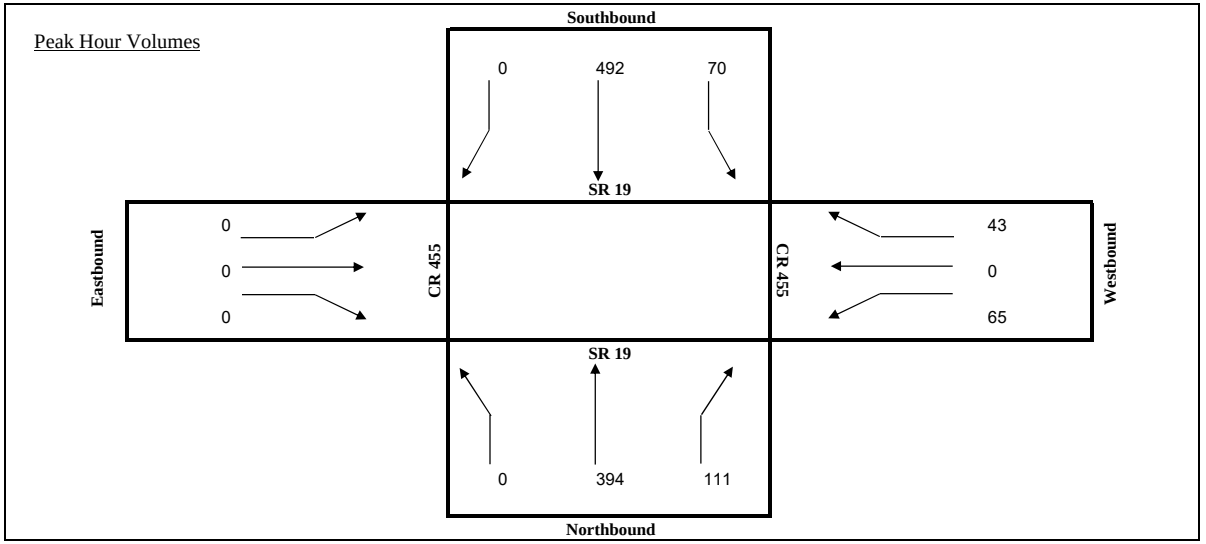


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): CR 455
Date: 1/24/2023

			SR 19 NB			SR 19 SB			CR 455 EB			CR 455 WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	92	15	11	131	0	0	0	0	7	0	4	260
7:15 AM	7:30 AM	0	93	23	16	144	0	0	0	0	9	0	6	291
7:30 AM	7:45 AM	0	111	27	21	105	0	0	0	0	13	0	11	288
7:45 AM	8:00 AM	0	91	26	20	124	0	0	0	0	17	0	12	290
8:00 AM	8:15 AM	0	99	35	13	119	0	0	0	0	26	0	14	306
8:15 AM	8:30 AM	0	93	29	18	98	0	0	0	0	22	0	11	271
8:30 AM	8:45 AM	0	74	27	11	94	0	0	0	0	22	0	12	240
8:45 AM	9:00 AM	0	81	22	9	94	0	0	0	0	17	0	9	232
Total for:	7:00 AM	8:00 AM	0	387	91	68	504	0	0	0	0	46	0	33	1129
Total for:	8:00 AM	9:00 AM	0	347	113	51	405	0	0	0	0	87	0	46	1049
Tota Peak Hour:	7:15 AM	8:15 AM	0	394	111	70	492	0	0	0	0	65	0	43	1175
Overall PHF:	0.96														

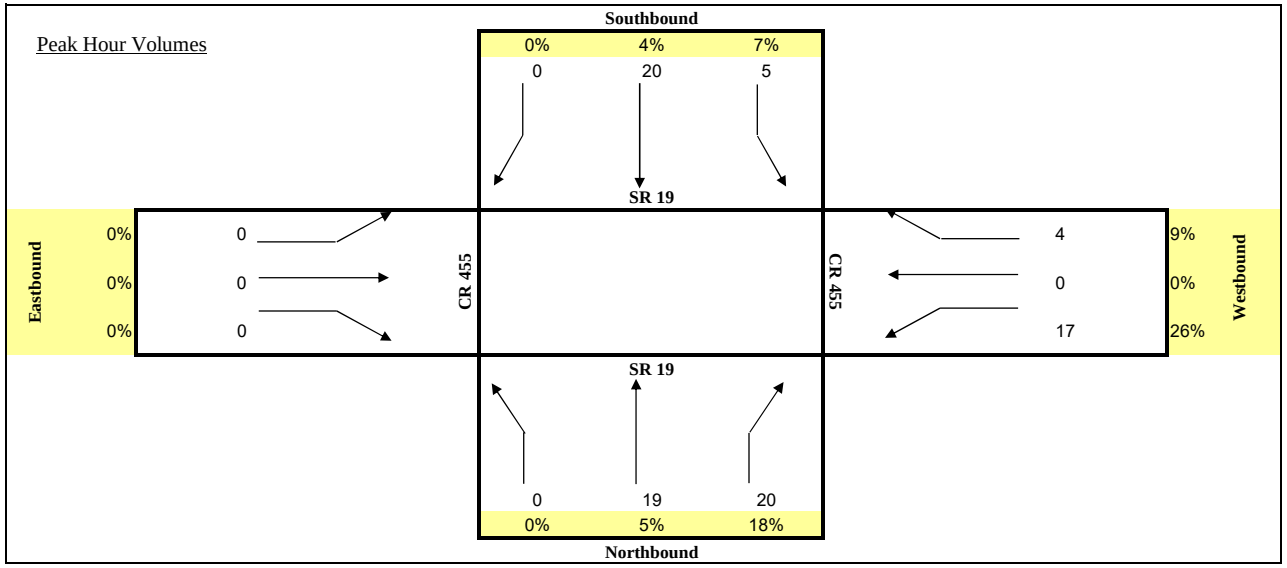


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): CR 455
Date: 1/24/2023

		SR 19 NB			SR 19 SB			CR 455 EB			CR 455 WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
7:00 AM	7:15 AM	0	3	3	0	7	0	0	0	0	2	0	1	16
7:15 AM	7:30 AM	0	6	1	1	8	0	0	0	0	2	0	0	18
7:30 AM	7:45 AM	0	7	7	3	5	0	0	0	0	3	0	2	27
7:45 AM	8:00 AM	0	3	2	1	3	0	0	0	0	1	0	0	10
8:00 AM	8:15 AM	0	6	5	0	5	0	0	0	0	5	0	1	22
8:15 AM	8:30 AM	0	3	6	3	6	0	0	0	0	3	0	2	23
8:30 AM	8:45 AM	0	3	6	1	5	0	0	0	0	6	0	0	21
8:45 AM	9:00 AM	0	7	3	1	4	0	0	0	0	3	0	1	19
Total for:	7:00 AM	8:00 AM	0	19	13	5	23	0	0	0	0	8	0	3	71
Total for:	8:00 AM	9:00 AM	0	19	20	5	20	0	0	0	0	17	0	4	85
Tota Peak Hour:	8:00 AM	9:00 AM	0	19	20	5	20	0	0	0	0	17	0	4	85
Overall PHF:	0.92														

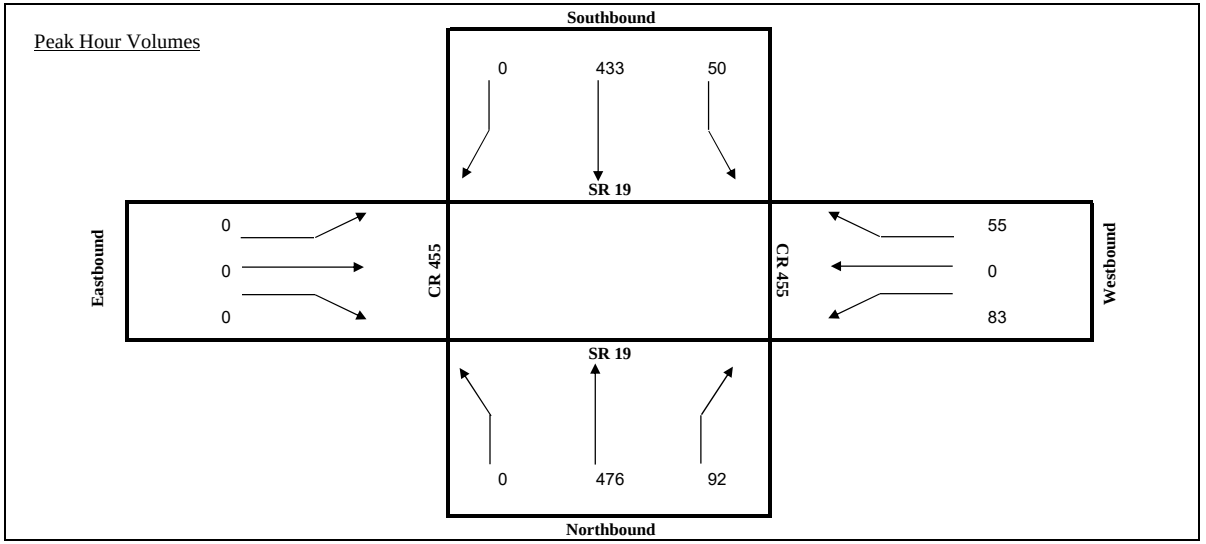


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): CR 455
Date: 1/24/2023

			SR 19 NB			SR 19 SB			CR 455 EB			CR 455 WB			
	Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
	4:00 PM	4:15 PM	0	97	20	6	117	0	0	0	0	18	0	14	272
	4:15 PM	4:30 PM	0	111	22	9	109	0	0	0	0	22	0	11	284
	4:30 PM	4:45 PM	0	114	25	13	108	0	0	0	0	19	0	16	295
	4:45 PM	5:00 PM	0	118	22	9	108	0	0	0	0	25	0	13	295
	5:00 PM	5:15 PM	0	131	21	14	104	0	0	0	0	18	0	10	298
	5:15 PM	5:30 PM	0	113	24	14	113	0	0	0	0	21	0	16	301
	5:30 PM	5:45 PM	0	96	28	17	94	0	0	0	0	17	0	19	271
	5:45 PM	6:00 PM	0	87	21	10	102	0	0	0	0	21	0	12	253
Total for:	4:00 PM	5:00 PM	0	440	89	37	442	0	0	0	0	84	0	54	1146
Total for:	5:00 PM	6:00 PM	0	427	94	55	413	0	0	0	0	77	0	57	1123
Tota Peak Hour:	4:30 PM	5:30 PM	0	476	92	50	433	0	0	0	0	83	0	55	1189
Overall PHF:	0.99														

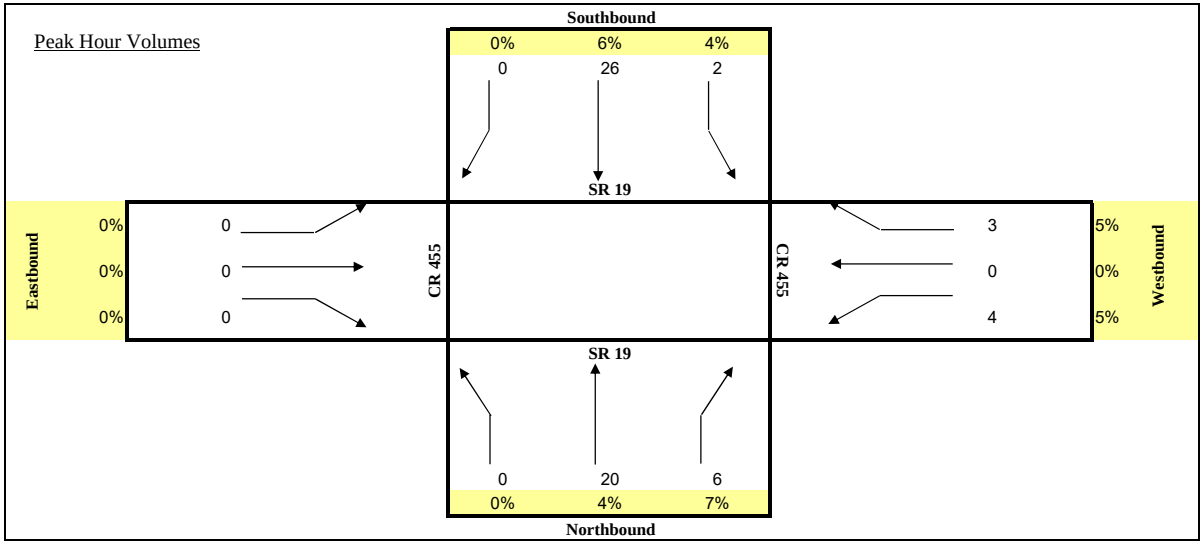


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): SR 19
Intersection (E/W): CR 455
Date: 1/24/2023

		SR 19 NB			SR 19 SB			CR 455 EB			CR 455 WB			
Start	End	R	T	L	R	T	L	R	T	L	R	T	L	TOTAL
4:00 PM	4:15 PM	0	6	3	0	7	0	0	0	0	1	0	1	18
4:15 PM	4:30 PM	0	5	0	1	7	0	0	0	0	1	0	1	15
4:30 PM	4:45 PM	0	7	2	1	4	0	0	0	0	0	0	0	14
4:45 PM	5:00 PM	0	2	1	0	8	0	0	0	0	2	0	1	14
5:00 PM	5:15 PM	0	4	3	1	2	0	0	0	0	0	0	0	10
5:15 PM	5:30 PM	0	3	1	0	7	0	0	0	0	1	0	0	12
5:30 PM	5:45 PM	0	0	4	1	1	0	0	0	0	0	0	2	8
5:45 PM	6:00 PM	0	0	1	0	5	0	0	0	0	1	0	1	8
Total for:	4:00 PM	5:00 PM	0	20	6	2	26	0	0	0	0	4	0	3	61
Total for:	5:00 PM	6:00 PM	0	7	9	2	15	0	0	0	0	2	0	3	38
Tota Peak Hour:	4:00 PM	5:00 PM	0	20	6	2	26	0	0	0	0	4	0	3	61
Overall PHF:	0.85														



2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1100 LAKE COUNTYWIDE

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	0.99	1.04
2	01/02/2022 - 01/08/2022	1.01	1.06
3	01/09/2022 - 01/15/2022	1.03	1.08
4	01/16/2022 - 01/22/2022	1.02	1.07
5	01/23/2022 - 01/29/2022	1.00	1.05
* 6	01/30/2022 - 02/05/2022	0.98	1.03
* 7	02/06/2022 - 02/12/2022	0.97	1.02
* 8	02/13/2022 - 02/19/2022	0.95	1.00
* 9	02/20/2022 - 02/26/2022	0.95	1.00
*10	02/27/2022 - 03/05/2022	0.94	0.99
*11	03/06/2022 - 03/12/2022	0.94	0.99
*12	03/13/2022 - 03/19/2022	0.93	0.98
*13	03/20/2022 - 03/26/2022	0.94	0.99
*14	03/27/2022 - 04/02/2022	0.95	1.00
*15	04/03/2022 - 04/09/2022	0.95	1.00
*16	04/10/2022 - 04/16/2022	0.96	1.01
*17	04/17/2022 - 04/23/2022	0.97	1.02
*18	04/24/2022 - 04/30/2022	0.98	1.03
19	05/01/2022 - 05/07/2022	0.99	1.04
20	05/08/2022 - 05/14/2022	0.99	1.04
21	05/15/2022 - 05/21/2022	1.00	1.05
22	05/22/2022 - 05/28/2022	1.01	1.06
23	05/29/2022 - 06/04/2022	1.02	1.07
24	06/05/2022 - 06/11/2022	1.03	1.08
25	06/12/2022 - 06/18/2022	1.04	1.09
26	06/19/2022 - 06/25/2022	1.05	1.11
27	06/26/2022 - 07/02/2022	1.05	1.11
28	07/03/2022 - 07/09/2022	1.06	1.12
29	07/10/2022 - 07/16/2022	1.06	1.12
30	07/17/2022 - 07/23/2022	1.06	1.12
31	07/24/2022 - 07/30/2022	1.05	1.11
32	07/31/2022 - 08/06/2022	1.05	1.11
33	08/07/2022 - 08/13/2022	1.04	1.09
34	08/14/2022 - 08/20/2022	1.04	1.09
35	08/21/2022 - 08/27/2022	1.05	1.11
36	08/28/2022 - 09/03/2022	1.06	1.12
37	09/04/2022 - 09/10/2022	1.07	1.13
38	09/11/2022 - 09/17/2022	1.08	1.14
39	09/18/2022 - 09/24/2022	1.05	1.11
40	09/25/2022 - 10/01/2022	1.02	1.07
41	10/02/2022 - 10/08/2022	1.00	1.05
42	10/09/2022 - 10/15/2022	0.97	1.02
43	10/16/2022 - 10/22/2022	0.98	1.03
44	10/23/2022 - 10/29/2022	0.99	1.04
45	10/30/2022 - 11/05/2022	0.99	1.04
46	11/06/2022 - 11/12/2022	1.00	1.05
47	11/13/2022 - 11/19/2022	1.01	1.06
48	11/20/2022 - 11/26/2022	1.00	1.05
49	11/27/2022 - 12/03/2022	1.00	1.05
50	12/04/2022 - 12/10/2022	0.99	1.04
51	12/11/2022 - 12/17/2022	0.99	1.04
52	12/18/2022 - 12/24/2022	1.01	1.06
53	12/25/2022 - 12/31/2022	1.03	1.08

* PEAK SEASON

23-FEB-2023 09:11:22 830UPD 5_1100_PKSEASON.TXT

Appendix E
HCM Analysis Worksheets - Existing Conditions

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	346	229	316	455	277	98
Future Volume (veh/h)	346	229	316	455	277	98
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	357	117	326	0	286	101
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	390	315	751		564	1114
Arrive On Green	0.23	0.23	0.42	0.00	0.12	0.62
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	357	117	326	0	286	101
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	18.9	6.6	11.8	0.0	8.2	2.1
Cycle Q Clear(g_c), s	18.9	6.6	11.8	0.0	8.2	2.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	390	315	751		564	1114
V/C Ratio(X)	0.91	0.37	0.43		0.51	0.09
Avail Cap(c_a), veh/h	417	336	751		705	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	29.2	18.4	0.0	11.8	7.1
Incr Delay (d2), s/veh	23.6	0.7	1.8	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.8	3.7	8.6	0.0	5.1	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.5	29.9	20.3	0.0	12.6	7.3
LnGrp LOS	E	C	C		B	A
Approach Vol, veh/h	474		326	A		387
Approach Delay, s/veh	50.7		20.3			11.2
Approach LOS	D		C			B

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.3	45.0		28.6		62.3
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	18.5	38.6		22.7		38.6
Max Q Clear Time (g_c+I1), s	10.2	13.8		20.9		4.1
Green Ext Time (p_c), s	0.5	1.9		0.3		0.5

Intersection Summary			
HCM 6th Ctrl Delay		29.5	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	434	319	72	353	304	84
Future Volume (veh/h)	434	319	72	353	304	84
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	447	210	74	0	313	87
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	405	327	729		767	1107
Arrive On Green	0.24	0.24	0.41	0.00	0.13	0.61
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	447	210	74	0	313	87
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	22.7	13.1	2.4	0.0	9.5	1.8
Cycle Q Clear(g_c), s	22.7	13.1	2.4	0.0	9.5	1.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	405	327	729		767	1107
V/C Ratio(X)	1.10	0.64	0.10		0.41	0.08
Avail Cap(c_a), veh/h	405	327	729		880	1107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	31.8	16.9	0.0	11.2	7.4
Incr Delay (d2), s/veh	76.1	4.3	0.3	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	25.4	7.8	1.8	0.0	5.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	111.6	36.1	17.1	0.0	11.5	7.6
LnGrp LOS	F	D	B		B	A
Approach Vol, veh/h	657		74	A		400
Approach Delay, s/veh	87.5		17.1			10.7
Approach LOS	F		B			B

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.6	45.0		30.0		63.6
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	18.5	38.6		22.7		38.6
Max Q Clear Time (g_c+I1), s	11.5	4.4		24.7		3.8
Green Ext Time (p_c), s	0.6	0.4		0.0		0.4

Intersection Summary						
HCM 6th Ctrl Delay			55.7			
HCM 6th LOS			E			

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	3	10	11	1	15	12	377	24	4	428	7
Future Vol, veh/h	35	3	10	11	1	15	12	377	24	4	428	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	12	33	2	2	2	2	38	10	2	42	2	11
Mvmt Flow	36	3	10	11	1	15	12	389	25	4	441	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	887	891	445	885	882	402	448	0	0	414	0	0
Stage 1	453	453	-	426	426	-	-	-	-	-	-	-
Stage 2	434	438	-	459	456	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.83	6.22	7.12	6.52	6.22	4.48	-	-	4.52	-	-
Critical Hdwy Stg 1	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.297	3.318	3.518	4.018	3.318	2.542	-	-	2.578	-	-
Pot Cap-1 Maneuver	254	251	613	266	285	648	946	-	-	960	-	-
Stage 1	568	521	-	606	586	-	-	-	-	-	-	-
Stage 2	581	529	-	582	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	243	245	613	255	278	648	946	-	-	960	-	-
Mov Cap-2 Maneuver	243	245	-	255	278	-	-	-	-	-	-	-
Stage 1	558	518	-	596	576	-	-	-	-	-	-	-
Stage 2	556	520	-	565	565	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.7	15.1	0.3	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	946	-	-	278	386	960	-	-
HCM Lane V/C Ratio	0.013	-	-	0.178	0.072	0.004	-	-
HCM Control Delay (s)	8.9	0	-	20.7	15.1	8.8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.2	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	32	12	13	17	3	14	16	363	21	16	432	40
Future Vol, veh/h	32	12	13	17	3	14	16	363	21	16	432	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	12	33	2	2	2	2	38	10	2	42	2	11
Mvmt Flow	33	12	13	18	3	14	16	374	22	16	445	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	924	926	466	927	935	385	486	0	0	396	0	0
Stage 1	498	498	-	417	417	-	-	-	-	-	-	-
Stage 2	426	428	-	510	518	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.83	6.22	7.12	6.52	6.22	4.48	-	-	4.52	-	-
Critical Hdwy Stg 1	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.297	3.318	3.518	4.018	3.318	2.542	-	-	2.578	-	-
Pot Cap-1 Maneuver	240	239	597	249	265	663	914	-	-	975	-	-
Stage 1	536	496	-	613	591	-	-	-	-	-	-	-
Stage 2	587	535	-	546	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	225	228	597	225	253	663	914	-	-	975	-	-
Mov Cap-2 Maneuver	225	228	-	225	253	-	-	-	-	-	-	-
Stage 1	524	485	-	599	577	-	-	-	-	-	-	-
Stage 2	558	523	-	508	521	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.6	17.9	0.4	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	914	-	-	263	313	975	-	-
HCM Lane V/C Ratio	0.018	-	-	0.223	0.112	0.017	-	-
HCM Control Delay (s)	9	0	-	22.6	17.9	8.8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.4	0.1	-	-

HCM 6th TWSC
3: S Florida Ave & W Central Ave

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	37	12	1	19	1	4	0	3	0	0	0
Future Vol, veh/h	1	37	12	1	19	1	4	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	46	15	1	24	1	5	0	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	61	0	0	83	83	54	85	90	25
Stage 1	-	-	-	-	-	-	56	56	-	27	27	-
Stage 2	-	-	-	-	-	-	27	27	-	58	63	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1589	-	-	1542	-	-	904	807	1013	901	800	1051
Stage 1	-	-	-	-	-	-	956	848	-	990	873	-
Stage 2	-	-	-	-	-	-	990	873	-	954	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1589	-	-	1542	-	-	902	805	1013	896	798	1051
Mov Cap-2 Maneuver	-	-	-	-	-	-	902	805	-	896	798	-
Stage 1	-	-	-	-	-	-	955	847	-	989	872	-
Stage 2	-	-	-	-	-	-	989	872	-	950	841	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	8.8	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	946	1589	-	-	1542	-	-	-
HCM Lane V/C Ratio	0.009	0.001	-	-	0.001	-	-	-
HCM Control Delay (s)	8.8	7.3	0	-	7.3	0	-	0
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	29	5	17	25	5	5	1	20	1	0	0
Future Vol, veh/h	0	29	5	17	25	5	5	1	20	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	6	21	31	6	6	1	25	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	37	0	0	42	0	0	115	118	39	128	118	34
Stage 1	-	-	-	-	-	-	39	39	-	76	76	-
Stage 2	-	-	-	-	-	-	76	79	-	52	42	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1574	-	-	1567	-	-	862	772	1033	845	772	1039
Stage 1	-	-	-	-	-	-	976	862	-	933	832	-
Stage 2	-	-	-	-	-	-	933	829	-	961	860	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1574	-	-	1567	-	-	853	761	1033	815	761	1039
Mov Cap-2 Maneuver	-	-	-	-	-	-	853	761	-	815	761	-
Stage 1	-	-	-	-	-	-	976	862	-	933	820	-
Stage 2	-	-	-	-	-	-	920	817	-	936	860	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.7	8.8	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	980	1574	-	-	1567	-	-	815
HCM Lane V/C Ratio	0.033	-	-	-	0.014	-	-	0.002
HCM Control Delay (s)	8.8	0	-	-	7.3	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	5	5	0	4	3	324	13	3	435	0
Future Vol, veh/h	2	0	5	5	0	4	3	324	13	3	435	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	12	2	10	2
Mvmt Flow	2	0	6	6	0	4	3	360	14	3	483	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	864	869	483	865	862	367	483	0	0	374	0	0
Stage 1	489	489	-	373	373	-	-	-	-	-	-	-
Stage 2	375	380	-	492	489	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	274	290	584	274	293	678	1080	-	-	1184	-	0
Stage 1	561	549	-	648	618	-	-	-	-	-	-	0
Stage 2	646	614	-	558	549	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	271	288	584	270	291	678	1080	-	-	1184	-	-
Mov Cap-2 Maneuver	271	288	-	270	291	-	-	-	-	-	-	-
Stage 1	559	547	-	645	616	-	-	-	-	-	-	-
Stage 2	639	612	-	551	547	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.3	15	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1080	-	-	439	369	1184	-
HCM Lane V/C Ratio	0.003	-	-	0.018	0.027	0.003	-
HCM Control Delay (s)	8.3	-	-	13.3	15	8	0
HCM Lane LOS	A	-	-	B	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1	4	8	0	3	1	372	12	7	343	0
Future Vol, veh/h	3	1	4	8	0	3	1	372	12	7	343	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	12	2	10	2
Mvmt Flow	3	1	4	9	0	3	1	413	13	8	381	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	820	825	381	822	819	420	381	0	0	426	0	0
Stage 1	397	397	-	422	422	-	-	-	-	-	-	-
Stage 2	423	428	-	400	397	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	294	308	666	293	310	633	1177	-	-	1133	-	0
Stage 1	629	603	-	609	588	-	-	-	-	-	-	0
Stage 2	609	585	-	626	603	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	290	305	666	288	307	633	1177	-	-	1133	-	-
Mov Cap-2 Maneuver	290	305	-	288	307	-	-	-	-	-	-	-
Stage 1	628	598	-	608	587	-	-	-	-	-	-	-
Stage 2	605	584	-	615	598	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14	16.1	0	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1177	-	-	408	338	1133	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.036	0.007	-
HCM Control Delay (s)	8.1	-	-	14	16.1	8.2	0
HCM Lane LOS	A	-	-	B	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	43	394	111	70	492
Future Vol, veh/h	65	43	394	111	70	492
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	590	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	38	15	8	22	9	5
Mvmt Flow	68	45	410	116	73	513

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1069	410	0	0	526	0
Stage 1	410	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.78	6.35	-	-	4.19	-
Critical Hdwy Stg 1	5.78	-	-	-	-	-
Critical Hdwy Stg 2	5.78	-	-	-	-	-
Follow-up Hdwy	3.842	3.435	-	-	2.281	-
Pot Cap-1 Maneuver	210	614	-	-	1006	-
Stage 1	599	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	189	614	-	-	1006	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	407	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.1	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	189	614	1006	-
HCM Lane V/C Ratio	-	-	0.358	0.073	0.072	-
HCM Control Delay (s)	-	-	34.3	11.3	8.9	0
HCM Lane LOS	-	-	D	B	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.2	0.2	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	55	476	92	50	433
Future Vol, veh/h	83	55	476	92	50	433
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	590	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	38	15	8	22	9	5
Mvmt Flow	86	57	496	96	52	451

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1051	496	0	0	592	0
Stage 1	496	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.78	6.35	-	-	4.19	-
Critical Hdwy Stg 1	5.78	-	-	-	-	-
Critical Hdwy Stg 2	5.78	-	-	-	-	-
Follow-up Hdwy	3.842	3.435	-	-	2.281	-
Pot Cap-1 Maneuver	215	548	-	-	950	-
Stage 1	544	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	199	548	-	-	950	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	472	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.7	0	0.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	199	548	950	-
HCM Lane V/C Ratio	-	-	0.434	0.105	0.055	-
HCM Control Delay (s)	-	-	36.3	12.3	9	0
HCM Lane LOS	-	-	E	B	A	A
HCM 95th %tile Q(veh)	-	-	2	0.3	0.2	-

Appendix F
ITE Trip Generation Sheets

Single-Family Detached Housing
(210)

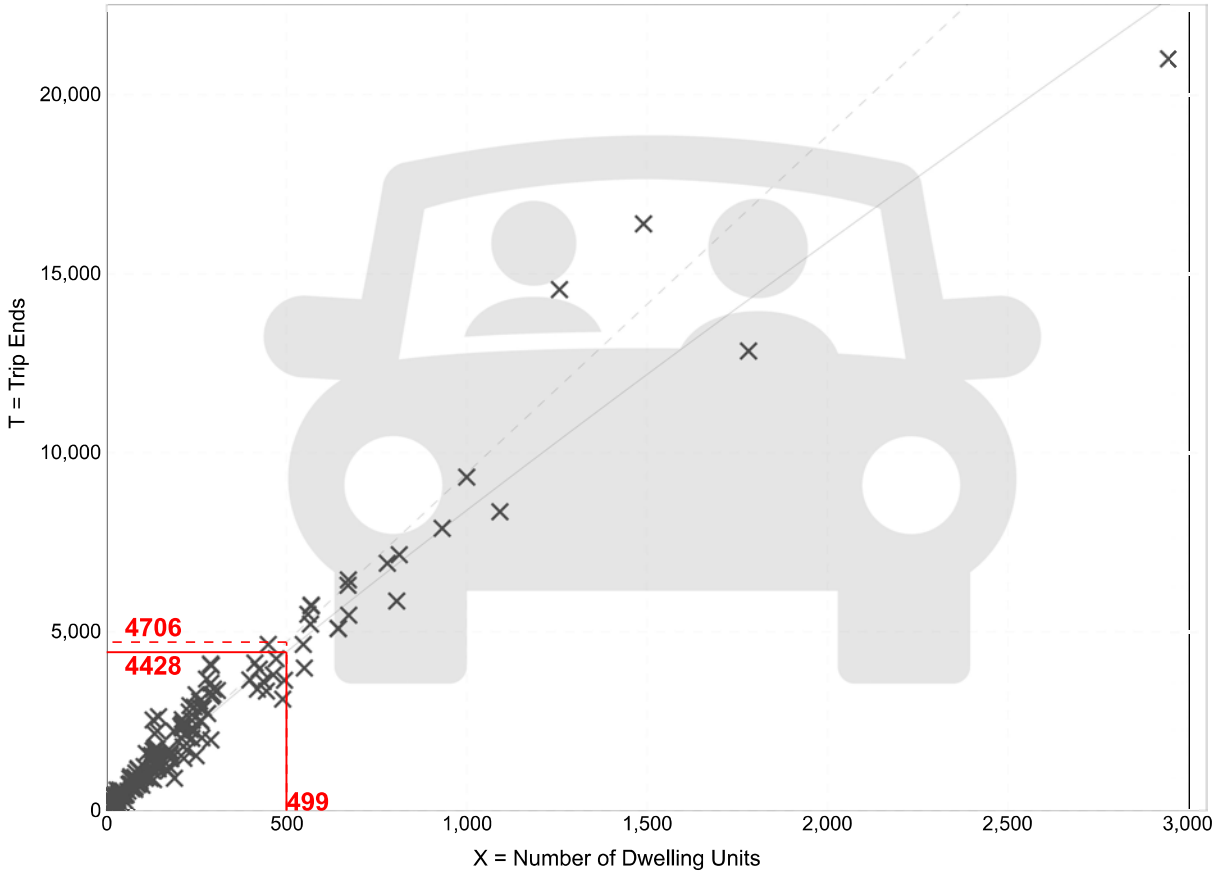
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68 **R^2= 0.95**

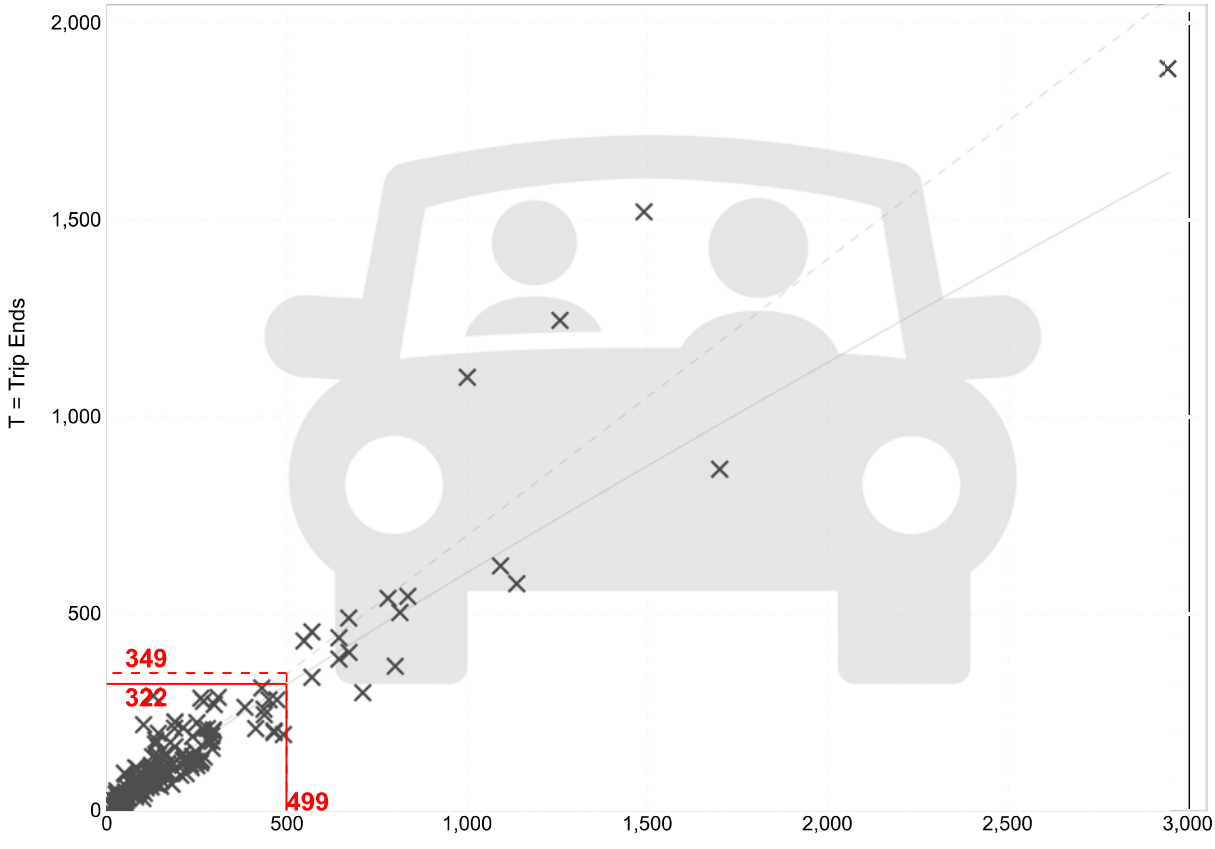
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



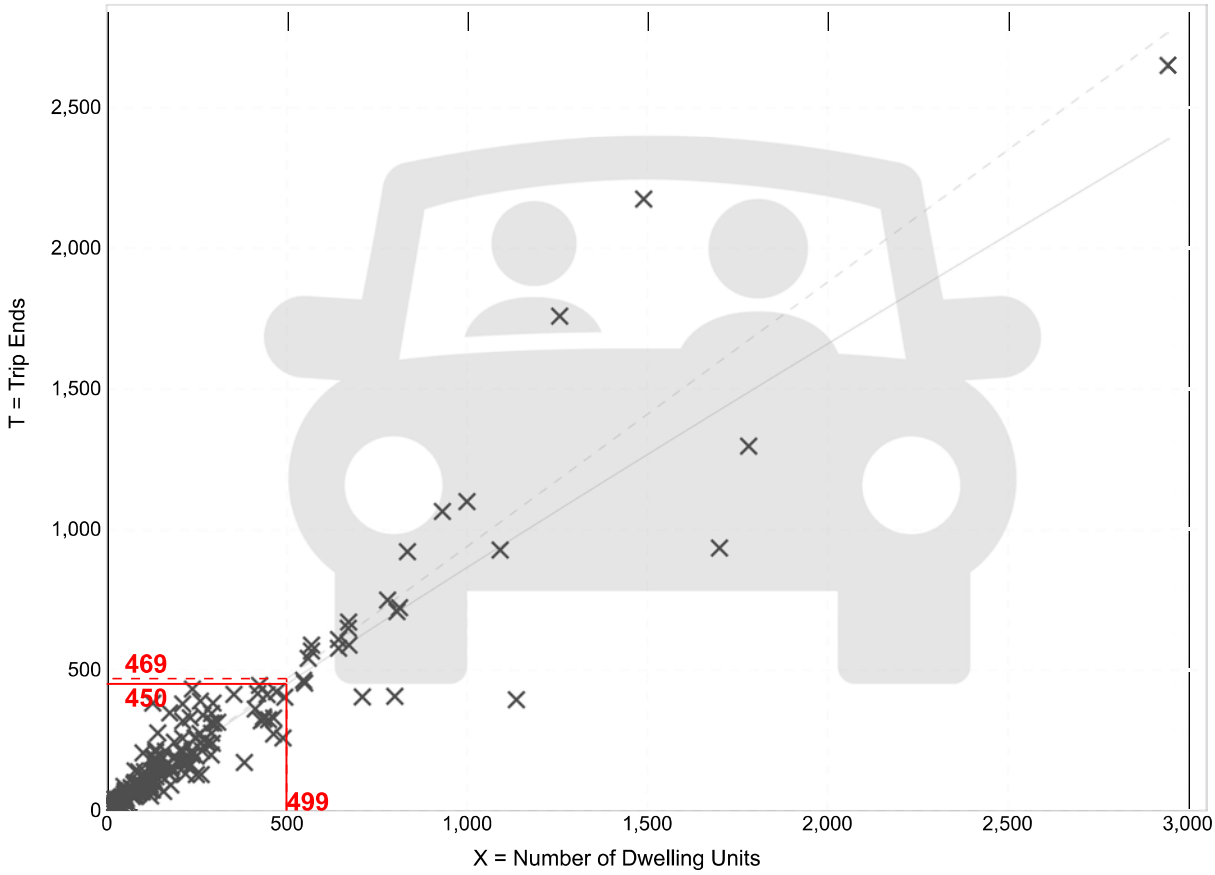
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

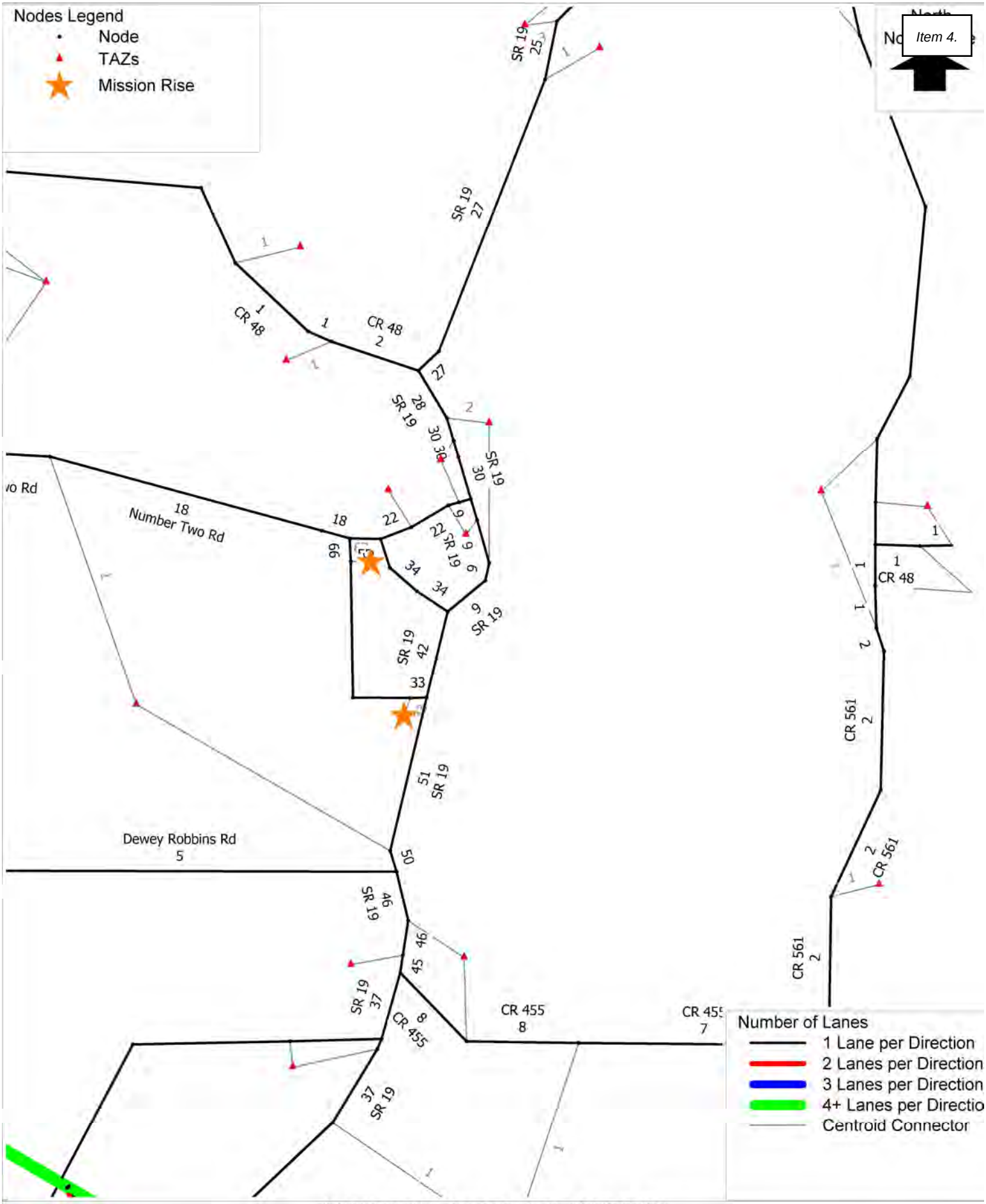
Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



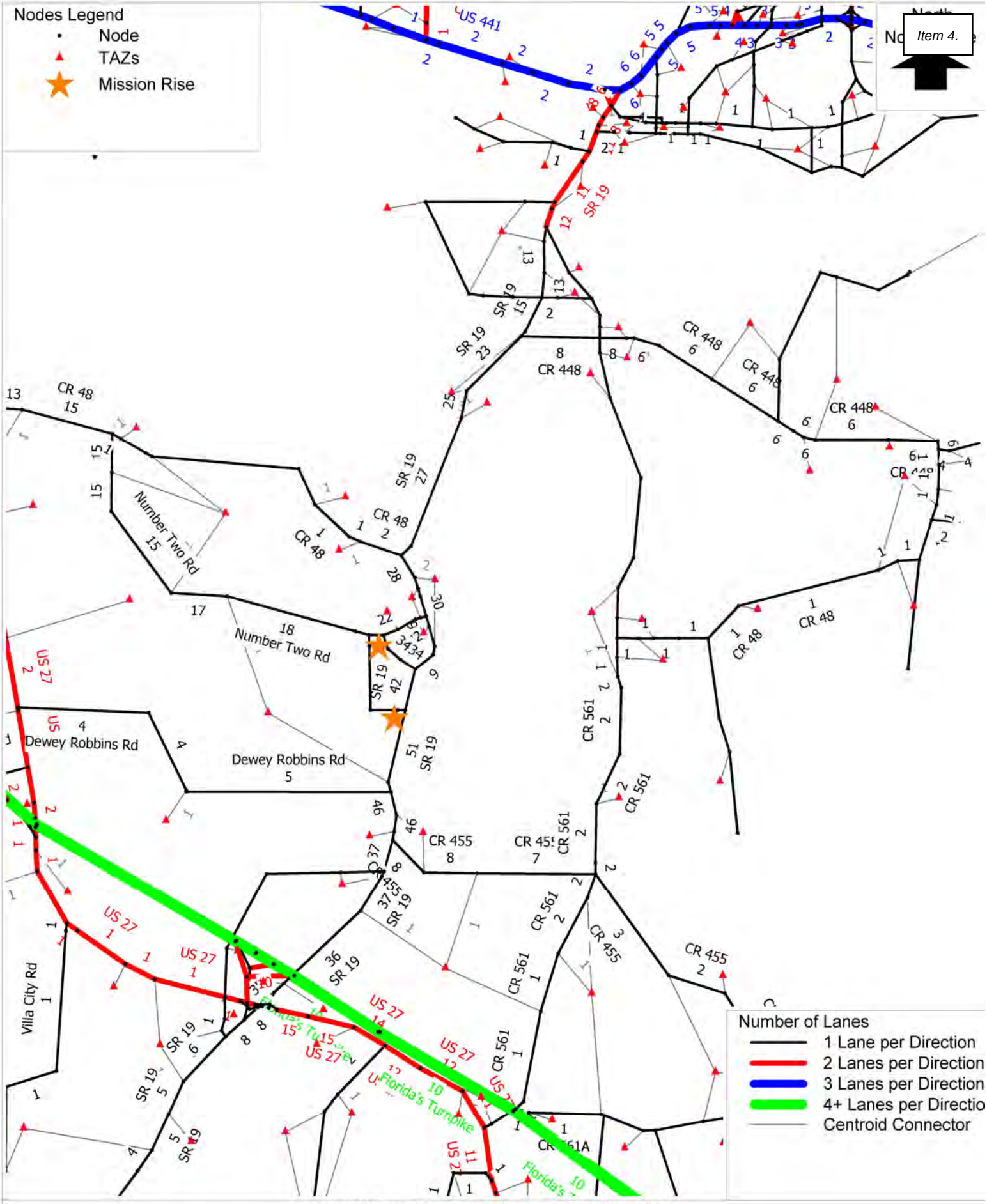
Fitted Curve Equation: Ln(T) = 0.94 Ln(X) + 0.27 **R^2= 0.92**

Appendix G
CFRPM Model Output



23017 Mission Rise - Osceola County, FL TAZ 7676, 7677
Project Distribution
C:\FSUTMS\D5\CFRPM7\Base\CF_2030\P23017\OUTPUT\HWYLOAD_SL_AllDay_A30.NET

cube (Licensed to Traffic & Mobility Consultants)

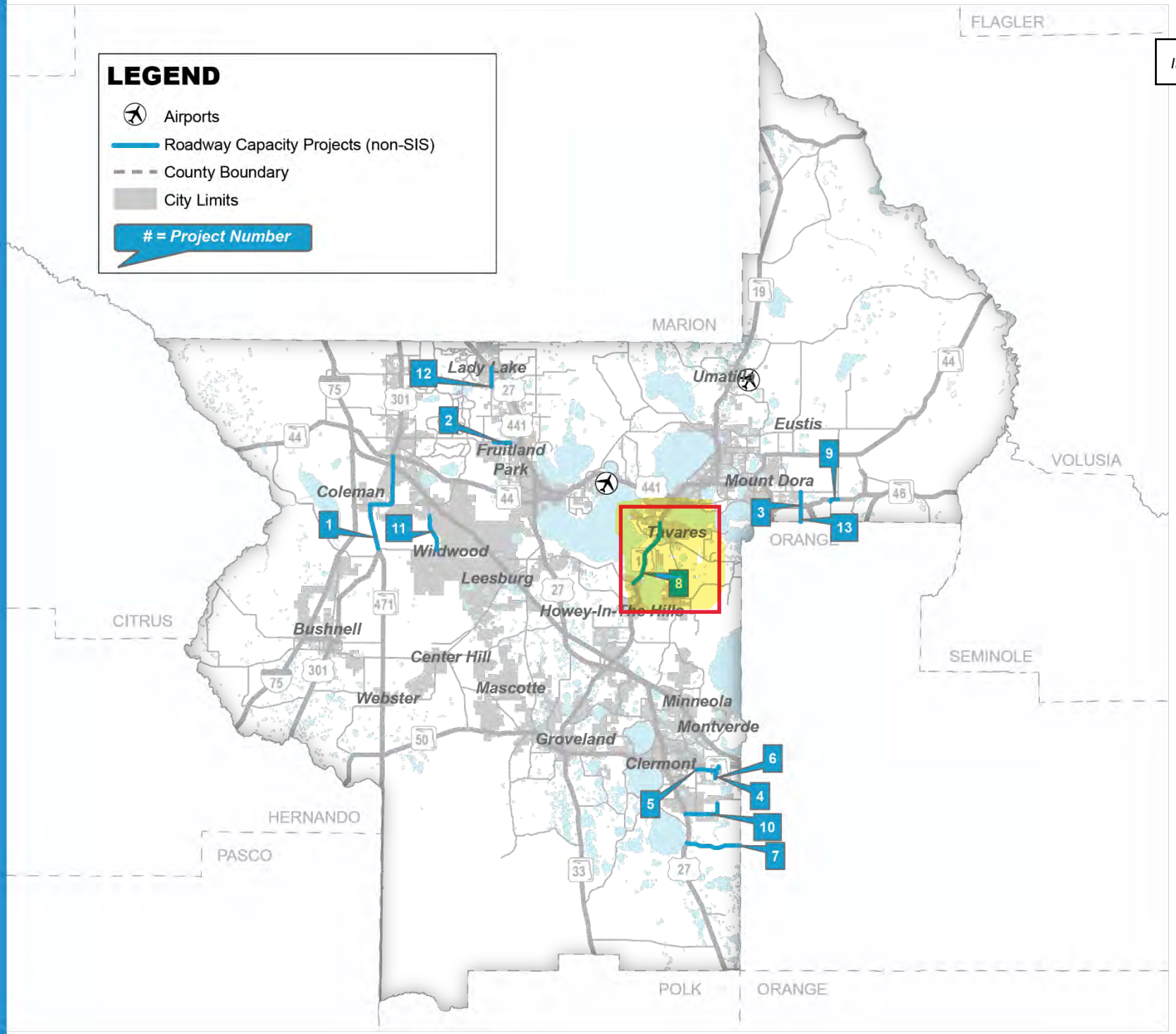


23017 Mission Rise - Osceola County, FL TAZ 7676, 7677
Project Distribution
C:\FSUTMS\D5\CFRPM7\Base\CF_2030\P23017\OUTPUT\HWYLOAD_SL_AllDay_A30.NET

cube (Licensed to Traffic & Mobility Consultants)

Appendix H
LSMPO TIP and *LSMPO LOPP*

ROADWAY CAPACITY PROJECTS (NON-SIS)



7

Project Description: WELLNESS WAY FROM US-27 TO THE LAKE/ORANGE COUNTY LINE

FM# 4487331

Funding Source(s): Local and State

LRTP Page: PG. 4-12

Work Description: NEW ROAD CONSTRUCTION

Phase	<2023	2023	2024	2025	2026	2027	>2027	Amount Funded
PDE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PE	$ -	$ -	$ 3,000,000	$ -	$ -	$ -	$ -	$ 3,000,000
ENV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
ROW	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
LAR	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
RRU	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ 3,000,000	$ -	$ -	$ -	$ -	$ 3,000,000

Responsible Agency: RESPONSIBLE AGENCY NOT AVAILABLE | County: LAKE | Total Project Cost: $ 3,000,000

8

Project Description: SR 19 FROM CR 48 TO CR 561

FM# 2383191

Funding Source(s): State and Federal

LRTP Page: PG. 4-12

Work Description: ADD LANES & RECONSTRUCT

Phase	<2023	2023	2024	2025	2026	2027	>2027	Amount Funded
PDE	$ 1,161,015	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,161,015
PE	$ 4,141,718	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,141,718
ENV	$ 492,196	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ 692,196
ROW	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
LAR	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
RRU	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	$ 5,794,929	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ 5,994,929

Responsible Agency: FDOT | County: LAKE | Total Project Cost: $ 5,994,929

Lake-Sumter MPO
Metropolitan Planning Organization

2022 List of Priority Projects

Lake~Sumter Metropolitan Planning Organization

Adopted June 22, 2022

Table 3 – Roadway Capacity (Non-SIS) Project Priorities

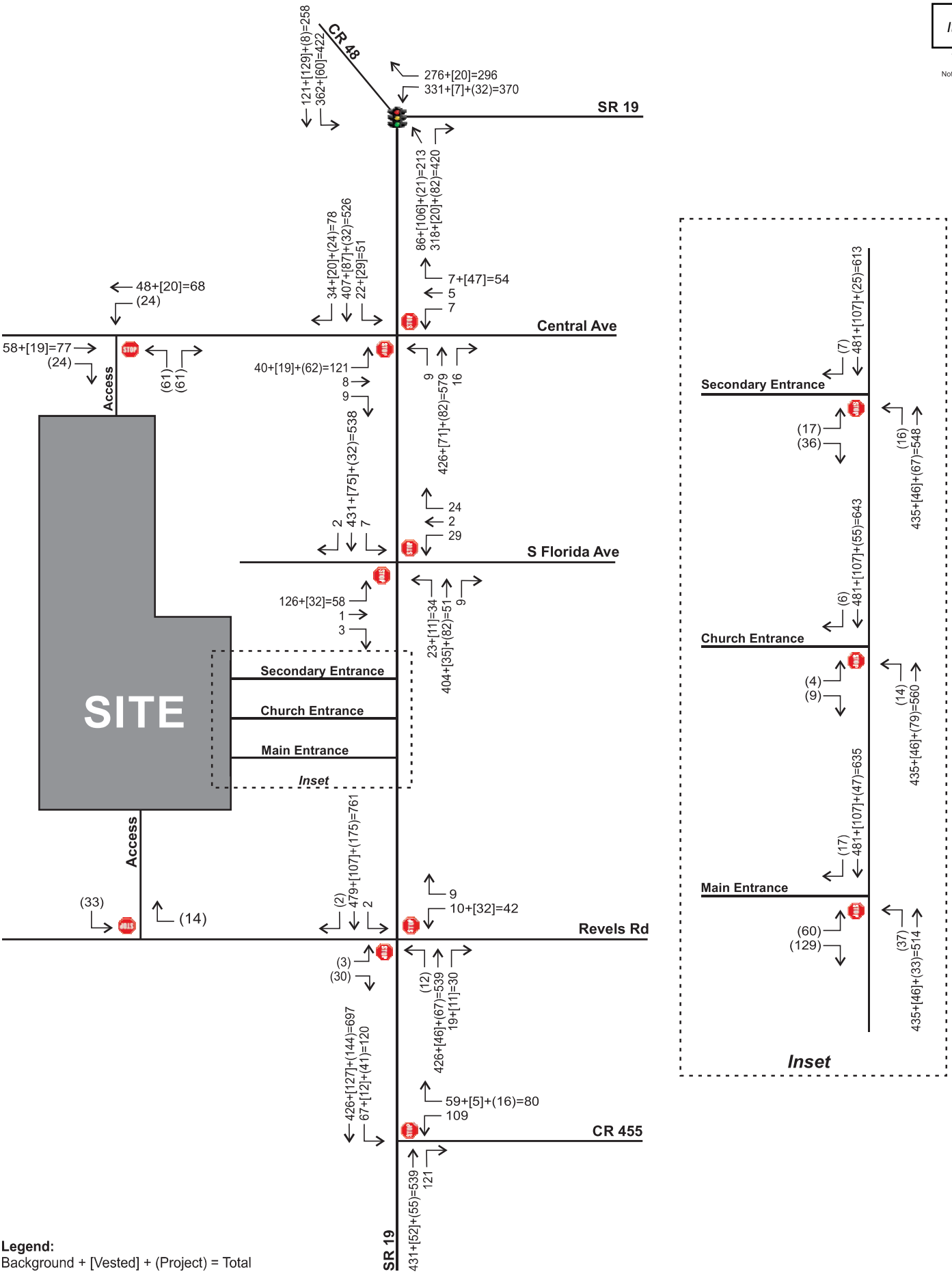
Capacity Rank	Sponsor/ Location	FM #	Project Name	From	To	Description	Performance Measure(s)	Proposed Phase	Proposed Phase FY	Proposed Phase Cost	Programmed Phase(s)	Programmed Phase FY	CMP Congested Corridors 2021 Analysis (for informational purposes)
1	FDOT/ Sumter County	430132-1	SR 35 (US 301)	SR 44	CR 470	Road Widening	System Performance	ROW	2026/27	$27,000,000	Design	2022/23 2025/26	**Extremely Congested (2021)**
2	FDOT/ Lake County	409870-1	SR 44 (CR44B)	US 441	SR44	Road Widening	System Performance; Safety	CST	2024/25	$23,701,500	ROW		**Extremely Congested (2021)**
3	Sumter County	447931-1	Marsh Bend Trail (CR 501)	Corbin Trail	Central Parkway	Roadway Improvements	System Performance	CST	2023/24	$1,275,400	CST	2022/23	**Operating at Acceptable Level of Service**
4	FDOT/ Lake County	238394-3	SR 500 (US 441)	Perkins Street	SR 44	Road Widening	System Performance	CST	2023/24	$13,794,537			**Congested (2026)**
5	FDOT/ Lake County	429356-1	SR 500 (US 441)	SR 44	N of SR 46	Road Widening	System Performance	CST	2023/24	$22,233,040	ROW	2021/22	**Not Congested**
6	Lake County/ Lady Lake	439665-1	Rolling Acres Road	West Lady Lake Ave.	Griffin Ave	Road Widening	System Performance	Design	2026/27	$2,000,000	PD&E	2025/26	**Extremely Congested (2026)**
7	Lake County	441710-1	Round Lake Road	Wolfbranch Rd	North of SR 44	New Roadway/ Alignment	System Performance	CST	2024/25	$30,000,000	Design		**Operating at Acceptable Level of Service**
8	Lake County	441779-1	CR 455 (Hartle Rd)	Lost Lake Rd.	Hartwood Marsh Rd.	Roadway Extension/ Widening	System Performance	CST	2024/25	$19,800,000	ROW	2022/23	**New Roadway, Not on CMP Network**
9	Lake County	-	CR 455 (Hartle Rd)	Hartwood Marsh Rd	CFX Lake-Orange Connector	Road Extension	System Performance	Design	2023/24	$3,000,000	PDE		**New Roadway, Not on CMP Network**

Capacity Rank	Sponsor/ Location	FM #	Project Name	From	To	Description	Performance Measure(s)	Proposed Phase	Proposed Phase FY	Proposed Phase Cost	Programmed Phase(s)	Programmed Phase FY	CMP Congested Corridors 2021 Analysis (for informational purposes)
10	Lake County	-	Citrus Grove Phase II	West of Scrub Jay Lane	Grassy Lake Rd	New Alignment/Widening	System Performance	CST	2024/25	$10,000,000	ROW		**New Roadway, Not on CMP Network**
11	Lake County	-	Citrus Grove Phase V	Turnpike	Blackstill Lake Dr	New Roadway/Alignment	System Performance	CST	2024/25	$5,000,000	Design		**New Roadway, Not on CMP Network**
12	Lake County	441393-1	CR 437 Realignment	Oak Tree Dr	SR 46	New Alignment/Widening	System Performance	CST	2024/25	$4,000,000	Design		**New Roadway, Not on CMP Network**
13	Lake County	-	Hartwood Marsh	Regency Hills Dr	Innovation Lane	Road Widening	System Performance	Design	2023/24	$750,000	PDE		**Approaching Congestion**
14	Lake County	-	CR 455 Paved Shoulder	CR 561	CR 561A	Paved Shoulder	System Performance	Design	2023/24	$700,000			**Operating at Acceptable Level of Service**
15	FDOT/Lake County	-	CR 470/CR 48	Meggison Road at The Villages	US 27	Road Widening	System Performance	Design	2023/24	$4,000,000			**Congested (2026)**
16	Lake County/ Mount Dora	-	Vista Ridge Drive/Wolf Branch Innovation Boulevard	Niles Rd	Round Lake Road	New Roadway	System Performance	Design	2023/24	$1,000,000	Study		**New Roadway, Not on CMP Network**
17	Lake County	-	CR 561A	CR 561	CR 455	Realignment	System Performance; Safety	PDE	2023/24	$750,000	Study		**Operating at Acceptable Level of Service**
18	FDOT/ Lake County	-	SR 44	Orange Ave	CR 46A	Road Widening	System Performance	PDE	2023/24	$TBD			**Congested (2021)**
19	FDOT	-	SR 19	SR 50	CR 455	Road Widening	System Performance	PDE	2023/24	$TBD			**Congested (2021)**

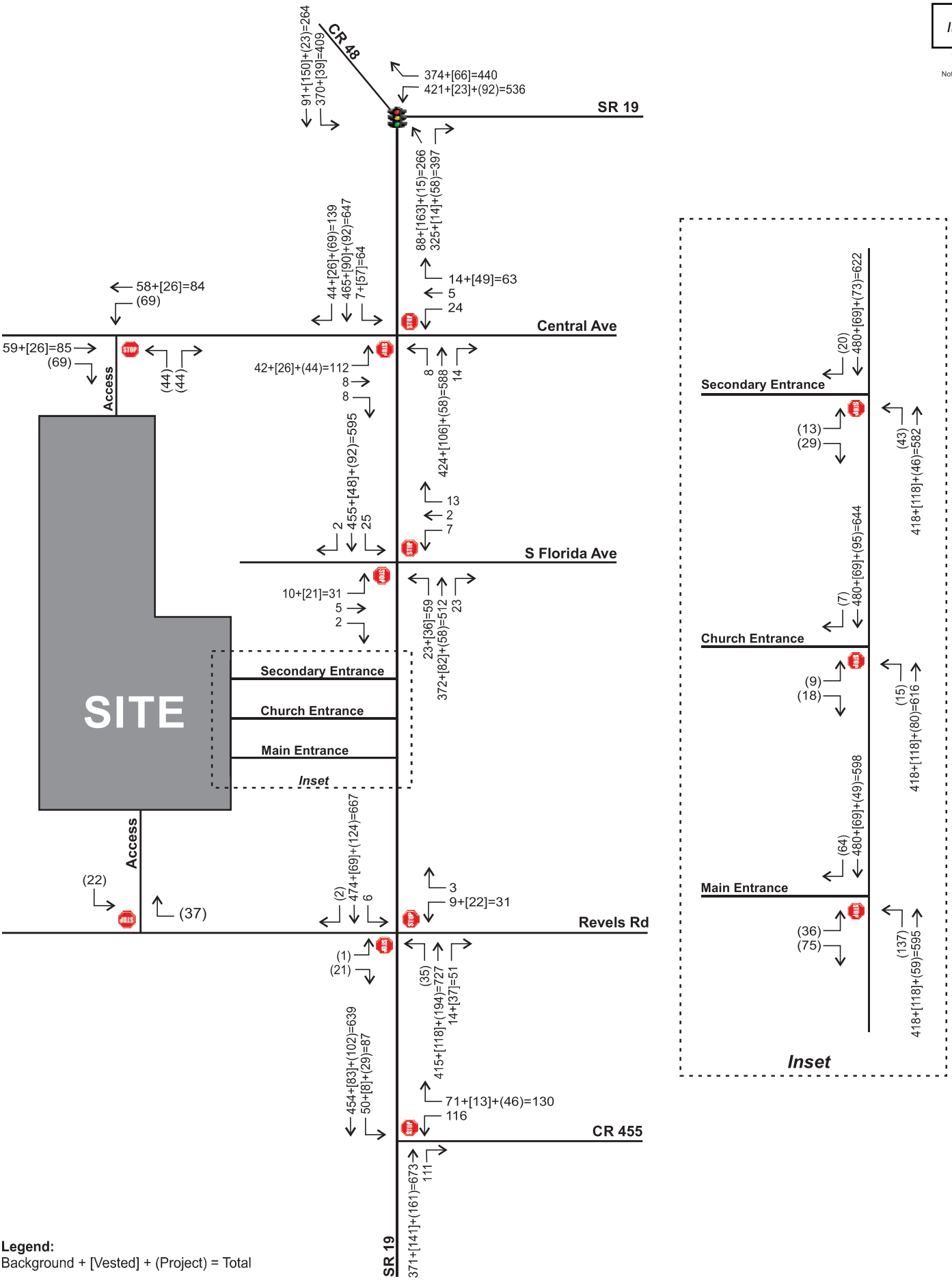
Capacity Rank	Sponsor/ Location	FM #	Project Name	From	To	Description	Performance Measure(s)	Proposed Phase	Proposed Phase FY	Proposed Phase Cost	Programmed Phase(s)	Programmed Phase FY	CMP Congested Corridors 2021 Analysis (for informational purposes)
20	Lake County	-	Woodlea Road	SR 19	End	Road Widening	System Performance	Design Update/ ROW	2023/24	$3,000,000			**Operating at Acceptable Level of Service**
21	FDOT/ Lake County	238319-1	SR 19	Howey Bridge	CR 561	Road Widening	System Performance	CST	2023/24	$35,000,000			**Extremely Congested (2021)**
22	Lake County	-	Hancock Road	Hartwood Marsh Rd	Wellness Way	New Road	System Performance	CST	2025/26	$20,000,000			**New Roadway, Not on CMP Network**
23	Lake County	-	SR 46A	SR 44	SR 46	Road Widening	System Performance	CST	2023/24	$TBD	Design		**Congested (2021)**

Top 20 Project

Appendix I
Vested Trips Data



Legend:
Background + [Vested] + (Project) = Total

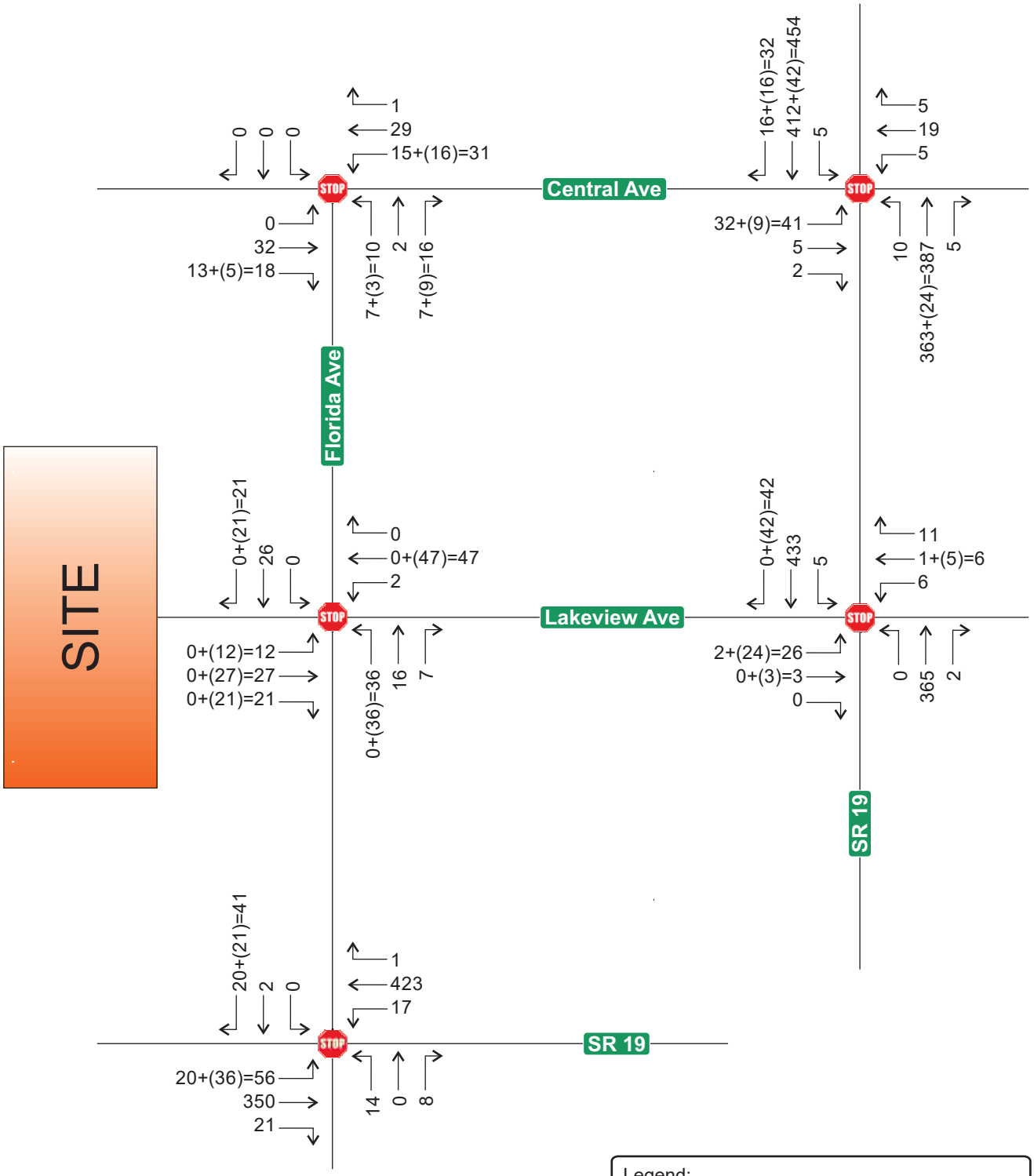


Legend:
Background + [Vested] + (Project) = Total

Projected PM Peak Intersection Volumes

The Reserve at Howey in the Hills
21082

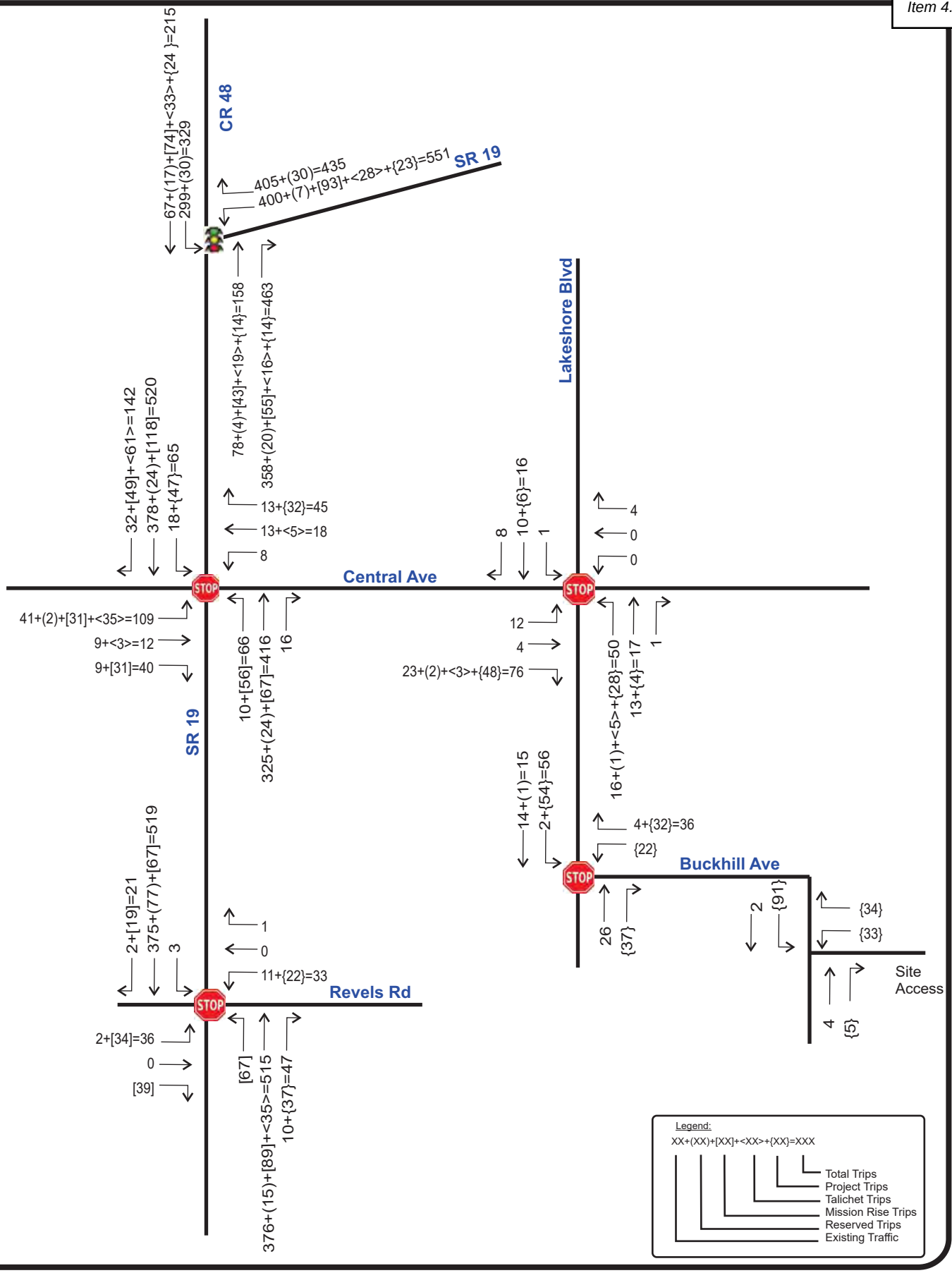
Figure 6



*Schematic drawing. Not to scale.
** Any +/- 1 project trip discrepancy is due to rounding

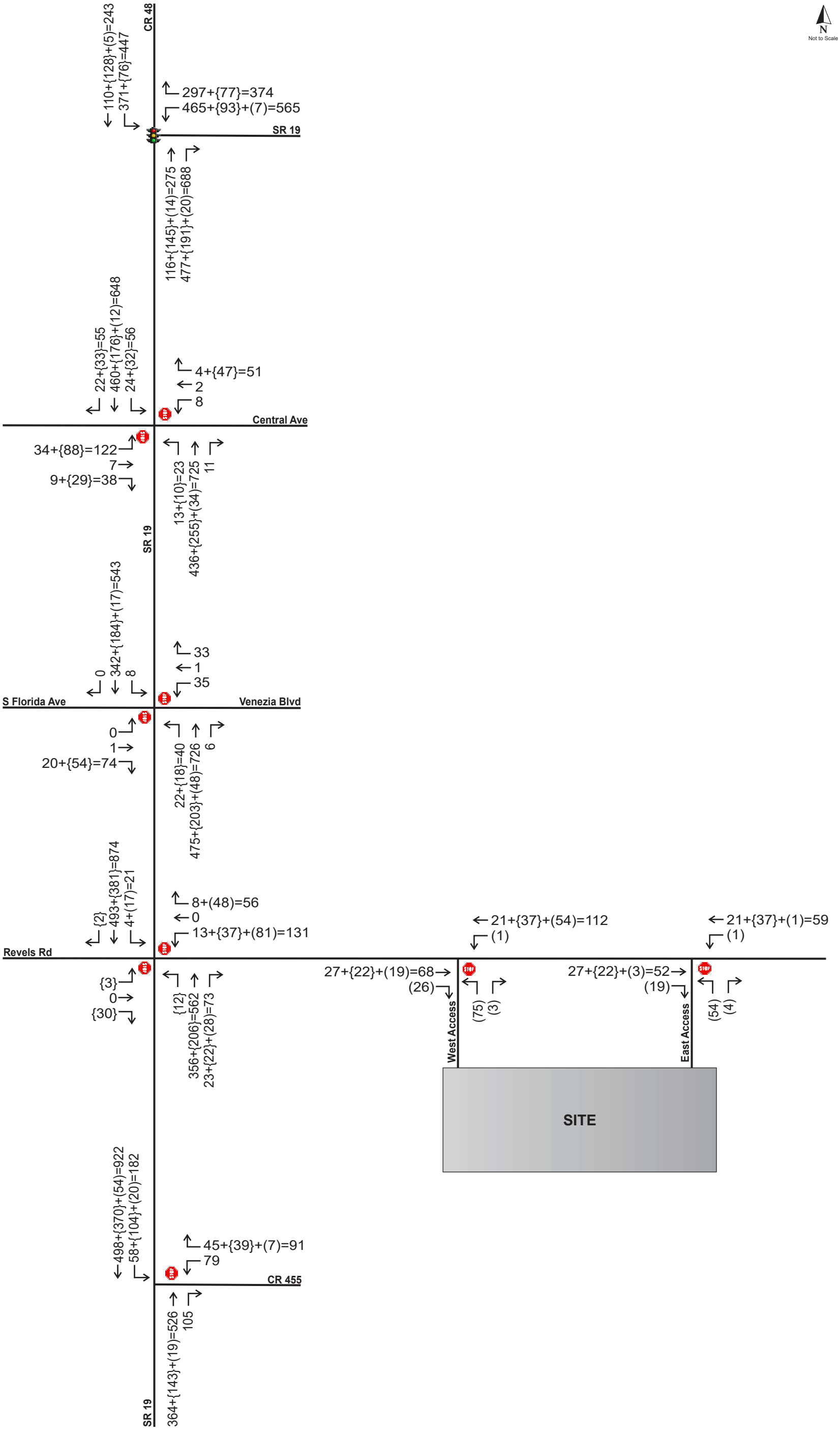
Talichet PUD
Project № 5045
Figure 5

Projected P.M. Peak Hour Traffic Volumes

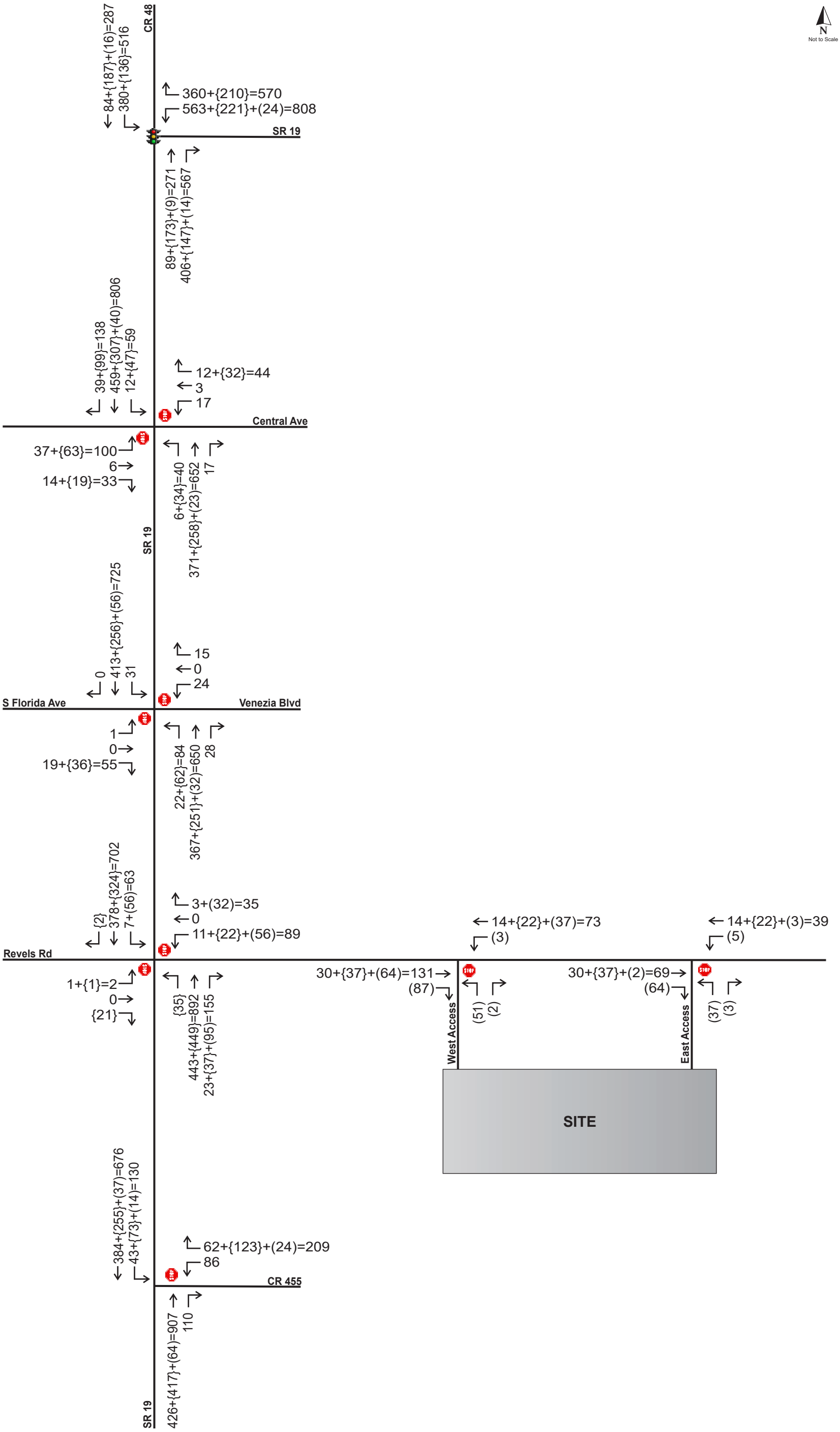


Whispering Hills
Project № 5199
Figure 5

Projected P.M. Peak Hour Intersection Volumes



Legend:
Background + {Committed} + (Project) = Total



Legend:
Background + {Committed} + (Project) = Total

Table 1
Trip Generation Calculations – Phase 1 (2026)

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single-Family Detached	184 DU	9.61	1,768	0.71	131	34	97	0.96	177	112	65
215	Single-Family Attached	146 DU	7.27	1,061	0.48	70	22	48	0.57	83	47	36
Total Trip Generation (Phase 1)				2,829		201	56	145		260	159	101

Source: ITE Trip Generation Manual, 11th Edition
ITE equations were used as R^2 were greater than 0.75 and with more than 20 studies

Phase 1 of the proposed development is projected to generate 2,829 new daily trips of which 201 trips occur during the AM peak hour, and 260 trips occur during the PM peak hour.

Table 2
Trip Generation Calculations – Phase 1 and Phase 2 (2030)

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single-Family Detached	358 DU	9.11	3,261	0.66	236	61	175	0.92	329	207	122
215	Single-Family Attached	292 DU	7.45	2,175	0.50	146	45	101	0.59	172	98	74
Total Trip Generation Buildout (Phase 1 + Phase 2)				5,436		382	106	276		501	305	196

Source: ITE Trip Generation Manual, 11th Edition
ITE equations were used as R^2 were greater than 0.75 and with more than 20 studies

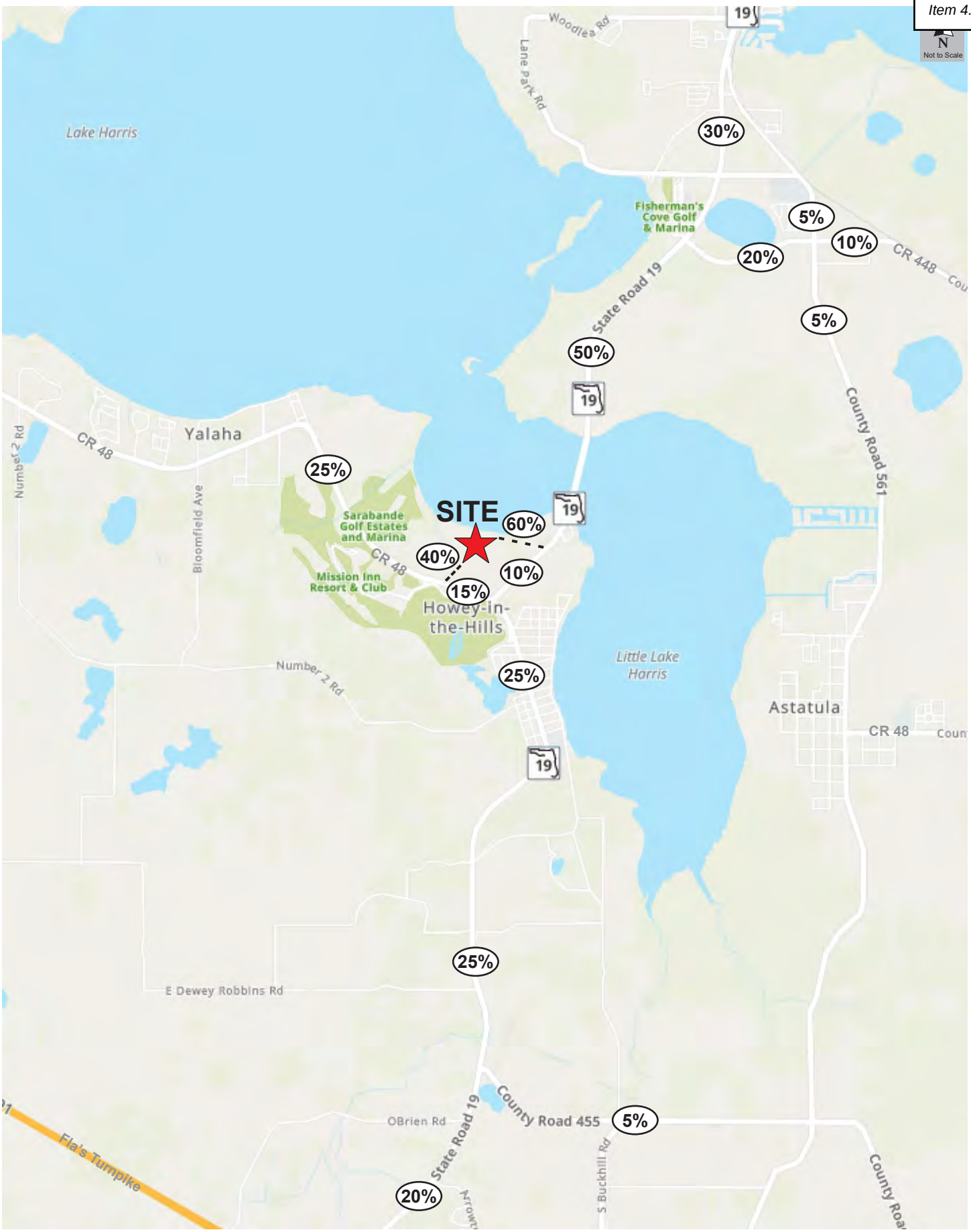
The proposed development at project buildout is projected to generate 5,436 new daily trips of which 382 trips occur during the AM peak hour, and 501 trips occur during the PM peak hour.

Trip Distribution

A trip distribution pattern was estimated using the *Central Florida Regional Planning Model, version 7 (CFRPM V7)*. The model distribution was adjusted based on local knowledge, professional engineering judgement, and the location of the development with respect to the study area attractions and activity centers to reflect prevailing travel patterns in the vicinity of the site and the surrounding transportation network. The raw model plots are provided in the **Attachments**, and the adjusted trip distribution is shown in **Figure 2.**

Study Area

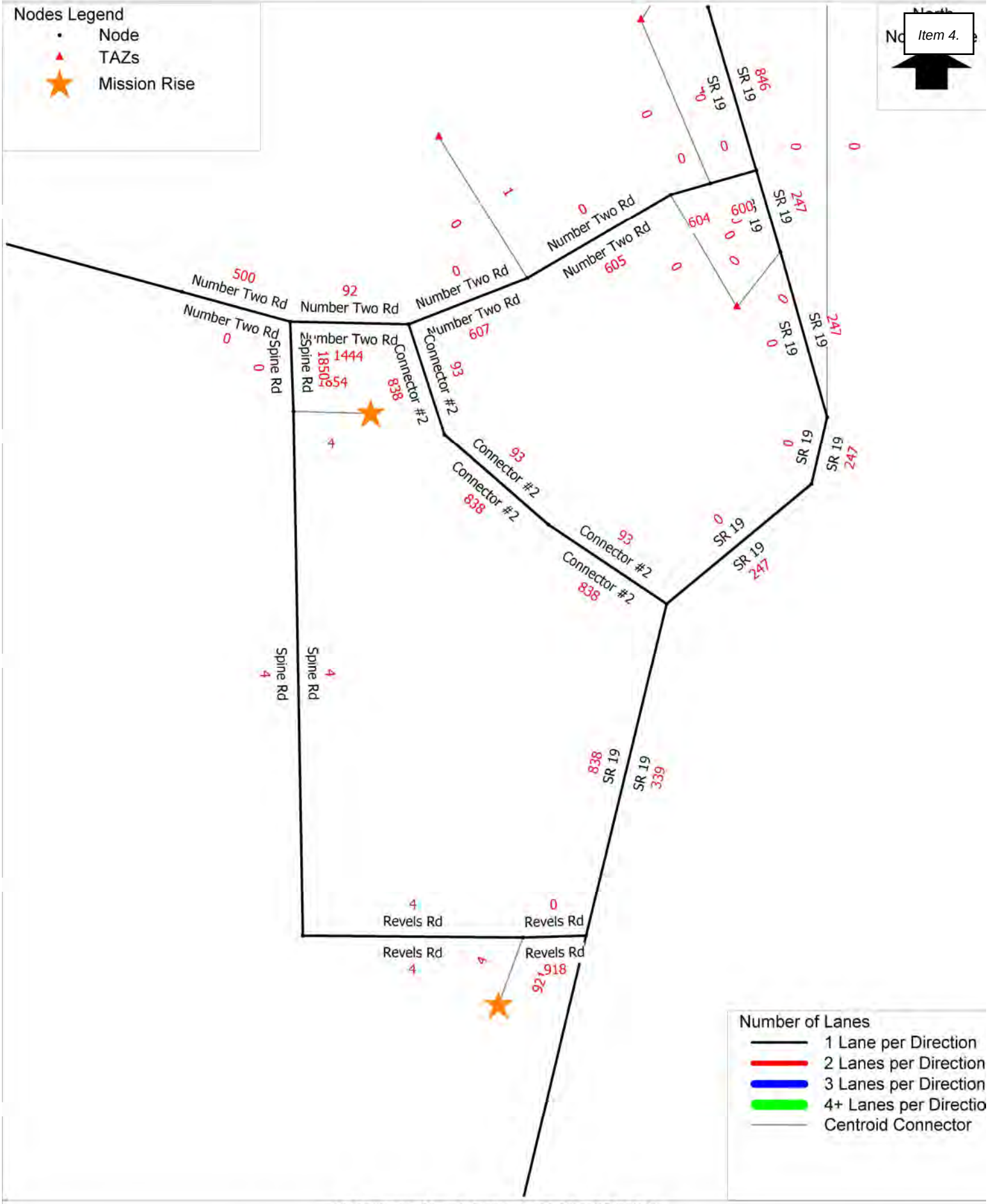
In accordance with the LSMPO requirements for a Tier 2 TIA methodology and the Town of Howey-In-The-Hills Land Development Code, the study area will encompass roadway segments and intersections within a 1-mile radius at minimum. The study will also include segments and intersections within a 4.55-mile radius, (½ the trip length for residential land use), where the project's peak hour trips consume five percent (5%) or more of a roadway's two-way peak hour generalized service volume, based on the adopted LOS and committed number of lanes. The total trip length was obtained from the *Lake County Transportation Impact Fee Schedule Table 9-1* (dated 12/21/2001), included in the **Attachments**. The roadway segments identified by the significance test will be analyzed in the Tier 2 TIA. Excerpts from the *2020 Lake County Congestion Management Plan (CMP) Database* are included in the **Attachments**. The study area significance analysis is summarized in **Table 3**.



Project Trip Distribution
Four Season Lake Harris
21237

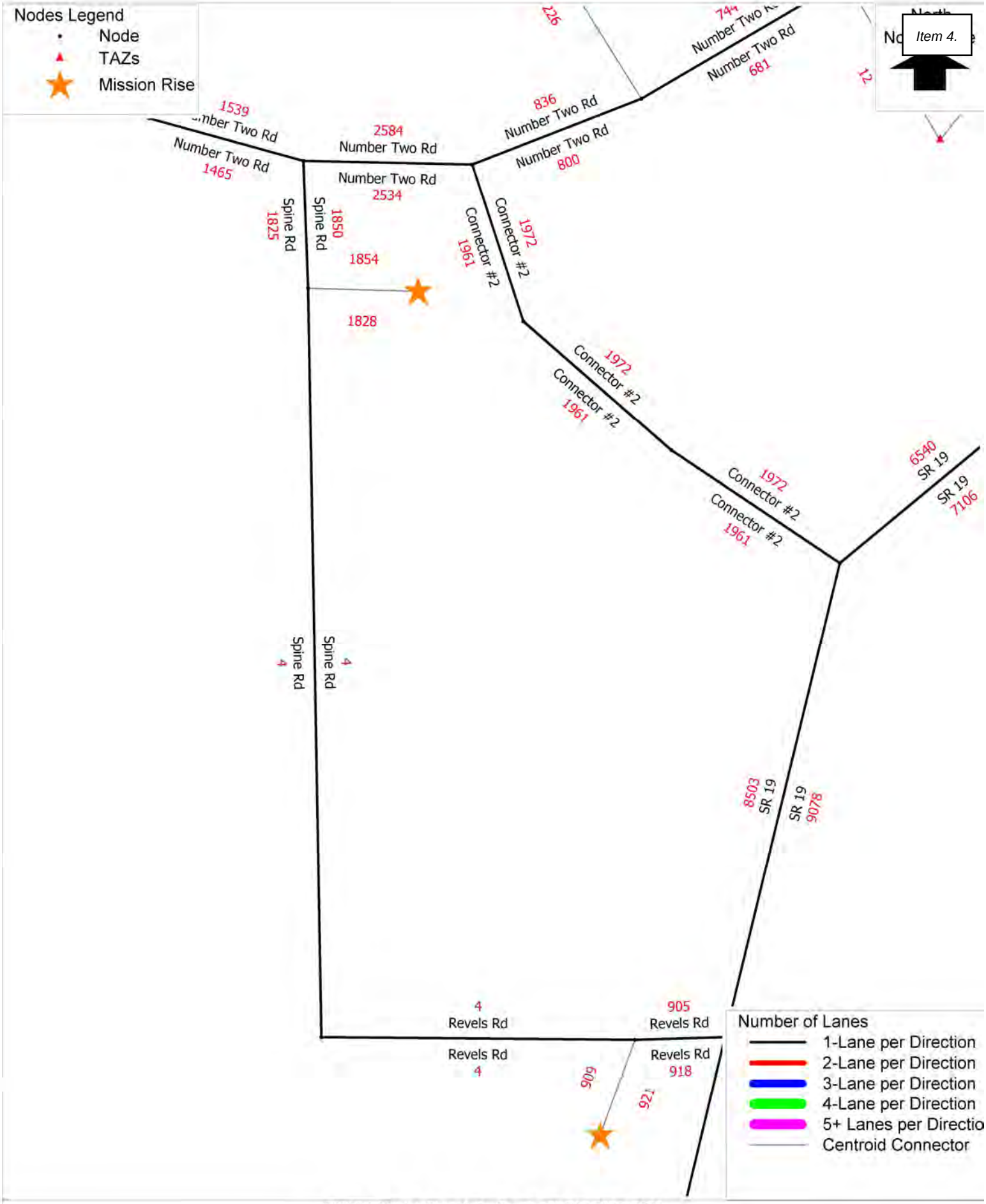
Figure

Appendix J
AADT Model Plot



23017 Mission Rise - Lake County, FL TAZ 7676, 7677
Future AADT
C:\FSUTMS\D5\CFRPM7\Base\CF_2030\P23017\OUTPUT\HWYLOAD_SL_AllDay_A30.NET

cube (Licensed to Traffic & Mobility Consultants)



23017.1 Mission Rise - Lake County, FL TAZ 7676, 7677
Future AADT
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Appendix K
HCM Worksheets - Projected Conditions

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	522	334	455	740	413	180
Future Volume (veh/h)	522	334	455	740	413	180
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	538	205	469	0	426	186
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	386	312	695		502	1139
Arrive On Green	0.23	0.23	0.39	0.00	0.17	0.63
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	538	205	469	0	426	186
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	22.7	13.5	21.5	0.0	14.2	4.2
Cycle Q Clear(g_c), s	22.7	13.5	21.5	0.0	14.2	4.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	386	312	695		502	1139
V/C Ratio(X)	1.39	0.66	0.67		0.85	0.16
Avail Cap(c_a), veh/h	386	312	695		535	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	34.2	24.5	0.0	16.9	7.5
Incr Delay (d2), s/veh	192.0	5.0	5.2	0.0	11.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	44.9	8.2	14.6	0.0	10.5	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	229.7	39.1	29.7	0.0	28.5	7.8
LnGrp LOS	F	D	C		C	A
Approach Vol, veh/h	743		469	A		612
Approach Delay, s/veh	177.1		29.7			22.2
Approach LOS	F		C			C

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	45.0		30.0		68.0
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	18.5	38.6		22.7		38.6
Max Q Clear Time (g_c+I1), s	16.2	23.5		24.7		6.2
Green Ext Time (p_c), s	0.4	2.5		0.0		1.0

Intersection Summary	
HCM 6th Ctrl Delay	87.2
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	751	483	164	588	451	194
Future Volume (veh/h)	751	483	164	588	451	194
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	774	359	169	0	465	200
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	380	307	685		737	1149
Arrive On Green	0.23	0.23	0.39	0.00	0.18	0.63
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	774	359	169	0	465	200
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	22.7	22.7	6.5	0.0	16.0	4.5
Cycle Q Clear(g_c), s	22.7	22.7	6.5	0.0	16.0	4.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	380	307	685		737	1149
V/C Ratio(X)	2.04	1.17	0.25		0.63	0.17
Avail Cap(c_a), veh/h	380	307	685		744	1149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	38.4	20.7	0.0	12.3	7.5
Incr Delay (d2), s/veh	475.1	105.6	0.9	0.0	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	92.9	24.6	4.9	0.0	9.5	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	513.5	144.1	21.5	0.0	14.0	7.8
LnGrp LOS	F	F	C		B	A
Approach Vol, veh/h	1133		169	A		665
Approach Delay, s/veh	396.4		21.5			12.1
Approach LOS	F		C			B

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.6	45.0		30.0		69.6
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	18.5	38.6		22.7		38.6
Max Q Clear Time (g_c+I1), s	18.0	8.5		24.7		6.5
Green Ext Time (p_c), s	0.1	0.9		0.0		1.1

Intersection Summary			
HCM 6th Ctrl Delay		234.3	
HCM 6th LOS		F	

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	70.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	144	4	12	13	1	65	14	672	29	37	663	49
Future Vol, veh/h	144	4	12	13	1	65	14	672	29	37	663	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	12	33	2	2	2	2	38	10	2	42	2	11
Mvmt Flow	148	4	12	13	1	67	14	693	30	38	684	51

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1556	1537	710	1530	1547	708	735	0	0	723	0	0
Stage 1	786	786	-	736	736	-	-	-	-	-	-	-
Stage 2	770	751	-	794	811	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.83	6.22	7.12	6.52	6.22	4.48	-	-	4.52	-	-
Critical Hdwy Stg 1	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.297	3.318	3.518	4.018	3.318	2.542	-	-	2.578	-	-
Pot Cap-1 Maneuver	~ 87	99	434	96	114	435	727	-	-	722	-	-
Stage 1	371	362	-	411	425	-	-	-	-	-	-	-
Stage 2	379	376	-	381	393	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 66	87	434	82	100	435	727	-	-	722	-	-
Mov Cap-2 Maneuver	~ 66	87	-	82	100	-	-	-	-	-	-	-
Stage 1	359	329	-	398	411	-	-	-	-	-	-	-
Stage 2	310	364	-	333	358	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 729.8	26.5	0.2	0.5
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	727	-	-	71	248	722	-	-
HCM Lane V/C Ratio	0.02	-	-	2.323	0.328	0.053	-	-
HCM Control Delay (s)	10.1	0	-	$ 729.8	26.5	10.3	0	-
HCM Lane LOS	B	A	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	15.7	1.4	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	83.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	108	14	16	20	4	49	19	642	25	66	784	162
Future Vol, veh/h	108	14	16	20	4	49	19	642	25	66	784	162
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	12	33	2	2	2	2	38	10	2	42	2	11
Mvmt Flow	111	14	16	21	4	51	20	662	26	68	808	167

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1771	1756	892	1758	1826	675	975	0	0	688	0	0
Stage 1	1028	1028	-	715	715	-	-	-	-	-	-	-
Stage 2	743	728	-	1043	1111	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.83	6.22	7.12	6.52	6.22	4.48	-	-	4.52	-	-
Critical Hdwy Stg 1	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.297	3.318	3.518	4.018	3.318	2.542	-	-	2.578	-	-
Pot Cap-1 Maneuver	~ 61	72	341	66	77	454	582	-	-	746	-	-
Stage 1	271	275	-	422	434	-	-	-	-	-	-	-
Stage 2	392	386	-	277	285	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 41	54	341	41	58	454	582	-	-	746	-	-
Mov Cap-2 Maneuver	~ 41	54	-	41	58	-	-	-	-	-	-	-
Stage 1	256	218	-	398	410	-	-	-	-	-	-	-
Stage 2	326	364	-	195	226	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	1096.5	89.7	0.3	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	582	-	-	47	110	746	-	-
HCM Lane V/C Ratio	0.034	-	-	3.027	0.684	0.091	-	-
HCM Control Delay (s)	11.4	0	-	$ 1096.5	89.7	10.3	0	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	15.4	3.6	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	68	17	10	31	1	10	0	20	0	0	0
Future Vol, veh/h	1	68	17	10	31	1	10	0	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	85	21	13	39	1	13	0	25	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	40	0	0	106	0	0	164	164	96	176	174	40
Stage 1	-	-	-	-	-	-	98	98	-	66	66	-
Stage 2	-	-	-	-	-	-	66	66	-	110	108	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1570	-	-	1485	-	-	801	729	960	786	719	1031
Stage 1	-	-	-	-	-	-	908	814	-	945	840	-
Stage 2	-	-	-	-	-	-	945	840	-	895	806	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1485	-	-	795	722	960	760	712	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-	795	722	-	760	712	-
Stage 1	-	-	-	-	-	-	907	813	-	944	832	-
Stage 2	-	-	-	-	-	-	936	832	-	871	805	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.8	9.2	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	898	1570	-	-	1485	-	-	-
HCM Lane V/C Ratio	0.042	0.001	-	-	0.008	-	-	-
HCM Control Delay (s)	9.2	7.3	0	-	7.4	0	-	0
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	52	11	36	59	6	9	1	33	1	0	0
Future Vol, veh/h	0	52	11	36	59	6	9	1	33	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	65	14	45	74	8	11	1	41	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	79	0	0	240	244	72	261	247	78
Stage 1	-	-	-	-	-	-	72	72	-	168	168	-
Stage 2	-	-	-	-	-	-	168	172	-	93	79	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1515	-	-	1519	-	-	714	658	990	692	655	983
Stage 1	-	-	-	-	-	-	938	835	-	834	759	-
Stage 2	-	-	-	-	-	-	834	756	-	914	829	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1515	-	-	1519	-	-	697	638	990	646	635	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	697	638	-	646	635	-
Stage 1	-	-	-	-	-	-	938	835	-	834	735	-
Stage 2	-	-	-	-	-	-	808	733	-	875	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.7	9.3	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	899	1515	-	-	1519	-	-	646
HCM Lane V/C Ratio	0.06	-	-	-	0.03	-	-	0.002
HCM Control Delay (s)	9.3	0	-	-	7.4	0	-	10.6
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	128

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	0	120	124	0	53	44	490	66	21	790	14
Future Vol, veh/h	41	0	120	124	0	53	44	490	66	21	790	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	430	-	-	-	-	405
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	12	2	10	2
Mvmt Flow	46	0	133	138	0	59	49	544	73	23	878	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1632	1639	878	1678	1619	581	894	0	0	617	0	0
Stage 1	924	924	-	679	679	-	-	-	-	-	-	-
Stage 2	708	715	-	999	940	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	81	100	347	~ 75	103	514	759	-	-	963	-	-
Stage 1	323	348	-	441	451	-	-	-	-	-	-	-
Stage 2	426	434	-	293	342	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	66	89	347	~ 42	92	514	759	-	-	963	-	-
Mov Cap-2 Maneuver	66	89	-	~ 42	92	-	-	-	-	-	-	-
Stage 1	302	331	-	412	422	-	-	-	-	-	-	-
Stage 2	353	406	-	172	326	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	51.2	$ 1224.7	0.7	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	66	347	58	963	-	-
HCM Lane V/C Ratio	0.064	-	-	0.69	0.384	3.391	0.024	-	-
HCM Control Delay (s)	10.1	-	-	137.5	21.3	$ 1224.7	8.8	0	-
HCM Lane LOS	B	-	-	F	C	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	3	1.8	20.9	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	127.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	1	83	88	0	36	135	744	146	64	602	45
Future Vol, veh/h	30	1	83	88	0	36	135	744	146	64	602	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	430	-	-	-	-	405
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	12	2	10	2
Mvmt Flow	33	1	92	98	0	40	150	827	162	71	669	50

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2039	2100	669	2091	2069	908	719	0	0	989	0	0
Stage 1	811	811	-	1208	1208	-	-	-	-	-	-	-
Stage 2	1228	1289	-	883	861	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	42	52	458	~ 38	54	334	882	-	-	699	-	-
Stage 1	373	393	-	224	256	-	-	-	-	-	-	-
Stage 2	218	234	-	340	372	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 28	36	458	~ 22	37	334	882	-	-	699	-	-
Mov Cap-2 Maneuver	~ 28	36	-	~ 22	37	-	-	-	-	-	-	-
Stage 1	310	326	-	186	212	-	-	-	-	-	-	-
Stage 2	159	194	-	224	308	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	135.1	$ 1882.8	1.3	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	882	-	-	28	458	30	699	-	-
HCM Lane V/C Ratio	0.17	-	-	1.23	0.201	4.593	0.102	-	-
HCM Control Delay (s)	9.9	-	-	$ 457.1	14.8	$ 1882.8	10.7	0	-
HCM Lane LOS	A	-	-	F	B	F	B	A	-
HCM 95th %tile Q(veh)	0.6	-	-	4	0.7	16.6	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	48.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	88	596	133	183	927
Future Vol, veh/h	78	88	596	133	183	927
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	590	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	38	15	8	22	9	5
Mvmt Flow	81	92	621	139	191	966

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1969	621	0	0	760	0
Stage 1	621	-	-	-	-	-
Stage 2	1348	-	-	-	-	-
Critical Hdwy	6.78	6.35	-	-	4.19	-
Critical Hdwy Stg 1	5.78	-	-	-	-	-
Critical Hdwy Stg 2	5.78	-	-	-	-	-
Follow-up Hdwy	3.842	3.435	-	-	2.281	-
Pot Cap-1 Maneuver	~ 55	465	-	-	821	-
Stage 1	473	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 27	465	-	-	821	-
Mov Cap-2 Maneuver	~ 27	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	101	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 576.7	0	1.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	27	465	821	-
HCM Lane V/C Ratio	-	-	3.009	0.197	0.232	-
HCM Control Delay (s)	-	-	$ 1210.8	14.6	10.7	0
HCM Lane LOS	-	-	F	B	B	A
HCM 95th %tile Q(veh)	-	-	9.9	0.7	0.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	68.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	100	179	956	110	130	756
Future Vol, veh/h	100	179	956	110	130	756
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	590	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	38	15	8	22	9	5
Mvmt Flow	104	186	996	115	135	788

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2054	996	0	0	1111	0
Stage 1	996	-	-	-	-	-
Stage 2	1058	-	-	-	-	-
Critical Hdwy	6.78	6.35	-	-	4.19	-
Critical Hdwy Stg 1	5.78	-	-	-	-	-
Critical Hdwy Stg 2	5.78	-	-	-	-	-
Follow-up Hdwy	3.842	3.435	-	-	2.281	-
Pot Cap-1 Maneuver	~ 48	280	-	-	603	-
Stage 1	307	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 29	280	-	-	603	-
Mov Cap-2 Maneuver	~ 29	-	-	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	172	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 544.7	0	1.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	29	280	603	-
HCM Lane V/C Ratio	-	-	3.592	0.666	0.225	-
HCM Control Delay (s)	-	-	$ 1447.7	40.2	12.7	0
HCM Lane LOS	-	-	F	E	B	A
HCM 95th %tile Q(veh)	-	-	12.5	4.4	0.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	33	71	0	44	42
Future Vol, veh/h	0	33	71	0	44	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	77	0	48	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	219	77	0	0	77	0
Stage 1	77	-	-	-	-	-
Stage 2	142	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	769	984	-	-	1522	-
Stage 1	946	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	744	984	-	-	1522	-
Mov Cap-2 Maneuver	744	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	857	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	3.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	984	1522	-
HCM Lane V/C Ratio	-	-	0.036	0.031	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	48	60	0	42	80
Future Vol, veh/h	0	48	60	0	42	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	52	65	0	46	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	244	65	0	0	65	0
Stage 1	65	-	-	-	-	-
Stage 2	179	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	744	999	-	-	1537	-
Stage 1	958	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	721	999	-	-	1537	-
Mov Cap-2 Maneuver	721	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	2.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	999	1537	-
HCM Lane V/C Ratio	-	-	0.052	0.03	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

HCM 6th TWSC
7: Spine Road & Number 2 Road

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	26	46	33	52	78
Future Vol, veh/h	62	26	46	33	52	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	420	655	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	28	50	36	57	85

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	203	67
Stage 1	-	-	-	-	67	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1499	-	786	997
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1499	-	760	997
Mov Cap-2 Maneuver	-	-	-	-	760	-
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.4	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	886	-	-	1499	-
HCM Lane V/C Ratio	0.159	-	-	0.033	-
HCM Control Delay (s)	9.8	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

HCM 6th TWSC
7: Spine Road & Number 2 Road

Intersection	
Int Delay, s/veh	5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	46	59	87	39	41	64
Future Vol, veh/h	46	59	87	39	41	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	420	655	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	64	95	42	45	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	114	0	282	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	232	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1475	-	708	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	807	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1475	-	663	1018
Mov Cap-2 Maneuver	-	-	-	-	663	-
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	842	-	-	1475	-
HCM Lane V/C Ratio	0.136	-	-	0.064	-
HCM Control Delay (s)	9.9	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	7.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	108	6	5	142	9
Future Vol, veh/h	10	108	6	5	142	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	117	7	5	154	10

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	328	10	0	0	12	0
Stage 1	10	-	-	-	-	-
Stage 2	318	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	666	1071	-	-	1607	-
Stage 1	1013	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	602	1071	-	-	1607	-
Mov Cap-2 Maneuver	602	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1005	1607	-
HCM Lane V/C Ratio	-	-	0.128	0.096	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.3	-

Intersection	
Int Delay, s/veh	7.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	163	9	12	134	5
Future Vol, veh/h	10	163	9	12	134	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	177	10	13	146	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	314	17	0	0	23	0
Stage 1	17	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	679	1062	-	-	1592	-
Stage 1	1006	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	617	1062	-	-	1592	-
Mov Cap-2 Maneuver	617	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	7.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1019	1592	-
HCM Lane V/C Ratio	-	-	0.185	0.091	-
HCM Control Delay (s)	-	-	9.3	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.3	-

HCM 6th TWSC
9: Orange Blossom Road & Revels Road

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	0	0	4	12	7
Future Vol, veh/h	7	0	0	4	12	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	0	0	4	13	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	4	0	-	0	18	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1618	-	-	-	1000	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1618	-	-	-	995	1082
Mov Cap-2 Maneuver	-	-	-	-	995	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1618	-	-	-	1025
HCM Lane V/C Ratio	0.005	-	-	-	0.02
HCM Control Delay (s)	7.2	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th TWSC
9: Orange Blossom Road & Revels Road

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	0	0	13	8	7
Future Vol, veh/h	7	0	0	13	8	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	0	0	14	9	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	14	0	-	0	23	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1604	-	-	-	993	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1604	-	-	-	988	1075
Mov Cap-2 Maneuver	-	-	-	-	988	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	SB
HCM Control Delay, s	7.3	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1604	-	-	-	1027
HCM Lane V/C Ratio	0.005	-	-	-	0.016
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Appendix L
Intersection Volume Projections

Project No. 23017 Mission Rise

Intersection Volumes

Counts on 7/19/2023

Period	Tgen	Enter	Exit		SF	AGR	Years	Legend
AM Peak		81	241		1.06	2.00%	10	Backg'd + {Vested} + (Project) = T

Intersection= SR 19 & CR 48 — **1**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.06	0	1.20		0						0			0	0	
EB	T	0	1.06	0	1.20		0						0			0	0	
	R	0	1.06	0	1.20		0						0			0	0	
	L	326	1.06	346	1.20		415	32	14		36	7	89	23%		18	522	415 + {89} + (18) = 522
WB	T	0	1.06	0	1.20		0						0			0	0	
	R	216	1.06	229	1.20		275				59		59			0	334	275 + {59} = 334
	L	0	1.06	0	1.20		0						0			0	0	
NB	T	298	1.06	316	1.20		379	21	24		12	14	71		2%	5	455	379 + {71} + (5) = 455
	R	429	1.06	455	1.20		546	82	23		14	20	139		23%	55	740	546 + {139} + (55) = 740
	L	261	1.06	277	1.20		332				81		81			0	413	332 + {81} = 413
SB	T	92	1.06	98	1.20		118	8	14		33	5	60	2%		2	180	118 + {60} + (2) = 180
	R	0	1.06	0	1.20		0						0			0	0	

Intersection= SR 19 & Central Ave — **2**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	33	1.06	35	1.20		42	62		16			78		10%	24	144	42 + {78} + (24) = 144
EB	T	3	1.06	3	1.20		4						0			0	4	4
	R	9	1.06	10	1.20		12						0			0	12	12
	L	10	1.06	11	1.20		13						0			0	13	13
WB	T	1	1.06	1	1.20		1						0			0	1	1
	R	14	1.06	15	1.20		18		47				47			0	65	18 + {47} = 65
	L	11	1.06	12	1.20		14						0			0	14	14
NB	T	356	1.06	377	1.20		452	82		42	26	34	184		15%	36	672	452 + {184} + (36) = 672
	R	23	1.06	24	1.20		29						0			0	29	29
	L	4	1.06	4	1.20		5		32				32			0	37	5 + {32} = 37
SB	T	404	1.06	428	1.20		514	32		24	69	12	137	15%		12	663	514 + {137} + (12) = 663
	R	7	1.06	7	1.20		8	24		9			33	10%		8	49	8 + {33} + (8) = 49

Intersection= Central Ave & S. Florida Ave — **3**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	1	1.06	1	1.20		1						0			0	1	1
EB	T	35	1.06	37	1.20		44						0		10%	24	68	44 + (24) = 68
	R	11	1.06	12	1.20		14			3			3			0	17	14 + {3} = 17
	L	1	1.06	1	1.20		1			9			9			0	10	1 + {9} = 10
WB	T	18	1.06	19	1.20		23						0	10%		8	31	23 + (8) = 31
	R	1	1.06	1	1.20		1						0			0	1	1
	L	4	1.06	4	1.20		5			5			5			0	10	5 + {5} = 10
NB	T	0	1.06	0	1.20		0						0			0	0	
	R	3	1.06	3	1.20		4			16			16			0	20	4 + {16} = 20
	L	0	1.06	0	1.20		0						0			0	0	
SB	T	0	1.06	0	1.20		0						0			0	0	
	R	0	1.06	0	1.20		0						0			0	0	

Intersection= SR 19 & Revels Rd — **4**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	2	1.06	2	1.20		2	3					3		15%	36	41	2 + {3} + (36) = 41
EB	T	0	1.06	0	1.20		0						0			0	0	
	R	5	1.06	5	1.20		6	30					30		35%	84	120	6 + {30} + (84) = 120
	L	5	1.06	5	1.20		6		37			81	118			0	124	6 + {118} = 124
WB	T	0	1.06	0	1.20		0						0			0	0	
	R	4	1.06	4	1.20		5					48	48			0	53	5 + {48} = 53
	L	3	1.06	3	1.20		4	12					12	35%		28	44	4 + {12} + (28) = 44
NB	T	306	1.06	324	1.20		389	67			26		93	10%		8	490	389 + {93} + (8) = 490
	R	12	1.06	13	1.20		16		22			28	50			0	66	16 + {50} = 66
	L	3	1.06	3	1.20		4					17	17			0	21	4 + {17} = 21
SB	T	410	1.06	435	1.20		522	175			69		244		10%	24	790	522 + {244} + (24) = 790
	R	0	1.06	0	1.20		0	2					2	15%		12	14	{2} + (12) = 14

Intersection= SR 19 & CR 455 — **5**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.00	0	1.20		0						0			0	0	
EB	T	0	1.00	0	1.20		0						0			0	0	
	R	0	1.00	0	1.20		0						0			0	0	
	L	65	1.00	65	1.20		78						0			0	78	78
WB	T	0	1.00	0	1.20		0						0			0	0	
	R	43	1.00	43	1.20		52	16			5	7	28	10%		8	88	52 + {28} + (8) = 88
	L	0	1.00	0	1.20		0						0			0	0	
NB	T	394	1.00	394	1.20		473	55			21	19	95	35%		28	596	473 + {95} + (28) = 596
	R	111	1.00	111	1.20		133						0			0	133	133
	L	70	1.00	70	1.20		84	41			14	20	75		10%	24	183	84 + {75} + (24) = 183
SB	T	492	1.00	492	1.20		590	144			55	54	253		35%	84	927	590 + {253} + (84) = 927
	R	0	1.00	0	1.20		0						0			0	0	

Counts on 1/24/2023

Intersection=		Interconnect Rd & Spine Rd (Proposed)															6
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						0									0	0	
EB	T						0									0	0	
	R						0									0	0	
	L						0									0	0	
WB	T						0									0	0	
	R						25							10%		8	33	25 + (8) = 33
	L						0									0	0	
NB	T						20									51	71	20 + (51) = 71
	R						0									0	0	
	L						20								10%	24	44	20 + (24) = 44
SB	T						25									16	41	25 + (16) = 41
	R						0									0	0	

Intersection=		Number 2 Rd & Spine Road / North Access															7
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						0									0	0	
EB	T						59						3			0	62	59 + {3} = 62
	R						15							15%		11	26	15 + (11) = 26
	L						30							20%		16	46	30 + (16) = 46
WB	T						28						5			0	33	28 + {5} = 33
	R						0									0	0	
	L						15								15%	37	52	15 + (37) = 52
NB	T						0									0	0	
	R						30								20%	48	78	30 + (48) = 78
	L						0									0	0	
SB	T						0									0	0	
	R						0									0	0	

Intersection=		Revels Rd & Spine Rd / Proposed															8
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						0									0	0	
EB	T						0									0	0	
	R						0									0	0	
	L						3								3%	7	10	3 + (7) = 10
WB	T						0									0	0	
	R						62							25%		46	108	62 + (46) = 108
	L						0									0	0	
NB	T						4							2%		2	6	4 + (2) = 6
	R						3							3%		2	5	3 + (2) = 5
	L						74								25%	68	142	74 + (68) = 142
SB	T						4								2%	5	9	4 + (5) = 9
	R						0									0	0	

Intersection=		Revels Rd & Orange Blossom Rd / South Access															9
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						7									0	7	7
EB	T						0									0	0	
	R						0									0	0	
	L						0									0	0	
WB	T						0									0	0	
	R						0							5%		4	4	(4)
	L						0									0	0	
NB	T						0									0	0	
	R						0									0	0	
	L						0								5%	12	12	(12)
SB	T						0									0	0	
	R						7									0	7	7

Project No. 23017 Mission Rise

Intersection Volumes

Counts on 7/19/2023

Period	Tgen	Enter	Exit		SF	AGR	Years	Legend
PM Peak		284	167		1.06	2.00%	10	Backg'd + {Vested} + (Project) = T

Intersection= SR 19 & CR 48 — **1**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.06	0	1.20		0						0			0	0	
EB	T	0	1.06	0	1.20		0						0			0	0	
	R	0	1.06	0	1.20		0						0			0	0	
	L	409	1.06	434	1.20		521	92	23		25	24	164	23%		66	751	521 + {164} + (66) = 751
WB	T	0	1.06	0	1.20		0						0			0	0	
	R	301	1.06	319	1.20		383				100		100			0	483	383 + {100} = 483
	L	0	1.06	0	1.20		0						0			0	0	
NB	T	68	1.06	72	1.20		86	15	14		37	9	75		2%	3	164	86 + {75} + (3) = 164
	R	333	1.06	353	1.20		424	58	14		39	14	125		23%	39	588	424 + {125} + (39) = 588
	L	287	1.06	304	1.20		365				86		86			0	451	365 + {86} = 451
SB	T	79	1.06	84	1.20		101	23	24		24	16	87	2%		6	194	101 + {87} + (6) = 194
	R	0	1.06	0	1.20		0						0			0	0	

Intersection= SR 19 & Central Ave — **2**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	30	1.06	32	1.20		38	44		9			53		10%	17	108	38 + {53} + (17) = 108
EB	T	11	1.06	12	1.20		14						0			0	14	14
	R	12	1.06	13	1.20		16						0			0	16	16
	L	16	1.06	17	1.20		20						0			0	20	20
WB	T	3	1.06	3	1.20		4						0			0	4	4
	R	13	1.06	14	1.20		17		32				32			0	49	17 + {32} = 49
	L	15	1.06	16	1.20		19						0			0	19	19
NB	T	342	1.06	363	1.20		436	58		24	76	23	181		15%	25	642	436 + {181} + (25) = 642
	R	20	1.06	21	1.20		25						0			0	25	25
	L	15	1.06	16	1.20		19		47				47			0	66	19 + {47} = 66
SB	T	408	1.06	432	1.20		518	92		42	49	40	223	15%		43	784	518 + {223} + (43) = 784
	R	38	1.06	40	1.20		48	69		16			85	10%		29	162	48 + {85} + (29) = 162

Intersection= Central Ave & S. Florida Ave — **3**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.06	0	1.20		0						0			0	0	
EB	T	27	1.06	29	1.20		35						0		10%	17	52	35 + (17) = 52
	R	5	1.06	5	1.20		6			5			5			0	11	6 + {5} = 11
	L	16	1.06	17	1.20		20			16			16			0	36	20 + {16} = 36
WB	T	24	1.06	25	1.20		30						0	10%		29	59	30 + (29) = 59
	R	5	1.06	5	1.20		6						0			0	6	6
	L	5	1.06	5	1.20		6			3			3			0	9	6 + {3} = 9
NB	T	1	1.06	1	1.20		1						0			0	1	1
	R	19	1.06	20	1.20		24			9			9			0	33	24 + {9} = 33
	L	1	1.06	1	1.20		1						0			0	1	1
SB	T	0	1.06	0	1.20		0						0			0	0	
	R	0	1.06	0	1.20		0						0			0	0	

Intersection= SR 19 & Revels Rd — **4**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	3	1.06	3	1.20		4	1					1		15%	25	30	4 + {1} + (25) = 30
EB	T	1	1.06	1	1.20		1						0			0	1	1
	R	4	1.06	4	1.20		5	21					21		35%	57	83	5 + {21} + (57) = 83
	L	8	1.06	8	1.20		10		22			56	78			0	88	10 + {78} = 88
WB	T	0	1.06	0	1.20		0						0			0	0	
	R	3	1.06	3	1.20		4					32	32			0	36	4 + {32} = 36
	L	1	1.06	1	1.20		1	35					35	35%		99	135	1 + {35} + (99) = 135
NB	T	351	1.06	372	1.20		446	194			76		270	10%		28	744	446 + {270} + (28) = 744
	R	11	1.06	12	1.20		14		37			95	132			0	146	14 + {132} = 146
	L	7	1.06	7	1.20		8					56	56			0	64	8 + {56} = 64
SB	T	324	1.06	343	1.20		412	124			49		173		10%	17	602	412 + {173} + (17) = 602
	R	0	1.06	0	1.20		0	2					2	15%		43	45	{2} + (43) = 45

Intersection= SR 19 & CR 455 — **5**

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.00	0	1.20		0						0			0	0	
EB	T	0	1.00	0	1.20		0						0			0	0	
	R	0	1.00	0	1.20		0						0			0	0	
	L	83	1.00	83	1.20		100						0			0	100	100
WB	T	0	1.00	0	1.20		0						0			0	0	
	R	55	1.00	55	1.20		66	46			15	24	85	10%		28	179	66 + {85} + (28) = 179
	L	0	1.00	0	1.20		0						0			0	0	
NB	T	476	1.00	476	1.20		571	161			61	64	286	35%		99	956	571 + {286} + (99) = 956
	R	92	1.00	92	1.20		110						0			0	110	110
	L	50	1.00	50	1.20		60	29			10	14	53		10%	17	130	60 + {53} + (17) = 130
SB	T	433	1.00	433	1.20		520	102			39	37	178		35%	58	756	520 + {178} + (58) = 756
	R	0	1.00	0	1.20		0						0			0	0	

Counts on 1/24/2023

Intersection=		Interconnect Rd & Spine Rd (Proposed)															6
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						0									0	0	
EB	T						0									0	0	
	R						0									0	0	
	L						0									0	0	
WB	T						0									0	0	
	R						20							10%		28	48	20 + (28) = 48
	L						0									0	0	
NB	T						25									36	61	25 + (36) = 61
	R						0									0	0	
	L						25								10%	17	42	25 + (17) = 42
SB	T						20									61	81	20 + (61) = 81
	R						0									0	0	

Intersection=		Number 2 Rd & Spine Road / North Access															7
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						0									0	0	
EB	T						41						5			0	46	41 + {5} = 46
	R						15							15%		44	59	15 + (44) = 59
	L						30							20%		57	87	30 + (57) = 87
WB	T						36						3			0	39	36 + {3} = 39
	R						0									0	0	
	L						15								15%	26	41	15 + (26) = 41
NB	T						0									0	0	
	R						30								20%	34	64	30 + (34) = 64
	L						0									0	0	
SB	T						0									0	0	
	R						0									0	0	

Intersection=		Revels Rd & Spine Rd / Proposed															8
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						0									0	0	
EB	T						0									0	0	
	R						0									0	0	
	L						4								3%	6	10	4 + (6) = 10
WB	T						0									0	0	
	R						74							25%		89	163	74 + (89) = 163
	L						0									0	0	
NB	T						3							2%		6	9	3 + (6) = 9
	R						4							3%		8	12	4 + (8) = 12
	L						62								25%	72	134	62 + (72) = 134
SB	T						3								2%	2	5	3 + (2) = 5
	R						0									0	0	

Intersection=		Revels Rd & Orange Blossom Rd / South Access															9
Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	The Reserve	Whisp. Hills	Talichet	Lake Hills	Watermark	Vested	%Proj Ent	%Proj Ext	Project	Total	Formula
	L						7									0	7	7
EB	T						0									0	0	
	R						0									0	0	
	L						0									0	0	
WB	T						0									0	0	
	R						0							5%		13	13	(13)
	L						0									0	0	
NB	T						0									0	0	
	R						0									0	0	
	L						0								5%	8	8	(8)
SB	T						0									0	0	
	R						7									0	7	7

Appendix M
Background Conditions / Buildout Conditions with Mitigation

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	504	334	450	685	413	178
Future Volume (veh/h)	504	334	450	685	413	178
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	520	203	464	0	426	184
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	386	312	695		506	1139
Arrive On Green	0.23	0.23	0.39	0.00	0.17	0.63
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	520	203	464	0	426	184
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	22.7	13.4	21.2	0.0	14.2	4.1
Cycle Q Clear(g_c), s	22.7	13.4	21.2	0.0	14.2	4.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	386	312	695		506	1139
V/C Ratio(X)	1.35	0.65	0.67		0.84	0.16
Avail Cap(c_a), veh/h	386	312	695		539	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	34.1	24.4	0.0	16.8	7.5
Incr Delay (d2), s/veh	172.2	4.7	5.0	0.0	11.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	41.4	8.1	14.4	0.0	10.4	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	209.9	38.8	29.5	0.0	27.8	7.8
LnGrp LOS	F	D	C		C	A
Approach Vol, veh/h	723		464	A		610
Approach Delay, s/veh	161.9		29.5			21.8
Approach LOS	F		C			C

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	45.0		30.0		68.0
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	18.5	38.6		22.7		38.6
Max Q Clear Time (g_c+I1), s	16.2	23.2		24.7		6.1
Green Ext Time (p_c), s	0.4	2.5		0.0		1.0

Intersection Summary	
HCM 6th Ctrl Delay	80.1
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	685	483	161	549	451	188
Future Volume (veh/h)	685	483	161	549	451	188
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	706	302	166	0	465	194
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	380	307	685		740	1149
Arrive On Green	0.23	0.23	0.39	0.00	0.18	0.63
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	706	302	166	0	465	194
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	22.7	22.2	6.3	0.0	16.0	4.4
Cycle Q Clear(g_c), s	22.7	22.2	6.3	0.0	16.0	4.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	380	307	685		740	1149
V/C Ratio(X)	1.86	0.98	0.24		0.63	0.17
Avail Cap(c_a), veh/h	380	307	685		747	1149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	38.3	20.6	0.0	12.3	7.4
Incr Delay (d2), s/veh	395.5	46.9	0.8	0.0	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	79.4	16.3	4.8	0.0	9.5	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	433.9	85.1	21.5	0.0	13.9	7.8
LnGrp LOS	F	F	C		B	A
Approach Vol, veh/h	1008		166	A		659
Approach Delay, s/veh	329.4		21.5			12.1
Approach LOS	F		C			B

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.6	45.0		30.0		69.6
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	18.5	38.6		22.7		38.6
Max Q Clear Time (g_c+I1), s	18.0	8.3		24.7		6.4
Green Ext Time (p_c), s	0.1	0.9		0.0		1.1

Intersection Summary	
HCM 6th Ctrl Delay	187.5
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	41.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	120	4	12	13	1	65	14	636	29	37	651	41
Future Vol, veh/h	120	4	12	13	1	65	14	636	29	37	651	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	12	33	2	2	2	2	38	10	2	42	2	11
Mvmt Flow	124	4	12	13	1	67	14	656	30	38	671	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1501	1482	692	1475	1488	671	713	0	0	686	0	0
Stage 1	768	768	-	699	699	-	-	-	-	-	-	-
Stage 2	733	714	-	776	789	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.83	6.22	7.12	6.52	6.22	4.48	-	-	4.52	-	-
Critical Hdwy Stg 1	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.297	3.318	3.518	4.018	3.318	2.542	-	-	2.578	-	-
Pot Cap-1 Maneuver	~ 95	107	444	104	124	456	742	-	-	747	-	-
Stage 1	380	369	-	430	442	-	-	-	-	-	-	-
Stage 2	397	392	-	390	402	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 74	95	444	89	110	456	742	-	-	747	-	-
Mov Cap-2 Maneuver	~ 74	95	-	89	110	-	-	-	-	-	-	-
Stage 1	368	338	-	417	428	-	-	-	-	-	-	-
Stage 2	327	380	-	343	368	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 472.6	24.5	0.2	0.5
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	742	-	-	80	265	747	-	-
HCM Lane V/C Ratio	0.019	-	-	1.753	0.307	0.051	-	-
HCM Control Delay (s)	9.9	0	-	$ 472.6	24.5	10.1	0	-
HCM Lane LOS	A	A	-	F	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	11.9	1.3	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	50.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	91	14	16	20	4	49	19	617	25	66	741	133
Future Vol, veh/h	91	14	16	20	4	49	19	617	25	66	741	133
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	12	33	2	2	2	2	38	10	2	42	2	11
Mvmt Flow	94	14	16	21	4	51	20	636	26	68	764	137

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1686	1671	833	1673	1726	649	901	0	0	662	0	0
Stage 1	969	969	-	689	689	-	-	-	-	-	-	-
Stage 2	717	702	-	984	1037	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.83	6.22	7.12	6.52	6.22	4.48	-	-	4.52	-	-
Critical Hdwy Stg 1	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.83	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.297	3.318	3.518	4.018	3.318	2.542	-	-	2.578	-	-
Pot Cap-1 Maneuver	~ 70	81	369	76	89	470	624	-	-	764	-	-
Stage 1	292	294	-	436	446	-	-	-	-	-	-	-
Stage 2	405	397	-	299	308	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 49	63	369	50	69	470	624	-	-	764	-	-
Mov Cap-2 Maneuver	~ 49	63	-	50	69	-	-	-	-	-	-	-
Stage 1	277	240	-	414	423	-	-	-	-	-	-	-
Stage 2	340	377	-	219	251	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 701.2	65.2	0.3	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	624	-	-	57	130	764	-	-
HCM Lane V/C Ratio	0.031	-	-	2.188	0.579	0.089	-	-
HCM Control Delay (s)	11	0	-	$ 701.2	65.2	10.2	0	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	12.3	2.9	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	44	17	10	23	1	10	0	20	0	0	0
Future Vol, veh/h	1	44	17	10	23	1	10	0	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	55	21	13	29	1	13	0	25	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	76	0	0	124	124	66	136	134	30
Stage 1	-	-	-	-	-	-	68	68	-	56	56	-
Stage 2	-	-	-	-	-	-	56	56	-	80	78	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1583	-	-	1523	-	-	850	766	998	835	757	1044
Stage 1	-	-	-	-	-	-	942	838	-	956	848	-
Stage 2	-	-	-	-	-	-	956	848	-	929	830	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1583	-	-	1523	-	-	843	758	998	808	749	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	843	758	-	808	749	-
Stage 1	-	-	-	-	-	-	941	837	-	955	840	-
Stage 2	-	-	-	-	-	-	947	840	-	905	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2.2	9	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	940	1583	-	-	1523	-	-	-
HCM Lane V/C Ratio	0.04	0.001	-	-	0.008	-	-	-
HCM Control Delay (s)	9	7.3	0	-	7.4	0	-	0
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	35	11	36	30	6	9	1	33	1	0	0
Future Vol, veh/h	0	35	11	36	30	6	9	1	33	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	44	14	45	38	8	11	1	41	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	58	0	0	183	187	51	204	190	42
Stage 1	-	-	-	-	-	-	51	51	-	132	132	-
Stage 2	-	-	-	-	-	-	132	136	-	72	58	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1562	-	-	1546	-	-	778	708	1017	754	705	1029
Stage 1	-	-	-	-	-	-	962	852	-	871	787	-
Stage 2	-	-	-	-	-	-	871	784	-	938	847	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1562	-	-	1546	-	-	760	687	1017	706	684	1029
Mov Cap-2 Maneuver	-	-	-	-	-	-	760	687	-	706	684	-
Stage 1	-	-	-	-	-	-	962	852	-	871	763	-
Stage 2	-	-	-	-	-	-	845	760	-	899	847	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.7	9.1	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	940	1562	-	-	1546	-	-	706
HCM Lane V/C Ratio	0.057	-	-	-	0.029	-	-	0.002
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	10.1
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	54.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	36	124	0	53	16	482	66	21	766	2
Future Vol, veh/h	5	0	36	124	0	53	16	482	66	21	766	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	12	2	10	2
Mvmt Flow	6	0	40	138	0	59	18	536	73	23	851	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1536	1543	852	1527	1508	573	853	0	0	609	0	0
Stage 1	898	898	-	609	609	-	-	-	-	-	-	-
Stage 2	638	645	-	918	899	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	95	115	359	~ 96	121	519	786	-	-	970	-	-
Stage 1	334	358	-	482	485	-	-	-	-	-	-	-
Stage 2	465	467	-	326	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	79	106	359	~ 80	112	519	786	-	-	970	-	-
Mov Cap-2 Maneuver	79	106	-	~ 80	112	-	-	-	-	-	-	-
Stage 1	322	342	-	465	468	-	-	-	-	-	-	-
Stage 2	398	451	-	277	342	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.5	$ 478.9	0.3	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	786	-	-	251	107	970	-	-
HCM Lane V/C Ratio	0.023	-	-	0.181	1.838	0.024	-	-
HCM Control Delay (s)	9.7	-	-	22.5	$ 478.9	8.8	0	-
HCM Lane LOS	A	-	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	15.9	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	48.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	26	88	0	36	36	716	146	64	585	2
Future Vol, veh/h	5	1	26	88	0	36	36	716	146	64	585	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	12	2	10	2
Mvmt Flow	6	1	29	98	0	40	40	796	162	71	650	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1770	1831	651	1765	1751	877	652	0	0	958	0	0
Stage 1	793	793	-	957	957	-	-	-	-	-	-	-
Stage 2	977	1038	-	808	794	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	65	76	469	~ 65	86	348	935	-	-	718	-	-
Stage 1	382	400	-	310	336	-	-	-	-	-	-	-
Stage 2	302	308	-	375	400	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	47	58	469	~ 49	66	348	935	-	-	718	-	-
Mov Cap-2 Maneuver	47	58	-	~ 49	66	-	-	-	-	-	-	-
Stage 1	346	338	-	281	304	-	-	-	-	-	-	-
Stage 2	242	279	-	296	338	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30	$ 653.3	0.4	1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	935	-	-	179	65	718	-	-
HCM Lane V/C Ratio	0.043	-	-	0.199	2.12	0.099	-	-
HCM Control Delay (s)	9	-	-	30	$ 653.3	10.6	0	-
HCM Lane LOS	A	-	-	D	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	13.1	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	26.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	80	568	133	159	843
Future Vol, veh/h	78	80	568	133	159	843
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	590	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	38	15	8	22	9	5
Mvmt Flow	81	83	592	139	166	878

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1802	592	0	0	731	0
Stage 1	592	-	-	-	-	-
Stage 2	1210	-	-	-	-	-
Critical Hdwy	6.78	6.35	-	-	4.19	-
Critical Hdwy Stg 1	5.78	-	-	-	-	-
Critical Hdwy Stg 2	5.78	-	-	-	-	-
Follow-up Hdwy	3.842	3.435	-	-	2.281	-
Pot Cap-1 Maneuver	~ 71	483	-	-	842	-
Stage 1	489	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 44	483	-	-	842	-
Mov Cap-2 Maneuver	~ 44	-	-	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	147	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 303.4	0	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	44	483	842	-
HCM Lane V/C Ratio	-	-	1.847	0.173	0.197	-
HCM Control Delay (s)	-	-	$ 600.2	14	10.3	0
HCM Lane LOS	-	-	F	B	B	A
HCM 95th %tile Q(veh)	-	-	8.3	0.6	0.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	40.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	100	151	857	110	113	698
Future Vol, veh/h	100	151	857	110	113	698
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	590	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	38	15	8	22	9	5
Mvmt Flow	104	157	893	115	118	727

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1856	893	0	0	1008	0
Stage 1	893	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Critical Hdwy	6.78	6.35	-	-	4.19	-
Critical Hdwy Stg 1	5.78	-	-	-	-	-
Critical Hdwy Stg 2	5.78	-	-	-	-	-
Follow-up Hdwy	3.842	3.435	-	-	2.281	-
Pot Cap-1 Maneuver	~ 65	322	-	-	661	-
Stage 1	347	-	-	-	-	-
Stage 2	320	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 46	322	-	-	661	-
Mov Cap-2 Maneuver	~ 46	-	-	-	-	-
Stage 1	347	-	-	-	-	-
Stage 2	224	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 322.1	0	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	46	322	661	-
HCM Lane V/C Ratio	-	-	2.264	0.488	0.178	-
HCM Control Delay (s)	-	-	$ 768.6	26.4	11.6	0
HCM Lane LOS	-	-	F	D	B	A
HCM 95th %tile Q(veh)	-	-	10.9	2.5	0.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	522	334	454	740	413	180
Future Volume (veh/h)	522	334	454	740	413	180
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	538	205	468	0	426	186
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	548	442	485		430	991
Arrive On Green	0.33	0.33	0.27	0.00	0.21	0.55
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	538	205	468	0	426	186
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	35.2	13.3	28.8	0.0	23.1	5.7
Cycle Q Clear(g_c), s	35.2	13.3	28.8	0.0	23.1	5.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	548	442	485		430	991
V/C Ratio(X)	0.98	0.46	0.96		0.99	0.19
Avail Cap(c_a), veh/h	548	442	485		430	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	29.3	39.4	0.0	31.2	12.6
Incr Delay (d2), s/veh	33.9	0.8	33.0	0.0	40.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	25.7	7.5	23.3	0.0	22.6	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.5	30.0	72.4	0.0	72.0	13.0
LnGrp LOS	E	C	E		E	B
Approach Vol, veh/h	743		468	A		612
Approach Delay, s/veh	59.4		72.4			54.1
Approach LOS	E		E			D

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.0	36.6		43.4		66.6
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	23.5	30.2		36.1		60.2
Max Q Clear Time (g_c+I1), s	25.1	30.8		37.2		7.7
Green Ext Time (p_c), s	0.0	0.0		0.0		1.1

Intersection Summary			
HCM 6th Ctrl Delay		60.9	
HCM 6th LOS		E	

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	17.7
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	882	1231	612
Demand Flow Rate, veh/h	1008	1319	670
Vehicles Circulating, veh/h	510	473	592
Vehicles Exiting, veh/h	1282	789	926
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	14.2	23.0	11.9
Approach LOS	B	C	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	R	L	TR
Assumed Moves	L	TR	LT	R	L	TR
RT Channelized						
Lane Util	0.587	0.413	0.387	0.613	0.706	0.294
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544
Entry Flow, veh/h	592	416	510	809	473	197
Cap Entry Lane, veh/h	893	893	923	923	829	829
Entry HV Adj Factor	0.909	0.827	0.917	0.943	0.901	0.943
Flow Entry, veh/h	538	344	468	763	426	186
Cap Entry, veh/h	811	738	847	871	746	782
V/C Ratio	0.663	0.466	0.552	0.876	0.571	0.238
Control Delay, s/veh	16.0	11.4	12.1	29.7	13.9	7.2
LOS	C	B	B	D	B	A
95th %tile Queue, veh	5	2	3	11	4	1

HCM 6th Signalized Intersection Summary
1: SR 19 & CR 48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	751	483	164	587	451	194
Future Volume (veh/h)	751	483	164	587	451	194
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1589	1767	1811	1737	1811
Adj Flow Rate, veh/h	774	359	169	0	465	200
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	21	9	6	11	6
Cap, veh/h	777	627	259		467	743
Arrive On Green	0.47	0.47	0.15	0.00	0.20	0.41
Sat Flow, veh/h	1668	1346	1767	1535	1654	1811
Grp Volume(v), veh/h	774	359	169	0	465	200
Grp Sat Flow(s),veh/h/ln	1668	1346	1767	1535	1654	1811
Q Serve(g_s), s	50.9	21.4	9.9	0.0	22.5	8.1
Cycle Q Clear(g_c), s	50.9	21.4	9.9	0.0	22.5	8.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	777	627	259		467	743
V/C Ratio(X)	1.00	0.57	0.65		1.00	0.27
Avail Cap(c_a), veh/h	777	627	259		467	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	21.4	44.3	0.0	33.2	21.5
Incr Delay (d2), s/veh	31.4	1.3	12.2	0.0	40.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	33.4	10.6	8.9	0.0	12.2	6.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	60.7	22.7	56.5	0.0	73.6	22.4
LnGrp LOS	E	C	E		E	C
Approach Vol, veh/h	1133		169	A		665
Approach Delay, s/veh	48.7		56.5			58.2
Approach LOS	D		E			E

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	29.0	22.5		58.5		51.5
Change Period (Y+Rc), s	6.5	6.4		7.3		6.4
Max Green Setting (Gmax), s	22.5	16.1		51.2		45.1
Max Q Clear Time (g_c+I1), s	24.5	11.9		52.9		10.1
Green Ext Time (p_c), s	0.0	0.3		0.0		1.1

Intersection Summary						
HCM 6th Ctrl Delay			52.6			
HCM 6th LOS			D			

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	1272	774	665
Demand Flow Rate, veh/h	1454	825	728
Vehicles Circulating, veh/h	184	516	851
Vehicles Exiting, veh/h	1157	1063	787
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.6	15.7	23.4
Approach LOS	B	C	C

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	R	L	TR
Assumed Moves	L	TR	LT	R	L	TR
RT Channelized						
Lane Util	0.585	0.415	0.223	0.777	0.709	0.291
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544
Entry Flow, veh/h	851	603	184	641	516	212
Cap Entry Lane, veh/h	1201	1201	888	888	655	655
Entry HV Adj Factor	0.910	0.826	0.917	0.944	0.901	0.943
Flow Entry, veh/h	774	498	169	605	465	200
Cap Entry, veh/h	1092	992	815	838	590	618
V/C Ratio	0.708	0.502	0.207	0.722	0.788	0.324
Control Delay, s/veh	14.4	9.7	6.6	18.2	29.0	10.2
LOS	B	A	A	C	D	B
95th %tile Queue, veh	6	3	1	6	8	1

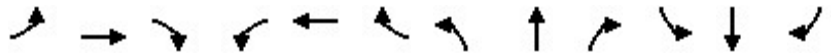
HCM 6th Signalized Intersection Summary
2: SR 19 & W Central Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	4	12	13	1	65	14	672	29	37	663	49
Future Volume (veh/h)	144	4	12	13	1	65	14	672	29	37	663	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1411	1870	1870	1870	1870	1337	1752	1870	1278	1870	1737
Adj Flow Rate, veh/h	148	4	12	13	1	67	14	693	30	38	684	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	33	2	2	2	2	38	10	2	42	2	11
Cap, veh/h	310	10	15	105	29	252	78	1054	45	101	1041	75
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	965	56	81	128	159	1375	11	1642	70	43	1623	118
Grp Volume(v), veh/h	164	0	0	81	0	0	737	0	0	773	0	0
Grp Sat Flow(s),veh/h/ln	1102	0	0	1663	0	0	1722	0	0	1783	0	0
Q Serve(g_s), s	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.2	0.0	0.0	2.2	0.0	0.0	13.5	0.0	0.0	13.2	0.0	0.0
Prop In Lane	0.90		0.07	0.16		0.83	0.02		0.04	0.05		0.07
Lane Grp Cap(c), veh/h	335	0	0	386	0	0	1177	0	0	1218	0	0
V/C Ratio(X)	0.49	0.00	0.00	0.21	0.00	0.00	0.63	0.00	0.00	0.63	0.00	0.00
Avail Cap(c_a), veh/h	506	0	0	645	0	0	1177	0	0	1218	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.9	0.0	0.0	18.1	0.0	0.0	5.7	0.0	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.3	0.0	0.0	2.5	0.0	0.0	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.0	0.0	1.4	0.0	0.0	6.1	0.0	0.0	6.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	0.0	18.3	0.0	0.0	8.2	0.0	0.0	8.2	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		164			81			737			773	
Approach Delay, s/veh		21.0			18.3			8.2			8.2	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	37.5	13.9	37.5	13.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.0	18.0	33.0	18.0
Max Q Clear Time (g_c+I1), s	15.5	9.2	15.2	4.2
Green Ext Time (p_c), s	5.0	0.5	5.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary
2: SR 19 & W Central Ave

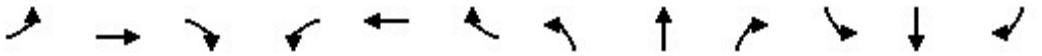


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	14	16	20	4	49	19	642	25	66	784	161
Future Volume (veh/h)	108	14	16	20	4	49	19	642	25	66	784	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1411	1870	1870	1870	1870	1337	1752	1870	1278	1870	1737
Adj Flow Rate, veh/h	111	14	16	21	4	51	20	662	26	68	808	166
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	33	2	2	2	2	38	10	2	42	2	11
Cap, veh/h	338	28	21	191	43	187	124	917	35	154	784	155
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	839	169	129	296	258	1130	18	1650	64	64	1410	279
Grp Volume(v), veh/h	141	0	0	76	0	0	708	0	0	1042	0	0
Grp Sat Flow(s),veh/h/ln	1136	0	0	1684	0	0	1731	0	0	1753	0	0
Q Serve(g_s), s	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	1.3	0.0	0.0	9.9	0.0	0.0	18.0	0.0	0.0
Prop In Lane	0.79		0.11	0.28		0.67	0.03		0.04	0.07		0.16
Lane Grp Cap(c), veh/h	387	0	0	421	0	0	1077	0	0	1094	0	0
V/C Ratio(X)	0.36	0.00	0.00	0.18	0.00	0.00	0.66	0.00	0.00	0.95	0.00	0.00
Avail Cap(c_a), veh/h	803	0	0	1020	0	0	1077	0	0	1094	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	11.8	0.0	0.0	5.4	0.0	0.0	7.6	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.2	0.0	0.0	1.5	0.0	0.0	17.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	0.7	0.0	0.0	2.7	0.0	0.0	11.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	0.0	0.0	12.0	0.0	0.0	6.8	0.0	0.0	24.7	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	C	A	A
Approach Vol, veh/h		141			76			708			1042	
Approach Delay, s/veh		13.3			12.0			6.8			24.7	
Approach LOS		B			B			A			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	22.5	9.9	22.5	9.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	11.9	5.7	20.0	3.3
Green Ext Time (p_c), s	2.5	0.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
4: SR 19 & Revels Rd/Revels Rd

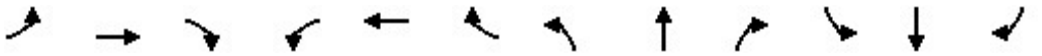


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	0	120	124	0	53	44	490	66	21	790	14
Future Volume (veh/h)	41	0	120	124	0	53	44	490	66	21	790	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1781	1722	1870	1752	1870
Adj Flow Rate, veh/h	46	0	133	138	0	59	49	544	73	23	878	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	8	12	2	10	2
Cap, veh/h	377	0	210	0	0	210	342	980	131	104	1093	1010
Arrive On Green	0.13	0.00	0.13	0.00	0.00	0.13	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1455	0	1585	0	0	1585	622	1538	206	16	1716	1585
Grp Volume(v), veh/h	46	0	133	0	0	59	49	0	617	901	0	16
Grp Sat Flow(s),veh/h/ln	1455	0	1585	0	0	1585	622	0	1744	1731	0	1585
Q Serve(g_s), s	0.0	0.0	3.1	0.0	0.0	1.3	2.5	0.0	7.8	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.9	0.0	3.1	0.0	0.0	1.3	17.5	0.0	7.8	15.0	0.0	0.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.12	0.03		1.00
Lane Grp Cap(c), veh/h	377	0	210	0	0	210	342	0	1111	1197	0	1010
V/C Ratio(X)	0.12	0.00	0.63	0.00	0.00	0.28	0.14	0.00	0.56	0.75	0.00	0.02
Avail Cap(c_a), veh/h	819	0	731	0	0	731	630	0	1921	1984	0	1745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	16.0	0.0	0.0	15.3	11.8	0.0	4.0	5.3	0.0	2.6
Incr Delay (d2), s/veh	0.1	0.0	3.1	0.0	0.0	0.7	0.2	0.0	0.4	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	2.0	0.0	0.0	0.8	0.5	0.0	1.7	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	19.2	0.0	0.0	16.0	12.0	0.0	4.4	6.3	0.0	2.6
LnGrp LOS	B	A	B	A	A	B	B	A	A	A	A	A
Approach Vol, veh/h		179			59			666			917	
Approach Delay, s/veh		18.2			16.0			5.0			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		29.4	0.0	9.7		29.4		9.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		43.0	5.0	18.0		43.0		18.0				
Max Q Clear Time (g_c+I1), s		19.5	0.0	5.1		17.0		3.3				
Green Ext Time (p_c), s		4.8	0.0	0.5		7.9		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary
4: SR 19 & Revels Rd/Revels Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	83	88	0	36	135	744	146	64	602	45
Future Volume (veh/h)	30	1	83	88	0	36	135	744	146	64	602	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1781	1722	1870	1752	1870
Adj Flow Rate, veh/h	33	1	92	98	0	40	150	827	162	71	669	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	8	12	2	10	2
Cap, veh/h	244	6	140	0	0	140	388	1102	216	126	1006	1207
Arrive On Green	0.09	0.09	0.09	0.00	0.00	0.09	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1422	65	1585	0	0	1585	733	1447	283	80	1321	1585
Grp Volume(v), veh/h	34	0	92	0	0	40	150	0	989	740	0	50
Grp Sat Flow(s),veh/h/ln	1486	0	1585	0	0	1585	733	0	1730	1401	0	1585
Q Serve(g_s), s	0.0	0.0	3.4	0.0	0.0	1.4	9.8	0.0	19.1	4.7	0.0	0.5
Cycle Q Clear(g_c), s	1.1	0.0	3.4	0.0	0.0	1.4	33.6	0.0	19.1	24.0	0.0	0.5
Prop In Lane	0.97		1.00	0.00		1.00	1.00		0.16	0.10		1.00
Lane Grp Cap(c), veh/h	249	0	140	0	0	140	388	0	1318	1133	0	1207
V/C Ratio(X)	0.14	0.00	0.66	0.00	0.00	0.29	0.39	0.00	0.75	0.65	0.00	0.04
Avail Cap(c_a), veh/h	542	0	476	0	0	476	600	0	1818	1548	0	1666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	26.5	0.0	0.0	25.6	15.2	0.0	4.0	3.3	0.0	1.8
Incr Delay (d2), s/veh	0.2	0.0	5.2	0.0	0.0	1.1	0.6	0.0	1.2	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	2.5	0.0	0.0	1.0	2.7	0.0	4.3	2.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	31.6	0.0	0.0	26.7	15.8	0.0	5.1	3.9	0.0	1.8
LnGrp LOS	C	A	C	A	A	C	B	A	A	A	A	A
Approach Vol, veh/h		126			40			1139			790	
Approach Delay, s/veh		30.0			26.7			6.5			3.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		50.5	0.0	9.8		50.5		9.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.0	5.0	18.0		63.0		18.0				
Max Q Clear Time (g_c+I1), s		35.6	0.0	5.4		26.0		3.4				
Green Ext Time (p_c), s		10.8	0.0	0.3		7.2		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary
5: SR 19 & CR 455

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	78	88	596	133	183	927
Future Volume (veh/h)	78	88	596	133	183	927
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1337	1678	1781	1574	1767	1826
Adj Flow Rate, veh/h	81	92	621	139	191	966
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	38	15	8	22	9	5
Cap, veh/h	101	113	1527	1143	214	983
Arrive On Green	0.08	0.08	0.86	0.86	0.86	0.86
Sat Flow, veh/h	1273	1422	1781	1334	216	1146
Grp Volume(v), veh/h	81	92	621	139	1157	0
Grp Sat Flow(s),veh/h/ln	1273	1422	1781	1334	1362	0
Q Serve(g_s), s	8.9	9.1	10.9	2.4	105.7	0.0
Cycle Q Clear(g_c), s	8.9	9.1	10.9	2.4	116.6	0.0
Prop In Lane	1.00	1.00		1.00	0.17	
Lane Grp Cap(c), veh/h	101	113	1527	1143	1197	0
V/C Ratio(X)	0.80	0.81	0.41	0.12	0.97	0.00
Avail Cap(c_a), veh/h	161	180	1540	1153	1208	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	64.4	64.4	2.2	1.6	12.5	0.0
Incr Delay (d2), s/veh	13.6	13.9	0.2	0.0	18.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	6.7	4.5	0.8	40.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	78.0	78.4	2.4	1.7	30.8	0.0
LnGrp LOS	E	E	A	A	C	A
Approach Vol, veh/h	173		760			1157
Approach Delay, s/veh	78.2		2.3			30.8
Approach LOS	E		A			C

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	126.5			126.5	15.8
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	123.0			123.0	18.0
Max Q Clear Time (g_c+I1), s	12.9			118.6	11.1
Green Ext Time (p_c), s	5.3			3.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
5: SR 19 & CR 455

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	100	179	956	110	130	756
Future Volume (veh/h)	100	179	956	110	130	756
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1337	1678	1781	1574	1767	1826
Adj Flow Rate, veh/h	104	186	996	115	135	788
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	38	15	8	22	9	5
Cap, veh/h	153	171	1461	1094	141	755
Arrive On Green	0.12	0.12	0.82	0.82	0.82	0.82
Sat Flow, veh/h	1273	1422	1781	1334	138	921
Grp Volume(v), veh/h	104	186	996	115	923	0
Grp Sat Flow(s),veh/h/ln	1273	1422	1781	1334	1059	0
Q Serve(g_s), s	11.7	18.0	34.2	2.5	88.8	0.0
Cycle Q Clear(g_c), s	11.7	18.0	34.2	2.5	123.0	0.0
Prop In Lane	1.00	1.00		1.00	0.15	
Lane Grp Cap(c), veh/h	153	171	1461	1094	896	0
V/C Ratio(X)	0.68	1.09	0.68	0.11	1.03	0.00
Avail Cap(c_a), veh/h	153	171	1461	1094	896	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.2	66.0	5.5	2.7	24.2	0.0
Incr Delay (d2), s/veh	11.6	95.0	1.3	0.0	38.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.7	17.1	15.7	1.1	52.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.9	161.0	6.8	2.7	62.3	0.0
LnGrp LOS	E	F	A	A	F	A
Approach Vol, veh/h	290		1111			923
Approach Delay, s/veh	130.1		6.4			62.3
Approach LOS	F		A			E

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	127.5			127.5	22.5
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	123.0			123.0	18.0
Max Q Clear Time (g_c+I1), s	36.2			125.0	20.0
Green Ext Time (p_c), s	11.8			0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

Appendix N

Lake County Land Development Code (LDC)

2. Turn Lanes

Turn lanes consist of left-turn lanes and right-turn lanes (deceleration lanes). Turn lanes shall be installed on the road which is being accessed at the proposed entrance(s) to the development, as deemed necessary by the County Manager or Designee. The County Manager or Designee may also require turn lanes at adjacent or nearby intersections in lieu of, or in addition to, turn lanes at the development entrances.

Conditions which are to be considered in determining the need for turn lanes include the following:

a) If the property accessing the road is projected to generate 500 or more vehicle trips per day, or 50 or more vehicle trips in any hour;

b) If a traffic analysis indicates that turn lanes would be necessary to maintain capacity on fronting roads and/or on adjacent or nearby intersections.

c) If entrances are proposed at locations where grade, topography, site distance, traffic, or other unusual conditions indicate that turn lanes would be needed for traffic safety. The need for turn lanes to accommodate right turn movements and left turn movements shall be based upon anticipated traffic distribution and projected turning movement volumes among other considerations, including traffic safety.

C. ***Traffic Analysis***

1. Transportation Concurrency Management System

Transportation Concurrency Management System is administered by the Lake-Sumter Metropolitan Planning Organization (LSMPO). All information regarding traffic study could be found on LSPMO website www.lakesumtermpo.com/concurrency/index.aspx

D. ***Road Classification***

1. Arterial Roads

An arterial road is a route providing service which is relatively continuous and of relatively high traffic volume, long average trip length, high operating speed and of high mobility importance.

Arterial roads are grouped into the following sub-categories:

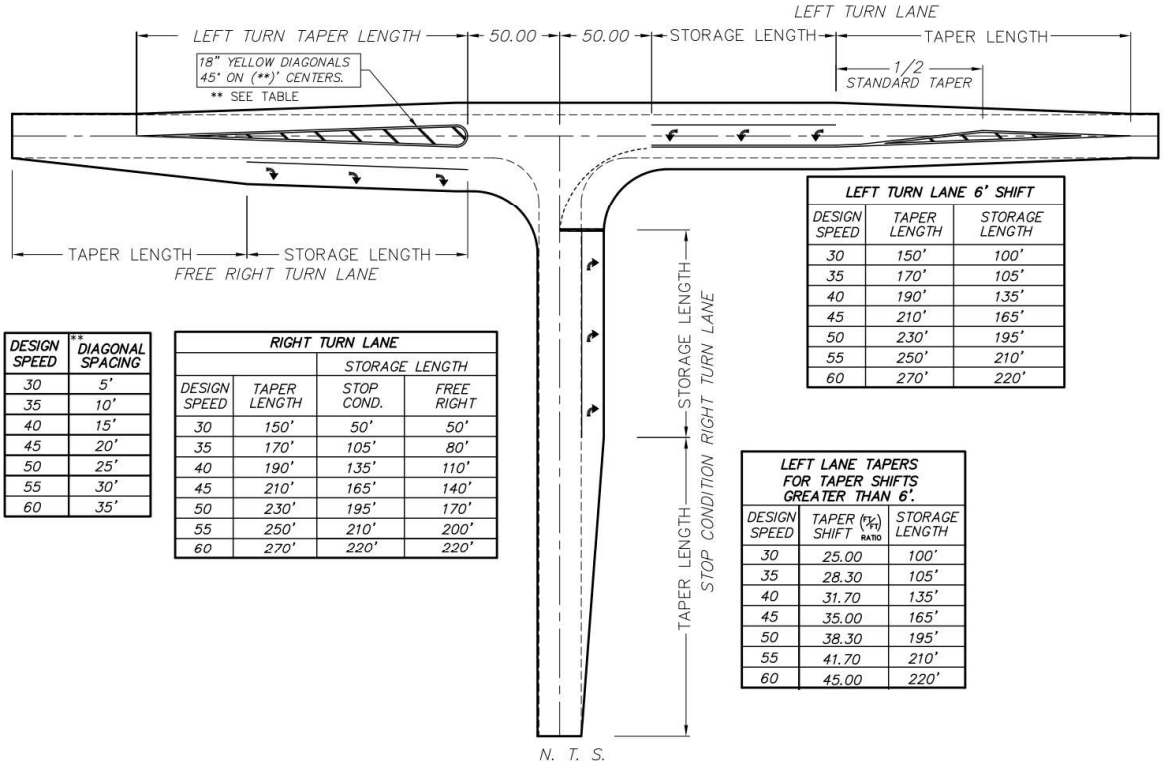
a) Principal Arterial
b) Minor Arterial

The classification of roads as arterials shall be based upon criteria established by the Florida Department of Transportation utilizing their most recent, adopted functional classification system.

2. Collector Roads

A collector road is a route providing services which is of relatively moderate traffic volume, moderate trip length and moderate operating speed. Collector roads collect and distribute the traffic between local roads and arterial roads and serves as a linkage between land access and mobility needs.

LAKE COUNTY STANDARD TURN LANES



LEFT TURN LANE 6' SHIFT		
DESIGN SPEED	TAPER LENGTH	STORAGE LENGTH
30	150'	100'
35	170'	105'
40	190'	135'
45	210'	165'
50	230'	195'
55	250'	210'
60	270'	220'

DESIGN SPEED	** DIAGONAL SPACING
30	5'
35	10'
40	15'
45	20'
50	25'
55	30'
60	35'

RIGHT TURN LANE			
		STORAGE LENGTH	
DESIGN SPEED	TAPER LENGTH	STOP COND.	FREE RIGHT
30	150'	50'	50'
35	170'	105'	80'
40	190'	135'	110'
45	210'	165'	140'
50	230'	195'	170'
55	250'	210'	200'
60	270'	220'	220'

LEFT LANE TAPERS FOR TAPER SHIFTS GREATER THAN 6'.		
DESIGN SPEED	TAPER SHIFT (W/Y1) RATIO	STORAGE LENGTH
30	25.00	100'
35	28.30	105'
40	31.70	135'
45	35.00	165'
50	38.30	195'
55	41.70	210'
60	45.00	220'

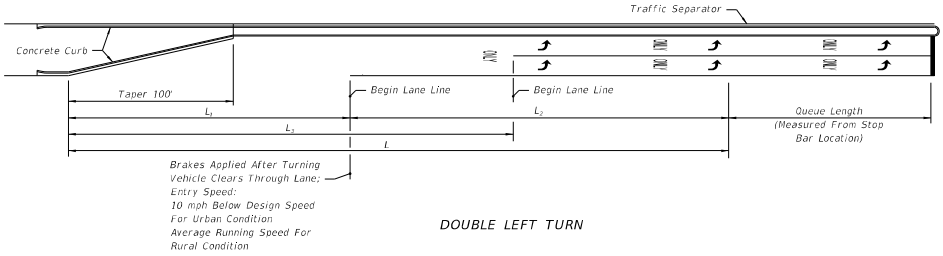
O:_CAD STANDARDS\DWG\Turn LanesR1.dwg (02/06/2007)

THIS SHOULD BE USED AS A GUIDE LINE ONLY.
ALL DESIGNS SHALL BE SUBMITTED FOR REVIEW.

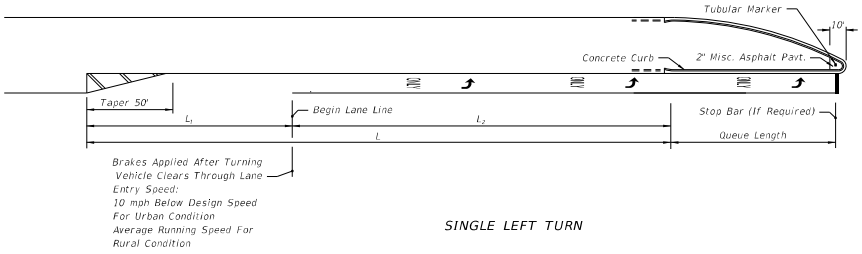
Typical Details

Appendix O
FDOT Design Manual Exhibit 212-1

MEDIAN TURN LANES
MINIMUM DECELERATION LENGTHS



DOUBLE LEFT TURN



SINGLE LEFT TURN

MEDIAN TURN LANES								
			URBAN CONDITIONS			RURAL CONDITIONS		
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L_1 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)
35	25	70	75	145	110	——	——	——
40	30	80	75	155	120	——	——	——
45	35	85	100	185	135	——	——	——
50	40/44	105	135	240	160	185	290	160
55	48	125	——	——	——	225	350	195
60	52	145	——	——	——	260	405	230
65	55	170	——	——	——	290	460	270

NOT TO SCALE

EXHIBIT 212-1
01/01/2022

Appendix B
Preliminary Development Plan

Appendix C
Lake County CMP Database and 2023 FDOT Q/LOS

Appendix D
Turning Movement Counts and Seasonal Factor Data

Appendix E
HCM Analysis Worksheets - Existing Conditions

Appendix F
ITE Trip Generation Sheets

Appendix G
CFRPM Model Output

Appendix H
LSMPO TIP and *LSMPO LOPP*

Appendix I
Vested Trips Data

Appendix J
AADT Model Plot

Appendix K
HCM Worksheets - Projected Conditions

Appendix L
Intersection Volume Projections

Appendix M
Background Conditions / Buildout Conditions with Mitigation

Appendix N

Lake County Land Development Code (LDC)

Appendix O
FDOT Design Manual Exhibit 212-1

September 28, 2023

Thomas A. Harowski, AICP
Town of Howey-in-the-Hills
101 N. Palm Ave., P.O. Box128,
Howey-In-The-Hills, Florida 34737

RE: Mission Rise PUD

Dear: Mr. Harowski

Enclosed please find responses to Staff's comments below in bold. The following items are resubmitted in response to Staff''s comments:

1. Revised Conceptual Land Use Plan
2. Revised Development Agreement
3. Revised Traffic Impact Analysis

PLANNING REVIEW COMMENTS:
CONCEPT PLAN:

1. The project still fails to meet the 15% non-residential land area requirements of the Village Mixed Use land use classification. The stormwater areas allocated to the non-residential use calculation are in fact engineering elements of other land uses. The civic land use, the amenity centers and the park areas can count toward the non-residential land use as proposed. Staff is willing to include the major trail area that falls outside the central collector road right-of-way (so long as this area is not already counted as park area).

   RESPONSE: Please see page 4 of the Conceptual Land Use Plan, which provides distinct details of the non-residential land area proposed within the development. Stormwater areas have been excluded from the calculation. An additional park area is proposed in the southern part of Phase 2.

2. The proposed recreational facilities have been better detailed, but the "regional" park still fails to meet the definition included in the comprehensive plan. Perhaps revising the name to a neighborhood facility is more appropriate given that the park is unlikely to draw significant interest from residents outside the neighborhood.

   RESPONSE: The "regional" park has been renamed to "neighborhood" parks. In turn, the previous "neighborhood parks" have been renamed to "mini" parks. The mini parks are planned as recreational space for the use of the residents of the community. The neighborhood parks are intended to serve the larger community and facilitate access and use of the multiuse trail system.

3. The area in the center designated as regional park is a bonafide park area. The highlighted areas in Phase 3 and at the south end of Phase 2 are just open space and should not be

counted as park area.

RESPONSE: The proposed park areas have been detailed, in terms of the proposed features/amenities on page 3 of the Conceptual Land Use Plan.

4. The applicant has elected to retain stormwater retention areas within the central core area which staff recommended for tree preservation and green space. As noted in our comments last time, the retention ponds are part of the residential land use and should be located there. Be advised this item will be a comment in the staff report.

   RESPONSE: Acknowledged.

5. The park area developments have been detailed but outside of the amenity centers are essentially passive designs. As an additional item, the applicant could consider including some court activities as part of the overall program. We renew our suggestions for repurposing the small residential development at the southeast corner of Phase 2 as a central community facility.

   RESPONSE: Active recreational amenities may be provided in the park area in the southern part of Phase 2. The planned facilities/amenities and design of the park areas are intended to be further detailed at the subdivision/site plan process.

6. The applicant needs to address how the double-frontage lots located in Phase 2 and Phase 3 will be addressed. These lots have access from a parallel street so that the rear yards of these properties will front on the central collector road. Perhaps some sort of buffer such as a landscaped berm or wall is appropriate.

   RESPONSE: The double-frontage lots will have a 10' landscaped buffer along the Collector Road to protect views from this roadway.

7. For the 55-foot-wide lots where no alley access is proposed, what design options are suggested to reduce the impact of a garage-dominate streetscape.

   RESPONSE: In accordance with LDC Section 4.06.02.A.3., at least 25% of the lots in the development will have to provide recessed garages. Further, side-loaded garages are encouraged, as stated in the proposed Development Agreement.

8. The unit totals provided for the phase allocations do not add correctly on the table provided.

   RESPONSE: The unit totals have been revised on the Phase Development Table. Please see page 2 of the Conceptual Land Use Plan.

9. The note to the table needs to be removed. Movement of units between phases will be considered a major amendment of the development agreement. As an alternative the applicant could propose language in the development agreement allowing for a specifc level of shifting units between phases for Town Council consideration.

   RESPONSE: Acknowledged. The note has been removed and language related to movement of units between phases will be added to the Development Agreement.

10. At the last DRC meeting the applicant was requested to provide a timing proposal for construction of the central collector road. The agreement needs to include a proposed timing.

    RESPONSE: Please see the revised Development Agreement.

11. Map 2 seems to be unclear. Phase lines are similar to the symbols for pathways, parking, non-residential areas etc. Perhaps the information can be divided into more maps that will present a clearer summary.

    RESPONSE: Please see page 2 of the Conceptual Land Use Plan where the phase line type has been updated for better readability.

PUD/DEVELOPMENT AGREEMENT:

1. On page two the development agreement states the project is 592 units while the concept plan has 499. These documents need to be in agreement.

   RESPONSE: Please see the revised Development Agreement.

2. On page three the minimum lot width at the building line needs to be 75 feet for the 75 x 120 lot size.

   RESPONSE: Please see the revised Development Agreement.

3. On page three the wetland buffer needs to reflect the town requirements in Sec. 3.02.03C as well as the water management district and DEP requirements. The Town's requirements vary in some respects from the state requirements.

   RESPONSE: Please see the revised Development Agreement.

4. On page four, the language setting the timing for the Town to ask for utility upgrades is still not satisfactory. The proposed 270 days from approval of the plan is still not what we need. The timing should be triggered by the application for final subdivision approval for the phase of the project proposed. The final subdivision approval gives authorization to construct subdivision improvements. The Town should be required to make its needs and commitments at this point. If final subdivision approval is sought by phase, then the Town's opportunity to seek utility line upgrades should attach to each phase.

   RESPONSE: Please see the revised Development Agreement.

5. On page 6, the Town is not requiring all roads to be public. The applicant has the choice to use gated access for the project or for sub-areas within the project. While the collector road should remain with full public access, the applicant may wish to revise the proposed language to preserve the option for gated areas.

   RESPONSE: Please see the revised Development Agreement.

6. On page eleven, the termination language related to sewer service acquisition should be modified to include other options than the CLCDD.

   RESPONSE: Please see the revised Development Agreement.

TRAFFIC IMPACT ASSESSMENT:

1. Defer to the Town engineer comments

   RESPONSE: Acknowledged.

ENGINEERING REVIEW COMMENTS:
TRAFFIC STUDY:

1. The conceptual land use plan states the maximum number of lots is 499. The traffic study and the development agreement states 592 lots. All three need to be the same.

   RESPONSE: The Traffic Impact Analysis and Development Agreement have been revised to state a maximum of 499 units.

2. The methodology states that Lake Hills & Watermark are to be included in the background traffic projection. The submitted study left these developments out.

   RESPONSE: Please see the revised Traffic Impact Analysis.

3. For the future condition intersection analysis for SR 19 & Revels Rd. include right & left turn lanes on SR 19 and a right turn lane on revels.

   RESPONSE: Please see the revised Traffic Impact Analysis.

4. For the future condition intersection analysis for the Spine Rd. and Number 2 Rd., include right & left turn lanes on Number 2 Rd.

   RESPONSE: Please see the revised Traffic Impact Analysis.

5. Per the MPO TIS Guidelines the study needs to include a section for Mitigation Strategies. This needs to address the road segments and intersections with deficiencies. For unsignalized intersections, side streets with deficient delays need to be evaluated for mitigation. Also, the narrow width of Number 2 Road needs to be addressed in this section. While capacity is not an issue, operational safety is.

   RESPONSE: Please see the revised Traffic Impact Analysis.

6. There is no proposed widening of SR 19 at Central Avenue as stated in the study.

   RESPONSE: Please see the revised Traffic Impact Analysis.

7. Based on Lake County's requirement for turn lane widening on Number 2 Road (all on the south side) the length of tapers will need to be twice the standard length.

   RESPONSE: Please see the revised Traffic Impact Analysis.

CONCEPT PLAN:

1. The main N-S spine road and realigned Revels Road should not have driveway connections or on-street parking. They should have full pedestrian accommodation including the multi-use trail and raised crosswalks/speed tables at key points along its length connecting the trail and sidewalks to amenity, open space, and park areas.

   RESPONSE: On-street parking/driveway connections along the Collector Road have been removed from the plan. All lots abutting the Collector Road will have access from another local street or alley.

2. The curb & gutter for the neighborhood roads should 2' wide Type F or Drop Curb.

   RESPONSE: Please see page 6 of the Conceptual Land Use Plan, where the curb and gutter has been updated to 2' width.

Development Agreement

1. Section 1. (f) Wetlands: Wetland impacts and buffering shall also be subject to the Town's land development regulations as well as the St Johns River Water Management District.

   RESPONSE: Please see the revised Development Agreement.

2. Section 1. (j) Transportation, Streets and Sidewalks: Revels Road and the Spine Road must have a minimum 90-foot right-of-way, 2' curb and gutter, and a minimum 32-foot-wide pavement with 12-foot travel lanes and 4' curb lanes.

   RESPONSE: Please see the revised Development Agreement.

Thank you in advance for your consideration of the above information. If you require further information, please do not hesitate to contact me at 607.216.2390 or rlopes@rviplanning.com

Sincerely,

RVi Planning + Landscape Architecture

Rhea Lopes, AICP
Project Manager

Enclosures

cc: Alexis Crespo, RVi Planning + Landscape Architecture
Jason Humm, ASF TAP FL I LLC
Jonathan Huels, Lowndes Law Group

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MISSION RISE
PUD REZONE
PROJECT NARRATIVE, COMPREHENSIVE PLAN & REZONE CRITERIA COMPLIANCE
Revised July 2023

I. PROJECT OVERVIEW

On behalf of the Property Owner, ASF TAP FL I, LLC. ("Applicant"), enclosed please find a Rezone Application to amend the Planned Unit Development ("PUD") zoning of the Mission Rise Property ("Property"). The Property consists of 243+/- acres including 4 parcels, PIDs: 02-21-25-0002-000-04800; 34-20-25-0004-000-01003; 34-20-25-0001-000-00100; 27-20-25-0004-000-01200. It is generally located south of Number Two Road, west of SR 19, and east of Silverwood Lane in the southwestern portion of the Town of Howey-in-the-Hills (see Aerial Map, included in the application materials).

The Property is designated as Village Mixed Use (VMU) and Conservation (CON) based on the Town of Howey-in-the-Hills Future Land Use Map. In 2005, the Property was rezoned to PUD per Ordinance 2005-357, with a binding conceptual development plan allowing for development of 400 dwelling units. The Developer's Agreement related to the Rezone was approved in 2007 and expired 10 years later in February 2017. The Property is currently vacant, consisting of pasturelands and wetlands. The Property can be accessed from Number 2 Road and Revels Road.

The purpose of this petition is to rezone the Property from PUD to PUD with a new Conceptual Land Use Plan and Developer's Agreement, to allow for a maximum of **499 dwelling units**, along with supportive amenities and infrastructure. A multi-use trail and parks system as well as a trailhead site is also included as the non-residential use within the PUD.

II. SURROUNDING USES

While a majority of land surrounding the Property is predominantly vacant currently, many properties are entitled for development.

The surrounding lands to the north, south, and west of the Property consist of vacant agricultural lands, groves, or pastures along with a few dispersed single-family residential dwellings. The Reserve (Hillside Grove) PUD was approved to the east in November 2021 (Ordinance 2021-010), allowing for 284 single-family homes, 291-single-family cluster homes, and 153 townhouse units, along with up to 300,000 square feet of commercial uses and 100,000 square feet of institutional uses. Lands to the east of SR 19, known as the Simpson Parcels, was also rezoned to PUD as the Watermark PUD (Ordinance 2022-016). The PUD was approved for 275 single-family dwelling units. Table 1 below provides a comprehensive inventory of the surrounding land use pattern.

TABLE 1: INVENTORY OF SURROUNDING USES

	Future Land Use	Zoning	Existing Land Use
North	Village Mixed Use (VMU), Conservation	AR (Lake County), PUD (The Reserve, Ordinance 2021-010)	ROW (Number 2 Road) Agriculture/Pasture

	(CON), Urban Low Density (Lake County)		
South	Rural Transition (Lake County)	A (Lake County)	Single-family residential
East	Village Mixed Use (VMU), Conservation (CON), Medium Density Residential (MDR)	PUD (The Reserve, Ordinance 2021-010 & Watermark PUD, Ordinance 2022-016), LI	Future Residential (The Reserve (Lennar) PUD/Agriculture (Orange Grove)/Pasture
West	Village Mixed Use (VMU), Conservation (CON)	AG, A (Lake County), R-3 (Lake County)	Agriculture/Pasture/Single-family/Manufactured Home

Based on the development of the adjacent Reserve PUD and Watermark PUD, the surrounding area will be transitioning into denser residential or mixed-use neighborhoods.

III. HISTORY

Following annexation into the Town limits in 2005, the Property was rezoned to PUD per Ordinance 2005-037. The conceptual development plan, approved by the Town Council, authorizes the development of 400 single-family residential units. The Mission Rise Developer's Agreement was approved in February 2007, to establish mutually agreed upon terms regarding the development of the Property. This agreement expired 10 years following the effective date. In 2018, Hanover Properties attempted to secure zoning entitlements through a PUD rezone for 629 single-family residential units with associated amenities and infrastructure on the Property. However, this rezone request was denied by the Town Council.

IV. REZONE REQUEST

The Applicant is requesting to rezone the Property from PUD to PUD with a new Binding Development Plan and Developer's Agreement, to allow for a maximum of 499 dwelling units, along with supportive amenities and infrastructure. A regional multi-use trail and park system and a civic tract is planned as the non-residential component of this PUD, consistent with the requirements of the VMU future land use district.

The proposed density of 499 dwelling units is within the limitations of the base density permitted per the Town's Comprehensive Plan. The proposed density calculations are as follows:

Net Land Area = Total acreage – Waterbodies acreage[1] – Required open space[2] – Remaining Wetlands acreage[3]

[1] Only pre-existing water bodies are to be included in the calculation.
[2] 25% of gross land area has to be reserved as open space. Per Policy 1.2.2 of the Future Land Use Element of the Town's Comprehensive Plan, no more than 50% of the open space requirement can be met with wetlands. Landscaped buffers and stormwater facilities may be counted towards open space if designed in a park-like setting with pedestrian facilities and free-form ponds. Up to

10% of open space may be impervious.
[3] Wetlands not counted towards the open space requirement.

Net Land Area	= 243.3 – 0 – 60.8 – 29.4 = 153.1 acres
Total Yield	= 153.1 x 4 = **612 dwelling units**
Max. Potential Units per FLU	**= 612 dwelling units.**
Max. Units Requested	**= 499 dwelling units.**

Only single-family detached residential units are proposed within the PUD, including a mix of 75-foot-wide and 55-foot-wide lots. The smaller lots are strategically located in the interior of the Property, with larger lots proposed along the boundaries. Compatibility with the adjacent properties will be addressed via sensitive site design that addresses the placement of buffers, open space/preserve areas, and proposed residential development tracts. The proposed density and lot sizes is consistent with the recent approval for the Reserve PUD to the immediate east.

Access to the project will be via Number 2 and Revels Road, as shown on the proposed Conceptual Land Use Plan. The N-S spine roadway (Connector #1) passing through the Property, connecting Number Two Road and SR 19 through Revels Road, will be designed as a two-lane Collector roadway with a 90' right-of-way. This roadway will traverse through the proposed development providing interconnectivity. Additional future potential access points connecting to the Reserve PUD to the east and to the west are also proposed. A full access point is proposed to the south, connecting to Orange Blossom Road.

Connector #1 is designed with a continuous multimodal trail of min. 12' that will provide for pedestrian and bicycle connectivity across the project. The multimodal trail will be designed to capture natural viewsheds along the preserved wetlands, serving as an amenity for the project's residents as well as the Town as a whole. Additional pedestrian paths are planned along stormwater ponds throughout the development forming a system of parks adjacent to the N-S Spine Roadway. The system of multi-use trails and parks are designed to take advantage of the natural features of the site.

Over 25% of open space is provided within the project, consistent with the requirements of the Comprehensive Plan. On-site wetlands have been preserved along with upland buffers to the greatest extent possible, with minimal planned impacts.

V. INFRASTRUCTURE

Transportation:
Traffic & Mobility Consultants have prepared a Transportation Impact Analysis for this project, which is included in the application materials. Please see the report for additional details on the impacts of the proposed development.

Utilities:
Potable water will be provided through the Town's public water supply system. Sanitary sewer service will be secured through the Mission Inn Wastewater Treatment Plant, which is operated by the Central Lakes Community Development District (CDD). The Applicant is working with the Town and CDD to establish

available capacity to serve the project.

Fire and EMS:
Fire and EMS services will be provided by the Lake County Fire District.

Schools:
Lake County School District has reviewed this project (application reviewed for 592 dwelling units, as initially proposed) and provided an Adequate Public Facilities Determination Letter.

VI. ENVIRONMENTAL

An Environmental Assessment for the Property was prepared by Bio-Tech Consulting Inc., which contains information related to soils, land use types, listed and protected flora and fauna species, wetland delineation, and other environmental constraints.

Only 0.3 +/- acres of impacts to the 60.1 +/- acres of on-site wetlands is proposed, as reflected on the proposed Conceptual Land Use Plan. Consistent with Section 3.02.03 of the Land Development Code (LDC), no development is proposed within 25' of a wetland and no building or impervious surface area with the exception of stormwater ponds is planned within 50' of a wetland.

Any impacts to protected/listed species or wetlands will be permitted in accordance with relevant State and Federal guidelines as further described in the Environmental Assessment. Required buffers are maintained from the identified bald eagle's nest.

The project is in the X, A and AE flood zones. The proposed development is designed to have a majority of development, outside of areas prone to flooding per FEMA.

VII. STORMWATER MANAGEMENT

The project will provide adequate stormwater management facilities to ensure water quality and attenuation in accordance with all applicable local, state and federal regulations. It is understood that the Applicant will obtain an Environmental Resource Permit (ERP) from the St. John's River Water Management District (SJRWMD) and any required Section 404 permits from the Florida Department of Environmental Protection (FDEP) prior to construction.

Stormwater runoff from the developed portions of the project will be conveyed to stormwater management ponds. Approximately 26.8+/- acres of the Property are planned as stormwater ponds. The ponds will treat and attenuate the stormwater runoff in accordance with SJRWMD and Town's requirements prior to discharging off site. Stormwater will be detained within the ponds where chemical and physical processes within the ponds will improve water quality. The ponds will attenuate the project's runoff rate by holding back water, reducing the discharge rate.

Information related to proposed impervious surfaces will not be available until detailed design, which will be provided during at later stages of the Town's permitting process. Management of stormwater run-off, considering changes in existing and proposed impervious surfaces, will comply with SJRWMD and the Town of Howey-in-the-Hills requirements.

VIII. FUTURE LAND USE/COMPREHENSIVE PLAN COMPLIANCE

The proposed amendment is consistent with the Goals, Objectives and Policies of the Howey-in-the-Hills County Comprehensive Plan as follows:

Policy 1.1.1: Land Use Designations, Village Mixed Use (VMU)

- *Minimum of 25 acres to apply for this land use. Maximum density of 4 dwelling units per acre, which may be increased to 6 dwelling units per acre if the development includes 20% usable public open space (no wetlands).*

  RESPONSE: The Property is 243 +/- acres in size, meeting the minimum threshold to be developed under the VMU future land use designation. The PUD is proposed for a maximum of 499 dwelling units, that is under the maximum base density of 4 dwelling units per acre, as demonstrated by the calculations included earlier in this narrative.

- *Residential areas shall comprise a minimum of 70% of the net land area and a maximum of 85% of the net land area.*
- *Commercial/non-residential areas shall comprise a minimum of 15% of the net land area and a maximum of 30% of the net land area. This includes community facilities and schools.*

  RESPONSE: 15.2 % of the net land area or 23.2 acres is planned as non-residential areas within the project. This includes a mix of community recreational areas and the system of multi-use trails and parks, with trailhead site. The remainder of the net land area is proposed for residential uses.

- *For developments with more than 100 acres, 5% of the non-residential land shall be dedicated for public/civic buildings.*

  RESPONSE: A 1.2 +/- acre site (5% of non-residential area) along SR 19 is designated as a civil tract which is planned to be developed with a trailhead to support the proposed trail and park system.

- *Commercial/non-residential may be 2 stories with 50% coverage as long as parking and other support facilities (stormwater) are met. The maximum building height is 35 feet.*

  RESPONSE: The project will comply with this requirement.

- *Public recreational uses must occupy a minimum of 10% of the useable open space (no wetlands).*

  RESPONSE: Over 10% of usable open space or 6.8 +/- acres is planned as public recreation areas.

- *A minimum of 25% open space is required.*

  RESPONSE: 28.5% or 69.4 +/- acres is planned as open space within the project. Please note that any areas accredited towards non-residential area requirements are not included in this open space calculation.

- *The maximum building size is 30,000 sq. ft.; unless a special exception is granted to the developer*

by the Town Council.

RESPONSE: The project will comply with the maximum building size requirement of 30,000 SF. No special exception is being requested.

Policy 1.1.2: Village Mixed Use – Primarily intended to create sustainability and maintain the unique charm of the Town, including the provisions of reducing the dependability on the automobile, protecting more open land, and providing quality of life by allowing people to live, work, socialize, and recreate in close proximity. Elementary, middle, and high schools are also permitted in this category.

RESPONSE: The project meets the required mix of residential and non-residential areas for the VMU future land use designation. Non-residential areas are planned as the multi-use trail and park system that will be compatible with the residential development and maximize the natural features of the site. Special emphasis has been paid to multimodal connectivity across the project, especially connecting to the non-residential areas, consistent with the intent of this category.

Policy 1.3.1: Limiting Development in Wetland Areas. The Town shall limit development within all wetland areas to land uses supporting conservation facilities and water-related passive recreation activities, as defined in the Recreation and Open Space Element. Wetlands shall be identified on the Future Land Use Map Series as Conservation lands. No development shall be permitted in wetlands except for conservation or passive recreation uses as defined within policies cited herein.

RESPONSE: On-site wetlands are preserved to the greatest extent feasible with only 0.3 +/- acres of impacts proposed. This impact area is to accommodate the north-south Connector #1, consistent with the Town's 2035 Future Transportation Map.

Policy 1.11.2 Use of Cluster Developments. To promote the conservation of permeable surface area and maintain the Town's rural character, cluster developments shall be promoted by the Town during the development review process. Developers of Mixed Use/Planned Unit Developments and residential subdivisions shall be encouraged to cluster development in order to preserve open space.

RESPONSE: As seen on the proposed Conceptual Land Use Plan, the development is clustered consistent with this policy to allow for maximum preservation of on-site natural wetlands and native habitat. Approximately 25% of the site is wetland habitat, almost all of which is proposed to be preserved along with required upland buffers. 28.5% of open space has been provided within the project, only including 50% of on-site wetlands within the open space calculation. Thus, the development will help conserve permeable surface area and maintain the Town's rural character.

Based on the above analysis, the proposed rezone petition is in substantial compliance with the Goals, Objectives and Policies of the Town's Comprehensive Plan.

IX. REZONING CRITERIA COMPLIANCE

1. Is the rezoning request consistent with the Town's comprehensive plan?

   Yes, the rezoning request is consistent with the Town's Comprehensive Plan, as further detailed in Section VIII above.

2. Describe any changes in circumstances of conditions affecting the property and the surrounding area that support a change in the current zoning.

   The Property is currently zoned PUD. This request does not seek to change the zoning designation of the subject property. Instead, it seeks approval of a new Conceptual Land Use Plan and Developer's Agreement for the Property, as the prior Conceptual Land Use Plan and Developer's Agreement expired in February 2017.

   The proposed density is consistent with the maximum permitted per the underlying future land use of VMU. The proposed development will meet all requirements of the VMU category. Further, at current, development in the surrounding including the Reserve PUD and Watermark PUD is supportive of the requested density. The proposed lot sizes within the project are consistent with the lot sizes approved in the Reserve PUD that is immediately to the east of the Property. It uses clustering principles to allow for wetland preservation and open space enhancement to maximize the natural features of the Property.

   Overall, the proposed rezoning will be consistent with the underlying future land use and mimics the nature of development seen in the surrounding area.

3. Will the proposed rezoning have any negative effects on adjacent properties?

   No, the proposed rezoning will not have a negative effect on adjacent properties. The site has been sensitively designed such that preserved wetlands, stormwater ponds, and open space form a natural buffer adjacent to a majority of the Property's boundaries. Where residential use is proposed adjacent to single-family development to the west, larger 75'-wide-lots are planned. Smaller lots are strategically located in the interior of the Property and adjacent to the Reserve PUD, where similar lot sizes are approved. In terms of connectivity, the Conceptual Land Use Plan depicts the north-south Connector #1. This 90' ROW will connect Number Two Road to SR 19, improving connectivity in the area. Thus, the proposed development will not have any negative effects on adjacent properties and instead serve as a continuation of the existing development pattern with enhanced connectivity.

4. Will the proposed rezoning have any impacts upon natural resources?

   No, the proposed rezoning will not have any impacts upon natural resources. Please see the attached Environmental Assessment by Bio-Tech Consulting Inc. which provides detailed information of natural resources on site.

   On-site wetlands have been preserved to the greatest extent feasible, along with upland buffers as required by the Town's Comprehensive Plan. Any impacts to listed species and their habitat will be permitted through relevant State and Federal agencies. Required buffers have been maintained from the identified bald eagle's nest on site, in accordance with the U.S Fish and Wildlife Service's management plans.

5. Will the proposed rezoning have any impacts upon adjacent properties?

   The proposed rezoning is a continuance of development seen in the adjacent area in recent years with approval of the Reserve PUD and Watermark PUD. Consistent with the intent of

PUDs, the proposed Conceptual Land Use Plan proposes a clustered development with greater extent of environmental protection, open space, and public recreational areas. The proposed development meets all requirements of the VMU future land use designation, as described in Section VIII of this narrative. Further, the project will help interconnectivity within the area through the inclusion of the north-south Connector #1. This roadway is to be designed as a two-lane roadway with dedicated continuous min. 12' multimodal trail to ensure both vehicular and pedestrian connectivity from Number Two Road down to Revels Road and SR 19.

6. Will the rezoning create any impacts on services including schools, transportation, utilities, stormwater management and solid waste disposal?

   - **Schools - An Adequate School Facilities Determination Letter has been provided by the Lake County School District.**

   - **Transportation –Transportation & Mobility Consultants, Inc. has prepared a Traffic Impact Analysis based on a methodology approved by the Town.**

   - **Utilities – Potable water will be provided through the Town's public water supply system; the Town has indicated adequate capacity to serve the project. Sanitary sewer service will be secured through the Mission Inn Wastewater Treatment Plant, which is operated by the Central Lakes Community Development District (CDD). The Applicant is working with the CDD to establish available capacity to serve the project.**

   - **Stormwater Management – Please see Section VII of this narrative. Stormwater systems will be designed to manage stormwater on-site and receive applicable permits from the SJRWMD and the Town, prior to construction.**

   - **Solid Waste – Solid waste service will be provided through the Town.**

7. Are there any mistakes in the assignment of the current zoning classification?

   No, the proposed rezoning is not to change the current zoning classification of PUD, but instead to seek approval of a new Conceptual Land Use Plan and Developer's Agreement for the Mission Rise Property.

X. CONCLUSION

The proposed petition seeks approval of a new Conceptual Land Use Plan and Developer's Agreement for the Mission Rise site. The proposed development will continue to meet all requirements of the VMU future land use designation, be consistent with the requirements of the LDC and uphold the Goals, Objectives and Policies of the Town of Howey-in-the-Hills' Comprehensive Plan. For these reasons, the Applicant respectfully requests approval of rezoning and reserves the right to modify this application through the review process.

RVi Planning + Landscape Architecture

MISSION RISE PUD REZONE

Town of Howey-in-the-Hills Town Council

January 22, 2024

PROJECT TEAM

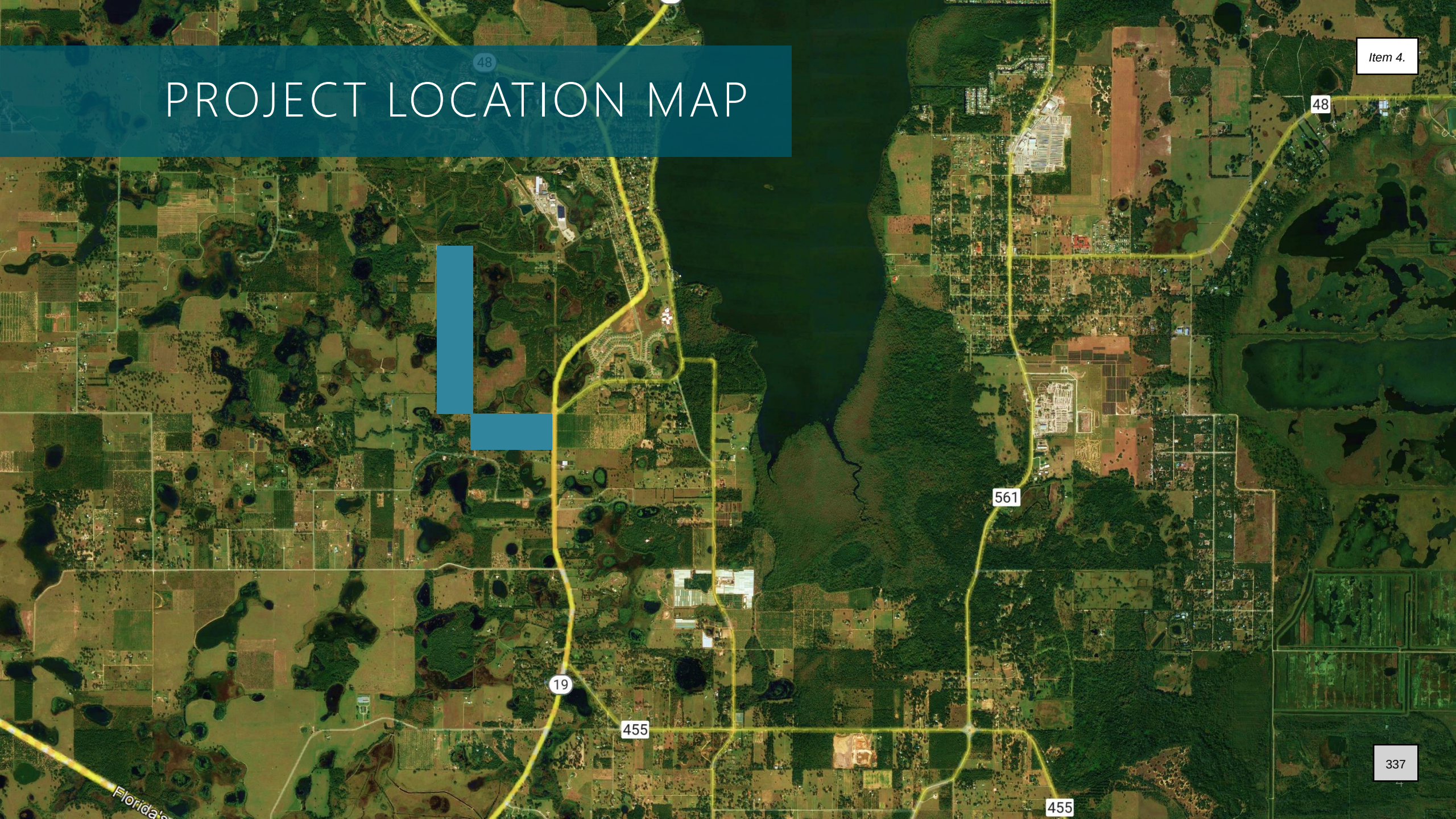
MISSION RISE PUD

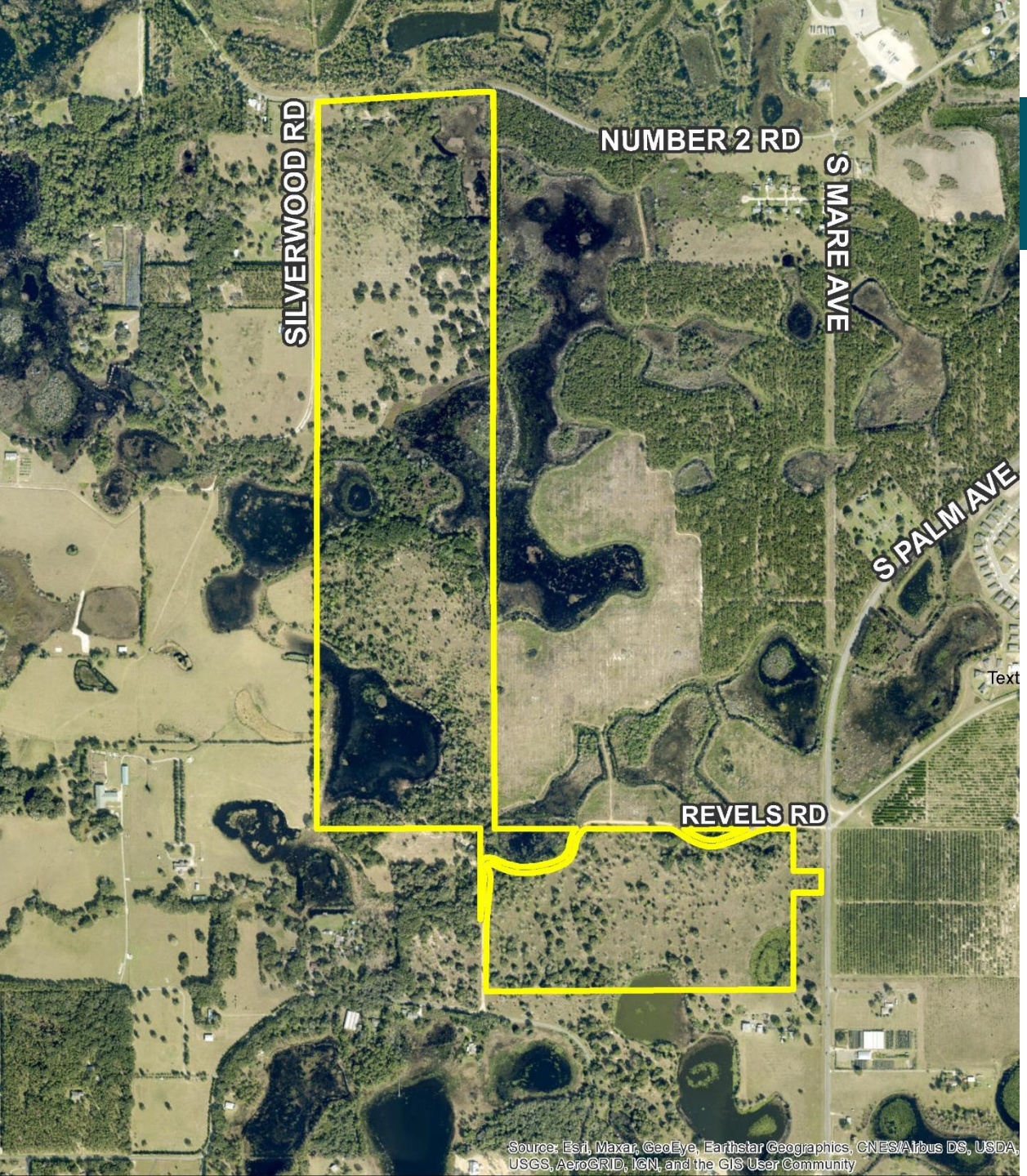
- Jason Humm, ASF TAP FL I LLC
- Jonathan Huels, Lowndes
- Mike Ripley, Land Advisors
- Jacqueline St. Juste, Atwell
- Charlotte Davidson, Traffic Mobility Consultants
- Mark Ausley, Bio-Tech Consulting
- Jack Caldwell, Alexis Crespo & Rhea Lopes, RVi Planning + Landscape Architecture

REQUEST SUMMARY

Rezone 243 acres from PUD to PUD to allow for a maximum of 499 single-family dwelling units, public and private recreational amenities, 90+/- acres of combined open space and wetland preservation areas, and substantial public benefits via binding Developers Agreement

PROJECT LOCATION MAP





SITE OVERVIEW

- 243+/- acres
- Accessed from S.R. 19 and Number 2 Road
- Currently vacant
- FLU: Village Mixed Use (VMU)
- Existing Zoning: Planned Unit Development (PUD)
  - Ordinance 2005-357 – 400 DUs
  - Developer's Agreement Expired in 2017

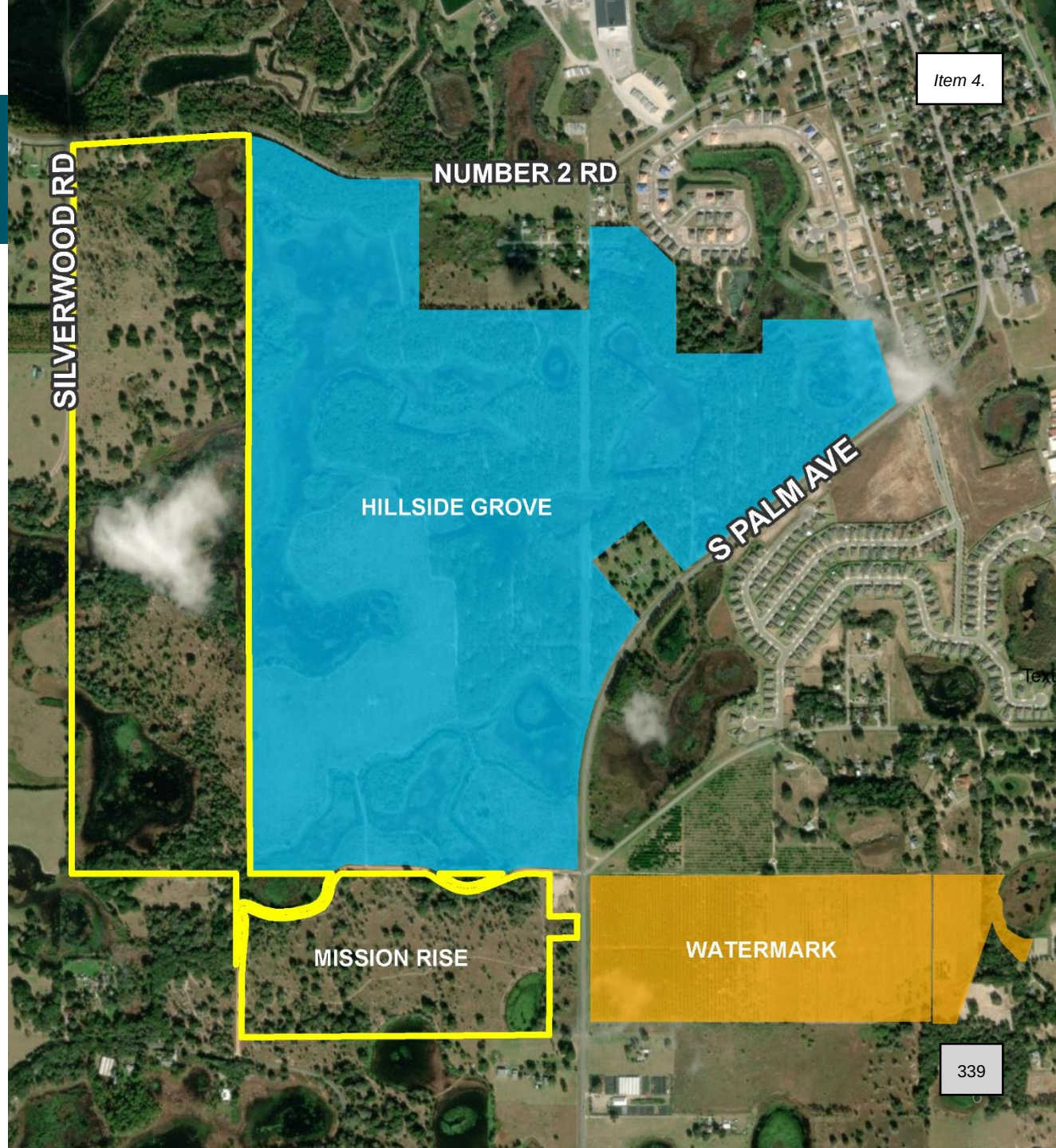
SURROUNDING PUDS

Hillside Grove (The Reserve)

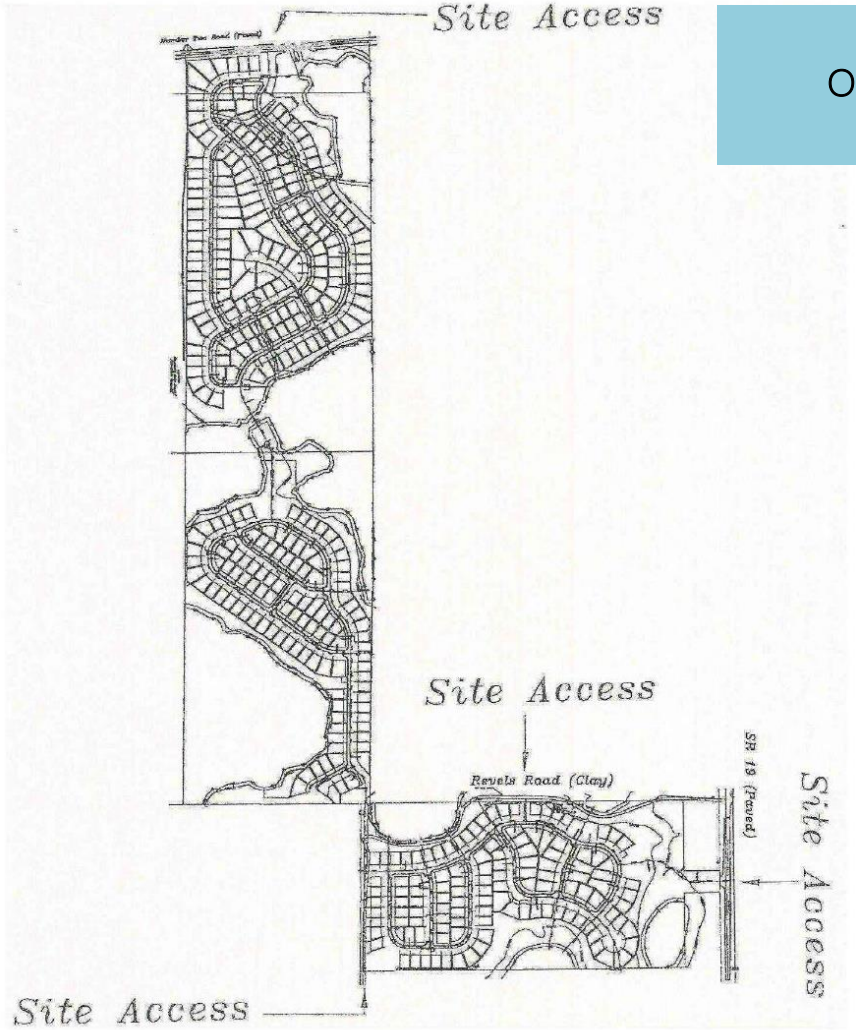
- FLU: Village Mixed Use (VMU)
- Zoning: Planned Unit Development (PUD)
- Entitlements:
  - 740 SFD Residential
  - 105,716 SF Office/Storage
  - 300,000 SF Retail/Office
  - 100,000 SF Institutional
- Lot Sizes
  - 50 x 80
  - 27 x 115
  - 50 x 115

Watermark (Simpsons Parcel)

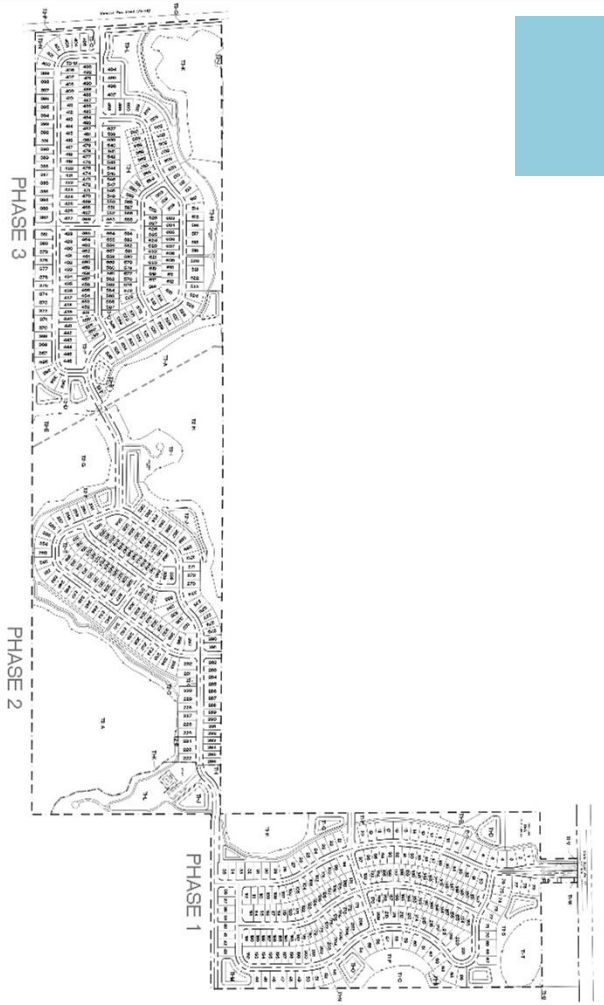
- FLU: Medium Density Residential (MDR)
- Zoning: Planned Unit Development (PUD)
- Entitlements:
  - 225 SFD Residential
- Lot Sizes
  - 70 x 120
  - 80 x 120



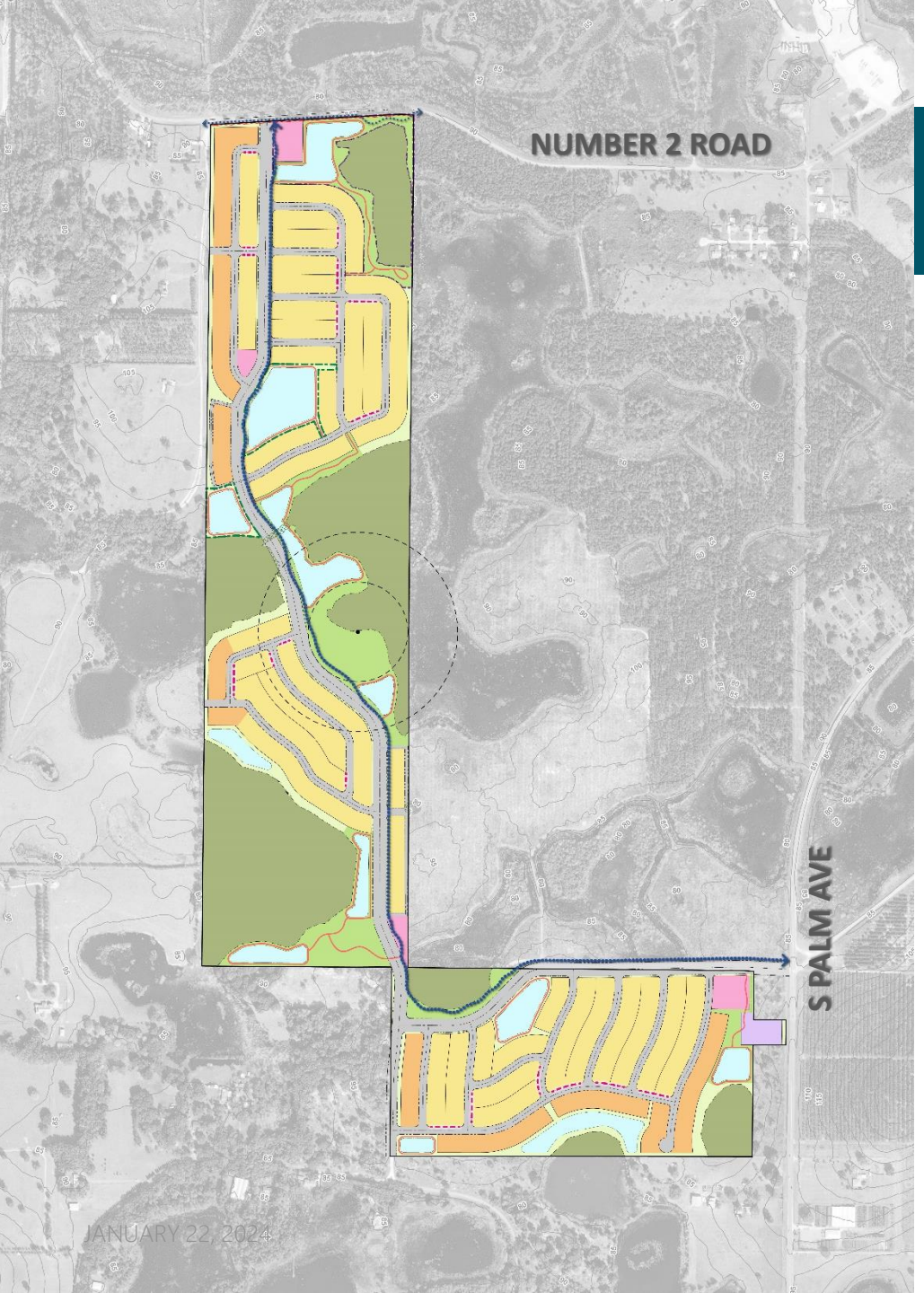
PREVIOUS APPROVALS



2005 Zoning
Ordinance 2005-037
400 SFD LOTS



2019 Zoning
(Not Approved)
629 SFD LOTS



REQUEST SUMMARY

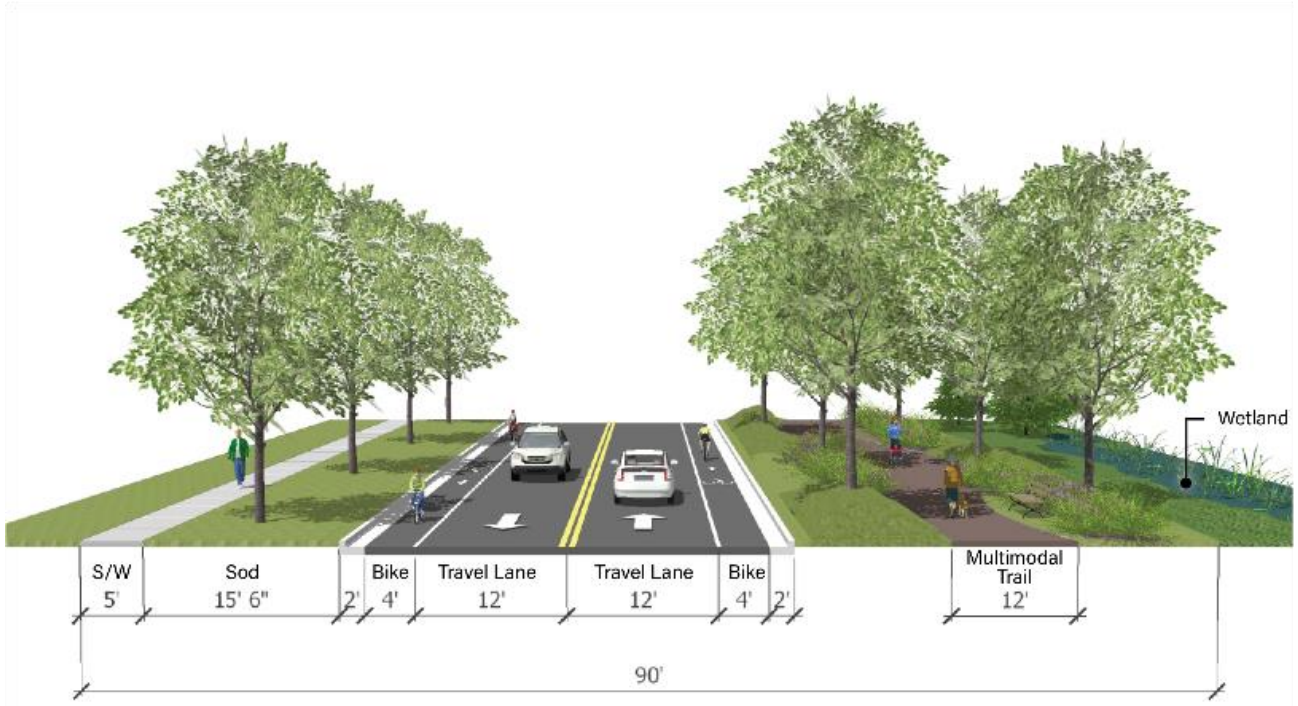
- Rezone to PUD with Binding Conceptual Land Use Plan & Developer's Agreement
- Residential Program
  - Maximum of 499 DU
  - Net Density: 3.3 DU/NA (Net Acreage: 153 AC)
- Non-Residential Program
  - Regional Multi-use Trail with Trail Head & 2 Public Parks
- Project Highlights
  - Open Space: 69.4 AC (28.5%)
  - 99% Wetland Preservation (±60.1 AC) & Eagle's Nest Buffer
  - On-site Amenities
  - 90' Wide Collector Roadway
  - Intersection Improvements at SR 19 & Revels Road

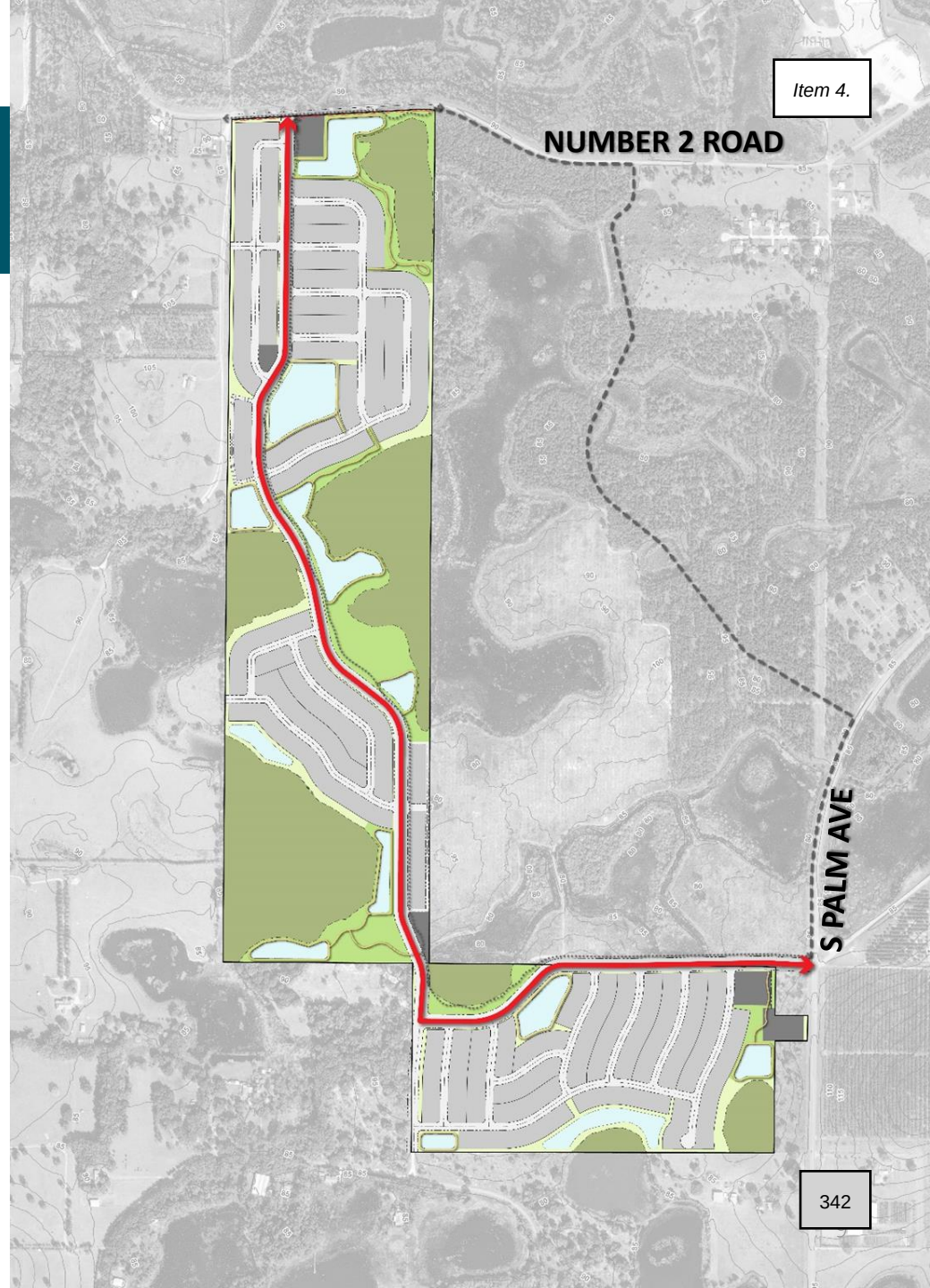
COLLECTOR ROAD

- Required per the Comprehensive Plan

SPINE ROAD

90' ROW WITH BIKE LANE & 12' MULTIMODAL TRAIL





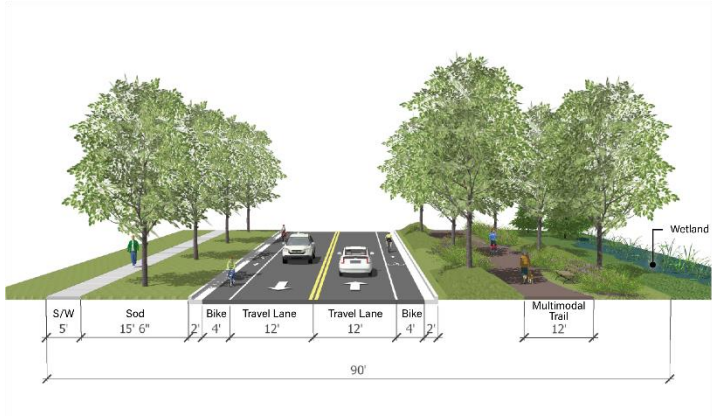
NON-RESIDENTIAL PROGRAM

- Site not suitable for commercial uses
  - Lack of frontage on major roadway
  - Shape of the property
  - Proximity to larger residential lots
- Multimodal Trail & Park System
- Trailhead along S.R. 19

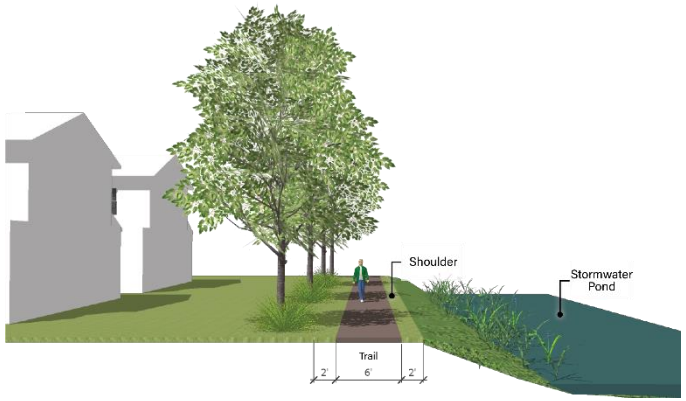
MULTI-USE TRAIL & PARKS SYSTEM

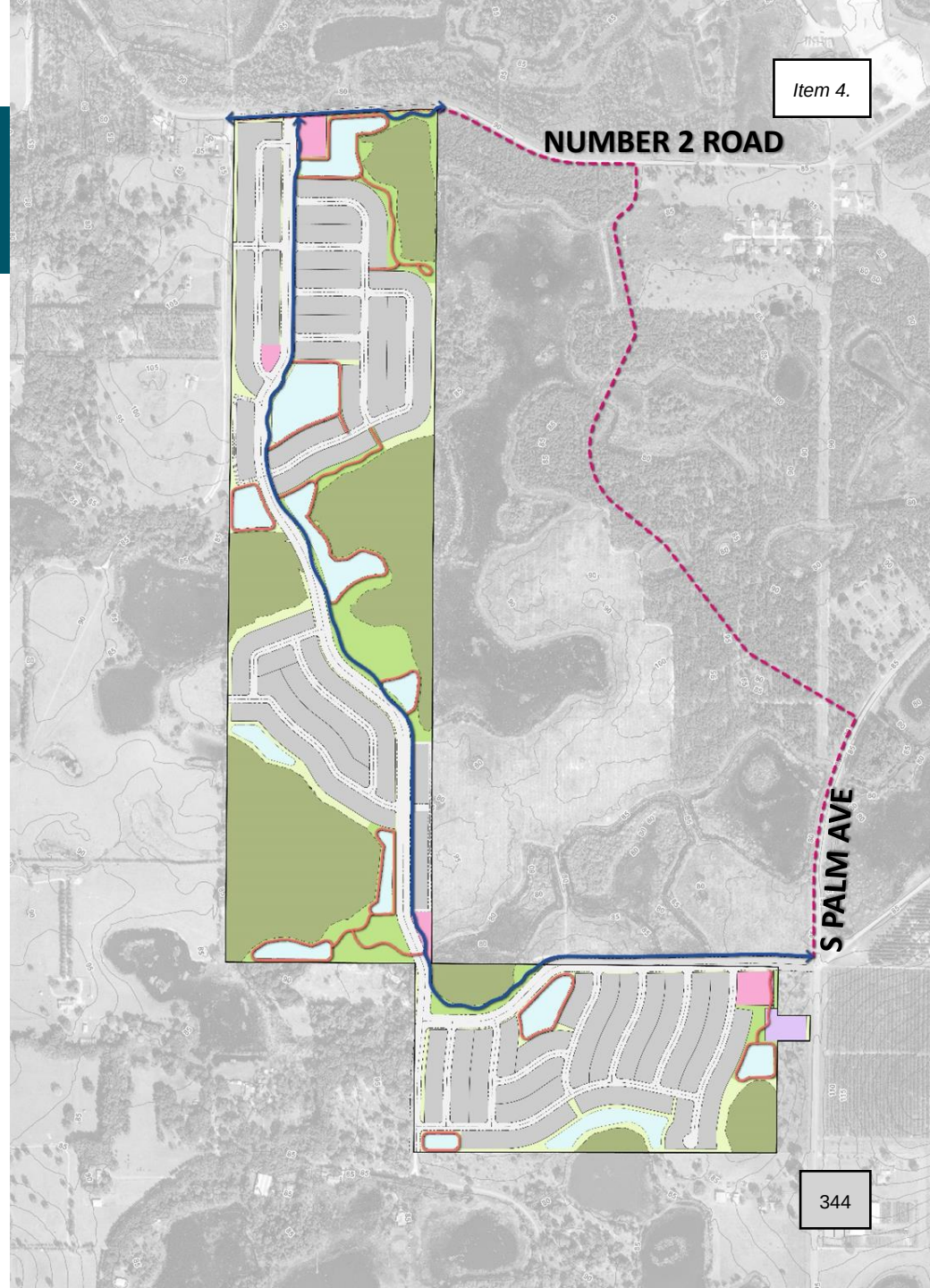
- Min. 12’ wide
- Located near the Collector Roadway
- Viewsheds along Preserved Wetlands, Ponds
- Pedestrian Trails along Ponds

SPINE ROAD
90’ ROW WITH BIKE LANE & 12’ MULTIMODAL TRAIL



PEDESTRIAN PATH
6’ TRAIL





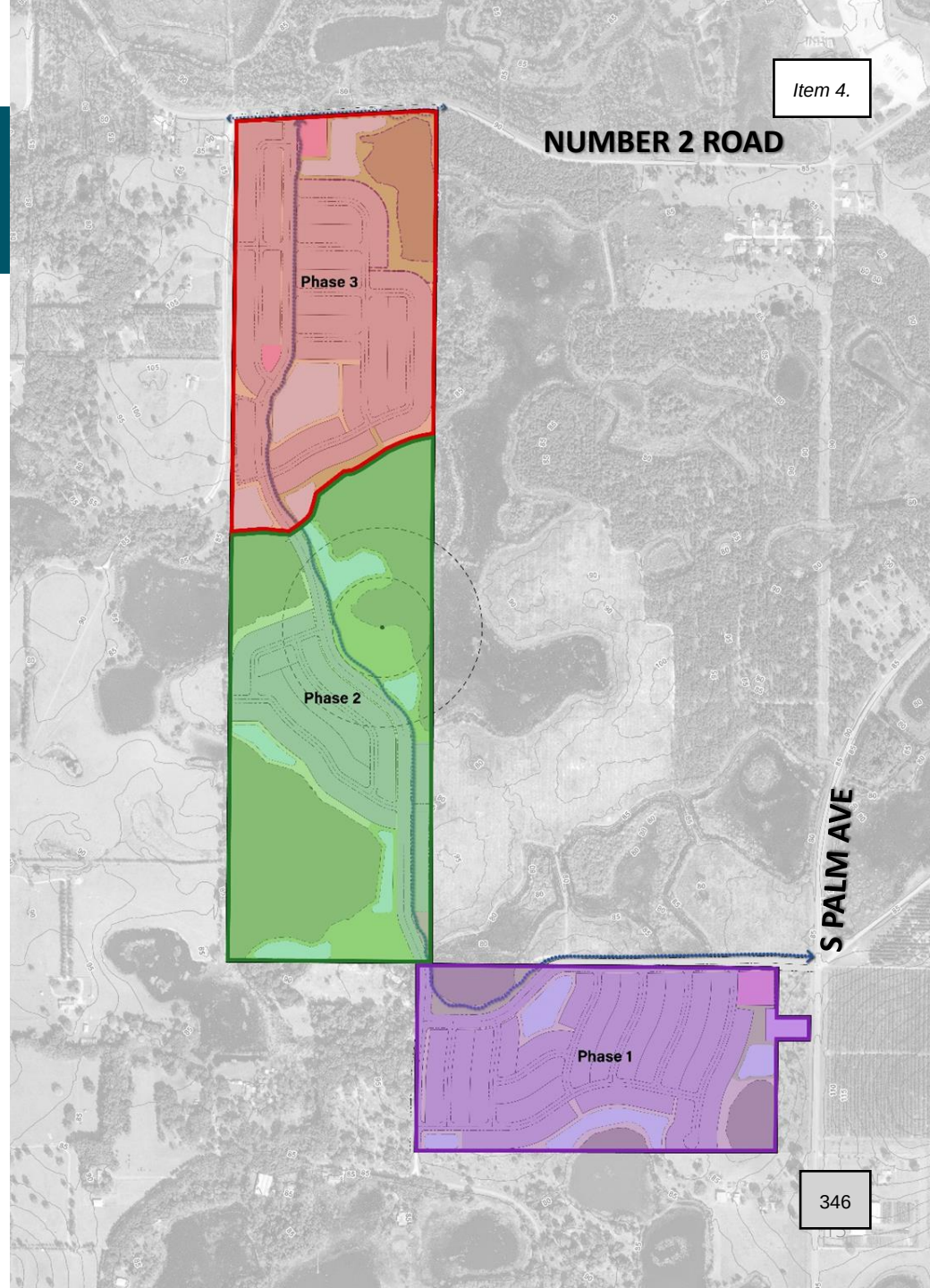
MULTI-USE TRAIL & PARKS SYSTEM

- Programmed Park Space
  - Trails
  - Benches
  - Picnic Tables

- Amenitized Trail head Site at S.R. 19 with Phase 1 of Project
  - Parking
  - Restrooms
  - Bike Maintenance Station
  - Cooling Station
  - Water Station
  - Benches
  - Picnic Tables

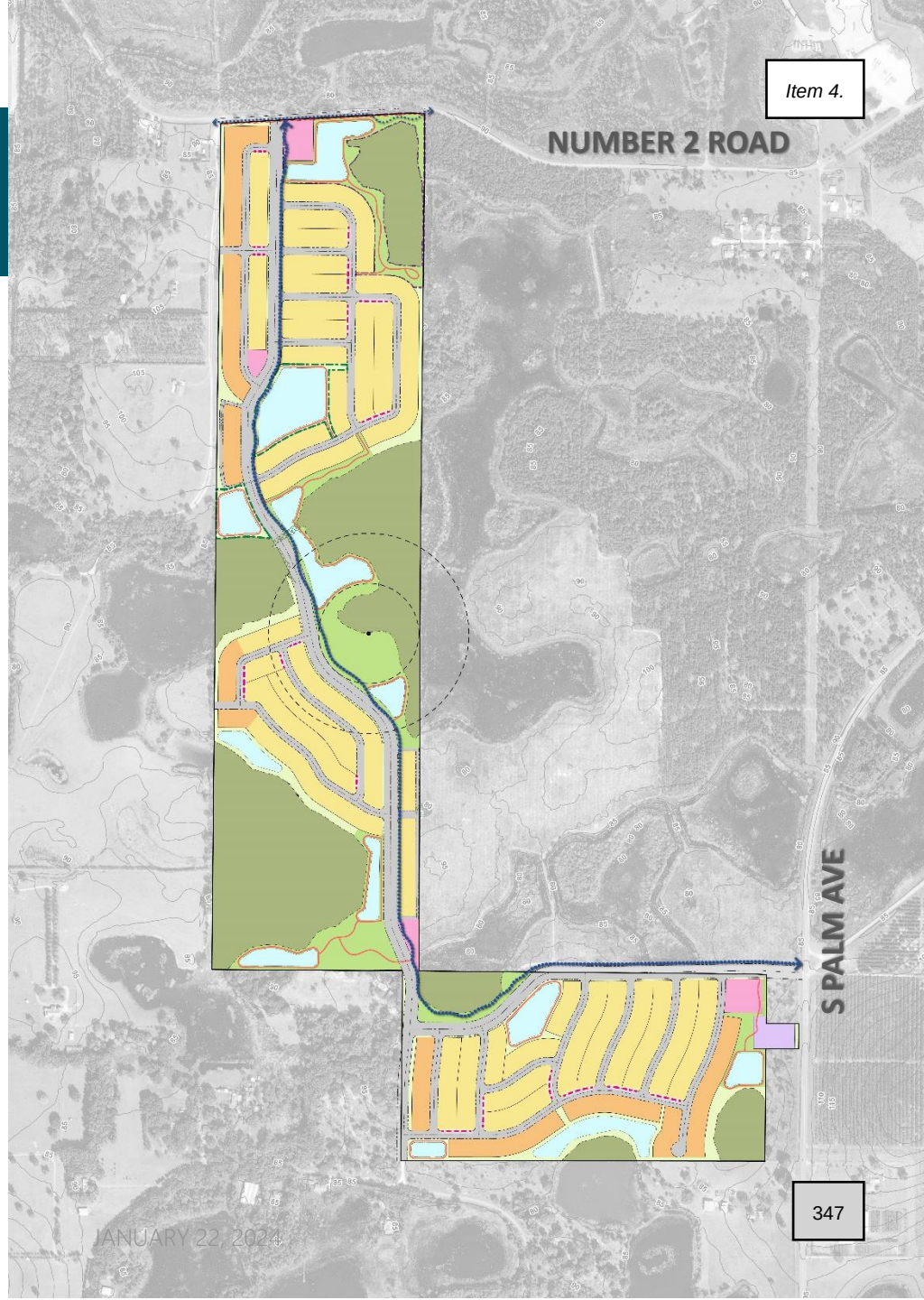
RESIDENTIAL PROGRAM

- 499 DU (Maximum 611 permitted per FLU)
- All Single-Family Detached Lots
- 3 Phases of Development
- Access from S.R. 19 & Number 2 Road
- Connectivity across Property through Spine Road (Collector Road per the Comprehensive Plan)
- Realignment of Revels Road
- Gated Access to Orange Blossom Road as directed by Town/County



PROPOSED LOT DESIGN

- 75’-wide Lots along all the Perimeters
- 55’-wide Lots only internal to the Development



JANUARY 22, 2024

DESIGNED FOR COMPATIBILITY

- Design Standards to Preserve Views from the Collector Road:
  - Limited units on Collector Road with Alley Access
  - 10’ Landscaped Buffer along Collector Road for Double-Frontage Lots

- Design Standards to prevent Monotony (DA):
  - Requirements for a variety of materials
  - Block-face restrictions
  - Specific Standards will be finalized at Subdivision Plans Stage

DESIGN WITH NATURE

- Development Footprint: 50% of the site
- 99% Wetlands Preservation
- 1% Wetland Impact for Collector Roadway Crossing
- Multi-use trail and park spaces located around preserved wetlands & vegetated areas
- Tree Preservation per LDC
- 330’ no-development buffer around eagle’s nest

INFRASTRUCTURE

- Development Agreement to address all infrastructure needs of the Project
- Traffic
  - Project includes 90’ ROW Collector Road – to be constructed by the Developer in Phases
  - Commitment for intersection improvement at Revels Road & S.R. 19
- Stormwater
  - Master Stormwater System (Public & Private Components)
- Utilities
  - Potable Water – Town of Howey-in-the-Hills
  - Wastewater – Mission Inn CDD or other options
- Publicly Accessible Multiuse trail & Parks

CONSISTENCY WITH THE COMPREHENSIVE PLAN

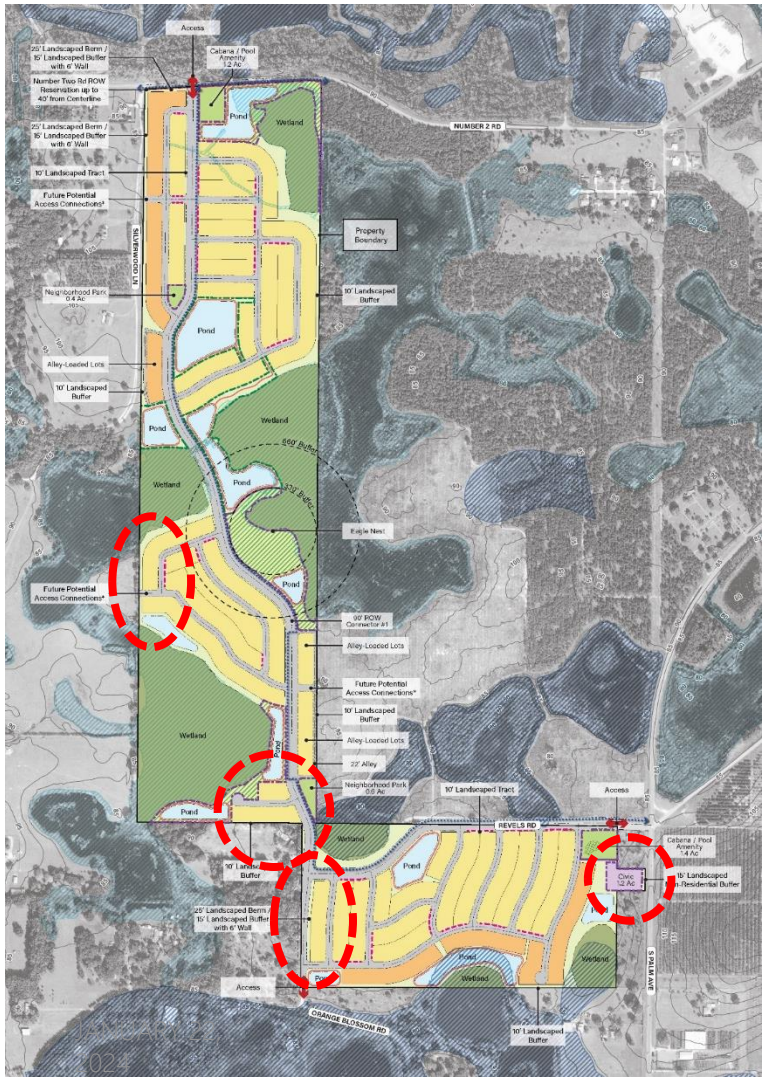
- VMU District – Increased Density with Enhanced Requirements for Open Space, Non-Residential Areas, Civic Space

Detail	VMU Requirement	Proposal
Residential Areas	85% NLA (max.) = 130.1 AC	84.5% NLA = 129.3 AC
Non-Residential Areas	15% NLA (min.) = 22.97 AC	15.2% NLA = 23.2 AC
Open Space	25% GA (min.) = 60.8 AC	28.5% GA = 69.4 AC
Public Recreational Area	10% of usable open space (min.) = 3.9 AC	17.4% of usable open space = 6.8 AC
Public/Civic Space	5% of non-residential land (min.) = 1.14 AC	5.7% of non-residential land = 1.3 AC

- **Policy 1.11.2:** Use of Cluster Developments. To promote the conservation of permeable surface area and maintain the Town's rural character, ***cluster developments shall be promoted by the Town*** during the development review process. Developers of Mixed Use/Planned Unit Developments and residential subdivisions shall be encouraged to cluster development in order to preserve open space.

- 90' Collector Roadway – per 2035 Future Transportation Map

PLAN EVOLUTION



Community Workshop August '23

Current Plan

CONCLUSION

MISSION RISE PUD

- CONSISTENT with the Comprehensive Plan & LDC
- Additional measures for COMPATIBILITY with adjacent properties
- ENVIRONMENTALLY-SENSITIVE site design
- SUBSTANTIAL PUBLIC BENEFITS via roadway improvements, public parks & multi-use trail system

THANK YOU!

QUESTIONS?

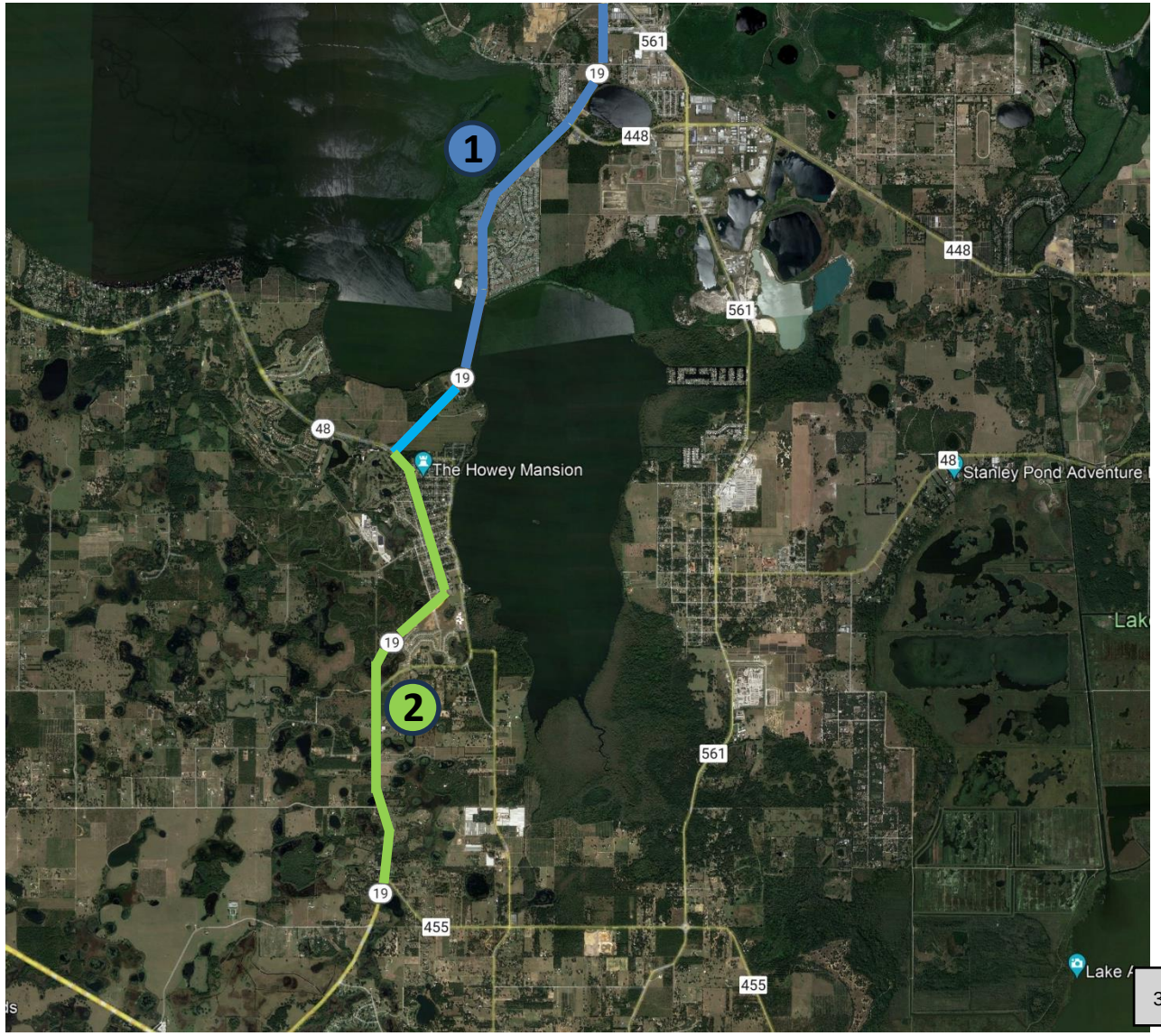
Planned Transportation Improvements

1. SR 19 from CR 48 to CR 561
   Widen to 4 Lanes

   Environmental, PD&E, Preliminary Engineering

2. SR 19 from CR 48 to CR 455
   Widen to 4 Lanes

   Partially Funded
   Per Lake-Sumter MPO TIP



BENEFITS OF CLUSTERING

- Reduced Development Footprint; Greater Open Space
- Lesser Landscaped Areas; Greater Natural Vegetation Preserve
- Smaller Lawns; Lower Irrigation Costs
- Community Gathering Space

GRIFFEY ENGINEERING, INC.

February 11, 2024

Sean O'Keefe, Town Manager
Town of Howey-in-the-Hills
101 N. Palm Avenue
Howey-in-the-Hills, FL 34737

RE: Hillside Groves SR 19 Access Connection

Dear Sean:

This letter is a follow up to the town council meeting of January 8, 2024 regarding the SR 19 access connection for Hillside Groves. At that meeting I reported on our prior meeting with FDOT regarding the width of the proposed access connection (three lanes versus a four lane divided boulevard). As I discussed with the council, FDOT would only permit the three lane connection at this time, and that they would reevaluate the connection configuration when the commercial portion of the project came forward for permitting.

In my report to the council, I also looked at a roundabout as an alternate type of connection, and it was my opinion that it was preferable to the standard turn lanes as shown in the construction plans. During our discussion council members expressed concerns that changing the connection at this point in the process would create delays, and that there would be an increase in cost. My working assumptions during the meeting were that a roundabout would cost less than the turn lane option, and that, while it might cause some delay, it would not be inordinately long. At the conclusion of our discussion I told the council that I would work with FDOT and the developer to determine if a roundabout would be a viable alternative.

I have since had communications with the developer's consultants and with FDOT, and it turns out that my assumptions were not correct. The project engineers have provided us with cost estimates for both options and they assert that a roundabout would be costlier. I've also been in contact with FDOT, and while they are generally positive, they seem to be bound by their processes and procedures. It looks like the roundabout option would result in a time delay to the project. Based on those findings, my recommendation is to continue forward with the access connection as shown in the approved construction plans, and issue a Local Government Letter of Authorization for the FDOT Notice of Intent to Issue Permit (NOI).

It should be noted that this intersection will likely require signalization in the future. Also, the primary need for a signal will be project generated traffic. Accordingly, the majority of the cost of the signal should be borne by the project developer. As the later phases of Hillside Groves (residential and commercial) come forward in the future, this intersection will be reevaluated by the town and FDOT. We will certainly look closely into future signalization.

Sincerely,

Donald A. Griffey, P.E.

36202 EAST ELDORADO LAKE DR. • EUSTIS, FLORIDA 32736 • [352] 409-0640

US 19 Roundabout Howey in the Hills	Notes	Estimated Costs
Roundabout Construction Cost	mobilization, roadway, drainage, signing & marking, lighting, traffic control plans, & landscaping	$1,914,467
Design + CEI + permiting (15%)	Engineering design, construction inspection, permits (FDOT, WMD)	$287,170
Wetland mitigation	Assumed 0.90 acres of impact	$45,000
Total Roundabout Cost		**$2,246,637**

Jan-24

Project: TBD

Proposal:		**Description:**	**US 19 HOWEY IN THE HILLS**
Letting Date:		**US Route:**	**US 19**
Designer:	**Connelly & Wicker**	**State Route:**	**SR 45**

Pay Item	Description	Unit	Quantity	Unit Cost	Total Cost
	Roadway				
0101- 1-	MOBILIZATION (US 19)	LS	1.000	$174,042	$174,042.45
0102- 1-	MAINTENANCE OF TRAFFIC (US 19)	LS/DA	180	$990.71	$178,327.17
0102- 2-200	SPECIAL DETOUR- TEMPORARY PAVEMENT	LS/SY	3111	$48.49	$150,849.28
0102- 2-300	SPECIAL DETOUR- TEMPORARY EARTHWORK/BASE	LS/CY	500	$298.95	$149,472.75
				SUBTOTAL	$652,691.65
			TOTAL ROUNDABOUT CONSTRUCTION COST		**$1,914,467**

Project: TBD

Proposal:		**Description:**	**US 19 HOWEY IN THE HILLS**
Letting Date:		**US Route:**	**US 19**
Designer:	**Connelly & Wicker**	**State Route:**	**SR 45**

Pay Item	Description	Unit	Quantity	Unit Cost	Total Cost
ROADWAY + DRAINAGE	**Description**				
0104- 10- 3	SEDIMENT BARRIER	LF	2000	$1.70	$3,402.00
0104- 18-	INLET PROTECTION SYSTEM	EA	5	$185.18	$925.89
0107- 1-	LITTER REMOVAL	AC	1.53	$37.96	$58.07
0107- 2-	MOWING	AC	1.53	$65.06	$99.54
0110- 1- 1	CLEARING & GRUBBING (44152415203)	LS/AC	1.530	$33,213.54	$50,816.71
0110- 4- 10	REMOVAL OF EXISTING CONCRETE	SY	0	$48.03	$0.00
0120- 1-	REGULAR EXCAVATION	CY	235	$36.11	$8,485.73
0120- 4-	SUBSOIL EXCAVATION	CY	942	$9.45	$8,901.90
0120- 6-	EMBANKMENT	CY	2825	$40.93	$115,624.43
0160- 4-	TYPE B STABILIZATION	SY	5,708	$19.49	$111,227.76
0285-703-	OPTIONAL BASE, BASE GROUP 01	SY	670	$24.76	$16,588.53
0285-709-	OPTIONAL BASE, BASE GROUP 09	SY	3809	$33.89	$129,102.25
0285-713-	OPTIONAL BASE, BASE GROUP 13	SY	0	$101.13	$0.00
0327- 70- 6	MILLING EXISTING ASPHALT PAVEMENT, 1 1/2" AVG DEPTH	SY	0	$7.48	$0.00
0327- 70- 7	MILLING EXISTING ASPHALT PAVEMENT, 4" AVG DEPTH	SY	0	$11.87	$0.00
0334- 1- 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	0	$543.30	$0.00
0334- 1- 13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	TN	611.4	$129.77	$79,341.07
0337- 7- 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	366.1	$178.29	$65,271.97
0350- 30- 13	CONCRETE PAVEMENT FOR ROUNDABOUT APRON, 12" DEPTH	SY	447	$321.30	$143,621.10
0425- 1-351	INLETS, CURB, TYPE P-5, <10'	EA	2.000	$7,560.00	$15,120.00
0425- 1-361	INLETS, CURB, TYPE P-6, <10'	EA	3.000	$9,240.00	$27,720.00
0425- 1-561	INLETS, DT BOT, TYPE F, <10'	EA	0	$9,187.07	$0.00
0425- 1-910	INLETS, CLOSED FLUME	EA	0	$10,347.75	$0.00
0425- 2- 61	MANHOLES, P-8, <10'	EA	2	$7,025.91	$14,051.81
0425- 5-	MANHOLE, ADJUST	EA	0	$1,932.27	$0.00
0425- 5- 1	MANHOLE, ADJUST, UTILITIES	EA	0	$1,853.54	$0.00
0425- 6-	VALVE BOXES, ADJUST	EA	0	$1,054.85	$0.00
0430-175-112	PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 12"S/CD	LF	0	$474.22	$0.00
0430-175-118	PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 18"S/CD	LF	156	$149.09	$23,257.96
0430-175-124	PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 24"S/CD	LF	156	$262.25	$40,910.69
0430-175-224	PIPE CULVERT,OPTIONAL MATERIAL,OTHER SHAPE-ELIP/ARCH, 24"S/CD	LF	0	$180.60	$0.00
0520- 1- 7	CONCRETE CURB & GUTTER, TYPE E	LF	0	$62.24	$0.00
0520- 1- 10	CONCRETE CURB & GUTTER, TYPE F	LF	447	$44.61	$19,942.68
0520- 2- 2	CONCRETE CURB, TYPE B	LF	270	$114.45	$30,901.50
0520- 2- 4	CONCRETE CURB, TYPE D	LF	174	$31.64	$5,504.75
0520- 2- 8	CONCRETE CURB, TYPE RA	LF	273	$60.43	$16,496.71
0520- 5- 11	TRAFFIC SEPARATOR CONCRETE-TYPE I, 4' WIDE	LF	0	$367.50	$0.00
0520- 70-	CONCRETE TRAFFIC SEPARATOR, SPECIAL- VARIABLE WIDTH	SY	0	$243.41	$0.00
0522- 1-	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	180	$104.72	$18,848.97
0522- 2-	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	180	$161.63	$29,092.77
0527- 2-	DETECTABLE WARNINGS	SF	244	$32.13	$7,839.72
0919-528-100	DIRECTIONAL INDICATORS	SF	0	$68.25	$0.00
S&PM					
0700- 1- 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	25	$508.37	$12,709.20
0700- 1- 12	SINGLE POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS	8	$1,587.46	$12,699.71

	0700- 1- 50	SINGLE POST SIGN, RELOCATE	AS	0	$299.28	$0.00
	0700- 1- 60	SINGLE POST SIGN, REMOVE	AS	5	$50.52	$252.58
	0704- 1- 1	TUBULAR MARKER, DURABLE, 36" WHITE POST	EA	0	$219.77	$0.00
	0705- 10- 3	OBJECT MARKER, TYPE 3	EA	1.000	$268.37	$268.37
	0706- 1- 3	RAISED PAVEMENT MARKER, TYPE B	EA	175.000	$4.05	$709.28
	0710- 90-	PAINTED PAVEMENT MARKINGS, FINAL SURFACE (44152415203)	LS	1.000	$19,301.13	$19,301.13
	0711- 11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	229.000	$3.53	$807.91
	0711- 11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	33.000	$5.16	$170.13
	0711- 11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	72.000	$6.75	$486.11
	0711- 11-141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.086	$2,563.03	$220.42
	0711- 11-144	THERMOPLASTIC, STANDARD, WHITE, 2-2 DOTTED EXTENSION LINE, 12" FOR ROUNDABOUT	GM	0.025	$7,573.71	$189.34
	0711- 11-160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	6.000	$168.57	$1,011.40
	0711- 11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	17.000	$64.97	$1,104.56
	0711- 11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	117.000	$5.31	$621.62
	0711- 14-125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	200.000	$15.17	$3,034.50
	0711- 14-160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	2.000	$240.57	$481.13
	0711- 14-170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	EA	2.000	$313.65	$627.29
	0711- 16-101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6"	GM	0.745	$5,686.45	$4,236.41
	0711- 16-102	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 8"	GM	0.073	$7,166.87	$523.18
	0711- 16-131	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SKIP, 6",10-30 SKIP OR 3-9 LANE	GM	0.447	$1,582.56	$707.40
	0711- 16-201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6"	GM	0.659	$5,868.02	$3,867.02
	0711- 16-231	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SKIP, 6"	GM	0.017	$2,070.54	$35.20
	LIGHTING					
	0630- 2- 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	225	$17.71	$3,985.54
	0630- 2- 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	480	$35.71	$17,141.04
	0635- 2- 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	11	$1,327.71	$14,604.86
	0715- 1- 13	LIGHTING CONDUCTORS, F&I, INSULATED, NO 4 TO NO 2	LF	2115	$2.38	$5,041.10
	0715- 1- 60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF	0	$0.19	$0.00
	0715- 7- 21	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	1	$8,000.00	$8,000.00
	0715- 11-211	LUMINAIRE, F&I- REPLACE EXISTING LUMINAIRE ON EXISTING POLE/ARM, ROADWAY, COBRA	EA	0	$1,543.50	$0.00
	0715- 61-342	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING	EA	8	$11,760.00	$94,080.00
	0715- 69-000	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA	0	$873.14	$0.00
	0715-500- 1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH AND INSTALL, CONVENTIONAL	EA	8	$899.85	$7,198.80
	0715-516-115	LIGHT POLE COMPLETE-F&I, POLE TOP MOUNT, ALUMINUM, 15'	EA	0	$13,738.20	$0.00
	0715-518-115	LIGHT POLE COMP- SPECIAL DESIGN, F&I, DOUBLE ARM, POLE TOP MOUNT, ALUMINUM, 15'	EA	0	$15,750.00	$0.00
	0630- 2- 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	0	$35.71	$0.00
	0632- 7- 1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	0	$19,254.32	$0.00
	0635- 2- 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	0	$1,330.86	$0.00
	0654- 2- 27	MIDBLOCK CROSSWALK: REC RAPID FLASHING BEACON, FURNISH/INSTALL- SOLAR, SIGN	AS	0	$8,938.65	$0.00
	LANDSCAPING					
	0570- 1- 2	PERFORMANCE TURF, SOD	SY	7520	$4.59	$34,505.52
	0580- 1- 1	LANDSCAPE COMPLETE- SMALL PLANTS	LS	1.000	$10,000.00	$10,000.00
	0580- 1- 2	LANDSCAPE COMPLETE- LARGE PLANTS	LS	1.000	$20,000.00	$20,000.00
	0590- 70-	IRRIGATION SYSTEM	LS	0	$10,000.00	$0.00
		TOTAL CONSTRUCTION COST OF ROADWAY + DRAINAGE + SIGNING + PAVEMENT MARKING + LIGHTING + LANDSCAPING				**$1,261,775.27**

Hillside Grove Spine Road A

Hughes Brothers Construction, Inc.

948 Walker Road

Wildwood, FL 34785

Contact: **Brent Rossman**

Phone: **352-399-6829**

Fax: **352-399-6830**

Quote To:	LENNAR Attn: Seth Yawn	Job Name:	Hillside Grove Spine Road A
		Date of Plans:	August 2022
Phone:	407-973-7435	Revision Date:	
Fax:			
Date:	11/21/2022		

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
900	Mobilization	1.00	LS	5,500.00	5,500.00
10000	Survey & Layout	1.00	LS	63,250.00	63,250.00
10100	As-Builts	1.00	LS	17,250.00	17,250.00
10200	NPDES Monitoring	1.00	LS	2,600.00	2,600.00
10300	Silt Fence	4,160.00	LF	1.85	7,696.00
10305	Construction Entrance	1.00	EA	4,025.00	4,025.00
10400	Geo-Testing	1.00	LS	23,000.00	23,000.00
10500	**TOTAL GENERAL CONDITIONS**				**123,321.00**
10510	Fine Grade ROW	26,630.00	SY	0.55	14,646.50
10800	Fine Grade Disturbed Areas	220.00	SY	0.55	121.00
10900	**TOTAL EARTHWORK**				**14,767.50**
11000	Sod Entire Back of Curb	26,630.00	SY	3.00	79,890.00
11100	Seed & Mulch Disturbed Areas	220.00	SY	0.35	77.00
11200	**TOTAL GRASSING**				**79,967.00**
11270	15" RCP Storm	1,380.00	LF	55.10	76,038.00
11300	18" RCP Storm	414.00	LF	65.50	27,117.00
11400	24" RCP Storm	716.00	LF	94.40	67,590.40
11500	30" RCP Storm	396.00	LF	135.10	53,499.60
11600	36" RCP Storm	1,368.00	LF	179.85	246,034.80
11650	15" MES	2.00	EA	1,300.00	2,600.00
11660	24" MES	3.00	EA	1,745.00	5,235.00
11670	30" MES	1.00	EA	3,530.00	3,530.00
11680	36" MES	7.00	EA	4,415.00	30,905.00
11700	Type P-5 Curb Inlet	6.00	EA	8,060.00	48,360.00
11800	Type P-6 Curb Inlet	26.00	EA	7,935.00	206,310.00
11900	Type J-5 Curb Inlet	2.00	EA	11,115.00	22,230.00
12000	Type J-6 Curb Inlet	7.00	EA	11,915.00	83,405.00
12100	Type C Inlet	2.00	EA	5,105.00	10,210.00
12105	Type E Inlet With Baffle	1.00	EA	5,830.00	5,830.00
12200	Type P Manhole	1.00	EA	3,565.00	3,565.00

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
12400	Testing	4,274.00	LF	4.95	21,156.30
12402	Dewatering	4,274.00	LF	20.70	88,471.80
12500	**TOTAL STORM**				**1,002,087.90**
12600	0/6 8" PVC Sewer	68.00	LF	40.65	2,764.20
12700	6/8 8" PVC Sewer	150.00	LF	43.80	6,570.00
12800	8/10 8" PVC Sewer	522.00	LF	48.10	25,108.20
12900	10/12 8" PVC Sewer	471.00	LF	54.05	25,457.55
13000	12/14 8" PVC Sewer	620.00	LF	63.05	39,091.00
13100	14/16 8" PVC Sewer	662.00	LF	93.15	61,665.30
13200	16/18 8" PVC Sewer	462.00	LF	130.65	60,360.30
13500	8/10 Sewer Manhole	4.00	EA	6,680.00	26,720.00
13600	10/12 Sewer Manhole	1.00	EA	8,100.00	8,100.00
13700	12/14 Sewer Manhole	5.00	EA	9,675.00	48,375.00
13800	14/16 Sewer Manhole	2.00	EA	15,525.00	31,050.00
13900	16/18 Sewer Manhole	3.00	EA	20,145.00	60,435.00
14000	0/6 Sewer Manhole w/Liner	1.00	EA	11,335.00	11,335.00
14050	6/8 Sewer Manhole w/Liner	1.00	EA	12,015.00	12,015.00
14100	Single Service	6.00	EA	1,545.00	9,270.00
14300	Testing	2,955.00	LF	4.90	14,479.50
14305	Dewatering	2,955.00	LF	20.70	61,168.50
14400	**TOTAL SEWER**				**503,964.55**
14500	Lift Station Complete	1.00	LS	486,895.00	486,895.00
14600	**TOTAL LIFT STATION**				**486,895.00**
14602	Connect to Existing Manhole	1.00	EA	1,980.00	1,980.00
14700	4" PVC Forcemain	40.00	LF	24.55	982.00
14702	4" DIP	40.00	LF	83.15	3,326.00
14800	6" PVC Forcemain	60.00	LF	31.70	1,902.00
14802	10" PVC Forcemain	4,660.00	LF	43.95	204,807.00
14804	10" DIP	260.00	LF	107.95	28,067.00
14900	4" Gate Valve	1.00	EA	1,425.00	1,425.00
15000	6" Gate Valve	1.00	EA	1,670.00	1,670.00
15002	10" Gate Valve	7.00	EA	3,365.00	23,555.00
15004	ARV Assy	2.00	EA	11,230.00	22,460.00
15100	Fittings	1.00	LS	129,385.00	129,385.00
15200	Testing	5,060.00	LF	2.00	10,120.00
15300	**TOTAL FORCEMAIN**				**429,679.00**
15400	Connect To Existing (TSV)	1.00	EA	1,435.00	1,435.00
15500	Temporary Jumper	1.00	EA	2,255.00	2,255.00
15700	8" PVC Watermain	270.00	LF	45.50	12,285.00
15800	8" DIP Watermain	350.00	LF	62.40	21,840.00
15900	12" PVC Watermain	4,740.00	LF	117.60	557,424.00
16000	12" DIP Watermain	80.00	LF	89.80	7,184.00
16100	8" Gate Valve	10.00	EA	2,380.00	23,800.00
16105	12" Gate Valve	19.00	EA	4,085.00	77,615.00
16200	Blow-Off Assy.	8.00	EA	1,050.00	8,400.00
16300	Fire Hydrant Assy.	6.00	EA	6,765.00	40,590.00
16302	ARV Assy	2.00	EA	11,810.00	23,620.00

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
16400	Fittings	1.00	LS	138,425.00	138,425.00
16500	Lift Station Service	1.00	EA	1,705.00	1,705.00
16800	Testing	5,440.00	LF	4.30	23,392.00
16900	**TOTAL WATERMAIN**				**939,970.00**
17000	Connect To Existing	1.00	EA	3,695.00	3,695.00
17004	4" PVC Reclaim	20.00	LF	21.12	422.40
17008	6" PVC Reclaim	40.00	LF	31.75	1,270.00
17100	8" PVC Reclaim	258.00	LF	45.45	11,726.10
17200	8" DIP Reclaim	150.00	LF	67.20	10,080.00
17202	10" PVC Reclaim	1,400.00	LF	63.40	88,760.00
17204	10" DIP Reclaim	80.00	LF	75.35	6,028.00
17206	12" PVC Reclaim	1,100.00	LF	81.60	89,760.00
17208	12" DIP Reclaim	60.00	LF	89.50	5,370.00
17212	4" Gate Valve	2.00	EA	1,400.00	2,800.00
17214	6" Gate Valve	1.00	EA	1,660.00	1,660.00
17300	8" Gate Valve	4.00	EA	2,325.00	9,300.00
17302	12" Gate Valve	4.00	EA	4,085.00	16,340.00
17400	Flushing Hydrant Assy	3.00	EA	1,085.00	3,255.00
17500	Fittings	1.00	LS	100,485.00	100,485.00
17705	Irrigation Service	5.00	EA	1,975.00	9,875.00
17800	Testing	3,108.00	LF	2.35	7,303.80
17900	**TOTAL RECLAIM**				**368,130.30**
18000	12" Stabilized Subgrade	28,345.00	SY	11.60	328,802.00
18100	8" Limerock Base	21,805.00	SY	19.35	421,926.75
18250	2.5" SP-9.5 Asphalt	21,805.00	SY	26.45	576,742.25
18400	Type F Curb	14,662.00	LF	22.45	329,161.90
18800	Sidewalk in Open Tracts	68,042.00	SF	6.90	469,489.80
19000	Concrete Driveway	625.00	SF	11.50	7,187.50
19100	Handicap Ramps	33.00	EA	1,350.00	44,550.00
19200	Signage & Striping	1.00	LS	52,360.00	52,360.00
19300	**TOTAL ROADWAY**				**2,230,220.20**
20990	Compacted Subgrade	5,290.00	SY	4.25	22,482.50
20995	Full Depth Limerock	4,075.00	SY	58.60	238,795.00
21000	2" SP-12.5 Asphalt	4,075.00	SY	16.70	68,052.50
21100	1.5" FC-12.5 Asphalt	4,075.00	SY	37.90	154,442.50
21105	Mill & Resurface	5,376.00	SY	45.70	245,683.20
21108	Open Cut Repair	595.00	SY	112.70	67,056.50
21110	Signage & Striping	1.00	LS	56,350.00	56,350.00
21115	Guard Rail	365.00	LF	172.50	62,962.50
21120	MOT	1.00	LS	86,250.00	86,250.00
21230	ROW Restoration	31,550.00	SY	3.55	112,002.50
21240	**TOTAL OFF-SITE ROADWAY**				**1,114,077.20**
GRAND TOTAL					**$7,293,079.65**

NOTES:

Bid Qualifications:

1. This proposal is valid no more than 15 days from bid due date.
2. Due to the current landscape of the utility market, all underground utility pricing is subject to change and will be priced at time of shipping.
3. This proposal is based on Engineered plans provided by CW Engineering dated August 2022.
4. Proposal excludes mobilization (included in mass grading bid). If additional mobilizations are required due to situations outside of HBC's control additional costs may occur.
5. Permits, bonds and fees are excluded.
6. Construction layout is included for HBC scope of work only. Staking of utilities including power, telecommunications, gas, and irrigation is excluded.
7. Certified as-builts included for HBC scope of work only. Record drawings are by others and excluded.
8. Density testing is included.
9. Clearing unit price is based upon open burning onsite. Pit burning and/or grinding is excluded.
10. Topo to be field verified before breaking ground.
11. Dewatering is included. Any unforeseen circumstances such as springs, wells, extreme weather conditions, acts of God and any other conditions that were not readily apparent at time of proposal are excluded. Temporary holding ponds, settling basins, and chemical testing of discharge water are also excluded.
12. Proposal is based on all on-site excavating materials being suitable for use in site fills.
13. Unsuitable, contaminated, muck or hazardous material removal and/or replacement is excluded. Over excavation of any clay soils is excluded.
14. Dust control included in earthwork operations consists of one water truck while earthwork crew is onsite. Additional dust control required in addition to one truck is excluded.
15. Retaining wall is quoted as a standard gray color segmental block retaining wall with geogrid tie-back system. Adequacy of the proposed system for site specific conditions cannot be verified until structural design is performed after awarding of contract. Screen wall excluded.
16. HBC is not responsible for the cleanup and/or disposal of waste generated by any subcontractor not contracted by HBC.
17. Proposal includes fine grading ROW one time only. Regrading due to utility installation not included within HBC's contract scope is excluded.
18. Sidewalk quantity included is for open tract areas only based upon attached exhibit. All other sidewalk is excluded.
19. Sodding quantity included is based upon attached exhibit and includes pond slopes, site slopes 4:1 and greater, swales, etc. Any sodding beyond the limits of the attached exhibit is excluded.
20. Conduit crossings and telephone relocation are excluded.
21. Irrigation, landscaping, fencing and hardscaping are excluded.
22. Well abandonment is excluded.
23. Price given for conservation signs as each, not shown in plans.
24. This proposal is furnished as a complete scope of work as defined above and shall be contracted to HBC in its entirety. Individual line items shall not be removed without prior authorization of HBC. Items not defined in this proposal shall be considered excluded.
25. Payment terms shall be per the Contract agreement or no later than 30 days after issuance of HBC invoice.
26. Prices quoted are based on current FOB refinery prices on liquid asphalt and diesel fuel at $4.50 including taxs & fees. Such prices are not guaranteed by the major oil company's and are subject to sudden adjustment during the time of the contract. The base prices for liquid asphalt and fuel are based on the current FDOT index. If the cost of these materials increase the owner/contractor will make adjustments to the contract based on the index. Hughes Brothers Construction, Inc. will make adjustments to the contract based on this index.
27. HBC warrants all installation and workmanship for the above-referenced project in accordance with the plans, specifications, and other relevant documents for a period of one year from date of final completion. This warranty excludes normal wear and tear, product abuse/misuse, material defects, alterations of any kind performed by persons other than HBC, and damage resulting from vandalism and acts of God.

TOWN OF HOWEY-IN-THE-HILLS
SARA MAUDE MASON PRESERVE BOARDWALK
RFP:#2024-001

Title Page

Vender, Dock Pro LLC

Primary Address / Office, 793 Chestnut St Clermont FL 34711

Gary Butler Jr. Cell# 352 242 6415 Email: Dockpr025@yahoo.com

Managers Address / Office, 165 E Beach St Groveland FL 34736

Primary Contact

Gary Butler sr. Cell# 352 267 0009 Email: Dockpr01466@yahoo.com

TOWN OF HOWEY-IN-THE-HILLS
SARA MAUDE MASON PRESERVE BOARDWALK
RFP:#2024-001

Letter Of Transmittal:

Dock Pro LLC is a Sole Proprietorship located in Lake County Florida.

Primary Office,
Owner Gary Butler Jr.
793 Chestnut st Clermont FL 34711 cell#
352 242 6415
Email: Dockpr025@yahQ0.com

Secondary office
Manager Gary Butler Sr.
165 E Beach st Groveland FL 34736
Cell# 352 267 0009
Email: Dockprol 466@yahoo.com

Gary Butler Sr. is Authorized and will be representing Dock Pro LLC.
Dock Pro Gary Butler Sr. Certifies Dock Pro will furnish all goods and services specified in the proposal package at the prices quoted in the proposal and the proposal will remain firm for 60 days after the date that the proposal package is submi in order for the town to evaluate the proposal and make award.

Gary Butler Jr. and Sr. have made site visits and understand the scope of the project and look forward to working with The City of Howey — In — The — Hills on this project. Thank You for the opportunity to be your builder. Gary Butler Sr. Gary Butler Jr. Dock Pro LLC.

TOWN OF HOWEY-IN-THE-HILLS
SARA MAUDE MASON PRESERVE BOARDWALK
RFP:#2024-001

Eligibility:

1. Provide proof of legal entity and authorization to do business within the State of Florida.

   (See attached) 2 pages Sunbiz Division of corporations.

2. Provide a minimum of three specific references with appropriate contact information for "similar" projects, period of performance for the specific engagement, and the value of services performed.

   Fox Run HOA Dock, Tavares 5'x3,000'$160,000.00
   Fox Run HOA 352 343 0716
   Cheryl Kilgore

   Universal City Walk, Orlando 5- Hotel Docks and main City Walk dock Total $250,000.00 +
   City Walk David Malizia
   321 443 0276

   Hawthorne Mobile Home Park, Leesburg Redeck dock change floats add 300 cleats add 250 Bumpers $430,000.00
   Chad Peck
   352 360 6200

3. Indicate financial wherewithal and stability of firm.

   Dock Pro LLC has been with Chase Bank for 15 yrs. and is financially strong. Recently purchased land on Lake Susan paid $400,000.00 Cash and still holds over $400,000.00 in account. Dock Pro LLC does not use credit lines (See attached)

4. Indicate any potential conflicts of interest with the Town.
   Dock Pro LLC and employees do not have any conflicts of interest.

TOWN OF HOWEY-IN-THE-HILLS
SARA MAUDE MASON PRESERVE BOARDWALK
RFP:#2024-001

Schedule and Price, for completing the project as outlined herein.

Dock Pro LLC will remove all existing materials and properly dispose of all materials.
Dock Pro LLC will provide all materials, tabor and equipment required to build a new boardwalk. 5' wide x 1 ,300' with seating areas that may be covered by galvalume Platform and observation tower.

MATERIALS:
All lumber will be #1 -Marine pressure treated, C-A. With organic fungicide, sealed with Olympic/ThomsonNOC wood protection or same. (Prior to installing)
6x6 Piles, 2x10 joist, 2x10 girders, 2x6 kick plate, 2x6 mid rail 2x8 top rail.
Decking will be 2x6 (1.5"x5.5") Composite attached with manufacturers recommended screws or better.

A.D.A
Boardwalk to be built level if slope is needed it will be 1" on 12" up or down.
Kick plate will be to code. Handrail 36" on boardwalk / platform and 42" on observation tower.
The top rail will be beveled 45* at all splices. If wood it will be routered on all 4 sides
Graspable railing all areas ramping or stairs.

Using:
6x6 wood Piles, 2x10 wood joist, 2x10 wood girders, 2x6 wood kick plate, 2x6 wood mid rail 2x8 t wood top rail routered and splices at 45* angle.
Decking will be 2x6 (1.5"x5.5") Composite attached with manufacturers recommended screws or better.

For a total cost of $379,500.00

Add $21.667.00 for Option #1 Composite for top rail (Top rail will be wood framed composite top)

Add $70,000.00 for Option #2 Aluminum piles, framing and girders.

TOWN OF HOWEY-IN-THE-HILLS
SARA MAUDE MASON PRESERVE BOARDWALK

Add $3,200.00 for each area to be covered with Galvalume roofing,

License / Permits / Laws

Dock Pro LLC is a Marine Contractor and is familiar with the conditions and requirements.

Dock Pro LLC carries Longshoreman Workers Comp, General Liability Insurance and Commercial Auto I insurance _to pull required permits.

Dock Pro LLC has full experience to run all equipment required to do the job (We do not use sub- contractors)

Dock Pro LLC will provide electronic copies of all plans and engineering reports to the Town of Howey-in-the-Hills at the end of the project.

Project Timeline: Dock Pro LLC has estimated the project will be completed 180 days after the contract signing.

DiViSEON OF CORPORATIONS

P-epadæut-Qf-Siaie / PLujsjon-QLGupeca.UQ2-s / Sear-Gh-R-@GQLd5 / Search.by-EEllEIN-Numhec /

Detail by FEI/EIN Number

Florida Limited Liability Company

DOCK PRO LLC

E,LingJnfcr.matiQn

Document Number L10000072072

FEVEIN Number 27-3007933

Date Filed 07/08/2010

State FL

Status ACTIVE Last Event LC STMNT OF RAJRO CHG

Event Date Filed 11/23/2016

Event Effective Date NONE

ecj.ncipalAdxess

793 chestnut st
Clermont, FL 34711

Changed: 01/23/2023

Mailj.ngug.rgsg

793 chestnut st
Clermont, FL 34711

Changed: 01/23/2023

Registered Agent Name & Address

Dock Pro LLC
793 chestnut st
Clermont FL 34711

Name Changed: 04/01/2019

Address Changed: 0112312023

Authorized Person(s) Detail

Name & Address

Title President

BUTLER, GARY Theodore , Jr.
793 Chestnut St
CLERMONT, FL 34711

Title Manager

Butler, Gary Theodore , Sr.
793 chestnut st
Clermont, FL 34711

Annual-Bepgcts

Report Year	Filed Date
2022	03/11/2022 2023
	01/23/2023 2024
	01/2212024

Document-Lægeg	
01/22/2024 -- ANNUAL REPORT	View image in PDF format
01/23/2023 ANNUAL REPORT	View image in PDF format
03/11/2022 „ANNUAL REPORT	View image in PDF format
01/28/2021 „ANNUAL REPORT	View image in PDF format
03/19/2020 --ANNUAL REPORT	View image in PDF format
04/01/2019 „ANNUAL REPORT	View image in PDF format
03/20/2018 -- ANNUAL REPORT	View image in PDF format
02/10/2017 ANNUAL REPORT	View image in PDF format
11/23/2016 „CORLCRACHG	View image in PDF format
02/01/2016 „ANNUAL REPORT	View image in PDF format
02/18/2015 -- ANNUAL REPORT	View image in PDF format
01/21/2014 -- ANNUAL REPORT	View image in PDF format
01/1512013 ANNUAL REPORT	View image in PDF format
10/04/2012 -- REINSTATEMENT	View image in PDF format
08/22/2011 -LC Amendment	
02/10/2011 - ANNUAL REPORT	View image in PDF format
07/08/2010„F!orida Limited Liability.	View image in PDF format
	View image in PDF format
	View image in PDF format
	View image in PDF format

Bank accounts

Bank accounts	Total available balance $402,087.75

Account	Available balance e	Present balance	Account type	
Dock Pro [redacted] >	$226,012.09	$226,012.09	Checking	•••
[redacted]				
CHASE BUS TOTAL	$183.36	$18336	Saving	
[redacted]				
PREMIER PLUS	$115,689.71	$115,689.71	Checking	
CHASE SAVINGSÄ	$60,202.59	$60,202.59	Saving	

ACORD@ CERTIFICATE OF LIABILITY INSURANCE

DATE (MWDDIWW)
02/11/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and condltlons of the policy, certain policies may requlre an endorsement A statement on this certificate does not confer ri hts to the certificate holder in lieu of such endorsement s).

PRODUCER	NAME: Teresita Revell	
Agriculture insurance Solutions, LLC PO Box 560586 Montverde FL 34756	PHONE 407429-0133 FAX NC No: E-MAIL agineurancesolutions@gmait.com	
	INSURER S AFFORDING COVERAGE	NAIC #
	INSURER A: Centu Surety Company	36951
INSURED DOCK PRO LLC 793 CHESTNUT ST Clermont, FL 34711	INSURER B : AmGUARD Insurance Company	42390
	INSURER C	
	INSURER D :	
	INSURER E :	
	INSURER F •	

COVERAGES CERTIFICATE NUMBER: REVISIONNUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [X] LOC [ ] OTHER:	X		CCP1182774	12/09/2023	12/09/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 1,000,000
B	AUTOMOBILE LIABILITY [ ] ANY AUTO [X] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			DOAU419499	09/26/2023	09/26/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) PIP Per Person/ Per Ac	$ 1,000,000 CSL $ $ $ $ 10,000
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [ ] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A					[ ] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Insured Vehicles- (1) 2007 TOYOTA TACOMA VIN: 3TMJU62N77M049319 (2) 2007 Ford F150 VIN: 1FTRF12WX7KC00329
Location Address- 793 CHESTNUT ST Clermont, FL 34711
Operations- Dock, deck, gazebo & water retaining wall construction over lakes. Carpentry work.

The Additional Insured endorsement is included with the General liability Insurance listed on this Certificate and is applied automatically when a written and signed agreement exists.

CERTIFICATE HOLDER

Town of Howie - In - The -Hills
101 N. Palm Avenue
Howey-in-the-Hills, FL 34737

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Jennifer M Bell

ACORD 25 (2016103) The ACORD name and logo are registered marks of ACORD

CERTIFICATE OF LIABILITY INSURANCE

Date 211212024

Producer: Plymouth Insurance Agency 2739 U.S. Highway 19 N. Holiday, FL 34691 (727) 938-5562

This Cedficae is issued as a mater of informaBon only and mnfers no rights upon ete Ceräfiee Holder. This **'ertificate** does not amend, or alterthe coverage afforded by the policie below.

	Insurers Affording Coverage	NAIC #
Insured: South East Personnel Leasing, Inc. & Subsidiaries 2739 U.s. Highway 19 N. Holiday, FL 34691	Insurer A: Lion Insurance Company	11075
	Insurer B:	
	Insurer C:	
	insurer D:	
	Insurer E:	

Covera es

e policies insurance listed below have been Issued to einsu the Icyperi indica hs Ing anyrequirament, termor bon any contractor other document with respect to which this certificate rnay be issued or rnay pertain, the insurance afforded by the policies described herein is subject to all terms, exclusions, and conditions of such policies. Aggregate limits shown may have been reduced by paid claims.

INSR I-TR	ADDL INSRD	Type of Insurance	Policy Number	Policy Date (MWDD,'YY)	Policy Expiration Date(MWDDNY)	Limits	
		ENERAL LIABILITY				Each Occurrence	
		Commercial General Liability				DanBge to rented premises (EA occurrence)	
		Claims Made				Med Exp	
		eneral aggregate limit applies per:				Personal Adv Injury	
		Policy ☐ Project ☐ LOC				General Aggregate	
						Products - ComplOp Agg	
		UTOMOBILE LIABILITY				Combined Single Lirnit (4 Accident)	
		Any Auto					
		All Owned Autos				Bodily Injury (Per Person)	
		Scheduled Autos					
		Hired Autos				Bodily Inßry (Per Accident)	
		Non-Owned Autos					
						Propeny Darnage (Per Accident)	
		EXCESSIUMBRELLA LIABILITY				Each Occurrence	
		☐ Claims Made				Aggregate	
		Deductible					
A		Workers ›ompensation and Liability	wc 71949	01/01/2024	01/01/2025	X WC Statut Limits OTH-	
		Employers' ·/parmer/executive Any ember excluded? JO under special provisions below.				E.L. Each Accident	$1,000,000
		If Yes,				E.L. Disease - Ea Employee	$1,000,000
		escribe				E.L. Disease - Policy Limits	$1,000,000

Lion Insurance Com n isA.M0 BestCom n rated A Excellent AMB # 12616

Descriptions of OperationslLocationsNehicles/Exclusions added by EndorsementlSpeeiat Provisions: Client ID: 92-71-368

Coverage only applies to active employee(s) of Souål East Personnel Leasing, Inc, & Subsidiaries Olat are teased to tie following "Client Company":

Dock Pro LLC

Coverage only applies to injuries incurred by South East Personnel Leasing, Inc. & Subsidiaries aöJe employee(s) while working in: FL.

Coverage does not apply sumtory ernptoyee(s) or independent contractor(s) of tie Client Company or any otter entß'.
A list Of the active employee(s) leased to me Client Company an be obüined by emailing a oerüficaes@ljoninsurancecompany.com Projee Name:

ISSUE 02-12-24 (TD)

n Date: 10 4 2023

UOLDEQ

TOWN OF HOWEY-IN-THE-HILLS 101 N PALM AVENUE HOWEY-IN-THE-HUS, FL 34737	CANCELLATION Should any of me aDove descriDea pouctes DE can before expiration date thereof, e ung insurer will endeavor to rtzil 30 days writen notice to tie certificate holder naræd to the let. but failure to do so shall invose obligation or liability of any kind upon tre insurer. agents or representaüves.

Composite, kick plate, mid rail top rail.

Aluminum piles / framing