

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0007240, Hall County **OFFICE** Preconstruction
CSSTP-0007-00(240)
SR 11/US 129 at I-985 Intersection Improvements **DATE** July 20, 2006

FROM *John J. J. J.* Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO *MBP* SEE DISTRIBUTION

SUBJECT APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

Brian Summers
Harvey Keepler
Ken Thompson
Jamie Simpson
Michael Henry
Keith Golden
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Russell McMurry
BOARD MEMBER
FHWA

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: P. I. No. 0007240, Hall County **OFFICE** Preconstruction
CSSTP-0007-00(240)
SR 11/US 129 at I-985 Intersection Improvements **DATE** April 20, 2006

FROM *John Pirkle*
Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO David E. Studstill, Jr., P.E., Chief Engineer

SUBJECT PROJECT CONCEPT REPORT

This project consists of operational improvements to the interchange of I-985/US 23 at SR 11/US 129. The purpose of this project is to provide interim improvements to the operational efficiency of the I-985 at SR 11/US 129 interchange and thereby improve access to and from the interstate. This interchange will be reconstructed by a future project (NH-985-1(340), P.I. No. 110465-). State Route 11/US 129 is currently experiencing high accident rates within the project corridor. The accident rates currently exceed the statewide average for urban arterials throughout the length of the project, with rates over 3 times the statewide average in some locations. These high accidents can be attributed to the highly developed nature of the corridor. Without the proposed improvements, access to and from the interstate will be severely limited due to the unacceptable levels of service at the ramp intersections.

The proposed construction will include the addition of turn lane improvements on the I-985 northbound off-ramp which will include dual left turn lanes to SR 11/US 129. On SR 11/US 129 northbound and southbound on-ramps-dual lanes on the ramps will be included as part of this project. An additional left turn lane will be added in the median beginning just west of the SR 11/US 129 bridge over I-985 for the southbound I-985 on-ramp. Also included are a signal installation for SR 11/US 129 at the I-985 southbound on-ramp and signal improvements at the I-985 northbound off-ramp to SR 11/US 129. An interconnection plan for signals located on SR 11/US 129 at the on-ramp and off-ramp will also be part of this project.

Environmental concerns include requiring a Categorical Exclusion be prepared; a public hearing open house is not required; time saving procedures are appropriate.

David Studstill

Page 2

P. I. No. 0007240, Hall

April 20, 2006

The estimated costs for this project are:

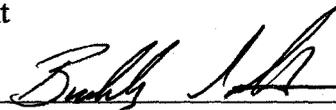
	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$558,000	\$480,000	L200	Lump
Right-of-Way & Utilities*	-0-	-0-		

I recommend this project concept be approved.

MBP:JDQ/cj

Attachment

CONCUR



Buddy Gratton, P.E., Director of Preconstruction

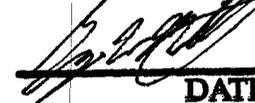
APPROVE


f2 : Robert M. Callan, Administrator, FHWA

APPROVE


David E. Studstill, Jr., P.E., Chief Engineer

Recommended for Approval


7-12-06
DATE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

PROJECT NUMBER: CSSTP-0007-00(240)

P.I. NO.: 0007240

COUNTY: Hall

FEDERAL ROUTE NO: 129

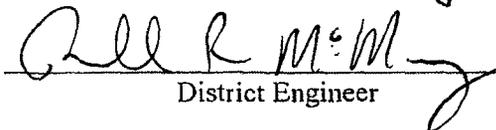
STATE ROUTE NO: 11

Recommendation for approval:

DATE 3/27/2006


Project Manager

DATE 4-3-2006


District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE

State Transportation Planning Administrator

DATE

Office of Financial Management Administrator

DATE

State Environmental / Location Engineer

4-11-06



DATE

State Traffic Safety & Design Engineer

DATE

District Engineer

DATE

Project Review Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

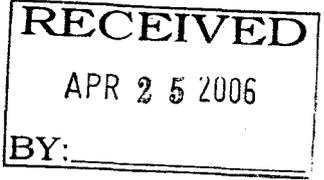
PROJECT NUMBER: CSSTP-0007-00(240)

P.I. NO.: 0007240

COUNTY: Hall

FEDERAL ROUTE NO: 129

STATE ROUTE NO: 11



Recommendation for approval:

DATE 3/27/2006

Project Manager

DATE 4-3-2006

District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Plan (RTP) and the State Transportation Improvement Program (STIP).

4/25/06
DATE

State Transportation Planning Administrator

DATE

Office of Financial Management Administrator

DATE

State Environmental / Location Engineer

DATE

State Traffic Safety & Design Engineer

DATE

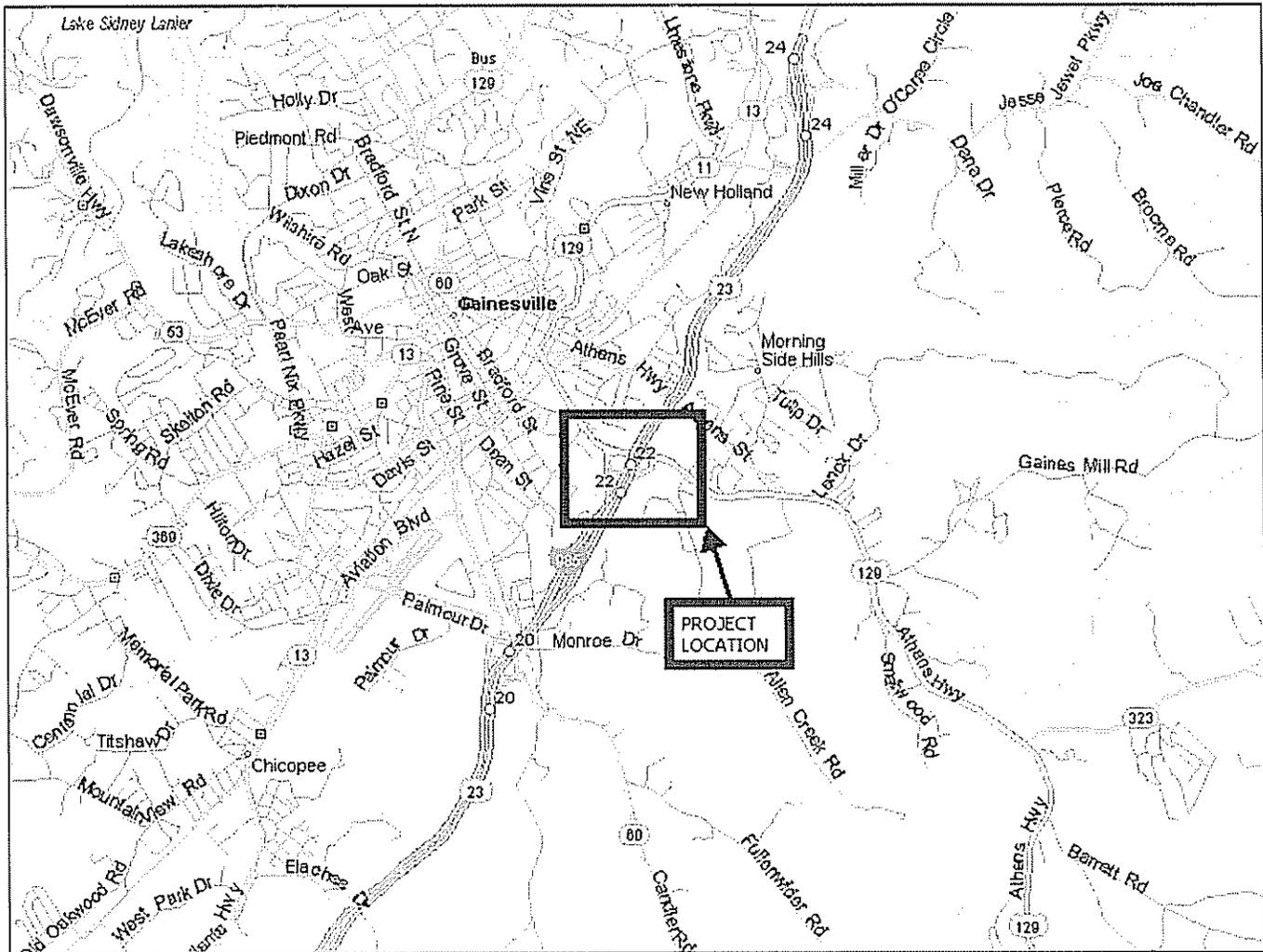
District Engineer

DATE

Project Review Engineer

PROJECT LOCATION MAP

Project: CSSTP-0007-00(240) Hall County P.I. Number: 0007240
Project Description: Intersection Improvements on US 129/SR 11 at I-985/US 23

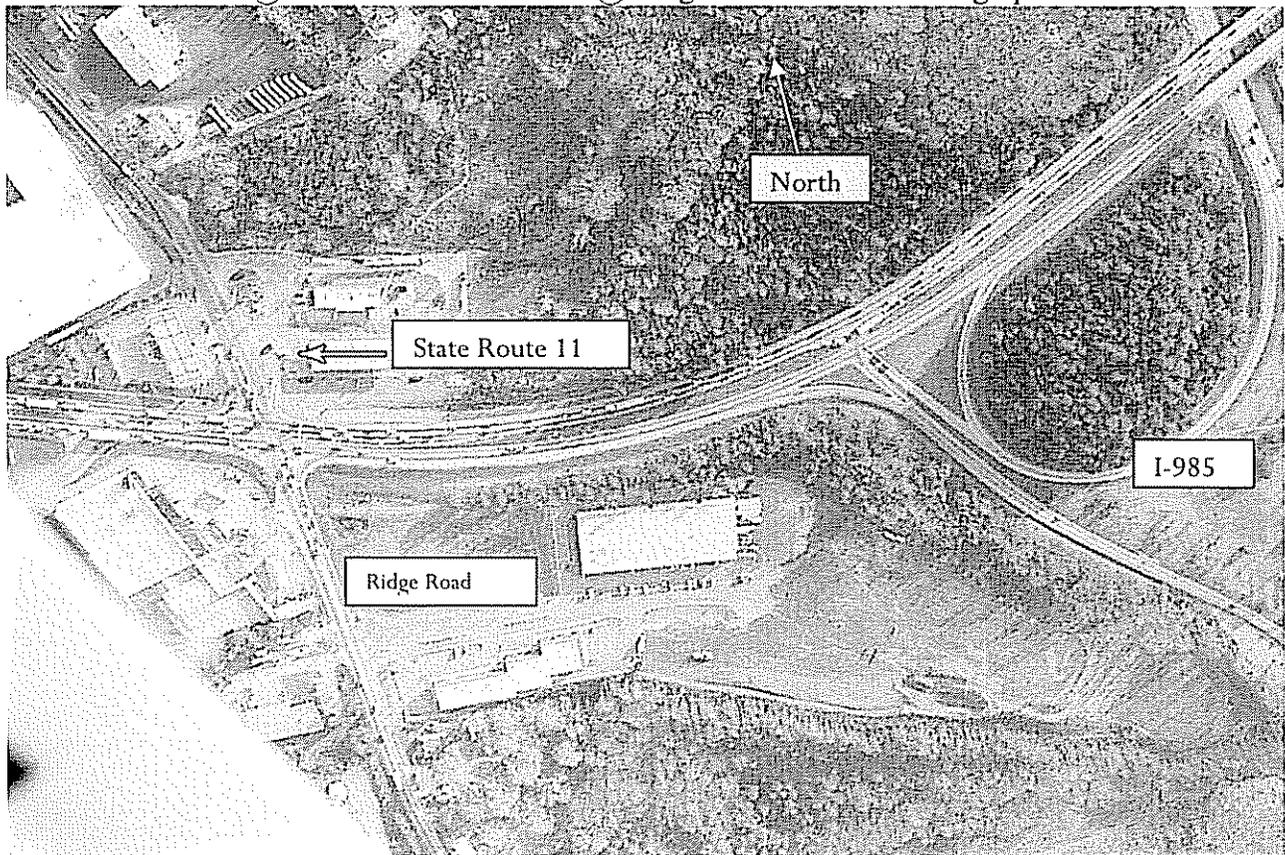


Background

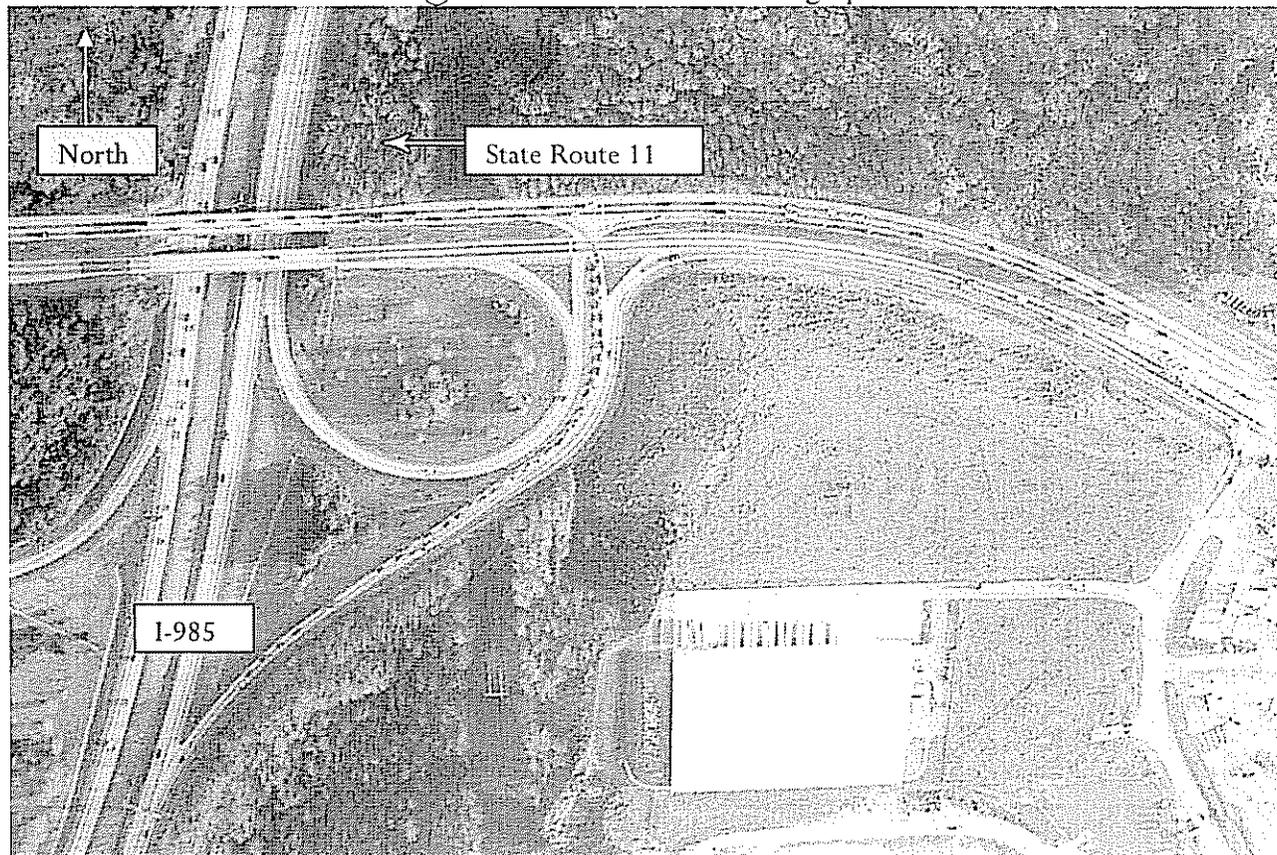
This project is phase I of proposed operational improvements to the interchange of I-985/US 23 @ SR 11/US 129. Phase II is GDOT PI No. 110465 (see Project Linkage section for description of Phase II). This interchange is located at exit 22 on I-985 in both directions. SR 11 provides access to the City of Gainesville and the City of Talmo in Jackson County to the south. This project is located entirely within Hall County.

The preliminary engineering phase of this project was authorized in 2006. The CST phase for this project is lump sum.

SR 11 @ I-985/US 23 and SR 11 @ Ridge Road - Aerial Photograph #1



SR 11 @ I-985/US 23 - Aerial Photograph #2



Existing and Projected Traffic Conditions

The existing conditions of the interchange of I-985/US 23 @ SR 11/US 129 are as follows: The existing I-985 northbound exit ramp includes a signalized single left turn lane onto SR 11 (westbound) and a single free-flowing right turn lane onto SR 11 (eastbound). The northbound entrance ramp to I-985 is a single lane loop ramp from SR 11 eastbound to I-985 North, combined with a signalized entrance for westbound traffic on SR 11. The southbound entrance ramp is a non-signalized, single lane ramp from SR 11 to I-985 south (as shown in Aerial Photograph #1). The southbound exit ramp is a non-signalized, loop ramp with a single left turn lane onto SR 11 (westbound) and a single right turn lane onto SR 11 (eastbound).

At this interchange, the functional classification for I-985 is an Urban Interstate Principal Arterial and SR 11 is an Urban Principal Arterial. The posted speed limit for SR 11 is 45 MPH and for I-985, the speed limit is 70 MPH. The percentage of trucks on I-985 is estimated at ten percent (10%) and on SR 11, an estimated 5 percent (5%) across this interchange.

Table 1 depicts the current and projected Average Daily Traffic (ADT) at this interchange.

Table 1: Current and Projected ADT

Year	I-985/US 23		SR 11/US 129	
Comparison	North	South	West	East
Current	34,562	50,264	37,615	36,000
2010	40,000	60,500	47,000	43,500
2030	68,000	99,000	73,500	69,500

Source: Office of Environment/Location

Table 2 represents the No-Build Capacity Analysis Results for the exit and entrance ramp junctions of I-985 @ SR 11, classified by direction, either north or southbound. In review, Table 2 shows that the I-985 northbound ramp junction is projected to reach LOS 'F' by 2030 in the 'No-Build' scenario.

Table 2 – No-Build Capacity Analysis Results - I-985 Ramp Junctions

Location	Current LOS	LOS No-Build	LOS No-Build
I-985 Southbound	C	D	F
I-985 Southbound	B	B	D

Table 3 represents the No-Build Capacity Analysis Results for the SR 11 Intersections in proximity to the SR 11 and I-985 interchange. In the current year, the intersections of SR 11 @ the northbound exit and southbound entrance ramp of I-985 and SR 11 @ Ridge Road operate at a volume/capacity (VC) ratio greater than '1' or are considered to be 'over capacity'. The intersection of SR 11 and the southbound exit and northbound entrance ramp will reach capacity in 2010 (VC ratio = 1) and will reach a VC ratio of 1.47 (over capacity) by 2030. In review of Table 3, the three intersections, SR 11 @ the southbound exit & northbound entrance, SR 11 @ the northbound exit and southbound entrance and SR 11 @ Ridge Road will be at or over capacity by the year 2010.

**Table 3 – No-Build Capacity Analysis Results -
 SR 11 Intersections**

Location	Peak Hour	Current V/C Ratio	2010 V/C No-Build	2030 V/C No-Build
SR 11 @ SB exit & NB Entrance	AM	0.99	1.00	1.47
	PM	0.89	1.00	1.47
SR 11 @ NB exit & SB Entrance	AM	1.38	1.42	2.32
	PM	0.97	1.42	2.32
SR 11 @ Ridge Road (west of interchange)	AM	1.13	1.37	2.14
	PM	1.24	1.49	2.33

The Atlanta Arterials 2004 Traffic Survey identifies the westbound traffic of SR 11 from SR 323 (east of I-985) to the intersection of SR 11 and Ridge Road (west of I-985) with a Surrogate Level of Service (LOS) ‘E’ in the AM peak hour and LOS ‘D’ in the PM peak hour. Eastbound traffic along this same corridor is identified as LOS ‘C’ in the AM peak hour and in the PM peak hour; traffic is identified as LOS ‘E’ west of I-985 and LOS ‘D’ east of I-985. This survey does not include the entrance and exit ramps to I-985.

The survey methodology for the Atlanta Arterials 2004 Traffic Survey defines the Surrogate LOS Performance Ratings by assessing the nature of vehicle platoons and the extent of queuing found at signalized intersections. Accordingly, the six surrogate LOS performance ratings used in this survey of interrupted-flow highways are defined as follows (because they are surrogate LOS measures, they are underlined for differentiation from HCM LOS):

* Surrogate LOS ‘A’: Very few vehicles are using the highway; the highway is virtually deserted [HCM qualitative description for LOS A: Vehicles are completely unimpeded in their ability to maneuver within the traffic stream, free-flow operations]

* Surrogate LOS ‘B’: Traffic flow is light; there are little or no groupings of vehicles (“platoons”) [HCM qualitative description for LOS B: Reasonably unimpeded operations. ability to maneuver only slightly restricted]

* Surrogate LOS ‘C’: Traffic flow is light; there are little or no groupings of vehicles (“platoons”). [HCM qualitative description for LOS C: Reasonably unimpeded operations. ability to maneuver only slightly restricted. driving comfort declines noticeably on the roadway]

* Surrogate LOS ‘D’: Traffic flow is heavy; there are many cars on the road. Significant queuing is found at signals, but all queued vehicles are expected to clear the signal on “green” (there are less than 20 vehicles per lane queued at all signals in the segment). Platoons contain at least 15 but do not exceed 25 vehicles per lane [HCM qualitative description for LOS D: borders on unstable flow where small increases in flow may cause substantial decreases in travel speed]

* Surrogate LOS ‘E’: Traffic flow is congested. The segment may contain one or two signalized intersections with queues of more than 20 vehicles per lane (all vehicles may not clear on “green”). Platoon populations exceed 25 vehicles per lane (on long one-lane segments, the movement of vehicles may resemble a funeral procession, with little opportunity for side-traffic to enter the roadway) [HCM qualitative description for LOS E: Significant delays and low average travel speeds. typical causes include adverse progression, high signal density, high volumes, extensive delays at critical intersections and inappropriate signal timing, traffic flow is at or near capacity]

* Surrogate LOS ‘F’: Traffic flow is severely congested. This involves vehicles backing through an upstream signal or for the length of the segment; a series of closely-spaced intersections with more than 20 vehicles per lane queued at each; or the segment contains one severely congested intersection with more than 40 vehicles per lane queued approaching the signal (it may take two or more signal cycles to clear the intersection) [HCM qualitative description for LOS F: flow at extremely low speeds, high delays and extensive queuing likely at critical intersections, traffic demand exceeds capacity]

Proposed Improvements

The design will include the addition of turn lane improvements on the I-985 northbound off-ramp which will include dual left turn lanes to SR 11/US 129. On SR 11/US 129 to I-985 northbound and southbound on-ramps - dual lanes on the ramps will be included as part of this project. An additional left turn lane will be added in the median beginning just west of the SR 11/US 129 bridge over I-985 for the southbound I-985 on-ramp. Also included, are a signal installation for SR 11/US 129 at the I-985 southbound on-ramp and Signal improvements at the I-985 northbound off-ramp to SR 11/US 129. An interconnection plan for the signals located on SR 11/US 129 at the on-ramp and off-ramp will also be part of this project.

Logical Termini

The southern terminus is at the I-985 southbound entrance ramp, south of the SR 11 interchange. The project's northern terminus is at the I-985 northbound entrance ramp, north of the SR 11 interchange.

Project Linkage

The interchange of I-985 and SR 11 provides access to and from I-985 and the City of Gainesville and the City of Talmo in Jackson County to the south.

There is currently one project in the GHMPO Long Range Transportation Plan in proximity to this project.

This project is GH-048 (GDOT PI No. 110465), phase II of PI 0007240, which proposes the reconstruction / rehabilitation of the northbound entrance loop ramp and the southbound exit loop ramp of the I-985 and SR 11/US 129 interchange. The ROW phase is currently proposed for 2012 and the CST phase is proposed for Long Range.

Bike and Pedestrian Facilities

There are no proposed bike and pedestrian improvements within this corridor in the GDOT Statewide Bicycle & Pedestrian Plan. This interchange is not identified in the GHMPO Bicycle and Pedestrian Plan.

Accident Data

Table 4 depicts the accident rates at the I-985 and SR 11 interchange. A review of Table 4 shows that the accident rate at the I-985 and SR 11 was above the statewide averages for the years 2002, 2003, and 2004. The injury rate was below the statewide average in 2002, but was above in 2003 and 2004. The fatality rate was lower than the statewide average in all three years. The primary accident type at this interchange is rear end collisions, which accounted for seventy-five percent (75%) of accidents in both 2002 and 2003 and sixty percent (60%) in 2004. Other accident types included angle, sideswipes, head on and collisions not with another motor vehicle.

Table 4: Accidents / Accident Rates for the I-985 and SR 11 Interchange

Year	2002		2003		2004	
Comparison	SR 11/I-985	Statewide	SR 11/I-985	Statewide	SR 11/I-985	Statewide
Accidents	8		12		10	
Accident Rate	333	204	500	200	511	190
Injuries	0		8		4	
Injury Rate	0	49	333	48	204	44
Fatalities	0		0		0	
Fatality Rate	0	0.59	0	0.62	0	0.52

In summary, the accident rates exceed the statewide average in 2002, 2003 and 2004. The significant proportion of rear end collisions are correlated with turning movements and indicate congested facilities.

Need and Purpose

The need for improvements at the I-985/US 23 and SR 11/US 129 interchange is to reduce congestion along I-985 and the high accident rates occurring at the entrance and exit ramps, therefore improving the operation of the interstate and of SR 11/US 129. The purpose is to reduce congestion and accident rates by providing operational and signal improvements to intersections along SR 11 and to the exit and entrance ramps of the I-985/US 23 and SR 11/129 interchange.

Description of the proposed project: This project is located within the city limits of Gainesville at the intersections of SR 11/US 129 with the I-985/US 23 on and off ramps. It has a length of approximately 0.4 miles. Listed below are the planned improvements:

- Add dual left turn lanes from westbound SR 11/US 129 onto the I-985 southbound on ramp and an additional receiving lane on the ramp
- Add dual left turn lanes from westbound SR 11/US 129 onto the I-985 northbound on ramp and an additional receiving lane on the loop ramp
- Add dual left turn lanes from the I-985 northbound off ramp onto SR 11/US 129 westbound and extend the existing right turn lane
- Install a traffic signal at the intersection of I-985 southbound on ramp and SR 11/US 159
- Install an interconnect on SR 11/US 129 between the proposed signal at the I-985 southbound on ramp and the existing signal at the I-985 northbound off ramp

Is the project located in a Non-attainment area? Yes

PDP Classification: Major _____ Minor X

Federal Oversight: Full Oversight (), Exempt (X), State Funded (), or Other ()

Functional Classification:

- SR 11/US 129 - Urban Principal Arterial
- I-985/US 23 – Urban Interstate Principal Arterial

US Route Numbers: I-985/US 23 & US 129 **State Route Number:** SR 11

Traffic (AADT):	Current Year (2006)	
	SR 11/US 129	39,650
	I-985 NB Off Ramp	12,300
	I-985 SB On Ramp	12,300
	I-985 NB on Ramp	2,880

Existing Design Features:

- Typical Section: SR 11/US 129 is a four-lane divided highway with intersection improvements and a 36-foot depressed median. The outside shoulder is a 10-foot paved shoulder. The inside shoulder is 2-foot paved and 4-foot grass. The I-985 ramps have a 6.5-foot outside shoulder which is all paved and a 4-foot inside shoulder which is 2-foot paved and 2-foot grassed.
- Posted Speed: 45 mph
- Maximum degree of curvature: 4°15'00"
- Maximum Grade: 4%
- Width of right-of-way: Varies, 250 feet typical
- Major Structures: SR 11/US 129 bridges over I-985/US 23. Each bridge is 28'x 260'.
- Major interchanges or intersections along the project: This project is located at the interchange of I-985/US 23 and SR 11/US 129.
- Existing length of roadway segment: 0.4 miles

Proposed Design Features:

- Proposed Typical Sections: SR11/US 129 will remain a four-lane divided highway, but the median at each intersection will be a raised concrete median. On I-985 the ramps will continue to have a 6.5-foot outside shoulder which is all paved and a 4-foot inside shoulder with is 2-foot paved and 2-foot grassed.
- Proposed Design Speed: 45 mph
- Proposed Maximum grade Mainline: 4%
- Maximum Grade Allowable: 6%
- Proposed Maximum Degree of Curvature: 4°15'00"
- Maximum Degree Allowable: 11°30'00"
- Right-of-way: No right-of-way or easement will be acquired
- Structures: The existing bridges of SR 11/US 129 over I-985/US 23 will remain unimproved. There are no proposed retaining walls.
- Traffic Control during Construction: Traffic will be maintained at all times through staged construction. Traffic control will primarily consist of temporary lane closures.

- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:			X
ROADWAY WIDTH:			X
SHOULDER WITH:			X
VERTICAL GRADES:			X
CROSS SLOPES:			X
STOPPING SIGHT DISTANCE:			X
SUPERELEVATION RATES:			X
HORIZONTAL CLEARANCE:			X
SPEED DESIGN:			X
VERTICAL CLEARANCE:			X
BRIDGE WIDTH:			X
BRIDGE STRUCTURAL CAPACITY:			X
- Design Variances: None
- Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes
 - Programmatic Categorical Exclusion
- Utility Involvements: None

Project Responsibilities:

- Design: Wolverton & Associates
- Right-of-Way Acquisition: N/A
- Relocation of Utilities: N/A
- Letting to Contract: GDOT
- Supervision of Construction: GDOT
- Providing Material Pits: N/A
- Providing Detours: N/A

Coordination:

- Initial Concept Team Meeting – January 6, 2006
- Public Involvement – None
- Local Government – Officials from the City of Gainesville, Hall County and the Gainesville-Hall MPO attended the Initial Concept Team Meeting
- Other Projects in the Area – Project number NH-985-1(340) is currently in the concept phase. This project is a complete redesign of this interchange, and is currently scheduled to be let in 2012.

Scheduling – Responsible Parties’ Estimates

- Time to complete the environmental process – 3-6 months
- Time to complete preliminary plans – 3 months
- Time to complete final construction plans – 3 months

Other Alternates Considered:

- No Build

Project Concept Report
Project Number: CSSTP-0007-00(240)
PI No. 0007240
County: Hall

April 2006

Attachments:

1. Construction Cost Estimate
2. Typical Sections
3. Initial Concept Team Meeting Minutes

Estimate Report for file "CSSTP-0007-00(240)"

Section Roadway					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	25000.00	TRAFFIC CONTROL - CSSTP-0007-00(240)	25000.00
210-0100	1	LS	55000.00	GRADING COMPLETE - CSSTP-0007-00(240)	55000.00
310-1101	3820	TN	15.24	GR AGGR BASE CRS, INCL MATL	58216.80
402-3121	1710	TN	42.15	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	72076.50
402-3130	940	TN	39.95	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	37553.00
402-3190	580	TN	44.25	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	25665.00
413-1000	640	GL	1.03	BITUM TACK COAT	659.20
441-0303	1	EA	1605.29	CONC SPILLWAY, TP 3	1605.29
441-0740	1030	SY	26.47	CONCRETE MEDIAN, 4 IN	27264.10
441-6740	1720	LF	11.14	CONC CURB & GUTTER, 8 IN X 30 IN, TP 7	19160.80
500-3900	1	CY	711.89	CLASS B CONCRETE, INCL REINF STEEL	711.89
500-9999	29	CY	169.79	CLASS B CONC, BASE OR PVMT WIDENING	4923.91
550-1150	20	LF	23.92	STORM DRAIN PIPE, 15 IN, H 1-10	478.40
550-1180	120	LF	32.67	STORM DRAIN PIPE, 18 IN, H 1-10	3920.40
550-4215	1	EA	355.13	FLARED END SECTION 15 IN, STORM DRAIN	355.13
611-9000	2	EA	734.63	CAPPING MINOR STRUCTURE	1469.26
641-1200	320	LF	13.67	GUARDRAIL, TP W	4374.40
641-5001	1	EA	477.90	GUARDRAIL ANCHORAGE, TP 1	477.90
668-1100	3	EA	1787.86	CATCH BASIN, GP 1	5363.58
Section Sub Total:					\$344,275.56

Section PERMANENT EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
441-0204	1450	SY	27.72	PLAIN CONC DITCH PAVING, 4 IN	40194.00
603-2182	3	SY	44.06	STN DUMPED RIP RAP, TP 3, 24 IN	132.18
603-7000	3	SY	4.05	PLASTIC FILTER FABRIC	12.15
700-6910	3	AC	783.13	PERMANENT GRASSING	2349.39
700-7000	6	TN	58.04	AGRICULTURAL LIME	348.24
700-7010	8	GL	18.81	LIQUID LIME	150.48
700-8000	3	TN	264.51	FERTILIZER MIXED GRADE	793.53
700-8100	150	LB	1.52	FERTILIZER NITROGEN CONTENT	228.00
Section Sub Total:					\$44,207.97

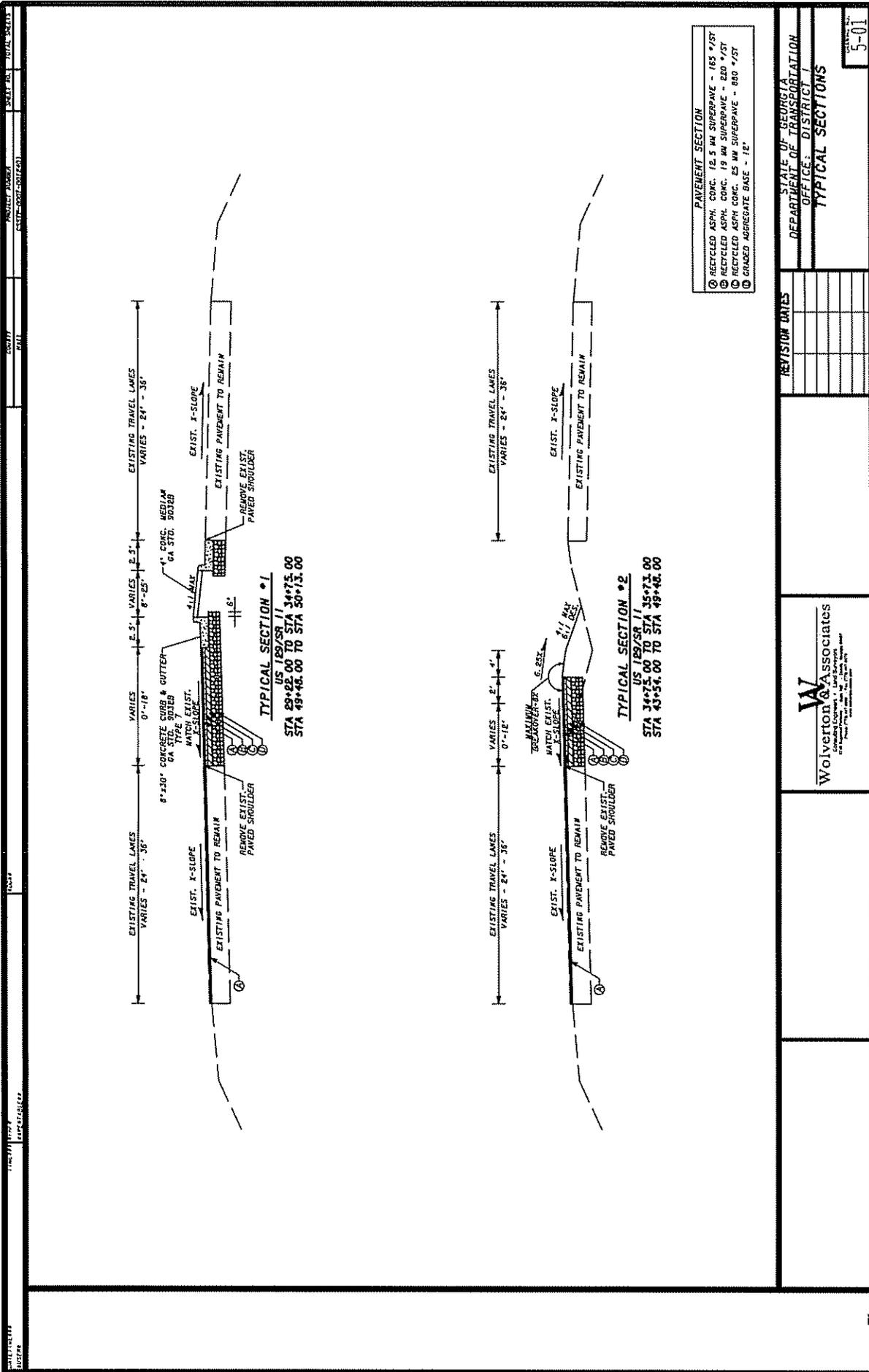
Section TEMPORARY EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	2	AC	479.26	TEMPORARY GRASSING	958.52
163-0240	45	TN	196.32	MULCH	8834.40
163-0521	35	EA	164.74	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS	5765.90
163-0530	960	LF	2.64	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	2534.40
163-0550	4	EA	241.20	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	964.80
165-0030	50	LF	1.16	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	58.00
165-0040	35	EA	68.40	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	2394.00
165-0070	480	LF	1.44	MAINTENANCE OF BALED STRAW EROSION CHECK	691.20
165-0105	4	EA	84.45	MAINTENANCE OF INLET SEDIMENT TRAP	337.80
171-0030	100	LF	3.20	TEMPORARY SILT FENCE, TYPE C	320.00
716-2000	6900	SY	1.06	EROSION CONTROL MATS, SLOPES	7314.00
Section Sub Total:					\$30,173.02

Section SIGNING, MARKING AND SIGNALS					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
615-1200	1550	LF	10.80	DIRECTIONAL BORE -	16740.00

636-1020	16	SF	13.60	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	217.60
636-1031	15	SF	16.90	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6	253.50
636-2070	62	LF	7.01	GALV STEEL POSTS, TP 7	434.62
639-4004	4	EA	4354.44	STRAIN POLE, TP IV	17417.76
647-1000	1	LS	6979.00	TRAFFIC SIGNAL INSTALLATION NO - 1	6979.00
647-1000	1	LS	23500.00	TRAFFIC SIGNAL INSTALLATION NO - 2	23500.00
647-2141	1	EA	911.46	PULL BOX, PB-4S	911.46
647-2151	2	EA	1174.90	PULL BOX, PB-5S	2349.80
653-0120	27	EA	59.25	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	1599.75
653-1501	8400	LF	0.27	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	2268.00
653-1502	970	LF	0.27	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	261.90
653-1704	170	LF	3.35	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	569.50
653-3501	2600	GLF	0.17	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	442.00
682-6233	1600	LF	3.97	CONDUIT, NONMETL, TP 3, 2 IN	6352.00
935-1113	1780	LF	1.73	OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SINGLE MODE, 24 FIBER	3079.40
935-1511	150	LF	3.73	OUTSIDE PLANT FIBER OPTIC CABLE, DROP, SINGLE MODE, 6 FIBER	559.50
935-3103	2	EA	673.40	FIBER OPTIC CLOSURE, UNDERGROUND, 24 FIBER	1346.80
935-4010	4	EA	33.24	FIBER OPTIC SPLICE, FUSION	132.96
935-6562	2	EA	1578.27	EXTERNAL TRANSCEIVER, DROP AND REPEAT, 1310 SINGLE MODE, (SIGNAL JOBS)	3156.54
Section Sub Total:					\$88,572.09

Total Estimated Cost: \$507,228.64

Subtotal Construction Cost	\$507,228.64
E&C Rate 10.0 %	\$50,722.86
Inflation Rate 0.0 % @ 0.0 Years	\$0.00
<hr/>	
Total Construction Cost	\$557,951.50
Right Of Way	\$0.00
ReImb. Utilities	\$0.00
<hr/>	
Grand Total Project Cost	\$557,951.50



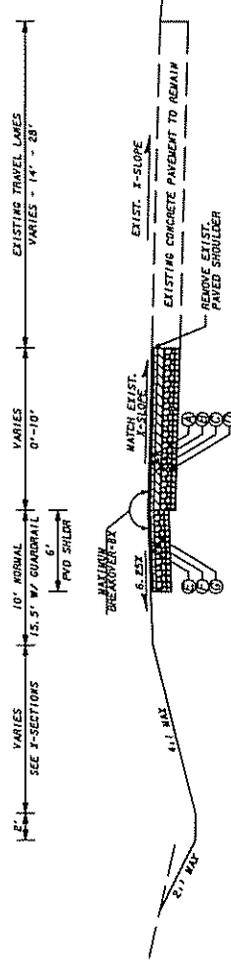
PAVEMENT SECTION

- (1) RECYCLED ASPH. CONC. 12.5 MM SUPERPAVE - 163 #/ST
- (2) RECYCLED ASPH. CONC. 19 MM SUPERPAVE - 220 #/ST
- (3) RECYCLED ASPH. CONC. 25 MM SUPERPAVE - 280 #/ST
- (4) GRADED AGGREGATE BASE - 12"

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF DISTRICT 1
TYPICAL SECTIONS
5-01

REVISION DATES

Wolverton & Associates
 Consulting Engineers, Inc. Land Surveyors
 1000 Peachtree Street, N.E., Suite 1000
 Atlanta, Georgia 30309
 Phone: 404.525.8800
 Fax: 404.525.8801

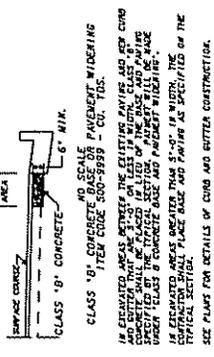


TYPICAL SECTION #3
 I-985 SOUTHBOUND OFF RAMP
 STA 9+00.00 TO STA 15+65.00
 I-985 NORTHBOUND ON RAMP
 STA 80+00.00 TO STA 88+23.00
 I-985 NORTHBOUND OFF RAMP
 STA 97+14.00 TO STA 105+85.56

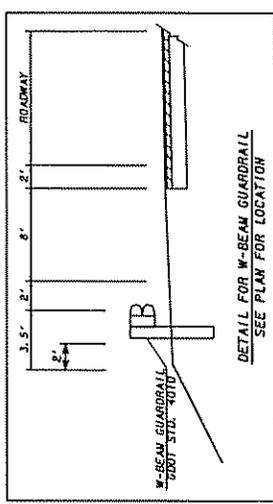
SLOPE CONTROLS	
SLOPE	CUT FILL
2:1	ABOVE #1 ABOVE #2
4:1	BELOW #1 BELOW #2

ALLOWABLE RANGES TABLE
 FOR THIS PROJECT, CROSS SLOPES THAT ARE ADJUSTED TO "BEST FIT" EXISTING PAVEMENT SLOPES ARE SUBJECT TO THE FOLLOWING LIMITS:

- SPURVEYOR CHECK**
 - SECTION WITH GRADES - 0.3% OR GREATER
 - SECTION WITH GRADES - LESS THAN 0.3%
 - 0.015% FTTT - MAXIMUM
 - 0.020% FTTT - DESIRABLE
 - 0.030% FTTT - MAXIMUM
- SUPERELEVATION RATE**
 S.E. RATE SHOWN OF PLANS OR S.E. RATE EXISTING IN FIELD WHICHEVER IS GREATER.
- SUPERELEVATION TRANSITION LENGTH (LENGTH FROM FLAT POINT TO FULL SE)**
 CONSECUTIOUS DIFFERENCE IN CHANGE BETWEEN PIVOT POINT AND EDGE OF PAVEMENT
 - MAXIMUM 1:150
 - DESIRABLE 1:100
 - MINIMUM 1:200
- POSITIONING OF SUPERELEVATION TRANSITION LENGTH ON SIMPLE CURVES**
 SIZE OF TRANSITION INSIDE CURVE - MAXIMUM
 SIZE OF TRANSITION OUTSIDE CURVE - MINIMUM
 NOTE: CROSS WIPES-OUT SHALL BE AT THE SAME RATE AS THE SE TRANSITION.
- SMOOTHNESS OF GRADES**
 IN CASE AVAILABLE, AT BEG. AND END OF TRANSITION SHALL BE LIMITED TO A FINISHING GRIT (FIN FEET) EQUAL TO THE SPEED DESIRABLE (15 MPH).

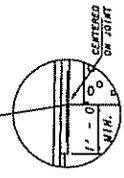


CLASS '8' CONCRETE
 BASE OR WIDENING DETAIL



PAVEMENT SECTION

- RECYCLED ASPH. CONC. 12.5 MM SUPERPAVE - 165 4/27
- RECYCLED ASPH. CONC. 19 MM SUPERPAVE - 220 4/27
- RECYCLED ASPH. CONC. 25 MM SUPERPAVE - 880 4/27
- GRADED AGGREGATE BASE - 12"
- RECYCLED ASPH. CONC. 12.5 MM SUPERPAVE - 165 4/27
- RECYCLED ASPH. CONC. 19 MM SUPERPAVE - 220 4/27
- GRADED AGGREGATE BASE - 10"



PVD REINFORCEMENT FABRIC DETAIL

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: DISTRICT I
TYPICAL SECTIONS

REVISOR DATES

Wolverton Associates
 Consulting Engineers & Land Surveyors
 1115 Peachtree Street, N.E., Atlanta, Georgia 30309
 Phone: 404.525.8800 Fax: 404.525.8801

DATE: 11/11/11 PROJECT NO: 10413 SHEET NO: 5-02 TOTAL SHEETS: 5



MEETING MINUTES

RE: I-985/US 23 @ SR 11/US 129
CSSTP-0007-00(240) Hall
P.I. No : 0007240
W&A Project No. : 05-459

DATE: January 6, 2006

ATTENDEES: Brent Cook, GDOT
Shane Dover, GDOT
Neil Kantner, GDOT
Robert Mahoney, GDOT
Russell McMurry, GDOT
Robby Oliver, GDOT
Dee Taylor, City of Gainesville
Scott Puckett, Hall County
Jody Woodall, Hall County
Bill Meyer, Gainesville-Hall MPO
Srikanth Yamala, Gainesville-Hall MPO
Joe Macrina, Wolverton & Associates
Kerrie Boyette, Wolverton & Associates

This meeting was held to kick-off the design for this project. Robert Mahoney began the meeting by stating that Shane Dover with GDOT will be the contact person for all day-to-day issues for this project and also for invoices. Wolverton & Associates presented the concept layout that was developed under a previous work order to the attendees. This project includes only the Phase 1 improvements to this interchange which are improvements, built within the existing right-of-way, that will improve the operation of the interchange before the Phase 2 project is built. The Phase 2 improvements will be designed and built as a separate project. Listed below are the improvements shown on the Phase 1 concept plan:

- Add dual left turn lanes from westbound SR 11/US 129 onto the I-985 southbound on ramp
- Add an additional lane to the I-985 southbound on ramp to receive the dual left turn lanes added to westbound SR 11/US 129
- Add dual left turn lanes from westbound SR 11/US 129 onto the I-985 northbound on ramp
- Add an additional lane to the I-985 northbound on ramp to receive the dual left turn lanes added to westbound SR 11/US 129
- Add dual left turn lanes from the I-985 northbound off ramp onto SR 11/US 129 westbound
- Install a traffic signal at the intersection of I-985 southbound on ramp and SR 11/US 129

- Install an interconnect on SR 11/US 129 between the proposed signal at the I-985 southbound on ramp and the existing signal at the I-985 northbound off ramp

After discussion among the attendees, the following changes will be made to the concept layout:

- Wolverton & Associates will work to maximize the storage length of the right turn decel lane on the I-985 northbound off ramp
- Wolverton & Associates will work to maximize the storage length for the dual left turn lanes on SR 11/US 129 onto the I-985 southbound on ramp by extending the proposed raised median back to the existing approach slab. Also, the existing guardrail should be replaced and a straight guardrail anchor may be used.

The attendees discussed the need for an accelerated schedule for this project because of the scheduled let date in 2006. Wolverton & Associates should use the asphalt pavement design shown in the memo concerning pavement sections for minor projects from Buddy Gratton dated June 7, 2005 instead of having a soil survey and pavement design approved by OMR. Also, asphalt should be used throughout the project even though the existing ramps are concrete. As a result of the schedule, all work should be done within the existing right-of-way so that right-of-way plans will not be needed for this project. Also, Robby Oliver said that plan submissions to utility companies will not be required.

There was a discussion of the pedestrian issues on the project. It was decided that the sidewalk and crosswalks should remain as shown on the concept plan. Signs should be shown in the signing and marking plans directing all pedestrians to the north side of SR 11/US 129 through the interchange.

Representatives from Hall County and the City of Gainesville requested that the proposed traffic signal on SR 11/US 129 at the I-985 southbound on ramp and an interconnect between the signals on SR 11/US 129 between Ridge Road and Monroe Drive be built sooner than is planned for this project. Brent Cook said that this may be possible, and that Wolverton & Associates should coordinate with his office on this issue once the design begins on the preliminary plans.

Wolverton and Associates should begin work immediately following this meeting on the concept plan and report. Robert Mahoney asked that Wolverton & Associates send four copies of the concept layout to him so that he request that work begin on the environmental document. Also, Robert Mahoney will request that the Need and Purpose Statement be written.

Action Items:

- Kerrie Boyette - Send four copies of the concept layout to Robert Mahoney to begin the environmental process
- Kerrie Boyette – Make the plan revisions stated above

- Kerrie Boyette – Begin work on the concept report and cost estimate
- Kerrie Boyette – Coordinate with Brent Cook concerning the proposed traffic signal and signal interconnect once preliminary plans begin
- Robert Mahoney – Request that work begin on the environmental document
- Robert Mahoney – Request that the Need and Purpose Statement be written for inclusion in the concept report