

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

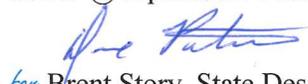
**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. # 0013282

OFFICE Design Policy & Support

Chatham County
GDOT District 5 - Jesup
Culvert Replacement with Bridge:
SR 25 @ Pipemaker Canal

DATE 11/3/2016

FROM  Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED CONCEPT REPORT**

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Hiral Patel, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Darryl VanMeter, State Innovative Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Eric Duff, State Environmental Administrator
Bill DuVall, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Monica Flournoy, State Materials and Testing Administrator
Patrick Allen, State Utilities Engineer
Richard Cobb, Statewide Location Bureau Chief
Brad Saxon, District Engineer
Troy Pittman, District Preconstruction Engineer
Dallory Rozier, District Utilities Engineer
Aghdas Ghazi, Project Manager
BOARD MEMBER - 1st Congressional District

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Type:	<u>Bridge</u>	P.I. Number:	<u>0013282</u>
GDOT District:	<u>5</u>	County:	<u>Chatham</u>
Federal Route Number:	<u>N/A</u>	State Route Number:	<u>25</u>
	Project Number:		<u>N/A</u>

SR 25/Main Street at Pipemakers Canal

Submitted for approval:

<u>Chris Marsengill</u> R. Christopher Marsengill, PE, PTOE – Moffatt & Nichol, Inc.	<u>8/18/16</u> Date
<u>Nathan Panther</u> Nathaniel Panther, PE – Chatham County, Georgia	<u>8/18/2016</u> Date
<u>Albert Shelby</u> State Program Delivery Engineer	<u>8/23/16</u> Date
<u>Rashid S. [Signature]</u> <i>C.L.B.</i> GDOT Project Manager	<u>8/19/2016</u> Date

Recommendation for approval:

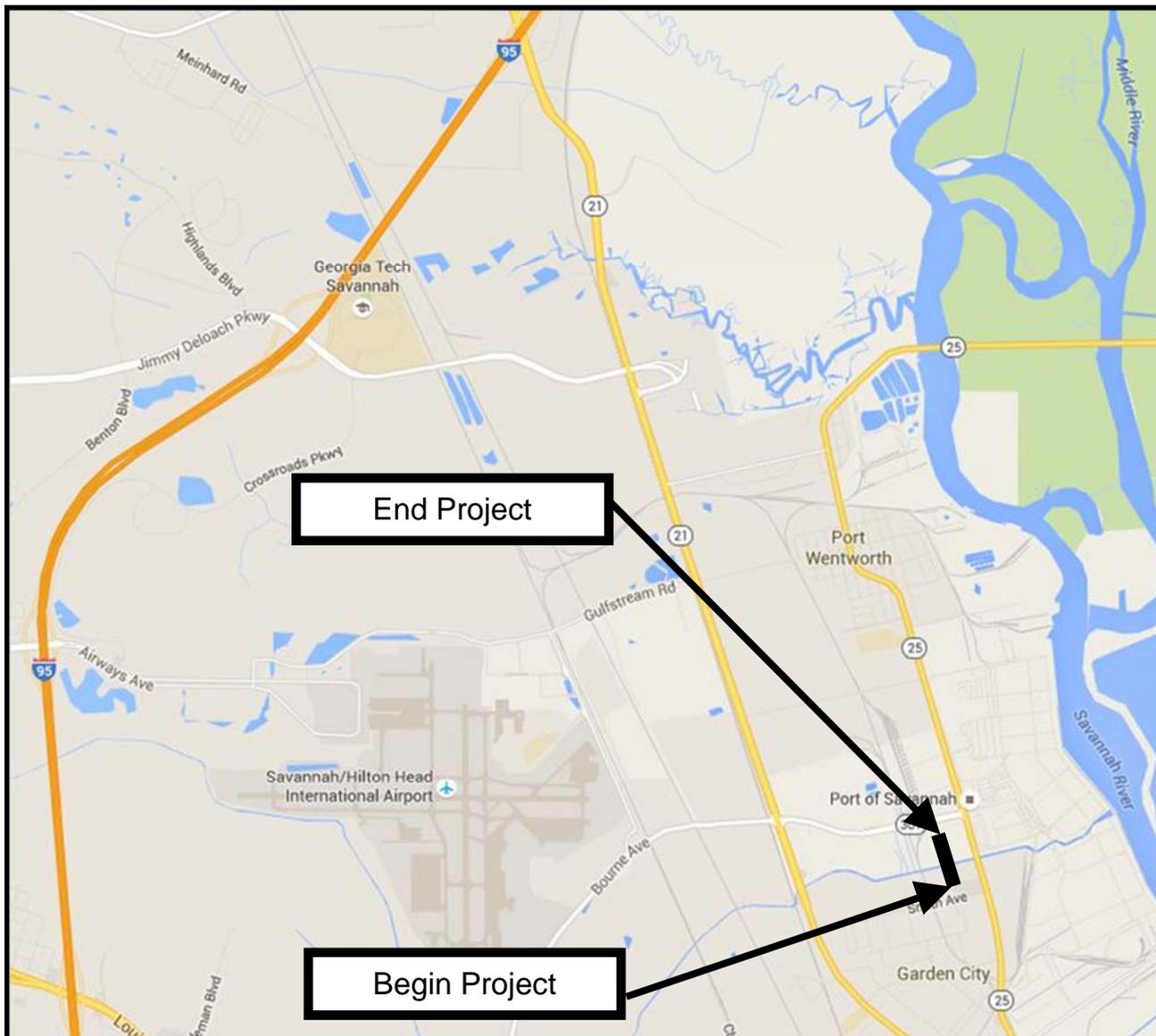
<u>ERIC DUFF*/EKP</u> State Environmental Administrator	<u>8/25/2016</u> Date
<input type="checkbox"/> Environmental Surveys for history and ecology are complete. (Surveys are complete means that the field survey has been performed and the survey report has been completed and reviewed by the Office of Environmental Services)	
<u>ERIK ROHDE*/EKP</u> State Traffic Engineer	<u>9/6/2016</u> Date
<i>FOR</i> <u>LEE UPKINS*/EKP</u> Project Review Engineer	<u>8/29/2016</u> Date
<u>BRAD SAXON*/EKP</u> State Utilities Engineer	<u>8/26/2016</u> Date
<u>BILL DUVALI*/EKP</u> District Engineer	<u>9/8/2016</u> Date
<u>State Bridge Engineer</u>	<u>Date</u>

- MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

<u>CINDY VAN DYKE*/EKP</u> State Transportation Planning Administrator	<u>8/25/2016</u> Date
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** - RECOMMENDATION ON FILE*

PROJECT LOCATION MAP



County: Chatham

PLANNING AND BACKGROUND

Project Justification Statement:

SR 25 is a north-south roadway that runs from the Florida state line near Kingsland, Georgia to the South Carolina state line near Port Wentworth, Georgia. FL SR 5 becomes GA SR 25 at the St. Mary's River. SR 25 continues northeast into Savannah and Port Wentworth, and then to the South Carolina state line where it becomes SC SR 170. This project includes a portion of SR 25 located in Garden City, Georgia, where it is locally recognized as Main Street. The entire project is located within Chatham County, and the roadway section within the project limit is comprised of one lane in each direction with rural shoulders and ditches. The SR 25 posted speed limit within the project limits is 35 MPH.

The proposed project will replace the existing SR 25 bridge over Pipemakers Canal to accommodate upstream and downstream canal conveyance improvements completed by Chatham County, including a 65-foot-wide canal section, and improve storm water conveyance through the crossing. The project will also provide a grade separation of six new rail lines and three new Garden City Terminal inter-terminal access roads proposed along the banks of the canal as part of the Port of Savannah International Multi-modal Connector. The design and construction of the Port of Savannah International Multi-modal Connector is proceeding on a separate schedule. These future tracks will be located on property owned by the Georgia Ports Authority and therefore are not owned by any railroad entity.

Pipemakers Canal is tidally influenced between its mouth at the Savannah River and a tide gate system located approximately 1,000 feet upstream of the river. The proposed project is located approximately 3,600 feet upstream of the tide gate. The Canal is a FEMA-studied waterway, and it provides drainage and flood control throughout the basin. Chatham County has completed numerous improvements along Pipemakers Canal in the interest of improving the conveyance of this critical flood control system. Even after these improvements, there are still five remaining constrictions that fall short of the County's conveyance goals. As part of this project, a hydraulic & hydrologic study will be performed to satisfy GDOT and FEMA requirements. This project will widen the existing canal at the bridge to match the previous improvements done by Chatham County and will eliminate this location as one of the five restrictions.

A review of the crash history from the GDOT Office of Safety for four previous years, May 2012 to April 2016, revealed one crash within the project limits. The limits reviewed included SR 25 from Smith Street to SR 307/Dean Forest Road. The crash history does not indicate existing typical section deficiencies.

Existing conditions:

The existing bridge has two 12-foot-wide lanes, 10-foot-wide shoulders, and a sidewalk on the east side of the bridge. The bridge was constructed in 1984 with three 30-foot-long spans and has a current sufficiency rating of 94.60. Chatham County has completed extensive upstream and downstream improvements to Pipemakers Canal adjacent to this project, and this bridge is one of five remaining constrictions in this critical flood control system. The northern terminus of the bridge is approximately 1,100 feet south of the entrance to the Georgia Ports Authority (GPA) Garden City Terminal and directly south of Gate 6 for exiting truck traffic.

Other projects in the area:

- PI 0011743 – SR 21 from I-516 to Effingham County Line – Corridor Study; Status: Scoping
- PI 0013281 – SR 21 @ Pipemakers Canal – Culvert Replacement; Status: Preliminary Engineering
- PI 0006328 – Brampton Road Conn from SR 21/SR 25 to SR 21 Spur – New Location; Status: Preliminary Engineering
- PI 0007885 – CS 602/CS 650/Grange Road from SR 21 to E OF SR 25 – Widening; Status: Construction
- Port of Savannah International Multi-modal Connector

County: Chatham

MPO: Coastal Region (CORE) MPO

TIP #: 2015-County-02

Congressional District(s): 001

Federal Oversight: PoDI Exempt State Funded Other

Projected Traffic: ADT 24 HR T: 19.7 %

Current Year (2016): 7,442 Open Year (2020): 8,030 Design Year (2040): 11,700

Traffic Projections Performed by: Coastal Engineering & Consulting, LLC

Date approved by the GDOT Office of Planning: TBD, in progress

Functional Classification (Mainline): Urban Principal Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Standard Warrants:Warrants met: None Bicycle Pedestrian Transit

- Bicycle accommodations are warranted due to new bridge reconstruction however the project is not on a designated bicycle route. Existing bicycle traffic is minimal due to the lack of bicycle travel generators near this project. A design variance is not required since current bicyclists crossing the existing bridge utilize the travel lane and will continue this operation along the new bridge.
- Pedestrian accommodations are warranted as this roadway will include curb and gutter as part of an urban border area. In addition, a parking lot located on the south side of Pipemakers Canal currently provides pedestrian connectivity across the bridge to GPA's Gate 6 on the north side of the canal.

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes**Pavement Evaluation and Recommendations**

Initial Pavement Evaluation Summary Report Required? No Yes
 Initial Pavement Type Selection Report Required? No Yes
 Feasible Pavement Alternatives: HMA PCC HMA & PCC

DESIGN AND STRUCTURAL**Description of the proposed project:**

The SR 25 project will replace the existing SR 25 bridge over Pipemakers Canal to accommodate upstream and downstream canal conveyance improvements completed by Chatham County, including a 65-foot-wide canal section, and improve storm water conveyance through the crossing. The project will also provide a grade separation of six new rail lines and three new Garden City Terminal inter-terminal access roads proposed along the banks of the canal as part of the Port of Savannah International Multi-modal Connector. The design and construction of the Port of Savannah International Multi-modal Connector is proceeding on a separate schedule. Moffatt & Nichol is responsible for the design and construction of the multi-modal project under contract to the Georgia Ports Authority (GPA).

Major Structures:

Structure	Existing	Proposed
SR 25 Bridge at Pipemakers Canal	90-ft. long (3-30' spans), two 12-ft. travel lanes with 10-ft. shoulders and a striped 6-ft. sidewalk. Sufficiency rating is 94.60.	414-ft long (4-span), two 12-ft. travel lanes with 8-ft. shoulders (on rural, west side) 12-ft. travel lanes with 7'-6" shoulder including 2-ft. gutter and 5'-6" sidewalk (on urban, east side).
Retaining walls (not including gravity walls)	None	MSE abutments and retaining walls required for both ends of the bridge.

County: Chatham

Mainline Design Features: SR 25 at Pipemakers Canal

Feature	Existing	Standard*/ Guideline	Proposed
Typical Section:			
- Number of Lanes	2	2	2
- Lane Width(s)*	12'	12'	12'
- Median Width & Type*	N/A	N/A	N/A
- Outside Shoulder Width or Border Area Width	10'	10'	10' (Urban) 8' (Rural)
- Outside Shoulder Slope*	6%	6%	6%
- Inside Shoulder Width*	N/A	N/A	N/A
- Sidewalks *	6'	5'	5' (Right Only)
- Auxiliary Lanes	12'	12'	12'
- Bike Lanes*	N/A	N/A	N/A
Posted Speed	35 mph		35 mph
Design Speed	35 mph		35 mph
Min Horizontal Curve Radius*	2292'	340'	2300'
Maximum Superelevation Rate*		6%	6%
Maximum Grade*		6%	6%
Access Control	Permitted	Permitted	Permitted
Design Vehicle	WB-62	WB-62	WB-62
Pavement Type	Asphalt	Asphalt	Asphalt

*According to current GDOT design policy if applicable

Major Interchanges/Intersections: None

Lighting required: No Yes

Off-site Detours Anticipated: No Undetermined Yes

An off-site detour will re-route all SR 25 traffic and will utilize other State Routes in the area. SR 21 will be the closest alternative route while SR 25 is closed for bridge construction. An offsite detour was selected as the best alternative after coordinating with GDOT, Chatham County, and GPA. An on-site detour was determined infeasible due to the additional impacts to utilities and property along the corridor. The proposed detour route is approximately 3.6 miles long.

Transportation Management Plan [TMP] Required: No Yes

If Yes: Project classified as: Non-Significant Significant
 TMP Components Anticipated: TTC TO PI

County: Chatham

Design Exceptions to FHWA/AASHTO Controlling Criteria anticipated:

FHWA/AASHTO Controlling Criteria	No	Undetermined	Yes	Approval Date (if applicable)
1. Design Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Lane Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Bridge Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Horizontal Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Superelevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Vertical Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Stopping Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Cross Slope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Vertical Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Lateral Offset to Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Bridge Structural Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undetermined	Yes	Approval Date (if applicable)
1. Shoulder Width	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Access Control/Median Openings	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Intersection Sight Distance	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Intersection Skew Angle	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Lateral Offset to Obstruction	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Rumble Strips	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Safety Edge	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Median Usage	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Roundabout Illumination Levels	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Complete Streets	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. ADA & PROWAG	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. GDOT Construction Standards	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. GDOT Drainage Manual	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. GDOT Bridge & Structural Manual	Bridges	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

VE Study anticipated: No Yes Completed – Date:

UTILITY AND PROPERTY

Railroad Involvement: Railroad construction is not part of this project. If rail yard lines are constructed by GPA in the future, they will be owned and located on GPA property.

Utility Involvements: AT&T, GA Power (Distribution and Transmission), Southern Natural Gas, City of Savannah Water & Sewer, and Comcast, Garden City Water & Sewer

SUE Required: No Yes Undetermined

Public Interest Determination Policy and Procedure recommended? No Yes

County: Chatham

Right-of-Way (ROW): Existing width: Varies 85-105 ft. Proposed width: 120 ft.

Required Right-of-Way anticipated: None Yes Undetermined
Easements anticipated: None Temporary Permanent Utility Other
Check all easement types that apply.

Anticipated total number of impacted parcels: 7
Displacements anticipated: Businesses: _____
Residences: _____
Other: _____
Total Displacements: 0

Location and Design approval: Not Required Required

Impacts to USACE property anticipated? No Yes Undetermined

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: None

Context Sensitive Solutions Proposed: None

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

NEPA: PCE CE EA-FONSI EIS
GEPA*: Type A Type B EER None

*A GEPA document must be prepared only for state funded projects where the project cost meets or exceeds \$100 million.

Level of Environmental Analysis:

- The environmental considerations noted below are based on preliminary desktop or screening level environmental analysis and are subject to revision after the completion of resource identification, delineation, and agency concurrence.
- The environmental considerations noted below are based on the completion of resource identification, delineation, and agency concurrence.

Water Quality Requirements:

MS4 Permit Compliance – Is the project located in a MS4 area? No Yes

Is Protected Species water quality mitigation anticipated? Yes No

County: Chatham

Environmental Permits/Variations/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/Corps Land	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Nationwide or Regional Permit
4. 33 USC 408 Decision	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. FEMA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. Other Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Is a PAR required? No Yes Completed – Date:

Environmental Comments and Information:

NEPA/GEPA: The proposed NEPA document for this project is a Categorical Exclusion (CE). With the exception of ecology, no special studies field surveys have been conducted to date.

Ecology: Field surveys have been conducted to identify wetlands, open waters and streams, and potential habitat for federal and state listed endangered species. Informal Section with US Fish and Wildlife Service and coordination under the Fish and Wildlife Coordination Act (FWCA) is anticipated.

History: A Historic Resources Survey Report will be prepared and submitted to OES and SHPO for concurrence. Field surveys and background research will be conducted. It is anticipated that an Assessment of Effects report will be required for this project.

Archeology: An Archaeological field survey will be conducted to determine if any cemeteries or other publicly documented archaeological resources are present, and the possible effects to archeological resources are present, and the possible effects to archeological resources. It is anticipated that a Phase 1 will be required. A Phase 2 may be required, since the area has known documented archaeological resources.

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? No Yes
 Is the project located in an Ozone Non-attainment area? No Yes
 Is a Carbon Monoxide hotspot analysis required? No Yes

Noise Effects: Noise study will be conducted to include receptors within 500 feet of the project limits.

Public Involvement: A Public Information Open House is anticipated. An off-site detour is anticipated, and the detour meeting will be combined with the PIOH.

County: Chatham

Major stakeholders:

Chatham County Public Works
 Georgia Ports Authority
 Chatham County EMS
 Garden City, City Manager
 Coastal Georgia Regional Commission
 Georgia Emergency Management Agency
 Chatham Emergency Management Agency
 Army Corps of Engineers

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: No construction staging issues are anticipated because SR 25 will be closed during construction. With the significant vertical adjustments required, the existing transmission poles will likely require relocation. Coordination with utility owners is in progress to determine the extent of relocations required to accommodate the elevated roadway and bridge construction.

Early Completion Incentives recommended for consideration: No Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Initial Concept Meeting: August 15, 2016

Concept Meeting: Not required

Other coordination to date: 3/29/16 – Kickoff Meeting for SR 25 @ Pipemakers Canal with Chatham County

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Moffatt & Nichol
Design	Moffatt & Nichol
Right-of-Way Acquisition	Chatham County
Utility Coordination (Preconstruction)	Moffatt & Nichol
Utility Relocation (Construction)	Utility Owners
Letting to Contract	Chatham County
Construction Supervision	Chatham County
Providing Material Pits	Contractor
Providing Detours	Contractor
Environmental Studies, Documents, & Permits	CALYX Engineers & Consultants, Sligh Environmental, and Brockington & Associates
Environmental Mitigation	Chatham County
Construction Inspection & Materials Testing	Chatham County

County: Chatham

Project Cost Estimate Summary and Funding Responsibilities:

	PE Activities		ROW	Reimbursable Utilities	CST*	Total Cost
	PE Funding	Section 404 Mitigation				
Funded By	Chatham County	Chatham County	Chatham County	Chatham County	Chatham County	
\$ Amount	\$758,100	\$0	\$676,000	\$0	\$7,480,420	\$8,914,520
Date of Estimate	6/22/16	9/22/16	9/22/16	9/20/16	9/20/16	

*CST Cost includes: Construction, Engineering and Inspection, Contingencies and Liquid AC Cost Adjustment.

ALTERNATIVES DISCUSSION**Alternative selection:**

Preferred Alternative: SR 25 Bridge at Pipemakers Canal			
Estimated Property Impacts:	7	Estimated Total Cost:	\$8,914,520
Estimated ROW Cost:	\$676,000	Estimated CST Time:	24 Months
Rationale: The four-span bridge will provide proper horizontal and vertical clearance for the future intermodal expansion between Chatham Yard and Mason Yard. The bridge opening will accommodate the upstream and downstream canal conveyance improvements completed by Chatham County. The span arrangement is a more economical beam design than a longer three-span arrangement.			

No-Build Alternative: No Build			
Estimated Property Impacts:	0	Estimated Total Cost:	\$0.00
Estimated ROW Cost:	\$0.00	Estimated CST Time:	0 months
Rationale: The existing bridge opening will not accommodate the upstream and downstream canal conveyance improvements completed by Chatham County.			

On-Site Detour Alternative: On Site Detour			
Estimated Property Impacts:	0	Estimated Total Cost:	\$0.00
Estimated ROW Cost:	\$0.00	Estimated CST Time:	0 months
Rationale: An on-site detour was determined infeasible due to a considerable increase in cost. The additional impacts to utility relocations and commercial property owners along the corridor would be increased with this option. Also, staging construction with an onsite detour would warrant more property relocations/displacements.			

County: Chatham

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical sections
3. Detour Plan
4. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection and Contingencies
 - b. Completed Liquid AC Cost Adjustment forms
 - c. Right-of-Way (TBD)
 - d. Utilities (TBD)
 - e. Environmental Mitigation (TBD)
5. Summary of TE Study
6. S I & A Report
7. Concept Level Hydrology Study for MS4 Permit
 - a. MS4 Concept Report Summary
 - b. MS4 Concept Level Design Spreadsheet
 - c. MS4 Drainage Area Layout
8. Minutes of Concept meetings – August 15, 2016
9. PFA
10. Concept Utility Report

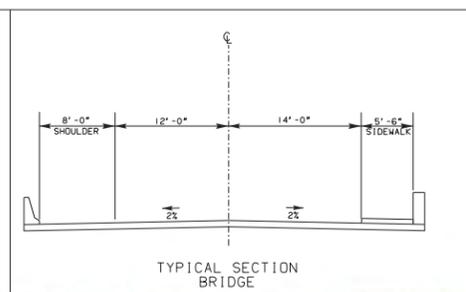
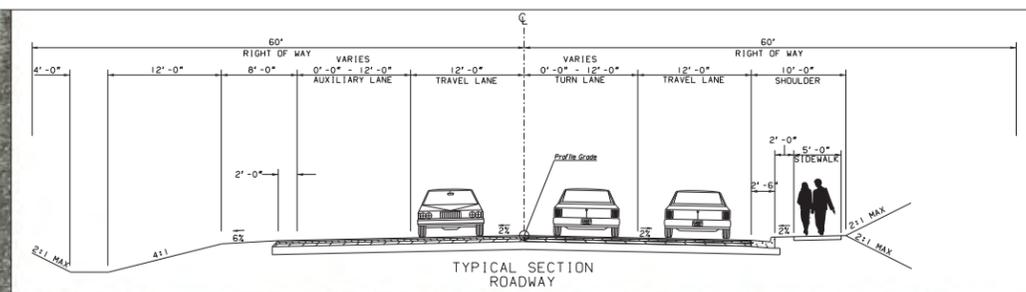
APPROVALS

Concur: *Heidi Patel*
Director of Engineering

Approve: *Margaret B. Puckle*
Chief Engineer

10/27/16
Date

- LEGEND**
- BRIDGE
 - ROADWAY CENTERLINE
 - ASPHALT
 - EXIST R/W
 - REQD R/W
 - MSE WALL
 - ESA BOUNDARY
 - F- FILL LIMITS
 - C- CUT LIMITS

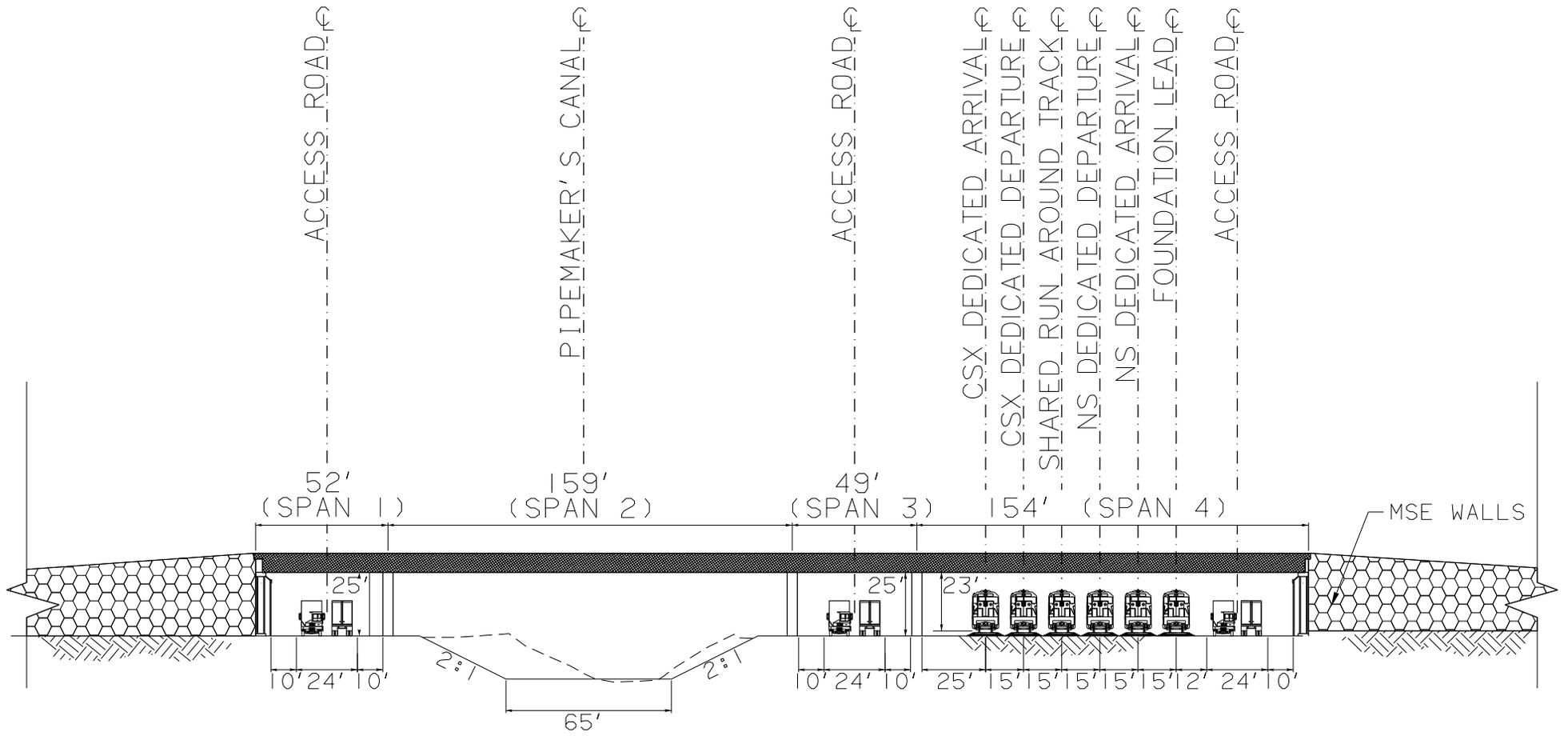


**CONCEPTUAL LAYOUT
PIPEMAKERS CANAL
IMPROVEMENTS AT
SR 25**



moffatt & nichol

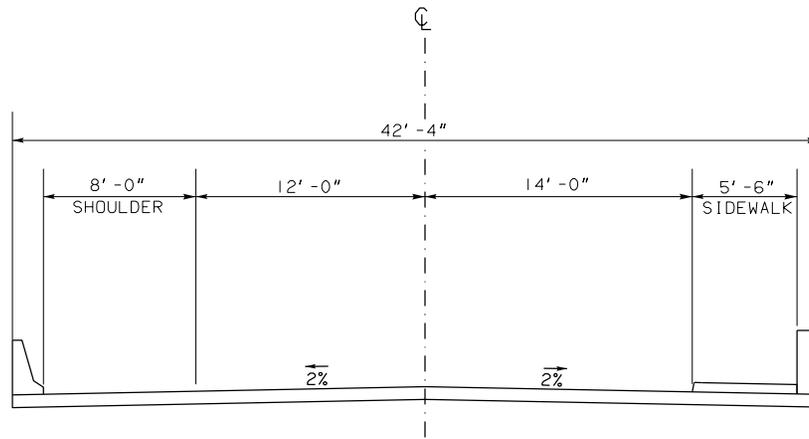




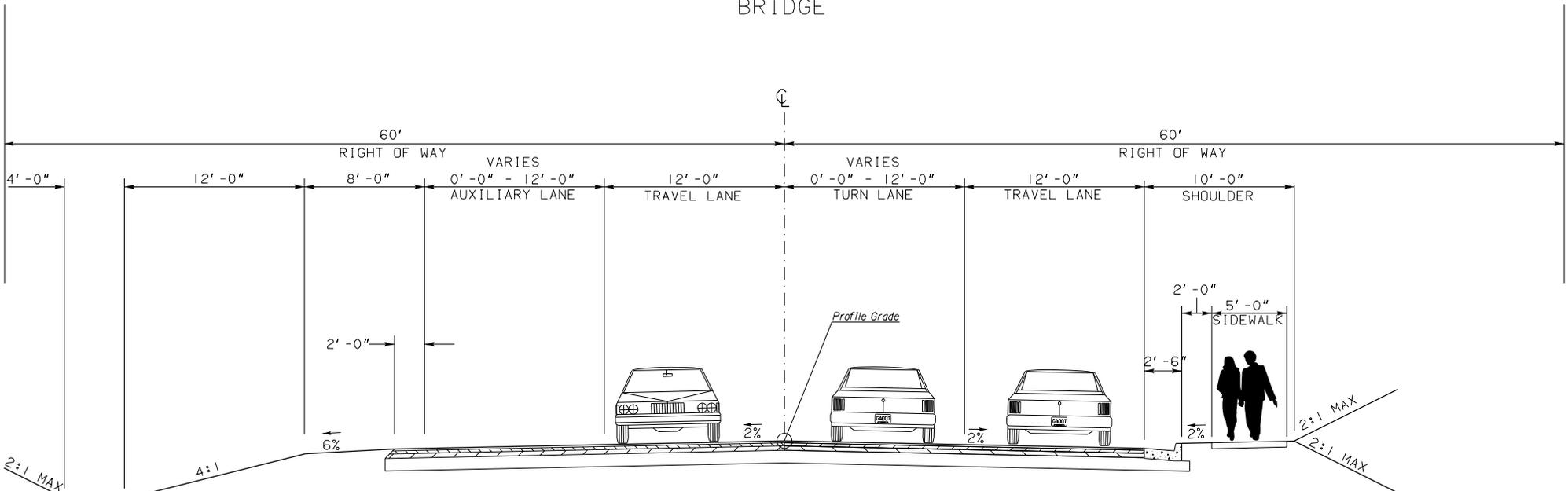
TYPICAL SECTION
MULTIMODAL

SCALE IN FEET

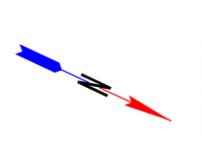




TYPICAL SECTION
BRIDGE



TYPICAL SECTION
ROADWAY



SR 25 OFF-SITE DETOUR



moffatt & nichol

SCALE IN FEET



SR 25 DETOUR LENGTH

SR 21	2.49 MI
SR 307	1.08 MI
TOTAL MILES	3.57 MI

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

OFFICE

Project Description

DATE

FROM

TO Lisa L. Myers, State Project Review Engineer

SUBJECT REVISIONS TO PROGRAMMED COSTS

MGMT LET DATE

PROJECT MANAGER

MGMT ROW DATE

PROGRAMMED COST (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASON FOR COST INCREASE

CONTINGENCY SUMMARY

Construction Cost Estimate: \$

(Base Estimate from CES)

Contingency: \$

(Base Estimate x %)

See Contingency Table in GDOT Policy 3A-9 for %

Total Liquid AC Adjustment: \$

(From Attached Worksheet)

Construction Total: \$

REIMBURSABLE UTILITY COST

Utility Owner

Reimbursable Cost

Attachments:

0230	163-0240	TN	MULCH	30	312.46	9373.84
0235	163-0300	EA	CONSTRUCTION EXIT	2	1765.00	3530.00
0240	163-0527	EA	CNST/REM RIP RAP CKDM, STN P RIPRAP/SN BG	8	363.28	2906.29
0245	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	1700	0.73	1247.39
0250	165-0041	LF	MAINT OF CHECK DAMS - ALL TYPES	80	1.82	146.39
0255	165-0101	EA	MAINT OF CONST EXIT	2	437.64	875.28
0260	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2	442.40	884.82
0265	167-1500	MO	WATER QUALITY INSPECTIONS	18	966.91	17404.55
0270	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	3400	3.12	10612.01
0275	627-1000	SF	MSE WALL FACE, 0 - 10 FT HT, WALL NO - 1 MSE WALL 0-10 FT	3600	26.30	94708.87
0280	627-1010	SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 1 MSE WALL 10-20 FT	11900	41.03	488306.27
0285	627-1020	SF	MSE WALL FACE, 20 - 30 FT HT, WALL NO - 1 MSE WALL 20+ FT	20200	50.00	1010000.00
0290	627-1100	LF	COPING A, WALL NO - 1	2200	69.78	153528.47
0295	627-1160	LF	TRAFFIC BARRIER H, WALL NO - 1	2100	171.52	360200.78
0300	627-1180	CY	ADDITIONAL MSE BACKFILL	2000	35.90	71816.70

ITEM TOTAL						6484230.13
INFLATED ITEM TOTAL						6484230.13

TOTALS FOR JOB 0013282

ESTIMATED COST:						6484230.11
CONTINGENCY PERCENT (15.0):						972634.52
ESTIMATED TOTAL:						7456864.63

PROJ. NO.

9209

CALL NO.

P.I. NO.

0013282

DATE

7/29/2016

INDEX (TYPE)

REG. UNLEADED

Jun-16 \$ 2.126

DIESEL

\$ 2.341

LIQUID AC

\$ 348.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)				23072.4	\$	23,072.40
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	556.80		
Monthly Asphalt Cement Price month project let (APL)			\$	348.00		
Total Monthly Tonnage of asphalt cement (TMT)				110.5		

ASPHALT	Tons	%AC	AC ton
Leveling	110	5.0%	5.5
12.5 OGFC		5.0%	0
12.5 mm	460	5.0%	23
9.5 mm SP		5.0%	0
25 mm SP	1100	5.0%	55
19 mm SP	540	5.0%	27
	2210		110.5

BITUMINOUS TACK COAT

Price Adjustment (PA)			\$	475.31	\$	475.31
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	556.80		
Monthly Asphalt Cement Price month project let (APL)			\$	348.00		
Total Monthly Tonnage of asphalt cement (TMT)				2.276403489		

Bitum Tack

Gals	gals/ton	tons
530	232.8234	2.27640349

PROJ. NO.

9209

CALL NO.

P.I. NO.

0013282

DATE

7/29/2016

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)						0	\$	-
Monthly Asphalt Cement Price month placed (APM)		Max. Cap	60%	\$	556.80			
Monthly Asphalt Cement Price month project let (APL)				\$	348.00			
Total Monthly Tonnage of asphalt cement (TMT)					0			

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

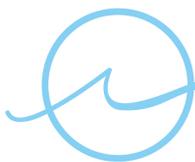
TOTAL LIQUID AC ADJUSTMENT							\$	23,547.71
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TRAFFIC ENGINEERING STUDY

SR 25/Main Street at Pipemakers Canal

PI No. 0013282

Chatham County, GA



COASTAL ENGINEERING

AND CONSULTING

May 2016

<i>Title</i>	
SR 25/Main Street at Pipemakers Canal PI No. 0013282 Chatham County, GA	
<i>Prepared For</i>	<i>Date</i>
Chatham County	May 31, 2016
<i>And</i>	
Moffatt & Nichol 2 East Bryan Street, Suite 501 Savannah, GA 31401	
<i>Prepared By</i>	<i>Report By</i>
Coastal Engineering & Consulting 35 Barnard Street, Suite 300 Savannah, GA 31401 (912) 210-5383	C. Scott Burns, P.E.
This study was conducted to substantiate a proposed two-lane bridge replacement for SR 25/Main Street over Pipemakers Canal. Based on the results of the study, maintaining the existing two-lane typical section is recommended.	

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LIST OF APPENDICES

A – EXISTING TRAFFIC DATA

Introduction

The purpose of this study is to provide traffic projections and capacity analysis to evaluate improvements for SR 25/Main Street bridge replacement at the Pipemakers Canal in Chatham County, Georgia. Figure 1 shows the project location.

FIGURE 1: PROJECT LOCATION



Existing Conditions

Existing Geometry

State Route (SR) 25 is a north-south roadway that runs from the Florida state line near Kingsland to the South Carolina state line near Port Wentworth. Florida 5 becomes SR 25 at the St. Mary's River. The roadway continues northeast towards Savannah and into Port Wentworth, continuing to the South Carolina state line where it becomes South Carolina 170. This study analyzes a portion of SR 25, locally recognized as Main Street, located in Chatham County. In the project limits, the roadway consists of one lane in each direction with rural shoulders and ditches throughout. The posted speed limit in this area is 35 MPH.

The proposed project will replace the existing bridge, provide additional conveyance for the canal, and grade separate a planned rail crossing for the new rail line proposed along the northern bank of the canal.

Existing Daily Volumes

Existing daily traffic volumes, speed, and classification data were collected at two locations along the SR 25/Main Street corridor from Tuesday, March 29, 2016 to Thursday, March 31, 2016. The ADT for the project location was determined by dividing the total vehicles by the number of days that the counts were taken. Table 1 summarizes existing ADTs along SR 25/Main Street at Pipemakers Canal. Table 2 summarizes the existing speed and classification data along the SR 25/Main Street at this location.

TABLE 1: EXISTING ADT

Location	Northbound	Southbound
SR 25 at Pipemakers Canal	3,497	3,945

TABLE 2: EXISTING DAILY VOLUME DATA

	Northbound	Southbound
Directional Split %	47.0	53.0
85 th Percentile Speed (MPH)	46.0	47.5
Truck % - SU	8.4	15.0
Truck % - COMB.	6.7	7.3
Truck % - Total	15.1	22.3

Existing Peak Hour Volumes

Existing peak hour count data was collected at SR 25/Main Street. The counts are detailed below.

TABLE 3: EXISTING PEAK HOUR VOLUMES

Peak Hour	Northbound	Southbound
07:15 – 08:15 AM	247	467
05:00 – 06:00 PM	566	337

Horizon Year Traffic Projections

This section contains traffic projections for the future years to be evaluated.

- Construction Year – when the construction is expected to be complete (2020)
- Design Year – 20 years after construction (2040)

Historic Traffic Data

The process used to project future traffic uses an examination of past trends along with outputs from models of future land use and travel demand.

The past traffic data was examined at nearby locations where GDOT periodically conducts traffic counts. GDOT count station TC 0510241 (Figure 3) is a short term portable counter.

Table 4 summarizes the average annual daily traffic recorded at this location for each year from 2010 to 2016.

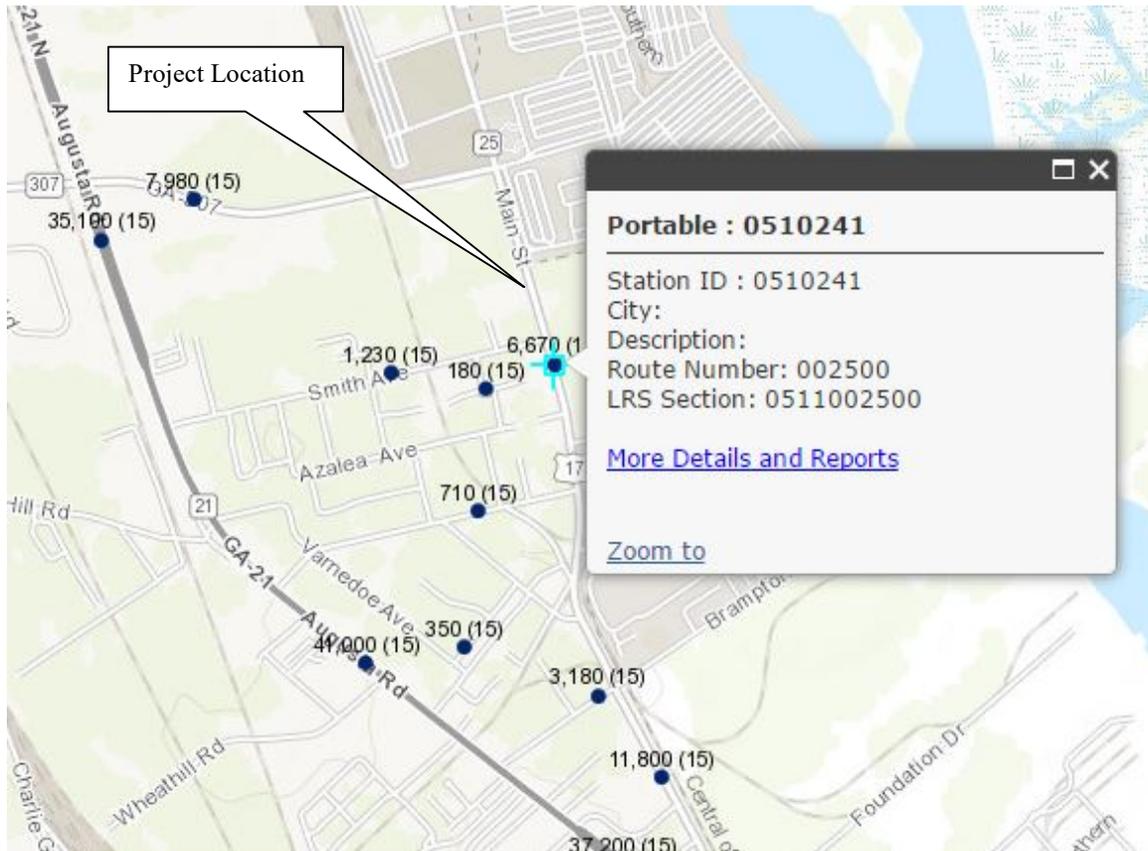
TABLE 4: HISTORIC TRAFFIC DATA

Year	AADT	ADT from GDOT Survey
2016	N/A**	8,118
2015	6,670	7,332
2014	6,180*	N/A**
2013	6,180	7,033
2012	4,880*	N/A**
2011	4,940	5,416
2010	6,440	7,089

* Volumes were estimated by GDOT.

** No Volumes provided during this period.

FIGURE 3: GDOT COUNT STATION



In addition to the AADT data provided by GDOT, ADT counts are periodically performed for a period of two days. These values are available in the GDOT Survey data for each counter location and will serve as the base year for calculation of the growth rate (r). GDOT approved counts at this location in 2010, 2011, 2013, 2015 and 2016. The values used were approved GDOT counts recorded in April 2013 provided in their survey data for the count station and the volumes collected as a part of this study.

$$7,442 = 7,033 * (1 + r)^3$$

Based on this information, the growth rate was calculated to be 1.90%. This value will be used to determine the projected traffic for the construction and design years.

Growth Rate Calculation

Volume projections were developed by applying the growth rate factors discussed below to the existing data.

1. Construction Year (from 2016 to 2020)

$$F_{2020} = (1 + r)^n = (1+0.019)^4 = 1.08$$

Since 2020 is four (4) years away from now, $n = 4$

Note: This factor will be applied to the existing volumes to project Construction Year volumes.

2. Design Year (from 2016 to 2040)

$$F_{2040} = (1 + r)^n = (1+0.019)^{24} = 1.57$$

Since 2040 is twenty-four (24) years away from now, $n = 24$

Note: This factor will be applied to the existing volumes to project Design Year Volumes.

Projected Changes in Truck Percentages

Although GDOT data demonstrates a decrease in truck percentage over the last five (5) years, the field-recorded truck percentages reported in Table 2 will be used for both the Construction Year and Design Year. Based on the presence of industrial developments along and near the SR 25 corridor, including the Georgia Ports Authority, a reduction in the truck percentage is not realistic.

Traffic Projections, Construction Year (2020)

Projected ADT volumes were estimated by applying the previously determined growth factor to the existing ADT volumes. The SR 25/Main Street projected volumes for Construction Year (2020) are shown in Table 5.

Construction Year (2020) Design Hourly Volumes

Design Hourly volumes were estimated by applying the previously determined growth factor to the existing traffic for the corridor. The projected volumes for Construction Year (2020) are shown in Table 6. The AM and PM peak hours, 7:15 AM to 8:15 AM and 5:00 PM to 6:00 PM respectively, were determined from the count data.

Traffic Projections, Design Year (2040)

Projected ADT volumes were estimated by applying the previously determined growth factor to the existing ADT volumes. The SR 25/Main Street projected volumes for Design Year (2040) are shown in Table 5.

Design Year (2040) Directional Hourly Volumes

Projected directional hourly volumes were estimated by applying the previously determined growth factor to the existing Peak Hour volumes. The projected volumes for Design Year (2040) are shown in Table 6 for SR 25/Main Street.

TABLE 5: AVERAGE DAILY TRAFFIC (ADT)

Year	Northbound	Southbound
2016 Existing	3,497	3,945
2020 Construction	3,770	4,260
2040 Design	5,500	6,200

TABLE 6: DIRECTIONAL HOURLY VOLUMES

Peak Hour	Northbound	Southbound
2016 AM	247	467
2016 PM	566	337
2020 AM	270	510
2020 PM	610	370
2040 AM	390	740
2040 PM	890	530

Directional Split

The directional split for the daily volumes as well as the AM/PM DHV are provided in Table 7 for SR 25/Main Street.

TABLE 7: DIRECTIONAL SPLIT PERCENTAGES

Peak Hour	Northbound	Southbound
ADT	47.0%	53.0%
AM DHV	34.6%	65.4%
PM DHV	62.7%	37.3%

Capacity Analysis

GDOT provides guidelines for capacity of multiple typical sections for use in design. Based on these guidelines, the ideal capacity should first be reviewed. The ideal capacity of a two lane roadway is 1,700 vehicles per hour (vph) in each direction. The projected roadway volumes do not exceed this empirical ideal capacity, and this indicates that the existing two-lane typical section is acceptable.

HCS 2010 software was used to further analyze the project’s typical section, and the results are presented in Table 8.

TABLE 8: HCS 2010 OUTPUT DATA

	Northbound	Southbound
Directional Flow Rate	1,011 pc/h	613 pc/h/ln
Percent Time Spent Following	88.5%	71.1%
Level of Service	D	D

Based on the HCS 2010 software, the directional flow rate of Northbound SR 25/Main Street is 1,011 pc/h, which is less than the ideal capacity of 1,700 vph in each direction. The HCS 2010 uses the percentage of time spent following to determine the level of service instead of the capacity. In the study limits, passing is not allowed due to the Georgia Ports Authority access gate and the bridge over the Pipemakers Canal.

Crash History

Crash history along SR 25/Main Street was reviewed for the past four (4) years (May 2012 to April 2016) to determine if the crash history warrants additional improvements for the corridor as a part of the project. The proposed limits of review were SR 307/Dean Forest Road to Smith Street. After review of the crash data for the previous four (4) years, no crashes have occurred in the study limits. Based on this information, the crash data does not warrant improvements to the proposed typical section.

Recommendation of Improvements

Based on the projected traffic data, capacity analysis and the proposed DHV, the existing two-lane typical section should be maintained for SR 25/Main Street at Pipemakers Canal.

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:051-0052-0

Chatham

SUFF. RATING: 94.60

Location & Geography

Structure ID: 051-0052-0
 200 Bridge Information: 06
 *6A Feature Int: PIPEMAKER CANAL
 *6B Critical Bridge:
 *7A Route No Carried: SR00025
 *7B Facility Carried: OCEAN HIGHWAY
 9 Location: CITY OF GARDEN CITY
 2 Dot District: 4841500000 - D5 District Five Jesup
 207 Year Photo: 2012
 *91 Inspection Frequency: 24 Date: 08/12/2014
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 00 Date: 02/01/1901
 92C Other Spc. Insp Freq: 00 Date: 02/01/1901
 * 4 Place Code: 32048
 *5 Inventory Route(O/U): 1
 Type: 3 - State
 Designation: 1- Mainline
 Number: 00025
 Direction: 0. Not applicable
 *16 Latitude: 32.0000- 7.4286 HMMS Prefix:SR
 *17 Longitude: 81.0000- 9.0504 HMMS Suffix:00
 MP: 16.45
 98 Border Bridge: % Shared:00
 99 ID Number: 0000000000000000
 *100 STRAHNET: 2- The Feature is on a Non-Interstate STRAHNET route
 12 Base Highway Network:
 13A LRS Inventory Route: 511002500
 13B Sub Inventory Route: 0.00
 *101 Parallel Structure: N. No parallel structure exists
 *102 Direction of Traffic: 2- Two Way
 *264 Road Inventory Mile Post: 016.45
 *208 Inspection Area: Area 05 Initials: KAS
 Engineer's Initials: bcn
 * Location ID No: 051-00025D-016.45N

*104 Highway System: 1-Inventory Route is on the NHS
 *26 Functional Classification: 14- Urban - Other Principal Arterial
 *204 Federal Route Type: F - Primary. No: 00641
 105 Federal Lands Highway: 0. Not applicable
 *110 Truck Route: 0
 206 School Bus Route: 1
 217 Benchmark Elevation: 0009.64
 218 Datum: 2- Mean Sea Level
 *19 Bypass Length: 4
 *20 Toll: 3- On a Free Road or Non-Highway
 *21 Maintenance: 01-State Highway Agency.
 *22 Owner: 01-State Highway Agency.
 *31 Design Load: 6- HS 20 + Mod (2-24,000# Axles @ 4ft Ctrs., when they govern)
 37 Historical Significance: 5- Not eligible for the National Register of Historic Places
 205 Congressional District: 012
 27 Year Constructed: 1984
 106 Year Reconstructed: 0
 33 Bridge Median : 0-None
 34 Skew: 0
 35 Structure Flared: No
 38 Navigation Control: 0- Navigation is not controlled by an Agency
 213 Special Steel Design: 0- Not applicable or other
 267 Type of Paint: 0- Not Applicable.
 *42 Type of Service On: 5-Highway-Pedestrian
 Type of Service Under: 5-Waterway
 214 Movable Bridge: 0
 203 Type Bridge: D - Concr - O. Concrete O. Concrete- O. Concrete
 259 Pile Encasement 3
 *43 Structure Type Main: 1-Concrete 4-Tee Beam
 45 No.Spans Main: 3
 44 Structure Type Appr: 0- Other 0- Other
 46 No Spans Appr: 0
 226 Bridge Curve Horz 0 Vert: 0.00
 111 Pier Protection N - Navigation Control item coded 0, or Feature not a waterway
 107 Deck Structure Type:
 108 Wearing Structure Type:
 Membrane Type:
 Deck Protection:

Signs & Attachments

225 Expansion Joint Type: 02- Open or sealed concrete joint (silicone sealant)
 242 Deck Drains: 1- Open Scuppers.
 243 Parapet Location: 0- None present.
 Height: 0.00
 Width: 0.00
 238 Curb Height: 0
 Curb Material: 0- None.
 239 Handrail 9- Concrete New 9- Concrete
 *240 Median Barrier Rail: Jarsav Type Barrier New Jarsav
 0- None.
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 230 Guardrail Loc. Dir. Rear: 6- Both sides, approach and continuous.
 Fwrd: 6- Both sides, approach and continuous.
 Oppo. Dir. Rear: 0- None.
 Oppo. Fwrd: 0- None.
 244 Approach Slab 3- Forward and Rear.
 224 Retaining Wall: 0- None.
 233Posted Speed Limit: 45
 236 Warning Sign: 0.00
 234 Delineator: 1.00
 235 Hazard Boards: 0
 237 Utilities Gas: 00- Not Applicable
 Water: 00- Not Applicable
 Electric: 00- Not Applicable
 Telephone: 00- Not Applicable
 Sewer: 00- Not Applicable
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0- Not
 *248 County Continuity No.: 00

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:051-0052-0

Programming Data		Measurements:		Inventory Rating			
201 Project No:	BRF-064-1 (24)	*29 ADT	4940	Year:2011	65 Inventory Rating Method:	1-Load Factor (LF)	
202 Plans Available:	4- Plans in Infolmage.	109 %Trucks:	13		63 Operating Rating Method:	1-Load Factor (LF)	
249 Prop Proj No:	000000000000000000000000	* 28 Lanes On:	2	Under:0	66 Inventory Type:	2 - HS loading. Rating: 56	
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 - HS loading. Rating: 93	
251 PI Number:	0000000	* 48 Max. Span Length	30		231 Calculated Loads:		
252 Contract Date:	02/01/1901	* 49 Structure Length:	90		H-Modified:	21 0	
260 Seismic No:	00000	51 Br. Rwdy. Width	44.00		HS-Modified:	30 0	
75 Type Work:	0- Not Applicable 0- Initial Inventory	52 Deck Width:	47.20		Type 3:	33 0	
94 Bridge Imp. Cost:	\$352	* 47 Tot. Horiz. Cl:	44		Type 3s2:	40 0	
95 Roadway Imp. Cost:	\$35	50 Curb / Sidewalk Width	0.00 / 5.00		Timber:	37 0	
96 Total Imp Cost:	\$527	32 Approach Rdwy. Width	23		Piggyback:	40 0	
76 Imp Length:	0	*229 Shoulder Width:			261 H Inventory Rating:	35	
97 Imp Year:	2013	Rear Lt:	2.00	Type:8 - Rt:2	262 H Operating Rating	62	
114 Furure ADT:	7410 Year:2031	Fwd. Lt:	6.00	Type:2 - Rt:6	67 Structural Evaluation:	7	
Hydraulic Data		Pavement Width:			58 Deck Condition:	7 - Good Condition	
215 Waterway Data:		Rear:		23.00	Type: 2- Asphalt.	59 Superstructure Condition:	7 - Good Condition
High Water Elev:	0000.0 Year:1900	Fwd:		23.00	Type: 2- Asphalt.	* 227 Collision Damage:	
Flood Elev:	0014.0 Freq:100	Intersaction Rear:		0	Fwd: 1	60A Substructure Condition:	7 - Good Condition
Avg Streambed Elev:	0000.0	36 Safety Features Br. Rail:		1- Meets current standards		60B Scour Condition:	8 - Very Good Condition
Drainage Area:	00023	Transition:		2- Inspected feature meets acceptable construction date standards.		60C Underwater Condition	N - Not Applicable
Area of Opening:	000641	App. G. Rail:		1- Meets current standards		61 Channel Protection Cond.:	8
113 Scour Critical	U. No Load Rating; no scour critical data entered.	App. Rail End:		2- Inspected feature meets acceptable construction date standards.		68 Deck Geometry:	7
216 Water Depth:	5 Br.Height:12.5	53 Minimum Cl. Over:		99'99"		69 UnderClr. Horz/Vert:	N
222 Slope Protection:	1	Under:		N- Feature not a highway or railroad. 0.00'0.00"		72 Appr. Alignment:	8-No reduction of vehicle operating speed required.
221 Spur Dikes Rear	0 Fwd:0	*228 Minimum Vertical Cl				62 Culvert:	N - Not Applicable
219 Fender System	0- None.	Act. Odm Dir.:		99 ' 99"		Posting Data	
220 Dolphin:		Oppo. Dir:		99' 99"		70 Bridge Posting Required	5. Equal to or above legal loads
223 Culvert Cover:	000	Posted Odm. Dir:		00' 00"		41 Struct Open, Posted, CL:	A. Open, no restriction
Type:	0- Not Applicable	Oppo. Dir:		00'00 "		* 103 Temporary Structure:	0
No. Barrels:	0	55 Lateral Undercl. Rt:		N- Feature not a highway or railroad. 0.00		232 Posted Loads	
Width:	0.00 Height:0	56 Lateral Undercl. Lt:		0.00		H-Modified:	00
Length:	0 Apron:0	*10 Max Min Vert Cl:		99' 99" Dir:0		HS-Modified:	00
*265 U/W Insp. Area	0 Diver:ZZZ	39 Nav Vert Cl:		000 Horiz:0		Type 3:	00
*Location ID No:	051-00025D-016.45N	116 Nav Vert Cl Closed:		000		Type 3s2:	00
		245 Deck Thickness Main		8.00		Timber:	00
		Deck Thick Approach:		0.00		Piggyback	00
		246 Overlay Thickness:		0.00		253 Notification Date:	02/01/1901
		212 Year Last Painted:		Sup:0000 Sub:0000		258 Fed Notify Date:	02/01/1901

MS4 Concept Report Summary

Attach the following checklist information to the Concept Report Template:

Is there a Project Level Exclusion that applies to this project: No Yes

If yes, please indicate which of the following exclusions apply:

- Roadways that are not owned or operated (maintained) by GDOT may not require post-construction BMPs. Coordinate with the appropriate local government or entity to determine stormwater management requirements.
- The project location is not within a designated MS4 area.
- Maintenance and safety improvement projects whereby the sites are not connected and disturbs less than one acre at each individual site. This includes projects such as repaving, shoulder building, fiber optic line installation, sign addition, and sound barrier installation.
- Projects that have their environmental documents approved or right-of-way plans submitted for approval on or before June 30th, 2012.
- Road projects that disturb less than 1 acre or for site development projects that add less than 5,000 ft² of impervious area.

Drainage Area Summary									
Outfall Area	Pre-Development			Post-Development			Water Quality Volume (Cubic Feet)	Channel Protection Volume (Cubic Feet)	Required Detention Volume (Cubic Feet)
	Tc	Weighted CN	Area (Acres)	Tc	Weighted CN	Area (Acres)			
1	5	91	0.79	5	78	0.23	50	N/A	N/A
2	5	82	0.93	5	90	1.61	351	8877	11272
3	5	85	1.06	5	74	0.35	76	N/A	N/A
4	5	82	1.45	5	88	1.94	423	7048	14278
5	5	74	0.16	5	74	0.16	35	0	259

BMP Selection and Feasibility Summary					
Outfall Area	Outfall Level Exclusion?		BMP Selected	Is the BMP Feasible?	
	Y/N	Exclusion No.		Y/N	Infeasibility Criteria No.
1	Y	6	N/A		
2	N		Dry Enhanced Swale	Y	
3	Y	3, 6	N/A		
4	N		Dry Enhanced Swale	Y	
5	Y	4, 6	N/A		

Project Name: SR 25 at Pipemakers
 Project Number: 0013282
 Calculated By: ARG
 Date: 8/18/2016
 Outfall Area ID: Outfall Area 1

Outfall Area Information

Denotes Input Cell

Rainfall Depths	NOAA		
Outfall Area Pre (A_{Pre})	0.79 ac	Pond/Swamp Area Percentage	0.0 %
Outfall Area Post (A_{Post})	0.23 ac	Pond/Swamp Adjustment Factor (F_p)	1.00
SCS Curve Number Pre (CN_{Pre})	91		
SCS Curve Number Post (CN_{Post})	78		
Time of Concentration (T_c)	5.0 min		

Water Quality Volume Calculation

$$R_V = 0.05 + 0.009(I) \qquad WQ_V = \frac{1.2R_V A}{12}$$

Percent Impervious Pre (I_{Pre})	0.00 %	
Percent Impervious Post (I_{Post})	0.00 %	
Runoff Coefficient (R_V)	0.050	(Equals R_V Post; New Construction)
Water Quality Volume (WQ_V)	0.001 ac-ft	
Water Quality Volume (WQ_V)	50 cf	

Required Volume Storage Summary

	CP _v /1-Year (cf)	25-Year (cf)	100-Year (cf)
Post-Development	-6494	-194555	-233914

Channel Protection Volume (CP_v) Control Required? No (1-year peak flow less than 2 cfs)

Peak Flow Summary

	1-Year (cfs)	25-Year (cfs)	100-Year (cfs)
Pre-Development	3.60	9.28	12.97
Post-Development	0.63	2.11	3.13
Change (Post - Pre)	-2.97	-7.17	-9.84
Percent Change	-82.50%	-77.26%	-75.87%

Project Name: SR 25 at Pipemakers
 Project Number: 0013282
 Calculated By: ARG
 Date: 8/18/2016
 Outfall Area ID: Outfall Area 2

Outfall Area Information

Denotes Input Cell

Rainfall Depths	NOAA		
Outfall Area Pre (A_{Pre})	0.93 ac	Pond/Swamp Area Percentage	0.0 %
Outfall Area Post (A_{Post})	1.61 ac	Pond/Swamp Adjustment Factor (F_p)	1.00
SCS Curve Number Pre (CN_{Pre})	82		
SCS Curve Number Post (CN_{Post})	90		
Time of Concentration (T_c)	5.0 min		

Water Quality Volume Calculation

$$R_V = 0.05 + 0.009(I)$$

$$WQ_V = \frac{1.2R_V A}{12}$$

Percent Impervious Pre (I_{Pre})	0.00 %	
Percent Impervious Post (I_{Post})	0.00 %	
Runoff Coefficient (R_V)	0.050	(Equals R_V Post; New Construction)
Water Quality Volume (WQ_V)	0.008 ac-ft	
Water Quality Volume (WQ_V)	351 cf	

Required Volume Storage Summary

	CP _v /1-Year (cf)	25-Year (cf)	100-Year (cf)
Post-Development	8877	11272	15415

Channel Protection Volume (CP_v) Control Required? Yes (1-year peak flow greater than 2 cfs)

Peak Flow Summary

	1-Year (cfs)	25-Year (cfs)	100-Year (cfs)
Pre-Development	3.03	9.28	13.49
Post-Development	7.09	18.60	26.10
Change (Post - Pre)	4.06	9.32	12.61
Percent Change	133.99%	100.43%	93.48%

Project Name: SR 25 at Pipemakers
 Project Number: 0013282
 Calculated By: ARG
 Date: 8/18/2016
 Outfall Area ID: Outfall Area 3

Outfall Area Information

Denotes Input Cell

Rainfall Depths	NOAA	
Outfall Area Pre (A_{Pre})	1.06 ac	Pond/Swamp Area Percentage
Outfall Area Post (A_{Post})	0.35 ac	0.0 %
SCS Curve Number Pre (CN_{Pre})	85	Pond/Swamp Adjustment Factor (F_p)
SCS Curve Number Post (CN_{Post})	74	1.00
Time of Concentration (T_c)	5.0 min	

Water Quality Volume Calculation

$$R_V = 0.05 + 0.009(I) \qquad WQ_V = \frac{1.2R_V A}{12}$$

Percent Impervious Pre (I_{Pre})	0.00 %	
Percent Impervious Post (I_{Post})	0.00 %	
Runoff Coefficient (R_V)	0.050	(Equals R_V Post; New Construction)
Water Quality Volume (WQ_V)	0.002 ac-ft	
Water Quality Volume (WQ_V)	76 cf	

Required Volume Storage Summary

	CP _v /1-Year (cf)	25-Year (cf)	100-Year (cf)
Post-Development	-6729	-162891	-202693

Channel Protection Volume (CP_v) Control Required? No (1-year peak flow less than 2 cfs)

Peak Flow Summary

	1-Year (cfs)	25-Year (cfs)	100-Year (cfs)
Pre-Development	3.88	11.20	16.06
Post-Development	0.80	2.94	4.46
Change (Post - Pre)	-3.08	-8.26	-11.60
Percent Change	-79.38%	-73.75%	-72.23%

Project Name: SR 25 at Pipemakers
 Project Number: 0013282
 Calculated By: ARG
 Date: 8/18/2016
 Outfall Area ID: Outfall Area 4

Outfall Area Information

Denotes Input Cell

Rainfall Depths	NOAA	
Outfall Area Pre (A_{Pre})	1.45 ac	Pond/Swamp Area Percentage
Outfall Area Post (A_{Post})	1.94 ac	0.0 %
SCS Curve Number Pre (CN_{Pre})	82	Pond/Swamp Adjustment Factor (F_p)
SCS Curve Number Post (CN_{Post})	88	1.00
Time of Concentration (T_c)	5.0 min	

Water Quality Volume Calculation

$$R_V = 0.05 + 0.009(I) \qquad WQ_V = \frac{1.2R_V A}{12}$$

Percent Impervious Pre (I_{Pre})	0.00 %	
Percent Impervious Post (I_{Post})	0.00 %	
Runoff Coefficient (R_V)	0.050	(Equals R_V Post; New Construction)
Water Quality Volume (WQ_V)	0.010 ac-ft	
Water Quality Volume (WQ_V)	423 cf	

Required Volume Storage Summary

	CP _v /1-Year (cf)	25-Year (cf)	100-Year (cf)
Post-Development	7048	10363	14278

Channel Protection Volume (CP_v) Control Required? Yes (1-year peak flow greater than 2 cfs)

Peak Flow Summary

	1-Year (cfs)	25-Year (cfs)	100-Year (cfs)
Pre-Development	4.73	14.46	21.03
Post-Development	7.95	21.64	30.63
Change (Post - Pre)	3.22	7.18	9.60
Percent Change	68.08%	49.65%	45.65%

Project Name: SR 25 at Pipemakers
 Project Number: 0013282
 Calculated By: ARG
 Date: 8/18/2016
 Outfall Area ID: Outfall Area 4

Outfall Area Information

Denotes Input Cell

Rainfall Depths	NOAA		
Outfall Area Pre (A_{Pre})	0.16 ac	Pond/Swamp Area Percentage	0.0 %
Outfall Area Post (A_{Post})	0.16 ac	Pond/Swamp Adjustment Factor (F_p)	1.00
SCS Curve Number Pre (CN_{Pre})	74		
SCS Curve Number Post (CN_{Post})	74		
Time of Concentration (T_c)	5.0 min		

Water Quality Volume Calculation

$$R_V = 0.05 + 0.009(I) \qquad WQ_V = \frac{1.2R_V A}{12}$$

Percent Impervious Pre (I_{Pre})	0.00 %	
Percent Impervious Post (I_{Post})	0.00 %	
Runoff Coefficient (R_V)	0.050	(Equals R_V Post; New Construction)
Water Quality Volume (WQ_V)	0.001 ac-ft	
Water Quality Volume (WQ_V)	35 cf	

Required Volume Storage Summary

	CP _v /1-Year (cf)	25-Year (cf)	100-Year (cf)
Post-Development	0	259	392

Channel Protection Volume (CP_v) Control Required? No (No change in impervious)

Peak Flow Summary

	1-Year (cfs)	25-Year (cfs)	100-Year (cfs)
Pre-Development	0.36	1.35	2.04
Post-Development	0.36	1.35	2.04
Change (Post - Pre)	0.00	0.00	0.00
Percent Change	0.00%	0.00%	0.00%

IMPERVIOUS AREA 

PERVIOUS AREA 



OUTFALL 1

OUTFALL 3

N/F DIXIE HOSPITALITY LLC

N/F INDUSTRIAL & COMMERCIAL ESTATE

N/F GEORGIA PORTS AUTHORITY

N/F TULLUMUKTI LLC

REQD R/W

EXIST. R/W

EXIST. R/W

REQD R/W

REQD R/W

EXIST. R/W

EXIST. R/W

REQD R/W

N/F GEORGIA PORTS AUTHORITY

REQD R/W

N/F GEORGIA PORTS AUTHORITY

N/F GEORGIA PORTS AUTHORITY

OUTFALL 2

OUTFALL 4

OUTFALL 5
(SHEET)



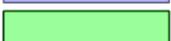
moffatt & nichol

REVISION DATES

NO.	DATE	DESCRIPTION

SR 25 AT PIPEMAKERS CANAL
PRE-CONSTRUCTION
DRAINAGE AREA MAP

CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

IMPERVIOUS AREA 
 PERVIOUS AREA 



OUTFALL 1

OUTFALL 3

N/F DIXIE HOSPITALITY LLC

N/F INDUSTRIAL & COMMERCIAL ESTATE

N/F GEORGIA PORTS AUTHORITY

N/F TULLUMUKTI LLC

REQD R/W

EXIST. R/W

EXIST. R/W

REQD R/W

REQD R/W

EXIST. R/W

EXIST. R/W

REQD R/W

50' UTILITY EASEMENT

50' UTILITY EASEMENT

N/F GEORGIA PORTS AUTHORITY

N/F GEORGIA PORTS AUTHORITY

ENHANCED SWALE

ENHANCED SWALE

OUTFALL 2

OUTFALL 4

OUTFALL 5
(SHEET)



moffatt & nichol

REVISION DATES

NO.	DATE	DESCRIPTION

SR 25 AT PIPEMAKERS CANAL
 POST-CONSTRUCTION
 DRAINAGE AREA MAP

CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

Meeting Minutes

Date:	August 15, 2016	Time:	10:00 AM
Location:	Georgia DOT District 5, Area 5 Office – Savannah, GA		
Subject:	Initial Concept Team Meeting		
Project No:	SR 25 at Pipemakers Canal		
Recorded By:	PI No. 0013282, Chatham County		
	Chris Marsengill		

<u>Attendees</u>	<u>Organization</u>	<u>Phone</u>	<u>Email</u>
Aghdas Ghazi	GDOT-OPD	912-271-7027	aghazi@dot.ga.gov
Darren Wilton	Moffatt & Nichol	404-205-8534	dwilton@moffattnichol.com
Chris Marsengill	Moffatt & Nichol	912-231-0044	cmarsengill@moffattnichol.com
Nathaniel Panther	Chatham County Engineering	912-652-7813	npanther@chathamcounty.org
Matt Bennett	GDOT-OPD	912-530-4392	mabennett@dot.ga.gov
Byron Cowart	GDOT-DPPE	912-530-4453	bcowart@dot.ga.gov
Billy Gordon	Chatham County Right of Way	912-652-7858	bgordon@chathamcounty.org
Binyam Araya	GDOT-Construction	912-651-2144	baraya@dot.ga.gov
George Shenk	GDOT-Utilities	678-580-9753	geshenk@dot.ga.gov
Charles Draeger	Garden City	912-966-7790	cdraeger@gardencity-ga.gov
Ron Feldner	Garden City	912-966-7777	rfeldner@gardencity-ga.gov
Meredith Tredeau	CALYX	678-795-3604	mtredeau@calyxengineers.com
Joseph Capello	GDOT	912-651-2144	jcapello@gdot.ga.gov
Daniel Davis	Southern Natural Gas	912-660-7151	daniel_davis@kinder-morgan.com
Aries Little (via teleconference)	GDOT Planning	404-631-1795	arlittle@dot.ga.gov

- Aghdas Ghazi introduced herself and welcomed meeting attendees. Each was asked to sign the sign-in sheet and introduce themselves.
- Aghdas identified the project and turned the meeting over to Chris Marsengill.
- Chris began by discussing the general location of SR 25 and Pipemakers Canal in relation to PI No. 0013281 and the Georgia Ports Authority's (GPA) Garden City Terminal.
- Chris presented and generally discussed the bridge elevation view, Chatham County's project interest, and the GPA's project interest.
- He then turned the meeting over to Darren Wilton who first clarified the project identification information included in the agenda, and Aghdas corrected the let date:
 - Project No: N/A

**SR 25 at Pipemakers Canal
Meeting Minutes (continued)
Initial Concept Team Meeting
August 15, 2016**

- Chatham County
- PI No: 0013282
- Let date: ~~9/5/2016~~ 10/16/2019
- Darren explained that Chatham County has completed numerous improvements along Pipemakers Canal in the interest of improving the conveyance of this critical flood control system.
 - Even after these improvements, five constrictions remain limiting the conveyance.
 - This project proposes to alleviate one of the five restrictions by replacing the existing bridge over Pipemakers Canal. The canal width through the opening will be increased by approximately 35 feet.
- Darren explained that the project will also grade separate SR 25 and proposed rail lines and inter-terminal access roads included in the Port of Savannah International Multi-modal Connector.
- He identified other projects in the area, including:
 - PI 0011743, SR 21 from I-516 to Effingham County Line – Corridor Study
 - PI 0013281, SR 21 @ Pipemakers Canal – Culvert Replacement
 - PI 0008690, Jimmy Deloach Pkwy Ext from SR 21 to SR 307 – New Location
- Chris clarified that PI 0008690 is now complete.
- George Shenk and Matt Bennett noted that Grange Road Widening and Brampton Road Extension should also be included in this list.
- Darren presented the following traffic data:
 - Base year: 8,090 (2020)
 - Design year: 12,260 (2040)
- He also stated that no crashes were reported within the project limits during the period from May 2012 to April 2016 (data available from GeoTRAQS). As a result, no crash-related deficiencies in the existing facility are known within the project limits.
- Ron Feldner advised that a head-on, fatality collision had occurred on the bridge.
 - Chris reviewed GeoTRAQS again during the meeting, and was unable to locate a record of this crash along the corridor.
 - Ron stated that he would request and provide the incident report for incorporation.
- Darren noted that the design speed is 35 MPH, and he described the proposed roadway typical section as 2-12' lanes with 10' paved shoulders. The proposed bridge typical section will have 2-12' lanes with an 8' rural shoulder on the west side and a 7'-6" urban shoulder on the east side.
- He also stated that sidewalk would be included on the east side beginning at the GPA's existing parking area and terminating just south of SR 307.
- Joseph Capello requested extension of this sidewalk to the SR 307 intersection.
- Darren stated that the proposed bridge is a 414-foot-long, four-span bridge, while the existing bridge is only a 90-foot-long, three-span structure. The sufficiency rating of 94.60.

**SR 25 at Pipemakers Canal
Meeting Minutes (continued)
Initial Concept Team Meeting
August 15, 2016**

- The bridge elevation view was revisited, and the need for roadway-rail grade separation was discussed again in the interest of the GPA's Port of Savannah International Multi-modal Connector.
- Chris noted that the GPA's Port of Savannah International Multi-modal Connector project is proceeding on a separate schedule.
- Darren stated that SR 25 would be detoured via SR 21 while the new bridge is under construction, and the 3.6-mile-long detour route was reviewed.
- Joseph Capello requested additional detour signage along I-516 south of the SR 25 interchange, and along SR 21 north of SR 307.
- Ron Feldner presented a concern about trucks utilizing city streets during the temporary closure instead of following the blazed detour route.
- Darren listed the utilities on the project to be Georgia Power (distribution and transmission), Southern Natural Gas, City of Savannah Water & Sewer, Garden City Water & Sewer, AT&T, and Comcast and asked if anyone knew of any other utilities in the project area.
 - Garden City identified the location of a plant effluent line that parallels the canal on the north side.
 - Chris will coordinate further with Garden City to verify that this line is included and addressed in the utility database.
- Darren stated that a Categorical Exclusion (CE) environmental document is anticipated, and a PAR is not required. Ecology fieldwork has been completed, and archeology and history fieldwork are scheduled to start. Pipemakers Canal is a historic canal, but permitting issues are not anticipated since previous changes have been made to the canal.
- Because the SR 25 profile is being raised significantly, a noise study will be required due the presence of the residential community to the southeast. The study will include noise receptors within 500 feet of the project limits.
- A Public Information Open House is not required, but Chatham County will hold one and combine it with a Detour Meeting.
- Darren listed the March 29, 2016 kickoff meeting with Chatham County as the only coordination to date
- He discussed the project costs that were included in the concept report:
 - PE: Chatham County - \$758,100
 - ROW: Chatham County - \$416,160 (seven parcels; no displacements)
 - Reimbursable Utility: TBD
 - CST: GDOT - \$6,135,800
 - Environmental Mitigation: Chatham County - TBD
- Darren stated that Billy Gordon, Chatham County's right of way agent, is preparing a right of way estimate update for the project.

**SR 25 at Pipemakers Canal
Meeting Minutes (continued)
Initial Concept Team Meeting
August 15, 2016**



- Nathaniel Panther and Billy Gordon advised that the update should be available by mid-October.
- Billy noted that the commercial truck repair facility located at the southwest corner of the bridge will be significantly damaged by the retaining walls and the grade and proximity of the proposed driveway to the repair facility.
- He also stated that Chatham County had condemned a portion of this property for the previous Pipemakers Canal improvements project, and at that time, there was a UST on the property.
- Darren stated that the two alternatives included in the Concept Report are the No-Build scenario and the SR 25 Bridge at Pipemakers Canal. The latter is the preferred alternative, and the following parameters were summarized:
 - 7 estimated property impacts
 - \$7,310,060 estimated total cost
 - 24 months estimated construction time
- It was agreed that there would not be a need for a subsequent Concept Team meeting.





November 4, 2015

Honorable Albert J. Scott, Chairman
Chatham County Board of Commissioners
P.O. Box 8161
Savannah, GA 31412

Dear Chairman Scott:

I am returning for your files an executed agreement between the Georgia Department of Transportation and Chatham County for the following project:

Chatham County, PI# 0013282

We look forward to working with you on the successful completion of the joint project.
Should you have any questions, please contact the Project Manager Aghdas Ghazi at (912) 271-7027.

Sincerely,

A handwritten signature in blue ink, appearing to read "Angela Robinson".

Angela Robinson,
Financial Management Administrator

AR:kp

Enclosure

c: Bob Rogers
Karon Ivery – District 5 Engineer
Maggie Yoder – District 5 Planning & Programming Engineer
Dallory Rozier – District 5 Utilities Engineer
Lee Upkins – State Utilities Engineer

AGREEMENT
BETWEEN
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
AND
Chatham County
FOR
TRANSPORTATION FACILITY IMPROVEMENTS

This Framework Agreement is made and entered into this 20th day of October, 2015, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and Chatham County, acting by and through its Mayor and City Council or Board of Commissioners, hereinafter called the "LOCAL GOVERNMENT".

WHEREAS, the LOCAL GOVERNMENT has represented to the DEPARTMENT a desire to improve the transportation facility described in Attachment "A", attached and incorporated herein by reference and hereinafter referred to as the "PROJECT"; and

WHEREAS, the LOCAL GOVERNMENT has represented to the DEPARTMENT a desire to participate in certain activities, as applicable, including the funding of certain portions of the PROJECT and the DEPARTMENT has relied upon such representations; and

WHEREAS, the DEPARTMENT has expressed a willingness to participate in certain activities of the PROJECT as set forth in this Agreement; and

WHEREAS, the DEPARTMENT has provided an estimated cost to the LOCAL GOVERNMENT for its participation in certain activities of the PROJECT; and

WHEREAS, the Constitution authorizes intergovernmental agreements whereby state and local entities may contract with one another "for joint services, for the provision of services, or for the joint or separate use of facilities or equipment; but such contracts must deal with activities, services or facilities which the parties are authorized by law to undertake or provide." Ga. Constitution Article IX, §III, ¶1(a).

NOW THEREFORE, in consideration of the mutual promises made and of the benefits to flow from one to the other, the DEPARTMENT and the LOCAL GOVERNMENT hereby agree each with the other as follows:

1. The LOCAL GOVERNMENT has applied for and received "Qualification Certification" to administer federal-aid projects. The GDOT Local Administered Project (LAP) Certification Committee has reviewed, confirmed and approved the certification for the LOCAL GOVERNMENT to develop federal project(s) within the scope of its certification using the DEPARTMENT'S Local Administered Project Manual procedures. The LOCAL GOVERNMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities,

hereinafter referred to as "PE", all reimbursable utility relocations, all non-reimbursable utilities owned by the LOCAL GOVERNMENT, railroad costs, right of way acquisitions and construction, as specified in Attachment "A", affixed hereto and incorporated herein by reference. In addition, the May 8, 2014 memorandum titled PE Oversight Funding Structure for Non-GDOT Sponsored Projects outlines conditions when the LOCAL GOVERNMENT will be requested to fund the PE oversight activities at 100%, and when the Department will fund PE oversight with federal-aid funds and is enclosed as Attachment "C" and incorporated herein by reference. Expenditures incurred by the LOCAL GOVERNMENT prior to the execution of this AGREEMENT or subsequent funding agreements shall not be considered for reimbursement by the DEPARTMENT. PE expenditures incurred by the LOCAL GOVERNMENT after execution of this AGREEMENT shall be reimbursed by the DEPARTMENT once a written notice to proceed is given by the DEPARTMENT.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the PE, right of way acquisitions, reimbursable utility relocations, railroad costs, or construction (specified in Attachment "A") affixed hereto and incorporated herein by reference, as it adheres to memorandum dated May 8, 2014 (specified in Attachment "C").

3. The DEPARTMENT shall provide a PE Oversight Estimate to the LOCAL GOVERNMENT, if appropriate, appended as Attachment "D" and incorporated by reference as if fully set out herein. The LOCAL GOVERNMENT will be responsible for

providing payment, which represents 100% of the DEPARTMENT's PE Oversight Estimate at the time of the Project Framework Agreement execution.

If at any time the PE Oversight funds are depleted within \$5,000 of the remaining PE Oversight balance and project activities and tasks are still outstanding, the LOCAL GOVERNMENT shall, upon request, make additional payment to the DEPARTMENT.

The payment shall be determined by prorating the percentage complete and using the

same estimate methodology as provided in Attachment "D". If there is an unused

balance after completion of all tasks and phases of the project, then pending a final

audit, the remainder will be refunded to the sponsor.

4. It is understood and agreed by the DEPARTMENT and the LOCAL

GOVERNMENT that the funding portion as identified in Attachment "A" of this

Agreement only applies to the PE. The Right of Way, Utility and Construction funding

estimate levels as specified in Attachment "A" are provided herein for planning purposes

and do not constitute a funding commitment for right of way, utility and construction.

The DEPARTMENT will prepare LOCAL GOVERNMENT Specific Activity Agreements

for funding applicable to other activities when appropriate.

Further, the LOCAL GOVERNMENT shall be responsible for repayment of any expended federal funds if the PROJECT does not proceed forward to completion due to a lack of available funding in future PROJECT phases, changes in local priorities or

cancellation of the PROJECT by the LOCAL GOVERNMENT without concurrence by the DEPARTMENT.

5. In accordance with Georgia Code 32-2-2, the LOCAL GOVERNMENT shall be responsible for all costs for the continual maintenance and operations of any and all sidewalks and the grass strip between the curb and sidewalk within the PROJECT limits. The LOCAL GOVERNMENT shall also be responsible for the continual maintenance and operation of all lighting systems installed to illuminate any roundabouts constructed as part of this PROJECT. Furthermore, the LOCAL GOVERNMENT shall also be responsible for the maintaining of all landscaping installed as part of any roundabout constructed as part of this PROJECT.

6. Both the LOCAL GOVERNMENT and the DEPARTMENT hereby acknowledge that Time is of the Essence. It is agreed that both parties shall adhere to the schedule of activities currently established in the approved Transportation Improvement Program/State Transportation Improvement Program, hereinafter referred to as "TIP/STIP". Furthermore, all parties shall adhere to the detailed project schedule as approved by the DEPARTMENT, attached as Attachment "B" and incorporated herein by reference. In the completion of respective commitments contained herein, if a change in the schedule is needed, the LOCAL GOVERNMENT shall notify the DEPARTMENT in writing of the proposed schedule change and the DEPARTMENT

shall acknowledge the change through written response letter; provided that the DEPARTMENT shall have final authority for approving any change.

If, for any reason, the LOCAL GOVERNMENT does not produce acceptable deliverables in accordance with the approved schedule, the DEPARTMENT reserves the right to delay the PROJECT's implementation until funds can be re-identified for right of way, utility, or construction phases, as applicable.

7. The LOCAL GOVERNMENT shall certify that the regulations for "CERTIFICATION OF COMPLIANCES WITH FEDERAL PROCUREMENT REQUIREMENTS, STATE AUDIT REQUIREMENTS, and FEDERAL AUDIT REQUIREMENTS" are understood and will comply in full with said provisions.

Note: If FEDERAL-AID HIGHWAY PROGRAM (FAHP) funds are not participating in an engineering and design related services contract, the contracting agency may procure the services in accordance with its own established policies and procedures which reflect applicable State and local laws. However, the costs of consultant service contracts that utilize only State or local funding which were not procured, negotiated, or administered in accordance with applicable Federal laws and regulations would not be eligible to apply toward the non-Federal share of costs for subsequent phases (e.g., construction) of a FAHP funded project.

8. The LOCAL GOVERNMENT shall accomplish the PE activities for the PROJECT. The PE activities shall be accomplished in accordance with the DEPARTMENT's Plan Development Process hereinafter referred to as "PDP", the applicable guidelines of the American Association of State Highway and Transportation Officials, hereinafter referred to as "AASHTO", the DEPARTMENT's Standard Specifications Construction of Transportation Systems, and all applicable design guidelines and policies of the DEPARTMENT to produce a cost effective PROJECT.

Failure to follow the PDP and all applicable guidelines and policies will jeopardize the use of Federal Funds in some or all categories outlined in this agreement, and it shall be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding.

The LOCAL GOVERNMENT's responsibility for PE activities shall include, but is not limited to the following items:

- a. Prepare the PROJECT Concept Report and Design Data Book in accordance with the format used by the DEPARTMENT. The concept for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the LOCAL GOVERNMENT as provided for in paragraph 8b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the LOCAL GOVERNMENT beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept

may be updated or modified by the LOCAL GOVERNMENT as required by the DEPARTMENT and re-approved by the DEPARTMENT during the course of PE due to updated guidelines, public input, environmental requirements, Value Engineering recommendations, Public Interest Determination (PID) for utilities, utility/railroad conflicts, or right of way considerations.

b. Prepare a Traffic Study for the PROJECT that includes Average Daily Traffic, hereinafter referred to as "ADT", volumes for the base year (year the PROJECT is expected to be open to traffic) and design year (base year plus 20 years) along with Design Hour Volumes, hereinafter referred to as "DHV", for the design year. DHV includes morning (AM) and evening (PM) peaks and other significant peak times. The Study shall show all through and turning movement volumes at intersections for the ADT and DHV volumes and shall indicate the percentage of trucks on the facility. The Study shall also include signal warrant evaluations for any additional proposed signals on the PROJECT.

c. Prepare environmental studies, documentation reports and complete Environmental Document for the PROJECT along with all environmental re-evaluations required that show the PROJECT is in compliance with the provisions of the National Environmental Policy Act or the Georgia Environmental Policy Act as per the DEPARTMENT's Environmental Procedures Manual, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological, air, noise, community involvement, environmental justice, flood plains, underground storage tanks, and hazardous waste site studies required. The

completed Environmental Document approval shall occur prior to Right of Way funding authorization. A re-evaluation is required for any design change as described in Chapter 7 of the Environmental Procedures Manual. In addition, a re-evaluation document approval shall occur prior to any Federal funding authorizations if the latest approved document is more than six months old. The LOCAL GOVERNMENT shall submit to the DEPARTMENT all studies, documents and reports for review and approval by the DEPARTMENT, the FHWA and other environmental resource agencies. The LOCAL GOVERNMENT shall provide Environmental staff to attend all PROJECT related meetings where Environmental issues are discussed. Meetings include, but are not limited to, concept, field plan reviews and value engineering studies.

d. Prepare all PROJECT public hearing and public information displays and conduct all required public hearings and public information meetings with appropriate staff in accordance with DEPARTMENT practice.

e. Perform all surveys, mapping, soil investigations and pavement evaluations needed for design of the PROJECT as per the appropriate DEPARTMENT Manual.

f. Perform all work required to obtain all applicable PROJECT permits, including, but not limited to, Cemetery, TVA and US Army Corps of Engineers permits, Stream Buffer Variances and Federal Emergency Management Agency (FEMA) approvals. The LOCAL GOVERNMENT shall provide all mitigation required for the project, including but not limited to permit related mitigation. All mitigation costs are considered PE costs. PROJECT permits and non-construction

related mitigation must be obtained and completed three months prior to the scheduled let date. These efforts shall be coordinated with the DEPARTMENT.

g. Prepare the stormwater drainage design for the PROJECT and any required hydraulic studies for FEMA Floodways within the PROJECT limits. Acquire of all necessary permits associated with the Hydrology Study or drainage design.

h. Prepare utility relocation plans for the PROJECT following the DEPARTMENT's policies and procedures for identification, coordination and conflict resolution of existing and proposed utility facilities on the PROJECT. These policies and procedures, in part, require the Local Government to submit all requests for existing, proposed, and relocated facilities to each utility owner within the project area. Copies of all such correspondence, including executed agreements for reimbursable utility/railroad relocations, shall be forwarded to the DEPARTMENT's Project Manager and the District Utilities Engineer and require that any conflicts with the PROJECT be resolved by the LOCAL GOVERNMENT. If it is determined that the PROJECT is located on an on-system route or is a DEPARTMENT LET PROJECT, the LOCAL GOVERNMENT and the District Utilities Engineer shall ensure that permit applications are approved for each utility company in conflict with the project. If it is determined through the DEPARTMENT's Project Manager and State Utilities Office during the concept or design phases the need to utilize Overhead/Subsurface Utility Engineering, hereinafter referred to as "SUE", to obtain the existing utilities, the LOCAL GOVERNMENT shall be responsible for acquiring those services. SUE costs are considered PE costs.

i. Prepare, in English units, Preliminary Construction plans, Right of Way plans and Final Construction plans that include the appropriate sections listed in the Plan Presentation Guide, hereinafter referred to as "PPG", for all phases of the PDP. All drafting and design work performed on the project shall be done utilizing Microstation V8i and InRoads software respectively using the DEPARTMENT's Electronic Data Guidelines. The LOCAL GOVERNMENT shall further be

responsible for making all revisions to the final right of way plans and construction

plans, as deemed necessary by the DEPARTMENT, for whatever reason, as

needed to acquire the right of way and construct the PROJECT.

Prepare PROJECT cost estimates for construction; Right of Way and

Utility/railroad relocation at the following project stages: Concept, Preliminary Field

Plan Review, Right of Way plan approval (Right of Way cost only); Final Field Plan

Review and Final Plan submission using the applicable method approved by the

DEPARTMENT. The cost estimates shall also be updated annually if the noted

project stages occur at a longer frequency. Failure of the LOCAL GOVERNMENT

to provide timely and accurate cost estimates may delay the PROJECT's

implementation until additional funds can be identified for right of way or

construction, as applicable.

k. Provide certification, by a Georgia Registered Professional Engineer, that the Design and Construction plans have been prepared under the guidance of the professional engineer and are in accordance with AASHTO and DEPARTMENT Design Policies.

l. Provide certification, by a Level II Certified Design Professional that the Erosion Control Plans have been prepared under the guidance of the certified professional in accordance with the current Georgia National Pollutant Discharge Elimination System.

m. Provide a written certification that all appropriate staff (employees and consultants) involved in the PROJECT have attended or are scheduled to attend the Department's PDP Training Course. The written certification shall be received by the Department no later than the first day of February of every calendar year until all phases have been completed.

9. The Primary Consultant firm or subconsultants hired by the LOCAL GOVERNMENT to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the LOCAL GOVERNMENT with a list of prequalified consultant firms in the appropriate area-classes. The LOCAL GOVERNMENT shall comply with all applicable state and federal regulations for the procurement of engineering and design related services in accordance with 23 C.F.R. Part 172 which mandates selection in accordance with the Brooks Architect-Engineers Act of 1972, better known as the Brooks Act, for any consultant hired to perform work on the PROJECT.

10. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT provided however this review and approval does not relieve the LOCAL GOVERNMENT of its responsibilities under the terms of this agreement. The

DEPARTMENT will work with the FHWA to obtain all needed approvals as deemed necessary with information furnished by the LOCAL GOVERNMENT.

11. The LOCAL GOVERNMENT shall be responsible for the design of all bridge(s) and preparation of any required hydraulic and hydrological studies within the limits of this PROJECT in accordance with the DEPARTMENT's policies and guidelines. The LOCAL GOVERNMENT shall perform all necessary survey efforts in order to complete the hydraulic and hydrological studies and the design of the bridge(s). The final bridge plans shall be incorporated into this PROJECT as a part of this Agreement.

12. The LOCAL GOVERNMENT unless otherwise noted in Attachment "A" shall be responsible for funding all LOCAL GOVERNMENT owned utility relocations and all other reimbursable utility/railroad costs. The utility costs shall include but are not limited to PE, easement acquisition, and construction activities necessary for the utility/railroad to accommodate the PROJECT. The terms for any such reimbursable relocations shall be laid out in an agreement that is supported by plans, specifications, and itemized costs of the work agreed upon and shall be executed prior to certification by the DEPARTMENT. The LOCAL GOVERNMENT shall certify via written letter to the DEPARTMENT's Project Manager and District Utilities Engineer that all Utility owners' existing and proposed facilities are shown on the plans with no conflicts three months prior to advertising the PROJECT for bids and that any required agreements for reimbursable utility/railroad costs have been fully executed. Further, this certification letter shall state that the LOCAL GOVERNMENT understands that it is responsible for

the costs of any additional reimbursable utility/railroad conflicts that arise during construction.

13. The DEPARTMENT will be responsible for all railroad coordination on DEPARTMENT Let and/or State Route (On-System) projects; the LOCAL GOVERNMENT shall address concerns, comments, and requirements to the satisfaction of the Railroad and the DEPARTMENT. If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A" on off-system routes, the LOCAL GOVERNMENT shall be responsible for all railroad coordination and addressing concerns, comments, and requirements to the satisfaction of the Railroad and the DEPARTMENT for PROJECT.

14. The LOCAL GOVERNMENT shall be responsible for acquiring a Value Engineering Consultant for the DEPARTMENT to conduct a Value Engineering Study if the total estimated PROJECT cost is \$50 million or more. The Value Engineering Study cost is considered a PE cost. The LOCAL GOVERNMENT shall provide project related design data and plans to be evaluated in the study along with appropriate staff to present and answer questions about the PROJECT to the study team. The LOCAL GOVERNMENT shall provide responses to the study recommendations indicating whether they will be implemented or not. If not, a valid response for not implementing shall be provided. Total project costs include PE, right of way, and construction, reimbursable utility/railroad costs.

15. The LOCAL GOVERNMENT, unless shown otherwise on Attachment "A", shall acquire the Right of way in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. Seq., and 49 CFR Part 24 and the rules and regulations of the DEPARTMENT. Upon the DEPARTMENT's approval of the PROJECT right of way plans, verification that the approved environmental document is valid and current, a written notice to proceed will be provided by the DEPARTMENT for the LOCAL GOVERNMENT to stake the right of way and proceed with all pre-acquisition right of way activities. The LOCAL GOVERNMENT shall not proceed to property negotiation and acquisition whether or not the right of way funding is Federal, State or Local, until the right of way agreement named "Contract for the Acquisition of Right of Way" prepared by the DEPARTMENT's Office of Right of Way is executed between the LOCAL GOVERNMENT and the DEPARTMENT. Failure of the LOCAL GOVERNMENT to adhere to the provisions and requirements specified in the acquisition contract may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. Right of way costs eligible for reimbursement include land and improvement costs, property damage values, relocation assistance expenses and contracted property management costs. Non reimbursable right of way costs include administrative expenses such as appraisal, consultant, attorney fees and any in-house property management or staff expenses. The LOCAL GOVERNMENT shall certify that all required right of way is obtained and cleared of obstructions, including underground storage tanks, three months prior to advertising the PROJECT for bids.

16. The DEPARTMENT unless otherwise shown in Attachment "A" shall be responsible for Letting the PROJECT to construction, solely responsible for executing any agreements with all applicable utility/railroad companies and securing and awarding the construction contract for the PROJECT when the following items have been completed and submitted by the LOCAL GOVERNMENT:

- a. **Submittal of acceptable PROJECT PE activity deliverables noted in this Agreement.**
- b. **Certification that all needed rights of way have been obtained and cleared of obstructions.**
- c. **Certification that the environmental document is current and all needed permits and mitigation for the PROJECT have been obtained.**
- d. **Certification that all Utility/Railroad facilities, existing and proposed, within the PROJECT limits are shown, any conflicts have been resolved and reimbursable agreements, if applicable, are executed.**

If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A", the LOCAL GOVERNMENT shall provide the above deliverables and certifications and shall follow the requirements stated in Chapters 10, 11, 12 and 13 of the DEPARTMENT's Local Administered Project Manual. The LOCAL GOVERNMENT shall be responsible for providing qualified construction oversight with their personnel or by employing a Consultant firm prequalified in Area Class 8.01 to perform construction

IN WITNESS WHEREOF, the DEPARTMENT and Chatham County have caused these presents to be executed under seal by their duly authorized representatives.

Chatham County

DEPARTMENT OF
TRANSPORTATION

BY: *Bill R. Wilmy*
Commissioner

BY: *Robert Scott*
Name
Title

Signed, sealed and delivered this 17th
day of July, 2015, in the
presence of:

ATTEST:
Angela D. Whitfield
Treasurer

Julia J. King
Witness



Danielle Hillery
Notary Public

DANIELLE HILLERY
Notary Public, Chatham County GA
My Commission Expires Oct. 21, 2016

This Agreement approved by Local
Government, the 17th day of

July, 2015

Attest

Janice Bocock, Clerk
Name and Title

FEIN: 58-600113

Attachment "A" Funding Sources and Distribution

Project 0013282 Sponsor: Chatham County

County: Chatham

Attach "Project Manager" Project Charging Form for Approval

Preliminary	Preliminary Engineering (Design) - Phase I					**GDOT Oversight for PE (Phase I) ²				Grand Total - Preliminary Engineering (Phase I) ²	
	Percentage	PE Amount	*Maximum PE Participation Amount (\$)	Participant	PE Activity Sponsor	Percentage	Amount	Participant	Percentage	Amount	
1	38%	\$240,000.00	\$240,000.00	Federal	LOCAL	0%	\$0.00	Federal	38%	\$240,000.00	
2	0%	\$0.00	\$0.00	State		0%	\$0.00	State	0%	\$0.00	
3	62%	\$385,000.00	N/A	Local		0%	\$0.00	Local	62%	\$385,000.00	
4	0%	\$0.00	N/A	Other		0%	\$0.00	Other	0%	\$0.00	
Total	100%	\$625,000.00				0%	\$0.00		100%	\$625,000.00	

Right-of-Way Phase II	Right of Way - Phase II					Acquisition By:	Acquisition Funds By:
	Percentage	ROW Amount	*Maximum ROW Participation Amount (\$)	Participant			
1	0%	\$0.00	\$0.00	Federal	LOCAL	LOCAL GOVERNMENT	
2	0%	\$0.00	\$0.00	State			
3	100%	\$400,000.00	N/A	Local			
4	0%	\$0.00	N/A	Other			
Total	100%	\$400,000.00					

Construction Oversight Phases V & VI	(GDOT Oversight for Phase III CST)	
	Testing (Phase V) Funding By:	Inspection (Phase VI) Funding By:
	LOCAL	LOCAL
	100%	100%

Construction Phase III	Construction - Phase III				
	Percentage	CST Amount	*Maximum CST Participation Amount (\$)	Participant	Letting By:
1	0%	\$0.00	\$0.00	Federal	LOCAL
2	0%	\$0.00	\$0.00	State	
3	100%	\$1,500,000.00	N/A	Local	
4	0%	\$0.00	N/A	Other	
Total	100%	\$1,500,000.00			

Utility Phase IV	Utility Relocation				Railroad			
	Percentage	Utility Amount	*Maximum Utility Participation Amount (\$)	Participant	Percentage	Railroad Amount	*Maximum RR Participation Amount (\$)	Participant
1	0%	\$0.00	\$0.00	Federal	0%	\$0.00	\$0.00	Federal
2	0%	\$0.00	\$0.00	State	0%	\$0.00	\$0.00	State
3	0%	\$0.00	N/A	Local	0%	\$0.00	N/A	Local
4	0%	\$0.00	N/A	Other	0%	\$0.00	N/A	Other
Total	100%	\$0.00			100%	\$0.00		

Summary of All Phases I through VI	Grand Total - Phases I through IV			
	Percentage	Total Amount (PE, ROW, CST & UTL)	*Maximum Participation Amount (\$)	Participant
1	10%	\$240,000.00	\$240,000.00	Federal
2	0	\$0.00	\$0.00	State
3	90%	\$2,285,000.00	N/A	Local
4	0	\$0.00	N/A	Other
Total	100%	\$2,525,000.00		

The funding portion identified in Attachment "A" only applies to PE. The Right of Way, Construction and Utilities funding estimates are provided for planning purposes and do not constitute a funding commitment for Right of Way, Construction or Utilities.

* The maximum allowable GDOT participating amounts are shown above. The Local Government will only be reimbursed the percentage of the accrued invoiced amounts up to but not to exceed the maximum amount indicated.

**The GDOT Oversight check shall be remitted to the District Planning and Programming Engineer along with the signed Project Framework Agreement (PFA).

²GDOT Oversight for PE (Phase I) is detailed in Attachment "D".
 Note: Separate GDOT P.O.s will be established for each funding phase.

ATTACHMENT "B" Project Timeline

PI # 0013282-CHATHAM COUNTY

Proposed Project Timeline

Environmental Phase					
Concept Phase					
Preliminary Plan Phase					
Right of Way Phase					
Deadlines for Responsible Parties	Execute Agreement	6/2017 (Approve Concept)	5/2019 (Approve Env. Document)	7/2019 (Authorize Right of Way funds)	8/2020 (Authorize Const. funds)

Annual Reporting Requirements

The Local Government shall provide a written status report to the Department's Project Manager with the actual phase completion date(s) and the percent complete/proposed completion date of incomplete phases. The written status report shall be received by the Department no later than the first day of February of every calendar year until all phases have been completed.

ATTACHMENT "C"

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTER-DEPARTMENT CORRESPONDENCE

FROM: Bobby Hilliard, P.E., Program Control Administrator DATE: May 8, 2014

TO: Toby Carr, Director of Planning
Russell R. McMurry, P.E., Chief Engineer

SUBJECT: Preliminary Engineering (PE) Oversight Funding Structure for Non-GDOT Sponsored Projects (Guidance for MPO's, TMA's, Project Managers and Project Delivery Staff)

Note: This memo supersedes the previous PE Oversight Memo, dated September 17, 2010.

PE Oversight Funding - Programming Guidance for a Non-GDOT Sponsored Project

This policy provides guidance during the planning and programming of a project to specify responsibility for funding PE Oversight to cover estimated resource activities and expenses for the Department prior to the execution of a Project Framework Agreement (PFA).

The Department has established the attached "Oversight Funding Responsibility Matrix for Locally Sponsored Projects" which details the conditions under which the Department will fund PE oversight with federal-aid funds and when the Department will request that the local government/project sponsor fund the Department's expenses associated with PE oversight. State funding participation for oversight is at the discretion and approval of the GDOT Chief Engineer and GDOT Director of Planning.

It is the responsibility of the GDOT Project Manager to utilize the GDOT Oversight Estimate for Consultant & LAP Projects Microsoft Excel™ Tool to estimate the PE oversight cost. The GDOT Project Manager will subsequently coordinate with the Office of Financial Management to establish an appropriate amount of federally funded PE oversight. Concurrently, the GDOT Project Manager will coordinate with the District Planning and Programming Engineer to engage the local government for processing the Project Framework Agreement (PFA) and to secure locally sourced PE oversight funds if appropriate. Please note that the STIP/TIP amendment process must be followed for adding oversight funds to a project.

PE Oversight funds will be used to administer the project and fund staff man-hours along with any other associated expenses incurred by any GDOT employee working on the project. The process detailed applies equally to both on-system and off-system routes on the National Highway System.

Upon approval, this process will be distributed to all GDOT Project Managers and incorporated into future Project Framework Agreements (PFA's) along with a copy of the PE Oversight Estimate.

"Oversight Funding Responsibility Matrix for locally Sponsored Projects"

- (1) If a project does not have a subsequent phase programmed in the currently approved TIP/STIP+2, oversight funding (for all remaining phases of PE, ROW, CST & UTL) will be the responsibility of the local government regardless of PE fund source.
- (2) If a project does have a subsequent project phase programmed in the currently approved TIP/STIP+2, see phase oversight funding responsibility breakdown in the table below.

Oversight Responsibility - Next Phase of Project is <i>Included</i> in the Approved TIP/STIP+2									
Project Fund Source	NHPP(MO01)	STP<Z00k (M231)	STP-Urban (M230)	STP<Sk (M23Z)	STP-Fiex (M240)	TAP(M301)	CMAQ(M400)	Earmark	local
Oversight Fund Source	Federal (MO01)/State or Local ¹	Federal (M231)/State or Local ²	Federal/State	Federal (M232)/State or Local ²	Federal (M240)/State	Federal (M301)/Local or 100% local	Federal/State ³	Earmark/Local or 100% Local	Local

¹ State match for oversight will be used if project is on state route system, local match for oversight will be requested if off state route system.

² State match for oversight is at the discretion of the GDOT Director of Planning & GDOT Chief Engineer

³ Oversight funds for M230 and CMAQ projects will be drawn from a specific M230 funded project programmed in the currently approved STIP.

ATTACHMENT "D"
**GDOT Oversight Estimate for Locally Administered
 Project**

Wednesday, June 17,
 2015 1:36PM

PI Number	<u>0013282</u>	Project Number	<u>N/A</u>
County	<u>Chatham</u>	Project Length	<u>0.400</u> Miles
Project Manager	<u>Ghazi, Aghdas</u>	Project Cost	<u>\$2,525,000.00</u>
Project Type	<u>Bridge (Widen/Replacement/New)</u>		
Project Description	<u>SR 25 @ Pipemaker Canal-Culvert Replacement</u>		
Expected Life of Project	<u>4.00</u>	Years	

Project Phase	Oversight Hours	Oversight Cost
1. Project Initiation	0	\$ 0.00
2. Concept Development	0	\$ 0.00
3. Database Preparation*	0	\$ 0.00
4. Preliminary Design	0	\$ 0.00
5. Environmental	0	\$ 0.00
6. Final Design	0	\$ 0.00
Travel Expenses		\$
Total Oversight Estimate	0	\$ 0.00
Percentage of Project Cost	.00%	

ATTACHMENT "E" GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT

Name of Contracting Entity: CHATHAM COUNTY

Contract No. and Name: P.I. # 0013282
S.R. 25 @ PIPEMAKERS CANAL

By executing this affidavit, the undersigned person or entity verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or entity which is contracting with the Georgia Department of Transportation has registered with, is authorized to participate in, and is participating in the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned person or entity further agrees that it will continue to use the federal work authorization program throughout the contract period, and it will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the undersigned with the information required by O.C.G.A. § 13-10-91(b).

The undersigned person or entity further agrees to maintain records of such compliance and provide a copy of each such verification to the Georgia Department of Transportation within five (5) business days after any subcontractor is retained to perform such service.

11 22 12
E-Verify / Company Identification Number

Albert J. Scott
Signature of Authorized Officer or Agent

8 APRIL 2008
Date of Authorization

Albert J. Scott
Printed Name of Authorized Officer or Agent

Chairman
Title of Authorized Officer or Agent

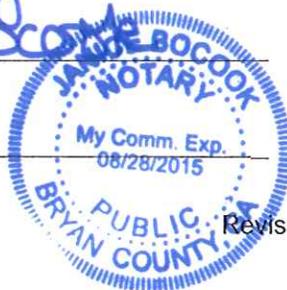
July 17, 2015
Date

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

17th DAY OF July, 2015.
Janice Bocock
Notary Public

[NOTARY SEAL]

My Commission Expires: 08/28/2015



ATTACHMENT "F"

TITLE VI ACKNOWLEDGEMENT FORM

The CHATHAM COUNTY assures that no person shall on the grounds or race, color, national origin or sex as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987 be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any City or County sponsored program or activity. The CHATHAM COUNTY assures that every effort will be made to ensure non discrimination in all of its programs or activities, whether those programs are federally funded or not.

Assurance of compliance therefore falls under the proper authority of the City Council or the County Board of Commissioners. The Title VI Coordinator or Liaison is authorized to ensure compliance with provisions of this policy and with the Law, including the requirements of 23 Code of Federal Regulations (CFR) 200 and 49 CFR 21.

Albert A. A. A.
Official Name and Title

07/27/2015
Date

Citations:

Title VI of the Civil Rights Act of 1964; 42 USC 2000d to 2000d-4; 42 USC 4601 to 4655; 23 USC 109(h); 23 USC 324; DOT Order 1050.2; EO 12250; EO 12898; 28 CFR 50.3

Other Nondiscrimination Authorities Expanded the range and scope of Title VI coverage and applicability

The 1970 Uniform Act (42 USC 4601)
Section 504 of the 1973 Rehabilitation Act (29 USC 790) The 1973
Federal-aid Highway Act (23 USC 324)
The 1975 Age Discrimination Act (42 USC 6101) Implementing
Regulations (49 CFR 21 & 23 CFR 200) Executive Order 12898 on
Environmental Justice (EJ) Executive Order 13166 on Limited English
Proficiency (LEP)

ATTACHMENT "G"

FEDERAL-AID HIGHWAY PROGRAM (FAHP) FUNDING PARTICIPATION DESIGNATION FORM

For Competitive Negotiation/Qualifications Based Selection Procurement for Engineering and Design Related Services Contract

Name of LOCAL AGENCY: CHATHAM COUNTY

Please check and sign only one option below:

OPTION A: [checked]

If there is FAHP funding participating in an engineering and design related services contract, THEN the Federal competitive negotiation/qualifications based selection (Brooks Act) procurement procedures is still applicable and must be conducted in accordance with the guidelines established in 23 C.F.R. Part 172.

[Signature]

05/27/2015

Signature

Date

OPTION B: []

If FAHP funds are not participating in an engineering and design related services contract, the contracting agency may procure the services in accordance with its own established policies and procedures which reflect applicable State and local laws. However, the costs of consultant service contracts that utilize only State or local funding which were not procured, negotiated, or administered in accordance with applicable Federal laws and regulations would not be eligible to apply toward the non-Federal share of costs for subsequent phases (e.g., construction) of a FAHP funded project.

Signature

Date

Concept Utility Report

Project Number: N/A **Date:** August 18, 2016
County: Chatham **District:** 5
PI Number: 0013282 **Prepared By:** R. Christopher Marsengill, PE

Project Description:

The SR 25 project will replace the existing SR 25 bridge over Pipemakers Canal to accommodate upstream and downstream canal conveyance improvements completed by Chatham County, including a 65-foot-wide canal section, and improve storm water conveyance through the crossing. The project will also provide a grade separation of six new rail lines and three new Garden City Terminal inter-terminal access roads proposed along the banks of the canal as part of the Port of Savannah International Multi-modal Connector. The design and construction of the Port of Savannah International Multi-modal Connector is a Georgia Ports Authority (GPA) projects that is proceeding on a separate schedule.

The information provided herein has been gathered from Georgia811and/or field visits and serves as an estimate. Nothing contained in this report is to be used as a substitute for 1st Submission or SUE.

Are SUE services recommended? No Yes Level: A B C D

Public Interest Determination (PID): Automatic Mandatory Consideration
 No Use Exempt

Is a separate utility funding phase recommended? No Yes

The following utility owners contacted during concept design:

Facility Owner	Non-Reimbursable	Reimbursable	Notes
AT&T	TBD	\$0	Within Existing R/W
Atlanta Gas Light	\$0	\$0	No Facilities
City of Garden City W&S	TBD	\$0	Within Existing R/W
City of Savannah W&S	TBD	\$0	Within Existing R/W
Comcast	TBD	\$0	Within Existing R/W
GA Power Distribution	TBD	\$0	Within Existing R/W
GA Power Transmission	TBD	\$0	Within Existing R/W
Southern Natural Gas	TBD	\$0	Within Existing R/W

Potential Project (Schedule/Budget) Impacts:

In the interest of construction efficiency, outage scheduling and material lead times should be coordinated with GA Power Transmission.

Capital Improvement Projects (Utilities) Anticipated in the Area: No Yes

Project Specific Recommendations for Avoidance/Mitigation: None

Right of Way Coordination:

Utility easements will likely be required for GA Power Transmission relocations. The responsibility for acquiring these utility easements is assumed to be GA Power's. However, coordination will be conducted to identify potential cost saving measures.

Environmental Coordination:

At the conceptual level, it appears that required utility relocations can be constructed with no additional, significant environmental impacts.

Additional Remarks:

GEL Geophysics, LLC was commissioned to field locate existing utilities in advance of the topographical field survey. The project database (UTLE file) includes the field survey of the located facilities.