GEORGIA DEPARTMENT OF TRANSPORTATION

GDOT Project No: NH000-0575-01(028)

PI No: 713640

JBT Project No. 255717

Bridge No. 39
I-575 REVERSIBLE OVER HAWKINS STORE RD

November, 2009

COBB COUNTY

DESIGN CALCULATIONS

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience prior to the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.

(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not complete and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.

(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to pertinent factors and without proper regard for their purpose, could lead to erroneous conclusions.

(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work activity, a complete confirmation of the information contained herein should be performed prior to any such use.

(d) GTP has no responsibility for the use of this information not under its direct control.

Prepared for Georgia Transportation Partners
Atlanta, Georgia

J.B. TRIMBLE, INC.
2550 Heritage Ct, SE Suite 250
Atlanta, GA 30339-3062
(770) 952-1022

Purpose of Calculation

Bridge design calculations for Bridge #39 were made for costing purposes.

1. Specifications and References

AASHTO 17th Edition, 2002
GDOT Bridge Design Manual, 2008

2. Computer

Computer Type Used: PC
Operating System: Windows XP, Pentium 4, 2GB RAM (min.)

3. Computer Programs (Standard Computer Program)

None

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#39	1

SUBJECT	DISCIPLINE
References for Design	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	YES NO			NONE	

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Included Reference Information:

- Roadway information
- Bridge Survey Shots
- Existing Bridge Plans
- Existing Bridge Maintenance Reports
- BFI

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	71	71	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#39

SUBJECT: Roadway Information
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

PI	( )	1162+59.8641	1468028.9379	2176862.6992
PI	( )	1176+85.4854	1469435.3671	2176629.5621
Tangential Direction:		N 9°24'43.4203" W		
Tangential Length:		1425.6213		

Element: Linear

PI	( )	1176+85.4854	1469435.3671	2176629.5621
PI	( )	1183+52.8783	1470093.5595	2176519.1261
Tangential Direction:		N 9°31'29.1403" W		
Tangential Length:		667.3929		

Element: Linear

PI	( )	1183+52.8783	1470093.5595	2176519.1261
PC	( )	1189+11.4340	1470644.5222	2176427.3407
Tangential Direction:		N 9°27'29.1619" W		
Tangential Length:		558.5558		

Element: Circular

PC	( )	1189+11.4340	1470644.5222	2176427.3407
PI	( )	1218+37.7290	1473531.0373	2175946.4734
CC	( )		1471178.5827	2179633.1603
PT	( )	1236+76.1628	1474311.0107	2178766.9067
Radius:		3250.0000		
Delta:		83°59'58.7274" Right		
Degree of Curvature (Arc):		1°45'46.6095"		
Length:		4764.7288		
Tangent:		2926.2950		
Chord:		4349.3340		
Middle Ordinate:		834.7726		
External:		1123.2942		
Tangent Direction:		N 9°27'29.1619" W		
Radial Direction:		N 80°32'30.8380" E		
Chord Direction:		N 32°32'30.2018" E		
Radial Direction:		S 15°27'30.4344" E		
Tangent Direction:		N 74°32'29.5656" E		

BR#38 575 ℄ Betts Ferry

Element: Linear

309.6643 .9693

PT	( )	1236+76.1628	1474311.0107	2178766.9067
PC	( )	1258+60.9756	1474893.3497	2180872.6817
Tangential Direction:		N 74°32'29.5656" E		
Tangential Length:		2184.8128		

Element: Circular

PC	( )	1258+60.9756	1474893.3497	2180872.6817
PI	( )	1276+86.2122	1475379.8475	2182631.8884
CC	( )		1477683.6201	2180101.0496
PT	( )	1291+18.0216	1477176.9079	2182951.3598
Radius:		2895.0000		
Delta:		64°27'40.0868" Left		
Degree of Curvature (Arc):		1°58'44.8637"		
Length:		3257.0459		

BR#39 575 ℄ Hawkins Store

PROJECT:	NW Corridor
COUNTY:	COBB
BRIDGE:	39
DESCRIPTION:	I-575 over Hawkins Store Rd.

VERTICAL GRADE DATA FOR NEW ALIGNMENT, ADJUSTED FOR SURVEY DIFF.:

PVC =	1277+21.84	PVI =	1283+21.84	PVT =	1289+21.84
PVI EL. =	996.2300	PVI EL. =	994.73	PVI EL. =	980.3300
		VC Length (ft) =	1200		

ELEVATION COMPARISON, ADJUSTED FOR SURVEY DIFF.

BENT 1R LEFT SIDE

Geomath Rdy EL. =	994.767
Survey EL. =	994.811
DIFFERENCE =	-0.044

BENT 1R RIGHT SIDE

Geomath Rdy EL. =	997.494
Survey EL. =	997.501
DIFFERENCE =	-0.007

BENT 2R LEFT SIDE

Geomath Rdy EL. =	993.285
Survey EL. =	993.265
DIFFERENCE =	0.020

BENT 2R RIGHT SIDE

Geomath Rdy EL. =	995.973
Survey EL. =	995.953
DIFFERENCE =	0.020

Mean EL. Difference = -0.003

Degree of Curvature (Arc):	2°51'53.2403"
Length:	718.1910
Tangent:	363.0047
Chord:	714.3384
Middle Ordinate:	32.1509
External:	32.6762
Tangent Direction:	S 21°27'32.4974" E
Radial Direction:	S 68°32'27.5026" W
Chord Direction:	S 11°10'18.1158" E
Radial Direction:	S 89°06'56.2659" W
Tangent Direction:	S 0°53'03.7341" E

Element: Linear

PT	( )	293+39.3773	1474918.3415	2178583.2832
POE	( )	305+92.5328	1473665.3353	2178602.6251
Tangential Direction:		S 0°53'03.7341" E		
Tangential Length:		1253.1555		

Alignment Name: XR 1280+00 Hawkins Store
Alignment Description: I-575 Hawkins Store Road
Alignment Style: MAIN_P_SIDECL

Element: Linear

		Station	Northing	Easting
POB	( )	346+19.4014	1476189.0826	2182198.5369
POE	( )	353+89.5329	1476184.6832	2182968.6559
Tangential Direction:		S 89°40'21.6972" E		
Tangential Length:		770.1315		

Alignment Name: XR 1449+00 Towne Lake
Alignment Description: I-575 Towne Lake Pkwy
Alignment Style: MAIN_P_SIDECL

Element: Linear

		Station	Northing	Easting
POB	( )	491+04.8011	1492492.6748	2185975.2171
POE	( )	497+98.0939	1492576.4982	2186663.4238
Tangential Direction:		N 83°03'20.1529" E		
Tangential Length:		693.2928		

Trimble, Inc.

Vertical Alignment: Point Profile
Vertical Description: Hawkins Store Point Profile
Vertical Style: Default

Element: Linear

POB	346+19.4014	964.5370
PVI	346+50.0000	964.8536
Tangent Grade:	1.03%	
Tangent Length:	30.5986	

Element: Linear

PVI	346+50.0000	964.8536
PVI	347+00.0000	965.4816
Tangent Grade:	1.26%	
Tangent Length:	50.0000	

Element: Linear

PVI	347+00.0000	965.4816
PVI	347+50.0000	966.1440
Tangent Grade:	1.32%	
Tangent Length:	50.0000	

Element: Linear

PVI	347+50.0000	966.1440
PVI	348+00.0000	966.6832
Tangent Grade:	1.08%	
Tangent Length:	50.0000	

Element: Linear

PVI	348+00.0000	966.6832
PVI	348+50.0000	967.2678
Tangent Grade:	1.17%	
Tangent Length:	50.0000	

Element: Linear

PVI	348+50.0000	967.2678
PVI	349+00.0000	967.8399
Tangent Grade:	1.14%	
Tangent Length:	50.0000	

Element: Linear

PVI	349+00.0000	967.8399
PVI	349+50.0000	968.3620
Tangent Grade:	1.04%	
Tangent Length:	50.0000	

Element: Linear

PVI	349+50.0000	968.3620
PVI	350+00.0000	968.8968
Tangent Grade:	1.07%	
Tangent Length:	50.0000	

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Element: Linear

PVI	350+00.0000	968.8968
PVI	350+50.0000	969.5321
Tangent Grade:	1.27%	
Tangent Length:	50.0000	

Element: Linear

PVI	350+50.0000	969.5321
PVI	351+00.0000	970.1504
Tangent Grade:	1.24%	
Tangent Length:	50.0000	

Element: Linear

PVI	351+00.0000	970.1504
PVI	351+50.0000	970.7292
Tangent Grade:	1.16%	
Tangent Length:	50.0000	

Element: Linear

PVI	351+50.0000	970.7292
PVI	352+00.0000	971.1427
Tangent Grade:	0.83%	
Tangent Length:	50.0000	

Element: Linear

PVI	352+00.0000	971.1427
PVI	352+50.0000	971.2220
Tangent Grade:	0.16%	
Tangent Length:	50.0000	

Element: Linear

PVI	352+50.0000	971.2220
PVI	353+00.0000	971.3040
Tangent Grade:	0.16%	
Tangent Length:	50.0000	

Element: Linear

PVI	353+00.0000	971.3040
PVI	353+50.0000	971.2624
Tangent Grade:	-0.08%	
Tangent Length:	50.0000	

Element: Linear

PVI	353+50.0000	971.2624
POE	353+89.5329	970.9362
Tangent Grade:	-0.82%	
Tangent Length:	39.5329	

Horizontal Alignment: XR 1449+00 Towne Lake
Horizontal Description: I-575 Towne Lake Pkwy
Horizontal Style: MAIN_P_SIDECL

	Station	**Elevation**

J. B. Trimble, Inc.

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#39

SUBJECT: Bridge Survey Shots
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

I-575 over Hawkins Store Rd (Existing Right Bridge)

BENT 1 LEFT SIDE
SVXO10349 N 1476106.419700 E 2182522.084600 Z 994.811 TBRDG
"ZEBG93"
BENT 1 RIGHT SIDE
SVXO10359 N 1476105.581500 E 2182570.928900 Z 997.501 TBRDG
"ZEBG93"

BENT 2 LEFT SIDE
SVXO10353 N 1476260.104000 E 2182615.794200 Z 993.265 TBRDG
"ZEBG93"
BENT 2 RIGHT SIDE
SVXO10354 N 1476259.705100 E 2182663.372900 Z 995.953 TBRDG
"ZEBG93"

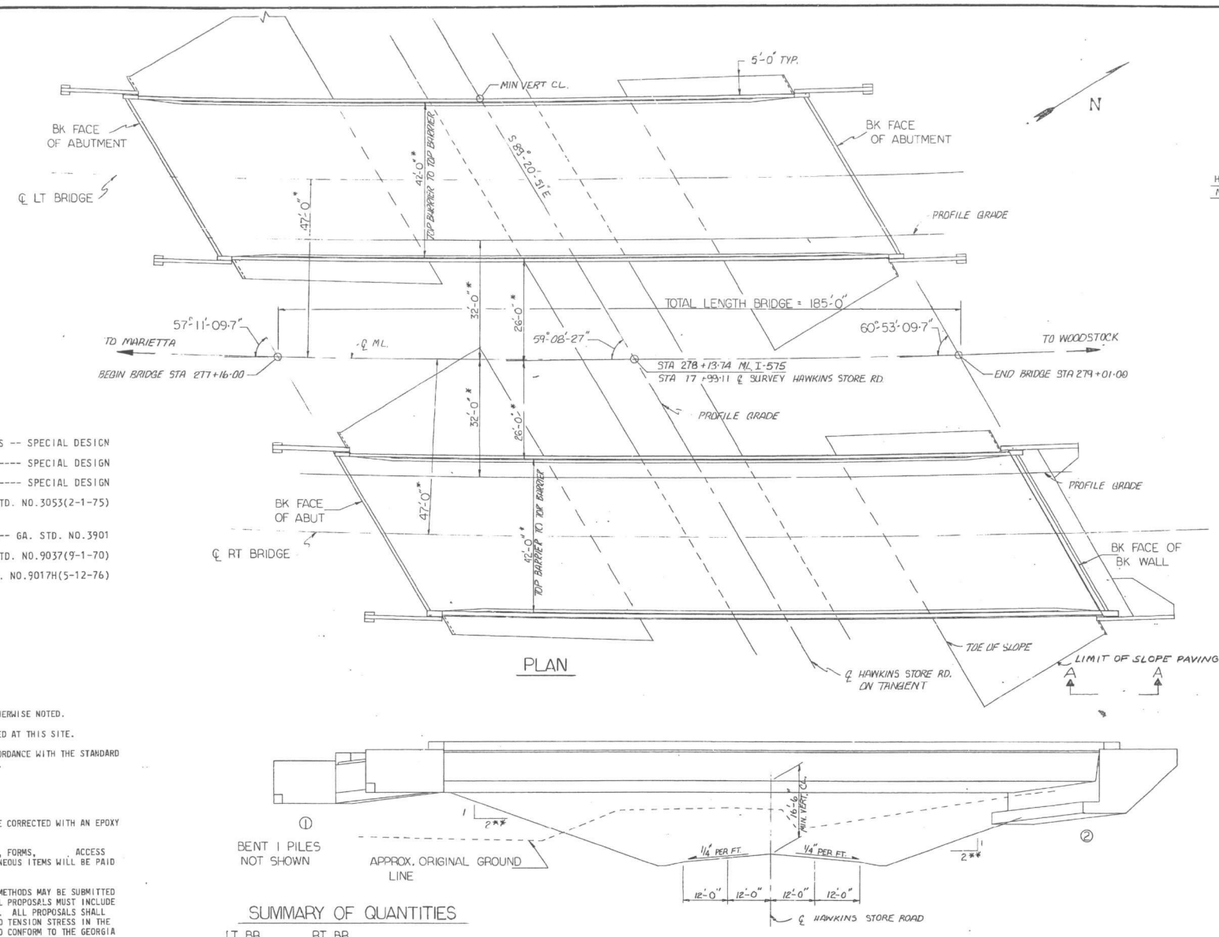
CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#39

SUBJECT: Existing Bridge Plans
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.		SHEET NO.	TOTAL SHEETS
3	GA.	I-575-1(2)00		213	437



PLAN

PI STA 274+73.07
Δ = 14°-35'-06" LT.
D = 2°-30'
T = 1813.52'
L = 3229.25'
SE = .07 FT.

HORIZONTAL CURVE DATA ON M.L. I-575

1200' V.C.
-0.25% -2.40%
PVI STA 281+00
EL 994.43

GRADE DATA ON M.L. I 575

700' V.C.
+1.14% -3.52%
PVI STA 283+00
EL 974.12

GRADE DATA ON HAWKINS STORE RD.

ALL BENTS ARE PARALLEL

* RADIAL DIMENSION
** NORMAL TO HAWKINS STORE RD.

BRIDGES CONSIST OF:

2 - 185'-0" SIMPLE SPAN POST-TENSIONED BOX GIRDER UNITS -- SPECIAL DESIGN
3 - STEEL H PILE END ABUTMENTS ---------- SPECIAL DESIGN
1 - SPREAD FOOTING END ABUTMENT ---------- SPECIAL DESIGN
END POST & END POST GUARDRAIL ATTACH. DETAIL --- GA. STD. NO.3053(2-1-75)
L = 4'-0"; W = 1'-1"; H = 2'-8"
BAR BENDING DETAILS ---------- GA. STD. NO.3901
TYPICAL FILL DETAILS AT END OF BRIDGE ---------- GA. STD. NO.9037(9-1-70)
REINFORCED CONCRETE APPROACH SLAB ---------- GA. STD. NO.9017H(5-12-76)

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD DATED 1972.

CHAMFER - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4 INCH UNLESS OTHERWISE NOTED.

PROTECTIVE SURFACE TREATMENT - PER SECTION 500.13C WILL BE REQUIRED AT THIS SITE.

REINFORCEMENT - ALL REINFORCEMENT SHALL BE PLACED AND TIED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED.

DRIVING DATA PILES - ONE REQUIRED AT EACH BENT.

PLAN DRIVING OBJECTIVE - SEE SUBSTRUCTURE DETAILS.

ALL AREAS WITH MINOR IMPERFECTIONS INCLUDING HONEYCOMBING SHALL BE CORRECTED WITH AN EPOXY COMPOUND AS DIRECTED BY THE ENGINEER.

COST OF FALSEWORK, EXCAVATION NECESSARY FOR ABUTMENT CONSTRUCTION, FORMS, ACCESS DOOR ASSEMBLIES, CELL DRAIN AND ACCESSORIES, EPOXY AND MISCELLANEOUS ITEMS WILL BE PAID FOR AS "LUMP SUPERSTR CONC".

SEGMENTAL CONSTRUCTION - PROPOSALS FOR CONSTRUCTION BY SEGMENTAL METHODS MAY BE SUBMITTED FOR CONSIDERATION AS AN ALTERNATE TO METHOD SHOWN ON PLANS. ALL PROPOSALS MUST INCLUDE A SET OF CONSTRUCTION DRAWINGS AND COMPLETE DESIGN CALCULATIONS. ALL PROPOSALS SHALL CONFORM TO THE LATEST A.A.S.H.T.O. SPECIFICATIONS EXCEPT THAT NO TENSION STRESS IN THE CONCRETE AFTER LOSSES WILL BE ALLOWED. ALL PROPOSALS SHALL ALSO CONFORM TO THE GEORGIA SPECIAL PROVISIONS, AND WILL BE SUBJECT TO APPROVAL BY THE STATE BRIDGE ENGINEER. IF APPROVED FOR USE, THE ALTERNATE SEGMENTAL CONSTRUCTION METHOD SHALL BE OF NO EXTRA COST TO THE DEPARTMENT AND WITH NO INCREASE IN CONTRACT TIME.

PARTIAL PAYMENTS WILL NOT BE MADE FOR "LUMP PRESTRESSING CAST-IN-PLACE CONCRETE - BR NO 8 LT & 8 RT" ITEM.

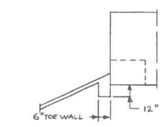
BARRIER - BARRIER SHALL CONFORM TO LINE AND GRADE AND SHALL BE FINISHED AS SHOWN ON PLANS.

APPROACH SLAB - THE VOLUME OF CONCRETE, PREFORMED ELASTIC SEAL, AND LBS. BAR REINF. IN THE APPROACH SLAB ARE TO BE CONSTRUCTED AND PAID FOR AS ROADWAY ITEMS. GA. STD. NO.9017-H SHOWN FOR INFORMATION PURPOSE AT BRIDGE ENDS ONLY.

UTILITIES

NONE

ELEVATION



SECTION A-A
(NO SCALE)

SUMMARY OF QUANTITIES

LT BR	RT BR	
794	785	SQ YD CONC SLOPE PAV, 4 IN
LUMP	---	SUPERSTR CONC (CL AAA) - BR NO 8 LT
---	LUMP	SUPERSTR CONC (CL AAA) - BR NO 8 RT
---	150	CU YD CL AAA CONC
---	17,376	LB BAR REINF STEEL
LUMP	---	SUPERSTR REINF STEEL - BR NO 8 LT
---	LUMP	SUPERSTR REINF STEEL - BR NO 8 RT
91	---	LIN FT PILING IN PLACE, STEEL H, 12 BP 53
790	740	LIN FT PILING IN PLACE, STEEL H, 14 BP 73
1	---	EACH LOAD TEST, STEEL H, 12 BP 53 (IF REQD)
1	1	EACH LOAD TEST, STEEL H, 14 BP 73 (IF REQD)
LUMP	---	PRESTRESSING CAST-IN-PLACE CONC - BR NO 8 LT
---	LUMP	PRESTRESSING CAST-IN-PLACE CONC - BR NO 8 RT
LUMP	---	EPOXY COATED SUPERSTRUCTURE REINFORCEMENT STEEL BR. NO 8 LT.
---	LUMP	EPOXY COATED SUPERSTRUCTURE REINFORCEMENT STEEL BR. NO 8 RT.

DESIGN DATA

SPECIFICATIONS - A.A.S.H.T.O., 1973; INT. '74, '75
TYPICAL HS20-44 AND/OR MILITARY LOADING - IMPACT ALLOWED
FUTURE PAVING ALLOWANCE = 15 LBS. PER SQ. FT.
CONCRETE: f'c = 5,000 PSI (ALLOWABLE fc = 2,000)
REINFORCING STEEL: GRADE 60 (fy = 60,000 PSI)
(ALLOWABLE fs = 24,000 PSI)

BRIDGE NO. 8 LT, RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

PLAN AND ELEVATION
M.L. I-575 OVER HAWKINS STORE ROAD
COBB CO. I-575-1(2)00 CT 1
SCALE: 1/16" - 1'-0" DEC 1976

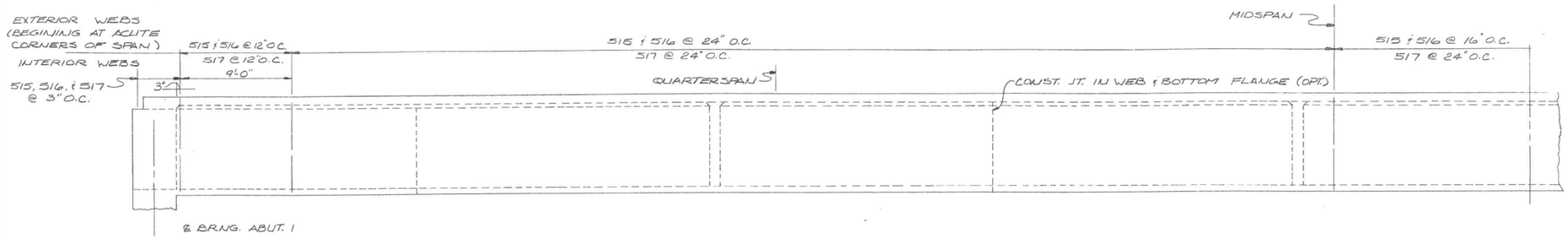
DATE	REVISIONS	BY

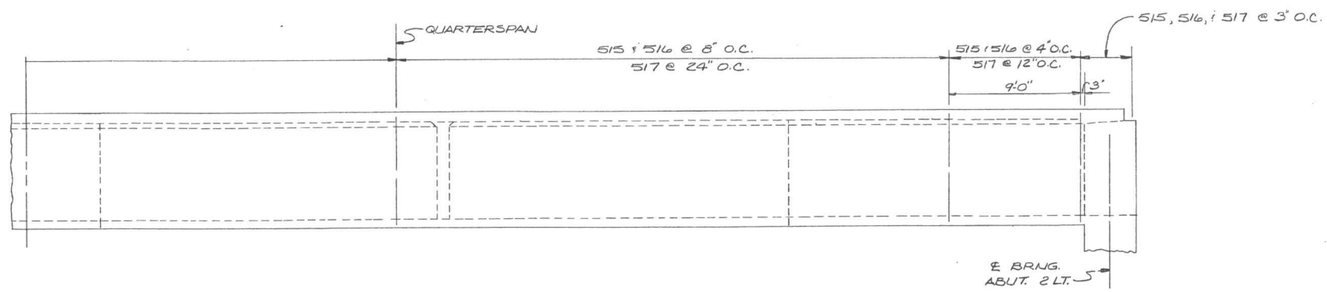
BRIDGE SHEET 1 OF 9

DESIGNED FEC
DRAWN PSO
TRACED
CHECKED FEC
REVIEWED LRC
APPROVED

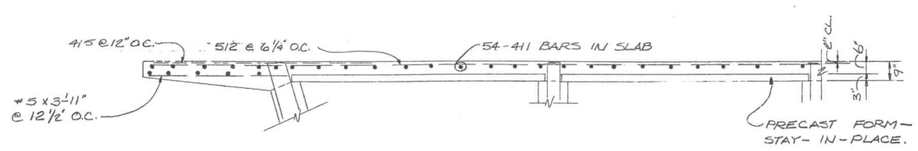
GA.	I-575-1(2)00	213-A	437

Added 10/20/78





NOTE: TOP OF WEB SHALL BE ARTIFICALLY ROUGHENED EXCEPT WHERE PRECAST REST.



SLAB MODIFICATION

C.W. MATTHEWS CONTR. CO., INC.
BRIDGE DIVISION

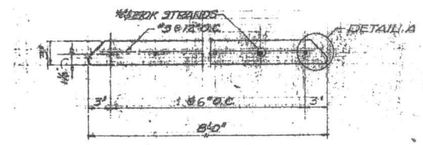
Revisions	GUILLEBEAU, BRITT & WALDROP, INC. CONSULTING ENGINEERS	
	BRIDGE NO. 8 L&R	Drawn MJK
	M.L. I-575 OVER HAWKINS	Designed
	STORE ROAD	Checked
		Date
		Sheet
	COBB COUNTY I-575-1(2)00 CT.1	

78150

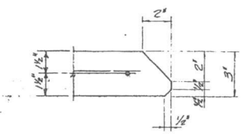
DRAWING 60-107-31456

STATE	PROJECT NUMBER	SHEET NO.	TOTAL
GA.	I-575-1(2)00	213B	438

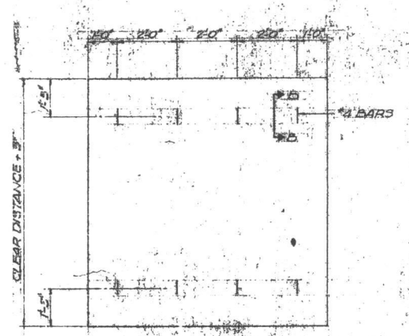
- Added 10/20/78



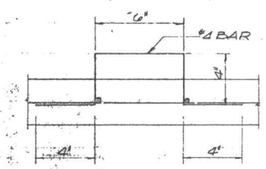
TYPICAL SECTION



DETAIL A

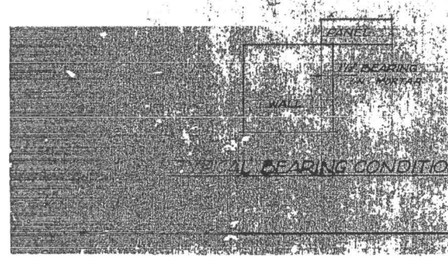


TYPICAL PLAN



SECTION B-B

STRANDS - 1/2" ϕ 270 K (2890 # EA)
CONC.-5000 PSI (f'c 4000 PSI)
REINF.- ASTM A615 GRADE 40



TYPICAL BEARING CONDITION

GARY CONCRETE PROD.

PRESTRESSED CONCRETE DECK PANELS

BRIDGE NO. 8L & 8R
M.L. I-575 OVER HAWKINS
STORE ROAD

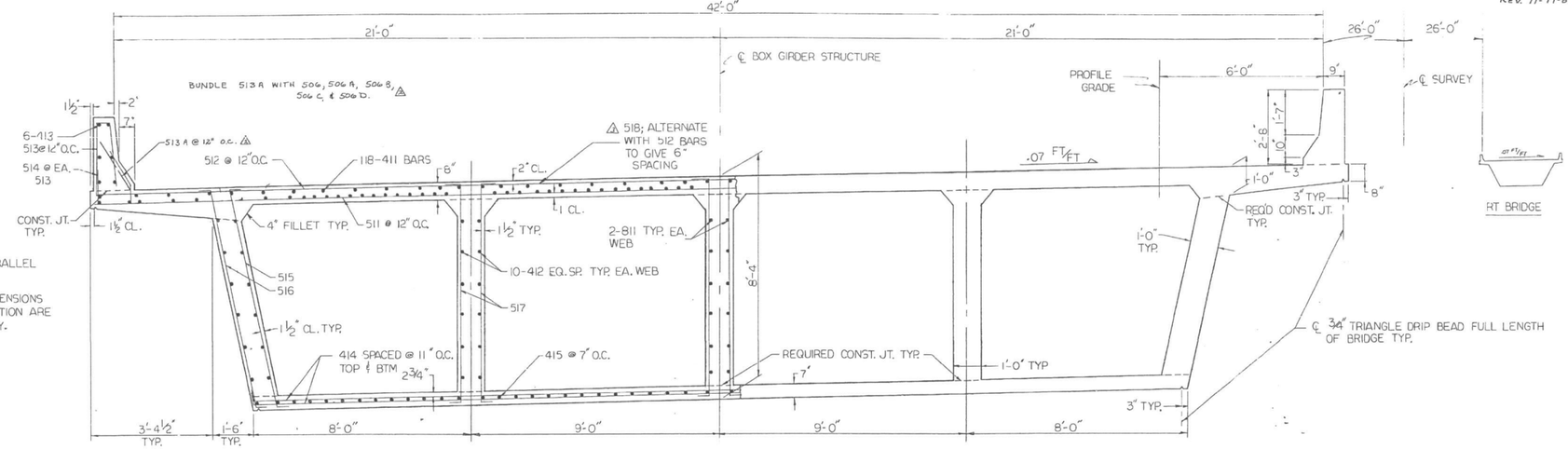
COBB COUNTY

I-575-1(2)00 CT.1

FED. ROAD DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	GA.	I-575-1(2)00	214	437

Rev. 11-18-77
Rev. 10-5-79
Rev. 11-17-80

NOTE: ALL BAR REINFORCEMENT IN BRIDGES 8LT & 8RT IS TO BE GRADE 60 STEEL.
EPOXY COATING ON BARS 512, 518, & TOP 411



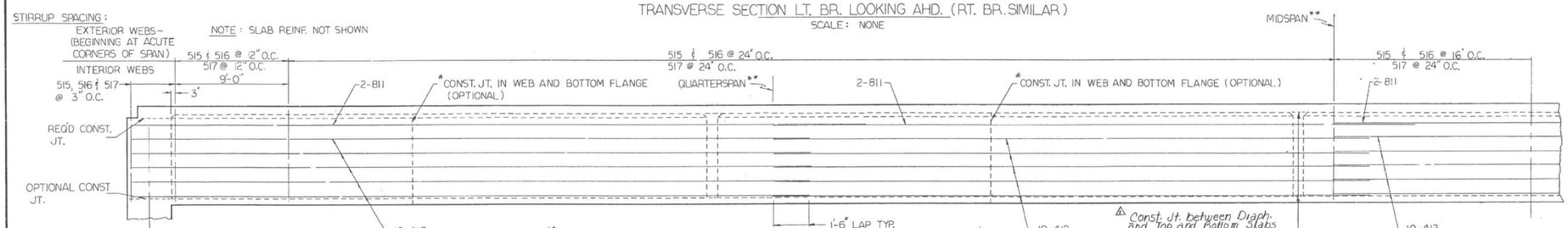
NOTE: BOTTOM SLAB IS PARALLEL TO TOP SLAB.

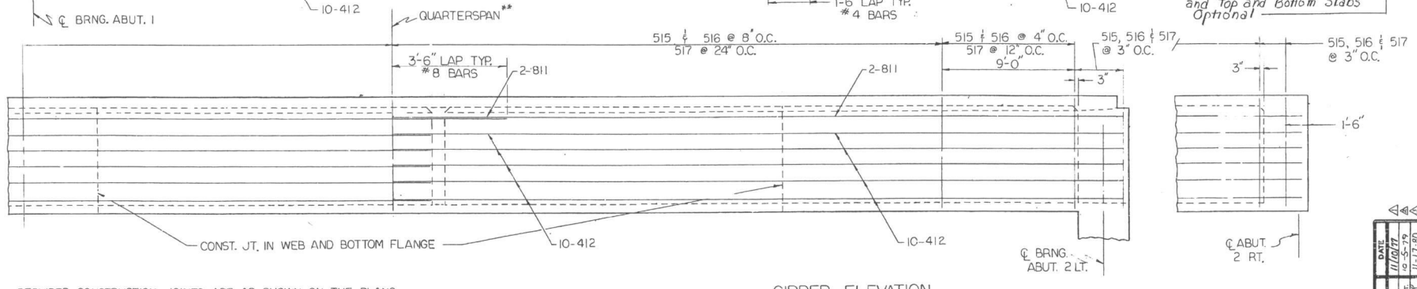
ALL HORIZONTAL DIMENSIONS ON TRANSVERSE SECTION ARE RADIAL TO ℄ SURVEY.

TRANSVERSE SECTION LT. BR. LOOKING AHD. (RT. BR. SIMILAR)
SCALE: NONE

STIRRUP SPACING:

NOTE: SLAB REINF. NOT SHOWN





DEAD LOAD DEFLECTIONS – (INCHES)		
	QTR. SPAN	MIDSPAN
INITIAL	3/8	1/2
FINAL	2¾	3½

NOTE: * REQUIRED CONSTRUCTION JOINTS ARE AS SHOWN ON THE PLANS. LOCATION AND NUMBER OF ADDITIONAL CONSTRUCTION JOINTS ARE AT THE CONTRACTOR'S OPTION AND SUBJECT TO APPROVAL OF THE STATE BRIDGE ENGINEER.

** FOR LT. BR., SPAN LENGTH IS FROM BK. FACE OF ABUT. TO BK. FACE OF ABUT. FOR RT. BR., SPAN LENGTH IS FROM BK. FACE OF ABUT 1 TO BK. FACE OF BACKWALL AT BT. 2.

GIRDER ELEVATION
LT. BRIDGE
RT. BRIDGE ABUT. 2 DISSIMILARITY SHOWN
SCALE: NONE

QUANTITIES			
ITEM / SPAN	1 LT	1 RT	TOTAL
CU. YDS. CLASS AAA CONCRETE	780.0	740.0	1520
LB. BAR REINF. STEEL △	~~89,444~~ 90,197	~~81,478~~ 82,931	~~171,422~~ 173,128
△ LB. BAR REINF. STEEL EPOXY COAT.	~~23,468~~ 23,196	~~23,170~~ 22,901	~~46,638~~ 46,097

BRIDGE SHEET 2 OF 9

BRIDGE NO. 8 LT, RT

REVISIONS	BY	DATE
Const. Jt. Optional	JWW	11/18/77
Added B.S.& Abut. Dim. Const.	C.E.M.	10-5-79
Rev. Typ. Sec. & Const. Jt. Typ.	B.D.M.	11-17-80

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

SUPERSTRUCTURE DETAILS
M.L. I-575 OVER HAWKINS STORE ROAD
COBB CO. I-575-1(2)00 CT. 1
SCALE AS NOTED DEC 1976

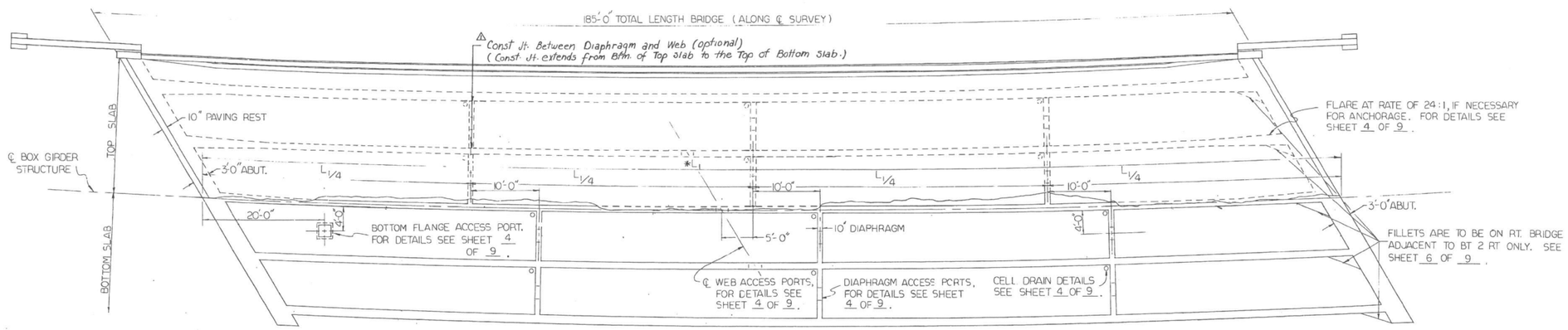
DESIGNED FEC | TRACED | REVIEWED LRP
DRAWN DSG | CHECKED FEC | APPROVED

FED. ROAD DIV. NO.	STATE	PROJ. NO.		SHEET NO.	TOTAL SHEETS
3	GA.	I-575-1(2)00		215	437

REV. 11-18-77

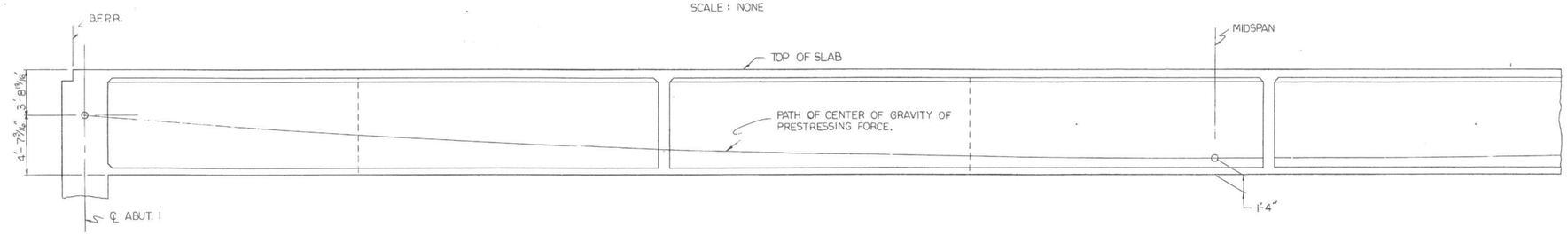
* FOR LT. BRIDGE, L_1 IS THE DISTANCE ALONG THE ℄ BOX GIRDER STRUCTURE FROM THE BACK FACE OF ABUTMENT 1 TO THE BACK FACE OF ABUTMENT 2.
FOR RT BRIDGE, L_1 IS THE DISTANCE ALONG THE ℄ BOX GIRDER STRUCTURE FROM THE BACK FACE OF ABUTMENT 1 TO THE BACK FACE OF BACK WALL OF ABUTMENT 2.
L_1 = 186.1734', LT. BRIDGE
L_1 = 183.9400', RT. BRIDGE

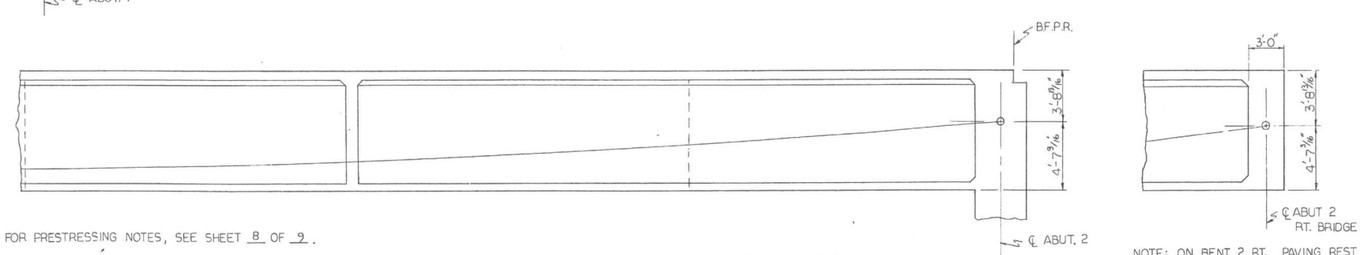
NOTE: WEBS ARE LAID OUT AS ARCS OF CONCENTRIC CIRCLES AND DIAPHRAGMS ARE LAID OUT ON RADIAL LINES.



PLAN

LT BRIDGE; RT BRIDGE SIMILAR
SCALE: NONE





NOTE: FOR PRESTRESSING NOTES, SEE SHEET 8 OF 9.

GIRDER ELEVATION

LT. BRIDGE
RT. BRIDGE ABUT. 2 DISSIMILARITY SHOWN.
SCALE: NONE

NOTE: ON BENT 2 RT., PAVING REST IS ON SUBSTRUCTURE.

BRIDGE NO. 8 LT., RT.

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

SUPERSTRUCTURE DETAILS
M.L. I-575 OVER HAWKINS STORE ROAD
COBB CO. I-575-1(2)00 CT1
SCALE AS NOTED DEC 1976

REVISIONS	BY	DATE
Added Sheet # 4 Note	JWH	11/16/77

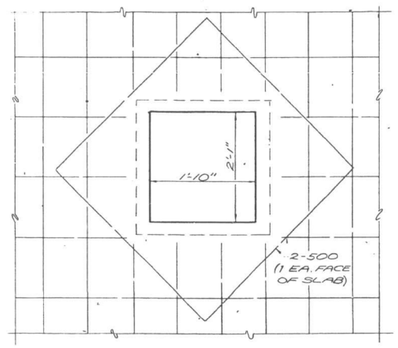
BRIDGE SHEET 3 OF 9

DESIGNED FEC | TRACED | REVIEWED LRP
DRAWN DSC | CHECKED FEC | APPROVED

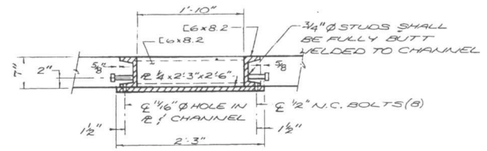
FED. ROAD DIV. NO.	STATE	PROJ. NO.		SHEET NO.	TOTAL SHEETS
3	GA.	I-575-1(2)00		216	437

NOTE: CLIP BARS IN BOTTOM SLAB TO CLEAR OPENING BY 2" MIN.

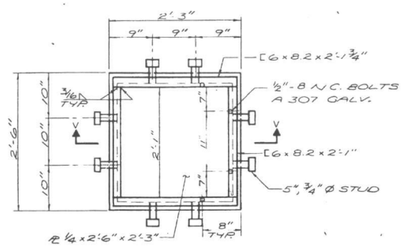
NOTE: 1 ACCESS PORT ASSEMBLY REQUIRED. A-36 STEEL GALVANIZED AFTER FABRICATION. APPROX. WEIGHT PER ASSEMBLY UNIT - 125 lbs.



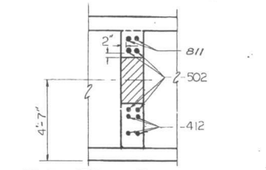
BOTTOM FLANGE ACCESS PORT



SECTION V-V

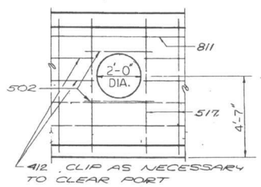


PLAN



SECTION Y-Y

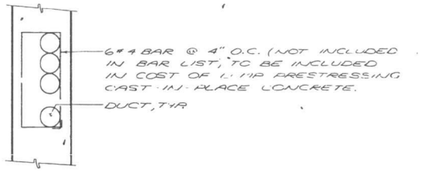
SLAB REINF. NOT SHOWN



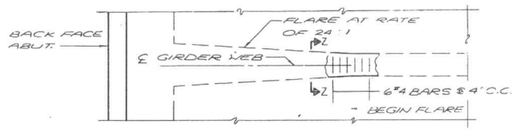
WEB ACCESS PORT

SLAB REINF. NOT SHOWN

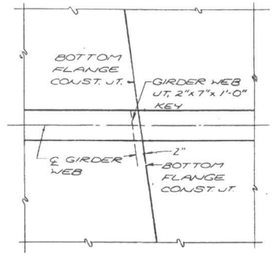
NOTE: LOCAL 517 BARS MAY BE SPACED TO ALLOW 2" CL. AROUND WEB ACCESS PORT.



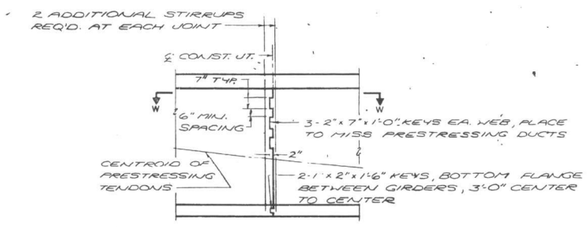
SECTION Z-Z



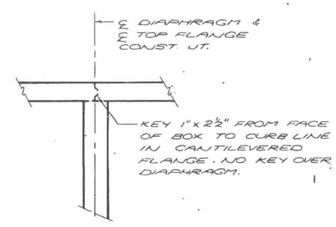
GIRDER FLARE REINF. DETAIL



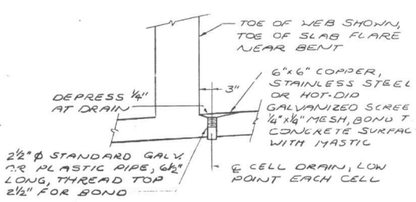
SECTION W-W



GIRDER WEB & BOTTOM FLANGE CONSTRUCTION JOINT

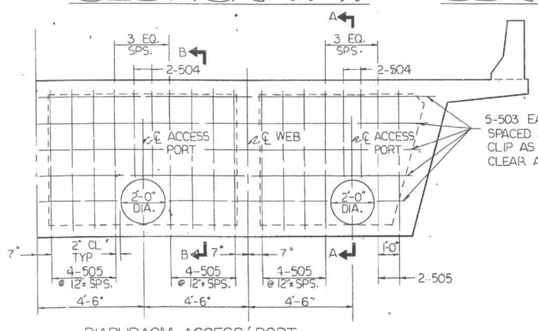


TOP FLANGE DETAILS



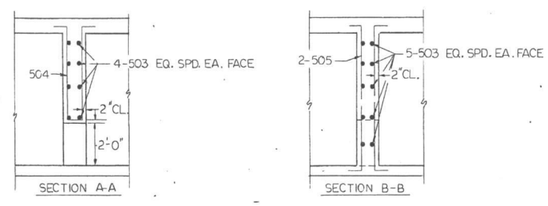
CELL DRAIN DETAILS

NO SCALE



DIAPHRAGM ACCESS PORT

SCALE: NONE



DIAPHRAGM DETAILS

NO SCALE

BRIDGE NO 8 LT, RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

SUPERSTRUCTURE DETAILS

M.L. I-575 OVER HAWKINS STORE ROAD
COBB COUNTY I 575-1(2)00 CT 1

NO SCALE DEC 1976

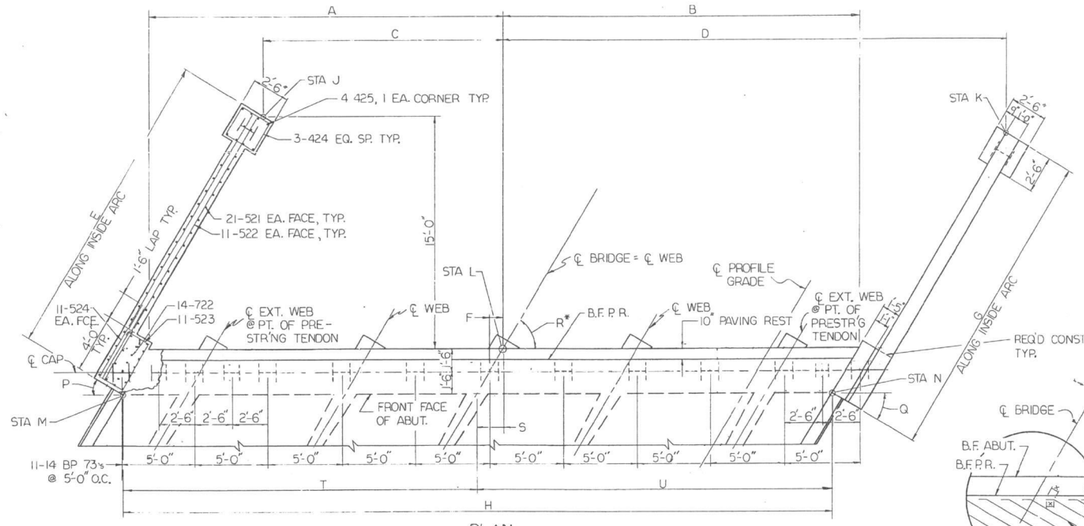
BRIDGE SHEET	DATE	REVISIONS	BY
4 OF 9			

DESIGNED FEC TRACED REVIEWED LRP
DRAWN DSC CHECKED FEC APPROVED

FED. ROAD DIV. NO.	STATE	PROJ. NO.		SHEET NO.	TOTAL SHEETS
3	GA.	I-575-1(2)00		217	437

	A	B	C	D	E	F	G	H	J	K	L
LT BR ABUT 1	25'-1 1/4"	25'-2 3/16"	16'-11 3/16"	36'-11 7/8"	20'-7 3/8"	11 3/8"	22'-7 1/2"	50'-3 3/16"	276+61.88	276+51.36	276+85.08
LT BR ABUT 2	24'-2 3/8"	24'-1 3/8"	17'-3 1/8"	34'-1 9/16"	19'-11 7/8"	10 1/4"	21'-5 7/16"	48'-5 5/16"	278+78.93	279+04.51	278+74.32
RT BR ABUT 1	24'-9 3/16"	24'-10 5/16"	17'-1/2"	36'-1 3/8"	20'-4 1/8"	11 5/16"	22'-3 7/16"	49'-7 5/16"	277+42.19	277+14.02	277+45.72

M	N	P	Q	R	S	T	U
277+02.66	276+74.55	33°-4'-50"	33°-38'-34"	56°-34'-3.51	1'-11 3/4"	25'-1 1/4"	25'-2 3/16"
278+58.51	278+82.89	29°-57'-49"	29°-28'-34"	60°-21'-6.7"	1'-8 1/2"	24'-2 1/2"	24'-1 3/16"
277+62.08	277+36.10	31°-53'-33"	32°-24'-43"	57°-46'-49.1	1'-10 11/16"	24'-9 1/4"	24'-10 1/16"



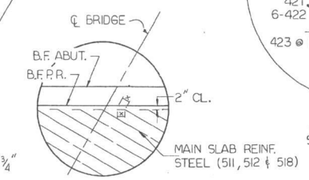
PLAN

SCALE: NONE

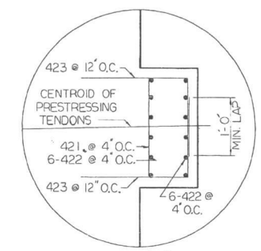
NOTE: MAINTAIN 2" CL. ON ALL REINF UNLESS OTHERWISE NOTED. WINGWALLS SHALL BE POURED AFTER TENSIONING OPERATIONS HAVE BEEN COMPLETED.

* MEASURED FROM TANGENT TO ℄ BRIDGE AT ITS INTERSECTION WITH BACK FACE OF ABUTMENT.

BARS 622 & 623 OVER EXTERIOR PILES MAY BE MANIPULATED IN ORDER TO MAINTAIN 2" CL. AND TO CLEAR REINFORCEMENT IN ENDPOST PLATFORM AND WINGWALL.



BAR BENDING DETAILS AT B.F.P.R.



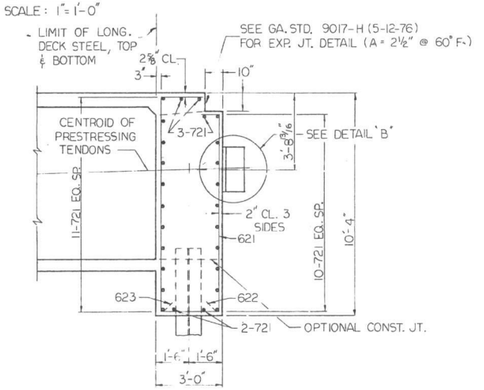
DETAIL "B"

SCALE: 1" = 1'-0"

PLAN DRIVING OBJECTIVE

DRIVE ALL 14 BP 73's TO A DRIVING RESISTANCE OF 90 TONS AND 12 BP 53's TO 68 TONS AFTER THE FOLLOWING MIN. TIP ELEV. HAVE BEEN REACHED.

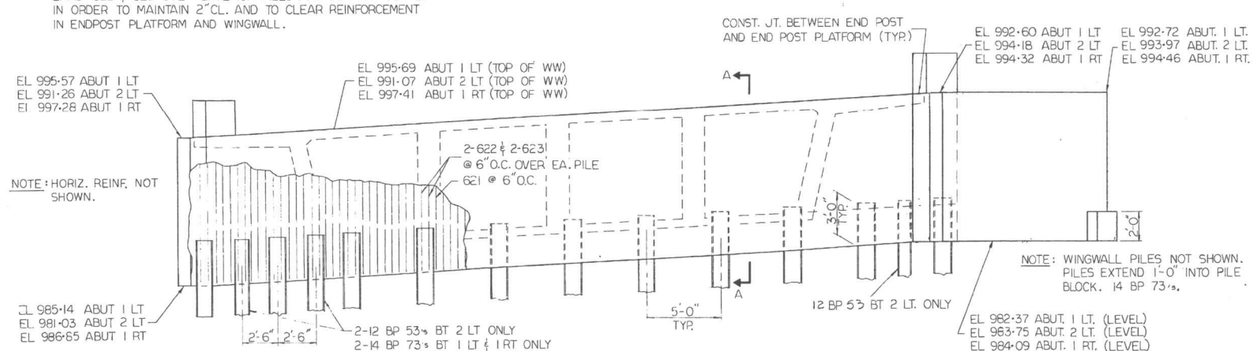
BT 1 LT — 970
BT 1 RT — 945
BT 2 LT — 970



SECTION A-A

SCALE: NONE

BRIDGE NO. 8 LT, RT



ELEVATION

ABUT. 2 LT., LOOKING AHD.
(ABUT. 1 LT., 1 RT. LOOKING BK. SIMILAR)
SCALE: NONE

NOTES (ALL END BENTS)

1. CONTRACTOR TO SUBMIT FOR APPROVAL WORKING DRAWINGS OF THE BEARING SEAT DETAILS NEEDED FOR THE PRESTRESSING SYSTEM THAT WILL BE USED.
2. EDGE DISTANCE OF BEARING PLATES SHALL BE 1 1/2" MIN.
3. THE ANCHORAGES SHALL BE RECESSED AND THE RECESS SHALL BE FILLED WITH CONCRETE TO PROVIDE 2" MIN. COVER OVER ALL METAL SURFACES AFTER POST TENSIONING AND GROUTING OF THE TENDONS HAS BEEN COMPLETED AND ACCEPTED.
4. CONCRETE IN ABUTMENTS 1 LT, 1 RT & 2 LT SHALL BE INCLUDED WITH SUPERSTR. CONC (CL AAA). BAR REINFORCEMENT IN ABUTMENTS 1 LT, 1 RT & 2 LT SHALL BE INCLUDED WITH LUMP SUPERSTR REINF STEEL.

NOTES CONTINUED ON SHEET 6 OF 9.

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

ABUTMENTS 1 LT, RT, 2 LT

M.L. I-575 OVER HAWKINS STORE ROAD

COBB CO. I-575-1(2)00 CT. 1

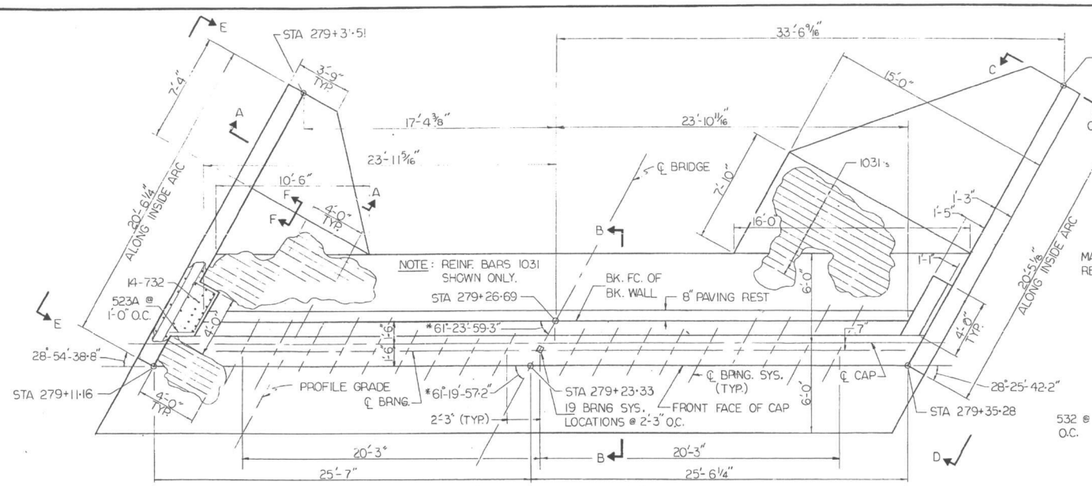
SCALE AS NOTED JAN 1977

BRIDGE SHEET	DATE	REVISIONS	DESIGNED FEC	TRACED	REVIEWED LRP
5 OF 9	BY		DRAWN DJO	CHECKED FEC	APPROVED

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	I-575-1(2)00	218	437

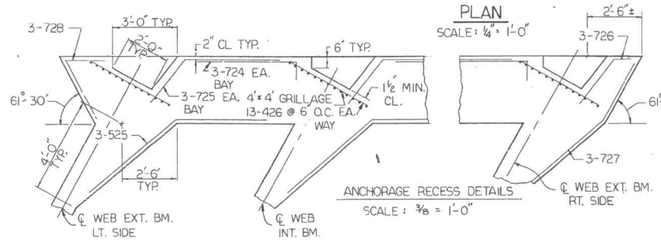
Rev. 10-13-78

NOTE: * IF JOINT SEAL ASSEMBLY IS SEATED IN THE SLAB, MAIN SLAB REINF. IS TO BE FABRICATED AND PLACED SUCH THAT A 2" CL. TO THE SURFACE OF THE CONC. ADJACENT TO THE JOINT SEAL ASSEMBLY IS MAINTAINED.



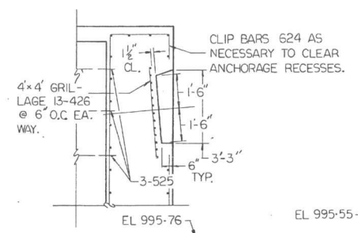
PLAN

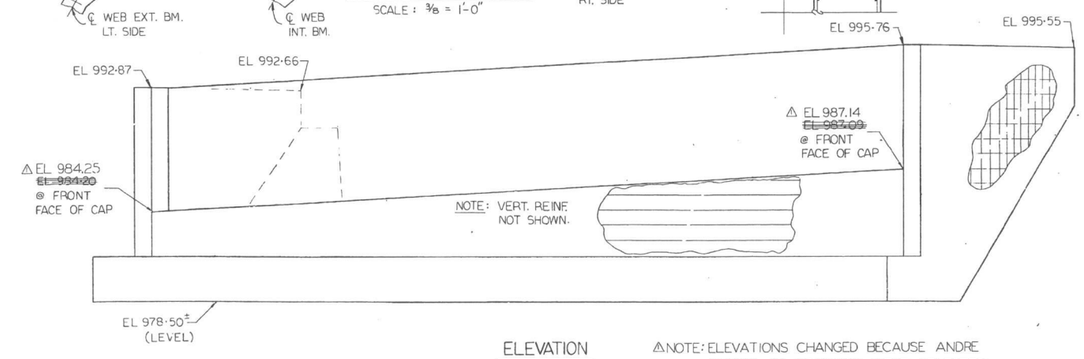
SCALE: 1/4" = 1'-0"



ANCHORAGE RECESS DETAILS

SCALE: 3/8" = 1'-0"





ELEVATION

LOOKING AHD.

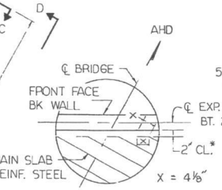
SCALE: 1/4" = 1'-0"

△NOTE: ELEVATIONS CHANGED BECAUSE ANDRE RUBBER CO. BEARINGS WERE SELECTED BY CONTRACTOR IN LIEU OF THE UNITON BEARINGS.

NOTES CONT'D

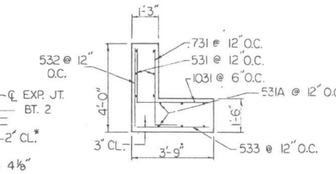
5. NUMBER AND LENGTH OF 421, 422, & 423 BARS AND VOLUME OF CONCRETE IN BEARING SEAT TO COMPLY WITH PROPOSED PRESTRESSING SYSTEM. THE COST OF CONCRETE AND BARS SHALL BE INCLUDED IN PRICE OF LUMP PRESTRESSING CAST-IN-PLACE CONCRETE. (BTS 1 LT, 1 RT & 2 LT ONLY.)
6. SEE GA STD 3053 FOR DETAILS OF 4'-0" × 1'-1" × 2'-8" ENDPOST AND BAR REINF. IN ENDPOST. COST OF BARS IN ENDPOST SHALL BE INCLUDED WITH PRICE OF LUMP LBS. BAR REINF IN SUPERSTR.

QUANTITIES	
ITEM / ABUT.	2 RT.
CU. YDS. CLASS AAA CONCRETE	150.0
LBS. BAR REINF. STEEL	17,376.0



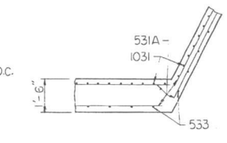
BAR BENDING DETAIL AT EXP. JT.

SCALE: 1/2" = 1'-0"



SECTION C-C

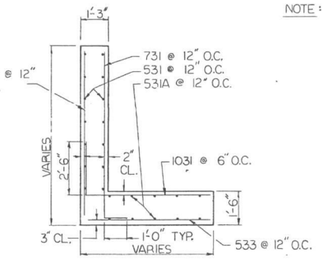
SCALE: 3/8" = 1'-0"



SECTION F-F

SCALE: 3/8" = 1'-0"

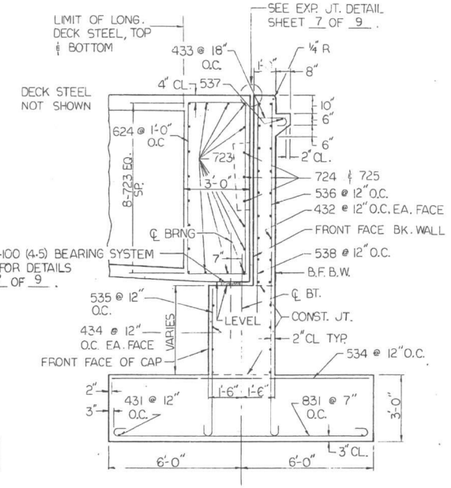
NOTE: DOWEL 533 & 531A BARS OF WINGWALL FOOTING 1'-6" INTO MAIN ABUTMENT FOOTING. FIELD BEND AS NECESSARY.



SECTION A-A

SCALE: 3/8" = 1'-0"

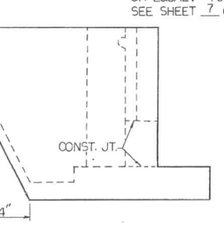
UNITON UBLR-100 (4.5) BEARING SYSTEM OR EQUAL. FOR DETAILS SEE SHEET 7 OF 9.



SECTION B-B

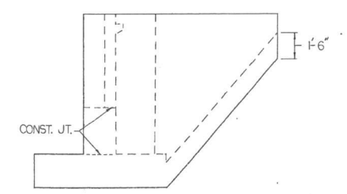
SCALE: 3/8" = 1'-0"

MAXIMUM DESIGN SOIL BEARING CAPACITY = 3.5 TSF.



SECTION E-E

SCALE: NONE



SECTION D-D

SCALE: NONE

BRIDGE NO. 8 LT, RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

ABUTMENT 2 RT

M.L. I-575 OVER HAWKINS STORE ROAD

COBB CO. I-575-1(2)00 CT. 1

SCALE AS NOTED JAN 1977

REVISIONS	DATE
REV. ELEV. & PROFILE	10-17-78

BRIDGE SHEET 6 OF 9

DESIGNED FEC | TRACED | REVIEWED LAP
DRAWN PSC | CHECKED FEC | APPROVED

FORM NO. BP-1

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	I-575-1(2)00	219	437

NOTES

1) PRESTRESSING OPERATIONS WILL INITIALLY CAUSE THE SUPERSTRUCTURE TO SHORTEN APPROX. 1".

2) IN TIME (APPROX. ONE OR TWO MONTHS) ANOTHER 1⅛" OF SHORTENING IS ANTICIPATED.

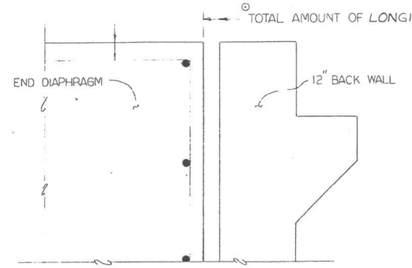
3) SUPERSTRUCTURE IS TO BE CAST WITH A GAP BETWEEN THE END DIAPHRAGM AND THE 12" BACK WALL EQUAL TO THE AMOUNT REQUIRED FOR INSTALLATION OF THE EXPANSION JOINT MINUS 1".

4) EXPANSION JOINT IS TO BE SELECTED SUCH THAT IT WILL: 1) ALLOW FROM 0" TO 1⅛" OF ADDITIONAL SHORTENING AFTER ITS IMPLACEMENT. 2) ALLOW FOR 1" OF THERMAL MOVEMENT IN EACH DIRECTION.

5) IT IS LIKELY THAT UPON COMPLETION OF PRESTRESSING, THE SUPERSTRUCTURE WILL NOT SHORTEN BY EXACTLY 1". ANY DEVIATION FROM THIS MAY BE CORRECTED BY INCREASING OR DECREASING THE WIDTH OF THE 12" BACKWALL. (ADJUSTING WIDTH OF THE BACK WALL IS FOR DEVIATION OF INITIAL SHORTENING OF SUPERSTRUCTURE ONLY)

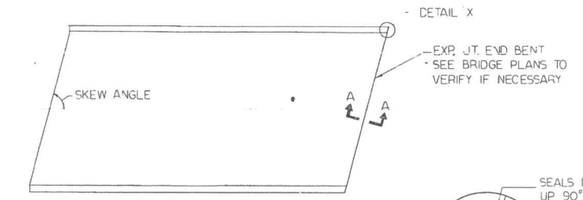
NOTE: MAXIMUM SIZE OF OPENING SHALL BE THAT AMOUNT DUE TO BRIDGE CONTRACTION AND FUTURE SHORTENING. ANY ENLARGEMENT NECESSARY FOR INSTALLATION OF JOINT SHALL BE COVERED WITH CONCEALMENT PLATES WHICH SHALL BE REMOVABLE AND FLUSH WITH INSIDE FACE OF ENDPOSTS. SEE SPECIAL PROVISION. TEMPERATURE FOR SETTING JOINT OPENING SHALL BE SHOWN ON SHOP DRAWINGS SUBMITTED FOR JOINT SYSTEM.

⊙ MINIMUM AMOUNT OF OPENING AFTER TOTAL EXPANSION SHALL BE ½".



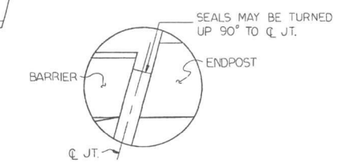
SECTION A-A

ABUT. 2 RT. ONLY



NOTE: SEE BRIDGE PLANS FOR PROPER SKEW ANGLE.

GENERAL DECK PLAN



DETAIL X

* IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CO-ORDINATE THESE DIMENSIONS WITH THE MANUFACTURER OF THE SELECTED EXPANSION JOINT, STRUCTURAL STEEL FABRICATOR AND REINFORCING STEEL FABRICATOR.

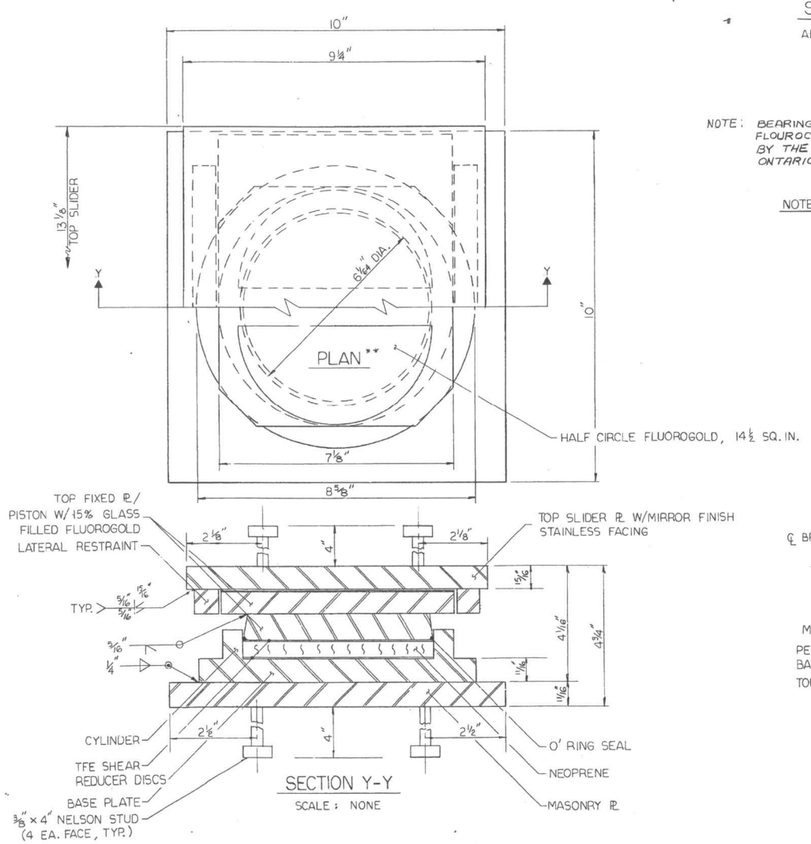
NOTE: BEARING ASSEMBLY DETAILS SHOWN ON PLANS ARE THE "UNITON", MANUFACTURED BY THE FLUOROCARBON CO. AN ACCEPTABLE SUBSTITUTE, THE "POT BEARING", IS MANUFACTURED BY THE ANDRE RUBBER COMPANY. (CANADA) LIMITED, 6-1145 BELLAMY ROAD, SCARBOROUGH, ONTARIO M1H 1H5.

NOTE: ** UNITON BEARING SYSTEM (UBLR-100 (4.5)) PRODUCED BY THE FLUOROCARBON CO; PINE BROOK, N.J.

- ALL STEEL IN BEARING IS A588.
- NEOPRENE IN BEARING IS AASHO 50 DURO.
- TOP SLIDER PLATE FACING IS 14 GAUGE TYPE 304 STAINLESS.
- PAINT ALL STEEL SURFACES WITH ONE COAT OF ZINC CHROMATE.
- COST OF BEARING SYSTEM IS TO BE INCLUDED IN LUMP SUPERSTRUCTURE CONCRETE.

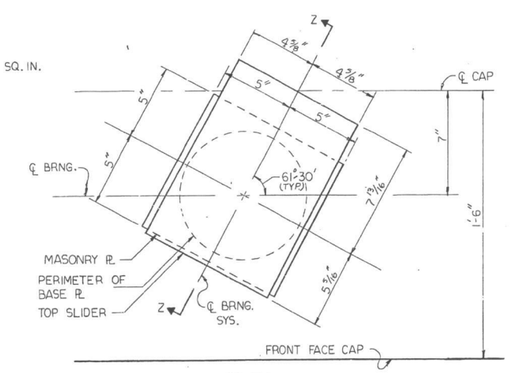
GENERAL NOTES

1. EXPANSION JOINT SELECTED WILL BE AS PER SPECIAL PROVISION.
2. EXPANSION JT IS TO EXTEND FROM INSIDE FACE OF ENDPOST TO INSIDE FACE OF ENDPOST.
3. THE FOLLOWING TYPES OF SEALS ARE TO BE UTILIZED IN THE CONTRACTOR'S SELECTION OF EXPANSION JT: TYPE I



SECTION Y-Y

SCALE: NONE



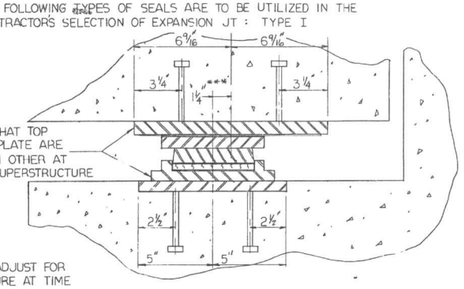
PLAN

BEARING ASSEMBLIES IN PLACE

SCALE: 3" = 1'-0"

NOTE: TOP SLIDER IS TO BE INSTALLED OFFSET AS SHOWN.

IT IS IMPORTANT THAT TOP PLATE AND BASE PLATE ARE PARALLEL TO EACH OTHER AT TIME OF CASTING SUPERSTRUCTURE



*** AT 60°F; ADJUST FOR TEMPERATURE AT TIME OF CONSTRUCTION.

SECTION Z-Z

SCALE: 3" = 1'-0"

BRIDGE NO. 8 LT & RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

MISCELLANEOUS DETAILS

M.L.I-575 OVER HAWKINS STORE ROAD

COBB CO. I-575-1(2) 00 CT 1.

SCALE: NONE FEB 1977

BY	REVISIONS	DATE

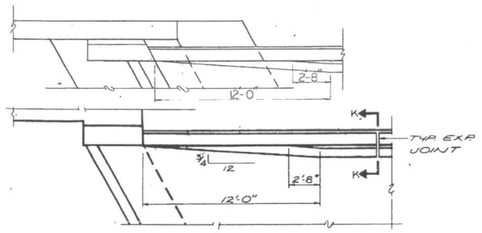
BRIDGE SHEET 7 OF 19

DESIGNED FEC TRACED REVIEWED LRP
DRAWN BEB CHECKED FEC APPROVED

FORM NO. BP-2

FED. ROAD DIV. NO.	STATE	PROJ. NO.		SHEET NO.	TOTAL SHEETS
3	GA.	I-575-1(2)00		220	437

REV. 3-29-79

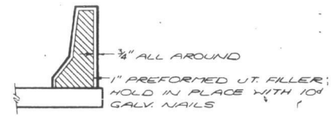


PLAN

ABUT 1 LT, RT; 2 LT
ABUT 2 RT SHOWN ABOVE

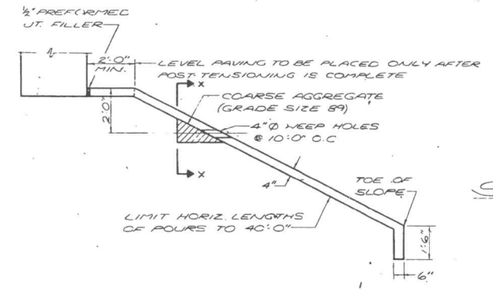
ELEVATION

BARRIER TRANSITION DETAILS

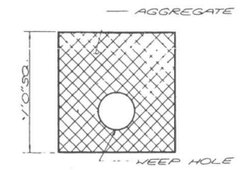


SECTION K-K

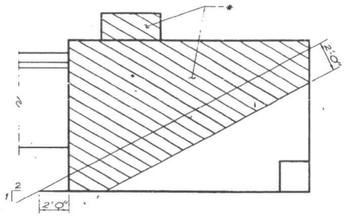
NOTE: 1" EXP. JOINTS SHALL BE PLACED IN BARRIER AT INTERVALS OF NOT LESS THAN 10 FT. NOR MORE THAN 30 FT. THESE SPACINGS SHALL BE AT CONTRACTOR'S OPTION. BARS 413 WERE ASSUMED AS FULL LENGTH OF BARRIER FOR QUANTITY CALCULATIONS.



SLOPE PAVING DETAIL

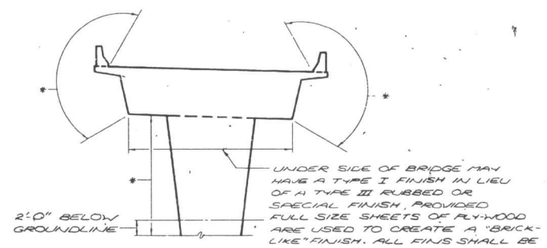


SECTION X-X



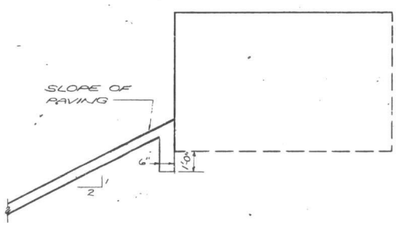
NOTE: FINISH EXTERIOR SIDES OF ENDPOSTS AND WINGWALLS TO 2'-10" BELOW SLOPE PAVING LINE, WITH TYPE III RUBBED FINISH OR SPECIAL SURFACE COATING FINISH, CLASS B

FINISH DETAIL

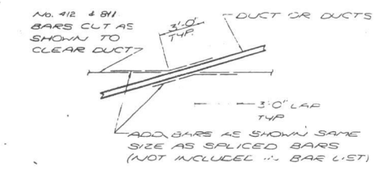


* TYPE III RUBBED FINISH OR SPECIAL SURFACE COATING FINISH, CLASS B

FINISH DETAIL



SLOPE PAVING DETAIL AT WINGS



WEB REINF. DETAIL **

** THIS DETAIL TO BE USED ONLY IF WEB REINFORCEMENT STEEL INTERFERES WITH TENDON DUCTS

PRESTRESSING NOTES:

CONCRETE:

POST TENSIONING SHALL NOT BEGIN UNTIL THE CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI (f_{ci} = 3500).

POST TENSIONING:

PATH OF CENTER OF GRAVITY OF PRESTRESSING FORCE IS PARABOLIC BETWEEN POINTS SHOWN. OFFSET DIMENSIONS SHOWN ARE VERTICAL AND HORIZONTAL. THE REQUIRED JACKING FORCE (P_{jack}) IS 3623 KIPS AT EACH GIRDER WEB OR A TOTAL FORCE OF 18115 KIPS. TENDONS SHALL BE STRESSED TO THE REQUIRED JACKING FORCE FROM BENT 1 ONLY. STRESSING SHALL PROCEED ON THE BASIS OF CYCLES OF ONE TENDON IN EACH WEB, IN SUCH AN ORDER THAT LATERAL AND VERTICAL ECCENTRICITY OF PRESTRESSING WILL BE A MINIMUM.

BAR REINFORCEMENT INTERFERING WITH PRESTRESSING TENDON ALIGNMENT SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER.

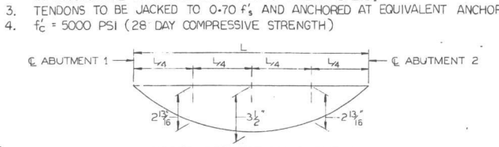
CLEARANCES FOR POST TENSIONED UNITS:

1. HORIZONTAL CLEARANCE BETWEEN UNITS, 2½" MIN.
2. UNITS MAY BE BUNDLED VERTICALLY IN GROUPS OF 3 MAX.
3. VERTICAL CLEARANCE BETWEEN BUNDLED UNITS, 3" MIN.

ALL FEATURES OF THE PRESTRESSING SYSTEM PROPOSED SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER, INCLUDING NUMBER, LOCATION AND TYPE OF TENDONS AND DUCTS, ANCHORAGE DETAILS, TENSIONING SEQUENCE, AND PROVISIONS FOR GROUTING AND VENTING. IF THE SYSTEM REQUIRES FLARING OF GIRDER WEBS AT ANCHORAGE ENDS, DETAILS AND ADDITIONAL REINFORCEMENT REQUIRED WILL BE PRESCRIBED AND SUBJECT TO APPROVAL OF THE ENGINEER.

DESIGN IS BASED ON THE FOLLOWING:

1. FRICTION LOSS COEFFICIENTS ARE K = .0003 ; U = 0.25
2. JACKING FORCE (P_{jack}) INCLUDES FRICTION LOSSES AND PROVISION FOR OTHER LOSSES IN ACCORDANCE WITH THE 1975 AASHTO INTERIM SPECS.
3. TENDONS TO BE JACKED TO 0.70 f'_s AND ANCHORED AT EQUIVALENT ANCHOR SET OF 5/8".
4. f'_c = 5000 PSI (28 DAY COMPRESSIVE STRENGTH)



GIRDER DEFLECTION CURVE △

DEFLECTIONS SHOWN ARE APPROXIMATE FINAL DEFLECTIONS DUE TO DEAD LOAD AND PRESTRESS, INCLUDING TIME EFFECTS, INITIAL DEFLECTIONS AT TIME OF PRESTRESSING ARE APPROXIMATELY 40% OF THESE VALUES.
FALSEWORK SHALL BE CAMBERED FOR THE FULL DEFLECTION SHOWN, PLUS EFFECTS OF VERTICAL CURVE, NORMAL SLOPE OF ROAD AND ANTICIPATED SETTLEMENT OR DEFLECTION OF FALSEWORK.

BRIDGE SHEET 8 OF 9

REVISIONS	BY	DATE
BRIDGE ANTICIPATED SCHED.		3-29-79

BRIDGE NO. 8 LT, RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

MISCELLANEOUS DETAILS
M.L. I-575 OVER HAWKINS STORE ROAD
COBB CO. I-575-1(2)00 CT. 1

SCALE: NONE DEC 1976

DESIGNED FEC
DRAWN DSC
TRACED
CHECKED FEC
REVIEWED LRP
APPROVED

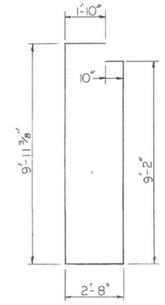
LOCATION	NO. OF LOC.	MARK	LENGTH FT. IN.	NO. BARS REQ'D	TYPE	AG	B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	J FT. IN.	K FT. IN.	N	Θ
LEFT BRIDGE	1															
		** 411A	VARY	472	1											
		412A	VARY	200	1											
		413A	178- 0	6	1											
		413B	178- 0	6	1											
		414	36- 8	394	7		33- 8	1- 6	1- 6						102	78
		415	VARY	216	1											
		424	9- 5	12	25	4 4	2- 2	2- 2								
		425	1- 8	15	1											
		500	10- 0	2	25	4 4	3- 4	3- 5								
		502	4- 0	6	1											
		503	VARY	60	1											
		504	12- 2	24	30	4 4	6	5- 4	5- 4							
		505	9- 9	168	2		7- 6 1/2	1- 0	1- 0							
		511	43- 6	185	1											
		* 512	46- 3	183	2		43- 3	1- 6	1- 6							
		513	4-10	361	23		0- 5	2- 7	2- 2 1/2							84
		△ 513A	2-0	361	1											
		514	5- 1	313	46		1-10	1- 2	8	1- 2	9 1/2					
		514A		12	46		1-10	VARIES	8	1- 2	9 1/2					
		514B		36	46		1-10	VARIES	8	VARIES	VARIES					
		515	10- 3	384	8		8- 2 7/8	1- 0	1- 0						80	80
		516	10- 3	384	8		8- 2 7/8	1- 0	1- 0						80	260
		517	10- 0	762	8		8- 0	1- 0	1- 0						64	96
		△ * 518	~~46-3~~ ~~47-8~~	~~184~~ ~~192~~	~~2~~		~~43-3~~ ~~5~~	~~1-6~~ ~~1-1~~	~~1-6~~ ~~1-1~~	~~5-6~~	~~5-8~~	~~43-3~~	~~1-6~~	~~1-6~~	~~5~~	~~45~~
		521	VARY	168	1											
		522	VARY	88	1											
		523	11-10	44	25	4 4	3- 8	1- 9								
		524	5- 6	88	1											
621 BARS ARE DETAILED SEPARATELY																
		622	11- 2	54	7		5- 2	1- 0	1- 0						90	135
		623	12-10	54	7		10- 0	1-10	1- 0						45	90
		721A	54- 8	26	7		50- 4	2- 2	2- 2						213	33
		721B	52- 9	26	7		48- 5	2- 2	2- 2						210	30
		722	VARY	56	1											
		811A	VARY	40	1											
RIGHT BRIDGE	1															
		** 411A		472	1											
		412		200	1											
		413C	178- 4	6	1											
		413D	178-10	6	1											
		414	36- 8	388												
		415A	VARY	216	1											
		424	9- 5	6												
		425	1- 8	8												
		426	4- 4	130	1											
		500	10- 0	2												
		502	4- 0	12												
		503	VARY	60	1											
		504	12- 2	24												
		505	9- 9	168												
		511	43- 6	183												
		* 512	46- 3	183												
		513	4-10	361												
		△ 513A	2-0	361	1											
		514	5- 1	313												
		514C		12	46		1-10	VARIES	8	1- 2	9 1/2					
		514D		36	46		1-10	VARIES	8	VARIES	VARIES					
		515	10- 3	358												
		516	10- 3	358												
		517	10- 0	708												

LOCATION	NO. OF LOC.	MARK	LENGTH FT. IN.	NO. BARS REQ'D	TYPE	AG	B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	J FT. IN.	K FT. IN.	N	Θ
		△ * 518	~~46-3~~ ~~47-8~~	~~182~~ ~~192~~												
		621A	VARY	94	1											
		622A	VARY	44	1											
		523	11-10	22												
		524	5- 6	44												
		525	8- 0	12	4		4- 0	4- 0								48
621 BARS ARE DETAILED SEPARATELY																
		622	11- 2	26												
		623	12-10	26												
		624	22- 1	40	25	4 4	2- 8	7-10								
		721C	54- 0	26	7		49- 7 1/2	2- 2	2- 2						212	32
		722A	VARY	28	1											
		723	VARY	17	1											
		724	5- 6	12	3		5- 0	6								
		725	8- 0	12	4		5- 0	3- 0								52
		726	3- 6	3	4		3- 0	0- 6								52
		727	7- 0	3	4		4- 0	3- 0								20
		728	4- 0	3	5		3- 0	1- 0								61
		811B	VARY	40	1											
BENT 2 RT	1															
		431	54- 4	13	10	1 1	53- 4									
		432	49- 0	18	1											
		433	3- 4	93	21	1	1- 4	1- 6								90
		434	52- 0	8	1											
		434A		4	1											
		531	VARY	66	1											
		531A	VARY	100	1											
		532	VARY	43	1											
		533	VARY	45	1											
		534	11- 8	54	1											
		535		52	9	1	VARIES									
		536		49	9	1	VARIES									
		537	47- 6	1	1											
		538	9- 8	49	1											
		523A	10- 9	13	38	4 4	3- 8	1- 6 1/2	10 1/4	2- 9 3/4						
		523B	12- 4	16	38	4 4	4- 5 1/4	1- 6 1/2	10	3- 7 1/4						
		731		43	3		VARIES	1- 0								
		732A	11- 1	14	1											
		732B	14- 0	14	1											
		831	13- 4	93	10	1 1	11- 6									
		1031		108	3		VARIES	2- 6								
SEE GA STD 3901 FOR BAR BENDING DETAILS																

P.I. R.A.D. No.	STATE	PROJ. No.	PROJ. No.		SHEET No.	TOTAL SHEETS
3	GA.		I-575-1(2)00		221	437

Rev. 10-5-79
Rev. 11-17-80

* EPOXY COATING ON ALL BARS
** EPOXY COATING ON 1/6 OF TOTAL NO. OF BARS



621 BAR

SCALE : NONE

NUMBER OF BARS REQ'D.- 150 LT. BR.
76 RT. BR.

BRIDGE SHEET
9 OF 9

BRIDGE NO. 8 LT & RT

REVISIONS	BY	DATE
ADDED BARS S.3 & S.3A REVISED S.1A & S.1B	D.B.N. D.B.N.	10-5-79 11-17-80

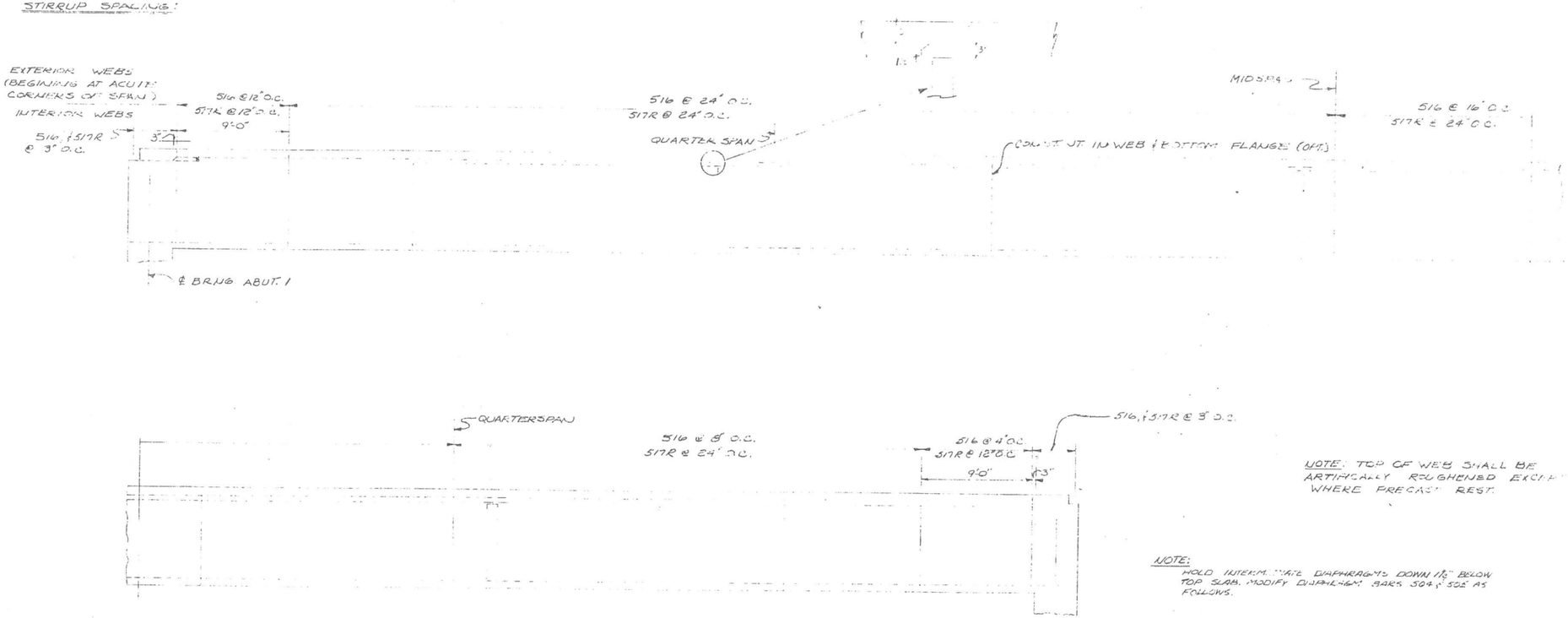
STATE HIGHWAY DEPARTMENT OF GEORGIA
BRIDGE DIVISION

BAR REINFORCEMENT DETAILS
M.L. I-575 OVER HAWKINS STORE RD.
COBB CO. I-575-1(2)00 CT, 1

SCALE AS SHOWN APRIL 1977

DESIGNED FEC TRACED REVIEWED LRP
DRAWN DSO CHECKED FEC APPROVED

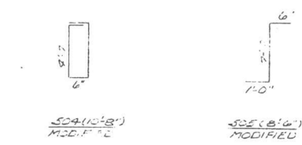
STIRRUP SPACING:



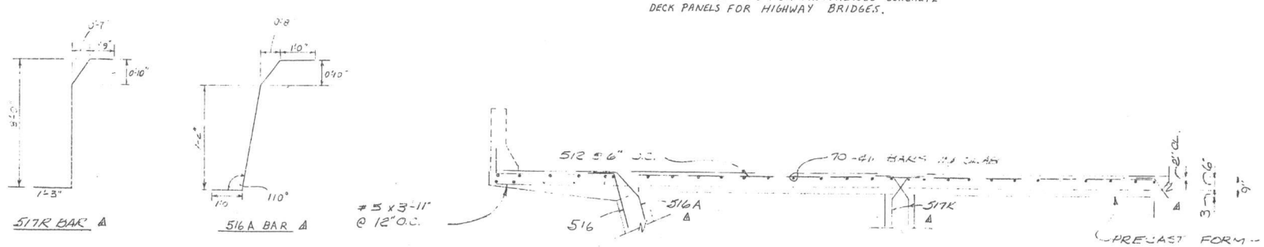
STIRRUP SPACING

NOTE: TOP OF WEB SHALL BE ARTIFICIALLY ROUGHENED EXCEPT WHERE PRECAST REST.

NOTE:
HOLD INTERM. STRUT DIAPHRAGMS DOWN 1½" BELOW TOP SLAB. MODIFY DIAPHRAGM BARS 504 & 505 AS FOLLOWS.

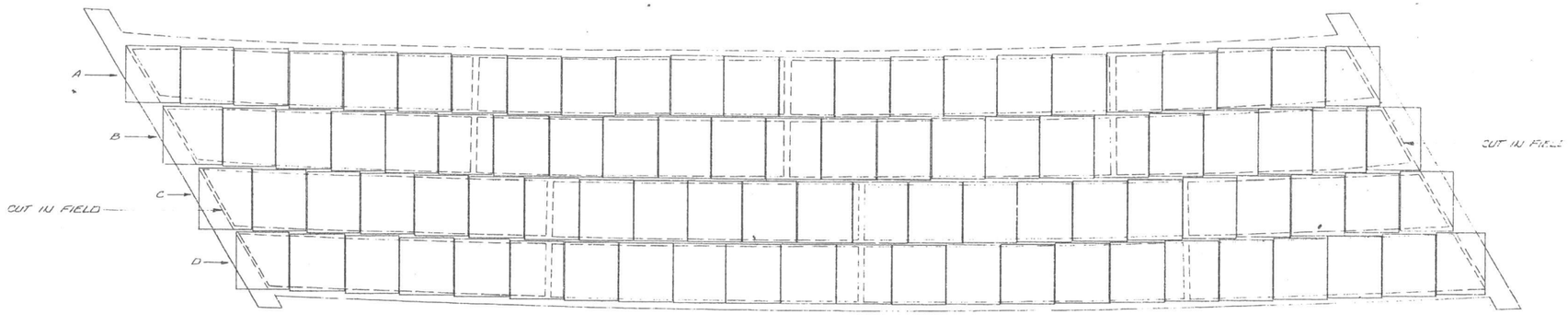


△ NOTE:
PANELS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GA. DEPT. OF TRANSPORTATION SPECIAL PROVISIONS FOR PRESTRESSED CONCRETE DECK PANELS FOR HIGHWAY BRIDGES.



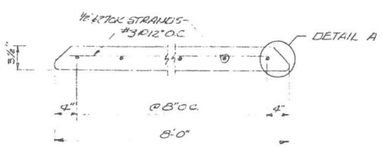
SLAB MODIFICATION

C.W. MATTHEWS CONTR. CO., INC. BRIDGE DIVISION		
Revisions	GUILLEBEAU, BRITT & WALDROP, INC. CONSULTING ENGINEERS	
△ 9/1/88 BAR REV. HGS	BRIDGE NO. 8 L.R. M.L. I-575 OVER HAWKINS STORE ROAD	Drawn M.T.
		Designed
		Checked
		Date
		Sheet
	COBB COUNTY I-575-1(2)00 CSI	1

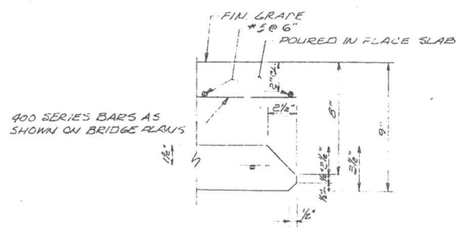


RIGHT BRIDGE (23-8'-0" PANELS ON EX. ROW)
LEFT BRIDGE - 23-8'-0" PANELS ON LINE D & 23-8'-0" & 1-2'-0" PANEL ON LINES A, B, & C.

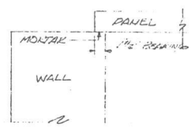
NOTE:
THE TOP SURFACE OF ALL PANELS SHALL RECEIVE A SCRED FINISH WITH A DEPTH OF SCORING OF 1/16" PERPENDICULAR TO THE PRESTRESSING STRAND IN THE PANEL.



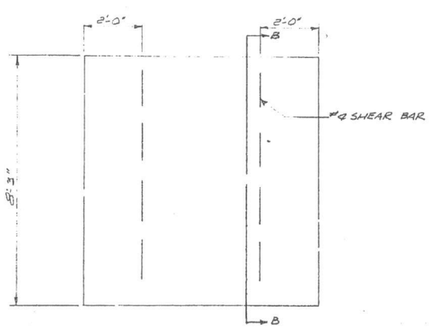
TYPICAL SECTION



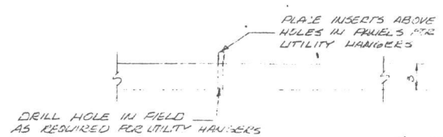
DETAIL A



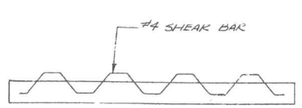
TYPICAL BEARING CONDITION



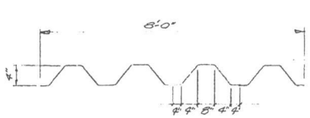
TYPICAL PLAN



f'c = 4000 PSI
f'ci = 3000 PSI



SECTION B-B



SHEAR BAR DETAIL

C.W. MATTHEWS CONST. CO. INC.

Revisions	GUILLEBEAU, BRITT & WALDROP, INC. CONSULTING ENGINEERS	
	PRESTRESSED CONCRETE DECK PANELS - [illegible] LAYOUT	Drawn [illegible]
		Designed [illegible]
		Checked
		Date
	BRIDGE NO. 6 [illegible]	Sheet
	[illegible]	

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#39

SUBJECT: Bridge Maintenance Reports
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

BRIDGE INVENTORY DATA LISTING GEOI 'A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0119-0 **Cobb** SUFF. RATING 91.75

Location & Geography

*		Structure I.D.No:	067-0119-0
	200	Bridge Information	07
*	6A	Feature Int:	CR 646 HAWKINS STORE RD.
*	6B	Critical Bridge:	0
*	7A	Route Number Carried:	SR00417
*	7B	Facility Carried:	I-575 (NBL)
*	9	Location:	5 MI NE OF KENNESAW
	2	DOT District:	7
	207	Year Photo:	2007
*	91	Inspection Frequency:	24 Date: 07/02/2007
	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:	00575
		Direction:	0
*	16	Latitude:	34-3.4482 MMS Prefix: SR
*	17	Longitude:	84-32.5817 MMS Suffix: 00 MP: 4.87
	98	Border Bridge:	000 %Shared: 00
	99	ID Number:	000000000000000
*	100	STRAHNET:	1
	12	Base Highway Network:	1
	13A	LRS Inventory Route:	671041700
	13B	Sub Inventory Route:	0
*	101	Parallel Structure:	R
*	102	Direction of Traffic:	1
*	264	Road Inventory Mile Post:	021.78
*	208	Inspection Area:	09 Initials: JMC
		Engineer's Initial:	sgm

* Location I.D. No.: 067-00417D-004.92N

*	104	Highway System:	1
*	26	Functional Classification:	11
*	204	Federal Route Type:	I No.: 05751
	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:	01
*	20	Toll:	3
*	21	Maintenance:	01
*	22	Owner:	01
*	31	Design Load:	6
	37	Historical Significance:	5
	205	Congressional District:	11
	27	Year Constructed:	1980
	106	Year Reconstructed:	0000
	33	Bridge Median:	1
	34	Skew:	30
	35	Structure Flared:	0
	38	Navigation Control:	N
	213	Special Steel Design:	0
	267	Type of Paint:	0
*	42	Type of Service on:	1
			1
	214	Movable Bridge:	0
	203	Type Bridge:	Z-O-P-O
	259	Pile Encasement:	3
*	43	Structure Type Main:	5 06
	45	No. Spans Main:	001
	44	Structure Type Appr:	0 00
	46	No. Spans Appr:	0000
	226	Bridge Curve Horz:	1 Vert: 0
	111	Pier Protection:	0
	107	Deck Structure Type:	1
	108	Wearing Surface Type:	1
		M	0
		F	0

Signs & Attachments

	225	Expansion Joint Type:	15
	242	Deck Drains:	0
	243	Parapet Location:	0
		Height:	0.00
		Width:	0.00
	238	Curb:	0.00 0
	239	Handrail:	9 9
*	240	Median Barrier Rail:	0
	241	Bridge Median Height:	0.00
		Width:	0.00
*	230	Guardrail Loc Dir Rear:	6
		Fwrd:	0
		Oppo Dir Rear:	0
		Fwrd:	0
	244	Approach Slab:	3
	224	Retaining Wall:	0
	233	Posted Speed Limit:	65
	236	Warning Sign:	0
	234	Delineator:	1
	235	Hazard Boards:	0
	237	Utilities Gas:	00
		W	00
		Ele	00
		Telephone:	00
		S	00
	247	Lighting Street:	0
		Naviagtion:	0
		Aerial:	0
*	248	County Continuity No.:	01

BRIDGE INVENTORY DATA LISTING GEOI 'A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0119-0 **Cobb** SUFF. RATING 91.75

Programming Data

201 Project No.: I-575-1 (2) 00 CT.1
202 Plans Available: 4
249 Prop. Proj. No. 0000000000000000
250 Approval Status: 0000
251 P.I. No.: 0000000
252 Contract Date: 02/01/1901
260 Seismic No.: 00000
75 Type Work: 00 0
94 Bridge Imp. Cost: $ 0
95 Roadway Imp. Cost: $ 0
96 Total Imp Cost: $ 0
76 Imp. Length: 000000
97 Imp. Year: 0000
114 Future ADT: 124935 Year: 2026

Hydraulic Data

215 Waterway Data
Highwater Elev.: 0000.0 Year: 1900
Avg. Streambed Elev.: 0000.0 Freq.: 00
Drainage Area: 00000
Area Of Opening: 000000
113 Scour Critical: N
216 Water Depth: 00.0 Br. Height: 00.0
222 Slope Protection: 4
221 Spur Dikes Rear: 0 Fwrd: 0
219 Fender System: 0
220 Dolphin: 0
223 Culvert Cover: 000
Type: 0
No. Barrels: 0
Width: 0.00 Height: 0.00
Length: 0 Apron: 0
* 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No.: 067-00417D-004.92N

Measurements

* 29 ADT: 083290 Year: 2006
109 % Trucks: 0
* 28 Lanes On: 02 Under: 02
210 No. Tracks On: 00 Under: 00
* 48 Max. Span Length: 0185
* 49 Structure Length: 185
51 Br. Rwdy. Width: 40.50
52 Deck Width: 43.70
* 47 Tot. Horz. Cl: 40.50
50 Curb/Sdewlk Width: 0.00/0.00
32 Approach Rdwy Width: 038
* 229 Shoulder Width:
Rear Lt: 4.00 Type: 2 Rt: 10.00
Fwrd Lt: 4.00 Type: 2 Rt: 10.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 0 Fwrd: 0
36 Safety Features Br. Rail: 1
Transition: 1
App. G. Rail: 1
App. Rail End: 1
53 Minimum Cl.Over: 99 ' 99 "
Under: H 16 ' 11 "
* 228 Min. Vertical Cl
Act. Odm Dir: 99 ' 99 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
55 Lateral Undercl. Rt: H 21.00
56 Lateral Undercl. Lt: 0.00
* 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: 8.00
Deck Thick Approach: 0.00
246 Overlay Thickness: 0.00
212 Year Last Painted: Sup: 0000 Sub: 0000

Ratings

65 Inventory Rating Method: 2
63 Inventory Rating Method: 2
66 Inventory Type: 2 Rating: 36
64 Operating Type: 2 Rating: 51
231 Calculated Loads
H-Modified: 20 0
HS-Modified: 25 0
Type 3: 28 0
Type 3s2: 40 0
Timber: 36 0
Piggyback: 40 0
261 H Inventory Rating: 20
262 H Operating Rating: 28
67 Structural Evaluation: 7
58 Deck Condition: 7
59 Superstructure Condition: 7
* 227 Collision Damage: 0
60A Substructure Condition: 7
60B Scour Condition: N
60C Underwater Condition: N
71 Waterway Adequacy: N
61 Channel Protection Cond: N
68 Deck Geometry: 7
69 UnderClr. Horz/Vert: 9
72 Appr. Alignment: 8
62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
41 Struct Open, Posted, Cl: A
* 103 Temporary Structure: 0
232 Posted Loads H-Modified: 00
HS-Modified: 00
Type 3: 00
Type3s2: 00
Timber: 00
Piggyback: 00
253 Notification Date 02/01/1901
253 Fed Notify Date: 02/01/1901 0

GEORGIA DEPARTMENT OF TRANSPORTATION

Bridge Inspection Report

District: 7 **Inspection Date:** 7/2/2007 **Inspection Area:** 09

Bridge Inspector: Jerry Cooper **Over:** CR 646 HAWKINS STORE RD. **Bridge Status:** 07

Location ID: 067-00417D-004.92N **County:** Cobb

Structure ID: 067-0119-0 **Road Name:** I-575 (NBL)

EVALUATION & DEFICIENCIES

SubStructure: **Year Painted:** 0000

Concrete abutments, only cap exposed.
Minor cracking in both abutments caps.

SuperStructure: **Year Painted:** 0000

1 span post tensioned box beam.
Minor cracking on the bottom and in the exterior wall at abutments.
Went inside box on 09-93 minor cracking in back wall at abutment 2 also, hair line cracking along cable path in walls at various locations.
Went back inside box on 07-99 and their was no additional cracks other than those already marked during the 09-93 inspection.
Use of ladder to enter box.

Deck:

8" concrete slab
Minor longitudinal cracking in the deck surface.
Minor cracking on the bottom inside box.
Minor deck spall in the deck at abutment 2.
All joints have been replaced with Evazote.
Approach slabs are low but have been overlaid.

General:

Built in 1980 project # i-575-1 (2) 00 ct.1
Concrete S.I.P.. deck forms inside box.
Steel pot bearings at abutment 2 which have been concealed with silicone.

Condition Rating

Component	Material	Rating
Substructure	Concrete	7
Superstructure	Concrete	7
Deck	Concrete	7

Temp Shored: **No**

Truck Type	Gross/H-Mod	HSMod	Tand	3-S-2	Log	Piggy
Calculated Posting	20	25	28	40	36	40
Posting Required	No	No	No	No	No	No
Existing Posting	00	00	00	00	00	00

Not a School Bus Route.

Structure Does Not Require Posting

GEORGIA DEPARTMENT OF TRANSPORTATION

Deficiency Report

District: 7 **Inspection Date:** 7/2/2007 **Inspection Area:** 09

Bridge Inspector: Jerry Cooper **Over:** CR 646 HAWKINS STORE RD.

Location ID: 067-00417D-004.92N **County:** Cobb

Structure ID: 067-0119-0 **Asst. District Engineer:** Shun Pringle

EVALUATION & DEFICIENCIES

I-575 (NBL) Over CR 646 HAWKINS STORE RD.-------5 MI NE OF KENNESAW

Item	Units	Work	P	Date Reported	Location	Date Completed	Complete
845	HOURS	10	B	4/1/1995		7/19/2005	3,762.00
800	LIN. FT.	40	B	5/23/2001		12/14/2001	205.00
805	LIN. FT.	40	B	5/23/2001		11/14/2001	175.00

Comments:

BRIDGE INVENTORY DATA LISTING GEOF A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0119-0 **Cobb** SUFF. RATING 91.75

Location & Geography

* Structure I.D.No: 067-0119-0
* 6A Feature Int: SR 417 NBL (I-575)
* 6B Critical Bridge: 0
* 7A Route Number Carried: CR00646
* 7B Facility Carried: HAWKINS STORE RD
* 9 Location: 5 MI NE OF KENNESAW
* 91 Inspection Frequency: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 2
Type: 4
Designation: 1
Number: 00646
Direction: 0
* 16 Latitude: 34-3.4482 HMMS Prefix:
* 17 Longitud 84-32.5817 HMMS Suffix: MP:
* 100 STRAHNET: 0
12 Base Highway Network: 1
13A LRS Inventory Route: 672064600
13B Sub Inventory Route: 0
* 101 Parallel Structure: R
* 102 Direction of Traffic: 2
* 104 Highway System: 0
* 26 Functional Classification: 19
* 204 Federal Route Type: 0 No.:
105 Federal Lands Highway: 0
* 110 Truck Route: 0
* 19 Bypass Length: 02
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
27 Year Constructed: 1980
* 42 Type of Service on: 1 Under: 1
* 43 Structure Type Main: 5 06
* 208 Inspection Area: 09 Initials: JMC
* Location I.D. No.: 067-00646X-001.02E
* XReference I.D. No 067-00417D-004.92N

Signs & Attachments

* 240 Median Barrier Rail: 0
* 230 Guardrail Loc Dir Rear: 0
Fwrd: 0
Oppo Dir Rear: 0
Fwrd: 0

Measurements

* 29 ADT: 001710 Year: 1998
* 28 Lanes On: 02 Under: 02
* 48 Max. Span Length: 0185
* 49 Structure Length: 185
* 47 Tot. Horz. Cl: 66.00
* 229 Shoulder Width:
Rear Lt: 12.00 Type: 8 Rt: 12.00
Fwrd Lt: 12.00 Type: 1 Rt: 12.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 1 Fwrd: 0

* 228 Min. Vertical Cl
Act. Odm Dir: 16 ' 11 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
* 10 Max Min Vert Cl: 16 ' 11 " Dir: 3

Ratings

* 227 Collision Damage: 0

Posting Data

* 103 Temporary Structure: 0
* 248 County Continuity No.: 01

Hydraulic Data

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

GEORGIA DEPARTMEN)F TRANSPORTATION

Bridge Component Report

District: 7
Bridge Inspector: Jerry Cooper
Location ID: 067-00417D-004.92N
Structure ID: 067-0119-0

Inspection Date: 7/2/2007
Over: CR 646 HAWKINS STORE RD.
County: Cobb
Road Name: I-575 (NBL)

Inspection Area: 09

SubStructure Data

Bent#	Type	Foundation	Col	#Cols	Piling	#Piles	Sway	CAP	Remarks
1	A			0		0		C	ONLY CAP EXPOSED
2	A			0		0		C	ONLY CAP EXPOSED

SuperStructure Data

Span#	Beam Type	Spacing	Length	#Beams	Remarks
1	PSC Box Beam	0.00	185.00	1	Pre-stressed Post-tension

Bearing Data

Span#	Rear Type Bearing	FWD Type Bearing	Remarks
1		07 - Pot Bearing	Covered with silicone

BRIDGE INVENTORY DATA LISTING GEOF A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0120-0 **Cobb** SUFF. RATING 91.77

Location & Geography

*		Structure I.D.No:	067-0120-0
	200	Bridge Information	07
*	6A	Feature Int:	CR 646 HAWKINS STORE RD.
*	6B	Critical Bridge:	0
*	7A	Route Number Carried:	SR00417
*	7B	Facility Carried:	I-575 (SBL)
*	9	Location:	5 MI NE OF KENNESAW
	2	DOT District:	7
	207	Year Photo:	2007
*	91	Inspection Frequency:	24 Date: 08/20/2007
	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:	00575
		Direction:	0
*	16	Latitude:	34-3.4482 MMS Prefix: SR
*	17	Longitude:	84-32.6038 MMS Suffix: 00 MP: 4.88
	98	Border Bridge:	000 %Shared: 00
	99	ID Number:	000000000000000
*	100	STRAHNET:	1
	12	Base Highway Network:	1
	13A	LRS Inventory Route:	671041700
	13B	Sub Inventory Route:	0
*	101	Parallel Structure:	L
*	102	Direction of Traffic:	1
*	264	Road Inventory Mile Post:	021.79
*	208	Inspection Area:	09 Initials: JMC
		Engineer's Initial:	sgm

* Location I.D. No.: 067-00417D-004.93N

*	104	Highway System:	1
*	26	Functional Classification:	11
*	204	Federal Route Type:	I No.: 05751
	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:	01
*	20	Toll:	3
*	21	Maintenance:	01
*	22	Owner:	01
*	31	Design Load:	6
	37	Historical Significance:	5
	205	Congressional District:	11
	27	Year Constructed:	1980
	106	Year Reconstructed:	0000
	33	Bridge Median:	1
	34	Skew:	30
	35	Structure Flared:	0
	38	Navigation Control:	N
	213	Special Steel Design:	0
	267	Type of Paint:	0
*	42	Type of Service on:	1
			1
	214	Movable Bridge:	0
	203	Type Bridge:	Z-O-P-O
	259	Pile Encasement:	3
*	43	Structure Type Main:	5 06
	45	No. Spans Main:	001
	44	Structure Type Appr:	0 00
	46	No. Spans Appr:	0000
	226	Bridge Curve Horz:	1 Vert: 0
	111	Pier Protection:	0
	107	Deck Structure Type:	1
	108	Wearing Surface Type:	1
		M	0
		F	0

Signs & Attachments

	225	Expansion Joint Type:	15
	242	Deck Drains:	0
	243	Parapet Location:	0
		Height:	0.00
		Width:	0.00
	238	Curb:	0.00 0
	239	Handrail:	9 9
*	240	Median Barrier Rail:	0
	241	Bridge Median Height:	0.00
		Width:	0.00
*	230	Guardrail Loc Dir Rear:	6
		Fwrd:	0
		Oppo Dir Rear:	0
		Fwrd:	0
	244	Approach Slab:	3
	224	Retaining Wall:	0
	233	Posted Speed Limit:	65
	236	Warning Sign:	0
	234	Delineator:	1
	235	Hazard Boards:	0
	237	Utilities Gas:	00
		W	00
		Ele	00
		Telephone:	00
		S	00
	247	Lighting Street:	0
		Naviagtion:	0
		Aerial:	0
*	248	County Continuity No.:	01

Programming Data

201 Project No.: I-575-1 (2) 00 CT.1
202 Plans Available: 0
249 Prop. Proj. No. 0000000000000000
250 Approval Status: 0000
251 P.I. No.: 0000000
252 Contract Date: 02/01/1901
260 Seismic No.: 00000
75 Type Work: 00 0
94 Bridge Imp. Cost: $ 0
95 Roadway Imp. Cost: $ 0
96 Total Imp Cost: $ 0
76 Imp. Length: 000000
97 Imp. Year: 0000
114 Future ADT: 124605 Year: 2027

Hydraulic Data

215 Waterway Data
Highwater Elev.: 0000.0 Year: 1900
Avg. Streambed Elev.: 0000.0 Freq.: 00
Drainage Area: 00000
Area Of Opening: 000000
113 Scour Critical: N
216 Water Depth: 00.0 Br. Height: 00.0
222 Slope Protection: 4
221 Spur Dikes Rear: 0 Fwrd: 0
219 Fender System: 0
220 Dolphin: 0
223 Culvert Cover: 000
Type: 0
No. Barrels: 0
Width: 0.00 Height: 0.00
Length: 0 Apron: 0
* 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No.: 067-00417D-004.93N

Measurements

* 29 ADT: 083070 Year: 2007
109 % Trucks: 0
* 28 Lanes On: 02 Under: 02
210 No. Tracks On: 00 Under: 00
* 48 Max. Span Length: 0185
* 49 Structure Length: 185
51 Br. Rwdy. Width: 40.50
52 Deck Width: 43.70
* 47 Tot. Horz. Cl: 40.50
50 Curb/Sdewlk Width: 0.00/0.00
32 Approach Rdwy Width: 038
* 229 Shoulder Width:
Rear Lt: 4.00 Type: 2 Rt: 10.00
Fwrd Lt: 4.00 Type: 2 Rt: 10.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 0 Fwrd: 0
36 Safety Features Br. Rail: 1
Transition: 1
App. G. Rail: 1
App. Rail End: 1
53 Minimum Cl.Over: 99 ' 99 "
Under: H 16 ' 04 "
* 228 Min. Vertical Cl
Act. Odm Dir: 99 ' 99 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
55 Lateral Undercl. Rt: H 21.00
56 Lateral Undercl. Lt: 0.00
* 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: 8.00
Deck Thick Approach: 0.00
246 Overlay Thickness: 0.00
212 Year Last Painted: Sup: 0000 Sub: 0000

Ratings

65 Inventory Rating Method: 2
63 Inventory Rating Method: 2
66 Inventory Type: 2 Rating: 36
64 Operating Type: 2 Rating: 51
231 Calculated Loads
H-Modified: 20 0
HS-Modified: 25 0
Type 3: 28 0
Type 3s2: 40 0
Timber: 36 0
Piggyback: 40 0
261 H Inventory Rating: 20
262 H Operating Rating: 28
67 Structural Evaluation: 7
58 Deck Condition: 7
59 Superstructure Condition: 7
* 227 Collision Damage: 0
60A Substructure Condition: 7
60B Scour Condition: N
60C Underwater Condition: N
71 Waterway Adequacy: N
61 Channel Protection Cond: N
68 Deck Geometry: 7
69 UnderClr. Horz/Vert: 7
72 Appr. Alignment: 8
62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
41 Struct Open, Posted, Cl: A
* 103 Temporary Structure: 0
232 Posted Loads H-Modified: 00
HS-Modified: 00
Type 3: 00
Type3s2: 00
Timber: 00
Piggyback: 00
253 Notification Date 02/01/1901
253 Fed Notify Date: 02/01/1901 0

GEORGIA DEPARTMENT OF TRANSPORTATION

Bridge Inspection Report

District: 7 **Inspection Date:** 8/20/2007 **Inspection Area:** 09

ridge Inspector: Jerry Cooper **Over:** CR 646 HAWKINS STORE RD. **Bridge Status:** 07

Location ID: 067-00417D-004.93N **County:** Cobb

Structure ID: 067-0120-0 **Road Name:** I-575 (SBL)

EVALUATION & DEFICIENCIES

SubStructure: **Year Painted:** 0000

Concrete abutments only.
Abutments and superstructure were poured monolithically.
Minor cracking in both abutment caps .

SuperStructure: **Year Painted:** 0000

1 span post tensioned box beam (1 box)
Minor longitudinal cracking on the bottom.
Went inside box on 09-93 minor cracking in back wall at abutment 2, also hair line cracking along cable path in walls at various locations .
Went back inside the box on 07-99 and their was no additional cracks other than those already noted during the 09-93 inspection.
Use of ladder required to enter box.

Deck:

8" concrete slab.
The deck surface has minor cracking on the top and Bottom inside box.
Approach slabs are low but have been overlaid .

General:

Built in 1980 project # i-575-1 (2) 00 ct.1
The Inventory Load Capacity = HS-20 + Military ---> Design.
This structure is in Good Condition.
Concrete S.I.P. deck forms.

Condition Rating

Component	Material	Rating
Substructure	Concrete	7
Superstructure	Concrete	7
Deck	Concrete	7

Temp Shored: **No**

Truck Type	Gross/H-Mod	HSMod	Tand	3-S-2	Log	Piggy
Calculated Posting	20	25	28	40	36	40
Posting Required	No	No	No	No	No	No
Existing Posting	00	00	00	00	00	00

Not a School Bus Route.

Structure Does Not Require Posting

GEORGIA DEPARTMENT OF TRANSPORTATION

Deficiency Report

District: 7 **Inspection Date:** 8/20/2007 **Inspection Area:** 09

Bridge Inspector: Jerry Cooper **Over:** CR 646 HAWKINS STORE RD.

Location ID: 067-00417D-004.93N **County:** Cobb

Structure ID: 067-0120-0 **Asst. District Engineer:** Shun Pringle

EVALUATION & DEFICIENCIES

I-575 (SBL) Over CR 646 HAWKINS STORE RD.-------5 MI NE OF KENNESAW

Item	Units	Work	P	Date Reported	Location	Date Completed	Complete
520	HOURS	10	B	4/1/1991		8/20/2007	5,985.00
800	LIN. FT.	80	B	5/23/2001		12/14/2001	205.00

Comments:

BRIDGE INVENTORY DATA LISTING GEOF A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0120-0 **Cobb** SUFF. RATING 91.77

Location & Geography

* Structure I.D.No: 067-0120-0
* 6A Feature Int: SR 417 SBL (I-575)
* 6B Critical Bridge: 0
* 7A Route Number Carried: CR00646
* 7B Facility Carried: HAWKINS STORE RD
* 9 Location: 5 MI NE OF KENNESAW
* 91 Inspection Frequency: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 2
Type: 4
Designation: 1
Number: 00646
Direction: 0
* 16 Latitude: 34-3.4482 HMMS Prefix:
* 17 Longitud 84-32.6038 HMMS Suffix: MP:
* 100 STRAHNET: 0
12 Base Highway Network: 1
13A LRS Inventory Route: 672064600
13B Sub Inventory Route: 0
* 101 Parallel Structure: L
* 102 Direction of Traffic: 2
* 104 Highway System: 0
* 26 Functional Classification: 19
* 204 Federal Route Type: 0 No.:
105 Federal Lands Highway: 0
* 110 Truck Route: 0
* 19 Bypass Length: 01
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
27 Year Constructed: 1980
* 42 Type of Service on: 1 Under: 1
* 43 Structure Type Main: 5 06
* 208 Inspection Area: 09 Initials: JMC
* Location I.D. No.: 067-00646X-001.00E
* XReference I.D. No 067-00417D-004.93N

Signs & Attachments

* 240 Median Barrier Rail: 0
* 230 Guardrail Loc Dir Rear: 0
Fwrd: 0
Oppo Dir Rear: 0
Fwrd: 0

Measurements

* 29 ADT: 001710 Year: 1998
* 28 Lanes On: 02 Under: 02
* 48 Max. Span Length: 0185
* 49 Structure Length: 185
* 47 Tot. Horz. Cl: 66.00
* 229 Shoulder Width:
Rear Lt: 12.00 Type: 8 Rt: 12.00
Fwrd Lt: 12.00 Type: 1 Rt: 12.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 1 Fwrd: 0

* 228 Min. Vertical Cl
Act. Odm Dir: 16 ' 04 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
* 10 Max Min Vert Cl: 16 ' 04 " Dir: 3

Ratings

* 227 Collision Damage: 0

Posting Data

* 103 Temporary Structure: 0
* 248 County Continuity No.: 01

Hydraulic Data

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

GEORGIA DEPARTMEN. OF TRANSPORTATION

Bridge Component Report

District: 7
Bridge Inspector: Jerry Cooper
Location ID: 067-00417D-004.93N
Structure ID: 067-0120-0

Inspection Date: 8/20/2007
Over: CR 646 HAWKINS STORE RD.
County: Cobb
Road Name: I-575 (SBL)

Inspection Area: 09

SubStructure Data

Bent#	Type	Foundation	Col	#Cols	Piling	#Piles	Sway	CAP	Remarks
1	A			0		0		C	
2	A			0		0		C	

SuperStructure Data

Span#	Beam Type	Spacing	Length	#Beams	Remarks
1	PSC Box	0.00	185.00	1	Pre-stressed Post-tension

Bearing Data

Span#	Rear Type Bearing	FWD Type Bearing	Remarks
1			No bearings

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#39

SUBJECT: Bridge Foundation Investigation
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

BRIDGE AND RETAINING WALL FOUNDATION INVESTIGATION REPORT
I-575 over CR 646 (Hawkins Store Road)
Northwest Corridor Project
GDOT Project No. CSNHS-0008-00(256), PI No. 0008256
Cobb County, Georgia

WILLMER ENGINEERING INC.
Project No. ATL-171-3099E

Document No.: ATL-171-3099**E**
Revision: 1
Issue Date: August 22, 2008
Document Status: Issued for Use

Prepared For

GEORGIA TRANSPORTATION PARTNERS
Atlanta, Georgia

Prepared By

WILLMER ENGINEERING INC.
3772 Pleasantdale Road
Suite 165
Atlanta, Georgia 30340-4270

770.939.0089

WILLMER ENGINEERING INC. | WE

August 22, 2008

VIA COURIER

Pete M. McMahon, PE
Georgia Transportation Partners
c/o PBS&J, Inc.
5665 New Northside Drive, Suite 400
Atlanta, Georgia 30328

SUBJECT: **Bridge and Retaining Wall Foundation Investigation Report**
I-575 over CR 646 (Hawkins Store Road)
Northwest Corridor Project
GDOT Project No. CSNHS-0008-00(256), PI No. 0008256
Cobb County, Georgia
Willmer Project No. ATL-171-3099E

Dear Mr. McMahon:

Willmer Engineering Inc. (Willmer) is pleased to provide this Bridge and Retaining Wall Foundation Investigation (BFI and WFI) report for the proposed widening of the I-575 bridge over CR 646 (Hawkins Store Road) in Cobb County, Georgia. The BFI and WFI were performed in general accordance with our contract with Georgia Transportation Partners (GTP), dated May 12, 2007. The objective of this investigation was to gather sufficient geotechnical information to support the costing plans to be developed by GTP. Additional borings will be performed in the design/build phase of the project to provide additional information as required. This report was prepared in general accordance with Georgia Department of Transportation (GDOT) guidance documents for bridge and retaining wall foundation investigations. This report was revised to incorporate GDOT comments dated July 18, 2008.

The attached summary presents the site and subsurface conditions along the proposed bridge and retaining wall alignments, and our geotechnical recommendations related to foundation design and construction.

We appreciate the opportunity to be of service to you on this project and look forward to a continuing relationship. Please contact us if you have any questions concerning this report or require further assistance.

Sincerely,

WILLMER ENGINEERING INC.

Murthy S. Kotha
Project Engineer

Sujit K. Bhowmik, PhD, PE
Chief Engineer

James L. Willmer, PE
Executive Vice President/Principal Consultant

MSK/SKB/JLW:ks

I:\Word Processing\Projects\171-GEO\171-3099 Northwest Corridor Project (Bechtel)\Reports\3099 E - CR 646 (Hawkins Store Road)\171-3099E REVISED BFI Report - I-575 over Hawkins Store Road 8-22-08.doc

Geotechnical Engineering ◇ Environmental Services and Engineering ◇ Construction Services

3772 Pleasantdale Road
Suite 165
Atlanta, GA 30340-4270

P: 770-939-0089
F: 770-939-4299

www.willmerengineering.com

8/22/08

Attachments: **Bridge and Retaining Wall Foundation Investigations**

Figures

Figure 1 Project Location Map
Figure 2 Boring Location Plan
Figure 3 Generalized Subsurface Profile; Section A-A' (Left)
Figure 4 Generalized Subsurface Profile; Section B-B' (Center)
Figure 5 Generalized Subsurface Profile; Section C-C' (Right)

Appendix I

Boring Record Legend
Unified Soil Classification System Reference Sheet
Engineering Description of Rock Hardness
Boring Records: BB-1, BB-2, W-1 and W-2 (New Borings)
Laboratory Test Results

Appendix II

Boring Records: B-1 through B-8 (Borings from Existing GDOT BFI Report)

Revision History:

Revision	Issue Date	Document Status
A	January 4, 2008	Issued for Review
0	January 15, 2008	Issued for Use
1	August 22, 2008	Issued for Use

BRIDGE FOUNDATION INVESTIGATION	
Willmer Project Number	ATL-171-3099E
GDOT Project Number	CSNHS-0008-00(256)
Project P.I. Number	0008256
Location	I-575 Bridge over CR 646 (Hawkins Store Road), Cobb County, Georgia (see Figure 1).
GENERAL INFORMATION	
Project Description	The two existing I-575 bridges over CR 646 (Hawkins Store Road) are planned to be replaced with one new bridge as part of the proposed I-575 widening project. The bridge will be a single span, 111 feet long reinforced concrete structure. The existing bridges are single span and are supported on H-piles at Bent 1 of both left and right bridges and Bent 2 of the left bridge, and a spread footing at Bent 2 of the right bridge. The BFI report for the existing bridges was obtained from GDOT, and it includes eight borings performed by GDOT in 1976.
Geologic Information	The project alignment is geologically sited within the Piedmont Physiographic Province of Georgia, and is underlain by Metamorphosed Maffic Rock Formations which include amphibolite, mica schist and biotite gneiss.
Subsurface Features	Subsurface information for this project was obtained from two borings (BB-1 and BB-2) performed by Willmer as part of the present study (see Appendix I) and eight borings (B-1 through B-8) performed by GDOT in 1976 as part of the BFI for the two existing bridges (see Appendix II). The subsurface profile at the two new boring locations is generally comprised of residuum underlain by partially weathered rock (PWR) and parent bedrock. The residual soils consist of loose to medium dense silty sand. Although no fill material was encountered at the two borings performed for the BFI, fill was encountered at one boring (W-1) drilled from the existing roadway (I-575) shoulder for the retaining wall investigation. The fill material consisted of loose to medium dense silty sand. During the present field investigation, no ground water was encountered at any of the boring locations, however, ground water was encountered between elevations 959 and 976 feet during the field investigation by GDOT in 1976.

PWR AND AUGER REFUSAL ELEVATIONS (feet)

Bent No.	Reference Boring No.	Top of PWR	Auger Refusal
1	B-1	958	**
	BB-1	956	955
	B-6	934	931
2	B-3	*	**
	BB-2	*	962
	B-8	*	**

* Boring did not encounter PWR.
** Boring was not extended to auger refusal.

MAXIMUM PILE DESIGN LOADS

Pile Type	Load Transfer (%)		Design Load
	Friction	End Bearing	
H-Piles	10	90	10 BP 42 = 55 Tons
			12 BP 53 = 70 Tons
			14 BP 73 = 96 Tons
			14 BP 89 = 117 Tons

FOUNDATION RECOMMENDATIONS

Bent No.	Pile Footing (Type)	Pile Bent (Type)
1		H
2		H

PILE TIP ELEVATIONS (feet)

Bent No.	Reference Boring No.	H-Pile	
		Minimum Tip	Estimated Tip
1-Left	B-1,B-3	955	952
1-Center	BB-1	955	950
1-Right	B-6,B-8	949	934
2-Left	B-3,B-1	958	952
2-Center	BB-2	962	952
2-Right	B-8,B-6	962	952

NOTES

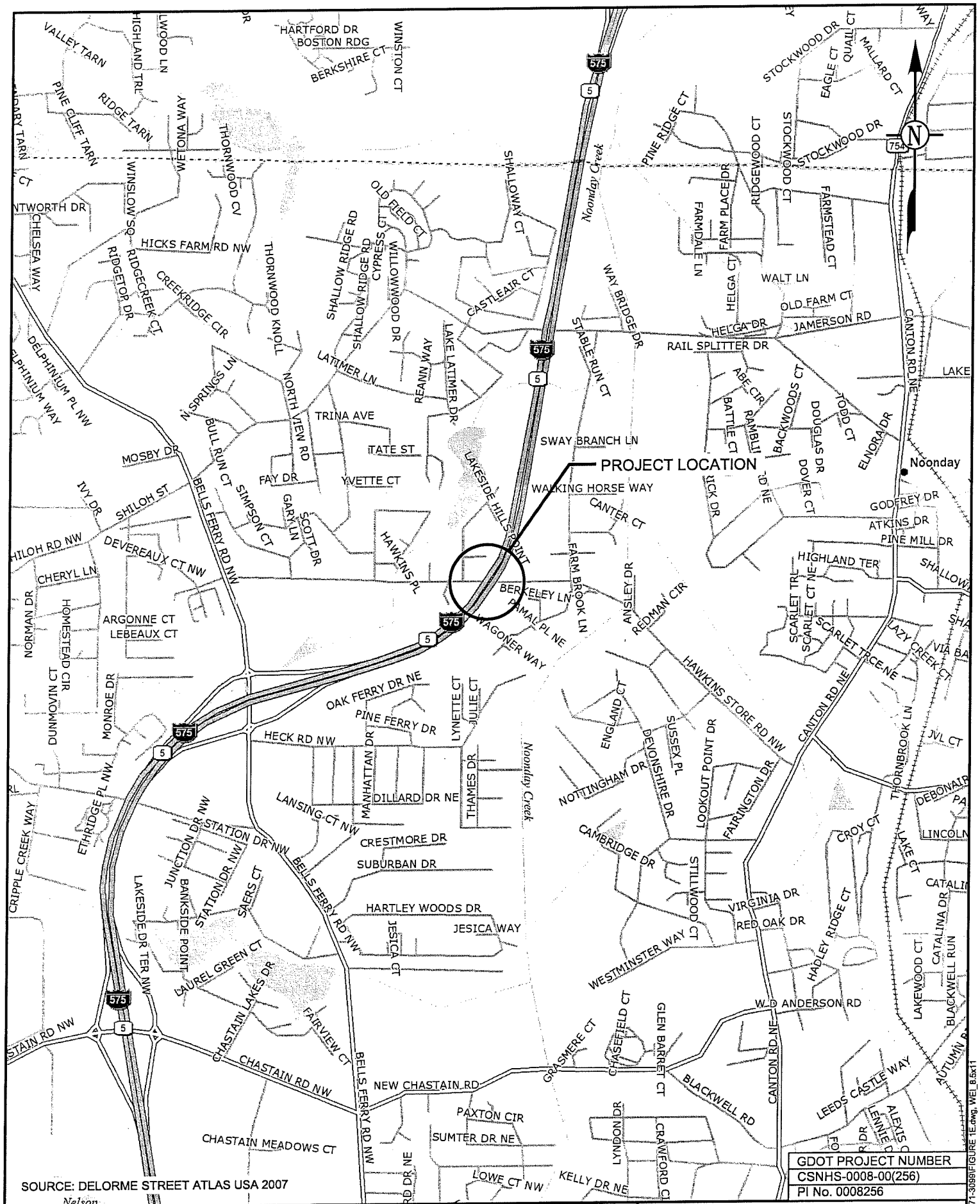
Elevations	All elevations referenced in this report are based on Control Points No. 134 (3/4" rebar, EL. 990.65 feet) and No. 511 (Spur PKNS -T, EL. 968.21 feet) established by the surveyors.
PDO	Driving resistance after Minimum Tip Elevations are achieved.
Points	Pile points are recommended for piles driven at Bent 1 (Left and Right) and Bent 2 (Left and Right) to insure adequate penetration through/into dense/very dense soils and PWR. The use of points should be at the direction of the project Geotechnical Engineer.

Down-drag Protection	To avoid inducing down-drag loads onto the piles from potential settlement of the loose to medium dense silty sand during construction of the MSE wall, we recommend that the piles at Bent 1 be protected from down-drag by using Jackets or other approved measures.
Waiting Period	None required (see MSE wall recommendations)
Special Problems	Erratic pile lengths can be expected.
As-built Information	As-built information should be forwarded to the Geotechnical Engineering Bureau upon completion of the foundation system.

RETAINING WALL INVESTIGATION	
Location	Two MSE retaining walls (Wall Nos. 8 and 9) are proposed for the bridge at I-575 over CR 646 (Hawkins Store Road). Wall No. 8 and 9 are comprised of the abutment walls and wing walls on the two sides at Bents 1 and 2, respectively. The total length of each wall is about 320 feet (see Figure 2) and the maximum height of the walls is about 34 feet. The bottom elevation of the walls at the bridge bents is about 967 feet.
Subsurface Features	The subsurface profile (see Figure 4 and boring logs for BB-1, BB-2, W-1 and W-2) along the proposed walls is comprised of fill and residuum underlain by partially weathered rock (PWR). The fill consists of loose to medium dense silty sand. The residual soils consist of loose to very dense silty sand and stiff to very stiff silt with sand underlain by partially weathered rock. Ground water was not encountered at any of the borings during the present field investigation, however, groundwater was encountered between elevations 959 and 976 feet during the field investigation by GDOT in 1976. It should be noted that the borings for the present study were performed during an extended dry period, and ground water may be encountered during construction.
Soil Parameters	The following soil design parameters are recommended for use for the proposed MSE walls: Soil Unit Weight γ = 125 pcf Cohesion c = 0 psf Angle of Internal Friction ϕ = 28 degrees Coefficient of Sliding Friction μ = 0.40 The above design parameters assume the backfill material behind the MSE wall fill to consist of silty sand compacted to the specified density.

Recommendations	Based on the available boring data in the vicinity of the proposed MSE walls, the soil type and strength along the walls are expected to vary significantly. The following steps are recommended for the MSE walls. (i) Based on available information on location and elevation of the proposed MSE walls, the MSE walls at the bridge abutments will likely be along or adjacent to an existing concrete-lined ditch. Prior to MSE wall construction, the concrete-lined ditch should be removed and final grade achieved by placement of compacted structural fill. (ii) Any soft/loose soils from beneath the MSE walls should be over-excavated and replaced with compacted wall backfill material. The depth and extent of any over-excavation should be determined during construction by the project Geotechnical Engineer. (iii) Allowable Bearing Pressures: **Wall No. 8:** For Wall No. 8, we recommend a maximum allowable bearing pressure of 2,500 psf for use in design. However, at the location of maximum wall height, the design bearing pressure will likely exceed the maximum allowable bearing pressure. Therefore, we recommend that the MSE wall be constructed in two stages. In the first stage, the wall should be constructed to half of its final height. A minimum 30-day waiting period should be allowed after the first stage before beginning the second stage of construction. Settlement of the MSE wall should be monitored upon completion of the first stage of construction. The length of the waiting period may be increased or decreased based on the settlement monitoring data, at the discretion of the project Geotechnical Engineer. After the waiting period, the MSE wall should be constructed to the final height. **Wall No. 9:** For Wall No. 9, we recommend a maximum allowable bearing pressure of 5,000 psf for use in design. (iv) The MSE wall backfill material and drainage measures should conform to GDOT standard specifications.
Prepared By	Murthy S. Kotha / Sujit K. Bhowmik, PhD, PE
Senior Review By	James L. Willmer, PE

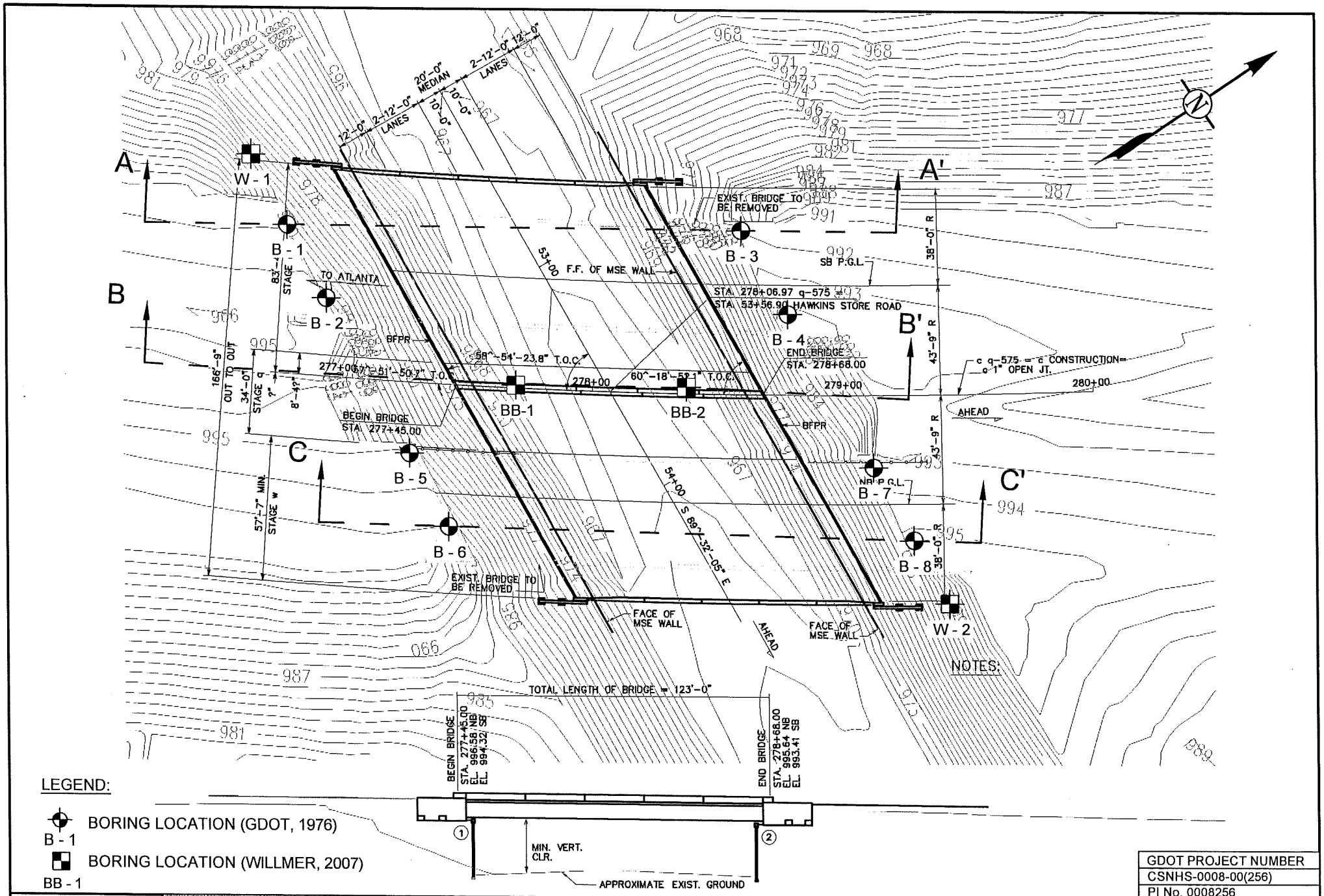
FIGURES



GDOT PROJECT NUMBER
CSNHS-0008-00(256)
PI No. 0008256

SCALE: 1" = 2000'	WILLMER ENGINEERING INC. WE	GEOTECHNICAL ENGINEERING CONSTRUCTION SERVICES ENVIRONMENTAL SERVICES AND ENGINEERING 3772 PLEASANTDALE ROAD - SUITE 165 ATLANTA, GA 30340-4270
DATE: 10/26/2007		FIGURE 1 PROJECT LOCATION MAP I-575 OVER C.R. 646 (HAWKINS STORE ROAD) NORTHWEST CORRIDOR PROJECT COBB COUNTY, GEORGIA WILLMER PROJECT No. ATL-171-3099E
DRAWN BY: MDB		
REVIEWED BY: MK		

I:\AutoCAD\171-GEO\171-3099\FIGURE 1E.dwg, WEI_8.5x11

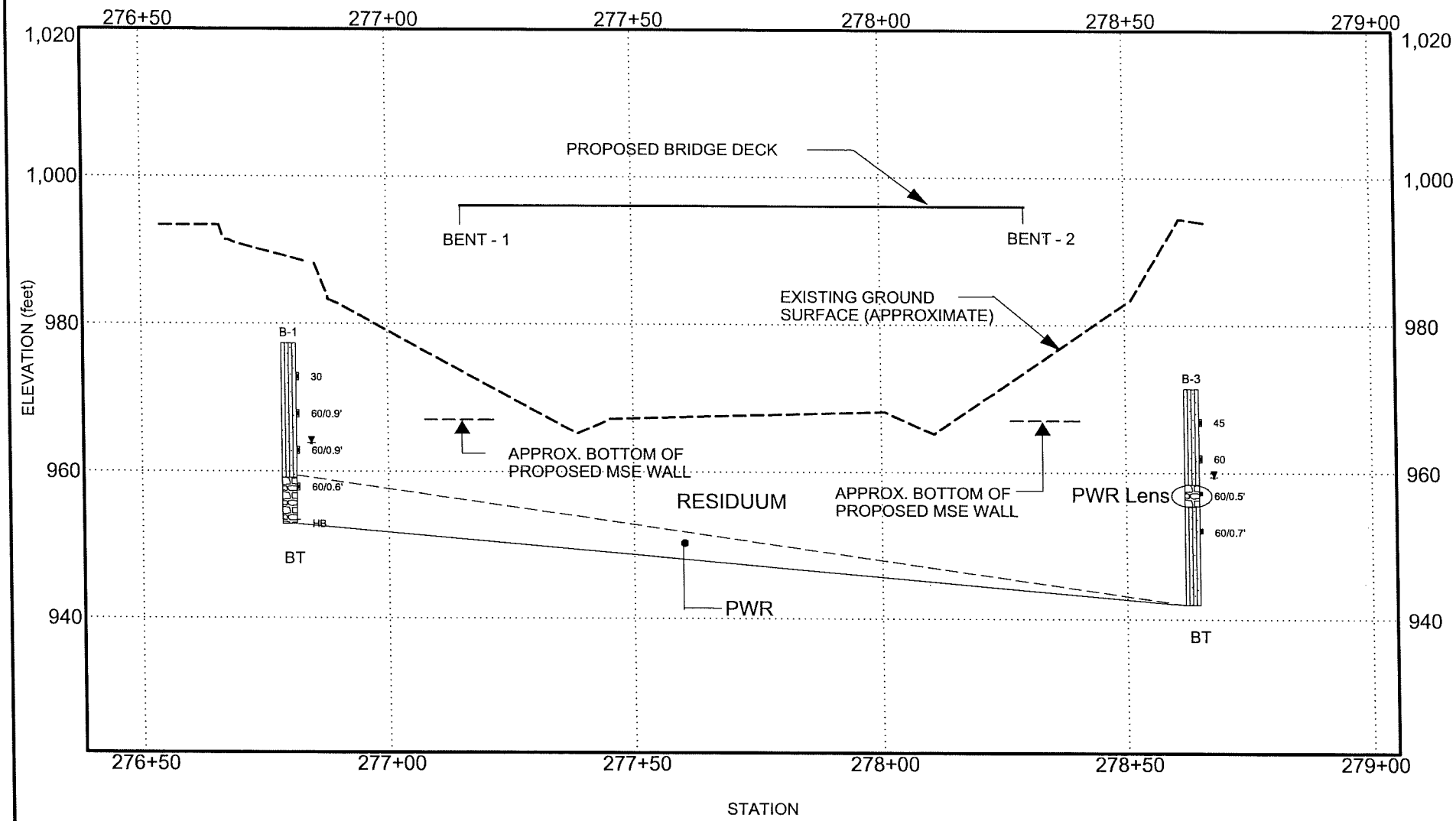


GDOT PROJECT NUMBER
CSNHS-0008-00(256)
PI No. 0008256

SCALE: 1" = 50'	WILLMER ENGINEERING INC.	GEOTECHNICAL ENGINEERING ▪ CONSTRUCTION SERVICES ENVIRONMENTAL SERVICES AND ENGINEERING 3772 PLEASANTDALE ROAD - SUITE 165 ATLANTA, GA 30340-4270
DATE: 6/3/2008		
DRAWN BY: CBS		
REVIEWED BY: MK		

FIGURE 2
BORING LOCATION PLAN
I-575 OVER C.R. 646 (HAWKINS STORE ROAD
NORTHWEST CORRIDOR PROJECT
COBB COUNTY, GEORGIA
WILLMER PROJECT No. ATL-171-3099E

I:\AutoCAD\171-GEO\171-3099\Revised Bridge plans\2004 Versions\Geo_Hawkins_PE.dwg, WEI_11x8.5



LEGEND:
- Groundwater Table @ 24 hours
- Groundwater Table @ Time of Boring
BT - Boring Terminated
PWR - Partially Weathered Rock
HB - Hammer Bounce

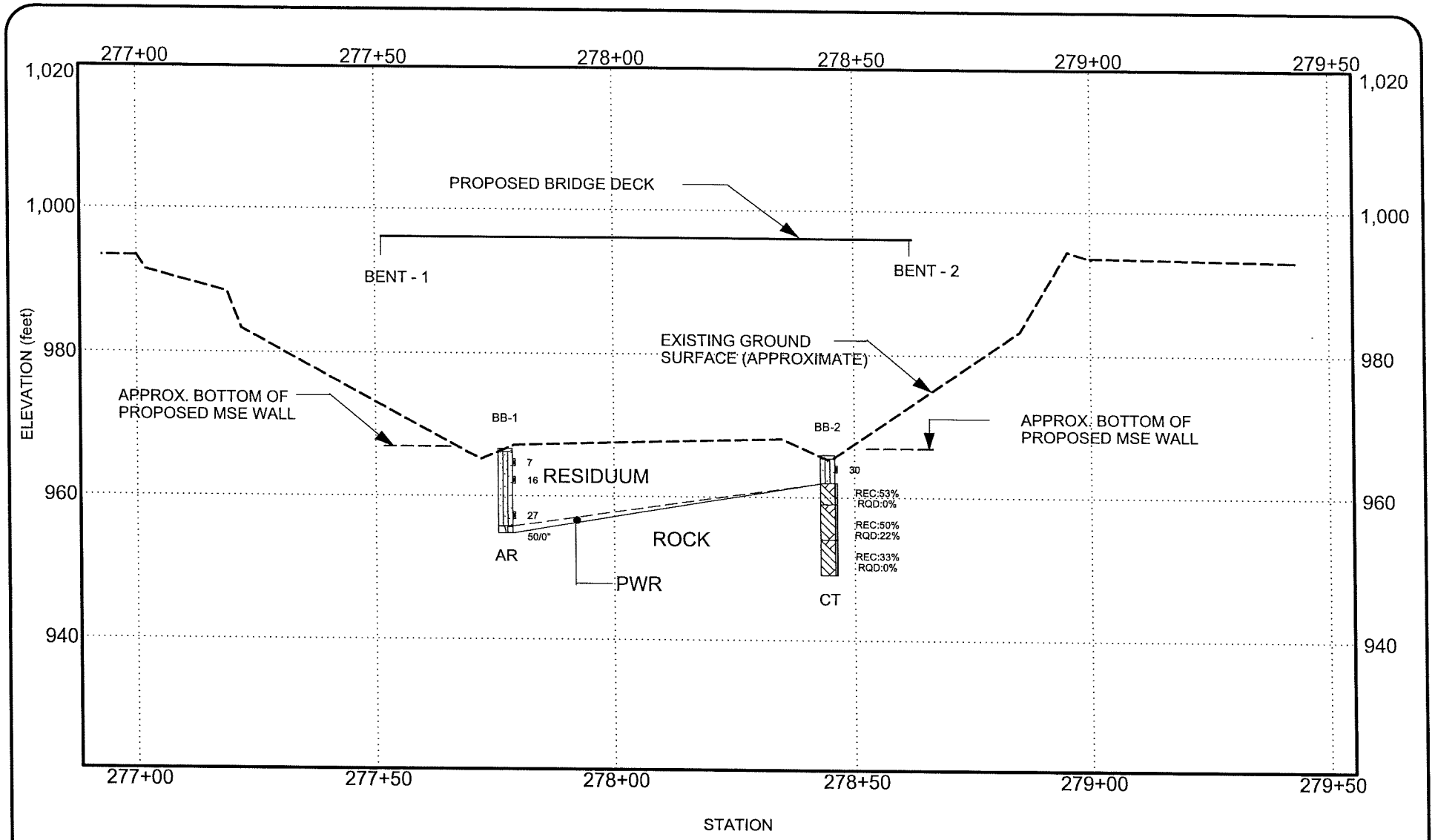
SCALE : 1 inch = 20 feet (vertical)
1 inch = 30 feet (horizontal)

Note: Borings B-1 and B-3 were drilled by GDOT in 1976.

GENERALIZED SUBSURFACE PROFILE
SECTION A-A' (Left)

I-575 over CR 646 (Hawkins Store Road)
GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256
Cobb County, Georgia

PROJECT #	DATE	FIGURE
171-3099E	Dec 18, 2007	3



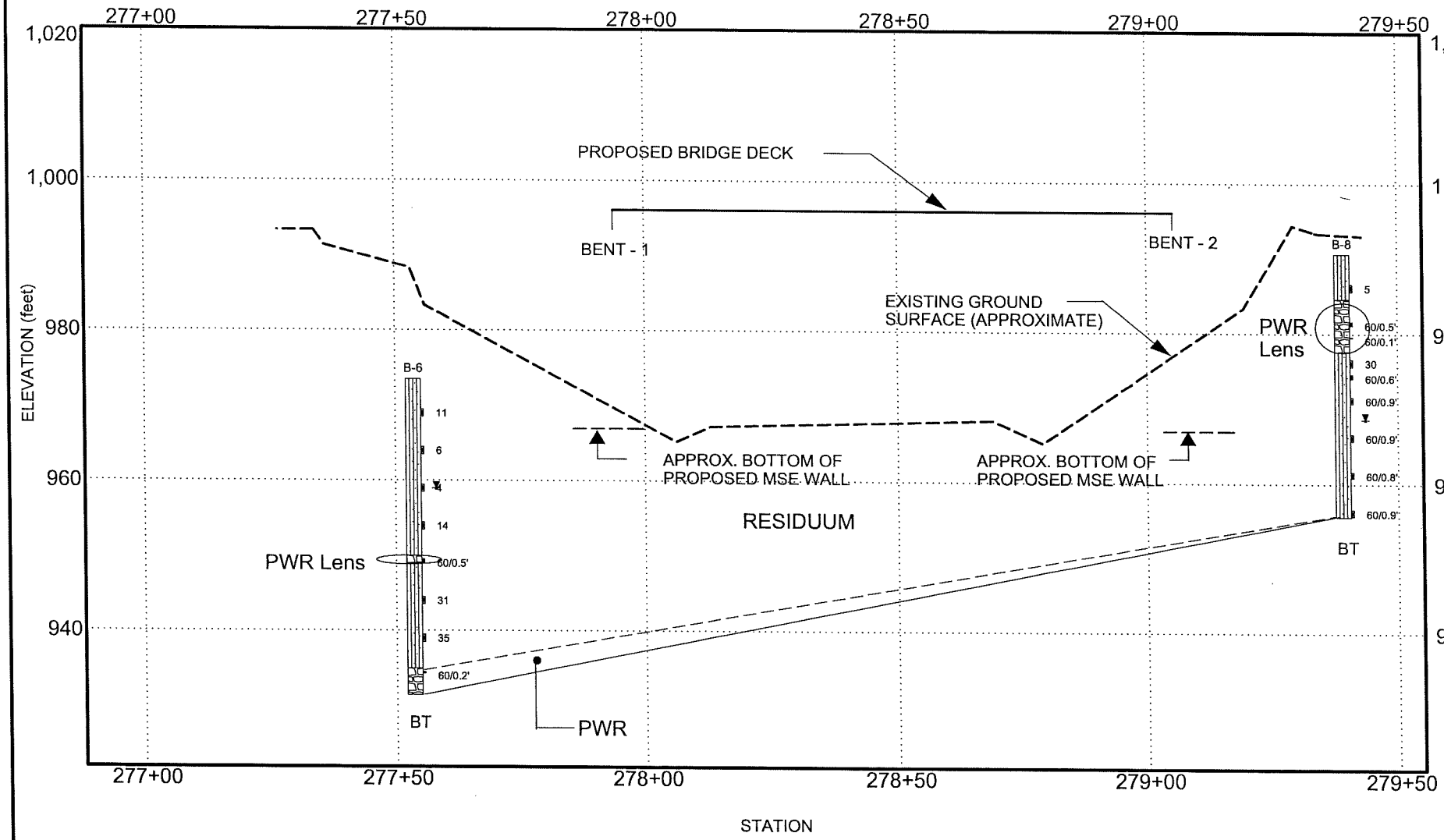
LEGEND:
AR - Auger Refusal
CT - Coring Terminated
PWR - Partially Weathered Rock
REC - Recovery
RQD - Rock Quality Description

SCALE : 1 inch = 20 feet (vertical)
1 inch = 30 feet (horizontal)

GENERALIZED SUBSURFACE PROFILE
SECTION B-B' (Center)

I-575 over CR 646 (Hawkins Store Road)
GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256
Cobb County, Georgia

PROJECT #	DATE	FIGURE
171-3099E	Dec 20, 2007	4



LEGEND:
- Groundwater Table @ 24 hours
- Groundwater Table @ Time of Boring
AR - Auger Refusal
BT - Boring Terminated
PWR - Partially Weathered Rock

SCALE : 1 inch = 20 feet (vertical)
1 inch = 30 feet (horizontal)

Note: Borings B-6 and B-8 were drilled by GDOT in 1976.

GENERALIZED SUBSURFACE PROFILE
SECTION C-C' (Right)

I-575 over CR 646 (Hawkins Store Road)
GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256
Cobb County, Georgia

PROJECT #	DATE	FIGURE
171-3099E	Dec 18, 2007	5

APPENDIX I

WILLMER ENGINEERING INC. WE

BORING RECORD LEGEND

SM, CL, etc: - GROUP SYMBOL based on Unified Soil Classification System.
(Refer to ASTM D-2488 and Table 1 of D-2487)

N-VALUE: BLOWS PER FOOT- Standard Penetration Resistance (SPT) blow count , the sum of the second and third 6-inch increments of the SPT test.
(Refer to ASTM D-1586)

CONSISTENCY / RELATIVE DENSITY Correlated with SPT Blow Count, N:

SILTS AND CLAYS

N (blows per foot)	Consistency
0 - 2	Very Soft
3 - 4	Soft
5 - 8	Firm
9 - 15	Stiff
16 - 30	Very Stiff
31 - 50	Hard
> 50	Very Hard

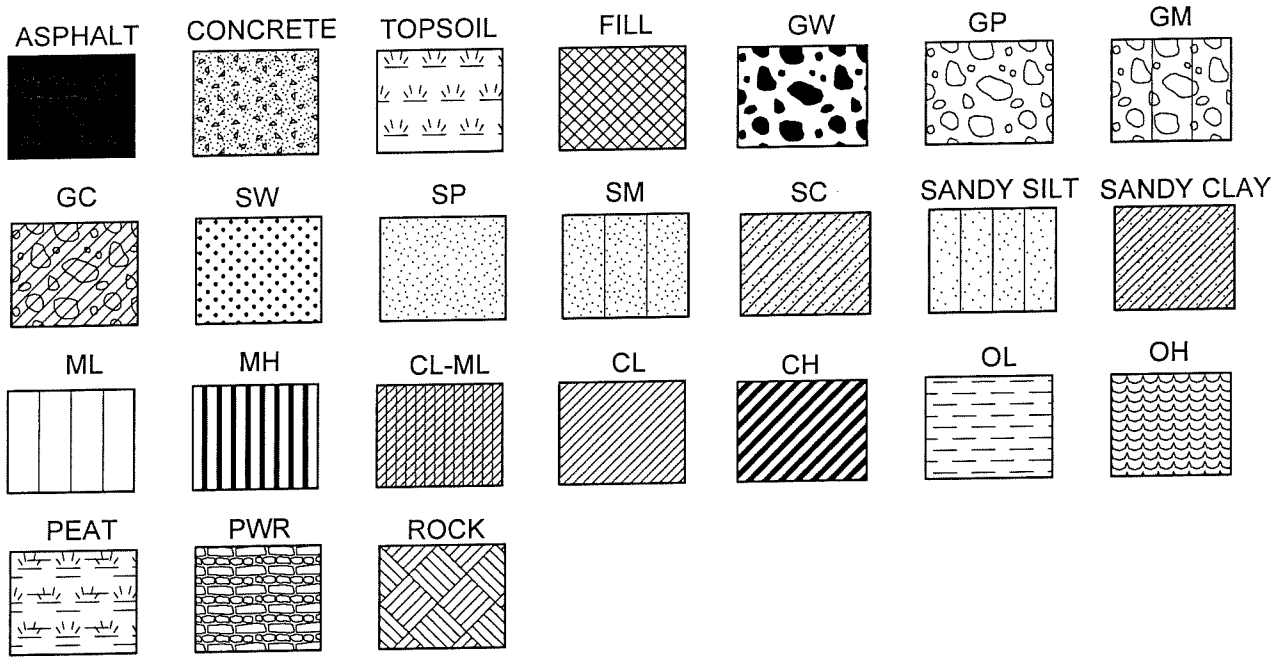
SANDS

N (blows per foot)	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
> 50	Very Dense

NOTES:

Groundwater Measurements:

- ▼ Water level at time of backfilling
- ▽ Water level at time of boring
- Caved level at 24 hours



WILLMER ENGINEERING INC. | WE

Willmer Engineering Inc.
3772 Pleasantdale Road, Suite 165
Atlanta, Georgia 30340

UNIFIED SOIL CLASSIFICATION SYSTEM REFERENCE SHEET

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN #200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED #4 SIEVE	CLEAN GRAVELS LITTLE OR NO FINES	(GW)	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			(GP)	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES APPRECIABLE AMOUNT OF FINES	(GM)	SILTY GRAVELS and GRAVEL-SAND-SILT MIXTURES
			(GC)	CLAYEY GRAVELS and GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING #4 SIEVE	CLEAN SAND LITTLE OR NO FINES	(SW)	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			(SP)	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES APPRECIABLE AMOUNT OF FINES	(SM)	SILTY SANDS and SAND-SILT MIXTURES
			(SC)	CLAYEY SANDS and SAND-CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		(ML)	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR VERY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			(CL)	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			(OL)	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		(MH)	INORGANIC ELASTIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS
			(CH)	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			(OH)	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			(PT)	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

WILLMER ENGINEERING INC. | WE

ENGINEERING DESCRIPTION OF ROCK HARDNESS

Hardness	Description
Very hard	Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
Moderately hard	Can be scratched with knife or pick. can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.
Medium	Can be grooved or gouged 1/16 inch deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1 inch maximum size by hard blows of the point of a geologist's pick.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
Very soft	Can be carved with knife. Can be excavated readily with point of pick. Pieces 1 inch or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.
Partially Weathered Rock	For engineering purposes, partially weathered rock (PWR) is locally defined as residual soils exhibiting Standard Penetration Test N-values in excess of 50 blows for 6 inches of penetration.

WILLMER ENGINEERING INC. WE

Project: I-575 over CR 646 (Hawkins Store Road)	**HOLE No. BB-1**
Location: Cobb County, Georgia	Sheet 1 of 1
Project Number: 171-3099E; GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256	Location: Bent - 1

Azimuth: -- Angle from Horizontal: 90 Surface Elevation (ft): 966.65 Station: ST. 277+75, CL

Drilling Equipment: CME 550 Drilling Method: HSA Auto Hammer

Core Boxes: -- Samples: 4 Overburden (ft): 12 Rock (ft): -- Total Depth (ft): 12.0

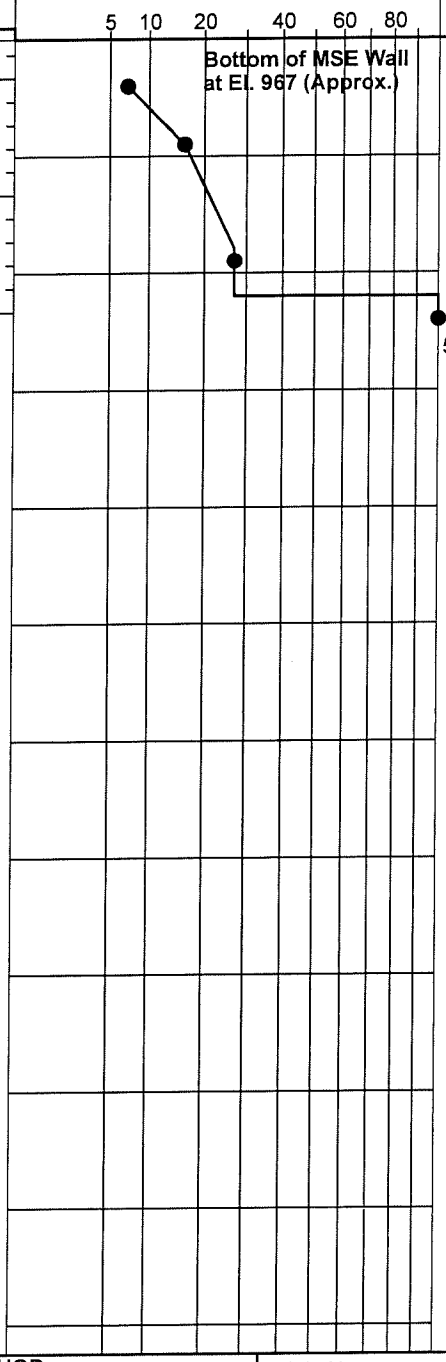
Logged By: MK Date Drilled: 10/4/07

VERTICAL DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE	REC%	RQD %	MATERIAL DESCRIPTION	ELEVATION (feet)	N-VALUE
					CONCRETE = 6 inches	966.7	
		SS			RESIDUUM: Loose and medium dense black, tan and brown silty medium to fine **SAND** (micaceous) SM	965	7
5		SS					16
						960	
10		SS					27
		SS			PARTIALLY WEATHERED ROCK: Sampled as very dense gray and tan silty medium to fine **SAND** (micaceous) PWR	955	50/0"

Auger refusal encountered at 12 feet below the existing ground surface

Groundwater was not encountered at the time of boring completion.

STANDARD PENETRATION TEST DATA (blows/foot)



SAMPLER TYPE		DRILLING METHOD		Hole No.
SS - Split Spoon	NX - Rock Core, 2-1/8"	HSA - Hollow Stem Auger	RW - Rotary Wash	BB-1
ST - Shelby Tube	CU - Cuttings	CFA - Continuous Flight Augers	RC - Rock Core	
NQ - Rock Core, 1-7/8"	CT - Continuous Tube	DC - Driving Casing		

WILLMER ENGINEERING INC. WE

Project: **I-575 over CR 646 (Hawkins Store Road)**	**HOLE No. BB-2**
Location: **Cobb County, Georgia**	Sheet 1 of 1
Project Number: **171-3099E; GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256**	Location: **Bent - 2**

Azimuth: -- Angle from Horizontal: **90** Surface Elevation (ft): **966.03** Station: **ST. 278+45, CL**

Drilling Equipment: **CME 550** Drilling Method: **HSA Auto Hammer**

Core Boxes: **1** Samples: **1** Overburden (ft): **4** Rock (ft): **13** Total Depth (ft): **17.0**

Logged By: **MK** Date Drilled: **10/5/07**

VERTICAL DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE	REC%	RQD %	MATERIAL DESCRIPTION	ELEVATION (feet)	STANDARD PENETRATION TEST DATA (blows/foot)	N-VALUE
					CONCRETE = 6 inches	966.0		
		SS			RESIDUUM: Medium dense brown and tan silty medium to fine **SAND** with rock fragments **SM**	965		30
5		NQ	53	0	ROCK CORE: Moderately hard black, gray and white **BIOTITE GNEISS** with seams of soil	960	Bottom of MSE Wall at El. 967 (Approx.)	
10		NQ	50	22	Moderately hard black, gray and white **BIOTITE GNEISS** with seams of soil	955		
15		NQ	33	0	Soft black, gray and tan **BIOTITE GNEISS** with seams of soil	950		

Auger refusal encountered at 4 feet below the existing ground surface

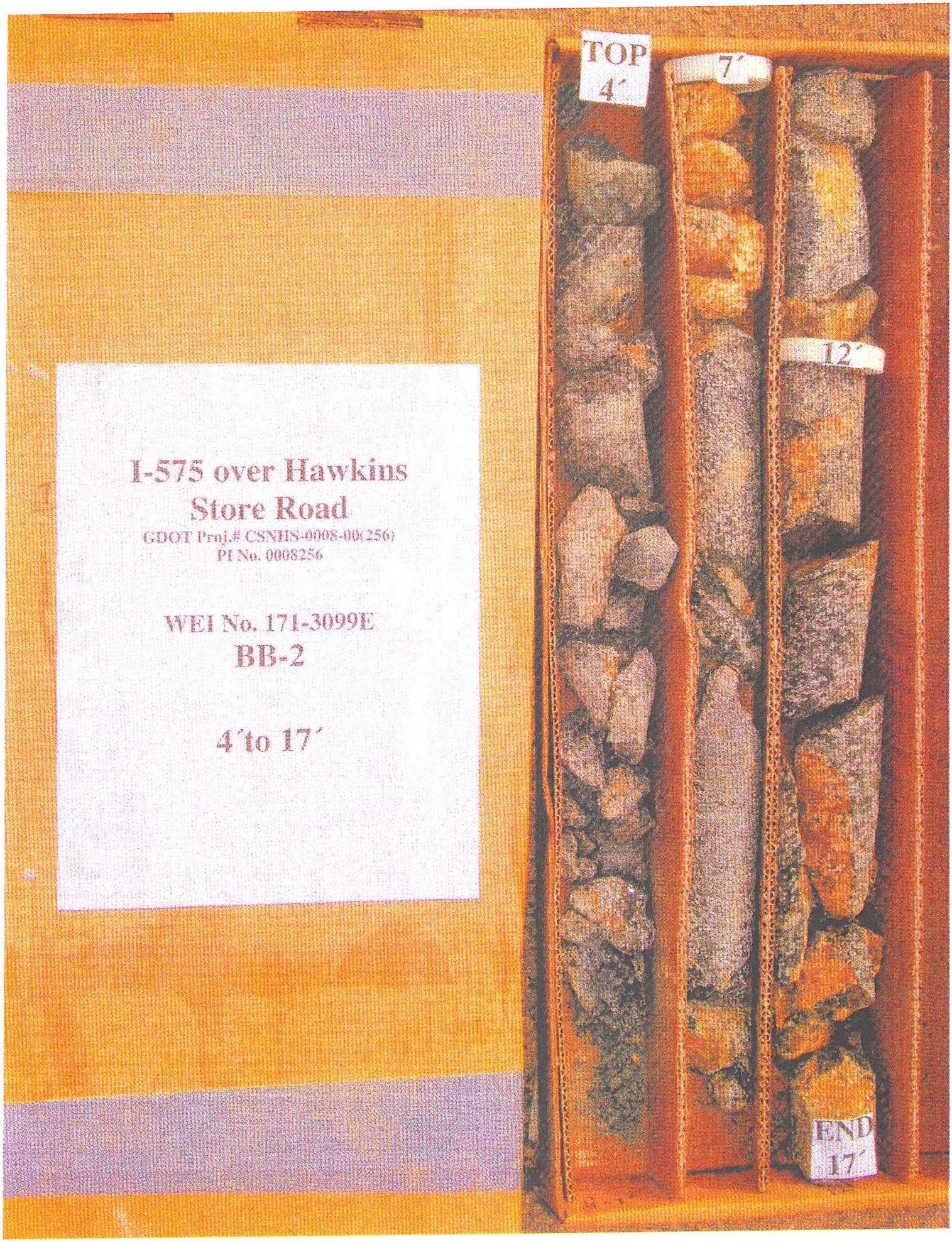
Coring was terminated at 17 feet below the existing ground surface

Groundwater was not encountered at the time of boring completion.

STANDARD PENETRATION TEST DATA (blows/foot): 5 10 20 40 60 80

SAMPLER TYPE		DRILLING METHOD		Hole No.
SS - Split Spoon	NX - Rock Core, 2-1/8"	HSA - Hollow Stem Auger	RW - Rotary Wash	BB-2
ST - Shelby Tube	CU - Cuttings	CFA - Continuous Flight Augers	RC - Rock Core	
NQ - Rock Core, 1-7/8"	CT - Continuous Tube	DC - Driving Casing		

SPTN 171-3099E.GPJ 12/27/07


I-575 over Hawkins
Store Road
GDOT Proj.# CSNHS-0008-00(256)
PI No. 0008256
WEI No. 171-3099E
BB-2
4´to 17´
TOP
4´
7´
12´
END
17´

WILLMER ENGINEERING INC. WE

Project: I-575 over CR 646 (Hawkins Store Road)	**HOLE No. W-1**
Location: Cobb County, Georgia	Sheet 1 of 1
Project Number: 171-3099E; GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256	Location: Wall No. 8

Azimuth: -- Angle from Horizontal: 90 Surface Elevation (ft): 993.27 Station: ST. 276+65, 85' Lt. of CL

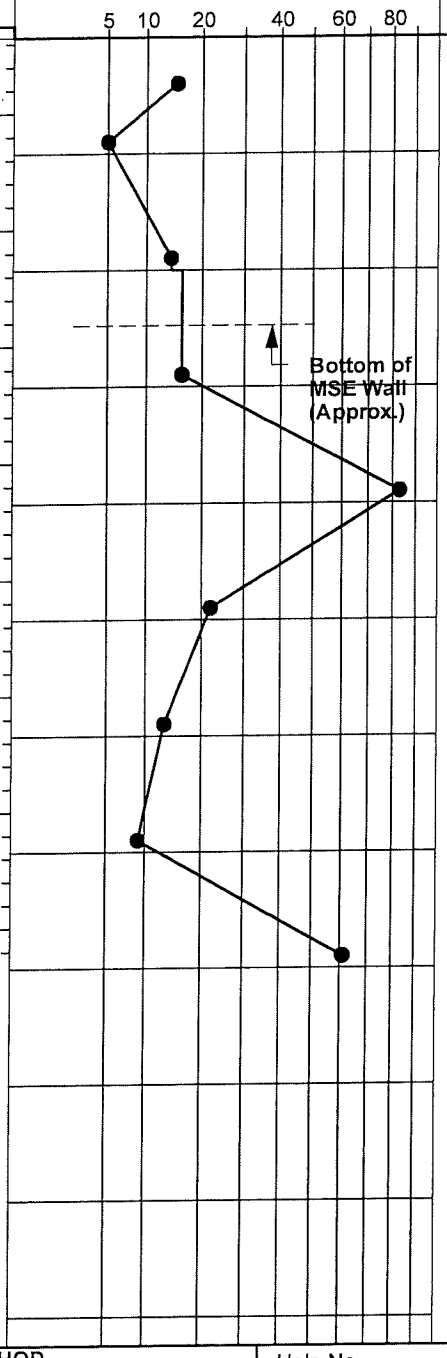
Drilling Equipment: CME 550 Drilling Method: HSA Auto Hammer

Core Boxes: -- Samples: 9 Overburden (ft): -- Rock (ft): -- Total Depth (ft): 40.0

Logged By: MK Date Drilled: 10/16/07

VERTICAL DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE	REC%	RQD %	MATERIAL DESCRIPTION		ELEVATION (feet)
					TOPSOIL = 1 inch	FILL	993.3
		SS			FILL: Medium dense and loose red, brown and tan silty medium to fine **SAND** with rock fragments		
5		SS					990
							985
10		SS			Medium dense black and tan silty medium to fine **SAND** with organic odour, roots and rock fragments	FILL SM	
					RESIDUUM: Medium dense red and tan silty medium to fine **SAND**		980
15		SS					
					Very dense brown, black and tan silty medium to fine **SAND** with rock fragments	SM	975
20		SS					
					Very stiff and stiff reddish brown **SILT** with fine sand (slightly micaceous)	ML	970
25		SS					
30		SS					965
					Loose to very dense brown, white and tan silty medium to fine **SAND** with rock fragments	SM	960
35		SS					
40		SS					955
					Boring terminated at 40 feet below the existing ground surface		
					Groundwater was not encountered at the time of boring completion.		

STANDARD PENETRATION TEST DATA (blows/foot)



N-VALUE: 15, 5, 14, 16, 83, 22, 13, 9, 61

SAMPLER TYPE		DRILLING METHOD		Hole No.
SS - Split Spoon	NX - Rock Core, 2-1/8"	HSA - Hollow Stem Auger	RW - Rotary Wash	W-1
ST - Shelby Tube	CU - Cuttings	CFA - Continuous Flight Augers	RC - Rock Core	
NQ - Rock Core, 1-7/8"	CT - Continuous Tube	DC - Driving Casing		

WILLMER ENGINEERING INC. WE

Project: I-575 over CR 646 (Hawkins Store Road)
Location: Cobb County, Georgia
Project Number: 171-3099E; GDOT Proj. # : CSNHS-0008-00(256); PI # : 0008256

HOLE No. W-2

Sheet 1 of 1

Location: Wall No. 9

Azimuth: -- Angle from Horizontal: 90 Surface Elevation (ft): 996.05 Station: ST. 279+55, 85' Rt. of CL

Drilling Equipment: CME 550 Drilling Method: HSA Auto Hammer

Core Boxes: -- Samples: 5 Overburden (ft): -- Rock (ft): -- Total Depth (ft): 20.0

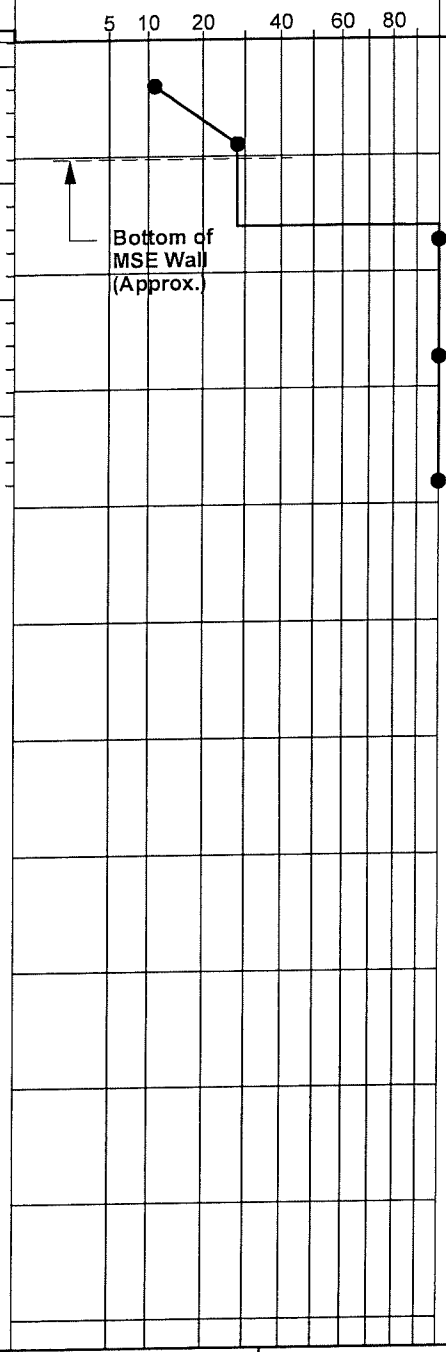
Logged By: MK Date Drilled: 10/16/07

VERTICAL DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE	REC%	RQD %	MATERIAL DESCRIPTION	ELEVATION (feet)
					TOPSOIL = 1 inch SM	996.1
		SS			RESIDUUM: Medium dense red, brown and tan silty medium to fine **SAND** with rock fragments (micaceous)	995
		SS				
5						990
		SS			PARTIALLY WEATHERED ROCK: Sampled as very dense brown and tan silty medium to fine **SAND** with rock fragments PWR	
10						985
		SS				
15						980
		SS				
20						

Boring terminated at 20 feet below the existing ground surface

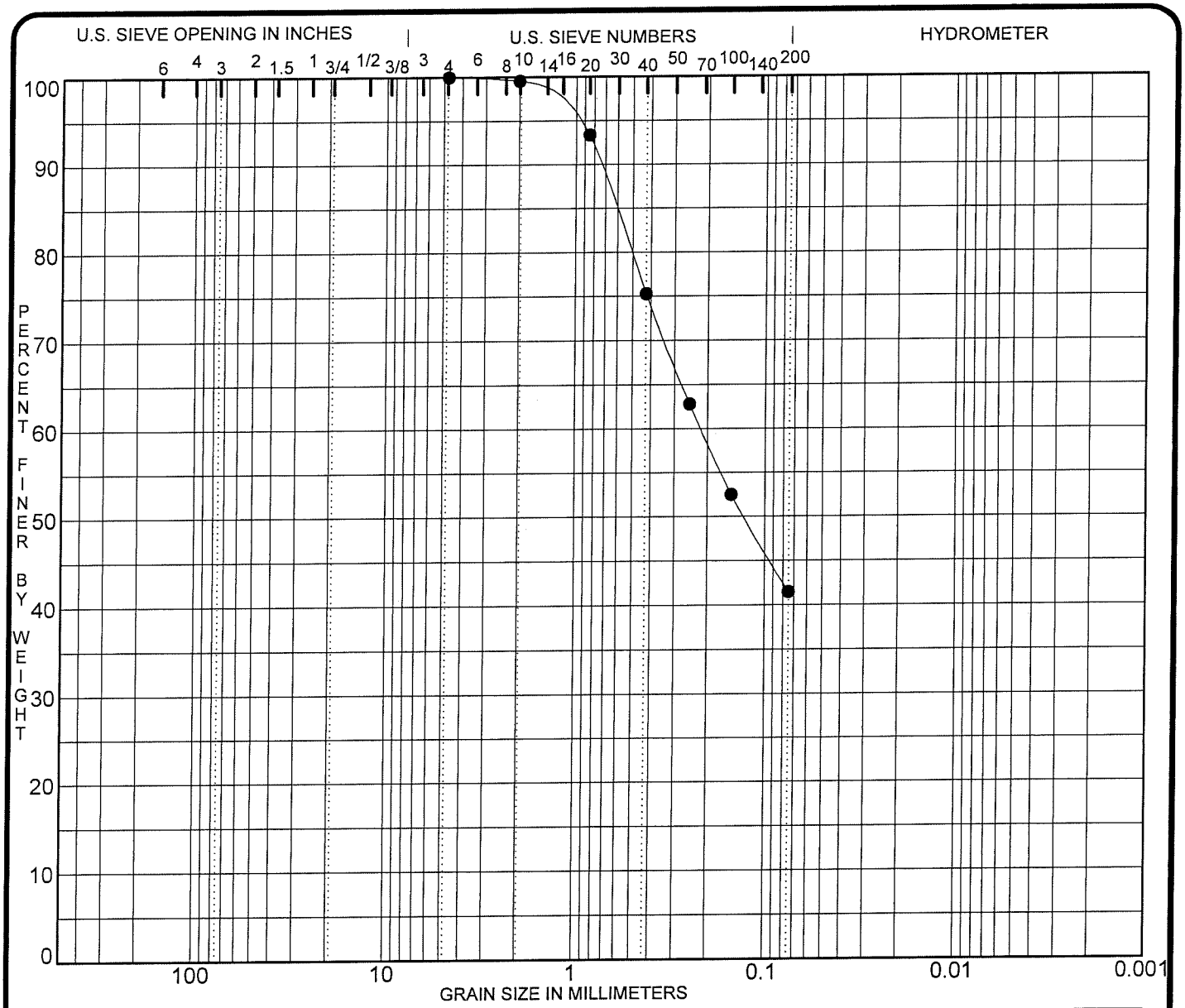
Groundwater was not encountered at the time of boring completion.

STANDARD PENETRATION TEST DATA (blows/foot)



SAMPLER TYPE		DRILLING METHOD		Hole No.
SS - Split Spoon	NX - Rock Core, 2-1/8"	HSA - Hollow Stem Auger	RW - Rotary Wash	W-2
ST - Shelby Tube	CU - Cuttings	CFA - Continuous Flight Augers	RC - Rock Core	
NQ - Rock Core, 1-7/8"	CT - Continuous Tube	DC - Driving Casing		

SPTN 171-3099E.GPJ 12/27/07



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification	Soil Description	MC%	LL	PL	PI	Cc	Cu
●	**BB-1 (1-2.5 ft)**	**Black, tan and brown silty medium to fine SAND (micaceous)**						

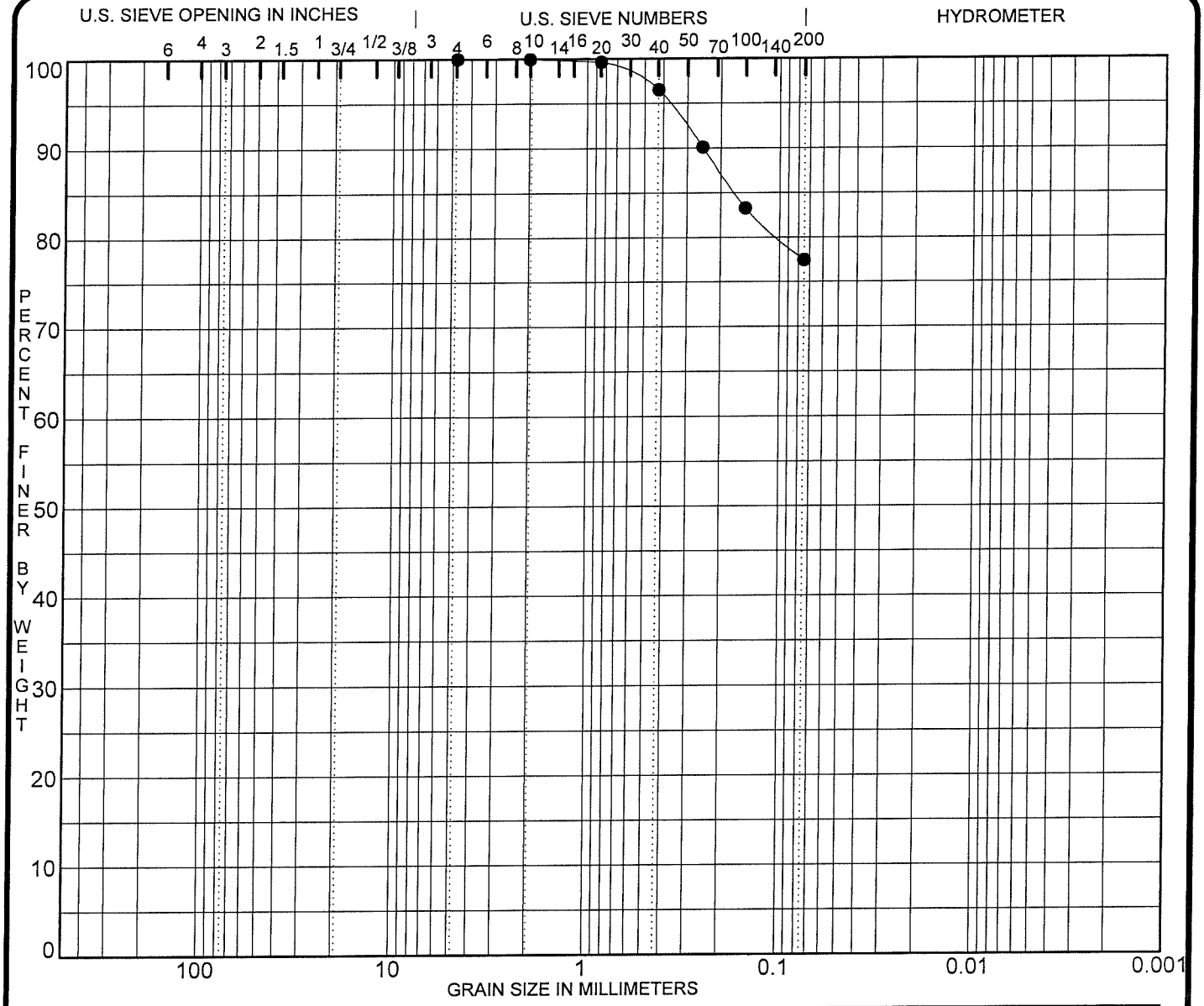
	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**BB-1 (1-2.5 ft)**	**4.75**	**0.22**			**0.0**	**58.5**	**41.5**	

PROJECT **I - 575 / CR 646 (Hawkins Store Rd.)-Cobb Co, GA**
GDOT Proj. #: CSNHS -0008-00(256); PI #:0008256

JOB NO. **171-3099 E**
DATE **12/27/07**

WILLMER ENGINEERING INC. WE

GRADATION CURVE



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification	Soil Description	MC%	LL	PL	PI	Cc	Cu
●	**W-1 (23.5-25 ft)**	**Reddish brown SILT with fine sand (slightly micaceous)**						

	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**W-1 (23.5-25 ft)**	**4.75**				**0.0**	**22.5**	**77.5**	

PROJECT **I - 575 / CR 646 (Hawkins Store Rd.)-Cobb Co, GA**
GDOT Proj. #: CSNHS -0008-00(256); PI #:0008256

JOB NO. **171-3099 E**
DATE **12/27/07**

WILLMER ENGINEERING INC. WE

GRADATION CURVE

APPENDIX II

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 7-7-76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-1

BENT NO. 1 FOOTING GROUND ELEV. 977.35

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	ϕ	BC	LL	PI	% 200	% CLAY
	Gr. El.													
	Dense Mltc. Micas Sandy Silt													
970		1s	30											
		2s	60=.9'											
GWT	Very Dense Same													
960		3s	60=.9'											
	Very Dense Mltc. Micas Silty Sand & Grl. (W.R.)	4s	60=.6'											
	Very Dense (W.R.)	5s	H.B.											
950	End Drilling													

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy.

No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and finds that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on the job.

490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 5 - 27 - 76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-2

BENT NO. 1 FOOTING GROUND ELEV. 974.95

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	ϕ	BC	LL	PI	% 200	% CLAY
	Gr. El.													
	Loose Red Micas Clayey Sandy Silt W/ Gvl.													
970	Medium Dense Mltc. Micas Sandy Silt W/ Gravel	1s	20											
	Dense Mltc. Micas Silty Sand W/ Gravel (W.R.)	2s	40											
WT 960														
	Very Dense Same	3s	60											
	Very Dense (Weathered Rock)	4s	H.B.											
950	Practical Refusal													

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DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 7-7-76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-3

BENT NO. 2 FOOTING 73' Lt ℄ GROUND ELEV. 971.45

PROPOSED FOOTING ELEV. 985.3 ± Pile Cut Off PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	Ø	BC	LL	PI	% 200	% CLAY
	Gr. El.													
970	Medium Dense Mltc. Micas Clayey Sandy Silt													
	Dense Mltc. Micas Sandy Silt	1s	45											
960 GWT	Very	2s	60											
		3s	60=5'											
	Dense	4s	60=7'											
950	Same													
940	End Drilling													

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy. No claim will be considered if the contractor [illegible] in his bidding on [illegible] and finds that [illegible] report is not considered a [illegible] and Specifications [illegible]

DOT .490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 7-7-76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-4

BENT NO. 2 FOOTING GROUND ELEV. 982.35

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	Ø	BC	LL	PI	% 200	% CLAY
	Gr. El.													
980	Dense Mitc. Micas													
	Sandy Silt W/Gravel	1s	44											
	Very Dense Same	2s	60=.7'											
	Very Dense (Weathered Rock)													
	Dense Mitc. Micas	3s	33											
970	Sandy Silt	4s	50											
GWT		5s	62											
960	Very Dense Same	6s	60=.10'											
	Very Dense (Weathered Rock)	7s	60=.5'											
	Practical Refusal													

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy.

No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and finds that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on the job.

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 5-27-76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-5

BENT NO. 1 FOOTING GROUND ELEV. 973.65

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	ϕ	BC	LL	PI	% 200	% CLAY
	Gr. El. 7													
	Medium Dense Mltc.													
970		1												
	Micas Clayey Sandy Silt W/ Gravel	2s	16											
		3u												
	Dense Mltc. Micas Silty Sand	4s	28											
960 WT	Medium Dense Same	5s	12											
	Medium Dense Mltc. Micas Sandy Silt	6s	17											
950	Very Loose Same	7s	3											
	Very Dense (W.R.)													
	Practical Refusal													

The Department of Transportation in making this [illegible] to contractors assumes [illegible] for its accuracy. No claim will be considered if the contractor or [illegible] in his bidding on [illegible] conditions and finds that [illegible] the investigation report is not considered as a part of the Plans and Specs [illegible] the job.

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 5-27-76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-6

BENT NO. II FOOTING GROUND ELEV. 973.25

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	ϕ	BC	LL	PI	% 200	% CLAY
	Gr. El.													
970	Medium Dense Red Micas Clayey Silty Sand	1s	11											
	Loose Mltc. Micas Sandy Silt	2s	6											
960 GWT	Very Loose Same	3s	4											
	Medium Dense Mltc. Micas Sandy Silt	4s	14											
950	Very Dense Same	5s	60=.5'											
	Very Dense (Weathered Rock)													
	Dense Mltc. Micas	6s	31											
940	Sandy Silt	7s	35											
	V.Dse.Mltc.Micas Sdy.Slt. Very Dense (W.R.)	8s	60=.2'											
930	Practical Refusal													

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy. No claim will be considered if the contractor or relies on this information in his bidding or in his construction operations and finds that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on the job.

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 5-26-76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-7

BENT NO. 2 FOOTING GROUND ELEV. 988.65

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	ϕ	BC	LL	PI	% 200	% CLAY
	Gr. El.													
	Medium Dense Mltc. Micas Sandy Silt	1s	11											
		2s	30											
980	Dense Same	3s	49											
		4s	49											
GWT		5s	60=.9'											
	Very Dense	6s	58											
970	Mltc. Micas	7s	60=.9'											
	Sandy Silt	8s	60=.3'											
	Very Dense (Weathered Rock)													
960	Practica Refusal													

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy.

No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and it is inaccurate.

This foundation [illegible]

DOT '490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND TEST, FOREST PARK, GEORGIA
SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

PROJECT CSNHS-0008-00(256) PI No. 0008256 COUNTY Cobb DATE 5 - 26 - 76

LOCATION I-575 over CR 646 (Hawkins Store Road) BORING NO. B-8

BENT NO. 2 FOOTING GROUND ELEV. 990.65

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG	SAMPLE	BLOW	UNIFIED	W	γ	Gs	C.	ϕ	BC	LL	PI	% 200	% CLAY
	Gr. El.													
990	Loose Mltc. Micas Sandy Silt W/Gravel													
	Very Dense Mltc. Micas Sandy Silt W/Gvl.	1s	60=.5'											
	Very Dense (Weathered Rock)													
980	Very Dense Mltc.	2s	60=.5'											
	Micas Sandy Silt W/ Gravel	3s	60=.10'											
	Dense Same	4s	30											
		5s	60=.6'											
970	Very Dense	6s	60=.9'											
GWT														
	Mltc. Micas Sandy	7s	60=.9'											
960		8s	60=.8'											
	Silt W/ Gravel													
		9s	60=.9'											
	End Drilling													

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy. No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and finds that it is inaccurate. This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on the job.