



# **Northeast Venice Neighborhood Transportation Study**

# Scope

- Revisit Future Conditions Analysis/Growth Assumptions in the City Comprehensive Plan for the NE Venice Area
  - Existing Comprehensive Plan Analysis:
    - Performed in 2017 based on 2015 traffic counts
    - Only considered growth from FDOT D1's adopted travel demand model (without refinements) or historical traffic count trends
- Refine Analysis Methodology for the NE Venice Area
  - Future traffic volume projections update considering:
    - Traffic count trends
    - Bureau of Economic & Business Research (BEBR) projections
    - Area traffic studies
    - Travel demand modeling runs with socioeconomic data updates and consideration of local area calibration
  - Consideration of new N/S Public Road (from Border Road to Laurel Road) east of I-75

# Travel Demand Modeling

- FDOT District 1 Regional Planning Model (D1RPM)
  - Regional Planning Tool
    - Long Range Transportation Plans (LRTP)
    - Comprehensive Plans
    - Other traffic/transit studies
  - Primary Inputs: Roadway/Transit network (speed/headway, capacity), Socioeconomic data by location (# housing units by type, # employees by job sector type)
  - Primary Outputs: Traffic volumes/transit ridership
  - Trip generation, trip distribution, iterative route assignment of trips to the roadway/transit network
  - Calibrated to roadway segment/transit line counts

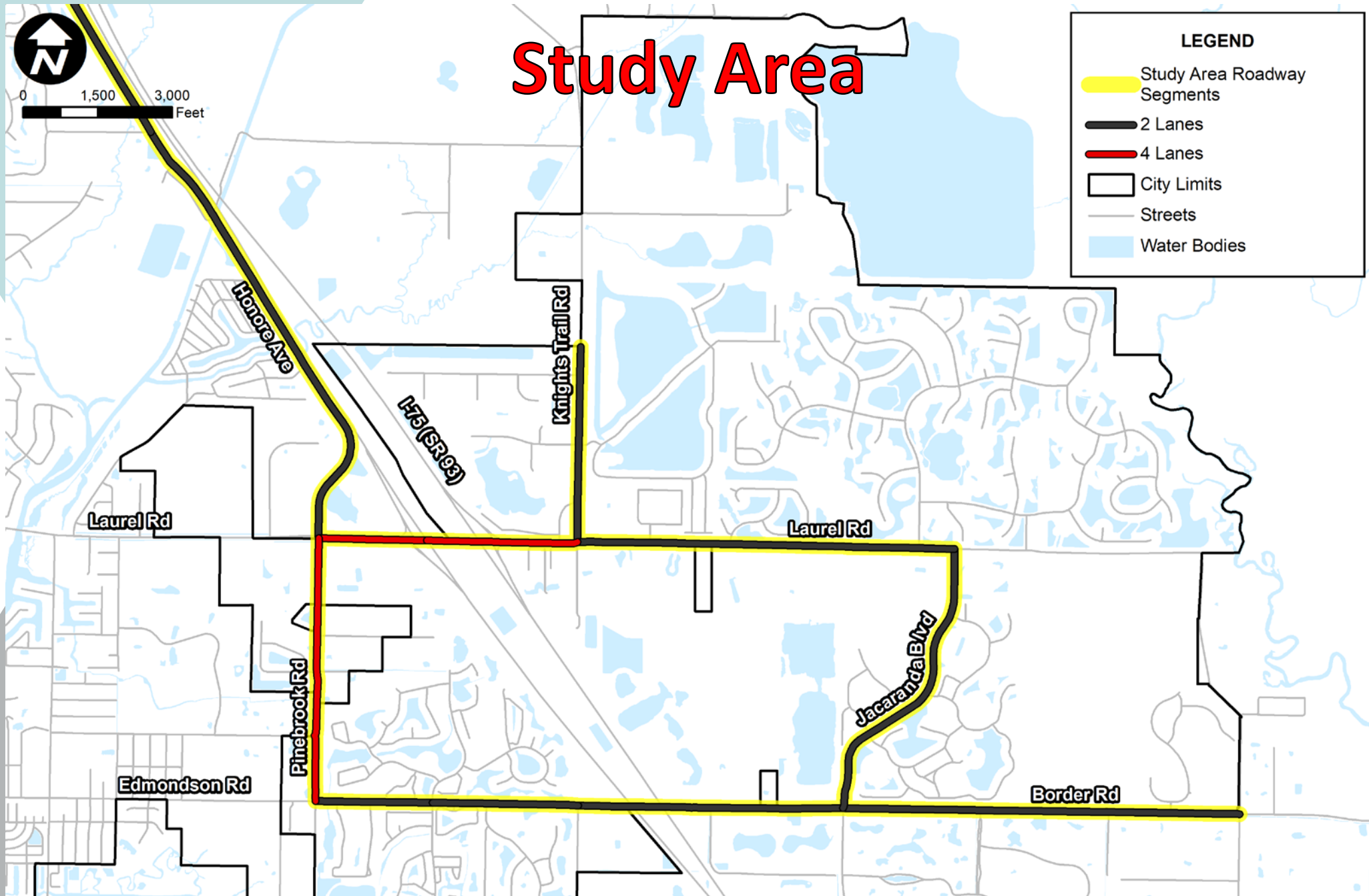
# Model Refinements

- Roadway Network
  - Modified traffic analysis zone (TAZ) connectors to reflect appropriate access to roadways
  - Added Rustic Road connection to Honore Road in future year runs
- Socioeconomic Data (additions/refinement for area projects)
  - Sarasota Memorial Hospital
  - Murphy Oaks
  - Golf Coast Community Foundation (GCCF) Property
  - Laurel Road Mixed-Use Property
  - Hurt Property
  - Rustic Road Development
  - Woods at Venice
  - SJMR PUD
  - Milano PUD

# Significant Growth by 2030

- Review of recent traffic studies in the NE Venice Area alone shows the following growth anticipated between Year 2015 and 2030:
  - 3,187 Single-family units
  - 2,248 Multi-family units
  - 4,444 Employees

# Study Area



# Existing Conditions (2017)

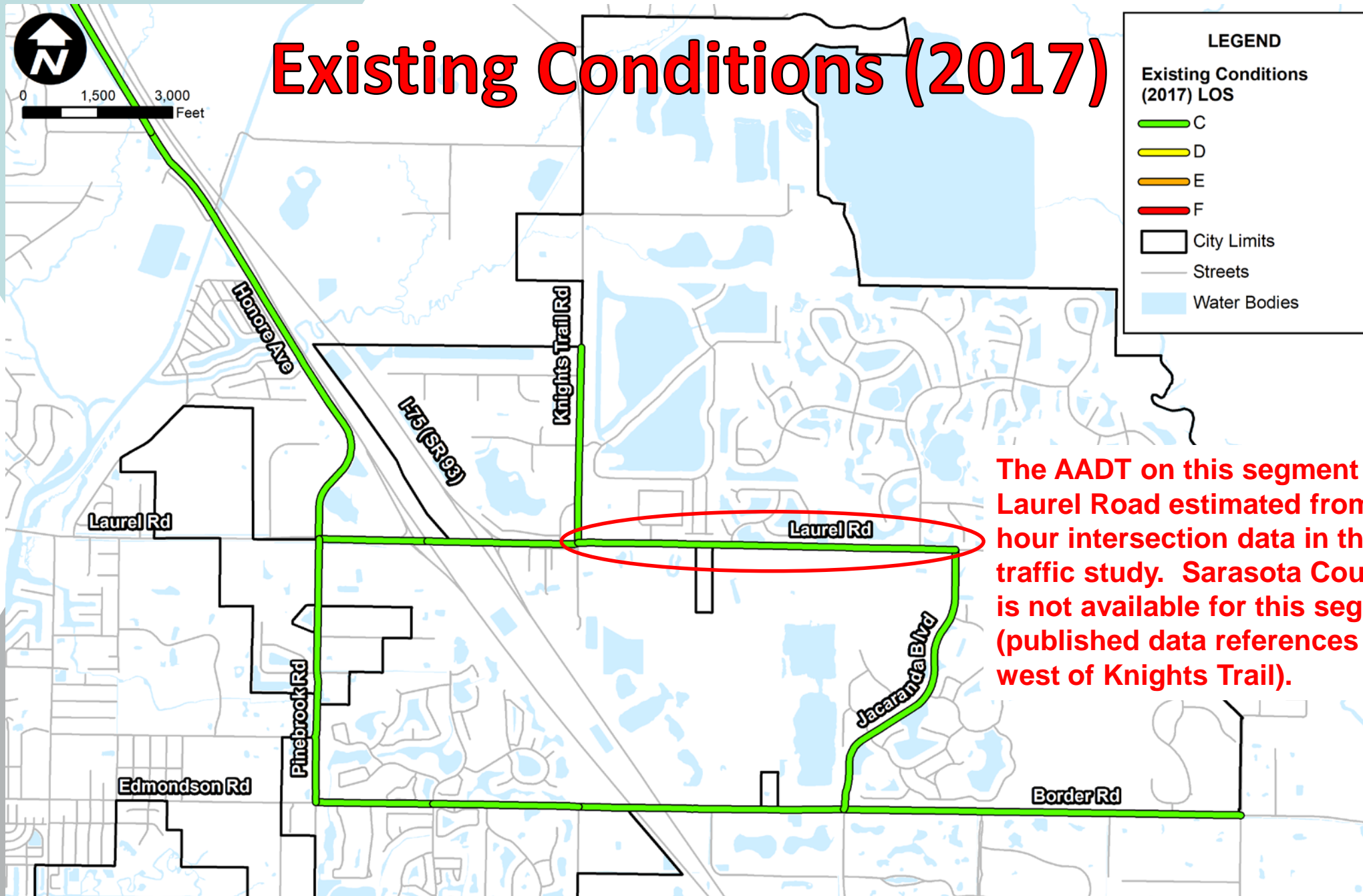
Roadway	From	To	No. of Lanes	2017 AADT	Max Service Volume	Peak Hour Vol	V/C	LOS
Border Road	Auburn Road	Jacaranda Blvd	2	3,210	1,264	289	0.23	C
Border Road	Jacaranda Blvd	Jackson Road	2	1,942	1,057	175	0.17	C
Edmondson Road	Pinebrook Road	Capri Isle Blvd	2	3,600	1,197	324	0.27	C
Edmondson Road	Capri Isle Blvd	Auburn Road	2	3,600	931	324	0.35	C
Honore Avenue	Laurel Road	Ranch Road	2	2,841	1,520	256	0.17	C
Honore Avenue	Ranch Road	SR 681	2	2,841	1,600	256	0.16	C
Jacaranda Blvd	Laurel Road	Border Road	2	4,015	1,330	361	0.27	C
Knights Trail	City Limits	Laurel Road	2	6,600	1,440	594	0.41	C
Laurel Road	Pinebrook Road	I-75	4	15,900	3,401	1431	0.42	C
Laurel Road	I-75	Knights Trail	4	17,549	3,401	1579	0.46	C
Laurel Road	Knights Trail	Jacaranda Blvd	2	6,022	1,440	542	0.38	C
Pinebrook Road	Laurel Road	Edmondson Road	4	11,511	3,401	1036	0.30	C

Note: 2017 AADT as reported in Sarasota County Generalized LOS Analysis Table

Laurel Road (Knights Trail Road to Jacaranda Boulevard) AADT generated from intersection count reported in GCCF Property TIA dated February 2019

**The AADT on this segment of Laurel Road estimated from peak hour intersection data in the GCCF traffic study. Sarasota County data is not available for this segment (published data references data west of Knights Trail).**

# Existing Conditions (2017)



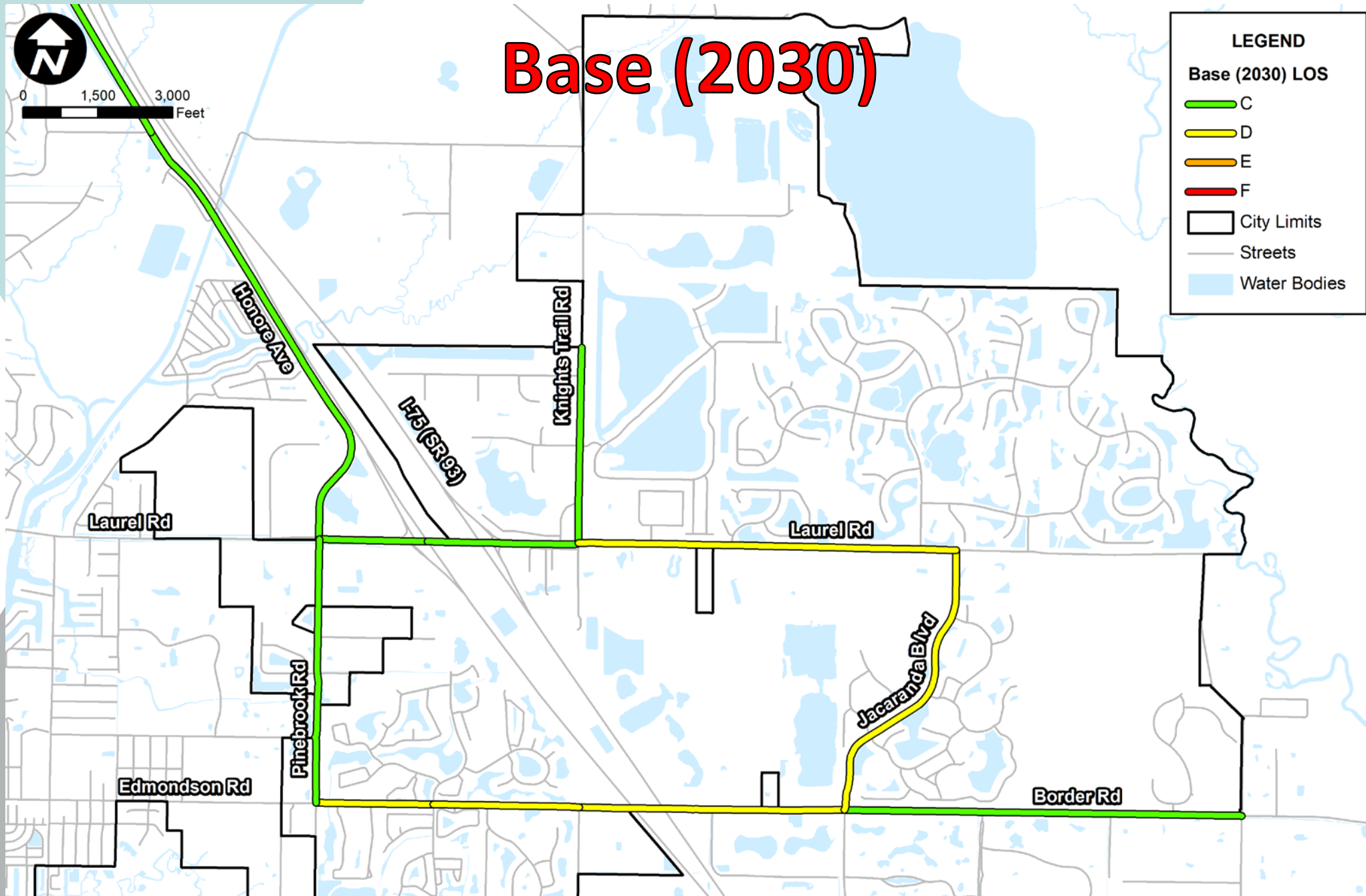


# Base (2030)

Roadway	From	To	No. of Lanes	2017 AADT	2030 AADT	Max Service Volume	Peak Hour Vol	V/C	LOS
Border Road	Auburn Road	Jacaranda Blvd	2	3,210	10,797	1,264	972	0.77	D
Border Road	Jacaranda Blvd	Jackson Road	2	1,942	8,038	1,057	723	0.68	C
Edmondson Road	Pinebrook Road	Capri Isle Blvd	2	3,600	10,649	1,197	958	0.80	D
Edmondson Road	Capri Isle Blvd	Auburn Road	2	3,600	6,397	931	576	0.62	D
Honore Avenue	Laurel Road	Ranch Road	2	2,841	9,607	1,520	865	0.57	C
Honore Avenue	Ranch Road	SR 681	2	2,841	11,669	1,600	1,050	0.66	C
Jacaranda Blvd	Laurel Road	Border Road	2	4,015	8,824	1,330	794	0.60	D
Knights Trail	City Limits	Laurel Road	2	6,600	11,777	1,440	1,060	0.74	C
Laurel Road	Pinebrook Road	I-75	4	15,900	30,351	3,401	2,732	0.80	C
Laurel Road	I-75	Knights Trail	4	17,549	34,174	3,401	3,076	0.90	C
Laurel Road	Knights Trail	Jacaranda Blvd	2	6,022	15,358	1,440	1,382	0.96	D
Pinebrook Road	Laurel Road	Edmondson Road	4	11,511	23,027	3,401	2,072	0.61	C

**Recommended 2030 planning volumes are an average of existing count plus cumulative area traffic study trips and adopted model volumes (before data refinements) adjusted for base year model volume-to-count ratios.**

# Base (2030)



# Refined Future (2030)

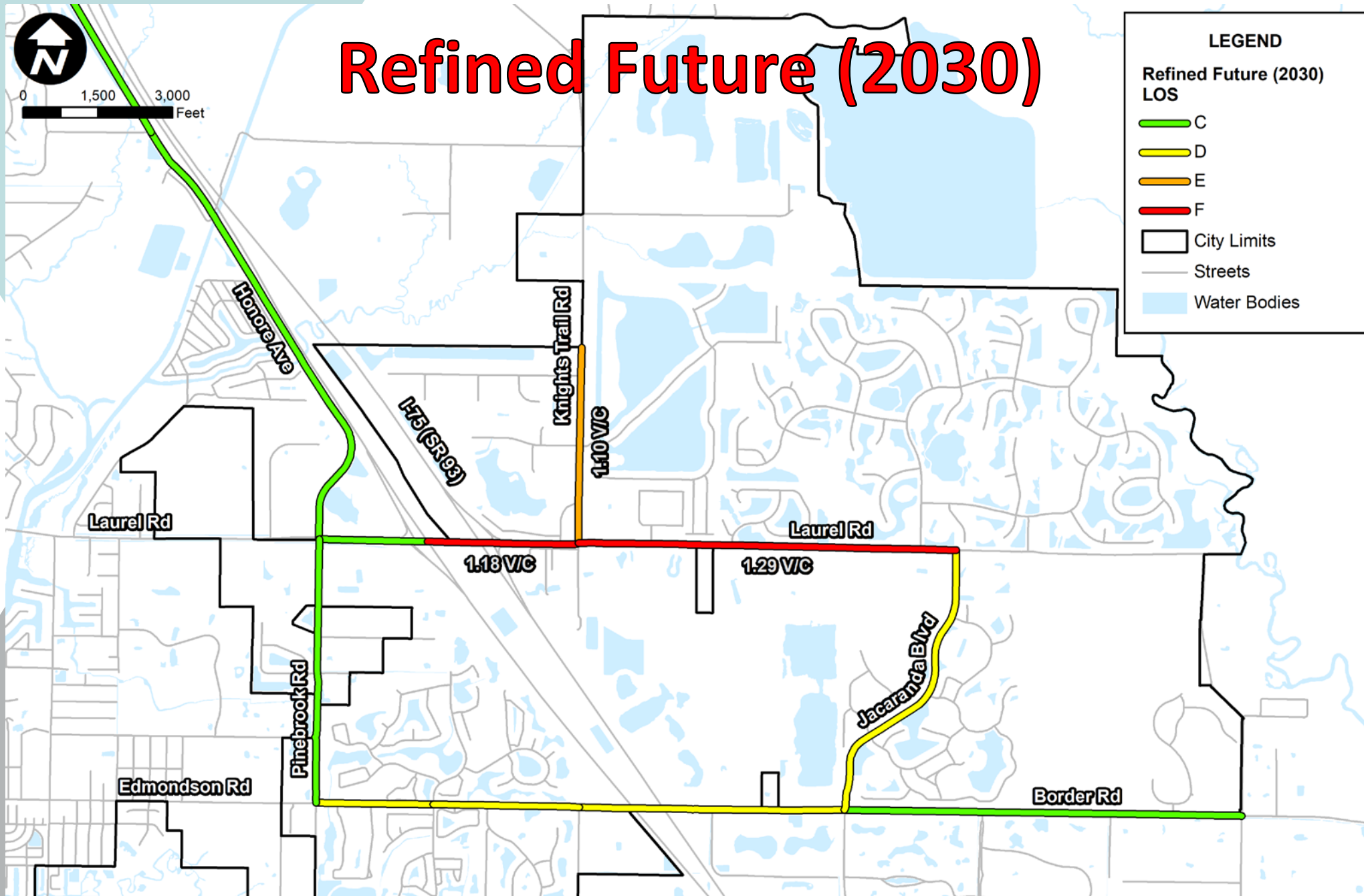
- Zone-by-zone review of adopted model assumptions in the NE Venice region
- Added the following unaccounted growth to 2030 data:
  - 1,863 Single-family units
  - 2,051 Multi-family units
  - 5,352 Employees
- As a result, significant convergence between 2030 planning volumes from cumulative area traffic study trips and adjusted model volumes occurred.

# Refined Future (2030)

Roadway	From	To	No. of Lanes	2017 AADT	2030 AADT	Max Service Volume	Peak Hour Vol	V/C	LOS
Border Road	Auburn Road	Jacaranda Blvd	2	3,210	12,077	1,264	1,087	0.86	D
Border Road	Jacaranda Blvd	Jackson Road	2	1,942	8,203	1,057	738	0.70	C
Edmondson Road	Pinebrook Road	Capri Isle Blvd	2	3,600	11,410	1,197	1,027	0.86	D
Edmondson Road	Capri Isle Blvd	Auburn Road	2	3,600	7,063	931	636	0.68	D
Honore Avenue	Laurel Road	Ranch Road	2	2,841	11,761	1,520	1,058	0.70	C
Honore Avenue	Ranch Road	SR 681	2	2,841	13,189	1,600	1,187	0.74	C
Jacaranda Blvd	Laurel Road	Border Road	2	4,015	10,423	1,330	938	0.71	D
Knights Trail	City Limits	Laurel Road	2	6,600	17,586	1,440	1,583	1.10	E
Laurel Road	Pinebrook Road	I-75	4	15,900	30,843	3,401	2,776	0.82	C
Laurel Road	I-75	Knights Trail	4	17,549	44,469	3,401	4,002	1.18	F
Laurel Road	Knights Trail	Jacaranda Blvd	2	6,022	20,589	1,440	1,853	1.29	F
Pinebrook Road	Laurel Road	Edmondson Road	4	11,511	25,743	3,401	2,317	0.68	C

**Recommended 2030 planning volumes are an average of existing count plus cumulative area traffic study trips and adopted model volumes (after data refinements) adjusted for base year model volume-to-count ratios.**

# Refined Future (2030)



# Future Network Scenarios (2030)

- L RTP Improvements
  - Potential improvements that have been included/considered in L RTP planning added to the Refined 2030 network:
    - Knights Trail Extension to Roadway A
    - Interchange at I-75 & SR 681
- New N/S Public Road
  - Planned through the GCCF Property between Laurel Road and Border Road
  - Assumed public accessibility in the model to determine potential demand/impact in 2030
  - Coded as a low speed 2-lane collector road

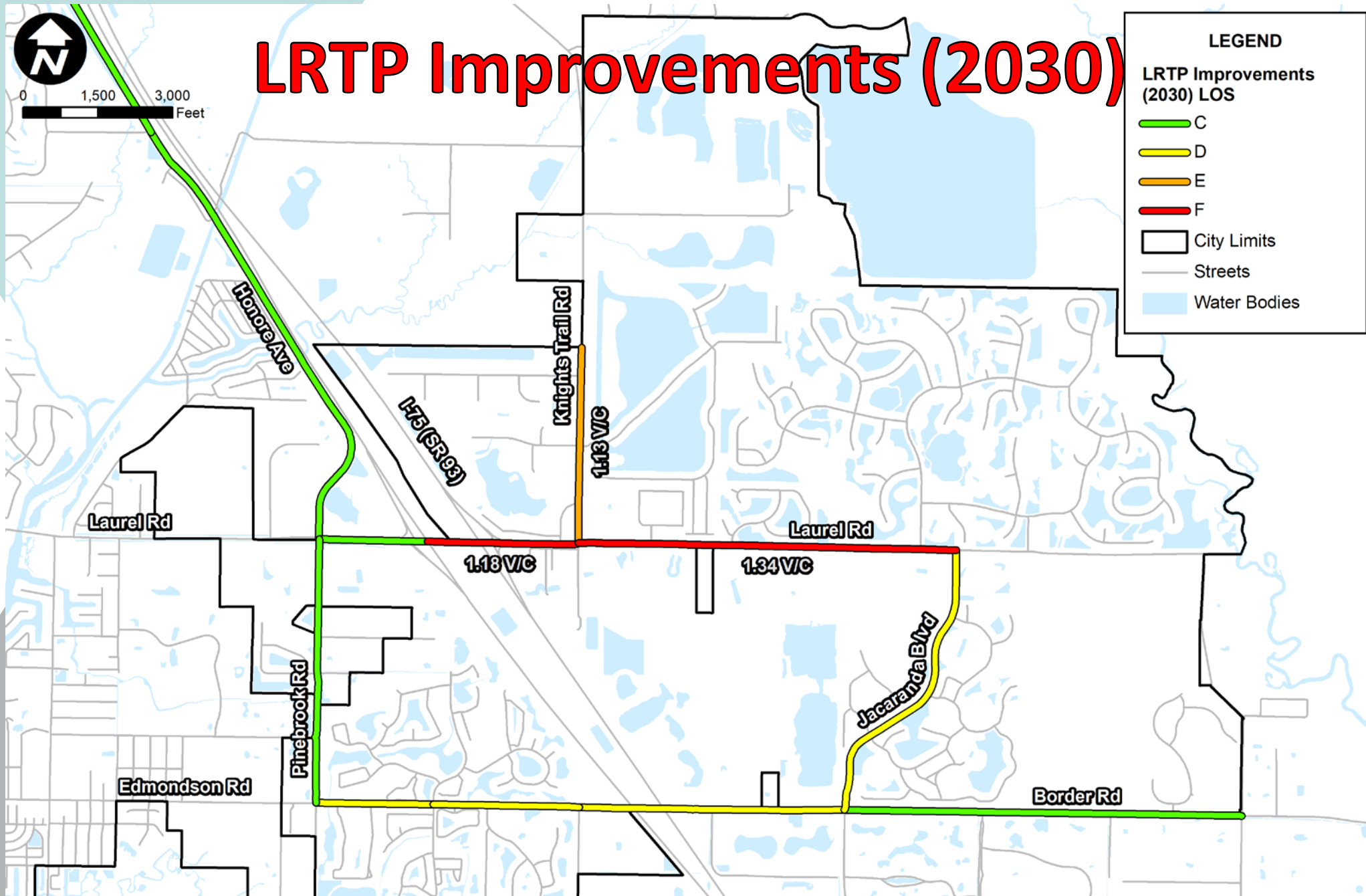
# L RTP Improvements (2030)

Roadway	From	To	No. of Lanes	2017 AADT	2030 AADT	Max Service Volume	Peak Hour Vol	V/C	LOS
Border Road	Auburn Road	Jacaranda Blvd	2	3,210	11,705	1,264	1,053	0.83	D
Border Road	Jacaranda Blvd	Jackson Road	2	1,942	8,597	1,057	774	0.73	C
Edmondson Road	Pinebrook Road	Capri Isle Blvd	2	3,600	11,902	1,197	1,071	0.89	D
Edmondson Road	Capri Isle Blvd	Auburn Road	2	3,600	7,275	931	655	0.70	D
Honore Avenue	Laurel Road	Ranch Road	2	2,841	12,527	1,520	1,127	0.74	C
Honore Avenue	Ranch Road	SR 681	2	2,841	12,901	1,600	1,161	0.73	C
Jacaranda Blvd	Laurel Road	Border Road	2	4,015	10,948	1,330	985	0.74	D
Knights Trail	City Limits	Laurel Road	2	6,600	18,045	1,440	1,624	1.13	E
Laurel Road	Pinebrook Road	I-75	4	15,900	31,324	3,401	2,819	0.83	C
Laurel Road	I-75	Knights Trail	4	17,549	44,546	3,401	4,009	1.18	F
Laurel Road	Knights Trail	Jacaranda Blvd	2	6,022	21,438	1,440	1,929	1.34	F
Pinebrook Road	Laurel Road	Edmondson Road	4	11,511	27,798	3,401	2,502	0.74	C

**Recommended 2030 planning volumes are an average of existing count plus cumulative area traffic study trips and adopted model volumes (after data refinements) adjusted for base year model volume-to-count ratios.**



# L RTP Improvements (2030)





# New N/S Public Road (2030)

Roadway	From	To	No. of Lanes	2017 AADT	2030 AADT	Max Service Volume	Peak Hour Vol	V/C	LOS
Border Road	Auburn Road	Jacaranda Blvd	2	3,210	13,356	1,264	1,202	0.95	D
Border Road	Jacaranda Blvd	Jackson Road	2	1,942	8,006	1,057	721	0.68	C
Edmondson Road	Pinebrook Road	Capri Isle Blvd	2	3,600	10,963	1,197	987	0.82	D
Edmondson Road	Capri Isle Blvd	Auburn Road	2	3,600	7,020	931	632	0.68	D
Honore Avenue	Laurel Road	Ranch Road	2	2,841	11,665	1,520	1,050	0.69	C
Honore Avenue	Ranch Road	SR 681	2	2,841	13,242	1,600	1,192	0.75	C
Jacaranda Blvd	Laurel Road	Border Road	2	4,015	8,973	1,330	808	0.61	D
Knights Trail	City Limits	Laurel Road	2	6,600	17,710	1,440	1,594	1.11	E
Laurel Road	Pinebrook Road	I-75	4	15,900	30,584	3,401	2,753	0.81	C
Laurel Road	I-75	Knights Trail	4	17,549	44,072	3,401	3,966	1.17	F
Laurel Road	Knights Trail	Jacaranda Blvd	2	6,022	20,614	1,440	1,855	1.29	F
Pinebrook Road	Laurel Road	Edmondson Road	4	11,511	24,950	3,401	2,246	0.66	C

**Recommended 2030 planning volumes are an average of existing count plus cumulative area traffic study trips and adopted model volumes (after data refinements) adjusted for base year model volume-to-count ratios.**



0 1,500 3,000  
Feet

# New N/S Public Road (2030)

## LEGEND

New 2L Facility (2030)  
LOS

C

D

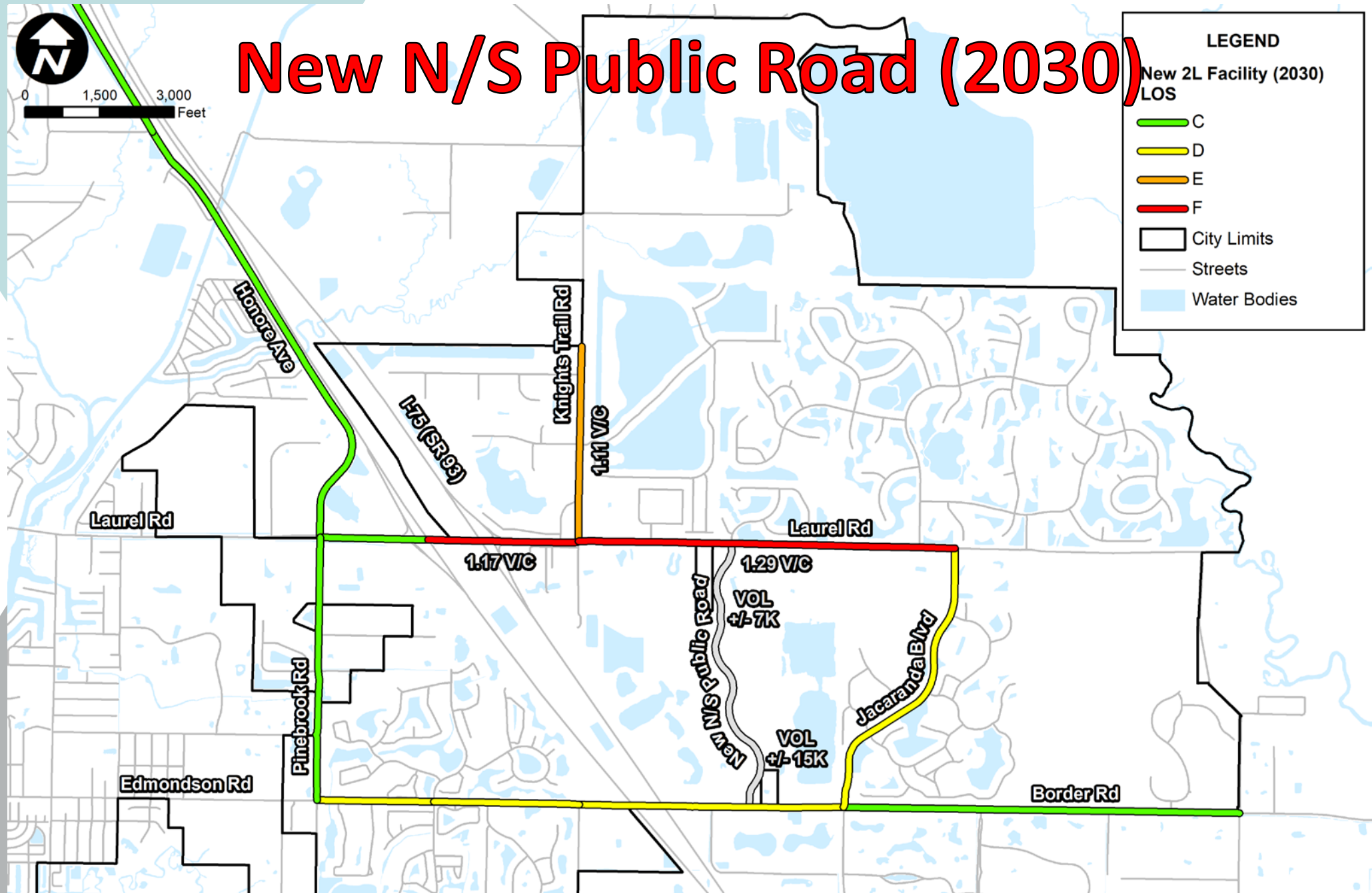
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City Limits

Streets

Water Bodies



# Analysis Conclusions

- Redevelopment is anticipated to add more traffic in the NE Venice Area than is currently being planned for in Year 2030
  - Recommend updating Comprehensive Plan/Capital Improvements Schedule for NE Venice results
  - Recommend coordinating with FDOT/Sarasota County to provide updated growth data for future D1RPM updates
- The following segments are anticipated to exceed adopted Level of Service (LOS) by the Year 2030 :
  - Knights Trail (City Limit to Laurel Road) – 4-lane need (**unplanned**)
  - Laurel Road (I-75 to Knights Trail Road) – 6-lane need (**unplanned**)
  - Laurel Road (Knights Trail Road to Jacaranda Boulevard) – 4-lane need
- Preliminary analysis of the LRTP improvements does not show significant impact locally (within the NE Venice study area)

# Analysis Conclusions

- The N/S public Road could generate a daily traffic demand of +/-15,000 daily trips as a public 2-lane collector in the future
  - Roughly 50%/50% future local traffic versus pass-through trips
  - Pass-through traffic primary diverted from Jacaranda Boulevard and, to a lesser extent, Pinebrook Road
  - Adding new N/S Public Road doesn't appear to have a significant impact on future deficiencies (Laurel Road, Knights Trail)
- Other N/S Public Road Considerations
  - Public N/S Road would increase local connectivity (some trip length reduction, better emergency access)
  - There are currently 3 parallel options within +/-2 miles (Pinebrook, I-75, Jacaranda) and none are anticipated to exceed LOS by 2030
  - Jacaranda Boulevard has ROW set aside for future widening



**Available for Questions**