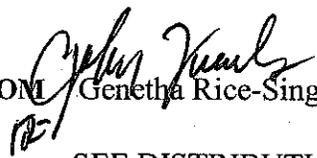


DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

**FILE** P. I. No. 210700-, Richmond County **OFFICE** Preconstruction  
NH-520-1(17)  
Widening of I-520 from Gordon Hwy-  
to Deans Bridge Road with Interchange Improvements **DATE** March 6, 2008

**FROM**  Genetha Rice-Singleton, Assistant Director of Preconstruction

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

Attachment

DISTRIBUTION:

Brian Summers  
Glenn Bowman  
Ken Thompson  
Michael Henry  
Keith Golden  
Tony Collins  
Angela Alexander  
Paul Liles  
George Brewer  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** P.I. No. 210700-, Richmond County  
NH-520-1(17)  
Widening of I-520 from Gordon Hwy-  
To Deans Bridge Road with Interchange Improvements

**OFFICE:** Preconstruction

**DATE:** June 26, 2007

  
**FROM:** Genetha Rice-Singleton, Assistant Director of Preconstruction

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

**SUBJECT: PROJECT CONCEPT REPORT**

This project is the widening and reconstruction of I-520 from where the existing 6 lane section ends west of US 78/278/SR 10 (Gordon Highway) and continues east of US 1/SR 4 (Deans Bridge Road). This project includes the interchange reconstruction at Gordon Highway and Deans Bridge Road. The primary need for this project is to provide improvements to the existing interstate system allowing the system to operate at acceptable levels of service throughout its design life. The base year traffic (2012) along this corridor is 83,800 VPD and the design year traffic (2032) is 127,000 VPD.

The project proposes to widen I-520 to a 6 lane facility for the entire project limits for a total of 3.40 miles. The typical section will consist of three, 12' lanes in each direction with a 16' paved median with barrier and 10' outside paved shoulders. The speed design will be 55 MPH. The additional lanes will be added to the inside of the existing lanes within the existing 40' depressed median. The proposed interchanges for US 78/278/SR 10 and US 1/SR 4 are partial cloverleaf/partial diamond interchanges to replace the full cloverleaf interchanges. Traffic exiting I-520 will utilize a diamond configuration type ramp with dedicated right and left turn lanes controlled by traffic signals. Traffic entering I-520 will utilize loop ramps and diamond type ramps with free flow access. Traffic will be maintained during construction.

Environmental concerns include requiring a COE 404 permit; a Categorical Exclusion is anticipated; a Public Information Open House will be held; Time saving procedures is appropriate.

P.I. No. 0008295, Fulton County  
June 26, 2007

The estimated costs for this project are:

	PROPOSED	APPROVED	FUNDING	PROG DATE
Construction (includes E&C And inflation)	\$ 15,132,000	\$ 8,800,000	GRVA	2010
Right-of-way	\$ 500,000	\$ 167,000	L050	2009
Utilities	\$ 100,000			

\* Notification letter sent to Richmond-Augusta 7-29-04

I recommend this project concept be approved.

GRS: JDQ

Attachment

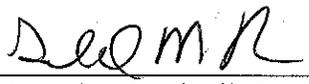
CONCUR

  
Todd I. Long, P.E., Director of Reconstruction

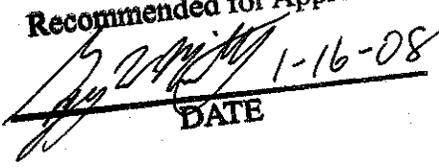
APPROVED

  
For: Rodney A. Barry, P.E., Division Administrator FHWA

APPROVED

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

Recommended for Approval

  
DATE 1-16-08

**PRECONSTRUCTION STATUS REPORT**

PROJ ID	COUNTY	DESCRIPTION	MGMT. ROW DATE	SCHED DATE	MGMT. LET DATE
210700-	Richmond	I-520 FROM SR 4/US 1 TO GORDON HIGHWAY			
NH-520-1(17)	FIELD DIST: 2				
TIP #: NHS-10	TWIN:	US: I-520			
MPO: Augusta TMA	EST DATE: 12/16/05				
MODEL YR:	PROJ LENGTH: 3.40				
PROJ MGR: Brewer, George	TYPE WORK: Widening				
PROG: Reconstruction/Rehabilitation					
TYPE:					
CONCEPT: ADD 6R(MED 28)	LET RESP: DOT	Congressional Districts: 12			

Phase	Approved	Proposed	Cost	Fund	Status
PE	2005	2005	1,614,301.03	Q05	AUTHORIZED
ROW	2008	2009	167,000.00	L050	PRECST
CST	2009	2010	8,800,000.00	GRVA	PRECST

MGMT. ROW DATE: ~~Dec 08~~  
 SCHED DATE: ~~Dec 08~~  
 MGMT. LET DATE: ~~Dec 09~~

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACT/EST FINISH	PCT	DISTRICT COMMENTS
5/28/07	11/28/07	Define Project Concept			8	(MPO) 12/7/93 Presurvey meeting 1/6/94 - 5-20-94 Survey finished 5/4/04 Sponsor:Dist; needed proj 6/21/04 Governor's "Fast Forward" prog 4/12/05 Scoping mtg with H&L 1/30/06 NTP given to H & L 2/13/07 Concept mtg @ 9:00 in Augusta
12/18/07	12/18/07	Concept Meeting			0	
1/2/08	2/5/08	Concept Submittal and Review			0	
2/6/08	2/19/08	Receive Preconstruction Concept Approval			0	
2/19/08	2/19/08	Management Concept Approval Complete			0	
3/12/08	3/12/08	Public Information Open House Held			0	
2/20/08	10/15/09	Environmental Approval			0	
4/30/09	4/30/09	Public Hearing Held			0	
		Mapping	6/15/05	8/1/05	100	
5/25/07	5/31/07	Field Surveys/SDE	11/8/05		50	
6/1/07	5/27/09	Preliminary Plans			0	
10/5/07	1/3/08	Preliminary Bridge Design			0	
2/20/08	3/26/08	Underground Storage Tanks			0	
6/26/08	9/10/08	404 Permit Obtainment			0	
11/6/09	11/9/09	PFPR Inspection			0	
12/15/09	3/8/10	R/W Plans Preparation			0	
5/4/10	5/7/10	R/W Plans Final Approval			0	
12/15/09	12/17/09	L & D Report Development and Approval			0	
5/10/10	3/19/12	R/W Acquisition			0	
9/30/10	10/13/10	Stake R/W			0	
12/15/09	12/24/09	Soil Survey			0	
12/15/09	1/19/10	Bridge Foundation Investigation			0	
12/18/09	10/21/10	Final Design			0	
1/18/10	5/7/10	Final Bridge Plans Preparation			0	
11/12/10	11/15/10	FFPR Inspection			0	
11/29/10	12/10/10	FFPR Response			0	

BIKE PROVISIONS INCLUDED?: N MEASUREMENT E CONSULTANT: C UT EST: \$ 0.00

PDD: FF>>  
 Bridge: BRIDGE REQUIRED  
 Design: H&L  
 EIS: EW | KITCHINGS  
 LGPA: NOTIFICATION LETTER SENT TO RICHMOND-AUGUSTA 7-29-04  
 Planning: MIS COMPLETED: NO VIABLE ALTERNATIVE TO PROJECT. 10/27/97 CJC  
 Programming: #1 9-06  
 Traffic Op: AWAITING CONSULTANT PFPR PLANS FOR REVIEW  
 Utility: (JL) NEED 1ST SUB PLANS 2/13/07  
 EMG: 2123 (H83-E/V29); DOT=M/S; CONSULT=D

**R/W INFORMATION:**  
 PREL PARCEL CT: 10 TOTAL PARCEL CT: ACQUIRED BY: DOT ACQ MGR:  
 UNDER-REVIEW CT: RELEASED OPT-PEND CT: DEEDS CT: COND-PEND CT: COND-FILED CT:  
 RW CERT DT: ACQUIRED CT: RELOCATION CT:

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT CONCEPT REPORT**

**Project Number: NH-520-1(17)  
County: Richmond  
P.I. Number: 210700**

**Federal Route Number: I-520  
State Route Number: 415**

**Widening of I-520 (Bobby Jones Expressway) from US 78/278 / SR 10 (Gordon Highway) to  
US 1 / SR 4 (Deans Bridge Road) with interchange improvements.**

Recommendation for approval:

DATE 3/28/07

George M. Brewer  
Project Manager

DATE 3-28-07

Michael J. Brown  
Office Head/District Engineer

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental/Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE 6/18/07

Bruce K. Summers  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT CONCEPT REPORT**

**Project Number: NH-520-1(17)  
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Recommendation for approval:

DATE 3/28/07

George M. Bower  
Project Manager

DATE 3-28-07

Michael J. Thomas  
Office Head/District Engineer

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DATE 5/29/07

Angela S. Alexander  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental/Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Design Engineer

5-15-07  
WKS

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: NH-520-1(17)  
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Project Manager

DATE 3-28-07

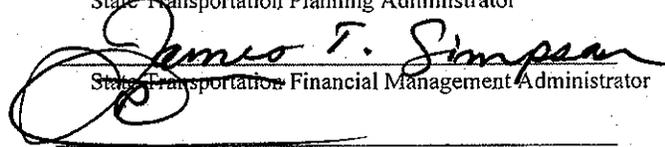
  
Office Head/District Engineer

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DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE 5-17-07

  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

State Environmental/Location Engineer

DATE \_\_\_\_\_

State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge & Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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Recommendation for approval:

DATE 3/28/07

George M. Bruner  
Project Manager

DATE 3-28-07

Phillip J. Brown  
Office Head/District Engineer

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DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental/Locality Engineer

DATE 5-17-07

Heidi Schell  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT CONCEPT REPORT**

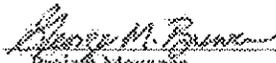
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State Route Number: 415**

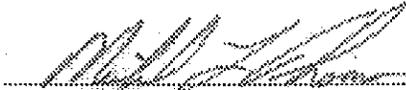
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Project Manager

DATE 3-28-07

  
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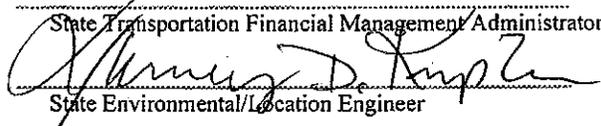
DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

State Transportation Financial Management Administrator

DATE 6/07/07

  
State Environmental/Location Engineer

DATE \_\_\_\_\_

State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge & Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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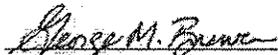
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Recommendation for approval:

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Project Manager

DATE 3-28-07

  
Office Head/District Engineer

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\_\_\_\_\_  
State Transportation Planning Administrator

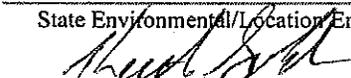
DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental/Location Engineer

DATE 5-21-07

  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Design Engineer

## SCORING RESULTS AS PER MOG 2440-2

<b>Project Number:</b> NH-520-1(17)		<b>County:</b> Richmond		<b>PI No.:</b> 210700-	
<b>Report Date:</b> June 22,2007		<b>Concept By:</b> DOT Office: District 2			
<input checked="" type="checkbox"/> Concept Stage		Consultant: Parsons			
<b>Project Type:</b> Choose One From Each Column		<input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural	<input type="checkbox"/> ATMS <input type="checkbox"/> Bridge Replacement <input type="checkbox"/> Building <input type="checkbox"/> Interchange Reconstruction <input type="checkbox"/> Intersection Improvement <input checked="" type="checkbox"/> Interstate <input type="checkbox"/> New Location <input type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
<b>FOCUS AREAS</b>	<b>SCORE</b>	<b>RESULTS</b>			
<b>Presentation</b>	100				
<b>Judgment</b>	100				
<b>Environmental</b>	100				
<b>Right of Way</b>	100				
<b>Utility</b>	100				
<b>Constructability</b>	100				
<b>Schedule</b>	100				

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT CONCEPT REPORT**

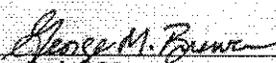
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**Federal Route Number: I-520  
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**Widening of I-520 (Bobby Jones Expressway) from US 78/278 / SR 10 (Gordon Highway) to  
US 1 / SR 4 (Deans Bridge Road) with interchange improvements.**

Recommendation for approval:

DATE 3/28/07

  
Project Manager

DATE 3-28-07

  
Office Head/District Engineer

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental/Location Engineer

DATE \_\_\_\_\_

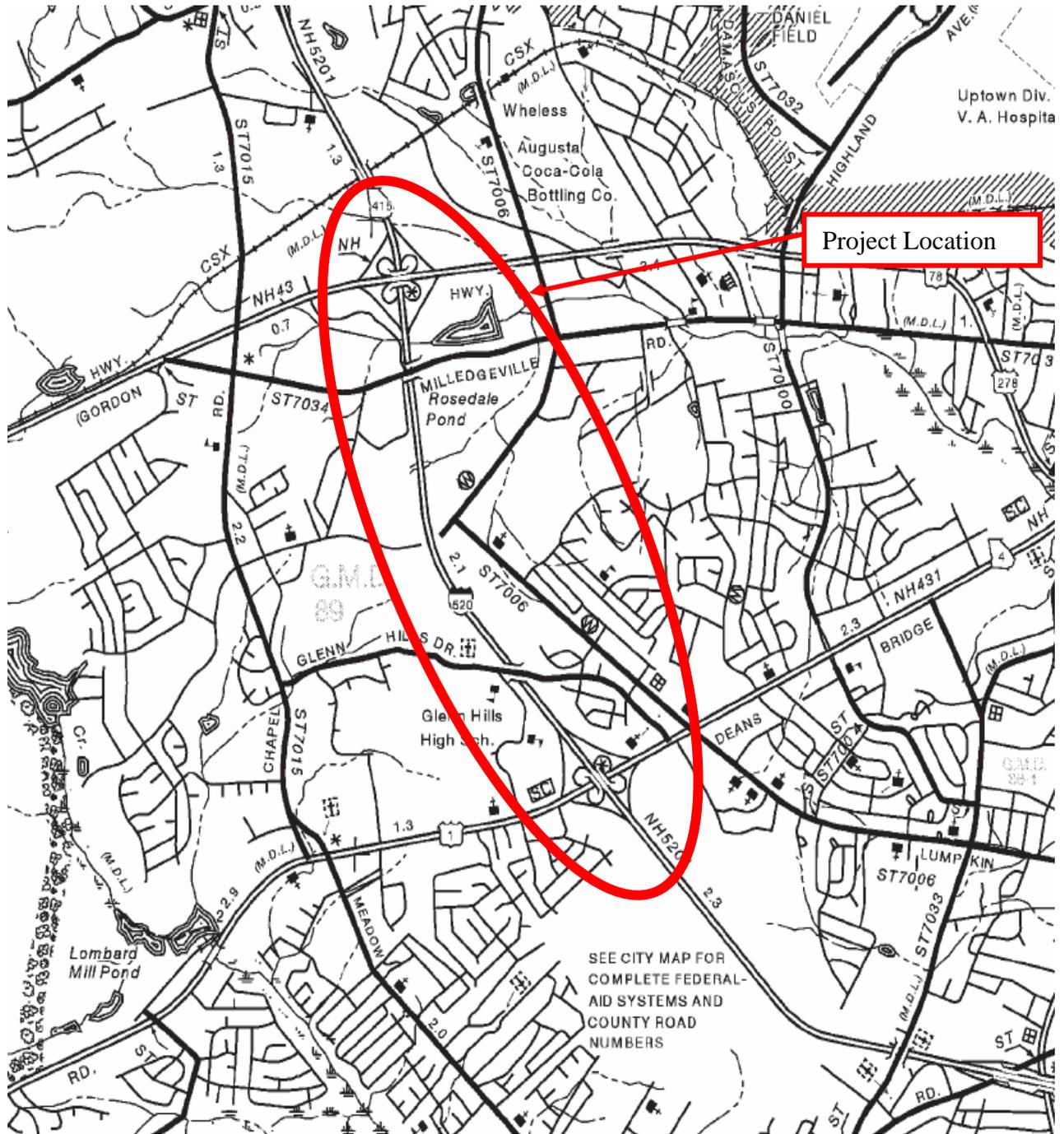
\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Design Engineer



**Location Map**

**NH-520-1(17), P.I. 210700  
Richmond County, Ga.**

**Widening of I-520 (Bobby Jones Expressway) from US 78/278 / SR 10 (Gordon Highway) to  
US 1 / SR 4 (Deans Bridge Road) with interchange improvements.**

### **Need and Purpose:**

The proposed widening of I-520 totals 3.4 miles of interstate roadway. The project begins at MP 2.9 where the existing 6 lane section ends west of US 78/278/SR 10 (Gordon Highway) and continues to MP 6.3 east of US 1/SR 4 (Dean's Bridge Road).

The existing I-520 four lane, forty foot depressed median section needs both safety and capacity improvements. The existing US 78/278/SR 10 (Gordon Highway) six lane, ten foot raised median section needs operational and safety improvements for loop ramp weaving situations and pedestrian access. The existing US 1/SR 4 (Deans Bridge Road) six/five lane, eleven foot raised median section needs operational and safety improvements for loop ramp weaving situations and pedestrian access. Both interchanges exist as full cloverleaf designs with short weaving lengths on I-520, Gordon Highway, and Deans Bridge Road.

Widening I-520 to six lanes with a 16 foot median and median barrier will increase the capacity and improve driver safety by creating barrier separation for opposing traffic. Reconfiguring the Gordon Highway and Deans Bridge Road interchanges to partial cloverleaf/diamond configurations improves the capacity and safety by eliminating entrance and exit traffic merge conflicts. The use of urban shoulders with sidewalks will improve pedestrian access at Gordon Highway and Deans Bridge Road.

The future development in the area will increase I-520 ADT from projected year 2012 83,800 VPD to design year 2032 127,000 VPD. Traffic volumes on US78/278/SR 10 will increase ADT from projected year 2012 36,400 VPD to design year 2032 52,000 VPD. And traffic volumes on US1/SR4 will increase ADT from projected year 2012 43,400 VPD to design year 2032 62,000 VPD. This section of I-520 with US78/278/SR10 and US1/SR4 serve many businesses, shopping centers, restaurants, and homes in the city of Augusta.

The accident data for the section of I-520 from MP 2.9 to 6.3 for the years 2003 to 2005 is as follows: I-520 – 497 accidents – 120 injuries and no fatalities; Gordon Highway - 161 accidents – 40 injuries and no fatalities; Deans Bridge Road – 228 accidents – 58 injuries and no fatalities.

### **Proposed Project Description:**

This project involves adding an additional lane in both directions on I-520 (Bobby Jones Expressway) and reconfiguring interchange access at the US 78/278/SR 10 (Gordon Highway) interchange underpass and the US 1/SR 4 (Deans Bridge Road) interchange overpass. Interstate 520 is a local perimeter for the city of Augusta, linking I-20 to US 78 in North Augusta.

The proposed widening of I-520 totals 3.4 miles of interstate roadway. The project begins at MP 2.9 where the existing 6 lane section ends west of US 78/278/SR 10 (Gordon Highway) and continues to MP 6.3 east of US 1/SR 4 (Dean's Bridge Road). The proposed project will widen the 4 lane interstate to 6 lanes. Three lanes in each direction will be separated by a 16 foot median

with a concrete median barrier wall. The posted speed limit will remain at 55 MPH. The additional lanes will be added to the inside of the existing lanes within the existing 40 foot depressed median. The proposed widening requires the existing I-520 bridge over US 1/SR 4 be widened to the inside.

**US78/278 /SR10 (Gordon Highway)**

The proposed interchange for US 78/278/SR 10 is a partial cloverleaf/partial diamond interchange to replace the full cloverleaf configuration interchange. Traffic exiting I-520 will utilize a diamond configuration type ramp with dedicated right and left turn lanes controlled by traffic signals on US 78/278/SR 10. Traffic entering I-520 will utilize loop ramps and diamond type ramps with free flow access. The existing loop ramps will be improved to meet 35 mph design speed. The proposed roadway typical section on US 78/278/SR 10 is 8 lanes with a 12 foot raised median and 16 foot urban shoulders with sidewalks. The posted speed will remain at 45 mph.

**US1/SR4 (Deans Bridge Road)**

The proposed interchange for US 1/SR 4 is a partial cloverleaf/partial diamond interchange to replace the full cloverleaf configuration interchange. Traffic exiting I-520 will utilize a diamond configuration type ramp with dedicated right and left turn lanes controlled by traffic signals on US 1/SR 4. Traffic entering I-520 will utilize loop ramps and diamond type ramps with free flow access. The existing loop ramps will be retained with their current 25 mph design speed, but the pavement section will be replaced. The proposed roadway typical section on US 1/SR 4 is 6 lanes with a 10 foot raised median and 16 foot urban shoulders with sidewalks. The posted speed will remain at 45 mph.

Is this Project in the Non-Attainment Area? Yes \_\_\_ No X

PDP Classification: Major X Minor \_\_\_

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

Functional Classification: I-520 – Urban Interstate Principal Arterial  
US 78/278 / SR 10 – Urban Principal Arterial  
US 1 / SR 4 – Urban Principal Arterial

US Route Number(s)	I-520	State Route Number(s)	SR 415
	US 78 / 278		SR 10
	US 1		SR 4

**Traffic (AADT):**

I-520	Current Year: (2012)	<u>83,800</u>	Design Year: (2032)	<u>127,000</u>
US 78/278/SR 10	Current Year: (2012)	<u>36,400</u>	Design Year: (2032)	<u>52,000</u>
US 1/SR 4	Current Year: (2012)	<u>43,400</u>	Design Year: (2032)	<u>62,000</u>

**Existing Roadway Features:**

**I-520**

- Typical Sections: (2) 12'-0" Wide Travel Lanes in each Direction,  
40'-0" depressed median & 12'-0" rural shoulders
- Posted Speed Limit: 55 mph Minimum radius for curve: 1920 ft.
- Maximum Super-elevation rate for curve: 6.0%
- Maximum Grade: 4.00%
- Width of Right of Way: 300 Ft. (nominal width)
- Major Structures: 

<u>US 78/278/SR 10 overpass - 274' x 126.2'</u>	Suff. Rating: <u>95.31</u>
<u>Milledgeville Rd overpass - 276' x 40.4'</u>	Suff. Rating: <u>98.70</u>
<u>Glenn Hills Dr overpass - 304' x 44.4'</u>	Suff. Rating: <u>97.81</u>
<u>I-520(EBL) overpass(US1/SR4)-188' x 50.4'</u>	Suff. Rating: <u>86.47</u>
<u>I-520(WBL) overpass(US1/SR4)-196' x 50.4'</u>	Suff. Rating: <u>97.81</u>
- Major Interchanges and Intersections: Interchanges at US 78/278 /SR 10 and US I/SR 4

**US 78/278/SR 10**

- Typical Sections: (6) 12'-0" Wide Travel Through Lanes, (2) 12'-0" Auxiliary Lanes  
12'-0" Raised Concrete Median  
10'-0" Wide Rural Shoulder with 6'-0" Paved Shoulder
- Posted Speed Limit: 45 mph Minimum radius for curve: N/A
- Maximum Super-elevation rate for curve: N/A
- Maximum Grade: 4.00%
- Width of Right of Way: 150 Ft. (nominal width)

**US 1/SR 4**

- Typical Sections: (6) 12'-0" Wide Travel Through Lanes,  
11'-0" Raised Median  
10'-0" Wide Rural Shoulders with 2' to 6' Paved Shoulder
- Posted Speed Limit: 45 mph Minimum radius for curve: N/A
- Maximum Super-elevation rate for curve: N/A
- Maximum Grade: 6.00%
- Width of Right of Way: 100 Ft. (nominal width)

**Ramps**

- Typical Sections: (1) 16'-0" Wide Travel Lane on each ramp,  
6'-0" Inside and Outside Paved Shoulders on Loops  
0'-0" Inside Paved Shoulder on Ramp  
6'-0" Outside Paved Shoulder on Ramp
- Posted Speed Limit(Loop): 25 mph Minimum radius for curve: 190 ft.
- Posted Speed Limit(Ramp): 45 mph Minimum radius for curve: 716 ft.
- Maximum Super-elevation rate for curve: 8.0%
- Maximum Grade: 3.00%
- Width of Right of Way: N/A

**Proposed Design Features:**

**I-520**

- Proposed typical section(s): (3) 12'-0" Wide Travel Lanes in each Direction,  
16'-0" median with 6'-0" paved shoulders and barrier  
12'-0" Outside Rural Shoulders
- Proposed Design Speed Mainline 55 mph
- Proposed Maximum Grade Mainline 4.0 % Maximum Grade Allowable 5.0 %
- Proposed Minimum Radius for Curve 1920 ft. Minimum radius allowable 960 ft.
- Proposed Maximum super-elevation rate for curve: 8.0%
- Proposed Maximum degree of curve 3.0 Maximum degree allowable 6.0
- Right of Way
  - Width 300 ft.
  - Easements: Temporary ( ), Permanent ( ), Utility ( ), Other ( ).
  - Type of access control: Full (X), Partial ( ), By Permit ( ), Other ( ).
  - Number of parcels: 0 Number of displacements: 0
- Structures:
  - Bridges: I-520 over US 1 / SR 4 – The I-520 bridge will be widened to the inside to accommodate the additional lanes for I-520.
- Major interchanges: I-520 at US 78/278/SR 10, I-520 at US 1/SR 4
- Traffic Control during construction: Traffic will be maintained on existing roadway.

**US 78/278/SR 10**

- Proposed typical section(s): (6) 12'-0" Through Lanes with (2) 12'-0"  
Auxiliary lanes for right turns.  
Improve shoulders to 16'-0" Urban Shoulder.
- Proposed Design Speed Mainline 45 mph
- Proposed Maximum Grade Mainline 4.0 % Maximum Grade Allowable 8.0 %
- Proposed Minimum Radius for Curve N/A Minimum radius allowable 587 ft.
- Proposed Maximum super-elevation rate for curve: N/A
- Proposed Maximum degree of curve N/A Maximum degree allowable 9.76
- Right of Way
  - Width 150 ft.
  - Easements: Temporary (X), Permanent (X), Utility ( ), Other ( ).
  - Type of access control: Full (X), Partial ( ), By Permit ( ), Other ( ).
  - Number of parcels: 7 Number of displacements: 0

**US 1/SR 4**

- Proposed typical section(s): (6) 12'-0" Through Lanes with (2) 12'-0"  
Auxiliary Lanes for right turns.  
Improve shoulders to 16'-0" Urban Shoulder.
- Proposed Design Speed Mainline 45 mph
- Proposed Maximum Grade Mainline 4.0 % Maximum Grade Allowable 8.0 %
- Proposed Minimum Radius for Curve N/A Minimum radius allowable N/A
- Proposed Maximum super-elevation rate for curve: N/A
- Proposed Maximum degree of curve N/A Maximum degree allowable N/A
- Right of Way

- Width 100 ft.
- Easements: Temporary (X), Permanent (X), Utility ( ), Other ( ).
- Type of access control: Full ( ), Partial ( ), By Permit (X), Other ( ).
- Number of parcels: 11 Number of displacements: 1 Business

**Ramps**

- Typical Sections: (1) 16'-0" Wide Travel Lane on each ramp, with (3 to 4) 12'-0" Turn Lanes at each Ramp Head  
 10'-0" Inside and 6'-0" Outside Paved Shoulders on Loops  
 6'-0" Inside Paved Shoulder on Ramp  
 10'-0" Outside Paved Shoulder on Ramp
- Proposed Design Speed (Loop) 35 mph US 78/278 / SR 10
- Proposed Design Speed (Loop) 25 mph US 1 / SR 4
- Proposed Design Speed (Ramp) 45 mph
- Proposed Maximum Grade Mainline 4.0 % Maximum Grade Allowable 8.0 %
- Proposed Min. Radius for 35 mph Loop Curve 314ft. Minimum radius allowable 314 ft.
- Proposed Min. Radius for 25 mph Loop Curve 180ft. Minimum radius allowable 134 ft.
- Proposed Min. Radius for Ramp Curve 587ft. Minimum radius allowable 587 ft.
- Proposed Maximum super-elevation rate for curve: 8.0%
- Proposed Max. degree of 35 mph Loop curve 18.2 Maximum degree allowable 18.2
- Proposed Max. degree of 25 mph Loop curve 31.8 Maximum degree allowable 42.8
- Proposed Max. degree of Ramp curve 31.8 Maximum degree allowable 42.8
- Right of Way Varies 50' to 150' from baseline
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	( )	( )	(X)
ROADWAY WIDTH:	( )	( )	(X)
SHOULDER WIDTH:	( )	(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 anticipated
- Environmental Concerns: none anticipated
- Level of Environmental Analysis: Categorical Exclusion
- Utility Involvement: Pending Utility Concept Impact Assessment

**Project Responsibilities:**

- Design: District 2/Heath-Lineback Engineers, Inc.
- Right of Way Acquisition: Georgia Department of Transportation
- Relocation of Utilities: Contractor
- Letting Contract: Georgia Department of Transportation
- Supervision of Construction: Georgia Department of Transportation
- Providing Materials pits: Contractor
- Providing detours: Contractor (if required)

**Coordination:**

- Initial Concept Team Meeting date: February 15, 2006
- Concept Team Meeting date: February 13, 2007
- PAR meetings, dates and results: None Anticipated
- FEMA, USCG, and / or TVA: None Anticipated
- Public Involvement: PIOH
- Local Government comments: None
- Other Projects: N/A
- Railroads: None
- VE NOT REQUIRED

**Scheduling – Responsible Parties' Estimate:**

- Time to complete the environmental process: 12 months
- Time to complete the Section 404 Permits: N/A
- Time to complete preliminary construction plans: 9 months
- Time to complete right of way plans: 1 month
- Time to complete final construction plans: 6 months
- Time to purchase right of way: 12 months
- List other major items that will effect the project schedule: None

**Other alternates considered:**

**US 78/278 / SR10 (Gordon Highway)**

**Alternate 1 (Diamond Interchange)**

Reconfigure the existing cloverleaf interchange to a diamond interchange. This alternate retains the existing Gordon Highway bridge over I-520, eliminates all loop ramps, and eliminates all entrance/exit weaving situations. The existing raised median would be removed to add dual left turn lanes from Gordon Highway to the on ramps. All construction would occur within the existing right of way.

This alternate was not selected due to unacceptable level of service for the design year. The overall interchange LOS would be C (AM) and D (PM). Left turns from the ramps to Gordon

Highway would be LOS E (AM) and F (PM). Left turns from Gordon Highway to the northbound onramp would be LOS F. In addition, some of the through and right turn movements would be LOS E.

**Alternate 2 (Partial Cloverleaf Interchange- Parcel B)**

Reconfigure the existing cloverleaf interchange to a partial cloverleaf interchange. This alternate retains the existing Gordon Highway bridge over I-520, replaces the existing loop off-ramps from I-520 with ramps designed for 45 mph, and reconstructs the I-520 on-ramps as required by the loop ramp design. Diamond ramps would be provided in all four quadrants, with the southeast and northwest quadrant ramps reconstructed within the existing right of way. Additional right of way would be required to construct the I-520 loop off-ramps and relocated I-520 on-ramps in the northeast and southwest quadrants of the interchange.

This alternate was not selected due to significant additional required right of way area. Right of way impacts include displacement of at least three apartment buildings in the northeast quadrant, and additional required right of way, but no displacements, in the southwest quadrant of the interchange.

**Alternate 3 (Partial Cloverleaf Interchange – Parcel A)**

Reconfigure the existing cloverleaf interchange to a partial cloverleaf interchange. This alternate retains the existing Gordon Highway bridge over I-520, retains the existing 25 mph design speed loop on-ramps to I-520 and reconstructs the I-520 off-ramps as required to add capacity. Diamond ramps would be provided in all four quadrants, with the northeast and southwest quadrant ramps reconstructed within the existing right of way. Additional right of way would be required to construct the I-520 loop on-ramps and relocated I-520 off-ramps in the southeast and northwest quadrants of the interchange.

This alternate was not selected although it provides an acceptable level of service for the design year; Alternate 4 brings the loop ramps up to a 35 mph design speed. All movements are LOS C or better, except for the southbound off-ramp right turn, which is LOS D in the PM. Although additional right of way is required, this design does not require any property displacements.

**Alternate 4 (Partial Cloverleaf Interchange – Parcel <sup>B</sup>A)**

Reconfigure the existing cloverleaf interchange to a partial cloverleaf interchange. This alternate retains the existing Gordon Highway bridge over I-520, replaces the existing loop on-ramps to I-520 with ramps designed for 35 mph, and reconstructs the I-520 off-ramps as required by the loop ramp design. Diamond ramps would be provided in all four quadrants, with the northeast and southwest quadrant ramps reconstructed within the existing right of way. Additional right of way would be required to construct the I-520 loop on-ramps and relocated I-520 off-ramps in the southeast and northwest quadrants of the interchange.

This alternate was selected because it provides an acceptable level of service for the design year and minimizes I-520 right of way impacts. All movements are LOS C or better, except for the southbound off-ramp right turn, which is LOS D in the PM. Although additional right of way is required, this design does not require any property displacements.

### **Alternate 5 (Single Point Urban Interchange – SPUI)**

Reconfigure the existing cloverleaf interchange to a SPUI. This alternative replaces the existing Gordon Highway bridge over I-520 and constructs a new Single Point Urban Interchange at this location. All existing ramps would be replaced. All construction would occur within the existing right of way.

This alternate was not selected due to unacceptable level of service for the design year and high construction costs as a result of reconstructing the existing bridge. The overall interchange LOS would be D (AM) and D (PM). Left turns from the I-520 off-ramps to Gordon Highway would be LOS E (AM) and F (PM), and left turns from Gordon Highway to the on-ramps would be LOS E. In addition, some of the through and right turn movements would be LOS F.

### **Alternate 6 (No Build)**

This alternate was not selected because it fails to meet the need and purpose of the project. Specifically, the four existing exit/entrance and entrance/exit weaving situations would not be eliminated and the overall interchange capacity would not be improved.

### **US 1/SR 4 (Deans Bridge Road)**

#### **Alternate 1 (Diamond Interchange)**

Reconfigure the existing cloverleaf interchange to a diamond interchange. This alternate widens the existing I-520 bridge over Deans Bridge Road, eliminates all loop ramps, and eliminates all entrance/exit weaving situations. The existing raised median would be removed to add left turn lanes from Deans Bridge Road to the I-520 on-ramps. All construction would occur within the existing right of way.

This alternate was not selected due to unacceptable level of service for the design year. The overall interchange LOS would be D (AM) and C (PM). Left turns from the ramps to Deans Bridge Road would be LOS F. Left turns from Deans Bridge Road to the northbound on-ramp would be LOS F. In addition, some of the through and right turn movements would be LOS F.

#### **Alternate 2 (Partial Cloverleaf Interchange- Parclo B)**

Reconfigure the existing cloverleaf interchange to a partial cloverleaf interchange. This alternate widens the existing I-520 bridge over Deans Bridge Road, replaces the existing loop off-ramps from I-520 with ramps designed for 45 mph, and reconstructs the I-520 on-ramps as required by the loop ramp design. The proposed configuration on Deans Bridge Road would retain the 3 through lanes westbound and 2 through lanes eastbound with the existing auxiliary lane for the eastbound off-ramp converted to an additional through lane. Diamond ramps would be provided in all four quadrants, with the southeast and northwest quadrant ramps reconstructed within the existing right of way. Additional right of way would be required to construct the I-520 loop off-ramps and relocated I-520 on-ramps in the northeast and southwest quadrants of the interchange.

This alternate was not selected due to significant required right of way area and impacts to neighborhoods and businesses in both quadrants of the loop ramps.

### **Alternate 3 (Partial Cloverleaf Interchange – Parclo A)**

Reconfigure the existing cloverleaf interchange to a partial cloverleaf interchange. This alternate retains the existing I-520 bridge over Deans Bridge Road, retains the existing locations of the loop on-ramps to I-520 with a new pavement section and reconstructs the I-520 off-ramps as required by the loop ramp design. The proposed configuration on Deans Bridge Road would retain the 3 through lanes westbound and 2 through lanes eastbound with the existing auxiliary lane for the eastbound off-ramp converted to an additional through lane. Diamond ramps would be provided in all four quadrants, with the northeast and southwest quadrant ramps reconstructed within the existing right of way. Additional right of way would be required to construct the I-520 loop on-ramps and relocated I-520 off-ramps in the southeast and northwest quadrants of the interchange.

This alternate was selected because it provides an acceptable level of service for the design year and minimizes the right of way impacts. All movements are LOS B or better. Although additional right of way is required, this design does not require any property displacements

### **Alternate 4 (Partial Cloverleaf Interchange – Parclo A)**

Reconfigure the existing cloverleaf interchange to a partial cloverleaf interchange. This alternate retains the existing I-520 bridge over Deans Bridge Road, improves and reconstructs the existing loop on-ramps to I-520 with ramps designed for 35 mph, and reconstructs the I-520 off-ramps as required by the loop ramp design. The proposed configuration on Deans Bridge Road would retain the 3 through lanes westbound and 2 through lanes eastbound with the existing auxiliary lane for the eastbound off-ramp converted to an additional through lane. Diamond ramps would be provided in all four quadrants, with the northeast and southwest quadrant ramps reconstructed within the existing right of way. Additional right of way would be required to construct the I-520 loop on-ramps and relocated I-520 off-ramps in the southeast and northwest quadrants of the interchange.

This alternate with the improved 35 mph loop ramps was not selected due to significant required right of way areas and impacts to residential and commercial. The result would be 4 commercial displacements and 4 condo style residential displacements.

### **Alternate 5 (Single Point Urban Interchange – SPUI)**

Reconfigure the existing cloverleaf interchange to a SPUI. This alternate replaces the existing I-520 bridge over Deans Bridge Road and constructs a new Single Point Urban Interchange at this location. All existing ramps would be replaced. All construction would occur within the existing right of way.

This alternate was not selected due to unacceptable level of service for the design year and high construction costs as a result of reconstructing the existing bridge. The overall interchange LOS would be D (AM) and D (PM). Left turns from the I-520 off-ramps to Deans Bridge Road would be LOS F, and left turns from Deans Bridge Road to the on-ramps would be LOS F (AM) and E (PM). In addition, some of the through and right turn movements would be LOS E.

**Alternate 6 (No Build)**

This alternate was not selected because it fails to meet the need and purpose of the project. Specifically, the four existing exit/entrance and entrance/exit weaving situations would not be eliminated and the overall interchange capacity would not be ignored.

**Attachments:**

- Preliminary Cost Estimates
- Typical Sections
- Proposed Alternates
- Concept Team Meeting minutes

**PRELIMINARY CONSTRUCTION AND RIGHT OF WAY COST ESTIMATE - PREFERRED ALTERNATE (PARCLO A)**

PROJECT NUMBER: NH-520-1(17) COUNTY: RICHMOND  
 DATE: 1/29/2007 LETTING DATE: MARCH 2009  
 PREPARED BY: H&L Inc.  
 PROGRAMMING PROCESS  CONCEPT DEVELOPMENT

**PROJECT COST**

<b>1. MAJOR STRUCTURES</b>					
a. I-520 Bridge over US1/SR4 (Bridge Widening)	6250	SF	\$ 100.00		\$625,000
b. Median Barrier Type 20 on I-520	4500	LF	\$ 160.00		\$720,000
c. Median Barrier Type 21 on I-520	100	SF	\$ 98.21		\$9,821
d. Median Barrier Type 22 on I-520	3500	SF	\$ 216.66		\$758,310
				<b>SUBTOTAL 1:</b>	<b>\$2,113,131</b>
<b>2. BASE AND PAVING</b>					
a. GRADED AGGREGATE BASE	32000	TN	\$ 24.32		\$778,240
b. 12.5mm SUPERPAVE	2250	TN	\$ 85.00		\$191,250
c. 19.0mm SUPERPAVE	3000	TN	\$ 90.00		\$270,000
d. 25.0mm SUPERPAVE	6000	TN	\$ 80.00		\$480,000
e. LEVELING	2000	TN	\$ 90.00		\$180,000
f. BITUM TACK COAT	3700	GL	\$ 2.05		\$7,585
g. PLAIN PC CONC PVMT, CL 1, 12 INCH THK	20000	SY	\$ 46.11		\$922,200
h. CONC SIDEWALK, 4 IN	2700	SF	\$ 29.86		\$80,622
i. CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	4800	LF	\$ 31.60		\$151,680
				<b>SUBTOTAL 2:</b>	<b>\$3,061,577</b>
<b>3. LUMP ITEMS</b>					
a. TRAFFIC CONTROL	1	LS	\$3,000,000		\$3,000,000
b. CLEARING AND GRUBBING	1	LS	\$3,000,000		\$3,000,000
c. EROSION CONTROL	1	LS	\$400,000		\$400,000
d. SIGNING AND MARKING	1	LS	\$500,000		\$500,000
e. SIGNALS & INTERCONNECT FIBER CABLE	4	LS	\$130,000		\$520,000
				<b>SUBTOTAL 3:</b>	<b>\$7,420,000</b>
<b>4. MISCELLANEOUS</b>					
a. GUARD RAIL TP W	2000	LF	\$ 17.11		\$34,220
b. TP1 ANCHORS	8	EA	\$ 613.61		\$4,909
c. TP12 ANCHORS	8	EA	\$ 1,713.38		\$13,707
d. RIGHT OF WAY MARKERS	20	EA	\$ 94.15		\$1,883
e. REINF CONC APPROACH SLAB	215	SY	\$ 146.16		\$31,424
f. Field Office	1	EA	\$ 75,300.00		\$75,300
				<b>SUBTOTAL 4:</b>	<b>\$161,443</b>
<b>5. GRADING AND DRAINAGE</b>					
a. EARTHWORK - IN PLACE EMBANKMENT (TOTAL FILL 50000 CY @ \$9.94/CY)					\$500,000
b. DRAINAGE					\$500,000
					<b>\$1,000,000</b>

**ESTIMATE SUMMARY**

<b>SUBTOTAL CONSTRUCTION COST</b>	<b>\$13,756,151</b>
E. & C. (10%)	\$1,375,615
INFLATION (NOT INCLUDED)	
<b>TOTAL CONSTRUCTION COST</b>	<b>\$15,131,766</b>
RIGHT OF WAY	\$500,000
REIMBURSABLE UTILITIES	\$100,000
<b>GRAND TOTAL PROJECT COSTS</b>	<b>\$15,731,766</b>

**PRELIMINARY CONSTRUCTION AND RIGHT OF WAY COST ESTIMATE - PARCLO B - ALTERNATE (2)**

PROJECT NUMBER: NH-520-1(17) COUNTY: RICHMOND  
 DATE: 1/29/2007 LETTING DATE: MARCH 2009  
 PREPARED BY: H&L Inc.  
 PROGRAMMING PROCESS  CONCEPT DEVELOPMENT

**PROJECT COST**

<b>1. MAJOR STRUCTURES</b>					
a. I-520 Bridge over US1/SR4 (Bridge Widening)	6250	SF	\$ 100.00		\$625,000
b. Median Barrier Type 20 on I-520	4500	LF	\$ 160.00		\$720,000
c. Median Barrier Type 21 on I-520	100	SF	\$ 98.21		\$9,821
d. Median Barrier Type 22 on I-520	3500	SF	\$ 216.66		\$758,310
				<b>SUBTOTAL 1:</b>	<b>\$2,113,131</b>
<b>2. BASE AND PAVING</b>					
a. GRADED AGGREGATE BASE	40000	TN	\$ 24.32		\$972,800
b. 12.5mm SUPERPAVE	3000	TN	\$ 85.00		\$255,000
c. 19.0mm SUPERPAVE	4000	TN	\$ 90.00		\$360,000
d. 25.0mm SUPERPAVE	8000	TN	\$ 80.00		\$640,000
e. LEVELING	2000	TN	\$ 90.00		\$180,000
f. BITUM TACK COAT	5000	GL	\$ 2.05		\$10,250
g. PLAIN PC CONC PVMT, CL 1, 12 INCH THK	30000	SY	\$ 46.11		\$1,383,300
h. CONC SIDEWALK, 4 IN	2700	SF	\$ 29.86		\$80,622
i. CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	4800	LF	\$ 31.60		\$151,680
				<b>SUBTOTAL 2:</b>	<b>\$4,033,652</b>
<b>3. LUMP ITEMS</b>					
a. TRAFFIC CONTROL	1	LS	\$1,000,000		\$1,000,000
b. CLEARING AND GRUBBING	1	LS	\$3,000,000		\$3,000,000
c. EROSION CONTROL	1	LS	\$1,000,000		\$1,000,000
d. SIGNING AND MARKING	1	LS	\$500,000		\$500,000
e. SIGNALS & INTERCONNECT FIBER CABLE	4	LS	\$130,000		\$520,000
				<b>SUBTOTAL 3:</b>	<b>\$6,020,000</b>
<b>4. MISCELLANEOUS</b>					
a. GUARD RAIL TP W	4000	LF	\$ 17.11		\$68,440
b. TP1 ANCHORS	8	EA	\$ 613.61		\$4,909
c. TP12 ANCHORS	8	EA	\$ 1,713.38		\$13,707
d. RIGHT OF WAY MARKERS	50	EA	\$ 94.15		\$4,708
e. REINF CONC APPROACH SLAB	215	SY	\$ 146.16		\$31,424
f. Field Office	1	EA	\$ 75,300.00		\$75,300
				<b>SUBTOTAL 4:</b>	<b>\$198,488</b>
<b>5. GRADING AND DRAINAGE</b>					
a. EARTHWORK - IN PLACE EMBANKMENT (TOTAL FILL 100000 CY @ \$9.94/CY)					\$1,000,000
b. DRAINAGE					\$750,000
					<b>\$1,750,000</b>

**ESTIMATE SUMMARY**

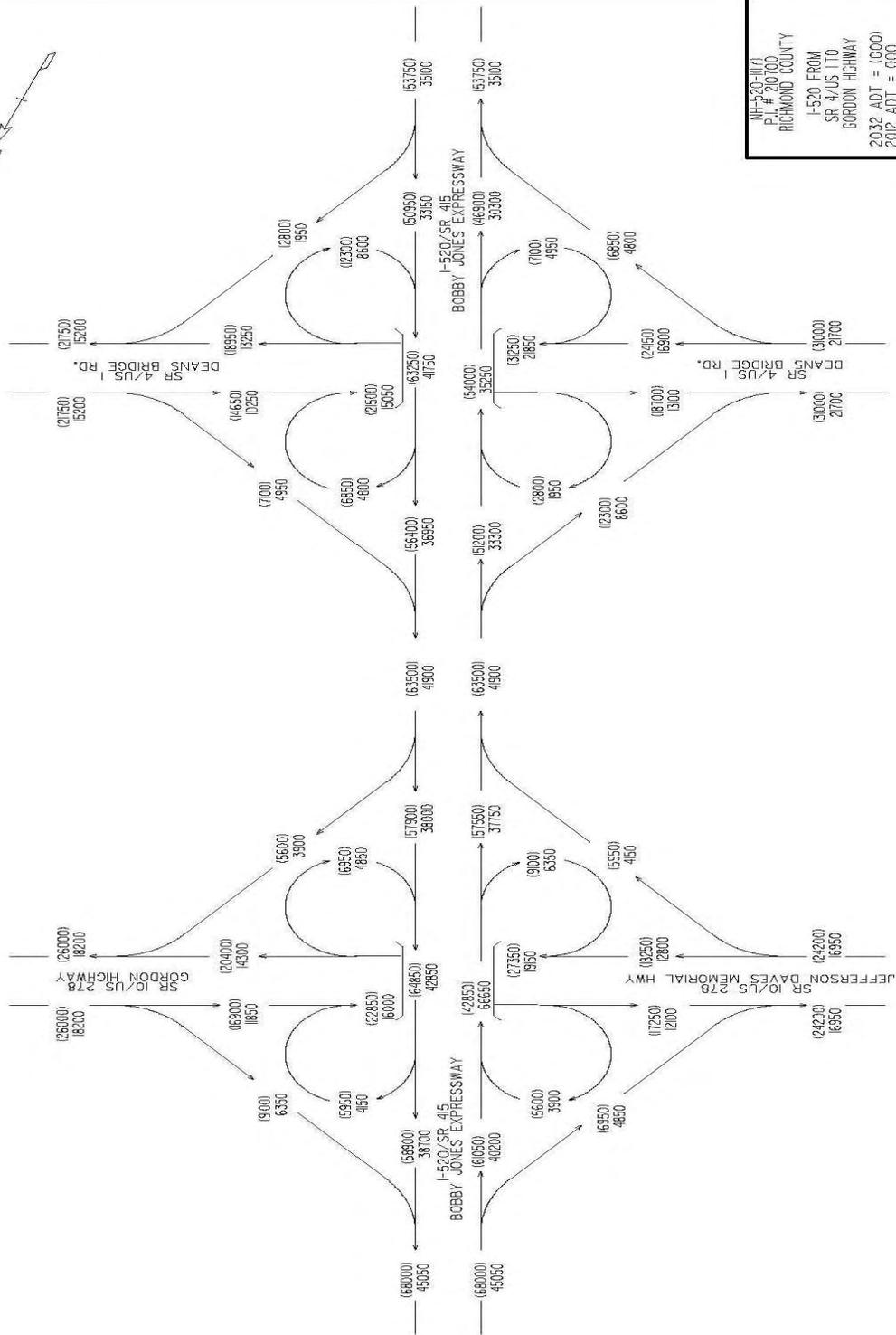
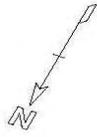
<b>SUBTOTAL CONSTRUCTION COST</b>	<b>\$14,115,271</b>
E. & C. (10%)	\$1,411,527
INFLATION (NOT INCLUDED)	
<b>TOTAL CONSTRUCTION COST</b>	<b>\$15,526,798</b>
RIGHT OF WAY	\$8,000,000
REIMBURSABLE UTILITIES	\$500,000
<b>GRAND TOTAL PROJECT COSTS</b>	<b>\$24,026,798</b>

**PRELIMINARY CONSTRUCTION AND RIGHT OF WAY COST ESTIMATE - ALTERNATE (4)**

PROJECT NUMBER: NH-520-1(17) COUNTY: RICHMOND  
 DATE: 1/29/2007 LETTING DATE: MARCH 2009  
 PREPARED BY: H&L Inc.  
 PROGRAMMING PROCESS  CONCEPT DEVELOPMENT

**PROJECT COST**

<b>1. MAJOR STRUCTURES</b>					
a. I-520 Bridge over US1/SR4 (Bridge Replacement)	27400	SF	\$	80.00	\$2,192,000
a. US78/SR10 Bridge over I-520 (Bridge Replacement)	55360	SF	\$	80.00	\$4,428,800
b. Median Barrier Type 20 on I-520	4500	LF	\$	160.00	\$720,000
c. Median Barrier Type 21 on I-520	100	SF	\$	98.21	\$9,821
d. Median Barrier Type 22 on I-520	3500	SF	\$	216.66	\$758,310
				<b>SUBTOTAL 1:</b>	<b>\$8,108,931</b>
<b>2. BASE AND PAVING</b>					
a. GRADED AGGREGATE BASE	32000	TN	\$	24.32	\$778,240
b. 12.5mm SUPERPAVE	2250	TN	\$	85.00	\$191,250
c. 19.0mm SUPERPAVE	3000	TN	\$	90.00	\$270,000
d. 25.0mm SUPERPAVE	6000	TN	\$	80.00	\$480,000
e. LEVELING	2000	TN	\$	90.00	\$180,000
f. BITUM TACK COAT	3700	GL	\$	2.05	\$7,585
g. PLAIN PC CONC PVMT, CL 1, 12 INCH THK	20000	SY	\$	46.11	\$922,200
h. CONC SIDEWALK, 4 IN	2700	SF	\$	29.86	\$80,622
i. CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	4800	LF	\$	31.60	\$151,680
				<b>SUBTOTAL 2:</b>	<b>\$3,061,577</b>
<b>3. LUMP ITEMS</b>					
a. TRAFFIC CONTROL	1	LS	\$	3,000,000	\$3,000,000
b. CLEARING AND GRUBBING	1	LS	\$	2,000,000	\$2,000,000
c. EROSION CONTROL	1	LS	\$	500,000	\$500,000
d. SIGNING AND MARKING	1	LS	\$	500,000	\$500,000
e. SIGNALS & INTERCONNECT FIBER CABLE	4	LS	\$	130,000	\$520,000
				<b>SUBTOTAL 3:</b>	<b>\$6,520,000</b>
<b>4. MISCELLANEOUS</b>					
a. GUARD RAIL TP W	4000	LF	\$	17.11	\$68,440
b. TP1 ANCHORS	8	EA	\$	613.61	\$4,909
c. TP12 ANCHORS	8	EA	\$	1,713.38	\$13,707
d. RIGHT OF WAY MARKERS	0	EA	\$	94.15	\$0
e. REINF CONC APPROACH SLAB	1250	SY	\$	146.16	\$182,700
f. Field Office	1	EA	\$	75,300.00	\$75,300
				<b>SUBTOTAL 4:</b>	<b>\$345,056</b>
<b>5. GRADING AND DRAINAGE</b>					
a. EARTHWORK - IN PLACE EMBANKMENT (TOTAL FILL 50000 CY @ \$9.94/CY)					\$500,000
b. DRAINAGE					\$500,000
					<b>\$1,000,000</b>
<b>ESTIMATE SUMMARY</b>					
<b>SUBTOTAL CONSTRUCTION COST</b>					<b>\$19,035,564</b>
E. & C. (10%)					\$1,903,556
INFLATION (NOT INCLUDED)					
<b>TOTAL CONSTRUCTION COST</b>					<b>\$20,939,120</b>
RIGHT OF WAY					\$0
REIMBURSABLE UTILITIES					\$0
<b>GRAND TOTAL PROJECT COSTS</b>					<b>\$20,939,120</b>

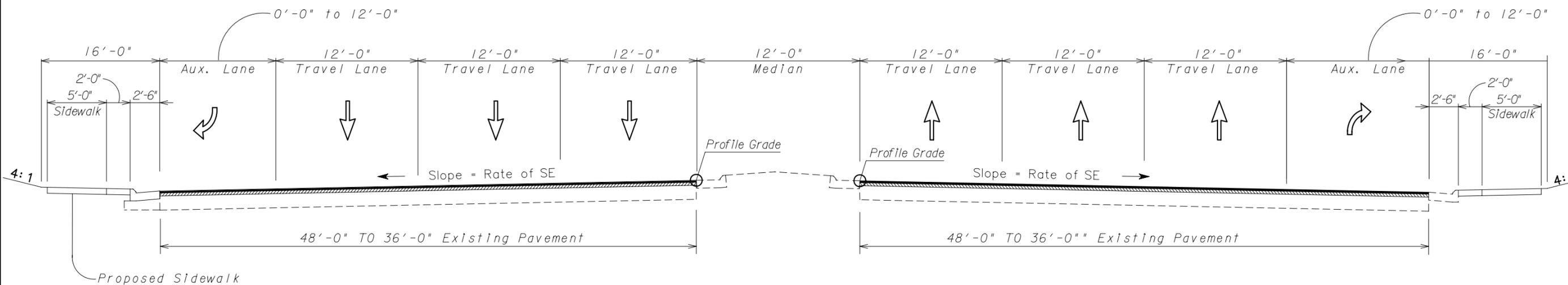


NH-520-1071  
 P.L.# 200700  
 RICHMOND COUNTY  
 I-520 FROM  
 SR 4/US 170  
 GORDON HIGHWAY  
 2032 ADT = 10000  
 2012 ADT = 000  
 24 HR T= 10%  
 S.U.= 3%  
 COMB.= 7%  
 SMS  
 4/20

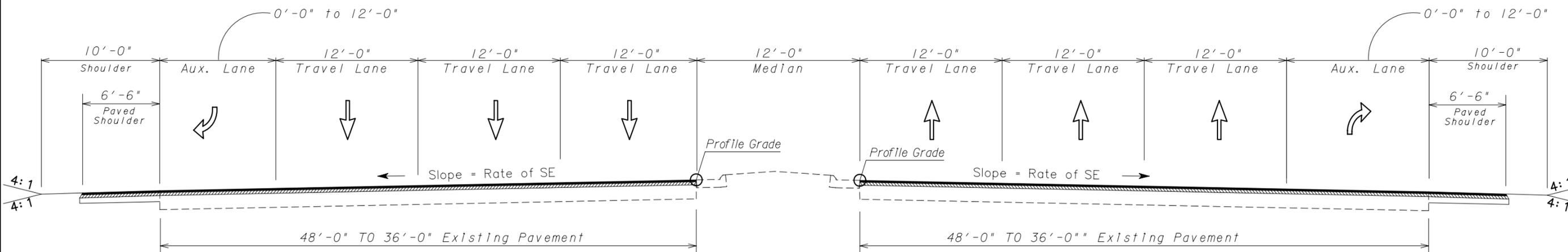
Diagram 1 – ADT Traffic Data



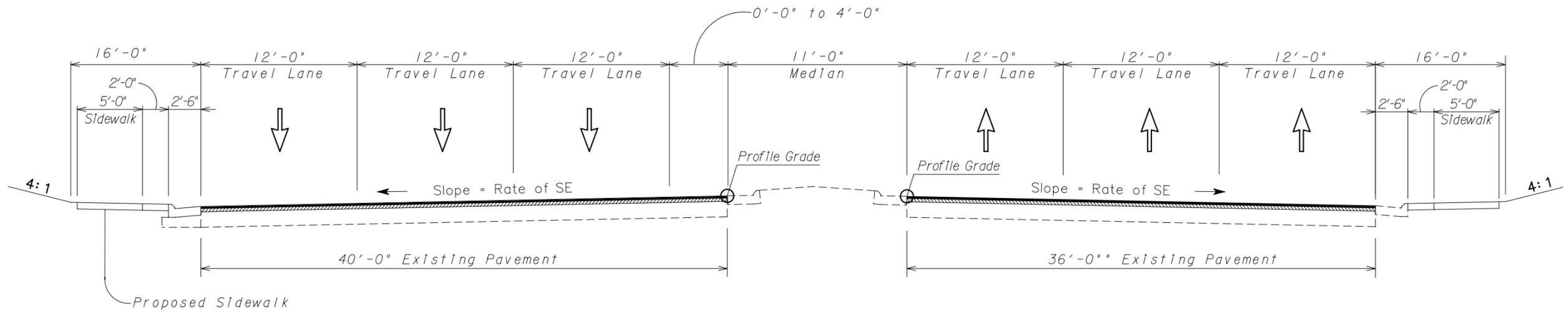




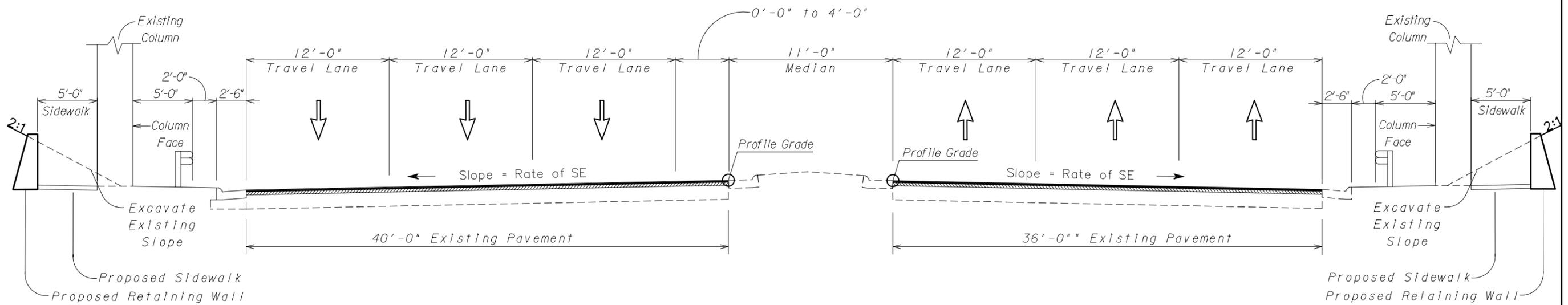
TYPICAL SECTION US-78/278 / SR-10  
 FROM N. LEG ROAD TO JUST EAST  
 OF OVERPASS OF I-520



TYPICAL SECTION US-78/278 / SR-10  
 JUST EAST OF OVERPASS OF I-520 TO  
 END OF PROJECT AT NOLAND CONNECTOR

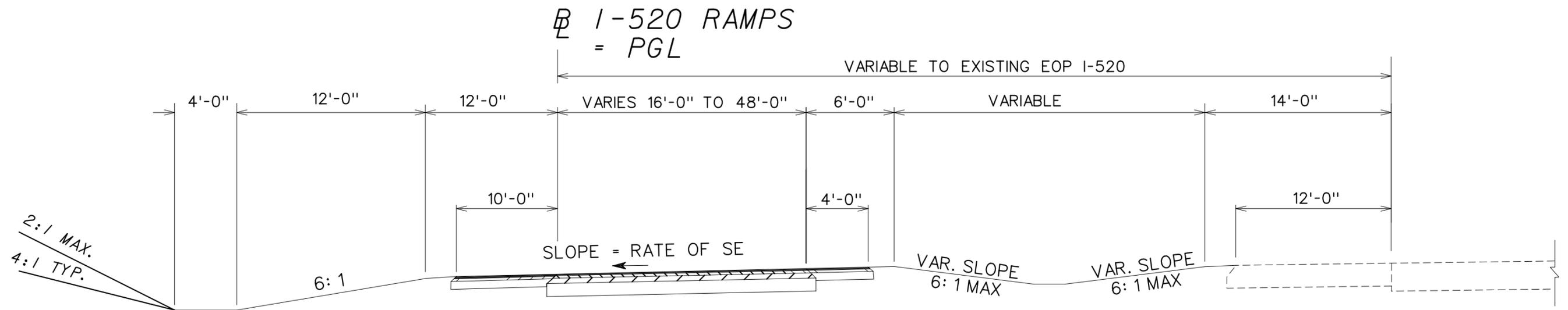


TYPICAL SECTION US-1/SR-4



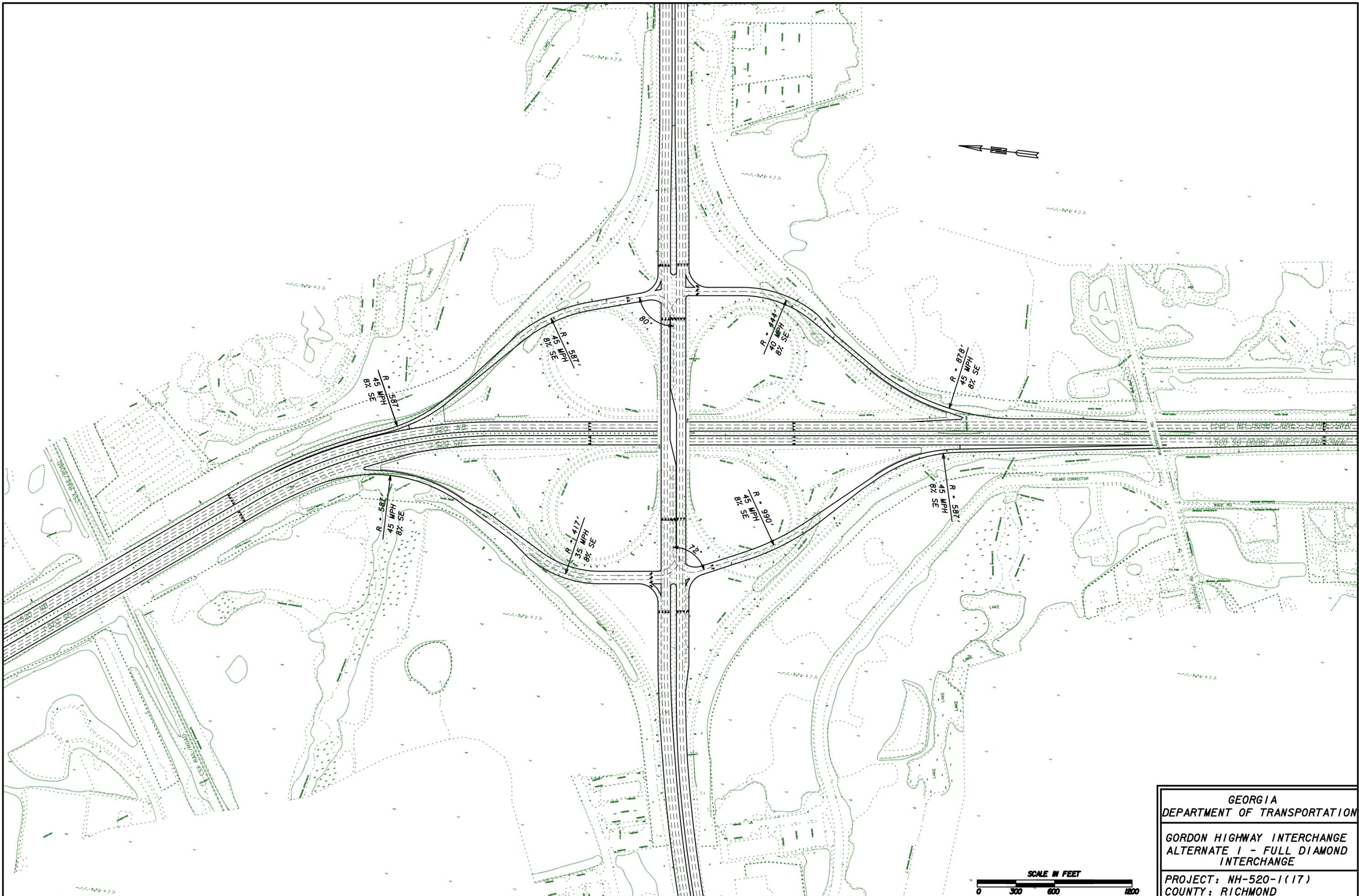
TYPICAL SECTION US-1/SR-4  
AT I-520 OVERPASS

NOT TO SCALE

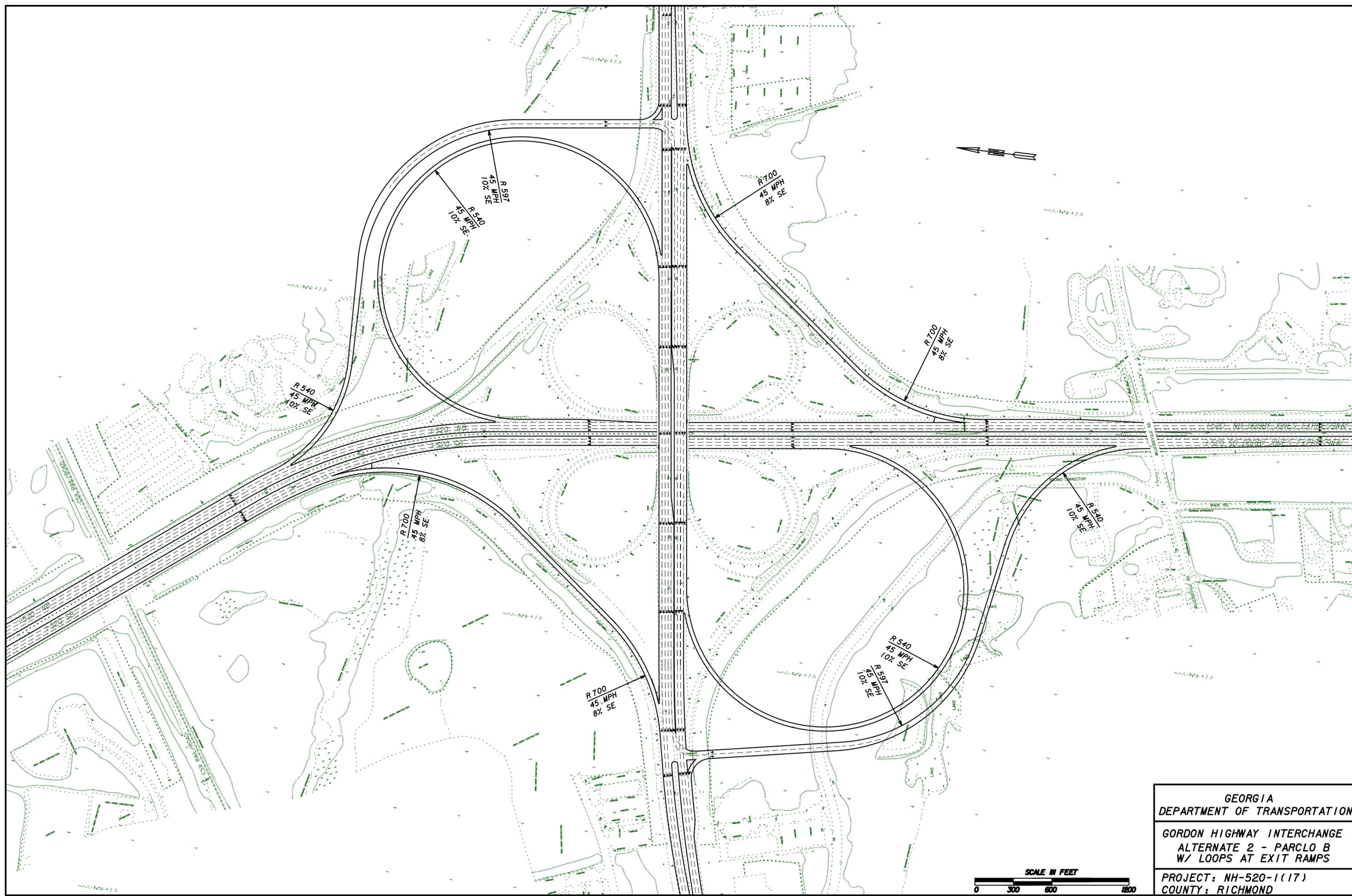


TYPICAL SECTION I-520 RAMPS

NOT TO SCALE

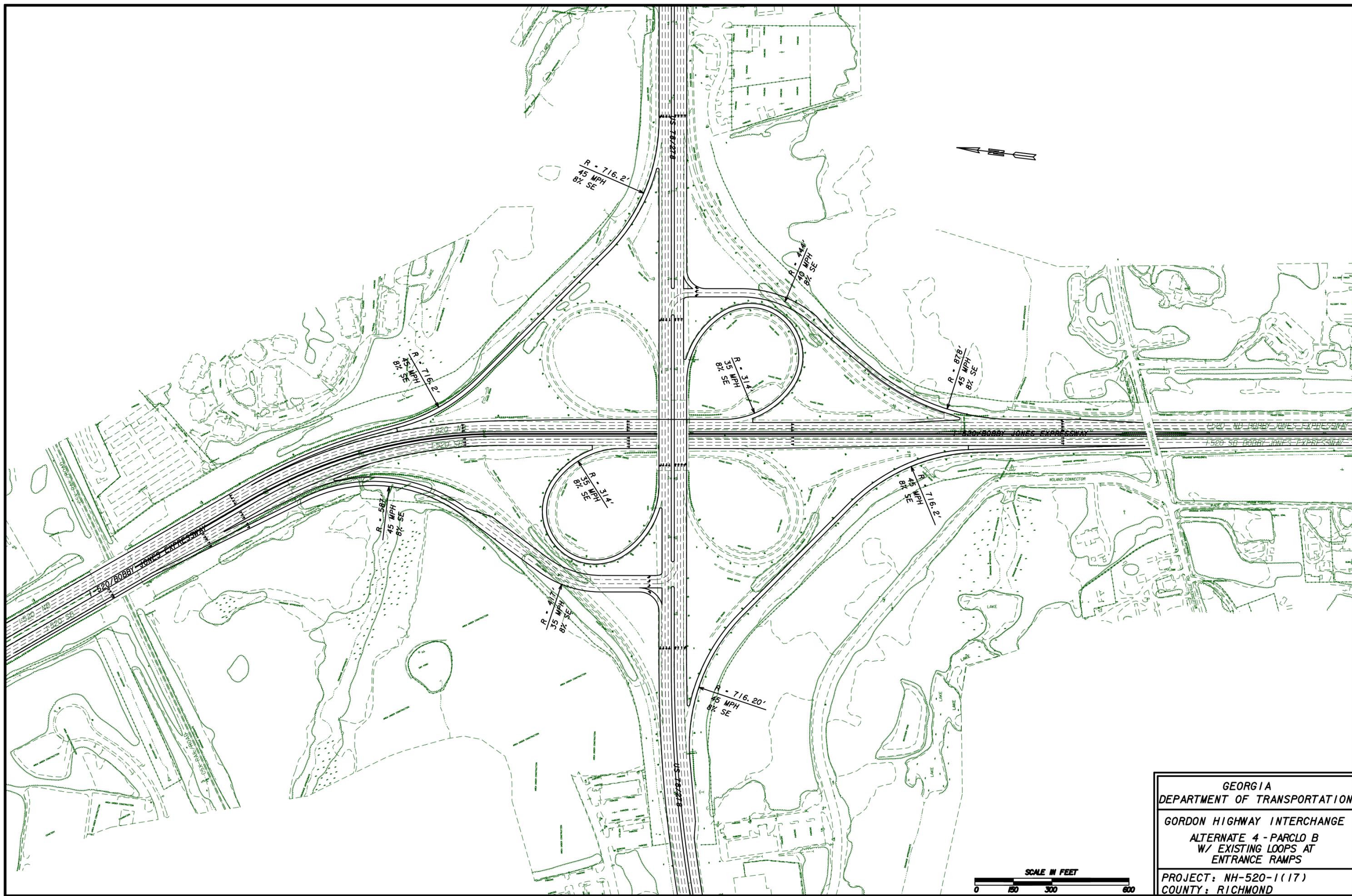


GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 GORDON HIGHWAY INTERCHANGE  
 ALTERNATE 1 - FULL DIAMOND  
 INTERCHANGE  
 PROJECT: NH-520-1(17)  
 COUNTY: RICHMOND

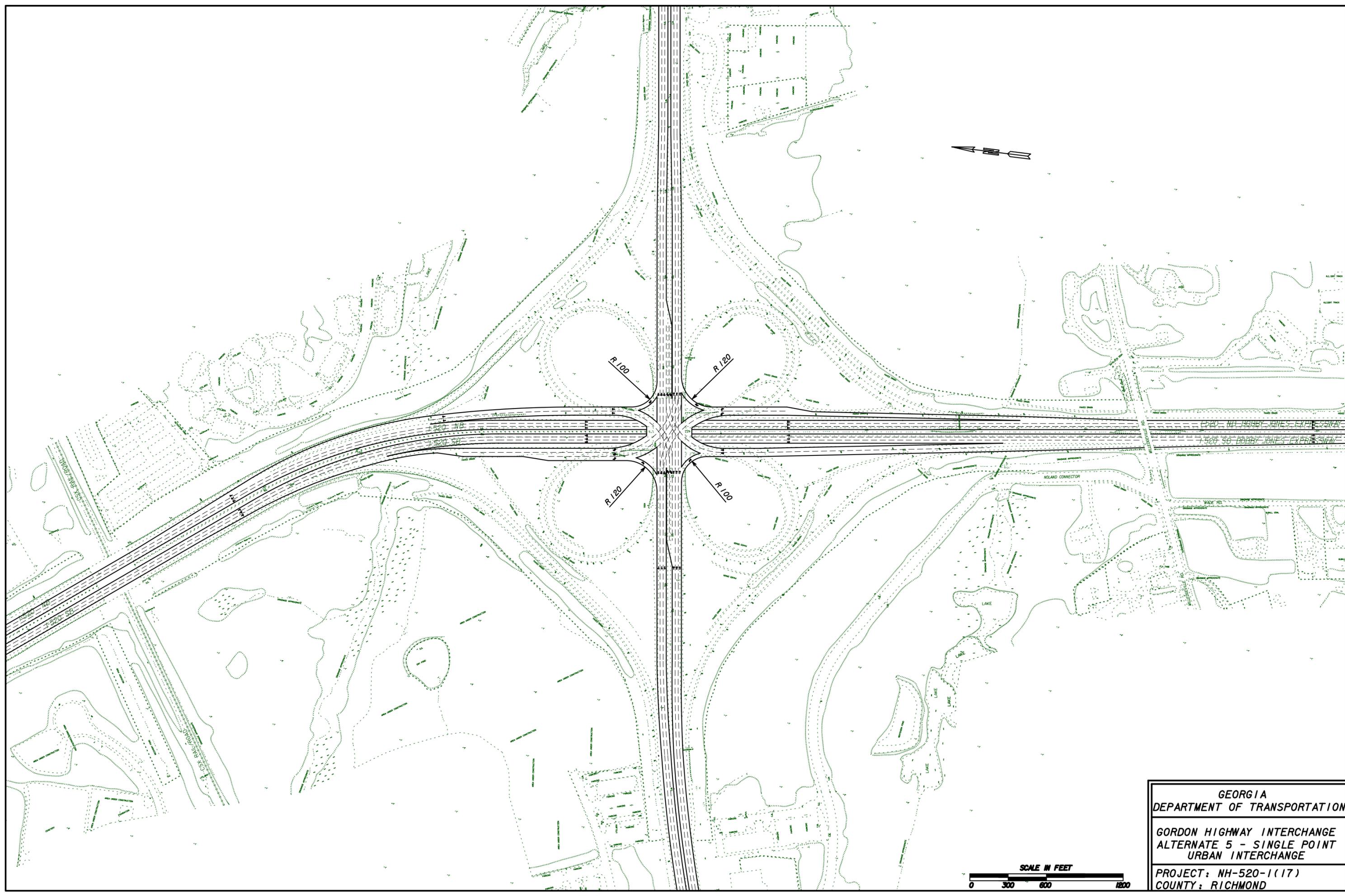


GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 GORDON HIGHWAY INTERCHANGE  
 ALTERNATE 2 - PARCLO B  
 W/ LOOPS AT EXIT RAMPS  
 PROJECT: NH-520-1(17)  
 COUNTY: RICHMOND



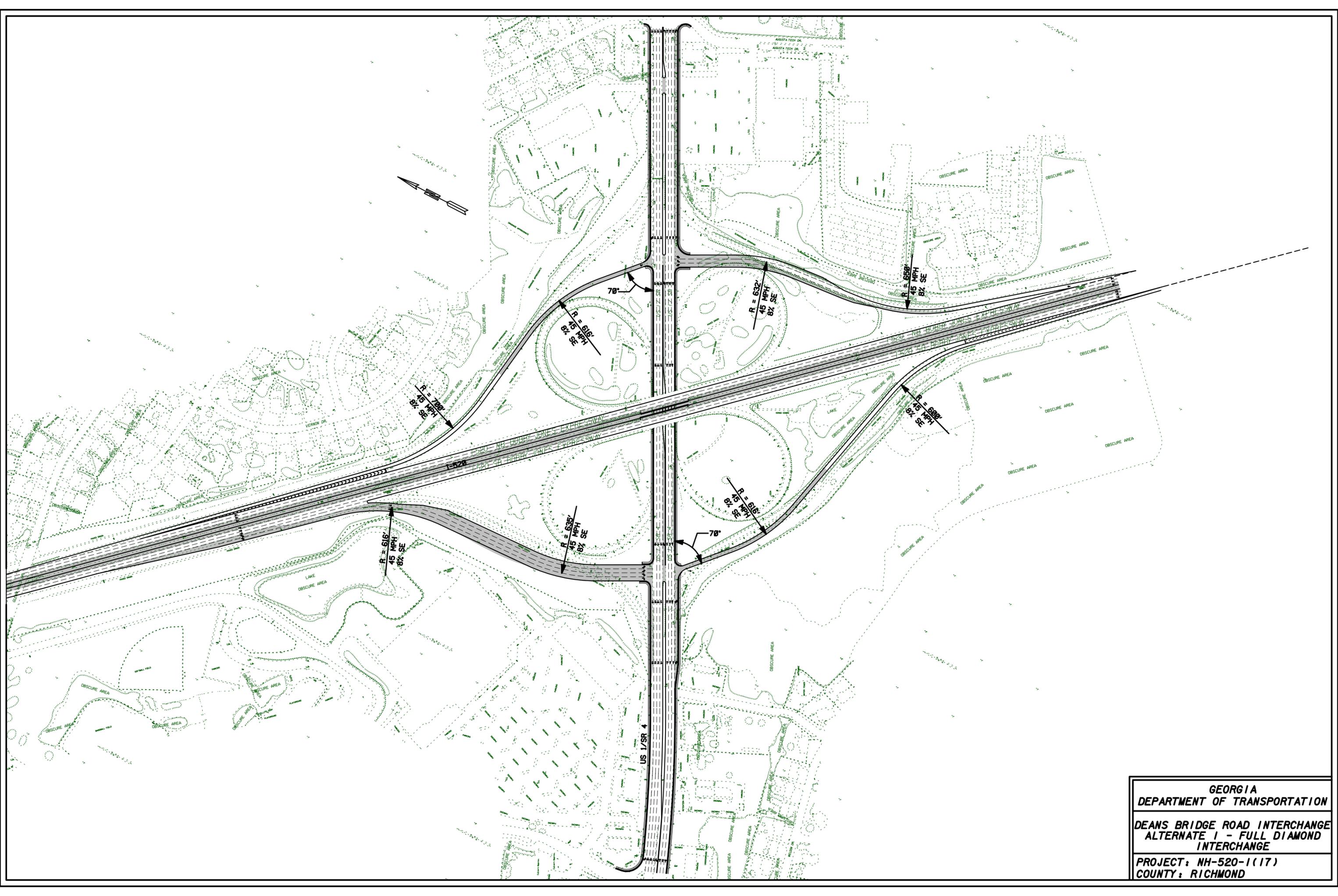


GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 GORDON HIGHWAY INTERCHANGE  
 ALTERNATE 4 - PARCLO B  
 W/ EXISTING LOOPS AT  
 ENTRANCE RAMPS  
 PROJECT: NH-520-1(17)  
 COUNTY: RICHMOND

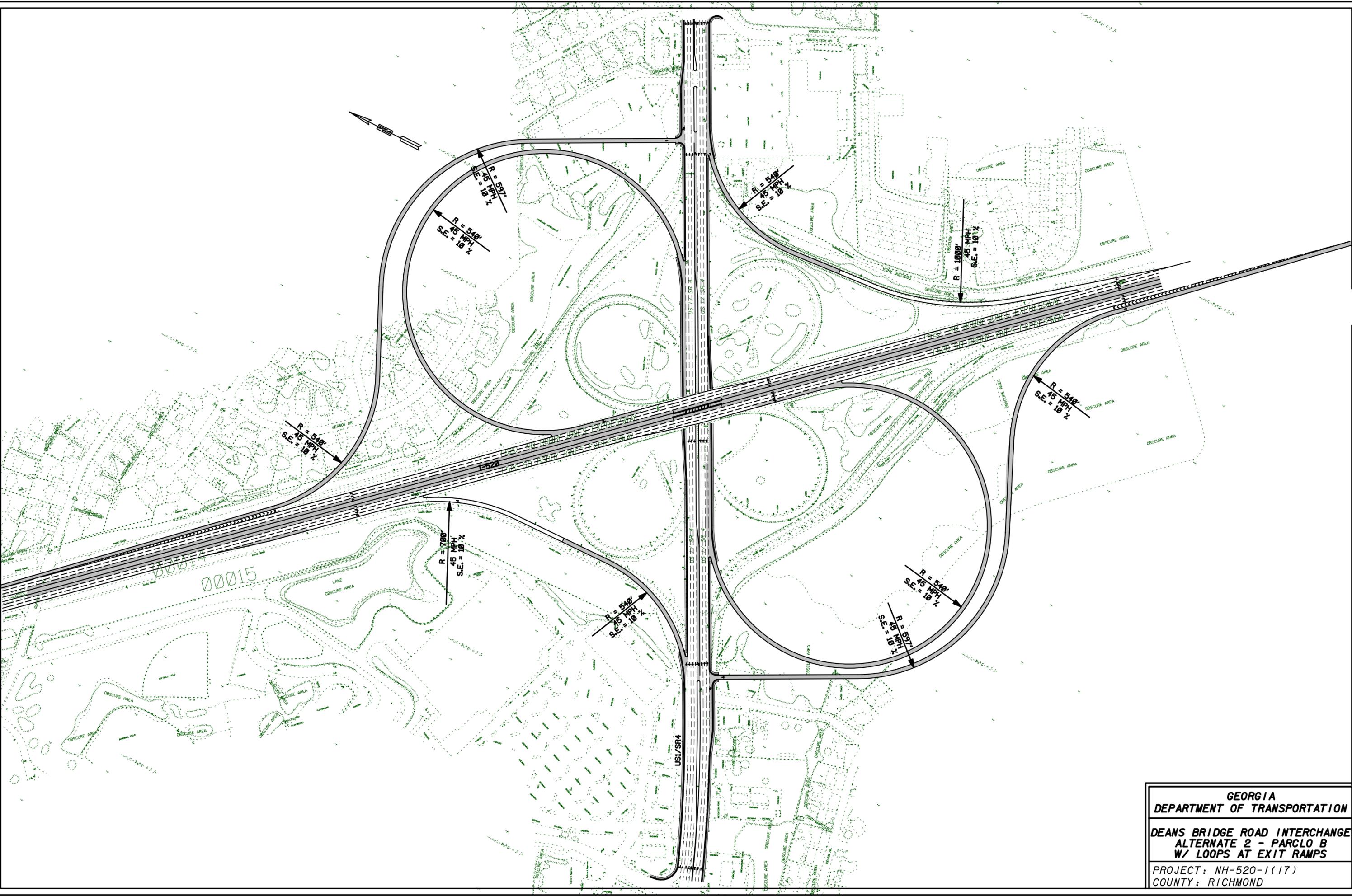
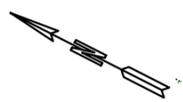


GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 GORDON HIGHWAY INTERCHANGE  
 ALTERNATE 5 - SINGLE POINT  
 URBAN INTERCHANGE  
 PROJECT: NH-520-1(17)  
 COUNTY: RICHMOND





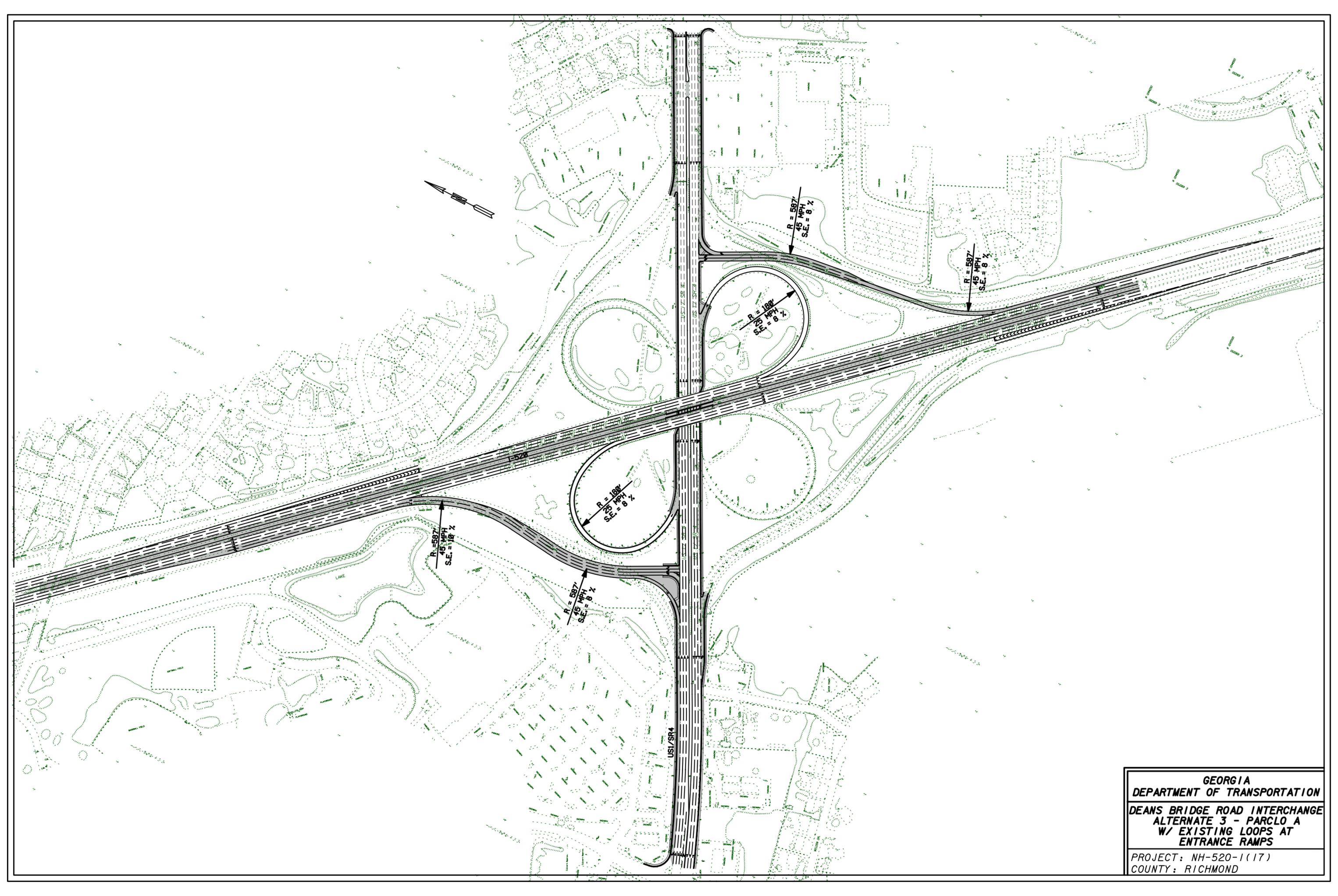
**GEORGIA**  
**DEPARTMENT OF TRANSPORTATION**  
**DEANS BRIDGE ROAD INTERCHANGE**  
**ALTERNATE 1 - FULL DIAMOND**  
**INTERCHANGE**  
**PROJECT: NH-520-1(17)**  
**COUNTY: RICHMOND**



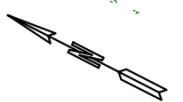
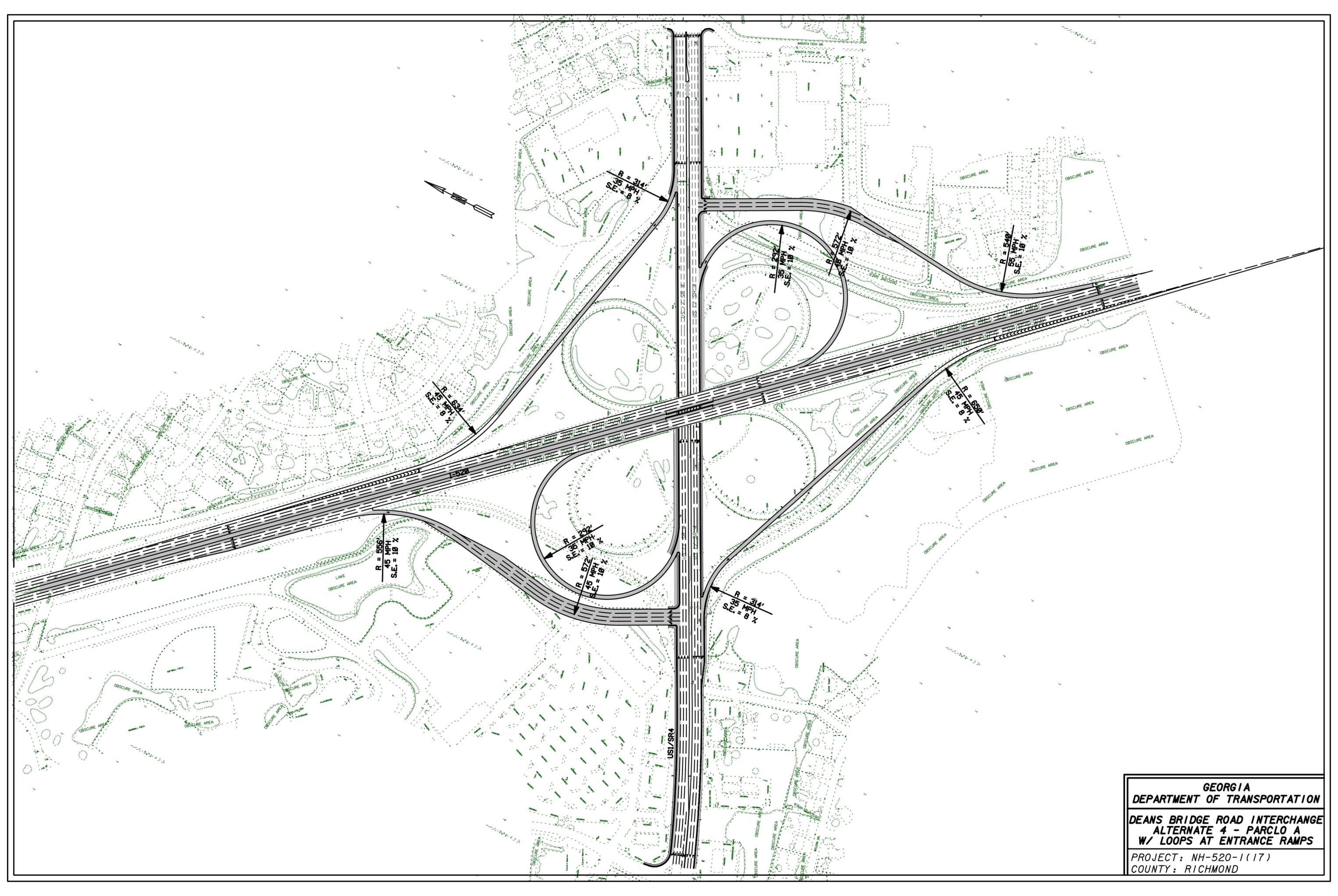
GEORGIA  
DEPARTMENT OF TRANSPORTATION

DEANS BRIDGE ROAD INTERCHANGE  
ALTERNATE 2 - PARCLO B  
W/ LOOPS AT EXIT RAMP

PROJECT: NH-520-1(17)  
COUNTY: RICHMOND



GEORGIA  
DEPARTMENT OF TRANSPORTATION  
DEANS BRIDGE ROAD INTERCHANGE  
ALTERNATE 3 - PARCLO A  
W/ EXISTING LOOPS AT  
ENTRANCE RAMPS  
PROJECT: NH-520-1(17)  
COUNTY: RICHMOND



R = 314'  
36 MPH  
S.E. = 8 %

R = 292'  
35 MPH  
S.E. = 10 %

R = 572'  
55 MPH  
S.E. = 10 %

R = 540'  
55 MPH  
S.E. = 10 %

R = 524'  
45 MPH  
S.E. = 8 %

R = 524'  
45 MPH  
S.E. = 8 %

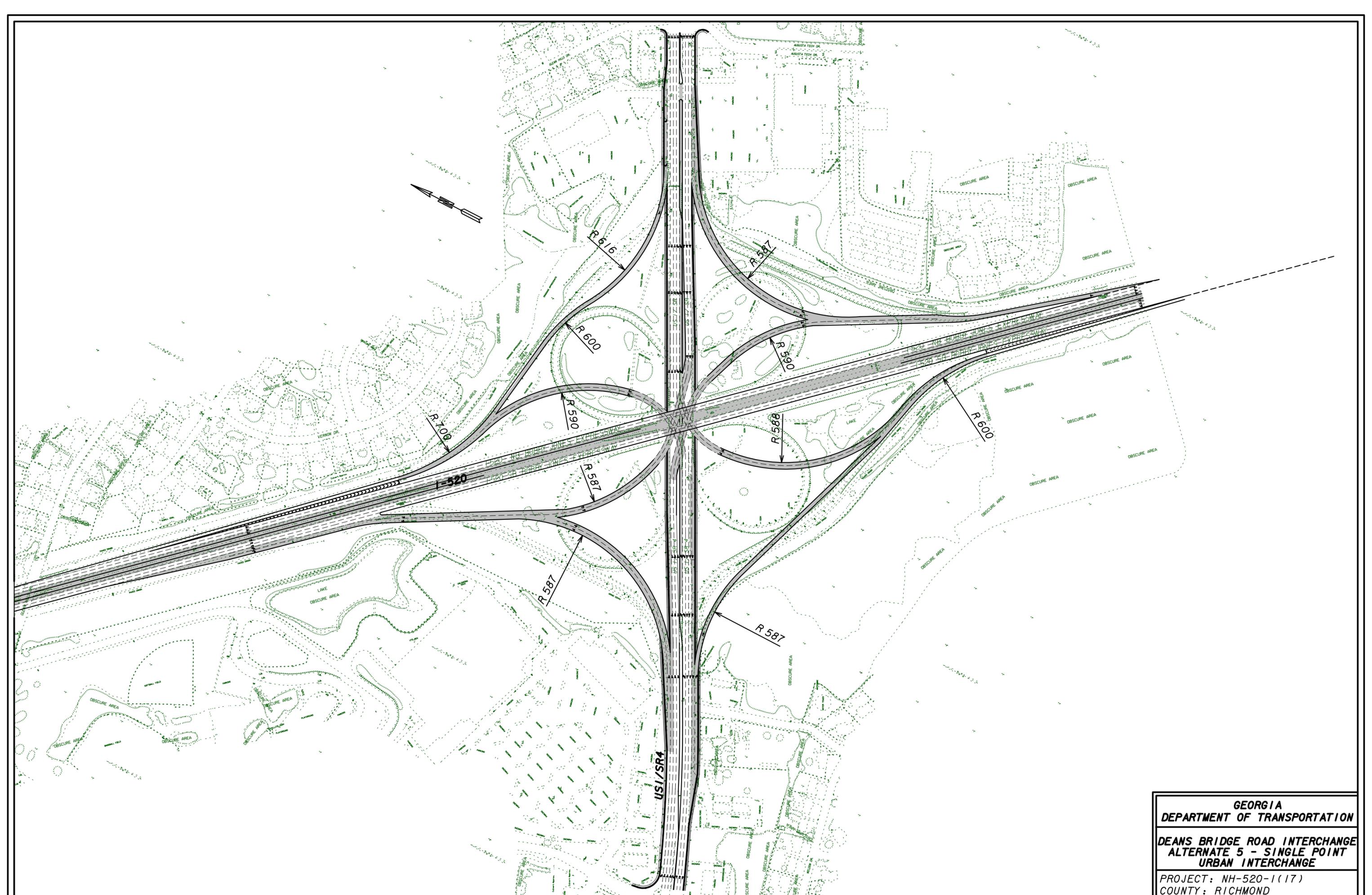
R = 556'  
45 MPH  
S.E. = 10 %

R = 572'  
45 MPH  
S.E. = 10 %

R = 292'  
35 MPH  
S.E. = 10 %

R = 314'  
36 MPH  
S.E. = 8 %

GEORGIA  
DEPARTMENT OF TRANSPORTATION  
DEANS BRIDGE ROAD INTERCHANGE  
ALTERNATE 4 - PARCLO A  
W/ LOOPS AT ENTRANCE RAMP  
PROJECT: NH-520-1(17)  
COUNTY: RICHMOND



**GEORGIA**  
**DEPARTMENT OF TRANSPORTATION**  
**DEANS BRIDGE ROAD INTERCHANGE**  
**ALTERNATE 5 - SINGLE POINT**  
**URBAN INTERCHANGE**  
 PROJECT: NH-520-1(17)  
 COUNTY: RICHMOND

# Memorandum

To: George Brewer, District 2 Preconstruction Engineer  
From: Tom Barwick  
CC: File  
Date: 2/13/2007  
Re: **NH-520-1(17) PI No. 210700 - I-520 Concept Team Meeting 2/13/2007**

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List of attendees:

George Brewer	GDOT District 2 Preconstruction	<a href="mailto:George.Brewer@dot.state.ga.us">George.Brewer@dot.state.ga.us</a>
David Griffith	City of Augusta Engineering Department	<a href="mailto:dgriffith@jg.com">dgriffith@jg.com</a>
Raye Southerland	GDOT District 2 Traffic Operations	
James H Smith	GDOT District 2 Construction	<a href="mailto:Jimmy.Smith@dot.state.ga.us">Jimmy.Smith@dot.state.ga.us</a>
Allen Krivsky	Heath & Lineback Engineers	<a href="mailto:akrivsky@heath-lineback.com">akrivsky@heath-lineback.com</a>
Warren Dimsdale	Heath & Lineback Engineers	<a href="mailto:wdimsdale@heath-lineback.com">wdimsdale@heath-lineback.com</a>
Kyle Baxley	GDOT District 2 Construction	<a href="mailto:Kyle.Baxley@dot.state.ga.us">Kyle.Baxley@dot.state.ga.us</a>
Jamie Lindsey	GDOT District 2 Utilities	<a href="mailto:Jamie.Lindsey@dot.state.ga.us">Jamie.Lindsey@dot.state.ga.us</a>
Larry Rodgers	GDOT District 2 Construction, Augusta	<a href="mailto:Larry.Rodgers@dot.state.ga.us">Larry.Rodgers@dot.state.ga.us</a>
Tom Barwick	Heath & Lineback Engineers	<a href="mailto:tbarwick@heath-lineback.com">tbarwick@heath-lineback.com</a>
Alan Hunley	Parsons	<a href="mailto:alan.hunley@parsons.com">alan.hunley@parsons.com</a>
Mike Keene	GDOT District 2 Signal Engineer	<a href="mailto:Mike.Keene@dot.state.ga.us">Mike.Keene@dot.state.ga.us</a>
Steve Cassell	City of Augusta Eng. Dept. Traffic	<a href="mailto:SCassell@augustaga.gov">SCassell@augustaga.gov</a>

George Brewer opened the meeting and asked Tom Barwick with Heath & Lineback Engineers (HLE) to describe the project. Tom gave a short description of the project and asked George if the Need and Purpose Statement was adequate to send to the Planning Office. George noted that we should add accident history information and the he would send the statement out for approval.

George told HLE that the project was classified as Full Federal Over Sight not Exempt.

Jamie Lindsey with District 2 Utilities gave a brief overview of the possible utility impacts for our project. There will be no utility impacts for the median work on I-520 with the possible exception of overhead power lines. Any impact to the transmission line crossings would be reimbursable. US1/SR4 (Deans Bridge Road) has sewer, power line crossings and buried telephone cables. It is possible that there are water lines under US1/SR4 as well. He was unaware of any buried utilities on US78/278/SR10 (Gordon Highway). Jamie noted that he did not find any bridge attachments for utilities at either interchange.

Alan Hunley with Parsons gave a summary of the traffic study that Parsons had prepared for this project. The initial traffic volumes were provided by GDOT. Our traffic study was expanded at the request of FHWA to include the next side road intersections on US78/278/SR10 and US1/SR4 on both sides of the interchange with I-520. After studying these intersections, they were not affected by the traffic from the reconfigured interchanges at I-520.

Tom stated that although the preferred design speed for the loop ramps is 35 mph, HLE recommends that GDOT retain the existing 25 mph loop ramps to minimize significant right of way impacts. Jimmy Smith with District 2 Construction asked if the proposed construction was designed for 8% superelevation. He noted the new department guidelines set the maximum superelevation to 6%. Allen questioned if the 6% super elevation maximum applied to loop ramps. Tom noted that we would look into it.

Allen stated HLE's concern that maintaining the existing loop ramp would prohibit a desirable length for the auxiliary lane to help with traffic entering the loop ramp. It was decided that an auxiliary lane added after the overpass would be sufficient (approximately 200 feet).

Because of the road classifications shown in the report will require that pedestrian facilities be provided at Gordon Highway and Deans Bridge Road. If pedestrian are to be accommodated on Gordon Highway, the existing bridge will need to be widened. A separate pedestrian bridge was discussed, but it was agreed it would be less expensive to widening the existing bridge.

Pedestrian access through the interchange, crossing the loop ramps and free flow exit ramps was discussed. It was decided that signing and marking would suffice at the ramps without pedestrian signals. Pedestrian signals at the loop ramps would be difficult to successfully implement.

The other alternates considered were discussed as well as the preferred alternates. The group decided that the preferred alternate for both interchanges would be to retain the existing 25 mph designed entrance loop ramps instead of the alternate that improved the loop ramps to 35 mph at Gordon Highway.

Jimmy Smith noted that the \$9 million construction cost estimate appeared too low. He believed the construction cost would be closer to \$20 million. Tom stated that the estimate was derived from the GDOT Detailed Estimate web program with the latest increased unit rates, but HLE would review and adjust items as necessary. The lump sum items needed special consideration.

A field visit was conducted by the concept team and the following items were noted:

The proposed exit ramp for Gordon Highway on I-520 East is in a very bad location at the bottom of a sag curve and GDOT had to go out and stripe out the auxiliary lanes because of the number of accidents in the gore area at the ramp. George

asked that HLE/Parsons look at improving the first curve of the exit ramp to 55 mph and Alan Hunley stated that Parsons would look into realigning the exit ramp to flatten out the sag curve and try to improve safety.

Jimmy asked that HLE look into filling in a deep hole located between the Deans Bridge Road I-520 West entrance loop ramp and the Deans Bridge Road West exit ramp. It is about 30 feet deep and GDOT currently protects the area with two rows of guardrail.

The existing concrete loop entrance ramps at Deans Bridge Road are in very poor condition. HLE needs to include the concrete reconstruction of the ramps in their report.

It was decided that sidewalks under the I-520 overpass at Deans Bridge Road would be located to the outside of the piers from the road instead of between the guardrail and pier to improve safety. A retaining wall will have to be constructed between the intermediate piers and the end abutments to allow room for the sidewalk and to ensure that all ADA guidelines are met.

It was determined that the adjacent intersections to the I-520 interchange on Deans Bridge Road would be the limits of construction in order to connect to existing pedestrian facilities. It was requested that only the northeast corner of the Deans Bridge Road and Georgetown Drive intersection be improved for pedestrians.

Gordon Highway is currently a rural section with no evidence of pedestrian traffic or paths. HLE noted that they would confirm the functional classification of Gordon Highway. If the urban classification ended north of I-520, the Gordon Highway typical section could remain with rural shoulders.