

INDEX OF SHEETS

SEE SHEET 2

RECORD PLANS

CONTRACTOR: J.P. SICARD, INC. - BARTON, VT
 RESIDENT ENGINEER: JAY STRONG
 CONSTRUCTION BEGAN: JULY 11, 2011
 CONSTRUCTION COMPLETE: OCTOBER 23, 2012
 RECORD PLANS BY: JAY STRONG & CRAIG PIERCE
 I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
 BY: *JWS* RESIDENT ENGINEER
 DATE: *Apr 8th 2013*

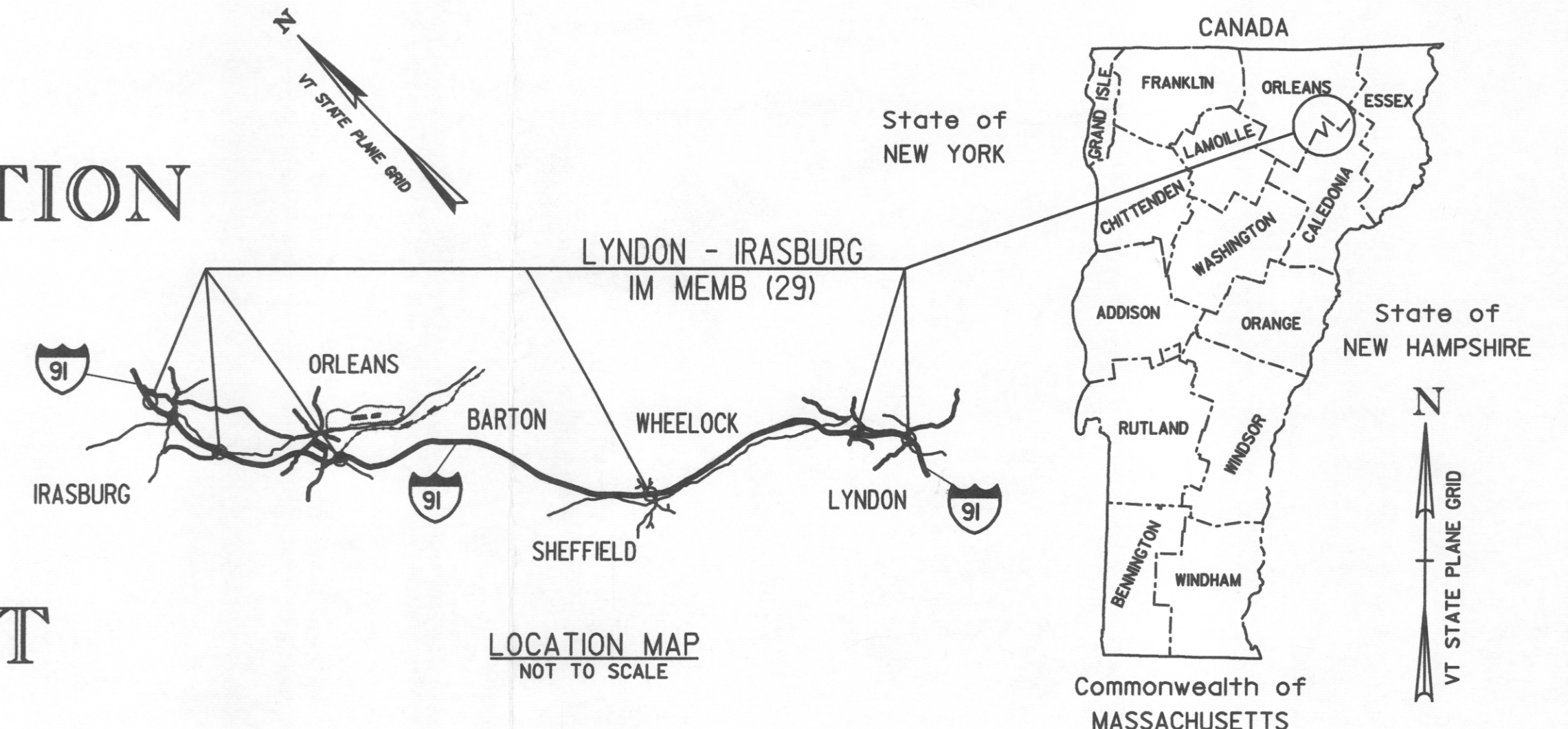
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

STATE OF VERMONT
 AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
 BRIDGE PROJECT

TOWNS OF LYNDON, SHEFFIELD, BARTON, AND IRASBURG
 COUNTIES OF CALEDONIA AND ORLEANS
 BRIDGE NOs. 95S, 96S, 99S, 100N, 102S, 105N&S, & 107S ON INTERSTATE 91



PROJECT LOCATIONS: BRIDGE 95S IS LOCATED ON I-91 (M.M. 138.7) OVER T.H. NO. 9 (COLLEGE RD.) IN THE TOWN OF LYNDON.
 BRIDGE 96S IS LOCATED ON I-91 (M.M. 139.9) OVER VT. ROUTE 122 & MILLER RUN IN THE TOWN OF LYNDON.
 BRIDGE 99S IS LOCATED ON I-91 (M.M. 145.6) OVER T.H. NO. 1 (BERRY HILL RD.) IN THE TOWN OF SHEFFIELD.
 BRIDGE 100N IS LOCATED ON I-91 (M.M. 145.6) OVER T.H. NO. 1 (BERRY HILL RD.) IN THE TOWN OF SHEFFIELD.
 BRIDGE 102S IS LOCATED ON I-91 (M.M. 156.0) OVER VT. ROUTE 16 IN THE TOWN OF BARTON.
 BRIDGES 105N&S ARE LOCATED ON I-91 (M.M. 160.0) OVER T.H. NO. 6 (LAKE REGION RD.) IN THE TOWN OF BARTON.
 BRIDGE 107S IS LOCATED ON I-91 (M.M. 163.1) OVER BARTON RIVER, CONN. R.I. LINE R.R., AND T.H. NO. 3 (MAPLE ST.) IN THE TOWN OF IRASBURG.

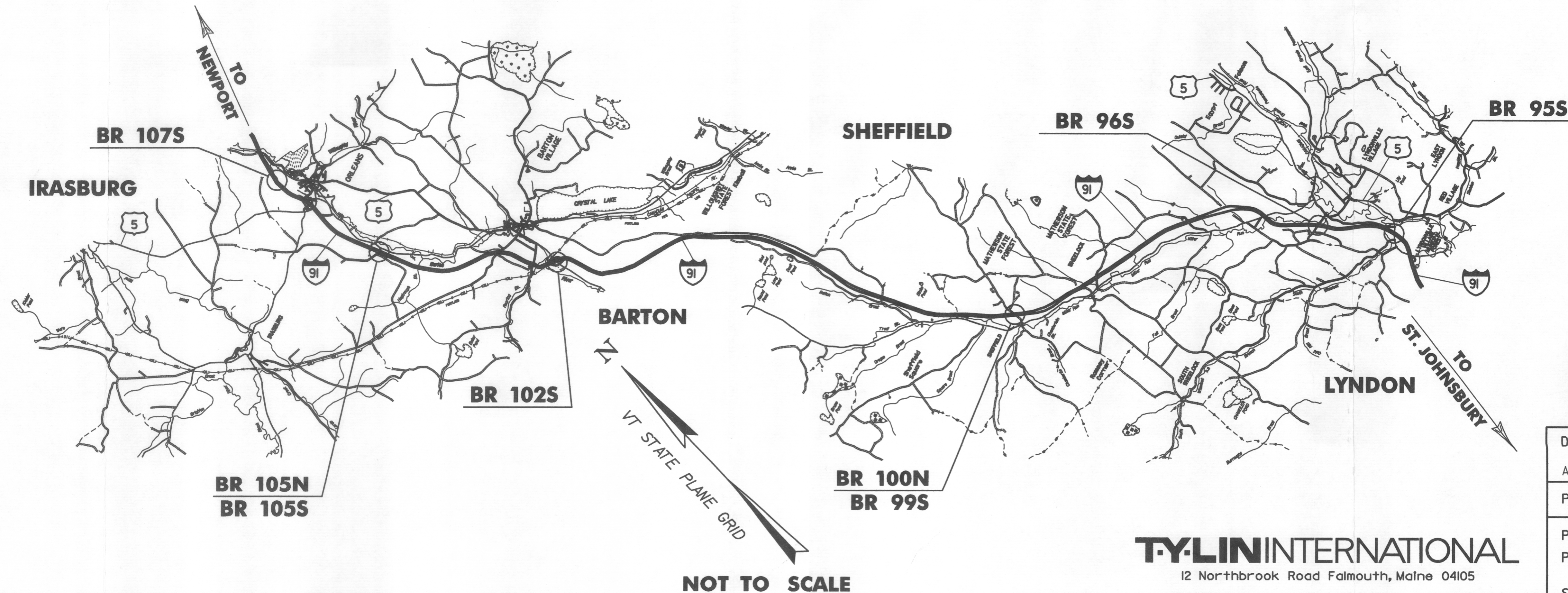
LENGTH OF BRIDGES:	95S	150.18'
	96S	246.17'
	99S	136.98'
	100N	144.98'
	102S	180.29'
	105N	89.00'
	105S	89.00'
	107S	447.43'
TOTAL LENGTH OF BRIDGES:		1484.03'
TOTAL LENGTH OF PROJECT:		1484 FEET

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BITUMINOUS CONCRETE WEARING SURFACE AND MEMBRANE ON BRIDGES AND APPROACHES WITH ASSOCIATED MINOR WORK.

QUALITY ASSURANCE PROGRAM: LEVEL 1

CONVENTIONAL SYMBOLS

COUNTY LINE	— — — — —
TOWN LINE	— — — — —
LIMITS OF ACCESS	— — — — —
POINT OF ACCESS	X
FENCE LINE	X — X — X — X —
STONE WALL	○ — ○ — ○ — ○ —
TRAVELED WAY	— — — — —
GUARD RAIL	— — — — —
RAILROAD	— — — — —
SURVEY LINE	— — — — —
CULVERT	— — — — —
POWER POLE	— — — — —
TELEPHONE POLE	— — — — —
TREES	— — — — —
CONTROL OF ACCESS	— — — — —
PROPERTY LINE	— — — — —
R.O.W. TAKING LINE	— — — — —
SLOPE RIGHTS	— — — — —
TOP OF CUT	— — — — —
TOE OF SLOPE	— — — — —



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
 CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
 APPROVED: *[Signature]* DATE: *4/4/11*
 PROJECT MANAGER: SHERWARD G. FARNSWORTH
 PROJECT NAME: LYNDON - IRASBURG
 PROJECT NUMBER: IM MEMB (29)
 SHEET 1 OF 55 SHEETS

TYLIN INTERNATIONAL
 12 Northbrook Road Falmouth, Maine 04105

NOT TO SCALE

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

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STANDARDS LIST

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	06-01-1994
E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-2004
E-101	CONSTRUCTION SIGN DETAILS	05-30-2003
E-102	CONSTRUCTION SIGN DETAILS	05-30-2003
E-102A	CONSTRUCTION SIGN DETAILS	05-01-2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-2003
E-107A	BREAKAWAY BARRICADE DETAILS	06-08-2009
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	06-08-2009
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-134	BRIDGE NUMBER PLAQUE	08-08-1995
E-164	SQUARE STEEL SIGN POST	08-08-2009
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	01-03-2000
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	01-03-2000
SB-R4B-82	GUARD RAIL APPROACH SECTION, TYPE I & II	03-30-1988
SB-R6-82	BRIDGE RAILING - HEAVY DUTY STEEL BEAM	01-06-1995
SB-R7-90	BRIDGE RAILING - HEAVY DUTY STEEL BEAM	01-11-1995

STRUCTURAL DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES
SD-502.00	CONCRETE DETAILS AND NOTES

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: June 2009

DRAINAGE AREA : 4.3 sq. mi.
 CHARACTER OF TERRAIN : Hilly to mountainous, mostly forested with ski area development
 STREAM CHARACTERISTICS : Incised, sinuous
 NATURE OF STREAMBED : Cobbles, gravel, sand

PEAK FLOW DATA

Q 2.33 =	325 cfs	Q 50 =	1000 cfs
Q 10 =	650 cfs	Q 100 =	1150 cfs
Q 25 =	850 cfs	Q 500 =	1500 cfs

DATE OF FLOOD OF RECORD : Unknown
 ESTIMATED DISCHARGE : Unknown
 WATER SURFACE ELEV. : Unknown
 NATURAL STREAM VELOCITY : @ Q25 = 12.8 fps
 ICE CONDITIONS : Moderate to heavy
 DEBRIS : Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
 IS ORDINARY RISE RAPID? No
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE:

WATERSHED STORAGE: < 1% HEADWATERS: _____
 UNIFORM: X
 IMMEDIATELY ABOVE SITE: _____

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Steel beam with concrete deck
 YEAR BUILT: 1960, reconstructed in 1976
 CLEAR SPAN(NORMAL TO STREAM): 21'
 VERTICAL CLEARANCE ABOVE STREAMBED: 7'
 WATERWAY OF FULL OPENING: 140 sq. ft.
 DISPOSITION OF STRUCTURE: Remove and replace
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

WATER SURFACE ELEVATIONS AT:

Q2.33 =	997.0'	VELOCITY =	7.8 fps
Q10 =	998.2'	"	14.0 fps
Q25 =	999.2'	"	12.4 fps
Q50 =	999.9'	"	12.5 fps
Q100 =	1000.4'	"	12.6 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
 FREQUENCY: Below Q10
 RELIEF ELEVATION: 997.5'
 DISCHARGE OVER ROAD @Q100: 40 cfs

UPSTREAM STRUCTURE

TOWN: N/A DISTANCE: _____
 HIGHWAY #: _____ STRUCTURE #: _____
 CLEAR SPAN: _____ CLEAR HEIGHT: _____
 YEAR BUILT: _____ FULL WATERWAY: _____
 STRUCTURE TYPE: _____

DOWNSTREAM STRUCTURE

TOWN: Mendon DISTANCE: 2,110'
 HIGHWAY #: TH 7 STRUCTURE #: BR 19
 CLEAR SPAN: 27' CLEAR HEIGHT: 7' +/-
 YEAR BUILT: 1981 FULL WATERWAY: _____
 STRUCTURE TYPE: Concrete Slab

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR	4A STR	5A SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	1.66	1.19					
POSTING							
OPERATING	2.15	1.54	2.59	1.33	1.83	1.68	
COMMENTS:							

26. MINIMUM GROUND SNOW LOAD _____
 27. SEISMIC DATA PGA: --- S: ---

PROPOSED STRUCTURE

STRUCTURE TYPE: Concrete Slab Bridge

CLEAR SPAN(NORMAL TO STREAM): 32'
 VERTICAL CLEARANCE ABOVE STREAMBED: 8'
 WATERWAY OF FULL OPENING: 215 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	997.0'	VELOCITY =	7.8 fps
Q10 =	998.2'	"	9.1 fps
Q25 =	999.2'	"	15.5 fps
Q50 =	999.6'	"	15.6 fps
Q100 =	999.9'	"	15.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: N/A
 RELIEF ELEVATION: 997.6'
 DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1000.7'
 VERTICAL CLEARANCE: @ Q25 = 1.5'

SCOUR: 2.5' at Q500

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	10 cfs	DEPTH OR ELEVATION:	
ORDINARY LOW WATER:	5 cfs		0.5'
ORDINARY HIGH WATER:	140 cfs		2.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
 CLEAR SPAN (NORMAL TO STREAM): _____
 VERTICAL CLEARANCE ABOVE STREAMBED: _____
 WATERWAY AREA OF FULL OPENING: _____

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	dp: 2.0 INCH
3. DESIGN SPAN	L: 39.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: ---
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	fy: 270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'c: 6.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'ci: 5.0 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'c: 4.0 KSI
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'c: 4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'c: 3.5 KSI
11. CONCRETE, CLASS C	f'c: 3.0 KSI
12. REINFORCING STEEL	fy: 60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	fy: 60 KSI
14. SOIL UNIT WEIGHT	γ: 0.125 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	qn: ---
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
17. NOMINAL BEARING RESISTANCE OF ROCK	qn: ---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
19. NOMINAL AXIAL PILE RESISTANCE	qp: 162.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	fy: 50 KSI
21. PILE SIZE	HP 12X 84
22. EST. PILE LENGTH	Lp: 30 FT
23. PILE RESISTANCE FACTOR	φ: 0.65
24. LATERAL PILE DEFLECTION	Δ: 0.25 INCH
25. BASIC WIND SPEED	V3s: ---
26. MINIMUM GROUND SNOW LOAD	pg: ---
27. SEISMIC DATA	PGA: --- S: ---

PROJECT NAME: MENDON
 PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272pi.xls PLOT DATE: 9/14/2010
 PROJECT LEADER: K. HIGGINS DRAWN BY: R. PELLETT
 DESIGNED BY: G. LAROCHE CHECKED BY: G. LAROCHE
 PRELIMINARY INFORMATION SHEET 1 SHEET 2 OF 32

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT	
2012	200	25	52	7	5	20 year ESAL for flexible pavement from 2012 to 2032 : 25000
2032	120	30	52	8.9	10	40 year ESAL for flexible pavement from 2012 to 2052 : 55000
						Design Speed : 35 mph

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY R_{vd} : 250.00 KIP
2. PILE TEST RESISTANCE FACTOR ϕ : 0.65
3. MAXIMUM PILE TIP ELEVATION: 963.00 FT
4. 0

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOURTH EDITION, AND ITS LATEST REVISIONS AND THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, SECOND EDITION, AND ITS LATEST REVISIONS.
2. THE BRIDGE IS DESIGNED FOR HL-93 LIVE LOAD WITH A 2" ALLOWANCE FOR FUTURE PAVEMENT.
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FARENHEIT UNLESS OTHERWISE NOTED.
4. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.

EARTHWORK

5. THE HEIGHT OF FILL BEHIND ABUTMENTS WILL BE LIMITED TO THE BRIDGE SEAT ELEVATION UNTIL THE DECK HAS BEEN POURED AND THE CURING PERIOD IS UP.

CONCRETE

6. THE AGENCY WILL PROVIDE THE BRIDGE PLAQUE FOR THE CONTRACTOR TO INSTALL AS SHOWN ON THE PLANS.
7. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP NOTCHES.
8. ALL CONCRETE BELOW THE CONSTRUCTION JOINT SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS OTHERWISE NOTED.
9. ALL CONCRETE ABOVE THE CONSTRUCTION JOINT SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A UNLESS OTHERWISE NOTED.

STONE FILL

10. THE STONE FILL, TYPE IV SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE DECK IS POURED.

TRAFFIC CONTROL

11. AS PART OF ITEM 641.10 TRAFFIC CONTROL, THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ROADWAY, TRAFFIC, AND SAFETY ENGINEER FOR APPROVAL PER SUBSECTION 105.03.
12. ACCESS TO ALL DRIVES SHALL BE MAINTAINED DURING CONSTRUCTION.
13. IT SHALL BE THE RESPONSIBILITY OF THE TOWN TO SIGN THE OFFSITE DETOUR.
14. FOR ADDITIONAL CONSTRUCTION SIGNING INSTRUCTIONS SEE E-100 SERIES STANDARDS AND THE LATEST EDITION OF THE MUTCD. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.

PILES

15. THE PILES SHALL BE HP 12X84.
16. THE PILES SHALL BE EMBEDDED INTO THE GROUND A MINIMUM OF 30 FEET (ELEV. 963.00) AND BE DRIVEN TO A NOMINAL RESISTANCE OF 250 KIPS. TO PREVENT DAMAGE TO THE PILES, PILE SHOES SHALL BE REQUIRED AND SHALL CONFORM TO SECTION 505.
17. PILE TESTING AND SEQUENCE - A MINIMUM OF ONE DYNAMIC LOAD TEST SHALL BE CONDUCTED AT EACH SUBSTRUCTURE UNIT. MORE TESTS MAY BE REQUIRED BY THE ENGINEER. THE FIRST PRODUCTION PILE DRIVEN FOR EACH SUBSTRUCTURE UNIT SHALL BE USED FOR THE FIRST PILE TEST. THE PILE SHALL BE DRIVEN AND TESTED IN ITS FINAL LOCATION.
18. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272gennote.dgn PLOT DATE: 07-SEP-2010
PROJECT LEADER: K. HIGGINS DRAWN BY: R. PELLETT
DESIGNED BY: G. LAROCHE CHECKED BY: G. LAROCHE
GENERAL NOTES SHEET 3 OF 32

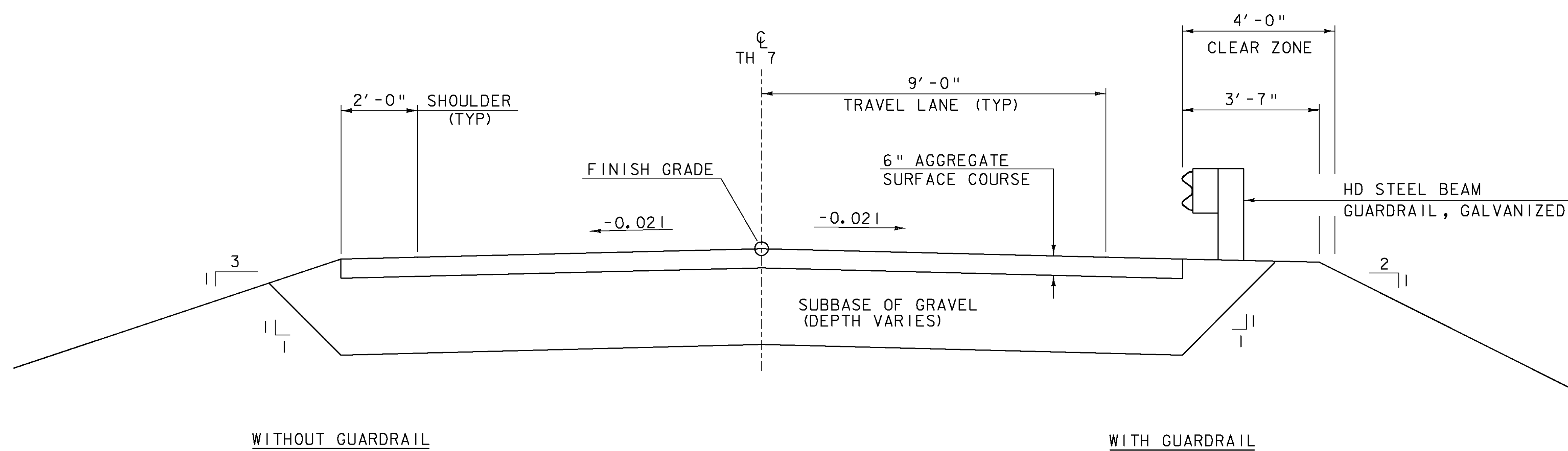
QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
							ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
							240				240		CY	COMMON EXCAVATION	203.15				
							240				240		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
									130		130		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
									200		200		CY	COFFERDAM EXCAVATION, EARTH	208.30				
									50		50		CY	COFFERDAM EXCAVATION, ROCK	208.35				
									1		1		LS	COFFERDAM (ABUTMENT 1)	208.40				
									1		1		LS	COFFERDAM (ABUTMENT 2)	208.40				
							270				270		CY	SUBBASE OF GRAVEL	301.15				
							90				90		CY	AGGREGATE SURFACE COURSE	401.10				
									74		74		CY	CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)	501.33				
									66		66		CY	CONCRETE, HIGH PERFORMANCE CLASS B (FPQ)	501.34				
									1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10				
									256		256		LF	STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X 84	505.265				
									2		2		EACH	DYNAMIC PILE LOADING TEST	505.45				
									8190		8190		LB	REINFORCING STEEL (FPQ)	507.15				
									12690		12690		LB	EPOXY COATED REINFORCING STEEL (FPQ)	507.17				
									10		10		GAL	WATER REPELLENT, SILANE	514.10				
									88		88		LF	BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING (FPQ)	525.44				
									1		1		EACH	REMOVAL OF STRUCTURE (294 SF - EST.)	529.15				
							1				1		MGAL	DUST CONTROL WITH WATER	609.10				
									220		220		CY	STONE FILL, TYPE IV	613.13				
							180				180		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED (FPQ)	621.21				
							4				4		EACH	ANCHOR FOR STEEL BEAM RAIL (FPQ)	621.60				
							56				56		LF	REMOVAL AND DISPOSAL OF GUARDRAIL (FPQ)	621.80				
							100				100		HR	FLAGGERS	630.15				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
										3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
							1				1		LS	MOBILIZATION/DEMobilIZATION	635.11				
							1				1		LS	TRAFFIC CONTROL	641.10				
								115			115		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								150			150		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
								47			47		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
								5			5		LB	SEED	651.15				
								50			50		LB	FERTILIZER	651.18				
								0.5			0.5		TON	AGRICULTURAL LIMESTONE	651.20				
								0.5			0.5		TON	HAYMULCH	651.25				
								20			20		CY	TOPSOIL	651.35				
								50			50		SY	GRUBBING MATERIAL	651.40				

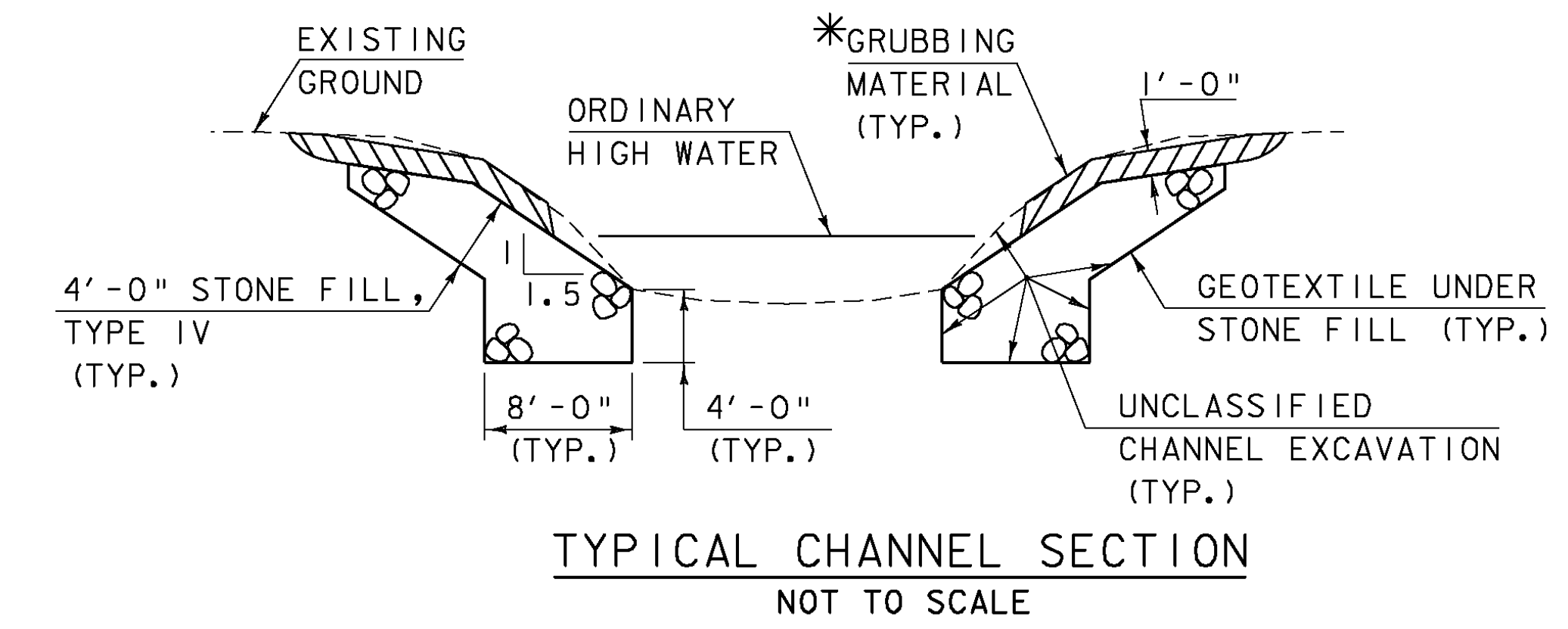
PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272qs.xls
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
QUANTITY SHEET #1

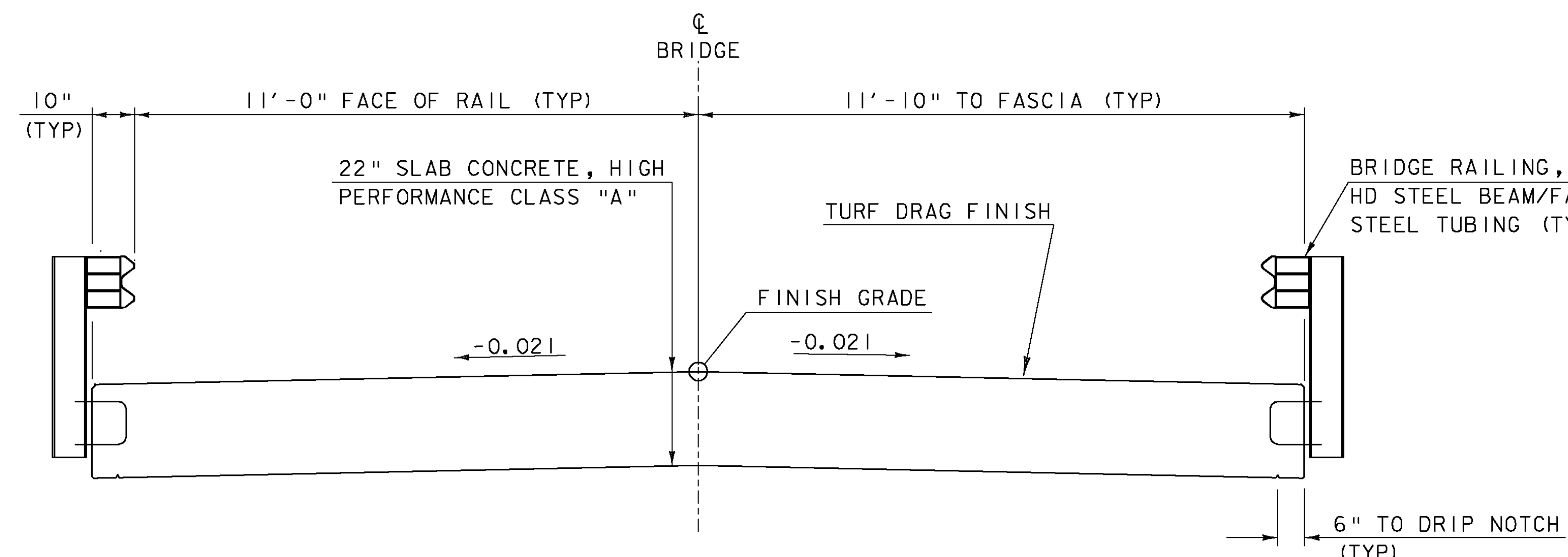
PLOT DATE: 08-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: G. LAROCHE
SHEET 4 OF 32



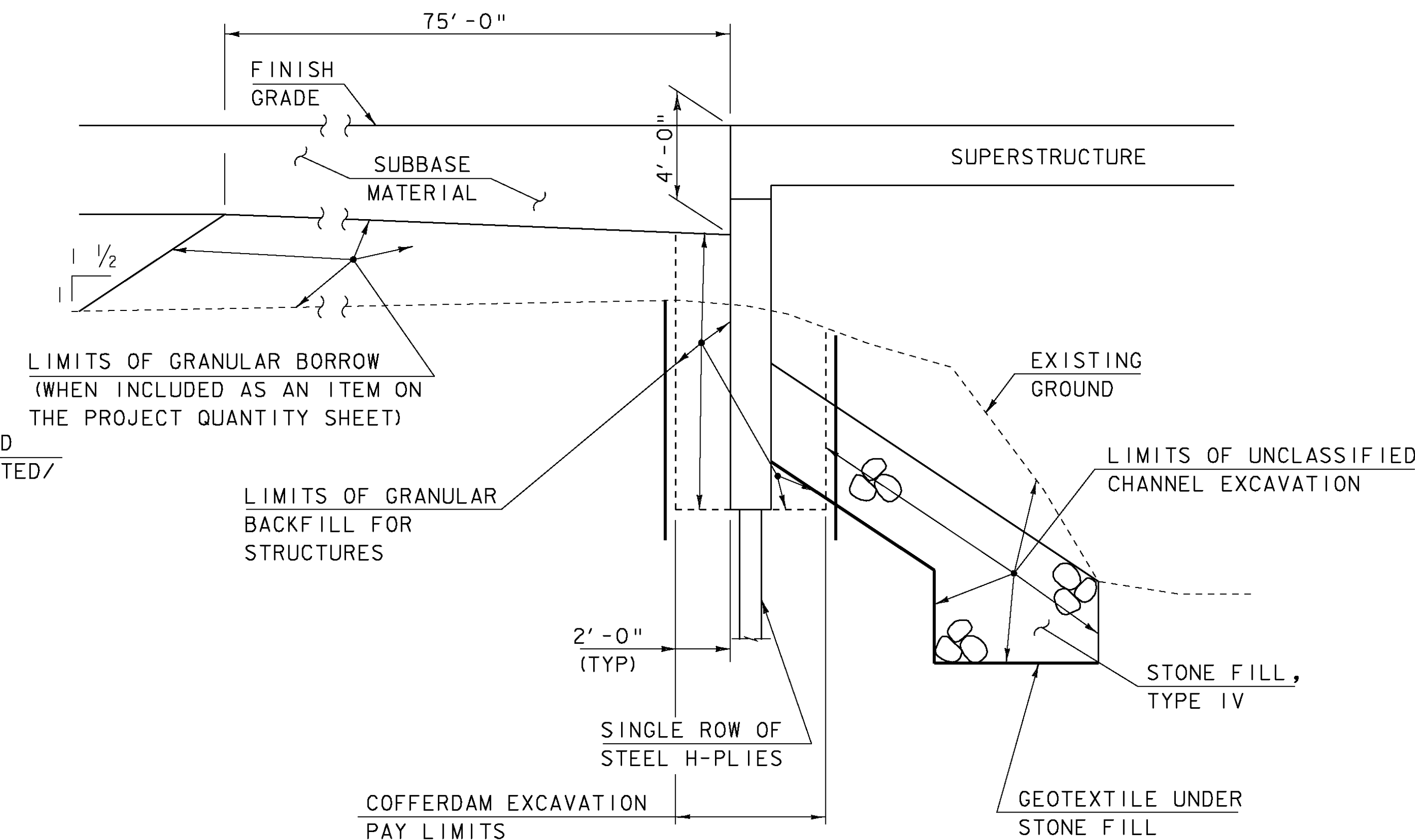
TYPICAL ROADWAY SECTION
SCALE 1/2" = 1'-0"



*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



TYPICAL BRIDGE SECTION
SCALE 1/2" = 1'-0"



TYPICAL INTEGRAL ABUTMENT SECTION
NOT TO SCALE

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

COFFERDAM NOTES

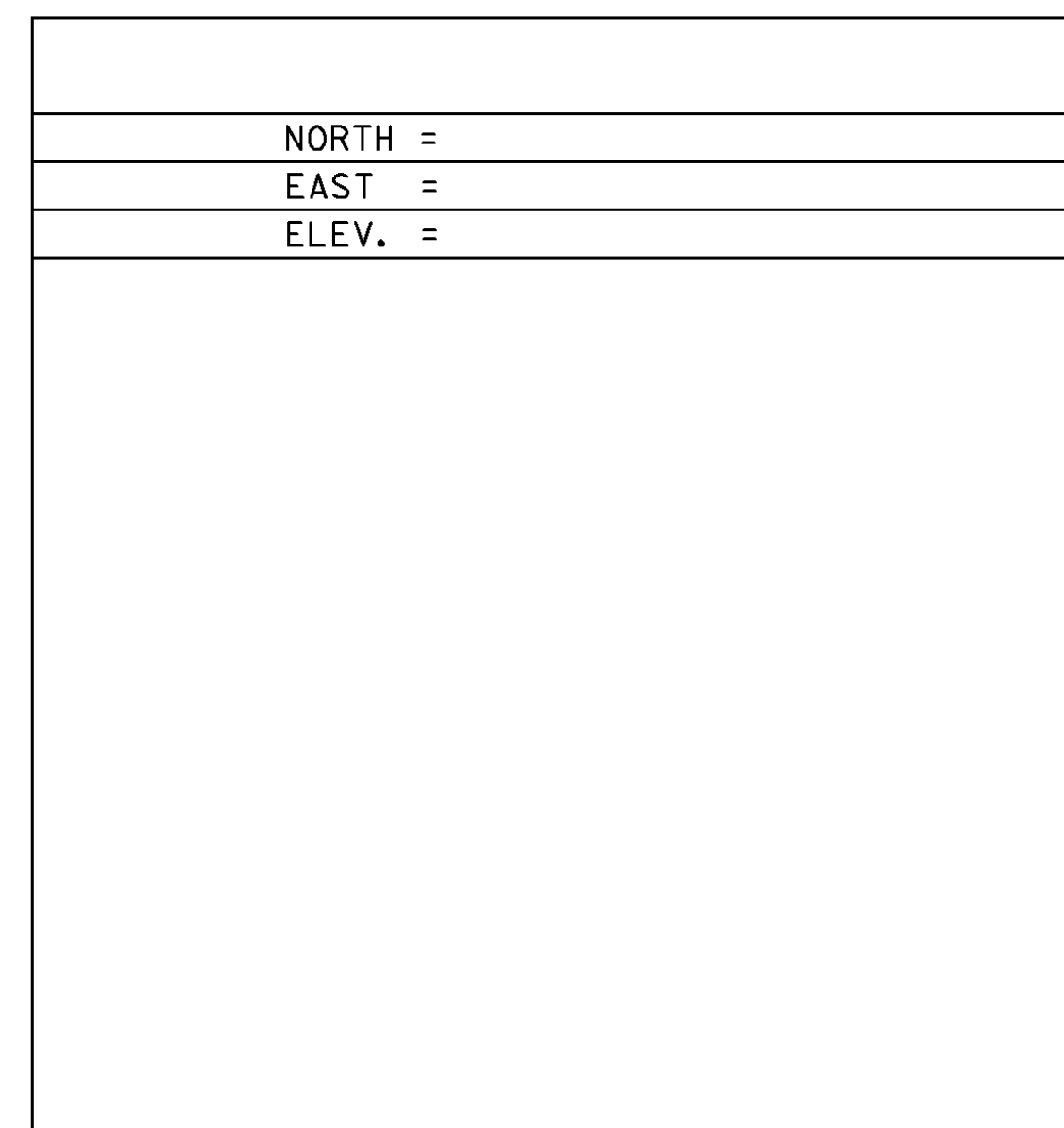
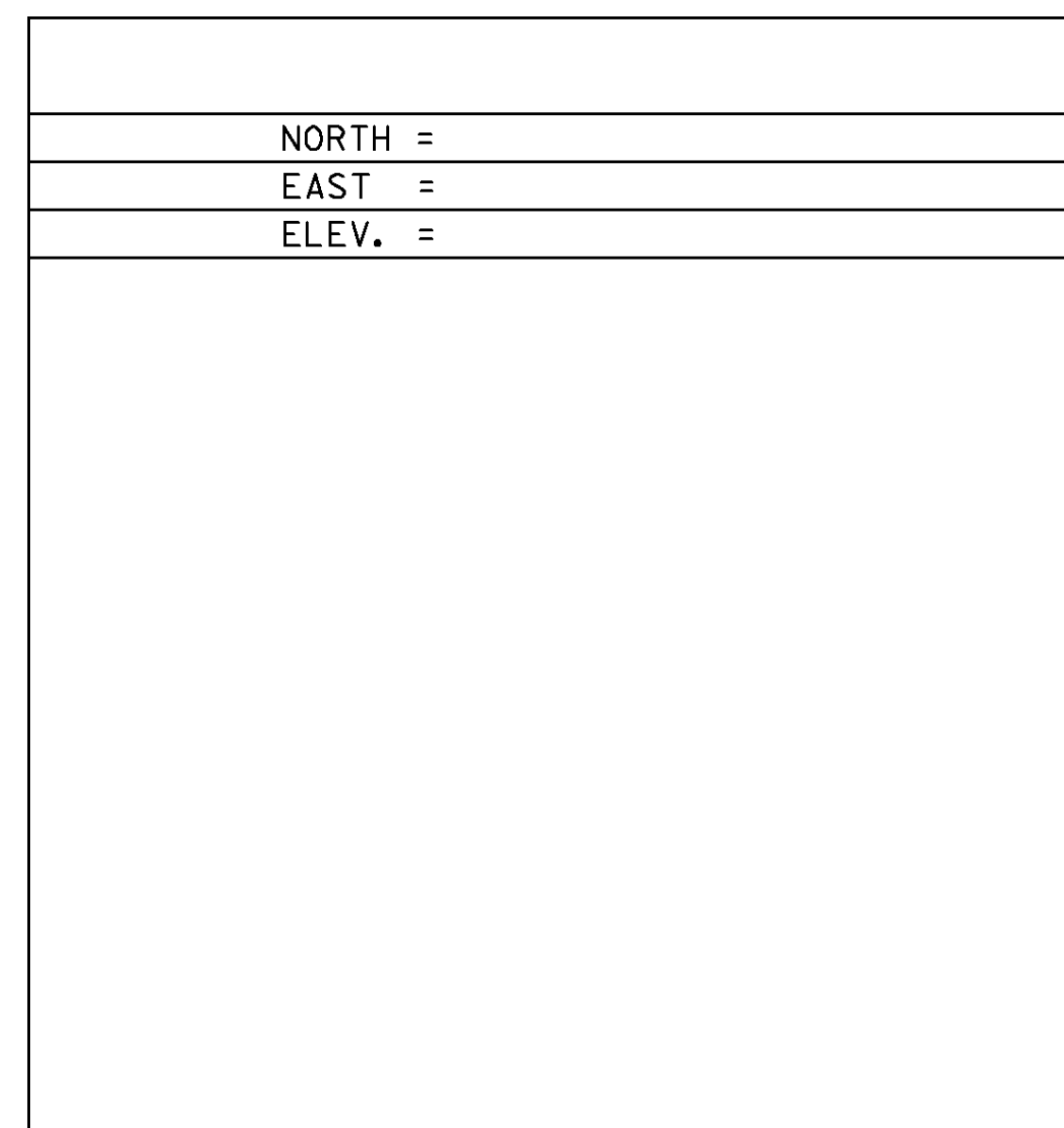
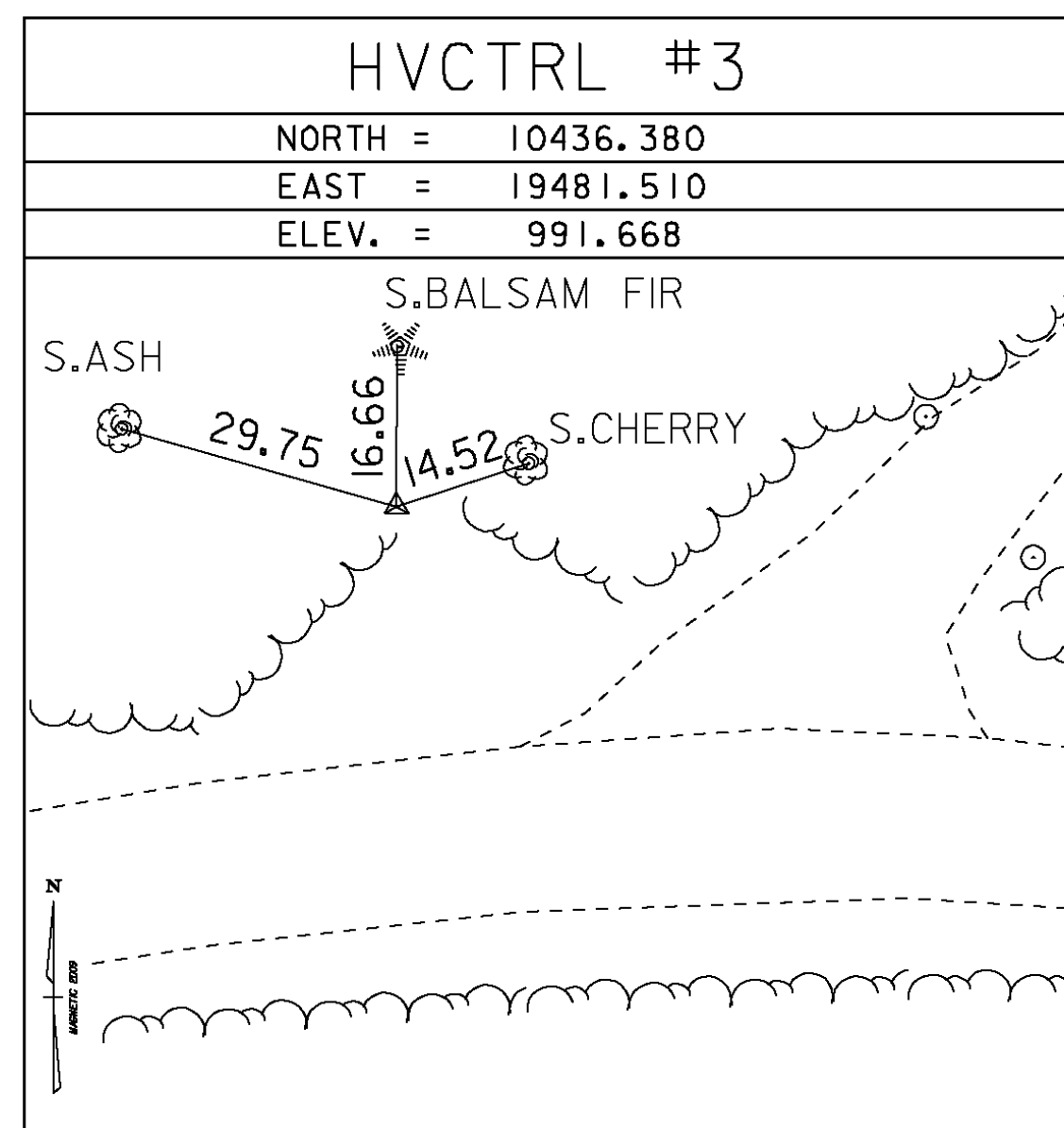
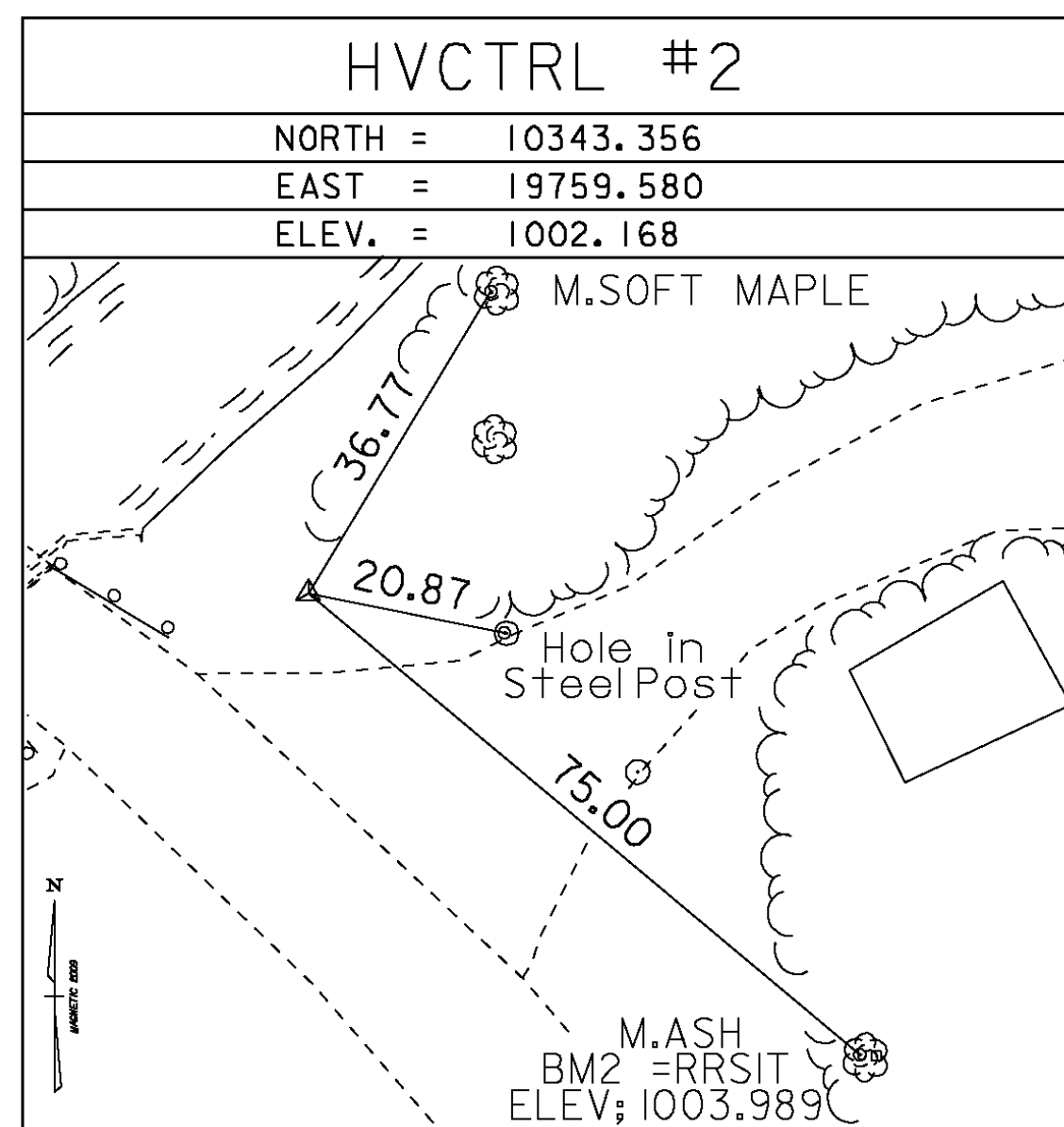
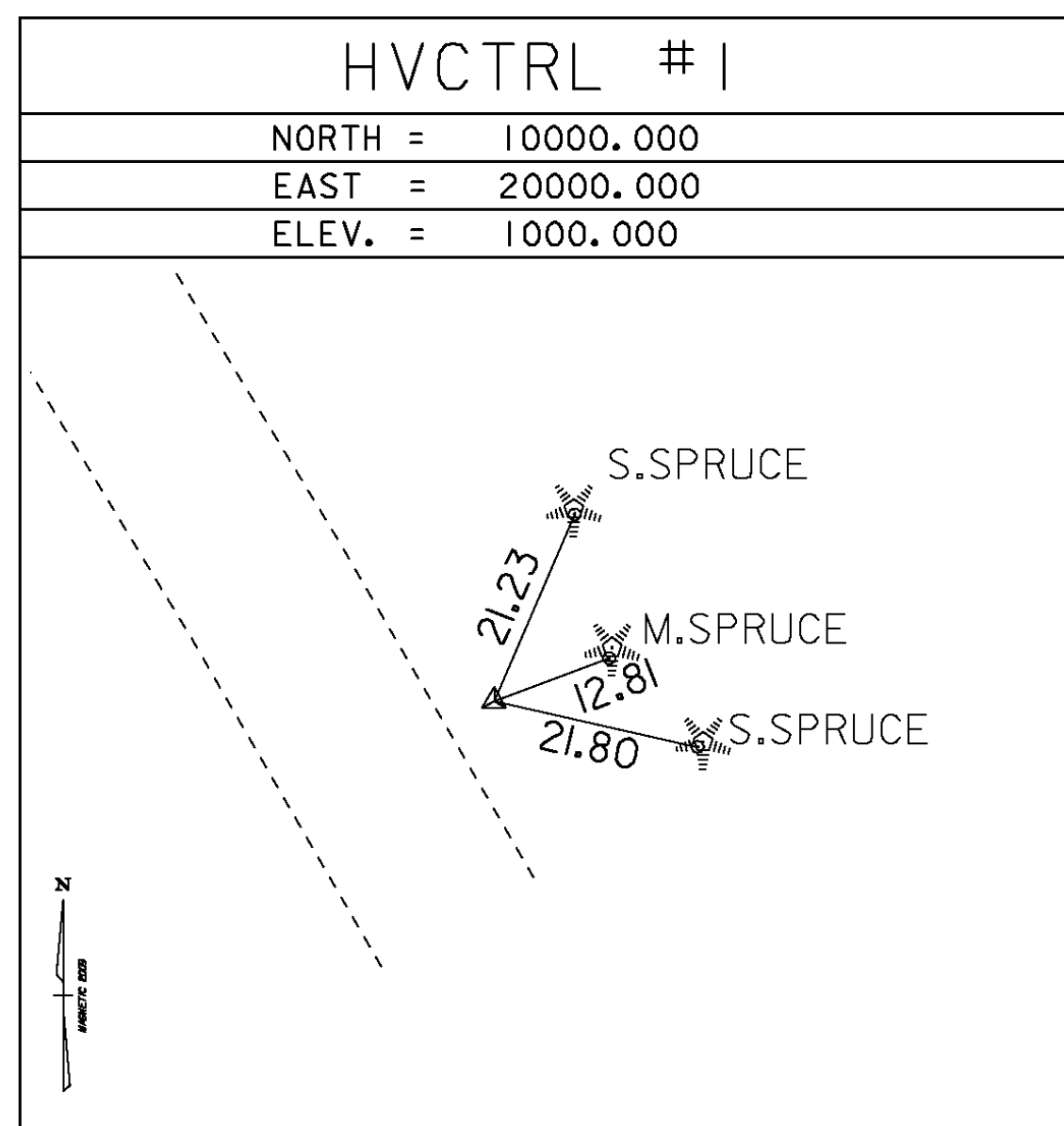
1. COFFERDAM DIMENSIONS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF EITHER "COFFERDAM EXCAVATION, EARTH" OR "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE PILE CAP AND FROM BOTTOM OF EXCAVATION UP TO THE EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION. NO MEASUREMENT AND PAYMENT WILL BE MADE FOR COFFERDAM EXCAVATION AND GRANULAR BACKFILL FOR STRUCTURES OUTSIDE THE PAY LIMITS DEFINED IN NOTE 2.

PROJECT NAME:	MENDON	PLOT DATE:	07-SEP-2010
PROJECT NUMBER:	BRO 1443 (43)	DRAWN BY:	K. PATTERSON
FILE NAME:	s01j272+yp.dgn	CHECKED BY:	J. SALVATORI
PROJECT LEADER:	K. HIGGINS	TYPICAL SECTIONS	
DESIGNED BY:	J. SALVATORI	SHEET	6 OF 32

GPS CONTROL POINTS

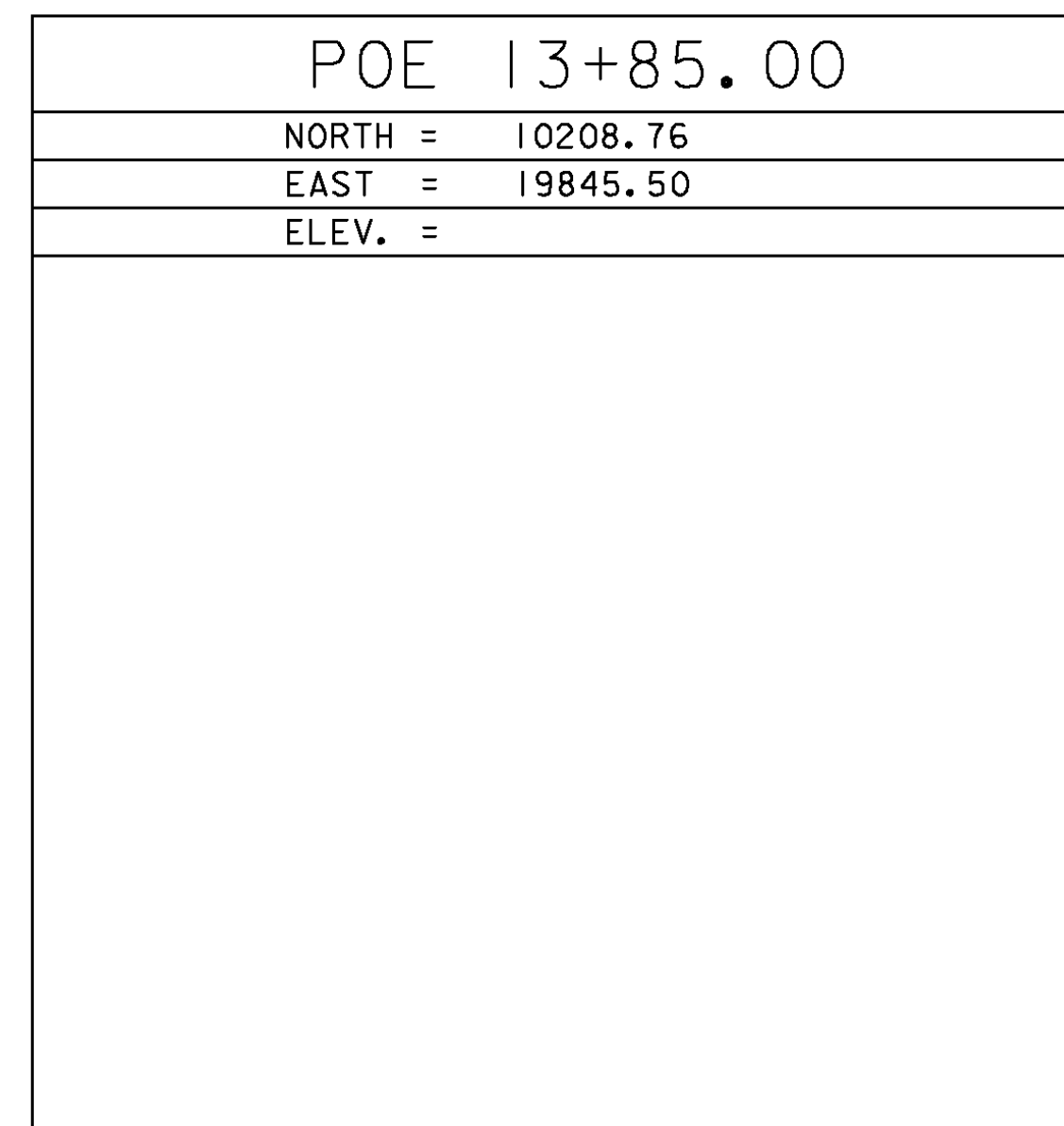
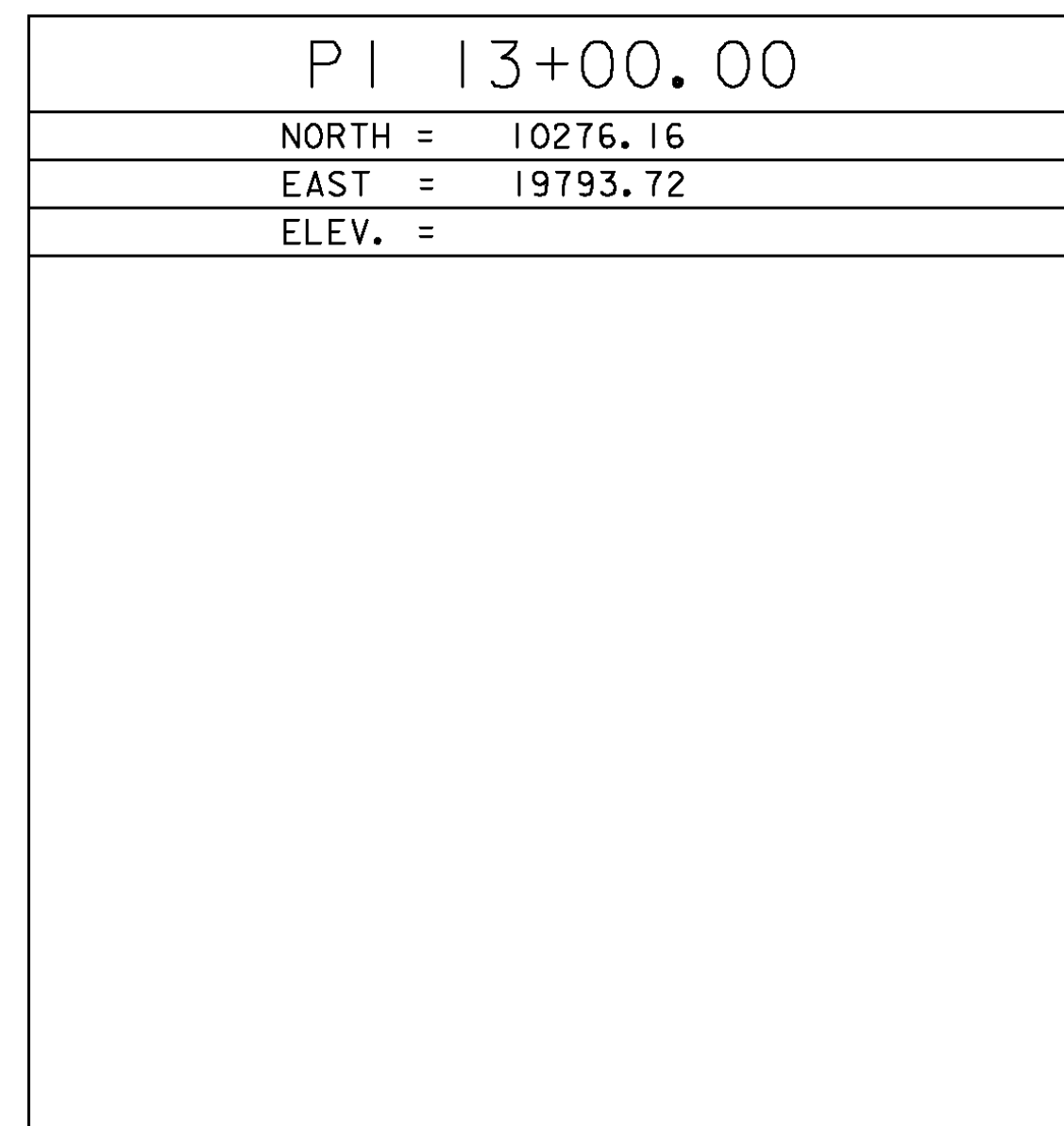
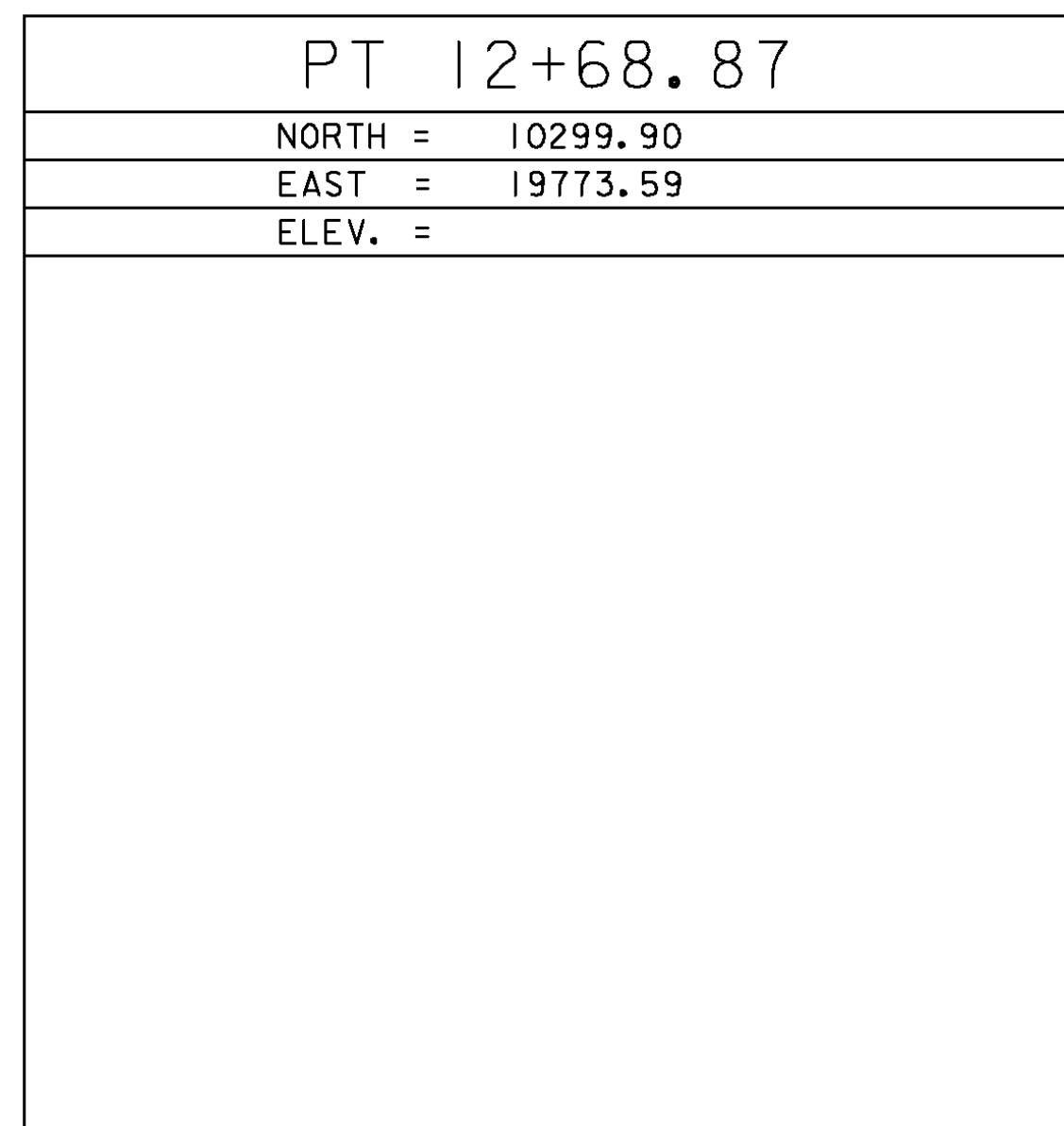
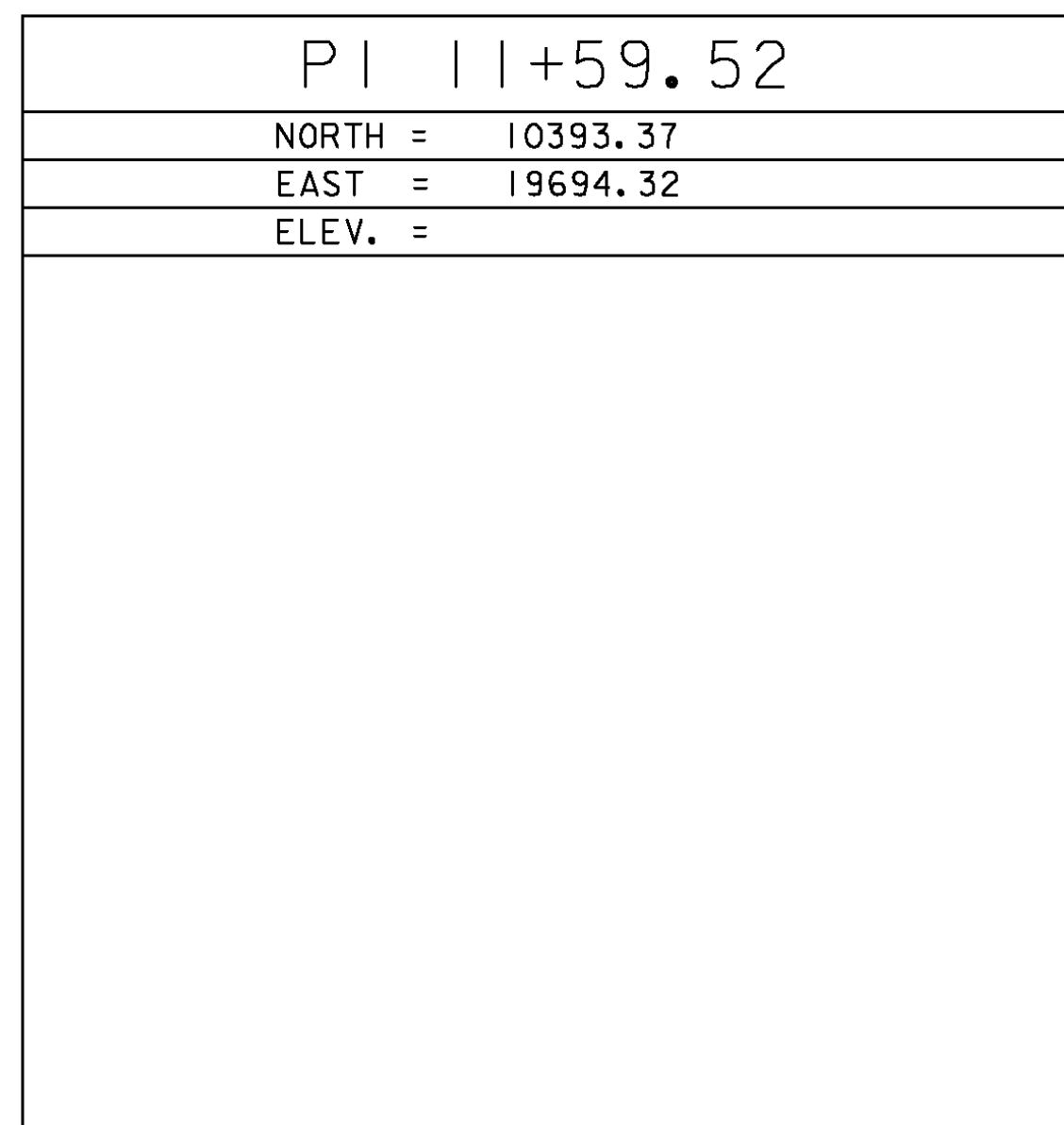
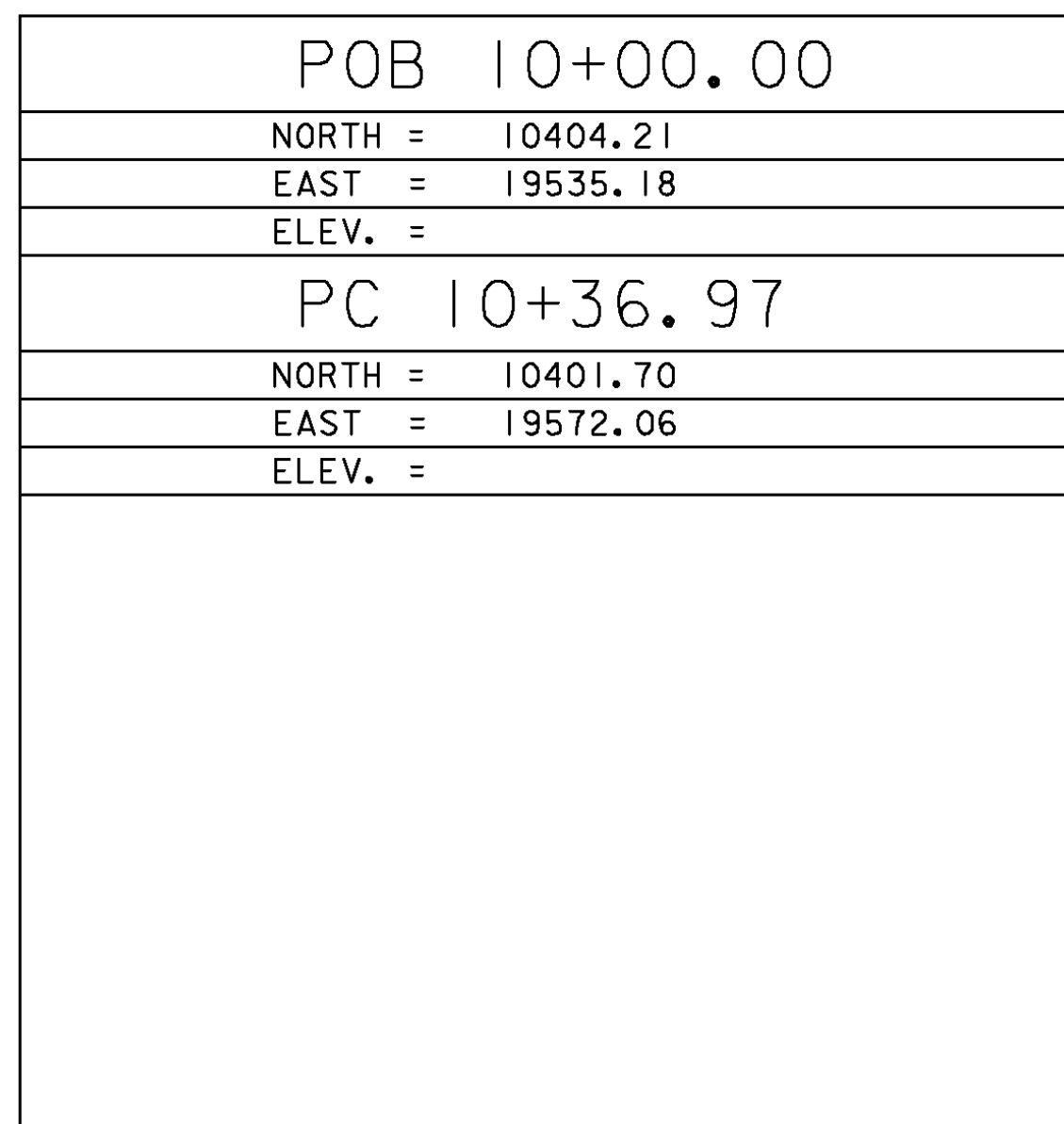
ASSUMED HORIZONTAL and VERTICAL DATUMS

TRAVERSE TIES



* Main Traverse Complete 2/4/2009 by L.Orvis P.C. & R.Bockus

ALIGNMENT COORD



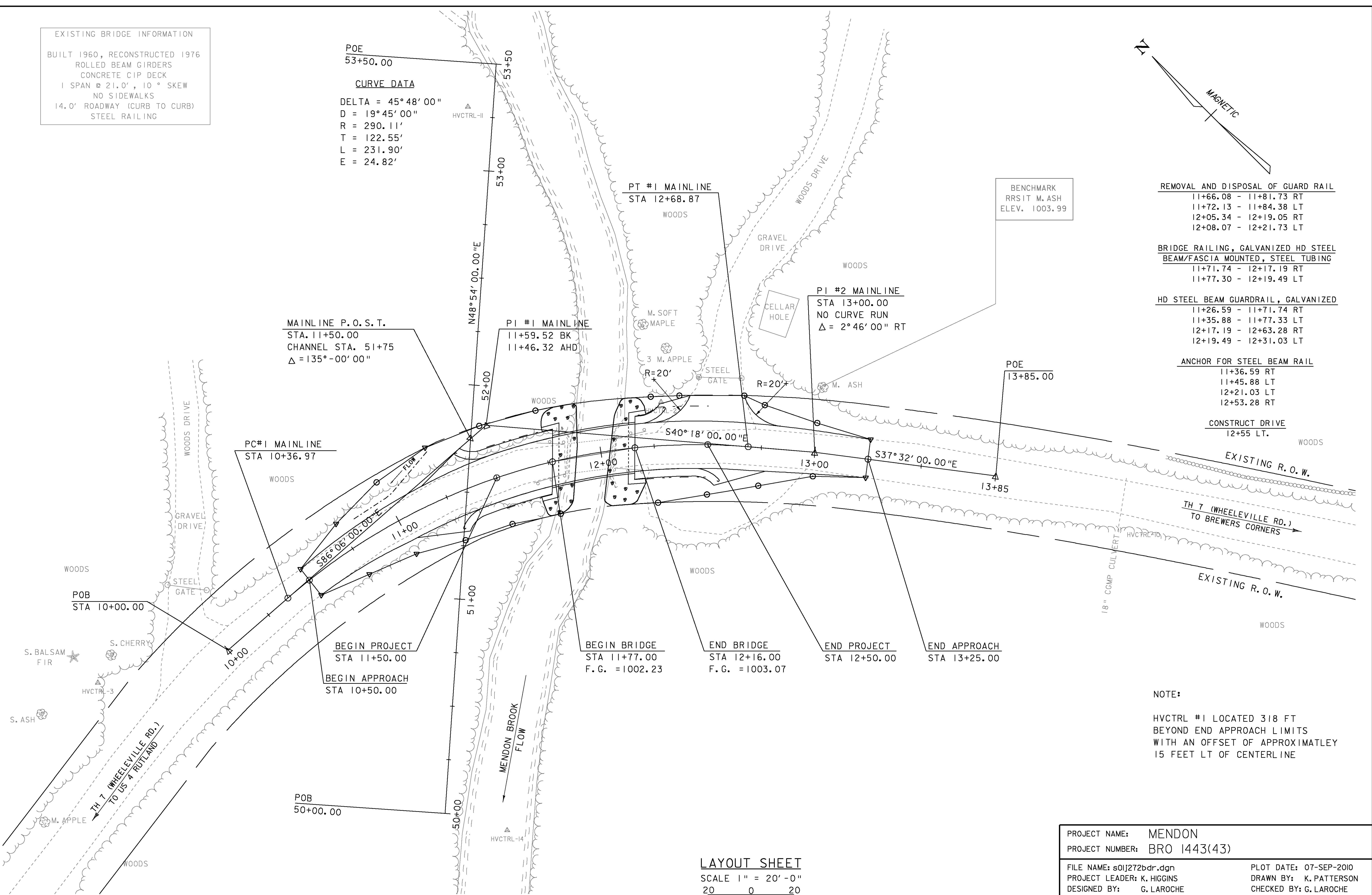
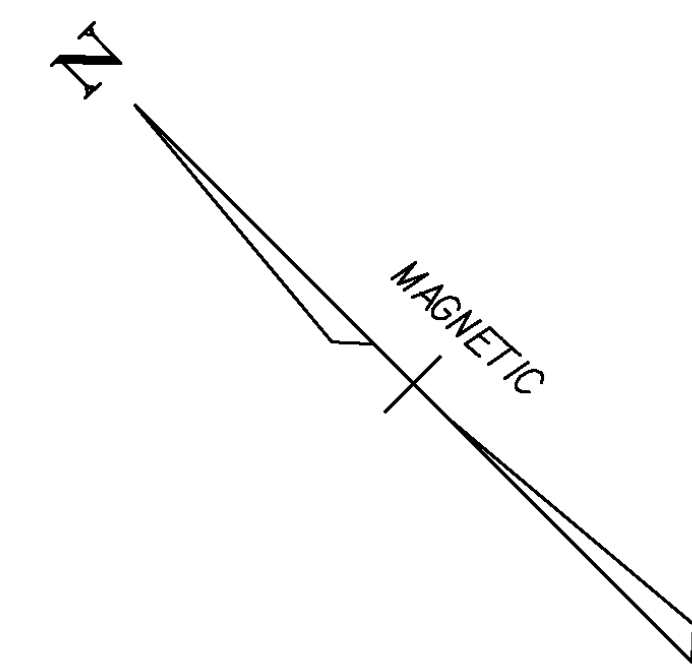
DATUM	
VERTICAL	<u>Assumed</u>
HORIZONTAL	<u>Assumed</u>
ADJUSTMENT	<u>Compass</u>

PROJECT NAME: Mendon	
PROJECT NUMBER: BRO 1443 (43)	
FILE NAME: 01J272\survey\01J272+1.dgn	PLOT DATE: 07-SEP-2010
PROJECT LEADER: K. HIGGINS	DRAWN BY: R. Bullock
DESIGNED BY: J. SALAVATORI	CHECKED BY: J. SALAVATORI
TIE SHEET	SHEET 7 OF 32

EXISTING BRIDGE INFORMATION
 BUILT 1960, RECONSTRUCTED 1976
 ROLLED BEAM GIRDERS
 CONCRETE CIP DECK
 1 SPAN @ 21.0', 10° SKEW
 NO SIDEWALKS
 14.0' ROADWAY (CURB TO CURB)
 STEEL RAILING

POE
 53+50.00

CURVE DATA
 DELTA = 45° 48' 00"
 D = 19° 45' 00"
 R = 290.11'
 T = 122.55'
 L = 231.90'
 E = 24.82'



REMOVAL AND DISPOSAL OF GUARD RAIL
 11+66.08 - 11+81.73 RT
 11+72.13 - 11+84.38 LT
 12+05.34 - 12+19.05 RT
 12+08.07 - 12+21.73 LT

BRIDGE RAILING, GALVANIZED HD STEEL
 BEAM/FASCIA MOUNTED, STEEL TUBING
 11+71.74 - 12+17.19 RT
 11+77.30 - 12+19.49 LT

HD STEEL BEAM GUARDRAIL, GALVANIZED
 11+26.59 - 11+71.74 RT
 11+35.88 - 11+77.33 LT
 12+17.19 - 12+63.28 RT
 12+19.49 - 12+31.03 LT

ANCHOR FOR STEEL BEAM RAIL
 11+36.59 RT
 11+45.88 LT
 12+21.03 LT
 12+53.28 RT

CONSTRUCT DRIVE
 12+55 LT.

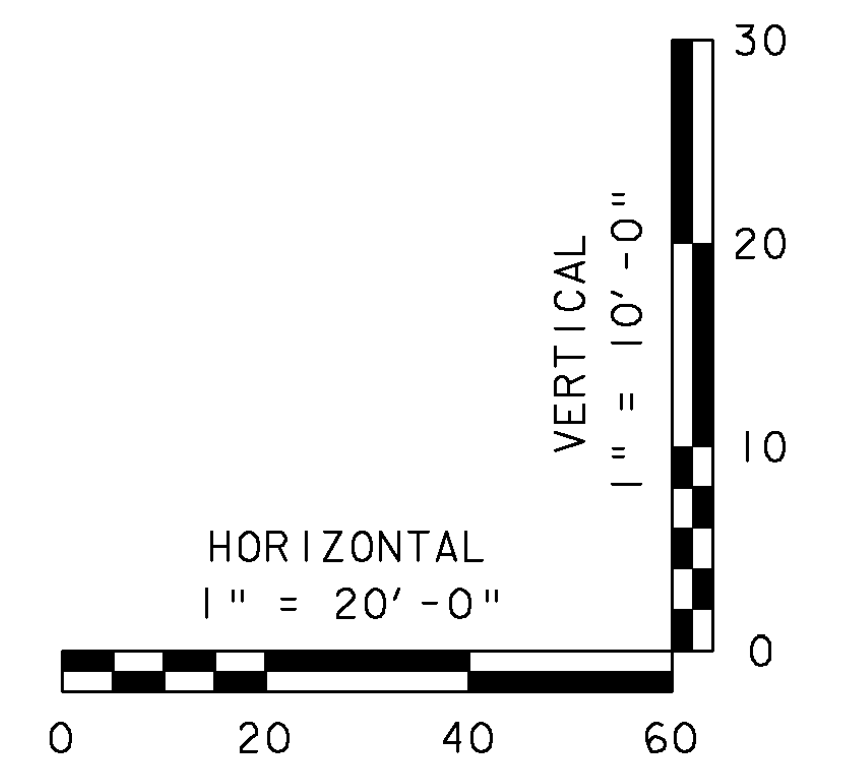
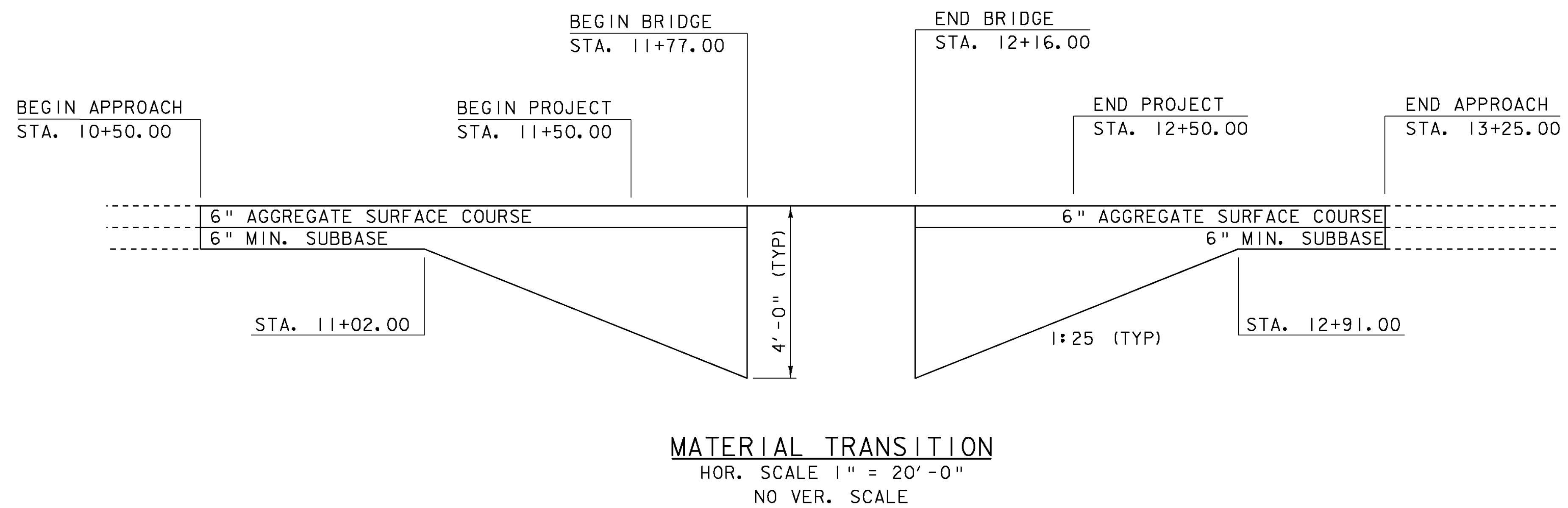
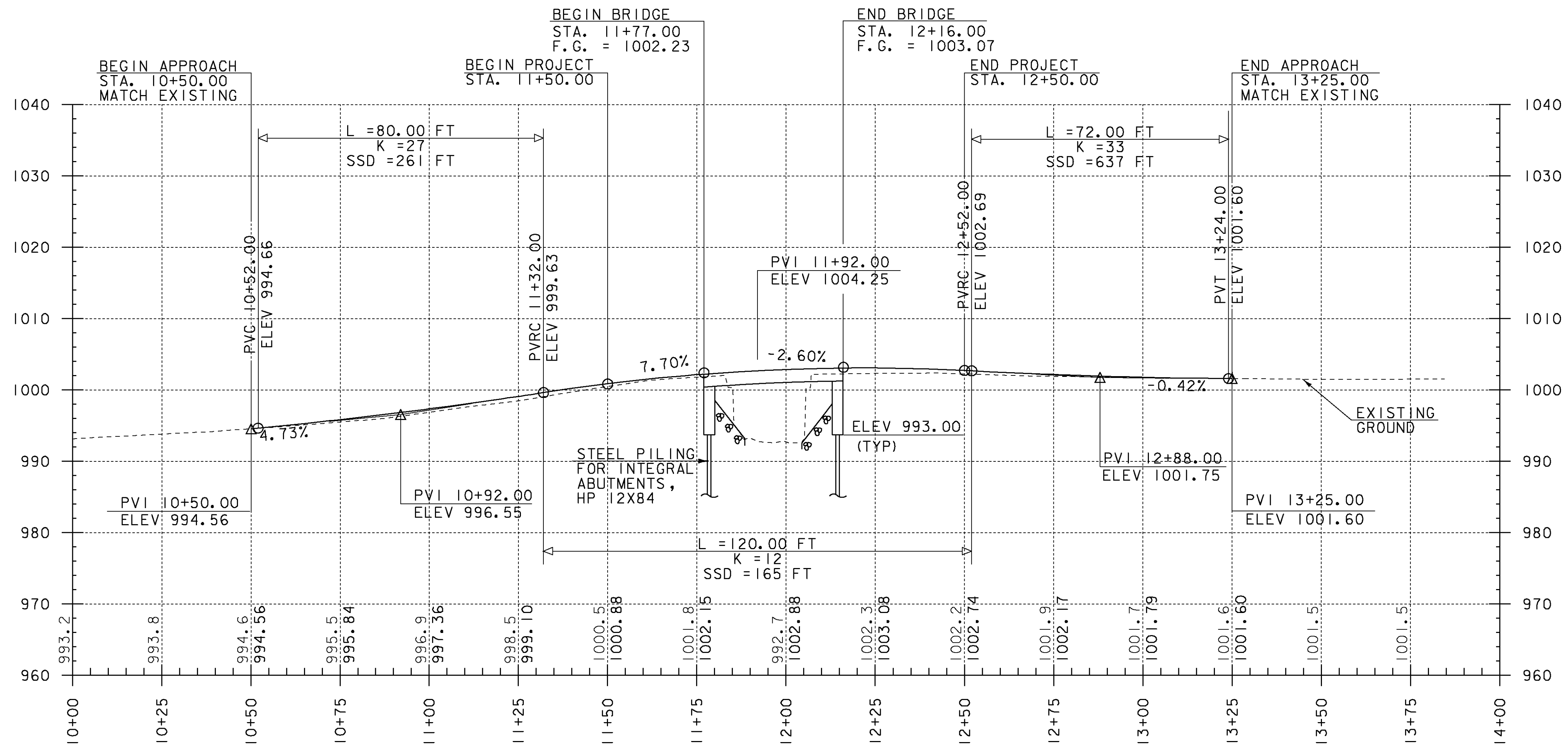
NOTE:
 HVCTRL #1 LOCATED 318 FT
 BEYOND END APPROACH LIMITS
 WITH AN OFFSET OF APPROXIMATELY
 15 FEET LT OF CENTERLINE

PROJECT NAME: MENDON
 PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272bdr.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: G. LAROCHE
 LAYOUT SHEET

PLOT DATE: 07-SEP-2010
 DRAWN BY: K. PATTERSON
 CHECKED BY: G. LAROCHE
 SHEET 8 OF 32

LAYOUT SHEET
 SCALE 1" = 20'-0"
 20 0 20



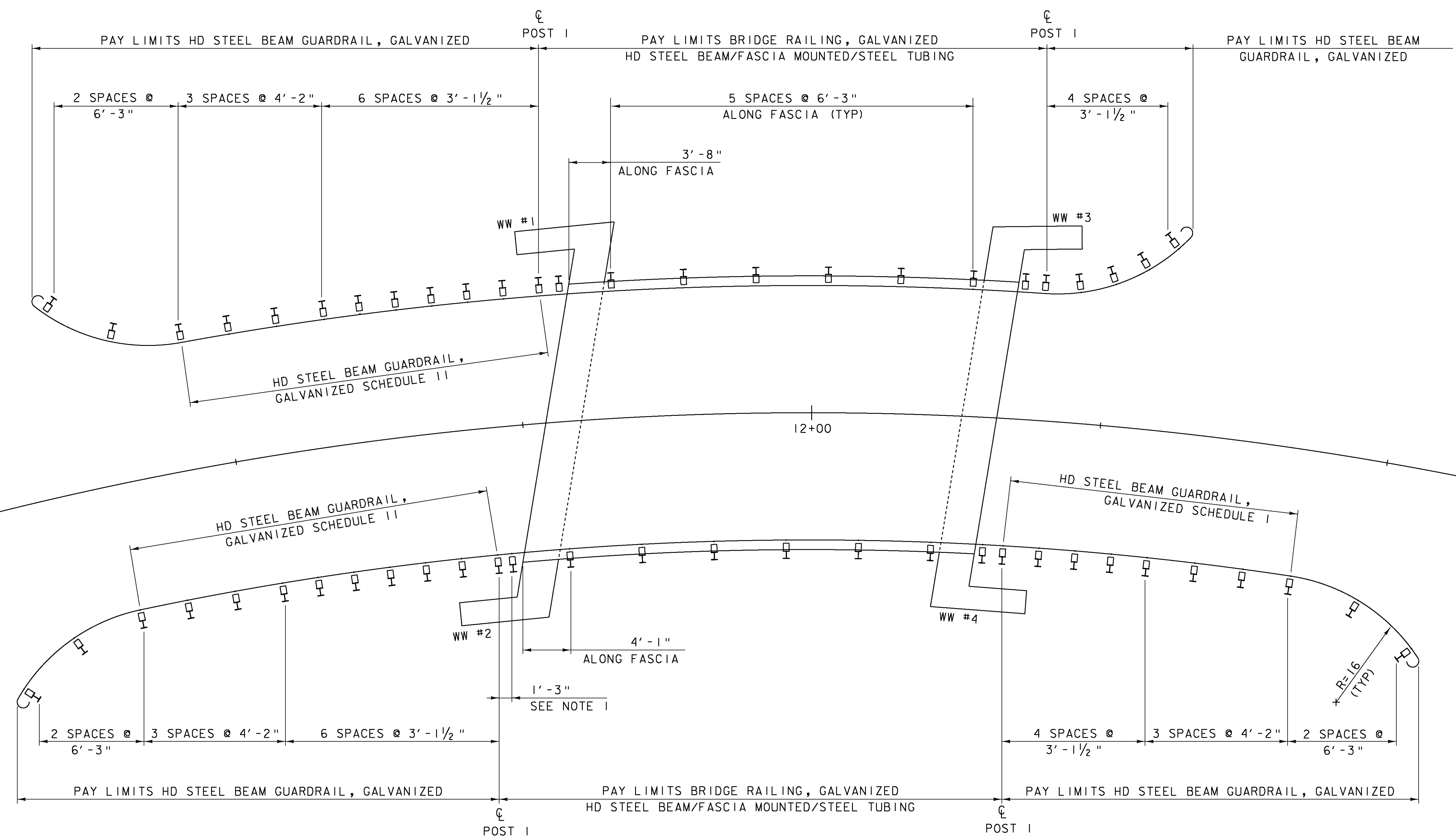
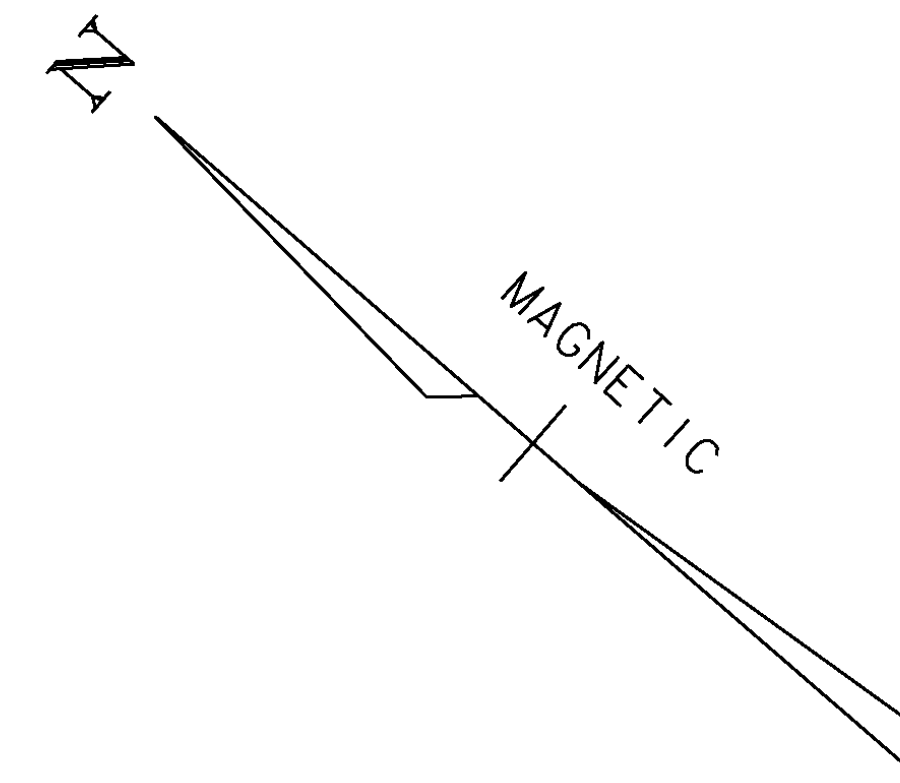
THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

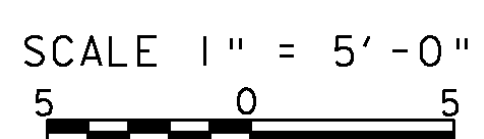
PROJECT NAME: MENDON
 PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272pro.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: G. LAROCHE
 PROFILE & MATERIAL TRANSITION SHEET

PLOT DATE: 07-SEP-2010
 DRAWN BY: K. PATTERSON
 CHECKED BY: G. LAROCHE
 SHEET 9 OF 32



GUARDRAIL LAYOUT



NOTES:

1. FOLLOW STANDARD DRAWING SB-R7-90 TRANSITION POST SPACING FOR WW1, WW3, AND WW4. WW2 WILL HAVE A TRANSITION POST SPACING OF 1'-3"
2. SEE STANDARD DRAWING SB-R6-82 FOR GUARDRAIL PAYMENT SCHEDULE ONLY.

PROJECT NAME: MENDON	PLOT DATE: 16-SEP-2010
PROJECT NUMBER: BRO 1443(43)	DRAWN BY: K. PATTERSON
FILE NAME: s01j27r01a.dgn	CHECKED BY: J. SALVATORI
PROJECT LEADER: K. HIGGINS	SHEET 10 OF 32
DESIGNED BY: G. LAROCHE	

SOIL CLASSIFICATION (ASHTO)

- A1 Gravel and Sand
- A3 Fine Sand
- A2 Silty or Clayey Gravel and Sand
- A4 Silty Soil - Low Compressibility
- A5 Silty Soil - Highly Compressible
- A6 Clayey Soil - Low Compressibility
- A7 Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

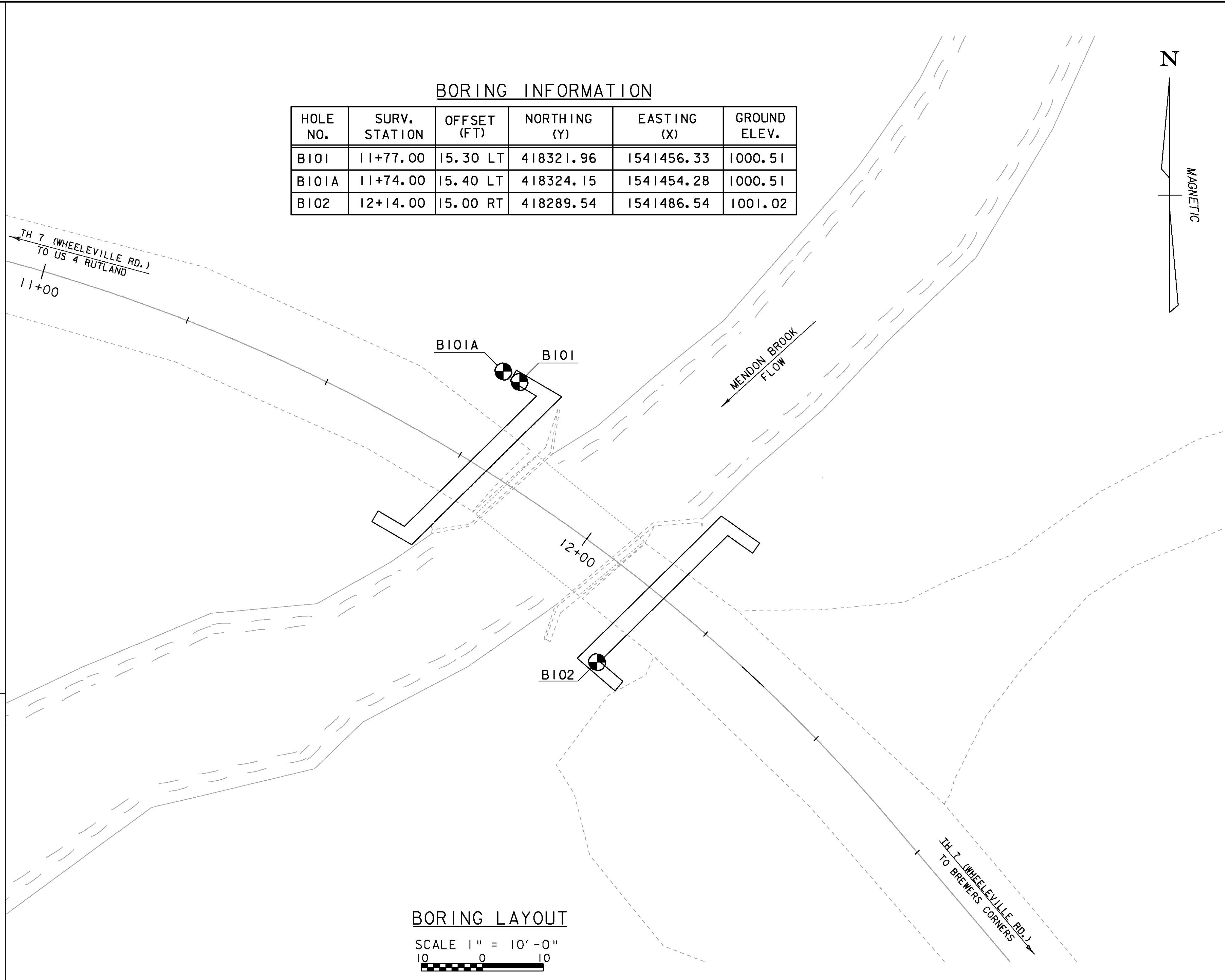
- ▼ Water Elevation
- ⊙ Standard Penetration Boring
- ⊕ Auger Boring
- ⊙ Rod Sounding
- ⊙ Sample
- N Standard Penetration Test
- Blow Count Per Foot For: 2" O. D. Sampler
- 1 3/8" I. D. Sampler
- Hammer Weight Of 140 Lbs.
- Hammer Fall Of 30"
- VS Field Vane Shear Test
- US Undisturbed Soil Sample
- B Blast
- DC Diamond Core
- MD Mud Drill
- WA Wash Ahead
- HSA Hollow Stem Auger
- AX Core Size 1 1/8"
- BX Core Size 1 5/8"
- NX Core Size 2 1/8"
- M Double Tube Core Barrel Used
- L Liquid Limit
- LL Plastic Limit
- PL Plasticity Index
- PI Non Plastic
- MP Moisture Content (Dry Wgt. Basis)
- D Dry
- M Moist
- MTW Moist To Wet
- W Wet
- Sat Saturated
- BO Boulder
- Gr Gravel
- Sa Sand
- Si Silt
- Cl Clay
- HP Hardpan
- Le Ledge
- NLTD No Ledge To Depth
- CNPF Can Not Penetrate Further
- TLOB To Ledge Or Boulder
- NR No Recovery
- Rec. Recovery
- %Rec. Percent Recovery
- RQD Rock Quality Designation
- CBR California Bearing Ratio
- < Less Than
- > Greater Than
- R Refusal > (N 100)

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

BORING INFORMATION

HOLE NO.	SURV. STATION	OFFSET (FT)	NORTHING (Y)	EASTING (X)	GROUND ELEV.
B101	11+77.00	15.30 LT	418321.96	1541456.33	1000.51
B101A	11+74.00	15.40 LT	418324.15	1541454.28	1000.51
B102	12+14.00	15.00 RT	418289.54	1541486.54	1001.02



BORING LAYOUT

SCALE 1" = 10'-0"
 10 0 10

DEFINITIONS (AASHTO)

- BEDROCK (LEDGE)** - Rock in its native location of indefinite thickness.
- BOULDER** - A rock fragment with an average dimension > 12 inches.
- COBBLE** - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL** - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND** - Particles of rock < 0.075" (#10 sieve) and > 0.0025" (#200 sieve).
- SILT** - Soil < 0.0025" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY** - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED** - Alternate layers of silt and clay.
- HARDPAN** - Extremely dense soil, cemented layer, not softened when wet.
- MUCK** - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT** - Weight of water divided by dry weight of soil.
- FLOWING SAND** - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE** - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP** - Inclination of bed with a horizontal plane.

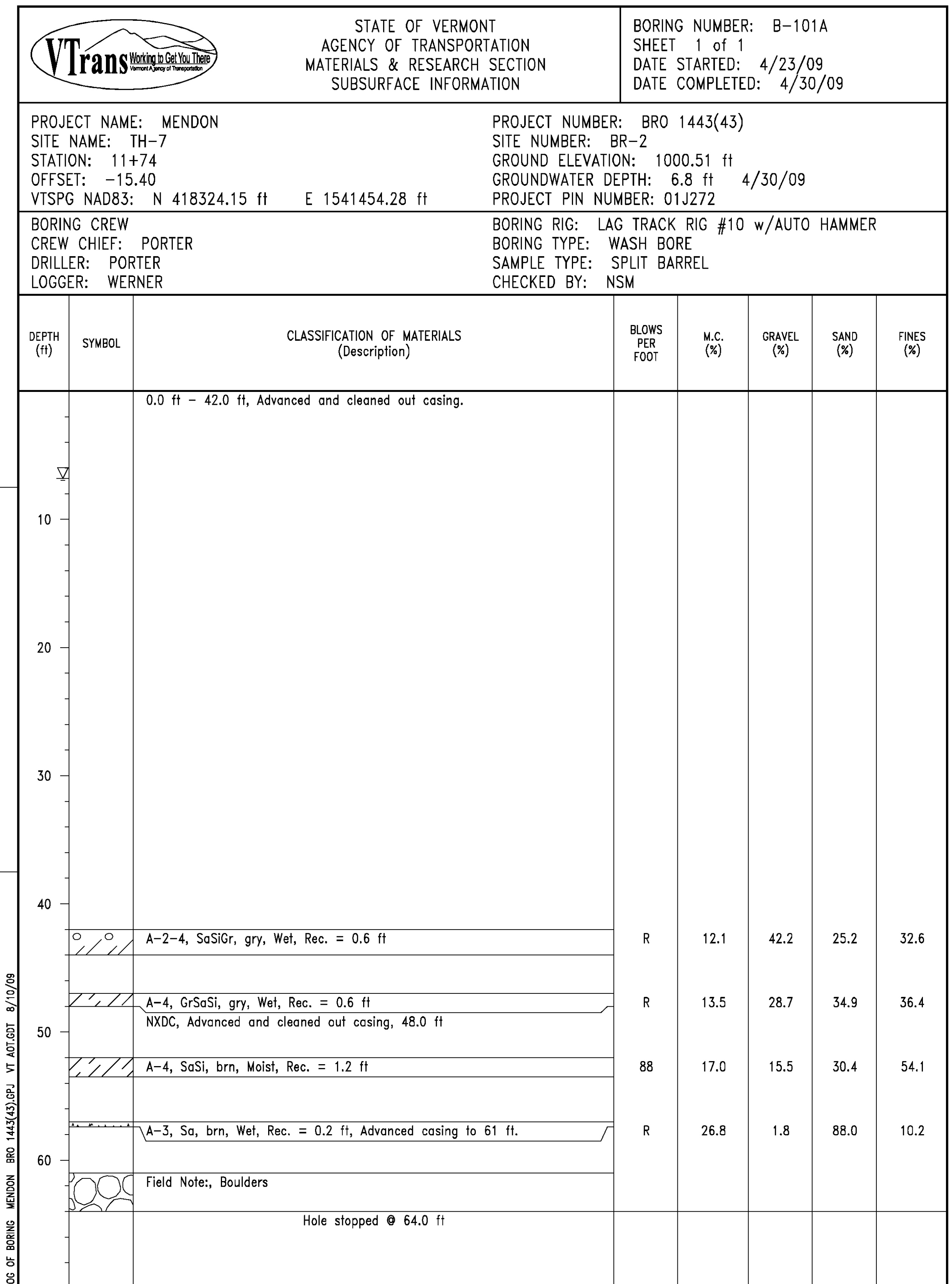
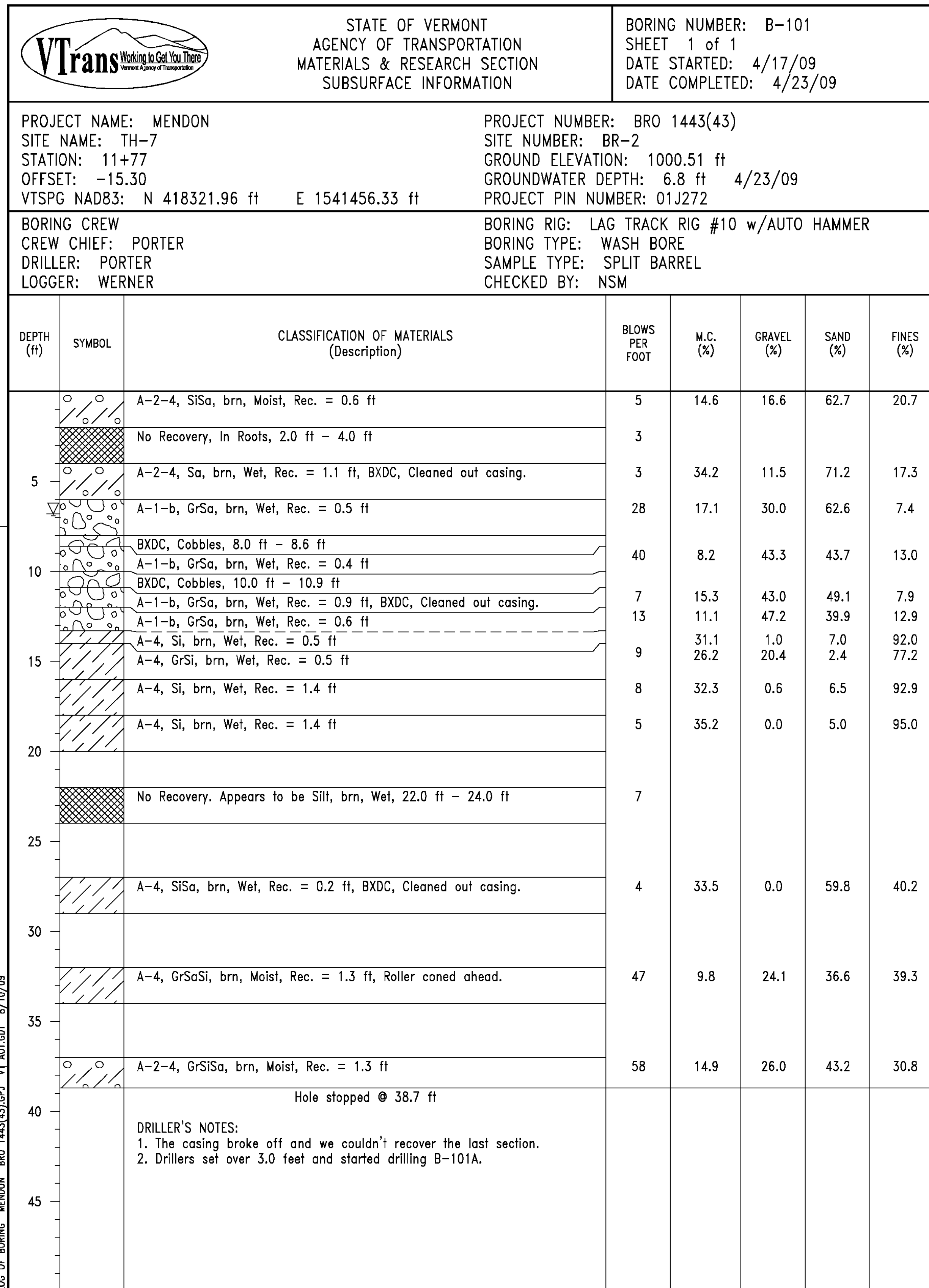
GENERAL NOTES

- The subsurface explorations shown herein were made between 04/10/2009 and 04/30/2009 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

PROJECT NAME: MENDON
 PROJECT NUMBER: BRO 1443 (43)

FILE NAME: s01j272.BOR.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: G. LAROCHE
 BORING LAYOUT

PLOT DATE: 07-SEP-2010
 DRAWN BY: G. LAROCHE
 CHECKED BY: J. LACROIX
 SHEET 11 OF 32



PROJECT NAME: MENDON	
PROJECT NUMBER: BRO 1443(43)	
FILE NAME: s01J272bor.dgn	PLOT DATE: 07-SEP-2010
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. PATTERSON
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
BORING LOG SHEET #1	SHEET 12 OF 32



STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING NUMBER: B-102
 SHEET 1 of 1
 DATE STARTED: 4/10/09
 DATE COMPLETED: 4/17/09

PROJECT NAME: MENDON
 SITE NAME: TH-7
 STATION: 12+14
 OFFSET: 15.00
 VTSPG NAD83: N 418289.54 ft E 1541486.54 ft

PROJECT NUMBER: BRO 1443(43)
 SITE NUMBER: BR-2
 GROUND ELEVATION: 1001.02 ft
 GROUNDWATER DEPTH: 6.5 ft 4/13/09
 PROJECT PIN NUMBER: 01J272

BORING CREW
 CREW CHIEF: PORTER
 DRILLER: PORTER
 LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL
 CHECKED BY: NSM

ABUTMENT 2
 BOTTOM OF PILE CAP
 ELEV. 993.00

ABUTMENT 2
 PILE TIP
 ELEV. 963.00

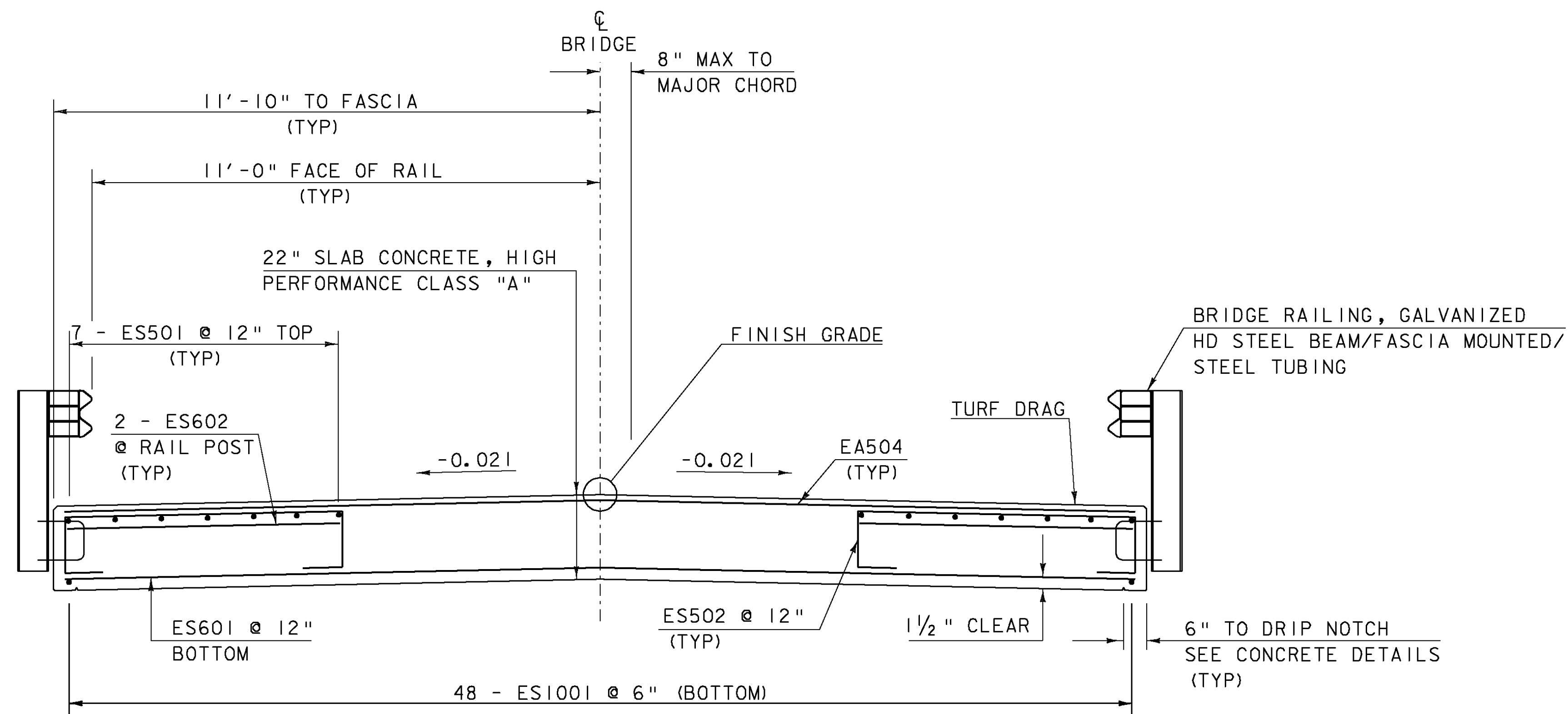
LOG OF BORING MENDON BRO 1443(43).GPJ VT AOT.GDT 8/19/09

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft	15	10.9	34.6	47.8	17.6
		A-1-a, SaGr, brn, Moist, Rec. = 0.7 ft	R	5.1	53.1	34.9	12.0
		A-1-a, SaGr, brn, Wet, Rec. = 0.5 ft	13	14.0	53.1	37.3	9.6
		No Recovery. Stones in end of sampler, 6.0 ft - 8.0 ft	15				
		No Recovery. Stones in end of sampler, 8.0 ft - 10.0 ft	8				
		No Recovery. Stones in end of sampler, 10.0 ft - 12.0 ft	18				
		A-1-b, GrSa, brn, Wet, Rec. = 1.1 ft	29	15.4	41.0	43.9	15.1
		A-1-b, GrSa, brn, Wet, Rec. = 1.6 ft	29	14.3	38.0	51.0	11.0
		A-4, SaGrSi, brn, Wet, Rec. = 0.6 ft	13	22.9	32.4	30.6	37.0
		A-4, GrSi, brn, MTW, Rec. = 0.3 ft	19	25.6	24.0	19.1	56.9
		A-4, Si, brn, MTW, Rec. = 1.5 ft	5	36.1	0.0	2.7	97.3
		A-4, SaSi, brn, MTW, Rec. = 1.1 ft	5	32.1	0.0	40.4	59.6
		A-4, SiSa, brn, Wet, Rec. = 1.2 ft	4	28.0	0.0	52.2	47.8
		Cobbles, 37.0 ft - 38.0 ft					
		No Recovery. Stones in end of sampler, 38.0 ft - 38.5 ft	R				
		A-4, SiSa, brn, Moist, Rec. = 0.5 ft	R	10.2	19.4	42.0	38.6
		A-4, GrSaSi, brn, Moist, Rec. = 0.4 ft	R	9.9	20.4	37.4	42.2
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.7 ft, Broken rock was within sample.	R	13.7	22.3	43.8	33.9
		Hole stopped @ 55.0 ft					

PROJECT NAME: MENDON
 PROJECT NUMBER: BRO 1443(43)

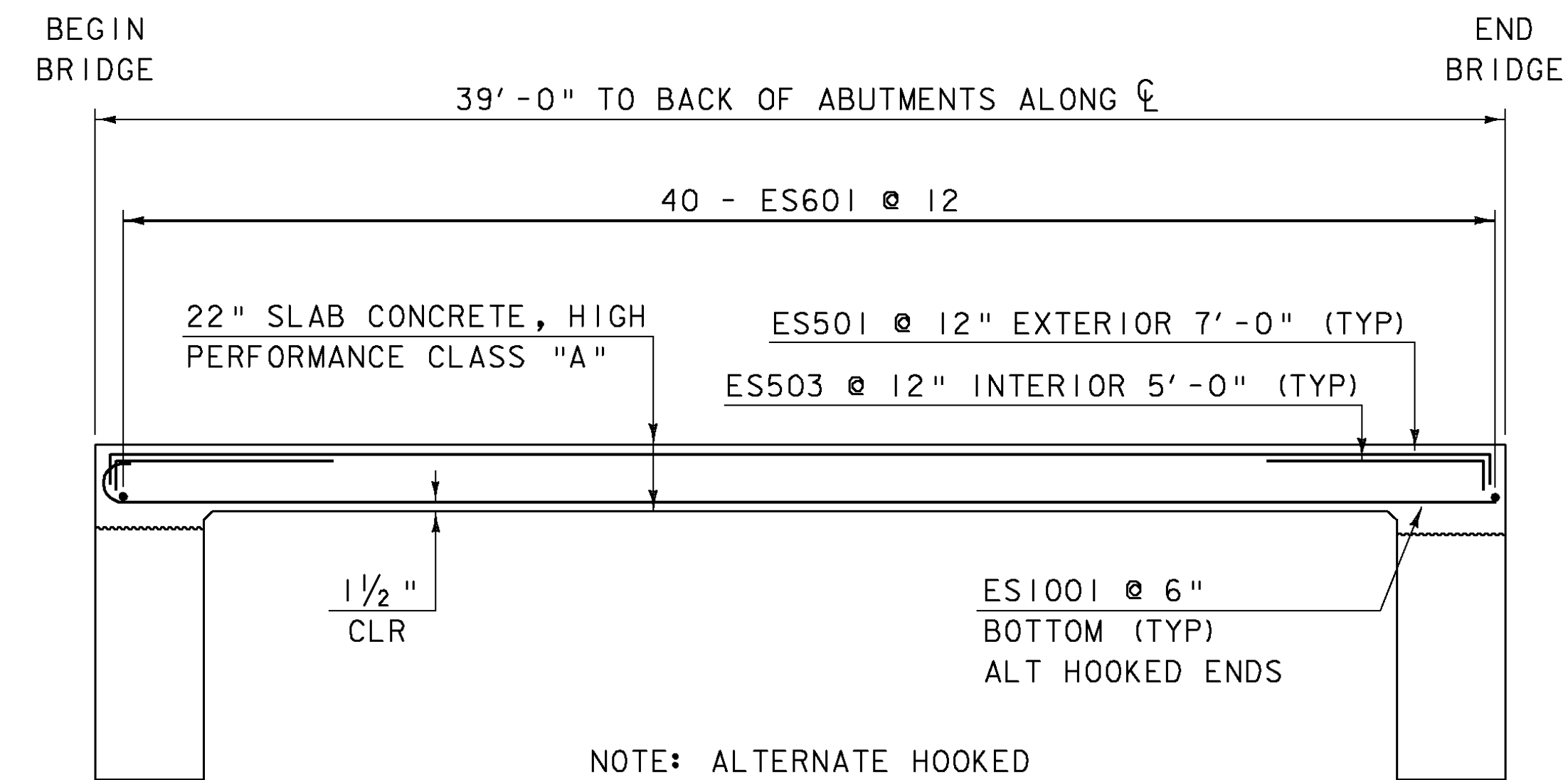
FILE NAME: s01j272bor.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: G. LAROCHE
 BORING LOG SHEET #2

PLOT DATE: 07-SEP-2010
 DRAWN BY: K. PATTERSON
 CHECKED BY: G. LAROCHE
 SHEET 13 OF 32



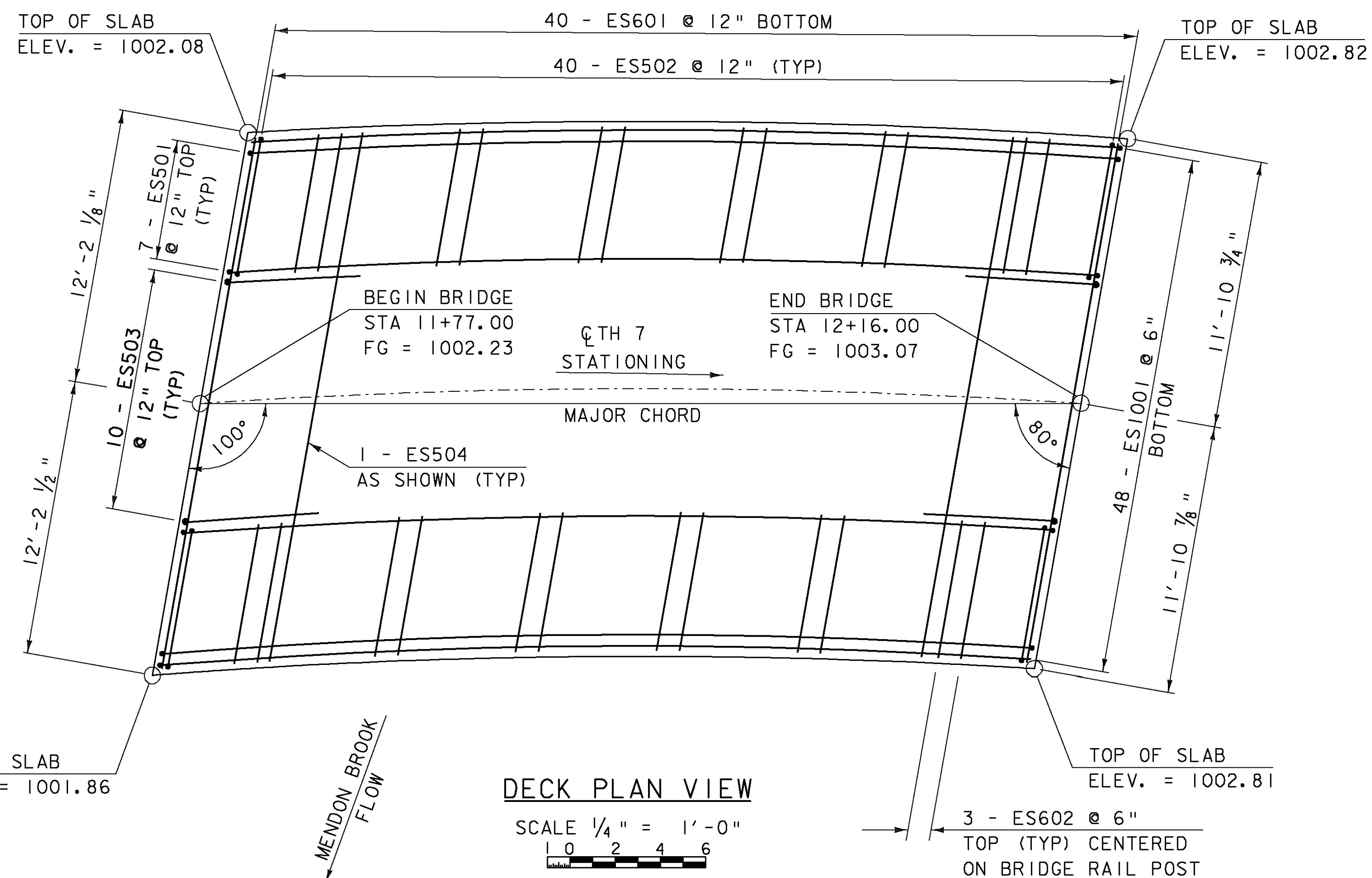
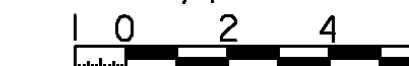
TYPICAL DECK SECTION

SCALE 1/2" = 1'-0"



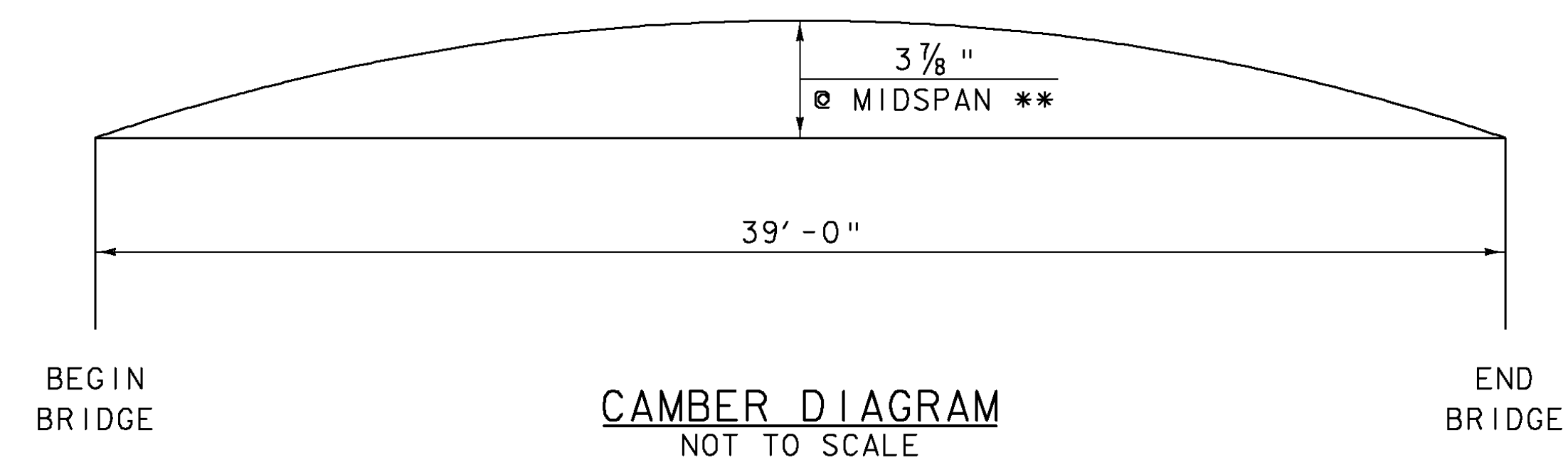
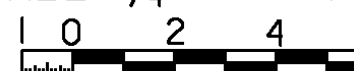
DECK ELEVATION VIEW

SCALE 1/4" = 1'-0"



DECK PLAN VIEW

SCALE 1/4" = 1'-0"



CAMBER DIAGRAM
NOT TO SCALE

** SET CONSTRUCTION FORMS TO THIS CAMBER
CAMBER SHALL APPROXIMATE A CIRCULAR CURVE

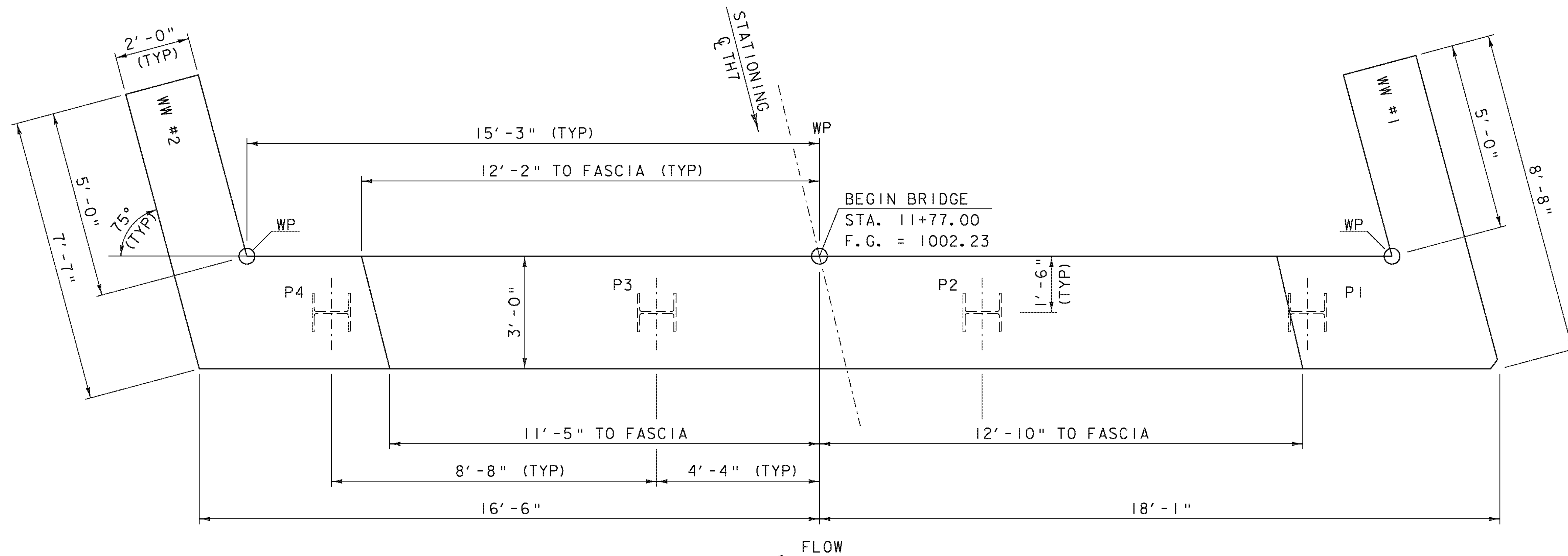
NOTE:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

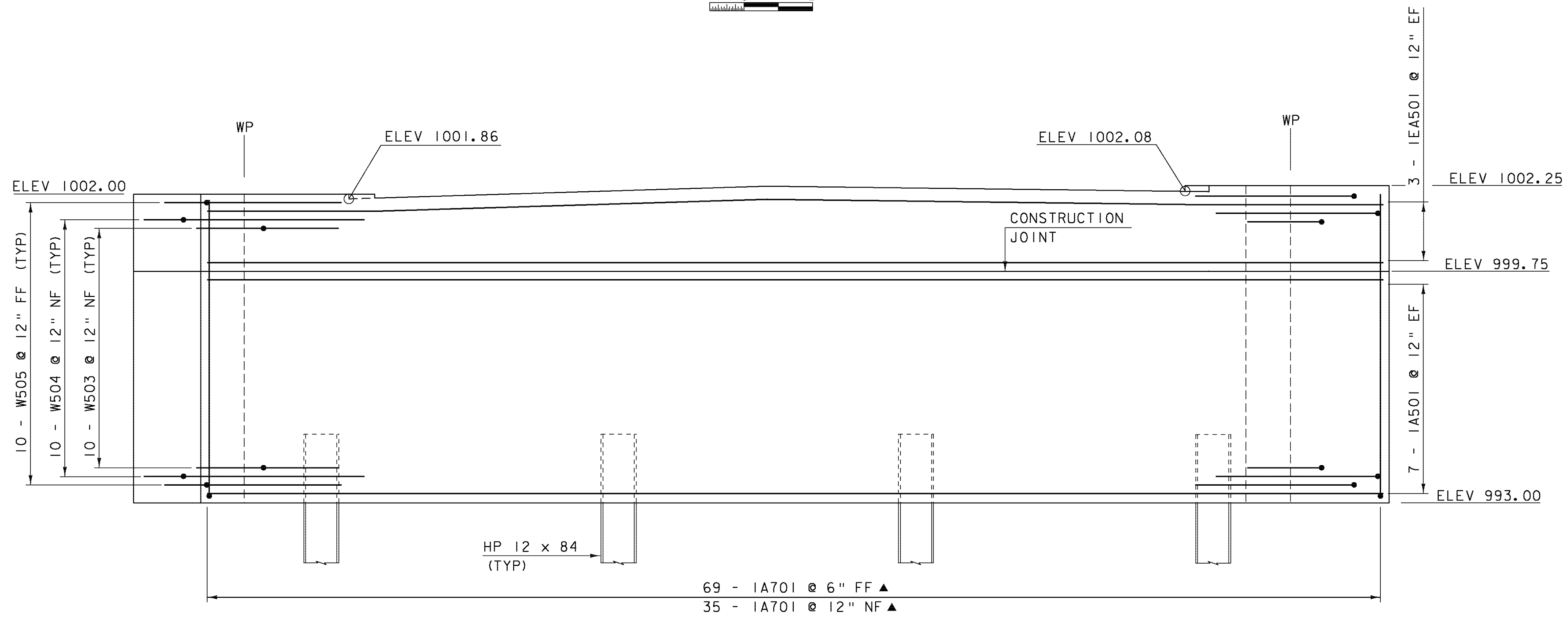
PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443 (43)

FILE NAME: s01j272sup.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
DECK PLAN

PLOT DATE: 07-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. SALVATORI
SHEET 15 OF 32

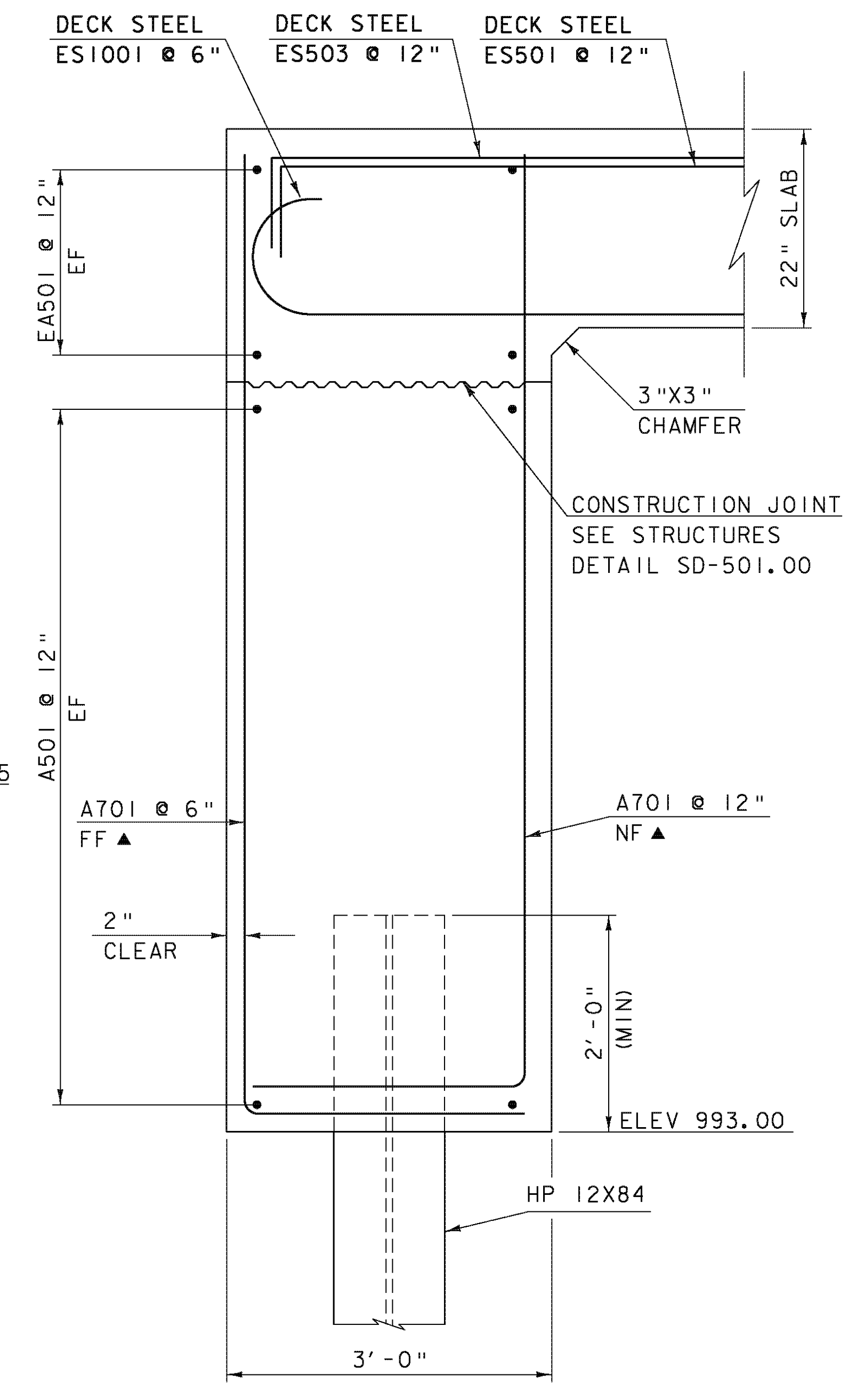


ABUTMENT #1 PLAN
SCALE 1/2" = 1'-0"
1 0 1 2



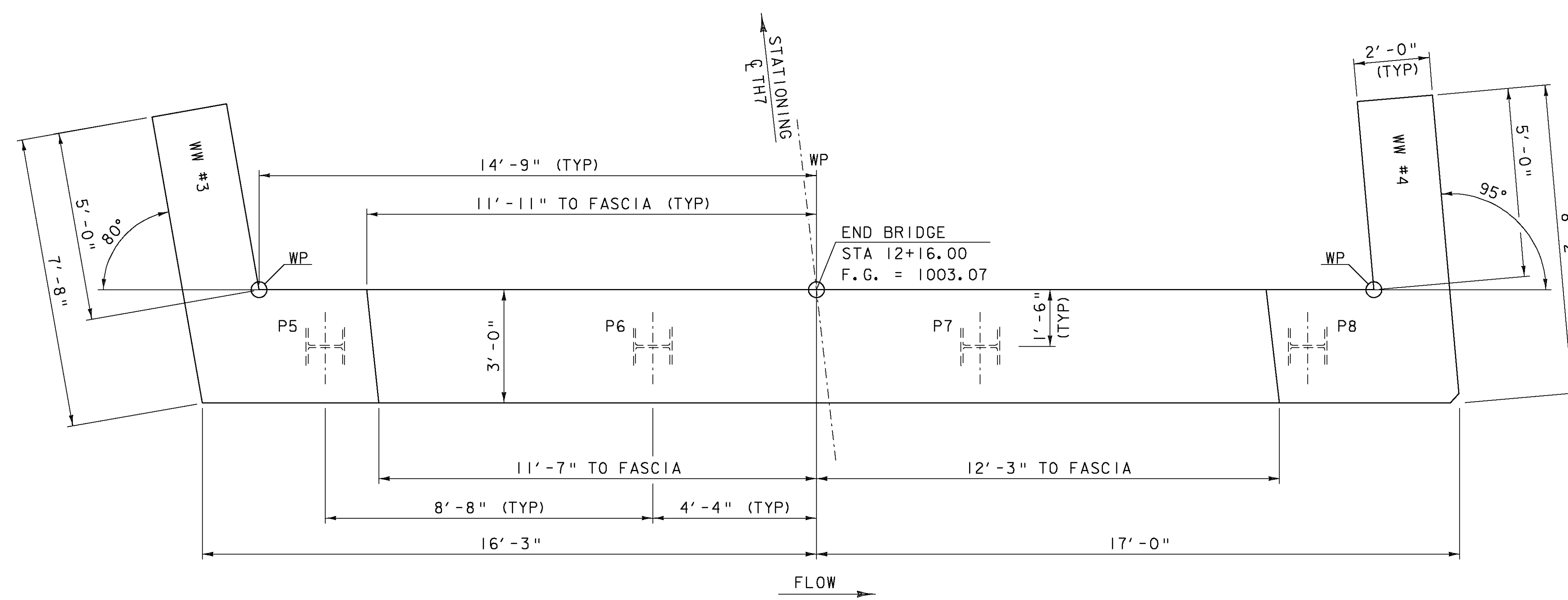
ABUTMENT #1 ELEVATION
SCALE 1/2" = 1'-0"
1 0 1 2

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

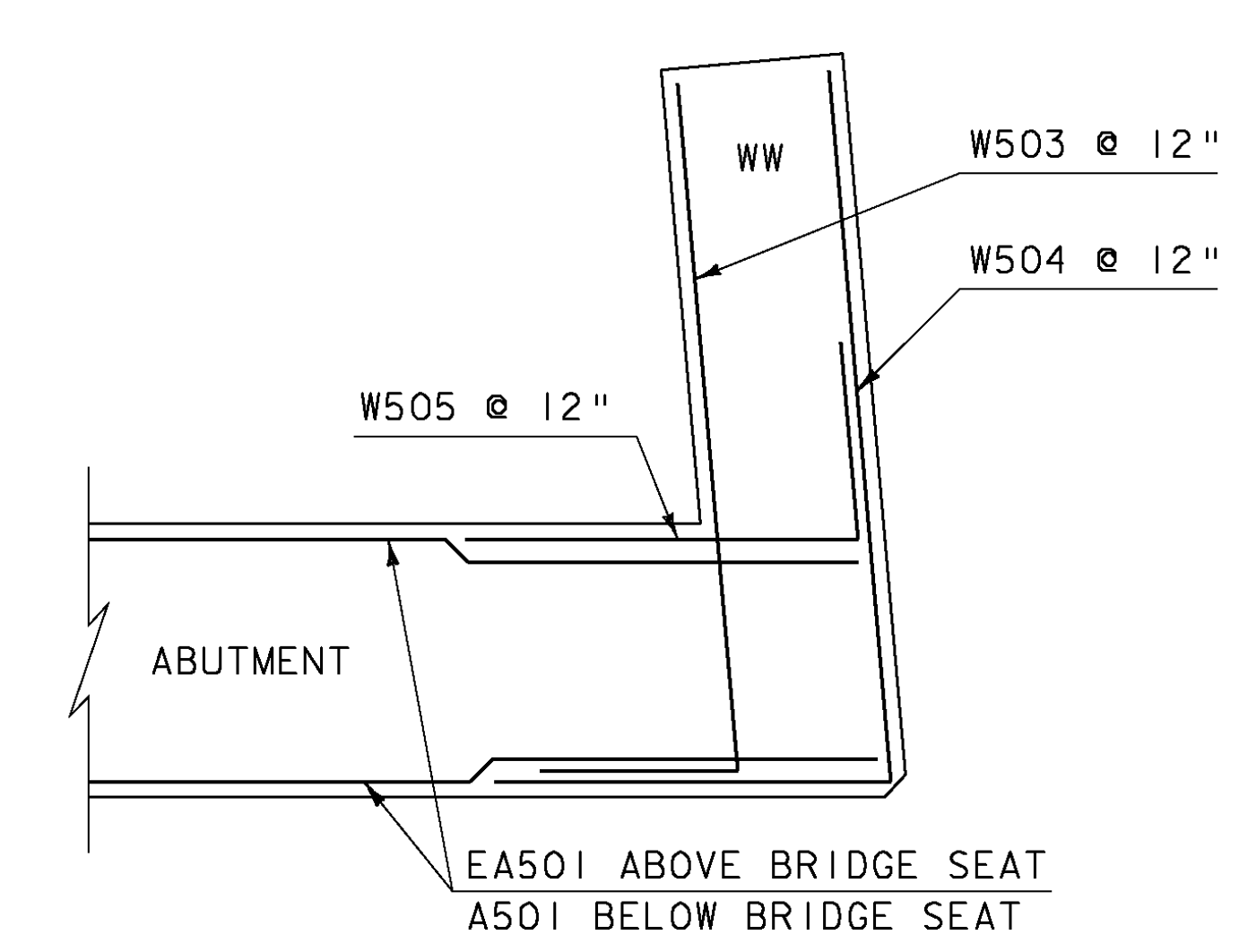


ABUTMENT TYPICAL SECTION
SCALE 1" = 1'-0"
1 9 6 3 0 1 2

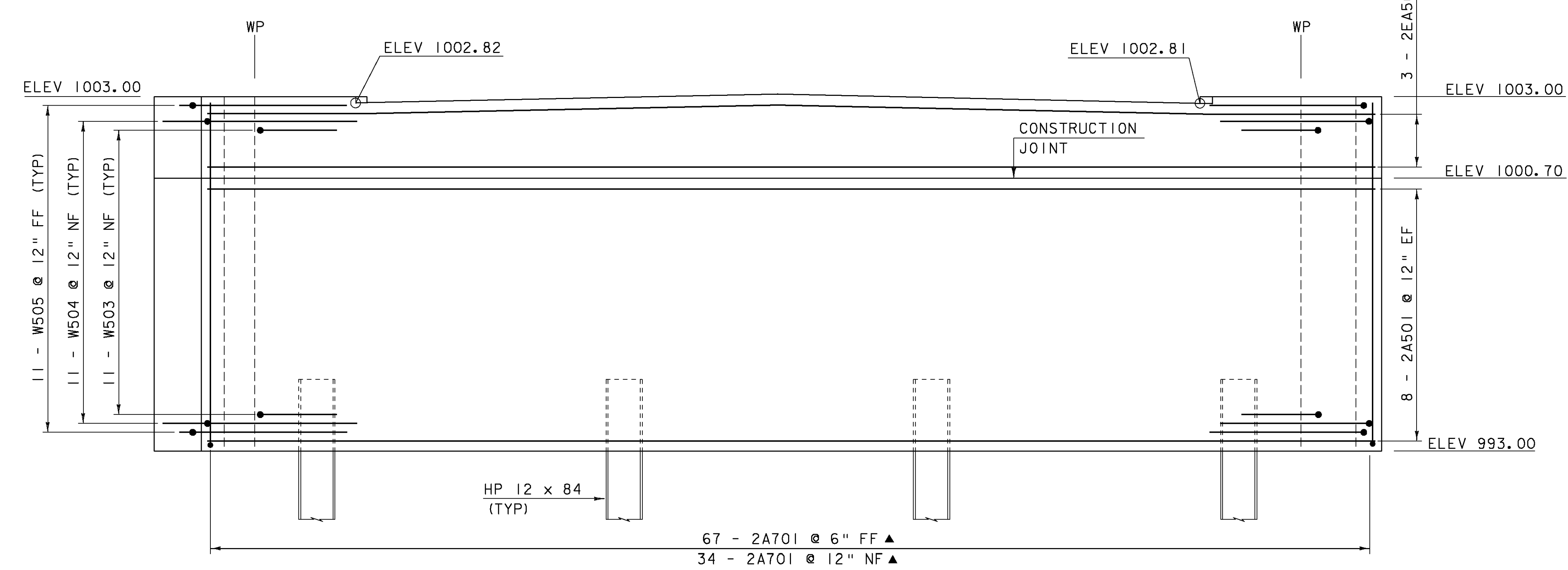
PROJECT NAME: MENDON	PLOT DATE: 16-SEP-2010
PROJECT NUMBER: BRO 1443(43)	DRAWN BY: J. GRIFFIN
FILE NAME: s01j272substructure.dgn	CHECKED BY: G. LAROCHE
PROJECT LEADER: K. HIGGINS	SHEET 16 OF 32
DESIGNED BY: G. LAROCHE	



ABUTMENT #2 PLAN
SCALE 1/2" = 1'-0"
0 1 2



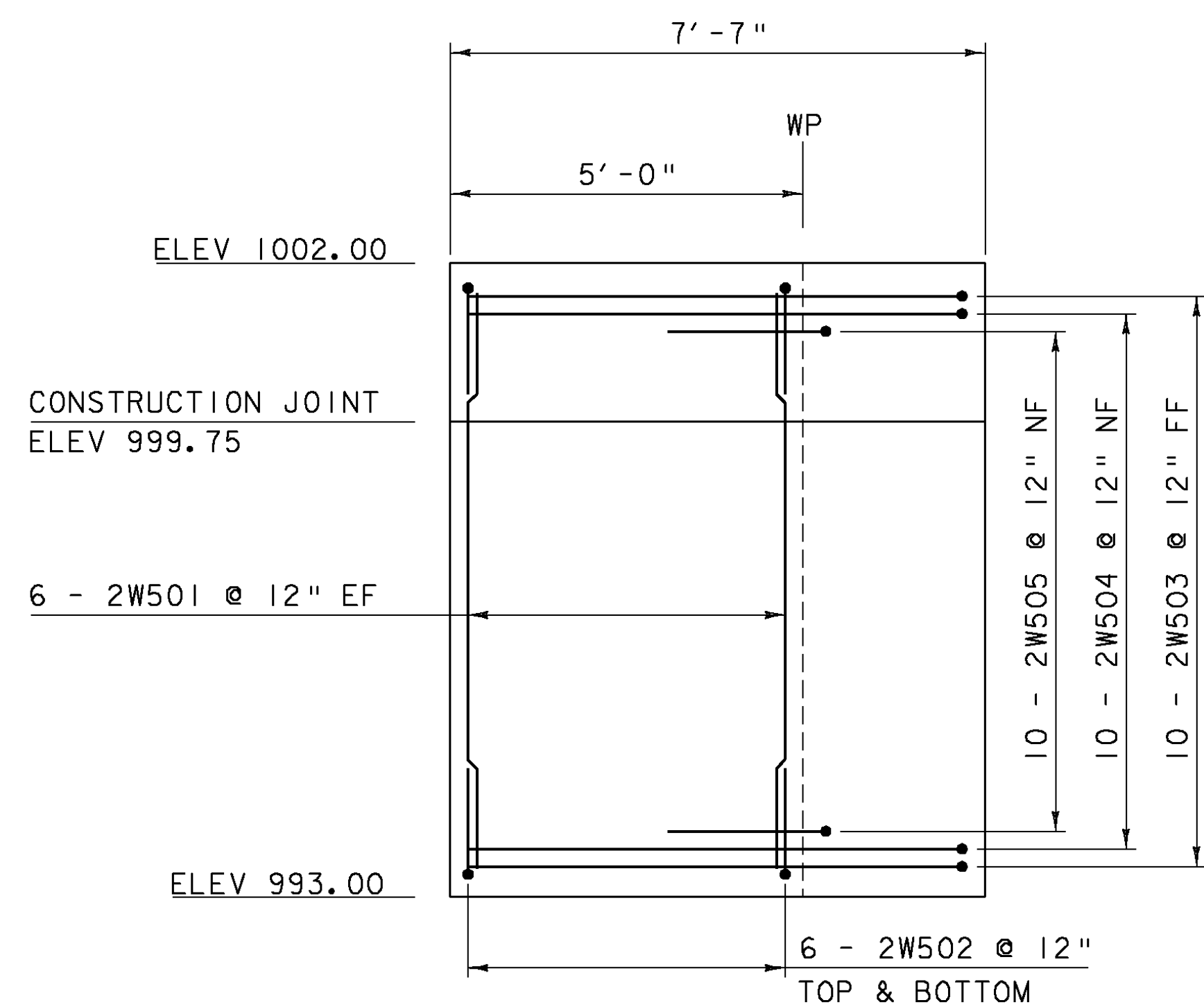
CORNER DETAIL
NOT TO SCALE



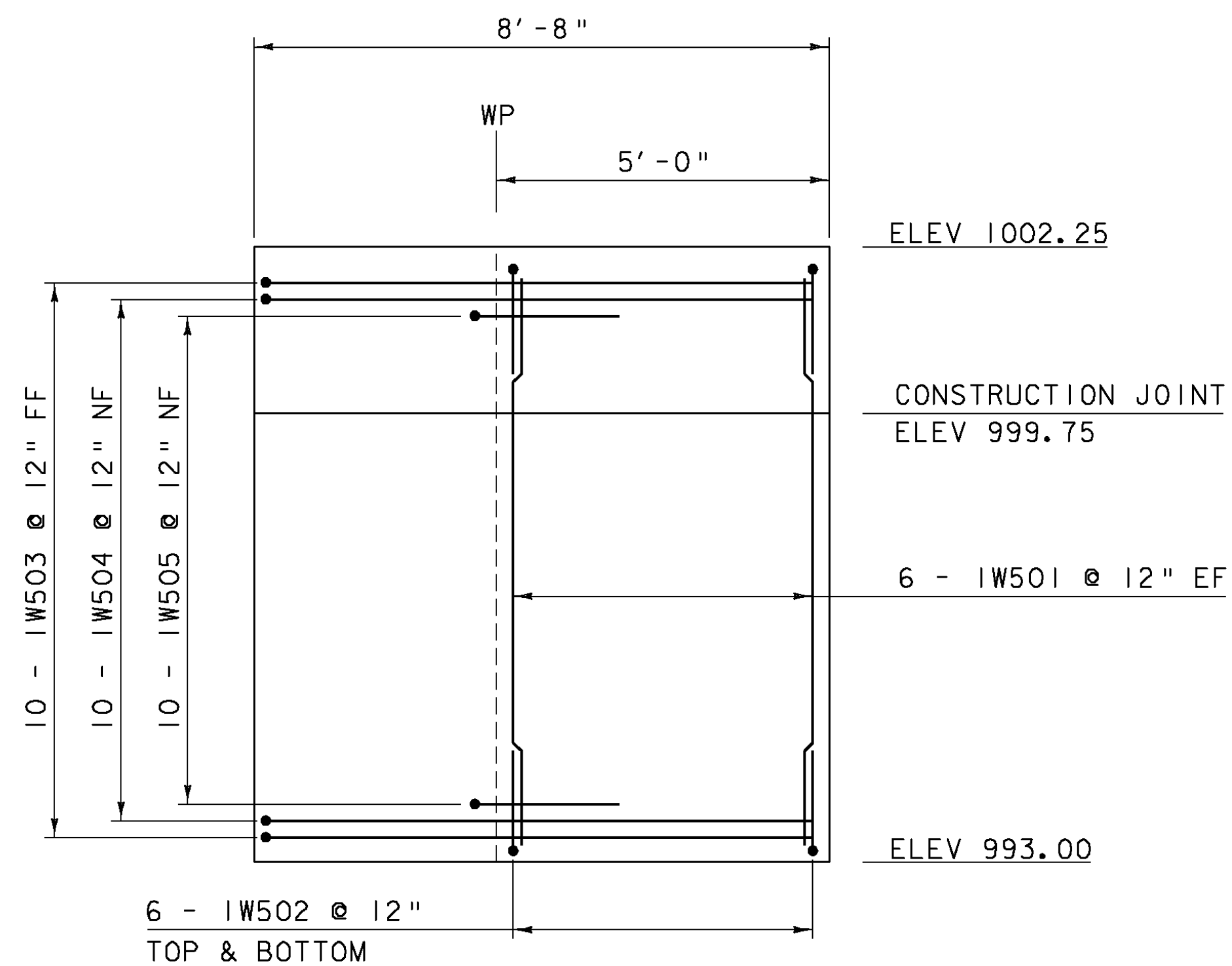
ABUTMENT #2 ELEVATION
SCALE 1/2" = 1'-0"
0 1 2

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

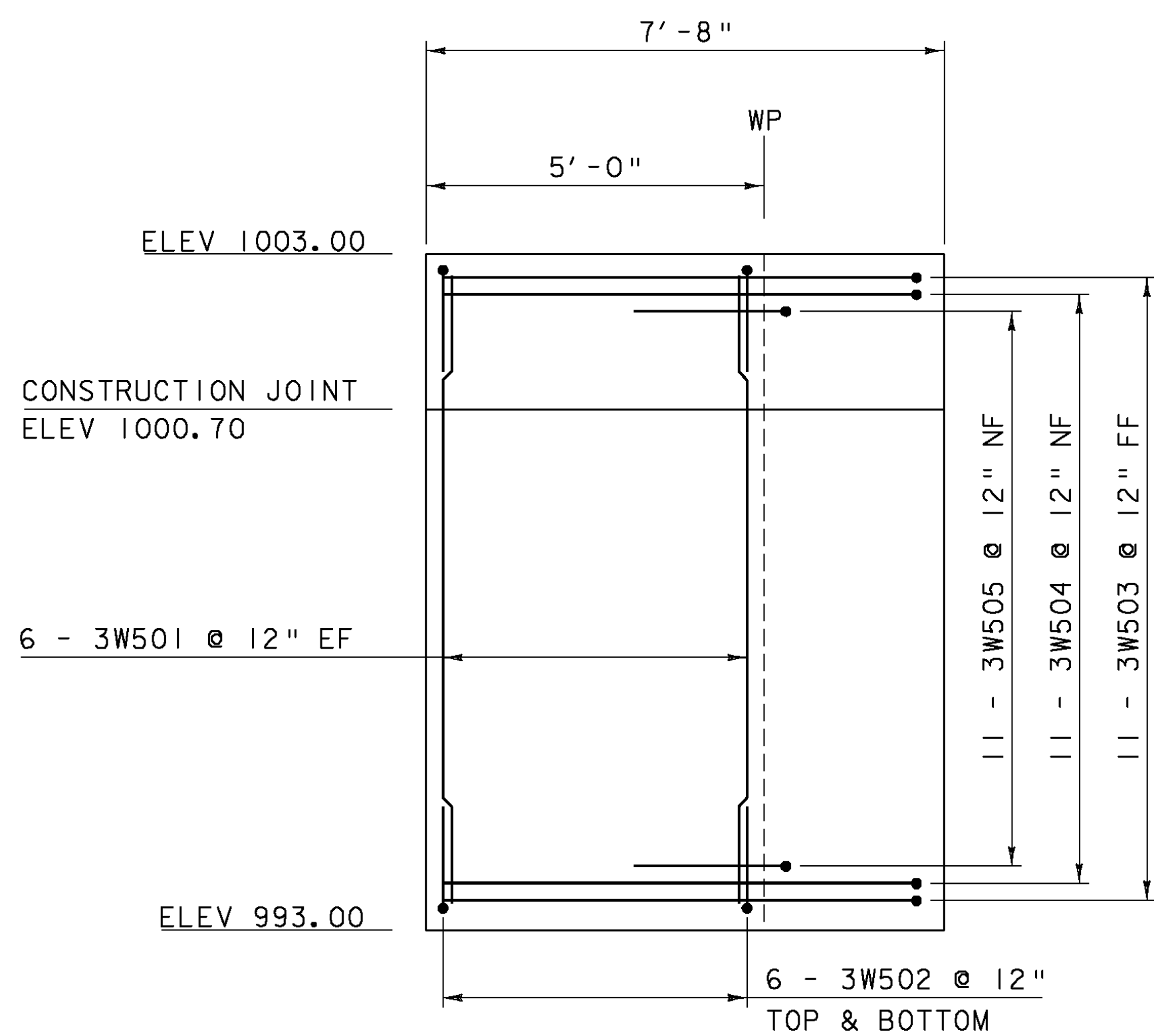
PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443(43)	DRAWN BY: J. GRIFFIN
FILE NAME: s01j272substructure.dgn	CHECKED BY: G. LAROCHE
PROJECT LEADER: K. HIGGINS	SHEET 17 OF 32
DESIGNED BY: G. LAROCHE	
ABUTMENT #2	



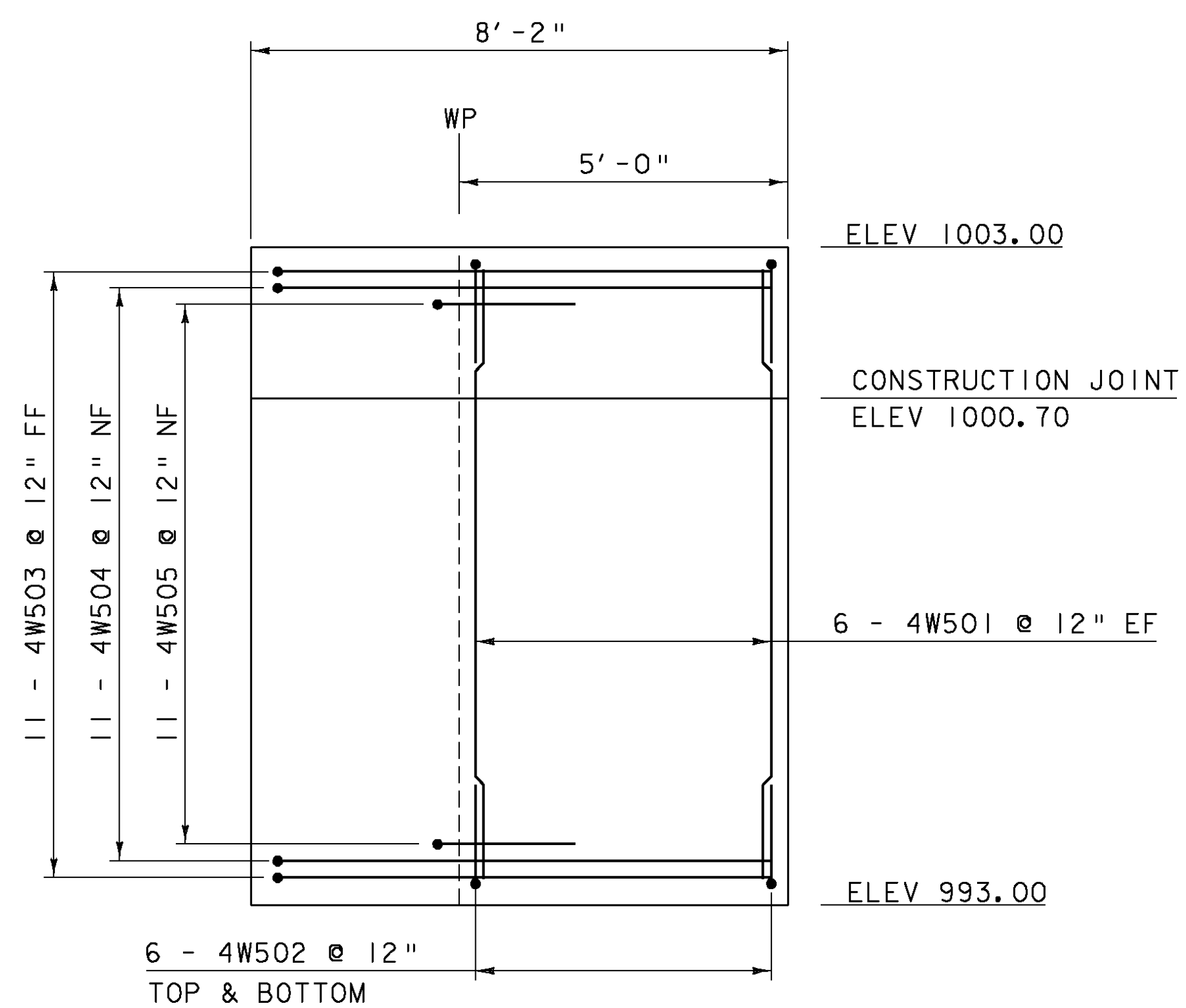
WINGWALL #2
SCALE 1/2" = 1'-0"
0 2



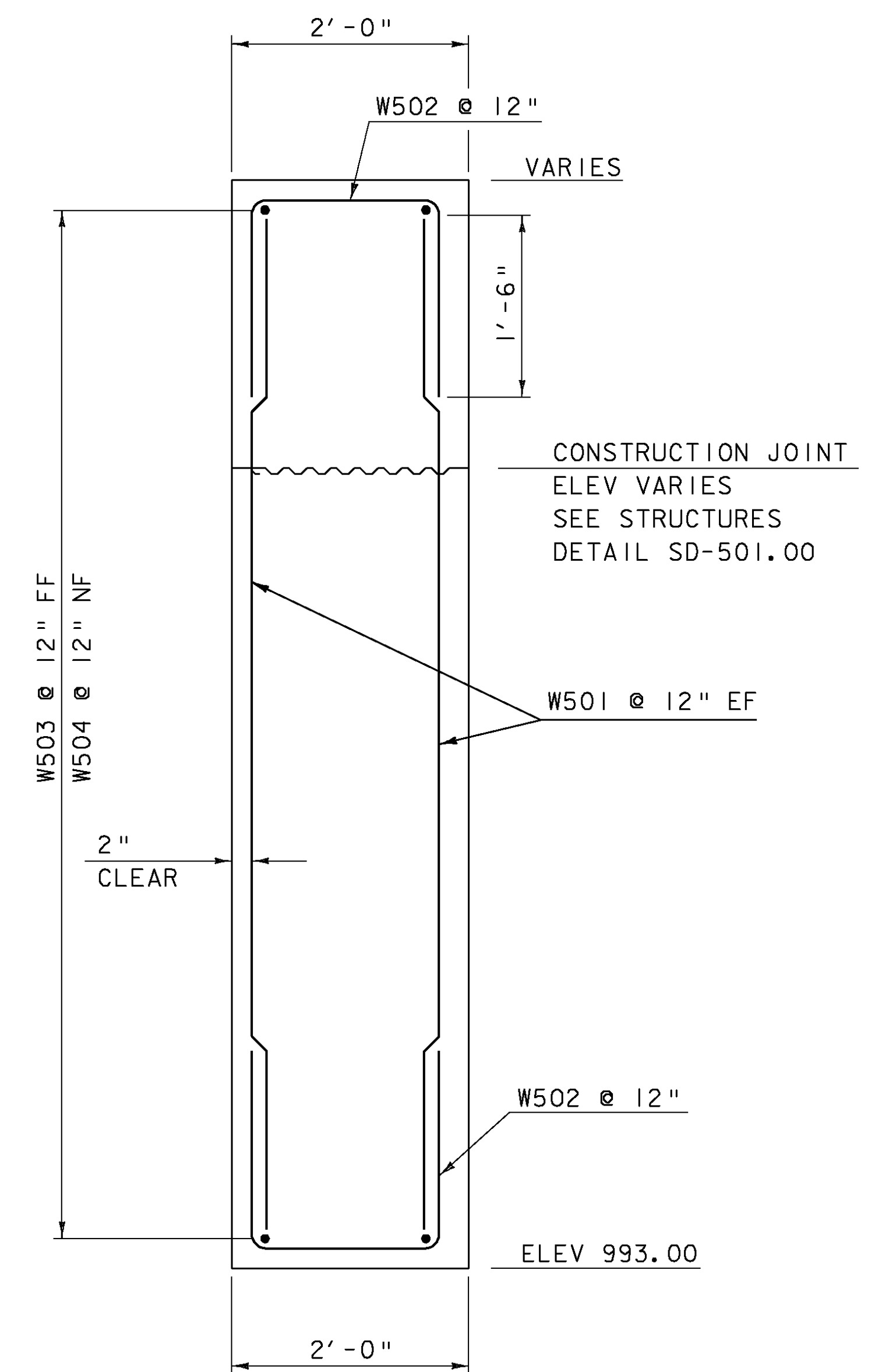
WINGWALL #1
SCALE 1/2" = 1'-0"
0 2



WINGWALL #3
SCALE 1/2" = 1'-0"
0 2



WINGWALL #4
SCALE 1/2" = 1'-0"
0 2



WINGWALL TYPICAL SECTION
SCALE 1" = 1'-0"
1 9 6 3 0 2

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443(43)

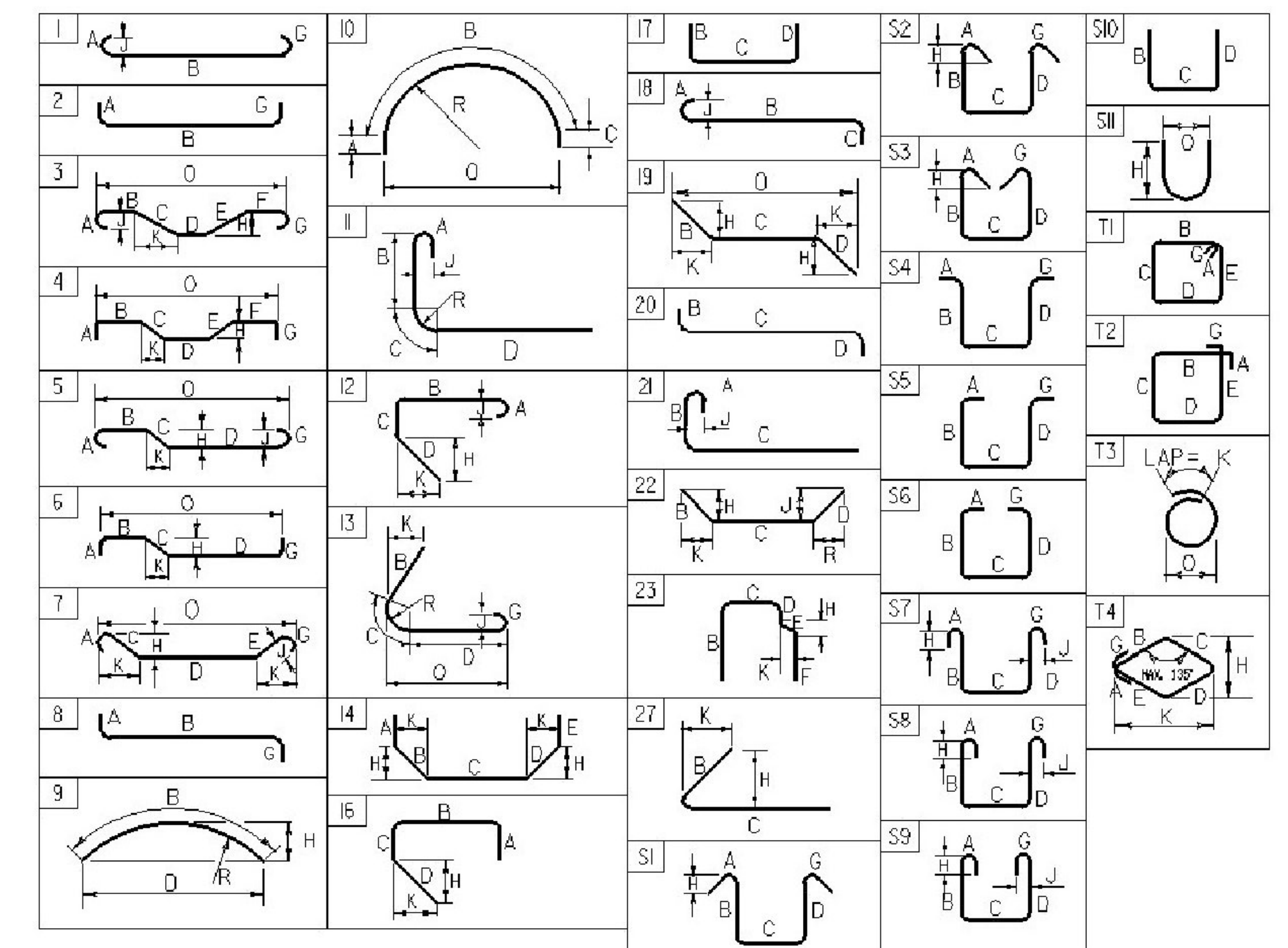
FILE NAME: s01j272substructure.dgn PLOT DATE: 07-SEP-2010
PROJECT LEADER: K. HIGGINS DRAWN BY: J. GRIFFIN
DESIGNED BY: G. LAROCHE CHECKED BY: G. LAROCHE
WINGWALLS SHEET 18 OF 32

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O			
SLAB																																						
*	15	5	40'-1"	ES501	2	0'-10"	38'-5"					0'-10"																										
	80	5	10'-4"	ES502	S6	0'-10"	1'-4"	6'-0"	1'-4"			0'-10"																										
	20	5	6'-10"	ES503	2	0'-10"	6'-0"																															
	2	5	23'-4"	ES504	STR	23'-4"																																
	40	6	23'-4"	ES601	STR	23'-4"																																
*	37	6	6'-0"	ES602	STR	6'-0"																																
*	49	10	41'-8"	ES1001	1	1'-10"	38'-5"					1'-5"		1'-1"																								
ABUTMENT #1																																						
*	7	5	34'-1"	1EA501	STR	34'-1"																																
	15	5	34'-1"	1A501	STR	34'-1"																																
*	▲	106	7	11'-4"	1A701	2	2'-7"	8'-9"																														
WING WALL #1																																						
	12	5	8'-9"	1W501	STR	8'-9"																																
	12	5	5'-11"	1W502	S10		2'-2"	1'-7"	2'-2"																													
	10	5	9'-11"	1W503	27		7'-9"	2'-2"				7'-6"		2'-0"																								
	10	5	12'-10"	1W504	27		8'-1"	4'-9"				7'-10"		2'-1"																								
	10	5	6'-11"	1W505	27		2'-2"	4'-9"				2'-1"		0'-7"																								
WING WALL #2																																						
	12	5	8'-6"	2W501	STR	8'-6"																																
	12	5	5'-11"	2W502	S10		2'-2"	1'-7"	2'-2"																													
	10	5	9'-10"	2W503	22		7'-8"	2'-2"				7'-5"		2'-0"																								
	10	5	11'-8"	2W504	22		7'-1"	4'-7"				6'-10"		1'-10"																								
	10	5	6'-9"	2W505	22		2'-2"	4'-7"				2'-1"		0'-7"																								
ABUTMENT #2																																						
*	7	5	32'-9"	2EA501	STR	32'-9"																																
*	17	5	32'-9"	2A501	STR	32'-9"																																
*	▲	102	7	12'-1"	2A701	2	2'-7"	9'-6"																														
WING WALL #3																																						
	12	5	9'-6"	3W501	STR	9'-6"																																
	12	5	5'-11"	3W502	S10		2'-2"	1'-7"	2'-2"																													
	11	5	9'-8"	3W503	22		7'-6"	2'-2"				7'-4"		1'-3"																								
	11	5	11'-4"	3W504	22		7'-2"	4'-2"				7'-0"		1'-3"																								
	11	5	6'-4"	3W505	22		2'-2"	4'-2"				2'-1"		0'-5"																								
WING WALL #4																																						
	12	5	9'-6"	4W501	STR	9'-6"																																
	12	5	5'-11"	4W502	S10		2'-2"	1'-7"	2'-2"																													
	11	5	9'-8"	4W503	27		7'-6"	2'-2"				7'-5"		0'-8"																								
	11	5	11'-11"	4W504	27		7'-8"	4'-3"				7'-7"		0'-8"																								
	11	5	6'-5"	4W505	27		2'-2"	4'-3"				2'-1"		0'-2"																								

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS				
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: **MENDON**
 PROJECT NUMBER: **BRO 1443 (43)**
 FILE NAME: s01j272rss.dgn
 PROJECT MANAGER: **K. HIGGINS**
 DESIGNED BY: **G. LAROCHE**
 REINFORCING STEEL SCHEDULE SHEET
 PLOT DATE: 8/30/2010
 DRAWN BY: **J. GRIFFIN**
 CHECKED BY: **J. SALVATORI**
 SHEET 19 OF 33

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF EXISTING ROLLED BEAM BRIDGE #24 WITH A NEW CONCRETE SLAB BRIDGE WITH ABUTMENTS AND WINGWALLS. THE NEW BRIDGE LENGTH WILL BE 37 FOOT SPAN.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.14 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS MOSTLY WELL ESTABLISHED FOREST WITH OCCASIONAL OPEN AREAS. TH 7 AND FIELD DRIVES ARE IN THE PROJECT LIMITS.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE MENDON BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS STEEP, SINUOUS, NARROW, WITH A CONFINED AND ARMORED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS. THE TRIBUTARY AREA AT THE CULVERT CROSSING IS 4.6 MILES². THERE ARE A NUMBER OF DROP INLETS ON SITE DRAINING FROM THE ROADWAY TO THE BROOK. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF RUTLAND, VERMONT. SOILS ON THE PROJECT SITE ARE 150A PEACHAM MUCK, 0% TO 8% SLOPES, "K FACTOR" = 0.28. THE SOIL IS CONSIDERED TO HAVE MODERATE EROSION POTENTIAL.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: YES, RIVER BED
HISTORICAL OR ARCHEOLOGICAL AREAS: YES, EAST SIDE END OF PROJECT
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: MENDON BROOK
WETLANDS: YES, NEAR WING WALL #1 AND ON THE RIGHT HAND SIDE OF THE ROAD AT BEGIN PROJECT.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

DEWATERING OF COFFERDAM IS ANTICIPATED. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

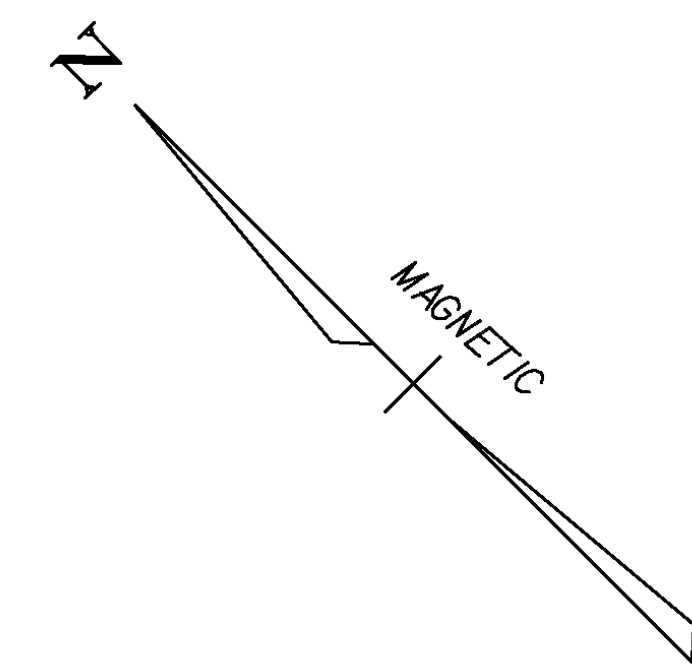
1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

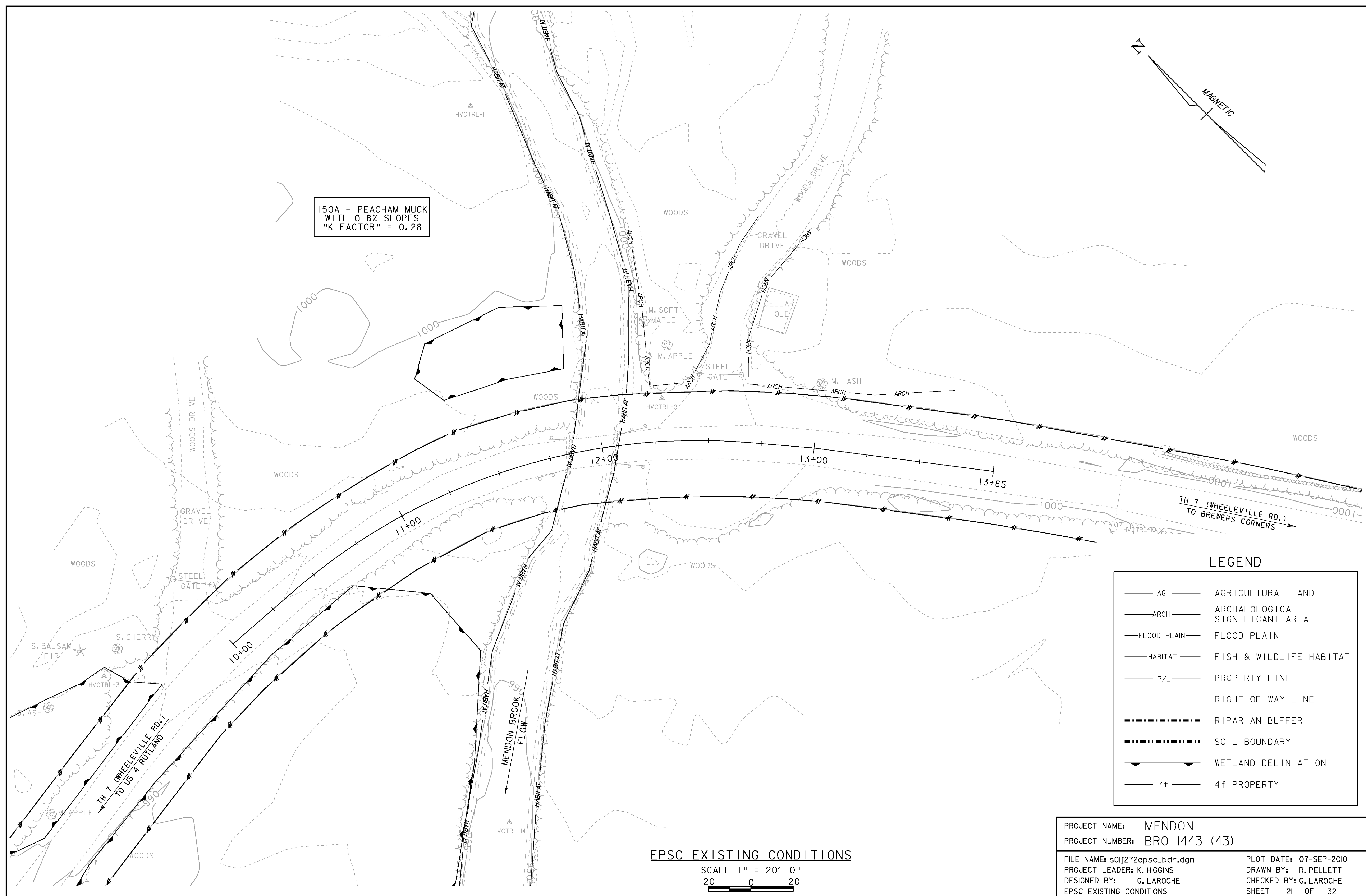
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTION 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272EPSC_Narrative.dgn PLOT DATE: 16-SEP-2010
PROJECT LEADER: K. HIGGINS DRAWN BY: R. PELLETT
DESIGNED BY: R. PELLETT CHECKED BY: G. LAROCHE
EPSC PLAN NARRATIVE SHEET 20 OF 32



150A - PEACHAM MUCK
WITH 0-8% SLOPES
"K FACTOR" = 0.28



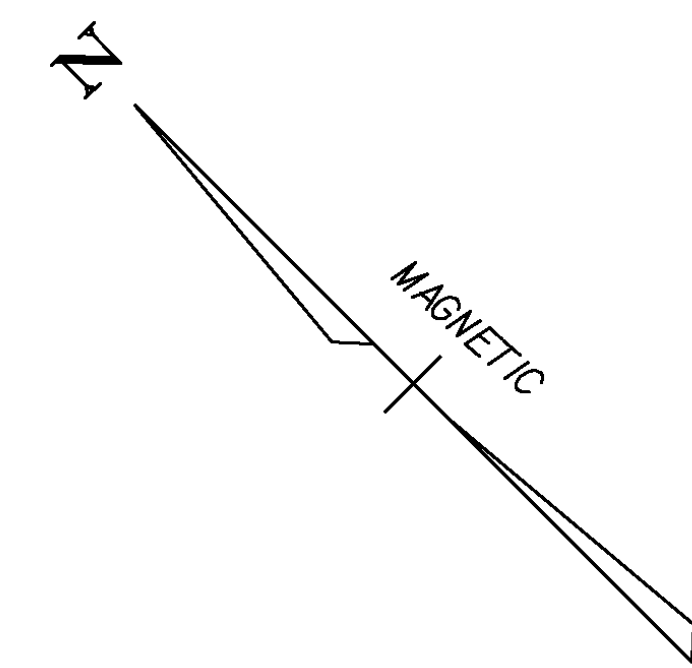
LEGEND

— AG —	AGRICULTURAL LAND
— ARCH —	ARCHAEOLOGICAL SIGNIFICANT AREA
— FLOOD PLAIN —	FLOOD PLAIN
— HABITAT —	FISH & WILDLIFE HABITAT
— P/L —	PROPERTY LINE
— — —	RIGHT-OF-WAY LINE
— — — — —	RIPARIAN BUFFER
— · · · · ·	SOIL BOUNDARY
— > < —	WETLAND DELIMITATION
— 4f —	4f PROPERTY

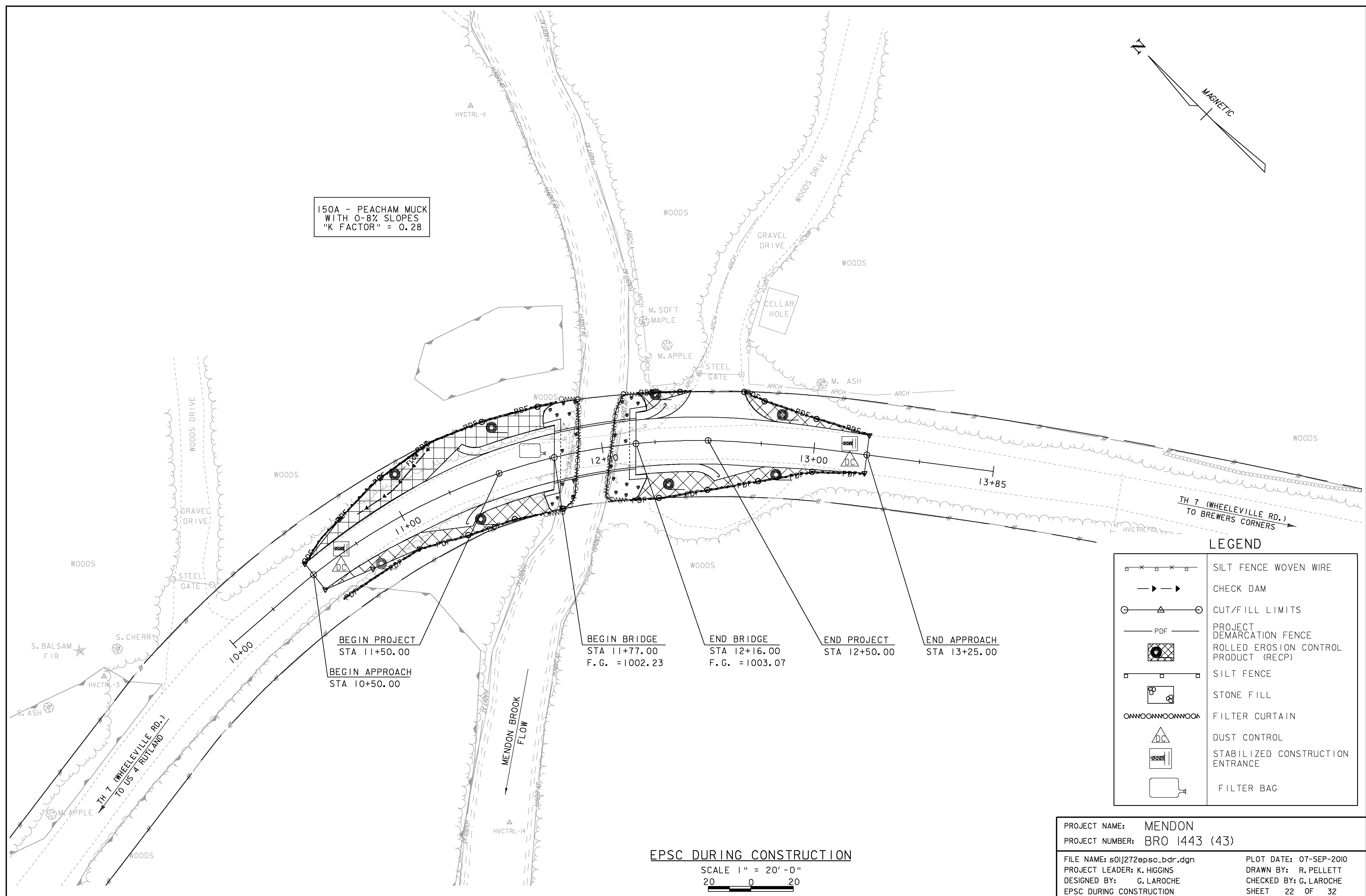
EPSC EXISTING CONDITIONS

SCALE 1" = 20' - 0"
20 0 20

PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443 (43)	DRAWN BY: R. PELLETT
FILE NAME: s01j272epsc_bdr.dgn	CHECKED BY: G. LAROCHE
PROJECT LEADER: K. HIGGINS	SHEET 21 OF 32
DESIGNED BY: G. LAROCHE	
EPSC EXISTING CONDITIONS	



150A - PEACHAM MUCK
WITH 0-8% SLOPES
"K FACTOR" = 0.28



LEGEND

	SILT FENCE WOVEN WIRE
	CHECK DAM
	CUT/FILL LIMITS
	PROJECT DEMARCATION FENCE
	ROLLED EROSION CONTROL PRODUCT (RECP)
	SILT FENCE
	STONE FILL
	FILTER CURTAIN
	DUST CONTROL
	STABILIZED CONSTRUCTION ENTRANCE
	FILTER BAG

BEGIN PROJECT
STA 11+50.00
BEGIN APPROACH
STA 10+50.00

BEGIN BRIDGE
STA 11+77.00
F.G. = 1002.23

END BRIDGE
STA 12+16.00
F.G. = 1003.07

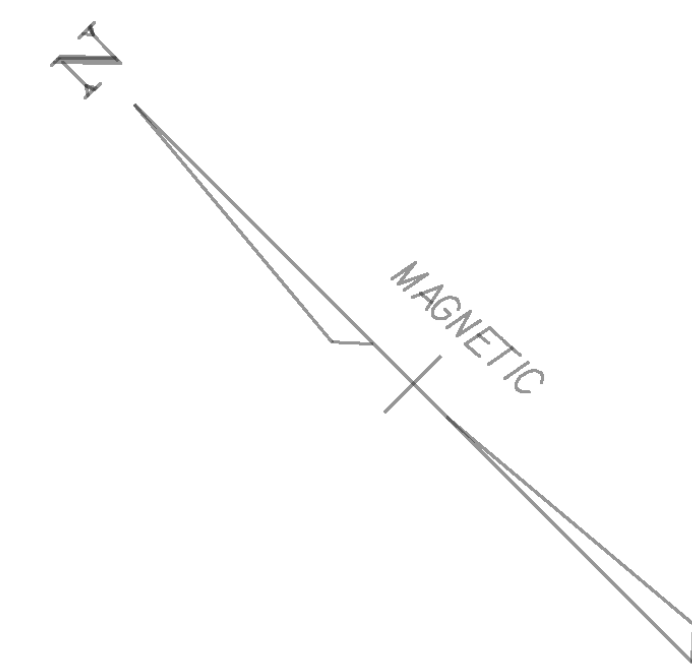
END PROJECT
STA 12+50.00

END APPROACH
STA 13+25.00

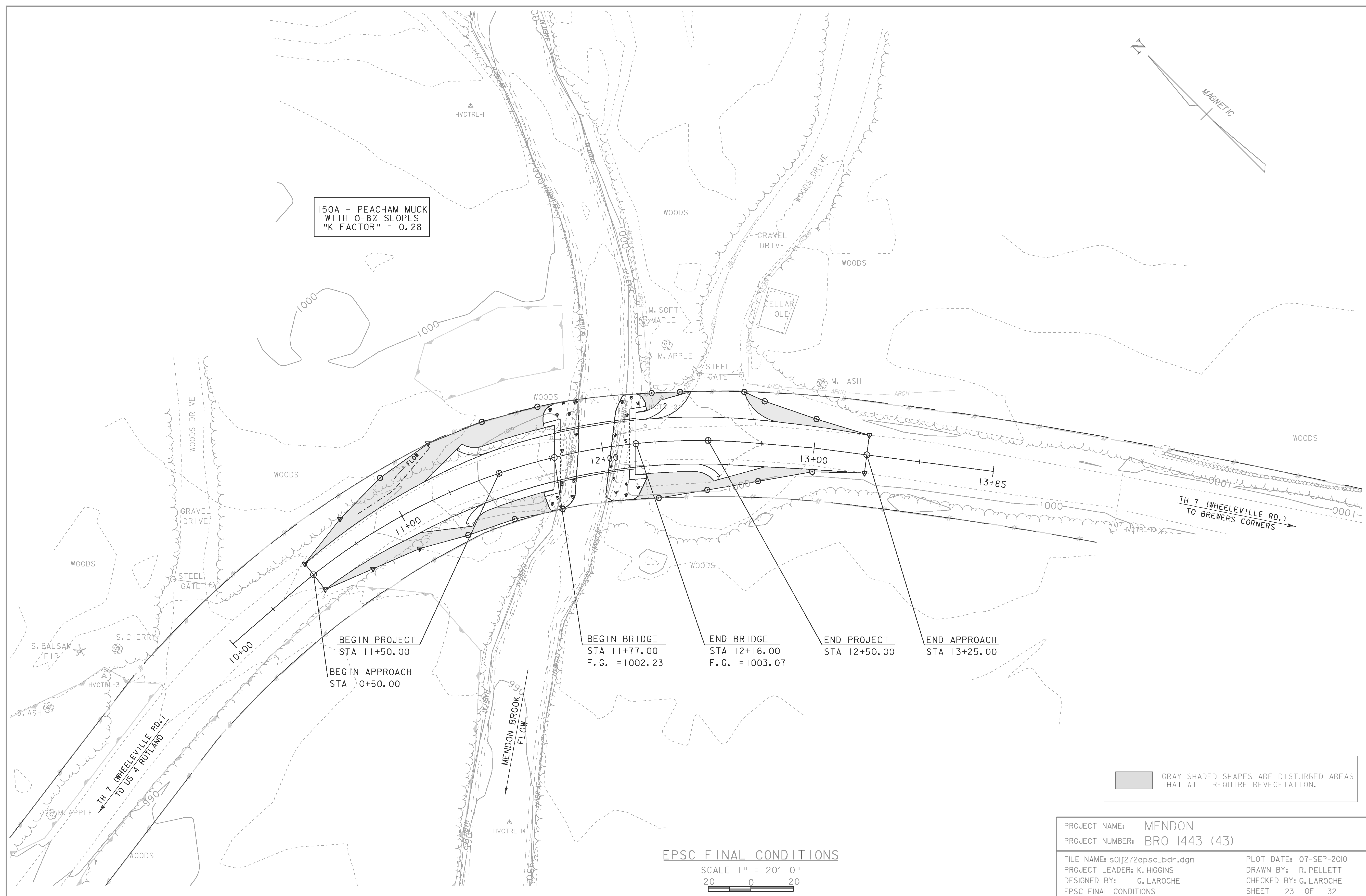
EPSC DURING CONSTRUCTION

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443 (43)	DRAWN BY: R. PELLETT
FILE NAME: s01j272epsc_bdr.dgn	CHECKED BY: G. LAROCHE
PROJECT LEADER: K. HIGGINS	SHEET 22 OF 32
DESIGNED BY: G. LAROCHE	
EPSC DURING CONSTRUCTION	



150A - PEACHAM MUCK
WITH 0-8% SLOPES
"K FACTOR" = 0.28



BEGIN PROJECT
STA 11+50.00
BEGIN APPROACH
STA 10+50.00

BEGIN BRIDGE
STA 11+77.00
F.G. = 1002.23

END BRIDGE
STA 12+16.00
F.G. = 1003.07

END PROJECT
STA 12+50.00

END APPROACH
STA 13+25.00

GRAY SHADED SHAPES ARE DISTURBED AREAS
THAT WILL REQUIRE REVEGETATION.

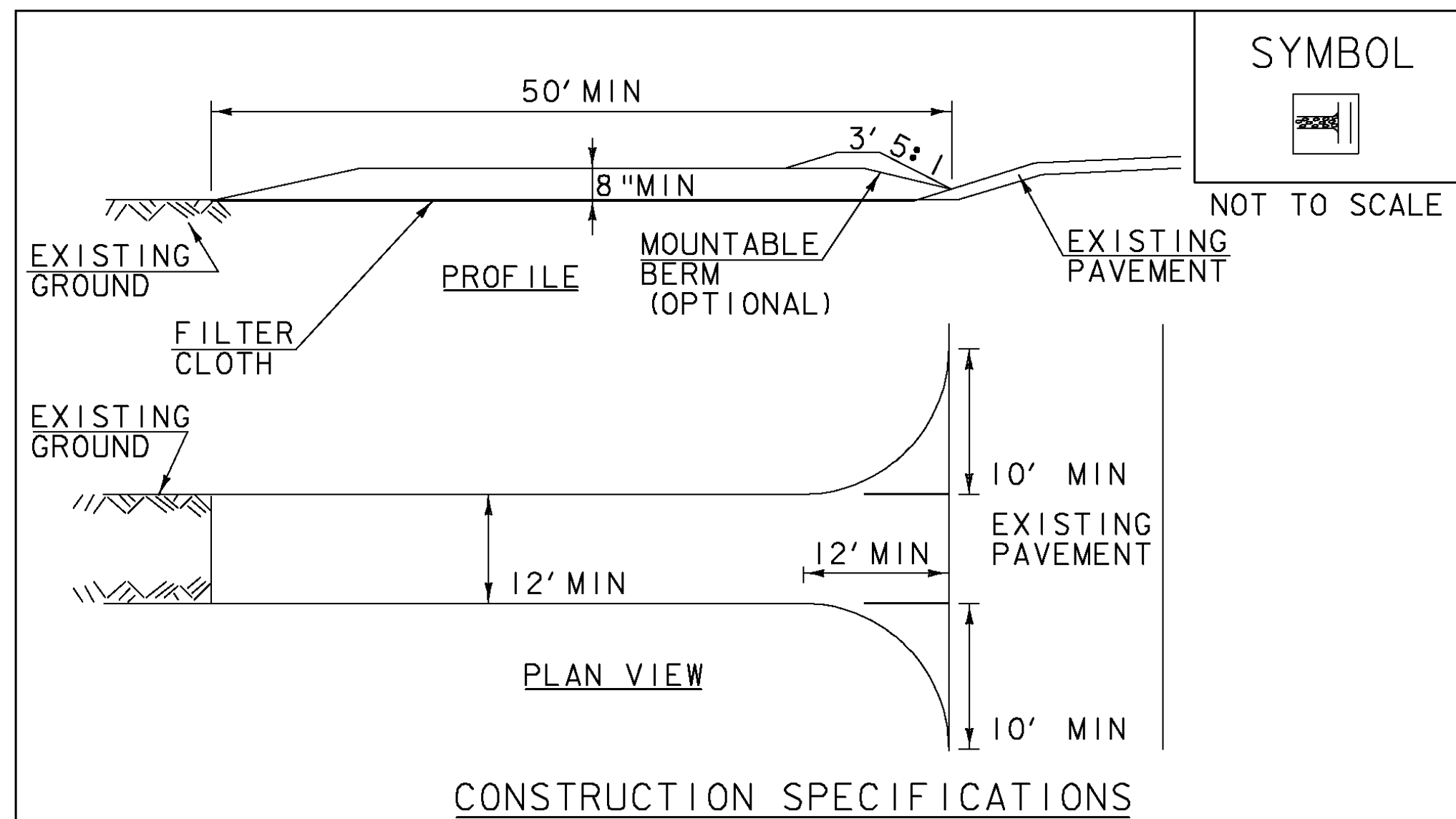
EPSC FINAL CONDITIONS

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443 (43)

FILE NAME: s01j272epsc_bdr.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
EPSC FINAL CONDITIONS

PLOT DATE: 07-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: G. LAROCHE
SHEET 23 OF 32



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

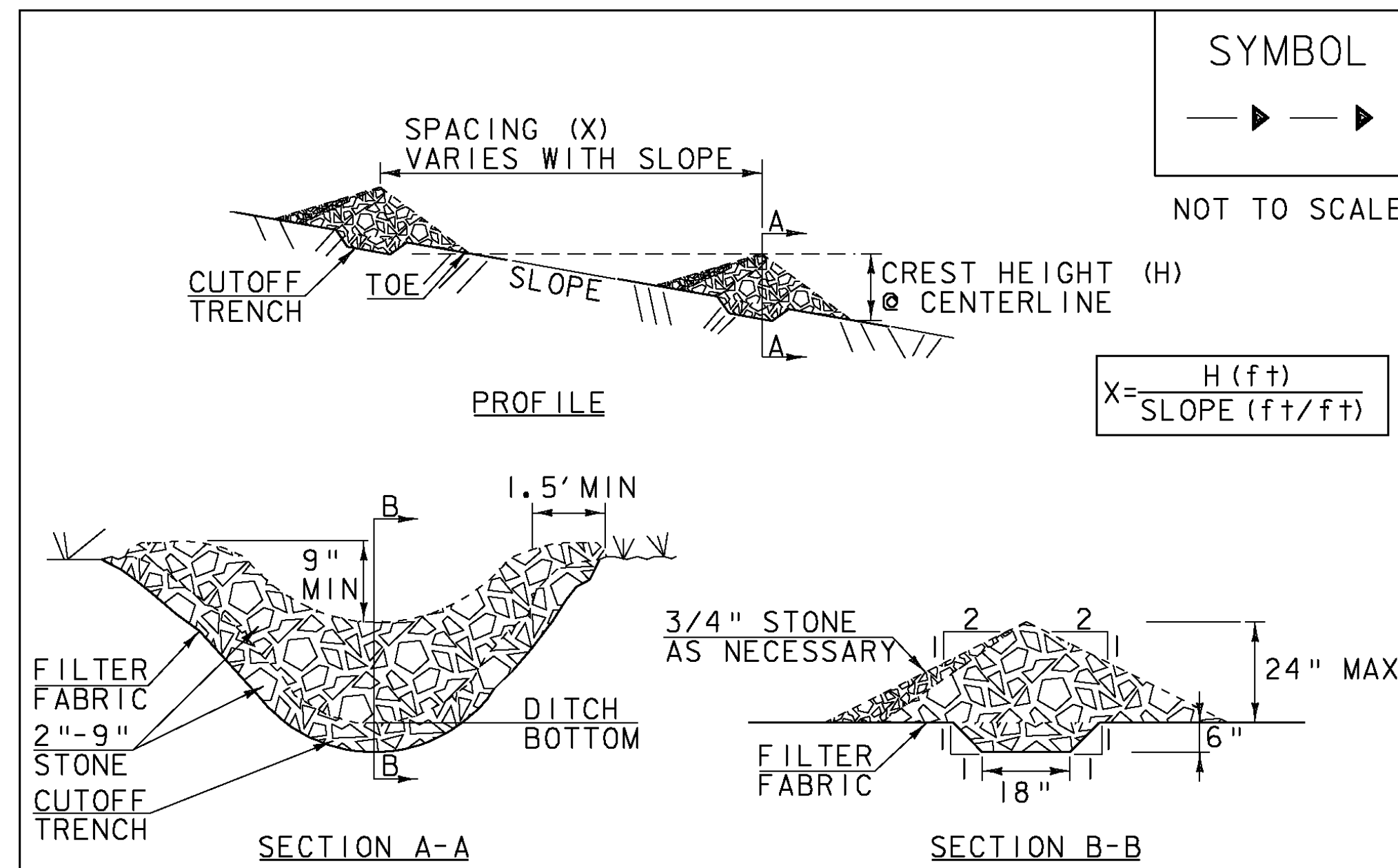
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**STABILIZED
CONSTRUCTION
ENTRANCE**

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

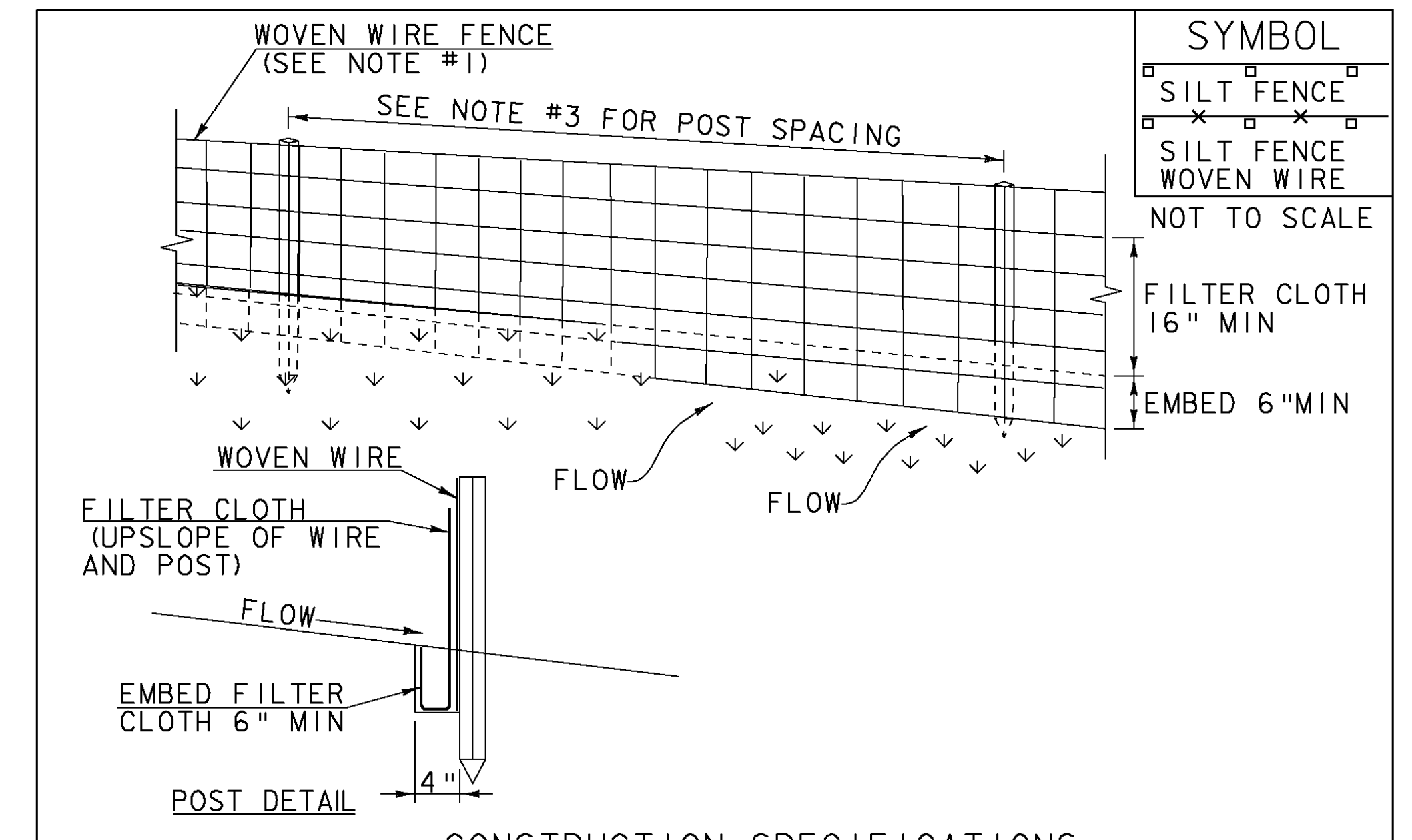
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

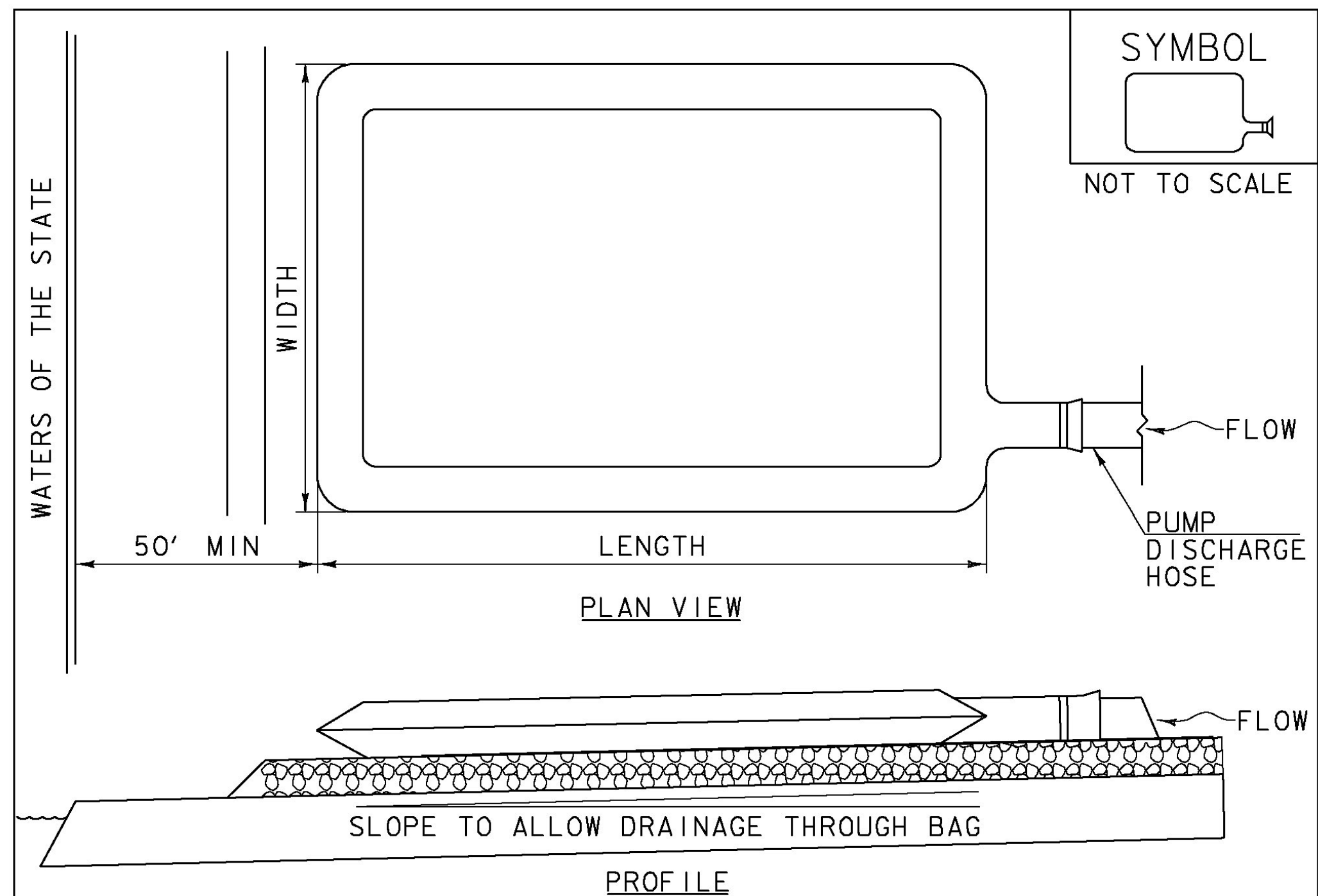
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272EPSC_De+alls.dgn PLOT DATE: 07-SEP-2010
PROJECT LEADER: K. HIGGINS DRAWN BY: R. PELLETT
DESIGNED BY: VAOT CHECKED BY: G. LAROCHE
EPSC DETAILS #1 SHEET 24 OF 32



CONSTRUCTION SPECIFICATIONS

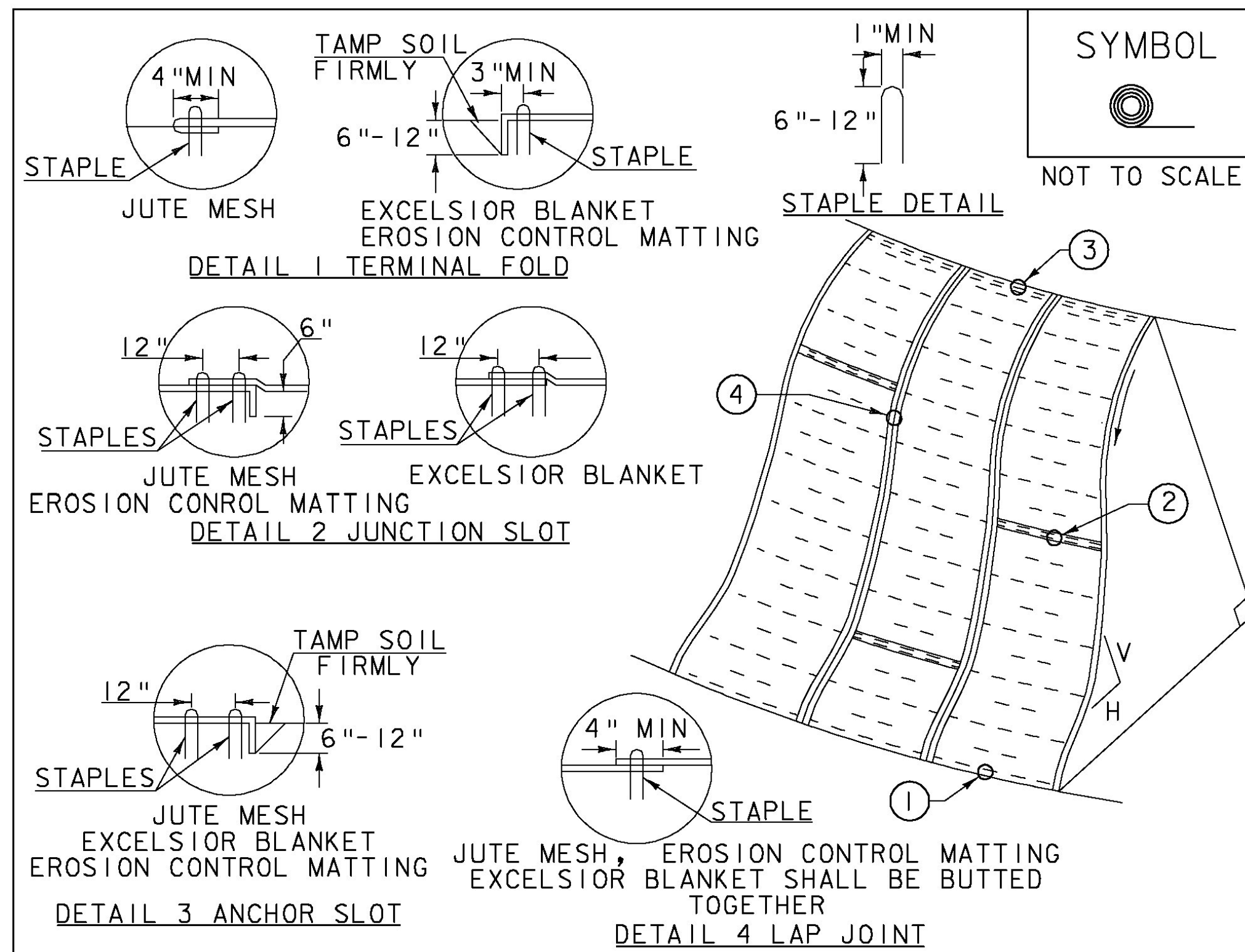
1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

FILTER BAG

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H: 1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX					
% WEIGHT	LBS/AC		NAME	GERM %	PURITY %
	BROADCAST	HYDROSEED			
37.5%	22.5	45	CREeping RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX					
% WEIGHT	LBS/AC		NAME	GERM %	PURITY %
	BROADCAST	HYDROSEED			
42.5%	34	68	CREeping RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

GENERAL GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	19-19-19	PELLETIZED	LIQUID
500 LBS/AC		2 TONS/AC	4.4 GAL/AC

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

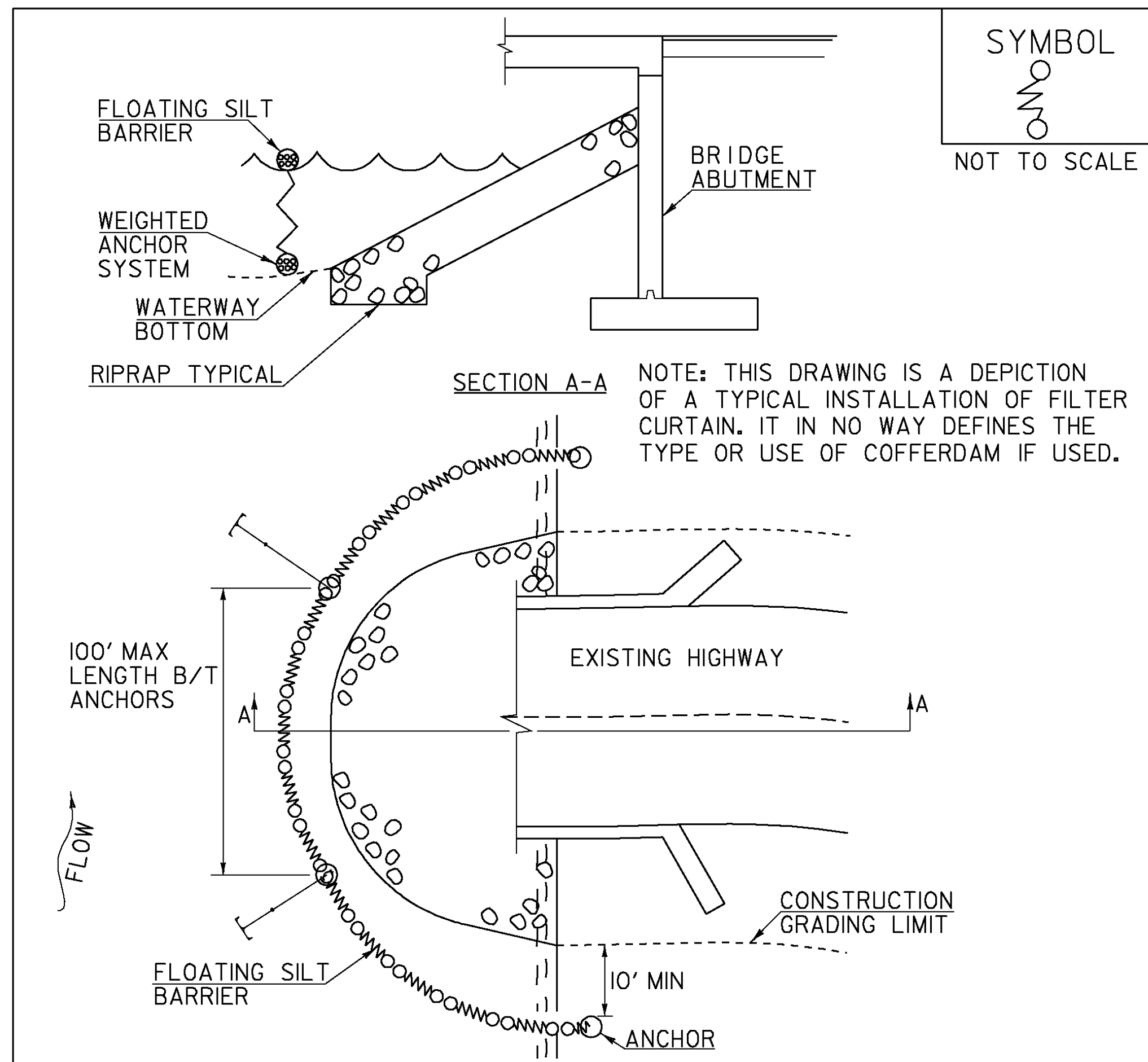
ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MAUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES


TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF

PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443(43)

FILE NAME: s01j272EPSC_De+ails.dgn PLOT DATE: 07-SEP-2010
PROJECT LEADER: K. HIGGINS DRAWN BY: R. PELLETT
DESIGNED BY: VAOT CHECKED BY: G. LAROCHE
EPSC DETAILS #2 SHEET 25 OF 32



SYMBOL

 NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

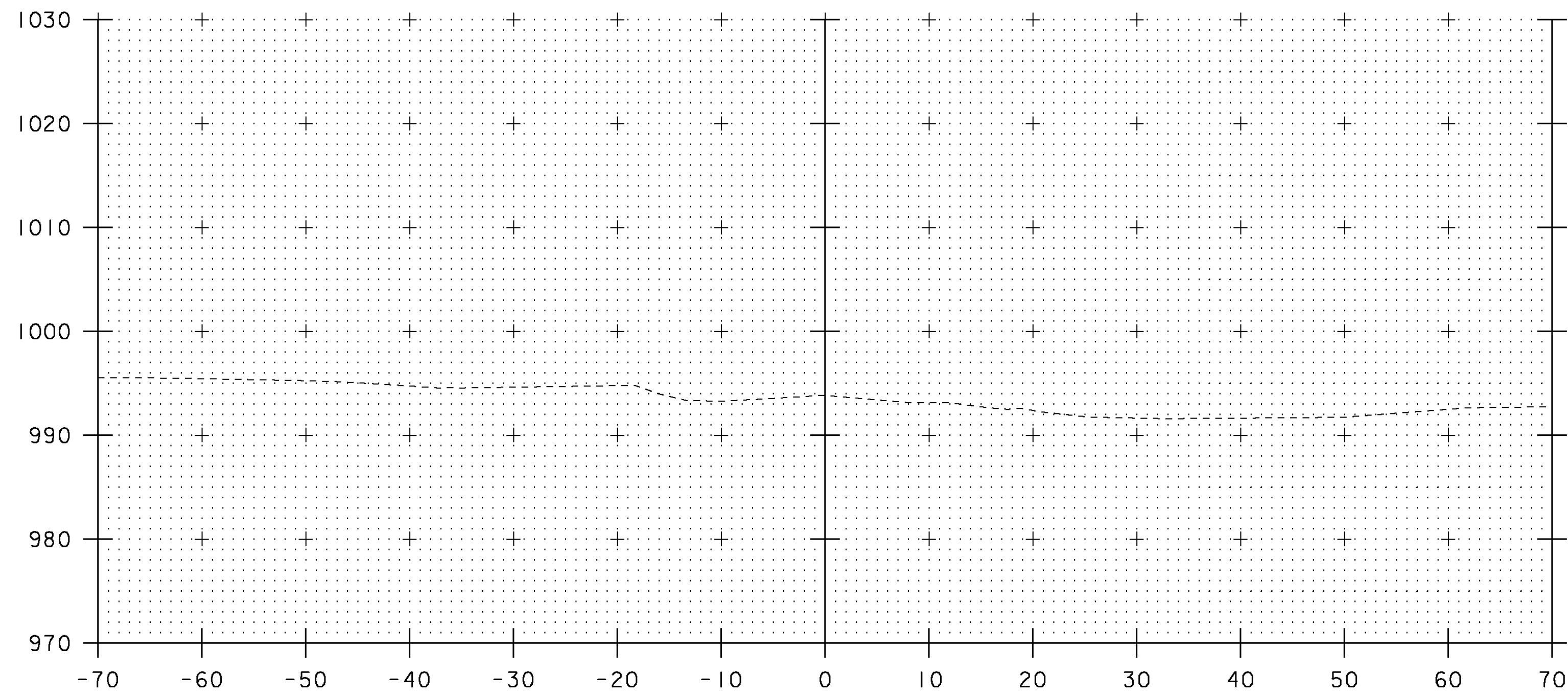
1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

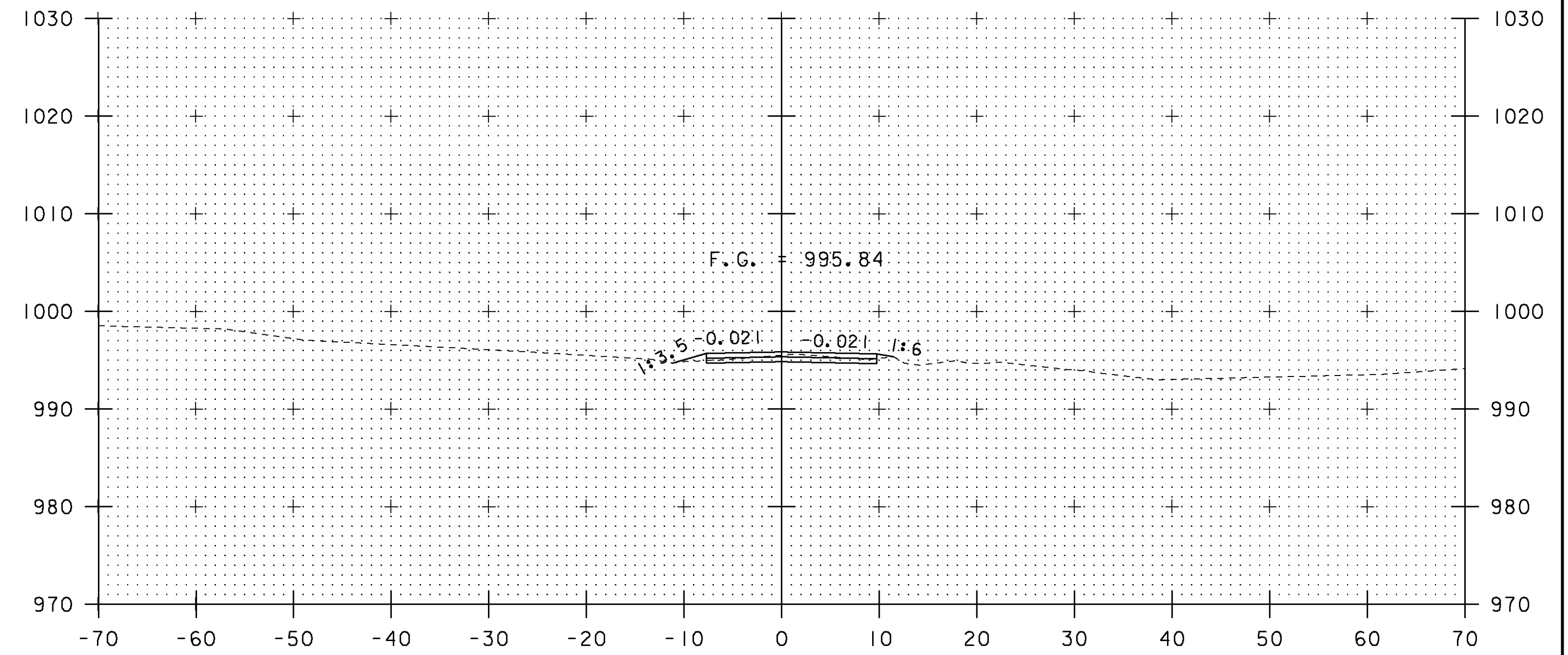
REVISIONS		
APRIL 1, 2008	WHF	
JANUARY 13, 2009	WHF	
SEPTEMBER 4, 2009	WHF	

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.6I).

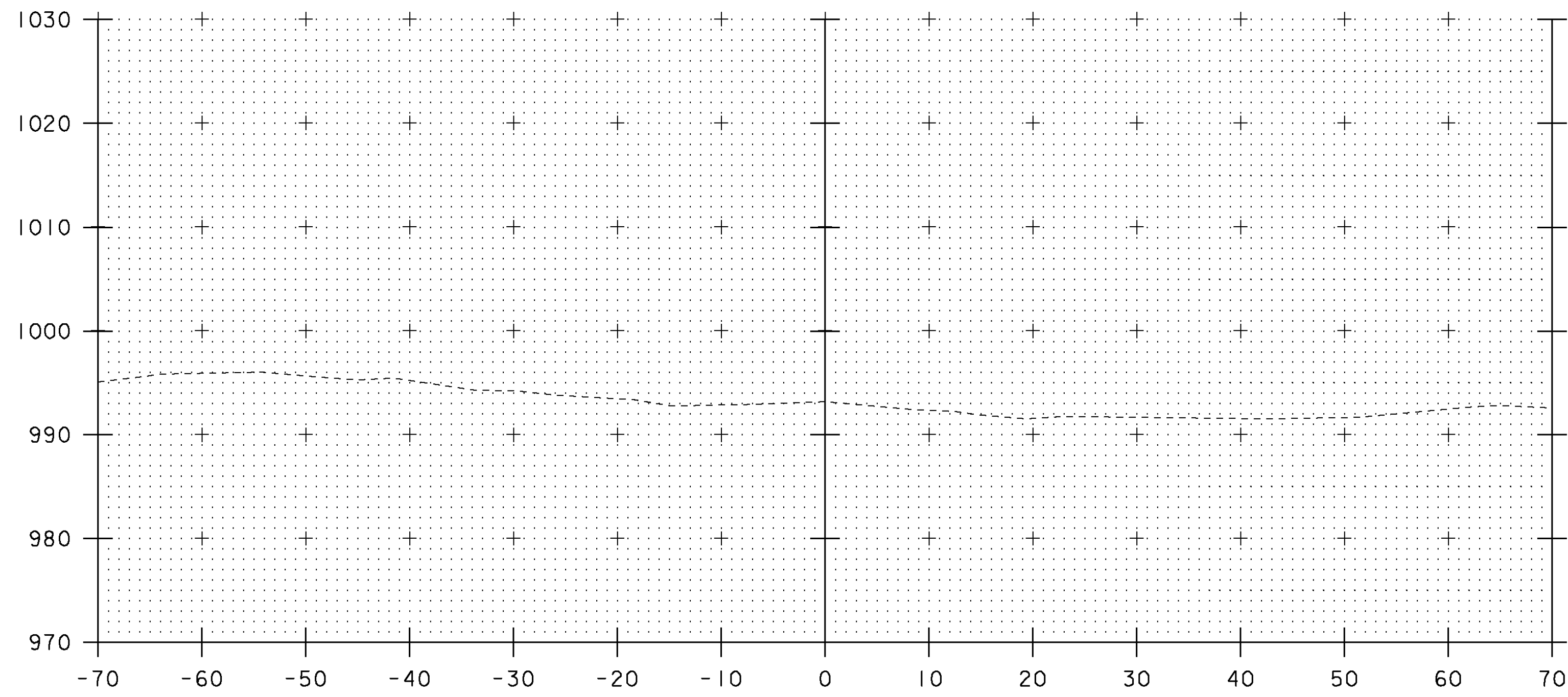
PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443(43)	DRAWN BY: R. PELLETT
FILE NAME: s01j272EPSC_Details.dgn	CHECKED BY: G. LAROCHE
PROJECT LEADER: K. HIGGINS	SHEET 26 OF 32
DESIGNED BY: VAOT	
EPSC DETAILS #3	



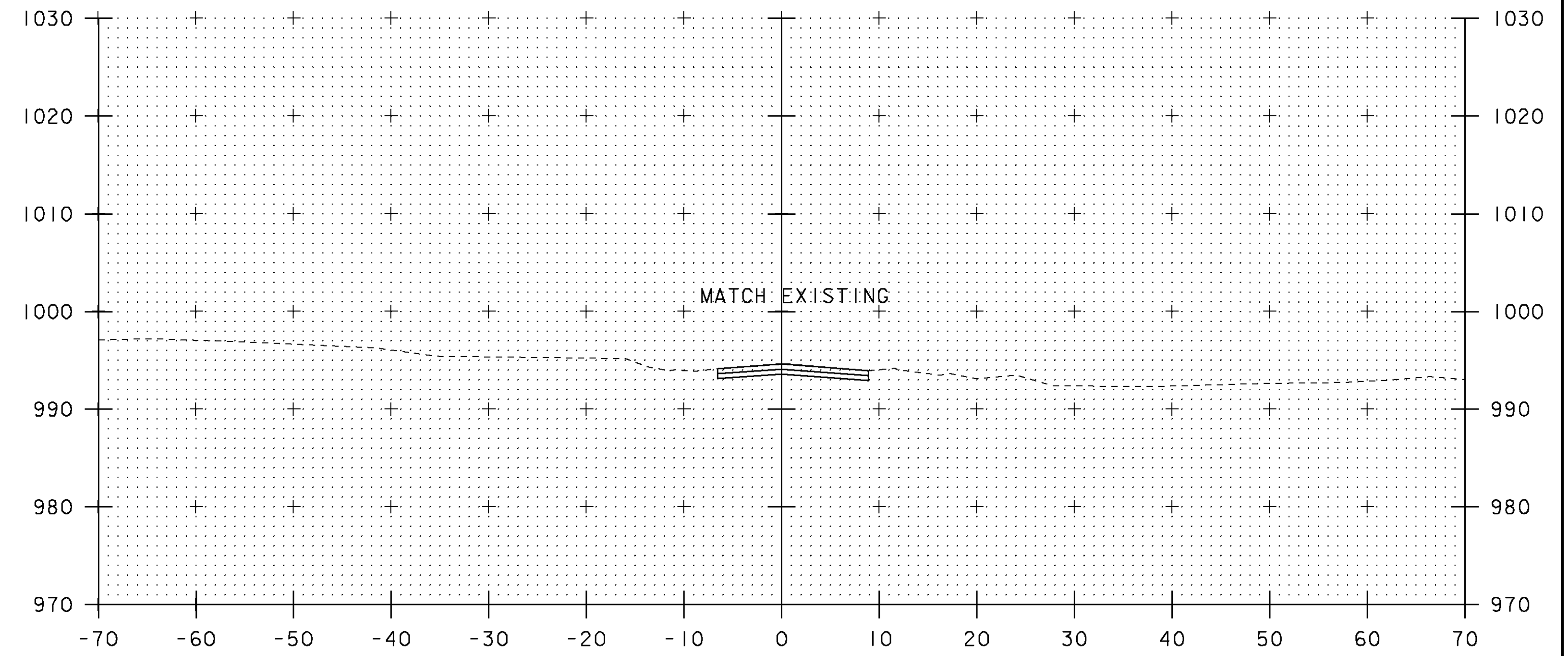
10+25



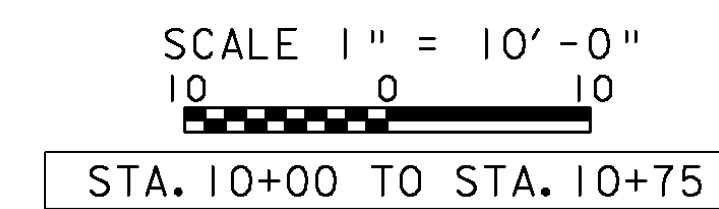
10+75



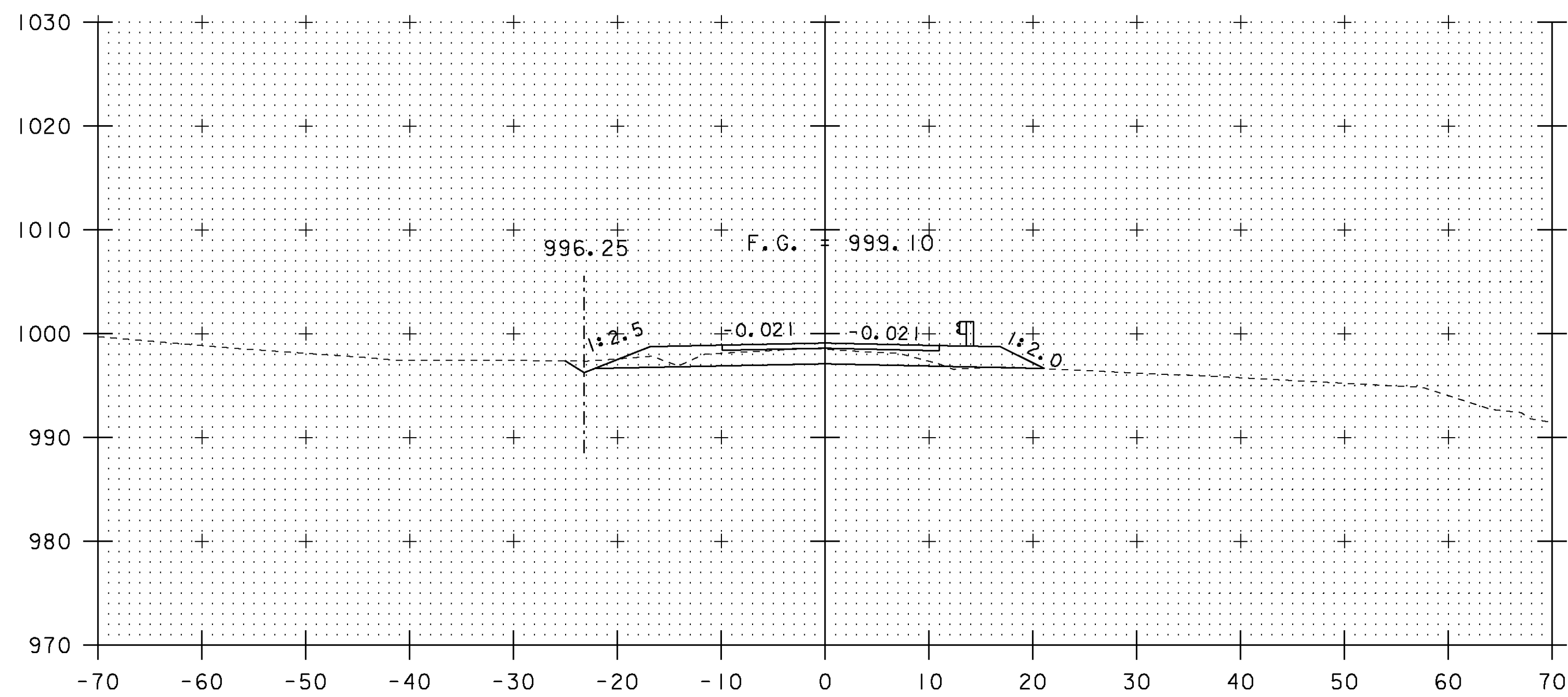
10+00



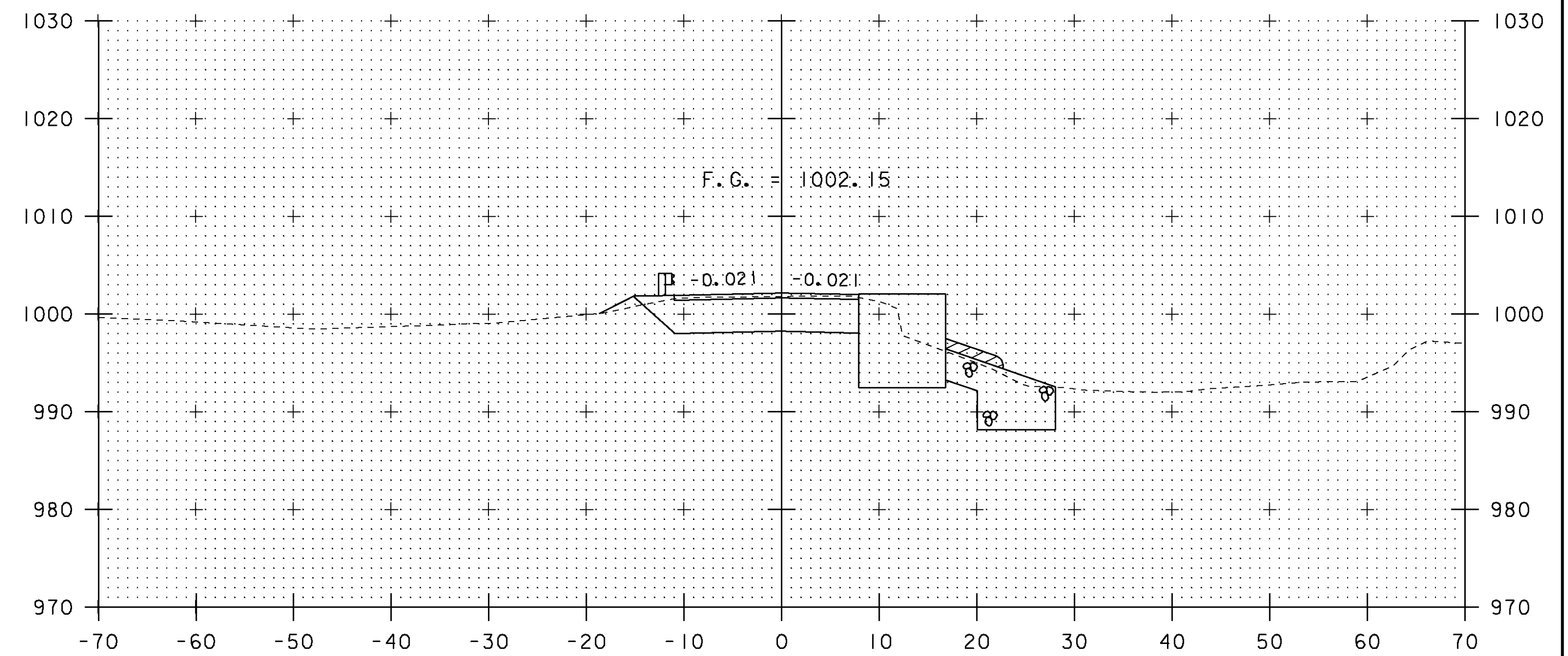
BEGIN APPROACH
10+50



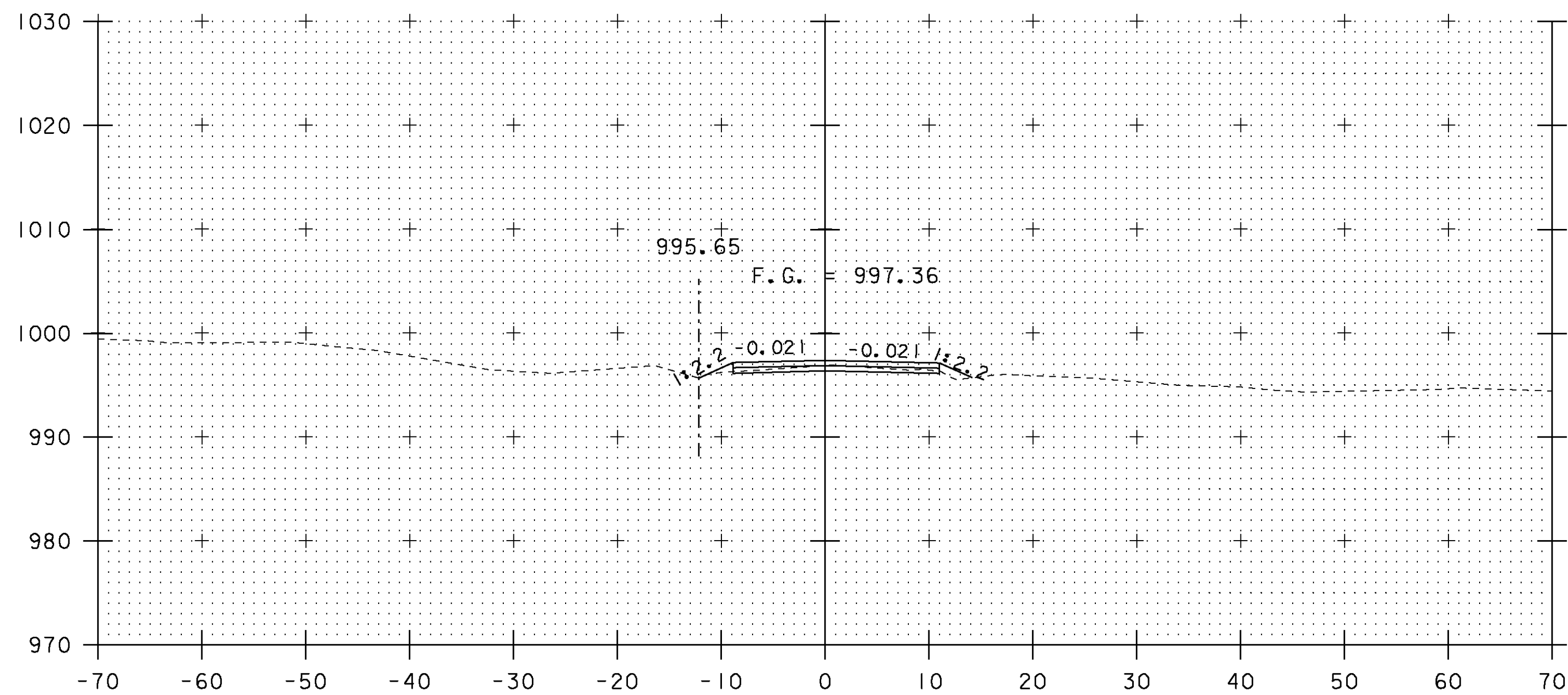
PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443 (43)	DRAWN BY: G. LAROCHE
FILE NAME: s01j272xs.dgn	CHECKED BY: J. SALVATORI
PROJECT LEADER: K. HIGGINS	SHEET 27 OF 32
DESIGNED BY: G. LAROCHE	
MAINLINE SECTIONS #1	



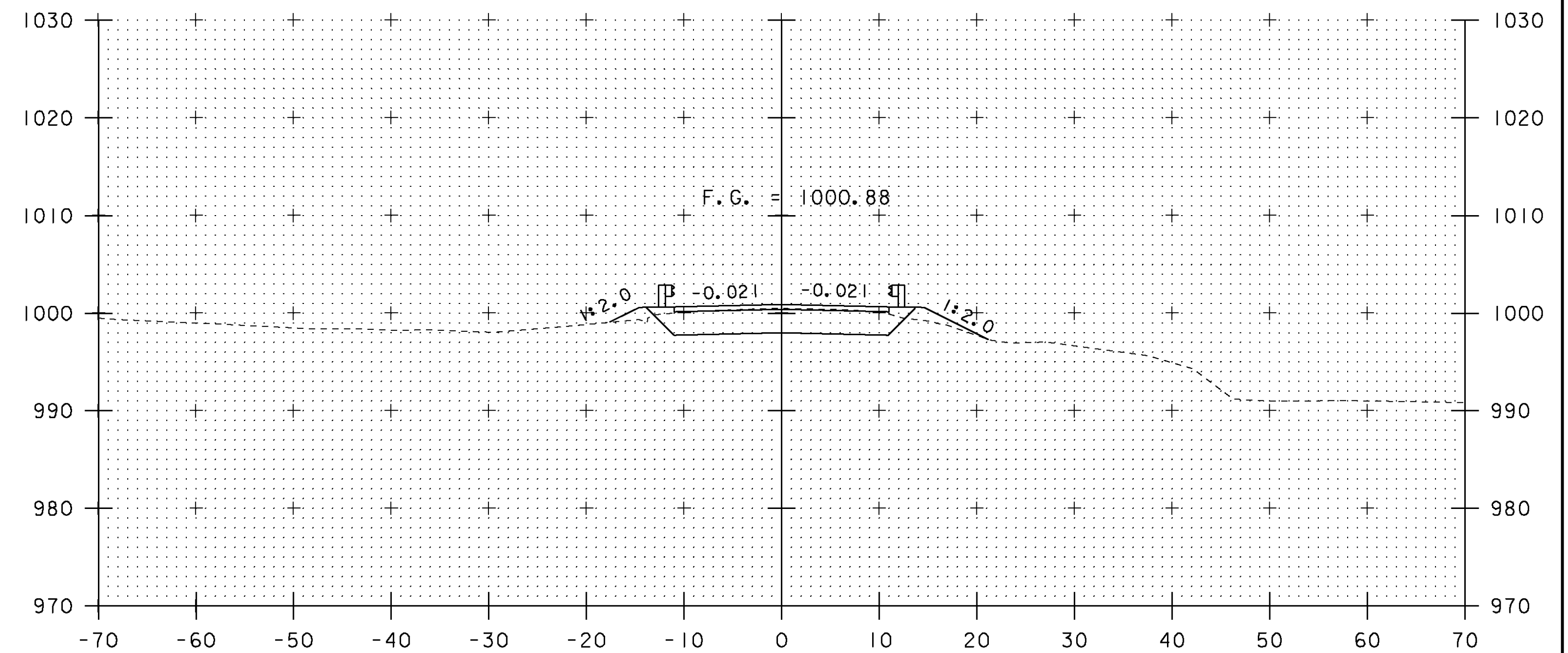
11+25



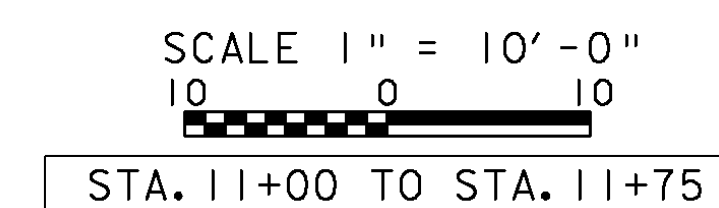
11+75



11+00

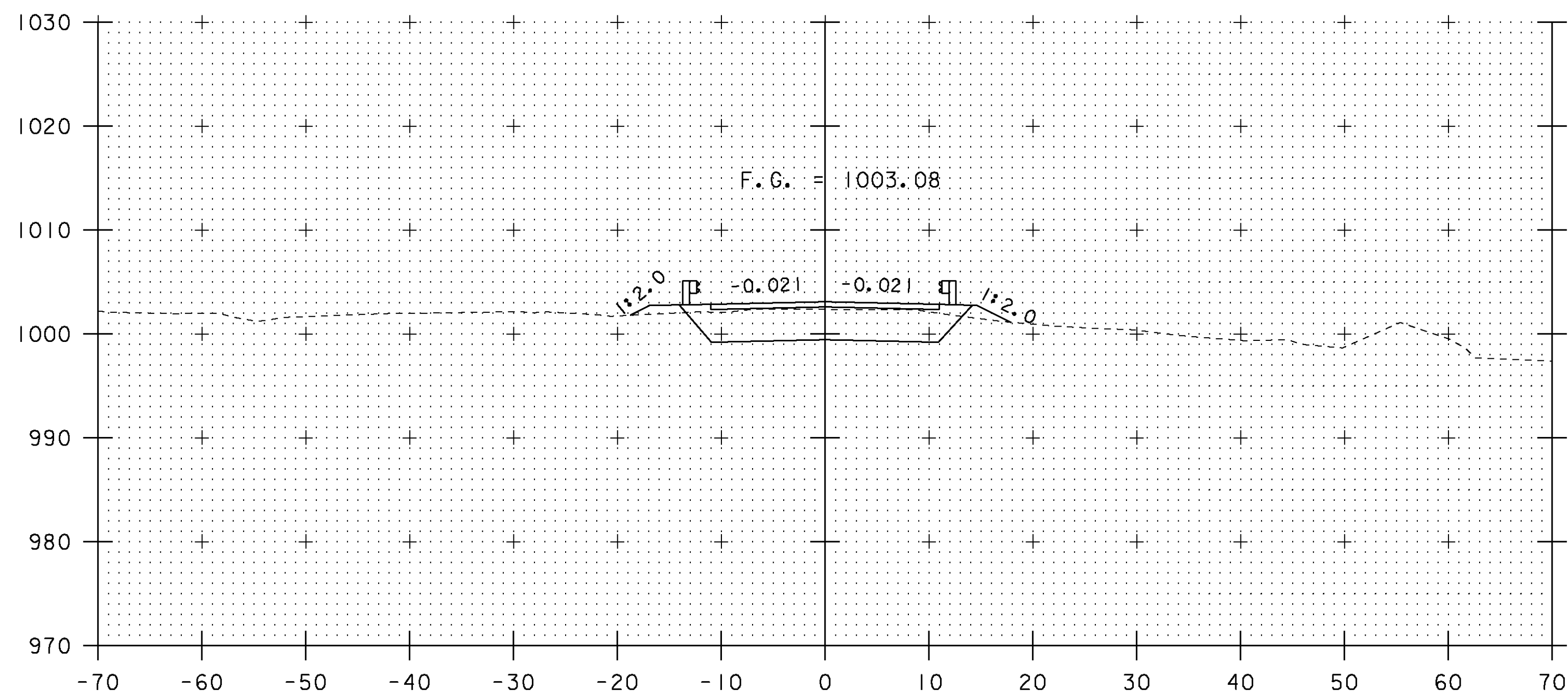


BEGIN PROJECT
11+50

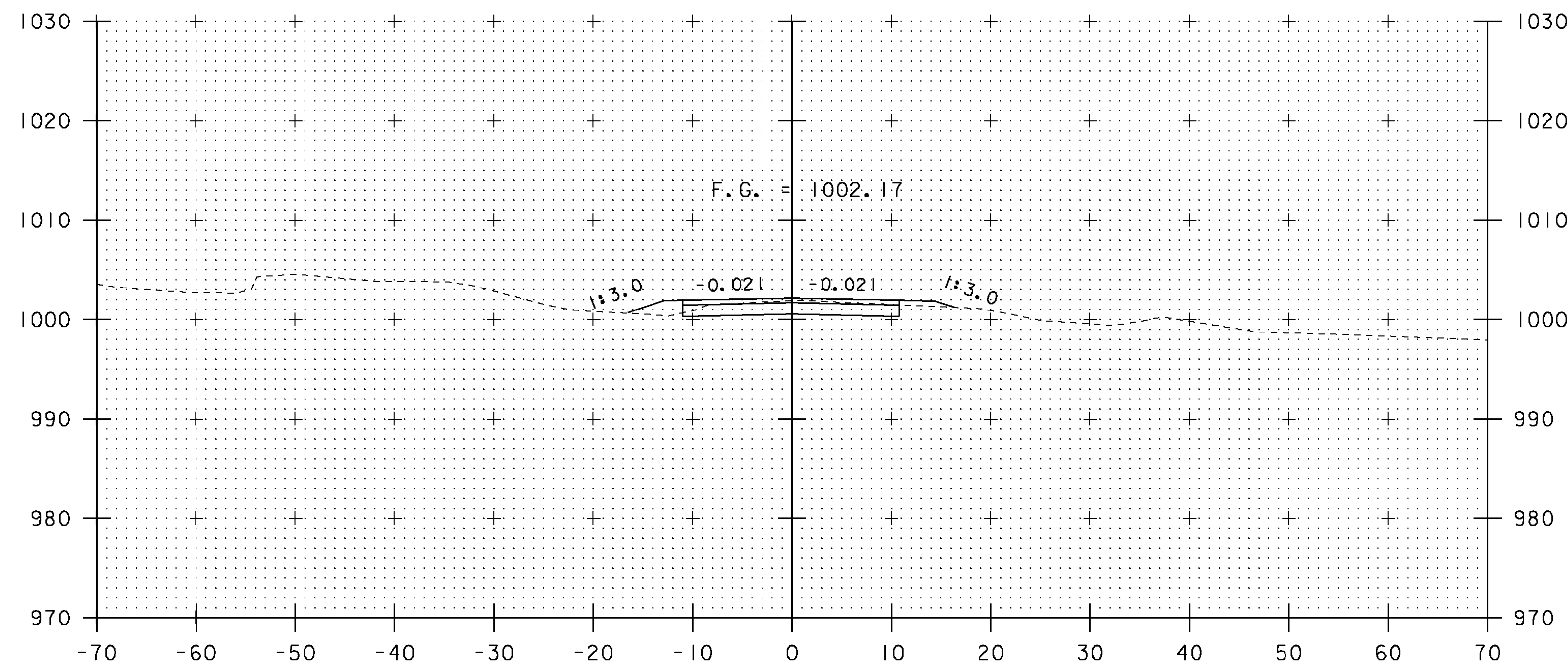


STA. 11+00 TO STA. 11+75

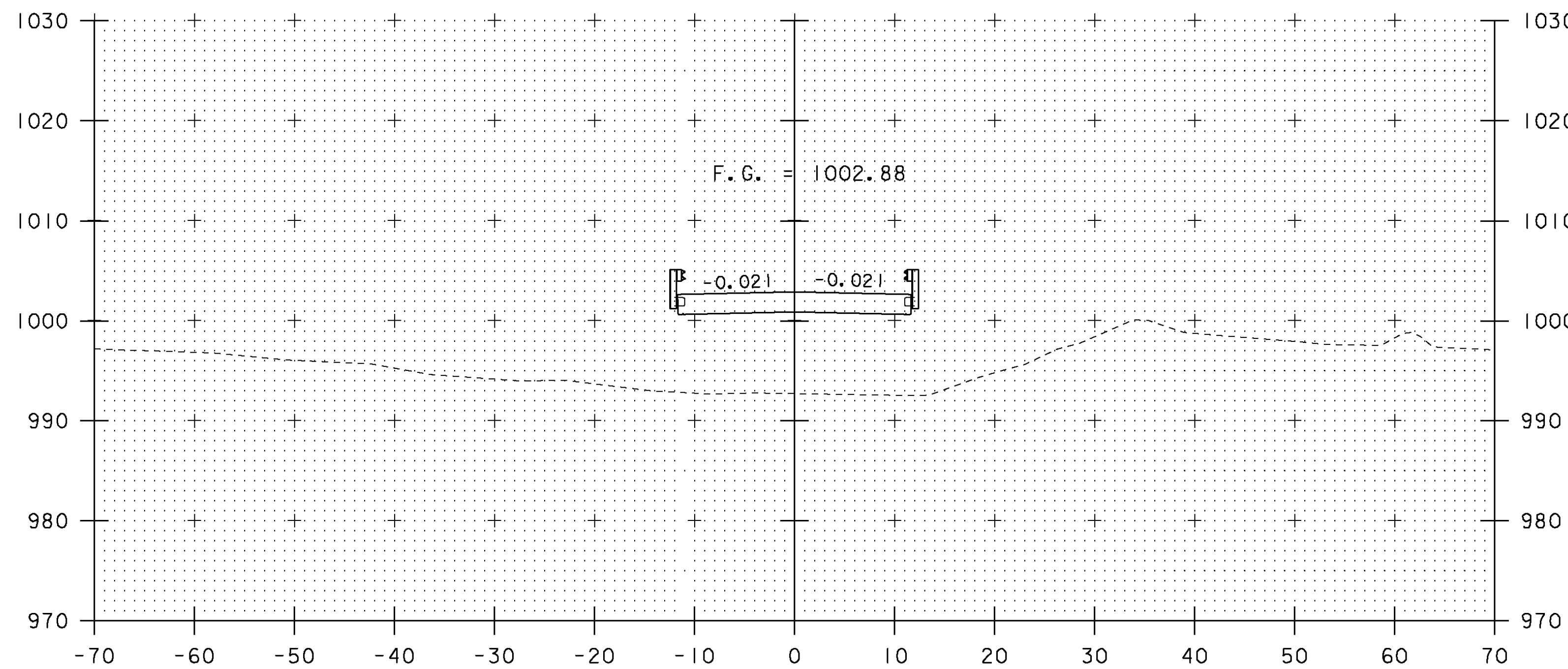
PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443 (43)	DRAWN BY: G. LAROCHE
FILE NAME: s01j272xs.dgn	CHECKED BY: J. SALVATORI
PROJECT LEADER: K. HIGGINS	SHEET 28 OF 32
DESIGNED BY: G. LAROCHE	
MAINLINE SECTIONS #2	



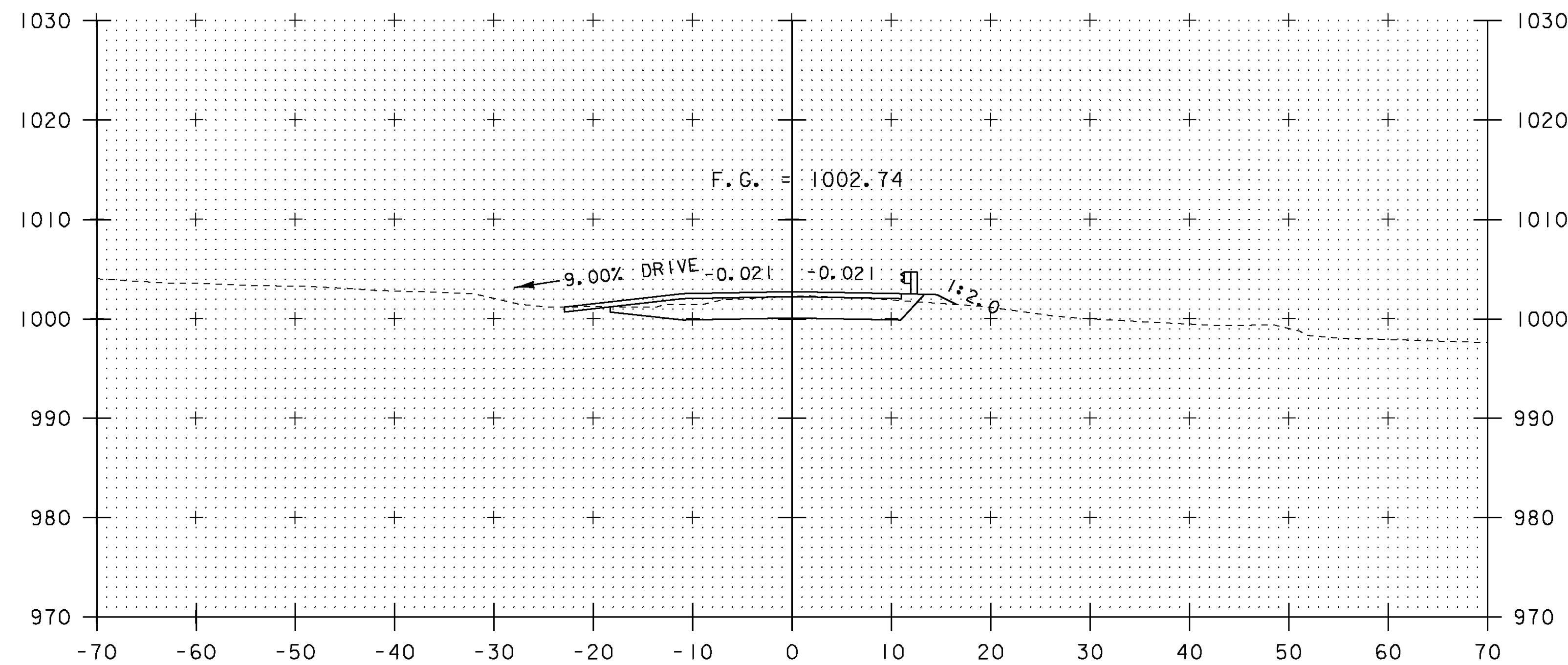
12+25
END BRIDGE STA 12+16.00



12+75



12+00
BEGIN BRIDGE STA 11+77.00



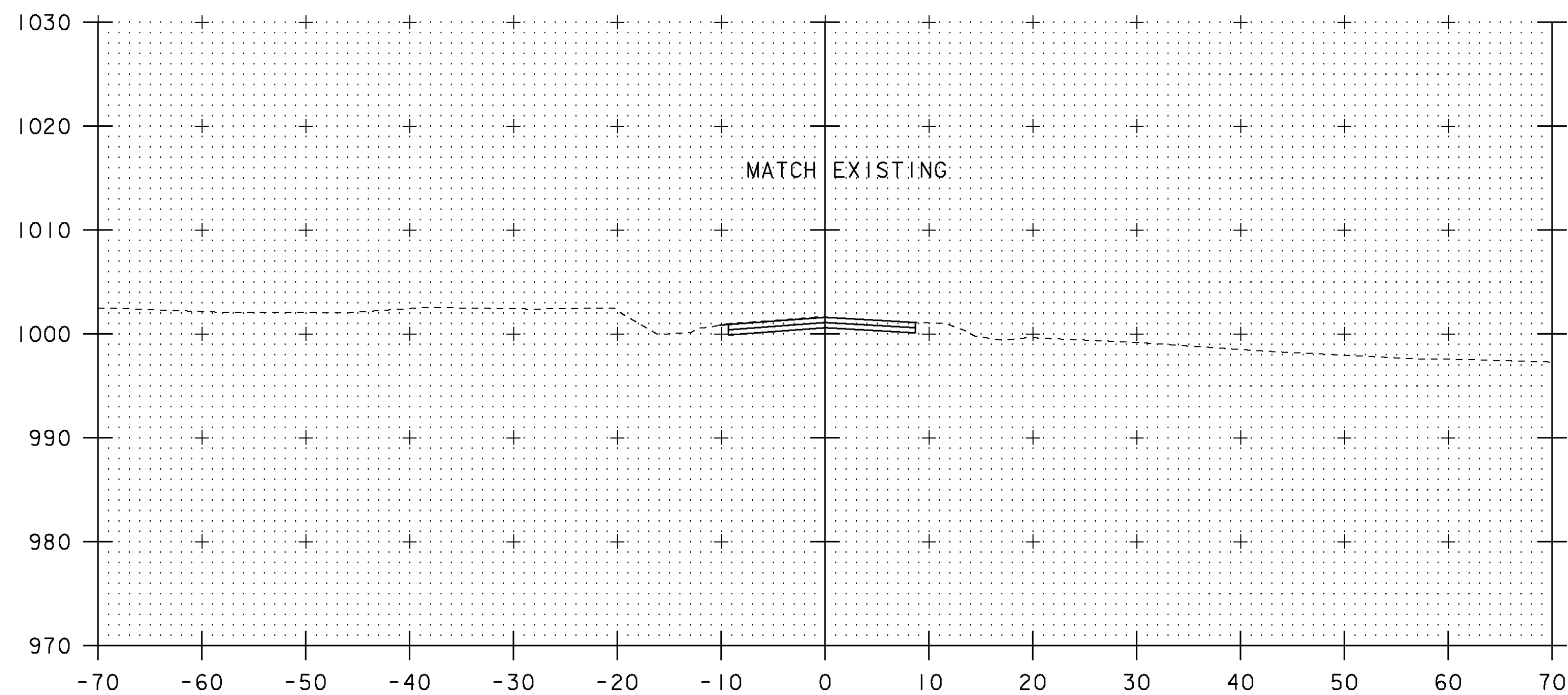
END PROJECT
12+50

SCALE 1" = 10'-0"
10 0 10
STA. 12+00 TO STA. 12+75

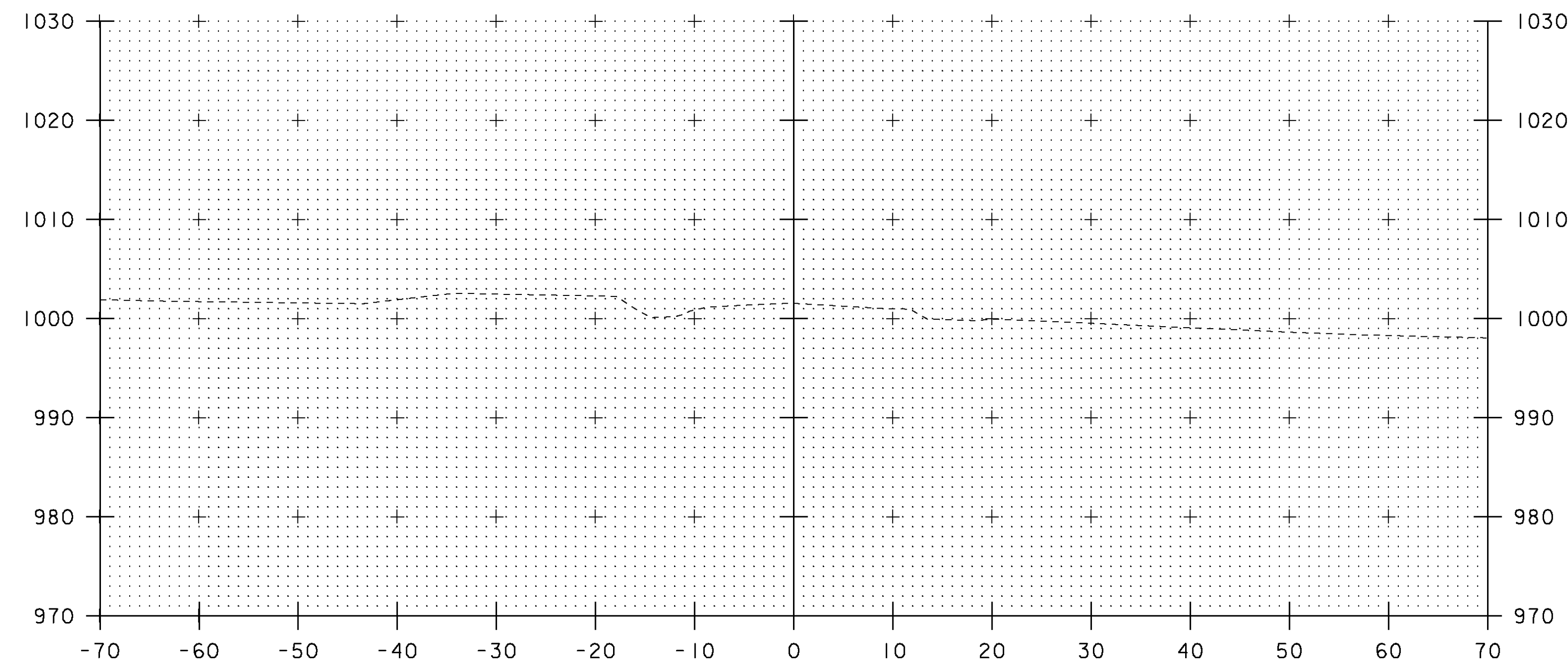
PROJECT NAME: MENDON
PROJECT NUMBER: BRO 1443 (43)

FILE NAME: s01j272xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
MAINLINE SECTIONS #3

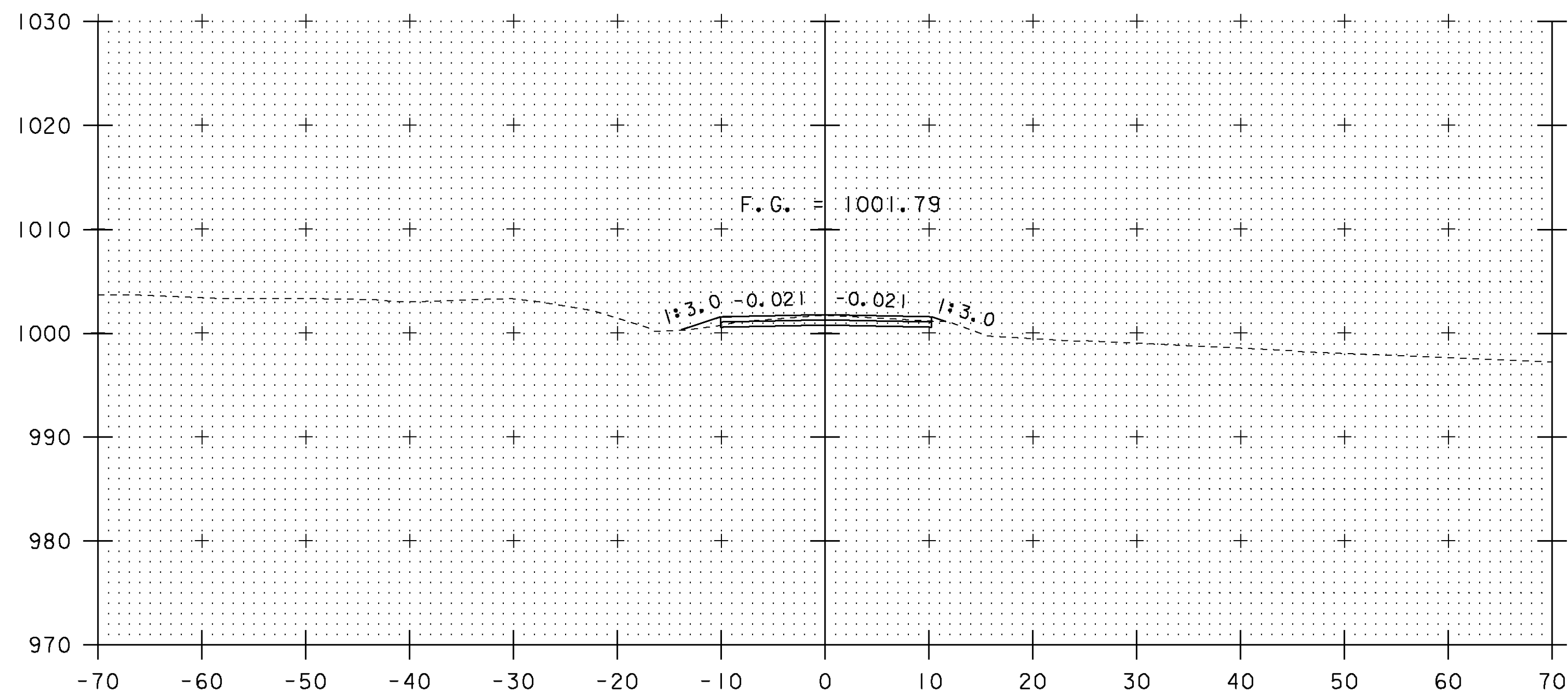
PLOT DATE: 07-SEP-2010
DRAWN BY: G. LAROCHE
CHECKED BY: J. SALVATORI
SHEET 29 OF 32



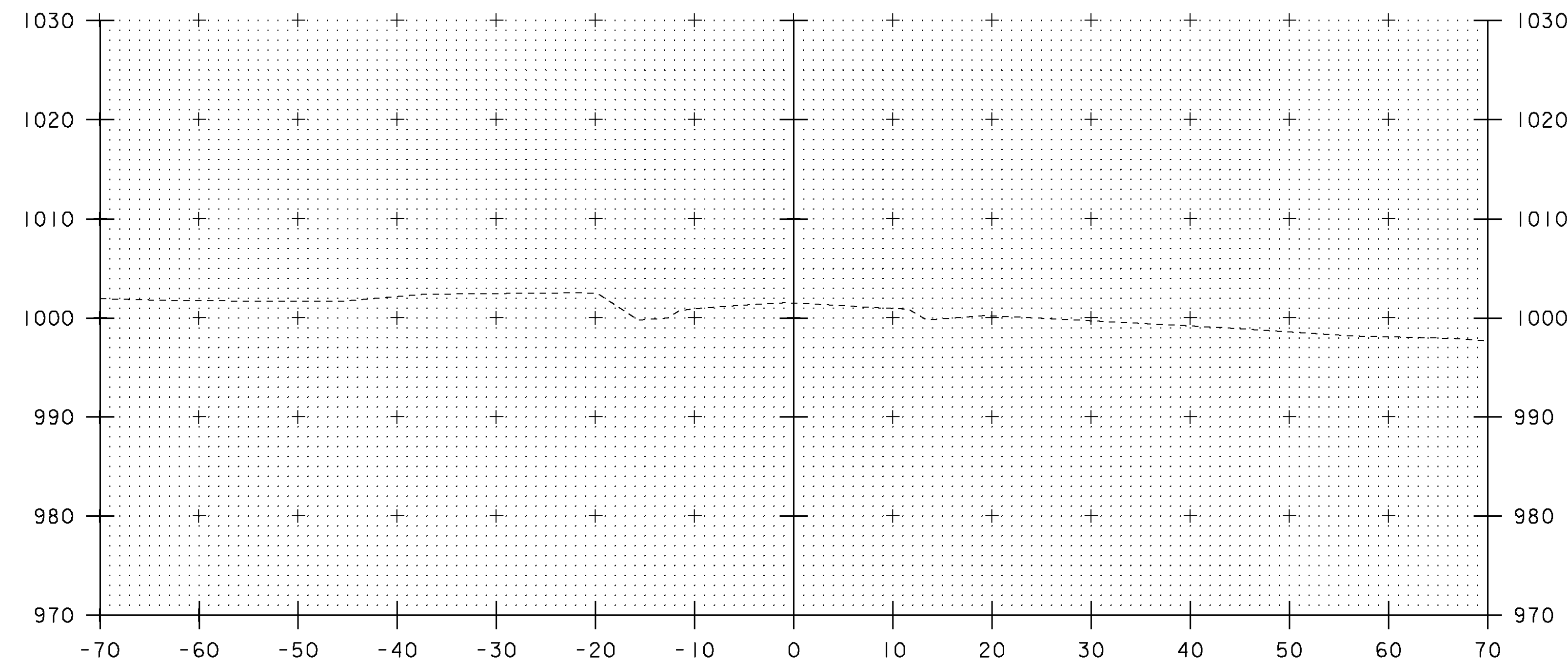
END APPROACH
13+25



13+75



13+00

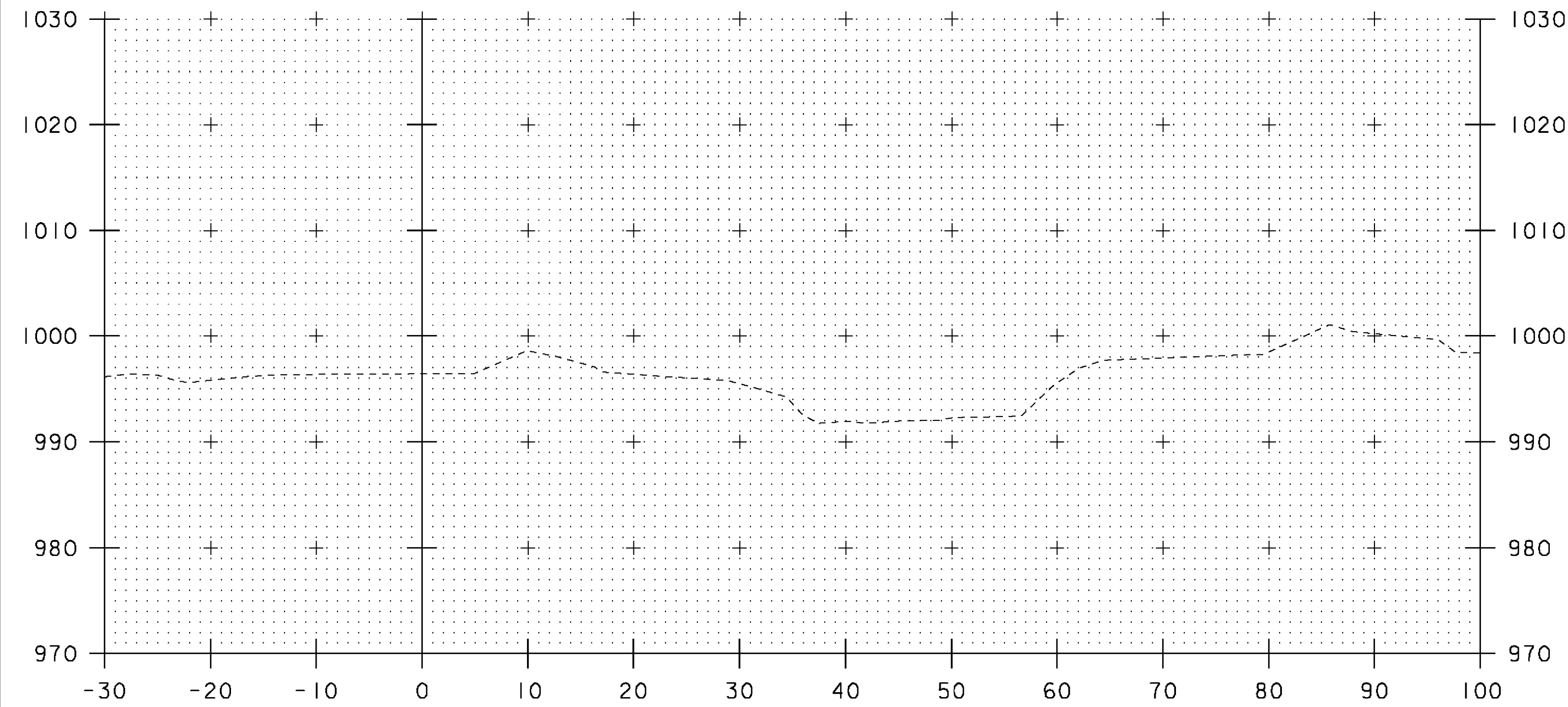


13+50

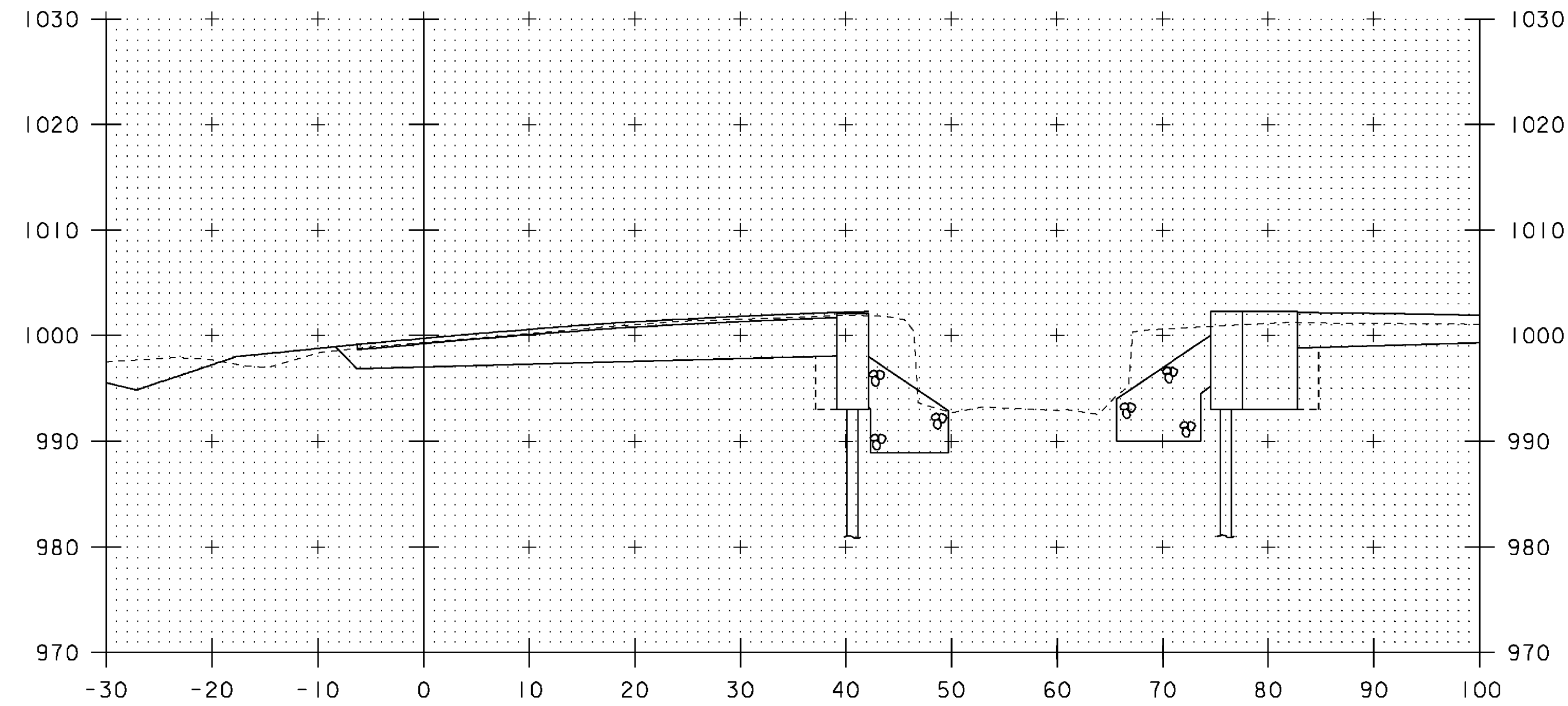
SCALE 1" = 10'-0"
10 0 10
STA. 13+00 TO STA. 13+75

PROJECT NAME: MENDON	PLOT DATE: 07-SEP-2010
PROJECT NUMBER: BRO 1443 (43)	DRAWN BY: G. LAROCHE
FILE NAME: s01j272xs.dgn	CHECKED BY: J. SALVATORI
PROJECT LEADER: K. HIGGINS	SHEET 30 OF 32
DESIGNED BY: G. LAROCHE	
MAINLINE SECTIONS #4	

EXISTING GROUND NO LONGER VALID SINCE IRENE 8-28-11.
 NEW SURVEY REQUIRED FOR CHANNEL SECTIONS
 (TYP ALL SHEETS 31 & 32).

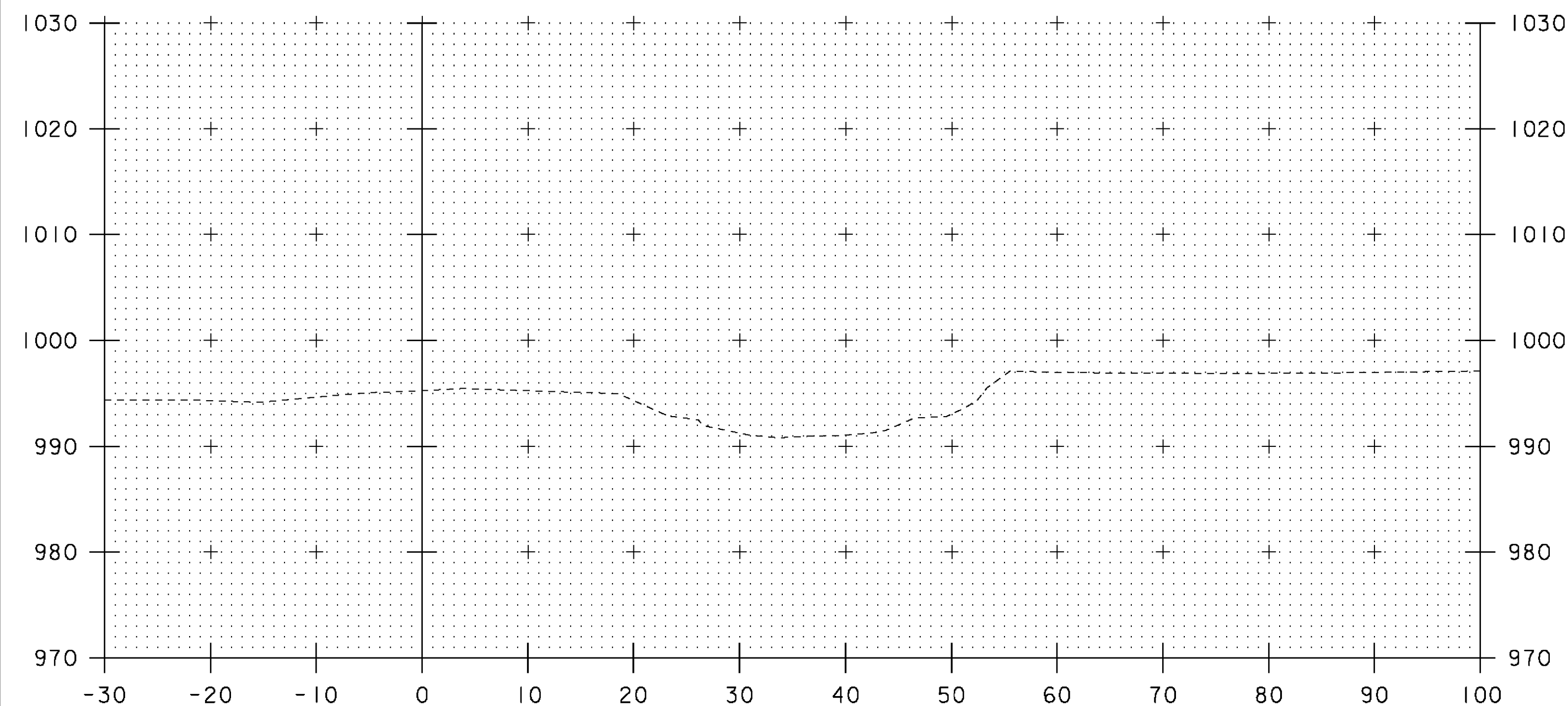


51+25

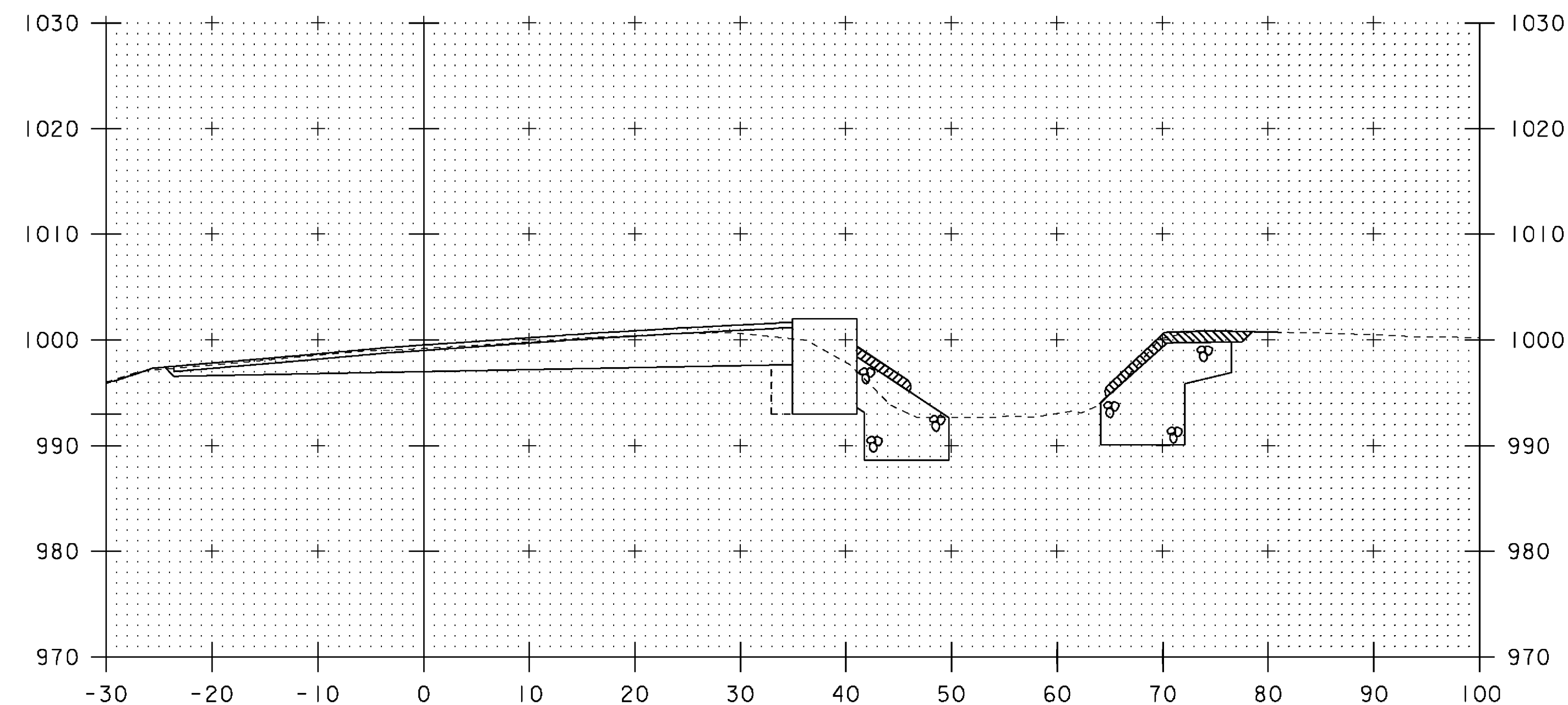


RT. (ABUT #2)
 END GRUBBING MATERIAL 51+62 RT.

51+60



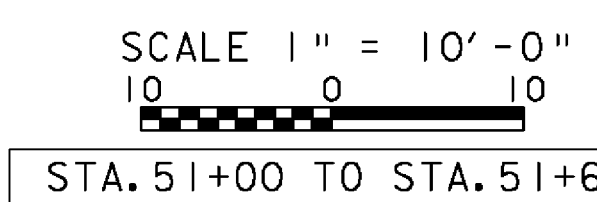
51+00



STA 51+41 RT. (ABUT #1)
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION
 BEGIN STONE FILL, TYPE IV
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN GRUBBING MATERIAL
 END GRUBBING MATERIAL 51+56 RT.

STA 51+48 RT. (ABUT #2)
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION
 BEGIN STONE FILL, TYPE IV
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN GRUBBING MATERIAL

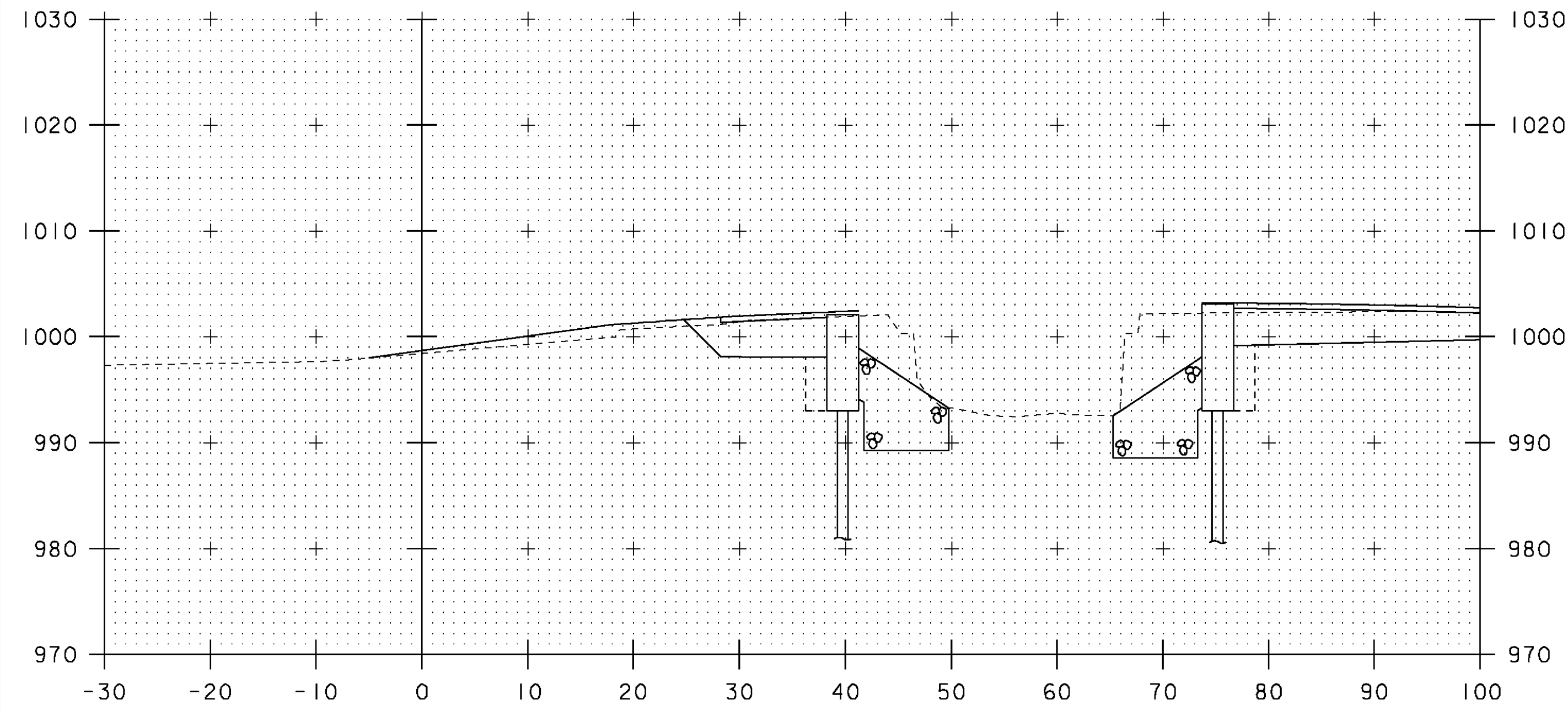
51+50



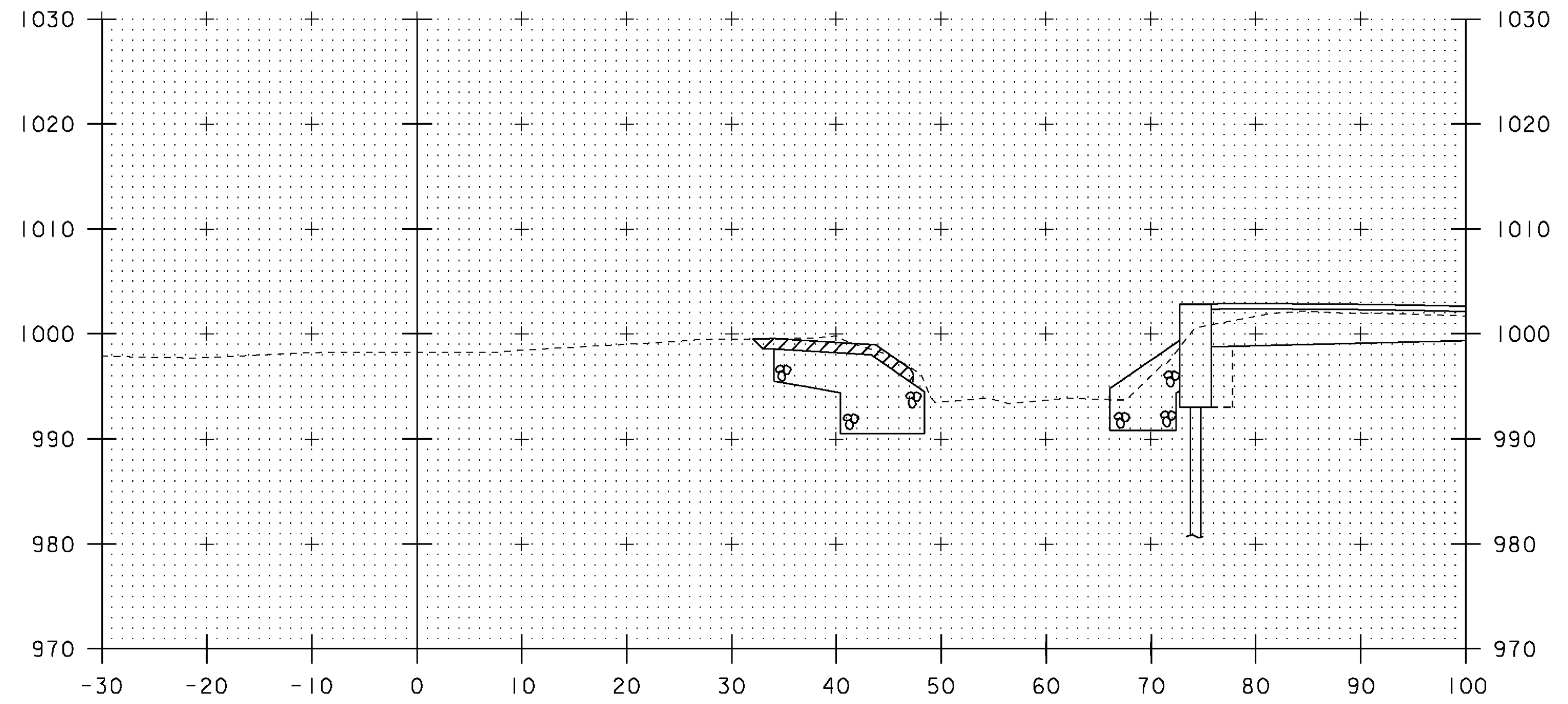
STA. 51+00 TO STA. 51+60

PROJECT NAME:	MENDON	PLOT DATE:	07-SEP-2010
PROJECT NUMBER:	BRO 1443 (43)	DRAWN BY:	G. LAROCHE
FILE NAME:	s01j272xs.dgn	CHECKED BY:	J. SALVATORI
PROJECT LEADER:	K. HIGGINS	SHEET	31 OF 32
DESIGNED BY:	G. LAROCHE		
CHANNEL SECTIONS #1			

EXISTING GROUND NO LONGER VALID SINCE IRENE 8-28-II.
 NEW SURVEY REQUIRED FOR CHANNEL SECTIONS
 (TYP ALL SHEETS 31 & 32).



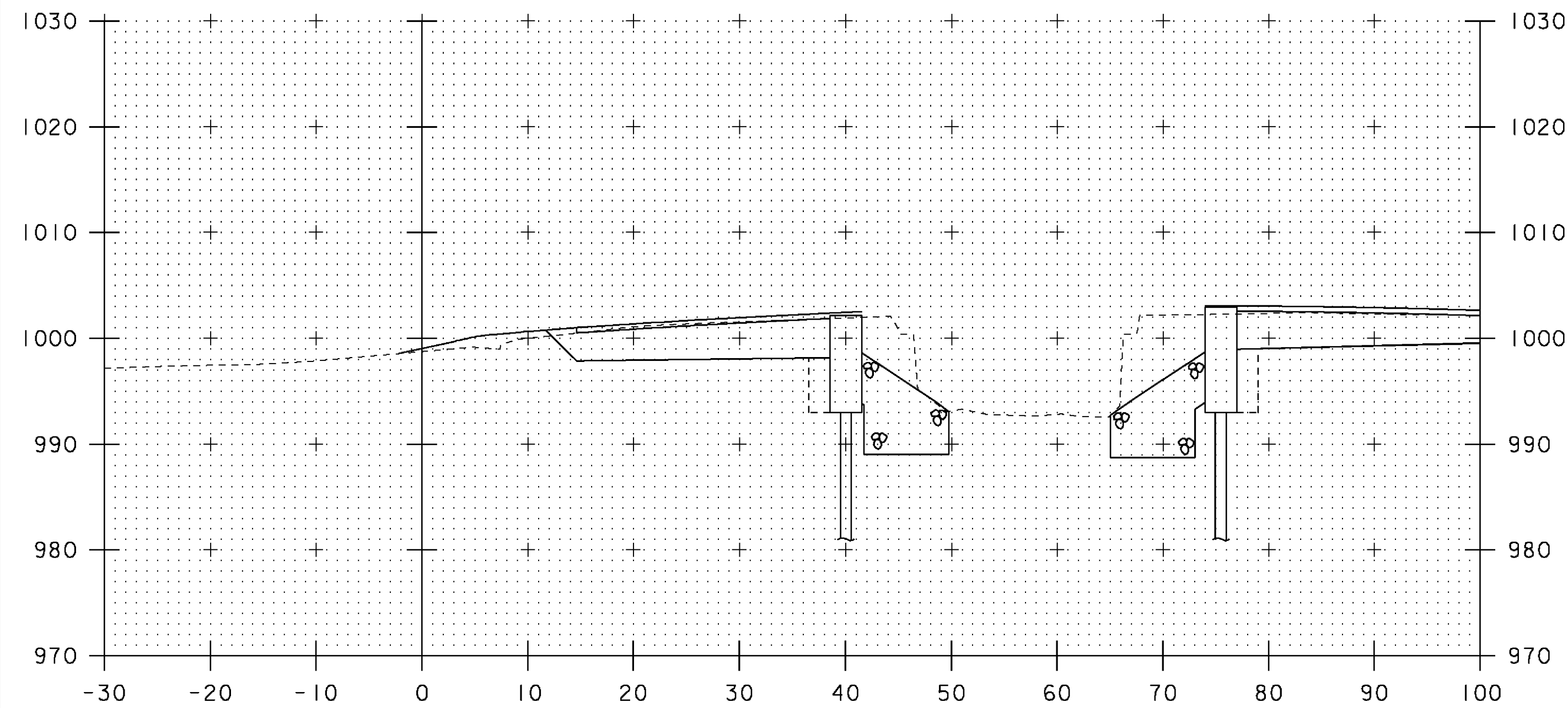
51+75



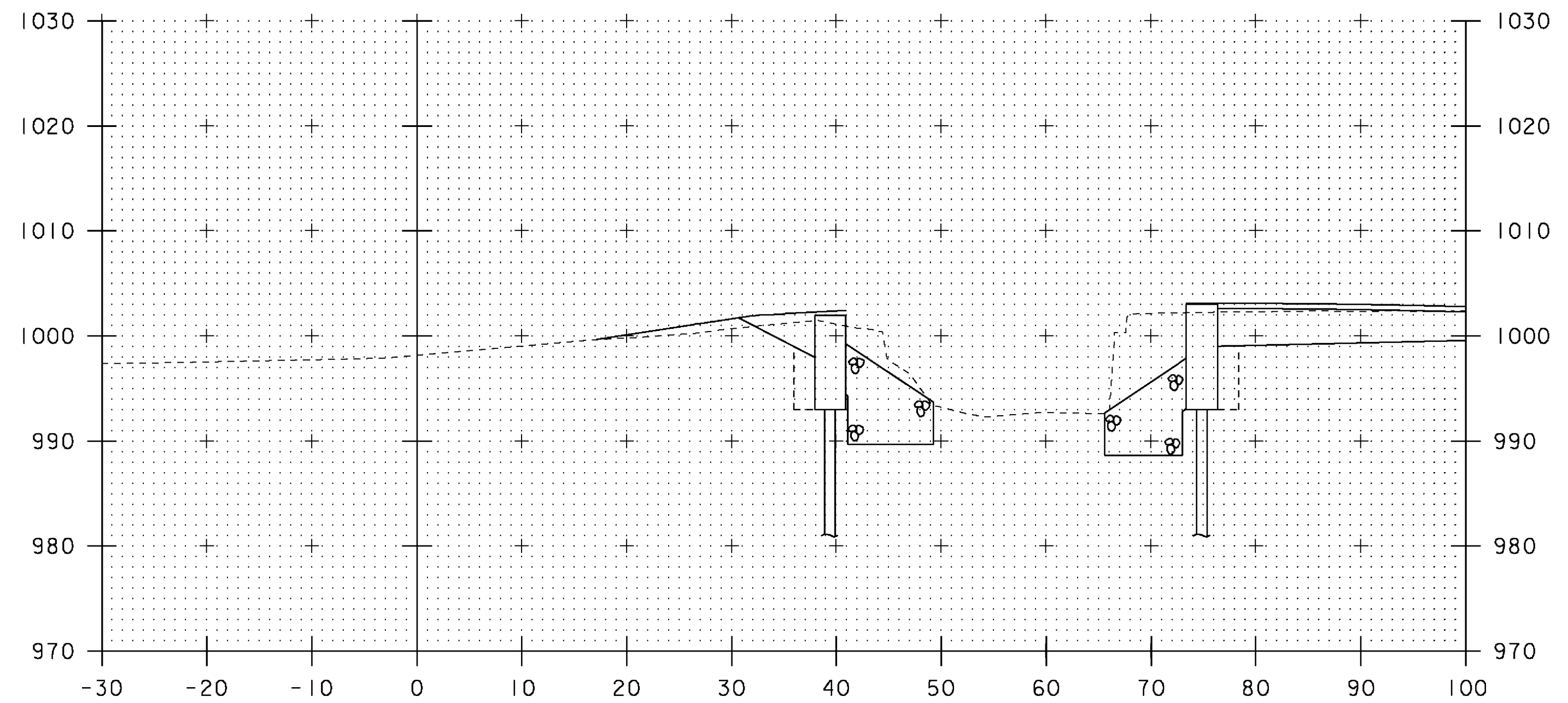
51+90

STA 51+94 RT. (ABUT #1)
 END UNCLASSIFIED CHANNEL EXCAVATION
 END STONE FILL, TYPE IV
 END GEOTEXTILE UNDER STONE FILL
 END GRUBBING MATERIAL

STA 51+99 RT. (ABUT #2)
 END UNCLASSIFIED CHANNEL EXCAVATION
 END STONE FILL, TYPE IV
 END GEOTEXTILE UNDER STONE FILL
 END GRUBBING MATERIAL



51+70



51+80

RT. (ABUT #1)
 BEGIN GRUBBING MATERIAL 51+82 RT.

RT. (ABUT #2)
 BEGIN GRUBBING MATERIAL 51+87 RT.

SCALE 1" = 10' - 0"



STA. 51+70 TO STA. 51+90

PROJECT NAME: MENDON
 PROJECT NUMBER: BRO 1443 (43)

FILE NAME: s01j272xs.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: G. LAROCHE
 CHANNEL SECTIONS #2

PLOT DATE: 07-SEP-2010
 DRAWN BY: G. LAROCHE
 CHECKED BY: J. SALVATORI
 SHEET 32 OF 32