ENVIRONMENTAL ASSESSMENT

for

US 190 (COLLINS BOULEVARD) WIDENING
(LOUISIANA HIGHWAY 25 TO US 190 BUSINESS)
ST. TAMMANY PARISH
STATE PROJECT NO. H.004987

February 2017

REGIONAL PLANNING COMMISSION

and

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST

WBS No. H.004987
Name: US 190 (Collins Boulevard) Widening
Route: US 190 (Collins Boulevard) from LA 25 to US190 Business
Parish: St. Tammany

1. General Information

☐Conceptual Layout ☒Line and Grade ☐Preliminary Plans
☐Survey ☐Plan-in-Hand ☐Advance Check Prints

2. Class of Action

☐ Environmental Impact Statement (E.I.S.) ☐ State Funded Only (EE/EF/ER)
☒ Environmental Assessment (E.A.)
☐ Categorical Exclusion (C.E.)
☐ Programmatic C.E. (as defined in FHWA letter of agreement dated 03/15/95)

3. Project Description

Please refer to the project description provided on Page 1 of the EA.

4. Public Involvement

☒ Views were solicited.
☐ Views were not solicited.
☒ Public Involvement events held. (List events and dates in Section 11.)
☒ A public hearing/opportunity for requesting a public hearing required. (List dates in Section 11.)
☐ A public hearing/opportunity for requesting a public hearing not required.

5. Real Estate

	NO	YES	N/A
a. Will additional **right-of-way** be required?	☐	☒	☐
Is right-of-way required from a **burial/cemetery** site? ……..	☒	☐	☐
Is right-of-way required from a Wetland Reserve Program (**WRP**) property?	☒	☐	☐
Is required right-of-way prime **farmland**? (Use form AD 1006, if needed) ...	☒	☐	☐
b. Will any **relocation** of residences or businesses occur?	☐	☒	☐
c. Are construction or drainage **servitudes** required?	☐	☒	☐

6. Section 4(f) and Section 6(f)

	NO	YES	N/A
a. Will historic sites or publicly owned parks, recreation areas, wildlife or waterfowl refuges (**Section 4f**) be affected? ……	☐	☒	☐
b. Are properties acquired or improved with **L&WC** funds affected? …….....	☒	☐	☐

7. Cultural Section 106

		NO	YES	N/A
a.	Are any **known historic properties** adjacent or impacted by the project? (If so, list below)……..	☒	☐	☐
b.	Are any k**nown archaeological sites** adjacent or impacted by the project? (If so, list site # below) ……..	☒	☐	☐
c.	Would the project affect property owned by or held in trust for a federally recognized **tribal government**?	☒	☐	☐

8. Natural & Physical Environment

		NO	YES	N/A
a.	Are **wetlands** affected? …….....	☐	☒	☐
b.	Are **other waters** of the U.S. affected? …….....	☐	☒	☐
c.	Are **Endangered/Threatened Species**/Habitat affected? ……	☒	☐	☐
d.	Is project within 100 Year **Floodplain**? ….....	☐	☒	☐
e.	Is project in **Coastal Zone** Management Area? ….....	☒	☐	☐
f.	Is project in a **Coastal Barrier Resources** area? ……..	☒	☐	☐
g.	Is project on a **Sole Source Aquifer**? ……..……..	☐	☒	☐
h.	Is project impacting a **navigable waterway**? ….....	☒	☐	☐
i.	Are any State or Federal **Scenic Rivers/Streams** impacted? ……	☒	☐	☐
j.	Is a **noise** analysis warranted (Type I project) ……..……	☐	☒	☐
k.	Is an **air** quality study warranted?	☒	☐	☐
l.	Is project in a **non-attainment** area? …….....	☒	☐	☐
m.	Is project in an approved Transportation Plan, Transportation Improvement Program (TIP) and State Transportation Improvement Program (**STIP**)?	☐	☒	☐
n.	Are **construction** air, noise, & water impacts major? ……..	☒	☐	☐
o.	Will the project affect or be affected by a **hazardous waste site**, leaking underground storage tank, oil/gas well, or other potentially contaminated site?	☒	☐	☐

9. Social Impacts

		NO	YES	N/A
a.	Will project change **land use** in the area? ……	☒	☐	☐
b.	Are any c**hurches and schools** impacted by or adjacent to the project? …... (If so, list below)	☐	☒	☐
c.	Has **Title VI** been considered? ……	☐	☒	☐
d.	Will any **specific groups** be adversely affected? (i.e., *minorities, low-income, elderly, disabled,* etc.) ……	☒	☐	☐
e.	Are any **hospitals, medical facilities, fire police** facilities impacted by or adjacent to the project? (If so, list below)……	☐	☒	☐
f.	Will **Transportation patterns** change? ……..	☒	☐	☐
g.	Is **Community cohesion** affected by the project? ……	☒	☐	☐
h.	Are **short-term social/economic** impacts due to construction considered major?	☒	☐	☐

i.	Do conditions warrant **special construction times?** (i.e., *school in session, congestion, tourist season, harvest*) ……	☒	☐	☐
j.	Were **Context Sensitive Solutions** considered? (If so explain below)…….	☒	☐	☐
k.	Were **bike and pedestrian** accommodations considered? (explain below)…..	☐	☒	☐
l.	Will the **roadway/bridge be closed?** (If yes, answer questions below)…….	☒	☐	☐
	Will a **detour bridge** be provided?	☐	☐	☒
	Will a **detour road** be provided?	☐	☐	☒
	Will a **detour route** be signed?	☐	☐	☒

10. Permits (Check all permits that might be required)

☐Corps Nationwide	☐CUP/Consistency Determination	☐LA Scenic Stream
☒Corps Section 404/10	☐USCG Bridge	☒DEQ WQC
☐Levee	☒USCG Navigational Lights	☒LPDES Storm Water
☐Other (explain below)		

11. Other (Use this space to explain or expand answers to questions above.)

Question 4: Two public meetings were held at Council Chambers in Covington, Louisiana on October 21, 2010 and June 11, 2015. Refer to EA Section 5.2 - Public Meetings.
Question 6a: Portions of the Tammany Trace will be relocated.
Question 5b: Acquisition of additional ROW for the Build Alternative might require three residential relocations and 26 non-residential relocations. Refer to EA Section 4.1.3.
Question 8a: Refer to EA Section 4.1.11 - Wetlands and Other Waters.
Question 8d: Refer to EA Section 4.1.12 - Floodplains.
Question 8g: Refer to EA Section 4.1.14 - Subsurface Water.
Question 8j: Refer to EA Section 4.1.18 - Noise.
Question 8k: Refer to EA Section 4.1.19 - Air Quality.
Question 8o. LDEQ assessments are ongoing at Main Street Shell due to a UST line test failure. Refer to EA Section 4.1.20 Hazardous Materials.
Question 9b. The Build Alternative would impact parking areas at Northlake Assembly of God Church and at Collins Boulevard Baptist Church. Refer to EA Section 4.1.8 – Community Facilities, Services, and social Resources.
Question 9e. St. Tammany Fire Protection District 12 Headquarters is adjacent to the project limits but would not be impacted. Refer to EA Section 4.1.8 – Community Facilities, Services, and social Resources.
Question 9k: The Build Alternative includes a side path along the length of the project corridor. Refer to EA Section 3.2 - Build Alternative.

Preparer: Jeff Robinson, P.E.
Title: Project Manager
Date: July 31, 2015

Attachments

☒ S.O.V. and Responses (Appendix B)
☒ Wetlands Finding (Appendix D)
☒ Project Description Sheet (Appendix B)
☒ Conceptual Stage Relocation Plan (Appendix G)
☒ Noise Analysis (Appendix E)
☒ Air Analysis (Appendix E)

☒ Exhibits and/or Maps (Appendix A)

☐ 4(f) Evaluation

☐ Form AD 1006 (Farmlands)

☒ 106 Documentation (Appendices B and C)

☒ Other: Recognized Environmental Conditions Survey (Appendix F)

LIST OF ACRONYMS

LIST OF ACRONYMS

AADT	Annual Average Daily Traffic
APE	Area of Potential Effect
ASTM	American Society for Testing and Materials
BMP	Best Management Practice
CFR	Code of Federal Regulations
CZMA	Coastal Zone Management Act
dBA	A-weighted Decibels
DOT	U.S. Department of Transportation
DOTD	Louisiana Department of Transportation and Development
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
LA 21	Louisiana Highway 21 and, within project limits, Military Road
LA 25	Louisiana Highway 25
LA 36	Louisiana Highway 36
LA 437	Louisiana Highway 437 and, within project limits, Lee Road
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LNHP	LDWF Natural Heritage Program
LOS	Level of Service
LPDES	Louisiana Pollutant Discharge Elimination System
MPH	Miles per hour
MSAT	Mobile Source Air Toxics
MSFCA	Magnuson-Stevenson Fishery Conservation Act
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
REC	Recognized Environmental Condition
ROW	Right-of-Way
RPC	Regional Planning Commission
SHPO	State Historic Preservation Officer
STAA	Surface Transportation Authorization Act
US 190	U.S. Highway 190 and, within project limits, Collins Boulevard

US 190B	U.S. Highway 190 (Business)
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank

SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

The following permits would be obtained and mitigation measures implemented to avoid or minimize potential adverse environmental impacts associated with the US 190 (Collins Boulevard) Widening Project. Section 4.5 provides additional details.

PERMITS

- Potentially jurisdictional wetlands and Other Waters of the U.S., approximately 2.29 and 0.97 acres, respectively, were identified in the project area. Acreage of wetlands and Other Waters of the U.S. impacted will be determined as project plans are finalized. A preliminary wetland finding would be provided to the U.S. Army Corps of Engineers (USACE) for a Jurisdictional Determination. A USACE Section 404 permit would be required prior to placing fill and/or starting construction.

- If a wetland permit is required, Water Quality Certification would be required from the Louisiana Department of Environmental Quality (LDEQ) and would be obtained in conjunction with the USACE Section 404 permit process.

- A Louisiana Pollutant Discharge Elimination System (LPDES) Permit and Storm Water Pollution Prevention Plan would be required.

MITIGATION

- Residences and businesses relocated due to project construction would be afforded protections under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Relocation Act), and relocation resources would be available without discrimination to those affected.

- To ensure no net loss of wetlands, project impacts to wetlands would be compensated in accordance with an approved mitigation plan developed during the permitting process.

- To mitigate potential water quality impacts to surface waters, the project would comply with standard Louisiana Department of Transportation and Development (DOTD) best management practices (BMPs) and applicable LDEQ permit provisions to prevent erosion and nonpoint source pollution during construction.

- Required drainage structures would be designed, installed, and maintained to ensure an appropriate flow of water through the project area and to ensure no adverse impacts to natural function of local floodplains.

- To protect future development from becoming incompatible with anticipated highway traffic noise levels, projections of future noise levels for undeveloped lands would be provided to local planning and building officials. As desired, these officials could review project-related noise data during consideration of future land use decisions.

- Short-term construction impacts would be mitigated through adherence to applicable local, state, and federal regulations including, but not limited to, Section 107.14 (Environmental Protection) of the Louisiana Specifications for Roads and Bridges and appropriate LDEQ air quality regulations governing fugitive emissions of particulate matter during road construction (LAC 33:III.1305). Standard specification 107.27 (Archaeological and Historical Findings) dictates procedures necessary in the event archeological or historical material is discovered during the course of construction.

COMMITMENTS

- A construction sequencing plan would be implemented to minimize traffic disruption. Lane closures would be minimized to the extent practicable, and evacuation needs during hurricane season would be addressed.

- Areas within existing state-owned right-of-way (ROW) currently used by businesses would be incorporated into the project to accommodate additional width. Encroachments located within the widened footprint of project need (for example, areas where the widened roadway or side path would be constructed, or where utilities or drainage features would be installed) would be removed during project construction. Any remaining encroachments that fall outside the area of project need would be addressed in accordance with DOTD policy by removal of the encroachment, disposal of excess ROW, or by entering a Joint Use Agreement granting a servitude to St. Tammany Parish for excess area that would be maintained by the parish.

- If hazardous constituents are unexpectedly encountered in the project area during construction operations, DOTD would be immediately notified and appropriate measures for the proper assessment, remediation, and management of contamination would be initiated in accordance with applicable federal, state, and local regulations. Liquid materials and chemicals such as fuels, lubricants, and paints would be stored on site during construction in accordance with all applicable regulations and requirements, and the contractor would be required to take appropriate measures to prevent, minimize, and control any release of hazardous materials in construction areas.

- Many of the buildings and residences located along the project were likely constructed with asbestos-containing materials (ACM). Any structure demolished as part of project construction will be surveyed so that ACM can be removed and disposed of in accordance with applicable environmental regulations.

- ROW required for the project will extend near or possibly acquire underground storage tanks (USTs), and remediation actions could be required prior to project construction. As project design and ROW plans are completed, soil sampling and screening could be warranted: 1) along the required ROW limit at its closest point of approach to USTs in the event a portion of a UST site is acquired that does not include the USTs; and 2) within UST beds in the event a UST site (or portion thereof) is acquired that includes the USTs.

- The project would be constructed in three phases (Section 4.2.1). Among other improvements, Phase 3 includes new ramps and approaches to a new Bogue Falaya River Bridge from Boston Street. Phase 3 cannot be constructed unless St. Tammany Parish obtains ownership of Tammany Trace ROW owned by Canadian National Railroad. Vertical clearances planned for the new ramps and approaches are insufficient for crossing ROW that could be redeveloped for rail traffic. Should the parish fail to acquire the property, Phase 3 improvements would be redesigned and readdressed in a future National Environmental Policy Act (NEPA) document, i.e. Supplemental Environmental Assessment (EA).

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

DOTD and the Regional Planning Commission (RPC) for the parishes of Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany, and Tangipahoa have prepared an EA to examine alternatives and environmental impacts for the US 190 (Collins Boulevard) Widening Project from Louisiana Highway 25 (LA 25) to US 190 Business (US 190B) in St. Tammany Parish. The total length of the project is approximately 2.7 miles. The project also includes improvements to approximately 1,400 feet of LA 25 and to 1,400 feet of LA 21 (Military Road).

Collins Boulevard currently consists of two travel lanes (one southbound, one northbound) and a center turn lane from south of LA 25 to north of the Bogue Falaya River Bridge. The project corridor includes 20 intersections, nine of which are signalized and 11 of which are not.

In May 2010, DOTD and RPC proposed to improve traffic capacity along a portion of the roadway from the intersection of Collins Boulevard with LA 25 to the intersection of US 190B with West Front Street. In 2012, a preliminary draft EA recommended widening the roadway to four travel lanes separated by a median; a four-lane bridge across the Bogue Falaya River; and roundabouts at the Collins Boulevard intersections with Columbia Street and LA 437 (Lee Road) and at the US 190B intersections with E. Boston Street and Military Road.

Based on an updated traffic corridor study completed in 2013, DOTD and RPC have revised the proposed improvements with the purpose of further reducing traffic delays and improving capacity along the project corridor. The project is slightly longer and now extends an additional 1,400 feet along LA 25 and an additional 1,400 feet along Military Road. The project also includes additional roundabouts at the Collins Boulevard intersections with 32nd Avenue, E. Magee Street, and LA 25; the Poole Drive intersection with Columbia Street; the Military Road intersection with LA 36; and the US 190B intersection with Front Street.

PURPOSE

The primary purpose of the project is to improve traffic capacity and reduce congestion and delays along Collins Boulevard between LA 25 and US 190B.

NEED

Collins Boulevard is a major corridor in Covington that also serves as the main link for motorists traveling between Covington and I-12 or the Causeway Bridge. This section of Collins Boulevard currently experiences considerable daily congestion, which is expected to worsen with anticipated future increases in traffic volume.

Level of Service (LOS) measures operational conditions for roadways using six letter grades (LOS A represents free-flow traffic; LOS F represents operational failure due to excess traffic). Existing 2013 and design year 2033 LOS were determined using traffic data collected by DOTD in 2013 and forecasted growth rates. Analysis indicates 2033 LOS at major intersections will worsen or remain unchanged under the No-Build Alternative. Traffic delays and congestion will increase at Collins Boulevard intersections with 32nd Avenue and Lee Road, and at the Military

Road intersection with LA 36. The project would replace these intersections with roundabouts and maintain or improve LOS during peak traffic.

BUILD ALTERNATIVE

The Build Alternative currently being evaluated would widen the roadway to four 12-foot travel lanes (two northbound, two southbound) separated by a 30-foot-wide median. Eight-foot-wide paved shoulders would be constructed for the outside lanes, and a curb and gutter would be constructed along both sides of the road. The shoulders and/or curb and gutters could be reduced or excluded during design. The Bogue Falaya River Bridge would be replaced with two bridges (four travel lanes; two northbound, two southbound). Between the bridge and Lee Road, the road would be widened to five 12-foot travel lanes (three northbound, two southbound) to include an extended right turn lane onto Lee Road. Ten roundabouts would replace signalized intersections to facilitate traffic flow. A side path for pedestrians and bicycles would be constructed along the project corridor from LA 25 to the existing Tammany Trace where it crosses the Bogue Falaya River. A portion of LA 36 would be realigned near its intersection with Military Road for improved intersection operation.

Compared to the No-Build Alternative, the Build Alternative would provide better intersection operations and decrease traffic delays and congestion. It would also provide a side path along the full length of the corridor that connects with the Tammany Trace and provides pedestrian and bicycle access to businesses and residences in the project corridor.

ASSESSMENT

In compliance with the National Environmental Policy Act (NEPA) of 1969, the alternatives were evaluated for their impacts to the environment.

A wetland delineation conducted for the project indicates approximately 2.29 acres of potentially jurisdictional wetlands and 0.97 acres of potentially jurisdictional Other Waters of the U.S. are located in the project area. Depending on final project plans, wetlands might be impacted. If so, a wetland permit would be required.

The project is not located within the Louisiana Coastal Zone.

A cultural resources survey of the project area in 2015 concluded no historic properties are located within the direct or indirect Area of Potential Effect (APE) for the proposed project.

The Build Alternative might impact areas within state-owned ROW used by businesses. Areas within existing state-owned ROW currently used by businesses would be incorporated into the project to accommodate additional width. Encroachments located within the widened footprint of project need (for example, areas where the widened roadway or side path would be constructed, or where utilities or drainage features would be installed) would be removed during project construction. Any remaining encroachments that fall outside the area of project need would be addressed in accordance with DOTD policy by removal of the encroachment, disposal of excess

ROW, or by entering a Joint Use Agreement granting a servitude to St. Tammany Parish over excess area that would be maintained by the parish.

Additional ROW needed for the project might require three residential and 26 non-residential relocations.

Impacts to businesses and properties located within existing ROW would be addressed in accordance with DOTD policy.

Project impacts to minority and low-income populations would not be disproportionately high or adverse.

No threatened or endangered species would be impacted.

No violations of carbon monoxide thresholds for air quality are anticipated as a result of the project.

A Recognized Environmental Conditions Assessment conducted for the project revealed evidence of one potential hazardous, toxic, or radioactive waste site within project ROW. According to LDEQ records, assessments are ongoing.

The project area contains no wetland reserve program properties or scenic streams.

The Southern Hills Aquifer underlies the project area; however, the U.S. Environmental Protection Agency (EPA) has confirmed the project would have no adverse effects on the aquifer's water quality.

No adverse impacts to floodplains are anticipated as a result of the proposed Build Alternative.

No prime farmland or agricultural use would be impacted.

The estimated cost for the Build Alternative is approximately $102.8 million.

PREFERRED ALTERNATIVE

The Build Alternative is preferred over the No-Build Alternative because it would improve traffic capacity and reduce congestion and delays along Collins Boulevard between LA 25 and US 190B. It would also provide a side path along the full length of the corridor that connects with the Tammany Trace and provides pedestrian and bicycle access to businesses and residences.

ENVIRONMENTAL ASSESSMENT

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

RPC and DOTD have prepared this EA to examine alternatives and environmental impacts for the US 190 (Collins Boulevard) Widening Project from LA 25 to US 190B, a distance of approximately 2.7 miles, in Covington, St. Tammany Parish, Louisiana (figures 1 and 2). The project would also construct improvements to approximately 1,400 feet of LA 25 and to 1,400 of Military Road.

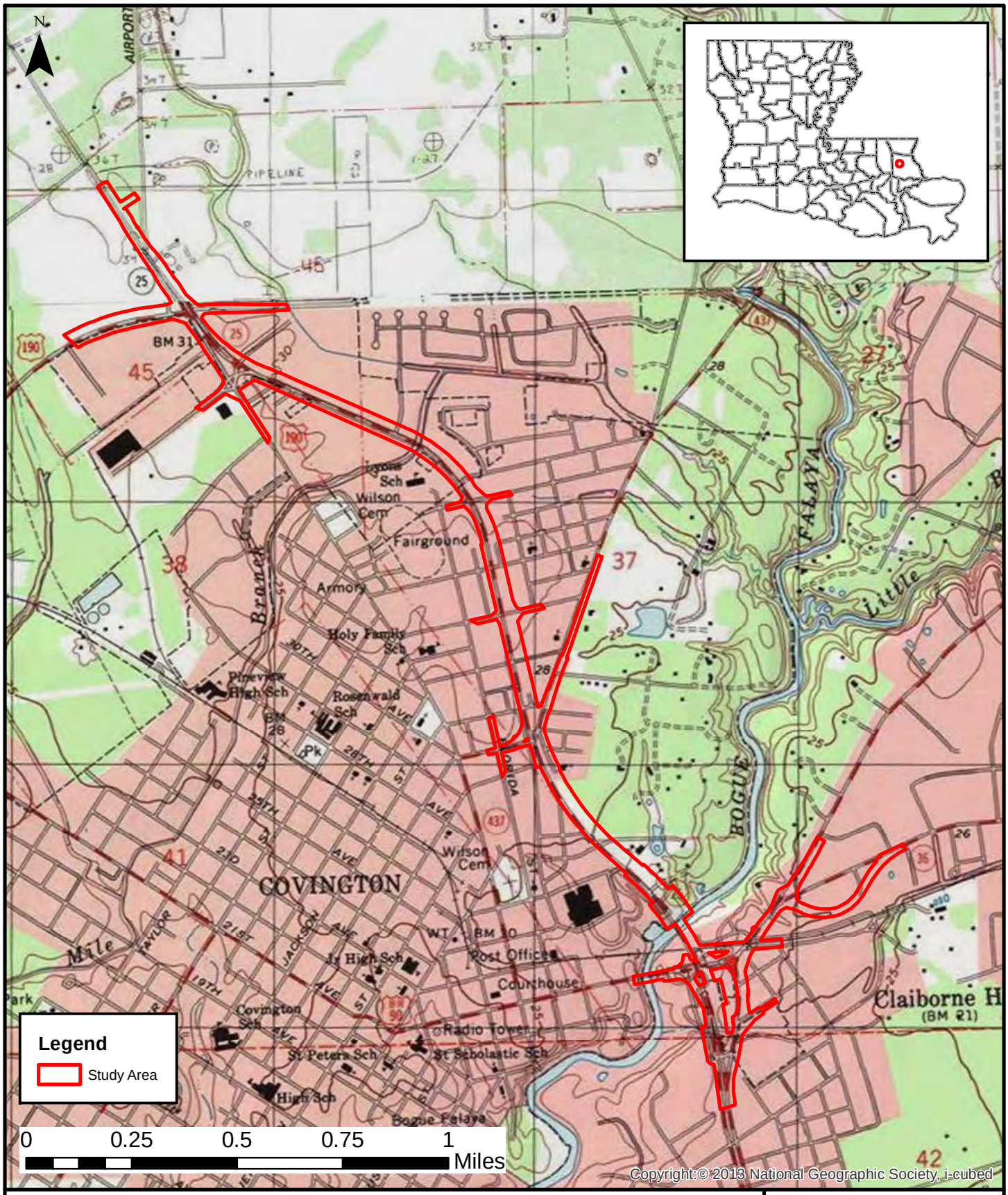
Collins Boulevard currently consists of two travel lanes (one southbound, one northbound) and a center turn lane from south of LA 25 to north of the two-lane Bogue Falaya River Bridge. The right turn lane from northbound Collins Boulevard to Lee Road would be extended before construction of the proposed widening project as an interim measure to reduce congestion at this intersection. The NEPA process was completed for this interim DOTD project (State Project Number H.0098350) in 2013 through a Categorical Exclusion.

The Build Alternative currently being evaluated would widen the roadway to four 12-foot travel lanes (two northbound, two southbound) separated by a 30-foot-wide median. Eight-foot-wide paved shoulders would be constructed for the outside lanes, and a curb and gutter would be constructed along both sides of the road. The shoulders and/or curb and gutters could be reduced or excluded during design. The existing Bogue Falaya River Bridge would be replaced with two bridges (four lanes; two northbound, two southbound). Between the bridge and Lee Road, the road would be widened to five 12-foot travel lanes (three northbound, two southbound) to include an extended right turn lane onto Lee Road. Ten roundabouts would replace signalized intersections to facilitate traffic flow. A side path for pedestrians and bicyclists would be constructed along the project corridor from LA 25 to the existing Tammany Trace where it crosses the Bogue Falaya River. A portion of LA 36 would be realigned near its intersection with Military Road for improved intersection operation.

This EA was prepared to evaluate effects of the proposed alternatives on the natural and human environment.

1.2 WHAT IS AN ENVIRONMENTAL ASSESSMENT?

NEPA directs federal agencies to evaluate alternatives and impacts to the natural and human environment for proposed federal actions. The NEPA process requires coordination with local, state, and federal agencies and the public throughout the planning process. Communities and stakeholders are provided the opportunity to ask questions and provide comments about project alternatives. Public input is documented in the EA and considered by the project team in developing alternatives. Unlike an Environmental Impact Statement (EIS), which is prepared when significant impacts are known, an EA is a concise public document that presents sufficient evidence and analysis for determining whether impacts from the proposed action warrant further analysis in an EIS, or whether a Finding of No Significant Impact (FONSI) is appropriate.



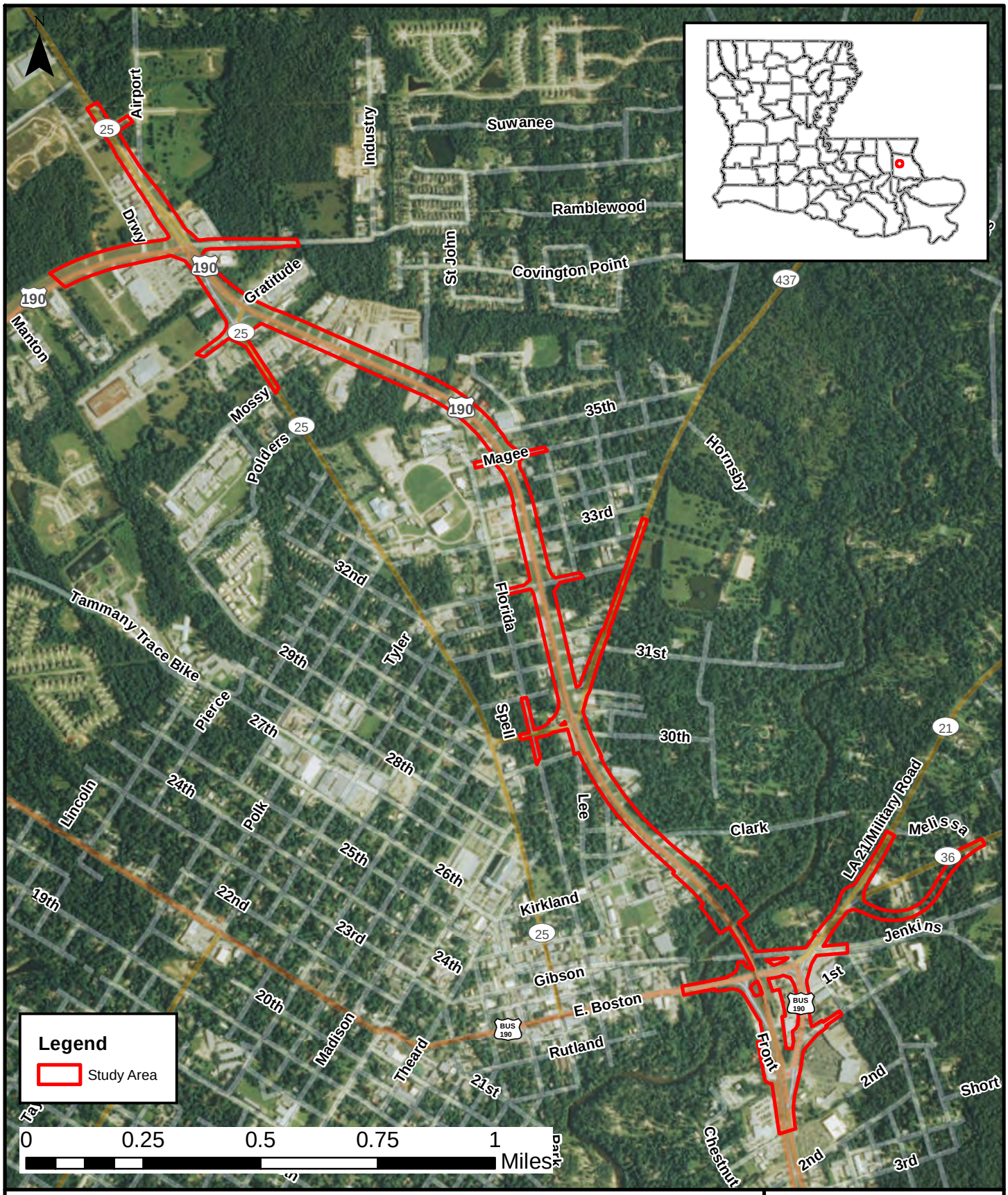
SITE LOCATION

US 190/Collins Boulevard Widening Project
St. Tammany Parish, Louisiana
State Project No. H.004987, Federal Project No. H004987

Data Sources & Dates. For example: 7.5 Minute USGS Topographic Map East Baton Rouge (1989)

GEC

Figure: 1
Date: July 2015
Scale:1:20,000
Source: ESRI/GEC
Map ID:4987-3160



PROJECT VICINITY

US 190/Collins Boulevard Widening Project
St. Tammany Parish, Louisiana
State Project No. H.004987, Federal Project No. H004987

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Figure: 2
Date: July 2015
Scale:1:18,000
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1.3 WHERE IS THE PROPOSED PROJECT IN THE DEVELOPMENT PROCESS?

The NEPA process for this project began in 2010 when project information and a request for comments were sent to resource agencies, elected officials, and other stakeholders. A public meeting was held for the project on October 21, 2010 to provide information about the project and to record comments. Two Build Alternatives were presented at the meeting, both of which would widen the roadway to four travel lanes.

In 2013, DOTD recorded new traffic data for the project corridor and applied new growth forecasts to update traffic volume estimates for the roadway, and the updates indicated additional improvements were warranted. The proposed Build Alternatives developed in 2010 were reformulated to further reduce congestion and increase capacity, and a single, revised Build Alternative was presented at a second public meeting on June 11, 2015. With the Federal Highway Administration's (FHWA's) approval, this EA is currently being distributed to regulatory agencies, stakeholders, and the public to solicit comments. A public hearing will be held following the distribution of the EA to provide interested parties an opportunity to learn more about the project and to submit comments.

2.0 PROJECT PURPOSE AND NEED

2.1 PURPOSE OF THE PROJECT

The primary purpose of the project is to increase capacity and reduce congestion along Collins Boulevard from LA 25 to US 190B.

A secondary objective of the project includes improving safety at the US 190/LA 25 intersection. The traffic analyses conducted for this project identified that the existing intersection has a crash rate (crashes per million vehicles) more than three times the statewide average crash rate compared to other similar intersections statewide. This results in a high potential for safety improvement by implementing intersection improvements.

2.2 NEED FOR THE PROJECT

Collins Boulevard is a major corridor in Covington that serves as the main link for motorists traveling between Covington and I-12 or the Causeway Bridge. The section of Collins Boulevard addressed in this EA currently experiences considerable daily congestion, which is expected to worsen with anticipated future increases in traffic volume.

Traffic capacity, congestion, and safety data analyzed in this report are documented in *U.S. 190 (Collins Blvd.) Corridor Study* (Neel-Schaffer, 2014).

2.2.1 Capacity

Traffic data were initially collected in June 2010. In 2013, DOTD updated traffic counts and forecasts to refine the Build Alternatives. Model results indicated an increase in traffic demand

and reduced capacity from existing year 2013 to design year 2033 conditions within the study area (Table 1).

Table 1. Average Daily Traffic

Year	Near LA 25	Lee Road to Bridge
2013	21,070	29,133
2033	35,378	59,249

Source: Neel-Schaffer, Inc.

2.2.2 Congestion

LOS describes operational conditions within a traffic stream based on speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Depending on these operational conditions, the roadway is assigned a grade: "A" represents free-flow traffic; "D" describes decreasing free-flow levels, with reduced speeds and more limited maneuverability within the traffic stream; "F" represents operational failure, with ease of traffic movement becoming increasingly difficult.

Existing 2013 and future 2033, with- and without-project LOS (Table 2), were determined using traffic data collected by DOTD in 2013 and forecasted growth rates. Analysis indicates 2033 LOS at major intersections will worsen or remain unchanged under the No-Build Alternative. Traffic delays and congestion will increase at Collins Boulevard intersections with 32nd Avenue and Lee Road, and at the Military Road intersection with LA 36. The project would replace the intersections shown in Table 2 with roundabouts and maintain or improve LOS during peak traffic.

Table 2. Project Corridor Existing and Future Level of Service (LOS), With- and Without-Project

Intersection	2013 Existing		2033 No-Build		2033 Build	
	AM	PM	AM	PM	AM	PM
LA 25 (Military Road)[1]	C	C	C	C	B	B
LA 437 Spur[1]	B	D	B	D	A	B
Magee Street[2]	NB[3]: C	NB: C	NB: C	NB: C	A	B
	SB[3]: C	SB: C	SB: C	SB: C		
32nd Avenue[1]	C	B	C	C	B	B
LA 437 (Lee Road)[1]	F	D	F	E	B	B
Walgreens @ US190B East Ramp[1]	A	B	A	B	A	B
Military Road @ LA 36[1]	C	B	D	C	A	A
U.S. 190B West Ramp[2]	--[4]	--[4]	--[4]	--[4]	A	B
U.S. 190B East Ramp[1]	D	C	D	C	C	A

[1]Existing (2013) signalized intersection replaced with a roundabout for 2033 Build analysis.
[2]Existing (2013) unsignalized intersection replaced with a roundabout for 2033 Build analysis.
[3]NB is northbound, SB is southbound.
[4]Level-of-service not calculated/applicable because this is a yield-controlled intersection.

Source: Neel-Schaffer, Inc.

2.2.3 Safety

With increased traffic demand and diminished available capacity, the frequency of crashes along Collins Boulevard (US 190) have also increased. The data for the intersection of US 190 and LA 25 were analyzed and show that the number of collisions were at or worse than the statewide average for left-turn, right-turn, and side swipe crashes. The existing crash data also show that 50 percent of the crashes at the intersection resulted in injury. Based on the safety benefit analysis that was conducted for the intersection, it is anticipated that incorporating a multilane roundabout at the intersection would provide more safety benefit (larger reduction in crashes) compared to the existing intersection configuration or compared to conventional intersection improvements such as the addition of left turn lanes for all approaches. The money saved from crash reductions over 20 years for the proposed roundabout would account for over 75 percent of the total construction cost of the roundabout at US 190 and LA 25.

3.0 ALTERNATIVES CONSIDERED

Preliminary alternatives to increase capacity for the roadway were first developed and evaluated in 2010. They included a range of improvements, including construction of additional lanes, a new Bogue Falaya River Bridge, and access management features.

3.1 NO-BUILD ALTERNATIVE

NEPA regulations require evaluation of the No-Build Alternative. The No-Build Alternative assumes no actions would be taken to improve Collins Boulevard capacity. Under this alternative traffic operations will worsen. Side street approaches will have longer delays and degraded LOS would continue to worsen at major intersections.

3.2 BUILD ALTERNATIVES

3.2.1 Preliminary Alternatives Eliminated from Further Consideration

Initial Build Alternatives included two variations of a four-lane road and median from the Collins Boulevard intersection with LA 25 to the US190B intersection with West Front Street. Both variations included a side path to both sides of Collins Boulevard. No additional ROW would be required for either. Operationally there was little difference between the two alternatives. Build Alternative 1 was symmetrical to the ROW centerline, and Build Alternative 2 was asymmetrical. Under the symmetrical alternative, the existing roadway would be removed and the new, widened roadway would be built on the ROW centerline. Under the asymmetrical alternative, the existing two-lane roadway would remain in place to be used for southbound traffic with a median and additional lanes constructed to the east. Using existing pavement would provide cost savings and accelerated construction schedules. The main features of the two preliminary Build Alternatives included:

- Four travel lanes (two northbound, two southbound) with shoulders, and three northbound travel lanes from the bridge to Lee Road;
- Pedestrian/bike paths on both sides of the corridor;

- A 30-foot-wide median;
- Bridge replacement and widening; and
- Four roundabouts at the following intersections:

    - Collins Boulevard at N. Columbia Street
    - Lee Road at West 30th Avenue
    - E. Boston Street at West Front Street
    - Military Road at LA 36

The alternatives were presented at a stakeholder meeting on August 26, 2010, a local official meeting on September 10, 2010, and a public meeting on October 21, 2010 at Council Chambers in Covington. Attendees indicated support for the widening project.

In 2013, DOTD recorded new traffic data for the project corridor and applied new growth forecasts to update traffic volume estimates for the roadway, and the updates indicated additional improvements were warranted. The proposed Build Alternatives were reformulated to further reduce congestion and increase capacity. Consequently, the two initial Build Alternatives were dismissed from further consideration.

3.2.2 Build Alternative Evaluated in this EA

The Build Alternative entails construction of additional travel lanes, two new bridges over the Bogue Falaya River with four travel lanes, roundabouts and other access management modifications at intersections, and a side path that connects with the Tammany Trace. Appendix A presents line and grade plans and typical sections. Collins Boulevard is currently classified an Urban Arterial-2 (UA-2) roadway with a posted speed of 45 miles-per-hour (mph). The Build Alternative will meet the same classification and use the same posted speed. Table 3 includes selected design standards for UA-2 roads.

Table 3. Design Standards for UA-2 Roads and Streets

Feature	Value
Design Speed (mph)	45
Level of Service	C
Number of Lanes	2-4
Width of Travel Lanes (ft)	11-12
Shoulder Type	Paved
Minimum Vertical Clearance	16

Source: Louisiana DOTD Design Standards for Urban Arterial Roads and Streets.

Widened Lane Configuration: The road would be widened to four 12-foot travel lanes (two northbound, two southbound) separated by a 30-foot-wide median. Eight-foot-wide paved shoulders would be constructed for the outside lanes, and a curb and gutter would be constructed along both sides of the road. The shoulders and/or curb and gutters could be reduced or excluded during design. From the Bogue Falaya River Bridge to Lee Road, the road would be widened to five 12-foot travel lanes (three northbound, two southbound) to include an extended right turn lane onto Lee Road. The project would also widen approximately 1,400 feet of LA 25 and 1,400 feet of Military Road.

Bogue Falaya Bridge Modifications: During Phase 1 of the project a new bridge over the Bogue Falaya River would be constructed adjacent to, and east of, the existing bridge. The existing bridge would remain open to two-way traffic while the new bridge is constructed.

The new bridge would be 54-feet-wide with three 12-foot travel lanes for northbound traffic with an eight-foot shoulder to the inside and a 10-foot shoulder to the outside. The third (outside) travel lane would taper into the two northbound through lanes north of the bridge. Once this new bridge is open to traffic, the existing bridge would be converted to two southbound travel lanes.

During Phase 3, the new bridge would be modified to accommodate north- and southbound traffic while the older, southbound bridge is replaced with a new bridge. During replacement of the southbound bridge, the new, 54-foot-wide bridge would provide four 11-foot-wide lanes (two northbound, two southbound) with two-foot wide shoulders on each side and a two-foot-wide median barrier between the north- and southbound lanes.

The new southbound bridge would be 40-feet-wide with two 12-foot travel lanes with a six-foot shoulder to the inside and a 10-foot shoulder to the outside. Once the new southbound bridge is open to traffic, the 54-foot-wide bridge constructed during Phase I would be converted back to northbound traffic. It would include two 12-foot travel lanes with 15-foot inside and outside shoulders.

Intersection Roundabouts: The Build Alternative would replace existing signalized intersections with roundabouts at 10 locations. Remaining side street intersections would be converted to right-out access to Collins Boulevard. Additional ROW would be required for a portion of each roundabout and at other locations; however, the majority of the project would be constructed within existing ROW. From north to south, roundabouts would be constructed at the following intersections along Collins Boulevard:

- LA 25
- LA 437 Spur (Columbia Street)
- Magee Street
- 32nd Avenue
- Lee Road

The roundabout proposed for the Collins Boulevard intersection with Magee Street would provide direct yield-entry access for the St. Tammany Parish Fairgrounds and Elmer E. Lyon

Elementary School. Additionally, northbound and southbound yield-controlled U-turns would be constructed on Collins Boulevard for Gratitude Drive.

Additional roundabouts would be constructed at the following five intersections:

- Poole Drive and Columbia Street
- US 190B and E. Boston Street
- US 190B and Military Road
- US 190B and Front Street
- Military Road and LA 36

Re-alignment of LA 36 near its intersection with Military Road for improved intersection operation would change the way residences and businesses located along the abandoned reach of LA 36 access the realigned reach.

Side Path: The Tammany Trace, an existing 10-foot-wide multi-use path, crosses the proposed project at two locations: beneath the Bogue Falaya River Bridge and at the Military Road intersection with US 190B. The trace is located on Canadian National Railroad ROW and is the first and only rails-to-trails conversion in Louisiana. The trail is 31 miles long, paved, wheelchair accessible, and available for hiking, biking, skating, and horse-back-riding. The trail begins about 0.5-mile west of the project corridor at the Covington trailhead and passes through Abita Springs, Mandeville, Lacombe, and ends in Slidell. The Covington trailhead includes parking, restrooms, water fountains, and a museum/visitor's center (St. Tammany Parish Government, 2015).

Construction of the project requires re-alignment of the trace at its crossing beneath the bridge, where it would be relocated northward, nearer the river, to provide adequate clearance beneath the new bridge and bridge ramps. The relocation would total approximately 810 feet and would replace approximately 590 feet of existing trace. Like the existing trace, the new, relocated section would be at-grade, paved, and 10 feet wide. A 10-foot by 10-foot, lighted tunnel would be constructed to replace the trace's current at-grade crossing at Military Road.

Project construction includes a new, paved, 10-foot-wide side path, separated five feet from the back of the new roadway's curb, to the west and east sides of Collins Boulevard. The new path would connect with the Tammany Trace just east of its intersection with East Gibson Street, near the Bogue Falaya River, and extend along the west side of Collins Boulevard for 2.1 miles to LA 25. To the east of Collins Boulevard the side path would extend from the intersection with Lee Road to LA 25, a distance of approximately 1.7 miles. The two paths would connect across Collins Boulevard at Lee Road, 32nd Avenue, E. Magee Street, Poole Drive, and LA 25.

3.3 PREFERRED ALTERNATIVE

Identification of a preferred alternative takes into consideration environmental effects of each alternative, cost, public opinion, and other factors. The Build Alternative is recommended as the preferred alternative. Compared to the No-Build Alternative it would provide better intersection operations and decrease traffic delays and congestion. It would also provide a side path along the

full length of the corridor that connects with the Tammany Trace and provides pedestrian and bicycle access to businesses and residences. As documented in Section 4.0, environmental impacts of the Build Alternative would be minor, and impacts to wetlands would be mitigated as dictated by USACE permit conditions. Relocated residences and businesses would be afforded protection under the Uniform Relocation Act, and relocation resources would be available without discrimination to those affected.

4.0 ENVIRONMENTAL RESOURCES, IMPACTS, AND MITIGATION

4.1 ENVIRONMENTAL CONDITIONS AND POTENTIAL EFFECTS

4.1.1 Land Use and Community Character

The project extends approximately 2.7 miles through Covington and traverses a mix of zoning. The northern and southern ends of the corridor are zoned light to heavy commercial and include businesses serving the city and surrounding communities (office complexes, car dealerships, automotive shops, and large retail and grocery stores). The remainder of the project corridor is zoned a mix of light industrial, neighborhood commercial, and institutional. Land use includes local retail shops, landscape nurseries, restaurants, heavy equipment rental businesses, banks, local government offices, and churches (City of Covington, 2015).

Residential neighborhoods are located behind these commercial and institutional districts. Surveys pursuant to the noise analysis observed a total of 74 single family homes and duplexes within 500 feet of each side of the roadway. Covington's proposed future land use plan is generally consistent with the current planning zones along Collins Boulevard (City of Covington, 2015).

No-Build Alternative: The No-Build Alternative will not change existing and future land use and community character. Residents and businesses would continue to experience delays on Collins Boulevard, and future conditions are expected to worsen (Table 2).

Build Alternative: The Build Alternative would not alter existing or future land use and community character. The project area would continue to include a mix of commercial, light industrial, and institutional land uses. However, congestion and traffic delays would be reduced, providing benefits to motorists.

The proposed side path and raised median could create a more aesthetically pleasing and pedestrian and bicycling friendly environment for users of the road which, in turn, could enhance community character. Pedestrian and bicycling access to businesses along the corridor would be improved.

Areas within existing state-owned ROW currently used by businesses would be incorporated into the project to accommodate additional width. Encroachments located within the widened footprint of project need (for example, areas where the widened roadway or side path would be constructed, or where utilities or drainage features would be installed) would be removed during project construction. Any remaining encroachments that fall outside the area of project need

would be addressed in accordance with DOTD policy by removal of the encroachment, disposal of excess ROW, or by entering a Joint Use Agreement granting a servitude to St. Tammany Parish over excess area to be maintained by the parish.

4.1.2 Economic Activity

The largest project area employment sectors include healthcare and social assistance; retail trade; and professional, scientific, and technical services (U.S. Census Bureau, 2012). The following are headquartered in Covington: St. Tammany Parish Hospital; Hornbeck Offshore, a provider of marine transportation services for the energy sector; Rain CII, one of the world's largest producers of calcined petroleum coke (CPC); POOLCORP, which sells swimming pool equipment and supplies; Gilsbar, a health and benefits management organization; and Globalstar, Inc., one of the world's largest providers of mobile satellite voice and data services. The project corridor includes a mix of large and small retail stores, automotive service providers, restaurants, light industrial facilities, and local government offices.

No-Build Alternative: The No-Build Alternative impacts project area economic activity; residents and businesses would continue to experience delays on Collins Boulevard, and future conditions are expected to worsen (Table 2).

Build Alternative: The Build Alternative might require 26 non-residential relocations (Table 4, Appendix G):

Table 4. Non-Residential Relocations

Property	Address
ARCP WP Slidell, LA LLC	1260 Front Street
Walgreens	1260 Front Street
Cash America	1190 US 190 Business
Vacant	1000 US 190 Business
Blossman Oil Co.	1001 US 190 Business
Shell Station	1001 US 190 Business
Autopar Remainder III, LLC	950 E. Boston Street
Advance Auto Store	950 E. Boston Street
Vacant	993 E. Boston Street
St. Tammany Farm Bureau, Inc.	19520 LA 36
Farm Bureau	19520 LA 36
Henry J. Smith	1021 N. Lee Road
Trophy Shop	1021 N. Lee Road
Henry J. Smith	1005 Collins Blvd.
Smoke BBQ	1005 Collins Blvd.
Paul F. Esser et ux	120 W. 30th Ave.
E&E Plumbing	120 W. 30th Ave.
Wanda S. Skinner	104 W. 30th Ave.
Take Five Oil Change	104 W. 30th Ave.
Blossman Oil Co.	1229 Collins Blvd.
Storage Sales Etc.	1229 Collins Blvd.
Helmstetter Properties LLC	1500 Collins Blvd.

Property	Address
Gulf Mechanical	1500 Collins Blvd.
Richard Blossman, Jr. et al	1001 Ronald Reagan Hwy.
Twice The Ice	1001 Ronald Reagan Hwy.
Shell Station	1001 Ronald Reagan Hwy.

All properties subject to relocation would be afforded protection under the Uniform Relocation Act, and relocation resources would be available without discrimination to those affected.

Two businesses that front Collins Boulevard include structures apparently located within existing Collins Boulevard ROW: A-1 Glass Services Inc. and Studio 11 Salon. Additionally, numerous businesses appear to have parking lots/areas located within, or partially within, existing Collins Boulevard ROW (Table 5). These businesses will be addressed in accordance with DOTD policy.

Table 5. Businesses with Property within Existing DOTD ROW

Business	Address
Acadian Shutters	847 Collins Blvd.
Northlake Assembly of God Church	958 N. Lee Rd.
Honda of Covington	1026 Collins Blvd.
Best Little Wherehouse Bar and Grill	1105 Collins Blvd.
Golf Cart World LLC	843 Collins Blvd.
A-1 Glass Services Inc.	1247 Collins Blvd.
Studio 11 Salon	1251 Collins Blvd.
McGehee Outdoor Equipment	1430 Collins Blvd.
Collins Blvd. Baptist Church	1501 Collins Blvd.
Southern Comfort A/C & Heating	1608 Collins Blvd.
Lagniappe Shoe and Consignment	1615 Collins Blvd.
Inwood Gardens	1640 Collins Blvd.
Tammany Haulers	1695 Collins Blvd.
Northshore Trailer and Equipment	1900 Collins Blvd.
AOK Mini Storage	1917 Collins Blvd.
McGehee Outdoor Equipment	1430 Collins Blvd.

Areas within existing state-owned ROW currently used by businesses would be incorporated into the project to accommodate additional width. Encroachments located within the widened footprint of project need (for example, areas where the widened roadway or side path would be constructed, or where utilities or drainage features would be installed) would be removed during project construction. Any remaining encroachments that fall outside the area of project need would be addressed in accordance with DOTD policy by removal of the encroachment, disposal of excess ROW, or by entering a Joint Use Agreement granting a servitude to St. Tammany Parish over excess area to be maintained by the parish.

The side path would cross business driveways, which might present potential conflict points between pedestrians/cyclists and traffic entering/exiting driveways.

The Build Alternative would enhance economic activity in the project area by improving traffic operations, which might make the area more attractive for retail and commercial development. Although the proposed project would affect access patterns by limiting left turns to intersections with roundabouts and to turn lanes that cross the median, the overall improvement in traffic flow resulting from the Build Alternative would be expected to offset any impacts from left turn limitations.

Those travelling the project corridor might be temporarily inconvenienced during construction; however, the roadway would remain open, and any project-related adverse effects on economic activity would be minor and temporary.

4.1.3 Residential and Commercial Relocations

Residential neighborhoods and businesses are located within 500 feet of the project corridor.

No-Build Alternative: This alternative requires no relocations.

Build Alternative: The project would be located primarily in existing state-owned ROW; however, areas adjacent to proposed roundabouts and other improvements would require the acquisition of additional ROW. It appears acquisition of additional ROW might require three residential and 26 non-residential relocations.

A Conceptual Stage Relocation Plan is provided in Appendix G. Table 4 presents non-residential relocations. Residential relocations might include 19456 LA 36, 865 N. Claiborne, and 132 W. 30th Avenue.

Residences and businesses relocated due to project construction would be afforded protections under the Uniform Relocation Act and relocation resources would be available without discrimination to those affected.

Two businesses that front Collins Boulevard include structures apparently located within existing Collins Boulevard ROW: A-1 Glass Services Inc. and Studio 11 Salon (Table 5). Additionally, numerous businesses appear to have parking lots/areas located within, or partially within, existing Collins Boulevard ROW (Table 5). These businesses will be addressed in accordance with DOTD policy.

Encroachments located within the widened footprint of project need (for example, areas where the widened roadway or side path would be constructed, or where utilities or drainage features would be installed) would be removed during project construction. Any remaining encroachments that fall outside the area of project need would be addressed in accordance with DOTD policy by removal of the encroachment, disposal of excess ROW, or by entering a Joint Use Agreement granting a servitude to St. Tammany Parish over excess area to be maintained by the parish.

4.1.4 Demographics and Environmental Justice

Title VI of the Civil Rights Act (42 United States Code [USC] 2000) and Executive Order (EO) 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* mandate federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income communities. FHWA Order 6640.23A establishes policies and procedures for the FHWA to use in complying with EO 12898. In accordance with the provisions of EO 12898 and FHWA Order 6640.23, socioeconomic and demographic data for the project area were reviewed to determine if the proposed action would have a disproportionately high and adverse impact on minority or low-income communities. For this analysis, low-income is defined as household income at or below the poverty line based on statistics updated annually by the U.S. Department of Health and Human Services and the U.S. Census Bureau's American Community Survey.

Demographic data were collected from the 2010 U.S. Census Bureau for populated Census Block Groups crossed by the project corridor with a 2,000-foot buffer (Table 6). The average percentage of minorities (all races/ethnicities except non-Hispanic white persons) of these Census Block Groups was estimated to be approximately 25.0 percent of the population, which is approximately 5.6 percent more than St. Tammany Parish as a whole (19.4 percent).

Table 6. Minority Populations by Census Block Group

Census Tract/Block Group	Total Population	Minorities	Minorities (%)
405.01/1	2,353	1,173	49.9
402.02/2	3,420	260	7.6
406.05/2	1,852	672	36.3
402.01/1	4,268	584	13.7
406.02/1	771	55	7.1
405.02/3	978	100	10.2
405.01/2	981	598	61.0
405.02/2	963	133	13.8
	Total Population 15,586	Total Minorities 3,575	Average Percentage 25.0

Source: U.S. Census Bureau's Population and Housing Summary File 1, 2010.

Approximately 10.1 percent of the population living in the six project-area census tracts (the smallest geographic unit of analysis available) lives below the poverty line (Table 7), which is slightly less than St. Tammany Parish as a whole (11.5 percent).

No-Build Alternative: The No-Build Alternative would have no disproportionate effects on minority or low-income communities.

Table 7. Poverty by Census Tract

Census Tract	% Below Poverty Line
406.02	3.9
402.02	7.4
405.01	22.2
406.05	10.7
402.01	11.1
405.02	5.2
Average Percentage = 10.1%	

Source: U.S. Census Bureau 5-Year Estimates,
American Community Survey, 2006-2010.

Build Alternative: Although the Build Alternative would require the relocation of businesses and one residence, no minority or low-income populations have been identified that would be adversely impacted by the proposed project as determined above. The project would benefit the public through reduced congestion and improved traffic flow. Therefore, in accordance with the provisions of EO 12898 and FHWA Order 6640.23, no further Environmental Justice analysis is required.

4.1.5 Cultural Resources

Consideration of impacts to cultural resources is mandated under Section 106 of the National Historic Preservation Act as implemented by 36 Code of Federal Regulations (CFR) Part 800. Requirements include the identification of significant historic properties that might be impacted by the proposed action or alternatives within the project's area of potential effect. Historic properties are defined as archaeological sites, standing structures or other historic resources listed, or determined eligible for listing, in the National Register of Historic Places (NRHP). If adverse effects on historic, archaeological, or cultural properties are identified, agencies must attempt to avoid, minimize, or mitigate the impacts to these resources.

According to correspondence with the SHPO (Appendix B), no known historic properties would be affected by the proposed project. The Choctaw Nation of Oklahoma requested a cultural resources survey for the proposed project area (Appendix C), and a cultural resources survey was conducted in the project area in 2015 (Appendix H). The report concludes there are no historic properties located within the direct or indirect APE for the proposed project.

No-Build Alternative: The No-Build Alternative impacts no cultural resources.

Build Alternative: Based on the 2015 cultural resources survey, no historic properties would be impacted by the project.

4.1.6 Section 4(f) Resources

Section 4(f) of the Department of Transportation Act of 1966 stipulates FHWA cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless: (1) there is no feasible and prudent avoidance alternative; or (2) use of the land would have only a *de minimis* impact, or no adverse effect, to key features of such properties. The Tammany Trace is considered a Section 4(f) property.
The Tammany Trace crosses the proposed project at two locations: beneath the proposed new Bogue Falaya River Bridge and at the Boston Street/Military Road intersection with US 190B (Appendix A). To provide the Trace sufficient vertical clearance in the vicinity of the new bridge, DOTD and RPC propose its realignment so that it would be relocated northward, nearer the river. The relocation would total approximately 810 feet and would replace approximately 590 feet of existing Trace. Like the existing Trace, the new, relocated section would be at-grade, paved, and 10 feet wide. To improve safety at the Military Road intersection with US 190B, DOTD and RPC propose the construction of a 10-foot by 10-foot, lighted tunnel to replace the Trace's current at-grade crossing.

Additionally, the project includes construction of a paved, 10-foot-wide side path to the west and east sides of Collins Boulevard north of the river (Appendix A). The new path would connect with the Tammany Trace just east of its intersection with East Gibson Street, near the Bogue Falaya River, and extend along the west side of Collins Boulevard for 2.1 miles to LA 25. To the east of Collins Boulevard, the side path would extend from the intersection with Lee Road to LA 25, a distance of approximately 1.7 miles. The two paths would connect across Collins Boulevard at Lee Road, 32nd Avenue, E. Magee Street, Poole Drive, and LA 25.

No-Build Alternative: The No-Build Alternative impacts no Section 4(f) resources.

Build Alternative: In correspondence dated January 27, 2015, SHPO stated no historic properties would be affected by the project (Appendix B). A cultural resources survey was conducted in the project area in 2015. No historic properties were located within the direct or indirect APE for the proposed project. From its Solicitation of Views response and follow-up correspondence, the Louisiana Department of Wildlife and Fisheries (LDWF) states no state or federal parks, wildlife refuges, scenic streams, or wildlife management areas would be affected by the project (appendices B and C).

DOTD and RPC believe the project's impact to the Tammany Trace is *de minimis.* A *de minimis* impact is one that results in a determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). DOTD and RPC believe that the net result of the project would be beneficial for the Tammany Trace for these reasons:

- Realignment of the Trace at the new Bogue Falaya River Bridge is negligible and would not impair the continuity of the Trace due to the additional length of trail provided;
- Construction of the tunnel at the Boston Street/Military Road intersection with US 190B improves user safety; and

- Construction of the new side paths north of the river significantly increase access to the Trace.

In correspondence dated September 24, 2015, the DOTD and RPC requested that St. Tammany Parish Government, because of its having jurisdiction over the Section 4(f) property (Tammany Trace), provide in writing an agreement that the proposed project will not adversely affect the features, attributes, or activities that qualify the Trace for Section 4(f) protection (Appendix C). St. Tammany Parish Government concurred that the proposed project will not adversely affect the Tammany Trace (Appendix C).

Based on the fact that the undertaking does not adversely affect the function or qualities of the Section 4(f) property on a permanent or temporary basis; and with the agreement from St. Tammany Parish Government, the proposed action constitutes a *de minimis* use and no analysis of avoidance alternatives is required.

4.1.7 Section 6(f) Resources

Section 6(f) of the Land and Water Conservation Act requires unavoidable conversion of lands or facilities acquired or developed with Land and Water Conservation Act funds be replaced in kind or coordinated with the Department of the Interior.

No-Build Alternative: The No-Build Alternative affects no Section 6(f) resources.

Build Alternative: LDWF has identified no state or federal parks, wildlife refuges, scenic streams, or wildlife management areas within the project limits (appendices B and C). The project would not result in the conversion of a designated 6(f) resource.

4.1.8 Community Facilities, Services, and Social Resources

Collins Boulevard traverses Covington, and numerous churches, schools, and community facilities are located in or near the project area: St. Tammany Parish Hospital Community Wellness Center; St. Tammany Parish Fairgrounds; childcare centers; St. Tammany Parish Courthouse; churches; and schools (Elmer E. Lyon Elementary, Lakeview Maria Montessori, and Covington School of Music are located within 0.25 mile of the project corridor). The St. Tammany Parish Sherriff's Office and Collins Boulevard Baptist Church front Collins Boulevard within project limits, and Lakeview Regional Physician Group North Covington Medical Care fronts the project corridor on LA 25. Northlake Assembly of God Church fronts the project corridor on Lee Road. St. Tammany Fire Protection District 12 headquarters fronts the project corridor on Military Road.

No-Build Alternative: Congestion and traffic delays currently affecting access to project area businesses and community facilities would persist under the No-Build Alternative. Pedestrian and bicycle access to these facilities would remain difficult due to the lack of a side path.

Build Alternative: Short-term traffic delays might occur during construction; longer term, the project would provide more efficient access to community facilities. The roundabout proposed

for the Magee Street intersection with Collins Boulevard would provide direct yield entry for St. Tammany Parish Fairgrounds and Elmer E. Lyon Elementary School.

Areas within the existing state-owned ROW currently used by community facilities for driveways and parking would be incorporated into the project to accommodate additional width required for the widened road and the new side paths. Two churches would be directly impacted by the project: portions of the parking lots at Northlake Assembly of God and Collins Boulevard Baptist churches are located within existing Collins Boulevard ROW. The project would cause a partial loss of parking spaces at both lots.

Encroachments located within the widened footprint of project need (for example, areas where the widened roadway or side path would be constructed, or where utilities or drainage features would be installed) would be removed during project construction. Any remaining encroachments that fall outside the area of project need would be addressed in accordance with DOTD policy by removal of the encroachment, disposal of excess ROW, or by entering a Joint Use Agreement granting a servitude to St. Tammany Parish over excess area to be maintained by the parish.

4.1.9 Wildlife and Protected Species

Section 7 of the Endangered Species Act (ESA) of 1973 requires federal actions be implemented in a manner that does not jeopardize protected species or their habitat. The U.S. Fish and Wildlife Service (USFWS) is charged with implementing the ESA and maintains a list of protected plants and animals and their protection status. The Louisiana Natural Heritage Program (LNHP) of the LDWF lists threatened and endangered species for each parish in Louisiana. Table 8 presents species listed as threatened or endangered in St. Tammany Parish.

Table 8. State and Federal Threatened and Endangered Species in St. Tammany Parish

Scientific Name	Common Name	State Status	Federal Status
Acipenser oxyrinchus desotoi	Gulf sturgeon	Threatened	Threatened
Gopherus polyphemus	Gopher tortoise	Threatened	Threatened
Graptemys oculifera	Ringed map turtle	Threatened	Threatened
Haliaeetus leucocephalus	Bald eagle	Endangered	Delisted
Picoides borealis	Red-cockaded woodpecker	Endangered	Endangered
Potamilus inflatus	Inflated heelsplitter	Threatened	Threatened
Rana sevosa	Dusky gopher frog	Not listed	Endangered
Trichechus manatus	Manatee	Endangered	Endangered
Ursus americanus luteolus	Louisiana black bear	Threatened	Threatened

Source: LNHP, 2015.

The USFWS Critical Habitat Mapper indicates no critical habitat in the project area or vicinity (USFWS, 2015).

In correspondence dated December 19, 2014, USFWS stated the proposed project: is not an activity that would affect federally listed threatened or endangered species; there are no proposed or designated critical habitat present within St. Tammany Parish; and a "no effect" conclusion is appropriate (Appendix B). In a letter dated January 23, 2015, LDWF stated, “no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project” (Appendix B).

4.1.10 Wetland Reserve Program

The project corridor traverses no properties enrolled in the Natural Resources Conservation Service (NRCS) Wetland Reserve Program (WRP); neither alternative would impact WRP properties.

4.1.11 Wetlands and Other Waters

Executive Order No. 11990, Protection of Wetlands, issued May 24, 1977, directs federal agencies “to avoid to the extent possible long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.” Wetlands are semiaquatic lands flooded or saturated by water for varying periods of time. For an area to be delineated as a wetland, it must exhibit appropriate hydrology, contain hydric soils, and support hydrophytic vegetation (Environmental Laboratory, 1987).

Wetlands restore and maintain water quality by removing and retaining nutrients contained in storm water runoff that would otherwise flow directly into the water column. These ecosystems provide critical habitat for a diversity of plants and animals, including fish, shellfish, waterfowl, shorebirds, wading birds, songbirds, and mammals. Wetlands provide flood control by retaining water that would otherwise flood nearby residential and agricultural areas.

A wetland delineation conducted in September 2013 for the “US 190 Right Turn Lane at Lee Road” project (State Project Number H.0098350), which will be constructed before the project assessed in this EA, addressed existing Collins Boulevard ROW from the north end of the Bogue Falaya River Bridge to Lee Drive. New Orleans District, USACE issued a Jurisdictional Determination dated January 16, 2014 stating that 0.5-acre of wetlands and 0.4-acre of other waters would be impacted by the project (Appendix D). Wetlands impacts would be mitigated as required by the USACE permit.

A preliminary wetland delineation was conducted in January and February 2015 for the project assessed in this EA (Appendix D). Three forested communities and one herbaceous community totaling approximately 2.29 acres of wetlands and 0.97 acres of Other Waters of the U.S. (including portions of the Bogue Falaya River, Mile Branch Stream, two small unnamed perennial streams, and two intermittent streams) were identified in the ROW proposed for the Build Alternative. USACE would make the final determination as to whether these areas are considered jurisdictional wetlands. A USACE permit might be required prior to placing fill and/or the start of construction.

4.1.12 Floodplains

Executive Order 11988 (Floodplain Management) and U.S. DOT Order 5650.2 require federal agencies avoid to the greatest extent possible long- and short-term adverse impacts associated with the occupancy and modification of floodplains and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The 100-year floodplain is defined as an area that would be inundated by a precipitation event having a 1-in-100 chance of occurring each year. Regulations require encroachment within the 100-year floodplain be minimized and that land development inconsistent with floodplain values be avoided.

According to effective Flood Insurance Rate Maps (FIRMs), most of the project area is located in Flood Zones B or C (outside the 100-year floodplain). However, portions of the proposed project are located within Flood Zones A and A15, which are within the 100-year floodplain (Appendix B). Federal floodplain management regulations and mandatory purchase requirements apply in these zones.

No-Build Alternative: The No Action Alternative would have no impacts on floodplain management in the area.

Build Alternative: Correspondence from DOTD's Floodplain Management Program Coordinator stated, "During construction there must be allowance for the adequate flow of water and assurance that there would be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction. At this time, consideration must be given to the responsibility for cleaning debris and keeping the surrounding area clear so as not to interfere with its function" (Appendix B). The St. Tammany Parish Floodplain Administrator and the City of Covington Engineer offered no objections to the project during telephone conversations on March 10 and March 12, 2015. The project would not impede the flow of floodwaters through the floodplain. The bridges would be constructed to provide adequate flow, would cause no backwater flooding, and would cause no rise in flood elevations in the floodplain.

4.1.13 Coastal Resources and Essential Fish Habitat

The Coastal Zone Management Act (CZMA) of 1972 authorizes the Coastal Zone Management Program, a federal-state partnership dedicated to comprehensive management of the nation's coastal resources. By making federal funds available, the law encourages states to preserve, protect, and, where possible, restore or enhance valuable natural coastal resources, such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. Any federal or state agency whose activities directly affect the coastal zone must, to the maximum extent practicable, be consistent with approved state management programs.

The Magnuson-Stevens Fishery Conservation Act (MSFCA) (50 CFR 600) states essential fish habitat (EFH) is "those waters and substrate necessary for fish for spawning, breeding or growth to maturity." The 2005 amendments to the MSFCA set forth a mandate for the National Marine Fisheries Service (NMFS), regional Fishery Management Councils, and other federal agencies to identify and protect EFH of economically important marine and estuarine fish. A review of

NMFS data identified no EFH in the project area (National Oceanic and Atmospheric Administration (NOAA), Habitat Conservation, 2015).

No-Build Alternative: The No-Build Alternative would not affect coastal resources or EFH.

Build Alternative: The project is not located within the Louisiana Coastal Zone (Louisiana Department of Natural Resources (LDNR, 2012). Therefore, a coastal use permit is not required. Further, the project would not affect oceanic or marine resources, including EFH. Correspondence from NOAA stated no adverse impacts to NOAA trust resources (Appendix B).

4.1.14 Subsurface Water

EPA defines a sole source aquifer as an underground water source that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas have no alternative drinking water sources that could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. The project is located atop the Southern Hills Aquifer System, a designated sole source aquifer.

No-Build Alternative: The No-Build Alternative would have no effect on subsurface water.

Build Alternative: In a letter dated December 19, 2014, EPA's Sole Source Aquifer Program coordinator stated, "Based on the information provided for the project, we have determined that the project, as proposed, should not have an adverse effect on the quality of the groundwater underlying the project site" (Appendix B).

4.1.15 Wild, Scenic, and Natural Rivers

The National Wild and Scenic Rivers System was created by Congress to preserve rivers possessing outstanding natural, cultural, and recreational values. In 1970, the Louisiana Legislature created the Louisiana Natural and Scenic Rivers System to preserve, protect, develop, reclaim, and enhance the wilderness qualities, scenic beauty, and ecological regimes of selected free-flowing streams in Louisiana. Correspondence with LDWF stated no scenic streams would be impacted by the project. Therefore, neither alternative would impact wild, scenic, or natural rivers (appendices B and C).

4.1.16 Navigable Waterways

In compliance with the Surface Transportation Assistance Act (STAA) of 1982, FHWA concluded in a letter dated January 19, 2012, to the U.S. Coast Guard (USCG) the proposed project is exempt from USCG permitting. In correspondence dated February 2, 2012, USCG 8th Coast Guard District concurred with the finding, stating, "... the Coast Guard accepts your determination that this bridge project meets the criteria for the STAA and is exempt from Coast Guard Bridge Administration purposes. Plans for the proposed bridge construction project should provide for navigational clearances to accommodate any recreational boating that might exist at high water and should be at an appropriate elevation to pass floodwaters" (Appendix B).

USCG also stated the proposed improvements are subject to the statute requiring the establishment, maintenance, and operation of Coast Guard required lights and signals on fixed structures, including bridges. Copies of the USCG letters are provided in Appendix B.

4.1.17 Farmland

Through NRCS, the U.S. Department of Agriculture (USDA) administers the Farmland Protection Policy Act to minimize the extent to which federal actions contribute to the unnecessary conversion of farmland to non-agricultural uses. Of particular concern are prime or unique farmland soils. USDA defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses but is not urban, built-up land, or water. Unique farmland is land, other than prime farmland, that is used for production of specific high-value food and fiber crops.

No-Build Alternative: The No-Build Alternative would not affect project area geology or soils.

Build Alternative: In its correspondence (Appendix B) NRCS advised, "The project map and narrative submitted with your request indicates the proposed construction areas are within urban areas and therefore are exempt from the rules and regulations of the Farmland Protection Policy Act. Furthermore, we do not predict impacts to NRCS work in the vicinity." The Louisiana Department of Agriculture and Forestry (LDAF) had no comments regarding the proposed project (Appendix B). The Build Alternative is not anticipated to affect farmland.

4.1.18 Noise

Previous Build Alternatives developed in 2010 proposed to improve Collins Boulevard from the intersection of US 190B/West Front Street to the Collins Boulevard/LA 25 intersection to four travel lanes separated by a median, and a noise analysis was prepared in accordance with DOTD policy (Appendix E). Because the current Build Alternative also recommends four travel lanes throughout and requires ROW similar to the previous alternatives, and because existing (2010) and future (2030) annual average daily traffic (AADT) determined in 2010, upon which the noise analysis was based, exceed updated existing (2013) and future (2033) AADT determined in 2014, actual noise impacts would be less than those determined in the 2010 noise analysis.

Traffic noise levels are expressed in terms of an hourly, A-weighted equivalent sound level in decibels (dBA). A sound level represents the level of the rapid air pressure fluctuations caused by sources such as traffic that are heard as noise. A decibel is a unit that relates the sound pressure of a noise to the faintest sound the human ear can detect. The A-weighting refers to the amplification or attenuation of the different frequencies of the sound (subjectively, the pitch) to correspond to the way the human ear hears these frequencies. Generally, when the sound level exceeds the mid-60 dBA range, outdoor conversation in normal tones at a distance of three feet becomes difficult.

Noise abatement procedures are considered for DOTD projects if (1) future sound levels are 66 dBA or greater, or (2) a substantial increase in existing sound levels (10 dBA or more) is

predicted. Surveys conducted pursuant to the noise analysis noted 74 single family homes (or duplexes) located within 500 feet of the proposed roadway edge. Other noise-sensitive land uses located within 500 feet of the roadway edge include Elmer E. Lyon Elementary School, Collins Boulevard Baptist Church, and Northlake Assembly of God. The FHWA Noise Abatement Criteria (NAC) of 66 dBA applies to these noise-sensitive land uses.

To determine existing sound levels, measurements were conducted at noise-sensitive land uses on May 11, 2010. A sound level of 68 dBA at 815 Collins Boulevard was the greatest sound level recorded. The lowest measured sound level of 52 dBA was recorded farther from Collins Boulevard, at 204 Hornsby Street. Collins Boulevard was the dominant noise source at all measurement sites with the exception of 952 North Lee Road, where traffic and accelerating northbound vehicles on North Lee Road contributed equally to noise levels. In total, eight residences were impacted by noise levels exceeding the 66 dBA threshold under existing conditions.

No-Build Alternative: Sound levels for the No-Build Alternative were estimated by evaluating existing and future traffic volumes on Collins Boulevard. Doubling traffic on a roadway would result in a three dBA increase in the sound level at a given receptor assuming all other conditions remained constant. By 2030, traffic volume on Collins Boulevard was predicted to be approximately 100 percent greater than existing volume. However, because of reduced traffic speed resulting from increased congestion and delays, the noise analysis estimated a two dBA increase in sound levels. The increase exceeded 66 dBA at a total of nine residences (Table 9).

Table 9. Noise Impact Summary

Traffic Volume Scenario	Impacts
2010 Existing	8 residences
2030 No Build	9 residences
2030 Build	9 residences

Build Alternative: A noise analysis of the previous Build Alternatives was completed using the FHWA Traffic Noise Model computer program, which calculated design-year equivalent sound levels at noise-sensitive land uses in the project area, including the measurement locations. Projected noise levels ranged from 57 dBA for residences along Hornsby Street, Briggs Street, and Ozone Park Road to 71 dBA at the residences closest to Collins Boulevard. In total, nine residences were predicted to be impacted by noise levels exceeding the 66 dBA threshold under the previous Build Alternatives (Table 9). It is important to note that eight of the nine are already impacted by existing noise levels exceeding 66 dBA. It should also be noted that, although exterior noise levels for Collins Boulevard Baptist Church and Northlake Assembly of God Church are predicted to exceed 66 dBA, neither location possesses exterior activity areas. As such, neither would be impacted.

DOTD policy requires consideration of abatement measures when traffic noise impacts occur as a result of a project. Most of the impacted sites adjacent to Collins Boulevard have driveways that connect to the road. Maintaining access to the highway would require noise barrier gaps at each driveway, which would render the barrier ineffective at reducing sound levels. Discontinuous noise barriers generally cannot achieve the eight-decibel insertion loss required by the DOTD noise policy; therefore, a detailed noise barrier analysis was not performed.

In order to protect future development from becoming incompatible with anticipated highway traffic noise levels, projections of future noise levels for undeveloped lands would be provided to local planning and building officials. As desired, these officials could review project-related noise data during consideration of future land use decisions.

4.1.19 Air Quality

As with noise quality, an air quality analysis was prepared for the previous Build Alternatives developed in 2010 (Appendix E). Because the current Build Alternative also recommends four travel lanes, requires ROW similar to the previous alternatives, and because existing (2010) and future (2030) AADT determined in 2010, upon which the air analysis is based, exceed updated existing (2013) and future (2033) AADT prepared in 2014, actual air impacts would be less than those previously assessed. The analysis assessed the project with respect to: (1) air quality standards; (2) transportation conformity requirements; and 3) Mobile Source Air Toxics (MSATs).

EPA has established allowable concentrations and exposure limits (National Ambient Air Quality Standards - NAAQS) for six criteria air pollutants:

- Carbon monoxide;
- Nitrogen dioxide;
- Ozone;
- Sulfur oxides (commonly measured as sulfur dioxide);
- Lead; and
- Particulate matter no greater than 2.5 micrometers (µm) in diameter; and particulate matter no greater than 10 µm in diameter.

In accordance with the Clean Air Act Amendments of 1990, EPA identified areas that failed to meet NAAQS for the criteria pollutants and designated them as nonattainment areas. EPA also designates maintenance areas; those previously designated nonattainment but currently meeting NAAQS. St. Tammany Parish is currently designated attainment for criteria pollutants.

Transportation conformity, a Metropolitan Planning Organization's process, requires federally funded transportation plans, programs, and projects in nonattainment or maintenance areas to conform to a State Implementation Plan, a plan to achieve or maintain NAAQS for a particular pollutant. Because St. Tammany Parish is not a nonattainment or maintenance area, conformity does not apply to the project.

Project assessment with respect to MSATs indicates it possesses low potential impact, based on FHWA criteria, due to its type (widening, with new interchanges) and because design year AADT is less than 140,000-150,000. The MSAT assessment is provided in Appendix E.

No-Build Alternative: The No-Build Alternative would have no impact on air quality. Future emissions will likely be lower than present levels as a result of EPA's national control programs which are projected to reduce MSAT emissions by 2020.

Build Alternatives: The Build Alternative possesses low potential for MSATs based on FHWA criteria. There would be no appreciable difference in overall MSAT emissions between the No-Build and Build Alternatives. Construction activity, which presents a potential for temporary emissions increases, would have no long-term impact on project area air quality.

4.1.20 Hazardous Materials

An assessment was conducted for the project area to identify potential recognized environmental conditions (RECs) located in or adjacent to the project area that have, or might have in the past, adversely impacted environmental conditions. As defined in the American Society for Testing and Materials (ASTM) E1527-13, REC means, "The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

Based on site reconnaissance and LDEQ records review, the assessment (Appendix F) has revealed evidence of underground storage tanks (USTs) in the project area. Additionally, many buildings and residences located in the project area appear to be constructed with asbestos containing materials.

No-Build Alternative: The No-Build Alternative would have no effect on hazardous materials.

Build Alternative: Current plans indicate ROW required for the project would extend near existing USTs at five locations and at one location where a UST was removed. Environmental data indicate numerous compliance issues and/or violations at these sites; however, property owners at five of these sites addressed the issues and LDEQ issued a No Further Action determination for each, indicating there is no contamination that poses a risk to human health or the environment at these locations. According to LDEQ records, assessments are ongoing at the sixth site, Main Street Shell, because of a UST line test failure. Therefore, this site might represent a REC. If so, remediation actions might be required. As project design and ROW plans are completed, the assessment recommends:

- Soil sampling and screening along the required ROW limit at its closest point of approach to USTs in the event a portion of a UST site is acquired that does not include the tanks; or

- Soil sampling and screening of UST beds in the event a UST site (or portion of one) is acquired that includes the tanks.

Many buildings/residences located near the project appear to be constructed with asbestos-containing materials, which present a potential REC. The assessment recommends asbestos surveys for any structures acquired pursuant to project construction. If hazardous constituents are unexpectedly encountered in the project area during construction operations, DOTD would be immediately notified and appropriate measures for the proper assessment, remediation, and management of contamination would be initiated in accordance with applicable federal, state, and local regulations. Liquid materials and chemicals such as fuels, lubricants, and paints would be stored on site during construction in accordance with all applicable regulations and requirements, and the contractor would be required to take appropriate measures to prevent, minimize, and control any release of hazardous materials in construction areas.

4.1.21 Travel Patterns

The project would widen the roadway and Bogue Falaya River Bridge to four travel lanes (two northbound, two southbound) to improve mobility and ease congestion. Between the bridge and Lee Road the road would be widened to five travel lanes (three northbound, two southbound) to include an extended right turn lane onto Lee Road.

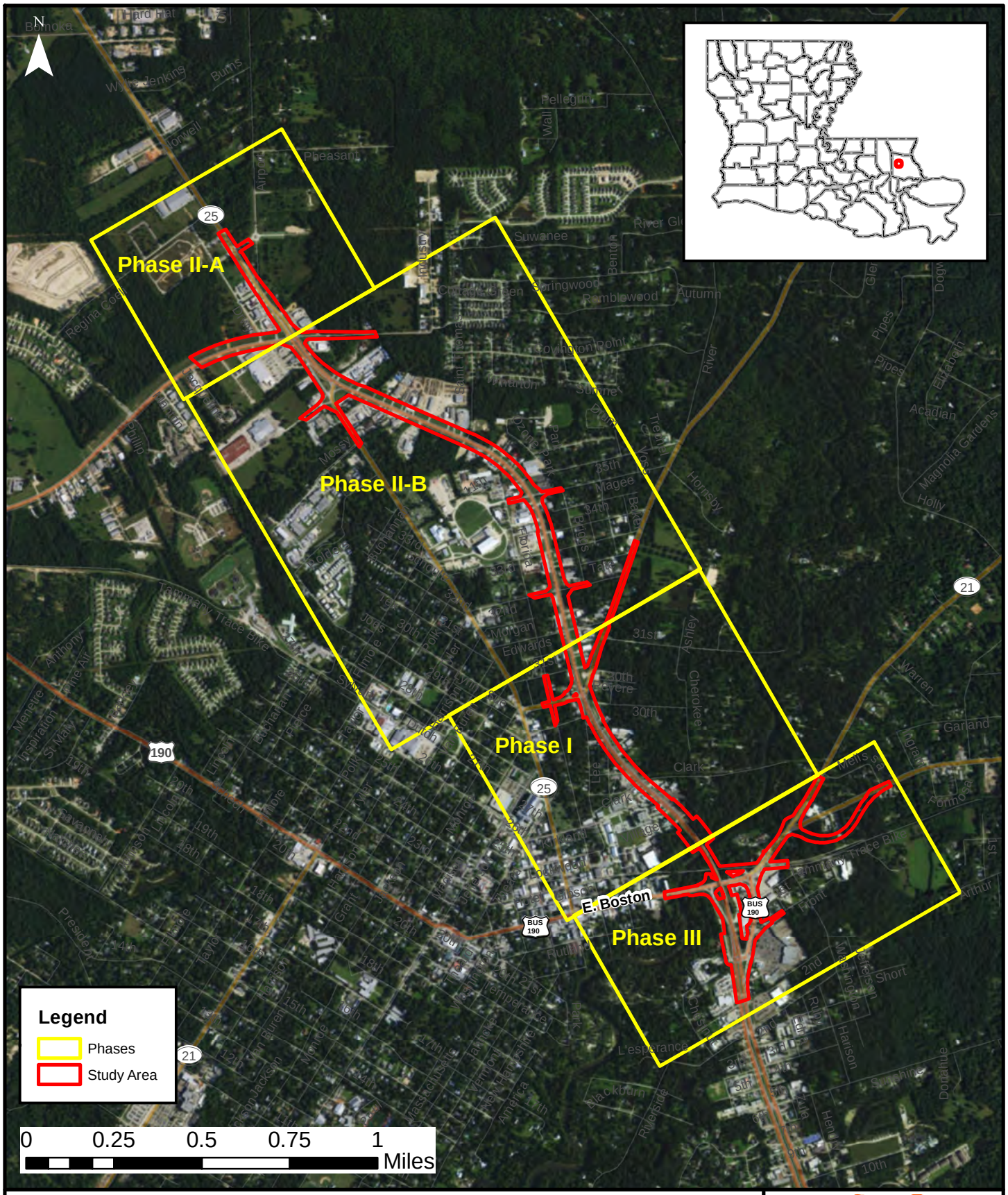
Roundabouts would be constructed at 10 intersections and right-turn only access to Collins Boulevard would be provided for remaining side street intersections. The roundabout proposed for the Magee Street intersection would provide direct yield-entry access for St. Tammany Parish Fairgrounds and Elmer E. Lyon Elementary. Also, a northbound yield-controlled directional U-turn would be constructed north of Gratitude Drive and southbound yield-controlled U-turns would be constructed at Gratitude Drive. Medians, roundabouts, and U-turns would alter the way properties and side streets are accessed; however, current access points to properties would be maintained.

Realignment of LA 36 near its intersection with Military Road for improved intersection operation would change the way residences and business located along the abandoned reach of LA 36 access the realigned reach; however, no significant changes to existing travel patterns are anticipated.

4.2 CONSTRUCTABILITY

4.2.1 Proposed Implementation Plan

Phase 1 (Figure 3) would construct improvements for Collins Boulevard from its intersection with US 190B to its intersection with Lee Road, excluding the proposed roundabout at Lee Road. An additional left turn lane will be constructed adjacent to the existing left turn lane for westbound vehicles turning south from Lee Road onto Collins Boulevard as an interim measure until the roundabout is built at this intersection in Phase 2. A new bridge over the Bogue Falaya River would be constructed adjacent to, and east of, the existing bridge. The existing bridge would remain open to two-way traffic while the new bridge is constructed. The new bridge would be 54-feet-wide with three 12-foot travel lanes for northbound traffic with an eight-foot shoulder to the inside and a 10-foot shoulder to the outside. The third (outside) travel lane would



PROPOSED IMPLEMENTATION PLAN

US 190/Collins Boulevard Widening Project
St. Tammany Parish, Louisiana
State Project No. H.004987, Federal Project No. H004987

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GEC

Figure: 3
Date: February 2017
Scale:1:24,000
Source: ESRI/GEC
Map ID:4987-3160

taper into the two north-bound through lanes north of the bridge. Once this new bridge is open to traffic, the existing bridge would be converted to two southbound travel lanes.

Phase 2A (Figure 3) would construct the roundabout at the Collins Boulevard intersection with LA 25 and approaches to the intersection.

Phase 2B (Figure 3) would construct project improvements for Collins Boulevard from its intersection with LA 25 to Lee Road, including the proposed roundabout at Lee Road.

During Phase 3 (Figure 3), the new bridge would be modified to accommodate north- and southbound traffic while the older, southbound bridge is replaced with a new bridge. During replacement of the southbound bridge, the new, 54-foot-wide bridge would provide four 11-foot-wide lanes (two northbound, two southbound) with two-foot wide shoulders on each side and a two-foot-wide median barrier between the north- and southbound lanes. The new southbound bridge would be 40-feet-wide with two 12-foot travel lanes with a six-foot shoulder to the inside and a 10-foot shoulder to the outside. Once the new southbound bridge is open to traffic, the 54-foot-wide bridge constructed during Phase I would be converted back to northbound traffic. It would include two 12-foot travel lanes with 15-foot inside and outside shoulders. New ramps and approaches for new bridges to/from Boston Street would also be constructed during Phase 3, as would improvements to Military Road, Front Street, E. Boston Street, and LA 36.

Phased construction is subject to change according to funding and may be implemented in any order as funds become available. Additionally, Phase 3 cannot be constructed until St. Tammany Parish obtains ownership of Tammany Trace ROW, owned by Canadian National Railroad. Vertical clearances planned for the new ramps and approaches to the new Bogue Falaya River Bridge are insufficient for crossing ROW that could be redeveloped for rail traffic. Should STP fail to acquire this ROW, Phase 3 improvements would be redesigned and readdressed in a future NEPA document, i.e., Supplemental EA.

Full passage through the project corridor would be maintained during each phase. Driveway access might experience brief, intermittent disruptions but would be maintained. Two lanes in each direction would remain open to traffic during construction.

Lane closures limiting traffic to fewer than two lanes in each direction would be limited in duration and conducted only during weekends or at night.

Standard DOTD advance warning signage, flashing lights, and retro-reflective markings would be used. Where possible, and when it would not create excessive noise impacts, nighttime and weekend construction activities might be authorized to mitigate traffic impacts.

4.2.2 Complete Streets Policy

DOTD implemented the Complete Streets Policy on July 18, 2010, to create a “comprehensive, integrated, connected transportation network for Louisiana that balances access, mobility, health, and safety needs of motorists, transit users, bicyclists, and pedestrians for all ages and abilities, which includes users of wheelchairs and mobility aids.”

Accounting for surrounding residential and commercial development, potential property impacts, costs for construction and ROW acquisition, project scope, and other factors, it was determined reasonable and feasible to include a side path with the project; a new, paved, 10-foot-wide side path, separated five feet from the back of the new roadway's curb, to the west and east sides of Collins Boulevard. The new path would connect with the Tammany Trace just east of its intersection with East Gibson Street near the Bogue Falaya River, and extend along the west side of Collins Boulevard for 2.1 miles to LA 25. To the east of Collins Boulevard the side path would extend from the intersection with Lee Road to LA 25, a distance of approximately 1.7 miles. The two paths would connect across Collins Boulevard at Lee Road, 32nd Avenue, E. Magee Street, Poole Drive, and LA 25.

Consideration shall be given during final plan development for supplemental features including roadside "Share the Road" signage to facilitate motorized and non-motorized travel modes.

4.2.3 Access Management Policy

DOTD has adopted an Access Management Policy for the construction of new roadways. Access management includes the systematic control of the location, spacing, design, and operation of driveways, median openings, and street connections in order to improve safety. The Build Alternative would incorporate access management through the use of yield-entry roundabouts at major intersections, right-turn only access onto Collins Boulevard for remaining side streets, and raised medians with intermittent openings.

4.3 INDIRECT IMPACTS

The purpose of the project is to increase the capacity of Collins Boulevard and decrease congestion. The Build Alternative would construct additional travel lanes (road and bridge), replace signalized intersections with yield-entry roundabouts, limit side-street access to Collins Boulevard to right-turn only access, and construct other access management features including U-turns. The potential for increased commercial and residential development along the project corridor as a result of this project is limited due to the current level of development that already exists. The side path, together with the proposed raised median, could create a more aesthetically pleasing and pedestrian and bicycling friendly environment for users of the road which, in turn, could enhance community character.

4.4 CUMULATIVE IMPACTS

Cumulative impacts are defined in 40 CFR 1508.7 as those effects that result from, ". . .the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Cumulative impacts analysis focuses on those resources expected to be directly or indirectly affected by the proposed project. Although portions of the project are located in the 100-year

floodplain, no effects to this resource are anticipated; however, the EA has identified potential project impacts to noise and wetlands/other waters.

4.4.1 Noise

Previous Build Alternatives requiring additional travel lanes and similar ROW, although eliminated from further consideration, were at one time considered, and a noise evaluation was prepared to determine existing and future sound levels at noise-sensitive land uses. The greatest measured existing peak hour equivalent sound level of 68 dBA was recorded at 815 Collins Boulevard. The lowest measured existing sound level of 52 dBA was recorded farther from Collins Boulevard, at 204 Hornsby Street. Collins Boulevard was the dominant noise source at all measurement sites with the exception of 952 North Lee Road, where traffic and accelerating northbound vehicles on North Lee Road contributed equally to noise levels.

Summary of Project Impacts on Noise: For previous Build Alternatives, projected noise levels ranged from 57 dBA for residences along Hornsby Street, Briggs Street, and Ozone Park Road to 71 dBA at residences closest to Collins Boulevard. In total, nine residences were predicted to be impacted by noise levels exceeding the FHWA/DOTD NAC of 66 dBA (Appendix E). Because the current Build Alternative also recommends four travel lanes throughout the project corridor, requires ROW similar to the previous alternatives, and because existing (2010) and future (2030) AADT determined in 2010, upon which the noise analysis is based, exceed updated existing (2013) and future (2033) AADT prepared in 2014, actual noise impacts would be less than those determined in the noise analysis.

Other Reasonably Foreseeable Effects: Covington's proposed future land use plan is generally consistent with the current planning zones along Collins Boulevard (City of Covington, 2015). The project area would continue to include a mix of commercial, light industrial, and institutional land uses. No significant new sources of noise are expected to add cumulative effects to noise levels in the project area.

4.4.2 Wetlands/Other Waters

The project is located in the Deltaic Coastal Marshes and Barrier Islands ecoregion, which was historically dominated by wetland habitat (EPA, 2015). Wetland habitat in the project area has been significantly reduced as a result of development and ongoing trends affecting coastal Louisiana such as sea level rise, lack of sediment input, delta erosion, and land subsidence.

A preliminary wetland delineation was conducted in January and February 2015 for the project assessed in this EA (Appendix D). Three forested communities and one herbaceous community totaling 2.29 acres of wetlands and 0.97 acres of Other Waters of the U.S. (including portions of the Bogue Falaya River, Mile Branch Stream, two small unnamed perennial streams, and two intermittent streams) were identified in the ROW proposed for the Build Alternative. USACE would make the final determination as to whether these areas are considered jurisdictional wetlands. A USACE permit might be required prior to placing fill and/or the start of construction.

Summary of Project Impacts on Wetlands/Other Waters: Depending on final plans and specifications for the project, it might impact 2.29 acres of wetlands and 0.97 acres of Other Waters of the U.S. If so, compensatory mitigation would be completed to offset these impacts.

Other Reasonably Foreseeable Effects: Other present and reasonably foreseeable future actions and their effects on wetlands in the area include:

- "US 190 Right Turn Lane at Lee Road" (State Project Number H.0098350) will be constructed before the project assessed in this EA. Approximately 0.47-acre of wetlands and 0.36-acre of Other Waters of the U.S. might be impacted. Impacts would be mitigated as dictated by regulatory agencies.

- Other construction projects implemented for flood protection or traffic might similarly impact wetlands. These impacts would be offset through compensatory mitigation coordinated with regulatory agencies.

- Ongoing trends of sea level rise, deltaic erosion, and land subsidence would continue to convert wetland habitat to open water habitat. Coastal restoration projects planned for coastal Louisiana would minimally offset these effects.

Cumulative effects to area wetlands resulting from this and other construction projects combined with deltaic erosion and sea level rise could cause an overall net loss of wetland habitat in the future. Adverse impacts to wetlands resulting from this project could incrementally add to the losses. However, by providing compensatory mitigation, contributions to overall wetland loss from the project would be minimal.

4.5 MITIGATION FOR ADVERSE IMPACTS

The proposed project is expected to have minimal effects on the environment. For impacts that cannot be avoided, the following mitigation measures would be implemented.

4.5.1 Relocation Impacts

Residences and businesses relocated through real estate acquisition would be afforded protection under the Uniform Relocation Act, and relocation resources would be available without discrimination to those affected. It is anticipated that three residential and 26 non-residential relocations might be required. Additionally, two businesses that front Collins Boulevard include structures apparently located within existing Collins Boulevard ROW, and numerous businesses appear to have parking lots/areas located within, or partially within, existing Collins Boulevard ROW. These businesses will be addressed in accordance with DOTD policy. A Conceptual Stage Relocation Plan is provided in Appendix G.

4.5.2 Wetlands and Other Waters

To ensure no net loss of wetlands, project impacts to wetlands would be compensated in accordance with an approved mitigation plan developed during the permit process. To mitigate

potential water quality impacts to surface waters, the proposed project would adhere to standard DOTD BMPs and applicable LDEQ permit provisions to prevent erosion and nonpoint source pollution that might result from construction.

4.5.3 Floodplains

Required drainage structures would be designed, installed, and maintained to ensure adequate water flow through the project area and to ensure no adverse impacts to the natural function of local floodplains.

4.5.4 Noise

DOTD highway traffic noise policy requires consideration of abatement measures if noise impacts are identified. Only noise abatement measures determined feasible and reasonable would be proposed for the project. To be considered feasible, noise abatement measures must obtain a noise reduction of at least eight dBA for at least one receptor.

Receivers anticipated to be impacted from construction of the previous Build Alternatives were evaluated with respect to noise barrier feasibility. The impacted residential sites have individual driveways to Collins Boulevard. To maintain access, a noise barrier would have to incorporate openings which would prevent it from achieving an eight-dBA noise reduction. Therefore, it was determined that noise barriers would not be feasible for the project.

Because the project is relatively development-locked, non-barrier measures such as alterations to horizontal and/or vertical alignments would not be viable options for noise abatement. To protect future development from becoming incompatible with anticipated highway traffic noise levels, projections of future noise levels for undeveloped lands would be provided to local planning and building officials. As desired, these officials can review project-related noise data during consideration of future land use decisions.

4.5.5 Construction Impacts

Short-term construction impacts to noise and air quality would be mitigated through adherence to applicable local, state, and federal regulations, including (but not limited to) Section 107.14 (Environmental Protection) of the Louisiana Specifications for Roads and Bridges and appropriate LDEQ air quality regulations governing fugitive emissions of particulate matter during road construction activities (LAC 33:III.1305). Standard specification 107.27 (Archaeological and Historical Findings) dictates procedures necessary in the event archeological or historical material is discovered during construction.

5.0 PUBLIC COMMENTS AND AGENCY COORDINATION

5.1 Agency Coordination

Information regarding the project was sent to federal, state, and local agencies and officials on December 19, 2014. The Solicitation of Views and responses are included in Appendix B. Tables 10 and 11 provide a list of agencies consulted and a summary of their comments.

Table 10. Summary of Responses to the Solicitation of Views

Date of Comment	Agency/Tribe	Comment Summary
June 30, 2010	NOAA	None of the proposed alternatives would adversely impact NOAA trust resources. As such, NMFS has no comments to provide.
February 2, 2012	USCG	Accepts FHWA STAA determination; bridge not exempt from Coast Guard lighting requirements
December 19, 2014	EPA	No adverse effect on the Southern Hills aquifer system.
December 19, 2014	USFWS	The proposed project would not affect threatened or endangered species and no critical habitat is present. A "no effect" conclusion is appropriate.
January 5, 2015	LDNR Resources-Office of Conservation	No active oil, gas, or injection wells in the project area; possibility of registered/unregistered water wells in the project vicinity.
January 6, 2015	DOTD – Floodplain Management	Project is located in the 100-year floodplain. The St. Tammany Parish and the City of Covington floodplain administrators should be contacted to ensure compliance with the National Flood Insurance Program.
January 6, 2015	Louisiana Department of Health and Hospitals – Office of Public Health	No objections. The proposed project must comply with any and all applicable Louisiana State Sanitary Code regulations.
January 15, 2015	NRCS	The proposed construction areas are within urban areas and therefore are exempt from the rules and regulations of the Farmland Protection Policy Act. Furthermore, we do not predict impacts to NRCS work in the vicinity.
January 16, 2015	Louisiana Department of Agriculture and Forestry	No comment.
January 20, 2015	LDEQ	No objections. Take necessary steps to obtain and/or update all necessary approvals and environmental permits. No additional coordination with LDEQ is required.

Date of Comment	Agency/Tribe	Comment Summary
January 23, 2015	LDWF	The Tchefuncte River, a designated Scenic River, is located in the project vicinity. Additional coordination with LDWF is required. No other impacts to rare, threatened or endangered species or critical habitats are anticipated from the proposed project. No other state or federal parks, wildlife refuges, wildlife management areas or scenic rivers are known at the specified site within Louisiana's boundaries.
January 23, 2015	Alabama-Coushatta Tribe	No known impacts to cultural assets of the Alabama-Coushatta Tribe of Texas are anticipated.
January 27, 2015	SHPO	No known historic properties will be affected by this undertaking.
January 28, 2015	Choctaw Nation of Oklahoma	St. Tammany Parish is within an area of historic interest to the Choctaw Nation of Oklahoma. The tribe wishes to enter into government-to-government consultation directly with the FHWA.
February 4, 2015	Jena Band of Choctaw Indians	Requested a copy of the revised EA and a copy of the Cultural Resources Survey.
February 12, 2015	Louisiana Office of State Parks	No state parks, sites or other recreational areas under our jurisdiction are located near this project. No objections.
February 19, 2015	USACE	No adverse impacts to USACE projects; indicated the possibility of jurisdictional wetlands in the area.

Table 11. Summary of Follow-Up Coordination (Appendix C)

Date of Comment	Agency/Tribe	Comment Summary
February 3, 2015	LDWF	No scenic rivers would be affected by the project. No permit is required.
April 22, 2015	Choctaw Nation of Oklahoma	A cultural resources survey in the project area is requested.
February 9, 2017	St. Tammany Parish	The project would not adversely affect the Tammany Trace.

5.2 PUBLIC MEETINGS

Two public meetings were held for the project at Council Chambers in Covington, Louisiana on October 21, 2010 and June 11, 2015. Meeting notices were published in *The Times Picayune* and in *The Advocate*. Notices of the public meetings were also distributed to agencies, stakeholders, and local officials.

The meetings provided the public an opportunity to learn more about the proposed project and provide written and verbal comments for consideration by the project team. Project overview handouts, maps, and comment cards were provided for all attendees. A PowerPoint presentation describing project alternatives was provided for viewing.

Approximately 20 people attended the first meeting. The handouts, PowerPoint presentation, and comment cards specified that written comments would be accepted until November 21, 2010. One comment was received in response to the public meeting that advocated three continuous travel lanes on the bridge over the Bogue Falaya River and a bicycle and pedestrian path along the full project corridor, including the bridge.

Approximately 64 people attended the second meeting on June 11, 2015. Table 12 summarizes comments received during the public meeting and those submitted during the public comment period. The comments convey general support for the project, particularly with regard to proposed bridge enhancements. Concerns were expressed regarding the proposed roundabouts, access to businesses along Collins Boulevard and US 190B, and access to/from side streets, especially E. Kirkland Street. Table 12 includes DOTD responses to the comments.

Table 12. Public Meeting Comments and Responses

No.	Comment	Response
1	In favor of the project.	Comment taken into consideration.
2	Pleased to see that Phase I includes bridge work. Two lanes at roundabouts may be unsafe--may be too much of a learning curve for drivers.	Traffic simulations of the proposed roundabouts indicate improved intersection operations.
3	In favor of the project design. Pleased to see that the construction phasing will accelerate the schedule.	Comment taken into consideration.
4	Access to businesses on 190B needs to be maintained, including access for deliveries for Butter Krisp Donuts.	The project will preserve access to the currently permitted driveway(s) at this location.
5	In favor of the project.	Comment taken into consideration.
6	In favor of the proposed widening project and the additional turn lane at Lee Road.	Comment taken into consideration.
7	The traffic signal operations north of the bridge need to be improved to minimize delays.	Signalized intersections would be eliminated from Collins Blvd. with construction of the project.
8	In favor of the roundabouts proposed for the project. Although some residents oppose them, the roundabouts will facilitate traffic flow.	Comment taken into consideration.
9	Morning and afternoon traffic delays will not be improved with the proposed roundabouts, especially with regard to the volume of 18-wheelers coming from Lee Rd.	Traffic modeling/simulations of anticipated future traffic volumes (peak hour morning and afternoon) indicate the project would reduce congestion along the project. Roundabouts have been designed/sized to accommodate 18-wheel truck/trailers.

No.	Comment	Response
10	The proposed roundabouts may not be able to handle future growth in traffic volumes due to additional subdivisions (Oak Alley and Oak Meadows additions) and the possible addition of Costco; the Lee Rd. roundabout will not facilitate traffic flow.	Traffic modeling of anticipated future traffic volumes take into account future residential and commercial growth and indicate the project would reduce congestion along the corridor, including at the US 190/Lee Rd. intersection.
11	Widening the roadway is the only measure needed to sustain traffic flow; please reconsider the installation of roundabouts.	Traffic modeling indicates that replacing traffic lights with roundabouts along the project corridor will improve traffic operations and reduce delays.
12	In order to make a convincing argument for roundabouts, the simulation should have included both roundabouts and traffic stop lights. As traffic flow increases, roundabouts become less effective, and traffic congestion in St. Tammany Parish will probably increase. I am not convinced that the planned number of roundabouts is conducive to the needs of our residents and businesses.	Traffic modeling/simulations of anticipated future traffic volumes compared LOS at project-area intersections with traffic lights versus roundabouts. The analysis showed that the LOS at major intersections with traffic lights in 2033 would either worsen or remain unchanged as compared to existing conditions. However, simulations showed that replacing traffic lights with roundabouts would maintain or improve LOS for peak traffic at these intersections in 2033.
13	In favor of the project, especially bridge improvements. The fire station for Fire District 12 is south of the bridge. Congestion on the bridge currently reduces fire station response times in the event of emergencies. Construction of the project should be expedited.	Comment taken into consideration. Construction of the widened bridge will begin during the first phase of project implementation.
14	Concerned that there will be traffic delays during peak rush hour for east- and westbound traffic entering roundabouts; please consider projected growth in the US 190/Branch Crossing area.	Traffic modeling/simulations of anticipated future traffic volumes (peak hour morning and afternoon) take into account future residential and commercial growth and indicate the project would reduce congestion and improve intersection operations along the corridor.
15	In favor of Phases 1 and 2A of the project. Opposed to the proposed ramps connecting the widened bridge with Boston St. and Military Rd. Also opposed to the proposed roundabouts between the bridge and LA 25. The roundabouts may impede traffic flow.	Comment taken into consideration. Traffic modeling/simulations of anticipated future traffic volumes (peak hour morning and afternoon) take into account future residential and commercial growth and indicate the project roundabouts would reduce congestion and improve intersection operations along the corridor.

No.	Comment	Response
16	Opposed to roundabouts based on delays experienced at a roundabout in the Lafayette area. Traffic is increasing daily, and the roundabout proposed for the US 190/LA 25 intersection will cause increased crashes. Traffic studies are needed.	Traffic modeling/simulations of anticipated future traffic volumes compared LOS at project-area intersections (including the US 190/LA 25 intersection) with traffic lights versus roundabouts. The analysis showed that the LOS at major intersections with traffic lights in 2033 would either worsen or remain unchanged as compared to existing conditions. However, simulations showed that replacing traffic lights with roundabouts would maintain or improve LOS for peak traffic at these intersections in 2033. Traffic simulations of the proposed roundabouts indicate improved intersection operations.
17	Was there any consideration to having a flat bridge (like the existing one that goes over the river on Boston St.) rather than a high bridge? It appears a flat bridge would cost less to build.	The new bridge must maintain vertical clearance for Boston Street and will also span the Tammany Trace/railroad right-of-way and the river, avoiding another intersection at Boston Street.
18	Opposed to the numerous roundabouts proposed for the project, particularly the US 190/Lee Rd. roundabout. Traffic will worse due to expected Costco and residential development at Oak Alley and Oak Meadows subdivisions near the US 190/Branch Crossing. Use taxpayer money wisely.	Comment taken into consideration. Traffic modeling/simulations of anticipated future traffic volumes take into account future residential and commercial growth and indicate the project roundabouts would reduce congestion and improve intersection operations along the corridor.
19	In favor of the project, especially bridge improvements. Improvements in this area will help spur development in the northern areas of St. Tammany as more people will want to avoid the congestion experienced in the Mandeville area.	Comment taken into consideration.
20	The drivers on the roadway are sometimes the problem, not the roadway itself.	Comment taken into consideration.
21	In favor of widening the bridge to four lanes. Currently, traffic delays during peak travel times in the morning and evening are extensive, and emergency vehicles are delayed as well.	The project provides for a four-lane bridge across the Bogue Falaya.
22	In favor of construction of the proposed roundabout at Lee Rd. during Phase I.	Comment taken into consideration.
23	There could be a need to re-examine the Collins Blvd. /E. Kirkland St. intersection to provide for northbound turns onto Collins from Kirkland.	Comment taken into consideration (see below).
24	How will parking lot access be accommodated along the northbound off-ramp between US 190 and the Walgreen's roundabout?	Existing driveways on this reach of US 190 B will be maintained for access to the parking lots / businesses.

No.	Comment	Response
25	Consider providing an additional southbound U-turn with bulb-out north of Clark St. that can accommodate 18-wheelers.	South- and northbound U-turns will be provided for this reach of Collins until construction of the roundabout at Lee Drive.
26	Concerned with the unsignalized left turn movement from US 190 to the service road that serves the Chimes at 19130 W Front St.	The plan has been modified to address this concern. The proposed plan now provides a directional left turn lane to Rogers Ln. from northbound US 190, and the US 190 southbound left turn lane has been removed. Rogers Ln. will be a right in / right out. Those wanting to go north will go a short distance south on US 190 to a U-turn.
27	(1) Suggest a detailed drainage runoff study for a potential 100 year flood over the banks of the Bogue Falaya River at E. 31st Avenue. This request goes much further than the widening of US 190 but also the long term future growth of the North Covington, Bogue Falaya Corridor and the increased potential for flooding. (2) If feasible and safe, consider including the roundabout at the junction of Lee Road and US 190 / Collins Boulevard in Phase 1. 3) Consider a safe bike path to the Trace from either E. 31st. Avenue at Lee Road, or from the end of Cherokee Lane.	A drainage study for the project will be prepared during engineering and design. Comments taken into consideration. The proposed shared-use path is restricted to the proposed project limits.
28	Please add my name to the project distribution list, and send information where the environmental assessment can be reviewed.	The locations for reviewing the environmental assessment, when completed, will be posted on the City of Covington website, local newspapers, and in a notification sent to the distribution list.
29	In favor of the project. Hope to see the project built without delays.	Comment taken into consideration.
30	The Collins Blvd. intersection with Kirkland street must provide for northbound turns onto Collins from Kirkland.	Comment taken into consideration (see below).

During and after the June 11, 2015 public meeting, representatives of Phoenix Covington Associates (PCA) expressed concern regarding project plans for the Collins Boulevard intersection with E. Kirkland Street, which provide for right-in/right-out turns at E. Kirkland Street and a dedicated left-turn from northbound Collins Boulevard onto E. Kirkland Street. PCA plans development of Covington Village Walk on 12 acres located near the west side of Collins Boulevard, adjacent to (and to the south of) E. Kirkland Street and believes that elimination of northbound (left) turns from E. Kirkland Street onto Collins Boulevard will negatively impact the development.

In response to this concern, DOTD and RPC considered an additional roundabout at E. Kirkland Street or at E. Clark Street. A signalized intersection for Collins Boulevard at E. Kirkland Street would counter project purpose.

A roundabout at E. Kirkland Street would be located in the immediate vicinity of grade changes necessary for the new Bogue Falaya River Bridge, at a point of acceleration/deceleration, and would negatively impact traffic operations. Additionally, a roundabout at either location would require additional right-of-way acquisition and, possibly, commercial relocations.

DOTD and RPC believe current project plans for the Collins Boulevard intersection with E. Kirkland Street are appropriate, and PCA concerns regarding northbound (left) turns from E. Kirkland Street onto Collins Boulevard are mitigated because of existing connectivity from the proposed development onto northbound Collins Boulevard via East Kirkland to Lee Drive and East Kirkland to Florida Street to Monroe Street.

Open House Public Meeting Transcript documents public notices for the June 11, 2015 meeting along with attendance, meeting exhibits, and comments.

5.3 PUBLIC HEARING

A public hearing will be held following the distribution of the Draft EA to provide interested parties an opportunity to learn more about the proposed project and to submit comments. A synopsis of the public hearing will be compiled in a public hearing transcript, which will include comments grouped by topic. The Final EA will also include a response to each comment in a comment/response summary table.

6.0 COMPARISON OF THE BUILD AND NO-BUILD ALTERNATIVES

Table 13 provides a comparison of quantifiable impacts for the No-Build and Build alternatives.

Table 14 provides a summary of estimated construction costs.

Table 13. Comparison of Impacts of Alternatives

Evaluation Measure	Units	No-Build	Build Alt.
Residential Relocations	Each	0	3
Commercial Relocations	Each	0	26[1]
Community Relocations	Each	0	0
Vacant/Unused Structure Relocations	Each	0	0
Other Relocations	Each	0	0
Wetlands	Acres	0	2.29
Other Waters of the U.S.	Acres	0	0.97
Scenic Streams	Each	0	0
Stream Crossings	Each	1	1
Sole Source Aquifer Impacts	Acres	0	0
Protected Species	Each	0	0
Prime and Unique Farmland	Acres	0	0
Coastal Resources and Essential Fish Habitat	Each	0	0
Properties Eligible for or Listed on NRHP	Each	0	0
Properties Not Eligible for NRHP	Each	0	0
Section 4(f) and 6(f) Properties	Each	0	1
Impacted Receivers	Each	9	9
Side Path	Miles	0	3.8[2]

1 – Does not include impacts to two businesses apparently located within existing Collins Boulevard ROW (Section 4.1.3).
2 – Includes 2.1 miles to the west of Collins Boulevard and 1.7 miles to the east.

Table 14. Summary of the Estimated Opinion of Probable Construction Cost

Cost	Percent	Phase 1	Phase 2A	Phase 2B	Phase 3	Project Total
Major Construction Items						
Bridge Structure	--	$8,306,000	$0	$0	$13,445,000	$21,751,000
Other Items	--	1,426,436	6,788,000	12,255,000	12,017,000	32,486,436
Sub-total		$10,370,000	$6,788,000	$12,255,000	$25,462,000	$54,237,436
Temporary Traffic Control	7.5%	778,000	509,000	919,000	1,910,000	4,116,000
Mobilization	7.0%	726,000	475,000	858,000	1,782,000	3,841,000
Construction Layout	2.0%	207,000	136,000	245,000	509,000	1,097,000
Sub-total		$12,081,000	$7,908,000	$14,277,000	$29,663,000	$63,929,000
Contingencies	10.0%	1,208,000	791,000	1,428,000	2,966,000	6,393,000
Total Construction Cost		**$13,290,000**	**$8,700,000**	**$15,710,000**	**$32,630,000**	**$70,330,000**
Right-of-way Acquisition	--	0	2,281,000	4,087,000	3,136,000	9,504,000
Utility Relocations	--	300,000	1,124,000	2,013,000	1,545,000	4,982,000
Environmental	2.0%	266,000	174,000	314,000	653,000	1,407,000
Design Engineering	8.0%	1,063,000	696,000	1,257,000	2,610,000	5,626,000
Construction Engineering & Inspection	7.5%	997,000	653,000	1,178,000	2,447,000	5,275,000
Land Acquisition Services	10.0%	0	870,000	1,571,000	3,263,000	5,704,000
Total Estimate of Probable Construction Cost		**$15,900,000**	**$14,500,000**	**$26,100,000**	**$46,300,000**	**$102,800,000**

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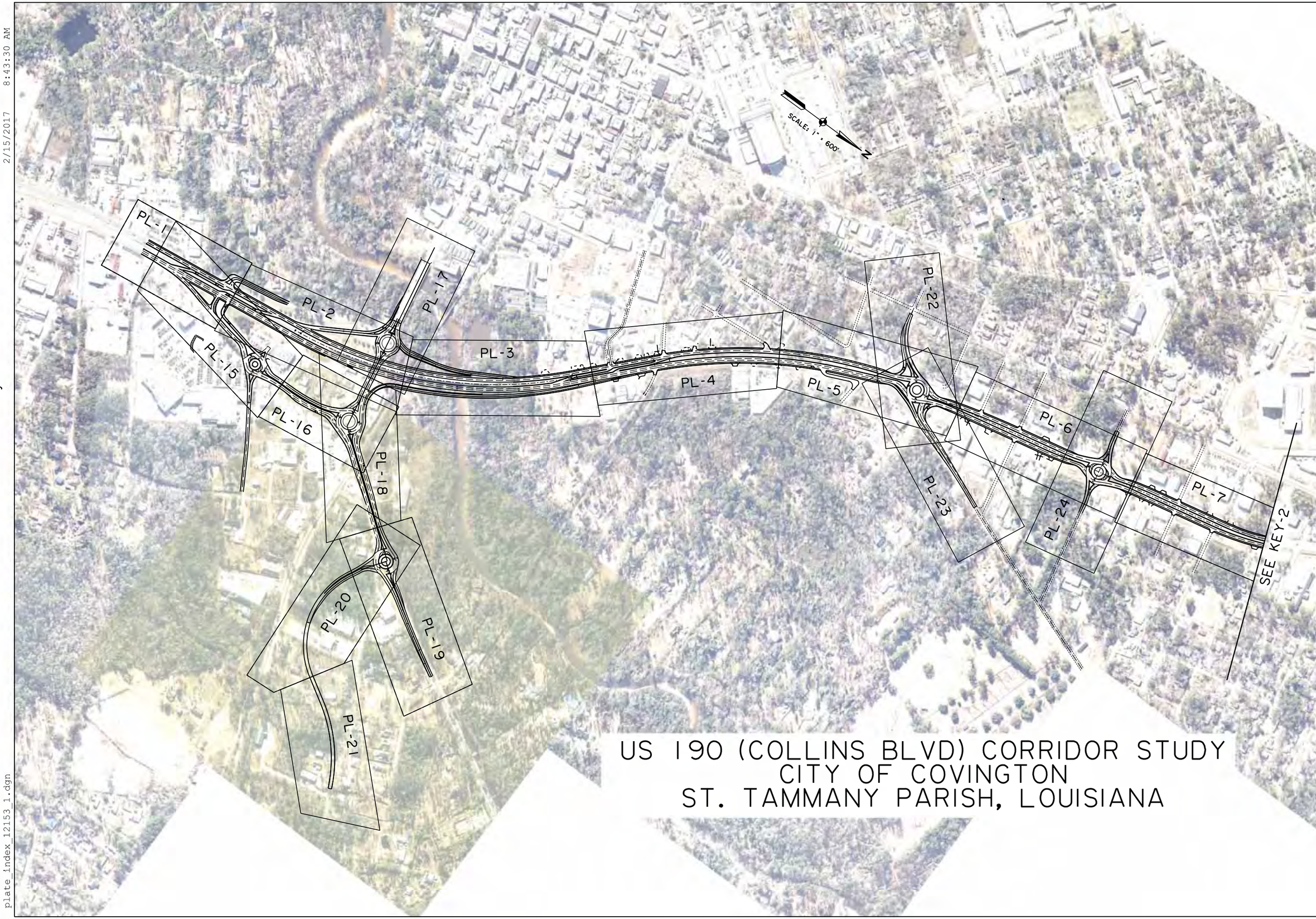
Appendix A

BUILD ALTERNATIVE



US 190 (COLLINS BLVD) CORRIDOR STUDY
CITY OF COVINGTON
ST. TAMMANY PARISH, LOUISIANA

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FEDERAL PROJECT	H004634
STATE PROJECT	H.004634
DESIGNED	WCS
CHECKED	DTT
DETAILED	WCS
CHECKED	DTT
DATE	2-14-17
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLATE INDEX

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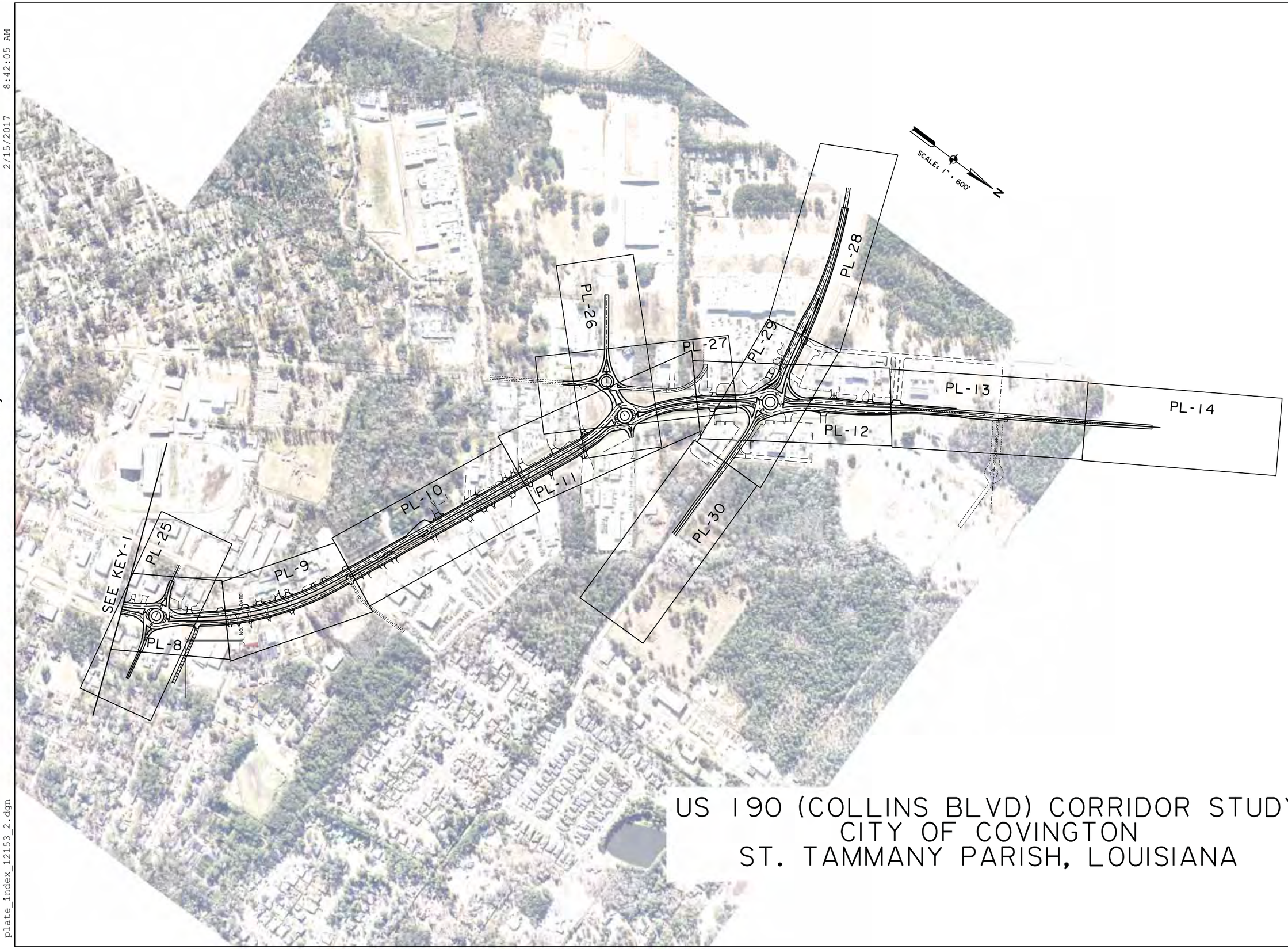

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ST. TAMMANY PARISH, LOUISIANA

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STATE PROJECT	H.004634
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DETAILED / CHECKED	WCS / DTT
DATE / SHEET	2-14-17

NO.	DATE	REVISION DESCRIPTION	BY

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2/15/2017 8:42:05 AM

Line and Grade Study

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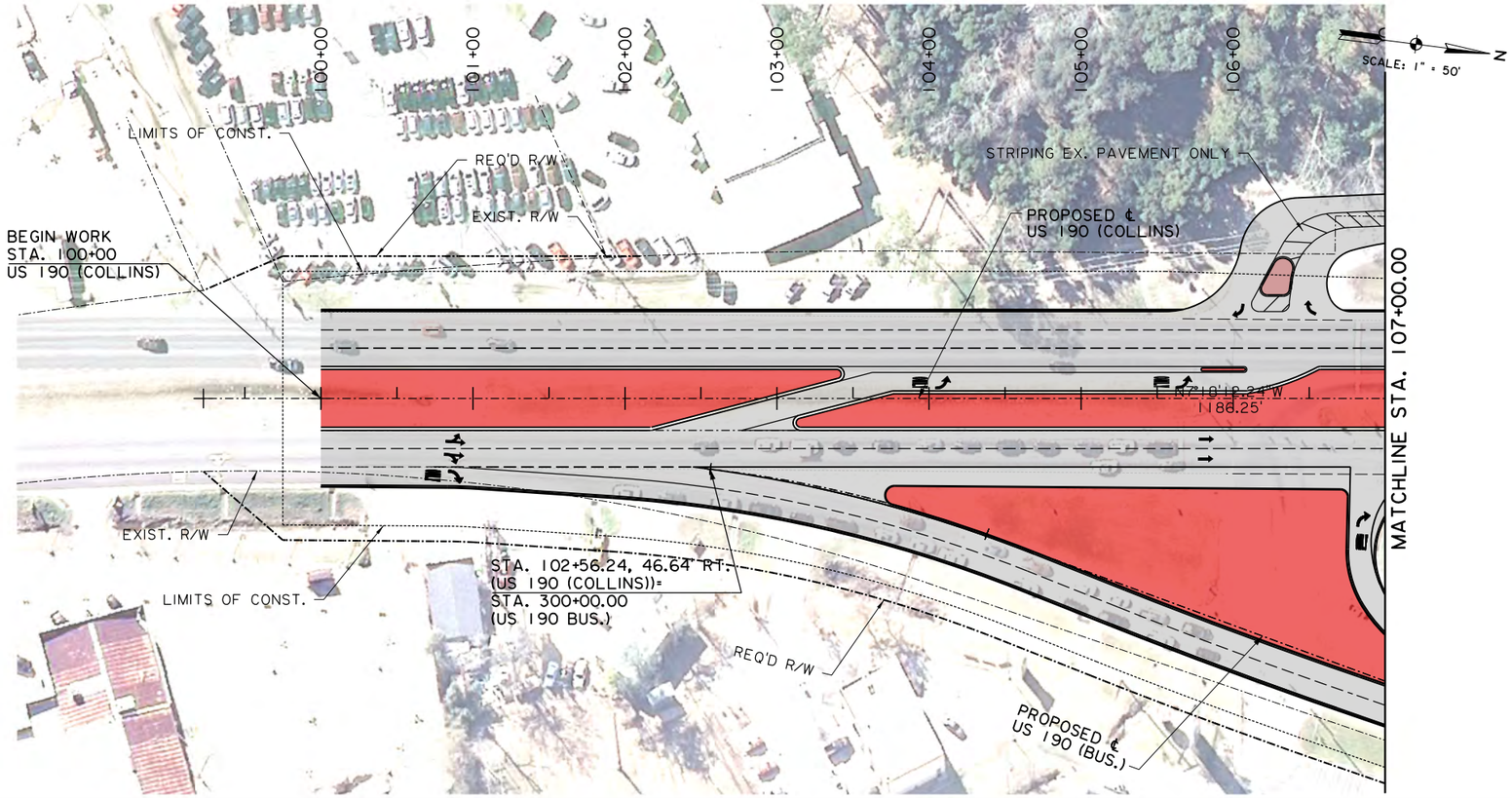

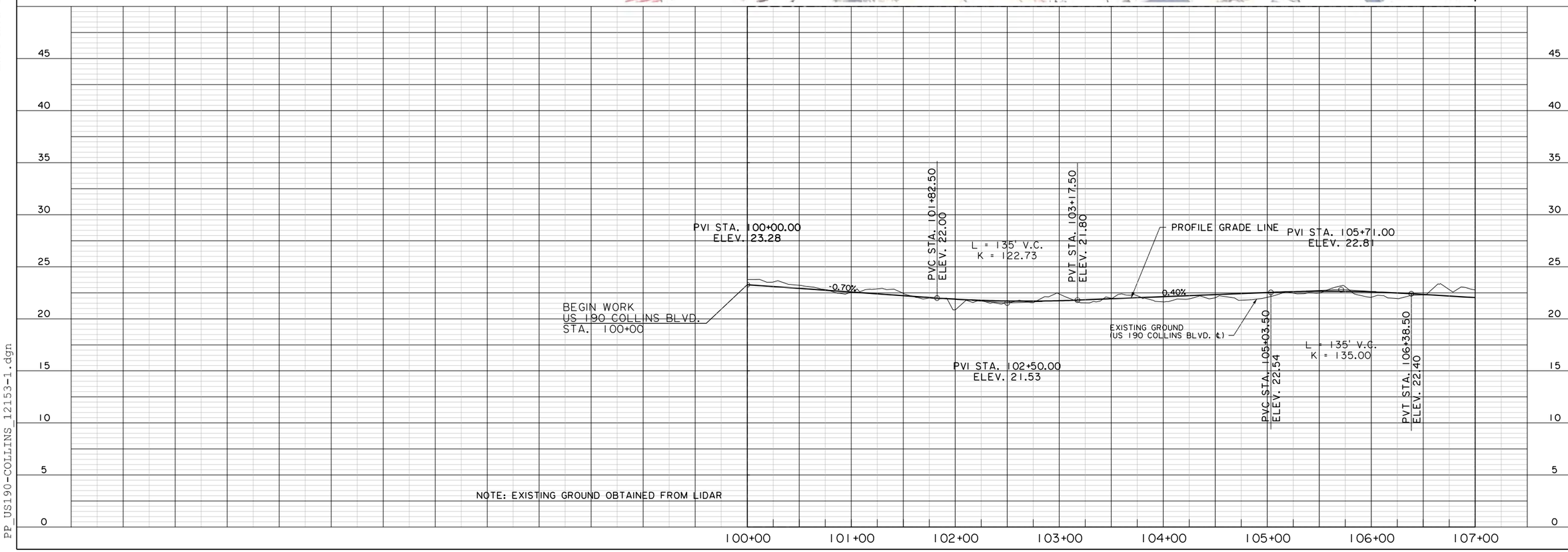

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CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

Line and Grade Study

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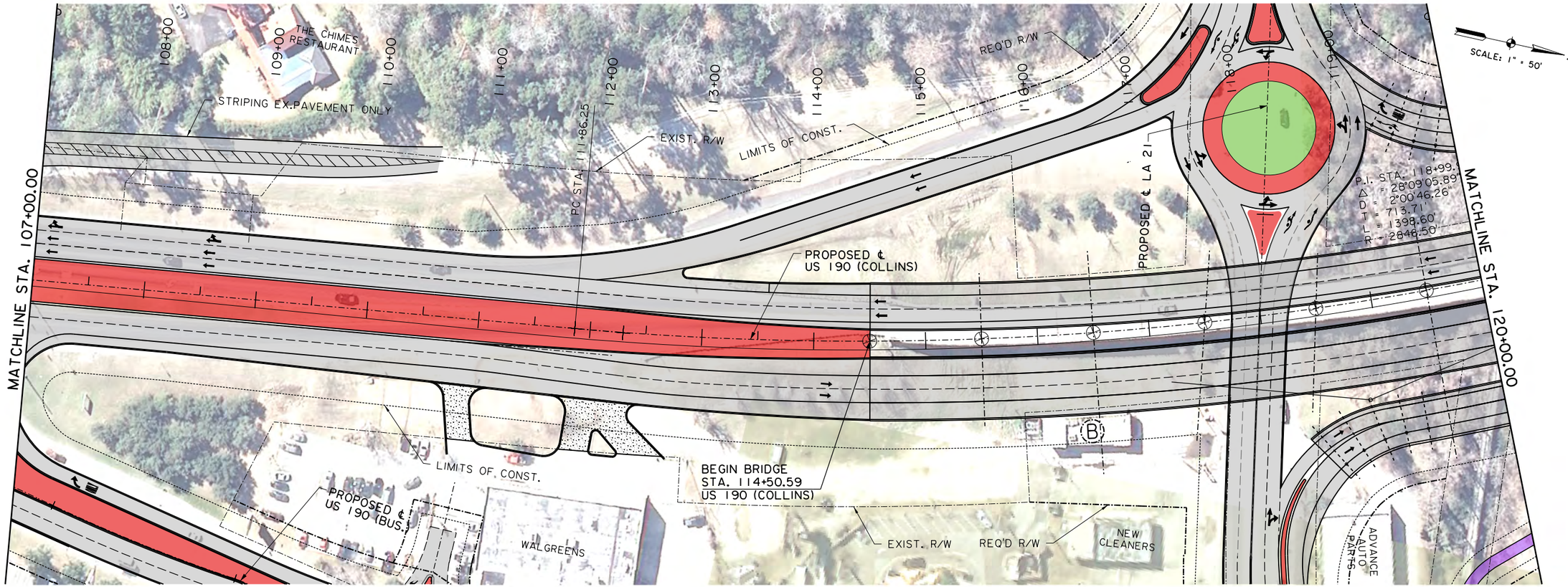
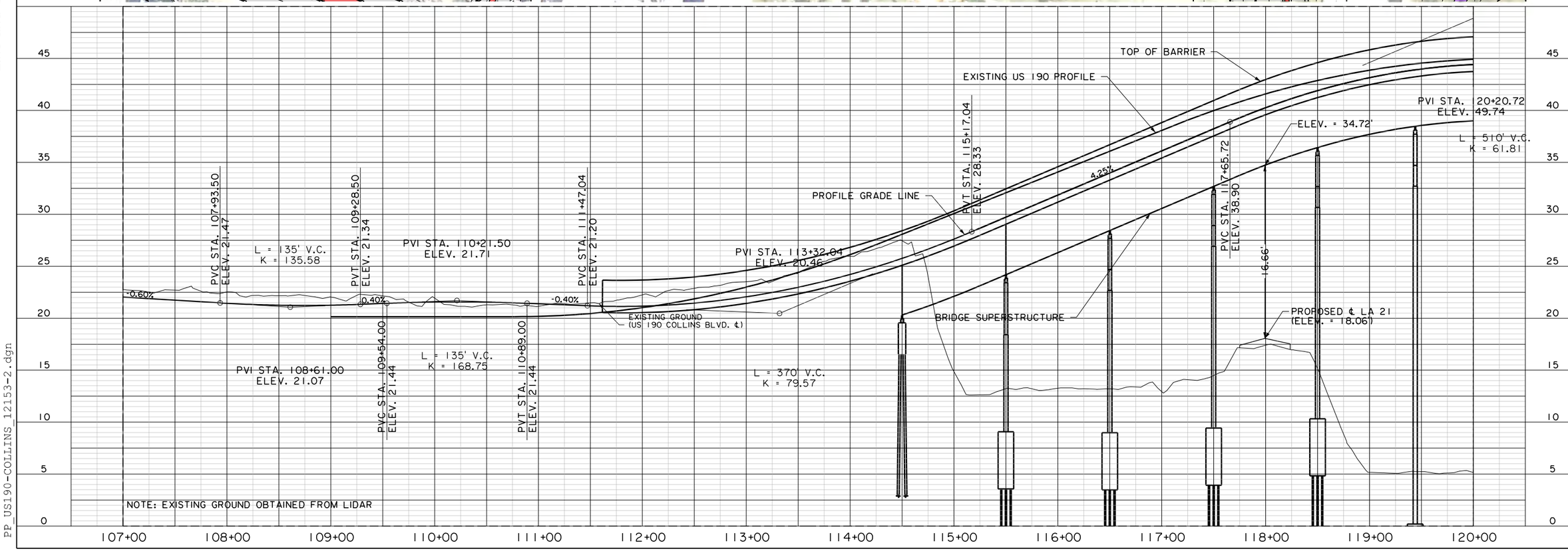
Line and Grade Study





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SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

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US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

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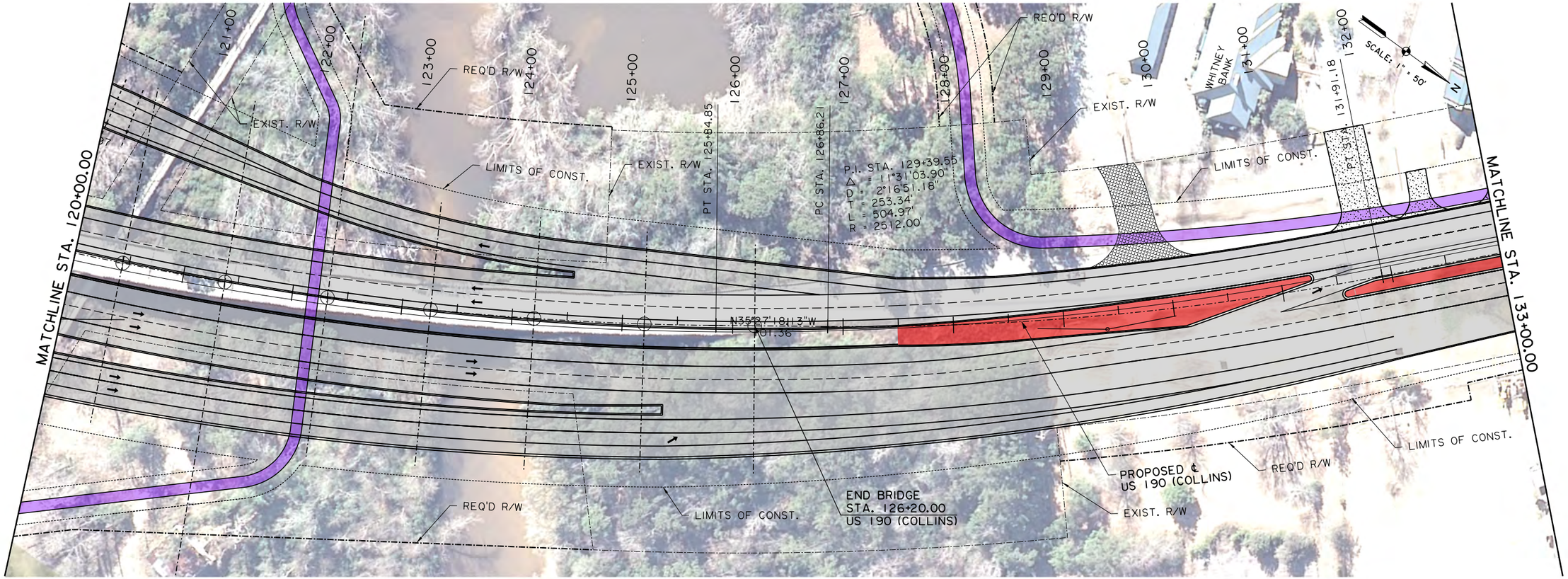

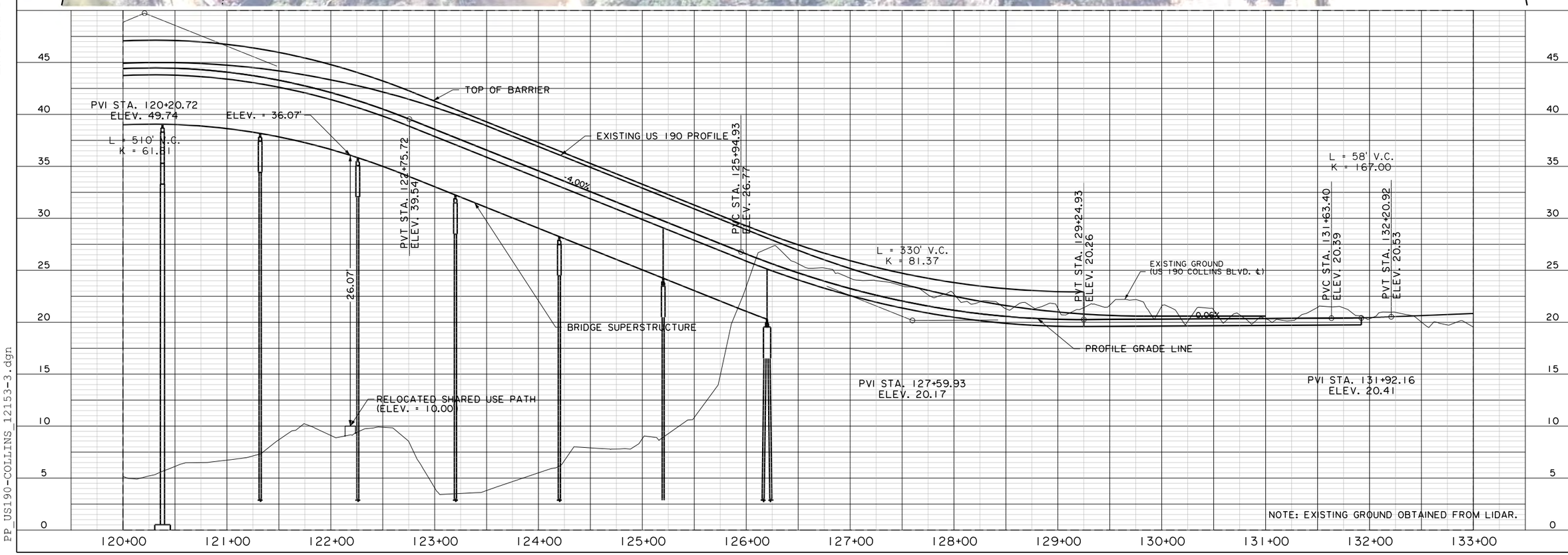

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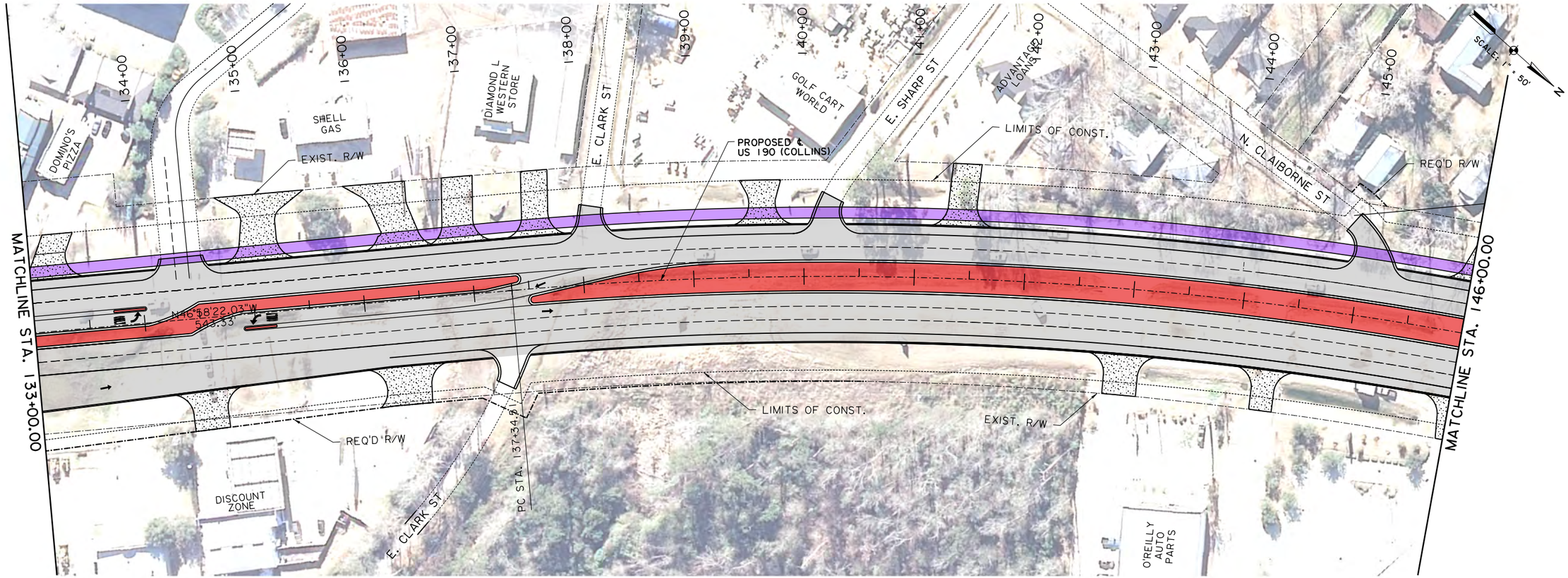
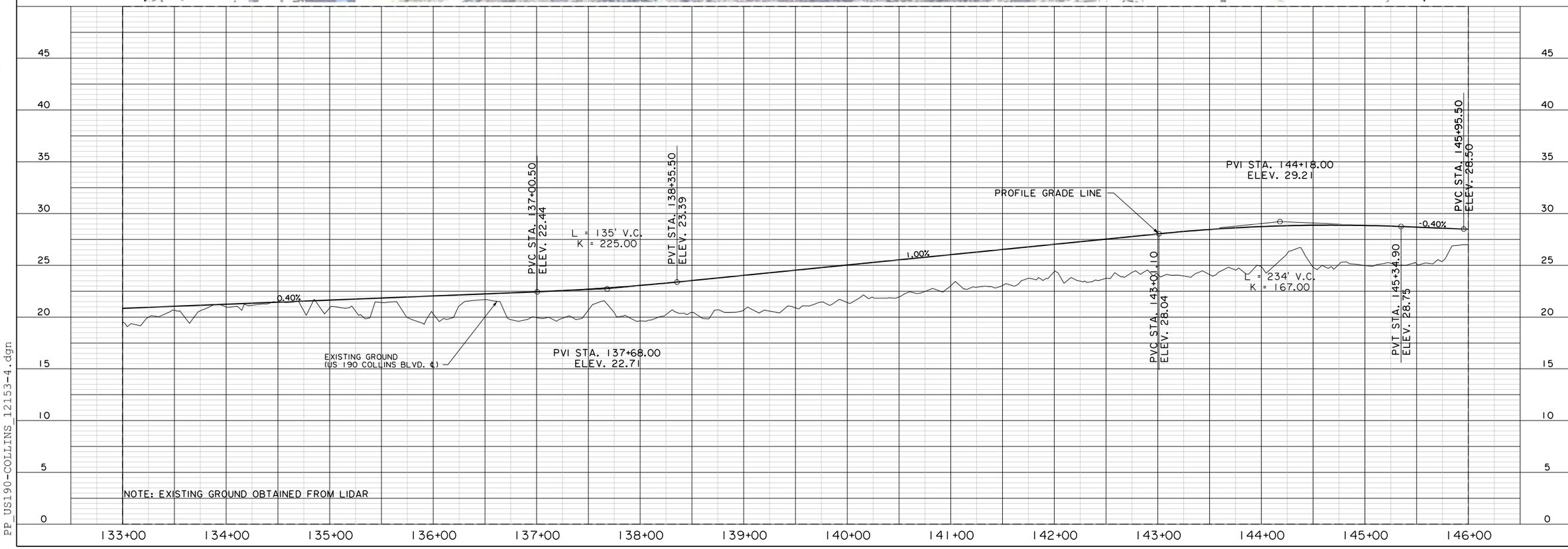
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21



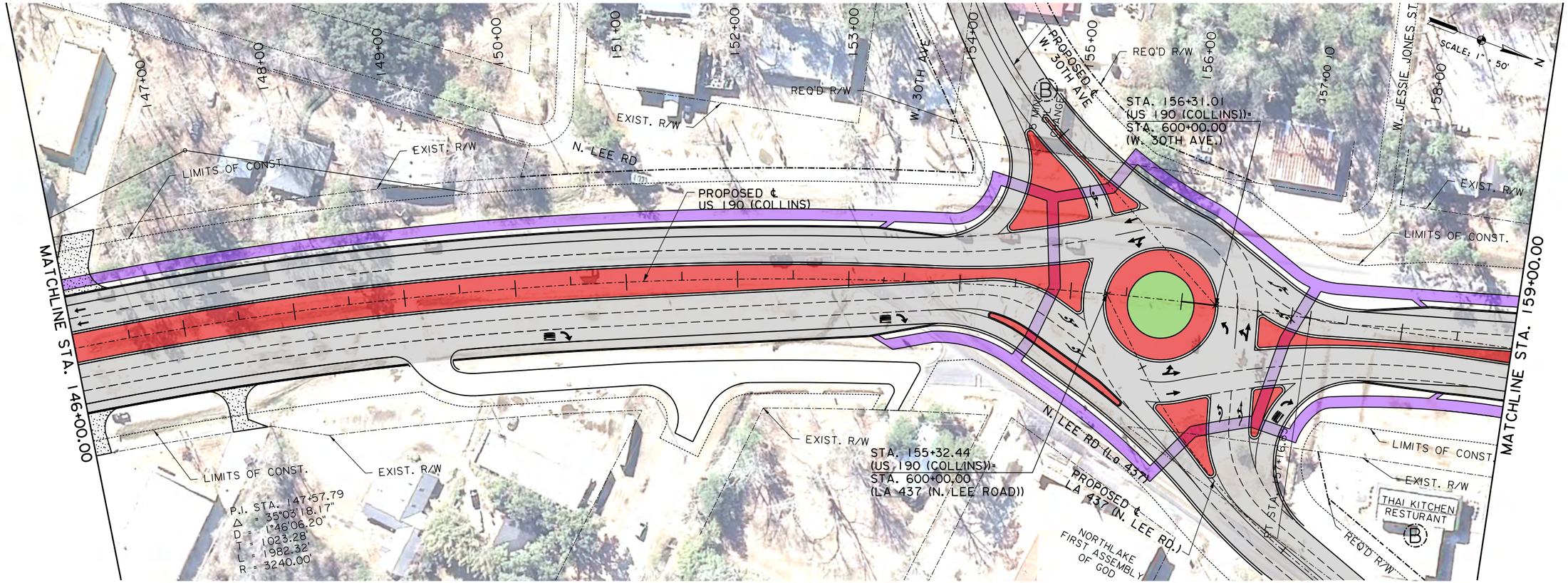


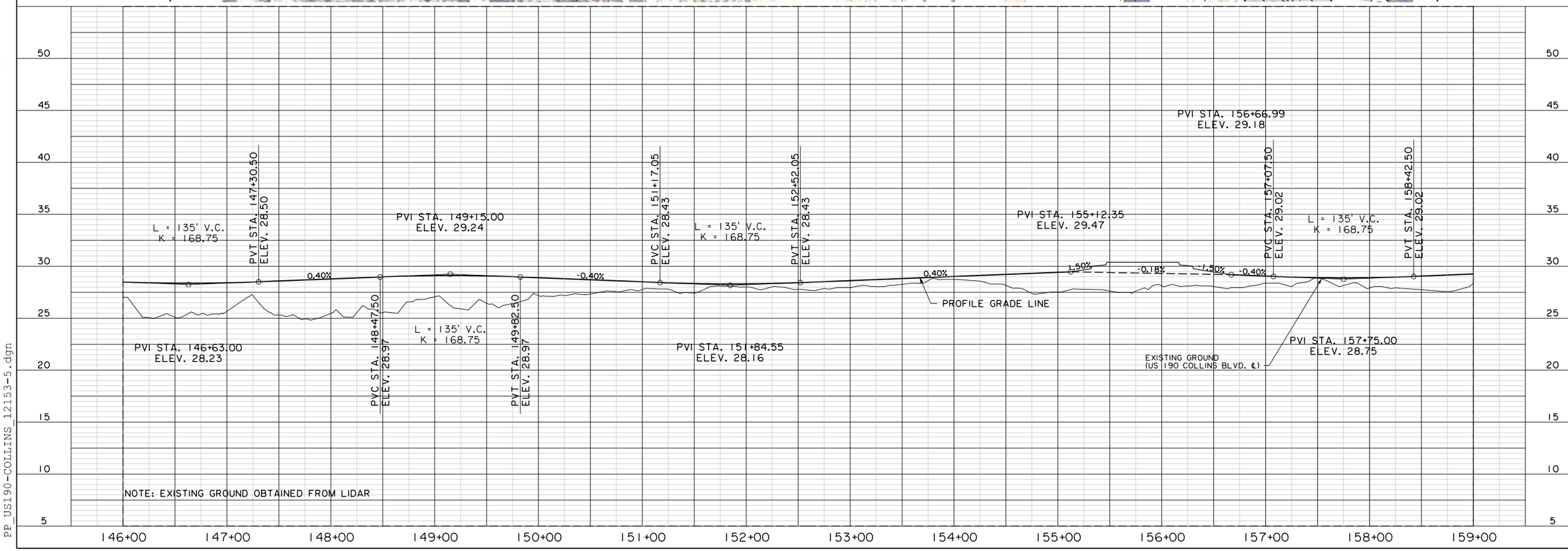
SHEET NUMBER	PL-4
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-5
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED / CHECKED	WCS / DTT
DETAILED / CHECKED	WCS / DTT
DATE / SHEET	3-15-16

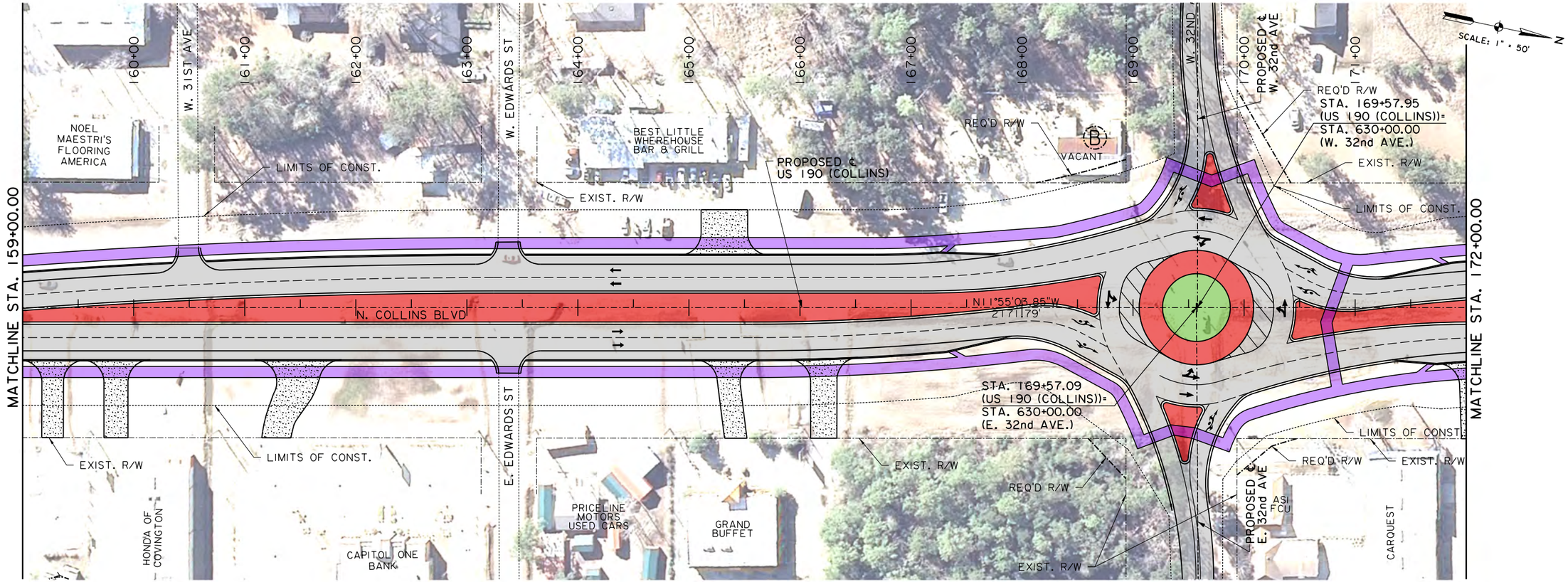
NO. | DATE | REVISION DESCRIPTION | BY

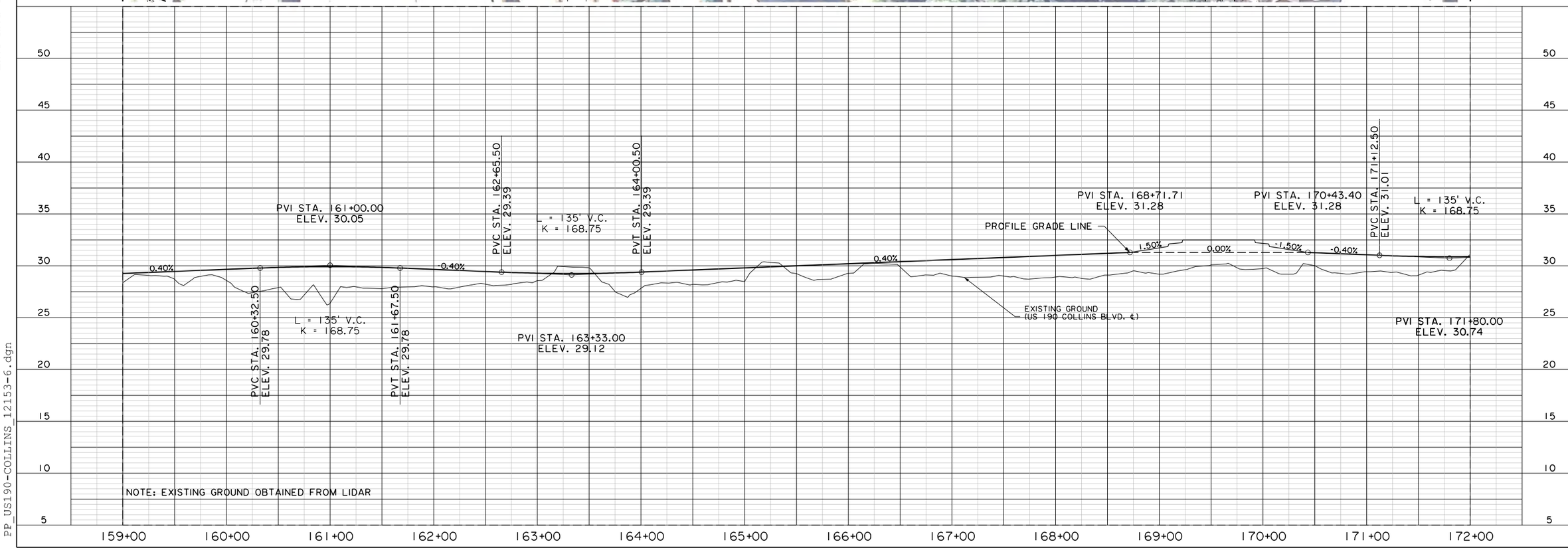
PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

Line and Grade Study

PP_US190-COLLINS_12153-5.dgn



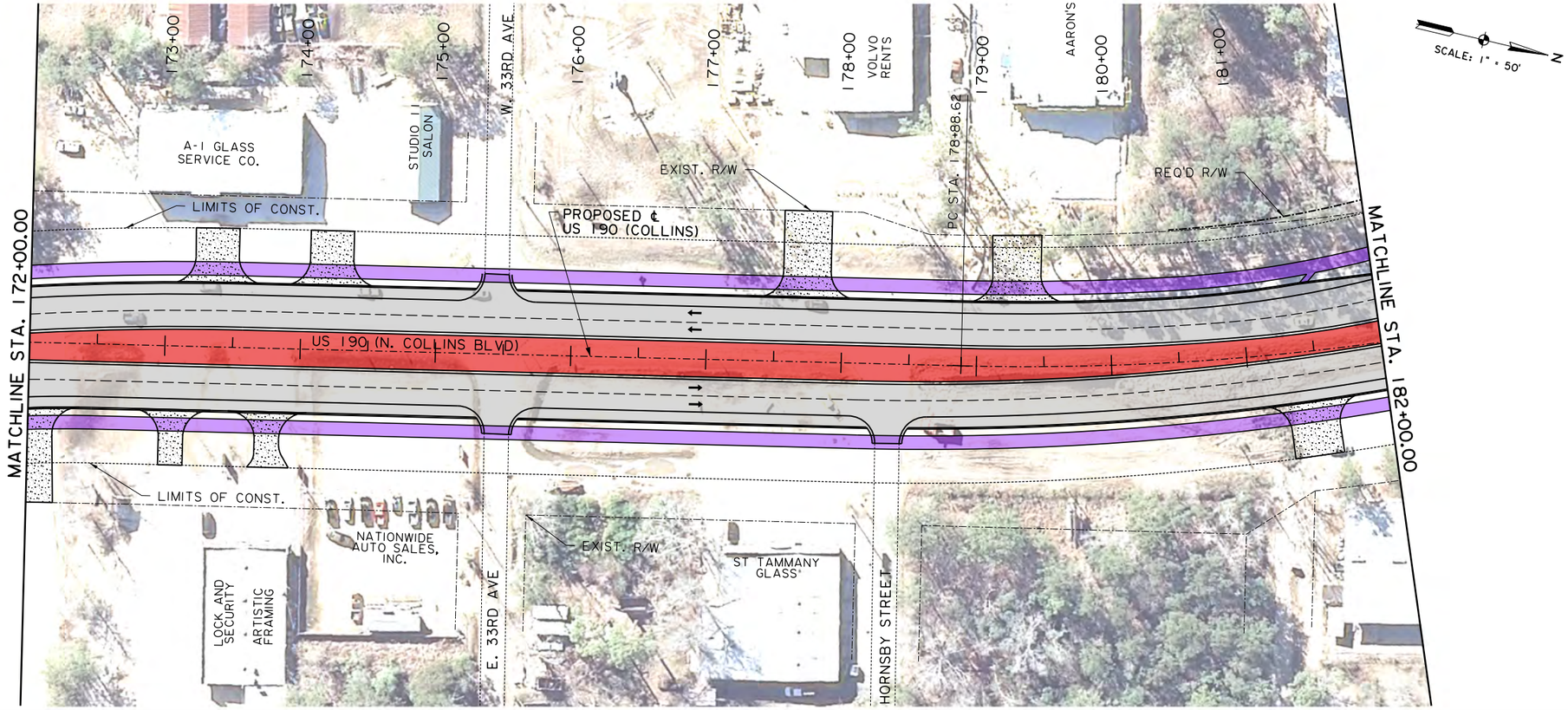


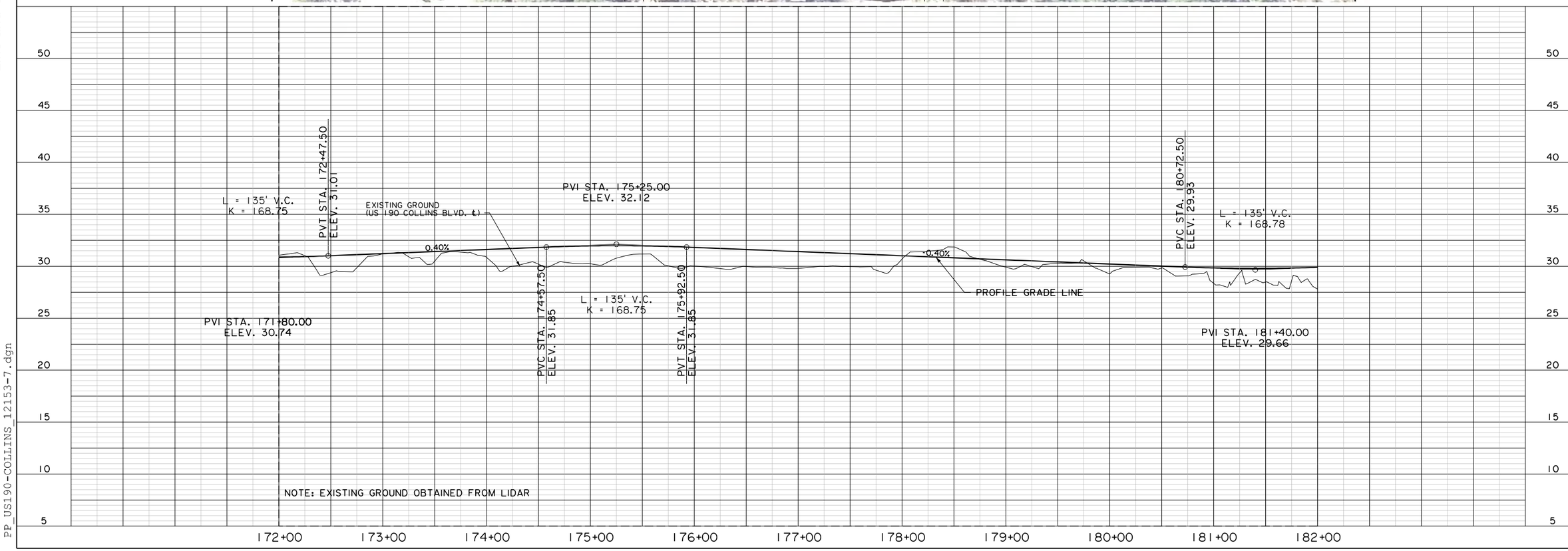
SHEET NUMBER	PL-6
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21





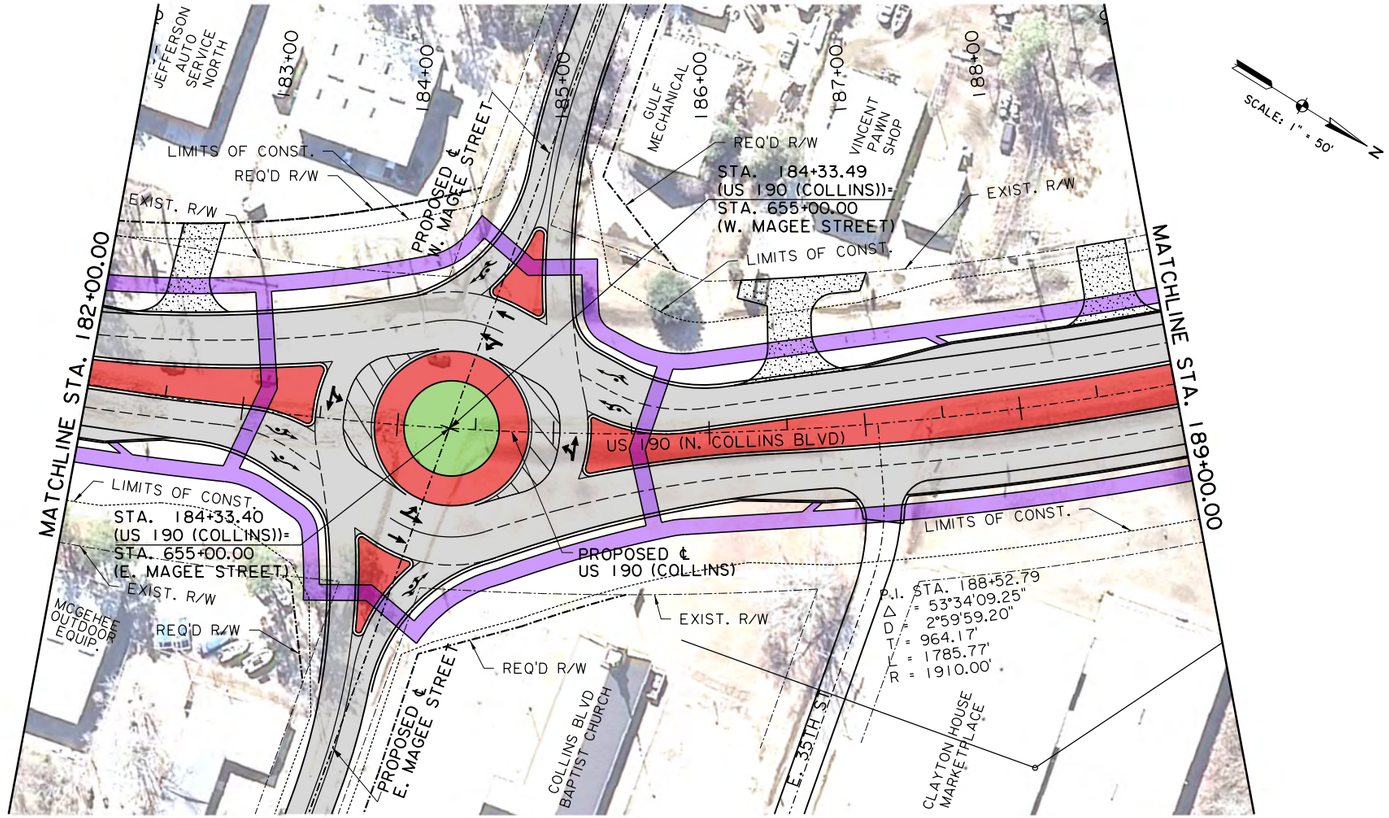
SHEET NUMBER	PL-7
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

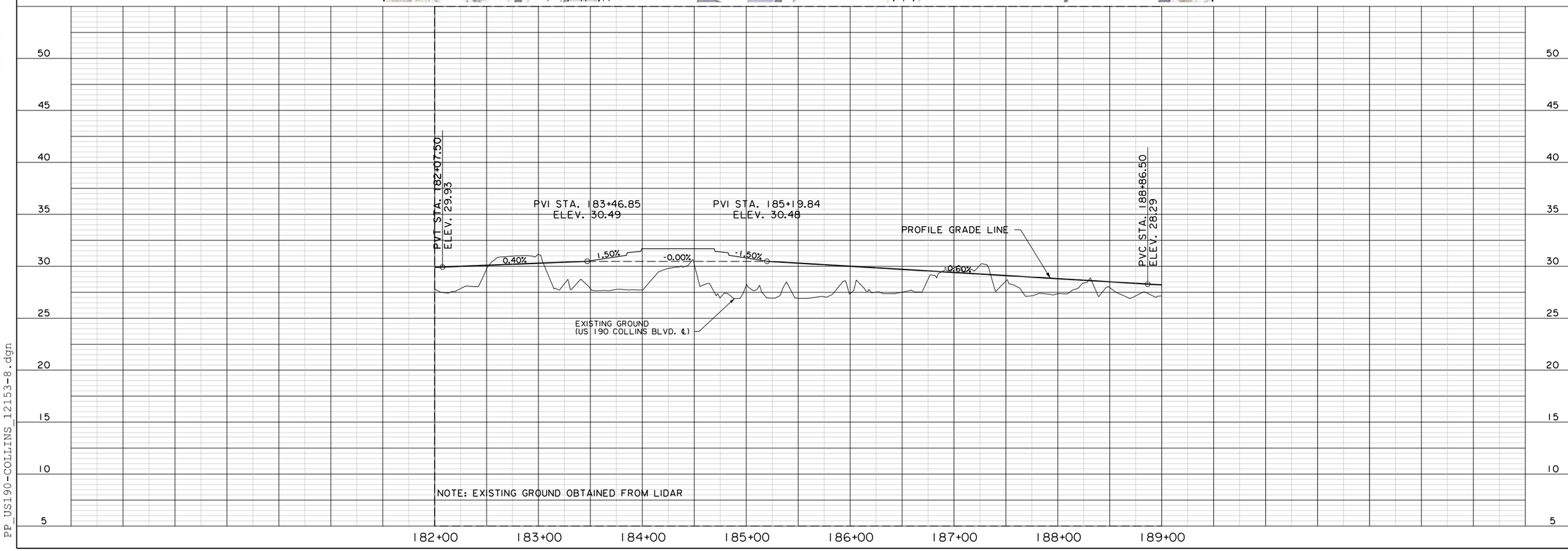
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-8
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

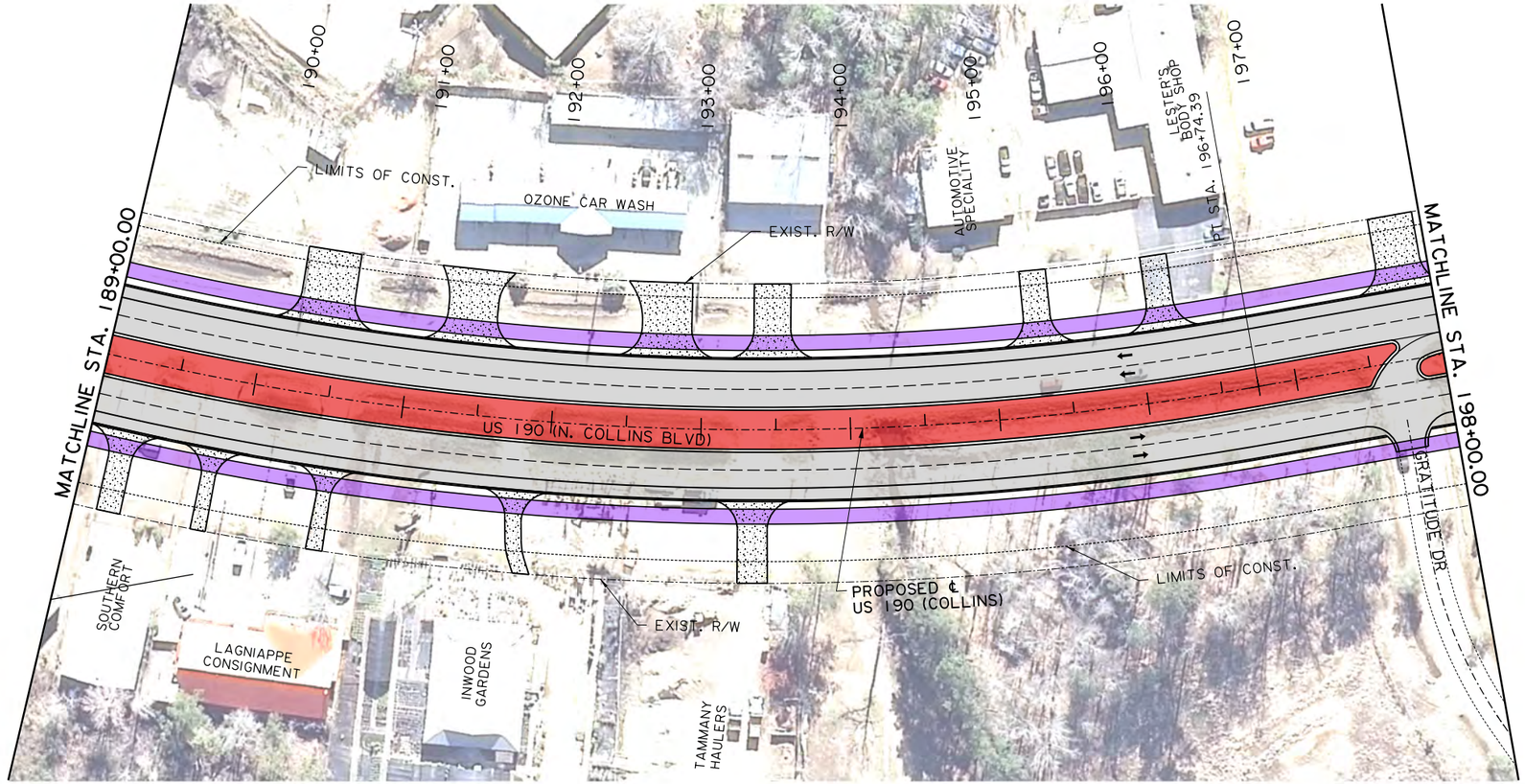
PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

Line and Grade Study

PP_US190-COLLINS_12153-8.dgn

Line and Grade Study



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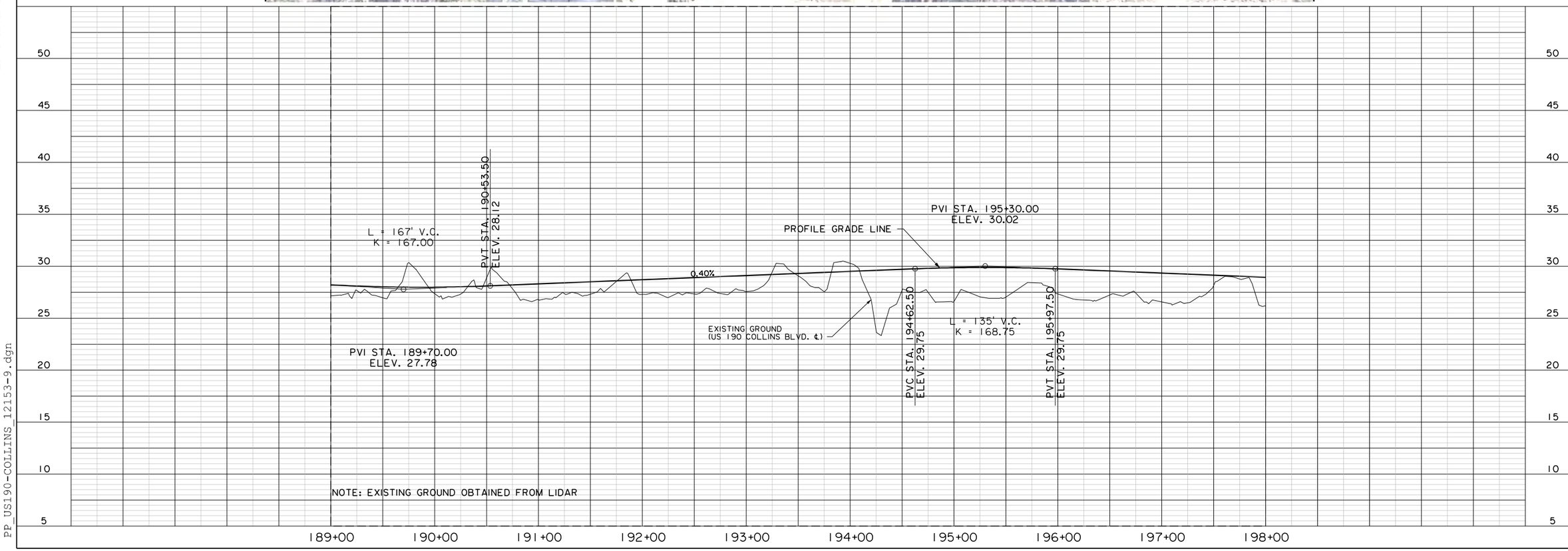


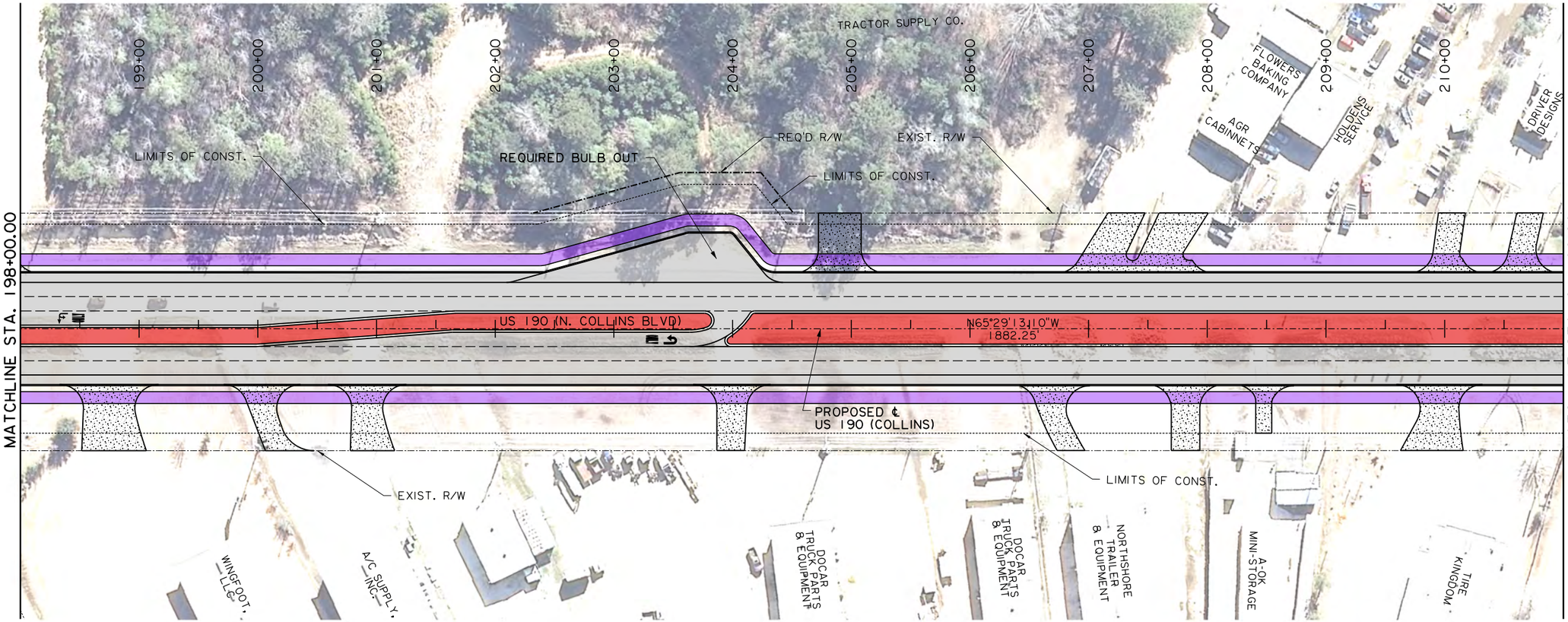
SHEET NUMBER	PL-9
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

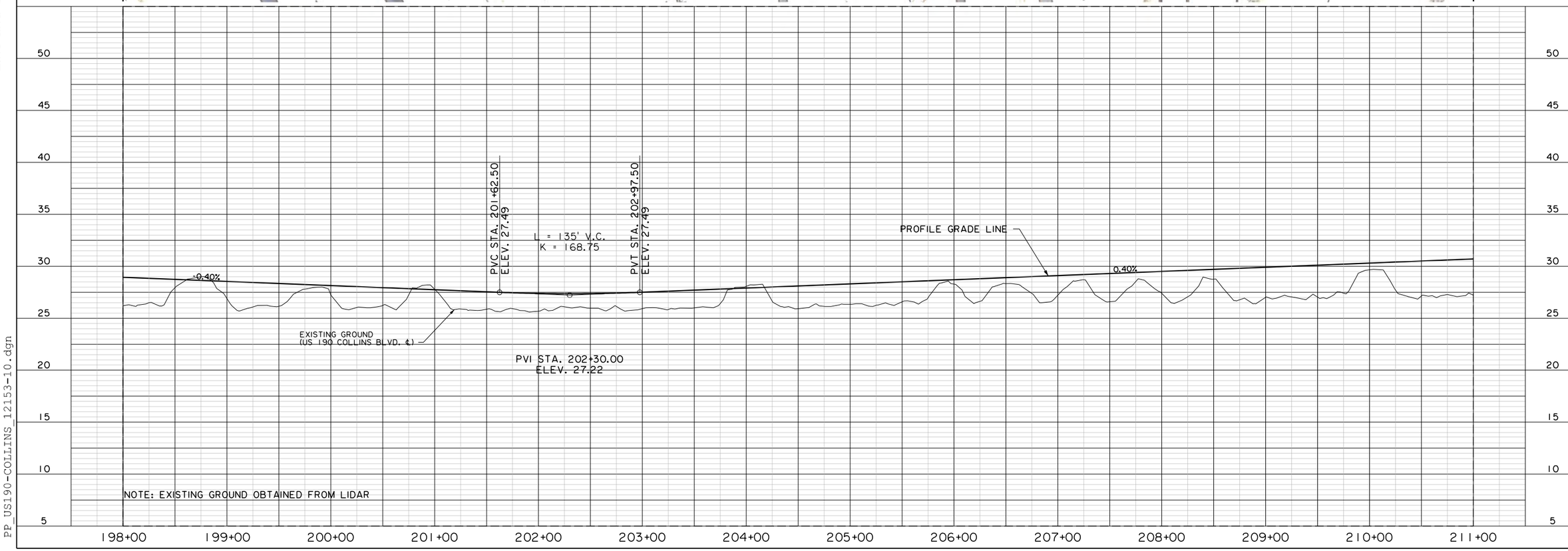
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21



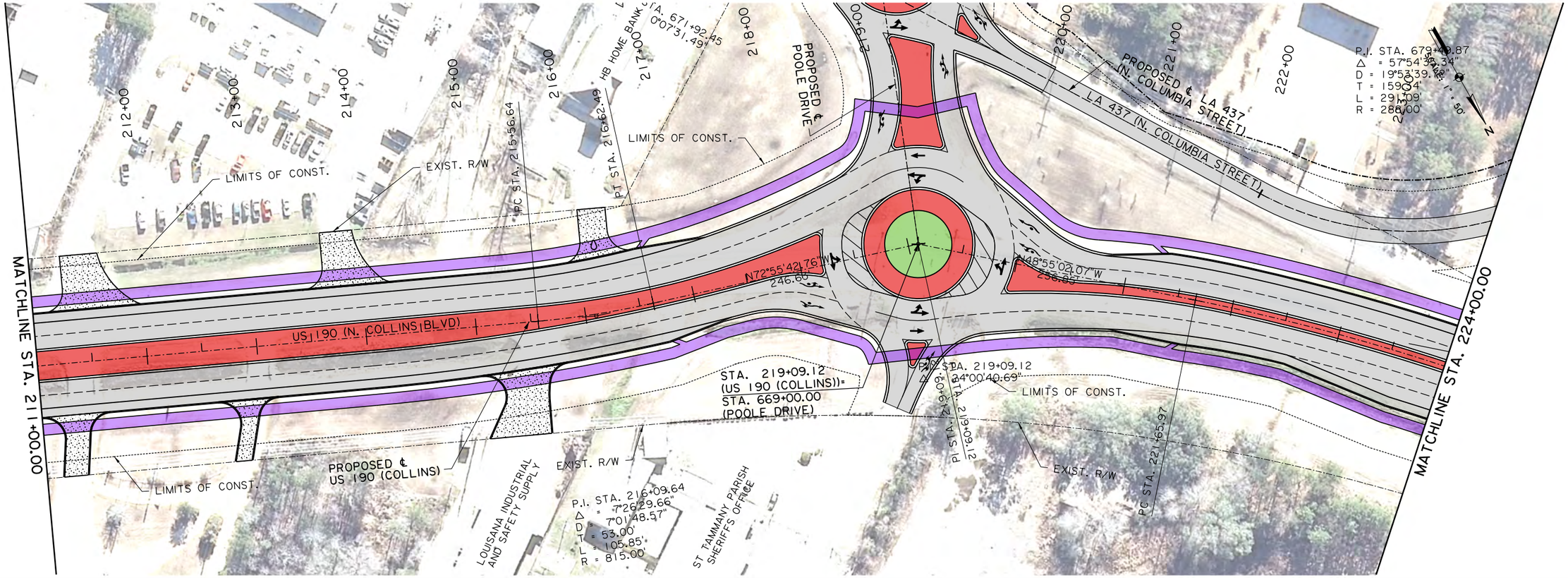


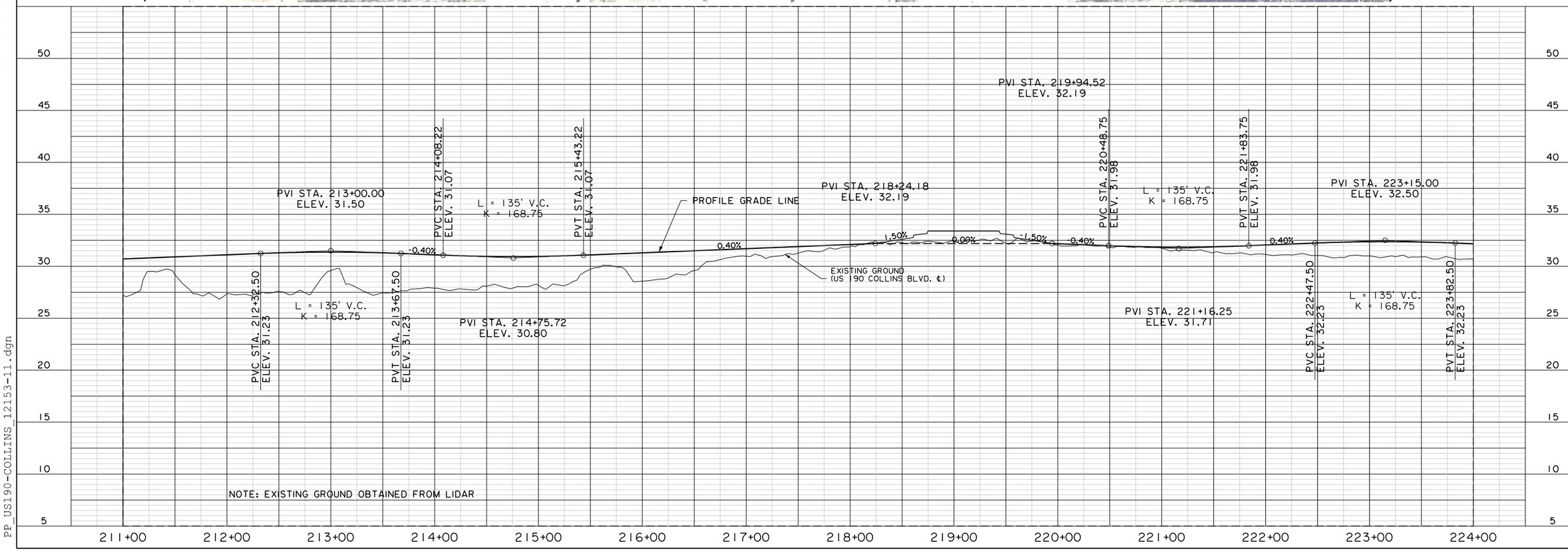
SHEET NUMBER	PL-10
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED	WCS
CHECKED	DTT
DETAILED	WCS
CHECKED	DTT
DATE	3-15-16
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-11
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

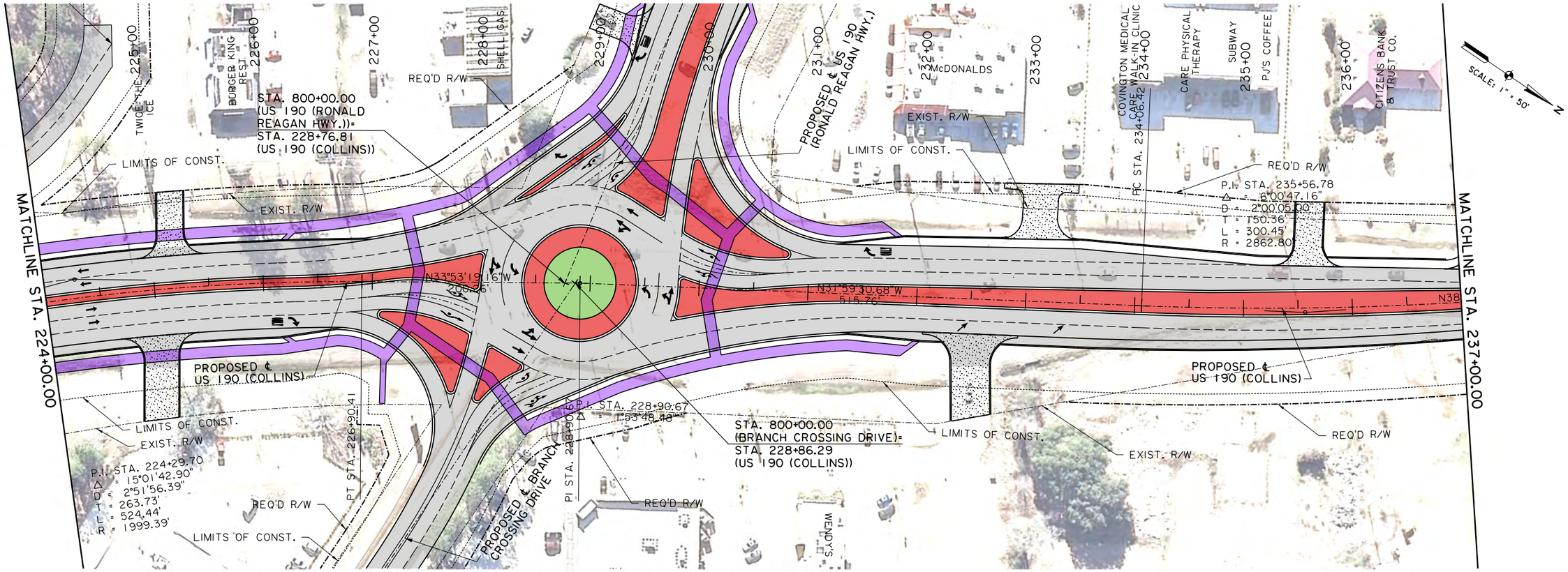
NO.	DATE	REVISION DESCRIPTION	BY

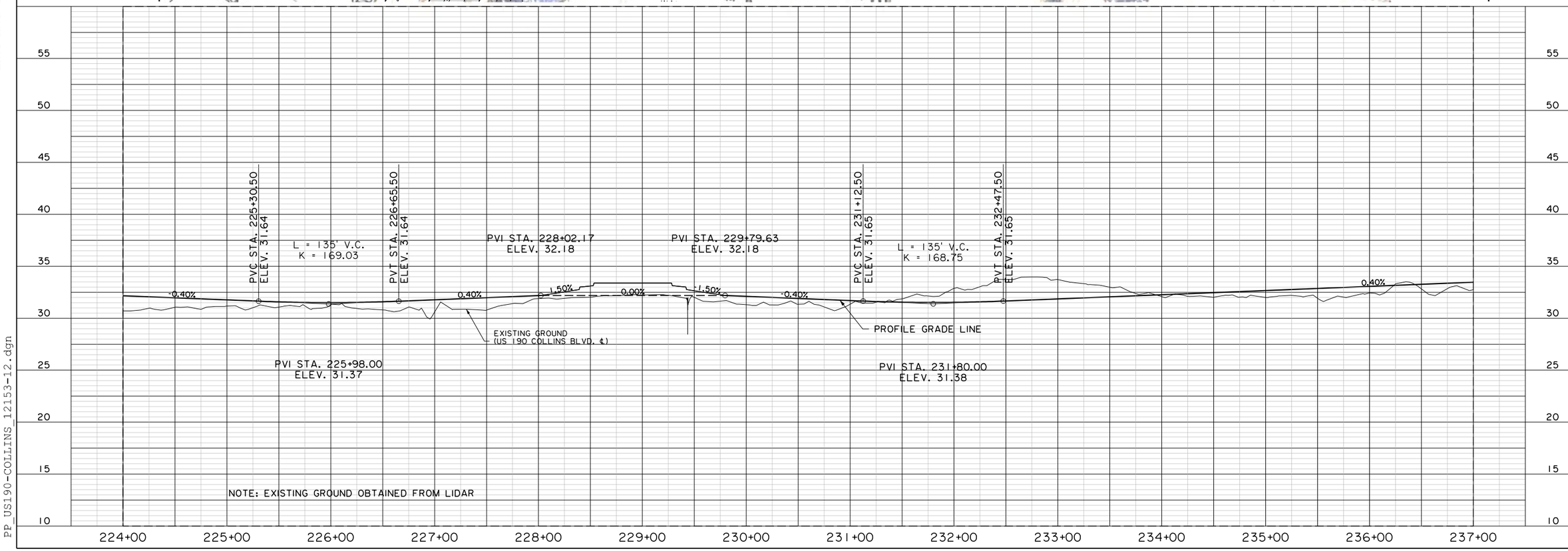
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

Line and Grade Study





SHEET NUMBER	PL-12
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

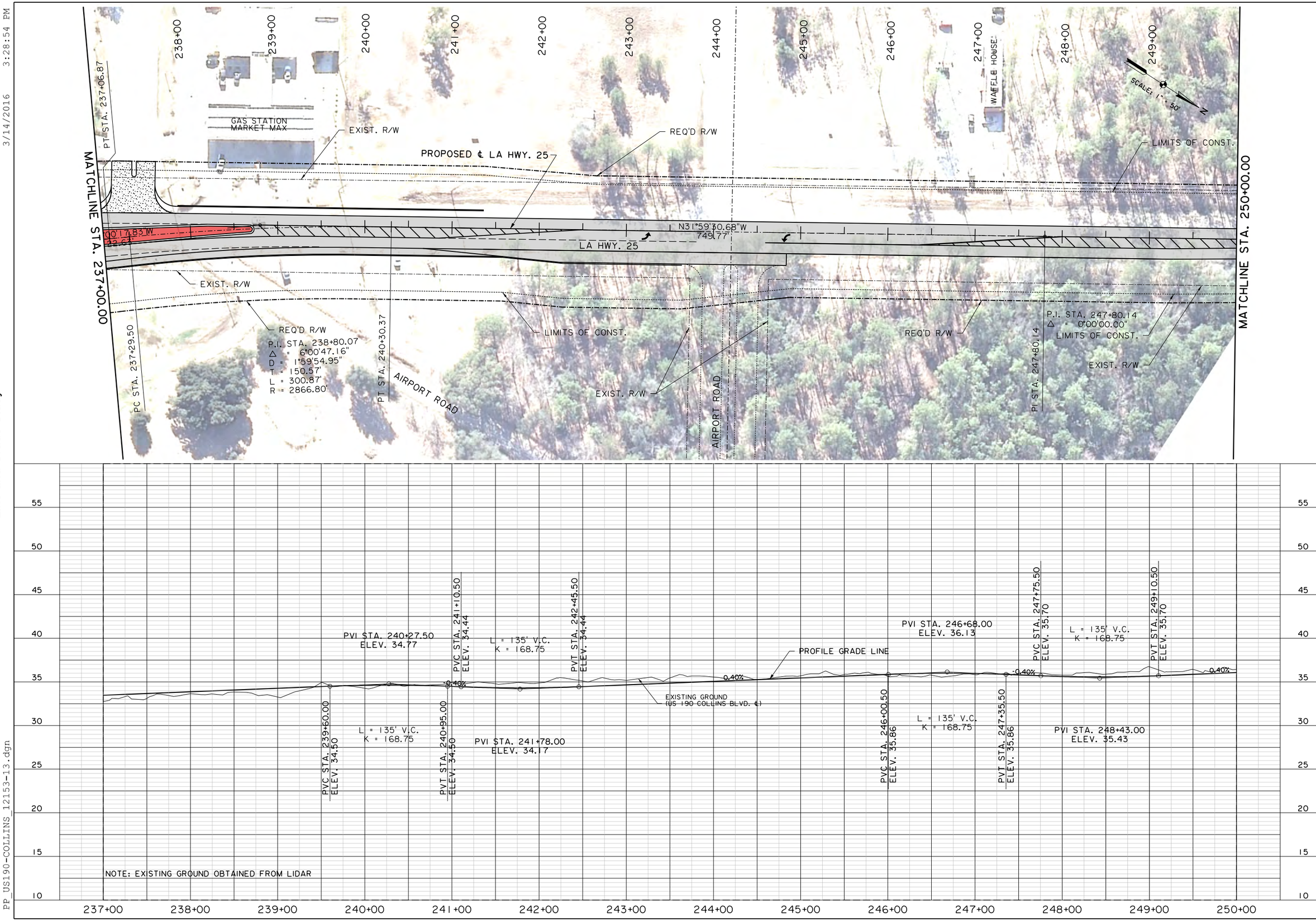
NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

PP_US190-COLLINS_12153-12.dgn

Line and Grade Study

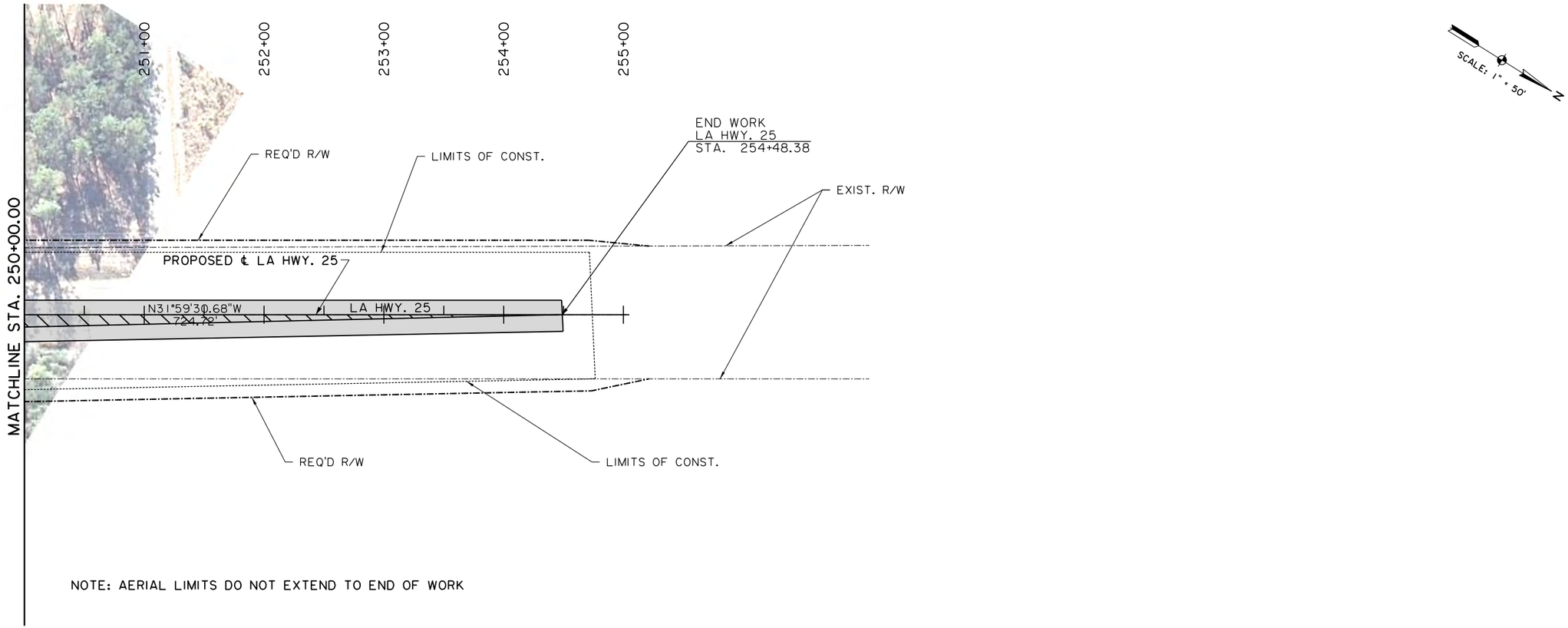


SHEET NUMBER	PL-13
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

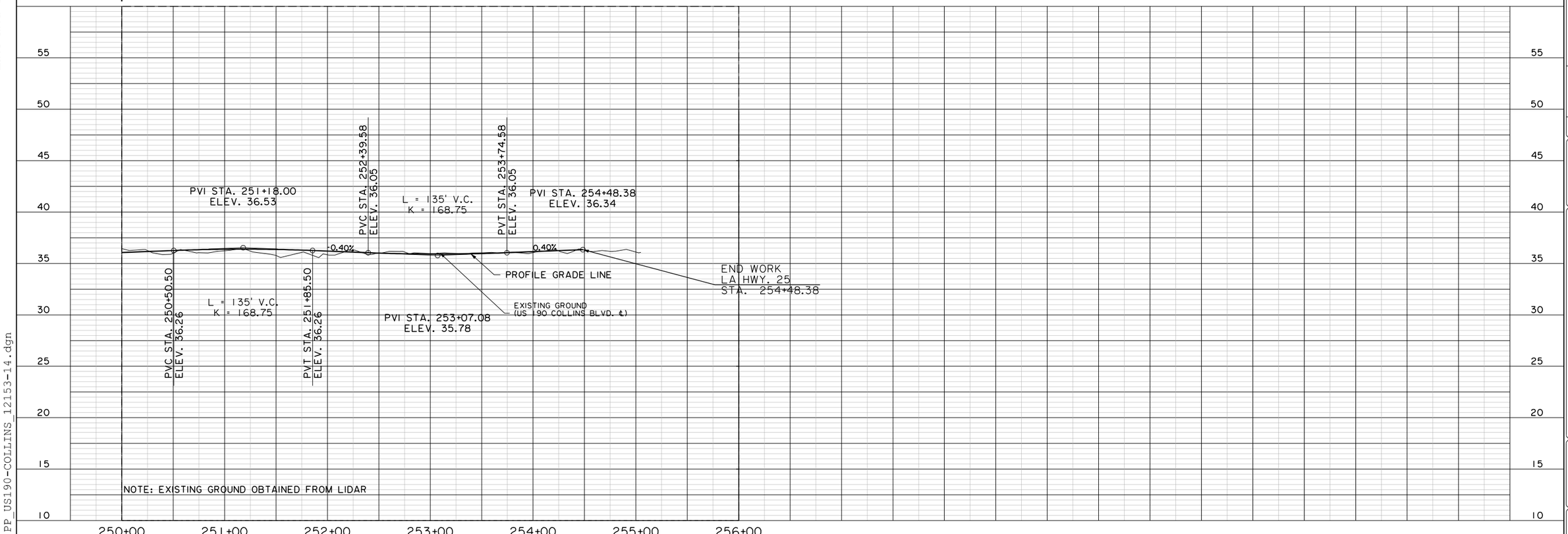
NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21



NOTE: AERIAL LIMITS DO NOT EXTEND TO END OF WORK



SHEET NUMBER	PL-14
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

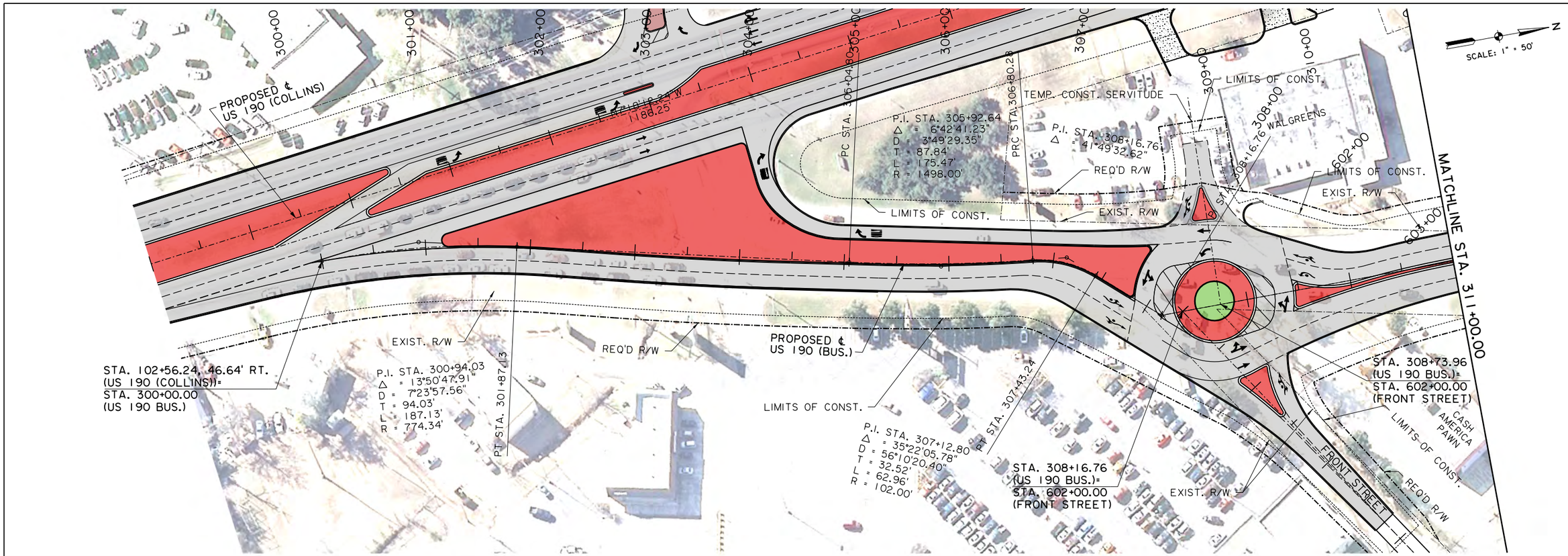
STATE OF LOUISIANA

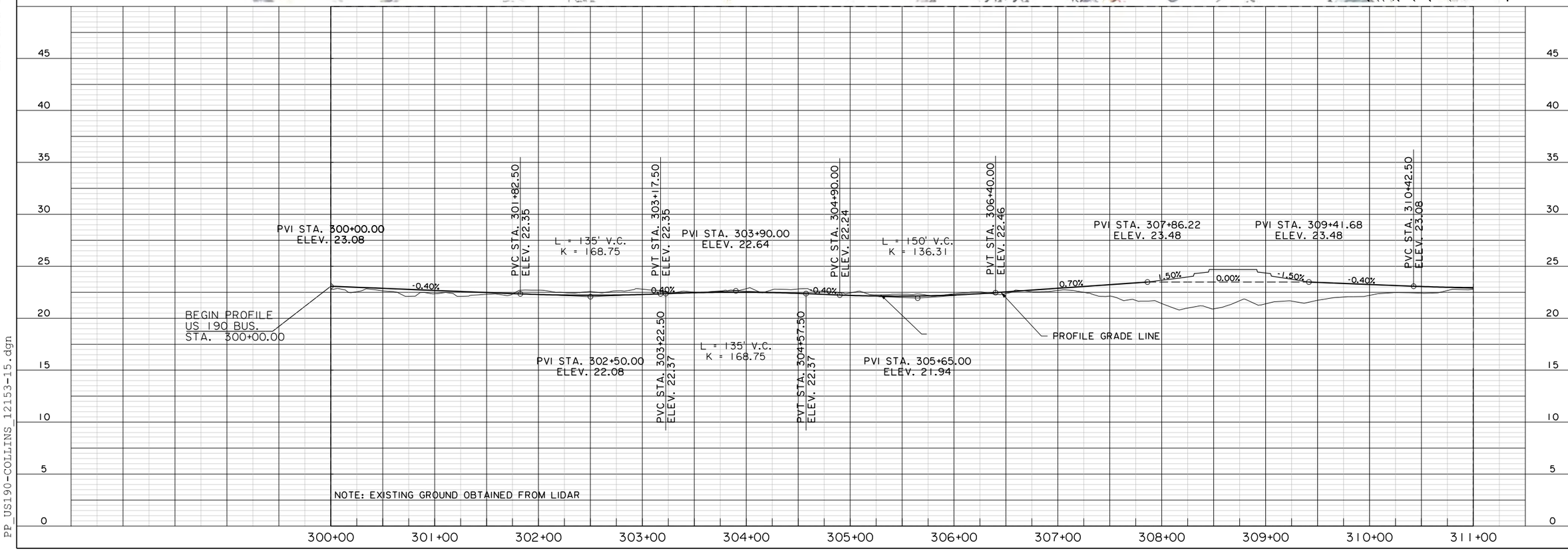
PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

Line and Grade Study

PP_US190-COLLINS_12153-14.dgn





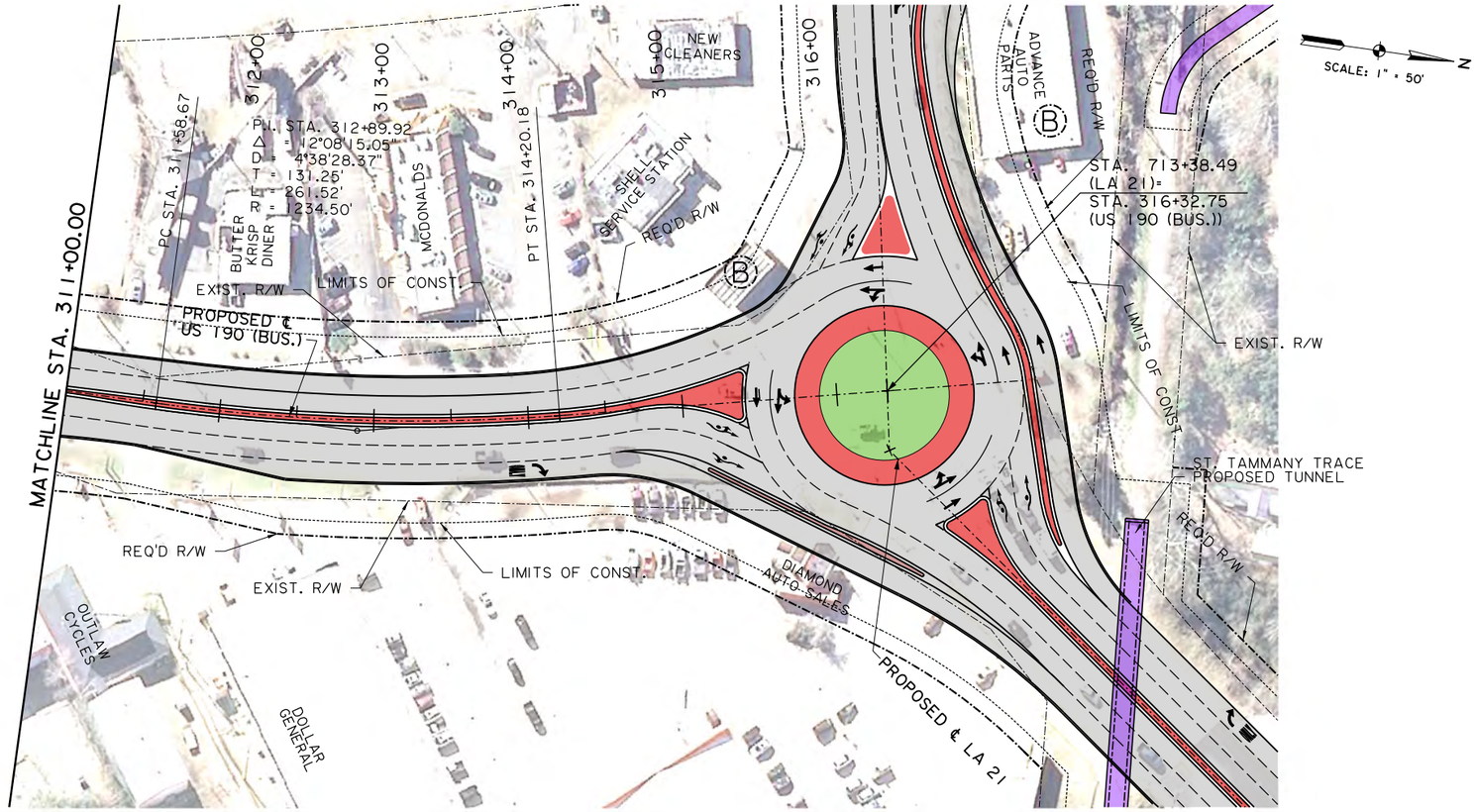
SHEET NUMBER	PL-15
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

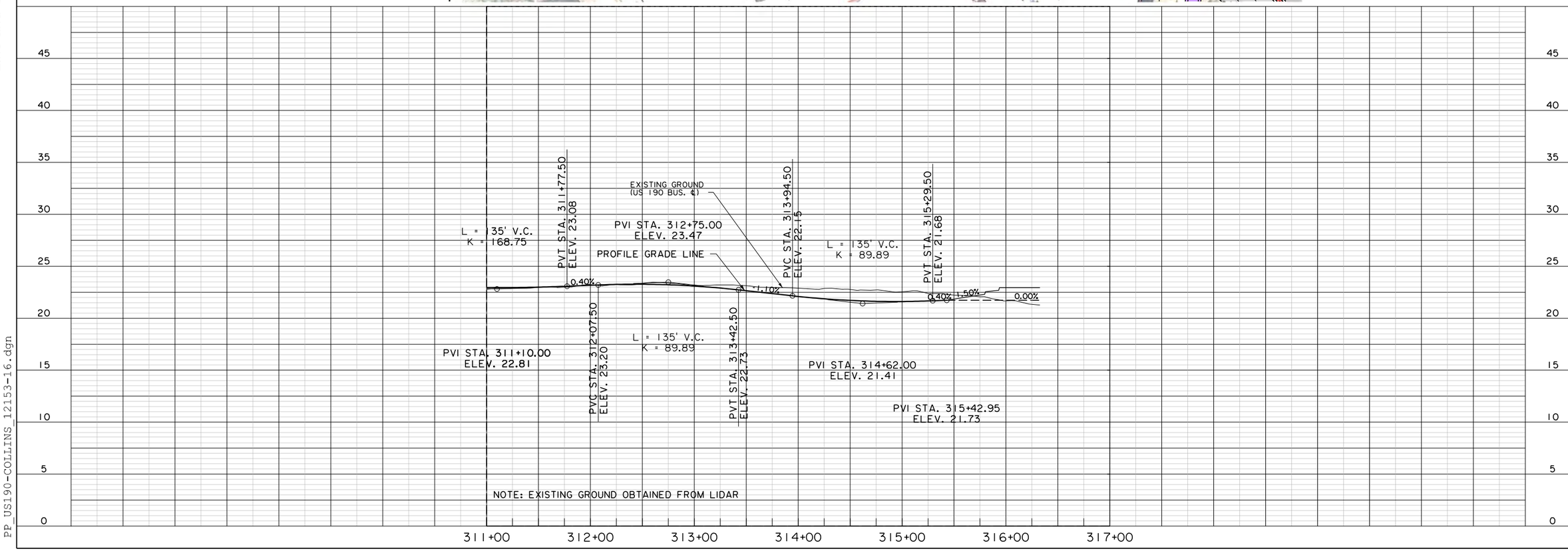
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
US 190 BUSINESS

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-16
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

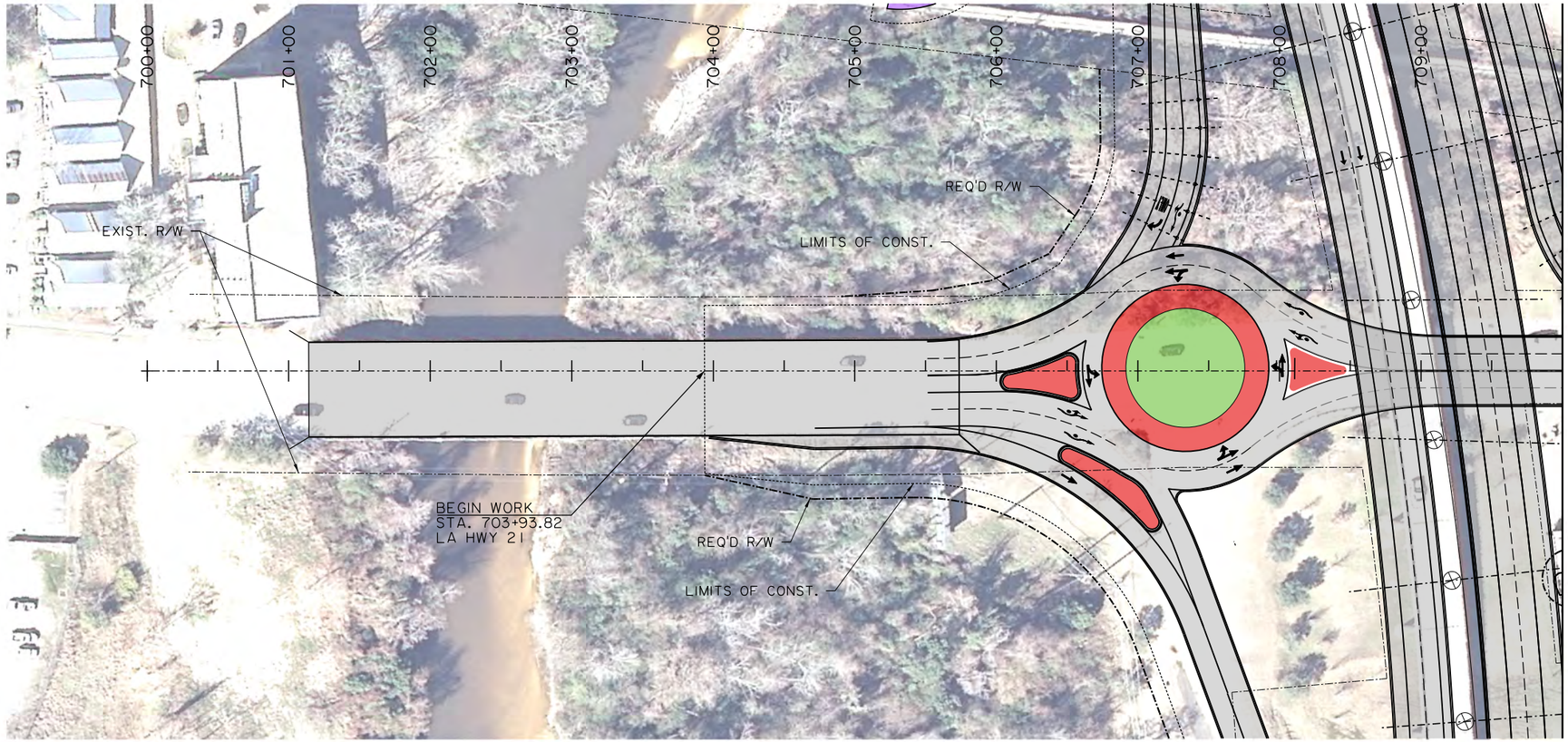
NO.	DATE	REVISION DESCRIPTION	BY

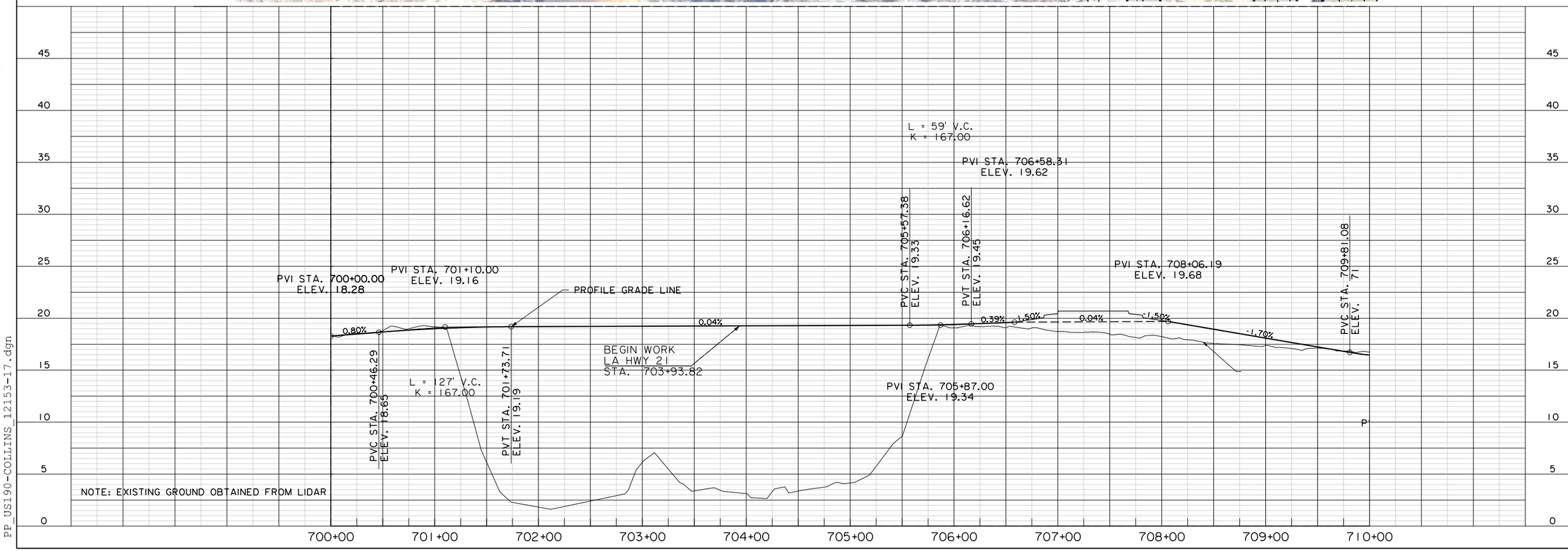
STATE OF LOUISIANA

PLAN - PROFILE
US 190 BUSINESS

US 190 BRIDGE OVER HWY. 21

Line and Grade Study





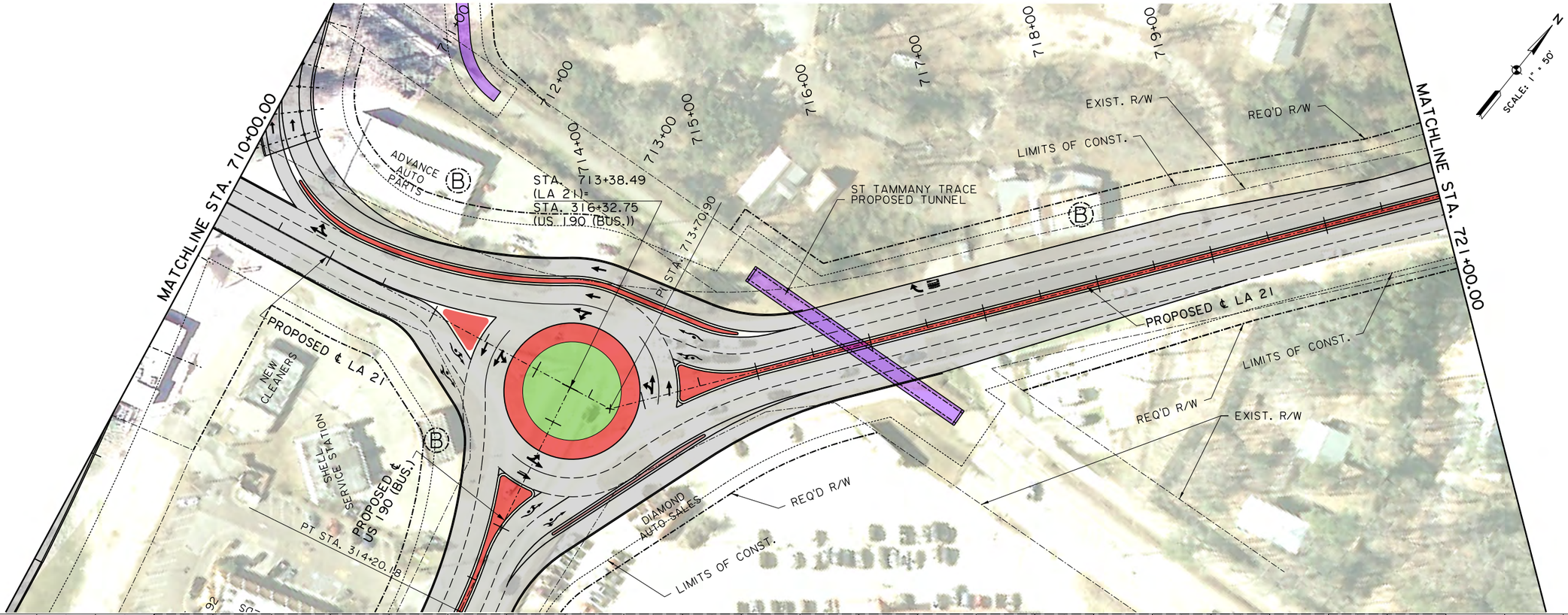
SHEET NUMBER	PL-17
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

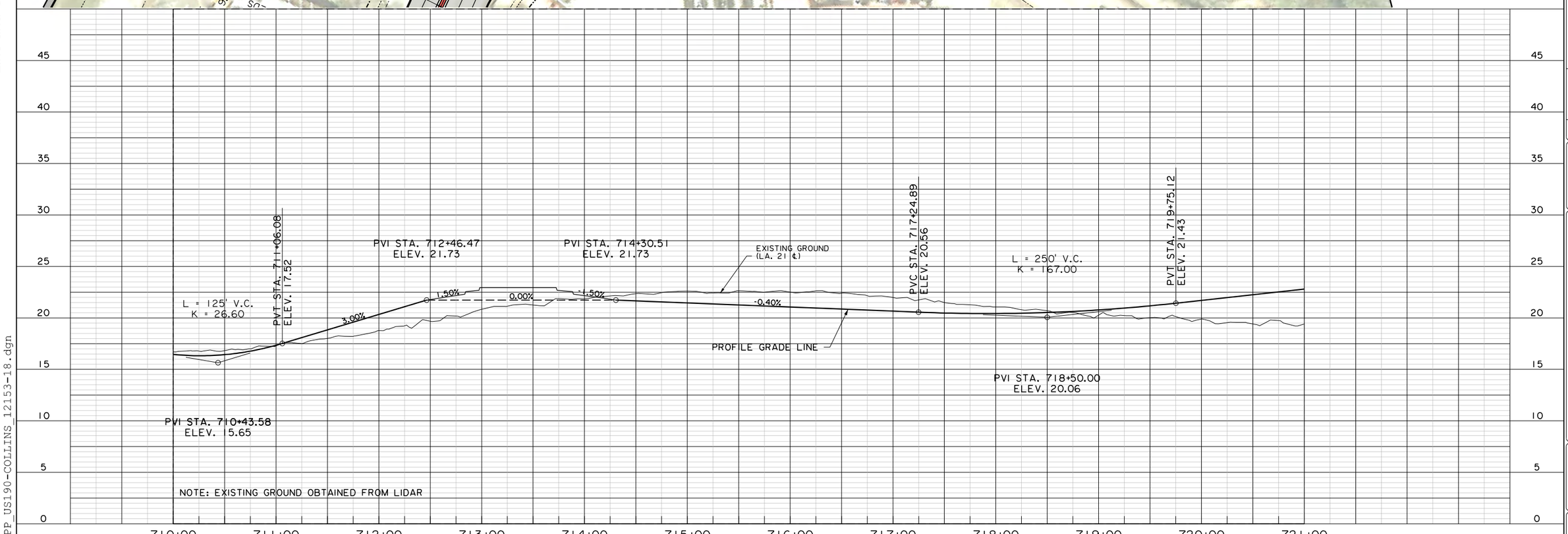
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
LA. HWY. 21

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-18
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

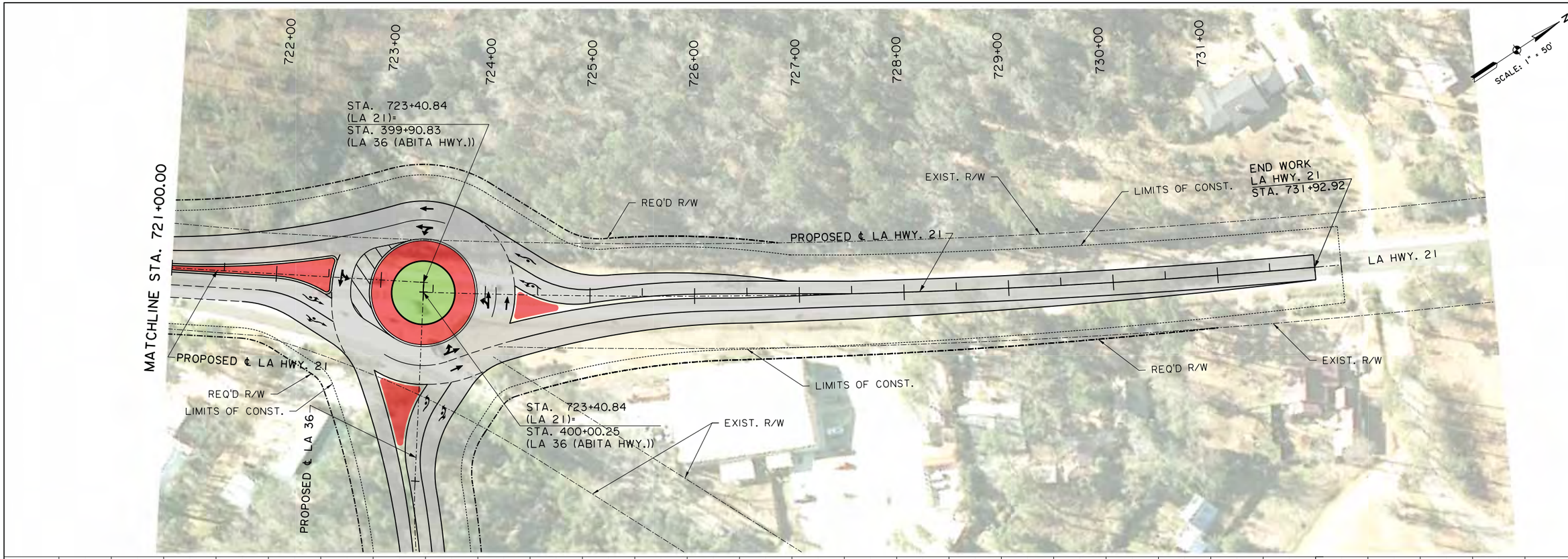
NO. DATE REVISION DESCRIPTION BY

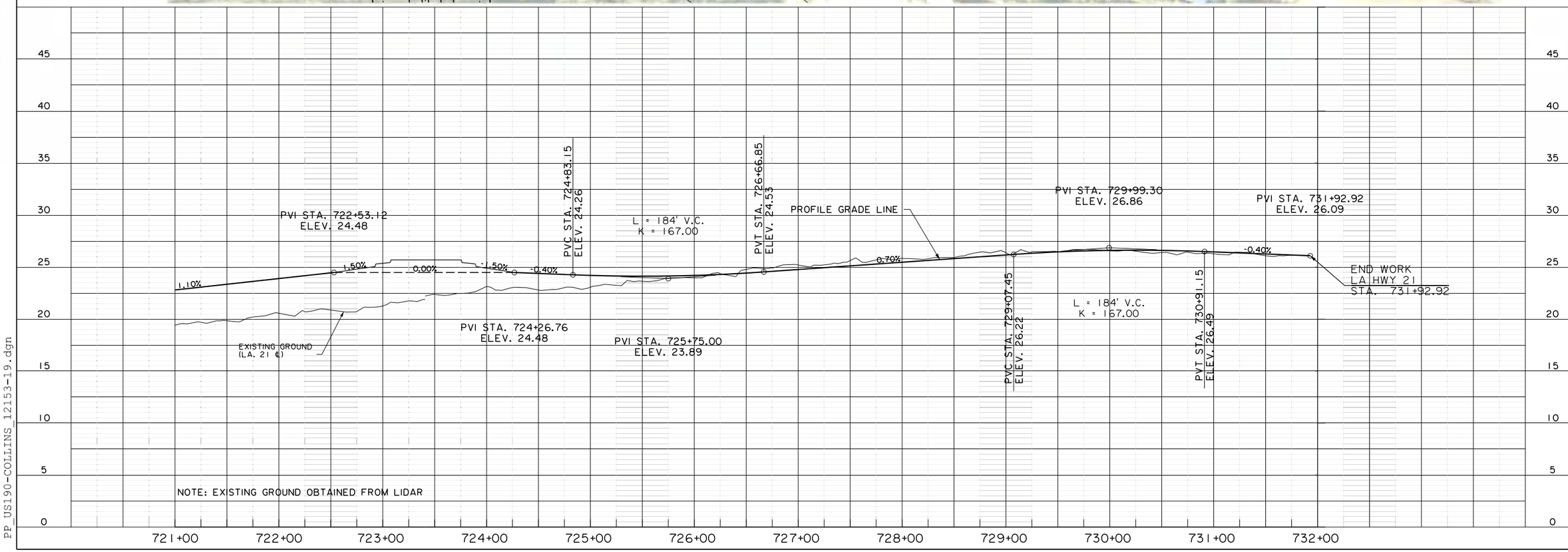
STATE OF LOUISIANA

PLAN - PROFILE
LA. HWY. 21

US 190 BRIDGE OVER HWY. 21

Line and Grade Study





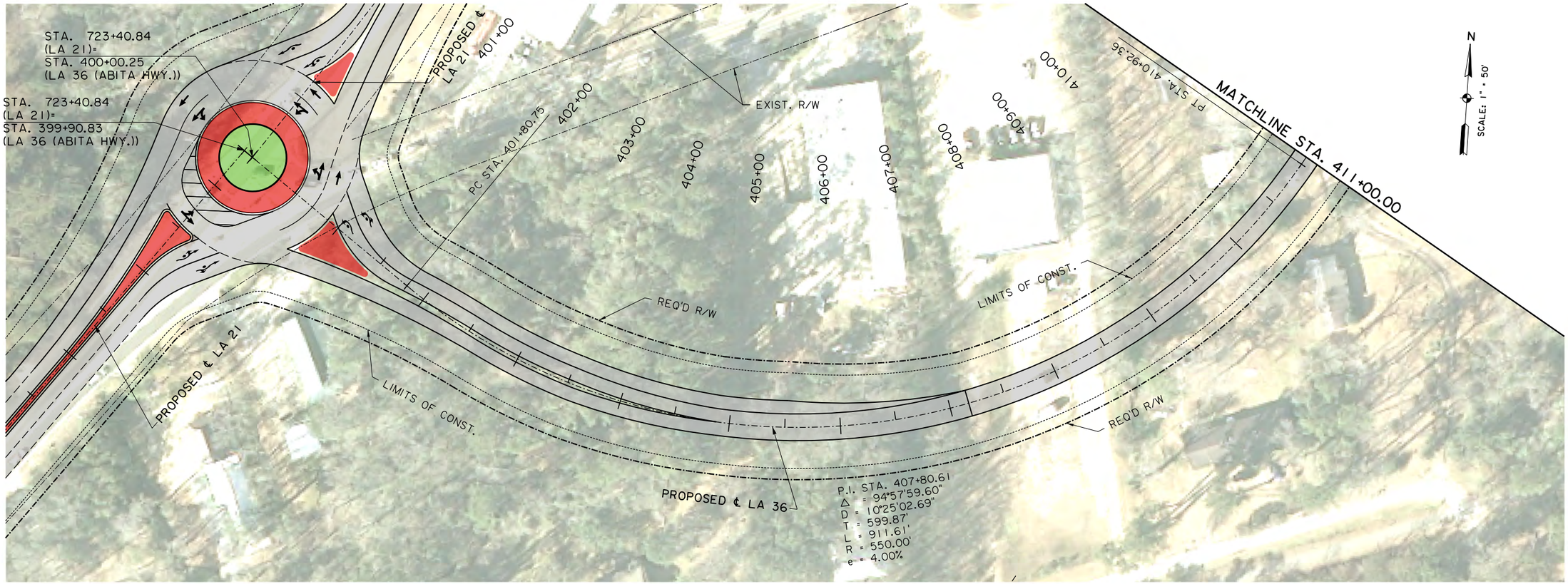
SHEET NUMBER	PL-19
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 2-14-17	
SHEET	

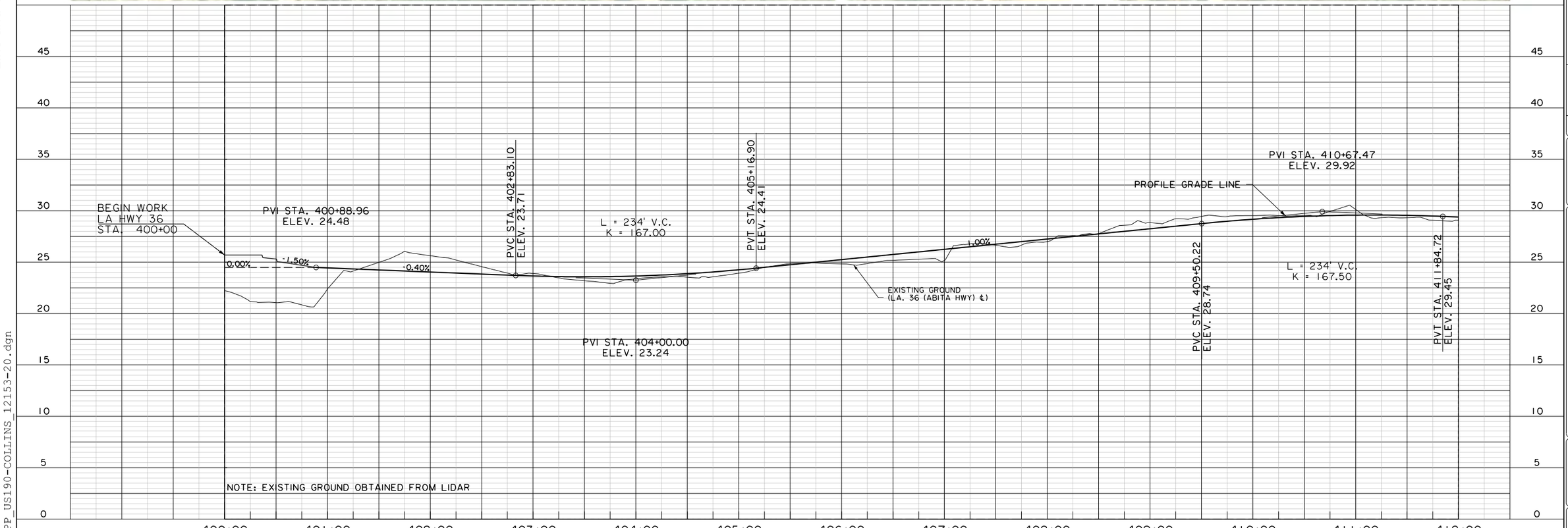
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
LA. HWY. 21

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-20
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

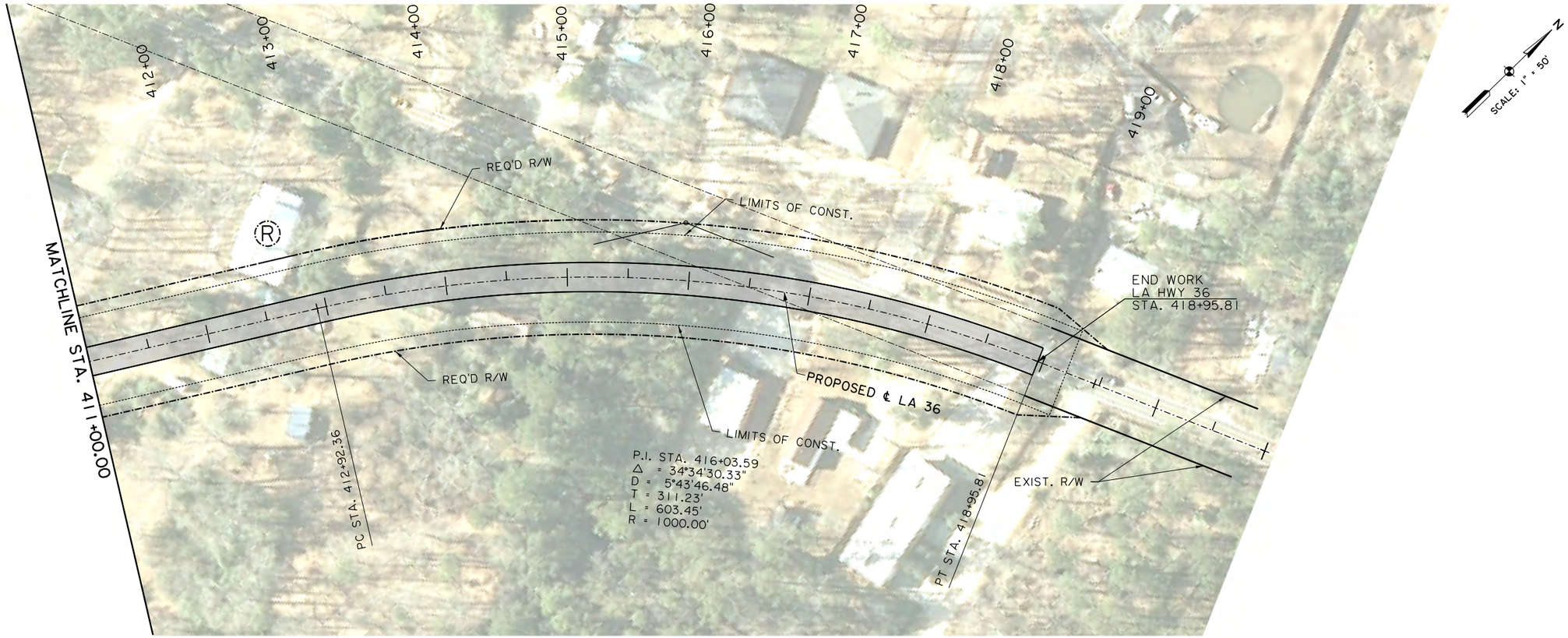
PLAN - PROFILE
LA. HWY. 36

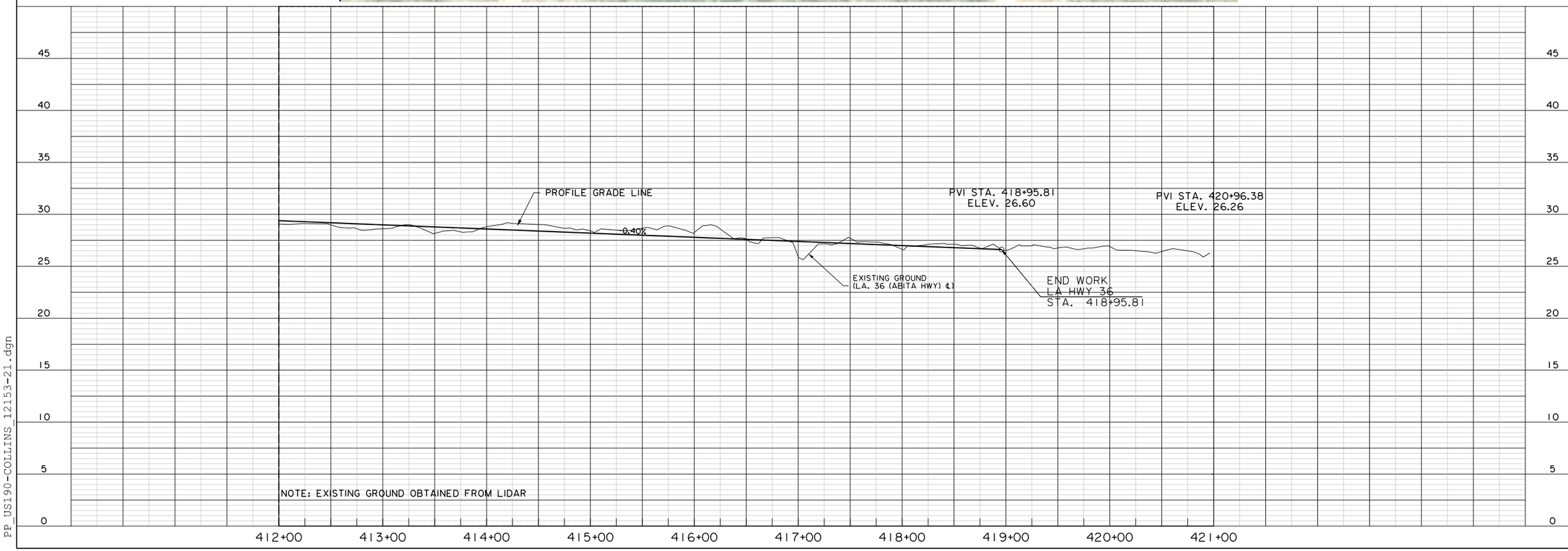
US 190 BRIDGE OVER HWY. 21

Line and Grade Study

PP_US190-COLLINS_12153-20.dgn

Line and Grade Study





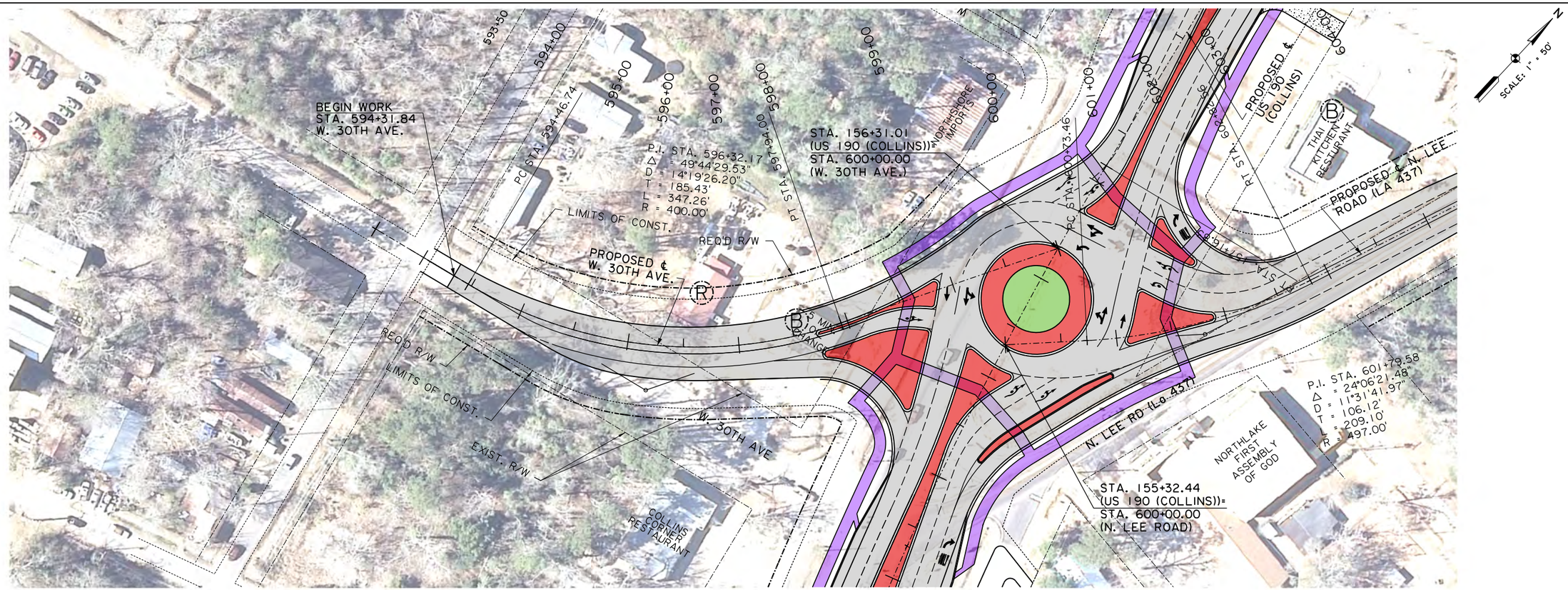
SHEET NUMBER	PL-21
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED / CHECKED	WCS / DTT
DETAILED / CHECKED	WCS / DTT
DATE / SHEET	3-15-16

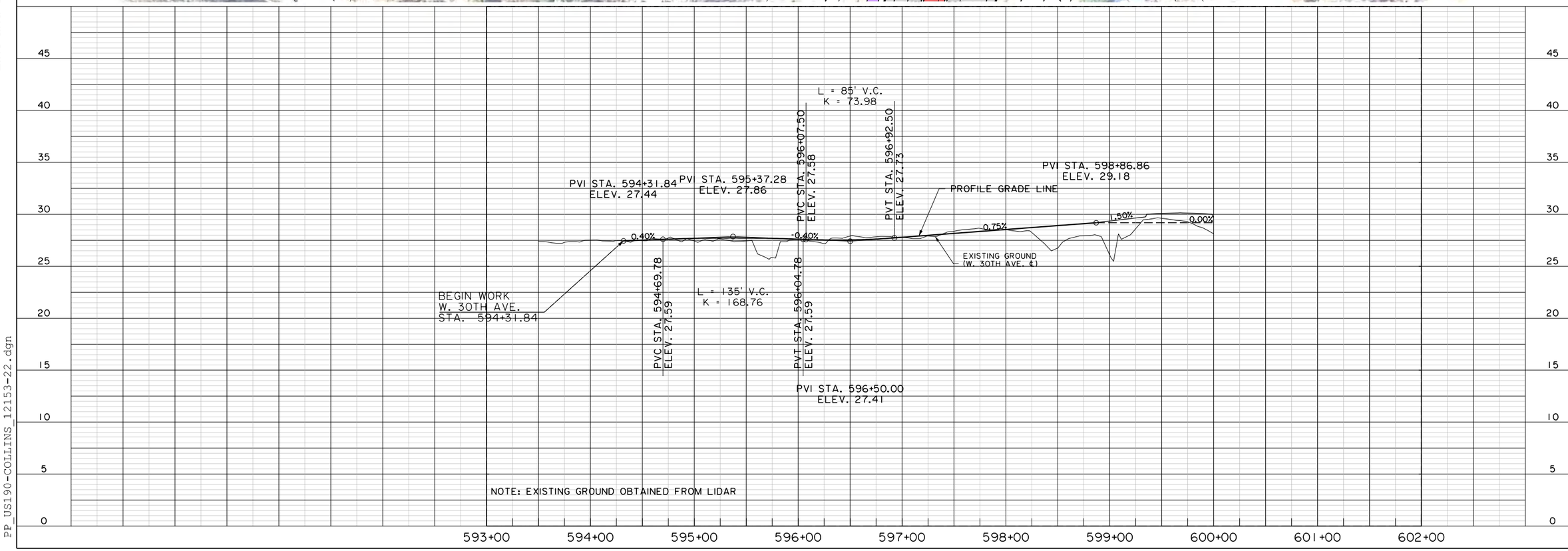
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
LA. HWY. 36

US 190 BRIDGE OVER HWY. 21





Line and Grade Study

PP_US190-COLLINS_12153-22.dgn

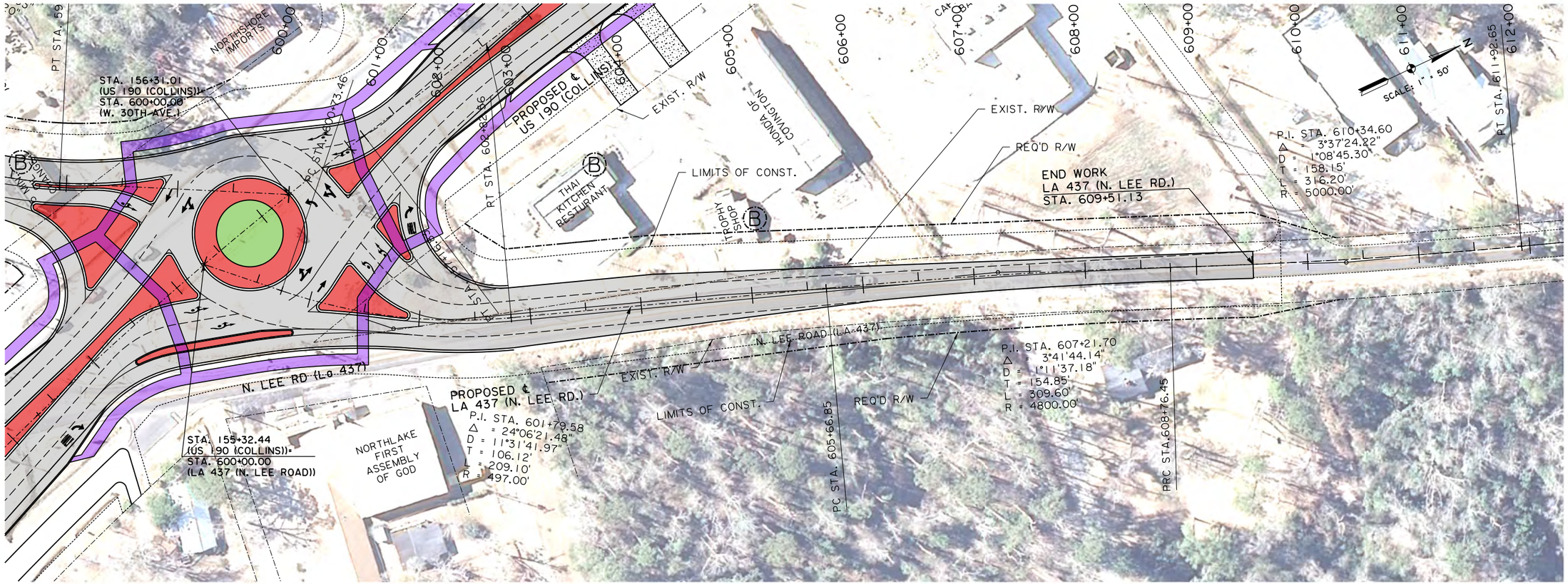
SHEET NUMBER	PL-22
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED	WCS
CHECKED	DTT
DETAILED	WCS
CHECKED	DTT
DATE	3-15-16
SHEET	

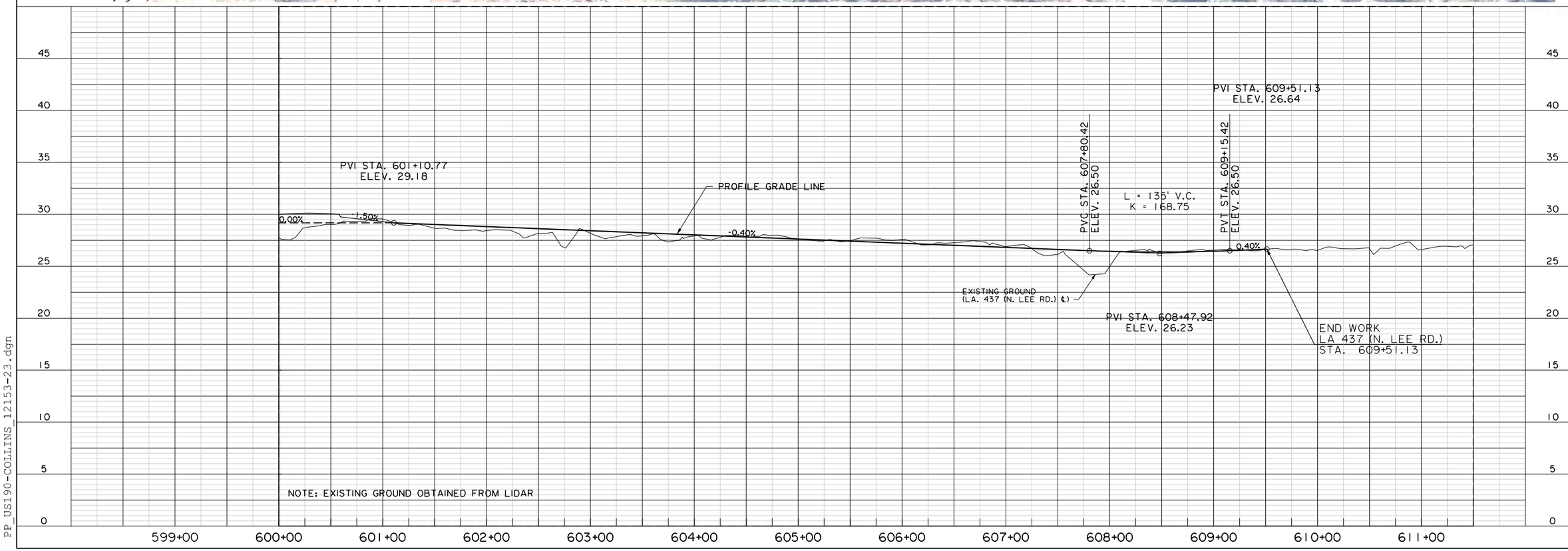
NO. DATE REVISION DESCRIPTION BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLAN - PROFILE W. 30TH AVE.

US 190 BRIDGE OVER HWY. 21





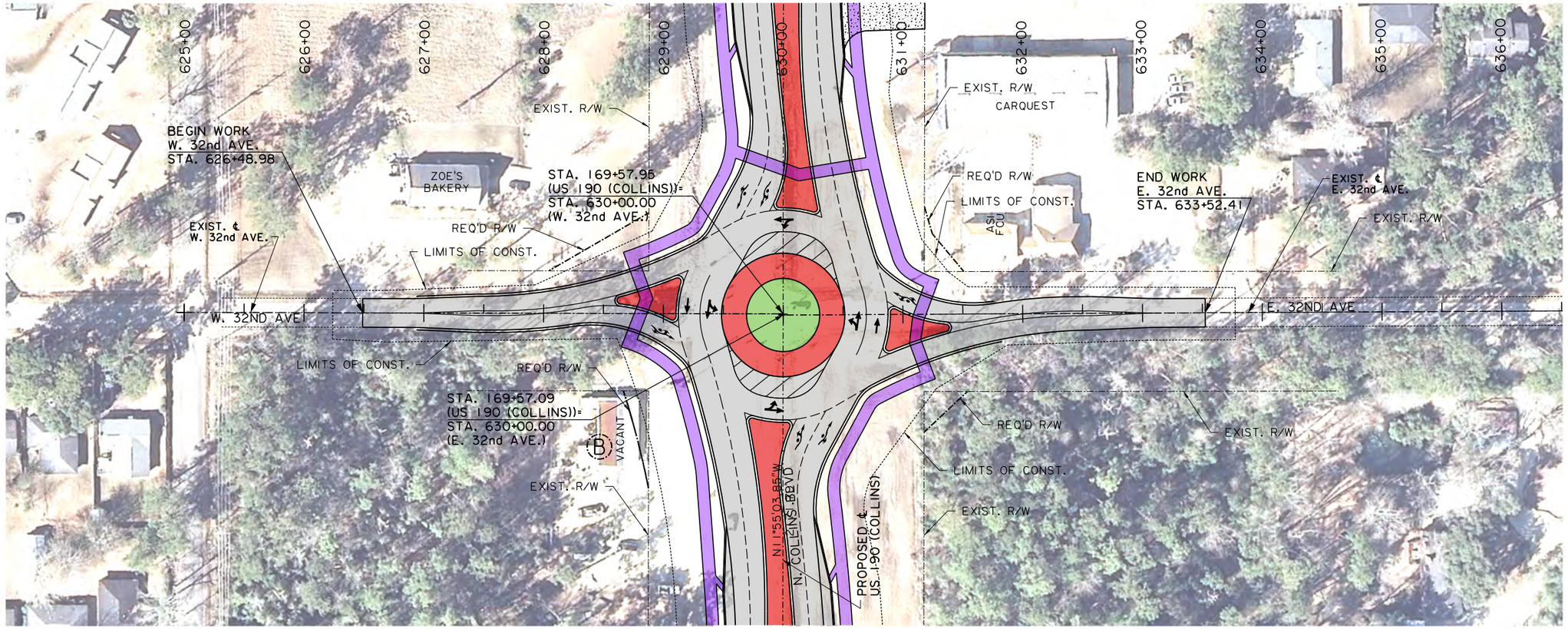
SHEET NUMBER	PL-23
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

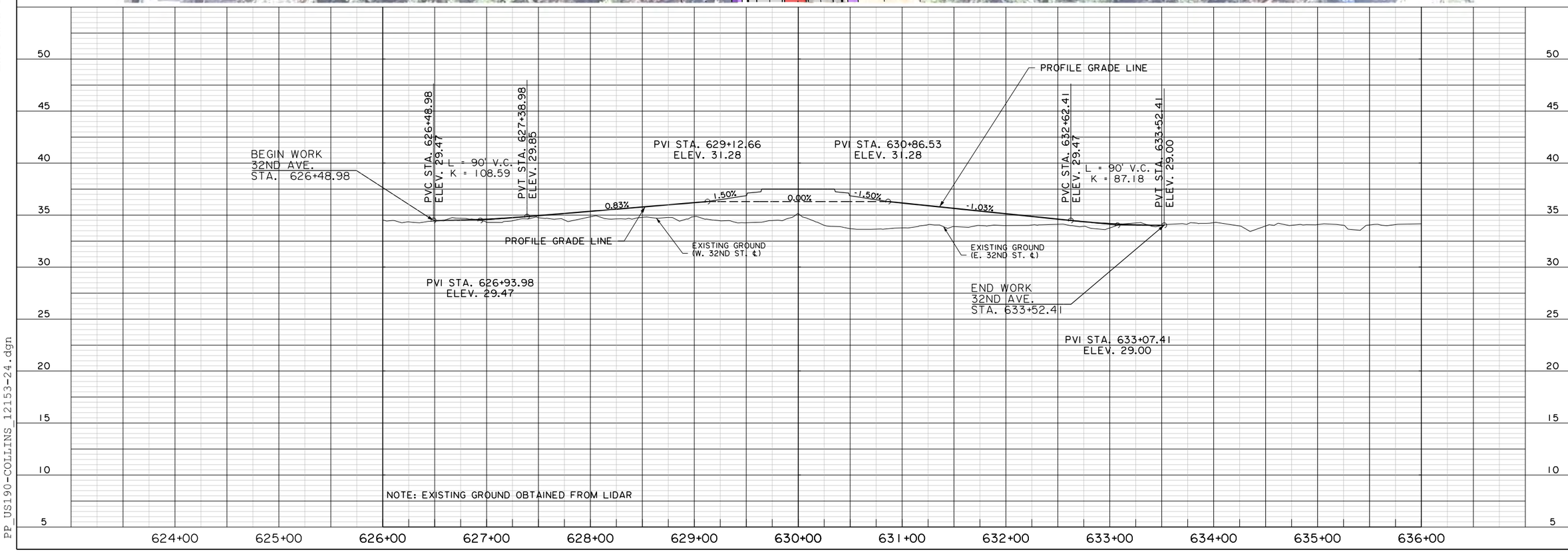
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
LA 437 (N. LEE RD.)

US 190 BRIDGE OVER HWY. 21





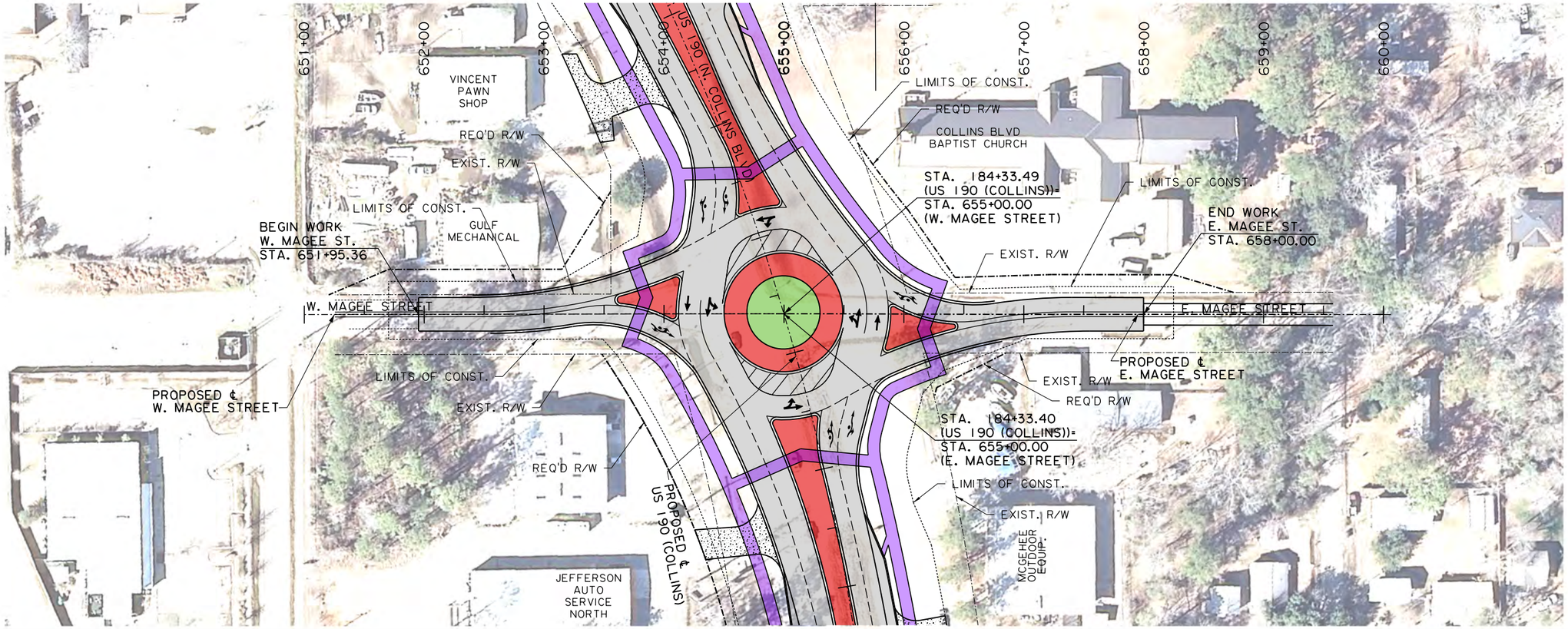
SHEET NUMBER	PL-24
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

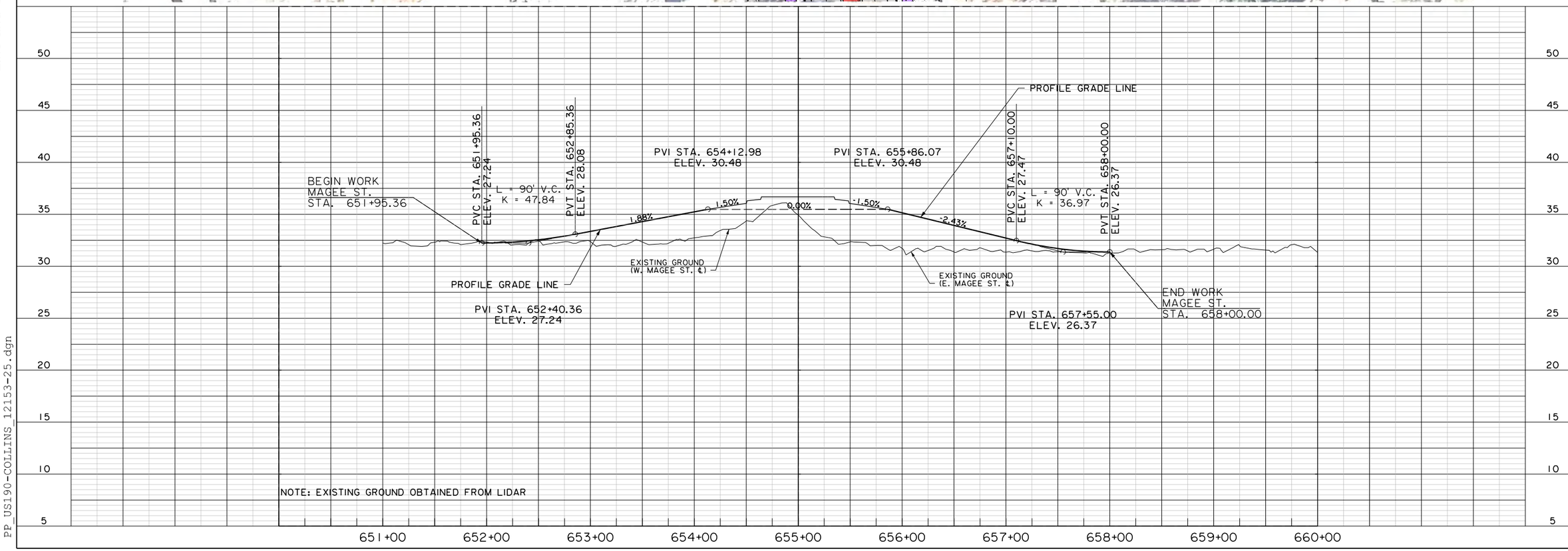
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE 32ND AVE.

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER PL-25

PARISH: ST. TAMMANY

FEDERAL PROJECT

STATE PROJECT: H.004987

DESIGNED: WCS
CHECKED: DTT

DETAILED: WCS
CHECKED: DTT

DATE: 3-15-16

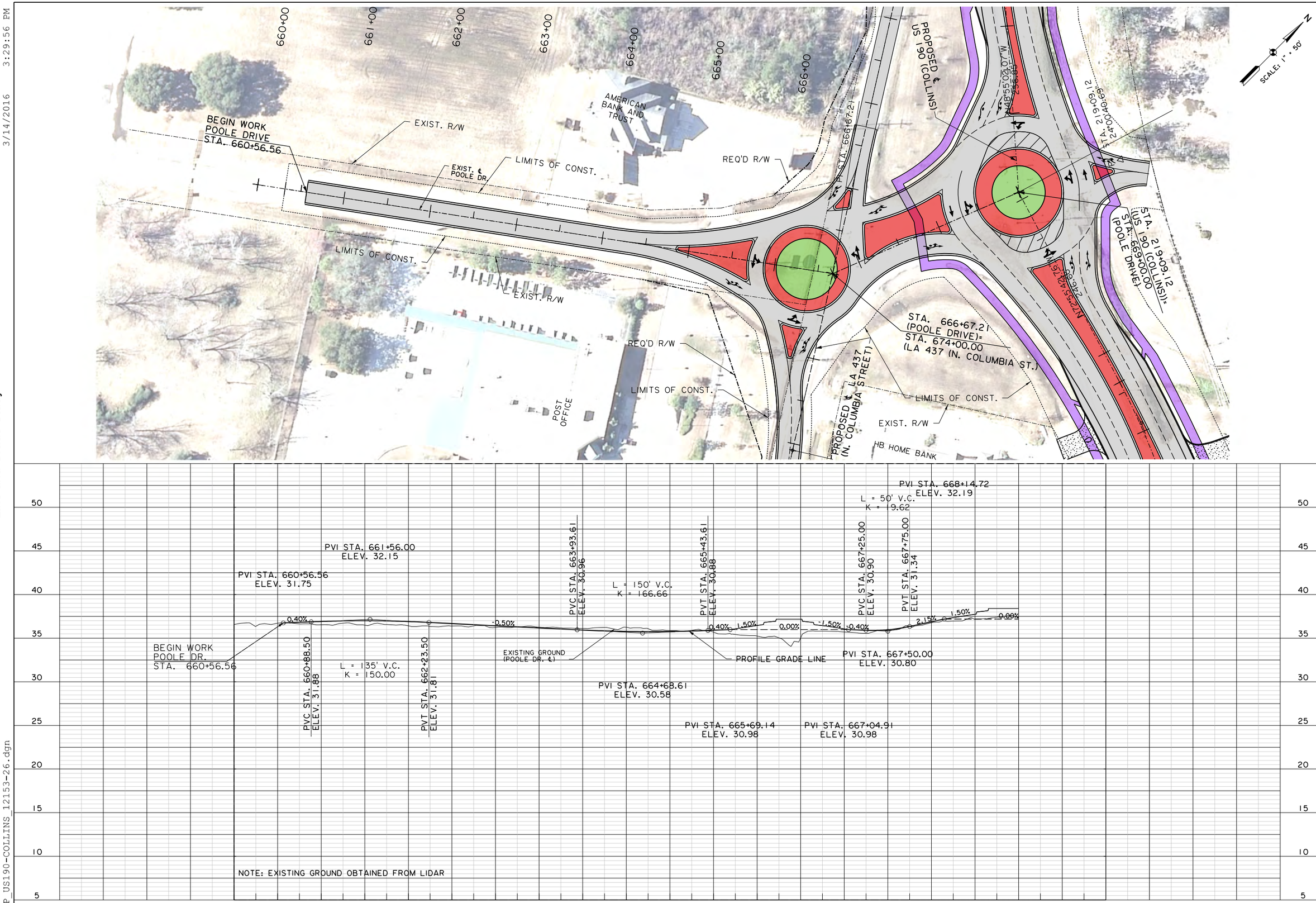
SHEET

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLAN - PROFILE MAGEE. ST.

US 190 BRIDGE OVER HWY. 21



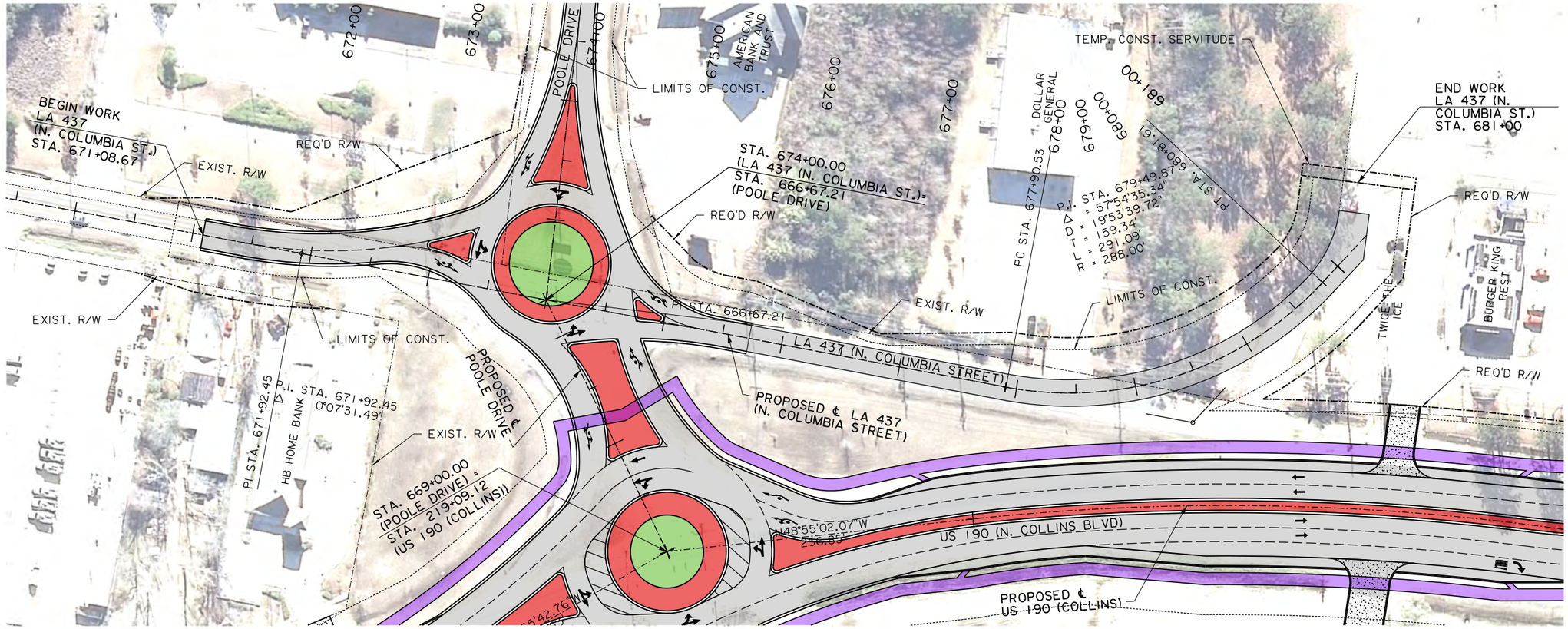
SHEET NUMBER	PL-26
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

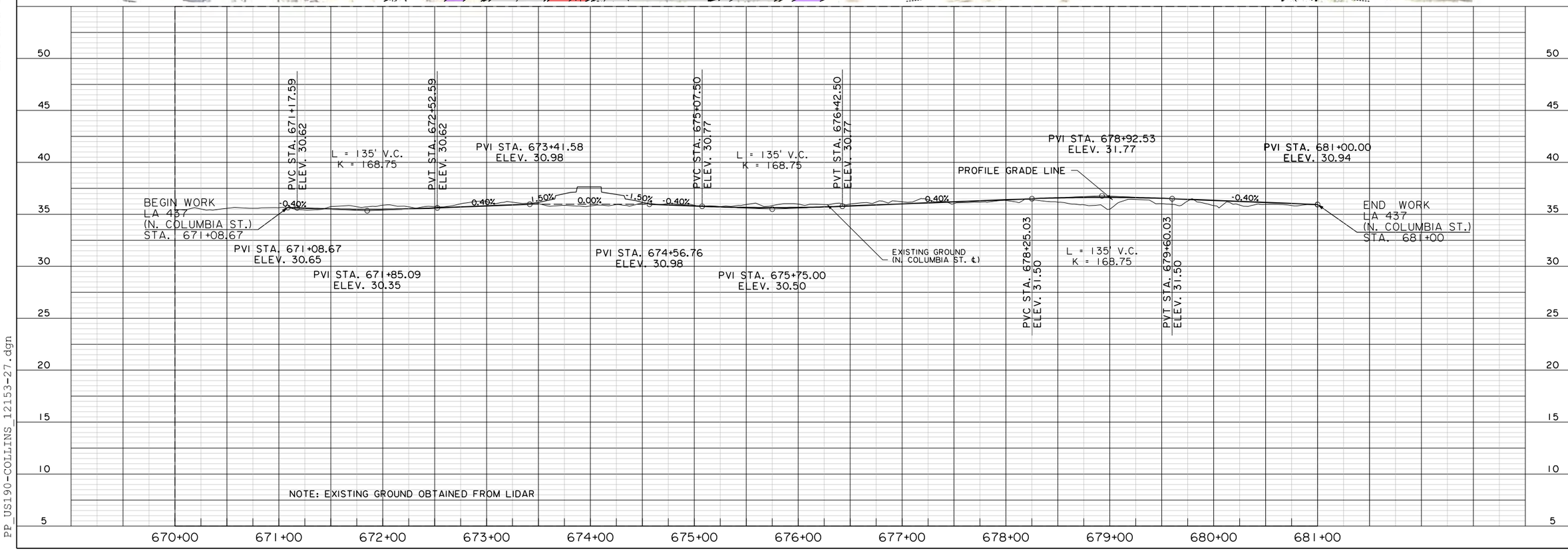
NO. | DATE | REVISION DESCRIPTION | BY

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLAN - PROFILE POOLE DRIVE

US 190 BRIDGE OVER HWY. 21





SHEET NUMBER	PL-27
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

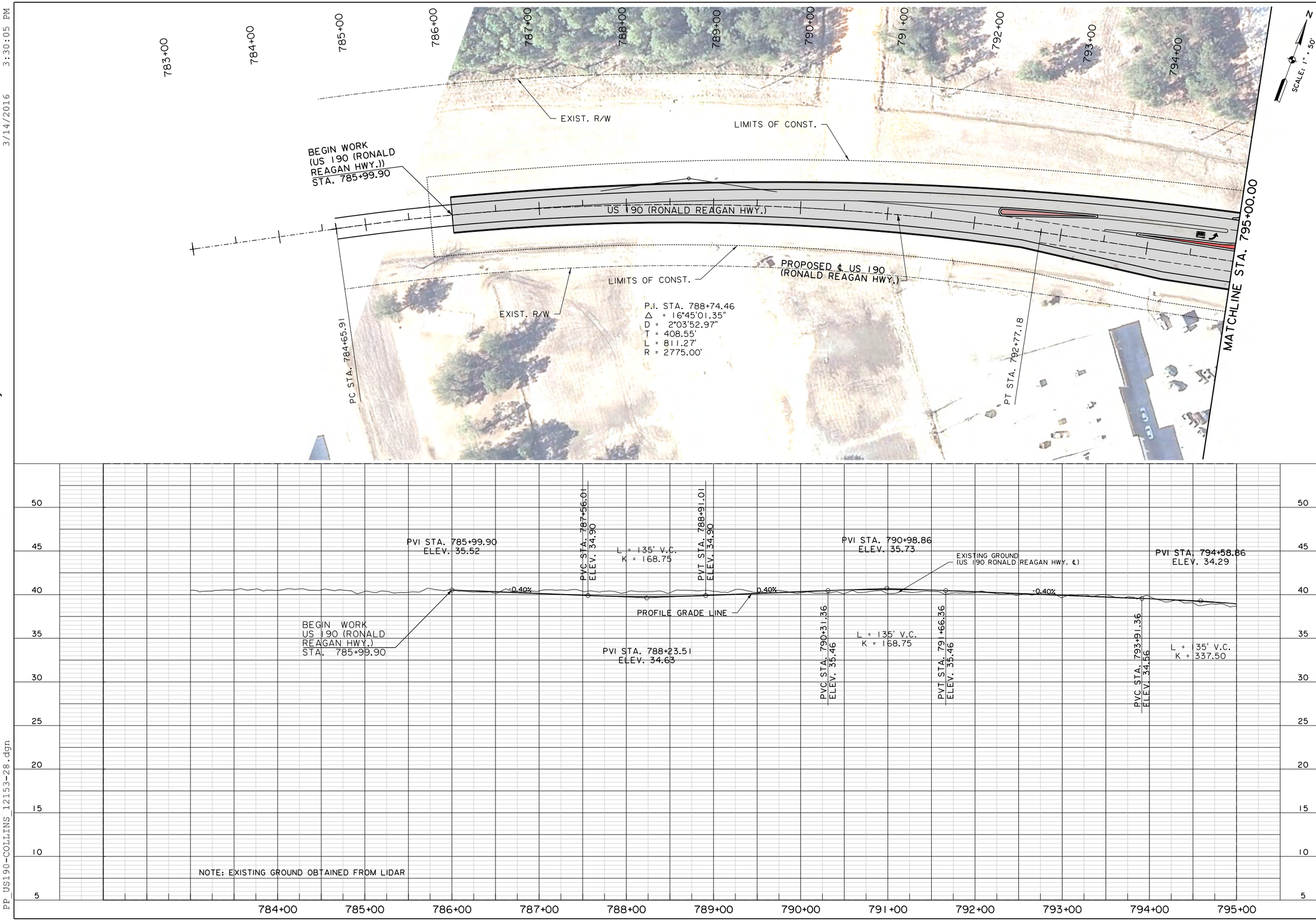
PLAN - PROFILE
N. COLUMBIA ST.

US 190 BRIDGE OVER HWY. 21

Line and Grade Study

PP_US190-COLLINS_12153-27.dgn

Line and Grade Study

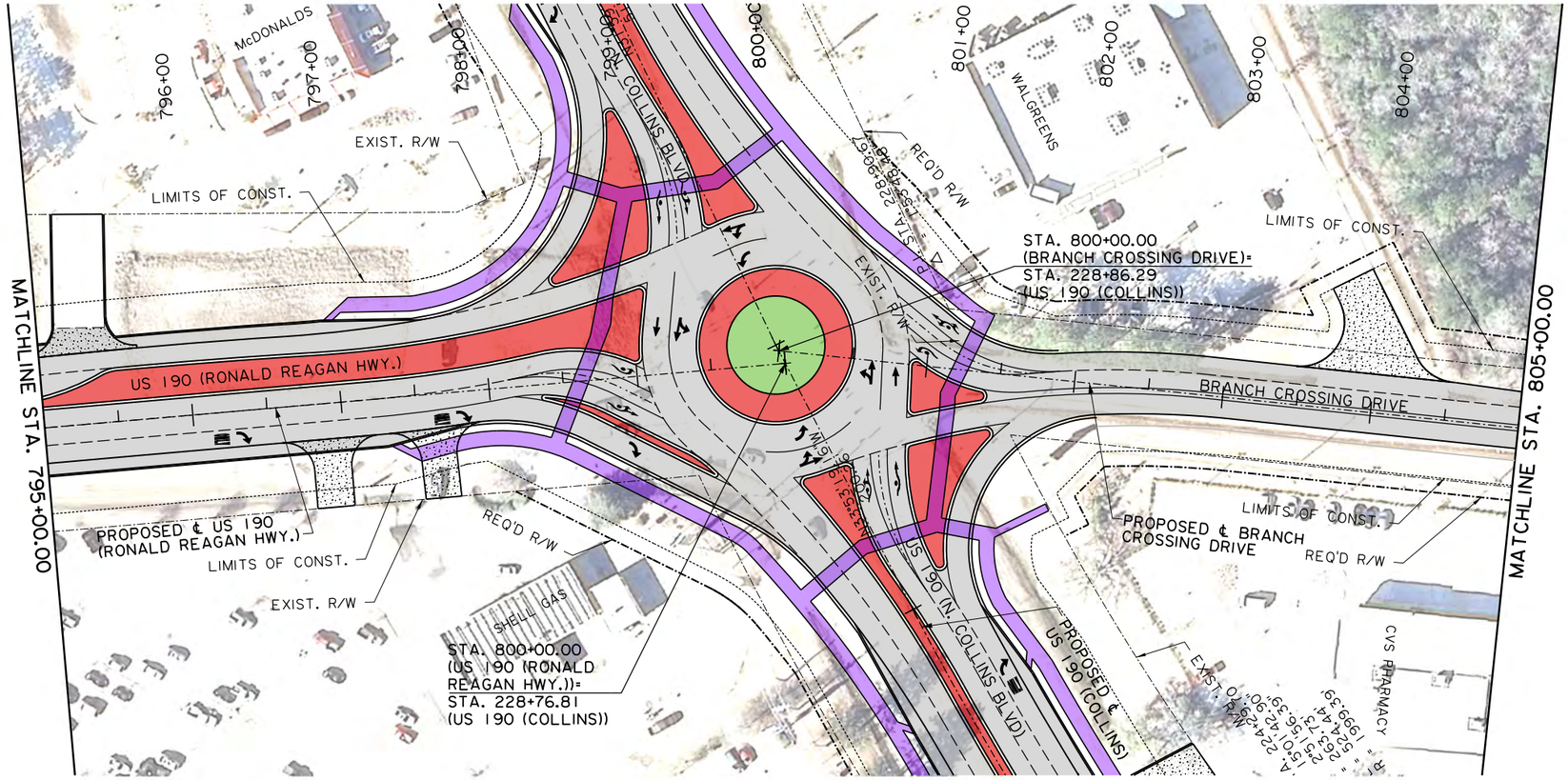


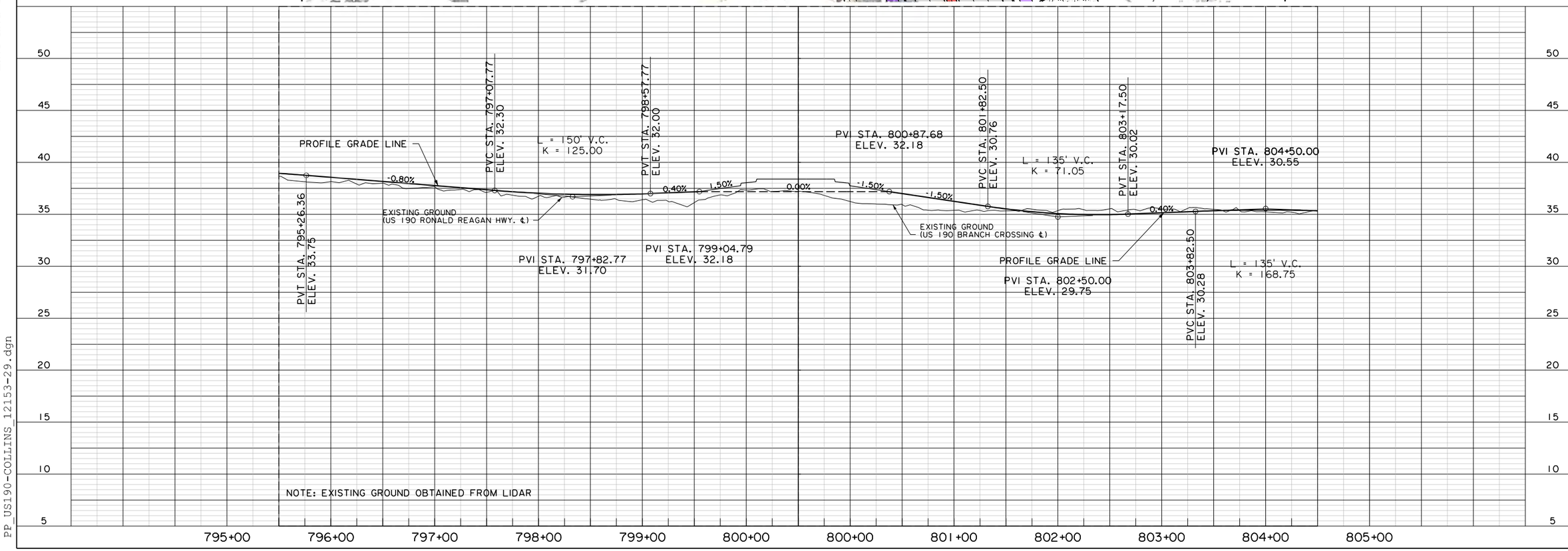
SHEET NUMBER	PL-28
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

PLAN - PROFILE
US 190 RONALD REAGAN

US 190 BRIDGE OVER HWY. 21





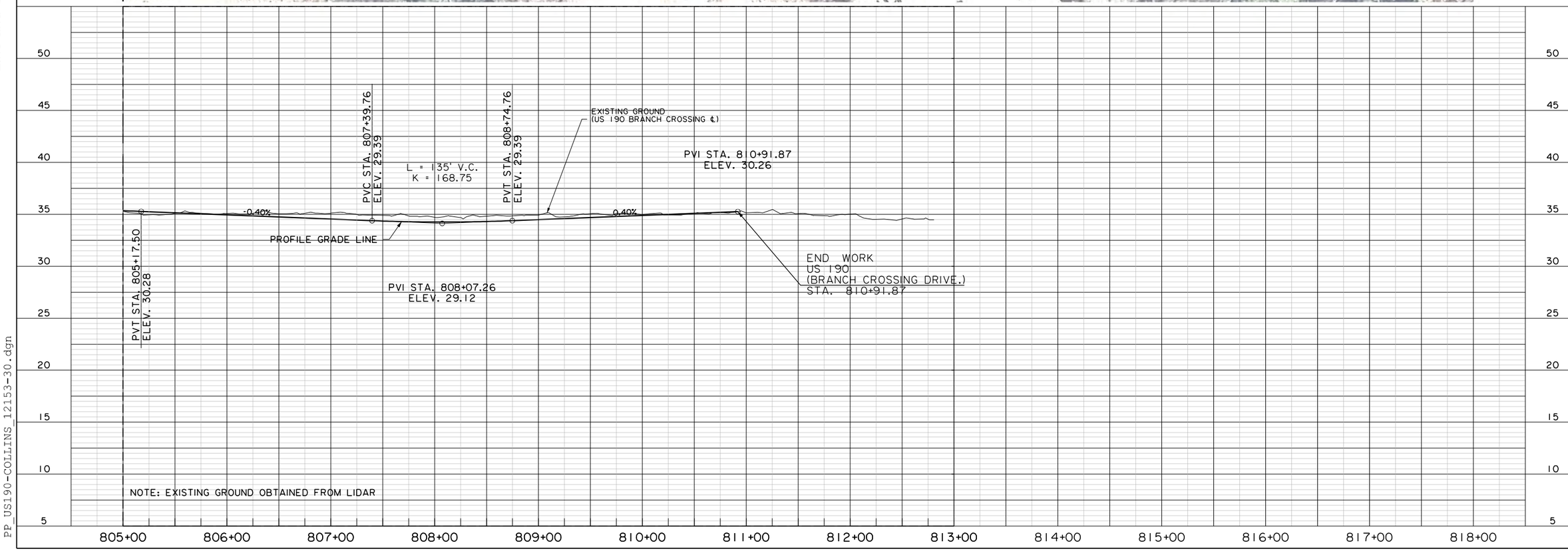
SHEET NUMBER	PL-29
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE	3-15-16
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

PLAN - PROFILE
US 190 RONALD REAGAN

US 190 BRIDGE OVER HWY. 21



SHEET NUMBER	PL-30
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	H.004987
DESIGNED WCS	
CHECKED DTT	
DETAILED WCS	
CHECKED DTT	
DATE 3-15-16	
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

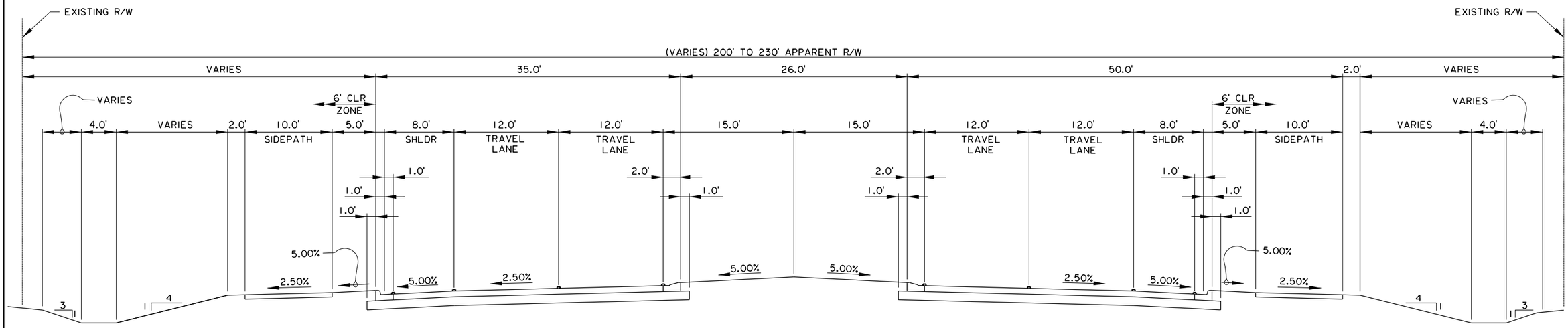
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLAN - PROFILE
US 190 BRANCH CROSSING

US 190 BRIDGE OVER HWY. 21

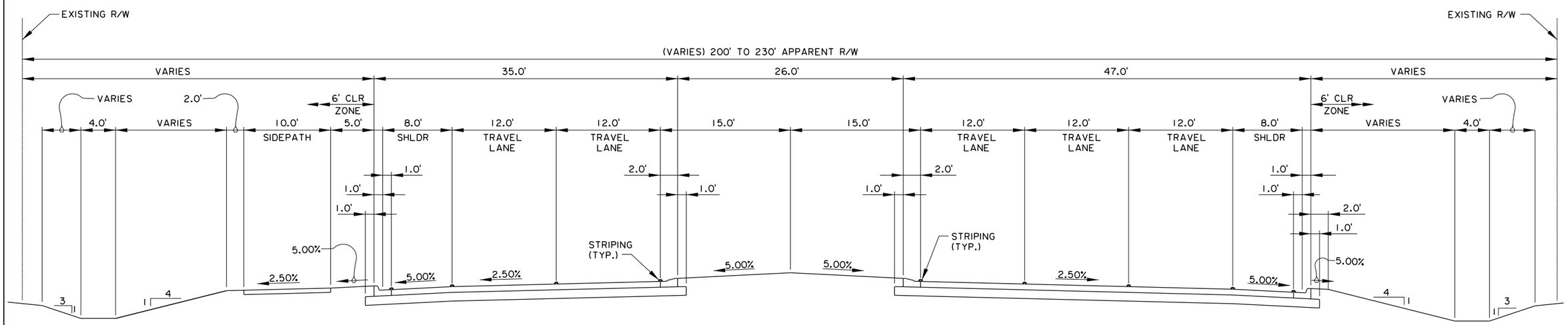
Line and Grade Study

PP_US190-COLLINS_12153-30.dgn



U.S. 190 (COLLINS BLVD.)
TYPICAL SECTION
UA-2 URBAN
W/ SIDEPATHS EACH SIDE

N.T.S.



U.S. 190 (COLLINS BLVD.)
UA-2 URBAN
TYPICAL SECTION
W/ SIDEPATH ONE SIDE

N.T.S.

SHEET NUMBER	TS-1
PARISH	ST. TAMMANY
FEDERAL PROJECT	H.004987
STATE PROJECT	S.P. NO. 00002630 T.O. NO. H.004987.5
DESIGNED / CHECKED	DTT / NJF
DETAILED / CHECKED	WCS / DTT
DATE / SHEET	3-15-16

NO.	REVISION DESCRIPTION	BY	DATE

TYPICAL SECTIONS

US 190 (COLLINS BLVD.) CORRIDOR STUDY

Line and Grade Study

Typical_Section.dgn

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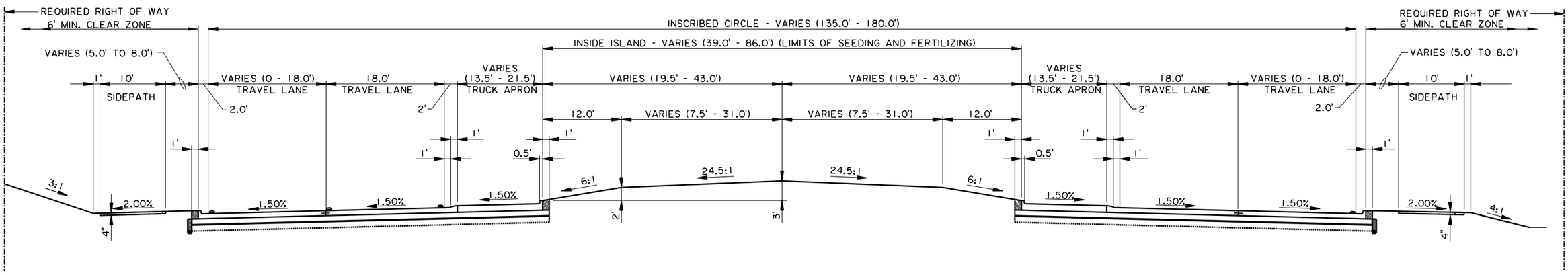


HALF SECTION IN CUT

TYPICAL FINISHED SECTION
MULTI-LANE ROUNDABOUT W/SIDEPATHS

HALF SECTION IN FILL

Line and Grade Study

Typicals_ROUNDABOUT- TS-2_12153.dgn

SHEET NUMBER	TS-2
PARISH	ST. TAMMANY
FEDERAL PROJECT	H.004987
STATE PROJECT	S.P. NO. 00002630 T.O. NO. H.004987.5
DESIGNED / CHECKED	DTT / NJF
DETAILED / CHECKED	WCS / DTT
DATE / SHEET	3-15-16

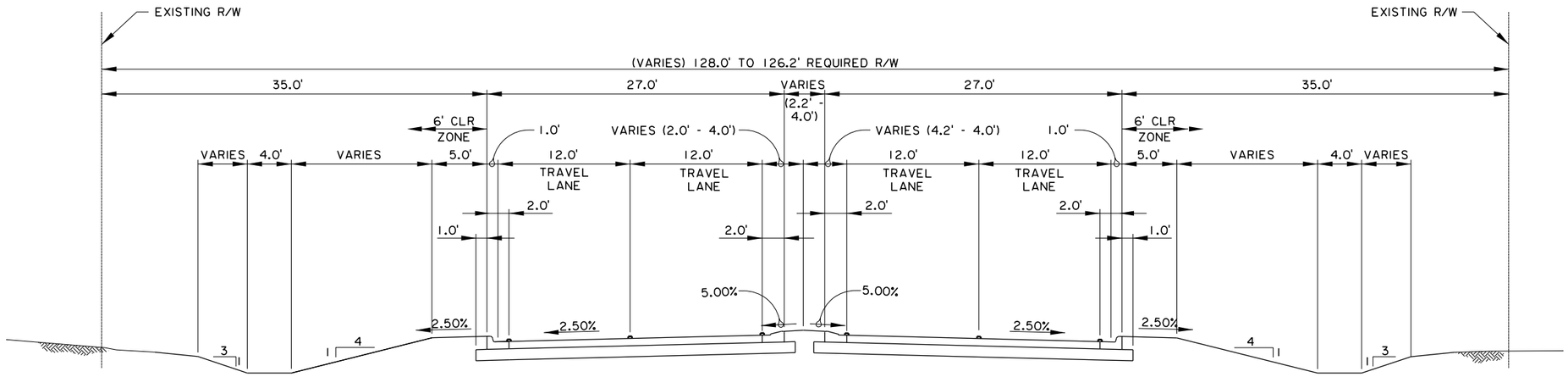
NO.	DATE	REVISION DESCRIPTION	BY

STATE OF LOUISIANA

TYPICAL SECTIONS
MULTI-LANE ROUNDABOUT

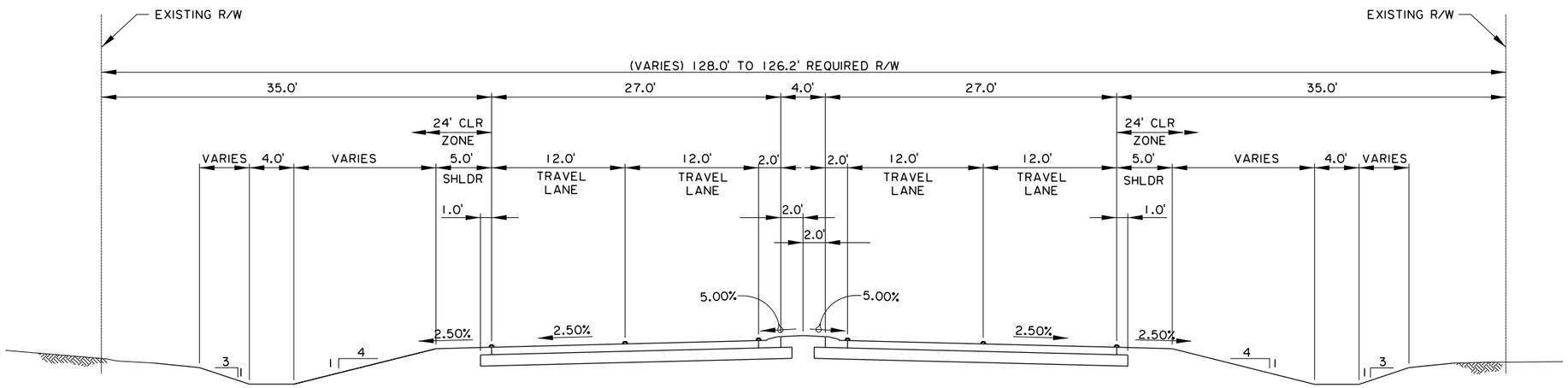
US 190 (COLLINS BLVD.) CORRIDOR STUDY

DOTD



U.S. 190 (BUSINESS)
TYPICAL SECTION
UA-2 URBAN

N.T.S.



LA 21
TYPICAL SECTION
UA-2 URBAN 4-LANE SECTION

N.T.S.

SHEET NUMBER	TS-3
PARISH	ST. TAMMANY
FEDERAL PROJECT	H.004987
STATE PROJECT	S.P. NO. 00002630 T.O. NO. H.004987.5
DESIGNED / CHECKED	DTT / NJF
DETAILED / CHECKED	WCS / DTT
DATE / SHEET	3-15-16

NO.	DATE	REVISION DESCRIPTION	BY

TYPICAL SECTIONS

US 190 (COLLINS BLVD.) CORRIDOR STUDY

Line and Grade Study

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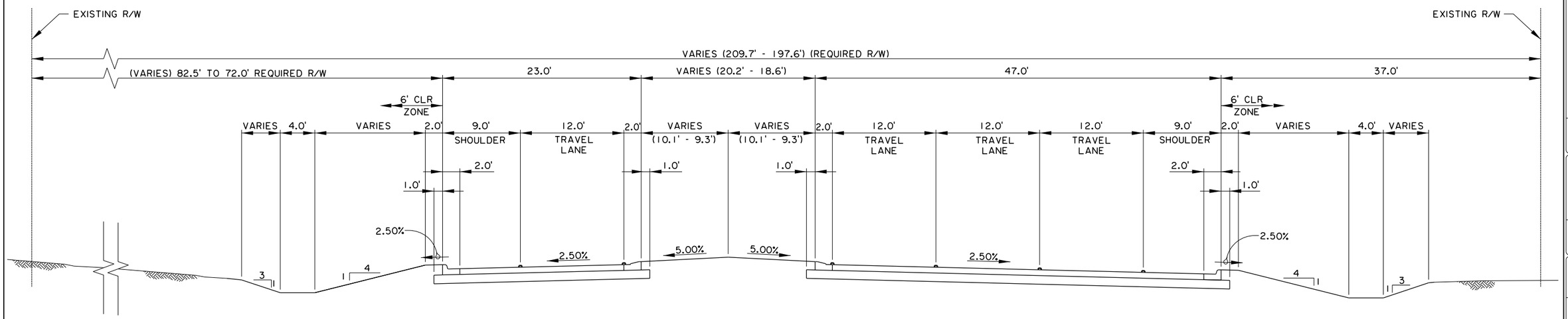
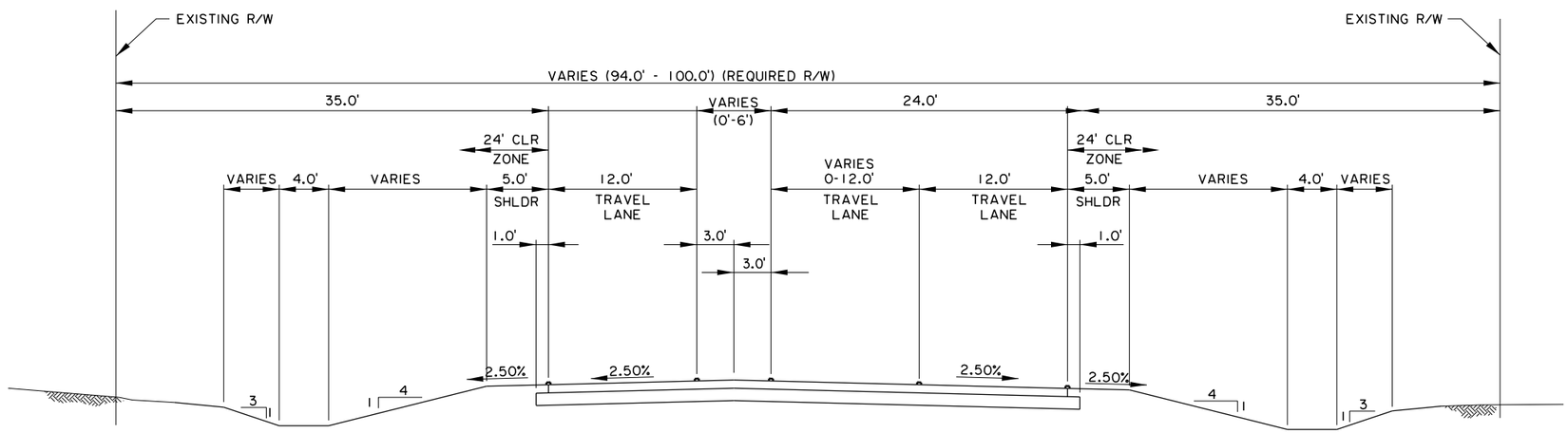


U.S. 190 (RONALD REAGAN HWY)
TYPICAL SECTION
UA-2 URBAN

N.T.S.



LA 36
TYPICAL SECTION
UA-2 URBAN

N.T.S.

Line and Grade Study

Typical_Section_TS-4.dgn

SHEET NUMBER	TS-4
PARISH	ST. TAMMANY
FEDERAL PROJECT	H.004987
STATE PROJECT	S.P. NO. 00002630 T.O. NO. H.004987.5
DESIGNED / CHECKED	DTT / NJF
DETAILED / CHECKED	WCS / DTT
DATE / SHEET	3-15-16

NO.	DATE	REVISION DESCRIPTION	BY

TYPICAL SECTIONS

US 190 (COLLINS BLVD.) CORRIDOR STUDY

CHECK PRINTS
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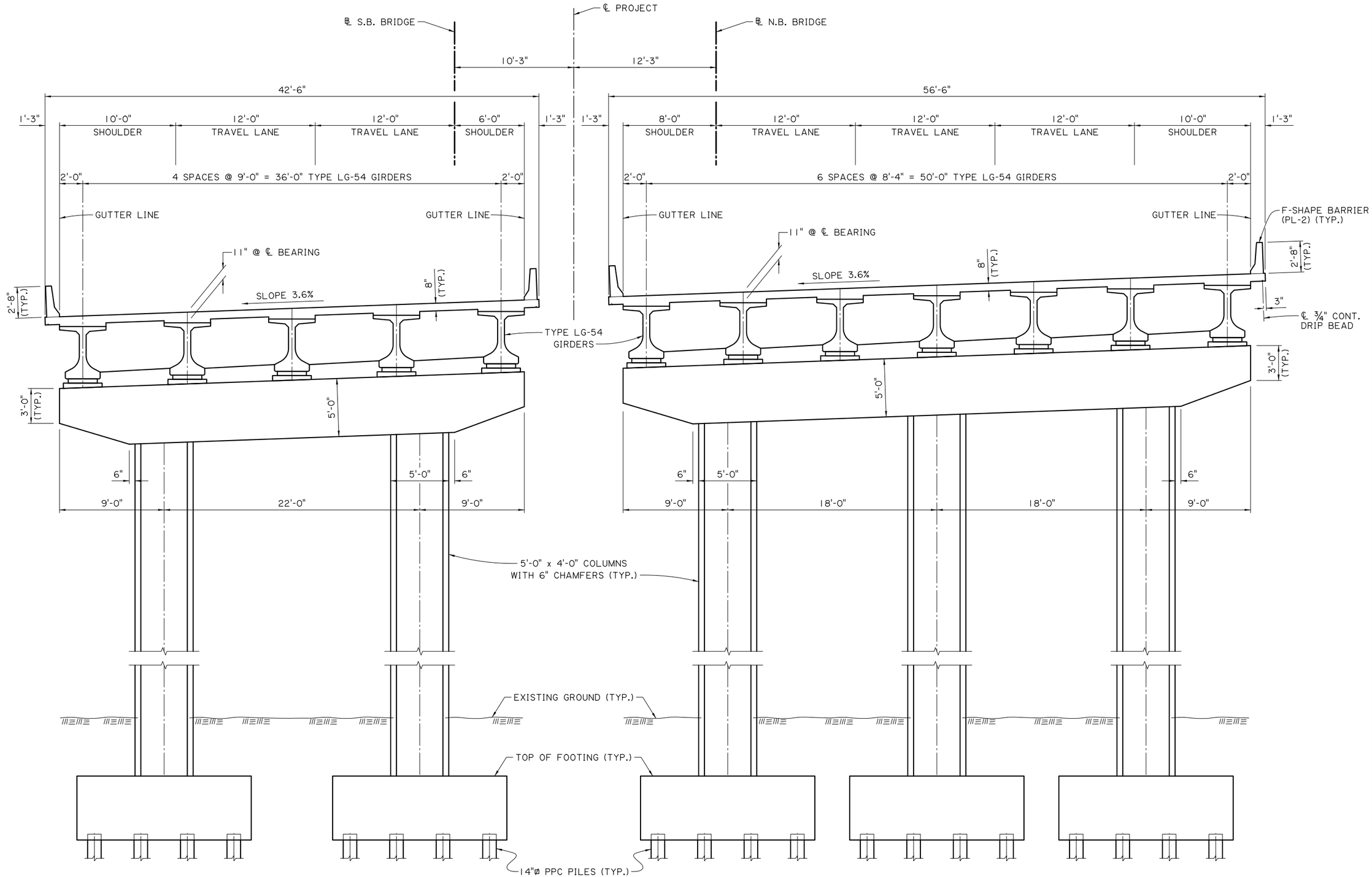


TYPICAL SECTION - BRIDGE
STA. 115+50 TO STA. 120+38

SCALE: 1/4" = 1'-0"

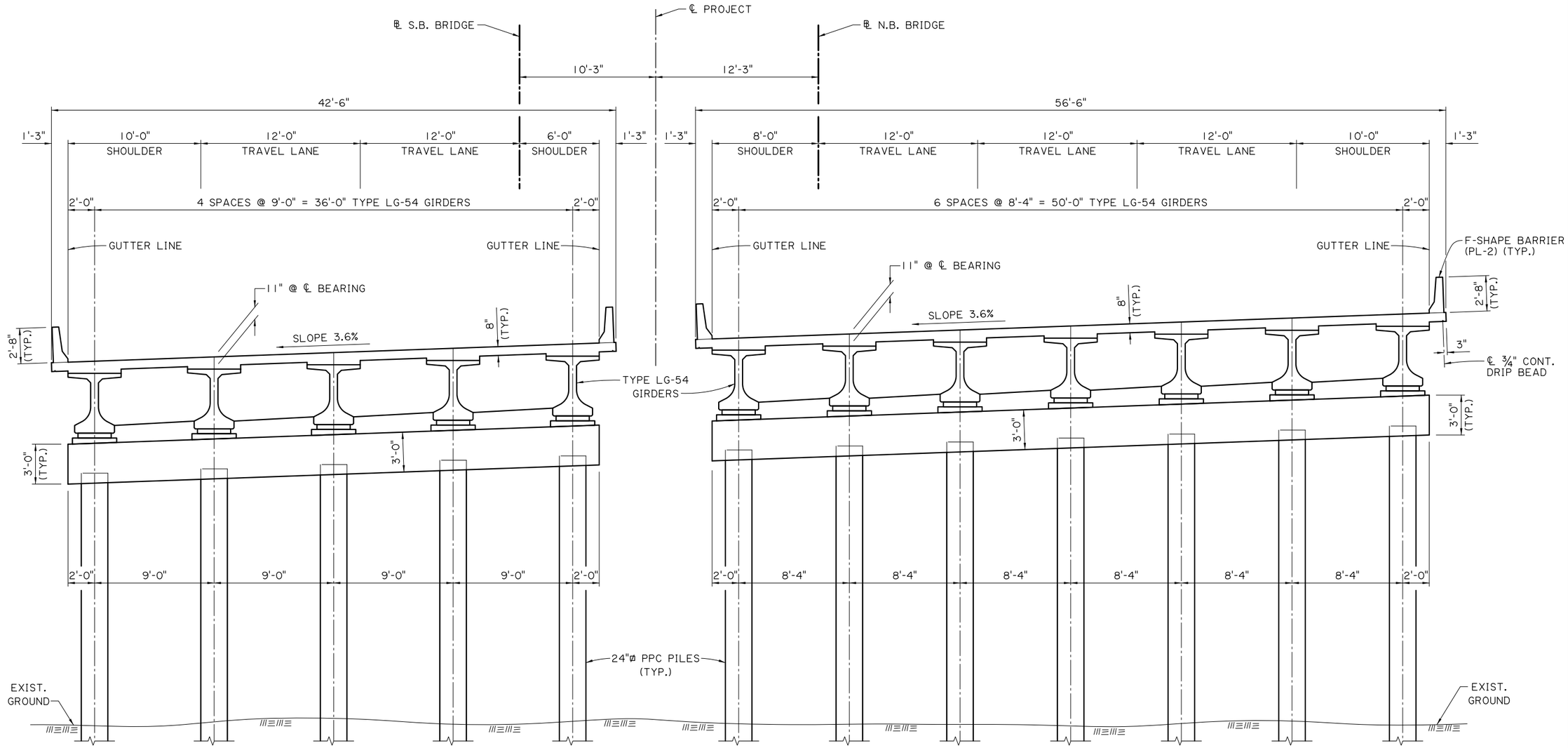
SHEET NUMBER	BR-1
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	
DESIGNED	R.P. DUGAS
CHECKED	K. REBELLO
DETAILED	H.C. TAYLOR
CHECKED	K. REBELLO
REVIEWED	
SERIES #	1 OF 1

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

TYPICAL SECTION
N.B. AND S.B. SPANS
STA. 115+50 TO STA. 120+38

RPC - US 190 OVER THE BOGUE FALAYA RIVER

GEC Gulf Engineers & Consultants



TYPICAL SECTION - BRIDGE
STA. 121+32 TO STA. 125+20

SCALE: 1/4" = 1'-0"

CHECK PRINTS

J:\00GECMain\Y_Drive\183 - New Orleans RPC\KL52.1830410.058 US190 EA\Dgn\Typical_Section_PB.dgn 9/16/2015 10:55

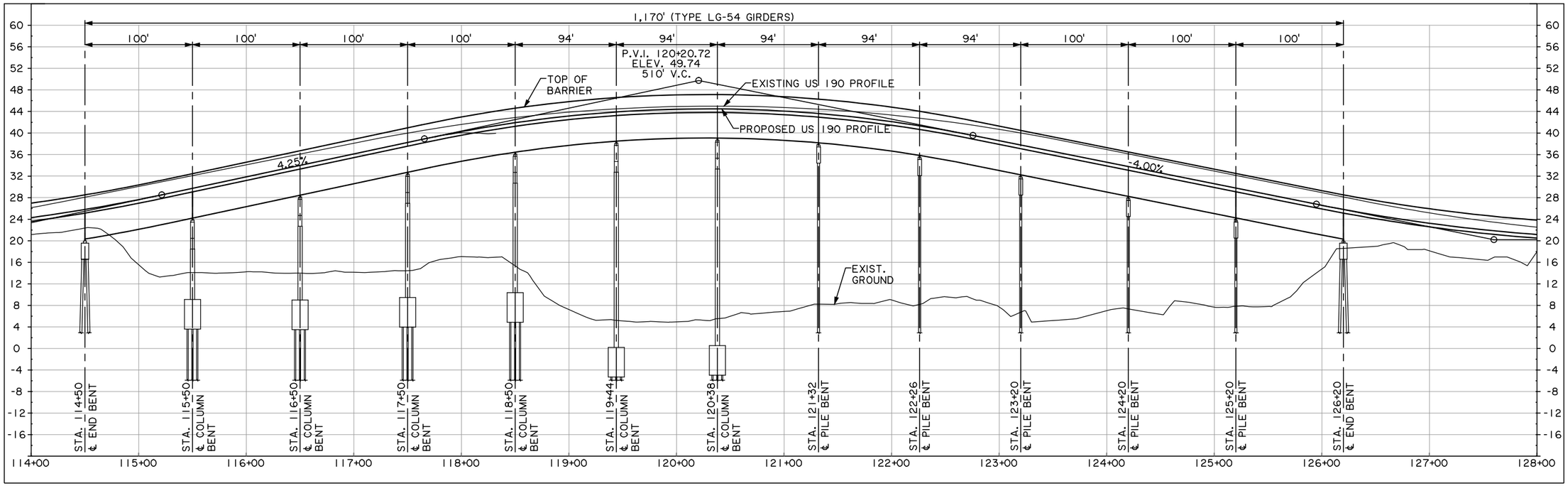
SHEET NUMBER	BR-2
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	
DESIGNED	R.P. DUGAS
CHECKED	K. REBELLO
DETAILED	H.C. TAYLOR
CHECKED	K. REBELLO
REVIEWED	
SERIES #	1 OF 1

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

TYPICAL SECTION
N.B. AND S.B. SPANS
STA. 121+32 TO STA. 125+20

RPC - US 190 OVER THE BOGUE FALAYA RIVER

GEC Gulf Engineers & Consultants



PROFILE
SCALE: H: 1"=50'
V: 1"=5'

SHEET NUMBER BR-3

PARISH ST. TAMMANY

FEDERAL PROJECT

STATE PROJECT

DESIGNED R.P. DUGAS
CHECKED K. REBELLO
DETAILED L. BECK
CHECKED H.C. TAYLOR
REVIEWD
SERIES 1 OF 1

NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

MAINLINE PROFILE

RPC - US 190 OVER THE BOGUE FALAYA RIVER

GEC Gulf Engineers & Consultants

Appendix B

SOLICITATION OF VIEWS AND RESPONSES

OFFICERS
MITCHELL J. LANDRIEU
Chairman
BILLY NUNGESSER
1st Vice Chairman
PATRICIA BRISTER
2nd Vice Chairman
JOHN F. YOUNG
3rd Vice Chairman
GORDON BURGESS
Secretary
DAVID PERALTA
Treasurer

MEMBERSHIP
JEFFERSON PARISH
JOHN F. YOUNG, JR.
Parish President
ELTON LAGASSE
Councilmember-at-Large
BELINDA CONSTANT
Mayor, City of Gretna
LEE GIORGIO
JOHN F. STUMPF, JR.

ORLEANS PARISH
MITCHELL J. LANDRIEU
Mayor, City of New Orleans
JASON WILLIAMS
Councilmember at Large
STACY HEAD
Councilmember at Large
RONALD CARRERE, JR.
JEFFREY SCHWARTZ

PLAQUEMINES PARISH
BILLY NUNGESSER
President, Plaquemines Parish Gov't.
BYRON MARINOVICH
Councilmember
KIRK LEPINE
Councilmember
DARREN BARROIS, SR.
MIKE FORD

ST. BERNARD PARISH
DAVID PERALTA
Parish President
RICHARD LEWIS
Councilmember
RAY LAUGA
Councilmember
CHARLES H. PONSTEIN
DAVID MUNN

ST. TAMMANY PARISH
PATRICIA BRISTER
Parish President
STEVE STEFANCIK
Councilmember
R. REID FALCONER, AIA
Councilmember
RICHARD P. KELLEY
E. RENE' SOULE'

TANGIPAHOA PARISH
GORDON BURGESS
Parish President
ROBERT ZABBIA
Mayor, City of Pontchatoula
DAVID VIAL
Council Chairman
DR. BONNIE LEWIS
MITCH WILLIAMS

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SHERRI LeBAS
Secretary

WALTER R. BROOKS
Executive Director, RPC

REGIONAL PLANNING COMMISSION

JEFFERSON • ORLEANS • PLAQUEMINES • ST. BERNARD • ST. TAMMANY • TANGIPAHOA

December 19, 2014

STATE PROJECT NO.: H.004987
F.A.P. NO.: H004987
US 190 / COLLINS BOULEVARD WIDENING
ST. TAMMANY PARISH

RE: Solicitation of Views

In the planning stages of a transportation facility, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the Regional Planning Commission (RPC), the Louisiana Department of Transportation (DOTD) and the Federal Highway Administration (FHWA) with the early identification of possible adverse economic, social, or environmental effects or concerns. Your assistance in this regard will be appreciated.

A preliminary project description and a location map are attached.

It is requested that you review the attached information and furnish us with your views and comments by January 23, 2015. Replies should be addressed to:

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Mr. Robinson can also be contacted via email at jrobins@gecinc.com or fax at (225) 612-4270.

Please include "State Project No. H.004987" in your reply.

TRANSPORTATION POLICY COMMITTEE (MPO) Full RPC Membership
IFTIKHAR AHMAD, *Director, Louis Armstrong N. O. Intl. Airport*
RYAN BROWN, *Director, Transit Administration, Jefferson Parish*
MIKE COOPER, *Mayor, City of Covington*
FREDDY DRENNAN, *Mayor, City of Slidell*
MAYSON FOSTER, *Mayor, City of Hammond*
Greater N. O. Expwy. Comm.
PAT GALLWEY, *Chief Operating Officer, Port of New Orleans*
CATHY F. GAUTREAUX, *Ex. Dir. Louisiana Motor Transport Assoc.*
SALVADOR LONGORIA, *Chairman, Regional Transit Authority*
JEFF DAVIS, *Gen. Manager, NO Public Belt RR*
NATALIE ROBOTTOM, *Parish President, St. John the Baptist*
V.J. ST. PIERRE, JR., *Parish President, St. Charles Parish*
DONALD VILLERE, *Mayor, City of Mandeville*

Telephone (504) 483-8500 *An Equal Opportunity Employer*
Fax (504) 483-8526
Email: rpc@norpc.org; Web Site: http://www.norpc.org

REGIONAL TRANSPORTATION MANAGEMENT CENTER
10 VETERANS MEMORIAL BOULEVARD • NEW ORLEANS, LOUISIANA • 70124-1162

PRELIMINARY PROJECT DESCRIPTION

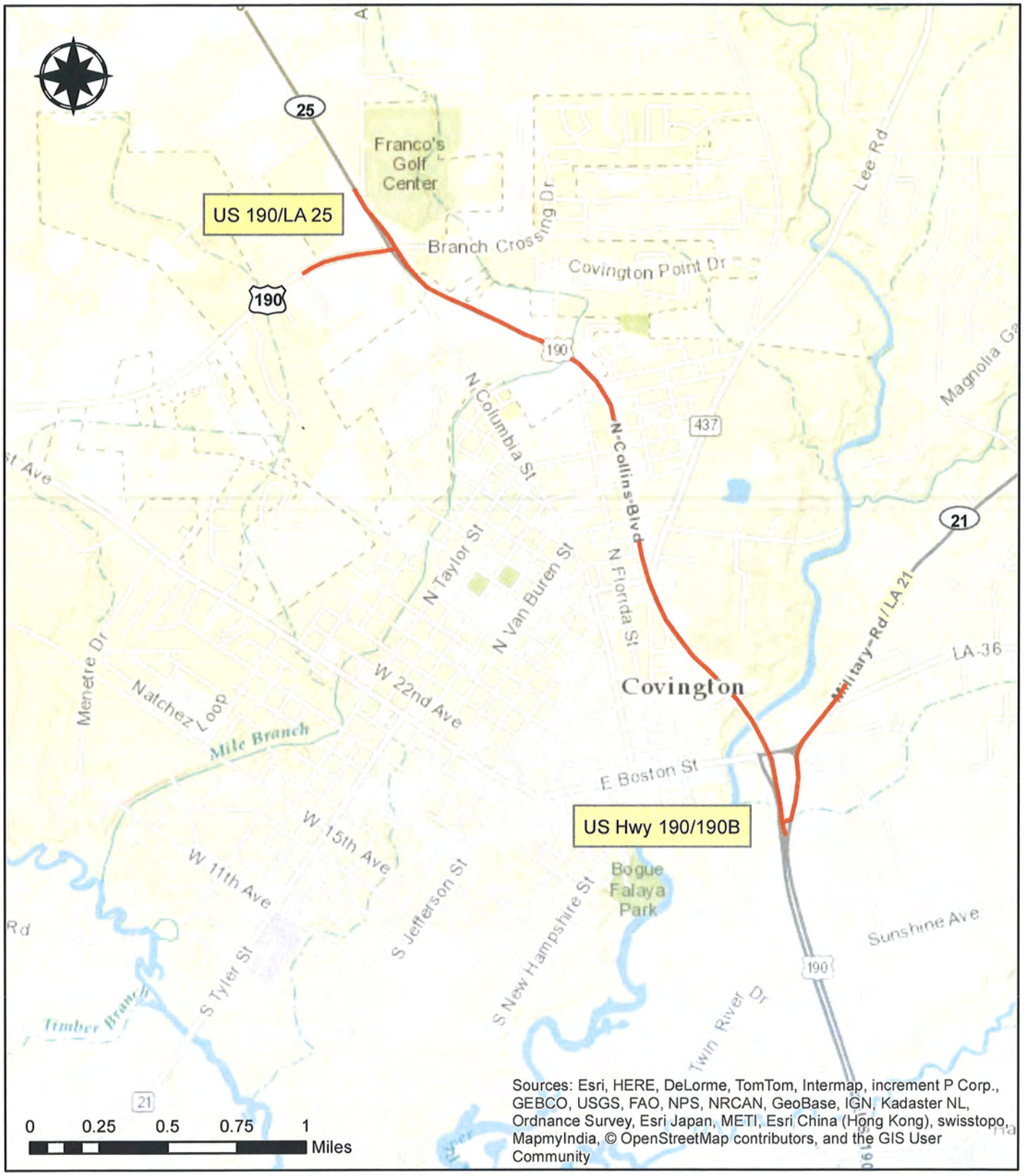
STATE PROJECT NO. H.004987
FEDERAL AID PROJECT NO. H004987
US 190 / COLLINS BOULDEVARD WIDENING
US 190
ST. TAMMANY PARISH

In May 2010 the Louisiana Department of Transportation and Development (DOTD) and the New Orleans Regional Planning Commission (RPC) proposed to improve traffic capacity along a portion of U.S. Highway 190 (US 190, Collins Boulevard) in Covington, Louisiana from the intersection of US 190 Business (US 190B) with West Front Street to the intersection of US 190 with Louisiana Highway 25 (LA 25). In 2012, a preliminary draft Environmental Assessment (EA) recommended improvement to four travel lanes separated by a median; a four-lane bridge across the Bogue Falaya River; and roundabouts at the US 190 intersections with Columbia Street and LA 437 and the US 190B intersections with E. Boston Street and LA 21 (Military Road).

Based on a revised traffic corridor study completed in May 2014, DOTD and RPC have revised the proposed improvements. The project is slightly longer and now extends an additional 1,400 feet along LA 25 and an additional 1,400 feet along LA 21 (Military Road). In addition to the improvements proposed in the 2012 preliminary draft EA, the project includes additional roundabouts at the US 190B intersection with Front Street, the US 190 intersections with 32nd Avenue, E. Magee Street, and LA 25, the LA 21 (Military Road) intersection with LA 36, and the Poole Drive intersection with Columbia Street.

The total length of the project is approximately 2.7 miles; a location map is attached. The environmental analysis of this proposed project will be published for public comment in a revised EA.

DOTD and RPC request your review and any comments you have regarding the project.



STATE PROJECT NO.: H.004987
F.A.P. NO.: H004987
US 190 / COLLINS BOULEVARD WIDENING
ST. TAMMANY PARISH

8TH COAST GUARD DISTRICT
DISTRICT COMMANDER
HALE BOGGS FEDERAL BUILDING
500 POYDRAS ST
New Orleans LA 70130

COALITION TO RESTORE COASTAL L
STEVEN PEYRONNIN, EXECUTIVE DI
6160 PERKINS RD STE 225
Baton Rouge LA 70808

COUSHATTA TRIBE OF LOUISIANA
P O BOX 818
Elton LA 70532

DEPARTMENT OF AGRICULTURE AND
OFFICE OF FORESTRY
P O BOX 1628
Baton Rouge LA 70821

DEPARTMENT OF AGRICULTURE AND
OFFICE OF SOIL/WATER CONSERVAT
P O BOX 3554
Baton Rouge LA 70821

DEPARTMENT OF CULTURE RECREATI
DIVISION OF ARCHAEOLOGY
P O BOX 44247
CAPITOL ANNEX 3RD
Baton Rouge LA 70804

DEPARTMENT OF CULTURE RECREATI
OFFICE OF STATE PARKS
P O BOX 44426
Baton Rouge LA 70804

DEPARTMENT OF ECONOMIC DEVELOP
OFFICE OF BUSINESS DEVELOPMENT
P O BOX 94185
Baton Rouge LA 70804

DEPARTMENT OF HEALTH AND HOSPI
DIVISION OF ENVIRONMENTAL HEAL
ATTN: STEVEN DAVIS, P.E.
P O BOX 4489
Baton Rouge LA 70821

DEPARTMENT OF HEALTH AND HOSPI
TENNEY SIBLEY, CHIEF SANITARIA
628 N 4TH ST
Baton Rouge LA 70802

DEPARTMENT OF PUBLIC SAFETY
HIGHWAY SAFETY COMMISSION
P O BOX 66336
Baton Rouge LA 70896

DEPARTMENT OF WILDLIFE & FISHE
LOUISIANA NATURAL HERITAGE PRO
P O BOX 98000
Baton Rouge LA 70898

DEQ EMAIL LETTERS SOV'S TO LIN
EMAIL: DEQ AT LINDA.HARDY@LA.G
BATON ROUGE LA 70802

DIVISION OF ADMINISTRATION
FACILITY PLANNING & CONTROL
P O BOX 94095
Baton Rouge LA 70804

DIVISION OF ADMINISTRATION
STATE LAND OFFICE
P O BOX 44124
Baton Rouge LA 70804

ENVIRONMENTAL PROTECTION AGENC
SOURCE WATER PROTECTION (6WQ-S
1445 ROSS AVE
Dallas TX 75202-2733

FEDERAL TRANSIT ADMINISTRATION
819 TAYLOR ST RM. 8A36
Fort Worth TX 76102

FEMA REGION VI
800 NORTH LOOP 288
Denton TX 76209

FLOODPLAIN MANAGEMENT PROGRAM
SUSAN VEILLON
DISTRICT 64

INTER-TRIBAL COUNCIL OF LOUISI
DIRECTOR
991 GRAND CAILLOU RD
HOUMA LA 70363-5705

JENA BAND OF CHOCTAW INDIANS
P O BOX 14
Jena LA 71342

KAREN CLEMENT
DEPT OF THE ARMY – TECH SUPPOR
ATTN: OD-W
P O BOX 60267
NEW ORLEANS LA 70538

LOUISIANA DEPARTMENT OF NATURA
OFFICE OF CONSERVATION
617 N 3RD ST
Baton Rouge LA 70802

LOUISIANA DEPARTMENT OF NATURA
OFFICE OF MINERAL RESOURCES
P O BOX 2827
Baton Rouge LA 70821

LOUISIANA FORESTRY ASSOCIATION
EXECUTIVE DIRECTOR
P O BOX 5067
Alexandria LA 71301

LOUISIANA GOOD ROADS ASSOCIATI
P O BOX 3713
Baton Rouge LA 70821

LOUISIANA STATE UNIVERSITY
SEA GRANT LEGAL ADVISORY SERVI
JAMES G WILKINS
227B SEA GRANT BUILDING
Baton Rouge LA 70803

MISSISSIPPI BAND OF CHOCTAW IN
E-MAIL LETTERS TO KCARLETON@CH
KCARLETON@CHOCTAW.ORG
Choctaw MS 39350

NATURAL RESOURCES CONSERVATION
KEVIN D. NORTON
3737 GOVERNMENT ST
Alexandria LA 71302

OFFICE OF INDIAN AFFAIRS
DIRECTOR
1201 NORTH 3RD STREET
SUITE G -219
Baton Rouge LA 70802

SEMINOLE: EMAIL LETTERS (SOV'S
EMAIL SEMINOLE AT
HARJO.N@SNOBATON
ROUGE LA 70802

U, S.HOUSE OF REPRESENTATIVES
CONGRESSMAN CEDRIC RICHMOND
(DISTRICT 2)
2021 LAKESHORE DR.
SUITE 309
NEW ORLEANS LA 70122

U.S. FISH & WILDLIFE SERVICE
ONLINE USFWS SOV
WWW.FWS.GOV/LAFAYETTE
Lafayette LA 70506

U.S. GEOLOGICAL SURVEY
3535 S SHERWOOD FOREST STE 120
Baton Rouge LA 70806

U.S. HOUSE OF REPRESENTATIVES
CONGRESSMAN BILL CASSIDY M.D.
(DISTRICT 6)
5555 HILTON AVE STE 100
Baton Rouge LA 70808

U.S. HOUSE OF REPRESENTATIVES
CONGRESSMAN CHARLES W. BOUSTAN
(DISTRICT 3)
800 LAFAYETTE ST.
SUITE 1400
Lafayette LA 70501

U.S. HOUSE OF REPRESENTATIVES
CONGRESSMAN STEVE J. SCALISE
(DISTRICT 1)
110 VETERANS BLVD., STE. 500
METAIRIE LA 70005

U.S. HOUSE OF REPRESENTATIVES
CONGRESSMAN VANCE MCALLISTER
(DISTRICT 5)
1900 STUBBS AVE
STE.B
Monroe LA 71201

U.S. HOUSE OF REPRESENTATIVES
HON. JOHN FLEMING
(DISTRICT 4)
6425 YOUREE DR STE 350
Shreveport LA 71105

U.S. NATIONAL PARK SERVICE
SOUTHEAST REGION
100 ALABAMA ST, SW
1924 BUILDING
Atlanta GA 30303

UNITED STATES SENATE
SENATOR DAVID VITTER
2800 VETERANS MEMORIAL BLVD ST
Metairie LA 70002

UNITED STATES SENATE
SENATOR MARY LANDRIEU
HALE BOGGS FEDERAL BUILDING
500 POYDRAS ST RM. 1005
New Orleans LA 70130

USEPA
REGION 6
6 EN-XP
1445 ROSS AVE, STE 1200
Dallas TX 75202-2733

LOUISIANA STATE POLICE
TROOP L
2600 NORTH CAUSEWAY
MANDEVILLE LA 70471

MR GARY YOUNG, DEPUTY CHIEF
REGIONAL PLANNING & ENVIR. DIV
DEPART. OF THE ARMY CORPS OF E
4155 CLAY ST
VICKSBURG MS 39183-3435

NATIONAL MARINE FISH SERVICE
HABITAT CONSERVATION DIV
LSU CENTER FOR WETLAND RES
BATON ROUGE LA 70803-7535

REGIONAL PLANNING COMMISSION
10 VETERANS MEMORIAL BLVD
NEW ORLEANS LA 70124

HON BEN NEVERS
LOUISIANA STATE SENATE
(DISTRICT 12)
724 AVE F
BOGALUSA LA 70427

SLIDELL CITY COUNCIL
MR SHAWN MCMANUS
COUNCIL ADMINISTRATOR
P O BOX 828
SLIDELL LA 70459-0828

OFFICE OF EMERGENCY MANAGEMENT
1300 PERDIDO ST
STE 9E06
NEW ORLEANS LA 70112

ST TAMMANY HISTORICAL SOCIETY
P O BOX 362
MADISONVILLE LA 70447

JEFFERSON PARISH PLANNING DEPT
DIRECTOR
1221 ELMWOOD PARK BLVD
HARAHAN LA 70123

HON GEORGE GREGORY CROMER
LA HOUSE OF REPRESENTATIVES
(DISTRICT 90)
P O BOX 2088
SLIDELL LA 70459

ST. TAMMANY PARISH
SCHOOL BOARD
P O BOX 940
COVINGTON LA 70434

ST. TAMMANY PARISH
FLOODPLAIN ADMINISTRATOR
P O BOX 628
COVINGTON LA 70434

ST. TAMMANY PARISH
SHERIFF
P O BOX 1120
COVINGTON LA 70433

CHAMBER OF COMMERCE
118 WEST HALL AVE
SLIDELL LA 70460-2633

ALABAMA COUSHATTA TRIBE OF TX
575 STATE PARK RD 56
LIVINGSTON TX 77351

N.O. BICYLCE CLUB
18405 REEVES DRIVE
COVINGTON LA 70435

TAMMANY TRACE
21490 KOOP DRIVE
MANDEVILLE LA 70471

HON PAUL HOLLIS
LA HOUSE OF REPRESENTATIVES
DISTRICT 104
2000 PRESERVE LAKE DR, STE.B
COVINGTON LA 70433

DEPT OF PUBLIC WORKS
ATTN: MR SHANNON DAVIS, DIRECT
620 N. TYLER ST.
COVINGTON LA 70434

HON JACK DONAHUE
LOUISIANA STATE SENATE
(DISTRICT 11)
3030 EAST CAUSEWAY APPROACH
MANDEVILLE LA 70448

HON J. KEVIN PEARSON
LA HOUSE OF REPRESENTATIVES
(DISTRICT 76)
1349 CORPORATE SQUARE, STE 6
SLIDELL LA 70458

HON JOHN M. SCHRODER SR.
LA HOUSE OF REPRESENTATIVES
(DISTRICT 77)
522 N. NEW HAMPSHIRE ST., STE.
COVINGTON LA 70433

ST. TAMMANY PARISH
COUNCIL
P O BOX 628
COVINGTON LA 70434

HON TIMOTHY G “TIM” BURNS
LA HOUSE OF REPRESENTATIVES
(DISTRICT 89)
2090 WOODROW ST, STE A
MANDEVILLE LA 70448

HON SCOTT M SIMON
LA HOUSE OF REPRESENTATIVES
(DISTRICT 74)
P O BOX 1297
ABITA SPRINGS LA 70420

HON HAROLD L. RITCHIE
LA HOUSE OF REPRESENTATIVES
DISTRICT 75
302 LOUISIANA AVE
BOGALUSA LA 70427

THE STATE SENATE (DISTRICT1)
SENATOR A.G. CROWE
646 CARNATION ST.
SLIDELL LA 70460

BOGUE CHITTO PEARL RIVER SOIL
CONSERVATION DISTRICT OF LA
1111 WASHINGTON STREET
FRANKLINTON LA 70438

Updated September 11, 2014

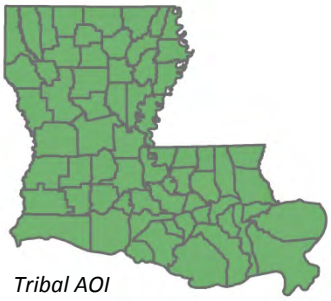
List of Federally and State Recognized Native American Tribes and Other Contacts - State of Louisiana

Federally Recognized Tribes

Alabama Coushatta Tribe of Texas

Oscola Clayton Sylestine, Chief
Ronnie Thomas, Chairman
www.alabama-coushatta.com

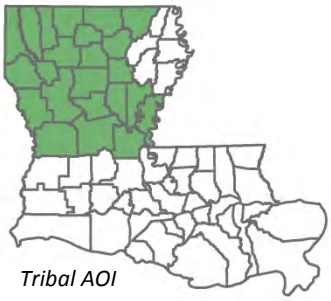
***Bryant Celestine, Historic Preservation Officer**
571 State Park Rd. 56
Livingston, TX 77351
Phone (936) 563-1181
Fax (936) 563-1183
histpres@actribe.org
Celestine.bryant@actribe.org



Caddo Nation

Brenda Edwards, Chairperson
P.O. Box 487
Binger, OK 73009
Phone (405) 656-2344
Fax (405) 656-2892
www.caddonation-nsn.gov

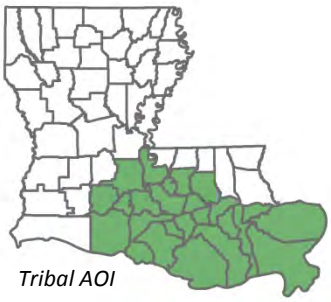
***Robert Cast, THPO**
(405) 656-2903
(405) 656-2386
preservation@caddonation-nsn.gov
rcast@caddonation.org



Chitimacha Tribe of Louisiana

John Paul Darden, Chairman
P.O. Box 661
Charenton, LA 70523
Phone (337) 923-7215
Fax (337) 923-6848
www.chitimacha.gov

*** Kimberly Walden, Cultural Director**
Phone (337) 923-9923
kswalden@chitimacha.gov



Choctaw Nation of Oklahoma

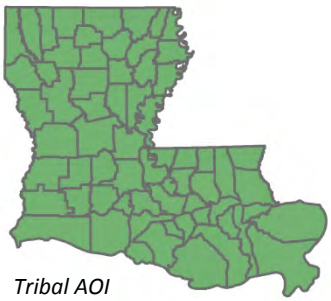
Gary Batton, Chief
P.O. Drawer 1210
Durant, OK 74702
Phone (580) 924-8280
www.choctawnation.com

***Ian Thompson, THPO**
580-924-8280, ext. 2125
ithompson@choctawnation.com

Coushatta Tribe of Louisiana

Lovelin Poncho, Chairman
P.O. Box 818
Elton, LA 70532
Phone (337) 584-2261
Fax (337) 584-2998
www.coushattatribela.org

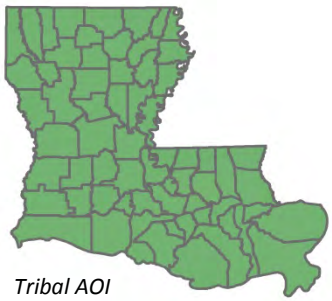
*** Dr. Linda Langley, THPO**
Heritage Department
P.O. Box 10
Elton, LA 70352
Phone (337) 584-1567
llangley@mcneese.edu



Jena Band of Choctaw Indians

B. Cheryl Smith, Chief
P.O. Box 14
Jena, LA 71342-0014
Phone (318) 992-2717
Fax (318) 992-8244
www.jenachoctaw.org

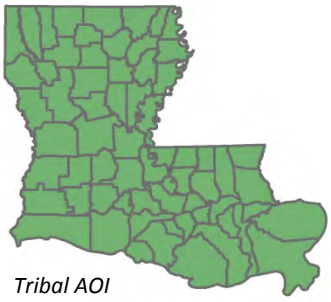
***Dana Masters, THPO**
(318) 992-1205
danammasters@aol.com



Mississippi Band of Choctaw Indians

Phyllis J. Anderson, Chief
P.O. Box 6257
Philadelphia, MS 39350
Phone (601) 656-5251
Fax (601) 656-1992
www.choctaw.org

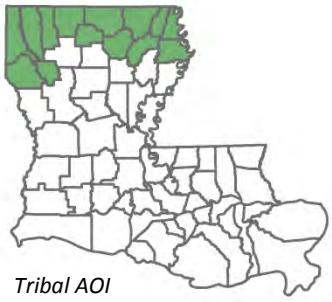
*** Kenneth Carleton, Tribal Archaeologist & THPO**
Phone (601) 650-7316
Fax (601) 650-7454
kcarleton@choctaw.org



Quapaw Tribe of Oklahoma

John Berrey, Chair
P.O. Box 765
Quapaw, OK 74363-0765
Phone (918) 542-1853
Fax (918) 542-4694
www.quapawtribe.com

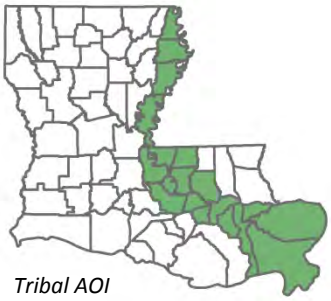
***Everett Bandy, THPO**
Quapaw Tribe of Oklahoma
PO Box 765
Quapaw, OK 74363-0765
(918) 642-4724
ebandy@quapawtribe.com



Seminole Nation of Oklahoma

Enoch Haney, Principal Chief
P.O. Box 1498
Wewoka, OK 74884
Phone (405) 257-6287
www.seminolenation.com

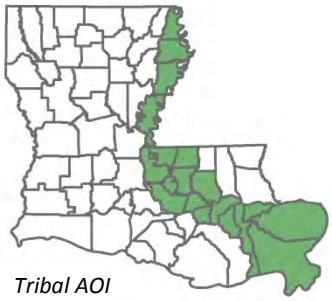
***Natalie Harjo, Historic Preservation Officer**
(405) 385-5194
Harjo.n@sno-nsn.gov



Seminole Tribe of Florida

Mitchell Cypress, Chairman
6300 Stirling Road
Hollywood, FL 33024
Phone (800) 683-7800
www.semtribe.com

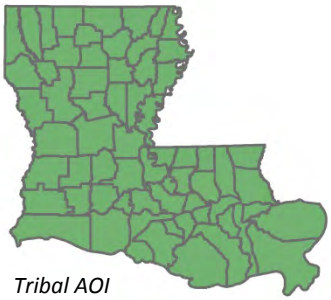
***Paul Backhouse, THPO**
30290 Josie Billie Hwy
PMB 1004
Clewiston, FL 33440
Phone (863) 983-6542 Ext 12244
Fax (863) 902-1117
paulbackhouse@semtribe.com



Tunica-Biloxi Tribe of Louisiana

Marshall Pierite, Chairman
P.O. Box 1589
Marksville, LA 71351
Phone (318) 253-9767
Fax (318) 253-9791
www.tunica.org

*** Earl J. Barbry, Jr., THPO**
Attn: Museum Division Offices
Phone (318) 253-8174
Fax (318) 253-7711
earlii@tunica.org



State Recognized Tribes

Adai Caddo Indians of Louisiana

Rufus Davis, Jr., Chairman
Route 2, Box 246
Robeline, LA 71469
Phone (318) 472-8680
Fax (318) 472-8684

www.adaiindiannation.com
chiefdavis@chiefsolutionsinc.com

Biloxi Chitimacha Confederation/ Bayou Lafourche Band

Randy Verdun, Chairman
P. O. Box 856
Zachary, LA 70791
(225) 359-2476

www.biloxi-chitimacha.com
chiefrandyverdun@biloxi-chitimacha.com
bccmi@aol.com

Choctaw-Apache Tribe of Ebarb

John Procell, Chairman
P.O. Box 1428
Zwolle, LA 71486
Phone (318) 645-2588
Fax (318) 645-2589

www.choctaw-apache.org
achoctaw@yahoo.com

Clifton Choctaw Tribe of Louisiana

Tom Neal, Chairman
1312 Clifton Road
Clifton, LA 71447
Phone (318) 793-8236

ccri@belsouth.net

Four-Winds Cherokee Tribe

Jackie Womack, Principal Chief
P.O. Box 118
Merryville, LA 70653
Phone (337) 825-8641
Fax (337) 537-1697

www.fourwindscherokee.com/
talkingleaves2003@yahoo.com

Grand Caillou/Dulac Band

Marlene Foret. Chairwoman
114 Retreat Drive
Bourg, LA 70343
Phone (985) 594-6593

www.biloxi-chitimacha.com/grand_caillou_dulac.htm
mmforet@mobiletel.com

Isle de Jean Charles Band

Chief Albert Naquin
100 Dennis Street
Montegut, LA 70377
Phone (985) 594-3725

www.biloxi-chitimacha.com/isle_de_jean_charles.htm
whitebuffaloa@netscape.net

The Louisiana Choctaw Tribe

James Rainwater
15212 Hubb Road
Pride, LA 70770
Phone (225) 261-9751

Point au Chien Tribe

Charles Verdin, Chairman
793 Aragon Road
Montegut, LA 70377

http://pactribe.tripod.com
verdin1504@yahoo.com

United Houma Nation

Thomas Dardar, Jr., Principal Chief
20986 Highway 1
Golden Meadow, LA 70357
Phone (504) 475-6640
Fax (504) 475-7109

www.unitedhoumanation.org

Other Contacts

Apalachee Talimali Band of Louisiana

Gilmer Bennett
P.O. Box 84
Libuse, LA 71348
Phone (318) 473-4412
Fax (318) 561-2333

Atakapa-Ishak Nation

Chief Michael Amos
P.O. Box 1532
Lake Charles, LA 70602
(409) 728-0394

chief.m.amos@sbcglobal.net
www.atakapa-ishak.com

Chahta Tribe

Chief Elwin Warhorse Gillum
61357 Dixe Ranch Rd,
Slidell, LA 70460
(985) 781-7650

chiefwarhorse@aol.com
http://hometown.aol.com/chiefwarhorse/myhomepage/club.html

Governor's Office of Indian Affairs

Executive Director
P.O. Box 94004
Baton Rouge, LA 70804
Phone (225) 219-8715
Fax (225) 219-7551

www.indianaffairs.com

Inter-Tribal Council of Louisiana, Inc.

Kevin Billiot, Director
5723 Superior Dr., Suite B-1
Baton Rouge, LA 70816
Phone (225) 292-2474

Louisiana Choctaw Turtle Tribe

Chief James "Greywolf" Gil
379 Sharon Lane
Lake Charles, LA 70611
(337) 855-4427

harleymawmaw@Gmail.com

ALABAMA-COUSHATTA TRIBE OF TEXAS
571 State Park Road 56 • Livingston, Texas 77351 • (936) 563-1100

January 23, 2015

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Boulevard
Baton Rouge, LA 70806

Dear Mr. Robinson:

On behalf of Mikko Colabe III Clem Sylestine and the Alabama-Coushatta Tribe, our appreciation is expressed on your efforts to consult us regarding H004987: Collins Boulevard widening proposal in St. Tammany Parish

Our Tribe maintains ancestral associations throughout the state of Louisiana despite the absence of written records to completely identify Tribal activities, villages, trails, or burial sites. However, it is our objective to ensure significances of American Indian ancestry, especially of Alabama-Coushatta origin, are administered with the utmost considerations.

Upon review of your December 19, 2014 submission, no known impacts to cultural assets of the Alabama-Coushatta Tribe of Texas are anticipated in conjunction with this proposal. In the event of the inadvertent discovery of human remains and/or archaeological artifacts, activity in proximity to the location must cease and appropriate authorities, including this Office, notified without delay for additional consultations.

Should you require further assistance, please do not hesitate to contact us.

Sincerely,

Bryant J. Celestine
Historic Preservation Officer

Office (936) 563 – 1181 celestine.bryant@actribe.org Fax (936) 563 – 1183

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
Office of the Secretary
PO Box 94245 | Baton Rouge, LA 70804-9245
ph: 225-379-3005 | fx: 225-379-3002

Bobby Jindal, Governor
Sherri H. LeBas, P.E., Secretary

January 6, 2015

STATE PROJECT NO.: H.004987
F.A.P. NO.: H004987
US 190 / COLLINS BOULEVARD WIDENING
PARISH: ST. TAMMANY

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Subject: Solicitation of Views

Dear Mr. Robinson:

Enclosed is a copy of St. Tammany Parish Flood Insurance Rate Map (FIRM) indicating the proposed project.

During the improvements and construction, there must be allowance for the adequate flow of water and assurance that there will be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction. At this time, consideration must be given to the responsibility for cleaning debris and keeping the surrounding area clear so as not to interfere with its function.

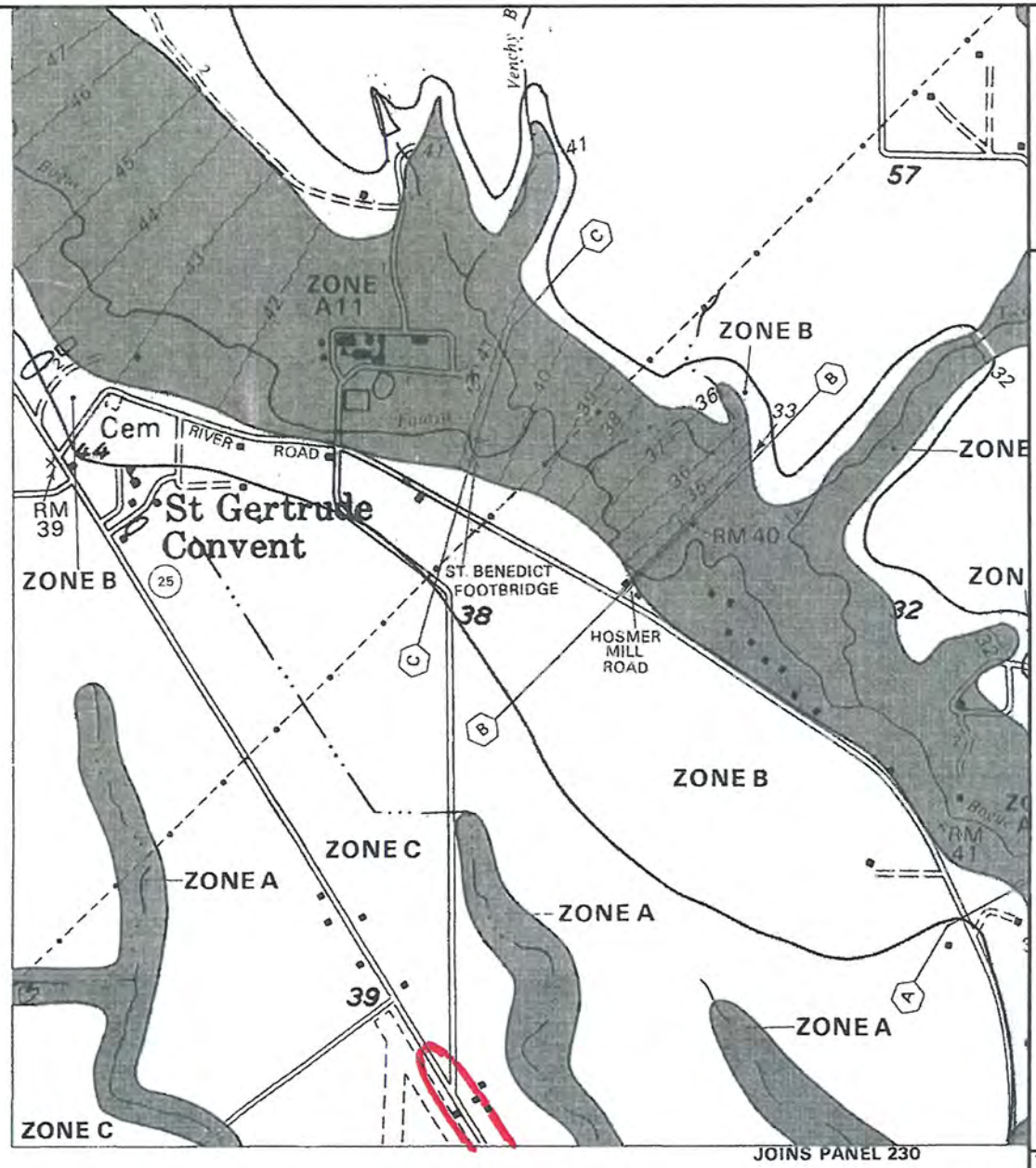
In order to assure compliance with St. Tammany Parish's requirements for the National Flood Insurance Program (NFIP), and ensure that appropriate permits are obtained, please contact the floodplain administrator for the Parish. The contact person is Alan Pelegrin, 21490 Koop Drive, Mandeville, LA, 70448 and telephone no. (985) 898-2574. Because the proposed project also lays within the city limits of Covington, you must also contact Daniel Hill, P.O. Box 778, Covington, LA, 70434 and telephone no. (985) 892-1811.

We thank you for the opportunity to comment on this project. If you need additional information, please contact our office, (225) 379-3005.

Sincerely,

Jennifer Deglandon
Floodplain Management Program Coordinator

Enclosure
pc: Alan Pelegrin
Daniel Hill



APPROXIMATE SCALE

2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

ST. TAMMANY PARISH, LOUISIANA
(UNINCORPORATED AREAS)

PANEL 150 OF 600
(SEE MAP INDEX FOR PANELS NOT PRINTED)

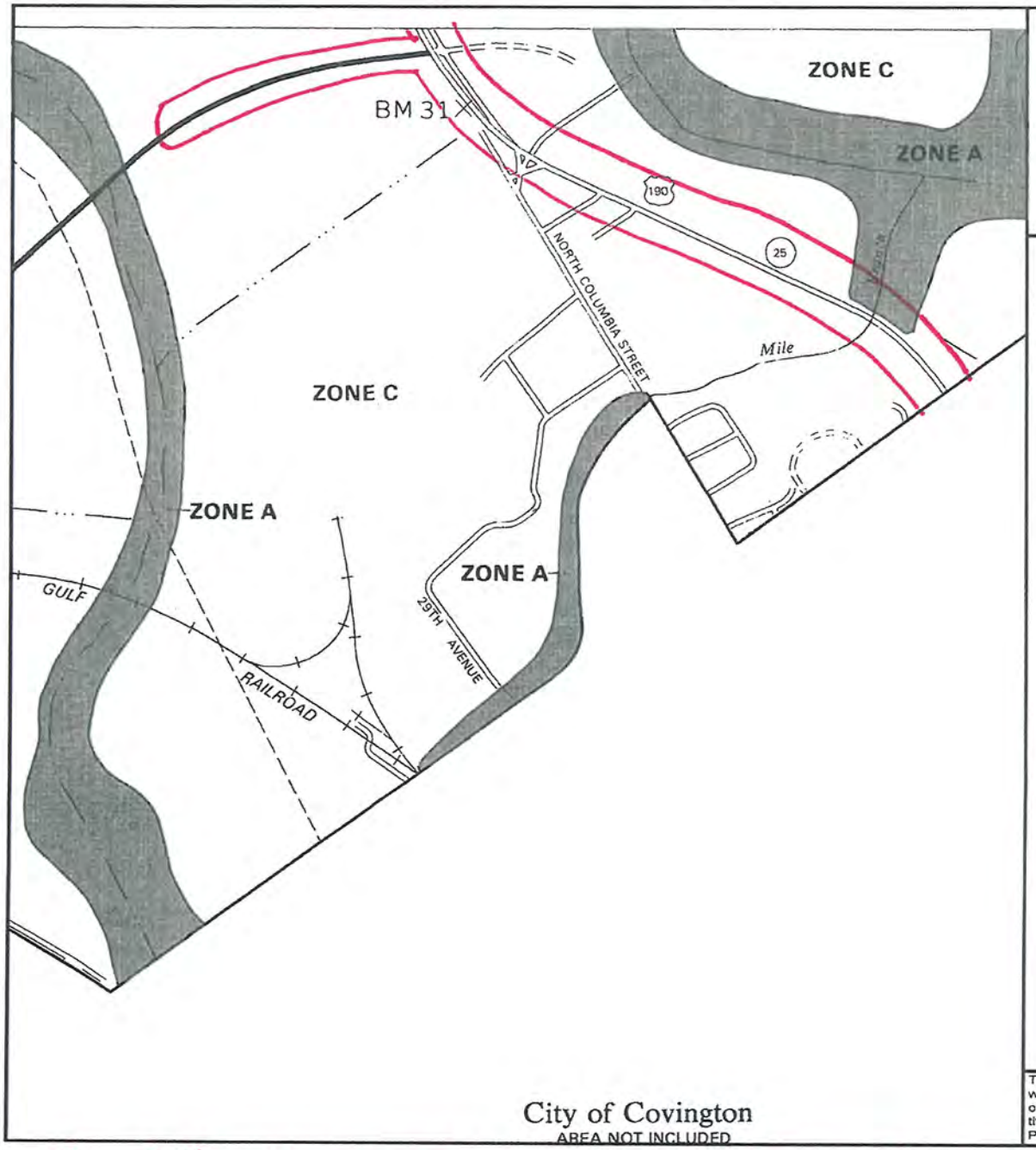
COMMUNITY-PANEL NUMBER
225205 0150 C

MAP REVISED:
OCTOBER 17, 1989

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

1 of 4: H. 004987 US190/ Collins Blvd Widening



APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

ST. TAMMANY PARISH, LOUISIANA
(UNINCORPORATED AREAS)

PANEL 230 OF 600
(SEE MAP INDEX FOR PANELS NOT PRINTED)

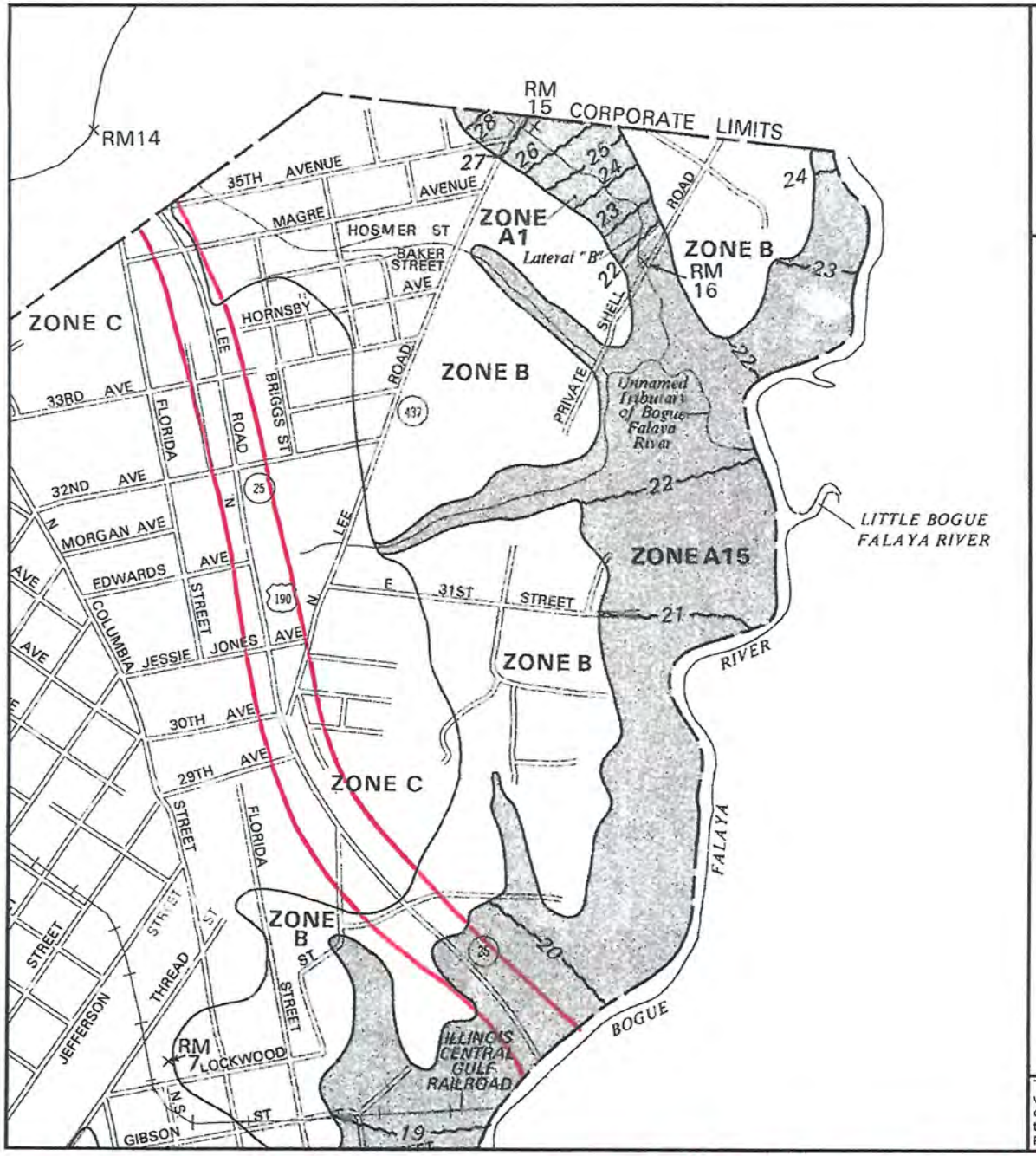
COMMUNITY-PANEL NUMBER
225205 0230 C

MAP REVISED:
OCTOBER 17, 1989

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

2 of 4: H.004987 US 190/Collins Blvd widening



APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
COVINGTON, LOUISIANA
ST. TAMMANY PARISH

ONLY PANEL PRINTED

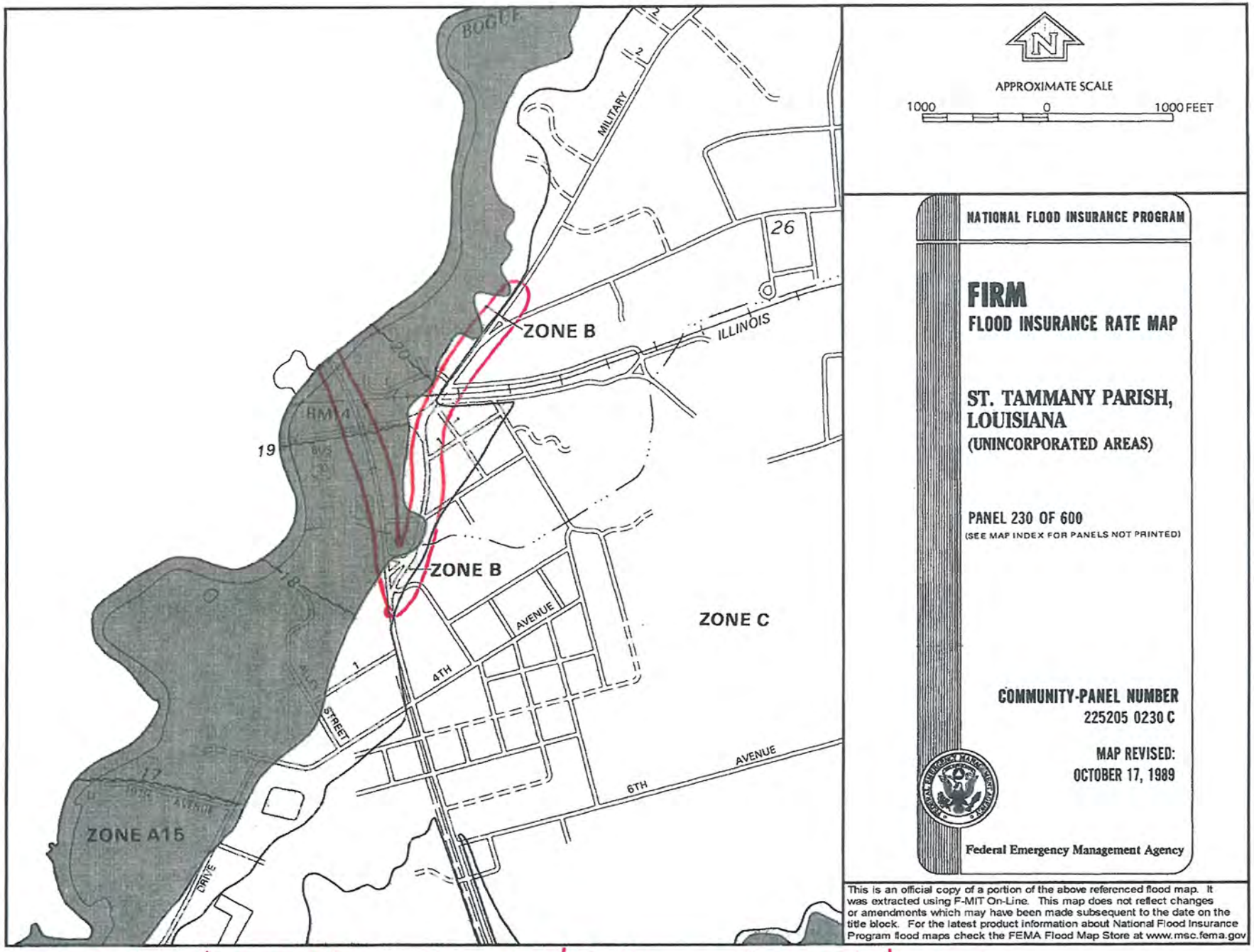
COMMUNITY-PANEL NUMBER
220200 0005 B

EFFECTIVE DATE:
NOVEMBER 19, 1980

federal emergency management agency
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

3 of 4: H.004987 US190/ Collins Blvd Widening



4 of 4: H.004987 US 190/ Collins Blvd Widening

Jack Donahue
State Senator
District 11

Senate
State of Louisiana

COMMITTEES:

Finance, *Chairman*
Education
Judiciary A
Senate & Governmental Affairs
Joint Legislative Committee on the Budget, *Chairman*
Legislative Budgetary Control Council
State Bond Commission

January 14, 2015

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Re: State Project No. H.0044987

Dear Mr. Robinson:

This project is both critical and vital to the continued growth of the Northshore. The delays experienced along this route have become legendary in this part of St. Tammany Parish.

As businesses continue to enter our market we are hearing more and more negative comments about the Highway 190 Corridor and the difficulty encountered in trying to traverse this crowded state highway.

As you may be aware, there are more vehicles traveling North and South on Highway 190 then there are traveling East and West on Interstate 12.

As I stated in the first paragraph, this project is both critical and vital for the continued development of our community.

Sincerely,

John L. "Jack" Donahue, Jr., P.E.
State Senator - District 11

Distict Office: P.O. Box 896, Mandeville, LA 70470 Phone: (985) 727-7949 Fax: (985) 727-9904
Capital Office: P.O. Box 94183, Baton Rouge, LA 70804 Phone: (225) 342-2040

JAY DARDENNE
LIEUTENANT GOVERNOR

State of Louisiana

OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF STATE PARKS

CHARLES R. DAVIS
DEPUTY SECRETARY

DWIGHT LANDRENEAU
ASSISTANT SECRETARY

February 12, 2015

G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Re: State Project No. H.004987

Dear Jeff Robinson:

The Office of State Parks has reviewed your proposed project for widening US 190 in Covington, St. Tammany Parish.

We have no parks, sites or other recreational areas located near this project and have no objections or concerns.

Best regards,

Britt Evans
Natural Resources Manager

BE: be

P.O. BOX 44426 • BATON ROUGE, LOUISIANA 70804-4426 • PHONE (225) 342-8111 • FAX (225) 342-8107 • WWW.CRT.LA.GOV

LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY
MIKE STRAIN DVM
COMMISSIONER

Agricultural & Environmental Sciences
P.O. Box 3596
Baton Rouge, LA 70821
(225) 925-3770
Fax: 925-3760

Agro-Consumer Services
P.O. Box 3098
Baton Rouge, LA 70821
(225) 922-1341
Fax: 923-4877

Animal Health & Food Safety
P.O. Box 1951
Baton Rouge, LA 70821
(225) 925-3962
Fax: 925-4103

Forestry
P.O. Box 1628
Baton Rouge, LA 70821
(225) 925-4500
Fax: 922-1356

Management & Finance
P.O. Box 3481
Baton Rouge, LA 70821
(225) 922-1255
Fax: 925-6012

Soil & Water Conservation
P.O. Box 3554
Baton Rouge, LA 70821
(225) 922-1269
Fax: 922-2577

January 16, 2015

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

RE: Solicitation of Views

STATE PROJECT NO.: H.004987
F.A.P. NO.:H004987
US 190 / COLLINS BOULEVARD WIDENING
ST. TAMMANY PARISH

Dear Mr. Robinson,

I have no comment at this time regarding the above referenced project.

Sincerely,

Brad Spicer /KH

Bradley E. Spicer
Assistant Commissioner

BES:kh

Bobby Jindal
GOVERNOR

Kathy H. Kliebert
SECRETARY

State of Louisiana

Department of Health and Hospitals
Office of Public Health

January 6, 2015

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Re: Solicitation of Views; State Project Number H.004987; F.A.P. No. H004987;
US 190 / Collins Boulevard Widening
Parish: St. Tammany Parish

This office is in receipt of a Solicitation of Views regarding the above referenced project(s).

Based upon the information received from your office we have no objection to the referenced project(s) at this time. The applicant shall be aware of and comply with any and all applicable Louisiana State Sanitary Code regulations (LAC 51, as applicable). Furthermore, should additional project data become available to this office that in any way amend the information upon which this office's response has been based, we reserve the right of additional comments on the referenced project(s).

In the event of any future discovery of evidence of non-compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any applicable public health laws or statutes which may have escaped our awareness during the course of this cursory review, please be advised that this office's preliminary determination on this Solicitation of View of the project(s) shall not be construed as absolving the applicant of responsibility, if any, with respect to compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any other applicable public health laws or statutes.

Sincerely,

Yuanda Zhu
Louisiana Department of Health and Hospitals
Office of Public Health Engineering Services
Telephone: (225) 342-7432
Electronic mail: yuanda.zhu@la.gov

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

STEPHEN CHUSTZ
SECRETARY

JAMES H. WELSH
COMMISSIONER OF CONSERVATION

January 5, 2015

TO: Mr. Jeff Robinson, P.E.
G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, Louisiana 70806

RE: Solicitation of Views
State & Federal Project No. H.004987
St. Tammany Parish

Dear Ms. Ardoin:

In response to the Regional Planning Commission's letter dated December 19, 2014, concerning the referenced matter, please be advised that the Office of Conservation collects and maintains many types of information regarding oil and gas exploration, production, distribution, and other data relative to the petroleum industry as well as related and non-related injection well information, surface mining and ground water information and other natural resource related data. Most information concerning oil, gas and injection wells for any given area of the state, including the subject area of your letter can be obtained through records search via the SONRIS data access application available at:

http://www.dnr.louisiana.gov

A review of our computer records for the referenced project area indicates that there are no oil, gas or injection wells located in the project area. The DNR water well database indicates that there are registered water wells in the vicinity of the project area. Also, it's possible that unregistered water wells may be located in the area.

The Office of Conservation maintains records of all activities within its jurisdiction in paper, microfilm or electronic format. These records may be accessed during normal business hours, Monday through Friday, except on State holidays or emergencies that require the Office to be closed. Please call 225-342-5540 for specific contact information

or for directions to the Office of Conservation, located in the LaSalle Building, 617 North Third Street, Baton Rouge, Louisiana. For pipelines and other underground hazards, please contact Louisiana One Call at 1-800-272-3020 prior to commencing operations. Should you need to direct your inquiry to any of our Divisions, you may use the following contact information:

Division	Contact	Phone No.	E-mail Address
Engineering	Jeff Wells	225-342-5638	jeff.wells@la.gov
Pipeline	Steven Giambrone	225-342-2989	steven.giambrone@la.gov
Injection & Mining	Brad Bourgoyne	225-342-4286	brad.bourgoyne@la.gov
Geological	Mike Kline	225-342-3335	mike.kline@la.gov
Environmental	Gary Snellgrove	225-342-7222	gary.snellgrove@la.gov

If you have difficulty in accessing the data via the referenced website because of computer related issues, you may obtain assistance from our technical support section by selecting Help on the SONRIS tool bar and submitting an email describing your problems and including a telephone number where you may be reached.

Sincerely,

James H. Welsh
Commissioner of Conservation

JHW:MSK:msk

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

Date	January 23, 2015
Name	Jeff Robinson
Company	GEC, Inc.
Street Address	8282 Goodwood Blvd.
City, State, Zip	Baton Rouge, LA 70806
Project	State Project No. H.004987 Regional Planning Commission US 190 / Collins Blvd Widening
Project ID	52015
Invoice Number	15012315

Personnel of the Coastal & Nongame Resources Division have reviewed the preliminary data for the captioned project.

The Tchefuncte River, which is designated as a Scenic River, is located within the proposed project. Contact Chris Davis with the Louisiana Department of Wildlife and Fisheries at 225-765-2642 concerning this Scenic River.

After careful review of our database, no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No other state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

The Louisiana Natural Heritage Program (LNHP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. LNHP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager at 225-765-2643. If you have any questions, or need additional information, please call 225-765-2357.

Sincerely,

for Carolyn Michael
Amity Bass, Coordinator
Natural Heritage Program

cc: Chris Davis

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

INVOICE

RETAIN THIS COPY FOR YOUR RECORDS

Date	January 23, 2015
Invoice Number	15012315
Project	State Project No. H.004987 Regional Planning Commission US 190 / Collins Blvd Widening
Name	Jeff Robinson
Company	GEC, Inc.
Street Address	8282 Goodwood Blvd.
City, State, Zip	Baton Rouge, LA 70806
Number of Quads Reviewed	1
Total Due	$30.00

Payment should be made to "Louisiana Department of Wildlife & Fisheries" within 30 days of the date of this invoice. Please include the invoice number on your check and return a copy of this invoice with your remittance to the following address:

Louisiana Department of Wildlife & Fisheries
Attn: Jennifer Riddle
P.O. Box 80399
Baton Rouge, LA 70898-0399

Should you have any questions regarding this invoice, for review of the Louisiana Natural Heritage database for information on known sensitive elements at a charge of $30.00 per quad reviewed, please contact LNHP at (225) 765-2357.

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

INVOICE

RETURN THIS COPY OF INVOICE WITH PAYMENT

Date	January 23, 2015
Invoice Number	15012315
Project	State Project No. H.004987 Regional Planning Commission US 190 / Collins Blvd Widening
Name	Jeff Robinson
Company	GEC, Inc.
Street Address	8282 Goodwood Blvd.
City, State, Zip	Baton Rouge, LA 70806
Number of Quads Reviewed	1
Total Due	$30.00

Payment should be made to "Louisiana Department of Wildlife & Fisheries" within 30 days of the date of this invoice. Please include the invoice number on your check and return a copy of this invoice with your remittance to the following address:

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Attn: Jennifer Riddle
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Baton Rouge, LA 70898-0399

Should you have any questions regarding this invoice, for review of the Louisiana Natural Heritage database for information on known sensitive elements at a charge of $30.00 per quad reviewed, please contact LNHP at (225) 765-2357.

Nancy Shaw

From: Linda (Brown) Hardy <Linda.Hardy@la.gov>
Sent: Tuesday, January 20, 2015 2:16 PM
To: Jeff Robinson
Cc: Yasoob Zia
Subject: 141222/1725 US 190 Collins Boulevard Widening Project

January 20, 2015

Jeff Robinson
G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, LA 70806
jrobins@gecinc.com

RE: 141222/1725 US 190 Collins Boulevard Widening Project
H.004987 DOTD & FHWA Funding
St. Tammany Parish

Dear Mr. Robinson:

The Department of Environmental Quality (LDEQ), Business and Community Outreach Division has received your request for comments on the above referenced project.

After reviewing your request, the Department has no objections based on the information provided in your submittal. However, for your information, the following general comments have been included. Please be advised that if you should encounter a problem during the implementation of this project, you should immediately notify LDEQ's Single-Point-of-contact (SPOC) at (225) 219-3640.

- Please take any necessary steps to obtain and/or update all necessary approvals and environmental permits regarding this proposed project.
- If your project results in a discharge to waters of the state, submittal of a Louisiana Pollutant Discharge Elimination System (LPDES) application may be necessary.
- If the project results in a discharge of wastewater to an existing wastewater treatment system, that wastewater treatment system may need to modify its LPDES permit before accepting the additional wastewater.
- All precautions should be observed to control nonpoint source pollution from construction activities. LDEQ has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that you contact the LDEQ Water Permits Division at (225) 219-9371 to determine if your proposed project requires a permit.
- If your project will include a sanitary wastewater treatment facility, a Sewage Sludge and Biosolids Use or Disposal Permit application or Notice of Intent must be submitted no later than January 1, 2014. Additional information may be obtained on the LDEQ website at http://www.deq.louisiana.gov/portal/tabid/2296/Default.aspx or by contacting the LDEQ Water Permits Division at (225) 219- 9371.
- If any of the proposed work is located in wetlands or other areas subject to the jurisdiction of the U.S. Army Corps of Engineers, you should contact the Corps directly regarding permitting issues. If a Corps permit is required, part of the application process may involve a water quality certification from LDEQ.
- All precautions should be observed to protect the groundwater of the region.
- Please be advised that water softeners generate wastewaters that may require special limitations depending on local water quality considerations. Therefore if your water system improvements include water softeners, you are advised to contact the LDEQ Water Permits to determine if special water quality-based limitations will be necessary.
- Any renovation or remodeling must comply with LAC 33:III.Chapter 28, Lead-Based Paint Activities; LAC 33:III.Chapter 27, Asbestos-Containing Materials in Schools and State Buildings (includes all training and accreditation); and LAC 33:III.5151, Emission Standard for Asbestos for any renovations or demolitions.

- If any solid or hazardous wastes, or soils and/or groundwater contaminated with hazardous constituents are encountered during the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Additionally, precautions should be taken to protect workers from these hazardous constituents.

Currently, St. Tammany Parish is classified as attainment with the National Ambient Air Quality Standards and has no general conformity determination obligations.

Please send all future requests to my attention. If you have any questions, please feel free to contact me at (225) 219-3954 or by email at linda.hardy@la.gov.

Sincerely,

Linda M. Hardy

Technical Assistant to the Deputy Secretary
Louisiana Department of Environmental Quality
Office of the Secretary
P.O. Box 4301
Baton Rouge, LA 70821-4301
Ph: (225) 219-3954
Fax: (225) 219-3971
Email: linda.hardy@la.gov

Nancy Shaw

From: Lindsey Bilyeu <lbilyeu@choctawnation.com>
Sent: Wednesday, January 28, 2015 8:43 AM
To: Jeff Robinson
Subject: RE: H.004987, US 190/Collins Blvd Widening, St. Tammany Parish, LA

Mr. Robinson,

The Choctaw Nation of Oklahoma thanks you for the correspondence regarding the above referenced project. St. Tammany Parish, LA is within an area that is of historic interest to the Choctaw Nation of Oklahoma. As a federally recognized Tribe, we wish to exercise our right to enter into government-to-government consultation directly with the federal agency (FHWA) as directed in 36 CFR Part 800.3(c) (3), Executive Order 13175.

If you have any questions, please contact me at 580-924-8280 ext. 2631.

Thank you,

Lindsey D. Bilyeu
NHPA Senior Section 106 Reviwer
Historic Preservation Department
Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74701
580-924-8280 ext. 2631
lbilyeu@choctawnation.com

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure. If you have received this message in error, you are hereby notified that we do not consent to any reading, dissemination, distribution or copying of this message. If you have received this communication in error, please notify the sender immediately and destroy the transmitted information. Please note that any view or opinions presented in this email are solely those of the author and do not necessarily represent those of the Choctaw Nation.

Jeff Robinson

From: Alina Shively [ashively@jenachoctaw.org]
Sent: Wednesday, February 04, 2015 3:09 PM
To: Jeff Robinson
Subject: FW: H.004987, US 190/Collins Blvd Widening, St. Tammany Parish, LA

From: Alina Shively
Sent: Wednesday, February 4, 2015 3:08 PM
To: 'jrobins@geinc.com'
Subject: H.004987, US 190/Collins Blvd Widening, St. Tammany Parish, LA

Dear Mr. Robbins,

Regarding the above-mentioned project, a letter dated December 19, 2014, was received by the Jena Band of Choctaw Indians' THPO on January 12, 2015. Views and comments were to be furnished by January 23, 2015. Generally, a THPO is given 30 days to respond to Section 106 Requests from agencies, due to heavy workloads and the THPO's dealing with numerous different agencies. I hope that you will accept the following request:

The Jena Band of Choctaw THPO requests a copy of the revised EA and a copy of the Cultural Resources Survey done within the project APE.

Thank you for your cooperation in this matter.

Sincerely,

Alina J. Shively
Jena Band of Choctaw Indians
Deputy THPO
P.O. Box 14
Jena, LA 71342
(318) 992-1205
ashively@jenachoctaw.org

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

January 12, 2015

Mr. Jeff Robinson, P.E.
G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Dear Mr. Robinson:

We have received your December 19, 2014, letter requesting our evaluation of the potential environmental impacts which might result from the following project:

Highway Widening
US 190, Collins Blvd., Parts of LA 25 & LA21
Plus Several Roundabouts
STP No. H.004987
FAP No. H004987
St. Tammany Parish
Covington, Louisiana

The project is located on the Southern Hills aquifer system which has been designated a sole source aquifer (SSA) by the EPA. Based on the information provided for the project, we have determined that the project, as proposed, should not have an adverse effect on the quality of the ground water underlying the project site.

This approval of the proposed project does not relieve the applicant from adhering to other State and Federal requirements, which may apply. This approval is based solely upon the potential impact to the quality of ground water as it relates to the EPA's authority pursuant to Section 1424(e) of the Safe Drinking Water Act.

If you did not include the parish, project description, project location or the federal funding agency, please do so in future SSA correspondence.

If you have any questions on this letter or the SSA program please contact me at (214) 665-7133.

Sincerely yours,

Michael Bechdol, Coordinator
Sole Source Aquifer Program
Ground Water/UIC Section

cc: Jesse Means, LDEQ

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

FEB 19 2015

Operations Division
Operations Manager,
Completed Works

Mr. Jeff Robinson
G.E.C., Inc.
8282 Goodwood Boulevard
Baton Rouge, Louisiana 70806

Dear Mr. Robinson:

This is in response to your Solicitation of Views request, on behalf of the Regional Planning Commission, dated December 19, 2014, concerning the widening of US Highway 190, Collins Boulevard and constructing two roundabouts in St. Tammany Parish, Louisiana (H.004987).

We have reviewed your request for potential Department of the Army regulatory requirements and impacts on any Department of the Army projects.

We do not anticipate any adverse impacts to any Corps of Engineers projects.

Information and signatures obtained from recent maps, aerial photography, and local soil surveys concerning the proposed project are indicative of the occurrence of waters of the United States, including wetlands. Department of the Army (DA) permits are required prior to the deposition and/or redistribution of dredged or fill material into jurisdictional waters and wetlands.

Please be advised that the bridge requires authorization by the United States Coast Guard. Please contact the Coast Guard's Bridge Branch at Eighth Coast Guard District, 501 Magazine Street, New Orleans, LA 70130.

This preliminary determination is advisory in nature. If an approved delineation is needed, please furnish us with the detailed field data concerning vegetations, soils, and hydrology that we require for all jurisdictional decisions. The fact that a field wetland delineation/determination has not been completed does not alleviate your responsibility to obtain the proper DA permits prior to working in jurisdictional wetlands or waters occurring on this property.

You should apply for said permit well in advance of the work to be performed. The application should include sufficiently detailed maps, drawings, photographs, and descriptive text for accurate evaluation of the proposal.

Please contact Mr. Robert Heffner, of our Regulatory Branch by telephone at (504) 862-1288, or by e-mail at Robert.A.Heffner@usace.army.mil for questions concerning wetlands determinations or need for on-site evaluations. Questions concerning regulatory permit requirements may be addressed to Mr. Michael Farabee by telephone at (504) 862-2292 or by email at Michael.V.Farabee@usace.army.mil.

Future correspondence concerning this matter should reference our account number MVN-2015-00248-SB. This will allow us to more easily locate records of previous correspondence, and thus provide a quicker response.

Sincerely,

Karen L. Clement

Karen L. Clement
Solicitation of Views Manager

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Hale Federal Building

500 Poydras Street, Room 1313
New Orleans, LA 70130-3310
Staff Symbol: dpb
Phone: (504) 671-2128
Fax: (504) 671-2133
D8DPBALL@uscg.mil

16591A
February 10, 2015

G.E.C., Inc.
Attn: Mr. Jeff Robinson
8282 Goodwood Blvd.
Baton Rouge, LA 70806

State Project: H.004987
Federal Aid Project No: H004987
US 190, Collins Boulevard over Bogue Falaya River
St Tammany Parish, Louisiana

Dear Mr. Robinson:

We received your Solicitation of Views dated December 19, 2014 the proposed replacement of US 190, Collins Boulevard over Bogue Falaya River, St Tammany Parish, Louisiana. Construction of any proposed bridges, bridge replacement or bridge modification may necessitate the Coast Guard's involvement in the permitting process. However, prior to the Coast Guard's involvement in this project, under 23 CFR §650.805, the Federal Highway Administration (FHWA) has the responsibility under the Surface Transportation Assistance (STA) Act of 1978 to determine whether or not a USCG permit is required for this bridge constructions.

Section 144(h) of Title 23 U.S. Code was enacted in 1978 to reduce paperwork and related costs in the execution of the Coast Guard's bridge permit programs. This section has been amended by the Act of April 2, 1987 (Public Law 100-17), to further reduce paperwork and related costs in the permitting of bridges funded by this Act. By reason of this provision, certain bridges --which are constructed, reconstructed, rehabilitated, or replaced with federal assistance imposed under Title 23 U.S. Code -- are no longer subject to the permitting requirements imposed under 33 U.S.C. 401 and 525(b). The bridges that fall into this excluded category are those that cross waterways:

(1) which are not used and are not susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce; and

(2) which are nontidal, or if tidal, used by vessels less than 21 feet in length.

Since FHWA has the responsibility for the STA Act, the Coast Guard will accept a determination by the FHWA Administrator that this bridge project receiving federal assistance under Title 23 U.S. Code meets the stated criteria and is exempted for Coast Guard Bridge Administration purposes. This letter does not imply that this project meets the criteria above and does not constitute concurrence as meeting the criteria. Coordination between FHWA and the Coast Guard is required prior to FHWA reaching a determination that the bridge or bridges are eligible under the applicable statutes. It must be noted that the subject Act which amended Title 23 U.S. Code to include 23 U.S.C. 144(h), did not exclude that category of bridges from the application of 14 U.S.C.85.

16591A
February 10, 2015

The later statute requires the establishment, maintenance, and operation of Coast Guard required lights and signals on fixed structures, including bridges. Approval of lights and other signals required under the provisions of 33 CFR 118 should be obtained, prior to the commencement of construction, from this office. Approval of lights and other signals required under the provisions of 33 CFR 118 should be obtained, prior to the commencement of construction, from this office. If it is determined that federal funds will not be utilized, additional information may be required to determine whether a Coast Guard permit will be required.

If we can be of further assistance, please contact this office.

Sincerely,

DAVID M. FRANK
Chief Bridge Administration Branch
U.S. Coast Guard
By direction

Copy: Ms. Traci Johnson, LDOTD

U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard
Hale Boggs Federal Building

500 Poydras Street, Room 1313
New Orleans, LA 70130-3310
Staff Symbol: dpb
Phone: (504) 671-2128
Fax: (504) 671-2133
D8DPBALL@uscg.mil

16591C
02 February 2011

MEMORANDUM

From: David M. Frank
CGD EIGHT (dpb)

To: Carl M. Highsmith, Program Operations Manager
Federal Highway Administration

Subj: STA ACT CONCURRENCE

1) You have determined by letter dated January 19, 2012 that the following proposed widening of the bridge on US 190 also known as Collins Blvd (SP # 700-52-0200) crossing Hwy 21 and the Bogue Falaya River with FAP # DE 5209(516) in St. Tammany Parish, Louisiana. This bridge is exempt under the Surface Transportation Authorization Act (STAA) from Coast Guard Permitting. We concur with your findings.

2) FHWA has the responsibility for the STAA and based on the information provided by LDOTD, the Coast Guard accepts your determination that this bridge project meets the criteria for the STAA and is exempt for Coast Guard ~~Bridge~~ Administration purposes. Plans for the proposed bridge construction project should provide for navigational clearances to accommodate any recreational boating that may exist at high water and should be at an appropriate elevation to pass floodwaters.

3) However, this bridge is not exempt from the Coast Guard required lights and other signals as the subject Act which amended Title 23 U.S. Code, to include 23 U.S.C. 144(h), did not exclude this category of bridges from the application of 14 U.S.C. 85. The later statute requires the establishment, maintenance, and operation of Coast Guard required lights and signals on fixed structures, including bridges. The owner, in this case, the Louisiana Department of Transportation and Development (LDOTD) must request the lighting exemptions and provide the reason, the only exemption being Title 33 CFR 118.40(b). The statement of the reason for these exemptions must fulfill the requirements of this section. Specifically, if it is determined that no significant nighttime navigation occurs at this bridge site a statement to this effect is required before a decision can be made. Once we receive the required information from the bridge owner, we will evaluate the specified conditions and respond accordingly.

4) If we could be of further assistance, please contact this office.

#

Copy: LDOTD, Ms. Noel Ardoin
LDOTD, Ms. Traci Johnson

date should be 02 F 2012

U.S. Department of Transportation
Federal Highway Administration

FHWA Louisiana Division Office

5304 Flanders Drive, Suite A
Baton Rouge, Louisiana 70808
(225) 757-7600
(225) 757-7601 Fax

January 19, 2012

In Reply Refer To:
HDA-LA

Sherri H. LeBas, P.E.
Secretary
Louisiana Department of Transportation
and Development
Baton Rouge, LA

Subject: FAP. DE 5209(516), SPN 700-52-0200
US 190 Bridge over Hwy 21 & Bogue Falaya River
St. Tammany Parish

Attention: Ms. Traci Johnson, LDOTD
Permits Program Manager

Dear Ms. LeBas:

We have determined under provisions of Section 144(h) of Title 23 U.S. Code that a USCG permit is not needed for the subject project since the waterways is not used and is not susceptible to use in its natural condition or by reasonable improvements as a means to transport interstate or foreign commerce and is non-tidal, or if tidal is used only by recreational boating, fishing, and other small vessels less than 21 feet in length. By copy of this letter we are requesting that the USCG concur in our determination under provision of 23 U.S.C. 144(h).

Should you have any questions, please contact Mr. Scott Nelson, Area Engineer at (225)757-7619.

Sincerely yours,

Digitally signed by Carl Highsmith
DN: cn=Carl Highsmith, o, ou, email=carl.highsmith@dot.gov, c=US
Date: 2012.01.20 14:52:10 -06'00'

Carl M. Highsmith
Project Delivery Team Leader

cc: Ms. Noel Ardoin, LDOTD
Ms. Robin Spain, LDOTD
Mr. Bob Mahoney, FHWA
Mr. David Frank, w/encl
Chief, Bridge Administration Branch
U.S. Coast Guard

USDA
United States Department of Agriculture

January 15, 2015

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Boulevard
Baton Rouge, Louisiana 70806

RE: State Project No. H.004987 – US 190 – Collins Boulevard Widening

Dear Mr. Robinson:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resources Conservation Service projects in the immediate vicinity.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and narrative submitted with your request indicates that the proposed construction areas are within urban areas and therefore are exempt from the rules and regulations of the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. Enclosed is completed form NRCS-CPA-106. Furthermore, we do not predict impacts to NRCS work in the vicinity.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location: http://websoilsurvey.nrcs.usda.gov/

Please direct all future correspondence to me at the address shown above.

Respectfully,

Kevin D. Norton
State Conservationist

ACTING FOR

Enclosure

Natural Resources Conservation Service
State Office
3737 Government Street
Alexandria, Louisiana 71302
Voice: (318) 473-7751 Fax: (318) 473-7682
An Equal Opportunity Provider and Employer

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 12/19/14	4. Sheet 1 of _____
1. Name of Project **US 190 - Collins Boulevard Widening**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Road Construction - State Proj No. H004987**	6. County and State **St. Tammany Parish, Louisiana**	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS 1/6/15	2. Person Completing Form M. Mouton
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☑		4. Acres Irrigated / Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS 1/15/14

PART III *(To be completed by Federal Agency)*		Alternative Corridor For Segment _____			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres In Corridor					
PART IV *(To be completed by NRCS) Land Evaluation Information*					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*					
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area in Nonurban Use	15				
2. Perimeter in Nonurban Use	10				
3. Percent Of Corridor Being Farmed	20				
4. Protection Provided By State And Local Government	20				
5. Size of Present Farm Unit Compared To Average	10				
6. Creation Of Nonfarmable Farmland	25				
7. Availablility Of Farm Support Services	5				
8. On-Farm Investments	20				
9. Effects Of Conversion On Farm Support Services	25				
10. Compatibility With Existing Agricultural Use	10				
TOTAL CORRIDOR ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	0	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?
(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Louisiana Ecological Services Office

ESA Technical Assistance Form

General Information

Name: New Orleans Regional Planning Commission

Point of Contact: Jeff Robinson, P.E.

Address: 8282 Goodwood Blvd.

City: Baton Rouge **State:** Louisiana **Zip Code:** 70806

Phone Number 1: 225 612 3000 **Phone Number 2:** 225 612 4178

Email Address: jrobins@gecinc.com

Proposed Project Information

Project Reference ID: 4074

Project Latitude: 30° 29' 19.38" North **Project Longitude:** 90° 5' 40.64" West

Project Parish(es): Saint Tammany

Project Description: In May 2010 the Louisiana Department of Transportation and Development (DOTD) and the New Orleans Regional Planning Commission (RPC) proposed to improve traffic capacity along a portion of U.S. Highway 190 (US 190, Collins Boulevard) in Covington, Louisiana from the intersection of US 190 Business (US 190B) with West Front Street to the intersection of US 190 with Louisiana Highway 25 (LA 25). In 2012, a preliminary draft Environmental Assessment (EA) recommended improvement to four travel lanes separated by a median; a four-lane bridge across the Bogue Falaya River; and roundabouts at the US 190 intersections with Columbia Street and LA 437 and the US 190B intersections with E. Boston Street and LA 21 (Military Road).

Based on a revised traffic corridor study completed in May 2014, DOTD and RPC have revised the proposed improvements. The project is slightly longer and now extends an additional 1,400 feet along LA 25 and an additional 1,400 feet along LA 21 (Military Road). In addition to the improvements proposed in the 2012 preliminary draft EA, the project includes additional roundabouts at the US 190B intersection with Front Street, the US 190 intersections with 32nd Avenue, E. Magee Street, and LA 25, the LA 21 (Military Road) intersection with LA 36, and the Poole Drive intersection with Columbia Street.

Louisiana Ecological Services Office

ESA Technical Assistance Form

The total length of the project is approximately 2.7 miles. The environmental analysis of this proposed project will be published for public comment in a revised EA.

Based on the information provided, the proposed project is not an activity that would affect a federally listed threatened or endangered species; nor is there proposed or designated critical habitat present within this Parish.

Therefore, a "no effect" conclusion is appropriate. No further ESA coordination with the Service is necessary for the proposed action, unless there are changes in the scope or location of the proposed project or the project has not been initiated one year from the date of this letter.

If the proposed project has not been initiated within one year, follow-up coordination via this website should be accomplished prior to making expenditures because our threatened and endangered species information is updated annually. If the scope or location of the proposed project is changed, coordination via this website should occur as soon as such changes are made.

This finding completes project review by the Service for effects to Federal trust resources under our jurisdiction and currently protected by the ESA.

Please keep a copy of this pre-development coordination for your records. Do not send it to the Lafayette ES Office.

If you have additional questions, please contact Louisiana ES Office Biological Science Technician at 337/291-3100 for further assistance.

Louisiana Ecological Services Office

ESA Technical Assistance Form

Project Type: Other

Does the project propose to obtain, remodel, refurbish, or rehabilitate existing structures in such a way that does not significantly alter the present capacity or use, and does not alter surrounding land areas that were previously undisturbed? **No**

Does the project propose to reconstruct, resurface, or enhance infrastructure and/or cityscape (e.g. streets, sewers, sidewalks, etc.) within the current footprint of the infrastructure and in a manner that does not disturb previously undisturbed ground? **No**

Is the construction project located entirely within the footprint of an established urban/suburban area (incorporated villages, towns, or cities)? **Yes**

Appendix C

FOLLOW-UP AGENCY COORDINATION (Cultural Resources, Scenic Rivers, and Section 4(f))

Jeff Robinson

From: Chris Davis [rcdavis@wlf.la.gov]
Sent: Wednesday, February 04, 2015 4:18 PM
To: Jeff Robinson
Subject: RE: State Project No. H.004987, US 190, Covington, LA

I called and left a message yesterday. The Bogue Falaya crossing at Hwy 190 is Non Scenic, so no permit would be required from LDWF Scenic Rivers Program. If that was your question to us.

thx

Chris Davis
Biologist, Environmental Investigations
Louisiana Department of Wildlife and Fisheries
P. O. Box 98000
2000 Quail Drive, Room 432
Baton Rouge, LA 70898-9000
Phone: (225)765-2642 Fax (225)765-2625

From: Jeff Robinson [mailto:jrobins@gecinc.com]
Sent: Wednesday, January 28, 2015 3:04 PM
To: Chris Davis
Subject: State Project No. H.004987, US 190, Covington, LA

Chris:

I'm managing an Environmental Assessment for the widening of US 190 in Covington. I forwarded an SOV (attached) describing the project to LDWF. Today I received the LDWF reply (also attached). I would appreciate a few minutes of your time when it's convenient.

Thank you,
Jeff

Jeff Robinson, P.E.
G.E.C., Inc.
Direct Phone: (225) 612-4178 | Cell Phone: (225) 241-4274 | Fax: (225) 612-4270
Email:jrobins@gecinc.com
8282 Goodwood Blvd., Baton Rouge, LA 70806
Toll Free: (800) 883-5588

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G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, Louisiana 70806
(225) 612-3000 Fax (225) 612-3015
Verdi Adam, P.E., President
Bob Boagni, Chief Operating Officer

ENR TOP 500 DESIGN FIRMS

March 18, 2015

Rachel Watson
Division of Archaeology
Office of Culture, Recreation, and Tourism
P.O. Box 44747, Capital Station
Baton Rouge, La 70804

Ms. Watson,

RE: US 190 / Collins Boulevard Widening

Please see the attached plans, project description, and maps for the proposed US 190 / Collins Boulevard Widening Project.

This project was originally cleared by your office on January 27, 2015. However, additional right of way may be needed around the turnarounds of the project. Any possible additional right of way will be within 25 feet of the existing right of way already reviewed. A map depicting the areas with the additional right of way and the original clearance returned to us by your office have also been attached.

A preliminary review of the GIS maintained by your office show no cultural resources within the additional 25 feet of Right of Way, so no adverse effect is anticipated.

Please do not hesitate to contact me at (225)612-4185 or cperez@gecinc.com with any further question or information required.

Sincerely,

Carlos Perez
Cultural Resource Specialist

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Pam Breaux 3-20-15
Pam Breaux Date
State Historic Preservation Officer

RECEIVED
MAR 18 2015
ARCHAEOLOGY

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BILLY NUNGESSER *1st Vice Chairman*
PATRICIA BRISTER *2nd Vice Chairman*
JOHN F. YOUNG *3rd Vice Chairman*
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STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SHERRI LeBAS *Secretary*

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REGIONAL PLANNING COMMISSION

JEFFERSON • ORLEANS • PLAQUEMINES • ST. BERNARD • ST. TAMMANY • TANGIPAHOA

December 19, 2014

STATE PROJECT NO.: H.004987
F.A.P. NO.: H004987
US 190 / COLLINS BOULEVARD WIDENING
ST. TAMMANY PARISH

RE: Solicitation of Views

In the planning stages of a transportation facility, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the Regional Planning Commission (RPC), the Louisiana Department of Transportation (DOTD) and the Federal Highway Administration (FHWA) with the early identification of possible adverse economic, social, or environmental effects or concerns. Your assistance in this regard will be appreciated.

A preliminary project description and a location map are attached.

It is requested that you review the attached information and furnish us with your views and comments by January 23, 2015. Replies should be addressed to:

G.E.C., Inc.
Attn: Jeff Robinson, P.E.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Mr. Robinson can also be contacted via email at jrobins@gecinc.com or fax at (225) 612-4270.

Please include "State Project No. H.004987" in your reply.

RECEIVED
JAN 12 2015
ARCHAEOLOGY

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Pam Breaux 1-27-15
Pam Breaux Date
State Historic Preservation Officer

TRANSPORTATION POLICY COMMITTEE (MPO) Full RPC Membership
IFTIKHAR AHMAD, *Director, Louis Armstrong N. O. Intl. Airport*
RYAN BROWN, *Director, Transit Administration, Jefferson Parish*
MIKE COOPER, *Mayor, City of Covington*
FREDDY DRENNAN, *Mayor, City of Slidell*
MAYSON FOSTER, *Mayor, City of Hammond*
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PAT GALLWEY, *Chief Operating Officer, Port of New Orleans*
CATHY F. GAUTREAUX, *Ex. Dir. Louisiana Motor Transport Assoc.*
SALVADOR LONGORIA, *Chairman, Regional Transit Authority*
JEFF DAVIS, *Gen. Manager, NO Public Belt RR*
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(225) 612-3000 Fax (225) 612-3015
Verdi Adam, P.E., President
Stephen Spohrer, P.E., Chief Operating Officer

ENR TOP 500 DESIGN FIRMS

7/22/2011

State Project No. 700-52-0200
"U.S. Highway 190 (Collins Blvd.)" Widening - Environmental Assessment
US 190 Bridge over LA Hwy. 21 and Bogue Falaya River
(US 190B to LA 25)
St. Tammany Parish, LA
Environmental Assessment

Ms. Pam Breaux
State Historic Preservation Officer
Department of Culture, Recreation and Tourism
Office of Cultural Development
P.O. Box 44247, Capitol Station
Baton Rouge, LA 70804

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Pam Breaux 9-19-11
Pam Breaux Date
State Historic Preservation Officer

RE: No Historic Properties Affected

Ms. Breaux:

The Regional Planning Commission (RPC) and the Louisiana Department of Transportation and Development (LADOTD) are sponsoring an Environmental Assessment that will examine alternatives for widening "US Hwy. 190 (Collins Blvd.)" from US 190B/ W. Front Street to LA 25/N. Collins Blvd. This project will include a bridge crossing the Bogue Falaya River; in addition to the road widening project from three lanes (one lane on each direction and a continuous turning lane) to four lanes with a raised median; and providing some modification to included intersections; as well as some enhancements of the roadway. Total length of the project is to be about 2.29 miles.

Staff from GEC Krebs-LaSalle searched the Louisiana Divisions of Historic Preservation and Archaeology GIS databases to identify existing archaeological sites, standing structures and districts listed or deemed eligible for inclusion on the National Register of Historic Places (NRHP) within or adjacent to the project area. No historic properties, archaeological sites, or districts were identified adjacent to the project area. However, the US 190 bridge over the Bogue Falaya, (Structure #62520593001701) constructed in 1958, is potentially a historic bridge.

The project area is along the "US Hwy. 190 (Collins Blvd.)" corridor northeast of Covington. The project study area extends from approximately US 190B/West Front Street on the southern terminus where it will tie-in to an existing four lane divided highway and will extend north to the northern terminus where it will tie-in to an existing four lane divided highway LA 25/N./Collins Blvd. This stretch of roadway is an important link for motorists travelling to and from the I-12 Corridor and Causeway to Covington. There are primarily commercial land uses along either side of the roadway, with residential subdivisions nearby. All improvements will be within the existing LADOTD Right-of-Way.

The bridge is currently over capacity, and is in need of replacement. It is structurally sound, but is not constructed to current standards.

To: Maria Reid
Subject: FW: H.004987 US 190 Collins Blvd

HI Maria,

Please, see the information below regarding project H.004987 from the Choctaw Nation. Please, do let me know if you intended to conduct a survey and when you might anticipate that survey taking place.

Hope you are having a great morning. Feel free to contact me at any time with questions or concerns.

Thank you.

Regards,

Chandra Bondzie
FHWA LA Division
225-757-7623

From: Lindsey Bilyeu [mailto:lbilyeu@choctawnation.com]
Sent: Wednesday, April 22, 2015 4:21 PM
To: Bondzie, Chandra (FHWA)
Subject: RE: H.004987 US 190 Collins Blvd

Chandra,

Thank you for the additional information. I have viewed the project area in our GIS database [redacted] I do believe that a survey should be conducted if the area has not been previously surveyed. [redacted]

Thank you,

Lindsey D. Bilyeu
NHPA Senior Section 106 Reviwer
Historic Preservation Department
Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74701
580-924-8280 ext. 2631
lbilyeu@choctawnation.com

From: chandra.bondzie@dot.gov [mailto:chandra.bondzie@dot.gov]
Sent: Thursday, March 19, 2015 6:59 AM
To: Lindsey Bilyeu
Cc: Maria.Reid@la.gov; Robert.Mahoney@dot.gov
Subject: FW: H.004987 US 190 Collins Blvd

Good Morning Lindsey,

I wanted to send along the materials received from DOTD regarding project H.0004987, US190 Collins Bvld. I will be following up with you regarding any decisions from the archeologists about what is necessary for the project per your March 12 request.

I hope you are having a great day and feel free to contact me at any time.

Regards,

Chandra Bondzie
FHWA LA Division
225-757-7623

From: Maria Reid [mailto:Maria.Reid@la.gov]
Sent: Wednesday, March 18, 2015 4:21 PM
To: Bondzie, Chandra (FHWA)
Subject: RE: H.004987 US 190 Collins Blvd

Chandra,
I've attached the corridor maps showing the existing ROW and potential required ROW. The required ROW areas are associated with the proposed intersection improvements.

Maria

Maria Bernard Reid
225-242-4506

From: chandra.bondzie@dot.gov [mailto:chandra.bondzie@dot.gov]
Sent: Thursday, February 12, 2015 6:52 AM
To: Maria Reid
Subject: RE: H.004987 US 190 Collins Blvd

Thanks Maria – I will forward to Lindsey.

From: Maria Reid [mailto:Maria.Reid@la.gov]
Sent: Wednesday, February 11, 2015 4:40 PM
To: Bondzie, Chandra (FHWA)
Subject: H.004987 US 190 Collins Blvd

Chandra,

The beginning point for this project is 30.476491, -90.087268. End point is 30.49954, -90.108812.

The attached map was provided in the SOV letter.

As I receive additional information, I will forward it to you.

Thanks,
Maria

Maria Bernard Reid
Environmental Impact Manager 1

Louisiana Department of Transportation and Development
P.O. Box 94245
Baton Rouge, LA 70804-9245

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Environmental Section
PO Box 94245 | Baton Rouge, LA 70804-9245
ph: 225-242-4502 | fx: 225-242-4500

Bobby Jindal, Governor
Sherri H. LeBas, P.E., Secretary

September 24, 2015

STATE PROJECT NO.: H.004987
FEDERAL AID PROJECT NO.: H004987
NAME: US 190 (COLLINS BLVD.) WIDENING
ROUTE: US 190
PARISH: ST. TAMMANY

Mr. Eddie Williams
Director, Department of Engineering
St. Tammany Parish Government
21410 Koop Drive
Mandeville, Louisiana 70471

SUBJECT: TAMMANY TRACE *DE MINIMIS* IMPACT DETERMINATION

Dear Mr. Williams:

The Louisiana Department of Transportation and Development (DOTD) and Regional Planning Commission (RPC) have proposed widening US 190 (Collins Blvd.) along a 2.7-mile reach from LA 25 to US 190B in Covington (Figure 1). The project includes the construction of a new bridge across the Bogue Falaya River. The Tammany Trace crosses the project at two locations: beneath the Bogue Falaya River bridge and at the Boston Street/Military Road intersection with US 190B.

To provide the Trace sufficient vertical clearance in the vicinity of the new bridge, DOTD and RPC propose its realignment (PL-3) so that it would be relocated northward, nearer the river. The relocation would total approximately 810 feet and would replace approximately 590 feet of existing trace. Like the existing Trace, the new, relocated section would be at-grade, paved, and 10 feet wide.

To improve safety at the Military Road intersection with US 190B (PL-18), DOTD and RPC propose the construction of a 10-foot by 10-foot, lighted tunnel to replace the Trace's current at-grade crossing.

Additionally, the project includes construction of a new, paved, 10-foot-wide multi-use path to the west and east sides of Collins Blvd. north of the river. The new path would connect with the Tammany Trace just east of its intersection with East Gibson Street, near the Bogue Falaya River, and extend along the west side of Collins Blvd. for 2.1 miles to LA 25. To the east of Collins Blvd. the multi-use path would extend from the intersection with Lee Road to LA 25, a distance of approximately 1.7 miles. The two paths would connect across Collins Blvd. at Lee Road, 32nd Avenue, E. Magee Street, Poole Drive, and LA 25.

DOTD must comply with the Department of Transportation Act (DOT Act) of 1966 (23 CFR 774), which includes special provision Section 4(f). Section 4(f) stipulates Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. The Tammany Trace is considered a Section 4(f) property.

DOTD and RPC believe the project's impact to the Tammany Trace is *de minimis*. A *de minimis* impact is one that results in a determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). DOTD and RPC believe that the net result of the project would be beneficial for the Tammany Trace for these reasons:

- Realignment of the Trace at the new Bogue Falaya River Bridge is negligible and not adverse due to additional length of trail provided;
- Construction of the tunnel at Boston Street/Military Road intersection with US 190B improves user safety; and
- Construction of the new multi-use paths north of the river significantly increase access to the Trace.

We request St. Tammany Parish Government, as the officials with jurisdiction over the Section 4(f) property (Tammany Trace), provide in writing an agreement the proposed project will not adversely affect the features, attributes, or activities that qualify the property for Section 4(f) protection.

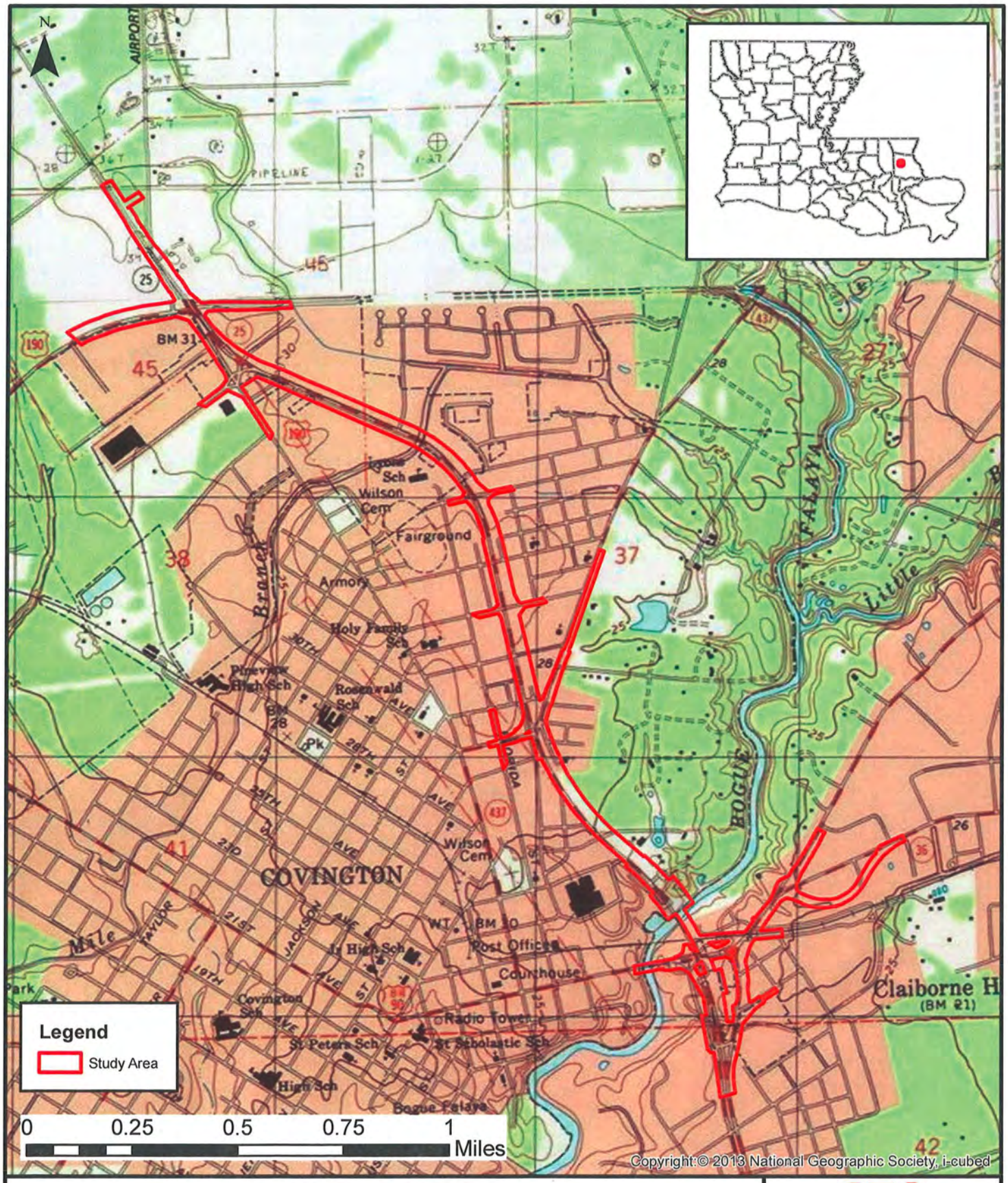
If you have any questions or require additional information, please contact me at (225) 242-4506 or via email at maria.reid@la.gov.

Sincerely,

Maria Bernard Reid
Environmental Impact Manager

enclosures

cc: Mr. Robert Mahoney (FHWA)
Mr. Scott Nelson (FHWA)
Mr. Corey Landry (DOTD)
Mr. Jeff Roesel (RPC)
Mr. Jeff Robinson (GEC)



SITE LOCATION

US 190/Collins Boulevard Widening Project
St. Tammany Parish, Louisiana
State Project No. H.004987, Federal Project No. H004987

Data Sources & Dates. For example: 7.5 Minute USGS Topographic Map East Baton Rouge (1989)

GEC

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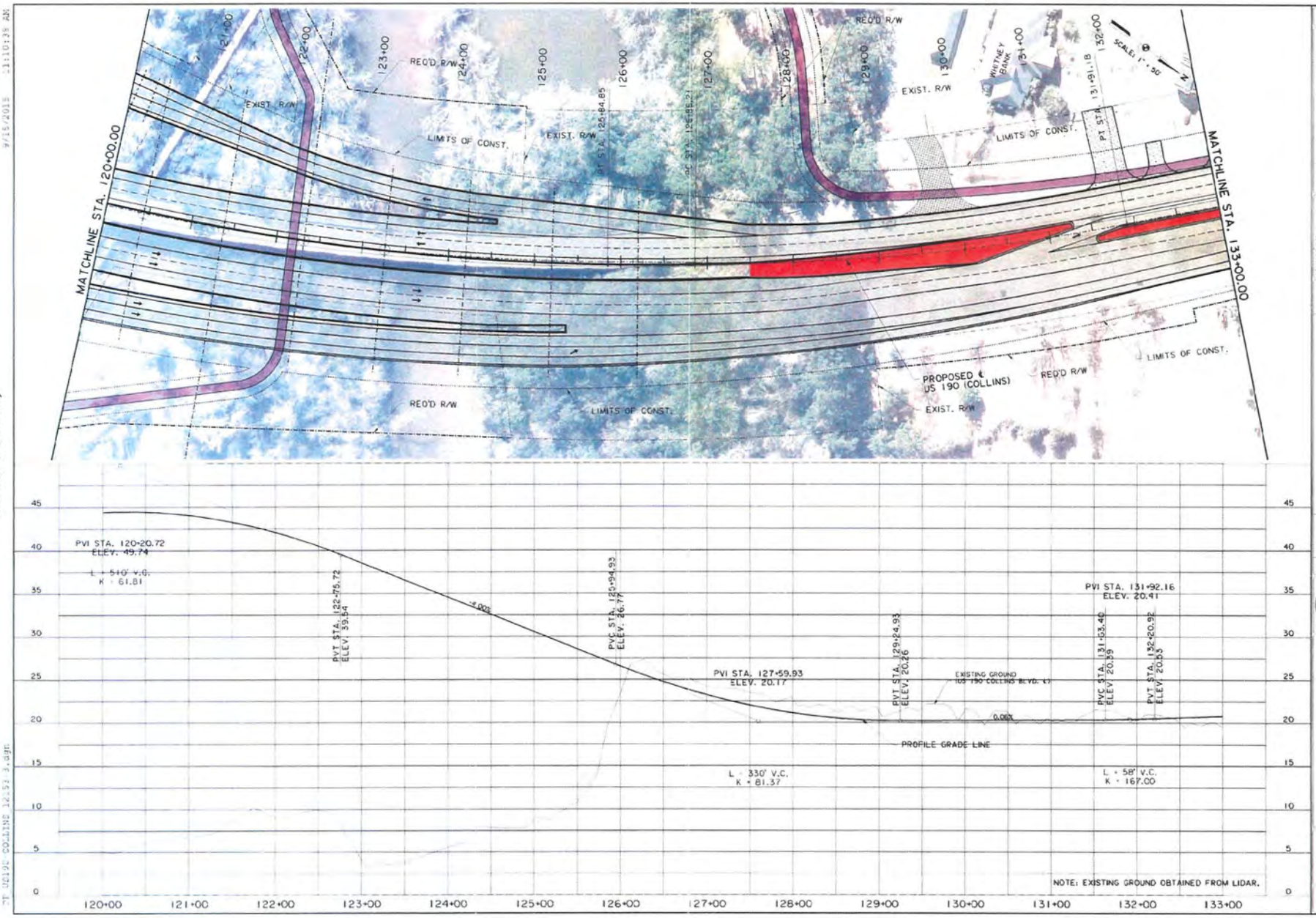
Map ID:4987-3160

Line and Grade Study



PLAN - PROFILE
US 190 (COLLINS BLVD.)

US 190 BRIDGE OVER HWY. 21

ST. TAMMANY

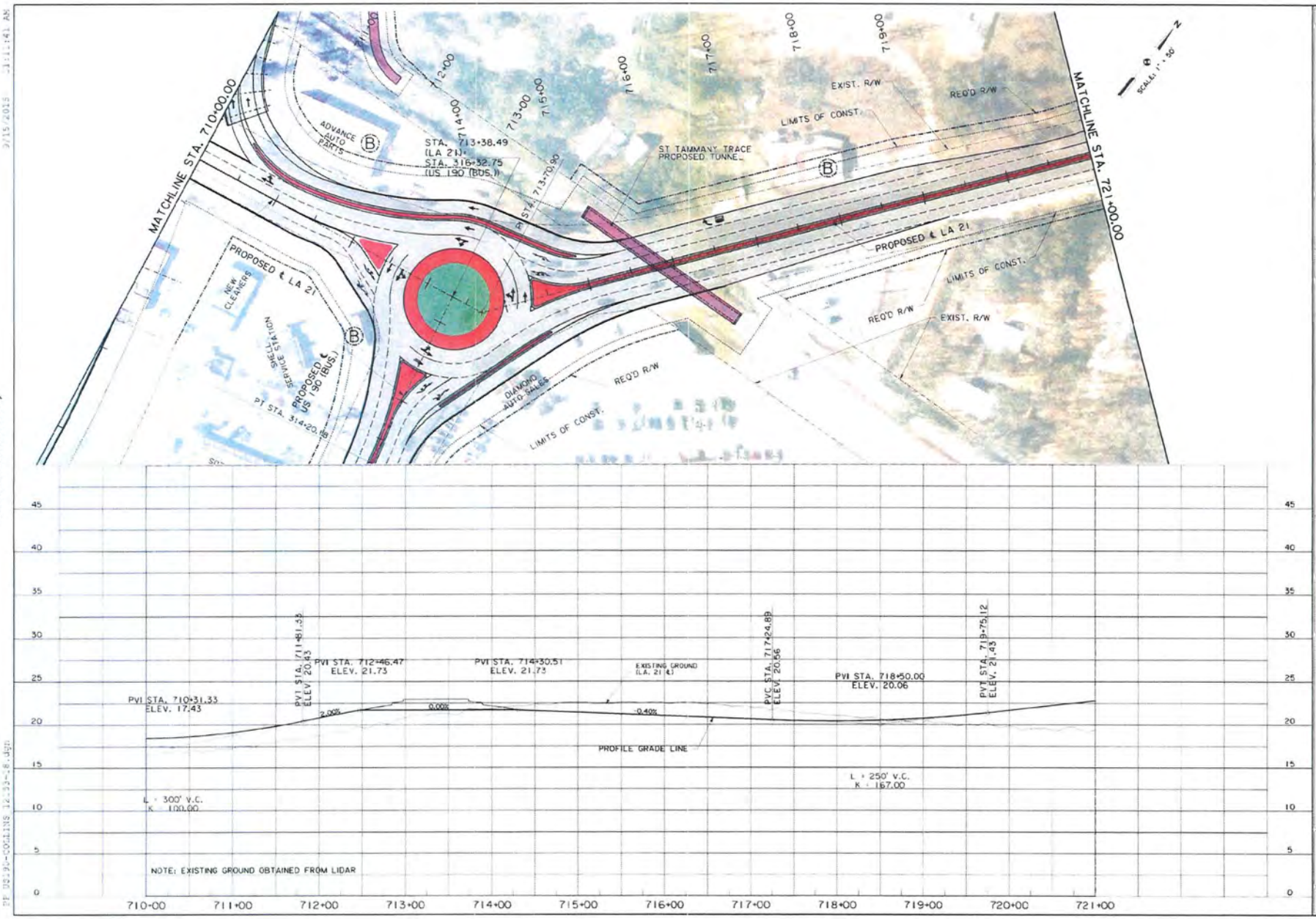
H.004987

8/31/15

9/15/2015 2:10:38 AM

PT 02190 COLLINS 12.53 3.dgn

Line and Grade Study



PLAN - PROFILE
LA. HWY. 21

ST. TAMMANY

H.004987

Nancy Shaw

From: Donna S. O'Dell <dsodell@stpgov.org>
Sent: Thursday, February 09, 2017 5:07 PM
To: jroesel
Cc: Jeff Robinson; wbrooks; Maria Reid (Maria.Reid@la.gov); Gina Campo; Erin Stair; Elizabeth A. Warren
Subject: RE: US 190 Collins EA SPN H.004987, Tammany Trace

Jeff,

Regarding the US 190 Collins EA SPN H.004987 and the Tammany Trace - the proposed project will not adversely affect the features, attributes, or activities that qualify the property for Section 4(f) protection.

If you have any questions or need any additional information to progress this project toward construction, please do not hesitate to contact me.

Thank you,

Donna O'Dell, P.E
Parish Engineer
Public Works Department
St. Tammany Parish Government
620 N. Tyler St;. Covington, LA 70434
p: 985-898-2552 e: dsodell@stpgov.org
www.stpgov.org

"Disclaimer: Any e-mail may be construed as a public document and may be subject to a public records request. The contents of this e-mail reflect the opinion of the writer and are not necessarily the opinion or policy of St. Tammany Parish Government. "

Appendix D

WETLAND REPORT

WETLAND DELINEATION REPORT
U.S. HIGHWAY 190/COLLINS BOULEVARD WIDENING
S.P. NO. H.004987
ST. TAMMANY PARISH, LOUISIANA

Prepared for

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

RPC REGIONAL PLANNING COMMISSION FOR THE PARISHES OF LOUISIANA

Prepared by

GEC Gulf Engineers & Consultants

Baton Rouge, Louisiana 70806

February 23, 2015

WETLAND DELINEATION REPORT
U.S. HIGHWAY 190/COLLINS BOULEVARD WIDENING
S.P. NO. H.004987
ST. TAMMANY PARISH, LOUISIANA

Prepared for

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
1201 Capitol Access Road
Baton Rouge, LA, 70802
(225) 379-1232

RPC REGIONAL PLANNING COMMISSION
10 Veterans Memorial Blvd.
New Orleans, LA 70124
(504) 483-8526

Prepared by

GEC Gulf Engineers & Consultants
8282 Goodwood Boulevard
Baton Rouge, Louisiana 70806
225/612-3000

February 23, 2015

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WETLAND DELINEATION

WETLAND DELINEATION REPORT
U.S. HIGHWAY 190/COLLINS BOULEVARD WIDENING
ST. TAMMANY PARISH, LOUISIANA

1.0 INTRODUCTION

A wetland delineation was conducted within the proposed right-of-way (ROW) in preparation for a proposed widening project along both sides of a 2.7-mile stretch of U.S. Highway 190 (US 190)/Collins Boulevard along with additional improvements along US 190 Business, LA 21, LA 25, and LA 36. This planning effort is sponsored by the Regional Planning Commission (RPC) of Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany parishes and the Louisiana Department of Transportation and Development (LADOTD) to examine alternatives for widening the 2.7-mile stretch of US 190 between US 190 Business/W. Front to the south and LA 25/N. Collins Boulevard to the north along with additional improvements to intersecting side streets as depicted on Figure 1.

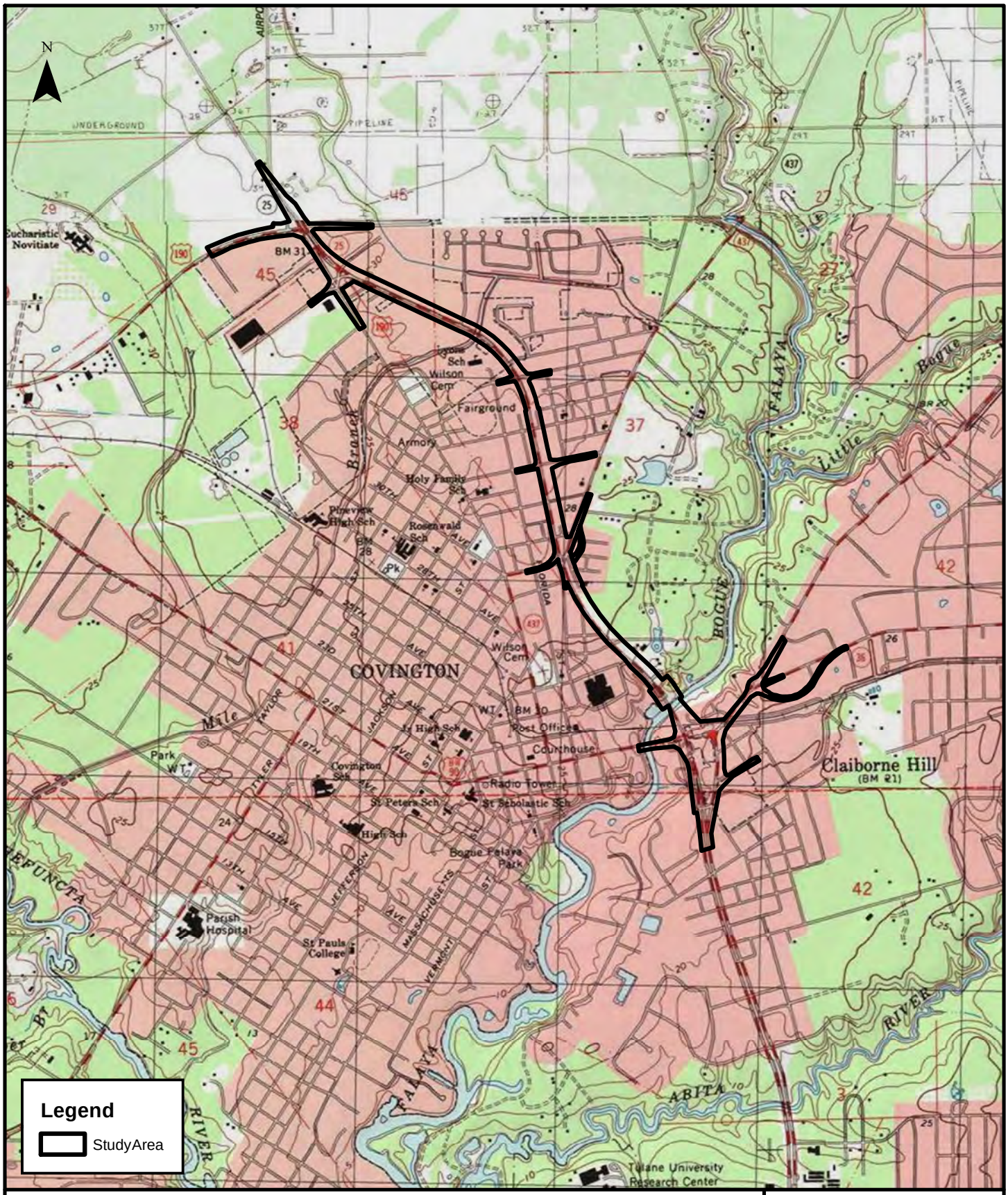
The project site is mostly within existing ROW of US 190 and intersecting streets with some additional ROW required at various locations along the routes to be improved. The entire project site is within the city limits of Covington, St. Tammany Parish, Louisiana. The site is located in Township 6 South, Range 11 East, Section 37, 38, and 42. The northern terminus is located at approximately 30° 30' 9.971"N, 90° 6' 33.311"W and the southern terminus is at approximately 30° 28' 18.805"N, 90° 5' 11.058"W.

The site is currently an actively used highway and associated ROW, providing a thoroughfare from I-12 and the Causeway to Covington. Most of the ROW is maintained as herbaceous habitat with some forested habitat under the existing bridge over the Bogue Falaya River. Residential and commercial developments with only a few undeveloped lots are present immediately east and west of the highway and ROW. Along the intersecting side streets, most improvements will be within the existing ROW, which is maintained. However, there are some improvements that will require additional ROW. These areas are generally through commercial or residential lots, with some patches of forested habitat and are shown on Figure 2.

2.0 METHODOLOGY

The wetland delineation was conducted in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual as well as the Atlantic and Gulf Coastal Plains Regional Supplement. Aerial photography, Natural Resources Conservation Service (NRCS) St. Tammany Parish soil survey maps, and U.S. Geological Survey (USGS) topographic quadrangle maps were reviewed prior to the initiation of field work to identify the potential extent of wetlands present on the subject property.

Routine Wetland Delineation Data Forms (Appendix A), as approved by Headquarters, U.S. Army Corps of Engineers (USACE) 10/08, were completed for each vegetation community encountered throughout the property. These data forms contain sufficient information regarding the presence or absence of hydric soils, hydrophytic vegetation, and wetland hydrology, to support the demarcation of a wetland boundary. Locations of each sample plot,



SITE LOCATION

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

GEC

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Date: February 2015
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Source: ESRI/GEC
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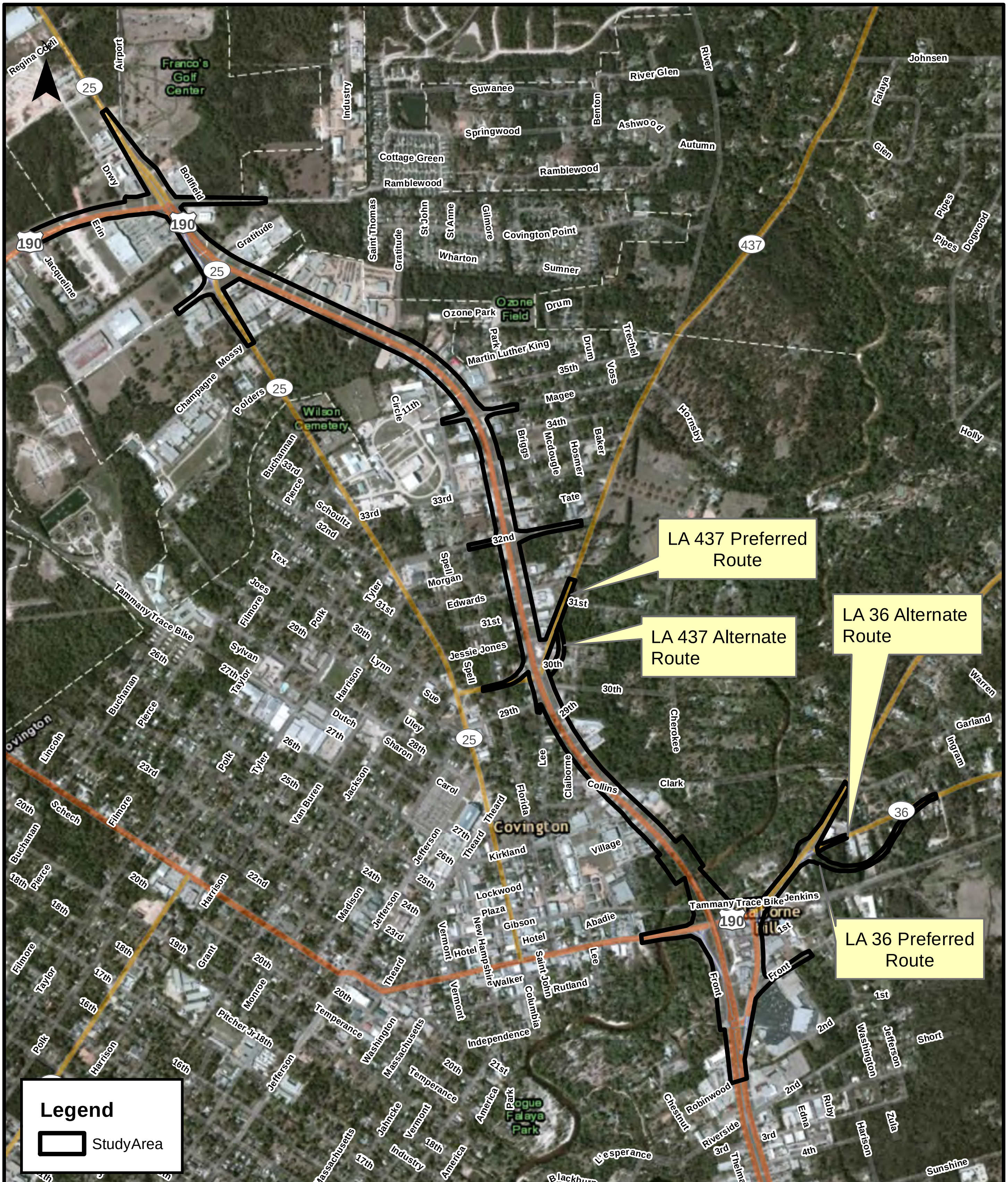

SITE VICINITY

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
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GEC

Figure: 2
Date: February 2015
Scale:1:18,400
Source: ESRI/GEC
Map ID: KL521830410058-3162

mapped wetlands, and other waters are presented on Figures 3 and 3-A through 3-D. Figures 4 and 4-A through 4-D provide the Wetland Delineation information in a black and white reproducible format.

Dominant vegetation was recorded on the data forms along with the indicator status as listed in the *National List of Plant Species Occurring in Wetlands (Region 2)* published by the U.S. Fish and Wildlife Service. Once dominant vegetation was recorded and evaluated, if more than 50 percent of the dominant vegetation had an indicator status of FAC, FACW, or OBL the hydrophytic vegetation criterion was met.

A soil pit was excavated to a depth of approximately 18 inches at each sample plot. The pit remained open for at least 15 minutes to allow the pit to fill with water, if present. Soils were sampled along the exposed stratum. Information recorded on the data forms included soil colors (hue, value, and chroma as per the 1992 revised edition of the Munsell Color Chart), size, color, abundance, and depth of mottles, as well as soil texture. Soil texture was determined using the *texture by feel* analysis. The soils mapped by the NRCS within the project area are depicted on Figure 5.

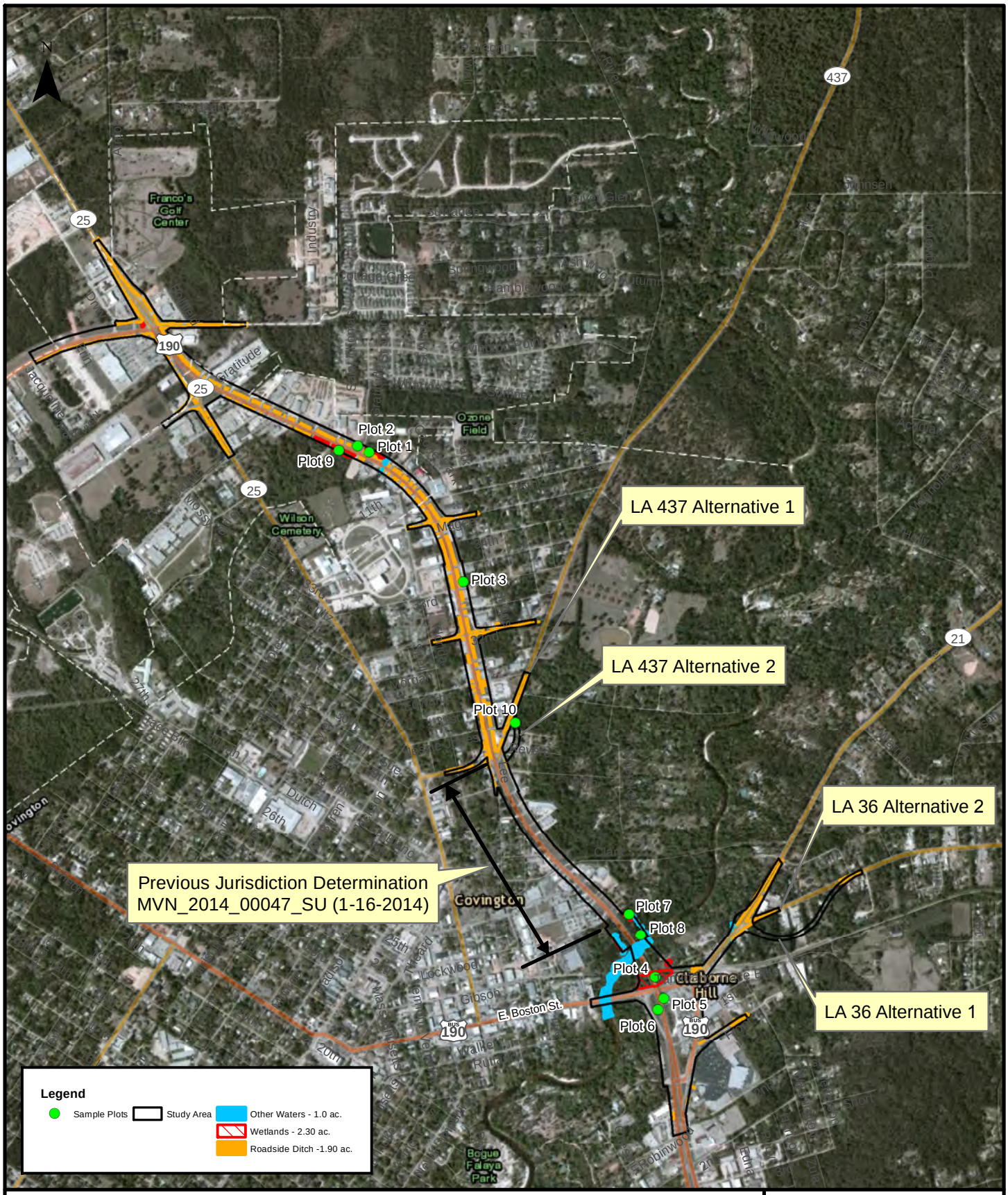
Wetland hydrology indicators were also recorded at each sample plot as per the USACE requirements. If at least one primary or two secondary hydrology indicators were present, the sample plot was classified as having wetland hydrology.

Photographs were taken at each sample plot where a data form was completed. These photographs show a representative soil profile, as well as overviews of the sample plot (Appendix B). Additional photographs were taken of various water features in the project area.

A wetland delineation within the existing ROW of US 190 was conducted by KLL on July 1, August 19, and November 24, 2010. GEC re-evaluated the wetlands in the ROW and conducted additional wetland surveys within any additional ROW for the intersecting side streets on January 13 and 27, 2015 and February 9, 2015. GEC previously conducted a wetland delineation within a portion of the project area, which was associated with another proposed project to construct a right turn lane along the north bound lane of US 190 at the intersection of Lee Drive. This project area included the portion of US 190 from the north end of the Bogue Falaya River Bridge to the intersection with Lee Drive. The survey of this project was conducted in September of 2013 and the Jurisdictional Determination from the New Orleans District, Corps of Engineers was received on January 16, 2014 under Account No. MVN-2014-00047-SU (Appendix C). The results of the surveys from the remaining portion of the proposed project are presented below.

3.0 RESULTS

The following subsections describe the different soil conditions, plant communities, and hydrological conditions observed during the investigations in 2010 and 2015.



WETLAND MAP

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

GEC

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Date: April 2015
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WETLAND MAP

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC

Figure: 3-A
Date: February 2015
Scale:1:6,000
Source: ESRI/GEC
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WETLAND MAP

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC

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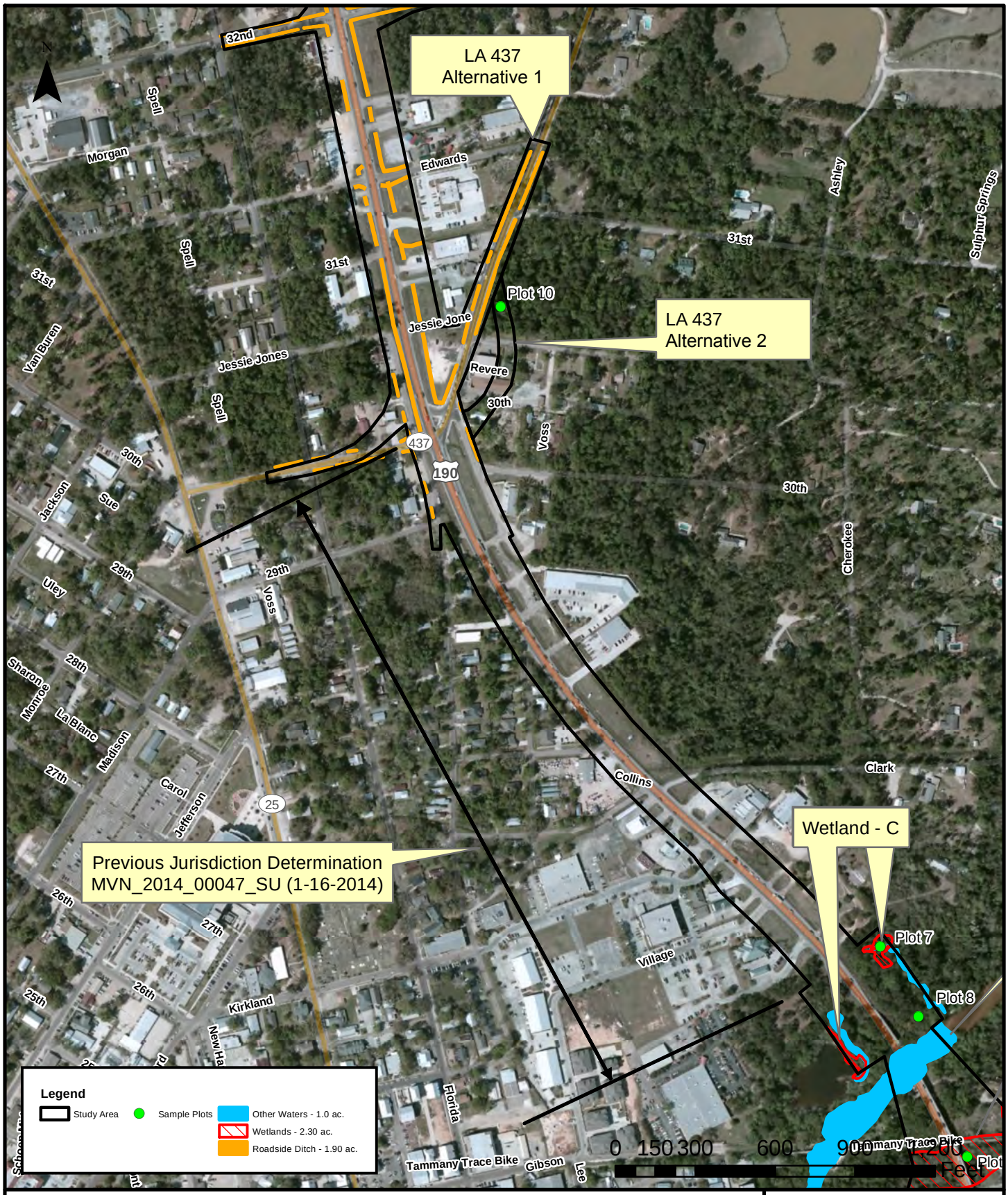

WETLAND MAP

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC

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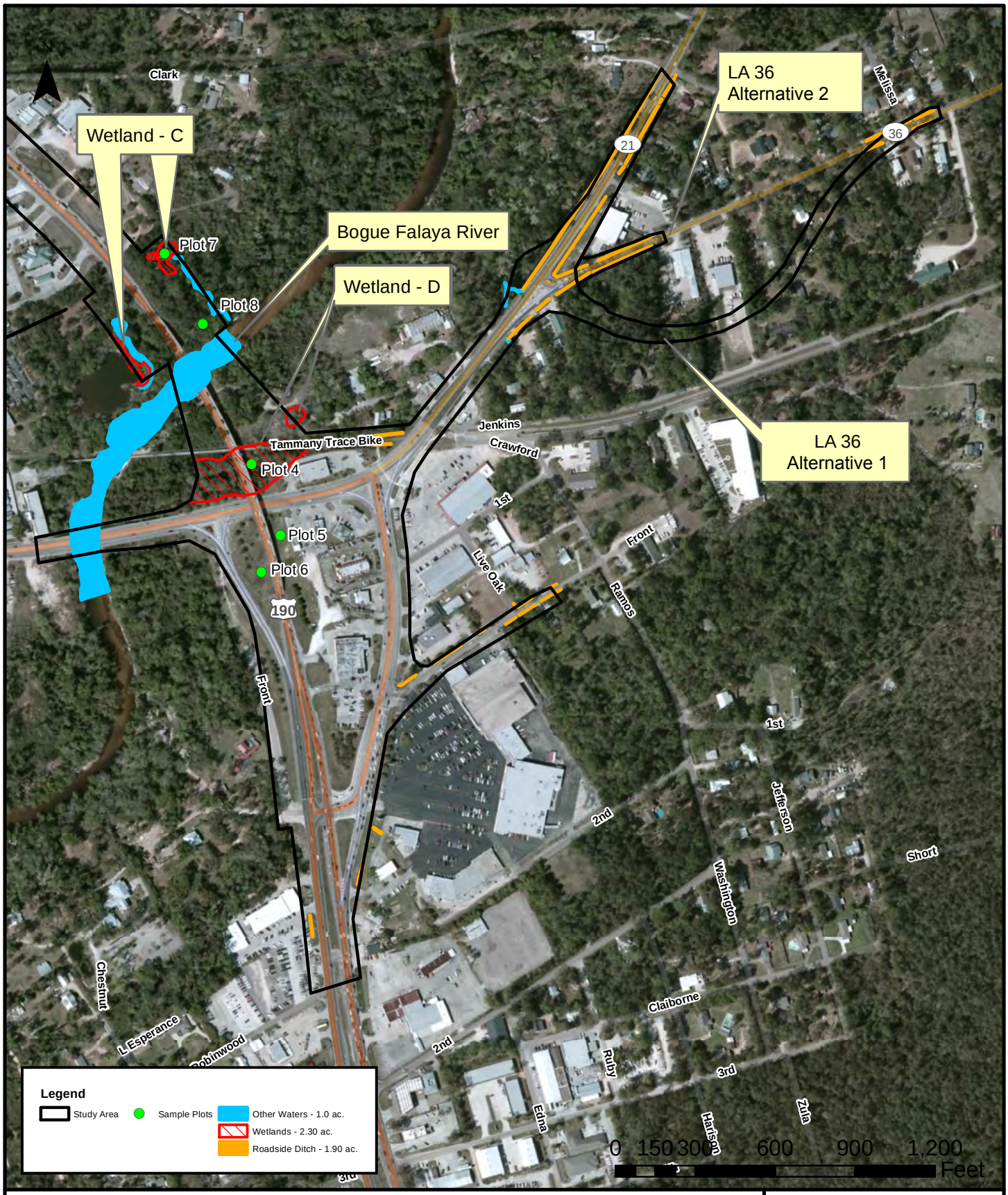

WETLAND MAP

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC

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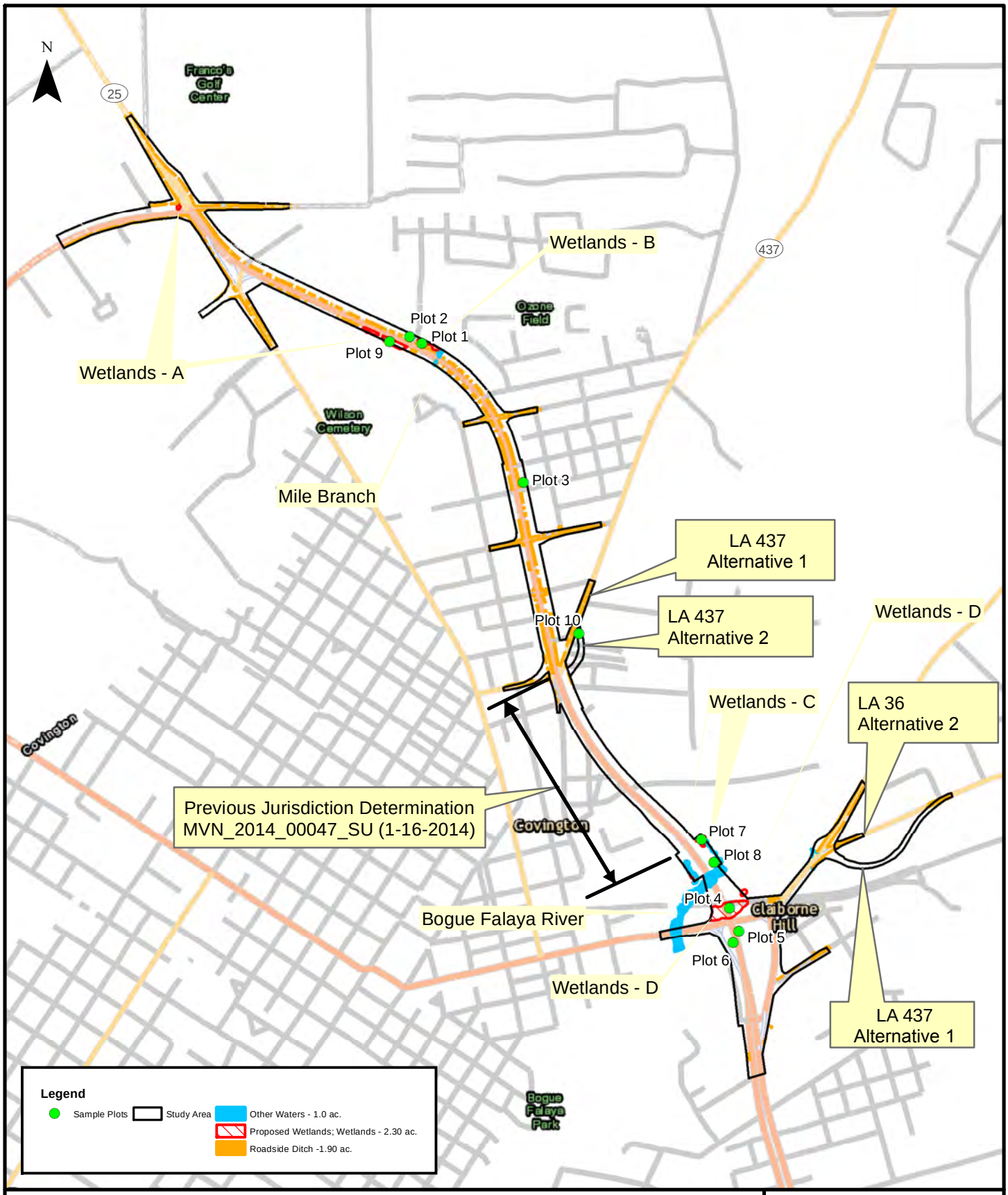

WETLAND MAP - JD

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

GEC

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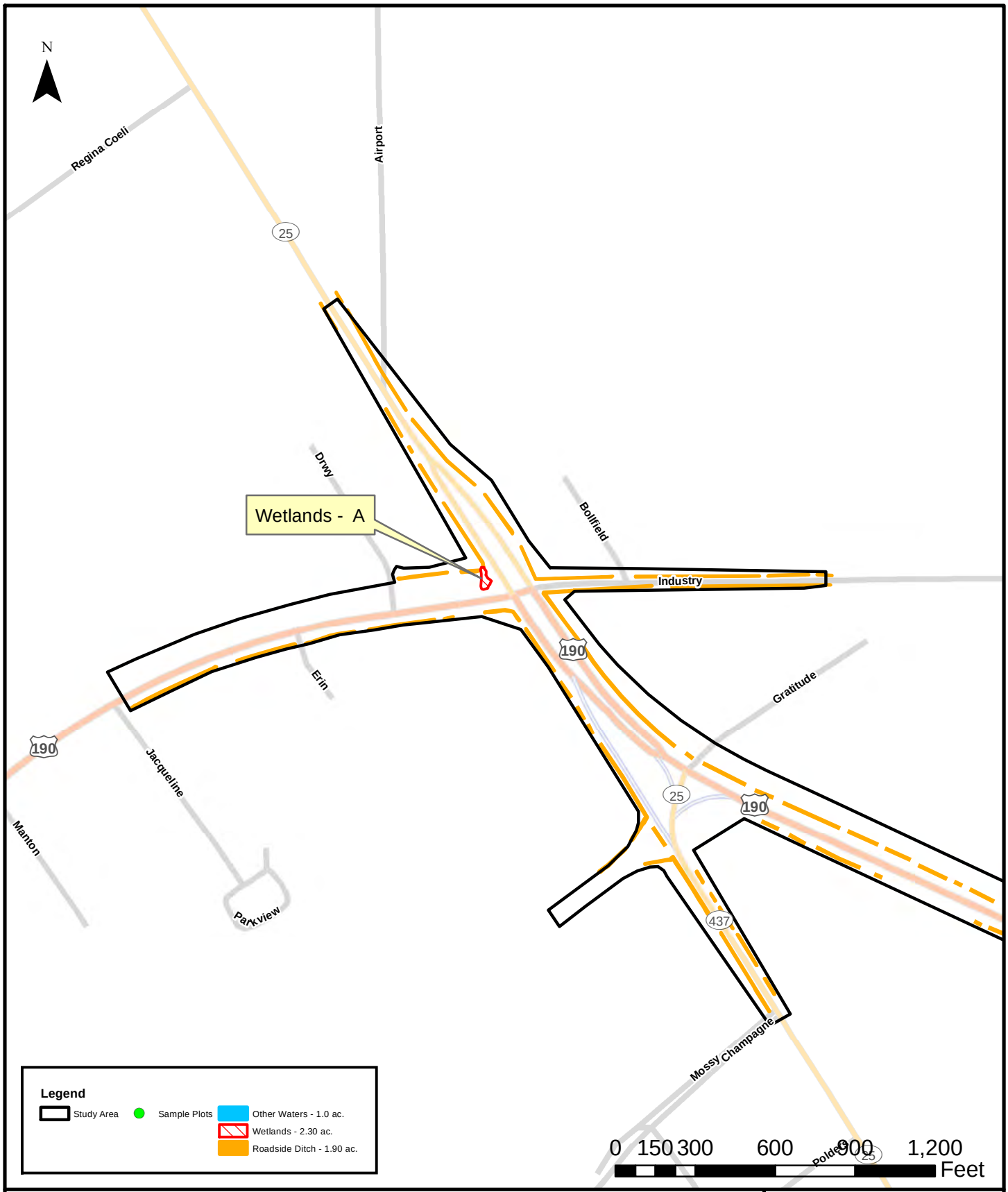

WETLAND MAP - JD

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits:

GEC

Figure: 4-A
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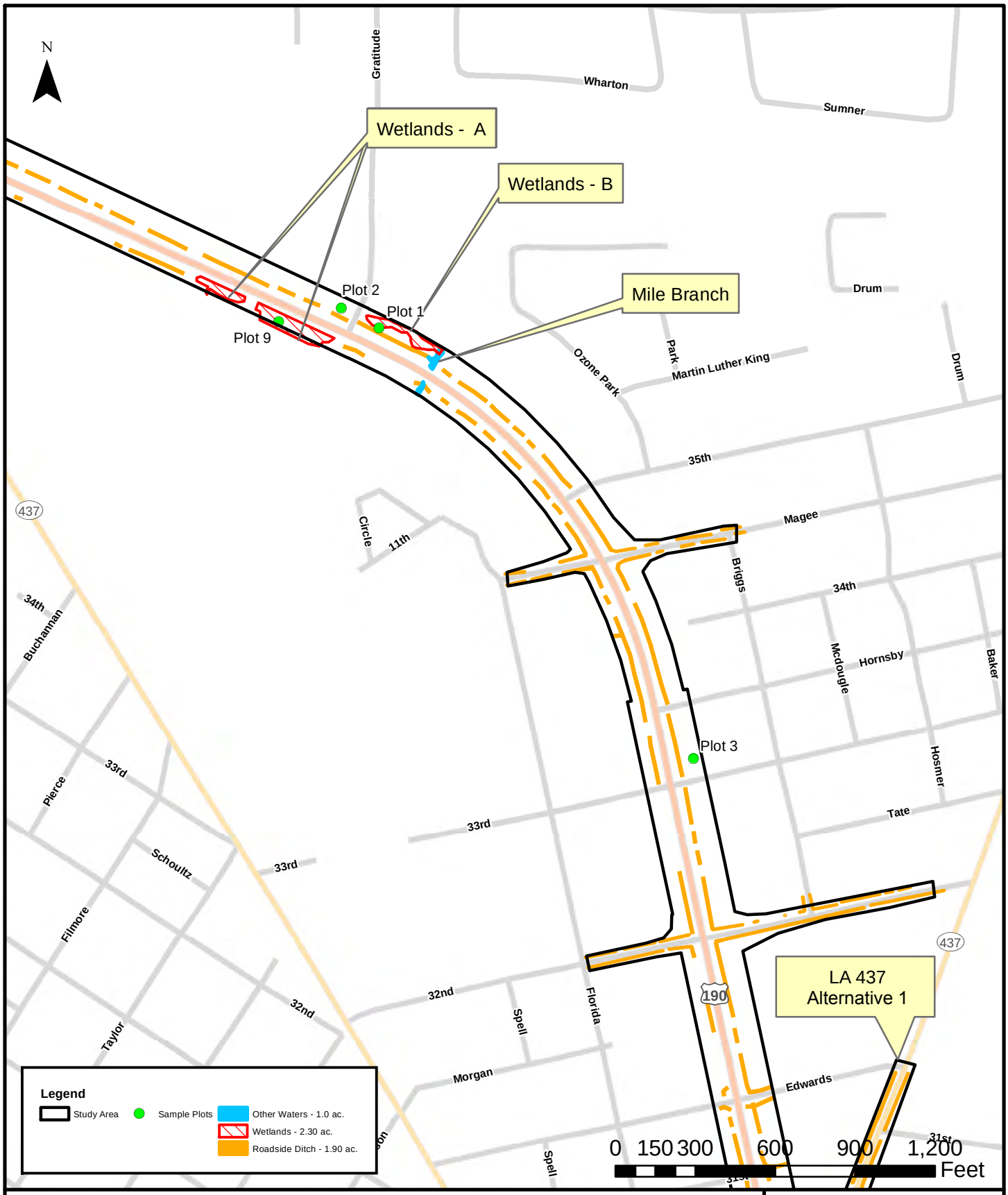

WETLAND MAP - JD

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits:

GEC

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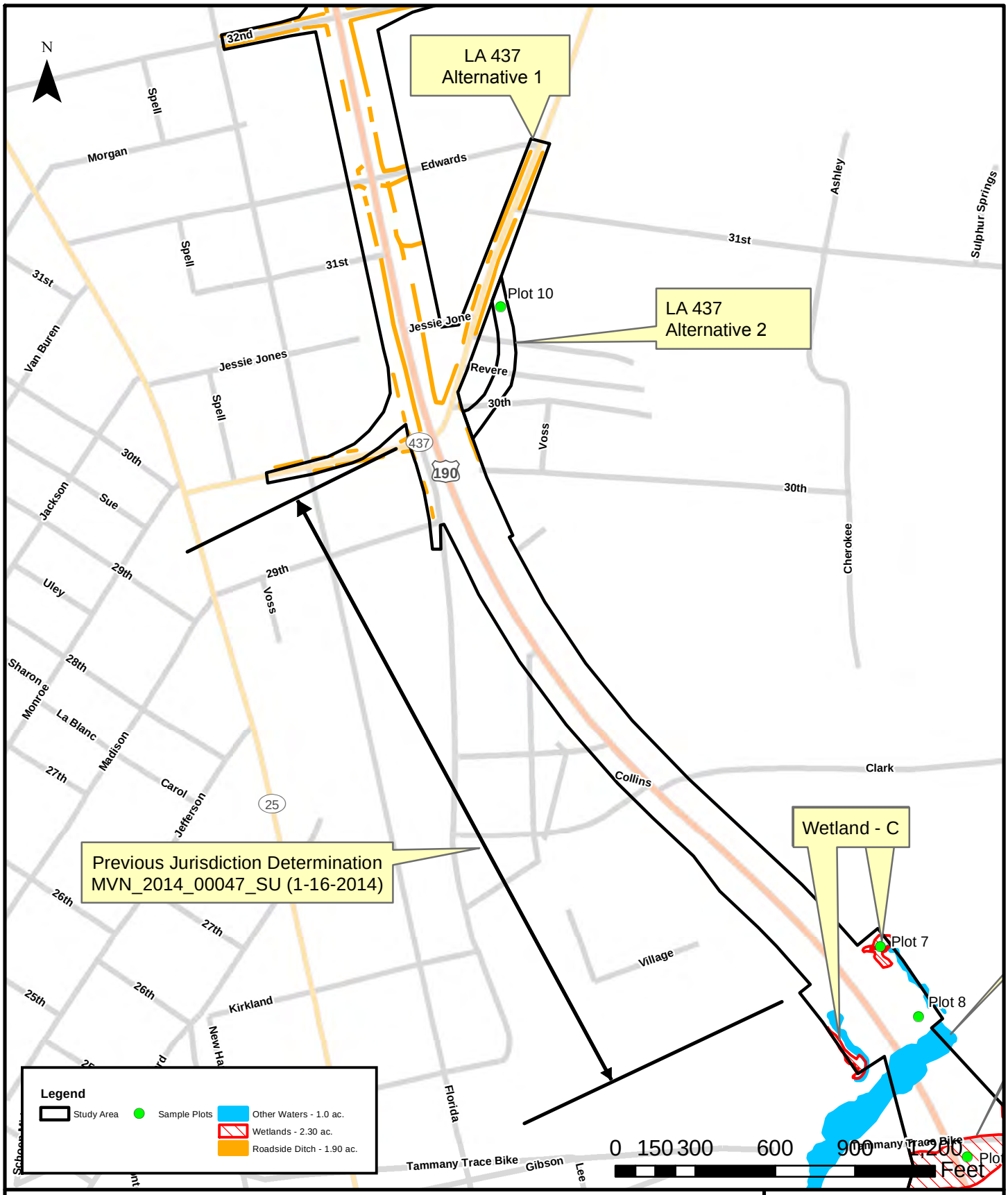

WETLAND MAP - JD

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits:

GEC

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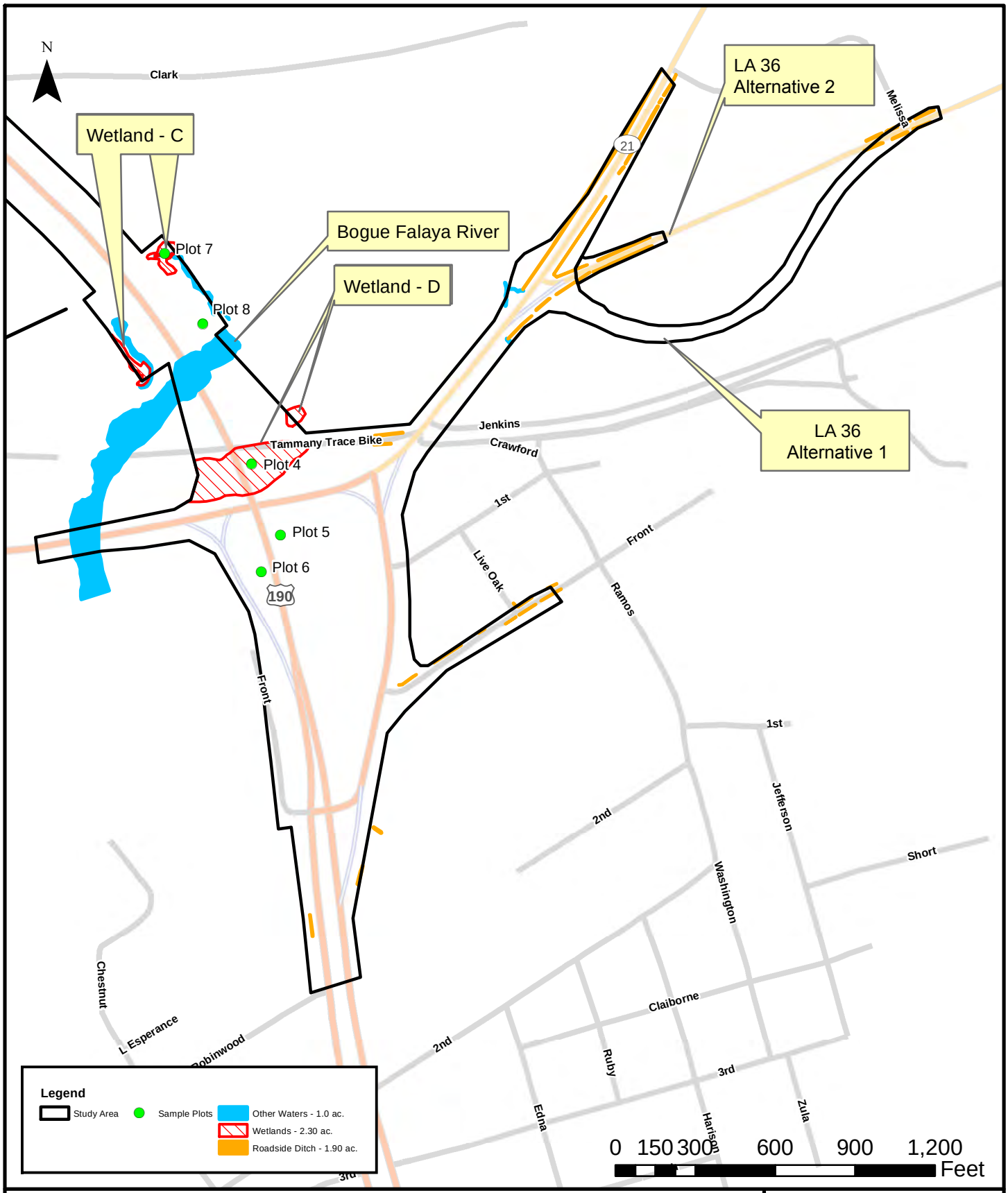

WETLAND MAP - JD

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits:

GEC

Figure: 4-D
Date: February 2015
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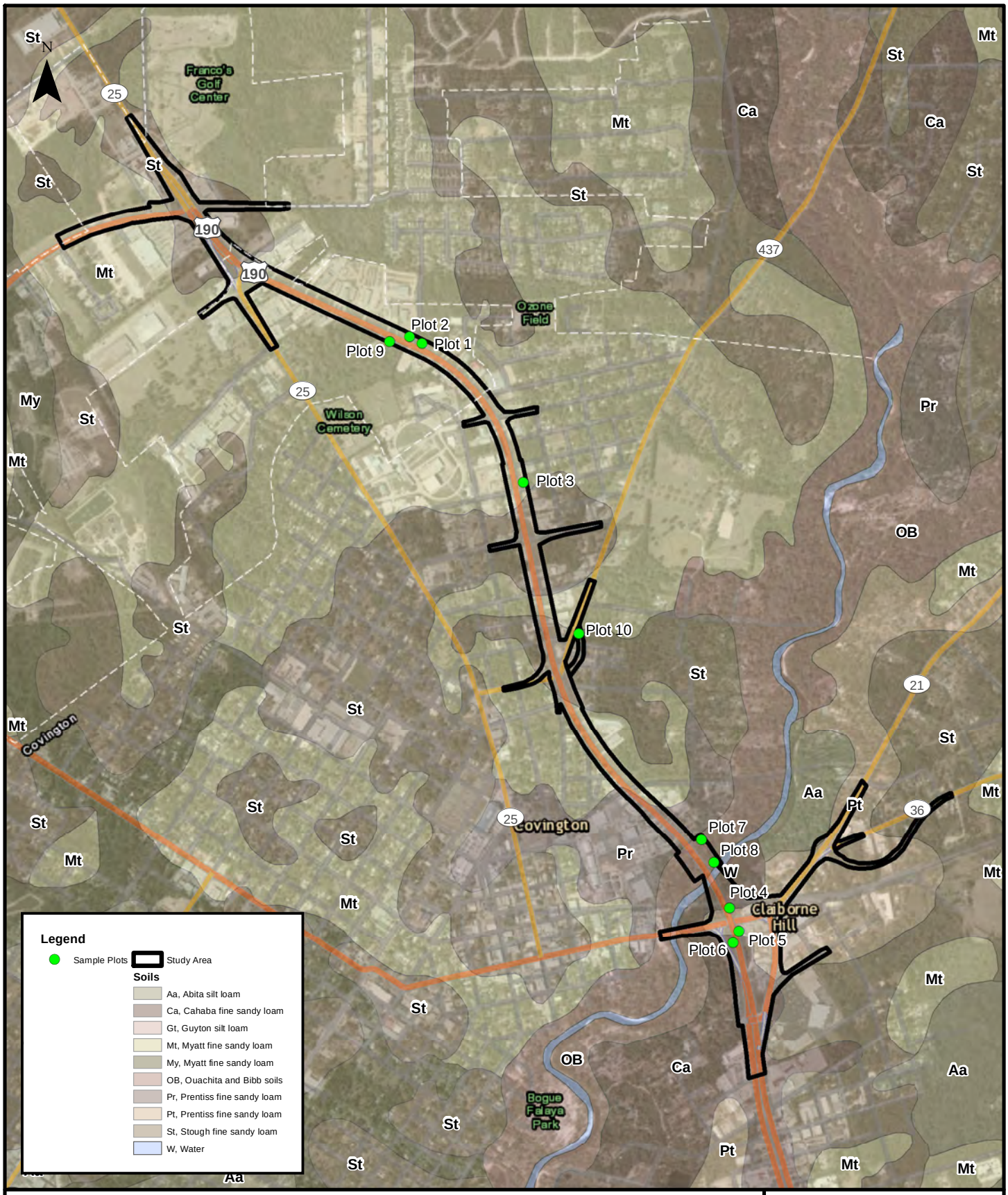


SOILS MAP

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

GEC

Figure: 5
Date: February 2015
Scale:1:18,600
Source: ESRI/GEC
Map ID: KL521830410058-3162

3.1 Wetland Area A

Sample Plot 9 is located along the west side of US 190 at the northern end of the project within the maintained ROW (figures 3-A & 3-B; photographs 17 and 18). This habitat characterized as a herbaceous habitat with the inclusion of black willow (*Salix nigra*) and Drummond red maple (*Acer rubrum* var. *drummondii*) as dominant shrub species. The herbaceous stratum was dominated by soft rush (*Juncus effusus*), jointed flatsedge (*Cyperus articulates*), late-flowering thorough-wort (*Eupatorium serotinum*), sesbania hemp (*Sesbania exaltata*), and narrow-leaf cattail (*Typha angustifolia*). Other less abundant species include river seedbox (*Ludwigia leptocarpa*), green flatsedge, fragrant beakrush (*Rhynchospora odorata*), sugar-cane plumegrass (*Erianthus giganteus*), short-bristle beakrush (*Rhynchospora corniculata*), and canada golden-rod (*Solidago canadensis*). Serrate-leaf blackberry (*Rubus argutus*) was the dominant species in the woody vine stratum. The hydrophytic vegetation criterion was met within this sample plot.

The soils within the sample plot are mapped as Myatt fine sandy loam. This series is listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soils indicators for a depleted matrix.

Surface water (A1), saturation (A3), water marks (B1), water-stained leaves (B9), and oxidized rhizospheres on living roots (C3) were the primary hydrology indicators recorded within the sample plot. Additionally, crawfish burrows (C8) and a positive FAC-Neutral test (D8) were recorded as secondary hydrology indicators within the sample plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of all three wetland parameters (see Data Form Plot - 9).

3.2 Wetland Area B

Sample Plot 1 is located along the east side of US 190 within a forested habitat at the outer edge of the right-of-way (ROW) (Figure 3-B; photographs 1 and 2). This habitat is dominated by loblolly pine (*Pinus taeda*) in the tree stratum with lesser occurrences of sweet gum (*Liquidambar styraciflua*). The sapling/shrub stratum is lacking within this sample plot. Dominant herbaceous species include marshland flatsedge (*Cyperus distinctus*) and annual ragweed (*Ambrosia artemisiifolia*). Other less abundant herbaceous species include sweet gum, Chinese tallow tree (*Triadica sebifera*), nimble-will (*Muhlenbergia schreberi*), Brazilian vervain (*Verbena brasiliensis*) and needle-leaf witchgrass *(Dicanthelium aciculare*). The woody vine was dominated by pepper-vine (*Ampelopsis arborea*) and common morning-glory (*Ipomoea purpurea*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within the sample plot are mapped as Myatt fine sandy loam. This series is listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soil indicators for a depleted matrix.

Primary hydrology indicators recorded at the sample plot were surface water (A1) and oxidized rhizospheres along living roots (C3). There were no secondary hydrology indicators recorded

for this sample plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of all three wetland parameters at this sample plot (see Data Form Plot - 1).

3.3 Wetland Area C

Sample Plot 7 is located along the east side of US 190 and north of the Bogue Falaya River within a forested habitat in the highway ROW (Figure 3-C; photographs 13 and 14). This forested habitat has a tree stratum with blue beech (*Carpinus caroliniana*) as the dominant species. The dominant shrub species is Chinese privet (*Ligustrum sinense*) with other less abundant species such as Chinese tallow tree and red maple (*Acer rubrum*). Herbaceous dominants included alligator weed, broad-leaf arrow-head (*Sagittaria latifolia*), and netted-chain fern (*Woodwardia areolata*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within the sample plot are mapped as Ouachita and Bibb soils, frequently flooded. Both of these are listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soils indicators for depleted below dark surface.

Water marks (B1) and water-stained leaves (B9) were the primary hydrology indicator recorded at the sample plot. In addition, drainage patterns (B10), crayfish borrows (C8), geomorphic position (D2), and a positive FAC-Neutral test (D5) were recorded as secondary hydrology indicators. It is GEC's opinion that this sample plot is within a wetland, based on the fact that all three wetland parameters, hydrophitic vegetation, hydric soils, and wetland hydrology were met (see Data Form Plot - 7).

3.4 Wetland Area C

Sample Plot 4 is located between LA 21 and the Tammany Trace Bike Trail within a forested habitat (Figure 3-D; photographs 7 and 8). This habitat is dominated by red maple (*Acer rubrum*) and bald cypress (*Taxodium distichum*) in the tree stratum with lesser occurrences of river birch (*Betula nigra*). Dominant herbaceous species include bushy seedbox (*Ludwigia alternifolia*), lizard's tail (*Saururus cernuus*), and Carolina spider-lily (*Hymenocallis caroliniana*). Other less abundant herbaceous species include elephant's ear (*Colocasia esculenta*), small-spike false-nettle (*Boehmeria cylindrical*), and alligator weed (*Alternanthera philoxeroides*). The woody vine was dominated by southern dewberry (*Rubus trivialis*) with scattered occurrences of pepper-vine (*Ampelopsis arborea*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within the sample plot are mapped as Ouachita and Bibb soils. Both of these are listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soil indicators for depleted below dark surface.

Primary hydrology indicators recorded at the sample plot were high water table (A2) and saturation (A3). Secondary hydrology indicators include a positive FAC-Neutral test (D5). It is GEC's opinion that this sample plot is within a wetland, based on the presence of all three wetland parameters at this sample plot (see Data Form Plot - 4).

3.5 Non-Wetland Areas

Sample Plot 2 is located within the maintained right-of-way (ROW) of US 190 just north of Sample Plot 1 (Figure 3-B; photographs 3 and 4). This herbaceous habitat is dominated by bahia grass (*Paspalum notatum*). The hydrophytic vegetation criterion is not met within this sample plot.

The soils within the sample plot are mapped as Myatt fine sandy loam. This series is listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soil indicators for a depleted matrix.

The only primary hydrology indicator recorded at the sample plot was oxidized rhizospheres along living roots (C3). There were no secondary hydrology indicators recorded for this sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the absence of hydrophyte vegetation (see Data Form Plot - 2).

Sample Plot 3 is located along the east side of US 190 within the maintained ROW in the northern portion of the proposed project boundary (Figure 3-B; Photographs 5 and 6). This herbaceous habitat is dominated by bahia grass (*Paspalum notatum*) and Bermuda grass (*Cynodon dactylon*). Other less abundant species observed include dallis grass (*Paspalum dilatatum*), erect coinleaf (*Centella erecta*), annual ragweed, dog fennel (*Eupatorium capillifolium*), alligator weed (*Alternanthera philoxeroides*), and rusty flatsedge (*Cyperus odoratus*). The hydrophytic vegetation criterion is not met within this sample plot.

The soils within the sample plot are mapped as Myatt fine sandy loam. This series is listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soils indicators for depleted below dark surface.

No hydrology indicators were recorded at the sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the fact that only one of the three wetland parameters, hydric soils was met at this sample plot (see Data Form Plot - 3).

Sample Plot 5 is located within the maintained ROW of US 190 along the east side just south of LA Highway 21 (Figure 3-D; photographs 9 and 10). This herbaceous habitat is dominated by bahia grass (*Paspalum notatum*). The hydrophytic vegetation criterion is not met within this sample plot.

The soils within the sample plot are mapped as Prentiss fine sandy loam, 1-3 percent slopes. This series is not listed as a hydric soil on either the National or the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is met within this sample plot based on the presence of hydric soils indicators for depleted below dark surface.

No primary or secondary hydrology indicators were recorded at the sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydrophytic vegetation and wetland hydrology (see Data Form Plot - 5).

Sample Plot 6 is located within the maintained ROW of US 190 along the west side at the foot of the bridge just south of LA Highway 21 (Figure 3-D; photographs 11 and 12). This herbaceous habitat is dominated by torpedo grass (*Panicum repens*) with scattered occurrences of Bermuda grass, alligator weed, green flatsedge (*Cyperus virens*) and penny-wort (*Hydrocotyle* sp.). The hydrophytic vegetation criterion is met within this sample plot.

The soils within the sample plot are mapped as Cahaba fine sandy loam. This series is not listed as a hydric soil on either the National or the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that no hydric soil indicators were present within the sample plot; therefore, the soils are considered non-hydric.

The only primary hydrology indicator recorded was surface water (A1) and the only secondary hydrology indicator recorded was a positive FAC-Neutral test (D5). It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydric soils (see Data Form Plot - 6).

Sample Plot 8 is located along the east side of US 190 and north of the Bogue Falaya River within a forested habitat on the top bank of the river within the highway ROW (Figure 3-C; photographs 15 and 16). The dominant tree species within this habitat include loblolly pine and water oak (*Quercus nigra*) with scattered occurrences of water tupelo (*Nyssa aquatic*). Water oak and red maple dominate the sapling stratum while Chinese privet was the dominant shrub species as well as the dominant herbaceous species. Dominant woody vines were muscadine grape (*Vitis rotundifolia*), pepper vine, and Japanese honeysuckle (*Lonicera japonica*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within the sample plot are mapped as Ouachita and Bibb soils, frequently flooded. Both of these are listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is not met within this sample plot based on the lack of hydric soils indicators.

There were no primary or secondary hydrology indicators recorded at the sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack hydric soils and wetland hydrology (see Data Form Plot - 8).

Sample Plot 10 is located within a forested habitat within the preferred route for the new alignment of the Lee Road intersection along the east side of US 190 (Figure 3-C; photographs 19 and 20). The dominant tree species within this habitat include southern red oak (*Quercus falcate*), water oak, and loblolly pine. Scattered occurrences of sweetgum are also noted but not as a dominant species. Yaupon (*Ilex vomitoria*), water oak, Elliott's blueberry (*Vaccinium elliotii*) aree the dominant species within the sapling/shrub statrum with occurrences of farkleberry (*Vaccinium arboretum*), large-flower Magnolia (*Magnolia grandiflora*), and American holly (*Ilex opaca*) scattered throughout. The dominant woody vine is common greenbrier (*Vitis rotundifolia*). The hydrophytic vegetation criterion is met within this sample plot.

The soils within the sample plot are mapped as Ouachita and Bibb soils, frequently flooded. Both of these are listed as a hydric soil on the National and the Louisiana Hydric Soils lists. Field observations of the soil profile concluded that the hydric soils criterion is not met within this sample plot based on the lack of hydric soils indicators.

There were no primary or secondary hydrology indicators recorded at the sample plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack hydric soils and wetland hydrology (see Data Form Plot - 10).

4.0 CONCLUSION

Investigators identified and mapped three forested wetland habitats (Wetland Areas B, C, & D), one herbaceous wetland habitat (Wetland Area A), the Bogue Falaya River, Mile Branch, two small perennial streams, two small intermittent streams and numerous roadside ditches within the project ROW. Wetland Area A includes three small areas of herbaceous habitat within the existing ROW of US 190. The first area is located at the northwest corner of the US 190/LA 25 intersection (see Figure 3-A). The next two areas are along the west side of US 190 just north of Magee Street (see Figure 3-B). All three areas encompass a total of 0.47 acre.

Wetland Area B is a forested habitat located along the east side of US 190 just north of the Mile Branch crossing (see Figure 3-B). This wetland encompasses approximately 0.19 acres. Mile Branch is a small perennial stream crossing through approximately 189 linear feet of the proposed ROW. Photographs 21 and 22 provide an overview of Mile Branch.

Wetland Area C is located along the north side of Bogue Falaya with two areas on either side of US 190 (see Figure 3-C). These areas are forested wetlands encompassing approximately 0.22 acre. In addition to the wetland habitats, investigators mapped three Other Waters consisting of the Bogue Falaya River and two small perennial streams along either side of the US 190 bridge ROW and flowing into the Bogue Falaya. Approximately 258 linear feet of the Bogue Falaya River traverses through the ROW just south of the forested wetland habitats. Overviews of the Bogue Falaya are provided in photographs 23 and 24 in Appendix B. The two small perennial streams are associated with each of the forested wetland habitats on either side of the US 190 bridge. The stream on the west side of US 190 traverses through approximately 275 linear feet of the ROW, while the eastern stream traverses through approximately 342 linear feet of the ROW. Photographs 25 through 28 in Appendix B provide general overviews of the two streams. As the Bogue Falaya flows to the southwest, it traverses through another portion of the project ROW along Boston Street for an additional 100 linear feet.

Wetland Area D includes two forested wetland habitats south of the Bogue Falaya River totaling approximately 1.41 acres.

The two intermittent streams are located along the north side of LA 21 just south of the LA 36 intersection. A total of 120 linear feet of these streams are located within the proposed ROW. Photographs 29 through 30 in Appendix B show overviews of these two intermittent streams.

In addition to the wetlands and Other Waters, investigators also mapped approximately 26,091 linear feet of roadside ditches within the proposed ROW throughout the entire project area.

Ditch widths ranged from one foot to six feet. Typical overviews of some of the roadside ditches are provided in Appendix B as photographs 31 through 32.

The following table provides the acreage of Other Waters and Wetlands mapped along the proposed route of the project as well as the two Alternate Options for Lee Drive and LA 36.

Wetlands and Other Waters Within ROW	Acreage / Linear Footage		
	Alternative 1	LA 36 Alternative 2	Lee Drive Alternative 2
Wetland A	0.49	0.47	0.47
Wetland B	0.19	0.19	0.19
Wetland C	0.22	0.22	0.22
Wetland D	1.41	1.41	1.41
Total All Wetlands	**2.29**	**2.29**	**2.29**
Waters of the U.S. (Bogue Falaya)	0.82/358	0.82/358	0.82/358
Waters of the U.S. (Intermittent streams)	0.009/120	0.009/120	0.009/120
Waters of U.S. (Perennial streams)	0.14/617.6	0.14/617.6	0.14/617.6
Roadside Ditches	1.82/25,540.63	1.79/25,196.71	1.79/25,055.83

Although the investigators used the same criteria and methodology as that of the U.S. Army Corps of Engineers (USACE), due to the degree of subjectivity associated with studies of this type, there may be some degree of variance in the demarcation of the wetland boundary. Consequently, the opinions presented in this report may not necessarily reflect that of the USACE, nor does it relieve our client of any legal obligations to verify the wetland findings, consult with the USACE, and possibly obtain a Department of the Army permit prior to performing any dredging, filling and/or construction operations in Waters of the United States, including wetlands.

It is our conclusion that Alternative 1 of the proposed project will impact a total of approximately 2.29 acre of wetlands, 0.97 acre or 1,096 linear feet of Other Waters (Bogue Falaya River, Mile Branch, two small perennial streams, and two intermittent streams), and 25,540.63 linear feet (approximately 1.82 acre) of roadside ditches.

Appendix A

DATA FORMS

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 1

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 37 T 6-S R 11-E

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** flat **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 29 43.589 **Long.:** 90 05 54.362 **Datum:** NAD83

Soil Map Unit Name: Myatt fine sandy loam **NWI classification:** None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☑ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉ No ○	Depth (inches):	4
Water Table Present?	Yes ◉ No ○	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes ◉ No ○	Depth (inches):	

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area depressional with mix of shallow water areas and non-inundated areas. Covington received 7.09 inches of rain in June, with some rainfall everyday from 6/26 - 6/31.

VEGETATION - Use scientific names of plants.

Sampling Point: 1

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Pinus taeda	15	☑	83.3%	FAC
2. Liquidambar styraciflua	3	☐	16.7%	FAC+
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	18 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Cyperus distinctus	50	☑	39.1%	FACW
2. Ambrosia artemisiifolia	40	☑	31.3%	FACU
3. Liquidambar styraciflua	5	☐	3.9%	FAC+
4. Triadica sebifera	5	☐	3.9%	FAC
5. Muhlenbergia schreberi	20	☐	15.6%	FAC
6. Verbena brasiliensis	3	☐	2.3%	FAC-
7. Dichanthelium aciculare	5	☐	3.9%	FACU
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	128 = Total Cover			

Woody Vine Stratum (Plot size: 30' radius)				
1. Ampelopsis arborea	2	☑	40.0%	FAC+
2. Ipomoea purpurea	3	☑	60.0%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	5 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	53	x 3 =	159
FACU species	48	x 4 =	192
UPL species	0	x 5 =	0
Column Totals:	151 (A)		451 (B)

Prevalence Index = B/A = 2.987

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (If observed, list morphological adaptations below).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type [1]	Loc[2]	Texture	Remarks
0-2	10YR	4/2	100%						Silt Loam	
2-16	10YR	5/2	95%	7.5YR	4/6	5%	C	M	Sandy Loam	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2] Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 2

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 37 T 6-S R 11-E

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** flat **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 29 44.406 **Long.:** 90 05 56.049 **Datum:** NAD83

Soil Map Unit Name: Myatt fine sandy loam **NWI classification:** None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ◉	No ○	
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
Mowed area. NE corner of Gratitude and Collins.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches): _____
Water Table Present?	Yes ○	No ◉	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches): _____

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Eupatorium capillifolium	1	☐	1.0%	FACU
2. Paspalum notatum	99	☑	98.0%	FACU+
3. Centella erecta	1	☐	1.0%	FACW
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	101 = Total Cover			

Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	1	x 2 =	2
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	101 (A)		402 (B)

Prevalence Index = B/A = 3.980

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks: (If observed, list morphological adaptations below).

Mowed lawn.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc[2]	Texture	Remarks
0-1	10YR	3/2	100%						Loam	
1-7	10YR	5/2	95%	10YR	5/6	5%	C	M	Loam	
7-16	10YR	5/2	60%						Clay Loam	
	10YR	5/8	40%							

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2] Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 3

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 37 T 6-S R 11-E

Landform (hillslope, terrace, etc.): **Local relief (concave, convex, none):** **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 29 27.438 **Long.:** 90 05 41.413 **Datum:** NAD83

Soil Map Unit Name: Myatt fine sandy loam **NWI classification:** None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ◉	No ○	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
N. 33rd & Collins

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil wet from surface to 6.5" down, relatively dry below that - appears to be artifact of recent rainfalls rather than "saturated soils". No culverts at N. 33rd - area appears to have to drain to north. Some water present in low places adjacent to drive and in adjacent ditches, but not across site.

VEGETATION - Use scientific names of plants.

Sampling Point: 3

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Cynodon dactylon	40	☑	38.8%	FACU
2. Paspalum notatum	40	☑	38.8%	FACU+
3. Paspalum dilatatum	5	☐	4.9%	FAC+
4. Centella erecta	2	☐	1.9%	FACW
5. Ambrosia artemisiifolia	2	☐	1.9%	FACU
6. Eupatorium capillifolium	2	☐	1.9%	FACU
7. Alternanthera philoxeroides	10	☐	9.7%	OBL
8. Cyperus odoratus	2	☐	1.9%	FACW
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	103 = Total Cover			

Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	4	x 2 =	8
FAC species	5	x 3 =	15
FACU species	84	x 4 =	336
UPL species	0	x 5 =	0
Column Totals:	103 (A)		369 (B)

Prevalence Index = B/A = 3.583

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks: (If observed, list morphological adaptations below).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type [1]	Loc[2]	Texture	Remarks
0-5	10YR	3/1	80%	10YR	3/6	20%	C	M	Silt Loam	
5-7	10YR	3/2	70%	10YR	3/6	30%	C	M	Loam	
7-16	10YR	5/1	60%	10YR	5/6	40%	C	M	Loam	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 4

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 42 T 6-S R 11-E

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** flat **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 28 38.103 **Long.:** 90 05 14.537 **Datum:** NAD83

Soil Map Unit Name: Cahaba fine sandy loam **NWI classification:** PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Hydric Soil Present?	Yes ◉	No ○	
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
Southeast side of Bogue Falaya Bridge N of Hwy 21, river flood plain

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ◉	No ○	Depth (inches): 7
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: 4

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Acer rubrum	5	☑	41.7%	FAC
2. Taxodium distichum	5	☑	41.7%	OBL
3. Betula nigra	2	☐	16.7%	FACW
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	12 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Saururus cernuus	20	☑	19.0%	OBL
2. Hymenocallis caroliniana	20	☑	19.0%	FACW
3. Colocasia esculenta	10	☐	9.5%	FACW
4. Boehmeria cylindrica	10	☐	9.5%	FACW+
5. Alternanthera philoxeroides	5	☐	4.8%	OBL
6. Ludwigia alternifolia	40	☑	38.1%	OBL
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	105 = Total Cover			

Woody Vine Stratum (Plot size: 30' radius)				
1. Rubus trivialis	70	☑	93.3%	FAC
2. Ampelopsis arborea	5	☐	6.7%	FAC+
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	75 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	42	x 2 =	84
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	192 (A)		394 (B)

Prevalence Index = B/A = 2.052

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (If observed, list morphological adaptations below).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type [1]	Loc[2]	Texture	Remarks
0-8	10YR	3/2	70%	10YR	4/6	30%	C	M	Clay	
8-16	2.5YR	5/3	50%	10YR	4/6	25%	C	M	Clay	
				10YR	6/2	25%	RM	M		

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2] Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 5

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 42 T 6-S R 11-E

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** flat **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 28 35.429 **Long.:** 90 05 13.387 **Datum:** NAD83

Soil Map Unit Name: Prentiss fine sandy loam, 1 - 3 percent slopes **NWI classification:** None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ◉	No ○	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
South side of Hwy 21, east side of bridge; Mowed area

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches): _____
Water Table Present?	Yes ○	No ◉	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators observed.

VEGETATION - Use scientific names of plants.

Sampling Point: 5

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Paspalum notatum	100	☑	100.0%	FACU+
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	100 = Total Cover			

Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.000

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks: (If observed, list morphological adaptations below).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox Features %	Type [1]	Loc[2]	Texture	Remarks
0-2	10YR	2/1	100%						Loam	some sand grains
2-16	10YR	3/2	100%						Sandy Loam	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

Lots of gravel (appears to be exogenous fill) from surface down.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 6

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 42 T 6-S R 11-E

Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** concave **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 28 34.105 **Long.:** 90 05 14.176 **Datum:** NAD83

Soil Map Unit Name: Cahaba fine sandy loam **NWI classification:** None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
South side of Hwy 21,west side of bridge; inclusion in mowed area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉	No ○	Depth (inches): 1
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Depressional area at foot of bridge. Drain grate on northwest side of area allows water outflow from area. Mix of areas with and without standing water. Only water input is drainage from adjacent roads/commercial areas and rainwater.

VEGETATION - Use scientific names of plants.

Sampling Point: 6

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Cynodon dactylon	10	☐	7.4%	FACU
2. Alternanthera philoxeroides	5	☐	3.7%	OBL
3. Hydrocotyle sp.	20	☐	14.8%	
4. Cyperus virens	10	☐	7.4%	FACW
5. Panicum repens	90	☑	66.7%	FACW-
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	135 = Total Cover			

Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	105 (A)		225 (B)

Prevalence Index = B/A = 2.143

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (If observed, list morphological adaptations below).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type [1]	Loc[2]	Texture	Remarks
0-3	10YR	3/2	100%						Silt Loam	
3-8	10YR	4/1	95%	2.5YR	3/6	5%	C	M	Clay	Lots of gravel

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2] Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

High concentration of gravel, broken asphalt, broken concrete, etc. Too much gravel below 8" to dig hole. Appears to be exogenous fill.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 01-Jul-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 7

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 42 T 6-S R 11-E

Landform (hillslope, terrace, etc.): Floodplain **Local relief (concave, convex, none):** flat **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 28 45.997 **Long.:** 90 05 18.193 **Datum:** NAD83

Soil Map Unit Name: Ouachita and Bibb soils, frequently flooded **NWI classification:** PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Hydric Soil Present?	Yes ◉	No ○	
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
NE side of Bogue Falaya Bridge; floodplain at bottom of ridge, drainage channels evident.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☑ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☑ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉	No ○	Depth (inches): 2
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water present in drainage features. Very little leaf litter.

VEGETATION - Use scientific names of plants.

Sampling Point: 7

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Carpinus caroliniana	100	☑	100.0%	FAC
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	100 = Total Cover			

Sapling Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0 = Total Cover			

Shrub Stratum (Plot size: 30' radius)				
1. Ligustrum sinense	20	☑	74.1%	FAC
2. Triadica sebifera	5	☐	18.5%	FAC
3. Acer rubrum	2	☐	7.4%	FAC
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	27 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Alternanthera philoxeroides	5	☑	25.0%	OBL
2. Sagittaria latifolia	10	☑	50.0%	OBL
3. Woodwardia areolata	5	☑	25.0%	OBL
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	20 = Total Cover			

Woody Vine Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	0	x 2 =	0
FAC species	127	x 3 =	381
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	147 (A)		401 (B)

Prevalence Index = B/A = 2.728

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (If observed, list morphological adaptations below).

Very little herbaceous/forb presence.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc[2]	Texture	Remarks
0-4	10YR	4/1	100%					Clay Loam	
4-16	10YR	8/1	40%					Loamy Sand	
	10YR	6/6	30%						
	7.5YR	4/6	30%						

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

No obvious organic coating on sand grains. Area a bit atypical as it appears to be subject to both erosional/depositional impacts associated with overflow from the Bogue Falaya.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Hwy 190 Covington **City/County:** Covington/St. Tammany **Sampling Date:** 19-Aug-10

Applicant/Owner: RPC **State:** LA **Sampling Point:** 8

Investigator(s): Ryan Munchausen, Rocky Hinds **Section, Township, Range:** S 38 T 6-S R 11-E

Landform (hillslope, terrace, etc.): **Local relief (concave, convex, none):** **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 152A in LRR T **Lat.:** 30 28 43.286 **Long.:** 90 05 16.616 **Datum:** NAD83

Soil Map Unit Name: Ouachita and Bibb soils, frequently flooded **NWI classification:** None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ **(If no, explain in Remarks.)**

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **naturally problematic?** **(If needed, explain any answers in Remarks.)**

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
River ridge, east of Hwy. 190 Bridge

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
None noted.

VEGETATION - Use scientific names of plants.

Sampling Point: 8

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Pinus taeda	25	☑	27.8%	FAC
2. Quercus nigra	50	☑	55.6%	FAC
3. Nyssa aquatica	15	☐	16.7%	OBL
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	90 = Total Cover			

Sapling Stratum (Plot size: 30' radius)				
1. Ligustrum sinense	5	☐	14.3%	FAC
2. Quercus nigra	20	☑	57.1%	FAC
3. Acer rubrum	10	☑	28.6%	FAC
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	35 = Total Cover			

Shrub Stratum (Plot size: 30' radius)				
1. Ligustrum sinense	30	☑	100.0%	FAC
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	30 = Total Cover			

Herb Stratum (Plot size: 30' radius)				
1. Ligustrum sinense	30	☑	100.0%	FAC
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	30 = Total Cover			

Woody Vine Stratum (Plot size: 30' radius)				
1. Vitis rotundifolia	3	☑	42.9%	FAC
2. Ampelopsis arborea	2	☑	28.6%	FAC+
3. Lygodium japonicum	2	☑	28.6%	FAC
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	7 = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC:	9	(A)
Total Number of Dominant Species Across All Strata:	9	(B)
Percent of dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	0	x 2 =	0
FAC species	177	x 3 =	531
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	192 (A)		546 (B)

Prevalence Index = B/A = 2.844

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤3.0 [1]
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excludeing woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (If observed, list morphological adaptations below).

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc[2]	Texture	Remarks
0-6	10YR	3/3	100%					Sandy Loam	
6-12	10YR	6/4	100%					Sand	
12-15	10YR	8/2	100%					Sand	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2] Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Muck Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

No evident organic coating on sand grains.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: US Hwy 190/Collins Boulevard Widening City/County: St. Tammany Sampling Date: Jan 15, 2015

Applicant/Owner: LADOTD, RPC State: Louisiana Sampling Point: 9

Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec. 37, 38, & 42; Township 6 South; Range 11 East

Landform (hillslope, terrace, etc.) Flatwoods Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR or MLRA): LRR T (MLRA 152A, 152B, 153A) Lat: 30°29'43.8" N Long: 90°5'59" W Datum: NAD 83

Soil Map Unit Name: Myatt fine sandy loam NWI Classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____		
Wetland Hydrology Present?	Yes X No ____		

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2-3
Water Table Present?	Yes X	No ____	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 6

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point 9

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
50 % of total cover: 0	20 % of total cover: 0		

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Salix nigra (Willow,black)	10	Y	OBL
2. Acer rubrum var. drummondii (Maple,drummond red)	5	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	15	= Total Cover	
50 % of total cover: 7.5	20 % of total cover: 3		

Herb Stratum (Plot size: 30' radius)			
1. Juncus effusus (Rush,soft)	35	Y	FACW
2. Cyperus articulatus (Flatsedge,jointed)	30	Y	OBL
3. Eupatorium serotinum (Thorough-wort,late-flowering)	20	Y	FAC
4. Sesbania exaltata (Hemp,sesbania)	20	Y	FACW
5. Typha angustifolia (Cattail,narrow-leaf)	20	Y	OBL
6. Ludwigia leptocarpa (Seedbox,river)	15		OBL
7. Cyperus virens (Flatsedge,green)	10		FACW
8. Rhynchospora odorata (Beakrush,fragrant)	10		OBL
9. Erianthus giganteus (Plumegrass,sugar,cane)	5		FACW
10. Rhynchospora corniculata (Beakrush,short-bristle)	5		OBL
11. Solidago canadensis (Golden-rod,canada)	5		FACU
12.			
	175	= Total Cover	
50 % of total cover: 87.5	20 % of total cover: 35		

Woody Vine Stratum (Plot size: 30' radius)			
1. Rubus argutus (Blackberry,serrate-leaf)	10	Y	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
50 % of total cover: 5	20 % of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		X 2 =	
FAC species		X 3 =	
FACU species		X 4 =	
UPL species		X 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

___ 3 – Prevalence Test is ≤ 3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/1	98	7.5YR 4/6	2	C	PL	Silty Clay	
5-11	10YR 4/1	96	5YR 4/6	2	C	PL	Silty Clay	
			10YR 5/8	2	C	M	Silty Clay	
11-18+	10YR 5/1	75	5YR 5/8	25	C	PL	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Suface (S9) **(LRR S, T, U)**
- ___ Loamy Gleyed Matrix (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: US Hwy 190/Collins Boulevard Widening City/County: St. Tammany Sampling Date: Feb 11, 2015

Applicant/Owner: LADOTD, RPC State: Louisiana Sampling Point: 10

Investigator(s): B. McCoy, Q. Daigre Section, Township, Range: Sec. 37, 38, & 42; Township 6 South; Range 11 East

Landform (hillslope, terrace, etc.) Forested Local relief (concave, convex, none): none Slope (%): <1

Subregion (LRR or MLRA): LRR T (MLRA 152A, 152B, 153A) Lat: 30°28'43.4" N Long: 90°5'17.2" W Datum: NAD 83

Soil Map Unit Name: Stough fine sandy loam NWI Classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point 10

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus falcata (Oak,southern red)	30	Y	FACU
2. Quercus nigra (Oak,water)	30	Y	FAC
3. Pinus taeda (Pine,loblolly)	20	Y	FAC
4. Liquidambar styraciflua (Gum,sweet)	15		FAC
5.			
6.			
7.			
8.			
	95	= Total Cover	
50 % of total cover: 47.5	20 % of total cover: 19		

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Ilex vomitoria (Yaupon)	45	Y	FAC
2. Quercus nigra (Oak,water)	25	Y	FAC
3. Vaccinium elliottii (Blueberry,elliott)	25	Y	FAC
4. Vaccinium arboreum (Farkleberry)	20		FACU
5. Magnolia grandiflora (Magnolia,large-flower)	15		FAC
6. Ilex opaca (Holly,american)	10		FAC
7.			
8.			
	140	= Total Cover	
50 % of total cover: 70	20 % of total cover: 28		

Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0	= Total Cover	
50 % of total cover: 0	20 % of total cover: 0		

Woody Vine Stratum (Plot size: 30' radiu)			
1. Smilax rotundifolia (Greenbrier,common)	20	Y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
50 % of total cover: 10	20 % of total cover: 4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		X 2 =	
FAC species		X 3 =	
FACU species		X 4 =	
UPL species		X 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

___ 3 – Prevalence Test is ≤ 3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 4/3	100			N/A	N/A	N/A	root & organic matter
1-4	10YR 4/2	98	10YR 5/3	2	C	M	Silt Loam	
4-10	10YR 5/3	97	10YR 5/8	3	C	M	Silt Loam	
10- 18+	10YR 6/3	95	10YR 5/8	5	C	PL/M	Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Stratified Layers (A5)
___Organic Bodies (A6) **(LRR P, T, U)**
___5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___Muck Presence (A8) **(LRR U)**
___1 cm Muck (A9) **(LRR P, T)**
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Coast Prairie Redox (A16) **(MLRA 150A)**
___Sandy Mucky Mineral (S1) **(LRR O, S)**
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Dark Surface (S7) **(LRR P, S, T, U)**
___Polyvalue Below Surface (S8) **(LRR S, T, U)**
___Thin Dark Suface (S9) **(LRR S, T, U)**
___Loamy Gleyed Matrix (F1) **(LRR O)**
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
___Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)
___Marl (F10) **(LRR U)**
___Depleted Ochric (F11) **(MLRA 151)**
___Iron Manganese Masses (F12) **(LRR O, P, T)**
___Umbric Surface (F13) **(LRR P, T, U)**
___Delta Ochric (F17) **(MLRA 151)**
___Reduced Vertic (F18) **(MLRA 150A, 150B)**
___Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___1 cm Muck (A9) **(LRR O)**
___2 cm Muck (A10) **(LRR S)**
___Reduced Vertic (F18) **(outside MLRA 150A,B)**
___Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

Appendix B

PHOTOGRAPHS

Photo 1: Sample plot 1 soil sample.

Photo 2: Sample plot 1 vegetation sample.

Photo 3: Sample plot 2 soil sample.

Photo 4: Sample plot 2 vegetation sample.

Photo 5: Sample plot 3 soil sample.

Photo 6: Sample plot 3 vegetation sample.

Photo 7: Sample plot 4 soil sample.

Photo 8: Sample plot 4 vegetation sample.

Photo 9: Sample plot 5 soil sample.

Photo 10: Sample plot 5 vegetation sample.

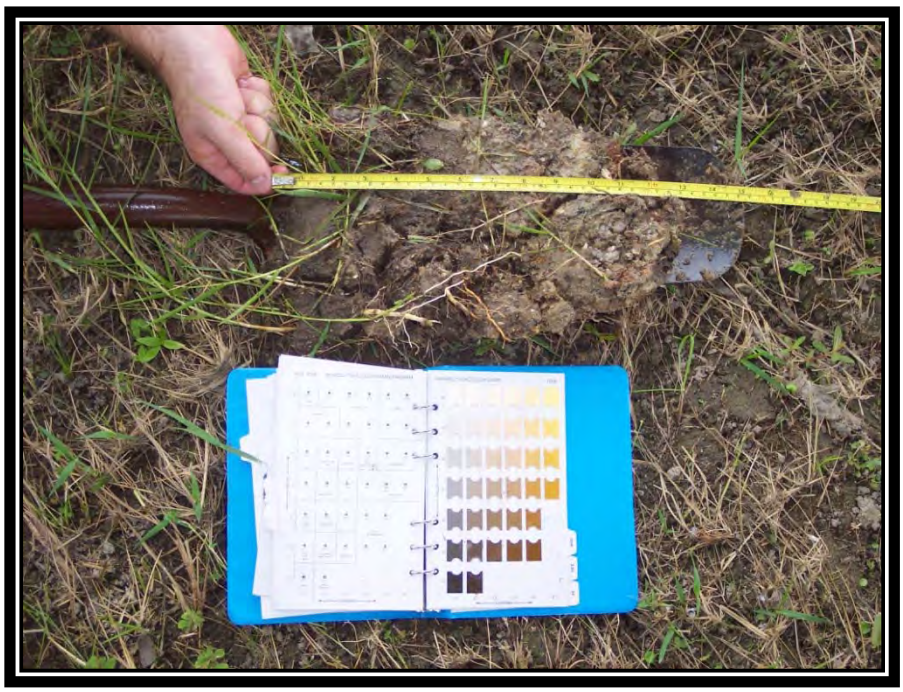


Photo 11: Sample plot 6 soil sample.

Photo 12: Sample plot 6 vegetation sample.

Photo 13: Sample plot 7 soil sample.

Photo 14: Sample plot 7 vegetation sample.

Photo 15: Sample plot 8 soil sample.

Photo 16: Sample plot 8 vegetation sample.

Photo 17. Overview of habitat observed at Sample Plot 9, facing southeast.

Photo. 18. Overview of habitat observed at Sample Plot 9, facing northwest.

Photo 19. Soil profile observed at Sample Plot 10.

Photo. 20. Overview of habitat observed at Sample Plot 10, facing northeast.

Photo 21. Mile Branch of the Tchefuncte River.

Photo 22. Culvert taking Mile Branch under Hwy. 190.

Photo 23. Eastern view of Bogue Falaya River at the Hwy. 190 bridge crossing.

Photo 24. Northern shoreline of the Bogue Falaya River.

Photo 25. Head of roadside ditch, west side of Hwy. 190 bridge.

Photo 26. Southern view of roadside ditch west of Hwy. 190 bridge from Photo 20 location.

Photo 27. Culvert which appears to provide the major water source for the small stream on the east side of Hwy. 190

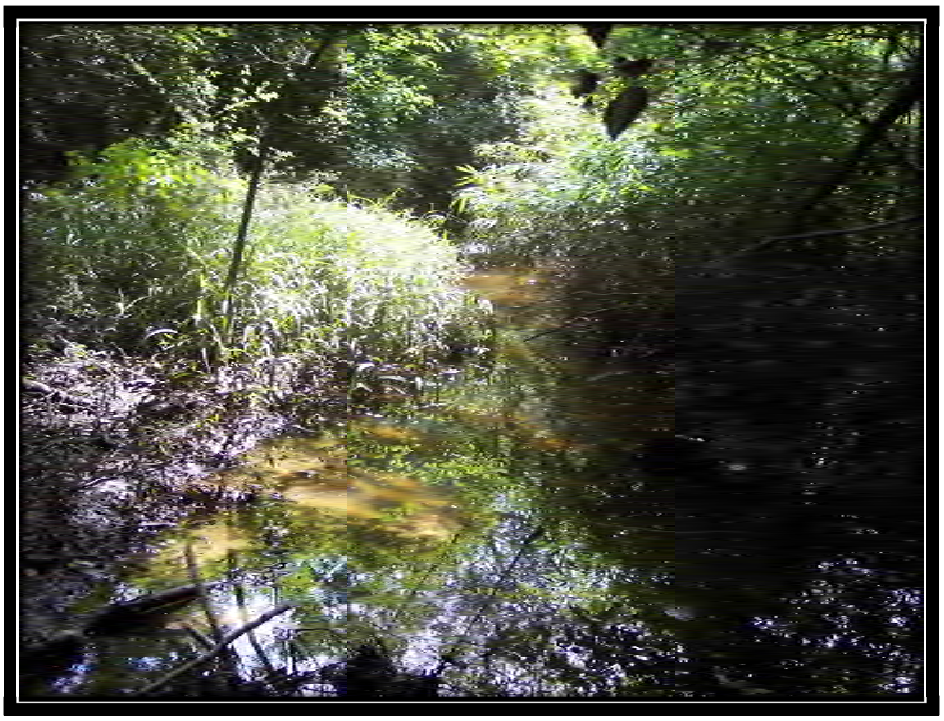


Photo 28. Southern view of small stream east of Hwy. 190 bridge.

Photo 29. Overview of the small intermittent stream crossing under LA 21 at the LA 21/LA 36 intersection.

Photo 30. Overview of the small intermittent stream flowing adjacent to LA 21 at the LA 21/LA 36 intersection.

Photo 31. Typical roadside ditch observed within the US 190 ROW.

Photo 32. Typical roadside ditch observed within the US 190 ROW.

Appendix C

PRELIMINARY JURISDICTIONAL DETERMINATION

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

JAN 1 0 2014

Operations Division
Surveillance and Enforcement Section

Mr. Barry McCoy
G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, Louisiana 70806

Dear Mr. McCoy:

Reference is made to your request, on behalf of the Louisiana Department of Transportation and Development, for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Sections 37 and 38, Township 6 South, Range 11 East, St. Tammany Parish, Louisiana (enclosed map). Specifically, this project is identified the addition of a right turn lane on U.S. 190 at Lee Road.

Based on review of recent maps, aerial photography, soils data, and information provided with your request, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the United States. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into other waters subject to Corps' jurisdiction. Other waters that may be subject to Corps' jurisdiction are indicated in blue on the map. Furthermore, federal projects are known to exist in this area that may require your proposal to undergo further engineering review. For more information, please contact Mr. Don Schneider of our Operations Division at (504) 862-1828.

You are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Should there be any questions concerning these matters, please contact Mr. Rob Heffner at (504) 862-2099 and reference our Account No. MVN-2014-00047-SU. The New Orleans District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please complete the survey on our web site at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

for Martin S. Mayer
Chief, Regulatory Branch

Enclosures

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: New Orleans District | File/ORM #: MVN-2014-00047-SU | PJD Date: Jan 8, 2014

State: LA | City/County: St. Tammany

Nearest Waterbody: Bogue Falaya

Location: TRS, LatLong or UTM: Sec 37 & 38, T 6S, R 11E
L 30.4187°N, Lo 90.0916°W

Name/ Address of Person Requesting PJD: Mr. Barry McCoy
G.E.C., Inc.
8282 Goodwood Blvd.
Baton Rouge, LA 70806

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: [ ] linear ft [ ] width 0.4 acres | Stream Flow: Intermittent

Wetlands: 0.5 acre(s) | Cowardin Class: Palustrine, emergent

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: n/a | Non-Tidal: n/a

☑ Office (Desk) Determination
☐ Field Determination: | Date of Field Trip:

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☑ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☑ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite quad name:
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.sc.egov.usda.gov/default.aspx
- ☑ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Wetlands-Mapper.html
- ☐ State/Local wetland inventory map(s):
- ☑ FEMA/FIRM maps: http://maps.lsuagcenter.com/la_floodmaps/?FIPS=22071
- ☑ 100-year Floodplain Elevation is: approx 20'
- ☑ Photographs: ☑ Aerial (Name & Date): '10, '08, '05, '98
  - ☑ Other (Name & Date): provided with submittal
- ☑ Previous determination(s). File no. and date of response letter: 2005-03218 - October 17, 2005
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

HEFFNER.ROBERT.ALEXANDER.1230208340 — Digitally signed by HEFFNER.ROBERT.ALEXANDER.1230208340 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=HEFFNER.ROBERT.ALEXANDER.1230208340 Date: 2014.01.08 12:41:18 -06'00'

Signature and Date of Regulatory Project Manager (REQUIRED)

blanket request by DOTD received 02/05/13

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: LA DOTD		File Number: MVN-2014-00047-SU	Date: [illegible]
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
	APPROVED JURISDICTIONAL DETERMINATION		D
✓	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

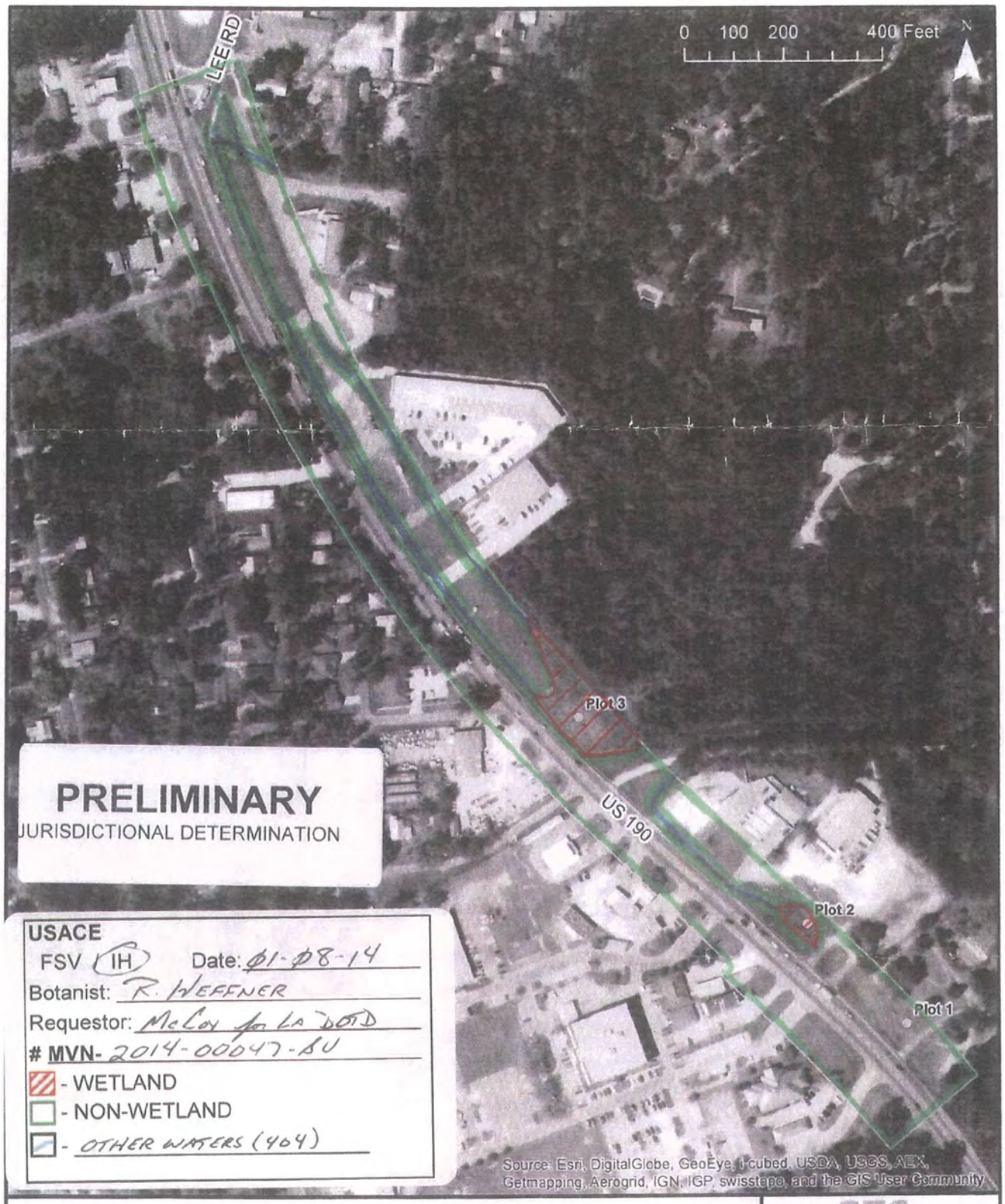
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.



WETLAND DELINEATION

St. Tammany Parish, Louisiana

GEC

Figure: 2
Date: September 2013
Scale: 1:3,200
Source: ESRI/GEC
Map ID: 52.2240412.008-3098

Appendix E

AIR QUALITY AND NOISE EVALUATION

Air Quality and Noise Evaluation for US190 Widening and Improvements from LA25 to US190 Business

St. Tammany Parish, Louisiana

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December 2010

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1.0 INTRODUCTION

This report documents the results of an analysis of the air quality and noise impacts of the widening and improvement of US190, between LA25 and the US190 Business Loop in Covington, Louisiana located within St. Tammany Parish. The current two lane roadway with a center turn lane will be widened to a four lane boulevard design with a center median of varying width and traffic roundabouts at the intersections of US190 and LA437 and US190 and the LA437 spur. Figure 1 shows the general project area. The proposed new alignment is shown in Figure 2.

2.0 AIR QUALITY EVALUATION

This report section summarizes the results of an analysis of the potential air quality effects of the project. The purpose of this analysis is, first, to address the potential for the project to affect air quality standards including transportation conformity requirements; and second, to address the potential Mobile Source Air Toxics (MSATs) effects of the project.

2.1 National Ambient Air Quality Standards (NAAQS)

The United States Environmental Protection Agency (EPA) has established allowable concentrations and exposure limits called the National Ambient Air Quality Standards (NAAQS) for various "criteria" pollutants. These pollutants include carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), sulfur oxides (SO_x), and lead (Pb).

In accordance with the Clean Air Act Amendments of 1990 (CAAA of 1990), EPA identified those areas that did not meet the NAAQS for the criteria pollutants and designated them as "nonattainment" areas. Once a nonattainment area meets the NAAQS, it is redesignated as a "maintenance" area.

St. Tammany Parish including Covington is currently not a nonattainment or maintenance area for any criteria pollutant.

2.2 Transportation Conformity

Transportation conformity is a process required of Metropolitan Planning Organizations (MPOs) pursuant to the Clean Air Act Amendments of (CAAA) of 1990. CAAA require that transportation plans, programs, and projects in nonattainment or maintenance areas that are funded or approved by the Federal Highway Administration (FHWA) be in conformity with the State Implementation Plan (SIP), which represents the State's plan to either achieve or maintain the NAAQS for a particular pollutant.

The proposed project is not located in a nonattainment or maintenance area, so conformity does not apply to this project.

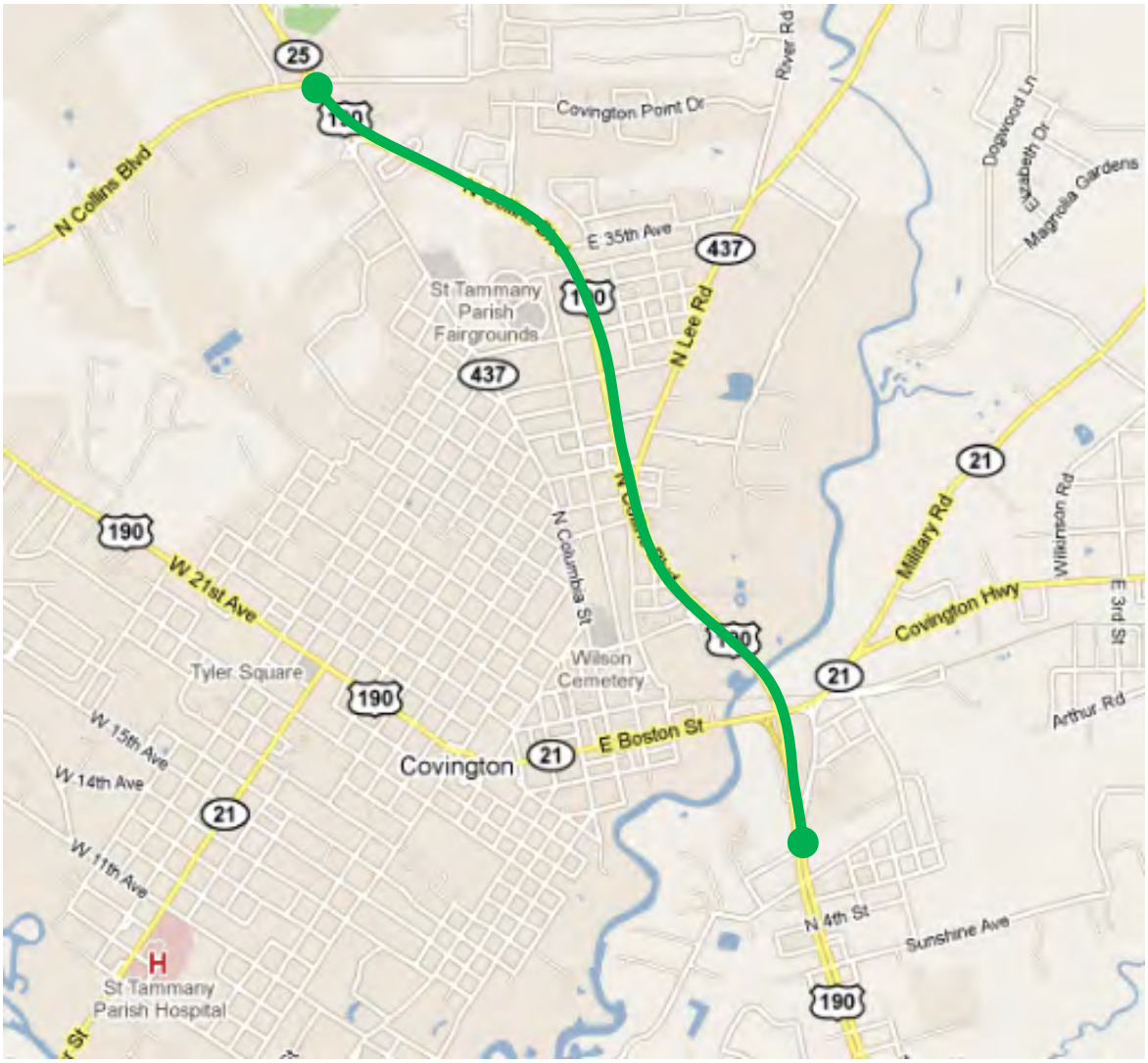


Figure 1: Project Location

2.3 Carbon Monoxide (CO)

Transportation projects have the potential to affect air quality by changing the number of vehicles at specific locations. Tailpipe emissions from vehicles could result in increases in ambient concentrations of carbon monoxide (CO) near the project.

Carbon monoxide (CO) is a colorless, odorless gas that interferes with the delivery of oxygen to a person's organs and tissues. The health effects of CO exposure depend on the duration and intensity of exposure as well as a person's health. CO concentrations are usually higher during the winter months because vehicles emit higher CO emissions in cold weather due to the characteristics of internal combustion engines. The National Ambient Air Quality Standard (NAAQS) for CO include a one-hour standard of 35 parts per million (ppm) and an eight-hour standard of 9 ppm.

The state of Louisiana is in attainment statewide for CO. Past project-level CO "hot spot" analyses on similar projects have revealed no violations of the NAAQS. Carbon monoxide (CO) concentrations are not anticipated to cause or contribute to an exceedance of the CO NAAQS.

2.4 Mobile Source Air Toxics (MSATs)

On February 3, 2006, FHWA released "*Interim Guidance on Air Toxic Analysis in NEPA Documents.*"[1] The purpose of this guidance is to advise on when and how to analyze Mobile Source Air Toxics (MSATs) in the NEPA process for highways. This guidance is interim because MSAT science is still evolving. As the science progresses, FHWA will update the guidance.

A basic analysis of the potential MSAT emissions impacts of this project was completed in accordance with this Interim Guidance. Additional background information regarding MSATs is provided in Appendix A.

Technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions. The qualitative assessment presented below has been prepared in accordance with FHWA's Interim Guidance derived in part from a study conducted by the FHWA entitled *"A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives."* [2]

FHWA's Interim Guidance groups projects into the following categories:

- Exempt Projects or Projects with no Meaningful Potential MSAT Effects;
- Projects with Low Potential MSAT Effects; and,
- Projects with Higher Potential MSAT Effects.

Examples of projects with low potential MSAT emissions include minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street, or where design year traffic projections are less than 140,000 to 150,000 annual average daily traffic (AADT).

The Build Alternative includes the widening of US190 and meets the definition of a project with low potential MSAT effects as the highest design year AADT on US190 is substantially lower than the FHWA

criterion.

For the No-Build and Build Alternatives, the amount of MSATs emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The estimated VMT for the Build Alternative is essentially the same as the VMT for the No-Build Alternative. Therefore, it is expected that there would be no appreciable difference in overall MSAT emissions between the No-Build and Build Alternatives.

Additionally, travel speeds for the Build Alternative will be higher than for the No-Build Alternative. According to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated for the Build Alternative will have the effect of moving some traffic closer to nearby homes and churches; therefore, under the Build Alternative there may be localized areas where ambient concentrations of MSATs could be higher than under the No-Build Alternative. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Substantial construction-related MSAT emissions are not anticipated for this project as construction is not planned to occur over an extended building period. However, construction activity may generate temporary increases in MSAT emissions in the project area.

3.0 NOISE EVALUATION

This study has been prepared in accordance with Federal Highway Administration noise standards, *Procedures for Abatement of Highway Traffic and Construction Noise, 23 CFR 772* [3], and the Louisiana Department of Transportation and Development's (DOTD) *Highway Traffic Noise Policy*. [4]. The noise analysis included the following tasks:

- Identification of noise-sensitive land uses: Identification of existing land uses in the project area that are sensitive to highway traffic noise;
- Determination of existing sound levels: Measurement of existing sound levels at sensitive land uses to characterize the existing noise environment in the project area;
- Determination of future sound levels: Prediction of future, design year, worst-hour sound levels for the No-Build and Build Alternatives;
- Determination of traffic noise impacts: Determination of noise impacts based on the increase in existing sound levels, as well as the future sound levels;
- Noise abatement evaluation: Evaluation of noise abatement for noise-sensitive land uses determined to be impacted by the project;
- Discussion of construction noise; and,
- Coordination with local officials.

Each of these analysis steps is discussed in detail following a discussion of DOTD's criteria for determining noise impacts.

3.1 Criteria for Determining Impacts

3.1.1 Traffic Noise Terminology

Traffic noise levels are expressed in terms of the hourly, A-weighted equivalent sound level in decibels (dBA). A sound level represents the level of the rapid air pressure fluctuations caused by sources such as traffic that are heard as noise. A decibel is a unit that relates the sound pressure of a noise to the faintest sound the young human ear can hear. The A-weighting refers to the amplification or attenuation of the different frequencies of the sound (subjectively, the pitch) to correspond to the way the human ear "hears" these frequencies. Generally, when the sound level exceeds the mid-60 dBA range, outdoor conversation in normal tones at a distance of three feet becomes difficult. A 9-10 dB increase in sound level is typically judged by the listener to be twice as loud as the original sound while a 9-10 dB reduction is judged to be half as loud. Doubling the number of sources (i.e., vehicles) will increase the hourly equivalent sound level by approximately 3 dB, which is usually the smallest change in hourly equivalent A-weighted traffic noise levels that people can detect without specifically listening for the change.

Because most environmental noise fluctuates from moment to moment, it is standard practice to condense data into a single level called the equivalent sound level (L_{eq}). The L_{eq} is a steady sound level that would contain the same amount of sound energy as the actual time-varying sound evaluated over the same time-period. The L_{eq} averages the louder and quieter moments, but gives much more weight to the louder moments in the averaging. For traffic noise assessment purposes, L_{eq} is typically evaluated over the worst one-hour period and is defined as L_{eq} (1h).

The term insertion loss (IL) is generally used to describe the reduction in L_{eq} (1h) at a location after a noise barrier is constructed. For example, if the L_{eq} (1h) at a residence before a barrier is constructed is 75

dBA and the L_{eq} (1h) after a barrier constructed is 65 dBA, then the insertion loss would be 10 dB.

3.1.2 Noise Abatement Criteria (NAC)

Noise impact is determined by comparing future project sound levels: (1) to a set of Noise Abatement Criteria (NAC) for a particular land use category, and (2) to existing sound levels.

The FHWA noise standards (contained in 23 CFR 772) and DOTD's noise policy state that traffic noise impacts that require consideration of abatement occur when worst-hour equivalent sound levels exceed the NAC listed in Table 1.

Table 1: DOTD Noise Abatement Criteria

Activity Category	*L_{eq}(1h) (dBA)*	*Description of Activity*
A	56 (Exterior)	Land on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	71 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped lands.
E	51 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

As shown in Table 1, Category A land uses refer to parks or other areas where low noise levels are essential for the proper use of the area, such as nature areas. Activity Category B land uses include picnic and recreation areas, playgrounds, active sports areas, parks, and the exterior areas of residences, motels, hotels, schools, churches, libraries, and hospitals. Activity Category C includes all developed lands not included in Categories A and B, while Category D includes undeveloped lands. Activity Category E land uses are those Activity Category B areas where there is no outdoor use of the property, so interior noise levels are considered.

DOTD noise policy also defines impacts to occur if there is an increase of 10 dB or more in design year equivalent sound levels above the existing equivalent sound levels. The primary areas of concern for this project are the residential properties located along or adjacent to US190, so the NAC for Activity Category B apply. Therefore, impacts would occur and noise abatement would be considered if future equivalent sound levels for an analysis location were 66 dBA or higher, or if an increase of 10 dB or more in existing equivalent sound levels was predicted.

3.2 Identification of Noise-Sensitive Land Uses

A review of available electronic mapping as well as field reconnaissance revealed residences on both sides of US190 between Industry Drive on the project north end and Riverside Drive on the south end. Residences were also identified near US190 along Clark Street, N. Claiborne Street, N. Lee Road, W. 29th Avenue, E. 30th Avenue, Florida Street, Jessie Jones Street, Edwards Street, Briggs Street, Hornsby Street, E.

34th Avenue, Ozone Park Road and Columbia Street. A total of 74 single family homes or duplexes were found within 500 feet of the proposed edge of roadway.

Other noise-sensitive land uses within 500 feet of the project that might be affected by traffic noise are the Lyon Elementary School, Collins Boulevard Baptist Church, Peace of Mind Preschool, and the Northlake First Assembly of God Church.

The NAC for Activity Category B will apply to these noise-sensitive uses. Noise impacts will be identified and noise abatement will be considered if future sound levels are 66 dBA or higher, or if a substantial increase in existing sound levels (10 dB or more) is predicted.

There are several tracts of Category D undeveloped lands exist along the project. These undeveloped lands are not noise-sensitive and have not been included in the noise analysis. However, noise impacts could occur in the future if noise-sensitive land uses are constructed near US190. A discussion of future sound levels and the need for noise-compatible land use planning is provided later in this report.

3.3 Determination of Existing Sound Levels

Measurements were conducted at DOTD-approved, sensitive land uses on May 11, 2010 between 6:25 am and 6:30 pm. Two RION NL-32 noise meters, which meet ANSI Type 1 standards, were deployed at five different locations for both peak and off-peak noise measurements.

Measurement procedures at a site included:

1. Record measurement and site information on data sheets: equipment parameters, calibration, time, date, distance to key sources or other landmarks and weather parameters (temperature, wind speed and direction).

2. Set the microphone of the analyzer on a tripod at height of approximately 1.5 meters above the ground; place a windscreen on the microphone, which was oriented 70 degrees from the horizontal per manufacturer's recommendations.

3. Calibrate before and after each set of measurements.

4. Measure for desired number of periods.

5. Record notes for the individual one minute periods onto field data sheets.

6. Count and record traffic volumes in five-minute increments during noise measurements.

7. Check data sheets for completeness.

Table 2 summarizes the measured equivalent sound levels at each of the measurement sites. The measurement locations are shown in Figure 2 and are indicated by an “(M)”. The noise measurement data, data sheets, and site photographs are provided in Appendix B.

Noise measurements of at least 15 minute duration were recorded at all sites in one minute interval periods. Background noise was noted, and any one-minute measurement intervals with intrusive, non-representative noise (dogs barking near microphone, sirens, loud car stereos) were eliminated from the

averaging of the measurement data.

Four of the measurement sites were selected as representative of the first row noise-sensitive land uses along US190. The site along Hornsby Street was chosen to be representative of the second row noise sensitive land uses along US190. The measurement site at 815 Collins Boulevard was also used as a reference site to gauge the variation of traffic noise levels throughout the day.

Table 2: Existing Sound Levels at Measurement Locations

Site	*Distance to US190 (ft)*	*Peak Start Time*	*Duration (min)*	*Peak Leq (dBA)*	*Off Peak Start Time*	*Duration (min)*	*Off Peak Leq (dBA)*
Collins Boulevard Baptist Church	130	17:17	20	63.2	13:38	20	64.2
204 Hornsby Street	425	17:47	20	52.5	12:37	20	51.9
111 Edwards Street	200	7:05	25	58.5	15:17	20	58.3
952 N. Lee Road	120	16:43	20	66.7	11:40	22	66.7
815 Collins Boulevard	75	7:47	20	66.1	14:41	20	68.4

As indicated in Table 2, the highest measured equivalent sound level of 68 dBA was recorded at the closest site to US190, 815 Collins Boulevard. The lowest measured sound levels of 52 dBA were recorded at the second row residence along Hornsby Street. Typically the peak hour equivalent sound level was at or slightly below the off-peak. High traffic volumes and congestion resulting in lower vehicle speeds are the cause of the lower peak hour equivalent sound levels. US190 was the dominant noise source at all of the measurement sites with the exception of 952 N. Lee Road where traffic and accelerating westbound vehicles on N. Lee Road were an equal contributor to the noise levels.

LEGEND

Noise Prediction Receptor

Impacted Residence

Figure 2: Noise Prediction Receptors and Impacts

LEGEND

- **Noise Prediction Receptor**
- **Impacted Residence**

Figure 2: Noise Prediction Receptors and Impacts

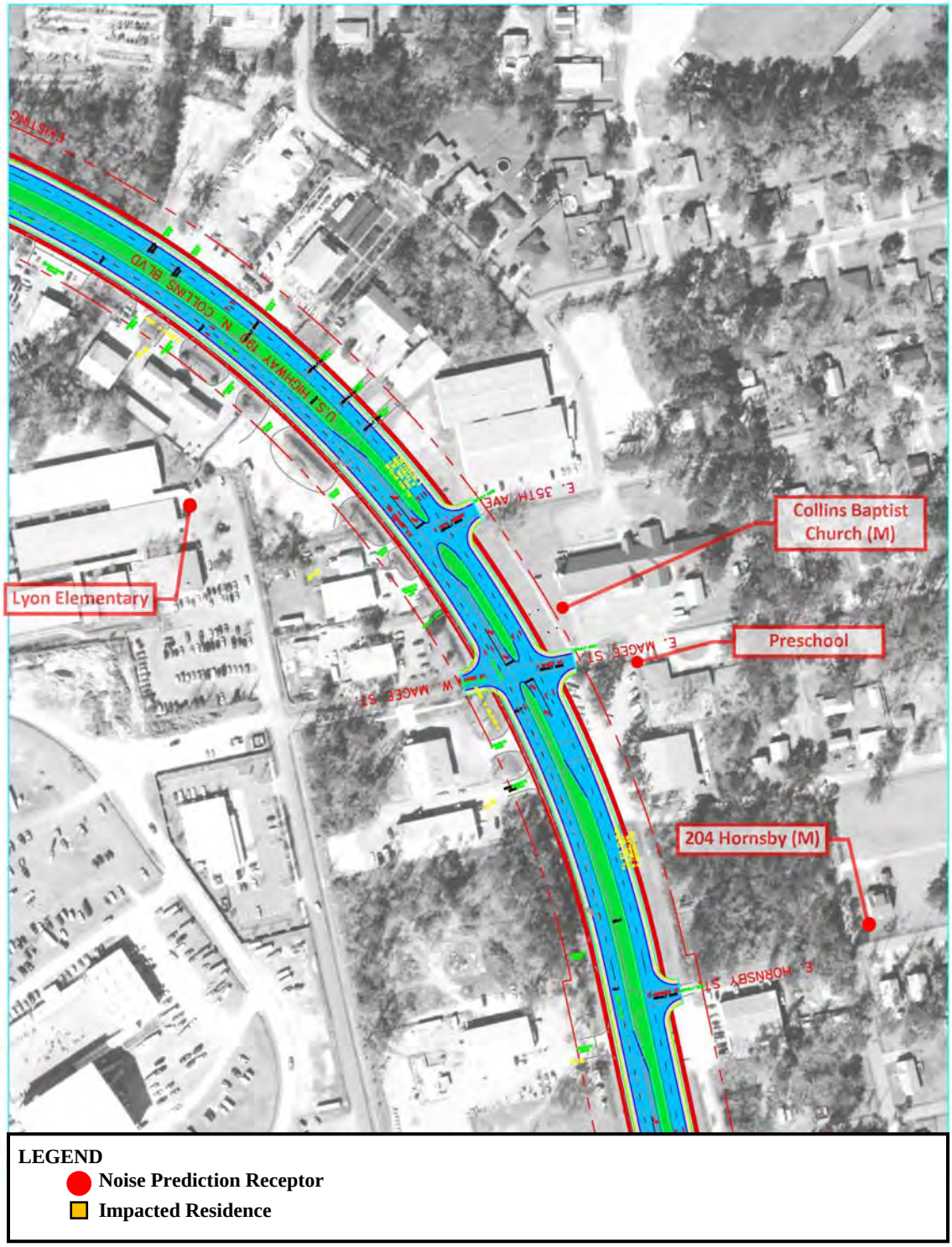
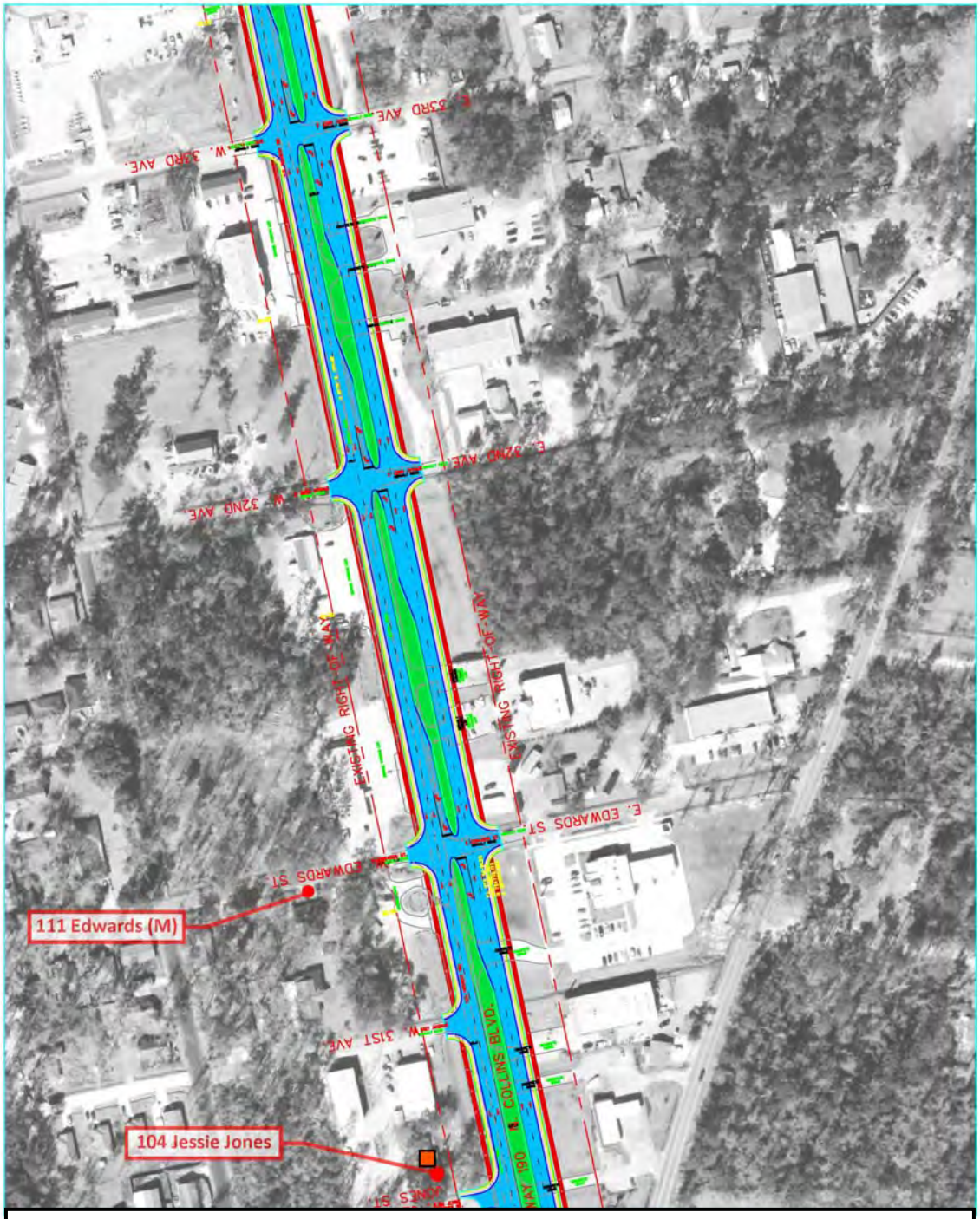


Figure 2: Noise Prediction Receptors and Impacts



LEGEND

- Noise Prediction Receptor
- Impacted Residence

Figure 2: Noise Prediction Receptors and Impacts

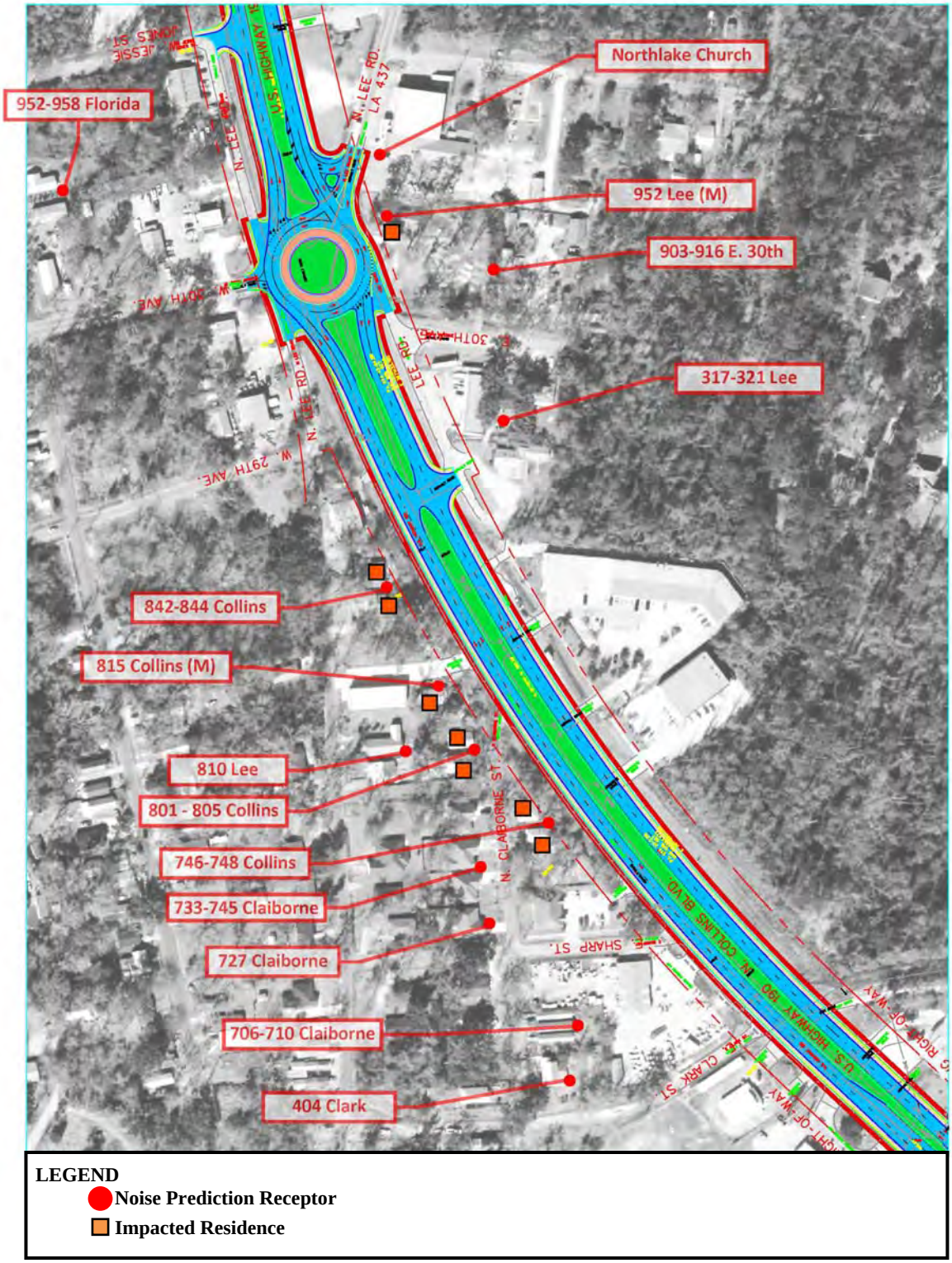


Figure 2: Noise Prediction Receptors and Impacts

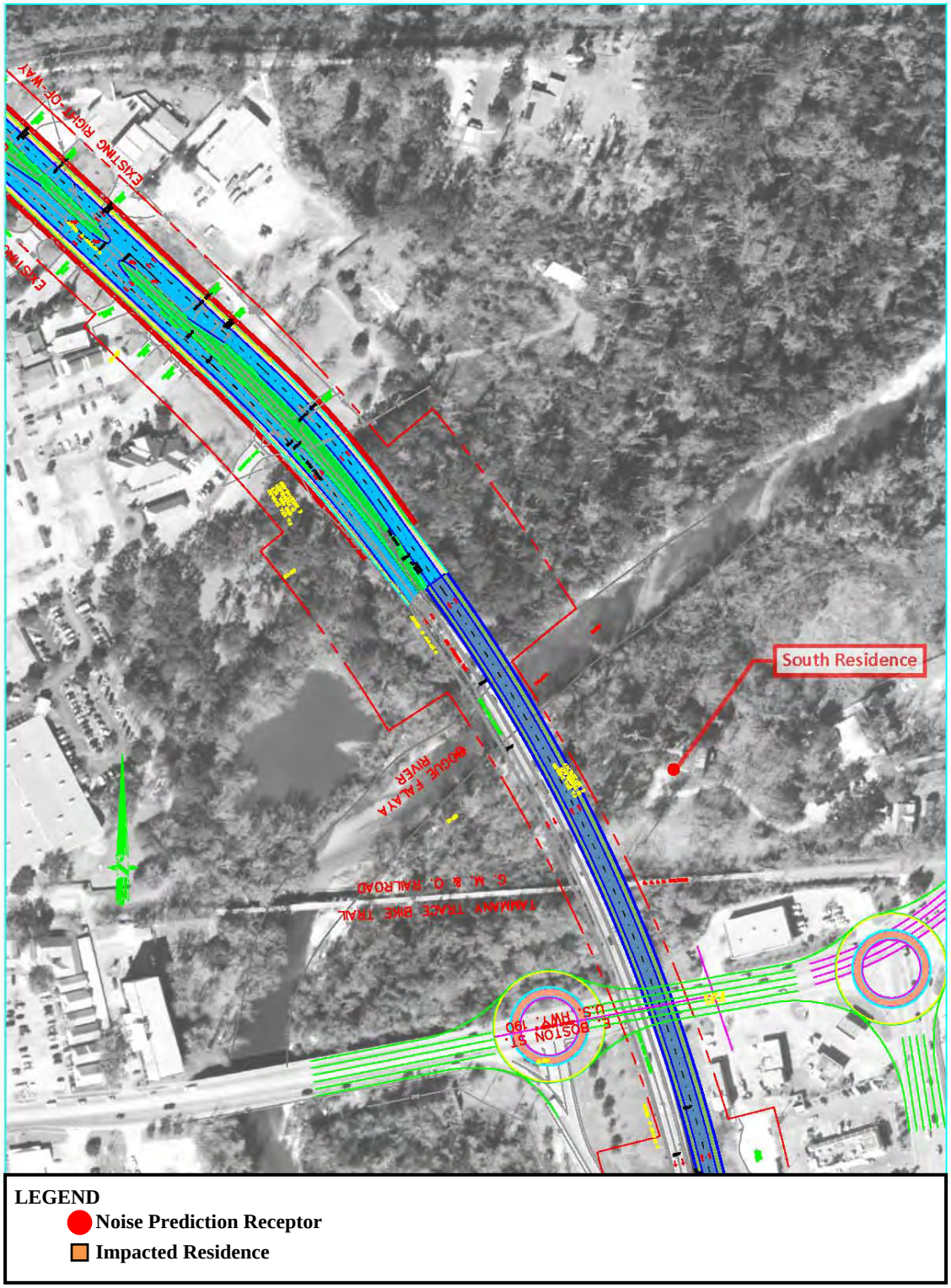


Figure 2: Noise Prediction Receptors and Impacts

3.4 Model Validation

As a check to make sure that TNM was accurately predicting traffic noise levels for the geometry of the project area, model validation was necessary. The traffic count from each first row representative noise measurement session was factored to an hourly volume. That hourly volume was plugged into TNM and the resulting L_{eq} prediction was compared to the measured L_{eq}. The results of this validation process are shown below in Table 3.

Table 3: TNM Model Validation Results

Site	*Distance from US190 (feet)*	*Peak Measured L_{eq} (dB)*	*Peak Predicted L_{eq} (dB)*	*Pred-Meas*	*Off Peak Measured L_{eq} (dB)*	*Off Peak Predicted L_{eq} (dB)*	*Pred-Meas*
Collins Boulevard Baptist Church	130	63.2	61.2	-2.0	64.2	63.0	-1.2
204 Hornsby Street	425	52.5	51.1	-1.4	51.9	53.6	+1.7
111 Edwards Street	200	58.5	58.6	+0.1	58.3	59.7	+1.4
952 N. Lee Road	120	66.7	63.9	-2.8	66.7	64.4	-2.3
815 Collins Boulevard	75	66.1	67.6	+1.5	68.4	67.3	-1.1

In general, the modeled results showed good agreement with the measured L_{eq}. All of the individual predictions were within 3 dB of the measured L_{eq}.

3.5 Prediction of Traffic Noise Equivalent Sound Levels

Krebbs, LaSalle, LeMieux Consultants, Inc. developed and provided traffic counts and traffic projections for the project for the existing year 2010 and the design year 2030. These projections include traffic volumes on US190 and LA437 for the AM and PM peak hours. The design year traffic projections are shown in Appendix C.

TNM traffic noise predictions were made at twenty one representative receptors along the length of the project. Six of these receptors are noise measurement locations discussed in Section 3.3. The other receptors were chosen to represent the noise-sensitive land uses that are within 500 feet of the proposed roadway widening. Each receptor may represent more than one single family home, condominium or apartment. The noise prediction receptors are shown in Figure 2.

Noise predictions were made for both the AM and PM peak hour traffic conditions. The highest predicted level from those two traffic cases was used for each receptor in the Existing Year 2010 and Design Year 2030 cases.

3.5.1 Existing Year 2010

Existing noise levels are determined by modeling the existing US190 geometry and traffic within TNM and then calculating the $L_{eq}(h)$ for each representative noise receptor. Predicted $L_{eq}(h)$ for the Existing Year 2010 case ranged from 53 dBA for the residences along Hornsby Street, Briggs Street and Ozone Park Road up to 69 dBA at the closest residences along US190 (Collins Boulevard). A total of 8 residences are impacted in the Existing Year by noise levels from US190.

3.5.2 No-Build Alternative 2030

Sound levels for the No-Build Alternative can be reasonably estimated by evaluating existing and future traffic volumes on US190.

As noted previously, doubling the traffic on a roadway would result in a 3 dB increase in the sound level at a given receptor assuming all other conditions remain the same. Year 2030 traffic volumes on US190 are predicted to approximately double in the next twenty years. Though the traffic volumes are expected to double (which normally would increase sound levels by 3 dB) this increase in traffic would lead to increased congestion and lowered travel speeds during many hours of the day. Conservatively, the peak sound levels at nearby land uses would increase by approximately 1-2 dB.

As a result, existing sound levels have been increased by 2 dB to arrive at design year 2030 sound levels for the No-Build Alternative at all noise prediction sites. A total of 9 residences are impacted by noise levels for the No-Build Alternative.

3.5.3 Build Alternative 2030

Noise modeling of the Build Alternative was completed using the FHWA Traffic Noise Model (TNM 2.5) computer program. The program calculated design year 2030 equivalent sound levels at the noise-sensitive land uses in the project area, including the measurement locations.

Conceptual design plans and aerial photography data were used to develop the TNM runs.

In developing the TNM files, the points of TNM objects including roadways, receptors, barriers, terrain lines, and building rows were first digitized from the conceptual plans. Then a DXF file was exported out of MicroStation and read into TNM. Those DXF objects were then converted to TNM objects and elevation data was entered.

The posted speed of 45 mph on US190 was modeled for all traffic. Through the roundabouts traffic speeds were lowered to 20mph.

The predicted design year sound levels for the modeled receptors are summarized in Table 4 and are discussed in the following section. TNM plan views showing the locations of the modeled roadways and receptors are provided in Appendix D.

Predicted $L_{eq}(h)$ for the Build Design Year 2030 case ranged from 57 dBA for the second row residences along Hornsby Street, Briggs Street and Ozone Park Road up to 71 dBA at the closest residences to the project along US190 (Collins Boulevard).

Table 4: Predicted Sound Levels and Impact Determination

Receptor	*# of Res*	*2010 L_{eq}(1h) dBA*	*2030 No Build L_{eq}(1h) dBA*	*2030 Build L_{eq}(1h) dBA*	*2030 Build Exceed NAC?*	*Increase >10?*	*Impact?*	*Number of Impacts*
1740 Columbia	1	58.5	60.5	58.7	N	N	N	
Lyon Elementary	0	58.0	60.0	58.4	N	N	N	
Collins Blvd. Baptist Church (M)	0	62.4	64.4	***68.2***	Y	N	*	
Preschool	0	59.5	61.5	63.9	N	N	N	
204 Hornsby (M)	18	53.3	55.3	56.5	N	N	N	
111 Edwards (M)	6	60.4	62.4	60.3	N	N	N	
104 Jesse Jones	1	***66.7***	***68.7***	***67.6***	Y	N	Y	1
952-958 Florida	5	56.3	58.3	57.2	N	N	N	
Northlake Church	0	***66.6***	***68.6***	***70.0***	Y	N	*	
952 Lee (M)	1	64.9	***66.9***	***69.1***	Y	N	Y	1
903-916 E 30th	10	58.6	60.6	60.4	N	N	N	
317-321 Lee	2	57.5	59.5	60.9	N	N	N	
842-844 Collins	2	***68.6***	***70.6***	***69.3***	Y	N	Y	2
815 Collins (M)	1	***67.9***	***69.9***	***69.0***	Y	N	Y	1
810 Lee	10	61.1	63.1	61.7	N	N	N	
801-805 Collins	2	***67.0***	***69.0***	***68.6***	Y	N	Y	2
746-748 Collins	2	***69.0***	***71.0***	***70.7***	Y	N	Y	2
733-745 N Claiborne	3	59.5	61.5	60.7	N	N	N	
727 N Claiborne	2	56.5	58.5	57.8	N	N	N	
706-710 Claiborne	3	57.3	59.3	58.5	N	N	N	
404 Clark	4	56.0	58.0	57.9	N	N	N	
South Residence	1	58.6	60.6	61.8	N	N	N	
							TOTAL	9

Equivalent sound levels above the NAC are indicated in bold italics: ***69.0***

***** Though the equivalent sound level exceeds the NAC these land uses have no exterior activity areas near the project and are thus not impacted.

3.6 Noise Impact Determination Analysis

As noted previously, a Category B land use is impacted if 1) the predicted worst hour L_{eq} (1h) approaches or exceeds the NAC (defined by DOTD as 66 dBA), or 2) a substantial increase (defined by DOTD as an increase of 10 dB or more) in L_{eq} (1h).

Design year sound levels at the receptors located along the widened section of US190 are predicted to be up to 6 dB higher than existing sound levels however the majority of the increases are in the range of 1-3 dB. These increases are not substantial increases according to DOTD policy. Therefore, none of these receptors are predicted to be impacted by a substantial increase in sound level.

As shown in Table 4, design year sound levels at the first row receptors along US190 are predicted to be between 61 and 71 dBA. A total of 9 residences represented by those receptors are predicted to be impacted by the project with design year sound levels of 66 dBA or higher.

In total, 9 residences are predicted to be impacted under the Build Alternative. Those impacted residences are indicated in Figure 2.

The predicted exterior sound level at the Collins Boulevard and Northlake First Assembly of God Churches are above the NAC. However, since neither of these land uses has exterior activity areas there is no impact. The predicted exterior sound levels at both the Peace of Mind Preschool and the Lyon Elementary School are below the NAC.

Table 5: Impact Summary

Case	*Impacts*
2010 Existing	8 Residences
2030 No Build	9 Residences
2030 Build	9 Residences

3.7 Noise Abatement Evaluation

DOTD policy requires the consideration of abatement when traffic noise impacts occur as a result of a project. Noise abatement measures may include alteration of horizontal and vertical alignment and traffic management measures (such as reducing speed limits, prohibition of heavy trucks, etc.). These forms of mitigation have already been taken into consideration in the design and development of the project. Noise barriers would be the best available abatement measures to reduce sound levels for impacted areas.

DOTD requires that a determination of feasibility and reasonableness be made for an abatement measure. For an abatement measure to be feasible, at least one of the impacted receivers must receive a minimum of an 8 dB insertion loss.

DOTD also requires that the cost of any proposed abatement measure be at or below $25,000 per benefited residence. A benefited residence receives at least 5 dB of insertion loss from the abatement measure.

Though there are impacted residences, achieving an 8 dB insertion loss to meet DOTD's feasibility requirement is not possible because of the numerous access points and driveways that connect to US190.

Those access points and driveways would create large gaps in any noise barrier along the edge of shoulder and would drastically reduce the effectiveness of the barrier

3.8 Construction Noise

The construction of the project would result in temporary noise increases for the residences and noise sensitive land uses along US190. Other noise-sensitive land uses are located at a distance far enough from the project area that noise levels would not increase. The noise would be generated primarily from heavy equipment used in hauling materials and building the roadway.

The construction contractor has the responsibility for protection of the general public in all aspects of construction throughout the life of the project. All construction equipment will be required to comply with OSHA Regulations as they apply to the employees' safety, and in accordance with the DOTD Standard Specifications. All construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. In order to minimize the potential for impacts of construction noise on the local residents, the contractor should operate, whenever possible, between the hours of 7:00 a.m. and 5:00 p.m.

3.9 Future Noise Levels on Undeveloped Lands

In order to protect future development from becoming incompatible with anticipated highway traffic noise levels, the best estimation of future noise levels for undeveloped lands will be provided to local officials and planners.

Table 5 presents predicted design year 2030 sound levels for areas near the project where vacant and possibly developable lands exist. Noise predictions were made at distances between 50 and 200 feet from US190. These values do not represent predicted levels at every location at a particular distance away from the roadway. Sound levels will vary by location and will be affected by the shielding of terrain features such as hills and tops of cuts, and the shielding by objects such as buildings.

Table 6: Design Year 2030 Sound Levels – Undeveloped Lands

Distance[(1)]	L_{eq} *(1h) (dBA)*[(2)]
50 ft	72
75 ft	70
100 ft	68
125 ft	67
135 ft	66
150 ft	65
175 ft	64
200 ft	62

(1) Perpendicular distance to the center of near lane.
(2) At-grade situation.

This information is being included to make local officials and planners aware of anticipated highway noise levels so that future development will be compatible with these levels.

4.0 REFERENCES

[1] *Interim Guidance on Air Toxic Analysis in NEPA Documents*, FHWA, February 3, 2006. http://www.fhwa.dot.gov/environment/airtoxic/020306guidmem.htm

[2] Claggett, M., et. al., "A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives," Federal Highway Administration, Resource Center.

[3] Procedures for Abatement of Highway Traffic and Construction Noise, 23 CFR 772, Federal Highway Administration.

[4] *Highway Traffic Noise Policy*, Louisiana Department of Transportation and Development, March, 2004 (Amended for Type II, August 2009).

Appendix A
MSATs Background Information

Mobile Source Air Toxics (MSATs)

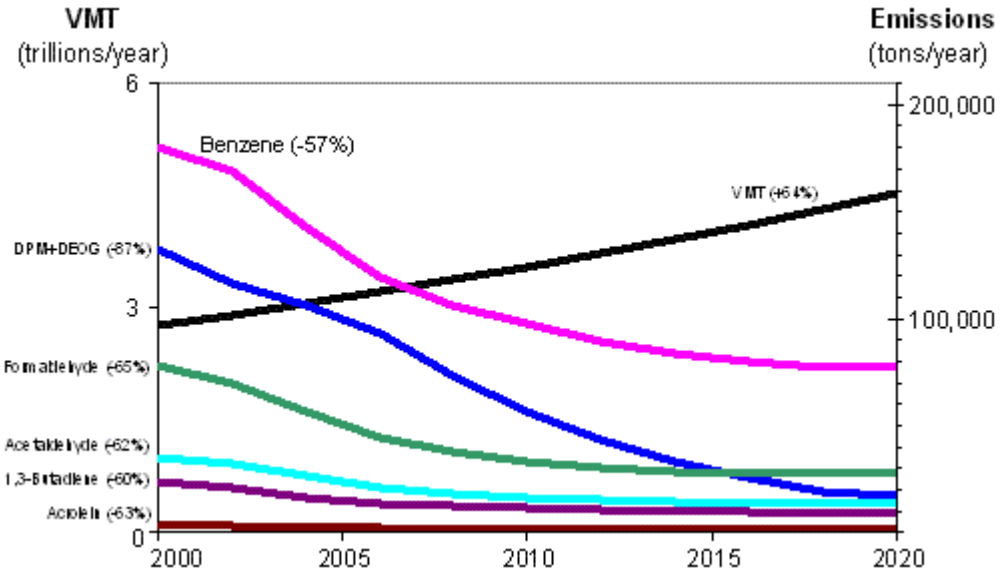
Background

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources, 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in Figure 1.

Figure 1: U.S. Annual Vehicle Miles Traveled (VMT) vs. Mobile Source Air Toxics Emissions 2000-2020*



Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline RVP and oxygenate content are held constant. VMT: Highway Statistics 2000, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO4 from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.
* From FHWA's "*Interim Guidance on Air Toxic Analysis in NEPA Documents.* "

As a result, EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

Unavailable Information for Project Specific MSAT Impact Analysis

The air quality analysis for this project includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable the prediction of the project-specific health impacts of the emission changes associated with the proposed alternative. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Information that is Unavailable or Incomplete. Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

Emissions: The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model--emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

Dispersion. The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum

concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs. Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.

- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems [1]. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable performance of a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community. Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

[1] *South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards,* The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

Appendix B
Noise Measurement Data Sheet, Photos and Data

Collins Boulevard Baptist Church

US190 Widening - Covington, LA
Noise Measurements

Date:	***05/11/10***	***Temperature:***	84°F
Site:	***Collins Blvd Bapt Church***	***Wind:***	4-6 / varying
Description:	***Peak***	***Weather notes:***	sunny
Filename:	***AU2_1187***		

									Traffic									
									SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**		**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	17:17	64.5	66.9	2818383	Y	1			49	3	1	0	0	58	0	1	0	0
2	17:18	62.0	66.2	1584893	Y	1												
3	17:19	65.3	71.2	3388442	Y	1	HT NB											
4	17:20	63.4	67.9	2187762	Y	1	HT SB											
5	17:21	63.2	66.3	2089296	Y	1												
6	17:22	60.5	65.5	1122018	Y	1			41	0	0	0	0	62	2	1	1	0
7	17:23	61.7	64.5	1479108	Y	1												
8	17:24	61.6	64.9	1445440	Y	1												
9	17:25	62.5	65.9	1778279	Y	1												
10	17:26	64.1	67.9	2570396	Y	1	HT NB											
11	17:27	64.1	68.5	2570396	Y	1			39	1	0	0	0	78	2	0	1	0
12	17:28	61.4	66.5	1380384	Y	1	traffic lull											
13	17:29	64.6	69.8	2884032	Y	1												
14	17:30	62.1	67.0	1621810	Y	1												
15	17:31	64.4	66.7	2754229	Y	1												
16	17:32	64.2	67.8	2630268	Y	1			32	0	0	0	0	71	0	1	0	0
17	17:33	62.6	66.2	1819701	Y	1	HT NB											
18	17:34	64.1	68.4	2570396	Y	1												
19	17:35	62.4	65.4	1737801	Y	1												
20	17:36	62.5	67.6	1778279	Y	1												
21				0	N	0												
22				0	N	0												
23				0	N	0												
24				0	N	0												
25				0	N	0												
26				0	N	0												
27				0	N	0												
28				0	N	0												
29				0	N	0												
30				0	N	0												
			Energy Sum	42211312		20		SUM	161	4	1	0	0	269	4	3	2	0	0
			Leq	**63.2**				1-Hr Facto	483	12	3	0	0	807	12	9	6	0	0

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site Collins Blvd Sam. Ct.

Area

Address

Site Sketch

SAME AS PREVIOUS

Weather

Temp 84°, 30% clouds

Wind 4-6 / varying

Direction

Other Notes

AVE 1187

RION/LD/N121# 051072 Cal@ 94.0 Cal Check=

#	Time Start	data start @ 1715 Description
1	1717	
2	18	
3	19	HT NB
4	1720	HT SB
5	21	
6	22	
7	23	
8	24	
9	1725	
10	26	HT NB (finally quiet)
11	27	
12	28	[illegible] :27-:52
13	29	
14	1730	
15	31	
16	32	
17	33	HT NB
18	34	
19	1735	
20	36	
21		
22		END DATA @ 1737
23		
24		
25		
26		
27		
28		
29		
30		

US190 Widening - Covington, LA
Noise Measurements

Date:	***05/11/10***	***Temperature:***	88°F
Site:	***Collins Blvd Bapt Church***	***Wind:***	4-8 / WSW
Description:	***Off-Peak***	***Weather notes:***	sunny
Filename:	***AU2_1183***		

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	13:38	60.8	68.8	1202264	Y	1	severl autos=63	48	2	4	0	0	34	4	2	0	0
2	13:39	67.4	79.5	5495409	Y	1	Loud HT NB										
3	13:40	62.7	66.3	1862087	Y	1											
4	13:41	63.1	67.0	2041738	Y	1											
5	13:42	61.9	72.0	1548817	Y	1											
6	13:43	64.6	72.0	2884032	Y	1		47	4	4	0	0	38	0	3	0	1
7	13:44	62.1	65.9	1621810	Y	1											
8	13:45	62.5	68.8	1778279	Y	1	HT NB										
9	13:46	66.8	73.4	4786301	Y	1	Loud HT SB										
10	13:47	65.1	71.7	3235937	Y	1											
11	13:48	62.6	65.9	1819701	Y	1		48	2	5	0	0	29	4	4	1	0
12	13:49	65.7	73.2	3715352	Y	1	Loud HT NB										
13	13:50	62.2	67.9	1659587	Y	1											
14	13:51	63.6	66.4	2290868	Y	1											
15	13:52	62.9	68.3	1949845	Y	1											
16	13:53	61.0	66.4	1258925	Y	1		53	2	3	2	0	49	2	2	0	0
17	13:54	61.7	65.1	1479108	Y	1											
18	13:55	62.3	66.8	1698244	Y	1	HT SB										
19	13:56	63.2	66.8	2089296	Y	1											
20	13:57	69.2	78.3	8317638	Y	1	HT accel NB										
21				0	N	0											
22				0	N	0											
23				0	N	0											
24				0	N	0											
25				0	N	0											
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	52735237		20	Sum	196	10	16	2	0	150	10	11	1	1
			Leq	**64.2**			1-Hr Facto	588	30	48	6	0	450	30	33	3	3

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site Collins Blvd Bapt. Cd.

Area

Address

Weather

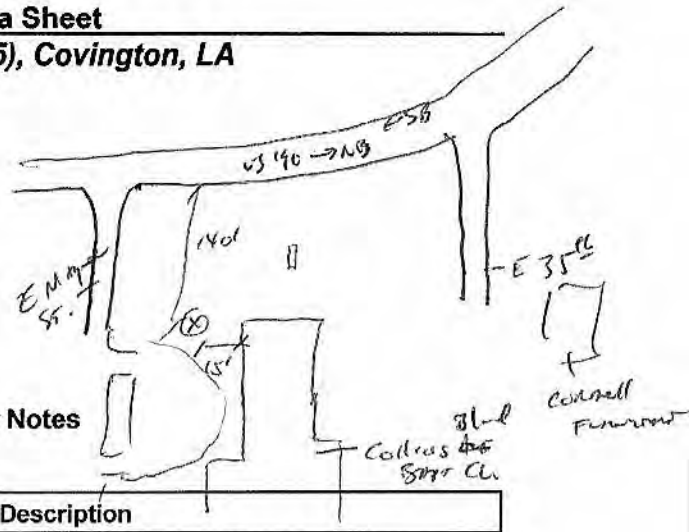
Temp 88°, Sunny

Wind 4-8 / WSW

Direction

RION/LD/N121# 131071 Cal@ 95 94.0 Cal Check=

Site Sketch



Other Notes

AV2-1183

#	Time Start	Description
1	1334	DATA START steady vehs=61-66, semi vehs=63
2	~	
3	1338	
4	39	LOW HT NB
5	1340	
6	41	
7	42	
8	43	
9	44	
10	1345	HT NB
11	46	LOW HT SB :58
12	47	
13	48	
14	49	LOW HT NB
15	1350	
16	51	
17	52	
18	53	
19	54	
20	1355	HT SB
21	56	
22	57	HT Accel NB 2NB, 1 SB HT in minute
23		
24		END DATA @ 1358
25		
26		
27		
28		
29		
30		

AV2-1183

204 Hornsby Street

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 84°F
Site: ***204 Hornsby*** ***Wind:*** 3-5 / S
Description: ***Peak*** ***Weather notes:*** sunny, 30% clouds
Filename: ***AU2_1188***

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	17:47	54.7	58.8	295121	Y	1		42	1	0	0	0	61	1	4	0	0
2	17:48	60.0	71.5	0	N	0	local pk up										
3	17:49	53.7	57.1	234423	Y	1											
4	17:50	54.2	58.4	263027	Y	1											
5	17:51	50.9	53.0	123027	Y	1											
6	17:52	54.3	57.9	0	N	0	local pkup on Briggs	26	0	0	0	0	41	1	0	0	0
7	17:53	50.4	55.0	109648	Y	1											
8	17:54	53.9	60.3	0	N	0	local auto										
9	17:55	51.9	58.5	0	N	0	local suv										
10	17:56	54.8	62.8	0	N	0	local pkup										
11	17:57	53.5	62.1	223872	Y	1		40	0	0	0	0	67	1	0	0	0
12	17:58	51.2	52.5	131826	Y	1											
13	17:59	51.8	52.7	151356	Y	1											
14	18:00	51.4	53.9	138038	Y	1	winds = 6-10 / SSW										
15	18:01	51.4	54.3	138038	Y	1											
16	18:02	59.0	69.6	0	N	0	local pkup	41	0	1	0	0	61	1	1	0	0
17	18:03	52.8	58.3	190546	Y	1	HT SB										
18	18:04	56.5	66.1	0	N	0	local van, dog barking										
19	18:05	50.6	61.6	114815	Y	1											
20	18:06	53.1	57.3	204174	Y	1	HT NB										
21				0	N	0											
22				0	N	0											
23				0	N	0											
24				0	N	0											
25				0	N	0											
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	2317911		13	SUM	149	1	1	0	0	230	4	5	0	0
			Leq	**52.5**			1 Hr. Facto	447	3	3	0	0	690	12	15	0	0

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site 204 Hornsby

Area

Address

Site Sketch

Weather

Temp 84°, sunny, 30% clouds

Wind 3-5/S

Direction

Other Notes

AV2-1188

RION/LD/N121# 151072 Cal@ 94.0 Cal Check= 93.9

#	Time Start	Description
		Date Start 1747
1	1747	local pkd HT NB
2	48	Lwp pkup local HT NB
3	49	
4	1750	pkd on buses / stereo
5	51	
6	52	HT SB, local pkup on buses
7	53	
8	54	local pkd on buses
9	1755	local pkup on Hornsby
10	56	local pkup on Hornsby
11	57	
12	58	
13	59	
14	1800	wind pks up 6-10 / 55N
15	01	
16	02	local pkup on Hornsby
17	03	local pkup on Hornsby HT SB
18	04	local VAH on Hornsby, dog barking
19	1805	
20	06	HT NB, local pkd on buses
21		
22		
23		END DATA 1807
24		
25		
26		
27		
28		
29		
30		

AV2-1188

US190 Widening - Covington, LA
Noise Measurements

Date:	***05/11/10***	***Temperature:***	88°F
Site:	***204 Hornsby***	***Wind:***	4-8 / S
Description:	***Off-Peak***	***Weather notes:***	sunny
Filename:	***AU2_1182***		

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	12:37	49.7	51.9	93325	Y	1	typical US190=49-52	51	0	0	0	0	44	1	0	0	0
2	12:38	51.7	56.2	0	N	0	local vehicle										
3	12:39	49.4	52.0	87096	Y	1											
4	12:40	51.9	55.5	154882	Y	1											
5	12:41	52.3	56.2	0	N	0	pkup local										
6	12:42	51.9	55.5	154882	Y	1	HT NB	59	0	4	0	1	38	1	0	0	0
7	12:43	51.3	54.3	134896	Y	1											
8	12:44	50.3	51.6	107152	Y	1											
9	12:45	51.8	58.2	0	N	0	local SUV										
10	12:46	51.6	56.2	144544	Y	1											
11	12:47	52.6	59.4	181970	Y	1		38	1	5	0	0	33	2	3	1	0
12	12:48	59.6	68.5	0	N	0	Loud HT stack NB, local pkup										
13	12:49	54.2	60.6	0	N	0	local pkup										
14	12:50	51.3	58.0	134896	Y	1											
15	12:51	54.2	61.2	263027	Y	1	2 Loud HTs accel NB										
16	12:52	51.0	53.2	125893	Y	1		58	1	5	0	0	42	2	3	0	1
17	12:53	52.4	54.8	173780	Y	1											
18	12:54	52.6	56.1	181970	Y	1											
19	12:55	51.8	54.8	151356	Y	1											
20	12:56	53.4	57.2	218776	Y	1											
21				0	N	0											
22				0	N	0											
23				0	N	0											
24				0	N	0											
25				0	N	0											
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	2308445		15	Total	206	2	14	0	1	157	6	6	1	1	0
			Leq	**51.9**			1-Hr factor	618	6	42	0	3	471	18	18	3	3	0

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site 204 Hornsby

Area

Address

Weather

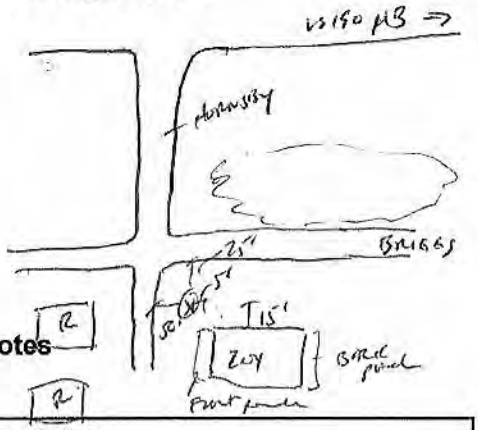
Temp 88°, sunny

Wind 4-8/S

Direction

RION/LD/N121# 157072 Cal@ 94.0

Site Sketch



Other Notes

Cal Check=

#	Time Start	Description
1	1237	typical US190 = 49-52
2	38	local comm Hornsby
3	39	
4	1240	local car
5	41	pickup on Hornsby
6	42	HT NB @ :25
7	43	
8	44	
9	1241	local car @ :55
10	46	
11	47	
12	48	Lord HT some NB. local pickup slow on Briggs
13	49	local pickup Hornsby, local car
14	1250	local car
15	51	2 Lord HTs accel NB
16	52	
17	53	HT SB-pbc smooth
18	54	local pickup Hornsby wind pickup 6-9 /S
19	1255	
20	56	
21		
22		END 0 DATE 1257
23		
24		
25		
26		
27		
28		
29		
30		

AU2-1182

111 Edward Street

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***111 Edwards*** ***Wind:*** 3-4 / SSE
Description: ***Peak*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1180***

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	7:05	57.2	63.0	524807	Y	1	NB auto=58-61	55	2	1	2	0	37	2	2	0	0
2	7:06	56.2	63.3	416869	Y	1	All US190 Noise										
3	7:07	60.0	65.7	1000000	Y	1											
4	7:08	59.8	66.6	954993	Y	1											
5	7:09	61.4	66.8	1380384	Y	1											
6	7:10	62.2	69.5	1659587	Y	1		39	2	0	0	0	21	1	1	0	0
7	7:11	62.0	70.1	1584893	Y	1											
8	7:12	54.2	58.7	263027	Y	1											
9	7:13	64.4	75.3	0	N	0	Local vehicle										
10	7:14	59.6	72.5	0	N	0	Local vehicle										
11	7:15	58.9	63.9	0	N	0	Resident's auto nearby	52	2	1	0	0	27	0	2	0	0
12	7:16	58.5	62.8	707946	Y	1											
13	7:17	57.4	66.7	0	N	0	Local vehicle										
14	7:18	56.8	60.5	478630	Y	1											
15	7:19	53.1	58.2	204174	Y	1											
16	7:20	61.6	69.9	0	N	0	Local vehicle	50	3	1	0	0	32	2	2	0	0
17	7:21	57.5	68.1	562341	Y	1											
18	7:22	57.4	61.2	549541	Y	1											
19	7:23	58.4	65.8	0	N	0	Local vehicle										
20	7:24	55.9	60.9	389045	Y	1											
21	7:25	56.3	61.6	426580	Y	1		49	1	1	0	0	29	2	3	0	0
22	7:26	56.9	65.7	0	N	0	Local vehicle										
23	7:27	58.2	63.9	660693	Y	1											
24	7:28	56.1	61.7	407380	Y	1											
25	7:29	64.7	74.2	0	N	0	School bus on local										
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	12170891		17	SUM	245	10	4	2	0	146	7	10	0	0
			Leq	**58.5**			1-hr. Facto	588	24	10	5	0	350	17	24	0	0

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/4/10

Site 111 Edwards

Area

Address

Weather

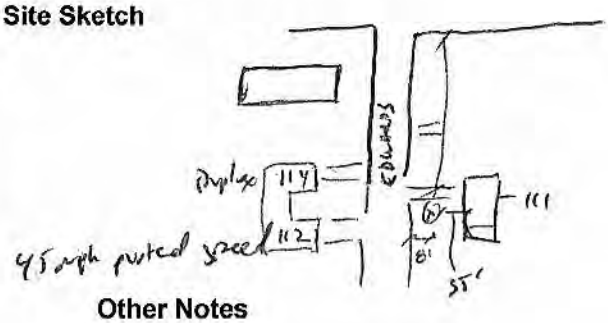
Temp 68°, 60% clouds

Wind 3-4/SSE

Direction

AVZ-1180

Site Sketch



Other Notes

RION/LD/N121# 1S072 Cal@ 94.0 Cal Check=

#	Time Start	Description
1	703	Start sound NB AVG = 58-61, SB = 60-62
2	—	All US190
3	705	sound traffic count
4	06	HT SB traffic SB = 30-35 mph NB = 45 mph
5	07	high vol minute (platoon from Lee HS)
6	08	
7	09	
8	710	Local car?
9	11	Bird near mic NB HT = 64
10	12	No traffic = 46
X 11	13	SB traffic (30-35 mph) = 52-57 Mix-Low X = 72)
X 12	14	NB SB : 90
X 13	715	Resident into filling out of drive
14	16	HT NB
X 15	17	High SB volume, local auto = 67
16	~~18~~ 18	SB is stopped @ Edwards : 20-:45 low speed-25 mph
17	19	HT SB (slow: 20 mph) = 58
X 18	720	local car : 25-:54 SB stopped
19	21	HT NB = upper 60's?
20	22	:50, :10
X 21	23	stopped SB local acq
22	24	SB coming @ 5-10 mph NB = 45 mph
23	725	
X 24	26	local auto
25	27	:12 - :32 SB stopped HT NB = 65 (?)
26	28	
X 27	29	School bus on local: low tones
28		end @ 7:30
29		
30		

AVZ-1180

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 88°F
Site: ***111 Edwards*** ***Wind:*** 6-10 / S
Description: ***Off-Peak*** ***Weather notes:*** sunny
Filename: ***AU2_1185***

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	15:17	59.7	62.8	933254	Y	1		46	0	1	1	0	65	1	0	0	0
2	15:18	56.9	60.8	489779	Y	1											
3	15:19	59.4	69.2	0	N	0	local minvan										
4	15:20	66.8	79.6	0	N	0	Siren SB										
5	15:21	56.8	62.3	478630	Y	1	HT SB										
6	15:22	60.6	69.4	0	N	0	local vehicle	56	1	0	0	0	44	2	1	1	0
7	15:23	56.7	60.9	467735	Y	1											
8	15:24	59.0	65.6	794328	Y	1											
9	15:25	61.5	70.0	0	N	0	local vehicle										
10	15:26	58.1	65.7	645654	Y	1											
11	15:27	58.5	63.8	707946	Y	1		50	2	4	0	0	44	5	3	4	0
12	15:28	58.2	65.1	660693	Y	1											
13	15:29	61.3	68.4	1348963	Y	1	HT SB x 2										
14	15:30	58.8	62.6	758578	Y	1											
15	15:31	58.7	64.8	741310	Y	1	HT NB x 2										
16	15:32	60.5	69.1	0	N	0	local auto	51	2	1	0	0	54	1	0	0	0
17	15:33	55.9	64.2	389045	Y	1											
18	15:34	57.7	66.0	0	N	0	local suv										
19	15:35	58.4	65.9	691831	Y	1	HT SB										
20	15:36	56.5	63.5	446684	Y	1											
21				0	N	0											
22				0	N	0											
23				0	N	0											
24				0	N	0											
25				0	N	0											
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	9554430		14	SUM	203	5	6	1	0	207	9	4	5	0	0
			Leq	**58.3**			1-Hr Facto	609	15	18	3	0	621	27	12	15	0	0

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site 111 EDWARDS

Area

Address

Site Sketch

SAME AS PREVIOUS

Weather

Temp 88°, SUNNY

Wind 6-10/5

Direction

Other Notes

RION/LD/N121# 851072 Cal@ 94.0 Cal Check=

	#	Time Start	Description
	1	1517	start-bike! conly
	2	18	
?	3	19	local motion?
X	4	1520	local ~~auto~~ auto ?, SIREN SB
	5	21	HT SB (quiet)??
X	6	22	long SUV local
	7	23	
	8	24	
X	9	1525	long SUV local
X	10	26	local auto
?	11	27	local auto
	12	28	
	13	29	HT SB x2
	14	1530	
	15	31	HT NB x2
X	16	32	local auto x2
?	17	33	local auto, local lawn from BIKE MEET
?	18	34	local SUV
?	19	1535	local auto, HT SB
	20	36	
	21		
	22		
	23		END MEAS 1537
	24		
	25		
	26		
	27		
	28		
	29		
	30		

A02-1185

952 N. Lee Road

US190 Widening - Covington, LA
Noise Measurements

Date:	***05/11/10***	***Temperature:***	84°F
Site:	***952/958 N. Lee Road, Northlake AOG***	***Wind:***	4-8 / S
Description:	***Peak***	***Weather notes:***	50% clouds
Filename:	***AU2_1186***		

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	16:43	69.6	74.9	9120108	Y	1	HT accel SB=75	79	0	1	0	1	102	1	1	0	0
2	16:44	66.3	69.7	4265795	Y	1											
3	16:45	64.0	70.3	2511886	Y	1	autos on US190 = 62-64										
4	16:46	62.7	67.3	1862087	Y	1											
5	16:47	64.8	70.0	3019952	Y	1											
6	16:48	67.2	75.0	5248075	Y	1	SB HT accel=72	61	1	3	0	0	107	3	0	0	0
7	16:49	66.9	75.7	4897788	Y	1											
8	16:50	66.6	70.2	4570882	Y	1											
9	16:51	65.3	72.2	3388442	Y	1											
10	16:52	67.2	75.6	5248075	Y	1	loud pkup SB=75										
11	16:53	64.0	67.6	2511886	Y	1		60	1	0	0	0	93	4	1	1	0
12	16:54	64.1	68.4	2570396	Y	1											
13	16:55	66.8	72.1	4786301	Y	1	loud pkup=72										
14	16:56	64.6	69.8	2884032	Y	1											
15	16:57	63.8	69.4	2398833	Y	1											
16	16:58	70.1	80.0	10232930	Y	1	dually pkup NB=79	72	5	1	0	0	106	3	1	2	0
17	16:59	65.6	71.8	3630781	Y	1											
18	17:00	71.4	80.0	13803843	Y	1	Loud HT accel=79										
19	17:01	63.8	69.3	2398833	Y	1											
20	17:02	65.6	69.3	3630781	Y	1											
21				0	N	0											
22				0	N	0											
23				0	N	0											
24				0	N	0											
25				0	N	0											
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	92981704		20	SUM	272	7	5	0	1	408	11	3	3	0
			Leq	**66.7**			1 Hr. Facto	816	21	15	0	3	1224	33	9	9	0

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site 958 N. Lee Rd.

Area

Address

Site Sketch

Weather

Temp 84°, 50% clouds

Wind 4-8 15

Direction

Other Notes

AU2 1186

RION/LD/N121# 157072 Cal@ 94.0 Cal Check=

#	Time Start	Description
1	1643	start data / count HT Accel SB US190 = 75
2	44	
3	1645	Auto on US190 = 62-64
4	46	
5	47	
6	48	SB HT Accel = 72 (US190)
7	49	
8	1650	
9	51	
10	52	incl Accel SB = 75
11	53	
12	54	
13	1655	incl Accel = 72
14	56	
15	57	
16	58	Smally NB (Lee Rd) = 79
17	59	
18	1700	incl HT Accel NB US190 = 79
19	01	
20	02	
21		
22		End Traffic 1703
23		
24		
25		
26		
27		
28		
29		
30		

AU2-~~1158~~ 1186

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 86°F
Site: ***952/958 N. Lee Road, Northlake AOG*** ***Wind:*** 3-4 / S
Description: ***Off-peak*** ***Weather notes:*** sunny
Filename: ***AU2_1181***

								Traffic									
								SB					NB				
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
1	11:40	69.2	80.2	8317638	Y	1	pkup accel NB=79	86	1	3	0	0	50	1	2	0	0
2	11:41	62.3	65.2	1698244	Y	1	typical auto NB=62, SB=61-64										
3	11:42	66.0	69.9	3981072	Y	1	HT NB=68										
4	11:43	66.6	75.9	4570882	Y	1											
5	11:44	64.8	70.1	3019952	Y	1											
6	11:45	67.9	75.0	6165950	Y	1	HT accel = 75	59	1	2	0	0	55	2	2	0	0
7	11:46	64.1	67.4	2570396	Y	1											
8	11:47	61.9	66.7	1548817	Y	1	winds=6-8/SSW										
9	11:48	68.6	76.8	7244360	Y	1											
10	11:49	64.7	73.0	2951209	Y	1											
11	11:50	69.6	79.0	9120108	Y	1		64	2	3	1	1	61	2	4	0	1
12	11:51	74.6	84.0	0	N	0	Horn=82										
13	11:52	66.0	69.7	3981072	Y	1											
14	11:53	69.2	73.6	8317638	Y	1											
15	11:54	72.2	81.0	16595869	Y	1											
16	11:55	67.5	77.4	5623413	Y	1		96	1	0	0	0	74	1	5	0	0
17	11:56	61.7	65.9	1479108	Y	1											
18	11:57	64.2	68.5	2630268	Y	1											
19	11:58	63.6	71.5	2290868	Y	1											
20	11:59	64.4	71.3	2754229	Y	1											
21	12:00	64.2	68.7	2630268	Y	1											
22	12:01	65.7	72.6	3715352	Y	1											
23	12:02	63.8	68.4	2398833	Y	1											
24				0	N	0											
25				0	N	0											
26				0	N	0											
27				0	N	0											
28				0	N	0											
29				0	N	0											
30				0	N	0											
			Energy Sum	103605544		22	SUM	305	5	8	1	1	240	6	13	0	1
			Leq	**66.7**			1-hr. Facto	915	15	24	3	3	720	18	39	0	3

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site 958 E Lee Rd. Cov Northlake 1st Assem. of God.

Area

Address

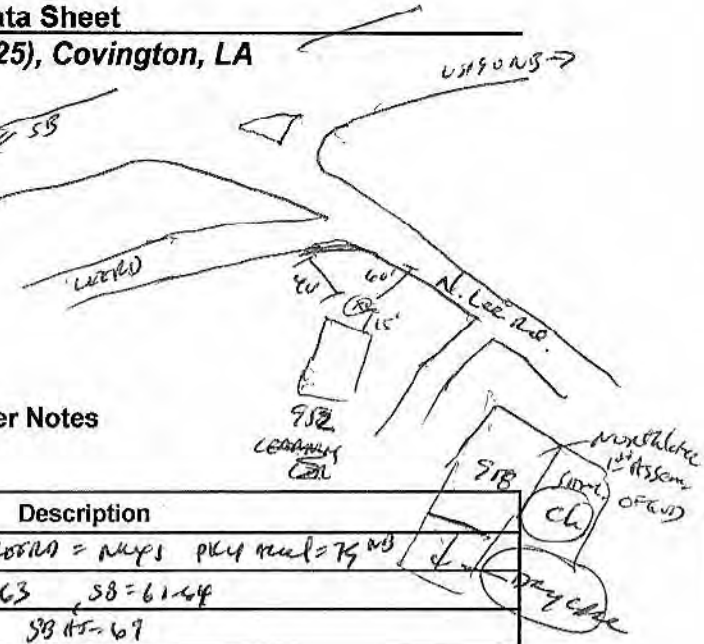
Weather

Temp 86°, Sunny

Wind 3-4/S

Direction

Site Sketch



Other Notes

RION/LD/N121# 157072 Cal@ 94.0 Cal Check=

AV2-1181

#	Time Start	Description
1	1140	START DATA + COUNTS NB LOBRA = MAYS PKU Fuel = 75 NB
2	41	typical NB on Lee pkv = 62 63 SB = 61-64
3	42	HT NB on US190 = 68 SB HT = 67
4	43	SB HT diesel on Lee = 75
5	44	
6	1145	HT diesel SB/Lee = 75
7	46	
8	47	low traffic = 52 57 winds = 6-8/SSW
9	48	HT NB/Lee diesel = 77
10	49	
11	1150	HT diesel NB/Lee = 77
12	51	HT diesel = 82 gasoline = 82
13	52	
14	53	
15	54	Bus idle = 68 HT diesel SB bet = 81
16	1155	HT NB diesel Lee = 74
17	56	
18	57	
19	58	
20	59	
21		LAID DOWN @ 1200
22		
23		
24		
25		
26		
27		
28		
29		
30		

5750 Gain Lee
5737 stopped at Gain 1180
5244
5352 Gain Lee

≈ 2 mins

X

AV2.1181

815 Collins Boulevard
(long term site)

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

Period #	Time Start	Leq	Lmax	Energy	Keep?	Count	Note	Leq 10 min	Leq 20 min	Leq 1hr		Traffic SB Auto	SB MT	SB HT	SB Bus	SB MC	NB Auto	NB MT	NB HT	NB Bus	NB MC
1	6:25	72.6	81.7	18197009	Y	1	HT NB=72, HT SB=81 (stack)	68.7	68.5	68.4											
2	6:26	67.2	72.6	5248075	Y	1		67.9	68.1	68.3											
3	6:27	68.4	72.0	6918310	Y	1	All US190 noise	68.2	68.2	68.3											
4	6:28	68.8	73.8	7585776	Y	1		68.2	68.2	68.3											
5	6:29	67.4	72.1	5495409	Y	1		68.1	68.2	68.2											
6	6:30	68.0	72.6	6309573	Y	1		68.2	68.2	68.2											
7	6:31	65.0	69.8	3162278	Y	1		68.2	68.3	68.2											
8	6:32	67.3	71.2	5370318	Y	1	Leaving site	68.4	68.4	68.2											
9	6:33	68.8	74.4	7585776	Y	1		68.5	68.4	68.1											
10	6:34	68.8	71.4	7585776	Y	1		68.4	68.6	68.1											
11	6:35	68.1	73.0	6456542	Y	1		68.4	68.6	68.0											
12	6:36	70.0	77.4	10000000	Y	1		68.4	68.7	68.0											
13	6:37	68.0	72.7	6309573	Y	1		68.2	68.6	68.0											
14	6:38	68.4	72.6	6918310	Y	1		68.2	68.5	67.9											
15	6:39	67.5	72.2	5623413	Y	1		68.3	68.6	67.9											
16	6:40	68.8	71.7	7585776	Y	1		68.3	68.6	67.9											
17	6:41	68.0	71.6	6309573	Y	1		68.3	68.7	67.8											
18	6:42	68.3	75.6	6760830	Y	1		68.3	68.6	67.8											
19	6:43	67.3	72.5	5370318	Y	1		68.3	68.6	67.7											
20	6:44	68.5	72.5	7079458	Y	1		68.8	68.5	67.7											
21	6:45	68.4	72.8	6918310	Y	1		68.9	68.5	67.7											
22	6:46	68.8	72.0	7585776	Y	1		69.0	68.4	67.6											
23	6:47	67.6	75.7	5754399	Y	1		68.9	68.4	67.6											
24	6:48	69.1	72.5	8128305	Y	1		68.8	68.4	67.6											
25	6:49	68.3	72.2	6760830	Y	1		68.9	68.3	67.6											
26	6:50	68.8	72.6	7585776	Y	1		68.8	68.4	67.5											
27	6:51	67.4	72.3	5495409	Y	1		68.9	68.4	67.4											
28	6:52	68.8	72.3	7585776	Y	1		68.9	68.4	67.4											
29	6:53	71.3	77.7	13489629	Y	1		68.8	68.3	67.3											
30	6:54	68.8	73.1	7585776	Y	1		68.1	68.0	67.2											
31	6:55	69.7	76.7	9332543	Y	1		68.1	68.1	67.3											
32	6:56	67.6	71.3	5754399	Y	1		67.7	67.9	67.2											
33	6:57	66.6	72.5	4570882	Y	1		67.8	68.0	67.2											
34	6:58	69.5	73.0	8912509	Y	1		67.9	68.0	67.2											
35	6:59	67.7	73.2	5888437	Y	1		67.7	67.9	67.1											
36	7:00	69.9	72.2	9772372	Y	1		67.9	68.0	67.1											
37	7:01	66.6	71.6	4570882	Y	1		67.7	67.8	67.0											
38	7:02	67.4	70.3	5495409	Y	1		67.8	67.9	67.0											
39	7:03	64.4	70.2	2754229	Y	1		67.8	68.0	66.9											
40	7:04	68.4	77.1	6918310	Y	1		68.0	68.1	66.9											
41	7:05	66.9	71.0	4897788	Y	1		68.2	68.1	66.9											
42	7:06	68.5	71.8	7079458	Y	1		68.1	68.2	66.9											
43	7:07	67.4	71.3	5495409	Y	1		68.1	68.2	66.9											
44	7:08	68.1	72.7	6456542	Y	1		68.1	68.3	66.8											
45	7:09	69.2	73.9	8317638	Y	1		68.1	68.1	66.8											
46	7:10	68.7	72.6	7413102	Y	1		68.0	68.0	66.8											
47	7:11	66.8	71.1	4786301	Y	1		67.9	67.8	66.9											
48	7:12	67.6	72.6	5754399	Y	1		68.1	67.8	66.8											
49	7:13	67.5	72.7	5623413	Y	1		68.3	67.6	66.8											
50	7:14	69.9	74.0	9772372	Y	1		68.3	67.6	66.8											
51	7:15	66.4	72.5	4365158	Y	1		68.0	67.3	66.7											
52	7:16	68.5	70.9	7079458	Y	1		68.3	67.2	66.7											
53	7:17	67.2	71.4	5248075	Y	1		68.2	67.3	66.7											
54	7:18	67.6	71.7	5754399	Y	1		68.4	67.2	66.8											
55	7:19	68.8	71.6	7585776	Y	1		68.2	67.1	66.8											
56	7:20	67.4	72.2	5495409	Y	1		68.0	66.8	66.9											
57	7:21	68.8	73.6	7585776	Y	1		67.7	66.8	66.9											
58	7:22	69.5	78.2	8912509	Y	1		67.4	66.5	67.0											
59	7:23	67.5	70.4	5623413	Y	1		66.8	66.2	66.9											
60	7:24	67.8	73.6	6025596	Y	1		66.8	66.1	66.9											
61	7:25	69.2	77.1	8317638	Y	1		66.4	66.2	66.9											
62	7:26	67.4	70.8	5495409	Y	1		65.8	65.9	66.9											
63	7:27	69.1	75.2	8128305	Y	1		66.1	65.9	67.0											
64	7:28	64.2	68.7	2630268	Y	1		65.6	65.8	66.9											
65	7:29	66.6	71.1	4570882	Y	1		65.6	65.8	67.0											
66	7:30	62.0	67.9	1584893	Y	1		65.3	65.7	67.0											
67	7:31	66.1	69.1	4073803	Y	1		65.7	65.7	67.1											
68	7:32	62.4	68.1	1737801	Y	1		65.3	65.6	67.1											
69	7:33	67.2	73.6	5248075	Y	1		65.5	65.7	67.2											
70	7:34	61.5	65.9	1412538	Y	1		65.3	65.5	67.3											
71	7:35	65.3	69.2	3388442	Y	1		66.1	66.3	67.4											
72	7:36	69.2	78.8	8317638	Y	1		65.9	66.4	67.4											
73	7:37	65.4	72.7	3467369	Y	1		65.6	66.0	67.3											
74	7:38	64.3	68.1	2691535	Y	1		65.9	66.1	67.3											
75	7:39	62.0	66.4	1584893	Y	1		66.0	66.0	67.4											
76	7:40	66.9	76.2	4897788	Y	1		66.1	66.3	67.5											
77	7:41	61.7	65.3	1479108	Y	1		65.7	66.2	67.5											
78	7:42	65.2	72.0	3311311	Y	1		65.8	66.3	67.5											
79	7:43	65.6	74.0	3630781	Y	1		65.8	66.2	67.5											
80	7:44	68.9	78.5	7762471	Y	1		65.7	66.2	67.6											
81	7:45	62.7	69.1	1862087	Y	1		66.6	66.0	67.6											
82	7:46	67.3	76.0	5370318	Y	1		66.8	66.3	67.6											
83	7:47	68.0	75.5	6309573	Y	1		66.4	66.2	67.6											
84	7:48	65.8	70.2	3801894	Y	1		66.3	66.1	67.6		86	1	0	0	0	73	2	2	0	0
85	7:49	63.4	68.7	2187762	Y	1		66.1	66.1	67.6											
86	7:50	62.2	66.2	1659587	Y	1		66.6	66.5	67.7											
87	7:51	63.7	66.3	2344229	Y	1		66.7	66.8	67.7											
88	7:52	64.8	72.2	3019952	Y	1		66.7	66.9	67.8											
89	7:53	64.5	71.6	2818383	Y	1		66.6	67.0	67.8		76	3	4	0	0	48	1	3	2	0
90	7:54	72.1	82.5	16218101	Y	1		66.7	67.0	67.8											
91	7:55	66.5	75.1	4466836	Y	1		65.3	66.5	68.0											
92	7:56	61.0	63.5	1258925	Y	1		65.7	66.5	68.0											
93	7:57	67.0	71.8	5011872	Y	1		65.9	66.7	68.0											
94	7:58	61.6	65.0	1445440	Y	1		65.8	67.0	68.0		74	3	4	0	2	55	1	4	4	1
95	7:59	68.6	76.9	7244360	Y	1		66.2	67.1	68.0											
96	8:00	64.8	70.4	3019952	Y	1		66.4	67.3	68.0											
97	8:01	62.4	64.7	1737801	Y	1		66.9	67.5	68.0											
98	8:02	64.5	69.7	2818383	Y	1		67.1	67.9	68.0											
99	8:03	65.1	71.8	3235937	Y	1		67.3	68.0	68.0		77	2	1	0	0	57	2	2	4	0
100	8:04	65.5	69.2	3548134	Y	1		67.3	68.1	68.0											
101	8:05	68.7	79.9	7413102	Y	1		67.5	68.3	68.1											
102	8:06	65.6	70.0	3630781	Y	1		67.2	68.3	68.1											
103	8:07	66.3	71.3	4265795	Y	1		67.4	68.4	68.2											
104	8:08	67.0	69.8	5011872	Y	1		67.9	68.5	68.2	SUM	313	9	9	0	2	233	6	11	10	1

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

								Leq	Leq	Leq	Traffic										
											SB					NB					
Period #	**Time Start**	**Leq**	**Lmax**	**Energy**	**Keep?**	**Count**	**Note**	10 min	20 min	1hr	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
105	8:09	69.7	77.2	9332543	Y	1		67.8	68.5	68.2	1-hr. Facto 939	27	27	0	6	699	18	33	30	3
106	8:10	69.1	74.3	8128305	Y	1		68.1	68.4	68.1										
107	8:11	66.3	70.0	4265795	Y	1		68.0	68.3	68.2										
108	8:12	66.9	71.9	4897788	Y	1		68.6	68.4	68.2										
109	8:13	65.6	71.5	3630781	Y	1		68.6	68.5	68.1										
110	8:14	67.1	72.9	5128614	Y	1		68.8	68.8	68.1										
111	8:15	66.7	69.9	4677351	Y	1	Traffic is free flow	68.9	68.8	68.2										
112	8:16	67.4	72.2	5495409	Y	1		69.1	68.8	68.2										
113	8:17	70.3	78.6	10715193	Y	1		69.2	68.8	68.2										
114	8:18	66.5	71.4	4466836	Y	1		69.0	68.6	68.2										
115	8:19	71.1	80.2	12882496	Y	1		69.0	68.6	68.2										
116	8:20	68.1	73.3	6456542	Y	1		68.8	68.4	68.1										
117	8:21	71.4	82.3	13803843	Y	1		68.7	68.4	68.0										
118	8:22	66.7	70.6	4677351	Y	1		68.3	68.1	67.9										
119	8:23	68.9	72.6	7762471	Y	1		68.5	68.1	67.9										
120	8:24	68.6	72.1	7244360	Y	1		68.8	68.2	67.8										
121	8:25	69.0	73.5	7943282	Y	1		68.7	68.1	67.8										
122	8:26	68.9	73.7	7762471	Y	1		68.5	68.0	67.8										
123	8:27	67.9	71.8	6165950	Y	1		68.3	67.9	67.8										
124	8:28	67.4	70.4	5495409	Y	1		68.1	67.8	67.8										
125	8:29	69.1	78.3	8128305	Y	1		68.2	67.9	67.8										
126	8:30	67.0	70.2	5011872	Y	1		68.1	67.8	67.7										
127	8:31	68.7	75.4	7413102	Y	1		68.1	67.9	67.7										
128	8:32	69.1	75.1	8128305	Y	1		68.0	67.9	67.7										
129	8:33	71.0	80.9	12589254	Y	1		67.7	67.7	67.7										
130	8:34	67.7	74.8	5888437	Y	1		67.6	67.5	67.7										
131	8:35	65.9	70.5	3890451	Y	1		67.4	68.3	67.7										
132	8:36	66.7	71.8	4677351	Y	1		67.5	68.4	67.7										
133	8:37	65.6	72.6	3630781	Y	1		67.5	68.3	67.7										
134	8:38	68.3	73.9	6760830	Y	1		67.5	68.3	67.7										
135	8:39	68.0	76.6	6309573	Y	1		67.5	68.2	67.7										
136	8:40	67.3	72.4	5370318	Y	1		67.5	68.1	67.7										
137	8:41	67.1	72.2	5128614	Y	1		67.7	68.1	67.7										
138	8:42	66.2	72.4	4168694	Y	1		67.9	68.0	67.7										
139	8:43	70.6	80.9	11481536	Y	1		67.8	68.0	67.7										
140	8:44	65.3	70.1	3388442	Y	1		67.4	67.7	67.6										
141	8:45	66.8	70.8	4786301	Y	1		69.1	68.0	67.6										
142	8:46	66.6	72.0	4570882	Y	1		69.1	68.2	67.7										
143	8:47	66.9	70.7	4897788	Y	1		69.0	68.2	67.7										
144	8:48	67.7	72.1	5888437	Y	1		69.0	68.2	67.7										
145	8:49	68.0	74.7	6309573	Y	1		68.8	68.1	67.7										
146	8:50	68.9	72.5	7762471	Y	1		68.7	68.1	67.7										
147	8:51	69.4	73.7	8709636	Y	1		68.5	68.2	67.6										
148	8:52	63.4	74.4	2187762	Y	1		68.1	68.1	67.5										
149	8:53	67.7	72.6	5888437	Y	1		68.2	68.1	67.5										
150	8:54	74.8	84.8	30199517	Y	1		68.0	68.1	67.6										
151	8:55	67.2	73.8	5248075	Y	1		66.5	67.5	67.3										
152	8:56	62.2	67.0	1659587	Y	1		66.9	67.4	67.3										
153	8:57	67.0	71.8	5011872	Y	1		67.2	67.5	67.4										
154	8:58	63.7	68.6	2344229	Y	1		67.2	67.6	67.4										
155	8:59	66.9	72.3	4897788	Y	1		67.4	67.7	67.4										
156	9:00	66.5	70.8	4466836	Y	1		67.3	67.6	67.5										
157	9:01	63.0	69.0	1995262	Y	1		67.9	67.6	67.5										
158	9:02	66.9	71.0	4897788	Y	1		68.1	67.6	67.5										
159	9:03	64.9	69.5	3090295	Y	1		68.0	67.5	67.5										
160	9:04	70.6	77.2	11481536	Y	1		68.1	67.5	67.5										
161	9:05	69.6	78.7	9120108	Y	1		68.2	67.1	67.5										
162	9:06	67.5	74.3	5623413	Y	1		67.9	67.2	67.4										
163	9:07	67.1	70.7	5128614	Y	1		67.8	67.1	67.4										
164	9:08	66.1	70.0	4073803	Y	1		67.9	67.2	67.3										
165	9:09	66.0	69.7	3981072	Y	1		67.9	67.2	67.3										
166	9:10	71.1	82.5	12882496	Y	1		67.8	67.3	67.4										
167	9:11	66.6	70.2	4570882	Y	1		67.1	67.0	67.3										
168	9:12	64.7	70.5	2951209	Y	1		67.0	67.1	67.3										
169	9:13	66.6	71.2	4570882	Y	1		67.0	67.2	67.3										
170	9:14	71.3	81.3	13489629	Y	1		66.8	67.5	67.3										
171	9:15	66.8	71.1	4786301	Y	1		65.6	67.3	67.2										
172	9:16	66.2	72.3	4168694	Y	1		66.3	67.3	67.2										
173	9:17	68.0	72.4	6309573	Y	1		66.2	67.3	67.2										
174	9:18	66.0	72.1	3981072	Y	1		66.3	67.2	67.2										
175	9:19	65.1	70.0	3235937	Y	1		66.5	67.2	67.2										
176	9:20	65.5	70.7	3548134	Y	1		66.7	67.4	67.2										
177	9:21	64.9	69.4	3090295	Y	1		67.0	67.4	67.2										
178	9:22	64.2	67.6	2630268	Y	1		67.1	67.5	67.2										
179	9:23	63.7	67.7	2344229	Y	1		67.3	67.5	67.2										
180	9:24	63.5	68.0	2238721	Y	1		68.0	67.6	67.2										
181	9:25	70.3	78.6	10715193	Y	1		68.5	67.7	67.3										
182	9:26	66.1	72.2	4073803	Y	1		68.1	67.7	67.2										
183	9:27	68.2	71.5	6606934	Y	1		68.1	67.7	67.3										
184	9:28	67.6	71.8	5754399	Y	1		68.0	67.7	67.3										
185	9:29	67.8	72.5	6025596	Y	1		67.9	67.6	67.3										
186	9:30	67.9	72.5	6165950	Y	1		67.9	67.5	67.3										
187	9:31	66.8	70.7	4786301	Y	1		67.7	67.5	67.2										
188	9:32	67.3	70.4	5370318	Y	1		67.8	67.4	67.2										
189	9:33	70.8	80.7	12022644	Y	1		67.7	67.2	67.2										
190	9:34	69.4	74.9	8709636	Y	1		67.2	67.3	67.2										
191	9:35	67.0	73.2	5011872	Y	1		66.8	67.1	67.2										
192	9:36	65.7	71.9	3715352	Y	1		67.3	67.2	67.1										
193	9:37	67.3	73.8	5370318	Y	1		67.3	67.3	67.1										
194	9:38	66.2	71.3	4168694	Y	1		67.3	67.3	67.1										
195	9:39	68.1	73.2	6456542	Y	1		67.2	67.4	67.2										
196	9:40	65.6	74.5	3630781	Y	1		67.2	67.4	67.2										
197	9:41	68.1	74.4	6456542	Y	1		67.2	67.6	67.2										
198	9:42	65.8	72.1	3801894	Y	1		66.8	67.5	67.2										
199	9:43	67.1	72.3	5128614	Y	1		66.7	67.6	67.3										
200	9:44	66.5	74.4	4466836	Y	1		67.3	67.5	67.3										
201	9:45	70.3	77.6	10715193	Y	1		67.4	67.6	67.2										
202	9:46	65.4	70.7	3467369	Y	1		67.1	67.3	67.2										
203	9:47	67.3	77.6	5370318	Y	1		67.4	67.3	67.2										
204	9:48	64.9	70.6	3090295	Y	1		67.2	67.2	67.2										
205	9:49	67.6	72.5	5754399	Y	1		67.6	67.2	67.2										
206	9:50	66.0	71.9	3981072	Y	1		67.7	67.4	67.2										
207	9:51	63.6	70.4	2290868	Y	1		67.9	67.3	67.2										
208	9:52	63.4	72.5	2187762	Y	1		68.1	67.6	67.3										

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

Period #	Time Start	Leq	Lmax	Energy	Keep?	Count	Note	Leq 10 min	Leq 20 min	Leq 1hr	Traffic SB Auto	SB MT	SB HT	SB Bus	SB MC	NB Auto	NB MT	NB HT	NB Bus	NB MC
209	9:53	71.1	80.3	12882496	Y	1		68.3	67.6	67.3										
210	9:54	67.2	75.3	5248075	Y	1		67.6	67.3	67.2										
211	9:55	68.3	70.9	6760830	Y	1		67.7	67.2	67.3										
212	9:56	68.6	73.0	7244360	Y	1		67.5	67.1	67.3										
213	9:57	65.4	71.4	3467369	Y	1		67.2	67.0	67.5										
214	9:58	68.7	75.1	7413102	Y	1		67.1	67.2	67.6										
215	9:59	68.9	75.8	7762471	Y	1		66.8	67.0	67.7										
216	10:00	68.0	74.6	6309573	Y	1		67.0	66.9	67.6										
217	10:01	67.0	70.4	5011872	Y	1		66.6	66.7	67.6										
218	10:02	67.2	70.1	5248075	Y	1		67.0	66.6	67.6										
219	10:03	65.4	70.2	3467369	Y	1		66.8	66.5	67.6										
220	10:04	68.1	75.5	6456542	Y	1		66.8	66.5	67.7										
221	10:05	65.4	69.9	3467369	Y	1		66.7	66.4	67.7										
222	10:06	65.8	73.1	3801894	Y	1		66.8	66.7	67.7										
223	10:07	63.5	72.8	2238721	Y	1		66.7	66.8	67.7										
224	10:08	66.0	75.9	3981072	Y	1		67.2	67.0	67.7										
225	10:09	70.3	78.2	10715193	Y	1		67.2	67.0	67.6										
226	10:10	62.6	68.6	1819701	Y	1		66.7	66.8	67.6										
227	10:11	69.7	79.2	9332543	Y	1		66.8	66.9	67.6										
228	10:12	64.2	69.4	2630268	Y	1		66.2	66.7	67.5										
229	10:13	65.9	73.9	3890451	Y	1		66.3	66.8	67.5										
230	10:14	66.5	75.4	4466836	Y	1		66.2	67.0	67.5										
231	10:15	66.6	70.0	4570882	Y	1		66.2	67.1	67.5										
232	10:16	65.6	71.6	3630781	Y	1		66.5	67.1	67.5										
233	10:17	68.8	77.3	7585776	Y	1		66.8	67.1	67.5										
234	10:18	65.9	70.6	3890451	Y	1		66.9	67.0	67.5										
235	10:19	67.0	71.6	5011872	Y	1		66.8	67.2	67.5										
236	10:20	65.1	68.4	3235937	Y	1		66.8	67.3	67.5										
237	10:21	64.5	69.7	2818383	Y	1		66.9	67.3	67.6										
238	10:22	64.9	69.0	3090295	Y	1		67.1	67.5	67.7										
239	10:23	65.3	71.7	3388442	Y	1		67.3	67.6	67.7										
240	10:24	66.3	70.5	4265795	Y	1		67.7	67.7	67.8										
241	10:25	69.1	77.5	8128305	Y	1		67.9	67.6	67.8										
242	10:26	68.0	76.2	6309573	Y	1		67.6	67.6	67.7										
243	10:27	69.2	76.2	8317638	Y	1		67.4	67.6	67.7										
244	10:28	65.6	71.3	3630781	Y	1		67.2	67.4	67.7										
245	10:29	67.1	73.5	5128614	Y	1		67.6	67.4	67.8										
246	10:30	66.5	72.9	4466836	Y	1		67.8	67.5	67.8										
247	10:31	66.6	71.5	4570882	Y	1		67.7	67.5	67.9										
248	10:32	67.4	71.8	5495409	Y	1		68.0	67.5	68.0										
249	10:33	69.1	73.6	8128305	Y	1		68.0	67.6	68.0										
250	10:34	68.7	77.6	7413102	Y	1		67.8	67.5	68.0										
251	10:35	66.5	70.1	4466836	Y	1		67.3	67.4	68.0										
252	10:36	65.4	69.9	3467369	Y	1		67.5	67.6	68.0										
253	10:37	74.3	85.9	0	N	0	Elevated Lmax and Leq	67.7	68.6	68.1										
254	10:38	69.1	78.8	8128305	Y	1		67.7	68.6	68.0										
255	10:39	69.3	77.6	8511380	Y	1		67.3	68.7	68.0										
256	10:40	65.3	70.1	3388442	Y	1		67.0	68.5	68.0										
257	10:41	68.9	76.0	7762471	Y	1		67.2	68.5	68.0										
258	10:42	67.1	76.8	5128614	Y	1		66.9	68.5	68.0										
259	10:43	67.4	76.7	5495409	Y	1		67.1	68.6	68.0										
260	10:44	62.9	67.2	1949845	Y	1		67.2	68.6	68.0										
261	10:45	68.3	74.4	6760830	Y	1		67.6	68.7	68.1										
262	10:46	68.0	74.7	6309573	Y	1		67.6	68.6	68.0										
263	10:47	67.2	73.8	5248075	Y	1		69.3	68.6	68.0										
264	10:48	65.4	70.0	3467369	Y	1		69.5	68.5	68.0										
265	10:49	76.8	87.2	0	N	0	Elevated Lmax and Leq	70.0	68.4	68.0										
266	10:50	70.5	80.3	0	N	0		69.6	68.3	68.0										
267	10:51	66.6	72.6	4570882	Y	1		69.3	68.2	68.0										
268	10:52	68.3	73.6	6760830	Y	1		69.5	68.2	68.0										
269	10:53	68.4	75.2	6918310	Y	1		69.6	68.0	68.1										
270	10:54	67.6	72.5	5754399	Y	1		69.5	67.9	68.1										
271	10:55	68.7	80.0	7413102	Y	1		69.5	67.9	68.2										
272	10:56	74.5	84.3	28183829	Y	1		69.3	67.8	68.2										
273	10:57	69.3	77.3	8511380	Y	1		67.9	66.9	68.0										
274	10:58	70.5	79.7	11220185	Y	1		67.4	66.7	67.9										
275	10:59	65.1	72.0	3235937	Y	1		66.6	66.5	67.8										
276	11:00	65.0	69.1	3162278	Y	1		66.7	66.6	67.9										
277	11:01	69.0	77.6	7943282	Y	1		66.6	66.8	67.9										
278	11:02	69.1	82.0	8128305	Y	1		66.2	66.8	67.9										
279	11:03	67.7	73.2	5888437	Y	1		65.7	66.9	67.8										
280	11:04	67.0	71.4	5011872	Y	1		65.5	66.8	67.8										
281	11:05	65.9	70.6	3890451	Y	1		65.5	66.8	67.8										
282	11:06	67.0	71.8	5011872	Y	1		65.5	66.9	67.8										
283	11:07	61.9	68.4	1548817	Y	1		65.5	67.0	67.8										
284	11:08	63.7	66.6	2344229	Y	1		66.0	67.2	67.9										
285	11:09	65.4	70.4	3467369	Y	1		66.3	67.4	67.9										
286	11:10	63.5	67.3	2238721	Y	1		66.5	67.5	68.1										
287	11:11	66.1	68.8	4073803	Y	1		67.0	68.0	68.2										
288	11:12	65.3	73.8	3388442	Y	1		67.4	68.2	68.3										
289	11:13	66.2	69.9	4168694	Y	1		67.8	68.3	68.4										
290	11:14	67.0	75.6	5011872	Y	1		67.9	68.5	68.4										
291	11:15	66.1	73.1	4073803	Y	1		67.9	68.5	68.4										
292	11:16	67.3	70.7	5370318	Y	1		67.9	68.6	68.4										
293	11:17	67.2	72.0	5248075	Y	1		68.1	68.6	68.4										
294	11:18	67.6	72.0	5754399	Y	1		68.1	68.6	68.4										
295	11:19	67.0	69.5	5011872	Y	1		68.2	68.6	68.4										
296	11:20	68.9	75.5	7762471	Y	1		68.3	68.6	68.4										
297	11:21	69.4	78.4	8709636	Y	1		68.8	68.6	68.4										
298	11:22	69.9	77.6	9772372	Y	1		69.0	68.5	68.4										
299	11:23	66.9	69.7	4897788	Y	1		68.6	68.4	68.4										
300	11:24	66.9	71.9	4897788	Y	1		69.1	68.4	68.4										
301	11:25	66.4	70.7	4365158	Y	1		69.0	68.4	68.4										
302	11:26	69.2	77.0	8317638	Y	1		69.2	68.5	68.5										
303	11:27	67.5	71.2	5623413	Y	1		69.0	68.4	68.4										
304	11:28	68.7	76.7	7413102	Y	1		69.0	68.3	68.5										
305	11:29	67.6	71.6	5754399	Y	1		68.9	68.2	68.4										
306	11:30	72.3	82.0	16982437	Y	1		68.9	68.2	68.4										
307	11:31	70.3	77.7	10715193	Y	1		68.3	67.9	68.3										
308	11:32	66.3	70.6	4265795	Y	1		67.9	67.7	68.2										
309	11:33	71.2	80.1	13182567	Y	1		68.2	67.9	68.2										
310	11:34	65.7	68.5	3715352	Y	1		67.6	67.7	68.1										
311	11:35	68.4	73.9	6918310	Y	1		67.7	68.2	68.4										
312	11:36	67.4	69.8	5495409	Y	1		67.6	68.2	68.4										

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

Period #	Time Start	Leq	Lmax	Energy	Keep?	Count	Note	Leq 10 min	Leq 20 min	Leq 1hr	Traffic SB Auto	SB MT	SB HT	SB Bus	SB MC	NB Auto	NB MT	NB HT	NB Bus	NB MC
313	11:37	67.2	71.1	5248075	Y	1		67.6	68.2	68.4										
314	11:38	66.9	70.3	4897788	Y	1		67.5	68.2	68.4										
315	11:39	67.3	73.9	5370318	Y	1		67.5	68.2	68.4										
316	11:40	68.9	75.3	7762471	Y	1		67.4	68.2	68.4										
317	11:41	66.9	72.0	4897788	Y	1		67.4	68.1	68.4										
318	11:42	69.2	72.8	8317638	Y	1		67.5	68.2	68.5										
319	11:43	66.6	70.1	4570882	Y	1		67.6	68.1	68.4										
320	11:44	67.4	70.5	5495409	Y	1		67.8	68.1	68.4										
321	11:45	67.4	70.8	5495409	Y	1		68.7	68.1	68.4										
322	11:46	66.9	72.2	4897788	Y	1		68.8	68.0	68.5										
323	11:47	66.9	71.7	4897788	Y	1		68.8	68.0	68.5										
324	11:48	66.4	70.2	4365158	Y	1		68.8	68.0	68.6										
325	11:49	66.7	70.8	4677351	Y	1		68.8	68.0	68.5										
326	11:50	68.3	72.2	6760830	Y	1		68.9	68.6	68.6										
327	11:51	68.4	72.6	6918310	Y	1		68.8	68.8	68.6										
328	11:52	69.6	77.5	9120108	Y	1		68.8	69.0	68.6										
329	11:53	68.5	72.1	7079458	Y	1		68.5	69.0	68.5										
330	11:54	72.9	83.6	19498446	Y	1		68.3	68.9	68.5										
331	11:55	68.5	71.8	7079458	Y	1		67.5	68.5	68.4										
332	11:56	66.9	70.1	4897788	Y	1		67.2	68.5	68.4										
333	11:57	66.8	70.6	4786301	Y	1		67.1	68.5	68.4										
334	11:58	66.3	70.0	4265795	Y	1		67.1	68.5	68.4										
335	11:59	68.6	76.4	7244360	Y	1		67.2	68.5	68.4										
336	12:00	66.6	69.8	4570882	Y	1		68.3	68.5	68.4										
337	12:01	68.4	76.8	6918310	Y	1		68.8	68.4	68.4										
338	12:02	66.2	71.6	4168694	Y	1		69.1	68.4	68.4										
339	12:03	66.8	70.1	4786301	Y	1		69.4	68.6	68.4										
340	12:04	68.4	74.2	6918310	Y	1		69.4	68.7	68.4										
341	12:05	65.6	67.4	3630781	Y	1		69.4	68.7	68.4										
342	12:06	66.1	69.3	4073803	Y	1		69.5	68.8	68.5										
343	12:07	66.7	75.0	4677351	Y	1		69.5	68.9	68.6										
344	12:08	67.2	75.2	5248075	Y	1		69.5	69.0	68.5										
345	12:09	73.4	84.5	21877616	Y	1		69.5	68.9	68.6										
346	12:10	71.1	81.2	12882496	Y	1		68.7	68.5	68.4										
347	12:11	71.4	80.0	13803843	Y	1		68.1	68.2	68.3										
348	12:12	69.8	77.3	9549926	Y	1		67.6	67.9	68.2										
349	12:13	67.3	71.9	5370318	Y	1		67.6	67.7	68.1										
350	12:14	67.4	69.6	5495409	Y	1		67.8	67.7	68.1										
351	12:15	67.5	70.9	5623413	Y	1		67.8	68.6	68.1										
352	12:16	66.7	69.6	4677351	Y	1		68.1	68.5	68.1										
353	12:17	67.5	71.2	5623413	Y	1		68.2	68.5	68.1										
354	12:18	67.1	70.7	5128614	Y	1		68.3	68.5	68.1										
355	12:19	67.6	72.2	5754399	Y	1		68.2	68.6	68.1										
356	12:20	65.6	68.8	3630781	Y	1		68.2	68.6	68.1										
357	12:21	68.3	71.6	6760830	Y	1		68.4	68.7	68.1										
358	12:22	70.0	79.7	10000000	Y	1		68.1	68.7	68.1										
359	12:23	68.4	71.1	6918310	Y	1		67.9	68.6	68.0										
360	12:24	68.2	74.0	6606934	Y	1		67.6	68.5	68.0										
361	12:25	69.5	78.4	8912509	Y	1		69.2	68.5	68.0										
362	12:26	68.3	77.1	6760830	Y	1		69.0	68.7	68.0										
363	12:27	68.5	77.2	7079458	Y	1		68.9	68.7	67.9										
364	12:28	66.4	71.5	4365158	Y	1		68.7	68.6	67.9										
365	12:29	67.5	70.3	5623413	Y	1		69.0	68.6	67.9										
366	12:30	67.7	70.8	5888437	Y	1		69.0	68.7	67.9										
367	12:31	64.7	68.8	2951209	Y	1		69.0	68.8	67.9										
368	12:32	67.7	71.1	5888437	Y	1		69.3	68.8	68.0										
369	12:33	65.7	69.4	3715352	Y	1		69.3	68.8	67.9										
370	12:34	75.0	86.2	31622777	Y	1		69.3	68.8	67.9										
371	12:35	67.2	74.8	5248075	Y	1		67.7	68.0	67.6										
372	12:36	66.7	70.0	4677351	Y	1		68.4	68.1	67.6										
373	12:37	66.5	69.3	4466836	Y	1		68.5	68.2	67.6										
374	12:38	69.6	78.3	9120108	Y	1		68.5	68.2	67.6										
375	12:39	67.6	72.0	5754399	Y	1		68.2	68.1	67.5										
376	12:40	67.7	72.7	5888437	Y	1		68.4	68.1	67.5										
377	12:41	69.2	76.1	8317638	Y	1		68.5	68.2	67.6										
378	12:42	67.6	71.5	5754399	Y	1		68.3	68.0	67.5										
379	12:43	66.6	71.7	4570882	Y	1		68.2	68.0	67.5										
380	12:44	67.6	71.6	5754399	Y	1		68.2	68.1	67.5										
381	12:45	71.9	81.5	15488166	Y	1		68.3	68.1	67.6										
382	12:46	67.3	76.4	5370318	Y	1		67.7	68.0	67.5										
383	12:47	67.3	70.4	5370318	Y	1		67.8	68.0	67.5										
384	12:48	65.8	69.8	3801894	Y	1		67.8	67.9	67.5										
385	12:49	69.2	74.8	8317638	Y	1		68.0	68.1	67.5										
386	12:50	69.0	78.1	7943282	Y	1		67.7	67.9	67.4										
387	12:51	66.5	71.1	4466836	Y	1		67.8	67.8	67.4										
388	12:52	66.5	70.3	4466836	Y	1		67.7	67.8	67.4										
389	12:53	67.0	73.5	5011872	Y	1		67.9	67.8	67.4										
390	12:54	68.6	75.3	7244360	Y	1		67.9	67.8	67.4										
391	12:55	68.4	77.2	6918310	Y	1		67.9	67.7	67.4										
392	12:56	68.6	73.4	7244360	Y	1		68.2	67.8	67.4										
393	12:57	66.2	69.1	4168694	Y	1		68.2	67.6	67.4										
394	12:58	68.8	75.5	7585776	Y	1		68.2	67.5	67.4										
395	12:59	66.4	70.3	4365158	Y	1		68.1	67.4	67.4										
396	13:00	69.4	79.0	8709636	Y	1		68.1	67.4	67.4										
397	13:01	64.4	68.3	2754229	Y	1		67.7	67.2	67.4										
398	13:02	68.7	73.0	7413102	Y	1		67.9	67.3	67.5										
399	13:03	67.3	73.2	5370318	Y	1		67.6	67.1	67.4										
400	13:04	68.5	75.0	7079458	Y	1		67.6	67.3	67.5										
401	13:05	70.7	82.1	11748976	Y	1		67.5	67.2	67.5										
402	13:06	74.6	85.5	0	N	0	Elevated Lmax and Leq	67.2	66.9	67.4										
403	13:07	65.9	68.6	3890451	Y	1		67.0	66.9	67.4										
404	13:08	68.4	75.0	6918310	Y	1		66.9	66.9	67.4										
405	13:09	65.9	69.0	3890451	Y	1		66.6	66.9	67.4										
406	13:10	66.5	71.8	4466836	Y	1		66.6	67.0	67.4										
407	13:11	66.6	73.0	4570882	Y	1		66.6	67.0	67.4										
408	13:12	65.9	69.6	3890451	Y	1		66.6	67.1	67.4										
409	13:13	67.1	71.7	5128614	Y	1		66.7	67.0	67.4										
410	13:14	67.7	76.1	5888437	Y	1		67.0	67.0	67.4										
411	13:15	69.1	78.4	8128305	Y	1		66.9	66.9	67.4										
412	13:16	65.4	68.3	3467369	Y	1		66.6	66.7	67.3										
413	13:17	63.9	66.9	2454709	Y	1		66.7	66.8	67.4										
414	13:18	65.6	69.5	3630781	Y	1		67.0	66.9	67.4										
415	13:19	66.6	69.2	4570882	Y	1		67.2	66.9	67.4										
416	13:20	66.0	68.8	3981072	Y	1		67.3	67.0	67.5										

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

Period #	Time Start	Leq	Lmax	Energy	Keep?	Count	Note	Leq 10 min	Leq 20 min	Leq 1hr	Traffic SB Auto	SB MT	SB HT	SB Bus	SB MC	NB Auto	NB MT	NB HT	NB Bus	NB MC
417	13:21	67.0	70.1	5011872	Y	1		67.4	67.2	67.5										
418	13:22	66.4	70.7	4365158	Y	1		67.5	67.2	67.5										
419	13:23	69.4	80.2	8709636	Y	1		67.4	67.3	67.5										
420	13:24	75.6	87.4	0	N	0	Elevated Lmax and Leq	66.9	67.2	67.5										
421	13:25	66.9	76.1	4897788	Y	1		66.9	67.3	67.4										
422	13:26	66.4	68.7	4365158	Y	1		66.9	67.5	67.5										
423	13:27	67.5	72.8	5623413	Y	1		66.9	67.5	67.5										
424	13:28	67.8	76.2	6025596	Y	1		66.8	67.4	67.5										
425	13:29	67.1	73.5	5128614	Y	1		66.6	67.4	67.5										
426	13:30	67.5	70.0	5623413	Y	1		66.6	67.4	67.5										
427	13:31	67.6	71.4	5754399	Y	1		67.0	67.3	67.5										
428	13:32	64.8	69.8	3019952	Y	1		66.9	67.3	67.5										
429	13:33	66.1	72.5	4073803	Y	1		67.3	67.5	67.4										
430	13:34	66.4	75.5	4365158	Y	1		67.4	67.5	67.4										
431	13:35	66.7	71.0	4677351	Y	1		67.8	67.6	67.3										
432	13:36	66.3	70.3	4265795	Y	1		68.2	67.6	67.2										
433	13:37	73.3	84.5	0	N	0	Elevated Lmax and Leq	68.1	67.7	67.2										
434	13:38	66.5	72.8	4466836	Y	1		67.9	67.8	67.2										
435	13:39	67.1	72.0	5128614	Y	1		68.1	67.9	67.2										
436	13:40	69.5	76.7	8912509	Y	1		68.1	67.9	67.2										
437	13:41	67.1	70.7	5128614	Y	1		67.7	67.9	67.2										
438	13:42	68.5	74.7	7079458	Y	1		67.6	67.8	67.2										
439	13:43	67.5	73.5	5623413	Y	1		67.7	67.8	67.1										
440	13:44	69.4	79.6	8709636	Y	1		67.7	67.9	67.2										
441	13:45	69.8	77.2	9549926	Y	1		67.4	67.8	67.2										
442	13:46	65.6	70.3	3630781	Y	1		67.1	67.6	67.2										
443	13:47	66.0	70.6	3981072	Y	1		67.2	67.7	67.2										
444	13:48	73.0	84.8	0	N	0	Elevated Lmax and Leq	67.7	67.7	67.2										
445	13:49	67.3	73.4	5370318	Y	1		67.7	67.7	67.4										
446	13:50	65.7	69.6	3715352	Y	1		67.8	67.7	67.4										
447	13:51	66.7	69.9	4677351	Y	1		68.1	67.7	67.5										
448	13:52	68.6	76.7	7244360	Y	1		68.0	67.7	67.5										
449	13:53	67.6	72.5	5754399	Y	1		67.9	67.6	67.5										
450	13:54	67.7	75.9	5888437	Y	1		68.2	67.7	67.5										
451	13:55	67.4	73.3	5495409	Y	1		68.1	67.7	67.4										
452	13:56	67.0	69.8	5011872	Y	1		68.1	67.6	67.4										
453	13:57	69.8	76.5	9549926	Y	1		68.0	67.6	67.4										
454	13:58	67.5	72.7	5623413	Y	1		67.7	67.4	67.4										
455	13:59	68.2	70.6	6606934	Y	1		67.8	67.4	67.4										
456	14:00	69.1	77.4	8128305	Y	1		67.7	67.4	67.4										
457	14:01	66.1	68.7	4073803	Y	1		67.4	67.4	67.3										
458	14:02	67.9	71.2	6165950	Y	1		67.4	67.4	67.3										
459	14:03	69.6	77.1	9120108	Y	1		67.3	67.3	67.3										
460	14:04	67.3	70.6	5370318	Y	1		67.1	67.2	67.2										
461	14:05	66.8	75.8	4786301	Y	1		67.1	67.1	67.3										
462	14:06	66.3	69.1	4265795	Y	1		66.9	67.2	67.3										
463	14:07	66.8	70.6	4786301	Y	1		67.1	67.3	67.3										
464	14:08	68.0	73.3	6309573	Y	1		67.0	67.3	67.3										
465	14:09	67.7	73.5	5888437	Y	1		66.9	67.3	67.3										
466	14:10	65.7	69.7	3715352	Y	1		67.2	67.3	67.3										
467	14:11	66.3	70.6	4265795	Y	1		67.4	67.3	67.3										
468	14:12	67.0	71.0	5011872	Y	1		67.4	67.4	67.4										
469	14:13	68.7	75.1	7413102	Y	1		67.4	67.2	67.4										
470	14:14	66.9	70.1	4897788	Y	1		67.2	66.8	67.3										
471	14:15	64.5	69.1	2818383	Y	1		67.2	66.6	67.3										
472	14:16	67.6	73.7	5754399	Y	1		67.5	66.4	67.4										
473	14:17	66.6	69.1	4570882	Y	1		67.4	66.1	67.4										
474	14:18	66.8	73.4	4786301	Y	1		67.6	66.2	67.4										
475	14:19	69.5	75.2	8912509	Y	1		67.7	66.2	67.4										
476	14:20	68.5	73.5	7079458	Y	1		67.4	66.0	67.4										
477	14:21	65.2	71.6	3311311	Y	1		67.2	65.9	67.3										
478	14:22	67.2	69.8	5248075	Y	1		67.4	66.1	67.4										
479	14:23	67.5	70.4	5623413	Y	1		66.9	66.0	67.4										
480	14:24	66.2	71.0	4168694	Y	1		66.3	66.2	67.4										
481	14:25	68.4	74.7	6918310	Y	1		65.8	66.4	67.4										
482	14:26	66.8	70.8	4786301	Y	1		64.9	66.7	67.4										
483	14:27	68.2	71.0	6606934	Y	1		64.0	66.7	67.3										
484	14:28	68.0	72.3	6309573	Y	1		63.7	66.7	67.4										
485	14:29	67.0	70.6	5011872	Y	1		63.7	67.3	67.4										
486	14:30	66.8	70.0	4786301	Y	1		63.7	67.2	67.4										
487	14:31	65.1	69.0	0	N	0	Changin batteries	63.8	67.3	67.6										
488	14:32			1	Y	1		64.4	67.2	67.6										
489	14:33			1	Y	1		64.9	67.6	67.6										
490	14:34			1	Y	1		66.1	67.8	67.7										
491	14:35			1	Y	1		66.9	67.9	67.8										
492	14:36			1	Y	1		67.9	68.1	67.8										
493	14:37	66.8	70.0	4786301	Y	1	Data started again	68.3	68.4	67.9										
494	14:38	68.0	72.6	6309573	Y	1		68.3	68.4	67.9										
495	14:39	67.0	71.1	5011872	Y	1		69.1	68.4	67.9										
496	14:40	67.3	73.1	5370318	Y	1		69.0	68.4	67.9										
497	14:41	67.6	72.4	5754399	Y	1		69.0	68.4	67.9	56	1	2	0	0	66	2	3	0	0
498	14:42	66.0	69.1	3981072	Y	1	(on site)	69.0	68.3	67.9										
499	14:43	69.8	78.6	9549926	Y	1	Loud HT SB	69.2	68.4	68.0										
500	14:44	69.4	77.3	8709636	Y	1	loud pkup exhaust NB	69.1	68.2	67.9										
501	14:45	70.7	80.6	11748976	Y	1	Loud HT SB	68.8	68.1	67.9										
502	14:46	67.7	73.3	5888437	Y	1	HT NB	68.4	67.9	67.8	46	1	4	0	1	68	0	4	0	1
503	14:47	66.7	74.3	4677351	Y	1		68.5	68.0	67.8										
504	14:48	73.0	82.5	19952623	Y	1	Loud HT SB x 2	68.5	68.0	67.8										
505	14:49	66.1	71.4	4073803	Y	1		67.2	67.3	67.7										
506	14:50	67.7	72.5	5888437	Y	1		67.5	67.4	67.7										
507	14:51	66.4	71.2	4365158	Y	1		67.2	67.4	67.6	58	1	4	0	0	63	3	4	1	1
508	14:52	69.2	79.1	8317638	Y	1	traffic is stop-and-go NB	67.3	67.5	67.7										
509	14:53	78.6	90.2	0	N	0	Elevated Lmax and Leq	67.0	67.4	67.6										
510	14:54	65.3	68.6	3388442	Y	1		66.9	67.3	67.6										
511	14:55	68.0	74.5	6309573	Y	1		67.2	67.4	67.6										
512	14:56	72.9	82.9	0	N	0	Loud moto SB	67.2	67.4	67.7	59	2	3	0	1	72	2	2	0	0
513	14:57	66.8	70.1	4786301	Y	1		67.5	67.4	67.7										
514	14:58	71.8	82.1	0	N	0		67.4	67.4	67.7										
515	14:59	67.8	75.9	6025596	Y	1		67.4	67.4	67.7										
516	15:00	65.3	68.9	3388442	Y	1		67.4	67.4	67.7										
517	15:01	67.0	71.2	5011872	Y	1		67.6	67.5	67.8	Sum	219	5	13	0	2	269	7	13	1	2
518	15:02	67.8	75.4	6025596	Y	1		67.6	67.6	67.9	1-Hr Factor	657	15	39	0	6	807	21	39	3	6
519	15:03	66.3	69.5	4265795	Y	1	(leaving site)	67.6	67.6	67.9										
520	15:04	68.0	74.7	6309573	Y	1		67.7	67.6	67.9										

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

Period #	Time Start	Leq	Lmax	Energy	Keep?	Count	Note	Leq 10 min	Leq 20 min	Leq 1hr	Traffic SB Auto	SB MT	SB HT	SB Bus	SB MC	NB Auto	NB MT	NB HT	NB Bus	NB MC
521	15:05	68.1	73.8	6456542	Y	1		67.5	67.6	67.8										
522	15:06	68.9	76.0	7762471	Y	1		67.5	67.5	67.8										
523	15:07	66.3	70.3	4265795	Y	1		67.3	67.3	67.8										
524	15:08	67.5	70.5	5623413	Y	1		67.4	67.5	67.8										
525	15:09	67.9	70.8	6165950	Y	1		67.4	67.7	67.8										
526	15:10	67.6	72.8	5754399	Y	1		67.5	67.6	67.8										
527	15:11	67.1	72.9	5128614	Y	1		67.5	68.0	67.8										
528	15:12	67.6	73.2	5754399	Y	1		67.5	68.0	67.8										
529	15:13	67.0	70.1	5011872	Y	1		67.5	67.9	67.8										
530	15:14	66.3	69.0	4265795	Y	1		67.5	67.9	67.8										
531	15:15	67.9	74.5	6165950	Y	1		67.7	68.0	67.8										
532	15:16	67.4	70.0	5495409	Y	1		67.5	68.0	67.8										
533	15:17	67.8	75.8	6025596	Y	1		67.3	67.9	67.9										
534	15:18	67.5	71.4	5623413	Y	1		67.6	67.8	67.9										
535	15:19	68.2	73.6	6606934	Y	1		68.0	67.9	67.9										
536	15:20	79.7	93.6	0	N	0	Elevated Lmax and Leq	67.8	67.8	67.9										
537	15:21	67.9	80.5	0	N	0	Elevated Lmax and Leq	68.5	67.8	67.9										
538	15:22	67.9	73.4	6165950	Y	1		68.3	67.8	67.9										
539	15:23	66.9	70.4	4897788	Y	1		68.2	67.9	67.9										
540	15:24	67.9	73.2	6165950	Y	1		68.2	67.9	67.9										
541	15:25	66.1	69.9	4073803	Y	1		68.2	67.9	67.9										
542	15:26	64.8	69.0	3019952	Y	1		68.3	68.0	67.9										
543	15:27	69.9	78.9	9772372	Y	1		68.3	68.0	67.9										
544	15:28	69.7	79.2	9332543	Y	1		68.0	67.9	67.9										
545	15:29	66.9	71.2	4897788	Y	1		67.9	67.9	67.8										
546	15:30	71.9	79.4	15488166	Y	1		67.8	67.9	67.9										
547	15:31	65.9	69.8	3890451	Y	1		67.0	67.5	67.8										
548	15:32	66.9	71.1	4897788	Y	1		67.3	67.5	67.8										
549	15:33	66.2	70.3	4168694	Y	1		67.6	67.5	67.8										
550	15:34	67.7	70.5	5888437	Y	1		67.6	67.6	67.8										
551	15:35	67.7	71.5	5888437	Y	1		67.7	67.5	67.8										
552	15:36	65.4	68.8	3467369	Y	1		67.6	67.8	67.9										
553	15:37	67.0	71.5	5011872	Y	1		67.7	67.9	67.9										
554	15:38	69.2	76.0	8317638	Y	1		67.9	68.0	68.0										
555	15:39	65.5	70.6	3548134	Y	1		67.8	67.8	67.9										
556	15:40	66.7	70.4	4677351	Y	1		67.9	67.9	67.9										
557	15:41	68.9	78.3	7762471	Y	1		67.9	68.1	68.0										
558	15:42	69.4	76.6	8709636	Y	1		67.8	68.1	67.9										
559	15:43	66.8	73.8	4786301	Y	1		67.5	68.0	67.9										
560	15:44	68.1	72.8	6456542	Y	1		67.5	68.1	67.9										
561	15:45	67.2	69.9	5248075	Y	1		67.4	68.0	67.9										
562	15:46	66.7	72.4	4677351	Y	1		68.0	68.0	67.9										
563	15:47	68.7	75.2	7413102	Y	1		68.2	68.0	67.9										
564	15:48	68.7	75.3	7413102	Y	1		68.0	68.0	67.9										
565	15:49	67.1	69.8	5128614	Y	1		67.8	68.0	67.9										
566	15:50	66.4	68.5	4365158	Y	1		67.9	68.0	67.8										
567	15:51	67.7	74.6	5888437	Y	1		68.4	68.0	67.9										
568	15:52	66.6	71.2	4570882	Y	1		68.4	67.9	67.9										
569	15:53	66.8	70.4	4786301	Y	1		68.5	67.9	67.9										
570	15:54	67.0	69.8	5011872	Y	1		68.6	68.0	67.9										
571	15:55	71.6	82.5	14454398	Y	1		68.5	68.0	67.9										
572	15:56	68.1	73.6	6456542	Y	1		68.0	67.6	67.8										
573	15:57	67.5	71.1	5623413	Y	1		67.8	67.8	67.8										
574	15:58	66.3	70.5	4265795	Y	1		68.0	67.8	67.8										
575	15:59	67.7	72.6	5888437	Y	1		68.1	67.8	67.8										
576	16:00	70.6	77.3	11481536	Y	1		68.0	67.8	67.8										
577	16:01	68.5	73.1	7079458	Y	1		67.5	67.7	67.7										
578	16:02	68.0	70.8	6309573	Y	1		67.3	67.8	67.7										
579	16:03	67.4	70.6	5495409	Y	1		67.2	67.8	67.7										
580	16:04	66.5	69.6	4466836	Y	1		67.2	67.7	67.7										
581	16:05	67.4	70.4	5495409	Y	1		67.3	67.7	67.7										
582	16:06	66.2	71.2	4168694	Y	1		67.2	67.7	67.7										
583	16:07	69.0	74.9	7943282	Y	1		67.7	67.7	67.7										
584	16:08	67.7	70.7	5888437	Y	1		67.7	67.7	67.6										
585	16:09	67.2	71.6	5248075	Y	1		67.5	67.7	67.6										
586	16:10	66.3	69.6	4265795	Y	1		67.6	67.8	67.6										
587	16:11	66.5	70.7	4466836	Y	1		67.9	68.1	67.6										
588	16:12	67.0	69.7	5011872	Y	1		68.3	68.1	67.6										
589	16:13	67.7	74.1	5888437	Y	1		68.3	68.0	67.6										
590	16:14	67.1	74.0	5128614	Y	1		68.1	68.0	67.6										
591	16:15	66.8	69.4	4786301	Y	1		68.0	68.0	67.6										
592	16:16	70.2	82.9	10471285	Y	1		68.0	68.2	67.6										
593	16:17	68.6	72.0	7244360	Y	1		67.6	68.0	67.5										
594	16:18	66.2	70.4	4168694	Y	1		67.7	68.1	67.5										
595	16:19	67.9	77.4	6165950	Y	1		67.9	68.2	67.5										
596	16:20	69.5	78.3	8912509	Y	1		68.0	68.1	67.5										
597	16:21	70.0	79.4	10000000	Y	1		68.2	68.0	67.4										
598	16:22	66.4	70.8	4365158	Y	1		67.8	67.8	67.4										
599	16:23	64.3	67.1	2691535	Y	1		67.8	67.8	67.4										
600	16:24	66.5	70.7	4466836	Y	1		68.0	67.9	67.5										
601	16:25	67.2	73.0	5248075	Y	1		68.0	67.9	67.5										
602	16:26	66.2	70.6	4168694	Y	1		68.3	68.0	67.5										
603	16:27	69.2	73.0	8317638	Y	1		68.4	68.0	67.5										
604	16:28	68.6	75.2	7244360	Y	1		68.5	67.9	67.4										
605	16:29	69.1	77.1	8128305	Y	1		68.4	67.9	67.4										
606	16:30	70.5	81.2	11220185	Y	1		68.1	67.8	67.4										
607	16:31	66.3	70.3	4265795	Y	1		67.8	67.6	67.3										
608	16:32	66.2	69.6	4168694	Y	1		67.7	67.6	67.3										
609	16:33	67.5	73.2	5623413	Y	1		67.9	67.7	67.3										
610	16:34	66.4	73.0	4365158	Y	1		67.8	67.7	67.3										
611	16:35	70.3	76.3	10715193	Y	1		67.9	67.7	67.3										
612	16:36	66.8	70.2	4786301	Y	1		67.6	67.6	67.3										
613	16:37	69.9	77.9	9772372	Y	1		67.6	67.6	67.3										
614	16:38	67.9	70.9	6165950	Y	1		67.2	67.4	67.2										
615	16:39	65.7	69.2	3715352	Y	1		67.4	67.3	67.2										
616	16:40	68.1	77.3	6456542	Y	1		67.4	67.4	67.3										
617	16:41	65.7	69.9	3715352	Y	1		67.4	67.4	67.3										
618	16:42	67.6	70.8	5754399	Y	1		67.5	67.5	67.3										
619	16:43	67.4	71.7	5495409	Y	1		67.5	67.4	67.4										
620	16:44	67.1	71.6	5128614	Y	1		67.5	67.4	67.3										
621	16:45	67.9	72.3	6165950	Y	1		67.4	67.4	67.3										
622	16:46	66.8	70.4	4786301	Y	1		67.7	67.3	67.3										
623	16:47	67.5	71.7	5623413	Y	1		67.7	67.3	67.4										
624	16:48	69.3	78.8	8511380	Y	1		67.5	67.3	67.4										

US190 Widening - Covington, LA
Noise Measurements

Date: ***05/11/10*** ***Temperature:*** 64°F
Site: ***815 Collins Blvd*** ***Wind:*** 4-5mph/S
Description: ***Residence, long term site*** ***Weather notes:*** 60% clouds
Filename: ***AU2_1150, AU2_1151***

Period #	Time Start	Leq	Lmax	Energy	Keep?	Count	Note	Leq 10 min	Leq 20 min	Leq 1hr	Traffic SB Auto	SB MT	SB HT	SB Bus	SB MC	NB Auto	NB MT	NB HT	NB Bus	NB MC
625	16:49	65.1	69.6	3235937	Y	1		67.2	67.1	67.3										
626	16:50	68.2	74.5	6606934	Y	1		67.5	67.2	67.4										
627	16:51	66.5	70.1	4466836	Y	1		67.5	67.1	67.3										
628	16:52	68.3	72.6	6760830	Y	1		67.4	67.1	67.3										
629	16:53	67.1	71.9	5128614	Y	1		67.3	67.1	67.3										
630	16:54	66.1	69.8	4073803	Y	1		67.3	67.0	67.3										
631	16:55	69.6	76.7	9120108	Y	1		67.3	67.0	67.4										
632	16:56	66.9	71.8	4897788	Y	1		67.0	66.8	67.3										
633	16:57	65.1	69.6	3235937	Y	1		66.9	66.8	67.3										
634	16:58	67.2	72.2	5248075	Y	1		67.1	66.9	67.3										
635	16:59	67.9	73.0	6165950	Y	1		67.1	66.9	67.4										
636	17:00	68.4	71.3	6918310	Y	1		66.9	66.9	67.3										
637	17:01	65.9	71.0	3890451	Y	1		66.6	66.8	67.3										
638	17:02	67.4	71.8	5495409	Y	1		66.7	66.8	67.4										
639	17:03	66.8	70.3	4786301	Y	1		66.8	66.8	67.4										
640	17:04	66.4	70.4	4365158	Y	1		66.8	67.0	67.4										
641	17:05	66.9	71.6	4897788	Y	1		66.7	67.1	67.4										
642	17:06	65.8	71.7	3801894	Y	1		66.7	67.0	67.4										
643	17:07	67.2	70.6	5248075	Y	1		66.7	67.1	67.4										
644	17:08	67.2	70.6	5248075	Y	1		66.7	67.1	67.5										
645	17:09	66.3	70.1	4265795	Y	1		66.7	67.1	67.4										
646	17:10	65.8	71.0	3801894	Y	1		66.8	67.1	67.4										
647	17:11	66.7	70.5	4677351	Y	1		66.9	67.2	67.4										
648	17:12	68.5	72.7	7079458	Y	1		66.9	67.3	67.4										
649	17:13	66.1	70.2	4073803	Y	1		66.7	67.2	67.4										
650	17:14	65.3	71.9	3388442	Y	1		67.3	67.3	67.4										
651	17:15	67.0	71.6	5011872	Y	1		67.4	67.3	67.4										
652	17:16	65.5	70.7	3548134	Y	1		67.4	67.3	67.4										
653	17:17	67.8	72.1	6025596	Y	1		67.5	67.4	67.5										
654	17:18	66.6	69.6	4570882	Y	1		67.4	67.3	67.5										
655	17:19	67.6	74.3	5754399	Y	1		67.5	67.5											
656	17:20	67.0	71.4	5011872	Y	1		67.5	67.5											
657	17:21	66.4	73.5	4365158	Y	1		67.5	67.6											
658	17:22	66.9	71.3	4897788	Y	1		67.7	67.6											
659	17:23	70.4	76.9	10964782	Y	1		67.6	67.8											
660	17:24	67.1	71.7	5128614	Y	1		67.2	67.6											
661	17:25	66.1	71.7	4073803	Y	1		67.2	67.5											
662	17:26	67.0	70.9	5011872	Y	1		67.3	67.6											
663	17:27	67.6	71.9	5754399	Y	1		67.3	67.8											
664	17:28	67.7	72.3	5888437	Y	1		67.3	67.8											
665	17:29	66.7	71.0	4677351	Y	1		67.4	67.7											
666	17:30	67.3	71.1	5370318	Y	1		67.5	67.7											
667	17:31	68.1	73.9	6456542	Y	1		67.7	67.7											
668	17:32	66.1	69.7	4073803	Y	1		67.6	67.7											
669	17:33	68.0	74.0	6309573	Y	1		68.0	67.7											
670	17:34	66.9	69.9	4897788	Y	1		67.9	67.7											
671	17:35	67.5	71.9	5623413	Y	1		67.9	67.7											
672	17:36	67.0	71.3	5011872	Y	1		67.9	67.6											
673	17:37	66.8	69.9	4786301	Y	1		68.1	67.7											
674	17:38	68.7	72.0	7413102	Y	1		68.2	67.7											
675	17:39	67.9	72.7	6165950	Y	1		68.0	67.7											
676	17:40	69.2	75.0	8317638	Y	1		67.9	67.6											
677	17:41	67.4	74.7	5495409	Y	1		67.7	67.5											
678	17:42	69.5	73.9	8912509	Y	1		67.7	67.6											
679	17:43	66.8	71.1	4786301	Y	1		67.5	67.5											
680	17:44	66.7	72.8	4677351	Y	1		67.5	67.5											
681	17:45	67.6	71.0	5754399	Y	1		67.5	67.5											
682	17:46	69.5	73.2	8912509	Y	1		67.4	67.6											
683	17:47	67.7	71.8	5888437	Y	1		67.1	67.5											
684	17:48	66.6	69.8	4570882	Y	1		67.1	67.5											
685	17:49	66.6	70.5	4570882	Y	1		67.3	67.5											
686	17:50	67.0	70.3	5011872	Y	1		67.3	67.4											
687	17:51	67.3	70.9	5370318	Y	1		67.3	67.4											
688	17:52	68.2	73.8	6606934	Y	1		67.6	67.3											
689	17:53	67.1	73.1	5128614	Y	1		67.4	67.2											
690	17:54	66.8	71.1	4786301	Y	1		67.4	67.2											
691	17:55	65.9	69.6	3890451	Y	1		67.4	67.2											
692	17:56	67.7	72.4	5888437	Y	1		67.8	67.3											
693	17:57	67.6	72.5	5754399	Y	1		67.8	67.4											
694	17:58	68.3	71.3	6760830	Y	1		67.9	67.4											
695	17:59	65.9	70.2	3890451	Y	1		67.6	67.3											
696	18:00	67.6	72.1	5754399	Y	1		67.6												
697	18:01	69.6	79.6	9120108	Y	1		67.4												
698	18:02	66.2	70.4	4168694	Y	1		66.9												
699	18:03	67.1	72.2	5128614	Y	1		67.0												
700	18:04	67.1	71.7	5128614	Y	1		66.9												
701	18:05	69.2	74.8	8317638	Y	1		66.9												
702	18:06	67.8	71.3	6025596	Y	1		66.8												
703	18:07	68.7	77.6	7413102	Y	1		67.0												
704	18:08	64.9	70.7	3090295	Y	1		66.8												
705	18:09	65.9	70.2	3890451	Y	1		67.0												
706	18:10	64.9	69.6	3090295	Y	1														
707	18:11	63.9	68.3	2454709	Y	1														
708	18:12	67.1	72.1	5128614	Y	1														
709	18:13	66.2	69.7	4168694	Y	1														
710	18:14	67.5	71.4	5623413	Y	1														
711	18:15	68.1	71.1	6456542	Y	1														
712	18:16	69.3	76.0	8511380	Y	1														
713	18:17	67.3	71.1	5370318	Y	1														
714	18:18	67.5	69.8	5623413	Y	1														

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10

Site 815 ~~CLARBOURNE~~ COLLINS BLVD

Area

Address

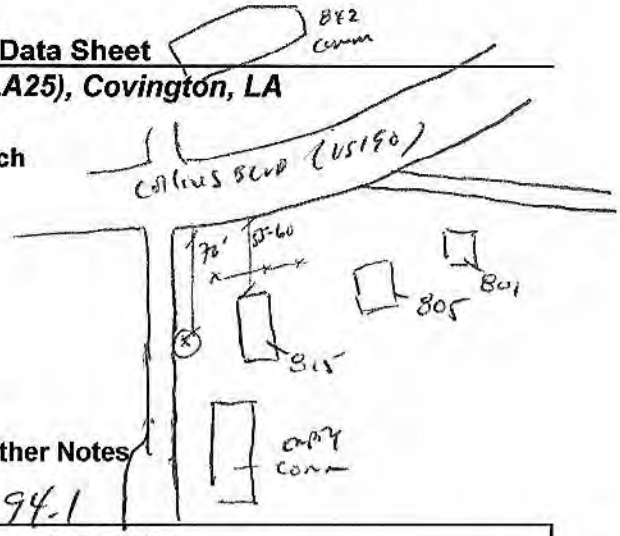
Weather

Temp 64°, 60% clouds

Wind 4-5/S

Direction

Site Sketch



Other Notes

RION/LD/N121# 840818 Cal@ 94.0 Cal Check= 94.1

#	Time Start	Description
1	6:25	HT HS=72, HT SS=81 (long stance), HT SS mid=75
2	26	
3	27	all US190 noise
4		
5		
6	32	Long site
7		
8	748-803	traffic cont
9		
10	≈ 815	traffic free flow
11		
12		
13	1430	changed batteries
14		
15	1438	start data
16		
17		
18	1518	END DATA
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

AV2-1130

AV2-1151

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/4/10

Site 875 Collins Blvd

Area

Address

Site Sketch

See previous

Weather

Temp 66°, 80% clouds

Wind

Direction

Other Notes

RION/LD/N121# Cal@ 94.0 Cal Check=

#	Time Start	REF 9 AM	Description
1	748	SIMULD AM	SBF 0 – 35 mph
2	49	:05 – :15 SB Slowdown (20mph) :20 → 0K → 35→25 mph	:46 – SB stopped
3	750	:35 – :55 NB stopped	:05
4	51	:30 – :50 SB stopped	
5	52	Lots SUV SB	
6	53		
7	54	HT revving/accel @ MVC	
8	755	:24 HT SB = max	
9	56	:30 – :48 SB stopped	
10	57	:02 – :24 NB stopped, HT NB accel	
11	58		
12	59	:15 HT accel NB	
13	820		
14	01	:03 – :40 NB stopped, SB slow	
15	02		
16	07	:15 – :55 NB stopped	
17	04		
18	805	:20 – :44 NB stopped, Lots HT SB @ 35 mph	
19	06	traffic flow is free-flow	
20	07	:30 – NB stopped	
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Noise Measurement Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/4/10

Site 815 Collins Blvd

Area

Address

Site Sketch

SAME AS PREVIOUS

Weather

Temp 90°, sunny

Wind 4-6 / SSW

Direction SW/SE

Other Notes

AN2-1151

RION/LD/N121# ~~15~~ Cal@ 94.0 Cal Check=

#	Time Start	Description
1	1442	START traffic counts
2	43	LOUD HT SB NB: 20-25, SB: 35-40 mph
3	44	LOUD pick up exhaust NB
4	1445	LOUD HT SB
5	46	HT NB
6	47	HT SB: 40 mph, HT NB: 10-15 mph
7	48	LOUD HT SB X2 : 44 NB stopped / stop: 90
8	49	SLOW HT NB
9	1450	
10	51	
11	52	HT SB stop: 90 NB
12	53	LOUD HT SB
13	54	
14	1455	PU NB Ms one motor w/ traffic: 10 mph
15	56	MOTO SB
16	57	
17	58	LOUD HT SB
18	59	
19	1500	NB: 10 mph
20	01	
21		
22		END DATA @ 1502
23		
24		
25		
26		
27		
28		
29		
30		

AN2-1151

Vehicle Count Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/16 **Name:** CR

Site

Roadway Direction US190 SB

Roadway Direction US 190

	Time Start	Auto	MT	SB HT	Bus	MC	Auto	MT	NB HT	Bus	MC
111 EDWARDS	705	55	2	1	*1	0	37	2	2	0	0
	710	39	2	0	0	0	21	1	1	0	0
	715	52	2	1	0	0	27	0	2	0	0
	720	50	3	1	0	0	22	2	2	0	0
	725	49	1	1	0	0	28	2	3	0	0
				SB	↓				NB ↓		
815 Collins	748	86	1	0	0	0	73	2	2	0	0
	753	76	3	4	0	0	48	1	3	II (2)	0
	758	74	3	4	0	II (2)	55	1	4	IIII (4)	I (1)
	803	77	2	1	∅	∅	57	2	2	IIII (4)	∅
		86		SB					NB		
	1140	86	1	3	0	0	50	1	2	0	0
	45	59	1	2	0	0	55	2	2	0	0
951-958 LCR	50	64	2	3	1	1	61	2	4	0	1
	55	96	1	0	0	0	74	1	5	0	0
				NB					SB		
	1237	51	0	0	0	0	44	1	0	0	0
	42	59	0	4	0	1	38	1	0	0	0
204 Hornsby	47	38	1	5	0	0	33	2	3	1	0
	52	58	1	5	0	0	42	2	3	0	1

Notes:

Vehicle Count Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/4/10 **Name:** CP

Site

Roadway Direction US190 **Roadway Direction** US190

	Time Start	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
				NB					SB		
Collins Baptist Ch.	1338	48	2	4	ø	ø	34	4	2	ø	ø
	1343	47	4	4	ø	ø	38	ø	3	ø	1
	1348	48	2	5	ø	ø	29	4	4	1	0
	1353	53	2	3	11(2)	ø	49	2	2	ø	ø
				SB					NB		
815 Collins	1441	56	1	2	0	0	66	2	3	0	0
	46	46	1	4	0	1	68	0	4	0	1
	51	58	1	4	ø	CP ø	63	3	4	1	1
	56	59	2	3	0	1	72	2	2	ø	ø
				SB					NB		
111 Edwards	1517	46	0	1	1	0	65	1	0	0	0
	22	53	1	0	0	0	44	2	1	1	0
	27	50	2	4	0	0	44	5	3	1111(4)	0
	32	51	2	1	0	0	54	1	0	0	0
									SB		
952-958 Lee Rice	1643	102	1	NB 1	0	0	79	0	1	0	1
	1648	107	3	0	0	0	61	1	3	0	0
	1653	93	4	1	1	0	60	1	0	0	0
	1658	106	3	1	11(2)	0	72	5	1	0	0

Notes:

Vehicle Count Data Sheet

US190 Widening (US190B to LA25), Covington, LA

Date 5/11/10 **Name:** CP

Site

Roadway Direction US190 **Roadway Direction** US190

Time Start	Auto	MT	HT	Bus	MC	Auto	MT	HT	Bus	MC
				NB				SB		
1717	58	0	1	0	0	49	3	1	0	0
22	62	2	1	1	0	41	0	0	0	0
27	78	2	0	1	0	38	1	0	0	0
32	71	0	1	0	0	32	0	0	0	0
			NB					SB		
1747	61	1	4	0	0	42	1	0	0	0
52	41	1	0	0	0	26	0	0	0	0
57	67	1	0	0	0	40	0	0	0	0
1802	61	1	1	0	0	41	0	1	0	0

Collins Bap. Church

204 Hornsby

Notes:

Appendix C
Design Year Traffic

AM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Background Growth
			Percent 3.50%
			# of Years 20
			1.9898
		A	**B**
1	US 190 AT LA 437 SPUR		
	SR	412	820
	ST	712	1417
	SL	16	32
	WR	7	14
	WT	18	36
	WL	17	34
	NR	31	62
	NT	543	1080
	NL	73	145
	ER	66	131
	ET	10	20
	EL	151	300
2	US 190 AT 32nd ST		
	SR	11	22
	ST	590	1174
	SL	15	30
	WR	7	14
	WT	181	360
	WL	15	30
	NR	11	22
	NT	412	820
	NL	74	147
	ER	12	24
	ET	36	72
	EL	15	30
3	US 190 AT LA437/30th AVE		
	SR	10	20
	ST	617	1228
	SL	7	14
	WR	6	12
	WT	113	225
	WL	394	784
	NR	157	312
	NT	435	866
	NL	104	207
	ER	62	123
	ET	21	42
	EL	8	16
4	US 190 AT KIRKLAND ST		
	SR	31	62
	ST	1061	2111
	SL	1	2
	WR	5	10
	WT	4	8
	WL	21	42
	NR	22	44
	NT	761	1514
	NL	150	298
	ER	24	48
	ET	5	10
	EL	9	18

AM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Background Growth
			Percent 3.50%
			# of Years 20
			1.9898
		A	**B**
5	US 190 BUS. SB RAMP AT E. BOSTON		
	SR	N/A	100
	ST	N/A	20
	SL	N/A	100
	WR		0
	WT	884	1759
	WL	309	615
	NR		0
	NT		0
	NL		0
	ER	349	694
	ET	225	448
	EL		0
6	US 190 BUS. AT LA 21		
	SR		0
	ST		0
	SL		0
	WR		0
	WT	604	1202
	WL	275	547
	NR	264	525
	NT		0
	NL	494	983
	ER	86	171
	ET	160	318
	EL		0
7	US 190 AT US 190 BUS./CLAIB.		
	SR	0	0
	ST	1864	3709
	SL	114	N/A
	WR	122	800
	WT	0	N/A
	WL	269	N/A
	NR	3	N/A
	NT	992	1974
	NL	1	N/A
	ER	1	2
	ET	0	N/A
	EL	0	N/A

PM PEAK

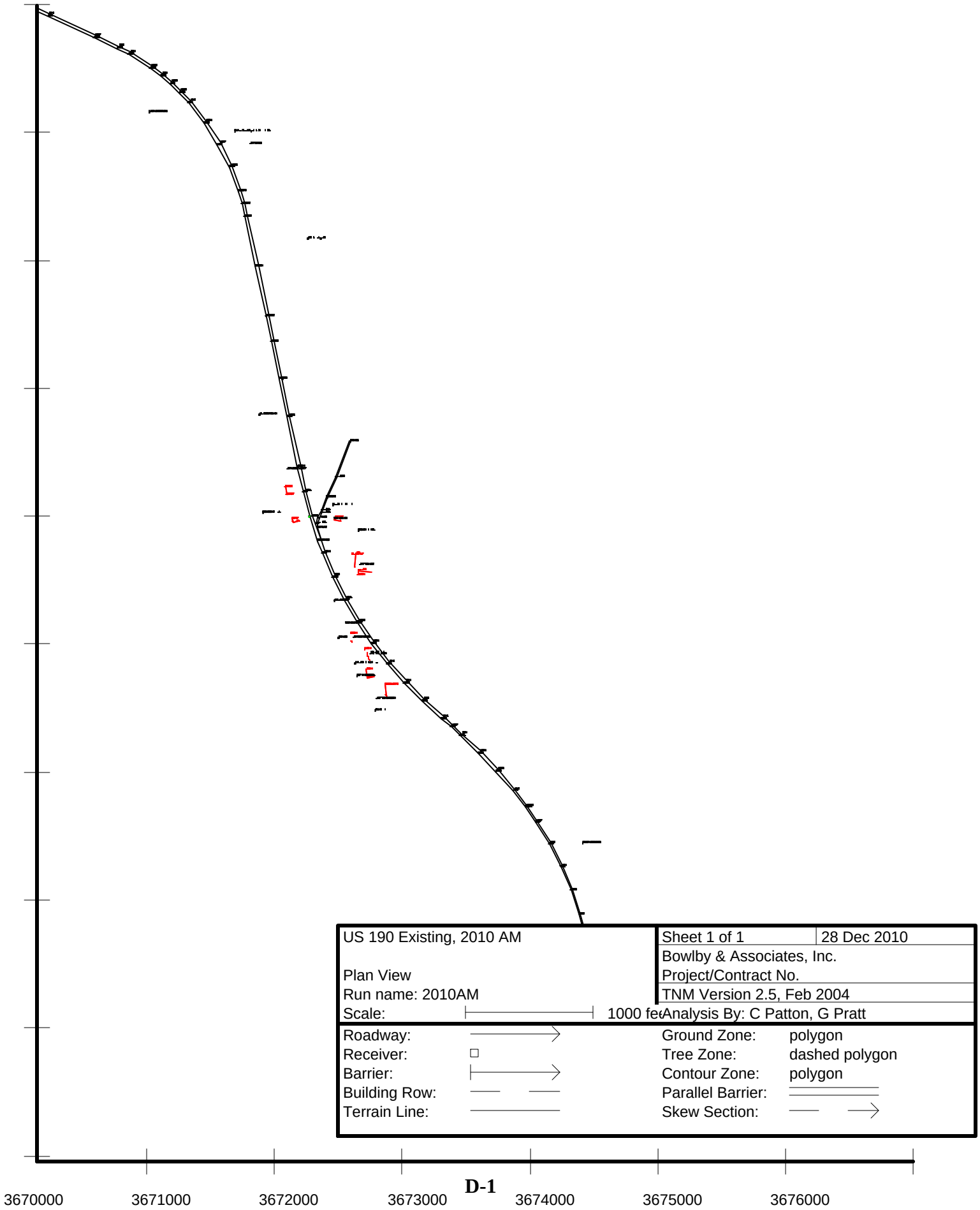
LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Background Growth	
			Percent	3.50%
			# of Years	20
			1.9898	
		A	**B**	
1	US 190 AT LA 437 SPUR			
	SR	214	426	
	ST	578	1150	
	SL	1	2	
	WR	10	20	
	WT	10	20	
	WL	0	0	
	NR	11	22	
	NT	945	1880	
	NL	59	117	
	ER	212	422	
	ET	21	42	
	EL	220	438	
2	US 190 AT 32nd ST			
	SR	16	32	
	ST	678	1349	
	SL	27	54	
	WR	23	46	
	WT	73	145	
	WL	28	56	
	NR	20	40	
	NT	776	1544	
	NL	30	60	
	ER	46	92	
	ET	120	239	
	EL	30	60	
3	US 190 AT LA437/30th AVE			
	SR	14	28	
	ST	718	1429	
	SL	7	14	
	WR	11	22	
	WT	36	72	
	WL	195	388	
	NR	451	897	
	NT	783	1558	
	NL	47	94	
	ER	51	101	
	ET	137	273	
	EL	19	38	
4	US 190 AT KIRKLAND ST			
	SR	20	40	
	ST	925	1841	
	SL	2	4	
	WR	5	10	
	WT	2	4	
	WL	17	34	
	NR	28	56	
	NT	1119	2227	
	NL	25	50	
	ER	127	253	
	ET	5	10	
	EL	79	157	

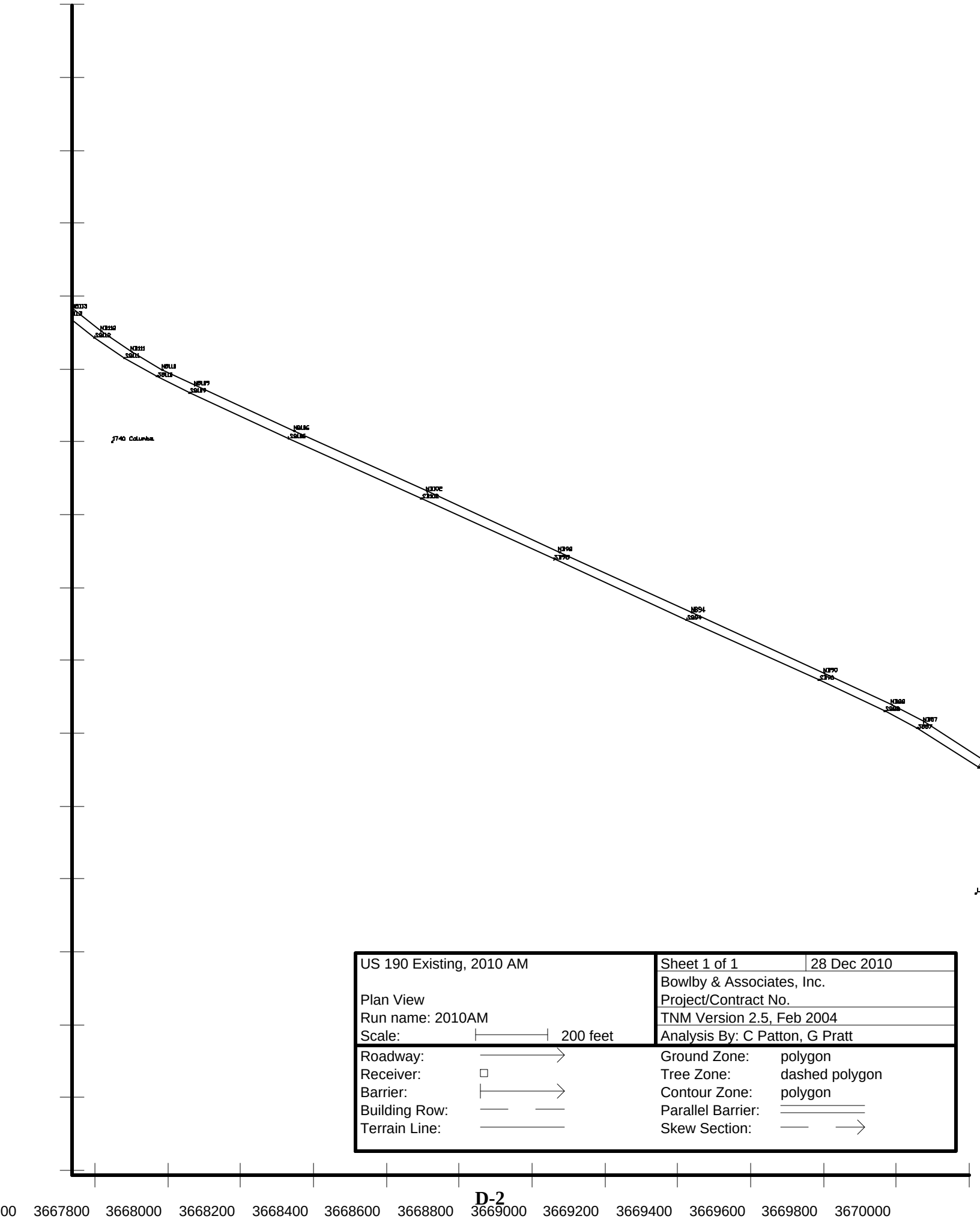
PM PEAK

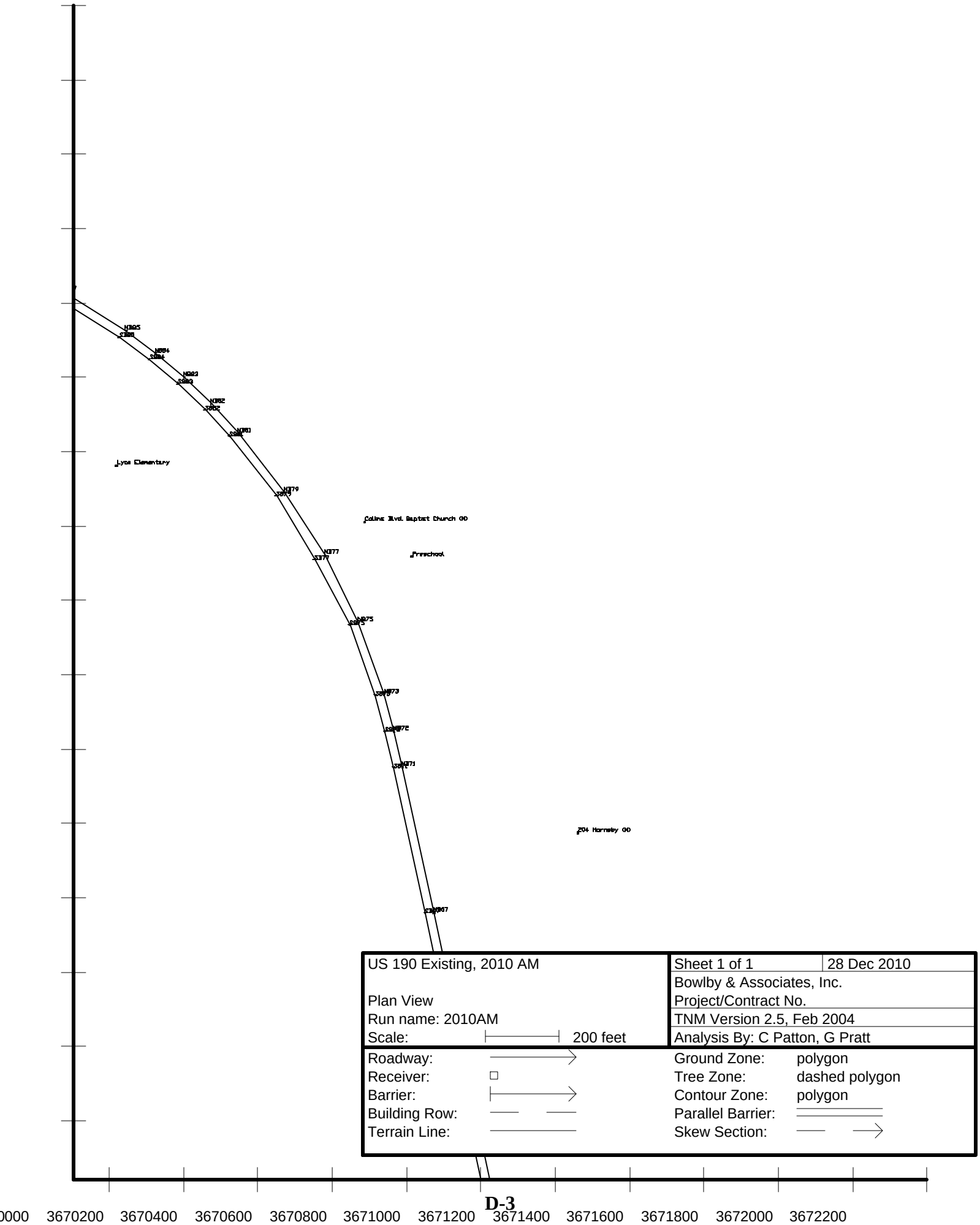
LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Background Growth	
			Percent	3.50%
			# of Years	20
			1.9898	
		A	**B**	
5	US 190 BUS. SB RAMP AT E. BOSTON			
	SR	N/A	200	
	ST	N/A	0	
	SL	N/A	218	
	WR		0	
	WT	838	1667	
	WL	191	380	
	NR		0	
	NT		0	
	NL		0	
	ER	482	959	
	ET	435	866	
	EL		0	
6	US 190 BUS. AT LA 21			
	SR		0	
	ST		0	
	SL		0	
	WR		0	
	WT	286	569	
	WL	237	472	
	NR	736	1464	
	NT		0	
	NL	499	993	
	ER	111	221	
	ET	424	844	
	EL		0	
7	US 190 AT US 190 BUS./CLAIB.			
	SR	0	0	
	ST	1712	3407	
	SL	218	N/A	
	WR	125	249	
	WT	5	N/A	
	WL	320	N/A	
	NR	0	N/A	
	NT	1065	2119	
	NL	0	N/A	
	ER	3	6	
	ET	1	N/A	
	EL	0	N/A	

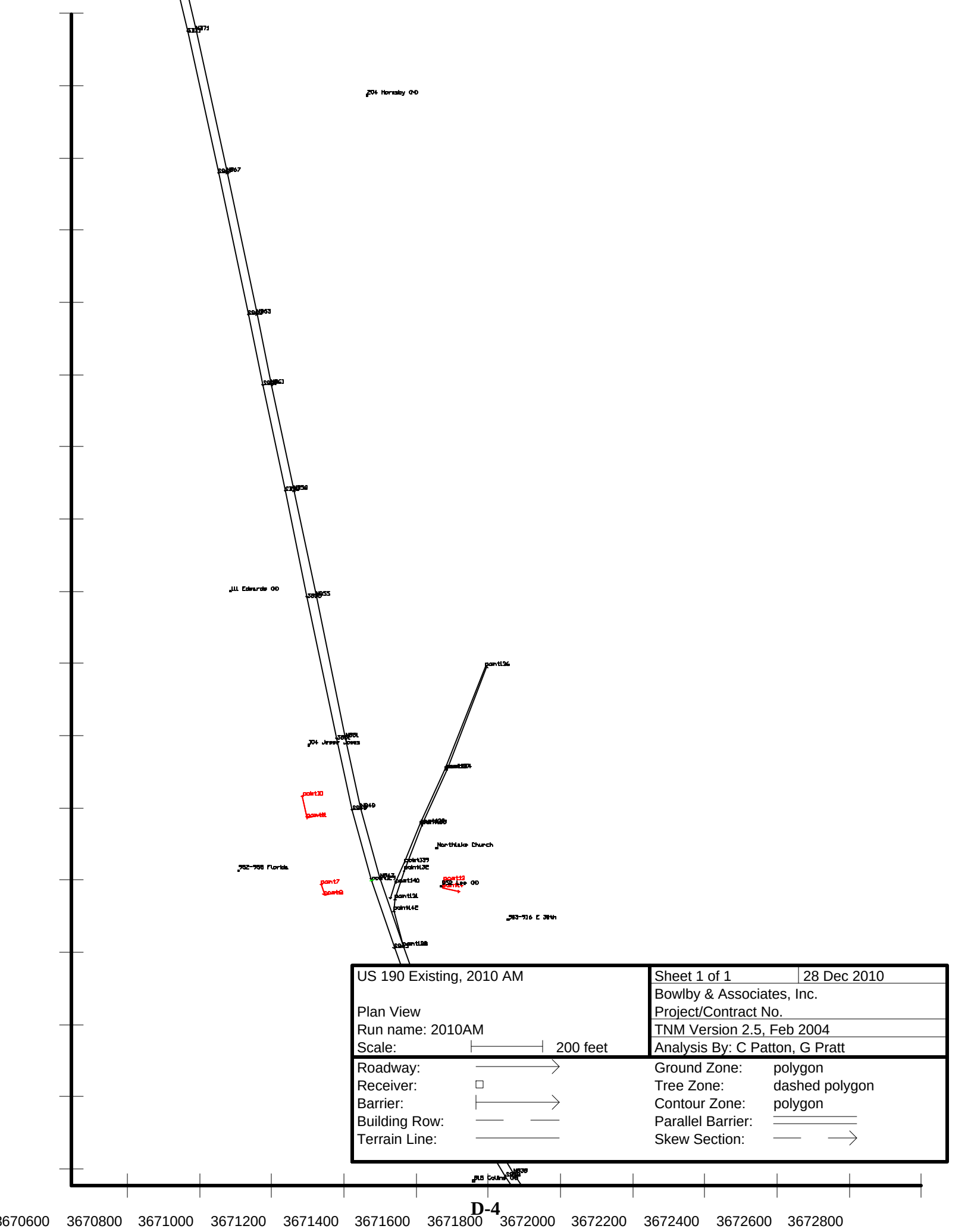
Appendix D
TNM Plan Views and Data

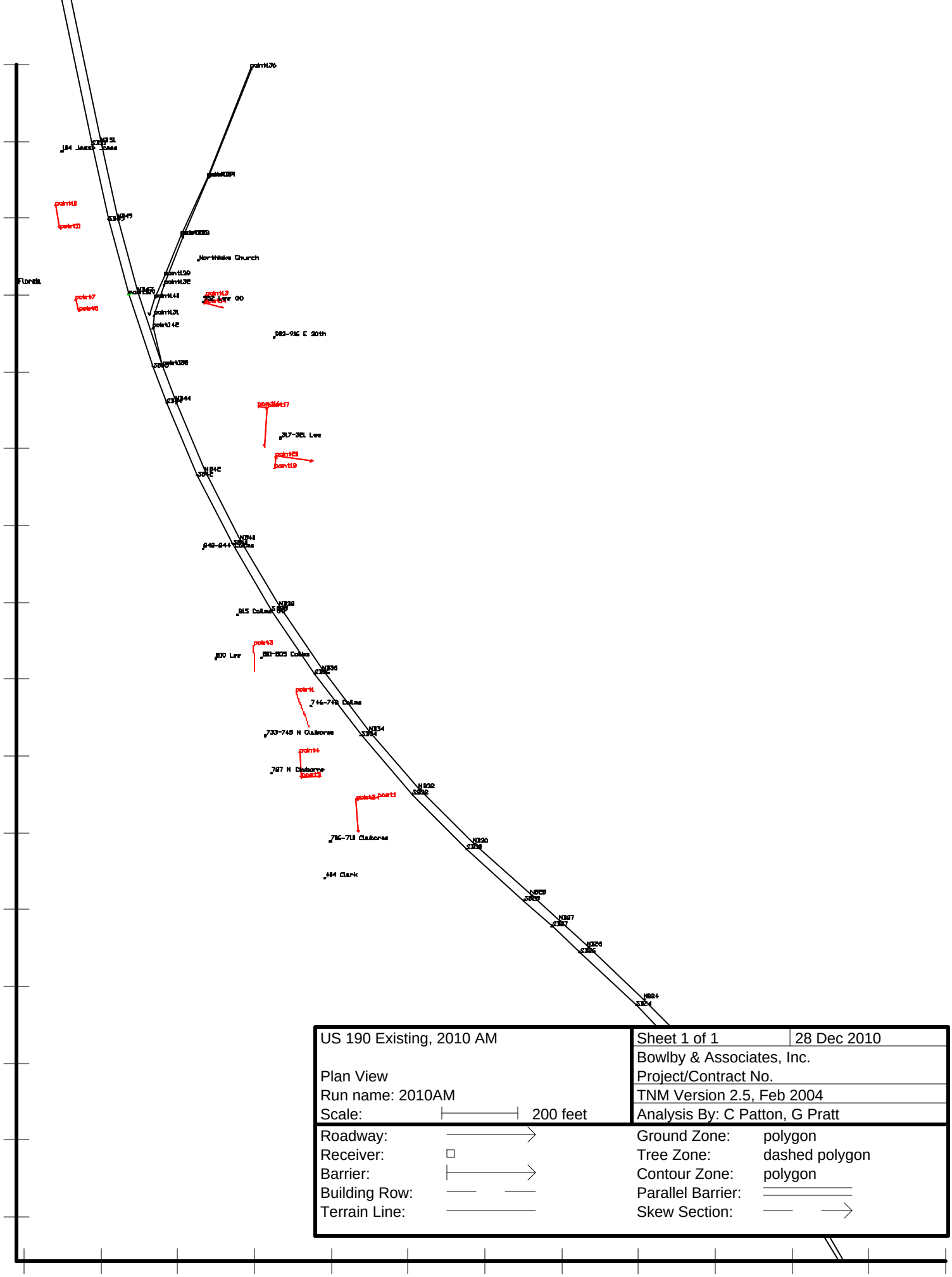
TNM Run Name	**Page**
2010 AM	D-1
2010 PM	D-20
2030 AM	D-27
2030 PM	D-48
2030 Distances [for undeveloped lands]	**D-56**
Validation: Collins Blvd Bapt. Church Peak	**D-63**
Validation: Collins Blvd Bapt. Church Off-peak	**D-68**
Validation: 204 Hornsby St. Peak	**D-73**
Validation: 204 Hornsby St. Off-peak	**D-78**
Validation: 111 Edwards St. Peak	**D-83**
Validation: 111 Edwards St. Off-peak	**D-88**
Validation: 952 N. Lee Road Peak	**D-93**
Validation: 952 N. Lee Road Off-peak	**D-98**
Validation: 815 Collins Blvd. Peak	**D-103**
Validation: 815 Collins Blvd. Off-peak	**D-108**


US 190 Existing, 2010 AM
Plan View
Run name: 2010AM
Scale:
1000 fe
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
3670000
3671000
3672000
3673000
3674000
3675000
3676000


1740 Columbia
US 190 Existing, 2010 AM
Plan View
Run name: 2010AM
Scale: 200 feet
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
3667800
3668000
3668200
3668400
3668600
3668800
3669000
3669200
3669400
3669600
3669800
3670000

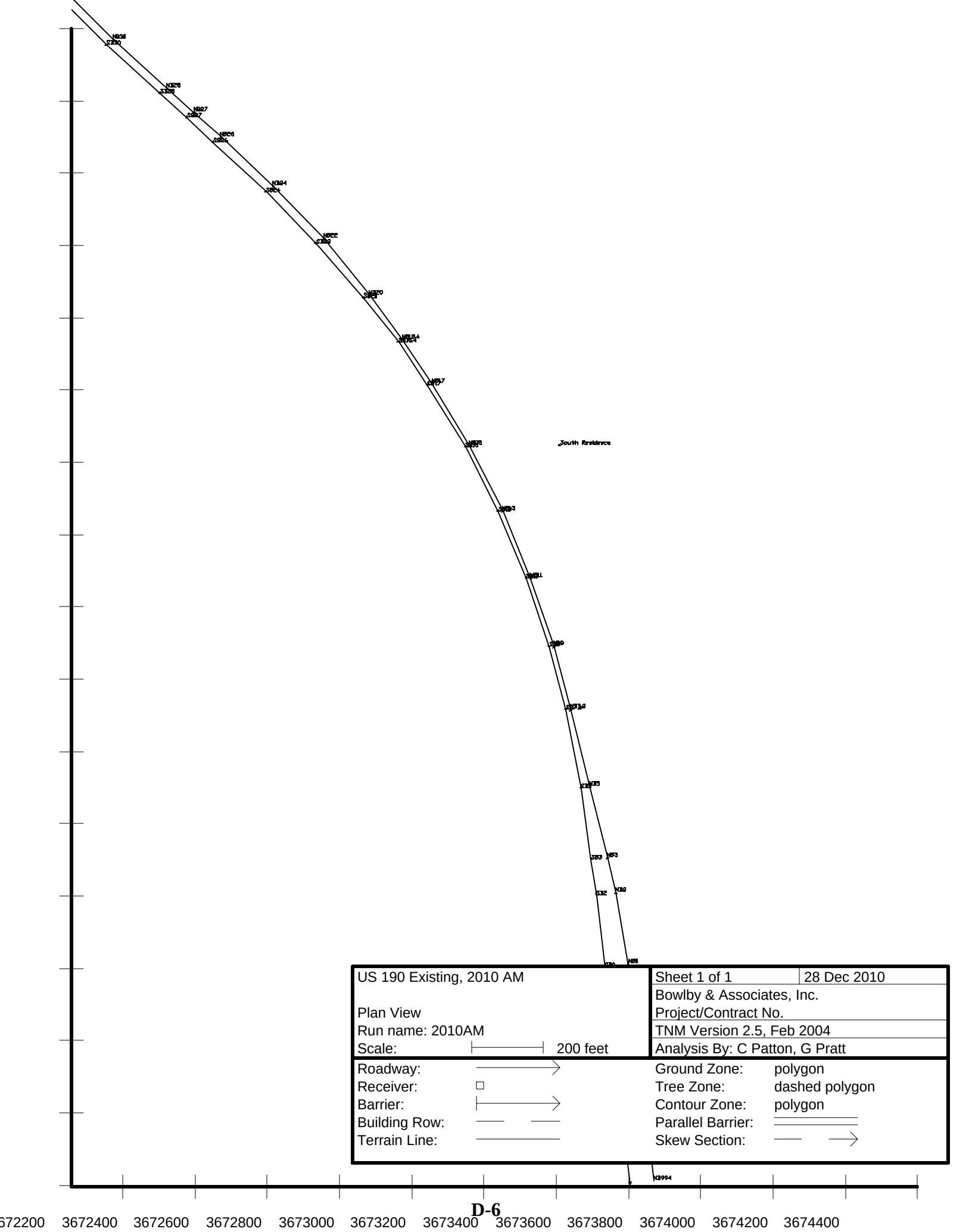

Lyon Elementary
Collins Blvd. Baptist Church 00
Preschool
204 Hornsby 00
US 190 Existing, 2010 AM
Plan View
Run name: 2010AM
Scale: 200 feet
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
3670200
3670400
3670600
3670800
3671000
3671200
3671400
3671600
3671800
3672000
3672200


US 190 Existing, 2010 AM
Plan View
Run name: 2010AM
Scale: 200 feet
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
Northlake Church
3670600
3670800
3671000
3671200
3671400
3671600
3671800
3672000
3672200
3672400
3672600
3672800



US 190 Existing, 2010 AM	Sheet 1 of 1 — 28 Dec 2010
	Bowlby & Associates, Inc.
Plan View	Project/Contract No.
Run name: 2010AM	TNM Version 2.5, Feb 2004
Scale: 200 feet	Analysis By: C Patton, G Pratt

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	


South Residence
US 190 Existing, 2010 AM
Plan View
Run name: 2010AM
Scale: 200 feet
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
3672200
3672400
3672600
3672800
3673000
3673200
3673400
3673600
3673800
3674000
3674200
3674400

Bowlby & Associates, Inc. 28 December 2010
C Patton, G Pratt TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing, 2010 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
952 Lee (M)	2	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
111 Edwards (M)	3	6	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
204 Hornsby (M)	4	18	0.0	52.0	66	52.0	10	----	52.0	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	0	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
404 Clark	6	4	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0
706-710 Claiborne	7	3	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
746-748 Collins	8	2	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
801-805 Collins	9	3	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
842-844 Collins	10	2	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
104 Jesse Jones	11	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
Preschool	13	0	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0
Northlake Church	14	0	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
727 N Claiborne	15	2	0.0	55.3	66	55.3	10	----	55.3	0.0	8	-8.0
733-745 N Claiborne	16	2	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
810 Lee	17	10	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
952-958 Florida	18	5	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0
903-916 E 30th	19	10	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
317-321 Lee	20	2	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0
Lyon Elementary	21	0	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
1740 Columbia	22	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0
South Residence	24	1	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
Dwelling Units		**# DUs**	**Noise Reduction**									

			Min	Avg	Max
			dB	dB	dB
All Selected		74	0.0	0.0	0.0
All Impacted		8	0.0	0.0	0.0
All that meet NR Goal		0	0.0	0.0	0.0

Bowlby & Associates, Inc. **28 December 2010**
C Patton, G Pratt **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **<Project Name?>**
RUN: **US 190 Existing, 2010 AM**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	661	45	17	45	14	45	3	45	0	0
	NB997	2	661	45	17	45	14	45	3	45	0	0
	NB999	3	661	45	17	45	14	45	3	45	0	0
	NB0	4	661	45	17	45	14	45	3	45	0	0
	NB2	5	661	45	17	45	14	45	3	45	0	0
	NB3	6	661	45	17	45	14	45	3	45	0	0
	NB5	7	661	45	17	45	14	45	3	45	0	0
	NB7.2	8	661	45	17	45	14	45	3	45	0	0
	NB9	9	661	45	17	45	14	45	3	45	0	0
	NB11	10	661	45	17	45	14	45	3	45	0	0
	NB13	11	661	45	17	45	14	45	3	45	0	0
	NB15	12	661	45	17	45	14	45	3	45	0	0
	NB17	13	661	45	17	45	14	45	3	45	0	0
	NB18.4	14	661	45	17	45	14	45	3	45	0	0
	NB20	15	661	45	17	45	14	45	3	45	0	0
	NB22	16	661	45	17	45	14	45	3	45	0	0
	NB24	17	661	45	17	45	14	45	3	45	0	0
	NB26	18	661	45	17	45	14	45	3	45	0	0
	NB27	19	661	45	17	45	14	45	3	45	0	0
	NB28	20	661	45	17	45	14	45	3	45	0	0
	NB30	21	661	45	17	45	14	45	3	45	0	0
	NB32	22	661	45	17	45	14	45	3	45	0	0
	NB34	23	661	45	17	45	14	45	3	45	0	0

	NB36	24	661	45	17	45	14	45	3	45	0	0
	NB38	25	661	45	17	45	14	45	3	45	0	0
	NB40	26	661	45	17	45	14	45	3	45	0	0
	NB42	27	661	45	17	45	14	45	3	45	0	0
	NB44	28	661	45	17	45	14	45	3	45	0	0
	NB45	29										
SB US 190 Existing	SB116	65	602	45	16	45	13	45	3	45	0	0
	SB115	66	602	45	16	45	13	45	3	45	0	0
	SB114	67	602	45	16	45	13	45	3	45	0	0
	SB113	68	602	45	16	45	13	45	3	45	0	0
	SB112	69	602	45	16	45	13	45	3	45	0	0
	SB111	70	602	45	16	45	13	45	3	45	0	0
	SB110	71	602	45	16	45	13	45	3	45	0	0
	SB109	72	602	45	16	45	13	45	3	45	0	0
	SB106	73	602	45	16	45	13	45	3	45	0	0
	SB102	74	602	0	16	45	13	45	3	45	0	0
	SB98	75	602	45	16	45	13	45	3	45	0	0
	SB94	76	602	45	16	45	13	45	3	45	0	0
	SB90	77	602	45	16	45	13	45	3	45	0	0
	SB88	78	602	45	16	45	13	45	3	45	0	0
	SB87	79	602	45	16	45	13	45	3	45	0	0
	SB85	80	602	45	16	45	13	45	3	45	0	0
	SB84	81	602	45	16	45	13	45	3	45	0	0
	SB83	82	602	45	16	45	13	45	3	45	0	0
	SB82	83	602	45	16	45	13	45	3	45	0	0
	SB81	84	602	45	16	45	13	45	3	45	0	0
	SB79	85	602	45	16	45	13	45	3	45	0	0
	SB77	86	602	45	16	45	13	45	3	45	0	0
	SB75	87	602	45	16	45	13	45	3	45	0	0
	SB73	88	602	45	16	45	13	45	3	45	0	0
	SB72	89	602	45	16	45	13	45	3	45	0	0
	SB71	90	602	45	16	45	13	45	3	45	0	0
	SB67	91	602	45	16	45	13	45	3	45	0	0
	SB63	92	602	45	16	45	13	45	3	45	0	0
	SB61	93	602	45	16	45	13	45	3	45	0	0
	SB58	94	602	45	16	45	13	45	3	45	0	0

	SB55	95	602	45	16	45	13	45	3	45	0	0
	SB51	96	602	45	16	45	13	45	3	45	0	0
	SB49	97	602	45	16	45	13	45	3	45	0	0
	SB47	98										
NB US 190 Existing-2	point128	128	427	45	11	45	9	45	2	45	0	0
	NB47	30	427	45	11	45	9	45	2	45	0	0
	NB49	31	427	45	11	45	9	45	2	45	0	0
	NB51	32	427	45	11	45	9	45	2	45	0	0
	NB55	33	427	45	11	45	9	45	2	45	0	0
	NB58	34	427	45	11	45	9	45	2	45	0	0
	NB61	35	427	45	11	45	9	45	2	45	0	0
	NB63	36	427	45	11	45	9	45	2	45	0	0
	NB67	37	427	45	11	45	9	45	2	45	0	0
	NB71	38	427	45	11	45	9	45	2	45	0	0
	NB72	39	427	45	11	45	9	45	2	45	0	0
	NB73	40	427	45	11	45	9	45	2	45	0	0
	NB75	41	427	45	11	45	9	0	2	45	0	0
	NB77	42	427	45	11	45	9	45	2	45	0	0
	NB79	43	427	45	11	45	9	45	2	45	0	0
	NB81	44	427	45	11	45	9	45	2	45	0	0
	NB82	45	427	45	11	45	9	45	2	45	0	0
	NB83	46	427	45	11	45	9	45	2	45	0	0
	NB84	47	427	45	11	45	9	45	2	45	0	0
	NB85	48	427	45	11	45	9	45	2	45	0	0
	NB87	49	427	45	11	45	9	45	2	45	0	0
	NB88	50	427	45	11	45	9	45	2	45	0	0
	NB90	51	427	45	11	45	9	45	2	45	0	0
	NB94	52	427	45	11	45	9	45	2	45	0	0
	NB98	54	427	45	11	45	9	45	2	45	0	0
	NB102	55	427	45	11	45	9	45	2	45	0	0
	NB106	56	427	45	11	45	9	45	2	45	0	0
	NB109	57	427	45	11	45	9	45	2	45	0	0
	NB110	58	427	45	11	45	9	45	2	45	0	0
	NB111	59	427	45	11	45	9	45	2	45	0	0
	NB112	60	427	45	11	45	9	45	2	45	0	0
	NB113	61	427	45	11	45	9	45	2	45	0	0

	NB114	62	427	45	11	45	9	45	2	45	0	0
	NB115	63	427	45	11	45	9	45	2	45	0	0
	NB116	64										
SB US 190 Existing-2	point129	129	1019	45	27	45	21	45	5	45	0	0
	SB45	99	1019	45	27	45	21	45	5	45	0	0
	SB44	100	1019	45	27	45	21	45	5	45	0	0
	SB42	101	1019	45	27	45	21	45	5	45	0	0
	SB40	102	1019	45	27	45	21	45	5	45	0	0
	SB38	103	1019	45	27	45	21	45	5	45	0	0
	SB36	104	1019	45	27	45	21	45	5	45	0	0
	SB34	105	1019	45	27	45	21	45	5	45	0	0
	SB32	106	1019	45	27	45	21	45	5	45	0	0
	SB30	107	1019	45	27	45	21	45	5	45	0	0
	SB28	108	1019	45	27	45	21	45	5	45	0	0
	SB27	109	1019	45	27	45	21	45	5	45	0	0
	SB26	110	1019	45	27	45	21	45	5	45	0	0
	SB24	111	1019	45	27	45	21	45	5	45	0	0
	SB22	112	1019	45	27	45	21	45	5	45	0	0
	SB20	113	1019	45	27	45	21	45	5	45	0	0
	SB18.4	114	1019	45	27	45	21	45	5	45	0	0
	SB17	115	1019	45	27	45	21	45	5	45	0	0
	SB15	116	1019	45	27	45	21	45	5	45	0	0
	SB13	117	1019	45	27	45	21	45	5	45	0	0
	SB11	118	1019	45	27	45	21	45	5	45	0	0
	SB9	119	1019	45	27	45	21	45	5	45	0	0
	SB7.2	120	1019	45	27	45	21	45	5	45	0	0
	SB5	121	1019	45	27	45	21	45	5	45	0	0
	SB3	122	1019	45	27	45	21	45	5	45	0	0
	SB2	123	1019	45	27	45	21	45	5	45	0	0
	SB0	124	1019	45	27	45	21	45	5	45	0	0
	SB999	125	1019	45	27	45	21	45	5	45	0	0
	SB997	126	1019	45	27	45	21	45	5	45	0	0
	SB994	127										
LA437 NB	point130	130	176	35	5	35	4	35	1	35	0	0
	point142	142	176	35	5	35	4	35	1	35	0	0
	point131	131	176	35	5	35	4	35	1	35	0	0

	point132	132	176	35	5	35	4	35	1	35	0	0
	point133	133	176	35	5	35	4	35	1	35	0	0
	point134	134	176	35	5	35	4	35	1	35	0	0
	point135	135										
LA437 SB	point136	136	487	35	13	35	10	35	3	35	0	0
	point137	137	487	35	13	35	10	35	3	35	0	0
	point138	138	487	35	13	35	10	35	3	35	0	0
	point139	139	487	25	13	25	10	25	3	25	0	0
	point140	140	487	35	13	35	10	35	3	35	0	0
	point141	141										

Bowlby & Associates, Inc. 28 December 2010
C Patton, G Pratt TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing, 2010 AM

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
NB US 190 Existing	22.0	NB994	1	3,673,666.8	719,415.4	22.00				Average	
		NB997	2	3,673,630.0	719,718.7	22.00				Average	
		NB999	3	3,673,607.2	719,917.8	22.00				Average	
		NB0	4	3,673,595.0	720,017.2	22.00				Average	
		NB2	5	3,673,561.2	720,214.3	22.00				Average	
		NB3	6	3,673,537.0	720,311.6	22.00				Average	
		NB5	7	3,673,488.0	720,507.8	22.00				Average	
		NB7.2	8	3,673,435.0	720,721.0	24.00				Average	
		NB9	9	3,673,388.5	720,895.6	24.00				Average	
		NB11	10	3,673,324.5	721,085.2	24.00				Average	
		NB13	11	3,673,246.8	721,270.6	24.00				Average	
		NB15	12	3,673,154.5	721,451.4	24.00				Average	
		NB17	13	3,673,051.2	721,623.1	24.00				Average	
		NB18.4	14	3,672,968.5	721,745.8	24.00				Average	
		NB20	15	3,672,877.8	721,867.8	24.00				Average	
		NB22	16	3,672,751.2	722,026.4	21.00				Average	
		NB24	17	3,672,610.8	722,168.8	21.00				Average	
		NB26	18	3,672,465.2	722,306.0	21.00				Average	
		NB27	19	3,672,392.0	722,374.2	22.00				Average	
		NB28	20	3,672,317.2	722,440.7	22.00				Average	
		NB30	21	3,672,168.2	722,574.4	22.00				Average	
		NB32	22	3,672,027.0	722,716.1	24.00				Average	
		NB34	23	3,671,896.8	722,865.6	26.00				Average	
		NB36	24	3,671,775.0	723,025.2	26.00				Average	
		NB38	25	3,671,663.8	723,191.4	28.00				Average	

		NB40	26	3,671,562.0	723,363.7	28.00				Average	
		NB42	27	3,671,469.8	723,542.1	28.00				Average	
		NB44	28	3,671,392.8	723,724.7	28.00				Average	
		NB45	29	3,671,358.5	723,819.0	28.00					
SB US 190 Existing	22.0	SB116	65	3,667,293.5	728,958.2	31.00				Average	
		SB115	66	3,667,364.2	728,885.6	32.00				Average	
		SB114	67	3,667,440.2	728,812.5	32.00				Average	
		SB113	68	3,667,518.0	728,749.7	32.00				Average	
		SB112	69	3,667,597.5	728,688.9	32.00				Average	
		SB111	70	3,667,680.0	728,631.9	32.00				Average	
		SB110	71	3,667,769.8	728,581.8	32.00				Average	
		SB109	72	3,667,859.0	728,536.7	31.00				Average	
		SB106	73	3,668,132.0	728,412.1	30.00				Average	
		SB102	74	3,668,496.0	728,246.1	30.00				Average	
		SB98	75	3,668,860.0	728,080.1	29.00				Average	
		SB94	76	3,669,223.8	727,914.1	28.00				Average	
		SB90	77	3,669,587.8	727,748.1	28.00				Average	
		SB88	78	3,669,768.2	727,662.6	28.00				Average	
		SB87	79	3,669,857.0	727,615.0	30.00				Average	
		SB85	80	3,670,026.5	727,508.1	30.00				Average	
		SB84	81	3,670,107.0	727,448.8	28.00				Average	
		SB83	82	3,670,183.5	727,383.6	28.00				Average	
		SB82	83	3,670,256.2	727,313.2	28.00				Average	
		SB81	84	3,670,322.0	727,241.7	28.00				Average	
		SB79	85	3,670,447.5	727,082.4	29.00				Average	
		SB77	86	3,670,550.2	726,910.6	29.00				Average	
		SB75	87	3,670,645.0	726,734.6	30.00				Average	
		SB73	88	3,670,713.8	726,544.7	30.00				Average	
		SB72	89	3,670,740.5	726,447.0	30.00				Average	
		SB71	90	3,670,763.0	726,349.6	30.00				Average	
		SB67	91	3,670,847.0	725,958.4	30.00				Average	
		SB63	92	3,670,929.5	725,567.1	30.00				Average	
		SB61	93	3,670,971.2	725,371.5	30.00				Average	
		SB58	94	3,671,032.8	725,077.9	30.00				Average	
		SB55	95	3,671,094.0	724,784.2	30.00				Average	
		SB51	96	3,671,176.0	724,391.1	28.00				Average	
		SB49	97	3,671,219.0	724,195.5	28.00				Average	
		SB47	98	3,671,271.8	724,002.6	28.00					
NB US 190 Existing-2	22.0	point128	128	3,671,358.5	723,819.0	28.00	Signal	0.00	30	Average	

		NB47	30	3,671,294.8	724,008.9	28.00				Average	
		NB49	31	3,671,241.5	724,201.7	28.00				Average	
		NB51	32	3,671,199.2	724,397.5	28.00				Average	
		NB55	33	3,671,117.2	724,789.1	30.00				Average	
		NB58	34	3,671,055.8	725,082.7	30.00				Average	
		NB61	35	3,670,993.8	725,376.2	30.00				Average	
		NB63	36	3,670,953.0	725,572.0	30.00				Average	
		NB67	37	3,670,870.2	725,963.4	30.00				Average	
		NB71	38	3,670,785.0	726,354.2	30.00				Average	
		NB72	39	3,670,762.5	726,451.7	30.00				Average	
		NB73	40	3,670,736.5	726,551.3	30.00				Average	
		NB75	41	3,670,667.0	726,744.0	30.00				Average	
		NB77	42	3,670,576.5	726,925.0	30.00				Average	
		NB79	43	3,670,468.8	727,094.0	29.00				Average	
		NB81	44	3,670,343.5	727,253.4	28.00				Average	
		NB82	45	3,670,270.0	727,332.8	28.00				Average	
		NB83	46	3,670,197.0	727,403.0	28.00				Average	
		NB84	47	3,670,120.5	727,468.1	28.00				Average	
		NB85	48	3,670,040.2	727,527.9	30.00				Average	
		NB87	49	3,669,871.2	727,635.1	30.00				Average	
		NB88	50	3,669,782.2	727,682.5	29.00				Average	
		NB90	51	3,669,597.5	727,769.7	28.00				Average	
		NB94	52	3,669,233.8	727,935.8	28.00				Average	
		NB98	54	3,668,869.8	728,101.9	28.00				Average	
		NB102	55	3,668,506.0	728,268.0	30.00				Average	
		NB106	56	3,668,142.0	728,434.1	30.00				Average	
		NB109	57	3,667,869.0	728,558.6	31.00				Average	
		NB110	58	3,667,779.8	728,603.7	32.00				Average	
		NB111	59	3,667,695.2	728,651.9	31.00				Average	
		NB112	60	3,667,612.5	728,708.3	31.00				Average	
		NB113	61	3,667,533.0	728,768.9	30.00				Average	
		NB114	62	3,667,458.2	728,835.9	30.00				Average	
		NB115	63	3,667,392.2	728,904.9	30.00				Average	
		NB116	64	3,667,327.5	728,981.8	30.00					
SB US 190 Existing-2	22.0	point129	129	3,671,271.8	724,002.6	28.00	Signal	0.00	30	Average	
		SB45	99	3,671,335.0	723,812.6	28.00				Average	
		SB44	100	3,671,370.0	723,718.5	28.00				Average	
		SB42	101	3,671,450.2	723,529.7	28.00				Average	
		SB40	102	3,671,542.5	723,351.4	28.00				Average	

		SB38	103	3,671,644.5	723,179.1	28.00				Average	
		SB36	104	3,671,755.8	723,012.8	28.00				Average	
		SB34	105	3,671,877.2	722,853.1	26.00				Average	
		SB32	106	3,672,011.0	722,699.6	25.00				Average	
		SB30	107	3,672,152.2	722,557.8	23.00				Average	
		SB28	108	3,672,301.0	722,424.0	22.00				Average	
		SB27	109	3,672,375.5	722,357.2	22.00				Average	
		SB26	110	3,672,448.0	722,288.4	22.00				Average	
		SB24	111	3,672,593.8	722,151.3	21.00				Average	
		SB22	112	3,672,733.0	722,007.6	21.00				Average	
		SB20	113	3,672,863.5	721,858.3	24.00				Average	
		SB18.4	114	3,672,960.5	721,736.2	24.00				Average	
		SB17	115	3,673,040.8	721,615.9	24.00				Average	
		SB15	116	3,673,145.5	721,445.2	24.00				Average	
		SB13	117	3,673,235.8	721,267.2	24.00				Average	
		SB11	118	3,673,313.8	721,081.9	24.00				Average	
		SB9	119	3,673,377.5	720,892.3	24.00				Average	
		SB7.2	120	3,673,423.5	720,718.4	24.00				Average	
		SB5	121	3,673,465.0	720,500.8	22.00				Average	
		SB3	122	3,673,493.5	720,303.9	22.00				Average	
		SB2	123	3,673,507.5	720,204.8	22.00				Average	
		SB0	124	3,673,531.0	720,005.9	22.00				Average	
		SB999	125	3,673,542.8	719,906.4	22.00				Average	
		SB997	126	3,673,566.0	719,707.4	22.00				Average	
		SB994	127	3,673,601.2	719,406.8	22.00					
LA437 NB	14.0	point130	130	3,671,358.5	723,819.0	28.00	Onramp	10.00	100	Average	
		point142	142	3,671,332.5	723,919.1	28.00				Average	
		point131	131	3,671,336.5	723,951.2	28.00				Average	
		point132	132	3,671,362.8	724,031.2	29.00				Average	
		point133	133	3,671,411.5	724,156.9	29.00				Average	
		point134	134	3,671,480.0	724,310.4	30.00				Average	
		point135	135	3,671,591.8	724,593.6	30.00					
LA437 SB	14.0	point136	136	3,671,587.0	724,593.8	30.00				Average	
		point137	137	3,671,475.8	724,310.2	30.00				Average	
		point138	138	3,671,407.0	724,158.6	29.00				Average	
		point139	139	3,671,363.5	724,051.2	29.00				Average	
		point140	140	3,671,337.2	723,993.5	28.00				Average	
		point141	141	3,671,322.5	723,949.4	28.00					

Bowlby & Associates, Inc. 28 December 2010
C Patton, G Pratt TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing, 2010 AM

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
815 Collins (M)	1	1	3,671,554.2	723,169.1	26.00	5.00	0.00	66	10.0	8.0	Y
952 Lee (M)	2	1	3,671,464.0	723,985.0	28.00	5.00	0.00	66	10.0	8.0	Y
111 Edwards (M)	3	6	3,670,880.2	724,801.9	28.00	5.00	0.00	66	10.0	8.0	Y
204 Hornsby (M)	4	18	3,671,258.0	726,176.1	30.00	5.00	0.00	66	10.0	8.0	Y
Collins Blvd. Baptist Church (M)	5	0	3,670,684.2	727,011.6	28.00	5.00	0.00	66	10.0	8.0	Y
404 Clark	6	4	3,671,781.5	722,483.6	24.00	5.00	0.00	66	10.0	8.0	Y
706-710 Claiborne	7	3	3,671,795.5	722,579.2	24.00	5.00	0.00	66	10.0	8.0	Y
746-748 Collins	8	2	3,671,744.8	722,931.4	26.00	5.00	0.00	66	10.0	8.0	Y
801-805 Collins	9	3	3,671,616.2	723,058.2	26.00	5.00	0.00	66	10.0	8.0	Y
842-844 Collins	10	2	3,671,464.0	723,340.4	26.00	5.00	0.00	66	10.0	8.0	Y
104 Jesse Jones	11	1	3,671,096.2	724,376.0	28.00	5.00	0.00	66	10.0	8.0	Y
Preschool	13	0	3,670,811.2	726,918.7	28.00	5.00	0.00	66	10.0	8.0	Y
Northlake Church	14	0	3,671,451.8	724,091.4	28.00	5.00	0.00	66	10.0	8.0	Y
727 N Claiborne	15	2	3,671,642.0	722,756.6	24.00	5.00	0.00	66	10.0	8.0	Y
733-745 N Claiborne	16	2	3,671,627.0	722,854.5	24.00	5.00	0.00	66	10.0	8.0	Y
810 Lee	17	10	3,671,496.8	723,055.5	26.00	5.00	0.00	66	10.0	8.0	Y
952-958 Florida	18	5	3,670,901.8	724,029.2	28.00	5.00	0.00	66	10.0	8.0	Y
903-916 E 30th	19	10	3,671,649.5	723,891.9	28.00	5.00	0.00	66	10.0	8.0	Y
317-321 Lee	20	2	3,671,666.5	723,629.5	28.00	5.00	0.00	66	10.0	8.0	Y
Lyon Elementary	21	0	3,670,016.5	727,163.7	28.00	5.00	0.00	66	10.0	8.0	Y
1740 Columbia	22	1	3,667,644.5	728,402.5	32.00	5.00	0.00	66	10.0	8.0	Y
South Residence	24	1	3,673,405.0	721,450.2	8.00	5.00	0.00	66	10.0	8.0	Y

Bowlby & Associates, Inc.					**28 December 2010**	
C Patton, G Pratt					**TNM 2.5**	
INPUT: BUILDING ROWS						
PROJECT/CONTRACT:	**<Project Name?>**					
RUN:	**US 190 Existing, 2010 AM**					
Building Row			**Points**			
Name	**Average**	**Building**	**No.**	**Coordinates (ground)**		
	Height	**Percent**		**X**	**Y**	**Z**
	ft	%		ft	ft	ft
N Clairborne 1	20.00	80	1	3,671,705.2	722,968.1	26.00
			2	3,671,740.0	722,879.2	26.00
N Clairborne 2	20.00	80	3	3,671,595.2	723,090.1	26.00
			4	3,671,598.0	723,021.9	26.00

Bowlby & Associates, Inc. 28 December 2010
C Patton, G Pratt TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing, 2010 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
952 Lee (M)	2	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
111 Edwards (M)	3	6	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
204 Hornsby (M)	4	18	0.0	53.3	66	53.3	10	----	53.3	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	0	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
404 Clark	6	4	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
706-710 Claiborne	7	3	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0
746-748 Collins	8	2	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0
801-805 Collins	9	3	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
842-844 Collins	10	2	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
104 Jesse Jones	11	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0
Preschool	13	0	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
Northlake Church	14	0	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
727 N Claiborne	15	2	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0
733-745 N Claiborne	16	2	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
810 Lee	17	10	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
952-958 Florida	18	5	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0
903-916 E 30th	19	10	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0
317-321 Lee	20	2	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0
Lyon Elementary	21	0	0.0	58.0	66	58.0	10	----	58.0	0.0	8	-8.0
1740 Columbia	22	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
South Residence	24	1	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction

			Min	Avg	Max
			dB	dB	dB
All Selected		74	0.0	0.0	0.0
All Impacted		9	0.0	0.0	0.0
All that meet NR Goal		0	0.0	0.0	0.0

Bowlby & Associates, Inc. **28 December 2010**
C Patton, G Pratt **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **<Project Name?>**
RUN: **US 190 Existing, 2010 PM**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	1217	45	32	45	26	45	6	45	0	0
	NB997	2	1217	45	32	45	26	45	6	45	0	0
	NB999	3	1217	45	32	45	26	45	6	45	0	0
	NB0	4	1217	45	32	45	26	45	6	45	0	0
	NB2	5	1217	45	32	45	26	45	6	45	0	0
	NB3	6	1217	45	32	45	26	45	6	45	0	0
	NB5	7	1217	45	32	45	26	45	6	45	0	0
	NB7.2	8	1217	45	32	45	26	45	6	45	0	0
	NB9	9	1217	45	32	45	26	45	6	45	0	0
	NB11	10	1217	45	32	45	26	45	6	45	0	0
	NB13	11	1217	45	32	45	26	45	6	45	0	0
	NB15	12	1217	45	32	45	26	45	6	45	0	0
	NB17	13	1217	45	32	45	26	45	6	45	0	0
	NB18.4	14	1217	45	32	45	26	45	6	45	0	0
	NB20	15	1217	45	32	45	26	45	6	45	0	0
	NB22	16	1217	45	32	45	26	45	6	45	0	0
	NB24	17	1217	45	32	45	26	45	6	45	0	0
	NB26	18	1217	45	32	45	26	45	6	45	0	0
	NB27	19	1217	45	32	45	26	45	6	45	0	0
	NB28	20	1217	45	32	45	26	45	6	45	0	0
	NB30	21	1217	45	32	45	26	45	6	45	0	0
	NB32	22	1217	45	32	45	26	45	6	45	0	0
	NB34	23	1217	45	32	45	26	45	6	45	0	0

	NB36	24	1217	45	32	45	26	45	6	45	0	0
	NB38	25	1217	45	32	45	26	45	6	45	0	0
	NB40	26	1217	45	32	45	26	45	6	45	0	0
	NB42	27	1217	45	32	45	26	45	6	45	0	0
	NB44	28	1217	45	32	45	26	45	6	45	0	0
	NB45	29										
SB US 190 Existing	SB116	65	702	45	18	45	15	45	4	45	0	0
	SB115	66	702	45	18	45	15	45	4	45	0	0
	SB114	67	702	45	18	45	15	45	4	45	0	0
	SB113	68	702	45	18	45	15	45	4	45	0	0
	SB112	69	702	45	18	45	15	45	4	45	0	0
	SB111	70	702	45	18	45	15	45	4	45	0	0
	SB110	71	702	45	18	45	15	45	4	45	0	0
	SB109	72	702	45	18	45	15	45	4	45	0	0
	SB106	73	702	45	18	45	15	45	4	45	0	0
	SB102	74	702	45	18	45	15	45	4	45	0	0
	SB98	75	702	45	18	45	15	45	4	45	0	0
	SB94	76	702	45	18	45	15	45	4	45	0	0
	SB90	77	702	45	18	45	15	45	4	45	0	0
	SB88	78	702	45	18	45	15	45	4	45	0	0
	SB87	79	702	45	18	45	15	45	4	45	0	0
	SB85	80	702	45	18	45	15	45	4	45	0	0
	SB84	81	702	45	18	45	15	45	4	45	0	0
	SB83	82	702	45	18	45	15	45	4	45	0	0
	SB82	83	702	45	18	45	15	45	4	45	0	0
	SB81	84	702	45	18	45	15	45	4	45	0	0
	SB79	85	702	45	18	45	15	45	4	45	0	0
	SB77	86	702	45	18	45	15	45	4	45	0	0
	SB75	87	702	45	18	45	15	45	4	45	0	0
	SB73	88	702	45	18	45	15	45	4	45	0	0
	SB72	89	702	45	18	45	15	45	4	45	0	0
	SB71	90	702	45	18	45	15	45	4	45	0	0
	SB67	91	702	45	18	45	15	45	4	45	0	0
	SB63	92	702	45	18	45	15	45	4	45	0	0
	SB61	93	702	45	18	45	15	45	4	45	0	0
	SB58	94	702	45	18	45	15	45	4	45	0	0

	SB55	95	702	45	18	45	15	45	4	45	0	0
	SB51	96	702	45	18	45	15	45	4	45	0	0
	SB49	97	702	45	18	45	15	45	4	45	0	0
	SB47	98										
NB US 190 Existing-2	point128	128	772	45	20	45	16	45	4	45	0	0
	NB47	30	772	45	20	45	16	45	4	45	0	0
	NB49	31	772	45	20	45	16	45	4	45	0	0
	NB51	32	772	45	20	45	16	45	4	45	0	0
	NB55	33	772	45	20	45	16	45	4	45	0	0
	NB58	34	772	45	20	45	16	45	4	45	0	0
	NB61	35	772	45	20	45	16	45	4	45	0	0
	NB63	36	772	45	20	45	16	45	4	45	0	0
	NB67	37	772	45	20	45	16	45	4	45	0	0
	NB71	38	772	45	20	45	16	45	4	45	0	0
	NB72	39	772	45	20	45	16	45	4	45	0	0
	NB73	40	772	45	20	45	16	45	4	45	0	0
	NB75	41	772	45	20	45	16	45	4	45	0	0
	NB77	42	772	45	20	45	16	45	4	45	0	0
	NB79	43	772	45	20	45	16	45	4	45	0	0
	NB81	44	772	45	20	45	16	45	4	45	0	0
	NB82	45	772	45	20	45	16	45	4	45	0	0
	NB83	46	772	45	20	45	16	45	4	45	0	0
	NB84	47	772	45	20	45	16	45	4	45	0	0
	NB85	48	772	45	20	45	16	45	4	45	0	0
	NB87	49	772	45	20	45	16	45	4	45	0	0
	NB88	50	772	45	20	45	16	45	4	45	0	0
	NB90	51	772	45	20	45	16	45	4	45	0	0
	NB94	52	772	45	20	45	16	45	4	45	0	0
	NB98	54	772	45	20	45	16	45	4	45	0	0
	NB102	55	772	45	20	45	16	45	4	45	0	0
	NB106	56	772	45	20	45	16	45	4	45	0	0
	NB109	57	772	45	20	45	16	45	4	45	0	0
	NB110	58	772	45	20	45	16	45	4	45	0	0
	NB111	59	772	45	20	45	16	45	4	45	0	0
	NB112	60	772	45	20	45	16	45	4	45	0	0
	NB113	61	772	45	20	45	16	45	4	45	0	0

	NB114	62	772	45	20	45	16	45	4	45	0	0
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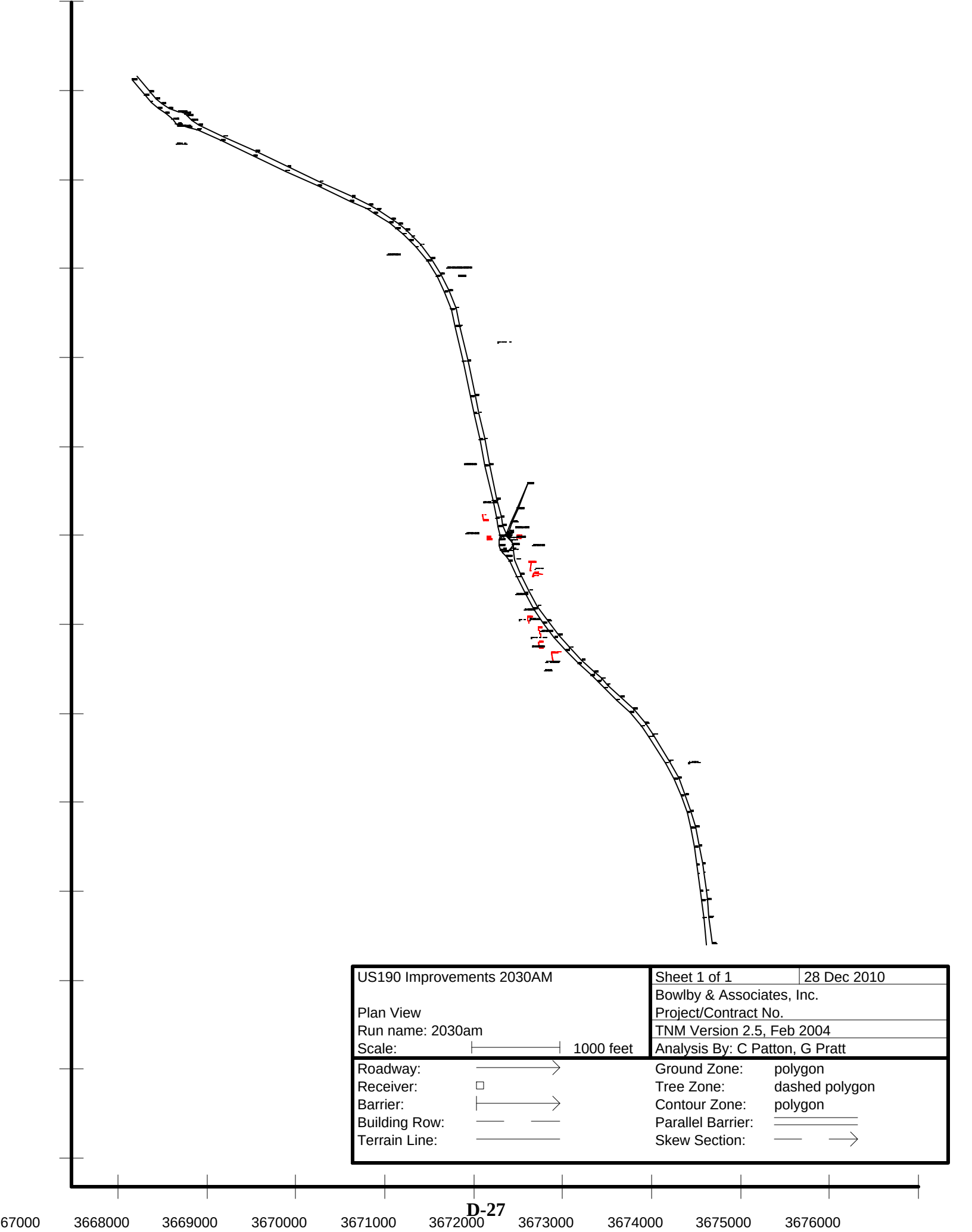
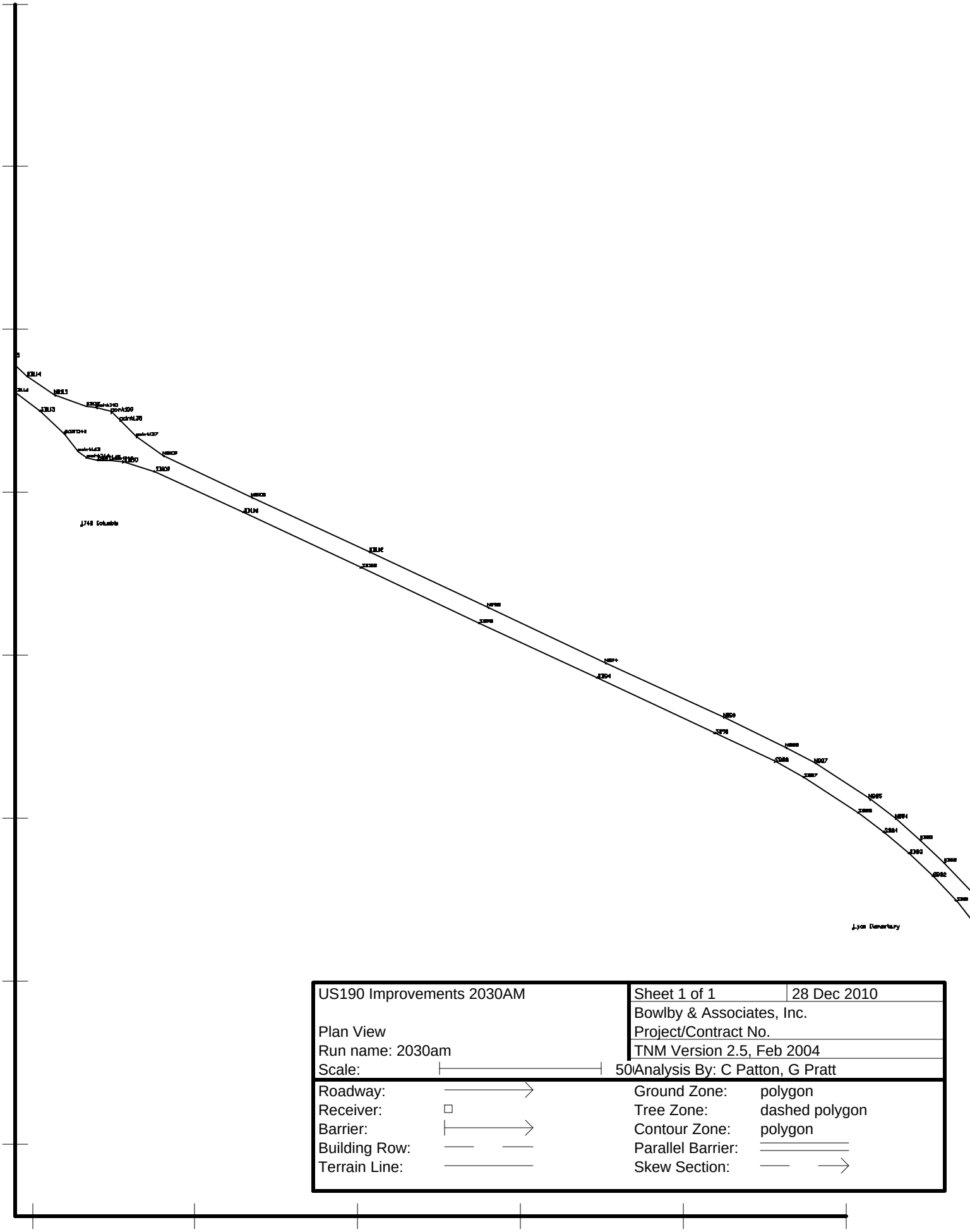
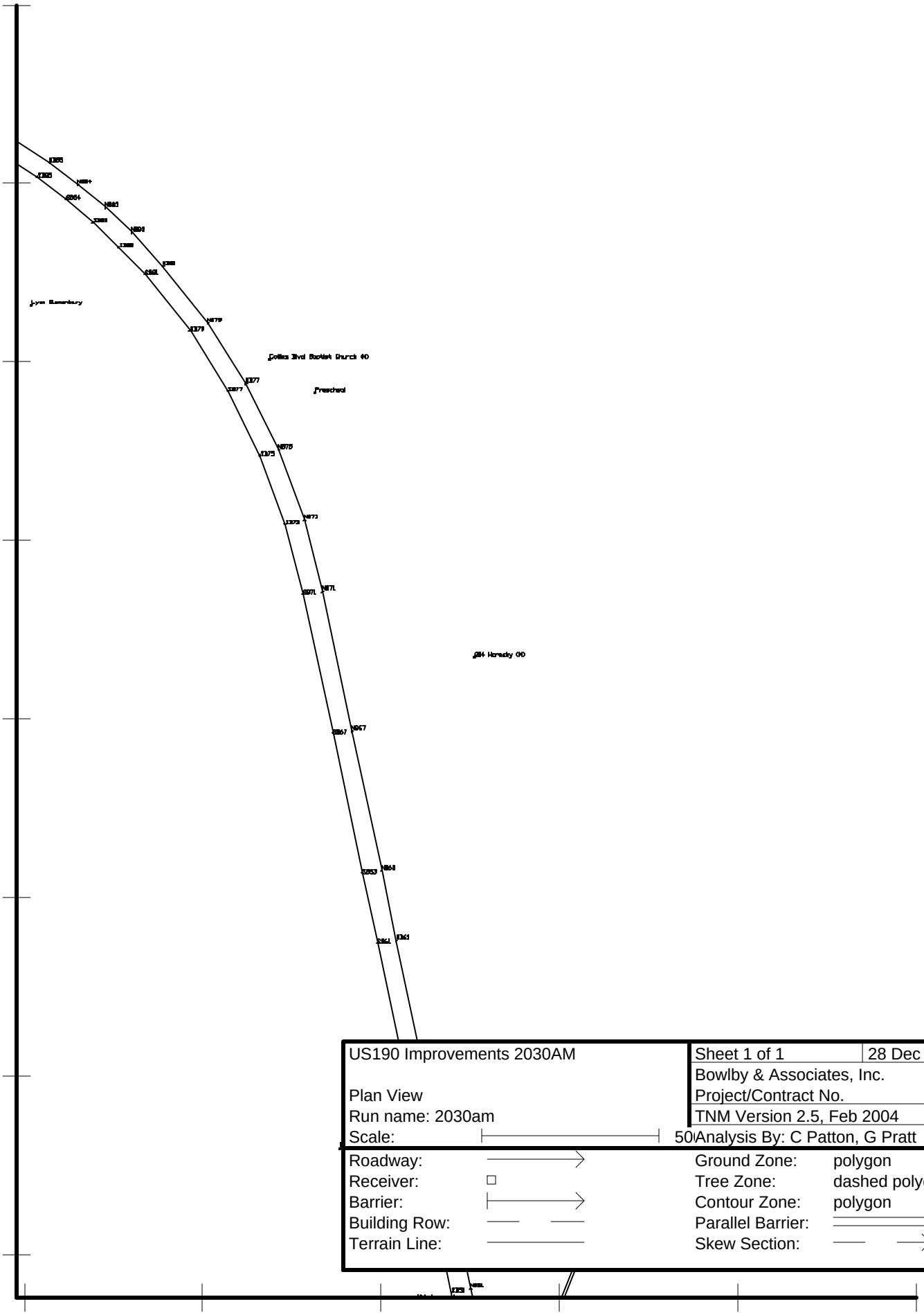
	NB116	64										
SB US 190 Existing-2	point129	129	916	45	24	45	19	45	5	45	0	0
	SB45	99	916	45	24	45	19	45	5	45	0	0
	SB44	100	916	45	24	45	19	45	5	45	0	0
	SB42	101	916	45	24	45	19	45	5	45	0	0
	SB40	102	916	45	24	45	19	45	5	45	0	0
	SB38	103	916	45	24	45	19	45	5	45	0	0
	SB36	104	916	45	24	45	19	45	5	45	0	0
	SB34	105	916	45	24	45	19	45	5	45	0	0
	SB32	106	916	45	24	45	19	45	5	45	0	0
	SB30	107	916	45	24	45	19	45	5	45	0	0
	SB28	108	916	45	24	45	19	45	5	45	0	0
	SB27	109	916	45	24	45	19	45	5	45	0	0
	SB26	110	916	45	24	45	19	45	5	45	0	0
	SB24	111	916	45	24	45	19	45	5	45	0	0
	SB22	112	916	45	24	45	19	45	5	45	0	0
	SB20	113	916	45	24	45	19	45	5	45	0	0
	SB18.4	114	916	45	24	45	19	45	5	45	0	0
	SB17	115	916	45	24	45	19	45	5	45	0	0
	SB15	116	916	45	24	45	19	45	5	45	0	0
	SB13	117	916	45	24	45	19	45	5	45	0	0
	SB11	118	916	45	24	45	19	45	5	45	0	0
	SB9	119	916	45	24	45	19	45	5	45	0	0
	SB7.2	120	916	45	24	45	19	45	5	45	0	0
	SB5	121	916	45	24	45	19	45	5	45	0	0
	SB3	122	916	45	24	45	19	45	5	45	0	0
	SB2	123	916	45	24	45	19	45	5	45	0	0
	SB0	124	916	45	24	45	19	45	5	45	0	0
	SB999	125	916	45	24	45	19	45	5	45	0	0
	SB997	126	916	45	24	45	19	45	5	45	0	0
	SB994	127										
LA437 NB	point130	130	565	35	15	35	12	35	3	35	0	0
	point142	142	565	35	15	35	12	35	3	35	0	0
	point131	131	565	35	15	35	12	35	3	35	0	0

	point132	132	565	35	15	35	12	35	3	35	0	0
	point133	133	565	35	15	35	12	35	3	35	0	0
	point134	134	565	35	15	35	12	35	3	35	0	0
	point135	135										
LA437 SB	point136	136	230	35	6	35	5	35	1	35	0	0
	point137	137	230	35	6	35	5	35	1	35	0	0
	point138	138	230	35	6	35	5	35	1	35	0	0
	point139	139	230	25	6	0	5	25	1	25	0	0
	point140	140	230	25	6	25	5	25	1	25	0	0
	point141	141										

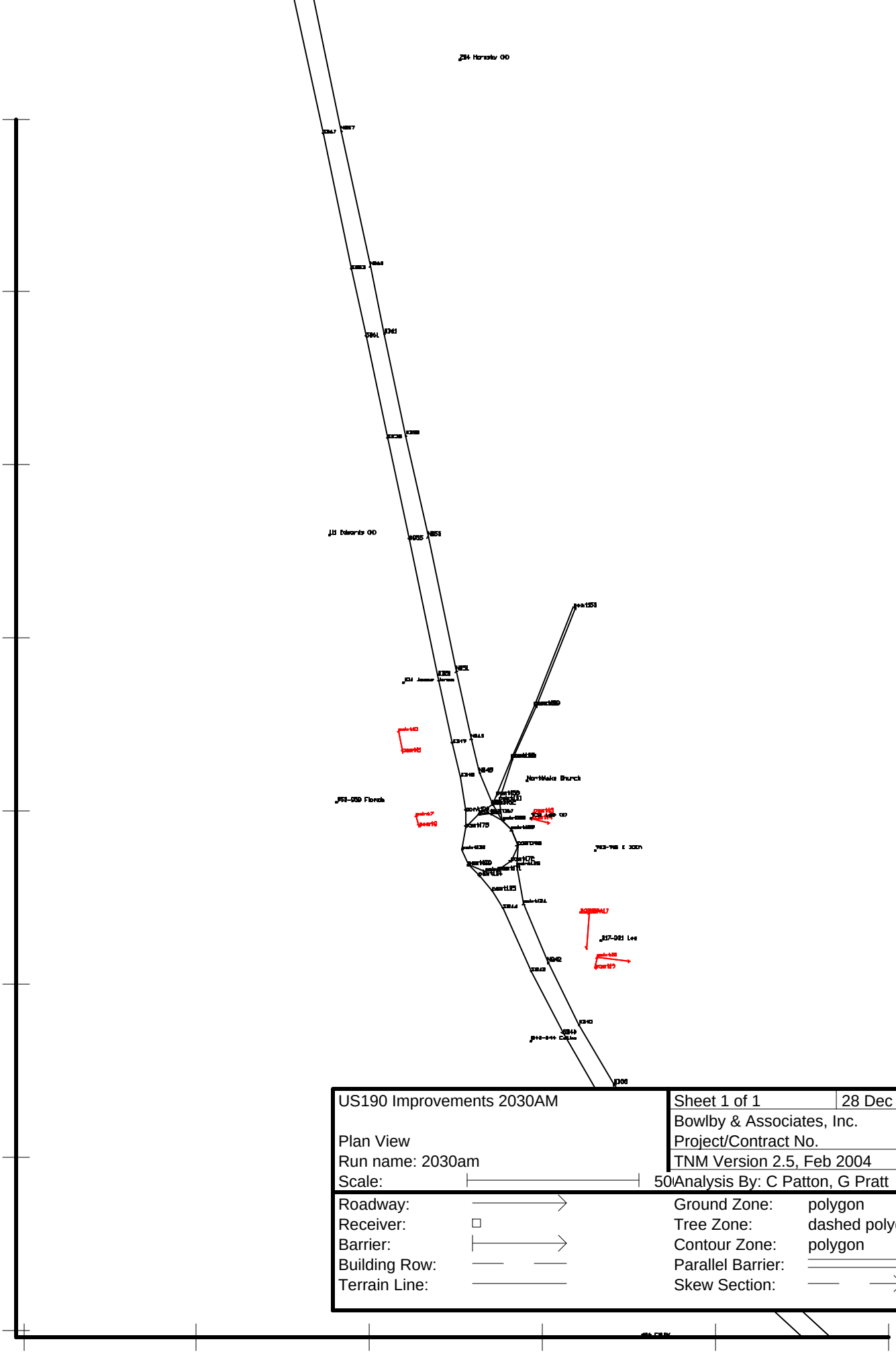

US190 Improvements 2030AM
Plan View
Run name: 2030am
Scale:
1000 feet
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
67000
3668000
3669000
3670000
3671000
3672000
3673000
3674000
3675000
3676000


US190 Improvements 2030AM
Plan View
Run name: 2030am
Scale:
50
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
3668000
3668500
3669000
3669500
3670000



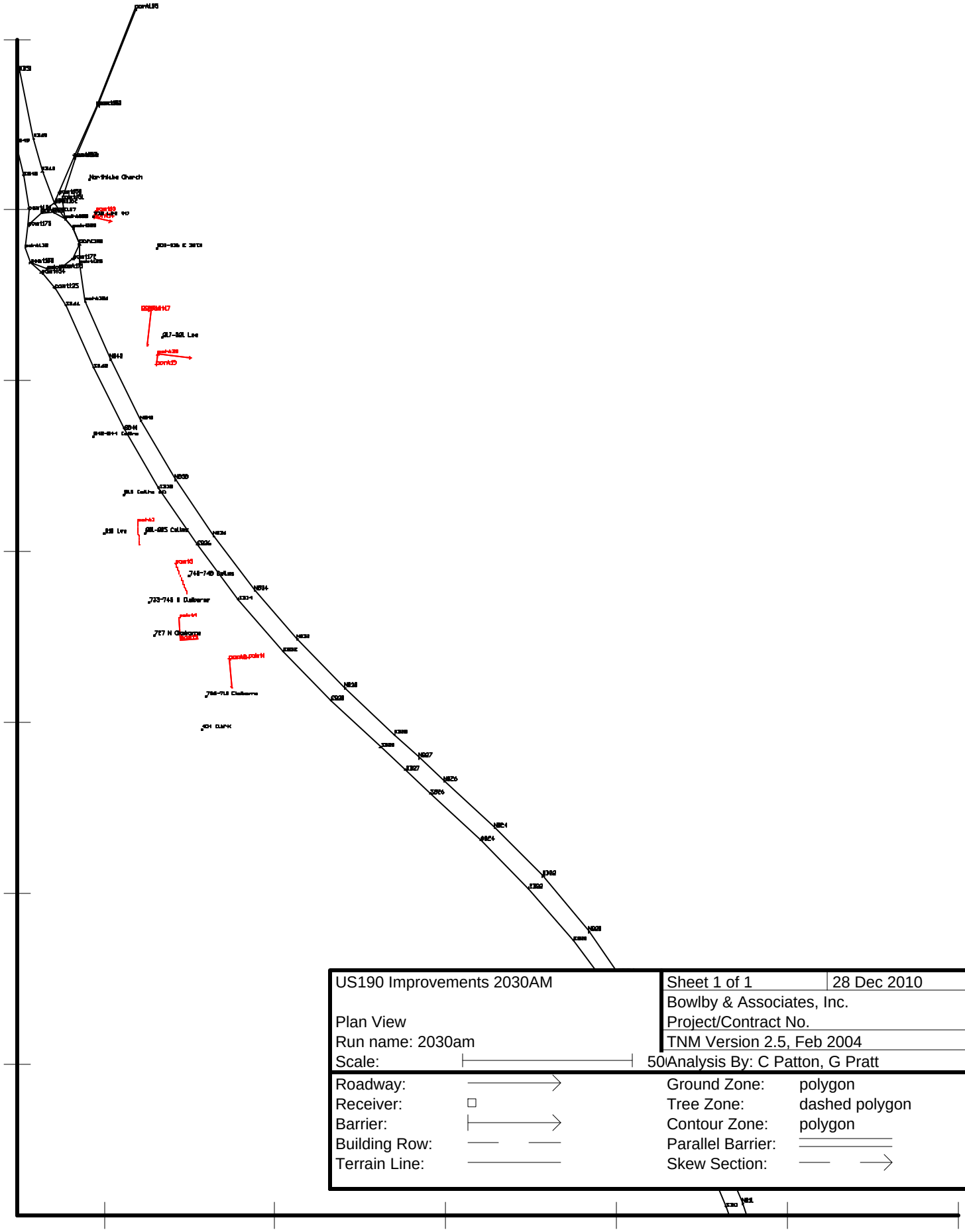
US190 Improvements 2030AM	Sheet 1 of 1	28 Dec 2010
	Bowlby & Associates, Inc.	
Plan View	Project/Contract No.	
Run name: 2030am	TNM Version 2.5, Feb 2004	
Scale: 50	Analysis By: C Patton, G Pratt	

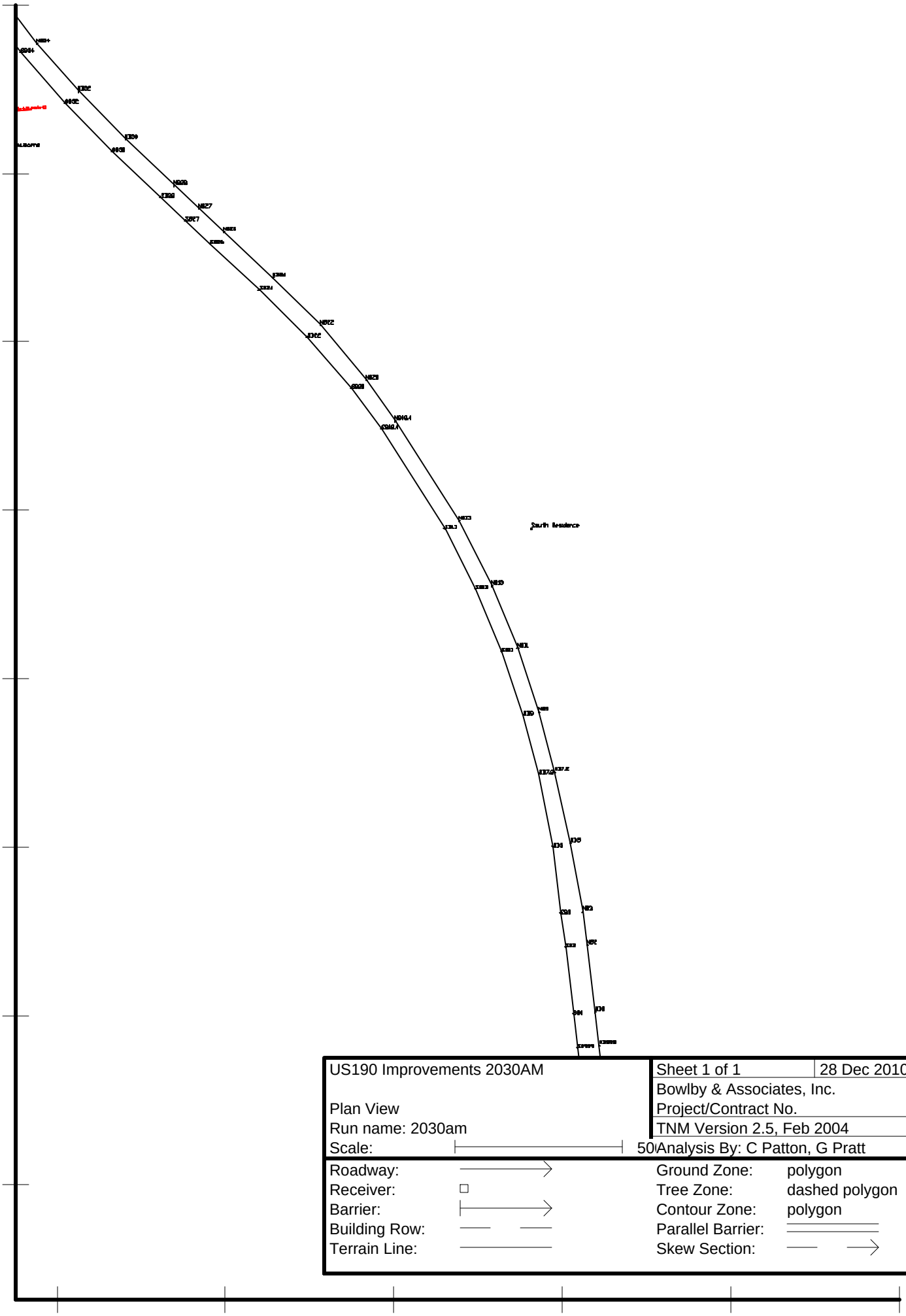
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	



US190 Improvements 2030AM	Sheet 1 of 1	28 Dec 2010
	Bowlby & Associates, Inc.	
Plan View	Project/Contract No.	
Run name: 2030am	TNM Version 2.5, Feb 2004	
Scale: 50	Analysis By: C Patton, G Pratt	

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	


US190 Improvements 2030AM
Plan View
Run name: 2030am
Scale: 50
Sheet 1 of 1
28 Dec 2010
Bowlby & Associates, Inc.
Project/Contract No.
TNM Version 2.5, Feb 2004
Analysis By: C Patton, G Pratt
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
3671500
3672000
3672500
3673000
3673500
3674000



US190 Improvements 2030AM	Sheet 1 of 1	28 Dec 2010
	Bowlby & Associates, Inc.	
Plan View	Project/Contract No.	
Run name: 2030am	TNM Version 2.5, Feb 2004	
Scale: 50	Analysis By: C Patton, G Pratt	

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

2000 3672500 3673000 3673500 3674000 3674500

Bowlby & Associates, Inc. 28 December 2010
C Patton, G Pratt TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US190 Improvements 2030AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
952 Lee (M)	2	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
111 Edwards (M)	3	6	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
204 Hornsby (M)	4	18	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	0	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
404 Clark	6	4	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0
706-710 Claiborne	7	3	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
746-748 Collins	8	2	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0
801-805 Collins	9	3	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
842-844 Collins	10	2	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0
104 Jesse Jones	11	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
Preschool	12	0	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
Northlake Church	13	0	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
727 N Claiborne	14	2	0.0	57.0	66	57.0	10	----	57.0	0.0	8	-8.0
733-745 N Claiborne	15	2	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
810 Lee	16	10	0.0	61.0	66	61.0	10	----	61.0	0.0	8	-8.0
952-958 Florida	17	5	0.0	56.1	66	56.1	10	----	56.1	0.0	8	-8.0
903-916 E 30th	18	10	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
317-321 Lee	19	2	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
Lyon Elementary	20	0	0.0	56.8	66	56.8	10	----	56.8	0.0	8	-8.0
1740 Columbia	21	1	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
South Residence	22	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction

			Min	Avg	Max
			dB	dB	dB
All Selected		74	0.0	0.0	0.0
All Impacted		10	0.0	0.0	0.0
All that meet NR Goal		0	0.0	0.0	0.0

Bowlby & Associates, Inc. **28 December 2010**
C Patton, G Pratt **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **<Project Name?>**
RUN: **US190 Improvements 2030AM**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 STA 0 - 44	NB994	1	1316	45	35	45	28	45	7	45	0	0
	NB997	2	1316	45	35	45	28	45	7	45	0	0
	NB999	3	1316	45	35	45	28	45	7	45	0	0
	NB0	4	1316	45	35	45	28	45	7	45	0	0
	NB2	5	1316	45	35	45	28	45	7	45	0	0
	NB3	6	1316	45	35	45	28	45	7	45	0	0
	NB5	7	1316	45	35	45	28	45	7	45	0	0
	NB7.2	8	1316	45	35	45	28	45	7	45	0	0
	NB9	9	1316	45	35	45	28	45	7	45	0	0
	NB11	10	1316	45	35	45	28	45	7	45	0	0
	NB13	11	1316	45	35	45	28	45	7	45	0	0
	NB15	12	1316	45	35	45	28	45	7	45	0	0
	NB18.4	13	1316	45	35	45	28	45	7	45	0	0
	NB20	14	1316	45	35	45	28	45	7	45	0	0
	NB22	15	1316	45	35	45	28	45	7	45	0	0
	NB24	16	1316	45	35	45	28	45	7	45	0	0
	NB26	17	1316	45	35	45	28	45	7	45	0	0
	NB27	18	1316	45	35	45	28	45	7	45	0	0
	NB28	19	1316	45	35	45	28	45	7	45	0	0
	NB30	20	1316	45	35	45	28	45	7	45	0	0
	NB32	21	1316	45	35	45	28	45	7	45	0	0
	NB34	22	1316	45	35	45	28	45	7	45	0	0
	NB36	23	1316	45	35	45	28	45	7	45	0	0

	NB38	24	1316	45	35	45	28	45	7	45	0	0
	NB40	25	1316	45	35	45	28	45	7	45	0	0
	NB42	26	1316	45	35	45	28	45	7	45	0	0
	NB44	27										
SB US 190 STA 44 - 0	SB44	28	2028	45	53	45	43	45	11	45	0	0
	SB42	29	2028	45	53	45	43	45	11	45	0	0
	SB40	30	2028	45	53	45	43	45	11	45	0	0
	SB38	31	2028	45	53	45	43	45	11	45	0	0
	SB36	32	2028	45	53	45	43	45	11	45	0	0
	SB34	33	2028	45	53	45	43	45	11	45	0	0
	SB32	34	2028	45	53	45	43	45	11	45	0	0
	SB30	35	2028	45	53	45	43	45	11	45	0	0
	SB28	36	2028	45	53	45	43	45	11	45	0	0
	SB27	37	2028	45	53	45	43	45	11	45	0	0
	SB26	38	2028	45	53	45	43	45	11	45	0	0
	SB24	39	2028	45	53	45	43	45	11	0	0	0
	SB22	40	2028	45	53	45	43	45	11	45	0	0
	SB20	41	2028	45	53	45	43	45	11	45	0	0
	SB18.4	43	2028	45	53	45	43	45	11	45	0	0
	SB15	44	2028	45	53	45	43	45	11	45	0	0
	SB13	45	2028	45	53	45	43	45	11	45	0	0
	SB11	46	2028	45	53	45	43	45	11	45	0	0
	SB9	47	2028	45	53	45	43	45	11	45	0	0
	SB7.2	48	2028	45	53	45	43	45	11	45	0	0
	SB5	49	2028	45	53	45	43	45	11	45	0	0
	SB3	50	2028	45	53	45	43	45	11	45	0	0
	SB2	51	2028	45	53	45	43	45	11	45	0	0
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	SB999	53	2028	45	53	45	43	45	11	45	0	0
	SB997	54	2028	45	53	45	43	45	11	45	0	0
	SB994	55										
NB US 190 47 - 110	NB47	56	849	45	22	45	18	45	4	45	0	0
	NB48	57	849	45	22	45	18	45	4	45	0	0
	NB49	58	849	45	22	45	18	45	4	45	0	0
	NB51	59	849	45	22	45	18	45	4	45	0	0
	NB55	60	849	45	22	45	18	45	4	45	0	0

	NB58	61	849	45	22	45	18	45	4	45	0	0
	NB61	62	849	45	22	45	18	45	4	45	0	0
	NB63	63	849	45	22	45	18	45	4	45	0	0
	NB67	64	849	45	22	45	18	45	4	45	0	0
	NB71	65	849	45	22	45	18	45	4	45	0	0
	NB73	66	849	45	22	45	18	45	4	45	0	0
	NB75	67	849	45	22	45	18	45	4	45	0	0
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	NB79	69	849	45	22	45	18	45	4	45	0	0
	NB81	70	849	45	22	45	18	45	4	45	0	0
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	NB83	72	849	45	22	45	18	45	4	45	0	0
	NB84	73	849	45	22	45	18	45	4	45	0	0
	NB85	74	849	45	22	45	18	45	4	45	0	0
	NB87	75	849	45	22	45	18	45	4	45	0	0
	NB88	76	849	45	22	45	18	45	4	45	0	0
	NB90	77	849	45	22	45	18	45	4	45	0	0
	NB94	78	849	45	22	45	18	45	4	45	0	0
	NB98	79	849	45	22	45	18	45	4	45	0	0
	NB102	80	849	45	22	45	18	45	4	45	0	0
	NB106	81	849	45	22	45	18	45	4	45	0	0
	NB109	82	849	45	22	45	18	45	4	45	0	0
	NB110	83										
SB US 190 STA 110 - 47	SB110	84	1199	45	32	45	25	45	6	45	0	0
	SB109	85	1199	45	32	45	25	45	6	45	0	0
	SB106	86	1199	45	32	45	25	45	6	45	0	0
	SB102	87	1199	45	32	45	25	45	6	45	0	0
	SB98	88	1199	45	32	45	25	45	6	45	0	0
	SB94	89	1199	45	32	45	25	45	6	45	0	0
	SB90	90	1199	45	32	45	25	45	6	45	0	0
	SB88	91	1199	45	32	45	25	45	6	45	0	0
	SB87	92	1199	45	32	45	25	45	6	45	0	0
	SB85	93	1199	45	32	45	25	45	6	45	0	0
	SB84	94	1199	45	32	45	25	45	6	45	0	0
	SB83	95	1199	45	32	45	25	45	6	45	0	0
	SB82	96	1199	45	32	45	25	45	6	45	0	0

	SB81	97	1199	45	32	45	25	45	6	45	0	0
	SB79	98	1199	45	32	45	25	45	6	45	0	0
	SB77	99	1199	45	32	45	25	45	6	45	0	0
	SB75	100	1199	45	32	45	25	45	6	45	0	0
	SB73	101	1199	45	32	45	25	45	6	45	0	0
	SB71	102	1199	45	32	45	25	45	6	45	0	0
	SB67	103	1199	45	32	45	25	45	6	45	0	0
	SB63	104	1199	45	32	45	25	45	6	45	0	0
	SB61	105	1199	45	32	45	25	45	6	45	0	0
	SB58	106	1199	45	32	45	25	45	6	45	0	0
	SB55	107	1199	45	32	45	25	45	6	45	0	0
	SB51	108	1199	45	32	45	25	45	6	45	0	0
	SB49	109	1199	45	32	45	25	45	6	45	0	0
	SB48	110	1199	45	32	45	25	45	6	45	0	0
	SB47	111										
NB US 190 STA 112 - 118.3	NB112	112	849	45	22	45	18	45	4	45	0	0
	NB113	113	849	45	22	45	18	45	4	45	0	0
	NB114	114	849	45	22	45	18	45	4	45	0	0
	NB115	115	849	45	22	45	18	45	4	45	0	0
	NB116	116	849	45	22	45	18	45	4	45	0	0
	NB118.3	117										
SB US 190 STA 118.3 - 112	SB118.3	118	1199	45	32	45	25	45	6	45	0	0
	SB116	119	1199	45	32	45	25	45	6	45	0	0
	SB115	120	1199	45	32	45	25	45	6	45	0	0
	SB114	121	1199	45	32	45	25	45	6	45	0	0
	SB113	122	1199	45	32	45	25	45	6	45	0	0
	SB112	123										
NB to Roundabout	point124	124	1316	35	35	35	28	35	7	35	0	0
	point125	125	1316	35	35	35	28	35	7	35	0	0
	point126	126										
SB Roundabout 30th St.	point130	130	1199	35	32	35	25	35	6	35	0	0
	point131	131										
NB Roundabout Columbia	point137	137	849	20	22	20	18	20	4	20	0	0
	point138	138	849	20	22	20	18	20	4	20	0	0
	point139	139	849	20	22	20	18	20	4	20	0	0
	point140	140	849	20	22	20	18	20	4	20	0	0

	point141	141										
SB Roundabout Columbia	point142	142	1199	20	32	20	25	20	6	20	0	0
	point143	143	1199	20	32	20	25	20	6	20	0	0
	point144	144	1199	20	32	20	25	20	6	20	0	0
	point145	145	1199	20	32	20	25	20	6	20	0	0
	point146	146	1199	20	32	20	25	20	6	20	0	0
	point147	147										
LA437 NB	point148	148	350	45	9	45	7	45	2	45	0	0
	point149	149	350	45	9	45	7	45	2	45	0	0
	point150	150	350	45	9	45	7	45	2	45	0	0
	point151	151	350	45	9	45	7	45	2	45	0	0
	point152	152	350	45	9	45	7	45	2	45	0	0
	point153	153	350	45	9	45	7	45	2	45	0	0
	point154	154										
LA437 SB	point155	155	971	35	26	35	20	35	5	35	0	0
	point156	156	971	35	26	35	20	35	5	35	0	0
	point157	157	971	35	26	35	20	35	5	35	0	0
	point158	158	971	35	26	35	20	35	5	35	0	0
	point159	159										
LA437 SB into Round	point162	162	959	20	25	20	20	20	5	20	0	0
	point163	163	1155	20	30	20	24	20	6	20	0	0
	point164	164										
Round NB to WB	point165	165	197	20	5	20	4	20	1	20	0	0
	point167	167	197	20	5	20	4	20	1	20	0	0
	point168	168										
Roundabout South side	point169	169	68	20	2	20	1	20	0	0	0	0
	point170	170	68	20	2	20	1	20	0	0	0	0
	point171	171	68	20	2	20	1	20	0	0	0	0
	point172	172	68	20	2	20	1	20	0	0	0	0
	point173	173										
NB Roundabout less LA437NB	point174	174	851	20	22	20	18	20	4	20	0	0
	point127	127	851	20	22	20	18	20	4	20	0	0
	point128	128	851	20	22	20	18	20	4	20	0	0
	point129	129										
SB Roundabout west side	point175	175	1925	20	51	20	41	20	10	20	0	0
	point132	132	1925	20	51	20	41	20	10	20	0	0

	point133	133										
SB US190 S of Round	point176	176	2028	45	53	45	43	45	11	45	0	0
	point134	134	2028	45	53	45	43	45	11	45	0	0
	point135	135	2028	45	53	45	43	45	11	45	0	0
	point136	136										

Bowlby & Associates, Inc. 28 December 2010
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INPUT: ROADWAYS
PROJECT/CONTRACT: <Project Name?>
RUN: US190 Improvements 2030AM

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
NB US 190 STA 0 - 44	28.0	NB994	1	3,673,666.8	719,415.4	22.00				Average	
		NB997	2	3,673,630.0	719,718.7	22.00				Average	
		NB999	3	3,673,607.2	719,917.8	22.00				Average	
		NB0	4	3,673,595.0	720,017.2	22.00				Average	
		NB2	5	3,673,571.5	720,216.1	22.00				Average	
		NB3	6	3,673,557.5	720,315.2	22.00				Average	
		NB5	7	3,673,521.8	720,518.0	22.00				Average	
		NB7.2	8	3,673,474.8	720,730.2	24.00				Average	
		NB9	9	3,673,428.0	720,907.5	24.00				Average	
		NB11	10	3,673,364.0	721,097.1	24.00				Average	
		NB13	11	3,673,286.5	721,282.6	24.00				Average	
		NB15	12	3,673,189.2	721,475.0	24.00				Average	
		NB18.4	13	3,673,000.8	721,771.2	24.00				Average	
		NB20	14	3,672,914.2	721,892.7	24.00				Average	
		NB22	15	3,672,779.5	722,055.6	21.00				Average	
		NB24	16	3,672,637.0	722,196.0	21.00				Average	
		NB26	17	3,672,490.8	722,332.6	21.00				Average	
		NB27	18	3,672,417.8	722,400.9	22.00				Average	
		NB28	19	3,672,344.8	722,469.2	22.00				Average	
		NB30	20	3,672,199.0	722,606.1	22.00				Average	
		NB32	21	3,672,059.2	722,749.5	24.00				Average	
		NB34	22	3,671,937.0	722,891.1	26.00				Average	
		NB36	23	3,671,815.0	723,050.6	27.00				Average	
		NB38	24	3,671,703.5	723,216.7	28.00				Average	
		NB40	25	3,671,602.5	723,389.5	28.00				Average	

		NB42	26	3,671,512.0	723,568.9	28.00				Average	
		NB44	27	3,671,440.2	723,737.8	28.00					
SB US 190 STA 44 - 0	28.0	SB44	28	3,671,384.8	723,722.5	28.00				Average	
		SB42	29	3,671,466.0	723,539.7	28.00				Average	
		SB40	30	3,671,556.8	723,360.4	28.00				Average	
		SB38	31	3,671,658.0	723,187.7	28.00				Average	
		SB36	32	3,671,769.5	723,021.6	27.00				Average	
		SB34	33	3,671,891.0	722,861.9	26.00				Average	
		SB32	34	3,672,021.8	722,710.6	24.00				Average	
		SB30	35	3,672,161.5	722,567.3	22.00				Average	
		SB28	36	3,672,307.2	722,430.4	22.00				Average	
		SB27	37	3,672,380.2	722,362.1	22.00				Average	
		SB26	38	3,672,453.2	722,293.8	21.00				Average	
		SB24	39	3,672,599.5	722,157.2	21.00				Average	
		SB22	40	3,672,741.5	722,016.3	21.00				Average	
		SB20	41	3,672,872.2	721,864.1	24.00				Average	
		SB18.4	43	3,672,962.0	721,743.6	24.00				Average	
		SB15	44	3,673,149.8	721,448.1	24.00				Average	
		SB13	45	3,673,241.0	721,268.8	24.00				Average	
		SB11	46	3,673,318.8	721,083.4	24.00				Average	
		SB9	47	3,673,382.5	720,893.8	24.00				Average	
		SB7.2	48	3,673,428.8	720,719.6	24.00				Average	
		SB5	49	3,673,471.0	720,502.6	22.00				Average	
		SB3	50	3,673,493.5	720,303.9	22.00				Average	
		SB2	51	3,673,507.5	720,204.8	22.00				Average	
		SB0	52	3,673,531.0	720,005.9	22.00				Average	
		SB999	53	3,673,542.8	719,906.4	22.00				Average	
		SB997	54	3,673,566.0	719,707.4	22.00				Average	
		SB994	55	3,673,601.2	719,406.8	22.00					
NB US 190 47 - 110	28.0	NB47	56	3,671,351.2	724,024.4	28.00				Average	
		NB48	57	3,671,313.5	724,117.8	28.00				Average	
		NB49	58	3,671,289.8	724,215.0	28.00				Average	
		NB51	59	3,671,247.5	724,410.8	29.00				Average	
		NB55	60	3,671,164.8	724,799.2	30.00				Average	
		NB58	61	3,671,102.2	725,092.6	30.00				Average	
		NB61	62	3,671,039.8	725,386.1	30.00				Average	
		NB63	63	3,670,998.2	725,581.7	30.00				Average	
		NB67	64	3,670,914.8	725,972.9	30.00				Average	
		NB71	65	3,670,831.5	726,364.1	30.00				Average	

		NB73	66	3,670,781.2	726,564.5	30.00				Average	
		NB75	67	3,670,708.8	726,761.9	30.00				Average	
		NB77	68	3,670,617.2	726,947.1	30.00				Average	
		NB79	69	3,670,510.0	727,116.5	29.00				Average	
		NB81	70	3,670,384.2	727,275.7	28.00				Average	
		NB82	71	3,670,295.8	727,369.7	28.00				Average	
		NB83	72	3,670,222.2	727,439.2	28.00				Average	
		NB84	73	3,670,145.8	727,504.2	28.00				Average	
		NB85	74	3,670,066.2	727,565.1	30.00				Average	
		NB87	75	3,669,898.5	727,674.0	30.00				Average	
		NB88	76	3,669,810.0	727,722.1	29.00				Average	
		NB90	77	3,669,617.5	727,813.5	28.00				Average	
		NB94	78	3,669,255.2	727,983.1	28.00				Average	
		NB98	79	3,668,893.0	728,152.7	28.00				Average	
		NB102	80	3,668,530.5	728,322.2	30.00				Average	
		NB106	81	3,668,168.5	728,491.8	30.00				Average	
		NB109	82	3,667,896.8	728,619.3	30.00				Average	
		NB110	83	3,667,813.0	728,676.5	32.00					
SB US 190 STA 110 - 47	28.0	SB110	84	3,667,777.5	728,598.5	32.00				Average	
		SB109	85	3,667,874.0	728,569.7	30.00				Average	
		SB106	86	3,668,146.0	728,442.7	30.00				Average	
		SB102	87	3,668,508.2	728,273.1	30.00				Average	
		SB98	88	3,668,870.5	728,103.5	28.00				Average	
		SB94	89	3,669,232.8	727,933.9	28.00				Average	
		SB90	90	3,669,595.0	727,764.3	28.00				Average	
		SB88	91	3,669,778.8	727,677.4	29.00				Average	
		SB87	92	3,669,867.5	727,629.6	30.00				Average	
		SB85	93	3,670,035.2	727,520.8	30.00				Average	
		SB84	94	3,670,114.8	727,459.9	28.00				Average	
		SB83	95	3,670,191.0	727,394.6	28.00				Average	
		SB82	96	3,670,264.2	727,324.8	28.00				Average	
		SB81	97	3,670,335.5	727,249.1	28.00				Average	
		SB79	98	3,670,462.2	727,090.4	29.00				Average	
		SB77	99	3,670,569.8	726,921.3	30.00				Average	
		SB75	100	3,670,659.2	726,740.6	30.00				Average	
		SB73	101	3,670,729.5	726,549.3	30.00				Average	
		SB71	102	3,670,778.8	726,352.9	30.00				Average	
		SB67	103	3,670,862.0	725,961.6	30.00				Average	
		SB63	104	3,670,945.2	725,570.4	30.00				Average	

		SB61	105	3,670,987.0	725,374.8	30.00				Average	
		SB58	106	3,671,049.5	725,081.4	30.00				Average	
		SB55	107	3,671,112.0	724,788.0	30.00				Average	
		SB51	108	3,671,195.5	724,396.5	29.00				Average	
		SB49	109	3,671,237.5	724,200.6	28.00				Average	
		SB48	110	3,671,261.5	724,103.5	28.00				Average	
		SB47	111	3,671,276.0	724,003.7	28.00					
NB US 190 STA 112 - 118.3	28.0	NB112	112	3,667,660.8	728,771.1	32.00				Average	
		NB113	113	3,667,561.8	728,806.4	32.00				Average	
		NB114	114	3,667,479.0	728,862.7	32.00				Average	
		NB115	115	3,667,413.5	728,919.6	32.00				Average	
		NB116	116	3,667,341.5	728,991.4	32.00				Average	
		NB118.3	117	3,667,197.8	729,172.9	32.00					
SB US 190 STA 118.3 - 112	28.0	SB118.3	118	3,667,140.0	729,134.4	32.00				Average	
		SB116	119	3,667,286.0	728,952.9	32.00				Average	
		SB115	120	3,667,358.5	728,881.6	32.00				Average	
		SB114	121	3,667,440.2	728,812.6	32.00				Average	
		SB113	122	3,667,521.2	728,753.7	32.00				Average	
		SB112	123	3,667,595.0	728,685.8	32.00					
NB to Roundabout	28.0	point124	124	3,671,440.2	723,737.8	28.00				Average	
		point125	125	3,671,422.8	723,846.3	28.00				Average	
		point126	126	3,671,424.8	723,905.9	28.00					
SB Roundabout 30th St.	28.0	point130	130	3,671,276.0	724,003.7	28.00				Average	
		point131	131	3,671,273.8	723,957.8	28.00					
NB Roundabout Columbia	28.0	point137	137	3,667,813.0	728,676.5	32.00				Average	
		point138	138	3,667,764.2	728,726.9	32.00				Average	
		point139	139	3,667,737.5	728,752.6	32.00				Average	
		point140	140	3,667,691.0	728,766.5	32.00				Average	
		point141	141	3,667,660.8	728,771.1	32.00					
SB Roundabout Columbia	28.0	point142	142	3,667,595.0	728,685.8	32.00				Average	
		point143	143	3,667,635.0	728,630.4	32.00				Average	
		point144	144	3,667,664.0	728,611.0	32.00				Average	
		point145	145	3,667,698.0	728,604.6	32.00				Average	
		point146	146	3,667,738.2	728,603.4	32.00				Average	
		point147	147	3,667,777.5	728,598.5	32.00					
LA437 NB	14.0	point148	148	3,671,424.8	723,905.9	28.00	Onramp	20.00	100	Average	
		point149	149	3,671,406.2	723,951.9	28.00				Average	
		point150	150	3,671,381.8	723,979.2	28.00				Average	
		point151	151	3,671,371.8	724,036.0	29.00				Average	

		point152	152	3,671,411.5	724,156.9	29.00				Average	
		point153	153	3,671,480.0	724,310.4	30.00				Average	
		point154	154	3,671,591.8	724,593.6	30.00					
LA437 SB	14.0	point155	155	3,671,587.0	724,593.8	30.00				Average	
		point156	156	3,671,473.5	724,309.2	30.00				Average	
		point157	157	3,671,407.0	724,158.6	29.00				Average	
		point158	158	3,671,363.5	724,051.2	29.00				Average	
		point159	159	3,671,351.2	724,024.4	28.00					
LA437 SB into Round	28.0	point162	162	3,671,351.2	724,024.4	28.00				Average	
		point163	163	3,671,311.5	723,995.5	28.00				Average	
		point164	164	3,671,273.8	723,957.8	28.00					
Round NB to WB	28.0	point165	165	3,671,381.2	723,978.8	28.00				Average	
		point167	167	3,671,346.0	723,998.9	28.00				Average	
		point168	168	3,671,311.5	723,995.5	28.00					
Roundabout South side	28.0	point169	169	3,671,281.8	723,848.5	28.00				Average	
		point170	170	3,671,330.8	723,831.4	28.00				Average	
		point171	171	3,671,370.0	723,833.4	28.00				Average	
		point172	172	3,671,405.8	723,860.9	28.00				Average	
		point173	173	3,671,424.8	723,905.9	28.00					
NB Roundabout less LA437NB	28.0	point174	174	3,671,424.8	723,905.9	28.00				Average	
		point127	127	3,671,405.5	723,951.7	28.00				Average	
		point128	128	3,671,381.2	723,978.8	28.00				Average	
		point129	129	3,671,351.2	724,024.4	28.00					
SB Roundabout west side	28.0	point175	175	3,671,273.8	723,957.8	28.00				Average	
		point132	132	3,671,265.0	723,893.5	28.00				Average	
		point133	133	3,671,281.8	723,848.5	28.00					
SB US190 S of Round	28.0	point176	176	3,671,281.8	723,848.5	28.00	Onramp	20.00	100	Average	
		point134	134	3,671,313.5	723,817.9	28.00				Average	
		point135	135	3,671,352.5	723,774.2	28.00				Average	
		point136	136	3,671,384.8	723,722.5	28.00					

Bowlby & Associates, Inc. 28 December 2010
C Patton, G Pratt TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: <Project Name?>
RUN: US190 Improvements 2030AM

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
815 Collins (M)	1	1	3,671,554.2	723,169.1	26.00	5.00	0.00	66	10.0	8.0	Y
952 Lee (M)	2	1	3,671,464.0	723,985.0	28.00	5.00	0.00	66	10.0	8.0	Y
111 Edwards (M)	3	6	3,670,880.2	724,801.9	28.00	5.00	0.00	66	10.0	8.0	Y
204 Hornsby (M)	4	18	3,671,258.0	726,176.1	30.00	5.00	0.00	66	10.0	8.0	Y
Collins Blvd. Baptist Church (M)	5	0	3,670,684.2	727,011.6	28.00	5.00	0.00	66	10.0	8.0	Y
404 Clark	6	4	3,671,781.5	722,483.6	24.00	5.00	0.00	66	10.0	8.0	Y
706-710 Claiborne	7	3	3,671,795.5	722,579.2	24.00	5.00	0.00	66	10.0	8.0	Y
746-748 Collins	8	2	3,671,744.8	722,931.4	26.00	5.00	0.00	66	10.0	8.0	Y
801-805 Collins	9	3	3,671,616.2	723,058.2	26.00	5.00	0.00	66	10.0	8.0	Y
842-844 Collins	10	2	3,671,464.0	723,340.4	26.00	5.00	0.00	66	10.0	8.0	Y
104 Jesse Jones	11	1	3,671,096.2	724,376.0	28.00	5.00	0.00	66	10.0	8.0	Y
Preschool	12	0	3,670,811.2	726,918.7	28.00	5.00	0.00	66	10.0	8.0	Y
Northlake Church	13	0	3,671,451.8	724,091.4	28.00	5.00	0.00	66	10.0	8.0	Y
727 N Claiborne	14	2	3,671,642.0	722,756.6	24.00	5.00	0.00	66	10.0	8.0	Y
733-745 N Claiborne	15	2	3,671,627.0	722,854.5	24.00	5.00	0.00	66	10.0	8.0	Y
810 Lee	16	10	3,671,496.8	723,055.5	26.00	5.00	0.00	66	10.0	8.0	Y
952-958 Florida	17	5	3,670,901.8	724,029.2	28.00	5.00	0.00	66	10.0	8.0	Y
903-916 E 30th	18	10	3,671,649.5	723,891.9	28.00	5.00	0.00	66	10.0	8.0	Y
317-321 Lee	19	2	3,671,666.5	723,629.5	28.00	5.00	0.00	66	10.0	8.0	Y
Lyon Elementary	20	0	3,670,016.5	727,163.7	28.00	5.00	0.00	66	10.0	8.0	Y
1740 Columbia	21	1	3,667,644.5	728,402.5	32.00	5.00	0.00	66	10.0	8.0	Y
South Residence	22	1	3,673,405.0	721,450.2	8.00	5.00	0.00	66	10.0	8.0	Y

Bowlby & Associates, Inc.					**28 December 2010**	
C Patton, G Pratt					**TNM 2.5**	
INPUT: BUILDING ROWS						
PROJECT/CONTRACT:	**<Project Name?>**					
RUN:	**US190 Improvements 2030AM**					
Building Row			**Points**			
Name	**Average**	**Building**	**No.**	**Coordinates (ground)**		
	Height	**Percent**		**X**	**Y**	**Z**
	ft	%		ft	ft	ft
N Clairborne 2	20.00	80	1	3,671,595.2	723,090.1	26.00
			2	3,671,598.0	723,021.9	26.00
N Clairborne 1	20.00	80	3	3,671,705.2	722,968.1	26.00
			4	3,671,740.0	722,879.2	26.00

Bowlby & Associates
C. Patton, G Pratt

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US190 Improvements 2020 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0
952 Lee (M)	2	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0
111 Edwards (M)	3	6	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
204 Hornsby (M)	4	18	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	0	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
404 Clark	6	4	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
706-710 Claiborne	7	3	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
746-748 Collins	8	2	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0
801-805 Collins	9	3	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
842-844 Collins	10	2	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0
104 Jesse Jones	11	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
Preschool	12	0	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
Northlake Church	13	0	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0
727 N Claiborne	14	2	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
733-745 N Claiborne	15	2	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
810 Lee	16	10	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
952-958 Florida	17	5	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0
903-916 E 30th	18	10	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
317-321 Lee	19	2	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
Lyon Elementary	20	0	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
1740 Columbia	21	1	0.0	58.7	66	58.7	10	----	58.7	0.0	8	-8.0
South Residence	22	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction

			Min	Avg	Max
			dB	dB	dB
All Selected		74	0.0	0.0	0.0
All Impacted		10	0.0	0.0	0.0
All that meet NR Goal		0	0.0	0.0	0.0

Bowlby & Associates 28 December 2010
C. Patton, G Pratt TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US190 Improvements 2020 PM

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 STA 0 - 44	NB994	1	2422	45	64	45	51	45	13	45	0	0
	NB997	2	2422	45	64	45	51	45	13	45	0	0
	NB999	3	2422	45	64	45	51	45	13	45	0	0
	NB0	4	2422	45	64	45	51	45	13	45	0	0
	NB2	5	2422	45	64	45	51	45	13	45	0	0
	NB3	6	2422	45	64	45	51	45	13	45	0	0
	NB5	7	2422	45	64	45	51	45	13	45	0	0
	NB7.2	8	2422	45	64	45	51	45	13	45	0	0
	NB9	9	2422	45	64	45	51	45	13	45	0	0
	NB11	10	2422	45	64	45	51	45	13	45	0	0
	NB13	11	2422	45	64	45	51	45	13	45	0	0
	NB15	12	2422	45	64	45	51	45	13	45	0	0
	NB18.4	13	2422	45	64	45	51	45	13	45	0	0
	NB20	14	2422	45	64	45	51	45	13	45	0	0
	NB22	15	2422	45	64	45	51	45	13	45	0	0
	NB24	16	2422	45	64	45	51	45	13	45	0	0
	NB26	17	2422	45	64	45	51	45	13	45	0	0
	NB27	18	2422	45	64	45	51	45	13	45	0	0
	NB28	19	2422	45	64	45	51	45	13	45	0	0
	NB30	20	2422	45	64	45	51	45	13	45	0	0
	NB32	21	2422	45	64	45	51	45	13	45	0	0
	NB34	22	2422	45	64	45	51	45	13	45	0	0
	NB36	23	2422	45	64	45	51	45	13	45	0	0

	NB38	24	2422	45	64	45	51	45	13	45	0	0
	NB40	25	2422	45	64	45	51	45	13	45	0	0
	NB42	26	2422	45	64	45	51	45	13	45	0	0
	NB44	27										
SB US 190 STA 44 - 0	SB44	28	1822	45	48	45	38	45	10	45	0	0
	SB42	29	1822	45	48	45	38	45	10	0	0	0
	SB40	30	1822	45	48	45	38	45	10	45	0	0
	SB38	31	1822	45	48	45	38	45	10	45	0	0
	SB36	32	1822	45	48	45	38	45	10	45	0	0
	SB34	33	1822	45	48	45	38	45	10	45	0	0
	SB32	34	1822	45	48	45	38	45	10	45	0	0
	SB30	35	1822	45	48	45	38	45	10	45	0	0
	SB28	36	1822	45	48	45	38	45	10	45	0	0
	SB27	37	1822	45	48	45	38	45	10	45	0	0
	SB26	38	1822	45	48	45	38	45	10	45	0	0
	SB24	39	1822	45	48	45	38	45	10	45	0	0
	SB22	40	1822	45	48	45	38	45	10	45	0	0
	SB20	41	1822	45	48	45	38	45	10	45	0	0
	SB18.4	43	1822	45	48	45	38	45	10	45	0	0
	SB15	44	1822	45	48	45	38	45	10	45	0	0
	SB13	45	1822	45	48	45	38	45	10	45	0	0
	SB11	46	1822	45	48	45	38	45	10	45	0	0
	SB9	47	1822	45	48	45	38	45	10	45	0	0
	SB7.2	48	1822	45	48	45	38	45	10	45	0	0
	SB5	49	1822	45	48	45	38	45	10	45	0	0
	SB3	50	1822	45	48	45	38	45	10	45	0	0
	SB2	51	1822	45	48	45	38	45	10	45	0	0
	SB0	52	1822	45	48	45	38	45	10	45	0	0
	SB999	53	1822	45	48	45	38	45	10	45	0	0
	SB997	54	1822	45	48	45	38	45	10	45	0	0
	SB994	55										
NB US 190 47 - 110	NB47	56	1537	45	40	45	32	45	8	45	0	0
	NB48	57	1537	45	40	45	32	45	8	45	0	0
	NB49	58	1537	45	40	45	32	45	8	45	0	0
	NB51	59	1537	45	40	45	32	45	8	45	0	0
	NB55	60	1537	45	40	45	32	45	8	45	0	0

	NB58	61	1537	45	40	45	32	45	8	45	0	0
	NB61	62	1537	45	40	45	32	45	8	45	0	0
	NB63	63	1537	45	40	45	32	45	8	45	0	0
	NB67	64	1537	45	40	45	32	45	8	45	0	0
	NB71	65	1537	45	40	45	32	45	8	45	0	0
	NB73	66	1537	45	40	45	32	45	8	45	0	0
	NB75	67	1537	45	40	45	32	45	8	45	0	0
	NB77	68	1537	45	40	45	32	45	8	45	0	0
	NB79	69	1537	45	40	45	32	45	8	45	0	0
	NB81	70	1537	45	40	45	32	45	8	45	0	0
	NB82	71	1537	45	40	45	32	45	8	45	0	0
	NB83	72	1537	45	40	45	32	45	8	45	0	0
	NB84	73	1537	45	40	45	32	45	8	45	0	0
	NB85	74	1537	45	40	45	32	45	8	45	0	0
	NB87	75	1537	45	40	45	32	45	8	45	0	0
	NB88	76	1537	45	40	45	32	45	8	45	0	0
	NB90	77	1537	45	40	45	32	45	8	45	0	0
	NB94	78	1537	45	40	45	32	45	8	45	0	0
	NB98	79	1537	45	40	45	32	45	8	45	0	0
	NB102	80	1537	45	40	45	32	45	8	45	0	0
	NB106	81	1537	45	40	45	32	45	8	45	0	0
	NB109	82	1537	45	40	45	32	45	8	45	0	0
	NB110	83										
SB US 190 STA 110 - 47	SB110	84	1397	45	37	45	29	45	7	45	0	0
	SB109	85	1397	45	37	45	29	45	7	45	0	0
	SB106	86	1397	45	37	45	29	45	7	45	0	0
	SB102	87	1397	45	37	45	29	45	7	45	0	0
	SB98	88	1397	45	37	45	29	45	7	45	0	0
	SB94	89	1397	45	37	45	29	45	7	45	0	0
	SB90	90	1397	45	37	45	29	45	7	45	0	0
	SB88	91	1397	45	37	45	29	45	7	45	0	0
	SB87	92	1397	45	37	45	29	45	7	45	0	0
	SB85	93	1397	45	37	45	29	45	7	45	0	0
	SB84	94	1397	45	37	45	29	45	7	45	0	0
	SB83	95	1397	45	37	45	29	45	7	45	0	0
	SB82	96	1397	45	37	45	29	45	7	45	0	0

	SB81	97	1397	45	37	45	29	45	7	45	0	0
	SB79	98	1397	45	37	45	29	45	7	45	0	0
	SB77	99	1397	45	37	45	29	45	7	45	0	0
	SB75	100	1397	45	37	45	29	45	7	45	0	0
	SB73	101	1397	45	37	45	29	45	7	45	0	0
	SB71	102	1397	45	37	45	29	45	7	45	0	0
	SB67	103	1397	45	37	45	29	45	7	45	0	0
	SB63	104	1397	45	37	45	29	45	7	45	0	0
	SB61	105	1397	45	37	45	29	45	7	45	0	0
	SB58	106	1397	45	37	45	29	45	7	45	0	0
	SB55	107	1397	45	37	45	29	45	7	45	0	0
	SB51	108	1397	45	37	45	29	45	7	45	0	0
	SB49	109	1397	45	37	45	29	45	7	45	0	0
	SB48	110	1397	45	37	45	29	45	7	45	0	0
	SB47	111										
NB US 190 STA 112 - 118.3	NB112	112	1537	45	40	45	32	45	8	45	0	0
	NB113	113	1537	45	40	45	32	45	8	45	0	0
	NB114	114	1537	45	40	45	32	45	8	45	0	0
	NB115	115	1537	45	40	45	32	45	8	45	0	0
	NB116	116	1537	45	40	45	32	45	8	45	0	0
	NB118.3	117										
SB US 190 STA 118.3 - 112	SB118.3	118	1397	45	37	45	29	45	7	45	0	0
	SB116	119	1397	45	37	45	29	45	7	45	0	0
	SB115	120	1397	45	37	45	29	45	7	45	0	0
	SB114	121	1397	45	37	45	29	45	7	45	0	0
	SB113	122	1397	45	37	45	29	45	7	45	0	0
	SB112	123										
NB to Roundabout	point124	124	2422	35	64	35	51	35	13	35	0	0
	point125	125	2422	35	64	35	51	35	13	35	0	0
	point126	126										
SB Roundabout 30th St.	point130	130	1397	35	37	35	29	35	7	35	0	0
	point131	131										
NB Roundabout Columbia	point137	137	1537	20	40	20	32	20	8	20	0	0
	point138	138	1537	20	40	20	32	20	8	20	0	0
	point139	139	1537	20	40	20	32	20	8	20	0	0
	point140	140	1537	20	40	20	32	20	8	20	0	0

	point141	141										
SB Roundabout Columbia	point142	142	1397	20	37	20	29	20	7	20	0	0
	point143	143	1397	20	37	20	29	20	7	20	0	0
	point144	144	1397	20	37	20	29	20	7	20	0	0
	point145	145	1397	20	37	20	29	20	7	20	0	0
	point146	146	1397	20	37	20	29	20	7	20	0	0
	point147	147										
LA437 NB	point148	148	1125	45	30	45	24	45	6	45	0	0
	point149	149	1125	45	30	45	24	45	6	45	0	0
	point150	150	1125	45	30	45	24	45	6	45	0	0
	point151	151	1125	45	30	45	24	45	6	45	0	0
	point152	152	1125	45	30	45	24	45	6	45	0	0
	point153	153	1125	45	30	45	24	45	6	45	0	0
	point154	154										
LA437 SB	point155	155	458	35	12	35	10	35	2	35	0	0
	point156	156	458	35	12	35	10	35	2	35	0	0
	point157	157	458	35	12	35	10	35	2	35	0	0
	point158	158	458	35	12	35	10	35	2	35	0	0
	point159	159										
LA437 SB into Round	point162	162	437	20	12	20	9	20	2	20	0	0
	point163	163	526	20	14	20	11	20	3	20	0	0
	point164	164										
Round NB to WB	point165	165	89	20	2	20	2	20	0	0	0	0
	point167	167	89	20	2	20	2	20	0	0	0	0
	point168	168										
Roundabout South side	point169	169	309	20	8	20	7	20	2	20	0	0
	point170	170	309	20	8	20	7	20	2	20	0	0
	point171	171	309	20	8	20	7	20	2	20	0	0
	point172	172	309	20	8	20	7	20	2	20	0	0
	point173	173										
NB Roundabout less LA437NB	point174	174	1606	20	42	20	34	20	8	20	0	0
	point127	127	1606	20	42	20	34	20	8	20	0	0
	point128	128	1606	20	42	20	34	20	8	20	0	0
	point129	129										
SB Roundabout west side	point175	175	1726	20	45	20	36	20	9	20	0	0
	point132	132	1726	20	45	20	36	20	9	20	0	0

	point133	133										
SB US190 S of Round	point176	176	1822	45	48	45	38	45	10	45	0	0
	point134	134	1822	45	48	45	38	45	10	45	0	0
	point135	135	1822	45	48	45	38	45	10	45	0	0
	point136	136										

Bowlby & Associates
C. Patton, G Pratt

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US190 Improvements 2030 PM-future dev
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
50ft	23	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0
100ft	24	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
125ft	25	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0
150ft	26	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
175ft	27	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
200ft	28	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
75ft	30	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0
135ft	32	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	8	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Bowlby & Associates **28 December 2010**
C. Patton, G Pratt **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **<Project Name?>**
RUN: **US190 Improvements 2030 PM-future dev**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 STA 0 - 44	NB994	1	2422	45	64	45	51	45	13	45	0	0
	NB997	2	2422	45	64	45	51	45	13	45	0	0
	NB999	3	2422	45	64	45	51	45	13	45	0	0
	NB0	4	2422	45	64	45	51	45	13	45	0	0
	NB2	5	2422	45	64	45	51	45	13	45	0	0
	NB3	6	2422	45	64	45	51	45	13	45	0	0
	NB5	7	2422	45	64	45	51	45	13	45	0	0
	NB7.2	8	2422	45	64	45	51	45	13	45	0	0
	NB9	9	2422	45	64	45	51	45	13	45	0	0
	NB11	10	2422	45	64	45	51	45	13	45	0	0
	NB13	11	2422	45	64	45	51	45	13	45	0	0
	NB15	12	2422	45	64	45	51	45	13	45	0	0
	NB18.4	13	2422	45	64	45	51	45	13	45	0	0
	NB20	14	2422	45	64	45	51	45	13	45	0	0
	NB22	15	2422	45	64	45	51	45	13	45	0	0
	NB24	16	2422	45	64	45	51	45	13	45	0	0
	NB26	17	2422	45	64	45	51	45	13	45	0	0
	NB27	18	2422	45	64	45	51	45	13	45	0	0
	NB28	19	2422	45	64	45	51	45	13	45	0	0
	NB30	20	2422	45	64	45	51	45	13	45	0	0
	NB32	21	2422	45	64	45	51	45	13	45	0	0
	NB34	22	2422	45	64	45	51	45	13	45	0	0
	NB36	23	2422	45	64	45	51	45	13	45	0	0

	NB38	24	2422	45	64	45	51	45	13	45	0	0
	NB40	25	2422	45	64	45	51	45	13	45	0	0
	NB42	26	2422	45	64	45	51	45	13	45	0	0
	NB44	27										
SB US 190 STA 44 - 0	SB44	28	1822	45	48	45	38	45	10	45	0	0
	SB42	29	1822	45	48	45	38	45	10	45	0	0
	SB40	30	1822	45	48	45	38	45	10	45	0	0
	SB38	31	1822	45	48	45	38	45	10	45	0	0
	SB36	32	1822	45	48	45	38	45	10	45	0	0
	SB34	33	1822	45	48	45	38	45	10	45	0	0
	SB32	34	1822	45	48	45	38	45	10	45	0	0
	SB30	35	1822	45	48	45	38	45	10	45	0	0
	SB28	36	1822	45	48	45	38	45	10	45	0	0
	SB27	37	1822	45	48	45	38	45	10	45	0	0
	SB26	38	1822	45	48	45	38	45	10	45	0	0
	SB24	39	1822	45	48	45	38	45	10	45	0	0
	SB22	40	1822	45	48	45	38	45	10	45	0	0
	SB20	41	1822	45	48	45	38	45	10	45	0	0
	SB18.4	43	1822	45	48	45	38	45	10	45	0	0
	SB15	44	1822	45	48	45	38	45	10	45	0	0
	SB13	45	1822	45	48	45	38	45	10	45	0	0
	SB11	46	1822	45	48	45	38	45	10	45	0	0
	SB9	47	1822	45	48	45	38	45	10	45	0	0
	SB7.2	48	1822	45	48	45	38	45	10	45	0	0
	SB5	49	1822	45	48	45	38	45	10	45	0	0
	SB3	50	1822	45	48	0	38	45	10	45	0	0
	SB2	51	1822	45	48	45	38	45	10	45	0	0
	SB0	52	1822	45	48	45	38	45	10	45	0	0
	SB999	53	1822	45	48	45	38	45	10	45	0	0
	SB997	54	1822	45	48	45	38	45	10	45	0	0
	SB994	55										
NB US 190 47 - 110	NB47	56	1537	45	40	45	32	45	8	45	0	0
	NB48	57	1537	45	40	45	32	45	8	45	0	0
	NB49	58	1537	45	40	45	32	45	8	45	0	0
	NB51	59	1537	45	40	45	32	45	8	45	0	0
	NB55	60	1537	45	40	45	32	45	8	45	0	0

	NB58	61	1537	45	40	45	32	45	8	45	0	0
	NB61	62	1537	45	40	45	32	45	8	45	0	0
	NB63	63	1537	45	40	45	32	45	8	45	0	0
	NB67	64	1537	45	40	45	32	45	8	45	0	0
	NB71	65	1537	45	40	45	32	45	8	45	0	0
	NB73	66	1537	45	40	45	32	45	8	45	0	0
	NB75	67	1537	45	40	45	32	45	8	45	0	0
	NB77	68	1537	45	40	45	32	45	8	45	0	0
	NB79	69	1537	45	40	45	32	45	8	45	0	0
	NB81	70	1537	45	40	45	32	45	8	45	0	0
	NB82	71	1537	45	40	45	32	45	8	45	0	0
	NB83	72	1537	45	40	45	32	45	8	45	0	0
	NB84	73	1537	45	40	45	32	45	8	45	0	0
	NB85	74	1537	45	40	45	32	45	8	45	0	0
	NB87	75	1537	45	40	45	32	45	8	45	0	0
	NB88	76	1537	45	40	45	32	45	8	45	0	0
	NB90	77	1537	45	40	45	32	45	8	45	0	0
	NB94	78	1537	45	40	45	32	45	8	45	0	0
	NB98	79	1537	45	40	45	32	45	8	45	0	0
	NB102	80	1537	45	40	45	32	45	8	45	0	0
	NB106	81	1537	45	40	45	32	45	8	45	0	0
	NB109	82	1537	45	40	45	32	45	8	45	0	0
	NB110	83										
SB US 190 STA 110 - 47	SB110	84	1397	45	37	45	29	45	7	45	0	0
	SB109	85	1397	45	37	45	29	45	7	45	0	0
	SB106	86	1397	45	37	45	29	45	7	45	0	0
	SB102	87	1397	45	37	45	29	45	7	45	0	0
	SB98	88	1397	45	37	45	29	45	7	45	0	0
	SB94	89	1397	45	37	45	29	45	7	45	0	0
	SB90	90	1397	45	37	45	29	45	7	45	0	0
	SB88	91	1397	45	37	45	29	45	7	45	0	0
	SB87	92	1397	45	37	45	29	45	7	45	0	0
	SB85	93	1397	45	37	45	29	45	7	45	0	0
	SB84	94	1397	45	37	45	29	45	7	45	0	0
	SB83	95	1397	45	37	45	29	45	7	45	0	0
	SB82	96	1397	45	37	45	29	45	7	45	0	0

	SB81	97	1397	45	37	45	29	45	7	45	0	0
	SB79	98	1397	45	37	45	29	45	7	45	0	0
	SB77	99	1397	45	37	45	29	45	7	45	0	0
	SB75	100	1397	45	37	45	29	45	7	45	0	0
	SB73	101	1397	45	37	45	29	45	7	45	0	0
	SB71	102	1397	45	37	45	29	45	7	45	0	0
	SB67	103	1397	45	37	45	29	45	7	45	0	0
	SB63	104	1397	45	37	45	29	45	7	45	0	0
	SB61	105	1397	45	37	45	29	45	7	45	0	0
	SB58	106	1397	45	37	45	29	45	7	45	0	0
	SB55	107	1397	45	37	45	29	45	7	45	0	0
	SB51	108	1397	45	37	45	29	45	7	45	0	0
	SB49	109	1397	45	37	45	29	45	7	45	0	0
	SB48	110	1397	45	37	45	29	45	7	45	0	0
	SB47	111										
NB US 190 STA 112 - 118.3	NB112	112	1537	45	40	45	32	45	8	45	0	0
	NB113	113	1537	45	40	45	32	45	8	45	0	0
	NB114	114	1537	45	40	45	32	45	8	45	0	0
	NB115	115	1537	45	40	45	32	45	8	45	0	0
	NB116	116	1537	45	40	45	32	45	8	45	0	0
	NB118.3	117										
SB US 190 STA 118.3 - 112	SB118.3	118	1397	45	37	45	29	45	7	45	0	0
	SB116	119	1397	45	37	45	29	45	7	45	0	0
	SB115	120	1397	45	37	45	29	45	7	45	0	0
	SB114	121	1397	45	37	45	29	45	7	45	0	0
	SB113	122	1397	45	37	45	29	45	7	45	0	0
	SB112	123										
NB to Roundabout	point124	124	2422	35	64	35	51	35	13	35	0	0
	point125	125	2422	35	64	35	51	35	13	35	0	0
	point126	126										
SB Roundabout 30th St.	point130	130	1397	35	37	35	29	35	7	35	0	0
	point131	131										
NB Roundabout Columbia	point137	137	1537	20	40	20	32	20	8	20	0	0
	point138	138	1537	20	40	20	32	20	8	20	0	0
	point139	139	1537	20	40	20	32	20	8	20	0	0
	point140	140	1537	20	40	20	32	20	8	20	0	0

	point141	141										
SB Roundabout Columbia	point142	142	1397	20	37	20	29	20	7	20	0	0
	point143	143	1397	20	37	20	29	20	7	20	0	0
	point144	144	1397	20	37	20	29	20	7	20	0	0
	point145	145	1397	20	37	20	29	20	7	20	0	0
	point146	146	1397	20	37	20	29	20	7	20	0	0
	point147	147										
LA437 NB	point148	148	1125	45	30	45	24	45	6	45	0	0
	point149	149	1125	45	30	45	24	45	6	45	0	0
	point150	150	1125	45	30	45	24	45	6	45	0	0
	point151	151	1125	45	30	45	24	45	6	45	0	0
	point152	152	1125	45	30	45	24	45	6	45	0	0
	point153	153	1125	45	30	45	24	45	6	45	0	0
	point154	154										
LA437 SB	point155	155	458	35	12	35	10	35	2	35	0	0
	point156	156	458	35	12	35	10	35	2	35	0	0
	point157	157	458	35	12	35	10	35	2	35	0	0
	point158	158	458	35	12	35	10	35	2	35	0	0
	point159	159										
LA437 SB into Round	point162	162	437	20	12	20	9	20	2	20	0	0
	point163	163	526	20	14	20	11	20	3	20	0	0
	point164	164										
Round NB to WB	point165	165	89	20	2	20	2	20	0	0	0	0
	point167	167	89	20	2	20	2	20	0	0	0	0
	point168	168										
Roundabout South side	point169	169	309	20	8	20	7	20	2	20	0	0
	point170	170	309	20	8	20	7	20	2	20	0	0
	point171	171	309	20	8	20	7	20	2	20	0	0
	point172	172	309	20	8	20	7	20	2	20	0	0
	point173	173										
NB Roundabout less LA437NB	point174	174	1606	20	42	20	34	20	8	20	0	0
	point127	127	1606	20	42	20	34	20	8	20	0	0
	point128	128	1606	20	42	20	34	20	8	20	0	0
	point129	129										
SB Roundabout west side	point175	175	1726	20	45	20	36	20	9	20	0	0
	point132	132	1726	20	45	20	36	20	9	20	0	0

	point133	133										
SB US190 S of Round	point176	176	1822	45	48	45	38	45	10	45	0	0
	point134	134	1822	45	48	45	38	45	10	45	0	0
	point135	135	1822	45	48	45	38	45	10	45	0	0
	point136	136										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
952 Lee (M)	2	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
111 Edwards (M)	3	1	0.0	59.2	66	59.2	10	----	59.2	0.0	8	-8.0
204 Hornsby (M)	4	1	0.0	51.4	66	51.4	10	----	51.4	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	1	63.2	61.2	66	-2.0	10	----	61.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	807	45	12	45	9	45	6	45	0	0
	NB997	2	807	45	12	45	9	45	6	45	0	0
	NB999	3	807	45	12	45	9	45	6	45	0	0
	NB0	4	807	45	12	45	9	45	6	45	0	0
	NB2	5	807	45	12	45	9	45	6	45	0	0
	NB3	6	807	45	12	45	9	45	6	45	0	0
	NB5	7	807	45	12	45	9	45	6	45	0	0
	NB7.2	8	807	45	12	45	9	45	6	45	0	0
	NB9	9	807	45	12	45	9	45	6	45	0	0
	NB11	10	807	45	12	45	9	45	6	45	0	0
	NB13	11	807	45	12	45	9	45	6	45	0	0
	NB15	12	807	45	12	45	9	45	6	45	0	0
	NB17	13	807	45	12	45	9	45	6	45	0	0
	NB18.4	14	807	45	12	45	9	45	6	45	0	0
	NB20	15	807	45	12	45	9	45	6	45	0	0
	NB22	16	807	45	12	45	9	45	6	45	0	0
	NB24	17	807	45	12	45	9	45	6	45	0	0
	NB26	18	807	45	12	45	9	45	6	45	0	0
	NB27	19	807	45	12	45	9	45	6	45	0	0
	NB28	20	807	45	12	45	9	45	6	45	0	0
	NB30	21	807	45	12	45	9	45	6	45	0	0
	NB32	22	807	45	12	45	9	45	6	45	0	0
	NB34	23	807	45	12	45	9	45	6	45	0	0

	NB36	24	807	45	12	45	9	45	6	45	0	0
	NB38	25	807	45	12	45	9	45	6	45	0	0
	NB40	26	807	45	12	45	9	45	6	45	0	0
	NB42	27	807	45	12	45	9	45	6	45	0	0
	NB44	28	807	45	12	45	9	45	6	45	0	0
	NB45	29	807	45	12	45	9	45	6	45	0	0
	NB47	30	807	45	12	45	9	45	6	45	0	0
	NB49	31	807	45	12	45	9	45	6	45	0	0
	NB51	32	807	45	12	45	9	45	6	45	0	0
	NB55	33	807	45	12	45	9	45	6	45	0	0
	NB58	34	807	45	12	45	9	45	6	45	0	0
	NB61	35	807	45	12	45	9	45	6	45	0	0
	NB63	36	807	45	12	45	9	45	6	45	0	0
	NB67	37	807	45	12	45	9	45	6	45	0	0
	NB71	38	807	45	12	45	9	45	6	45	0	0
	NB72	39	807	45	12	45	9	45	6	45	0	0
	NB73	40	807	45	12	45	9	45	6	45	0	0
	NB75	41	807	45	12	45	9	45	6	45	0	0
	NB77	42	807	45	12	45	9	45	6	45	0	0
	NB79	43	807	45	12	45	9	45	6	45	0	0
	NB81	44	807	45	12	45	9	45	6	45	0	0
	NB82	45	807	45	12	45	9	45	6	45	0	0
	NB83	46	807	45	12	45	9	45	6	45	0	0
	NB84	47	807	45	12	45	9	45	6	45	0	0
	NB85	48	807	45	12	45	9	45	6	45	0	0
	NB87	49	807	45	12	45	9	45	6	45	0	0
	NB88	50	807	45	12	45	9	45	6	45	0	0
	NB90	51	807	45	12	45	9	45	6	45	0	0
	NB94	52	807	45	12	45	9	45	6	45	0	0
	NB98	54	807	45	12	45	9	45	6	45	0	0
	NB102	55	807	45	12	45	9	45	6	45	0	0
	NB106	56	807	45	12	45	9	45	6	45	0	0
	NB109	57	807	45	12	45	9	45	6	45	0	0
	NB110	58	807	45	12	45	9	45	6	45	0	0
	NB111	59	807	45	12	45	9	45	6	45	0	0
	NB112	60	807	45	12	45	9	45	6	45	0	0

	NB113	61	807	45	12	45	9	45	6	45	0	0
	NB114	62	807	45	12	45	9	45	6	45	0	0
	NB115	63	807	45	12	45	9	45	6	45	0	0
	NB116	64										
SB US 190 Existing	SB116	65	483	45	12	45	3	45	0	0	0	0
	SB115	66	483	45	12	45	3	45	0	0	0	0
	SB114	67	483	45	12	45	3	45	0	0	0	0
	SB113	68	483	45	12	45	3	45	0	0	0	0
	SB112	69	483	45	12	45	3	45	0	0	0	0
	SB111	70	483	45	12	45	3	45	0	0	0	0
	SB110	71	483	45	12	45	3	45	0	0	0	0
	SB109	72	483	45	12	45	3	45	0	0	0	0
	SB106	73	483	45	12	45	3	45	0	0	0	0
	SB102	74	483	45	12	45	3	45	0	0	0	0
	SB98	75	483	45	12	45	3	45	0	0	0	0
	SB94	76	483	45	12	45	3	45	0	0	0	0
	SB90	77	483	45	12	45	3	45	0	0	0	0
	SB88	78	483	45	12	45	3	45	0	0	0	0
	SB87	79	483	45	12	45	3	45	0	0	0	0
	SB85	80	483	45	12	45	3	45	0	0	0	0
	SB84	81	483	45	12	45	3	45	0	0	0	0
	SB83	82	483	45	12	45	3	45	0	0	0	0
	SB82	83	483	45	12	45	3	45	0	0	0	0
	SB81	84	483	45	12	45	3	45	0	0	0	0
	SB79	85	483	45	12	45	3	45	0	0	0	0
	SB77	86	483	45	12	45	3	45	0	0	0	0
	SB75	87	483	45	12	45	3	45	0	0	0	0
	SB73	88	483	45	12	45	3	45	0	0	0	0
	SB72	89	483	45	12	45	3	45	0	0	0	0
	SB71	90	483	45	12	45	3	45	0	0	0	0
	SB67	91	483	45	12	45	3	45	0	0	0	0
	SB63	92	483	45	12	45	3	45	0	0	0	0
	SB61	93	483	45	12	45	3	45	0	0	0	0
	SB58	94	483	45	12	45	3	45	0	0	0	0
	SB55	95	483	45	12	45	3	45	0	0	0	0
	SB51	96	483	45	12	45	3	45	0	0	0	0

	SB49	97	483	45	12	45	3	45	0	0	0	0
	SB47	98	483	45	12	45	3	45	0	0	0	0
	SB45	99	483	45	12	45	3	45	0	0	0	0
	SB44	100	483	45	12	45	3	45	0	0	0	0
	SB42	101	483	45	12	45	3	45	0	0	0	0
	SB40	102	483	45	12	45	3	45	0	0	0	0
	SB38	103	483	45	12	45	3	45	0	0	0	0
	SB36	104	483	45	12	45	3	45	0	0	0	0
	SB34	105	483	45	12	45	3	45	0	0	0	0
	SB32	106	483	45	12	45	3	45	0	0	0	0
	SB30	107	483	45	12	45	3	45	0	0	0	0
	SB28	108	483	45	12	45	3	45	0	0	0	0
	SB27	109	483	45	12	45	3	45	0	0	0	0
	SB26	110	483	45	12	45	3	45	0	0	0	0
	SB24	111	483	45	12	45	3	45	0	0	0	0
	SB22	112	483	45	12	45	3	45	0	0	0	0
	SB20	113	483	45	12	45	3	45	0	0	0	0
	SB18.4	114	483	45	12	45	3	45	0	0	0	0
	SB17	115	483	45	12	45	3	45	0	0	0	0
	SB15	116	483	45	12	45	3	45	0	0	0	0
	SB13	117	483	45	12	45	3	45	0	0	0	0
	SB11	118	483	45	12	45	3	45	0	0	0	0
	SB9	119	483	45	12	45	3	45	0	0	0	0
	SB7.2	120	483	45	12	45	3	45	0	0	0	0
	SB5	121	483	45	12	45	3	45	0	0	0	0
	SB3	122	483	45	12	45	3	45	0	0	0	0
	SB2	123	483	45	12	45	3	45	0	0	0	0
	SB0	124	483	45	12	45	3	45	0	0	0	0
	SB999	125	483	45	12	45	3	45	0	0	0	0
	SB997	126	483	45	12	45	3	45	0	0	0	0
	SB994	127										

<Organization?>	28 December 2010
<Analysis By?>	TNM 2.5
	Calculated with TNM 2.5
RESULTS: SOUND LEVELS	
PROJECT/CONTRACT:	<Project Name?>
RUN:	US 190 Existing
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
952 Lee (M)	2	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
111 Edwards (M)	3	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
204 Hornsby (M)	4	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	1	64.2	63.0	66	-1.2	10	----	63.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	450	45	30	45	33	45	3	45	3	45
	NB997	2	450	45	30	45	33	45	3	45	3	45
	NB999	3	450	45	30	45	33	45	3	45	3	45
	NB0	4	450	45	30	45	33	45	3	45	3	45
	NB2	5	450	45	30	45	33	45	3	45	3	45
	NB3	6	450	45	30	45	33	45	3	45	3	45
	NB5	7	450	45	30	45	33	45	3	45	3	45
	NB7.2	8	450	45	30	45	33	45	3	45	3	45
	NB9	9	450	45	30	45	33	45	3	45	3	45
	NB11	10	450	45	30	45	33	45	3	45	3	45
	NB13	11	450	45	30	45	33	45	3	45	3	45
	NB15	12	450	45	30	45	33	45	3	45	3	45
	NB17	13	450	45	30	45	33	45	3	45	3	45
	NB18.4	14	450	45	30	45	33	45	3	45	3	45
	NB20	15	450	45	30	45	33	45	3	45	3	45
	NB22	16	450	45	30	45	33	45	3	45	3	45
	NB24	17	450	45	30	45	33	45	3	45	3	45
	NB26	18	450	45	30	45	33	45	3	45	3	45
	NB27	19	450	45	30	45	33	45	3	45	3	45
	NB28	20	450	45	30	45	33	45	3	45	3	45
	NB30	21	450	45	30	45	33	45	3	45	3	45
	NB32	22	450	45	30	45	33	45	3	45	3	45
	NB34	23	450	45	30	45	33	45	3	45	3	45

	NB36	24	450	45	30	45	33	45	3	45	3	45
	NB38	25	450	45	30	45	33	45	3	45	3	45
	NB40	26	450	45	30	45	33	45	3	45	3	45
	NB42	27	450	45	30	45	33	45	3	45	3	45
	NB44	28	450	45	30	45	33	45	3	45	3	45
	NB45	29	450	45	30	45	33	45	3	45	3	45
	NB47	30	450	45	30	45	33	45	3	45	3	45
	NB49	31	450	45	30	45	33	45	3	45	3	45
	NB51	32	450	45	30	45	33	45	3	45	3	45
	NB55	33	450	45	30	45	33	45	3	45	3	45
	NB58	34	450	45	30	45	33	45	3	45	3	45
	NB61	35	450	45	30	45	33	45	3	45	3	45
	NB63	36	450	45	30	45	33	45	3	45	3	45
	NB67	37	450	45	30	45	33	45	3	45	3	45
	NB71	38	450	45	30	45	33	45	3	45	3	45
	NB72	39	450	45	30	45	33	45	3	45	3	45
	NB73	40	450	45	30	45	33	45	3	45	3	45
	NB75	41	450	45	30	45	33	45	3	45	3	45
	NB77	42	450	45	30	45	33	45	3	45	3	45
	NB79	43	450	45	30	45	33	45	3	45	3	45
	NB81	44	450	45	30	45	33	45	3	45	3	45
	NB82	45	450	45	30	45	33	45	3	45	3	45
	NB83	46	450	45	30	45	33	45	3	45	3	45
	NB84	47	450	45	30	45	33	45	3	45	3	45
	NB85	48	450	45	30	45	33	45	3	45	3	45
	NB87	49	450	45	30	45	33	45	3	45	3	45
	NB88	50	450	45	30	45	33	45	3	45	3	45
	NB90	51	450	45	30	45	33	45	3	45	3	45
	NB94	52	450	45	30	45	33	45	3	45	3	45
	NB98	54	450	45	30	45	33	45	3	45	3	45
	NB102	55	450	45	30	45	33	45	3	45	3	45
	NB106	56	450	45	30	45	33	45	3	45	3	45
	NB109	57	450	45	30	45	33	45	3	45	3	45
	NB110	58	450	45	30	45	33	45	3	45	3	45
	NB111	59	450	45	30	45	33	45	3	45	3	45
	NB112	60	450	45	30	45	33	45	3	45	3	45

	NB113	61	450	45	30	45	33	45	3	45	3	45
	NB114	62	450	45	30	45	33	45	3	45	3	45
	NB115	63	450	45	30	45	33	45	3	45	3	45
	NB116	64										
SB US 190 Existing	SB116	65	588	45	30	45	48	45	6	45	0	0
	SB115	66	588	45	30	45	48	45	6	45	0	0
	SB114	67	588	45	30	45	48	45	6	45	0	0
	SB113	68	588	45	30	45	48	45	6	45	0	0
	SB112	69	588	45	30	45	48	45	6	45	0	0
	SB111	70	588	45	30	45	48	45	6	45	0	0
	SB110	71	588	45	30	45	48	45	6	45	0	0
	SB109	72	588	45	30	45	48	45	6	45	0	0
	SB106	73	588	45	30	45	48	45	6	45	0	0
	SB102	74	588	45	30	45	48	45	6	45	0	0
	SB98	75	588	45	30	45	48	45	6	45	0	0
	SB94	76	588	45	30	45	48	45	6	45	0	0
	SB90	77	588	45	30	45	48	45	6	45	0	0
	SB88	78	588	45	30	45	48	45	6	45	0	0
	SB87	79	588	45	30	45	48	45	6	45	0	0
	SB85	80	588	45	30	45	48	45	6	45	0	0
	SB84	81	588	45	30	45	48	45	6	45	0	0
	SB83	82	588	45	30	45	48	45	6	45	0	0
	SB82	83	588	45	30	45	48	45	6	45	0	0
	SB81	84	588	45	30	45	48	45	6	45	0	0
	SB79	85	588	45	30	45	48	45	6	45	0	0
	SB77	86	588	45	30	45	48	45	6	45	0	0
	SB75	87	588	45	30	45	48	45	6	45	0	0
	SB73	88	588	45	30	45	48	45	6	45	0	0
	SB72	89	588	45	30	45	48	45	6	45	0	0
	SB71	90	588	45	30	45	48	45	6	45	0	0
	SB67	91	588	45	30	45	48	45	6	45	0	0
	SB63	92	588	45	30	45	48	45	6	45	0	0
	SB61	93	588	45	30	45	48	45	6	45	0	0
	SB58	94	588	45	30	45	48	45	6	45	0	0
	SB55	95	588	45	30	45	48	45	6	45	0	0
	SB51	96	588	45	30	45	48	45	6	45	0	0

	SB49	97	588	45	30	45	48	45	6	45	0	0
	SB47	98	588	45	30	45	48	45	6	45	0	0
	SB45	99	588	45	30	45	48	45	6	45	0	0
	SB44	100	588	45	30	45	48	45	6	45	0	0
	SB42	101	588	45	30	45	48	45	6	45	0	0
	SB40	102	588	45	30	45	48	45	6	45	0	0
	SB38	103	588	45	30	45	48	45	6	45	0	0
	SB36	104	588	45	30	45	48	45	6	45	0	0
	SB34	105	588	45	30	45	48	45	6	45	0	0
	SB32	106	588	45	30	45	48	45	6	45	0	0
	SB30	107	588	45	30	45	48	45	6	45	0	0
	SB28	108	588	45	30	45	48	45	6	45	0	0
	SB27	109	588	45	30	45	48	45	6	45	0	0
	SB26	110	588	45	30	45	48	45	6	45	0	0
	SB24	111	588	45	30	45	48	45	6	45	0	0
	SB22	112	588	45	30	45	48	45	6	45	0	0
	SB20	113	588	45	30	45	48	45	6	45	0	0
	SB18.4	114	588	45	30	45	48	45	6	45	0	0
	SB17	115	588	45	30	45	48	45	6	45	0	0
	SB15	116	588	45	30	45	48	45	6	45	0	0
	SB13	117	588	45	30	45	48	45	6	45	0	0
	SB11	118	588	45	30	45	48	45	6	45	0	0
	SB9	119	588	45	30	45	48	45	6	45	0	0
	SB7.2	120	588	45	30	45	48	45	6	45	0	0
	SB5	121	588	45	30	45	48	45	6	45	0	0
	SB3	122	588	45	30	45	48	45	6	45	0	0
	SB2	123	588	45	30	45	48	45	6	45	0	0
	SB0	124	588	45	30	45	48	45	6	45	0	0
	SB999	125	588	45	30	45	48	45	6	45	0	0
	SB997	126	588	45	30	45	48	45	6	45	0	0
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
952 Lee	2	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
111 Edwards	3	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
204 Hornsby	4	1	52.5	51.1	66	-1.4	10	----	51.1	0.0	8	-8.0
Collins Blvd. Baptist Church	5	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	690	45	12	45	15	45	0	0	0	0
	NB997	2	690	45	12	45	15	45	0	0	0	0
	NB999	3	690	45	12	45	15	45	0	0	0	0
	NB0	4	690	45	12	45	15	45	0	0	0	0
	NB2	5	690	45	12	45	15	45	0	0	0	0
	NB3	6	690	45	12	45	15	45	0	0	0	0
	NB5	7	690	45	12	45	15	45	0	0	0	0
	NB7.2	8	690	45	12	45	15	45	0	0	0	0
	NB9	9	690	45	12	45	15	45	0	0	0	0
	NB11	10	690	45	12	45	15	45	0	0	0	0
	NB13	11	690	45	12	45	15	45	0	0	0	0
	NB15	12	690	45	12	45	15	45	0	0	0	0
	NB17	13	690	45	12	45	15	45	0	0	0	0
	NB18.4	14	690	45	12	45	15	45	0	0	0	0
	NB20	15	690	45	12	45	15	45	0	0	0	0
	NB22	16	690	45	12	45	15	45	0	0	0	0
	NB24	17	690	45	12	45	15	45	0	0	0	0
	NB26	18	690	45	12	45	15	45	0	0	0	0
	NB27	19	690	45	12	45	15	45	0	0	0	0
	NB28	20	690	45	12	45	15	45	0	0	0	0
	NB30	21	690	45	12	45	15	45	0	0	0	0
	NB32	22	690	45	12	45	15	45	0	0	0	0
	NB34	23	690	45	12	45	15	45	0	0	0	0

	NB36	24	690	45	12	45	15	45	0	0	0	0
	NB38	25	690	45	12	45	15	45	0	0	0	0
	NB40	26	690	45	12	45	15	45	0	0	0	0
	NB42	27	690	45	12	45	15	45	0	0	0	0
	NB44	28	690	45	12	45	15	45	0	0	0	0
	NB45	29	690	45	12	45	15	45	0	0	0	0
	NB47	30	690	45	12	45	15	45	0	0	0	0
	NB49	31	690	45	12	45	15	45	0	0	0	0
	NB51	32	690	45	12	45	15	45	0	0	0	0
	NB55	33	690	45	12	45	15	45	0	0	0	0
	NB58	34	690	45	12	45	15	45	0	0	0	0
	NB61	35	690	45	12	45	15	45	0	0	0	0
	NB63	36	690	45	12	45	15	45	0	0	0	0
	NB67	37	690	45	12	0	15	45	0	0	0	0
	NB71	38	690	45	12	45	15	45	0	0	0	0
	NB72	39	690	45	12	45	15	45	0	0	0	0
	NB73	40	690	45	12	45	15	45	0	0	0	0
	NB75	41	690	45	12	45	15	45	0	0	0	0
	NB77	42	690	45	12	45	15	45	0	0	0	0
	NB79	43	690	45	12	45	15	45	0	0	0	0
	NB81	44	690	45	12	45	15	45	0	0	0	0
	NB82	45	690	45	12	45	15	45	0	0	0	0
	NB83	46	690	45	12	45	15	45	0	0	0	0
	NB84	47	690	45	12	45	15	45	0	0	0	0
	NB85	48	690	45	12	45	15	45	0	0	0	0
	NB87	49	690	45	12	45	15	45	0	0	0	0
	NB88	50	690	45	12	45	15	45	0	0	0	0
	NB90	51	690	45	12	45	15	45	0	0	0	0
	NB94	52	690	45	12	45	15	45	0	0	0	0
	NB98	54	690	45	12	45	15	45	0	0	0	0
	NB102	55	690	45	12	45	15	45	0	0	0	0
	NB106	56	690	45	12	45	15	45	0	0	0	0
	NB109	57	690	45	12	45	15	45	0	0	0	0
	NB110	58	690	45	12	45	15	45	0	0	0	0
	NB111	59	690	45	12	45	15	45	0	0	0	0
	NB112	60	690	45	12	45	15	45	0	0	0	0

	NB113	61	690	45	12	45	15	45	0	0	0	0
	NB114	62	690	45	12	45	15	45	0	0	0	0
	NB115	63	690	45	12	45	15	45	0	0	0	0
	NB116	64										
SB US 190 Existing	SB116	65	447	45	3	45	3	45	0	0	0	0
	SB115	66	447	45	3	45	3	45	0	0	0	0
	SB114	67	447	45	3	45	3	45	0	0	0	0
	SB113	68	447	45	3	45	3	45	0	0	0	0
	SB112	69	447	45	3	45	3	45	0	0	0	0
	SB111	70	447	45	3	45	3	45	0	0	0	0
	SB110	71	447	45	3	45	3	45	0	0	0	0
	SB109	72	447	45	3	45	3	45	0	0	0	0
	SB106	73	447	45	3	45	3	45	0	0	0	0
	SB102	74	447	45	3	45	3	45	0	0	0	0
	SB98	75	447	45	3	45	3	45	0	0	0	0
	SB94	76	447	45	3	45	3	45	0	0	0	0
	SB90	77	447	45	3	45	3	45	0	0	0	0
	SB88	78	447	45	3	45	3	45	0	0	0	0
	SB87	79	447	45	3	45	3	45	0	0	0	0
	SB85	80	447	45	3	45	3	45	0	0	0	0
	SB84	81	447	45	3	45	3	45	0	0	0	0
	SB83	82	447	45	3	45	3	45	0	0	0	0
	SB82	83	447	45	3	45	3	45	0	0	0	0
	SB81	84	447	45	3	45	3	45	0	0	0	0
	SB79	85	447	45	3	45	3	45	0	0	0	0
	SB77	86	447	45	3	45	3	45	0	0	0	0
	SB75	87	447	45	3	45	3	45	0	0	0	0
	SB73	88	447	45	3	45	3	45	0	0	0	0
	SB72	89	447	45	3	45	3	45	0	0	0	0
	SB71	90	447	45	3	45	3	45	0	0	0	0
	SB67	91	447	45	3	45	3	45	0	0	0	0
	SB63	92	447	45	3	45	3	45	0	0	0	0
	SB61	93	447	45	3	45	3	45	0	0	0	0
	SB58	94	447	45	3	45	3	45	0	0	0	0
	SB55	95	447	45	3	45	3	45	0	0	0	0
	SB51	96	447	45	3	45	3	45	0	0	0	0

	SB49	97	447	45	3	45	3	45	0	0	0	0
	SB47	98	447	45	3	45	3	45	0	0	0	0
	SB45	99	447	45	3	45	3	45	0	0	0	0
	SB44	100	447	45	3	45	3	45	0	0	0	0
	SB42	101	447	45	3	45	3	45	0	0	0	0
	SB40	102	447	45	3	45	3	45	0	0	0	0
	SB38	103	447	45	3	45	3	45	0	0	0	0
	SB36	104	447	45	3	45	3	45	0	0	0	0
	SB34	105	447	45	3	45	3	45	0	0	0	0
	SB32	106	447	45	3	45	3	45	0	0	0	0
	SB30	107	447	45	3	45	3	45	0	0	0	0
	SB28	108	447	45	3	45	3	45	0	0	0	0
	SB27	109	447	45	3	45	3	45	0	0	0	0
	SB26	110	447	45	3	45	3	45	0	0	0	0
	SB24	111	447	45	3	45	3	45	0	0	0	0
	SB22	112	447	45	3	45	3	45	0	0	0	0
	SB20	113	447	45	3	45	3	45	0	0	0	0
	SB18.4	114	447	45	3	45	3	45	0	0	0	0
	SB17	115	447	45	3	45	3	45	0	0	0	0
	SB15	116	447	45	3	45	3	45	0	0	0	0
	SB13	117	447	45	3	45	3	45	0	0	0	0
	SB11	118	447	45	3	45	3	45	0	0	0	0
	SB9	119	447	45	3	45	3	45	0	0	0	0
	SB7.2	120	447	45	3	45	3	45	0	0	0	0
	SB5	121	447	45	3	45	3	45	0	0	0	0
	SB3	122	447	45	3	45	3	45	0	0	0	0
	SB2	123	447	45	3	45	3	45	0	0	0	0
	SB0	124	447	45	3	45	3	45	0	0	0	0
	SB999	125	447	45	3	45	3	45	0	0	0	0
	SB997	126	447	45	3	45	3	45	0	0	0	0
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
952 Lee	2	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
111 Edwards	3	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
204 Hornsby	4	1	51.9	53.6	66	1.7	10	----	53.6	0.0	8	-8.0
Collins Blvd. Baptist Church	5	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	471	45	18	45	18	45	3	45	3	45
	NB997	2	471	45	18	45	18	45	3	45	3	45
	NB999	3	471	45	18	45	18	45	3	45	3	45
	NB0	4	471	45	18	45	18	45	3	45	3	45
	NB2	5	471	45	18	45	18	45	3	45	3	45
	NB3	6	471	45	18	45	18	45	3	45	3	45
	NB5	7	471	45	18	45	18	45	3	45	3	45
	NB7.2	8	471	45	18	45	18	45	3	45	3	45
	NB9	9	471	45	18	45	18	45	3	45	3	45
	NB11	10	471	45	18	45	18	45	3	45	3	45
	NB13	11	471	45	18	45	18	45	3	45	3	45
	NB15	12	471	45	18	45	18	45	3	45	3	45
	NB17	13	471	45	18	45	18	45	3	45	3	45
	NB18.4	14	471	45	18	45	18	45	3	45	3	45
	NB20	15	471	45	18	45	18	45	3	45	3	45
	NB22	16	471	45	18	45	18	45	3	45	3	45
	NB24	17	471	45	18	45	18	45	3	45	3	45
	NB26	18	471	45	18	45	18	45	3	45	3	45
	NB27	19	471	45	18	45	18	45	3	45	3	45
	NB28	20	471	45	18	45	18	45	3	45	3	45
	NB30	21	471	45	18	45	18	45	3	45	3	45
	NB32	22	471	45	18	45	18	45	3	45	3	45
	NB34	23	471	45	18	45	18	45	3	45	3	45

	NB36	24	471	45	18	45	18	45	3	45	3	45
	NB38	25	471	45	18	45	18	45	3	45	3	45
	NB40	26	471	45	18	45	18	45	3	45	3	45
	NB42	27	471	45	18	45	18	45	3	45	3	45
	NB44	28	471	45	18	45	18	45	3	45	3	45
	NB45	29	471	45	18	45	18	45	3	45	3	45
	NB47	30	471	45	18	45	18	45	3	45	3	45
	NB49	31	471	45	18	45	18	45	3	45	3	45
	NB51	32	471	45	18	45	18	45	3	45	3	45
	NB55	33	471	45	18	45	18	45	3	45	3	45
	NB58	34	471	45	18	45	18	45	3	45	3	45
	NB61	35	471	45	18	45	18	45	3	45	3	45
	NB63	36	471	45	18	45	18	45	3	45	3	45
	NB67	37	471	45	45	45	18	45	3	45	3	45
	NB71	38	471	45	18	45	18	45	3	45	3	45
	NB72	39	471	45	18	45	18	45	3	45	3	45
	NB73	40	471	45	18	45	18	45	3	45	3	45
	NB75	41	471	45	18	45	18	45	3	45	3	45
	NB77	42	471	45	18	45	18	45	3	45	3	45
	NB79	43	471	45	18	45	18	45	3	45	3	45
	NB81	44	471	45	18	45	18	45	3	45	3	45
	NB82	45	471	45	18	45	18	45	3	45	3	45
	NB83	46	471	45	18	45	18	45	3	45	3	45
	NB84	47	471	45	18	45	18	45	3	45	3	45
	NB85	48	471	45	18	45	18	45	3	45	3	45
	NB87	49	471	45	18	45	18	45	3	45	3	45
	NB88	50	471	45	18	45	18	45	3	45	3	45
	NB90	51	471	45	18	45	18	45	3	45	3	45
	NB94	52	471	45	18	45	18	45	3	45	3	45
	NB98	54	471	45	18	45	18	45	3	45	3	45
	NB102	55	471	45	18	45	18	45	3	45	3	45
	NB106	56	471	45	18	45	18	45	3	45	3	45
	NB109	57	471	45	18	45	18	45	3	45	3	45
	NB110	58	471	45	18	45	18	45	3	45	3	45
	NB111	59	471	45	18	45	18	45	3	45	3	45
	NB112	60	471	45	18	45	18	45	3	45	3	45

	NB113	61	471	45	18	45	18	45	3	45	3	45
	NB114	62	471	45	18	45	18	45	3	45	3	45
	NB115	63	471	45	18	45	18	45	3	45	3	45
	NB116	64										
SB US 190 Existing	SB116	65	618	45	6	45	42	45	0	0	3	45
	SB115	66	618	45	6	45	42	45	0	0	3	45
	SB114	67	618	45	6	45	42	45	0	0	3	45
	SB113	68	618	45	6	45	42	45	0	0	3	45
	SB112	69	618	45	6	45	42	45	0	0	3	45
	SB111	70	618	45	6	45	42	45	0	0	3	45
	SB110	71	618	45	6	45	42	45	0	0	3	45
	SB109	72	618	45	6	45	42	45	0	0	3	45
	SB106	73	618	45	6	45	42	45	0	0	3	45
	SB102	74	618	45	6	45	42	45	0	0	3	45
	SB98	75	618	45	6	45	42	45	0	0	3	45
	SB94	76	618	45	6	45	42	45	0	0	3	45
	SB90	77	618	45	6	45	42	45	0	0	3	45
	SB88	78	618	45	6	45	42	45	0	0	3	45
	SB87	79	618	45	6	45	42	45	0	0	3	45
	SB85	80	618	45	6	45	42	45	0	0	3	45
	SB84	81	618	45	6	45	42	45	0	0	3	45
	SB83	82	618	45	6	45	42	45	0	0	3	45
	SB82	83	618	45	6	45	42	45	0	0	3	45
	SB81	84	618	45	6	45	42	45	0	0	3	45
	SB79	85	618	45	6	45	42	45	0	0	3	45
	SB77	86	618	45	6	45	42	45	0	0	3	45
	SB75	87	618	45	6	45	42	45	0	0	3	45
	SB73	88	618	45	6	45	42	45	0	0	3	45
	SB72	89	618	45	6	45	42	45	0	0	3	45
	SB71	90	618	45	6	45	42	45	0	0	3	45
	SB67	91	618	45	6	45	42	45	0	0	3	45
	SB63	92	618	45	6	45	42	45	0	0	3	45
	SB61	93	618	45	6	45	42	45	0	0	3	45
	SB58	94	618	45	6	45	42	45	0	0	3	45
	SB55	95	618	45	6	45	42	45	0	0	3	45
	SB51	96	618	45	6	45	42	45	0	0	3	45

	SB49	97	618	45	6	45	42	45	0	0	3	45
	SB47	98	618	45	6	45	42	45	0	0	3	45
	SB45	99	618	45	6	45	42	45	0	0	3	45
	SB44	100	618	45	6	45	42	45	0	0	3	45
	SB42	101	618	45	6	45	42	45	0	0	3	45
	SB40	102	618	45	6	45	42	45	0	0	3	45
	SB38	103	618	45	6	45	42	45	0	0	3	45
	SB36	104	618	45	6	45	42	45	0	0	3	45
	SB34	105	618	45	6	45	42	45	0	0	3	45
	SB32	106	618	45	6	45	42	45	0	0	3	45
	SB30	107	618	45	6	45	42	45	0	0	3	45
	SB28	108	618	45	6	45	42	45	0	0	3	45
	SB27	109	618	45	6	45	42	45	0	0	3	45
	SB26	110	618	45	6	45	42	45	0	0	3	45
	SB24	111	618	45	6	45	42	45	0	0	3	45
	SB22	112	618	45	6	45	42	45	0	0	3	45
	SB20	113	618	45	6	45	42	45	0	0	3	45
	SB18.4	114	618	45	6	45	42	45	0	0	3	45
	SB17	115	618	45	6	45	42	45	0	0	3	45
	SB15	116	618	45	6	45	42	45	0	0	3	45
	SB13	117	618	45	6	45	42	45	0	0	3	45
	SB11	118	618	45	6	45	42	45	0	0	3	45
	SB9	119	618	45	6	45	42	45	0	0	3	45
	SB7.2	120	618	45	6	45	42	45	0	0	3	45
	SB5	121	618	45	6	45	42	45	0	0	3	45
	SB3	122	618	45	6	45	42	45	0	0	3	45
	SB2	123	618	45	6	45	42	45	0	0	3	45
	SB0	124	618	45	6	45	42	45	0	0	3	45
	SB999	125	618	45	6	45	42	45	0	0	3	45
	SB997	126	618	45	6	45	42	45	0	0	3	45
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
952 Lee	2	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
111 Edwards	3	1	58.5	58.6	66	0.1	10	----	58.6	0.0	8	-8.0
204 Hornsby	4	1	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0
Collins Blvd. Baptist Church	5	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	350	45	17	45	24	45	0	0	0	0
	NB997	2	350	45	17	45	24	45	0	0	0	0
	NB999	3	350	45	17	45	24	45	0	0	0	0
	NB0	4	350	45	17	45	24	45	0	0	0	0
	NB2	5	350	45	17	45	24	45	0	0	0	0
	NB3	6	350	45	17	45	24	45	0	0	0	0
	NB5	7	350	45	17	45	24	45	0	0	0	0
	NB7.2	8	350	45	17	45	24	45	0	0	0	0
	NB9	9	350	45	17	45	24	45	0	0	0	0
	NB11	10	350	45	17	45	24	45	0	0	0	0
	NB13	11	350	45	17	45	24	45	0	0	0	0
	NB15	12	350	45	17	45	24	45	0	0	0	0
	NB17	13	350	45	17	45	24	45	0	0	0	0
	NB18.4	14	350	45	17	45	24	45	0	0	0	0
	NB20	15	350	45	17	45	24	45	0	0	0	0
	NB22	16	350	45	17	45	24	45	0	0	0	0
	NB24	17	350	45	17	45	24	45	0	0	0	0
	NB26	18	350	45	17	45	24	45	0	0	0	0
	NB27	19	350	45	17	45	24	45	0	0	0	0
	NB28	20	350	45	17	45	24	45	0	0	0	0
	NB30	21	350	45	17	45	24	45	0	0	0	0
	NB32	22	350	45	17	45	24	45	0	0	0	0
	NB34	23	350	45	17	45	24	45	0	0	0	0

	NB36	24	350	45	17	45	24	45	0	0	0	0
	NB38	25	350	45	17	45	24	45	0	0	0	0
	NB40	26	350	45	17	45	24	45	0	0	0	0
	NB42	27	350	45	17	45	24	45	0	0	0	0
	NB44	28	350	45	17	45	24	45	0	0	0	0
	NB45	29	350	45	17	45	24	45	0	0	0	0
	NB47	30	350	45	17	45	24	45	0	0	0	0
	NB49	31	350	45	17	45	24	45	0	0	0	0
	NB51	32	350	45	17	45	24	45	0	0	0	0
	NB55	33	350	45	17	45	24	45	0	0	0	0
	NB58	34	350	45	17	45	24	45	0	0	0	0
	NB61	35	350	45	17	45	24	45	0	0	0	0
	NB63	36	350	45	17	45	24	45	0	0	0	0
	NB67	37	350	45	17	45	24	45	0	0	0	0
	NB71	38	350	45	17	45	24	45	0	0	0	0
	NB72	39	350	45	17	45	24	45	0	0	0	0
	NB73	40	350	45	17	45	24	45	0	0	0	0
	NB75	41	350	45	17	45	24	45	0	0	0	0
	NB77	42	350	45	17	45	24	45	0	0	0	0
	NB79	43	350	45	17	45	24	45	0	0	0	0
	NB81	44	350	45	17	45	24	45	0	0	0	0
	NB82	45	350	45	17	45	24	45	0	0	0	0
	NB83	46	350	45	17	45	24	45	0	0	0	0
	NB84	47	350	45	17	45	24	45	0	0	0	0
	NB85	48	350	45	17	45	24	45	0	0	0	0
	NB87	49	350	45	17	45	24	45	0	0	0	0
	NB88	50	350	45	17	45	24	45	0	0	0	0
	NB90	51	350	45	17	45	24	45	0	0	0	0
	NB94	52	350	45	17	45	24	45	0	0	0	0
	NB98	54	350	45	17	45	24	45	0	0	0	0
	NB102	55	350	45	17	45	24	45	0	0	0	0
	NB106	56	350	45	17	45	24	45	0	0	0	0
	NB109	57	350	45	17	45	24	45	0	0	0	0
	NB110	58	350	45	17	45	24	45	0	0	0	0
	NB111	59	350	45	17	45	24	45	0	0	0	0
	NB112	60	350	45	17	45	24	45	0	0	0	0

	NB113	61	350	45	17	45	24	45	0	0	0	0
	NB114	62	350	45	17	45	24	45	0	0	0	0
	NB115	63	350	45	17	45	24	45	0	0	0	0
	NB116	64										
SB US 190 Existing	SB116	65	558	45	24	45	10	45	5	45	0	0
	SB115	66	558	45	24	45	10	45	5	45	0	0
	SB114	67	558	45	24	45	10	45	5	45	0	0
	SB113	68	558	45	24	45	10	45	5	45	0	0
	SB112	69	558	45	24	45	10	45	5	45	0	0
	SB111	70	558	45	24	45	10	45	5	45	0	0
	SB110	71	558	45	24	45	10	45	5	45	0	0
	SB109	72	558	45	24	45	10	45	5	45	0	0
	SB106	73	558	45	24	45	10	45	5	45	0	0
	SB102	74	558	45	24	45	10	45	5	45	0	0
	SB98	75	558	45	24	45	10	45	5	45	0	0
	SB94	76	558	45	24	45	10	45	5	45	0	0
	SB90	77	558	45	24	45	10	45	5	45	0	0
	SB88	78	558	45	24	45	10	45	5	45	0	0
	SB87	79	558	45	24	45	10	45	5	45	0	0
	SB85	80	558	45	24	45	10	45	5	45	0	0
	SB84	81	558	45	24	45	10	45	5	45	0	0
	SB83	82	558	45	24	45	10	45	5	45	0	0
	SB82	83	558	45	24	45	10	45	5	45	0	0
	SB81	84	558	45	24	45	10	45	5	45	0	0
	SB79	85	558	45	24	45	10	45	5	45	0	0
	SB77	86	558	45	24	45	10	45	5	45	0	0
	SB75	87	558	45	24	45	10	45	5	45	0	0
	SB73	88	558	45	24	45	10	45	5	45	0	0
	SB72	89	558	45	24	45	10	45	5	45	0	0
	SB71	90	558	45	24	45	10	45	5	45	0	0
	SB67	91	558	45	24	45	10	45	5	45	0	0
	SB63	92	558	45	24	45	10	45	5	45	0	0
	SB61	93	558	45	24	45	10	45	5	45	0	0
	SB58	94	558	45	24	45	10	45	5	45	0	0
	SB55	95	558	45	24	45	10	45	5	45	0	0
	SB51	96	558	45	24	45	10	45	5	45	0	0

	SB49	97	558	45	24	45	10	45	5	45	0	0
	SB47	98	558	45	24	45	10	45	5	45	0	0
	SB45	99	558	45	24	45	10	45	5	45	0	0
	SB44	100	558	45	24	45	10	45	5	45	0	0
	SB42	101	558	45	24	45	10	45	5	45	0	0
	SB40	102	558	45	24	45	10	45	5	45	0	0
	SB38	103	558	45	24	45	10	45	5	45	0	0
	SB36	104	558	45	24	45	10	45	5	45	0	0
	SB34	105	558	45	24	45	10	45	5	45	0	0
	SB32	106	558	45	24	45	10	45	5	45	0	0
	SB30	107	558	45	24	45	10	45	5	45	0	0
	SB28	108	558	45	24	45	10	45	5	45	0	0
	SB27	109	558	45	24	45	10	45	5	45	0	0
	SB26	110	558	45	24	45	10	45	5	45	0	0
	SB24	111	558	45	24	45	10	45	5	45	0	0
	SB22	112	558	45	24	45	10	45	5	45	0	0
	SB20	113	558	45	24	45	10	45	5	45	0	0
	SB18.4	114	558	45	24	45	10	45	5	45	0	0
	SB17	115	558	45	24	45	10	45	5	45	0	0
	SB15	116	558	45	24	45	10	45	5	45	0	0
	SB13	117	558	45	24	45	10	45	5	45	0	0
	SB11	118	558	45	24	45	10	45	5	45	0	0
	SB9	119	558	45	24	45	10	45	5	45	0	0
	SB7.2	120	558	45	24	45	10	45	5	45	0	0
	SB5	121	558	45	24	45	10	45	5	45	0	0
	SB3	122	558	45	24	45	10	45	5	45	0	0
	SB2	123	558	45	24	45	10	45	5	45	0	0
	SB0	124	558	45	24	45	10	45	5	45	0	0
	SB999	125	558	45	24	45	10	45	5	45	0	0
	SB997	126	558	45	24	45	10	45	5	45	0	0
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
952 Lee	2	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
111 Edwards	3	1	58.3	59.7	66	1.4	10	----	59.7	0.0	8	-8.0
204 Hornsby	4	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0
Collins Blvd. Baptist Church	5	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	621	45	27	45	12	45	15	45	0	0
	NB997	2	621	45	27	45	12	45	15	45	0	0
	NB999	3	621	45	27	45	12	45	15	45	0	0
	NB0	4	621	45	27	45	12	45	15	45	0	0
	NB2	5	621	45	27	45	12	45	15	45	0	0
	NB3	6	621	45	27	45	12	45	15	45	0	0
	NB5	7	621	45	27	45	12	45	15	45	0	0
	NB7.2	8	621	45	27	45	12	45	15	45	0	0
	NB9	9	621	45	27	45	12	45	15	45	0	0
	NB11	10	621	45	27	45	12	45	15	45	0	0
	NB13	11	621	45	27	45	12	45	15	45	0	0
	NB15	12	621	45	27	45	12	45	15	45	0	0
	NB17	13	621	45	27	45	12	45	15	45	0	0
	NB18.4	14	621	45	27	45	12	45	15	45	0	0
	NB20	15	621	45	27	45	12	45	15	45	0	0
	NB22	16	621	45	27	45	12	45	15	45	0	0
	NB24	17	621	45	27	45	12	45	15	45	0	0
	NB26	18	621	45	27	45	12	45	15	45	0	0
	NB27	19	621	45	27	45	12	45	15	45	0	0
	NB28	20	621	45	27	45	12	45	15	45	0	0
	NB30	21	621	45	27	45	12	45	15	45	0	0
	NB32	22	621	45	27	45	12	45	15	45	0	0
	NB34	23	621	45	27	45	12	45	15	45	0	0

	NB36	24	621	45	27	45	12	45	15	45	0	0
	NB38	25	621	45	27	45	12	45	15	45	0	0
	NB40	26	621	45	27	45	12	45	15	45	0	0
	NB42	27	621	45	27	45	12	45	15	45	0	0
	NB44	28	621	45	27	45	12	45	15	45	0	0
	NB45	29	621	45	27	45	12	45	15	45	0	0
	NB47	30	621	45	27	45	12	45	15	45	0	0
	NB49	31	621	45	27	45	12	45	15	45	0	0
	NB51	32	621	45	27	45	12	45	15	45	0	0
	NB55	33	621	45	27	45	12	45	15	45	0	0
	NB58	34	621	45	27	45	12	45	15	45	0	0
	NB61	35	621	45	27	45	12	45	15	45	0	0
	NB63	36	621	45	27	45	12	45	15	45	0	0
	NB67	37	621	45	27	45	12	45	15	45	0	0
	NB71	38	621	45	27	45	12	45	15	45	0	0
	NB72	39	621	45	27	45	12	45	15	45	0	0
	NB73	40	621	45	27	45	12	45	15	45	0	0
	NB75	41	621	45	27	45	12	45	15	45	0	0
	NB77	42	621	45	27	45	12	45	15	45	0	0
	NB79	43	621	45	27	45	12	45	15	45	0	0
	NB81	44	621	45	27	45	12	45	15	45	0	0
	NB82	45	621	45	27	45	12	45	15	45	0	0
	NB83	46	621	45	27	45	12	45	15	45	0	0
	NB84	47	621	45	27	45	12	45	15	45	0	0
	NB85	48	621	45	27	45	12	45	15	45	0	0
	NB87	49	621	45	27	45	12	45	15	45	0	0
	NB88	50	621	45	27	45	12	45	15	45	0	0
	NB90	51	621	45	27	45	12	45	15	45	0	0
	NB94	52	621	45	27	45	12	45	15	45	0	0
	NB98	54	621	45	27	45	12	45	15	45	0	0
	NB102	55	621	45	27	45	12	45	15	45	0	0
	NB106	56	621	45	27	45	12	45	15	45	0	0
	NB109	57	621	45	27	45	12	45	15	45	0	0
	NB110	58	621	45	27	45	12	45	15	45	0	0
	NB111	59	621	45	27	45	12	45	15	45	0	0
	NB112	60	621	45	27	45	12	45	15	45	0	0

	NB113	61	621	45	27	45	12	45	15	45	0	0
	NB114	62	621	45	27	45	12	45	15	45	0	0
	NB115	63	621	45	27	45	12	45	15	45	0	0
	NB116	64										
SB US 190 Existing	SB116	65	609	45	15	45	18	45	3	45	0	0
	SB115	66	609	45	15	45	18	45	3	45	0	0
	SB114	67	609	45	15	45	18	45	3	45	0	0
	SB113	68	609	45	15	45	18	45	3	45	0	0
	SB112	69	609	45	15	45	18	45	3	45	0	0
	SB111	70	609	45	15	45	18	45	3	45	0	0
	SB110	71	609	45	15	45	18	45	3	45	0	0
	SB109	72	609	45	15	45	18	45	3	45	0	0
	SB106	73	609	45	15	45	18	45	3	45	0	0
	SB102	74	609	45	15	45	18	45	3	45	0	0
	SB98	75	609	45	15	45	18	45	3	45	0	0
	SB94	76	609	45	15	45	18	45	3	45	0	0
	SB90	77	609	45	15	45	18	45	3	45	0	0
	SB88	78	609	45	15	45	18	45	3	45	0	0
	SB87	79	609	45	15	45	18	45	3	45	0	0
	SB85	80	609	45	15	45	18	45	3	45	0	0
	SB84	81	609	45	15	45	18	45	3	45	0	0
	SB83	82	609	45	15	45	18	45	3	45	0	0
	SB82	83	609	45	15	45	18	45	3	45	0	0
	SB81	84	609	45	15	45	18	45	3	45	0	0
	SB79	85	609	45	15	45	18	45	3	45	0	0
	SB77	86	609	45	15	45	18	45	3	45	0	0
	SB75	87	609	45	15	45	18	45	3	45	0	0
	SB73	88	609	45	15	45	18	45	3	45	0	0
	SB72	89	609	45	15	45	18	45	3	45	0	0
	SB71	90	609	45	15	45	18	45	3	45	0	0
	SB67	91	609	45	15	45	18	45	3	45	0	0
	SB63	92	609	45	15	45	18	45	3	45	0	0
	SB61	93	609	45	15	45	18	45	3	45	0	0
	SB58	94	609	45	15	45	18	45	3	45	0	0
	SB55	95	609	45	15	45	18	45	3	45	0	0
	SB51	96	609	45	15	45	18	45	3	45	0	0

	SB49	97	609	45	15	45	18	45	3	45	0	0
	SB47	98	609	45	15	45	18	45	3	45	0	0
	SB45	99	609	45	15	45	18	45	3	45	0	0
	SB44	100	609	45	15	45	18	45	3	45	0	0
	SB42	101	609	45	15	45	18	45	3	45	0	0
	SB40	102	609	45	15	45	18	45	3	45	0	0
	SB38	103	609	45	15	45	18	45	3	45	0	0
	SB36	104	609	45	15	45	18	45	3	45	0	0
	SB34	105	609	45	15	45	18	45	3	45	0	0
	SB32	106	609	45	15	45	18	45	3	45	0	0
	SB30	107	609	45	15	45	18	45	3	45	0	0
	SB28	108	609	45	15	45	18	45	3	45	0	0
	SB27	109	609	45	15	45	18	45	3	45	0	0
	SB26	110	609	45	15	45	18	45	3	45	0	0
	SB24	111	609	45	15	45	18	45	3	45	0	0
	SB22	112	609	45	15	45	18	45	3	45	0	0
	SB20	113	609	45	15	45	18	45	3	45	0	0
	SB18.4	114	609	45	15	45	18	45	3	45	0	0
	SB17	115	609	45	15	45	18	45	3	45	0	0
	SB15	116	609	45	15	45	18	45	3	45	0	0
	SB13	117	609	45	15	45	18	45	3	45	0	0
	SB11	118	609	45	15	45	18	45	3	45	0	0
	SB9	119	609	45	15	45	18	45	3	45	0	0
	SB7.2	120	609	45	15	45	18	45	3	45	0	0
	SB5	121	609	45	15	45	18	45	3	45	0	0
	SB3	122	609	45	15	45	18	45	3	45	0	0
	SB2	123	609	45	15	45	18	45	3	45	0	0
	SB0	124	609	45	15	45	18	45	3	45	0	0
	SB999	125	609	45	15	45	18	45	3	45	0	0
	SB997	126	609	45	15	45	18	45	3	45	0	0
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
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RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
952 Lee (M)	2	1	66.7	63.9	66	-2.8	10	----	63.9	0.0	8	-8.0
111 Edwards (M)	3	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
204 Hornsby (M)	4	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	1224	45	33	45	9	45	9	45	0	0
	NB997	2	1224	45	33	45	9	45	9	45	0	0
	NB999	3	1224	45	33	45	9	45	9	45	0	0
	NB0	4	1224	45	33	45	9	45	9	45	0	0
	NB2	5	1224	45	33	45	9	45	9	45	0	0
	NB3	6	1224	45	33	45	9	45	9	45	0	0
	NB5	7	1224	45	33	45	9	45	9	45	0	0
	NB7.2	8	1224	45	33	45	9	45	9	45	0	0
	NB9	9	1224	45	33	45	9	45	9	45	0	0
	NB11	10	1224	45	33	45	9	45	9	45	0	0
	NB13	11	1224	45	33	45	9	45	9	45	0	0
	NB15	12	1224	45	33	45	9	45	9	45	0	0
	NB17	13	1224	45	33	45	9	45	9	45	0	0
	NB18.4	14	1224	45	33	45	9	45	9	45	0	0
	NB20	15	1224	45	33	45	9	45	9	45	0	0
	NB22	16	1224	45	33	45	9	45	9	45	0	0
	NB24	17	1224	45	33	45	9	45	9	45	0	0
	NB26	18	1224	45	33	45	9	45	9	45	0	0
	NB27	19	1224	45	33	45	9	45	9	45	0	0
	NB28	20	1224	45	33	45	9	45	9	45	0	0
	NB30	21	1224	45	33	45	9	45	9	45	0	0
	NB32	22	1224	45	33	45	9	45	9	45	0	0
	NB34	23	1224	45	33	45	9	45	9	45	0	0

	NB36	24	1224	45	33	45	9	45	9	45	0	0
	NB38	25	1224	45	33	45	9	45	9	45	0	0
	NB40	26	1224	45	33	45	9	45	9	45	0	0
	NB42	27	1224	45	33	45	9	45	9	45	0	0
	NB44	28	1224	45	33	45	9	45	9	45	0	0
	NB45	29										
SB US 190 Existing	SB116	65	816	45	21	45	15	45	0	0	3	45
	SB115	66	816	45	21	45	15	45	0	0	3	45
	SB114	67	816	45	21	45	15	45	0	0	3	45
	SB113	68	816	45	21	45	15	45	0	0	3	45
	SB112	69	816	45	21	45	15	45	0	0	3	45
	SB111	70	816	45	21	45	15	45	0	0	3	45
	SB110	71	816	45	21	45	15	45	0	0	3	45
	SB109	72	816	45	21	45	15	45	0	0	3	45
	SB106	73	816	45	21	45	15	45	0	0	3	45
	SB102	74	816	45	21	45	15	45	0	0	3	45
	SB98	75	816	45	21	45	15	45	0	0	3	45
	SB94	76	816	45	21	45	15	45	0	0	3	45
	SB90	77	816	45	21	45	15	45	0	0	3	45
	SB88	78	816	45	21	45	15	45	0	0	3	45
	SB87	79	816	45	21	45	15	45	0	0	3	45
	SB85	80	816	45	21	45	15	45	0	0	3	45
	SB84	81	816	45	21	45	15	45	0	0	3	45
	SB83	82	816	45	21	45	15	45	0	0	3	45
	SB82	83	816	45	21	45	15	45	0	0	3	45
	SB81	84	816	45	21	45	15	45	0	0	3	45
	SB79	85	816	45	21	45	15	45	0	0	3	45
	SB77	86	816	45	21	45	15	45	0	0	3	45
	SB75	87	816	45	21	45	15	45	0	0	3	45
	SB73	88	816	45	21	45	15	45	0	0	3	45
	SB72	89	816	45	21	45	15	45	0	0	3	45
	SB71	90	816	45	21	45	15	45	0	0	3	45
	SB67	91	816	45	21	45	15	45	0	0	3	45
	SB63	92	816	45	21	45	15	45	0	0	3	45
	SB61	93	816	45	21	45	15	45	0	0	3	45
	SB58	94	816	45	21	45	15	45	0	0	3	45

	SB55	95	816	45	21	45	15	45	0	0	3	45
	SB51	96	816	45	21	45	15	45	0	0	3	45
	SB49	97	816	45	21	45	15	45	0	0	3	45
	SB47	98										
NB US 190 Existing-2	NB45	128	1224	45	33	45	9	45	9	45	0	0
	NB47	30	1224	45	33	45	9	45	9	45	0	0
	NB49	31	1224	45	33	45	9	45	9	45	0	0
	NB51	32	1224	45	33	45	9	45	9	45	0	0
	NB55	33	1224	45	33	45	9	45	9	45	0	0
	NB58	34	1224	45	33	45	9	45	9	45	0	0
	NB61	35	1224	45	33	45	9	45	9	45	0	0
	NB63	36	1224	45	33	45	9	45	9	45	0	0
	NB67	37	1224	45	33	45	9	45	9	45	0	0
	NB71	38	1224	45	33	45	9	45	9	45	0	0
	NB72	39	1224	45	33	45	9	45	9	45	0	0
	NB73	40	1224	45	33	45	9	45	9	45	0	0
	NB75	41	1224	45	33	45	9	45	9	45	0	0
	NB77	42	1224	45	33	45	9	45	9	45	0	0
	NB79	43	1224	45	33	45	9	45	9	45	0	0
	NB81	44	1224	45	33	45	9	45	9	45	0	0
	NB82	45	1224	45	33	45	9	45	9	45	0	0
	NB83	46	1224	45	33	45	9	45	9	45	0	0
	NB84	47	1224	45	33	45	9	45	9	45	0	0
	NB85	48	1224	45	33	45	9	45	9	45	0	0
	NB87	49	1224	45	33	45	9	45	9	45	0	0
	NB88	50	1224	45	33	45	9	45	9	45	0	0
	NB90	51	1224	45	33	45	9	45	9	45	0	0
	NB94	52	1224	45	33	45	9	45	9	45	0	0
	NB98	54	1224	45	33	45	9	45	9	45	0	0
	NB102	55	1224	45	33	45	9	45	9	45	0	0
	NB106	56	1224	45	33	45	9	45	9	45	0	0
	NB109	57	1224	45	33	45	9	45	9	45	0	0
	NB110	58	1224	45	33	45	9	45	9	45	0	0
	NB111	59	1224	45	33	45	9	45	9	45	0	0
	NB112	60	1224	45	33	45	9	45	9	45	0	0
	NB113	61	1224	45	33	45	9	45	9	45	0	0

	NB114	62	1224	45	33	45	9	45	9	45	0	0
	NB115	63	1224	45	33	45	9	45	9	45	0	0
	NB116	64										
SB US 190 Existing-2	point130	130	816	45	21	45	15	45	0	0	3	45
	SB45	99	816	45	21	45	15	45	0	0	3	45
	SB44	100	816	45	21	45	15	45	0	0	3	45
	SB42	101	816	45	21	45	15	45	0	0	3	45
	SB40	102	816	45	21	45	15	45	0	0	3	45
	SB38	103	816	45	21	45	15	45	0	0	3	45
	SB36	104	816	45	21	45	15	45	0	0	3	45
	SB34	105	816	45	21	45	15	45	0	0	3	45
	SB32	106	816	45	21	45	15	45	0	0	3	45
	SB30	107	816	45	21	45	15	45	0	0	3	45
	SB28	108	816	45	21	45	15	45	0	0	3	45
	SB27	109	816	45	21	45	15	45	0	0	3	45
	SB26	110	816	45	21	45	15	45	0	0	3	45
	SB24	111	816	45	21	45	15	45	0	0	3	45
	SB22	112	816	45	21	45	15	45	0	0	3	45
	SB20	113	816	45	21	45	15	45	0	0	3	45
	SB18.4	114	816	45	21	45	15	45	0	0	3	45
	SB17	115	816	45	21	45	15	45	0	0	3	45
	SB15	116	816	45	21	45	15	45	0	0	3	45
	SB13	117	816	45	21	45	15	45	0	0	3	45
	SB11	118	816	45	21	45	15	45	0	0	3	45
	SB9	119	816	45	21	45	15	45	0	0	3	45
	SB7.2	120	816	45	21	45	15	45	0	0	3	45
	SB5	121	816	45	21	45	15	45	0	0	3	45
	SB3	122	816	45	21	45	15	45	0	0	3	45
	SB2	123	816	45	21	45	15	45	0	0	3	45
	SB0	124	816	45	21	45	15	45	0	0	3	45
	SB999	125	816	45	21	45	15	45	0	0	3	45
	SB997	126	816	45	21	45	15	45	0	0	3	45
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
952 Lee (M)	2	1	66.7	64.4	66	-2.3	10	----	64.4	0.0	8	-8.0
111 Edwards (M)	3	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
204 Hornsby (M)	4	1	0.0	54.8	66	54.8	10	----	54.8	0.0	8	-8.0
Collins Blvd. Baptist Church (M)	5	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	720	45	18	45	39	45	0	0	3	45
	NB997	2	720	45	18	45	39	45	0	0	3	45
	NB999	3	720	45	18	45	39	45	0	0	3	45
	NB0	4	720	45	18	45	39	45	0	0	3	45
	NB2	5	720	45	18	45	39	45	0	0	3	45
	NB3	6	720	45	18	45	39	45	0	0	3	45
	NB5	7	720	45	18	45	39	45	0	0	3	45
	NB7.2	8	720	45	18	45	39	45	0	0	3	45
	NB9	9	720	45	18	45	39	45	0	0	3	45
	NB11	10	720	45	18	45	39	45	0	0	3	45
	NB13	11	720	45	18	45	39	45	0	0	3	45
	NB15	12	720	45	18	45	39	45	0	0	3	45
	NB17	13	720	45	18	45	39	45	0	0	3	45
	NB18.4	14	720	45	18	45	39	45	0	0	3	45
	NB20	15	720	45	18	45	39	45	0	0	3	45
	NB22	16	720	45	18	45	39	45	0	0	3	45
	NB24	17	720	45	18	45	39	45	0	0	3	45
	NB26	18	720	45	18	45	39	45	0	0	3	45
	NB27	19	720	45	18	45	39	45	0	0	3	45
	NB28	20	720	45	18	45	39	45	0	0	3	45
	NB30	21	720	45	18	45	39	45	0	0	3	45
	NB32	22	720	45	18	45	39	45	0	0	3	45
	NB34	23	720	45	18	45	39	45	0	0	3	45

	NB36	24	720	45	18	45	39	45	0	0	3	45
	NB38	25	720	45	18	45	39	45	0	0	3	45
	NB40	26	720	45	18	45	39	45	0	0	3	45
	NB42	27	720	45	18	45	39	45	0	0	3	45
	NB44	28	720	45	18	45	39	45	0	0	3	45
	NB45	29										
SB US 190 Existing	SB116	65	915	45	15	45	24	45	3	45	3	45
	SB115	66	915	45	15	45	24	45	3	45	3	45
	SB114	67	915	45	15	45	24	45	3	45	3	45
	SB113	68	915	45	15	45	24	45	3	45	3	45
	SB112	69	915	45	15	45	24	45	3	45	3	45
	SB111	70	915	45	15	45	24	45	3	45	3	45
	SB110	71	915	45	15	45	24	45	3	45	3	45
	SB109	72	915	45	15	45	24	45	3	45	3	45
	SB106	73	915	45	15	45	24	45	3	45	3	45
	SB102	74	915	45	15	45	24	45	3	45	3	45
	SB98	75	915	45	15	45	24	45	3	45	3	45
	SB94	76	915	45	15	45	24	45	3	45	3	45
	SB90	77	915	45	15	45	24	45	3	45	3	45
	SB88	78	915	45	15	45	24	45	3	45	3	45
	SB87	79	915	45	15	45	24	45	3	45	3	45
	SB85	80	915	45	15	45	24	45	3	45	3	45
	SB84	81	915	45	15	45	24	45	3	45	3	45
	SB83	82	915	45	15	45	24	45	3	45	3	45
	SB82	83	915	45	15	45	24	45	3	45	3	45
	SB81	84	915	45	15	45	24	45	3	45	3	45
	SB79	85	915	45	15	45	24	45	3	45	3	45
	SB77	86	915	45	15	45	24	45	3	45	3	45
	SB75	87	915	45	15	45	24	45	3	45	3	45
	SB73	88	915	45	15	45	24	45	3	45	3	45
	SB72	89	915	45	15	45	24	45	3	45	3	45
	SB71	90	915	45	15	45	24	45	3	45	3	45
	SB67	91	915	45	15	45	24	45	3	45	3	45
	SB63	92	915	45	15	45	24	45	3	45	3	45
	SB61	93	915	45	15	45	24	45	3	45	3	45
	SB58	94	915	45	15	45	24	45	3	45	3	45

	SB55	95	915	45	15	45	24	45	3	45	3	45
	SB51	96	915	45	15	45	24	45	3	45	3	45
	SB49	97	915	45	15	45	24	45	3	45	3	45
	SB47	98										
NB US 190 Existing-2	point128	128	720	45	18	45	39	45	0	0	3	45
	NB47	30	720	45	18	45	39	45	0	0	3	45
	NB49	31	720	45	18	45	39	45	0	0	3	45
	NB51	32	720	45	18	45	39	45	0	0	3	45
	NB55	33	720	45	18	45	39	45	0	0	3	45
	NB58	34	720	45	18	45	39	45	0	0	3	45
	NB61	35	720	45	18	45	39	45	0	0	3	45
	NB63	36	720	45	18	45	39	45	0	0	3	45
	NB67	37	720	45	18	45	39	45	0	0	3	45
	NB71	38	720	45	18	45	39	45	0	0	3	45
	NB72	39	720	45	18	45	39	45	0	0	3	45
	NB73	40	720	45	18	45	39	45	0	0	3	45
	NB75	41	720	45	18	45	39	45	0	0	3	45
	NB77	42	720	45	18	45	39	45	0	0	3	45
	NB79	43	720	45	18	45	39	45	0	0	3	45
	NB81	44	720	45	18	45	39	45	0	0	3	45
	NB82	45	720	45	18	45	39	45	0	0	3	45
	NB83	46	720	45	18	45	39	45	0	0	3	45
	NB84	47	720	45	18	45	39	45	0	0	3	45
	NB85	48	720	45	18	45	39	45	0	0	3	45
	NB87	49	720	45	18	45	39	45	0	0	3	45
	NB88	50	720	45	18	45	39	45	0	0	3	45
	NB90	51	720	45	18	45	39	45	0	0	3	45
	NB94	52	720	45	18	45	39	45	0	0	3	45
	NB98	54	720	45	18	45	39	45	0	0	3	45
	NB102	55	720	45	18	45	39	45	0	0	3	45
	NB106	56	720	45	18	45	39	45	0	0	3	45
	NB109	57	720	45	18	45	39	45	0	0	3	45
	NB110	58	720	45	18	45	39	45	0	0	3	45
	NB111	59	720	45	18	45	39	45	0	0	3	45
	NB112	60	720	45	18	45	39	45	0	0	3	45
	NB113	61	720	45	18	45	39	45	0	0	3	45

	NB114	62	720	45	18	45	39	45	0	0	3	45
	NB115	63	720	45	18	45	39	45	0	0	3	45
	NB116	64										
SB US 190 Existing-2	point129	129	915	45	15	45	24	45	3	45	3	45
	SB45	99	915	45	15	45	24	45	3	45	3	45
	SB44	100	915	45	15	45	24	45	3	45	3	45
	SB42	101	915	45	15	45	24	45	3	45	3	45
	SB40	102	915	45	15	45	24	45	3	45	3	45
	SB38	103	915	45	15	45	24	45	3	45	3	45
	SB36	104	915	45	15	45	24	45	3	45	3	45
	SB34	105	915	45	15	45	24	45	3	45	3	45
	SB32	106	915	45	15	45	24	45	3	45	3	45
	SB30	107	915	45	15	45	24	45	3	45	3	45
	SB28	108	915	45	15	45	24	45	3	45	3	45
	SB27	109	915	45	15	45	24	45	3	45	3	45
	SB26	110	915	45	15	45	24	45	3	45	3	45
	SB24	111	915	45	15	45	24	45	3	45	3	45
	SB22	112	915	45	15	45	24	45	3	45	3	45
	SB20	113	915	45	15	45	24	45	3	45	3	45
	SB18.4	114	915	45	15	45	24	45	3	45	3	45
	SB17	115	915	45	15	45	24	45	3	45	3	45
	SB15	116	915	45	15	45	24	45	3	45	3	45
	SB13	117	915	45	15	45	24	45	3	45	3	45
	SB11	118	915	45	15	45	24	45	3	45	3	45
	SB9	119	915	45	15	45	24	45	3	45	3	45
	SB7.2	120	915	45	15	45	24	45	3	45	3	45
	SB5	121	915	45	15	45	24	45	3	45	3	45
	SB3	122	915	45	15	45	24	45	3	45	3	45
	SB2	123	915	45	15	45	24	45	3	45	3	45
	SB0	124	915	45	15	45	24	45	3	45	3	45
	SB999	125	915	45	15	45	24	45	3	45	3	45
	SB997	126	915	45	15	45	24	45	3	45	3	45
	SB994	127										

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	66.1	67.6	66	1.5	10	Snd Lvl	67.6	0.0	8	-8.0
952 Lee	2	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
111 Edwards	3	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
204 Hornsby	4	1	0.0	54.8	66	54.8	10	----	54.8	0.0	8	-8.0
Collins Blvd. Baptist Church	5	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	699	45	18	45	33	45	30	45	3	45
	NB997	2	699	45	18	45	33	45	30	45	3	45
	NB999	3	699	45	18	45	33	45	30	45	3	45
	NB0	4	699	45	18	45	33	45	30	45	3	45
	NB2	5	699	45	18	45	33	45	30	45	3	45
	NB3	6	699	45	18	45	33	45	30	45	3	45
	NB5	7	699	45	18	45	33	45	30	45	3	45
	NB7.2	8	699	45	18	45	33	45	30	45	3	45
	NB9	9	699	45	18	45	33	45	30	45	3	45
	NB11	10	699	45	18	45	33	45	30	45	3	45
	NB13	11	699	45	18	45	33	45	30	45	3	45
	NB15	12	699	45	18	45	33	45	30	45	3	45
	NB17	13	699	45	18	45	33	45	30	45	3	45
	NB18.4	14	699	45	18	45	33	45	30	45	3	45
	NB20	15	699	45	18	45	33	45	30	45	3	45
	NB22	16	699	45	18	45	33	45	30	45	3	45
	NB24	17	699	45	18	45	33	45	30	45	3	45
	NB26	18	699	45	18	45	33	45	30	45	3	45
	NB27	19	699	45	18	45	33	45	30	45	3	45
	NB28	20	699	45	18	45	33	45	30	45	3	45
	NB30	21	699	45	18	45	33	45	30	45	3	45
	NB32	22	699	45	18	45	33	45	30	45	3	45
	NB34	23	699	45	18	45	33	45	30	45	3	45

	NB36	24	699	45	18	45	33	45	30	45	3	45
	NB38	25	699	45	18	45	33	45	30	45	3	45
	NB40	26	699	45	18	45	33	45	30	45	3	45
	NB42	27	699	45	18	45	33	45	30	45	3	45
	NB44	28	699	45	18	45	33	45	30	45	3	45
	NB45	29	699	45	18	45	33	45	30	45	3	45
	NB47	30	699	45	18	45	33	45	30	45	3	45
	NB49	31	699	45	18	45	33	45	30	45	3	45
	NB51	32	699	45	18	45	33	45	30	45	3	45
	NB55	33	699	45	18	45	33	45	30	45	3	45
	NB58	34	699	45	18	45	33	45	30	45	3	45
	NB61	35	699	45	18	45	33	45	30	45	3	45
	NB63	36	699	45	18	45	33	45	30	45	3	45
	NB67	37	699	45	18	45	33	45	30	45	3	45
	NB71	38	699	45	18	45	33	45	30	45	3	45
	NB72	39	699	45	18	45	33	45	30	45	3	45
	NB73	40	699	45	18	45	33	45	30	45	3	45
	NB75	41	699	45	18	45	33	45	30	45	3	45
	NB77	42	699	45	18	45	33	45	30	45	3	45
	NB79	43	699	45	18	45	33	45	30	45	3	45
	NB81	44	699	45	18	45	33	45	30	45	3	45
	NB82	45	699	45	18	45	33	45	30	45	3	45
	NB83	46	699	45	18	45	33	45	30	45	3	45
	NB84	47	699	45	18	45	33	45	30	45	3	45
	NB85	48	699	45	18	45	33	45	30	45	3	45
	NB87	49	699	45	18	45	33	45	30	45	3	45
	NB88	50	699	45	18	45	33	45	30	45	3	45
	NB90	51	699	45	18	45	33	45	30	45	3	45
	NB94	52	699	45	18	45	33	45	30	45	3	45
	NB98	54	699	45	18	45	33	45	30	45	3	45
	NB102	55	699	45	18	45	33	45	30	45	3	45
	NB106	56	699	45	18	45	33	45	30	45	3	45
	NB109	57	699	45	18	45	33	45	30	45	3	45
	NB110	58	699	45	18	45	33	45	30	45	3	45
	NB111	59	699	45	18	45	33	45	30	45	3	45
	NB112	60	699	45	18	45	33	45	30	45	3	45

	NB113	61	699	45	18	45	33	45	30	45	3	45
	NB114	62	699	45	18	45	33	45	30	45	3	45
	NB115	63	699	45	18	45	33	45	30	45	3	45
	NB116	64										
SB US 190 Existing	SB116	65	939	45	27	45	27	45	0	0	6	45
	SB115	66	939	45	27	45	27	45	0	0	6	45
	SB114	67	939	45	27	45	27	45	0	0	6	45
	SB113	68	939	45	27	45	27	45	0	0	6	45
	SB112	69	939	45	27	45	27	45	0	0	6	45
	SB111	70	939	45	27	45	27	45	0	0	6	45
	SB110	71	939	45	27	45	27	45	0	0	6	45
	SB109	72	939	45	27	45	27	45	0	0	6	45
	SB106	73	939	45	27	45	27	45	0	0	6	45
	SB102	74	939	45	27	45	27	45	0	0	6	45
	SB98	75	939	45	27	45	27	45	0	0	6	45
	SB94	76	939	45	27	45	27	45	0	0	6	45
	SB90	77	939	45	27	45	27	45	0	0	6	45
	SB88	78	939	45	27	45	27	45	0	0	6	45
	SB87	79	939	45	27	45	27	45	0	0	6	45
	SB85	80	939	45	27	45	27	45	0	0	6	45
	SB84	81	939	45	27	45	27	45	0	0	6	45
	SB83	82	939	45	27	45	27	45	0	0	6	45
	SB82	83	939	45	27	45	27	45	0	0	6	45
	SB81	84	939	45	27	45	27	45	0	0	6	45
	SB79	85	939	45	27	45	27	45	0	0	6	45
	SB77	86	939	45	27	45	27	45	0	0	6	45
	SB75	87	939	45	27	45	27	45	0	0	6	45
	SB73	88	939	45	27	45	27	45	0	0	6	45
	SB72	89	939	45	27	45	27	45	0	0	6	45
	SB71	90	939	45	27	45	27	45	0	0	6	45
	SB67	91	939	45	27	45	27	45	0	0	6	45
	SB63	92	939	45	27	45	27	45	0	0	6	45
	SB61	93	939	45	27	45	27	45	0	0	6	45
	SB58	94	939	45	27	45	27	45	0	0	6	45
	SB55	95	939	45	27	45	27	45	0	0	6	45
	SB51	96	939	45	27	45	27	45	0	0	6	45

	SB49	97	939	45	27	45	27	45	0	0	6	45
	SB47	98	939	45	27	45	27	45	0	0	6	45
	SB45	99	939	45	27	45	27	45	0	0	6	45
	SB44	100	939	45	27	45	27	45	0	0	6	45
	SB42	101	939	45	27	45	27	45	0	0	6	45
	SB40	102	939	45	27	45	27	45	0	0	6	45
	SB38	103	939	45	27	45	27	45	0	0	6	45
	SB36	104	939	45	27	45	27	45	0	0	6	45
	SB34	105	939	45	27	45	27	45	0	0	6	45
	SB32	106	939	45	27	45	27	45	0	0	6	45
	SB30	107	939	45	27	45	27	45	0	0	6	45
	SB28	108	939	45	27	45	27	45	0	0	6	45
	SB27	109	939	45	27	45	27	45	0	0	6	45
	SB26	110	939	45	27	45	27	45	0	0	6	45
	SB24	111	939	45	27	45	27	45	0	0	6	45
	SB22	112	939	45	27	45	27	45	0	0	6	45
	SB20	113	939	45	27	45	27	45	0	0	6	45
	SB18.4	114	939	45	27	45	27	45	0	0	6	45
	SB17	115	939	45	27	45	27	45	0	0	6	45
	SB15	116	939	45	27	45	27	45	0	0	6	45
	SB13	117	939	45	27	45	27	45	0	0	6	45
	SB11	118	939	45	27	45	27	45	0	0	6	45
	SB9	119	939	45	27	45	27	45	0	0	6	45
	SB7.2	120	939	45	27	45	27	45	0	0	6	45
	SB5	121	939	45	27	45	27	45	0	0	6	45
	SB3	122	939	45	27	45	27	45	0	0	6	45
	SB2	123	939	45	27	45	27	45	0	0	6	45
	SB0	124	939	45	27	45	27	45	0	0	6	45
	SB999	125	939	45	27	45	27	45	0	0	6	45
	SB997	126	939	45	27	45	27	45	0	0	6	45
	SB994	127										

<Organization?>
<Analysis By?>

28 December 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
815 Collins (M)	1	1	68.4	67.3	66	-1.1	10	Snd Lvl	67.3	0.0	8	-8.0
952 Lee	2	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0
111 Edwards	3	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
204 Hornsby	4	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0
Collins Blvd. Baptist Church	5	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?> 28 December 2010
<Analysis By?> TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: <Project Name?>
RUN: US 190 Existing

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
NB US 190 Existing	NB994	1	807	45	21	45	39	45	3	45	6	45
	NB997	2	807	45	21	45	39	45	3	45	6	45
	NB999	3	807	45	21	45	39	45	3	45	6	45
	NB0	4	807	45	21	45	39	45	3	45	6	45
	NB2	5	807	45	21	45	39	45	3	45	6	45
	NB3	6	807	45	21	45	39	45	3	45	6	45
	NB5	7	807	45	21	45	39	45	3	45	6	45
	NB7.2	8	807	45	21	45	39	45	3	45	6	45
	NB9	9	807	45	21	45	39	45	3	45	6	45
	NB11	10	807	45	21	45	39	45	3	45	6	45
	NB13	11	807	45	21	45	39	45	3	45	6	45
	NB15	12	807	45	21	45	39	45	3	45	6	45
	NB17	13	807	45	21	45	39	45	3	45	6	45
	NB18.4	14	807	45	21	45	39	45	3	45	6	45
	NB20	15	807	45	21	45	39	45	3	45	6	45
	NB22	16	807	45	21	45	39	45	3	45	6	45
	NB24	17	807	45	21	45	39	45	3	45	6	45
	NB26	18	807	45	21	45	39	45	3	45	6	45
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	NB28	20	807	45	21	45	39	45	3	45	6	45
	NB30	21	807	45	21	45	39	45	3	45	6	45
	NB32	22	807	45	21	45	39	45	3	45	6	45
	NB34	23	807	45	21	45	39	45	3	45	6	45

	NB36	24	807	45	21	45	39	45	3	45	6	45
	NB38	25	807	45	21	45	39	45	3	45	6	45
	NB40	26	807	45	21	45	39	45	3	45	6	45
	NB42	27	807	45	21	45	39	45	3	45	6	45
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	NB58	34	807	45	21	45	39	45	3	45	6	45
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	NB113	61	807	45	21	45	39	45	3	45	6	45
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	NB115	63	807	45	21	45	39	45	3	45	6	45
	NB116	64										
SB US 190 Existing	SB116	65	657	45	15	45	39	45	0	0	6	45
	SB115	66	657	45	15	45	39	45	0	0	6	45
	SB114	67	657	45	15	45	39	45	0	0	6	45
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	SB112	69	657	45	15	45	39	45	0	0	6	45
	SB111	70	657	45	15	45	39	45	0	0	6	45
	SB110	71	657	45	15	45	39	45	0	0	6	45
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	SB81	84	657	45	15	45	39	45	0	0	6	45
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	SB58	94	657	45	15	45	39	45	0	0	6	45
	SB55	95	657	45	15	45	39	45	0	0	6	45
	SB51	96	657	45	15	45	39	45	0	0	6	45

	SB49	97	657	45	15	45	39	45	0	0	6	45
	SB47	98	657	45	15	45	39	45	0	0	6	45
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	SB40	102	657	45	15	45	39	45	0	0	6	45
	SB38	103	657	45	15	45	39	45	0	0	6	45
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	SB34	105	657	45	15	45	39	45	0	0	6	45
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	SB24	111	657	45	15	45	39	45	0	0	6	45
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	SB20	113	657	45	15	45	39	45	0	0	6	45
	SB18.4	114	657	45	15	45	39	45	0	0	6	45
	SB17	115	657	45	15	45	39	45	0	0	6	45
	SB15	116	657	45	15	45	39	45	0	0	6	45
	SB13	117	657	45	15	45	39	45	0	0	6	45
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	SB9	119	657	45	15	45	39	45	0	0	6	45
	SB7.2	120	657	45	15	45	39	45	0	0	6	45
	SB5	121	657	45	15	45	39	45	0	0	6	45
	SB3	122	657	45	15	45	39	45	0	0	6	45
	SB2	123	657	45	15	45	39	45	0	0	6	45
	SB0	124	657	45	15	45	39	45	0	0	6	45
	SB999	125	657	45	15	45	39	45	0	0	6	45
	SB997	126	657	45	15	45	39	45	0	0	6	45
	SB994	127										

Appendix F

RECOGNIZED ENVIRONMENTAL CONDITIONS SURVEY

RECOGNIZED ENVIRONMENTAL CONDITION SURVEY
U.S. 190/COLLINS BOULEVARD WIDENING
S.P. NO. H.004987
ST. TAMMANY PARISH, LOUISIANA

Prepared for

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

RPC REGIONAL PLANNING COMMISSION FOR THE PARISHES OF LOUISIANA

Prepared by

GEC Gulf Engineers & Consultants

Baton Rouge, Louisiana 70806

March 16, 2015

RECOGNIZED ENVIRONMENTAL CONDITION SURVEY
U.S. 190/COLLINS BOULEVARD WIDENING
S.P. NO. H.004987
ST. TAMMANY PARISH, LOUISIANA

Prepared for

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
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March 16, 2014

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RECOGNIZED ENVIRONMENTAL CONDITION SURVEY

RECOGNIZED ENVIRONMENTAL CONDITION SURVEY U.S. HIGHWAY 190/COLLINS BOULEVARD WIDENING S.P. NO. H.004987 ST. TAMMANY PARISH, LOUISIANA

1.0 SUMMARY

This Recognized Environmental Condition (REC) Survey was prepared as a supplement to the U.S. Highway 190 (US 190)/Collins Boulevard Widening Environmental Assessment (EA). The US 190 EA is a planning effort sponsored by the Regional Planning Commission (RPC) of Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany Parishes and the Louisiana Department of Transportation and Development (DOTD) to examine alternatives for the widening of US 190/Collins Boulevard. The proposed project would begin south of the Bogue Falaya River Bridge at the US 190/US 190B intersection and continue northwestward to the US 190/Louisiana Highway 25 (LA 25) intersection. The project also entails improvements to portions of LA 25 and LA 21 (Military Road). The total length of the project is approximately 2.7 miles.

Pursuant to acquisition of any required right-of-way (ROW) for the project, G.E.C., Inc. (GEC) has prepared this survey to identify potential REC sites located within or near the project. Krebs, LaSalle, LeMieux (KLL) previously conducted a Phase 1 in 2010. KLL reviewed federal, state, and local environmental databases; conducted historical research; and performed a site investigation to characterize environmental conditions for the project. GEC reviewed the results of the KLL survey, reviewed an updated GeoSearch Report, and conducted additional site investigation in February 2015.

Based on the review and investigation, potential REC sites are present in close proximity to the project that might warrant additional investigation as design and ROW plans progress (refer to Section 9.0).

2.0 INTRODUCTION

2.1 Purpose

The purpose of the survey is to identify potential REC sites in the vicinity of the US 190/Collins Boulevard Widening project that have, or may have in the past, adversely impacted environmental conditions of ROW required for the project.

2.2 Scope of Services

GEC investigated the project in order to identify REC sites within and adjacent to ROW required for the project. Investigations included:

- Review of previous investigations;

- Research of available federal, state, and local environmental databases for potential REC sites within a specified distance of the project;

- Reviews of historical aerial photographs, United States Geologic Survey (USGS) topographic maps, and published soils and geologic information;

- Visual observations of accessible portions of the project to identify current and historic REC sites. Visual observations of accessible portions of properties adjacent to the project's required ROW were also conducted; and

- Preparation of a written report identifying potential REC sites that warrant additional investigation.

A REC Survey typically does not include sampling and analysis of soil and/or groundwater. In addition, a REC Survey typically does not include wetland, asbestos, or radon surveys.

2.3 Limitations and Exceptions

Record information and environmental databases reviewed by GEC included information that was reasonably ascertainable from standard sources. *Reasonably ascertainable* denotes: (1) information that is publicly available; (2) information that is obtainable within reasonable time and cost constraints; and (3) information that is practically reviewable. GEC's review included information gathered from governmental and regulatory agencies as well as an electronic database search performed by GeoSearch. Much of this information was gathered from public records and sources maintained by third parties. Although reasonable care was taken to verify this information, GEC does not accept responsibility for errors, omissions or inaccurate information.

Observations made during GEC reconnaissance of the project were limited to: (1) sites or portions of sites that were accessible to investigators; and (2) evidence visible to the investigators. Observations were based on evidence visible to inspectors while walking the ROW. No ground excavation, vegetation clearing, or physical relocation of obstacles was conducted during site investigations. Accordingly, no guarantee is made or intended that all site conditions were observed.

Finally, any changes in project actions, including but not limited to changes to required ROW and corridor realignment from those provided to GEC may render recommendations and conclusions presented in this report invalid.

2.4 User Reliance

GEC is not required to verify independently the information provided by various sources but may rely on the information unless there is actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained during the course of the investigation or otherwise actually known to the investigators

conducting the assessment. However, GEC has no indication that the information provided by outside sources is incorrect.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The project area includes the US 190/Collins Boulevard corridor within Covington, Louisiana (Figure 1).

3.2 Site Vicinity

US 190/Collins Boulevard is a major corridor within Covington that also serves as the main link for motorists traveling between Covington and I-12 or the Causeway. The corridor is generally bordered to the east and west by businesses and commercial developments. Residential properties also abut portions of the ROW as do some undeveloped properties.

3.3 Geologic, Hydrogeologic, Topographic, and Soil Conditions

3.3.1 Geology

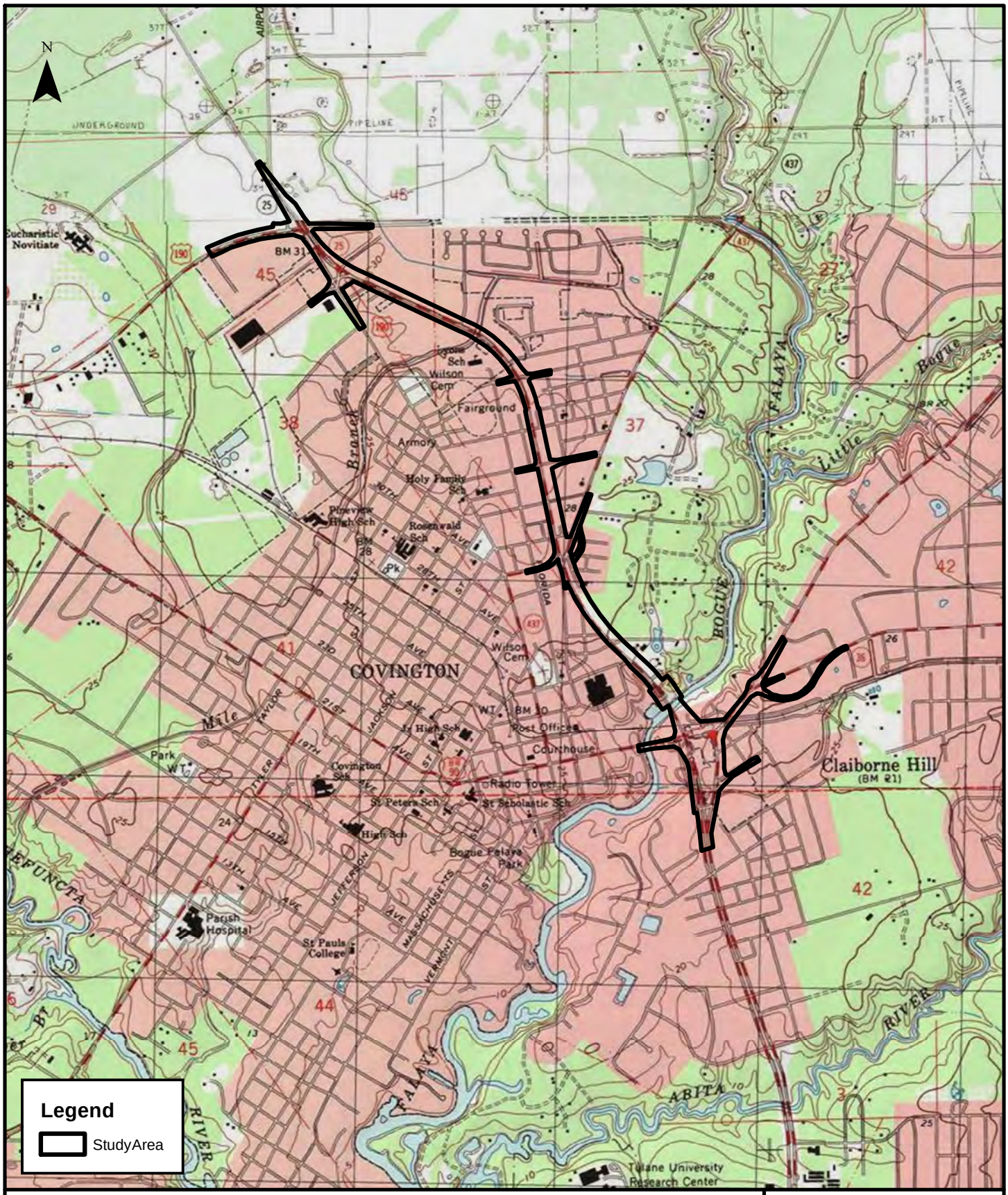
The Prairie Terrace in southeastern St. Tammany Parish extends outside the parish to the east and the west along streams and rivers such as the Pearl and the Bogue Chitto. Elevations in the Prairie Terrace range from near sea level in the south to approximately 70 feet mean sea level (msl) in the north. The Prairie Terrace was likely deposited during the Sangamon interglacial stage approximately 75,000 to 125,000 years ago. However, recent evidence suggests the Prairie Terrace formation was composed of two major interglacial stages, the Sangamon and the Middle Wisconsin or Farmdalian.

3.3.2 Hydrogeology

The Chicot equivalent aquifer system in St. Tammany Parish consists of two adjacent, near-surface aquifers: the upland terrace aquifer in the northern half of the parish and the upper Ponchatoula aquifer in the southern half. The base of the Chicot equivalent aquifer system ranges from about 0 ft National Geodetic Vertical Datum 1929 (NGVD 29) in northern St. Tammany Parish to -500 ft NGVD 29 in the southern portion. Aquifers in the Chicot equivalent aquifer system typically consist of 50- to 300-ft-thick units of sand and gravel.

The Evangeline equivalent aquifer system underlies the Chicot equivalent aquifer system and in St. Tammany Parish consists of, from near surface to deepest, the lower Ponchatoula, Big Branch, Abita, Covington, and Slidell aquifers.

The Jasper equivalent aquifer system underlies the Evangeline equivalent aquifer system and in St. Tammany Parish consists of, from shallowest to deepest, the Tchefuncte, Hammond, Amite, and Ramsay aquifers.



SITE LOCATION

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

GEC

Figure: 1
Date: February 2015
Scale:1:26,000
Source: ESRI/GEC
Map ID: KL521830410058-3162

3.3.3 Topography

Light Detection and Ranging (LIDAR) of the area shows elevations of 0 – 24 feet at the crossing of the Bogue Falaya River and 26 – 32 feet through the rest of the project. With the exception of the river crossing, the area is generally flat.

3.3.4 Soils

Soils in the project area have been impacted from construction of the existing roadway as well as the construction of commercial and residential developments along the roadway. They include Cahaba fine sandy loam, Prentiss fine sandy loam, Stough fine sandy loam, Ouachita and Bibb soils, and Myatt fine sandy loam. The Ouachita and Bibb soils and the Myatt fine sandy loam are considered hydric. The Cahaba fine sandy loam, Prentiss fine sandy loam, and Stough fine sandy loam are not.

4.0 REASON FOR PERFORMING REC SURVEY

GEC conducted the investigation to identify potential REC sites in the vicinity of the project that have, or may have in the past, adversely impacted environmental conditions within ROW required for the project.

5.0 RECORDS REVIEW

GEC conducted a search of federal, state, and local government environmental databases to obtain and review records and/or documents that would aid in the identification of known or potential REC sites on or near the project.

5.1 Standard Environmental Record Sources

ASTM E 1527 Section 7.2.1.1 *Standard Environmental Record Sources: Federal and State* requires a review of the following databases and proscribes various search radii:

Federal NPL Site List	1.0 mi
Federal RCRA CORRACTS List	1.0 mi
Federal RCRA Non-CORRACTS TSD Site List	0.5 mi
Federal CERCLIS List	0.5 mi
Federal CERCLIS/NFRAP Site List	0.5 mi
Federal TRIS Database	0.5 mi
Federal RCRA Generators List	property/adjoining
Federal ERNS List	project only
State-Equivalent NPL List	1.0 mi
State-Equivalent CERCLIS List	0.5 mi
State Landfill and/or Solid Waste Disposal Site Lists	0.5 mi
State Leaking UST Lists	0.5 mi
State-Registered UST Lists	property/adjoining

A summary of plottable sites listed in federal and state environmental databases identified during the environmental records review is provided in Appendix A. A one-mile search radius

was used for all databases. In addition to plottable sites, GeoSearch generated a list of orphan sites. Orphan sites contain insufficient location information and can only be identified as being within the same zip code(s) as the project.

A review of the GeoSearch Report and comparison to the ASTM E 1527 Section 7.2.1.1 *Standard Environmental Record Sources: Federal and State* produced the following (tables 1 and 2):

Table 1. Federal Listing

Federal Listing				
Database	**Acronym**	**Locatable**	**Unlocateable**	**Search Radius (miles)**
National Priorities List	Federal NPL Site List	0	0	1.0
Resource Conservation & Recovery Act – Corrective Action facilities	Federal RCRA CORRACTS List	0	0	1.0
No Longer regulated Non-Corracts TSD Facilities	Federal RCRA Non-CORRACTS TSD Site List	0	0	0.5
Comprehensive Environmental Response, Compensation & Liability Information System	Federal CERCLIS List	0	1	0.5
No Further Remedial Action Planned Sites	Federal CERCLIS/NFRAP Site List	0	1	0.5
Toxics Release Inventory	Federal TRIS Database	0	0	0.5
Resource Conservation & Recovery ACT – Generator Facilities	Federal RCRA Generators List	23	0	Property/ Adjoining
Emergency Response Notification System	Federal ERNS List	2	0	Project Only

Table 2. State Listing

State Listing				
Database	**Acronym**	**Locatable**	**Unlocateable**	**Search Radius (miles)**
National Priorities List	State-Equivalent NPL List	0	0	1.0
Comprehensive Environmental Response, Compensation & Liability Information System	State-Equivalent CERCLIS List	0	0	0.5
Solid Waste Landfills	State Landfill and/or Solid waste Disposal Site Lists	0		0.5
Leaking Underground Storage Tanks	State Leaking UST Lists	1	0	0.5
Underground Storage Tanks	State-Registered UST Lists	33	3	Property/ Adjoining

One archived Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) site was recorded. EPA ID LAN000605680 (Covington Abandoned Drum) was a removal only site and no further federal action will be taken. Twenty-three Resource Conservation & Recovery Act Generator Facilities (RCRAGR06) were located either on or adjoining the project area. Two Emergency Response Notification System (ERNS) were located; they are described in 6.3.2. One Leaking Underground Storage Tank (LUST) was reported in the search. It no longer appears on the Louisiana Department of Environmental Quality (LDEQ) list for LUSTs. Thirty-three Underground storage tanks sites (UST) were found. Of the 33 sites, only seven listed as currently active in LDEQ databases are located in close proximity to the project.

5.2 Physical Setting Sources

GEC reviewed historical quadrangles and aerial photographs for structures, mines, quarries, clearings, wells, and land use in order to: (1) ascertain development of the project area since the 1940s; and (2) identify indications of possible REC sites. A current USGS 7.5-Minute Topographic Map was utilized as the primary physical setting source. Additional sources were utilized to ascertain the geologic, hydrogeologic, hydrologic, and topographic conditions of the project. The sources included:

- U.S. Geological Survey 7.5-Minute and 15-Minute Topographic Quadrangle Maps;
- Louisiana Geological Survey Bedrock Geology Maps;
- Louisiana Geological Survey Surficial Geology Maps; and
- Aerial Photographs.

5.3 Historical Use Information on Property and Adjoining Properties

Records suggest the project area comprised a mix of cleared and forested lands. Development initially occurred west of the project. A railroad (now the Tammany Trace) historically traversed the area. Currently the project area comprises a mix of residential areas and business/commercial properties, and undeveloped properties.

5.4 Findings from Previous KLL Report

GEC reviewed a previous Phase 1 Site Assessment prepared by KLL (December 2010). KLL concluded there was low risk of there having been an onsite release of hazardous or toxic material and a moderate to high risk of contamination of the project site by hazardous or toxic materials from neighboring areas. KLL identified six REC sites and two Historic Recognized Environmental Conditions (HREC) sites within the project area. KLL's opinions regarding potential impacts of the RECs and HRECs are described in Sections 5.4.1 and 5.4.2.

5.4.1 RECs

REC # 1: Drain by Diesel Pumps at Discount Zone

Potential Impact: Moderate to High

KLL Explanation: A LDEQ incident report dated 4/8/05 reported gas spills ongoing for months; however the LDEQ site visit on 4/11/05 indicated the leaks were not occurring at any dispenser. The report indicates no further action was required.

REC # 2: Holden Wrecker Service

Potential Impact: Low to Moderate

KLL Explanation: LDEQ investigators found two areas of oil stained soil. A letter from Holder Wrecker Service dated 6/13/05 indicated soil was projected to be removed by Ranger Environmental. Upon further review of LDEQ's online records, no information was found indicating the soils had been removed.

REC # 3: Speedee Oil Change (currently Walgreens)

Potential Impact: Low to Moderate

KLL Explanation: The facility is no longer a Speedee Oil Change and is currently a Walgreens. Speedee Oil Change was issued a compliance order on June 21, 1989. LDEQ investigators located a pipe leading from the underground work area to a small ditch that drained directly into a storm drain ditch. Soil samples revealed oil, grease, and chemical oxygen demand at levels violating water quality standards. On October 10, 1997, four USTs were removed and disposed of at the Jefferson Parish Landfill. Additionally, 400 gallons of tank/wash waters were disposed of. The UST system has been removed from the UST database and no further action is required. The potential impact was based on LDEQ's investigations and determination that no further action was required.

REC # 4: Bell South

Potential Impact: Low

KLL Explanation: LDEQ records indicate this site had four different tank removals between October 1, 1991 and March 12, 1997. LDEQ removed the underground storage tanks from the database and required no further action. The potential impact was based upon LDEQ's actions and its determination that no further action was required.

REC #5: Roadway and ROW contamination

Potential Impact: Low

KLL Explanation: The project comprises and is adjacent to a highway constructed prior to 1967. Due to long term use of the highway, a high probability exits that oil, gas, other hydrocarbons, coolants, and other fluids might have leaked into the roadway and into the adjacent ROW.

REC #6: Fill for the Project and Adjacent Properties

Potential Impact: Unknown

KLL Explanation: Exogenous fill from unknown sources and of unknown quantities has been deposited within project ROW and to adjacent properties. It is unknown if the fill has any contaminants.

5.4.2 HRECs

HREC #1: P&W Industries (AI #9374) / Former SICA Property (AI #85457)

Potential Impact: Low

KLL Explanation: The P&W Industries / Former SICA Property sites were acquired by St. Tammany Parish to construct the Parish's Justice Center. The former P&W Industries site was a scrap metals yard which originally consisted of two tracts of land, the East Parcel and the West Parcel. The East Parcel was remediated down to native soils and closed in 1999 by LDEQ, which required no further action at that time. Impacted soils from the East Parcel were stockpiled on the West Parcel, which was to become the asphalt parking lot for the Justice Center. A total of 104 tons of soil was excavated, manifested, and transported to an approved landfill in 2010. Subsequent soil testing found levels of benzo(a)pyrene, benzo(b)flouroanthene, naphthalene, lead, and mercury still exceeding certain Risk Evaluation/Corrective Action Program (RECAP) soil standards. However, additional testing indicated little risk of groundwater contamination. Three underground storage tanks were also located and closed in 2010. LDEQ determined on November 22, 2002 that remediation to site-specific standards had been completed for the West Parcel and that no further action was necessary at that time. However, any change in use of the site, removal of the asphalt cover or movement of contaminated soils from the site must be preapproved by LDEQ.

The Former SICA Property was found to have seven USTs used to store oil, gasoline, and diesel. All seven tanks were excavated and closed in accordance with LDEQ requirements on June 19, 2000.

HREC # 2: Tire Kingdom

Potential Impact: Low

KLL Explanation: A LDEQ field investigation on May 10, 2005 revealed a waste oil area contaminated due to spilled oil. Rocks and soils were covered in residue and containers were left open with waste oil exposed. A Notice of Deficiency (NOD) was issued on July 7, 2005. On August 22, 2005 LDEQ issued a Deficiency Clear Letter stating the previous NOD had been adequately addressed. The potential impact is based on the LDEQ investigation report.

6.0 SITE RECONNAISSANCE

GEC conducted investigations to observe the project and surrounding areas for structures, oil and gas exploration and production, land use, runoff patterns, and indications of environmental impacts in February, 2015.

6.1 Observations

Seven UST sites are adjacent to the project area. There are no records of current LUSTs at these locations. Although potential RECs were documented at some of these sites in the past, most appear to have been addressed and no further action is required.

Various commercial sites adjacent to the project area are documented as RCRA generators and could potentially present RECs (mechanic and equipment shops, automobile dealers, and a dry cleaner).

Additionally, numerous buildings/residences constructed with potential asbestos containing materials are located in close proximity to the project.

6.1.1 Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)

CERCLIS is maintained by the Environmental Protection Agency (EPA). It does not list any active sites along the project. One archived site is recorded; EPA ID LAN000605680 (Covington Abandoned Drum) was a removal only site and no further federal action will be taken.

6.1.2 Emergency Response Notification System (ERNS)

ERNS is maintained by the National Response Center (NRC). NRC's primary function is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges to the environment anywhere in the United States and its territories. Two incidents within or near the project area are documented. One incident occurred at LA 21 and US 190 on 9/26/91 when a tank truck overturned and released an unknown amount of green liquor. A second incident occurred on US 190 at Claiborne Hill on 2/6/94 when a tanker truck valve was broken off due to a traffic accident and 246 gallons of oil and fuel (No. 2-D) were released.

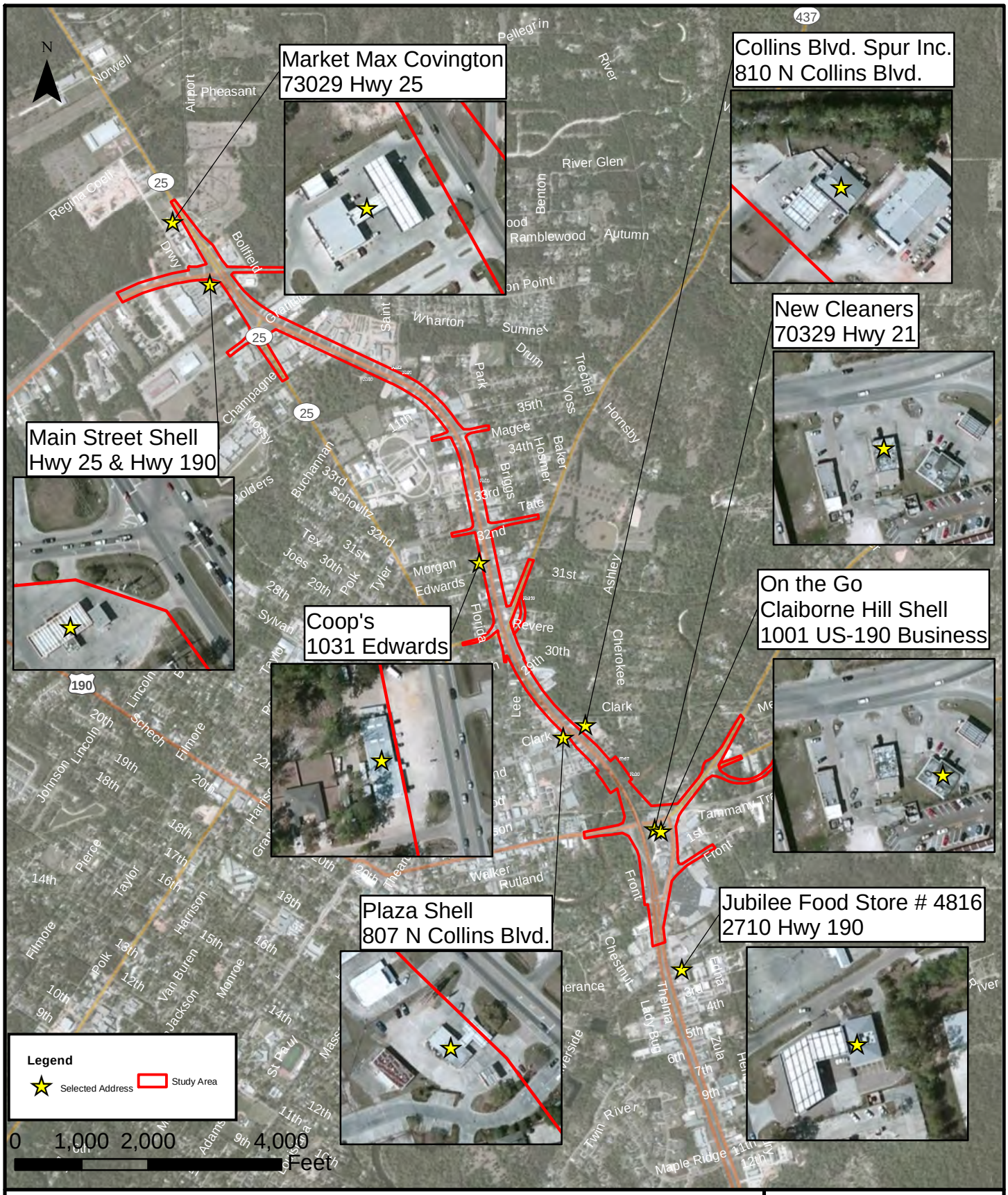
6.1.3 Enforcement and Compliance History

A review of the EPA's Enforcement and Compliance History Online (ECHO) database revealed no current enforcement or compliance violations within or adjacent to the project.

6.1.4 Underground Storage Tanks (USTs)

UST owners are required to register their tanks, including tank/system construction information, with LDEQ. Seven active UST sites are located in close proximity to the project (Figure 2). They include:

- Plaza Shell. - 807 N Collins Blvd;
- Collins Blvd. Spur Inc. - 810 N Collins Blvd;
- Coop's. - 1031 Edwards;
- Jubilee Food Store #4816. - 2710 Hwy 190;
- Main Street Shell. - Hwy 25 and Hwy 190;
- On the Go Claiborne Hill Shell - 1001 N Hwy 190; and



UST & DRY CLEANER SITES

U.S. Highway 190/Collins Boulevard Widening
St.Tammany Parish, Louisiana

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

GEC

Figure: 2
Date: March 2015
Scale:1:24,000
Source: ESRI/GEC
Map ID: KL521830410058-3162

- Market Max Covington. - 73029 Hwy 25.

GEC's review of LDEQ records indicates all seven have been cited for past compliance issues and/or operating deficiencies.

Plaza Shell, Collins Bloulevard Spur Inc., Jubillee Food Store #4816, and Main Street Shell have been notified of failure to operate and/or maintain release detection equipment and failure to properly operate and/or maintain spill, overfill, or corrosion protection equipment. LDEQ records indicate these deficiencies have been corrected and no further action is required.

Plaza Shell was also cited in 2013 for failing to test its line leak detectors every 12 months. The deficiency was corrected and no further action is required.

Although Coop's remains on LDEQ's active UST list, research indicates all tanks have been removed. An underground release occurred at this site; however, LDEQ records indicate all contaminated soil has been removed and no further action is required.

A current Notice of Pending Delivery Prohibition for Jubilee Food Store #4816 was filed by LDEQ for failure to operate and/or maintain release detection equipment and failure to properly operate and/or maintain spill, overfill, or corrosion protection equipment in 2014. LDEQ records indicate the deficiency has not been corrected.

An incident report was filed by LDEQ in 2015 for Main Street Shell. Incident # 161325 describes a line test failure. The affected tank was, and remains, out of service. The incident report states LDEQ will be contacted when soil samples are taken to determine if soil contamination has occurred.

On the Go Claiborne Hill Shell was noted in 2009 for having a cracked diesel spill bucket. The deficiency was corrected and no further action is necessary. The site was also cited in 2014 for failure to conduct corrosion protection tests every three years, but the deficiency was adequately addressed and no further action is required.

In summary, 13 compliance issues or violation notices have been documented for seven UST sites located in close proximity to the project. All except for outstanding soil sampling at Main Street Shell and the Notice of Pending Delivery Prohibition at Jubilee Food Store have been resolved and no further action is required.

6.1.5 Dry Cleaners

GeoSearch reported three Dry Cleaning Facilities (DCR) within or adjacent to the corridor. There are two records for Core's Cleaners, at 57 Claiborne Square and 1000 Business 190. The third addresses New Cleaners at 70329 LA 21 (Figure 2). Core's Cleaners no longer operates near the project, and GEC research indicates the possibility that the two environmental records, seemingly for two different locations, actually address a single location which is now the location of New Cleaners.

New Cleaners is registered as a small quantity generator which produces less than 100 kilograms (kg) of hazardous waste (tetrachloroethylene, PERC) per month; however, LDEQ

records indicate the facility, as of 2004, no longer uses PERC. It appears to now use CDF 2000 (a petroleum based dry cleaning fluid) instead.

According to LDEQ records, Core's Cleaners received warnings for failure to submit periodic compliance reports required for dry cleaners using PERC. There are no records of environmental releases.

6.1.6 Oil & Gas

Information regarding oil and gas wells was obtained from DOTD and the Louisiana Department of Natural Resources (LDNR). No oil or gas wells are located within a half-mile radius of the project. Review of the LDNR Strategic Online Natural Resources Information System (SONRIS) database indicates the nearest well is approximately six miles southwest of the project. Natural gas pipelines and residential service lines were observed directly adjacent to the project.

7.0 FINDINGS

LDEQ databases document seven UST sites near the project and no LUST sites. The data indicate numerous compliance issues and/or violations at these sites; however, all except for two have been cleared and no further action is required. LDEQ records indicate it is still expecting soil sampling results from Main Street Shell. They also indicate the agency is considering prohibiting future fuel deliveries to Jubilee Food Store.

GeoSearch and LDEQ databases report three dry cleaning facilities in close proximity to the project. GEC research indicates the possibility that all of the records address a single location, the current location of New Cleaners. The data indicate PERC was used at the location during the period 1997–2004. Since that time New Cleaners has used a petroleum based dry cleaning fluid instead of PERC.

Numerous buildings/residences constructed with potential asbestos containing materials are located in close proximity to the project.

8.0 OPINION

Six of the seven UST sites are potential REC sites because they might have, or might in the future, adversely impact environmental conditions within ROW required for the project. They include:

- Plaza Shell. - 807 N Collins Blvd;
- Collins Blvd. Spur Inc. - 810 N Collins Blvd;
- Coop's. - 1031 Edwards;
- Main Street Shell. - Hwy 25 and Hwy 190;
- On the Go Claiborne Hill Shell - 1001 N Hwy 190; and
- Market Max Covington. - 73029 Hwy 25.

GEC does not consider Jubilee Food Store #4816 a potential REC because of its location, at a greater distance from ROW required for the project.

Because it could find no indications of environmental releases in environmental databases, and because it appears that no ROW will be required from the property, GEC does not consider New Cleaners a REC.

Many buildings/residences located in close proximity to the project appear to be constructed with asbestos containing materials. GEC considers asbestos to present a potential REC because it might in the future adversely impact environmental conditions within ROW required for the project if acquisition of the buildings/residences is required.

9.0 CONCLUSIONS

GEC performed this REC Survey in conformance with the scope and limitations of ASTM E 1527, as applicable and appropriate. Any exceptions to or departures from this practice are described in the report. Based on the site reconnaissance, records review, and best engineering judgment, the assessment has revealed evidence of recognized environmental conditions associated with the project.

Current plans indicate ROW required for the project will extend very near existing USTs at five locations and to former USTs at one location. These include:

- Plaza Shell. - 807 N Collins Blvd;
- Collins Blvd. Spur Inc. - 810 N Collins Blvd;
- Coop's. - 1031 Edwards;
- Main Street Shell. - Hwy 25 and Hwy 190;
- On the Go Claiborne Hill Shell - 1001 N Hwy 190; and
- Market Max Covington. - 73029 Hwy 25.

Environmental data indicate numerous compliance issues and/or violations at these sites; all except one have been cleared and no further action is required. LDEQ is still expecting soil sampling results from Main Street Shell because of a UST line test failure. As project design and ROW plans are completed, GEC recommends:

- Soil sampling and screening along the required ROW limit at its closest point of approach to USTs in the event a portion of a UST site is acquired that does not include the tanks; or

- Soil sampling and screening of UST beds in the event a UST site (or portion of one) is acquired that includes the tanks.

At the current phase of development and design, it is not known whether the project will require acquisition and demolition of any buildings/residences. Many located near the project appear to be constructed with asbestos containing materials, and GEC recommends asbestos surveys for any that are acquired and will be demolished pursuant to project construction.

10.0 DEVIATIONS

Based on the scope of the project, GEC believes an *appropriate inquiry* level was utilized for the assessment. GEC did not perform an exhaustive assessment of observably clean properties.

11.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

Signature	Jeffrey H. Robinson
Name	Jeffrey H. Robinson, P.E.
Organization	GEC, Inc.
Date	3/16/2015

12.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Mr. Robinson is a professional civil engineer, Louisiana No. 29322, and has project management experience in civil engineering for environmental, hydrologic, and geotechnical projects throughout the United States. He provides planning, coordination, and consulting services on federal and state regulatory compliance issues for numerous governmental and private clients. Environmental projects completed since 1995 include:

Hazardous, Toxic, and Radioactive Waste (HTRW) Investigations – Risk liability studies addressing approximately 800,000 acres in Arkansas and 325,000 acres in Louisiana. Investigations conducted in accordance with U.S. Army Corps of Engineers Regulation ER 1165-2-132, *Water Resources Policies* and *Authorities for Hazardous, Toxic, and Radioactive Waste for Civil Works Projects*, which requires identification and evaluation of potential environmental risks in federal project areas.

Environmental Site Assessments – Numerous assessments for commercial and industrial clients to evaluate the presence of hazardous substances and petroleum products in accordance with American Society for Testing and Materials Standard E 1527, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

Certified Industrial Hygienist Investigations – Investigations of 10 industrial sites involving soil, water, and groundwater sampling and analyses with respect to the Louisiana Department of Environmental Quality's *Risk Evaluation/Corrective Action Program* (RECAP), recommendations regarding project feasibility, and development of site safety and health plans.

Environmental Baseline Studies – Characterizations of 15 Army Reserve Centers and U.S. Army Corps of Engineers properties with respect to potential environmental contamination liabilities in accordance with the Department of the Army's *Preliminary Assessment Manual 200-1*. Characterizations required assessments of radon, lead, petroleum products, hazardous materials, unexploded ordnance, PCBs, and asbestos and whether or not hazards were posed to human health and the environment.

Appendix A

GEOSEARCH RESULTS

Table 1. Federal Listing Acronyms for Databases

Database	Acronyms
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS
BIENNIAL REPORTING SYSTEM	BRS
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL
EPA DOCKET DATA	DOCKETS
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSLA
FACILITY REGISTRY SYSTEM	FRSLA
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR06
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	CISNPDES
LAND USE CONTROL INFORMATION SYSTEM	LUCIS
MATERIAL LICENSING TRACKING SYSTEM	MLTS
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR06
PCB ACTIVITY DATABASE SYSTEM	PADS
PERMIT COMPLIANCE SYSTEM	PCSR06
RCRA SITES WITH CONTROLS	RCRASC
CERCLIS LIENS	SFLIENS
SECTION SEVEN TRACKING SYSTEM	SSTS
TOXICS RELEASE INVENTORY	TRI
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA
NO LONGER REGULATED RCRA GENERATOR FACILITIES	NLRRCRAG
RESOURCE CONSERVATION & RECOVERY ACT – GENERATOR FACILITIES	RCRAGR06
HISTORICAL GAS STATIONS	HISTPST
BROWNFIELDS MANAGEMENT SYSTEM	BF
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION & LIABILITY INFORMATION SYSTEM	CERCLIS
DELISTED NATIONAL PRIORITIES LIST	DNPL
NO FURTHER REMEDIAL ACTION PLANNED SITES	NFRAP
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	NLRRCRAT
OPEN DUMP INVENTORY	ODI
RESOURCE CONSERVATION & RECOVERY ACT - TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT
DEPARTMENT OF DEFENSE SITES	DOD
FORMERLY USED DEFENSE SITES	FUDS
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC
NATIONAL PRIORITIES LIST	NPL
PROPOSED NATIONAL PRIORITIES LIST	PNPL
RESOURCE CONSERVATION & RECOVERY ACT – CORRECTIVE ACTION FACILITIES	RCRAC
RECORD OF DECISION SYSTEM	RODS

Table 2. State Listing Acronyms for Databases

Database	Acronyms
ASBESTOS DEMOLITION AND RENOVATION NOTIFICATION PROJECTS	ASBESTOS
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL
SITES WITH CONTROLS	IC
LISTING OF LOUISIANA DEQ LIENS	LIENS
SPILLS LISTING	SPILLS
WASTE TIRE GENERATOR LIST	WASTETIRE
DRYCLEANING FACILITIES	DCR
NO LONGER REPORTED UNDERGROUND STORAGE TANKS	NLRUST
UNDERGROUND STORAGE TANKS	UST
APPROVED HURRICANE DEBRIS DUMP SITES	ADS
HISTORICAL LEAKING UNDERGROUND STORAGE TANKS	HLUST
LEAKING UNDERGROUND STORAGE TANKS	LUST
RECYCLING FACILITIES	RCY
SOLID WASTE LANDFILLS	SWLF
VOLUNTARY REMEDIATION PROGRAM SITES	VRP
WASTE PITS	WP
CONFIRMED AND POTENTIAL SITES INVENTORY	CPI

Table 3. Plottable Sites Identified in Federal and State Databases (GeoSearch)

ID#	Database Name	Site ID#	Distance From Site	Site Name	Address	City, Zip Code
1	DCR	1188358819	0.001 SE	CORE'S CLEANERS	1000 BUSINESS 190	COVINGTON, 70433
1	UST	20869	0.001 SE	GENAUSA SHELL	BOSTON ST	COVINGTON, 70433
1	FRSLA	110003363529	0.001 SE	CORES ONE HOUR CLEANERS	1000 BUSINESS 190	COVINGTON, 70433
1	FRSLA	110059424671	0.001 SE	SOUTHEASTERN CANOPY INSTALLATION INC	1001 BUSISNESS 190	COVINGTON, 70433
1	RCRAGR06	LAR000032532	0.001 SE	CORES ONE HOUR CLEANERS	1001 BUSISNESS 190	COVINGTON, 70433
1	DCR	1127029194	0.001 SE	CORE'S CLEANERS	57 CLAIBORNE SQUARE	COVINGTON, 70433
2	UST	1978	0.001 NW	LARRY'S TIRE CENTER	HWY 25 & HWY 190	COVINGTON, 70433
2	FRSLA	110017758229	0.001 NW	SHARON CORE SIMS	AT/NEAR 2175 COLLINS BLVD	COVINGTON, 70433
2	FRSLA	110008380554	0.001 NW	LARRY'S TIRE CENTER	HWY 25 & HWY 190	COVINGTON, 70433
2	NLRRCRAG	LAD037967486	0.001 NW	LARRY'S TIRE CENTER	HWY 25 & HWY 190	COVINGTON, 70433
2	NLRUST	52-013157	0.001 NW	NORWEL EQUIPMENT COMPANY	190 BY PASS AND LA HWY 25	COVINGTON, 70433
3	SPILLS	134621	0.001 SE		CHAMPAGNE ST @ COVINGTON	COVINGTON, 70433
4	FRSLA	110020141407	0.001 SE	HOLDENS WRECKER SERVICE	1910 COLLINS BLVD	COVINGTON, 70433
4	FRSLA	110038518734	0.001 SE	FINISH LINE MOTOR CARS	1930 N. COLLINS BLVD	COVINGTON, 70433
4	ICIS	110020141407	0.001 SE	HOLDEN'S WRECKER SERVICE	1910 COLLINS BLVD	COVINGTON, 70433
4	ICISNPDES	LAG531863	0.001 SE	HOLDEN'S WRECKER SERVICE	1910 COLLINS BLVD	COVINGTON, 70433
4	NPDESR06	LAG531863	0.001 SE	HOLDENS WRECKER SVC, INC.	1910 COLLINS BLVD	COVINGTON, 70433
4	PCSR06	LAU004366	0.001 SE	HOLDEN'S WRECKER SVC, INC.	1910 COLLINS BLVD	COVINGTON, 70433
4	SPILLS	74229	0.001 SE		1910 COLLINS BLVD	COVINGTON, 70433
5	FRSLA	110022425883	0.001 SE	AAA RENT-ALL, INC	2051 COLLINS BLVD	COVINGTON, 70433
5	NPDESR06	LAG750530	0.001 SE	AAA RENT-ALL, INC.	2051 N. COLLINS BLVD	COVINGTON, 70433
5	PCSR06	LAG750530	0.001 SE	AAA RENT-ALL, INC.	2051 N. COLLINS BLVD	COVINGTON, 70433
5	SPILLS	85667	0.001 SE		2051 NO. COLLINS BLVD.	COVINGTON, 70433
6	FRSLA	110046295503	0.001 SE	SIMMON'S AUTO MART	1611 N. COLLINS BLVD	COVINGTON, 70000
6	ICISNPDES	LAG470330	0.001 SE	SIMMON'S AUTO MART	1611 N. COLLINS BLVD	COVINGTON, 70000
6	SPILLS	79938	0.001 SE		E. 35TH AVE COVINGTON	COVINGTON, 70000
7	SPILLS	72435	0.001 S		COLUMBIA ST, ACROSS FROM POST OFFICE	COVINGTON, 70435
8	FRSLA	110006022543	0.001 SE	WALGREEN DRUG STORE 3990	1205 HWY 190 BUS	COVINGTON, 70433
8	RCRAGR06	LAD981605280	0.001 SE	WALGREEN DRUG STORE 3990	1205 HWY 190 BUS	COVINGTON, 70433
8	UST	6879	0.001 SE	WALGREEN DRUG STORE 3990	1203 BUSINESS HWY 190	COVINGTON, 70433
9	WASTETIRE	7387	0.001 SE	AT&T SERVICES DBA AT&T	1950 COLLINS BLVD	COVINGTON, 70433

9	FRSLA	110003305897	0.001 SE	BELLSOUTH J2838	1950 COLLINS	COVINGTON, 70433
9	RCRAGR06	LAD981913742	0.001 SE	BELLSOUTH J2838	1950 COLLINS	COVINGTON, 70433
9	UST	7387	0.001 SE	AT&T SERVICES DBA AT&T	1950 COLLINS BLVD	COVINGTON, 70433
10	FRSLA	110003329568	0.001 NW	WR CORE INC	2121 COLLINS BLVD	COVINGTON, 70433
11	FRSLA	110003349190	0.001 SE	NEW CLEANERS	979 E BOSTON ST	COVINGTON, 70433
11	RCRAGR06	LAR000005520	0.001 SE	NEW CLEANERS	979 E BOSTON ST	COVINGTON, 70433
11	DCR	655586963	0.001 SE	NEW CLEANER	979 E. BOSTON	CONVINGTON, 70433
12	ERNSLA	89819	0.001 SE		HWY 21 AND 190	COVINGTON
12	UST	74587	0.001 SE	HOLDEN'S GULF SERVICE	HWY 190 & HWY 21	COVINGTON, 70433
13	FRSLA	110008390419	0.001 SE	A 1 RADIATOR SVC	1005 N LEE RD & HWY 190	COVINGTON, 70433
13	FRSLA	110008389092	0.001 SE	COVINGTON AUTO TECH INC	HWY 190 AT LEE RD	COVINGTON, 70433
13	NLRRCRAG	LAD981914070	0.001 SE	COVINGTON AUTO TECH INC	HWY 190 AT LEE RD	COVINGTON, 70433
13	RCRAGR06	LAD985189570	0.001 SE	A 1 RADIATOR SVC	1005 N LEE RD & HWY 190	COVINGTON, 70433
13	UST	12885	0.001 SE	A 1 RADIATOR SVC	1005 N LEE RD & HWY 190	COVINGTON, 70433
14	FRSLA	110003274590	0.001 SE	BUCKNER RENTAL SVC	710 COLLINS BLVD	COVINGTON, 70433
14	FRSLA	110011181620	0.01 SE	CHAMPION CYCLE CENTER, LLC	804 N. COLLINS BLVD	COVINGTON, 70433
14	FRSLA	110012807882	0.001 SE	COLLINS BLVD. SPUR, INC.	810 COLLINS BLVD	COVINGTON, 70433
14	ICIS	110012807882	0.001 SE	COLLINS BLVD. SPUR, INC.	810 COLLINS BLVD	COVINGTON, 70433
14	ICIS	110011181620	0.01 SE	CHAMPION CYCLE CENTER, LLC	804 N. COLLINS BLVD	COVINGTON, 70433
14	ICISNPDES	LAG531315	0.001 SE	COLLINS BLVD. SPUR, INC.	810 COLLINS BLVD	COVINGTON, 70433
14	ICISNPDES	LAG530261	0.01 SE	CHAMPION CYCLE CENTER, LLC	804 N. COLLINS BLVD	COVINGTON, 70433
14	NPDESR06	LAG531315	0.001 SE	STAR 2000, INC.	810 COLLINS BLVD	COVINGTON, 70433
14	NPDESR06	LAG530261	0.01 SE	CHAMPION CYCLE CENTER LLC	804 N. COLLINS BLVD 804 N. COLLINS	COVINGTON, 70433
14	UST	69306	0.001 SE	COLLINS BOULEVARD SPUR INC	810 N COLLINS BLVD	COVINGTON, 70433
15	FRSLA	110020042611	0.001 SE	THE TRAILER OUTLET INC	1900 COLLINS BLVD	COVINGTON, 70433
15	FRSLA	110020042602	0.001 SE	ROYAL KRAFT	1906 COLLINS BLVD	COVINGTON, 70433
15	ICIS	110020042611	0.001 SE	THE TRAILER OUTLET INC	1900 COLLINS BLVD	COVINGTON, 70433
15	ICIS	110020042602	0.001 SE	ROYAL KRAFT	1906 COLLINS BLVD	COVINGTON, 70433
15	ICISNPDES	LAG531662	0.001 SE	THE TRAILER OUTLET INC	1900 COLLINS BLVD	COVINGTON, 70433
15	ICISNPDES	LAG531661	0.001 SE	ROYAL KRAFT	1906 COLLINS BLVD	COVINGTON, 70433
15	NPDESR06	LAG531662	0.001 SE	THE TRAILER OUTLET INC	1900 COLLINS BLVD	COVINGTON, 70433
15	NPDESR06	LAG531661	0.001 SE	ROYAL KRAFT	1906 COLLINS BLVD	COVINGTON, 70433

15	WASTETIRE	122580	0.001 SE	PARISH TRAILER & EQUIPMENT LLC DBA NORTH	1900 COLLINS BLVD	COVINGTON, 70433
16	FRSLA	110043309675	0.001 SE	TRACTOR SUPPLY #1428	1884 COLLINS BLVD	COVINGTON, 70433
16	RCRAGR06	LAR000072447	0.001 SE	TRACTOR SUPPLY #1428	1884 COLLINS BLVD	COVINGTON, 70433
16	WASTETIRE	167555	0.001 SE	TRACTOR SUPPLY #1428	1884 COLLINS BLVD	COVINGTON, 70433
17	FRSLA	110020842481	0.001 SE	TIRE KINGDOM #179	1942 N COLLINS BLVD	COVINGTON, 70433
17	FRSLA	110017360283	0.001 SE	SEAFOOD WORLD	1957 COLLINS BLVD	MADISONVILLE, 70447
17	ICIS	110020842481	0.001 SE	TIRE KINGDOM #179	1942 N COLLINS BLVD	COVINGTON, 70433
17	ICISNPDES	LAG470213	0.001 SE	TIRE KINGDOM #179	1942 N COLLINS BLVD	COVINGTON, 70433
17	NPDESR06	LAG470213	0.001 SE	TIRE KINGDOM #179	1942 N COLLINS BLVD	COVINGTON, 70433
17	RCRAGR06	LAR000020172	0.001 SE	TIRE KINGDOM #179	1942 N COLLINS BLVD	COVINGTON, 70433
17	WASTETIRE	26742	0.001 SE	TIRE KINGDOM #179	1942 N COLLINS BLVD	COVINGTON, 70433
18	FRSLA	110020035175	0.001 SE	WINGFOOT COMMERCIAL TIRE	SYSTEMS, LLC	COVINGTON, 70433
18	FRSLA	110020042639	0.001 SE	A/C SUPPLY INC	1849 COLLINS BLVD	COVINGTON, 70433
18	ICIS	110020035175	0.001 SE	WINGFOOT COMMERCIAL TIRE	SYSTEMS, LLC	COVINGTON, 70433
18	ICISNPDES	LAG531666	0.001 SE	WINGFOOT COMMERCIAL TIRE	SYSTEMS, LLC	COVINGTON, 70433
18	NPDESR06	LAG531666	0.001 SE	WINGFOOT COMMERCIAL TIRE	SYSTEMS, LLC 1818 COLLINS BLVD	COVINGTON, 70433
18	NPDESR06	LAG531665	0.001 SE	A/C SUPPLY INC	1849 COLLINS BLVD	COVINGTON, 70000
18	WASTETIRE	25940	0.001 SE	WINGFOOT COMMERCIAL TIRE SYSTEMS LLC	1818 COLLINS BLVD	COVINGTON, 70433
19	WASTETIRE	10466	0.001 SE	COVINGTON POWERSPORTS LLC DBA HONDA OF C	1026 N COLLINS BLVD	COVINGTON, 70433
19	FRSLA	110003296996	0.001 SE	GARRETT HONDA YAMAHA OF COVINGTON	1025 COLLINS BLVD	COVINGTON, 70433
19	RCRAGR06	LAD981589609	0.001 SE	GARRETT HONDA YAMAHA OF COVINGTON	1025 COLLINS BLVD	COVINGTON, 70433
19	WASTETIRE	186479	0.001 SE	GARRETT HONDA	1026 N COLLINS BLVD	COVINGTON, 70433
20	ICISNPDES	LAR10G091	0.001 NW	COVINGTON COMMONS	LA 25 AND AIRPORT RD	COVINGTON, 70000
20	FRSLA	110041257289	0.001 NW	COVINGTON COMMONS	LA 25 AND AIRPORT RD	COVINGTON, 70000
21	RCRAGR06	LAD981512734	0.001 SE	A 1 GLASS SVC INC	1247 COLLINS BLVD	COVINGTON, 70433
21	FRSLA	110003290028	0.001 SE	A 1 GLASS SVC INC	1247 COLLINS BLVD	COVINGTON, 70433
22	ICISNPDES	LAG750635	0.001 SE	TUFF EQUIPMENT RENTALS LLC	1305 N. COLLINS BLVD.	COVINGTON, 70433
22	FRSLA	110033010827	0.001 SE	COLE'S RENTAL WORLD	1305 N. COLLINS BLVD.	COVINGTON, 70433
23	ICISNPDES	LAG531545	0.001 NW	KATHY BALSAMICO	73658 HWY 25	COVINGTON, 70433
23	NPDESR06	LAG531545	0.001 NW	KATHY BALSAMICO	73658 HWY 25	COVINGTON, 70433
23	FRSLA	110017361479	0.001 NW	KATHY BALSAMICO	73658 HWY 25	COVINGTON, 70433
24	ICISNPDES	LAR10F311	0.001 NW	CAT-4, LLC	HWY 25 BUSINESS PARK	COVINGTON, 70000
24	FRSLA	110037498883	0.001 NW	CAT-4, LLC	HWY 25 BUSINESS PARK	COVINGTON, 70433

25	FRSLA	110003262157	0.001 SE	GRADY CRAWFORD CONSTRUCTION CO INC	101 W 33RD ST	COVINGTON, 70433
26	ICIS	110014325756	0.001 SE	ADVANCED AUTO PARTS STORE 9768	950 EAST BOSTON	COVINGTON, 70433
26	NPDESR06	LAU003966	0.001 SE	ADVANCED AUTO PARTS STORE 9768	950 EAST BOSTON	COVINGTON, 70433
26	PCSR06	LAU003966	0.001 SE	ADVANCED AUTO PARTS STORE 9768	950 EAST BOSTON	COVINGTON, 70433
26	FRSLA	110014325756	0.001 SE	ADVANCED AUTO PARTS STORE 9768	950 EAST BOSTON	COVINGTON, 70433
27	FRSLA	110003279014	0.001 SE	DOCAR SLS INC	1875 COLLINS BLVD	COVINGTON, 70433
27	ICIS	110020158648	0.001 SE	DOCAR TRUCK PARTS & EQUIPMENT INC.	1875 COLLINS BLVD	COVINGTON, 70434
27	ICISNPDES	LAG470201	0.001 SE	DOCAR TRUCK PARTS & EQUIPMENT INC.	1875 COLLINS BLVD	COVINGTON, 70434
27	RCRAGR06	LAD081419269	0.001 SE	DOCAR SLS INC	1875 COLLINS BLVD	COVINGTON, 70434
27	FRSLA	110020158648	0.001 SE	DOCAR TRUCK PARTS & EQUIPMENT, INC.	1875 COLLINS BLVD	COVINGTON, 70433
28	RCRAGR06	LAD985185065	0.001 SE	NORWEL EQUIP CO	1764 COLLINS BLVD	COVINGTON, 70433
28	FRSLA	110003317562	0.001 SE	NORWEL EQUIP CO	1764 COLLINS BLVD	COVINGTON, 70433
29	FRSLA	110024401547	0.001 SE	ST. TAMMANY SHERIFF'S OFFICE ANNEX	2070 COLLINS BLVD	COVINGTON, 70433
29	FRSLA	110044261571	0.001 SE	AUTO COMPLEX	2070 COLLINS BLVD	COVINGTON, 70435
29	NPDESR06	LAG470209	0.001 SE	ST. TAMMANY PARISH OFFICE ANNEX	2070 COLLINS BLVD	COVINGTON, 70434
29	RCRAGR06	LAR000021931	0.001 SE	ST TAMMANY PARISH SHERIFFS OFFICE	2070 COLLINS BLVD	COVINGTON, 70434
29	FRSLA	110003358688	0.001 SE	ST TAMMANY PARISH SHERIFFS OFFICE	2070 COLLINS BLVD	COVINGTON, 70434
30	RCRAGR06	LAR000076513	0.001 SE	CVS PHARMACY 5469	2101 COLLINS BLVD	COVINGTON, 70433
30	FRSLA	110046235454	0.001 SE	CVS PHARMACY 5469	2101 COLLINS BLVD	COVINGTON, 70433
31	ICIS	110003318990	0.001 SE	LESTER'S BODY SHOP INC.	1750 COLLINS BLVD	COVINGTON, 70434
31	ICISNPDES	LAG470196	0.001 SE	LESTER'S BODY SHOP INC.	1750 COLLINS BLVD	COVINGTON, 70434
31	NPDESR06	LAG530928	0.001 SE	LESTER'S BODY SHOP INC.	1750 COLLINS BLVD	COVINGTON, 70433
31	NPDESR06	LAG470196	0.001 SE	LESTER'S BODY SHOP INC.	1750 COLLINS BLVD	COVINGTON, 70434
31	RCRAGR06	LAD985187038	0.001 SE	LESTER'S BODY SHOP INC.	1750 COLLINS BLVD	COVINGTON, 70433
31	FRSLA	110003318990	0.001 SE	LESTER'S BODY SHOP INC.	1750 COLLINS BLVD	COVINGTON, 70433
32	RCRAGR06	LAD985186154	0.001 SE	NORTH SHORE IMPORTS	105 W JESSE JONES ST	COVINGTON, 70433
32	RCRAGR06	110003318311	0.001 SE	NORTH SHORE IMPORTS	105 W JESSE JONES ST	COVINGTON, 70433
33	ICISNPDES	LAR05N021	0.001 SE	OZONE CAR WASH LLC	1625 N. COLLINS BLVD	COVINGTON, 70433
33	NPDESR06	LAR05N021	0.001 SE	OZONE CAR WASH LLC	1625 N. COLLINS BLVD	COVINGTON, 70433
33	PCSR06	LAR00B866	0.001 SE	OZONE CAR WASH LLC	1625 N. COLLINS BLVD	COVINGTON, 70433
33	FRSLA	110028274258	0.001 SE	OZONE CAR WASH LLC	1625 N. COLLINS BLVD	COVINGTON, 70433
34	FRSLA	110057340104	0.001 SE	BUTTER KRISP DINER	1105 BUSINESS 190	COVINGTON, 70433
35	PCSR06	LA0109843	0.001 SE	LA MACHINERY CO INC-	1796 COLLINS BLVD	COVINGTON, 70433
35	PCSR06	LAG750268	0.001 SE	LA MACHINERY CO INC-	1796 COLLINS BLVD	COVINGTON, 70433

36	WASTETIRE	183644	0.01 SE	COVINGTON AUTO PARTS LLC	72147 HWY 21	COVINGTON, 70433
36	ERNSLA	220439	0.01 SE		US 190 AT CLAIBORNE HILL	COVINGTON
36	FRSLA	110011178028	0.01 SE	APPLETREE ACADEMY	PO BOX 1967	COVINGTON, 70434
36	FRSLA	110008383310	0.01 SE	COVINGTON AUTO PARTS	HWY 21 & CLAIBORNE HILL	COVINGTON, 70433
36	RCRAGR06	LAD104699905	0.01 SE	COVINGTON AUTO PARTS	HWY 21 & CLAIBORNE HILL	COVINGTON, 70433
36	SPILLS	60766	0.01 SE		72127 MILITARY RD.	COVINGTON, 70435
37	UST	75924	0.01 W	MAIN STREET SHELL	HWY 25 & HWY 190	COVINGTON, 70434
37	NLRUST	52-000777	0.01 W	MAIN STREET SHELL	HWY 25 AND HWY 190	COVINGTON, 70434
38	UST	20870	0.01 SE	FUEL N GO LLC	807 N COLLINS BLVD	COVINGTON, 70434
39	WASTETIRE	1726	0.01 SE	RAINBOW NORTHSHORE BUICK GMC LLC	2925 N HWY 190	COVINGTON, 70433
39	FRSLA	110006019744	0.01 SE	COVINGTON PONTIAC BUICK-GMC	2925 N HWY 190	COVINGTON, 70433
39	FRSLA	110012817185	0.01 SE	RAINBOW NORTHSHORE PONTIAC BUICK GMC LLC	GMC TRUCKS, LLC	COVINGTON, 70433
39	ICIS	110012817185	0.01 SE	RAINBOW NORTHSHORE PONTIAC BUICK GMC LLC	2925 N HWY 190	COVINGTON, 70433
39	ICIS	110006019744	0.01 SE	COVINGTON PONTIAC BUICK-GMC	2925 HWY 190 NORTH	COVINGTON, 70433
39	ICISNPDES	LAG470141	0.01 SE	RAINBOW NORTHSHORE PONTIAC BUICK GMC LLC	2925 N HWY 190	COVINGTON, 70433
39	NPDESR06	LAU009407	0.01 SE	COVINGTON PONTIAC BUICK	2925 HWY 190 NORTH	COVINGTON
39	NPDESR06	LAG470141	0.01 SE	RAINBOW NORTHSHORE PONTIAC BUI	GMC TRUCKS, LLC 2925 NORTH HWY 190	COVINGTON, 70433
39	PCSR06	LAU009407	0.01 SE	COVINGTON PONTIAC BUICK	2925 HWY 190 NORTH	COVINGTON, 70433
39	RCRAGR06	LAD034224287	0.01 SE	COVINGTON PONTIAC BUICK GMC INC	2925 N HWY 190	COVINGTON, 70433
40	UST	1726	0.01 SE	RAINBOW NORTHSHORE BUICK GMC LLC	2925 N HWY 190	COVINGTON, 70433
41	UST	68493	0.01 SE	ST TAMMANY FIRE DISTRICT #12	19375 HWY 36	COVINGTON, 70433
42	WASTETIRE	170659	0.01 SE	TANC MOTORS LLC DBA SPEEDEE MIDAS	1256 BUSINESS HWY 190	COVINGTON, 70420
43	FRSLA	110011182148	0.01 E	HATTEBERG PROPERTIES INC	18113 INDUSTRY RD	COVINGTON, 70435
43	ICISNPDES	LAG530236	0.01 E	HATTEBERG PROPERTIES INC	18113 INDUSTRY RD	COVINGTON, 70435
43	NPDESR06	LAG530236	0.01 E	HATTEBERG PROPERTIECOVINGTON	18113 INDUSTRY RD	COVINGTON, 70435
43	FRSLA	110003347593	0.01 E	COVINGTON STRIPPING & REFINISHING INC	18113 BRANCH CROSSING DR	COVINGTON, 70435
44	ICIS	110016684346	0.01 SE	INWOOD GARDENS	HWY 190 BYPASS/COLLINS BLVD	COVINGTON, 70433
44	ICISNPDES	LAG530689	0.01 SE	INWOOD GARDENS	HWY 190 BYPASS/COLLINS BLVD	COVINGTON, 70433
44	NPDESR06	LAG530689	0.01 SE	INWOOD GARDENS	HWY 190 BYPASS/COLLINS BLVD	COVINGTON, 70433
44	FRSLA	110016684346	0.01 SE	INWOOD GARDENS	HWY 190 BYPASS/COLLINS BLVD	COVINGTON, 70433
45	FRSLA	110006808044	0.01 SE	ST TAMMANY SEWER DIST 4 WASTSEWATER TREATMENT	904 US-190 SERVICE RD,	COVINGTON, 70433

46	RCRAGR06	LA0001017417	0.02 SE	SCOTTY MUFFLER CTR INC	2910 N HWY 190	COVINGTON, 70434
46	FRSLA	110006018987	0.02 SE	SCOTTY MUFFLER CTR INC	2910 N HWY 190	COVINGTON, 70433
47	NPDESR06	LAG530850	0.02 SE	DISCOUNT AUTO PARTS-	EAST OF HWY 190 BYPASS HIGHWAY 190	COVINGTON, 70433
47	PCSR06	LAG530850	0.02 SE	DISCOUNT AUTO PARTS-	EAST OF HWY 190 BYPASS HIGHWAY 190	COVINGTON, 70433
47	FRSLA	110009931930	0.02 SE	DISCOUNT AUTO PARTS-	EAST OF HWY 190 BYPASS HIGHWAY 190	COVINGTON, 70433
48	ICIS	110009013619	0.02 SE	A ABSOLUTE BAIL BONDS	1856 N. COLLINS BLVD	COVINGTON, 70433
48	ICISNPDES	LAG530023	0.02 SE	A ABSOLUTE BAIL BONDS	1856 N. COLLINS BLVD	COVINGTON, 70433
48	RCRAGR06	LAR000045476	0.02 SE	ACADIAN AMBULANCE SVC INC	1856 N. COLLINS BLVD	COVINGTON, 70433
48	FRSLA	110012246140	0.02 SE	ACADIAN AMBULANCE SVC INC	1856 N. COLLINS BLVD	COVINGTON, 70433
49	ICISNPDES	LAG531569	0.02 SE	SOUTHERN COMFORT A/C & HEATING, INC.	1608 COLLINS BLVD	COVINGTON, 70434
49	ICIS	110017699793	0.02 SE	SOUTHERN COMFORT A/C & HEATING, INC.	1608 COLLINS BLVD	COVINGTON, 70434
50	WASTETIRE	150835	0.02 SE	JEFFERSON AUTO SERVICE - NORTH	1429 N COLLINS BLVD	COVINGTON, 70433
51	RCRAGR06	LAD981605025	0.03 SE	WALMART NEIGHBORHOOD MARKET 3042	2800 N HWY 190	COVINGTON, 70433
51	UST	6860	0.03 SE	WALMART NEIGHBORHOOD MARKET 3042	2800 N HWY 190	COVINGTON, 70433
52	RCRAGR06	LAR000080200	0.03 N	WALGREEN DRUG STORE 9645	73626 HWY 25	COVINGTON, 70435
53	UST	140200	0.04 NW	MARKET MAX COVINGTON	73029 HWY 25	COVINGTON, 70434
53	NLRUST	G1054815	0.04 NW	MARKET MAX COVINGTON	73029 HWY 25	COVINGTON, 70434
54	RCRAGR06	LAD034223180	0.06 SE	BALDWIN MTRS INC	833 E BOSTON ST	COVINGTON, 70433
54	RCRAGR06	LA0000920850	0.05 SE	H D HIMEL INC	823 E BOSTON ST	COVINGTON, 70433
54	UST	1724	0.06 SE	LADOTD	833 E BOSTON ST	COVINGTON, 70433
55	UST	77208	0.06 SE	SPENCER'S FEED & GARDEN	900 N COLUMBIA	COVINGTON, 70434
56	UST	79282	0.06 SE	SEACOAST SUPPLY	19426 HWY 36	COVINGTON, 70433
57	UST	74008	0.11 SE	NORHTLAKE EXPRESS	2710 N HWY 190	COVINGTON, 70434
58	WP	52_mh_12008	0.12 NW	JAMES A. SHOULTZ	COVINGTON	COVINGTON, 70435
59	UST	68871	0.16 SE	BAYOU SERVICE	1124 N COLUMBIA ST	COVINGTON, 70434
60	UST	75935	0.17 SE	QUICK STOP #4	N COLUMBIA ST	COVINGTON, 70433
61	UST	89590	0.18 SE	ECSTASY CAR WASH	705 E BOSTON ST	COVINGTON, 70433
61	UST	66823	0.17 SE	ALLISON'S GROCERY	709 E BOSTON ST	COVINGTON, 70434
62	UST	31387	0.19 SE	SUBWAY	706 E BOSTON ST	COVINGTON, 70434
62	NLRUST	52-017494	0.19 SE	SUBWAY(FORMER SERVICE STATION)	706 E BOSTON ST	COVINGTON, 70434
63	UST	66824	0.2 S	BROTHERS GROCERY	COLUMBIA ST	COVINGTON, 70433
64	UST	79328	0.2 SE	COMMERCIAL SAVINGS & LOAN ASSOCIATION	HWY 190 E @ FOURTH ST	COVINGTON, 70433

65	UST	71228	0.23 SE	COOP'S	1031 EDWARDS	COVINGTON, 70433
66	UST	28350	0.23 SE	NORTH PARK AUTOMOTIVE	2501 N HWY 190	COVINGTON, 70433
67	UST	85457	0.24 SE	FORMER SICA PROPERTY	713 N COLUMBIA ST	COVINGTON, 70433
68	UST	19342	0.25 S	PARISH CONCRETE INC	401 28TH AVE	COVINGTON, 70434
69	UST	2179	0.25 Se	DEPENDABLE GLASS WORKS INC	509 E GIBSON	COVINGTON, 70433
70	UST	86410	0.25 S	ST TAMMANY PARISH JAIL	1200 CHAMPAGNE ST	COVINGTON, 70433
71	RCY	9374	0.32 S	P&W INDUSTRIES	102 W 26TH ST	COVINGTON, 70433
71	LUST	9374	0.32 S	P&W INDUSTRIES	102 W 26TH ST	COVINGTON, 70433
72	BF	11517	0.32 S	12 OX-LOTS	VARIOUS LOCATIONS	COVINGTON, 70433
73	HLUST	52-013747	0.45 S	BAKER'S AUTO VALET	336 EAST BOSTON	COVINGTON, 70434

Table 4. Orphan Sites

ID#	Database Type	Site ID#	Site Name	Address	City
1	CERCLIS	LAN000605680*C	COVINGTON ABANDONED DRUM		COVINGTON
2	NFRAP	LAN000605680*NFRAP	COVINGTON ABANDONED DRUM		COVINGTON
3	UST	66813	LATINO TIRES	HWY 190	COVINGTON 70433 SAINT TAMMANY
4	UST	75938	MID SOUTH TURF	HWY 36	COVINGTON, LA 70434
5	UST	72749	TRANQUIL OAKS FARM	HWY 437	COVINGTON, LA 70434

Appendix G

CONCEPTUAL STAGE RELOCATION PLAN

January 12, 2016
CONCEPTUAL STAGE RELOCATION PLAN

STATE PROJECT NO. H.004987
U.S. 190 BRIDGE OVER HWY. 21 AND BOGUE FALAYA
ST. TAMMANY PARISH

A windshield survey of the proposed project indicated approximately three (3) residences and fifteen (15) businesses will be displaced by the proposed project.

The residences are believed to be owner-occupants with an estimated four (4) member households. Estimated values of the residences range from $85,000 to $110,000 for two residences and $138,000 to $150,000 for one residence. All residences are wood frame structures on piers; two (2) have vinyl siding. All appear to be maintained and believed to meet decent, safe, and sanitary standards.

One residence sits on a 1.056-acre lot. It is not known whether the lot would allow the owner-occupant to relocate on the remaining property. The other two residences sit on lots of .11 and .17 acres, respectively. Neither would have sufficient area on which to relocate the residence. A survey of current housing market appears to have sufficient replacement housing available for all owner-occupant residences. There was a wide range of prices from $89,900 to $229,000, depending on the accompanying acreage.

Of the fifteen (15) relocations, fourteen (14) are absentee landlords, one (1) is an owner occupant, and thirteen (13) are tenant owned businesses.

Two (2) of the businesses are service stations. One (1) service station will have a carwash impacted by the taking and possibly the taking of tanks; the other service station will be affected by taking of pumps/tank/canopy. Eleven (11) other businesses will have structures affected, come so close they will be unable to continue operating at that location, or parking will be so impacted, they will be unable to continue to operate at that location. The businesses include an auto parts store, a pawn shop, a restaurant, an insurance agency, a drug

store, an ice dispensary business, a trophy shop, two (2) plumbing contractors, an oil change business, and a thrift store.

The remaining two commercial properties are currently vacant at this time, but have absentee landlords eligible for relocation benefits. The structures are being affected, so if they are occupied at the time negotiations begin, they will be tenant business relocations.

The proposed project will be along the existing alignments of U.S. 190, E. Boston Avenue, LA 21, and LA 25. There will be a new alignment for LA 36 and construction of eight (8) roundabouts. There should be no divisive or disruptive effect on the community and there should be no impact on the neighborhoods or housing where the relocations are likely to take place.

The project may present some appraisal problems as there may be some properties that will be adversely impacted or leave uneconomic remainders.

A review of commercial realty in the general area shows a limited number of sites available to accommodate the businesses to be displaced. Some of the owners whose businesses will be affected by the project may choose not to go back in business because of their age, high cost of suitable replacement property or possible other reasons. However, the goods and/or services that have been provided by these businesses would be provided by similar type businesses in the general area or nearby towns.

It was noted that there are numerous structures and/or parking facilities located within the existing right-of-way. A review of the conveyance documents showed that the right-of-way for Collins Boulevard (U.S. 190) was acquired by right-of-way deeds in 1956-57. It appears the right-of-way is being maintained by property owners.

No special or unusual conditions have been identified. No discussions have been held with the local officials or community groups regarding displacement caused by the project, and none are planned at this time.

In conclusion, we do not anticipate any unusual problems in providing replacement housing under our normal procedures. However, if it should become necessary, we would employ housing of last resort.

The estimated cost for relocation assistance is $839,000.

There are no facilities which will qualify for functional replacement.

Appendix H

CULTURAL RESOURCES SURVEY

PHASE I CULTURAL RESOURCES SURVEY OF PROPOSED ROAD IMPROVEMENTS IN COVINGTON, ST. TAMMANY PARISH, LA

A Report of Negative Findings (Revised Final Report)

For

Department of Transportation and Development
1201 Capitol Access Road
Baton Rouge, Louisiana 70802

Lead Agency:
Federal Highway Administration
5304 Flanders Drive # A
Baton Rouge, Louisiana 70808

February 4, 2016

SURA, INC.
P.O. Box 14414
Baton Rouge, LA 70898-4414
Since 1986

PHASE I CULTURAL RESOURCES SURVEY OF PROPOSED ROAD IMPROVEMENTS IN COVINGTON, ST. TAMMANY PARISH, LA

A Report of Negative Findings (Revised Final Report)

By

Matthew J. Chouest, Brandy Kerr, Margeaux Murray, and Malcolm K. Shuman

For:

Department of Transportation and Development
1201 Capitol Access Road
Baton Rouge, Louisiana 70802

Lead Federal Agency:
Federal Highway Administration
5304 Flanders Drive # A
Baton Rouge, Louisiana 70808

Surveys Unlimited Research Associates, Inc.
P.O. Box 14414
Baton Rouge, Louisiana 70898-4414

February 4, 2016

ABSTRACT

On November 24, 2015, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) carried out a Phase I cultural resources survey of 17.6 acres (ac) (7.1 hectares [ha]) on a 4.6 mi stretch of US-190 in Covington in St. Tammany Parish. This survey was conducted for G.E.C. Inc. at the request of the Department of Transportation and Development which proposes road improvements to US-190 and Collins Blvd. A total of 66 shovel tests were dug, all of which were negative for cultural materials. It is recommended that development be authorized to proceed as planned.

ACKNOWLEDGMENTS

The authors are grateful for the help rendered by Mr. Carlos J. Perez. The field crew was directed by Mr. Matthew Chouest, with crew consisting of Ms. Margeaux Murray and Mr. Karl Shuman. Dr. Malcolm Shuman served as principal investigator.

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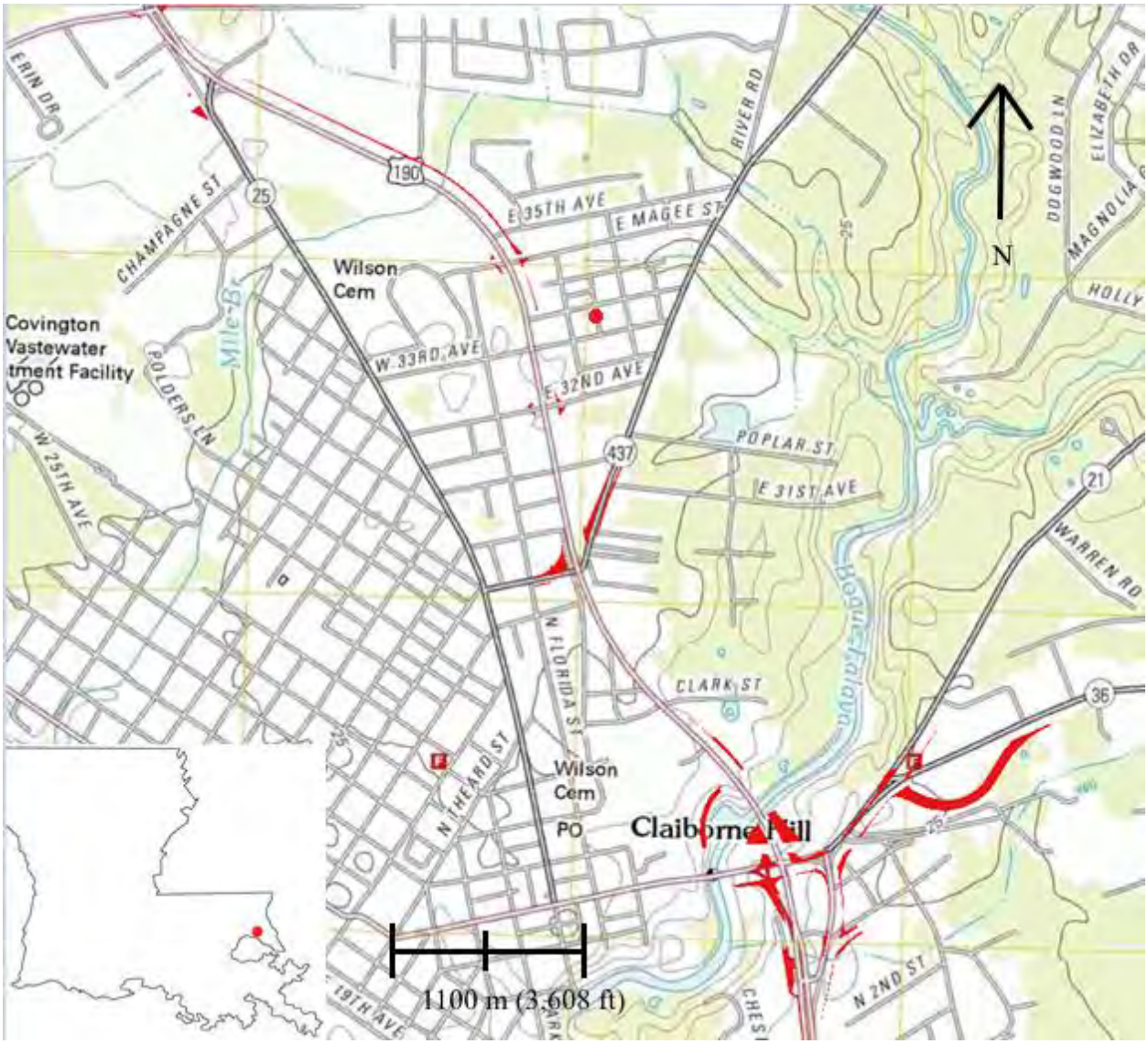
CHAPTER ONE:
INTRODUCTION

On November 24, 2015, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) carried out a Phase I cultural resources survey of 17.6 acres (ac) (7.1 hectares [ha]) on a 4.6 mi stretch of US-190 E in Covington in St. Tammany Parish (Figures 1-4). This survey was conducted for G.E.C. Inc. at the request of the Department of Transportation and Development which proposes road improvements to US-190 and Collins Blvd. The Area of Potential Effects (APE) lies in Sections 37, 42, and 45, T6/7S, R11E.

The survey was conducted to fulfill the requirements of Section 106 of the National Historic Preservation Act of 1966 and because of a request by the Choctaw Nation of Oklahoma. The field crew was directed by Mr. Matthew Chouest, with crew consisting of Ms. Margeaux Murray and Mr. Karl Shuman. Dr. Malcolm Shuman served as principal investigator.

This report is organized as follows: Chapters on the environment, prehistory, and history of the area and followed by a discussion of the methodology employed in the current survey, the results of the survey, and recommendations. A final section lists the references cited in the text.



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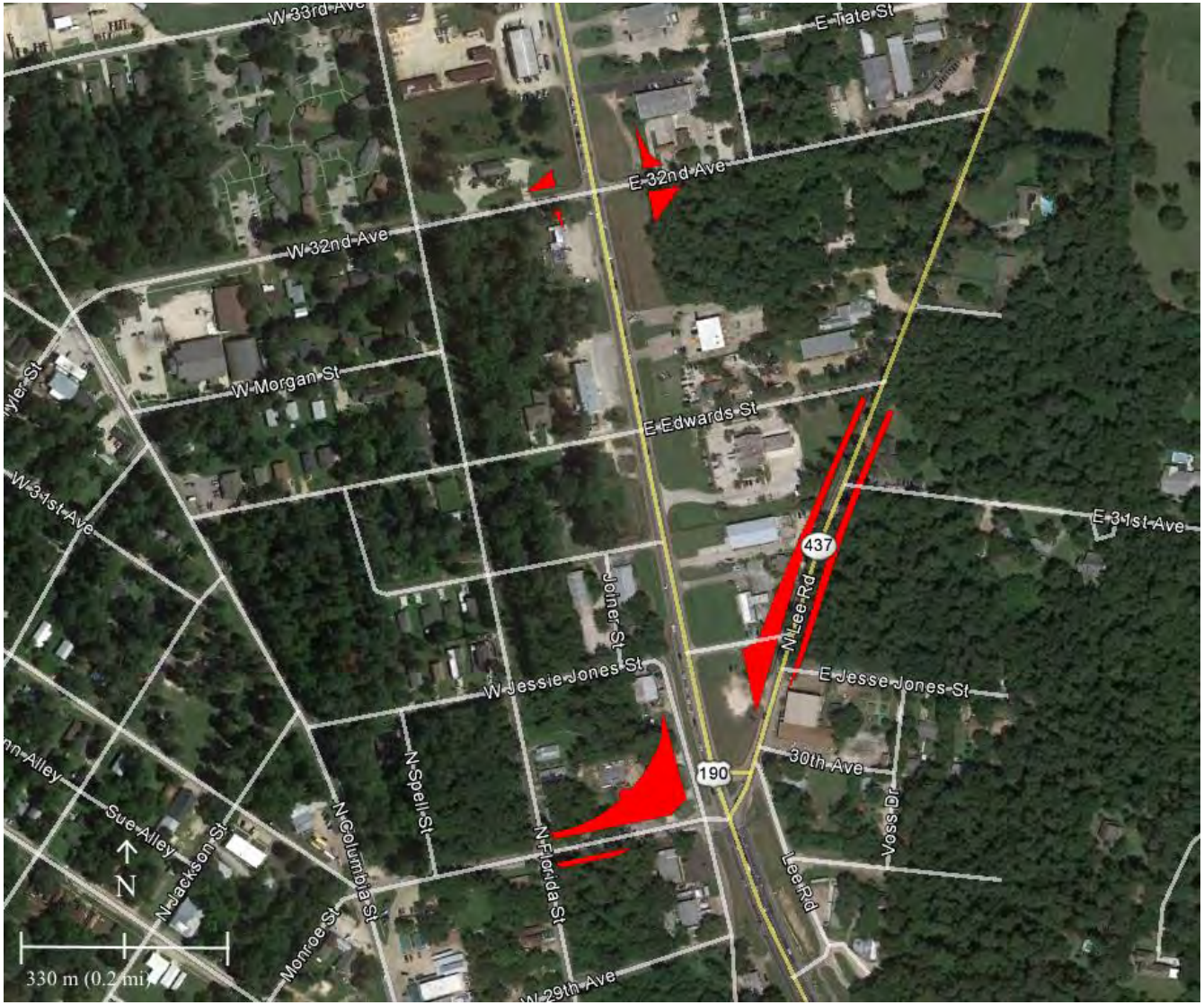


Figure 3: Surveyed area in red (Google Earth).

Figure 4: Surveyed area in red (Google Earth).

CHAPTER TWO:
ENVIRONMENTAL SETTING

Flora and Fauna

The dissected uplands in the Florida Parishes contain mixed shortleaf pine/oak-hickory forests. Examples of the common tree types are: the shortleaf pine *(Pinus echinata),* the loblolly pine *(Pinus taeda),* red oak *(Quercus falcata),* black oak *(Quercus velutine),* black hickory *(Carya texana),* sweet gum *(Liquidambar styraciflua)* and red maple *(Acer rubrum).* The understory in this type of forest contains a great many shrubs such as huckleberry *(Vaccinium arboreum),* holly *(Ilex decidua)* and poison ivy *(Rhus toxicodendron).* On the banks of the rivers, willows *(Salix nigra)* and sycamores *(Platanus occidentalis)* dominate the natural vegetation. The modern disturbance of the forests in Louisiana, however, has allowed the short leaf varieties to perpetuate beyond their natural exclusion from the hardwood forest. This description of the natural setting, typical for St. Tammany Parish, is also specifically appropriate for the project area.

The animal life of this region was undoubtedly diverse and abundant before extensive historic settlement. With farming and logging, however, the natural setting of the project area was significantly altered. Nevertheless, Table 1 presents a list of representative fauna that are known to inhabit the region surrounding the project area and that probably inhabited it before the onset of modern development.

Table 1: Representative animal species present in project area and vicinity (source: Jones et al. 1996).

Fish		
Common Name	**Scientific Name**	**Habitat**
Spotted gar	*Lepisosteus oculatus*	Clearer waters of lakes, bayous, and oxbows with abundant vegetation
Longnose gar	*Lepisosteus osseus*	Larger rivers
Shortnose gar	*Lepisosteus platostomus*	Larger rivers
Alligator gar	*Lepisosteus spatula*	Large bodies of water, rivers, and lakes
Bowfin	*Amia calva*	Sluggish waters of bayous and borrow pits often choked with vegetation
Gizzard shad	*Dorosoma cepedianum*	Common in all waters of this area
Cypress minnow	*Hybognathus hayi*	Quiet water areas of rivers over soft bottom
Silvery minnow	*Hybognathus nuchalis*	Main stream of major rivers over mud, sand or gravel bottom
Golden shiner	*Notemigonus srysoleucas*	Common in all waters of this area
Emeral shiner	*Notropis artherinoides*	Large rivers
River shiner	*Notropis blennius*	Large rivers
Smallmouth buffalo	*Ictiobus bubalus*	Oxbow lakes and backwaters of large rivers
Bigmouth buffalo	*Ictiobus cyprinellus*	Rivers, lakes, oxbows, and bayous
Black buffalo	*Ictiobus niger*	Larger rivers, oxbows, and bayous
Blue catfish	*Ictalurus furcatus*	Larger rivers
Channel catfish	*Ictalurus punctatus*	Most lakes and rivers
Yellow bass	*Morone mississippiensis*	Moderate to small lakes
Blue gill	*Lepomis macrochirus*	Non-flowing, clear water with scattered weed beds
Largemouth bass	*Micropterus salmoides*	Non-flowing water with aquatic vegetation
Freshwater drum	*Aplodinotus grunniens*	Silty waters of large rivers and lakes

Table 1 (continued): Representative animal species present in project area and vicinity.

Amphibians		
Common Name	**Scientific Name**	**Habitat**
American toad	*Bufo americanus*	Variety of habitats; require water, cover and insects
Green treefrog	*Hyla cinerea*	Swamps, lake borders, anyplace with much water
Gray treefrog	*Hyla versicolor and Hyla chrysoscelis*	Low shrubs in or near standing water
Bullfrog	*Rana catesbiana*	Large bodies of water (lakes, ponds, sluggish streams)
Green frog	*Rana clamitans melanota*	Shallow, fresh water
Reptiles		
Snapping turtle	*Chelydra serpentina*	Permanent body of fresh water
Alligator snapping turtle	*Macroclemyx temmincki*	Rivers and lakes
Three-toed box turtle	*Terrapene carolina triunguis*	Terrestrial, wooded areas or edges
Ground skink	*Leiolopisma laterale*	Forest floor covered with leaves
Five-lines skink	*Eumeces fasciatus*	In or near wooded areas with scattered debris
Diamondback water snake	*Natrix rhombifera rhombifera*	Most aquatic habitats
Yellow-bellied water snake	*Natrix erythrogaster flavigaster*	Large, permanent waterbodies
Eastern garter snake	*Thamnophis sirtalis sirtails*	Virtually all semi-aquatic to terrestrial habitats
Speckled king snake	*Lampropeltis getulus holbrooki*	Variety of habitats including swamps
Southern copperhead	*Agkistrodon contortrix contortrix*	Lowlands near swamps
Cottonmouth	*Agkistrodon piscivorus*	Aquatic habitat-swamps, lakes and rivers
Birds		
Great blue heron	*Ardea Herodias*	Shallow swamps and bayous
Marsh hawk	*Circus cyaneus*	Mature bottomland-pine hardwood forest
Black duck	*Anas rubripes*	Aquatic habitats
Pintail	*Anas acuta*	Aquatic habitats
Green-winged teal	*Anas carolinensis*	Aquatic habitats
Blue-winged teal	*Anas discors*	Aquatic habitats
Canvasback	*Anas valisineria*	Aquatic habitats
Gadwall	*Anas strepera*	Aquatic habitats

Table 1 (continued): Representative animal species present in project area and vicinity.

Birds (continued)		
Common Name	**Scientific Name**	**Habitat**
Mallard	*Anas platyrhynchos*	Shallow wooded swamps or flooded bottomlands
Wood duck	*Aix sponsa*	Wooded swamps and flooded bottomlands
Wild turkey	*Meleagris gallopavo*	Mature bottomlands or pine hardwood forest
Pileated woodpecker	*Dryocopus pileatus*	Conifer, mixed, and hardwood forests
Red-headed woodpecker	*Melanerpes erythrocephalus*	Groves, farm country
Mammals		
Virginia opossum	*Didelphis virginiana*	Wooded areas
Eastern cottontail	*Sylvilagus floridanus*	Open grassy areas and pastures
Swamp rabbit	*Sylvilagus aquaticus*	Heavily wooded areas
Gray squirrel	*Sciurus carolinensis*	Wooded area
Fox squirrel	*Sciurus niger*	Open, wooded area
American beaver	*Castor canadensis*	Aquatic area with wood vegetation
Coyote	*Canis latrans*	Prairies, open woodlands
Red fox	*Vulpes fulva*	Open or broken mixed forest
Gray fox	*Urocyon cinereoargenteus*	Upland mixed foresh-pasture areas
Striped skink	*Mephitis mephitis*	Mixed open and wooded areas
Neartic river otter	*Lutra canadensis*	Most aquatic habitats
White-tailed deer	*Odocoileus virginianus*	Bottomland hardwood forest with openings

Geology and Geomorphology

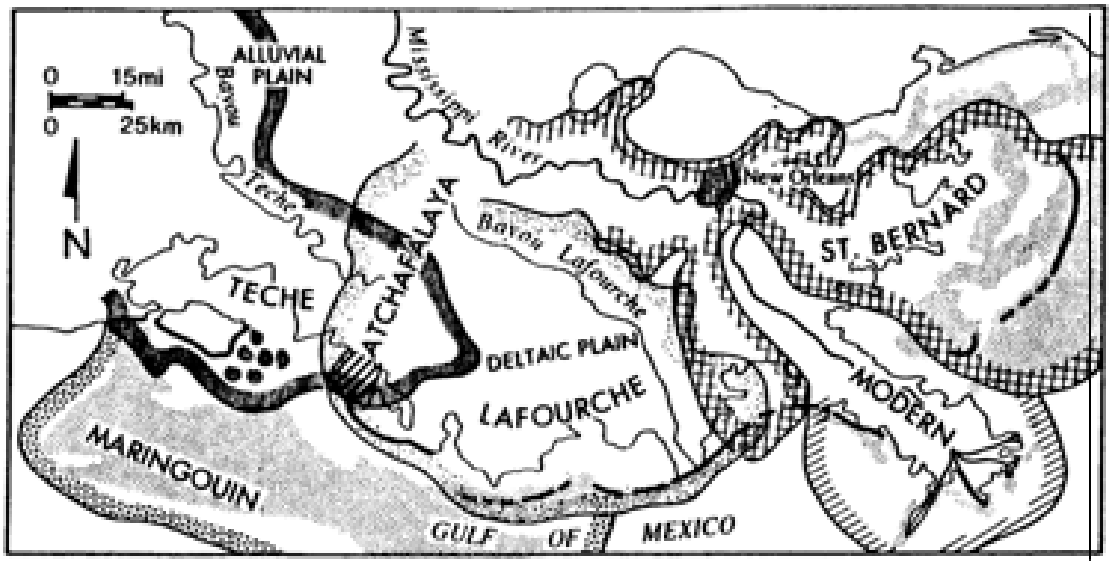
The outstanding surface geomorphological characteristics for St. Tammany and the other Florida parishes were determined by a series of terraces formed in the Pleistocene geological epoch. In profile, these terraces are arranged like steps that descend from north to south. Since 1900, there has been considerable discussion by geologists about the exact number and proper naming of these terraces. What has been agreed upon, however, is that this terracing was the product of the fluctuations in eustatic sea level, and that it has caused rivers in the area to alternately incise and then silt in their floodplains over the millennia (Saucier 1963).

In addition, the collection of sediment below the lower terraces has caused the upper terraces to be uplifted due to the subcrustal flow of the sediment weight. This uplift of the terraces

and downwarping of the deltaic plain has taken place along the hinge line of the Baton Rouge fault, which runs from Baton Rouge to the northern shore of Lake Pontchartrain (Saucier 1963). Such uplifting in the last few centuries has further raised the gradients of many of the streams in the general region. This higher gradient, in turn, has exposed many natural gravel deposits, which were important prehistorically as well as in modern times (Woodward and Gueno 1941).

The geomorphology of this area is further defined by the north to south flow of the major streams in the region. The Amite River on the west and the Pearl River on the east geographically bracket streams such as the Tickfaw, Tangipahoa and Tchefuncte rivers, and Bayous Chinchuba, Lacombe, Natalbany, Bogue Chitto and their tributaries, all of which flow into the Pontchartrain Basin. Because of their high gradients, these streams are deeply incised and have relatively narrow floodplains.

The north shore of Lake Pontchartrain was a relict beach 4,000 to 3,500 years B.P., which was the period of the maximum extent of the St. Bernard delta of the Mississippi River, according to Saucier (1963). By the period 2,800 to 2,600 years B.P., conforming to the time of maximum deterioration of the early St. Bernard delta, the relict beaches had become submerged/eroded away in the project area, leaving prairie terrace fringed on the south and southwest by 3.2–4.9 kilometers (km) (2.0–3.0 miles [mi]) of marsh (Saucier 1963). During the life of the late St. Bernard delta (2400–2000 B.P.), marsh extended south and southwest from the project area for up to 16.4 km (5 mi) (Saucier 1963). This situation does not seem to have changed appreciably during the span 1,800–300 B.P. (i.e., the times of the Lafourche and modern deltas) (Saucier 1963), so that living conditions in the project area would have remained generally stable for the past 3,500 years. The sequence of Holocene delta complexes is shown in Figure 5.



KEY

- Shell Reef
- Barrier Shoreline
- Sand

DELTA COMPLEX	AGE (YEARS BP)
Maringouin	7250-6200
Teche	5700-3900
St. Bernard	4600-1800
Lafourche	3500-400
Modern	Active
Atchafalaya	Active

Figure 5: Holocene delta complexes of the Mississippi River (Frazier 1967).

Soils in this part of St. Tammany Parish are mapped as part of the Myatt-Stough association, nearly level to depressed acid, loamy soils. Myatt soils have a gray fine sandy loam surface and a gray sandy clay loam subsoil. The Stough soils, which occur on ridges, have a pale brown fine sandy loam surface and a yellowish-brown loamy subsoil with gray mottles (USDA 1971).

CHAPTER THREE:
PREVIOUS INVESTIGATIONS

General

The first known archaeological work in this area was carried out in 1909 by David I. Bushnell, who undertook limited investigations at shell middens near Bayou Lacombe. Bushnell's analysis of the ceramics from these sites led him to suggest that the Choctaw Indians living on the north shore of Lake Pontchartrain were descended from the original Muskhogean inhabitants of the region (Bushnell 1909; Poplin 1987:29).

After Bushnell, little archaeology was done in the area for nearly three decades. In 1937, James A. Ford visited the Indian Village site (16ST6) on the Pearl River, and two years later Kniffen also visited the location (M. Webb 1982). The first archaeological project of significance to this area, however, took place in 1939 at the Tchefuncte site (16ST1), where two shell middens in what is now Fontainebleau State Park were excavated by Clarence L. Johnson (Neuman 1984:115). A more complete excavation of these two middens was carried out in January and February 1941 by a 35-man crew under Edward B. Doran, Jr., for the Works Progress Administration (WPA). This project succeeded in recovering fifty thousand sherds and forty-three human burials (Ford and Quimby 1945; Neuman 1984:116). It was on the basis of this work that the Tchefuncte culture was defined. A more recent analysis of the Tchefuncte site was carried out by Heller et al. in 2014. The report (#22-4368) details a two year project to examine cultural materials from four Early Woodland period sites (16ST1, 16SJB2, 16SM17, and 16OR1-4) (Heller et al. 2014).

Between 1950 and 1970, the most noteworthy work in this area was carried out by Sherwood M. Gagliano and Roger Saucier, who visited and made artifact surface collections at a number of sites (Price 1985:1–3). Also, Saucier, in his pioneering study of the geomorphology of the Pontchartrain Basin, attempted to relate sites to geomorphic features on the lakeshore and in nearby Pearl River Basin (Saucier 1963). Further, Gagliano and Webb brought together information on Poverty Point sites near the mouth of the Pearl River (Gagliano and Webb 1970).

In 1975, Neuman conducted a helicopter survey of the north shore of Lake Pontchartrain (Neuman 1975). In his one-page report, he lists three sites, 16ST26, 16ST48, and 16ST63. Site 16ST48 is described as "four small shell middens, located along Bayou Castine between its mouth and the Gulf, Mobile and Ohio railroad tracks" (Neuman 1975). No further description of the sites, their cultural affiliation or conditions is given, other than to note that 16ST26 "has been disturbed by previous dredging projects." The next year, Shenkel also surveyed the north shore of Lake Pontchartrain between Bayou Castine and Fontainebleau State Park. Visiting sites 16ST26 and 16ST63, he concluded that 16ST26 was "effectively destroyed" and 16ST63 either never existed or was mislocated (Shenkel 1976).

More site-specific data have been gathered over the last quarter century or so. In a highly revealing study, Malcolm Webb (1982) conducted test excavations at the Indian Village site (16ST6) and documented a late Marksville to Troyville transition (M. Webb 1982). This is significant in view of the poorly defined nature of the Troyville period in the Coastal area. This

site was revisited in 1988 by Dennis Jones and Malcolm Shuman, who conducted surface collections and made a contour map of the site (Jones and Shuman 1988). They also mapped the Shadows Mound (16ST125) in Mandeville (Jones and Shuman 1988).

Richard Beavers of the University of New Orleans, along with his coworkers, surveyed 15,000 ac (6,075 ha) and located 25 new sites in the Bogue Chitto River drainage. They concluded "there were site concentrations in areas where the natural environment offered the maximum range of subsistence potential…and in close proximity to avenues of communication" (Beavers et al. 1985).

Marine Archaeology

In 1983, Allen Saltus, working for Gulf South Research Institute (GSRI), did a magnetometer survey of four proposed dredge areas in the west Pearl River. He found boiler and wreckage debris at Site No. 3 and other, unspecified anomalies at Site No. 1 (Saltus 1983). Five years later he conducted a survey of submerged locations along the north shore of Lake Pontchartrain. Over 60 submerged or partially submerged watercraft were found (Saltus 1988). Under contract to the Corps of Engineers, Coastal Environments, Inc. did an underwater survey in the Lower Pearl and West Pearl rivers and recorded 94 anomalies, 22 of which are known to be historic watercraft (Pearson et al. 1991). In 1995, Pearson and Saltus examined 11 target areas on the Lower Pearl and West Pearl rivers and assessed the NRHP eligibility of the Gunboat CSS Arrow. The CSS Arrow and a wooden schooner were judged eligible for the NRHP and further work was recommended for them (Pearson and Saltus 1995). The following year, the same two investigators surveyed the Pearl River near Walkiah Bluff and recorded six sites (Saltus and Pearson 1996). These sites were tested by Pearson and the results reported in 1999 (Pearson 1999). In a follow-up study, Pearson conducted a magnetometer survey in the same area but recorded no additional sites (Pearson 1998). Finally, in 2001, Earth Search, Inc. conducted a marine remote sensing survey for a fiber optic line in Orleans and St. Tammany parishes and recorded 45 magnetic anomalies. Seven anomalies were considered eligible for the NRHP. Six were investigated and found to consist of debris and the seventh was avoided during construction (Saltus et al. 2001).

Projects within 1 mi (1.6 km) of APE

Five projects took place within 1 mi (1.6 km) of the APE (Table 2, Figure 6). The earliest completed was carried out by A.R. Saltus, Jr. in 1988 (#22-1327) and was a cultural resources survey of a various waterways of river systems that empty into Lake Pontchartrain (Saltus 1988). Following was a 1996 Phase I survey (#22-1966) by R. Christopher Goodwin and Associates, Inc. that dealt with improvements to the Mile Branch channel (Williams et at. 1996). Next was a 2011 negative findings report (#22-3687) by Panamerican Consultants, Inc. of the Hard Hat cell tower (Glass 2011). Most recently was a negative findings report (#22-4900) of a telecommunications site (McCarley 2015) and a survey (#22-4900) by Cultural Resource Analysts, Inc. that surveyed National Guard properties (#22-4990).

Table 2: Projects within 1 mi (1.6 km) of APE (LDOA).

Report No.	Author(s)	Type of Survey	Date
22-1327	Saltus	Waterways	1988
22-1966	Williams et al.	Channel improvements	1996
22-3687	Glass	Cell tower	2011
22-4900	McCarley	Telecommunications site	2015
22-4990	Pye and Higgins	National Guard properties	2015

Figure 6: Projects and Sites within 1 mi (1.6 km) of APE (LDOA).

CHAPTER FOUR:
METHODOLOGY

Procedures

Methodology for the survey included archival research and fieldwork. Archival research included review of relevant archaeological reports and an examination of site files in the Division of Archaeology. Historic maps by the U.S. Geological Survey were also consulted.

Fieldwork consisted of pedestrian survey and systematic shovel testing. Pedestrian survey consisted of transects spaced 164.04 ft (50 m) apart, with each crew person excavating a shovel test pit every 164.04 ft (50 m). The APE was not designated as needing survey by the SHPO but a survey was requested by the Choctaw Tribe of Oklahoma. The tribe agreed that a Low Probability (LP) methodology of the intervals above was acceptable as defined by the Field Standards for Terrestrial Phase I Cultural Resources Survey by the Division of Archaeology because of urban development and low site density of the surrounding area.

All excavated material was screened using .25 inch hardware cloth. Shovel tests were taken to 50 cm or clay, whichever came first. When archaeological sites are discovered, they are defined using the protocol described in the Louisiana Division of Archaeology Guidelines.

Each cultural resource site found is assessed according to current National Register of Historic Places (NRHP) criteria, as given below.

Eligibility for the *National Register of Historic Places*

According to the *National Register of Historic Places Bulletin* 15 (NPS 1995:2), "The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association are potentially eligible for the National Register of Historic Places." In order to evaluate this significance, four criteria have been developed. Eligible properties…

"A. …are associated with events that have made a significant contribution to the broad patterns of our history; or

B. …are associated with the lives of persons significant in our past; or

C. …embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. …have yielded, or may be likely to yield, information important in history o prehistory" (NPS 1995:2).

Curation Statement

Collected material and associated records are curated by the Louisiana Division of Archaeology (DOA). Upon completion of the project, the artifacts will be delivered to the Louisiana Division of Archaeology, Central Plant North Building 2nd Floor, 1835 North Third St., Baton Rouge, LA 70802.

CHAPTER FIVE:
RESULTS OF THE SURVEY

Archival Research

Archival research was undertaken to determine what previous projects had been conducted in the vicinity of the APE. The results of this process are presented in the fifth chapter. Research was also conducted to learn what archaeological sites had been recorded within 1 mi (1.62 km) of the APE. The results of this procedure are presented in Table 3.

Table 3: Archaeological sites within 1 mile (1.62 km) of APE (LDOA).

Site No.	Name	Type	Culture(s)	NR Status	Last Visited	Proximity to APE
16ST104	George Riser	Prehistoric	Tchefuncte	Not eligible	1995	0.53 mi (0.85 km)
16ST218	Covington Unmarked Burial	Historic	Late 19th/ Early 20th Century	Not eligible	2009	0.31 mi (0.5 km)
16ST268	Covington Cemetery #1	Historic	Antebellum, Civil War, Industrial and Modern	Potential	2015	0.21 mi (0.47 km)

As may be seen, of the three sites within the prescribed radius, two are not eligible for the National Register of Historic Places. The George Riser site (16ST104) was a Tchefuncte campsite that was completely excavated for the construction of a house. The second, Covington Unmarked Burial site (16ST218), consisted of unmarked human remains in a coffin from the late nineteenth or early twentieth century. The burial was completely destroyed by backhoe for the placement of a sewer line for the Louisiana National Guard Training Center. The remains have been interred at the adjacent Wilson Cemetery. Both of these sites are outside of the APE and no longer extant.

The third, Covington Cemetery #1 (16ST268), could potentially be eligible for the National Register of Historic Places. It is a diamond shaped cemetery consisting of 885 tombs from the antebellum, Civil War, and postbellum eras. The cemetery is outside of the APE.

Historic maps from the U.S. Geological Survey were also reviewed. These consisted of the 1968 and 1998 sheets (Figures 7-14).

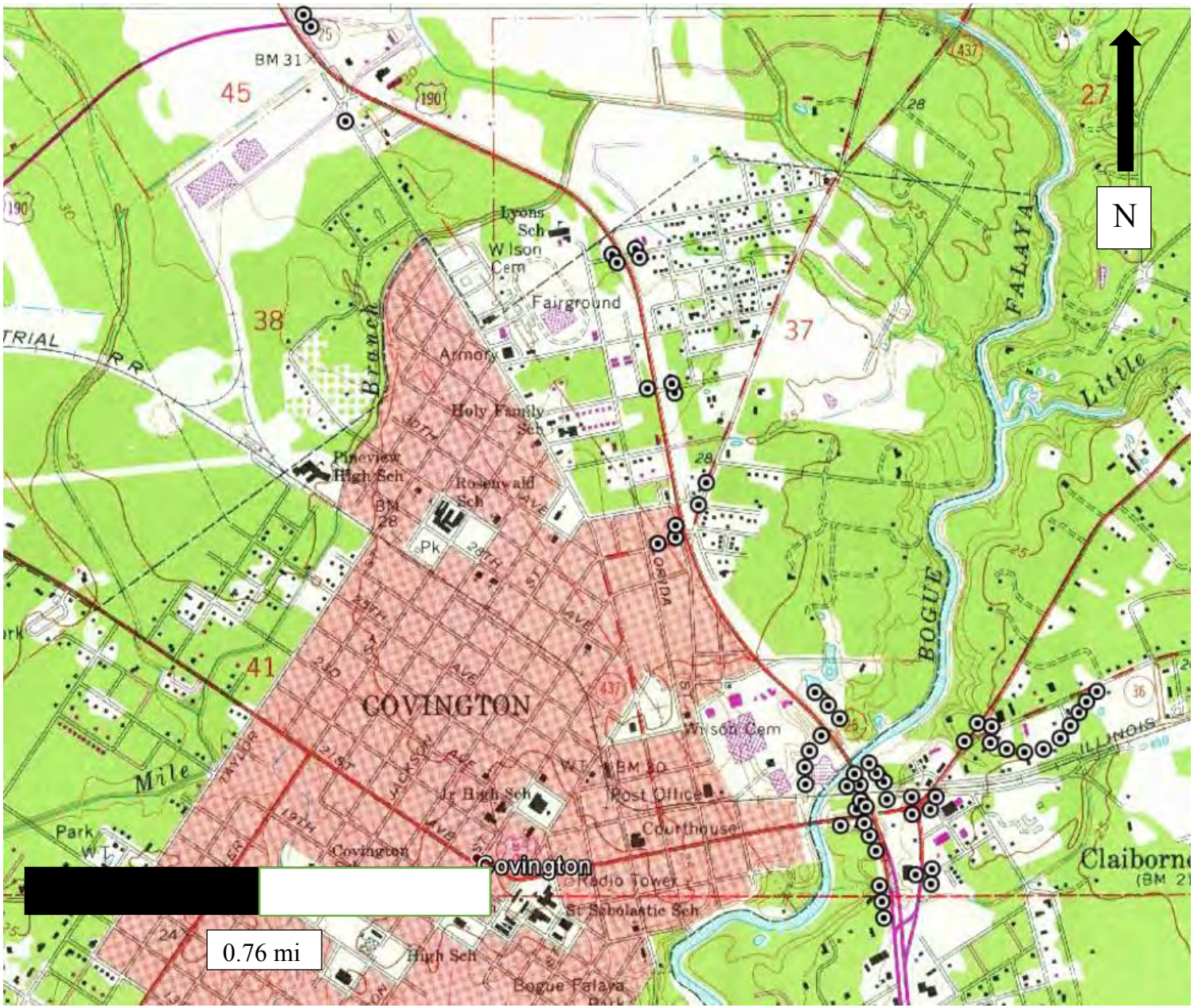


Figure 7: Portion of Covington, La. 1968 7.5-minute map showing shovel tests (USGS).

Figure 8: Portion of Covington, La. 1968 7.5-minute map showing shovel tests and APE (USGS).

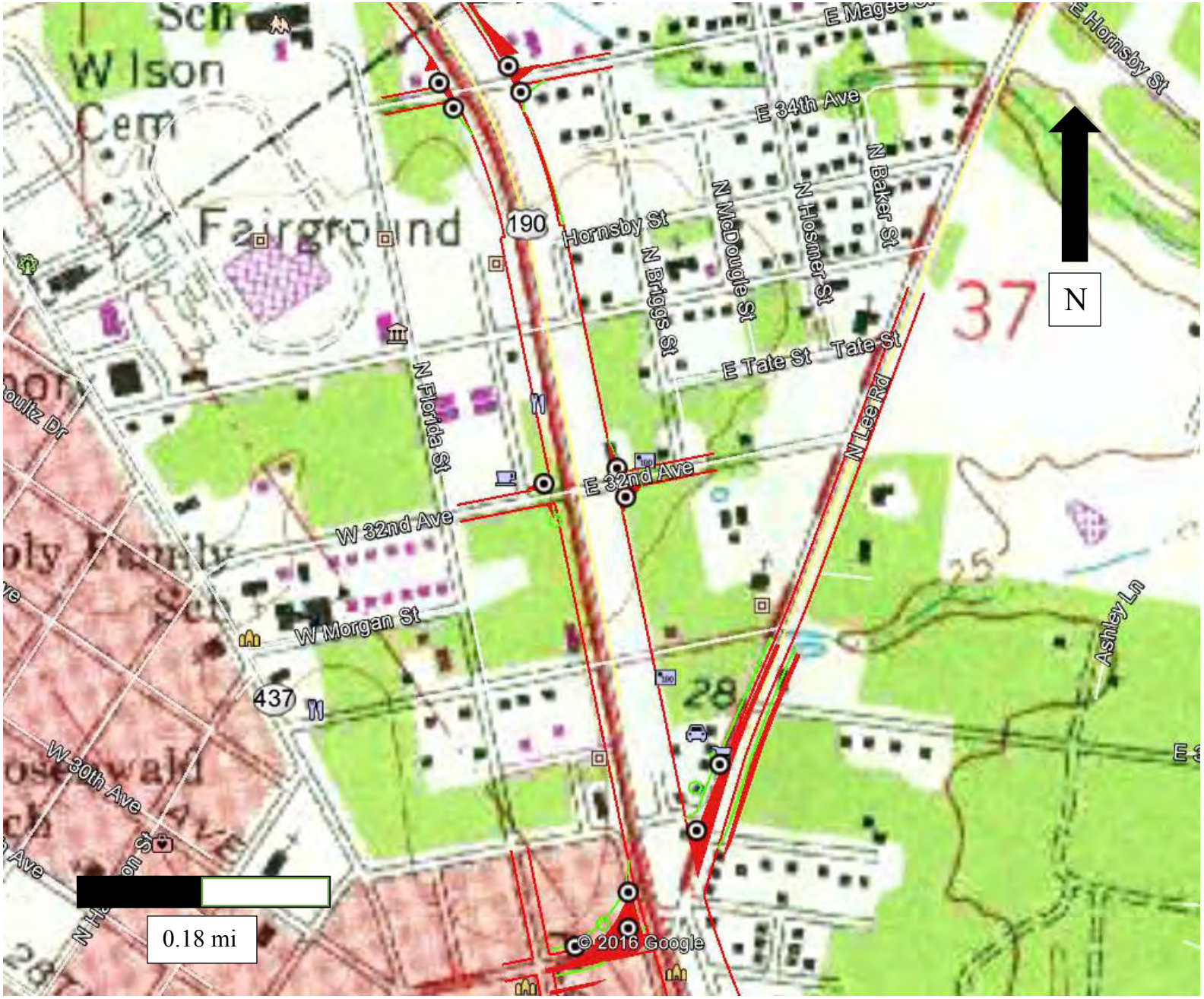
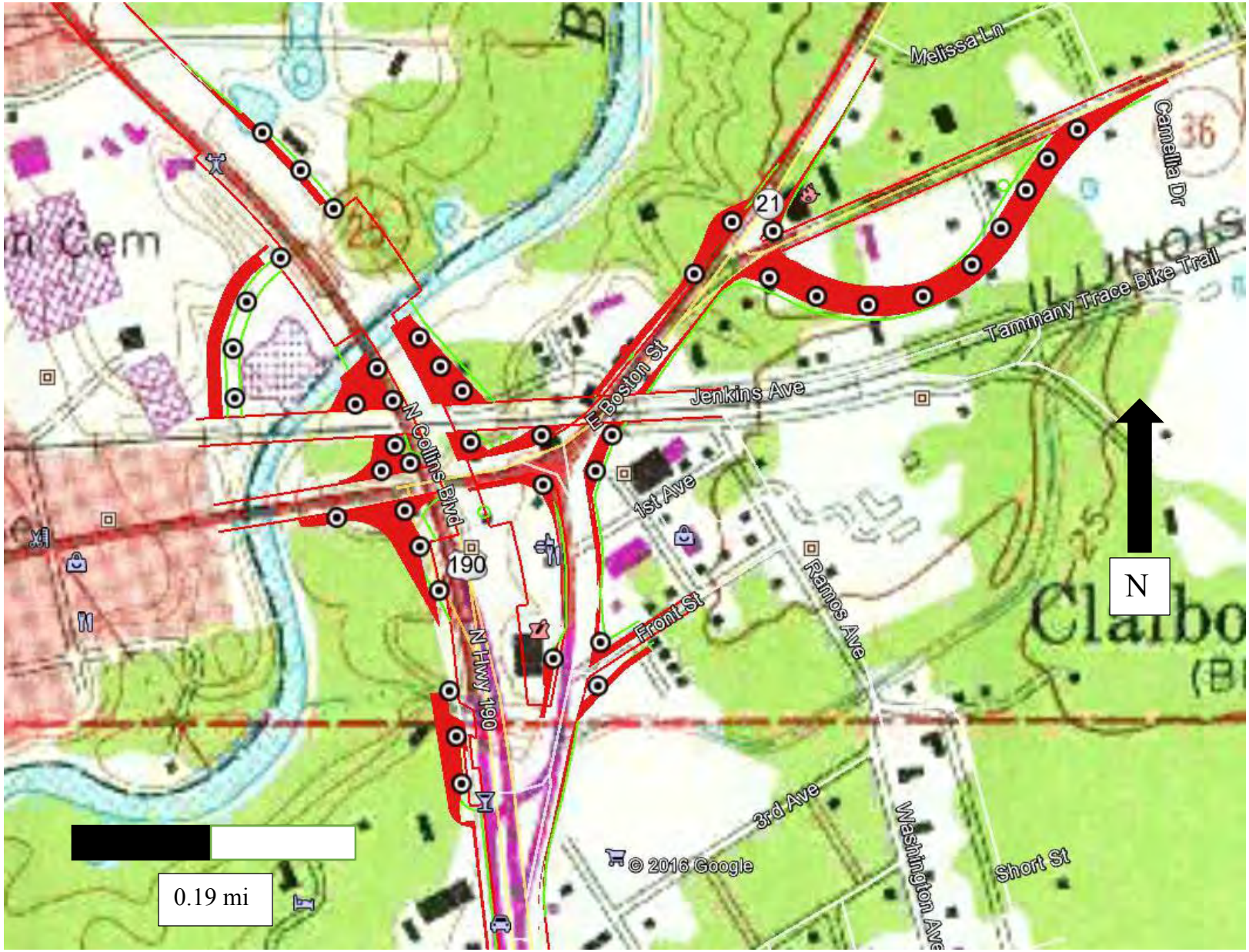


Figure 9: Portion of Covington, La. 1968 7.5-minute map showing shovel tests and APE (USGS).



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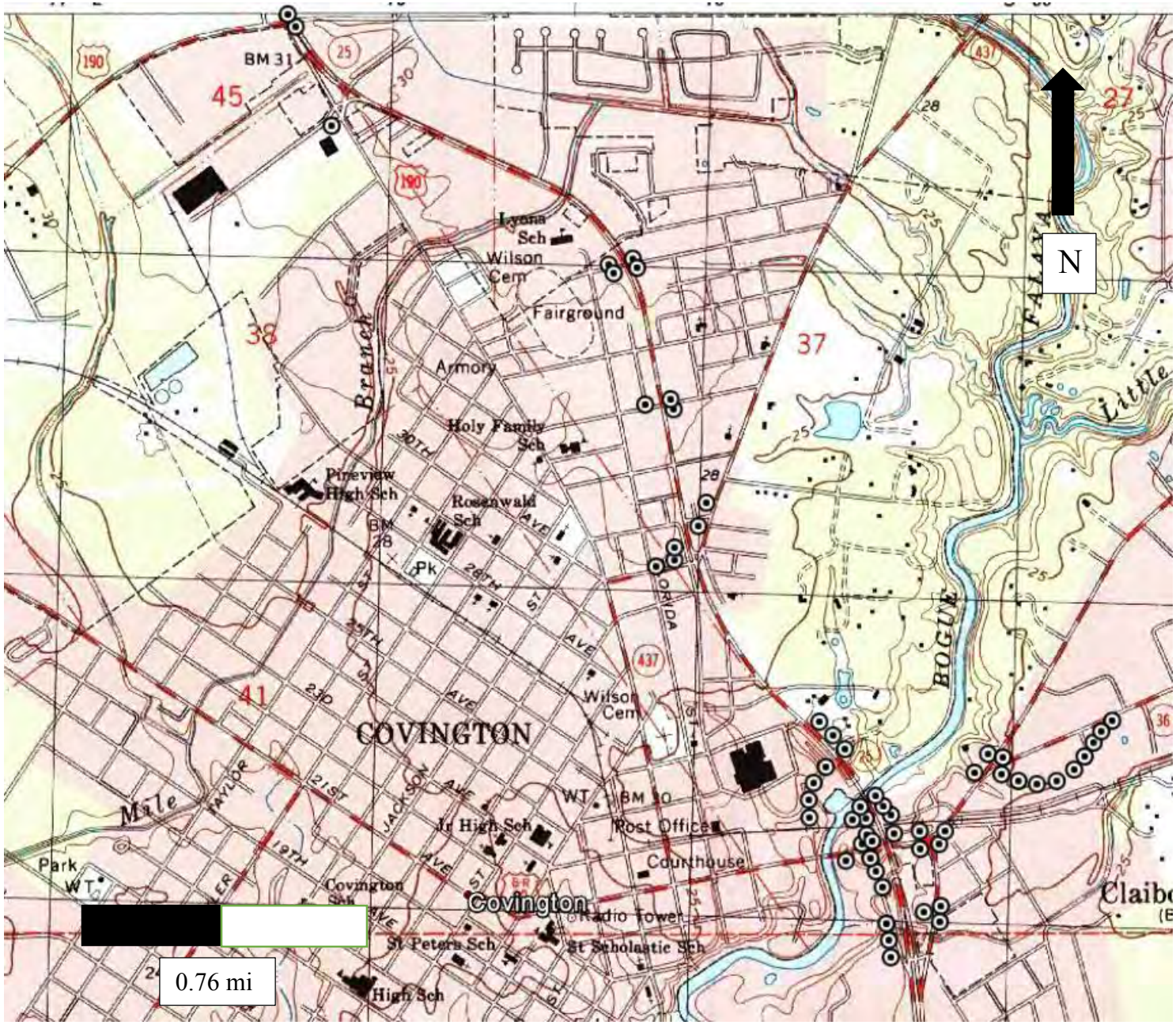

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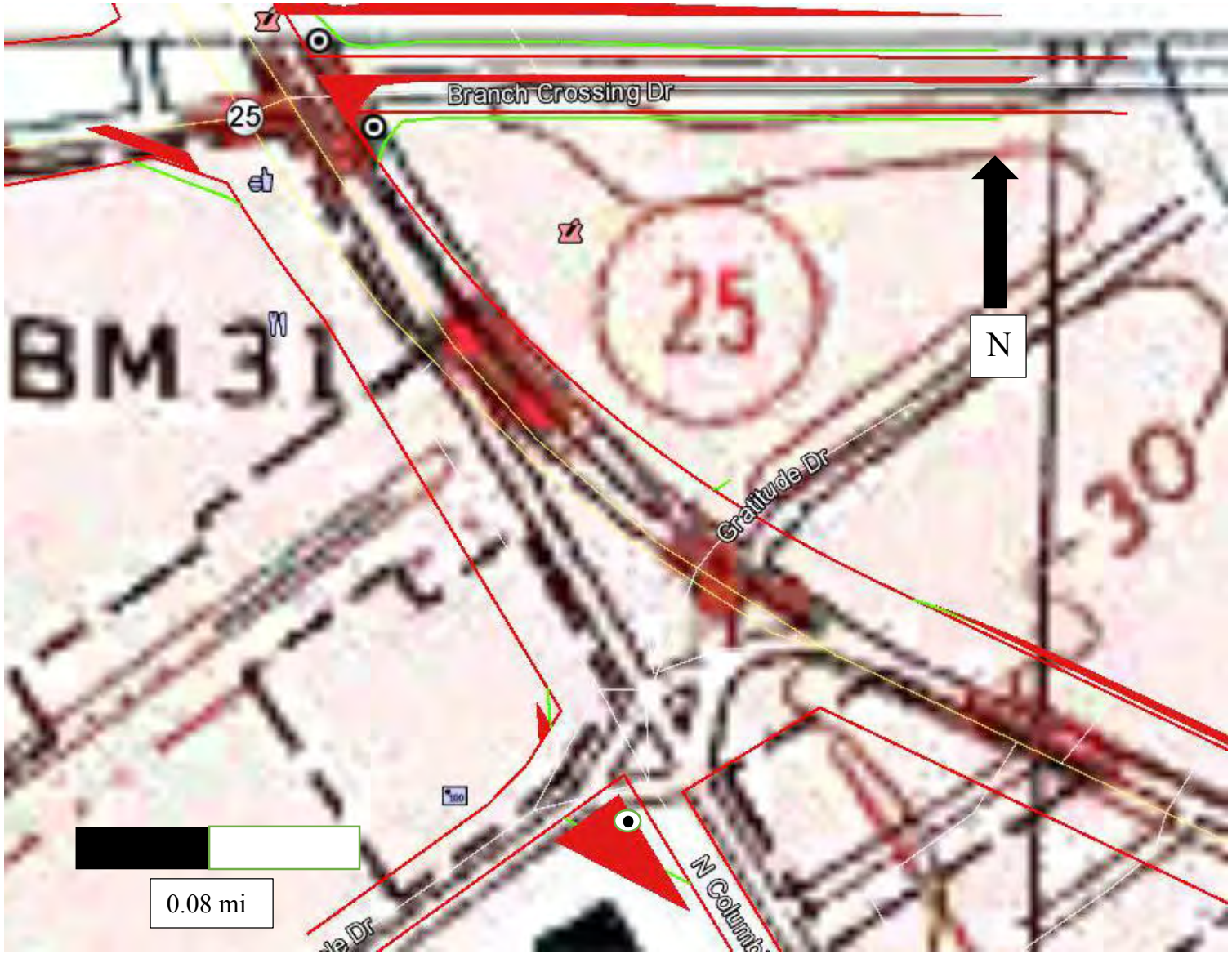

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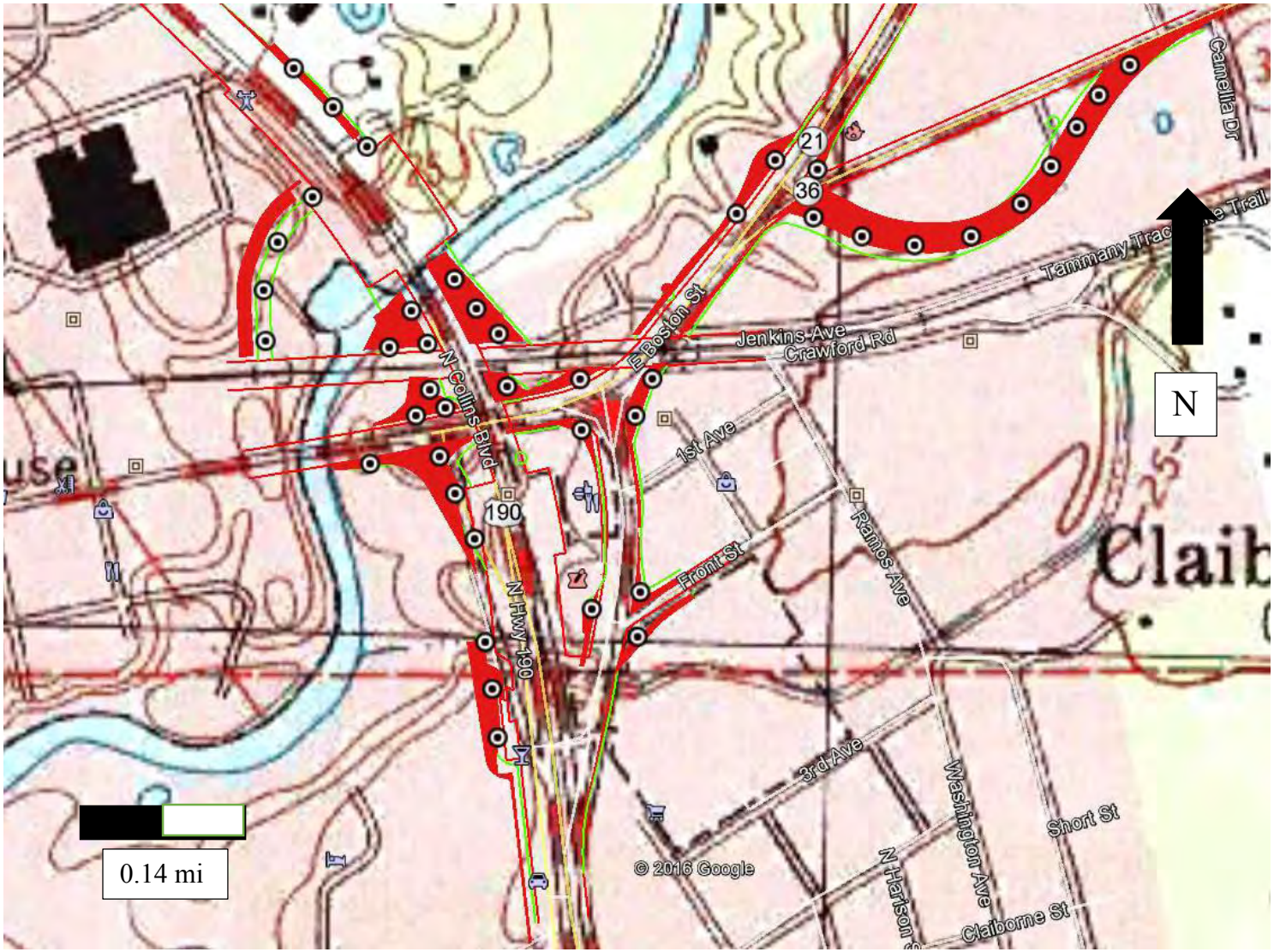

Figure 14: Portion of Covington, La. 1998 7.5-minute map showing shovel tests and APE (USGS).

Fieldwork

Field methodology has been described in the previous chapter. The APE consisted of several intersections throughout US-190 E as well as wooden areas on the banks of the Bogue Flaya. In areas where needed, a 25-ft wide area was added adjacent to the existing row. Survey was conducted only in areas that required this additional right of way or had not been previously investigated. Figure 15 depicts individual shovel tests throughout the extent of the APE. Figures 16-23 depicts views from the locations of various shovel tests.

Figure 15: Shovel tests of the APE (Google Earth)

Figure 16: View from ST3 facing north.

Figure 17: View from ST3 facing east.

Figure 18: View from ST3 facing south.

Figure 19: View from ST3 facing west.

Figure 20: View from ST17 facing north.

Figure 21: View from ST17 facing east.

Figure 22: View from ST17 facing south.

Figure 23: View from ST17 facing west.

Shovel tests were placed along Highway 25 heading southeast between Regina Coeli Road and at the intersections of Highways 25 and 190, Poole Drive and Highway 437, Highway 190 and East Magee Street, Highway 190 and East 32nd Avenue, Highway 190 and Highway 437, and Highway 190 and Highway 21. Additionally, shovel tests were placed within wooded patches north and south of the North Collins Boulevard Bridge and a strip of residential land along Highway 36.

Many of the shovel tests indicated profound disturbance from urban development or were unable to be dug for risk of striking buried fiber optic cables, gas pipelines, or water pipelines. In the course of the survey, no subsurface cultural resources were recovered. Figure 24 depicts a representative shovel test profile using the Munsell soil color system.

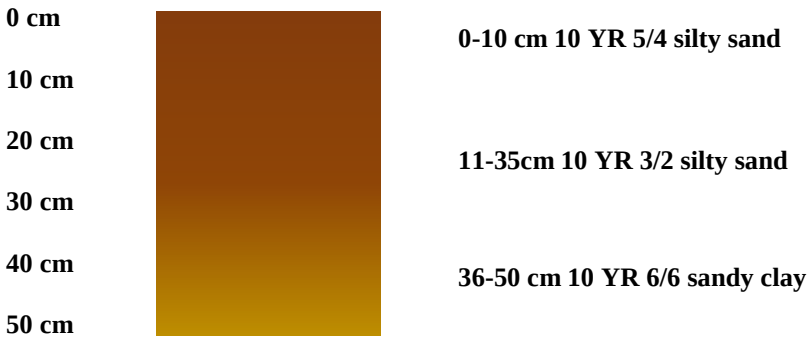

Figure 24: Representative shovel test profile for APE.

Standing Structures

A preliminary review of this project (State Project No. H.004987) was sent to the State Historic Preservation Officer on December 19, 2014. This review was received by SHPO on January 12, 2015, and it was stated that no historic properties would be affected in a letter sent on January 21, 2015 (G.E.C. 2015). An additional letter was sent on March 18, 2015, adding a 25 ft (7.62 m) Right of Way with a map detailing the impacted areas. Likewise, this addition was approved by SHPO on March 20, 2015, stating that no historic properties would be affected (Perez 2015). The structures inside of the APE did not meet the age criteria of inclusion.

The bridge that crosses the Bogue Falaya (Str #62520593001701, Recall #059450), while not being part of the APE and ineligible for the National Register of Historic Places, will be mentioned nonetheless. The bridge was constructed in 1958 and was found not eligible for inclusion into the NRPP because of Criteria A and C (DOTD n.p.). The bridge was found not eligible for inclusion into the NRHP in a September 19, 2011 letter (G.E.C. 2011).

CHAPTER SIX:
CONCLUSIONS AND RECOMMENDATIONS

On November 24, 2015, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) carried out a Phase I cultural resources survey of 17.6 acres (ac) (7.1 hectares [ha]) on a 4.6 mi stretch of US-190 in Covington in St. Tammany Parish. This survey was conducted for G.E.C. Inc. at the request of the Department of Transportation and Development, which proposes road improvements to US-190 and Collins Blvd. A total of 66 shovel tests were dug, all of which were negative for cultural materials. It is recommended that development be authorized to proceed as planned.

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