

Continuing Services Contract for Modeling Support and Limited Access Analysis, Contract No. C9-A66

TECHNICAL MEMORANDUM

**Task 4.3 and 4.4: HERE Data Analysis for I-4 BTU Corridor Potential Diversion Paths**

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## BACKGROUND AND SUMMARY

Task 4.3 and 4.4 are associated with potential diversion path analysis and travel time profiles. In Task 4.3, potential diversion paths for the I-4 BTU corridors were received from AECOM. From the previous Task 2 analysis results, peak month on I-4 was identified to be in July. Peak hour time was 5-6 pm. On the same days and times on I-4 during peak month (July) and peak hour (5-6 pm), corresponding speeds drops along the potential diversion paths were compared when I-4 speeds were 30 mph less than average.

In Task 4.4, travel time profiles for peak month (July) and off-month (April), day of the week and time of day were processed and reported using HERE 2014 Speed data. The travel time profiles include the potential diversion routes as well as along the I-4 BTU Southern corridor.

The following corridors were identified as the potential diversion paths for the I-4 BTU corridors.

- 1. US 27 between I-4 and SR 50
- 2. SR 429 between I-4 and Florida's Turnpike
- 3. SR 50 between US 27 and I-4
- 4. Florida's Turnpike between SR 50 and SR 408
- 5. SR 417 between I-4 and SR 408
- 6. John Young Pkwy between SR 417 and I-4
- 7. Orange Blossom Trl between SR 417 and I-4
- 8. SR 408 between Florida's Turnpike and SR 417

The study's key outcomes are as follows:

- All potential diversion paths except SR 429 were found to be at low speed percentiles (<5%) for most cases, either in WB/SB Direction or EB/NB Direction, exactly at the same times and days when I-4 speeds were 30 mph less than the yearly average speeds (percentiles <5%).
- The HERE 2014 peak and off-peak months, day of the week, and time of day travel speed profiles for the potential diversion routes as well as the I-4 BTU corridor are summarized in Table 5 and Table 6.

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## HERE DATA COLLECTION

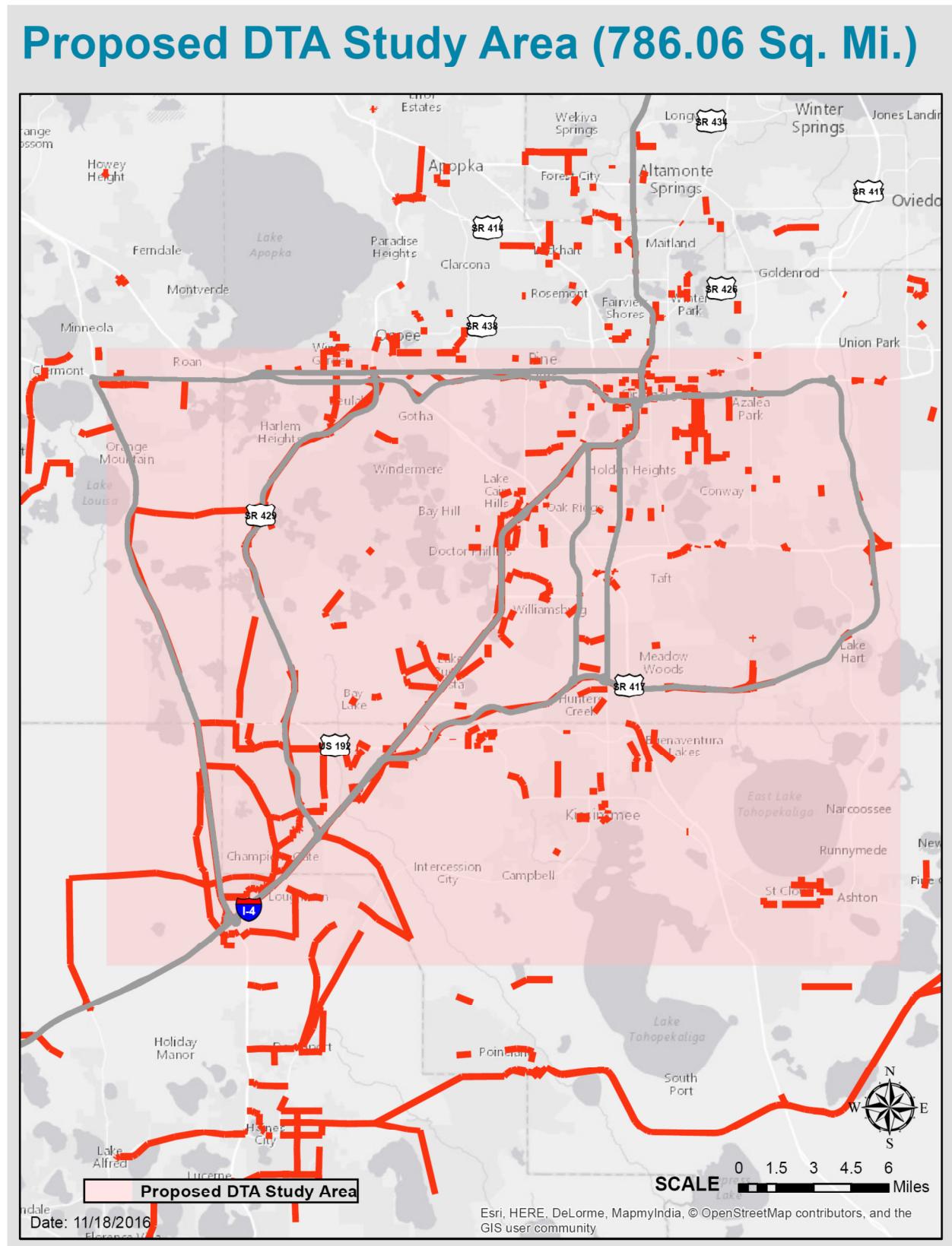
HERE captures real-time travel time data using probe points generated by multiple resources such as GPS or smart phone devices as well as sensor data. FDOT's Traffic Operations Office has acquired archived HERE data dating back to October 2013. For this study, Kittelson & Associates (KAI) analyzed 2014 HERE data to perform path diversion analysis for the I-4 BTU corridor and developed travel time profiles for the potential diversion routes.

Table 1 and Figure 1 display the potential diversion routes. The routes location map in Figure 1 was provided by AECOM.

Table 1: Corridors for Path Diversion Analysis

Corridor Facility IDs	Corridors for Path Diversion Analysis
1	US 27 between I-4 and SR 50
2	SR 429 between I-4 and Florida's Turnpike
3	SR 50 between US 27 and I-4
4	Florida's Turnpike between SR 50 and SR 408
5	SR 417 between I-4 and SR 408
6	John Young Pkwy between SR 417 and I-4
7	Orange Blossom Trl between SR 417 and I-4
8	SR 408 between Florida's Turnpike and SR 417
9	I-4 between Kirkman Road and US 27 interchanges

Figure 1: DTA Corridors for Path Diversion Analysis



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## PROCESS AND ANALYZE HERE DATA

The travel time data obtained from HERE 2014 data are in 5 minutes increments for 24 hours of a day, and 365 days of a year. Traffic speed data are reported at the road link level on Traffic Message Channel (TMC) segments. Each TMC has a unique TMC ID. Segments were defined and displayed in Table 2. In the peak month (July) when I-4 speeds were 30 mph less than average during peak hour (5-6 pm), the speed drops along the potential diversion paths shown in Table 1 were compared. The peak and off-peak months, day of the week and time of day travel time/speed profiles for the potential diversion paths and I-4 BTU corridors were also analyzed.

The locations of TMC IDs are shown in Appendix 1.

Table 2: Corridor and Segment IDs

Corridor Facility IDs	Segments	Segment IDs
1	US 27 between I-4 and US 192	1.1
	US 27 between US 192 and SR 50	1.2
2	SR 429 between I-4 and US 192	2.1
	SR 429 between US 192 and Florida's Turnpike	2.2
3	SR 50 between US 27 and Florida's Turnpike	3.1
	SR 50 between Florida's Turnpike and SR 429	3.2
	SR 50 between SR 429 and Kirkman Rd	3.3
	SR 50 between Kirkman Rd and John Young Pkwy	3.4
	SR 50 between John Young Pkwy and Orange Blossom Trl	3.5
	SR 50 between Orange Blossom Trl and I-4	3.6
4	Florida's Turnpike between SR 50 and SR 429	4.1
	Florida's Turnpike between SR 429 and SR 408	4.2
5	SR 417 between I-4 and Florida's Turnpike	5.1
	SR 417 between Florida's Turnpike and SR 528	5.2
	SR 417 between SR 528 and SR 408	5.3
6	John Young Pkwy between SR 417 and SR 528	6.1
	John Young Pkwy between SR 528 and I-4	6.2
7	Orange Blossom Trl between SR 417 and SR 528	7.1
	Orange Blossom Trl between SR 528 and I-4	7.2
8	SR 408 between Florida's Turnpike and Kirkman Rd	8.1
	SR 408 between Kirkman Rd and I-4	8.2
	SR 408 between I-4 and SR 417	8.3
9	I-4 between US 27 and SR 429	9.1
	I-4 between SR 429 and US 192	9.2
	I-4 between US 192 and World Center Dr/SR 536	9.3
	I-4 between World Center Dr/SR 536 and Beachline Expy/SR 528	9.4
	I-4 between Beachline Expy/SR 528 and Sand Lake Road/SR 482	9.5
	I-4 between Sand Lake Road/SR 482 and Kirkman Rd	9.6

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## HERE SPEED RESULTS

Table 3 and Table 5 display the directional speeds along potential diversion paths, exactly at the same times when I-4 speeds were abnormally congested (30 mph less than the yearly average speeds). Percentile is defined as the value below which a given percentage of observations in a group of observations fall. For example, the 5th percentile is the value below which 5% of the speed observations may be found. In this study, <5% speed percentile was considered to be in the “bad” traffic condition for any given road.

The findings are as below:

- In WB or SB Direction
  - At the same times when I-4 was abnormally congested (30 mph less than the yearly average speeds), speeds on US 27, SR 50, John Young Pkwy, and Orange Blossom Trail realized slow speeds (percentiles <5% in most cases).
  - At the same times when I-4 was abnormally congested (30 mph less than the yearly average speeds), speeds on SR 429, Florida Turnpike, SR 408, and SR 417 didn’t realize slow speeds (percentiles >5% in most cases).
- In EB or NB Direction
  - At the same times when I-4 was abnormally congested (30 mph less than the yearly average speeds), speeds on US 27, Florida Turnpike, SR 408, SR 417, and John Young Pkwy realized slow speeds (percentiles <5% in most cases).
  - At the same times when I-4 was abnormally congested (30 mph less than the yearly average speeds), speeds on SR 429, SR 50, and Orange Blossom Trail didn’t realize slow speeds (percentiles >5% in most cases)

These results indicate that SR429 is not at capacity and/or is not used as a diversion route when I-4 was abnormally congested. Since SR429 is a toll road, it is possible that travelers avoid paying toll by using other potential diversion paths. All other potential diversion paths were found to be at capacity and/or are used as a diversion route exactly at the same times and days when I-4 was abnormally congested (30 mph less than the yearly average speeds). These observations generally support that the size and width of the sub-area intended for BTU design traffic were reasonably developed.

Using the processed HERE data, Table 5 and Table 6 summarize the peak month (July) and off-peak month (April), day of the week and time of day travel speed files. The travel time profiles include potential diversion routes as well as along the I-4 BTU corridor. The raw HERE speed data has two decimal places for each speed observation. Our quantitative results shown in Table 5 and Table 6 have one decimal place for speeds for planning purpose.

Table 3: Slow Speeds Anomaly Days and Times in WB or SB Direction

Day of July 2014	Day of Week	Hour	Min	I4				US 27				SR 429				SR 50				Florida's Turnpike and SR 408				SR417				John Young Pkwy				Orange Blossom Trl														
				Spd	Avg Spd <sup>1</sup>	Per-centile	Diff	Spd	Avg Spd	Per-centile <sup>2</sup>	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff															
9	Wed	17	0	22.6	0.1%	-61.7%	43.5	2.8%	-9.9%	63.9	43.8%	0.2%	-26.4%	62.7	91.8%	1.8%	57.5	2.7%	-6.5%	27.3	1.9%	-23.8%	19.3	0.9%	-35.3%	29.8	1.3%	-25.2%	19.6	1.2%	-34.1%															
9	Wed	17	5	22.5	0.1%	-62.0%	43.9	4.4%	-9.0%	63.1	18.3%	-1.2%	22.5	63.0	95.5%	2.2%	54.0	0.5%	-12.4%	26.7	0.7%	-26.9%	19.3	0.9%	-35.1%	35.7	0.7%	-26.9%	19.3	0.2%	-29.7%	18.6	0.3%	-37.4%												
9	Wed	17	10	23.0	0.2%	-61.2%	43.7	3.5%	-9.4%	63.7	34.6%	-0.2%	23.9	63.0	96.0%	2.3%	56.8	1.7%	-7.8%	26.1	3.8%	-5.6%	25.1	0.8%	-26.6%	19.1	0.6%	-35.9%	48.2	0.8%	-26.6%	19.1	0.8%	-26.6%	21.2	4.2%	-28.9%									
9	Wed	17	15	24.2	0.3%	-59.1%	43.6	3.1%	-9.6%	63.9	41.9%	0.1%	23.5	62.3	77.6%	1.1%	58.1	10.3%	-2.6%	26.2	5.9%	-4.2%	26.2	19.6%	-1.2%	25.1	0.2%	-29.7%	21.6	5.7%	-27.3%	59.2	0.2%	-29.6%	23.1	11.5%	-22.5%									
9	Wed	17	20	24.3	0.3%	-58.9%	44.3	7.2%	-8.2%	64.6	74.7%	1.2%	22.4	62.3	76.2%	1.1%	59.9	10.3%	-2.6%	26.2	0.8%	-26.6%	19.1	0.6%	-35.9%	63.8	0.8%	-26.6%	19.1	0.8%	-26.6%	21.2	4.2%	-28.9%												
9	Wed	17	25	23.2	0.2%	-60.8%	44.2	5.9%	-8.5%	64.2	56.2%	0.6%	22.5	61.0	16.6%	-1.0%	59.0	19.6%	-1.2%	25.1	12.8%	-2.1%	25.2	0.2%	-29.6%	23.1	0.2%	-29.6%	21.6	5.7%	-27.3%	30.2	0.2%	-29.7%	21.6	0.2%	-29.7%	21.6	11.5%	-22.5%						
9	Wed	17	30	23.8	0.3%	-59.7%	42.2	0.7%	-12.4%	64.5	71.1%	1.1%	22.5	62.2	68.2%	0.9%	60.8	19.0%	-1.3%	26.1	0.7%	-26.9%	22.9	1.2%	-25.4%	21.2	0.6%	-27.2%	19.6	1.1%	-34.3%	61.6	0.7%	-26.9%	22.9	0.7%	-26.9%	22.9	10.6%	-23.2%						
9	Wed	17	35	27.8	0.7%	-53.0%	41.3	0.3%	-14.4%	64.3	62.3%	0.8%	20.6	62.8	93.3%	1.9%	60.3	19.0%	-1.3%	26.1	17.6%	-1.4%	26.7	1.2%	-25.4%	21.2	0.6%	-27.2%	19.6	1.1%	-34.3%	35.7	1.2%	-25.4%	21.2	1.2%	-25.4%	21.2	4.2%	-29.0%						
9	Wed	17	40	22.7	0.1%	-61.7%	42.7	1.0%	-11.5%	64.6	74.7%	1.2%	21.5	62.5	83.4%	1.4%	60.8	18.6%	-1.3%	26.0	37.7%	0.0%	26.2	0.8%	-26.6%	19.7	0.8%	-26.6%	19.7	0.8%	-26.6%	19.7	1.3%	-33.7%	61.6	1.3%	-25.4%	21.2	1.3%	-25.4%	21.2	4.2%	-29.0%			
9	Wed	17	45	24.9	0.4%	-57.9%	42.9	1.4%	-11.0%	64.7	80.0%	1.3%	22.0	60.8	13.5%	-1.3%	60.7	18.6%	-1.3%	26.0	17.6%	-1.4%	26.7	0.6%	-27.2%	19.6	0.6%	-27.2%	19.6	0.6%	-27.2%	19.6	1.1%	-34.3%	30.2	1.1%	-27.0%	19.0	1.1%	-34.3%	29.8	0.5%	-36.1%			
9	Wed	17	50	26.6	0.6%	-55.1%	41.4	0.3%	-14.3%	64.2	59.2%	0.7%	23.0	59.1	3.3%	-4.1%	60.8	37.7%	0.0%	26.2	3.6%	-20.7%	19.7	4.5%	-19.5%	19.0	4.5%	-19.5%	19.0	4.5%	-19.5%	19.0	0.5%	-36.1%	61.6	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.1%	-39.5%			
9	Wed	17	55	25.4	0.4%	-57.0%	42.0	0.5%	-13.0%	64.0	46.4%	0.3%	23.8	62.2	70.0%	1.0%	61.6	82.9%	1.8%	28.8	10.9%	-2.5%	24.9	1.1%	-25.4%	21.2	1.1%	-25.4%	21.2	1.1%	-25.4%	21.2	1.1%	-25.4%	21.2	4.2%	-29.0%	35.7	4.2%	-29.0%	29.8	4.2%	-29.0%	29.8	0.1%	-39.5%
11	Fri	17	55	28.6	0.8%	-51.7%	41.9	0.5%	-13.1%	64.9	91.2%	1.7%	26.7	63.1	96.5%	2.4%	62.7	10.9%	-3.0%	28.0	11.1%	-2.4%	26.5	2.0%	-7.4%	26.1	2.0%	-7.4%	26.1	2.0%	-7.4%	26.1	0.5%	-36.1%	61.6	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.5%	-36.1%
21	Mon	17	40	26.4	0.5%	-55.4%	42.9	1.3%	-11.1%	64.1	52.0%	0.5%	24.8	60.4	5.1%	-17.9%	60.4	8.6%	-2.0%	60.0	11.1%	-2.4%	26.5	2.0%	-7.4%	26.1	2.0%	-7.4%	26.1	2.0%	-7.4%	26.1	0.5%	-36.1%	30.2	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.5%	-36.1%
21	Mon	17	45	26.8	0.6%	-54.7%	44.3	7.2%	-8.2%	64.3	63.5%	0.8%	24.4	59.7	3.0%	-19.3%	59.7	5.0%	-3.1%	60.1	49.7%	0.6%	28.3	3.6%	-20.7%	19.7	8.3%	-16.5%	19.0	4.4%	-19.7%	19.4	1.0%	-35.0%	61.6	1.0%	-26.0%	18.5	1.2%	-25.4%	17.7	2.4%	-23.0%	19.2	0.7%	-35.5%
21	Mon	17	50	28.5	0.8%	-51.9%	44.3	7.1%	-8.2%	64.8	86.1%	1.5%	25.1	58.0	7.3%	-16.8%	58.0	2.0%	-5.9%	57.0	49.7%	0.6%	28.3	3.6%	-20.7%	19.7	8.3%	-16.5%	19.0	4.4%	-19.7%	19.4	1.0%	-35.0%	35.7	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.5%	-36.1%	29.8	0.5%	-36.1%
25	Fri	17	0	17.4	0.0%	-70.6%	44.2	6.5%	-8.3%	65.0	93.2%	1.8%	24.8	61.8	4.6%	-18.1%	61.8	43.3%	0.3%	61.9	17.3%	-0.9%	62.1	59.8%	1.0%	29.8	8.3%	-16.5%	19.0	4.4%	-19.7%	19.4	1.0%	-35.0%	61.6	1.0%	-26.0%	18.5	1.2%	-25.4%	17.7	2.4%	-23.0%	19.2	0.7%	-35.5%
25	Fri	17	5	16.1	0.0%	-72.8%	41.8	0.5%	-13.3%	64.9	90.3%	1.7%	25.2	61.1	7.6%	-16.7%	61.1	36.1%	0.0%	62.3	64.7%	1.1%	28.7	83.3%	1.8%	27.5	1.2%	-25.4%	17.7	3.4%	-21.1%	19.1	4.6%	-19.4%	20.1	2.7%	-22.3%	20.7	2.3%	-31.8%						
25	Fri	17	10	16.4	0.0%	-72.2%	42.4	0.8%	-12.1%	64.9	89.4%	1.7%	24.7	61.6	4.4%	-18.3%	61.6	95.1%	2.1%	62.7	88.0%	2.0%	26.7	33.5%	0.2%	28.9	4.8%	-19.2%	18.8	0.4%	-36.9%	30.2	3.9%	-20.4%	18.9	4.6%	-19.4%	20.1	0.6%	-35.9%						
25	Fri	17	15	16.6	0.0%	-72.0%	42.1	0.6%	-12.8%	65.0	94.5%	1.9%	24.6	62.6	3.9%	-18.6%	62.6	88.8%	1.6%	63.2	94.3%	2.6%	26.4	1.0%	-26.0%	18.5	0.3%	-37.8%	61.6	1.2%	-25.4%	17.7	0.0%	-40.4%	35.7	1.2%	-25.4%	17.7	1.2%	-25.4%	17.7	4.2%	-29.0%			
25	Fri	17	20	16.2	0.0%	-72.7%	42.6	0.9%	-11.7%	64.0	46.4%	0.3%	24.9	62.6	5.5%	-17.6%	62.6	88.8%	1.6%	62.8	88.0%	2.0%	26.7	33.5%	0.2%	28.9	4.8%	-19.2%	18.8	0.4%	-36.9%	30.2	3.9%	-20.4%	18.9	4.6%	-19.4%	20.1	0.6%	-35.9%						
25	Fri	17	25	15.3	0.0%	-74.2%	43.3	2.2%	-10.3%	64.1	50.5%	0.4%	24.8	63.0	4.9%	-17.9%	63.0	95.5%	2.2%	62.8	88.0%	2.0%	26.7	82.7%	1.8%	28.2	3.4%	-21.1%	19.1	4.6%	-19.4%	20.1	2.7%	-22.3%	20.7	2.3%	-31.8%									
25	Fri	17	30	15.1	0.0%	-74.6%	42.7	1.1%	-11.4%	63.6	30.5%	0.4%	24.7	62.6	4.4%	-18.3%	62.6	87.8%	1.5%	61.5	87.8%	2.0%	28.5	3.9%	-20.4%	18.9	4.6%	-19.4%	20.1	2.7%	-22.3%	20.7	2.3%	-31.8%												
25	Fri	17	35	14.8	0.0%	-74.9%	42.8	1.2%	-11.3%	64.4	65.1%	0.9%	23.6	63.0	1.4%	-21.8%	63.0	95.9%	2.3%	62.8	87.8%	2.0%	28.5	82.7%	1.8%	28.2	3.4%	-21.1%	19.1	4.6%	-19.4%	20.1	2.7%	-22.3%	20.7	2.3%	-31.8%									
25	Fri	17	40	16.0	0.0%	-73.0%	42.7	1.0%	-11.6%	63.3	24.0%	-0.8%	24.0	62.6	2.0%	-20.6%	62.6	90.2%	1.7%	62.7	82.7%	1.8%	28.2	81.2%	1.8%	28.8	4.6%	-19.4%	20.1	2.7%	-22.3%	20.7	2.3%	-31.8%												
25	Fri	17	45	15.4	0.0%	-74.0%	43.1	1.7%	-10.6%	63.1	18.3%	-1.2%	24.6	62.3	4.1%	-18.5%	62.3	76.2%	1.1%	62.6	81.2%	1.8%	28.8	9.9%	-2.7%	27.8	2.7%	-22.3%	20.7	2.3%	-31.8%															
25	Fri	17	50	16.4	0.0%	-72.3%	43.6	3.2%	-9.6%	64.2	56.2%	0.6%	24.6	63.0	3.9%	-18.6%	63.0	95.8%	2.3%	59.9	85.1%	1.4%	62.0	51.5%	0.6%	26.3	0.088	-26.5%	20.3	2.3%	-31.8%															
25	Fri	17	55	17.1	0.0%	-71.2%	40.0	0.2%	-17.1%	64.7	80.0%	1.3%	25.1	62.5	6.9%	-16.9%	62.5	85.1%	1.4%	62.0	51.5%	0.6%	26.3	0.008	-26.5%	20.3	2.3%	-31.8%																		

1. Average Speed:Average of whole-year corridor speed observations (excluding holidays and weekends)

2. Percentile:A measure indicating the value below which a given percentage of observations fall. For example, the 20th percentile is the value below which 20% of the observations may be found.

Table 4: Slow Speeds Anomaly Days and Times in EB or NB Direction

Day of July 2014	Day of Week	Hour	Min	I4				US 27				SR 429				SR 50				Florida's Turnpike and SR 408				SR417				John Young Pkwy				Orange Blossom Trl			
				Spd	Avg Spd <sup>1</sup>	Per-centile	Diff	Spd	Avg Spd	Per-centile <sup>2</sup>	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff	Spd	Avg Spd	Per-centile	Diff				
9	Wed	17	0	22.6	58.2	0.3%	-61.1%	41.1	48.3	0.2%	-15.0%	64.6	63.6	86.8%	2.0%	29.0	33.8	8.8%	-14.0%	63.7	62.6	86.2%	2.0%	61.0	35.1	6.9%	-3.0%	23.2	29.4	0.0%	-34.0%	23.7	16.7%	-19.0%	
9	Wed	17	5	22.5		0.3%	-61.3%	42.4		0.6%	-12.0%	64.9		96.9%	2.0%	29.4		14.0%	-13.0%	64.5		98.6%	3.0%	61.5		10.4%	-2.0%	24.7		0.1%	-30.0%	24.3		20.5%	-17.0%
10	Thu	17	25	23.0		0.4%	-60.5%	42.3		0.5%	-12.0%	63.7		45.0%	0.0%	29.9		22.3%	-12.0%	54.2		0.9%	-13.0%	55.5		0.6%	-12.0%	24.3		0.0%	-31.0%	21.8		6.4%	-26.0%
10	Thu	17	30	24.2		0.3%	-58.4%	41.8		0.3%	-13.0%	64.0		58.4%	1.0%	30.1		26.7%	-11.0%	49.0		0.3%	-22.0%	53.3		0.3%	-15.0%	24.4		0.0%	-31.0%	21.9		6.9%	-25.0%
10	Thu	17	35	24.3		0.2%	-58.2%	42.6		0.8%	-12.0%	63.7		46.3%	0.0%	30.6		33.9%	-9.0%	48.2		0.2%	-23.0%	51.5		0.2%	-18.0%	25.0		0.1%	-29.0%	21.7		6.1%	-26.0%
10	Thu	17	40	23.2		0.3%	-60.1%	43.4		2.9%	-10.0%	64.7		93.7%	2.0%	31.5		42.5%	-7.0%	47.3		0.2%	-24.0%	52.9		0.3%	-16.0%	25.9		0.3%	-26.0%	22.2		8.3%	-24.0%
10	Thu	17	45	23.8		0.3%	-59.0%	43.6		3.3%	-10.0%	63.7		45.0%	0.0%	31.3		40.8%	-8.0%	47.5		0.2%	-24.0%	53.3		0.3%	-15.0%	27.0		1.2%	-23.0%	22.9		11.5%	-22.0%
10	Thu	17	50	27.8		0.3%	-52.2%	43.1		1.8%	-11.0%	62.3		10.8%	-2.0%	32.0		45.5%	-5.0%	45.1		0.1%	-28.0%	54.8		0.6%	-13.0%	28.3		3.2%	-19.0%	21.5		5.2%	-27.0%
10	Thu	17	55	22.7		0.4%	-61.0%	42.8		1.2%	-11.0%	58.5		0.3%	-8.0%	32.0		45.6%	-5.0%	44.3		0.1%	-29.0%	54.2		0.4%	-14.0%	27.4		1.6%	-22.0%	21.6		5.8%	-26.0%
18	Fri	17	55	24.9		0.5%	-57.1%	39.9		0.0%	-17.0%	63.7		45.0%	0.0%	29.6		17.9%	-12.0%	63.6		79.9%	2.0%	62.3		22.9%	-1.0%	30.0		10.4%	-15.0%	24.0		18.1%	-18.0%
18	Fri	17	0	26.6		0.4%	-54.4%	41.5		0.2%	-14.0%	64.6		86.8%	2.0%	29.9		23.5%	-11.0%	63.7		84.3%	2.0%	62.5		28.7%	0.0%	27.0		1.2%	-23.0%	21.3		4.6%	-28.0%
18	Fri	17	5	25.4		0.4%	-56.3%	41.7		0.3%	-14.0%	64.6		85.2%	2.0%	29.9		22.3%	-12.0%	63.2		64.4%	1.0%	61.8		13.7%	-2.0%	29.0		5.6%	-17.0%	22.0		7.2%	-25.0%

1. Average Speed:Average of whole-year corridor speed observations (excluding holidays and weekends)

2. Percentile:A measure indicating the value below which a given percentage of observations in a group of observations fall. For example, the 20th percentile is the value below which 20% of the observations may be found.

Table 5: Travel Speed Profiles in Peak Month (July) for Potential Diversion Paths

Corridor	Corridor ID	Direction	Segment ID	Weekday							Time of Day																							
				Sun	Mon	Tue	Wed	Thur	Fri	Sat	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
US27	1	SB/WB	1.1	46.3	43.9	43.8	43.6	43.2	43.5	45.3	49.0	49.9	49.8	49.2	47.1	45.7	43.5	43.0	41.9	41.2	40.8	41.0	41.3	41.0	41.3	41.7	41.6	42.5	42.9	43.5	43.6	45.1	47.8	
			1.2	52.0	50.3	49.9	50.6	50.2	50.1	51.7	54.1	54.1	54.1	54.5	54.6	53.9	53.0	51.2	49.4	49.1	48.4	48.1	48.1	47.9	48.7	49.1	49.6	50.2	50.4	49.9	50.8	53.1		
	2	NB/EB	1.1	48.6	45.9	45.8	45.7	45.1	45.6	47.4	50.6	51.3	51.3	51.3	50.8	50.5	47.6	45.5	44.6	43.6	42.7	42.9	42.4	43.3	42.9	43.6	44.5	44.5	45.0	45.2	45.6	46.5	47.1	49.7
			1.2	51.9	49.6	49.0	49.4	49.5	49.7	50.8	53.9	54.1	54.3	54.3	54.1	53.5	52.0	49.7	49.0	48.3	48.1	47.2	47.1	47.2	47.3	47.8	48.3	48.5	49.2	49.2	50.1	52.9		
SR429	2	SB/WB	2.1	63.5	63.0	63.5	63.3	63.2	63.3	63.8	63.7	64.4	64.3	64.4	64.3	64.1	63.7	63.8	63.6	63.0	63.1	62.2	63.4	62.7	63.6	63.5	62.6	62.7	62.3	63.1	62.6	62.6		
			2.2	63.4	63.1	63.5	63.7	63.8	64.0	64.0	63.5	63.9	64.1	64.2	64.5	64.6	64.0	64.4	64.3	63.1	63.3	63.6	63.8	63.9	63.5	64.1	63.4	63.0	62.6	62.6	62.0	64.0		
	3	SB/WB	2.1	63.8	63.7	63.3	63.7	63.7	63.8	63.4	64.5	64.9	64.9	64.7	64.5	63.5	62.7	63.7	63.2	63.4	63.4	62.7	63.2	63.7	63.4	63.6	63.9	63.8	63.4	63.3	63.2	62.9	62.2	64.0
			3.1	42.8	40.9	40.7	40.7	40.6	41.0	42.1	43.8	43.8	43.9	43.9	43.7	42.2	40.5	39.8	39.4	39.5	39.8	39.5	39.3	39.4	39.8	39.9	37.6	39.2	41.0	41.7	42.0	42.8	43.8	
US50	3	SB/WB	3.2	39.7	36.4	36.3	36.5	36.2	36.3	38.5	42.4	42.3	42.5	42.3	41.9	39.4	36.7	34.7	34.3	34.3	33.8	34.2	33.0	34.0	33.5	33.4	32.9	34.9	36.3	36.9	37.7	38.8	41.8	
			3.3	35.7	32.0	32.5	32.2	31.8	31.8	34.4	38.8	39.2	39.3	38.4	38.5	36.5	33.6	33.8	31.8	30.4	30.2	29.3	28.3	28.1	28.4	29.1	29.9	31.0	31.7	32.8	33.4	34.7	37.9	
			3.4	32.7	31.0	31.5	31.3	30.6	33.0	38.2	38.7	39.1	38.6	37.9	37.6	35.8	33.1	29.9	28.7	27.9	26.1	26.9	26.9	27.3	27.0	26.5	28.2	30.6	31.6	32.9	34.2	37.6		
			3.5	31.8	30.4	29.7	29.6	29.3	29.9	32.5	35.8	36.3	36.6	36.7	36.7	35.9	34.2	32.1	29.1	27.4	27.1	27.4	27.0	27.2	27.7	29.9	30.7	31.5	33.0	35.7				
			3.6	29.7	23.9	23.2	23.2	22.1	22.8	28.3	31.2	31.4	31.5	31.6	31.3	29.3	25.8	23.5	22.8	24.2	23.2	22.9	22.4	21.1	20.1	16.8	14.5	17.9	24.1	25.5	26.3	27.2	30.5	
			3.1	41.1	39.5	39.5	39.5	39.2	38.7	40.4	42.7	42.8	43.1	43.0	43.2	41.6	38.1	37.6	38.1	36.5	37.4	37.2	37.2	37.4	37.4	38.6	38.9	39.6	40.2	40.0	40.8	42.5		
Florida's Turnpike	4	SB/WB	3.2	40.2	36.3	36.8	36.6	36.3	36.5	38.9	42.6	42.6	42.7	42.7	42.6	41.8	40.2	36.7	34.9	35.1	34.5	33.6	32.8	33.5	33.9	33.7	33.5	34.1	35.8	36.9	37.8	38.1	38.9	41.6
			4.1	68.4	68.0	67.7	67.6	67.1	67.0	68.5	65.6	67.4	67.7	68.2	67.8	68.0	67.9	67.8	67.8	67.5	68.0	68.3	67.9	67.6	68.4	68.5	67.5	67.9	67.4	66.6	67.2	65.8		
	5	SB/WB	4.2	68.2	67.3	66.1	67.0	66.8	67.2	67.5	67.0	67.7	67.3	67.9	66.7	67.4	67.4	67.5	67.5	65.6	67.2	67.4	67.0	66.7	67.6	67.7	67.8	67.2	67.5	66.8	67.1			
			5.1	61.7	62.5	61.9	62.2	62.4	62.3	62.1	62.9	63.1	63.2	63.0	63.2	63.1	63.1	62.2	62.8	62.1	60.9	62.0	61.5	61.8	62.4	62.8	62.6	61.6	60.7	61.0	60.8	61.8		
SR417	5	SB/WB	5.2	62.4	63.5	62.7	63.5	63.4	62.5	63.8	63.6	63.3	63.6	63.3	63.8	63.7	63.6	63.6	63.6	62.9	61.8	62.4	62.8	63.1	62.5	62.9	62.6	62.4	62.8	62.9	62.6			
			5.3	63.7	62.8	63.0	62.7	62.7	63.5	63.8	64.0	64.4	63.8	63.8	63.6	63.9	63.4	63.2	62.7	62.8	62.4	62.4	62.3	61.8	62.7	63.3	63.1	63.0	62.6	63.3	63.0			
			5.4	64.1	31.7	31.8	32.0	31.0	31.4	33.4	38.3	38.0	38.4	38.7	38.1	37.9	36.0	31.9	29.2	29.3	29.3	28.4	28.0	27.9	28.2	28.3	28.9	31.0	31.6	32.2	32.5	33.6	36.8	
	6	SB/WB	5.5	62.0	61.7	61.5	61.8	62.1	61.8	61.7	62.6	62.9	63.0	61.0	61.9	62.8	62.5	61.8	61.5	61.0	61.0	61.0	61.6	61.2	61.3	62.6	62.0	61.8	61.4	60.7	61.6			
			6.1	39.9	36.3	36.4	36.7	36.0	36.5	38.5	43.0	43.8	43.7	43.9	43.8	42.1	39.5	34.7	35.2	35.9	35.6	35.0	34.6	34.6	33.7	33.7	32.9	31.7	35.9	36.7	37.8	38.9	41.5	
			6.2	38.2	32.7	33.1	32.7	32.3	33.1	37.2	39.8	40.5	40.2	40.0	40.1	38.3	35.4	32.3	31.3	32.0	31.8	31.5	30.8	30.4	30.6	29.8	28.8	29.1	33.9	34.5	35.2	36.4	38.9	
John Young PKWY	6	NB/EB	6.1	38.4	37.5	38.0	38.0	37.9	37.5	38.6	42.6	43.1	42.9	42.7	42.7	42.0	40.0	36.7	34.8	35.9	36.7	36.3	35.1	34.3	34.6	35.4	35.5	36.7	38.1	39.2	38.6	41.7		
			6.2	36.8	31.5	32.2	31.6	31.6	35.7	38.5	38.8	38.9	39.1	38.6	37.2	34.5	31.6	30.2	29.8	30.4	29.9	29.8	30.4	29.0	29.4	28.5	26.5	26.5	29.8	33.0	33.9	35.0	37.0	
			6.3	31.3	30.0	30.2	29.9	29.8	29.3	31.3	37.1	37.5	37.9	37.7	37.4	35.8	33.6	33.6	32.1	30.6	29.6	29.3	27.6	25.6	25.4	25.9	28.5	24.8	24.6	29.3	31.1	31.8	32.8	35.9
	7	SB/WB	7.1	32.0	27.3	27.7	27.5	26.6	26.5	30.1	34.2	34.7	35.3	35.2	35.4	34.8	32.6	30.3	29.3	28.8	28.0	26.6	24.7	23.6	23.9	22.8	20.8	19.6	22.3	27.9	29.6	30.5	33.4	
			7.2	32.0	27.3	27.7	27.5	26.6	26.5	30.1	34.2	34.7	35.3	35.2	35.4	34.8	32.6	30.3	29.3	28.8	28.0	26.6	24.7	23.6	23.9	22.8	20.8	19.6	22.3	27.9	29.6	30.5	33.4	
			7.3	32.4	28.6	29.0	28.8	28.2	30.5	35.0	35.1	35.7	35.6	35.7	35.3	33.4	30.9	30.1	28.9	27.7	26.0	24.7	24.1	24.3	24.7	24.6	26.6	28.4	29.6	30.1	31.4	34.2		
SR 408	8	SB/WB	8.1	58.4	58.2	58.0	58.5	58.3	58.5	58.0	58.6	58.3	58.7	58.5	58.8	58.9	58.7	58.1	58.2	58.3	58.4	58.5	58.1	57.3	57.6	57.9	58.5	58.4	57.6	57.7	58.0			
			8.2	56.3	56.2	56.1	56.3	55.9	56.4	56.2	56.6	56.4	56.5	56.4	56.6	56.5	55.9	56.0	56.1	56.1	56.4	56.3	56.4	56.0	56.1	55.6	55.9	56.1	55.8	55.6	55.5	55.6		
			8.3	55.5	55.0	53.7	53.8	53.7	55.7	55.6	55.5	58.5	55.8	55.7	56.0	55.6	50.0	50.1	44.3	52.9	55.9	55.5	58.5	55.6	55.2	55.1	55.3	55.1	54.6	55.1				
			8.4	63.0	62.8	62.6	62.8	62.5	63.2																									

Table 6: Travel Speed Profiles in Off-Peak Month (April) for Potential Diversion Paths

Corridor	Corridor ID	Direction	Segment ID	Weekday							Time of Day																										
				Sun	Mon	Tue	Wed	Thur	Fri	Sat	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
US27	1	SB/WB	1.1	48.0	44.9	44.7	44.4	44.3	44.4	47.1	49.9	50.3	50.8	50.8	50.4	48.7	46.9	45.5	43.5	43.1	42.2	42.5	42.5	42.4	42.6	42.6	42.8	43.3	44.2	44.8	45.2	45.8	48.6				
			1.2	52.3	50.6	50.6	50.4	50.3	50.6	51.9	54.7	54.9	54.8	55.0	55.0	54.6	53.6	51.3	49.5	48.8	48.4	48.4	48.1	48.1	47.7	48.0	48.5	49.1	48.9	49.6	50.3	50.4	50.9	51.1	53.4		
	2	NB/EB	1.1	49.7	46.5	46.3	46.3	46.0	45.8	48.3	51.5	51.7	52.2	52.2	52.0	51.7	49.1	46.3	44.7	44.1	43.5	43.6	43.4	43.5	43.3	43.6	44.0	45.0	46.0	46.5	46.7	47.1	47.9	51.0			
			1.2	51.6	49.7	49.5	49.3	49.5	49.3	50.4	53.9	54.1	54.2	54.3	54.0	52.8	50.8	48.3	48.1	47.7	46.9	46.9	46.5	46.9	47.3	47.4	47.3	48.3	48.8	48.7	49.5	50.5	52.9				
SR429	2	SB/WB	2.1	64.1	63.6	63.2	63.4	63.2	63.6	63.8	64.1	64.1	64.1	63.5	63.6	64.1	64.1	63.6	63.1	63.0	63.5	63.7	63.8	63.6	63.9	64.0	63.5	62.9	62.3	62.4	63.0	63.0	63.2	63.9			
			2.2	64.5	64.4	63.9	63.9	64.2	64.2	64.5	62.4	63.6	64.3	64.2	64.1	64.5	64.4	64.7	64.4	64.3	64.3	64.4	64.6	64.4	64.4	64.9	64.8	64.4	64.6	64.4	64.7	64.8	64.3	63.2	63.1	63.6	
	3	SB/WB	3.1	42.5	39.9	40.0	39.5	40.1	40.1	41.8	43.8	43.8	43.8	43.7	43.9	42.3	39.7	39.2	39.2	38.9	39.8	39.2	39.1	38.6	38.4	38.0	36.1	36.7	39.9	40.5	41.5	42.2	43.7				
			3.2	40.4	37.3	37.2	37.2	37.3	37.1	39.4	43.0	43.1	43.1	43.0	42.9	42.8	41.2	38.0	35.3	35.6	36.2	35.2	35.3	34.9	35.0	34.6	34.4	34.6	36.0	36.6	37.4	37.7	38.3	41.7			
US50	3	SB/WB	3.3	36.3	33.1	32.9	32.9	32.7	32.7	35.0	39.7	39.8	39.7	39.5	39.2	39.3	38.0	35.5	32.4	31.5	31.4	30.6	29.5	29.5	29.1	29.1	29.3	30.1	31.0	32.1	33.0	33.6	34.6	38.5			
			3.4	36.2	32.9	32.8	33.0	32.5	31.3	33.1	39.8	40.4	40.4	40.3	39.4	39.6	38.4	36.0	31.6	31.3	30.8	30.0	29.2	28.8	28.8	28.3	28.1	27.0	30.1	31.6	32.5	33.1	34.1	38.5			
			3.5	34.9	31.3	31.1	30.9	30.8	30.6	33.4	36.8	37.4	37.8	37.7	37.6	37.9	36.4	34.1	29.5	29.7	28.1	28.4	28.2	27.3	27.4	28.0	28.5	27.7	30.2	30.9	31.5	32.3	33.2	36.2			
			3.6	29.8	24.7	23.3	23.3	23.4	23.0	27.8	31.6	31.9	31.9	31.8	32.4	32.3	30.9	26.9	23.7	23.7	24.8	23.2	23.3	22.8	21.9	20.2	20.2	22.6	23.8	24.1	25.6	30.3					
		NB/EB	3.1	41.1	39.0	38.7	38.5	38.0	38.0	40.1	42.6	42.9	42.8	42.9	42.9	42.9	40.6	36.7	36.1	36.9	36.7	36.6	36.4	36.2	36.4	36.5	37.0	37.6	38.2	39.2	39.8	40.0	40.4	42.7			
			3.2	40.9	37.6	37.2	37.2	37.3	37.5	39.7	43.5	43.7	43.7	43.7	43.4	42.8	41.5	38.2	35.5	35.8	35.6	34.8	34.2	34.6	34.6	34.6	34.2	34.2	35.3	36.5	37.6	38.1	38.7	39.2	42.2		
			3.3	36.6	33.5	33.2	33.1	32.5	32.7	34.9	40.0	40.2	40.0	39.6	39.5	39.2	37.3	34.0	31.9	31.6	31.2	30.7	29.9	29.4	29.3	29.4	29.6	30.4	31.7	32.9	33.4	34.1	34.9	38.7			
			3.4	36.5	33.4	33.3	33.6	33.2	33.0	34.1	39.7	40.1	40.1	40.5	40.4	40.8	38.4	34.1	30.6	30.7	30.6	29.7	29.6	29.5	29.6	29.6	30.0	30.8	32.2	33.6	34.2	34.5	35.1	38.1			
			3.5	35.4	30.7	30.1	30.6	30.0	31.0	33.7	37.1	38.0	38.2	38.6	38.2	37.5	37.5	30.7	26.1	27.5	28.6	28.6	28.9	28.0	27.9	27.1	27.4	28.2	29.6	31.1	31.5	32.5	32.8	36.5			
			3.6	28.1	23.0	23.1	23.2	23.3	23.4	26.9	30.3	30.5	30.7	30.8	30.7	29.8	27.8	22.2	18.5	20.9	22.7	22.6	22.1	22.3	21.9	21.9	21.5	22.2	23.0	23.9	24.4	24.9	29.0				
Florida's Turnpike	4	SB/WB	4.1	69.1	68.2	67.5	66.3	67.8	68.0	68.8	68.1	65.3	65.9	65.5	67.5	67.8	67.4	67.4	67.9	68.0	68.4	68.2	68.1	68.7	68.3	68.1	68.4	69.5	69.2	69.0	68.0	67.3	67.4	68.2			
			4.2	69.0	67.8	67.3	65.7	67.5	67.9	68.5	67.8	65.2	68.2	65.2	67.2	68.6	67.7	67.5	67.6	67.7	67.8	68.2	68.0	67.9	68.4	68.2	67.8	67.1	67.1	67.9							
	5	NB/EB	4.1	69.2	68.4	67.5	67.6	67.8	67.6	68.7	68.9	67.9	67.2	68.7	67.4	67.3	68.4	67.8	68.7	68.7	69.0	69.1	69.0	69.2	68.9	68.6	68.0	68.5	68.2	67.8	67.1	67.6	67.6				
			4.2	68.8	67.8	66.8	67.0	67.4	68.0	68.1	66.9	67.7	67.2	67.9	67.2	67.0	67.6	66.8	67.9	67.7	68.0	68.4	68.3	68.5	68.4	68.4	67.9	68.3	67.7	67.6	67.7	67.1	67.2				
SR417	5	SB/WB	5.1	63.4	63.6	62.5	63.2	63.0	63.5	63.0	63.3	63.5	63.9	63.5	64.0	64.0	64.1	64.0	64.0	64.3	63.1	63.1	63.4	63.4	63.2	62.8	63.8	63.8	64.2	64.2	64.1	62.6	61.0	62.2			
			5.2	65.0	64.3	63.9	64.1	64.5	64.5	64.3	63.7	64.0	63.9	63.9	63.7	64.7	65.5	65.5	65.1	65.4	64.9	64.6	64.2	64.4	64.9	64.9	64.8	64.0	63.1	63.2	63.5						
			5.3	65.3	63.5	62.7	63.5	62.7	63.5	64.6	61.5	62.5	61.0	59.7	62.0	64.6	65.7	65.9	65.5	65.0	64.9	64.4	63.8	63.6	64.3	64.8	65.0	65.2	64.2	61.0	62.6	63.0					
			5.4	62.6	62.7	61.6	61.9	62.4	62.2	62.3	62.4	63.0	62.5	61.1	61.4	63.0	62.7	62.5	62.6	62.6	62.0	61.2	61.8	61.6	62.2	62.2	62.6	63.3	63.0	62.8	62.4	67.1	67.2				
			5.5	63.9	63.0	62.6	61.8	62.8	62.7	63.7	64.0	63.4	60.9	62.4	62.9	62.7	63.0	62.9	63.0	62.9	63.1	63.0	62.9	63.0	62.3	65.0	64.6	64.5	64.5	64.2	63.1	62.7	62.3	62.4			
John Young PKWY	6	SB/WB	6.1	41.0	38.5	37.4	37.7	38.0	37.7	39.3	44.6	45.3	45.5	45.6	45.4	45.4	44.9	41.6	38.4	35.5	36.8	36.7	37.5	37.0	36.4	36.2	35.8	34.7	34.1	33.6	31.5	33.2	36.5	37.2	38.2	39.1	43.0
			6.2	39.3	34.5	33.6	33.8	34.0	34.0	38.0	41.4	41.5	42.1	42.1	41.8	42.1	38.4	33.8	32.2	33.1	33.5	33.1	32.2	31.3	31.6	30.9	29.7	29.1	31.7	34.6	35.3	36.2	37.2	40.2			
			6.3	39.8	31.8	31.7	31.9	37.8	38.3	38.1	38.5	42.8	43.2	43.3	43.2	43.0	40.6	40.9	40.6	39.6	36.8	37.4	37.3	37.1	37.0	36.2	35.8	35.8	35.7	37.1	38.3	38.5	38.6	39.4	41.8		
			6.4	37.8	32.7	32.2	32.3	32.6	33.0	36.4	40.3	40.3	40.6	40.9	40.6	40.9	39.6	36.8	32.0	30.3	30.7	32.1	31.5	30.9	29.9	30.5	30.1	29.1	27.4	30.7	33.3	34.3	34.6	35.6	38.3		
			6.5	34.8	31.5	31.5	31.4	31.6	30.7	32.3	39.0	39.3	39.4	39.4	39.4	39.4	39.2	38.4	36.2	33.7	31.2	31.1	30.8	29.2	27.5	26.8	27.1	27.0	27.1	26.5	27.6	30.1	31.5	32.6	33.4	37.3	

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## Appendix 1 HERE TMC Locations

