

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
SHELBY COUNTY

TENN.	YEAR	SHEET NO.
	2015	1
STATE PROJ. NO.	79091-3402-04	
PIN NO.	114432.00	

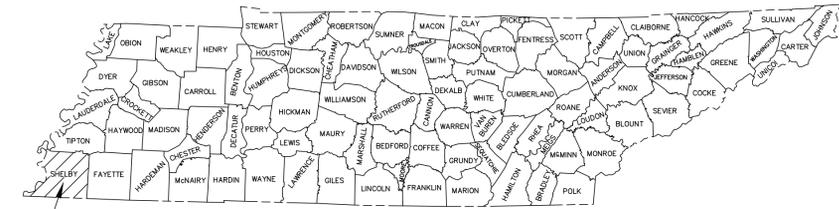
INDEX OF SHEETS

SHEET NUMBER	SHEET TITLE	
1	1	TITLE SHEET
2	1A	STANDARD DRAWINGS INDEX
3	2	ESTIMATED ROADWAY QUANTITIES
4	2A	TYPICAL SECTIONS AND PAVING SCHEDULE
5	2B	ROADWAY GENERAL NOTES
6	3	PROPERTY MAP
7	4	PRESENT LAYOUT FROM: 1+55.00 TO: 15+50.00
8	4A	PROPOSED PLAN AND PROFILE FROM: 1+55.00 TO: 15+50.00
9	4B	R.O.W. DETAILS FROM: 1+55.00 TO: 15+50.00
10	5	DRAINAGE MAP
11	11	EROSION CONTROL PLAN – PHASE 1
12	12	EROSION CONTROL PLAN (DEMOLITION) – PHASE 2
13	13	EROSION CONTROL NOTES
14	14	TRAFFIC CONTROL – PHASE 1
15	15	TRAFFIC CONTROL - DETOUR PLAN – PHASE 2
16	16	TRAFFIC CONTROL – DEMOLITION PLAN – PHASE 3
17	17	STRIPING AND SIGNAGE PLAN
18	BR-01	LAYOUT OF BRIDGE
19	BR-02	BRIDGE GENERAL NOTES
20	BR-03	ESTIMATED BRIDGE QUANTITIES
21	BR-04	FOUNDATION DATA
22	BR-05	TYPICAL SECTION
23	BR-06	SLAB PLAN
24	BR-07	FRAMING PLAN
25	BR-09	BRIDGE SCREED PLAN
26	BR-10	PRESTRESSED BEAM (TYPE III) DETAILS SPAN NO. 1 AND SPAN NO. 3
27	BR-11	PRESTRESSED BEAM (TYPE III) DETAILS SPAN NO. 2
28	BR-12	ABUTMENT NO. 1 LAYOUT
29	BR-13	ABUTMENT DETAILS
30	BR-14	ABUTMENT NO. 2 LAYOUT
31	BR-16	BENT LAYOUT
32	BR-17	FINAL FOUNDATION PLAN
33	BR-18	BILL OF STEEL
34	BR-19	CREEK GRADING / RIP-RAP PLAN
35	BR-20	CROSS-SECTIONS OF BIG CREEK
36	BR-21	CROSS-SECTIONS OF BIG CREEK
37	BR-22	CROSS-SECTIONS OF BIG CREEK
38	BR-23	DEMOLITION PLAN – OLD BRIDGE
39	XS1	CROSS SECTIONS FROM: 1+50 TO: 3+00
40	XS2	CROSS SECTIONS FROM: 3+50 TO: 5+00
41	XS3	CROSS SECTIONS FROM: 5+50 TO: 7+00
42	XS4	CROSS SECTIONS FROM: 7+50 TO: 8+50
43	XS5	CROSS SECTIONS FROM: 9+00 TO: 10+08.25
44	XS6	CROSS SECTIONS FROM: 10+50 TO: 12+00
45	XS7	CROSS SECTIONS FROM: 12+50 TO: 14+00
46	XS8	CROSS SECTIONS FROM: 14+50 TO: 15+50

SLEDGE ROAD  
OVER BIG CREEK

BRIDGE REPLACEMENT AND ROAD REALIGNMENT

CONSTRUCTION PLANS



PROJECT LOCATION



END PROJECT  
STA. 15+50.00

BEGIN PROJECT  
STA. 1+55.00



CONST.  
FIELD  
REVIEW

SEALED BY



SCOPE OF WORK

REMOVAL OF EXISTING BRIDGE AND PAVEMENT, GRADE AND PAVE  
NEW ALIGNMENT BRIDGE APPROACHES, CONSTRUCT NEW 3-SPAN  
BRIDGE.  
INSTALL GUARDRAIL, EROSION AND TRAFFIC CONTROL.

SPECIAL NOTES

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION WITH LATEST SUPPLEMENTAL SPECIFICATIONS INCLUDING SHELBY COUNTY, TENNESSEE SPECIAL PROVISIONS (CURRENT EDITION).

APPROVED: \_\_\_\_\_ MR. DARREN SANDERS, P.E., SHELBY COUNTY ENGINEER

DATE: \_\_\_\_\_

ROADWAY LENGTH 0.232 MILES  
BRIDGE LENGTH 0.032 MILES  
BOX BRIDGE LENGTH N/A  
PROJECT LENGTH 0.264 MILES

NO EXCLUSIONS  
NO EQUATIONS

SUBMITTED BY: BURR & COLE CONSULTING ENGINEERS, INC.  
3485 POPLAR AVENUE, SUITE 200  
MEMPHIS, TN 38111



**ESTIMATED ROADWAY QUANTITIES**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
201-01	CLEARING AND GRUBBING	LS	1
203-04	PLACING AND SPREADING TOPSOIL	C.Y.	860
(1)- 203-05	UNDERCUTTING	C.Y.	1000
203-06	WATER	M.G.	16
203-10	EMBANKMENT (COMPACTED IN PLACE)	C.Y.	11600
209-01.11	CONSTRUCTION ACCESS	LS	1
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	750
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	3650
209-08.05	ENHANCED SILT FENCE CHECK (V-DITCH)	EACH	8
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	1690
307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	490
309-01.01	MINERAL AGGREGATE (A-CBC)	TON	1875
309-01.02	PORTLAND CEMENT (A-CBC)	TON	91
309-02	BITUMINOUS MATERIAL (A-CBC)	TON	3
(2)- 309-10.01	PORTLAND CEMENT	TON	110
(2)- 309-10.03	PORTLAND CEMENT TREATMENT IN PLACE (8" DEPTH)	S.Y.	3820
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	1
(3)- 407-20.05	SAW CUTTING ASPHALT PAVEMENT	L.F.	50
411-02.10	ACS MIX(PG70-22) GRADING D	TON	290
712-01	TRAFFIC CONTROL	LS	1
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	104
712-05.01	WARNING LIGHTS (TYPE A)	EACH	116
712-06	SIGNS (CONSTRUCTION)	S.F.	350
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	50
716-02.01	PLASTIC PAVEMENT MARKING (4" LINE)	L.M.	0.6
717-01	MOBILIZATION	LS	1
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	2000
801-01	SEEDING (WITH MULCH)	UNIT	60
801-03	WATER (SEEDING & SODDING)	M.G.	10
803-01	SODDING (NEW SOD)	S.Y.	500

**FOOTNOTES:**

- (1) UNDERCUTTING WILL ONLY BE UTILIZED AT THE DISCRETION OF THE ENGINEER
- (2) STABILIZATION OF SUBGRADE WITH CEMENT WILL ONLY BE USED WHEN REPEATED ATTEMPTS HAVE FAILED TO OBTAIN THE REQUIRED COMPACTION AND THE ENGINEER HAS APPROVED THE WORK. PAYMENT FOR PORTLAND CEMENT UNDER THIS ITEM NO. WILL ONLY INCLUDE THE MATERIAL. THE COST FOR PROCESSING WILL BE INCLUDED IN ITEM NO. 309-10.03.
- (3) EXISTING PAVEMENT SHALL BE SAWCUT FULL DEPTH AT PROJECTS ENDS.

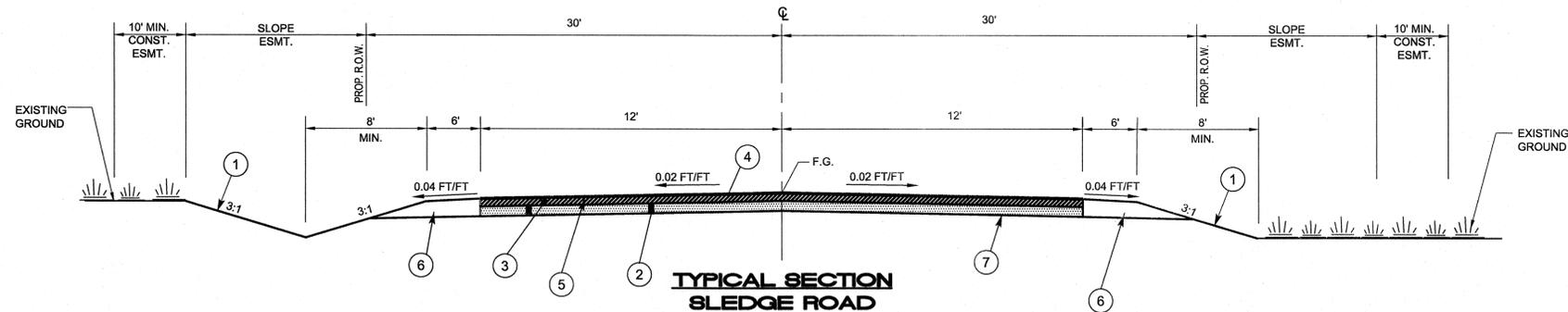
ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

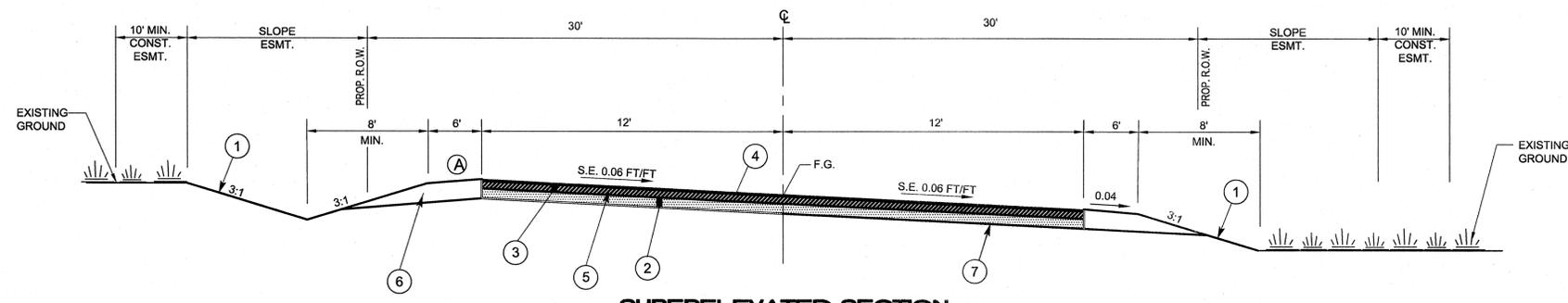
SHEET 3 OF 46 2  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
ESTIMATED  
ROADWAY  
QUANTITIES

SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
DESIGN BY: B.A.M.      DATE: 10/2012      BOOK:  
DRAWN BY: B.A.M.      DATE: 10/2012      SCALE: N/A



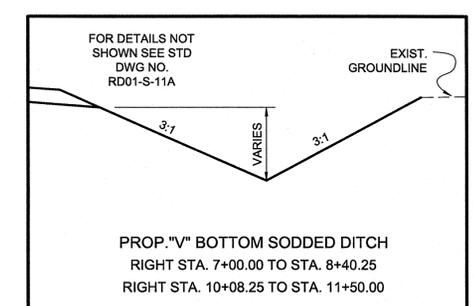
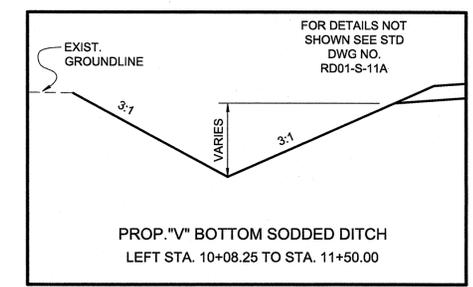
**TYPICAL SECTION  
SLEDGE ROAD**  
**STA. 8+14.18 TO STA. 8+40.25**  
**STA. 10+08.25 TO STA. 10+65.39**  
**STA. 14+19.69 TO STA. 15+50.00**

NOTES:  
 (A) ALGEBRAIC DIFFERENCE SHALL NOT EXCEED 7%.



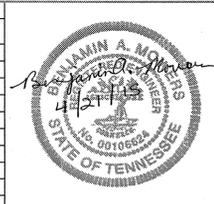
**SUPERELEVATED SECTION  
SLEDGE ROAD**  
**STA. 3+45.00 TO STA. 6+24.18**  
**STA. 12+55.39 TO STA. 12+77.19**

NOTE:  
 TYPICAL SECTION TRANSITIONS BETWEEN NORMAL TYPICAL SECTION AND SUPERELEVATED TYPICAL SECTION BETWEEN STATIONS:  
 1+55.00 TO 3+45.00  
 6+24.18 TO 8+14.18  
 10+65.39 TO 12+55.39 AND  
 12+77.19 TO 14+19.69.



PROPOSED PAVEMENT SCHEDULE			
COMMON PAVING			
1	ITEM 801-01, SEEDING (WITH MULCH)	5	TACK COAT 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) (0.07 GAL/SQ.YD.)
2	309-01.01 AGGREGATE-CEMENT BASE COURSE-10" THICK (1060 LBS/SQ.YD.) MINERAL AGGREGATE (A-CBC) 309-01.02 PORTLAND CEMENT (A-CBC) 309-02 BITUMINOUS MATERIAL (A-CBC)	6	MINERAL AGGREGATE BASE - THICKNESS VARIES (14" MAX.) 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"
3	BITUMINOUS BINDER- 2-1/2" THICK (283±LBS/SQ.YD.) 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	7	309-10.01 PORTLAND CEMENT 309-10.03 PORTLAND CEMENT TREATMENT MIXED IN PLACE (8" DEPTH)
4	ASPHALTIC CONCRETE SURFACE (ROADWAY)- 1-1/2" THICK (160±LBS/SQ.YD.) 411-02.10 ASPHALTIC CONCRETE SURFACE (PERFORMANCE GRADE PG 70-22)		

ITEM NO.	DESCRIPTION OF	APPROVAL DATE



DRAINAGE BASIN: SHEET 4 OF 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
 TYPICAL SECTIONS AND  
 PAVING SCHEDULE

SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
 DESIGN BY: RG DATE: 06/2012 BOOK:  
 DRAWN BY: BAM DATE: 06/2012 SCALE: N.T.S.

**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

**GENERAL NOTES**

**GRADING**

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.
- (3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

**SEEDING AND SODDING**

- (1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.
- (2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.
- (3) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

**GUARDRAIL**

- (4) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.
- (5) THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.
- (6) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.
- (7) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

**DRAINAGE**

- (8) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

**UTILITIES**

- (9) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- (10) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.

ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

- (11) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (12) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- (13) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

**MISCELLANEOUS**

- (14) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA

**ROAD CLOSURE**

- (15) NO LESS THAN FOURTEEN (14) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE COUNTY COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION.

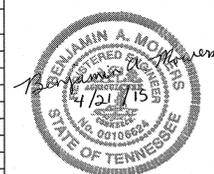
**RIGHT - OF - WAY**

- (16) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

**PAVEMENT**

- (17) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

ITEM NO.	DESCRIPTION OF	APPROVAL DATE

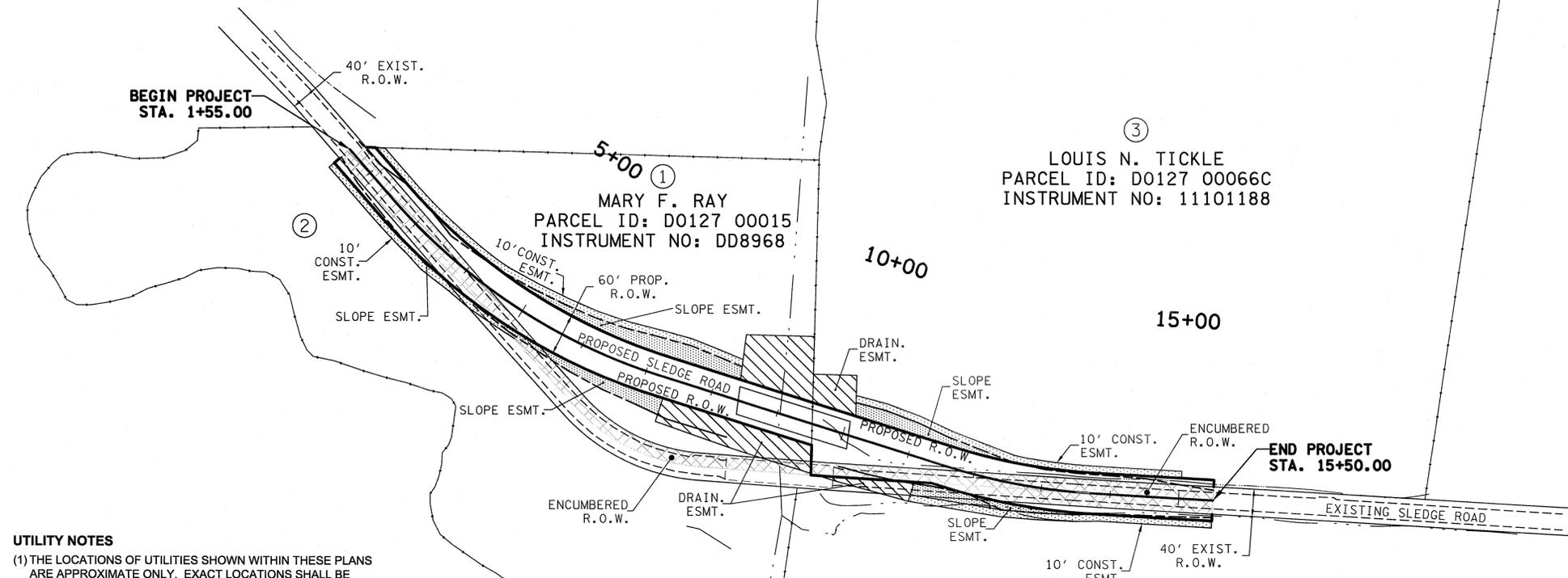


SHEET 5 OF 46 2B  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
 ROADWAY GENERAL NOTES

SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
 DESIGN BY: B.A.M.      DATE: 09/2012      BOOK:  
 DRAWN BY: B.A.M.      DATE: 09/2012      SCALE: N/A

**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

R.O.W. ACQUISITION TABLE																
TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE		LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
				BK.	PAGE											
1	RAY MARY F	36	D0127 00015	INST. DD8968		3.724	1.052	4.776	0.531	1.052	1.583	3.193		8342	5887	6256
2	COLEMAN MITTIE A TR	36	D0127 00014	INST. S80207			15.840	15.840		0.172	0.172		15.668	0	62	3480
3	TICKLE LOUIS N	36	D0127 00066C	INST. 11101188		44.094	0.270	44.364	0.541	0.140	0.681	43.553	0.130	3184	3267	4911
4	TOLBERT RUBY	36J	D0116 00235	INST. F65616			43.523	43.523		0.230	0.230	43.293		2052	2956	4427



**LEGEND**

SLOPE EASEMENT	
CONSTRUCTION EASEMENT	
DRAINAGE EASEMENT	
EXIST. PAVEMENT TO BE SCARIFIED	

**UTILITY NOTES**

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

(3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

**RIGHT - OF - WAY NOTES**

(1) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

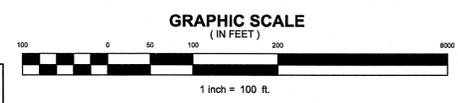
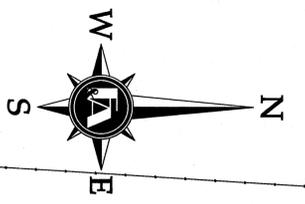
(2) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(3) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(5) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(6) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



SHEET 6 OF 46

**SLUDGE ROAD PROPERTY MAP**

DIVISION OF ENGINEERING

SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
 DESIGN BY: B.A.M. DATE: 08/2012 BOOK:  
 DRAWN BY: B.A.M. DATE: 08/2012 SCALE: 1" = 100'

**SLUDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

LOUIS N. TICKLE  
 PARCEL ID: D0127 0066C  
 INSTRUMENT NO: 11101188

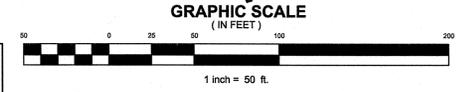
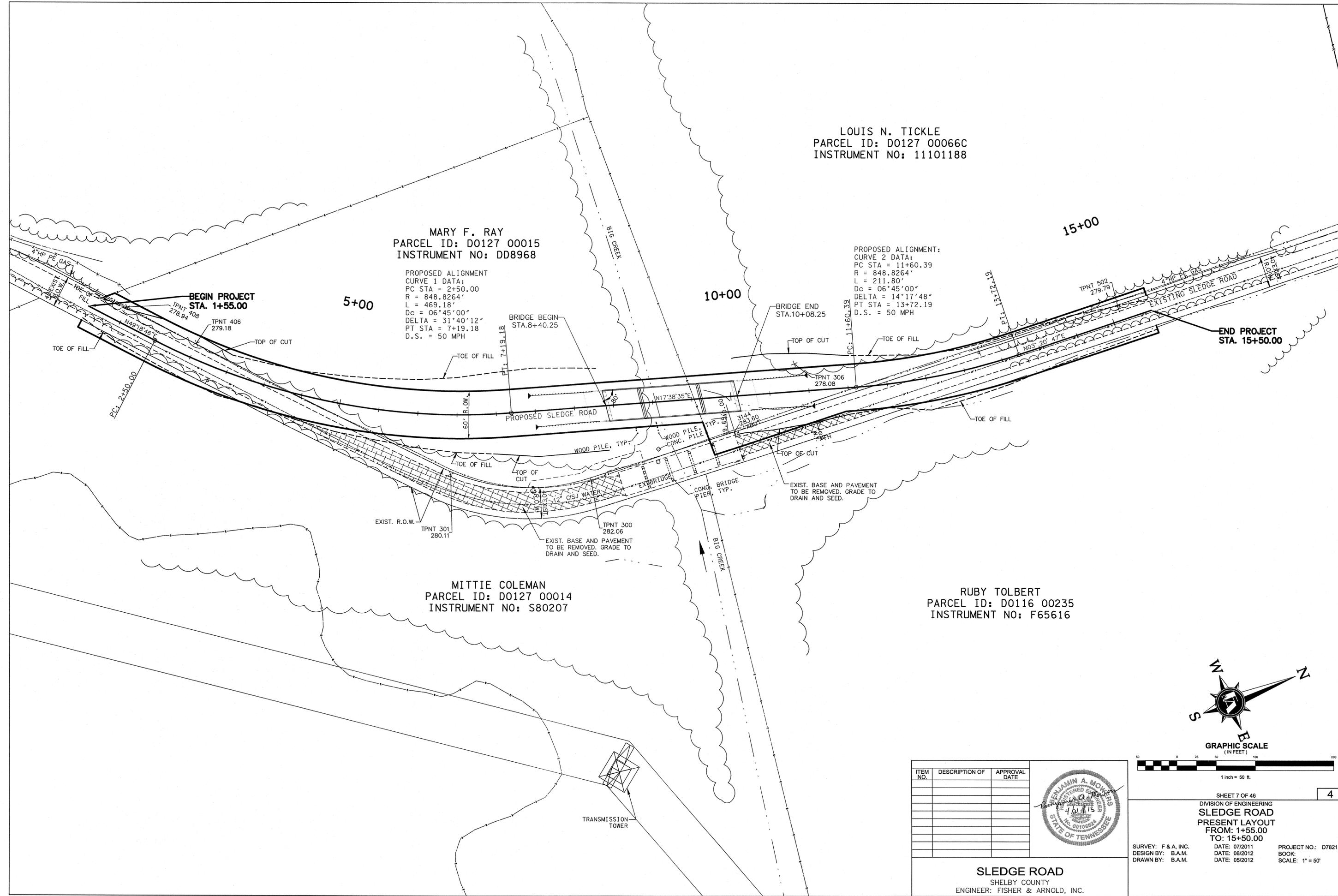
MARY F. RAY  
 PARCEL ID: D0127 00015  
 INSTRUMENT NO: DD8968

PROPOSED ALIGNMENT  
 CURVE 1 DATA:  
 PC STA = 2+50.00  
 R = 848.8264'  
 L = 469.18'  
 Δc = 06°45'00"  
 DELTA = 31°40'12"  
 PT STA = 7+19.18  
 D.S. = 50 MPH

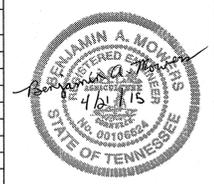
PROPOSED ALIGNMENT:  
 CURVE 2 DATA:  
 PC STA = 11+60.39  
 R = 848.8264'  
 L = 211.80'  
 Δc = 06°45'00"  
 DELTA = 14°17'48"  
 PT STA = 13+72.19  
 D.S. = 50 MPH

MITTIE COLEMAN  
 PARCEL ID: D0127 00014  
 INSTRUMENT NO: S80207

RUBY TOLBERT  
 PARCEL ID: D0116 00235  
 INSTRUMENT NO: F65616



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

SHEET 7 OF 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
 PRESENT LAYOUT  
 FROM: 1+55.00  
 TO: 15+50.00  
 SURVEY: F & A, INC. PROJECT NO: D7821  
 DESIGN BY: B.A.M. DATE: 07/2011 BOOK:  
 DRAWN BY: B.A.M. DATE: 06/2012 DATE: 05/2012 SCALE: 1" = 50'



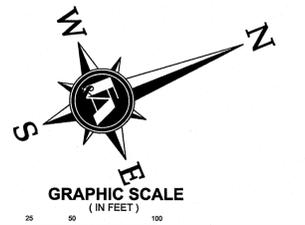
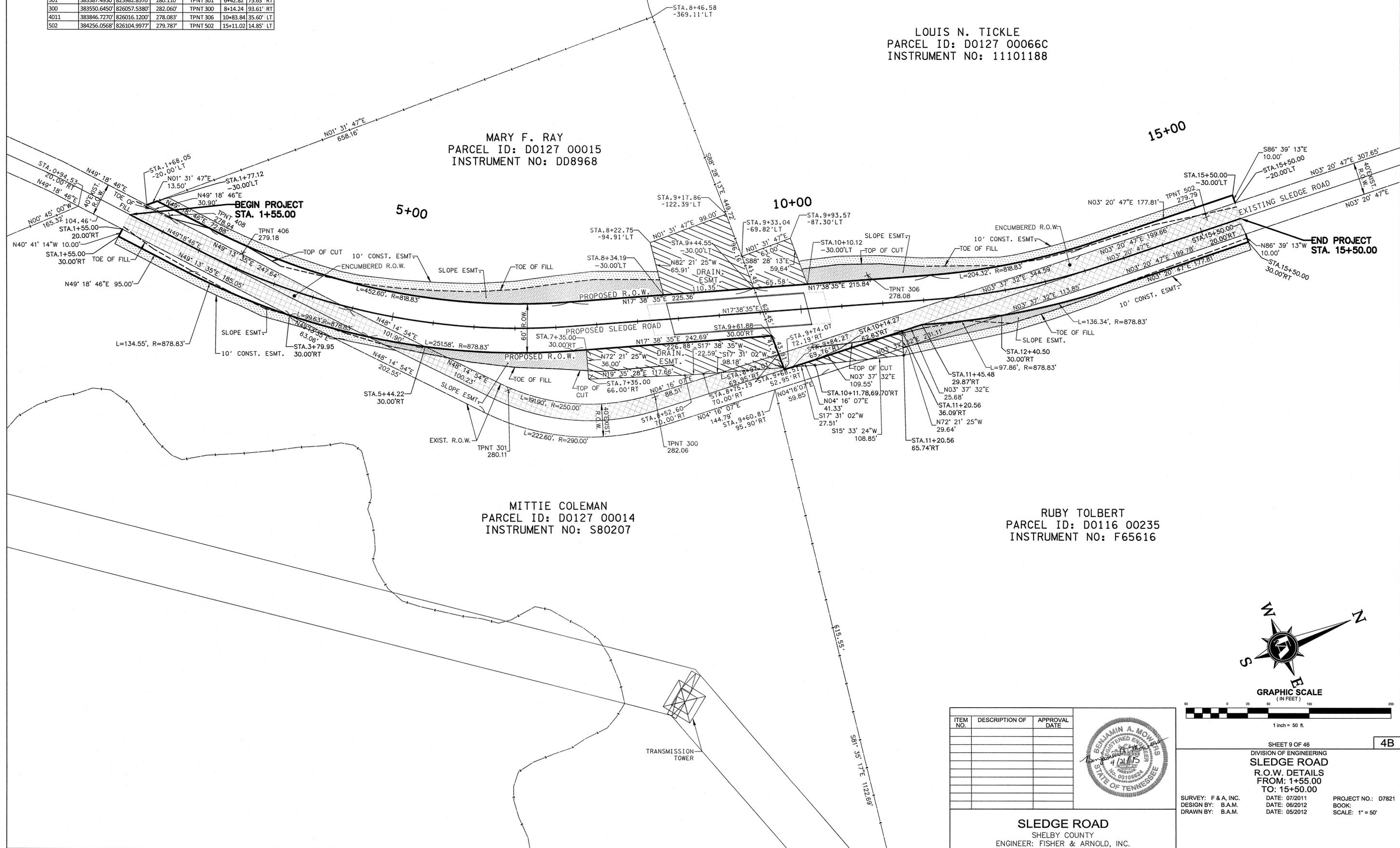
CONTROL POINTS						
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
408	383084.8410	825631.2060	278.940	TPNT 408	1+98.75	21.37' LT
406	383149.7930	825707.0300	279.180	TPNT 406	2+99.78	19.76' LT
301	383387.4950	825982.8570	280.110	TPNT 301	6+42.82	75.63' RT
300	383550.6450	826057.5380	282.060	TPNT 300	8+14.24	93.61' RT
4011	383846.7270	826016.1200	278.083	TPNT 306	10+83.84	35.60' LT
502	384256.0568	826104.9977	279.787	TPNT 502	15+11.02	14.85' LT

LOUIS N. TICKLE  
 PARCEL ID: D0127 00066C  
 INSTRUMENT NO: 11101188

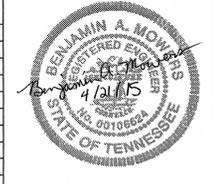
MARY F. RAY  
 PARCEL ID: D0127 00015  
 INSTRUMENT NO: DD8968

MITTIE COLEMAN  
 PARCEL ID: D0127 00014  
 INSTRUMENT NO: S80207

RUBY TOLBERT  
 PARCEL ID: D0116 00235  
 INSTRUMENT NO: F65616



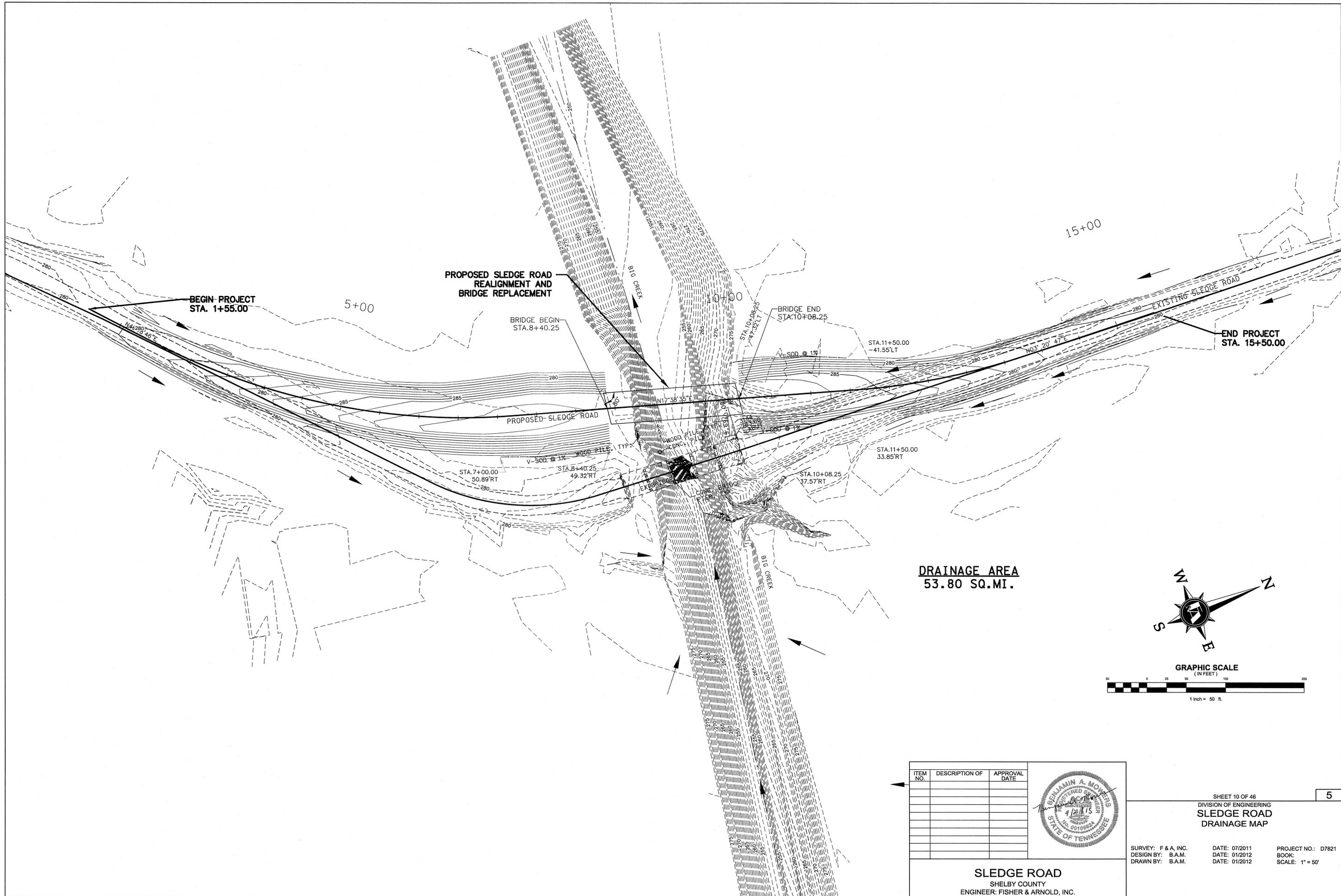
ITEM NO.	DESCRIPTION OF	APPROVAL DATE



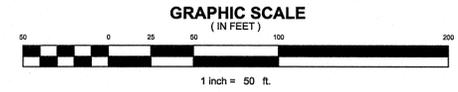
**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

SHEET 9 OF 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
 R.O.W. DETAILS  
 FROM: 1+55.00  
 TO: 15+50.00  
 SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
 DESIGN BY: B.A.M. DATE: 06/2012 BOOK:  
 DRAWN BY: B.A.M. DATE: 05/2012 SCALE: 1" = 50'

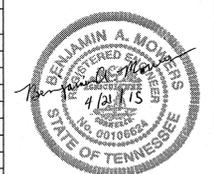
4B



**DRAINAGE AREA**  
53.80 SQ. MI.



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



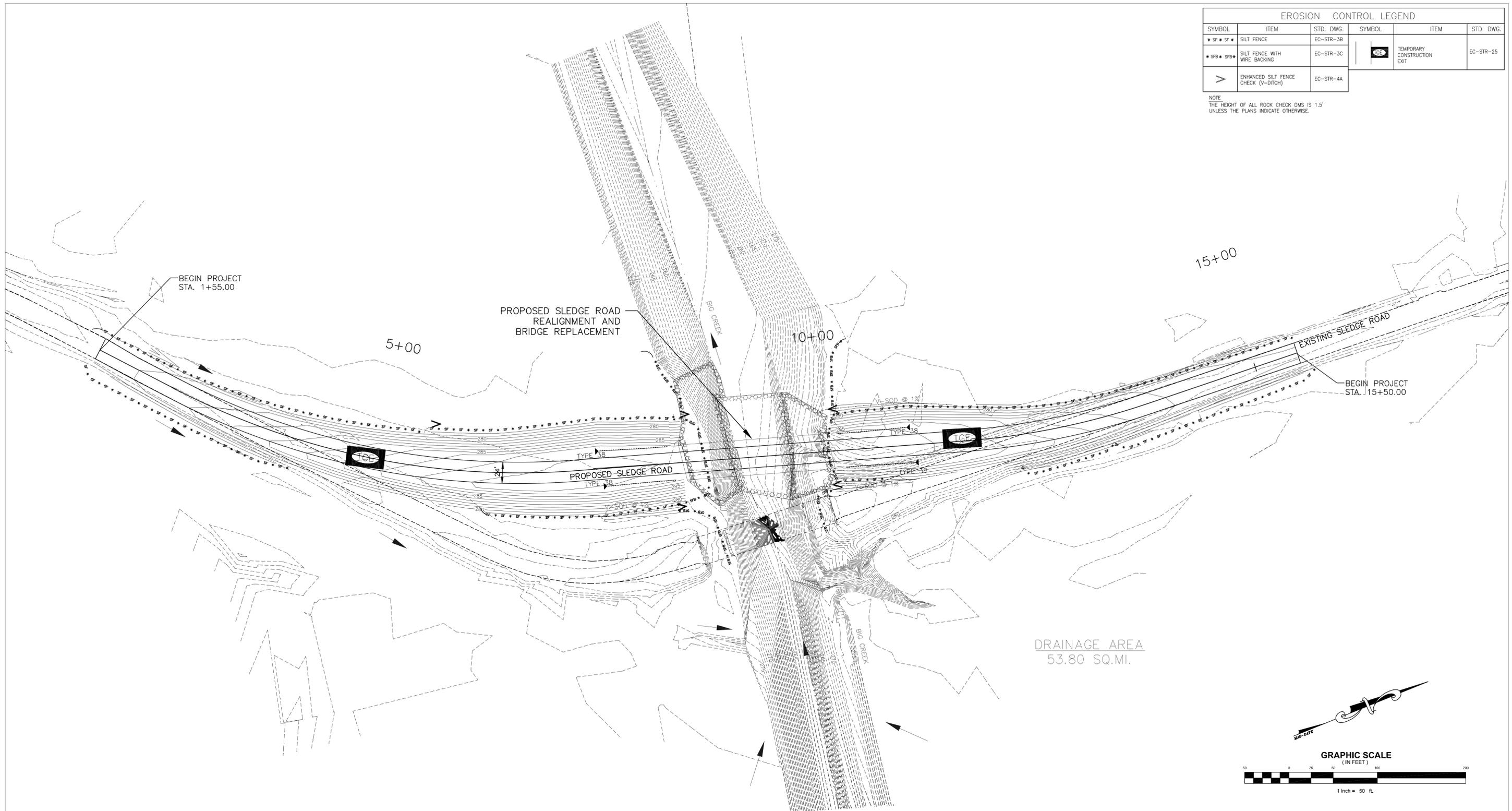
**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 10 OF 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
DRAINAGE MAP

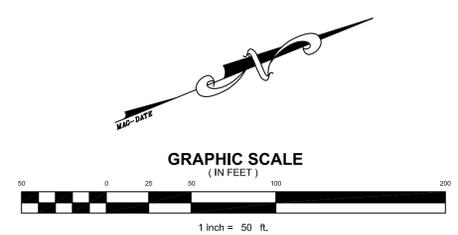
SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
DESIGN BY: B.A.M.      DATE: 01/2012      BOOK:  
DRAWN BY: B.A.M.      DATE: 01/2012      SCALE: 1" = 50'

EROSION CONTROL LEGEND					
SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* SF * SF *	SILT FENCE	EC-STR-3B		TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C			
>	ENHANCED SILT FENCE CHECK (V-DITCH)	EC-STR-4A			

NOTE  
THE HEIGHT OF ALL ROCK CHECK DAMS IS 1.5'  
UNLESS THE PLANS INDICATE OTHERWISE.



DRAINAGE AREA  
53.80 SQ. MI.



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



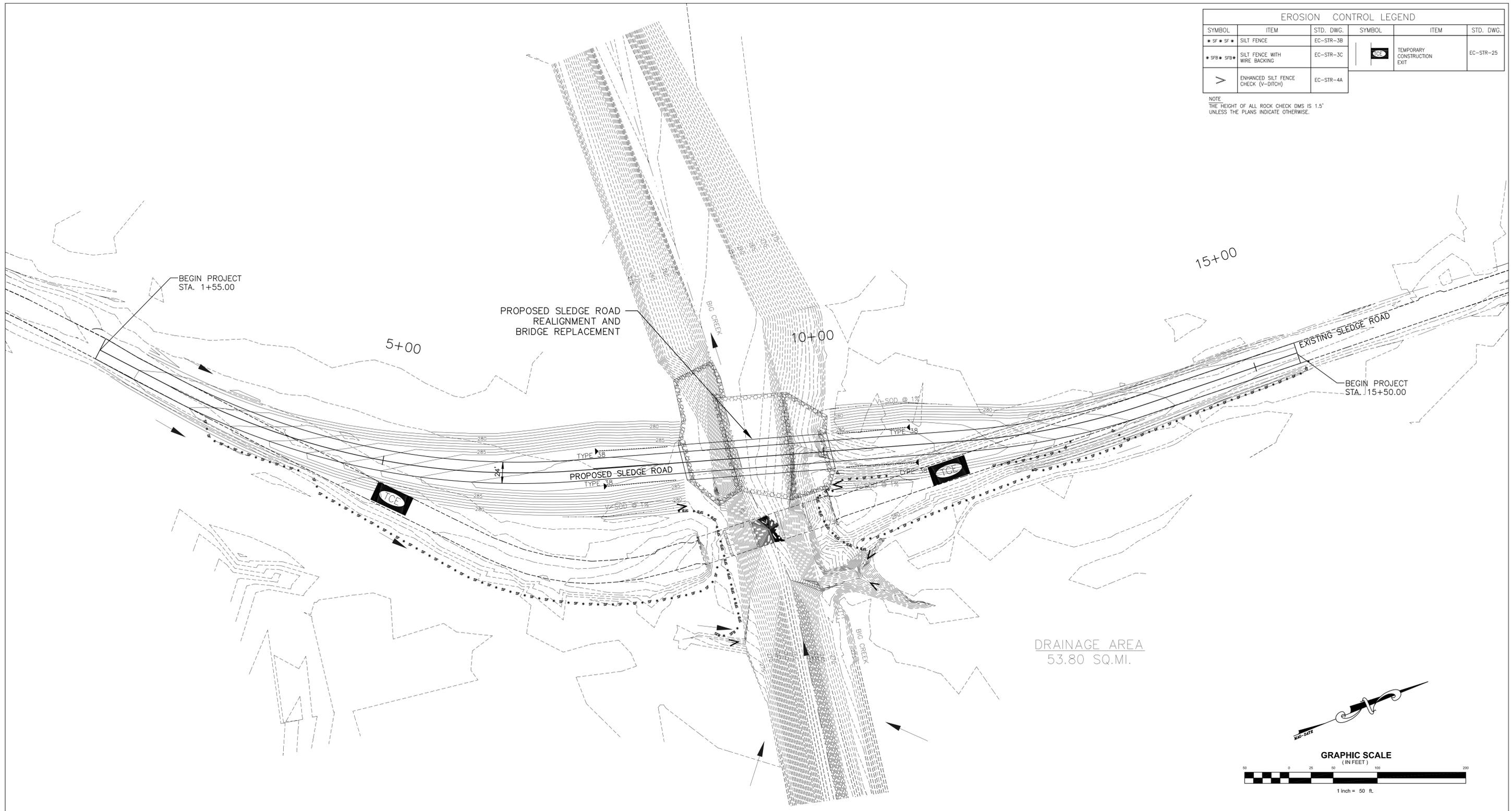
**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 11 OF 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
EROSION CONTROL PLAN - PHASE 1

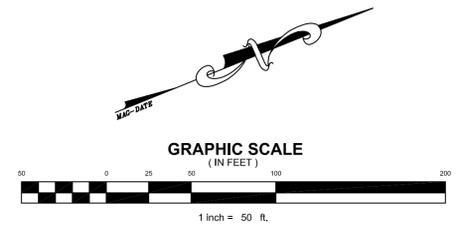
SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
DESIGN BY: B.A.M.      DATE: 10/2012      BOOK:  
DRAWN BY: B.A.M.      DATE: 10/2012      SCALE: 1"=50'

EROSION CONTROL LEGEND					
SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* SF * SF *	SILT FENCE	EC-STR-3B	[Symbol]	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	[Symbol]		
>	ENHANCED SILT FENCE CHECK (V-DITCH)	EC-STR-4A			

NOTE:  
THE HEIGHT OF ALL ROCK CHECK DMS IS 1.5'  
UNLESS THE PLANS INDICATE OTHERWISE.



DRAINAGE AREA  
53.80 SQ.MI.



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 12 OF 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
EROSION CONTROL - (DEMOLITION) - PHASE 2

SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
DESIGN BY: B.A.M.      DATE: 10/2012      BOOK:  
DRAWN BY: B.A.M.      DATE: 10/2012      SCALE: 1"=50'



**TRAFFIC CONTROL NOTES**

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) SEE PAGE 6F-7 STATE OF TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR HEIGHT AND LATERAL LOCATION OF SIGNS.

- (9) SIGNS SHOWN ON THIS PLAN ARE TO WARN TRAFFIC ABOUT THE CONSTRUCTION. OTHER TRAFFIC CONTROL DEVICES MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
- (10) NOTHING IN THIS PLAN IS INTENDED TO SUPERSEDE OR RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING THE APPROPRIATE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT STATE OF TENNESSEE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
- (11) ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION BEGINS.
- (12) ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL MEET THE STANDARD PRESCRIBED IN THE STATE OF TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL COMPLY WITH THE STATE OF TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 712 TEMPORARY TRAFFIC CONTROL.
- (13) ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
- (14) SIDE STREET, DRIVEWAY ACCESS, AND SAFE PEDESTRIAN WAYS SHALL BE MAINTAINED AT ALL TIMES.
- (15) PORTABLE BARRIER RAIL AND/OR DRUMS WITH TYPE "C" WARNING LIGHTS SHALL DELINEATE THE EDGE OF PAVEMENT THROUGH THE ENTIRE CONSTRUCTION AREA.
- (16) CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SIGNS OR DEVICES DURING CONSTRUCTION AND THEY SHALL REMAIN COVERED DURING CONSTRUCTION AND UNTIL SUCH TIME THAT NO CONFLICT EXISTS.
- (17) DURING CONSTRUCTION, A MINIMUM OF ONE 12 FOOT LANE OF TRAFFIC SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.
- (18) ALL TEMPORARY OR PERMANENT TRAVELED SURFACES SHALL BE INSPECTED DAILY BY THE CONTRACTOR (INCLUDING WEEKENDS) AND NECESSARY PATCHING OR REFINISHING PERFORMED.
- (19) MARKINGS SHALL BE MAINTAINED IN LONG-TERM STATIONARY WORK AREAS AND SHALL MATCH AND MEET THE MARKINGS IN PLACE AT BOTH ENDS OF THE WORK AREA.
- (20) CENTERLINE/LANE LINES SHOULD BE PLACED, REPLACED, OR DELINEATED WHERE APPROPRIATE BEFORE THE ROADWAY IS OPENED TO TRAFFIC.
- (21) THE APPROPRIATE TRAFFIC CONTROL SHALL BE INSTALLED AT THE INCEPTION OF EACH STAGE OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND/OR OPERATED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER.

- (22) OBLITERATED MARKINGS SHALL BE UNIDENTIFIABLE AS PAVEMENT MARKINGS UNDER DAY OR NIGHT, WET OR DRY CONDITIONS. OVERLAYING EXISTING STRIPES WITH BLACK PAINT OR ASPHALT DOES NOT MEET THE REQUIREMENTS OF COVERING, REMOVAL, OR OBLITERATION; HOWEVER, THE USE OF REMOVABLE, NONREFLECTIVE, PREFORMED, TAPE IS PERMITTED WHERE MARKINGS NEED TO BE COVERED TEMPORARILY.
- (23) AT NO TIME SHALL ONE LANE SECTION BE LEFT OPEN UNATTENDED. WHERE TWO FLAGGERS ARE REQUIRED AND IN CIRCUMSTANCES WHERE ONLY ONE LANE OF TRAFFIC IS OPEN AND THERE IS NO CLEAR LINE OF SIGHT FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, THE CONTRACTOR SHALL PROVIDE RADIO COMMUNICATION OR OTHER APPROPRIATE MEANS OF ESTABLISHING CONTROL OF TRAFFIC.
- (24) ANY TIME FLAGGER IS NOT PRESENT TO CONTROL TRAFFIC, TWO TRAFFIC LANES MUST BE OPEN TO MAINTAIN TWO-WAY TRAFFIC, AND ALL INAPPROPRIATE SIGNS SHALL BE COVERED OR REMOVED.
- (25) ALL FLAGGERS SHALL BE EQUIPPED WITH A STOP/SLOW PADDLE.
- (26) NO LESS THAN FOURTEEN (14) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE SHELBY COUNTY ROAD DEPARTMENT AND OBTAIN THEIR APPROVAL FOR THE CLOSURE SCHEDULE.
- (27) TWO WAY TRAFFIC SHALL BE MAINTAINED AFTER NORMAL WORKING HOURS.

**TRAFFIC CONTROL LEGEND**

SIGN . . . . .

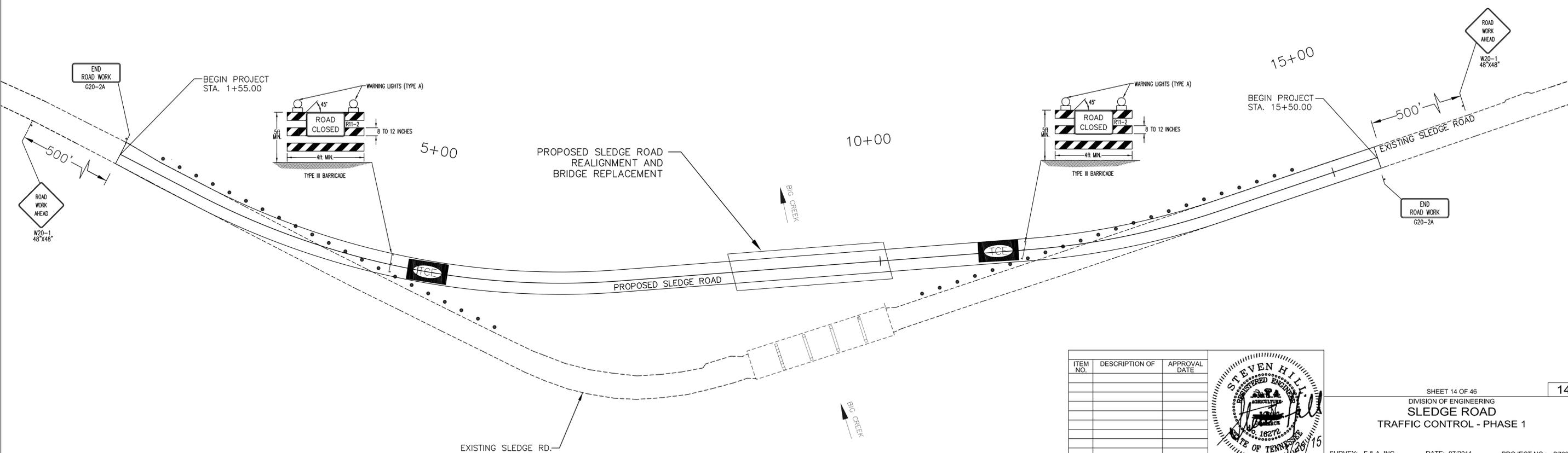
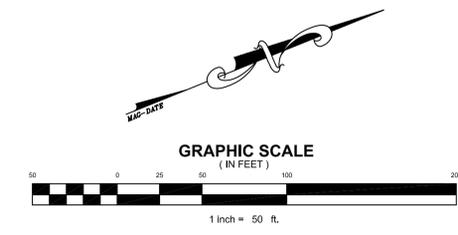
FLEXIBLE DRUMS W/WARNING LIGHTS (TYPE A) . . . . .

TYPE III BARRICADE . . . . .

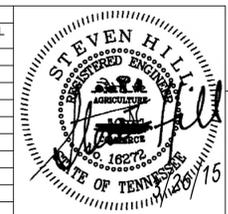
TRAFFIC CONTROL QUANTITIES				
ITEM NO.	DESCRIPTION	M.U.T.C.D. DESIGNATION	TOTAL	UNITS
712-04.01	FLEXIBLE DRUMS	----	43	EACH
712-05.01	WARNING LIGHTS (TYPE A)	----	43	EACH
712-06	SIGN (CONSTRUCTION)			
		G20-2A	2	EACH
		G20-2A	2	EACH
		R11-2	2	EACH
		W20-1	2	EACH
		TYPE III BARRICADE	2	EACH

**UTILITY NOTES**

1. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION LIMITS. FOR SITE LOCATION OF EXISTING UTILITIES INVOLVING ML&W, SOUTH CENTRAL BELL, AND/OR TEXAS GAS COMPANY, PLEASE CALL 1-800-351-1111.



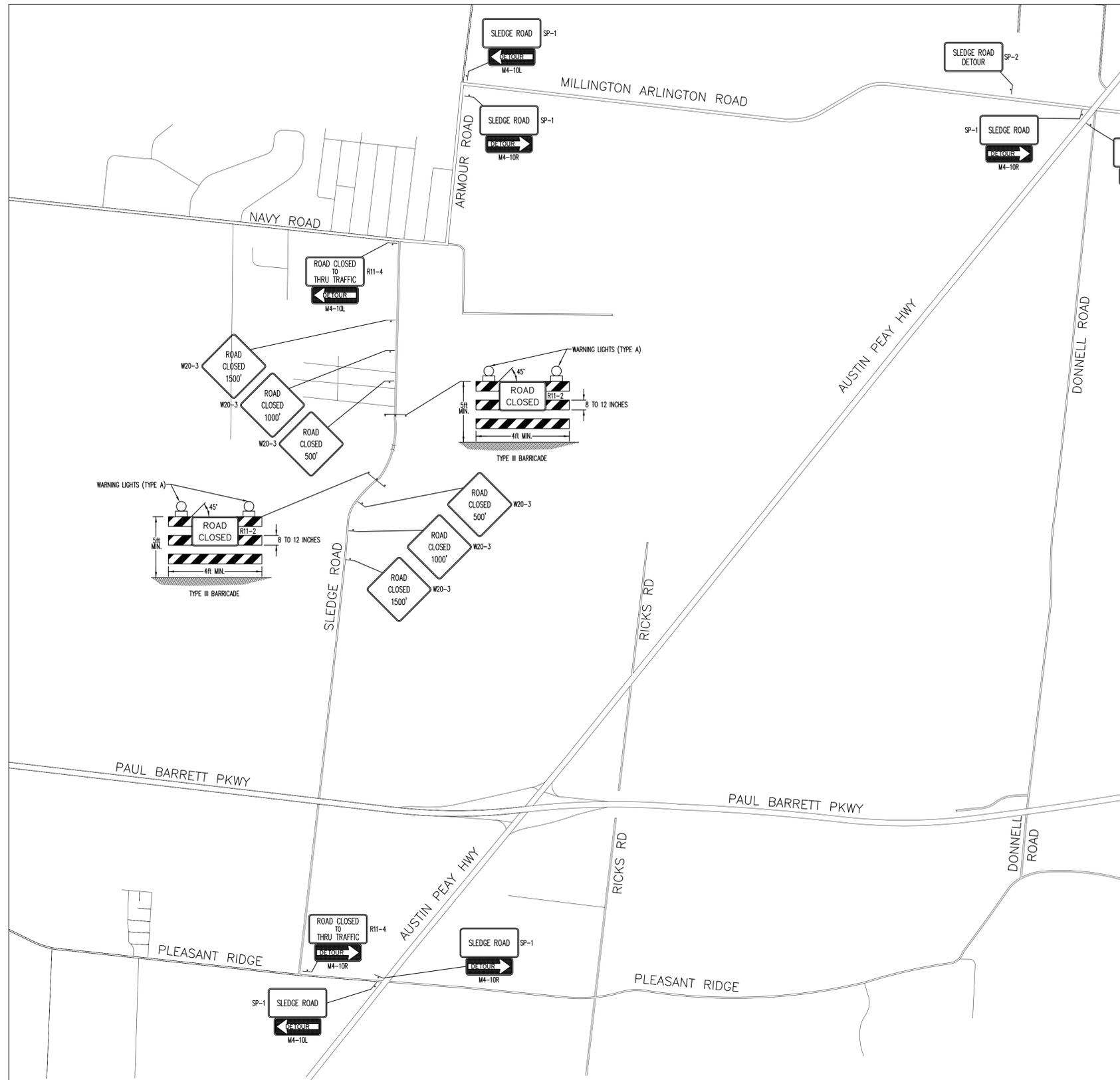
ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 14 OF 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
TRAFFIC CONTROL - PHASE 1

SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
DESIGN BY: B.A.M.      DATE: 10/2012      BOOK:  
DRAWN BY: B.A.M.      DATE: 10/2012      SCALE: 1"=50'



**TRAFFIC CONTROL NOTES**

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) SEE PAGE 6F-7 STATE OF TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR HEIGHT AND LATERAL LOCATION OF SIGNS.
- (9) SIGNS SHOWN ON THIS PLAN ARE TO WARN TRAFFIC ABOUT THE CONSTRUCTION. OTHER TRAFFIC CONTROL DEVICES MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
- (10) NOTHING IN THIS PLAN IS INTENDED TO SUPERSEDE OR RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING THE APPROPRIATE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT STATE OF TENNESSEE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
- (11) ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION BEGINS.
- (12) ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL MEET THE STANDARD PRESCRIBED IN THE STATE OF TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL COMPLY WITH THE STATE OF TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 712 TEMPORARY TRAFFIC CONTROL.
- (13) ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
- (14) SIDE STREET, DRIVEWAY ACCESS, AND SAFE PEDESTRIAN WAYS SHALL BE MAINTAINED AT ALL TIMES.
- (15) PORTABLE BARRIER RAIL AND/OR DRUMS WITH TYPE "C" WARNING LIGHTS SHALL DELINEATE THE EDGE OF PAVEMENT THROUGH THE ENTIRE CONSTRUCTION AREA.
- (16) CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SIGNS OR DEVICES DURING CONSTRUCTION AND THEY SHALL REMAIN COVERED DURING CONSTRUCTION AND UNTIL SUCH TIME THAT NO CONFLICT EXISTS.
- (17) DURING CONSTRUCTION, A MINIMUM OF ONE 12 FOOT LANE OF TRAFFIC SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.
- (18) ALL TEMPORARY OR PERMANENT TRAVELED SURFACES SHALL BE INSPECTED DAILY BY THE CONTRACTOR (INCLUDING WEEKENDS) AND NECESSARY PATCHING OR REFINISHING PERFORMED.
- (19) MARKINGS SHALL BE MAINTAINED IN LONG-TERM STATIONARY WORK AREAS AND SHALL MATCH AND MEET THE MARKINGS IN PLACE AT BOTH ENDS OF THE WORK AREA.
- (20) CENTERLINE/LANE LINES SHOULD BE PLACED, REPLACED, OR DELINEATED WHERE APPROPRIATE BEFORE THE ROADWAY IS OPENED TO TRAFFIC.
- (21) THE APPROPRIATE TRAFFIC CONTROL SHALL BE INSTALLED AT THE INCEPTION OF EACH STAGE OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND/OR OPERATED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER.
- (22) OBLITERATED MARKINGS SHALL BE UNIDENTIFIABLE AS PAVEMENT MARKINGS UNDER DAY OR NIGHT, WET OR DRY CONDITIONS. OVERLAYING EXISTING STRIPES WITH BLACK PAINT OR ASPHALT DOES NOT MEET THE REQUIREMENTS OF COVERING, REMOVAL, OR OBLITERATION; HOWEVER, THE USE OF REMOVABLE, NONREFLECTIVE, PREFORMED, TAPE IS PERMITTED WHERE MARKINGS NEED TO BE COVERED TEMPORARILY.
- (23) AT NO TIME SHALL ONE LANE SECTION BE LEFT OPEN UNATTENDED. WHERE TWO FLAGGERS ARE REQUIRED AND IN CIRCUMSTANCES WHERE ONLY ONE LANE OF TRAFFIC IS OPEN AND THERE IS NO CLEAR LINE OF SIGHT FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, THE CONTRACTOR SHALL PROVIDE RADIO COMMUNICATION OR OTHER APPROPRIATE MEANS OF ESTABLISHING CONTROL OF TRAFFIC.
- (24) ANY TIME FLAGGER IS NOT PRESENT TO CONTROL TRAFFIC, TWO TRAFFIC LANES MUST BE OPEN TO MAINTAIN TWO-WAY TRAFFIC, AND ALL INAPPROPRIATE SIGNS SHALL BE COVERED OR REMOVED.
- (25) ALL FLAGGERS SHALL BE EQUIPPED WITH A STOP/SLOW PADDLE.
- (26) NO LESS THAN FOURTEEN (14) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE SHELBY COUNTY ROAD DEPARTMENT AND OBTAIN THEIR APPROVAL FOR THE CLOSURE SCHEDULE.
- (27) TWO WAY TRAFFIC SHALL BE MAINTAINED AFTER NORMAL WORKING HOURS.

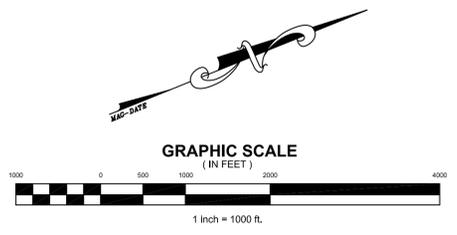
SLEDGE ROAD SHALL ONLY BE CLOSED FOR THIRTY (30) DAYS.

**TRAFFIC CONTROL LEGEND**

SIGN . . . . .

TYPE III BARRICADE . . . . .

TRAFFIC CONTROL QUANTITIES			
ITEM NO.	DESCRIPTION	M.U.T.C.D. DESIGNATION	TOTAL UNITS
712-06	SIGN (CONSTRUCTION)	R11-2	2 EACH
		SP-1	6 EACH
		SP-2	1 EACH
		M4-10L	3 EACH
		M4-10R	5 EACH
		R11-2	2 EACH
		R11-4	2 EACH
		W20-3	6 EACH
		TYPE III BARRICADE	2 EACH



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



SHEET 15 OF 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
 TRAFFIC CONTROL - DETOUR PLAN - PHASE 2

SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
 DESIGN BY: B.A.M. DATE: 10/2012 BOOK:  
 DRAWN BY: B.A.M. DATE: 10/2012 SCALE: 1"=1000'

**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

**TRAFFIC CONTROL NOTES**

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) SEE PAGE 6F-7 STATE OF TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR HEIGHT AND LATERAL LOCATION OF SIGNS.

- (9) SIGNS SHOWN ON THIS PLAN ARE TO WARN TRAFFIC ABOUT THE CONSTRUCTION. OTHER TRAFFIC CONTROL DEVICES MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
- (10) NOTHING IN THIS PLAN IS INTENDED TO SUPERSEDE OR RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING THE APPROPRIATE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT STATE OF TENNESSEE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
- (11) ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION BEGINS.
- (12) ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL MEET THE STANDARD PRESCRIBED IN THE STATE OF TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL COMPLY WITH THE STATE OF TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 712 TEMPORARY TRAFFIC CONTROL.
- (13) ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
- (14) SIDE STREET, DRIVEWAY ACCESS, AND SAFE PEDESTRIAN WAYS SHALL BE MAINTAINED AT ALL TIMES.
- (15) PORTABLE BARRIER RAIL AND/OR DRUMS WITH TYPE "C" WARNING LIGHTS SHALL DELINEATE THE EDGE OF PAVEMENT THROUGH THE ENTIRE CONSTRUCTION AREA.
- (16) CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SIGNS OR DEVICES DURING CONSTRUCTION AND THEY SHALL REMAIN COVERED DURING CONSTRUCTION AND UNTIL SUCH TIME THAT NO CONFLICT EXISTS.
- (17) DURING CONSTRUCTION, A MINIMUM OF ONE 12 FOOT LANE OF TRAFFIC SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.
- (18) ALL TEMPORARY OR PERMANENT TRAVELED SURFACES SHALL BE INSPECTED DAILY BY THE CONTRACTOR (INCLUDING WEEKENDS) AND NECESSARY PATCHING OR REFINISHING PERFORMED.
- (19) MARKINGS SHALL BE MAINTAINED IN LONG-TERM STATIONARY WORK AREAS AND SHALL MATCH AND MEET THE MARKINGS IN PLACE AT BOTH ENDS OF THE WORK AREA.
- (20) CENTERLINE/LANE LINES SHOULD BE PLACED, REPLACED, OR DELINEATED WHERE APPROPRIATE BEFORE THE ROADWAY IS OPENED TO TRAFFIC.
- (21) THE APPROPRIATE TRAFFIC CONTROL SHALL BE INSTALLED AT THE INCEPTION OF EACH STAGE OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND/OR OPERATED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER.

- (22) OBLITERATED MARKINGS SHALL BE UNIDENTIFIABLE AS PAVEMENT MARKINGS UNDER DAY OR NIGHT, WET OR DRY CONDITIONS. OVERLAYING EXISTING STRIPES WITH BLACK PAINT OR ASPHALT DOES NOT MEET THE REQUIREMENTS OF COVERING, REMOVAL, OR OBLITERATION; HOWEVER, THE USE OF REMOVABLE, NONREFLECTIVE, PREFORMED, TAPE IS PERMITTED WHERE MARKINGS NEED TO BE COVERED TEMPORARILY.
- (23) AT NO TIME SHALL ONE LANE SECTION BE LEFT OPEN UNATTENDED. WHERE TWO FLAGGERS ARE REQUIRED AND IN CIRCUMSTANCES WHERE ONLY ONE LANE OF TRAFFIC IS OPEN AND THERE IS NO CLEAR LINE OF SIGHT FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, THE CONTRACTOR SHALL PROVIDE RADIO COMMUNICATION OR OTHER APPROPRIATE MEANS OF ESTABLISHING CONTROL OF TRAFFIC.
- (24) ANY TIME FLAGGER IS NOT PRESENT TO CONTROL TRAFFIC, TWO TRAFFIC LANES MUST BE OPEN TO MAINTAIN TWO-WAY TRAFFIC, AND ALL INAPPROPRIATE SIGNS SHALL BE COVERED OR REMOVED.
- (25) ALL FLAGGERS SHALL BE EQUIPPED WITH A STOP/SLOW PADDLE.
- (26) NO LESS THAN FOURTEEN (14) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE SHELBY COUNTY ROAD DEPARTMENT AND OBTAIN THEIR APPROVAL FOR THE CLOSURE SCHEDULE.
- (27) TWO WAY TRAFFIC SHALL BE MAINTAINED AFTER NORMAL WORKING HOURS.

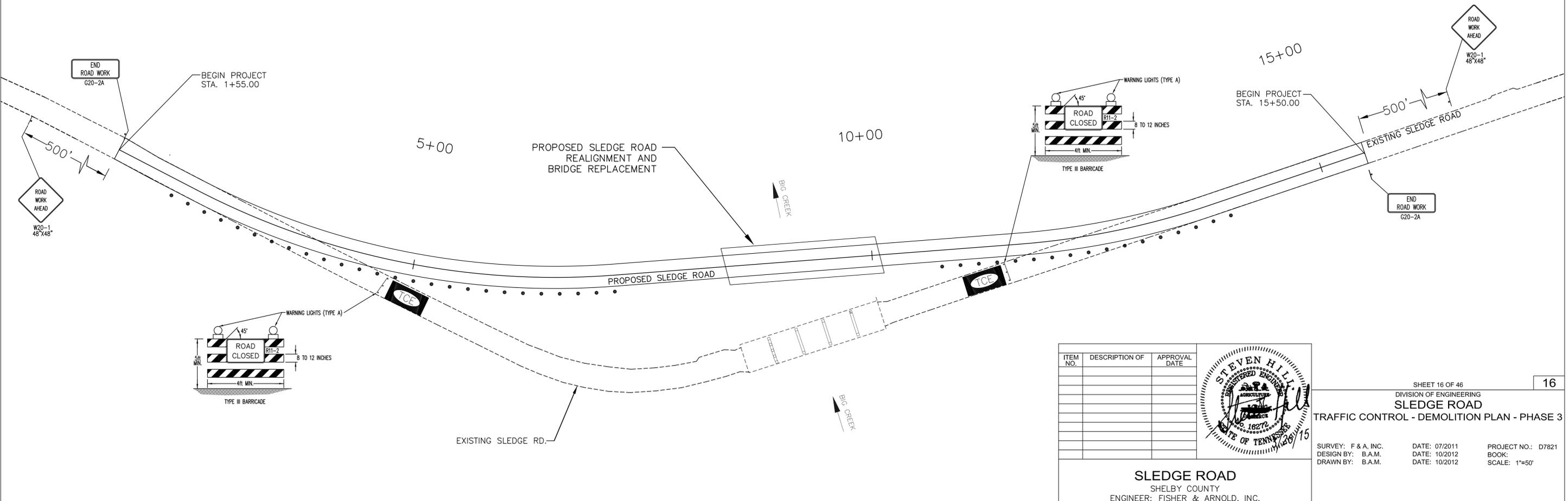
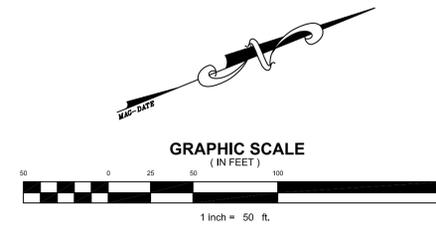
**TRAFFIC CONTROL LEGEND**

SIGN .....  
 FLEXIBLE DRUMS W/WARNING LIGHTS (TYPE A) .....  
 TYPE III BARRICADE .....

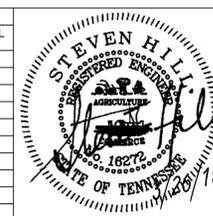
TRAFFIC CONTROL QUANTITIES				
ITEM NO.	DESCRIPTION	M.U.T.C.D. DESIGNATION	TOTAL	UNITS
712-04.01	FLEXIBLE DRUMS	----	43	EACH
712-05.01	WARNING LIGHTS (TYPE A)	----	43	EACH
712-06	SIGN (CONSTRUCTION)	G20-2A	2	EACH
		G20-2A	2	EACH
		R11-2	2	EACH
		W20-1	2	EACH
		TYPE III BARRICADE	2	EACH

**UTILITY NOTES**

1. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION LIMITS. FOR SITE LOCATION OF EXISTING UTILITIES INVOLVING MLG&W, SOUTH CENTRAL BELL, AND/OR TEXAS GAS COMPANY, PLEASE CALL 1-800-351-1111.



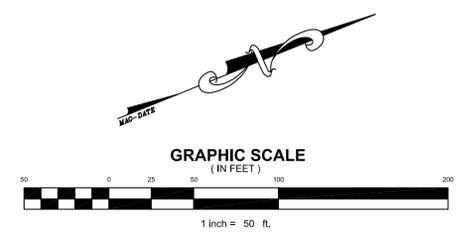
ITEM NO.	DESCRIPTION OF	APPROVAL DATE



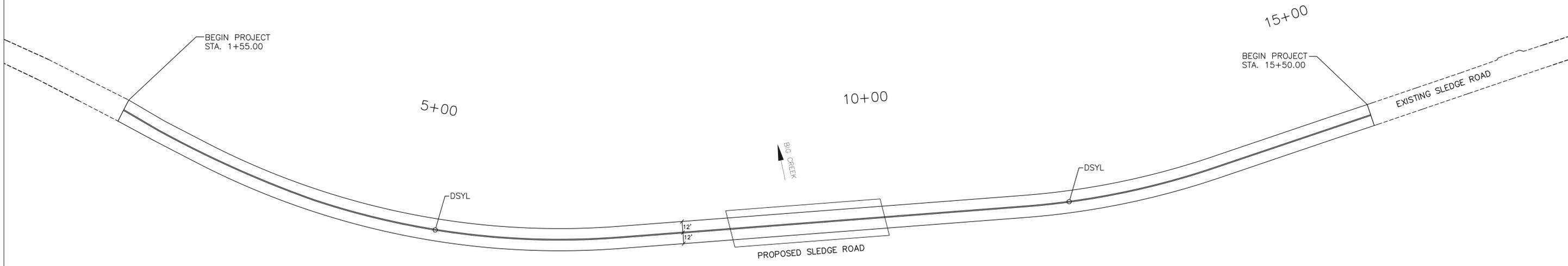
SHEET 16 OF 46 16  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
 TRAFFIC CONTROL - DEMOLITION PLAN - PHASE 3

SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
 DESIGN BY: B.A.M. DATE: 10/2012 BOOK:  
 DRAWN BY: B.A.M. DATE: 10/2012 SCALE: 1"=50'

**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.



**LEGEND**  
 DSYL - DOUBLE SOLID YELLOW LINE



ITEM NO.	DESCRIPTION OF	APPROVAL DATE

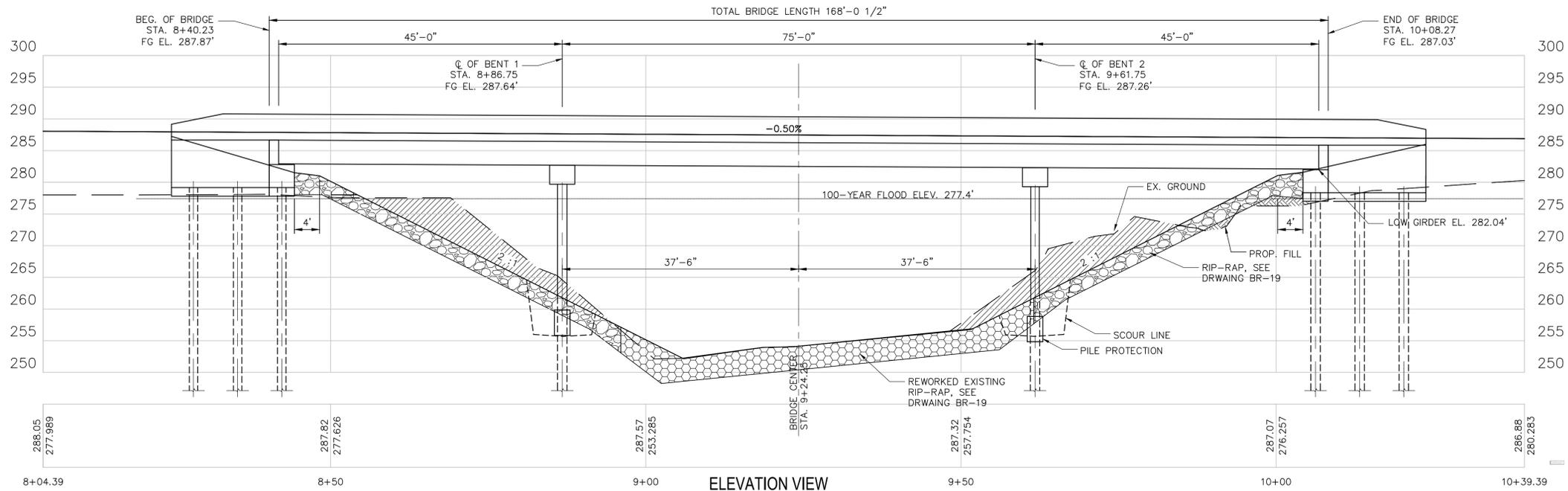


**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: FISHER & ARNOLD, INC.

SHEET 17 OF 46 17

**SLEDGE ROAD**  
 STRIPING PLAN AND SIGNAGE PLAN

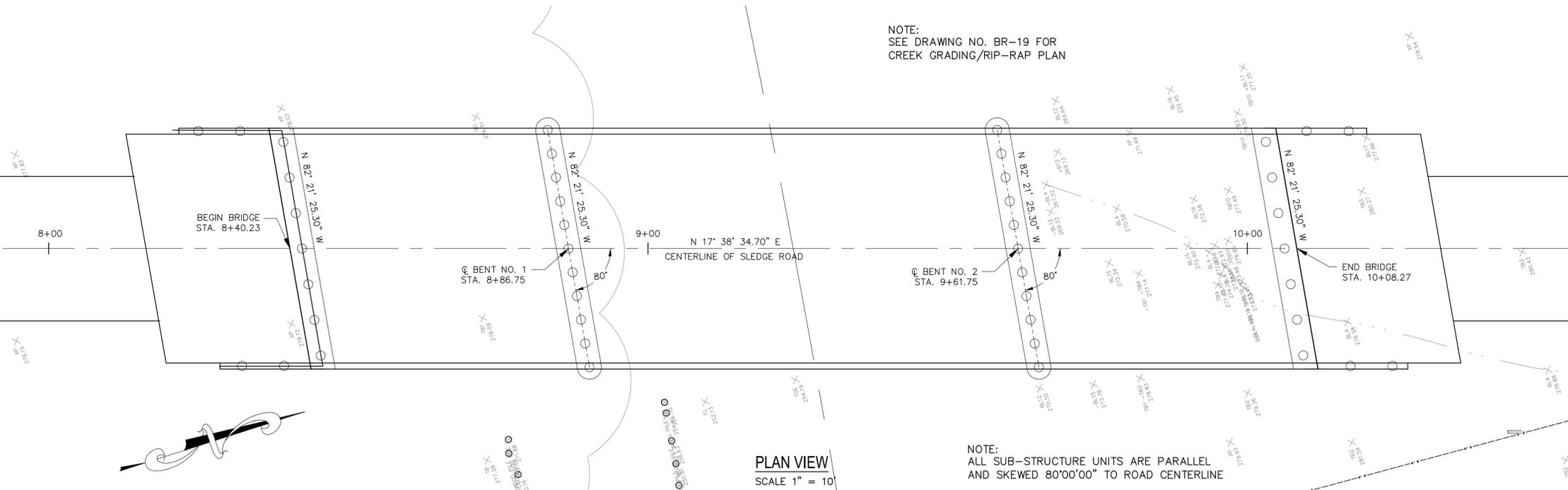
SURVEY: F & A, INC.      DATE: 07/2011      PROJECT NO.: D7821  
 DESIGN BY: B.A.M.      DATE: 10/2012      BOOK:  
 DRAWN BY: B.A.M.      DATE: 10/2012      SCALE: 1"=50'



**HYDRAULIC DATA**

DRAINAGE AREA	53.8 MI <sup>2</sup>
DESIGN FREQUENCY	100 YR
100 YEAR DISCHARGE	13,055 CFS
100 YEAR VELOCITY	6.77 FT/SEC
100 YEAR BACKWATER (AT ELEV. 276.71)	0.05 FT
100 YEAR WATERWAY AREA (BELOW ELEV. 276.71)	1928.30 FT <sup>2</sup>
ROADWAY OVERTOPPING ELEV.	277.0
500 YR BACKWATER ELEV. (@16,599 CFS)	278.19

NOTE:  
SEE DRAWING NO. BR-19 FOR  
CREEK GRADING/RIP-RAP PLAN



**LIST OF BRIDGE DRAWINGS**

DRAWING NUMBER	DESCRIPTION	LAST REVISION DATE
BR-01	LAYOUT OF BRIDGE	
BR-02	GENERAL NOTES	
BR-03	ESTIMATED QUANTITIES	
BR-04	FOUNDATION DATA	
BR-05	TYPICAL SECTION	
BR-06	SLAB PLAN	
BR-07	FRAMING PLAN	
BR-08	UNUSED	
BR-09	BRIDGE SCREED PLAN	
BR-10	PRESTRESSED BEAM (TYPE III) DETAILS SPAN NO. 1 and SPAN NO. 3	
BR-11	PRESTRESSED BEAM (TYPE III) DETAILS SPAN NO. 2	
BR-12	ABUTMENT NO. 1 LAYOUT	
BR-13	ABUTMENT DETAILS	
BR-14	ABUTMENT NO. 2 LAYOUT	
BR-15	UNUSED	
BR-16	BENT LAYOUT	
BR-17	FINAL FOUNDATION PLAN	
BR-18	BILL OF STEEL	
BR-19	CREEK GRADING/ RIP-RAP PLAN	
BR-20	CROSS-SECTIONS OF BIG CREEK	
BR-21	CROSS-SECTIONS OF BIG CREEK	
BR-22	CROSS-SECTIONS OF BIG CREEK	
BR-23	DEMOLITION PLAN - OLD BRIDGE	

**LIST OF STANDARD DRAWINGS**

STANDARD DRAWING NUMBER	LAST REVISION DATE	DESCRIPTION
STD-1-1SS	06/01/11	BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET
STD-1-2SS		SLIDER PLATES AND DECK DRAINS
STD-1-5	06/01/11	REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS
STD-5-2	04/08/05	STANDARD PILE DETAILS
STD-6-1	11/01/10	STANDARD SEISMIC DETAILS
STD-9-1	10/07/08	REINF. BAR SUPPORT DETAILS FOR CONC. SLABS
STD-10-1	04/08/05	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
STD-14-2	11/01/10	STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR I-BEAMS
S-GR-11	11/26/2007	V-BEAM & THIRIE BEAM BARRIER RAIL AND RUB RAIL ALTERNATES
S-GR-12	05/27/2003	V-BEAM BARRIER POST DETAILS AND SPECIFICATIONS
S-GR-13	05/27/2003	BARRIER RAIL MOUNTING POST BLOCK-OUTS WITH VERTICAL ADJUSTMENT HOLES
S-GR-14	04/17/2012	V-BEAM BARRIER FASTENING HARDWARE AND BRIDGE APPROACH DELINEATORS
S-GR-23	09/11/2002	GUARDRAIL ATTACHMENT TO STRUCTURES AND PROTECTIVE GUARDRAIL AT BRIDGE END DETAILS
S-GR-24	05/15/2008	GUARDRAIL END TERMINALS AT BRIDGE ENDS
S-GR-38	06/30/2009	DETAILS FOR CONSTRUCTION OF EARTH PAD FOR TYPE 38 GUARDRAIL END TERMINAL
S-GR-43		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38) POST LAYOUT AND ERECTION DETAILS
S-GR-44		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38) (2 TUBE) GUARDRAIL ELEMENT POST AND ASSEMBLY DETAILS

REVISION	APPROVAL	
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

SHEET 18 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
LAYOUT OF BRIDGE  
BR - 01

SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: BURR & COLE DATE: 04/2015 BOOK:  
DRAWN BY: BURR & COLE DATE: 04/2015 SCALE: AS NOTED

GENERAL DESIGN:

- 1. SPECIFICATIONS, STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION WITH LATEST SUPPLEMENTAL SPECIFICATIONS INCLUDING SHELBY COUNTY, TENNESSEE SPECIAL PROVISIONS (CURRENT EDITION).
2. DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012 WITH AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, 2ND EDITION, 2011, PUBLISHED BY AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

LOADS:

LIVE LOADS: HL-93 AND FATIGUE TRUCK

FUTURE WEARING SURFACE: 35 PSF

SEISMIC DESIGN CRITERIA:

(A) OPERATIONAL CLASSIFICATION: OTHER BRIDGE

(B) SITE CLASS: D
PEAK GROUND ACCELERATION COEFFICIENT PGA = 0.430
SPECTRAL ACCELERATION COEFFICIENT Ss = 0.794
S1 = 0.202
As = 0.460
Sps = 0.939
Sd1 = 0.403

(C) SEISMIC ZONE: 3
(D) SEISMIC DESIGN CATEGORY (SDC): SDC C
(E) REGULAR/IRREGULAR BRIDGE: REGULAR

(F) MINIMUM SEISMIC ANALYSIS METHOD(S): SINGLE-MODE ELASTIC OR UNIFORM LOAD ELASTIC

(G) SEISMIC ANALYSIS METHOD USED: MULTIMODE ELASTIC

CAST IN PLACE CONCRETE:

- 1. CAST IN PLACE CONCRETE SHALL CONFORM TO SECTION 604 OF TDOT SPECIFICATIONS AND SHELBY COUNTY SPECIAL PROVISIONS. CLASS "A" AND CLASS "D" CONCRETE SHALL CONFORM TO SHELBY COUNTY SPECIAL PROVISION SECTION 604.40 AND 604.45 RESPECTIVELY. AS INDICATED IN THESE SECTIONS FLY ASH SHALL NOT BE PERMITTED AND MINIMUM 620 LBS. CEMENT IS REQUIRED IN MIX DESIGN.

BRIDGE DECK, BENT DIAPHRAGMS, ABUTMENT ENDWALLS CLASS "D", f'c= 4500 PSI

BENT CAPS, ABUTMENT BEAMS, WING BEAMS, WING WALLS, INTERMEDIATE DIAPHRAGMS, PAVEMENT AT BRIDGE ENDS, PARAPET, WING POST, COLLAR AROUND STEEL PIPE PILES CONCRETE IN STEEL PIPE PILES CLASS "A", f'c= 4000 PSI

ALL OTHER CONCRETE CLASS "A", f'c= 4000 PSI

BRIDGE DECK:

- 1. BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE (C), SECTION 604.22 OF THE STANDARD SPECIFICATIONS. THE SAME FINISH SHALL BE PROVIDED TO THE PAVEMENT AT BRIDGE ENDS.
2. BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS SHALL BE REMAIN-IN-PLACE STEEL. SEE ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS. PRECAST PRESTRESSED CONCRETE DECK PANELS WILL NOT BE PERMITTED. FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL.
3. ABUTMENT ENDWALLS AND BENT DIAPHRAGMS SHALL BE POURED CONCURRENTLY WITH THE BRIDGE DECK SLAB AND INCLUDED IN THE QUANTITY FOR ITEM NO. 604-03.09.
4. INTERMEDIATE DIAPHRAGMS SHALL BE CAST-IN-PLACE CONCRETE AS SHOWN IN PLANS. PERMANENT STRUCTURAL STEEL DIAPHRAGMS ARE UNACCEPTABLE.
5. TEMPORARY ERECTION DIAPHRAGMS MUST BE USED AT THE ENDS OF PRECAST CONCRETE BEAMS SINCE ABUTMENT ENDWALLS AND BENT DIAPHRAGMS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE STANDARD DRAWING STD-14-2 AND ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE BEAMS TO PREVENT DAMAGE DUE TO TWISTING OR OVERTURNING DURING ALL PHASES OF CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT THE TEMPORARY ERECTION DIAPHRAGMS BE INSTALLED AND THE PERMANENT INTERMEDIATE DIAPHRAGMS BE POURED AND CURED PRIOR TO PLACING ANY LOADS ON THE GIRDERS. HOWEVER, TEMPORARY ERECTION DIAPHRAGMS AND PERMANENT INTERMEDIATE DIAPHRAGMS MUST BE IN PLACE IN THE SPAN AT THE TIME THE SLAB IS BEING POURED.
7. DECK CONCRETE POURING SEQUENCE: TRANSVERSE SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION SUBJECT TO THE FOLLOWING AND APPROVAL OF THE ENGINEER. ALL SLAB CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE SLAB CONSTRUCTION JOINT DETAIL ON DRAWING NO. BR-06.
A. NO CONSTRUCTION JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT.
B. THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED TO WITHIN AT LEAST 15 FEET OF THE SUPPORTS EITHER PRIOR TO OR CONCURRENTLY WITH THE SLAB OVER AN INTERIOR SUPPORT.

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS. REINFORCING STEEL DESIGNATED WITH THE SUFFIX 'E' SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 907.01 OF THE STANDARD SPECIFICATIONS.

STEEL STRUCTURES: SHALL CONFORM TO SECTION 602 OF THE STANDARD SPECIFICATIONS.

WELDING: SHALL CONFORM TO SECTION 602 OF THE STANDARD SPECIFICATIONS.

BEARING DEVICES:

- 1. ELASTOMERIC BEARING PADS SHALL BE IN ACCORDANCE WITH THE DETAILS AND DIMENSIONS SHOWN ON DRAWING BR-10 AND STANDARD DRAWING STD-14-2.
2. ELASTOMERIC BEARING PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

ANCHOR BOLTS: ANCHOR ASSEMBLIES AT BENTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING STD-6-1 AND STD-14-2.

RISER BLOCKS:

- 1. RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH ABUTMENT BEAM AND BENT CAP.
2. RISER BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

STEEL PIPE PILES/ FRICTION PILES:

- 1. PILES SHALL BE 16" DIAMETER X 1/2" THICK STEEL PIPE FILLED WITH CONCRETE AT ABUTMENTS AND BENTS. END CAP AT EACH PILE SHALL BE 3/4" THICK MINIMUM STEEL PLATE AND SHOP WELDED TO PILE.
2. STEEL PIPE PILES SHALL CONFORM TO ASTM A252 GRADE 3 (Fy = 45 KSI). WEATHERING STEEL WILL NOT BE ALLOWED FOR PIPE PILES. ANY PIPE PILE HAVING BENDS, KINKS OR OTHER DEFORMATIONS DURING THE PROCESS OF DRIVING THAT WOULD IMPAIR THE STRENGTH (10% REDUCTION AS DETERMINED BY THE ENGINEER) EFFICIENCY OF THE COMPLETED PILE SHALL BE EITHER REMOVED AND REPLACED OR REPAIRED BY THE CONTRACTOR IN A MANNER SATISFACTORY TO THE ENGINEER. THE CONTRACTOR WILL NOT BE REIMBURSED FOR ANY SUCH PIPE PILE ORDERED REMOVED OR REPLACED BY THE ENGINEER.
3. FULL LENGTH PILES SHALL BE USED WHERE PRACTICABLE. PILES MAY BE SPLICED WITH THE PRIOR APPROVAL OF THE ENGINEER. SPLICES SHALL USE FULL PENETRATION WELDS DESIGNED TO DEVELOP THE FULL STRENGTH OF THE PILE CROSS-SECTION IN TENSION AND COMPRESSION. SEE STANDARD DRAWING STD-5-2 FOR STEEL PILE SPLICE DETAILS. ONLY ONE SPLICE PER 40 LINEAR FEET OF PILE WILL BE ALLOWED. DRIVE ON SPLICES SHALL NOT BE USED AND ONLY COMMERCIAL MANUFACTURED SPLICES WILL BE ALLOWED. SPLICING DETAILS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL. COST TO BE INCLUDED IN THE COST OF PILES.
4. SEE STANDARD DRAWING STD-6-1 FOR STEEL PILE DETAILS AND NOTES.
5. FOR PILE DESIGN LOADS AND CUT-OFF ELEVATIONS, SEE TABLE ON DRAWING BR-04.
6. AFTER EXCAVATION TO THE PROPOSED FOOTING ELEVATIONS, A TEST PILE SHALL BE DRIVEN AT EACH SUBSTRUCTURE AT THE LOCATION DESIGNATED ON DRAWING BR-17. A LOAD TEST SHALL THEN BE APPLIED TO THE TEST PILE IN BENT OR ABUTMENT. FROM THE RESULTS OF THE LOAD TEST, THE ENGINEER OF RECORD WILL DETERMINE THE REQUIRED LENGTH OF THE PRODUCTION PILES AND MINIMUM REQUIRED BEARING.
7. THE CONTRACTOR SHALL INSTALL PILING SUCH THAT ALL THE FOLLOWING REQUIREMENTS ARE MET. THE TIP ELEVATION FOR ALL TEST PILES AND PRODUCTION PILES SHALL BE EQUAL TO OR BELOW THE MINIMUM PILE TIP ELEVATION SHOWN ON THE PLANS. IN ADDITION, TEST PILES TO BE LOAD TESTED SHALL BE INSTALLED TO AT LEAST THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH; ALL OTHER TEST PILES SHALL BE INSTALLED TO AT LEAST 1.5 TIMES THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH. ALL PRODUCTION PILES SHALL BE INSTALLED FULL LENGTH UNLESS EXCESSIVELY HARD DRIVING WHICH MIGHT DAMAGE THE PILES IS ENCOUNTERED. IF THE PRODUCTION PILES DO NOT ACHIEVE THE MINIMUM REQUIRED BEARING, THE ENGINEER OF RECORD WILL DETERMINE IF ADDITIONAL PILES ARE REQUIRED.
8. IN THE EVENT THAT DRIVING THE TEST PILE TO AT LEAST THE MINIMUM TIP ELEVATION OR DRIVING THE PRODUCTION PILE FULL LENGTH MIGHT DAMAGE THE PILE BECAUSE OF EXCESSIVELY HARD DRIVING, THE CONTRACTOR SHALL USE OTHER METHODS APPROVED BY THE ENGINEER FOR INSTALLING THE PILES SUCH AS JETTING OR PRE-DRILLING HOLES. HOWEVER, ALL PILES MUST BE DRIVEN BY HAMMER FOR THE LAST FEW FEET OF PENETRATION. NO MEASUREMENT FOR PAYMENT WILL BE MADE FOR PRE-DRILLING HOLES OR FOR JETTING PILING TO OBTAIN THE REQUIRED PILE PENETRATION.
9. THE PILE LOAD TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIFICATIONS. THE PILE LOAD TEST APPARATUS FOR APPLYING LOADS AND MEASURING MOVEMENT SHALL MEET THE REQUIREMENTS OF ASTM D1143, STANDARD METHOD OF TESTING PILES UNDER STATIC AXIAL COMPRESSIVE LOAD. WHEN INSUFFICIENT CLEARANCE IS AVAILABLE WITHIN AN EXCAVATION, THE CLEARANCE REQUIREMENTS IN ARTICLE 4.1.1 MAY BE REDUCED, BUT ONLY WITH PRIOR APPROVAL OF THE ENGINEER.
10. ALTERNATE PILES: THE CONTRACTOR MAY USE PILING OF A DIFFERENT MATERIAL OR CONFIGURATION FROM THAT SHOWN ON THE PLANS PROVIDED THE SUBSTITUTION MEETS MINIMUM DESIGN STANDARDS AND SPECIFICATIONS AND IS APPROVED BY THE ENGINEER. ANY ADDITIONAL COST DUE TO SUBSTITUTION IS TO BE PAID BY THE CONTRACTOR.
11. THE FILLS AT THE ENDS OF THE BRIDGE SHALL BE IN PLACE AND FILL THOROUGHLY COMPACTED BEFORE ANY ABUTMENT PILES ARE DRIVEN.

PILE PROTECTION SYSTEMS:

- 1. AT THE BENT LOCATIONS SPECIFIED ON THE PLANS, AND AFTER THE STEEL PILES HAVE BEEN DRIVEN TO THEIR FINAL ELEVATION, A CONCRETE COLLAR AS DETAILED ON STANDARD DRAWING STD-5-2 SHALL BE CONSTRUCTED ONE (1) FOOT ABOVE AND THREE (3) FEET BELOW THE FINISHED GROUND ELEVATION INDICATED ON THE CONTRACT PLANS.

- 2. STEEL PILES THAT EXTEND ABOVE THE GROUND OR WATER SURFACE SHALL BE PAINTED AS SPECIFIED IN SUBSECTION 606.19 OF THE STANDARD SPECIFICATIONS. THE TOP COAT COLOR SHALL BE MOUNTAIN GRAY, FED. SPEC. NO. 36440, FEDERAL COLOR STANDARD 595B. PAINT PROTECTION SHALL EXTEND FROM TOP OF CONCRETE COLLAR TO TOP OF PILE. INSTEAD OF FIELD PAINTING, STEEL PILES MAY BE SHOP PAINTED PROVIDED THE CONTRACTOR REPAIRS TO THE SATISFACTION OF THE ENGINEER ANY AREAS DAMAGED DUE TO HANDLING OR INSTALLATION.

BRIDGE RAIL SYSTEM:

- 1. BRIDGE RAILINGS INCLUDING PARAPET AND WINGPOST SHALL BE CONSTRUCTED ACCORDING TO STANDARD DRAWING STD-1-1SS.
2. BUILD BRIDGE DECK DRAINS/SCUPPER ACCORDING TO DETAIL SHOWN ON DRAWING BR-05. SCUPPER LOCATIONS SHOWN ON FRAMING PLAN DRAWING BR-07. SEE STANDARD DRAWING STD-1-2SS FOR ADDITIONAL DETAILS.
3. WHEN POURING THE SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE ENTIRE DECK SLAB IS POURED AND CURED.
4. WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS.
5. WHEN POURING WING POST, PROVISIONS SHALL BE MADE FOR SETTING INSERT ASSEMBLIES FOR GUARDRAIL. SEE DRAWING STD-1-1SS FOR INSERT ASSEMBLIES.

NOTE: THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS INSTALLING DECKING ABOVE 15 FEET.

PAVEMENT AT BRIDGE ENDS: BUILD PAVEMENT AT BRIDGE ENDS ACCORDING TO DRAWING STD-1-5. BRIDGE END DRAINS HOWEVER WILL NOT BE USED.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS B IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS. MACHINED RIP-RAP SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM 709-05.08.

SHOP DRAWINGS: SEE SECTION 105.02 OF TDOT STANDARD SPECIFICATIONS AND SECTION 105A OF SHELBY COUNTY SPECIAL PROVISIONS.

VALUE ENGINEERING ALTERNATE BRIDGE DESIGN CRITERIA: ALTERNATE BRIDGE DESIGN PROPOSALS MAY NOT DIMINISH THE FUNCTIONAL OR STRUCTURAL EQUIVALENCY OF THE BRIDGE AND MUST MEET OR EXCEED BOTH THE SERVICE LEVEL AND ULTIMATE CAPACITIES OF THE CONTRACT PLANS STRUCTURE. ADDITIONALLY, THE WATERWAY OPENING AND FLOOD CLEARANCES MAY NOT BE REDUCED; FOR GRADE SEPARATIONS, THE HORIZONTAL CLEARANCES MAY NOT BE REDUCED, NOR MAY THE VERTICAL CLEARANCES BE LESS THAN THE MINIMUM ACCEPTABLE FOR THE TYPE FACILITY CROSSED. ALTERNATE DESIGNS WILL REQUIRE APPROVAL OF THE ENGINEER.

FINISHING CONCRETE SURFACES WITH APPLIED TEXTURE FINISH:

- 1. CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE TENNESSEE STANDARD SPECIFICATION. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE.
2. IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH THIS SHEET, ALL EXPOSED SURFACES OF WINGWALLS, EXTERIOR PORTIONS/ENDS OF ABUTMENT ENDWALL, ABUTMENT BEAM AND BENTS ARE TO RECEIVE AN APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. NO. 36440, FEDERAL COLOR STANDARD 595B). THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.01.

UTILITIES:

- 1. IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES SHALL BE BORNE BY OTHERS AND NOT BE PAID FOR AS A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.
2. 12"Ø DUCTILE IRON PIPE WATER MAIN:
A. SLEEVE OPENING IS REQUIRED IN ABUTMENT ENDWALLS, BENT DIAPHRAGMS AND INTERMEDIATE DIAPHRAGMS TO ACCOMMODATE WATER MAIN AS INDICATED ON DRAWINGS BR-05, BR-07, BR-12 AND BR-14.
B. SLEEVE FOR WATER MAIN SHALL EXTEND FROM ABUTMENT ENDWALL TO END OF PAVEMENT AT BRIDGE ENDS, BOTH ENDS OF BRIDGE.
C. THE WATER MAIN IS TO BE SUSPENDED AS PER HANGER ASSEMBLY INDICATED ON DRAWING BR-05.
D. THE SLEEVES AND HANGER ASSEMBLY FRAMING INCLUDING SLAB INSERTS SHALL BE FURNISHED BY MLG&W.
E. INSTALLATION OF SLEEVES AND SLAB INSERTS FOR HANGERS SHALL BY PERFORMED BY THE CONTRACTOR. INSTALLATION OF WATER MAIN AND HANGER ASSEMBLY SHALL BE PERFORMED BY MLG&W.

Table with 4 columns: Abbreviations, ADD'L, ANCH. B, BM, BRG., CLR., CONC., CONSTR., CONT., EA., E.E., E.F., EL., EMB., E.W., EXIST., EXP., FED., F.G.L., FIN., FT., GALV., HORIZ., ADDITIONAL, ANCHOR, BOTTOM, BEAM, BEARING, CLEAR, CONCRETE, CONSTRUCTION, CONTINUOUS, EACH, EACH END, EACH FACE, ELEVATION, EMBEDMENT, EACH WAY, EXISTING, EXPANSION, FEDERAL, FINISHED GRADE LEVEL, FINISHED, FOOT, GALVANIZED, HORIZONTAL, L, MAX., MIN., NO., O.C., O.F., PP, PL, PROJ., REINF., REQ'D, S/W, SPEC., STA., STD., T, THK., TYP., U.N.O., VERT., W.P., WT., ANGLE, MAXIMUM, MINIMUM, NUMBER, ON CENTER, OUTSIDE FACE, PIPE PILE(S), PLATE, PROJECTION, REINFORCED, REQUIRED, SPLICED WITH SPACE(S), SPECIFICATION, STATION, STANDARD, TOP, THICKNESS, TYPICAL, UNLESS NOTED OTHERWISE, VERTICAL, WORK POINT, WEIGHT

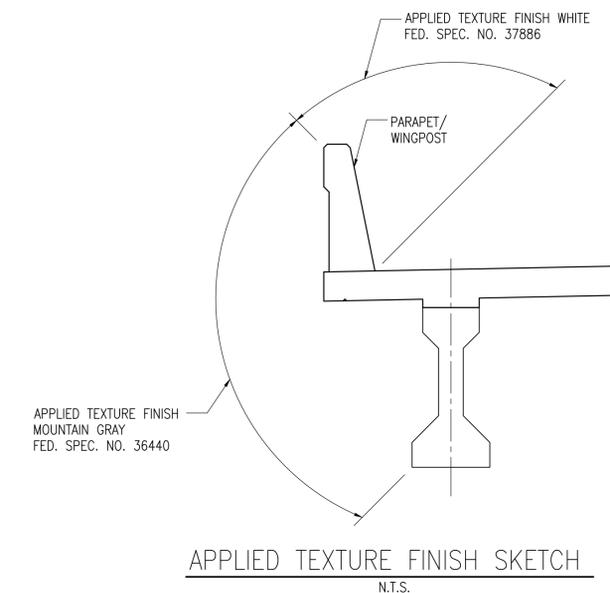
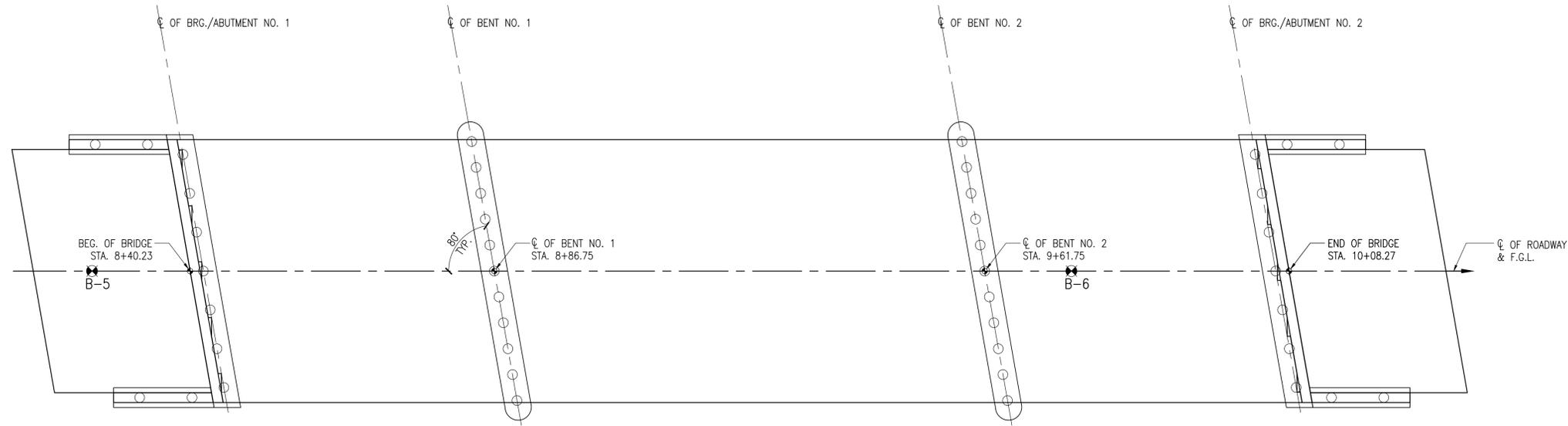


Table with 3 columns: REVISION, ITEM NO., DESCRIPTION OF CHANGE, APPROVAL DATE. Includes a circular seal for GARGI A. TALATI, REGISTERED ENGINEER, CIVIL, No. 10554, STATE OF TENNESSEE. Below the table is the text 'SLEDGE ROAD SHELBY COUNTY ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.'

SHEET 19 of 46 BR - 02 DIVISION OF ENGINEERING SLEDGE ROAD BRIDGE BRIDGE GENERAL NOTES SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00 DESIGNED BY: GAT DATE: 04/2015 BOOK: DRAWN BY: GAT DATE: 04/2015 SCALE: AS NOTED





PLAN AND BORING LOCATION

SCALE 1" = 10'

LOCATION	ULTIMATE DESIGN LOAD ; SERVICE DESIGN LOAD X 2 (TON)	PILE CUT-OFF ELEV. (P.C.O.) (FT)	ESTIMATED PILE LENGTH (FT)	TEST PILE LENGTH (FT)	MINIMUM PILE TIP ELEV. (FT)
ABUTMENT NO. 1	100	280.547	70	80	225
ABUTMENT NO. 2	100	279.727	55	65	225
BENT NO. 1	140	280.324	75	85	210
BENT NO. 2	140	279.949	65	75	215

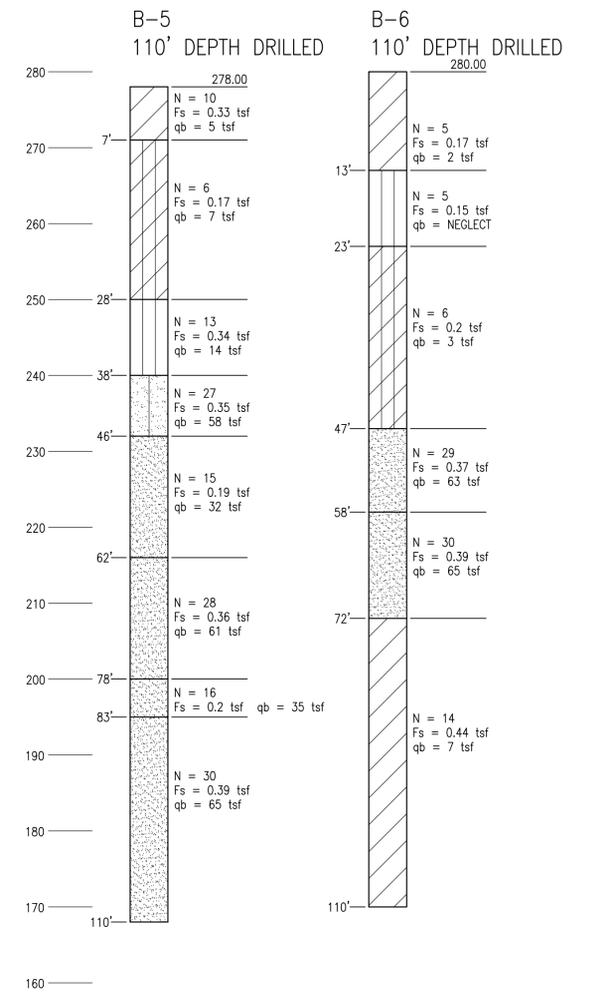
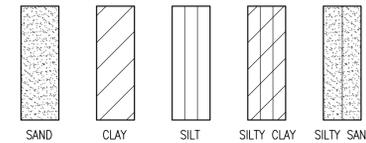
POINT	STATION	OFFSET	NORTHING	EASTING	GROUND ELEVATION
B-5	8+25	0.000			278
B-6	9+75	0.000			280

NOTES

Fs AND qb VALUES SHOWN ARE FOR DRIVEN STEEL PILES.  
THIS DRAWING IS FOR FOUNDATION DATA ONLY AND IS NOT TO BE USED AS A LAYOUT

LEGEND

N = AVERAGE N VALUE FOR INTERVAL SHOWN  
Fs = ULTIMATE SKIN FRICTION RESISTANCE  
qb = ULTIMATE END BEARING CAPACITY



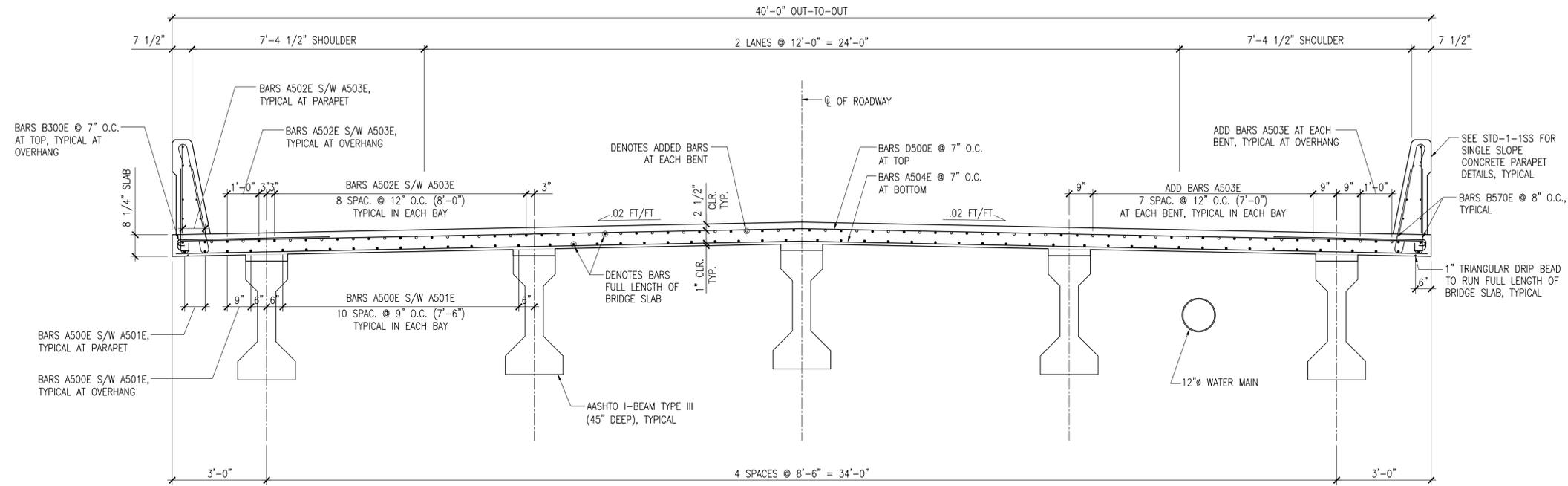
REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

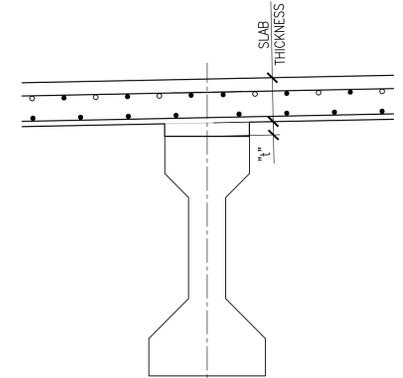
SHEET 21 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
FOUNDATION DATA  
SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: BZ DATE: 04/2015 BOOK:  
DRAWN BY: BZ DATE: 04/2015 SCALE: AS NOTED

BR - 04



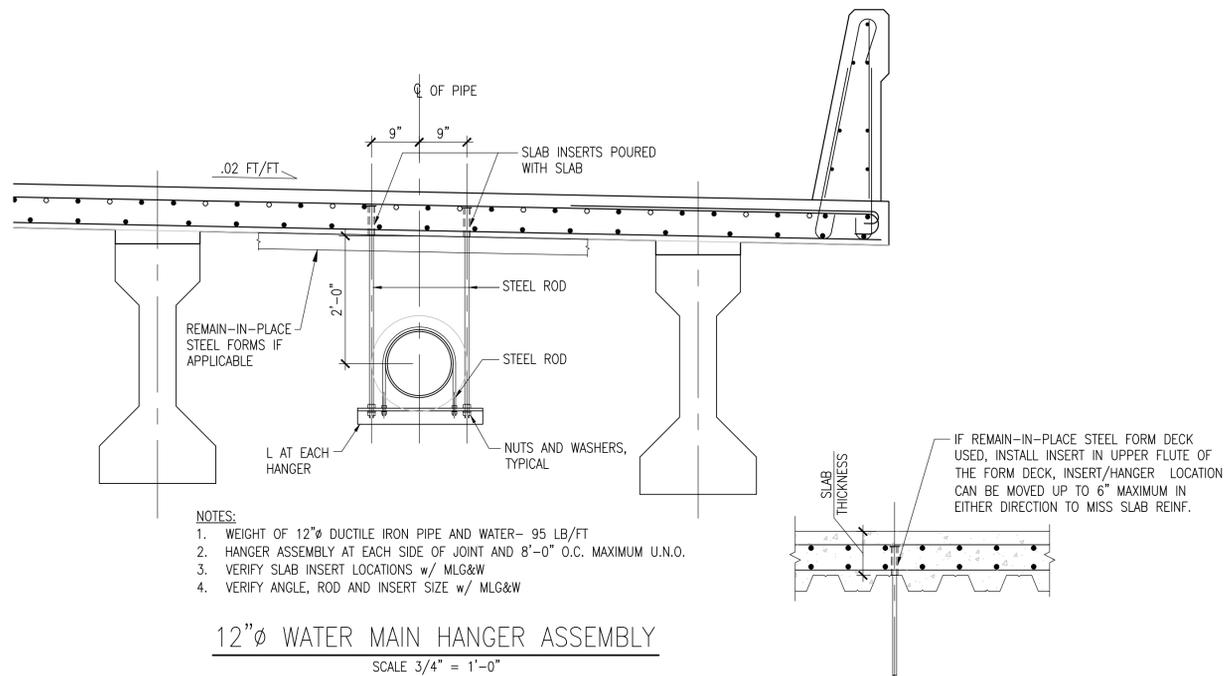
TYPICAL BRIDGE CROSS SECTION - (LOOKING AHEAD)  
SCALE 1/2" = 1'-0"

- NOTES:**
- SEE DWG. NO. BR-06 FOR SLAB REINFORCEMENT PLAN AND BAR DESIGNATION.
  - SEE DWG. NO. BR-07 FOR INTERMEDIATE AND BENT DIAPHRAGM DETAILS.



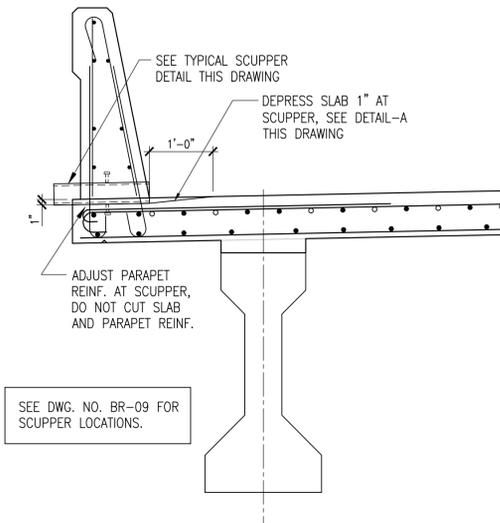
AFTER THE BEAMS ARE IN PLACE, THE CONTRACTOR SHALL FIELD MEASURE THE TOP OF BEAM ELEVATIONS. FINISH GRADE ELEVATIONS MINUS TOP OF BEAM ELEVATIONS, MINUS THE SLAB THICKNESS PLUS THE ALGEBRAIC DEAD LOAD DEFLECTIONS EQUAL THE REQUIRED THICKNESS "t". SEE DRAWING NO. BR-09 FOR SCREED PLAN AND BR-06 FOR DEAD LOAD CORRECTION CURVE.

FILLET DETAIL  
SCALE 3/4" = 1'-0"



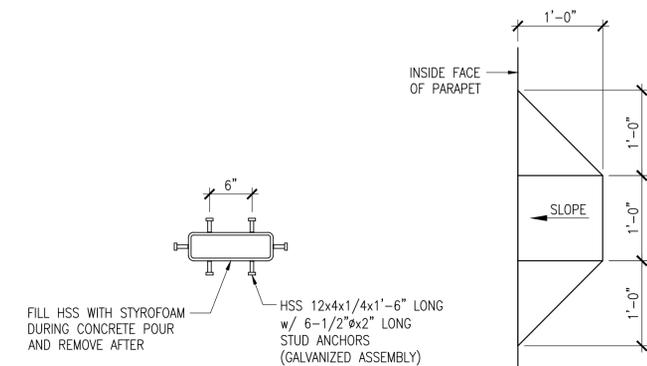
- NOTES:**
- WEIGHT OF 12" DUCTILE IRON PIPE AND WATER - 95 LB/FT
  - HANGER ASSEMBLY AT EACH SIDE OF JOINT AND 8'-0" O.C. MAXIMUM U.N.O.
  - VERIFY SLAB INSERT LOCATIONS w/ MLG&W
  - VERIFY ANGLE, ROD AND INSERT SIZE w/ MLG&W

12" WATER MAIN HANGER ASSEMBLY  
SCALE 3/4" = 1'-0"

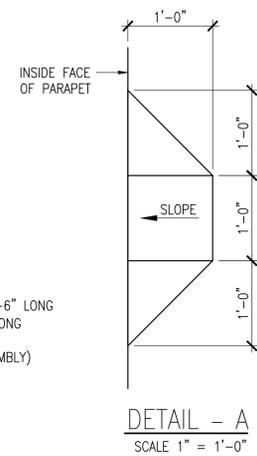


SEE DWG. NO. BR-09 FOR SCUPPER LOCATIONS.

SCUPPER THRU PARAPET DETAIL  
SCALE 3/4" = 1'-0"



TYPICAL SCUPPER DETAIL  
SCALE 1" = 1'-0"



DETAIL - A  
SCALE 1" = 1'-0"

REVISION	APPROVAL
ITEM NO.	DESCRIPTION OF CHANGE

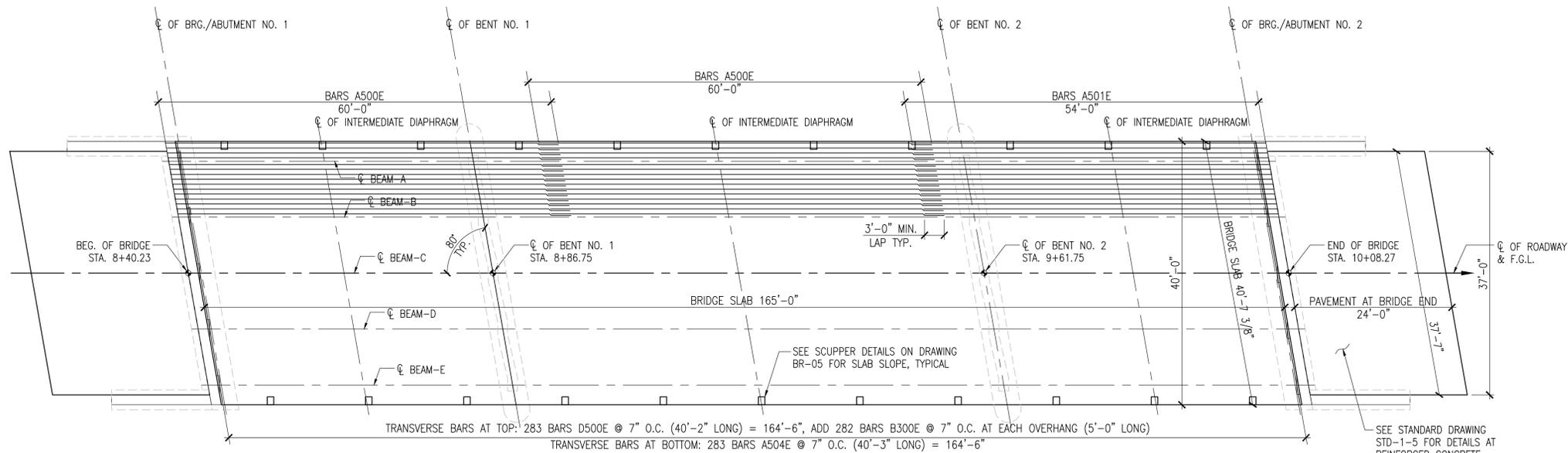


**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

SHEET 22 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
TYPICAL SECTION

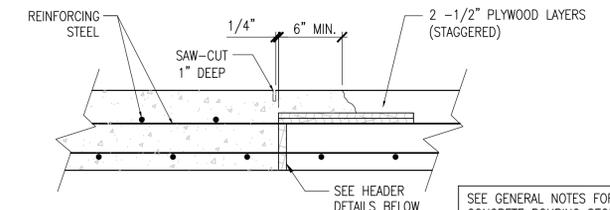
SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: BZ DATE: 04/2015 BOOK:  
DRAWN BY: GAT DATE: 04/2015 SCALE: AS NOTED

BR - 05



SLAB PLAN - TOP AND BOTTOM TRANSVERSE REINF. AND BOTTOM LONGITUDINAL REINF.

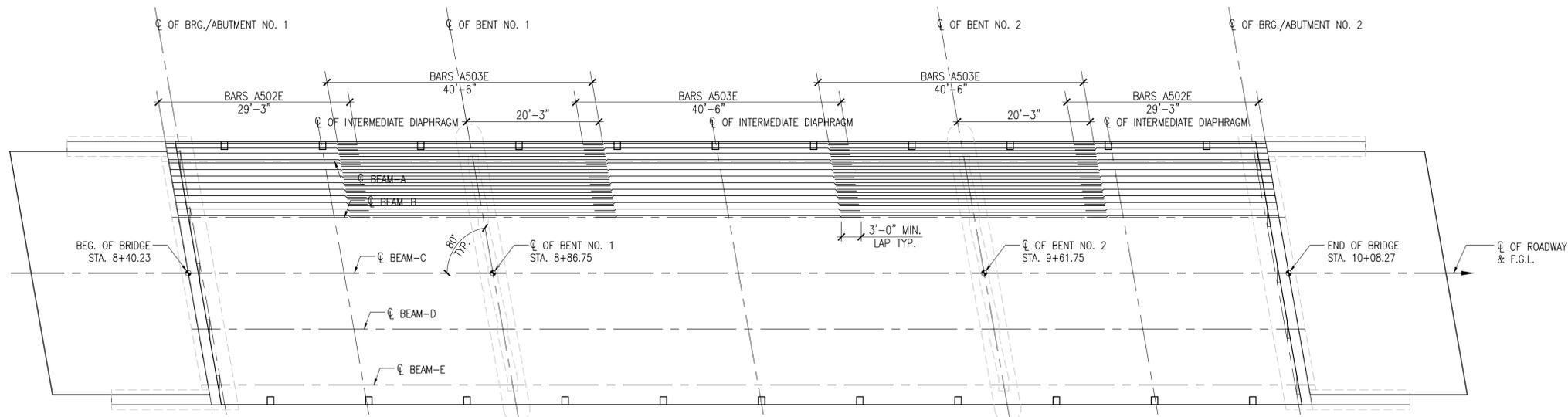
SCALE 1" = 10'



SLAB CONSTRUCTION JOINT DETAIL

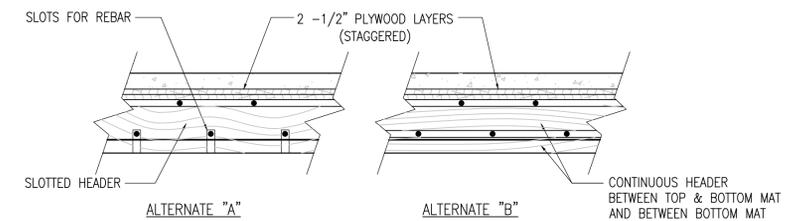
SCALE N.T.S.

SEE GENERAL NOTES FOR DECK CONCRETE POURING SEQUENCE



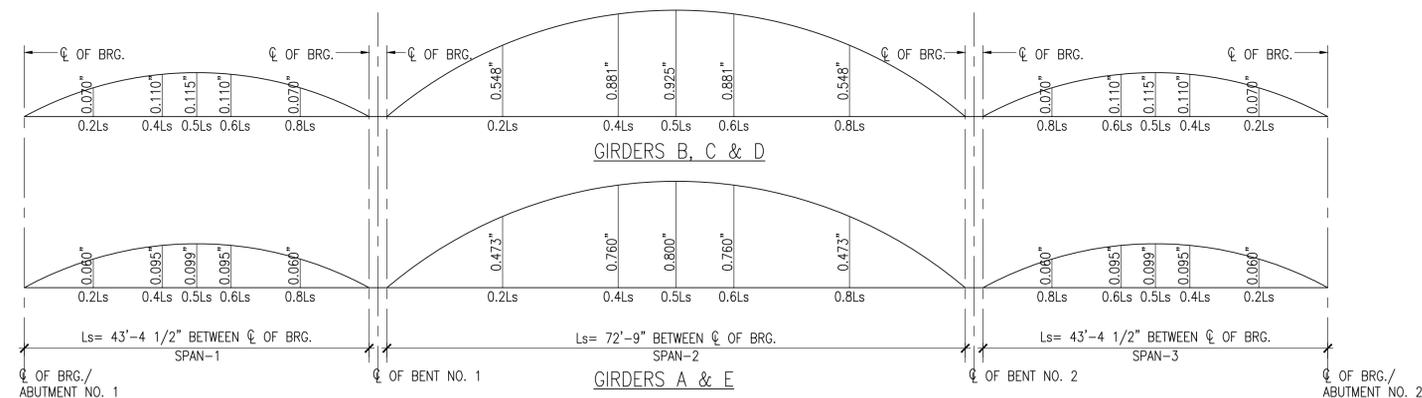
SLAB PLAN - TOP LONGITUDINAL REINF.

SCALE 1" = 10'



ALTERNATE HEADER DETAILS

SCALE N.T.S.



DEAD LOAD CORRECTION CURVE

THIS CURVE IS FOR SLAB DEAD LOAD AND ALL DEAD LOADS THAT ARE APPLIED AFTER THE SLAB IS IN PLACE

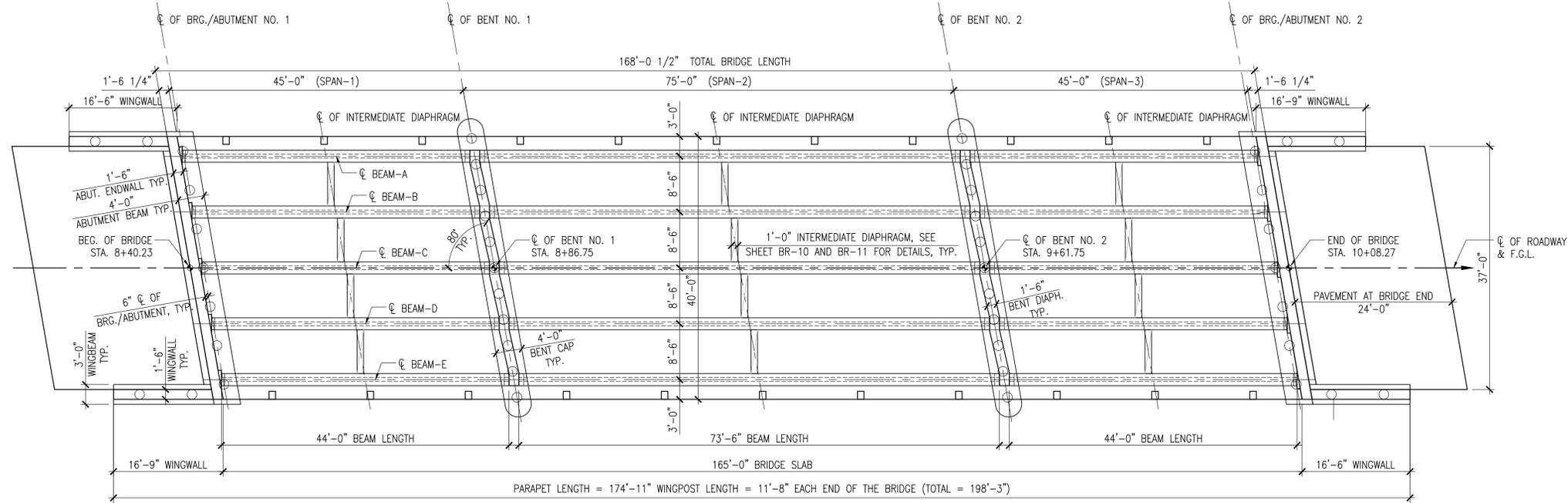
REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

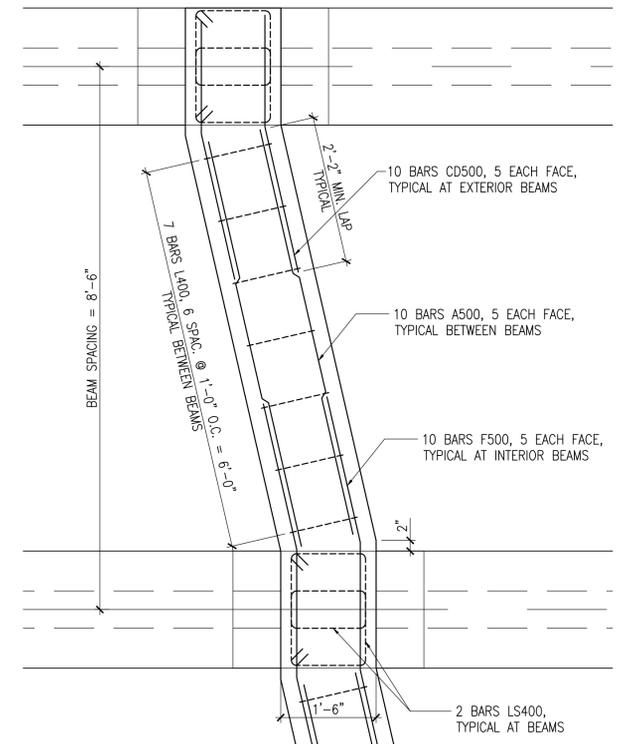
SHEET 23 of 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
 SLAB PLAN  
 SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
 DESIGNED BY: GAT DATE: 04/2015 BOOK:  
 DRAWN BY: GAT DATE: 04/2015 SCALE: AS NOTED

BR - 06



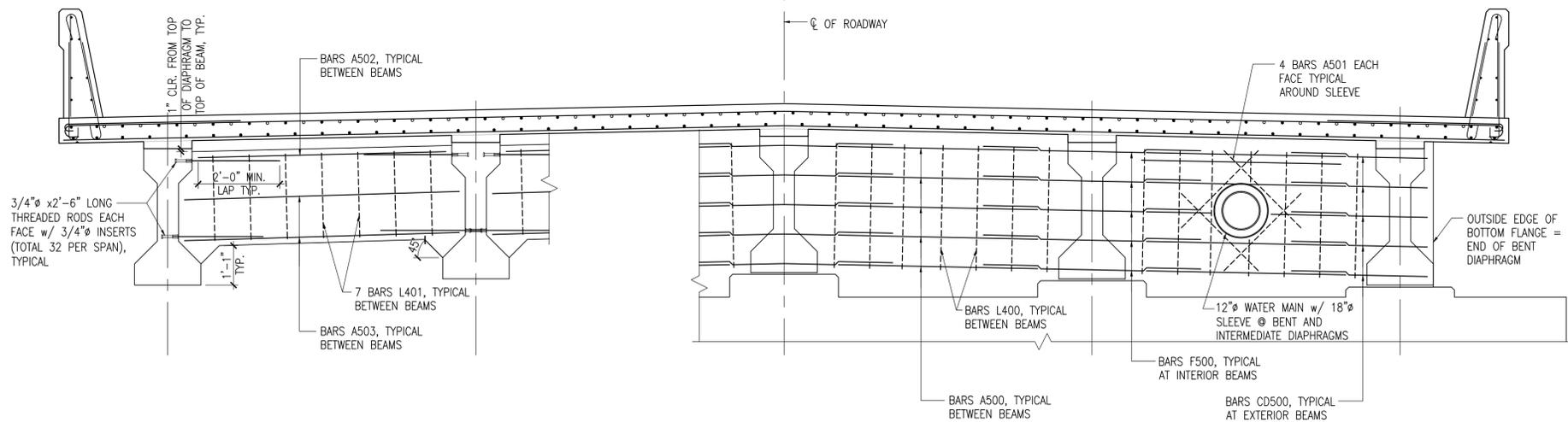
FRAMING PLAN

SCALE 1" = 10'



PARTIAL PLAN OF BENT DIAPHRAGM

SCALE 3/4" = 1'-0"

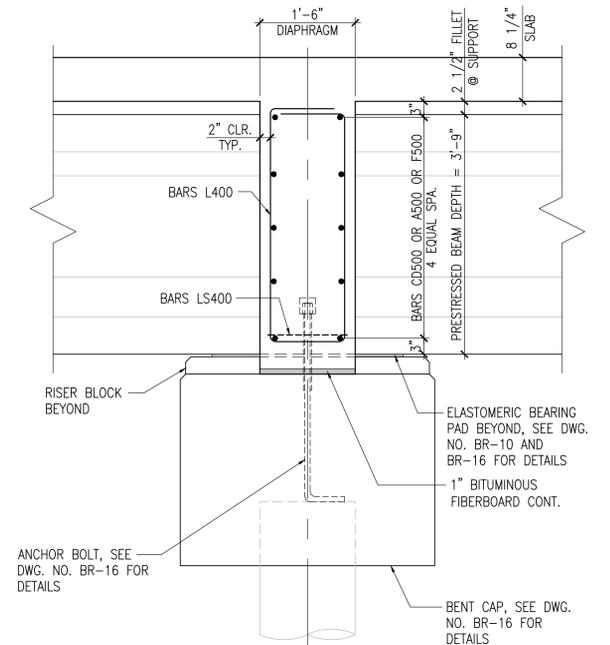


TYPICAL SECTION - AT INTERMEDIATE DIAPHRAGM (LOOKING AHEAD)

SCALE 1/2" = 1'-0"

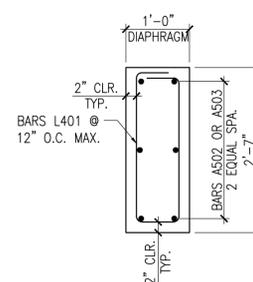
TYPICAL SECTION - AT BENT DIAPHRAGM (LOOKING AHEAD)

SCALE 1/2" = 1'-0"



SECTION AT BENT DIAPHRAGM BETWEEN BEAMS

SCALE 3/4" = 1'-0"



SECTION AT INTERMEDIATE DIAPHRAGM

SCALE 3/4" = 1'-0"

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE

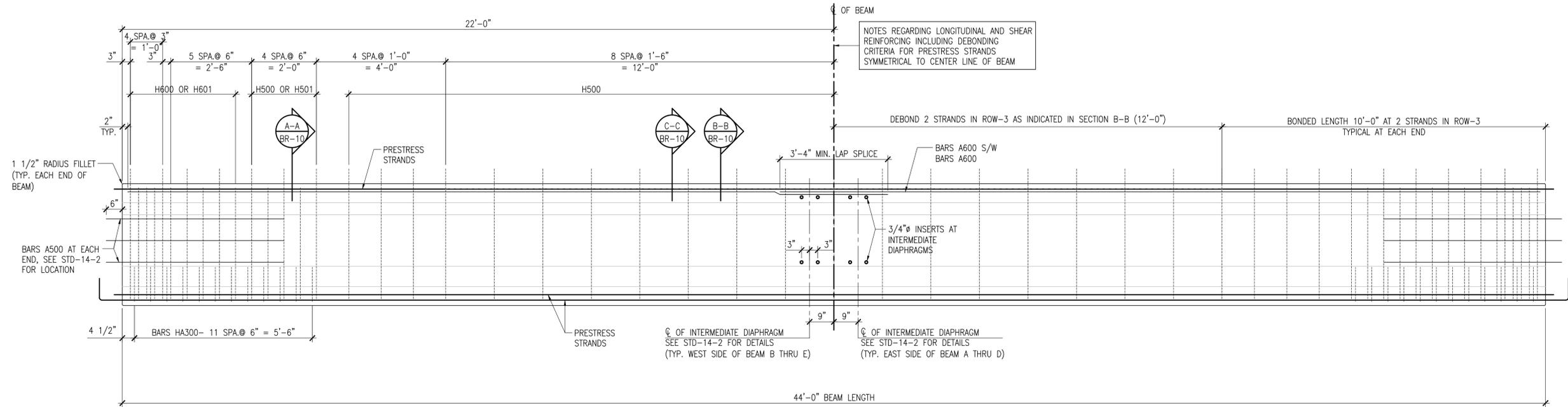


**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

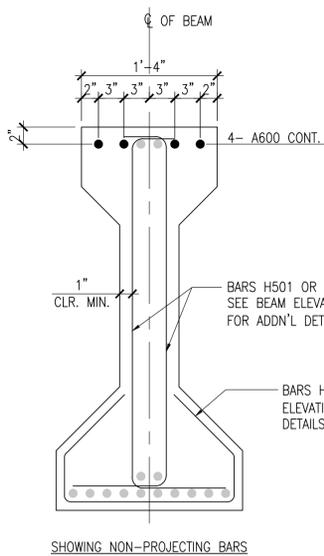
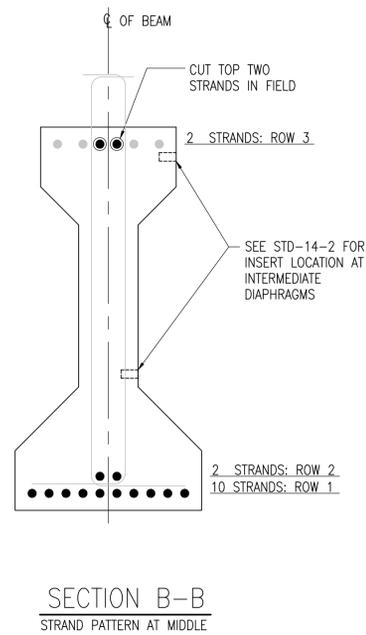
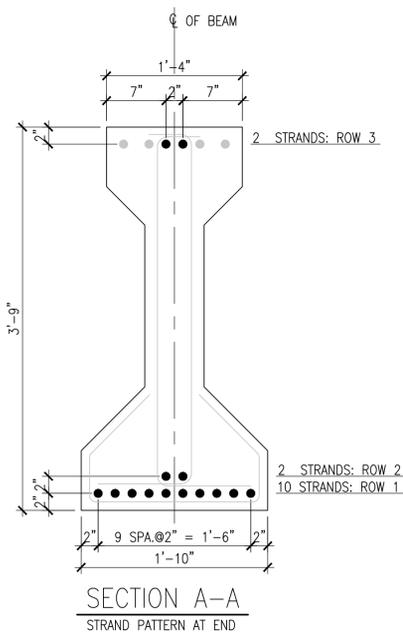
SHEET 24 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
FRAMING PLAN  
SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: GAT DATE: 04/2015 BOOK:  
DRAWN BY: GAT DATE: 04/2015 SCALE: AS NOTED

BR - 07

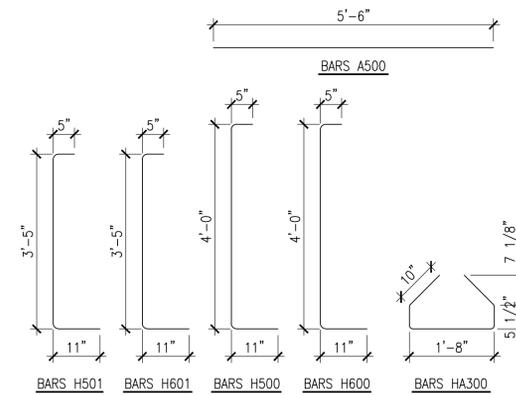
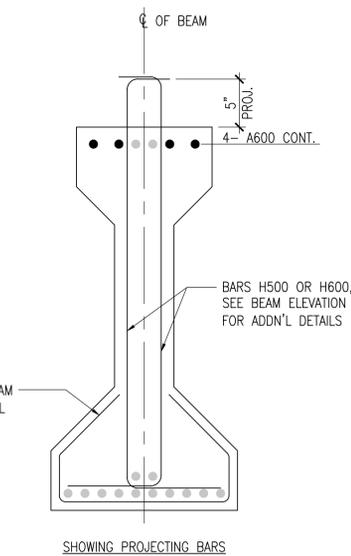




BEAM ELEVATION - SPAN NO. 1 & 3



SECTION C-C MILD STEEL REINFORCING



PRESTRESS BEAM DESIGN DATA (PER BEAM)

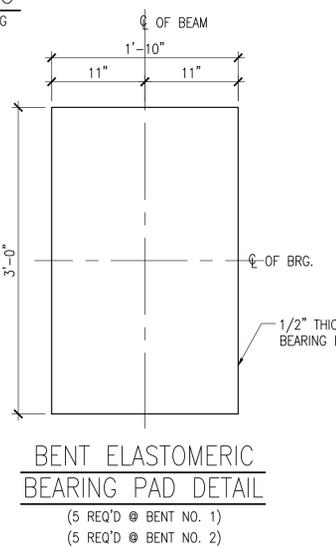
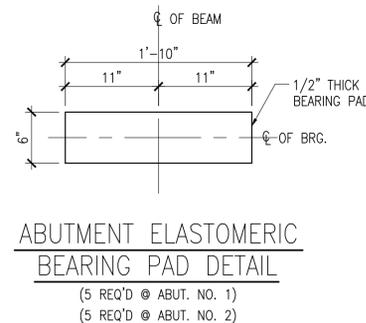
LIVE LOAD DISTRIBUTION FACTOR FOR STRENGTH/ SERVICE (LANE PER BEAM), POSITIVE MOMENT REGION	MOMENT-0.833 SHEAR-0.871
LIVE LOAD DISTRIBUTION FACTOR FOR STRENGTH/ SERVICE (LANE PER BEAM), NEGATIVE MOMENT REGION AT CONTINUOUS SUPPORT	MOMENT-0.770 SHEAR-0.872
COMPOSITE DEAD LOAD - LB. PER FT	CONCRETE PARAPET 149 FUTURE WEARING SURFACE 248 UTILITIES - BEAM D AND E 50 TOTAL 447
COMPOSITE SLAB DESIGN STRENGTH $f_c'$	4000 psi

NOTE: DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED. DISTRIBUTION FACTORS ARE FOR INTERIOR BEAMS (BEAM B, C, & D).

14- 1/2" PRESTRESSING STRANDS  
LENGTH OF DEBOND FROM EACH SIDE OF BEAM CENTER LINE:  
ROW 3: 12'-0" (INDICATED AS ● IN SECTION B-B)

NO. OF BEAMS REQ'D	CLASS 'P' CONCRETE C.Y.	MILD STEEL REINFORCING LB.	PRESTRESSING STRANDS (1/2" LOW RELAXATION) LB.
10	6.4	1017	345

BAR	SIZE	NO. REQ'D	LENGTH
A500	5	6	5'-6"
A600	6	8	23'-6"
H500	5	58	5'-4"
H501	5	8	4'-9"
H600	6	16	5'-4"
H601	6	24	4'-9"
HA300	3	24	4'-3"



NOTES:

- THE TOP OF ALL BEAMS ARE TO BE ROUGHENED TO AN AMPLITUDE OF 1/4" AT THE TIME OF INITIAL SET. THE TOP OF THE BEAMS SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE.
- MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
- ALL PRESTRESSING STRANDS SHALL BE 1/2" (0.153 SQ.IN./ STRAND) ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED LOW RELAXATION STRANDS. AN INITIAL FORCE OF 31003 LB SHALL BE APPLIED TO EACH STRAND INCLUDING THE STRANDS IN TOP OF BEAM.
- THE CONCRETE FOR THE BEAM SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 7,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.
- BLOCK OUT TO BE PROVIDED TO ALLOW FOR CUTTING OF TOP TWO PRESTRESSING STRANDS. SIZE AND LOCATION OF BLOCK OUT SHALL BE SPECIFIED ON SHOP DRAWINGS.
- ALL THE STRANDS IN THE BLOCK OUT THAT ARE TO BE CUT IN THE FIELD SHALL BE HEATED IN A SUFFICIENT AMOUNT (USUALLY NEAR WHITE SURFACE) TO RELIEVE THE STRESSES IN THE STRANDS BEFORE THE STRANDS ARE CUT. ANY DAMAGE THAT OCCURS TO THE BEAMS DUE TO A DEVIATION FROM THE CUTTING PROCEDURE AS STATED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT HIS OWN EXPENSE TO THE COMPLETE SATISFACTION OF THE ENGINEER.
- SEE STD-14-2 FOR I-BEAM AND INTERMEDIATE DIAPHRAGM STANDARD DETAILS, NOTES, AND REINFORCING.
- ALL BEAMS ARE AASHTO I-BEAMS: PCI STANDARD TYPE III.
- SEE DWG. NO. BR-7 FOR FRAMING PLAN AND BEAM LOCATIONS.
- SEE THIS SHEET FOR ELASTOMERIC BEARING PAD DETAIL AT ABUTMENTS AND BENTS.

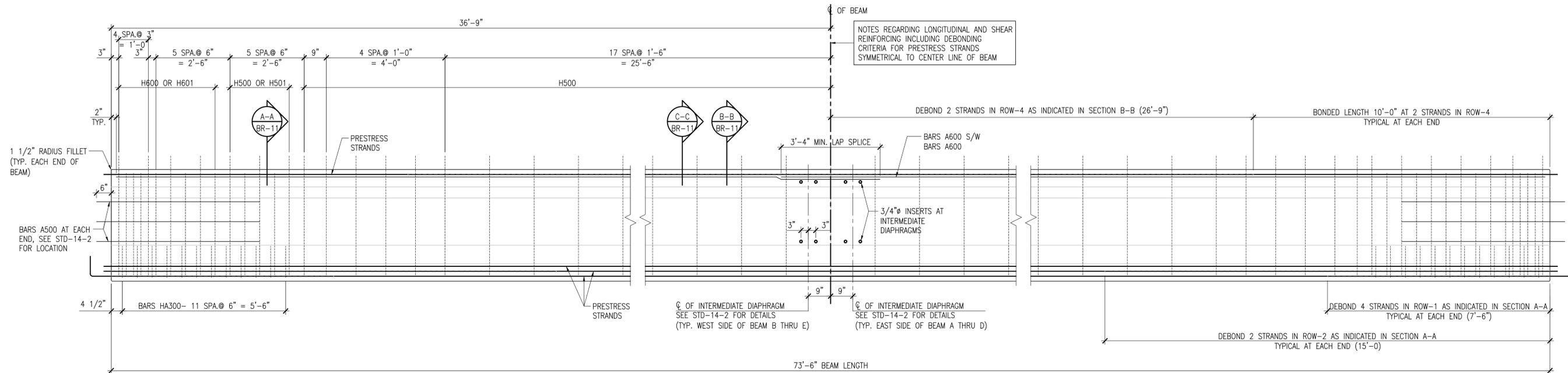
REVISION	DESCRIPTION OF CHANGE	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

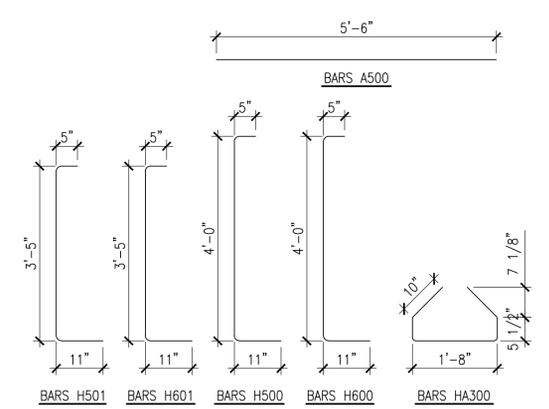
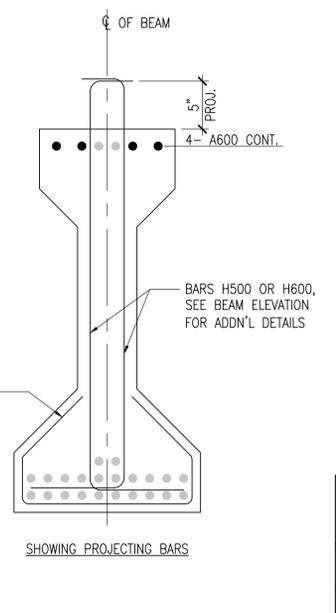
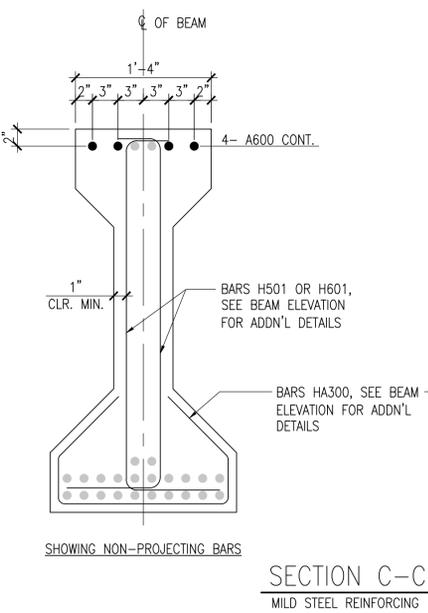
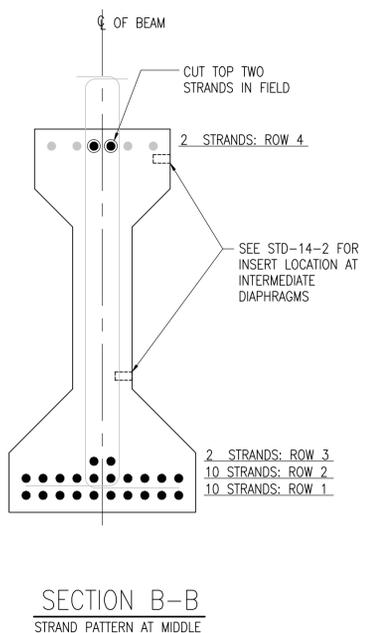
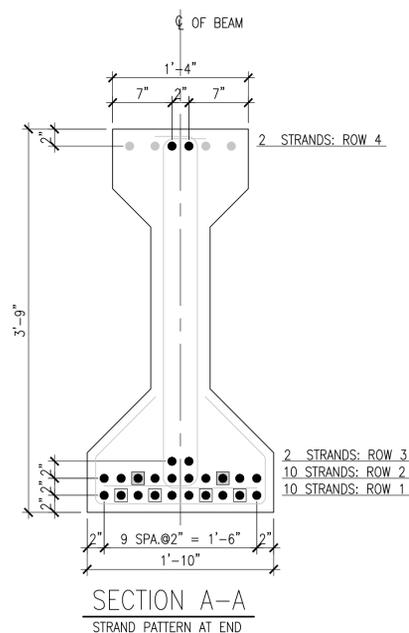
SHEET 26 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
PRESTRESSED BEAM (TYPE III) DETAILS  
SPAN NO. 1 AND SPAN NO. 3  
SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: GAT DATE: 04/2015 BOOK:  
DRAWN BY: GAT DATE: 04/2015 SCALE: AS NOTED

BR - 10



NOTES REGARDING LONGITUDINAL AND SHEAR REINFORCING INCLUDING DEBONDING CRITERIA FOR PRESTRESS STRANDS SYMMETRICAL TO CENTER LINE OF BEAM

BEAM ELEVATION - SPAN NO. 2



PRESTRESS BEAM DESIGN DATA (PER BEAM)	
LIVE LOAD DISTRIBUTION FACTOR FOR STRENGTH/ SERVICE (LANE PER BEAM), POSITIVE MOMENT REGION	MOMENT-0.724 SHEAR-0.874
LIVE LOAD DISTRIBUTION FACTOR FOR STRENGTH/ SERVICE (LANE PER BEAM), NEGATIVE MOMENT REGION AT CONTINUOUS SUPPORT	MOMENT-0.770 SHEAR-0.872
COMPOSITE DEAD LOAD - LB. PER FT	
CONCRETE	149
PARAPET	248
FUTURE WEARING SURFACE	50
UTILITIES - BEAM D AND E	447
TOTAL	
COMPOSITE SLAB DESIGN STRENGTH $f_c'$	4000 psi

NOTE: DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED. DISTRIBUTION FACTORS ARE FOR INTERIOR BEAMS (BEAM B, C, & D).

- NOTES:**
- THE TOP OF ALL BEAMS ARE TO BE ROUGHENED TO AN AMPLITUDE OF 1/4" AT THE TIME OF INITIAL SET. THE TOP OF THE BEAMS SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE.
  - MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
  - ALL PRESTRESSING STRANDS SHALL BE 1/2" (0.153 SQ.IN./ STRAND) ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED LOW RELAXATION STRANDS. AN INITIAL FORCE OF 31003 LB SHALL BE APPLIED TO EACH STRAND INCLUDING THE STRANDS IN TOP OF BEAM.
  - THE CONCRETE FOR THE BEAM SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 7,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.
  - BLOCK OUT TO BE PROVIDED TO ALLOW FOR CUTTING OF TOP TWO PRESTRESSING STRANDS. SIZE AND LOCATION OF BLOCK OUT SHALL BE SPECIFIED ON SHOP DRAWINGS.
  - ALL THE STRANDS IN THE BLOCK OUT THAT ARE TO BE CUT IN THE FIELD SHALL BE HEATED IN A SUFFICIENT AMOUNT (USUALLY NEAR WHITE SURFACE) TO RELIEVE THE STRESSES IN THE STRANDS BEFORE THE STRANDS ARE CUT. ANY DAMAGE THAT OCCURS TO THE BEAMS DUE TO A DEVIATION FROM THE CUTTING PROCEDURE AS STATED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT HIS OWN EXPENSE TO THE COMPLETE SATISFACTION OF THE ENGINEER.
  - SEE STD-14-2 FOR I-BEAM AND INTERMEDIATE DIAPHRAGM STANDARD DETAILS, NOTES, AND REINFORCING.
  - ALL BEAMS ARE AASHTO I-BEAMS: PCI STANDARD TYPE III.
  - SEE DWG. NO. BR-7 FOR FRAMING PLAN AND BEAM LOCATIONS.
  - SEE DWG. NO. BR-10 FOR ELASTOMERIC BEARING PAD DETAIL AT ABUTMENTS AND BENTS.

24- 1/2" PRESTRESSING STRANDS  
 LENGTH OF DEBOND FROM EACH END OF BEAM:  
 ROW 1: 7'-6" (INDICATED AS ● IN SECTION A-A)  
 ROW 2: 15'-0" (INDICATED AS ● IN SECTION A-A)  
 LENGTH OF DEBOND FROM EACH SIDE OF BEAM CENTER LINE:  
 ROW 4: 26'-9" (INDICATED AS ● IN SECTION B-B)

BILL OF STEEL (PER BEAM)			
BAR	SIZE	NO. REQ'D	LENGTH
A500	5	6	5'-6"
A600	6	8	38'-3"
H500	5	102	5'-4"
H501	5	8	4'-9"
H600	6	16	5'-4"
H601	6	24	4'-9"
HA300	3	24	4'-3"

ESTIMATED QUANTITIES (PER BEAM)			
NO. OF BEAMS REQ'D	CLASS 'P' CONCRETE C.Y.	MILD STEEL REINFORCING LB.	PRESTRESSING STRANDS (1/2" LOW RELAXATION) LB.
5	10.6	1438	955

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

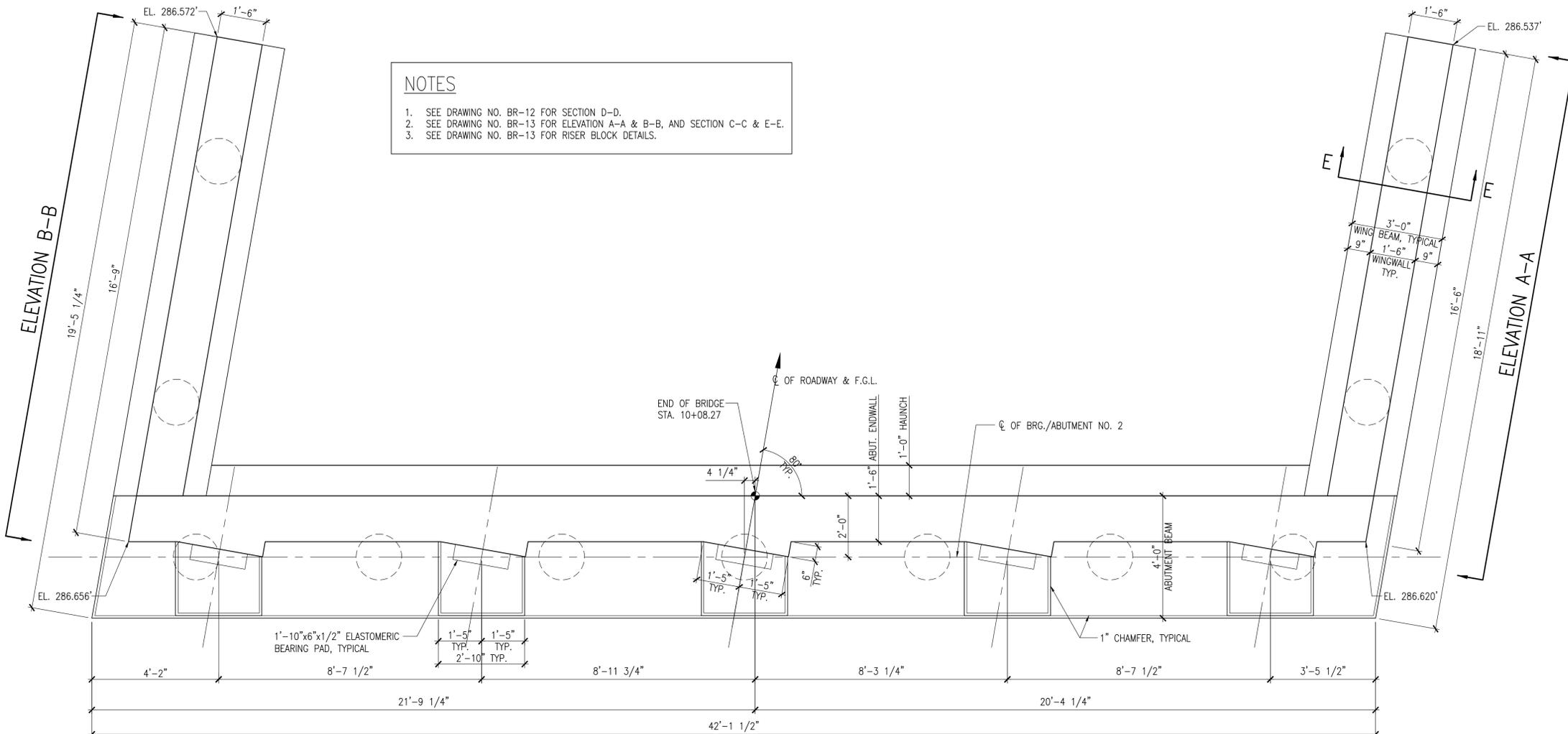
SHEET 27 of 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
 PRESTRESSED BEAM (TYPE III) DETAILS  
 SPAN NO. 2

SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
 DESIGNED BY: GAT DATE: 04/2015 BOOK:  
 DRAWN BY: GAT DATE: 04/2015 SCALE: AS NOTED

BR - 11



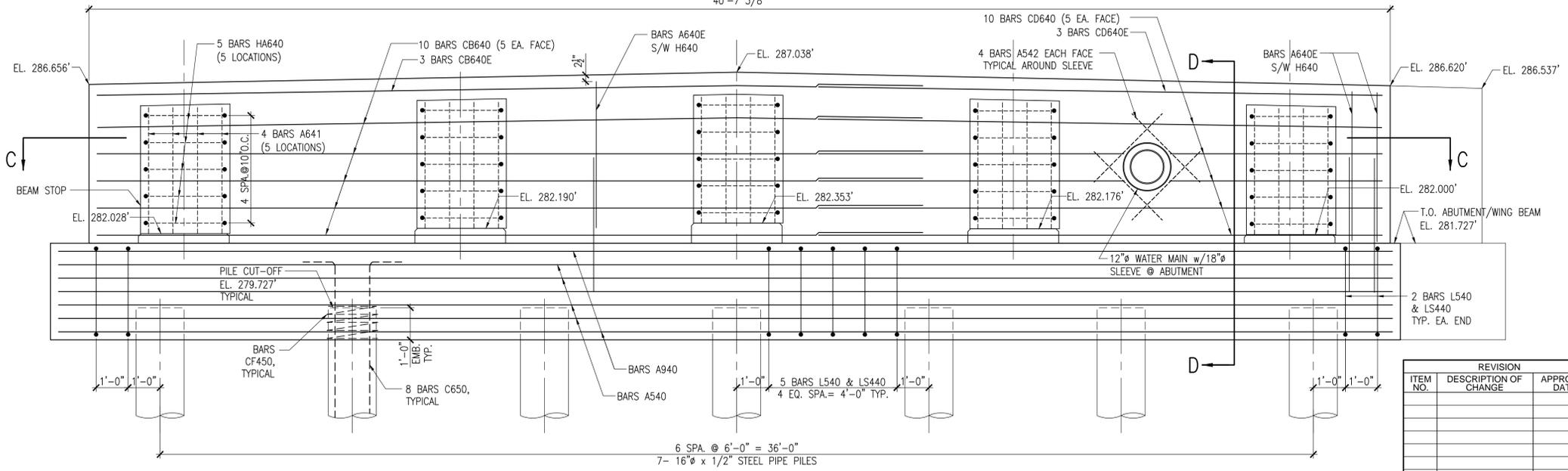




**NOTES**

1. SEE DRAWING NO. BR-12 FOR SECTION D-D.
2. SEE DRAWING NO. BR-13 FOR ELEVATION A-A & B-B, AND SECTION C-C & E-E.
3. SEE DRAWING NO. BR-13 FOR RISER BLOCK DETAILS.

**PLAN - ABUTMENT NO. 2**  
SCALE 1/2" = 1'-0"



**ELEVATION (LOOKING AHEAD)**  
SCALE 1/2" = 1'-0"

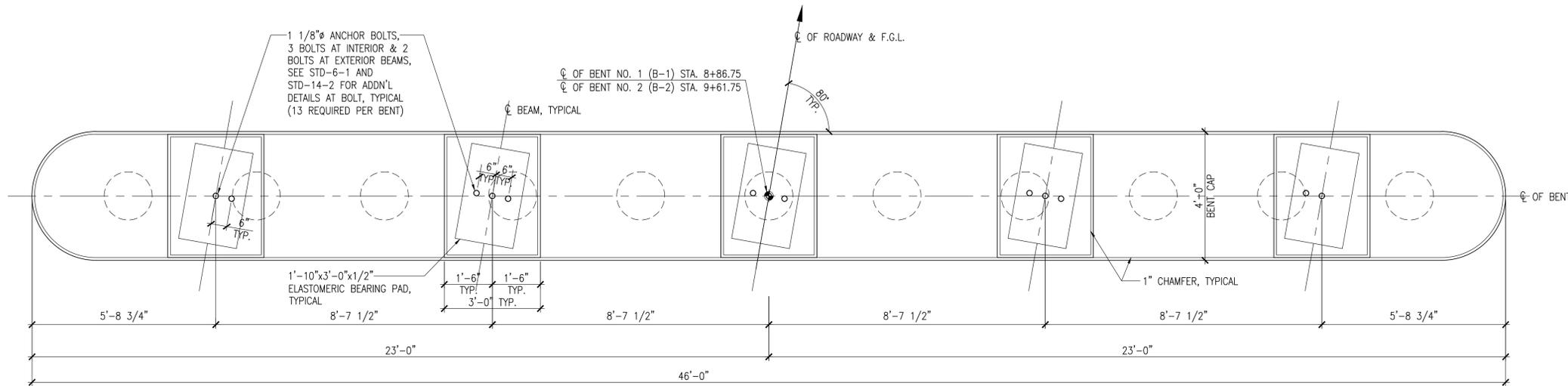
ITEM NO.	REVISION DESCRIPTION OF CHANGE	APPROVAL DATE



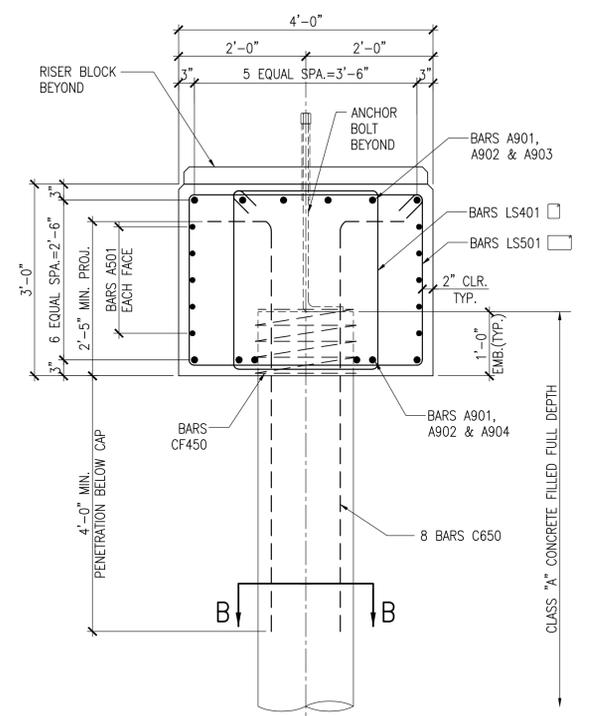
SHEET 30 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
ABUTMENT NO. 2 LAYOUT

SURVEY: F&A, INC.      DATE: 07/2011      PROJECT NO: 114432.00  
DESIGNED BY: BZ      DATE: 04/2015      BOOK:  
DRAWN BY: BZ      DATE: 04/2015      SCALE: AS NOTED

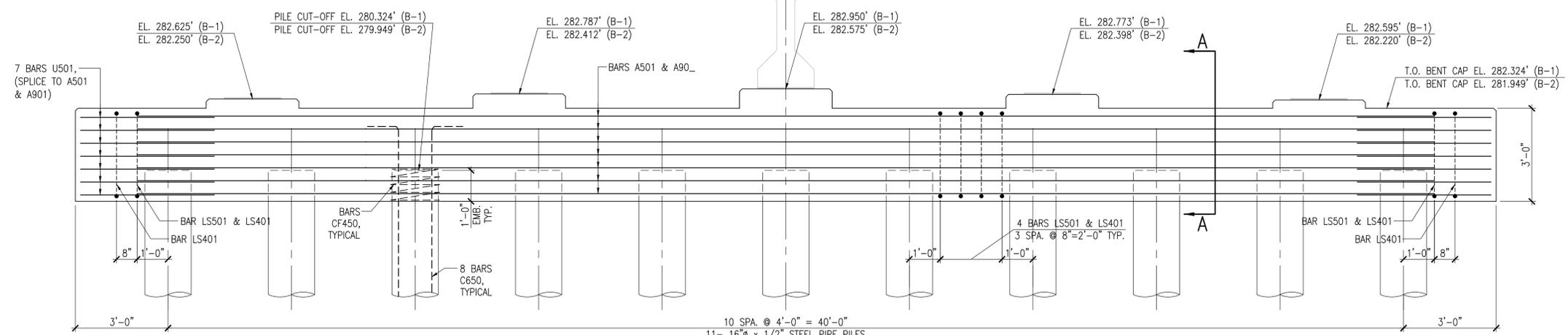
**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.



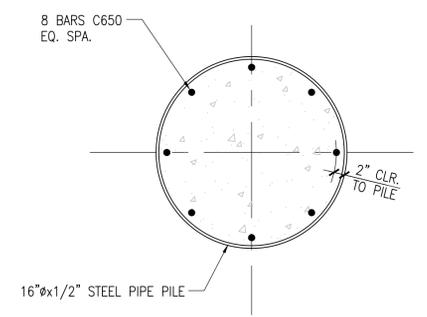
PLAN- BENT NO. 1 & 2  
SCALE 1/2" = 1'-0"



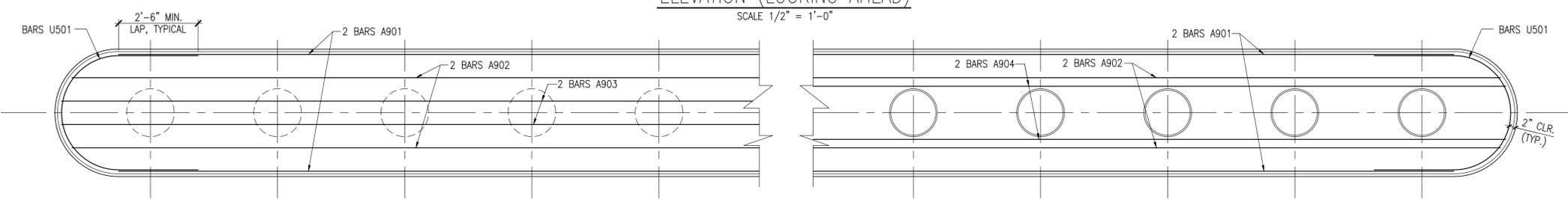
SECTION A-A  
SCALE 3/4" = 1'-0"



ELEVATION (LOOKING AHEAD)  
SCALE 1/2" = 1'-0"

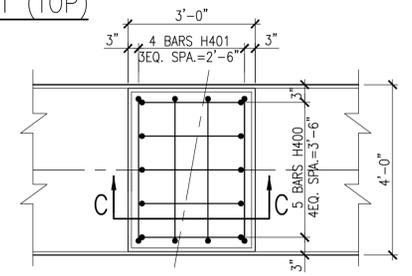


SECTION B-B  
SCALE 3/4" = 1'-0"

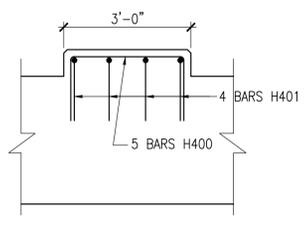


PARTIAL PLAN OF MAIN REINFORCEMENT (TOP)  
SCALE 1/2" = 1'-0"

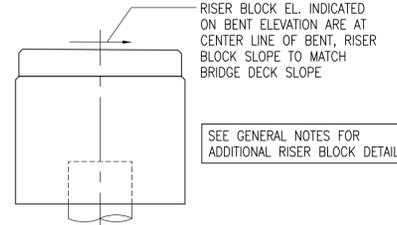
PARTIAL PLAN OF MAIN REINFORCEMENT (BOTTOM)  
SCALE 1/2" = 1'-0"



REINFORCEMENT PLAN



SECTION C-C  
RISER BLOCK DETAILS



RISER BLOCK SLOPE

RISER BLOCK EL. INDICATED ON BENT ELEVATION ARE AT CENTER LINE OF BENT, RISER BLOCK SLOPE TO MATCH BRIDGE DECK SLOPE

SEE GENERAL NOTES FOR ADDITIONAL RISER BLOCK DETAILS

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE

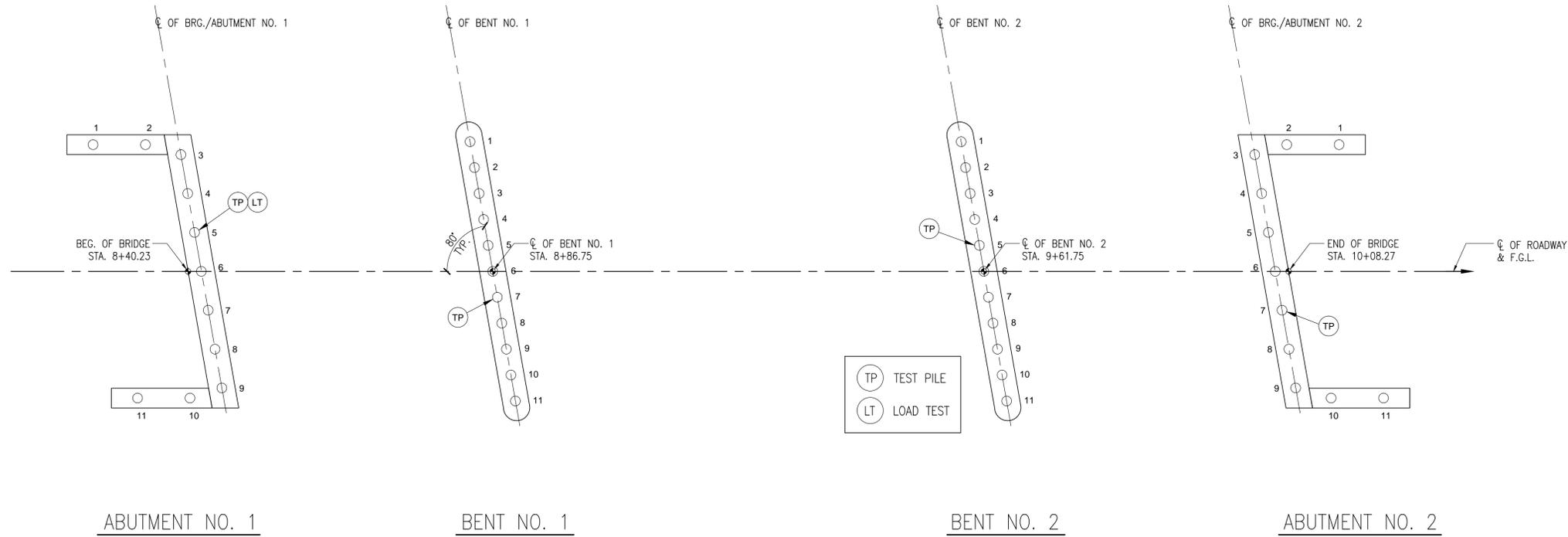


**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

SHEET 31 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
BENT LAYOUT

SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: BZ DATE: 04/2015 BOOK:  
DRAWN BY: BZ DATE: 04/2015 SCALE: AS NOTED

BR - 16



FOUNDATION PLAN  
SCALE 1" = 10'

		1	2	3	4	5	6	7	8	9	10	11
ABUT. 1	PILE CUT-OFF ELEV.											
	PILE TIP ELEV.											
	IN PLACE PILE LENGTH											
BENT 1	PILE CUT-OFF ELEV.											
	PILE TIP ELEV.											
	IN PLACE PILE LENGTH											
BENT 2	PILE CUT-OFF ELEV.											
	PILE TIP ELEV.											
	IN PLACE PILE LENGTH											
ABUT. 2	PILE CUT-OFF ELEV.											
	PILE TIP ELEV.											
	IN PLACE PILE LENGTH											

NOTE TO CONTRACTOR AND CONSTRUCTION OFFICE:  
THE BLANKS ON THIS SHEET ARE TO BE FILLED IN BY THE CONSTRUCTION OFFICE AND/OR FIELD ENGINEER GIVING AS-BUILT CONDITIONS, AFTER COMPLETION. IT IS TO BE SENT TO THE SHELBY COUNTY BRIDGE CONSTRUCTION & MAINTENANCE OFFICE TO BECOME PART OF THE FINAL BRIDGE DOCUMENTS.

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE

**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

SHEET 32 of 46  
BR - 17

**SLEDGE ROAD BRIDGE**  
FINAL FOUNDATION PLAN

SURVEY: F&A, INC.	DATE: 07/2011	PROJECT NO: 114432.00
DESIGNED BY: BZ	DATE: 04/2015	BOOK:
DRAWN BY: MM	DATE: 04/2015	SCALE: AS NOTED

# BILL OF STEEL

SUPERSTRUCTURE									
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH	
				A	B	C	D	FT.	IN.
EPOXY COATED									
A500E	BOTT. SLAB	5	104	60'-0"				60	0
A501E	BOTT. SLAB	5	52	54'-0"				54	0
A504E	BOTT. SLAB	5	283	40'-3"				40	3
A502E	TOP SLAB	5	44	29'-3"				29	3
A503E	TOP SLAB	5	204	40'-6"				40	6
D500E	TOP SLAB	5	283	40'-2"	8"			41	6
B300E	TOP SLAB	3	282	5'-0"	6"			5	6
B570E	PARAPET	5	1020	2'-8"	8"			3	4
REGULAR									
A500	BENT DIAPH.	5	80	6'-6"				6	6
F500	BENT DIAPH.	5	60	2'-4"	1'-11 1/2"	2'-4"	5 1/2"	6	8
CD500	BENT DIAPH.	5	40	1'-9"	2'-4"	2'-3 1/2"		4	1
LS400	BENT DIAPH.	4	20	1'-2"	1'-2"			5	5
L400	BENT DIAPH.	4	56	1'-2"	1'-0"	3'-8"		10	8
A501	BENT & INTERM. DIAPH.	5	40	3'-0"				3	0
A502	INTERM. DIAPH.	5	24	7'-0"				7	0
A503	INTERM. DIAPH.	5	48	7'-9"				7	9
L401	INTERM. DIAPH.	4	84	0'-8"	2'-3"			6	6

ABUTMENT 1									
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH	
				A	B	C	D	FT.	IN.
EPOXY COATED									
CB640E	ABUT. ENDWALL	6	3	25'-10"	1'-0"	2"		26	10
CD640	ABUT. ENDWALL	6	3	17'-10"	1'-0"	2"		18	10
R640E	SLAB / ENDWALL	6	41	3'-3"	3'-3"			6	6
A640E	ABUT. ENDWALL	6	82	4'-7 1/2"				4	7 1/2
F640E	ABUT. / PBE	6	37	1'-1"	1'-3"	1'-1"	1'-3"	4	1
B570E	PARAPET / WING	5	80	2'-8"	8"			3	4
HP570E	PARAPET / WING	5	20	4"	4'-0"	8 1/2"		8	4
CB440E	WING WALL	4	1	16'-4"	1'-0"	2"		17	4
CD440E	WING WALL	4	1	16'-1"	1'-0"	2"		17	1
CB641E	WING WALL	6	1	16'-1"	1'-0"	2"		17	1
CD641E	WING WALL	6	1	16'-4"	1'-0"	2"		17	4
H441E	WING WALL	4	30	1'-2"	1'-0"			3	2
REGULAR									
CB640	ABUT. ENDWALL	6	10	25'-10"	1'-0"	2"		26	10
CD640	ABUT. ENDWALL	6	10	17'-10"	1'-0"	2"		18	10
A440	ENDWALL HAUNCH	4	1	37'-5"				37	5
A940	ABUT. BEAM	9	12	41'-9"				41	9
A540	ABUT. BEAM	5	10	41'-9"				41	9
A640	ABUT. ENDWALL	6	8	3'-11"				3	11
H640	ABUT. BEAM	6	41	1'-2"	4'-2"			9	6
H540	ENDWALL HAUNCH	5	37	2'-2"	6"			3	2
LS40	ABUT. BEAM	5	34	3'-8"	1'-0"	2'-8"		13	8
LS440	ABUT. BEAM	4	34	2'-3"	2'-8"			10	7
HA640	ABUT. BEAM STOP	6	25	2'-6"	1'-4"	11"		4	9
A641	ABUT. BEAM STOP	6	20	3'-11"				3	11
H440	RISER BLOCK	4	20	2'-6"	1'-6"			5	6
H441	RISER BLOCK	4	20	2'-2"	1'-6"			5	2
A542	ABUT. ENDWALL	5	8	3'-0"				3	0
CB440	WINGWALL	4	5	16'-4"	1'-0"	2"		17	4
CD440	WINGWALL	4	5	16'-1"	1'-0"	2"		17	1
CB641	WINGWALL	6	5	16'-1"	1'-0"	2"		17	1
CD641	WINGWALL	6	5	16'-4"	1'-0"	2"		17	4
H641	WING BEAM	6	30	1'-2"	3'-11"			9	0
A441	WINGWALL	4	30	4'-7"				4	7
A644	WINGWALL	6	30	4'-7"				4	7
LS41	WING BEAM	5	25	2'-8"	1'-0"	2'-8"		11	8
A740	WING BEAM	7	20	18'-5"				18	5
A541	WING BEAM	5	4	18'-5"				18	5
CB540	WING BEAM	5	3	3'-0"	3'-0"	6"		6	0
CD540	WING BEAM	5	3	3'-0"	3'-0"	6"		6	0
C650	PILE TOPS	6	88	6'-5"				7	5
CF450	ABUT. BEAM	4	11	1'-0"	1'-5 1/2"	3"		24	0
VA850	PILE TOPS	8	22	2'-6"	2'-6"			5	0

ABUTMENT 2									
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH	
				A	B	C	D	FT.	IN.
EPOXY COATED									
CB640E	ABUT. ENDWALL	6	3	25'-10"	1'-0"	2"		26	10
CD640	ABUT. ENDWALL	6	3	17'-10"	1'-0"	2"		18	10
R640E	SLAB / ENDWALL	6	41	3'-3"	3'-3"			6	6
A640E	ABUT. ENDWALL	6	82	4'-7 1/2"				4	7 1/2
F640E	ABUT. / PBE	6	37	1'-1"	1'-3"	1'-1"	1'-3"	4	1
B570E	PARAPET / WING	5	80	2'-8"	8"			3	4
HP570E	PARAPET / WING	5	20	4"	4'-0"	8 1/2"		8	4
CB440E	WING WALL	4	1	16'-4"	1'-0"	2"		17	4
CD440E	WING WALL	4	1	16'-1"	1'-0"	2"		17	1
CB641E	WING WALL	6	1	16'-1"	1'-0"	2"		17	1
CD641E	WING WALL	6	1	16'-4"	1'-0"	2"		17	4
H441E	WING WALL	4	30	1'-2"	1'-0"			3	2
REGULAR									
CB640	ABUT. ENDWALL	6	10	25'-10"	1'-0"	2"		26	10
CD640	ABUT. ENDWALL	6	10	17'-10"	1'-0"	2"		18	10
A440	ENDWALL HAUNCH	4	1	37'-5"				37	5
A940	ABUT. BEAM	9	12	41'-9"				41	9
A540	ABUT. BEAM	5	10	41'-9"				41	9
A640	ABUT. ENDWALL	6	8	3'-11"				3	11
H640	ABUT. BEAM	6	41	1'-2"	4'-2"			9	6
H540	ENDWALL HAUNCH	5	37	2'-2"	6"			3	2
LS40	ABUT. BEAM	5	34	3'-8"	1'-0"	2'-8"		13	8
LS440	ABUT. BEAM	4	34	2'-3"	2'-8"			10	7
HA640	ABUT. BEAM STOP	6	25	2'-6"	1'-4"	11"		4	9
A641	ABUT. BEAM STOP	6	20	3'-11"				3	11
H440	RISER BLOCK	4	20	2'-6"	1'-6"			5	6
H441	RISER BLOCK	4	20	2'-2"	1'-6"			5	2
A542	ABUT. ENDWALL	5	8	3'-0"				3	0
CB440	WINGWALL	4	5	16'-4"	1'-0"	2"		17	4
CD440	WINGWALL	4	5	16'-1"	1'-0"	2"		17	1
CB641	WINGWALL	6	5	16'-1"	1'-0"	2"		17	1
CD641	WINGWALL	6	5	16'-4"	1'-0"	2"		17	4
H641	WING BEAM	6	30	1'-2"	3'-11"			9	0
A441	WINGWALL	4	30	4'-7"				4	7
A644	WINGWALL	6	30	4'-7"				4	7
LS41	WING BEAM	5	25	2'-8"	1'-0"	2'-8"		11	8
A740	WING BEAM	7	20	18'-5"				18	5
A541	WING BEAM	5	4	18'-5"				18	5
CB540	WING BEAM	5	3	3'-0"	3'-0"	6"		6	0
CD540	WING BEAM	5	3	3'-0"	3'-0"	6"		6	0
C650	PILE TOPS	6	88	6'-5"				7	5
CF450	ABUT. BEAM	4	11	1'-0"	1'-5 1/2"	3"		24	0
VA850	PILE TOPS	8	22	2'-6"	2'-6"			5	0

BENT 1									
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH	
				A	B	C	D	FT.	IN.
EPOXY COATED									
A801	CAP	9	4	42'-0"				42	0
A902	CAP	9	4	44'-11"				44	11
A903	CAP	9	2	45'-7"				45	7
A904	CAP	9	2	45'-3"				45	3
A501	CAP	5	10	42'-0"				42	0
U501	CAP	5	14	3'-8"	2'-6"	1'-10"		10	9
LS501	CAP	5	42	3'-8"	2'-8"			13	7
LS401	CAP	4	44	2'-3"	2'-8"			10	7
C650	PILE TOP	6	88	6'-5"				7	5
CF450	CAP	4	11	1'-0"	1'-5 1/2"	3"		24	0
H400	RISER BLOCK	4	25	2'-8"	1'-6"			5	8
H401	RISER BLOCK	4	20	3'-8"	1'-6"			6	8
VA850	PILE TOP	8	22	2'-6"	2'-6"			5	0
REGULAR									
A801	CAP	9	4	42'-0"				42	0
A902	CAP	9	4	44'-11"				44	11
A903	CAP	9	2	45'-7"				45	7
A904	CAP	9	2	45'-3"				45	3
A501	CAP	5	10	42'-0"				42	0
U501	CAP	5	14	3'-8"	2'-6"	1'-10"		10	9
LS501	CAP	5	42	3'-8"	2'-8"			13	7
LS401	CAP	4	44	2'-3"	2'-8"			10	7
C650	PILE TOP	6	88	6'-5"				7	5
CF450	CAP	4	11	1'-0"	1'-5 1/2"	3"		24	0
H400	RISER BLOCK	4	25	2'-8"	1'-6"			5	8
H401	RISER BLOCK	4	20	3'-8"	1'-6"			6	8
VA850	PILE TOP	8	22	2'-6"	2'-6"			5	0
REGULAR									
A801	CAP	9	4	42'-0"				42	0
A902	CAP	9	4	44'-11"				44	11
A903	CAP	9	2	45'-7"				45	7
A904	CAP	9	2	45'-3"				45	3
A501	CAP	5	10	42'-0"				42	0
U501	CAP	5	14	3'-8"	2'-6"	1'-10"		10	9
LS501	CAP	5	42	3'-8"	2'-8"			13	7
LS401	CAP	4	44	2'-3"	2'-8"			1	

END 200' PERMIT  
CREEK DISTURBANCE LIMIT

LIMITS OF RIP-RAP SLOPE PROTECTION

LIMITS OF RIP-RAP SLOPE PROTECTION

LIMITS OF REWORKED EXISTING RIP-RAP

N 17° 38' 34.70" E  
CENTERLINE OF SLEDGE ROAD

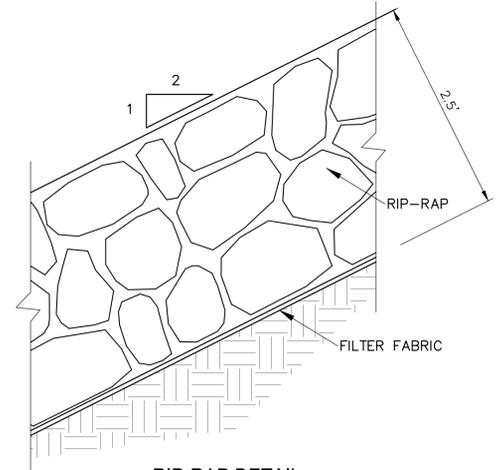
LIMITS OF REWORKED EXISTING RIP-RAP

RIP-RAP BOUNDARY

LIMITS OF RIP-RAP SLOPE PROTECTION

APPROX. LOCATION OF  
GAS LINE VERIFY PRIOR TO  
WORKING IN THIS AREA

BEGIN 200' PERMIT  
CREEK DISTURBANCE LIMIT



RIP-RAP DETAIL  
SCALE 1" = 1'

PLAN VIEW  
SCALE 1" = 10'

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



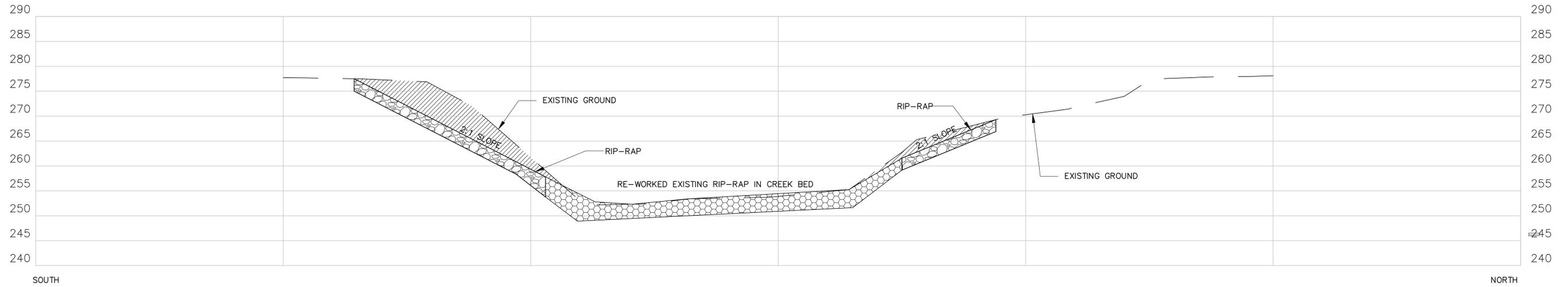
**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

SHEET 34 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
CREEK GRADING/RIP-RAP PLAN

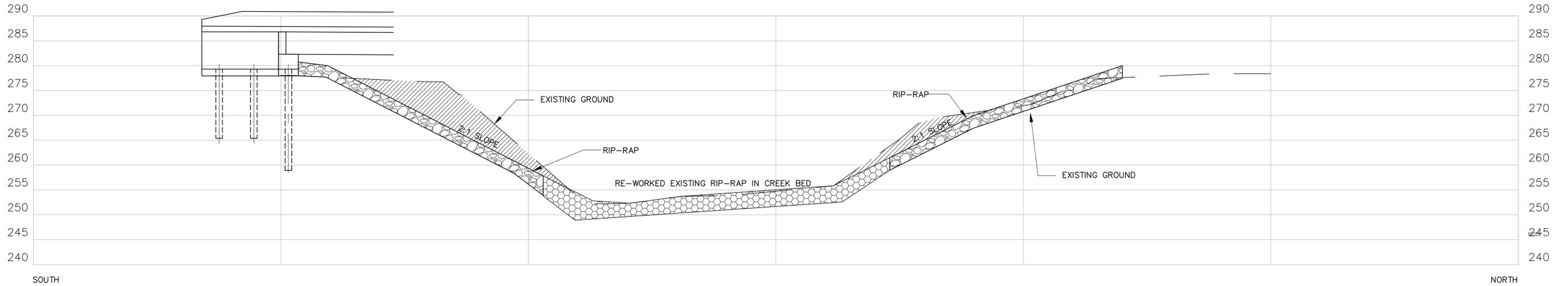
SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: BURR & COLE DATE: 04/2015 BOOK:  
DRAWN BY: BURR & COLE DATE: 04/2015 SCALE: AS NOTED

BR - 19





**BIG CREEK CROSS-SECTION 50' DOWNSTREAM OF BRIDGE CENTERLINE**  
 SCALE 1" = 10'



**BIG CREEK CROSS-SECTION 25' DOWNSTREAM OF BRIDGE CENTERLINE**  
 SCALE 1" = 10'

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**SLEDGE ROAD**  
 SHELBY COUNTY  
 ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

SHEET 36 of 46  
 DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
 CROSS-SECTIONS OF BIG CREEK

SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
 DESIGNED BY: BURR & COLE DATE: 04/2015 BOOK:  
 DRAWN BY: BURR & COLE DATE: 04/2015 SCALE: AS NOTED

BR - 21

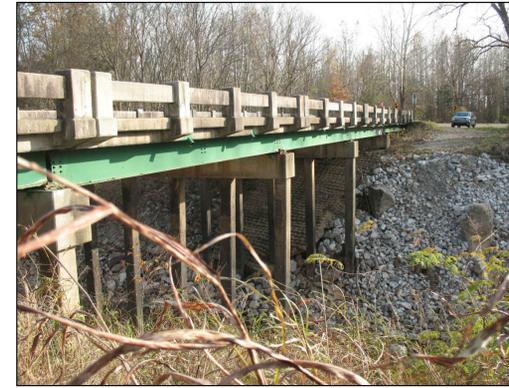




BRIDGE VIEWED FROM WEST



BRIDGE UNDERSIDE VIEWED FROM WEST



BRIDGE VIEWED FROM NORTHWEST



BRIDGE VIEWED FROM NORTHEAST



BRIDGE VIEWED FROM NORTH



BRIDGE VIEWED FROM SOUTHWEST

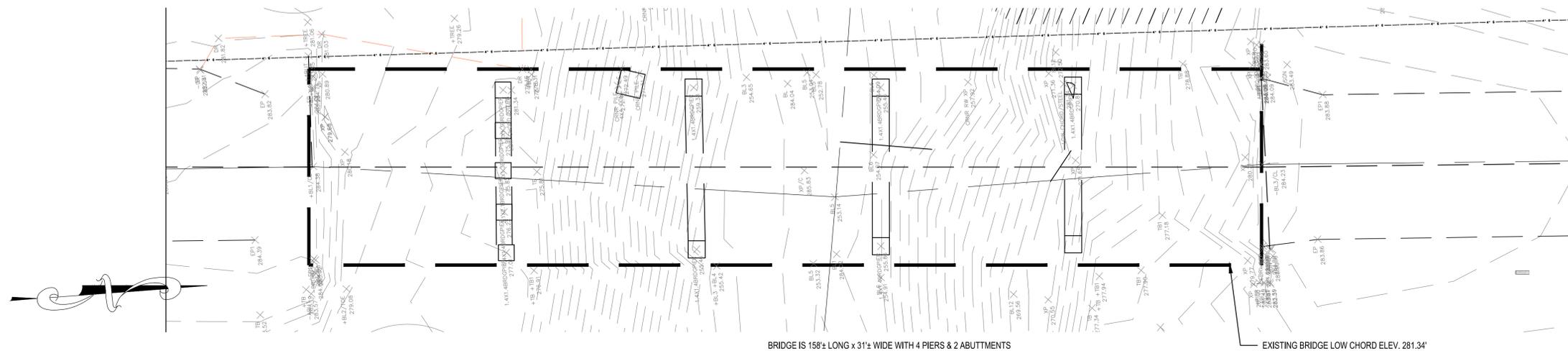


BRIDGE VIEWED FROM CREEK BOTTOM LOOKING SOUTHEAST



BRIDGE PIERS VIEWED FROM NORTHEAST

PHOTOS OF EXISTING BRIDGE



BRIDGE DEMOLITION PLAN  
SCALE 1" = 10'

BRIDGE DEMOLITION NOTES

1. THE BRIDGE HAS BEEN TESTED FOR LEAD BASED PAINT AND HAS BEEN FOUND TO CONTAIN LEAD PAINT ABOVE THE SAFE AMOUNT.
2. DEMOLITION SHALL COMPLY WITH GOVERNMENT REGULATIONS.
3. CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR ENGINEER REVIEW 2 WEEKS PRIOR TO BEGINNING DEMOLITION.
4. CONTRACTOR SHALL REMOVE THE BRIDGE IN ITS ENTIRETY INCLUDING PIERS TO 2' BELOW FINISH GRADE.
5. ALL DEBRIS SHALL BE PROPERLY DISPOSED OF AT A LOCATION ACCEPTABLE TO THE COUNTY.

REVISION	DESCRIPTION OF CHANGE	APPROVAL DATE

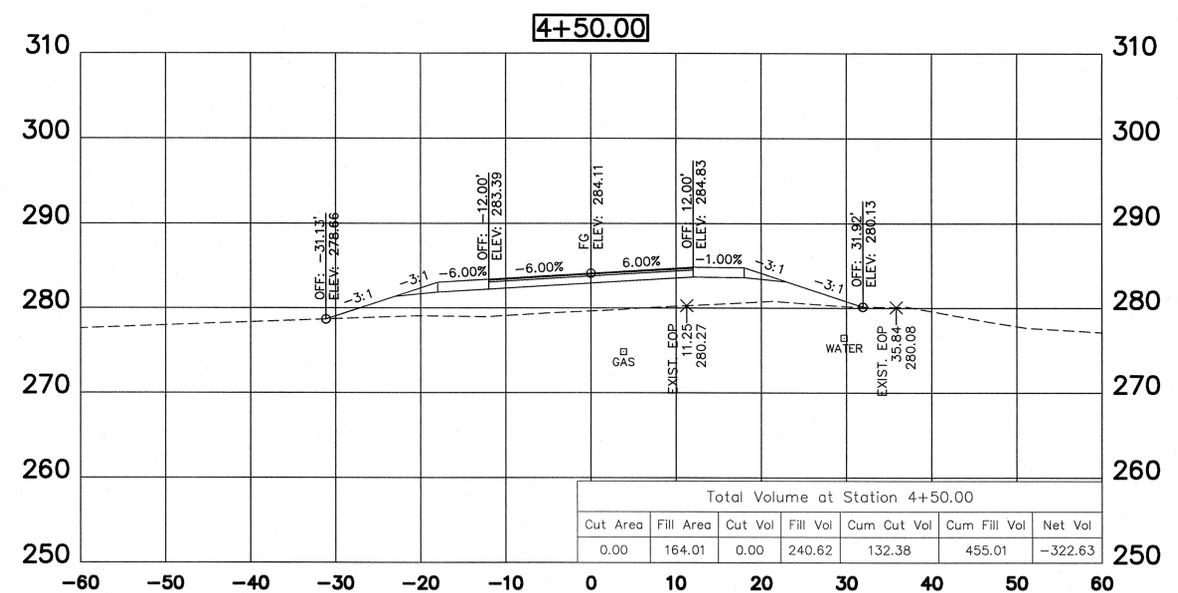
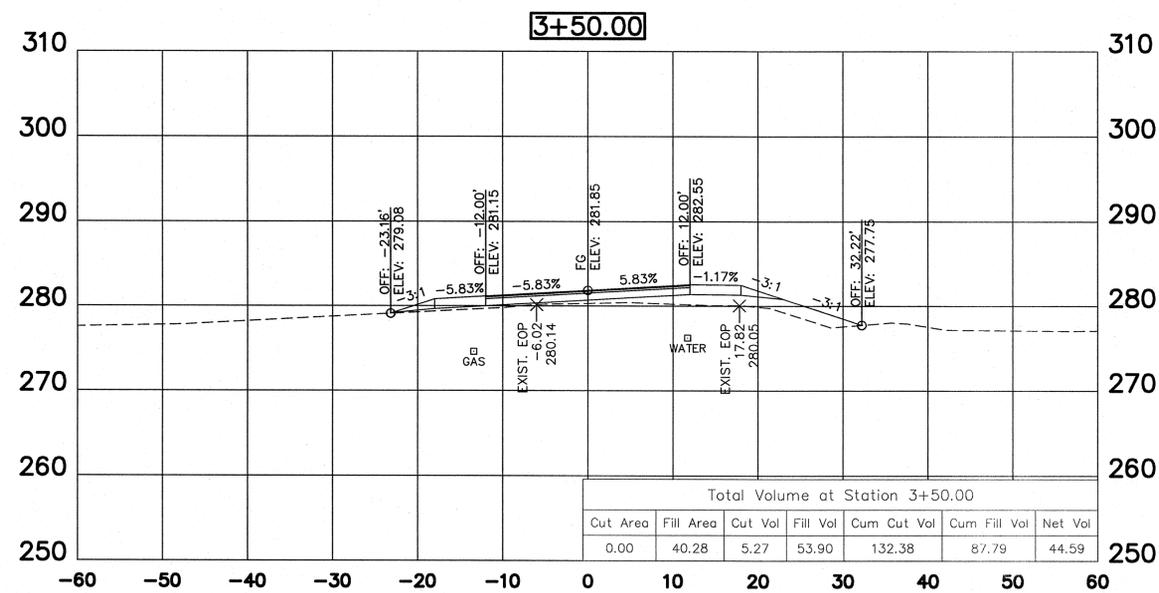
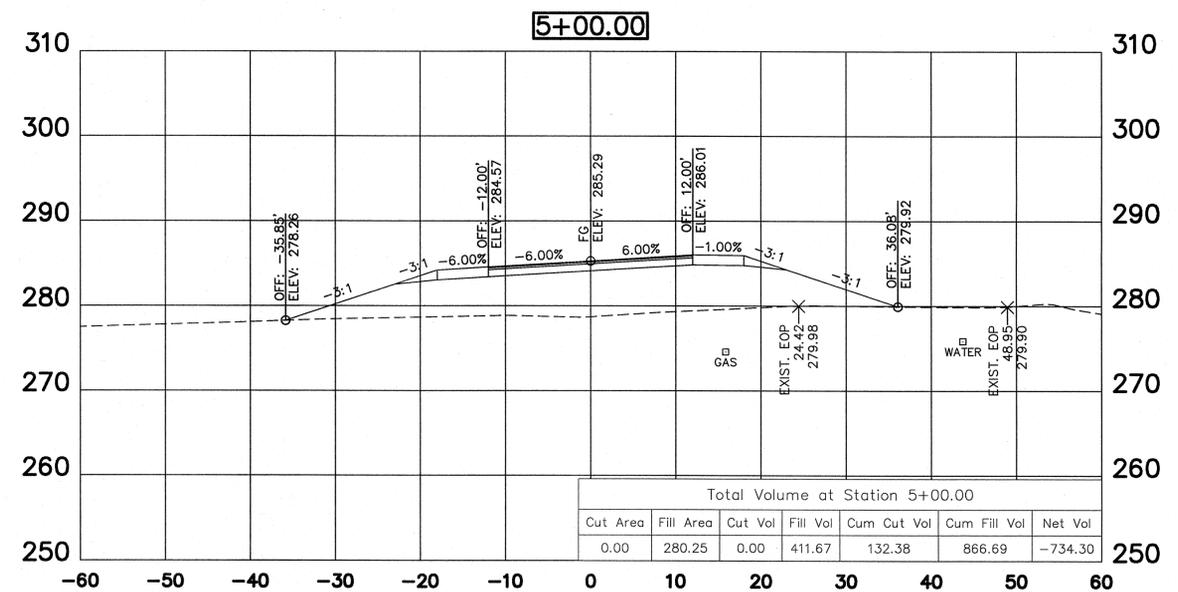
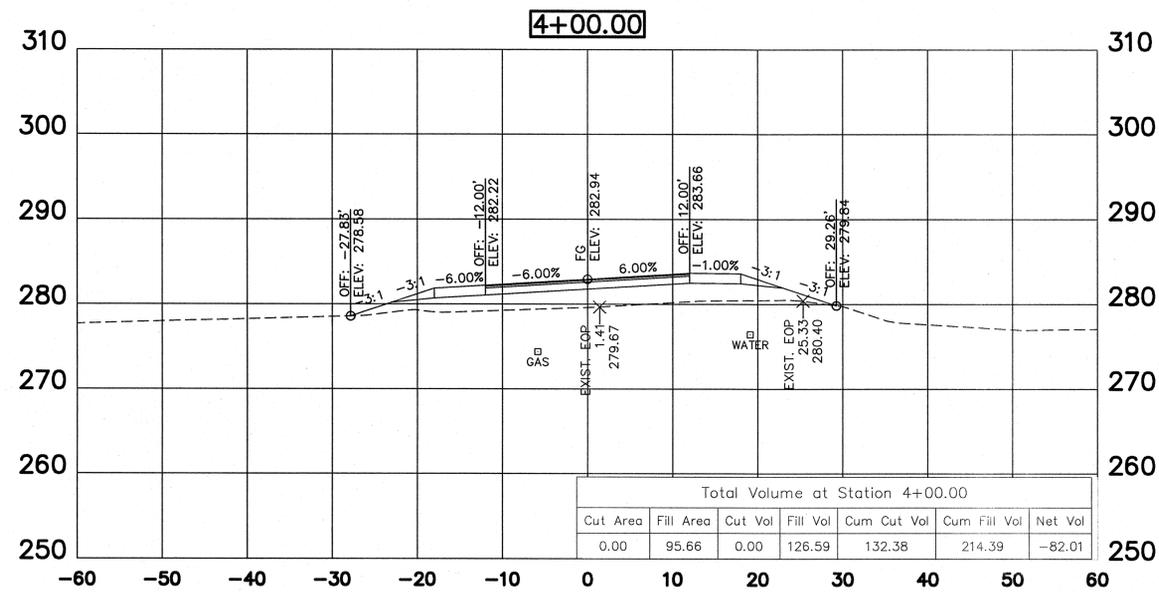


**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: BURR & COLE CONSULTING ENGINEERS, INC.

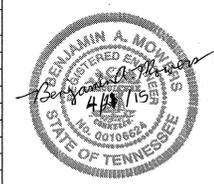
SHEET 38 of 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD BRIDGE**  
DEMOLITION PLAN - OLD BRIDGE

SURVEY: F&A, INC. DATE: 07/2011 PROJECT NO: 114432.00  
DESIGNED BY: BURR & COLE DATE: 04/2015 BOOK:  
DRAWN BY: BURR & COLE DATE: 04/2015 SCALE: AS NOTED





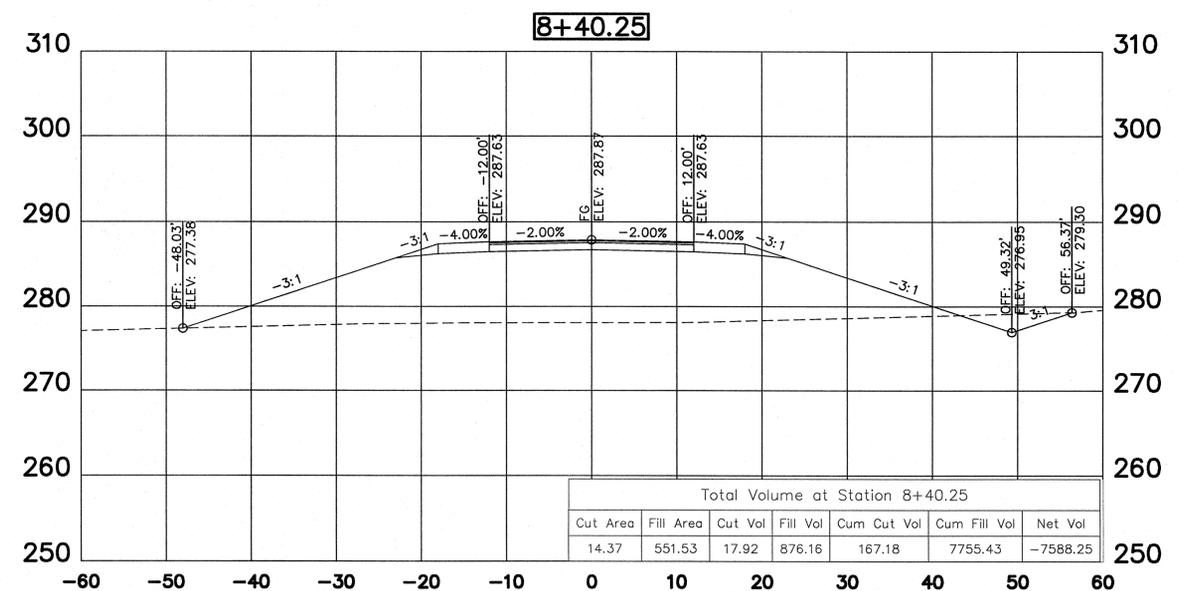
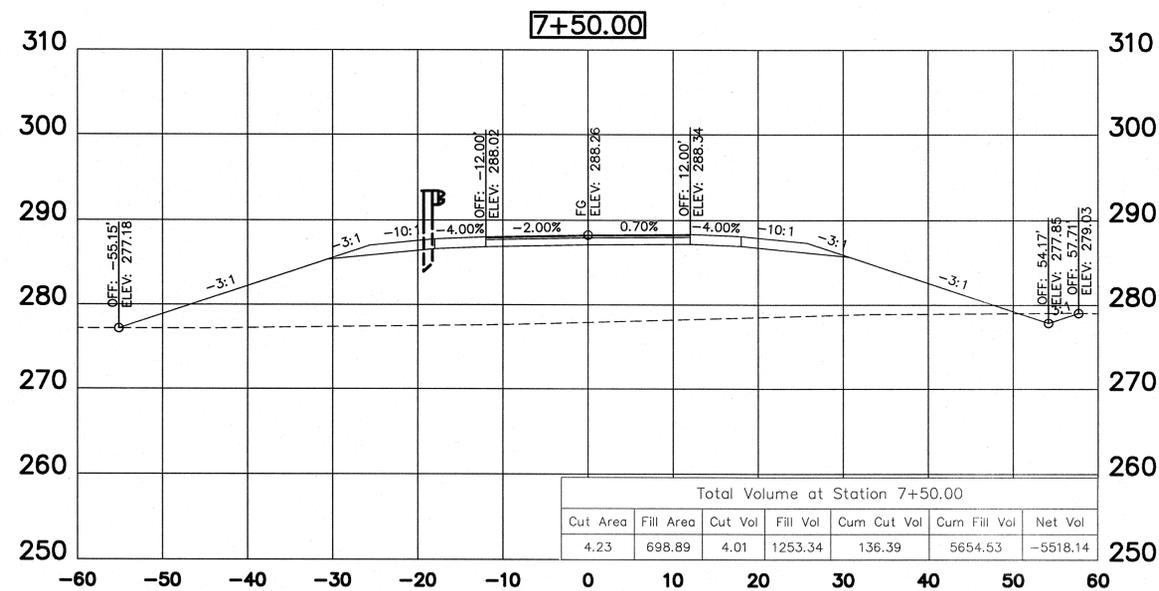
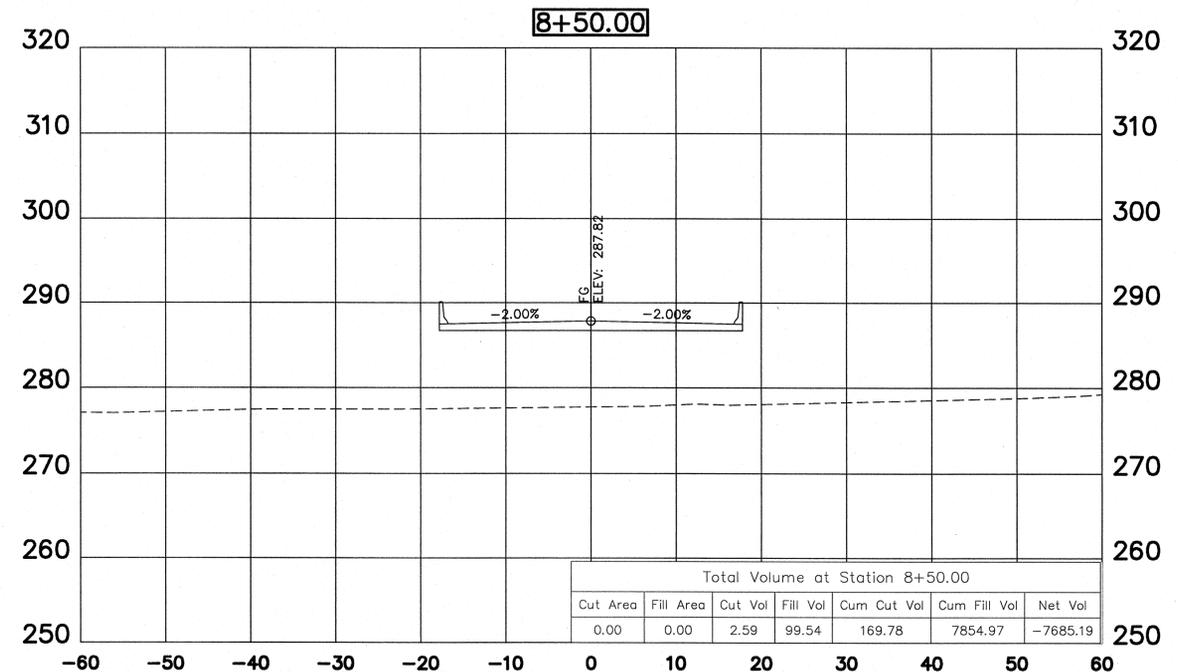
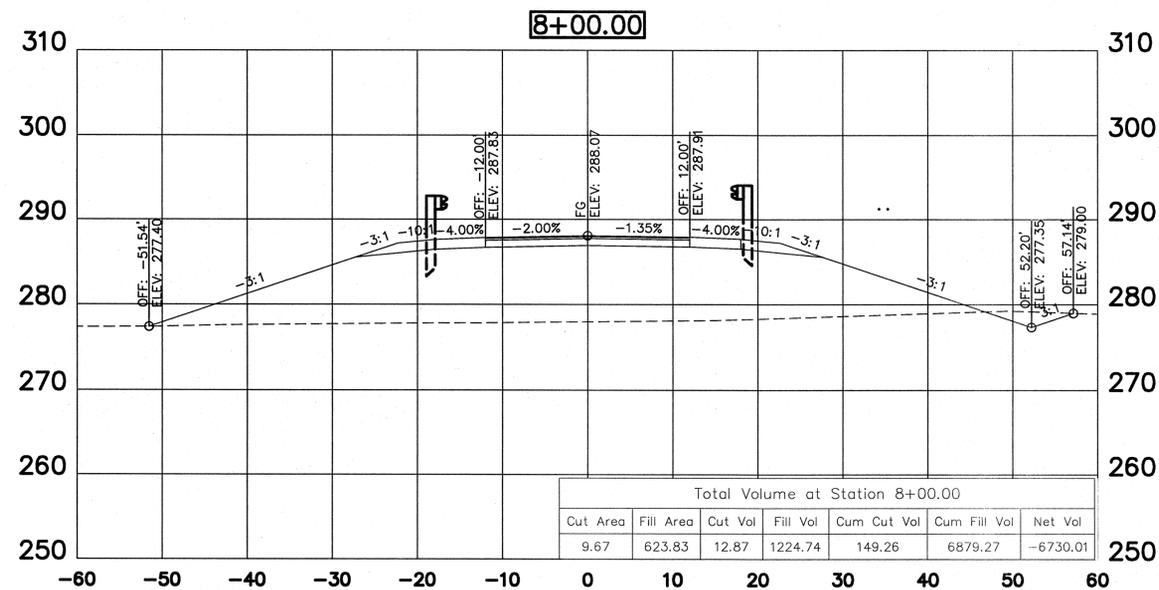
ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 39 OF 46 XS2  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
CROSS SECTIONS  
FROM: 3+50  
TO: 5+00  
SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
DESIGN BY: B.A.M. DATE: 06/2012 BOOK:  
DRAWN BY: B.A.M. DATE: 06/2012 SCALE: 1" = 10' H  
1" = 10' V





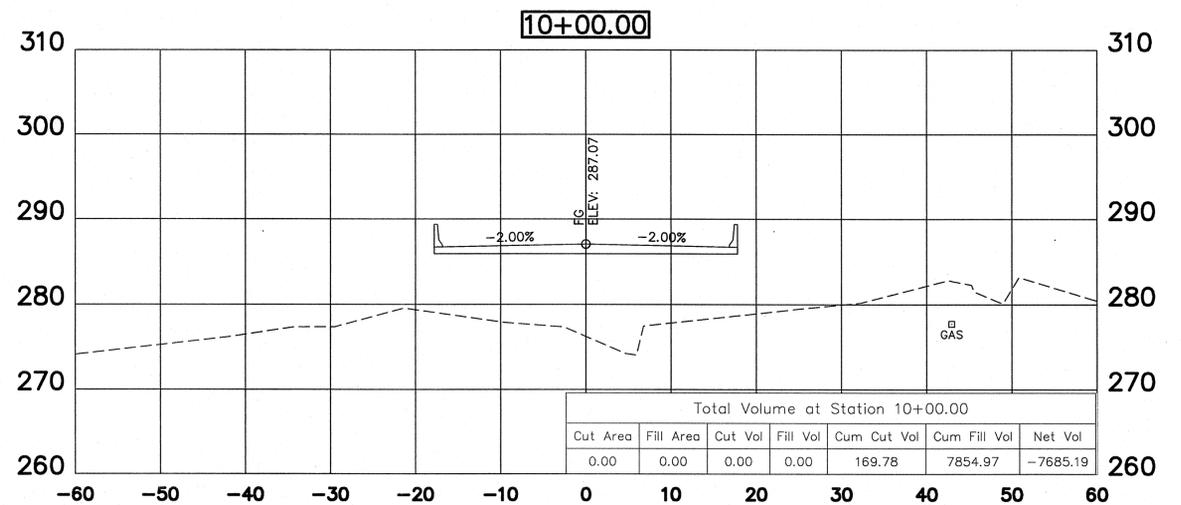
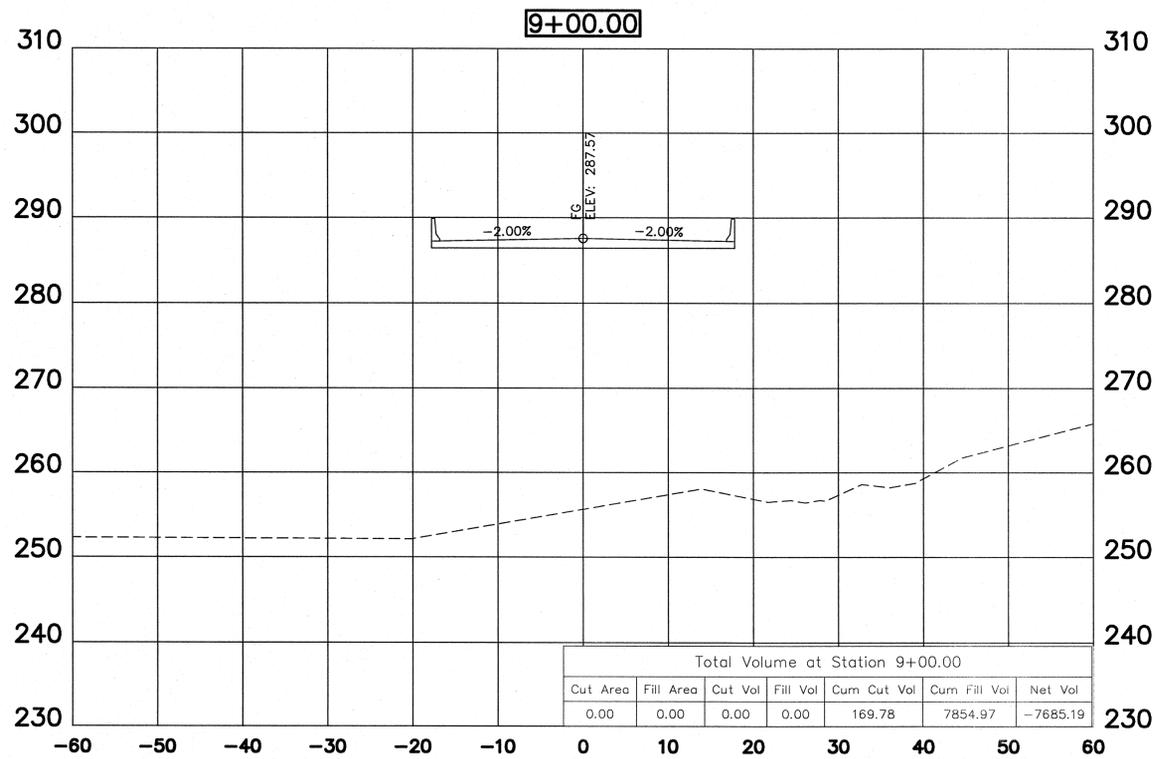
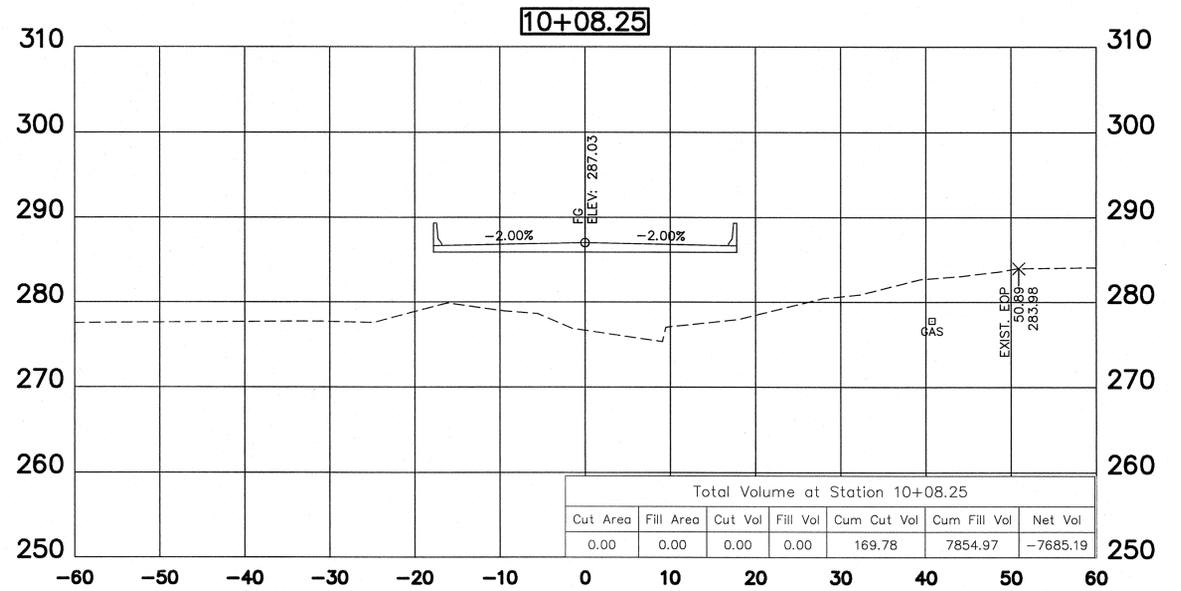
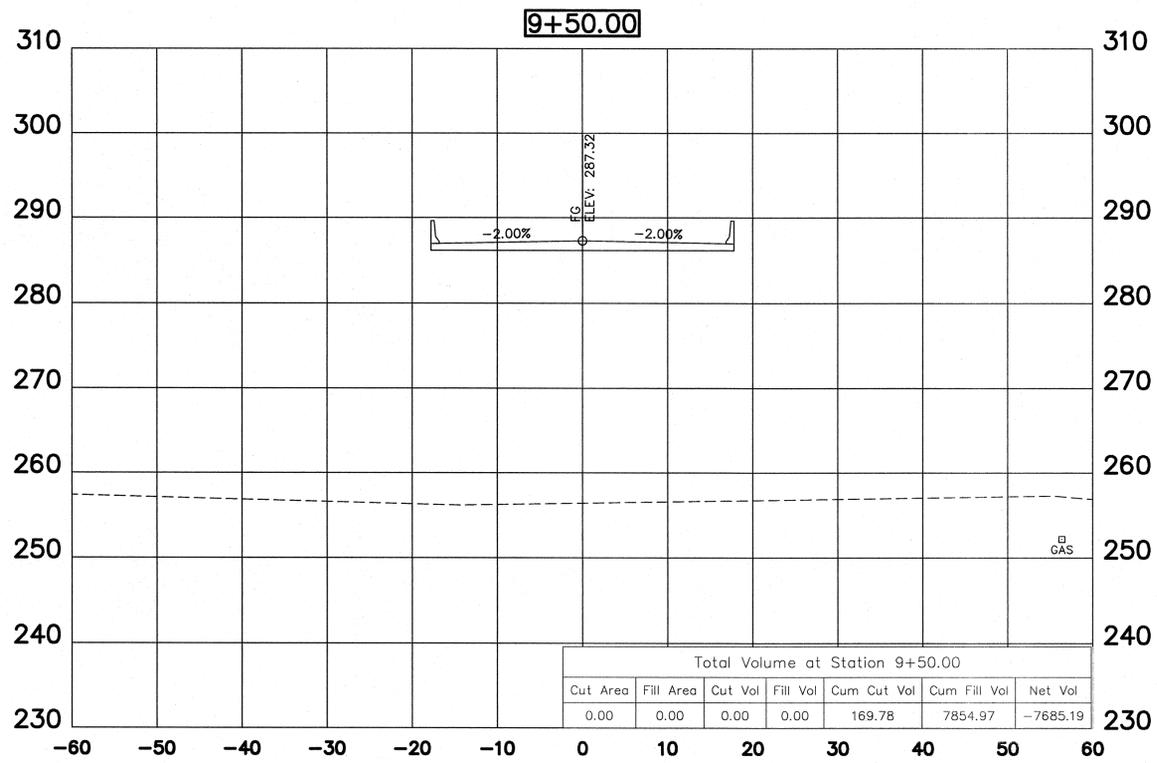
ITEM NO.	DESCRIPTION OF	APPROVAL DATE



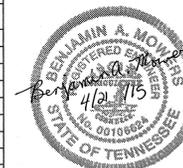
**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 42 OF 46  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
CROSS SECTIONS  
FROM: 7+50  
TO: 8+50  
DATE: 07/2011  
DESIGN BY: B.A.M.  
DRAWN BY: B.A.M.  
DATE: 06/2012  
PROJECT NO.: D7821  
BOOK:  
SCALE: 1" = 10' H  
1" = 10' V

XS4

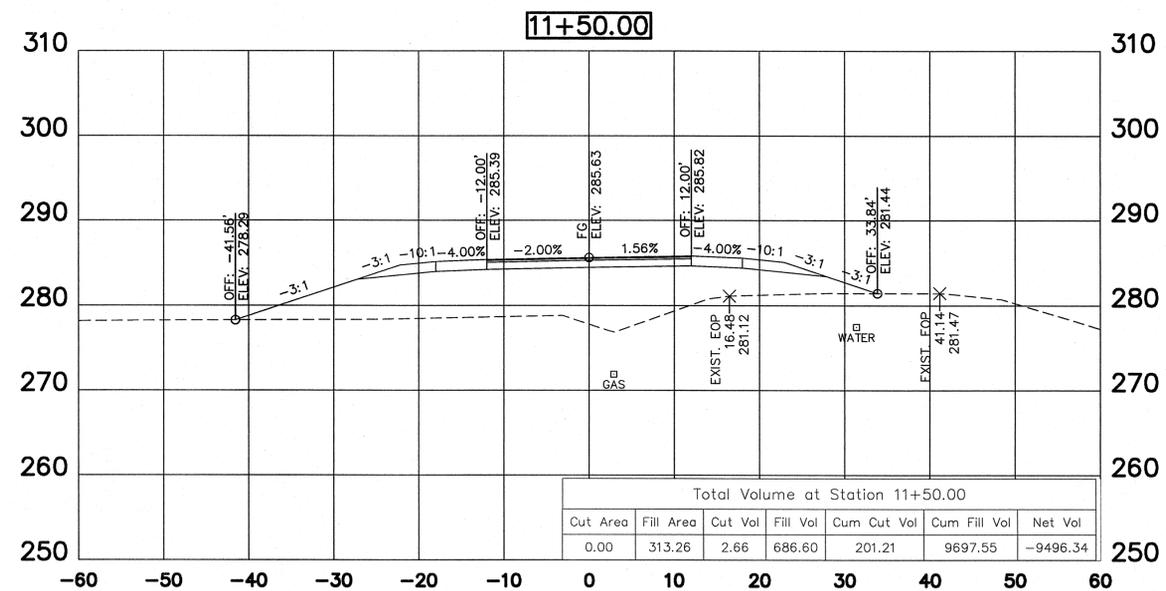
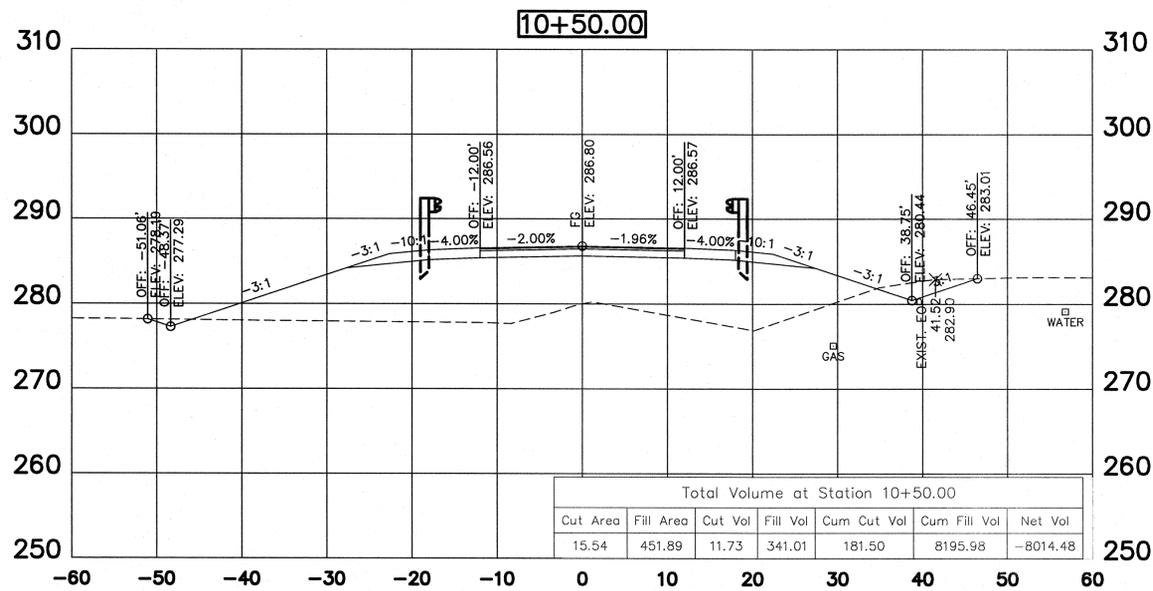
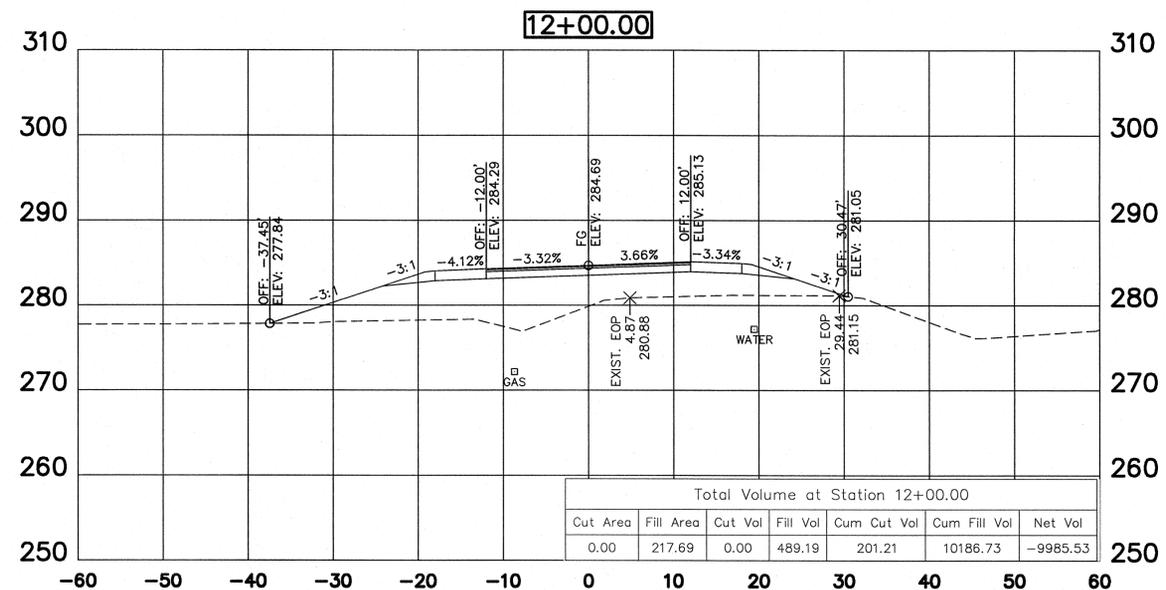
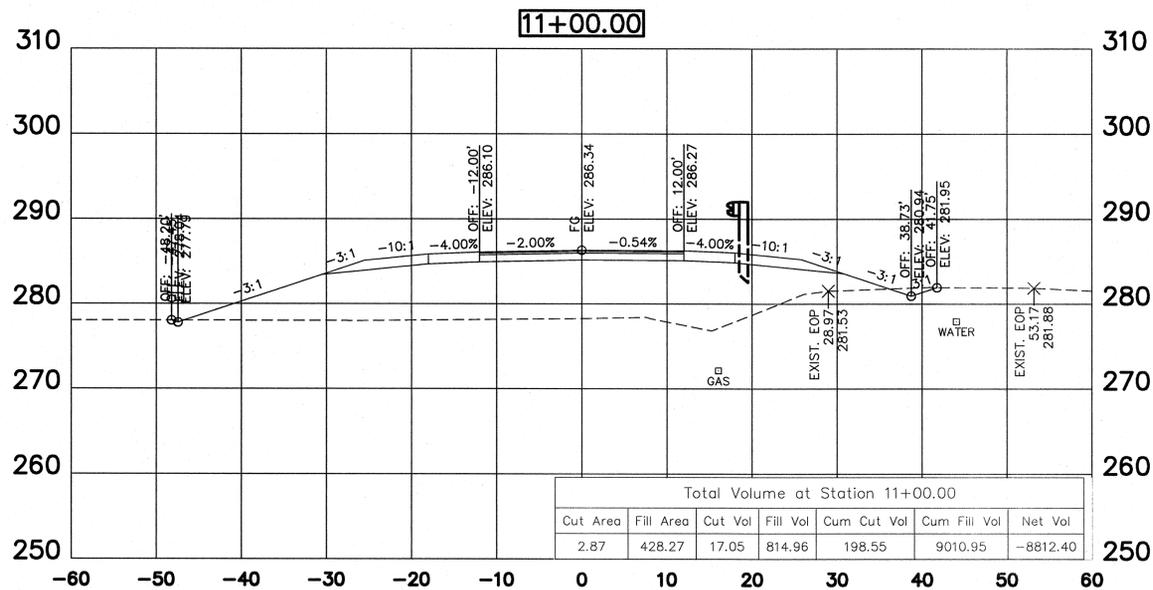


ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 43 OF 46 XS5  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
CROSS SECTIONS  
FROM: 9+00  
TO: 10+08.25  
SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
DESIGN BY: B.A.M. DATE: 06/2012 BOOK:  
DRAWN BY: B.A.M. DATE: 06/2012 SCALE: 1" = 10' H  
1" = 10' V

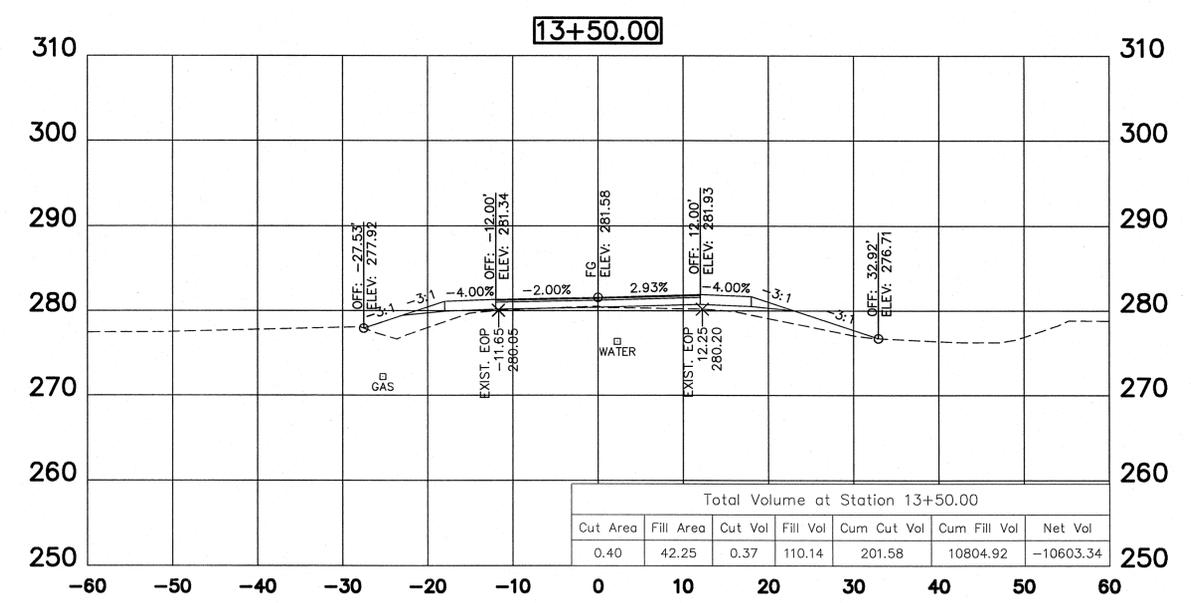
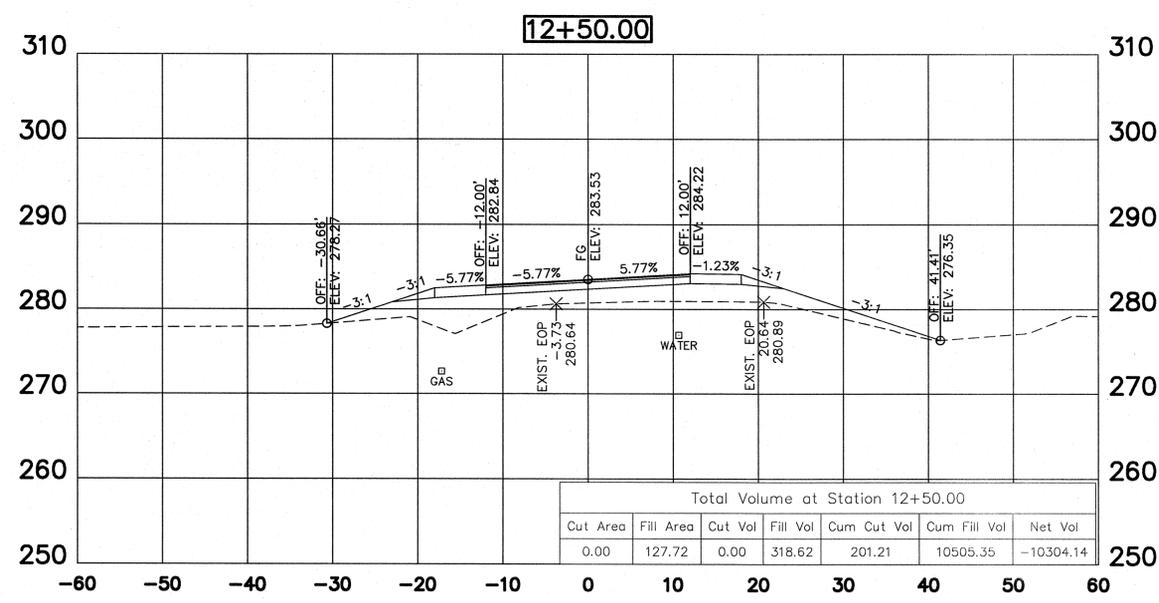
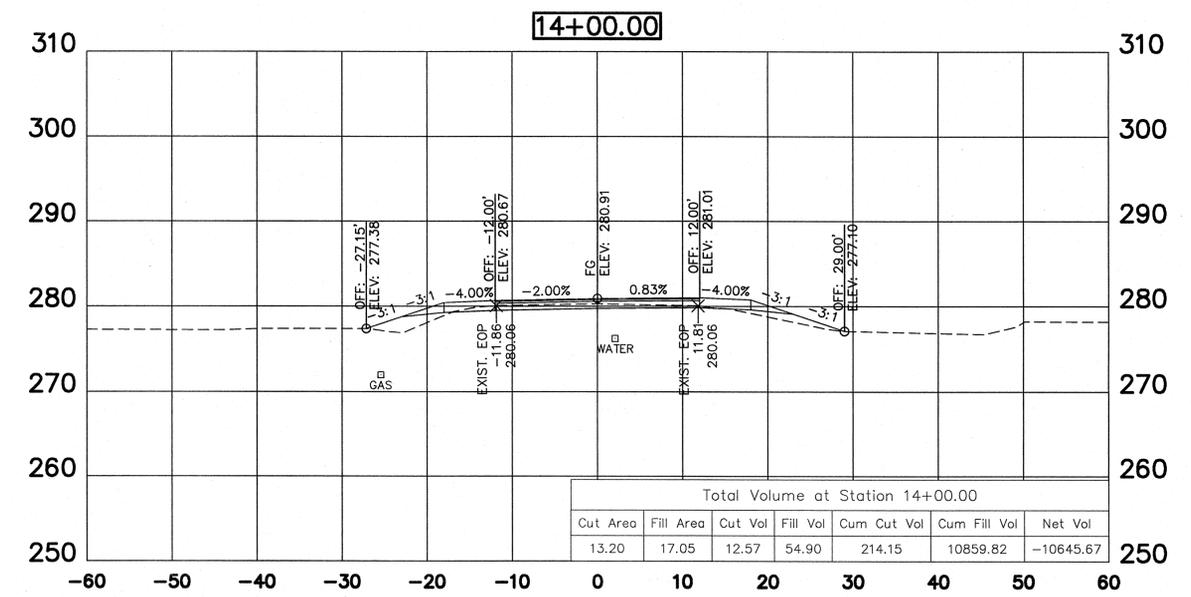
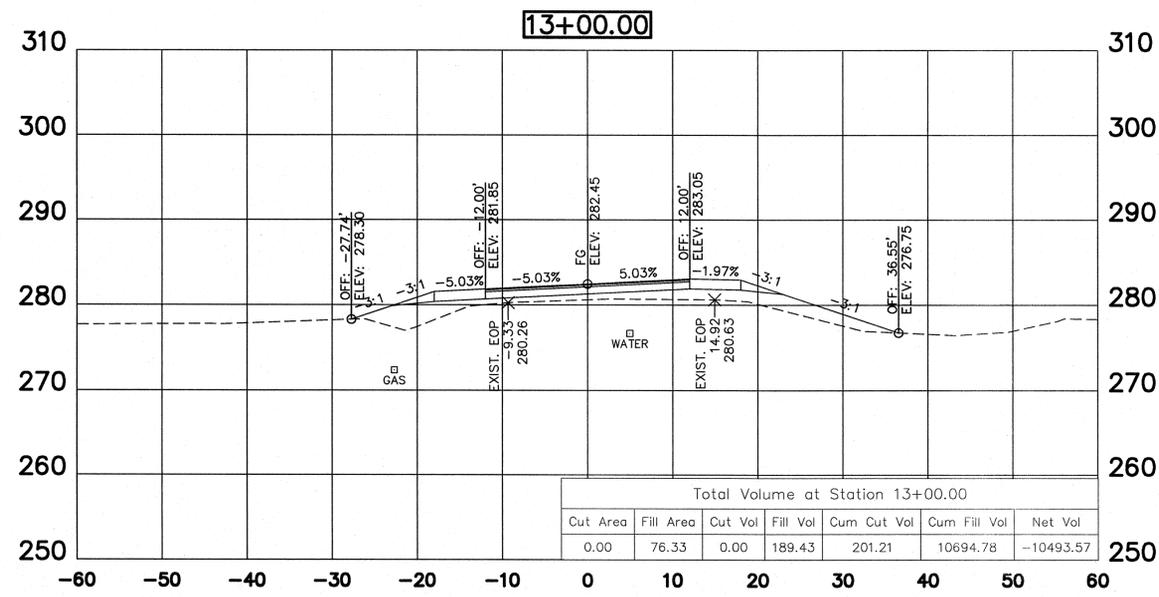


ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 44 OF 46 XS6  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
CROSS SECTIONS  
FROM: 10+50  
TO: 12+00  
SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
DESIGN BY: B.A.M. DATE: 06/2012 BOOK:  
DRAWN BY: B.A.M. DATE: 06/2012 SCALE: 1" = 10' H  
1" = 10' V

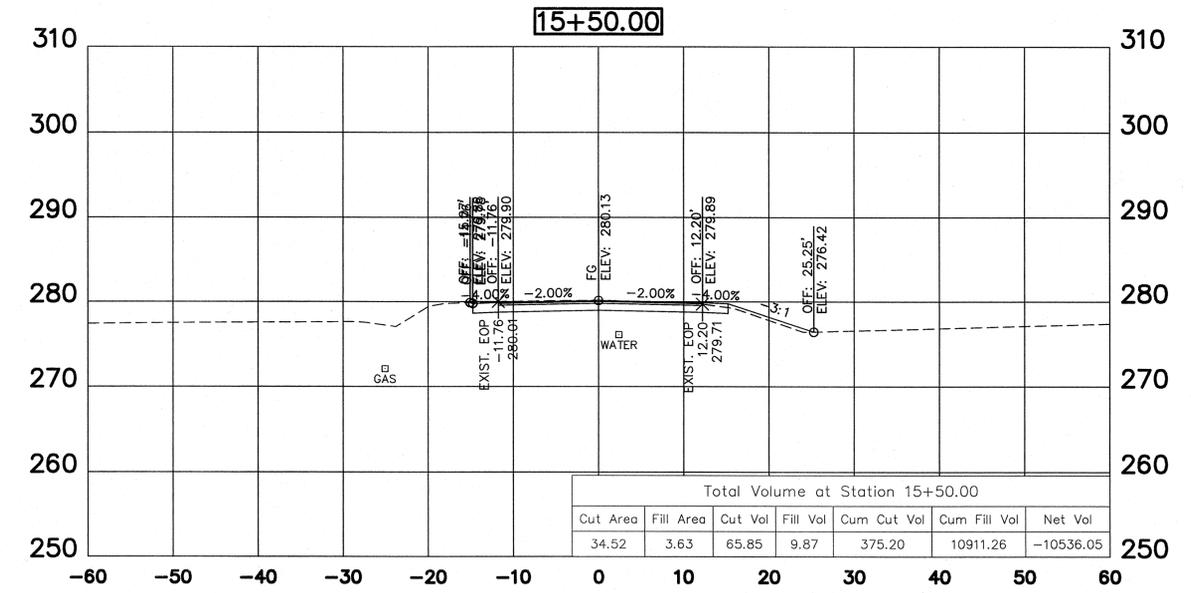
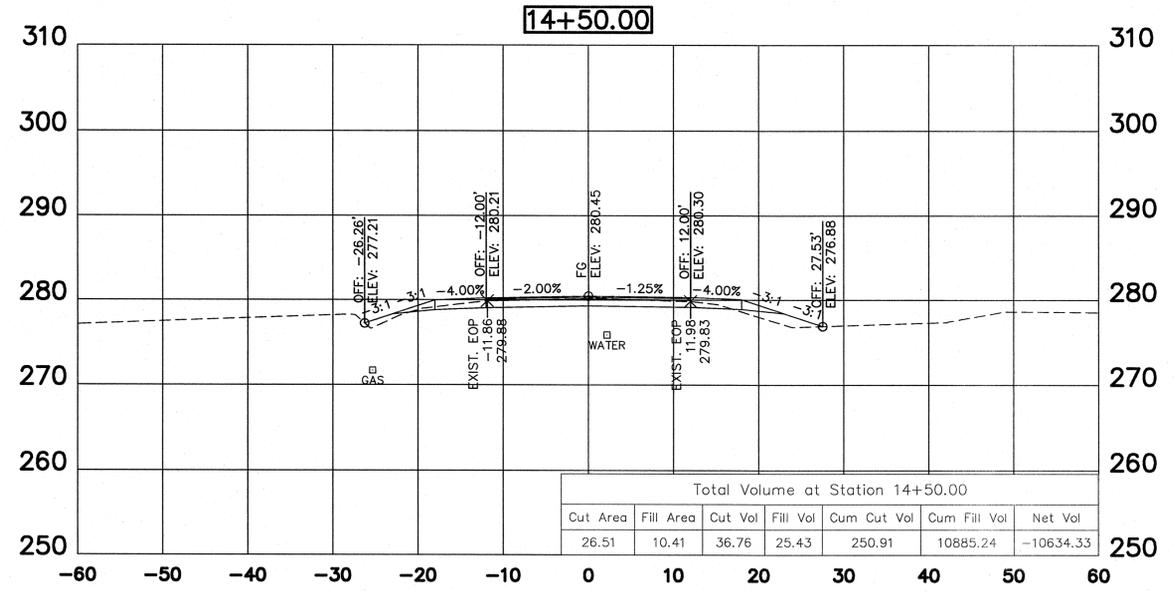
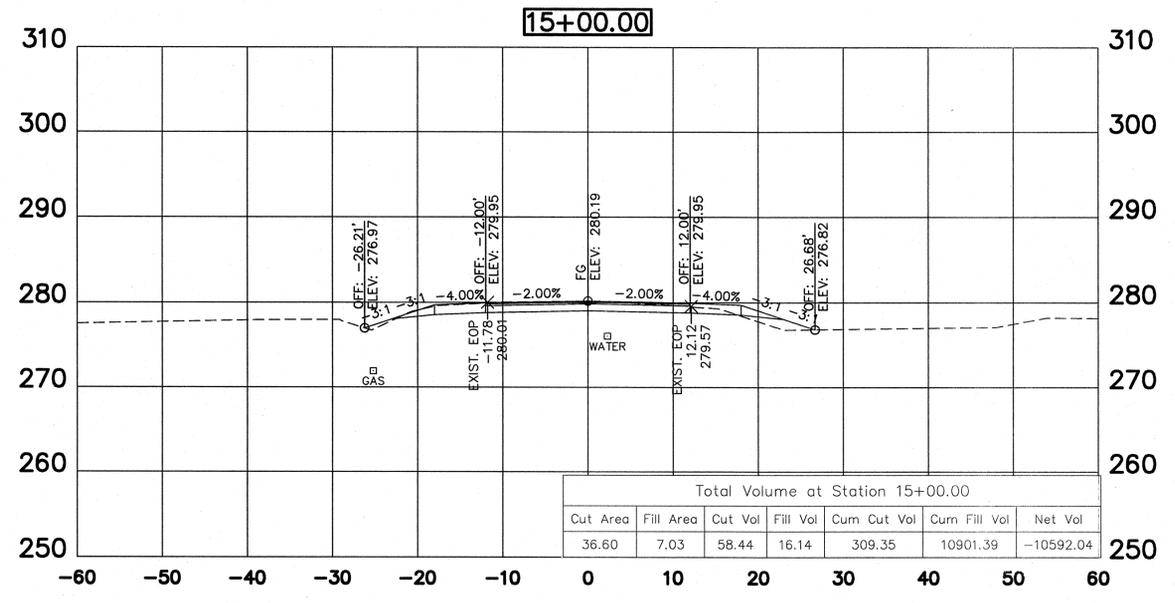


ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 45 OF 46 XS7  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
CROSS SECTIONS  
FROM: 12+50  
TO: 14+00  
SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
DESIGN BY: B.A.M. DATE: 06/2012 BOOK:  
DRAWN BY: B.A.M. DATE: 06/2012 SCALE: 1" = 10' H  
1" = 10' V



ITEM NO.	DESCRIPTION OF	APPROVAL DATE



**SLEDGE ROAD**  
SHELBY COUNTY  
ENGINEER: FISHER & ARNOLD, INC.

SHEET 46 OF 46 XS8  
DIVISION OF ENGINEERING  
**SLEDGE ROAD**  
CROSS SECTIONS  
FROM: 14+50  
TO: 15+50  
SURVEY: F & A, INC. DATE: 07/2011 PROJECT NO.: D7821  
DESIGN BY: B.A.M. DATE: 06/2012 BOOK:  
DRAWN BY: B.A.M. DATE: 06/2012 SCALE: 1" = 10' H  
1" = 10' V