Looking downstream from the downstream bridge on George Busbee Parkway.

Looking north along the upstream side of the downstream bridge.

Looking south along George Busbee Parkway (downstream bridge).

FEMA DATA

TABLE 2 - SUMMARY OF DISCHARGES (continued)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance Existing	1-Percent-Annual-Chance Future	0.2-Percent-Annual-Chance
MUD CREEK (continued)						
At Villa Rica Road	6.80	2,728	4,177	4,628	5,154	5,960
At West Sandtown Road Southwest	5.30	1,869	3,101	3,485	3,815	4,327
At Old Dallas Road Southwest	4.40	1,869	3,101	3,485	3,815	4,327
At Burnt Hickory Road Southwest	1.50	908	1,402	1,608	1,828	2,049
NICKAJACK CREEK						
At confluence with Chattahoochee River	35.9	10,520	17,320	20,640	21,650	28,910
Approximately 190 feet upstream of Old Cooper Lake Road Southeast	20.78	8,160	13,690	16,298	16,970	23,060
Approximately 220 feet upstream of Concord Road	14.56	6,370	10,100	11,840	12,250	16,400
Approximately 1,330 feet upstream of Hurt Road Southeast	8.44	5,160	7,810	8,880	9,020	11,720
Approximately 250 feet upstream of Church Road Southeast	5.99	4,770	6,970	7,830	7,950	10,250
Approximately 550 feet upstream of Smyrna Powder Springs Road Southeast	2.68	2,520	3,940	4,580	4,700	6,170
Approximately 220 feet upstream of South Cobb Drive Southeast/State Highway 280	0.62	440	650	740	740	970
NOONDAY CREEK						
At Shallowford Road Northeast (Downstream)	34.40	9,842	14,758	16,834	16,834	21406
At Hawkins Store Road Northeast (Upstream)	25.20	8,668	12,720	14,423	14,423	17,723
At New Chastain Road Northeast	22.40	8,843	12,834	14,652	14,652	17,605
At Bells Ferry Road Northeast	17.60	6,430	9,681	11,110	11,110	12,936
At Barrett Lakes Boulevard Northwest	10.80	5,365	7,471	8,534	8,534	10,964
At Duncan Road	7.80	3,507	4,917	5,480	5,480	6,451
At Roberts Boulevard Northwest	5.80	2,804	4,290	4,732	4,732	5,823

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Noonday Creek								
A	3,153	330	2,919	5.8	897.8	897.8	898.6	0.8
B	4,577	225	3,026	5.6	901.6	901.6	901.9	0.3
C	4,754	140	1,950	8.6	902.0	902.0	902.3	0.3
D	4,959	287	4,129	4.2	904.2	904.2	904.4	0.2
E	5,487	610	8,290	2.1	905.0	905.0	905.2	0.2
F	5,940	736	9,115	1.9	905.1	905.1	905.4	0.3
G	7,286	460	5,008	3.5	905.3	905.3	905.8	0.5
H	8,446	290	3,171	5.5	906.1	906.1	906.9	0.8
I	9,298	187	2,565	5.6	911.1	911.1	911.3	0.2
J	10,401	285	4,318	3.3	912.9	912.9	913.1	0.2
K	11,700	297	4,642	3.1	914.2	914.2	914.5	0.3
L	13,462	520	8,347	1.7	914.7	914.7	915.2	0.5
M	14,756	680	8,455	1.7	914.9	914.9	915.5	0.6
N	16,295	750	10,243	1.4	915.1	915.1	916.0	0.9
O	17,748	550	5,140	2.9	918.2	918.2	918.7	0.5
P	18,652	390	3,760	3.9	919.0	919.0	920.0	1.0
Q	20,341	400	3,886	3.8	922.1	922.1	922.9	0.8
R	22,221	800	7,381	1.5	924.3	924.3	925.2	0.9
S	23,477	200	2,520	4.7	927.6	927.6	928.1	0.5
T	24,584	260	3,414	3.5	929.1	929.1	929.6	0.5
U	24,943	430	4,820	2.5	929.7	929.7	930.3	0.6
V	26,158	345	3,525	3.4	930.7	930.7	931.2	0.5
W	27,925	116	1,206	9.9	933.4	933.4	934.3	0.9
X	28,276	175	1,446	8.2	934.9	934.9	935.3	0.4
Y	29,655	500	5,332	2.2	940.9	940.9	941.1	0.2
Z	31,354	100	1,323	9.0	942.1	942.1	943.1	1.0

[1]1,965 feet below county boundary

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

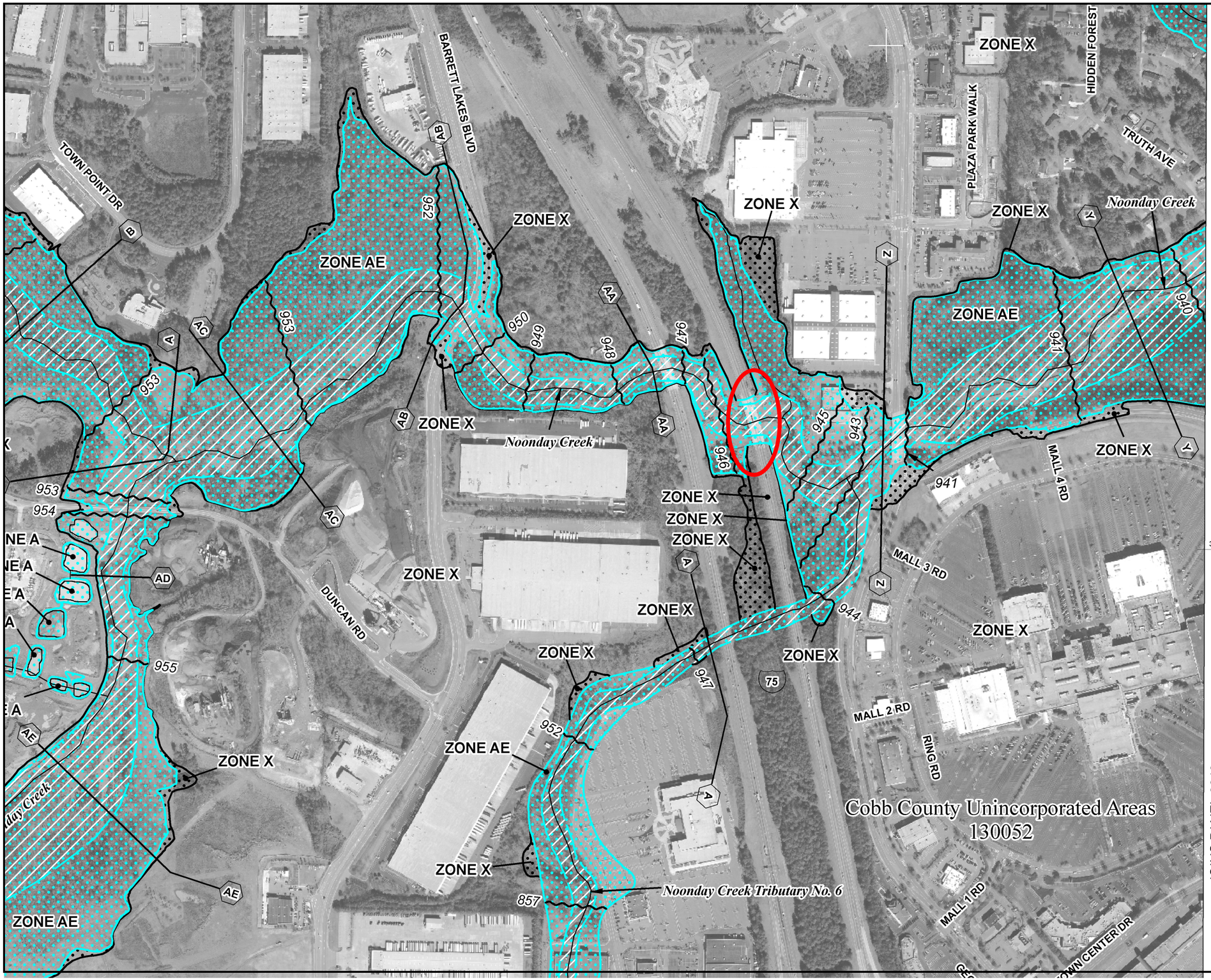
COBB COUNTY, GA AND INCORPORATED AREAS

FLOODWAY DATA

NOONDAY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Noonday Creek (continued)								
AA	33,046	120	1,562	4.7	947.9	947.9	948.2	0.3
AB	34,320	223	2,873	3.0	952.3	952.3	952.6	0.3
AC	35,731	390	4,580	1.9	953.1	953.1	953.6	0.5
AD	37,049	135	1,504	3.7	954.3	954.3	955.1	0.8
AE	38,163	470	5,097	1.1	955.8	955.8	956.6	0.8
AF	39,458	100	782	7.0	955.8	955.8	956.8	1.0
AG	41,077	130	1,918	2.9	959.9	959.9	960.5	0.6
AH	42,778	300	1,892	2.9	961.1	961.1	961.7	0.6
AI	44,309	150	832	5.2	963.5	963.5	964.3	0.8
AJ	45,690	121	878	3.2	969.9	969.9	969.9	0.0
AK	45,869	121	870	3.3	971.1	971.1	971.0	0.0
AL	46,822	130	813	3.8	973.3	973.3	974.1	0.8
AM	48,221	167	733	4.2	976.4	976.4	976.8	0.4
AN	49,848	220	1,407	1.7	982.5	982.5	982.7	0.2
AO	51,158	116	486	5.0	984.4	984.4	985.1	0.7
AP	52,150	150	458	5.3	989.1	989.1	989.4	0.3
AQ	53,909	60	261	2.9	994.9	994.9	995.5	0.6
AR	54,470	67	1,195	0.6	1,014.6	1,014.6	1,014.6	0.0
AS	55,789	220	2,507	1.0	1,014.7	1,014.7	1,014.7	0.0
AT	57,643	150	962	2.6	1,018.7	1,018.7	1,019.2	0.5
AU	58,694	100	497	5.0	1,025.0	1,025.0	1,025.2	0.2

[1]1,965 feet below county boundary



ional Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

50 0 500 1000 FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0039G

FIRM

FLOOD INSURANCE RATE MAP

COBB COUNTY, GEORGIA
AND INCORPORATED AREAS

PANEL 39 OF 252

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COBB COUNTY	130052	0039	G
KENNESAW, CITY OF	130055	0039	G

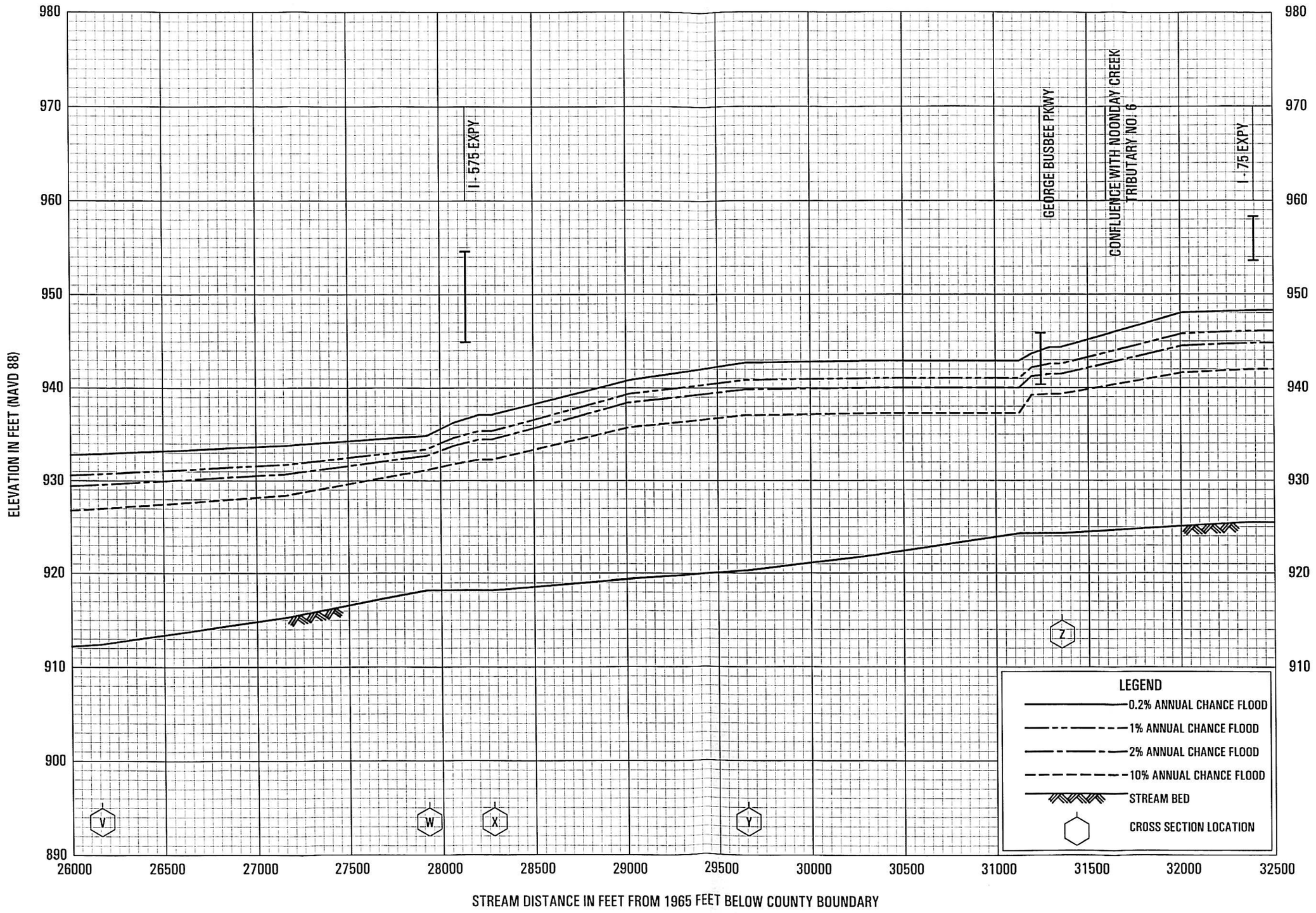
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
13067C0039G

MAP REVISED
DECEMBER 16, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



FLOOD PROFILES

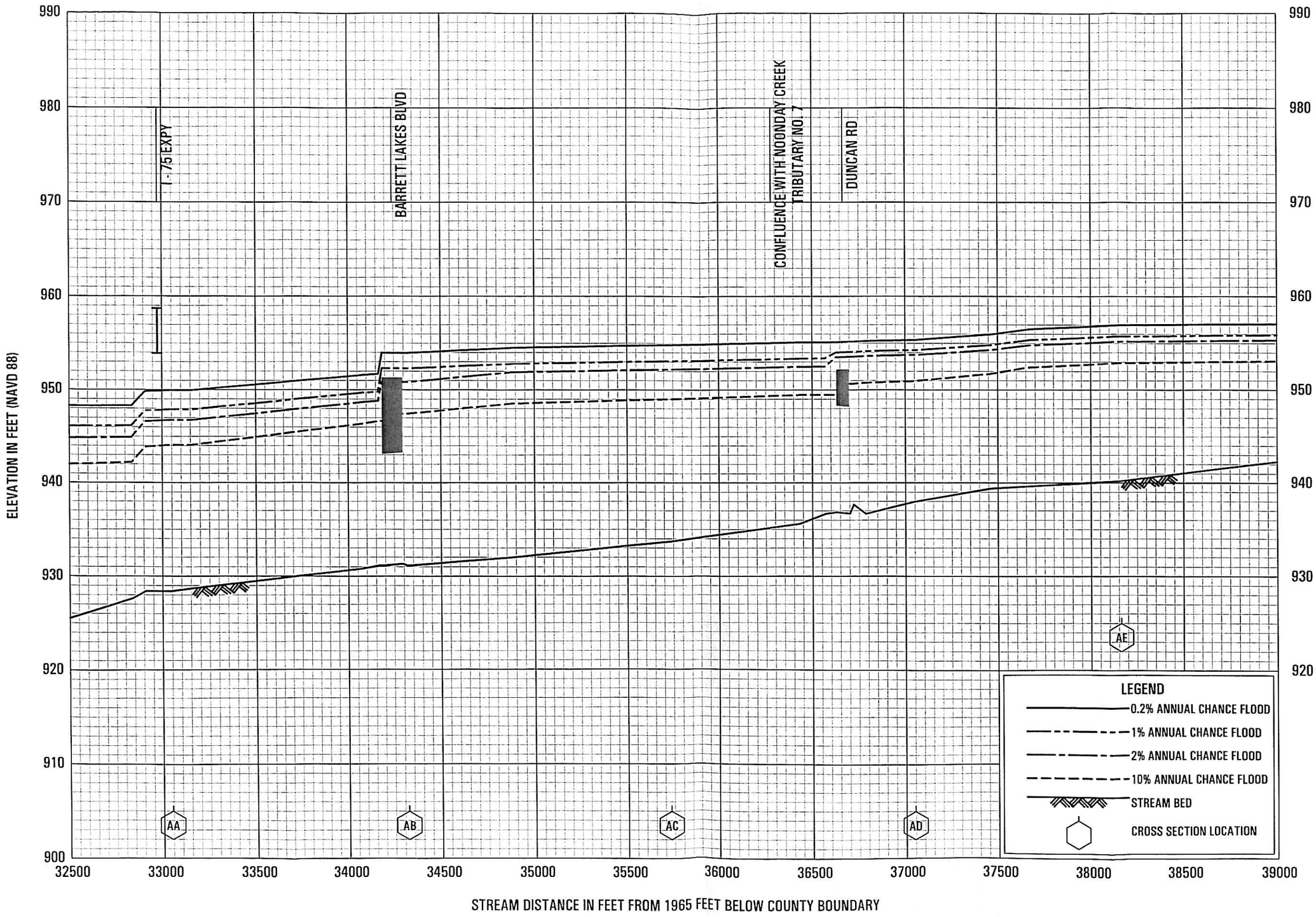
NOONDAY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

COBB COUNTY, GA

AND INCORPORATED AREAS

105P



FLOOD PROFILES

NOONDAY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

COBB COUNTY, GA

AND INCORPORATED AREAS

MISCELLANEOUS PROJECT DATA

John McWhorter

From: Crampton, Sam [scrampton@Dewberry.com]
Sent: Tuesday, April 29, 2008 6:09 PM
To: John McWhorter
Subject: RE: Cobb and Cherokee FEMA models

Thanks for the surveys. I will keep them handy for any updates we do. I will take a look at the USGS comments. The problem we find with the regression flows is that they are out of date and do not do well for urbanized area or for future flows. I certainly would not rule out the models over estimating. Unfortunately there has not been the funding for us to revise the hydrology completely on any studies except Pitner Creek and so they are all old HEC1 models that have simply had the curve numbers updated.

The next few weeks is really busy but after that we could meet for lunch.

Sam Crampton
Water Resources Engineer
Dewberry
2872 Woodcock Blvd, Suite 230
Atlanta, Ga 30341
678-530-0022 x203
678-530-0044 (fax)

From: John McWhorter [mailto:jmcwhorter@JBTrimble.com]
Sent: Tuesday, April 29, 2008 2:45 PM
To: Crampton, Sam
Cc: Robbie Frizzell; Beck, Susan
Subject: RE: Cobb and Cherokee FEMA models

Sam,

Here are the recent bridge surveys for the I-575 over Noonday Creek crossings. Hopefully this will be of use to you.

I noticed that there is a large difference between the FEMA discharges and the USGS regression flows. Since we will model the proposed construction with the FEMA model and our own HEC-RAS model using the project survey and our calculated discharges, I'm in the process of trying to resolve this difference. I presented this info to the USGS and asked for guidance. I've attached that email exchange here with hopes that you would read this over and comment as well.

Our May calendar is pretty full but Robbie and I want to take you to lunch soon to talk about projects and to say thanks for all your help over the past year or so.

Thanks again for you help!

John

From: Crampton, Sam [mailto:scrampton@Dewberry.com]
Sent: Friday, April 18, 2008 8:41 AM
To: John McWhorter
Subject: RE: Cobb and Cherokee FEMA models

I hope you got some sleep, I see the email was sent at 2:52AM!

I have the new model for Noonday which will become effective Dec26 08. We have a project in the vicinity of I-575 and 75 on Noonday Creek and will likely be making a FEMA submnittal. I know that the bridge survey in that area is very old and poor quality and really does need to be updated. If you have existing conditions survey for any of them structures around there, please could you provide us with them to update the model.

DEC08 Hydrology HEC1 model that will become effective for Noonday Creek in DEC 08
DEC08 Model RAS model for Noonday creek that will become effective in DEC08
Effective 92 Models These should be the Noonday and Tate models that went effective in 92. Check carefully to ensure that they are the models if you need to use them.
Incomplete Tate Revisions This model is one that we tried to use (performed by another consultant) but we found problems with

it and had to stick with the effective data for Tate Creek. We made some changes to this but gave up half way through because it would have cost too much to redo the model (I think it was mainly hydrology issues). There may be things you could use from this.

The zip with these files in can be downloaded from our ftp.
ftp.dewberry.com
Login: CobbGA
Pswd: S4RRWQ

Sam Crampton
Water Resources Engineer
Dewberry
2872 Woodcock Blvd, Suite 230
Atlanta, Ga 30341
678-530-0022 x203
678-530-0044 (fax)

From: John McWhorter [mailto:jmcwhorter@JBTrimble.com]
Sent: Friday, April 18, 2008 2:52 AM
To: Crampton, Sam
Cc: Robbie Frizzell
Subject: Cobb and Cherokee FEMA models

Sam,

Once again, I'm coming to you for some FEMA models. We are working on costing plans for a major construction project along I-575 in Cobb and Cherokee Counties. The floodways encountered along this corridor are Noonday Creek, Tate Creek and Little River. I've requested the data through Michael Baker also, but the Cobb County data has an effective date of August 18, 1992. I know there is a preliminary revised DFIRM for Cobb County. We want to get the latest data, especially if the revised effective data is imminent.

Any information you can provide along these streams in Cobb and Cherokee Counties will be much appreciated.

Thanks,

John McWhorter, P.E.
J.B. Trimble, Inc.
770-200-1713 direct
770-952-1022 office
770-952-1041 fax
jmcwhorter@jbtrimble.com

John McWhorter

From: Anthony J Gotvald [agotvald@usgs.gov]
Sent: Monday, April 28, 2008 9:57 AM
To: John McWhorter
Cc: Garrick L. Edwards; Larry Cook; Robbie Frizzell; Curtis, Steven; Beck, Susan
Subject: RE: Noonday Creek Discharges - I-575

John,

Do you know of any websites that explain the FEMA modeling in general. I am not very familiar with the FEMA modeling and would like to learn more. I am more familiar with the HEC modeling, and I would not mind looking at the HEC-1 model if it is not too much trouble to put it on an ftp site. As a rule of thumb, the rural equations can be used for sites that have impervious area less than 10 percent. 10-15% is kind of a grey area, and anything above 15% is definitely affected by urbanization and the urban equations should be used. If there is anyway you can calculate the impervious area for these sites, then I strongly recommend doing so. With the information that is available, I would recommend using the urban equations for both the 12.8 and 43.2 sq. mi sites. The impervious area is more than likely greater than 10 % and is only going to increase, so the urban equations would be more applicable. Of course, the 43.2 sq miles is out of the range of the urban equations, but if the impervious area is above 10% then this site is beyond the limitations of the rural equations as well. We are actually in the process of putting together a proposal to update the urban equations. We plan to use a multi-state approach where we would pool together urban sites from VA, TN, NC, SC, GA, AL, and FL. This way the ranges in drainage areas would increase for the urban equations. We are finishing up a similar multi-state approach for the rural equations. The new rural equations will be out at the end of the calendar year. As for the 2005 peaks for both 02392975 and 02392950, keep in mind those peaks have an accuracy of +/- 5 percent. So this is the reason for the slight difference (-2 percent). These sites are very close together and there is no major inflows between them, so the values of the two peaks are almost the same value if you consider the 10 percent uncertainty range.

Tony Gotvald, Hydrologist
USGS Georgia Water Science Center
3039 Amwiler Road, Suite 130
Atlanta, GA 30360
(770) 903-9310

"John McWhorter" <jmcwhorter@JBTrimble.com>

04/26/2008 09:57 PM

To "Anthony J Gotvald" <agotvald@usgs.gov>
cc "Garrick L. Edwards" <gledwards@JBTrimble.com>, "Larry Cook" <lcook@JBTrimble.com>, "Robbie Frizzell" <rfrizzell@JBTrimble.com>, "Curtis, Steven" <sacurtis@bechtel.com>, "Beck, Susan" <sbeck@dot.ga.gov>
Subject RE: Noonday Creek Discharges - I-575

Thanks Tony. I agree that the FEMA flows seem high for the 12.8 square mile area. Since they are in the regulatory model, we are probably stuck with them for the FEMA modeling. However, for projects that are reviewed by GDOT, we develop a separate HEC-RAS model using the project survey and our calculated discharges.

Using an impervious area of 15% for the Southern Noonday Creek crossing (12.8 sq mi) the Q100 = 7012 cfs, which equates to about 60% of the FEMA flow. For the northern Noonday crossing (43.2 sq mi), the 15% impervious area generates a Q100 = 16232 cfs, which is much greater than the FEMA flow. As you know, this drainage area size is outside of the range of use for the urban equations. Although Tim Stamey once told me that the urban equations could be used outside of their recommended range (standard error just won't apply), they may be excessive in this case. The rural equations here produce a Q100 = 9108 cfs.

Based on a 15% impervious area at the Hawkins Store Road gage (02392950), the 2005 event (6470 cfs) produced a 10 year storm along Noonday Creek (10 yr @ 15% imp = 6674 cfs). An interesting point to note is that the downstream Shallowford Road gage (02392975, DA = 33.6 sq mi) recorded a lower discharge for the same flood event in 2005.

Would you agree that using 15% +/- impervious and the urban equations for the 12.8 square mile site and just the rural equations for the 43.2 square mile site is a reasonable approach to the discharges for these sites?

There is a HEC-1 model. I can provide this to you if you would like. It's probably too big for email (5 meg) so let me know and I'll post it to our ftp site.

I really appreciate your help with this. This is a hot project and determining reasonable discharges for these sites is critical. This is particularly the case with the northern Noonday crossing since that bridge will likely be jacked to address a clearance issue.

Thanks again,

John

From: Anthony J Gotvald [mailto:agotvald@usgs.gov]
Sent: Fri 4/25/2008 2:44 PM
To: John McWhorter
Cc: Garrick L. Edwards; Larry Cook; Robbie Frizzell; Curtis, Steven; Beck, Susan
Subject: Re: Noonday Creek Discharges - I-575

John,

The Q100 values of 11,917 and 12,874 cfs at the I-575 crossing seem high for a drainage area of only 12.8 square miles. Are the data used for these FEMA analyses available? It would be interesting to see the data that were used in the analysis. I am a little confused on the study dates you mentioned. Cherokee County had a study done in 1988 and then 2006, and Cobb County had a study done in 1992 and then in 2008. Is this correct? Do any of these recent studies include the large event that occurred in July of 2005? I would estimate that the % impervious area for the Noonday Creek watershed is somewhere between 5-15%. Between the rural and urban equations, the urban equations would serve as a better estimate of the Q100 for this site. However, these FEMA studies may have additional information that would lead to a better estimate of the Q100 for this site.

Tony Gotvald, Hydrologist
USGS Georgia Water Science Center
3039 Amwiler Road, Suite 130
Atlanta, GA 30360
(770) 903-9310

"John McWhorter"
<jmcwhorter@JBTrimble.com>

04/25/2008 11:38 AM

To <agotvald@usgs.gov>
cc "Robbie Frizzell" <rfrizzell@JBTrimble.com>, "Beck, Susan" <sbeck@dot.ga.gov>, "Garrick L. Edwards" <gledwards@JBTrimble.com>, "Larry Cook" <lcook@JBTrimble.com>, "Curtis, Steven" <sacurtis@bechtel.com>
Subject Noonday Creek Discharges - I-575

Tony,

We are working on plans to widen I-575 over two crossings of Noonday Creek, which flows from south to north in Cobb and Cherokee Counties. The southern crossing is in Cobb County and the northern crossing is in Cherokee county. Since Noonday Creek is a FEMA studied stream, I was comparing discharges between the regression equations and FEMA and due to the large differences, I would like to get your comments.

The Cherokee County FEMA study is dated September 29, 2006. It appears that the discharges used for Noonday Creek in this study remain unchanged from the original study done in 1988. There is a "preliminary" study for Cobb County that is slated for a December 2008 effective date. This study includes new hydrology for Noonday Creek and the discharges are ~2.5 times the rural regression equations. This area is certainly urbanized and the use of the urban regression equations is easily warranted. However, even an impervious area of 100% will not approach the FEMA flows. At the southern (Cobb County) crossing of I-575 over Noonday Creek, the drainage area is 12.8 square miles. The USGS rural Q100 = 4468 cfs and the Dec. '08 FEMA flow is 11917 cfs. With an impervious area of 100%, the USGS urban regression Q100 = 9681cfs. For reference, the previous 100 year FEMA flow from the 1992 study = 12874 cfs.

There are gages on Noonday Creek at Shallowford Road (02392975) and Hawkins Store Road (02392950), which are in the area at 33.6 and 24.3 square miles, respectively. However, these gages only have about seven years of record.

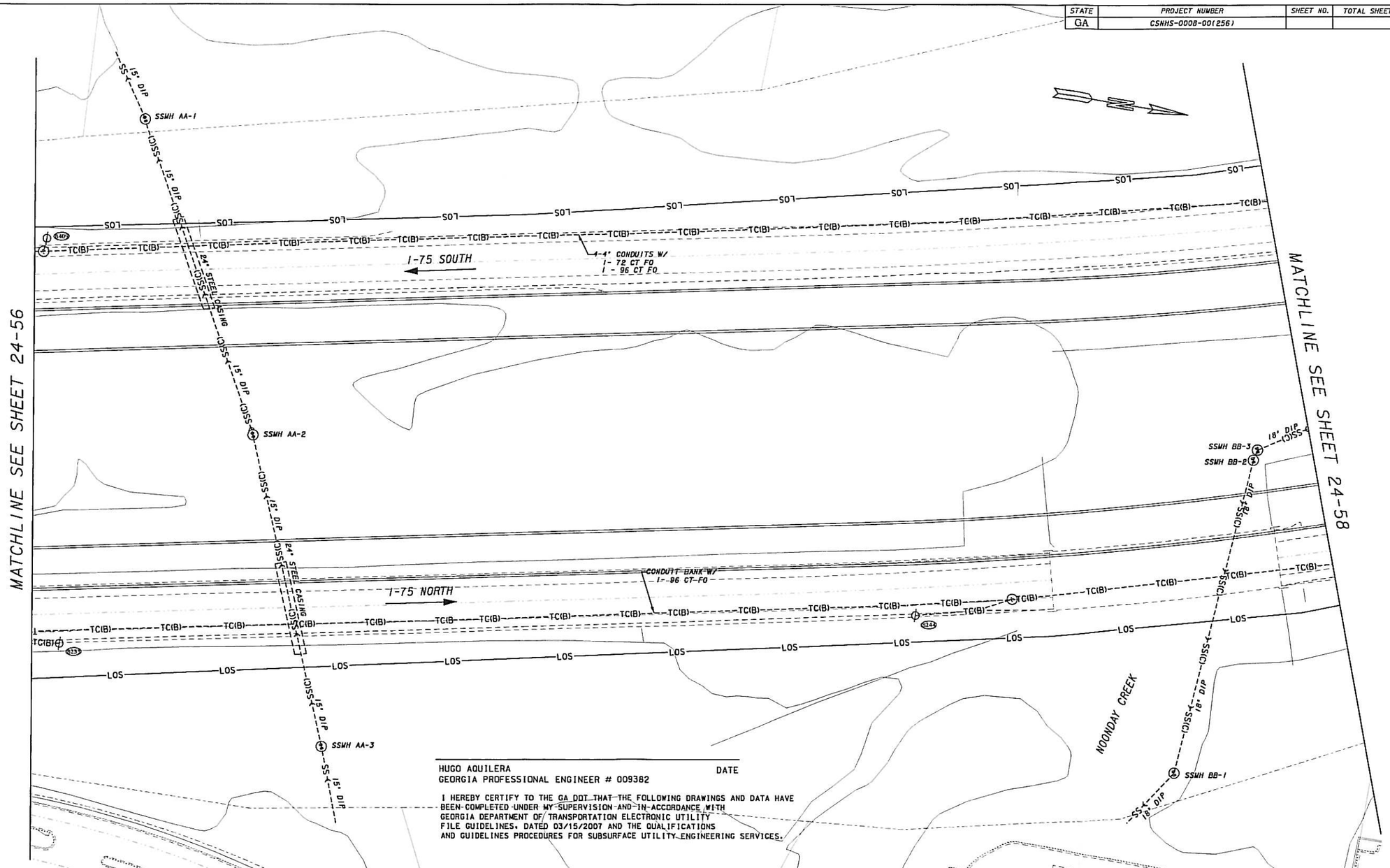
The northern I-575 crossing over Noonday Creek in Cherokee County has a drainage area of 43.2 square miles. The current 2006 Flood Insurance Study for Cherokee County has a 100 year discharge of 9372 cfs at the confluence with Little River (drainage area 49.3 square miles). The 100 year rural discharge is 9108 cfs at the bridge site (43.2 sq mi) and 9839 cfs at the confluence (49.2 sq mi). In this case, the discharges correlate fairly well between USGS and FEMA except that some urbanization should be considered.

As you can see, the downstream crossing has ~3.4 times the drainage area (43.2 vs. 12.8) and approximately 75% of the discharge based on the FEMA flows. There appears to be some storage available between the two I-575 crossings over Noonday Creek that could partially explain the reduction. If you would, please comment on this issue and provide your recommendations for the discharge calculations for both the north and south crossings of I-575 over Noonday Creek. I've attached an excerpt from the quad map for your use.

Thank you for your time.

John McWhorter, P.E.
J.B. Trimble, Inc.
770-200-1713 direct
770-952-1022 office
770-952-1041 fax
jmcwhorter@jbtrimble.com

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSNHS-0008-00(256)		



HUGO AQUILERA DATE
GEORGIA PROFESSIONAL ENGINEER # 009382

I HEREBY CERTIFY TO THE GA DOT THAT THE FOLLOWING DRAWINGS AND DATA HAVE BEEN COMPLETED UNDER MY SUPERVISION AND IN ACCORDANCE WITH GEORGIA DEPARTMENT OF TRANSPORTATION ELECTRONIC UTILITY FILE GUIDELINES, DATED 03/15/2007 AND THE QUALIFICATIONS AND GUIDELINES PROCEDURES FOR SUBSURFACE UTILITY ENGINEERING SERVICES.

REF.	
GA-75\SUE\14-13-09\0203550.APP.dgn	
GA-75\SUE\14-13-09\0203550.JUN.dgn	
GA-75\SUE\14-13-09\0203550.JUN2.dgn	
GA-75\SUE\14-13-09\0203550.JPG.dgn	
GA-75\SUE\14-13-09\0203550.JPG2.dgn	
GA-75\SUE\14-13-09\0203550.JPG3.dgn	
GA-75\SUE\14-13-09\0203550.JPG4.dgn	

9/24/2009 7:39:48 AM

GA-75\SUE\14-13-09\0203550.UT57.dgn

PHOENIX SOLUTIONS, INC.
LOGANVILLE, GEORGIA
(770)466-0466 FAX (770)466-0471

GTP Georgia Transportation Partners

SCALE IN FEET
0 50 100 200

NORTHWEST I-75/I-575 CORRIDOR

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PBSJ

REVISIONS
REV A 12/18/08
REV B 02/23/09
REV C 04/01/09

GEORGIA
DEPARTMENT OF TRANSPORTATION

UTILITY PLANS

PROJECT CSNHS-0008-00(256)
P. I. 0008256

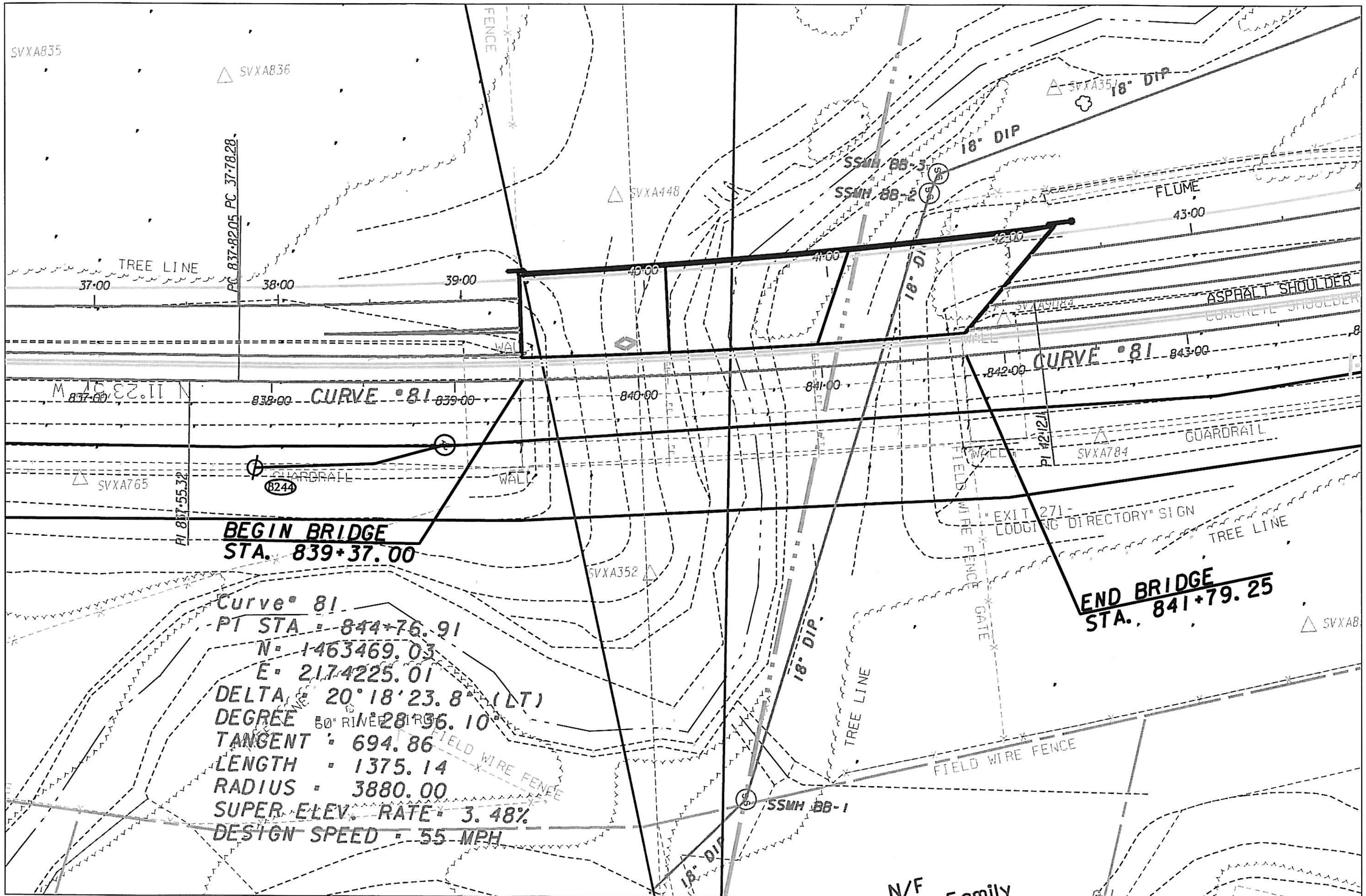
DRAWING No. 24-57

SANITARY SEWER DATA

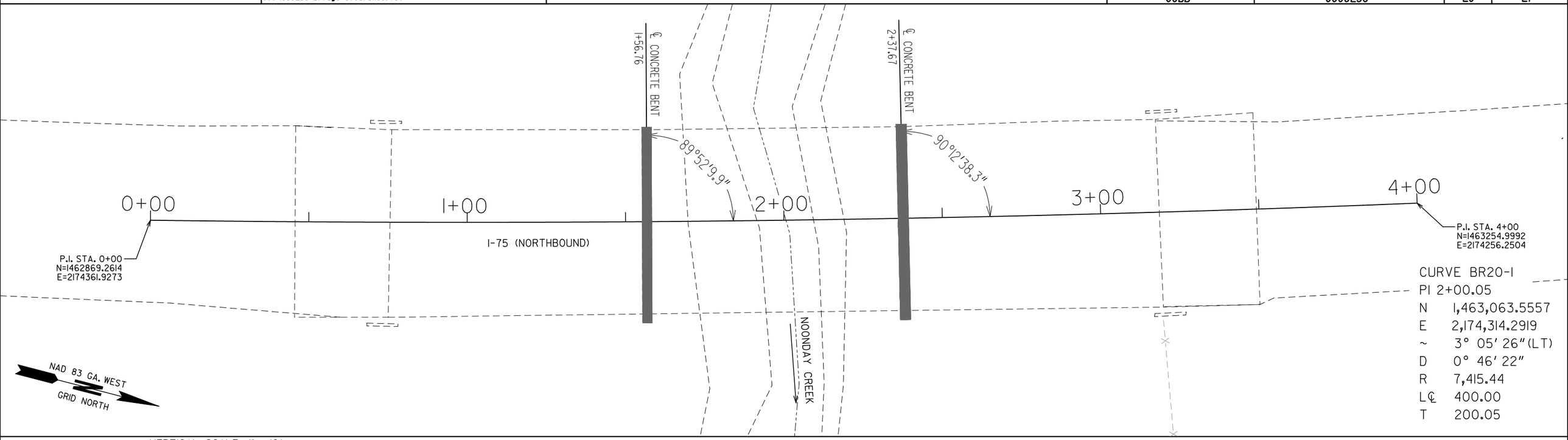
MANHOLE NUMBER	TOP ELEVATION	INVERT IN	INVERT OUT	MATERIAL	MISC.
Z-2	1018.84	981.53	981.35	15" DIP	TO SSMH Z-1
Z-1	983.61	973.81	973.67	15" DIP	TO SSMH OUTSIDE LOS
AA-3	941.20	929.60	929.48	15" DIP	TO SSMH AA-2
AA-2	943.48	928.98	928.80	15" DIP	TO SSMH AA-1
AA-1	943.14	926.64	926.46	15" DIP	TO SSMH OUTSIDE LOS
BB-6	952.56	945.96	945.77	18" DIP	TO SSMH BB-5
BB-5	950.02	944.22	944.09	18" DIP	TO SSMH BB-4
BB-4	948.93	943.33	943.21	18" DIP	TO SSMH BB-3
BB-3	938.93	933.33	933.19	18" DIP	TO SSMH BB-2
BB-2	938.79	932.09	931.94	18" DIP	TO SSMH BB-1
BB-1	940.56	930.76	930.58	18" DIP	TO SSMH OUTSIDE LOS
CC-5	1065.50	1055.57	1055.25	8" DIP	TO SSMH CC-4
CC-4	1063.98	1054.60	1054.38	8" DIP	TO SSMH CC-3
CC-3	1063.02	1053.87	1053.79	8" DIP	TO SSMH CC-2
CC-2	1061.86	1052.74	1052.36	8" DIP	TO SSMH CC-1
CC-1	1060.97	1051.22	1051.12	8" DIP	TO SSMH OUTSIDE LOS

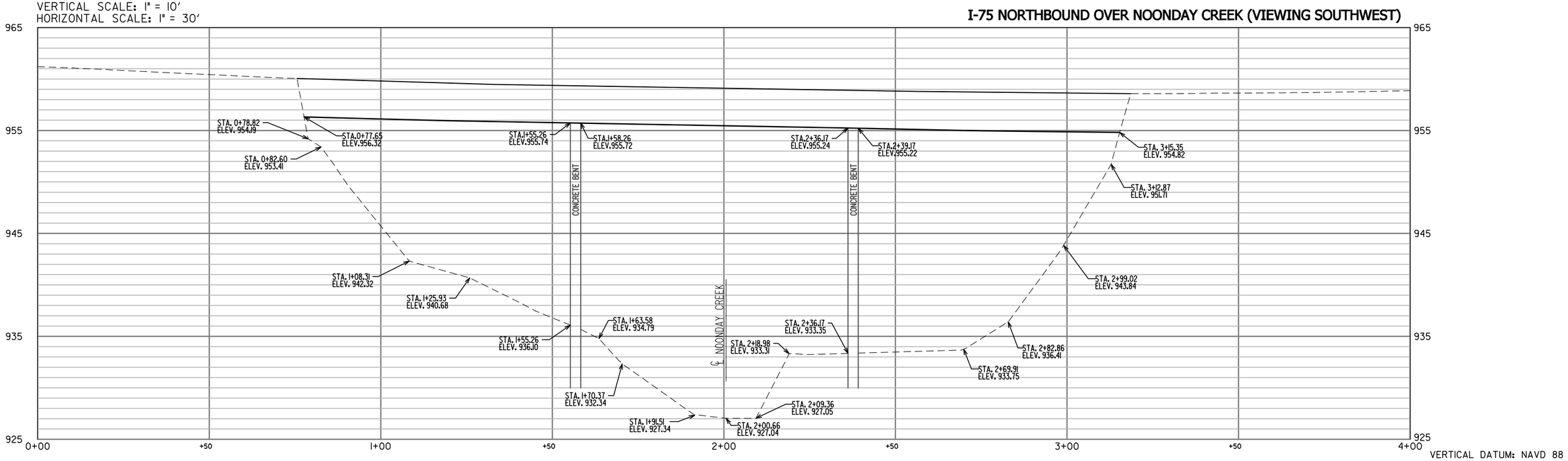
HUGO AQUILERA DATE
GEORGIA PROFESSIONAL ENGINEER # 009382

I HEREBY CERTIFY TO THE GA DOT THAT THE FOLLOWING DRAWINGS AND DATA HAVE BEEN COMPLETED UNDER MY SUPERVISION AND IN ACCORDANCE WITH GEORGIA DEPARTMENT OF TRANSPORTATION ELECTRONIC UTILITY FILE GUIDELINES, DATED 03/15/2007 AND THE QUALIFICATIONS AND GUIDELINES PROCEDURES FOR SUBSURFACE UTILITY ENGINEERING SERVICES.



...\Civil\Rdy\714130MAIN.dgn 9/23/2009 11:51:29 AM





NOTE: THIS PROFILE INDICATES ELEVATIONS ALONG THE CENTERLINE OF I-75 NORTHBOUND OVER NOONDAY CREEK.

P. I. NO.	LONG JOB NO.
0008256	0165-0020
DRAWN BY VCH	DATE 8/18/2008
CHECKED BY JGL	SCALE 1" = 30'

LONG ENGINEERING, INC.
1780 Corporate Drive
Suite 400
Norcross, Georgia 30093
Tel 770.931.8005
Fax 770.931.8555
www.longeng.com

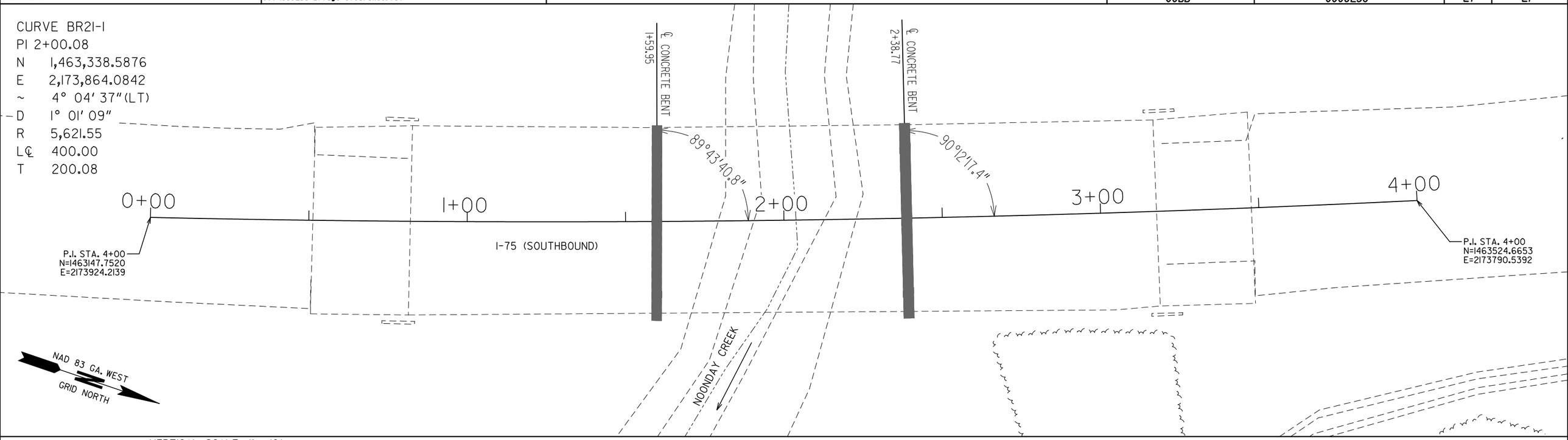
SCALE IN FEET
0 15 30 60

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

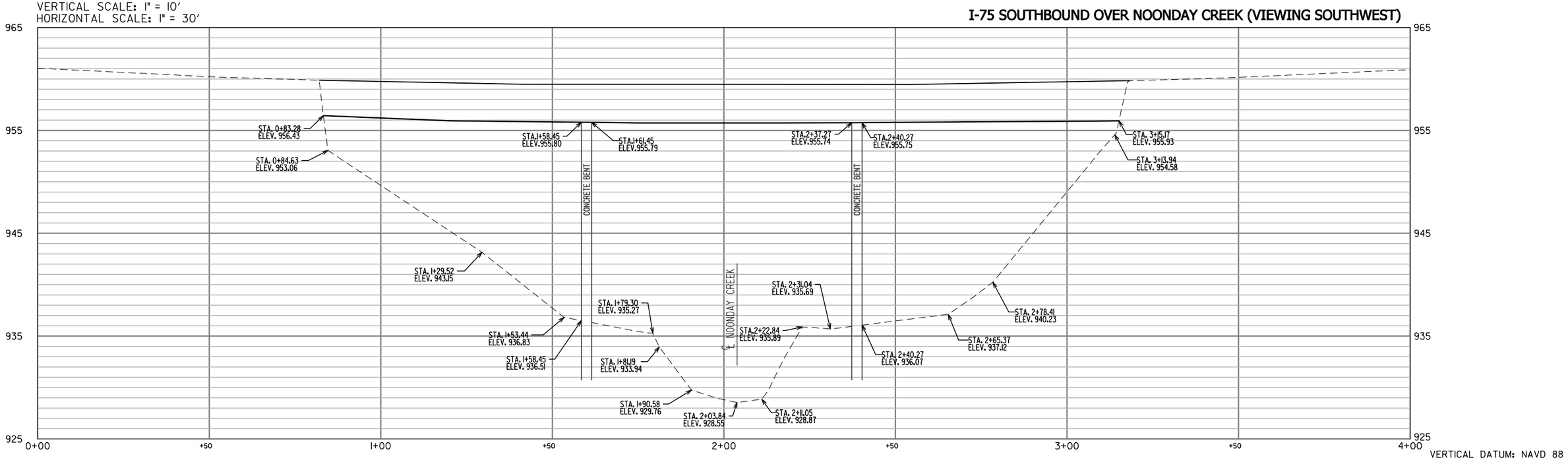
BRIDGE CLEARANCE
I-75 FROM CANTON ROAD
TO 2000' PAST WOODSTOCK ROAD
I-75(NB) OVER
NOONDAY CREEK

DRAWING No. 20



VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 30'

I-75 SOUTHBOUND OVER NOONDAY CREEK (VIEWING SOUTHWEST)



VERTICAL DATUM: NAVD 88

NOTE: THIS PROFILE INDICATES ELEVATIONS ALONG THE CENTERLINE OF I-75 SOUTHBOUND OVER NOONDAY CREEK.

P. I. NO.	LONG JOB NO.
0008256	0165-0020
DRAWN BY VCH	DATE 8/18/2008
CHECKED BY JGL	SCALE 1" = 30'

LONG ENGINEERING, INC.
1780 Corporate Drive
Suite 400
Norcross, Georgia 30093
Tel 770.931.8005
Fax 770.931.8555
www.longeng.com

SCALE IN FEET
0 15 30 60

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

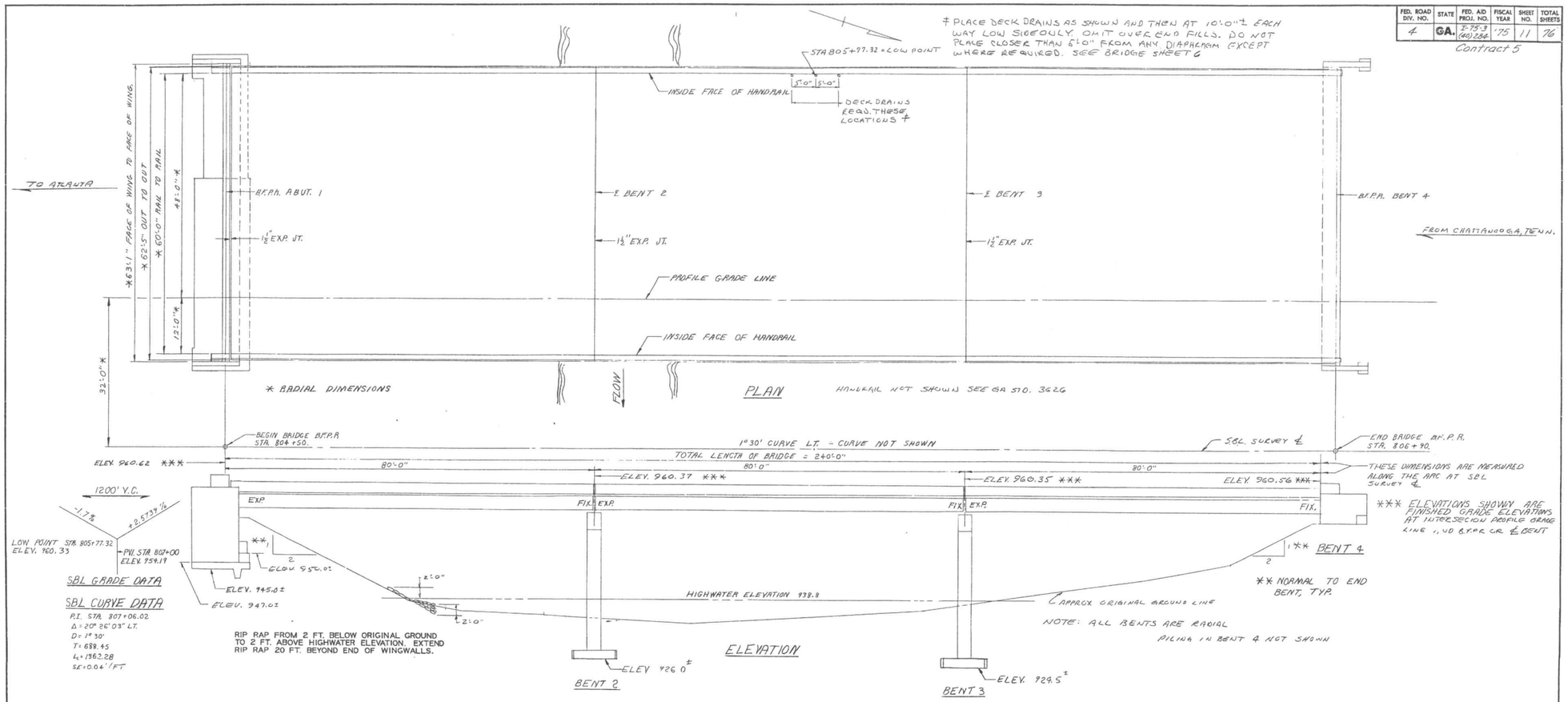
BRIDGE CLEARANCE

I-75 FROM CANTON ROAD
TO 2000' PAST WOODSTOCK ROAD
I-75(SB) OVER
NOONDAY CREEK

DRAWING No. 21

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	GA.	I-75-3 (40) 234	75	11	76

Contract 5



SBL GRADE DATA

SBL CURVE DATA

P.I. STA. 807+06.02
Δ = 20° 26' 03" LT.
D = 1° 30'
T = 688.45
L = 1362.28
SE = 0.04'/FT.

RIP RAP FROM 2 FT. BELOW ORIGINAL GROUND TO 2 FT. ABOVE HIGHWATER ELEVATION. EXTEND RIP RAP 20 FT. BEYOND END OF WINGWALLS.

SBL BRIDGE CONSISTS OF

3 - COMPOSITE ROLLED BEAM SIMPLE SPANS ---------- SPECIAL DESIGN
1 - CONCRETE ABUTMENT ---------- SPECIAL DESIGN
1 - STEEL H PILE END BENT ---------- SPECIAL DESIGN
2 - CONCRETE INTERMEDIATE BENTS ---------- SPECIAL DESIGN
ALUMINUM HANDRAILING ---------- GA. STD. NO. 3626 (8-29-74)
BAR BENDING DETAILS ---------- GA. STD. NO. 3901
TYPICAL FILL DETAIL AT END OF BRIDGE ---------- GA. STD. NO. 9037 (9-1-70)
END POST AND END POST GUARDRAIL ATTACHMENT DETAIL ------- GA. STD. NO. 9053
L = 4'-0", W = 1'-1", H = 3'-2¾"

DRAINAGE DATA

DRAINAGE AREA = 10.6 SQ. MI.
Q_{50} = 2300 cfs
AREA OF OPENING UNDER HIGH WATER = 975 SQ. FT.

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD DATED 1972.

END BENT EXCAVATION - EXCAVATION FOR END BENT NO. 1 LT. SHALL BE PAID FOR AS CU YD BR EXCAV, STREAM CROSS.

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, EXCEPT AS SHOWN ON THE PLANS.

DRIVING DATA PILES - ONE REQUIRED AT EACH OF BENT 4 LT. AND BENT 1 RT.

PLAN DRIVING OBJECTIVE - SEE SUBSTRUCTURE DETAILS.

UTILITIES

NONE

SUMMARY OF QUANTITIES

LT.	RT.	
510	299	CU YD BR EXCAV, STREAM CROSS
77	154	CU YD BR BKFILL
LUMP	——	SUPERSTR CONC (CL AA) - BR NO 1 LT
——	LUMP	SUPERSTR CONC (CL AA) - BR NO 1 RT
271	198	CU YD CL A CONC
LUMP	——	STR STEEL - BR NO 1 LT
——	LUMP	STR STEEL - BR NO 1 RT
51,141	41,152	LB BAR REINF STEEL
LUMP	——	SUPERSTR REINF STEEL - BR NO 1 LT
——	LUMP	SUPERSTR REINF STEEL - BR NO 1 RT
467	474	LIN FT ALUM HANDRAIL, STD 3626
245	504	LIN FT PILING IN PLACE, STEEL H, 12 BP 53
1	1	EACH LOAD TEST, STEEL H, 12 BP 53 (IF REQD)
359	438	SQ YD STN PLAIN RIP RAP

DESIGN DATA

SPECIFICATIONS - A.A.S.H.O., 1969, INT. 1970, 1971
TYPICAL HS20-44 AND/OR MILITARY LOADING - IMPACT ALLOWED
FUTURE PAVING ALLOWANCE = 15 LBS. PER SQ. FT.

BRIDGE NO. 1 LT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

PLAN AND ELEVATION
SBL I-75 OVER NOONDAY CREEK
COBB CO. I-75-3-40(234) C.T.5

SCALE: 1" = 10'-0" MAR. 1973

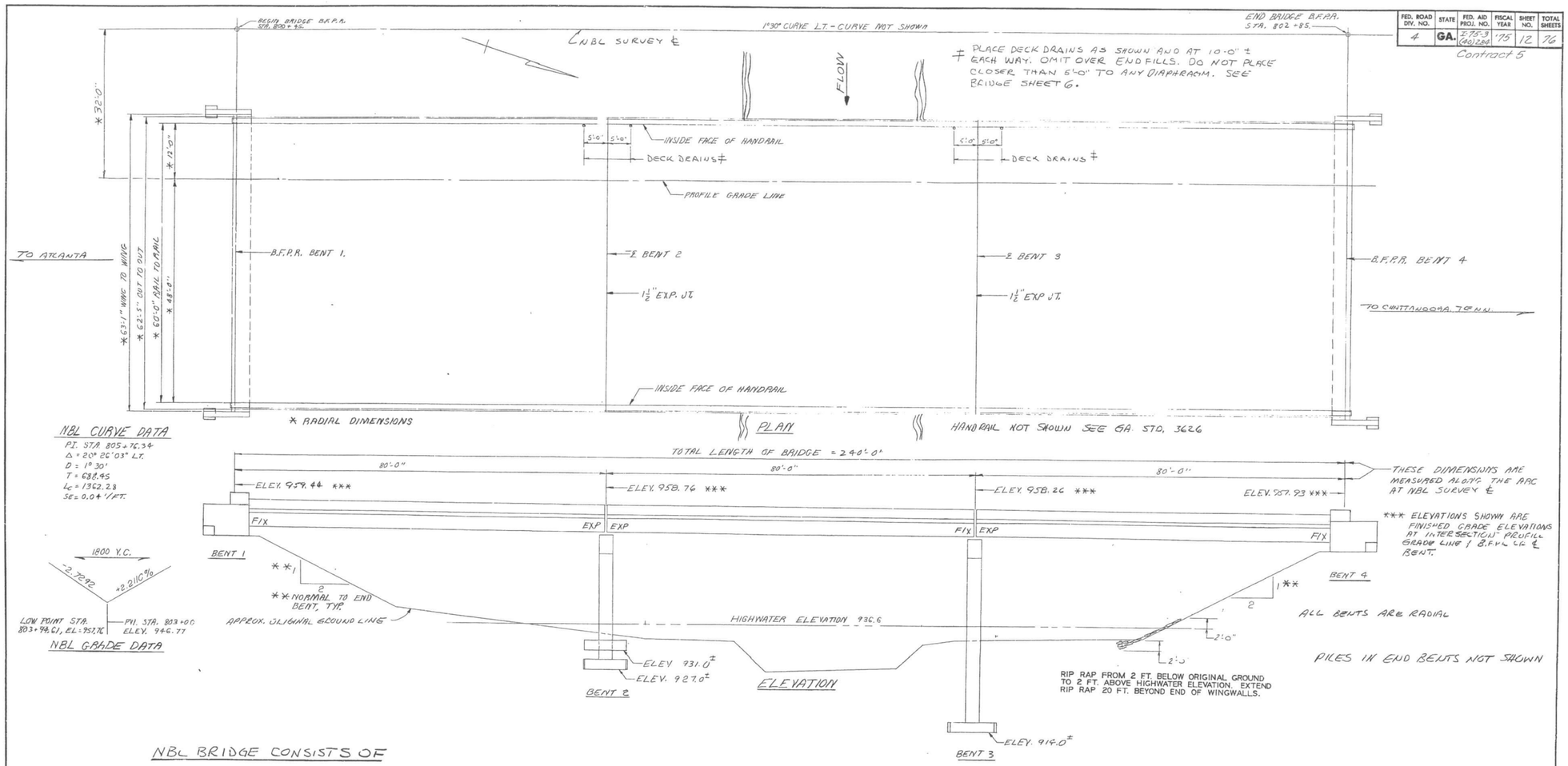
REVISIONS	DATE	BY

BRIDGE SHEET 1 OF 24

DESIGNED HJL TRACED REVIEWED LAP
DRAWN HHM CHECKED CDE APPROVED

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	GA.	I-75-3 (601)284	'75	12	76

Contract 5



NBL CURVE DATA

P.I. STA. 805+76.34
Δ = 20° 26' 03" L.T.
D = 1° 30'
T = 688.45
Lc = 1362.28
SE = 0.04'/FT.

NBL BRIDGE CONSISTS OF

3 - COMPOSITE ROLLED BEAM SIMPLE SPANS	SPECIAL DESIGN
2 - STEEL H PILE END BENTS	SPECIAL DESIGN
2 - CONCRETE INTERMEDIATE BENTS	SPECIAL DESIGN
ALUMINUM HANDRAIL	GA. STD. NO. 3626 (8-29-74)
BAR BENDING DETAILS	GA. STD. NO. 3901
TYPICAL FILL DETAIL AT END OF BRIDGE	GA. STD. NO. 9037 (9-1-70)
END POST AND END POST GUARDRAIL ATTACHMENT DETAIL L = 4'-0"; W = 1'-1"; H = 3'-2"	GA. STD. NO. 9053

NOTE: FOR GENERAL NOTES, SUMMARY OF QUANTITIES, DESIGN DATA AND OTHER NOTES, SEE PLAN AND ELEVATION SHEET, BRIDGE NO. 1 LT.

BRIDGE NO. 1 RT.

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

DATE | REVISIONS | BY

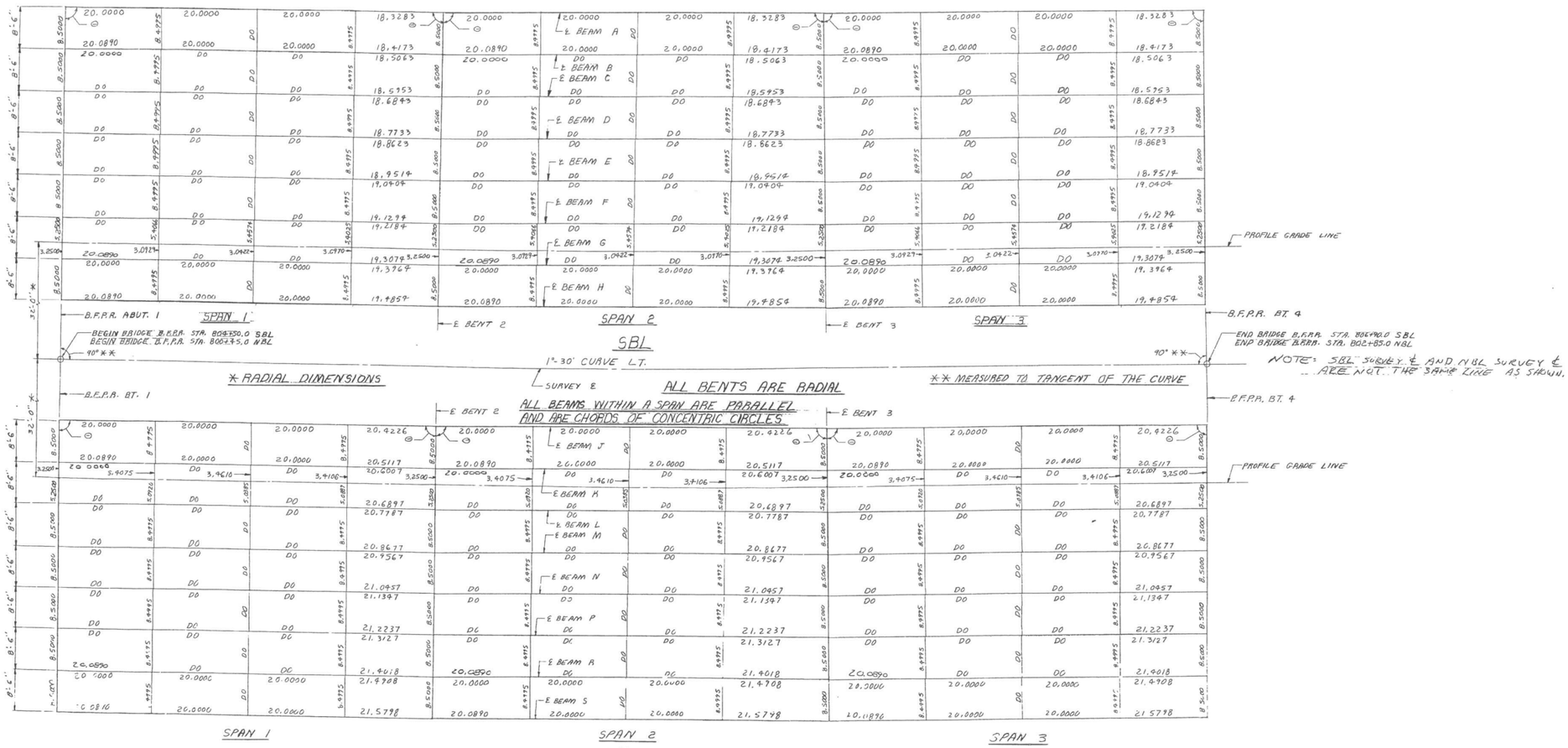
PLAN AND ELEVATION
NBL I-75 OVER NOONDAY CREEK
COBB CO.
I-1-3(4)254 CT 5
SCALE: 1" = 10'-0"
MAR. 1973

BRIDGE SHEET 2 OF 24

DESIGNED HJL | TRACED | REVIEWED LAP
DRAWN HHM | CHECKED CDE | APPROVED

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	GA.	I-75-3 (40)284	'75	13	76

Contract 5



NOTE: ⊙ = 89°-24'-00" MEASURED BETWEEN ℄ BEAM AND B.F.P.R. OR ℄ BENT, AT ALL BEAMS LT. AND RIGHT BRIDGE.

BRIDGE NO. 1 LT. & RT.

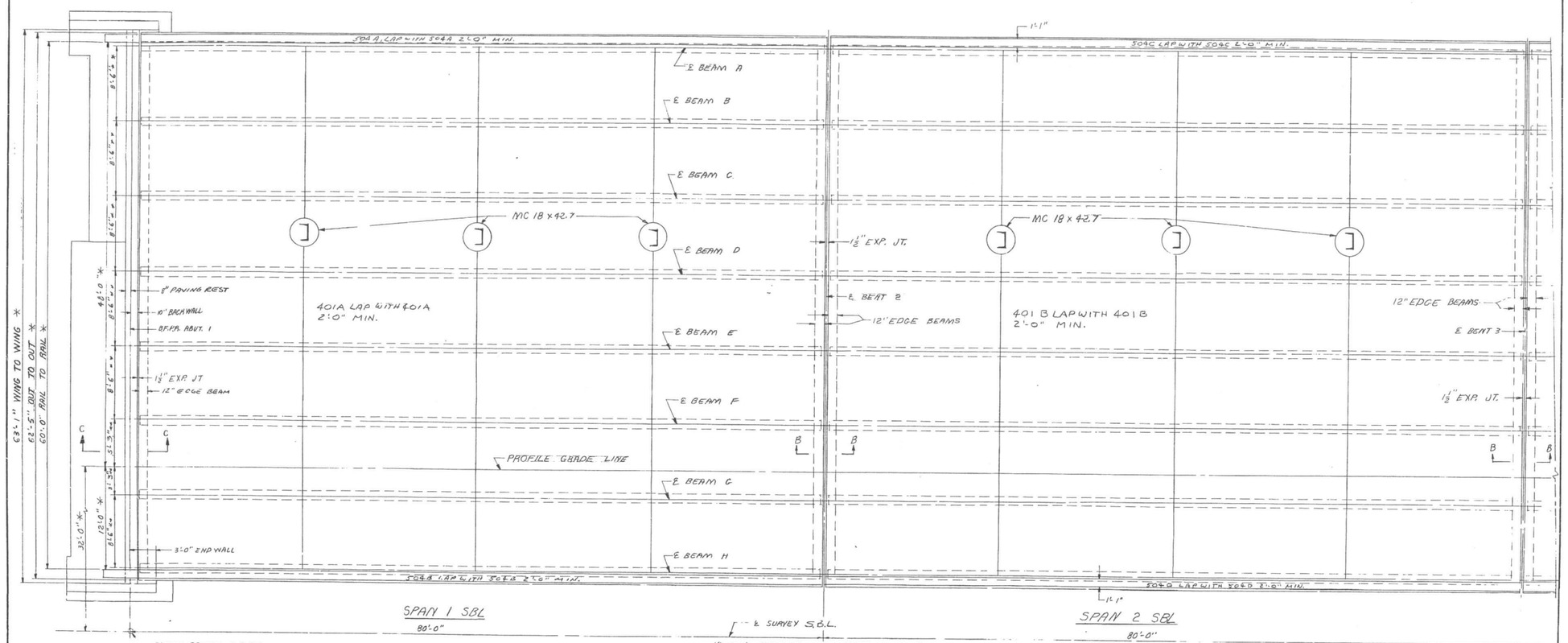
GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

BEAM CHORD LAYOUT
I-75 OVER NOONDAY CREEK
COBB CO. I-75-3(40)239 CT. 5
SCALE: 1"=10'-0" AUG. 1974

BRIDGE SHEET	DATE	REVISIONS	BY	DESIGNED JL	TRACED	REVIEWED LAP
3 OF 24				DRAWN MHM	CHECKED JPT	APPROVED

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	GA.	I-75-3 (40)284	'75	14	76

Contract 5



NOTE: ESTIMATED DEAD LOAD DEFLECTION, [illegible] SPANS, DUE TO WEIGHT OF SUPERSTRUCTURE, PARAPET AND HANDRAIL = 2 1/8"

BRIDGE NO. 1 LT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

SUPERSTRUCTURE DETAILS SH. NO. 1

SBL I-75 OVER NOONDAY CREEK

COBB CO — I-75-3(40)284 CT 5

SCALE: 3/16"=1'-0" (UNLESS NOTED) — JULY 1973

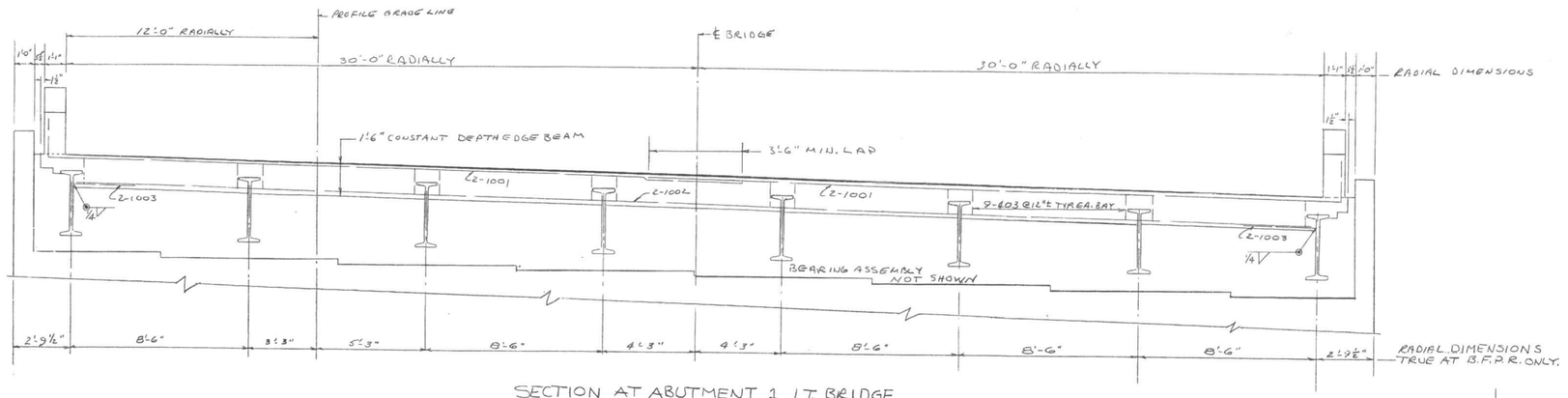
BY	REVISIONS	DATE

DESIGNED HJL — TRACED — REVIEWED LRP
DRAWN AHM — CHECKED CDE — APPROVED

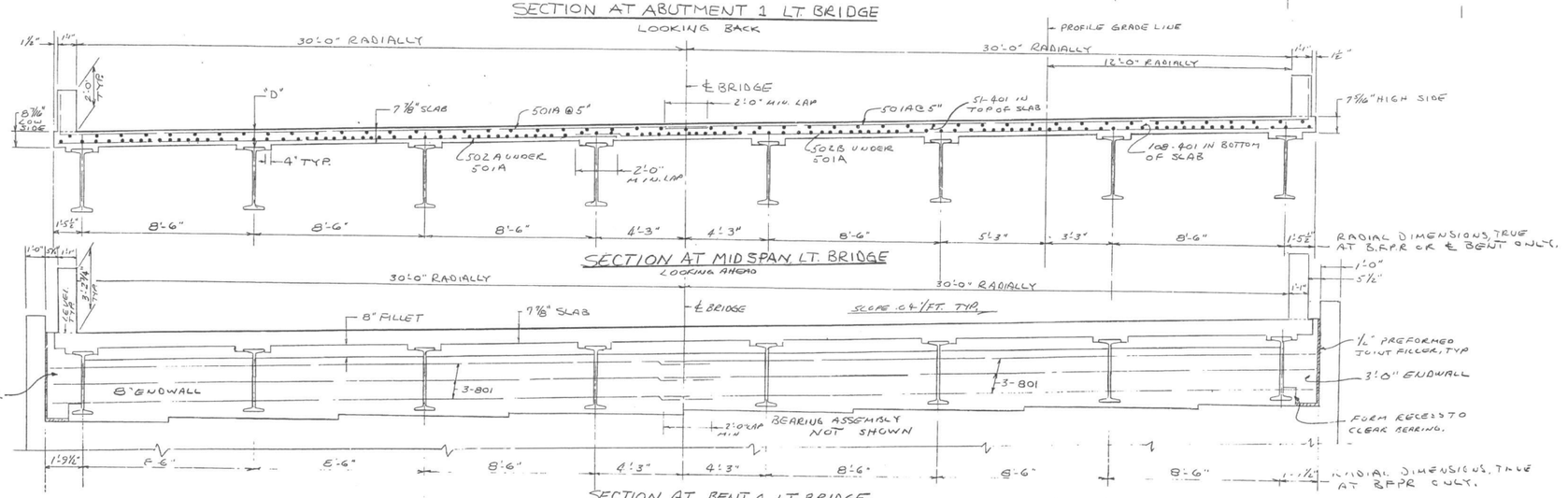
BRIDGE SHEET 4 OF 24

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	GA.	I-75-3 (40) 284	'75	15	76

Contract 5



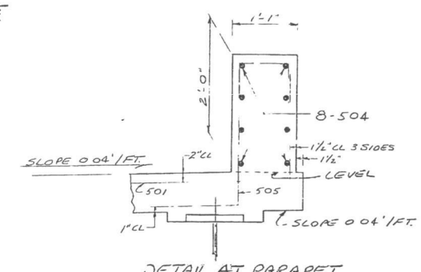
SECTION AT ABUTMENT 1 LT. BRIDGE
LOOKING BACK



SECTION AT MID SPAN LT. BRIDGE
LOOKING AHEAD

SECTION AT BENT 4 LT. BRIDGE
LOOKING AHEAD

"D" = 8¼" AND IS TRUE AT ℄ BEARINGS ONLY, VARY COPING BETWEEN ℄ BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTION AND VERTICAL CURVE. MAINTAIN CONSTANT 7⅞" SLAB BETWEEN COPINGS.



DETAIL AT PARAPET
SCALE 1" = 1'-0"

BRIDGE No. 1 LT.

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION - BRIDGE DESIGN

SUPERSTRUCTURE DETAILS SHEET 2
SBL I-75 OVER NOONDAY CREEK
COBB COUNTY I-75-3 (40) 284 CT. 5
SCALE: ⅜" = 1'-0" UN. SEPTEMBER 1974

DATE | REVISIONS | BY

DESIGNED H. J. L. | TRACED | REVIEWED L. R. P.
DRAWN C. D. E. | CHECKED J. P. T. | APPROVED

BRIDGE SHEET 5 OF 24