ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0011682 **OFFICE** Design Policy & Support

Dade County
GDOT District 6 - Cartersville **DATE** March 24, 2014
SR 299 Bridge Replacement @ I-24 -
Accelerated Bridge Construction

FROM for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED CONCEPT REPORT**

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

Attachment

DISTRIBUTION:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Darryl VanMeter, State Innovative Program Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Hiral Patel, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Jeff Fletcher, Statewide Location Bureau Chief
DeWayne Comer, District Engineer
Mike Haithcock, District Preconstruction Engineer
Kerry Bonner, District Utilities Engineer
Andrew Hoenig, Project Manager
BOARD MEMBER - 14th Congressional District
FHWA – attn: Rodney Barry, Georgia Division Administrator

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT

Project Type:	Bridge Replacement	P.I. Number:	0011682
GDOT District:	6 (Cartersville)	County:	Dade
Federal Route Number:	N/A	State Route Number:	299
		Project Number:	N/A

The proposed project will replace the existing, structurally deficient State Route (SR) 299 bridge over Interstate 24 (I-24) in Dade County, Georgia. The bridge will be replaced on the existing alignment using Accelerated Bridge Construction (ABC) techniques. ABC will allow the existing bridge removal and new bridge installation to occur within a time period of 36-48 hours, minimizing the project's impact to the traveling public. The project will be delivered using Design-Build.

Submitted for approval:

Wayne G. Mote Jr. HNTB Consultant Designer & Firm	12-3-13 DATE
Daryl D. V-Mt Office of Innovative Program Delivery	12-9-13 DATE
G. Andrew Hoang GDOT Project Manager	12-3-2013 DATE

Recommendation for approval: *(Delete any inapplicable signature lines)*

Program Control Administrator	DATE
GLENN BOWMAN*/EKP State Environmental Administrator	12/17/2013 DATE
KATHY ZAHUL*/EKP State Traffic Engineer	12/30/2013 DATE
LISA MYERS*/EKP Project Review Engineer	12/12/2013 DATE
JUN BIRNKAMMER*/EKP FOR State Utilities Engineer	12/13/2013 DATE
DEWAYNE COMER*/EKP District Engineer	12/11/2013 DATE
BEN RABUN*/EKP State Bridge Design Engineer	12/31/2013 DATE
State Transportation Financial Management Administrator	DATE

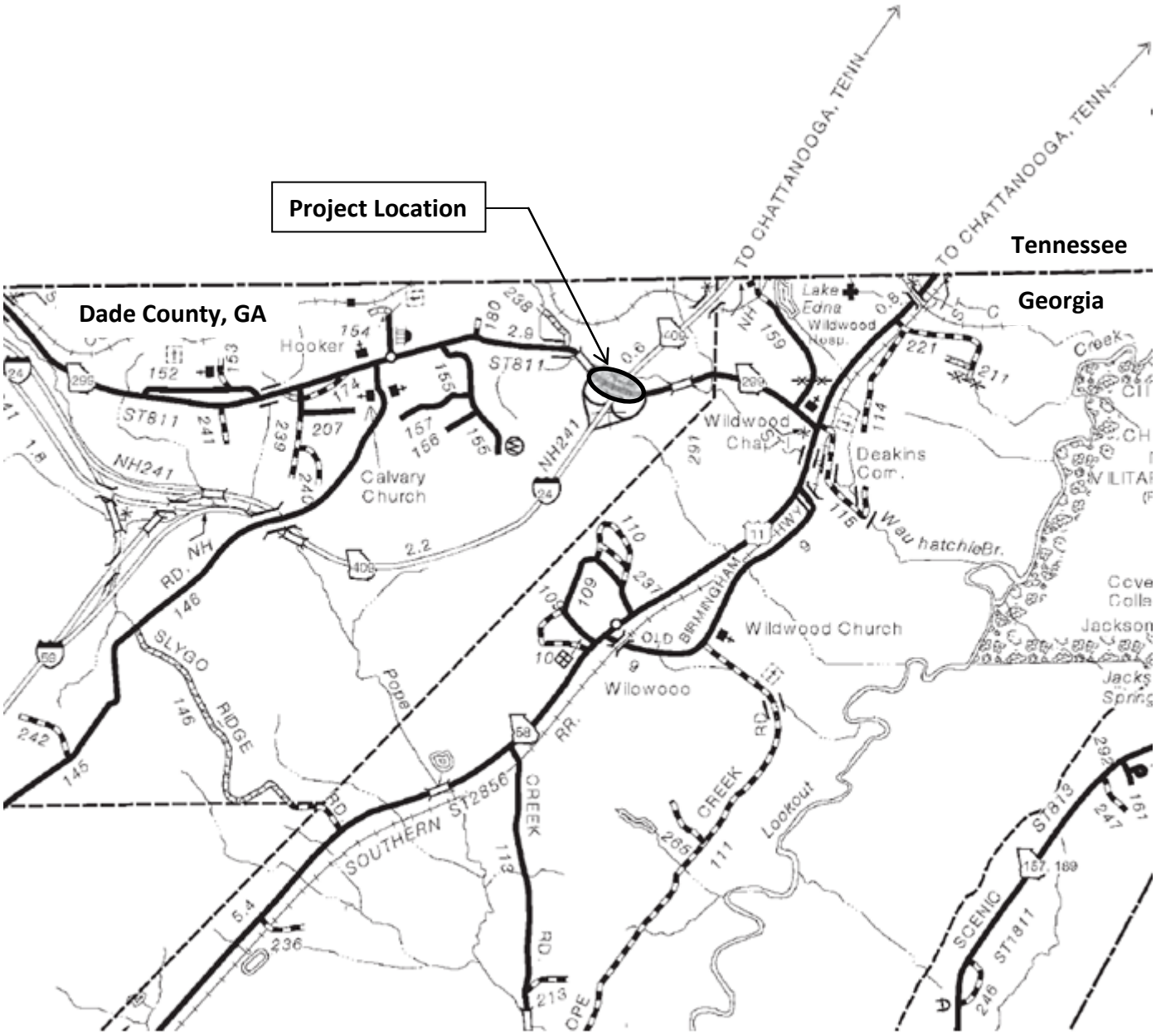
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

CINDY VAN DYKE*/EKP State Transportation Planning Administrator	12/13/2013 DATE

*-RECOMMENDATION ON FILE

PROJECT LOCATION MAP *(not to scale)*

SR 299 over I-24



PLANNING AND BACKGROUND

Project Justification Statement: This bridge (Structure ID 083-0020-0; SR 299 over I-24 (SR 409)) was built in 1965. The bridge consists of four spans of steel girders on concrete caps and columns. The overall condition of this bridge is classified as fair. The deck is in fair condition with concrete spalls and heavy transverse cracking throughout. The superstructure is in satisfactory condition with minor deterioration of the steel girders. The substructure is in fair condition with moderate to heavy concrete cracking and signs of rebar deterioration. Due to the structural integrity of the bridge and the condition of the deck resulting in a sufficiency rating below 50, the State Bridge Office recommends replacement of the structure.
For additional project background see the bulleted items below:

- GDOT State Bridge Inspection Engineer prepared the Project Justification Statement (see attached).
- Project is included in USDOT and FHWA's Every Day Counts (EDC-2) innovations initiative.
- The project originated with Bridge Maintenance.
- Project limits are within existing ramp area and could possibly extended to bridge north of interchange (I-24 over CSX Railroad) due to staging of traffic. Along SR 299, the ramp termini define the ends of the proposed project. The main purpose of the project is to replace the SR 299 bridge over I-24 so there is no reason to extend the project beyond the ramp termini.
- The project aims to correct structural deficiencies. The project will also act as an Accelerated Bridge Construction (ABC) demonstration project. ABC is defined by FHWA as a paradigm shift in the project planning and procurement approach where the need to minimize mobility impacts which occur due to onsite construction activities are elevated to a higher priority. ABC techniques shorten the anticipated construction schedule, and may include replacement of the bridge deck within reduced timeframes.

Existing conditions: The existing bridge consists of four spans of steel girders on concrete caps and columns. The overall condition of this bridge is classified as fair. The deck is in fair condition with concrete spalls and heavy transverse cracking throughout. The superstructure is in satisfactory condition with minor deterioration of the steel girders. The substructure is in fair condition with moderate to heavy concrete cracking and signs of rebar deterioration. Due to the structural integrity of the bridge and the condition of the deck the bridge received a sufficiency rating below 50.

Other projects in the area: I-24 is currently being repaved under a separate project. Any damage to I-24 during construction will require the Design-Build team to repave I-24 in those areas where damage occurs.

MPO: Chattanooga - Hamilton County Regional Planning Agency MPO Project ID: 0011682
2014 - 2017 TIP (TIP # GA-0011682), CHCRPA List of Projects, 2012

Regional Commission: Northwest Georgia RC RC Project ID: N/A

Congressional District(s): 14

Federal Oversight: ☒ Full Oversight ☐ Exempt ☐ State Funded ☐ Other

Projected Traffic: ADT

SR 299 - Current Year (2013): 7,000 Open Year (2015): 7,400 Design Year (2035): 12,900

I-24 - Current Year (2013): 61,500 Open Year (2015): 62,700 Design Year (2035): 79,400

Traffic Projections Performed by: HNTB Corporation

Functional Classification (Mainline): Rural Major Collector

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

Warrants met: ☒ None ☐ Bicycle ☐ Pedestrian ☐ Transit

Warrants are not met for bicycle, pedestrian, or transit along the SR 299 corridor.

- The project is not on a state, regional, or local bike route.
- No pedestrian facilities are within the project limits.
- There are no active transit stops within the project limits.

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? ☒ No ☐ Yes

DESIGN AND STRUCTURAL

Description of the proposed project: The proposed project [P.I. No. 0011682] will replace the existing, structurally deficient State Route (SR) 299 bridge over Interstate 24 (I-24) in Dade County, Georgia. This overpass is approximately 0.6 miles south of the Georgia/Tennessee state line at the I-24 Exit 169 interchange. The bridge will be replaced on the existing alignment using Accelerated Bridge Construction (ABC) techniques. ABC will allow the existing bridge removal and new bridge installation to occur within a time period of 36-48 hours, minimizing the project's impact to the traveling public. The project will be delivered using Design-Build.

Project length is approximately 0.16 miles along SR 299. Existing SR 299 right-of-way (ROW) is slightly variable ranging from 200 feet on the west side of I-24 to 255 feet on the east side of I-24. The existing bridge is 34'-3" wide and 240 feet long and accommodates one lane of traffic in each direction. The proposed bridge will have the same number of lanes, but will be widened to meet current AASHTO requirements. All approach work to accommodate the bridge widening will be limited to SR 299 between the I-24 ramp terminals. No additional ROW or easement will be required for the removal of the existing bridge or the construction of the new bridge.

The I-24 depressed median and inside the loop ramps may be utilized for construction staging and/or I-24 traffic shifts. The temporary median construction area may extend up to 0.39 miles north and south of the SR 299 bridge and will be confined within the existing outside edge of pavement limits.

Major Structures:

Structure	Existing	Proposed
SR 299 over I-24	242 feet long. 34'-3" wide (total) 28'-0" (c to c). Four spans.	242 feet long. 43'-3" wide (total); 40'-0" (curb to curb; 2 twelve foot travel lanes, 2 eight foot shoulders). It is anticipated that the proposed bridge will have four spans but the final design will be determined by the design build team.

Mainline Design Features: SR 299

Feature	Existing	Standard*	Proposed
Typical Section			
- **Number of Lanes**	**2**	**2**	**2**
- **Lane Width(s)**	**12 ft.**	**11-12 ft.**	**12 ft.**
- **Median Width & Type**	**N/A**	**N/A**	**N/A**
- **Outside Shoulder or Border Area Width**	**8-10 ft.**	**8 ft.**	**8-10 ft.**
- **Outside Shoulder Slope**	**2:1 to 4:1**	**2:1 to 4:1**	**2:1 to 4:1**
- **Inside Shoulder Width**	**N/A**	**N/A**	**N/A**
- **Sidewalks**	**N/A**	**N/A**	**N/A**
- **Auxiliary Lanes**	**N/A**	**N/A**	**N/A**
- **Bike Lanes**	**N/A**	**N/A**	**N/A**
Posted Speed	**45 mph**		**45 mph**
Design Speed	**45 mph**	**45 mph**	**45 mph**
Min Horizontal Curve Radius	**818.51 ft.**	**587 ft.****	**818.51 ft.**
Superelevation Rate	**5-7%**	**2-8%*****	**5-7%**
Grade	**1%-6%**	**7% max**	**1%-6%**
Access Control	**N/A**	**N/A**	**N/A**
Right-of-Way Width	**200 feet on west side to 250 feet on the east side**	**N/A**	**200 feet on west side to 250 feet on the east side**
Maximum Grade – Crossroad	**N/A**	**N/A**	**N/A**
Design Vehicle	**WB-67**	**WB-67**	**WB-67**

*According to current GDOT design policy if applicable

** For the design situation 587 ft. is the minimum curve radius but 643 ft. is preferred by GDOT.

*** For the design situation 8% is the maximum superelevation rate but 6% is preferred by GDOT.

Sideroad Design Features: I-24 (Crossover Detour Only – 45 MPH Detour Design Speed)

Feature	Existing	Standard*	Proposed
Typical Section			
- **Number of Lanes**	**4**	**4-6**	**4**
- **Lane Width(s)**	**12 ft.**	**12 ft.**	**12 ft.**
- **Median Width & Type**	**64 ft. Depressed**	**52-64 ft. Depressed**	**64 ft. Depressed**
- **Outside Shoulder or Border Area Width**	**12 ft.**	**14 ft.**	**12 ft.**
- **Outside Shoulder Slope**	**2:1 to 4:1**	**2:1 to 6:1**	**2:1 to 4:1**
- **Inside Shoulder Width**	**10 ft.**	**12 ft.**	**10 ft.**
- **Sidewalks**	**N/A**	**N/A**	**N/A**
- **Auxiliary Lanes**	**2 Ramps**	**N/A**	**2 Ramps**
- **Bike Lanes**	**N/A**	**N/A**	**N/A**
Posted Speed	**65 mph**		**65 mph**
Design Speed	**65 mph**	**65 mph**	**65 mph**
Min Horizontal Curve Radius	**2864 ft.**	**1810 ft.**	**2864 ft.**
Superelevation Rate	**1.04 - 4.00%**	**2.00 - 8.00%**	**1.04 - 4.00%**
Grade	**1.00 – 3.00%**	**5% max**	**1.00 – 3.00%**
Access Control	**Limited**	**Limited**	**Limited**
Right-of-Way Width	**490 ft.**	**N/A**	**490 ft.**
Maximum Grade – Crossroad	**N/A**	**N/A**	**N/A**
Design Vehicle	**WB-67**	**WB-67**	**WB-67**

*According to current GDOT design policy if applicable

Major Interchanges/Intersections: This bridge replacement is State Route 299 over Interstate 24/State Route 409. This interchange is Exit 169 on Interstate 24.

Lighting required: ☒ No ☐ Yes

Off-site Detours Anticipated: ☐ No ☐ Undetermined ☒ Yes

An off-site detour will be utilized on this project. This detour will need to be in place for up to 56 hours (9:00 PM Friday through 5:00 AM Monday) during the weekend bridge replacement. Due to the lack of availability of nearby State Routes for the detour, County roads may need to be utilized to accommodate the detour. A detour meeting will be hosted by the awarded Design-Build team 30 days prior to the detour.

Transportation Management Plan [TMP] Required: ☐ No ☒ Yes

If Yes: Project classified as: ☒ Non-Significant ☐ Significant

TMP Components Anticipated: ☒ TTC ☐ TO ☒ PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	No	Undeter-mined	Yes	Appvl Date (if applicable)
1. Design Speed	☒	☐	☐	
2. Lane Width	☒	☐	☐	
3. Shoulder Width	☒	☐	☐	
4. Bridge Width	☒	☐	☐	
5. Horizontal Alignment	☒	☐	☐	
6. Superelevation	☒	☐	☐	
7. Vertical Alignment	☒	☐	☐	
8. Grade	☒	☐	☐	
9. Stopping Sight Distance	☒	☐	☐	
10. Cross Slope	☒	☐	☐	
11. Vertical Clearance	☒	☐	☐	
12. Lateral Offset to Obstruction	☒	☐	☐	
13. Bridge Structural Capacity	☒	☐	☐	

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undeter-mined	Yes	Appvl Date (if applicable)
1. Access Control - *Median Opening Spacing*	DP&S	☒	☐	☐	
2. Median Usage & Width	DP&S	☒	☐	☐	
3. Intersection Skew Angle	DP&S	☒	☐	☐	
4. Lateral Offset to Obstruction	DP&S	☒	☐	☐	
5. Intersection Sight Distance	DP&S	☒	☐	☐	
6. Bike, Pedestrian & Transit Accommodations	DP&S	☒	☐	☐	
7. GDOT Drainage Manual	DP&S	☒	☐	☐	
8. Georgia Standard Drawings	DP&S	☒	☐	☐	
9. GDOT Bridge & Structural Manual	Bridge Design	☒	☐	☐	
10. Roundabout Illumination	DP&S	☒	☐	☐	
11. Rumble Strips	DP&S	☒	☐	☐	
12. Safety Edge	DP&S	☒	☐	☐	

VE Study anticipated: ☒ No ☐ Yes ☐ Completed – Date:

UTILITY AND PROPERTY

Temporary State Route needed: ☐ No ☐ Yes ☒ Undetermined

Railroad Involvement: Not Applicable

Utility Involvements: There are existing telecommunications attached to the bridge. Subsurface Utility Engineering (SUE) will be performed in the vicinity of the project to identify all utilities that may be affected. Due to the minimal timeframe for the project, utility relocation prior to Design Build (DB) contract may be beneficial.

SUE Required: ☐ No ☒ Yes

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

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

Anticipated number of impacted parcels:	
Displacements anticipated: Total:	
Businesses:	
Residences:	
Other:	

Location and Design approval: ☒ Not Required ☐ Required

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: Detour – Due to the potential for closing the ramps during construction the recommended route from GA 299 and I-24 West Exit 169 Ramp termini to GA 299 and I-24 East Exit 169 Ramp termini increases from an approximately 0.2 mile or 1 minute trip to an approximately 28 mile or 41 minute trip by way of GA 299 to GA 58 to TN 2 to TN 134 to GA 299. Additionally, in the opposite direction the detour will be approximately 28 miles or 41 minutes from GA 299 and the I-24 East Exit 169 Ramp termini to GA 299 and I-24 West Exit 169 Ramp termini by way of GA 299 to TN 134 to TN 2 to GA 58 to GA 299. Additionally the State has identified a 2nd route using the interstate. Detailed detour maps and directions are provided in the attachments section of this report. Shorter routes exist if county roads are utilized. The detour will be in place for a weekend or up to 56 hours (9:00 PM Friday through 5:00 AM Monday).

Context Sensitive Solutions: Public Outreach is anticipated for the detour route. This public meeting may be expanded to educate the public on the scope of the project and what benefits will be expected with replacing the bridge using ABC techniques. Public outreach may need to be targeted to the trucking industry due to the high volume of trucks in the corridor. Additionally, coordination with the county will take place to see if using county roads for the detour is feasible.

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

GEPA: ☐ **NEPA:** ☒ CE ☐ EA/FONSI ☐ EIS

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

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	☒	☐	
2. Forest Service/Corps Land	☒	☐	
3. CWA Section 404 Permit	☒	☐	
4. Tennessee Valley Authority Permit	☒	☐	No Objection Determination was received on 9/11/2013
5. Buffer Variance	☒	☐	
6. Coastal Zone Management Coordination	☒	☐	
7. NPDES	☐	☒	May be eliminated depending on Design-Build team's proposed design
8. FEMA	☒	☐	
9. Cemetery Permit	☒	☐	
10. Other Permits	☒	☐	
11. Other Commitments	☐	☒	Clearing restriction from March 1 to October 31 of each year
12. Other Coordination	☐	☒	Trucking industry, TnDOT

Is a PAR required? ☒ No ☐ Yes ☐ Completed – Date:

Environmental Comments and Information:

NEPA/GEPA: NEPA Categorical Exclusion (CE) is anticipated and on schedule for Spring 2014 approval.

Ecology: No impacts to waters of the US, state waters, protected flora or fauna are anticipated. No Section 404, TVA Section 26a, or Stream Buffer Variance is anticipated.

History: No historic resources were identified within the proposed project's area of potential effect.

Archeology: No archaeological resources were located within the project's area of potential effect. SHPO concurrence is not required.

Air Quality:

Air Special studies are anticipated to be write-off memos.

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

Noise Effects:

Noise Special studies are anticipated to be write-off memos.

Public Involvement: Public Outreach is anticipated for the detour route. This public meeting may need to be expanded to educate the public on the scope of the project and why there is a benefit to replacing the bridge using ABC techniques. A PIOH will be held December 3, 2013 to give the public an anticipated schedule. A separate detour meeting will be hosted by the DB Team closer to the time of the detour.

Major stakeholders: Additional coordination may be needed with Chattanooga and TennDOT.

CONSTRUCTION

Issues potentially affecting constructability/construction schedule:

- Due to the potential presence of several endangered bat species, clearing restrictions are in place from March 1st through October 31st.
- An off-site detour will be required for the weekend closure of SR 299.
- An on-site crossover of I-24 may be required depending on the method of ABC construction utilized by the Design-Build team.
- Bird netting may be utilized as an exclusionary device to prevent phoebes and swallows from nesting beneath the existing bridge.

Early Completion Incentives recommended for consideration: ☐ No ☒ Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Initial Concept Meeting: - The project kickoff meeting also served as the ICM. The meeting was held on April 17, 2013. The following items were discussed at the ICM: project scope, expectations, methods of ABC construction, anticipated schedule, environmental risks, utility relocations, Design-Build requirements, and potential industry outreach.

Concept Meeting: The project Concept Meeting was held on October 9, 2013. The follow items were discussed: The Project Layout, Design and Structural Data, Design-Build Best Value, the NEPA schedule, the Transportation Management Plan, Utilities relocations, the anticipated Detour Route, Weekend closure timeframe, and the Weekend closure impacts to gas stations on SR 299.

Other coordination to date: N/A

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	HNTB Corporation
Design	Design-Build team
Right-of-Way Acquisition	N/A
Utility Relocation	Design-Build team
Letting to Contract	Office of Innovative Program Delivery
Construction Supervision	Office of Construction
Providing Material Pits	Design-Build team
Providing Detours	Design-Build team
Environmental Studies, Documents, and Permits	HNTB Corporation
Environmental Mitigation	Design-Build team
Construction Inspection & Materials Testing	Office of Materials and Testing

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Utility	CST*	Environmental Mitigation	Total Cost
By Whom	GDOT	N/A	GDOT	HNTB	GDOT	
$ Amount	$737,000	N/A	$75,000	$4,776,358	$0.00	$5,588,358
Date of Estimate	FY 2014	N/A	11/26/2013	12/2/2013	N/A	

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

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred Alternative: Bridge Replacement utilizing ABC			
Estimated Property Impacts:	**0**	**Estimated Total Cost:**	**$5.59 M**
Estimated ROW Cost:	**$0**	**Estimated CST Time:**	**18 months**
Rationale: ABC minimizes the impact to the traveling public by only closing the bridge for up to 56 hours			

No-Build Alternative: Leave existing bridge in place			
Estimated Property Impacts:	**0**	**Estimated Total Cost:**	**$0**
Estimated ROW Cost:	**$0**	**Estimated CST Time:**	**N/A**
Rationale: This alternative was not selected as it does not accomplish the goals of the project.			

Alternative 1: Bridge Replacement with on-site or off-site detour using traditional construction methods.			
Estimated Property Impacts:	**2**	**Estimated Total Cost:**	**$5.61 M**
Estimated ROW Cost:	**$300,000**	**Estimated CST Time:**	**24 months**
Rationale: This alternative was not selected due to the high cost of construction, an on-site detour (ROW and construction costs) and the undesirable situation of a lengthy off-site detour as the detour is in excess of 28 miles. An onsite detour would also likely result in undesirable impacts to streams.			

P.I. Number: 0011682

Attachments:

A. Conceptual Layout and Recommended Sequence of Construction
B. Construction Cost Estimate
C. Utility Cost Estimate
D. Traffic diagrams
E. Bridge inventory
F. Recommend Detour Map
G. Initial Concept Meeting Minutes
H. Concept Meeting Minutes
I. Project Justification Statement Coordination with the GDOT State Bridge Inspection Engineer
J. Public Involvement Open House Synopsis

APPROVALS

Concur: _____ 1/14/2014
Director of Engineering

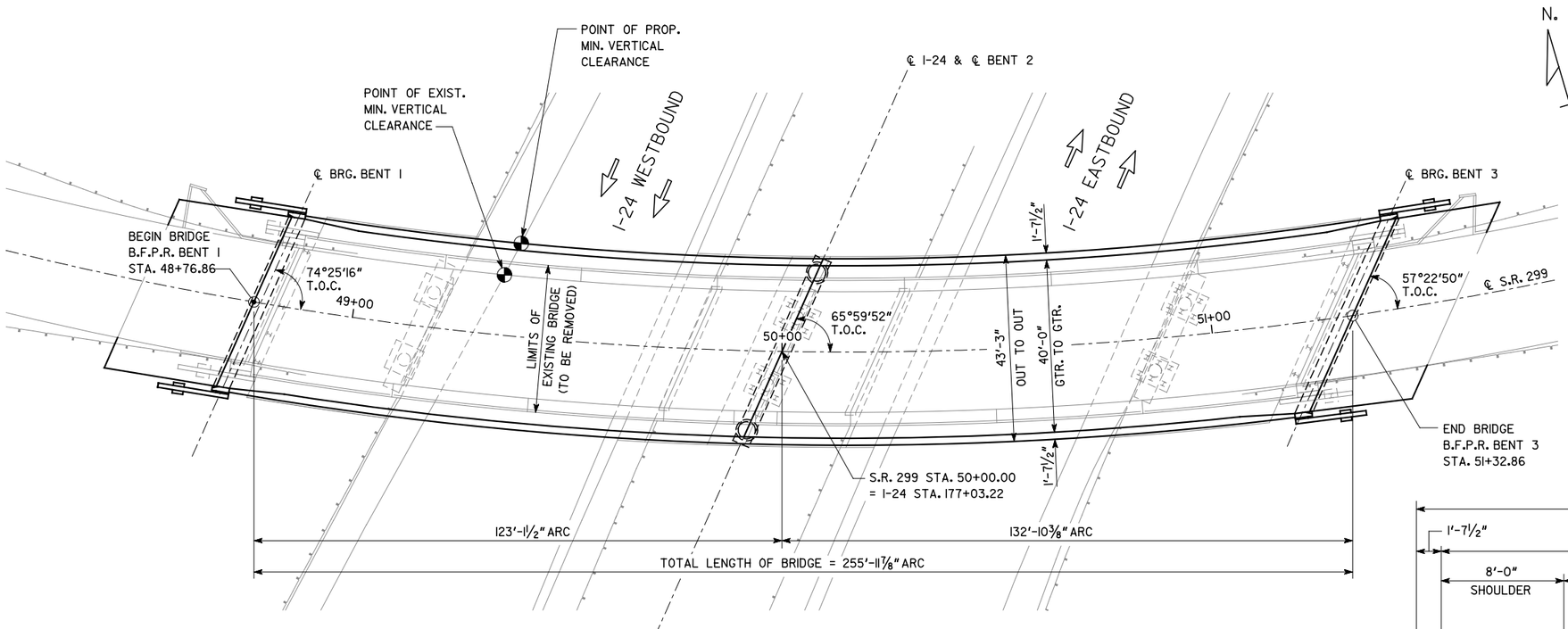
Approve: for _____ 2/4/14
Division Administrator, FHWA — Date

Approve: _____ 3-19-14
Chief Engineer — Date

Attachment A

Concept Layout

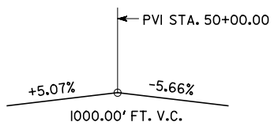
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



PLAN

NOTE: ALL PROPOSED BENTS ARE PARALLEL.

NOTE: ALL PROPOSED HORIZONTAL GEOMETRY SHALL MATCH EXISTING.



VERTICAL CURVE DATA

HORIZONTAL CURVE DATA

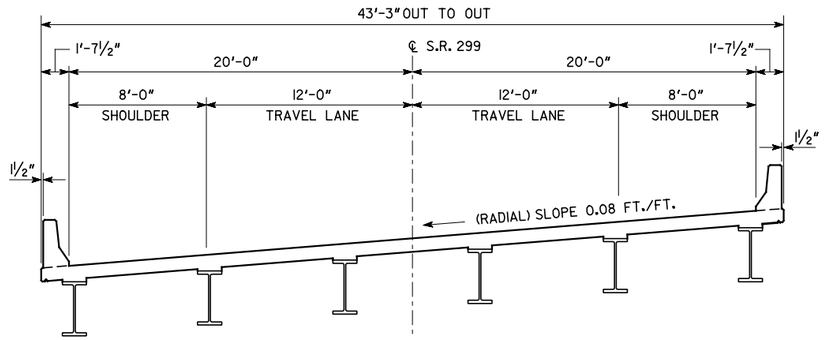
S.R. 299 CURVE DATA:	I-24 CURVE DATA:
△ = 70°42'56" LT.	△ = 22°09'20" RT.
Dc = 7°00'	Dc = 1°30'
L = 1010.22'	L = 1477.04'
T = 560.78'	T = 747.86'
R = 818.51'	R = 3819.72'
E = 185.11'	E = 72.52'

BRIDGE CONSISTS OF

2 - STEEL ROLLED GIRDER MAIN SPANS, 123'-1½" & 132'-10⅜".

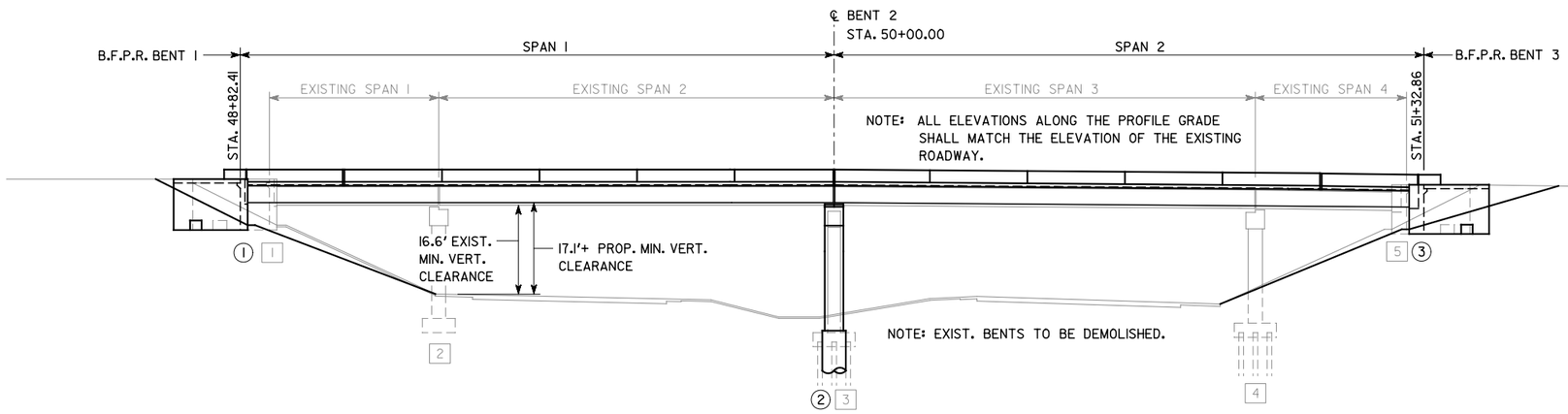
2 - CONCRETE END BENTS.

1- CONCRETE INTERMEDIATE BENTS.



TYPICAL SECTION

(LOOKING UPSTATION TO THE EAST)



ELEVATION

CONSTRUCTION NOTES:

1.) NEW BRIDGE TO BE CONSTRUCTED ON EXISTING ROADWAY ALIGNMENT.

2.) NEW BRIDGE STRUCTURE TO BE CONSTRUCTED USING ACCELERATED BRIDGE CONSTRUCTION (ABC) METHODS.

3.) TOTAL CLOSURE OF S.R. 299 TO BE 48 HOURS DURING A WEEKEND CLOSURE.

HNTB
3715 NORTHSIDE PARKWAY
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

GEORGIA
DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION-OFFICE OF BRIDGE DESIGN

CONCEPT LAYOUT
SR 299 OVER I-24

DADE COUNTY

SCALE: NO SCALE

DRAWING NO. 01
BRIDGE SHEET

BY	REVISIONS	DATE

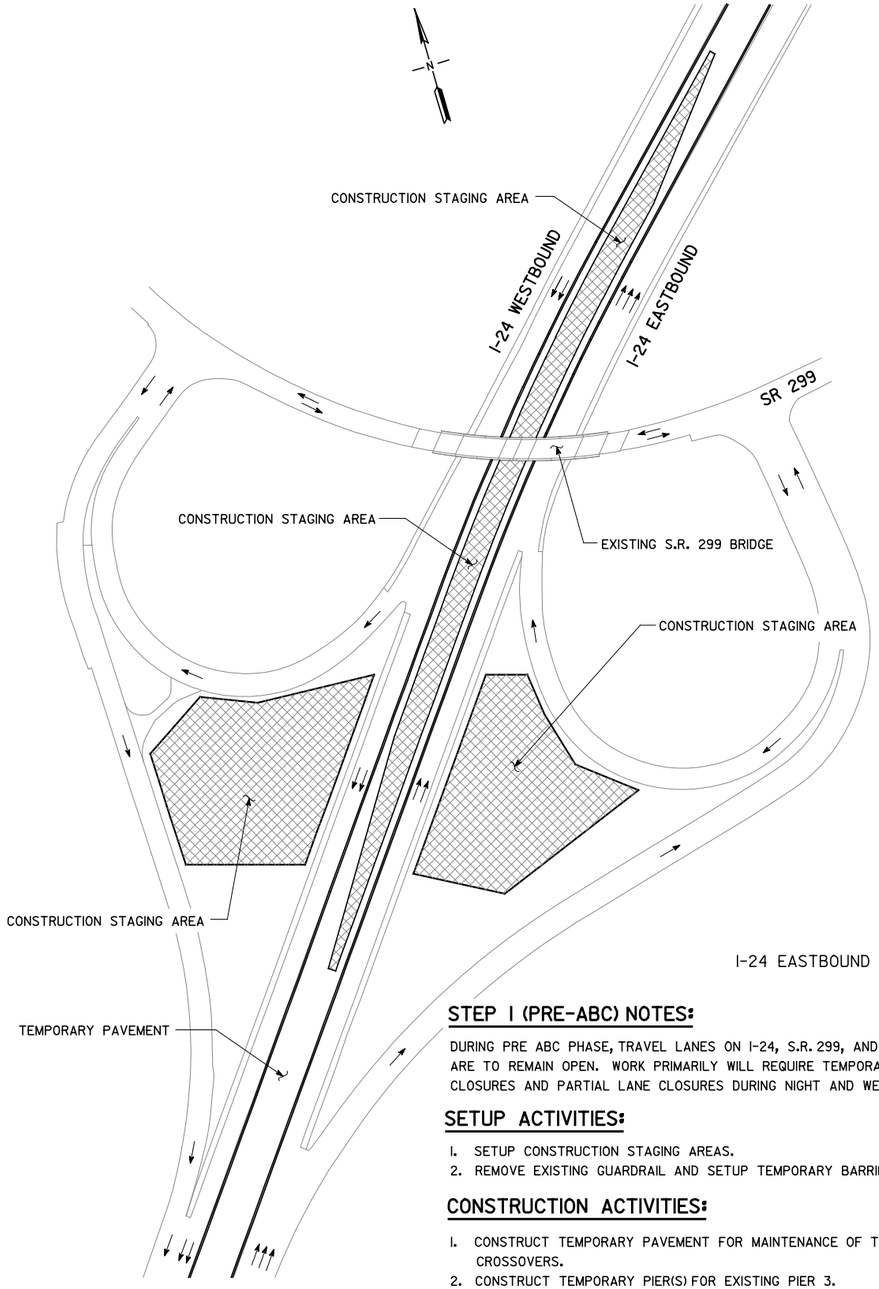
DESIGNED	CHECKED	REVIEWED
DRAWN	DESIGN GROUP	APPROVED

1 INCH WHEN PRINTED FULL SIZE

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

S.R. 299 OVER I-24 REPLACEMENT

ACCELERATED BRIDGE CONSTRUCTION (ABC)



STEP 1 (PRE-ABC) NOTES:

DURING PRE ABC PHASE, TRAVEL LANES ON I-24, S.R. 299, AND THE RAMPS ARE TO REMAIN OPEN. WORK PRIMARILY WILL REQUIRE TEMPORARY SHOULDER CLOSURES AND PARTIAL LANE CLOSURES DURING NIGHT AND WEEKEND WORK.

SETUP ACTIVITIES:

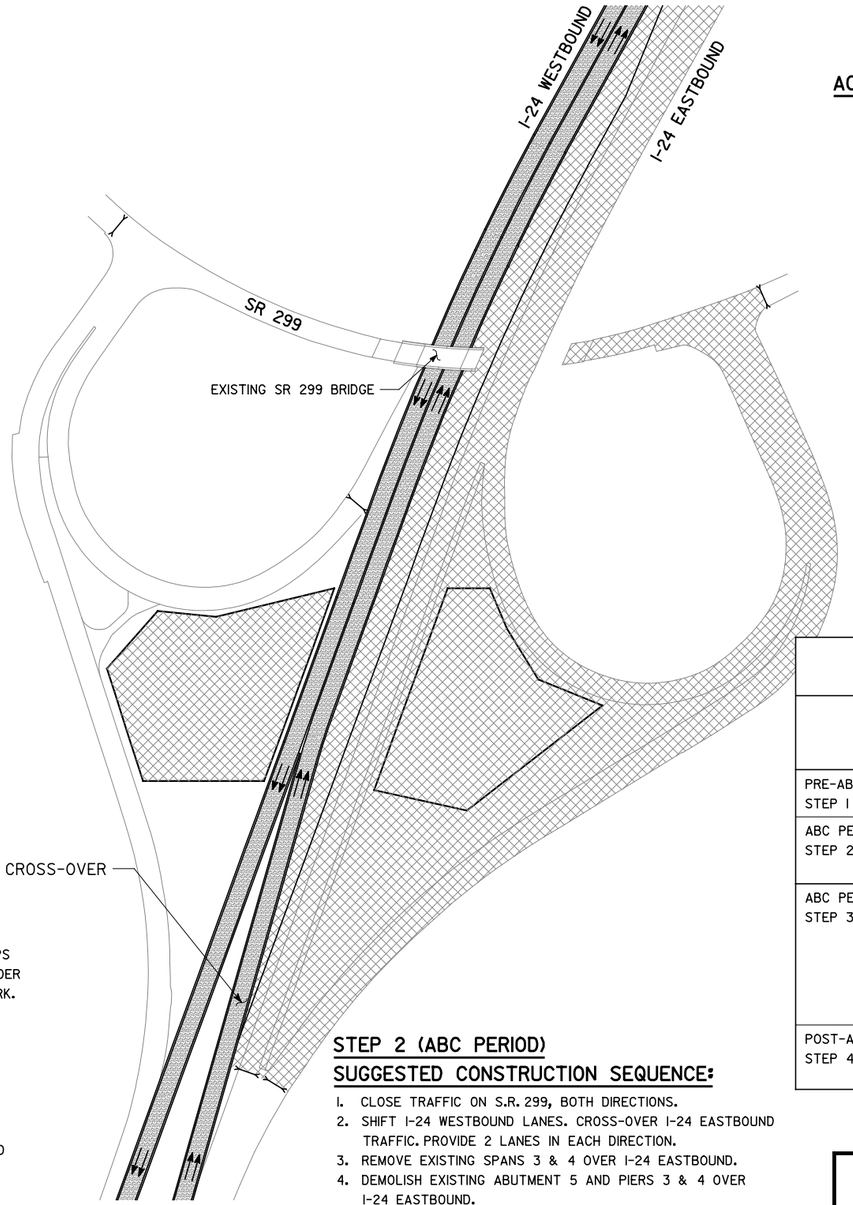
1. SETUP CONSTRUCTION STAGING AREAS.
2. REMOVE EXISTING GUARDRAIL AND SETUP TEMPORARY BARRIERS.

CONSTRUCTION ACTIVITIES:

1. CONSTRUCT TEMPORARY PAVEMENT FOR MAINTENANCE OF TRAFFIC AND CROSSOVERS.
2. CONSTRUCT TEMPORARY PIER(S) FOR EXISTING PIER 3.
3. CONSTRUCT NEW FOUNDATIONS, ABUTMENTS 1 & 3 AND PIER 2.
4. FABRICATE NEW BRIDGE SPANS IN CONSTRUCTION STAGING AREAS.

ACCELERATED BRIDGE CONSTRUCTION (ABC)

STEP 1 (PRE-ABC)



STEP 2 (ABC PERIOD) SUGGESTED CONSTRUCTION SEQUENCE:

1. CLOSE TRAFFIC ON S.R. 299, BOTH DIRECTIONS.
2. SHIFT I-24 WESTBOUND LANES. CROSS-OVER I-24 EASTBOUND TRAFFIC. PROVIDE 2 LANES IN EACH DIRECTION.
3. REMOVE EXISTING SPANS 3 & 4 OVER I-24 EASTBOUND.
4. DEMOLISH EXISTING ABUTMENT 5 AND PIERS 3 & 4 OVER I-24 EASTBOUND.
5. PLACE NEW BRIDGE SPAN OVER I-24 EASTBOUND.

ACCELERATED BRIDGE CONSTRUCTION (ABC)

STEP 2 (ABC PERIOD)

LEGEND:

- I-24 TRAFFIC FLOW
- CONSTRUCTION ZONE

ACCELERATED BRIDGE CONSTRUCTION STEPS

	BRIDGE ACTIVITY
PRE-ABC STEP 1	SITE PREPARATION; FOUNDATION, MINOR APPROACH, PIERS, AND ABUTMENT CONSTRUCTION ACTIVITIES
ABC PERIOD STEP 2	CLOSE S.R. 299 AND CROSSOVER I-24 EASTBOUND TRAFFIC. REMOVE EXISTING BRIDGE SPANS 3 & 4 AND PLACE NEW BRIDGE SPAN 2.
ABC PERIOD STEP 3	CROSSOVER TRAFFIC I-24 WESTBOUND. REMOVE EXISTING BRIDGE SPANS 1 & 2 AND PLACE NEW BRIDGE SPAN 1.
	RE-STORE NORMAL TRAFFIC FLOW ON I-24 EASTBOUND AND WESTBOUND; FINALIZE APPROACH WORK ON S.R. 299
	S.R. 299 RE-OPENS TO TRAFFIC
POST-ABC STEP 4	FINISHING ACTIVITIES ON S.R. 299; SITE CLEAN UP AND RESTORATION, MINOR FINISH WORK ON BRIDGE AND ROADWAY

HNTB
3715 NORTHSIDE PARKWAY
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

GEORGIA
DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION-OFFICE OF BRIDGE DESIGN

PROPOSED CONSTRUCTION SEQUENCE 1 OF 2
SR 299 OVER I-24

DADE COUNTY

DRAWING NO.

BRIDGE SHEET

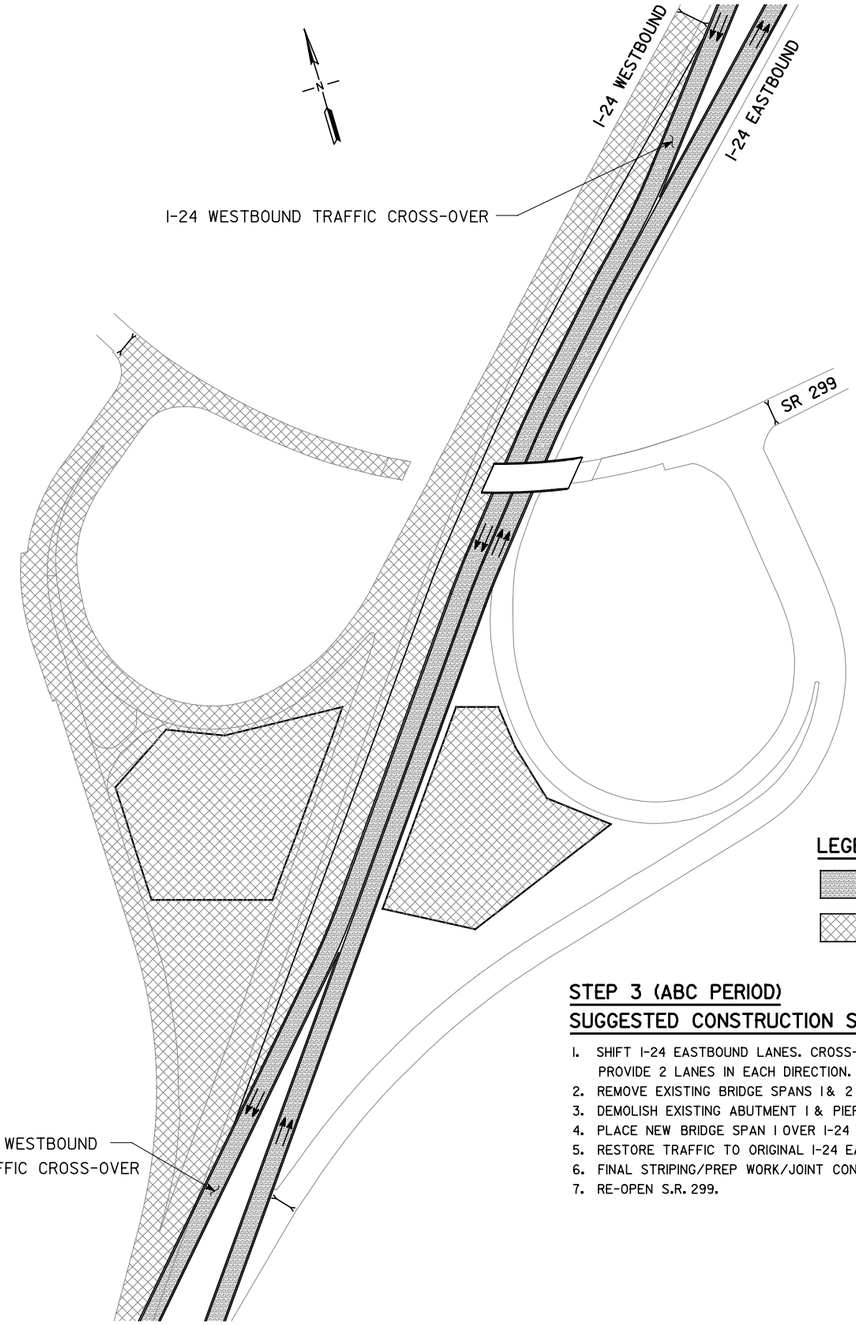
SCALE:

SEPTEMBER 2013

REVISIONS	DATE	BY

DESIGNED ____ DRAWN ____ CHECKED ____ DESIGN GROUP ____ REVIEWED ____ APPROVED ____

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



ACCELERATED BRIDGE CONSTRUCTION (ABC)

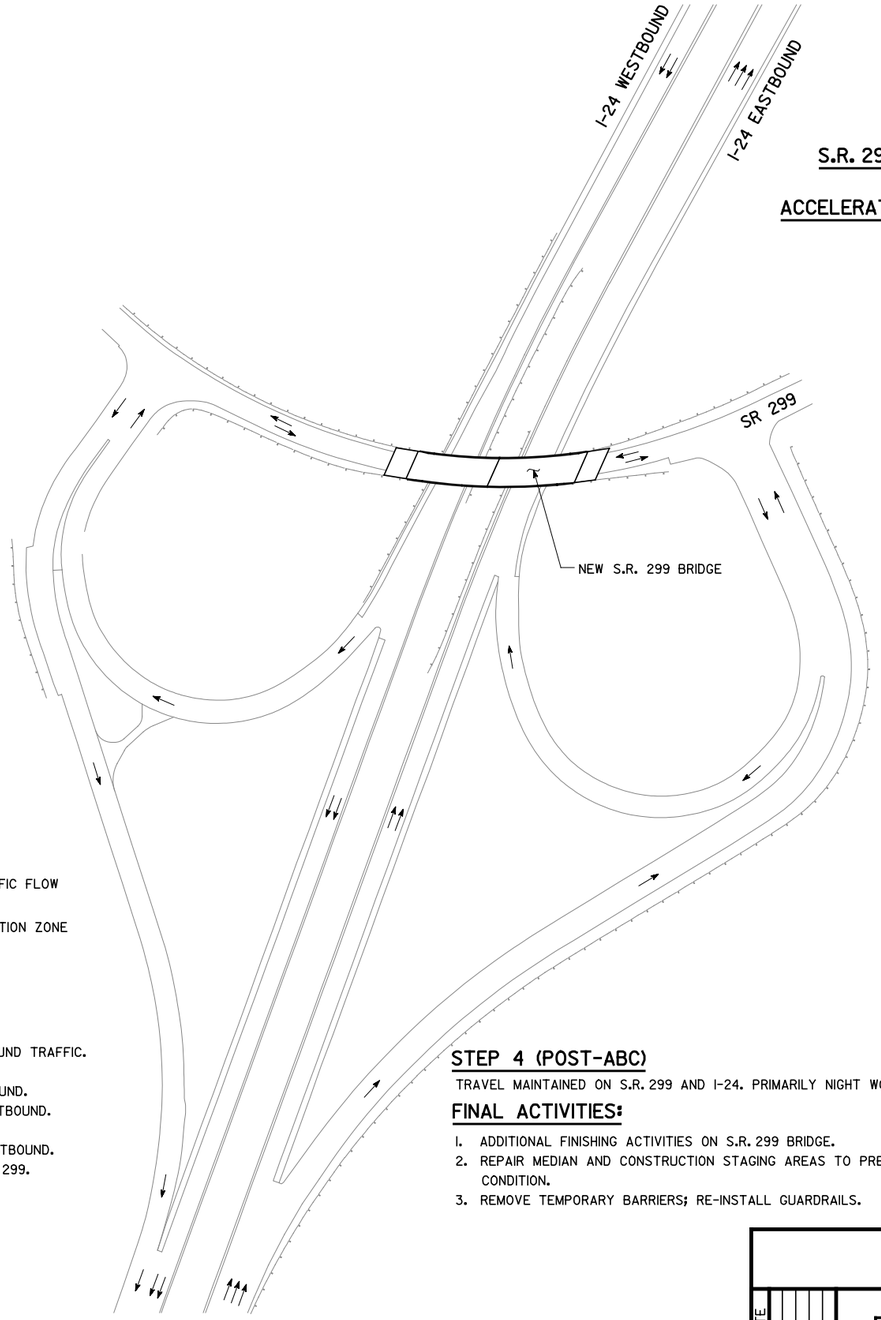
STEP 3 (ABC PERIOD)

LEGEND:

- I-24 TRAFFIC FLOW
- CONSTRUCTION ZONE

STEP 3 (ABC PERIOD)
SUGGESTED CONSTRUCTION SEQUENCE:

1. SHIFT I-24 EASTBOUND LANES. CROSS-OVER I-24 WESTBOUND TRAFFIC. PROVIDE 2 LANES IN EACH DIRECTION.
2. REMOVE EXISTING BRIDGE SPANS 1& 2 OVER I-24 WESTBOUND.
3. DEMOLISH EXISTING ABUTMENT 1 & PIER 2 OVER I-24 WESTBOUND.
4. PLACE NEW BRIDGE SPAN 1 OVER I-24 WESTBOUND.
5. RESTORE TRAFFIC TO ORIGINAL I-24 EASTBOUND AND WESTBOUND.
6. FINAL STRIPING/PREP WORK/JOINT CONSTRUCTION ON S.R. 299.
7. RE-OPEN S.R. 299.



ACCELERATED BRIDGE CONSTRUCTION (ABC)

STEP 4 (POST-ABC)

STEP 4 (POST-ABC)

TRAVEL MAINTAINED ON S.R. 299 AND I-24. PRIMARILY NIGHT WORK.

FINAL ACTIVITIES:

1. ADDITIONAL FINISHING ACTIVITIES ON S.R. 299 BRIDGE.
2. REPAIR MEDIAN AND CONSTRUCTION STAGING AREAS TO PREVIOUS CONDITION.
3. REMOVE TEMPORARY BARRIERS; RE-INSTALL GUARDRAILS.

S.R. 299 OVER I-24 REPLACEMENT

ACCELERATED BRIDGE CONSTRUCTION (ABC)

HNTB
3715 NORTHSIDE PARKWAY
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

GEORGIA
DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION-OFFICE OF BRIDGE DESIGN

DATE | REVISIONS | BY

PROPOSED CONSTRUCTION SEQUENCE 2 OF 2
SR 299 OVER I-24

DADE COUNTY

DRAWING NO.

SCALE: SEPTEMBER 2013

BRIDGE SHEET

DESIGNED	CHECKED	REVIEWED
DRAWN	DESIGN GROUP	APPROVED

Attachment B

Construction Cost Estimate

JOB ESTIMATE REPORT

JOB NUMBER : 0011682 SPEC YEAR: 01
DESCRIPTION: DADE COUNTY BRIDGE REPLACEMENT SR299 OVER I-24

ITEMS FOR JOB 0011682

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0080	543-9000		LS	CONSTR OF BRIDGE COMPLETE - 242X43X40	1.000	2698678.42	2698678.42
0085	540-1102		LS	REM OF EX BR, BR NO - 242X34X28	1.000	534912.19	534912.19
0089	210-0100		LS	GRADING COMPLETE - 0011682	1.000	100000.00	100000.00
0090	150-1000		LS	TRAFFIC CONTROL - BR STR ID 083-0020-0	1.000	186818.59	186818.59
0095	620-0100		LF	TEMP BARRIER, METHOD NO. 1	15840.000	23.35	369864.00
0100	402-4310		SY	4" RECYL AC 25MM SP,GP1/2,BMHL	14720.000	26.10	384192.00
0105	310-5100		SY	GR AGGR BS CRS 10IN INCL MATL	14720.000	18.53	272761.60
0110	641-1100		LF	GUARDRAIL, TP T	100.000	53.60	5360.95
0115	641-1200		LF	GUARDRAIL, TP W	1000.000	16.66	16661.14
0120	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	2.000	713.16	1426.32
0125	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	2.000	1868.35	3736.70
0128	163-0232		AC	TEMPORARY GRASSING	16.000	194.38	3110.20
0129	163-0240		TN	MULCH	200.000	267.72	53545.53
0133	163-0300		EA	CONSTRUCTION EXIT	4.000	1376.56	5506.28
0134	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	5000.000	0.73	3695.10
0139	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	10000.000	2.32	23244.40
0144	700-6910		AC	PERMANENT GRASSING	8.000	577.22	4617.77

ITEM TOTAL	4668131.18
INFLATED ITEM TOTAL	4668131.19

TOTALS FOR JOB 0011682

ESTIMATED COST:	4668131.19
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	4668131.19

PROJ. NO.	SR 299 bridge replacement over I-24
P.I. NO.	11682
DATE	1/3/2014

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Jan-14	$ 3.240
DIESEL		$ 3.823
LIQUID AC		$ 557.00

Link to Fuel and AC Index:
http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)-0.05]xTMTxAPL

Asphalt

Price Adjustment (PA)			**$ 108,227.33**	**$ 108,227.33**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	125%	$ 1,253.25	
Monthly Asphalt Cement Price month project let (APL)			$ 557.00	
Total Monthly Tonnage of asphalt cement (TMT)			161.92	

ASPHALT	Tons	%AC	AC ton
Leveling	0	5.0%	0
12.5 SMA	0	5.0%	0
12.5 PEM	0	5.0%	0
12.5 mm SP	0	5.0%	0
25 mm SP	3238.4	5.0%	161.92
19 mm SP	0	5.0%	0
	3238.4		**161.92**

BITUMINOUS TACK COAT

Price Adjustment (PA)			**$** -	**$** -
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	125%	$ 1,253.25	
Monthly Asphalt Cement Price month project let (APL)			$ 557.00	
Total Monthly Tonnage of asphalt cement (TMT)			0	

Bitum Tack Gals	gals/ton	tons
0	232.8234	0

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)			**$** -	**$** -
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	125%	$ 1,253.25	
Monthly Asphalt Cement Price month project let (APL)			$ 557.00	
Total Monthly Tonnage of asphalt cement (TMT)			0	

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

TOTAL LIQUID AC ADJUSTMENT	**$ 108,227.33**

Attachment C

Utility Cost Estimate

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0011682
Bridge Replacement I-24 @ SR 299
Dade County

OFFICE Cartersville

DATE November 26, 2013

FROM Kerry D. Bonner
District Utilities Engineer

TO Darryl D. VanMeter, P.E., Office of Innovative Program Delivery
ATTN Andrew Hoenig, P.E., Project Manager

SUBJECT CONCEPT UTILITY COST ESTIMATE

As requested by your office, we are furnishing you with a Concept Utility Cost estimate for each utility with facilities potentially located within the project limits. It appears that AT&T – Southeast is the only owner with conflict.

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
AT&T - Southeast		$ 75,000.00
Totals		$ 75,000.00

Total Updated Preliminary Utility Cost Estimate $ 75,000.00

If you have any questions, please contact Jennifer Deems at 678-721-5323.

KDB/jd

C: Mike Bolden, State Utilities Engineer (via e-mail)
File/Estimating Book

Attachment D

Traffic Diagrams

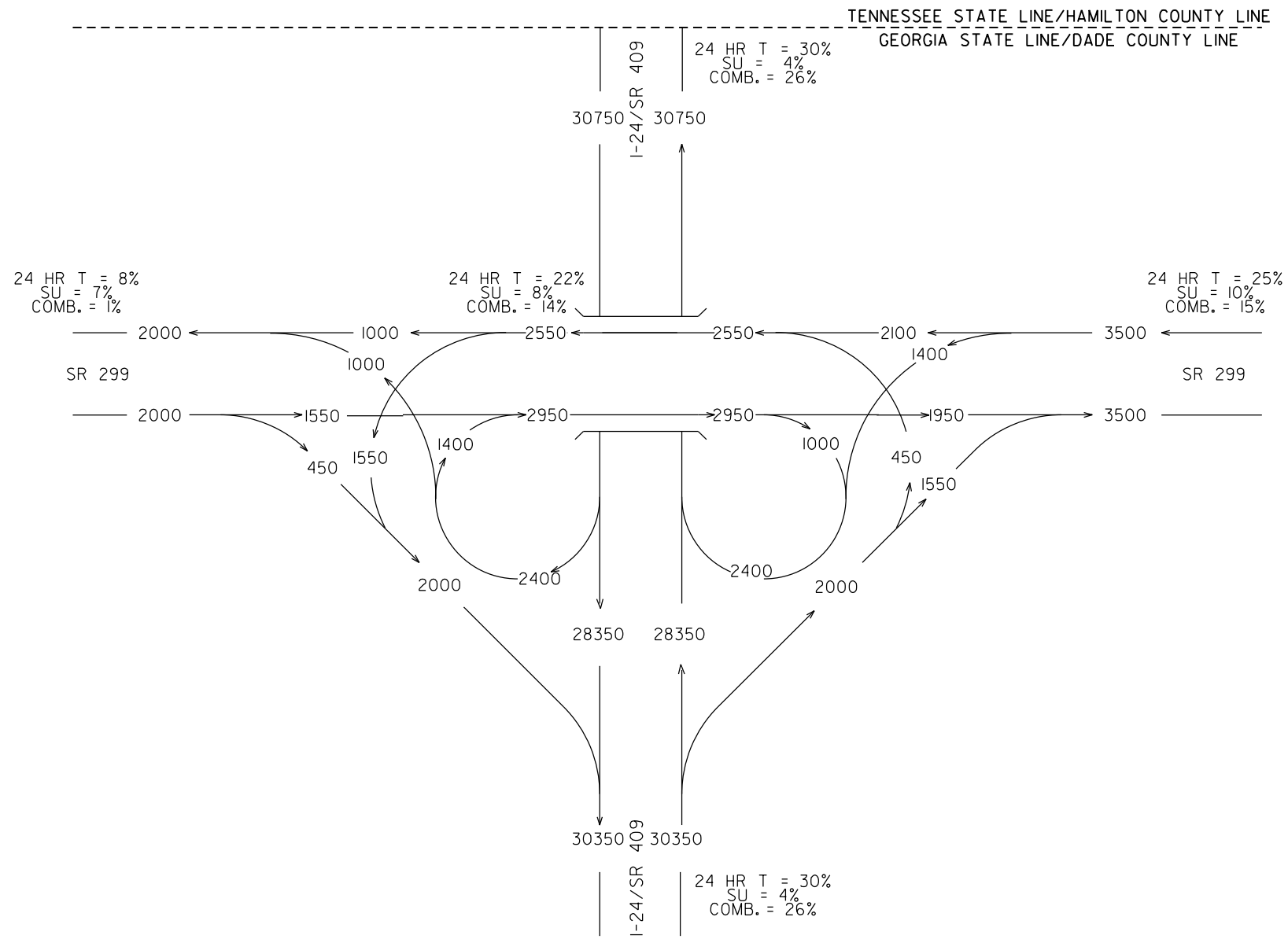
SHEET 1 OF 5

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

HNTB
3715 NORTHSIDE PARKWAY, NW
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

2013 EXISTING ADT

DADE COUNTY



STP00-0012-01(081)
PI# 0011682
DADE COUNTY

SR 299
BRIDGE REPLACEMENT
OVER I-24/SR 409

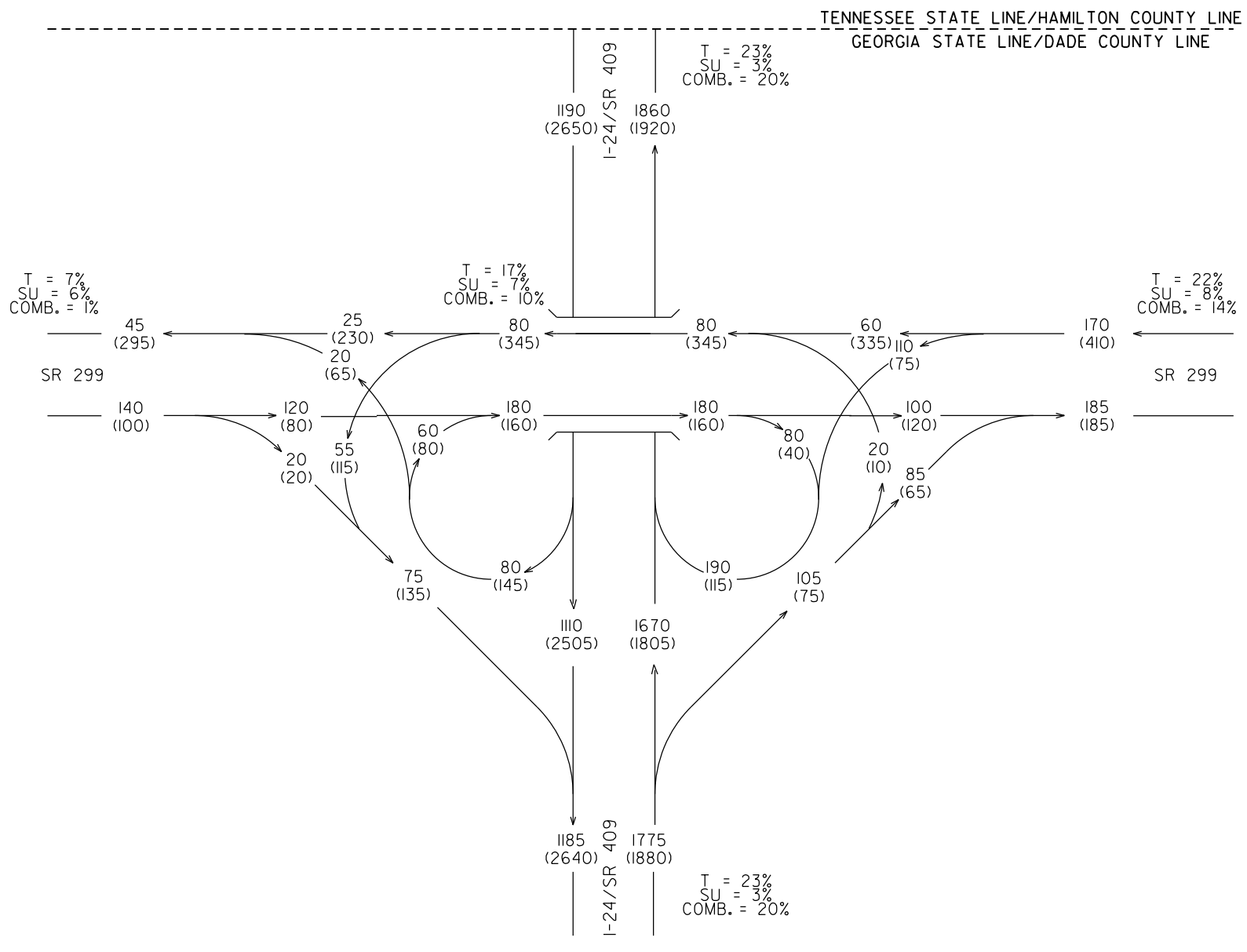
2013 EXISTING ADT
KAM 08/13

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

HNTB
3715 NORTHSIDE PARKWAY, NW
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

2013 EXISTING PEAK HOUR VOLUME

DADE COUNTY



STP00-0012-01(081)
PI# 0011682
DADE COUNTY

SR 299
BRIDGE REPLACEMENT
OVER I-24/SR 409

EXISTING
2013 AM PEAK HOUR = 000
2013 PM PEAK HOUR = (000)

KAM 08/13

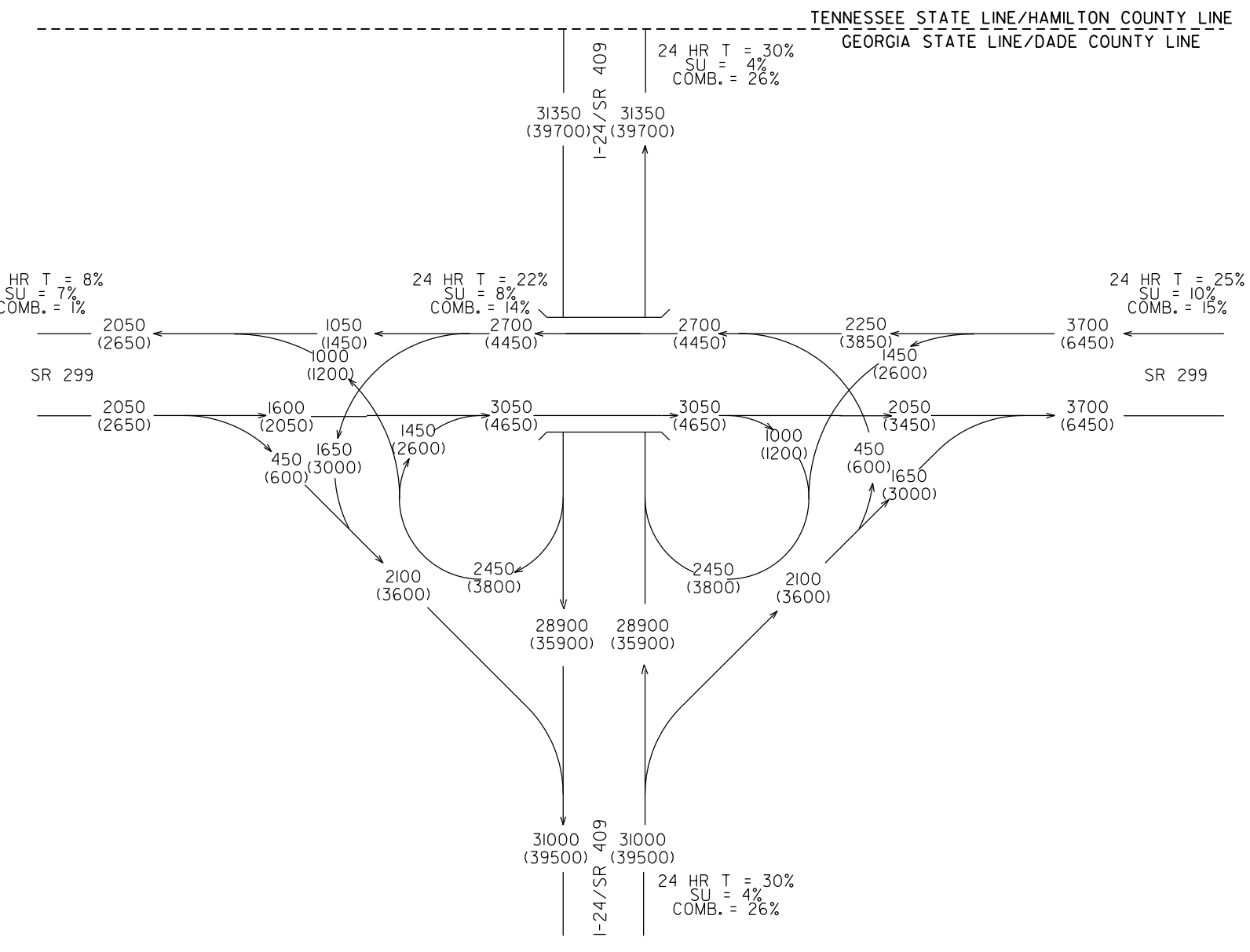
SHEET 3 OF 5

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

HNTB
3715 NORTHSIDE PARKWAY, NW
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

2015/2035 NO-BUILD/BUILD ADT

DADE COUNTY



STP00-0012-01(081)
PI# 0011682
DADE COUNTY

SR 299
BRIDGE REPLACEMENT
OVER I-24/SR 409

2015 ADT = 0000
2035 ADT = (0000)

KAM 08/13

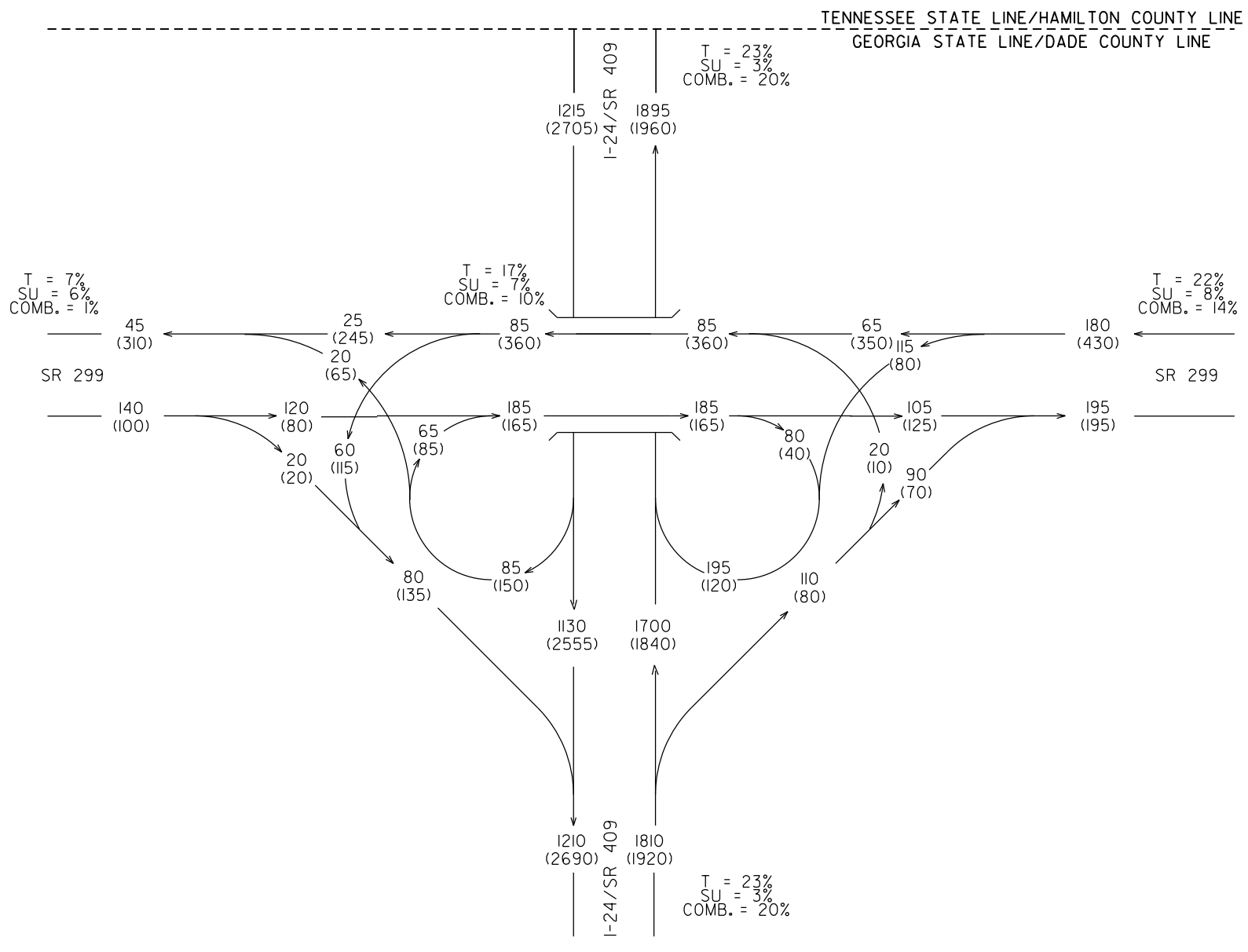
SHEET 4 OF 5

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

HNTB
3715 NORTHSIDE PARKWAY, NW
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

2015 NO-BUILD/BUILD DHV

DADE COUNTY



STP00-0012-01(081)
PI# 0011682
DADE COUNTY

SR 299
BRIDGE REPLACEMENT
OVER I-24/SR 409

2015 AM DHV = 000
2015 PM DHV = (000)

KAM 08/13

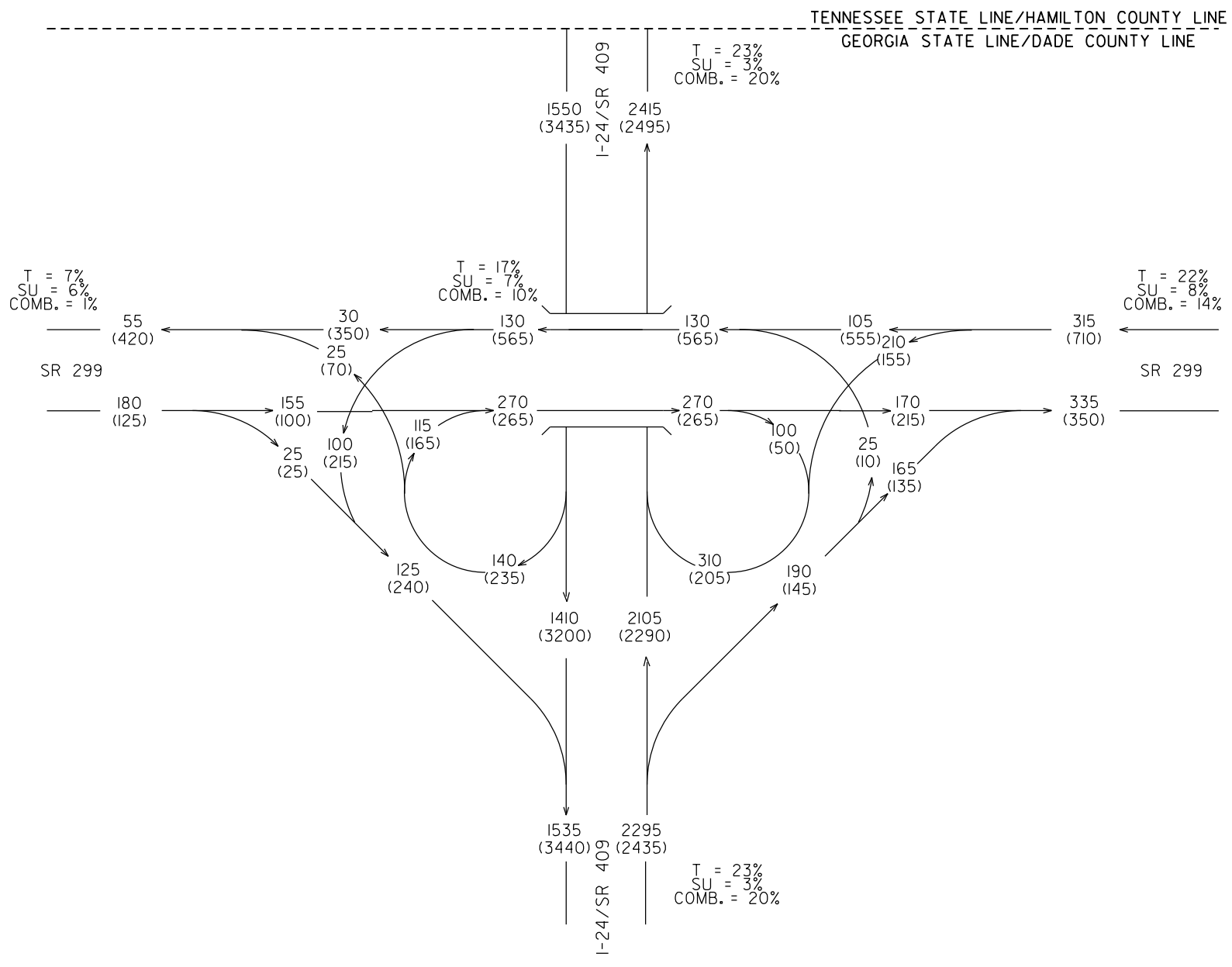
SHEET 5 OF 5

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

HNTB
3715 NORTHSIDE PARKWAY, NW
200 NORTHCREEK, SUITE 800
ATLANTA, GEORGIA 30327

2035 NO-BUILD/BUILD DHV

DADE COUNTY



STP00-0012-01(081)
PI# 0011682
DADE COUNTY

SR 299
BRIDGE REPLACEMENT
OVER I-24/SR 409

2035 AM DHV = 000
2035 PM DHV = (000)

KAM 08/13

Attachment E

Bridge Sufficiency Report

Processed Date:1/7/2013

Parameters: Bridge Serial Num

Bridge Inventory Data Listing

Structure ID:083-0020-0 **Dade** **SUFF. RATING:** 31.17

Location & Geography

Structure ID:	083-0020-0
200 Brdge Information:	06
*6A Feature Int:	I-24 (SR 409)
*6B Critical Bridge:	0
*7A Route No Carried:	SR00299
*7B Facility Carried:	SR 299
9 Location:	6 MI NE OF NEW ENGLAND
2 Dot District:	6
207 Year Photo:	2011
*91 Inspection Frequency:	24 Date: 08/15/2011
92A Fract Crit Insp Freq:	0 Date: 02/01/1901
92B Underwater Insp Freq:	0 Date: 02/01/1901
92C Other Spc. Insp Freq:	0 Date: 02/01/1901
* 4 Place Code:	00000
*5 Inventory Route(O/U):	1
Type:	3
Designation:	1
Number:	00299
Direction:	0
*16 Latitude:	34 58.6490 HMMS Prefix:SR
*17 Longtitude:	85 -25.0223 HMMS Suffix:00 MP:2.62
98 Border Bridge:	000%Shared:00
99 ID Number:	000000000000000
*100 STRAHNET:	0
12 Base Highway Network:	1
13A LRS Inventory Route:	831040900
13B Sub Inventory Route:	0
101 parellel Structure:	N
*102 Direction of Traffic:	2
*264 Road Inventory Mile Post:	002.62
*208 Inspection Area:	6 Initials: EFP
Engineer's Initials:	gmc
* Location ID No:	083-00299D-002.62E

*104 Highway System:	0
*26 Functional Classification:	01
*204 Federal Route Type:	S No: 00811
105 Federal Lands Highway:	0
*110 Truck Route:	0
2006 School Bus Route:	1
217 Benchmark Elevation:	0000.00
218 Datum:	0
*19 Bypass Length:	00
*20 Toll:	3
*21 Maintanance:	01
*22 Owner:	01
*31 Design Load:	5
37 Historical Significance:	5
205 Congressional District:	09
27 Year Constructed:	1965
106 Year Reconsrtucted:	0000
33 Bridge Medium:	0
34 Skew:	31
35 Structure Flared:	0
38 Navigation Control:	N
213 Special Steel Design:	0
267 Type of Paint:	5
*42 Type of Service On:	1
Type of Service Under:	1
214 Movable Bridge:	0
203 Type Bridge:	A
259 Pile Encasement	3
*43 Structure Type Main:	4 02
45 No.Spans Main:	004
44 Structure Type Appr:	0 00
46 No Spans Appr:	0000
226 Bridge Curve Horz	1 Vert: 1
111 pier Protection	0
107 Deck Structure Type:	1
108 Wearing Structure Type:	1
Membrane Type:	0
Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	01
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	1
Curb Material:	1
239 Handrail	7 7
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	3
Fwrd:	3
Oppo. Dir. Rear:	0
Oppo. Fwrd:	0
244 Aproach Slab	3
224 Retaining Wall:	0
233Posted Speed Limit:	65
236 Warning Sign:	0.00
234 Delineator:	1.00
235 Hazzard Boards:	0
237 Utilities Gas:	00
Water:	00
Electric:	00
Telephone:	21
Sewer:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00

Bridge Inventory Data Listing

Structure ID:083-0020-0

Programming Data

201 Project No: I-24-1 (3) 00 CT.2
202 Plans Available: 4
249 Prop Proj No: NH-24-1(17)
250 Approval Status: 0000
251 PI Number: 611020-
252 Contract Date: 02/01/1901
260 Seismic No: 00000
75 Type Work: 00 0
94 Bridge Imp: Cost: $0
95 Roadway Imp. Cost: 0
96 Total Imp Cost: 0
76 Imp Length: 000000
97 Imp Year: 0000
114Furure ADT: 093450 Year:2030

Hydralic Data

215Waterway Data:
High Water Elev: 0000.0 Year:1900
Flood Elev: 0000.0 Freq:00
Avg Streambed Elev: 0000.0
Drainage Area: 00000
Area of Opening: 000000
113 Scour Critical N
216Water Depth: 00.0 Br.Height:00.0
222Slope Protection: 4
221Slope Protection 0 Fwd:0
219Fender System 0
220Dolphin: 0
223Current Cover: 000
Type: 0
No. Barrels: 0
* Width: 0.00 Height:0.00
* Length: 0 Apron:0
265 U/W Insp. Area 0 Diver:ZZZ
Location ID No: 083-00299D-002.62E

Measurements:

*29ADT 062300 Year:2010
109%Trucks: 23
* 28 Lanes On: 02 Under:06
210 No. Tracks On: 00 Under:00
* 48 Max. Span Length 0090
* 49 Structure Length: 242
51 Br. Rwdy. Width 28.00
52 Deck Width: 34.30
* 47 Tot. Horiz. Cl: 28

50 Curb / Sidewalk Width 2.10 / 2.10
32 Approach Rdwy. Width 027
*229 Shoulder Width:
Rear Lt: 1.50 Type:2 Rt:1.50
Fwd. Lt: 2.00 Type:2 Rt:2.00

Permanent Width:
Rear: 24.00 Type:2
24.00 Type:2
Intersaction Rear: 1 Fwd: 1
36Safety Features Br. Rail: 2
Transition: 2
App. G. Rail: 1
App. Rail End: 1
53 Minimum Cl. Over: 99' 99 "
Under:
*228 Minimum Vertical Cl
Act. Odm Dir:: 99' 99"
Oppo. Dir: 99' 99"
Posted Odm. Dir: 00' 00"
Oppo. Dir: 00' 00"
55 Lateral Undercl. Rt: H 20 20
56 Lateral Undercl. Lt: 29.20
*10 Max Min Vert Cl: 99' 99" Dir:0
39 Nav Vert Cl: 000 Horiz:0000
116 Nav Vert Cl Closed: 000
245 Deck Thickness Main 6.80
Deck Thick Approach: 0.00
246 Overlay Thickness: 0.00

212 Year Last Painted: Sup:1996Sub:0000

65 Inventory Rating Mathod: 1
63 Operating Rating Method: 1
66 Inventory Type: 2 Rating: 10
64 Operating Type: 2 Rating: 10
231Calculated Loads:
H-Modified: 10 0
HS-Modified: 00 0
Type 3: 00 0
Type 3s2: 00 0
Timber: 00 0
Piggyback: 00 0
261 H Inventory Rating: 10
262 H Operating Rating 32
67 Structural Evaluation: 2
58 Deck Condition: 5
59 Superstructure Condition: 6
* 227 Collision Damage: 2
60A Substructure Condition: 5
60B Scour Condition: N
60C Underwater Condition N
71 Waterway Adequacy: N
61 Channel Protection Cond.: N
68 Deck Geometry: 4
69 UnderClr. Horz/Vert: 6
72 Appr. Alignment: 8
62 Culvert: N

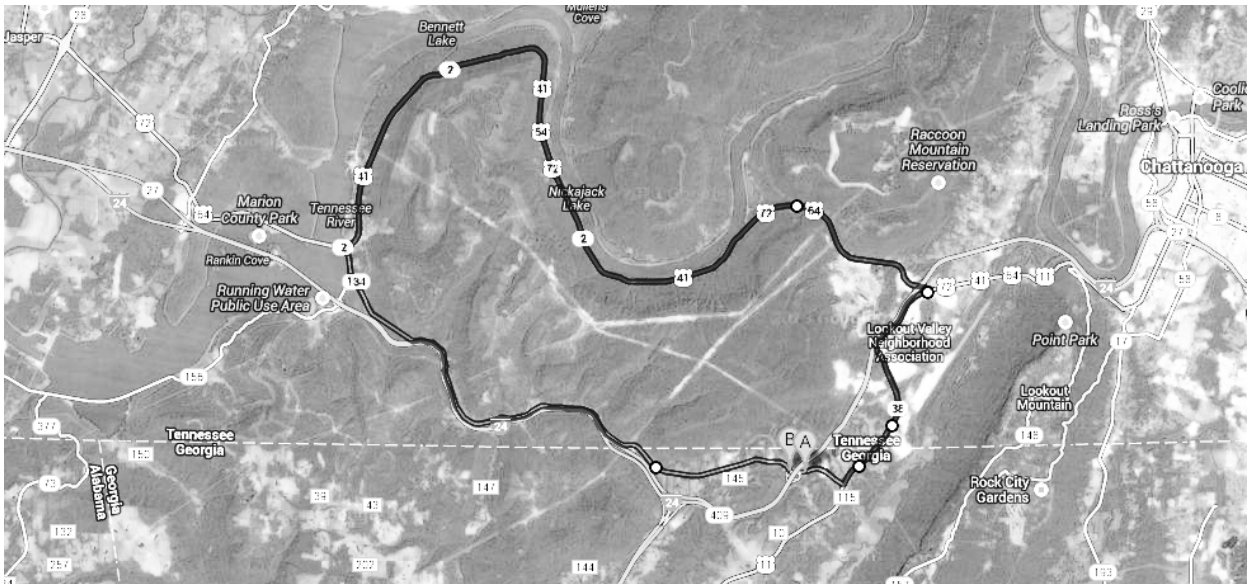
Posting Data

70 Bridge Posting Required 5
41 Struct Open, Posted, CL: A
* 103 Temporary Structure: 0
232 Posted Loads
H-Modified: 00
HS-Modified: 00
Type 3: 00
Type 3s2: 00
Timber: 00
Piggyback 00
253 Notification Date: 02/01/1901
258 Fed Notify Date: 2/1/1901 12:00:00AM

Attachment F

Detour Plan

Detour Route only using State Routes to avoid Interstates
(Final detour plan to be developed by the design build team.)



A GA-299 E

299	1. Head **east** on **GA-299 E** toward **Cooley Rd** About 1 min	go 0.7 mi total 0.7 mi
11	2. Turn left onto **GA-58 E/US-11 N/Birmingham Pike** Continue to follow US-11 N About 7 mins	go 3.7 mi total 4.4 mi
64	3. Turn left onto **Hwy 64 W/TN-2 W/U.S. 41 N/US-64 W/US-72 W/Lee Hwy** About 20 mins	go 14.5 mi total 18.9 mi
134	4. Turn left onto **TN-134 E/J E Clouse Hwy**	go 0.5 mi total 19.4 mi
134	5. Turn left to stay on **TN-134 E/J E Clouse Hwy** Continue to follow TN-134 E About 9 mins	go 6.0 mi total 25.4 mi
299	6. Continue onto **GA-299 E** About 3 mins Total 40 mins	go 2.6 mi total 28.0 mi

B GA-299 W

Detour Route only using Interstates and State Routes
(Final detour plan to be developed by the design build team.)

A	GA-299 W	
299	1. Head **east** on **GA-299 E** About 1 min	go 0.8 mi total 0.8 mi
58	2. Turn right onto **GA-58 W/US-11 S/Birmingham Pike** Continue to follow GA-58 W/US-11 S About 12 mins	go 9.8 mi total 10.6 mi
	3. Turn right onto **White Oak Gap Rd**	go 0.2 mi total 10.8 mi
59	4. Turn right to merge onto **I-59 N** About 7 mins	go 7.9 mi total 18.7 mi
24	5. Keep left at the fork, follow signs for **I-24 W/Nashville** and merge onto **I-24 W** About 6 mins	go 7.0 mi total 25.7 mi
	6. Take exit **161** for **TN-156** toward **Haletown/New Hope**	go 0.3 mi total 25.9 mi
156	7. Turn right onto **TN-156 E/Shellmound Rd** About 51 secs	go 0.3 mi total 26.3 mi
134	8. Take the 1st right onto **TN-134 E/J E Clouse Hwy** Continue to follow TN-134 About 8 mins	go 6.0 mi total 32.2 mi
299	9. Continue onto **GA-299 E** About 3 mins Total 38 mins	go 2.6 mi total 34.8 mi
B	GA-299 W	

Attachment G

Initial Concept Meeting Minutes

MEETING NOTES

Date: April 17, 2013

Project: I-24 at SR 299 bridge replacement – PI Number 0011682; Dade

Purpose: Kick-off Meeting

Location: GDOT General Office

Time: 1:30 PM

Attending:

Victor Dang	FHWA	victor.dang@dot.gov	404-562-3654
Keisha Jackson	GDOT – OES	keijackson@dot.ga.gov	404-631-1160
Steve Gaston	GDOT - Bridge	sgaston@dot.ga.gov	404-631-1881
Eric Huibregtse	GDOT - Bridge	ehuibregtse@dot.ga.gov	404-631-1875
Ben Rabun	GDOT - Bridge	brabun@dot.ga.gov	404-631-1008
Andrew Hoenig	GDOT – IPD	ahoenig@dot.ga.gov	404-631-1757
John Hancock	GDOT – IPD	jhancock@dot.ga.gov	404-631-1315
Heidi Schneider	HNTB	hlschneider@hntb.com	404-946-5707
Jim Aitken	HNTB	jaitken@hntb.com	404-946-5775
David Hannon	HNTB	dhannon@hntb.com	404-275-2829

The following items were discussed:

1. Andrew Hoenig opened the meeting and led introductions. This meeting is to kickoff the I-24 at SR 299 bridge replacement project. This project will be completed using Accelerated Bridge Construction (ABC) techniques. The project will be delivered using Design-Build (DB) to allow the DB team to determine exactly how to complete the accelerated construction.
2. Project Scope:
    a. The scope of the project is to replace the existing SR 299 bridge over I-24 on existing alignment.
    b. Replace the bridge with minimal impact to the traveling public by only closing the bridge for up to three days during construction.
    c. The new bridge will consist of two 12-foot wide lanes with 8 to 10-foot outside shoulders.
    d. HNTB will develop the NEPA document, examine and recommend ABC techniques, and develop DB specifications and example bridge layouts.
3. Project Schedule:
    a. Concept Team Meeting — Fall 2013
    b. NEPA approval — Spring 2014
    c. DB letting — FY 2015
    d. Construction Complete — 2016
    e. The group discussed these dates and the ability to move the project into FY 2014 if the NEPA document is approved early. The consensus was that funding would likely be available if the NEPA document was approved early to move the project into FY 2014 and let it prior to July 2014.
4. Environmental
    a. The NEPA document is anticipated to be a Categorical Exclusion (CE).

b. The Need and Purpose will be for a standard bridge replacement but also include language regarding the desire to replace the bridge quickly with minimal impact to the traveling public.

c. The group discussed the required survey area required for special studies. HNTB previously anticipated that based on the existing topography that they special studies would be confined to within the interchange and just north of the existing bridge. The group determined that the design-build team may need to construct crossovers to shift traffic during construction. To construct the crossovers, the median should be surveyed approximately 2000 feet, north and south of the bridge.

d. The Ecology survey was done on 4/16/2013. There may be suitable roosting and foraging habitat for the Indiana Bat (I-Bat).Suitable roosting habitat for the Gray bat was not identified; however, foraging habitat has not been ruled out. Acoustic and mist netting surveys for the I-bat may need to be done to determine if they are present in the area and impacted by the project. If these bat surveys are done, the Gray bat will also be surveyed. Keisha indicated that the bat surveys may need to include the Long Ear bat. HNTB to follow up with OES to determine if the surveys will need to include this species.

    1. Note: After the meeting HNTB followed up with Doug Chamblin who indicated that the Long Ear bat will not need to be tagged and tracked when the bat surveys are done, but will need to be documented if one is captured.
    2. HNTB to coordinate with US Fish and Wildlife Services (USFWS) to determine if the bat surveys are needed.

e. Additional field work for ecology, history, and archaeology may be required to accommodate the extended limits for the I-24 crossover.

f. Archaeology survey will be done in the next few weeks.

g. The History survey will be done in the next few weeks.

h. Air and Noise special studies are anticipated to be write-off memos.

i. Public Outreach is anticipated for the detour route. This public meeting may need to be expanded to educate the public on the scope of the project and why there's a benefit to replacing the bridge using ABC techniques.

j. Public outreach may need to be targeted to the trucking industry due to the high volume of trucks in the corridor.

k. Additional coordination may be needed with Chattanooga, TennDOT and AlDOT. Ben has had early discussions with TennDOT and AlDOT.

5. Submittals:

    a. Concept Report
        - Will be developed by HNTB.

    b. Field and Right of Way (ROW) surveys are being done by Cardno-TBE and are ongoing. These are expected to be complete by the end of June.

    c. The Traffic Report is being developed by HNTB. Traffic counts will need to be done before school lets out to supplement the report and to provide accurate information on the best days/times for lane closures and bridge closures.

    d. An Interchange Modification Report is not anticipated to be needed.

    e. Preliminary layouts will be parametric with just enough data shown for the designer/contractor to understand project limits, work zone, etc.

6. No additional ROW is anticipated to be required for the construction of the project. This will be confirmed once the existing ROW surveys are complete.

7. Utilities:
    a. There are existing telecommunications attached to the bridge.
    b. Subsurface Utility Engineering will need to be done in the area to identify all utilities in the area that may be impacted by the project.
    c. Due to the quick construction timeframe for the project, it may be beneficial to coordinate early relocation of the utilities to move them off the bridge in advance of the DB contract.
8. DB specifications and ABC alternatives
    a. The project may be one of the first to utilize the new Best Value legislation. As the project develops goals for a best value scoring system will need to be further discussed. Some early ideas for best value are:
        - Lifecycle costs
        - Maximizing bridge clearances
        - Minimizing construction and bridge closure times
        - Maintenance of Traffic (MOT) plan
    b. There are two ABC methods that the Bridge Office was originally considering:
        - Using self-propelled-modular-transports (SPMT)
        - Lateral sliding of the bridge into place, which is the method being pushed by FHWA's Every Day Counts II initiative.
    c. The State Highway Research Program (SHRP) 2 has developed an ABC Toolkit that identifies other methods of ABC bridge construction. These methods will need to be vetted further to determine if they will be allowed on this project.
        - Bridge Office is concerned that if the toolkit is used that the contractors will select an ABC method that is not desired (steel beams and precast deck)
        - HNTB to analyze and evaluate the additional ABC methods in the SHRP 2 Toolkit and recommend those that would accomplish the goals of the project for further discussion with GDOT and FHWA.
        - HNTB will discuss SHRP2 ABC toolkit with Bala Sivakumar (HNTB and tool kit author) discuss all methods and cost index of alternatives.
        - Ben Beerman with FHWA's Resource Center should be considered as an additional resource for evaluating acceptable methods.
    d. Bridge design criteria
        - The bridge will be designed using LRFD.
        - New sub and super structures
        - Existing footings may be allowed to be retained if the DB team could prove they are acceptable. This may factor into the lifecycle value of the best value scoring.
        - Steel and/or concrete beams would be acceptable
        - GDOT is open to alternative bridge designs such as the Florida Bulb Tee or tub girders but DB teams would need to propose that on and individual basis.
        - Options for what is feasible at this location need to be developed. A limited bridge type study will determine what alternatives for the bridges are available, including number of spans, beam type and substructure options in the context of ABC techniques that will be considered for this project. HNTB will develop the study.

9. Industry outreach
    a. DB teams need to be familiar with ABC techniques that will be available on this project. The group discussed informing DB teams of showcases of ABC construction activities throughout the country.
        - After the meeting, it was identified that there is a showcase for the slide in technique in New York this fall.
    b. IPD had anticipated that GDOT/HNTB would hold an education session for interested DB teams in advance of advertising the project. This may need to be timed to allow for DB teams to visit similar construction projects throughout the country prior to the project's advertisement.

Action Items:

1. **HNTB to follow up with OES to determine if the bat surveys will need to include the Long Ear bat. [COMPLETE]**
2. **HNTB to coordinate with US Fish and Wildlife Services (USFWS) to determine if the bat surveys are needed.**
3. **HNTB to analyze and evaluate the additional ABC methods in the SHRP 2 Toolkit and recommend those that would accomplish the goals of the project for further discussion with GDOT and FHWA.**
4. **HNTB will develop bridge type study to determine span arrangements, beam types and substructure option for this project to see what is feasible.**

This represents our understanding of items discussed and decisions reached. Please contact Andrew Hoenig (404-631-1757 or ahoenig@dot.ga.gov) if there are changes or additions no later than seven days after receipt.

cc: Attendees, Darryl VanMeter (GDOT), Tim Heilmeier (HNTB), Rob Lewis (HNTB), Keith Strickland (HNTB), Dom Saulino (HNTB)

Attachment H

Concept Meeting Minutes

MEETING NOTES

Date: October 9, 2013

Project: I-24 at SR 299 Accelerated Bridge Construction – PI Number 0011682; Dade County

Purpose: Concept Team Meeting

Location: GDOT District 6 Conference Room

Time: 10:00 AM

Attending:

Victor Dang	FHWA	Victor.dang@dot.gov	404-562-3654
Brendan Feery	FHWA	Brendan.feery@dot.gov	404-562-3444
Leon Kim	FHWA	Leon.kim@dot.gov	404-562-3636
Justin Messer	GDOT – District 6 Area 4	jmesser@dot.ga.gov	770-825-6402
Tyler Lumsden	GDOT – District 6	tlumsden@dot.ga.gov	770-630-2588
David Ray	GDOT – District 6	dray@dot.ga.gov	678-721-5256
Michael Haithcock	GDOT – District 6	mhaithcock@dot.ga.gov	678-227-2454
DeWayne Comer	GDOT – District 6	dcomer@dot.ga.gov	770-387-3602
Steve Gaston	GDOT – Bridge	sgaston@dot.ga.gov	404-631-1881
Keith Posey	GDOT – DP&S	kposey@dot.ga.gov	404-631-1219
Kenny Beckworth	GDOT – Construction	kbeckworth@dot.ga.gov	770-387-3611
James Harry	GDOT – Construction	jharry@dot.ga.gov	404-326-6235
Melissa Harper	GDOT – Construction	mharper@dot.ga.gov	404-631-1771
Michele Pate	GDOT – Eng. Services	mpate@dot.ga.gov	404-631-1771
Andrew Hoenig	GDOT - IPD	ahoenig@dot.ga.gov	404-631-1757
Jim Aitken	HNTB	jaitken@hntb.com	404-946-5775
David Hannon	HNTB	dhannon@hntb.com	404-275-2829

The following items were discussed:

1. Andrew Hoenig opened the meeting by leading introductions and providing background on the project.
    a. The scope of the proposed project is to replace the existing SR 299 bridge over I-24 utilizing a weekend closure of SR 299. The bridge replacement will be done with accelerated bridge construction (ABC) techniques and let as a Design-Build (DB) project. No right-of-way is anticipated.
    b. The current project schedule is:
        - Concept Team Meeting — October 9, 2013
        - PIOH — December 3, 2013
        - CE Approval — Spring 2014
        - DB Letting — Summer 2014
        - Construction Complete — Fall 2015
    c. The project is Full Oversight, within the Chattanooga-Hamilton County Regional Planning Agency, and Congressional District 14.
    d. The project is funded in 2015 and the cost estimate included in the concept report includes ABC bridge move, final design (to be done by the design build team), CEI, and construction contingencies.
2. David Hannon reviewed the project layout:
    a. The project will replace the existing SR 299 Bridge over I-24 on the same alignment as the existing bridge. The new bridge will be wider to meet current AASHTO requirements.

b. SR 299 is anticipated to be closed from 9:00 PM Friday to 5:00 AM Monday for a total closure of 56 hours. A detour will be established to allow traffic to get from the north side of SR 299 to the south side.
c. The group discussed the ability to construct the bridge using standard construction methods of either an onsite detour bridge, or staged construction that would allow for the new bridge to be built adjacent to the existing bridge in such a way that traffic could remain open during construction. Options that were discussed include:
    - Onsite detour with temporary bridge or using existing bridge during construction and realigning SR 299:
        1. This option is not being considered due to the high cost of the new or temporary bridge as the existing ground elevation adjacent to I-24 north of the existing alignment is approximately 60 feet below I-24 and has potential stream impacts.
        2. The wooded areas adjacent to the existing bridge include potential roosting habitat for the Indiana Bat and cannot be cleared in the breeding season which spans March 1 to October 31st of each year.
    - Onsite detour with staged construction:
        1. Staging for this would be difficult and would result in reduced lane widths and undesirable sight distance issues across the existing bridge.
        2. The staged construction would likely be done to the south of the existing bridge due to the steep slopes to the north and this would result in the new bridge alignment with a smaller horizontal curve radius which would be undesirable for the project.
        3. While this option would allow for traffic to remain open on SR 299, it would cause a detriment to the traveling public for a much longer duration (9 to 12 months).
d. This project has been received additional federal funding by agreeing to utilize ABC techniques. This funding will require the project to be constructed with ABC techniques.
e. A crossover on I-24 will likely need to be constructed to be able to demolish the existing bridge and to move the new bridge into place. This will require traffic to run as contra-flow separated by temporary barrier walls with reduced lane widths. The crossover of traffic on I-24 and contra-flow lanes will also be allowed only during the weekend closure of SR 299. Two separate crossovers will need to be done for each side of I-24.
f. Due to the high volume of traffic and truck traffic on I-24, the crossover will need to accommodate four lanes, two in each direction.

3. Context Sensitive Solutions
    a. Detour Route: The group discussed if the detour route should be done using county roads or State Routes. If county roads are used, then they may need to be upgraded to accommodate the additional traffic volumes. A detour on State Routes will involve routing traffic into Alabama and Tennessee and would require an agreement from both states. The group determined that a detour on State Routes is preferred.
        - Andrew to contact AlDOT and TnDOT to discuss detour route.
    b. Weekend closure timeframe: The group discussed potential events that may impact when the weekend closure can be utilized. Known events include a Civil War reenactment and a Chattanooga Music Festival. Dates for these events and additional events will be identified through coordination with Dade County, TnDOT, and AlDOT.
        - Andrew to contact Dade County, TnDOT, and AlDOT regarding local events that would be impacted by the weekend closure.
    c. Weekend closure impacts to gas stations on SR 299: There are gas stations and other small businesses located on the north and south sides of SR 299. Due to the crossover required and the construction staging for the weekend bridge move, the interchange ramps will likely be closed for the duration of the weekend closure and at a minimum the

ramps will be closed for the direction of traffic that is in contra-flow. This will cause a potential loss of business for all businesses on SR 299 at all times during the weekend ABC bridge move. No Right of Way (ROW) is being acquired from any of the businesses and the Department may not have a mechanism to pay these businesses for damages.

- Andrew to discuss business impacts with the ROW Office and identify mitigation measures.
    1. Update: The ROW Office indicated that the gas stations and other businesses along SR 299 are not allowed any compensation for the closure of the ramps, interstate or SR 299.

4. Design and Structural Data:
    a. A Design Exception may be required for the 8% existing vertical grade on SR 299 adjacent to the existing bridge.
        - HNTB to determine if the 8% existing vertical grade on SR 299 can be fixed during the construction of the project or if a Design Exception is required.
5. Utilities:
    a. SUE for the project was is currently underway and is anticipated to be complete by the end of this month.
    b. Once SUE has been completed, IPD will work with the District Utilities Office to set up a Utility Coordination meeting with all affected utility owners with the goal of relocating all utility owners in advance of construction.
6. Transportation Management Plan (TMP)
    a. A TMP is required for this project. This is considered a non-significant project, but the TMP will need to include a Traffic Control Plan and Public Involvement component for the detour.
7. NEPA
    a. The NEPA document is currently anticipated to be an Categorical Exlusion.
    b. Air Quality: Has been submitted to the Office of Environmental Services and is waiting on approval.
    c. Ecology: Has been submitted to FWHA for concurrence.
    d. History: Has been approved.
    e. Archeology: Has been approved.
    f. Noise: Has been approved.
    g. The project justification statement has been completed.
    h. Public Involvement:
        - The PIOH is scheduled for December 3, 2013.
        - A detour meeting will be held as a joint effort by GDOT and the DB team 4-6 prior to the weekend closure.
        - Specific outreach will be done at that time to engage the trucking industry and local residents and businesses.
8. Design-Build Best Value
    a. This project is anticipated to use Best-Value to select the winning Design-Build team. Best Value allows the Department to use a combination of a technical score and a price score to award the project to the proposing Design-Build team with the highest combined score.
    b. The group discussed potential items to be reviewed as part of the technical scoring:
        - Overall construction time
        - Weekend closure time – the group determined that reducing the closure time from 56 hours would not provide a benefit.
        - Traffic Control – ability to keep ramps open
        - Construction Staging – ability to keep ramps open, safer construction zone for travelling public

- Safer design for SR 299 – reduction in vertical grades, super elevation, flatter curve radius, etc…

c. Alternative Technical Concepts will also be allowed on this project. These will allow for the proposing Design-Build teams to propose alternative designs that are equal or better to the contract requirements.

9. FHWA Comments:
   a. FHWA would like to have a project showcase for this project to highlight it nationally. GDOT does not have the time or resources necessary to lead a showcase at this time.

Action Items:

1. **Andrew to contact AlDOT and TnDOT to discuss detour route.**
2. **Andrew to contact Dade County, TnDOT, and AlDOT regarding local events that would be impacted by the weekend closure.**
3. **Andrew to discuss business impacts with the ROW Office and identify mitigation measures. [COMPLETED]**
   a. **Update: The ROW Office indicated that the gas stations and other businesses along SR 299 are not allowed any compensation for the closure of the ramps, interstate or SR 299.**
4. **HNTB to determine if the 8% existing vertical grade on SR 299 can be fixed during the construction of the project or if a Design Exception is required.**

This is represents our understanding of items discussed and decisions reached. Please contact Andrew Hoenig (404-631-1757 or ahoenig@dot.ga.gov) if there are changes or additions no later than seven days after receipt.

cc: Attendees, Darryl VanMeter (GDOT), John Hancock (GDOT), Wayne Mote (HNTB)

Attachment H

Justification Statement Coordination

O'Quinn, Dustin

From: Hannon, David <dhannon@dot.ga.gov>
Sent: Thursday, June 06, 2013 12:53 PM
To: Anthony Prevost
Subject: FW: Justification Statement for PI 011682 - Dade County
Attachments: 2013-05-09_PI_No_0011682_Dade.docx

****
David Hannon, P.E., CPESC
Consultant - HNTB
Cell: 404-275-2829

Working with the
Office of Innovative Program Delivery
Darryl D. VanMeter, P.E.
****

From: Hoenig, Andrew
Sent: Thursday, June 06, 2013 10:14 AM
To: Hannon, David
Subject: FW: Justification Statement for PI 011682 - Dade County

- Andrew Hoenig
P: (404)-631-1757

From: Bennett, Clayton
Sent: Thursday, June 06, 2013 6:27 AM
To: Hoenig, Andrew
Subject: Justification Statement for PI 011682 - Dade County

Andrew,

Please find attached the justification statement for the subject project.

If you have any questions please feel free to contact me.

Regards,

Clayton Bennett, P.E.
GDOT State Bridge Inspection Engineer

935 East Confederate Avenue, SE
Building 24, Room 406
Atlanta, Georgia 30316-2531
Office number 404-635-2889
Cell number 404-519-9287

The Georgia Department of Transportation continues its RoadWorks 2013 construction program. Dozens of important roadway improvement projects are ongoing throughout the state this summer as we work to deliver projects on time and on budget while keeping our transportation network the nation's finest. Pardon the necessary inconvenience and please drive cautiously and safely at all times, especially in work zones.

Visit us at http://www.dot.ga.gov; or follow us on http://www.facebook.com/GeorgiaDOT and http://twitter.com/gadeptoftrans

---

The Georgia Department of Transportation continues its RoadWorks 2013 construction program. Dozens of important roadway improvement projects are ongoing throughout the state this summer as we work to deliver projects on time and on budget while keeping our transportation network the nation's finest. Pardon the necessary inconvenience and please drive cautiously and safely at all times, especially in work zones.

Visit us at http://www.dot.ga.gov; or follow us on http://www.facebook.com/GeorgiaDOT and http://twitter.com/gadeptoftrans

PI 0011682

Clayton Bennett

May 13, 2013

This bridge (Structure ID 083-0020-0; SR 299 over I-24 (SR 409)) was built in 1965. The bridge consists of four spans of steel girders on concrete caps and columns. The overall condition of this bridge would be classified as fair. The deck is in fair condition with concrete spalls and heavy transverse cracking throughout. The superstructure is in satisfactory condition with minor deterioration of the steel girders. The substructure is in fair condition with moderate to heavy concrete cracking and signs of rebar deterioration. Due to the structural integrity of the bridge and the condition of the deck and substructure replacement is recommended.

Attachment I

Public Involvement Open House Synopsis

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: P. I. Nos. 0011682 OFFICE: Environmental Services
DATE: December 3, 2013

FROM Glenn Bowman, P.E., State Environmental Administrator

TO Distribution Below

SUBJECT PUBLIC INFORMATION OPEN HOUSE SYNOPSIS

PROJECT NOs. & COUNTY:	Dade
PROJECT DESCRIPTION:	This project is the replacement of the existing bridge on SR 299 over I-24 using Accelerated Bridge Construction (ABC), replacing the bridge over a weekend.
DATE:	December 3, 2013
NUMBER IN ATTENDANCE:	37
FOR:	7
CONDITIONAL:	3
UNCOMMITTED:	0
AGAINST:	0
OFFICIALS IN ATTENDANCE:	1
ADDITIONAL COMMENTS:	Better signage is needed at the interchange after construction; widen the bridge while replacing; clearing and lighting for more visibility at ramps.
PREPARED BY:	Charlotte Weber, HNTB
TELEPHONE No.:	(404) 946-5712

cc: Russell McMurray, P.E.
Andrew Hoenig, P.E.
P. Paul Alimia
Chérie Marsh, District 6