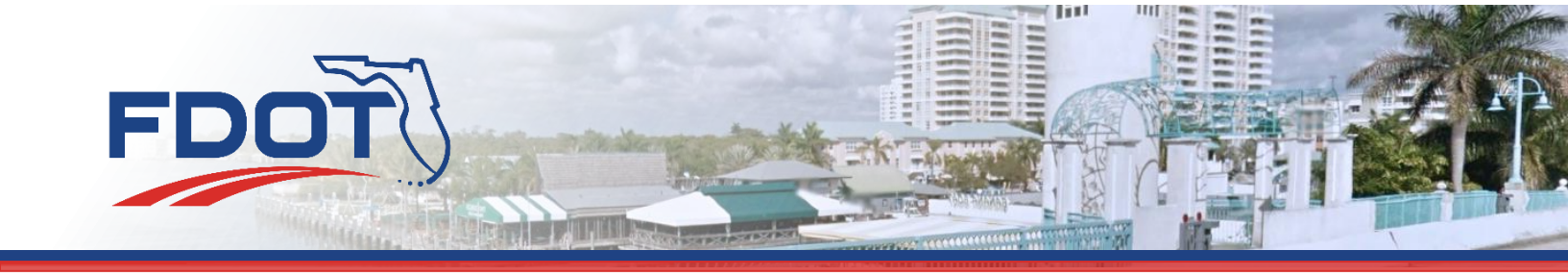


AIR QUALITY TECHNICAL MEMORANDUM

PD&E STUDY
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange (MP 57)
and
SR-9/I-95 at Gateway Boulevard Interchange (MP 58)
Palm Beach County, Florida

Prepared for
Florida Department of Transportation - District Four
3400 West Commercial Boulevard
Ft. Lauderdale, Florida 33309-3421

Financial Management Number: 435804-1-22-01
Financial Management Number: 231932-1-22-01
ETDM Numbers: 14180 and 14181

June 2017

Air Quality Technical Memorandum

PD&E STUDY
SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange (MP 57)
and
SR-9/I-95 at Gateway Boulevard Interchange (MP 58)
Palm Beach County, Florida

Financial Management Number: 435804-1-22-01
Financial Management Number: 231932-1-22-01
ETDM Numbers: 14180 and 14181

Prepared for
Florida Department of Transportation - District Four
3400 West Commercial Boulevard
Ft. Lauderdale, Florida 33309-3421

Prepared by:

Arcadis U.S., Inc.
1500 Gateway Boulevard
Suite 200
Boynton Beach, FL 33426
arcadis.com

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

Table of Contents

1. INTRODUCTION

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study for interchange improvements located at SR 9/I-95 at SR 804/Boynton Beach Boulevard and SR 9/I-95 and Gateway Boulevard in Palm Beach County, Florida. The alternatives developed in this PD&E Study and the associated social, economic, and environmental analyses were evaluated according to the requirements of the National Environmental Policy Act (NEPA) and FDOT's PD&E Manual, Part 1, Chapter 5 to receive Location and Design Acceptance (LDCA). 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 the Federal Highway Administration (FHWA) and FDOT.

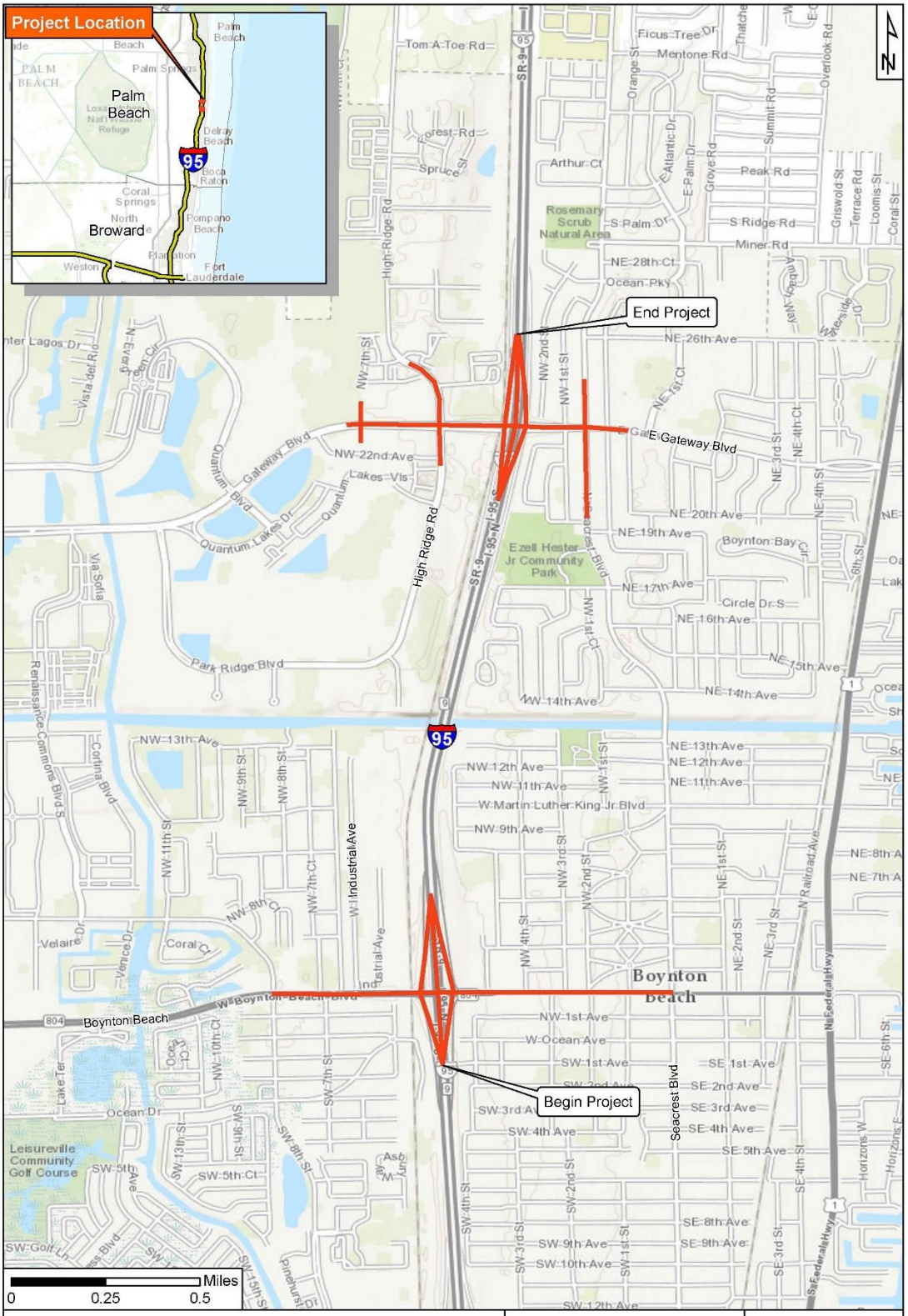
The project study area (study area) is in eastern Palm Beach County within the City of Boynton Beach between SR 9/I-95 at Woolbright Road to the south and SR 9/I-95 at Hypoluxo Road to the north. The SR 804/Boynton Beach Boulevard interchange is located on SR 9/I-95 at milepost 57 between the Gateway Boulevard interchange (1.5 miles to the north) and the Woolbright Road interchange (1.0 mile to the south). The SR 804/Boynton Beach Boulevard project length is 2.52 miles. The Gateway Boulevard interchange is located on SR 9/I-95 at milepost 58 between the Hypoluxo Road interchange (1.5 miles to the north) and the SR 804/Boynton Beach Boulevard interchange (1.5 miles to the south). At SR 804/Boynton Beach Boulevard, the project area extends from west of Industrial Avenue to east of Seacrest Boulevard. The Gateway Boulevard project length is 2.95 miles. At Gateway Boulevard, the project area extends from west of High Ridge Road to east of Seacrest Boulevard. A project location map is provided in Figure 1.

2. AIR QUALITY

An air quality review of the project area was conducted following the guidelines in Part 2, Chapter 16, Air Quality of the FDOT Project Development & Environment (PD&E) manual (August 24, 2016). The Clean Air Act Amendments of 1990 (CAAA) requires that a proposed project not cause any new violation of National Ambient Air Quality Standards (NAAQS), or increase the severity of existing violations, or delay attainment of NAAQS. National and state ambient air quality standards, developed for specific (criteria) pollutants to protect public health, safety, and welfare, are established in the CAAA.

The U.S. Environmental Protection Agency (EPA) established NAAQS for six air pollutants: carbon monoxide (CO), lead, nitrogen dioxide, sulfur dioxide, ozone (O_3), and particulate matter of 10 microns (PM-10) or less in size. NAAQS require the transportation sector to meet specified standards for PM-10, CO, and O_3 at ground level. Unlike PM-10 and CO, O_3 is not directly emitted, but created by a chemical reaction between nitrogen oxides and volatile organic compounds in the presence of sunlight. Ground-level O_3 is the primary component of smog.

Air quality is defined by primary standards which refer to air quality levels required to protect public health within an adequate margin of safety. Secondary standards refer to air quality levels required to safeguard visibility, comfort, animals, and property from poor air quality. The CAAA requires that transportation plans, programs, and projects funded or approved by FHWA be in conformity with the State Implementation Plan, which represents the state's plan to either achieve or maintain the NAAQS for a particular pollutant.



PD&E Study
SR-9/I-95 at SR-804/Boynton Beach Blvd Interchange
SR-9/I-95 at Gateway Blvd Interchange
FM Nos. 435804-1-22-01; 231932-1-22-01
ETDM Nos. 14180 and 14181

PROJECT LOCATION MAP

FIGURE 1

The Florida Department of Environmental Protection (DEP) is responsible for development of the air quality goals established by the State Implementation Plan (SIP). Under this statute, conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS) for ozone, carbon monoxide, nitrogen dioxide and particulate matter. FDOT and the Palm Beach Metropolitan Planning Organization (MPO) consult with DEP on the development of the SIP and motor vehicle emissions budget. The current one-and eight-hour NAAQS for CO, are 35 parts per million (PPM) and 9 PPM, respectively.

3. PROJECT LEVEL AIR QUALITY SCREENING ANALYSIS

The Recommended Build and No-Build Alternatives of this project were screened for potential air quality impacts using FDOT's screening model (CO Florida 2012, Version 1.01) 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, 35 PPM and 9 PPM, respectively.

The roadway intersection selected for screening is typically the one with the worst-case combination of traffic volumes, low vehicular speeds, and closest receptors. The Preferred Build and No-Build scenarios for the Open Year (2020) and the Design Year (2040) were evaluated. Based on the traffic study completed for the project, the SR 804/Boynton Beach Boulevard at SR 9/I-95 southbound ramp terminal intersection was chosen for the SR-9/I-95 at SR-804/Boynton Beach Boulevard interchange project area for both Open Year (2020) and Design Year (2040) traffic conditions and the Gateway Boulevard at High Ridge Road and Gateway Boulevard at SR 9/I-95 southbound ramp terminal intersection were chosen for the Open Year (2020) and Design Year (2040) respectively for the SR-9/I-95 and Gateway Boulevard interchange project area. The Build and No-Build alternatives for this project assumed similar traffic demand and have identical traffic volume input information. The traffic data input used in the evaluation are provided in Appendix A.

4. AIR QUALITY SCREENING ANALYSIS RESULTS

The project was reviewed for air quailty impacts consistent with the FHWA discussion paper *Appropriate Level of Highway Air Quality Analysis for a CE, EA/FONSI, and EIS.* Estimates of CO were predicted for the default receptors which are located at pre-determined worst-case locations from the edge of the roadway. Based on the results from the CO Florida 2012 screening models, the highest project-related CO one- and eight-hour levels are not predicted to meet or exceed the one- or eight-hour National Ambient Air Quality Standards (NAAQS) for this pollutant. The one-hour and eight-hour estimates predicted by the CO Florida 2012 models are directly compared to the current one-and eight-hour NAAQS for CO, which are 35 PPM and 9 PPM, respectively. The project **"passes"** the screening model by achieving CO levels well below the one- and eight-hour NAAQS CO standards. Results of the analysis are presented in Table 1 for SR 804/Boynton Beach Boulevard and Table 2 for Gateway Boulevard interchanges. The outputs from the CO Florida 2012 screening models are provided in Appendix B.

Table 1. Carbon Monoxide (CO) Concentrations for SR 9/I-95 at SR 804/Boynton Beach Boulevard

	Max One-Hour CO Concentration (PPM)		Max Eight-Hour CO Concentration (PPM)	
	No-Build/Build	No-Build/Build	No-Build/Build	No-Build/Build
Receptor	Open Year (2020)	Design Year (2040)	Open Year (2020)	Design Year (2040)
1	6.7	7.0	4.0	4.2
2	6.8	7.2	4.1	4.3
3	7.1	7.5	4.3	4.5
4	6.6	6.9	4.0	4.1
5	6.5	6.9	3.9	4.1
6	6.6	6.9	4.0	4.1
7	6.7	7.0	4.0	4.2
8	7.0	7.4	4.2	4.4
9	6.8	7.0	4.1	4.2
10	6.5	6.6	3.9	4.0
11	6.7	7.0	4.0	4.2
12	6.8	7.2	4.1	4.3
13	7.1	7.5	4.3	4.5
14	6.6	6.9	4.0	4.1
15	6.5	6.9	3.9	4.1
16	6.6	6.9	4.0	4.1
17	6.7	7.0	4.0	4.2
18	7.0	7.4	4.2	4.4
19	6.8	7.0	4.1	4.2
20	6.5	6.6	3.9	4.0

Table 2. Carbon Monoxide (CO) Concentrations for SR 9/I-95 at Gateway Boulevard

	Max One-Hour CO Concentration (PPM)		Max Eight-Hour CO Concentration (PPM)	
	No-Build/Build	No-Build/Build	No-Build/Build	No-Build/Build
Receptor	Open Year (2020)	Design Year (2040)	Open Year (2020)	Design Year (2040)
1	6.7	7.0	4.0	4.2
2	7.0	7.1	4.2	4.3
3	7.3	7.4	4.4	4.4
4	6.7	6.9	4.0	4.1
5	6.7	6.8	4.0	4.1
6	6.6	6.8	4.0	4.1
7	6.7	7.0	4.0	4.2
8	7.2	7.4	4.3	4.4
9	6.8	7.0	4.1	4.2
10	6.7	6.6	4.0	4.0
11	6.7	7.0	4.0	4.2
12	7.0	7.1	4.2	4.3
13	7.3	7.4	4.4	4.4
14	6.7	6.9	4.0	4.1
15	6.7	6.8	4.0	4.1

Receptor	Max One-Hour CO Concentration (PPM)		Max Eight-Hour CO Concentration (PPM)	
	No-Build/Build Open Year (2020)	No-Build/Build Design Year (2040)	No-Build/Build Open Year (2020)	No-Build/Build Design Year (2040)
16	6.6	6.8	4.0	4.1
17	6.7	7.0	4.0	4.2
18	7.2	7.4	4.3	4.4
19	6.8	7.0	4.1	4.2
20	6.7	6.6	4.0	4.0

5. GREENHOUSE GASES

Greenhouse gases (GHG) cause a global phenomenon in which heat is trapped in the earth's atmosphere. Because atmospheric concentration of GHGs continues to climb, our planet will continue to experience climate-related phenomena. For example, warmer global temperatures can cause changes in precipitation and sea levels. The burning of fossil fuels and other human activities are adding to the concentration of GHGs in the atmosphere. Many GHGs remain in the atmosphere for time periods ranging from decades to centuries.

To date, no national standards have been established regarding GHGs, nor has United States EPA established criteria or thresholds for ambient GHG emissions pursuant to its authority to establish motor vehicle emission standards for CO_2 under the Clean Air Act. GHGs are different from other air pollutants evaluated in the federal environmental reviews because their impacts are not localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The affected environment for CO_2 and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad scale actions such as actions involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the GHG emissions impacts for a particular transportation project. Furthermore, presently there is no scientific methodology for attributing specific climatological changes to a particular transportation project's emissions.

Under NEPA, detailed environmental analysis should be focused on issues that are significant and meaningful to decision-making (40 CFR 1500.1(b), 1500.2(b), 1500.4(g), and 1501.7). FHWA has concluded, based on the nature of GHG emissions and the exceedingly small potential GHG impacts of the proposed action that the GHG emissions from the proposed action will not result in "reasonably foreseeable significant adverse impacts on the human environment" (40 CFR 1502.22(b)). The GHG emission from the project Build Alternatives will be insignificant, and will not play a meaningful role in a determination of the environmentally preferable alternative or the selection of the Preferred Alternative. More detailed information on GHG emissions "is not essential to a reasoned choice among reasonable alternatives" (40 CFR 1502.22(a)) or to making a decision in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts (23 CFR 771.105(b)).

This document does not incorporate an analysis of the GHG emissions or climate change effects of each of the alternatives because the potential change in GHG emissions is very small in the context of the affected environment. Because of the insignificance of the GHG impacts, those local impacts will not be meaningful

to a decision on the environmentally Preferable Alternative or to a choice among alternatives (PD&E Manual Part 2, Chapter 16, Figure 16-3).

For these reasons, no GHG analysis has been performed for the alternatives proposed for this project.

6. SUMMARY

The project is located in Palm Beach County, an area currently designated as being in attainment for all of the National Ambient Air Quality Standards under the criteria provided in the Clean Air Act. Therefore, the Clean Air Act conformity requirements do not apply to the project.

Appendix A

Traffic Data for Air Quality Analysis

SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange
OPEN YEAR 2020
No-Build/Build Traffic Volumes

Date: April 27, 2017
Prepared By: Satya Kolluru, PE, PTOE
Financial Management Number: 435804-1-22-01 & 231932-1-22-01
Federal Aid Number: N/A
Project Description: PD&E Study for SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange and SR 9/I-95 at Gateway Boulevard Interchange, Palm Beach County, FL

AM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
SR 804/Boynton Beach Blvd & Old Boynton Rd/NW 8th St	31	1,276	65	1,372	149	1,192	242	1,583	64	63	17	144	508	72	24	604	**3,703**
SR 804/Boynton Beach Blvd & Industrial Ave	100	2,247	6	2,353	8	1,521	136	1,665	4	0	3	7	105	0	80	185	**4,210**
SR 804/Boynton Beach Blvd & I-95 SB Ramp terminal	-	1,555	800	2,355	385	878	-	1,263	-	-	-	0	559	-	787	1,346	**4,964**
SR 804/Boynton Beach Blvd & I-95 NB Ramp Rerminal	700	1,414	-	2,114	-	892	347	1,239	371	-	226	597	-	-	-	0	**3,950**
SR 804/Boynton Beach Blvd & Seacrest Blvd	175	591	255	1,021	65	462	29	556	200	202	51	453	93	379	220	692	**2,722**

PM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
SR 804/Boynton Beach Blvd & Old Boynton Rd/NW 8th St	58	1,098	75	1,231	128	1,470	795	2,393	117	176	86	379	375	97	31	503	**4,506**
SR 804/Boynton Beach Blvd & Industrial Ave	53	1,724	6	1,783	4	2,544	83	2,631	6	0	4	10	158	0	83	241	**4,665**
SR 804/Boynton Beach Blvd & I-95 SB Ramp terminal	-	1,427	459	1,886	237	1,752	-	1,989	-	-	-	0	436	-	879	1,315	**5,190**
SR 804/Boynton Beach Blvd & I-95 NB Ramp Rerminal	627	1,236	-	1,863	-	1,030	413	1,443	959	-	907	1,866	-	-	-	0	**5,172**
SR 804/Boynton Beach Blvd & Seacrest Blvd	329	750	197	1,276	100	765	99	964	303	438	91	832	78	261	199	538	**3,610**

NOTE:
Traffic data should be provided for the intersection that is forecasted to have the highest total approach traffic volume. Notably, this intersection may not be the same for the Open Year (2020) and Design Year (2040). The Build and No-Build alternatives for this project assumed similar traffic demand and have identical traffic volume information. The number of lanes should be the number of intersection approach through lanes. The traffic volumes should be representative of vehicles per hour (vph) and vehicle speeds should be representative of posted speeds if intersection cruise approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2012 Intersection Screening Model.

SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange
DESIGN YEAR 2040
No-Build/Build Traffic Volumes

Date: April 27, 2017
Prepared By: Satya Kolluru, PE, PTOE
Financial Management Number: 435804-1-22-01 & 231932-1-22-01
Federal Aid Number: N/A
Project Description: PD&E Study for SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange and SR 9/I-95 at Gateway Boulevard Interchange, Palm Beach County, FL

AM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
SR 804/Boynton Beach Blvd & Old Boynton Rd/NW 8th St	61	1,494	149	1,704	364	1,273	406	2,043	100	126	262	488	686	127	34	847	**5,082**
SR 804/Boynton Beach Blvd & Industrial Ave	214	2,666	17	2,897	14	1,830	245	2,089	12	0	7	19	186	0	163	349	**5,354**
SR 804/Boynton Beach Blvd & I-95 SB Ramp terminal	-	1,816	1,043	2,859	761	1,220	-	1,981	-	-	-	0	676	-	869	1,545	**6,385**
SR 804/Boynton Beach Blvd & I-95 NB Ramp Rerminal	898	1,594	-	2,492	-	1,523	674	2,197	458	-	322	780	-	-	-	0	**5,469**
SR 804/Boynton Beach Blvd & Seacrest Blvd	545	724	320	1,589	142	892	80	1,114	269	385	67	721	207	538	530	1,275	**4,699**

PM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
SR 804/Boynton Beach Blvd & Old Boynton Rd/NW 8th St	92	1,099	96	1,287	249	1,626	848	2,723	188	216	213	617	463	99	34	596	**5,223**
SR 804/Boynton Beach Blvd & Industrial Ave	152	1,833	14	1,999	9	2,763	187	2,959	16	0	9	25	262	0	184	446	**5,429**
SR 804/Boynton Beach Blvd & I-95 SB Ramp terminal	-	1,610	494	2,104	361	1,961	-	2,322	-	-	-	0	547	-	998	1,545	**5,971**
SR 804/Boynton Beach Blvd & I-95 NB Ramp Rerminal	733	1,424	-	2,157	-	1,248	683	1,931	1,074	-	1,065	2,139	-	-	-	0	**6,227**
SR 804/Boynton Beach Blvd & Seacrest Blvd	618	885	235	1,738	151	966	157	1,274	360	518	93	971	153	411	519	1,083	**5,066**

NOTE:
Traffic data should be provided for the intersection that is forecasted to have the highest total approach traffic volume. Notably, this intersection may not be the same for the Open Year (2020) and Design Year (2040). The Build and No-Build alternatives for this project assumed similar traffic demand and have identical traffic volume information. The number of lanes should be the number of intersection approach through lanes. The traffic volumes should be representative of vehicles per hour (vph) and vehicle speeds should be representative of posted speeds if intersection cruise approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2012 Intersection Screening Model.

SR 9/I-95 at Gateway Boulevard Interchange
OPEN YEAR 2020
No-Build/Build Traffic Volumes

Date: April 27, 2017
Prepared By: Satya Kolluru, PE, PTOE
Financial Management Number: 435804-1-22-01 & 231932-1-22-01
Federal Aid Number: N/A
Project Description: PD&E Study for SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange and SR 9/I-95 at Gateway Boulevard Interchange, Palm Beach County, FL

AM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
Gateway Blvd & Quantum Village	20	1,647	50	1,717	70	1,198	0	1,268	30	0	20	50	20	10	50	80	**3,115**
Gateway Blvd & High Ridge Rd	140	1,381	166	1,687	257	1,060	431	1,748	90	34	322	446	473	130	118	721	**4,602**
Gateway Blvd & I-95 SB Ramp terminal	-	1,274	902	2,176	418	1,141	-	1,559	-	-	-	0	237	-	607	844	**4,579**
Gateway Blvd & I-95 NB Ramp Rerminal	780	731	-	1,511	-	952	342	1,294	607	-	191	798	-	-	-	0	**3,603**
Gateway Blvd & Seacrest Blvd	143	443	381	967	53	669	20	742	297	205	47	549	34	239	281	554	**2,812**

PM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
Gateway Blvd & Quantum Village	67	1,335	9	1,411	29	1,997	13	2,039	2	0	9	11	49	0	112	161	**3,622**
Gateway Blvd & High Ridge Rd	149	1,170	74	1,393	203	1,729	404	2,336	136	56	271	463	327	42	174	543	**4,735**
Gateway Blvd & I-95 SB Ramp terminal	-	1,224	544	1,768	187	1,622	-	1,809	-	-	-	0	299	-	714	1,013	**4,590**
Gateway Blvd & I-95 NB Ramp Rerminal	582	941	-	1,523	-	797	203	1,000	1,012	-	410	1,422	-	-	-	0	**3,945**
Gateway Blvd & Seacrest Blvd	258	791	323	1,372	48	424	26	498	289	421	79	789	50	235	216	501	**3,160**

NOTE:
Traffic data should be provided for the intersection that is forecasted to have the highest total approach traffic volume. Notably, this intersection may not be the same for the Open Year (2020) and Design Year (2040). The Build and No-Build alternatives for this project assumed similar traffic demand and have identical traffic volume information. The number of lanes should be the number of intersection approach through lanes. The traffic volumes should be representative of vehicles per hour (vph) and vehicle speeds should be representative of posted speeds if intersection cruise approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2012 Intersection Screening Model.

SR 9/I-95 at Gateway Boulevard Interchange
DESIGN YEAR 2040
No-Build/Build Traffic Volumes

Date: April 27, 2017
Prepared By: Satya Kolluru, PE, PTOE
Financial Management Number: 435804-1-22-01 & 231932-1-22-01
Federal Aid Number: N/A
Project Description: PD&E Study for SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange and SR 9/I-95 at Gateway Boulevard Interchange, Palm Beach County, FL

AM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
Gateway Blvd & Quantum Village	20	2,351	50	2,421	70	1,541	0	1,611	30	0	20	50	20	10	50	80	**4,162**
Gateway Blvd & High Ridge Rd	179	1,974	238	2,391	289	1,381	513	2,183	99	38	334	471	493	156	131	780	**5,825**
Gateway Blvd & I-95 SB Ramp terminal	-	1,486	1,315	2,801	705	1,538	-	2,243	-	-	-	0	303	-	645	948	**5,992**
Gateway Blvd & I-95 NB Ramp Rerminal	885	904	-	1,789	-	1,401	451	1,852	842	-	328	1,170	-	-	-	0	**4,811**
Gateway Blvd & Seacrest Blvd	173	483	621	1,277	105	944	30	1,079	541	240	82	863	39	254	322	615	**3,834**

PM Peak Hour																	
Intersection	Opening Year 2020																Total
	Eastbound				Westbound				Northbound				Southbound				
	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	Left	Thru	Right	Approach	
Gateway Blvd & Quantum Village	67	1,812	9	1,888	29	2,395	13	2,437	2	0	9	11	49	0	112	161	**4,497**
Gateway Blvd & High Ridge Rd	213	1,527	130	1,870	292	2,061	482	2,835	193	75	356	624	333	48	183	564	**5,893**
Gateway Blvd & I-95 SB Ramp terminal	-	1,454	762	2,216	295	2,069	-	2,364	-	-	-	0	369	-	766	1,135	**5,715**
Gateway Blvd & I-95 NB Ramp Rerminal	666	1,184	-	1,850	-	991	260	1,251	1,373	-	690	2,063	-	-	-	0	**5,164**
Gateway Blvd & Seacrest Blvd	261	1,086	544	1,891	66	465	28	559	496	424	101	1,021	53	239	218	510	**3,981**

NOTE:
Traffic data should be provided for the intersection that is forecasted to have the highest total approach traffic volume. Notably, this intersection may not be the same for the Open Year (2020) and Design Year (2040). The Build and No-Build alternatives for this project assumed similar traffic demand and have identical traffic volume information. The number of lanes should be the number of intersection approach through lanes. The traffic volumes should be representative of vehicles per hour (vph) and vehicle speeds should be representative of posted speeds if intersection cruise approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2012 Intersection Screening Model.

Appendix B

Air Quality Analysis Screening Results

CO Florida 2012 - Results
Wednesday, May 31, 2017

Project Description

Project Title	I-95 at Boynton Beach/Gateway Blvd PD&E
Facility Name	Boynton Beach Blvd at I-95 SB Ramps
User's Name	Satya Kolluru
Run Name	Open Year (2020) - No-Build/Build Alts
FDOT District	4
Year	2020
Intersection Type	6 X 4
Speed	Arterial 35 mph
Approach Traffic	Arterial 1989 vph

Environmental Data

Temperature	53.9 °F
Reid Vapor Pressure	13.3 psi
Land Use	Urban
Stability Class	D
Surface Roughness	175 cm
1 Hr. Background Concentration	5.0 ppm
8 Hr. Background Concentration	3.0 ppm

Results
(ppm, including background CO)

Receptor	Max 1-Hr	Max 8-Hr
1	6.7	4.0
2	6.8	4.1
3	7.1	4.3
4	6.6	4.0
5	6.5	3.9
6	6.6	4.0
7	6.7	4.0
8	7.0	4.2
9	6.8	4.1
10	6.5	3.9
11	6.7	4.0
12	6.8	4.1
13	7.1	4.3
14	6.6	4.0
15	6.5	3.9
16	6.6	4.0
17	6.7	4.0
18	7.0	4.2
19	6.8	4.1
20	6.5	3.9

****
**********PROJECT PASSES**********
NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED
****

CO Florida 2012 - Results
Wednesday, May 31, 2017

Project Description

Project Title	I-95 at Boynton Beach/Gateway Blvd PD&E
Facility Name	Boynton Beach Blvd at I-95 SB Ramps
User's Name	Satya Kolluru
Run Name	Design Year (2040) - No-Build/Build Alts
FDOT District	4
Year	2040
Intersection Type	6 X 4
Speed	Arterial 35 mph
Approach Traffic	Arterial 2859 vph

Environmental Data

Temperature	53.9 °F
Reid Vapor Pressure	13.3 psi
Land Use	Urban
Stability Class	D
Surface Roughness	175 cm
1 Hr. Background Concentration	5.0 ppm
8 Hr. Background Concentration	3.0 ppm

Results

(ppm, including background CO)

Receptor	Max 1-Hr	Max 8-Hr
1	7.0	4.2
2	7.2	4.3
3	7.5	4.5
4	6.9	4.1
5	6.9	4.1
6	6.9	4.1
7	7.0	4.2
8	7.4	4.4
9	7.0	4.2
10	6.6	4.0
11	7.0	4.2
12	7.2	4.3
13	7.5	4.5
14	6.9	4.1
15	6.9	4.1
16	6.9	4.1
17	7.0	4.2
18	7.4	4.4
19	7.0	4.2
20	6.6	4.0

****
**********PROJECT PASSES**********
NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED
****

CO Florida 2012 - Results
Wednesday, May 31, 2017

Project Description

Project Title	I-95 at Boynton Beach/Gateway Blvd PD&E
Facility Name	Gateway Blvd at High Ridge Rd
User's Name	Satya Kolluru
Run Name	Open Year (2020) - No-Build/Build Alts
FDOT District	4
Year	2020
Intersection Type	6 X 4
Speed	Arterial 30 mph
Approach Traffic	Arterial 2336 vph

Environmental Data

Temperature	53.9 °F
Reid Vapor Pressure	13.3 psi
Land Use	Urban
Stability Class	D
Surface Roughness	175 cm
1 Hr. Background Concentration	5.0 ppm
8 Hr. Background Concentration	3.0 ppm

Results

(ppm, including background CO)

Receptor	Max 1-Hr	Max 8-Hr
1	6.7	4.0
2	7.0	4.2
3	7.3	4.4
4	6.7	4.0
5	6.7	4.0
6	6.6	4.0
7	6.7	4.0
8	7.2	4.3
9	6.8	4.1
10	6.7	4.0
11	6.7	4.0
12	7.0	4.2
13	7.3	4.4
14	6.7	4.0
15	6.7	4.0
16	6.6	4.0
17	6.7	4.0
18	7.2	4.3
19	6.8	4.1
20	6.7	4.0

****
**********PROJECT PASSES**********
NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED
****

CO Florida 2012 - Results
Wednesday, May 31, 2017

Project Description

Project Title	I-95 at Boynton Beach/Gateway Blvd PD&E
Facility Name	Gateway Blvd at I-95 SB Ramps
User's Name	Satya Kolluru
Run Name	Design Year (2040) - No-Build/Build Alts
FDOT District	4
Year	2040
Intersection Type	6 X 4
Speed	Arterial 35 mph
Approach Traffic	Arterial 2801 vph

Environmental Data

Temperature	53.9 °F
Reid Vapor Pressure	13.3 psi
Land Use	Urban
Stability Class	D
Surface Roughness	175 cm
1 Hr. Background Concentration	5.0 ppm
8 Hr. Background Concentration	3.0 ppm

Results

(ppm, including background CO)

Receptor	Max 1-Hr	Max 8-Hr
1	7.0	4.2
2	7.1	4.3
3	7.4	4.4
4	6.9	4.1
5	6.8	4.1
6	6.8	4.1
7	7.0	4.2
8	7.4	4.4
9	7.0	4.2
10	6.6	4.0
11	7.0	4.2
12	7.1	4.3
13	7.4	4.4
14	6.9	4.1
15	6.8	4.1
16	6.8	4.1
17	7.0	4.2
18	7.4	4.4
19	7.0	4.2
20	6.6	4.0

****
**********PROJECT PASSES**********
NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED
****