

D.O.T. 66

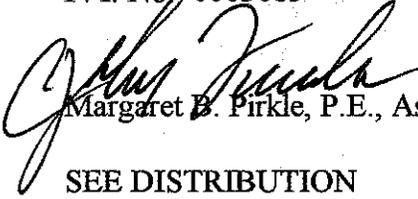
**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** BR-0003-00(083) Carroll County  
P. I. No. 0003083

**OFFICE** Preconstruction

**DATE** September 10, 2002

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

**TO** SEE DISTRIBUTION

**SUBJECT** PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

MBP/cj

Attachment

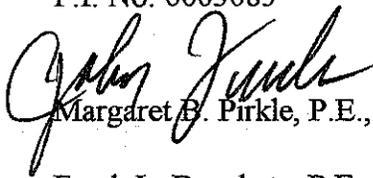
**DISTRIBUTION:**

David Mulling  
Harvey Keepler  
Jerry Hobbs  
Herman Griffin  
Michael Henry  
Phillip Allen  
Marta Rosen  
Paul Liles  
Ben Buchan  
Thomas Howell  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** BR-0003-00(083) Carroll County **OFFICE** Preconstruction  
P.I. No. 0003083 **DATE** August 28, 2002

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

**TO** Frank L. Danchetz, P.E., Chief Engineer

**SUBJECT PROJECT CONCEPT REPORT**

This project is the replacement of a structurally deficient bridge on CR 837/Sandy Flat Road over Big Indian Creek, 2.5 miles southwest of Bowden, Georgia. The existing bridge, constructed in 1973, is load limited with a sufficiency rating of 36. County Road 837 at this location is a rural two lane roadway with 10' travel lanes with rural shoulders. This section of CR 837 is functionally classified as a local rural road. Traffic is projected to be 350 VPD and 550 VPD in the years 2007 and 2027 respectively. The posted speed and the design speed are 35 MPH.

The construction proposes to construct a new 320' x 30' concrete bridge over Big Indian Creek at the existing bridge site. The approaches will consist of two, 12' lanes with 6' rural shoulders. Traffic will be maintained during construction utilizing an off-site detour. Carroll County will be responsible for the signing and maintenance of detour routes.

Environmental concerns include requiring a COE 404 Permit; a Categorical Exclusion will be prepared; a public hearing is not required; time saving procedures are appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG DATE</u>	<u>LET DATE</u>
Construction (includes E&C and inflation)	\$1,066,000	\$791,000	2005	FY-05
Right-of-Way & Utilities*	Local	Local		

\*LGPA sent 9-11-01 requesting Carroll County be responsible for right-of-way, utilities and detours.

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: BR-0003-00(083) Carroll  
P.I. Number 0003083

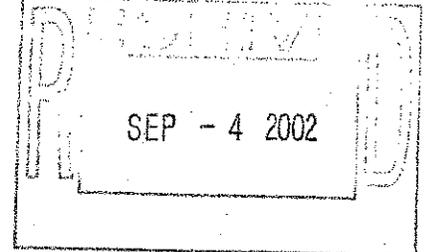
OFFICE: Engineering Services

DATE: August 30, 2002

FROM: David Mulling, Project Review Engineer *REW*

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: CONCEPT REPORT



We have reviewed the concept report submitted August 23, 2002 by the letter from Ben Buchan dated August 21, 2002, and have no additional comments.

The costs for the project are:

Construction	<del>\$470,815</del>	878,815
Inflation	<del>\$23,541</del>	90,079
E&C	<del>\$49,436</del>	96,889
Reimbursable Utilities	<del>\$13,000</del>	13,000
Right of Way	<del>\$13,250</del>	26,500

DTM

*REVISED 9/5/02 - DDQ*

c: Ben Buchan, Attn: Ted Cashin

Frank L. Danchetz

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BR-0003-00(083) Carroll

August 28, 2002

This project is in the STIP. I recommend this project concept be approved.

MBP:JDQ/cj

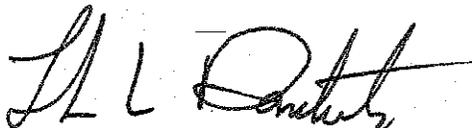
Attachment

CONCUR



Thomas L. Turner, P.E., Director of Preconstruction

APPROVE



Frank L. Danchetz, P.E., Chief Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

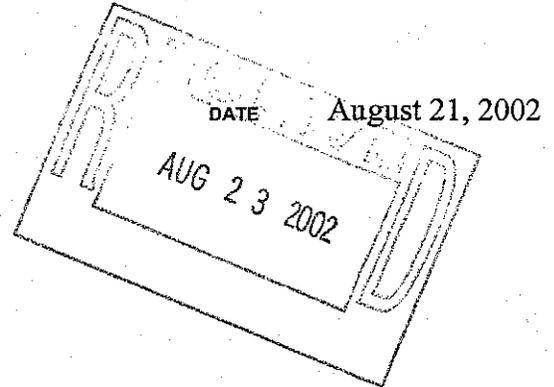
**FILE** **BR-0003-00(083) Carroll County**  
CR 837/Sandy Flat Rd. at Big Indian Creek 2.5 mi SW of Bowdon  
P.I. No. 0003083

**OFFICE** Atlanta

**FROM** *James B. Buchan* <sup>mBA</sup>  
James B. Buchan, State Consultant Design Engineer

**TO** Meg Pirkle, Assistant Director of Preconstruction

**SUBJECT** **PROJECT CONCEPT REPORT**



Attached is the original copy of the Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

Those on the distribution list below should review the Concept Report and send comments and/or the signature page to the Preconstruction Office within 10 days as per the PDP.

If you have any questions or require further information please call Ted Cashin at (404)463-6135 or Carol Bowler of Wilbur Smith Associates at (770) 936-8650.

*Distribution:*

David Mulling, Project Review Engineer  
Harvey Keepler, State Environmental/Location Engineer  
Phillip Allen, State Traffic Safety and Design Engineer  
Marta Rosen, State Transportation Planning Administrator  
Herman Griffin, Office of Financial Management Administrator  
Kent Sager, District Engineer – Cartersville  
Paul Liles, State Bridge & Structural Engineer

JBB:MBA:EJC

cc: Wilbur Smith Associates

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BR-0003-00(083)

County: Carroll

P.I. Number: 0003083

Federal Route Number: NA

State Route Number: NA

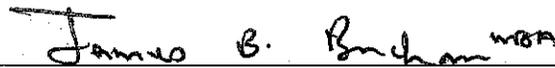
Recommendation for approval:

DATE 8-21-02

DATE 8-21-02



Project Manager



State Consultant Design Engineer

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

DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE \_\_\_\_\_

State Environmental / Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

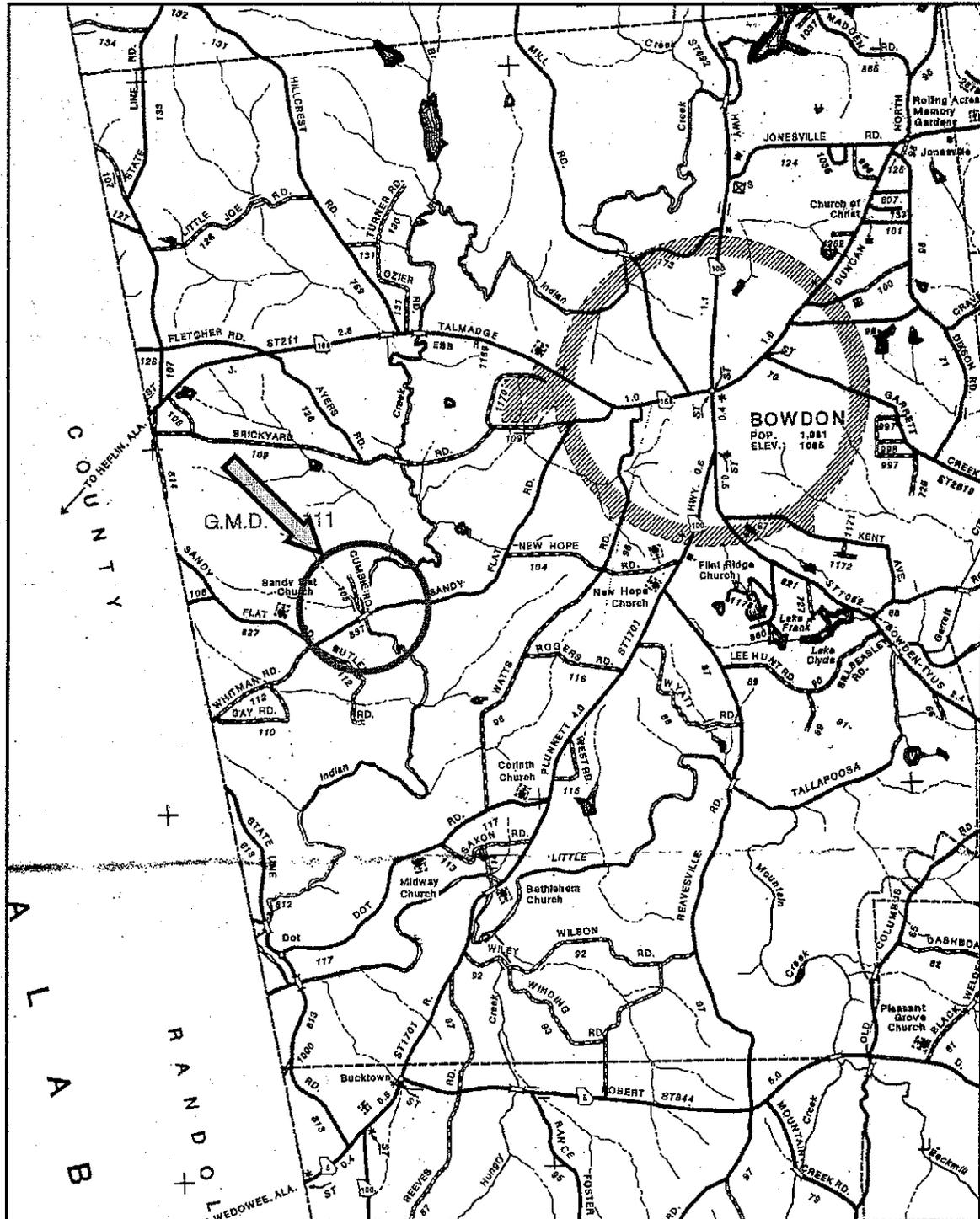
District Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge & Structural Design Engineer



Scale: 1 inch = 1 mile

North

Location Map

**Project:** BR-0003-00(083) Carroll County PI No.: 0003083

**Description:** CR 837/Sandy Flat Rd. at Big Indian Creek 2.5 mi SW of Bowdon

## PROJECT CONCEPT REPORT

**Need and Purpose:** Bridge project BR-0003-00 (083) will replace the structurally deficient bridge located on CR 837/Sandy Flat Road over Big Indian Creek. The bridge sufficiency rating is 36.3. The sufficiency rating, a number from 0 to 100 is a method of evaluating data by calculating four separate factors to obtain a numeric value that is indicative of bridge sufficiency to remain in service. The resultant rating would range between zero, which represents an entirely insufficient or deficient bridge, and 100, which represents an entirely sufficient bridge. The Office of Bridge Maintenance has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved. This project will replace the existing bridge with a structurally adequate bridge.

Sandy Flat Road is 22.4' wide with 6' shoulders. The bridge on Sandy Flat Road over Big Indian Creek is 23.8' wide, providing insufficient shoulder width on the bridge. The substructure has paint failure with overall surface corrosion. The deck is deteriorated and cracked.

This section of Sandy Flat Road is functionally classified as a rural local road. The bridge is not on a bike route and is on a designated school bus route. The posted speed limit along this section of Sandy Flat Road is 35 mph. The bridge is located 2.5 miles SW of Bowdon and was constructed in 1973. The projected 2027 ADT for this section of roadway is 550.

**Description of the proposed project:** The proposed project is located in Carroll County on CR 837/Sandy Flat Road at Big Indian Creek, 2.5 miles southwest of Bowdon. The project consists of replacing a structurally deficient bridge over Big Indian Creek on existing location while providing an offsite detour during construction. The proposed project length is 0.36 miles.

Is the project located in a Non-attainment area?  Yes  No

PDP Classification: Major  Minor

PDP Designation: Full Oversight (  ), Exempt (  ), State Funded (  ), or Other (  )

Functional Classification: Local Rural Road

U.S. Route Number(s): N/A

State Route Number(s): N/A

Traffic (AADT):

Current Year: (2007) 350

Design Year: (2027) 550

Existing design features:

- Typical Section: Two, 10' Lanes with 6' grassed shoulders.
- Posted Speed: 35 mph
- Maximum degree of curvature: 2°00'00"

- Maximum grade: 4.63% Mainline                      10.24% Driveways
- Width of right of way: 80 ft.
- Major structures:
  - *100' x 23.8' bridge over Big Indian County Road 837. Four spans @ 25'-00"*  
*Struct. ID: 045-5130-0                      Sufficiency rating: 36.3*
- Major interchanges or intersections along the project: *None*
- Existing length of roadway segment: 0.36 mi  
Beginning mile log for county segment: 1.45

**Proposed Design Features:**

- Proposed typical section(s): *The proposed roadway will consist of two 12' lanes with 6' grassed shoulders with side slopes.*
- Proposed Design Speed Mainline: 35 mph
- Proposed Maximum grade Mainline: 4.60%                      Maximum grade allowable: 9%
- Proposed Maximum grade Side Street: N/A                      Maximum grade allowable: N/A
- Proposed Maximum grade driveway: 12%
- Proposed Maximum degree of curve: 2°00'00"                      Maximum degree allowable: 11°15'00"
- Right of Way
  - Width: Varies 120'-160'
  - Easements: Temporary( ), Permanent() , Utility( ), Other( ).
  - Type of access control: Full( ), Partial( ), By Permit() , Other( ).
  - Number of parcels: 7                      Number of displacements:
    - Business: 0
    - Residences: 0
    - Mobile Homes: 0
    - Other: 0
- Structures:
  - Bridges: *The proposed bridge will be approximately 320' long and 30' wide*
  - Retaining Walls: *None*
- Major intersections and interchanges: *None*
- Traffic control during construction: *An offsite detour will be provided by Carroll County during construction of the proposed bridge.*

- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZ ALIGNMENT:	( )	( )	(X)
ROADWAY WIDTH:	( )	( )	(X)
SHOULDER WIDTH:	( )	( )	(X)
VERTICAL GRADES	( )	( )	(X)
CROSS SLOPES:	( )	( )	(X)
STOPPING SIGHT DISTANCE:	( )	( )	(X)
SUPERELEVATION RATES:	( )	( )	(X)
HORIZONTAL CLEARANCE:	( )	( )	(X)
SPEED DESIGN:	( )	( )	(X)
VERTICAL CLEARANCE:	( )	( )	(X)
BRIDGE WIDTH:	( )	( )	(X)
BRIDGE STRUCTURAL CAPACITY:	( )	( )	(X)

- Design Variances: *None*
- Environmental Concerns: *Possible involvement with waters of the US.*
- Level of Environmental Analysis:
  - Are Time Saving Procedures Appropriate? Yes (X), No ( )
  - Categorical Exclusion Anticipated? Yes (X), No ( )
  - Environmental Assessment/Finding of No Significant Impact: Yes ( ), No (X)
  - Environmental Impact Statement (EIS): Yes ( ), No (X)
- Utility Involvements:
  - Telephone: *Bell South*
  - Power: *Carroll EMC*
  - Gas: *None*
  - Cable TV: *None*
  - Water: *City of Bowdon*

**Project Responsibilities:**

- Design: *Earth Tech*
- Right of way acquisition: *Carroll County*
- Relocation of utilities: *LGPA signed 7-25-02*
- Letting to contract: *GDOT*
- Supervision of construction: *GDOT*
- Providing material pits: *Contractor*
- Providing detours: *LGPA was signed 7-25-02.*

**Coordination:**

- Concept Meeting date(Minutes Attached): *August 6, 2002*
- P.A.R. meetings, dates, and results: *None*
- FEMA, USCG and/or TVA: *None*
- Public involvement: *None anticipated.*
- Local government comments: *None*
- Other projects in the area: *None*
- Other coordination to date: *Joe Shaw, Carroll County Road Superintendent, has been contacted about providing an offsite detour.*

**Scheduling – Responsible Parties’ Estimate**

Time to complete the environmental process:	<u>6</u> Months
Time to complete preliminary construction plans:	<u>4</u> Months
Time to complete right of way plans:	<u>3</u> Months
Time to complete the section 404 permit:	<u>4</u> Months
Time to complete final construction plans:	<u>3</u> Months
Time to complete the purchase right-of-way:	<u>9</u> Months
Other major items that will affect project schedule:	None

**Other alternates considered:**

**Alternate 1** – *Replace the bridge on existing location, providing an onsite temporary detour with a detour bridge. Constructing a temporary detour bridge would increase construction time, and increase the project cost. Due to low traffic volumes and an acceptable offsite detour, this alternate was eliminated.*

**Alternate 2** – *Replace the bridge on new alignment while maintaining traffic on existing location. This alternate was eliminated because it would increase the project length and require additional right of way. CR 837 has low traffic volumes and an acceptable offsite detour, therefore, there is no need to leave this road open during construction of the new bridge.*

**Alternate 3** – *Rehabilitation of existing bridge. This alternate was eliminated because FHWA has determined that any structure with a sufficiency rating less than 50 should be replaced. The sufficiency rating for this bridge is 36.3.*

**Comments:** *It is recommended to replace the structurally deficient bridge on existing location and provide an offsite detour. Replacing the bridge on existing location creates the least impacts to adjacent properties and provides the most cost and time efficient alternative.*

Project Concept Report Page 7  
Project Number: BR-0003-00(083)  
P.I. Number: 0003083  
County: Carroll

**Attachments:**

1. Cost Estimates:
  - a. Construction including E&C
  - b. Right of Way, and
  - c. Utilities.
2. Typical sections,
3. Bridge Inventory
4. Concept Meeting Minutes
5. Location and Design Notice
6. Preliminary Pavement Design
7. Traffic Counts

**PRELIMINARY COST ESTIMATE**

PROJECT NUMBER: BR-0003-00(083)

COUNTY: CARROLL

DATE: July 27, 2002

ESTIMATED LETTING DATE: FY-05

PREPARED BY: CJP

PROJECT LENGTH: 0.36 miles

( ) PROGRAMMING PROCESS (X) CONCEPT DEVELOPMENT ( ) DURING PROJECT DEV.

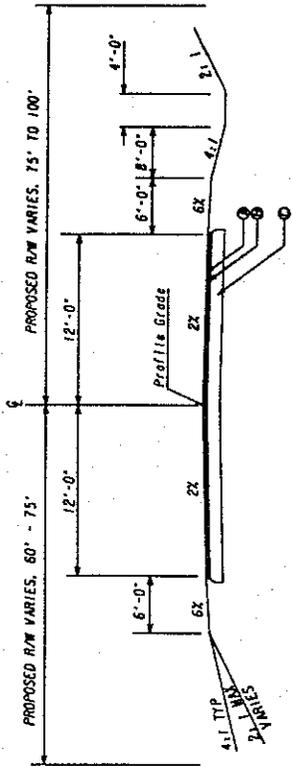
<b>PROJECT COST</b>	
<b>A. RIGHT-OF-WAY:</b>	
1. PROPERTY (LAND & EASEMENT) 2.65 AC	\$ 26,500
2. DISPLACEMENTS; RES: 0, BUS: 0, M.H.: 0	\$
3. OTHER COST (ADM./COST, INFLATION)	\$
SUBTOTAL: A	\$ 26,500
<b>B. REIMBURSABLE UTILITIES:</b>	
1. RAILROAD	\$
2. TRANSMISSION LINES	\$ 8,000
3. SERVICES	\$ 5,000
SUBTOTAL: B	\$ 13,000
<b>C. CONSTRUCTION:</b>	
1. MAJOR STRUCTURES	
a. BRIDGES )	
Main - 320' x 30' @ \$68/SF	\$ 652,800
	\$
SUBTOTAL: C-1.a	\$ 652,800
b. OTHER	
	\$
	\$
SUBTOTAL: C-1	\$ 652,800
2. GRADING AND DRAINAGE	
a. EARTHWORK	
	\$
Borrow/Excavation	\$ 500 CY @ \$7.5
SUBTOTAL: C-2a	\$ 3,750

<b>b. DRAINAGE</b>				
1) Side Drain Pipe	250	LF @ \$21	\$	5,250
2) Storm drain pipe	200	LF @ \$44	\$	8,800
3) Longitudinal System (incl. catch basins)		LF @ \$0	\$	-
4) Safety End Sections	2	EA @ \$1700	\$	3,400
5) Perforated Underdrain		LF @ \$6	\$	-
6) Temporary Pipe Slope Drain	200	LF @ \$24	\$	4,800
SUBTOTAL: C-2.b			\$	22,250
SUBTOTAL: C-2			\$	<b>26,000</b>
<b>3. BASE AND PAVING:</b>				
a. AGGREGATE BASE, 6"	1000	SY @ \$7	\$	7,000
b. ASPHALT PAVING (Mainline & Cross-Roads):				
9.5 mm Superpave	70	Tons @ \$38	\$	2,660
19 mm Superpave	120	Tons @ \$40	\$	4,800
25 mm Superpave		Tons @ \$38	\$	-
SUBTOTAL: C-3.b			\$	14,460
c. CLASS "B" CONCRETE		CY @ \$146	\$	-
d. OTHER (Leveling, Tack Coat, Milling)	2500	CY @ \$7.5	\$	18,750
e. AGGREGATE SURFACE COURSE	20	Tons @ \$19	\$	380
SUBTOTAL: C-3			\$	<b>40,590</b>

4. EROSION CONTROL				
a. SILT FENCE				
1. TYPE A	2500	LF @ \$3.5	\$	8,750
2. TYPE B		LF @ \$2.6	\$	-
3. TYPE C	750	LF @ \$5.3	\$	3,975
			\$	12,725
b. RIP RAP	100	SY @ \$30	\$	3,000
c. PLASTIC FILTER FABRIC	100	SY @ \$5.8	\$	580
d. EROSION CONTROL MATS	1200	SY @ \$5	\$	6,000
SUBTOTAL: C-4			\$	22,305
5. LUMP ITEMS				
a. GRASSING			\$	8000
b. CLEARING AND GRUBBING			\$	10000
c. EROSION CONTROL			\$	10000
d. TRAFFIC CONTROL			\$	15000
SUBTOTAL: C-5			\$	43,000
6. MISCELLANEOUS:				
a. LIGHTING			\$	
b. SIGNING - MARKING			\$	2500
c. GUARDRAIL				
W Beam	420	LF @ \$12	\$	5,040
T Beam	83	LF @ \$60	\$	4,980
Anchors	TYPE 12	2 @ \$1600	\$	3,200
	TYPE 1	2 @ \$500	\$	1,000
SUBTOTAL: C-6.c			\$	14,220
d. SIDEWALK			\$	
e. MEDIAN / SIDE BARRIER				
f. APPROACH SLABS	360	SY @ \$110	\$	39,600
g. REMOVAL				
Bridges			\$	37800
SUBTOTAL: C-6.g			\$	37,800
h. OTHER				
SUBTOTAL: C-6			\$	94,120
7. SPECIAL FEATURES				
SUBTOTAL: C-7			\$	

<b>SUMMARY</b>	
A. RIGHT-OF-WAY	\$ 26,500
B. REIMBURSABLE UTILITIES	\$ 13,000
C. CONSTRUCTION	
1. MAJOR STRUCTURES	\$ 652,800
2. GRADING AND DRAINAGE	\$ 26,000
3. BASE AND PAVING	\$ 40,590
4. EROSION CONTROL	\$ 22,305
5. LUMP ITEMS	\$ 43,000
6. MISCELLANEOUS	\$ 94,120
7. SPECIAL FEATURES	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 878,815
INFLATION (5% PER YEAR)	\$ 90,079
NUMBER OF YEARS	2
E. & C. (10%)	\$ 96,889
TOTAL CONSTRUCTION COST	\$ 1,065,783
<b>GRAND TOTAL PROJECT COST</b>	<b>\$ 1,105,283</b>

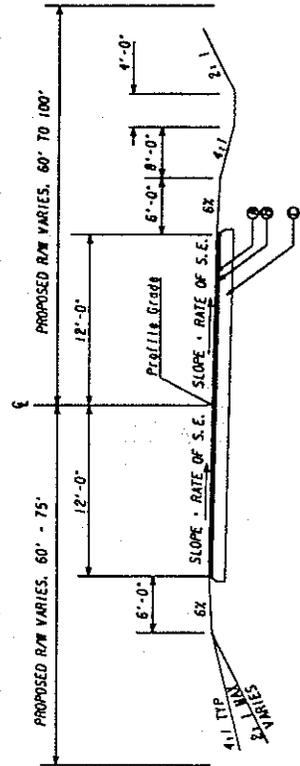
STATE	PROJECT NUMBER	DATE
GA	BR-0003-0010831	



TYPICAL SECTION NO. 1  
TANGENT SECTION

STA 109+21.44 TO STA 109+73.00  
STA 110+31.00 TO STA 112+96.36

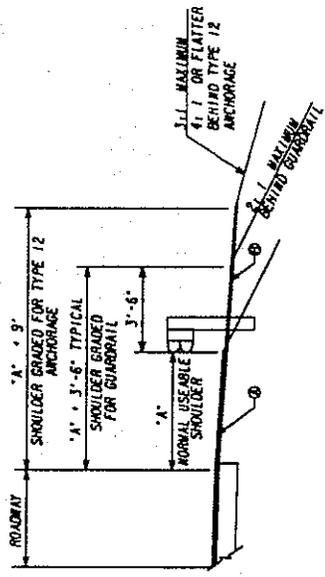
\* NOT TO SCALE



TYPICAL SECTION NO. 2  
SUPERELEVATED SECTION

STA 108+20.00 TO STA 109+21.44  
STA 112+56.36 TO STA 119+00.00

\* NOT TO SCALE



SHOULDER DETAIL FOR GUARDRAIL  
IF FOR CURRENT NOT UNDER 4001

\* NOT TO SCALE

SLOPE	CUT	FILL
4:1	0-10 FT.	0-10 FT.
2:1	OVER 10 FT.	OVER 10 FT.

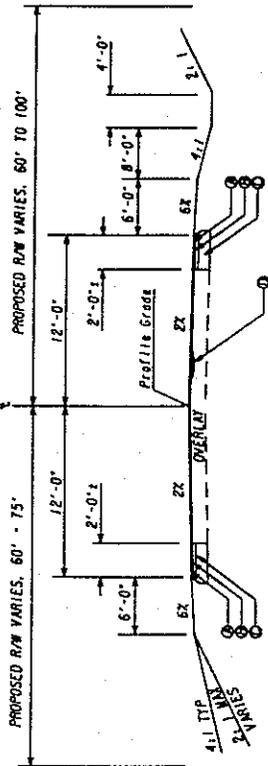
\* REQUIRES GUARDRAIL

- REQUIRED PAVEMENT
- ③ 135'/ST. RECYCLED ASPH CONC. 3.5 MM SUPERPAVE. GP 1 OR 2, INCL BITUM & H LIME. MIX DESIGN LEVEL 'A'
  - ④ 220'/ST. RECYCLED ASPH CONC. 19 MM SUPERPAVE. GP 1 OR 2, INCL BITUM & H LIME. MIX DESIGN LEVEL 'A'
  - ⑤ (6 IN) GRADED AGGREGATE BASE. INCL MALT

GEORGIA  
DEPARTMENT OF TRANSPORTATION  
TYPICAL SECTIONS  
PROJECT: BR-0003-0010831  
COUNTY: CARROLL  
DATE: 06/28/03 DRAWING: I OF 2

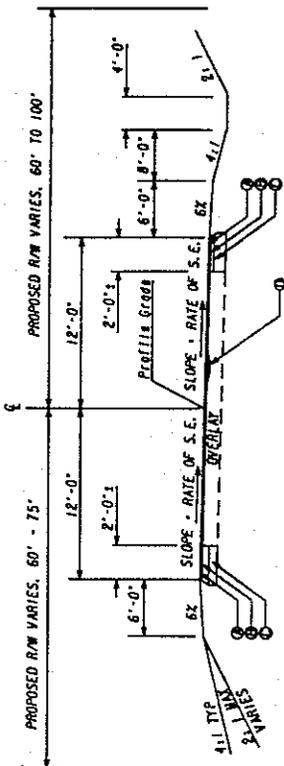
DATE	REVISIONS

EARTH TECH  
1455 850 ALABAMA DRIVE, SUITE 170  
ROSELLE, GEORGIA 30016  
(770) 390-1400



TYPICAL SECTION NO. 3  
TANGENT SECTION  
OVERLAY

NOT TO SCALE  
STA. 111+19.30 TO STA. 112+96.36  
STA. 122+12.08 TO STA. 122+50.00



TYPICAL SECTION NO. 4  
SUPERELEVATED SECTION  
OVERLAY

NOT TO SCALE  
STA. 102+50.00 TO STA. 109+30.00  
STA. 119+00.00 TO STA. 122+12.00

ALLOWABLE RANGES TABLE

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

A. NORMAL CROWN

SECTION WITH GRADES LESS THAN 0.5%	SECTION WITH GRADES 0.5% OR GREATER
1.5% - MINIMUM	1.5% - MINIMUM
2.0% - DESIRABLE	2.0% - DESIRABLE
3.0% - MAXIMUM	2.5% - MAXIMUM

B. SUPERELEVATION RATE

S.E. RATE SHOWN ON PLANS OR SE RATE EXISTING IN FIELD, WHICHEVER IS GREATER.

C. SUPERELEVATION TRANSITION LENGTH (LENGTH FROM FLAT POINT TO FULL SE)

RATE OF CHANGE	CORRESPONDING DIFFERENCE IN GRADE BETWEEN PIVOT POINT AND EDGE OF PAVEMENT
1:150	0.6%
1:200	0.5%
1:300	0.3%

D. POSITIONING OF SUPERELEVATION TRANSITION LENGTH ON SIMPLE CURVES

- 50% OF TRANSITION INSIDE CURVE - MAXIMUM
- 33% OF TRANSITION INSIDE CURVE - DESIRABLE
- 20% OF TRANSITION INSIDE CURVE - MINIMUM

NOTE: GROWN WIDE-OUT SHALL BE AT THE SAME RATE AS THE SE TRANSITION.

E. SMOOTHING OF BREAKS IN EDGE PROFILE AT BEGIN AND END OF TRANSITION SHALL BE ACCOMPLISHED BY VERTICAL CURVE WITH A MINIMUM LENGTH EQUAL TO THE SPEED DESIGN DIVIDED BY 5.

REQUIRED PAVEMENT

- ① 1.5"/57" RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL BITUM & H LIME, MIX DESIGN LEVEL "A"
- ② 2.0"/57" RECYCLED ASPH CONC, 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM & H LIME, MIX DESIGN LEVEL "A"
- ③ 16 IN1 GRADED AGGREGATE BASE, INCL WATL
- ④ RECYCLED ASPH CONC LEVELING 1", INCL BITUM

DATE	REVISIONS

EARTH TECH  
1455 OLD ALABAMA ROAD, SUITE 170  
ROSWELL, GEORGIA 30076  
(770) 390-1100

# BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 045-5130-0  
 Location & Geography

Carroll County

SUFF. RATING: 36.3

## Signs & Attachments

* Structure I.D. No.: 045-5130-0		
* 200 Bridge Information: 06		
* 6A Feature Int.: BIG INDIAN CREEK		
* 6B Critical Bridge: 0		
* 7A Route Number Carried: CR00837		
* 7B Facility Carried: SANDY FLAT ROAD		
* 9 Location: 2.5 MI SW OF BOWDON		
2 DOT District: 6		
207 Year Photo: 1998		
* 91 Inspection Frequency: 24	Date: 06/27/2000	
92A Fract Crit Insp Freq: 0 00	Date: 0000	
92B Underwater Insp Freq: 1 60	Date: 04/19/2001	
92C Other Spc. Insp Freq: 0 00	Date: 0000	
* 4 Place Code: 00000		
* 5 Inventory Route (O/U): 1	Type: 4	
	Designator: 1	
	Number: 00837	
	Direction: 0	
* 16 Latitude: 33-31.1		
* 17 Longitude: 85 -17.6		
98 Border Bridge: 000	%Shared: 00	
99 ID Number: 000000000000000000		
* 100 Defense Highway: 0		
* 101 Parallel Structure: N		
* 102 Direction of Traffic: 2		
264 Road Inventory Mile Post: 001.45		
* 208 Inspection Area: 09	Initials: JMC	
* Location I.D. No.: 045-00837X-001.45E		
* XReferen I.D. No.: 000-000000-000.000		
* 104 Highway System: 0		
* 26 Functional Classification: 09		
* 204 Federal Route Type: 0	No: 0	
* 110 Truck Route: 0		
206 School Bus Route: 1		
217 Benchmark Elevation: 0.00		
218 Datum: 0		
* 19 Bypass Length: 5		
* 20 Toll: 3		
* 21 Maintenance: 02		
* 22 Owner: 02		
* 31 Design Load: 0		
37 Historical Significance: 5		
205 Congressional District: 07		
* 27 Year Constructed: 1973		
106 Year Reconstructed: 0000		
33 Bridge Median: 0		
34 Skew: 00		
35 Structure Flared: 0		
38 Navigation Control: 0		
213 Special Steel Design: 0		
267 Type of Paint: 1		
* 42 Type Service On: 1	Under: 5	
214 Movable Bridge: 00		
203 Type Bridge: E-M-M-O		
259 Pile Encasement: 2		
* 43 Structure Type Main: 4	02	
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: 1		
108 Wearing Surface Type: 6	Membrane: 0	
	Protection: 0	
223 Expansion Joint Type: 00		
242 Deck Drains: 0		
243 Parapet Location: 0		
	Height: 0	
	Width: 0	
238 Curb: 0.0 0		
239 Handrail: 5 5		
* 240 Median Barrier Rail: 0		
241 Bridge Median Height: 0	Width: 0	
* 230 Guardrail Loc Dir Rear: 0	Fwr: 0	
	Oppo Dir Rear: 0	
	Fwr: 0	
244 Approach Slab: 0		
224 Retaining Wall: 0		
233 Posted Speed Limit: 35		
236 Warning Sign: 0		
234 Delineator: 0		
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		

# BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 045-5130-0  
 Programming Data

Carroll County

SUFF. RATING: 36.3

### COUNTY DESIGN

201 Project No: COUNTY DESIGN  
 202 Plans Available: 0  
 249 Prop. Proj No: 00000000000000000000000000000000  
 250 Approval Status: 0000  
 251 P.I. No: 000000  
 252 Contract Date: 0000  
 260 Seismic No: 00000  
 75 Type Work: 31 1  
 94 Bridge Imp. Cost: \$ 220  
 95 Roadway Imp. Cost: \$ 244  
 96 Total Imp. Cost: \$ 527  
 76 Imp. Length: 001427  
 97 Imp. Year: 1990  
 114 Future ADT: 001110 Year: 2020

### Hydraulic Data

215 Waterway Data  
 Highwater Elev: 0000.0 Year: 0000  
 Flood Elev: 0000.0 Freq: 00  
 Avg. Streambed Elev: 0000.0  
 Drainage Area: 00000  
 Area of Opening: 6  
 113 Scour Critical: 4 Br Height: 14.8  
 216 Water Depth: 0  
 222 Slope Protection: 0  
 221 Spur Dikes Rear: 0 Fwd: 0  
 219 Fender System: 0  
 220 Dolphin: 0  
 223 Culvert Cover: 000  
 Type: 0  
 No Barrels: 0  
 Width: 0.0  
 Height: 0.0  
 Length: 0  
 Apron: 0  
 \* 265 U/W Insp. Area: 1 Diver: RMO

\* Location I.D. No: 045-00837X-001.45E  
 \* XReferen I.D. No: 000-000000-000.000

### Measurements

\* 29 ADT: 000740 Year: 2000  
 109 % Trucks: 3  
 \* 28 Lanes On: 02 Under: 00  
 210 No. Tracks On: 00 Under: 00  
 \* 48 Max. Span Length: 0041  
 \* 49 Structure Length: 102  
 51 Br. Rdwy. Width: 22.4  
 52 Deck Width: 23.8  
 \* 47 Tot. Horz. Cl: 22.4  
 50 Curb/Sdewlk Width: 0.0/0.0  
 32 Approach Rdwy Width: 020  
 \* 229 Sllder Width:  
 Rear Lt: 6.0 Type: 8 Rt: 6.0  
 Fwd Lt: 6.0 Type: 8 Rt: 6.0  
 Pvmnt Width:  
 Rear: 20.0 Type: 2  
 Fwd: 20.0 Type: 2  
 Intersection Rear: 1 Fwd: 0  
 36 Safety Features Br. Rail: 3  
 Transition: 0  
 App. G. Rail: 0  
 App. Rail End: 0  
 53 Minimum Cl. Over: 99' 99"  
 Under: N 00' 00"  
 \* 228 Min. Vert. Cl  
 Act. Odm. Dir: 99' 99"  
 Opp. Dir: 99' 99"  
 Posted Odm. Dir: 00' 00"  
 Opp. Dir: 00' 00"  
 55 Lateral Undercl. Rt: N 99.9  
 56 Lateral Undercl. Lt: 0.0  
 \* 10 Max Min Vert Cl: 99' 99" Dir: 0  
 39 Nav Vert Cl: 000 Horz: 0000  
 116 Nav Vert Cl Closed: 000  
 245 Deck Thickness Main: 7.0  
 Deck Thick Approach: 0.0  
 246 Overlay Thickness: 3.0  
 211 Tons Structural Steel: 25.0  
 212 Year Last Painted: Sup: 1965 Sub: 1965

### Ratings

66 Inventory Type: 2 Rating: 12  
 64 Operating Type: 2 Rating: 17  
 231 Calculated Loads  
 H-Modified: 08 1  
 HS-Modified: 11 1  
 Type 3: 09 1  
 Type 3s2: 22 1  
 Timber: 14 1  
 Piggyback: 00 0  
 261 H Inventory Rating: 07  
 262 H Operating Rating: 10  
 67 Structural Evaluation: 2  
 58 Deck Condition: 6  
 59 Superstructure Condition: 6  
 \* 227 Collision Damage: 0  
 60A Substructure Condition: 5  
 60B Scour Condition: 7  
 60C Underwater Condition: 6  
 71 Waterway Adequacy: 8  
 61 Channel Protection Cond: 7  
 68 Deck Geometry: 4  
 69 UnderClr. Horz/Vert: N  
 72 Appr. Alignment: 6  
 62 Culvert: N

### Posting Data

70 Bridge Posting Required: 0  
 41 Struct Open, Posted, Cl: P  
 \* 103 Temporary Structure: 0  
 232 Posted Loads H-Modified: 08  
 HS-Modified: 11  
 Type 3: 09  
 Type 3S2: 22  
 Timber: 14  
 Piggyback: 00  
 253 Notification Date: 11/14/1996  
 253 Fed Notify Date: 02/12/1997 0

Earth Tech  
 1455 Old Alabama Road  
 Roswell, Georgia 30076  
 (770) 990-1403 Fax (770) 990-1400

## MEETING MINUTES

**DATE:** August 6, 2002

**PROJECT:** BR-0003-00(083)  
 P.I. No. 0003083  
 CR 837/Sandy Flat Road at Big Indian Creek

**SUBJECT:** Concept Team Meeting Minutes

<b>ATTENDEES:</b> William Darby	GDOT-Design Engineer	(770) 387-3622
Deborah Chambers	BellSouth	(770) 830-6574
Jennifer Deems	GDOT-District Utilities	(770) 387-3616
Mindy Hoepner	JB Trimble	(770) 952-1022
Ed Moon	Bowdon City Manager	(770) 258-8980
Sebastian Nesbitt	GDOT- Area 5	(770) 646-5522
Steve Sanders	GDOT-District Traffic Ops	(770) 387-3637
Royce Turner	GDOT-District Utilities	(770) 387-3615
Britt Hennessey	Earth Tech	(770) 990-1400
CJ Peng	Earth Tech	(770) 990-1400

Notes prepared by: Britt Hennessey, Earth Tech

A Concept Team Meeting was held on the above project on August 6, 2002 at the District 1 office in Cartersville, Georgia. Britt Hennessey called the meeting to order at 11:00 AM. Ms. Hennessey then presented the project. The following comments/discussions were noted:

Ms. Hennessey presented the conceptual layout and showed that the existing, structurally deficient bridge will be replaced on its existing alignment. Carroll County will provide an offsite detour during the construction of the new bridge.

Mindy Hoepner explained the necessity for the 320' bridge length and the 120' relief structure. It was noted that the proposed length was according to GDOT standards and guidelines and to use anything otherwise must require direction and approval from the State Bridge and Structural Design Engineer. More coordination with GDOT will be needed to determine the bridge length and the use of a relief structure on this project. (On August 7, 2002, Ted Cashin of OCD requested that the relief structure be eliminated from the concept report.)

Earth Tech will change the required right of way width to varies 120' to 160'.

Royce Turner said that GA Power has no facilities or involvements in this project. He will check with Atlanta Gas Light and Charter Communications to see if they have facilities near this project.

Deborah Chambers said that BellSouth has facilities within the existing right of way. They will relocate and coordinate with the power company as to the placement of their poles.

Ed Moon said that the City of Bowdon has water facilities on the east side. He requested that the proposed facilities be attached to the bridge. Coordination will be required between the bridge engineers and the City of Bowdon.

Earth Tech will change the right of way acquisition from GDOT to Carroll County.

Earth Tech  
1455 Old Alabama Road  
Roswell, Georgia 30076  
(770) 990-1403 Fax (770) 990-1400

## MEETING MINUTES

William Darby said that the LGPA has been requested for the county to provide detours and purchase right of way.

Earth Tech will coordinate with the District to send a letter to the county requesting that CR 837 be closed during construction of the new bridge.

Ms. Hennessey presented the on-site detour alternates. These alternates would increase the right of way and project costs. A detour to the north would possibly require a channel change due to the flow pattern of Indian Creek.

William Darby suggested permanently realigning the roadway to avoid the extra long bridge. It was decided that the same backwater requirements would still be necessary, so permanently realigning the roadway would not decrease bridge length or cost.

CJ Peng asked if concrete barrier should be used to reduce impacts to the parcel adjacent to the bridge on the southwest corner. William Darby suggested shortening the length of the guardrail on the west approach side of the bridge. CJ Peng noted that the minimum GDOT requirements were used for to determine this length.

CJ Peng asked how the district would handle the realignment of Cumbie Road to avoid the guardrail. William Darby said that the road can be constructed parallel to CR 837 and then tee in after the guardrail.

Everyone was in agreement that the off-site detour is the best alternative.

## NOTICE OF LOCATION AND DESIGN APPROVAL

Project No. BR-0003-00(083), Carroll County  
P.I. No. 0003083

Notice is hereby given in compliance with Georgia code 22-2-109 that the Georgia Department of Transportation has approved the Location and Design of the above project.

The date of location approval is SEPTEMBER 10, 2002

This project is located entirely in Carroll County on CR 837/Sandy Flat Road at Big Indian Creek, 2.5 mi southwest of Bowdon. *The project is located within Land Lot 167 and Land District 9.*

This project consists of the replacement of the structurally deficient bridge on CR 837 over Big Indian Creek. The proposed bridge structure will be constructed on the existing alignment.

Drawings and/or map, and/or plats of the proposed project as approved are on file and are available for public inspection at the Georgia Department of Transportation:

*Mr. David Fincher – Area 5 Engineer*  
David.Fincher@dot.state.ga.us  
4223 US Hwy 27  
Buchanan, Georgia 30113  
(770) 646-5522

Any interested party may obtain a copy of the drawings or maps or plats or portions thereof by paying a nominal fee and requesting in writing to:

Ted Cashin  
Office of Consultant Design  
Ted.Cashin@dot.state.ga.us  
No. 2 Capitol Square  
Atlanta, Georgia 30334  
404-463-6135

Any written request or communication in reference to this project or notice must include Project and P.I. Numbers as noted at the top of this notice.

# FLEXIBLE PAVEMENT DESIGN ANALYSIS

Project: BR-0003-00(083)

County: CARROLL

P.I. no.: 0003083

Description: CR 837 PAVING DESIGN

### Traffic Data (NOTE: AADTs are one-way)

24-hour Truck Percentage: 1.00%

AADT initial year of design period: 175 vpd (2007)

AADT final year of design period: 275 vpd (2027)

Mean AADT (one-way): 225 vpd

### Design Loading

Mean AADT	LDL	Trucks	18-K ESAL	Total Daily Loads
225 *	1.00 *	0.010 *	0.40 =	2

Total predicted design period loading =  $2 * 20 * 365 = 14,600$

### Design Data

Terminal Serviceability Index: 2.50

Soil Support: 2.50

Regional Factor: 1.80

### PROPOSED FLEXIBLE PAVEMENT STRUCTURE

Material	Thickness mm	Thickness (in.)	Structural Coefficient	Structural Value
9.5 mm Superpave	32	(1.25)	0.0173	0.55
19 mm Superpave	51	(2.00)	0.0173	0.88
Graded Aggregate Base	152	(6.00)	0.0063	0.96

Required SN = 2.32

Proposed SN = 2.39

>>> Proposed pavement is 2.8% Overdesign <<<

Remarks:

Prepared by CJ PENG

June 26, 2002

Date

Recommended

State Materials & Research Engineer

Date

Approved

State Consultant Design Engineer

Date

# Department of Transportation State of Georgia

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## INTERDEPARTMENT CORRESPONDENCE

**FILE** BR-0003-00(083) Carroll  
P.I. 0003083

**OFFICE** Environment/ Location

**DATE** November 9, 2001

**FROM** Harvey D. Keeper, State Environmental/ Location Engineer

**TO** Jim Chambers, P.E., State Consultant Design Engineer  
**Attn: Ted Cashin**

**SUBJECT** CR 837/Sandy Flat Road @ Big Indian Creek

We are furnishing estimated traffic assignments for the above project as follows:

Existing 2001 ADT = 300  
2007 ADT = 350  
2027 ADT = 550  
K = 10%  
D = 60%  
T = 1%  
24 HR T = 3%  
SU = 2%  
COMB = 1%

If you have any questions concerning this information please contact  
Teresa Williamson at (404)699-4458

HDK:TJW

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BR-0003-00(083)  
County: Carroll  
P.I. Number: 0003083

Federal Route Number: NA  
State Route Number: NA

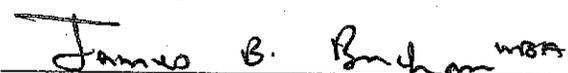
Recommendation for approval:

DATE 8-21-02

DATE 8-21-02



Project Manager



State Consultant Design Engineer

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

DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

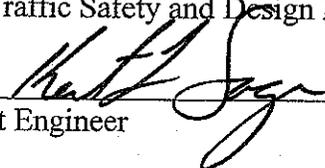
DATE \_\_\_\_\_

State Environmental / Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE 8/26/02



District Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BR-0003-00(083)  
County: Carroll  
P.I. Number: 0003083

Federal Route Number: NA  
State Route Number: NA

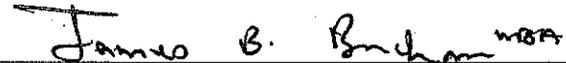
Recommendation for approval:

DATE 8-21-02

DATE 8-21-02



Project Manager



State Consultant Design Engineer

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

DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE \_\_\_\_\_

State Environmental / Location Engineer

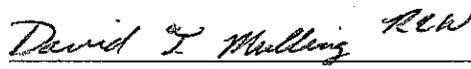
DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

District Engineer

9/3/02  
DATE \_\_\_\_\_

  
Project Review Engineer

DATE \_\_\_\_\_

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

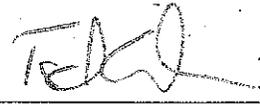
Project Number: BR-0003-00(083)  
County: Carroll  
P.I. Number: 0003083

Federal Route Number: NA  
State Route Number: NA

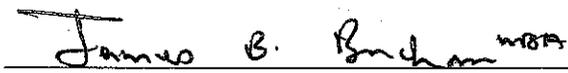
Recommendation for approval:

DATE 8-21-02

DATE 8-21-02



Project Manager



State Consultant Design Engineer

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

DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE \_\_\_\_\_

State Environmental / Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

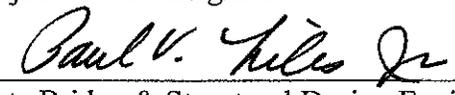
DATE \_\_\_\_\_

District Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE 9/02/02



State Bridge & Structural Design Engineer