

# Traffic Study for Port Everglades

Traffic Study Final Presentation  
Conference Room 301, PEV Administration Building

October 17, 2019



Many of the concepts included are preliminary in nature. Additional analyses and input will continue through the Master/Vision Plan process.

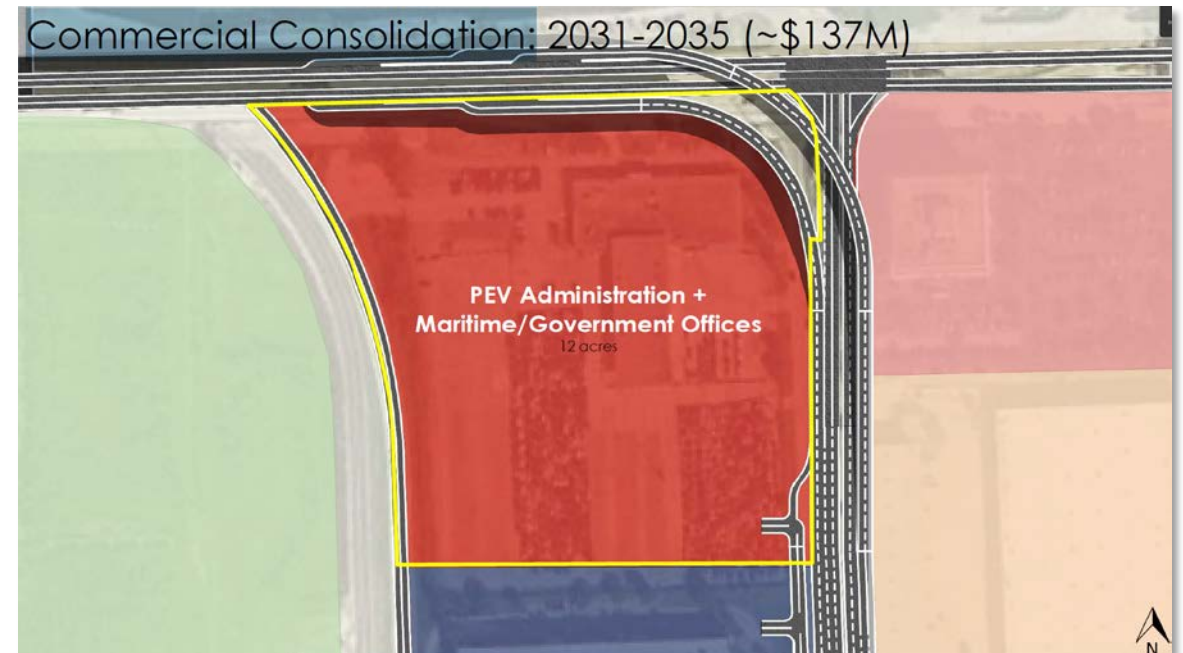
# Agenda

- ❑ New Activities
- ❑ Project Overview
- ❑ Future Travel Forecasting
- ❑ Operational Analysis
- ❑ Summary and Recommendations
- ❑ Discussion



# New Activities – Commercial Consolidation

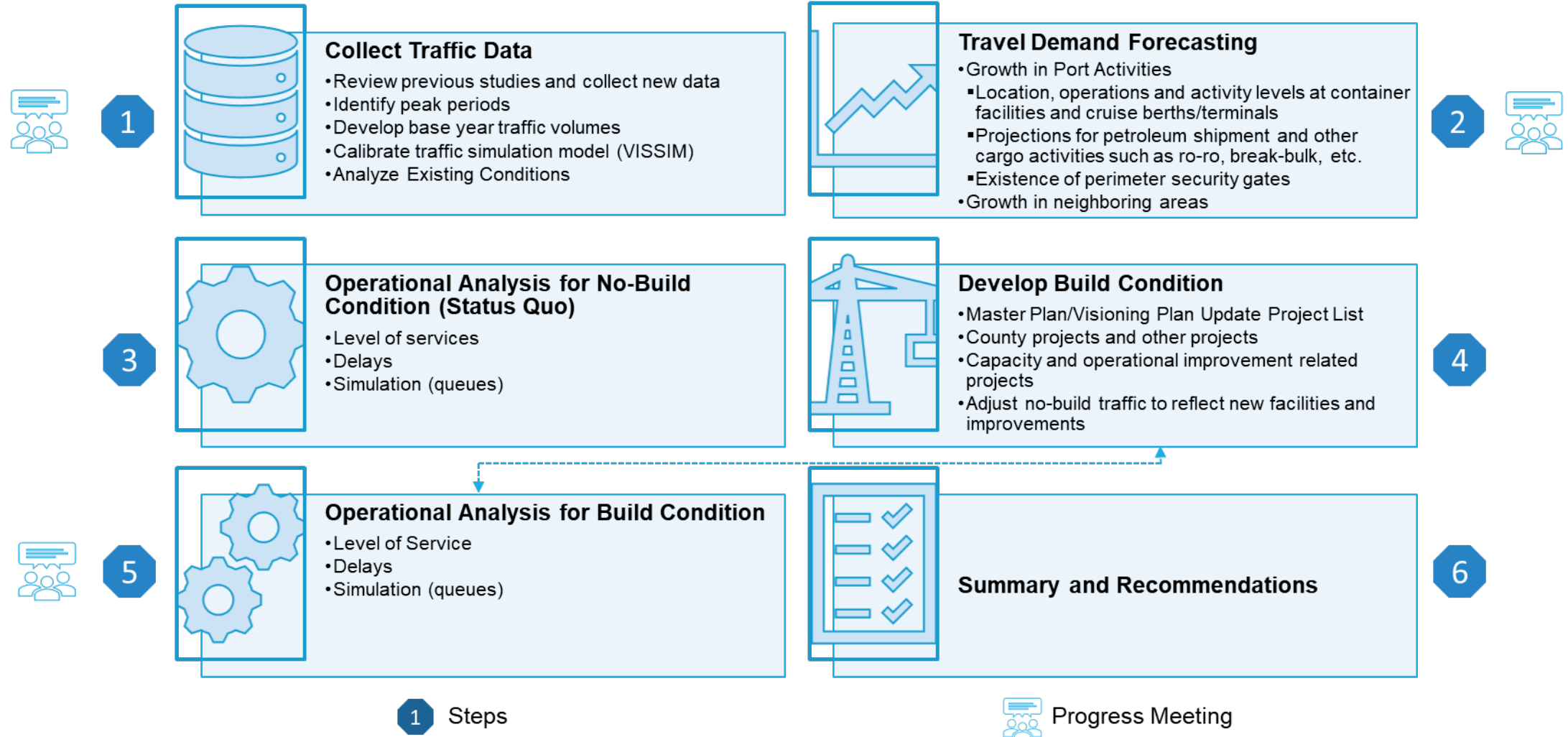
- ❑ Revised Build Condition for Years 2028 and 2033.
- ❑ Revised Future Traffic and Re-run the Models
- ❑ Reviewed and Revised Results for Other Years for Consistency
- ❑ Addressed Comments for Draft Report
- ❑ Revised Draft Report



Initially 2021-2027, now 2031-2035.



# Project Process Overview



# Typical Daily Conditions at Port Everglades

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## □ Represent Typical Daily Conditions

- Peak Periods (data from various sources)
  - ❖ Weekdays
    - AM Peak – 8:00am to 9:00am
    - MD Peak – 12:00pm to 1:00pm
  - ❖ Weekends
    - MD Peak – 11:30am to 12:30pm
  - ❖ McIntosh Security Gates: 3 out of 4 open for no-build, removed for build conditions.

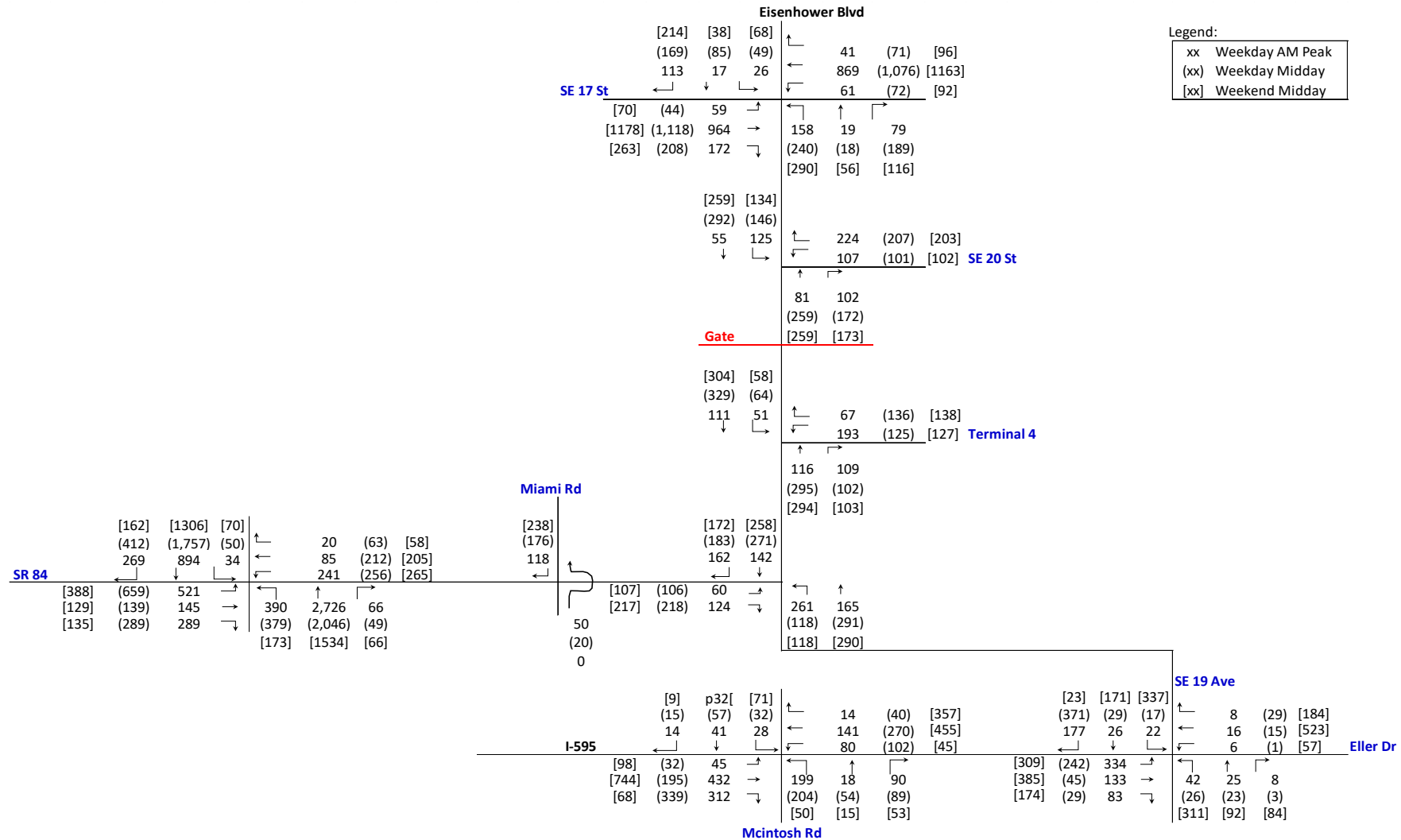
## □ Traffic Data

- Total Daily Traffic
- Turning Movement Volumes
- Traffic distribution and balancing

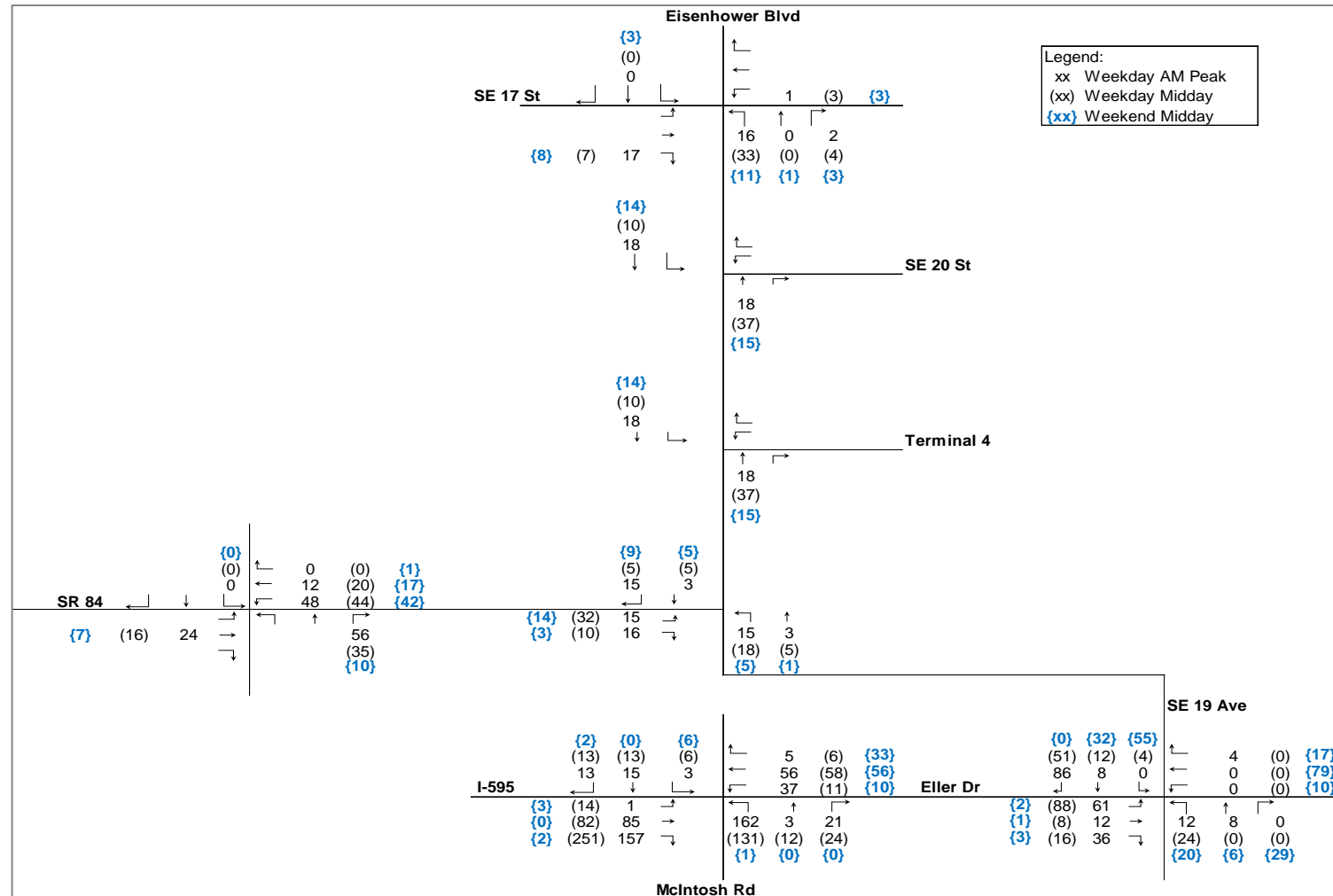
# 2018 Average Annual Daily Traffic (AADT)

Intersection	Location	2018 AADT	Truck Percentage	Source
Eller Drive and McIntosh Road	I-595 W of McIntosh Rod	17,500	40.2%	2018 FTI online
	Eller Drive N of I-595	3,500	5.0%	2018 FTI online
	Mcintosh Road S of Eller Drive	5,500	60.0%	From Ch2m Data (Site 8) and 2% growth rate on Tue, Wed, Thu
	Eller Drive E of McIntosh Rd	14,200	26.9%	2018 FTI online
Eller Driver and SE 19 St	SE 19 Ave N of Eller Drive	14,700	3.1%	2018 FTI online
	Eller Dr E of SE 19th Avenue	1,300	2.0%	From Ch2m Data (Site 6) and 2% growth Rate on Tue, Wed, Thu
	SE 19 Ave S of Eller Drive	2,100	34.0%	Based on AM peak TMC and peak to daily factor of 0.09.
US 1 and Spangler Blvd	US 1 N of Spangler Blvd	56,000	4.4%	2018 FTI online
	Spangler Blvd E of US 1	11,300	20.4%	2018 FTI online
	US 1 S of Spangler Blvd	57,500	6.4%	2018 FTI online
	SE 24 Street W of US 1	19,600	7.7%	2018 FTI online
SE 17 St and Eisenhower Blvd	SE 17 Street E of Eisenhower Blvd	32,000	3.6%	2018 FTI online
	SE 17 St W of Eisenhower Blvd	46,500	3.7%	2018 FTI online
	Eisenhower Blvd S of SE 17 St	3,300	10.1%	2018 FTI online
Eisenhower Blvd and Spangler Blvd	Eisenhower Blvd N of Spangler Blvd	3,500	10.1%	From Ch2m Data (Site 4) and 2% growth Rate on Tue, Wed, Thu
	Spangler Blvd W of Eisenhower Blvd	5,700	20.4%	2018 FTI online
	Eisenhower Blvd S of Spangler Blvd	3,300	3.1%	2018 FTI online

# 2018 Peak Turning Movement Volumes – All Vehicles



# 2018 Peak Turning Volumes – Trucks





# Future Travel Demand Forecast

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## □ General Methodology

### ➤ No-Build Condition

#### ❖ Determine growth factors

- Historical data
- Regional Planning Model (SERPM)
- Market Analysis (by BA)
- Separate growth factors for trucks and cruise passengers
- Different growth factors for different analysis years (2023,2028,2033, 2038)

#### ❖ Apply growth factors to base year (2018) traffic

#### ❖ Balance traffic and review for reasonableness

### ➤ Build Condition

- ❖ Adjust No-Build traffic to account for diversion, redistribution, and additional growth
- ❖ Use professional judgement

# Market Analysis – Based on MVP Projections

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y		
8				+ 3 SPP STS Cranes			TNE Complete + 3 SPP STS Cranes		USACE Complete				McIntosh Realignment + CY Reconfg Complete													
9	Containerized Cargo Forecast (TEUs)		1,080,000	1,080,000	1,105,000	1,130,000	1,180,000	1,291,492	1,342,831	1,384,577	1,426,227	1,467,883	1,508,719	1,551,845	1,588,525	1,625,263	1,662,036	1,698,907	1,735,913	1,773,091	1,810,181	1,847,891				
10		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR			
11	Low	1,108,465	851,342	859,856	868,454	877,139	885,910	894,769	903,717	912,754	921,882	931,100	940,411	949,815	959,314	968,907	978,596	988,382	998,266	1,008,248	1,018,331	1,028,514	-0.4%			
12	Medium	1,108,465	1,214,904	1,281,545	1,348,628	1,416,067	1,483,688	1,551,428	1,619,187	1,686,928	1,754,655	1,822,549	1,890,912	1,959,936	2,018,100	2,076,416	2,134,847	2,193,504	2,252,452	2,311,759	2,371,325	2,431,334	3.8%			
13	High	1,108,465	1,233,904	1,322,082	1,411,836	1,502,958	1,595,145	1,688,216	1,781,945	1,856,399	1,930,572	2,004,666	2,079,028	2,153,874	2,217,736	2,281,620	2,345,476	2,409,432	2,473,560	2,537,935	2,602,434	2,667,269	4.3%			
14	Likely	1,108,465	1,100,050	1,154,494	1,209,639	1,265,388	1,321,581	1,378,137	1,434,949	1,485,360	1,535,703	1,586,105	1,636,784	1,687,875	1,731,717	1,775,648	1,819,640	1,863,773	1,908,093	1,952,647	1,997,363	2,042,372	3.0%			
15		21,814	21,077	22,240	23,418	24,610	25,441	26,535	27,633	28,616	29,598	30,581	31,569	32,566	33,420	34,276	35,133	35,993	36,857	37,725	38,596	39,473				
32	Dry Bulk Cargo Forecast (Short Tons)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR		
33	Low (Likely)	1,499,589	1,565,307	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	0.6%			
34		3,204	3,345	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632	3,632				
42	Used Ro-Ro + Yacht Cargo Forecast (Short Tons)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR		
43	Low (Likely)	107,208	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	104,757	-0.1%			
44		275	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269				
54	New Automobile Cargo Forecast (CEUs)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR		
55	High (Likely)	28,975	16,829	17,262	25,709	26,282	26,870	27,475	28,097	28,737	29,394	30,070	30,765	31,481	32,063	32,656	33,262	33,879	34,509	35,152	35,808	36,477	1.1%			
56		86	49	50	91	92	94	95	97	98	100	102	103	105	107	108	110	112	113	115	117	119				
69	Break-bulk Cargo Forecast (Short Tons)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR		
71	Low (Likely)	255,849	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	-4.4%			
72		656	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256				
81	Liquid Bulk Cargo Forecast (Thousand Barrels per Day/CALLS)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR		
83	Total (Likely)	338	345	344	343	342	340	338	336	335	336	336	337	338	339	341	342	344	347	349	352	355	0.2%			
105		21,392	21,652	21,408	21,013	T21 Redevelopment Complete			19,854	19,414	19,126	18,868	18,632	18,413	18,219	18,049	17,901	17,766	17,659	17,575	17,535	17,494	17,475			
106						T29 Redevelopment Complete																				
107	Multi-Day Cruise Forecast (Revenue Passengers/CALLS)		3,623,920	3,709,164				4,456,120	4,610,403	4,826,111	5,031,055	5,208,885	5,344,605	5,563,716	5,713,500	5,867,333	Berth 19 Construction Begins									
108		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR			
109	Low	3,741,408	3,689,669	3,904,914	4,001,743	4,105,329	4,216,522	4,332,367	4,453,051	4,578,771	4,709,728	4,846,134	4,988,208	5,136,178	5,290,282	5,450,766	5,617,887	5,791,913	5,973,120	6,161,798	6,358,247	6,562,543	2.7%			
110	CALLS	596	690	719	722	726	731	737	742	748	755	761	768	776	783	791	799	808	817	826	836	846	1.7%			
111																										
112	Medium (Likely)	3,741,408	3,700,467	3,965,357	4,151,594	4,311,249	4,449,040	4,579,873	4,767,754	5,073,452	5,352,381	5,571,636	5,701,003	5,991,254	6,136,719	6,283,901	6,477,595	6,607,565	6,758,499	6,933,238	7,045,000	7,162,197	3.1%			
113	CALLS	596	690	774	785	805	818	831	852	883	931	945	959	973	988	1,003	1,027	1,038	1,053	1,069	1,077	1,084	2.9%			
114																										
115	High	3,741,408	3,689,669	3,720,822	4,094,445	4,378,951	4,587,493	4,768,055	5,112,397	5,802,552	6,404,488	6,819,198	6,955,737	7,566,115	7,732,996	7,895,551	8,187,821	8,278,728	8,421,967	8,625,671	8,629,087	8,637,300	4.1%			
116	CALLS	596	690	816	846	903	934	966	1,025	1,110	1,247	1,280	1,314	1,348	1,383	1,418	1,480	1,502	1,538	1,575	1,586	1,597	4.8%			
128																										
129	Daily Cruise Forecast (Revenue Passengers/CALLS)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	CAGR		
130		128,934	134,113	135,454	136,809	138,177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.0%			
139	Likely																									
145																										
153	TOTAL TRUCK TRIPS (DIFFERENTIATED GROWTH DISTRIBUTION)	48,213	47,546	48,851	49,689	50,560	50,916	51,600	52,284	53,017	53,798	54,562	55,350	56,170	56,873	57,600	58,351	59,118	59,918	60,766	61,606	62,475	1.24%			
155	Estimated Weekly Truck Trips_McIntosh Road Gate	15,977	14,655	15,425	16,201	16,980	17,502	18,202	18,901	19,514	20,122	20,727	21,330	21,934	22,437	23,018	23,600	24,184	24,771	25,360	25,952	26,548	2.45%			
156	Estimated Weekly Truck Trips_Eller Drive Gate	19,031	19,679	20,211	20,348	20,494	20,499	20,570	20,643	20,774	20,935	21,078	21,232	21,400	21,545	21,702	21,873	22,049	22,242	22,459	22,669	22,893	0.88%			
157	Estimated Weekly Truck Trips_Spangler Blvd. Gate	11,693	11,788	11,882	11,817	11,771	11,650	11,574	11,498	11,489	11,500	11,523	11,559	11,610	11,668	11,659	11,656	11,665	11,684	11,724	11,762	11,811	0.05%			
158	Estimated Weekly Truck Trips_Eisenhower Blvd. Gate	1,511	1,324	1,332	1,323	1,315	1,266	1,254	1,243	1,239	1,240	1,235	1,230	1,226	1,223	1,221	1,222	1,220	1,220	1,222	1,222	1,223	-1.00%			
167																										
168																										
174	Reconciliation																									
175		Sun-Sat	Sun-Sat																							
176	Average Weekly Total Trucks (from 2018 Traffic Counts Sun-Sat)	48,213																								
177	McIntosh Road Gate Weekly Total Trucks	33%	15,977																							
178	Eller Drive Gate Weekly Total Trucks	39%	19,031																							
179	Spangler Boulevard Gate Weekly Total Trucks	24%	11,693																							
180	Eisenhower Boulevard Gate Weekly Total Trucks	3%	1,511																							
181		100%	48,213																							

# Future Travel Demand Forecast – Growth Factors

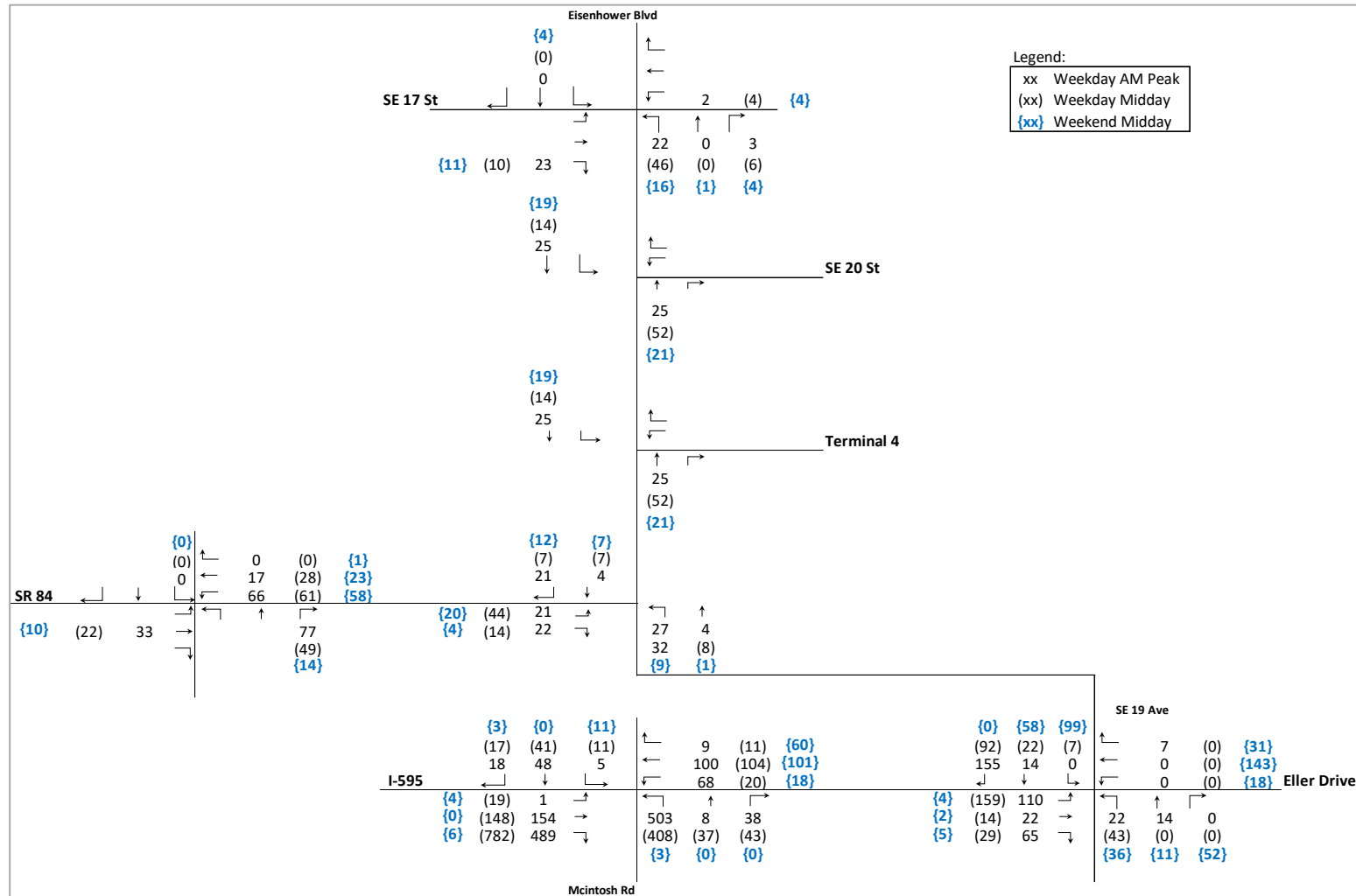
Gates	Existing and Projected Weekly Truck Traffic					Truck Traffic Ratio vs. 2018			
	2018	2023	2028	2033	2038	2023	2028	2033	2038
McIntosh Road Gate	15,977	17,502	20,727	23,600	26,548	1.095	1.297	1.477	1.662
Eller Drive Gate	19,031	20,499	21,078	21,873	22,893	1.077	1.108	1.149	1.203
Spangler Blvd. Gate	11,693	11,650	11,523	11,656	11,811	0.996	0.985	0.997	1.010
Eisenhower Blvd. Gate	1,511	1,266	1,235	1,222	1,223	0.838	0.817	0.809	0.810
Cruise Passengers (Million, Annual)	3.741	4.449	5.572	6.448	7.162	1.189	1.489	1.731	1.914

# Future Turning Movement Volumes – Growth Factors

Vehicle Type	Location	2023	2028	2033	2038
Trucks	McIntosh Road	2.053	2.432	2.769	3.116
	Eller Drive	1.615	1.662	1.724	1.805
	Spangler Blvd	1.281	1.314	1.348	1.381
	Eisenhower Blvd	1.281	1.314	1.348	1.381
Passenger Vehicles		1.182	1.396	1.650	1.950

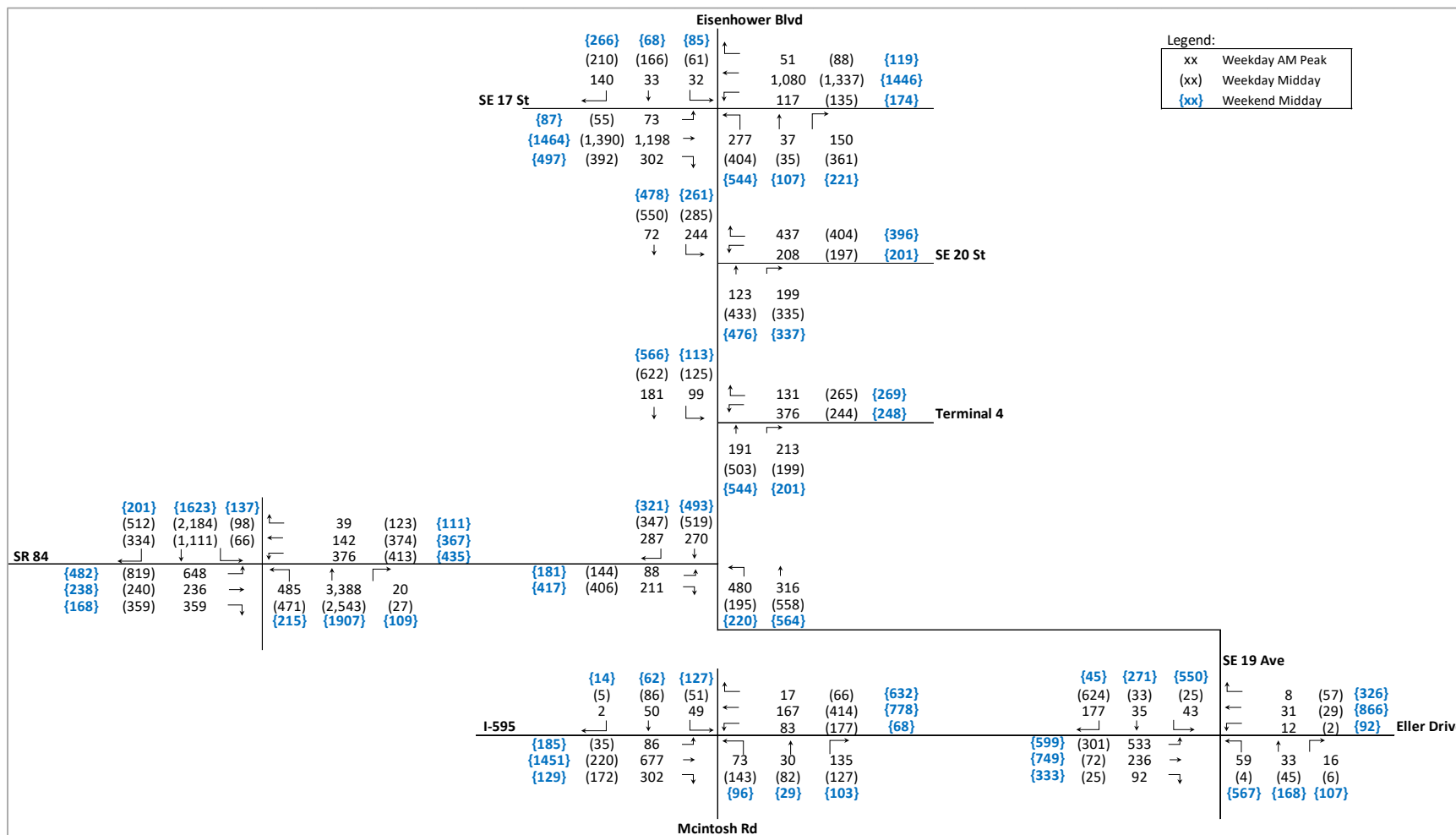
Note: Future turning volume growth factors are developed based on daily growth factors and peak-to-daily ratios to estimate hourly volumes.

# Future Year TMV – 2038 No-Build (Trucks)



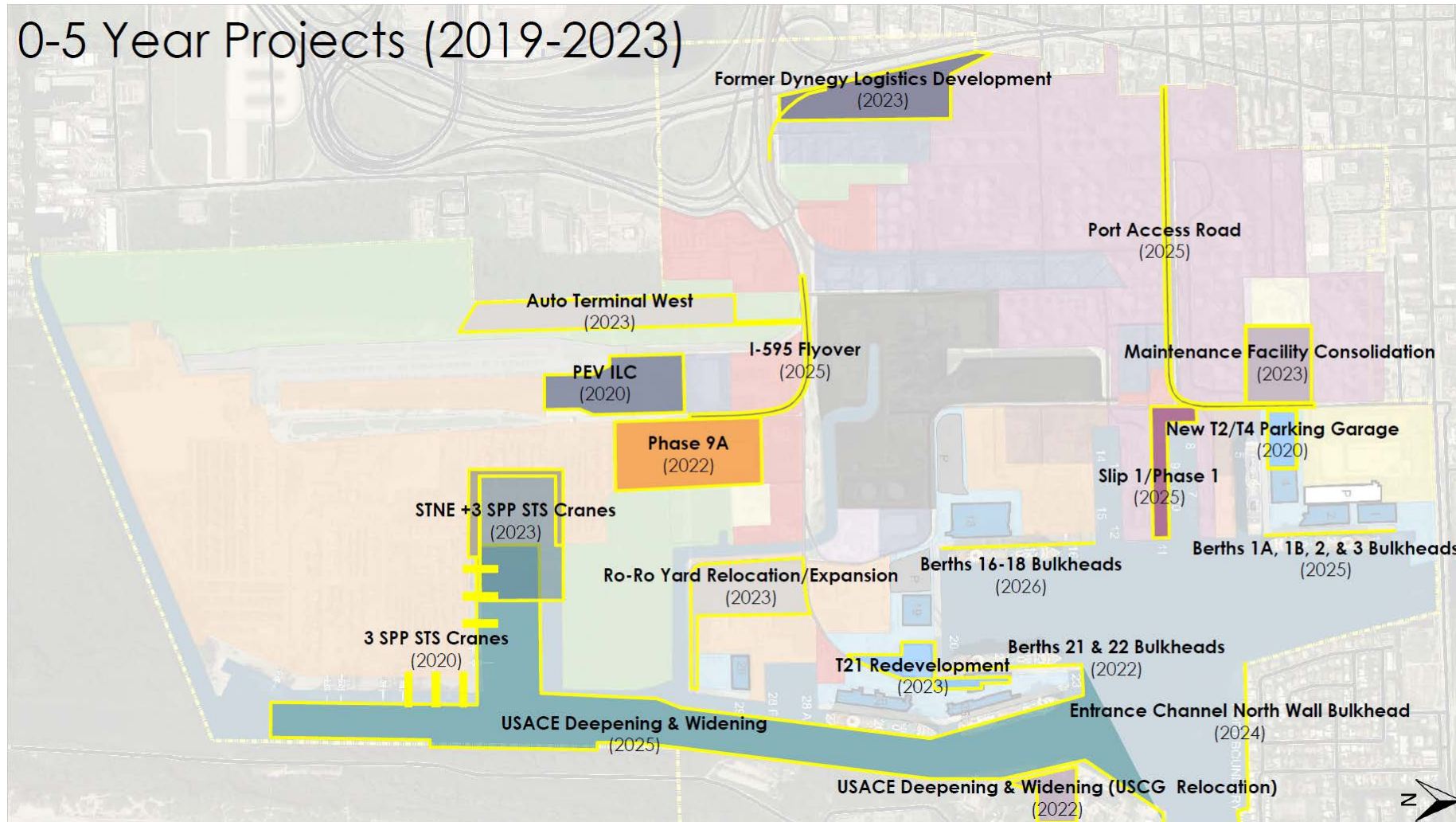


# Future Year TMV – 2038 No-Build (Passenger Vehicles)

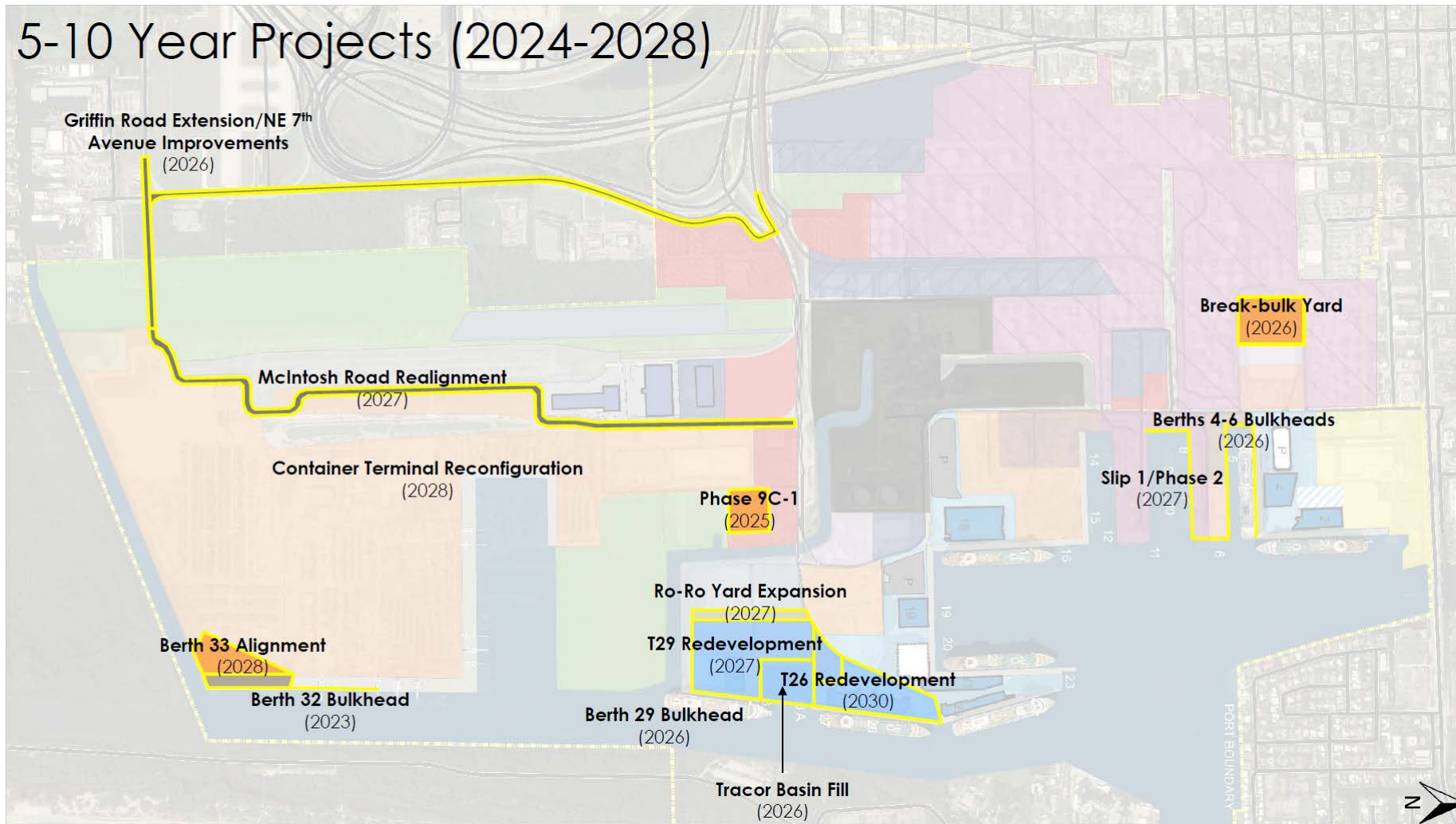


# PEV Master/Vision Plan Proposed New Projects

## 0-5 Year Projects (2019-2023)



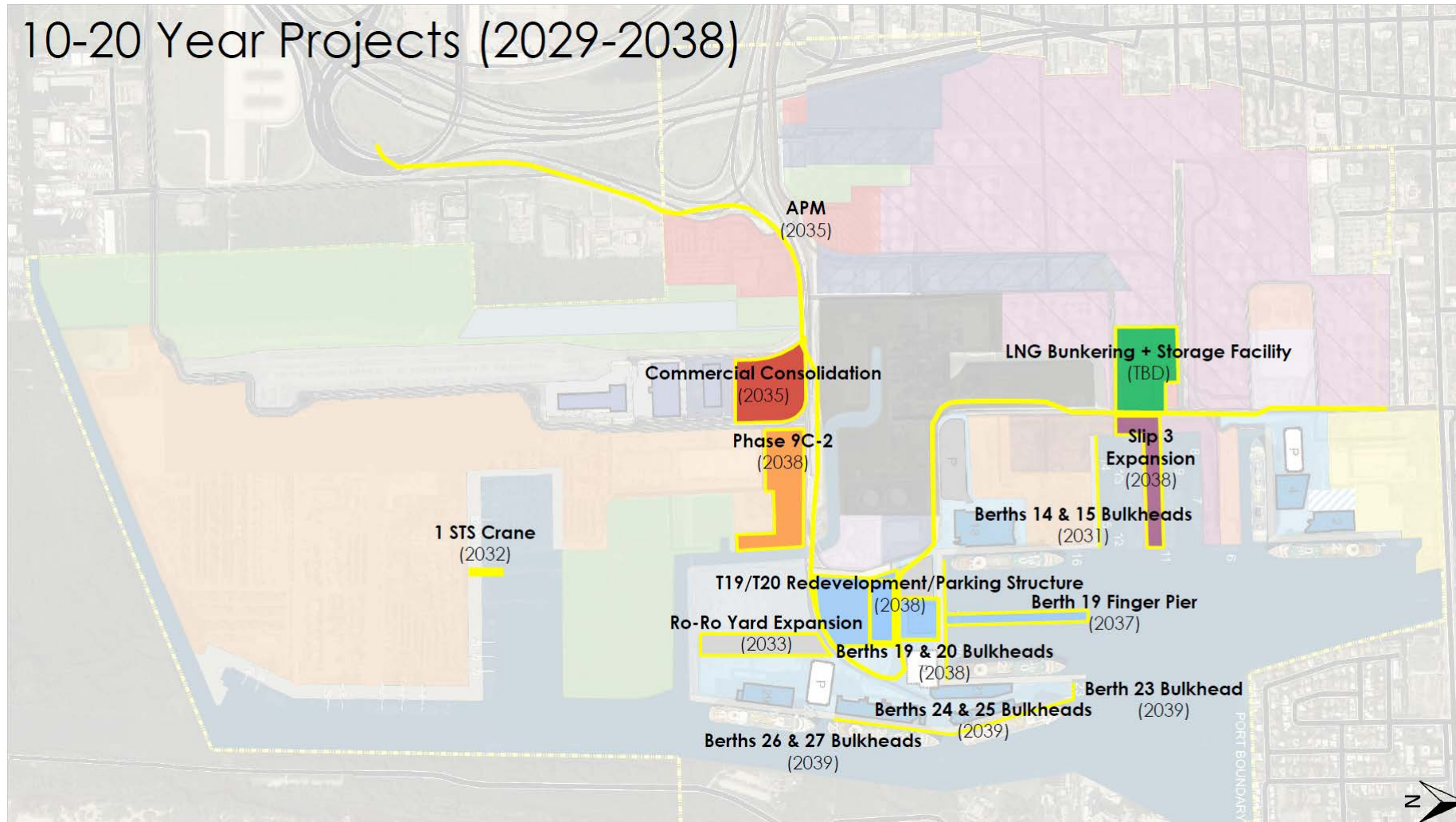
# PEV Master/Vision Plan Proposed New Projects





# PEV Master/Vision Plan Proposed New Projects

## 10-20 Year Projects (2029-2038)



# Build Scenario – Projects and Schedules

Project No	Description	Project Year	2023	2028	2033	2038
1	Port Access Road*	2019-2025		X	X	X
2	PEV ILC	2019-2020	X	X	X	X
3	Former Dynegy Logistics Development	2019-2023	X	X	X	X
4	I-595 Flyover**	2021-2025		X	X	X
5	Commercial Consolidation (PEV Administration + Maritime/Government Offices )	2031-2035				X
6	Griffin Road Extension/NE 7th Ave Improvements/McIntosh Road Realignment	2024-2027		X	X	X
7	McIntosh Road Realignment/Container Terminal Reconfiguration	2024-2028		X	X	X
8	McIntosh Road Gate Lane Addition	2020	X	X	X	X
9	Eller Drive at SE 19th Avenue Intersection Reconfiguration	2023		X	X	X

Note:

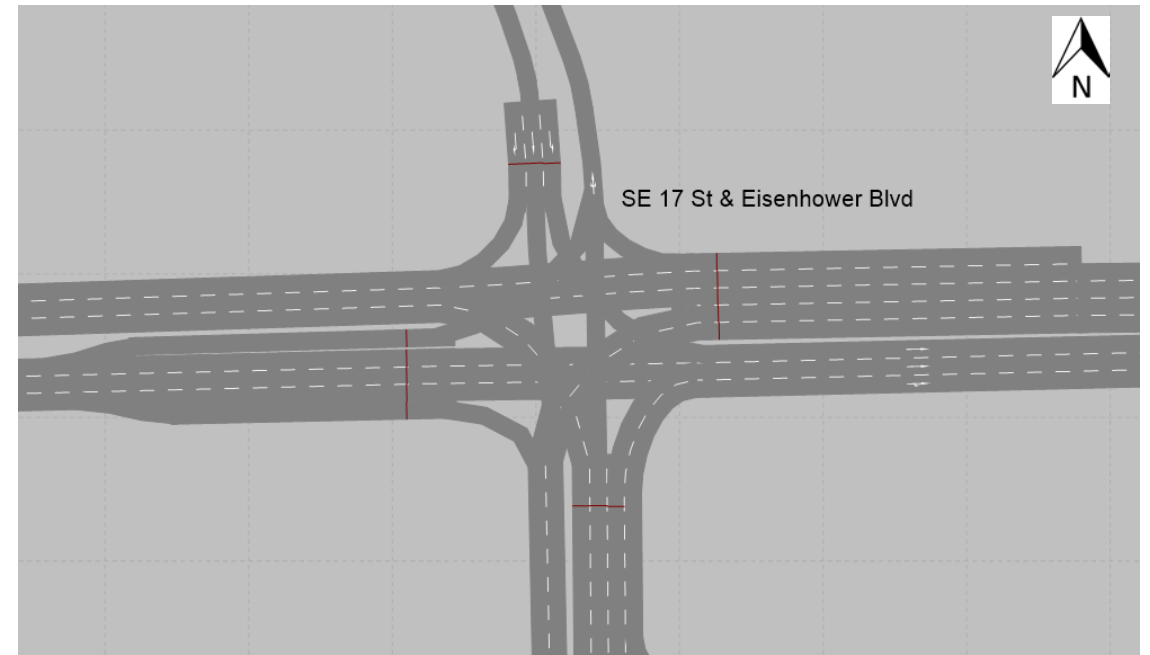
\* Port Access Road modelled with two versions (5/24/19 & 7/22/19)

\*\* Different configurations modeled (Southport entrance and circulation design)

\*\*\*Security checkpoints are removed for Build Condition

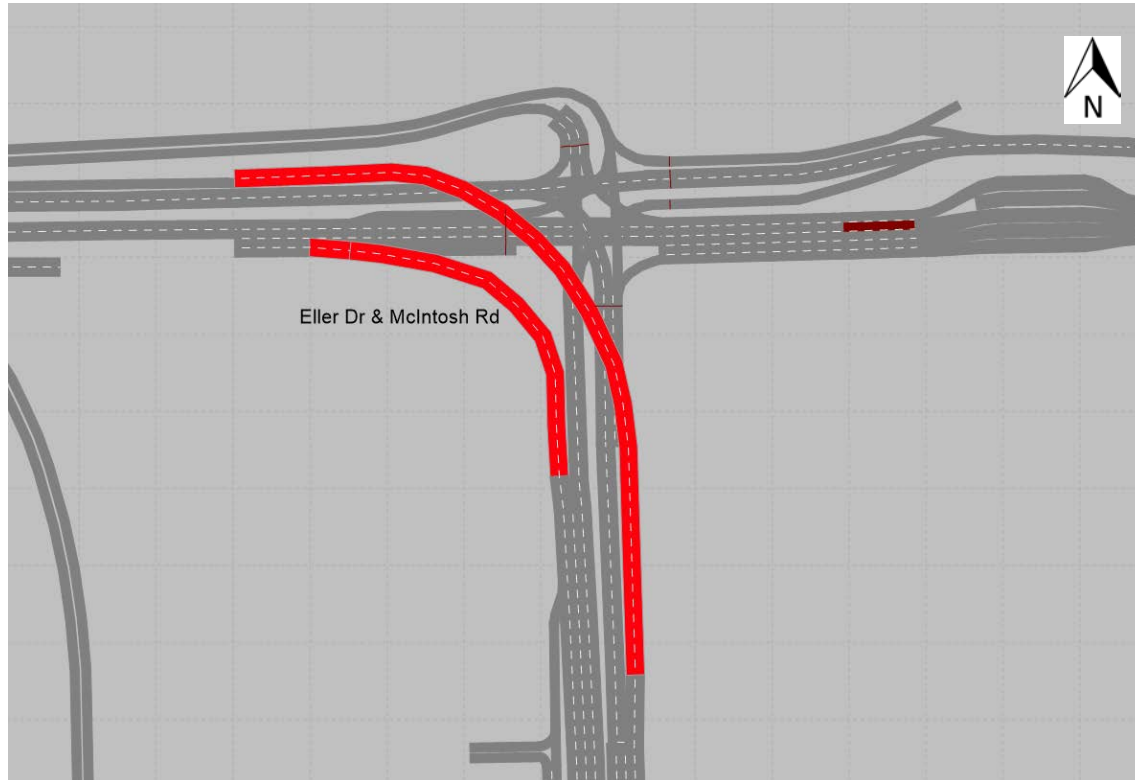


# Port Access Road – VISSIM Model Network Coding



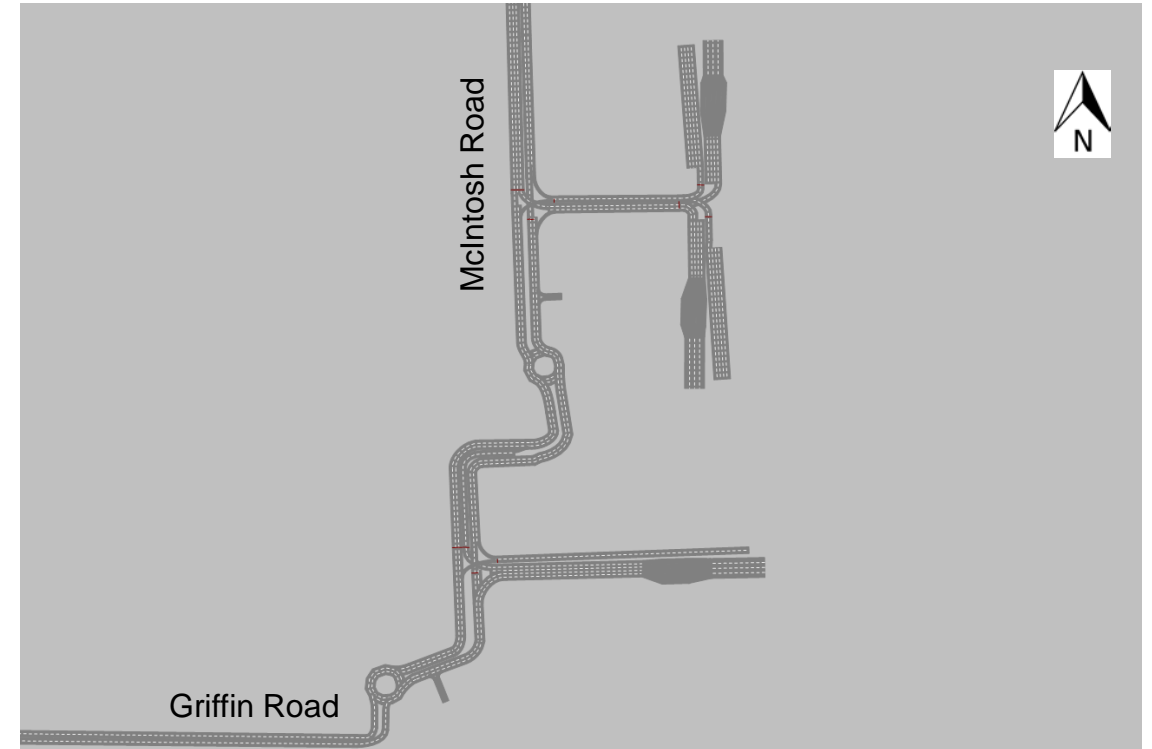
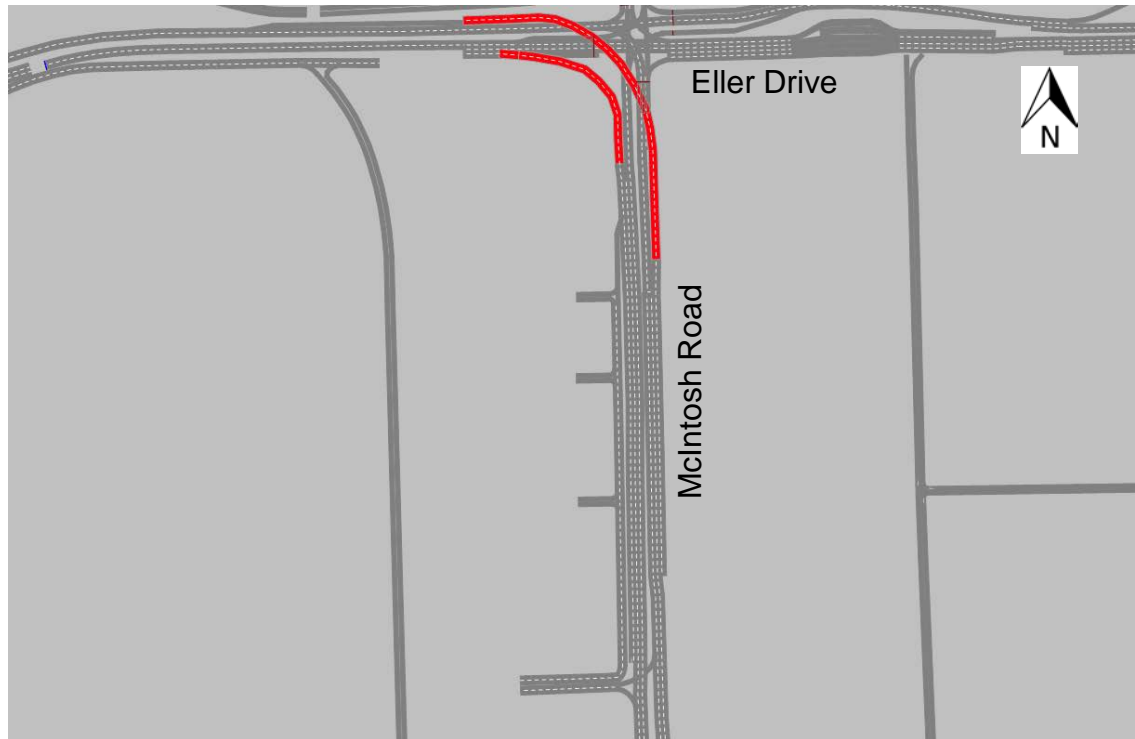
# I-595 Flyover & Eller Dr and SE 19 Ave Intersection

## VISSIM Model Network Coding



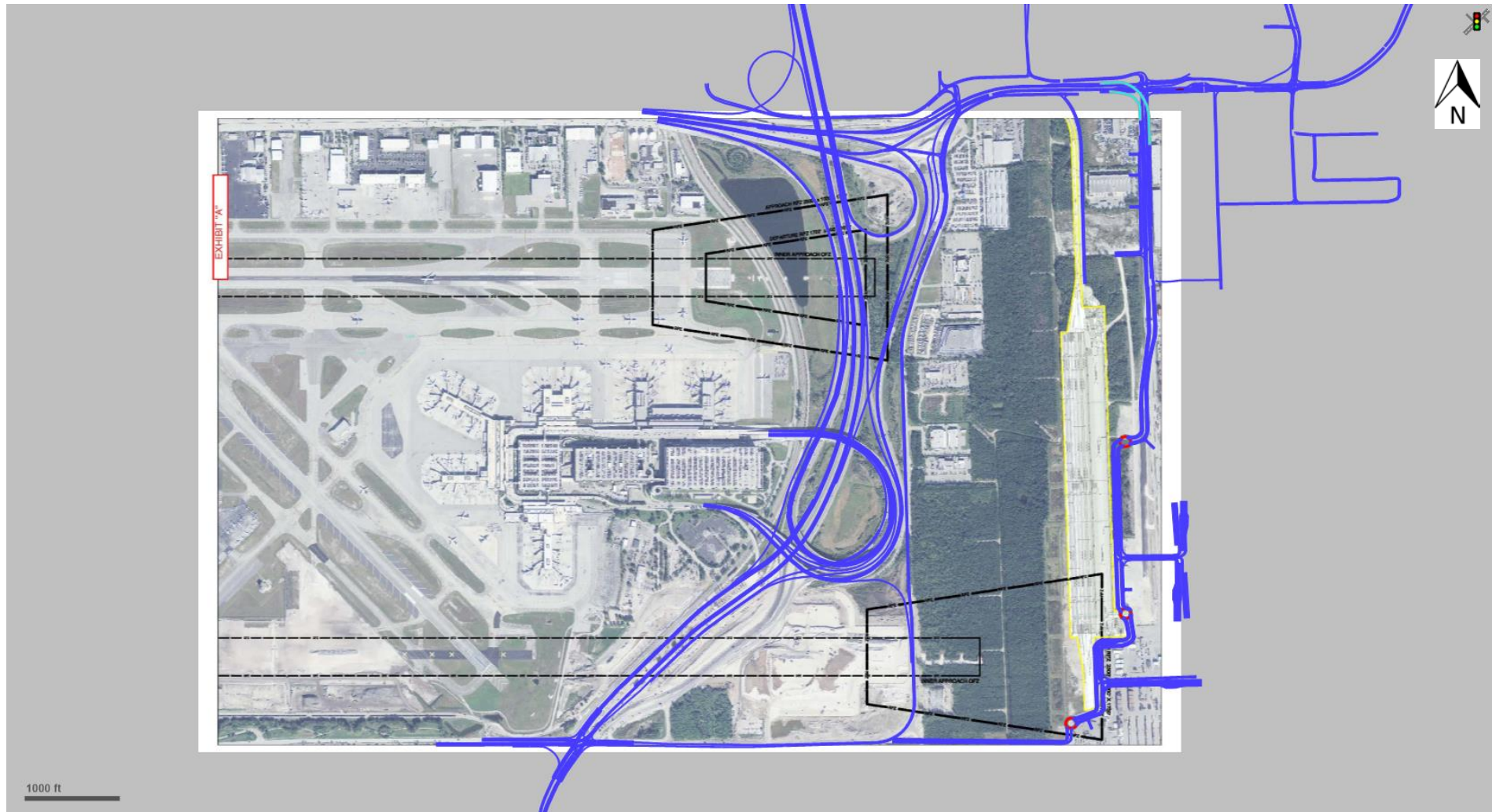
# Griffin Road Extension & McIntosh Realignment

## VISSIM Model Network Coding

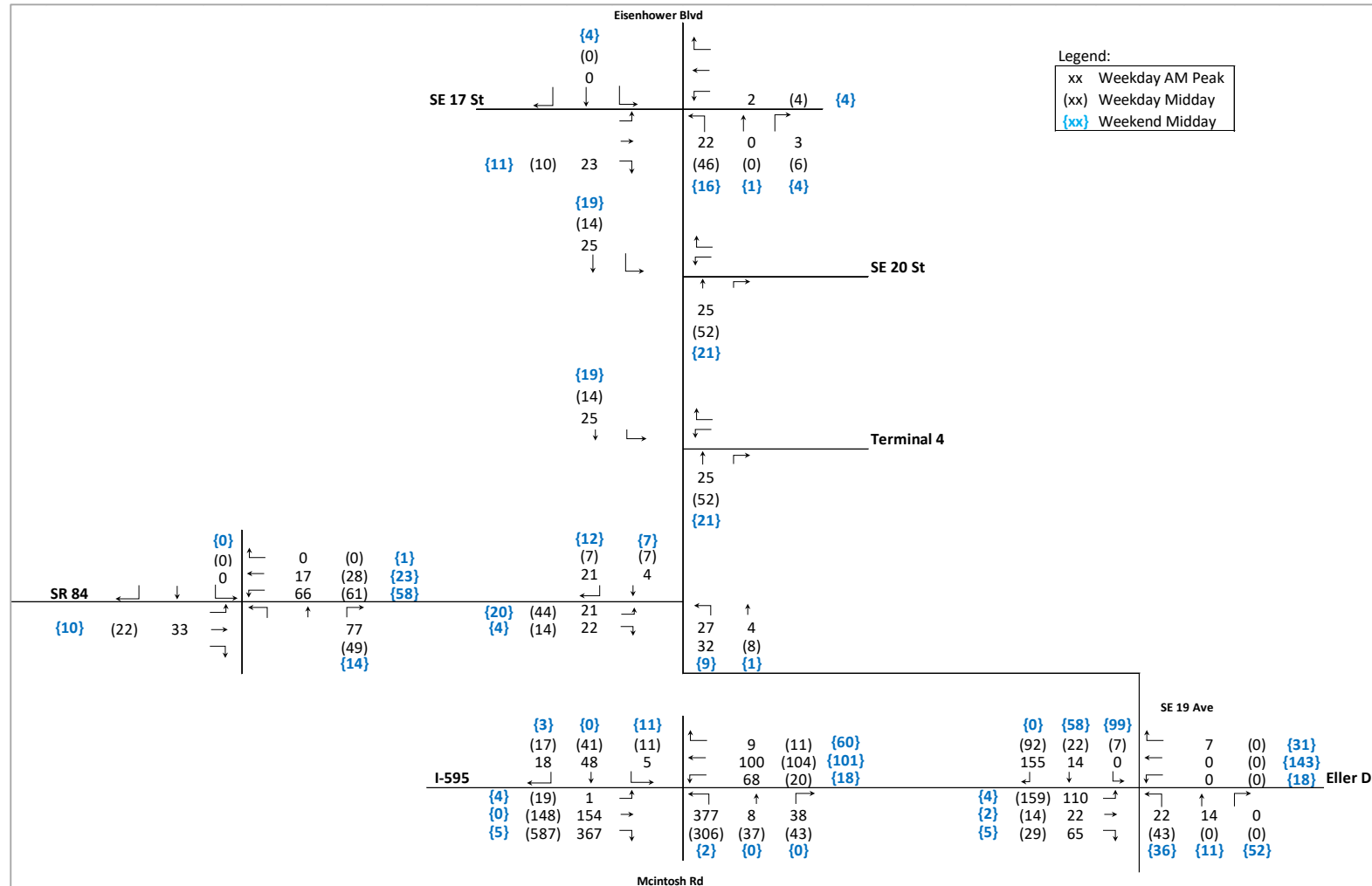


# Griffin Road Extension & McIntosh Realignment

## VISSIM Model Network Coding with FLL Airport Runway Protection Zone (RPZ)

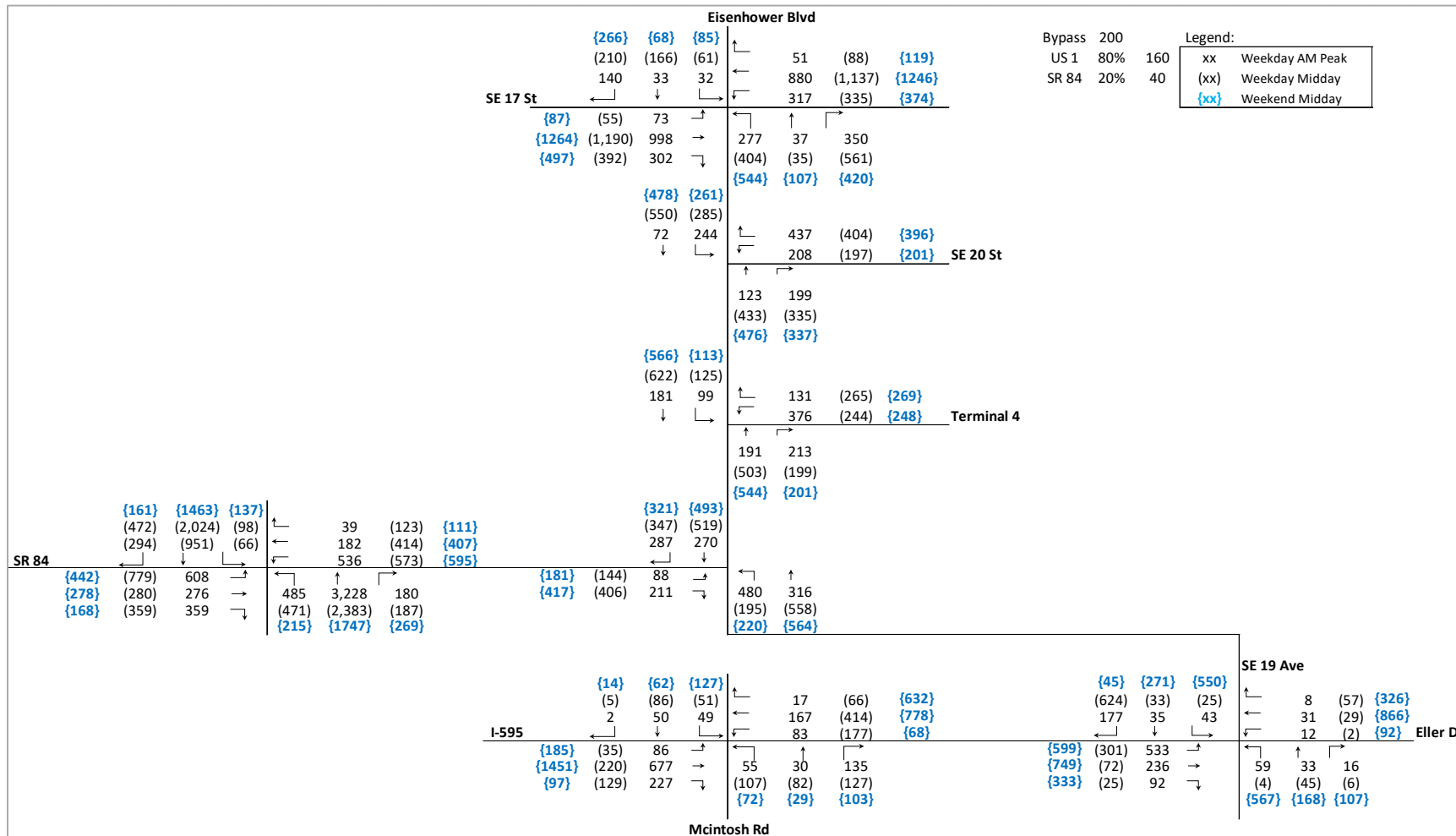


# Future Year TMV – 2038 Build (Trucks)





# Future Year TMV – 2038 Build (Passenger Vehicles)



# Operational Analysis Results (Average Delays & LOS)

	Weekday AM Peak Hour (8:00AM to 9:00 AM)								
Intersection	Existing 2018	No Build 2023	Build 2023	No Build 2028	Build 2028	No Build 2033	Build 2033	No Build 2038	Build 2038
US 1 at Spangler Blvd	45.0 [D]	53.4 [D]	57.7 [E]	56.7 [E]	60.8 [E]	57.5 [E]	63.2 [E]	68.8 [E]	70.1 [E]
SE 17th Street at Eisenhower Blvd	20.0 [B]	23.0 [C]	26.2 [C]	24.7 [C]	27.5 [C]	26.4 [C]	30.4 [C]	28.7 [C]	31.2 [C]
Eisenhower Blvd at Spangler Blvd	15.3 [B]	17.2 [B]	17.6 [B]	18.5[B]	19.6 [B]	21.1 [C]	21.4 [C]	26.2 [C]	27.2 [C]
Eller Drive at McIntosh Road	26.2 [C]	80.7 [F]	80.6 [F]	109.1 [F]	65.1 [E]	124.2 [F]	114.0 [F]	144.2 [F]	101.3 [F]
Eller Drive at SE 19th Street	15.1 [B]	16.9 [B]	16.9 [B]	18.0 [B]	15.1 [B]	20.4 [C]	16.0 [B]	21.1 [C]	16.5 [B]

  Port Access Road
   I-595 Flyover/McIntosh/Griffin
   Commercial Consolidation
   Intersection Re-configuration

Level of Service (LOS)	A	B	C	D	E	F
Ave Delay (Sec/Vehicle)	<= 10	> 10-20	> 20-35	>35-55	>55-80	>80

# Operational Analysis Results (Average Delays & LOS)

	Weekday Mid-day Peak Hour (12:00PM to 1:00PM)								
Intersection	Existing 2018	No Build 2023	Build 2023	No Build 2028	Build 2028	No Build 2033	Build 2033	No Build 2038	Build 2038
US 1 at Spangler Blvd	96.0 [F]	139.2 [F]	147.6 [F]	152.7 [F]	155.7 [F]	156.1[F]	156.8 [F]	158.6 [F]	162.0 [F]
SE 17th Street at Eisenhower Blvd	13.0 [B]	27.2 [C]	30.7 [C]	29.3 [C]	34.1 [C]	41.4 [D]	47.6 [D]	70.2 [E]	87.1 [F]
Eisenhower Blvd at Spangler Blvd	11.1 [B]	14.3 [B]	15.2 [B]	16.3 [B]	16.5 [B]	16.3 [B]	17.7 [B]	18.3 [B]	19.8 [B]
Eller Drive at McIntosh Road	32.2 [C]	116.1 [F]	102.0 [F]	119.8 [F]	18.4 [B]	145.0 [F]	20.2 [C]	161.1 [F]	22.9 [C]
Eller Drive at SE 19th Street	11.8 [B]	15.0 [B]	11.8 [B]	16.7[B]	12.2 [B]	14.6 [B]	13.0 [B]	20.6 [C]	11.9 [B]

  Port Access Road
   I-595 Flyover/McIntosh/Griffin
   Commercial Consolidation
   Intersection Re-configuration

Level of Service (LOS)	A	B	C	D	E	F
Ave Delay (Sec/Vehicle)	<= 10	> 10-20	> 20-35	>35-55	>55-80	>80

# Operational Analysis Results (Average Delays & LOS)

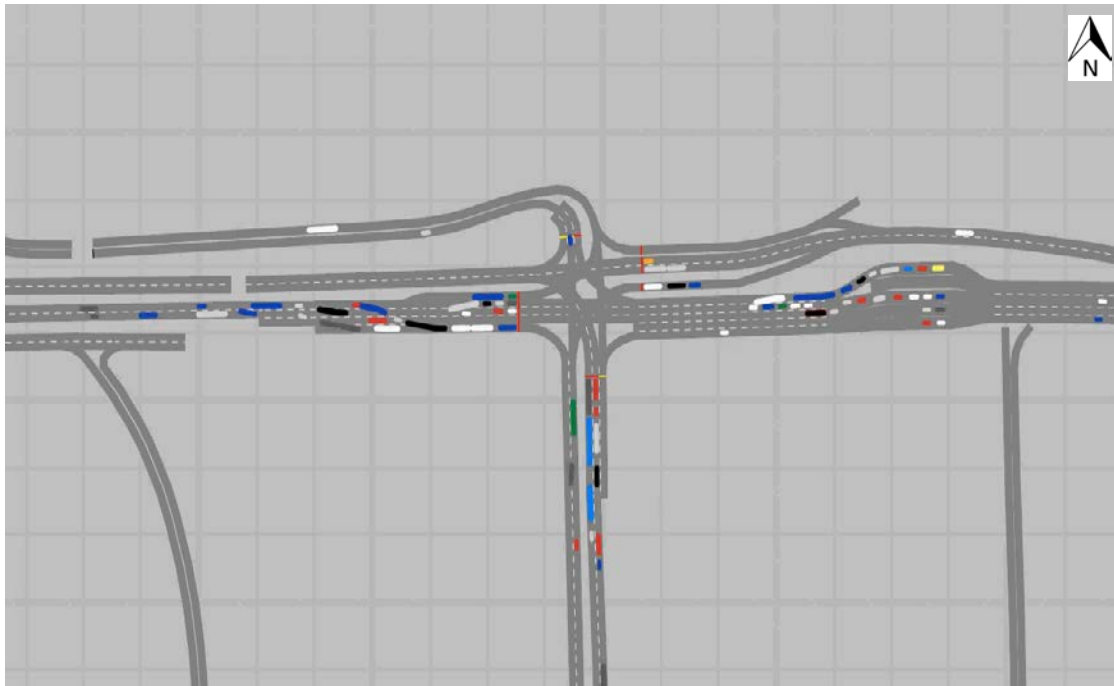
	Weekend Mid-day Peak Hour (11:30AM to 12:30PM)								
Intersection	Existing 2018	No Build 2023	Build 2023	No Build 2028	Build 2028	No Build 2033	Build 2033	No Build 2038	Build 2038
US 1 at Spangler Blvd	39.1 [D]	45.4 [D]	47.8 [D]	49.4 [D]	53.8 [D]	57.2 [E]	59.2 [E]	78.1 [E]	81.8 [F]
SE 17th Street at Eisenhower Blvd	40.2 [C]	45.1 [D]	46.8 [D]	47.4 [D]	51.2 [D]	49.8 [D]	55.3 [E]	82.1 [F]	82.6 [F]
Eisenhower Blvd at Spangler Blvd	11.7 [B]	13.4 [B]	13.5 [B]	14.8 [B]	15.2 [B]	16.2 [B]	16.3 [B]	17.6 [B]	18.1 [B]
Eller Drive at McIntosh Road	317.7 [F]	350.2 [F]	350.6 [F]	372.9 [F]	361.5 [F]	386.1 [F]	381.7 [F]	425.8 [F]	424.7 [F]
Eller Drive at SE 19th Street	43.3 [D]	55.7 [E]	56.7 [E]	64.6 [E]	59.9 [E]	76.3 [E]	73.1 [E]	86.4 [F]	80.8 [F]

  Port Access Road
   I-595 Flyover/McIntosh/Griffin
   Commercial Consolidation
   Intersection Re-configuration

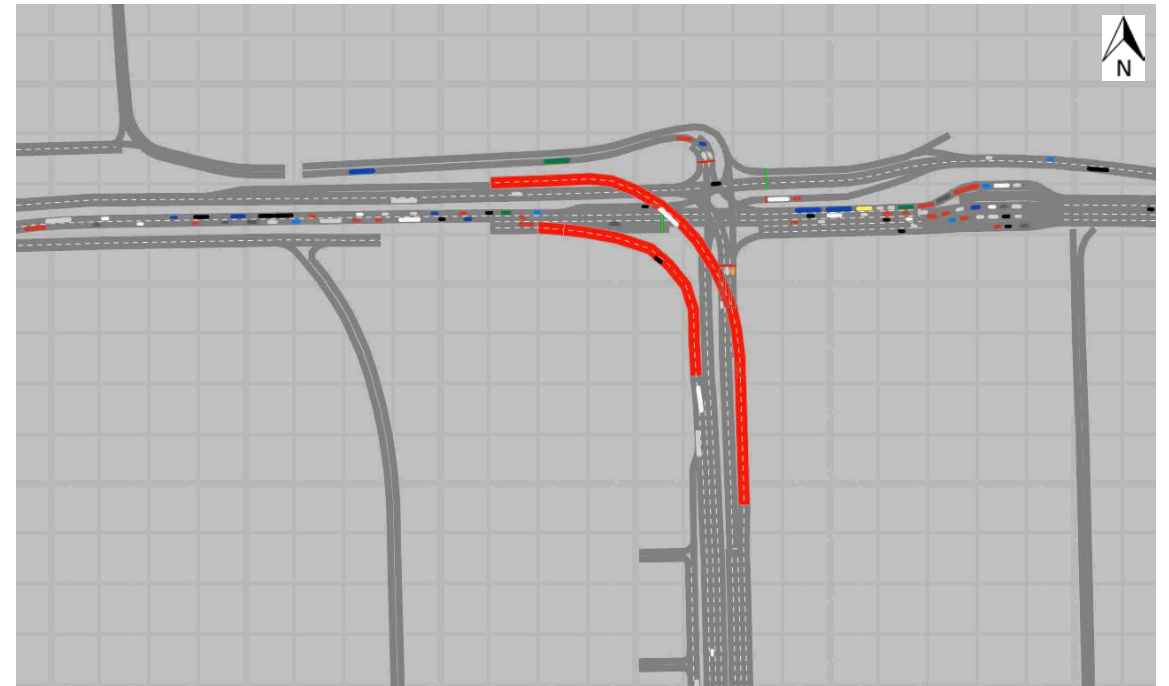
Level of Service (LOS)	A	B	C	D	E	F
Ave Delay (Sec/Vehicle)	<= 10	> 10-20	> 20-35	>35-55	>55-80	>80

# Simulation Video: 2038 Weekday AM No-Build & Build

No Build



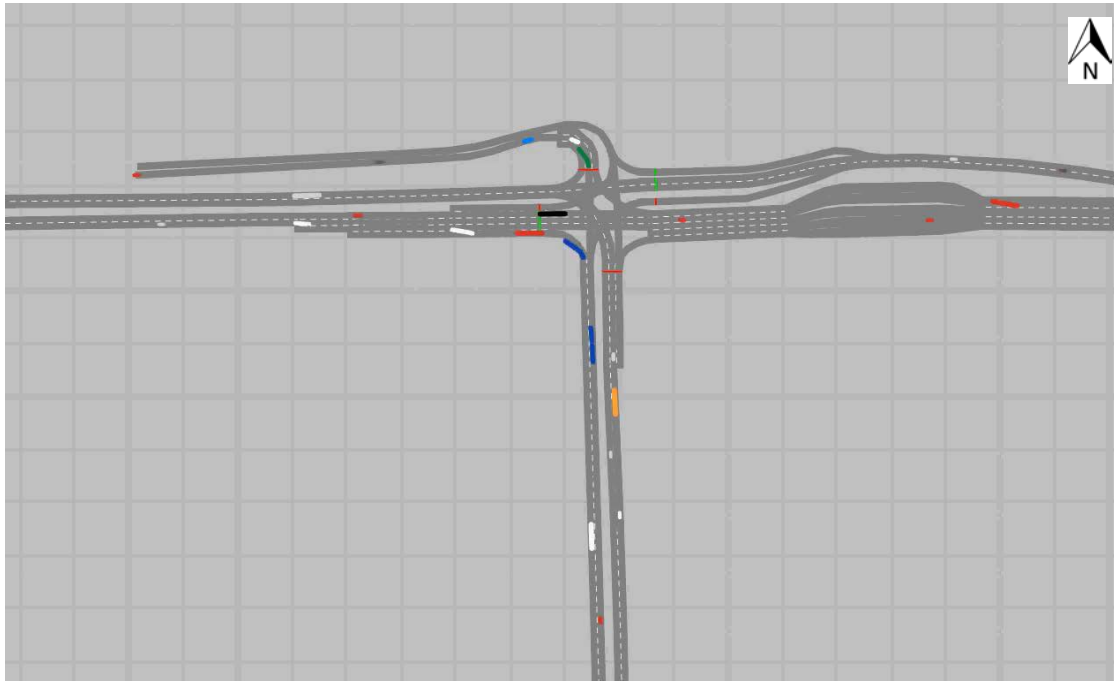
Build



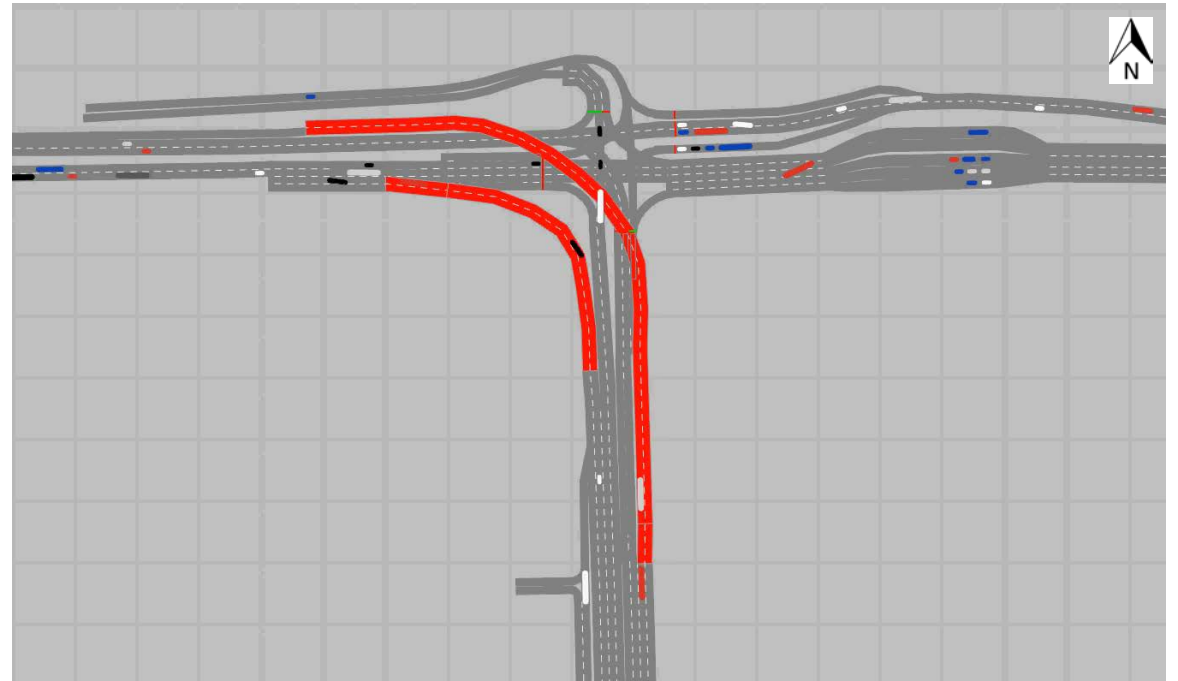


# Simulation Video: 2038 Weekday MD No-Build & Build

No Build

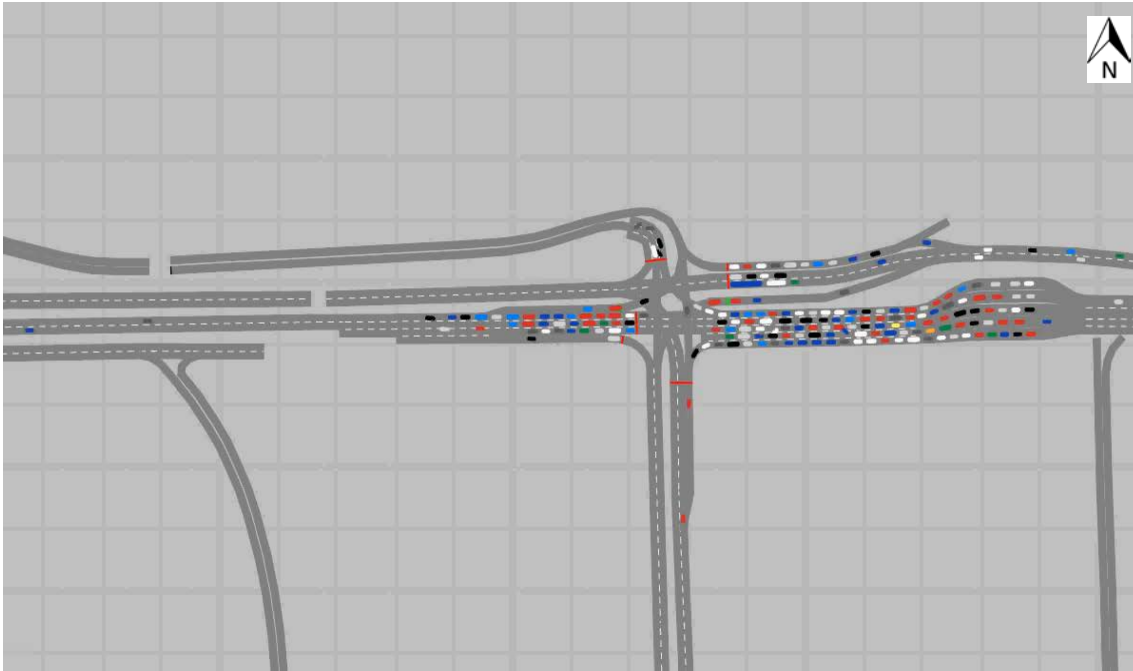


Build

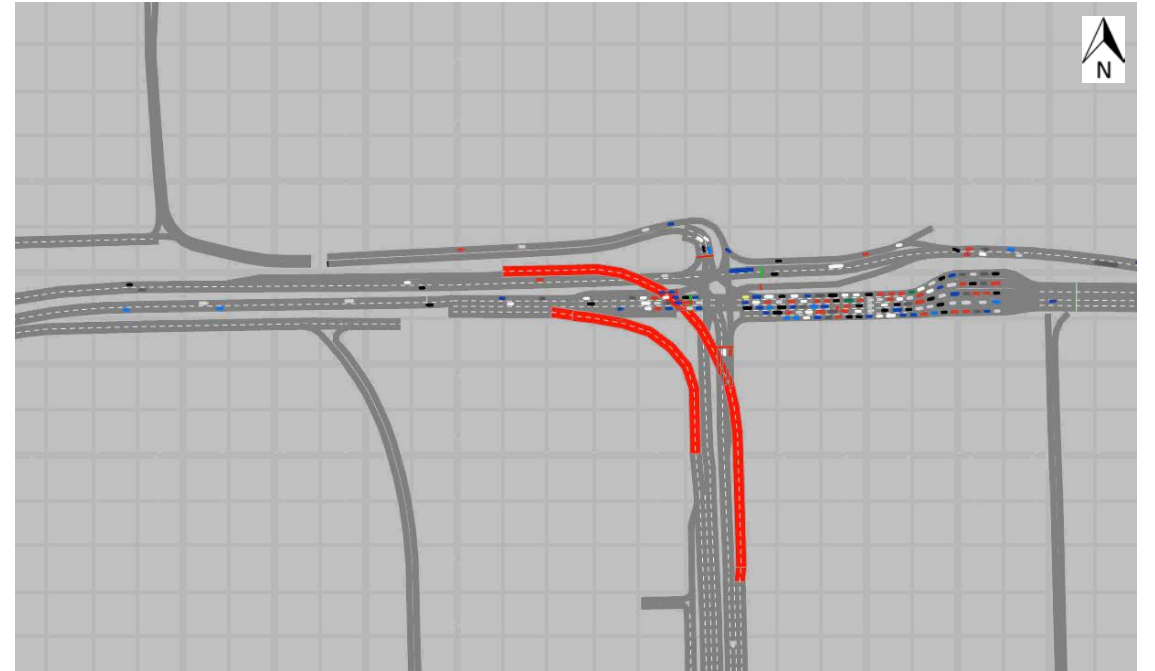


# Simulation Video: 2038 Weekend MD No-Build & Build

No Build



Build

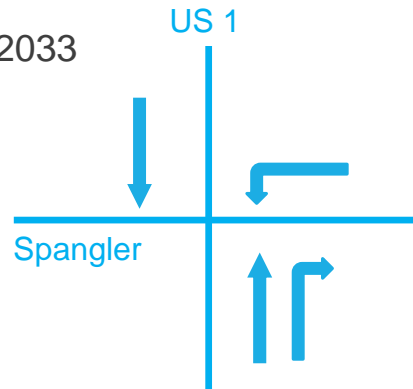


# Summary

## NO-BUILD

### ❑ US 1 and Spangler Blvd

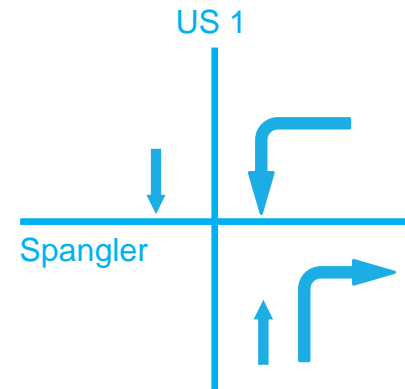
- Weekday AM
  - Reaches Capacity in 2023
- Weekday Midday
  - Fails during existing and all future years
- Weekend Midday (cruise)
  - Reaches capacity in 2033



## BUILD

### ❑ US 1 and Spangler Blvd

- Increased northbound right-turns and westbound left turns because of Port Access Road
- LOS and delays are worse than no-build conditions in all future years



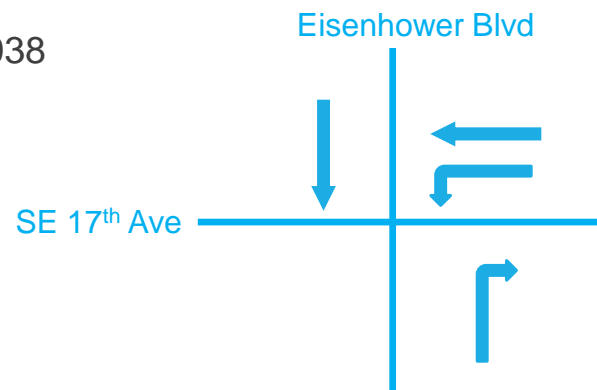
With Port Access Road Project

# Summary

## NO-BUILD

### □ SE 17th Ave and Eisenhower Blvd

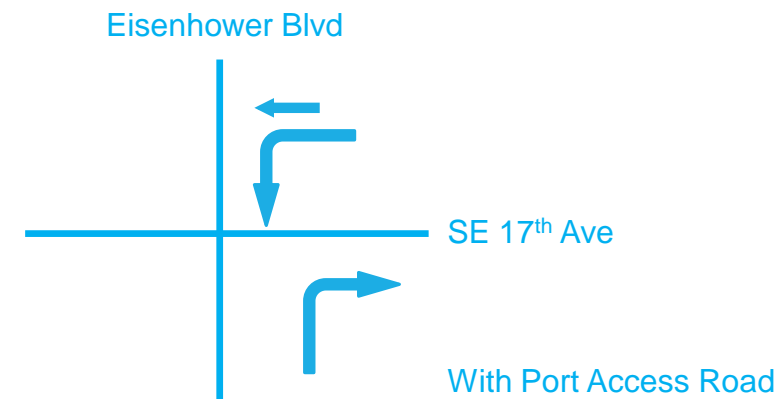
- Weekday AM
  - Acceptable LOS throughout
- Weekday Midday
  - Reaches capacity in 2038
- Weekend Midday (cruise)
  - Fails in 2038



## BUILD

### □ SE 17th Ave and Eisenhower Blvd

- Increased northbound right-turns and westbound left turns because of Port Access Road
- LOS and delays are worse than no-build conditions in all future years



# Summary

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## NO-BUILD

### ❑ Eller Drive and McIntosh Road

- Weekday AM
  - Fails in 2023
- Weekday Midday
  - Fails in 2023
- Weekend Midday (cruise)
  - Fails today and all future years
  - Queues extend to I-595 mainline up to 7,500 ft by 2038.

## BUILD

### ❑ Eller Drive and McIntosh Road

- Weekday AM
  - Fails in 2023, slightly better than no-build
  - Significantly improves in 2028 when I-595 flyover opens
  - Improvement in 2038 when admin building relocates
- Weekday Midday
  - Significant improvement after I-595 flyover opens
- Weekend Midday (cruise)
  - Fails today and all future years but slightly better than no-build. No queues for eastbound right turns
  - Flyover helps truck traffic but not cruise traffic

# Summary

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## NO-BUILD

### ❑ Eller Drive and SE 19th Street

- Weekday AM
  - Good LOS for existing and future years
- Weekday Midday
  - Good LOS for existing and future years
- Weekend Midday (cruise)
  - Reaches capacity in 2023, fails in 2038.

## BUILD

### ❑ Eller Drive and SE 19th Street

- Dual eastbound left-turn lanes improve LOS for all future years compared to No-Build.
- Weekend Midday (cruise)
  - Fails in 2038
  - Remain failing even with additional geometric improvements
  - Heavy east-west traffic and northbound left-turns



# Summary

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## NO-BUILD

### ❑ Eisenhower Blvd and Spangler Blvd

- Weekday AM
  - LOS C or better
- Weekday Midday
  - LOS B in all analysis years
- Weekend Midday (cruise)
  - LOS B in all analysis years

## BUILD

### ❑ Eisenhower Blvd and Spangler Blvd

- Weekday AM
  - LOS C or better
- Weekday Midday
  - LOS B in all analysis years
- Weekend Midday (cruise)
  - LOS B in all analysis years

### ❑ No operational issues at Eisenhower Blvd and Spangler Blvd

### ❑ No operational issues with McIntosh Road Realignment and Griffin Road Extension.

# Recommendations

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- ❑ Coordinate with FDOT, Broward County, and City of Fort Lauderdale to address the deficiencies at the two impacted intersections caused by Port Access Road: US 1 & Spangler and Eisenhower & SE 17th Ave.
- ❑ Reduce security gate processing time on Eller Drive and Eisenhower Boulevard.
  - Add additional security check lanes on Eisenhower Boulevard
  - Consider providing/promoting multimodal services to the Port for cruise passengers, such as Automated People Mover, Express Buses, Transportation Network Company (TNC) to reduce auto trips
  - Appointment systems for cargo
  - Conduct security checks outside the Port
- ❑ Check Right-Of-Way (ROW) and vertical/horizontal clearance requirements for I-595 flyover and possibly shift the alignment westward to avoid the 1800 Building on Eller.
- ❑ The intersection of Eller Drive & SE 19th Ave will remain at LOS F in the future due to high cruise traffic. The following improvements may reduce the congestion but will not solve the problem.
  - Add a NB LT lane at the NB approach (SE 19th Ave)
  - Widen/restripe Eller Drive to three through lanes and then add dual LT lanes on NB approach (SE 19th Ave) (subject ROW constraints).
  - Consider grade separation in the future (ROW constraints and high costs)
  - Coordinate with Cruise companies to develop staggered schedules
- ❑ Coordinate with FDOT, Broward County Aviation Department (BCAD), and other relevant cities and agencies on the development of proposed projects in and around the Port.

# Discussions and Questions

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# Supporting Slides

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# Main Data Sources – Recent Studies

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- ❑ Broward County Convention Center Traffic Study, February 2014
- ❑ 17th Street Corridor Mobility Plan, City of Fort Lauderdale, May 2017
- ❑ Port Everglades Terminal 4 Parking Garage – Traffic Operations Evaluation, January 2018
- ❑ Port Everglades Traffic Study, May 2018
- ❑ Port Everglades International Logistics Center Study, August 2018

# Intersection Traffic Counts – 10/11/2013

## Broward County Convention Center Traffic Study, Broward County, February 2014

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Eisenhower & Eller  
DATE: 10/11/2013  
RECORDER: Quality Counts, LLC  
Adjustment: 1.22

North

LOCATION	Southbound Road A			Northbound Road B			Westbound Road C			Eastbound Road D		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15 AM												
6:15-6:30												
6:30-6:45												
6:45-7:00												
7:00-7:15	2	2	27			1				22	1	9
7:15-7:30	2	5	22	2	1					31	11	11
7:30-7:45	9	9	20	1	4	4			2		7	13
7:45-8:00	5	12	18	4	4			5	1	38	9	16
8:00-8:15	5	4	28	4	4	2	1	1		21	13	6
8:15-8:30	6	5	28	11	9	5	1	5	5	61	20	12
8:30-8:45	7	9	26	5	11		2	5		18	6	6
8:45-9:00	1	5	33	13			1	2		31	6	8
9:00-9:15												
9:15-9:30												
9:30-9:45												
9:45-10:00												
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15	1	7	24	13	7			4	1	34	2	9
11:15-11:30	1	7	17	7	7	1	1	2	2	29	2	9
11:30-11:45	5	4	29	16	8	4	1	5	7	43	4	2
11:45-12:00 PM	5	10	28	13	7		1	5	8	40	4	4
12:00-12:15	1	11	34	11	6		2	5	57	9	6	
12:15-12:30	6	1	45	2	9		1		9	36	6	5
12:30-12:45	1	7	48	1	2			4	6	33	6	2
12:45-1:00	6	5	51	2	4			4	5	17	6	4
1:00-1:15												
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15												
3:15-3:30												
3:30-3:45												
3:45-4:00												
4:00-4:15		9	48	17	2		1	9	1	23	9	4
4:15-4:30	1	4	29	17				5	1	24		5
4:30-4:45	1	5	22	5	2			2	23		2	7
4:45-5:00	2	4	32	17	5		2	15	5	24		5
5:00-5:15	2	5	37	16		1	1	16	5	39		
5:15-5:30	2	18	6					9	7	24		2
5:30-5:45		18		5						24		
5:45-6:00	5	15	1	2			2	6	6	17		7
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
7:00-7:15												
7:15-7:30												
7:30-7:45												
7:45-8:00												
8:00-8:15												
8:15-8:30												
8:30-8:45												
8:45-9:00												
9:00-9:15												
9:15-9:30												
9:30-9:45												
9:45-10:00 PM												
TOTAL	72	142	688	183	101	18	17	117	83	716	131	160
AM PK HR	25	24	115	33	23	7		113	48	28		
MID PK HR	19	26	178	17	21		1	10	26	148	27	17
PM PK HR	6	16	109	45	7	1	4	44	21	101	11	

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Eller & McIntosh  
DATE: 10/11/2013  
RECORDER: Quality Counts, LLC  
Adjustment: 1.22

North

LOCATION	Southbound Road A			Northbound Road B			Westbound Road C			Eastbound Road D		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15 AM												
6:15-6:30												
6:30-6:45												
6:45-7:00												
7:00-7:15					10	5	9		15	11	48	79
7:15-7:30					17	1	7		6	12	60	76
7:30-7:45					45	9	11		6	7	82	113
7:45-8:00					46	9	15		17	20	116	127
8:00-8:15					37	9	19		18	12	98	98
8:15-8:30					35	17	20		20	12	102	70
8:30-8:45					40	2	19		16	12	61	44
8:45-9:00					44	6	16		23	19	67	45
9:00-9:15												
9:15-9:30												
9:30-9:45												
9:45-10:00												
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15					73	16	12		24	31	32	82
11:15-11:30					77	10	6		26	18	37	70
11:30-11:45					78	11	20		29	17	28	63
11:45-12:00 PM					101	22	13		33	15	25	73
12:00-12:15					106	27	20	1	31	17	20	82
12:15-12:30					62	15	23		23	23	39	77
12:30-12:45					54	6	35		17	24	32	82
12:45-1:00					63	7	35		11	31	27	98
1:00-1:15												
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15												
3:15-3:30												
3:30-3:45												
3:45-4:00												
4:00-4:15					128	17	20		76	10	18	39
4:15-4:30					122	16	9		49	7	12	35
4:30-4:45					104	7	7		43	20	15	40
4:45-5:00					121	6	6		65	13	17	40
5:00-5:15					143	11	6		67	29	9	51
5:15-5:30					92	5	6		31	11	18	46
5:30-5:45					62	9	1		25	1	22	44
5:45-6:00					50	9	9		17	4	18	54
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
7:00-7:15												
7:15-7:30												
7:30-7:45												
7:45-8:00												
8:00-8:15												
8:15-8:30												
8:30-8:45												
8:45-9:00												
9:00-9:15												
9:15-9:30												
9:30-9:45												
9:45-10:00 PM												
TOTAL					1,737	250	332	1	725	371	1,017	1,618
AM PK HR					256	34	62		77	50	328	246
MID PK HR					285	55	113	1	82	65	117	338
PM PK HR					479	29	28		214	73	60	178

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Federal & Spangler  
DATE: 10/11/2013  
RECORDER: Quality Counts, LLC  
Adjustment: 1.22

LOCATION	Southbound Road A			Northbound Road B			Westbound Road C			Eastbound Road D		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15 AM												
6:15-6:30												
6:30-6:45												
6:45-7:00												
7:00-7:15	6	379	41	48	343	30	43	24		68	31	21
7:15-7:30	4	368	54	51	487	20	52	22	5	73	26	84
7:30-7:45	12	423	51	81	559	9	49	24	2	93	46	57
7:45-8:00	9	429	75	86	603	13	58	24	5	102	38	74
8:00-8:15	7	461	73	88	575	19	44	17	2	106	31	70
8:15-8:30	10	444	41	151	595	5	72	20	5	117	41	66
8:30-8:45	6	447	66	70	599	23	60	22	5	110	32	62
8:45-9:00	7	459	65	94	595	13	43	18	6	120	27	65
9:00-9:15												
9:15-9:30												
9:30-9:45												
9:45-10:00												
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15	4	418	90	45	390	26	51	27	7	116	18	78
11:15-11:30	13	420	77	61	393	16	37	39	10	118	28	78
11:30-11:45	5	219	76	82	497	22	60	32	10	143	31	74
11:45-12:00 PM	5	495	106	70	472	34	58	41	17	95	49	75
12:00-12:15	7	389	77	98	515	21	59	38	21	151	34	60
12:15-12:30	12	430	111	61	418	28	57	57	12	130	28	68
12:30-12:45	12	420	115	84	498	22	43	31	7	134	27	63
12:45-1:00	10	350	71	100	426	24	72	66	17	173	30	71
1:00-1:15												
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15												
3:15-3:30												
3:30-3:45												
3:45-4:00												
4:00-4:15	2	516	41	78	472	16	101	48	9	78	21	105
4:15-4:30	4	608	65	62	437	21	99	56	7	73	17	78
4:30-4:45	6	571	86	84	506	11	81	38	2	78	26	81
4:45-5:00	1	580	97	78	439	11	107	48	5	100	34	79
5:00-5:15	1	676	56	60	600	11	126	56	7	88	12	102
5:15-5:30	5	843	88	92	828	11	121	52	11	106	29	116
5:30-5:45	1	531	40	124	465	21	112	44	11	113	24	89
5:45-6:00	2	680	87	72	593	16	96	39	6	70	20	62
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
7:00-7:15												
7:15-7:30												
7:30-7:45												
7:45-8:00												
8:00-8:15												
8:15-8:30												
8:30-8:45												
8:45-9:00												
9:00-9:15												
9:15-9:30												
9:30-9:45												
9:45-10:00 PM												
TOTAL	184	11,278	1,588	1,879	12,008	427	1,603	885	190	2,562	684	1,787
AM PKR HR	31	1,810	244	383	3,468	60	218	77	18	472	131	262
MD PKR HR	48	1,981	373	343	1,883	92	232	182	57	897	128	282
PM PKR HR	7	2,327	216	323	2,070	44	434	194	26	372	92	362

922  
2,116  
3,551  
5,050  
5,740  
6,066  
6,149  
6,145  
4,532  
3,011  
1,512

1,272  
2,567  
3,909  
5,363  
5,544  
5,967  
5,780  
6,762  
4,309  
2,891  
1,438

1,487  
3,013  
4,568  
6,096  
6,405  
6,537  
6,559  
6,709  
4,913  
3,255  
1,679

8:00 AM - 9:00 AM  
12:00 PM - 1:00 PM  
4:30 PM - 5:30 PM



# Link Counts – 03/15/2017 to 09/20/2017

## Port Everglades Area Transportation Study, FDOT, May 2018

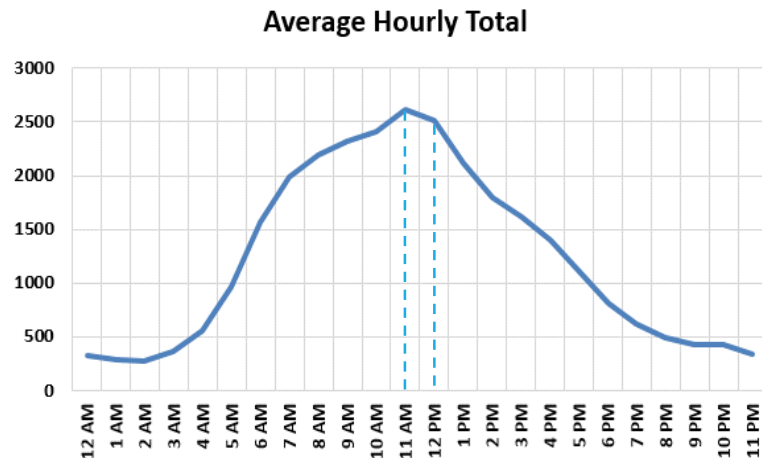


Figure 22. Average hourly traffic totals (all sites, all days)

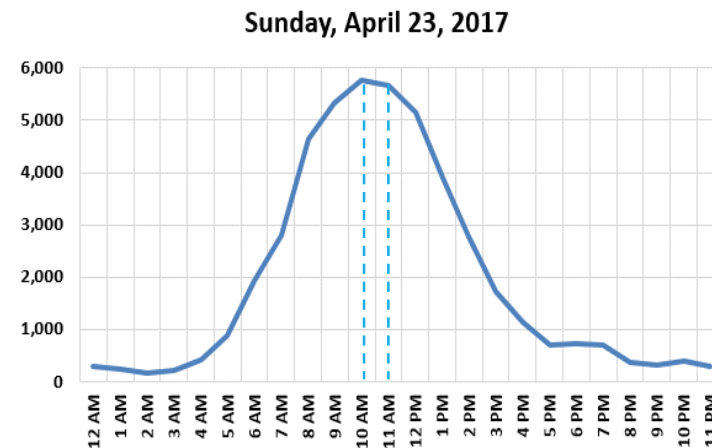


Figure 23. Average hourly traffic, April 23, 2017

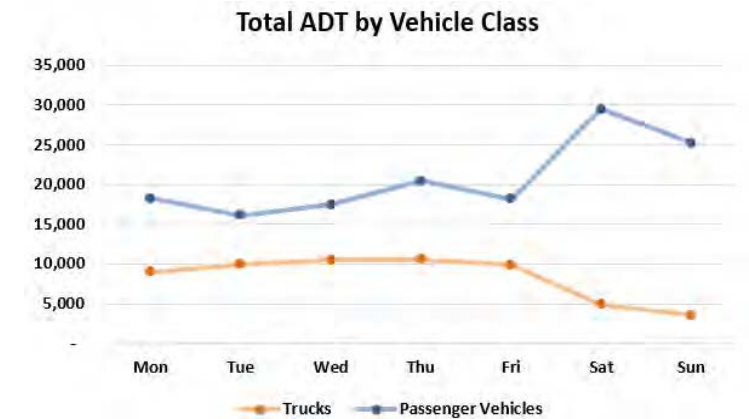


Figure 24. Total ADT by vehicle class

# Gate Processing Time (in seconds)

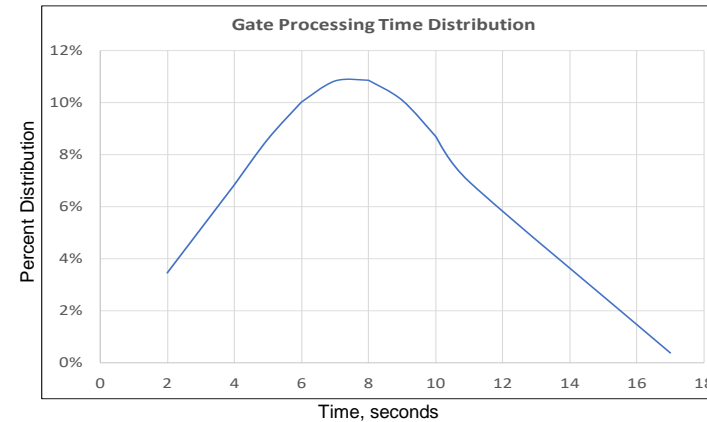
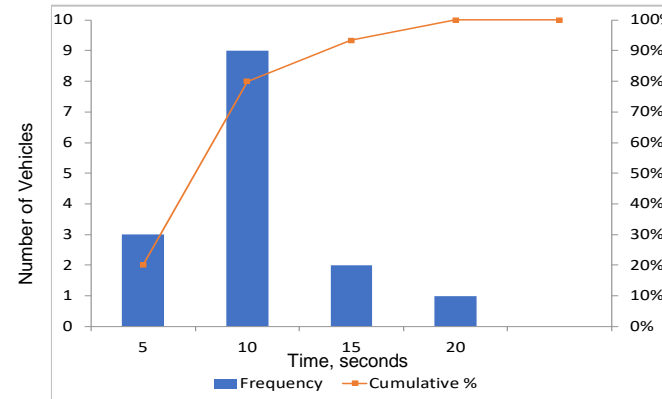
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Gate	Vehicle Type	Average	Minimum	Maximum
McIntosh Road	Truck	18	3	117
	Passenger Vehicle	19	6	90
Eller Drive	Truck	8	2	17
	Passenger Vehicle	28	2	132*
Spangler Boulevard	Truck	18	6	111
	Passenger Vehicle	26	4	117
* A 6 minutes processing time was observed during site visit.				

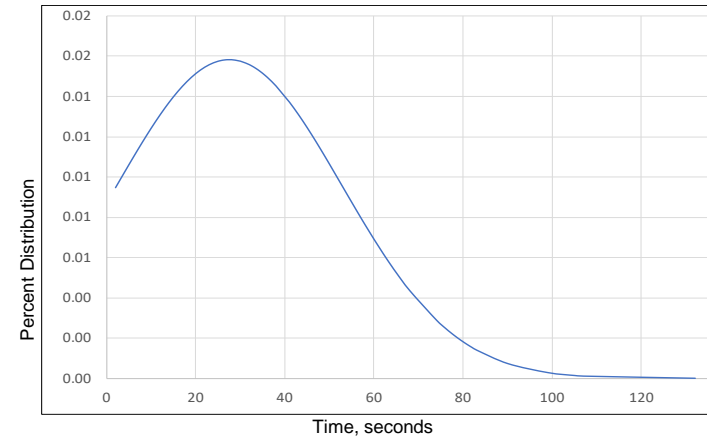
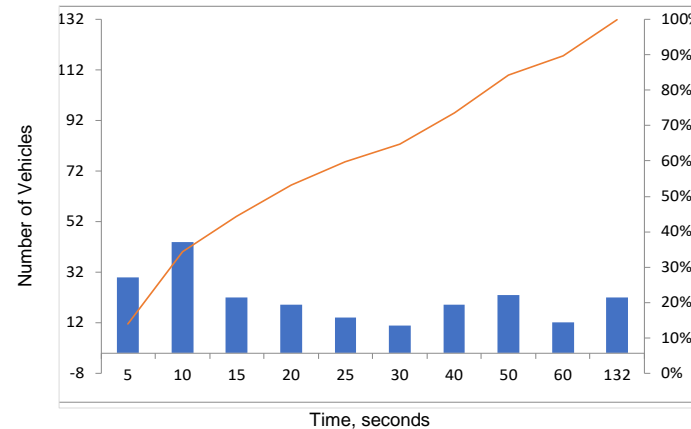
New observed processing times (5/25/19) at Gate on Eller Drive

# Gate Processing Time Distribution – Eller Drive

## Trucks



## Cars



New observed processing times (5/25/19) and derived curves

# Projected Future Year AADT and Truck Percentages

Location	2023		2028		2033		2038	
	AADT	Truck %	AADT	Truck %	AADT	Truck %	AADT	Truck %
I-595 west of McIntosh Rod	19,100	39.7%	20,700	37.7%	22,500	36.0%	24,600	34.4%
Eller Drive north of I-595	3,900	4.8%	4,300	4.5%	4,800	4.2%	5,300	4.0%
McIntosh Road south of Eller Drive	6,000	60.2%	7,000	61.1%	7,900	61.7%	8,900	61.6%
Eller Drive east of McIntosh Rd	15,600	26.4%	17,000	24.9%	18,700	23.5%	20,600	22.3%
SE 19 Ave north of Eller Drive	16,200	3.0%	18,000	2.8%	20,100	2.6%	22,600	2.4%
Eller Dr east of SE 19th Avenue	1,400	2.0%	1,600	1.8%	1,800	1.7%	2,000	1.6%
SE 19 Ave south of Eller Drive	2,300	33.4%	2,500	31.6%	2,700	30.4%	3,000	28.6%
US 1 north of Spangler Blvd	57,600	4.4%	59,300	4.4%	61,000	4.4%	62,900	4.3%
Spangler Blvd east of US 1	12,300	19.2%	13,500	17.9%	14,800	16.8%	16,400	15.5%
US 1 south of Spangler Blvd	59,400	6.4%	61,500	6.4%	63,600	6.3%	65,800	6.3%
SE 24 Street west of US 1	20,700	7.5%	21,800	7.3%	23,100	7.0%	24,600	6.8%
Eisenhower Blvd north of SE 17 St	6,300	2.0%	6,400	2.0%	6,600	2.0%	6,800	2.0%
SE 17 Street east of Eisenhower Blvd	32,900	3.6%	33,800	3.6%	34,700	3.6%	35,700	3.6%
SE 17 St west of Eisenhower Blvd	47,900	3.7%	49,400	3.7%	50,900	3.6%	52,500	3.6%
Eisenhower Blvd south of SE 17 St	3,600	9.5%	4,000	8.8%	4,400	8.2%	5,000	7.4%
Eisenhower Blvd north of Spangler Blvd	3,800	9.6%	4,200	8.9%	4,700	8.1%	5,300	7.4%
Spangler Blvd west of Eisenhower Blvd	6,200	19.2%	6,800	18.0%	7,500	16.7%	8,300	15.5%
Eisenhower Blvd south of Spangler Blvd	3,600	3.1%	4,000	2.8%	4,500	2.6%	5,100	2.4%

Note: AADT volumes are the total of cruise passenger vehicle volumes, regular vehicle volumes, and truck volumes. Truck percentages are presented as percentage of truck volumes of total volumes. Volumes are rounded to the nearest 100s.

# Build Alternative Definitions

Project No	Description	Project Year	Model Years			
			2023	2028	2033	2038
1	Port Access Road -	2019-2025		X	X	X
2	PEV ILC	2019-2020	X	X	X	X
3	Former Dynegy Logistics Development	2019-2023	X	X	X	X
4	I-595 Flyover	2021-2025		X	X	X
5	Commercial Consolidation (PEV Administration + Maritime/Government Offices )	2021-2027		X	X	X
6	Griffin Road Extension/NE 7th Avenue Improvements/McIntosh Road Realignment	2024-2027		X	X	X
7	McIntosh Road Realignment/Container Terminal Reconfiguration	2024-2028		X	X	X
8	McIntosh Road Security checkpoint*	2028*		X	X	X
9	McIntosh Road Gate Lane Addition	2020	X	X	X	X
10	Eller Drive at SE 19th Avenue Intersection Reconfiguration**	2023**		X	X	X
11	Midport Chute Rd***	2038***				X

*\*Security checkpoints in Southport are NOT recommended by B&A since the ICTF and all container terminals have their own, separate ISPS gates.*

*\*\*This project entails eliminating the raised median at the corner of Eller Drive and SE 19<sup>th</sup> Avenue in order to convert that area into a second left turn only lane; a right turn only lane would also be added (see below).*

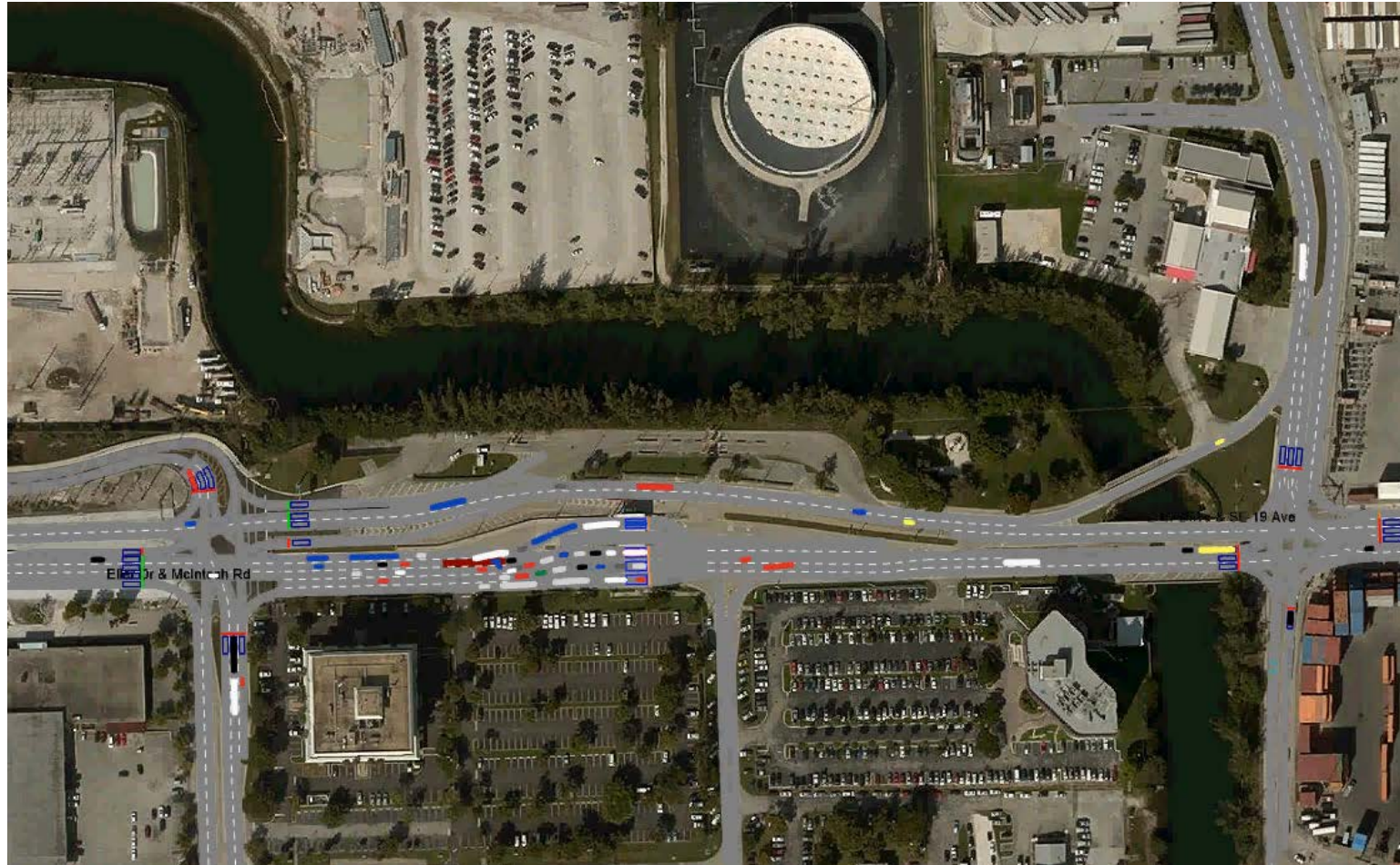
*\*\*\*A new Midport Chute Road is proposed for 2038 as part of the T19/T20 terminal redevelopment and garage project.*

# Proposed Eller Drive/SE 19<sup>th</sup> Ave Intersection





# Simulation Video – 2018 Weekday AM Peak (Eller Dr)



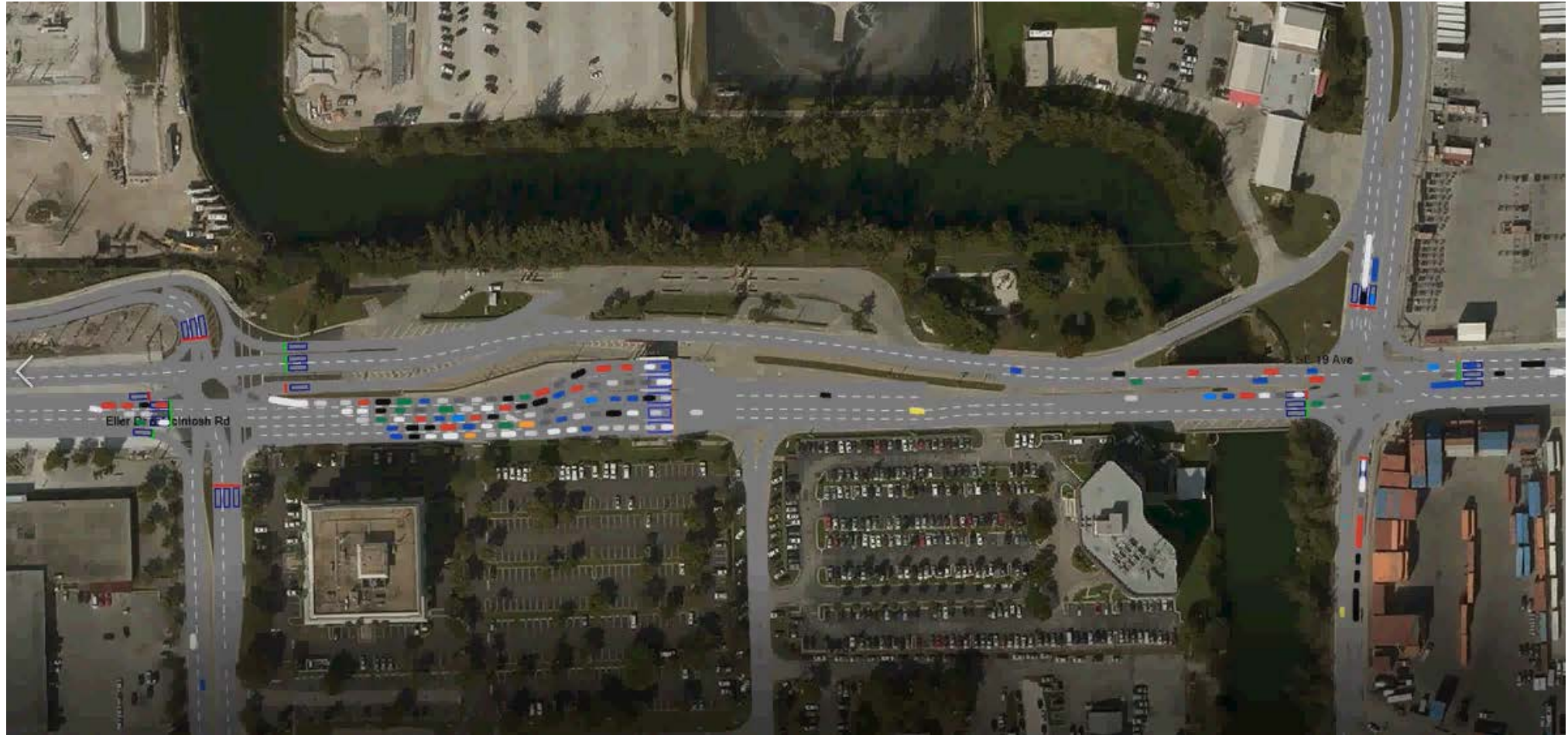


# Simulation Video – 2018 Weekday MD Peak (McIntosh Rd)

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# Simulation Video – 2018 Weekend MD Peak (Eller Dr)



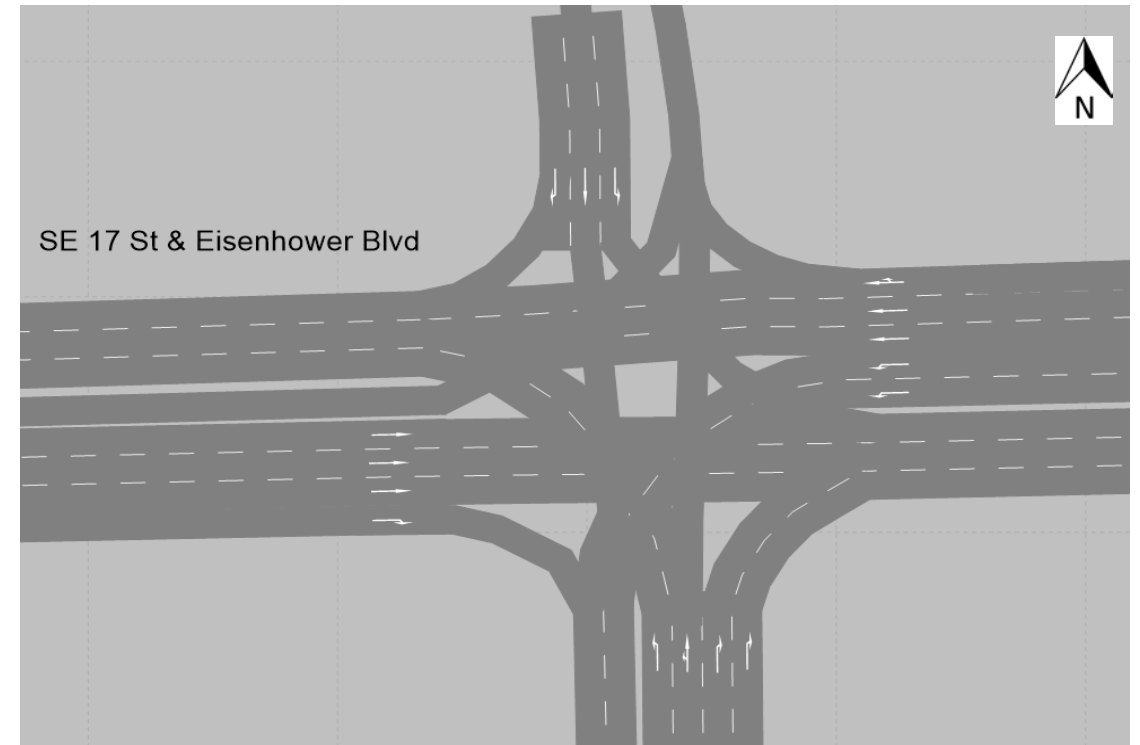


# Intersection Lane Configuration – Build Condition

Eller Drive and SE 19th Avenue



Eisenhower Blvd and SE 17th Street

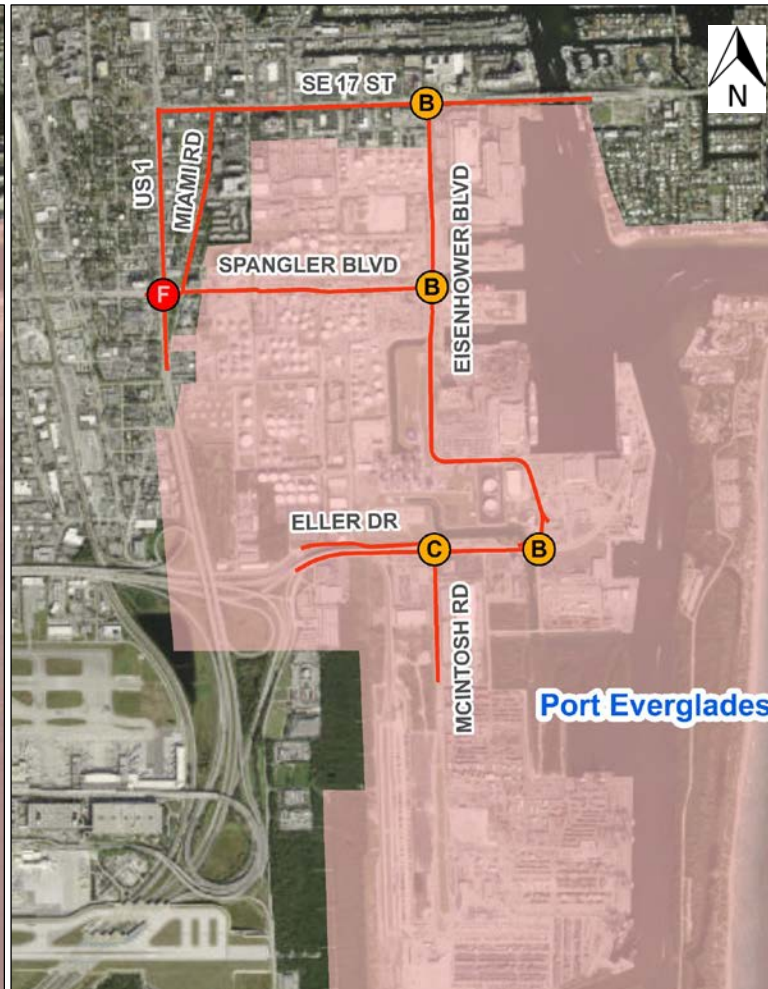


# Intersection LOS – Existing Conditions (2018)

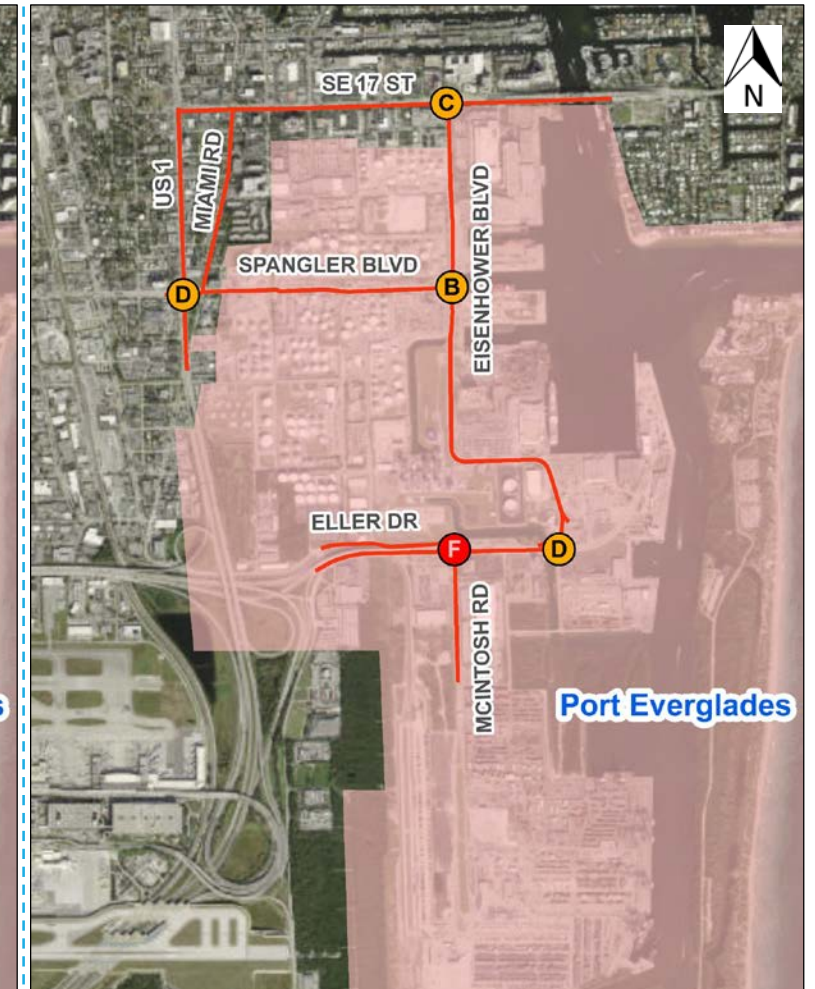
Weekday AM



Weekday MD



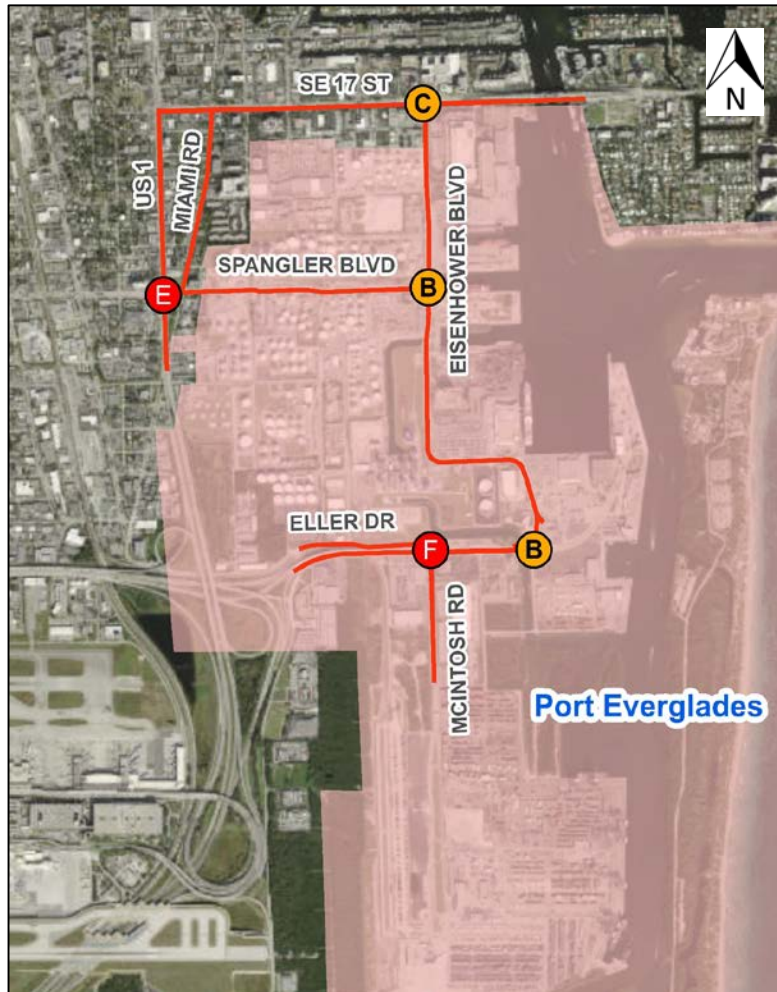
Weekend MD



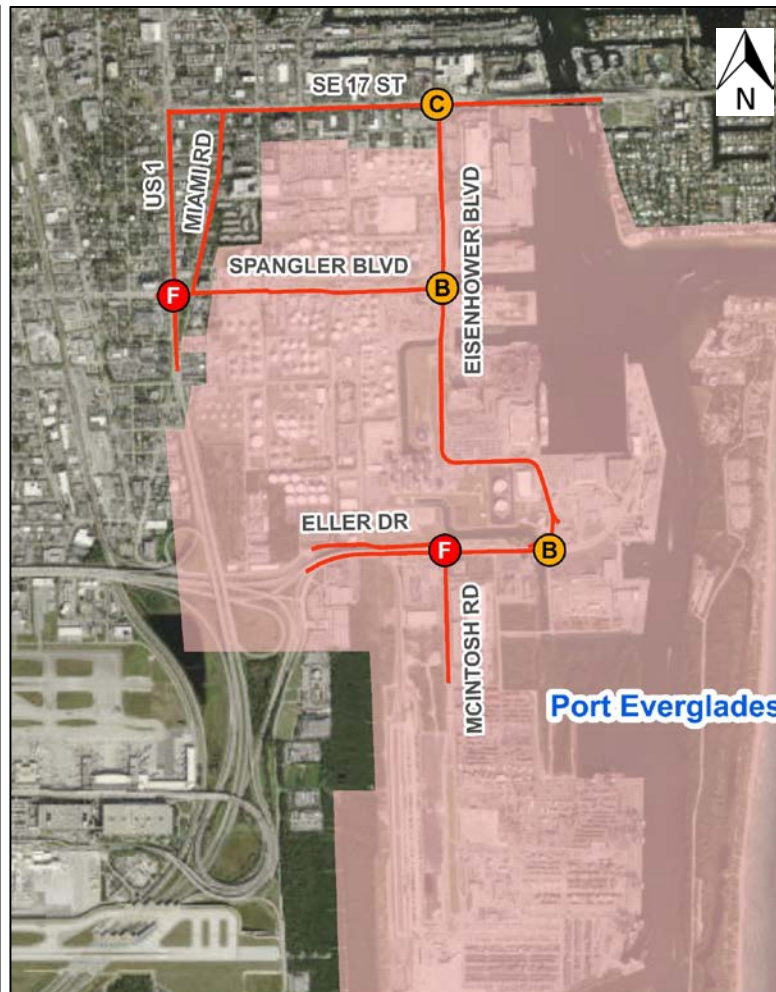


# Intersection LOS – Build Conditions (2023)

Weekday AM



Weekday MD



Weekend MD



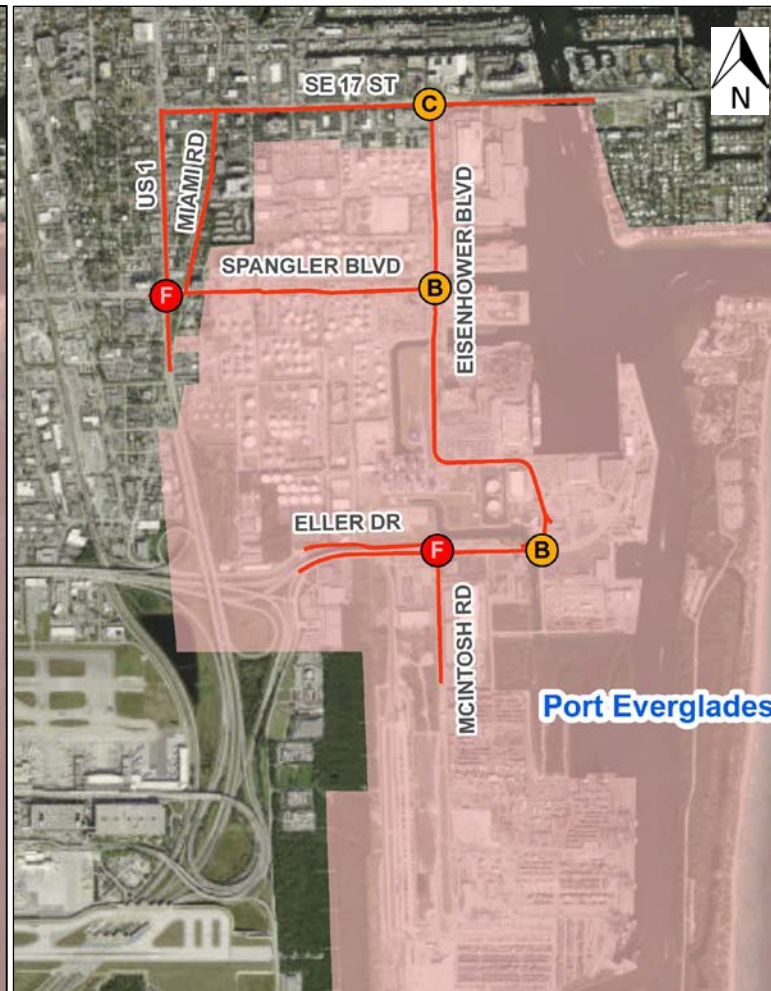


# Intersection LOS – No-Build Conditions (2023)

Weekday AM



Weekday MD



Weekend MD



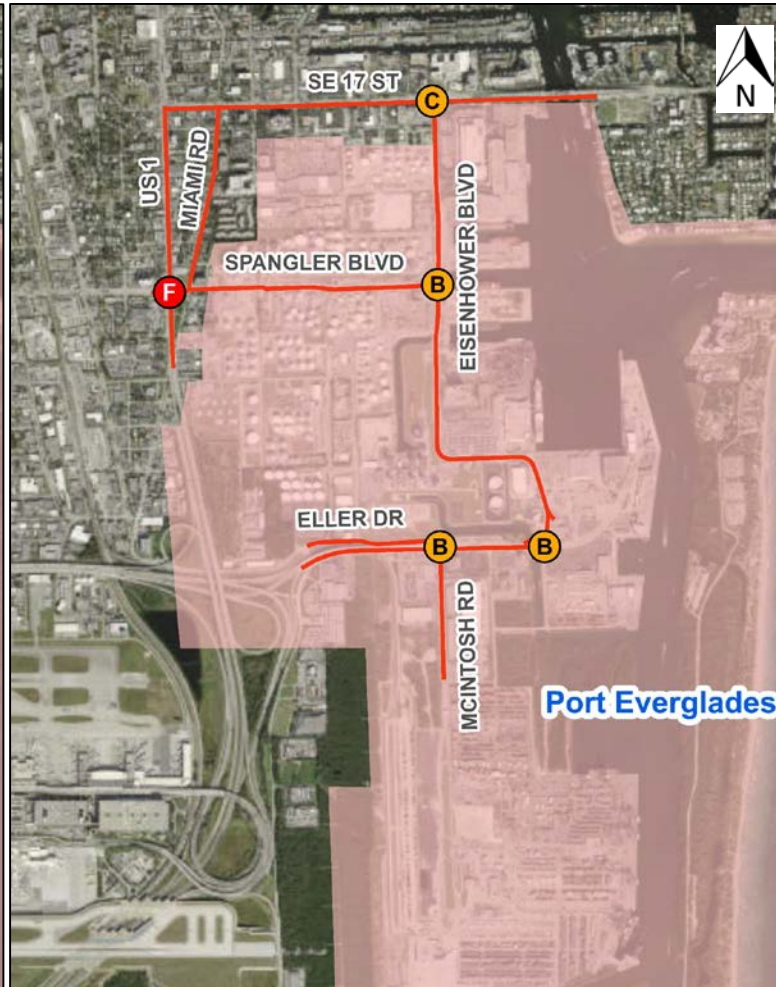


# Intersection LOS – Build Conditions (2028)

Weekday AM



Weekday MD



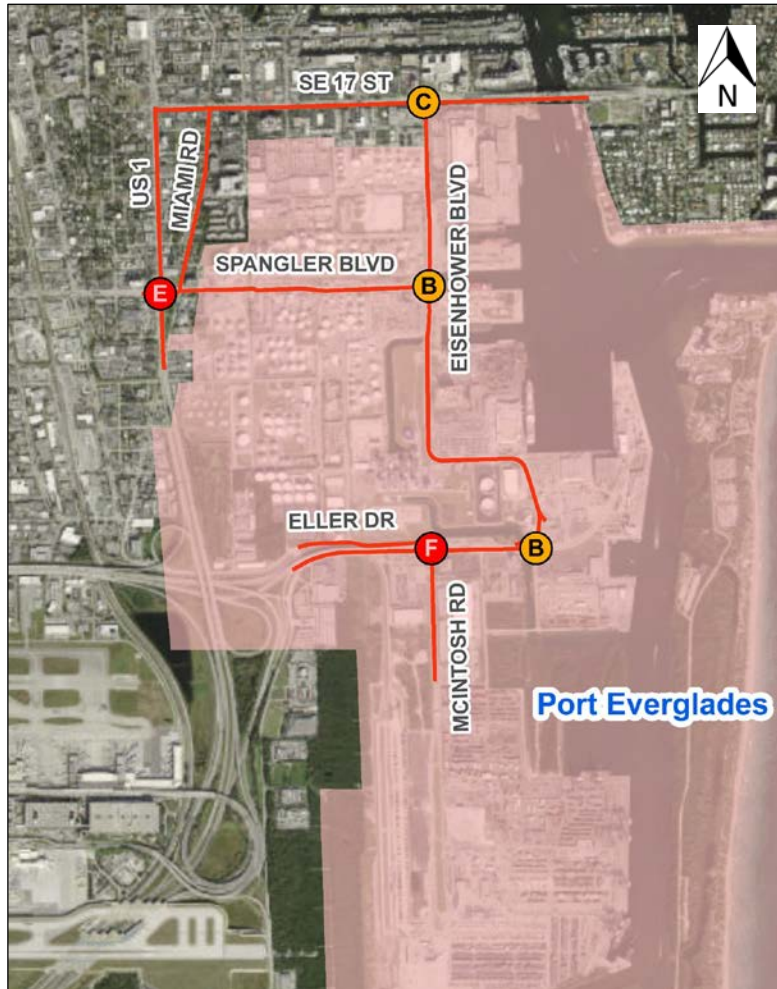
Weekend MD



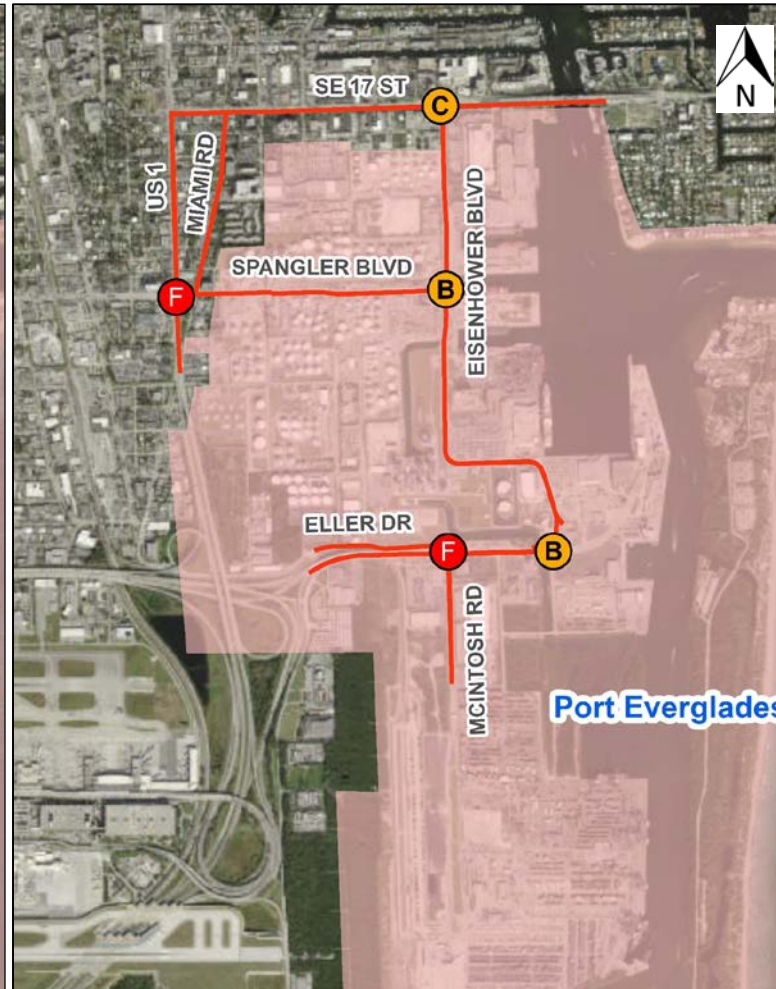


# Intersection LOS – No-Build Conditions (2028)

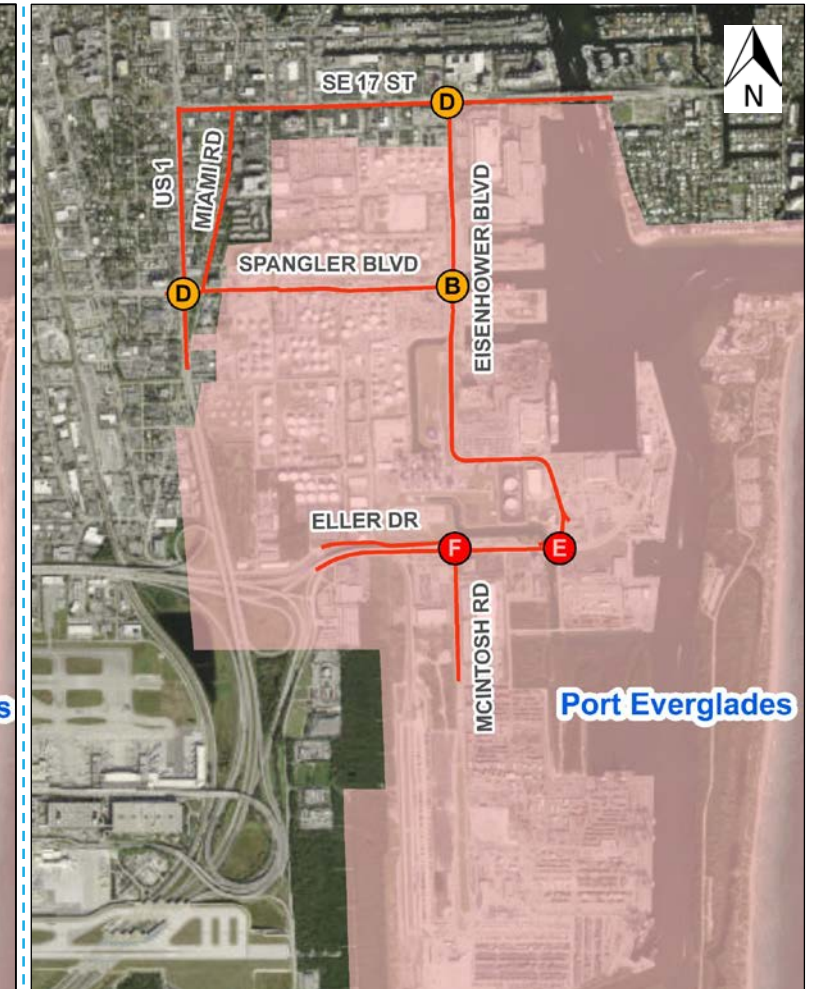
Weekday AM



Weekday MD



Weekend MD



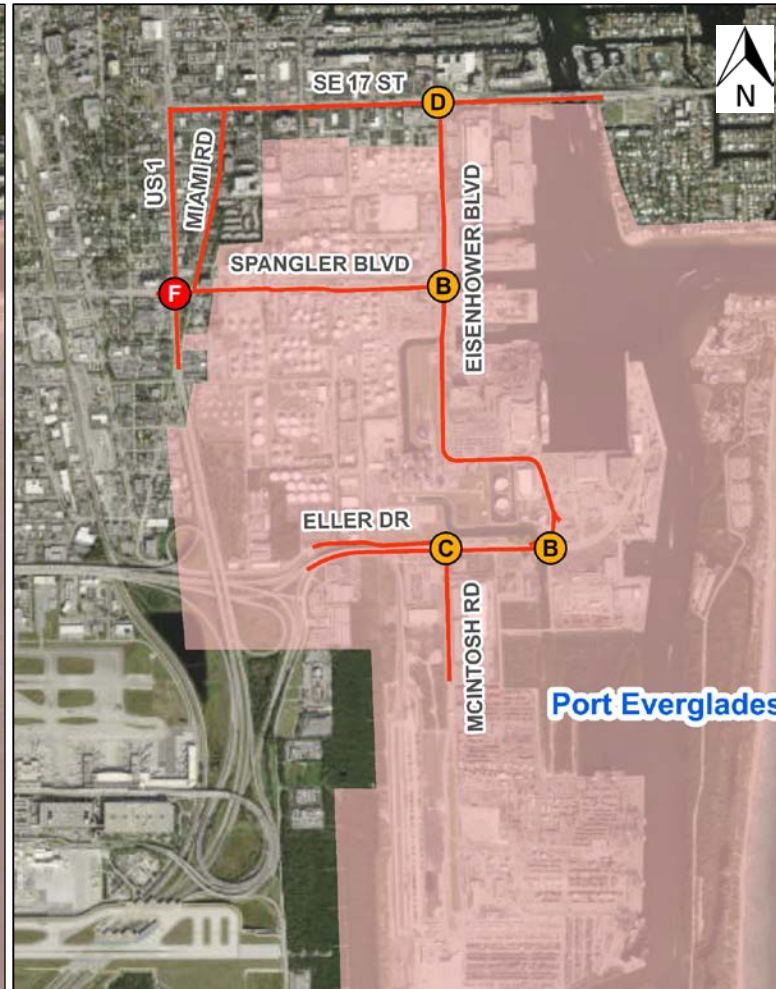


# Intersection LOS – Build Conditions (2033)

Weekday AM



Weekday MD



Weekend MD





# Intersection LOS – No-Build Conditions (2033)

Weekday AM



Weekday MD



Weekend MD





# Intersection LOS – Build Conditions (2038)

Weekday AM



Weekday MD



Weekend MD



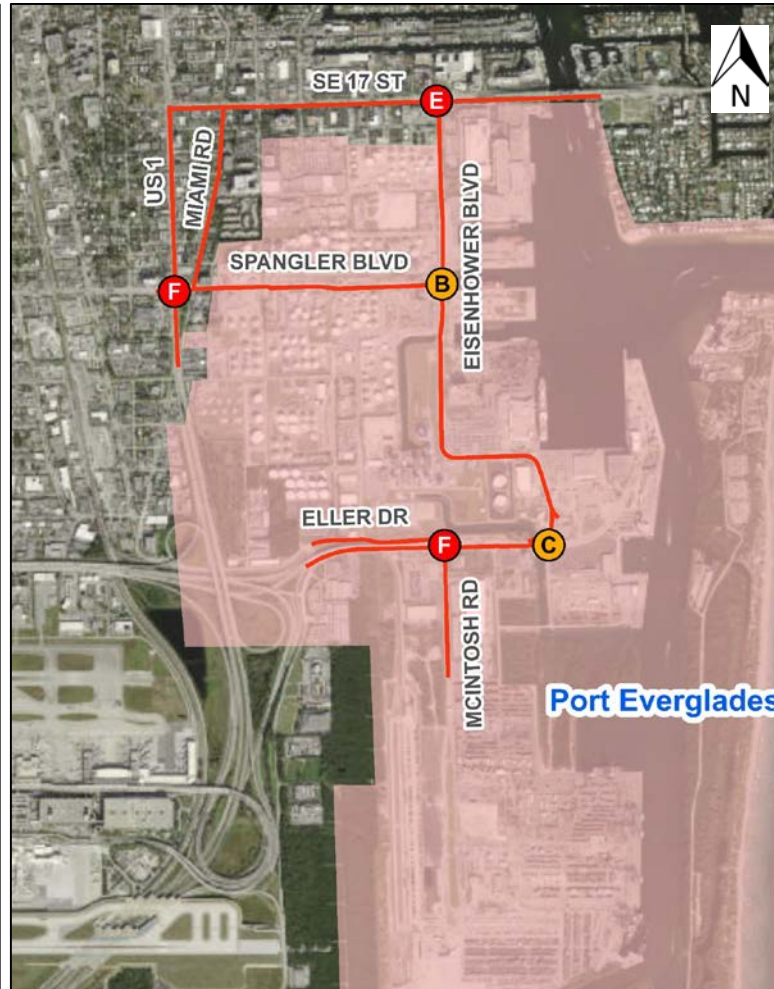


# Intersection LOS – No-Build Conditions (2038)

Weekday AM



Weekday MD



Weekend MD

