

Air Quality Technical Memorandum

Florida Department of Transportation

District 7

I-75 / SR 93A

Project Development and Environment (PD&E) Study

Limits of Project: From Moccasin Wallow Road to South of US 301/SR 43

Hillsborough and Manatee Counties, Florida

Work Program Item Segment Number: 419235-2

ETDM Number: 8001 & 14267

Date: January 2022

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

TECHNICAL MEMORANDUM AIR QUALITY SCREENING TEST

Date: January 2022

Subject: WPI Segment Number: 419235-2
Interstate 75 (I-75) PD&E Study, Moccasin Wallow Road to South of US 301
Manatee and Hillsborough Counties, FL

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

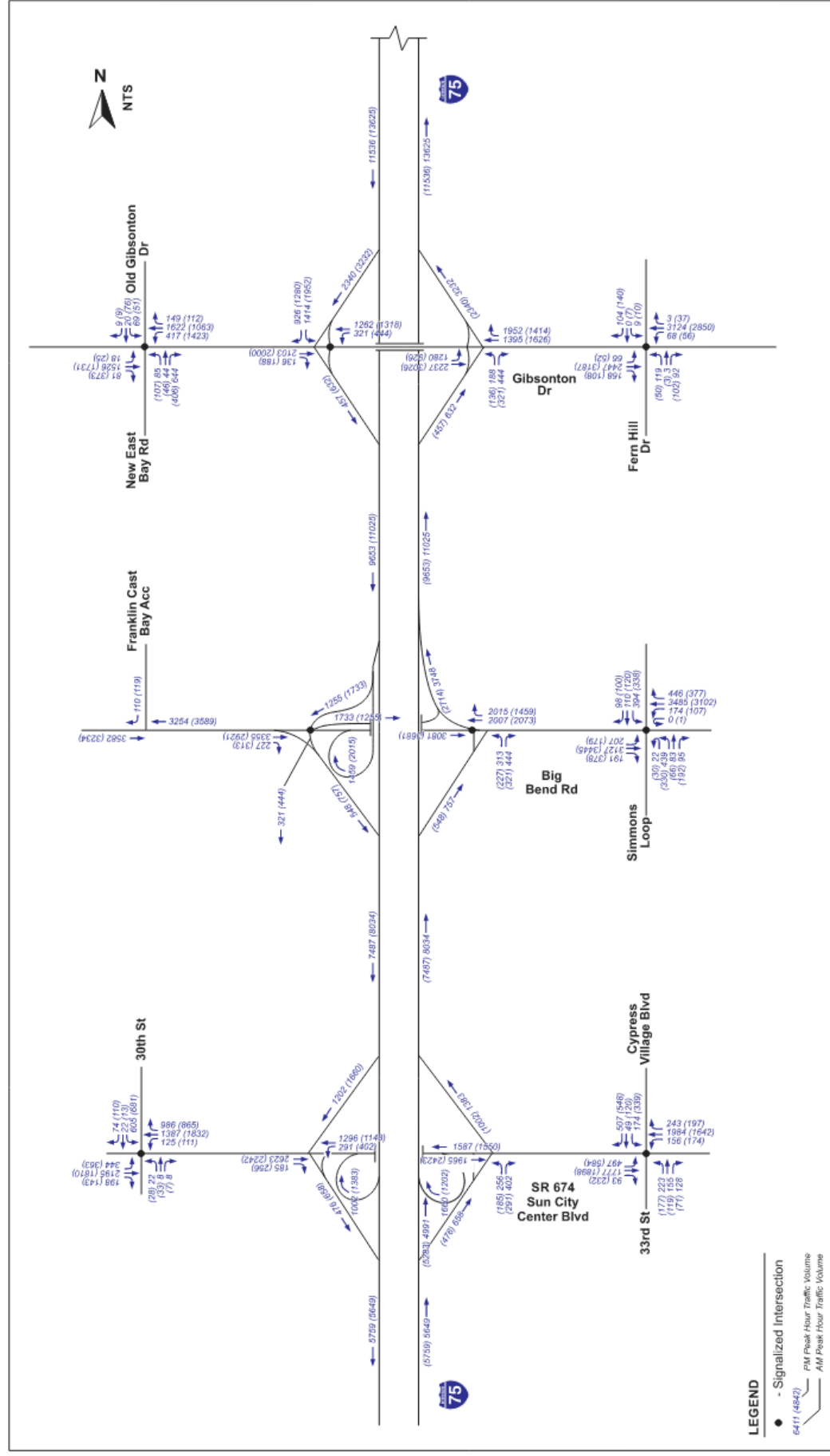
The proposed project is located in Manatee and Hillsborough Counties, FL, an area currently designated as being in attainment for the particulate matter (2.5 microns in size and 10 microns in size) and carbon monoxide (CO). The ETDM Programming Screen (ETDM #8001) performed in 2007 for this project concluded that Air Quality be identified with a summary degree of effect of Minimal.

The project alternatives were subjected to a CO screening model called **CO Florida 2012** that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The Florida Department of Transportation's (FDOT's) **CO Florida 2012** model uses the latest United States Environmental Protection Agency (EPA)-approved software to produce estimates of one-hour and eight-hour CO at default air quality receptor locations. The one-hour and eight-hour estimates can be directly compared to the current one-and eight-hour **National Ambient Air Quality Standards (NAAQS)** for CO.

The Gibsonton Drive interchange is forecasted to have the highest total traffic volumes around the receptors adjacent to the merge/diverge areas with I-75. Traffic volumes were obtained from the *Project Traffic Analysis Report* (December 2021) prepared for this project. For purposes of this screening both interchanges were subjected to a CO Screening assuming a diamond interchange within the CO Florida 2012 Screening Model. The Build and No-Build scenarios for the design year (2045) were evaluated using both AM and PM peak hour volumes. The traffic data input used in this evaluation is attached to this memorandum.

Based on the results from **CO Florida 2012**, the highest project-related CO one- and eight-hour levels are not predicted to meet or exceed the one- or eight-hour **NAAQS** for this pollutant with either the No-Build or Build alternatives. As such, the project "passes" the screening model. The results of the screening model are attached to this memorandum.

This project is not expected to create adverse impacts on air quality because the project area is in attainment for all **NAAQS**. Therefore, the **Clean Air Act** conformity requirements do not apply to the project. Additionally, the project is expected to improve the Level of Service (LOS) and reduce delay and congestion on all facilities within the study area.



CO Florida 2012 - Results
Monday, January 3, 2022

Project Description

Project Title I-75 from Moccasin Wallow to s of US 301
Facility Name I-75 at Gibsonton
User's Name Jeff Novotny
Run Name Gibsonton NoBuild AM
FDOT District 7
Year 2045
Intersection Type E-W Freeway N-S Diamond
Speed Arterial 45 mph Freeway 65 mph
Approach Traffic Arterial 3347 vph Freeway 11536 vph

Environmental Data

Temperature 48.8 F
Reid Vapor Pressure 13.3 psi
Land Use Suburban
Stability Class D
Surface Roughness 108 cm
1 Hr. Background Concentration 3.3 ppm
8 Hr. Background Concentration 2.0 ppm

Results

(ppm, including background CO)

Receptor Max 1-Hr Max 8-Hr

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1	8.3	5.0
2	6.0	3.6
3	6.5	3.9
4	6.4	3.8
5	5.8	3.5
6	6.6	4.0
7	7.0	4.2
8	6.3	3.8
9	5.2	3.1
10	8.0	4.8
11	8.3	5.0
12	6.0	3.6
13	6.4	3.8
14	6.3	3.8
15	5.8	3.5
16	6.6	4.0
17	7.0	4.2
18	6.3	3.8
19	5.2	3.1
20	8.0	4.8

*****PROJECT PASSES*****

NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED

CO Florida 2012 - Results
Monday, January 3, 2022

Project Description

Project Title I-75 from Moccasin Wallow to s of US 301
Facility Name I-75 at Gibsonton
User's Name Jeff Novotny
Run Name Gibsonton NoBuild PM
FDOT District 7
Year 2045
Intersection Type E-W Freeway N-S Diamond
Speed Arterial 45 mph Freeway 65 mph
Approach Traffic Arterial 3040 vph Freeway 13625 vph

Environmental Data

Temperature 48.8 F
Reid Vapor Pressure 13.3 psi
Land Use Suburban
Stability Class D
Surface Roughness 108 cm
1 Hr. Background Concentration 3.3 ppm
8 Hr. Background Concentration 2.0 ppm

Results

(ppm, including background CO)

Receptor Max 1-Hr Max 8-Hr

-----	-----	-----
1	8.5	5.1
2	5.8	3.5
3	6.4	3.8
4	6.2	3.7
5	6.0	3.6
6	7.3	4.4
7	7.3	4.4
8	6.9	4.1
9	5.3	3.2
10	8.5	5.1
11	8.5	5.1
12	5.8	3.5
13	6.3	3.8
14	6.1	3.7
15	5.9	3.5
16	7.3	4.4
17	7.3	4.4
18	6.9	4.1
19	5.4	3.2
20	8.5	5.1

*****PROJECT PASSES*****

NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED

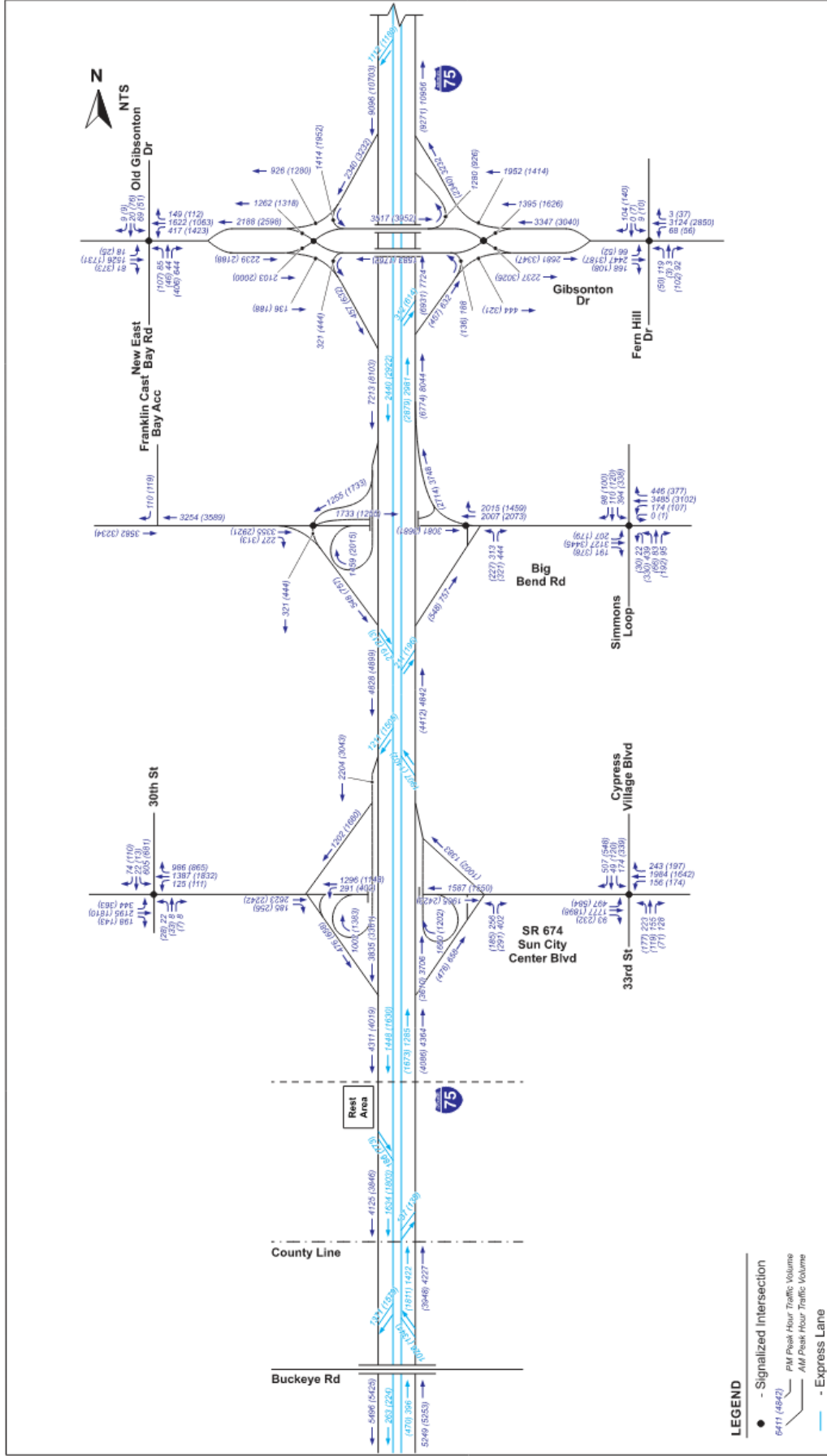


Figure 5-12 Future (2045) Build AM/PM Peak Hour Traffic

CO Florida 2012 - Results
Monday, January 3, 2022

Project Description

Project Title I-75 from Moccasin Wallow to s of US 301
Facility Name I-75 at Gibsonton
User's Name Jeff Novotny
Run Name Gibsonton Build AM
FDOT District 7
Year 2045
Intersection Type E-W Freeway N-S Diamond
Speed Arterial 45 mph Freeway 65 mph
Approach Traffic Arterial 3347 vph Freeway 9096 vph

Environmental Data

Temperature 48.8 F
Reid Vapor Pressure 13.3 psi
Land Use Suburban
Stability Class D
Surface Roughness 108 cm
1 Hr. Background Concentration 3.3 ppm
8 Hr. Background Concentration 2.0 ppm

Results

(ppm, including background CO)

Receptor Max 1-Hr Max 8-Hr

-----	-----	-----
1	7.7	4.6
2	5.7	3.4
3	6.5	3.9
4	6.2	3.7
5	5.8	3.5
6	6.6	4.0
7	6.7	4.0
8	6.3	3.8
9	4.8	2.9
10	7.1	4.3
11	7.7	4.6
12	5.7	3.4
13	6.4	3.8
14	6.1	3.7
15	5.8	3.5
16	6.6	4.0
17	6.7	4.0
18	6.3	3.8
19	4.8	2.9
20	7.1	4.3

*****PROJECT PASSES*****

NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED

CO Florida 2012 - Results
Monday, January 3, 2022

Project Description

Project Title I-75 from Moccasin Wallow to s of US 301
Facility Name I-75 at Gibsonton
User's Name Jeff Novotny
Run Name Gibsonton Build PM
FDOT District 7
Year 2045
Intersection Type E-W Freeway N-S Diamond
Speed Arterial 45 mph Freeway 65 mph
Approach Traffic Arterial 3040 vph Freeway 10703 vph

Environmental Data

Temperature 48.8 F
Reid Vapor Pressure 13.3 psi
Land Use Suburban
Stability Class D
Surface Roughness 108 cm
1 Hr. Background Concentration 3.3 ppm
8 Hr. Background Concentration 2.0 ppm

Results

(ppm, including background CO)

Receptor Max 1-Hr Max 8-Hr

-----	-----	-----
1	7.6	4.6
2	5.4	3.2
3	6.4	3.8
4	6.0	3.6
5	5.9	3.5
6	7.3	4.4
7	7.3	4.4
8	6.9	4.1
9	5.0	3.0
10	7.6	4.6
11	7.6	4.6
12	5.4	3.2
13	6.3	3.8
14	5.9	3.5
15	5.8	3.5
16	7.3	4.4
17	7.3	4.4
18	6.9	4.1
19	5.1	3.1
20	7.6	4.6

*****PROJECT PASSES*****

NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED
