



**AIR QUALITY TECHNICAL MEMORANDUM**

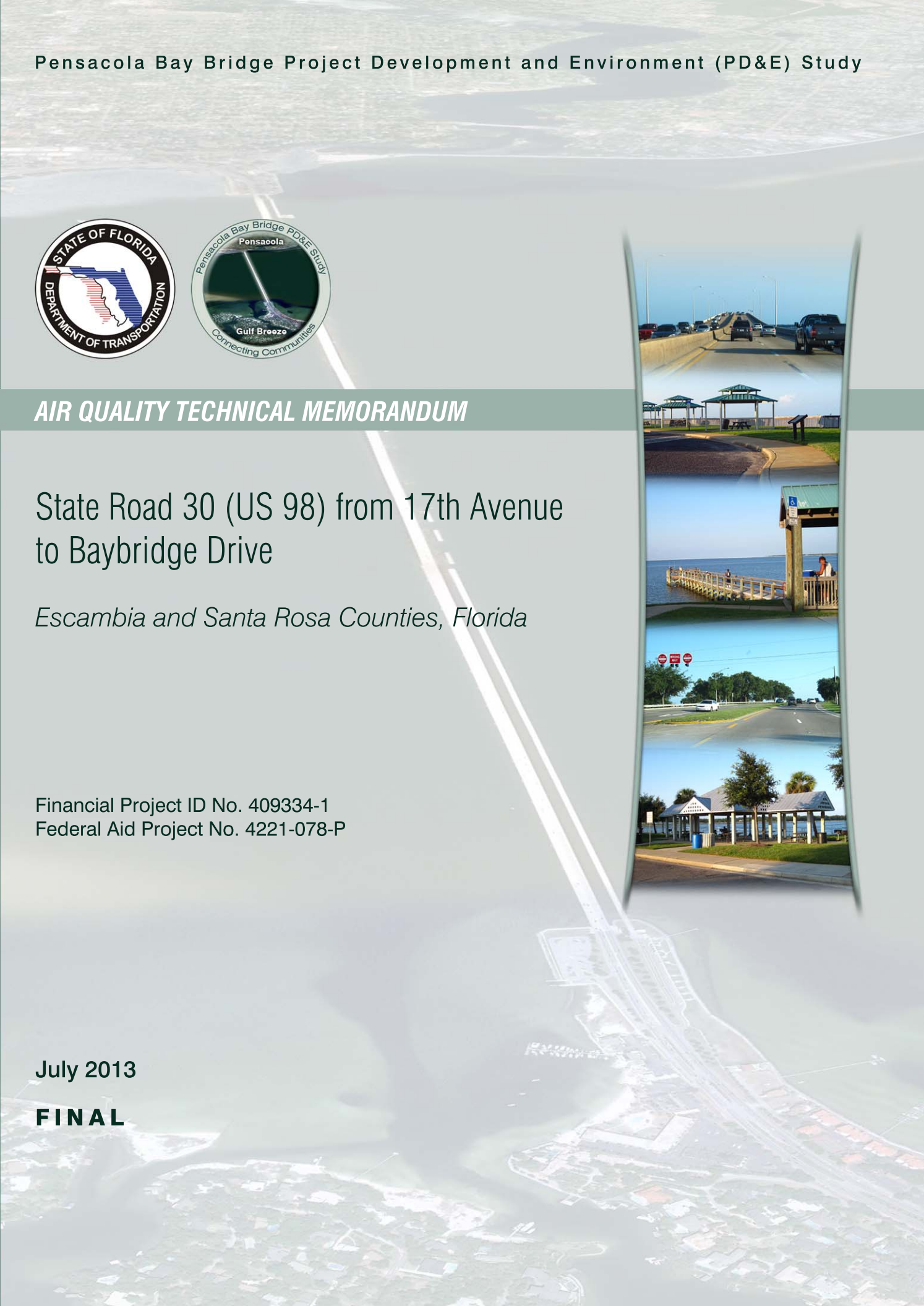
State Road 30 (US 98) from 17th Avenue  
to Baybridge Drive

*Escambia and Santa Rosa Counties, Florida*

Financial Project ID No. 409334-1  
Federal Aid Project No. 4221-078-P

July 2013

**FINAL**



## AIR QUALITY TECHNICAL MEMORANDUM

Date: July 2, 2013  
To: Florida Department of Transportation, District Three

Prepared by: Alex Aycrigg, Environmental Specialist  
Company: Reynolds, Smith and Hills, Inc.

Subject: AIR QUALITY SCREENING TEST  
Pensacola Bay Bridge Project Development and Environment (PD&E) Study  
SR 30 (US 98) from 17<sup>th</sup> Avenue to Baybridge Drive  
Escambia and Santa Rosa Counties, Florida  
Financial Project ID No.: 409334-1  
Federal Aid Project No.: 4221-078-P

The referenced proposed project is located in Escambia and Santa Rosa Counties which is currently designated as being in attainment for the following criteria air pollutants: ozone/nitrogen dioxide/particulate matter (2.5 microns in size and 10 microns in size)/sulfur dioxide/carbon monoxide/lead.

The project alternatives were subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The Florida Department of Transportation's (FDOT's) screening model, CO Florida 2012, uses the latest United States Environmental Protection Agency (USEPA)-approved software (Motor Vehicle Emission Simulator and CAL3QHC) to produce estimates of one-hour and eight-hour CO concentrations at default air quality receptor locations. The one-hour and eight-hour estimates can be directly compared to the one- and eight-hour National Ambient Air Quality Standards (NAAQS) for CO that are 35 parts per million (ppm) and 9 ppm, respectively.

The roadway intersection forecast to have the highest total approach traffic volume was 17<sup>th</sup> Avenue and SR 30 (US 98). The Build and No-Build scenarios were evaluated for both the opening year 2020 and the design year 2040. The traffic data used in the evaluation is attached to this memorandum.

Estimates of CO were predicted for the default receptors which are located 10 feet to 150 feet from the edge of the roadway. Based on the results from the screening model, 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 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.

The project is located in an area which is designated 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.

Construction activities will cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to all applicable State and local regulations and to the FDOT standard Specifications for Road and Bridge Construction.

## TRAFFIC DATA FOR AIR QUALITY ANALYSIS

Project Description: Pensacola Bay Bridge PD&E Study  
 SR 30 (US 98) from 17<sup>th</sup> Avenue to Baybridge Drive  
 Escambia and Santa Rosa Counties, Florida  
 Financial Project No.: 409334-1  
 Federal Aid Project No.: 4221-078-P

**Traffic Data for SR 30 (US 98) and 17<sup>th</sup> Avenue Signalized Intersection**

Project Scenarios	Project Alternative	Roadway Segment (Number of Lanes)	Design Hour Intersection Approach Volume	Intersection Approach Speed (miles per hour)
Opening Year (2020)	No Build Alternative	SR 30 (US 98) Westbound (2-Lane)	3,090	35
		SR 30 (US 98) Eastbound (2-Lane)	1,920	35
		17 <sup>th</sup> Avenue Southbound (1-Lane)	995	30
	Build Alternative	SR 30 (US 98) Westbound (2-Lane)	3,140	35
		SR 30 (US 98) Eastbound (2-Lane)	1,960	35
		17 <sup>th</sup> Avenue Southbound (1-Lane)	1,020	30
Design Year (2040)	No Build Alternative	SR 30 (US 98) Westbound (2-Lane)	3,505	35
		SR 30 (US 98) Eastbound (2-Lane)	2,175	35
		17 <sup>th</sup> Avenue Southbound (1-Lane)	1,125	30
	Build Alternative	SR 30 (US 98) Westbound (2-Lane)	3,745	35
		SR 30 (US 98) Eastbound (2-Lane)	2,325	35
		17 <sup>th</sup> Avenue Southbound (1-Lane)	1,205	30

Source: Final Design Traffic Technical Memorandum (August 2011) Figures 5-1, 5-3, 7-1, and 7-3 AM Peak Hour Volumes

**AIR QUALITY SCREENING MODEL RESULTS**  
**CO Florida 2012**

CO Florida 2012 - Results  
Tuesday, May 14, 2013

Project Description

Project Title Pensacola Bay Bridge PD&E  
Facility Name SR 30 (US 98) and 17th Avenue  
User's Name Alex Aycrigg  
Run Name 2020 No Build Opening Year  
FDOT District 3  
Year 2020  
Intersection Type East Tee  
Speed Arterial 30 mph  
Approach Traffic Arterial 3090 vph

Environmental Data

Temperature 39.3 °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	5.5	3.3
2	5.5	3.3
3	5.8	3.5
4	5.0	3.0
5	4.7	2.8
6	4.6	2.8
7	4.9	2.9
8	5.6	3.4
9	5.3	3.2
10	5.2	3.1
11	5.5	3.3
12	5.5	3.3
13	5.6	3.4
14	5.5	3.3
15	5.2	3.1
16	5.2	3.1
17	5.2	3.1

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

CO Florida 2012 - Results  
Tuesday, May 14, 2013

Project Description

Project Title Pensacola Bay Bridge PD&E  
Facility Name SR 30 (US 98) and 17th Avenue  
User's Name Alex Aycrigg  
Run Name 2020 Build Opening Year  
FDOT District 3  
Year 2020  
Intersection Type East Tee  
Speed Arterial 30 mph  
Approach Traffic Arterial 3140 vph

Environmental Data

Temperature 39.3 °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	5.5	3.3
2	5.5	3.3
3	5.8	3.5
4	5.0	3.0
5	4.7	2.8
6	4.6	2.8
7	5.0	3.0
8	5.6	3.4
9	5.4	3.2
10	5.2	3.1
11	5.5	3.3
12	5.6	3.4
13	5.7	3.4
14	5.6	3.4
15	5.3	3.2
16	5.2	3.1
17	5.2	3.1

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

CO Florida 2012 - Results  
Tuesday, May 14, 2013

Project Description

Project Title Pensacola Bay Bridge PD&E  
Facility Name SR 30 (US 98) and 17th Avenue  
User's Name Alex Aycrigg  
Run Name 2040 No Build Design Year  
FDOT District 3  
Year 2040  
Intersection Type East Tee  
Speed Arterial 30 mph  
Approach Traffic Arterial 3505 vph

Environmental Data

Temperature 39.3 °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	5.3	3.2
2	5.4	3.2
3	5.6	3.4
4	4.7	2.8
5	4.4	2.6
6	4.4	2.6
7	4.7	2.8
8	5.4	3.2
9	5.1	3.1
10	4.9	2.9
11	5.3	3.2
12	5.3	3.2
13	5.5	3.3
14	5.4	3.2
15	5.1	3.1
16	5.1	3.1
17	5.1	3.1

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

CO Florida 2012 - Results  
Tuesday, May 14, 2013

Project Description

Project Title Pensacola Bay Bridge PD&E  
Facility Name SR 30 (US 98) and 17th Avenue  
User's Name Alex Aycrigg  
Run Name 2040 Build Design Year  
FDOT District 3  
Year 2040  
Intersection Type East Tee  
Speed Arterial 30 mph  
Approach Traffic Arterial 3745 vph

Environmental Data

Temperature 39.3 °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	5.4	3.2
2	5.5	3.3
3	5.6	3.4
4	4.9	2.9
5	4.5	2.7
6	4.4	2.6
7	4.8	2.9
8	5.7	3.4
9	5.2	3.1
10	5.1	3.1
11	5.5	3.3
12	5.6	3.4
13	5.7	3.4
14	5.5	3.3
15	5.3	3.2
16	5.1	3.1
17	5.1	3.1

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