ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0009542
I-20 Collector/Distributor
system, east bound lanes from
I-285 to Panola Road
DeKalb County
District 7

OFFICE Design Policy & Support

DATE September 14, 2010

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:

Genetha Rice-Singleton, Program Control Adminstrator
Ron Wishon, State Project Review Engineer
Glenn Bowman, State Environmental Administrator
Ken Thompson, Statewide Location Bureau Chief
Michael Henry, Systems & Classification Branch Chief
Kathy Zahul, State Traffic Engineer
Angela Alexander, State Transportation Planning Administrator
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Angela Robinson, Financial Management Administrator
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Mac Cranford, District Planning & Programming Engineer
Jonathan Walker, District Utilities Engineer
Mike Lobdell, District Preconstruction Engineer
Bryant Poole, District Engineer
Marlo Clowers, Project Manager
Persephone Goodwin, Area Engineer (D7A4)
BOARD MEMBER - 4th Congressional District

U.S. Department of Transportation
Federal Highway Administration

Georgia Division

61 Forsyth Street S.W.
Atlanta, Georgia 30303
404-562-3630
404-562-3703
GA.fhwa@dot.gov

June 2, 2010

In Reply Refer To:
HPE-GA

Mr. Vance C. Smith, Commissioner
Georgia Department of Transportation
One Georgia Center
600 West Peachtree
Atlanta, GA 30308

Dear Mr. Smith:

We have reviewed the Concept Report for the proposed modifications to add collector distributer lanes along I-20 between I-285 and Wesley Chapel Road, PI Number 0009542. We approve the concept of the project with the following comments:

- Engineering and Operational Acceptability of the IMR has not been processed for this location. Because the IMR has not been completely processed, there is a potential for discrepancies between the IMR and the Concept Report. If there is a discrepancy in the project description between the Concept Report and the IMR, the Concept Report would need to be revised to match the IMR.

- The Need and Purpose of the project has been revised after the Concept Report was circulated through GDOT for signature. FHWA does not concur in the Need and Purpose as presented in the Concept Report, but is comfortable with the revised Need and Purpose.

- Noise walls did not appear to be discussed as part of the scope of the project, however, there is a small quantity contained in the estimate. Current analysis indicates that noise walls will be needed. The limits of noise wall construction is still being coordinated with our office.

RECOVERY.GOV

Please contact Mindy Roberson at (404) 562-3652, if you have any questions or would like to schedule a meeting to discuss any of these comments.

Sincerely,

Rodney N. Barry, P.E.
Division Administrator

Cc: David Peters, GDOT Location Conceptual Design Group Manager
Marlo Clowers, GDOT Office of Innovative Program Delivery

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

Office of Innovative Program Delivery

PROJECT CONCEPT REPORT

I-20 Eastbound From I-285 to CR 5150/Panola Road – CD System

Project Number: --
County: DeKalb
P. I. Number: 0009542

Federal Route Number: I-20
State Route Number: 402

Recommendation for approval:

DATE 10/14/09 Marlo S. Clowers
Project Manager

DATE 10/15/09 Daryl G. Vereen
State Innovative Program Delivery Engineer

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

DATE 10/23/09 Angela S. Allyard
State Transportation Planning Administrator

DATE _____
Financial Management Administrator

DATE 11/05/09 Glenn Bowman / OEP
State Environmental/Location Engineer
(approval on file)

DATE _____
State Traffic Safety & Design Engineer

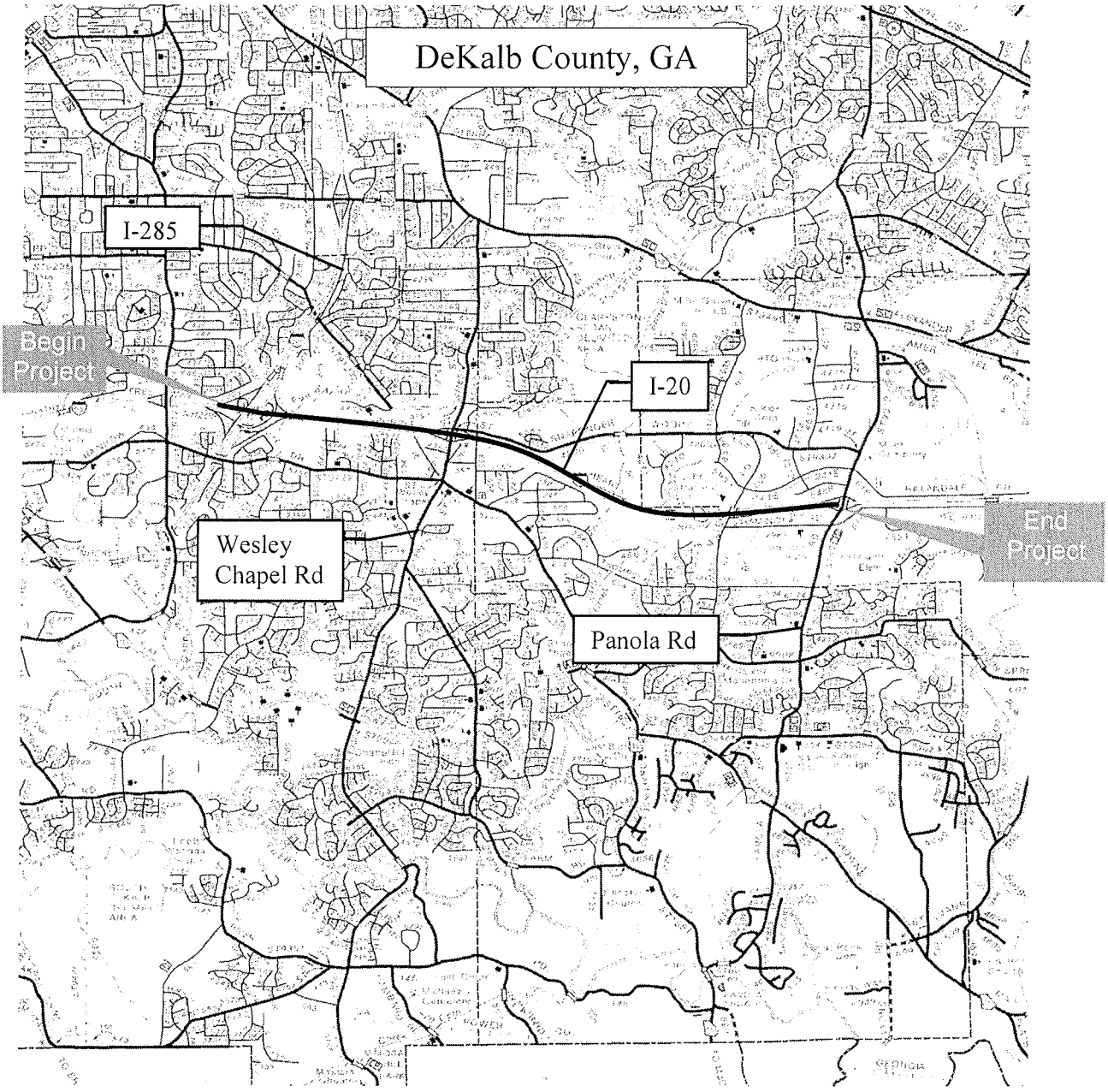
DATE _____
District Engineer

DATE _____
Project Review Engineer

DATE _____
State Urban Design Engineer

* THIS PROJECT IS A CANDIDATE FOR TIGER FUNDS AND, THEREFORE, IS NOT CURRENTLY INCLUDED IN THE RTP OR STIP. THIS PROJECT WILL BE INCLUDED IN BOTH THE RTP AND STIP AS SOON AS FUNDING IS SECURED.

Project Location Map



Need and Purpose:

The purpose of the proposed project is to provide operational and safety improvements along I-20 eastbound in the vicinity of the I-285 interchange (from approximately Columbia Drive to the I-20/Panola Road interchange) in DeKalb County, Georgia. A primary goal of the proposed project is to renew and extend the operational life of a critical segment of Georgia's interstate system. This project is needed to address operational and safety issues resulting from significant weaving on I-20 eastbound between I-285 and Wesley Chapel Road. The weaving in this section results from the conflict between entering traffic from I-285 and exiting traffic to Wesley Chapel Road. This deficiency is made worse by a two-lane reduction in mainline capacity at the Wesley Chapel Road exit. The resulting congestion in this segment spills back on I-20 west of I-285 and up both ramps of entering I-285 traffic, thereby creating congestion on I-285 as well. Poor traffic operations in this section raise major operational and safety concerns, which are described in Attachments 4 and 5.

The Georgia Department of Transportation (DOT) proposes to provide an interim operational improvement along I-20 eastbound in the vicinity of the I-20/I-285 interchange by adding collector-distributor (CD) lanes, modifying general purpose lanes, and making ramp improvements from just west of the I-20/I-285 interchange (approximately Columbia Drive) to the I-20/Panola Road interchange, for a total distance of approximately 4.5 miles. Designed to address system deficiencies in the project area, the CD system would free up the freeway capacity that is currently not being fully utilized due to excessive weaving, significantly increase vehicle throughput, and would address conflicting vehicle movements and stop-and-go traffic conditions to create safer travel conditions.

The proposed project is meant as a short-term solution for the segment of I-20 between I-285 and Panola Road. This temporary solution was identified by GDOT as a way to provide safety and operational improvements until the larger programmed project on I-20 East (Project NHIM0-0020-02(166), P.I. No. 713610, I-20 East Collector/Distributor Lanes Project from Columbia Drive to Evans Mill Road) can be implemented. This project is designed as an interim improvement project only, with a design life of approximately 10 years. The larger project is planned for long-range, but a funding source has not yet been secured for its implementation.

The breakdown year is defined as the year in which the roadway segment would fail (or, operate at a level of service of LOS F). For the proposed improvements within the project area, one section (between Wesley Chapel Road and Panola Road) would fail in 2019; the other section (between I-285 and Wesley Chapel Road) would fail in 2025. Therefore, an overall breakdown year of 2023 was selected for the project area to represent a 10-year design period.

Logical Termini

Significant weaving currently occurs on I-20 between the traffic exiting from I-20 eastbound onto Wesley Chapel Road and entering I-285 traffic that has destinations on I-20 east of Wesley Chapel Road. This weaving along with a two-lane reduction in capacity at the Wesley Chapel exit creates congestion and reduces capacity in this area. This reduction in capacity prevents vehicles from I-285 and I-20 west of the I-285 interchange from entering this segment and causes this freeway section to fail. In order to address this problem, a collector distributor system is being proposed in this segment which would revise the interstate

access points at the existing I-20/I-285 and I-20/Wesley Chapel Road interchanges, thus causing an Interchange Modification Report (IMR) to be required. According to the Federal Highway Administration (FHWA), Georgia Division's Guidance on Interstate Access Requests (August 5, 2003), an IMR requires that the operational impact on the mainline interstate between the proposed revised access and the adjacent existing interchanges on either side be analyzed. Therefore, the proposed project extends from Columbia Drive on the western end, which is the first interchange to the west of the I-20/I-285 interchange, and Panola Road on the eastern end, which is the first interchange to the east of the I-20/Wesley Chapel Road interchange, thereby encompassing the two adjacent interchanges and providing logical termini for this operational improvement project.

The proposed operational improvements would need to include auxiliary lanes from the CD lane merge with mainline I-20 to Panola Road in order to sufficiently address lane balance and operational efficiency of the Wesley Chapel Road and Panola Road interchanges. The addition of two mainline lanes at the merge of the proposed CD system with the I-20 mainline allows for proper lane balancing between Wesley Chapel Road and Panola Road with the subsequent lane drops. Because of the proximity of the CD lane merge with I-20 to the Wesley Chapel Road on ramp merge, the fifth lane is continued 4700 feet through the merge of the Wesley Chapel Road on ramp and is dropped approximately 2600 feet east of that point, which meets both AASHTO and GDOT lane drop recommendations. This length also gives sufficient length for CD traffic and Wesley Chapel Road traffic to merge with mainline I-20. Because traffic forecasts show the exiting traffic from I-20 to Panola Road being so high, the extension of the fourth lane to Panola Road allows the lane to be utilized as an auxiliary lane for the Panola Road exit, and to allow for sufficient weaving length. Termination of this lane at the Panola Road exit maintains the existing two-lane (one exit-only lane, one shared lane) configuration of this exit ramp, would provide lane balance, and would additionally allow for a lane reduction back to the existing three mainline lanes. Therefore, the proposed eastern project terminus at Panola Road is logical.

Description of the proposed project:

This project has been approved for Design-Build Implementation (see attachment).

This project is located in DeKalb County, Georgia on I-20 in the vicinity of the eastern I-20/I-285 interchange, near the towns of Lithonia and Decatur, Georgia. The project is 4.54 miles long and begins at approximate I-20 mile log 66.62 (DeKalb mile log 7.15), just east of the eastbound I-20 off ramp to I-285, and ends at I-20 mile log 71.16 (DeKalb mile log 11.68) at the Panola Road interchange. The proposed construction affects only the eastbound lanes of I-20.

This project consists of constructing approximately 1.2 miles of collector-distributor (CD) lanes from the I-285 / I-20 interchange to Wesley Chapel Road. Three CD lanes will be constructed within existing roadway right of way on the south side of I-20 and will be separated from the I-20 through lanes by a continuous barrier. To mitigate the need to acquire right of way and to reduce environmental impacts, various types of retaining walls will be constructed along the length of the project.

To serve the I-20 traffic entering the CD, an auxiliary lane will be constructed which will widen I-20 from 3 to 4 lanes from just east of the gore area of eastbound I-20 off ramps to I-285 continuing approximately 2700 feet eastward to the proposed slip ramp to the CD lanes.

Additionally, I-20 will be widened from 3 to 5 lanes from just east of Wesley Chapel Road, where the 2-lane CD will merge with I-20, for approximately 4700 feet. From there to Panola Road (approximately 1.7 miles), one lane will be dropped and I-20 will be widened from 3 to 4 lanes.

To provide more adequate ramp storage capacity and to accommodate the proposed widening, the eastbound on and off ramps for Wesley Chapel Road and the eastbound off ramp for Panola will be partially realigned. The I-285 NB and SB ramp to I-20 EB will also be realigned to form the beginning of the proposed CD lanes.

Is the project located in a Non-attainment area? _X_ Yes _____ No.
Based on conversations with GDOT Planning, this project is being considered to be included in the TIP and ENVISION 6 model. The project concept is being provided to ARC so there should be no difference between the proposed project concept and the conforming plans.

PDP Classification: Major _X_ Minor _____

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

Functional Classification: Freeway

U. S. Route Number(s): I-20 **State Route Number(s):** 402

Traffic (AADT): ***Eastbound only***
Current Year: (2009) I-285 to Wesley Chapel: 96000
Wesley Chapel to Panola: 83460

Open Year: (2012) I-285 to Wesley Chapel: 99875
Wesley Chapel to Panola: 87030

Design Year: (2032) I-285 to Wesley Chapel: 148420
Wesley Chapel to Panola: 132095

Existing design features:

- Typical Section:
  - Existing eastbound I-20 through the area of the project consists of five 12 foot lanes from the I-20/I-285 merge to Wesley Chapel Road and has three 12 foot lanes from Wesley Chapel Road to Panola Road. I-20 has a 12 foot paved, rural outside shoulder and 6'-9" paved inside shoulder with median barrier running the entire length of the project.
  - The on-ramp from I-285 to I-20 eastbound consists of three 12 foot lanes, one of which drops after the merge with I-20. Both the inside and outside shoulders are paved 10 foot rural shoulders.
  - The eastbound off ramps for Wesley Chapel and Panola Road vary from two to four 12 foot lanes with a 4 foot inside and 6 foot outside paved shoulder.
  - The eastbound on ramp for Wesley Chapel is a single 16 foot lane with 4 foot inside and 6 foot outside paved shoulders.
- Posted speed:

  - I-20: 55 mph
  - Ramps: variable 35-55 mph
- Maximum degree of curvature:
  - I-20: 1deg. 30' (3819' R)
  - I-285 system ramp to I-20 EB: 5deg. 12' 31" (1100' R)
  - Wesley Chapel and Panola Road ramps: 5deg. 43' 47" (1000' R)
- Maximum grade:
  - I-20: 3.55%
  - I-285: 6.00%
  - Wesley Chapel Road ramps: 5.60%
  - Panola Road ramp: 5.50%
- Width of right of way: varies 300-400 ft
- Major structures:
  - I-285 southbound ramps bridge over I-20: 82' x 236'
    - Sufficiency Rating: unknown
  - I-285 NB and SB bridge over I-20: 164' to 190' wide x 264' long
    - Sufficiency Rating: unknown
  - I-20 EB ramp to I-285 NB bridge over I-20: 42' x 295'
    - Sufficiency Rating: 93.7 (06/20/2000 INSPECTION)
  - Quadruple box culvert at Fowler Creek approximately 44' wide x 12' high located on I-20 approximately at the eastern gores of the I-20/I-285 interchange.
    - Sufficiency Rating: 70.00
  - Wesley Chapel Bridge over I-20: 120' x 297'
    - Sufficiency Rating: 53.22 (the rating for the new bridge was not found)
  - I-20 Bridge over the Snapfinger Creek: 116' x 190'
    - Sufficiency Rating: 83.00
  - Miller Road bridge over I-20: 43' x 250'
    - Sufficiency Rating: 86.16
  - Panola Road bridge over I-20: 90' x 228'
    - Sufficiency Rating: 92.5
- Major interchanges or intersections along the project:
  - **Interchanges**
    - I-20 at Columbia Drive interchange
    - I-20 and I-285 interchange
    - I-20 at Wesley Chapel Road interchange
    - I-20 at Panola Road interchange
  - **Intersections**
    - I-20 eastbound on and off ramps at Wesley Chapel Road
    - I-20 eastbound off ramp at Panola Road
- The existing length of roadway for this project is 4.54 miles. The beginning mile log for DeKalb County is mile 7.15.

Proposed Design Features:

- Proposed typical section(s):
  - I-20 and CD from east of I-285 to Wesley Chapel Road: I-20 will have a 6'-9" paved inside shoulder with median barrier, three 12' travel lanes, and a 12' paved outside shoulder

including a continuous barrier to separate I-20 travel lanes from the CD lanes. The CD will have a 4' paved inside shoulder, three 12' travel lanes, 12' paved outside shoulder with retaining wall and a continuous concrete barrier.

- I-20 from just west of the I-285/I-20 interchange to the just east of the I-285/I-20 interchange: 6'-9" paved inside shoulder with median barrier, four 12' travel lanes, and a 12' paved outside shoulder. Retaining walls and concrete barriers will be constructed as needed.
- Wesley Chapel Road to 4700' east of Wesley Chapel Road: 6'-9" paved inside shoulder with median barrier, five 12' travel lanes, and a 12' paved outside shoulder. Retaining walls and concrete barriers will be constructed as needed.
- 4700' east of Wesley Chapel Road to Panola Road: 6'-9" paved inside shoulder with median barrier, four 12' travel lanes, and a 12' paved outside shoulder. Retaining walls and concrete barriers will be constructed as needed.
- I-285 CD ramp: 10' paved inside shoulder, three 12' travel lanes, and a 12' paved outside shoulder. Retaining walls and concrete barriers will be constructed as needed.
- Wesley Chapel Road EB off ramp: 6' paved inside shoulder with median barrier, three to four 12' travel lanes, and a 6' to 10' paved outside shoulder. Retaining walls and concrete barriers will be constructed as needed.
- Wesley Chapel Road EB on ramp: 4' paved inside shoulder with median barrier, two 12' travel lanes, and a 10' to 12' paved outside shoulder. Retaining walls and concrete barriers will be constructed as needed.
- Panola Road EB off ramp: 4' paved inside shoulder with median barrier, two to three 12' travel lanes, and a 10' paved outside shoulder.

NOTE: Although not shown in the Typical Sections (Attachment 3), the existing eastbound lanes of I-20 will be milled to a depth specified by the Pavement Evaluation Report and inlayed with new material. The amount of surfacing and the type of treatment is determined by the pavement evaluation report (Attachment 11b).

- This project is being constructed as an interim project to a larger programmed CD lane project and managed lane construction project. The current proposed project is meant as a short-term solution until the larger project can be realized and funding can be secured. Because acquisition of right of way was prohibited for this project, all proposed construction will be contained within the existing roadway's clear zone / right of way. Future widening / capacity projects will require additional right of way and will therefore cause the need to remove most, if not all, of the drainage, retaining walls, and sound barriers proposed for this project. However, it is anticipated that much of the proposed paving for this project will be retained for use in the future. See **Attachment 11c** for an itemized cost of items to be removed under future contracts.

- Proposed Design Speed Mainline __70__ mph
- Proposed Design Speed CD Lanes __55__ mph

- Proposed Maximum grade Mainline __4__ % Maximum grade allowable __4__ %
- Proposed Maximum grade Ramps __6__ % Maximum grade allowable __6__ %
- Proposed Maximum grade Side Street __n/a__ % Maximum grade allowable __n/a__ %.
- Proposed Maximum grade driveway __n/a__ %

- Proposed Maximum degree of curve:
  - I-20: 1deg. 30' (3819' R)
  - I-285 ramps: 5deg. 24" 19" (1060' R)

  Maximum degree allowable:
  - I-20: 2deg. 48' 31" (2040'R @ 6%, 70 mph)
  - I-285 ramps: 5deg. 24" 19" (1060' R @ 6%, 55 mph)

- Right of way
  - Width: No right of way will be acquired. Existing right of way varies 300-400 ft.
  - Easements: Temporary ( ), Permanent ( ), Utility ( ), Other ( ).
  - Type of access control: Full (x), Partial ( ), By Permit ( ), Other ( ).
  - Number of parcels: ___0_____ Number of displacements:
    - Business: _____0_____
    - Residences: _____0_____
    - Mobile homes: ___0_____
    - Other: _____0_____
- Structures:
  - Bridges: No existing bridge decks will be modified or widened. Impacts to bridges will be isolated to reconstructing/reconfiguring bridge column protection and the restriping of travel lanes and shoulders.
  - Retaining walls: Several types of retaining walls will be constructed that may include cantilever walls, gravity walls, L-walls, soil nail, tie-back, and MSE. Depending on right of way restrictions, pier walls and other types of small-footprint type walls may be constructed. Wall types will be analyzed on a case-by-case basis taking into account right of way, cost, utility impacts, and wall-type usage.

- Major intersections and interchanges:
  - **Interchanges:**
    - I-20 at Columbia Drive: this interchange was included in the study area but no changes are planned.
    - I-20 and I-285: the on ramp from I-285 to eastbound I-20 will be realigned at existing grade.
    - I-20 at Wesley Chapel Road: the eastbound on and off ramps will be realigned at existing grade.
    - I-20 at Panola Road: the eastbound off ramp will be realigned at existing grade.
  - **Intersections:**
    - I-20 eastbound ramps at Wesley Chapel Road: proposed ramp construction will tie to the existing intersection.
    - I-20 eastbound ramps at Panola Road: proposed ramp construction will tie to the existing intersection.

- Traffic control during construction: Widening and construction will tie to the existing grade of I-20 and all interchange ramps. Minimal temporary lane closures will be needed to overlay existing I-20 and to pave where the proposed construction crosses existing travel lanes and ramps. A long term shoulder closure will be required for the construction of widening and the CD lanes. The closure type and schedule will be established by special provision 150.11 and should be limited to nights and

weekends.

- Design Exceptions to controlling criteria anticipated:

	UNDETERMINED	YES	NO
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)	( )	( )

Roadway Width Exception: To retain the existing Snapfinger Creek bridge on I-20 and the Miller Road Bridge over I-20, the eastbound lane width is proposed to be reduced to 11' starting at the Snapfinger Creek bridge and ending just past the Miller Road bridge (approximately 5500').
Shoulder Width Exception #1: To minimize the amount of construction needed and to reduce the need for right of way, the existing 6'-9" inside shoulders (8' on center) will be retained throughout the project on I-20.
Shoulder Width Exception #2: To retain the existing bridge, the outside paved shoulder is proposed to be reduced to 2'-10" on I-20 in area of the bridge over Snapfinger Creek.
Shoulder Width Exception #3: To retain the existing bridge, the outside paved shoulder is proposed to be reduced to 2'on I-20 in area of the Miller Road bridge over I-20.
Shoulder Width Exception #4: To eliminate the need to acquire right of way, a 6' outside shoulder is proposed on a portion of the I-20 EB off ramp to Wesley Chapel Road.
Horizontal Clearance Exception #1: To minimize the amount of construction needed and to reduce the need for right of way, the existing 6'-9" inside shoulders will be retained throughout the project on I-20. The horizontal clearance to concrete side barriers will require a design exception.
Horizontal Clearance Exception #2: To retain the existing bridge, the outside paved shoulder is proposed to be reduced to 2'-10" on I-20 in area of the bridge over Snapfinger Creek. The horizontal clearance to concrete side barriers will require a design exception.
Horizontal Clearance Exception #3: To retain the existing bridge, the outside paved shoulder is proposed to be reduced to 2'on I-20 in area of the Miller Road bridge over I-20. Because of this, the horizontal clearance to concrete side barriers will require a design exception.
Horizontal Clearance Exception #4: To eliminate the need to acquire right of way, a 6' outside shoulder and retaining wall is proposed on a portion of the I-20 EB off ramp to Wesley Chapel Road. The horizontal clearance to the retaining wall will require a design exception.
Bridge Width Exception: To retain the existing Snapfinger Creek Bridge, the outside paved shoulder is proposed to be reduced to 2'-10" on I-20.
Vertical Clearance Exception: There is a possibility that Miller Road bridge over I-20 does not provide adequate clearance. This will be investigated and an exception will be submitted if conditions merit one.

- Design Variances: None expected.

- Environmental concerns: Impacts to waters of the U.S., Section 404 Permit, floodplains, noise impacts, environmental justice communities.

- Level of environmental analysis anticipated:
  - Are Time Savings Procedures appropriate? Yes (x), No ( ),
  - Categorical exclusion (x),
  - Environmental Assessment/Finding of No Significant Impact (FONSI) ( ), or
  - Environmental Impact Statement (EIS) ( ).

- Utility involvements: Expected involvements will be determined pending a SUE Level B survey of the corridor.
  - Communications
  - Power
  - Gas
  - ITS
  - Telephone

Project responsibilities:

- Costing Plan Design: GA DOT Office of Innovative Delivery; Consultant: ARCADIS
- Right of Way Acquisition: N/A
- Relocation of Utilities: Utility Owner
- Letting to contract (**Design Build**): GA DOT
- Supervision of construction: GA DOT
- Providing material pits: Construction Contractor
- Providing detours: Construction Contractor
- Environmental: Arcadis, with GDOT oversight

Coordination

- Initial Concept Meeting date and brief summary: N/A, Due to fast-track schedule, only the concept meeting will be held.
- Concept meeting date and brief summary: Meeting held September 29, 2009. See meeting minutes for summary (Attachment 8).
- P. A. R. meetings, dates and results: None expected.
- FEMA, USCG, and/or TVA: None expected
- Public involvement: A Public Information Open House is anticipated to be held November 17, 2009. Public input will be evaluated and incorporated into the project as appropriate.
- Local government comments: No comments have been received at this time.
- Other projects in the area.
  - 721820-DeKalb (STP00-0165-01(060)): Snapfinger Rd from Wesley Chapel to Flat Shoals Pkwy
  - 712510-DeKalb (NHIM0-0285-01(296)): I-285 from I-20 N to Stone Mountain Fwy
  - 713610-DeKalb (NHIM0-0020-02(166)): I-20 from Columbia Dr east to Evans Mill Rd
  - 742750-DeKalb (STP00-9121-00(005)): Columbia Drive at Columbia Woods Drive / Rainbow Drive
  - 714085-Rockdale (NH000-0020-02(179)): I-20 ATMS Comm/Surveillance fm I-285/Dek to

SR 138/SR20 Rock
  - M003234-DeKalb (CSNHS-M003-00(234)): I-20 from CR 5154 / Columbia Dr to SR 12/Turner Hill Rd
  - M003309-DeKalb (CSNHS-M003-00(309)): I-20 @ CR 5150 / Panola Road – Interchange Improvement
  - 0000715 (NHS00-0000-00(715)): I-20 from East Managed Lanes
  - 0006898 (CSSTP-0006-00(898)): CR 5195 / Rainbow Drive from Candler Rd to Wesley Chapel Rd
  - 0006459 (CSMSL-0006-00(459)): I-285 Noise Walls from I-20 to Bouldercrest Rd
  - 0006402 (CSNHS-0006-00(402)): I-20 from I-285/Fulton to I-285/DeKalb – ATMS Ramp Meters
  - 0006395 (CSNHS-0006-00(395)): I-285 NE ATMS Ramp Meters from I-85 to I-20
  - 0005905 (CSSTP-0005-00(905)): CR 5150/Panola Rd from Thompson Mill Rd to Fairington Rd
  - 0002868 (NHS00-0002-00(868)): Panola Rd @ I-20 from Fairington Rd to Snapfinger Woods Dr
  - 0000378 (IM000-0000-00(378)): I-285 / I-20 East: Reconstruct Interchange
- Other coordination to date:
  - Section 106 Early Notification Letter sent Sept 04, 2009
  - Georgia DNR Early Coordination letter for T&E Species sent Sept 04, 2009
  - FEMA Early Coordination letter sent Oct 02,2009
- Railroads – N/A

Scheduling – Responsible Parties' Estimate (For Detailed Schedule, See Attachment 11d)

- Time to complete the environmental process: ___6_____Months.
- Time to complete 30% costing plans for the design build project: ____8_____Months.
- Time to complete right of way plans: ___N/A_____Months.
- Time to complete the Section 404 Permit: ___2.5___Months.
- Time to complete final construction plans: ___N/A_____Months.
- Time to complete to purchase right of way: ___ N/A _____Months.
- List other major items that will affect the project schedule: _____Months.

Other alternates considered: Alternatives that were not used are as follows:

2023 No-Build Scenario

- Existing Roadway network
- Tie back to the existing three lane section along I-20 eastbound, past Panola Road off ramp

Alternative 2: 3-Lane Barrier CD with 1-Lane Merge with Mainline east of Wesley Chapel Road On-Ramp

- Develop a 1-lane eastbound deceleration lane for the CD immediately after the I-20 Eastbound exit ramp to I-285 South.
- Sign the beginning of the CD 'to Wesley Chapel Road'.
- Start the barrier in the gore where the CD starts.

- Continue the 1-lane CD to the entrance ramp from I-285.
- Merge the I-285 northbound entrance ramp with 2-lane entrance ramp from I-285 southbound to form a 2-lane entrance ramp from I-285.
- Merge the 1-CD lane with the 2-lane entrance ramp from I-285 to form a 3-lane CD.
- Sign the outside CD lane to be exit only to Wesley Chapel and keep the center CD lane to be a decision lane to exit at Wesley Chapel or continue through. (this configuration would provide approximately 4500 feet of weaving segment length along I-20 eastbound CD, between I-285 merge and Wesley Chapel Road exit)
- Merge the acceleration lane from 1-lane Wesley Chapel on-ramp with the 2-lane CD to form a 2-lane CD.
- Continue 2-lane CD for an approximate distance of 2950 feet from the Wesley Chapel Road merge and drop the rightmost lane to form 1-lane CD.
- Continue 1-lane CD for an approximate distance of 2000 feet and merge with 3-lane I-20 eastbound mainline to form 4-lane section on I-20.
- Maintain 4th lane as an auxiliary lane up to Panola Road exit.
- Tie back to the existing three lane section along I-20 eastbound, past Panola Road off ramp

Alternative 3: 3-Lane Barrier CD with Braided Option and 2-Lane Merge with Mainline

- Develop a 1-lane eastbound deceleration lane for the CD immediately after the I-20 Eastbound exit ramp to I-285 South.
- Sign the beginning of the CD 'to Wesley Chapel Road'.
- Braid the 1-lane CD from I-20 with the entrance ramp from I-285
- Continue the 1-lane CD to the entrance ramp from I-285.
- Merge the I-285 northbound entrance ramp with 2-lane entrance ramp from I-285 southbound to form a 2-lane entrance ramp from I-285.
- Merge the 1-CD lane with the 2-lane entrance ramp from I-285 to form a 3-lane CD.
- Sign the outside CD lane to be exit only to Wesley Chapel and keep the center CD lane to be a decision lane to exit at Wesley Chapel or continue through. (this configuration would provide approximately 4500 feet of weaving segment length along I-20 eastbound CD, between I-285 merge and Wesley Chapel Road exit)
- Merge the two CD lanes (past 2-lane off-ramp to Wesley Chapel) with 3-lane I-20 eastbound mainline to form a 5-lane section on I-20.
- Keep five lanes along I-20 eastbound segment east of Wesley Chapel Road, with fifth lane dropped off at approximately 4700 feet east of Wesley Chapel Road
- Maintain 4th lane as an auxiliary lane up to Panola Road exit.
- Tie back to the existing three lane section along I-20 eastbound, past Panola Road off ramp

Alternative 4: 3-Lane Barrier CD with Braided Option and 1-Lane Merge with Mainline

- Develop a 1-lane eastbound deceleration lane for the CD immediately after the I-20 Eastbound exit ramp to I-285 South.
- Sign the beginning of the CD 'to Wesley Chapel Road'.
- Braid the 1-lane CD from I-20 with the entrance ramp from I-285
- Continue the 1-lane CD to the entrance ramp from I-285.
- Start the barrier where the 3-lane CD starts.

- Merge the I-285 northbound entrance ramp with 2-lane entrance ramp from I-285 southbound to form a 2-lane entrance ramp from I-285.
- Merge the 1-lane CD as a buffer separated lane with the 2-lane entrance ramp from I-285 to form a 3-lane CD.
- Sign the outside CD lane to be exit only to Wesley Chapel and keep the center CD lane to be a decision lane to exit at Wesley Chapel or continue through. (this configuration would provide approximately 4500 feet of weaving segment length along I-20 eastbound CD, between I-285 merge and Wesley Chapel Road exit)
- Merge the acceleration lane from 1-lane Wesley Chapel on-ramp with the 2-lane CD to form a 2-lane CD.
- Continue 2-lane CD for an approximate distance of 2950 feet from the Wesley Chapel Road merge and drop the rightmost lane to form 1-lane CD.
- Continue 1-lane CD for an approximate distance of 2000 feet and merge with 3-lane I-20 eastbound mainline to form 4-lane section on I-20.
- Maintain 4th lane as an auxiliary lane up to Panola Road exit.
- Tie back to the existing three lane section along I-20 eastbound, past Panola Road off ramp

Alternative 5: Two lane barrier separated CD

- Develop a 1-lane eastbound deceleration lane for the CD immediately after the I-20 Eastbound exit ramp to I-285 South.
- Sign the beginning of the CD 'to Wesley Chapel Road'.
- Start the barrier in the gore where the CD starts.
- Continue the 1-lane CD to the entrance ramp from I-285.
- Transition I-285 southbound ramp from two lane to one lane ramp, upstream of I-285 northbound ramp merge
- Merge the I-285 northbound entrance ramp with 1-lane entrance ramp from I-285 southbound to form a 1-lane entrance ramp from I-285.
- Merge the 1-CD lane with the 1-lane entrance ramp from I-285 to form a 2-lane CD.
- Sign the outside CD lane to be exit only to Wesley Chapel and keep the inner CD lane to be a decision lane to exit at Wesley Chapel or continue through. Merge the one CD lane (past 2-lane off-ramp to Wesley Chapel) with 3-lane I-20 eastbound mainline to form a 4-lane section on I-20.
- Maintain 4^{th} lane as an auxiliary lane up to Panola Road exit.
- Tie back to the existing three lane section along I-20 eastbound, past Panola Road off ramp

Alternative 6: 3-Lane Barrier CD with 2-Lane Merge with Mainline and Additional Mainline Capacity Improvements

- Develop a 1-lane eastbound deceleration lane for the CD immediately after the I-20 Eastbound exit ramp to I-285 South.
- Sign the beginning of the CD 'to Wesley Chapel Road'.
- Start the barrier in the gore where the CD starts.
- Continue the 1-lane CD to the entrance ramp from I-285.
- Merge the I-285 northbound entrance ramp with 2-lane entrance ramp from I-285 southbound to form a 2-lane entrance ramp from I-285.
- Merge the 1-CD lane with the 2-lane entrance ramp from I-285 to form a 3-lane CD.

- Sign the outside CD lane to be exit only to Wesley Chapel and keep the center CD lane to be a decision lane to exit at Wesley Chapel or continue through. (this configuration would provide approximately 4500 feet of weaving segment length along I-20 eastbound CD, between I-285 merge and Wesley Chapel Road exit)
- Merge the two CD lanes (past 2-lane off-ramp to Wesley Chapel) with 3-lane I-20 eastbound mainline to form a 5-lane section on I-20.
- Sign the 5th lane (outside lane) as an exit only lane to Panola Road and maintain the 4th lane as a decision lane to exit to Panola Road or continue on I-20, at approximately 8400 feet from the 2-lane CD merge on to I-20 mainline
- Keep the 4 lane section along I-20 past Panola Road and merge the 1- lane on ramp from Panola Road on to I-20 to form a 4 lane section along I-20
- Maintain the 4th lane (outside lane) as an auxiliary lane up to Lithonia Industrial Boulevard / Evans Mill Road exit
- Tie back to the existing three lane section along I-20 eastbound, past Lithonia Industrial Boulevard / Evans Mill Road off ramp

Comments: *As appropriate*

Attachments:

1. Cost Estimate
2. Sketch location map – See page 2
3. Typical sections
4. Accident summaries
5. Capacity analysis
6. Land Use and Environmental Justice
7. Bridge inventory
8. Minutes of Concept meeting
9. Minutes of any meetings that show support or objection to the concept
10. ~~Conforming plan's network schematics showing thru lanes~~
11. Other items referred to in the body of the report
    a. Design Traffic Approval Letter
    b. Pavement Evaluation Report
    c. Cost Estimate for Items to be Removed Under Future Contracts
    d. Project Design Schedule
    e. Approval for Design-Build Implementation

Concur: _____
Director of Engineering

Approve: Please refer to FHWA letter from June 2, 2010
Division Administrator, FHWA

Approve: _____ Date: _____
Chief Engineer

SCORING RESULTS AS PER TOPPS 2440-2

Project Number:	**County:**	**PI No.:**
None	Dekalb	0009542

Report Date:	**Concept By:** Marlo Clowers
October 8, 2009	DOT Office: Innovative Program Delivery
✠ CONCEPT	
	Consultant: Arcadis

Project Type: Choose One From Each Column			
	✠ Major ☐ Minor	✠ Urban ☐ Rural	☐ ATMS ☐ Bridge ☐ Building ☐ Interchange ✠ Intersection ☐ Interstate ☐ New Location ☐ Widening & Reconstruction ☐ Miscellaneous

FOCUS AREAS	**SCORE**	**RESULTS**
Presentation		
Judgment		
Environmental		
Right of Way		
Utility		
Constructability		
Schedule		

Attachment 1a: Construction Cost Estimate

Print Form

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE PROJECT No. None , Dekalb County **OFFICE** Innovative Program Delivery

I-20 Eastbound from I-285 to CR 5150/Panola Road - CD System **DATE** 10/14/09

P.I. No. 0009542

FROM Darryl D. VanMeter, P.E., State Innovative Program Delivery Engineer

TO Ronald E. Wishon, Project Review Engineer

SUBJECT REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Marlo L. Clowers, P.E.

MNGT LET DATE 8/12/2010

MNGT R/W DATE None

PROGRAMMED COST (TPro W/OUT INFLATION) **LAST ESTIMATE UPDATE**

CONSTRUCTION	$ 70,000,000.00	DATE 8/1/2009
RIGHT OF WAY	$ 0	DATE 8/1/2009
UTILITIES	$ 0	DATE 8/1/2009

REVISED COST ESTIMATES

CONSTRUCTION*	$ 64,596,000.00
RIGHT OF WAY	$ No Change
UTILITIES**	$ 3,223,000.00

* Costs contain 5 % Engineering and Inspection and 5 % Construction Contingencies.

** Costs contain 0 % contingency.

REASON FOR COST INCREASE

The utility cost increase was based on an estimate of approximately 5% of the total construction cost including E&I and construction contingencies .

Revised: February 9, 2009

CONTINGENCY SUMMARY

Construction Cost Estimate:	$ 58,723,000.00	(Base Estimate)
Engineering and Inspection:	$ 2,934,000.00	(Base Estimate x 5 %)
Construction Contingency:	$ 2,934,000.00	(Base Estimate x 5 %)
		(The Construction Contingency is based on the Project Improvement Type in TPro.)
Total Fuel Adjustment	$ Not Required	(From attached worksheet)
Total Liquid AC Adjustment	$ Not Required	(From attached worksheet)
Construction Total:	$ 64,596,000.00	
Utility Cost Estimate:	$ 3,223,000.00	
Utility Contingency:	$ 0	10 %
Utility Total:	$ 3,223,000.00	

REIMBURSABLE UTILITY COST

Utility Owner	Reimbursable Cost

Attachments

c: Genetha Rice-Singleton, State Program Control Administrator

Estimate Report for file "P.I. #0009542"

Section Roadway Items

Item Number	Quantity	Units	Unit Price	Item Description	Cost
500-2100	12400	LF	39.0	CONCRETE BARRIER	483600.0
621-3150	5500	LF	200.0	CONCRETE BARRIER, TYPE 26	1100000.0
624-4001	16290	LF	400.0	SOUND BARRIER, ALL HTS.	6516000.0
432-5010	135000	SY	8.0	MILL ASPH CONC PVMT, VARIABLE DEPTH	1080000.0
400-3604	21000	TN	91.0	ASPH CONC 12.5 MM SMA, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME	1911000.0
400-3624	15000	TN	81.0	ASPH CONC 12.5 MM PEM, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME	1215000.0
402-3121	64000	TN	59.0	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	3776000.0
402-3130	5000	TN	64.0	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	320000.0
402-3190	30000	TN	67.0	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2,INCL BITUM MATL & H LIME	2010000.0
999-2010	1	LS	2200000.0	DESIGN COMPLETE	2200000.0
109-0300	1	Lump Sum	3356886.0	PRICE ADJUSTMENT - ASPHALT CEMENT	3356886.0
632-0003	6	EA	12875.0	CHANGEABLE MESSAGE SIGN, PORTABLE, TYPE 3	77250.0
641-1100	5468	LF	52.0	GUARDRAIL, TP T	284336.0
641-1200	9114	LF	17.0	GUARDRAIL, TP W	154938.0
641-5001	12	EA	673.0	GUARDRAIL ANCHORAGE, TP 1	8076.0
641-5005	6	EA	1008.0	GUARDRAIL ANCHORAGE, TP 5	6048.0
641-5012	6	EA	1762.0	GUARDRAIL ANCHORAGE, TP 12	10572.0
456-2012	7	GLM	947.0	INDENTATION RUMBLE STRIPS - GROUND-IN-PLACE (CONTINUOUS)	6629.0
643-1152	9114	LF	40.0	CH LK FENCE, ZC COAT, 6 FT, 9 GA	364560.0
648-1350	3	EA	17113.0	IMPACT ATTENUATOR UNIT, TYPE P - 3 - U - 30	51339.0
518-1000	1	LS	300000.0	RAISE EXISTING BRIDGE, MILLER RD	300000.0
550-4218	10	EA	551.0	FLARED END SECTION 18 IN, STORM DRAIN	5510.0
550-4224	5	EA	643.0	FLARED END SECTION 24 IN, STORM DRAIN	3215.0
550-4230	3	EA	761.0	FLARED END SECTION 30 IN, STORM DRAIN	2283.0
550-4236	2	EA	1055.0	FLARED END SECTION 36 IN, STORM DRAIN	2110.0
603-2182	450	SY	47.0	STN DUMPED RIP RAP, TP 3, 24 IN	21150.0
603-7000	450	SY	4.0	PLASTIC FILTER FABRIC	1800.0
500-3101	4480	CY	526.0	CLASS A CONCRETE	2356480.0
668-2100	130	EA	3588.0	DROP INLET, GP 1	466440.0
668-2110	260	LF	255.0	DROP INLET, GP 1, ADDL DEPTH	66300.0
668-2200	10	EA	3111.0	DROP INLET, GP 2	31110.0
668-2210	20	LF	273.0	DROP INLET, GP 2, ADDL DEPTH	5460.0
500-3800	10	CY	740.0	CLASS A CONCRETE, INCL REINF STEEL	7400.0
511-1000	487000	LB	0.0	BAR REINF STEEL	0.0
550-1180	18230	LF	36.0	STORM DRAIN PIPE, 18 IN, H 1-10	656280.0
550-1240	9120	LF	44.0	STORM DRAIN PIPE, 24 IN, H 1-10	401280.0
550-1300	5470	LF	54.0	STORM DRAIN PIPE, 30 IN, H 1-10	295380.0
550-1360	3650	LF	66.0	STORM DRAIN PIPE, 36 IN, H 1-10	240900.0
550-1481	1830	LF	116.0	STORM DRAIN PIPE, 48 IN, H 10-15	212280.0
627-0000	140003	SF	70.0	RETAINING WALL (0 FT - 20 FT) ALL TYPES	9800210.0
109-0100	1	Lump Sum	335794.0	PRICE ADJUSTMENT - UNLEADED FUEL	335794.0
109-0200	1	Lump Sum	1312376.0	PRICE ADJUSTMENT - DIESEL FUEL	1312376.0
150-1000	1	LS	7492000.0	TRAFFIC CONTROL - P.I. #0009542	7492000.0
150-5010	10	EA	13200.0	TRAFFIC CONTROL, PORTABLE IMPACT ATTENUATOR	132000.0
153-1300	1	EA	76758.0	FIELD ENGINEERS OFFICE TP 3	76758.0
620-0100	10560	LF	31.0	TEMPORARY BARRIER, METHOD NO. 1	327360.0
210-0100	1	LS	5038000.0	GRADING COMPLETE - P.I. #0009542	5038000.0
310-1101	78000	TN	17.0	GR AGGR BASE CRS, INCL MATL	1326000.0
413-1000	69000	GL	2.0	BITUM TACK COAT	138000.0
432-0206	30600	SY	1.0	MILL ASPH CONC PVMT, 1 1/2 IN DEPTH	30600.0
				Section Sub Total:	**$56,016,710.00**

Section Erosion Control Items

Item Number	Quantity	Units	Unit Price	Item Description	Cost
700-6910	42	AC	839.0	PERMANENT GRASSING	35238.0
700-7000	84	TN	60.0	AGRICULTURAL LIME	5040.0
700-7010	105	GL	20.0	LIQUID LIME	2100.0
700-8000	42	TN	409.0	FERTILIZER MIXED GRADE	17178.0
700-8100	2100	LB	2.0	FERTILIZER NITROGEN CONTENT	4200.0
715-2200	2014	SY	2.0	BITUMINOUS TREATED ROVING, WATERWAYS	4028.0
716-2000	5034	SY	1.0	EROSION CONTROL MATS, SLOPES	5034.0
163-0232	21	AC	529.0	TEMPORARY GRASSING	11109.0
163-0240	609	TN	204.0	MULCH	124236.0
163-0300	13	EA	1822.0	CONSTRUCTION EXIT	23686.0
163-0503	31	EA	903.0	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	27993.0
163-0523	303	EA	165.0	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS - TYPE C SILT FENCE	49995.0
163-0550	21	EA	266.0	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	5586.0
165-0030	15101	LF	1.0	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	15101.0
165-0040	303	EA	71.0	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	21513.0
165-0087	31	EA	172.0	MAINTENANCE OF SILT CONTROL GATE, TP 3	5332.0
165-0101	13	EA	488.0	MAINTENANCE OF CONSTRUCTION EXIT	6344.0
165-0105	21	EA	95.0	MAINTENANCE OF INLET SEDIMENT TRAP	1995.0
167-1000	30	EA	1485.0	WATER QUALITY MONITORING AND SAMPLING	44550.0
167-1500	12	MO	917.0	WATER QUALITY INSPECTIONS	11004.0
171-0010	7551	LF	2.0	TEMPORARY SILT FENCE, TYPE A	15102.0
171-0030	30202	LF	3.0	TEMPORARY SILT FENCE, TYPE C	90606.0
				Section Sub Total:	**$526,970.00**

Section Signing, Marking, ITS Items

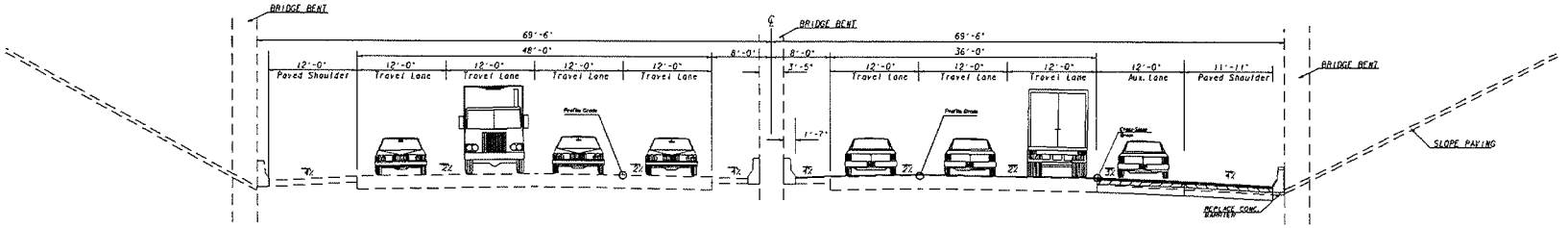
Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	900	SF	16.0	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	14400.0
636-1029	9000	SF	17.0	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 3	153000.0
636-1033	600	SF	20.0	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	12000.0
636-1041	900	SF	37.0	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 9	33300.0
636-1072	9000	SF	30.0	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	270000.0
636-2070	800	LF	8.0	GALV STEEL POSTS, TP 7	6400.0
636-2080	800	LF	11.0	GALV STEEL POSTS, TP 8	8800.0
636-2090	1500	LF	9.0	GALV STEEL POSTS, TP 9	13500.0
636-3000	12000	LB	3.0	GALV STEEL STR SHAPE POST	36000.0
636-5010	300	EA	46.0	DELINEATOR, TP 1	13800.0
636-9094	600	LF	82.0	PILING IN PLACE, SIGNS, STEEL H, HP 12 X 53	49200.0
638-1001	8	LS	100000.0	STR SUPPORT FOR OVERHEAD SIGN, TP I , STA -	800000.0
653-0294	40	EA	1560.0	THERMOPLASTIC PVMT MARKING, WORD, TP 13	62400.0
653-1501	77000	LF	0.0	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	0.0
653-1502	77000	LF	0.0	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	0.0
653-1810	36000	LF	1.0	THERMOPLASTIC SOLID TRAF STRIPE, 10 IN, WHITE	36000.0
653-3501	167000	GLF	0.0	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	0.0
653-6004	10000	SY	2.0	THERMOPLASTIC TRAF STRIPING, WHITE	20000.0
654-1003	1600	EA	3.0	RAISED PVMT MARKERS TP 3	4800.0
652-0091	140	EA	234.0	PAVEMENT MARKING, SYMBOL, TP 1	32760.0
653-0120	140	EA	88.0	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	12320.0
		Lump			

682-0000	1	Sum	600000.0	ITS COMPLETE	600000.0
				Section Sub Total:	**$2,178,680.00**

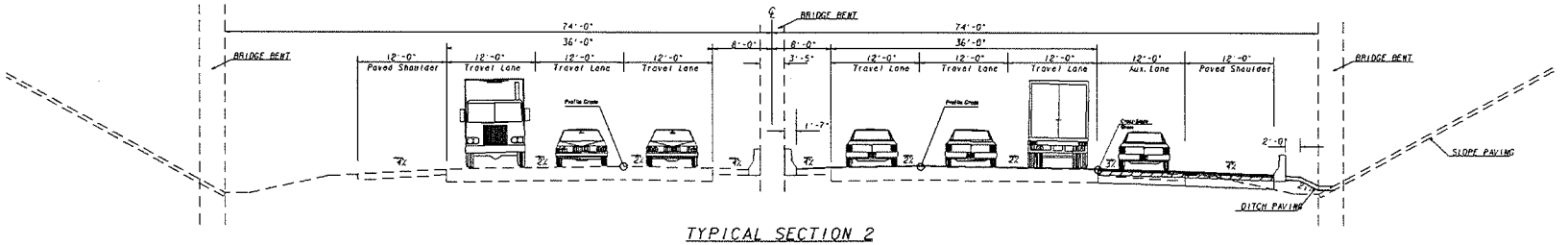
Total Estimated Cost: $58,722,360.00

Subtotal Construction Cost	**$58,722,360.00**
E&C Rate 10.0 %	$5,872,236.00
Inflation Rate 0.0 % @ 0 Years	$0.00
Total Construction Cost	**$64,594,596.00**
Right Of Way	0.00
ReImb. Utilities	3222852.00
Grand Total Project Cost	**$67,817,448.00**

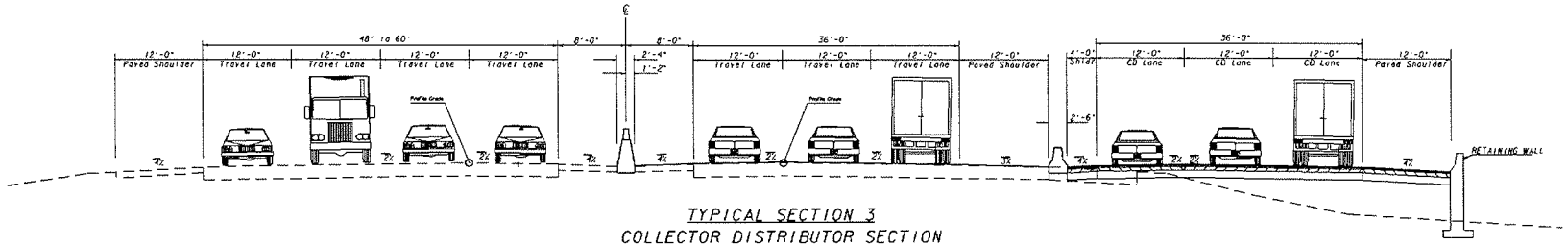
Attachment 3: Typical Sections



TYPICAL SECTION 1
I-20 UNDER I-285 MAINLINE AND
I-20 UNDER I-285 SB RAMP



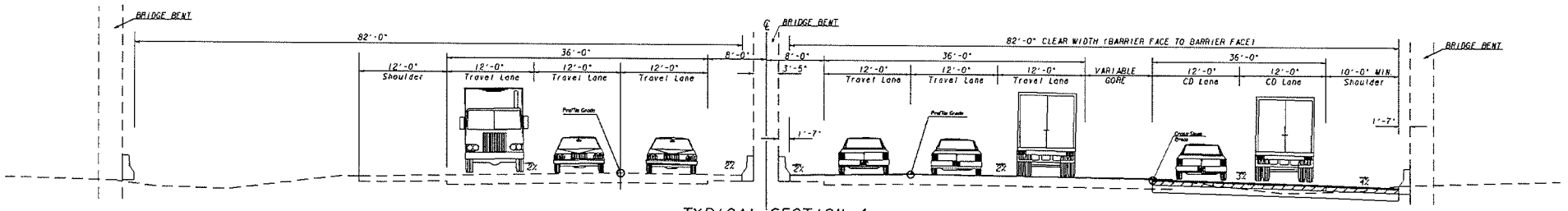
TYPICAL SECTION 2
I-20 MAINLINE UNDER
I-20 EB RAMP TO I-285 NB



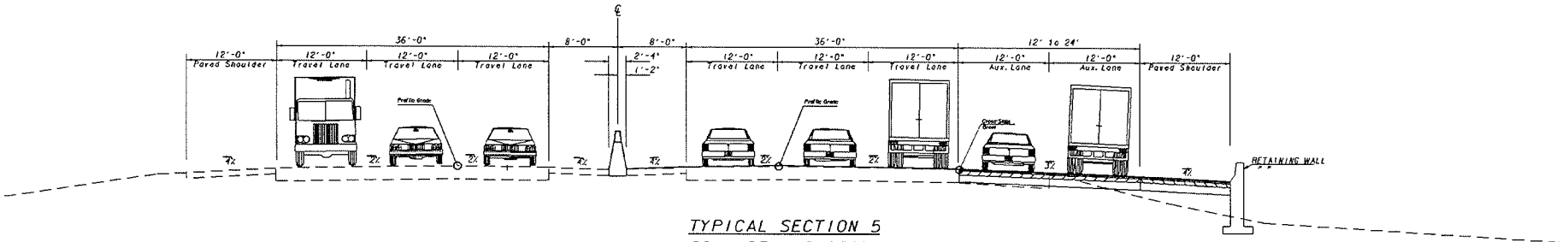
TYPICAL SECTION 3
COLLECTOR DISTRIBUTOR SECTION
I-20 BETWEEN I-285 AND WESLEY CHAPEL ROAD

NOTE: The typical sections as shown assume that any existing shoulder paving will need to be removed and reconstructed at full depth to accommodate projected traffic.

NOT TO SCALE



TYPICAL SECTION 4
I-20 UNDER WESLEY CHAPEL ROAD BRIDGE

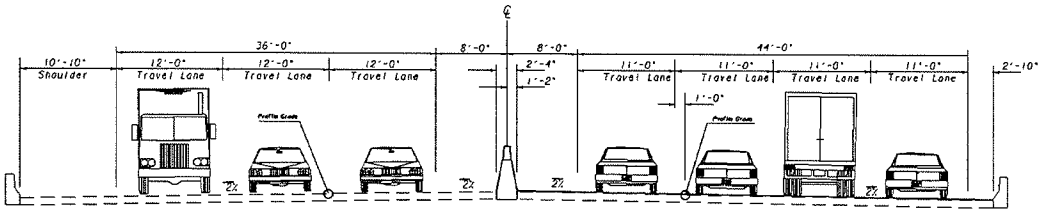


TYPICAL SECTION 5
I-20 WIDENING SECTION

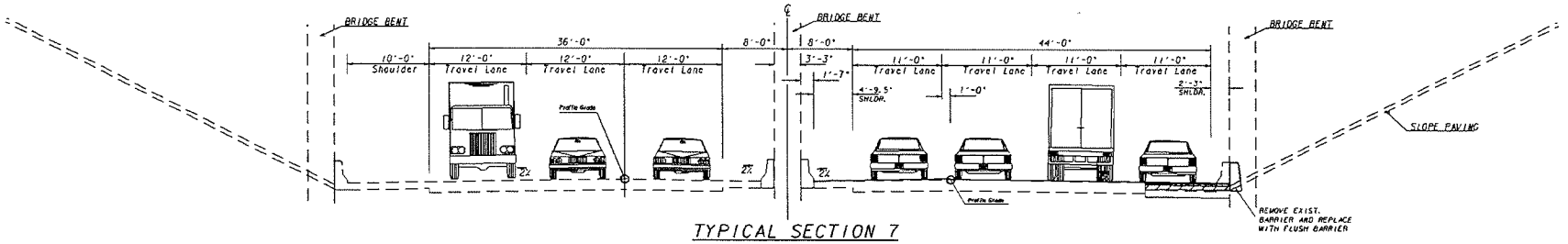
BEGIN PROJECT TO BEGIN CD LANES AND WESLEY CHAPEL ROAD TO PANOLA ROAD
** NOT ALL SEGMENTS PROPOSE A RETAINING WALL

NOTE: The typical sections as shown assume that any existing shoulder paving will need to be removed and reconstructed at full depth to accommodate projected traffic.

NOT TO SCALE



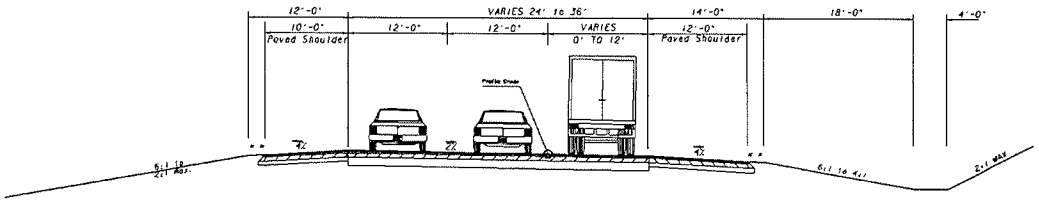
TYPICAL SECTION 6
I-20 SNAPFINGER BRIDGE SECTION



TYPICAL SECTION 7
I-20 UNDER MILLER ROAD BRIDGE

NOTE: The typical sections as shown assume that any existing shoulder paving will need to be removed and reconstructed at full depth to accommodate projected traffic.

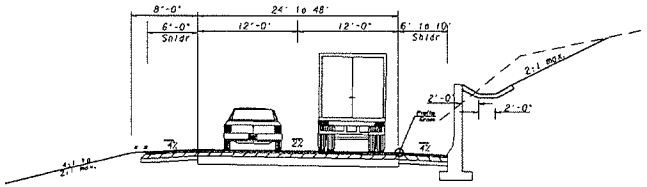
NOT TO SCALE



TYPICAL SECTION 8

I-285 TO I-20 EASTBOUND RAMP SECTION

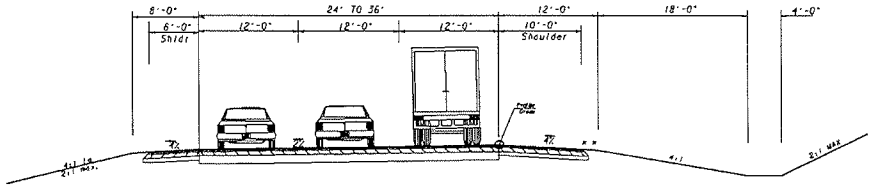
** CONCRETE BARRIER PROPOSED IN SOME SECTIONS



TYPICAL SECTION 9

WESLEY CHAPEL ROAD EB RAMPS

** CONCRETE BARRIER PROPOSED IN SOME SECTIONS



TYPICAL SECTION 10

PANOLA ROAD EB OFF RAMP

** RETAINING WALL PROPOSED IN SOME SECTIONS

NOTE: Where feasible, existing pavement will be retained and overlaid.

NOT TO SCALE

Attachment 4: Accident Summary

Safety analysis parameters, such as total accident rates, fatality rates, and injury rates, were developed for the study corridor. A comparison was made of the rates along I-20 between Columbia Drive and Panola Road with the corresponding statewide averages to assess the need to improve the traffic safety along this corridor. The historical accident data along this corridor for years 2005 through 2007 was obtained from Georgia DOT for similar road types. The results are summarized in Table 5. The results show that the accident and non-fatal injury rates for the project area have been consistently above the statewide rates for a similar facility.

Table 5. Comparison of Accident Rates on I-20 within the Project Corridor with Statewide Averages

Year	Average Annual Daily Traffic	Total Accidents	Total Fatalities	Total Injuries	Accident Rate*		Fatality Rate*		Injury Rate*	
					Actual	State-wide Average	Actual	State-wide Average	Actual	State-wide Average
2005	82,489	527	0	161	355	206	0.00	0.67	108	49
2006	79,886	509	2	183	354	200	1.39	0.66	127	46
2007	79,858	488	1	190	340	186	0.70	0.52	132	43

*Rate per 100 million vehicle miles (100 MVM)

Crash types were also analyzed for the I-20 corridor between I-285 and Panola Road for years 2005 through 2007. Rear-end accidents and same direction side swipe accidents constitute over 75 percent of the accidents within the study area. These accident types are most prevalent for frequent stop-and-go conditions and lane changes at weave/merge/diverge situations. Weaving maneuvers are prevalent and have become increasingly problematic along this section of eastbound I-20 due to an increase in traffic volumes and the existence of a surface street interchange (Wesley Chapel Road) one mile downstream of the I-20/I-285 interchange.

Attachment 5: Capacity Analysis

Introduction

I-20 is an east-west freeway that runs across the breadth of Georgia, connecting Alabama on the west to South Carolina on the east and providing connectivity between several north-south interstate corridors (e.g., I-75, I-85, and I-95). In the Atlanta area, I-20 bisects the city, carrying commuters downtown and home to some of the fastest growing neighborhoods just east of Atlanta, several of which are located in South DeKalb County and accessed via the Wesley Chapel Road and Panola Road I-20 interchanges. This corridor also provides access for system users to local businesses, such as gas stations, grocery stores, and other professional, service-oriented businesses of importance to the local economy. Currently, significant weaving occurs within the project area between the traffic exiting from I-20 eastbound onto Wesley Chapel Road and I-285 traffic that has destinations along I-20 east of Wesley Chapel Road, which results in a capacity constraint on I-20, preventing vehicles from I-285 and I-20 west of the I-285 interchange from entering the I-20 segment east of the I-285 interchange, and causing this freeway section to fail. Poor traffic operations at these major merge sections raise major operational and safety concerns in the project area, as described below.

Roadway Operations

Traffic Volumes

Table 1 presents the existing and projected future average daily traffic (ADT) volumes, including peak morning and evening volumes, on I-20 eastbound within the project area for the open year (2012), breakdown year (2023), and design year (2032) under the No-Build condition. [Note: The breakdown year is defined as the year in which the roadway segment would fail (or, operate at a level of service of LOS F). For the proposed improvements within the project area, one section (between Wesley Chapel Road and Panola Road) would fail in 2019; the other section (between I-285 and Wesley Chapel Road) would fail in 2025. Therefore, a representative breakdown year of 2023 was selected for the project area to correspond to a 10-year design period.]

Table 1. Existing and Projected Future Traffic Volumes along I-20 Eastbound within the Project Area under the No-Build Condition				
I-20 Eastbound Segment	2009 Conditions	No-Build Condition		
		2012 (Open Year)	2023 (Breakdown Year)	2032 (Design Year)
West of I-285 On-Ramp	**ADT (vpd):** 69,380 **a.m./p.m.:** 2,775/6,100	**ADT (vpd):** 72,180 **a.m./p.m.:** 2,890/7,430	**ADT (vpd):** 89,755 **a.m./p.m.:** 3,590/9,235	**ADT (vpd):** 107,260 **a.m./p.m.:** 4,295/11,040
I-20 On-Ramp @ I-285	**ADT (vpd):** 43,365 **a.m./p.m.:** 1,820/3,100	**ADT (vpd):** 45,115 **a.m./p.m.:** 2,425/3,160	**ADT (vpd):** 56,100 **a.m./p.m.:** 3,610/3,685	**ADT (vpd):** 67,040 **a.m./p.m.:** 4,215/4,400
Between I-285 and Wesley Chapel Road	**ADT (vpd):** 96,000 **a.m./p.m.:** 3,925/7,080	**ADT (vpd):** 99,875 **a.m./p.m.:** 4,615/8,415	**ADT (vpd):** 124,190 **a.m./p.m.:** 6,335/10,220	**ADT (vpd):** 148,420 **a.m./p.m.:** 7,470/12,210
I-20 Off-Ramp @ Wesley Chapel Road	**ADT (vpd):** 15,820 **a.m./p.m.:** 955/1,355	**ADT (vpd):** 16,245 **a.m./p.m.:** 985/1,450	**ADT (vpd):** 18,780 **a.m./p.m.:** 1,110/1,800	**ADT (vpd):** 21,145 **a.m./p.m.:** 1,330/2,150
Between Wesley Chapel Road and Panola Road	**ADT (vpd):** 83,460 **a.m./p.m.:** 3,155/6,090	**ADT (vpd):** 87,030 **a.m./p.m.:** 3,905/7,315	**ADT (vpd):** 109,530 **a.m./p.m.:** 5,570/8,805	**ADT (vpd):** 132,095 **a.m./p.m.:** 6,555/10,520
I-20 Off-Ramp @ Panola Road	**ADT (vpd):** 16,485 **a.m./p.m.:** 965/1,400	**ADT (vpd):** 17,070 **a.m./p.m.:** 1,030/1,530	**ADT (vpd):** 20,680 **a.m./p.m.:** 1,280/1,820	**ADT (vpd):** 24,190 **a.m./p.m.:** 1,535/2,170
East of Panola Road Interchange	**ADT (vpd):** 72,430 **a.m./p.m.:** 2,570/5,340	**ADT (vpd):** 75,635 **a.m./p.m.:** 3,335/6,455	**ADT (vpd):** 95,940 **a.m./p.m.:** 4,865/7,820	**ADT (vpd):** 116,405 **a.m./p.m.:** 5,705/9,345

Legend: vpd = vehicles per day; a.m. = morning peak hour volume; p.m. = evening peak hour volume

Capacity Analysis/Level of Service (LOS)

A capacity analysis is the primary method for evaluating the quality of service of highway and street facilities. Level of service (LOS) is a qualitative measure used to describe the operating conditions of a roadway. The *Highway Capacity Manual* (Transportation Research Board, 2000) generally describes LOS in terms of factors such as speed, travel time, freedom to maneuver, traffic interruptions, driver comfort and convenience, and safety. LOS is represented by a ranking letter from "A" to "F," with "A" representing free-flow conditions and "F" representing traffic breakdown conditions.

I-20 eastbound, between the I-285 and Wesley Chapel Road interchanges, currently operates at a LOS F. Capacity analyses were performed for the a.m. and p.m. peak hours for all segments of I-20 eastbound within the project limits for the open year (2012), breakdown year (2023), and design year (2032) under the No-Build alternative. The results of these analyses are shown in Table 2.

Table 2. Capacity Analysis Results for I-20 Eastbound Segments for the A.M. and P.M. Peak Hour under No-Build Conditions					
Segment	Distance (feet)*	Facility Type	Level of Service (LOS) (AM/PM)		
			2012 (Open Year)	2023 (Breakdown Year)	2032 (Design Year)
I-20 EASTBOUND					
West of Columbia Drive	4,870	Mainline	B/F	B/F	B/F
Off-ramp to Columbia Drive	1,500	Diverge	B/F	B/F	B/F
Between Off-ramp to Columbia Drive & Off-ramp to I-285	1,135	Mainline	A/F	B/F	B/F
Off-ramp to I-285	1,500	Diverge	A/F	B/F	B/F
Between Off-ramp to I-285 & On-ramp from I-285	4,060	Mainline	B/F	B/F	C/F
I-20 On-ramp @ I-285	1,500	Merge	B/F	C/F	E/F
Between I-285 & Wesley Chapel Road	1,730	Mainline	B/F	C/F	F/F
I-20 Off-Ramp @ Wesley Chapel Road	1,500	Diverge	B/D	C/F	F/F
Between Wesley Chapel Road Off-ramp & On-ramp	1,430	Mainline	C/D	D/E	F/E
I-20 On-ramp @ Wesley Chapel Road	1,500	Merge	C/D	D/D	F/E
Between Wesley Chapel Road & Panola Road	10,755	Mainline	C/D	D/D	E/D
I-20 Off-ramp @ Panola Road	1,500	Diverge	C/D	D/D	D/D
Between Panola Road Off-ramp & On-ramp	1,865	Mainline	B/C	C/C	C/C
I-20 On-ramp @ Panola Road	1,500	Merge	B/D	C/D	D/D
I-285 SOUTHBOUND					
I-285 Off-ramp @ I-20	1,500	Diverge	C/D	D/D	D/F
Between I-20 Off-ramp & On-ramp	5,575	Mainline	C/D	D/D	D/C
I-285 On-ramp @ I-20	1,500	Merge	D/D	D/D	D/D
I-285 NORTHBOUND					
I-285 Off-ramp @ I-20	1,500	Diverge	D/F	F/F	F/F
Between I-20 Eastbound & Westbound Off-ramps	1,945	Mainline	D/D	E/E	F/F
Between I-20 Westbound Off-ramp & I-20 On-ramp	1,335	Mainline	D/C	E/D	F/F
I-285 On-ramp @ I-20	1,500	Merge	C/C	C/C	F/F

* Based on the Highway Capacity Manual, merge and diverge section lengths are considered to be 1,500 feet.

As shown in Table 2, I-20 eastbound, between the I-285 and Wesley Chapel Road interchanges, would operate at an LOS F in the p.m. peak hour under No-Build conditions, for all years. These analysis results clearly indicate that this segment of I-20 eastbound does not have enough capacity to handle current and future demand. The lack of capacity along I-20 eastbound is due to a significant amount of vehicles weaving and conflicting movements between the traffic exiting from I-20 eastbound onto Wesley Chapel Road and I-285 traffic that has destinations along I-20 east of Wesley Chapel Road. The direct effect of these conditions is reflected in the significant reduction (approximately 20 to 40 percent) in vehicle throughput along I-20 East through the study area, significant delays, and frequent stop-and-go conditions. The significant backup and delays generate a shockwave effect that negatively impacts traffic operations on segments of I-20 East outside the project area. Long queues form and extend westward on the I-20 East mainline. These problems are described below.

Vehicles Denied Entry into the System

In terms of level of service, I-20 East appears to operate at an acceptable LOS of D or better in many locations within the project limits (see Table 2). However, this measure does not take into account the significant number of vehicles that are denied entry into the system during the p.m. peak hour because of the excessive weaving and capacity restraints. These vehicles instead form long queues that extend west of the study area on the I-20 East mainline. Table 3 shows the number of vehicles that can enter the system versus those that cannot under the No-Build condition, as well as the resulting speed reductions along the project corridor.

Table 3. Vehicles Denied Entry into System and Speed Reductions in the No-Build Condition

	Open Year 2012		Breakdown Year 2023		Design Year 2032	
	AM	PM	AM	PM	AM	PM
Total No. of Vehicles Entering System	7,230	11,766	9,271	11,477	10,429	11,282
Vehicles Entering from I-20	3,425	7,198	4,250	6,916	5,091	6,837
Vehicles Entering from I-285 Southbound Ramp	2,610	3,381	3,314	3,550	3,701	3,320
Vehicles Entering from I-285 Northbound Ramp	1,195	1,187	1,707	1,011	1,637	1,125
No. of Vehicles Denied Entry into System	20	3,660	364	4,723	1,016	7,978
% Denied Entry	0.28%	23.73%	3.78%	29.15%	8.88%	41.42%
Speed (mph) – I-20	60	38	57	36	50	36
Speed (mph) – I-285 Southbound Ramp	45	32	43	10	43	7
Speed (mph) – I-285 Northbound Ramp	44	9	39	6	39	6

Travel Time Analysis

Travel times and vehicle speeds during the a.m. and p.m. peak hours for all segments of I-20 eastbound within the project limits for the open year (2012), breakdown year (2023), and design year (2032) under the No-Build alternative are provided in Table 4. As shown in Table 4, several segments of I-20 eastbound within the project area experience substantial delays and reduced operating speeds, particularly in the p.m. peak hour, which are anticipated to worsen over time.

Table 4. Travel Time for Vehicles Entering the Project Area System during the A.M. and P.M. Peak Hour under No-Build Conditions

	Distance (feet)*	Facility Type	2012 (Open Year) (A.M./P.M.)		2023 (Breakdown Year) (A.M./P.M.)		2032 (Design Year) (A.M./P.M.)	
			Speed (mph)	Travel Time (sec)	Speed (mph)	Travel Time (sec)	Speed (mph)	Travel Time (sec)
I-20 EASTBOUND								
West of Columbia Drive	4,870	Mainline	59/18	56/186	59/13	57/249	58/13	57/252
Off-ramp to Columbia Drive	1,500	Diverge	59/15	18/69	58/13	18/76	58/13	18/77
Between Off-ramp to Columbia Drive & Off-ramp to I-285	1,135	Mainline	58/13	13/59	57/13	14/62	57/13	14/61
Off-ramp to I-285	1,500	Diverge	58/11	18/91	58/11	18/93	57/11	18/91
Between Off-ramp to I-285 & On-ramp from I-285	4,060	Mainline	58/10	48/289	58/10	48/299	58/10	49/286
I-20 On-ramp @ I-285	1,500	Merge	54/12	19/89	47/11	22/90	35/12	29/87
Between I-285 & Wesley Chapel Road	1,730	Mainline	56/26	21/46	50/14	23/81	21/13	55/91
I-20 Off-ramp @ Wesley Chapel Road	1,500	Diverge	56/44	18/23	50/20	21/52	20/24	51/43
Between Wesley Chapel Road Off-ramp & On-ramp	1,430	Mainline	60/54	16/18	52/47	19/21	27/46	37/21
I-20 On-ramp @ Wesley Chapel Road	1,500	Merge	61/52	17/20	51/52	20/20	35/48	29/21
Between Wesley Chapel Road & Panola Road	10,755	Mainline	62/56	119/131	57/58	128/127	50/57	147/130
I-20 Off-ramp @ Panola Road	1,500	Diverge	61/57	17/18	58/59	18/17	55/58	19/18
Between Panola Road Off-ramp & On-ramp	1,865	Mainline	63/60	21/22	60/60	22/22	60/60	22/22
I-20 On-ramp @ Panola Road	1,500	Merge	60/55	17/19	57/55	18/19	57/53	18/19
I-285 SOUTHBOUND								
I-285 Off-ramp @ I-20	1,500	Diverge	64/63	16/16	63/53	16/19	63/16	16/64
Between I-20 Off-ramp & On-ramp	5,575	Mainline	63/62	63/63	62/62	63/64	62/61	63/64
I-285 On-ramp @ I-20	1,500	Merge	62/62	17/16	62/62	17/17	62/62	17/17
I-285 NORTHBOUND								
I-285 Off-ramp @ I-20 Eastbound	1,500	Diverge	64/32	16/32	49/19	21/53	37/16	27/65
Between I-20 Eastbound & Westbound Off-ramps	1,945	Mainline	62/61	21/22	60/58	22/23	43/28	31/48
Between I-20 Westbound Off-ramp & I-20 On-ramp	1,335	Mainline	61/62	15/15	60/60	15/15	35/21	26/43
I-285 On-ramp @ I-20	1,500	Merge	61/63	15/14	60/61	15/15	27/15	34/58

* Based on the Highway Capacity Manual, merge and diverge section lengths are considered to be 1,500 feet.

Attachment 6: Land Use and Environmental Justice

Land Use

Land use surrounding the I-20 corridor within the project limits primarily consists of residential and commercial uses. Large residential developments are located on both sides of I-20 from the Columbia Drive interchange to the Miller Road overpass. These developments are primarily single-family residential communities; however, some apartment and condominium complexes also occur, particularly around the interchanges.

Commercial uses also occur on both sides of I-20 throughout the project limits, and include service- and retail-related uses, as well as some office space. In the western portion of the project corridor, commercial uses are mainly limited to areas immediately surrounding the interchanges with I-20; however, between the Miller Road overpass and the Panola Road interchange, commercial uses occur along the length of I-20.

In addition to residential and commercial uses, there is a minor amount of institutional use (churches/ religious institutions) scattered along road intersecting I-20 within the project limits.

Environmental Justice/Socioeconomics

The project corridor lies within seven U.S. Census 2000 census block groups. These include:

- Census Track 234.12, Block Group 1, which is located on the south side of I-20 between I-285 and Snapfinger Road/Wesley Chapel Road, and Block Group 3, which is located on the south side of I-20 and extends from Candler Road to I285;
- Census Track 234.14, Block Group 1, which is located on the south side of I-20 between Snapfinger/Wesley Chapel Road and Miller Road;
- Census Track 234.16, Block Group 1, which is located on the south side of I-20 between Miller Road and Panola Road;
- Census Track 235.06, Block Group 2, which is located on the north side of I-20 between Columbia Drive and Fowler Road;
- Census Track 235.07, Block Group 3, which is located on the north side of I-20 between Fowler Road and Wesley Chapel Road; and
- Census Tract 232.03, Block Group 2, which is located on the north side of I-20 between Wesley Chapel Road and Panola Road.

According to Census 2000 data, approximately 10.80 percent of DeKalb County's total population and 12.99 percent of the State of Georgia's total population was living below the poverty level in 1999. Of the seven 2000 Census block groups within the project area, the populations of two of them contain a higher percentage of persons living below the poverty level than the County or State as a whole. These include Census Track 232.03, Block Group 2, in which 18.18 percent of the population was living below the poverty level in 1999, and Census Track 234.14, Block Group 1, in which 13.08 percent of the population was living below the poverty level in 1999.

Minority populations in the state of Georgia comprise approximately 34.93 percent of the total state population, compared to approximately 64.12 percent of DeKalb County's population. All seven 2000 Census block groups within the project area contain a much higher percentage of minorities (from 91.67 percent in Census Tract 232.03, Block Group 2 to 98.41 percent in Census Tract 234.12, Block Group 3) than DeKalb County or the State of Georgia as a whole. The residential areas in the vicinity of the project corridor would be considered minority communities and are predominantly populated by African-Americans.

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 089-0257-0 **DeKalb County** SUFF. RATING: 93.7

Location & Geography

* Structure I.D. No.: 089-0257-0
200 Bridge Information: 01

* 6A Feature Int.: I-20
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00402
* 7B Facility Carried: I-20 RAMP
* 9 Location: .1 MI E I-20 & I-285 INT.
2 DOT District: 7
207 Year Photo: 1998

* 91 Inspection Frequency: 24 Date: 04/17/2000
92A Fract Crit Insp Freq: 0 00 Date: 0000
92B Underwater Insp Freq: 0 00 Date: 0000
92C Other Spc. Insp Freq: 0 00 Date: 0000

* 4 Place Code: 00000

* 5 Inventory Route (O/U): 1
Type: 1
Designator: 7
Number: 00020
Direction: 0

* 16 Latitude: 33-42.9
* 17 Longitude: 84 -14.3

98 Border Bridge: 000 %Shared: 00
99 ID Number: 000000000000000

* 100 Defense Highway: 1
* 101 Parallel Structure: N
* 102 Direction of Traffic: 1
264 Road Inventory Mile Post: 000.31

* 208 Inspection Area: 07 Initials: DAS

* Location I.D. No: 089-00402R-067.22E
* XReferen I.D. No: 000-000000-000.000

* 104 Highway System: 1
* 26 Functional Classification: 19
* 204 Federal Route Type: 1 No: 020-2
* 110 Truck Route: 1
206 School Bus Route: 1
217 Benchmark Elevation: 0.00
218 Datum: 0
* 19 Bypass Length: 3
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
* 31 Design Load: 6
37 Historical Significance: 5
205 Congressional District: 11
* 27 Year Constructed: 1984
106 Year Reconstructed: 0000
33 Bridge Median: 0
34 Skew: 66
35 Structure Flared: 0
38 Navigation Control: N
213 Special Steel Design: 0
267 Type of Paint: 2

* 42 Type Service On: 1
Under: 1
214 Movable Bridge: 00
203 Type Bridge: Z-O-M-O
259 Pile Encasement: 3
* 43 Structure Type Main: 4 02
45 No. Spans Main: 002
44 Structure Type Appr: 4 4
46 No. Spans Appr: 0002
226 Bridge Curve Horz: 1 Vert: 1
111 Pier Protection: 0
107 Deck Structure Type: 1

108 Wearing Surface Type: 1
Membrane: 0
Protection: 1

Signs & Attachments

223 Expansion Joint Type: 03
242 Deck Drains: 0

243 Parapet Location: 0
Height: 0
Width: 0

238 Curb: 0.0 0
239 Handrail: 9 9
* 240 Median Barrier Rail: 0

241 Bridge Median Height: 0
Width: 0

* 230 Guardrail Loc Dir Rear: 6
Fwrd: 6
Oppo Dir Rear: 0
Fwrd: 0

244 Approach Slab: 3
224 Retaining Wall: 0

233 Posted Speed Limit: 55
236 Warning Sign: 1
234 Delineator: 1
235 Hazard Boards: 0

237 Utilities Gas: 00
Water: 00
Electric: 00
Telephone: 00
Sewer: 00

247 Lighting Street: 0
Navigation: 0
Aerial: 0

* 248 County Continuity No: 00

Attachment 7: Bridge Inventory

- I-285 Ramps W-S and S-E over I-20 (**089-0057-0**)– Do not have inventory at this time
- I-285 over I-20 (**089-0096-0**)– Do not have inventory at this time
- Ramp E-N over I-20 (**089-0257-0**)

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 089-0057-0 **DeKalb County** SUFF. RATING: 70.0

Location & Geography

* Structure I.D. No.: 089-0057-0
200 Bridge Information: 07

* 6A Freature Int.: FOWLER CREEK
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00402
* 7B Facility Carried: I-20- RAMPS
* 9 Location: .2 MI E OF I-285
2 DOT District: 7
207 Year Photo: 1998

* 91 Inspection Frequency: 24 Date: 04/26/2000
92A Fract Crit Insp Freq: 0 00 Date: 0000
92B Underwater Insp Freq: 0 00 Date: 0000
92C Other Spc. Insp Freq: 0 00 Date: 0000

* 4 Place Code: 00000

* 5 Inventory Route (O/U): 1
Type: 1
Designator: 1
Number: 00020
Direction: 0

* 16 Latitude: 33-42.9
* 17 Longitude: 84 -14.2

98 Border Bridge: 000 %Shared: 00
99 ID Number: 000000000000000

* 100 Defense Highway: 1
* 101 Parallel Structure: N
* 102 Direction of Traffic: 2
264 Road Inventory Mile Post: 007.86

* 208 Inspection Area: 07 Initials: DAS

* Location I.D. No: 089-00402D-067.20E
* XReferen I.D. No: 000-000000-000.000

* 104 Highway System: 1
* 26 Functional Classification: 11
* 204 Federal Route Type: I No: 020-2
* 110 Truck Route: 1
206 School Bus Route: 0
217 Benchmark Elevation: 0.00
218 Datum: 0
* 19 Bypass Length: 2
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
* 31 Design Load: 6
37 Historical Significance: 5
205 Congressional District: 11
* 27 Year Constructed: 1958
106 Year Reconstructed: 1966
33 Bridge Median: 3
34 Skew: 99
35 Structure Flared: 0
38 Navigation Control: 0
213 Special Steel Design: 0
267 Type of Paint: 0

* 42 Type Service On: 1
Under: 5
214 Movable Bridge: 00
203 Type Bridge: Q- - -
259 Pile Encasement: 3
* 43 Structure Type Main: 1 19
45 No. Spans Main: 004
44 Structure Type Appr: 0 0
46 No. Spans Appr: 0000
226 Bridge Curve Horz: 0 Vert: 0
111 Pier Protection: 0
107 Deck Structure Type: N

108 Wearing Surface Type: N
Membrane: N
Protection: N

Signs & Attachments

223 Expansion Joint Type: 00
242 Deck Drains: 0

243 Parapet Location: 0
Height: 0
Width: 0

238 Curb: 0.0 0
239 Handrail: 0 0
* 240 Median Barrier Rail: 1

241 Bridge Median Height: 0
Width: 0

* 230 Guardrail Loc Dir Rear: 6
Fwrd: 6
Oppo Dir Rear: 6
Fwrd: 6

244 Approach Slab: 0
224 Retaining Wall: 0

233 Posted Speed Limit: 55
236 Warning Sign: 0
234 Delineator: 1
235 Hazard Boards: 0

237 Utilities Gas: 00
Water: 00
Electric: 00
Telephone: 00
Sewer: 32

247 Lighting Street: 0
Navigation: 0
Aerial: 0

* 248 County Continuity No: 00

I-20 at Fowler Creek (089-0057-0)

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 089-0142-0 **DeKalb** SUFF. RATING 53.22

Location & Geography

* Structure I.D.No: 089-0142-0
* 6A Feature Int: M-9015 WESLEY CHAPEL RD.
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00402
* 7B Facility Carried: I-20
* 9 Location: 10.5 MI W OF LITHONIA
* 91 Inspection Frequency: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 2
Type: 1
Designation: 1
Number: 00020
Direction: 0
* 16 Latitude: 33-42.7 HMMS Prefix:
* 17 Longitud 084-13.0 HMMS Suffix: MP:
* 100 STRAHNET: 1
12 Base Highway Network: 1
13A LRS Inventory Route: 891040200
13B Sub Inventory Route: 0
* 101 Parallel Structure: N
* 102 Direction of Traffic: 2
* 104 Highway System: 1
* 26 Functional Classification: 11
* 204 Federal Route Type: 1 No.: 00002
105 Federal Lands Highway: 0
* 110 Truck Route: 1
* 19 Bypass Length: 01
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
27 Year Constructed: 1959
* 42 Type of Service on: 5 Under: 1
* 43 Structure Type Main: 5 02
* 208 Inspection Area: 07 Initials: DAS
* Location I.D. No.: 089-00402D-068.84E
* XReference I.D. No 089-09015M-000.00N

Signs & Attachments

* 240 Median Barrier Rail: 1
* 230 Guardrail Loc Dir Rear: 6
Fwrd: 4
Oppo Dir Rear: 6
Fwrd: 4

Measurements

* 29 ADT: 139300 Year: 1999
* 28 Lanes On: 06 Under: 06
* 48 Max. Span Length: 0056
* 49 Structure Length: 216
* 47 Tot. Horz. Cl: 49.50
* 229 Shoulder Width:
Rear Lt: 5.50 Type: 2 Rt: 8.00
Fwrd Lt: 5.00 Type: 2 Rt: 9.00
Pavement Width:
Rear: 36.00 Type: 2
Fwrd: 36.00 Type: 2
Intersection Rear: 0 Fwrd: 0
* 228 Min. Vertical Cl
Act. Odm Dir: 15 ' 11 "
Oppo. Dir: 15 ' 09 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
* 10 Max Min Vert Cl: 16 ' 04 " Dir: 3

Ratings

* 227 Collision Damage: 2

Posting Data

* 103 Temporary Structure: 0
* 248 County Continuity No.: 00

Hydraulic Data

* 265 U/W Insp. Are 0 Diver: ZZZ

Wesley Chapel Road over I-20 for the new bridge (089-0142-0)

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 089-0058-0 **DeKalb** SUFF. RATING 83.00

Location & Geography

*	Structure I.D.No:	089-0058-0	
	200 Bridge Information	07	
*	6A Feature Int:	SNAPFINGER CREEK	
*	6B Critical Bridge:	0	
*	7A Route Number Carried:	SR00402	
*	7B Facility Carried:	I-20	
*	9 Location:	8.5 MI W OF LITHONIA	
	2 DOT District:	7	
	207 Year Photo:	2006	
*	91 Inspection Frequency:	24 Date: 05/08/2006	
	92A Fract Crit Insp Freq:	00 Date: 02/01/1901	
	92B Underwater Insp Freq:	00 Date: 02/01/1901	
	92C Other Spc. Insp Freq:	00 Date: 02/01/1901	
*	4 Place Code:	00000	
*	5 Inventory Route (O/U):	1	
	Type:	1	
	Designation:	1	
	Number:	00020	
	Direction:	0	
*	16 Latitude: 33-42.3	MMS Prefix: SR	
*	17 Longitude: 84-11.8	MMS Suffix: 00 MP: 69.70	
	98 Border Bridge:	000 %Shared: 00	
	99 ID Number:	000000000000000	
*	100 STRAHNET:	1	
	12 Base Highway Network:	I	
	13A LRS Inventory Route:	891040200	
	13B Sub Inventory Route:	0	
*	101 Parallel Structure:	N	
*	102 Direction of Traffic:	2	
*	264 Road Inventory Mile Post:	010.20	
*	208 Inspection Area:	07 Initials: DAS	
	Engineer's Initial:	sgm	

* Location I.D. No.: 089-00402D-069.70E

*	104 Highway System:	1	
*	26 Functional Classification:	11	
*	204 Federal Route Type:	I No.: 00202	
	105 Federal Lands Highway:	0	
*	110 Truck Route:	1	
	206 School Bus Route:	0	
	217 Benchmark Elevation:	0000.00	
	218 Datum:	0	
*	19 Bypass Length:	02	
*	20 Toll:	3	
*	21 Maintenance:	01	
*	22 Owner:	01	
*	31 Design Load:	6	
	37 Historical Significance:	5	
	205 Congressional District:	04	
	27 Year Constructed:	1959	
	106 Year Reconstructed:	1978	
	33 Bridge Median:	3	
	34 Skew:	00	
	35 Structure Flared:	0	
	38 Navigation Control:	0	
	213 Special Steel Design:	0	
	267 Type of Paint:	3	
*	42 Type of Service on:	1	
		5	
	214 Movable Bridge:	0	
	203 Type Bridge:	O-N-O-O	
	259 Pile Encasement:	2	
*	43 Structure Type Main:	1 04	
	45 No. Spans Main:	005	
	44 Structure Type Appr:	0 00	
	46 No. Spans Appr:	0000	
	226 Bridge Curve Horz:	0 Vert: 0	
	111 Pier Protection:	0	
	107 Deck Structure Type:	1	
	108 Wearing Surface Type:	6	
	M	1	
	F	8	

Signs & Attachments

	225 Expansion Joint Type:	02	
	242 Deck Drains:	1	
	243 Parapet Location:	0	
	Height:		0.00
	Width:		0.00
	238 Curb:		0.00 0
	239 Handrail:	9	9
*	240 Median Barrier Rail:	1	
	241 Bridge Median Height:		0.00
	Width:		0.00
*	230 Guardrail Loc Dir Rear:	6	
	Fwrd:	6	
	Oppo Dir Rear:	6	
	Fwrd:	6	
	244 Approach Slab:	3	
	224 Retaining Wall:	0	
	233 Posted Speed Limit:	55	
	236 Warning Sign:	0	
	234 Delineator:	0	
	235 Hazard Boards:	0	
	237 Utilities Gas:	00	
	W	00	
	Ele	00	
	Telephone:	00	
	Se	00	
	247 Lighting Street:	0	
	Naviagtion:	0	
	Aerial:	0	
*	248 County Continuity No.:	00	

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 089-0116-0 **DeKalb** SUFF. RATING 86.16

Location & Geography

* Structure I.D.No: 089-0116-0
* 6A Feature Int: CR 605 MILLER ROAD
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00402
* 7B Facility Carried: I-20
* 9 Location: 7 MI SW OF LITHONIA
* 91 Inspection Frequency: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 2
Type: 1
Designation: 1
Number: 00020
Direction: 0
* 16 Latitude: 33-42.2 HMMS Prefix:
* 17 Longitud 084-10.0 HMMS Suffix: MP:
* 100 STRAHNET: 1
12 Base Highway Network: 1
13A LRS Inventory Route: 891040200
13B Sub Inventory Route: 0
* 101 Parallel Structure: N
* 102 Direction of Traffic: 2
* 104 Highway System: 1
* 26 Functional Classification: 11
* 204 Federal Route Type: I No.: 00002
105 Federal Lands Highway: 0
* 110 Truck Route: 1
* 19 Bypass Length: 06
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
27 Year Constructed: 1959
* 42 Type of Service on: 5 Under: 1
* 43 Structure Type Main: 5 02
* 208 Inspection Area: 07 Initials: DAS
* Location I.D. No.: 089-00402D-070.55E
* XReference I.D. No 089-00605X-000.98N

Signs & Attachments

* 240 Median Barrier Rail: 1
* 230 Guardrail Loc Dir Rear: 6
Fwrd: 4
Oppo Dir Rear: 6
Fwrd: 4

Measurements

* 29 ADT: 139300 Year: 1999
* 28 Lanes On: 02 Under: 06
* 48 Max. Span Length: 0065
* 49 Structure Length: 251
* 47 Tot. Horz. Cl: 49.00
* 229 Shoulder Width:
Rear Lt: 5.00 Type: 2 Rt: 8.00
Fwrd Lt: 5.00 Type: 2 Rt: 9.00
Pavement Width:
Rear: 36.00 Type: 2
Fwrd: 36.00 Type: 2
Intersection Rear: 0 Fwrd: 0
* 228 Min. Vertical Cl
Act. Odm Dir: 17 ' 04 "
Oppo. Dir: 16 ' 07 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
* 10 Max Min Vert Cl: 17 ' 10 " Dir: 3

Ratings

* 227 Collision Damage: 0

Posting Data

* 103 Temporary Structure: 0
* 248 County Continuity No.: 00

Hydraulic Data

* 265 U/W Insp. Are 0 Diver: ZZZ

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 089-0228-0 **DeKalb** SUFF. RATING 92.01

Location & Geography

*	Structure I.D.No:	089-0228-0	
	200 Bridge Information	06	
*	6A Feature Int:	I-20	
*	6B Critical Bridge:	0	
*	7A Route Number Carried:	CR05150	
*	7B Facility Carried:	PANOLA ROAD	
*	9 Location:	3.7 MI W OF LITHONIA	
	2 DOT District:	7	
	207 Year Photo:	2006	
*	91 Inspection Frequency:	24 Date: 05/02/2006	
	92A Fract Crit Insp Freq:	00 Date: 02/01/1901	
	92B Underwater Insp Freq:	00 Date: 02/01/1901	
	92C Other Spc. Insp Freq:	00 Date: 02/01/1901	
*	4 Place Code:	00000	
*	5 Inventory Route (O/U):	1	
	Type:	5	
	Designation:	1	
	Number:	09012	
	Direction:	0	
*	16 Latitude: 33-42.2	MMS Prefix:	
*	17 Longitude: 84-10.2	MMS Suffix: MP: 0.00	
	98 Border Bridge: 000	%Shared: 00	
	99 ID Number: 000000000000000		
*	100 STRAHNET:	0	
	12 Base Highway Network:	1	
	13A LRS Inventory Route:	892515000	
	13B Sub Inventory Route:	0	
*	101 Parallel Structure:	N	
*	102 Direction of Traffic:	2	
*	264 Road Inventory Mile Post:	003.78	
*	208 Inspection Area: 07	Initials: DAS	
	Engineer's Initial: sgm		

* Location I.D. No.: 089-09012M-018.07E

*	104 Highway System:	0
*	26 Functional Classification:	16
*	204 Federal Route Type:	M No.: 09012
	105 Federal Lands Highway:	0
*	110 Truck Route:	0
	206 School Bus Route:	1
	217 Benchmark Elevation:	0000.00
	218 Datum:	0
*	19 Bypass Length:	02
*	20 Toll:	3
*	21 Maintenance:	01
*	22 Owner:	01
*	31 Design Load:	6
	37 Historical Significance:	5
	205 Congressional District:	04
	27 Year Constructed:	1959
	106 Year Reconstructed:	1985
	33 Bridge Median:	0
	34 Skew:	15
	35 Structure Flared:	0
	38 Navigation Control:	N
	213 Special Steel Design:	0
	267 Type of Paint:	0
*	42 Type of Service on:	5
		1
	214 Movable Bridge:	0
	203 Type Bridge:	Z-O-O-O
	259 Pile Encasement:	3
*	43 Structure Type Main:	5 02
	45 No. Spans Main:	004
	44 Structure Type Appr:	0 00
	46 No. Spans Appr:	0000
	226 Bridge Curve Horz:	0 Vert: 1
	111 Pier Protection:	0
	107 Deck Structure Type:	1
	108 Wearing Surface Type:	6
	M	1
	F	8

Signs & Attachments

	225	Expansion Joint Type:	10
	242	Deck Drains:	0
	243	Parapet Location:	3
		Height:	2.20
		Width:	1.10
	238	Curb:	0.50 1
	239	Handrail:	7 7
*	240	Median Barrier Rail:	0
	241	Bridge Median Height:	0.00
		Width:	0.00
*	230	Guardrail Loc Dir Rear:	3
		Fwrd:	3
		Oppo Dir Rear:	0
		Fwrd:	0
	244	Approach Slab:	3
	224	Retaining Wall:	0
	233	Posted Speed Limit:	45
	236	Warning Sign:	0
	234	Delineator:	0
	235	Hazard Boards:	0
	237	Utilities Gas:	23
		W	00
		Ele	25
		Telephone:	24
		Se	00
	247	Lighting Street:	0
		Naviagtion:	0
		Aerial:	0
*	248	County Continuity No.:	00

Attachment 8: Minutes of Concept Meeting

ARCADIS
2849 Paces Ferry Road
Suite 400
Atlanta
Georgia 30339
Tel 770.431.8666
Fax 770.435.2666

Subject:
Concept Team Meeting Report
I-20 Eastbound From I-285 to CR 5150/Panola Road – CD System
Project Number:
County: DeKalb
P. I. Number: 0009542
Federal Route Number: I-20
State Route Number: 402

Department:
Transportation

ARCADIS Project No.:
GADT0102.0001.000PM

Place/Date of Meeting:
Georgia DOT Office of Innovative Project Delivery
September 29, 2009

Minutes by:
Steve Callis

Issue Date:
October 7, 2009

Participants:
Marlo Clowers, GDOT IPD
Mike Dover, GDOT IPD
Mike Lobdell, GDOT District 7
Wade Woodard, GDOT District 7 Utilities
Jun Birnkammer, GDOT Utilities
Melanie Nable, GDOT OEL
Taylor Wright, DeKalb County (PBS&J)
Patrece Keeter, DeKalb County
Jennifer Giersch, FHWA
Keith Kunst, ARCADIS
Prasoon Sinha, ARCADIS
Robin Stevens, ARCADIS
Tyler Denning, ARCADIS
Steve Callis, ARCADIS

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1. Intro

   a. Introductions

   b. Georgia Department of Transportation (DOT) stated that this project has been identified as a good candidate for accelerated project development as a design-build project.

2. Need and Purpose

   ARCADIS began with a brief description of the project Need and Purpose.

a. ARCADIS indicated that the existing condition of I-20 between I-285 and Wesley Chapel Road experiences severe capacity and delay problems primarily from weaving movements of I-20 traffic exiting to Wesley Chapel Road and I-20 eastbound traffic from I-285.

   These conflicts cause traffic to back up on both I-20 inside the perimeter and on I-285.

b. Approximately 60 percent of vehicles traveling between the Wesley Chapel Road and Panola Road interchanges during the peak hour(s) comes from I-20, and 40 percent originates on I-285.

c. Two of the five lanes are dropped from I-20 at the Wesley Chapel Road off-ramp, leaving three through lanes on I-20 to handle approximately 8,400 vehicles per hour (VPH) during the 2023 no-build condition. Three lanes are insufficient to handle this volume (only approximately 7,000 VPH can be accommodated).

3. Description of the Preferred Alternative

   a. ARCADIS presented an aerial drawing of the proposed collector-distributor (CD) lane project and gave a detailed overview of the proposed build alternative.

   b. It was indicated that this project was to be designed using no right-of-way and that it had to qualify for a Categorical Exclusion. Special design walls will be necessary because of the tight right-of-way between I-285 and Wesley Chapel Road.

   c. Both mainline I-20 and the CD lanes are being designed at 70 mph.

      i. Transfer roads between the mainline and CD slip ramp will be designed at either 65 mph or 70 mph depending on constraints.

      ii. If the CD lane design speed is reduced to 60 mph, the CD slip ramp will be designed at 65 mph.

   d. ARCADIS described the proposed lane configurations for the length of the project.

      i. It was shown that all of the proposed ramp constructions will tie into the existing conditions at existing intersections and the limits of construction.

      ii. Barrier separation runs until just past the gore area of the Wesley Chapel Road off-ramp. The two through lanes (two lanes exit, two lanes pass through) come in as free-flowing lanes, which forms a five-lane mainline section past Wesley Chapel Road.

      iii. Because the Snapfinger Creek bridge can only accommodate four lanes, one mainline lane merges and drops off just before the bridge.

      iv. At Panola Road, three lanes pass through the interchange, while two lanes exit. The Panola Road off-ramp may require lengthening as part of the project.

   e. ARCADIS described the anticipated locations that will cause design exceptions.

i. Reduced lane widths (11 feet) will be present from the Snapfinger Creek bridge to just east of the I-20 underpass at Miller Road.

ii. Reduced shoulder widths are proposed at the Snapfinger Creek and Miller Road bridges and at the Wesley Chapel Road eastbound off-ramp.

iii. Reduced lane and shoulder widths are necessary at both the Snapfinger Creek and Miller Road bridges; however, rather than have a small area of standard widths between the two, it is proposed that one continuous exception area be implemented.

iv. It is proposed that the existing, substandard inside shoulder width be maintained.

v. There is the possibility that a vertical clearance exception will be needed at the Miller Road bridge.

1. This condition will be dependent on the required depth of paving and the proposed section.

2. The substandard clearance may be remedied by performing bridge jacking as part of the construction. Jacking can be accomplished within existing right-of-way.

vi. Georgia DOT suggested investigating the less than desirable conditions that are present at the existing eastbound on-ramp from Wesley Chapel Road. ARCADIS stated that this area would be evaluated for sight distance and weave length and that the acceleration/ merge lane would be extended if feasible and merited.

vii. The pavement evaluation is completed, and most of the existing pavement is in poor condition. The entire project corridor will require resurfacing.

viii. It was noted that sound walls are proposed for construction around residential areas, where necessary. Some walls may be necessary along the westbound I-20 lanes. The exact locations will depend on the results of the noise analysis currently being conducted.

4. Logical Termini

a. ARCADIS described that the major issue for this corridor, as previously stated, is the weaving movement on I-20 between I-285 and the Wesley Chapel Road interchange.

b. As a requirement of the Interchange Modification Report, the interchanges immediately up- and downstream of the project must be analyzed. Columbia Drive is west of the proposed project, and Panola Road is east of the project.

i. The Columbia Drive interchange was analyzed, and it was found that the current configuration would function acceptably with the construction of this project. There are no proposed improvements to this interchange under the current project, although it is recommended that the westbound on-ramp be signalized under a separate project.

ii. The Panola Road interchange is the logical terminus for the project based on the volume of traffic. The project includes improvements to I-20 up to this interchange.

c. Georgia DOT discussed the larger programmed CD lane project along I-20, which includes the current project area. This larger CD project is wrapped into the programmed I-20 managed lane project, which has uncertain funding at this time. The current proposed project is meant as a short-term solution until the larger project can be realized and funding can be secured.

d. ARCADIS discussed which portions of the proposed project would be "throw away" if/when the larger CD/managed lane project is constructed. Throw-away portions include sound and retaining walls, the barrier line, drainage for the barrier line (would be plugged and abandoned), and ramp improvements. Pavement/asphalt would be retained.

5. Traffic Results

a. ARCADIS stated that the overall result of the proposed project is a net reduction in total delay throughout the project corridor and increased capacity (increased throughput).

b. The build scenario deceptively shows a reduction of Level of Service from I-285 to Wesley Chapel Road.

i. This is because of the reduction of delay outside of the project (namely I-20 inside the I-285 perimeter and the I-285 to I-20 ramps).

ii. This reduction of delay in turn causes a greater volume to be present on I-20, but the net result is an appreciable reduction in travel delay.

6. Concept Report Review

a. Typical Sections

GDOT suggested re-ordering the typical sections and increasing the page size to make the sections easier to read.

b. There was discussion about the proposed section at the Miller Road bridge. The proposed section shows the crown point approximately 4 feet inside of one of the travel lanes.

i. ARCADIS suggested that the outside shoulder could be reduced to shift the travel lanes closer to the existing crown point.

ii. Georgia DOT suggested that because the existing pavement would be removed to an appreciable depth, the crown point could be shifted when paving was replaced.

c. ARCADIS suggested that the existing inside shoulder width be maintained throughout the length of the project. Georgia DOT concurred.

d. Page 6, Proposed Design Features

Georgia DOT suggested showing the pavement depths as recommended by the Pavement Evaluation Report.

i. ARCADIS suggested that paving depths not be included in the Concept Report's typical sections because of the complexity of the required paving. Georgia DOT concurred.

ii. Georgia DOT requested that the Pavement Evaluation Report be included as an attachment to the Concept Report.

e. Georgia DOT requested that ARCADIS provide a narrative of the elements of the proposed construction that will not be retained when I-20 is expanded for future projects and to supply an itemized inventory and cost estimate of these items.

i. ARCADIS stated that all median barrier, drainage, and walls would have to be removed on future projects.

ii. ARCADIS agreed to provide the requested information in the Concept Report.

f. Design Exceptions

Georgia DOT questioned whether a design exception would be required for this project because a 20-year operational capacity is not being provided. District 7 indicated that it has not had to add an exception for a shorter design life on past projects.

i. Georgia DOT suggested that ARCADIS address this issue in the Need and Purpose by explaining that this project is an interim project to a larger overall design.

ii. Georgia DOT and ARCADIS stated that not providing 20 years of operational capacity did not necessarily merit a design exception.

iii. DeKalb County suggested referencing the other future projects if these projects are expected to be constructed before the current project's design year arrives.

g. Environmental

i. ARCADIS addressed the possibility of not needing mitigation for stream impacts if the total impact for the project did not exceed the 100-foot threshold.

ii. ARCADIS pointed out areas of development that were not shown on the display aerial in the vicinity of Miller Road.

h. Staging

i. ARCADIS discussed maintenance of traffic during construction. Typical highway construction is proposed with no permanent lane closures. However, long-term or permanent shoulder closures may be necessary. Any lane closures would occur at night or on weekends.

ii. Georgia DOT asked if any of the existing I-20 shoulder would be retained. ARCADIS said that all shoulders would need to be reconstructed.

i. Utilities

i. Georgia DOT District 7 noted that there is a major MEAG power line just west of the Wesley Chapel Road interchange. There may be an issue with vertical clearance in this area.

ii. Georgia DOT District 7 also noted that Atlanta Gas Light recently got a permit to install a gas line in the vicinity of the Panola Road interchange. It is believed that this is just east of the interchange. In addition, there is a sanitary sewer between Wesley Chapel Road and Panola Road that needs to be considered.

iii. Georgia DOT indicated that a submission to District 7 Utilities needs to be made as soon as possible so that Georgia DOT may coordinate with the utility companies. This can be accomplished after SUE is complete.

iv. DeKalb County asked that if the sanitary sewer in the corridor needs to be moved for the project, would DeKalb County be responsible for funding this, or would it be considered part of the project? Georgia DOT will find an answer to this question.

j. Georgia DOT requested that an electronic submission of the proposed project be submitted as soon as feasible to facilitate utility coordination.

i. ARCADIS is to wait for the completion of the SUE Report before submitting to Utilities.

ii. Georgia DOT wanted ARCADIS to ensure that the SUE subconsultant coordinates its survey with the survey control that was used for the ARCADIS topographical survey.

k. Other projects in the area:

i. DeKalb County indicated that the I-20 ATMS comm/surveillance project's final plans were submitted about two years ago, but it has been shelved. The County inquired if the portion of the 1-20 ATMS comm/surveillance project within the current project's limits could be included as part of the current project.

ii. Georgia DOT District 7 noted that the I-20 repaving project has also been shelved. If this repaving project proceeds, we will need to coordinate this project with that larger repaving project.

l. Project Schedule

Georgia DOT asked that the FHWA Interchange Modification Report (IMR) review period be extended to one month.

7. IMR

FWHA stated that the IMR will need to undergo review at FHWA Headquarters. FHWA Headquarters indicated that the two adjacent interchanges on I-285 (to the north and south of I-20) do not need to be analyzed in the report; however, the mainline section of I-285 will need to be analyzed. FHWA also reminded everyone of the new IMR guidelines, which are available on FHWA's web site.

Attachment 9: Conforming plan's network schematics

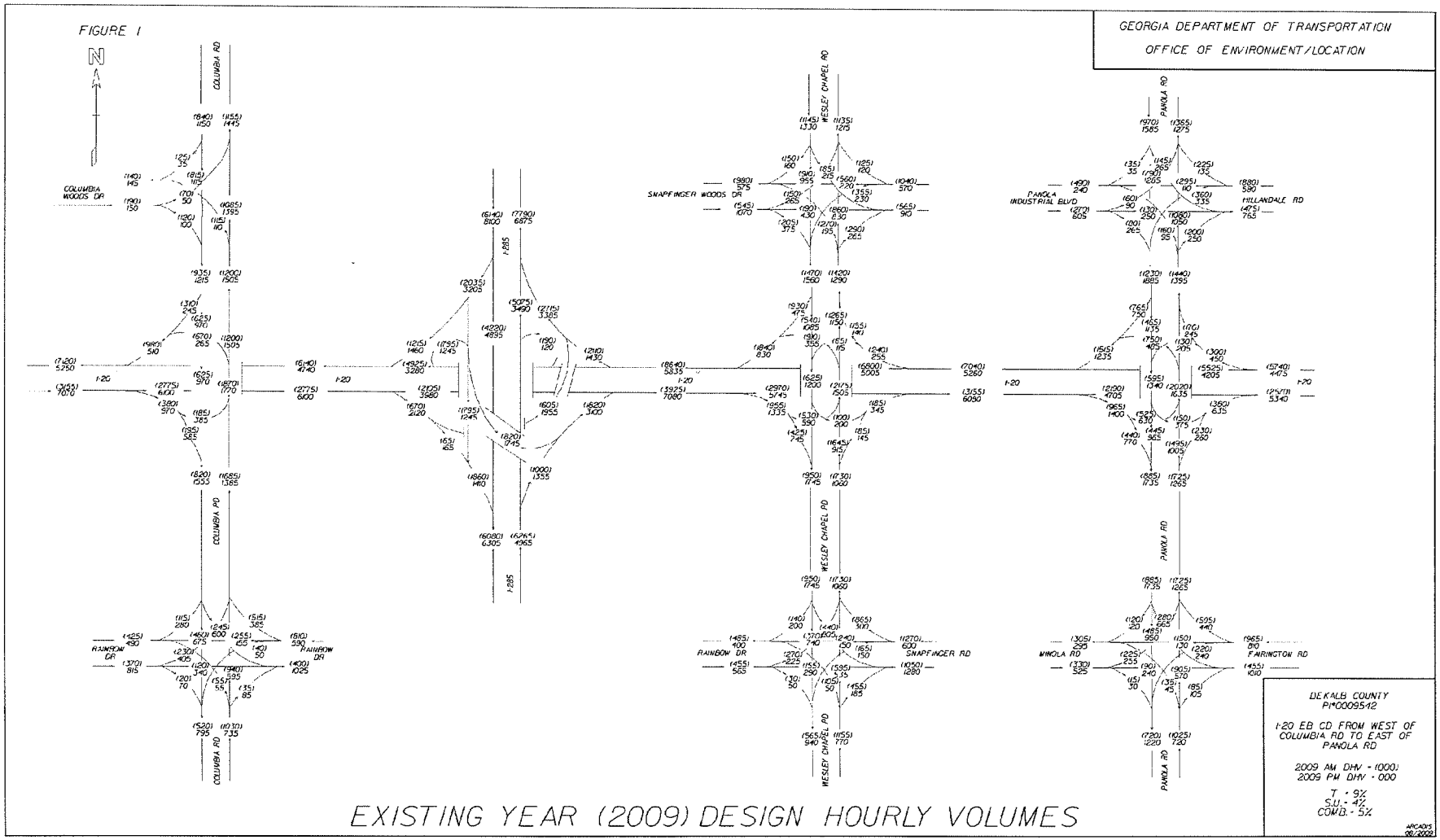
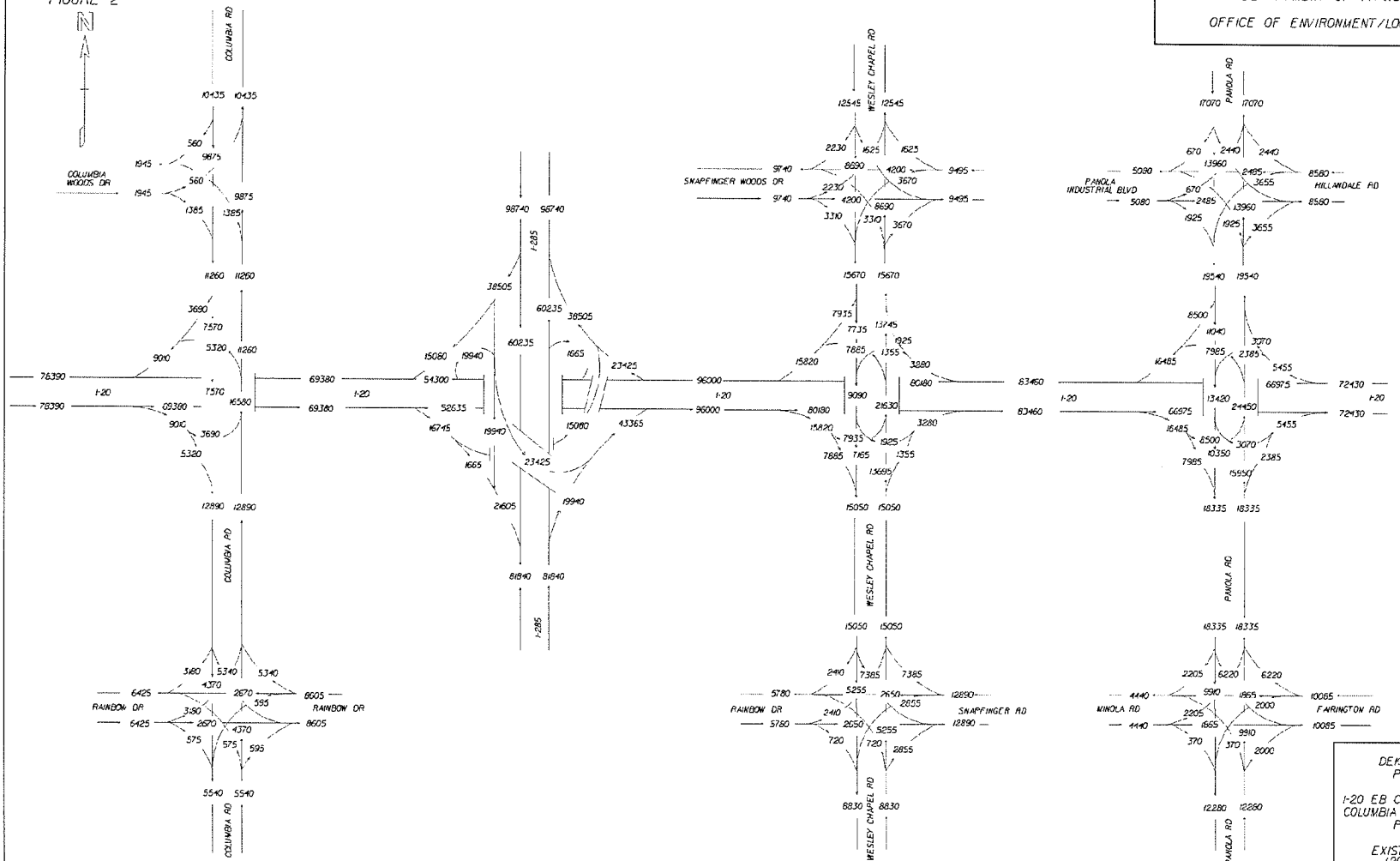


FIGURE 2

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



EXISTING YEAR (2009) ADT

DEKALB COUNTY
PI#0009542

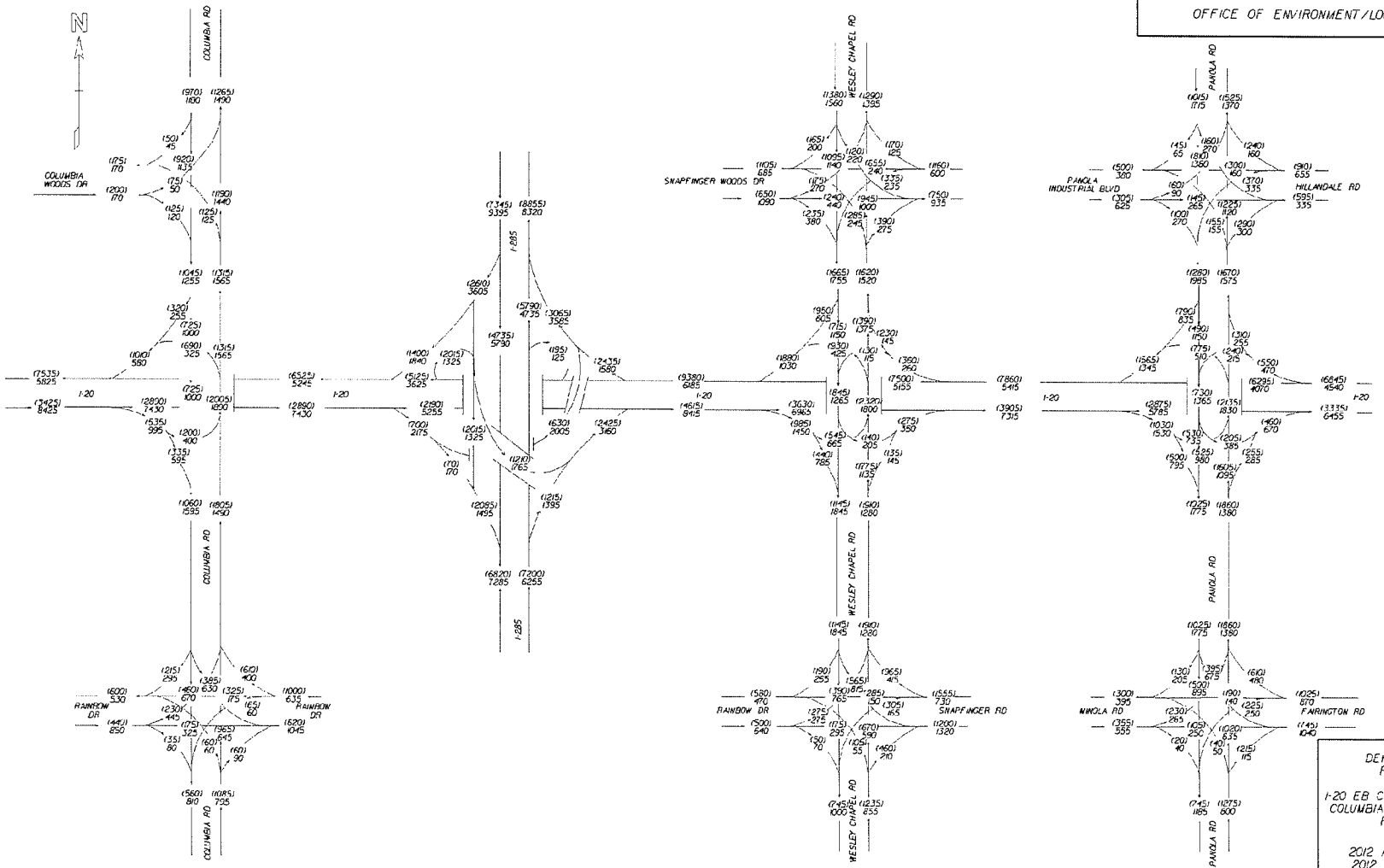
I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

EXISTING YEAR (2009) ADT
24 HR T = 18%
S.U. = 8%
COMB. = 10%

APCADYS 08/2009

FIGURE 3

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



OPEN YEAR (2012) DESIGN HOURLY VOLUMES - NO-BUILD CONDITIONS

DEKALB COUNTY
PI#0009542

I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

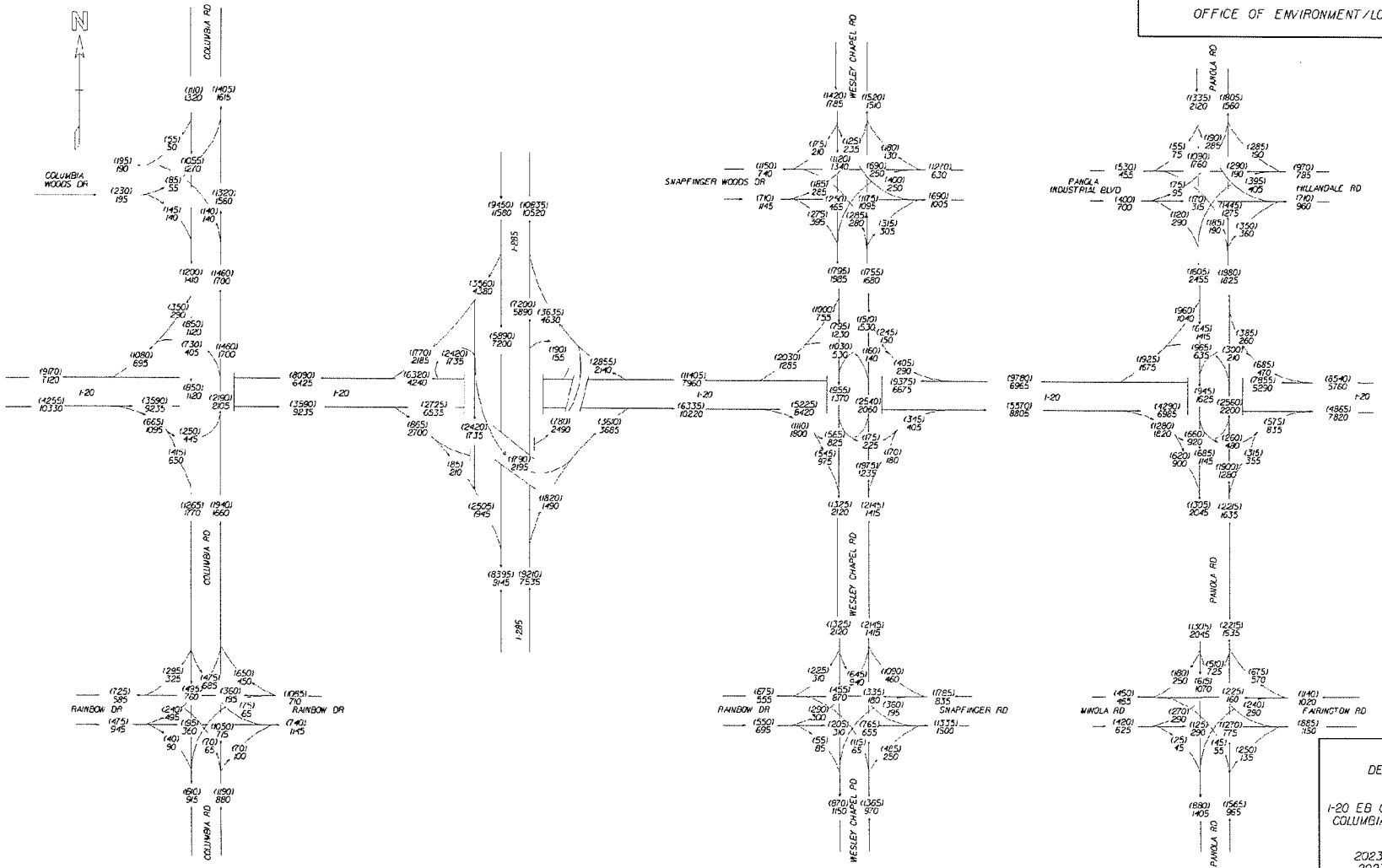
2012 AM DHV - (000)
2012 PM DHV - 000

T - 9%
S.U. - 4%
COMB. - 5%

ARCADIS
08-2020

FIGURE 4

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



BREAK DOWN YEAR (2023) DESIGN HOURLY VOLUMES - NO-BUILD CONDITIONS

DEKALB COUNTY
PI*0009542

I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

2023 AM DHV - (000)
2023 PM DHV - 000

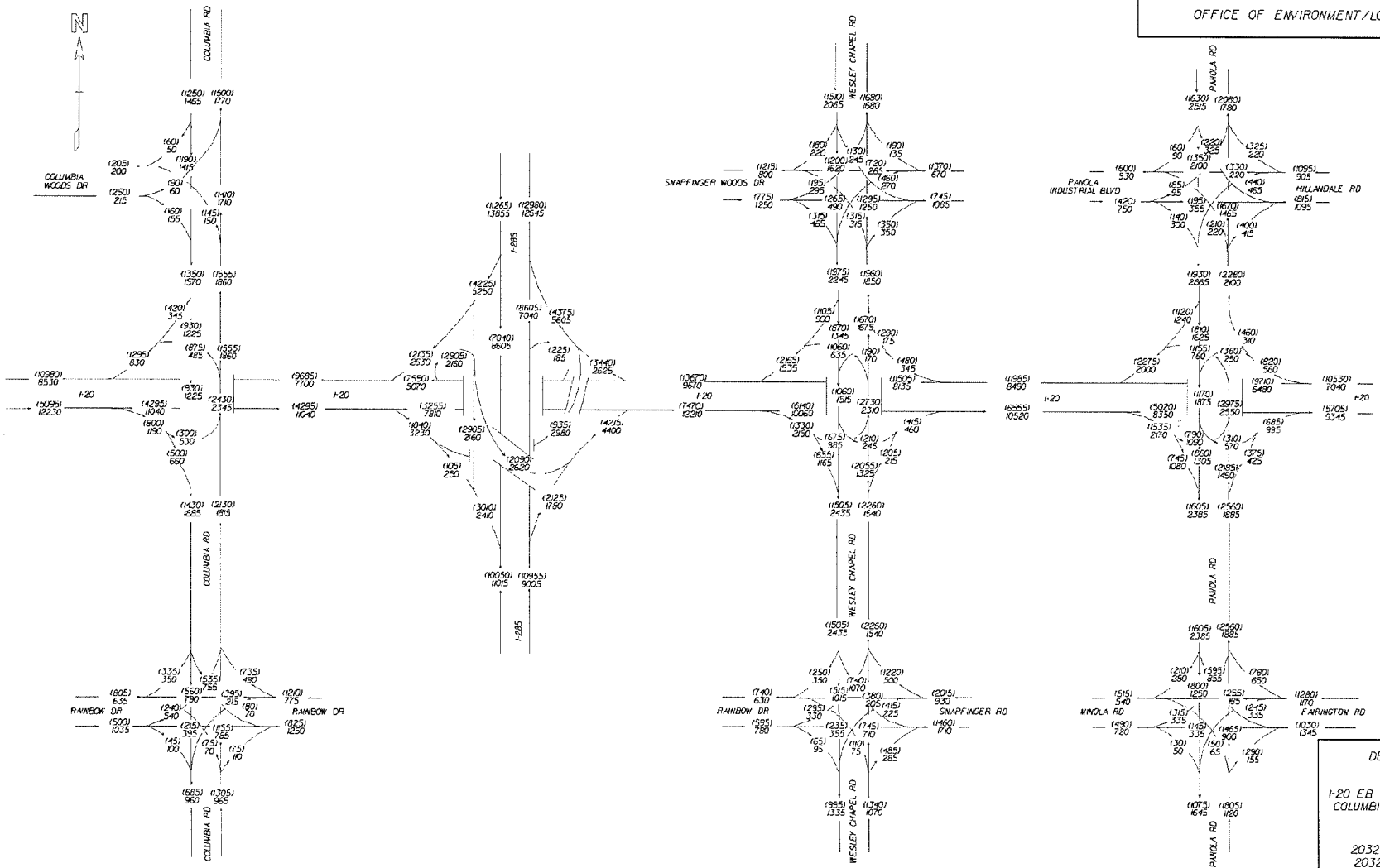
T - 9%
S.U. - 4%
COMB. - 5%

ARCADIS 08/2008

FIGURE 5

GEORGIA DEPARTMENT OF TRANSPORTATION

OFFICE OF ENVIRONMENT/LOCATION



DESIGN YEAR (2032) DESIGN HOURLY VOLUMES - NO-BUILD CONDITIONS

DEKALB COUNTY
PI#0009542

I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

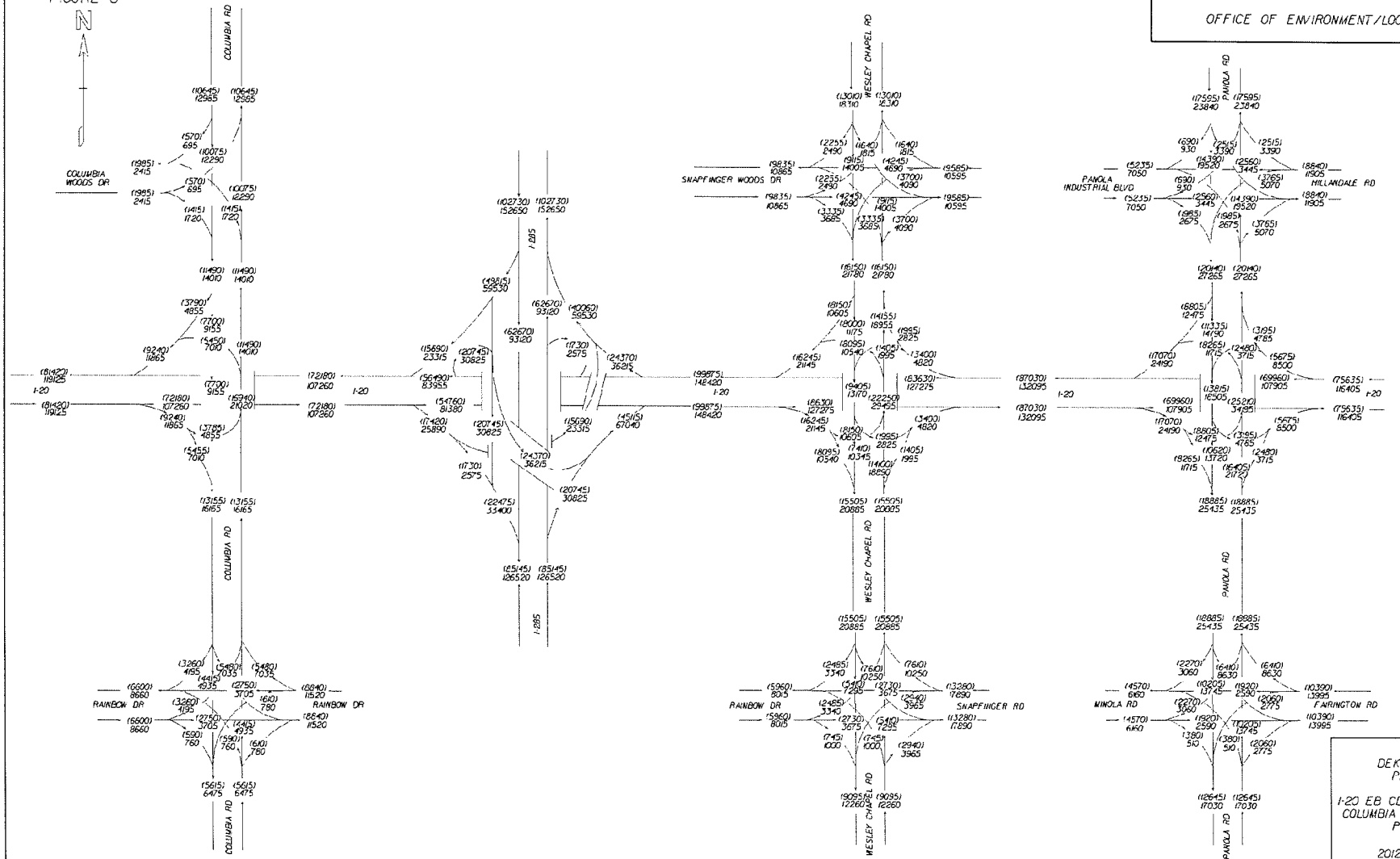
2032 AM DHV = (000)
2032 PM DHV = 000

T = 9%
SU = 4%
COMB. = 5%

APCAD/S
08/2008

FIGURE 6

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



OPEN YEAR (2012) & DESIGN YEAR (2032) ADT - NO-BUILD CONDITIONS

DEKALB COUNTY
PI#0009542

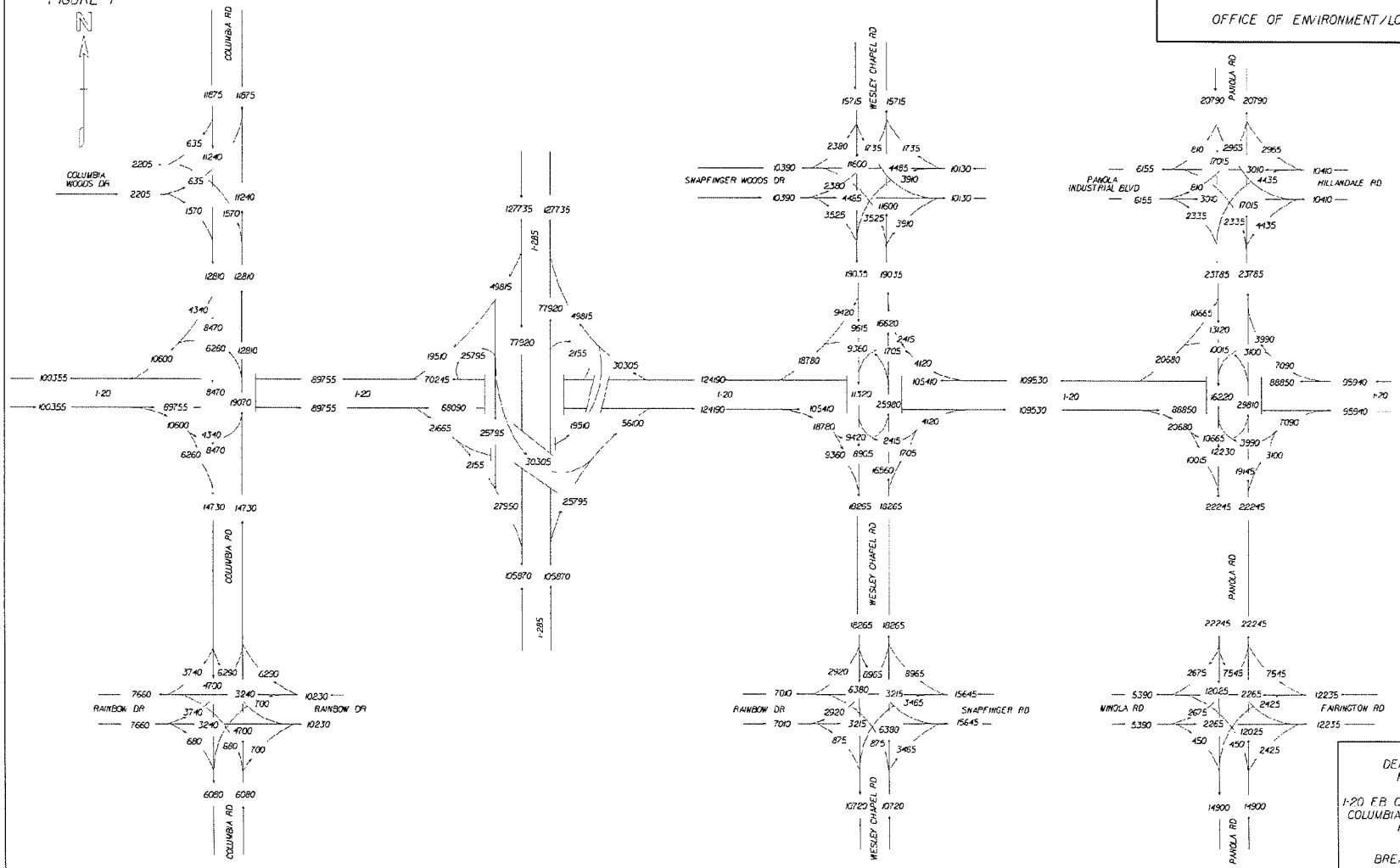
I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

2012 ADT = (000)
2032 ADT = 000
24 HR T = 18%
S.U. = 8%
COMB. = 10%

MPC/DOS 08/2008

FIGURE 7

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



BREAK DOWN YEAR (2023) ADT - NO-BUILD CONDITIONS

DEKALB COUNTY
PI#0009542

I-20 F.R. C.D. FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

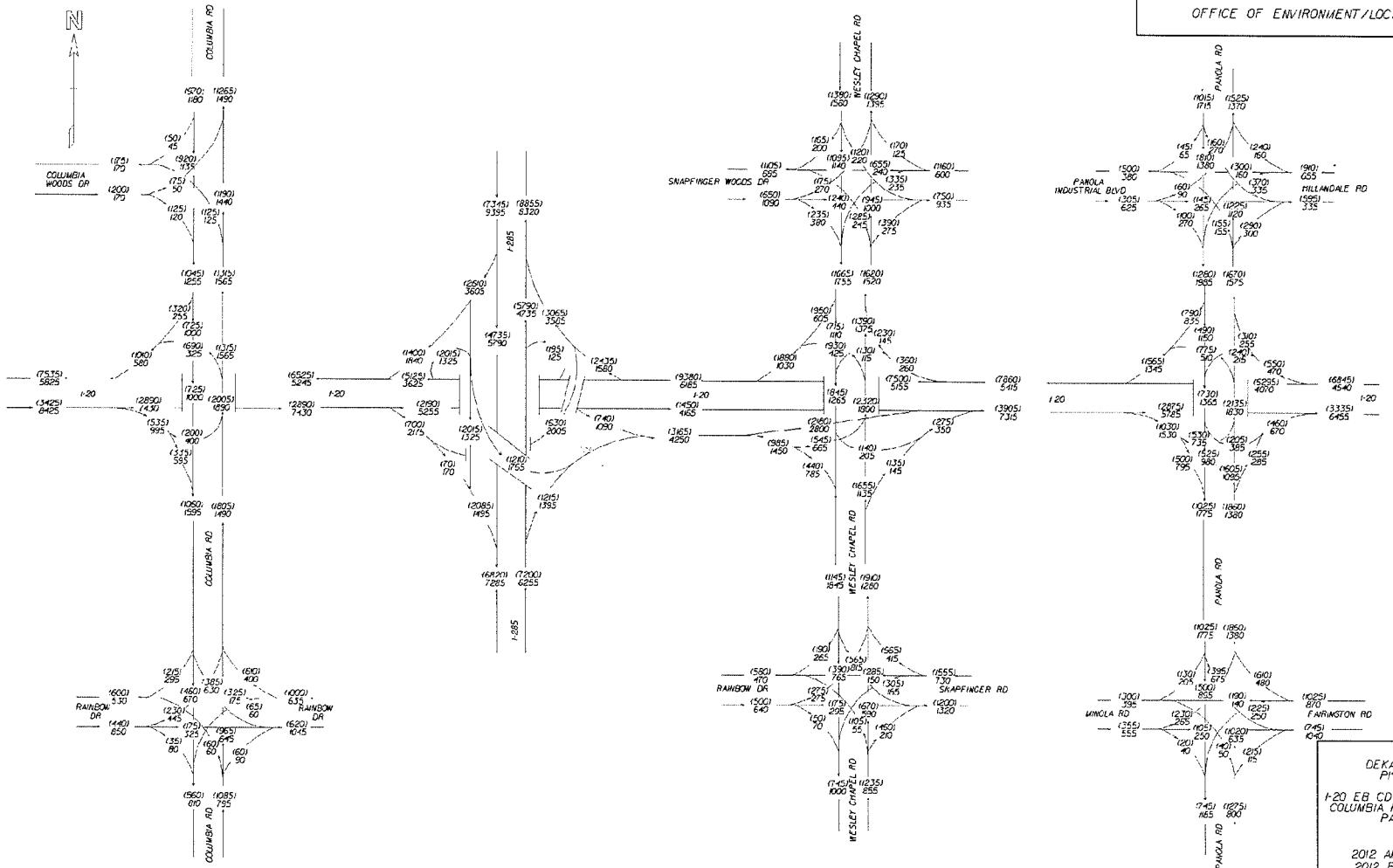
BREAK DOWN YEAR (2023) ADT
24 HR. T - 18%
S.U. - 8%
COMB. - 10%

APC4015
08/2002

FIGURE 6

GEORGIA DEPARTMENT OF TRANSPORTATION

OFFICE OF ENVIRONMENT/LOCATION



OPEN YEAR (2012) DESIGN HOURLY VOLUMES - BUILD CONDITIONS

DEKALB COUNTY
PI*0009542

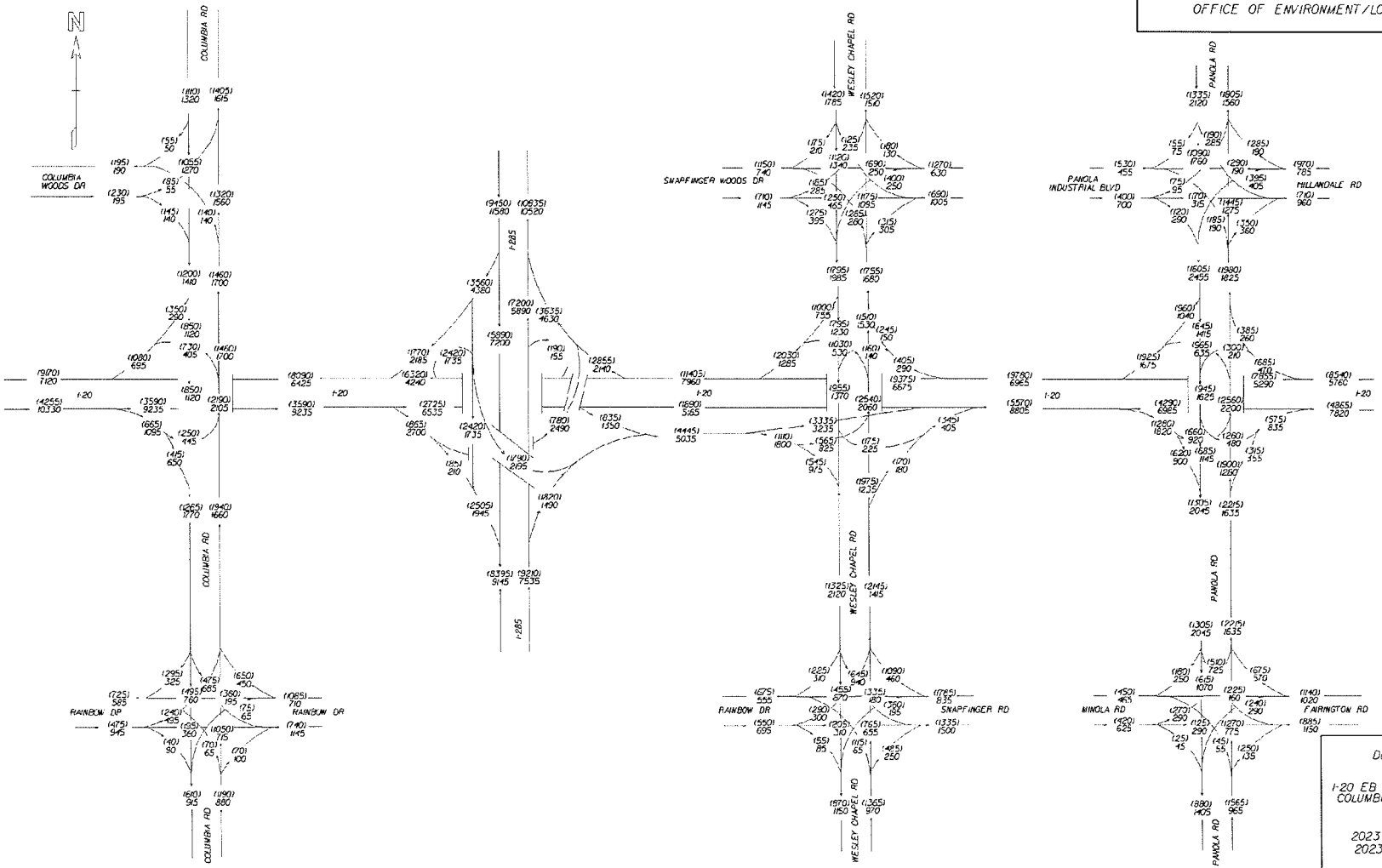
I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

2012 AM DHV - (000)
2012 PM DHV - 000
T = 9%
SU = 4%
COMB. = 5%

ARCADIS
06/2009

FIGURE 7

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



BREAK DOWN YEAR (2023) DESIGN HOURLY VOLUMES - BUILD CONDITIONS

DEKALB COUNTY
PI#0009542

I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

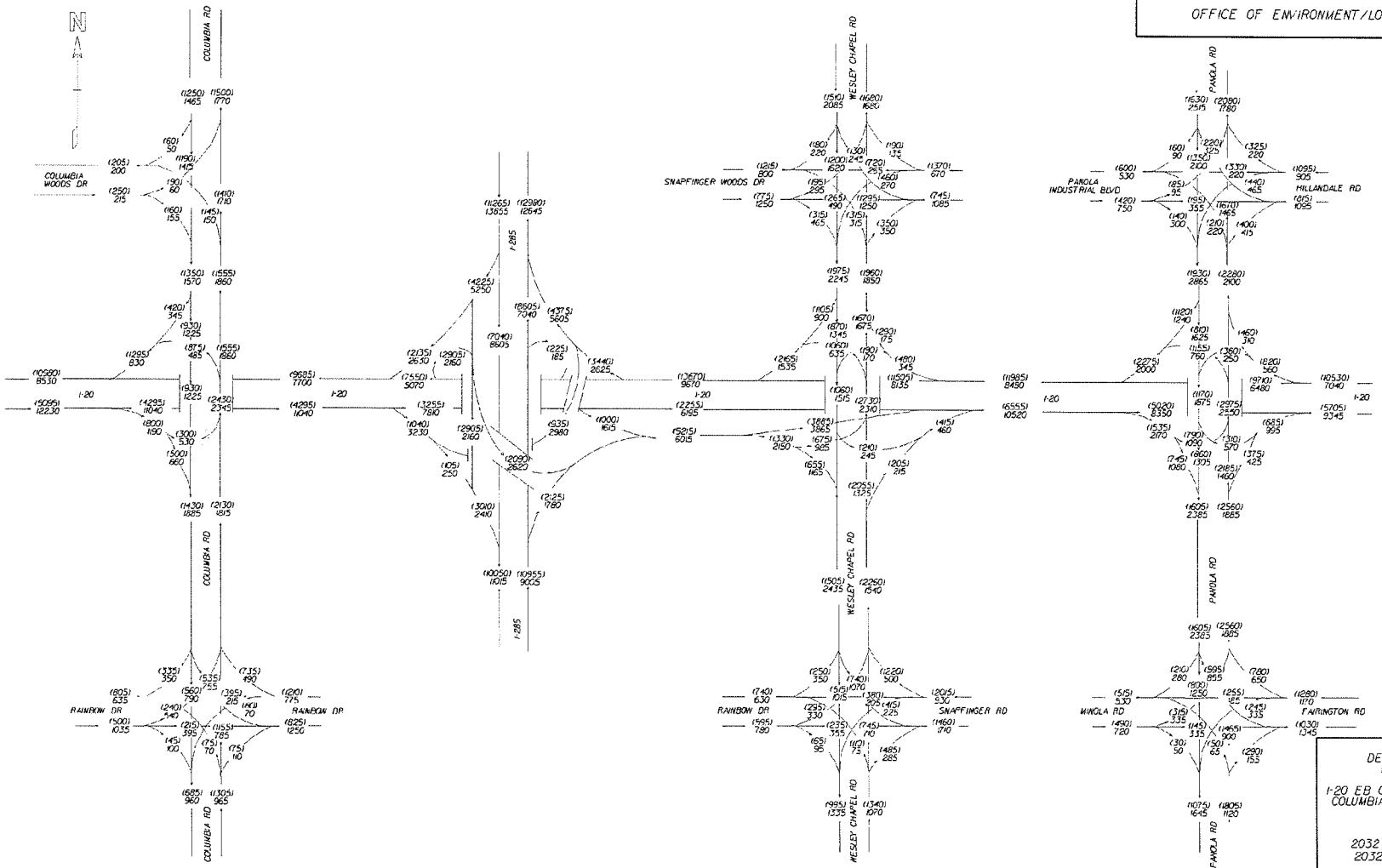
2023 AM DHV - (000)
2023 PM DHV - 000

T = 9%
S.U. = 4%
COMB. = 5%

ARCADIS
08/2009

FIGURE 8

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



DESIGN YEAR (2032) DESIGN HOURLY VOLUMES - BUILD CONDITIONS

DEKALB COUNTY
P.I.#0009542

I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

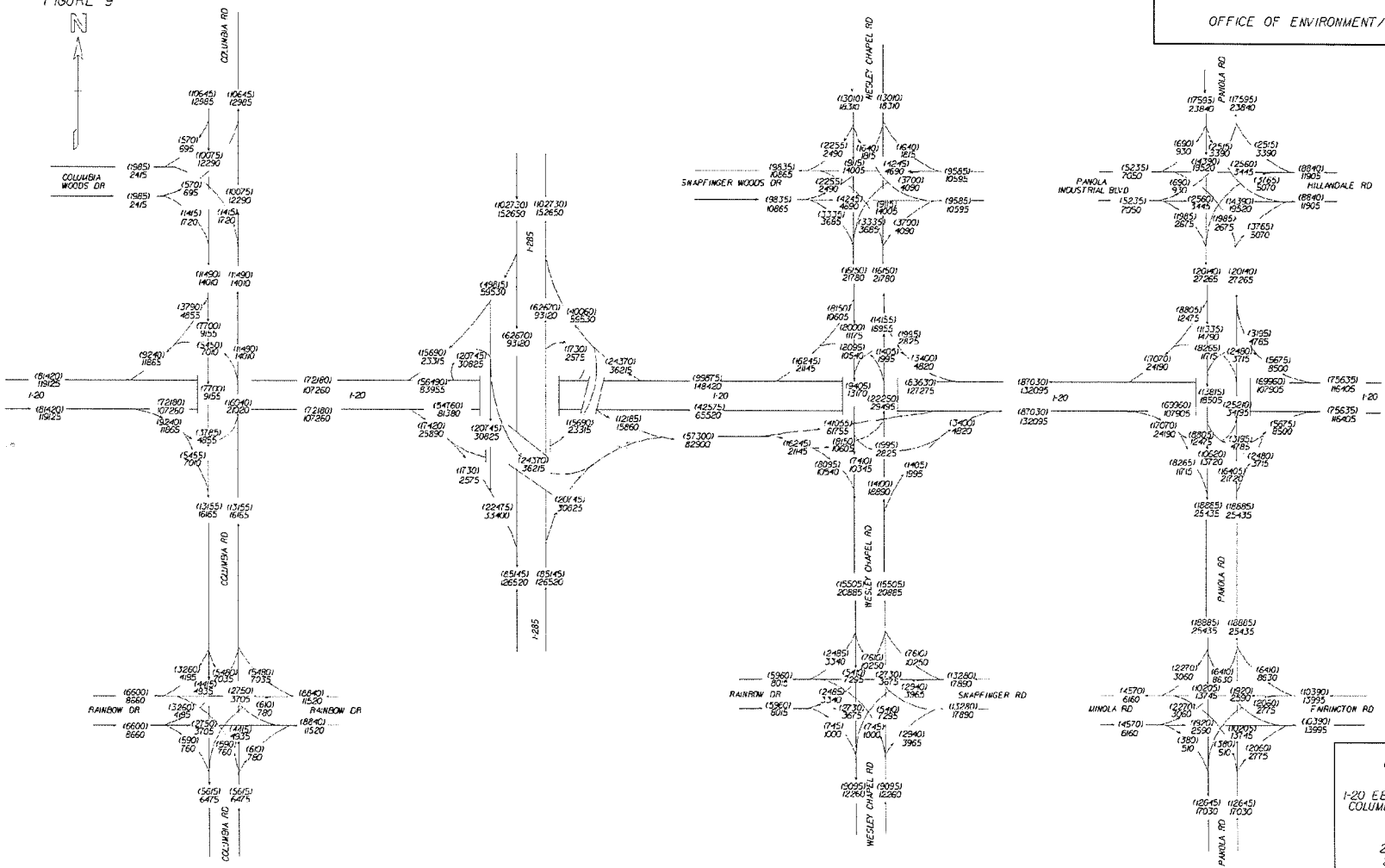
2032 AM DHV = (000)
2032 PM DHV = 000

T = 9%
S.U. = 4%
COMB. = 5%

ARCADIS
08/2002

FIGURE 9

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



OPEN YEAR (2012) & DESIGN YEAR (2032) ADT - BUILD CONDITIONS

DEKALB COUNTY
P.I.#0009542

I-20 E.B. C.D. FROM WEST OF COLUMBIA RD. TO EAST OF PANOLA RD.

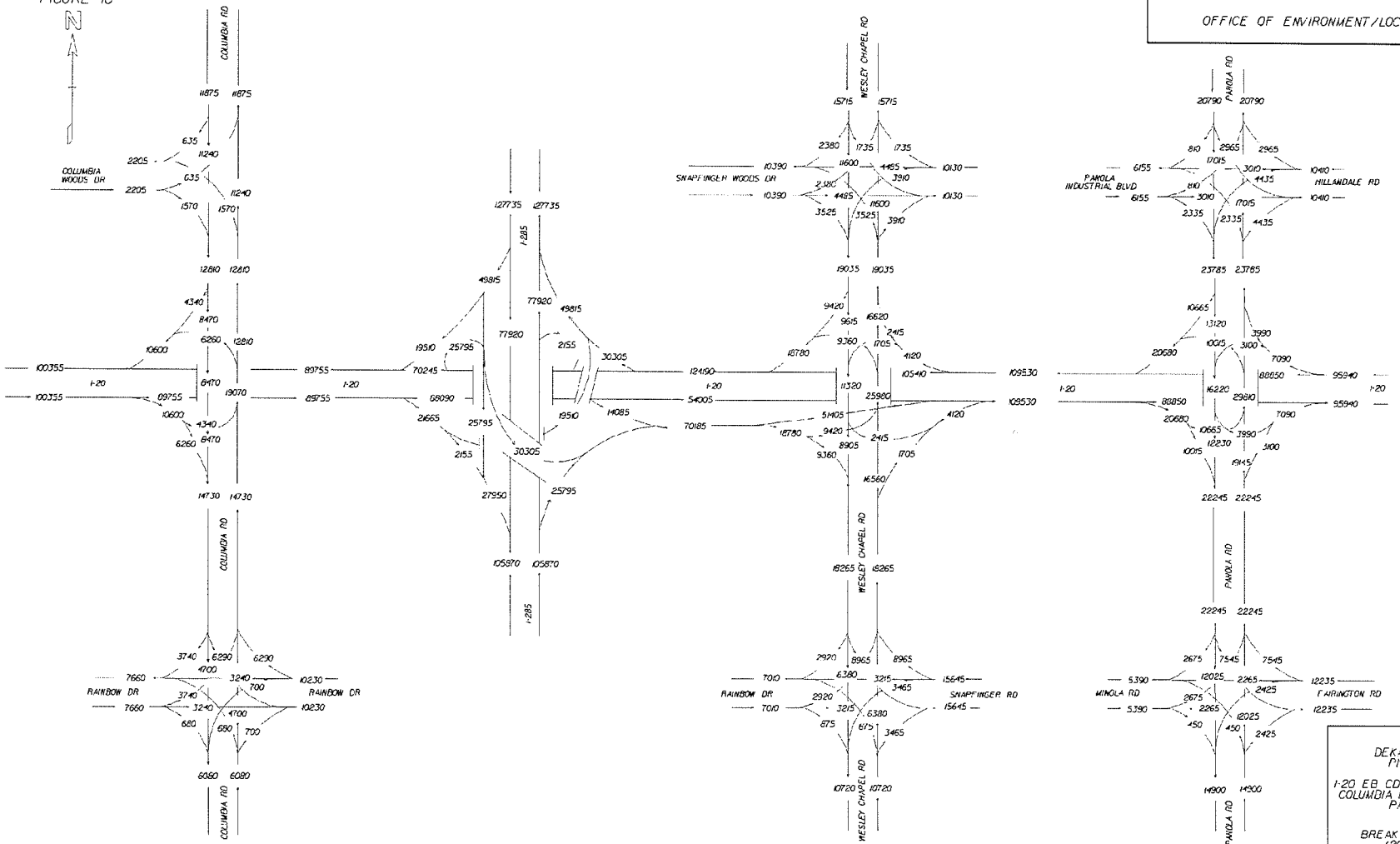
2012 ADT - (000)
2032 ADT - 000

24 HR. T - 18%
S.U. - 8%
COMB. - 10%

MRCADS 08/2008

FIGURE 10

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



BREAK DOWN YEAR (2023) ADT - BUILD CONDITIONS

DEKALB COUNTY
PI#0009542

I-20 EB CD FROM WEST OF COLUMBIA RD TO EAST OF PANOLA RD

BREAK DOWN YEAR (2023) ADT

24 HR T - 18%
S.U. - 8%
COMB. - 10%

APCADIS 06/2022

Attachment 10a: Design Traffic Approval Letter

Department of Transportation
State of Georgia

FILE DeKalb County
P.I. # 0009542

OFFICE Environment/Location

DATE September 30, 2009

FROM Glenn Bowman, P.E., State Environmental/Location Engineer

TO Bobby Hilliard, P.E., State Program Delivery Engineer
Attn.: Marlo Clowers

SUBJECT Design Traffic Review for I-20 EB FROM I-285 TO CR 5150/PANOLA ROAD – CD SYSTEM.

We have reviewed the consultant's traffic data for the above project. The Design Traffic is approved.

If you have any questions concerning this information please contact Rhonda Niles at (404) 699-4461.

GSB/RFN

Attachment 10b: Pavement Evaluation Report

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE CSNHS-M003-00 (234) DeKalb
PI No. M003234

OFFICE Materials and Research
DATE March 23, 2009

FROM Georgene M. Geary, P. E., State Materials and Research Engineer

TO Rachel Brown, Acting District Engineer, Chamblee
Attention: Mike Lobdell, District Preconstruction Engineer

SUBJECT Pavement Evaluation Summary
I-20 From Columbia Drive To Turner Hill Road

As requested, we have prepared a pavement evaluation summary for the aforementioned site. Results of this work are attached.

More work is scheduled to be done on the ramps for this project. The recommendations for these ramps will be transmitted under a separate cover.

If additional information is needed, please contact Steve Pahno of the Pavement Management Branch at 404-363-7571.

GMG: JTR: AJJ: SVP

Attachments
Pavement Evaluation Summary
Overlay Designs (3)

Copy: file
Sheila Hines, State Bituminous Construction Engineer, Forest Park
Myron Banks, State Concrete Engineer, Forest Park
Mac Cranford, District Design Squad Leader, Chamblee

M003234PES

PAVEMENT EVALUATION SUMMARY

For

CSNHS-M003-00 (234) DeKalb County
PI No. M003234

1. *LOCATION / DESCRIPTION*

This project is for the road improvements on I-20 beginning at Columbia Drive and continuing east to Turner Hill Road. The project is located in DeKalb County within the following station limits:

Mile Post to Mile Post	Location
65± to 75±	I-20

2. *PAVEMENT CONDITION SUMMARY*

After examination of the cores cut from the mainline of this project, some level of stripping was encountered in 19 of the 35 cores cut from the I-20 mainline. Because the condition of the asphalt will only continue to deteriorate, we recommend that the asphalt pavement in both directions be milled to the top of the PCC pavement in Lanes 2 and 3 and then inlaid. The eastbound Lane 1 should be milled and inlaid to the same depth as eastbound Lane 2 to eliminate any layers that have been damaged due to stripping. The westbound Lane 1 is in good condition and will only require 3 ¼ inches of milling and inlaying to provide a uniform riding surface for I-20. All inlaying details are provided in *Section 4: Inlay Sections.*

Eastbound Mainline
In Lane 1, the asphalt pavement was primarily in fair to poor condition. It was found that 15 to 16.5 inches of asphalt pavement overlaid a graded aggregate base.

In Lane 2, the existing asphalt portion of the composite pavement was in fair to poor condition. It was found that 7.25 to 9 inches of asphalt pavement overlaid 8.75 to 9 inches of PCC pavement.

In Lane 3, the existing asphalt portion of the composite pavement was in poor condition. It was found that the asphalt cores ranged from 4.5 to 8.25 inches. The underlying PCC thickness ranged from 8.5 to 9 inches. At the western extreme of the project, it was found that 10.25 inches of asphalt overlaid a soil aggregate base. At the eastern end of the project, it was found that 14.5 inches of asphalt overlaid a graded aggregate base.

Westbound Mainline
In Lane 1, the existing asphalt pavement was in good condition. It was found that 15 to 17 inches of asphalt overlaid a graded aggregate base.

In Lanes 2 and 3, the existing asphalt portion of the composite pavement was in fair to poor condition. In Lane 2, it was found that 8 to 10 inches of asphalt overlaid 9 to 9.25 inches of PCC pavement. In Lane 3, it was found that 7 to 8 inches of asphalt overlaid 8.75 to 9 inches PCC pavement.

At locations where there were Lanes 4 and 5, these lanes were in fair condition. These lanes are not travel lanes. At the two separate locations that were cored in Lane 4, one was full-depth asphalt over graded aggregate base and the other was a composite section. No cores were cut where there was a Lane 5.

Outside Shoulders

The outside shoulders in both directions were in good to fair condition. The westbound outside shoulders ranged from 6 ¼ to 11 inches of asphalt over a cement stabilized soil aggregate or a graded aggregate base. The eastbound outside shoulders ranged from 6 ½ to 16 inches of asphalt over cement stabilized soil aggregate, graded aggregate base, or PCC shoulder.

As requested, we have evaluated the suitability of the outside shoulders for use as temporary travel lanes for 14 weekends. Based on Asphalt Pavement Analyzer (APA) test results, we are recommending that the outside shoulder can be used as temporary travel lanes for the 14 weekends.

After the use of the outside shoulders as temporary travel lanes, we recommend milling and inlaying the shoulders 2 inches to remove oxidized layers and to extend the service life of the shoulders.

Ramps at Turner Hill Road

The ramps at this location are in good to fair condition. Only the eastbound ramps were cored. We recommend milling and inlaying 1.5 inches as detailed in *Section 4: Inlay Sections*.

Other Ramps

In general, the existing ramps are in good to poor condition. Only a visual inspection was conducted during our field investigation because of the initial limited scope of work requested. We will conduct more field work and provide more support for our recommendations, but we expect that only minor rehabilitation will be required for most of the ramps.

3. *FULL-DEPTH SECTION*

No full-depth pavement sections are required for this project.

4. *INLAY SECTIONS*

As reported in *Section 2: Pavement Condition Summary*, the thickness of the existing asphalt overlay was found to vary throughout the project. Either design in the next two tables can be used for I-20 when the existing pavement thickness is 8.25 to 10.25 inches. The structure in Option 1 would typically be recommended, but the Option 2 design is equally suitable, and it will eliminate a stage of construction and eliminate an asphalt mix type to monitor. If the asphalt portion of the composite pavement is thicker than 10.25 then the asphalt base layer can be increased to add thickness.

Section 1a: I-20 Mainline Composite – Option 1. Mill and Inlay.				
PAY ITEM NUMBER	MATERIAL	COURSE	THICKNESS	SPREAD RATE
400-3624	12.5 mm PEM	Drainage	1.25 inches	135 lbs/yd^2
400-3604	12.5 mm SMA	Surface	2 inches	220 lbs/yd^2
402-3190	19 mm Superpave	Binder	2 inches	220 lbs/yd^2
402-3121	25 mm Superpave	Asphalt Base	3 inches to 5 inches	330 lbs/yd^2 to 550 lbs/yd^2

Section 1b: I-20 Mainline Composite – Option 2. Mill and Inlay.				
PAY ITEM NUMBER	MATERIAL	COURSE	THICKNESS	SPREAD RATE
400-3624	12.5 mm PEM	Drainage	1.25 inches	135 lbs/yd^2
400-3604	12.5 mm SMA	Surface	2 inches	220 lbs/yd^2
402-3121	25 mm Superpave	Asphalt Base	5 inches to 7 inches	550 lbs/yd^2 to 770 lbs/yd^2

If the existing asphalt structure on the mainline is between 6.25 and up to 8.25 inches, then the inlay may be constructed as shown in the table below. This structure will handle the variability of the in-situ pavement thicknesses with the constraint of matching the existing grade.

Section 2: I-20 Mainline. Mill and Inlay.				
PAY ITEM NUMBER	MATERIAL	COURSE	THICKNESS	SPREAD RATE
400-3624	12.5 mm PEM	Drainage	1.25 inches	135 lbs/yd^2
400-3604	12.5 mm SMA	Surface	2 inches	220 lbs/yd^2
402-3121	25 mm Superpave	Asphalt Base	3 inches to 5 inches	330 lbs/yd^2 to 550 lbs/yd^2

Existing asphalt structures in the composite areas that are less than 6.25 inches are likely to be tapered for bridge structures or other reasons. During construction, the Engineer will need to prepare on how best to handle these situations.

The following section is recommended for Lane 1 in the westbound direction, which is in good condition and will only require a mill-and-inlay section to provide a uniform riding surface. (*Note: This roadway is not a micro-mill candidate.*)

Section 3: I-20 Westbound Lane 1. Mill and Inlay 3 ¼ inches.				
PAY ITEM NUMBER	MATERIAL	COURSE	THICKNESS	SPREAD RATE
400-3624	12.5 mm PEM	Drainage	1.25 inches	135 lbs/yd^2
400-3604	12.5 mm SMA	Surface	2 inches	220 lbs/yd^2

The following mill and inlay section is recommended for use on the outside shoulders of I-20 and on the eastbound on- and off-ramps at Turner Hill Road. The shoulder should be milled and overlaid ***after*** the proposed 14 weekends of temporary lane shifts are over.

Section 4: I-20 Outside Shoulders and Ramps at Turner Hill Road. Mill 2 inches and Inlay.				
PAY ITEM NUMBER	MATERIAL	COURSE	THICKNESS	SPREAD RATE
402-3130	12.5 mm Superpave	Surface	2 inches	220 lbs/yd^2

5. *PAVEMENT DISTRESSES*

Except for the following, no other distresses were encountered during the field investigation of this project:

Load Cracking On I-20, Levels 1, 2, and 3 load cracking were observed throughout the project limits.

Block/ Transverse Cracking On I-20, Levels 1, 2, and 3 block/ transverse cracking were observed throughout the project limits.

Reflection Cracking On I-20, Levels 1 and 2 cracking were observed throughout the project limits.

Edge Distress On I-20, an area of edge distress was observed where trucks appear to have pulled off the road at MP 72.609±. These truck movements can lead to edge cracking or shoulder drop-offs and may contribute to further deterioration of the pavement.

Raveling On I-20, raveling of the surface mix was observed throughout the project limits.

Bleeding/ Flushing On I-20, bleeding/ flushing was observed sporadically over the project limits.

6. *CORES*

Cores were recovered from 45 locations in the travel lanes, shoulders, and eastbound Turner Hill Road ramps of this project to determine the thicknesses and conditions of the existing pavement sections. The assessment of individual core conditions is not to be confused with the overall assessment of the condition of each travel lane. The results of this work are attached.

Core Number	Direction - Lane No.	Mile Post	Asphalt Core Length (inches)	Core Condition	Underlying Material
1	EBL 3	66.241±	10.25	Level 2 Load Crack to 5 inches with stripping below. Separated at 2.5± inches	Soil Aggregate Base
2	EBL 3	66.920±	8.25	Stripping at 4 inches and below	8.75 inches PCC
3	EBL 3	67.264±	6.5	Stripping at 3 ½ inches	8.5 inches PCC

Core Number	Direction - Lane No.	Mile Post	Asphalt Core Length (inches)	Core Condition	Underlying Material
4	EBL 3	68.422±	7.5	Core separated at 3.5± inches	9 inches PCC
5	EBL 3	69.210±	4.5	Level 1 Raveling & Level 1 Transverse Crack. Stripping.	PCC (Core not recovered)
6	EBL 3	70.529±	7.5	Level 1 Raveling. Stripping at 5 inches.	PCC (Core not recovered)
7	EBL 3 (On a sawed joint)	71.432±	6.25	Level 1 Reflection. Tape at bottom of core.	PCC (Core not recovered)
8	EBL 3	72.500±	7	Top-Down Crack to 5 inches. Core separated at 5 inches.	PCC (Cracked Full-depth. Not at joint)
9	EBL 2	67.161±	7.25	Stripping at 6 inches	PCC
10	EBL 1	68.023±	15	Good	GAB
11	EBL 2	69.017±	9	Level 2 Transverse full-depth crack. Asphalt fell apart in large pieces.	PCC (Core not recovered)
12	EBL 1	70.014±	16.5	Stripping at 9 to 11 inches	GAB
13	EBL 2 (On a sawed joint)	71.038±	8.5	Level 1 Transverse Crack to 5 inches	8 ¾ inches PCC (Cracked Full-depth)

Core Number	Direction - Lane No.	Mile Post	Asphalt Core Length (inches)	Core Condition	Underlying Material
14	EBL 1	73.118±	16	Stripping at 4 ½ inches	GAB
15	EBL 2	75.200±	9 (Full core not recovered)	Broke at 5 inches. Stripped at 4.5 inches.	9 inches PCC
16	EBL 3	73.241±	5 (Full core not recovered)	Level 1 Transverse Crack (Slanted). Stripping and fell apart at 6 inches.	PCC (Core not recovered)
17	EBL 3	74.184±	6	Level 2 Reflection crack bottom-up to 5 ½ inches, excluding surface layer.	PCC (Core not recovered)
18	EBL 3	75.876±	14.5	Level 1 Load Crack 0-½ inch down. Core broke at 8 ½ inches.	GAB
19	WBL 4	75.222±	14.5	Good	GAB
20	WBL 3	74.177±	8 (Full core not recovered)	Core broke apart. Very bad stripping. Separated at 2 inches.	PCC (Core not recovered)
21	WBL 3	73.234±	8 (Full core not recovered)	Level 1 Load Crack. Stripping. Core fell apart in hole.	PCC (Core not recovered)

Core Number	Direction - Lane No.	Mile Post	Asphalt Core Length (inches)	Core Condition	Underlying Material
22	WBL 3	72.473±	7	Level 1 Transverse Crack. Broke at 4 ½ inches.	9 inches PCC
23	WBL 3 (On a sawed joint)	71.322±	7	Level 1 Reflection. Stripping at 3 inches. Transverse Crack 3 inches top-bottom.	9 inches PCC (Cracked Full-depth)
24	WBL 3 (On a sawed joint)	70.301±	8	Level 1 Reflection Crack.	9 inches PCC (Cracked Full-depth)
25	WBL 3 (On a sawed joint)	69.204±	7	Level 2 Reflection full-depth crack. Core in pieces. Stripping at 4.5 inches.	9 inches PCC (Cracked Full-depth)
26	WBL 4	67.779±	7 ¾	Good. Core broke near PCC.	10 inches PCC
27	WBL 3 (On a sawed joint)	67.509±	7.5	Level 1 Reflection. Core in pieces.	8 ¾ inches PCC (Cracked Full-depth)
28	WBL 2	74.177±	10	Stripping at 5 inches and below. Core fell apart.	9 inches PCC
29	WBL 1	73.234±	16.5	Good	GAB
30	WBL 2	72.473±	8	Stripping below 4.5 inches	9.25 inches PCC

Core Number	Direction - Lane No.	Mile Post	Asphalt Core Length (inches)	Core Condition	Underlying Material
31	WBL 1	71.322±	17	Broke at 6 ½ inches. Some stripping.	GAB
32	WBL 2	70.301±	10	Bad stripping at 6 inches	9 inches PCC
33	WBL 1	69.204±	16	Good	GAB
34	WBL 2	67.779±	9	Break at 7 inches. Some stripping at 3 inches.	9 inches PCC
35	WBL 1	68.712±	15	Good	GAB
1-R	EB Off- Ramp (Exit 75: Turner Hill)	(Bottom of Ramp)	14	Crack 1 inch top-down. Raveling.	GAB
2-R	EB Off-Ramp (Exit 75: Turner Hill)	(Middle of Ramp)	14.25	Good	GAB
3-R	EB Off-Ramp (Exit 75: Turner Hill)	(Top of Ramp)	12	Good	GAB
4-R	EB On-Ramp (Exit 75: Turner Hill)	(Middle of Ramp)	9.25	Level 1 Load Crack (1.5 inches)	GAB
1-S	WB Outside Shoulder	75.991	11	Good	4 ¼ ± inches Cemented Stabilized Soil-Aggregate
2-S	WB Outside Shoulder	73.306	16	Good	GAB

Core Number	Direction - Lane No.	Mile Post	Asphalt Core Length (inches)	Core Condition	Underlying Material
3-S	WB Outside Shoulder	69.787	6 ¼	Good	Cement Stabilized Soil-Aggregate
4-S	EB Outside Shoulder	67.008	7 ½	Good	8 ¼ PCC
5-S	EB Outside Shoulder	72.014	6 ½	Level 1 Reflection Crack	Cement Stabilized Soil-Aggregate
6-S	EB Outside Shoulder	73.976	16	Good	GAB

7. *COPACES*

The COPACES rating is based on a visual survey of distresses of the pavement surface. In 2007, the latest average rating for portions of I-20/ SR 402 on this project was approximately 66.

8. *OTHER INFORMATION*

- The overlay pavement design analysis is attached.
- We recommend waterproofing the joints and cracks of concrete pavement prior to the overlaying operation, as per Section 445 of the Standard Specifications.
- We recommend milling the asphaltic concrete pavement, as per Section 432 of the Standard Specifications.
- In the event that the outside shoulders do fail during the temporary 14 weekend detour, removal of the damaged shoulder material shall be in accordance with Sections 411: *Asphaltic Concrete Pavement, Partial Removal* and 205: *Roadway Excavation.* The Contractor shall temporarily reconstruct the shoulders as per Section 400.5.01.D: *Asphaltic Concrete for Temporary Detours.* After completion of the staging detours, this Office should be contacted to assess the condition of the shoulders and to recommend a rehabilitation treatment.
- In the following two tables, the field notes from our visual inspection of the project are presented. The first table details observations of the eastbound direction of I-20 and the second table details observations of the westbound direction.

Table 1: Eastbound I-20

From	To	DESCRIPTION AND DISTRESSES OBSERVED
MP 65.000±	———	BEGINNING OF THE PROJECT
MP 66.190±	MP 66.716±	5-lane traffic. One lane is an HOV lane, Two lanes to I-285 - Level 2, Transverse/Reflection Cracking - Level 1, Load cracking on ramp - Level 2, Load cracking on Highway - Level 2, Joint Cracking
MP 66.716±	MP 67.186±	3-lane traffic - Recently Overlaid - No distresses encountered
MP 67.186±	MP 68.417±	New Pavement Stops, 3-lane traffic - Higher levels of joint cracking, with crack sealing used to seal the cracks - Early signs of raveling - Level 1, Transverse/Reflection Cracking - AC bleeding observed MP 67.438±, I-20 turns into 5 lanes MP 68.339±, I-20 turns back into 3 lanes
MP 68.417±	MP 68.579±	3-lane traffic - Recently Overlaid - No distresses encountered
MP 68.579±	MP 72.730±	New Pavement Stops, Lane 1 does not show level of distresses that other lanes do - Level 2, Transverse/Reflection Cracking - Levels of joint cracking, with crack sealing used to seal the cracks - Level 3 and Level 4 joint cracking - Sealed Transverse/Reflection Cracking on MP 69.231± - Level 1 Raveling (MP 69.231± to MP 69.642±) - Level 1 Raveling (MP 70.000± to MP 70.114±) - Level 4 Joint Cracking at MP 71.467±
MP 72.730±	MP 76.470±	3-lane traffic, - Recently Overlaid - Crack sealing stops - Limited Level 1, Transverse/Reflection Cracking - Surface for majority of section is in fair condition - AC patch on Lane 3 (MP 74.316± to MP 74.470±)
MP 76.470±	———	PROJECT ENDS (UNDER TURNER HILL RD BRIDGE)

Table 2: Westbound I-20

From	To	DESCRIPTION AND DISTRESSES OBSERVED
MP 76.000±	----------	PROJECT ENDING
MP 74.414±	MP 72.609±	3-lane traffic - New Pavement, recently overlaid - Low limit of Level 1 load cracking
MP 72.609±	MP68.499±	New Pavement Stops, 3-lane traffic - Level 1, Level 2, Transverse/Reflection Cracking - No crack sealing used at this section - Lane one is in good shape - Westbound distresses are very limited compare to Eastbound distresses - MP 72.609 ±, Shoulder drop-off and water standing for about 100 ft - MP 70.000 ±, New shoulder construction
MP68.499±	MP 68.310±	3-lane traffic - New Pavement and New Shoulders, recently overlaid
MP 68.310±	MP 67.140±	New Pavement Stops, 4-lane traffic, Lane 3 splits. Lane 1, 2, and 3 continues I-20 Westbound, while Lane 3 and 4 goes to I-285 - Small portion of crack sealing used on joint cracks - Lane 4 had patch (Starts from MP 67.761± to MP 67.779±) - Highway reduces to 3-lane at MP 67.800±
MP 67.140±	MP 65.000±	Highway becomes 5 lanes, One lane is HOV - Load crack sealing used in Lanes 4 and 5 at MP 66.834
MP 65.000±	----------	BEGINNING OF THE PROJECT

Reported By: Steve V. Pahno

Reviewed By: _____
A. J. Jubran, P. E.

M003234PES

Attachment 10c: Cost Estimate for Items to be Removed under Future Contracts

Roadway Construction

Item	Quantity	Unit	Unit Cost	Total Cost
Concrete Median Barrier, Type 26	5550	LF	$ 200.00	$ 1,110,000
Concrete Side Barrier	12400	LF	$ 39.86	$ 494,264
Impact Attenuator Unit Type P-3-U-30	3	EA	$ 17,113.20	$ 51,339
Chain Link Fence	9114	LF	$ 40.00	$ 364,550
Indentation Rumble Strips Ground In-place	7	GLM	$ 947.00	$ 6,629
Guardrail Type T	5468	LF	$ 52.35	$ 286,263
Guardrail Type W	9114	LF	$ 17.89	$ 163,045
Gurardrail Anchor TP1	12	EA	$ 673.15	$ 8,078
Gurardrail Anchor TP 5	6	EA	$ 1,008.31	$ 6,050
Gurardrail Anchor TP12	6	EA	$ 1,762.58	$ 10,575
Sub Total Roadway Construction				**$ 2,500,793**
Walls				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Retaining Wall (0 ft - 20ft) All types	140,003	SF	$ 70.00	$ 9,800,175
Sound Walls	16,290	LF	$ 400.00	$ 6,516,000
Sub Total Walls				**$ 16,316,175**
Drainage Items				
Item	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
Storm Drain Pipe 18 in 1-10 ft	18230	LF	$ 36.00	$ 656,280
Storm Drain Pipe 24 in 1-10 ft	9120	LF	$ 44.00	$ 401,280
Storm Drain Pipe 30 in 1-10 ft	5470	LF	$ 54.00	$ 295,380
Storm Drain Pipe 36 in 1-10 ft	3650	LF	$ 66.00	$ 240,900
Storm Drain Pipe 48 in 10-15 ft	1830	LF	$ 116.00	$ 212,280
Flared End Section 18 in	10	EA	$ 551.07	$ 5,511
Flared End Section 24 in	5	EA	$ 643.26	$ 3,216
Flared End Section 30 in	3	EA	$ 761.29	$ 2,284
Flared End Section 36 in	2	EA	$ 1,055.83	$ 2,112
Stone Dumped Rip-Rap TP 3, 24"	450	SY	$ 47.00	$ 21,150
Plastic Filter Fabric	450	SY	$ 4.00	$ 1,800
Drop Inlet Group 1	130	EA	$ 3,588.00	$ 466,440
Drop Inlet Addt'l Depth GP 1	260	LF	$ 255.00	$ 66,300
Drop Inlet Group 2	10	EA	$ 3,111.45	$ 31,115
Drop Inlet Addt'l Depth GP 2	20	LF	$ 273.00	$ 5,460
Sub Total Drainage Items				**$ 2,411,508**

Summary				
Sub Total Roadway Construction				$ 2,500,793
Sub Total Walls				$ 16,316,175
Sub Total Drainage				$ 2,411,508
			Subtotal	$ 21,228,476
E&C Rate, 10%				$ 2,122,848
			Total	$ 23,351,324

Attachment 10d: Preliminary Design Schedule

I-20 EBCD Task Order No. 2 Schedule: P.I. No. 0009542 Project No.:											Update as of 10/09/09
1		Action	Deliverable	Responsible	Schedule Dates					Original GDOT Schedule (Months after NTP)	Status / Updates from Last Report / Comments
					Planned			Actual			
2				Party / Agency	Begin	End	Months after NTP	Begin	End		
3											
6		Authorized	Notice To Proceed	GDOT	8/20/2009				8/20/2009	0	
8	Phase 0 – Public Involvement										
9		Submit	Public Involvement Plan	ARCADIS							
10		Request	Public Information Open House (1)	ARCADIS		9/7/2009	0.6		9/3/2009		Done
11		Hold	Public Information Open House (1)	GDOT		10/22/2009	2.0		11/17/2009	2	
13	Phase 1 – Concept Development										
14		Request Concept Team Meeting		ARCADIS		8/21/2009	0.0		8/21/2009		Done
15		Request VE Study		ARCADIS		8/21/2009	0.0		8/21/2009		Done
16		Submit	Draft PROJECT Concept Report	ARCADIS		9/8/2009	0.6		9/9/2009		Done
18		Submit	Draft IMR Report for selected concept	ARCADIS		10/30/2009	2.3				IMR Draft report schedule has been pushed out approximately 2 weeks to reflect additional time needed to model I-285 and consider new FHWA guidance as per FHWA comments
19		Receive	Feedback/Comments on IMR	GDOT	10/30/2009	11/16/2009	2.9				
20		Submit	Revised IMR based on GDOT comments	ARCADIS	11/16/2009	11/23/2009	3.1				1 week revision time assumming comments are not substantial and do not require revising operational models.
21		Submit	Revised IMR to FHWA Georgia Division	GDOT	11/23/2009	11/25/2009	3.2				
22		Receive	Feedback/Comments on IMR from FHWA Georgia Division	FHWA	11/25/2009	12/18/2009	3.9				21 days review time for FHWA Georgia Division
23		Submit	Revised IMR based on FHWA Georgia Division comments	ARCADIS	12/18/2009	12/28/2009	4.3				1 week revision time assumming comments are not substantial and do not require revising operational models.
24		Submit	Revised IMR to FHWA Headquarters	GDOT/FHWA	12/28/2009	12/30/2009	4.3				
25		Receive	Feedback/Comments on IMR from FHWA	FHWA	12/30/2009	1/31/2010	5.4				1 month review time for FHWA Headquarters
26		Submit	Revised IMR based on FHWA Headquarter comments	ARCADIS	1/31/2010	2/7/2010	5.6				1 week revision time assumming comments are not substantial and do not require revising operational models.
27		Approve	GDOT and FHWA approval of IMR	GDOT/FHWA	2/7/2010	2/14/2010	5.8				
28		Hold Concept Team Meeting		ARCADIS		9/29/2009	1.0		9/29/2009		Done
29			PROJECT Management Plan	ARCADIS		10/5/2009	1.5		10/2/2009		Done
30			PROJECT Quality Control Plan	ARCADIS		10/5/2009	1.5		10/2/2009		Done
31		Conduct VE Study		GDOT	1/25/2010	1/29/2010	5.3			2	GDOT cannot hold VE study until Jan 2010; Approved VE study recommendations will be incorporated into Costing Plans
32			Draft responses/recommendations to the VE Study	ARCADIS	1/29/2010	2/5/2010	5.6				
33			Final PROJECT Concept Report	ARCADIS	10/26/2009	10/30/2009	2.3		10/9/2009		Will not include approved VE recommendations
34		Concept Approved		GDOT	11/2/2009	11/2/2009	2.4			2	
35		Request	Design Exception/Variance report(s)	ARCADIS		12/21/2009	4.0				
36			Complete Soils Survey & WFIs	Ranger		12/31/2009	4.4				
37		Complete	PROJECT Costing Plans (30% preliminary plans)	ARCADIS	10/30/2009	2/18/2010	6.0				
38		Complete	Preliminary construction cost estimates	ARCADIS		2/18/2010	6.0				
39		Submit	Special provisions (Section 999 – DESIGN BUILD plus other special provisions n	ARCADIS	12/31/2010	2/1/2010	5.4				
40		Approved	Special provisions (Section 999 – DESIGN BUILD plus other special provis	GDOT	12/31/2010	2/18/2010	6.0				
43	Phase 2 – Database										
49			Electronic mapping (photogrammetric & field contact surveys)	ARCADIS		10/1/2009	1.4				
50			SUE QL B	TBE		12/31/2009	4.4				
52	Phase 3 – Environmental Documentation										
53		Air Quality									
54		Complete	Draft Air Quality Impact Assessment Report	ARCADIS	10/12/2009	11/16/2009	2.9				Note that there are issues in relation to Ozone and PM 2.5 (interagency determination) due to the project not currently being in the latest TIP. If we, OEL, and the interagency cannot agree on a way to proceed around this, and if the project cannot be added to the TIP until December, this will result in an approximately 2-3 month delay in our schedule, as the Air Quality Impact Assessment will not be able to be submitted until 2010.
55		Review	Review Draft	OEL	11/16/2009	11/30/2009	3.4				2-week review period by OEL
56		Revise	Revisions per GDOT Comment	ARCADIS	11/30/2009	12/7/2009	3.6				1 week revision period by ARCADIS
57		Review	Review	OEL	12/7/2009	12/21/2009	4.0				2-week review/approval period by OEL
58		Approve	Revised Air Quality Impact Assessment Report	OEL		12/21/2009	4.0				
59		Noise									
60		Complete	Draft Noise Impact Assessment Report	ARCADIS	10/7/2009	11/16/2009	2.9	10/7/2009			Air and Noise schedules have been pushed out approximately 3 weeks to reflect additional time to model the 285 corridor per FHWA comment.
61		Review	Review Draft	OEL	11/16/2009	11/30/2009	3.4				2-week review period by OEL
62		Revise	Revisions per GDOT Comment	ARCADIS	11/30/2009	12/7/2009	3.6				1 week revision period by ARCADIS
63		Review	Review	OEL	12/7/2009	12/21/2009	4.0				2-week review/approval period by OEL
64		Approve	Revised Noise Impact Assessment Report	OEL		12/21/2009	4.0				
65		Ecological Resources									
66		Prepare	Fish and Wildlife Coordination Act (FWCA) coordination letter (if necessary)	ARCADIS	9/3/2009						
67		Complete	Draft Ecology Report (single combined report)	ARCADIS	9/3/2009	11/13/2009	2.8	9/4/2009			Note: The Ecology Report Schedule has been moved out by 1 month because information regarding riprap impacts to streams will need to be incorporated into the Ecology Report. This information will not be available until a basin study is completed and flow volumes are determined.
68		Review	Review Draft	OEL	11/13/2009	11/30/2009	3.4				2-week review period by OEL
69		Revise	Revisions per GDOT Comment	ARCADIS	10/15/2009	12/4/2009	3.5				1 week revision period by ARCADIS
70		Review	Review	OEL	12/4/2009	12/18/2009	3.9				2-week review/approval period by OEL
71		Approve	Revised Ecology Report	OEL		12/6/2009	3.6				

72		Obtain	Stream Buffer Variance Application (if necessary)		11/6/2009	4/20/2010	8.0				Stream Buffer Variance not currently anticipated
73		Obtain	Section 404 Nationwide Permit Application		11/6/2009	4/5/2010	7.5				
74		Archaeological Resources									
75		Complete	Short Form of Negative Findings for Archaeological Resources	EPEI	9/3/2009	11/5/2009	2.5	9/4/2009			Draft submitted to OEL on 09/24/09. Assumes GDOT/SHPO concurrence by End Date
76		Historic Resources									
77		Complete	Notification of Section 106 Process Initiation letter	EPEI	9/3/2009	10/5/2009	1.5	9/4/2009			
78		Complete	Draft Historic Resources Survey Report	EPEI	9/3/2009	10/5/2009	1.5	9/4/2009	9/10/2009		
79		Review	Review Draft	OEL	10/5/2009	10/19/2009	2.0	9/10/2009	9/10/2009		2-week review period by OEL
80		Revise	Revisions to Survey Report per GDOT Comment	EPEI	10/19/2009	10/23/2009	2.1	9/10/2009	10/5/2009		1 week revision period by ARCADIS
81		Review	Review	OEL	10/23/2009	11/6/2009	2.6	10/5/2009			2-week review/approval period by OEL
82		Approve	Revised Historic Resources Survey Report	OEL		11/6/2009	2.6				
83		Concurrence	SHPO Concurrence on Historic Resources Survey Report	SHPO	11/6/2009	12/4/2009	3.5				**An expedited SHPO review period should be requested by OEL
84		Complete	Draft Finding of No Historic Properties Affected report	EPEI	10/26/2009	11/9/2009	2.7				**Assumes OEL will review a DRAFT AOE while awaiting SHPO concurrence on HRSR
85		Review	Review Draft	OEL	11/9/2009	11/23/2009	3.1				2-week review period by OEL
86		Revise	Revisions per GDOT comment	EPEI	11/23/2009	12/4/2009	3.5				
87		Review	Review Draft	OEL	12/4/2009	12/17/2009	3.9				2-week review/approval period by OEL
88		Approve	Revised Finding of No Historic Properties Affected report	OEL		12/17/2009	3.9				
89		Concurrence	SHPO Concurrence on Finding of No Historic Properties Affected	SHPO	12/17/2009	1/11/2010	4.7				**An expedited SHPO review period should be requested by OEL
90		NEPA Document									
91			Draft Categorical Exclusion	ARCADIS	9/3/2009	1/8/2010	4.6	9/4/2009			Note: Submittal of the Draft CE has been pushed out 3 weeks due to the 4-week delay in holding the PIOH.
92		Review	Review Draft	OEL	1/8/2010	1/22/2010	5.1				2 week review period by OEL; **Assumes OEL will review Draft CE prior to SHPO concurrence on AOE
93		Revise	Revisions per GDOT comment	ARCADIS	1/22/2010	1/29/2010	5.3				1 week revision period by ARCADIS
94		Approve	Revised Categorical Exclusion	GDOT/FHWA	1/29/2010	3/1/2010	6.3				1 month for both final OEL approval and approval by FHWA
95											
96											
97		Approved Categorical Exclusion		GDOT/FHWA		3/1/2010	6.3			6	
98											
99		Advertise for Statement of Qualifications				2/18/2010				6	
100		Shortlist Selected Firms Based on SOQs				4/20/2010				8	
101		Conduct PFPR		Not Required							
102		RW Plan Approval	Not Applicable (No RW Required)								
103		Final Field Plan Review		GDOT		4/20/2010				8	
104		Advertisement of Request for Proposals (RFPs)		GDOT		6/20/2010				10	
105		Design-Build Contract Award		GDOT		8/20/2010				12	

Attachment 10e: Approval for Design-Build Implementation

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NHIM0-0020-02(166), Dekalb County
I-20 Eastbound CD from I-285 to Panola Road
P.I.. No. 713610-

OFFICE Innovative Program Delivery

DATE May 26, 2009

FROM Darryl D. VanMeter, P.E., Acting Innovative Program Delivery Administrator

TO Gerald M. Ross, P.E., Commissioner/Chief Engineer

SUBJECT **Request for Approval to Add a Project to the Design-Build Program**

This letter is to request approval to include the above referenced project in the Department's Design-Build program. The project provides an operational improvement on I-20 eastbound between I-285 and Panola Road. It corrects a hazardous weave between traffic exiting I-285 onto I-20 eastbound and I-20 eastbound traffic exiting at Wesley Chapel Road. It also improves lane balance at the I-20 exit ramp to Wesley Chapel Road. The project was initiated at the request of the Commissioner/Chief Engineer.

Description of project: The project constructs a barrier separated collector-distributor (CD) on I-20 eastbound from I-285 to Wesley Chapel Road and a concurrent auxiliary lane from Wesley Chapel Road to Panola Road. The CD begins as one newly developed barrier separated lane immediately east of the I-20/I-285 interchange. Two lanes from the I-285 entrance ramp merge with the newly developed lane to form a three lane CD. Two lanes exit from the CD to Wesley Chapel Road and two lanes continue along I-20 eastbound. The barrier ends just east of Wesley Chapel Road to form five I-20 eastbound lanes. The fifth lane is tapered out and the fourth lane is an auxiliary lane to the Panola Road exit ramp.

Preliminary engineering activities: The Department is currently initiating a task order on the existing I-20 East Managed Lane IDIQ contract with Arcadis for the development phase of the design-build project. A Notice to Proceed on the task order is expected in July 2009.

Utility: Utilities impacts are not expected for this project.

Right-of-Way: Right-of-way acquisition is not expected to be necessary for this project.

Environmental: The level of environmental documentation for this project is expected to be a Categorical Exclusion. Expeditious reviews and approvals from the Office of Environment/Location and Federal Highway Administration are required.

Public Involvement: A Public Information Open House will be conducted. Additional public involvement activities will be considered as appropriate for this project.

Construction Work Program: This project is being considered for construction with Transportation Investment Generating Economic Recovery (TIGER) funds. The planning level project cost estimate is approximately $65,000,000. Currently, the project is programmed for Long Range Construction.

Project Framework Agreement: A Project Framework Agreement is not required for this project.

Letting: The Department will let the Design-Build contract for this project. The anticipated schedule to let the Design-Build contract is 12-months from issuing the Notice to Proceed on the task order for the development phase of this project.

With your approval, this office will begin activities for a Design-Build implementation. If you have any questions, please contact Marlo Clowers at (404) 631-1713 or by email.

APPROVAL: Gerald M. Ross, P.E., Chief Engineer — 6/4/09 Date of Approval

DVM:MLC

cc: Genetha Rice-Singleton
Phil Copeland
David Hoge
Randall Hart,
Angela Whitworth
Angela Alexander
Ron Wishon
Glenn Bowman
Jeff Baker
Keith Golden

Rec'd DRP
01/21/2010

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: P.I. No. 0009542 **OFFICE:** Environment/Location

PROJECT No. DEKALB County **DATE:** 11/5/09

I-20 eastbound from I-285 to CR 5150 / Panola Road -- CD System

FROM: Glenn Bowman, P.E., State Environmental/Location Engineer
TO: Genetha Rice-Singleton, Assistant Director of Preconstruction
SUBJECT: **PROJECT CONCEPT REPORT REVIEW**

The Concept Report for the above project has been reviewed and appears satisfactory subject to the following comments:

1. Please make sure this project is in the TIP, and since there are other programmed projects in the area, please get FHWA approval of termini as soon as possible.

2. The project will need to be in the TIP so that the Air Quality study and NEPA document can be completed and approved.

3. Please list who is responsible for the environmental work in the Project Responsibilities section.

If you have any questions, please contact Glenn Bowman at (404) 631-1101.

GB:lc

cc: Ron Wishon
Angela Whitworth
Keith Golden
Angela Alexander
Darryl VanMeter