

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
TIA PROJECT CONCEPT REPORT

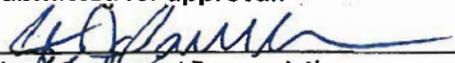
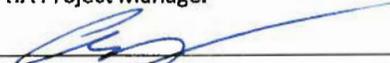
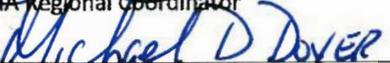


Project Type: Realignment & Rehabilitation
GDOT District: 2
Federal Route Number: N/A
State Route Number: N/A

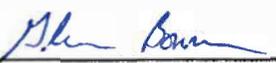
P.I. Number: 0011413 & 0011381
County: Richmond County
MPO ID Number: N/A

These projects propose to widen and realign Berckmans Road as well as replace the existing bridge over Rae's Creek, in Augusta, GA. These projects will realign the existing Berckmans Road to align with Alexander Drive at Washington Road. Additionally, the roadway will be widened and a roundabout installed at the existing intersection of Ingleside Drive and Berckmans Rd.

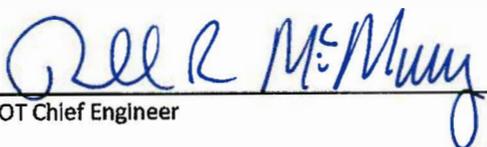
Submitted for approval:

 Local Government Representative	3/31/14 DATE
 POND & COMPANY Consultant & Firm	4-8-14 DATE
 TIA Project Manager	5-1-14 DATE
 TIA Program Manager	01 MAY 2014 DATE
 GDOT TIA Regional Coordinator	5/7/14 DATE
 MICHAEL D DOVER GDOT State TIA Administrator	5/4/14 DATE

Approval:

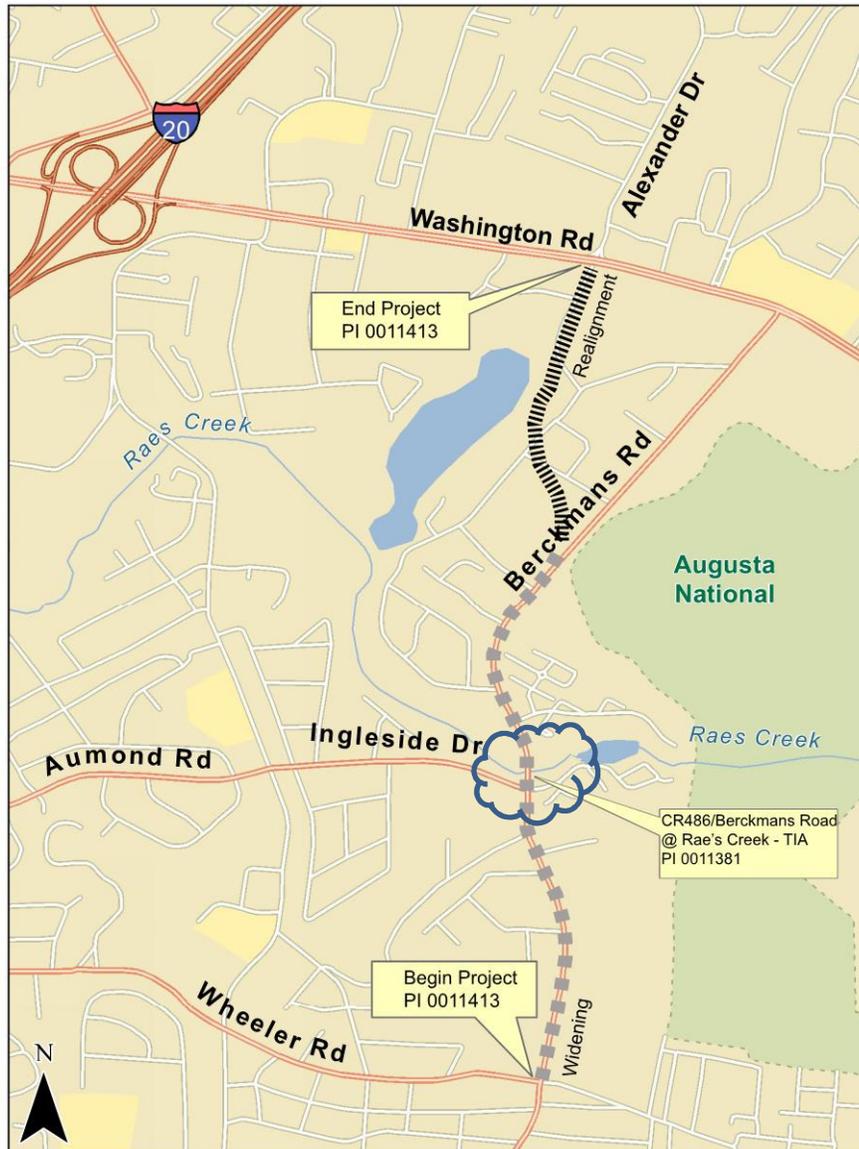
Concur: 
GDOT Director of Engineering

7/8/14
DATE

Approve: 
GDOT Chief Engineer

7/14/14
DATE

PROJECT LOCATION



*CR486/Berckmans Rd From CR 601/CR 2379 Wheeler Rd to SR 28 – TIA
PI 0011413
Richmond County, GA*

*CR486/Berckmans Road @ Rae's Creek – TIA
PI 0011381
Richmond County, GA*

PLANNING & BACKGROUND DATA

Description of the proposed project:

The proposed widening and realignment project lies completely within the City of Augusta in Richmond County. The project proposes to widen Berckmans Road from Wheeler Road to Washington Road and realign the northern terminus at Washington Road to connect with Alexander Drive. The proposed design will consist of two travel lanes with a center turn lane from Washington Road to Wheeler Road. The project also proposes to install a roundabout at the intersection of Berckmans Rd and Ingleside Drive/ Willowridge Drive. Furthermore, this project proposes to install two underpasses in order to accommodate the large influx of pedestrians that attend the major events at Augusta National Golf Course.

The proposed bridge would replace the existing bridge over Rae's Creek. The current bridge has posted weight limits for trucks. The proposed bridge would remove these weight restrictions for the bridge which currently services 6% trucks. The width of the bridge would be increased to accommodate the improvements to Berckmans Road.

This project will be constructed in two phases. Phase I of construction will consist of the portion of Berckmans Road that is to be realigned. Phase I will begin at Wicklow Drive and end at the intersection of Alexander Drive and Washington Road. Phase I will be approximately 0.94 miles in length and will include the two underpasses. Phase II of construction will begin at the intersection of Wheeler Road and end at Wicklow Drive. Phase II will consist of the portion of Berckmans Road that will maintain the existing alignment. Phase II will be approximately 0.91 miles in length and will include the roundabout at Ingleside Drive and the bridge over Rae's Creek.

Project Benefit:

PI 0011413 - CR486/Berckmans Rd From CR 601/CR 2379 Wheeler Rd to SR 28 – TIA

As stated on the TIA project sheet, this project would provide a public benefit by maximizing the value of Georgia's assets, as well as increasing modal options. Additionally, this project would benefit the public by providing pedestrian and bicycle connectivity along the corridor and improving daily traffic flow along Washington Rd by aligning Berckmans Rd with Alexander Dr. This project also benefits the public by creating a more direct route between South Augusta and the commercial centers that are located on Washington Rd and Riverwatch Pkwy. Also, this project will update the signals at Berckmans Rd and Washington Rd as well as Berckmans Rd and Wheeler Rd.

PI 0011381 - CR486/Berckmans Road @ Rae's Creek – TIA

As stated on the TIA project sheet, this project would provide a public benefit by maximizing the value of Georgia's assets. Additionally, this project benefits the public by replacing the existing bridge with one designed to accommodate for the increased traffic (10,890 average annual daily traffic) and loads (6% trucks) in the area.

Federal Oversight: Exempt State Funded TIA Other

MPO: Augusta Regional Transportation Study (ARTS)

Regional Commission: Central Savannah River Area
 RC Project ID: RC07-001211 & RC07-000106

Congressional District(s): 12

Projected Traffic: ADT

Current Year (2012): 11,340 Open Year (2015): 32,060 Design Year (2035): 41,260
 Traffic Projections Performed by: Pond & Company

Functional Classification (Mainline): Urban Minor Arterial Street
Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project?

No Yes

Will Context Sensitive Solutions procedures be utilized?

No Yes

DESIGN AND STRUCTURAL DATA

Features: Berckmans Rd (CR 486) – Urban Minor Arterial Street

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2		3
- Lane Width(s)	12 ft.	11-12 ft.	12 ft. travel lanes 14 ft. two-way left turn lane
- Outside Shoulder or Border Area Width	2 ft. min	10 ft.	16-20 ft. on west side of Berckmans Rd. 13-18 ft. on east side of Berckmans Rd.
- Outside Shoulder Slope	2-4%	2%	2%
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	0-5 ft.	5 ft.	8 ft. on west side of Berckmans 5-6 ft. on east side of Berckmans Rd.
- Auxiliary Lanes	11-12 ft.	10-12 ft.	11-12 ft.

Posted Speed	35		35
Design Speed	35	35	35
Min Horizontal Curve Radius	1000 ft.	371 ft.	533 ft.
Superelevation Rate	7% max	4 % max	4 % max
Grade	7% max	7-8% max	7-8% max
Access Control	Permitted	Permitted	Permitted
Right-of-Way Width	60-80'		80'- 110'
Maximum Grade – Crossroad	7% max	6-7% max	6-7% max
Design Vehicle	WB-40 or Bus-40	WB-40 or Bus-40	WB-40 or Bus-40

*According to current GDOT design policy if applicable

Major Structures:

Structure ID	Existing	Proposed
245-0080-0	56' wide	69'-5" wide

Major Intersections:

- Berckmans Road at Wheeler Road
- Berckmans Road at Ingleside Drive
- Berckmans Road at Washington Road
- Stanley Drive/Alexander Drive at Washington Road

Utility Involvements: Existing utilities include both above ground and underground facilities. Utility Companies anticipated within the project area include the following:

- City of Augusta Utilities Department- Water & Sewer
- Atlanta Gas Lights - Natural Gas
- WOW - Knology - Telecommunications
- AT&T – Telecommunications
- Level 3 – Telecommunications
- Comcast - Telecommunications
- Georgia Power (Distribution) - Electricity
- Georgia Power (Transmission) - Electricity

Public Interest Determination Policy and Procedure recommended (Utilities)? No Yes

SUE Required: No Yes

Railroad Involvement: None

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

*Warranted due to the fact that Bicycle and Pedestrian accommodations are included in the City of Augusta Bike and Ped Plan.

Right-of-Way:

Required Right-of-Way anticipated: No Yes Undetermined
Easements anticipated: None Temporary Permanent Utility Other

Anticipated number of impacted parcels:	49
Displacements Anticipated:	0
Businesses:	5
Residences:	44
Other:	0

Transportation Management Plan [TMP] Required: No Yes
If Yes: Project classified as: Non-Significant Significant
TMP Components Anticipated: TTC TO PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: None

Design Variances to GDOT Standard Criteria anticipated: None

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: Type A Letter Type B Letter Not Applicable
NEPA: CE EA/FONSI Not Applicable

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

Environmental Permits/Variations/Commitments/Coordination

Insofar as there are known water crossings on the project, a 404 Permit and/or Stream Buffer Variance (SBV) could be needed. Section 4(f) is not applicable to non-USDOT funded projects.

NEPA/GEPA Comments & Information:

This project will be local let, therefore GEPA will not apply and no special studies will be required unless requested by the USACE and/or State as part of the 404 Permit and/or Stream Buffer Variance process.

Anticipated effects:

Ecology - This project could potentially impact waters, requiring a 404 Permit and/or Stream Buffer Variance.

History - Properties listed on or potentially eligible for the National Register exist within the project area. Consequently, the potential for impacts to historic resources exists. Efforts should be made to avoid

historic resources if possible. As a TIA-funded, local let project that does not involve a state route or any federal or state funding, there is no transportation-related mechanism to protect historic resources. If there is a local interest mandating historic protections then these will be dealt with at the local level. Early coordination will be performed with the Army Corps of Engineers and SHPO to determine their level of involvement, and whether or not impacting historical resources will have an effect on the issuance of a 404 permit.

Archaeology - Based on background research, the likelihood of encountering significant archaeological resources within the project area is low.

Air - Air quality is unlikely to be effected by this project.

Public Involvement - Public outreach has occurred and is intended to continue for this project.

PROJECT RESPONSIBILITIES

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Pond & Company
Design	Pond & Company
Right-of-Way Acquisition	City of Augusta
Utility Relocation	City of Augusta
Letting to Contract	City of Augusta
Construction Supervision	City of Augusta
Providing Material Pits	City of Augusta
Providing Detours	City of Augusta
Environmental Studies, Documents, and Permits	Pond & Company
Environmental Mitigation	Pond & Company
Construction Inspection & Materials Testing	City of Augusta

Lighting required: No Yes

Other projects in the area:

- PI 0011391 - Highland Avenue from Wrightsboro Road to Wheeler Road – TIA
- PI 0011406 - CR 1507/Walton Way from Bransford Road to Milledge Road
- PI 0001794 – CR 560/ Alexander Drive from Washington Rd to Riverwatch Parkway

Other coordination to date:

- Public Information Meeting June 12, 2012 from 4-7 pm at the Julian Smith Casino, 2200 Broad Street, Augusta, GA 30904.
- Public Information Meeting September 17, 2012 from 4-7 pm at the Julian Smith Casino, 2200 Broad Street, Augusta, GA 30904.

- Utility coordination began in Feb. of 2014. All existing utility providers have been contacted and have supplied drawings showing their existing facilities.

Project Cost Estimate and Funding Responsibilities:

CR486/Berckmans Rd from CR 601/CR 2379 Wheeler Rd to SR 28 – TIA (PI 0011413)

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	Breakdown of ROW	Breakdown of Reimbursable Utilities	Breakdown of CST	Environmental Mitigation	Total Cost
By Whom	TIA	TIA	TIA	TIA	TIA	
Date of Estimate	03/25/2014	03/25/2014	03/25/2014	03/25/2014	03/25/2014	
TIA Current Programmed Budget \$	\$887,000	\$1,150,000	\$5,000,000	\$9,663,000	\$0	\$16,700,000
Estimated \$ Amount	\$700,000	\$2,983,825	\$0	\$12,116,348	\$0	
Budget Contingency \$	\$35,000	\$11,500	\$50,000	\$386,520	\$0	
Total Estimated Cost	\$735,000	\$2,995,325	\$50,000	\$12,502,868	\$0	\$16,283,193

- Note: 1. All phases contain 1% Department Management costs and calculated project risk contingencies in the Budget Contingency \$ line item.
 2. Construction phase contains 3% CE&I in addition to other contingencies.

CR486/Berckmans Road @ Rae's Creek – TIA (PI 0011381)

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	Breakdown of ROW	Breakdown of Reimbursable Utilities	Breakdown of CST	Environmental Mitigation	Total Cost
By Whom	TIA	TIA	TIA	TIA	TIA	
Date of Estimate	03/25/2014	03/25/2014	03/25/2014	03/25/2014	03/25/2014	
TIA Current Programmed Budget \$	\$267,080	\$130,000	\$0	\$3,310,893	\$0	\$3,707,973
Estimated \$ Amount	\$250,000	\$39,850	\$0	\$2,390,683	\$0	
Budget Contingency \$	\$59,569	\$6,392	\$0	\$459,446	\$0	
Total Estimated Cost	\$309,569	\$46,242	\$0	\$2,850,129	\$0	\$3,205,940

- Note: 1. All phases contain 1% Department Management costs and calculated project risk contingencies in the Budget Contingency \$ line item.
 2. Construction phase contains 3% CE&I in addition to other contingencies.

Project Concept Report

P.I. Number:0011413 & 0011381

County: Richmond

Attachments:

1. Concept Layout
2. Typical Sections
3. Bridge Renderings
4. Cost Estimates
5. Concept Report Traffic Study
6. PIOH Documentation
7. Project Schedule
8. Meeting Minutes

Project Sheet

Project Number: RC07-000106 **Project Name:** Berkman Road over Raes Creek (Bridge Replacement)

GDOT ID: 0011381

Project Description: Replace the bridge of Berkman Road over Raes Creek.

Regional Commission: Central Savannah River Area

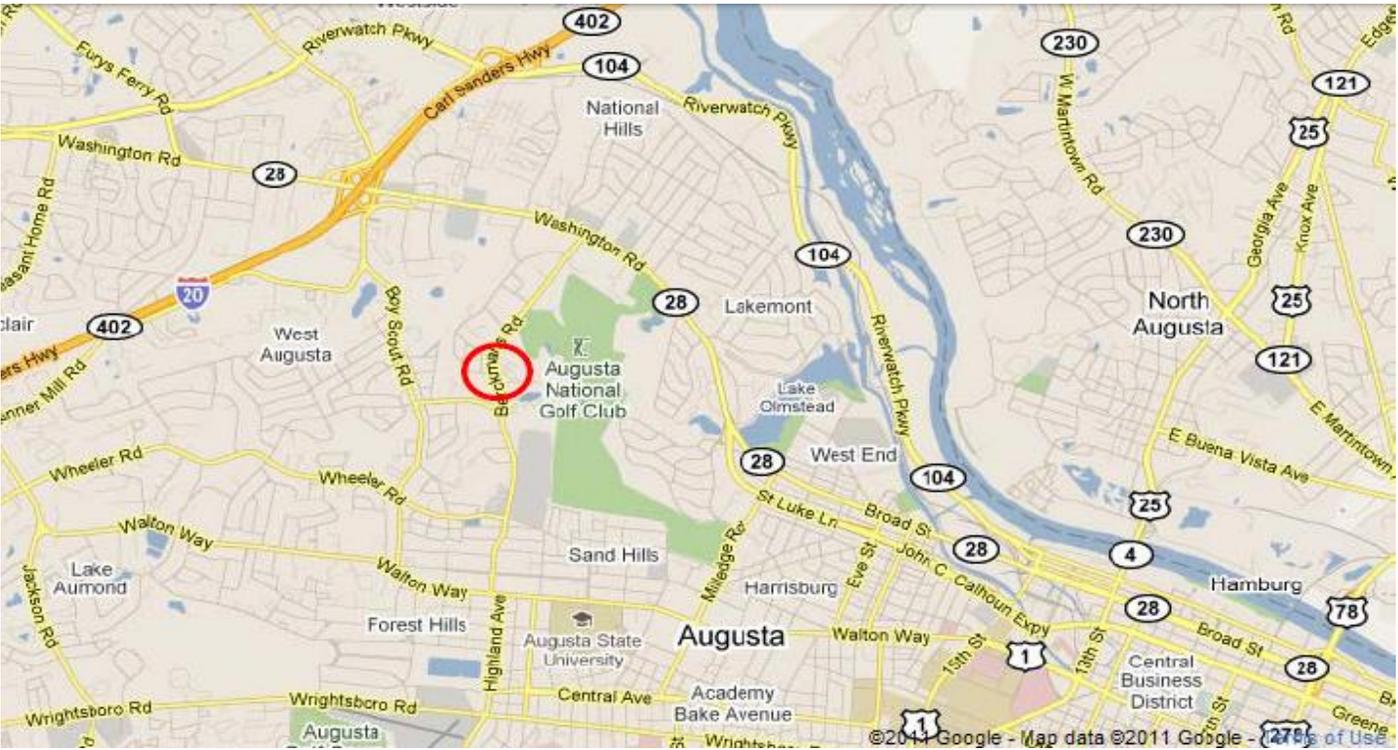
County: Richmond County

Phase	Total Project Cost	Total TIA Amount	Comments (Please note all cost estimates are in 2011 dollars and actual costs for all phases at year of expenditure will be higher):
PE	\$262,171	\$262,171	
ROW	\$41,629	\$41,629	
CST	\$3,352,137	\$3,352,137	
UTL	\$52,036	\$52,036	
Total	\$3,707,973	\$3,707,973	

Public Benefit	Notes
Maximizing the value of Georgia's Assets	This project could potentially maximize the full utility of an existing transportation facility(s). In some cases, bypasses will be necessary. Example benefits could be: mitigating congestion (e.g. operational improvements) and optimizing capital asset management (e.g. resurfacing, rehabilitation). The impacts would apply to this roadway segment, corridor, and/or intersection.

Additional Benefits	This project would benefit the public by replacing the existing bridge and increasing the load limits to accommodate for the increased traffic (10,890 average annual daily traffic) and loads (6% trucks).
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Project Location



Project Sheet

Project Number: RC07-001211 **Project Name:** Berckmans Road Realignment and Widening (Wheeler Road to Washington Road)

GDOT ID: 0011413

Project Description: Realign Berckmans Road at Washington Road and align it with Alexander Drive to complete a continuous north-south connection between Gordon Highway and the commercial centers along Washington Road and the proposed commercial center along Riverwatch Parkway. Project would also include bridge replacement at Raes Creek and a center left-turn lane between Wheeler and Washington Roads.

Regional Commission: Central Savannah River Area

County: Richmond County

Phase	Total Project Cost	Total TIA Amount	Comments (Please note all cost estimates are in 2011 dollars and actual costs for all phases at year of expenditure will be higher):
ALL	\$16,700,000	\$16,700,000	
Total	\$16,700,000	\$16,700,000	

Public Benefit

Notes

Maximizing the value of Georgia's Assets

This project could potentially maximize the full utility of an existing transportation facility(s). In some cases, bypasses will be necessary. Example benefits could be: mitigating congestion (e.g. operational improvements) and optimizing capital asset management (e.g. resurfacing, rehabilitation). The impacts would apply to this roadway segment, corridor, and/or intersection.

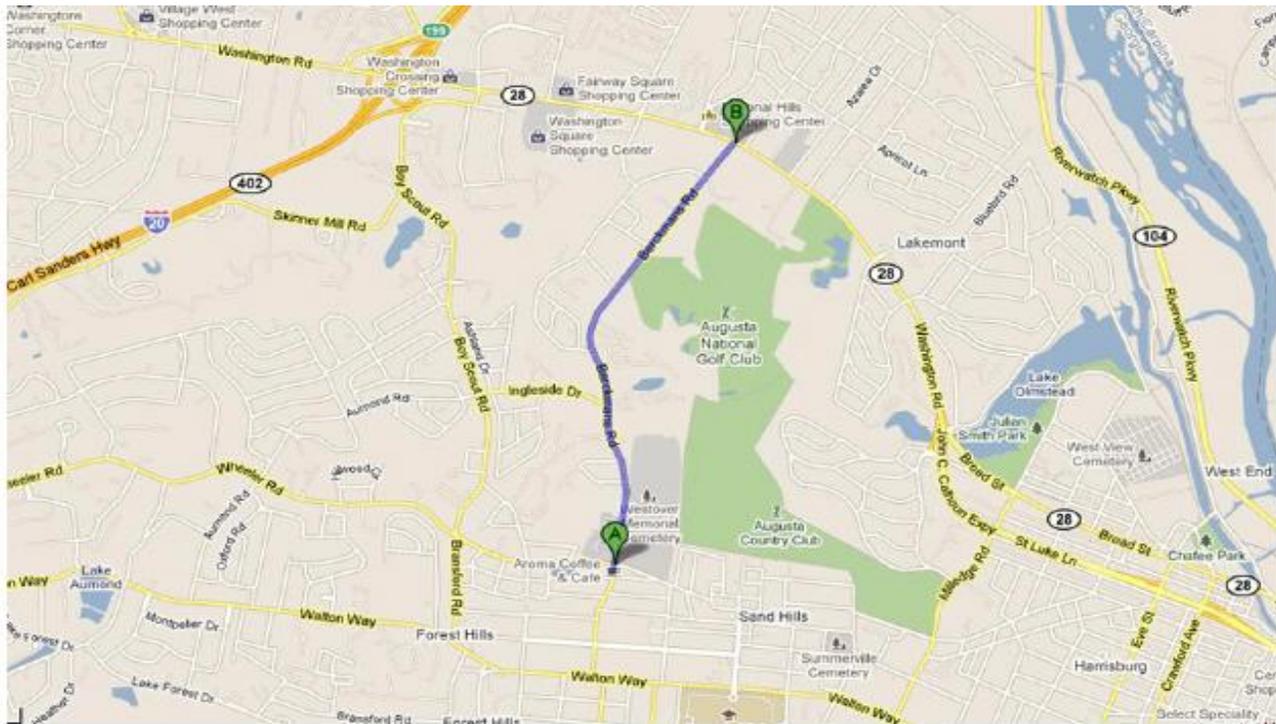
Increasing Modal Options (Bike/Ped)

This project could have a positive impact(s) for the local corridor and community while enhancing the efficiency and mobility of the regional transportation system. Other examples of possible benefits are: enhancing activity centers and the connectivity between other activity centers, reducing environmental impacts, and benefiting local communities and public health.

Additional Benefits

This project would benefit the public by improving pedestrian and bicycle safety along the corridor and improving daily traffic flow along Washington Road by aligning Berckmans Road with Alexander Drive. The project will remove the existing split-phased signal operation and allow for a more direct route between south Augusta and commercial centers on Washington Road and Riverwatch Pkwy. Berckmans Road currently operates with an average daily traffic of 10,890.

Project Location



Attachment 1:

Concept Layout



Surrey Center

2719 Wheeler Rd

Boardman Alonzo P Jr

Boardman Elizabeth F

Boardman Elizabeth F

Boardman Alonzo P Jr

Thompkins Catherine

Thompkins Kathleen

Stahl Nancy C

Highland Ave

Berckmans Rd

Rinker France Marian Woo

Waynesboro Motor Court Enterprises Inc

Berry Sarah

Rainey Frances L

Booker John

Bush Vernetta N

Westover Memorial Park

Cemetery

SEE SHEET 1

MATCH LINE

LEGEND

- EXISTING R / W - PROPERTY LINE
- PROPOSED ROADWAY
- PROPOSED SIDEWALK/SHARED USE PATH
- PROPOSED CONSTRUCTION LIMITS
- PROPOSED SIGNAL
- PROPOSED WALL

POND
Architects Engineers Planners
3500 Parkway Lane
Suite 600
Norcross, GA 30092
Phone 678-336-7740
Fax 678-336-7744
Web www.pondco.com

CITY OF AUGUSTA
ENGINEERING DEPARTMENT
CONCEPT LAYOUT - JAN. 2014
BERCKMANS RD WIDENING,
REALIGNMENT AND
BRIDGE REPLACEMENT





SEE SHEET 1

MATCH LINE

SEE SHEET 3

Boardman Alonzo P Jr

Williams Gail M Liv Tr

Downing St

Williams Andrew F

Cheeseborough Lee E

Price Charlotte R

Wellington Dr

Faraone Rose Marie

Berckmans Rd

Thurmond Bonnie B Irrevocable Trust

Indian Creek Rd

Barrett Patricia Strong

One Mill Place HOA

Bennitt Carmen G L/EST

Few Samuel W III (ROFS)

One Mill Place HOA

Whitley Lynn P

One Mill Pl

One Mill Place HOA

Aldridge Gerald W

Cemetery

Westover Memorial Park

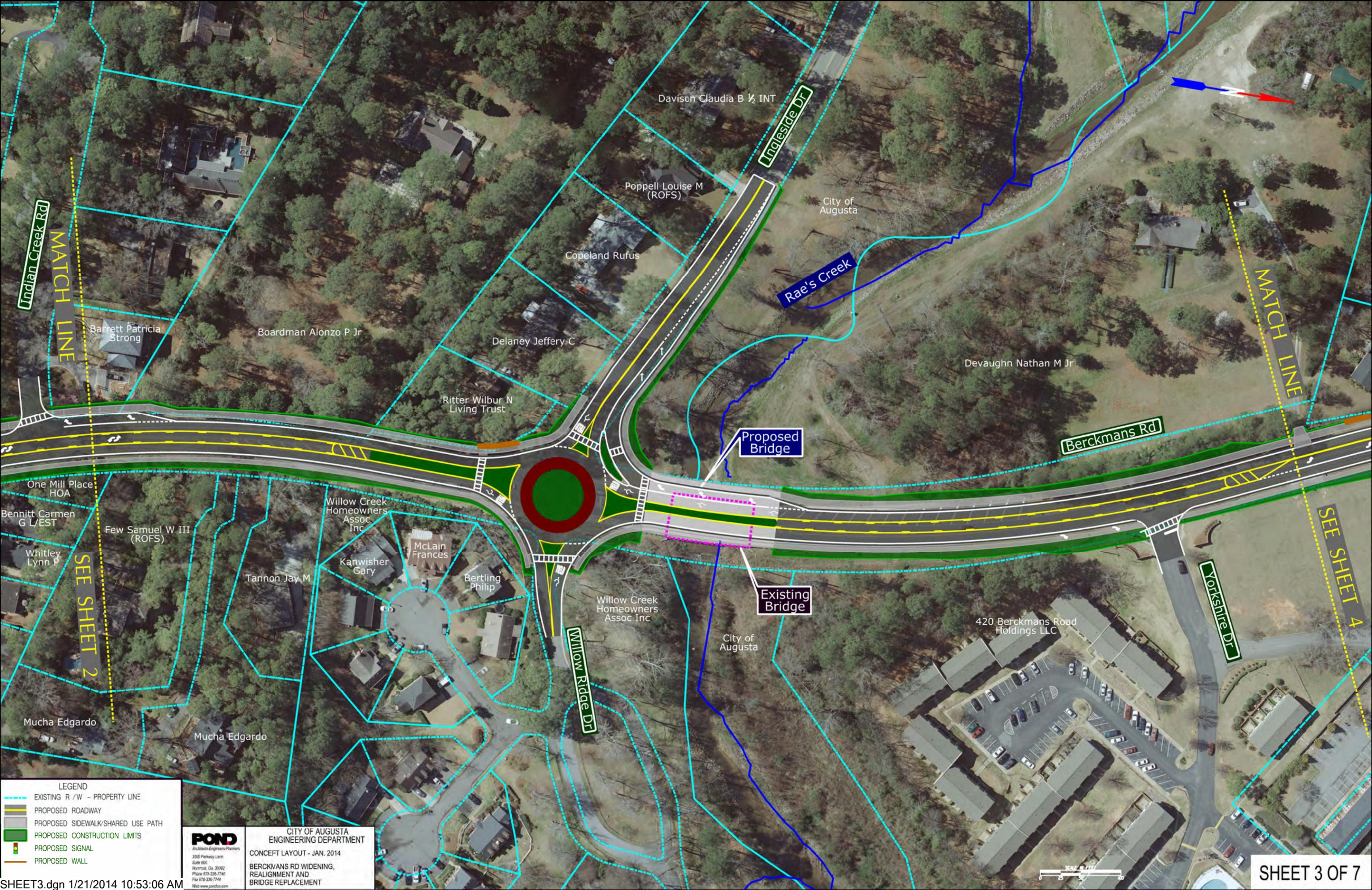
LEGEND

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CITY OF AUGUSTA
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 CONCEPT LAYOUT - JAN. 2014
 BERCKMANS RD WIDENING,
 REALIGNMENT AND
 BRIDGE REPLACEMENT





LEGEND

- EXISTING R / W - PROPERTY LINE
- PROPOSED ROADWAY
- PROPOSED SIDEWALK/SHARED USE PATH
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**CITY OF AUGUSTA
ENGINEERING DEPARTMENT**

CONCEPT LAYOUT - JAN. 2014

**BERCKMANS RD WIDENING,
REALIGNMENT AND
BRIDGE REPLACEMENT**



MATCH LINE

SEE SHEET 5

SEE SHEET 3

MATCH LINE

LEGEND

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CONCEPT LAYOUT - JAN. 2014
**BERCKMANS RD WIDENING,
REALIGNMENT AND
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SCALE IN FEET
0 25 50 75



LEGEND

- EXISTING R/W - PROPERTY LINE
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**CITY OF AUGUSTA
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 CONCEPT LAYOUT - JAN. 2014
 BERCKMANS RD WIDENING,
 REALIGNMENT AND
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FTD LLC

Rel. Berckmans Rd

SEE SHEET 7

MATCH LINE

Berckman Residential Properties LLC

Berckman Residential Properties LLC

SEE SHEET 5

Berckman Residential Properties LLC

FTD LLC

Berckman Residential Properties LLC

FTD LLC

MATCH LINE

Thacker Herman L

Berckman Residential Properties LLC

Heath Dr

Stanley Dr

LEGEND

- EXISTING R / W - PROPERTY LINE
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 CONCEPT LAYOUT - JAN. 2014
 BERCKMANS RD WIDENING,
 REALIGNMENT AND
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FTD LLC

SEE SHEET 6

Security Land & Dev Co

Midas Properties Inc

Southern Restaurant Group

Washington Rd

While We're Young LLC

FTD LLC

Richards Family Trust

Security Land & Dev Co

Flanagin Harriette Robinson Tr of Liv

Rel. Berckmans Rd

Berckman Residential Properties LLC

MATCH LINE

Berckman Corner LLC

Alexander Dr

Thacker Herman L

Villa De Flores 2744 Washington Rd LLC

DWT Properties LLC

Berckman Residential Properties LLC

Berckman Corner LLC

Berckman Corner LLC

Berckman Corner LLC

Cheng Su Yun

LEGEND

- EXISTING R / W - PROPERTY LINE
- PROPOSED ROADWAY
- PROPOSED SIDEWALK/SHARED USE PATH
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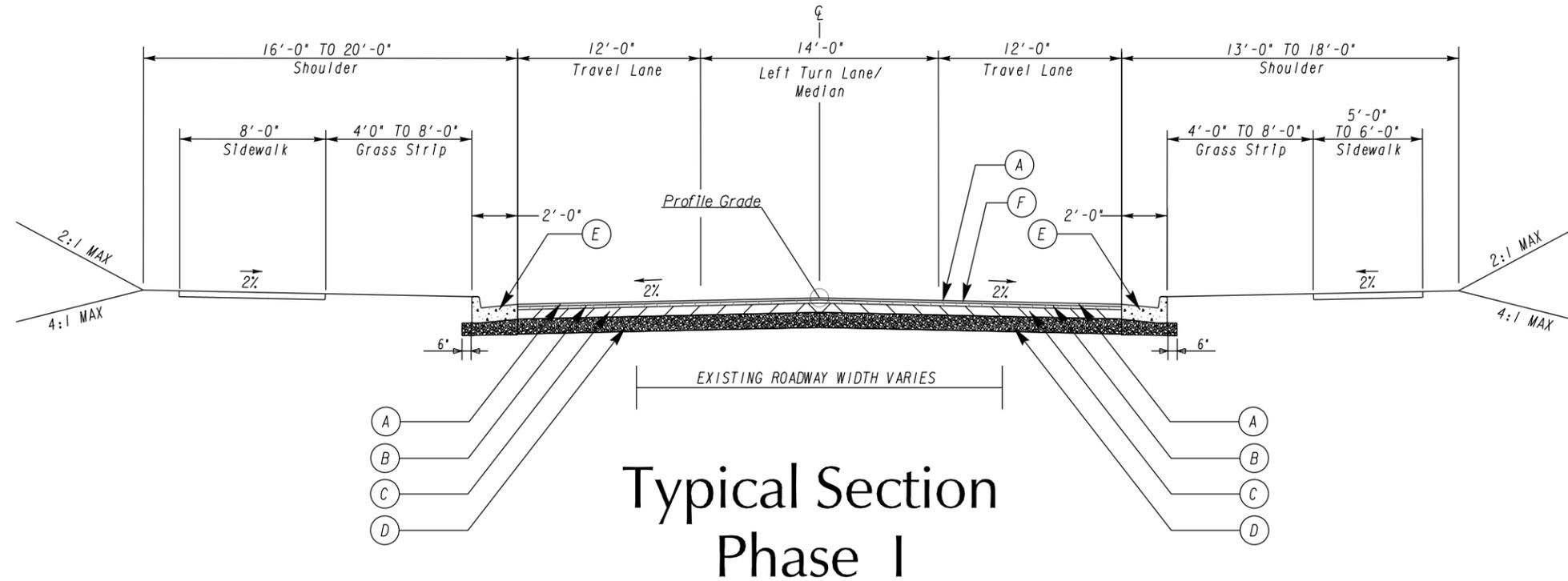
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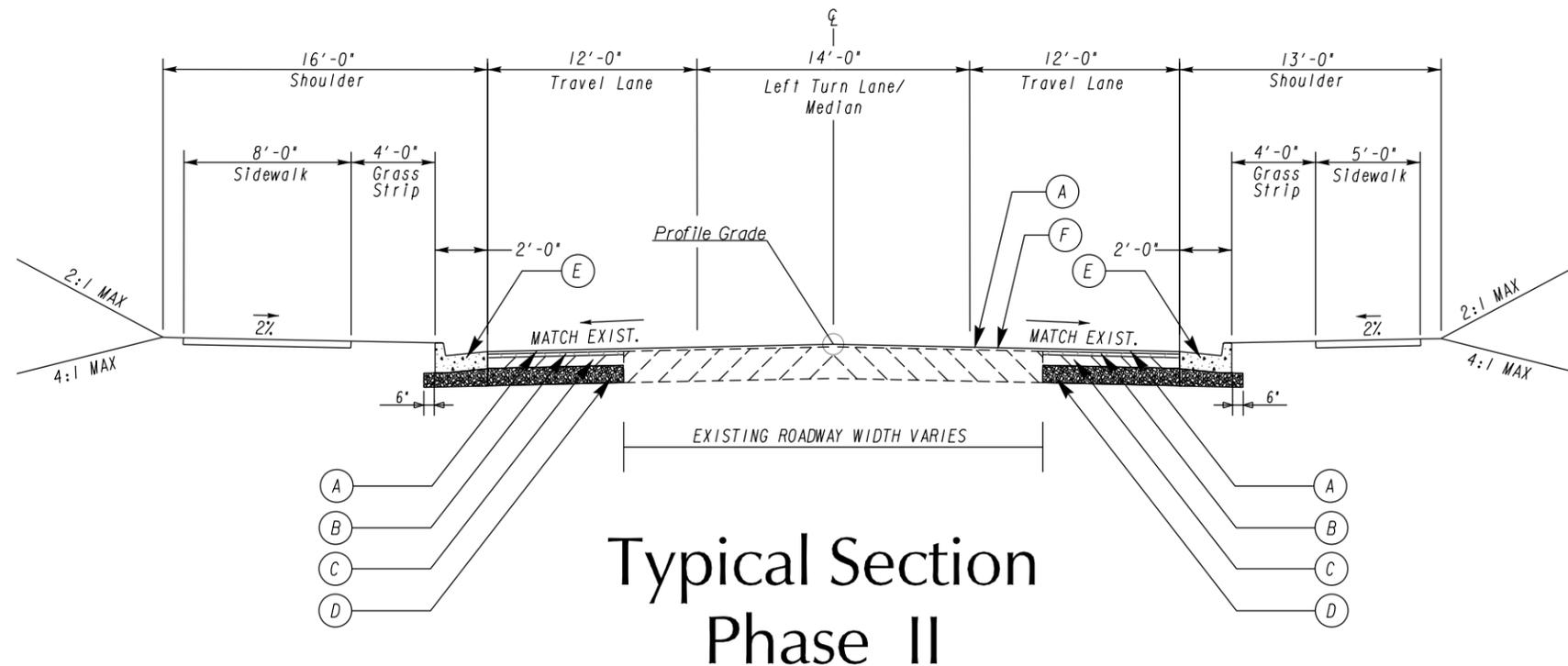


Attachment 2:

Typical Sections



Typical Section
Phase I



Typical Section
Phase II

- (A) - RECYCLED ASPH CONC 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME - 165 LBS/SY
- (B) - RECYCLED ASPH CONC 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME - 220 LBS/SY
- (C) - RECYCLED ASPH CONC 25 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME - 440 LBS/SY
- (D) - GR AGGR BASE CRS, INCL MATL - 10 INCH DEPTH
- (E) - CONC. CURB & GUTTER, 6' X 24' TP 2
- (F) - ASPH CONC. LEVELING, AS REQ'D - 35 LB/SY

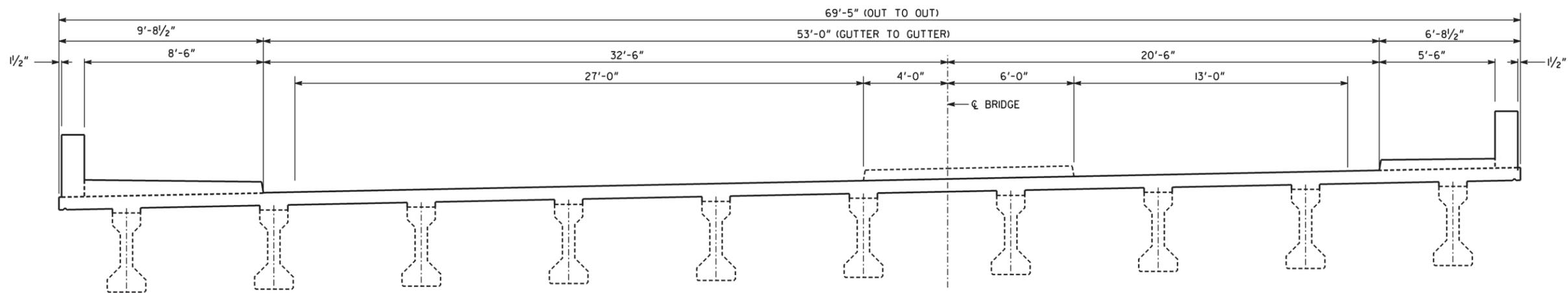
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REVISION DATES

CITY OF AUGUSTA
DEPARTMENT OF TRANSPORTATION
OFFICE:
TYPICAL SECTIONS
BERCKMANS ROAD

DRAWING No.
05-01

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



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9/24/2013 4:51:57 PM Carlos_Azcarra

BRIDGE NO. 1

URS URS CORPORATION
 400 NORTHPARK TOWN CENTER
 1000 ABERNATHY ROAD, N. E.
 SUITE 900
 ATLANTA, GA 30328
 TEL: (678) 808-8800
 FAX: (678) 808-8400

GEORGIA
DEPARTMENT OF TRANSPORTATION
 ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

PRELIMINARY TYPICAL SECTION
 CR 486 (BERCKMAN RD) OVER RAES CREEK
 RICHMOND COUNTY

REVISIONS	DATE

DRAWING NO. 35-01	SCALE: NONE	SEPTEMBER 2013
BRIDGE SHEET 01 OF 01	DESIGNED: CAV DRAWN: CAV	CHECKED: RSC DESIGN GROUP: XXX
	REVIEWED: WEI/WMD APPROVED: BFR	

1 INCH WHEN PRINTED FULL SIZE

X.DGN

Attachment 3:

Bridge Renderings





Attachment 4:

Cost Estimates

Project No. RC07-001211					
PI No. 0011413					
Project Name: Berckmans Rd Widening and Realignment					
Date: March 25, 2014					
CONSTRUCTION COST ESTIMATE					
Item No.	ITEMS:	Unit	Qty	Price	Cost
<u>ROADWAY ITEMS</u>					
150-1000	TRAFFIC CONTROL -	LS	1	\$500,000.00	\$500,000.00
207-0203	FOUND BK FILL MATL, TP II	CY	60000	\$36.93	\$2,215,800.00
609-1000	REMOVE ROADWAY SLAB	SY	5000	\$68.54	\$342,700.00
610-0959	REMOVE PIPE -	LF	3000	\$6.68	\$20,040.00
610-1055	REM GUARDRAIL	LF	2500	\$1.73	\$4,325.00
610-1075	REM GUARDRAIL ANCH, ALL TYPES	EA	12	\$181.46	\$2,177.52
999-3110	DETENTION POND	EA	4	\$25,000.00	\$100,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	21635	\$15.20	\$328,852.00
402-1802	RECYCLED ASPH CONC PATCHING, INCL BITUM MATL & H LIME	TN	380	\$77.35	\$29,393.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	500	\$71.77	\$35,885.00
402-3100	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, TYPE I, GP 1 OR BLEND 1, INCL BITUM MATL & H LIME	TN	186	\$72.87	\$13,553.82
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TN	4635	\$72.65	\$336,732.75
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	3250	\$67.49	\$219,342.50
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	6495	\$65.04	\$422,434.80
413-1000	BITUM TACK COAT	GL	5093	\$2.70	\$13,751.10
432-5010	MILL ASPH CONC PVTM, VARIABLE DEPTH	SY	600	\$2.15	\$1,290.00
439-0022	PLAIN PC CONC PVTM, CL 3 CONC, 10 INCH THK	SY	391	\$53.75	\$21,016.25
441-0016	DRIVEWAY CONCRETE, 6 IN TK	SY	322	\$30.62	\$9,859.64
441-0104	CONC SIDEWALK, 4 IN	SY	14050	\$20.24	\$284,372.00
441-0748	CONCRETE MEDIAN, 6 IN	SY	487	\$43.04	\$20,960.48
441-4020	CONC VALLEY GUTTER, 6 IN	SY	296	\$35.62	\$10,543.52
441-5008	CONCRETE HEADER CURB, 6 IN, TP 7	LF	302	\$8.72	\$2,633.44
441-6012	CONC CURB & GUTTER, 6 IN X 24 IN, TP 2	LF	20800	\$14.53	\$302,224.00
446-1100	PVTM REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	LF	10500	\$3.32	\$34,860.00
500-3201	CLASS B CONCRETE, RETAINING WALL	CY	780	\$495.95	\$386,841.00
500-9999	CLASS B CONC, BASE OR PVTM WIDENING	CY	19	\$131.07	\$2,490.33
515-2020	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND	LF	1500	\$36.30	\$54,450.00
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	11000	\$30.04	\$330,440.00
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	5200	\$36.09	\$187,668.00
550-1300	STORM DRAIN PIPE, 30 IN, H 1-10	LF	1900	\$45.40	\$86,260.00
550-1360	STORM DRAIN PIPE, 36 IN, H 1-10	LF	1300	\$56.29	\$73,177.00
550-1420	STORM DRAIN PIPE, 42 IN, H 1-10	LF	700	\$70.92	\$49,644.00
550-4218	FLARED END SECTION 18 IN, STORM DRAIN	EA	6	\$490.64	\$2,943.84
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	2	\$618.93	\$1,237.86
550-4236	FLARED END SECTION 36 IN, STORM DRAIN	EA	2	\$1,086.04	\$2,172.08
550-4242	FLARED END SECTION 42 IN, STORM DRAIN	EA	2	\$1,408.00	\$2,816.00
603-2181	STN DUMPED RIP RAP, TP 3, 18 IN	SY	100	\$36.39	\$3,639.00
603-7000	PLASTIC FILTER FABRIC	SY	100	\$3.22	\$322.00
641-1200	GUARDRAIL, TP W	LF	2500	\$16.03	\$40,075.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	6	\$648.02	\$3,888.12
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	6	\$1,964.12	\$11,784.72
634-1200	RIGHT OF WAY MARKERS	EA	80	\$104.54	\$8,363.20
643-8200	BARRIER FENCE (ORANGE), 4 FT	LF	900	\$1.25	\$1,125.00
668-1100	CATCH BASIN, GP 1	EA	70	\$1,989.63	\$139,274.10
668-4300	STORM SEWER MANHOLE, TP 1	EA	5	\$1,653.24	\$8,266.20
668-5000	JUNCTION BOX	EA	10	\$1,458.20	\$14,582.00
999-9000	LANDSCAPING	LS	1	\$750,000.00	\$750,000.00
999-9001	ROADWAY LIGHTING	LS	1	\$950,000.00	\$950,000.00
<u>EROSION CONTROL - PERMANENT</u>					
700-6910	PERMANENT GRASSING	AC	14	\$869.63	\$12,174.82
700-7000	AGRICULTURAL LIME	TN	42	\$64.65	\$2,715.30
700-8000	FERTILIZER MIXED GRADE	TN	14	\$364.69	\$5,105.66
700-8100	FERTILIZER NITROGEN CONTENT	LB	700	\$1.90	\$1,330.00
<u>EROSION CONTROL - TEMPORARY</u>					
163-0232	TEMPORARY GRASSING	AC	14	\$269.53	\$3,773.42

PROJ. NO.	RC07-001211
P.I. NO.	0011413
DATE	3/25/2014

CALL NO.

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Mar-14	\$ 3.293
DIESEL		\$ 3.909
LIQUID AC		\$ 563.00

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)				260882.94	\$	260,882.94
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	900.80		
Monthly Asphalt Cement Price month project let (APL)			\$	563.00		
Total Monthly Tonnage of asphalt cement (TMT)				772.3		

ASPHALT	Tons	%AC	AC ton
Leveling	880	5.0%	44
12.5 OGFC		5.0%	0
12.5 mm	4635	5.0%	231.75
9.5 mm SP	186	5.0%	9.3
25 mm SP	6495	5.0%	324.75
19 mm SP	3250	5.0%	162.5
	15446		772.3

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	7,389.36	\$	7,389.36
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	900.80			
Monthly Asphalt Cement Price month project let (APL)			\$	563.00			
Total Monthly Tonnage of asphalt cement (TMT)				21.874949			

Bitum Tack	Gals	gals/ton	tons
	5093	232.8234	21.874949

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	900.80		
Monthly Asphalt Cement Price month project let (APL)			\$	563.00		
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 \$ **268,272.30**

Project No. RC07-001211
 PI No. 0011413
 Project Name: Berckmans Rd Widening and Realignment
 Date: March 25, 2014

Preliminary ROW Cost Estimate

Land and Improvements	Agriculture	Residential	Commercial	Industrial
Estimate (ac)	\$0	\$700,000	\$1,000,000	\$0
Fee Simple Area (ac)	0	7.10	0.32	0
Fee Simple Estimate	\$0	\$4,970,000	\$320,000	\$0
Perm Esmt Area (ac)	0	0.18	0.00	0
Perm Esmt Factor	0%	50%	50%	0%
Perm Esmt Estimate	\$0	\$63,000	\$0	\$0
Temp Esmt Area (ac)	0	3.89	0.44	0
Temp Esmt Factor	0%	25%	25%	0%
Temp Esmt Estimate	\$0	\$680,750	\$110,000	\$0
City Land Available for Swap (ac)	0	6.60	0.00	0
City Land Available for Swap Estimate	\$0	(\$4,620,000)	\$0	\$0
Proximity Damages	\$0	\$0	\$0	\$0
Consequential Damages	\$0	\$0	\$0	\$0
Cost to Cures	\$0	\$0	\$1,000,000	\$0
Improvements	\$0	\$0	\$0	\$0
Trade Fixtures	\$0	\$0	\$0	\$0
PROPERTY TYPE TOTALS	\$0	\$1,093,750	\$1,430,000	\$0

Land and Improvements Sub Total \$2,523,750

Valuation Services	Agriculture	Residential	Commercial	Industrial
Appraisals (# of Parcels)	0	44	5	0
Estimated Fee (per Parcel)	\$0	\$1,000	\$2,000	\$0
Total Appraisals	\$0	\$44,000	\$10,000	\$0
Specialty Reports	\$0	\$0	\$0	\$0
Estimated Fees	\$0	\$0	\$0	\$0
PROPERTY TYPE TOTALS	\$0	\$44,000	\$10,000	\$0

Valuation Services Sub Total \$54,000

Legal Services	Parcels	Estimated Fees	Totals
Meeting with Attorney	49	\$125	\$6,125
Preliminary Titles	49	\$200	\$9,800
Closing and Final Title	49	\$300	\$14,700
Recording Fees	49	\$50	\$2,450

Legal Services Sub Total \$33,075

Administrative	Parcels	Man Hours/Parcel	Totals
Pre-Acquisition	49	40	\$98,000
Acquisition	49	100	\$245,000
Administrative Appeals	12	50	\$30,000

Administrative Sub Total \$373,000

Total Estimated Costs \$2,983,825

Project No. RC07-000106				
PI No. 0011381				
Project Name: CR486/Berckmans Road @ Rae's Creek -TIA				
Date: March 25, 2014				

CONSTRUCTION COST ESTIMATE

Item No.	ITEMS:	Unit	Qty	Price	Cost
BRIDGE ITEMS					
150-1000	TRAFFIC CONTROL -	LS	1	\$75,000.00	\$75,000.00
210-0100	GRADING COMPLETE -	LS	1	\$150,000.00	\$150,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	2600	\$15.20	\$39,520.00
402-1802	RECYCLED ASPH CONC PATCHING, INCL BITUM MATL & H LIME	TN	100	\$77.35	\$7,735.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	100	\$71.77	\$7,177.00
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TN	460	\$72.65	\$33,419.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	350	\$67.49	\$23,621.50
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	700	\$65.04	\$45,528.00
433-1000	REINF CONC APPROACH SLAB	SY	310	\$191.74	\$59,439.71
441-0104	CONC SIDEWALK, 4 IN	SY	900	\$20.24	\$18,216.00
441-0748	CONC MEDIAN, 6 IN	SY	200	\$46.75	\$9,350.00
441-6012	CONC CURB & GUTTER, 6 IN X 24 IN, TP 2	LF	1000	\$14.53	\$14,530.00
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	700	\$30.04	\$21,028.00
211-0300	BRIDGE EXCAVATION, STREAM CROSSING	CY	500	\$29.51	\$14,756.50
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	350	\$41.08	\$14,378.00
603-7000	PLASTIC FILTER FABRIC	SY	350	\$3.54	\$1,239.70
607-3000	STONE FACING	SF	1000	\$29.00	\$29,000.00
643-8405	FENCE, SPECIAL DESIGN -	LF	180	\$135.00	\$24,300.00
500-0100	GROOVED CONCRETE	SY	500	\$4.81	\$2,403.50
500-2110	CONCRETE PARAPET, SPCL DESIGN	LF	180	\$175.75	\$31,635.36
540-1101	REMOVAL OF EXISTING BR, STA NO -	LS	1	\$120,000.00	\$120,000.00
668-1100	CATCH BASIN, GP 1	EA	6	\$1,989.63	\$11,937.78
999-9002	REPLACEMENT STRUCTURE (69.42' wide X 90' long = 6,248 SF)	SF	6248	\$180.00	\$1,124,640.00
999-9000	LANDSCAPING	LS	1	\$50,000.00	\$50,000.00
999-9001	ROADWAY LIGHTING	LS	1	\$95,000.00	\$95,000.00
999-9002	EROSION CONTROL	LS	1	\$40,000.00	\$40,000.00
999-9003	SIGNING AND MARKING	LS	1	\$15,000.00	\$15,000.00
				BRIDGE SUBTOTAL =	\$2,078,855.05
				Liquid AC Adjustment	\$0.00
				Contingency 15.0%	\$311,828.26
				TOTAL =	\$2,390,683.31
*15% Contingency Includes Construction Engineering and Inspection & Materials Testing					

Project No. RC07-000106
 PI No. 0011381
 Project Name: CR486/Berckmans Road @ Rae's Creek -TIA
 Date: March 25, 2014

Preliminary ROW Cost Estimate

Land and Improvements	Agriculture	Residential	Commercial	Industrial
Estimate (ac)	\$0	\$700,000	\$1,000,000	\$0
Fee Simple Area (ac)	0.00	0.00	0.00	0.00
Fee Simple Estimate	\$0	\$0	\$0	\$0
Perm Esmt Area (ac)	0	0.00	0.00	0
Perm Esmt Factor	0%	50%	50%	0%
Perm Esmt Estimate	\$0	\$0	\$0	\$0
Temp Esmt Area (ac)	0.00	0.1	0.00	0.00
Temp Esmt Factor	0%	25%	25%	0%
Temp Esmt Estimate	\$0	\$17,500	\$0	\$0
City Land Available for Swap (ac)	0.00	0.00	0.00	0.00
City Land Available for Swap Estimate	\$0	\$0	\$0	\$0
Proximity Damages	\$0	\$0	\$0	\$0
Consequential Damages	\$0	\$0	\$0	\$0
Cost to Cures	\$0	\$0	\$0	\$0
Improvements	\$0	\$0	\$0	\$0
Trade Fixtures	\$0	\$0	\$0	\$0
PROPERTY TYPE TOTALS	\$0	\$17,500	\$0	\$0

Land and Improvements Sub Total \$17,500

Valuation Services	Agriculture	Residential	Commercial	Industrial
Appraisals (# of Parcels)	0	2	0	0
Estimated Fee (per Parcel)	\$0	\$1,000	\$2,000	\$0
Total Appraisals	\$0	\$2,000	\$0	\$0
Specialty Reports	\$0	\$0	\$0	\$0
Estimated Fees	\$0	\$0	\$0	\$0
PROPERTY TYPE TOTALS	\$0	\$2,000	\$0	\$0

Valuation Services Sub Total \$2,000

Legal Services	Parcels	Estimated Fees	Totals
Meeting with Attorney	2	\$125	\$250
Preliminary Titles	2	\$200	\$400
Closing and Final Title	2	\$300	\$600
Recording Fees	2	\$50	\$100

Legal Services Sub Total \$1,350

Administrative	Parcels	Man Hours/Parcel	Totals
Pre-Acquisition	2	40	\$4,000
Acquisition	2	100	\$10,000
Administrative Appeals	2	50	\$5,000

Administrative Sub Total \$19,000

Total Estimated Costs \$39,850

Attachment 5:

Concept Report Traffic Study

Concept Report Traffic Study Berckmans Road Augusta, Georgia

**Prepared for:
City of Augusta**

Prepared by:

POND

Architects ■ Engineers ■ Planners

**3500 Parkway Lane, Suite 600
Norcross, GA 30092
Phone: 678-336-7740**

March, 2013

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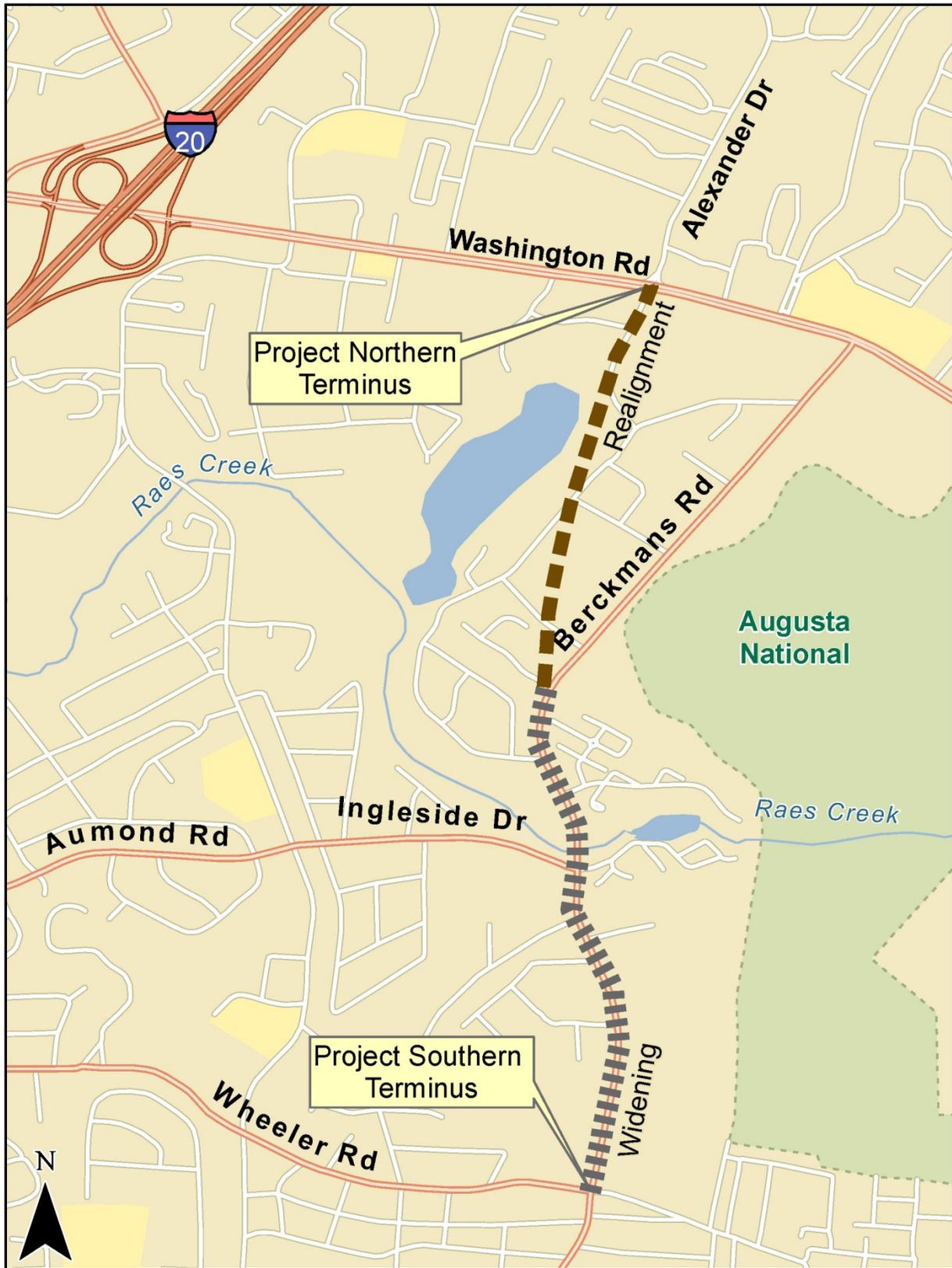
INTRODUCTION

Pond & Company has conducted an analysis of opening year and design year traffic conditions for the planned widening, realignment, and bridge replacement project along Berckmans Road in Augusta, Georgia. The project's opening year is 2015, and the design year is 2035.

This project will realign Berckmans Road at Washington Road and align it with Alexander Drive to complete a continuous north-south connection between Gordon Highway and the commercial centers along Riverwatch Parkway. Approximately one half of the project proposes to be along a new alignment. The rest of the route includes widening the roadway to add a center two-way left-turn lane between Wheeler Road and Washington Road. The project also includes bridge replacement at Raes Creek. Pond & Company has conducted an analysis of the future traffic conditions and transportation needs.

The project length is 1.8 miles. It begins at the intersection of Washington Road and Alexander Drive/Stanley Drive and ends at the intersection of Berckmans Road and Wheeler Road. The project area is shown in Figure 1: Project Location Map.

Figure 1: Project Location Map



2012, 2015, AND 2035 BALANCED FLOW DIAGRAMS

Future year traffic forecasts were prepared based on an examination of existing traffic flow, historic traffic volume trends, and growth projections from the Augusta Regional Transportation Study (ARTS) Regional Travel Demand model.

GDOT count data was collected at three locations in the Berckmans Road area. Table 1 shows the ADT volumes for 2005 and 2010 at each of these locations and the annual growth rate at each location. It also shows the average annual growth rate for the three locations, 0.5%.

Table 1: GDOT ADT Volumes

Road Section	2005 ADT Volume	2010 ADT Volume	Annual Growth Rate
Berckmans Road North of Ingleside Drive	10,130	10,790	0.2%
Washington Road East of Berckmans Road	28,880	35,350	0.7%
Alexander Road North of Washington Road	6,640	7,600	0.5%
Average			0.5%

The ARTS travel demand model was also used to identify an annual growth rate. Table 2 shows the 2006 base year volumes from the model. It also shows the projected 2035 volumes from the 2035 constrained model with the Berckmans Road realignment. This data was used to develop annual growth rates at each location and a model average annual growth rate of 0.9%.

Table 2: ARTS Travel Demand Model ADT Volumes

Road Section	Model Base Year 2006 Volume	2035 Constrained Model Volume	Annual Growth Rate
Berckmans Road North of Ingleside Drive	11,640	13,263	0.5%
Washington Road West of Alexander Road	30,170	37,027	0.7%
Alexander Road North of Washington Road	6,040	9,364	1.5%
Average			0.9%

The GDOT growth rate and the ARTS travel demand model growth rate were averaged to develop an overall growth rate for the Berckmans Road area of 0.7%. This growth rate was used to project open year and design year traffic volumes. The projected traffic volumes are shown in balanced traffic flow diagrams, which are provided in Appendix A (under separate cover). The traffic flow diagrams contain daily and peak hour existing traffic volumes and traffic volume forecasts for the following years:

- 2012 Existing Conditions
- 2015 Open Year, Build and No-Build
- 2035 Design Year, Build and No-Build

INTERSECTION CAPACITY ANALYSIS

In March 2012, traffic counts were conducted at a number of locations throughout the project area. A 24-hour bi-directional volume count with classification was conducted on Berckmans Road south of Heath Drive. 24-hour bi-directional volume counts were conducted at the following locations:

- Washington Rd west of Berckmans Rd
- Cherry Lane south of Washington Rd
- Heath Drive west of Berckmans Rd
- 1 Mill Pl east of Berckmans Rd
- Wellington Dr west of Berckmans Rd
- Downing St west of Berckmans Rd
- Surrey Center North Driveway west of Berckmans Rd
- Surrey Center 2nd Driveway from North west of Berckmans Rd
- Surrey Center 4th Driveway from North west of Berckmans Rd

AM and PM peak period (7-9 AM and 4-6 PM) turning movement counts were conducted at the following intersections:

- Washington Rd at Stanley Dr/Alexander Dr
- Washington Rd at Berckmans Rd
- Berckmans Rd at Heath Dr/Chapman Ct
- Berckmans Rd at Wicklow Dr
- Berckmans Rd at Yorkshire Dr
- Berckmans Rd at Ingleside Dr
- Berckmans Rd at Indian Creek Rd
- Berckmans Rd at Surrey Center 3rd Driveway from North
- Berckmans Rd at Wheeler Rd

The peak hour turning movement data was used to conduct an existing conditions analysis, while projected traffic volumes in the traffic flow diagrams were used for the future year traffic analyses. AM and PM peak hour intersection analyses were conducted in the Berckmans Road project area for the following alternatives:

- 2012 Existing Conditions
- 2015 No Build Alternative
- 2015 Build Alternative
- 2035 No Build Alternative
- 2035 Build Alternative

The peak hour traffic analyses were conducted using Trafficware Synchro software, version 8, which is based on the methodology from the Transportation Research Board's Highway Capacity Manual (HCM). Appendix B contains the results of the intersection capacity analyses.

Per HCM methodology, the overall level-of-service (LOS) and delay are provided for signalized intersections, which reflect the average delay for all movements. The HCM methodology does not provide an overall LOS for unsignalized intersections. Instead, only individual movements or approaches that have conflicts at an unsignalized intersection have an LOS.

2012 Existing Conditions Intersection Analysis

Berckmans Road is currently a two-lane roadway with no median. A number of two-way stop-controlled intersections are present along the corridor, with stop-control on the side street approaches. No turn lanes exist at these unsignalized intersections. While all of the intersections along the corridor were a part of the analysis, the primary focus is on the signalized intersections that will be impacted by this project.

Figure 2 shows the existing lane geometry at three signalized intersections within the project area. Table 3 shows the results of the 2012 Existing Conditions peak hour intersection analyses. As the table shows, most of the intersections analyzed operate with an acceptable Level-of-Service (LOS).

The signalized intersection of Berckmans Road/National Hills Shopping Center at Washington Road operates at LOS E during the PM peak hour. This is due in part to the high traffic volumes on Washington Road. However, since Berckmans Road ends at Washington Road, there is very little through traffic on the side street approaches at this intersection. The intersection has split phase traffic signal operation to accommodate the heavy turning volumes from the side street approaches. This operation gives a greater portion of the overall signal cycle to the side street approaches, resulting in greater delay for the overall intersection.

The southbound approach to the unsignalized intersection of Washington Road at River Ridge Drive operates at LOS F during both the AM and PM peak hours. The volumes on the southbound approach to this intersection are relatively low, as River Ridge Drive is a local roadway with residential development. The delay is created by the heavy traffic volumes on Washington Road. A driveway connects River Ridge Drive to the National Hills Shopping Center, allowing traffic from River Ridge Drive to use the signalized intersection of Berckmans Road/National Hills Shopping Center at Washington Road if needed during the peak hours.

Figure 2: 2012 Existing Lane Geometry

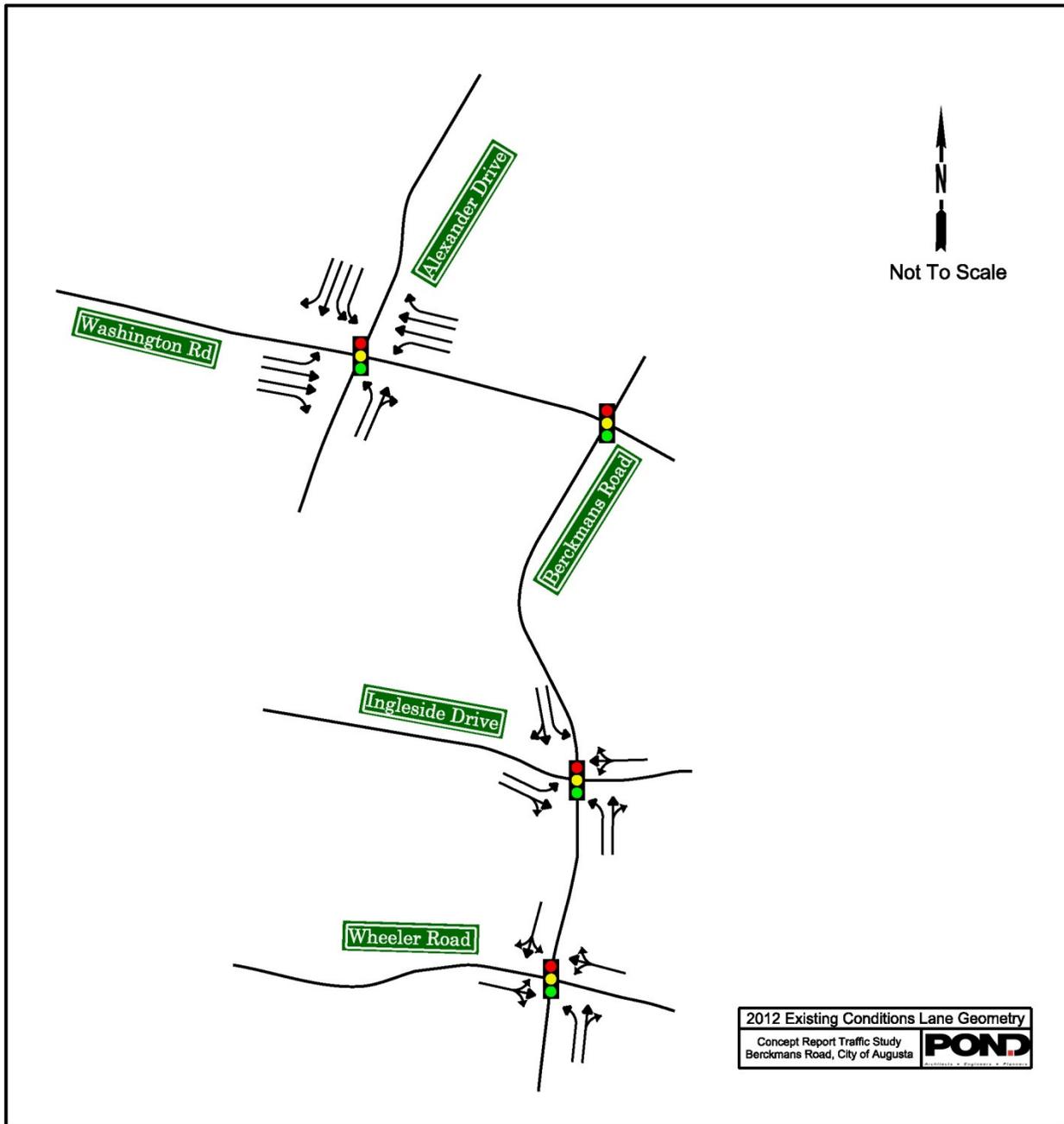


Table 3: 2012 Existing Conditions Peak Hour Intersection Analysis Results

Intersections	AM Peak Hour		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)
Berckmans Road at Wheeler Road, Signalized	B	15	B	16
Berckmans Road at Downing Street				
Eastbound Approach	B	13	C	21
Northbound Approach	A	0	A	0
Berckmans Road at Wellington Drive				
Eastbound Approach	B	12	C	21
Northbound Approach	A	0	A	0
Berckmans Road at 1 Mill Place				
Westbound Approach	A	10	C	22
Southbound Approach	A	0	A	0
Berckmans Road at Indian Creek Road				
Eastbound Approach	B	10	C	21
Northbound Approach	A	0	A	0
Berckmans Road at Ingleside Drive/Willow Ridge Drive, Signalized	B	16	B	13
Berckmans Road at Yorkshire Drive				
Westbound Approach	C	22	E	45
Southbound Approach	A	1	A	1
Berckmans Road at Wicklow Drive				
Eastbound Approach	B	15	C	20
Northbound Approach	A	0	A	1
Berckmans Road at Heath Drive				
Southeastbound Approach	B	14	C	17
Northeastbound Approach	A	0	A	0
Berckmans Road at Cherry Lane				
Southeastbound Approach	C	15	C	20
Northeastbound Approach	A	0	A	0
Berckmans Road at Hillside Lane				
Southeastbound Approach	C	15	C	24
Northeastbound Approach	A	0	A	0
Berckmans Road at Heath Drive				
Southeastbound Approach	B	14	D	25
Northeastbound Approach	A	0	A	0
Berckmans Road at Washington Road, Signalized	C	22	E	76
Washington Road at River Ridge Drive				
Eastbound Approach	A	1	A	1
Southbound Approach	F	58	F	>600
Washington Road at Stanley Drive/Alexander Drive, Signalized				
	B	13	C	28
Stanley Drive at National Plaza (Publix) Driveway				
Eastbound Approach	A	9	B	12
Northbound Approach	A	3	A	3

2015 Opening Year Intersection Analysis

The year 2015 is the opening year for the planned widening, realignment, and bridge replacement project along Berckmans Road. A 2015 No Build Alternative was analyzed using the projected 2015 traffic volumes. No changes were made to the lane geometry at the intersections within the project area as a part of the 2015 No Build Alternative analysis.

Table 4 shows the results of the 2015 No Build Alternative analysis. As the table shows, most of the intersections continue to operate with an acceptable Level-of-Service (LOS). The results are similar to the 2012 existing conditions analysis, although slightly more delay is projected within the area.

The concept design for the planned project is shown in Figure 3. As the figure shows, a two-way left-turn lane is proposed for the entire corridor from Wheeler Road to Washington Road. Conversion from a signalized intersection to a roundabout is proposed for the intersection of Berckmans Road at Ingleside Drive/Willow Ridge Drive. A roundabout at this intersection will provide acceptable traffic operations with the additional benefit of slowing all vehicles traveling through the roundabout area.

The proposed lane geometry for the intersections along the corridor is shown in Figure 4. The stop-controlled intersections will be served by the proposed two-way left-turn lane, which will reduce delay for through traffic at these intersections. The intersection of Berckmans Road at Wheeler Road has an existing northbound left-turn lane but no other dedicated turn lanes. Left-turn lanes are proposed to be added on all of the other approaches.

A number of changes are proposed to the lane geometry at the intersection of Washington Road at Berckmans Road/Alexander Drive for the 2015 opening year. These changes include:

- Adding a right-turn lane on the Berckmans Road northbound approach
- By 2035, adding a second left-turn lane on the Berckmans Road northbound approach
- Converting the Alexander Drive southbound approach to two through lanes, a left-turn lane, and a right-turn lane
- Adding a second left-turn lane on the Washington Road westbound approach

These changes are proposed to accommodate the projected increase in traffic at this intersection when the project is completed. It should be noted that the northbound approach is projected to operate acceptably with one left-turn lane in 2015, while dual left-turn lanes are projected to be needed by 2035. At the 2015 opening year, Berckmans Road should be widened to accommodate the northbound dual left-turn lanes that will be needed by the year 2035. However, the northbound approach should be striped for a single left-turn lane. It can be re-striped at a later date when traffic volumes are high enough to necessitate dual left-turn lanes on this approach.

A 2015 Build Alternative was analyzed using the projected 2015 traffic volumes and the lane geometry shown in Figure 4. The results of the analysis are shown in Table 5.

Table 4: 2015 Opening Year No Build, Peak Hour Intersection Analysis Results

Intersections	AM Peak Hour		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)
Berckmans Road at Wheeler Road, Signalized	B	19	B	18
Berckmans Road at Downing Street				
Eastbound Approach	C	15	C	23
Northbound Approach	A	9	A	9
Berckmans Road at Wellington Drive				
Eastbound Approach	C	15	C	23
Northbound Approach	A	9	A	9
Berckmans Road at 1 Mill Place				
Westbound Approach	B	14	C	24
Southbound Approach	A	8	A	9
Berckmans Road at Indian Creek Road				
Eastbound Approach	C	16	C	23
Northbound Approach	A	9	A	9
Berckmans Road at Ingleside Drive/Willow Ridge Drive, Signalized	B	12	B	12
Berckmans Road at Yorkshire Drive				
Westbound Approach	D	26	F	55
Southbound Approach	A	8	A	9
Berckmans Road at Wicklow Drive				
Eastbound Approach	C	15	C	21
Northbound Approach	A	9	A	9
Berckmans Road at Heath Drive				
Southeastbound Approach	C	15	C	18
Northeastbound Approach	A	9	A	9
Berckmans Road at Cherry Lane				
Southeastbound Approach	C	16	C	22
Northeastbound Approach	A	9	A	9
Berckmans Road at Hillside Lane				
Southeastbound Approach	C	16	D	29
Northeastbound Approach	A	8.5	A	9
Berckmans Road at Heath Drive				
Southeastbound Approach	C	16	D	29
Northeastbound Approach	A	8.5	A	9
Berckmans Road at Washington Road, Signalized	C	24	E	68
Washington Road at River Ridge Drive				
Eastbound Left-Turn	A	9	C	15
Southbound Left-Turn	F	158	F	>600
Southbound Right-Turn	A	9	C	16
Washington Road at Stanley Drive/Alexander Drive, Signalized	B	13	C	21
Stanley Drive at National Plaza (Publix) Driveway				
Eastbound Approach	A	9	B	12
Northbound Approach	A	8	A	8

Figure 4: Build Lane Geometry

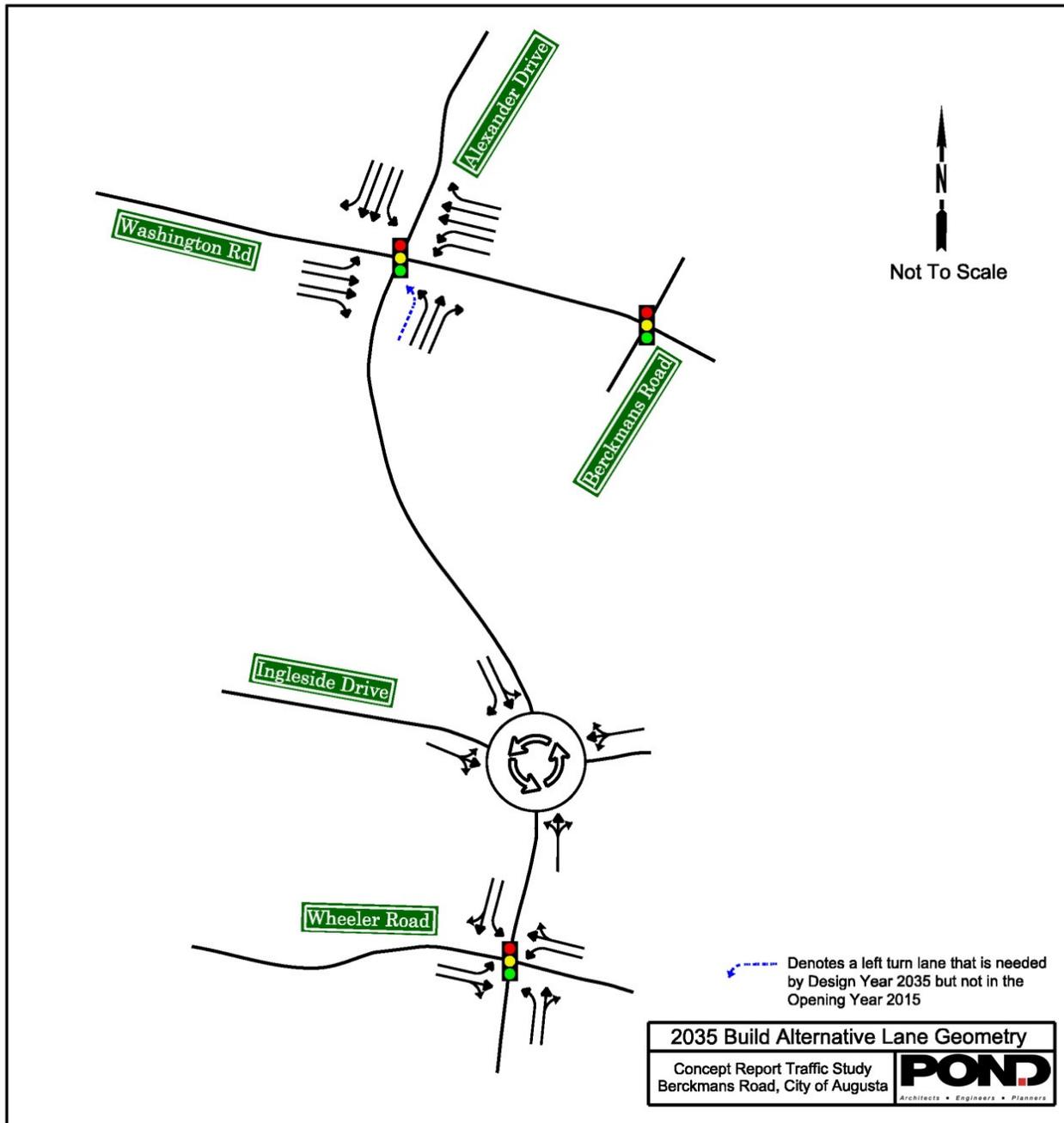


Table 5: 2015 Opening Year Build, Peak Hour Intersection Analysis Results

Intersections	AM Peak Hour		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)
Berckmans Road at Wheeler Road, Signalized	B	16	B	19
Berckmans Road at Downing Street				
Eastbound Approach	C	15	C	23
Northbound Approach	A	9	A	9
Berckmans Road at Wellington Drive				
Eastbound Approach	C	15	C	23
Northbound Approach	A	9	A	9
Berckmans Road at 1 Mill Place				
Westbound Approach	B	14	C	24
Southbound Approach	A	8	A	9
Berckmans Road at Indian Creek Road				
Eastbound Approach	C	16	C	23
Northbound Approach	A	9	A	9
Berckmans Road at Ingleside Drive/Willow Ridge Drive - Roundabout with Proposed Design				
Eastbound Approach	B	12	B	11
Westbound Approach	A	6	A	9
Northbound Approach	A	9	D	30
Southbound Through/Left-Turn	A	8	B	12
Southbound Right-Turn Bypass Lane	A	0	A	0
Berckmans Road at Yorkshire Drive				
Westbound Approach	D	25	F	52
Southbound Approach	A	8	A	9
Berckmans Road at Wicklow Drive				
Eastbound Approach	C	15	C	21
Northbound Approach	A	9	A	9
Berckmans Road at Heath Drive				
Southeastbound Approach	C	15	C	18
Northeastbound Approach	A	9	A	9
Berckmans Road at Private Driveway				
Eastbound Approach	C	22	D	34
Northbound Left-Turn	A	9	A	9
Berckmans Road at National Plaza (Publix) Driveway				
Eastbound Left-Turn	B	13	D	26
Eastbound Right-Turn	A	8	A	8
Northbound Left-Turn	A	8	A	8
Berckmans Road/Alexander Drive at Washington Road, Signalized				
Washington Road at River Ridge Drive	C	32	C	25
Washington Road at River Ridge Drive				
Eastbound Left-Turn	A	9	C	15
Southbound Left-Turn	F	140	F	>600
Southbound Right-Turn	A	9	C	16
Washington Road at Old Berckmans Road/National Hills Shopping Center, Signalized				
	B	17	B	18

The proposed roundabout at the intersection of Berckmans Road at Ingleside Drive/Willow Ridge Drive will include a southbound right-turn bypass lane to accommodate projected heavy traffic volumes on the southbound approach. All other approaches have a single lane.

The roundabout analyses for the 2015 Build Alternative were conducted using Trafficware Synchro 8 software, and the results are provided in Table 3. As the table shows, an LOS for the entire intersection of Berckmans Road at Ingleside Drive/Willow Ridge Drive is not provided by the HCM 2010 model methodology. Instead, LOS and delay for each approach are provided. The table shows that all approaches to the intersection are projected to operate with an acceptable delay in 2015.

The intersection of Washington Road at the re-aligned Berckmans Road/Alexander Drive operates at LOS C in 2015 during both the AM and PM peak hours. While more traffic is projected to use this intersection in the Build alternative, the proposed additional turn lanes allow the intersection to continue to operate with an acceptable level of delay.

The intersection of Washington Road at Old Berckmans Road/National Hills Shopping Center operates at LOS B in 2015 during both the AM and PM peak hours. This is less delay than in the 2015 No Build Alternative analysis, which shows the intersection operating at LOS C during the AM peak hour and at LOS E during the PM peak hour.

2035 Design Year Intersection Analysis

The year 2035 is the design year for the planned widening, realignment, and bridge replacement project along Berckmans Road. The projected 2035 AM and PM peak hour volumes were used for the 2035 No Build alternative analysis, while the lane geometry and traffic control were the same as the 2012 existing conditions and the 2015 No Build alternative. The results of the 2035 No Build Alternative peak hour analysis are shown in Table 6.

As the table shows, delay continues to increase in the study area, but most intersections are projected to operate with an acceptable LOS (LOS D or better). However, the intersection of Washington Road at Berckmans Road/National Hills Shopping Center is projected to operate at LOS F with 118 seconds of delay during the PM peak hour in the year 2035. In the 2015 No Build alternative, this intersection was projected to operate at LOS E with 68 seconds of delay. This shows a significant increase in delay is projected at this intersection during the PM peak in the 2035 No Build alternative analysis.

The intersection of Washington Road at River Ridge Drive is also projected to see increased delay by the year 2035. As previously discussed, River Ridge Drive is connected to the National Hills Shopping Center, allowing traffic from River Ridge Drive to use the signalized intersection of Berckmans Road/National Hills Shopping Center at Washington Road. As delay increases at this intersection, drivers may choose to use this traffic signal or use other alternate routes.

Table 6: 2035 No Build Alternative Peak Hour Intersection Analysis Results

Intersections	AM Peak Hour		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)
Berckmans Road at Wheeler Road, Signalized	C	23	C	22
Berckmans Road at Downing Street				
Eastbound Approach	C	17	D	29
Northbound Approach	A	9	A	9
Berckmans Road at Wellington Drive				
Eastbound Approach	C	17	D	29
Northbound Approach	A	9	A	9
Berckmans Road at 1 Mill Place				
Westbound Approach	C	16	D	31
Southbound Approach	A	8	B	10
Berckmans Road at Indian Creek Road				
Eastbound Approach	C	20	D	29
Northbound Approach	A	9	A	9
Berckmans Road at Ingleside Drive/Willow Ridge Drive, Signalized				
	B	14	B	14
Berckmans Road at Yorkshire Drive				
Westbound Approach	E	46	F	174
Southbound Approach	A	9	B	10
Berckmans Road at Wicklow Drive				
Eastbound Approach	C	17	D	28
Northbound Approach	A	9	A	9
Berckmans Road at Heath Drive				
Southeastbound Approach	C	18	C	22
Northeastbound Approach	A	9	A	9
Berckmans Road at Cherry Lane				
Southeastbound Approach	C	20	D	28
Northeastbound Approach	A	9	A	9
Berckmans Road at Hillside Lane				
Southeastbound Approach	C	22	F	63
Northeastbound Approach	A	9	B	10
Berckmans Road at Heath Drive				
Southeastbound Approach	C	22	F	63
Northeastbound Approach	A	9	B	10
Washington Road at Berckmans Road/National Hills Shopping Center, Signalized				
	D	48	F	118
Washington Road at River Ridge Drive				
Eastbound Left-Turn	A	9	E	39
Southbound Left-Turn	F	>600	F	>600
Southbound Right-Turn	A	9	F	57
Washington Road at Stanley Drive/Alexander Drive, Signalized				
	B	17	D	41
Stanley Drive at Publix Driveway				
Eastbound Approach	A	9	B	14
Northbound Approach	A	8	A	8

The 2035 Build Alternative includes the same design changes present in Figure 4. This includes a second northbound left-turn lane at the intersection of Berckmans Road/Alexander Drive at Washington Road which was not a part of the 2015 Build Alternative. Otherwise, the lane geometry and traffic control used in the 2035 Build Alternative analysis are the same as those used in the 2015 Build Alternative analysis.

Table 7 shows the results of the 2035 Build Alternative analysis. As the table shows, delay continues to increase in the study area, but all signalized intersections are projected to operate with an acceptable LOS (LOS D or better). The intersection of Washington Road at Old Berckmans Road/National Hills Shopping Center is projected to operate at LOS A during the AM peak hour and at LOS C during the PM peak hour. This is significantly less delay than the 2035 No Build Alternative, which projects the intersection operating at LOS D during the AM peak hour and at LOS F during the PM peak hour.

The 2035 Build Alternative increases the traffic volume passing through the intersection of Berckmans Road/Alexander Drive at Washington Road. This intersection is projected to operate at LOS D during both the AM and PM peak hours in the year 2035.

In both the 2035 No Build and Build alternatives, delay continues to increase on the side street approaches at the unsignalized intersections along Berckmans Road. However, the turning movement traffic volumes to and from these side streets continues to be very low, meaning only a small amount of traffic experiences this delay. The Build alternative includes a two-way left-turn lane along Berckmans Road, which allows through traffic to continue while left-turn traffic waits to turn. Although some of the unsignalized side streets experience LOS F conditions in year 2035, an initial screening indicated the volumes along the streets are not high enough to satisfy MUTCD signal warrant criteria. Therefore, a detailed evaluation of signalization needs was not conducted.

Table 7: 2035 Build Alternative Peak Hour Intersection Analysis Results

Intersections	AM Peak Hour		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)
Berckmans Road at Wheeler Road, Signalized	B	18	C	22
Berckmans Road at Downing Street				
Eastbound Approach	C	17	D	28
Northbound Left-Turn	A	9	A	9
Berckmans Road at Wellington Drive				
Eastbound Approach	C	17	D	28
Northbound Left-Turn	A	9	A	9
Berckmans Road at 1 Mill Place				
Westbound Approach	C	16	D	31
Southbound Left-Turn	A	8	B	10
Berckmans Road at Indian Creek Road				
Eastbound Approach	C	20	D	28
Northbound Left-Turn	A	9	A	9
Berckmans Road at Ingleside Drive/Willow Ridge Drive - See Roundabout Analysis Section				
Berckmans Road at Yorkshire Drive				
Westbound Approach	E	43	F	148
Southbound Left-Turn	A	9	B	10
Berckmans Road at Wicklow Drive				
Eastbound Approach	C	17	D	26
Northbound Left-Turn	A	9	A	9
Berckmans Road at Heath Drive				
Southeastbound Approach	C	18	C	22
Northeastbound Left-Turn	A	9	A	9
Berckmans Road at Private Driveway				
Eastbound Approach	D	28	F	87
Northbound Left-Turn	A	9	A	9
Berckmans Road at National Plaza (Publix) Driveway				
Eastbound Left-Turn	B	15	F	52
Eastbound Right-Turn	A	8	A	8
Northbound Left-Turn	A	8	A	8
Berckmans Road/Alexander Drive at Washington Road, Signalized	D	40	D	36
Washington Road at River Ridge Drive				
Eastbound Left-Turn	A	9	E	39
Southbound Left-Turn	F	68	F	>600
Southbound Right-Turn	A	9	F	57
Washington Road at Old Berckmans Road/National Hills Shopping Center, Signalized	A	7	C	30

Evaluation of Roundabouts along Berckmans Road

The 2035 Build Alternative roundabout analyses were conducted using Trafficware Synchro software and the Georgia Department of Transportation's (GDOT's) Roundabout Analysis Tool, version 2.1. Appendix C contains the results of each type of the roundabout analyses.

The GDOT Roundabout Analysis Tool provides analysis results based on two methodologies. These methodologies are the HCM 2010 model, which is intended for use in analysis of the roundabout's build year, and a calibrated HCM 2010 model which is intended for use in future year analyses. Generally, the HCM 2010 model methodology provides a lower capacity for the roundabout while the calibrated HCM 2010 model provides a greater capacity. The GDOT Roundabout Analysis Tool describes these two methodologies with the following text:

"The HCM 2010 Model is based on an analytical method based on gap acceptance behavior on roundabouts in the United States. The formula yields a lower value for capacity because of source data taken from US roundabouts where driver familiarity is lower. The calibrated HCM model adjusts the entry capacity formula based on empirical data collected from Bend, Oregon and various roundabouts in California. Each of these studies use site specific values for critical headway and follow up headway to calibrate the capacity models for the appropriate lane configurations. The calibrations typically yield a higher value for capacity because the source data taken is taken from roundabouts that have been in service and the familiarity is higher. This type of calibration should be used for future year scenarios where driver familiarity is expected to increase over time."

The roundabout analysis results using the HCM 2010 model methodology and the calibrated HCM 2010 model are shown in Table 8. The HCM 2010 model methodology is appropriate for the 2015 Build Year analyses. As driver familiarity with the proposed roundabout increases, the calibrated HCM 2010 model methodology may provide a more appropriate delay and LOS for the future analyses. However, roundabouts are not currently a common intersection design in the Augusta area, and driver familiarity may be inconsistent in the future. Therefore, the results using both roundabout analysis methodologies are provided for the 2035 Build Alternative analysis.

The table shows that in both analyses, all approaches are projected to operate at LOS C or better during the AM peak hour. The HCM 2010 model methodology projects LOS F for the northbound approach during the 2035 PM peak hour. All other approaches would operate at LOS C or better. The calibrated HCM 2010 model projects LOS C for the northbound approach during the 2035 PM peak hour. All other approaches would operate at LOS B or better. Based on these results, a roundabout at the intersection of Berckmans Road at Ingleside Drive/Willow Ridge Drive is projected to operate with an acceptable LOS through the year 2035.

Table 8: 2035 Build Analysis, Roundabout Peak Hour Intersection Analysis Results

Intersection	AM Peak Hour		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)
Berckmans Road at Ingleside Drive/Willow Ridge Drive - Roundabout with Proposed Design				
Roundabout Analysis, HCM 2010 Model Results				
Eastbound Approach	C	16	B	13
Westbound Approach	A	7	B	11
Northbound Approach	B	11	F	63
Southbound Through/Left-Turn	A	10	C	16
Southbound Right-Turn Bypass Lane	A	0	A	0
Roundabout Analysis, HCM 2010 Calibrated Model Results				
Eastbound Approach	B	10	A	9
Westbound Approach	A	5	A	8
Northbound Approach	A	8	C	24
Southbound Through/Left-Turn	A	7	B	10
Southbound Right-Turn Bypass Lane	A	0	A	0

DESIGN RECOMMENDATIONS – TURN LANE STORAGE LENGTHS

This project includes the addition of turn lanes at the following two intersections:

- Berckmans Road/Alexander Drive at Washington Road
- Berckmans Road/Highland Avenue at Wheeler Road

The length of the proposed turn lanes at these intersections was determined to provide adequate storage for design year 2035 traffic conditions. Three criteria were considered in determining recommended turn lane storage lengths:

GDOT Minimum Storage - The *GDOT Regulations for Driveway and Encroachment Control* manual, Table 4-8 and Table 4-9, provides minimum storage lengths for left-turn and right-turn lanes based on the roadway’s posted speed limit.

Storage for Arrivals in 1.5 Signal Cycles - Recommended storage lengths for the turn lanes at each intersection were analyzed further based on traffic volumes and proposed signal timing in the 2035 Build alternative. The *GDOT Regulations for Driveway and Encroachment Control* manual also states, “for signalized intersections, the storage should be sufficient to accommodate the number of vehicles arriving during 1.5 signal cycles, using peak hour volumes.” Storage lengths based on this methodology were developed for each intersection.

Traffic Operational Analysis - The Synchro analysis of the AM and PM peak hours also provides projected queue lengths based on the analysis results. Storage lengths based on the Synchro analyses were developed for each intersection.

The longest storage length from each of these methodologies is the recommended storage length for each turn lane at each intersection. The storage lengths developed using each of these methodologies, along with the recommended minimum storage lengths, are shown in Table 9 and Table 10. The recommended minimum storage lengths are also shown in Figure 5.

Table 9: Berckmans Road/Highland Avenue at Wheeler Road, Recommended Storage Lengths

Direction	Movement	Peak Arrival Storage Length (ft)	Synchro Queue Lengths (ft)	GDOT Minimum	Recommended Storage Length (FT)
Eastbound	Left-Turn	46.9	AM Peak: 52	160	160
			PM Peak: 65		
Westbound	Left-Turn	9.4	AM Peak: 18	160	160
			PM Peak: 18		
Northbound	Left-Turn	253.1	AM Peak: 41	160	255
			PM Peak: #181		
Southbound	Left-Turn	84.4	AM Peak: 56	160	160
			PM Peak: 41		

Table 10: Berckmans Road/Alexander Drive at Washington Road, Recommended Storage Lengths

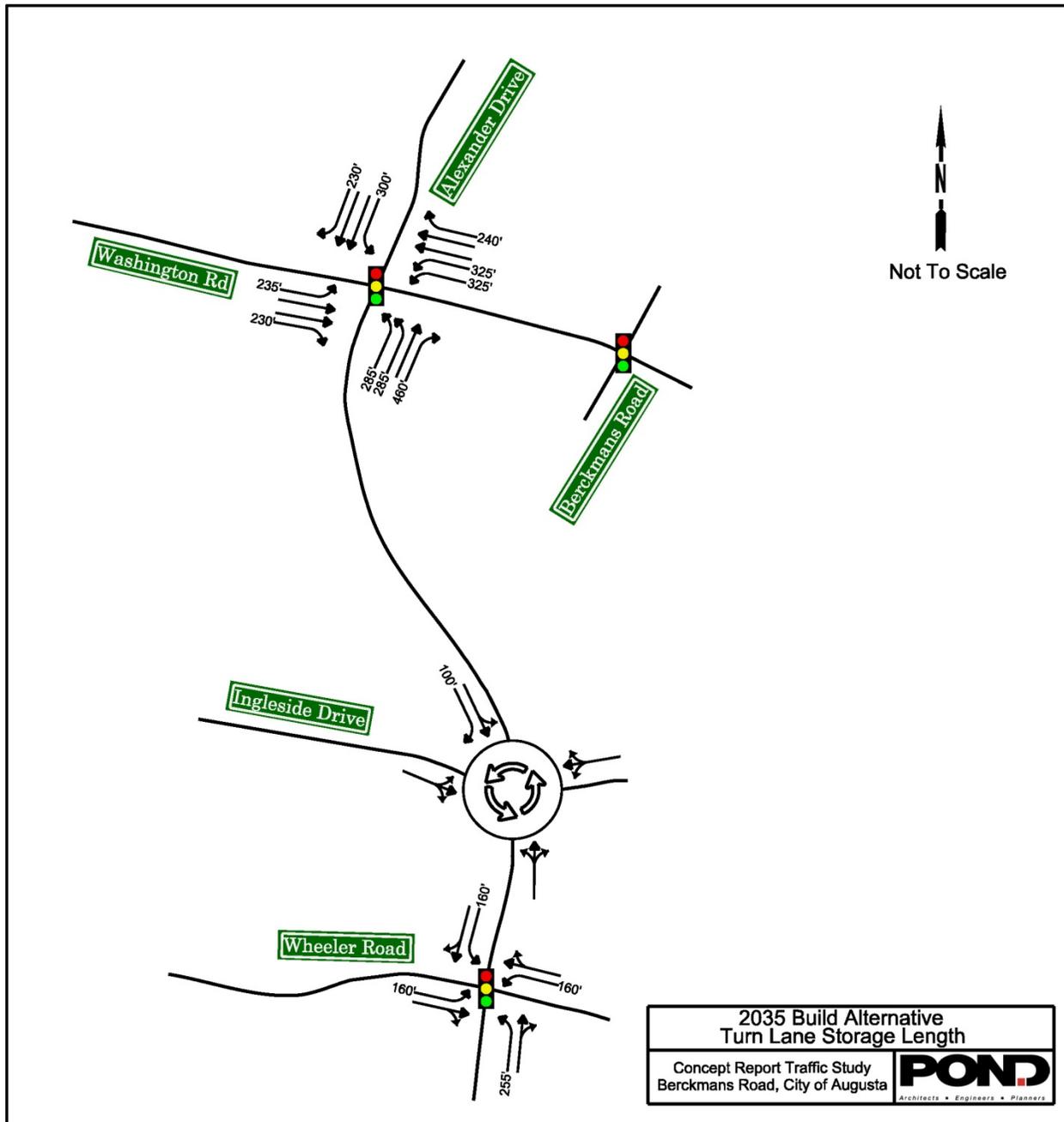
Direction	Movement	Peak Arrival Storage Length (ft)	Synchro Queue Lengths (ft)	GDOT Minimum	Recommended Storage Length (FT)
Eastbound	Left-Turn	150.0	AM Peak: 15	235	235
			PM Peak: #157		
Eastbound	Right-Turn	229.2	AM Peak: 63	175	230
			PM Peak: 95		
Westbound	Left-Turn	650.0	AM Peak: 106	235	Dual left-turn lanes at 325 ft each
			PM Peak: m223		
Westbound	Right-Turn	233.3	AM Peak: m1	175	240
			PM Peak: m1		
Northbound	Left-Turn	566.7	AM Peak: #105	235	Dual left-turn lanes at 285 ft each
			PM Peak: #282		
Northbound	Right-Turn	458.3	AM Peak: #446	175	460
			PM Peak: 417		
Southbound	Left-Turn	200.0	AM Peak: 97	235	Convert to single left-turn lane, 235 ft
			PM Peak: #193		
Southbound	Right-Turn	216.7	AM Peak: 0	175	230
			PM Peak: 100		

- 95th percentile queue exceeds capacity, queue may be longer
m - Volume for 95th percentile queue is metered by upstream signal

The planned southbound right-turn lane at the intersection of Berckmans Road at Ingleside Drive/Willow Ridge Drive is at an unsignalized intersection, meaning that the Storage for Arrivals in 1.5 Signal Cycles is not an applicable methodology. Additionally, the southbound right-turn lane is a bypass lane that has a dedicated receiving lane and will operate essentially as a free-flow movement. Traffic making this right-turn movement will merge downstream of the intersection after making the right-turn. Due to this free-flow design, no queue length is identified through the Synchro analysis. The GDOT Roundabout Analysis Tool, Version 2.1, projected a 95th percentile queue during the 2035 Build AM Peak Hour of 16 feet. It projected a 95th percentile queue during the 2035 Build PM Peak Hour of 25 feet. As minimal queuing is expected for this lane, the GDOT minimum storage length of 100 feet is recommended.

The recommended storage lengths presented in each table and for the bypass lane at the intersection of Berckmans Road at Ingleside Drive/Willow Ridge Drive are based on traffic volumes, GDOT methodologies, and Synchro analysis results. Actual turn-lane storage lengths will be determined during the design phase, as existing roadway features or constraints may impact the design. For example, at the intersection of Berckmans Road/Alexander Drive at Washington Road, the existing southbound left-turn lane is about 300 feet long. While this is greater than the recommended minimum storage length for this lane, there is no need to reduce the length of this lane (although it is recommended that one existing left-turn lane be converted to a through lane). On other approaches, existing developments may constrain ROW and prevent the full recommended length of some turn lanes from being constructed.

Figure 5: 2035 Build Alternative Turn Lane Storage Lengths



Attachment 6:

PIOH Documents



**May 28, 2012
For Immediate Release**

**Re: Berckmans Road Widening, Realignment, and Bridge Replacement
Design Underway – Public Meeting Tuesday, June 12, 2012**

Augusta-Richmond County - Plans are underway to widen Berckmans Road from Wheeler Road to Washington Road. The project will include realignment of the northern terminus of Berckmans Road at Washington Road to connect to the recently upgraded Alexander Drive as well replacement of the substandard bridge structure over Rae's Creek. The proposed design approach will take into account environmental and cultural surroundings including residential properties, adjacent commercial developments, Westover Memorial Park Cemetery, and the environmentally-sensitive Rae's Creek. The final roadway design and project implementation will provide a cost-effective solution to improve both current and future traffic operations along Berckmans Road and surrounding roadways. The City of Augusta is conducting a Public Information Meeting to present several proposed roadway alignment concepts on June 12, 2012 from 4-7 pm at Julian Smith Casino, 2200 Broad Street, Augusta, GA 30904. The public is encouraged to attend and provide input about the upcoming roadway project. For additional information, please visit www.augustaga.gov/BerckmansRoad.

Media Contact:

Mr. Steve Cassell
City of Augusta Public Works
Assistant Director, Traffic Engineering
706-796-5040



News Release

For Immediate Release

Karyn Nixon, Mayor's Office, knixon@augustaga.gov, 706.821.1833

**BERCKMANS ROAD WIDENING, REALIGNMENT, AND BRIDGE REPLACEMENT
PUBLIC MEETING**

AUGUSTA, Ga., Sept. 6, 2012 – The City of Augusta will be conducting its second Public Information Meeting to present updated information related to the proposed widening and realignment concept for Berckmans Road. The public is encouraged to attend and provide input.

Monday, September 17, 2012

4:00 – 7:00 PM

Julian Smith Casino

2200 Broad Street

Augusta, GA 30904

For additional information, please visit www.augustaga.gov/BerckmansRoad.

Berckmans Road Widening, Realignment, and Bridge Replacement Project



Project Purpose

The purpose of the project is to widen Berckmans Road from Wheeler Road to Washington Road and realign the northern terminus at Washington Road to connect with Alexander Drive as well as to replace the substandard bridge over Rae's Creek. The current concept consists of four travel lanes with a median or center turn lane from Washington Road to Ingleside Drive and two travel lanes with one center turn lane from Ingleside Drive to Wheeler Road. The proposed design approach will take into account environmental and cultural surroundings including residential properties, adjacent commercial developments, Westover Memorial Park Cemetery, and environmentally-sensitive Rae's Creek. The resulting roadway design and project implementation will provide a cost-effective solution to improve both current and future traffic operations on Berckmans Road and surrounding roadways.

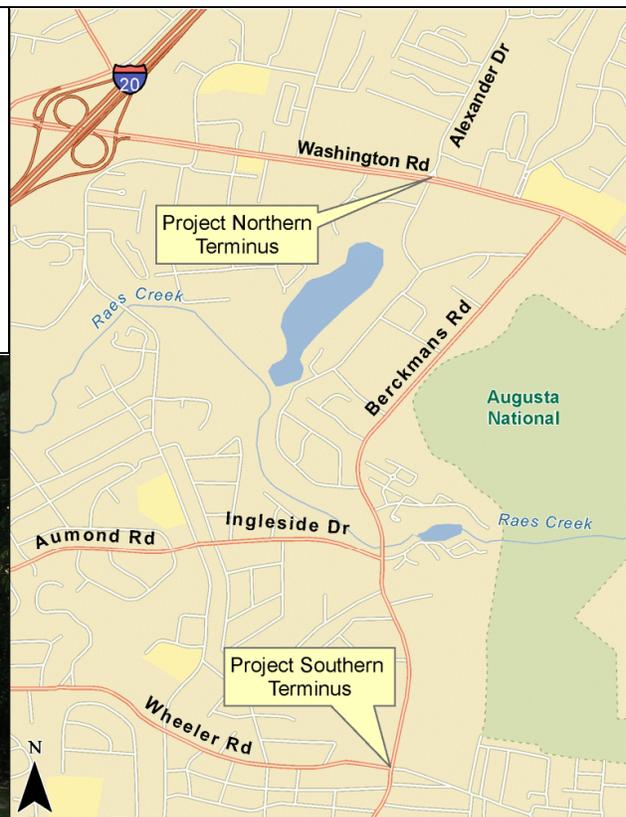
Anticipated Project Schedule

Subject to funding and approval process

2012: Conceptual Plan Development, Traffic Studies, & Preliminary Engineering

TBD: Right-of-Way Acquisition (approximately 1 year to complete)

TBD: Construction (approximately 2 years to complete)



**For
Additional
Information:**

www.augustaga.gov/BerckmansRoad

Mr. Steve Cassell

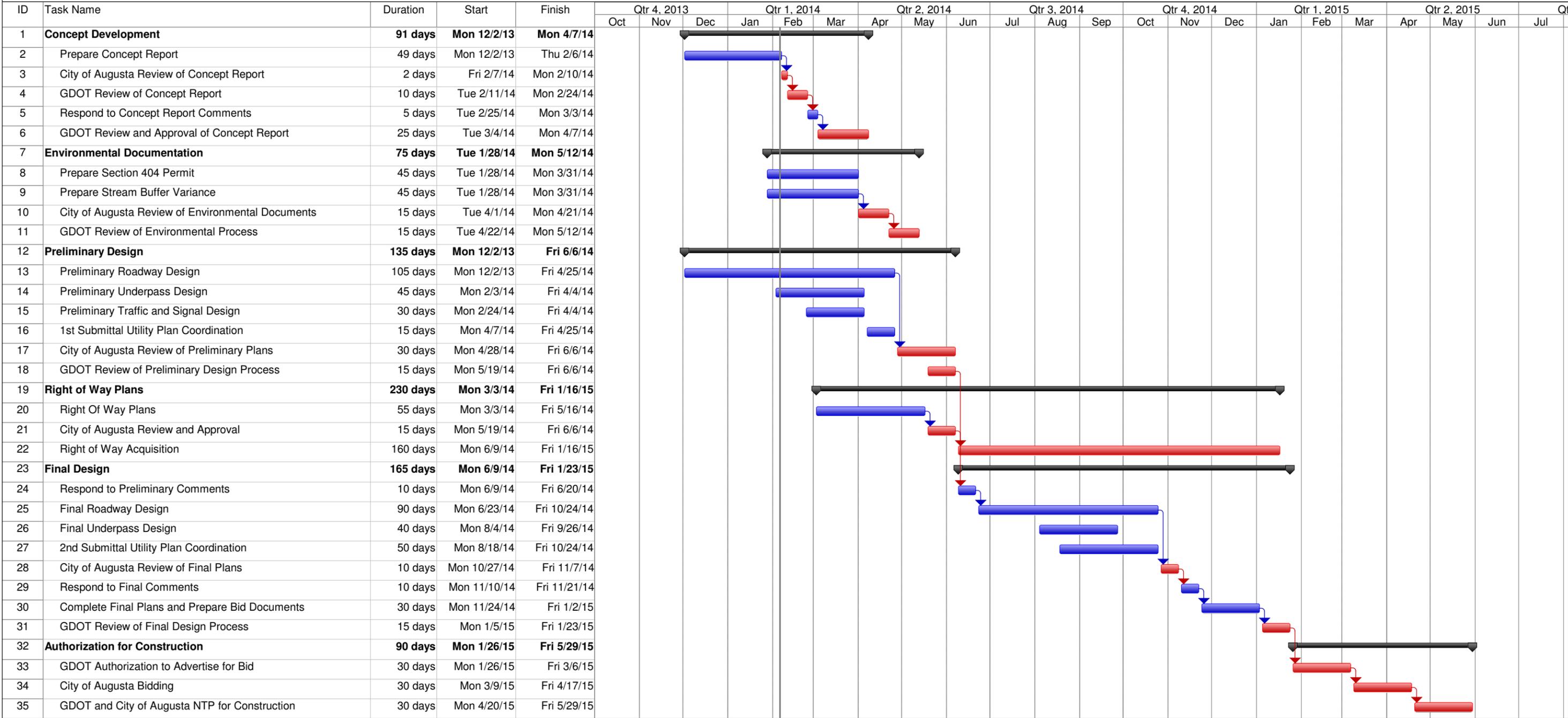
City of Augusta Public Works

Assistant Director, Traffic Engineering

706-796-5040

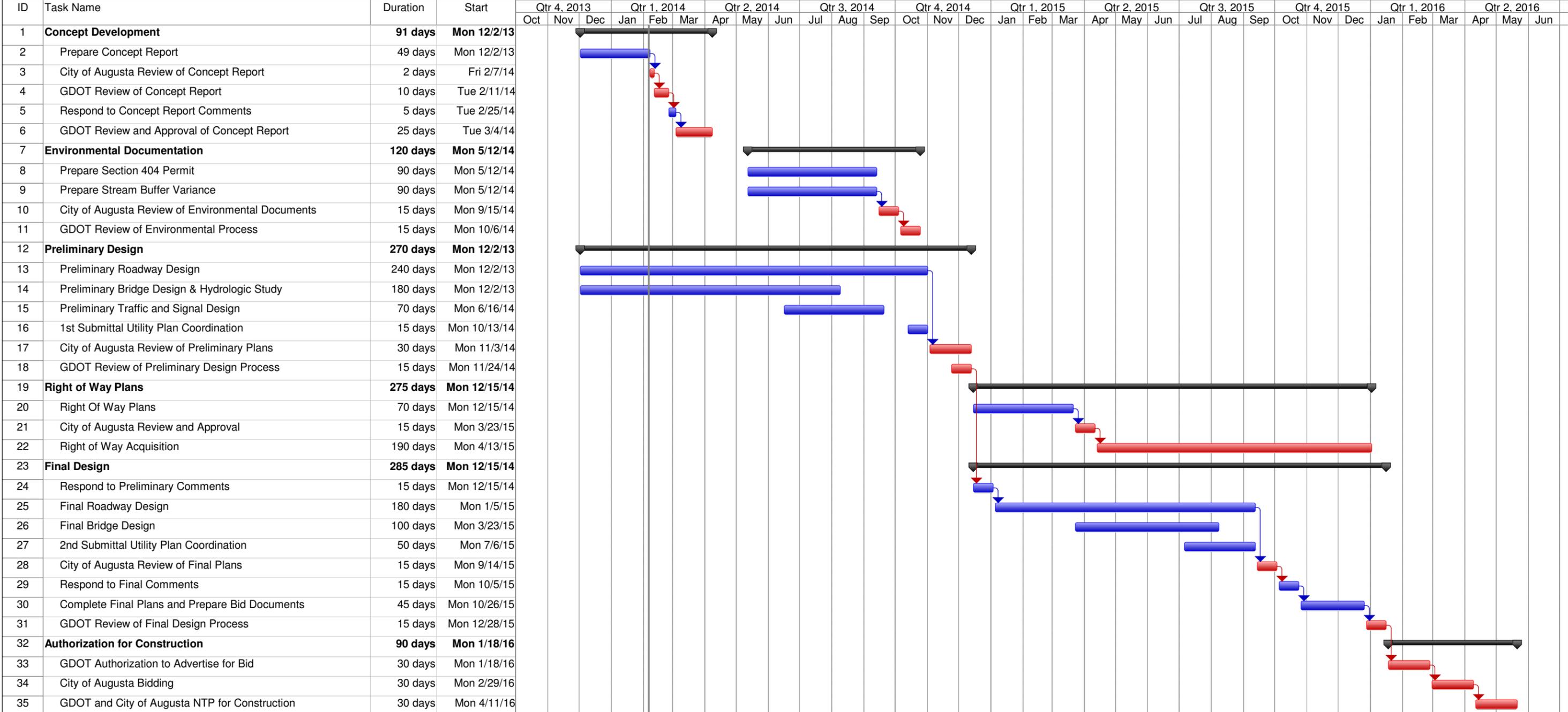
Attachment 7:

Schedule



PI Number:0011413 Date: Thu 2/6/14	Task		Project Summary		Inactive Task		Duration-only		Finish-only		Progress
	Split		External Tasks		Inactive Milestone		Manual Summary Rollup		Deadline		
	Milestone		External Milestone		Inactive Summary		Manual Summary				
	Summary		Inactive Task		Manual Task		Start-only				

City of Augusta **Berckmans Rd Widening and Realignment Phase II & Bridge Replacement Over Rae's Creek** **Pond & Company**



PI Number:0011413 & 0011381
Date: Thu 2/6/14

Task		Project Summary		Inactive Task		Duration-only		Finish-only		Progress
Split		External Tasks		Inactive Milestone		Manual Summary Rollup		Deadline		
Milestone		External Milestone		Inactive Summary		Manual Summary				
Summary		Inactive Task		Manual Task		Start-only				

Attachment 8:

Meeting Minutes

Architects
Engineers
Planners

3500 Parkway Lane
Suite 600
Norcross, GA 30092

P 678.336.7740
F 678.336.7744
www.pondco.com

MEETING MINUTES

Project : Berckmans Rd Widening and Realignment &
Berckmans Rd @ Rae's Creek Bridge Replacement

PI No. : 0011413 & 0011381

Meeting : Berckmans Rd Project meeting with GDOT

Meeting Location : 600 West Peachtree St NW,
Atlanta, GA 30308

Meeting Date : 01/31/14

Minutes prepared by : Mark Edwards
Prepared on : February 4, 2014

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Attendees

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<u>Name</u>	<u>Company/Dept./Branch</u>	<u>email</u>	<u>phone</u>
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Mark Edwards	Pond & Company	edwardsm@pondco.com	678.336.7740
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Ron Osterloh	Pond & Company	osterlohr@pondco.com	678.336.7740

PURPOSE OF MEETING:

This meeting was held in order to discuss the two Berckmans Rd projects with members of the GDOT TIA program management team.

MEETING PROCEEDINGS:

- Reviewed meeting agenda.
- Members of the GDOT TIA program management team had meet with the City of Augusta to discuss this 1/24/14. Pond & Company has a meeting to discuss the project with the City of Augusta the following 2/7/14.
- The concept report has been completed, waiting for the signature of the local government representative before submittal.
 - Need to update before submittal and add a description of how both projects satisfy the stated benefit.
- Project contains two PI numbers. One for the widening and realignment of Berckmans Rd, and one for the replacement of the bridge above Rae's Creek.
- Would like to proceed with the project in two phases.
 - Phase I would be the realignment portion of the project and would begin at Wicklow Drive and end at Washington Rd.

- Phase II would be the widening portion of the project and would begin at Wheeler Rd and end at Wicklow Drive. This phase would include the bridge replacement and roundabout.
- A few design iterations of the Phase I have occurred already. Worked with Smallwood, Reynolds, Stewart, Stewart, and Associates to incorporate the master plan that they prepared for the large landowner (ANGC) that owns a majority of the property along Phase I.
- Phase I would require two underpasses to get heavy equipment back and forth under Berckmans Rd. During Tournament the underpasses would serve to transport pedestrians to and from the golf course.
- A traffic study was performed at the intersection of the realigned Berckmans Rd and Washington Rd. The additional turn lanes shown on the drawings are a result of that study.
 - Traffic Study was based off of normal everyday volumes, not tournament week volumes.
 - Walgreens and TGIF would lose a row of parking due to widening.
- Existing signal at Berckmans Rd would likely no longer be warranted.
 - If work was done at this intersection it would not be done under either PI and would need to be part of a separate local project.
 - The signal at this location was one of the biggest points of contention at the two PIOH meetings.
- Roadway will be 12' lanes in both directions, with a 14' dual left in the center.
 - Showed 4 lane section with a median/left turn lane at the 1st PIOH. Public was not in favor of such a large roadway footprint.
 - No median will help with Tournament staging.
- Future Bike and Pedestrian plan calls for multi-use connection along Berckmans Rd. Would connect to a greenway that is planned to travel west along Rae's Creek.
- Berckmans Rd will have "sharrows" from Washington Rd to Ingleside Dr. 5' sidewalk is planned on the east side and 8' multi-use path on the west side of Berckmans Rd.
- Preliminary cost estimates have been completed and are slightly lower than what has been programmed for both projects.
- ROW cost estimates have been completed and are slightly lower than what has been programmed for both projects.
 - ROW cost estimates do not include the AGNC property – a property swap between City and property owner is a possibility.
- Two PIOH meetings were held for this project on 6/12/12 and 9/17/12. Presented conceptual drawings of the realignment and widening of Berckmans Rd and the bridge replacement.
 - Meetings were heavily attended by the public and press.
- Two ConSpan Underpasses are planned.
 - Underpasses will require the vertical alignment to be raised in order to accommodate them.
- Geotechnical investigation will be performed for the bridge.
- No utility coordination has been performed to date.
 - Pond will send out for existing utilities next week.

- Existing utilities (water, gas, power) are within the ROW of the existing Berckmans Rd.
- City has not yet decided whether or not to pay to move utilities or maintain a utility easement along the part of Berckmans Rd that will be abandoned.
- Anticipating that utility companies will pay to relocate – they are currently in the City ROW.
- A roundabout is proposed at Ingleside Dr and Berckmans Rd. Roundabout will have a bypass lane traveling south on Berckmans Rd to head west on Ingleside Dr.
 - 1st PIOH meeting the roundabout was a hot topic. 2nd PIOH meeting more visual aides were provided and lead to more support for the roundabout.
- Berckmans Rd has been shifted 2' to the west to avoid Westover Memorial Park Cemetery.
- Walls will be necessary along the sidewalk next to the Cemetery. It would be a good idea to match the architectural style of the walls with that of the Cemetery.
- Need to make an effort to protect the trees on the west side of Berckmans Rd in front of Surrey Center, unless it causes impacts to the Cemetery.
- The bridge above Rae's Creek will be completely replaced.
 - Bridge deck was replaced approximately 20 years ago.
 - Rae's Creek is controlled at several locations, and does not flow freely.
 - FEMA 100 year floodplain creek.
 - Hydrological study will be a critical path item.
 - Bridge replacement has its own PI#, some of the costs that have been included in the cost estimate include costs to raise roadway to accommodate new bridge.
- Pond & Company needs to be aware of TIA concerns with proceeding with both projects at the same time.
 - Projects must be handled separately, especially when concerning costs (PE/ROW/Construction).
 - When submitting any billing to the City and then on to TIA for reimbursement it needs to be clearly shown under two separate PI numbers.
- No major concerns with the environmental aspects.
 - Several streams – may require a stream buffer variance.
 - No GEPA – local let project.
- URS is performing the structural and environmental work for this project.
 - Review will need to be handled by others.
- City can buy ROW once the following has been accomplished;
 - 1) Approved concept report.
 - 2) Once the local environmental responsibility has been completed (404 permits, etc)
 - 3) GDOT needs to confirm that overpayment is not occurring with TIA funds.
- City can proceed forward with buying ROW at their risk.
- **Schedule**
 - Plan to have concept report submitted next 2/16/2014.
 - Preliminary plans for Phase I submitted by mid-April 2014

- Turn in ROW plans for Phase I at about the same time.
 - Preliminary plans for Phase II submitted by mid-April 2015
 - Turn in ROW plans for Phase II at about the same time.
 - Phase I of the project let by April 2015.
 - Phase II of the project let by April 2016.
- The role of GDOT.
 - Concept approval – Heavy involvement.
 - Justification that the plans match what is described in the concept report and the project satisfies the stated benefit described in the Special District’s Approved Investment List.
 - ROW plans – Do they meet the budget and have they been certified by the local government.
- Will not need a special encroachment permit for work on Washington Rd.
 - Agreement between the City and GDOT should cover this.
 - Coordination with District office will be necessary.
 - Signal revision permits with District office.
 - District office is aware of the project and was present at the public involvement meetings.
- Landscaping and lighting – need further discussion between GDOT and the City of Augusta.
 - GDOT concerned about whether or not these satisfy the stated benefit.
 - One of the reasons for the lighting – An extension of the Alexander Drive improvements.
 - Most TIA votes were for specifically defined projects.

ACTION ITEMS

- Need more establishment of Phase I & Phase II in the future. **(Pond & City of Augusta)**
 - Schedule of Phase I and Phase II to be included in the concept report.
 - Identify Phases as things are submitted.
- Submit concept report by 2/6/14. **(Pond & City of Augusta)**
- Submit environmental documentation. **(Pond)**
- Preliminary plans for Phase I will be submitted by mid-April 2014. **(Pond)**
- ROW plans for Phase I submitted after preliminary plans. **(Pond)**

END OF MEETING MINUTES

ADDITIONAL COMMENTS: