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STATE OF VERMONT AGENCY OF TRANSPORTATION



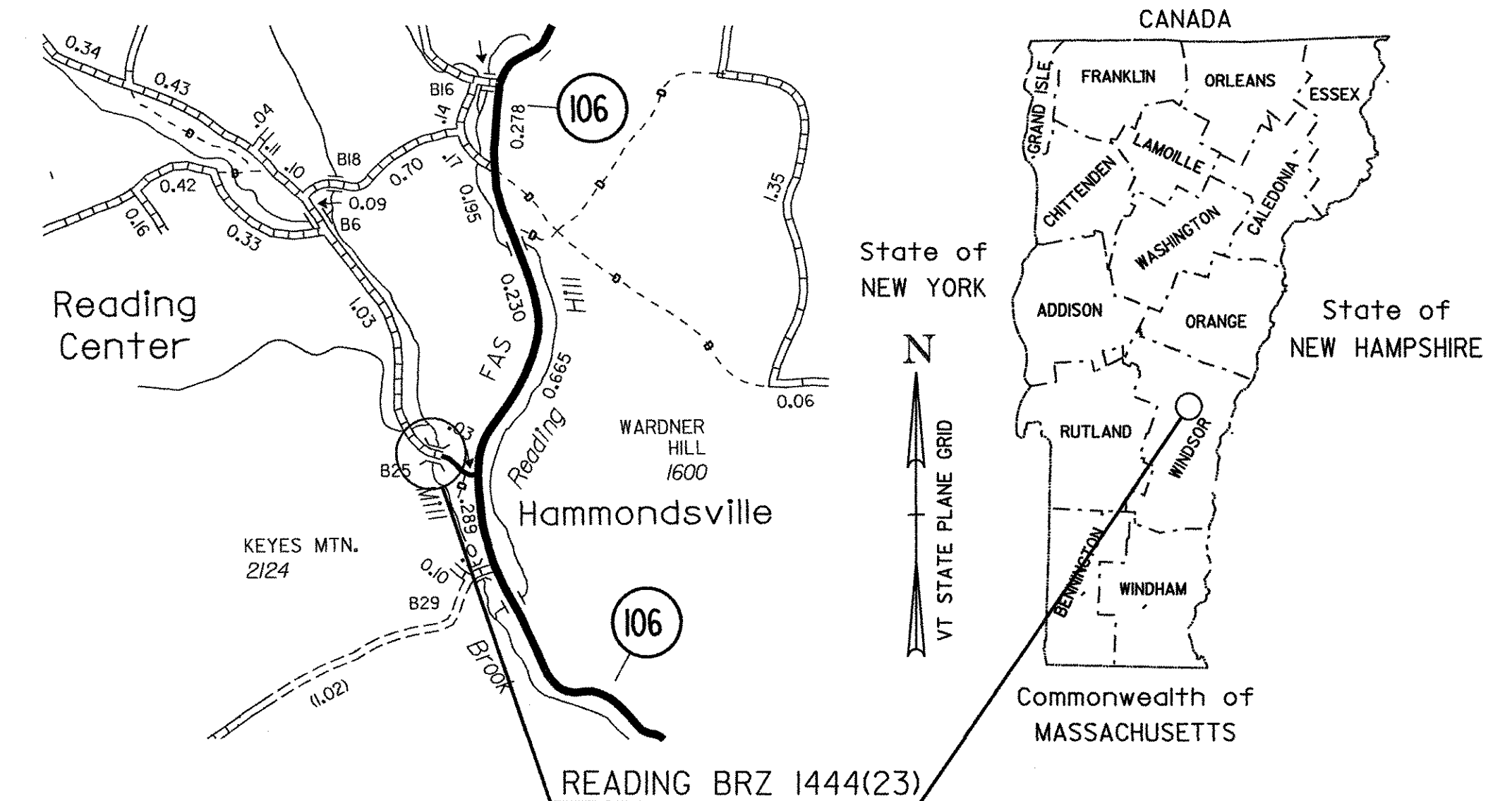
PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF READING COUNTY OF WINDSOR

ROUTE NO : TH 8, CL.3 BRIDGE NO : B25

PROJECT LOCATION : BEGINNING AT A POINT ON TH 8 APPROXIMATELY 0.11 MILE FROM THE INTERSECTION OF TH 8 AND VT 106 AND PROCEEDING NORTHWESTERLY ALONG TH 8 0.08 MILES.

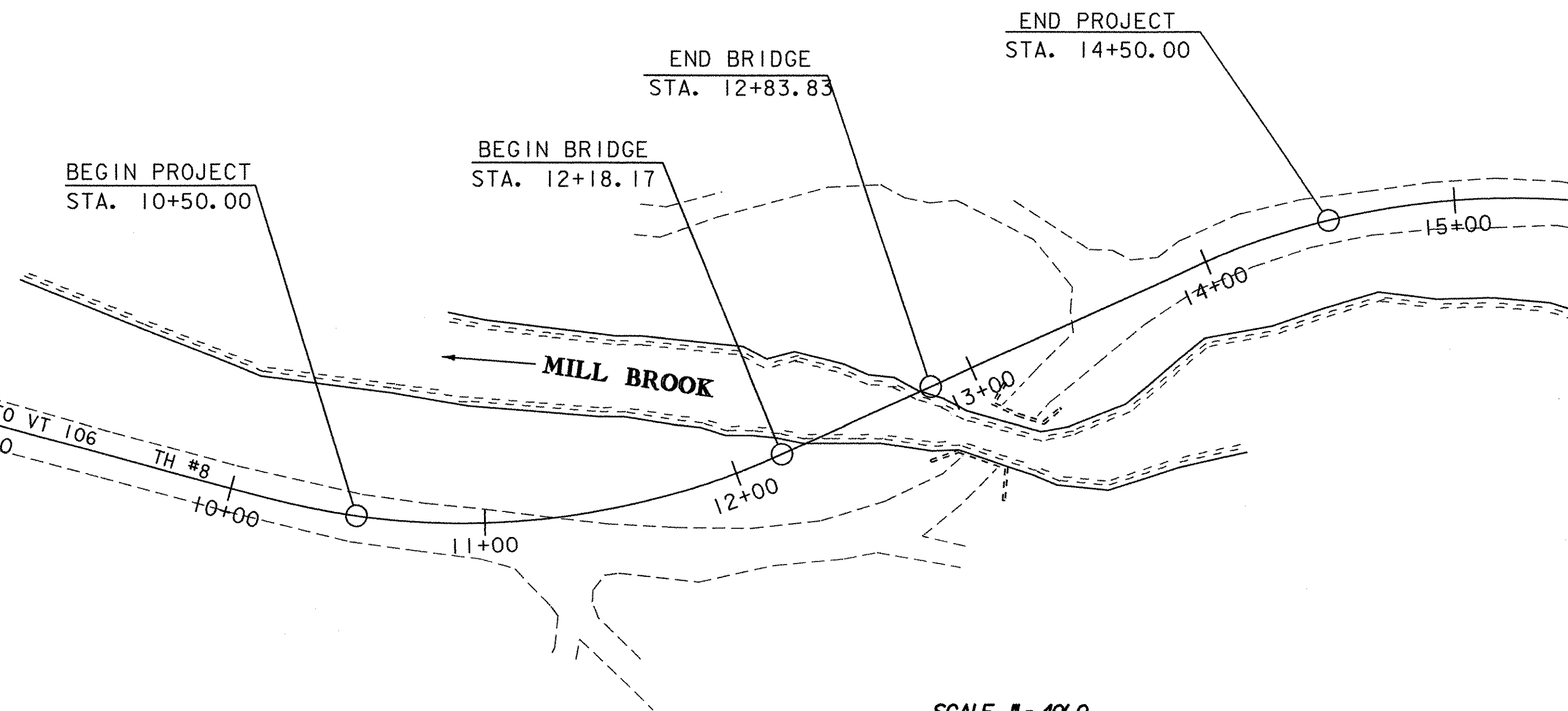
PROJECT DESCRIPTION : THE PROJECT SHALL CONSIST OF THE CONSTRUCTION OF A NEW STRUCTURE ALONG WITH RELATED ROADWAY APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE : 65.66 FEET.
LENGTH OF PARTICIPATION ROADWAY : 334.34 FEET.
LENGTH OF PROJECT : 400.00 FEET.



LIST OF STANDARDS

B-5	6/1/94
B-71	7/8/05
E-100	1/2/04
E-101	5/30/03
E-102	6/30/03
E-102a	5/1/04
E-107	6/30/03
E-107a	8/8/95
E-121	8/8/95
E-142	9/20/95
E-151	5/1/04
E-160	5/20/99
F-1	6/1/94
G-1	1/3/00
G-1d	1/3/00
SB-R6-82	1/6/95



SCALE 1" = 40'-0"

CONVENTIONAL SYMBOLS

COUNTY LINE	— — — — —
TOWN LINE	— — — — —
LIMITS OF ACCESS	— — — — —
POINT OF ACCESS	X
FENCE LINE	— 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	— SR — SR — SR —
SLOPE RIGHTS	— ○ — △ — ○ — △ —
TOP OF CUT	— △ — △ — △ —
TOE OF SLOPE	— ○ — ○ — ○ —

SURVEYED BY : R. GILMAN
SURVEYED DATE : 3/92

DATUM
VERTICAL USGS 1928
HORIZONTAL ASSUMED

RECORD PLANS

CONTRACTOR: MILLER CONSTRUCTION, WINDSOR VT.

RESIDENT ENGINEER: JEREMY REED

CONSTRUCTION BEGAN: MAY 7, 2008

CONSTRUCTION COMPLETE: NOVEMBER 11, 2008

RECORD PLANS BY: JEREMY REED

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY *Jeremy Reed* RESIDENT ENGINEER
DATE March 31, 2009

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.

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

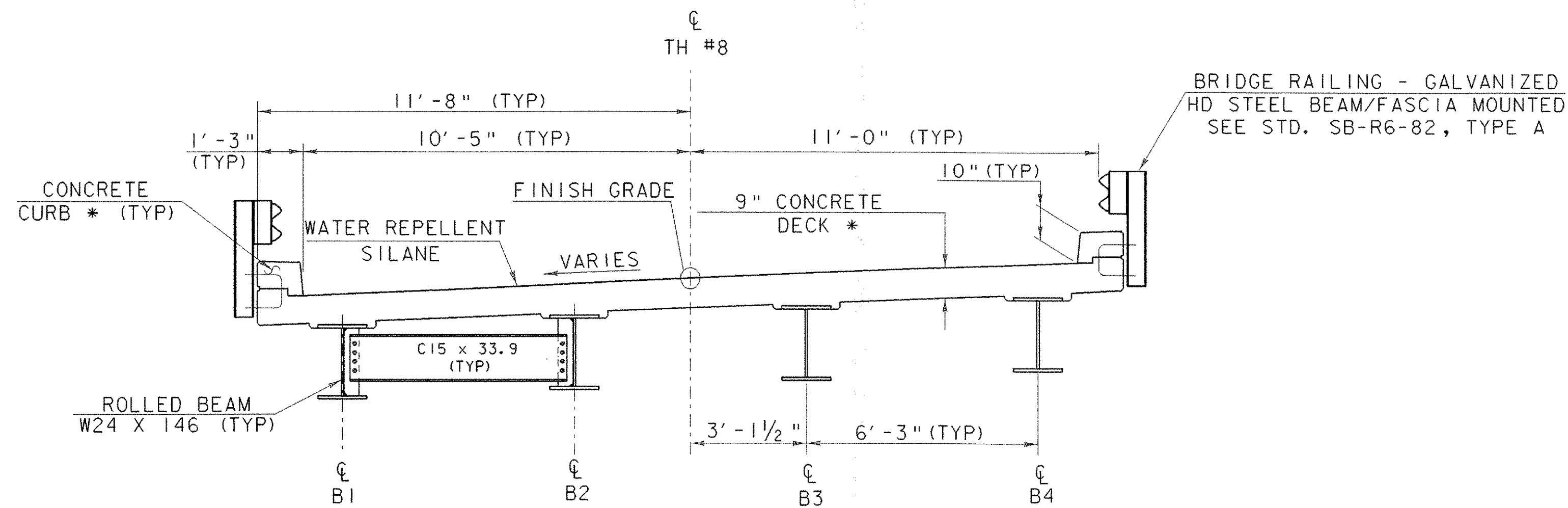
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED: *Ruth Felton* DATE 1/29/08

PROJECT MANAGER : C.P. WILLIAMS

PROJECT NAME : READING
PROJECT NUMBER : BRZ 1444 (23)

PLOTTED 29-JAN-2008 SHEET 1 OF 49 SHEETS

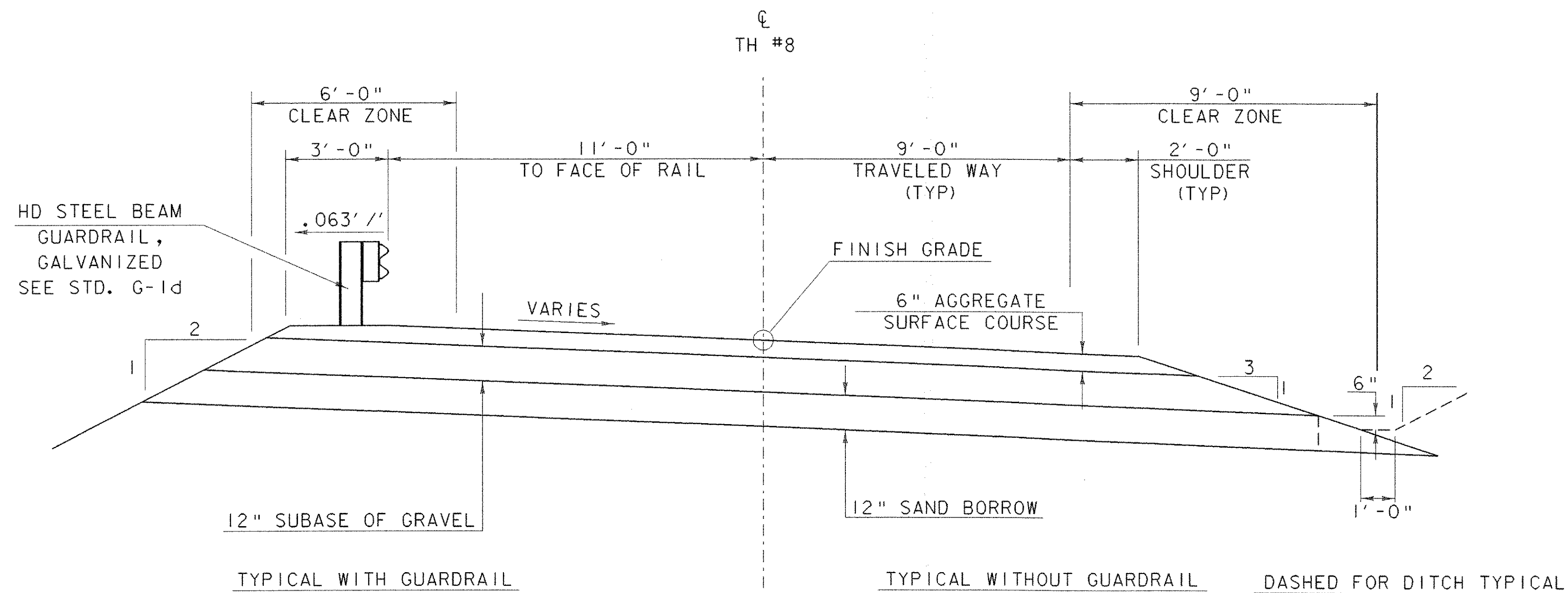


* ITEM 900.608 SPECIAL PROVISION
(HIGH PERFORMANCE CONCRETE,
CLASS A LOW CEMENT)

TYPICAL BRIDGE SECTION

SCALE 3/8" = 1'-0"

MATERIAL ITEM	TOLERANCE
AGG. SURF. COURSE	+/- 1"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"



TYPICAL ROADWAY SECTION

SCALE 3/8" = 1'-0"

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA: 9.5 sq. mi. (24.6 sq. km)
 CHARACTER OF TERRAIN: Hilly to mountainous
 CHARACTER & TYPE OF STREAM: Perennial, straight, narrow flood plain,
not braided or anabranching
 NATURE OF STREAMBED: Gravel and cobbles, with some ledge upstream

DATE OF FLOOD OF RECORD: Unknown
 WATER SURFACE ELEV.: Unknown ESTIMATED DISCHARGE: Unknown
 NATURAL STREAM VELOCITY @ 0.25 = 9.7 fps (3.0 mps)
 ICE CONDITIONS: Moderate DEBRIS: Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? Yes
 IS ORDINARY RISE RAPID? Yes
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE: _____

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

EXISTING STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge YEAR BUILT: 1940
 CLEAR SPAN (NORMAL TO STREAM): 20 ft. (6.1 m)
 VERTICAL CLEARANCE ABOVE STREAMBED: 8 ft (2.4 m)
 WATERWAY OF FULL OPENING: 146 sq. ft. (13.6 sq. m)
 DISPOSITION OF STRUCTURE: Remove

TYPE OF MATERIAL UNDER SUBSTRUCTURE: East abutment on ledge, west
abutment unknown
 WATER SURFACE ELEV. @ 02.33= 968.5 VELOCITY= 7.0 fps (2.1 mps)
 010= 971.1 " " 12.4 fps (3.8 mps)
 025= 975.1 " " 11.2 fps (3.4 mps)
 050= 975.4 " " 13.6 fps (4.1 mps)
 0100= 976.1 " " 13.9 fps (4.2 mps)

LONG TERM STREAM BED CHANGES: 1.5 ft. (0.5 m) of scour through bridge,
no signs of aggradation or degradation
 IS THE ROADWAY OVERTOPPED BELOW THE 0100? Yes FREQUENCY: 020
 RELIEF ELEVATION: 974.0 DISCHARGE OVER ROAD @ 0100: 480 cfs (13.6 cms)

UPSTREAM STRUCTURE: TOWN: Reading DISTANCE: 1.1 mi. (1.8 km)
 HIGHWAY NO.: I.H. 8 STRUCTURE NO.: 6
 STRUCTURE TYPE: Corrugated Galvanized Metal Plate Pipe Arch
 CLEAR SPAN: 19 ft. (5.8 m) CLEAR HEIGHT: 12 ft. (3.7 m)
 YEAR BUILT: 1941 FULL WATERWAY: 157 sq. ft. (14.6 sq. m)

DOWNSTREAM STRUCTURE: TOWN: Reading DISTANCE: 0.4 mi. (0.6 km)
 HIGHWAY NO.: I.H. 51 STRUCTURE NO.: 29
 STRUCTURE TYPE: Corrugated Galvanized Metal Plate Arch
 CLEAR SPAN: 25 ft. (7.6 m) CLEAR HEIGHT: 8.5 ft. (2.1 m)
 YEAR BUILT: 1963 FULL WATERWAY: Unknown

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO: HS-25-44
- DESIGN SPAN: 60'-0"
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: N.A. ON LEDGE: 10 KSF
- ALLOWABLE LOAD FOR PILING: N.A. TYPE: N.A. ESTIMATED LENGTH: N.A.
- STRUCTURAL STEEL AASHTO GRADE: M 270/M 270 GRADE 50W
- REINFORCING STEEL GRADE: 60
- CONCRETE HIGH PERFORMANCE CLASS A: f' = 4000 PSI
 CONCRETE HIGH PERFORMANCE CLASS B: f' = 3500 PSI

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE: N.A. OR ON TEMPORARY BRIDGE: N.A.
- TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY: N.A. TRAFFIC CONTROL SIGNALS REQUIRED: N.A.
 MINIMUM CLEAR SPAN (NORMAL TO STREAM): N.A. VERTICAL CLEARANCE ABOVE STREAMBED: N.A.
 WATERWAY OF FULL OPENING: N.A.
 ARE SIDEWALKS REQUIRED? N.A. IF SO, ON WHAT SIDE? _____
 STRUCTURE TYPE: N.A.

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A=2.17 B=1.00	49	60					
POSTED A=1.55 B=1.40	68	85	110		75	77	97
OPERATING A=1.30 B=1.67		101	131	153	90	92	

STRENGTH RF = $\frac{0.9 M_N - 1.3 M_{DL}}{A \times M_{LL+1}}$ SERVICEABILITY RF = B $\left[\frac{.95 F_y S_{LL+1} - M_{DL} S_{DL} - M_{SD} S_{SD}}{1.67 M_{LL+1}} \right]$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
1998	230	30	60	6	15
2018	310	40	60	7	25

18 kip ESAL for flexible pavement from 1998 to 2018: 148,000
 18 kip ESAL for flexible pavement from N.A. to N.A.: N.A.
 Design speed: 30 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge with concrete deck
 CLEAR SPAN (NORMAL TO STREAM): 31 ft. (9.5 m) effective clear span
 VERTICAL CLEARANCE ABOVE STREAMBED: 9.5 ft. (2.9 m)
 WATERWAY OF FULL OPENING: 254 sq. ft. (23.6 sq. m)
 WATER SURFACE ELEV. @ 02.33= 968.5 VELOCITY= 6.1 fps (1.9 mps)
 010= 970.3 " " 10.1 fps (3.1 mps)
 025= 971.6 " " 11.8 fps (3.6 mps)
 050= 972.4 " " 12.6 fps (3.8 mps)
 0100= 973.3 " " 13.3 fps (4.1 mps)

IS THE ROADWAY OVERTOPPED BELOW THE 0100? No FREQUENCY: N.A.
 RELIEF ELEVATION: 975.0 DISCHARGE OVER ROAD @ 0100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 973.0
 VERTICAL CLEARANCE @ 0.25 = 1.4 ft. (0.4 m)

SCOUR: 1 ft. (0.3 m) of contraction scour at 0100 and 0500
 REQUIRED CHANNEL PROTECTION: Stone fill, type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 20 cfs (0.6 cms)
 ORDINARY LOW WATER: 9 cfs (0.3 cms) DEPTH: 1 ft. (0.3 m)
 ORDINARY HIGH WATER: 260 cfs (7.4 cms) DEPTH: 3 ft. (0.9 m)

ADDITIONAL COMMENTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of: READING Bridge No.: B25
 Highway No.: TH 8 Log Sta.:
 Surv. Sta.:

TH 8 OVER MILL BROOK

PRELIMINARY INFORMATION

Designed By: W. B. SYMONDS Drawn By: W. B. SYMONDS
 Checked By: Date Bridge Design Supervisor
P. M. THURBER 9/96 C. P. WILLIAMS Date: 1/98

PROJECT: READING PROJECT NO.: BRZ 1444 (23)

L.G.C. Info. 90\058\structures\058p1.dgn s\058p1.i
 Bridge Sheet No. Sheet 2 of 49

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ABUT 1	ABUT 2	CHANNEL	SUPER-STRUCTURE		ROADWAY	BRIDGE	EROSION CONTROL	FULL E & C 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				
					740					740		CY	COMMON EXCAVATION	203.15				
		1090				1090				1090		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
					380					380		CY	SAND BORROW	203.31				
					260					260		CY	GRANULAR BORROW	203.32				
					70		10			80		CY	TRENCH EXCAVATION OF EARTH	204.20				
130	130					260				260		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
200	200					400				400		CY	COFFERDAM EXCAVATION, EARTH	208.30				
20	20					40				40		CY	COFFERDAM EXCAVATION, ROCK	208.35				
1						1				1		LS	COFFERDAM (STA 12+21.00)	208.40				
	1					1				1		LS	COFFERDAM (STA 12+81.00)	208.40				
					670					670		CY	SUBBASE OF GRAVEL	301.15				
					280					280		CY	AGGREGATE SURFACE COURSE	401.10				
					5					5		TON	MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.27				
175	175					350				350		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
			39240			39240				39240		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
7965	16365					24330				24330		LB	REINFORCING STEEL	507.15				
78	78					156				156		LF	DRILLING AND GROUTING DOWELS	507.16				
			12500			12500				12500		LB	EPOXY COATED REINFORCING STEEL	507.17				
			1			1				1		LS	SHEAR CONNECTORS (832 - 7/8" X 7")	508.15				
			28			28				28		GAL	WATER REPELLENT, SILANE	514.10				
			138			138				138		LF	BRIDGE RAILING, GALVANIZED HD STEEL BEAM/FASCIA MOUNTED	525.41				
			1			1				1		EACH	REMOVAL OF STRUCTURE (410 SF - EST.)	529.15				
			8			8				8		EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10				
			20			20				20		CY	CONCRETE, CLASS C	541.30				
													BEGIN OPTION AA					
					110					110		LF	18" CSP .084 (2-2/3 X 1/2)	601.0015				
					110					110		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215				
					110					110		LF	18" CPEP	601.0915				
													END OPTION AA					
													BEGIN OPTION BB					
					2					2		EACH	18" CSPES .064 (2-2/3 X 1/2)	601.6015				
					2					2		EACH	18" CAAPES .060 (2-2/3 X 1/2)	601.6215				
					2					2		EACH	18" CPEPES	601.7015				
													END OPTION BB					
					10		10			20		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
					1					1		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15				
					20		10			30		CY	STONE FILL, TYPE I	613.10				
		1034				1034				1034		CY	STONE FILL, TYPE III	613.12				
					250					250		LF	WOVEN WIRE FENCE WITH WOOD POSTS	620.26				

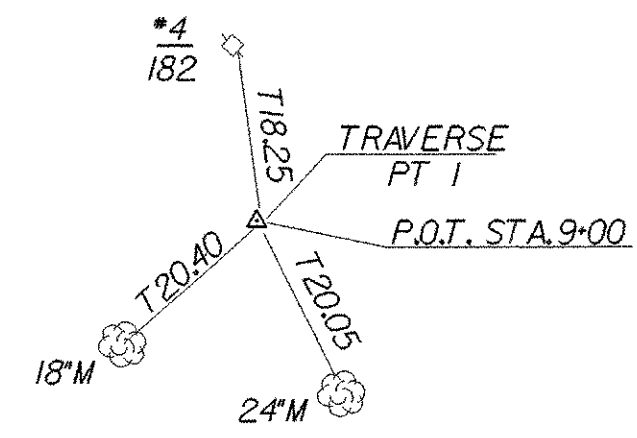
PROJECT NAME:	READING
PROJECT NUMBER:	BRZ 1444(23)
FILE NAME: M:\Projects\sj058\dtd.dgn	PLOT DATE: 02/08/2008
PROJECT MANAGER: C.P.WILLIAMS	DRAWN BY: M.FESSEL
DESIGNED BY: R.S.YOUNG	CHECKED BY: R.S.YOUNG
QUANTITY SHEET #1	SHEET 3 OF 49

QUANTITY SHEET 2

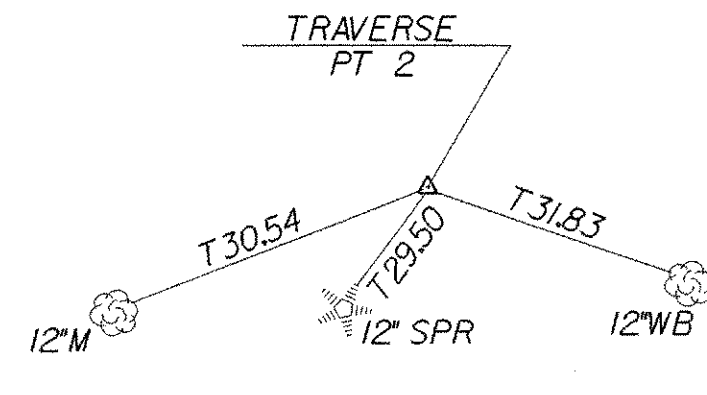
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ABUT 1	ABUT 2	CHANNEL	SUPER-STRUCTURE			ROADWAY	BRIDGE	EROSION CONTROL	FULL E & C ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1		EACH	DRIVE GATE FOR WOVEN WIRE FENCE	620.30				
						250				250		LF	REMOVAL OF EXISTING FENCE	620.55				
						423				423		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				
						4				4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
						40				40		LF	TEMPORARY TRAFFIC BARRIER	621.90				
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
						1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
						1				1		LS	TRAFFIC CONTROL	641.10				
								1250		1250		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								40		40		SY	GEOTEXTILE FOR SILT FENCE	649.51				
								190		190		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
								40		40		LB	SEED	651.15				
								20		20		LB	SEED, WINTER RYE	651.17				
								500		500		LB	FERTILIZER	651.18				
								1		1		TON	AGRICULTURAL LIMESTONE	651.20				
								1		1		TON	HAYMULCH	651.25				
								20		20		CY	TOPSOIL	651.35				
								750		750		SY	GRUBBING MATERIAL	651.40				
								1		1		LS	EPSC PLAN	652.10				
								40		40		HR	MONITORING EPSC PLAN	652.20				
								1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
								122		122		SY	TEMPORARY EROSION MATTING	653.20				
								30		30		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
								16		16		CY	VEHICLE TRACKING PAD	653.35				
								3		3		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
								1		1		EACH	FILTER BAG	653.45				
								750		750		LF	PROJECT DEMARCATION FENCE	653.55				
						12.5				12.5		SF	TRAFFIC SIGNS, TYPE A	675.20				
						42				42		LF	FLANGED CHANNEL SIGN POST	675.301				
						4				4		EACH	REMOVING SIGNS	675.50				
						1				1		EACH	ERECTING SALVAGED SIGNS	675.60				
										56		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608				

PROJECT NAME: **READING**
PROJECT NUMBER: **BRZ 1444(23)**
FILE NAME: #:\Projects\14058\14058.dgn
PROJECT MANAGER: C.P.WILLIAMS
DESIGNED BY: R.S.YOUNG
QUANTITY SHEET #2
PLOT DATE: 02/08/2008
DRAWN BY: M.FESSEL
CHECKED BY: R.S.YOUNG
SHEET 4 OF 49

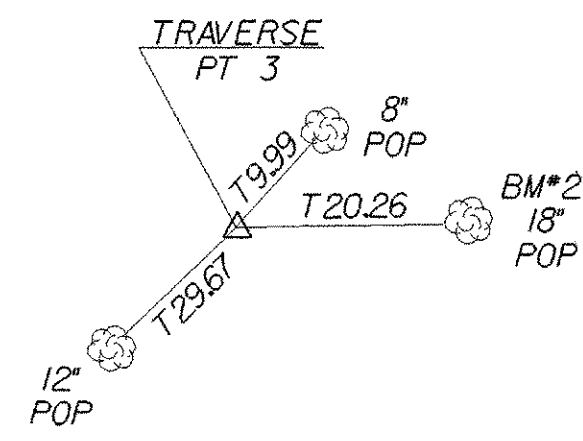
TRAVERSE TIES



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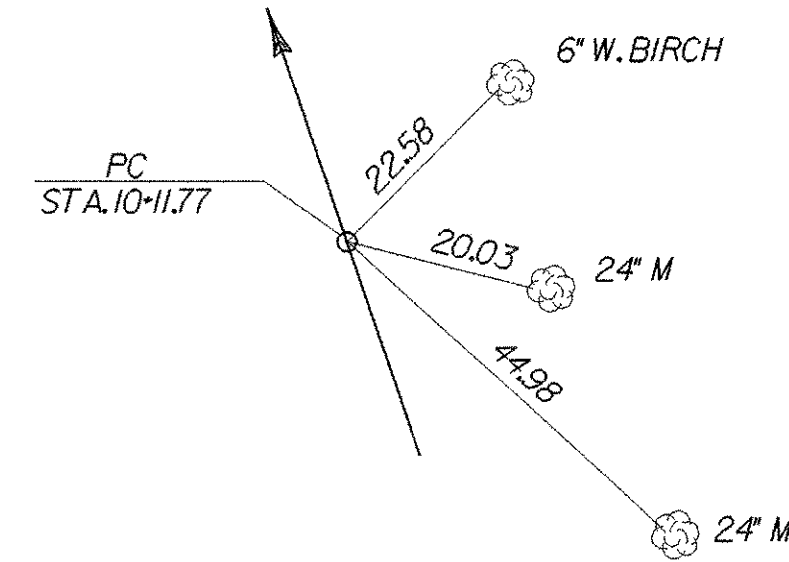


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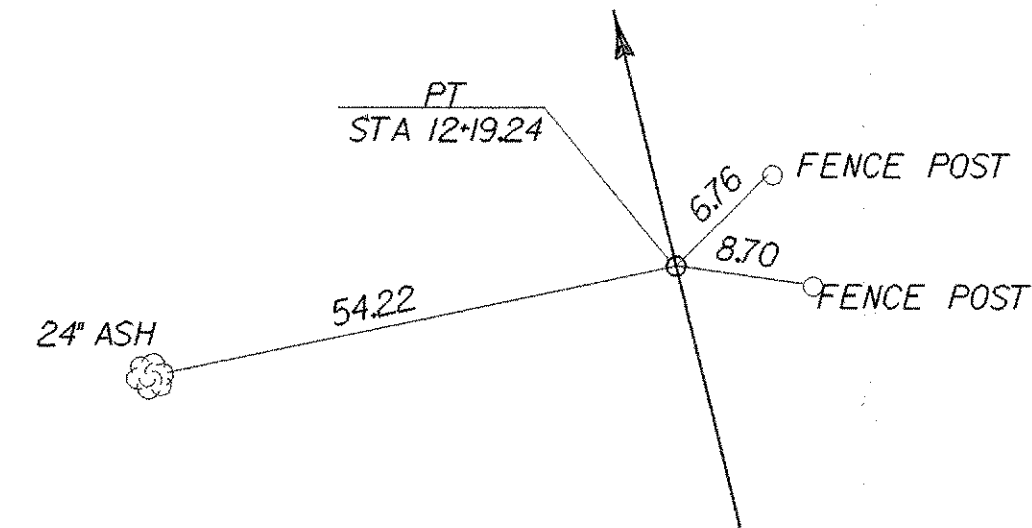


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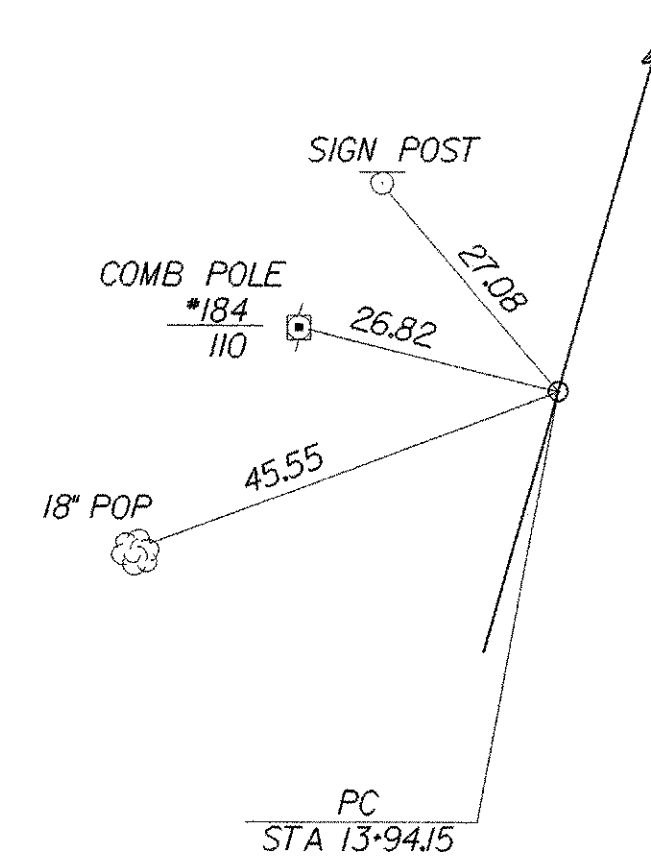
ALIGNMENT TIES



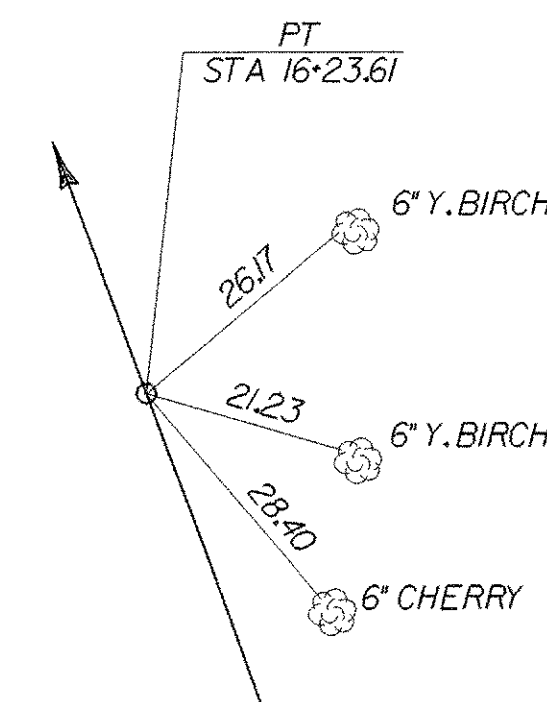
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E = 949.2580



N = 1239.0595
E = 801.2022



N = 1309.0292
E = 640.8982



N = 1468.4405
E = 483.5827

DATUM
VERTICAL USGS 1928
HORIZONTAL ASSUMED

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058tie.dgn	
IPARM FILE NAME: /str4/90j058/sj058tie.i	PLOT DATE: 13-FEB-2008
SURVEYED BY: R. GILMAN	SURVEY DATE: 3/92
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: W.B. SYMONDS
TRAVERSE AND ALIGNMENT TIES	SHEET: 5 OF 49

REMOVE EXISTING SIGNS

STA. 14+14 LT.
STA. 14+54 LT.
STA. 14+75 RT.

TRAFFIC SIGNS, TYPE A

STA. 9+25 RT.

ERECTING SALVAGED SIGNS

STA. 14+75 RT.

HO STEEL BEAM GUARDRAIL, GALVANIZED

STA. 11+15 - 12+05 LT.
STA. 12+74 - 13+44 LT.
STA. 12+06 - 12+28 RT.
STA. 12+97 - ~~14+93~~ RT.
13+30

CONSTRUCT DRIVE

STA. 11+25 RT. 1/2" TYPE III PAVED DRIVE

BRIDGE RAILING - GALVANIZED HD STEEL BEAM/FASCIA MOUNTED

STA. 12+05 - 12+74 LT.
STA. 12+28 - 12+97 RT.

CONSTRUCT FIELD DRIVE WITH 6" AGGREGATE SURFACE COURSE

STA. 12+00 RT.
STA. 13+50 LT.

REMOVAL OF EXISTING FENCE

STA. 10+25 LT. - 12+30 RT.
STA. 12+91 RT. - 13+56 LT.

WOVEN WIRE FENCE WITH WOOD POSTS*

STA. 9+60 LT. - 11+25 LT.
STA. 12+55 LT. - 13+40 LT.

* FENCE SHALL BE BARBED WIRE AND SET ALONG NEW R.O.W. LINE

DRIVE GATE FOR WOVEN WIRE FENCE

STA. 13+40 LT. - 13+56 LT.

NEW OPTION PIPE

(0.064" CSP, 0.060" CAAP OR CPEP)

STA. 13+32 LT - STA. 13+60 LT - 18" X 30'

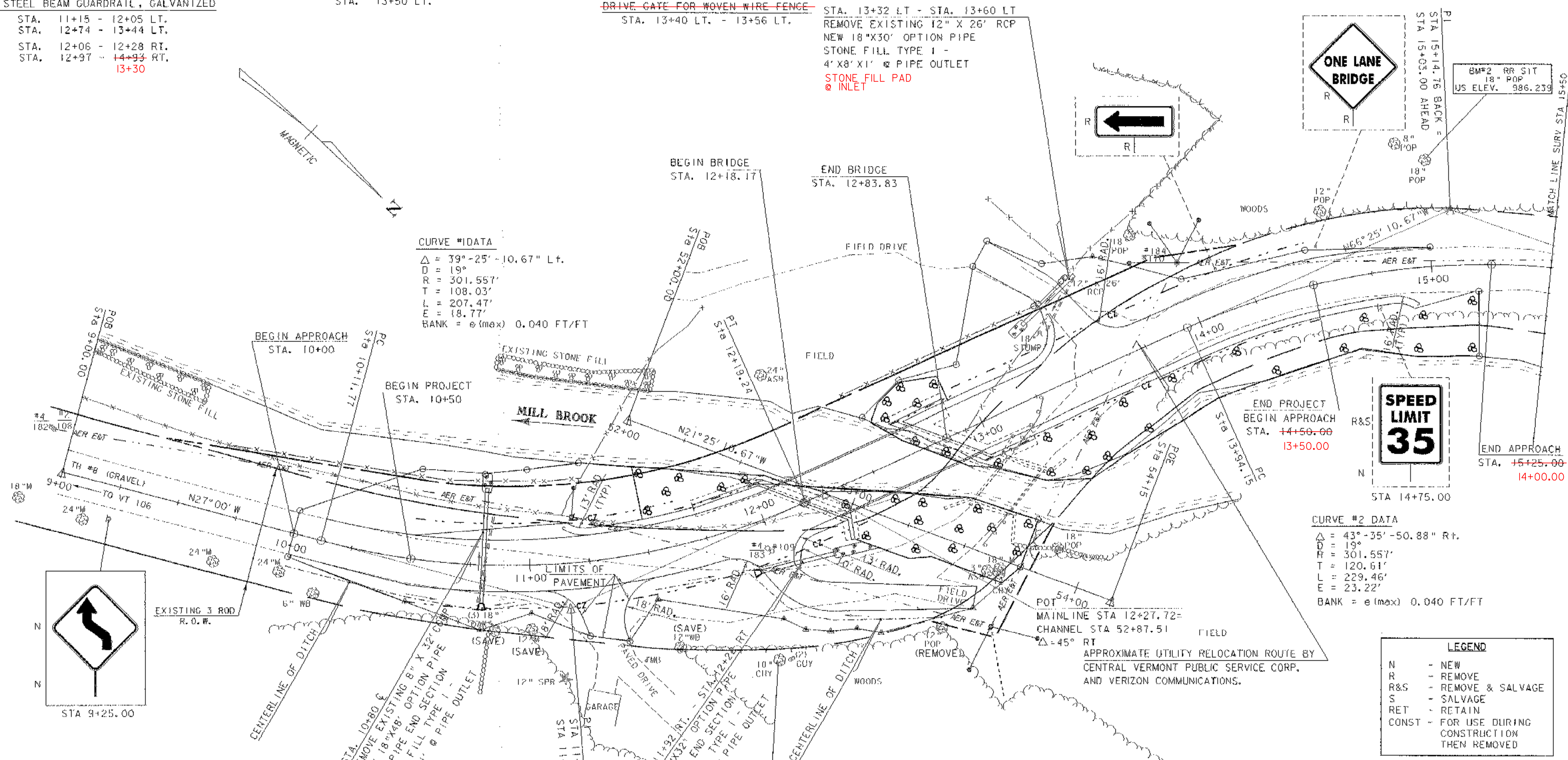
NEW OPTION PIPE W/END SECTION

(0.064" CSP, 0.060" CAAP OR CPEP)

STA. 10+80 E - 18" X 48'
STA. 11+92 RT - STA. 12+22 RT - 18" X 32'

ANCHORS FOR STEEL BEAM GUARD RAIL

STA. 11+18 LT
STA. 13+41 LT
STA. 12+09 RT
STA. ~~14+91~~ RT
13+27



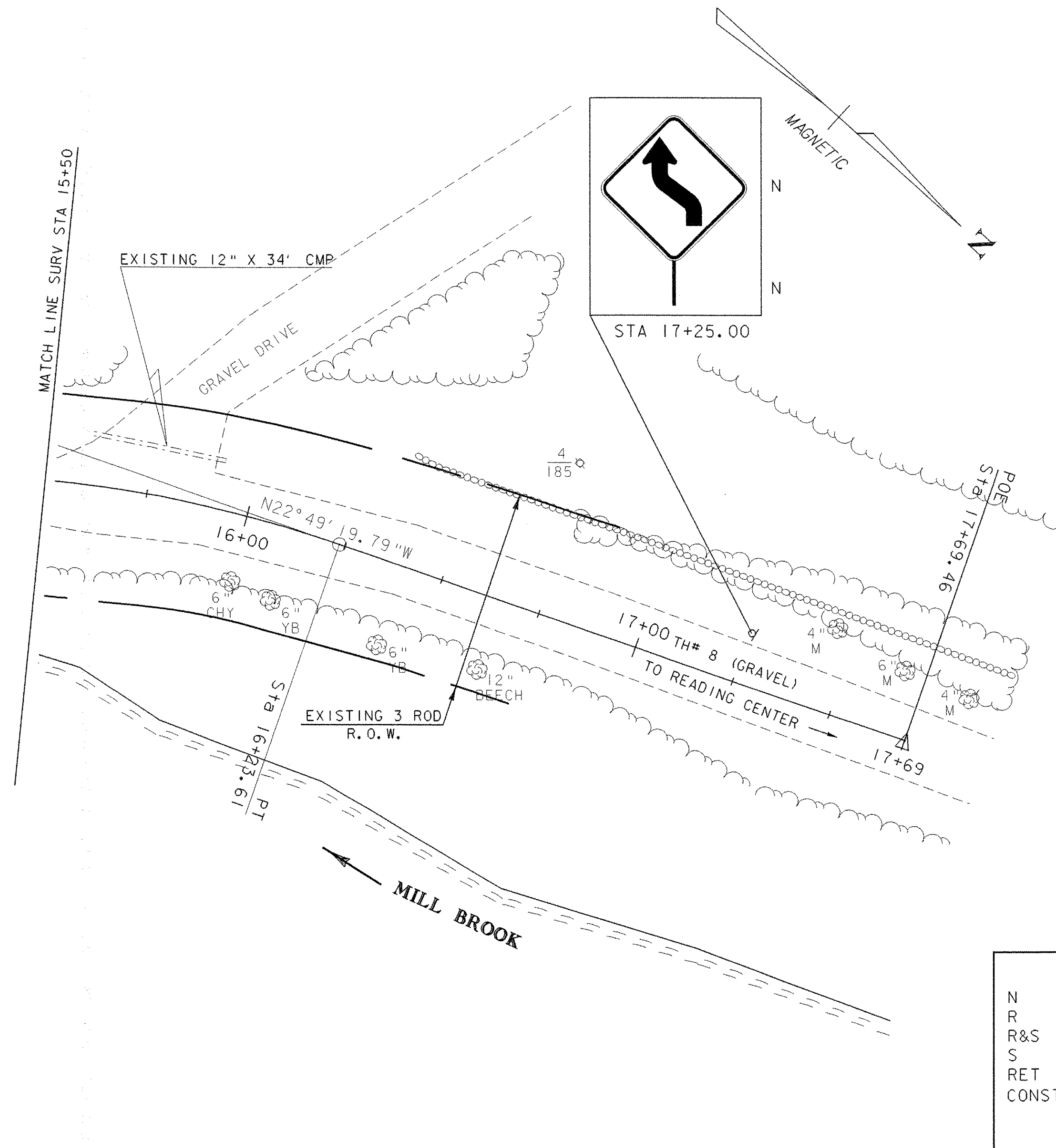
CURVE #1 DATA
 $\Delta = 39^\circ - 25' - 10.67" \text{ Lt.}$
 $D = 19'$
 $R = 301.557'$
 $T = 108.03'$
 $L = 207.47'$
 $E = 18.77'$
 $BANK = e(\text{max}) 0.040 \text{ FT/FT}$

CURVE #2 DATA
 $\Delta = 43^\circ - 35' - 50.88" \text{ Rt.}$
 $D = 19'$
 $R = 301.557'$
 $T = 120.61'$
 $L = 229.46'$
 $E = 23.22'$
 $BANK = e(\text{max}) 0.040 \text{ FT/FT}$

EXISTING BRIDGE INFO
 1 BEAM, CONC DECK
 24' OVERALL SPAN
 14' ROADWAY
 9.2' TO STREAMBED
 BUILT 1940

PROJECT: READING	PROJECT NO. # BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058bdr.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058lal1	SURVEY DATE: 3/92
SURVEYED BY: R. GILMAN	DRAWN BY: W.B. SYMONDS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 6 OF 49
LAYOUT SHEET 1	

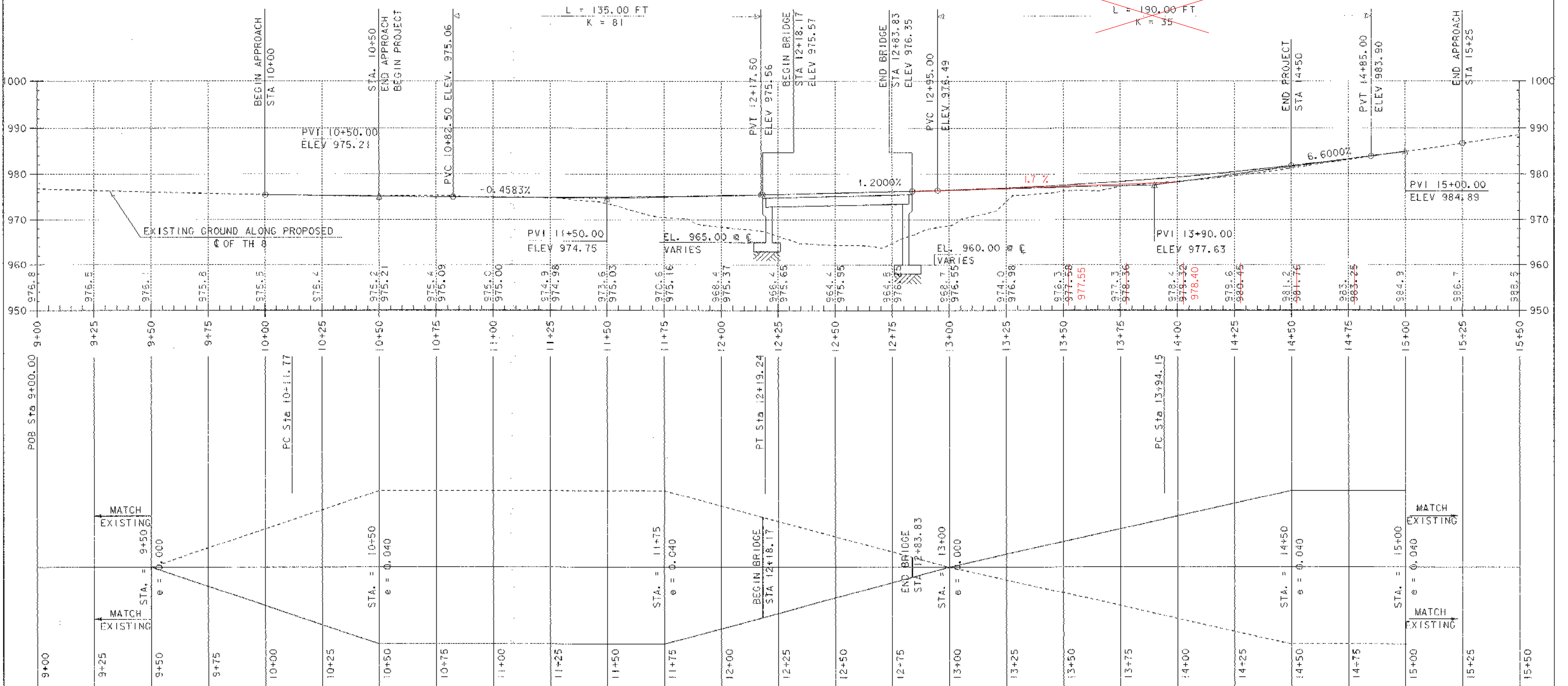
TRAFFIC SIGNS, TYPE A
 STA. 17+25 LT.



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

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058bdr.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058la2.i	SURVEY DATE: 3/92
SURVEYED BY: R. GILMAN	DRAWN BY: W.B. SYMONDS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 7 OF 49
LAYOUT SHEET 2	

TH 8 PROFILE



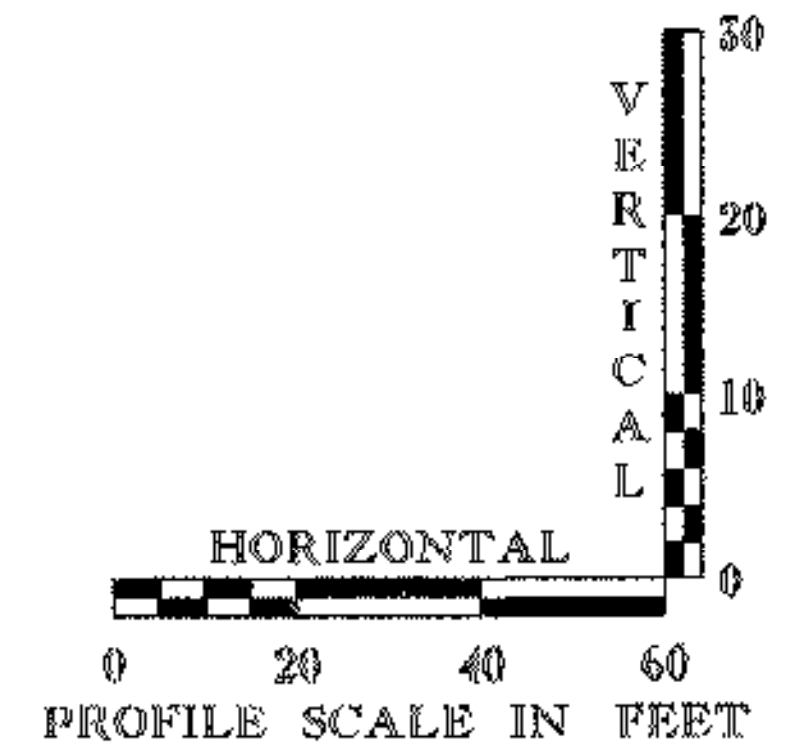
L = 135.00 FT
K = 81

~~L = 190.00 FT
K = 35~~

BANKING DIAGRAM
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"= 0.024 ft/ft

--- RIGHT BANKING RATE
--- LEFT BANKING RATE

NOTE: EXISTING CENTERLINE ELEVATIONS ARE SHOWN TO THE TENTH.
PROPOSED CENTERLINE ELEVATIONS ARE SHOWN TO THE HUNDREDTH.



PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058pr1.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058pr1	SURVEY DATE: 3/92
SURVEYED BY: R. GILMAN	DRAWN BY: W.B. SYMONDS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 8 OF 49
PROFILE SHEET	

SOIL CLASSIFICATION

AASHTO

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.O.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

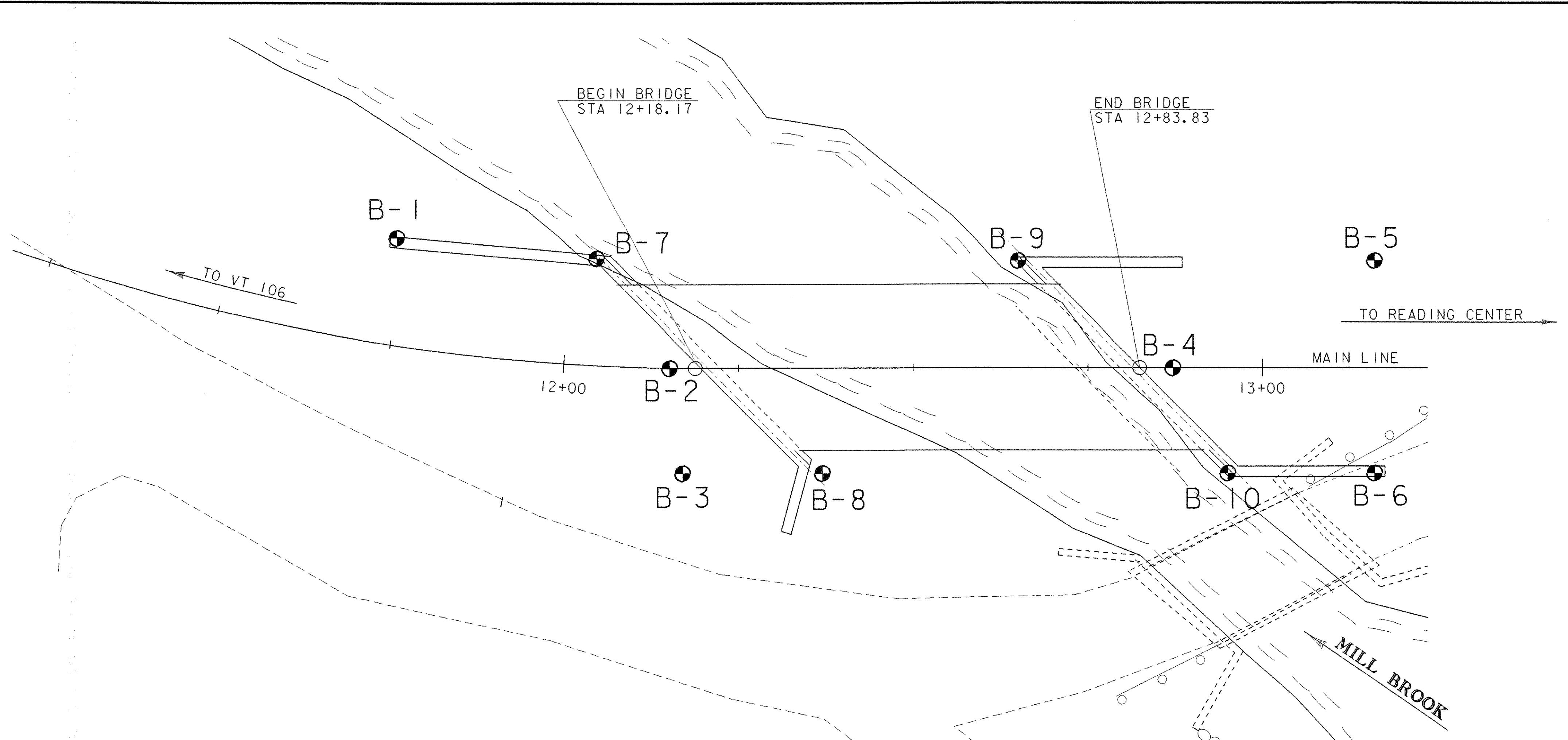
DENSITY (GRANULAR SOILS)	CONSISTENCY (COHESIVE SOILS)
N	N
<5	<2
5-10	2-4
11-24	5-8
25-50	9-15
>50	16-30
	31-60
	>60

COMMONLY USED SYMBOLS

- ▼ Water Elevation
- ⊕ Standard Penetration Boring
- ⊕ Auger Boring
- ⊙ Rod Sounding
- S 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 3/8"
- NX Core Size 2 1/8"
- M Double Tube Core Barrel Used
- LL Liquid Limit
- PL Plastic Limit
- PI Plasticity Index
- NP Non Plastic
- w Moisture Content (Dry Wgt. Basis)
- D Dry
- M Moist
- MTW Moist To Wet
- W Wet
- Sat Saturated
- Bo Boulder
- Gr Gravel
- Sa Sand
- Sl 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	mitc	Multicolored
or	Orange		



BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-1	11+74	15' LT	967.65	962.2
B-2	12+15	0'	967.44	963.9
B-3	12+17	15' RT	974.51	966.5
B-4	12+87	0'	965.53	962.5
B-5	13+16	15' LT	969.50	958.5
B-6	13+16	15' RT	975.38	963.4
B-7	12+04	15' LT	964.83	961.3
B-8	12+37	15' RT	973.15	965.7
B-9	12+65	15' LT	965.36	956.9
B-10	12+95	15' RT	965.29	959.8

GENERAL NOTES

- The subsurface explorations shown herein were made between 8/24/95 and 8/31/95 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.

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 > 0.0029" (#200 sieve).
- SILT** - Soil < 0.0029" (#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.

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	READING	Bridge No.	BR 25
Highway No.	TH 8	Log Sta.	
		Surv. Sta.	12-51
BORING SHEET			
TH8 OVER MILL BROOK			
Designed By	W.B. SYMONDS	Drawn By	W.B. SYMONDS
Checked By	P.M. THURBER	Date	9/96
		Bridge Design Supervisor	C.F. WILLIAMS
		Date	1/98
PROJECT	READING	PROJECT NO.	BRZ 1444(23)
I.G.C. Info\MA\Projects\90\058\Structures\1058bor.dgn		s\058bor.d	
Bridge Sheet No.		Sheet	9 of 49

ABUT. 1 TOP OF FOOTING
ELEV. = 965.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION		HOLE NO.: B-1 SHEET 1 OF 1 DATE STARTED: 8/28/95 DATE COMPLETED: 8/28/95							
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 11+74.00 GROUND EL.: 967.65		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: -15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: WARREN DRILLER: RABTOY LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Boulder, No Sample							
5		Top of bedrock at 5.5							
		Run #1, 5.5-10.5, Rec. = 4.4. See Geologist's report							
10		Run #2, 10.5-15.5, Rec. = 5.0. See Geologist's report							
15		Hole stopped at 15.5							
Geologist's Report									
20		Run Rec.% Rqd.% 1 70 0 2 100 82							
Core from run #1 consists of a gray calcareous quartz mica schist grading to a gray micaceous quartzite. Rock is very slightly weathered and moderately hard.									
Core from run #2 is the same as above, but more quartzite and less schist. Sample has joints tending 65-75 degrees.									
Low RQD in run #1 is due to mechanical breakage during drilling and should not affect overall competence of rock.									

ABUT. 1 TOP OF FOOTING
ELEV. = 965.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION		HOLE NO.: B-2 SHEET 1 OF 1 DATE STARTED: 8/25/95 DATE COMPLETED: 8/25/95							
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+15.00 GROUND EL.: 967.44		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: 0.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Top of bedrock at 3.5							
5		Run #1, BXMDC 3.5-8.5, Rec. = 2.7. See Geologist's report							
10		Run #2, BXMDC 8.5-13.5, Rec. = 3.9. See Geologist's report							
15		Hole stopped at 13.5							
Geologist's Report									
20		Run Rec.% Rqd.% 1 54 0 2 78 30							
Run #1: Core consists of a gray calcareous quartz mica schist, grading in places to a gray micaceous quartzite. Rock is slightly weathered, primarily along joints that vary from nearly vertical to nearly horizontal. Rock is moderately hard.									
Low RQD is due to mechanical breakage during drilling and should not affect overall competence of the rock.									
Run #2: Same as Run #1									

ABUT. 1 TOP OF FOOTING
ELEV. = 968.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION		HOLE NO.: B-3 SHEET 1 OF 1 DATE STARTED: 8/24/95 DATE COMPLETED: 8/24/95							
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+17.00 GROUND EL.: 974.51		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: 15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: WARREN DRILLER: RABTOY LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		No Recovery	9						
5		A-1-b, SaGr, Moist, brn, Rec. = 0.6	24	46.3	41.1	12.6			
		A-1-b, SaGr, Moist, brn, Rec. = 0.3	R	11.7	43.3	42	14.7		
		Top of bedrock at 8.0							
10		Run #1, BXDC 8.0-10.0, Rec. = 1.3. See Geologist's report							
		Run #2, BXMDC 10.0-15.0, Rec. = 1.8. See Geologist's report							
15		Run #3, BXMDC 15.0-20.0, Rec. = 5.1. See Geologist's report							
20		Hole stopped at 20.0							
Geologist's Report									
25		Run Rec.% Rqd.% 1 65 0 2 36 18 3 100 52							
Run #1: Core consists of a pale gray pyritiferous quartz mica schist. Rock is only slightly weathered in upper sections and is moderately hard.									
Low RQDs are due to mechanical breakage during drilling. Rock appears competent overall.									
Run #2: Same as above									
Run #3: Same as above									

ABUT. 2 TOP OF FOOTING
ELEV. = 963.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION		HOLE NO.: B-4 SHEET 1 OF 1 DATE STARTED: 8/28/95 DATE COMPLETED: 8/29/95							
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+87.00 GROUND EL.: 965.53		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: 0.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Top of bedrock at 3.0							
5		Run #1, BXMDC 3.0-8.0, Rec. = 4.7. See Geologist's report							
10		Run #2, BXMDC 8.0-13.0, Rec. = 5.0. See Geologist's report							
15		Hole stopped at 13.0							
Geologist's Report									
20		Run Rec.% Rqd.% 1 94 28 2 100 73							
Run #1: Core consists of a carbonaceous gray quartz mica schist grading to a gray micaceous quartzite. Rock is slightly weathered and moderately hard.									
Low RQD in Run #1 is due to mechanical breakage during drilling and should not affect overall competence of the rock.									
Run #2: Same as above, but more quartzite and less schist.									

All distances are in feet

SURVEYED BY	DATE
DRAWN BY	DATE
SQUAD LEADER	DATE
DESIGN FILE NO.	DATE
IPARM FILE	DATE
PROJ. NAME	READING
PROJ. NO.	BRZ 1444(23)
SHEET 10 OF 49 SHEETS	

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-5 SHEET 1 OF 1 DATE STARTED: 8/25/95 DATE COMPLETED: 8/25/95					
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 13+16.00 GROUND EL.: 969.50		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: -15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0-5		No sample. Boulders.							
10		A-1-a, SaGr, Moist, brn, Rec. = 0.3	R	10.7	54.5	34.2	11.3	0	0
		Run #1, BXMDC 11.0-16.0, Rec. = 3.3. See Geologist's report							
		Top of bedrock at 11.0							
15		Run #2, BXMDC 16.0-21.0, Rec. = 5.0. See Geologist's report							
20		Hole stopped at 21.0 in bedrock							
Geologist's Report									
Run Rec.% Rqd.%									
1 66 0									
2 100 80									
Run #1:									
Core consists of a light gray pyritiferous quartz mica schist. Rock is slightly weathered in upper sections and is moderately hard.									
Low ROD is due to mechanical breakage during drilling. Rock appears competent overall.									
Run #2:									
Same as above.									

ABUT. 2 TOP OF FOOTING
ELEV. = 965.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-6 SHEET 1 OF 1 DATE STARTED: 8/25/95 DATE COMPLETED: 8/25/95					
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 13+16.00 GROUND EL.: 975.38		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: 15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0-5		No sample	2						
10		A-1-b, SaGr, Moist, brn, Rec. = 0.8	21	10.8	47.7	42.2	10.1	0	0
		Run #1, BXMDC 12.0-17.0, Rec. = 4.8. See Geologist's report							
		Top of bedrock at 12.0							
15		Run #2, BXMDC 17.0-22.0, Rec. = 5.0. See Geologist's report							
20		Hole stopped at 22.0							
Geologist's Report									
Run Rec.% Rqd.%									
1 96 15									
2 100 42									
Run #1:									
Core consists of a gray calcareous quartz mica schist grading in places to a gray micaceous quartzite. Rock is very slightly weathered along a few nearly horizontal joints. Rock is moderately hard.									
Low RODs are due to mechanical breakage during drilling and should not affect the overall competence of the rock.									
Run #2:									
Same as above.									

ABUT. 1 TOP OF FOOTING
ELEV. = 965.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-7 SHEET 1 OF 1 DATE STARTED: 8/26/95 DATE COMPLETED: 8/27/95					
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+04.00 GROUND EL.: 964.83		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: -15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0-5		Run #1, BXMDC 3.5-8.5, Rec. = 3.3. See Geologist's report							
		Top of bedrock at 3.5							
10		Geologist's Report							
		Hole stopped at 8.5							
15		Run Rec.% Rqd.%							
		1 66 0							
		Run #1:							
		Core consists of a rusty weathering calcareous gray quartz mica schist grading in places to a micaceous quartzite. Rock is slightly weathered and moderately hard. Contains occasional lenses of quartz.							
		Low ROD due to mechanical breakage during drilling. Rock appears competent overall.							

ABUT. 1 TOP OF FOOTING
ELEV. = 968.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-8 SHEET 1 OF 1 DATE STARTED: 8/30/95 DATE COMPLETED: 8/30/95					
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+37.00 GROUND EL.: 973.15		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: 15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0-5		A-1-b, SaGr, Dry, brn, Rec. = 0.5	77	1.4	58.5	32.7	9.9	0	0
		Top of bedrock at 7.5							
10		Run #1, BXMDC 7.5-12.5, Rec. = 4.0. See Geologist's report							
		Hole stopped at 12.5							
15		Geologist's Report							
		Run Rec.% Rqd.%							
		1 80 8							
		Run #1:							
		Core consists of a rusty weathering calcareous gray quartz mica schist. Rock is slightly weathered and moderately hard.							
		Low ROD is due to mechanical breakage due to drilling. Rock appears competent overall.							

All distances are in feet

SURVEYED BY	Wei Y. Wu	DATE	12/95
DRAWN BY	Chris Benda	DATE	12/95
SQUAD LEADER			
DESIGN FILE NO.	/s/tr4/90j058/sj058bor.dgn		
IPARM FILE	sj058b12.i	DATE PLOTTED	12/13/95
PROJ. NAME	READING		
PROJ. NO.	BRZ 1444(23)		
SHEET #	49	OF	49 SHEETS

ABUT. 2 TOP OF FOOTING
ELEV. = 960.00

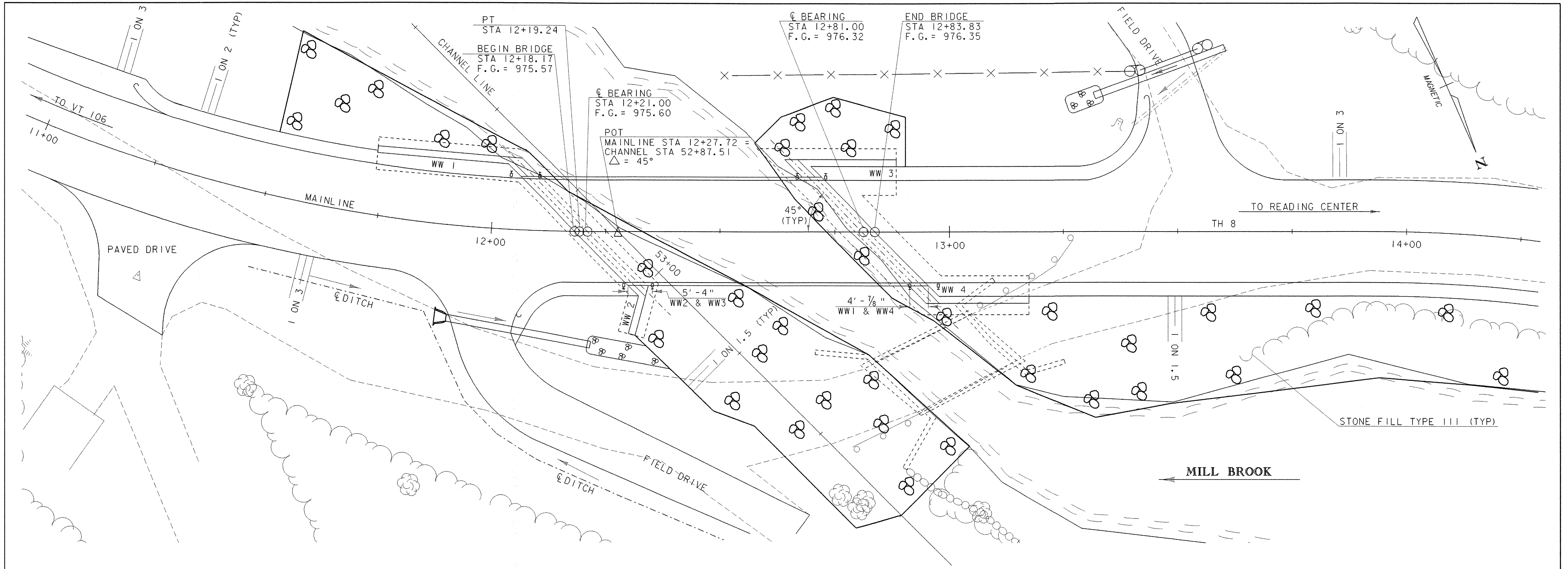
STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION			HOLE NO.: B-9 SHEET 1 OF 1 DATE STARTED: 8/31/95 DATE COMPLETED: 8/31/95						
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+65.00 GROUND EL.: 965.36		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: -15.00 G.W. DEPTH: 0							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		No sample, Boulders.							
10		Run #1, BXMDC 8.5-13.5, Rec. = 2.1. See Geologist's report							
15		Geologist's Report Run Rec,% Rqd,% 1 42 20 Run #1: Core consists of a rusty weathering calcareous gray quartz mica schist. Rock is slightly weathered, moderately hard and breaks along joints trending 70 - 80 degrees. Low ROD due to mechanical breakage during drilling. Rock appears competent overall.							
20									
25									
30									
35									
40									
45									

ABUT. 2 TOP OF FOOTING
ELEV. = 963.00

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION			HOLE NO.: B-10 SHEET 1 OF 1 DATE STARTED: 8/31/95 DATE COMPLETED: 8/31/95						
PROJECT NAME: READING SITE NAME: TH 8, CL.3 STATION: 12+95.00 GROUND EL.: 965.29		PROJECT NUMBER: BRZ 1444(23) SITE NO.: BRIDGE B25 OFFSET: 15.00 G.W. DEPTH:							
BORING CREW CREW CHIEF: RABTOY C DRILLER: WARREN LOGGER:		BORING RIG: TRUCK BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL							
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5									
10		Run BXMDC 5.5-10.5, Rec. = 2.6. See Geologist's report							
15		Geologist's Report Run Rec,% Rqd,% 1 52 0 Run #1: Core consists of a rusty weathering, gray calcareous quartz mica schist. Rock is slightly weathered and moderately hard. Low ROD is due to mechanical breakage along schistose foliation during drilling. Rock appears competent overall.							
20									
25									
30									
35									
40									
45									

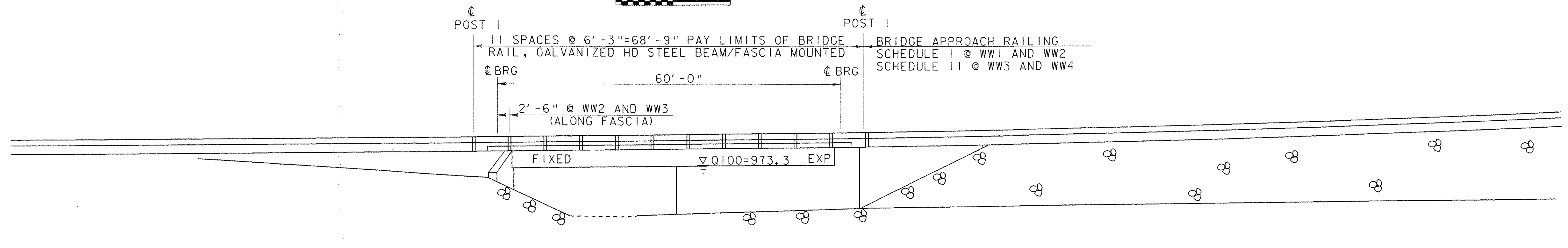
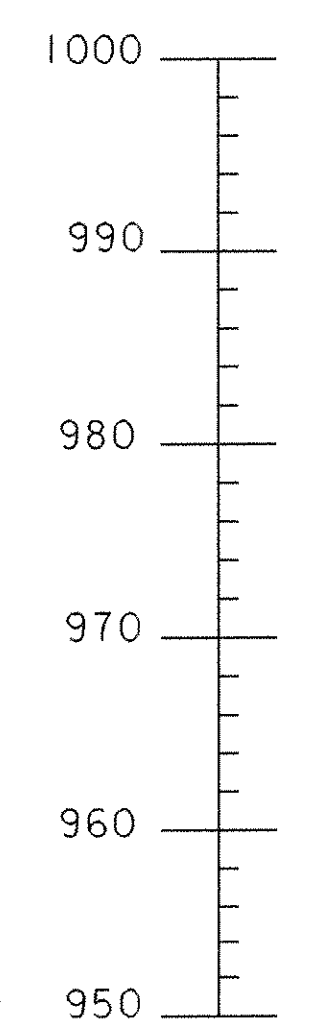
All distances are in feet

SURVEYED BY	Wei Y. Wu	DATE	12/95
DRAWN BY	Chris Benda	DATE	12/95
SQUAD LEADER			
DESIGN FILE NO.	/str4/90j058/sj058bor.dgn		
IPARM FILE	s1058b13.i	DATE PLOTTED	12/13/95
PROJ. NAME	READING		
PROJ. NO.	BRZ 1444(23)		
SHEET 12	OF 49	SHEETS	



PLAN

SCALE 1" = 10'-0"



ELEVATION AT UPSTREAM FASCIA

SCALE 1" = 10'-0"

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058el.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058el.l	SURVEY DATE: 3/92
SURVEYED BY: R. GILMAN	DRAWN BY: W.B. SYMONDS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 13 OF 49
PLAN AND ELEVATION	

GENERAL NOTES

- 1) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2002, AND ITS LATEST REVISIONS.
- 2) DESIGN IS FOR HS-25-44 LIVE LOADING.
- 3) BRIDGE NO. 25 SHALL BE CLOSED DURING THE CONSTRUCTION PERIOD.
- 4) FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES.
- 5) ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68° F OR AS NOTED OTHERWISE.
- 6) ALL ON-PROJECT CONSTRUCTION SIGNS AND BARRICADES AS REQUIRED BY THE RESIDENT ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED UNDER ITEM 641.10, TRAFFIC CONTROL. THE SIGNING WILL BE PER THE LATEST EDITION OF M.U.T.C.D. ALL OFF-PROJECT SIGNING SHALL BE THE RESPONSIBILITY OF THE TOWN.
- 7) EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF READING. THESE SIGNS SHALL BE STOCKPILED ON THE PROJECT TO BE PICKED UP BY THE TOWN. CONTACT THE TOWN ROAD FOREMAN FOR PICK UP OF SIGNS.
- 8) ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL BE USED FOR REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTIONS OF THE SUBSTRUCTURE NOT REMOVED UNDER THE ITEM 208.35 "COFFERDAM EXCAVATION, ROCK" OR ITEM 203.27 "UNCLASSIFIED CHANNEL EXCAVATION".
- 9) STONE FILL TYPE III SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE BEAMS ARE SET.
- 10) STONE FILL TYPE I SHALL BE USED AT THE END OF THE NEW PIPES TO PREVENT EROSION.
- 11) THE BRIDGE PLAQUE SHALL BE FURNISHED BY THE AGENCY OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR AS SHOWN ON THE DETAILS ON SHEET 19.
- 12) THE RESIDENT ENGINEER WILL WORK WITH PROPERTY OWNER, ROBERT WALSH 484-3555, DURING CONSTRUCTION TO ENSURE THE SAFETY OF HIS HERD.

CONCRETE

- 13) AFTER THE SUPERSTRUCTURE STEEL HAS BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH BEAM UNDER THE DIRECTION OF THE RESIDENT ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING THE FINAL GRADE.
- 14) CONCRETE PORTIONS OF THE ABUTMENT AND WINGWALLS ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.
- 15) FLEMING BRACKETS SHALL BE DESIGNED BY THE CONTRACTOR, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4'-0".
- 16) ANY BOLT HOLES IN THE WEB OF THE FASCIA BEAMS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX BOLTS MEETING AASHTO M 164 TYPE 3. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 507.04 OF THE STANDARD SPECIFICATIONS.
- 17) REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:

SPACING	+/- 1"
CLEARANCE	+/- 1/4"
- 18) WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDER SIDE OF THE DECK BETWEEN DRIP NOTCHES.
- 19) THE DECK AND CURB CONCRETE SHALL BE "SPECIAL PROVISION" (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT). ANY REQUIRED SUBFOOTING SHALL BE "CONCRETE, CLASS C". ALL OTHER CONCRETE SHALL BE "CONCRETE, HIGH PERFORMANCE CLASS B", UNLESS OTHERWISE NOTED.
- 20) THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
- 21) JOINTS AND SCORE MARKS IN THE CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 22) ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1"X1".
- 23) THE DECK SHALL BE GIVEN A TURF DRAG FINISH.

- 24) SURFACES OF BRIDGE SEATS UNDER THE BEARING DEVICES SHALL BE LEVEL. OTHER AREAS OF THE BRIDGE SEAT SHALL BE SLOPED 1/4" PER FOOT FULL WIDTH TOWARD MID SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE GIVEN A MAGNESIUM FLOAT FINISH.
- 25) WHEN PLACING THE DECK, THE CONCRETE SHALL BE DEPOSITED PARALLEL TO THE CENTERLINE OF BEARING SO AS TO LOAD THE GIRDERS EQUALLY.
- 26) THE DECK IS TO BE PLACED IN ONE CONTINUOUS PLACEMENT WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTORS CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED. A 96 HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S PLACEMENT AND THE BEGINNING OF ANOTHER PLACEMENT SHALL BE OBSERVED.

LEDGE

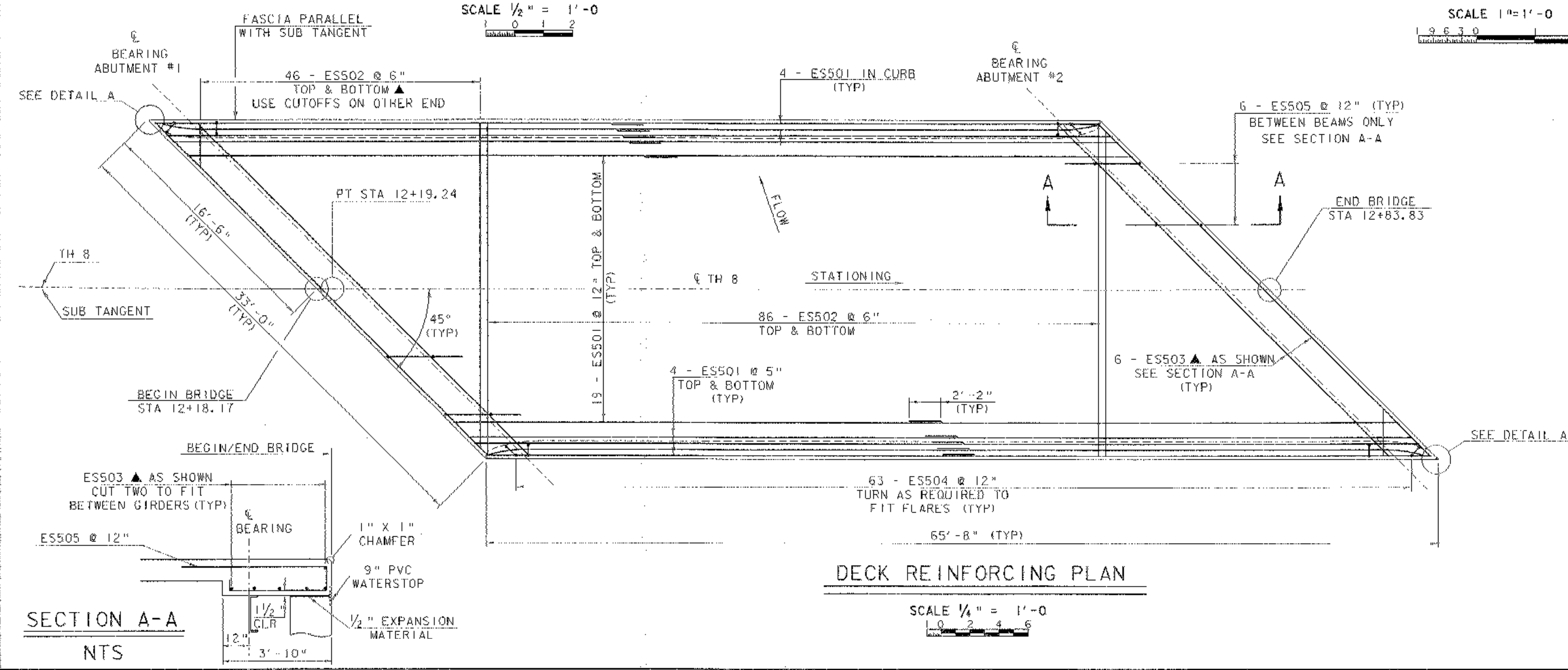
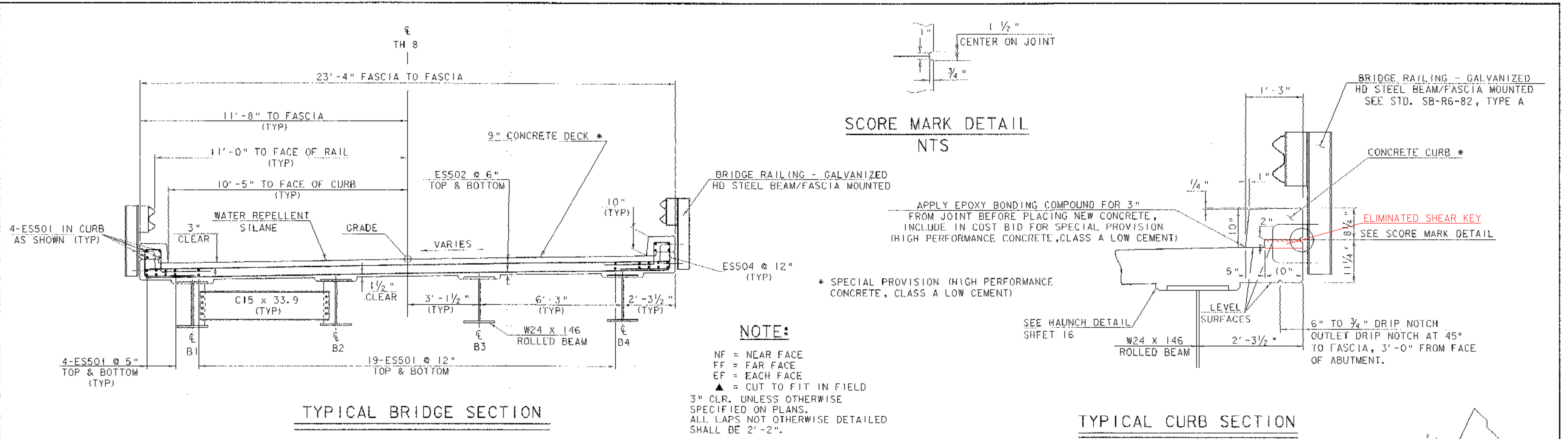
- 27) FOR ALL SUBSTRUCTURES, WHERE LEDGE IS BETWEEN 2'-0" AND 4'-0" BELOW THE TOP OF FOOTING ELEVATION, THE FOOTING SHALL BE POURED TO THE TOP OF THE LEDGE USING "CONCRETE, HIGH PERFORMANCE CLASS B".
- 28) THE FOOTING SHALL BE FOUNDED ON LEDGE WHICH HAS BEEN CLEANED OF ALL LOOSE ROCK AND OTHER DEBRIS. THE LEDGE SHALL BE REMOVED AS REQUIRED TO ENSURE THE FOOTINGS ARE PLACED ON COMPETENT ROCK.
- 29) THE SUBSTRUCTURE UNITS HAVE BEEN DESIGNED FOR THE TOP OF FOOTING ELEVATIONS AS SHOWN ON THE PLANS. IF THE LEDGE ELEVATION IS GREATER THAN 4'-0" BELOW THE DESIGN TOP OF FOOTING, THE STRUCTURES PROJECT MANAGER SHALL BE NOTIFIED AND PROVIDED WITH A LEDGE PROFILE. NO FURTHER WORK SHALL BE DONE UNTIL A REPLY IS RECEIVED. ITEM 541.30, "CONCRETE CLASS C" MAY BE USED IN THESE AREAS WITH APPROVAL OF THE ENGINEER.
- 30) FOR ALL SUBSTRUCTURE UNITS, WHERE LEDGE IS LESS THAN 2'-0" BELOW THE DESIGN TOP OF FOOTING, THE LEDGE SHALL BE EXCAVATED DOWN TO 2'-0" BELOW THE DESIGN TOP OF FOOTING ELEVATION. ALL LEDGE REMOVAL, UP TO A MAXIMUM OF 6" AVERAGE ALLOWANCE FOR OVERBREAKAGE IN ACCORDANCE WITH SUBSECTION 208.11(c), SHALL BE PAID FOR UNDER ITEM 208.35, "COFFERDAM EXCAVATION, ROCK". ADDITIONAL OVERBREAKAGE WILL BE AT THE CONTRACTOR'S EXPENSE. ALL OVERBREAKAGE SHALL BE REPLACED WITH CONCRETE, HIGH PERFORMANCE CLASS B. OVERBREAKAGE REPLACEMENT UP TO A MAXIMUM OF 6" AVERAGE DEPTH SHALL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". ADDITIONAL CONCRETE REQUIRED WILL BE AT THE CONTRACTOR'S EXPENSE.
- 31) UPON COMPLETION OF COFFERDAM EXCAVATION, EARTH; AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL CONTACT THE SOILS AND FOUNDATION ENGINEER/ENGINEERING GEOLOGIST FROM THE VERMONT AGENCY OF TRANSPORTATION TO INSPECT THE LEDGE TO DETERMINE IF IT IS COMPETENT TO SUPPORT THE DESIGN PRESSURE AS SHOWN ON THE PLANS. THE GEOLOGIST SHALL BE ALLOWED 5 WORKING DAYS FROM NOTICE OF EXCAVATION TO MAKE THE INSPECTION AND THE DETERMINATION OF THE COMPETENCY OF THE LEDGE.
- 32) IF LEDGE IS ABOVE THE DESIGN TOP OF FOOTING, THE FOOTING ELEVATION MAY BE RAISED. BEFORE ANY ADJUSTMENT IS MADE ON FOOTING ELEVATIONS THE STRUCTURES PROJECT MANAGER SHALL BE CONTACTED FOR APPROVAL OF THE CONFIGURATION.
- 33) #8 DOWELS SHALL BE DRILLED AND GROUTED INTO LEDGE AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A 2'-0" EMBEDMENT IN THE LEDGE AND SHALL EXTEND INTO THE FOOTING A MINIMUM OF 1'-6" UNLESS NOTED OTHERWISE. THE DRILLING AND GROUTING SHALL BE PAID FOR UNDER THE ITEM 507.16 "DRILLING AND GROUTING DOWELS", HOWEVER THE DOWELS SHALL BE PAID FOR UNDER THE ITEM 507.15 "REINFORCING STEEL".
- 34) IF LEDGE IS ENCOUNTERED DURING EXCAVATION FOR PLACEMENT OF STONE FILL TYPE III, LEDGE SHALL NOT BE REMOVED.

STEEL

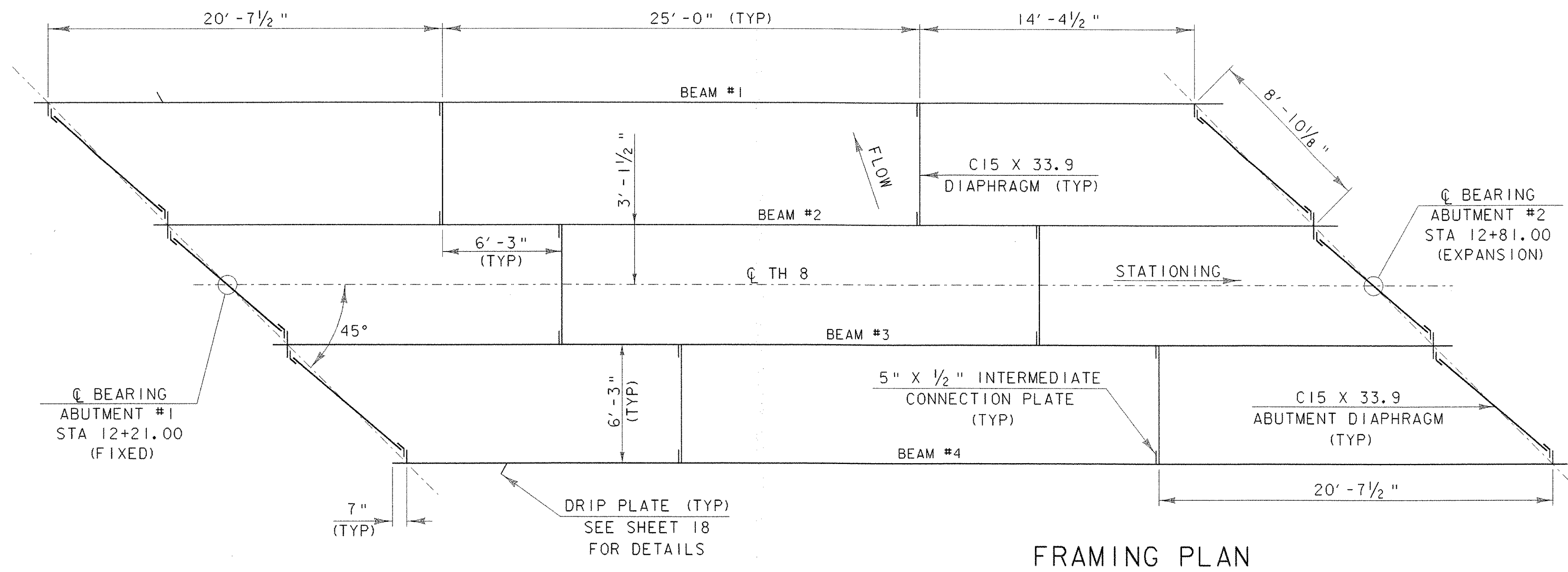
- 35) ALL STRUCTURAL STEEL PAID UNDER THE ITEM 506.50 "STRUCTURAL STEEL ROLLED BEAM" SHALL CONFORM TO AASHTO M 270M/M 270 GRADE 50W UNLESS NOTED OTHERWISE ON THE PLANS.
- 36) ALL FIELD CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER TYPE III BOLTS MEETING THE AASHTO M 164 SPECIFICATION. ANY CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
- 37) 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.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Rev. Sta.	
TH 8 OVER MILL BROOK			
GENERAL NOTES			
Designed By	R. S. YOUNG	Drawn By	R. S. YOUNG
Checked By	Date	Bridge Design Supervisor	
W. B. SYMONDS	8/99	C. P. WILLIAMS	Date 8/99
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
IG.C. Info.	M:\Projects\90\058\Structures\sj058not.dgn		
Bridge Sheet No.	sj105not.i	Sheet	14 of 49



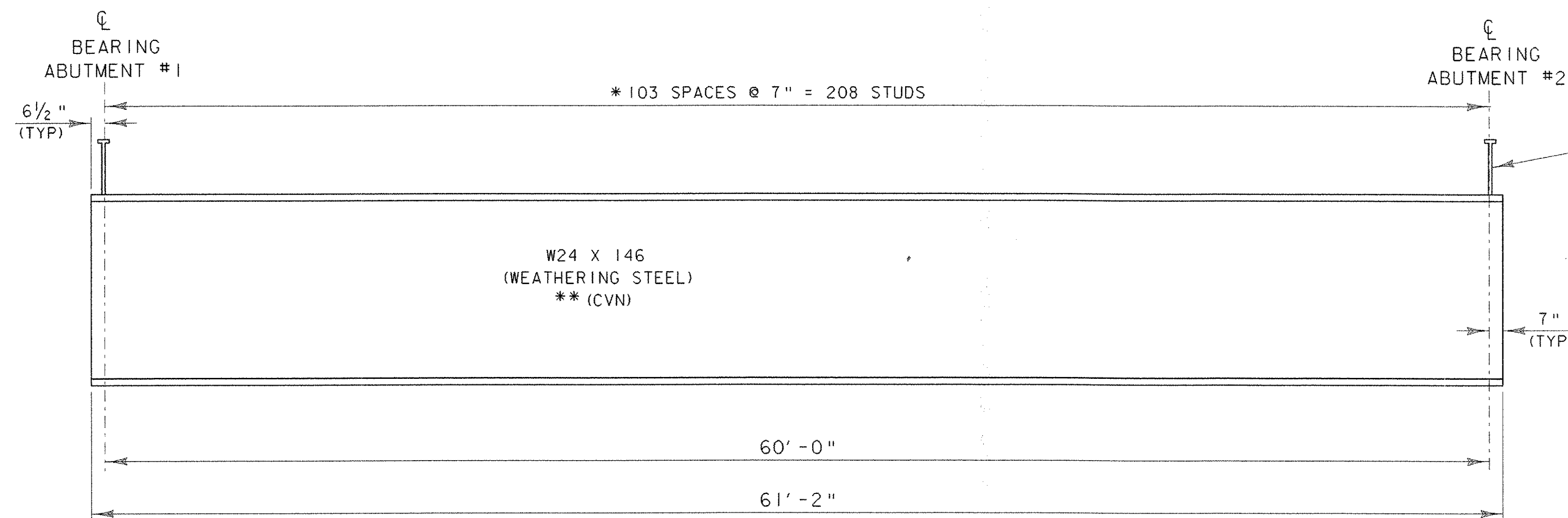
STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Rev. Sta.	
TYPICAL SECTION & DECK REINFORCING			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	R. S. YOUNG
Checked By	W. B. SYMONDS	Date	10/00
		Bridge Design Supervisor	C. P. WILLIAMS
		Date	10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.C. Info.	M:\Projects\90\058\Structures\1058spr.dgn		
Bridge Sheet No.	s\058\dr.e.1	Sheet	15 of 48



FRAMING PLAN

SCALE 1/4" = 1'-0"

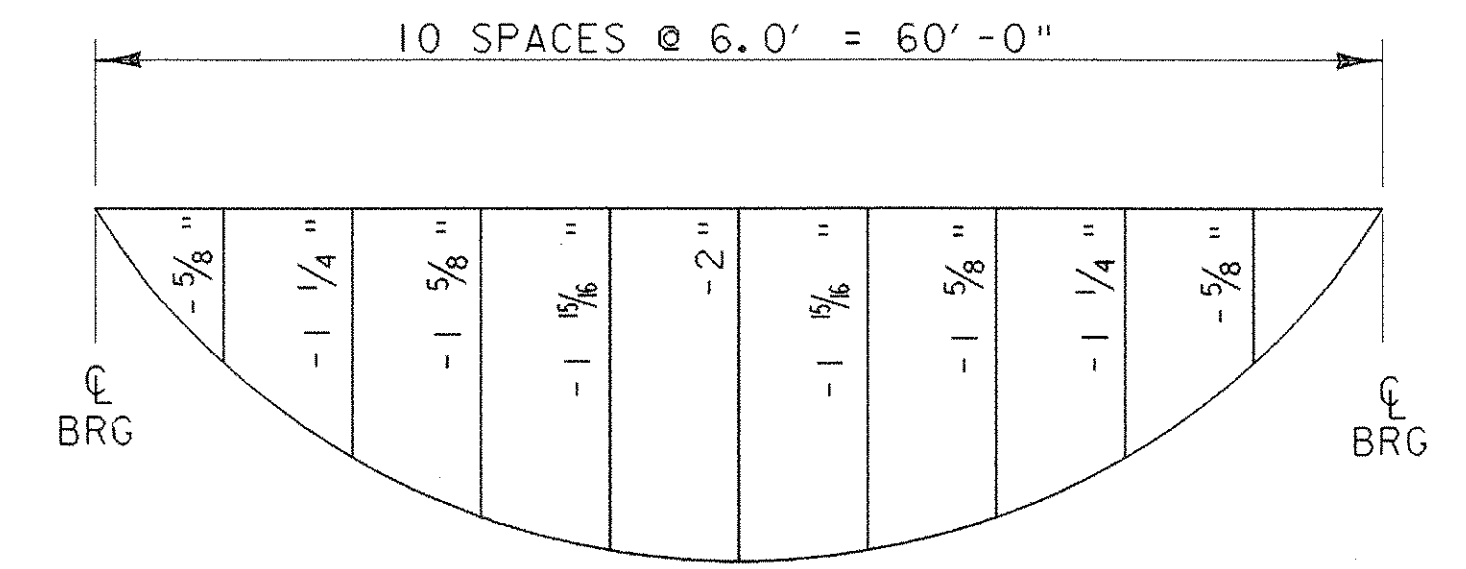
NOTE:
 ALL MEMBERS OR PLATES MARKED (CVN) AND ONLY THOSE MEMBERS MUST MEET THE CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS INDICATED IN SECTION 714 OF THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006.



BEAM ELEVATION

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

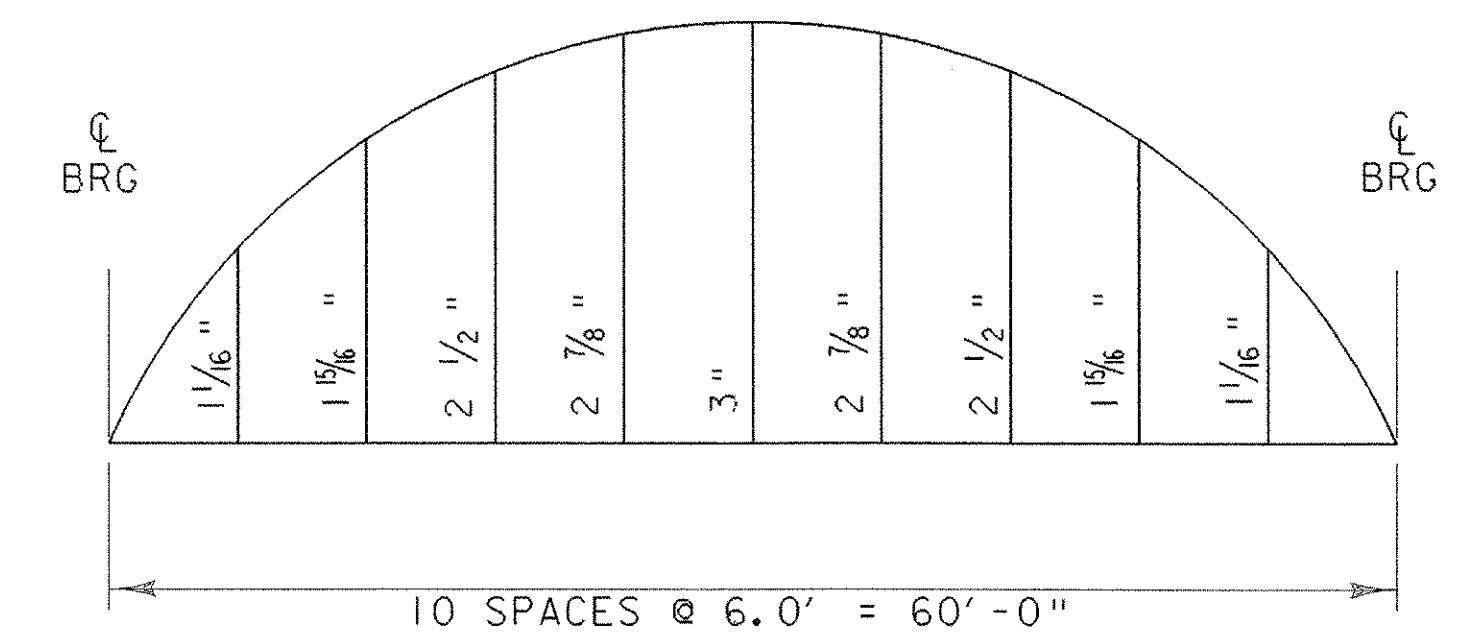
**CVN = CHARPY V-NOTCH TEST REQUIRED
 *SEE HAUNCH DETAIL



DEAD LOAD DEFLECTION DIAGRAM

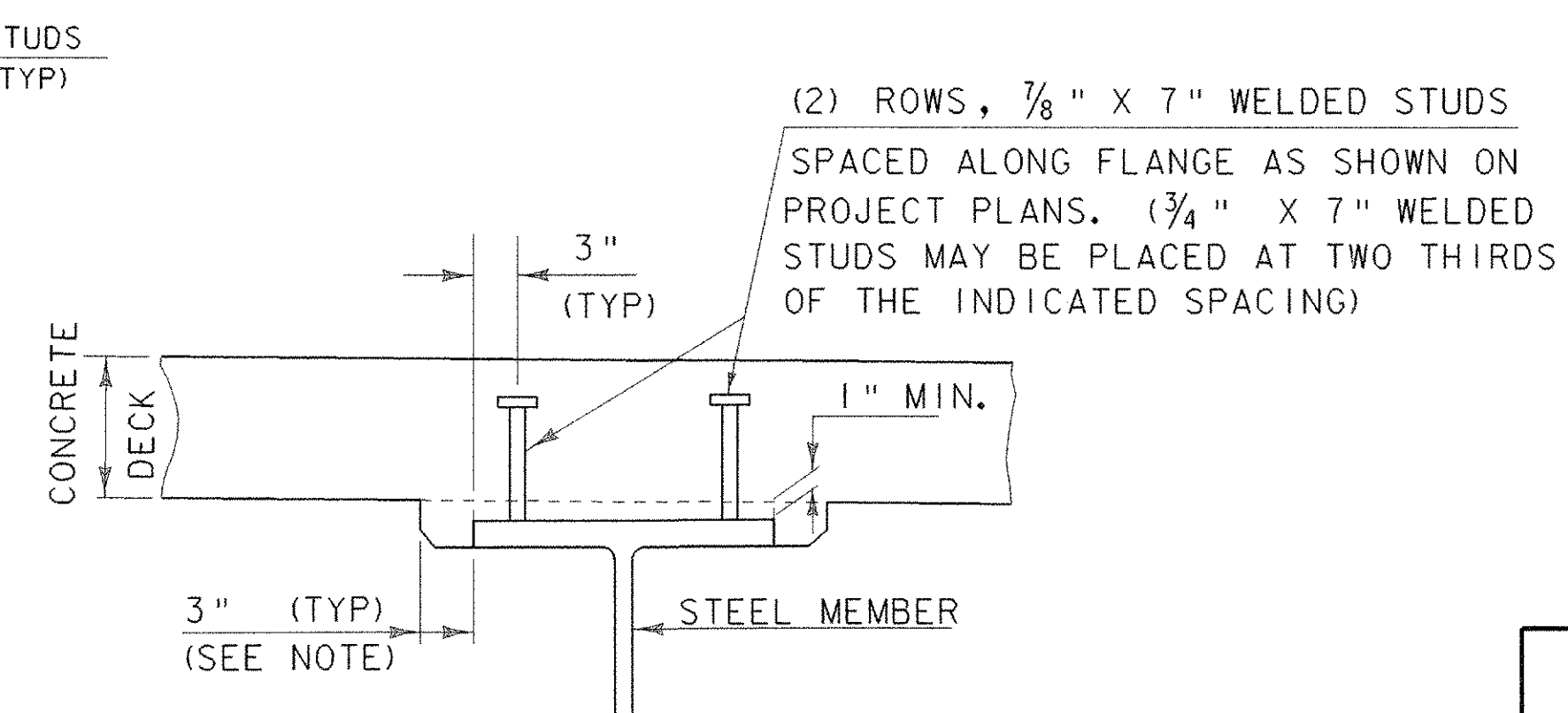
NTS

DIAGRAMS INCLUDE 5/16" DEAD LOAD DEFLECTION @ MIDSPAN DUE TO BEAM SELFWEIGHT.



CAMBER DIAGRAM

NTS



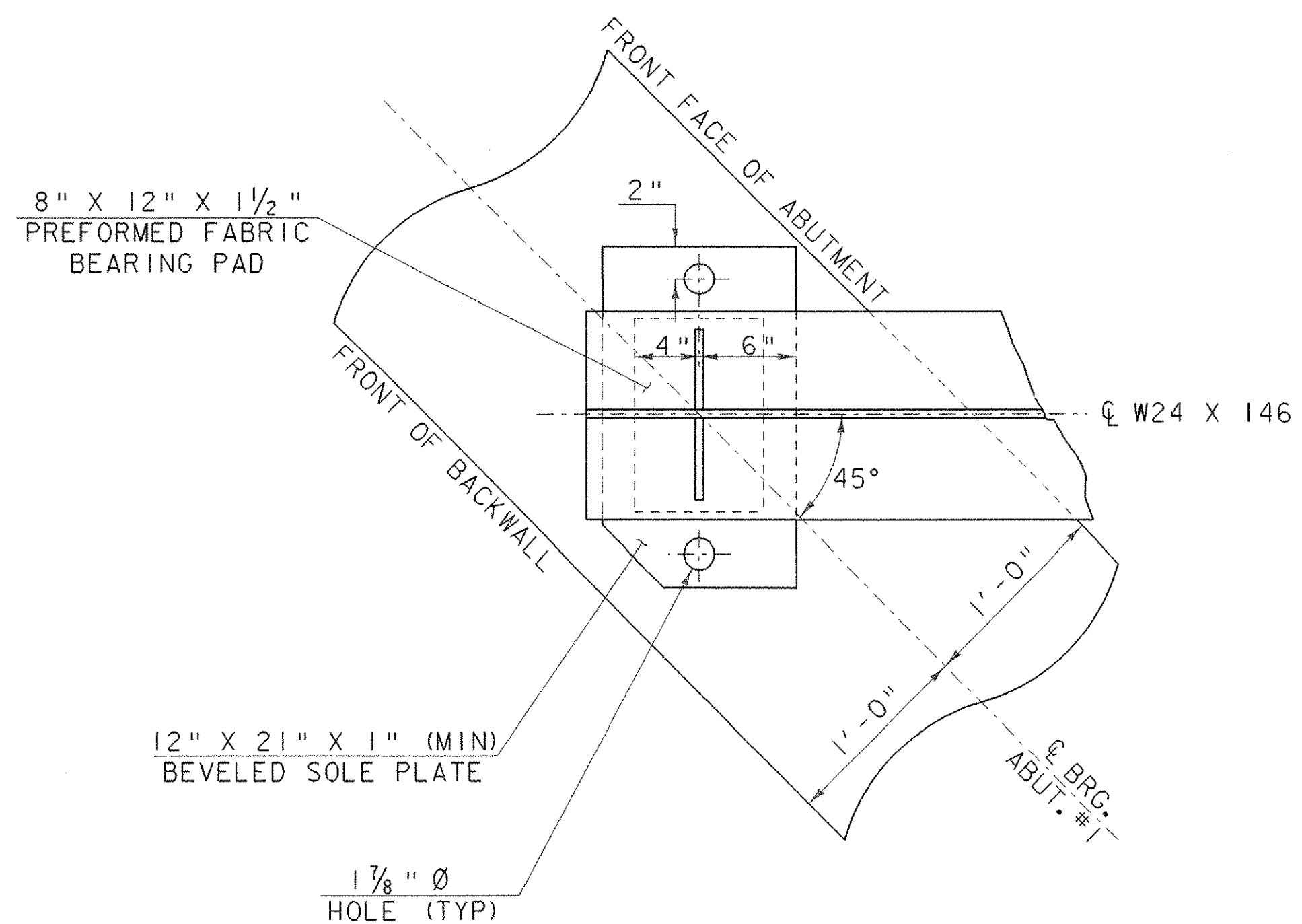
NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. SYSTEMS SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURES ENGINEER. ALL VOIDS SHALL BE FILLED WITH MORTAR, TYPE IV OR AN EQUIVALENT PRODUCT FROM THE APPROVED PRODUCTS LIST.

HAUNCH AND SHEAR CONNECTOR DETAILS

NTS

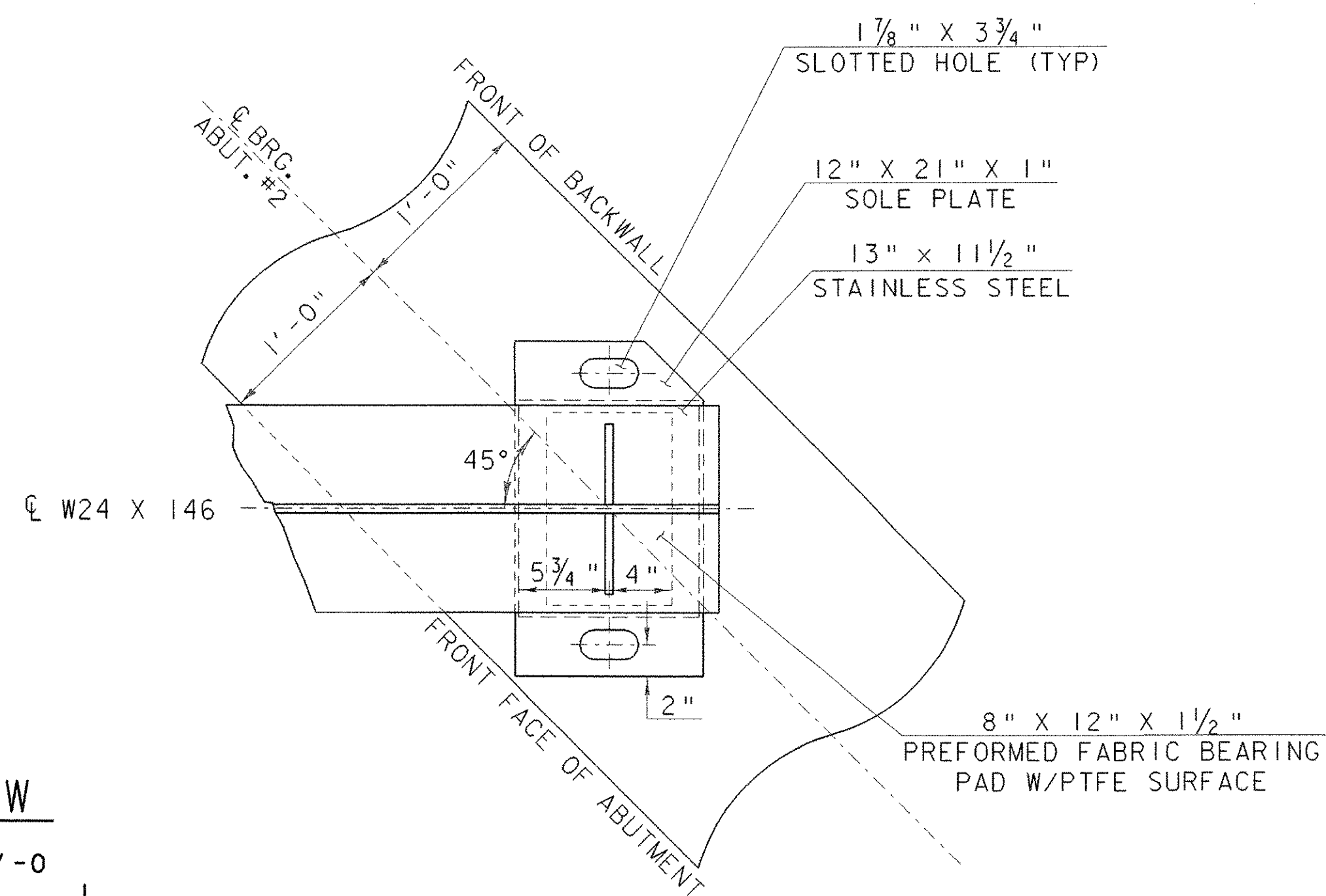
STATE OF VERMONT
 AGENCY OF TRANSPORTATION

Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Rev. Sta.	
FRAMING PLAN & STRUCTURAL STEEL DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	R. S. YOUNG
Checked By	Date	Bridge Design Supervisor	
W. B. SYMONDS	10/00	C. P. WILLIAMS	Date 10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.G.C. Info. M:\Projects\90\058\Structures\sj058spr.dgn			
Bridge Sheet No. sj058frm.i		Sheet 16 of 49	



PLAN VIEW

SCALE 1/2" = 1'-0"
 1 9 6 3 0

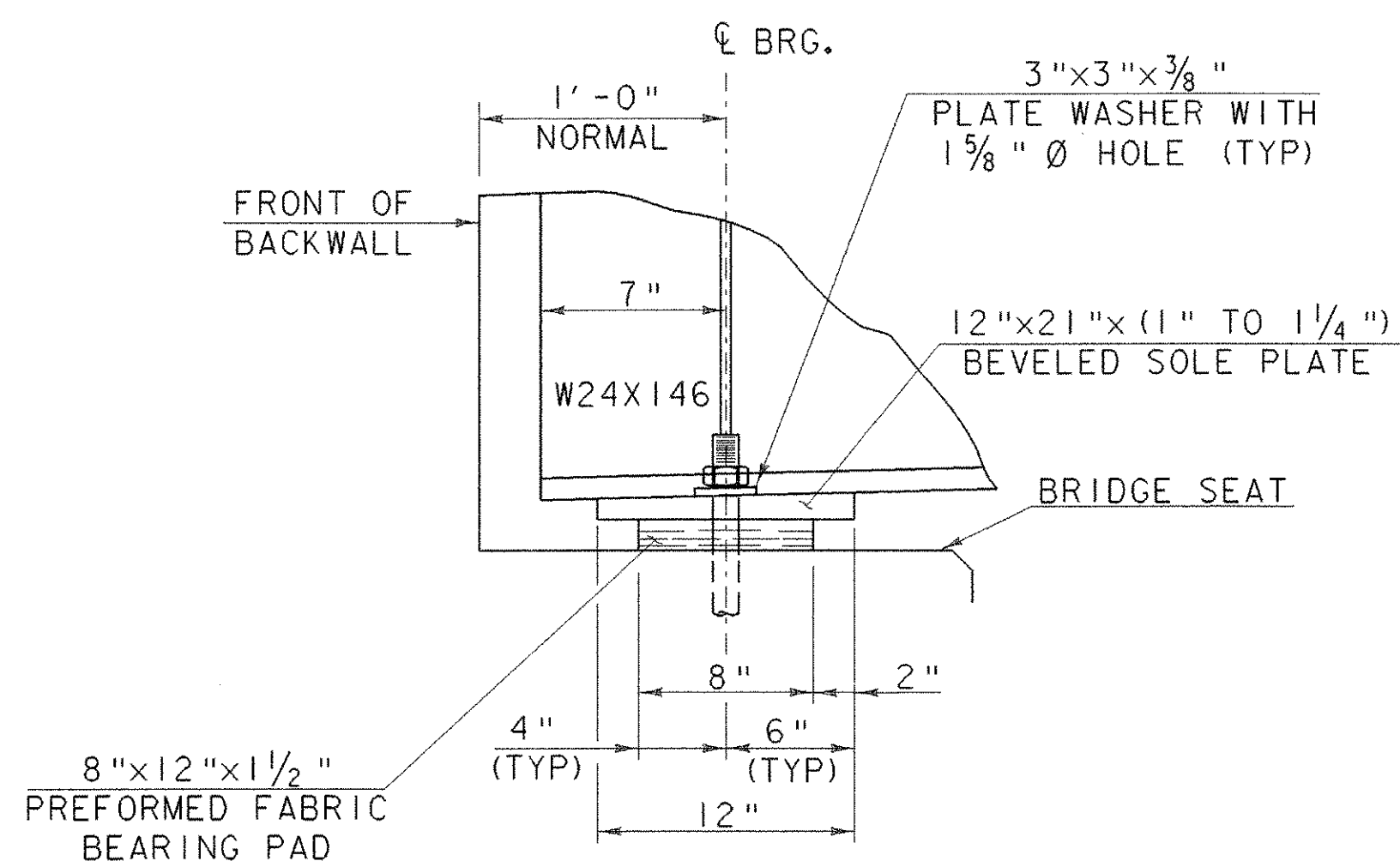


BEARING NOTES

- BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731.
- THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 RODS. AREAS OF GALVANIZING OR METALIZING DAMAGED BY WELDING AND/OR HANDLING SHALL BE PAINTED WITH A ZINC RICH PAINT, IN ACCORDANCE WITH SUBSECTION 513.06 (f).
- ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET, AND SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN.
- BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATE CONFIGURATION.
- THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE GIRDERS. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK AND CURBS HAVE BEEN POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO DEAD LOAD DEFLECTION FROM THE DECK AND CURBS. THE FINAL "B" DISTANCE MUST BE REACHED WITHIN 1/8".
- DESIGN CRITERIA:
 - BASE PLATE TO CONCRETE DESIGN PRESSURE = 1000 PSI MAXIMUM.
 - MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIAN.
 - HORIZONTAL CAPACITY SHALL BE A MINIMUM 10% OF VERTICAL LOAD.
 - DESIGN LOAD PER BEARING = 90.89 KIPS.

DL = 29.35 K
 LL + I = 61.54 K
 90.89 K

- SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED AND INCLUDE ANY NECESSARY WELDING OR BONDING PROCEDURES.
- SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED OR METALIZED AS PER SECTION 531.04 (b) AND 506.15. IF THE BEARINGS ARE METALIZED, THEY SHALL BE SEALED WITH AN APPROVED PRIMER AS SPECIFIED IN SUBSECTION 531.04 (b).
- ALL WASHERS SHALL BE 3/8" PLATE MINIMUM. PAYMENT FOR ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD". ANCHOR BOLTS SHALL CONFORM TO VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 714.08.
- ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS STEEL) SHALL BE AASHTO M 270/M 270 GRADE 36. ANCHOR BOLTS SHALL BE ASTM A307.

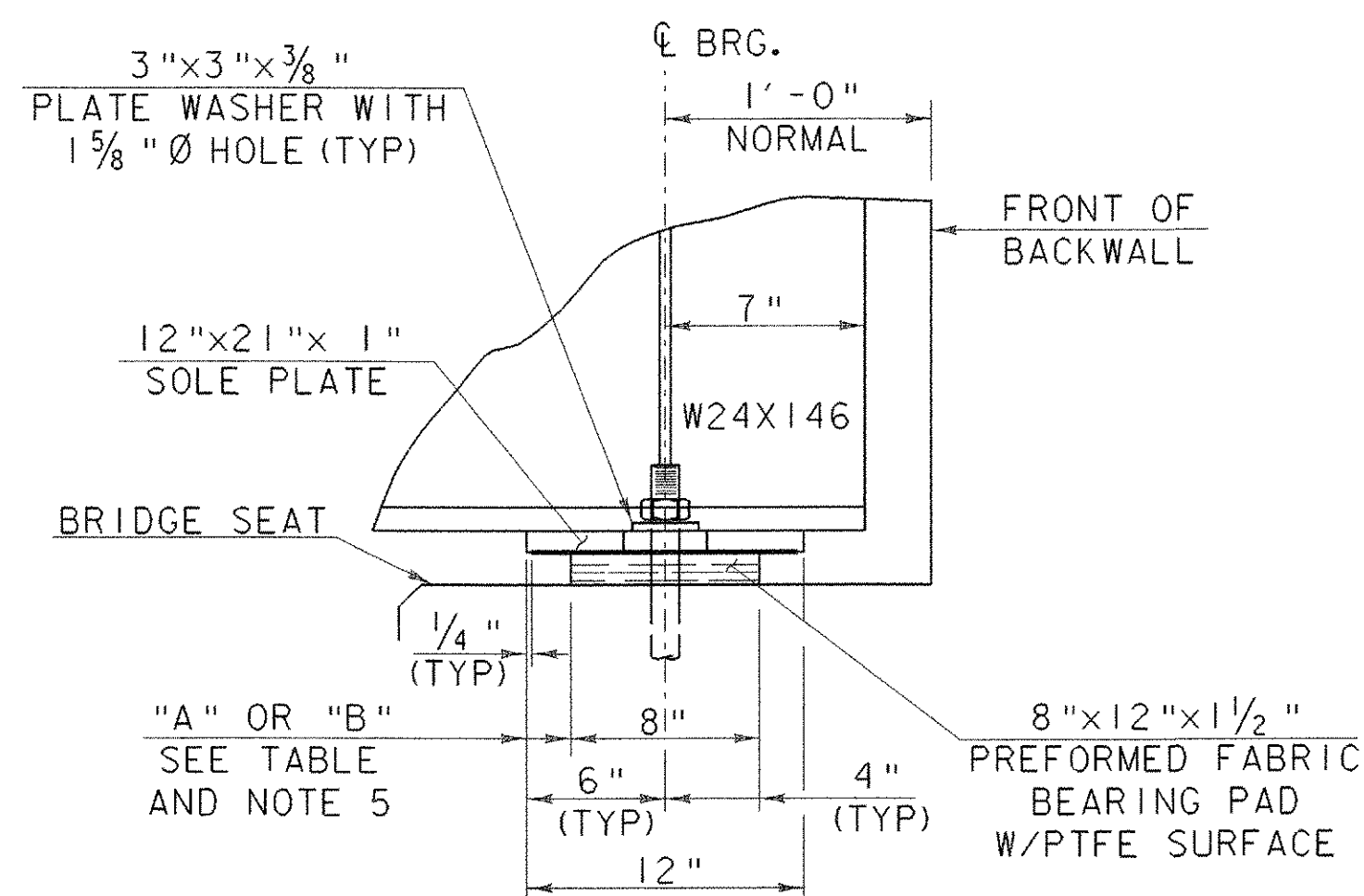


SOLE PLATE CLIP DETAIL

NTS

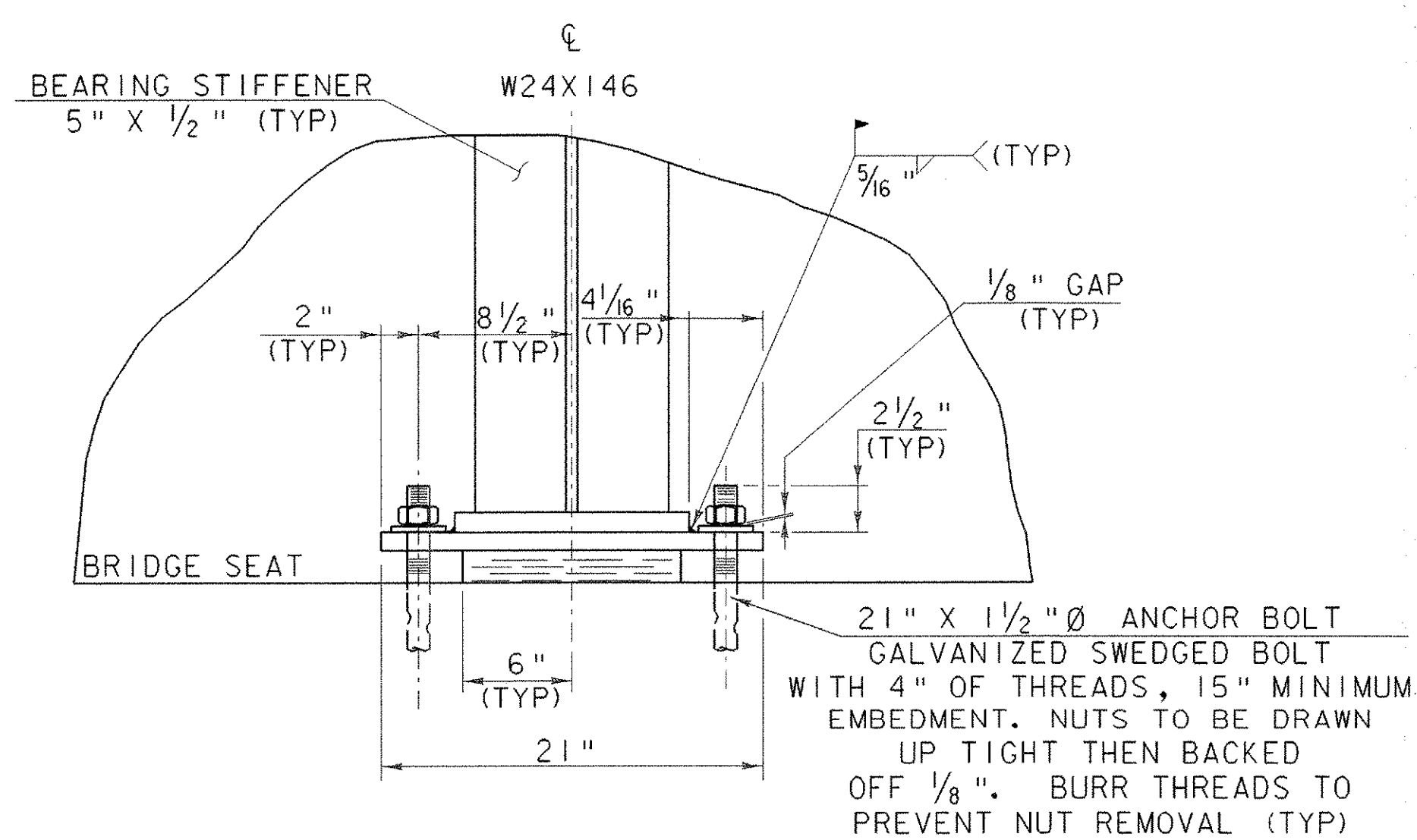
SIDE VIEW

PARALLEL TO C/T H 8
 SCALE 1/2" = 1'-0"
 1 9 6 3 0



ABUTMENT NO. 2

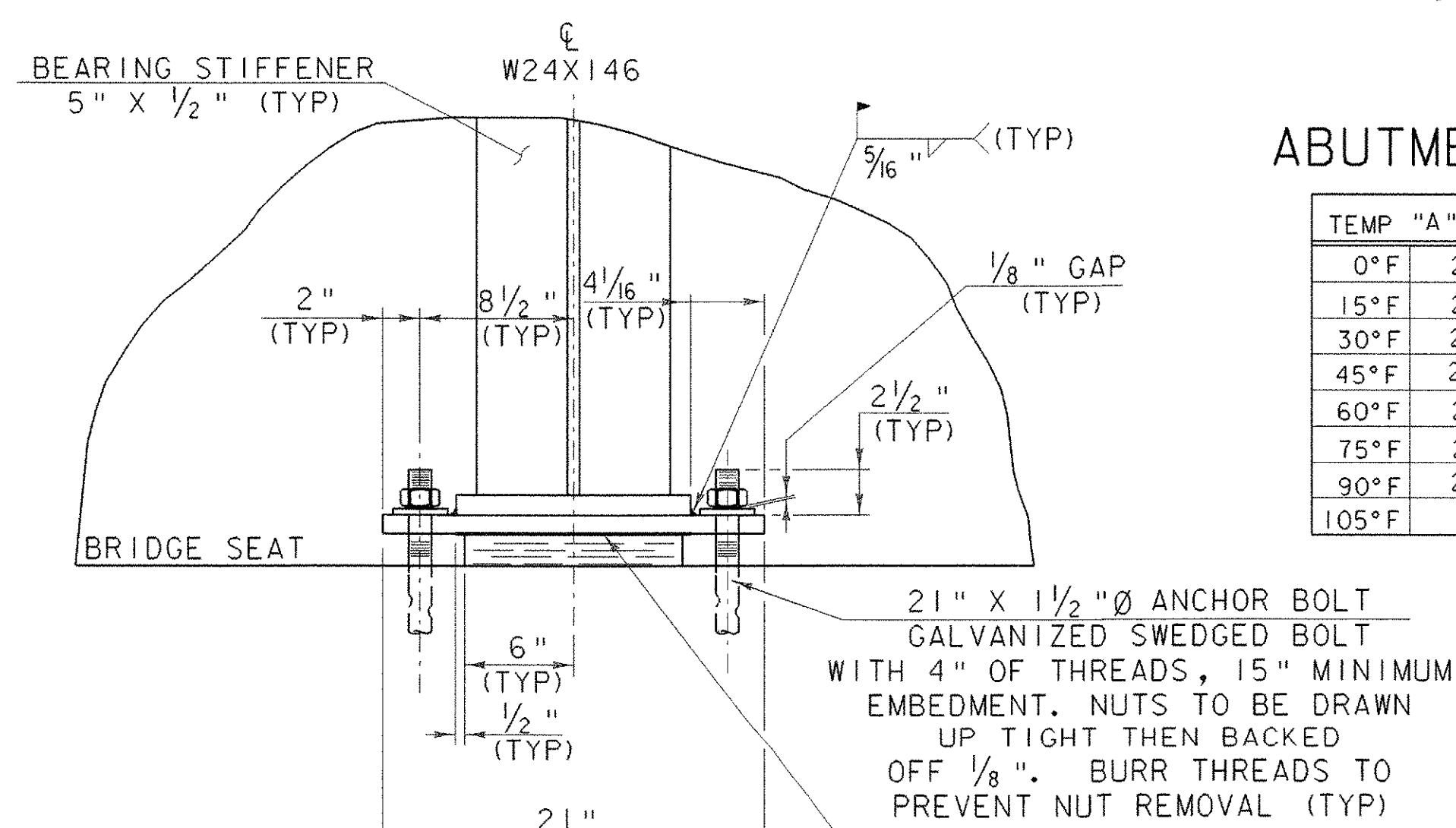
TEMP	"A" DIST	"B" DIST
0°F	2 1/16"	2 3/16"
15°F	2 3/16"	2 1/8"
30°F	2 5/16"	2 1/16"
45°F	2 7/16"	2"
60°F	2 9/16"	1 15/16"
75°F	2 11/16"	1 7/8"
90°F	2 13/16"	1 11/16"
105°F	2"	1 3/4"



FIXED BEARING @ ABUT #1

FRONT VIEW

SCALE 1/2" = 1'-0"
 1 9 6 3 0



EXPANSION BEARING @ ABUT #2

**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of **READING** Bridge No. **25**
 Highway No. **TH 8** Log Sta. _____
 Rev. Sta. _____

BEARING DETAILS

TH 8 OVER MILL BROOK

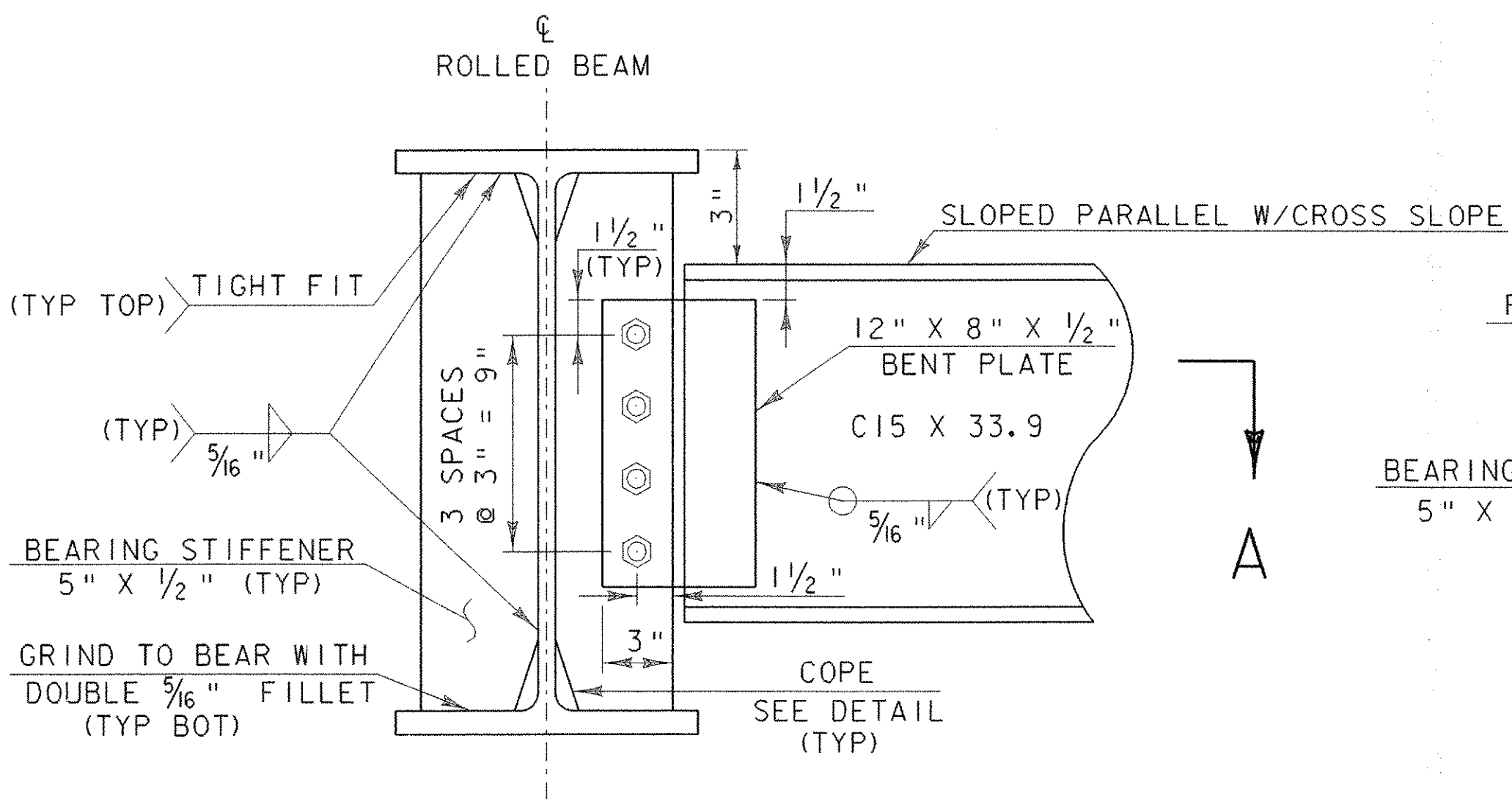
Designed By **R. S. YOUNG** Drawn By **R. S. YOUNG**
 Checked By _____ Date _____ Bridge Design Supervisor _____

W. B. SYMONDS 10/00 **C. P. WILLIAMS** Date 10/00

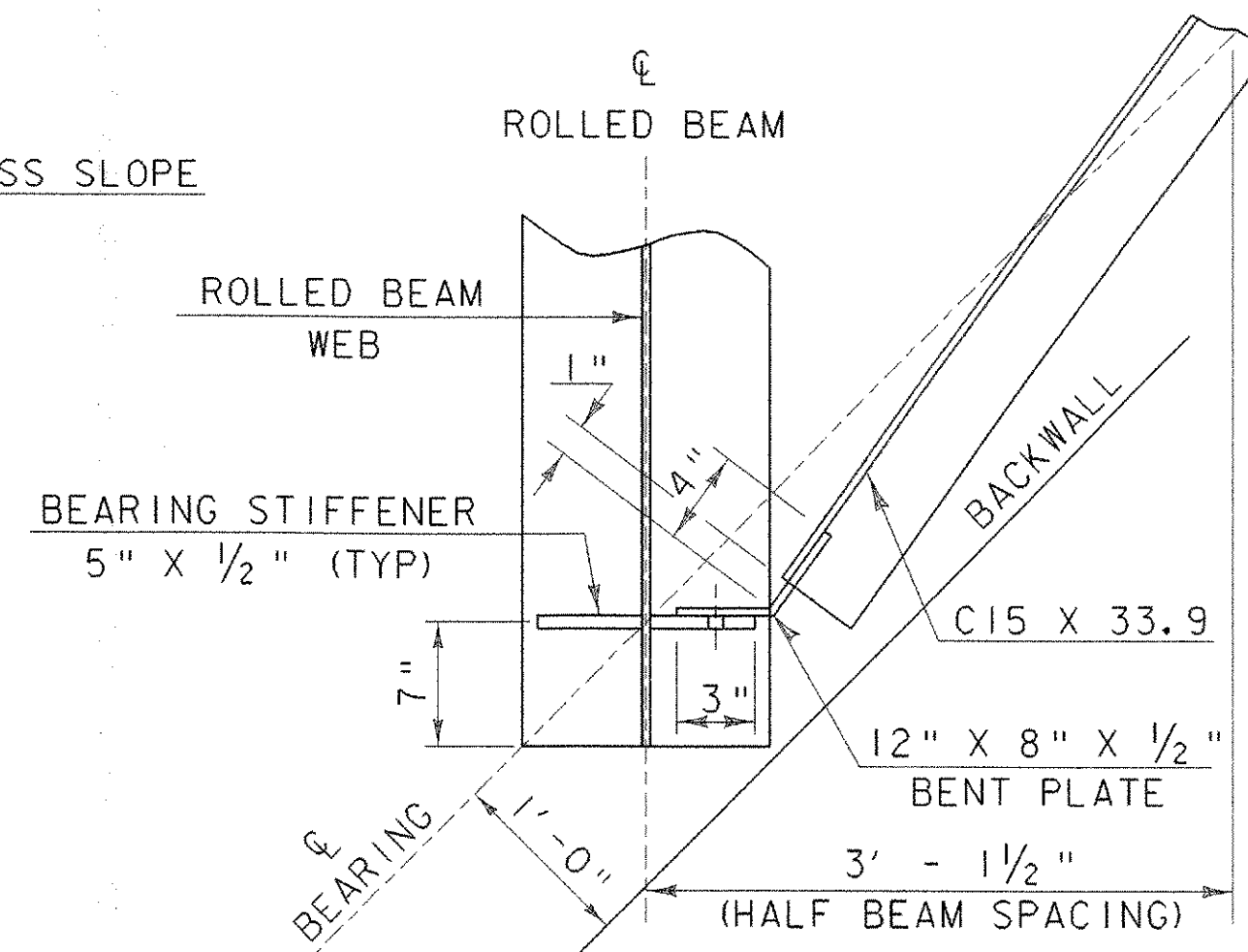
PROJECT **READING** PROJECT NO. **BRZ 1444 (23)**

I.G.C. Info. M:\Projects\90\058\Structures\sj058spr.dgn

Bridge Sheet No. **sj058bea.i** Sheet **17** of **49**

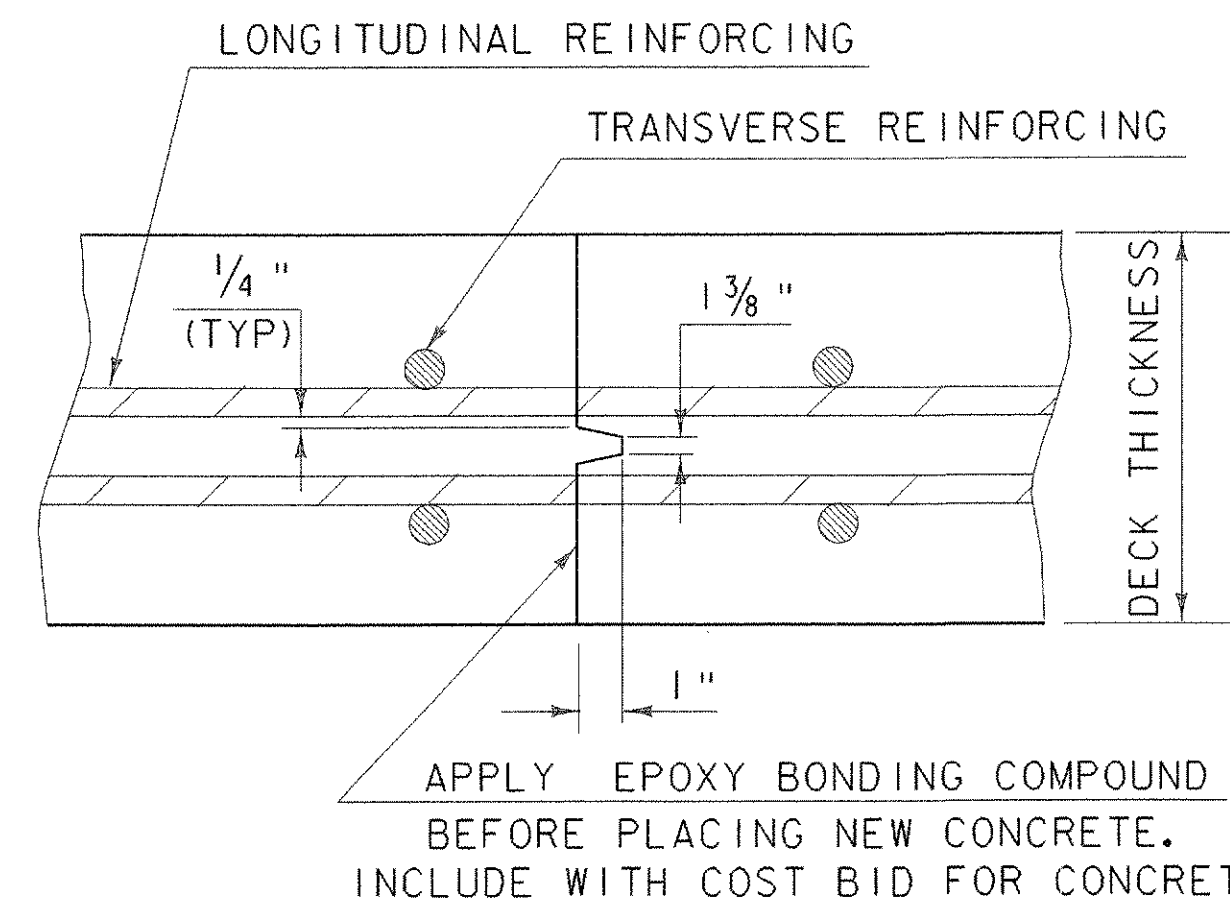


ABUTMENT DIAPHRAGM AND BEARING STIFFENERS

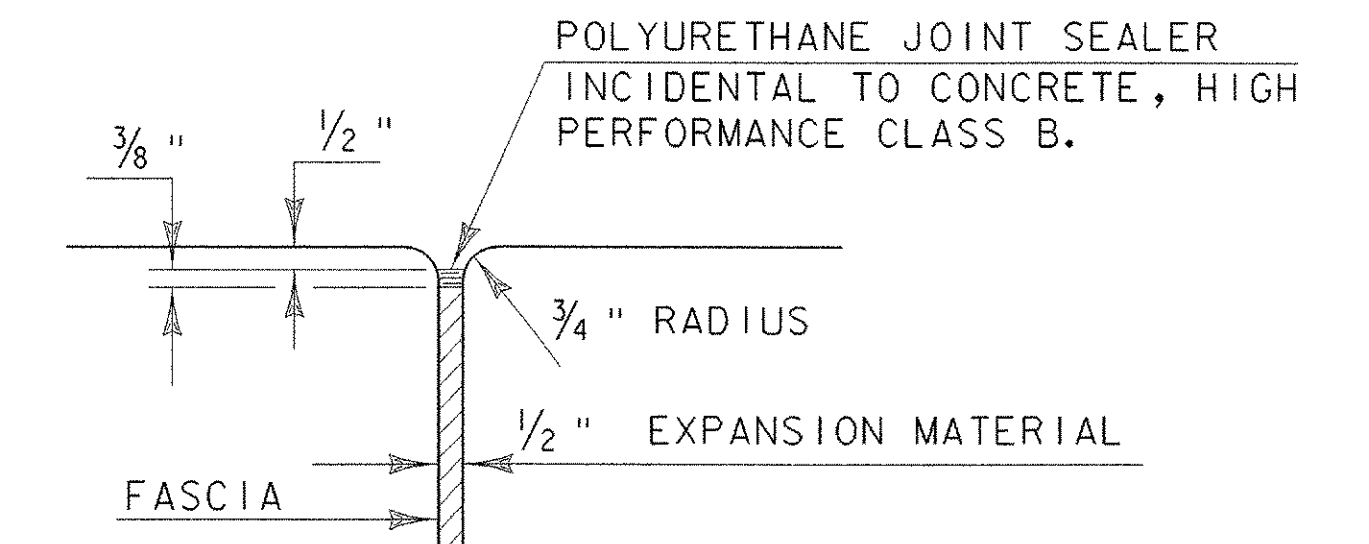


SECTION A - A

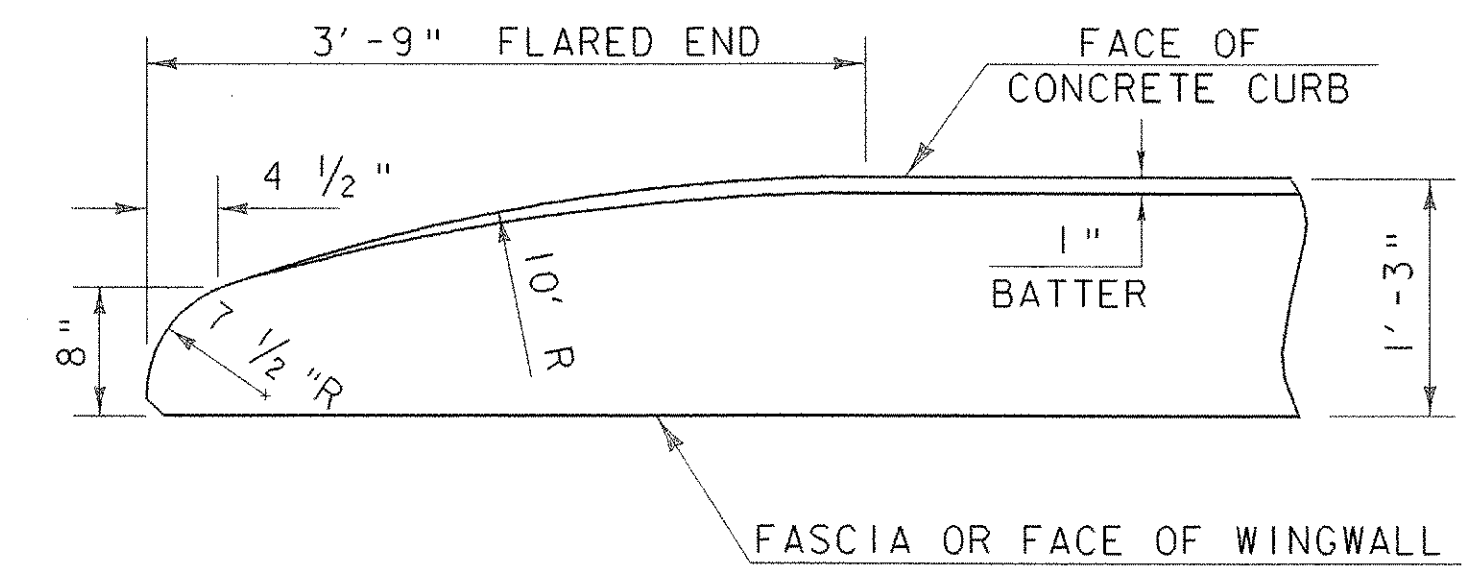
ALL DETAILS NOT TO SCALE



TRANSVERSE BRIDGE DECK CONSTRUCTION JOINT DETAILS

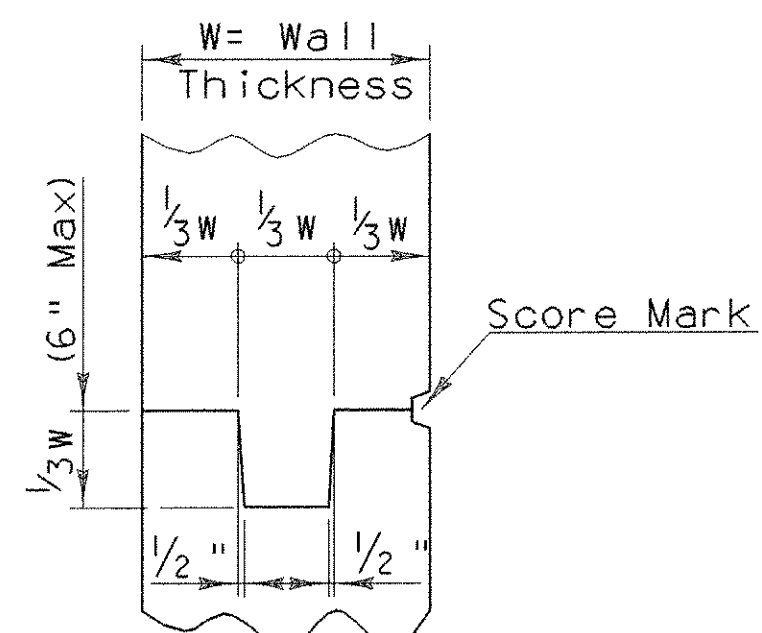


JOINT BETWEEN FASCIA AND WINGWALL

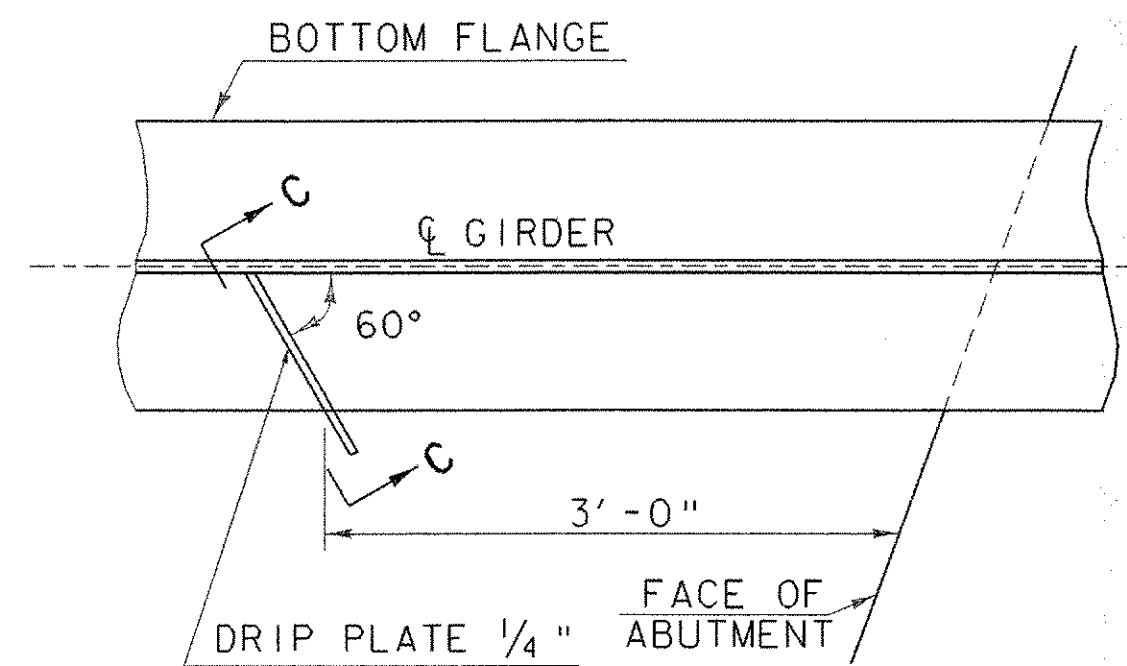


FLARED END DETAIL FOR 1'-3" CURB

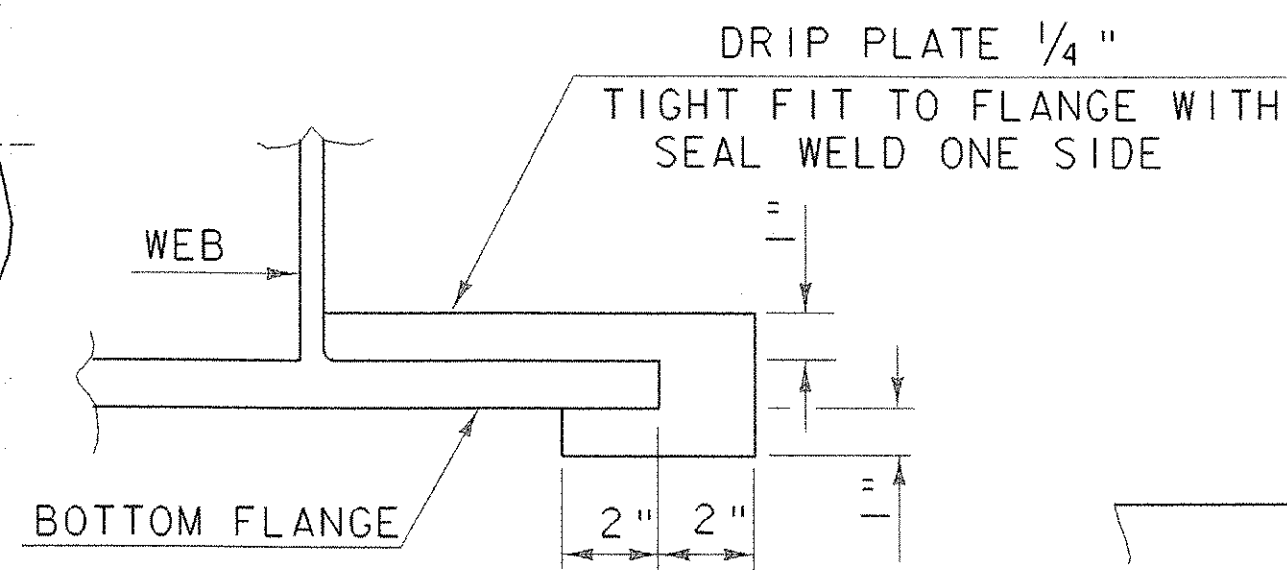
CURB REINFORCING STIRRUP BARS SHALL BE TURNED AS REQUIRED TO FIT FLARED ENDS.



TYPICAL CONCRETE CONSTRUCTION JOINT

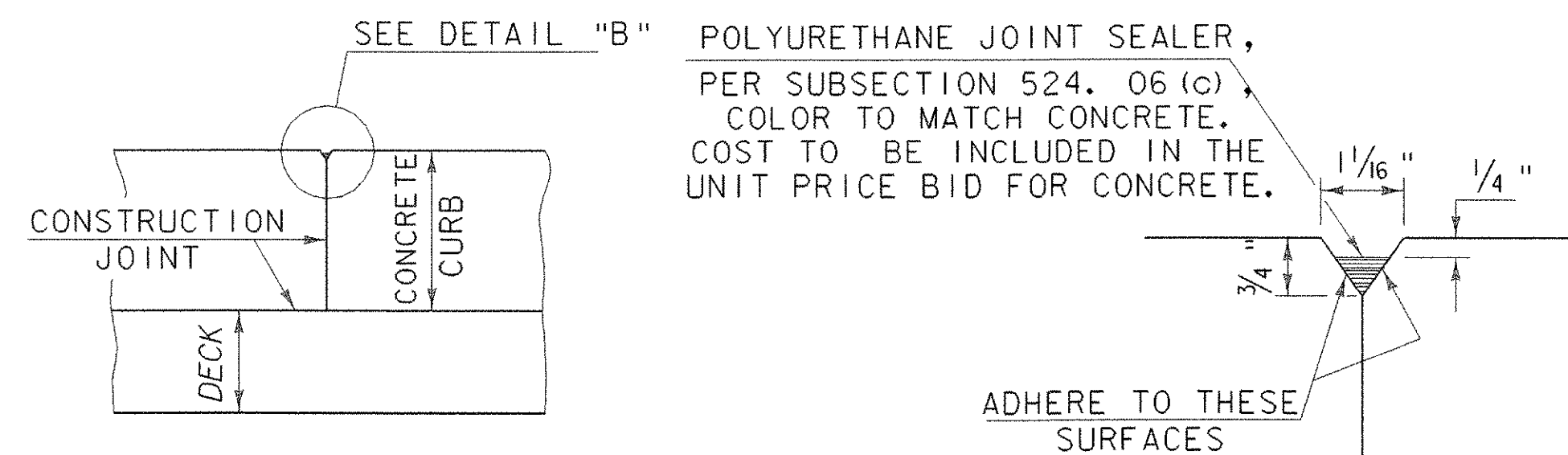


PLAN DRIP PLATE



SECTION C - C

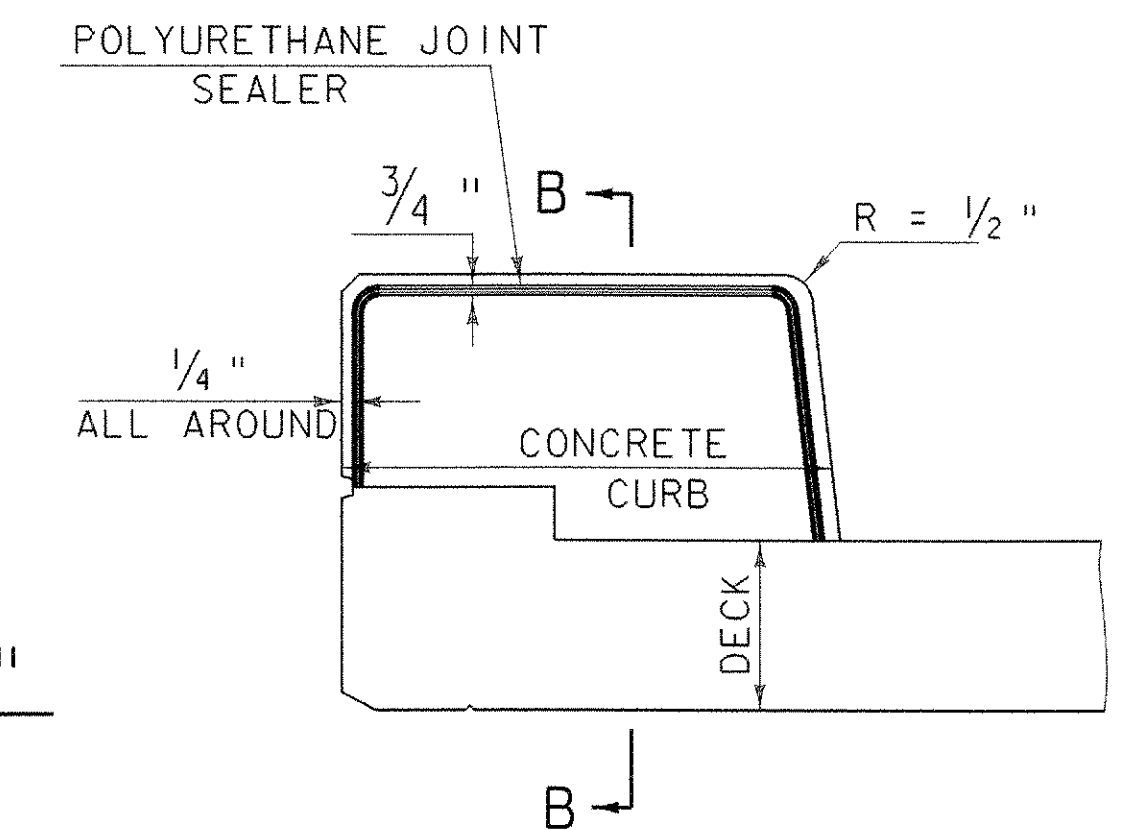
NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



SECTION B - B

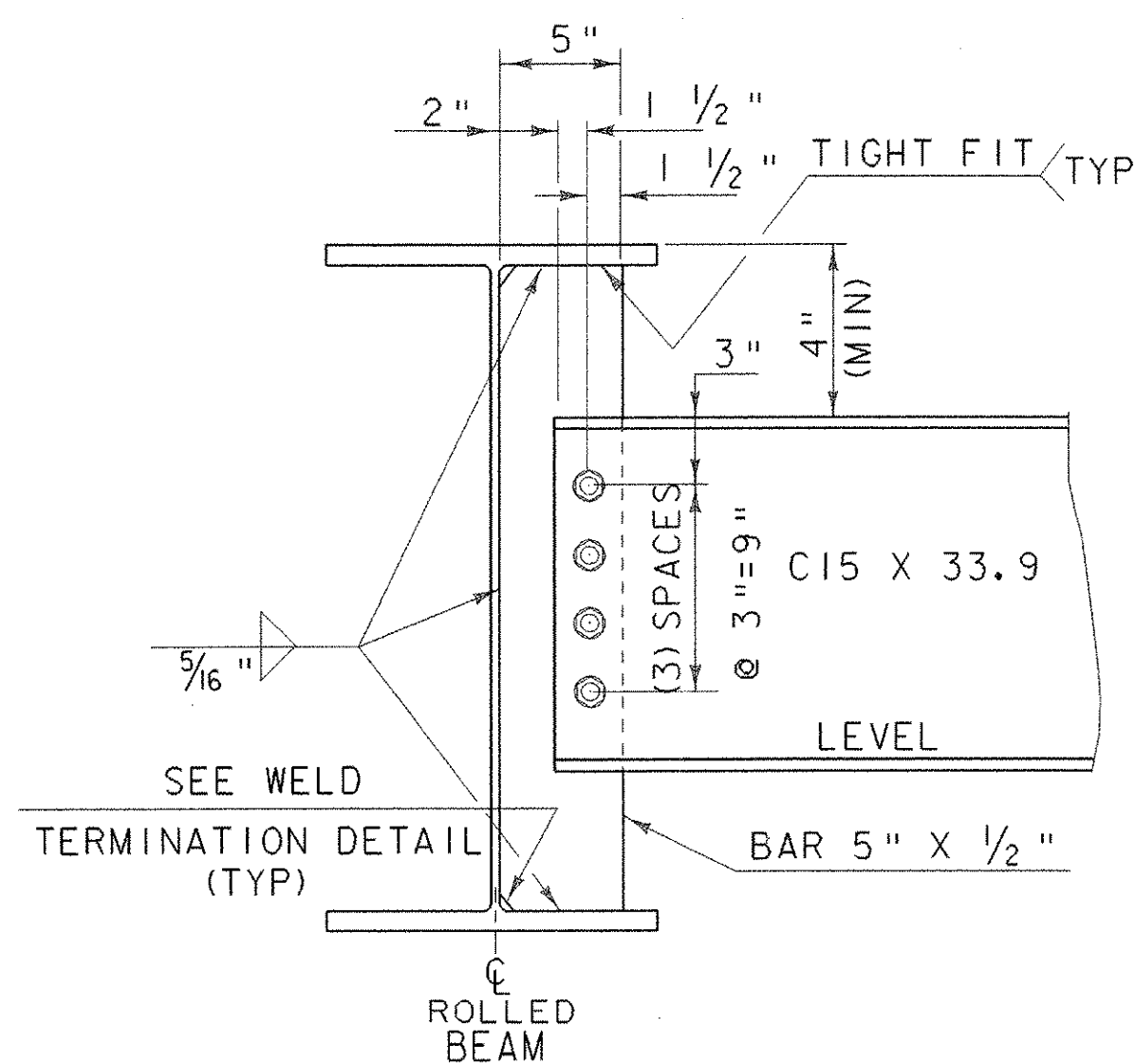
ADHERE TO THESE SURFACES

DETAIL "B"

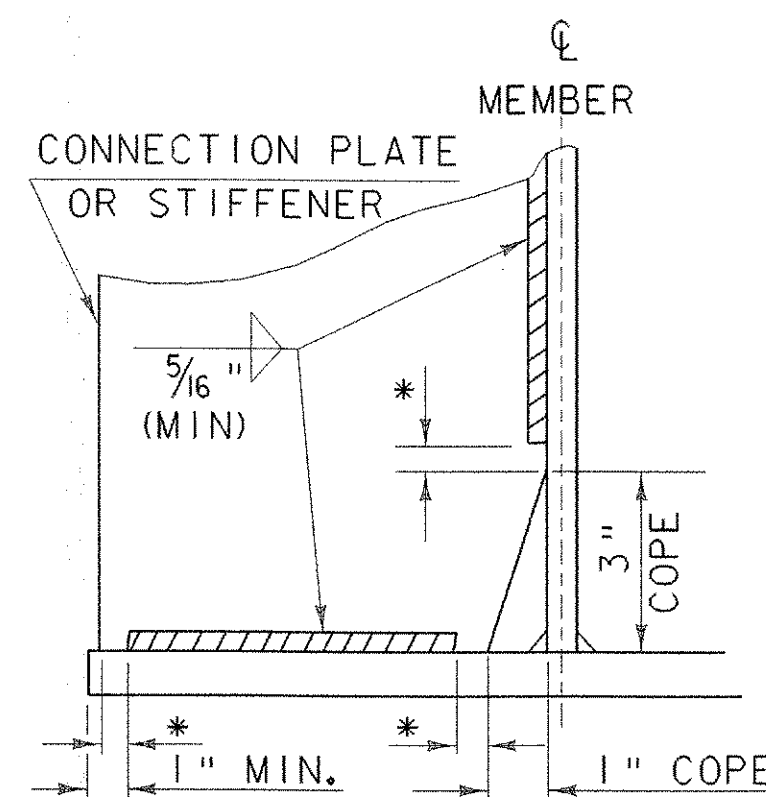


TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT

- NOTES:
1. CONCRETE CURBS MAY BE PLACED IN ONE POUR FOR THE FULL LENGTH OF THE BRIDGE. IF THE CONTRACTOR ELECTS TO USE CURB CONSTRUCTION JOINTS, THE JOINTS SHALL BE CONSTRUCTED AS SHOWN IN THESE DETAILS AND NOTES #2 AND #3 SHALL BE APPLICABLE.
 2. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
 3. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.

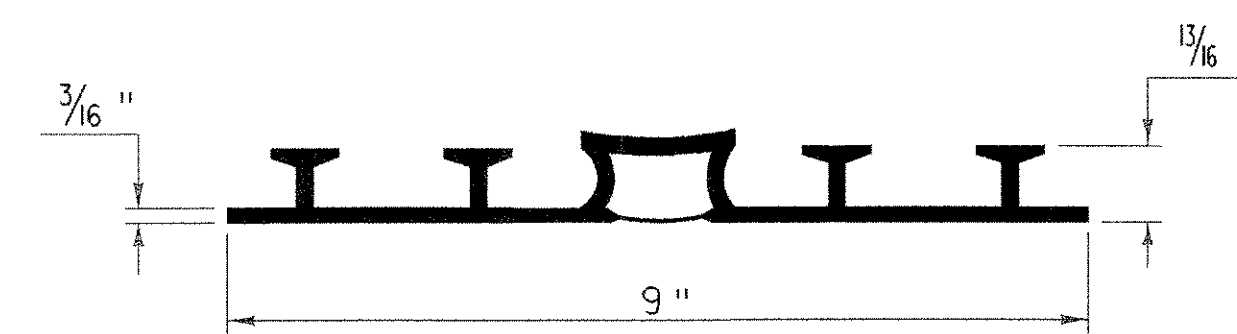


INTERMEDIATE DIAPHRAGMS FOR 24 THRU 30 INCH ROLLED BEAMS



*NO WELD FOR 1/4" MIN. 1/2" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

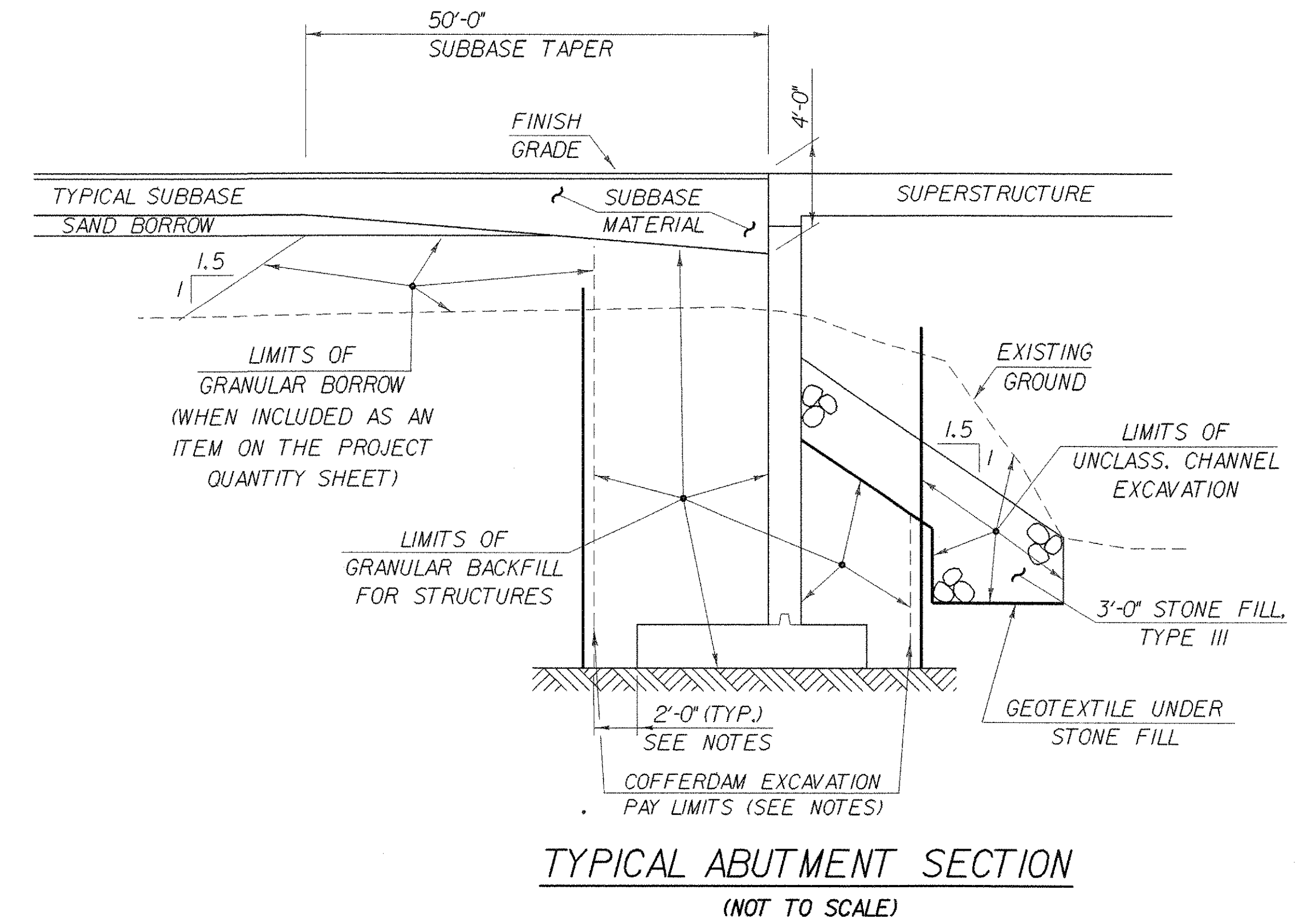
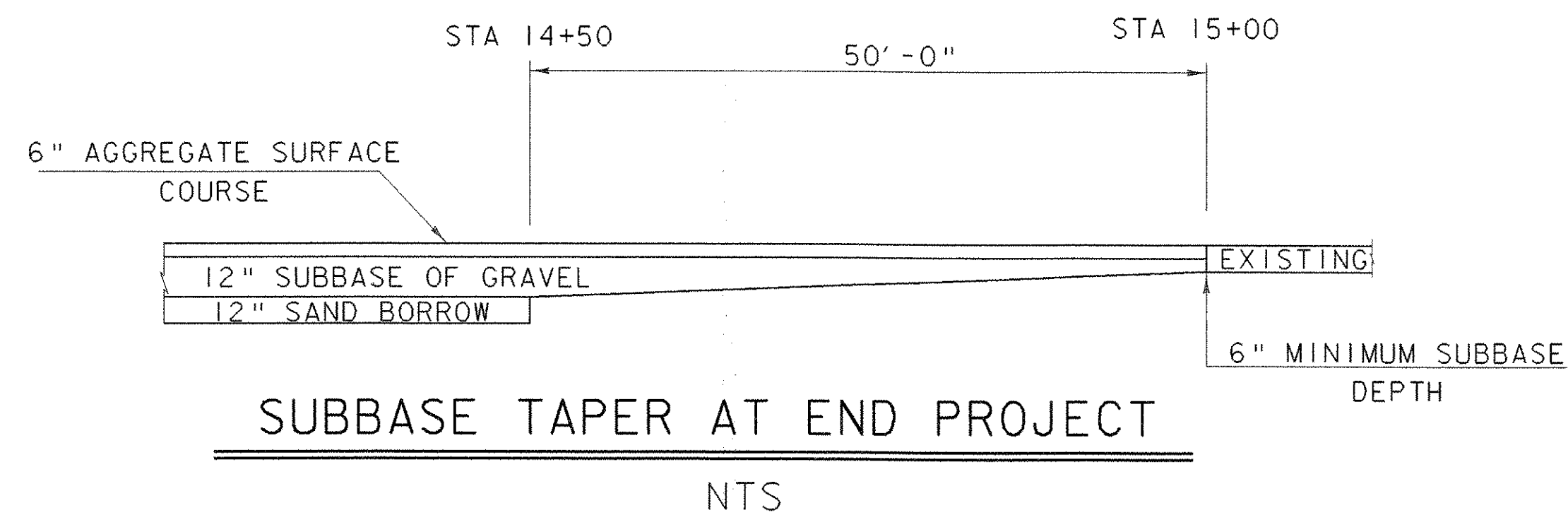
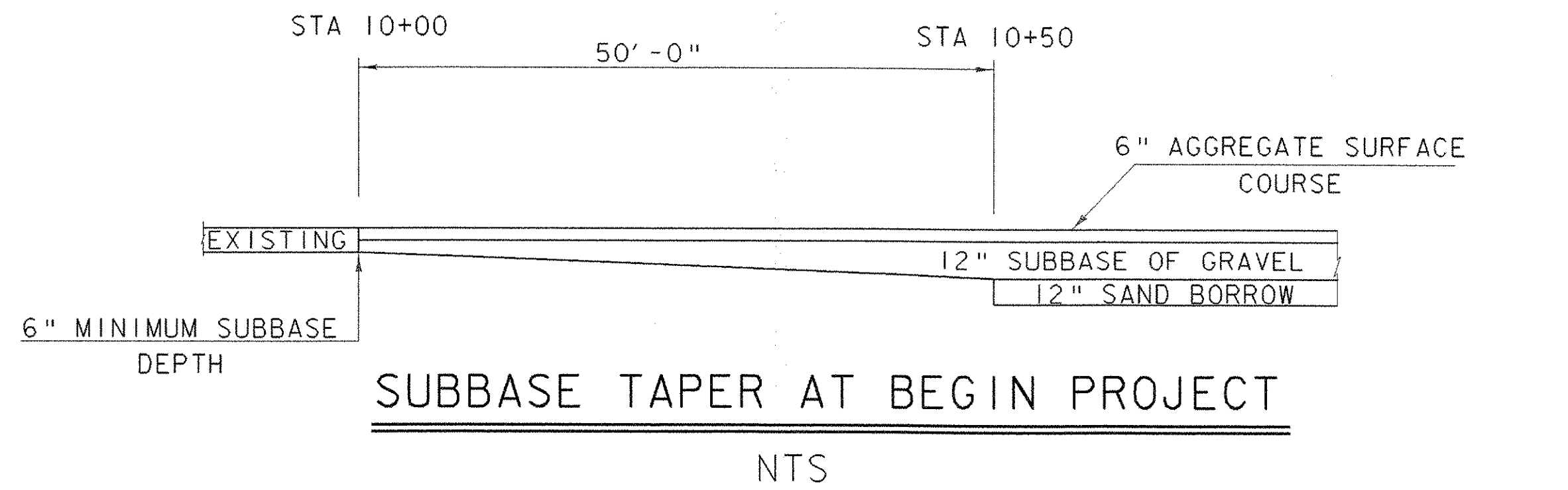
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS



P.V.C. WATERSTOP FOR JOINTS

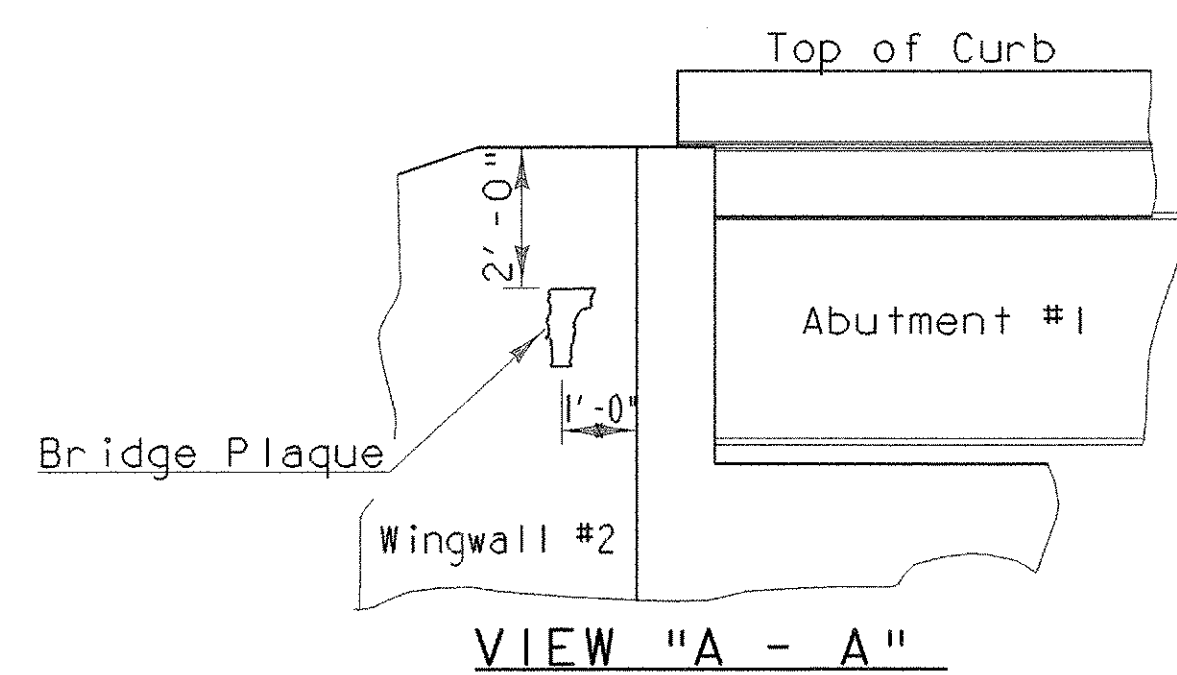
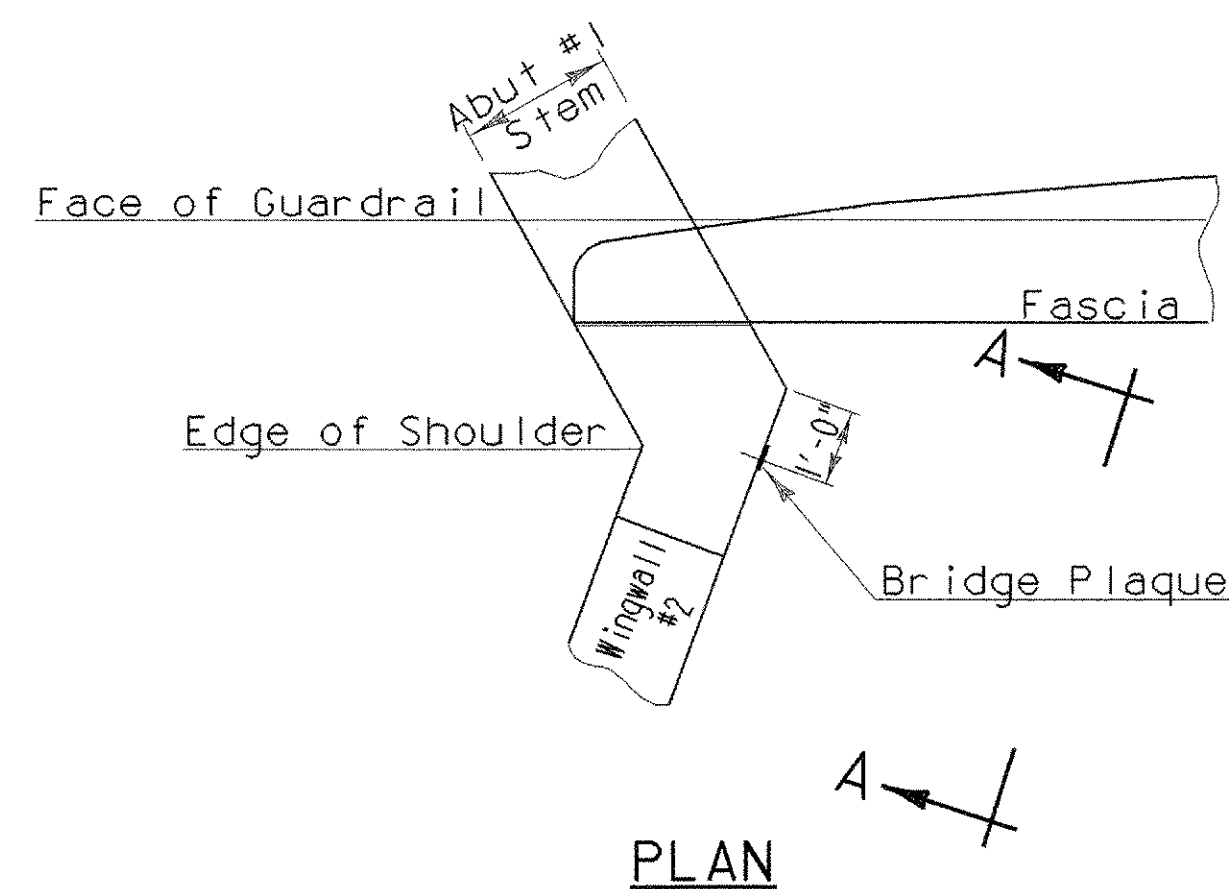
THE COSTS FOR P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Rev. Sta.	
MISC. STEEL & CONCRETE DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	R. S. YOUNG
Checked By	Date	Bridge Design Supervisor	
W. B. SYMONDS	10/00	C. P. WILLIAMS	Date 10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.G.C. Info.	M:\Projects\90\058\Structures\j058spr.dgn		
Bridge Sheet No.	sj058mdt.i	Sheet	18 of 49



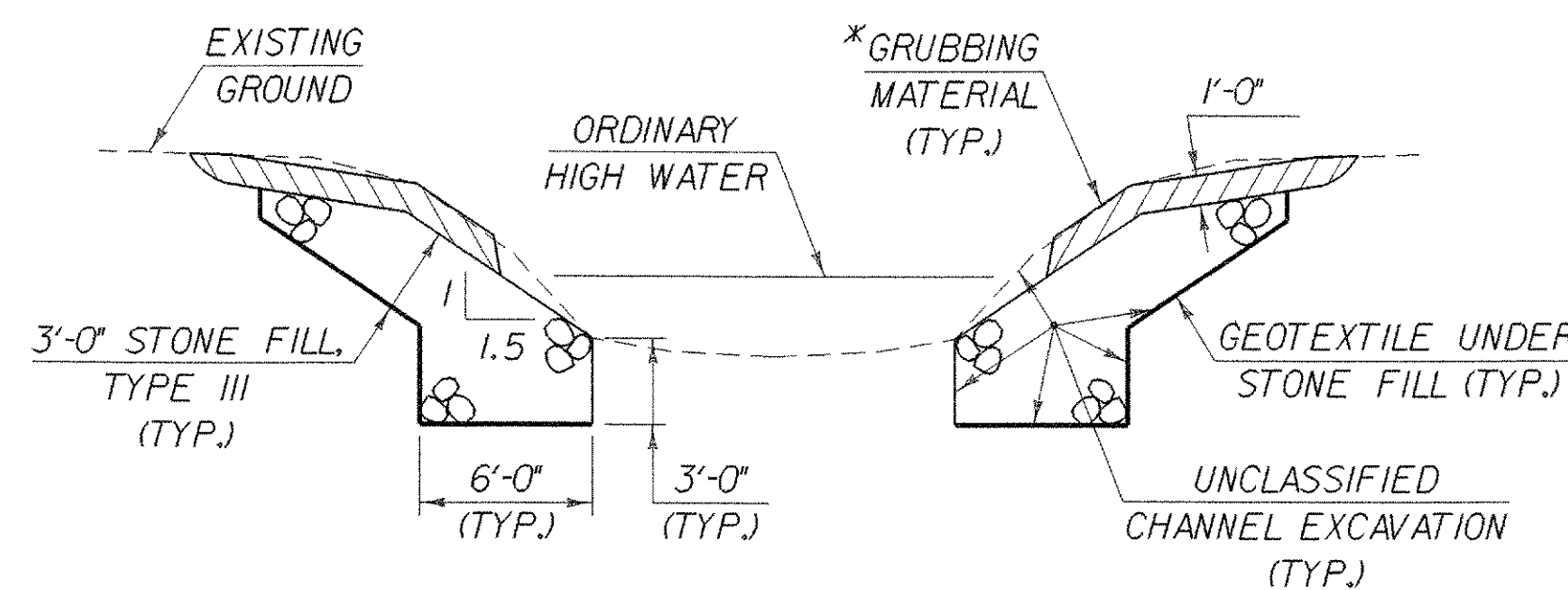
NOTES

1. ACTUAL COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF SUBSTRUCTURE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. ONE FOOT UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. 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 EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



LOCATE BRIDGE PLAQUE

The bridge plaque will be supplied by The Agency of Transportation and shall be installed by the contractor at abutment #1 on the right side as shown or as directed by the engineer.



*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE.

NOTE : GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE WHEN THE STONE FILL INTERSECTS THE ROADWAY SUBBASE.

STATE OF VERMONT AGENCY OF TRANSPORTATION

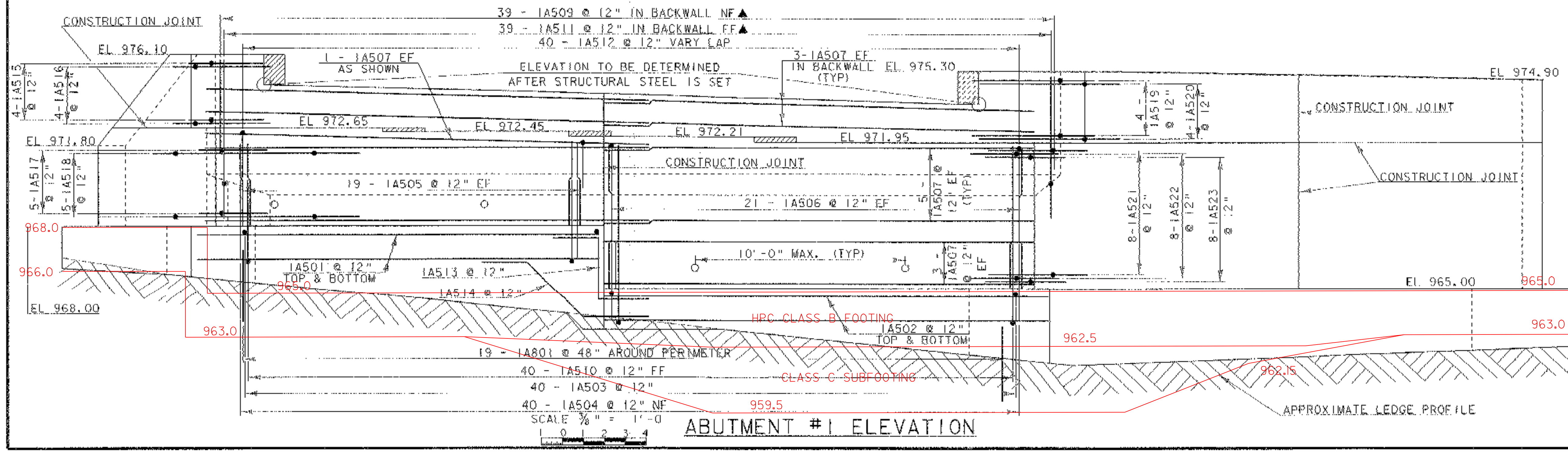
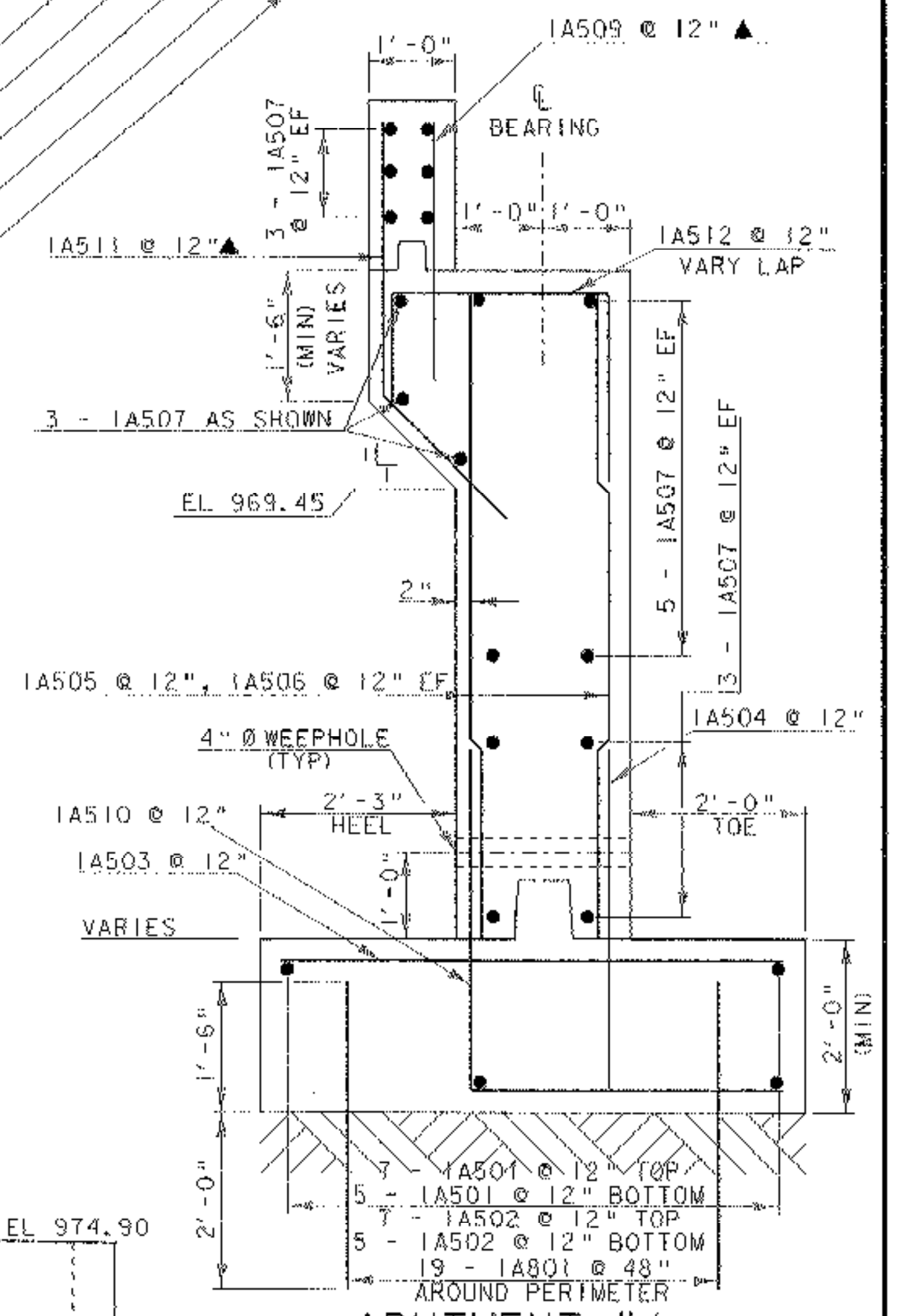
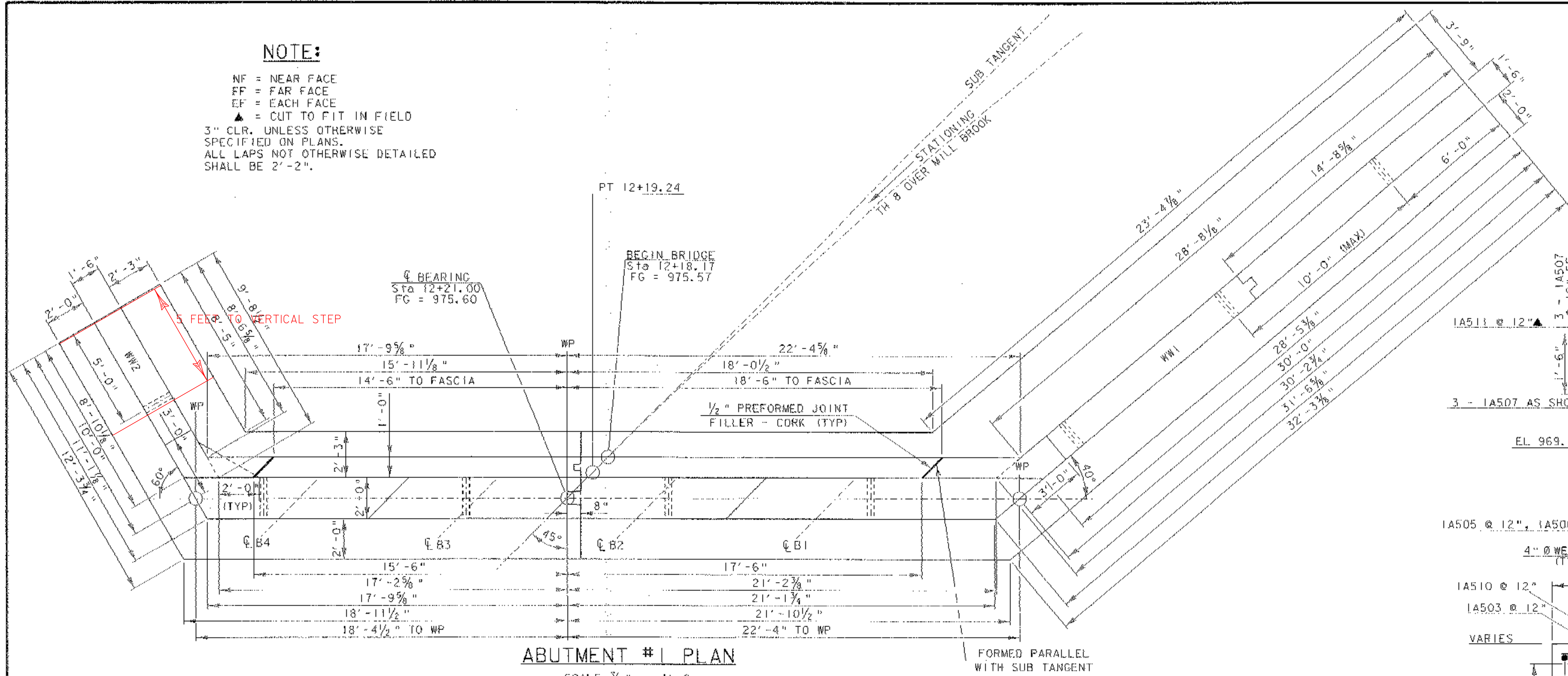
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Rev. Sta.	
TH 8 OVER MILL BROOK			
MICELLANEOUS DETAIL SHEET			
Designed By	W. B. SYMONDS	Drawn By	W. B. SYMONDS
Checked By	R. S. YOUNG	Date	8/99
		Bridge Design Supervisor	C. P. WILLIAMS
		Date	9/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I:\G.C. Info\Projects\90\058\Structures\sj058pr1.dwg\105mis.i			
Bridge Sheet No.		Sheet	19 of 49

NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
 ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".

NOTE:

SEE END OF BRIDGE
 DETAIL ON SHEET 15.
 SECTION A-A



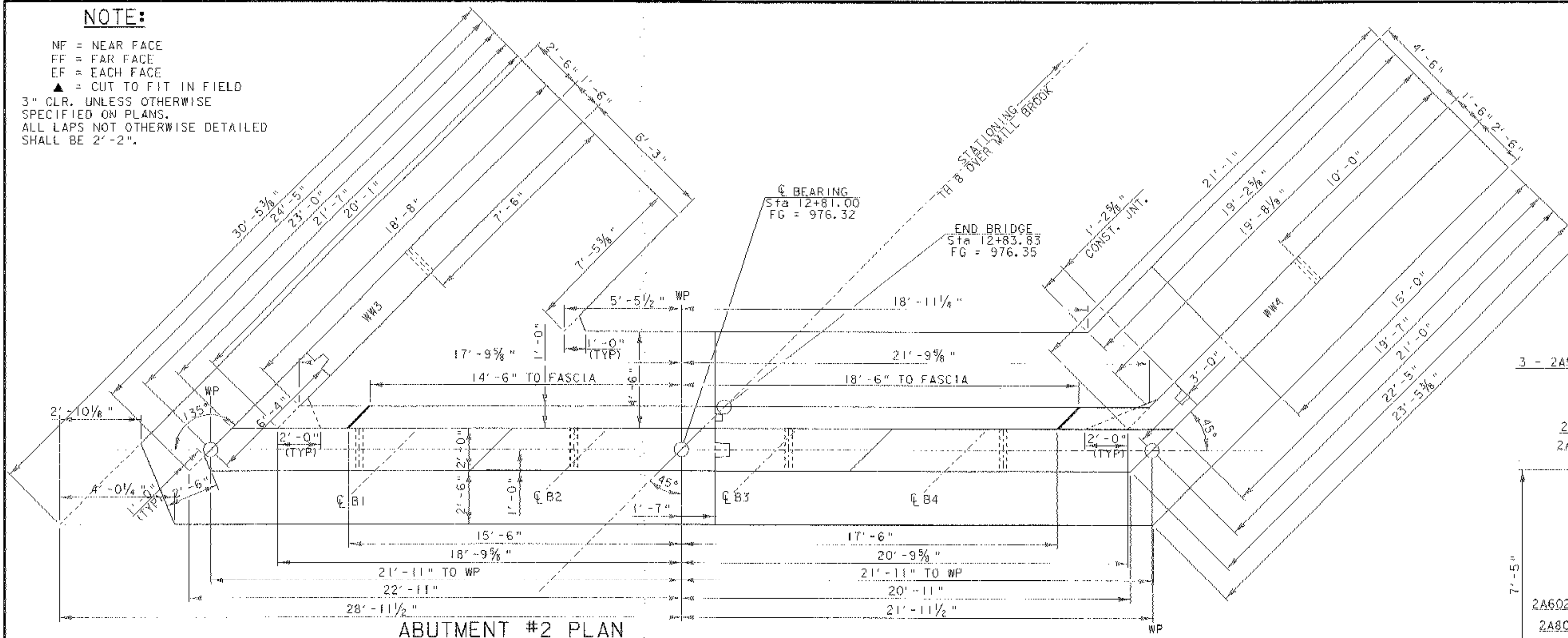
STATE OF VERMONT AGENCY OF TRANSPORTATION	
Town of READING	Bridge No. 25
Highway No. TH 8	Log Sta. Surv. Sta.
ABUTMENT #1 DETAILS TH 8 OVER MILL BROOK	
Designed By R. S. YOUNG	Drawn By P. G. JARVIS
Checked By R. S. YOUNG	Bridge Design Supervisor C. P. WILLIAMS
Date 10/00	Date 10/00
PROJECT READING	PROJECT NO. BRZ 1444 (23)
<small> I:\G.C. Info. M\Projects\901058\Structure\901058sub.dgn Bridge Sheet No. s\9058ab1.i Sheet 20 of 49 </small>	

NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
 ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".

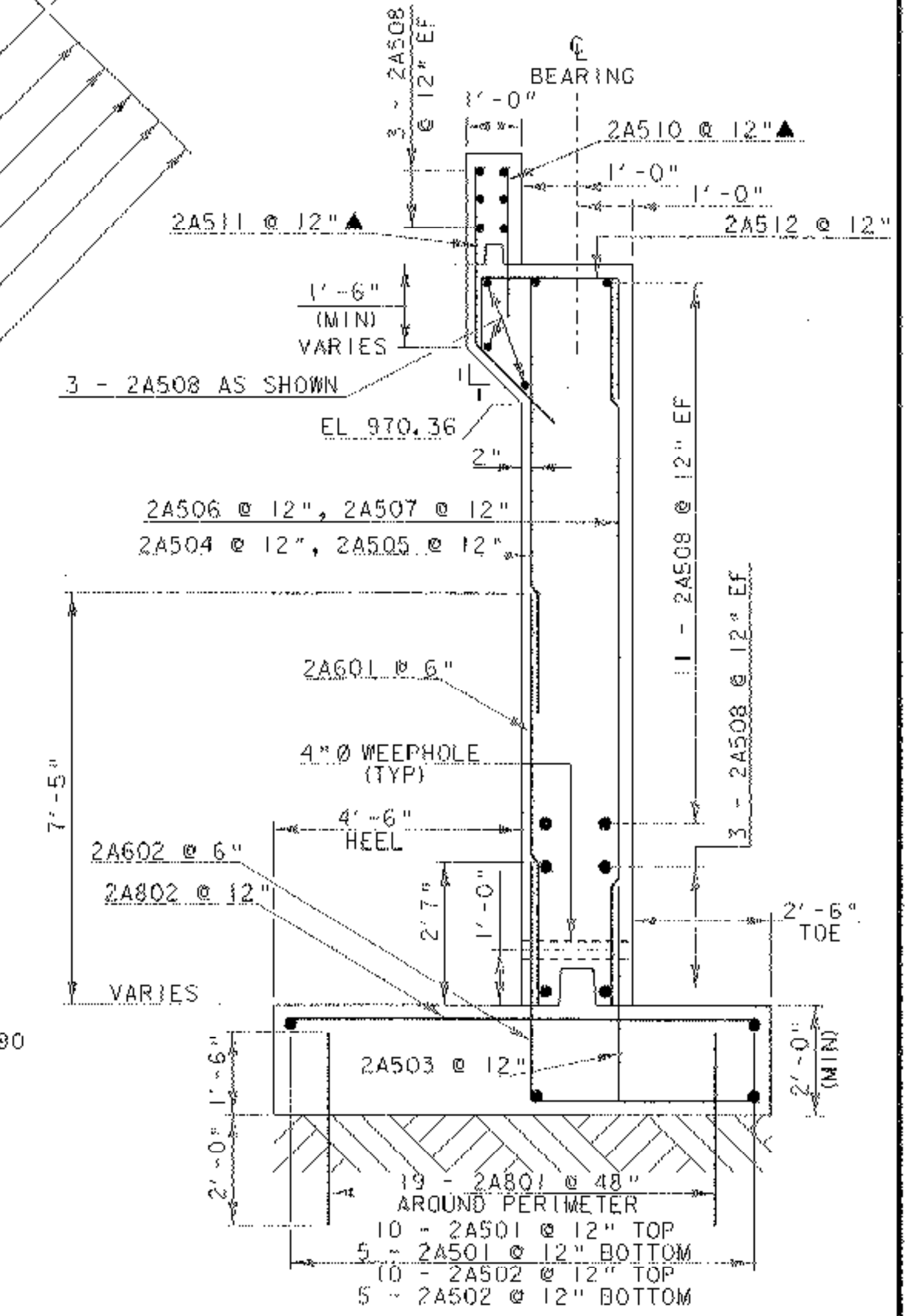
NOTE:

SEE END OF BRIDGE
 DETAIL ON SHEET 15.
 SECTION A-A



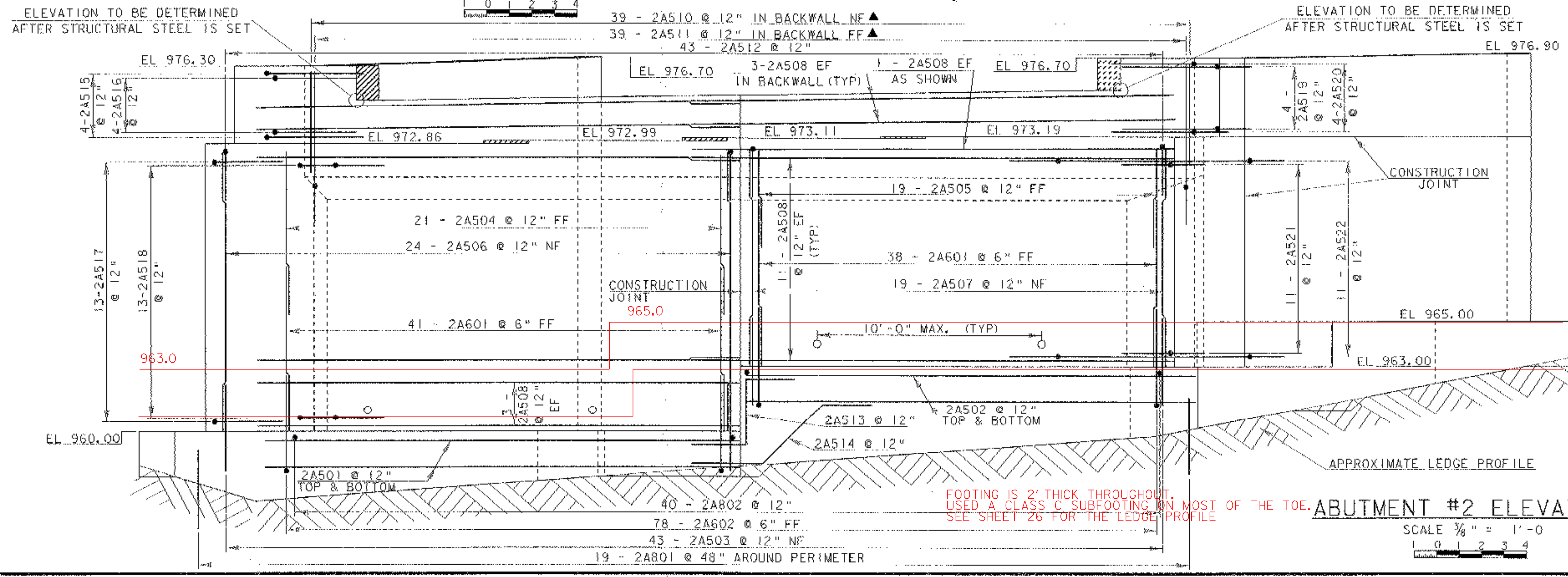
ABUTMENT #2 PLAN

SCALE 3/8" = 1'-0"



ABUTMENT #2 TYPICAL SECTION

SCALE 1/2" = 1'-0"



ABUTMENT #2 ELEVATION

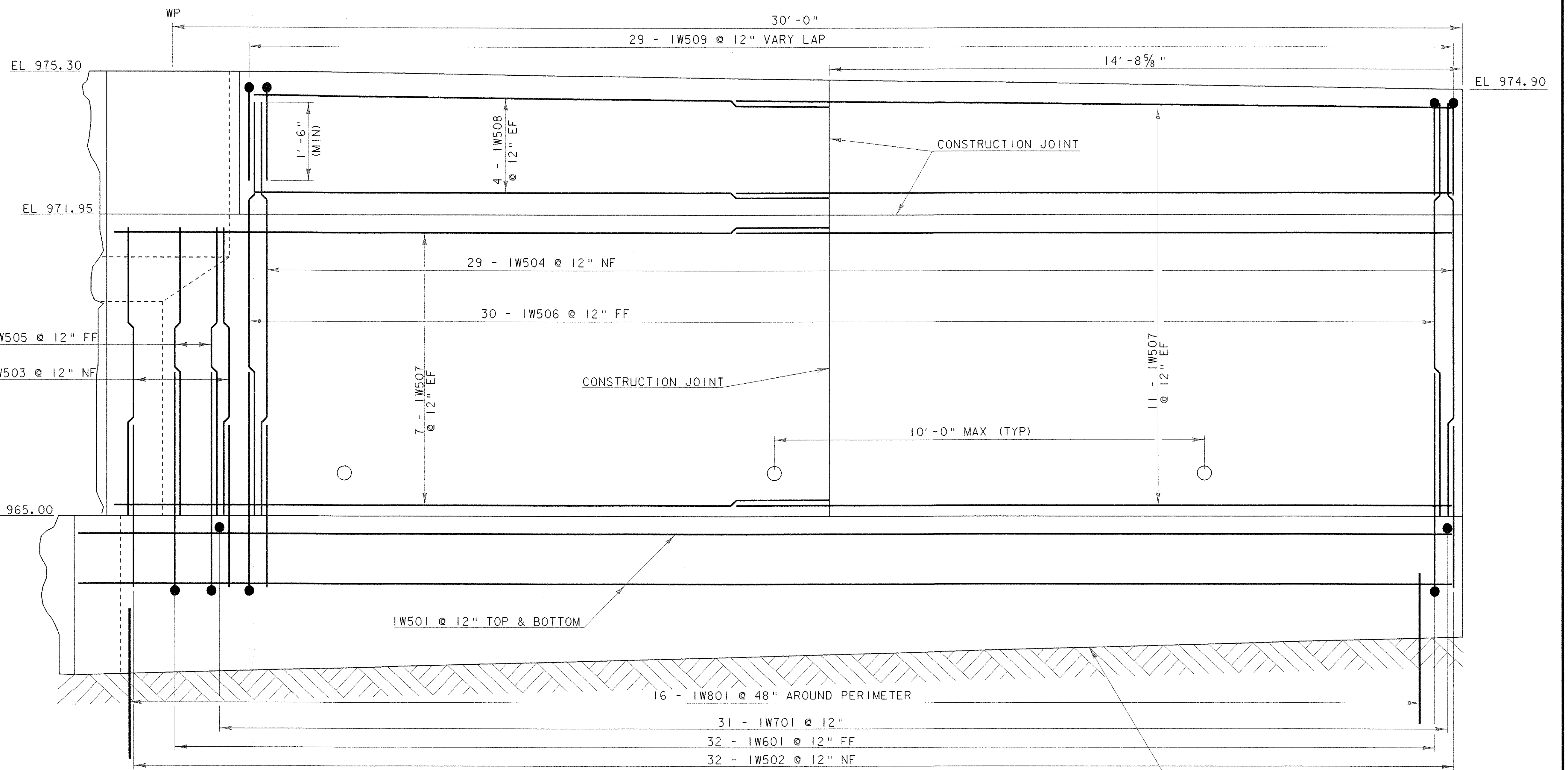
SCALE 3/8" = 1'-0"

FOOTING IS 2' THICK THROUGHOUT. USED A CLASS C SUBFOOTING ON MOST OF THE TOE. SEE SHEET 26 FOR THE LEDGE PROFILE.

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Surv. Sta.	
ABUTMENT #2 DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	P. G. JARVIS
Checked By	Date	Bridge Design Supervisor	
	R. S. YOUNG 10/00	C. P. WILLIAMS	Date 10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
L.C. Info. M:\Projects\901058\Structures\1058sub.dgn			
Bridge Sheet No.	sj058ab2.i	Sheet	21 of 49

NOTE:

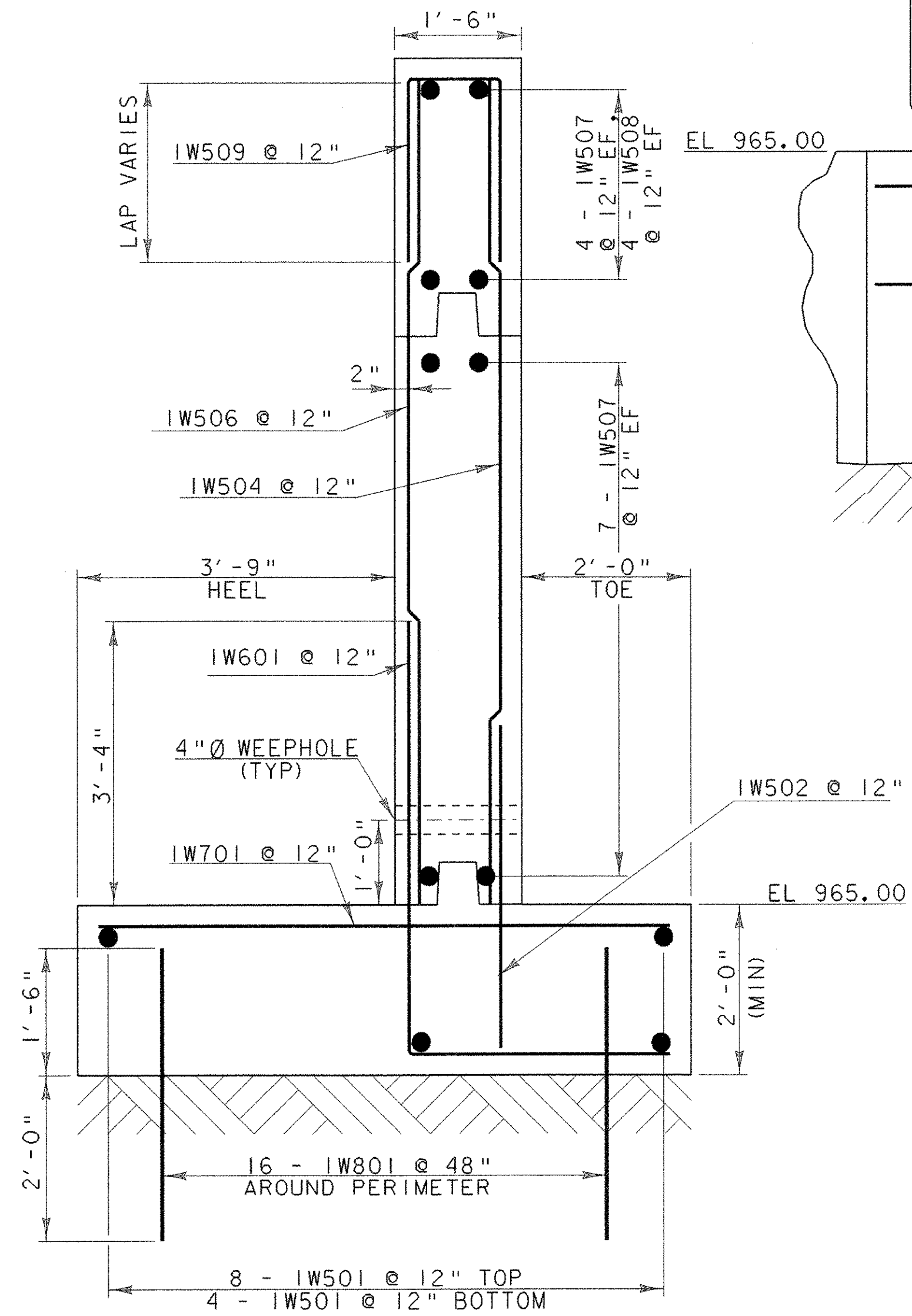
NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
 ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".



WINGWALL #1 ELEVATION

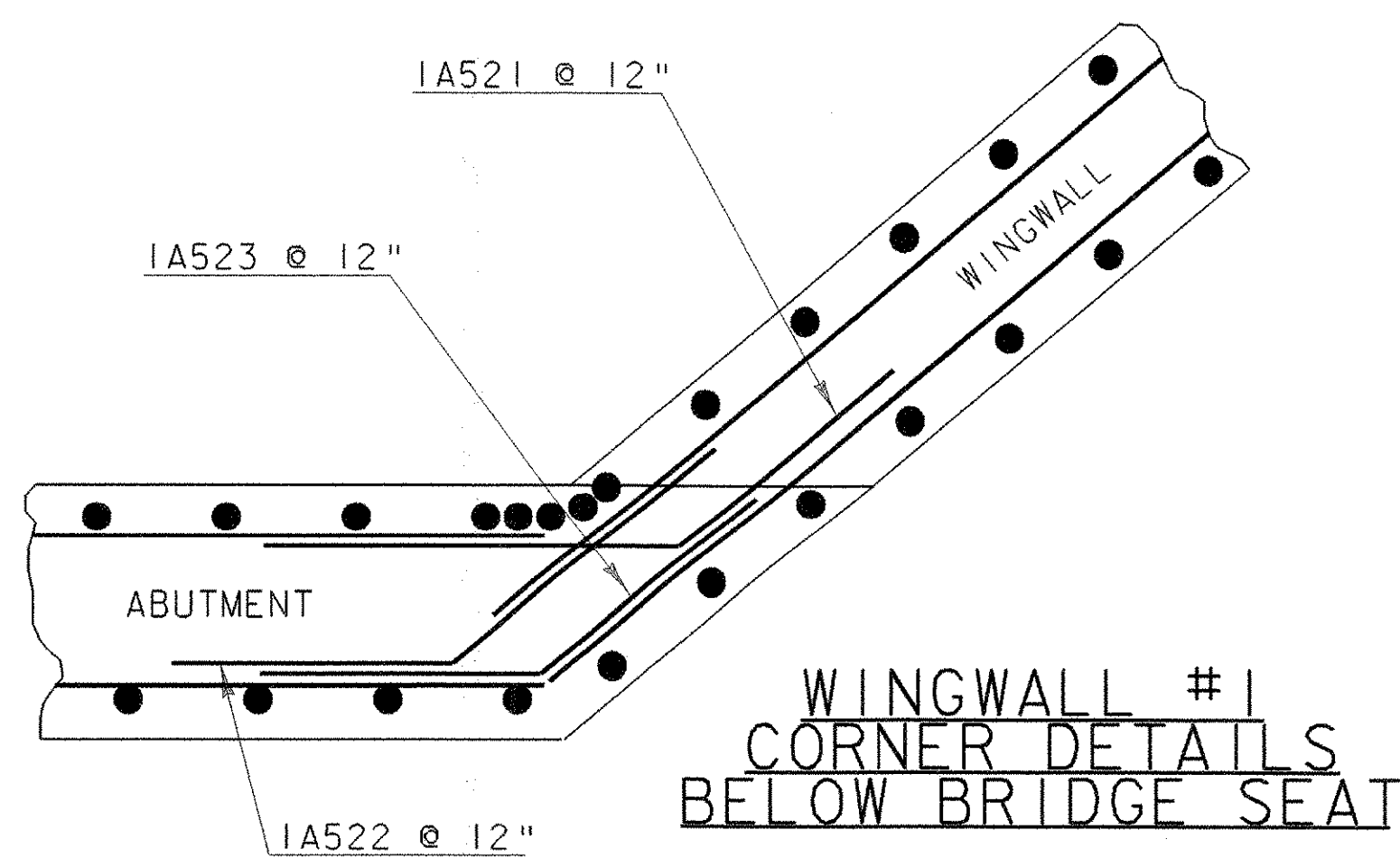
SCALE 3/4" = 1'-0"
 0 1 2

APPROXIMATE LEDGE PROFILE



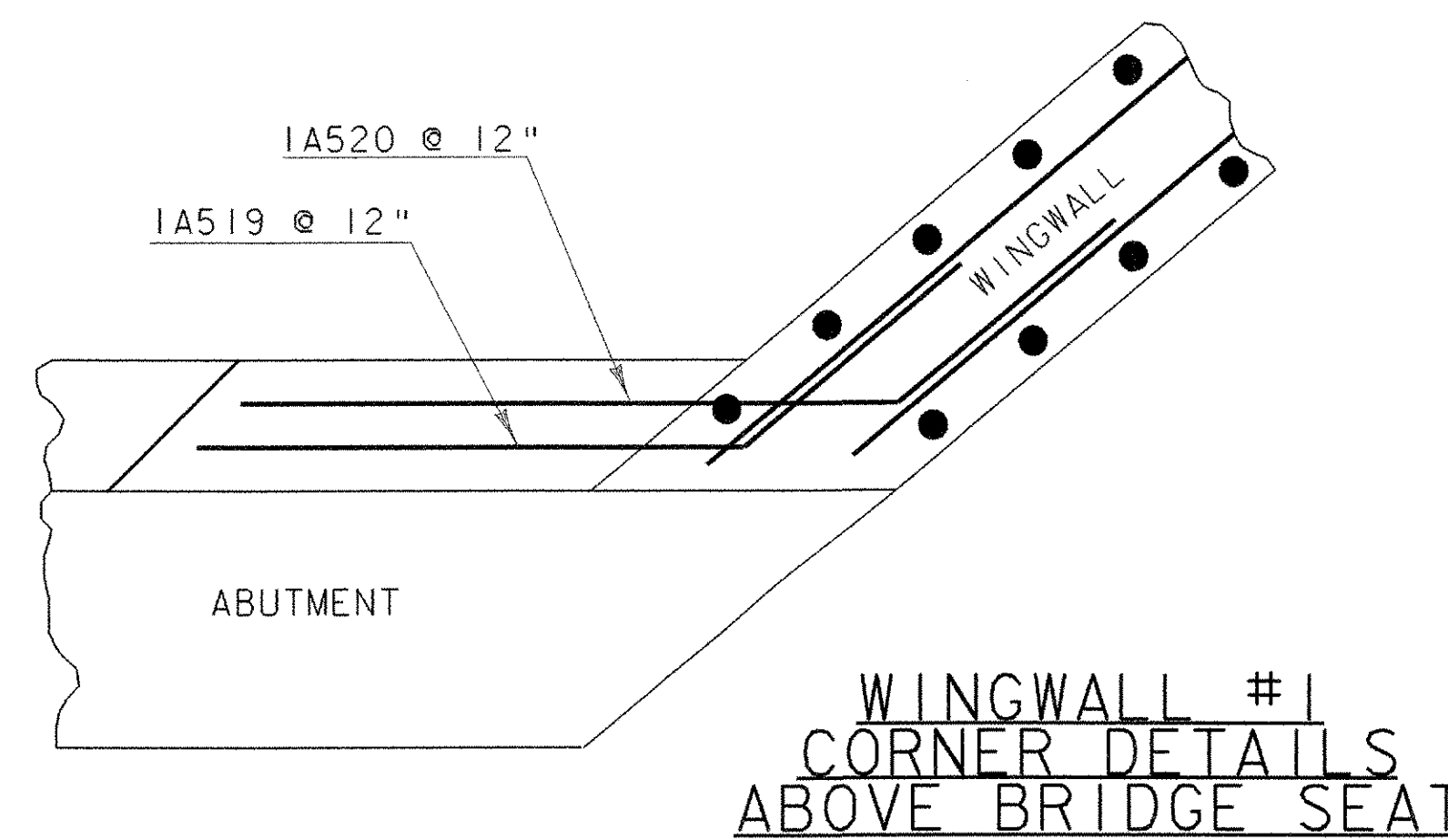
WINGWALL #1 TYPICAL

SCALE 3/4" = 1'-0"
 0 1 2



WINGWALL #1 CORNER DETAILS BELOW BRIDGE SEAT

SCALE 3/4" = 1'-0"
 0 1 2

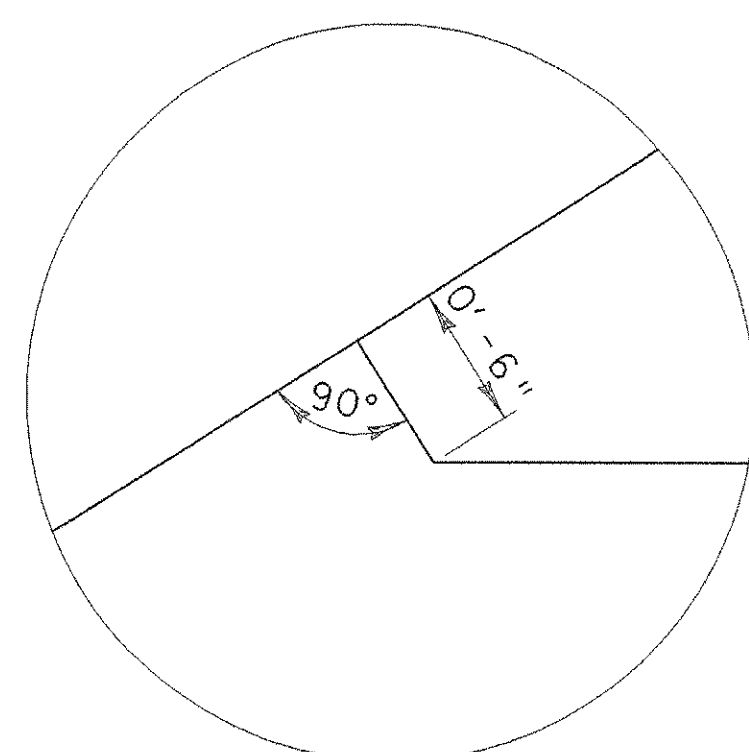


WINGWALL #1 CORNER DETAILS ABOVE BRIDGE SEAT

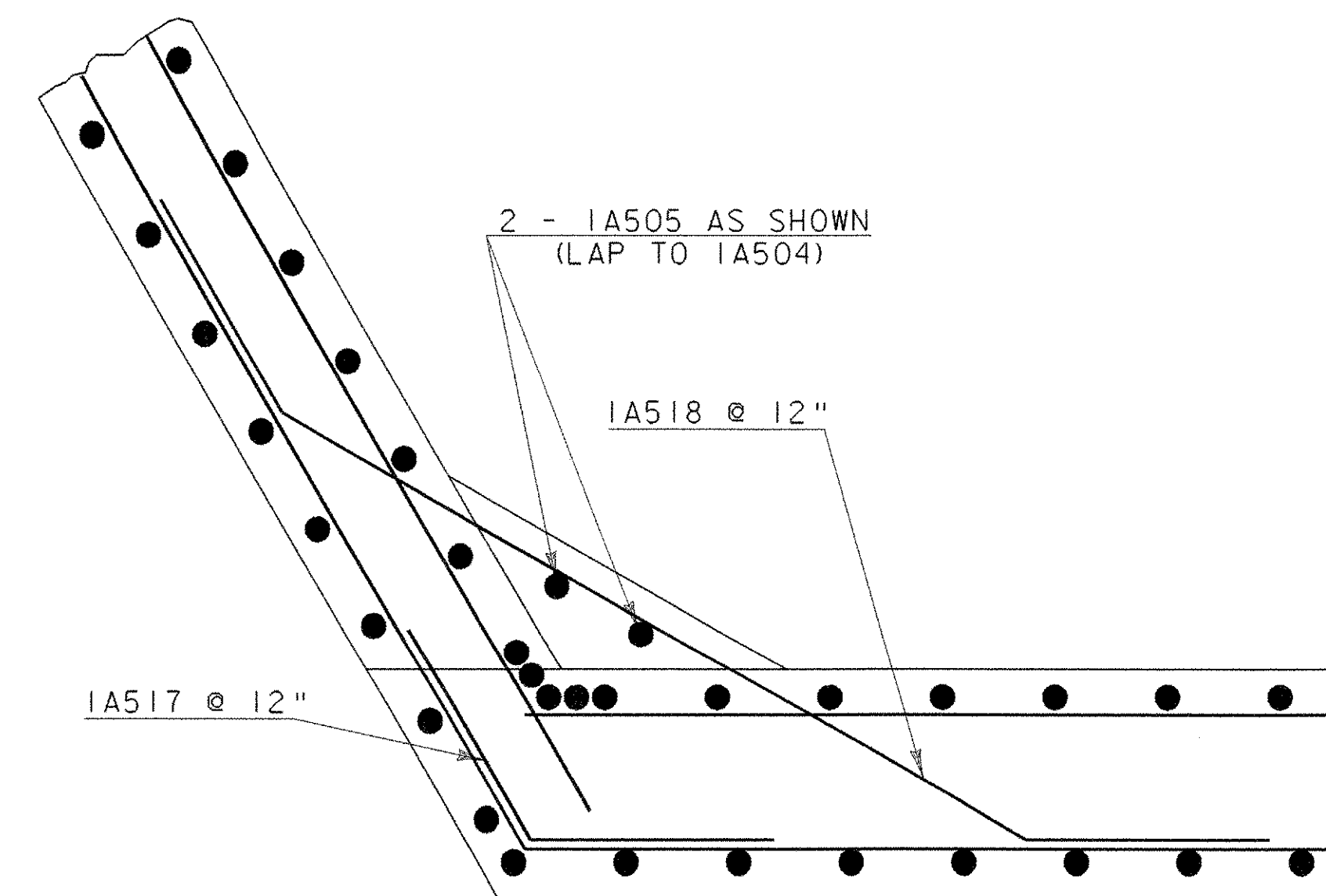
SCALE 3/4" = 1'-0"
 0 1 2

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Surv. Sta.	
WINGWALL #1 DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	P. G. JARVIS
Checked By	Date	Bridge Design Supervisor	
	R. S. YOUNG 10/00	C. P. WILLIAMS Date 10/00	
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.G.C. Info. M:\Projects\90j058\Structures\sj058sub.dgn			
Bridge Sheet No.	sj058ww1.i	Sheet 22 of 49	

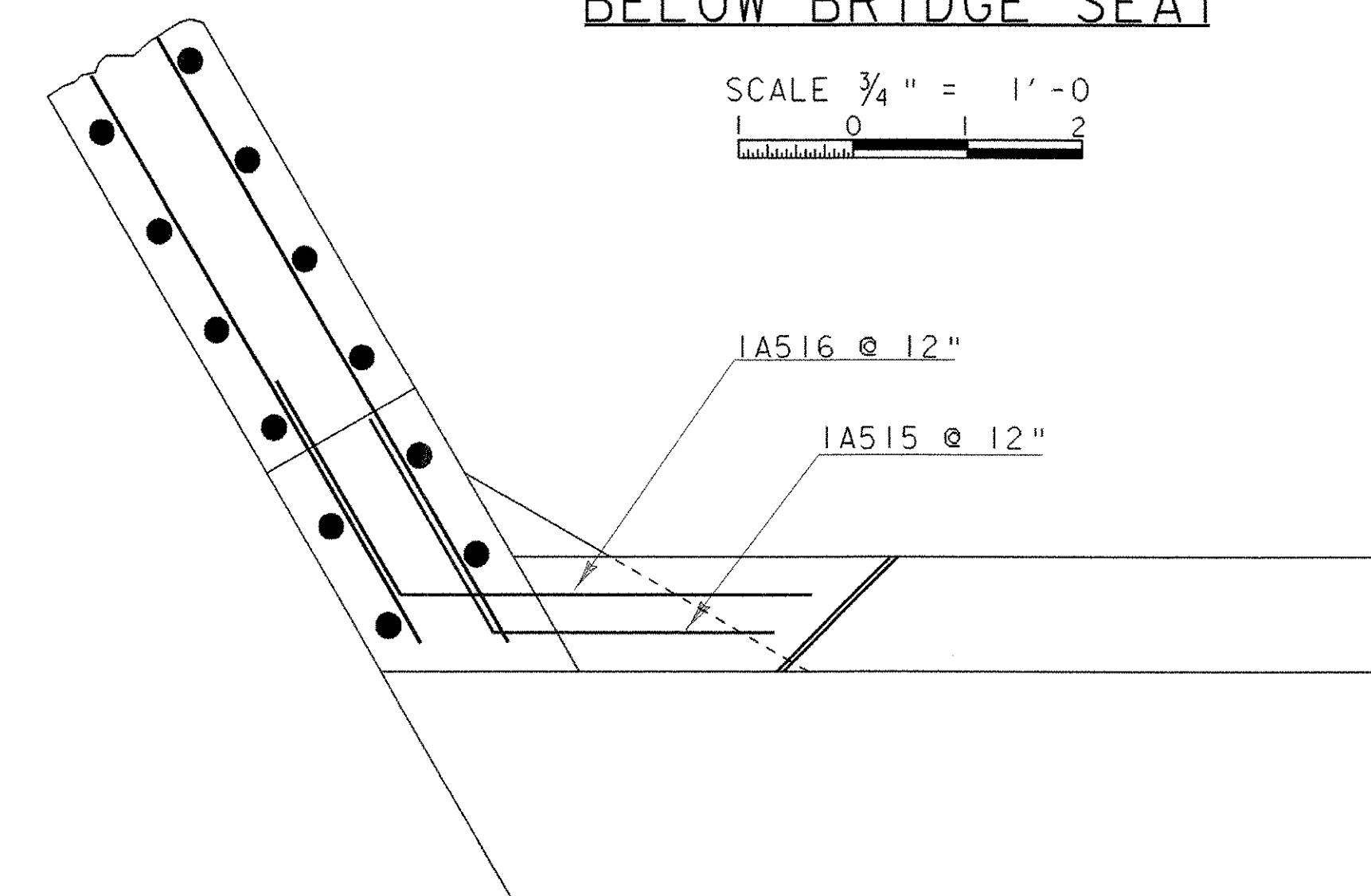


DETAIL A
NTS



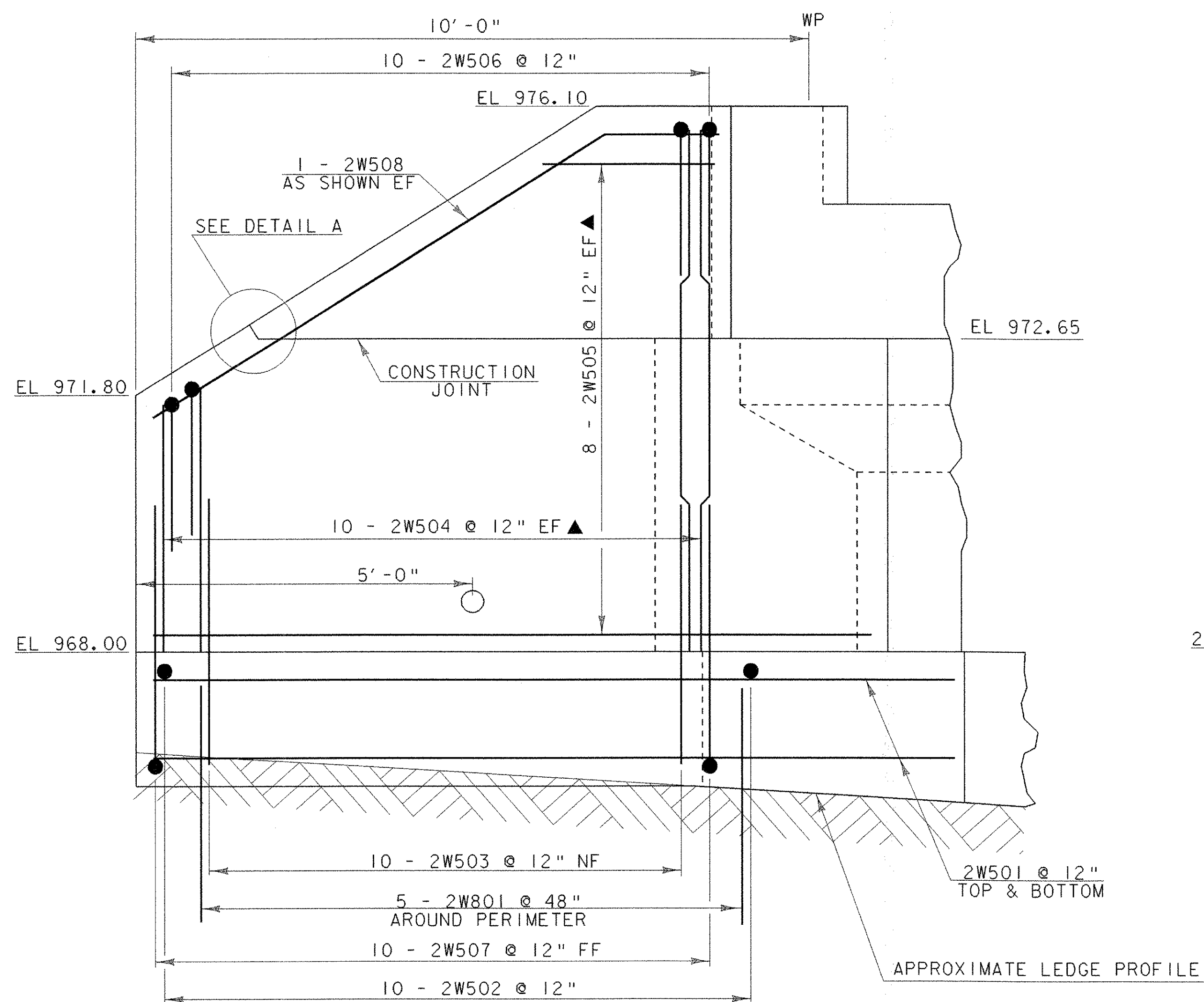
WINGWALL #2
CORNER DETAILS
BELOW BRIDGE SEAT

SCALE 3/4" = 1'-0"
0 1 2



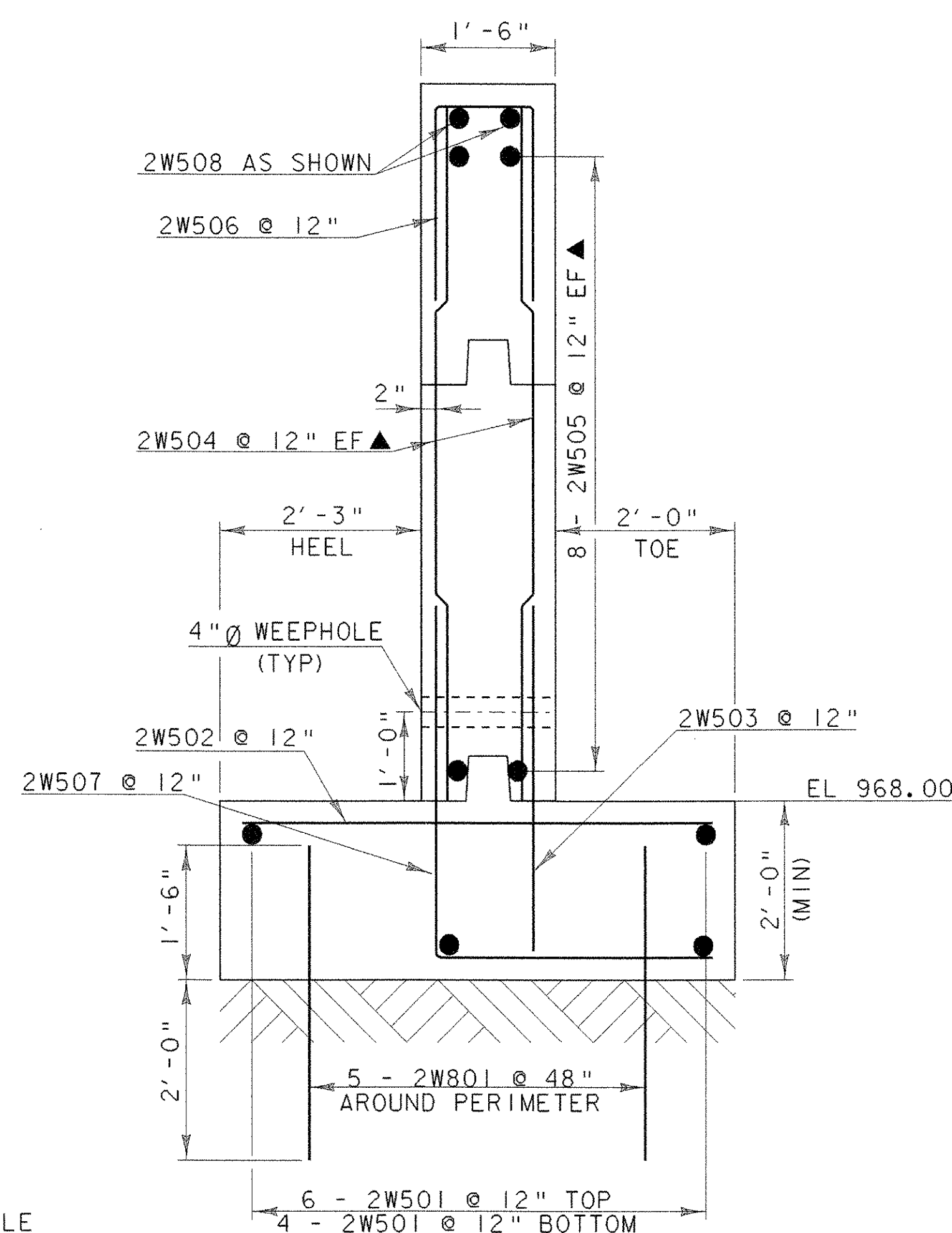
WINGWALL #2
CORNER DETAILS
ABOVE BRIDGE SEAT

SCALE 3/4" = 1'-0"
0 1 2



WINGWALL #2 ELEVATION

SCALE 3/4" = 1'-0"
0 1 2



WINGWALL #2 TYPICAL

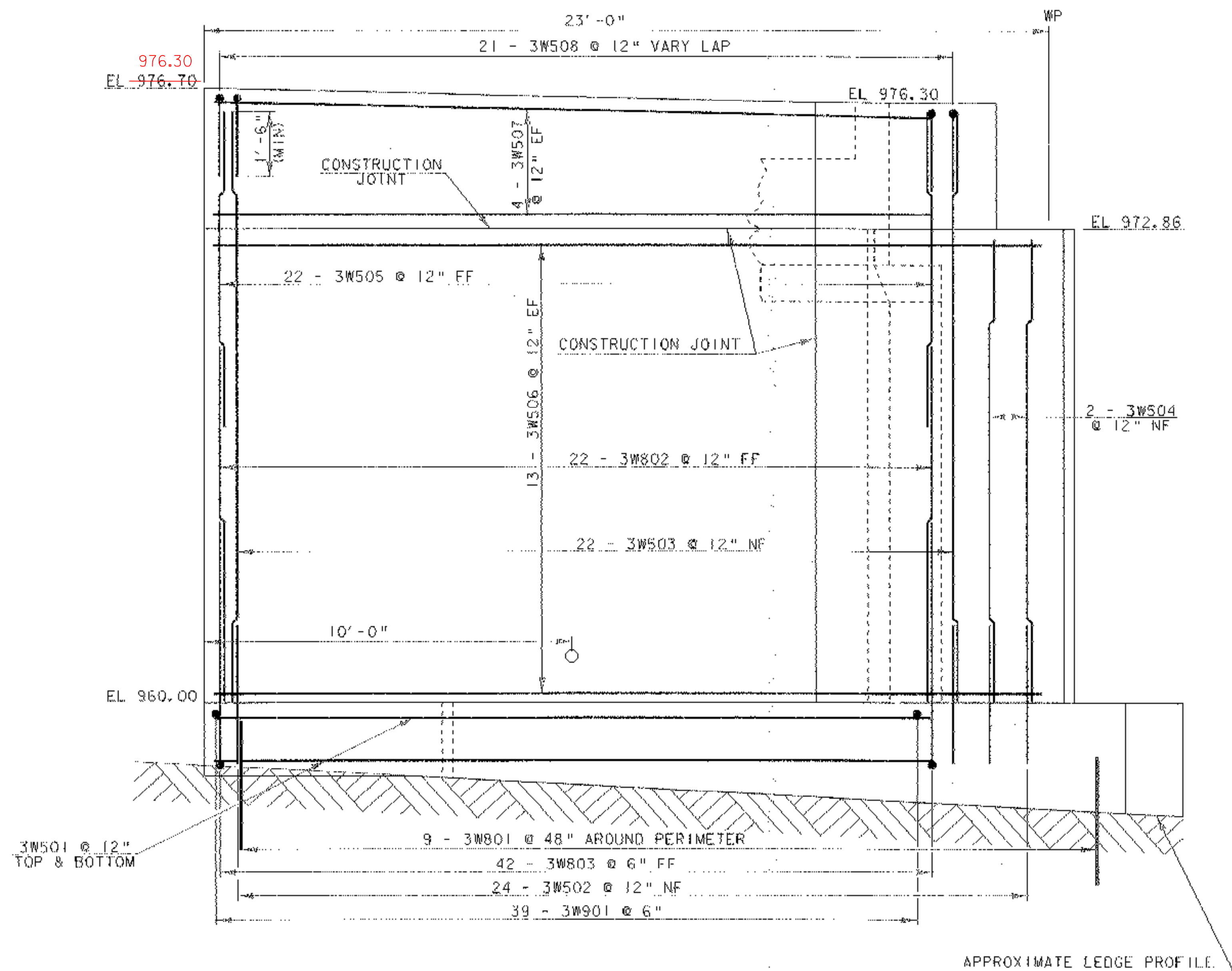
SCALE 3/4" = 1'-0"
0 1 2

NOTE:

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FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".

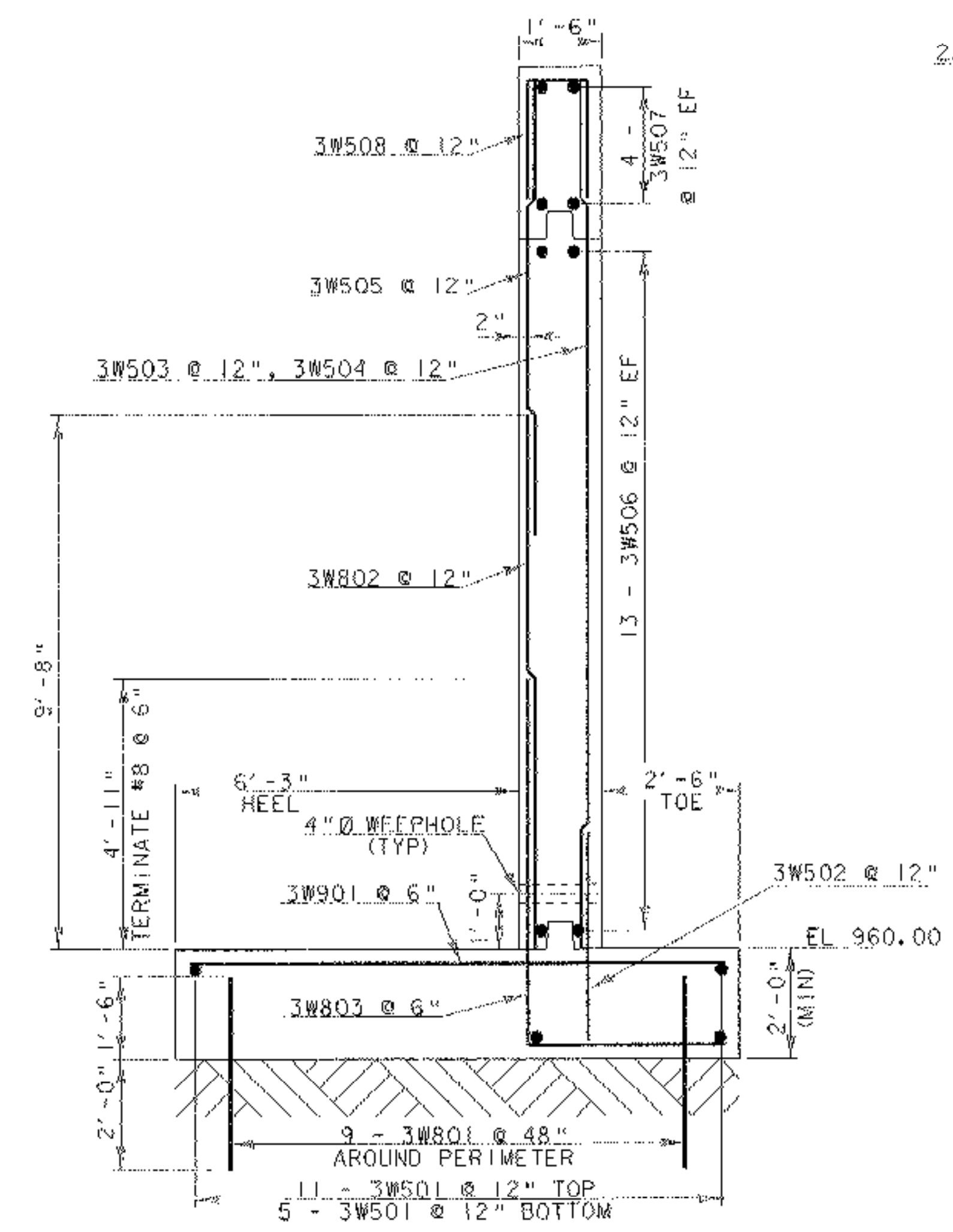
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Surv. Sta.	
WINGWALL #2 DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R.S. YOUNG	Drawn By	P.G. JARVIS
Checked By	Date	Bridge Design Supervisor	
	R.S. YOUNG 10/00	C.P. WILLIAMS	Date 10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.G.C. Info. M:\Projects\90\058\Structures\sj058sub.dgn			
Bridge Sheet No. sj058ww2.i		Sheet 23 of 49	



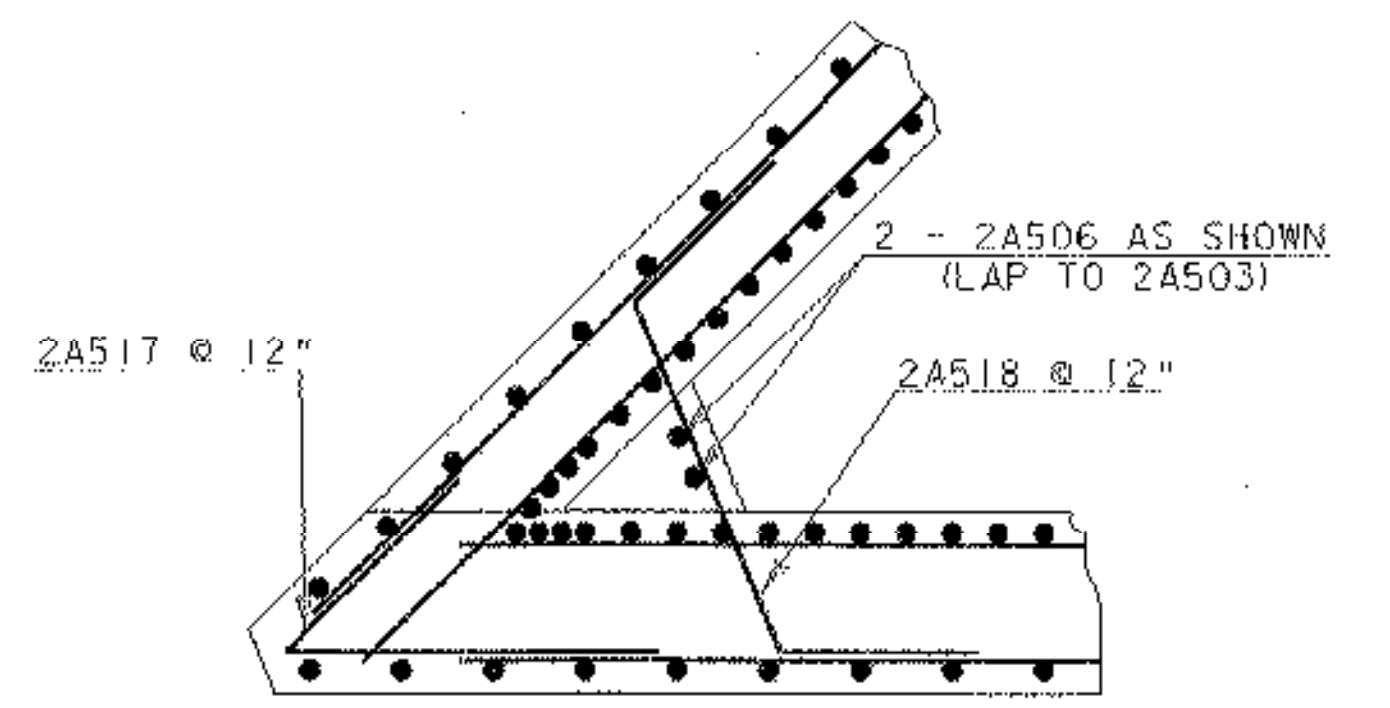
WINGWALL #3 ELEVATION

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



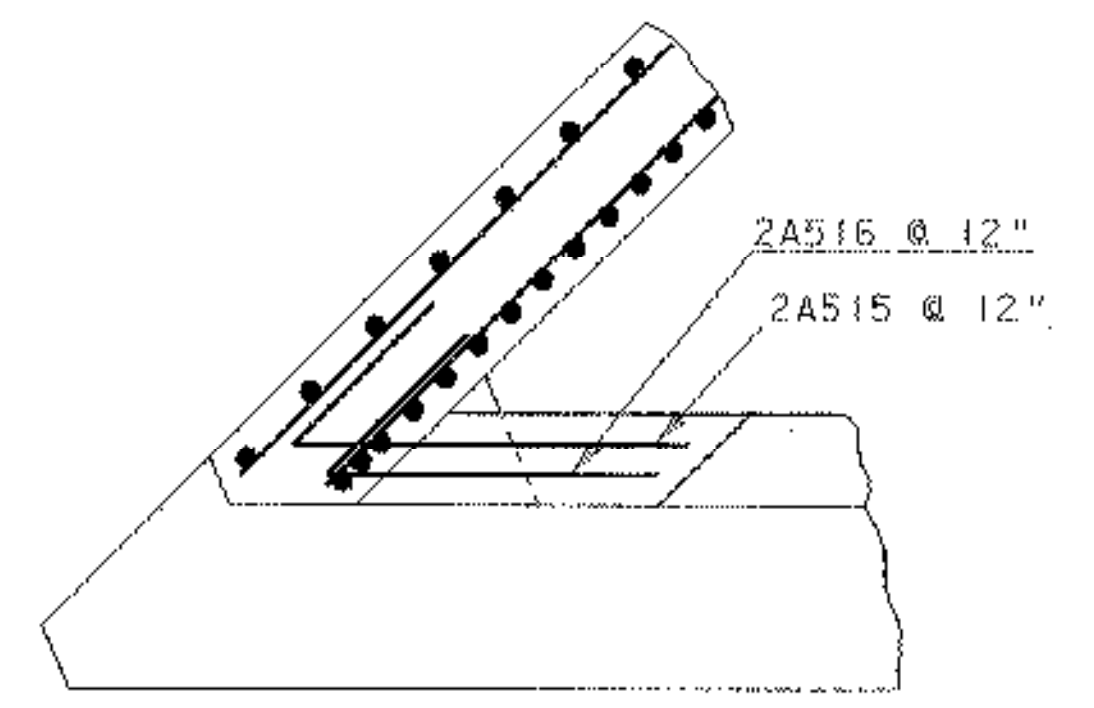
WINGWALL #3 TYPICAL

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



WINGWALL #3 CORNER DETAILS BELOW BRIDGE SEAT

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

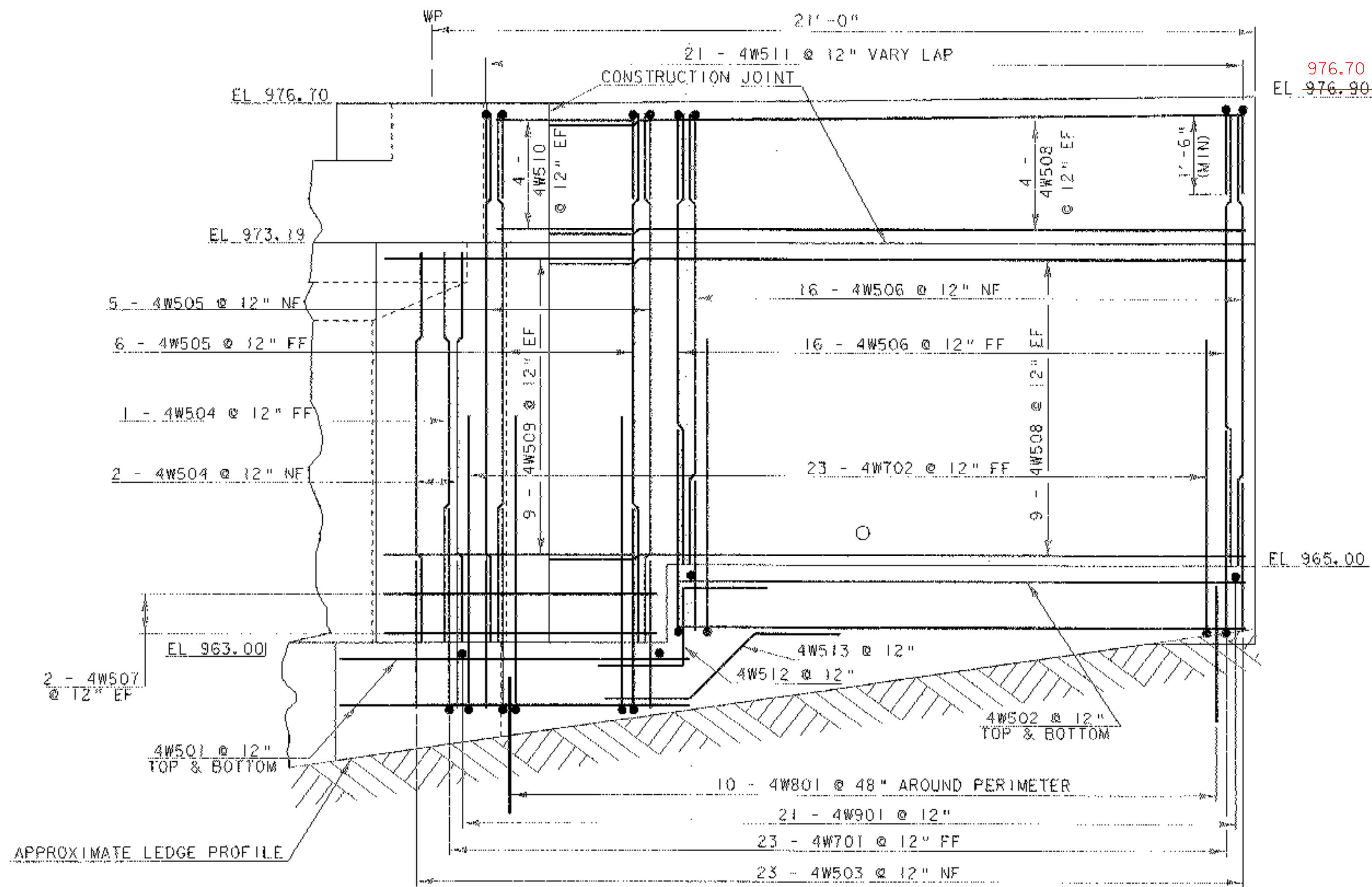


WINGWALL #3 CORNER DETAILS ABOVE BRIDGE SEAT

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

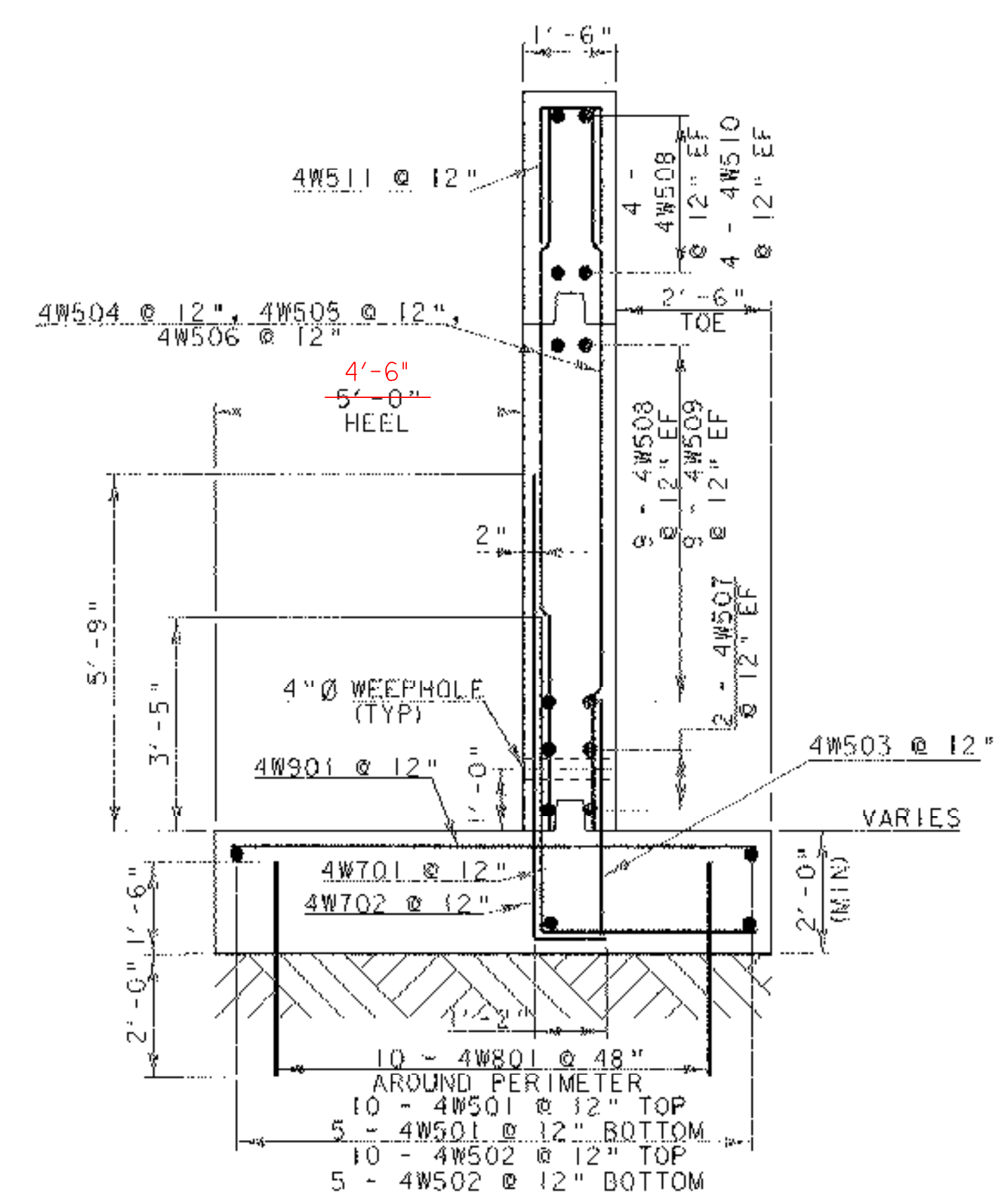
NOTE:
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 EF = EACH FACE
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 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
 ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Surv. Sta.	
WINGWALL #3 DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	P. G. JARVIS
Checked By	Date	Bridge Design Supervisor	
R. S. YOUNG	10/00	C. P. WILLIAMS	Date 10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.G.C. Info. M:\Projects\90\058\Structures\9058sub.dgn			
Bridge Sheet No.	sj058vw3.1	Sheet	24 of 49



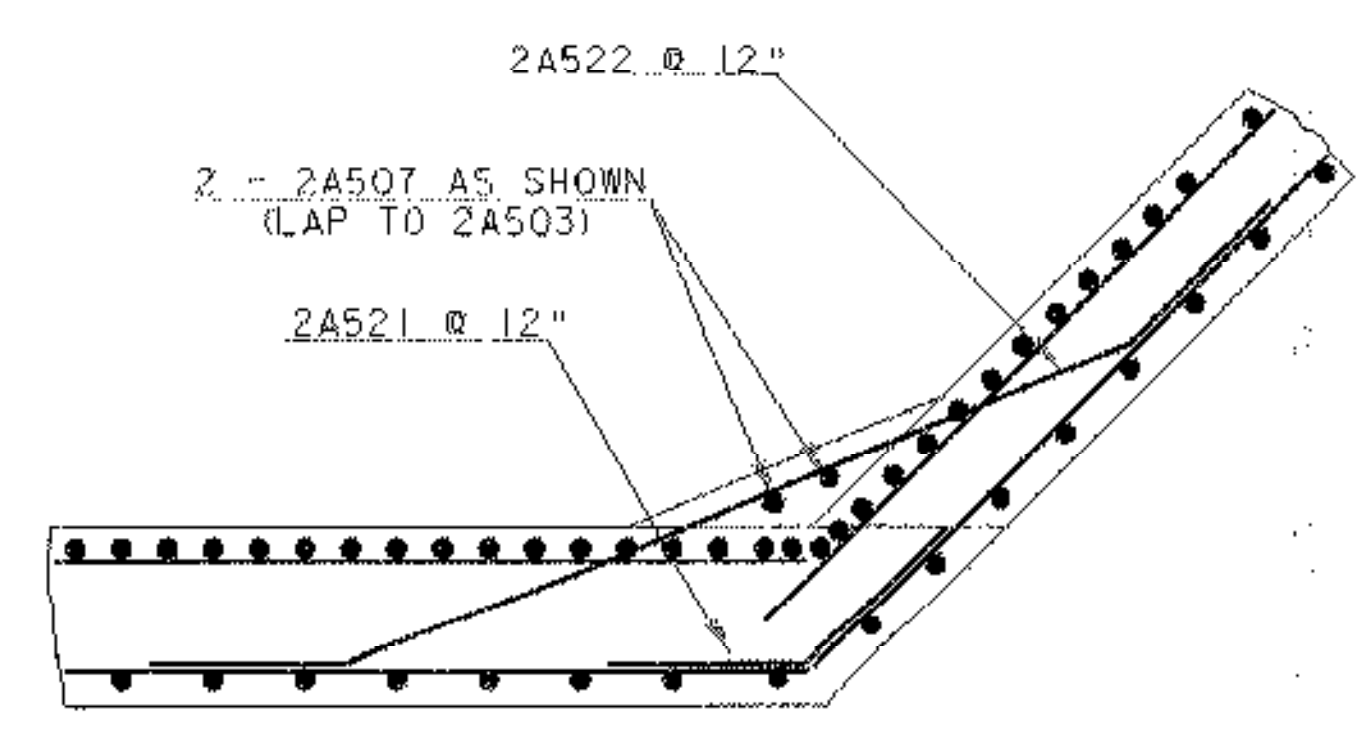
WINGWALL #4 ELEVATION

SCALE 1/2" = 1'-0"



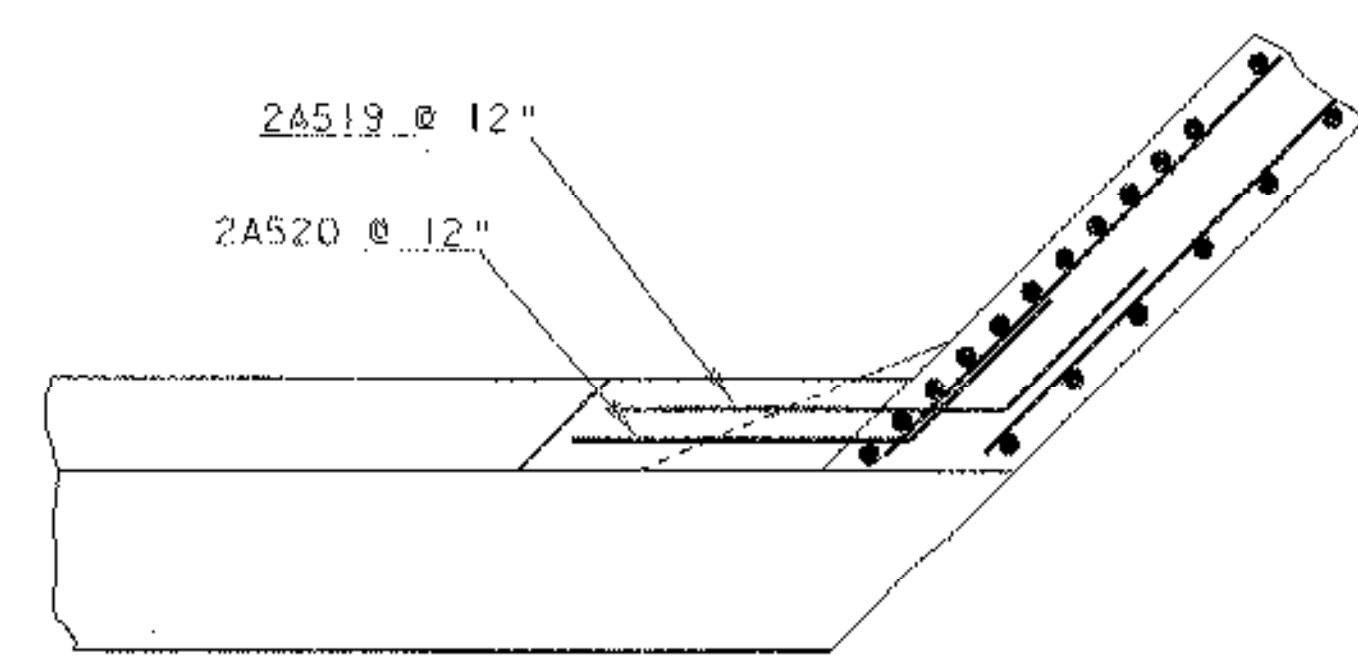
WINGWALL #4 TYPICAL

SCALE 1/2" = 1'-0"



WINGWALL #4 CORNER DETAILS BELOW BRIDGE SEAT

SCALE 1/2" = 1'-0"



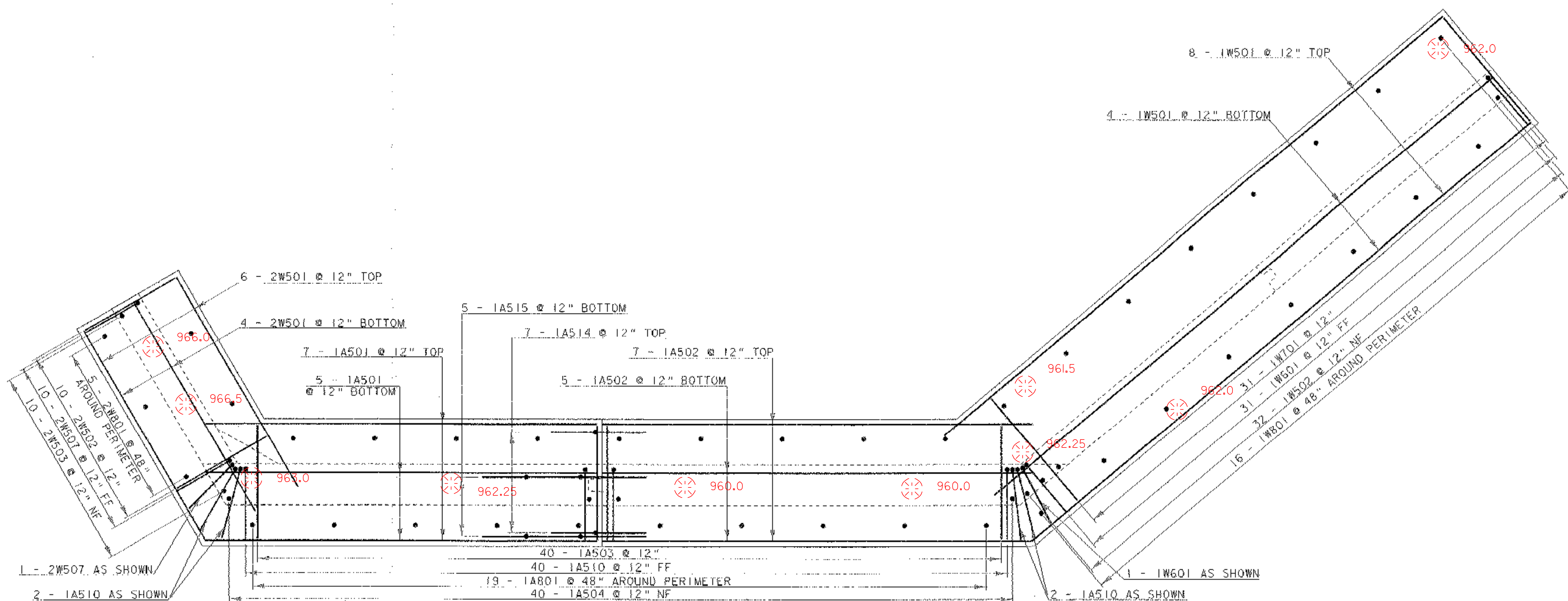
WINGWALL #4 CORNER DETAILS ABOVE BRIDGE SEAT

SCALE 1/2" = 1'-0"

NOTE:

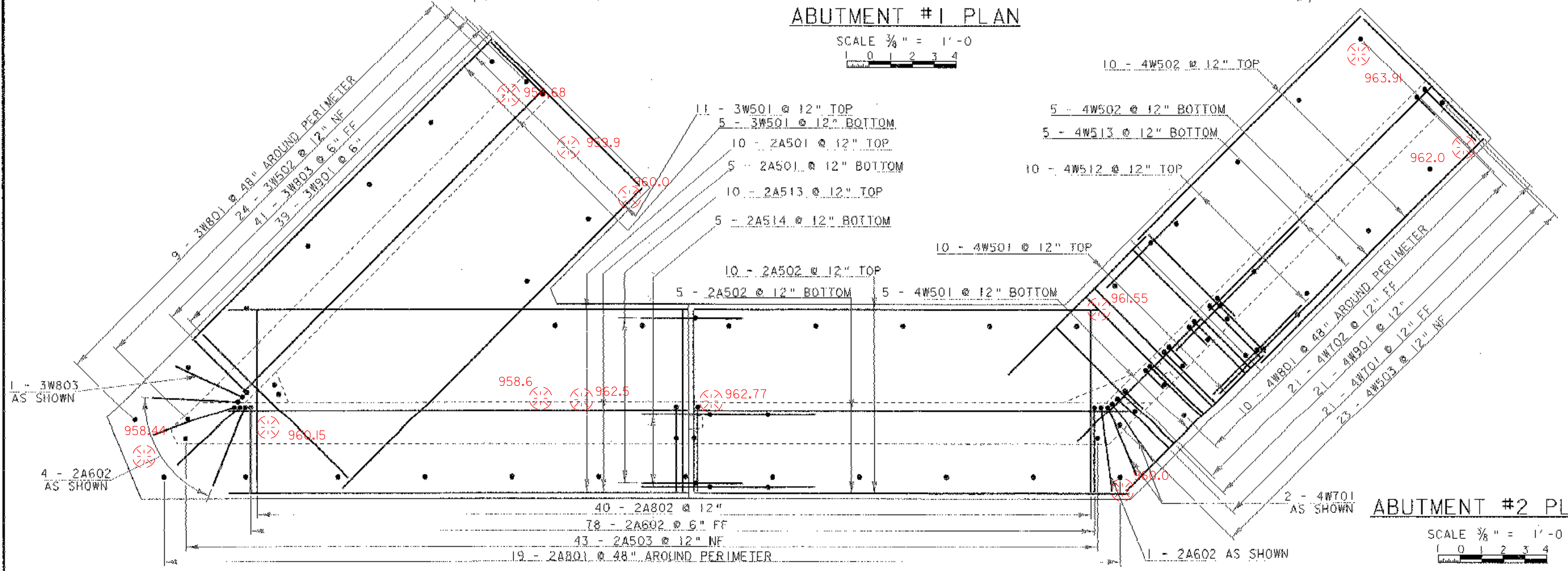
- NF = NEAR FACE
 - FF = FAR FACE
 - EF = EACH FACE
 - ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log Sta.	
		Surv. Sta.	
WINGWALL #4 DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	P. G. JARVIS
Checked By	Date	Bridge Design Supervisor	
	R. S. YOUNG 10/00	C. P. WILLIAMS	Date 10/00
PROJECT	READING	PROJECT NO.	BRZ 1444 (23)
I.G.C. Info. M:\Projects\901058\Structures\901058sub.dgn			
Bridge Sheet No.	901058ww4.i	Sheet	25 of 49



ABUTMENT #1 PLAN

SCALE 3/8" = 1'-0"
 1 0 1 2 3 4



ABUTMENT #2 PLAN

SCALE 3/8" = 1'-0"
 1 0 1 2 3 4

NOTE:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.
- ALL LAPS NOT OTHERWISE DETAILED SHALL BE 2'-2".

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	READING	Bridge No.	25
Highway No.	TH 8	Log. Sta.	
		Surv. Sta.	
FOOTING REINFORCING DETAILS			
TH 8 OVER MILL BROOK			
Designed By	R. S. YOUNG	Drawn By	P. G. JARVIS
Checked By	Date	Bridge Design Supervisor	
	R. S. YOUNG 7/99	C. P. WILLIAMS Date 7/99	
PROJECT	READING	PROJECT NO.	
		BRZ 1444 (23)	
I:\C.C. Info. M\Projects\90\058\Structures\058sub.dgn			
Bridge Sheet No.	sj058ftg.f	Sheet 26 of 49	

REMOVE EXISTING SIGNS

STA. 14+14 LT.
STA. 14+54 LT.
STA. 14+75 RT.

TRAFFIC SIGNS, TYPE A

STA. 9+25 RT.

ERECTING SALVAGED SIGNS

STA. 14+75 RT.

HD STEEL BEAM GUARDRAIL, GALVANIZED

STA. 11+15 - 12+05 LT.
STA. 12+74 - 13+44 LT.
STA. 12+06 - 12+28 RT.
STA. 12+97 - 14+93 RT.

CONSTRUCT DRIVE

STA. 11+25 RT. 1/2" TYPE III PAVED DRIVE

BRIDGE RAILING - GALVANIZED HD STEEL BEAM/FASCIA MOUNTED

STA. 12+05 - 12+74 LT.
STA. 12+28 - 12+97 RT.

CONSTRUCT FIELD DRIVE WITH 6" AGGREGATE SURFACE COURSE

STA. 12+00 RT.
STA. 13+50 LT.

REMOVAL OF EXISTING FENCE

STA. 10+25 LT. - 12+30 RT.
STA. 12+91 RT. - 13+56 LT.

WOVEN WIRE FENCE WITH WOOD POSTS*

STA. 9+60 LT. - 11+25 LT.
STA. 12+55 LT. - 13+40 LT.

* FENCE SHALL BE BARBED WIRE AND SET ALONG NEW R.O.W. LINE

DRIVE GATE FOR WOVEN WIRE FENCE

STA. 13+40 LT. - 13+56 LT.

NEW OPTION PIPE
(0.064" CSP, 0.060" CAAP OR CPEP)

STA. 13+32 LT - STA. 13+60 LT - 18" X 30'

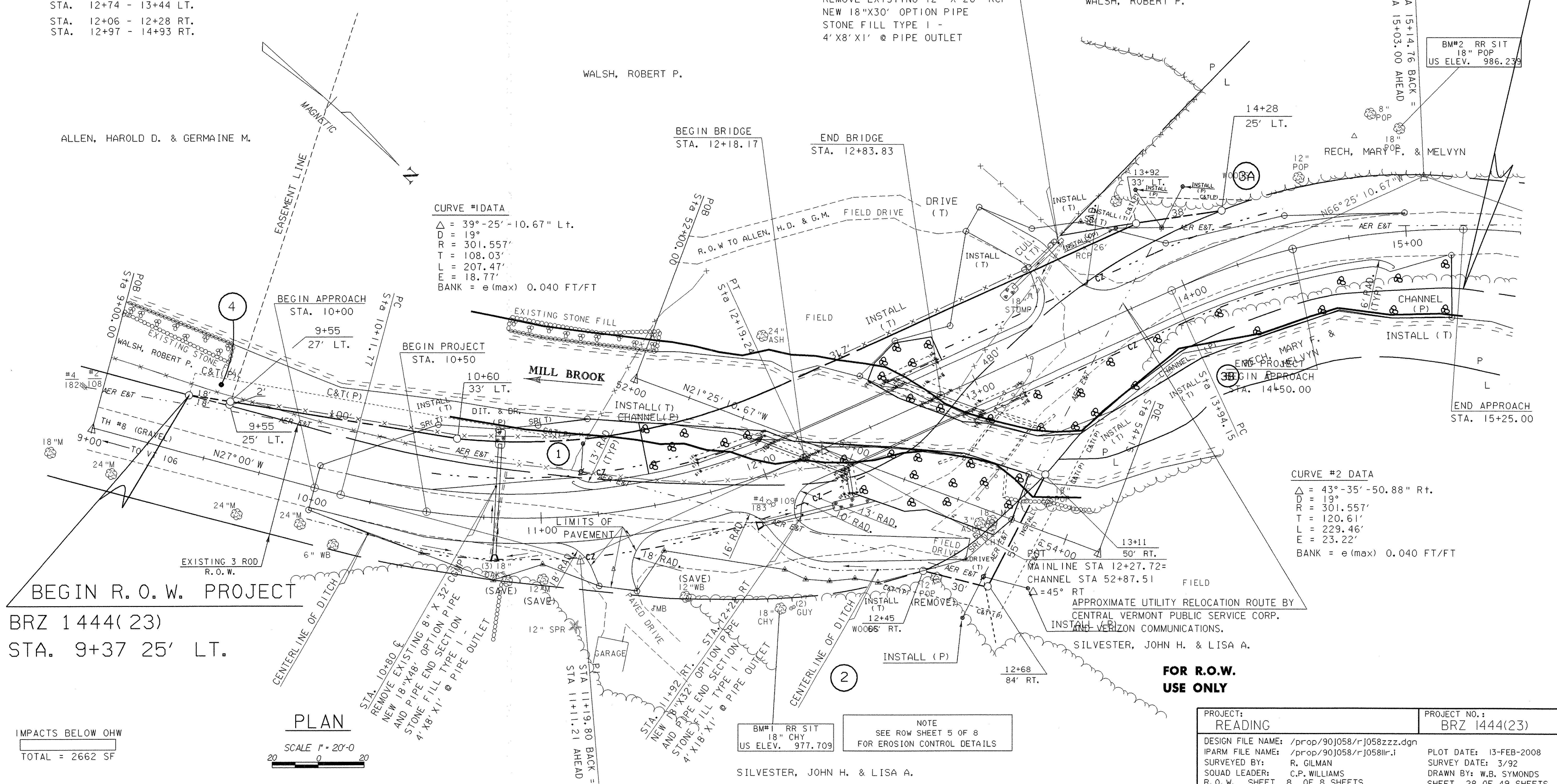
NEW OPTION PIPE W/END SECTION
(0.064" CSP, 0.060" CAAP OR CPEP)

STA. 10+80 C - 18" X 48'
STA. 11+92 RT - STA. 12+22 RT - 18" X 32'

ANCHORS FOR STEEL BEAM GUARD RAIL

STA. 11+18 LT
STA. 13+41 LT
STA. 12+09 RT
STA. 14+91 RT

END R.O.W. PROJECT
BRZ 1444(23)
STA. 15+25 26' RT.



CURVE #1 DATA
 $\Delta = 39^\circ - 25' - 10.67" \text{ Lt.}$
 $D = 19^\circ$
 $R = 301.557'$
 $T = 108.03'$
 $L = 207.47'$
 $E = 18.77'$
 $BANK = e(\text{max}) 0.040 \text{ FT/FT}$

CURVE #2 DATA
 $\Delta = 43^\circ - 35' - 50.88" \text{ Rt.}$
 $D = 19^\circ$
 $R = 301.557'$
 $T = 120.61'$
 $L = 229.46'$
 $E = 23.22'$
 $BANK = e(\text{max}) 0.040 \text{ FT/FT}$

BEGIN R.O.W. PROJECT
BRZ 1444(23)
STA. 9+37 25' LT.

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

IMPACTS BELOW OHW
TOTAL = 2662 SF

NOTE
SEE ROW SHEET 5 OF 8
FOR EROSION CONTROL DETAILS

FOR R.O.W.
USE ONLY

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /prop/90j058/rj058zzz.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /prop/90j058/rj058llr.i	SURVEY DATE: 3/92
SURVEYED BY: R. GILMAN	DRAWN BY: W.B. SYMONDS
SQUAD LEADER: C.P. WILLIAMS	R.O.W. SHEET 8 OF 8 SHEETS
	SHEET 28 OF 49 SHEETS

SILVESTER, JOHN H. & LISA A.

TABLE OF PROJECT PROPERTY ACQUISITION

**STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET**

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	WALSH, ROBERT P.	8	9+37 LT. 9+37 LT. 9+37 LT. 10+26 LT. 10+80 LT. 12+68 LT. 12+97 LT. 13+05 LT. 13+50 LT. 13+40 LT. 13+83 LT. 10+41 LT. 11+50 LT.	14+28 LT. 11+20 LT. 13+75 LT. 11+75 LT. 12+87 LT. 13+73 LT. 13+30 LT. 13+60 LT. 13+86 LT. 11+50 LT. 11+63 LT.	0.22A±		CUT & TRIM (P) 1480 S.F. ± RESET (T) INSTALL (T) DITCH & DRAINAGE (P) INSTALL (T) INSTALL (T) INSTALL (T) INSTALL (T) DRIVE (T) CULVERT (T) INSTALL (P) SLOPE (T) 660 S.F. ± CHANNEL (P) 18 S.F. ±			READING			POWER LINE BARBWIRE FENCE SILT FENCE SILT FENCE SILT FENCE SEDIMENT BASIN 12' GRAVEL ALSO R.O.W. TO PARCEL #4. GUY WIRE	1	7, 8	PARCEL NO. 2 HEIFFEL. CHANGE TITLE TO: SILVESTER, JOHN H. & LISA A. PER C.O. 9097 ELECTRONIC IPARMS TO STRUCTURES 2-12-01	03-09-00	M. J. R.	L. W. B.
2	SILVESTER, JOHN H. LISA A.	8	12+45 RT. 11+25 RT. 12+10 RT. 12+27 RT. 12+52 RT. 12+71 RT. 12+90 RT. 12+00 RT. 13+00 RT.	13+11 RT. 12+56 RT. 13+28 RT. 12+67 RT. 12+83 RT. 13+00 RT. 12+68 RT. 13+11 RT.	660 S.F. ±		INSTALL (T) CUT & TRIM (P) 1150 S.F. ± INSTALL (P) INSTALL (P) INSTALL (T) INSTALL (T) DRIVE (T)	WDOE	11-14-00	READING	60	270-271	PAVED DRIVE SILT FENCE POWER LINE GUY WIRE GUY WIRE SILT FENCE 10' GRAVEL STONE WALL						
3A	RECH, MARY F. & MELVYN	8	13+60 LT. 13+67 LT. 13+88 LT. 13+98 LT. 14+05 LT.	13+77 LT. 13+94 LT. 14+44 LT. 14+01 LT. 14+15 LT.			SLOPE (T) 50 S.F. ± INSTALL (T) CUT & TRIM (P) 375 S.F. ± INSTALL (P) INSTALL (P)	WDOE	10-25-00	READING	60	141-142	SILT FENCE POWER LINE GUY WIRE GUY WIRE						
3B		8	13+20 RT. 13+25 RT. 13+42 RT.	13+45 RT. 15+25 RT. 15+20 RT.			CUT & TRIM (P) 100 S.F. ± INSTALL (T) CHANNEL (P) 1220 S.F. ±						POWER LINE SILT FENCE						
4	ALLEN, HAROLD D. & GERMAINE M.	8	9+37 LT. 9+37 LT. 13+50 LT.	9+55 LT. 9+55 LT.	18 S.F. ±		ALL R. T. & I. CUT & TRIM (P) 190 S.F. ± DRIVE (T)	WDOE	10-02-00	READING	60	30-31	POWER LINE R.O.W. OVER PARCEL #1						
5	CVPS CORPORATION												UTILITY						
6	BELL-ATLANTIC												UTILITY						

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DATE PLOTTED 13-FEB-2008

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND . . . CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SLOPE RIGHTS
P PROPERTY LINE
L TOP OF CUT
○ TOE OF SLOPE

R. O. W. PLANS
APPROVED: LAWRENCE W. BLISS DATE: 07-07-98
AGENT D, PLANS & TITLES

READING
BRZ 1444 (23)
R. O. W. SHEET 7 OF 8 SHEETS
SHEET 29 OF 49

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT IS LOCATED AT BRIDGE # 25 WHICH CARRIES TH # 8 OVER MILL BROOK IN THE TOWN OF READING, VERMONT.

THE PROJECT WILL CONSIST OF THE CONSTRUCTION OF A NEW TWO LANE, SINGLE SPAN STEEL BEAM BRIDGE WITH CONCRETE DECK ON A SLIGHTLY DOWNSTREAM ALIGNMENT (TO MINIMIZE THE REVERSE CURVE IN TH # 8) INCLUDING RELATED ROADWAY AND CHANNEL WORK. THE BRIDGE WILL BE CLOSED DURING CONSTRUCTION.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.71 ACRES.

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

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, MODERATE TO STEEPLY SLOPING, MIXED HARDWOOD AND SOFTWOOD FOREST WITH WELL DEFINED DRAINAGEWAYS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES.

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

MILL BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS PERENNIAL, STRAIGHT, NARROW FLOOD PLAIN, NOT BRAIDED OR ANA-BRANCHED WITH A STREAM BED CONSISTING OF GRAVEL AND COBBLES, WITH SOME LEDGE UPSTREAM. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 9.5 SQUARE MILES. DISTURBED SOILS WILL ALL BE WITHIN 100 FEET OF RECEIVING WATERS.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS HILLY TO MOUNTAINOUS. TH # 8 AND THREE DRIVES ARE WITHIN THE PROJECT SITE.

1.2.4 VEGETATION

A MIX OF HARDWOOD AND SOFTWOOD TREES OF ALL SIZES EXIST ALONG TH # 8. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ALONG A NEW ALIGNMENT. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. THE SOIL ON THE PROJECT SITE IS PODUNK, FINE SANDY LOAM, 0% TO 3% SLOPES, "K FACTOR" = 0.24. THE SOIL IS CONSIDERED NOT HIGHLY ERODIBLE.

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.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
AGRICULTURAL LAND: YES
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: MILL BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. 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, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL PRACTICES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. 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.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT, WHICH MAY INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCE - PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA PHASING PLAN

1.4.3 STABILIZE CONSTRUCTION EXIT STABILIZED CONSTRUCTION ENTRANCE

1.4.4 INSTALL SILT FENCE

SILT FENCE - SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. INSTALLATION SHALL BE PERFORMED PER INCLUDED DETAIL SHEET. MEASURES SUCH AS SILT FENCE SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT BUILD-UP SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.5 DIVERT UPLAND RUNOFF

SWALE (STORM WATER FROM STREET COLLECTIONS DRAINAGE SYSTEM)

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK DAM

1.4.7 CONSTRUCT PERMANENT CONTROLS

TYPE I, II, III STONE FOR SLOPE LINING AND CHANNEL PROTECTION - STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED BY VTRANS ON THE PROJECT PLANS. THE STONE FILL WILL STABILIZE THE EXISTING BANK IN ORDER TO PROTECT FROM EROSION DURING STORM AND HIGH WATER EVENTS.

SEED AND MULCH
DRAINAGE INLETS AND PIPING
SOIL RETENTION WALLS

1.4.8 STABILIZE EXPOSED SOILS

SEED AND MULCH AND EROSION MATTING - SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

TRACKING - TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEED AND MULCH - ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. AREAS WITH SLOPES STEEPER THAN 1:3 SHALL UTILIZE BIODEGRADABLE EROSION CONTROL MATTING. STREAM BANK VEGETATION WILL BE INTRODUCED IN THE GRUBBING MATERIAL THAT IS TO BE PLACED OVER THE STREAM BANK STONE FILL.

1.4.11 DE-WATERING ACTIVITIES

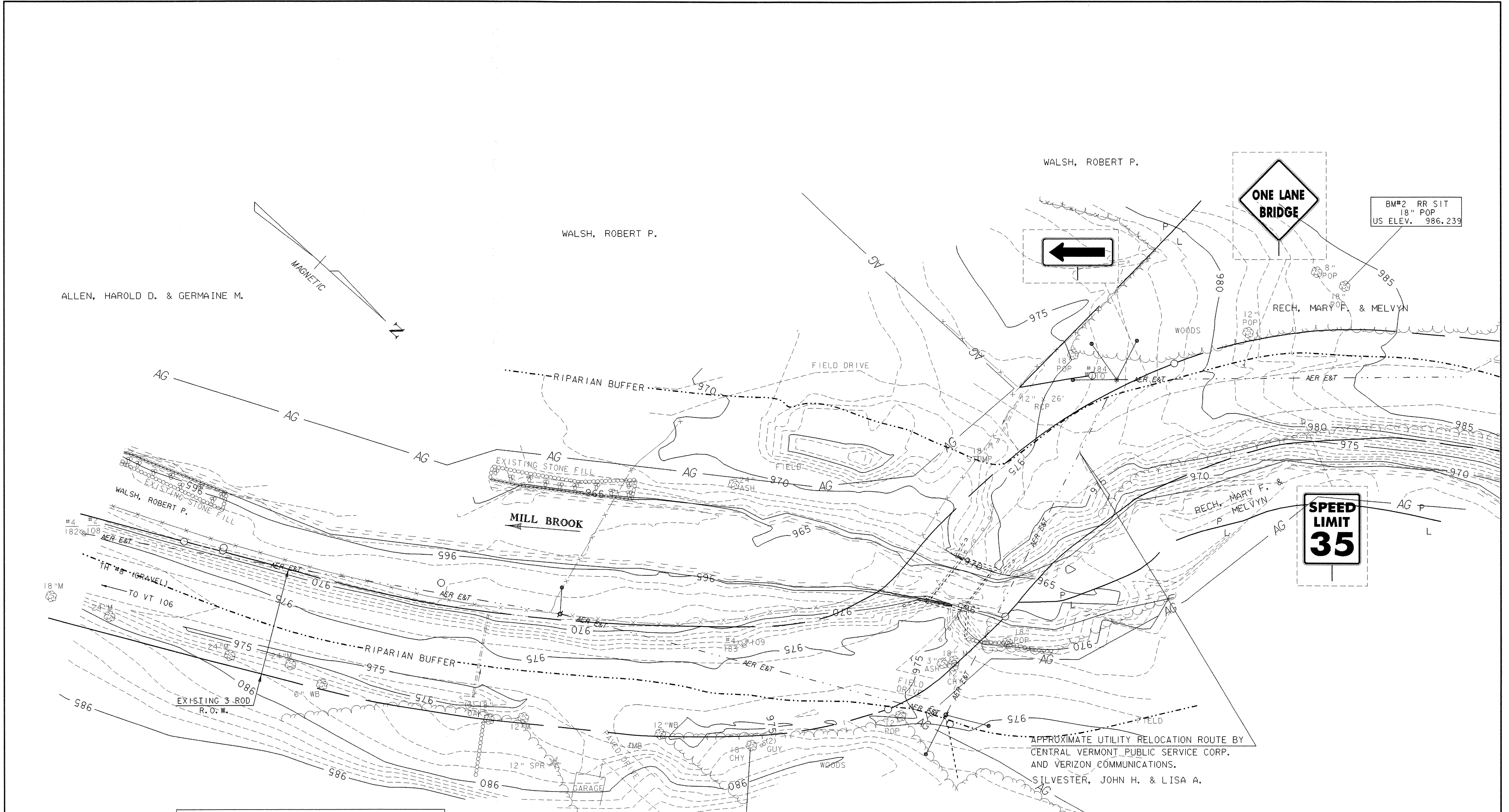
SEDIMENT BASINS FOR ABUTMENT WORK

1.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

EPSC NARRATIVE

PROJECT: READING	PROJECT NO.: BRZ 1444 (23)
DESIGN FILE NAME: 90j058\Structures\s90j058erode.t.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: sj058epsnarr.i	DRAWN BY: M.FESSEL
DESIGNED BY: R.S.YOUNG	CHECKED BY: R.S.YOUNG
SQUAD LEADER: C.P. WILLIAMS	SHEET: 31 OF 49
EPSC NARRATIVE	



ALLEN, HAROLD D. & GERMAINE M.

WALSH, ROBERT P.

WALSH, ROBERT P.

**ONE LANE
BRIDGE**

BM#2 RR SIT
18" POP
US ELEV. 986.239

**SPEED
LIMIT
35**

LEGEND	
— AER E&T —	AERIAL ELECTRIC & TELEPHONE
-----	RIPARIAN BUFFER ZONE
AG	AGRICULTURAL LAND

DATUM	
VERTICAL	USGS 1928
HORIZONTAL	ASSUMED

BM#1 RR SIT
18" CHY
US ELEV. 977.709

SILVESTER, JOHN H. & LISA A.

EXISTING BRIDGE INFO

1 BEAM, CONC DECK
24' OVERALL SPAN
14' ROADWAY
9.2' TO STREAMBED
BUILT 1940


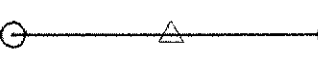

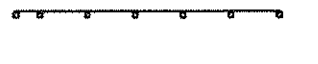



SCALE 1" = 20' - 0
20 0 20

EPSC EXISTING CONDITIONS SITE PLAN

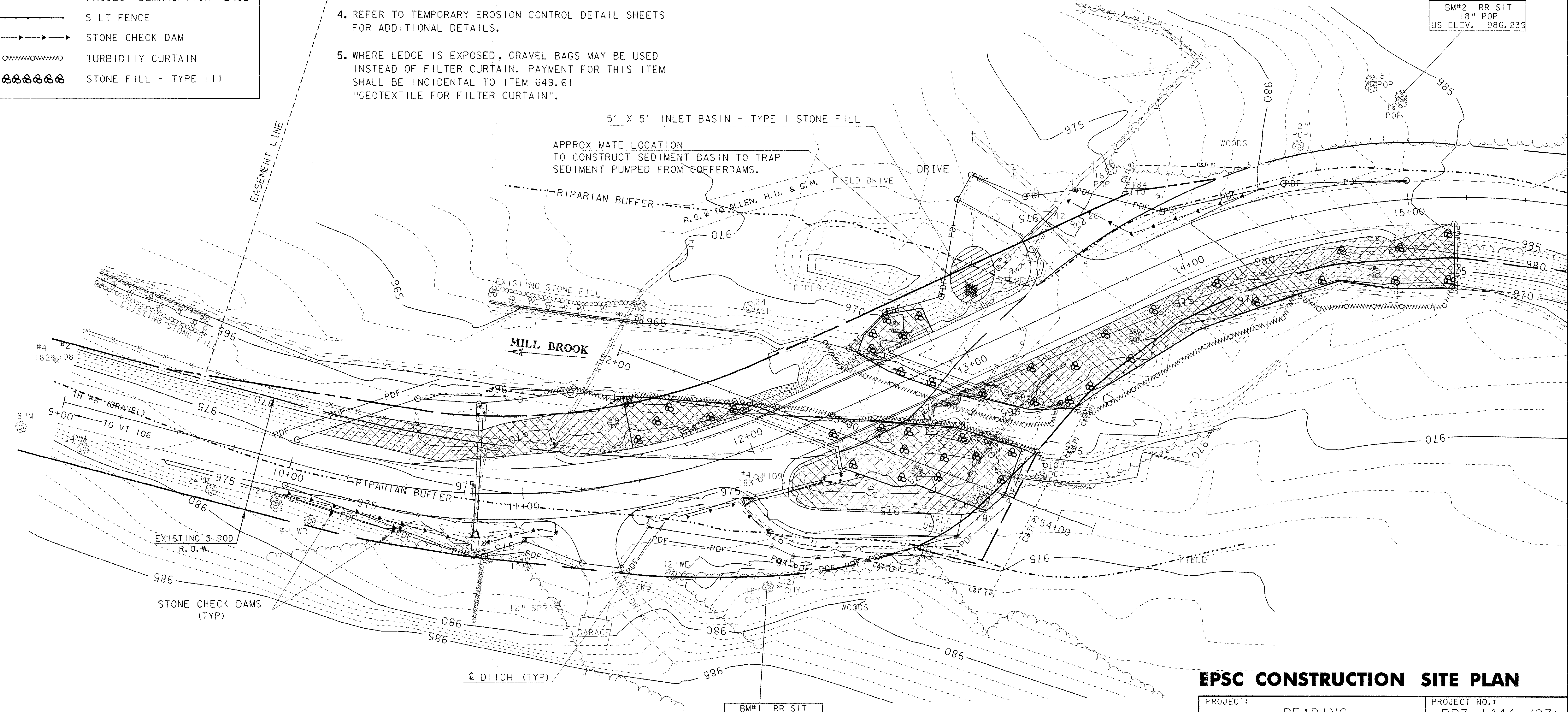
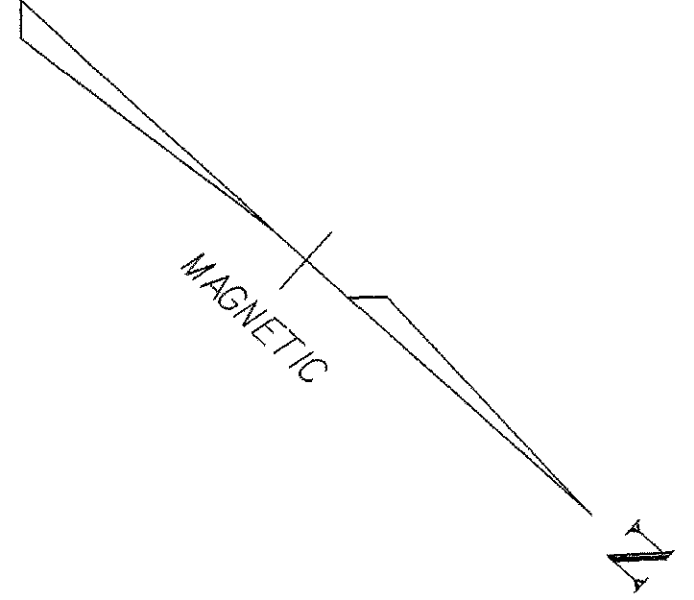
PROJECT:	READING	PROJECT NO.:	BRZ 1444 (23)
DESIGN FILE NAME:	90j058\structures\s90j058bdr_era.dgn	PLOT DATE:	13-FEB-2008
IPARM FILE NAME:	s90j058excon.i	SURVEY DATE:	12/2000
SURVEYED BY:	R. GILMAN	DRAWN BY:	M. FESSEL
SQUAD LEADER:	C.P. WILLIAMS	EPSC EXISTING CONDITIONS SITE PLAN SHEET: 32 OF 49	

SOIL CLASSIFICATION
 SOIL TYPE: PODUNK FINE SANDY LOAM
 SLOPES: 0-3%
 "K FACTOR" 0.24
 CLASSIFIED: NOT HIGHLY ERODIBLE LAND
 NOTE: THIS IS THE ONLY SOIL TYPE
 WITHIN THE PROJECT SITE.

LEGEND

-  EROSION MATTING
-  LIMITS OF SOIL DISTURBANCE
-  PROJECT DEMARCATION FENCE
-  SILT FENCE
-  STONE CHECK DAM
-  TURBIDITY CURTAIN
-  STONE FILL - TYPE III

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. WHERE LEDGE IS EXPOSED, GRAVEL BAGS MAY BE USED INSTEAD OF FILTER CURTAIN. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 649.61 "GEOTEXTILE FOR FILTER CURTAIN".



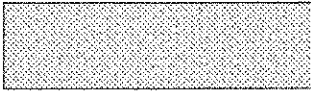

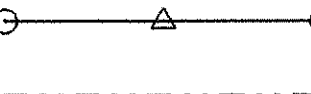
BM#2 RR SIT
 18" POP
 US ELEV. 986.239

BM#1 RR SIT
 18" CHY
 US ELEV. 977.709

DATUM
 VERTICAL USGS 1928
 HORIZONTAL ASSUMED

SCALE 1" = 20' - 0
 20 0 20

EPSC CONSTRUCTION SITE PLAN	
PROJECT: READING	PROJECT NO.: BRZ 1444 (23)
DESIGN FILE NAME: 90j058\structures\s90j058bdr_ero.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: s90j058eroplan.i	SURVEYED BY: R. GILMAN
SURVEYED BY: R. GILMAN	SURVEY DATE: 12/2000
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: M. FESSEL
EPSC CONSTRUCTION SITE PLAN	SHEET: 33 OF 49

LEGEND	
— AER E&T —	AERIAL ELECTRIC & TELEPHONE
	DISTURBED AREAS REQUIRING RE-VEGETATION
	EROSION MATTING
	LIMITS OF SOIL DISTURBANCE
- - - - -	RIPARIAN BUFFER ZONE

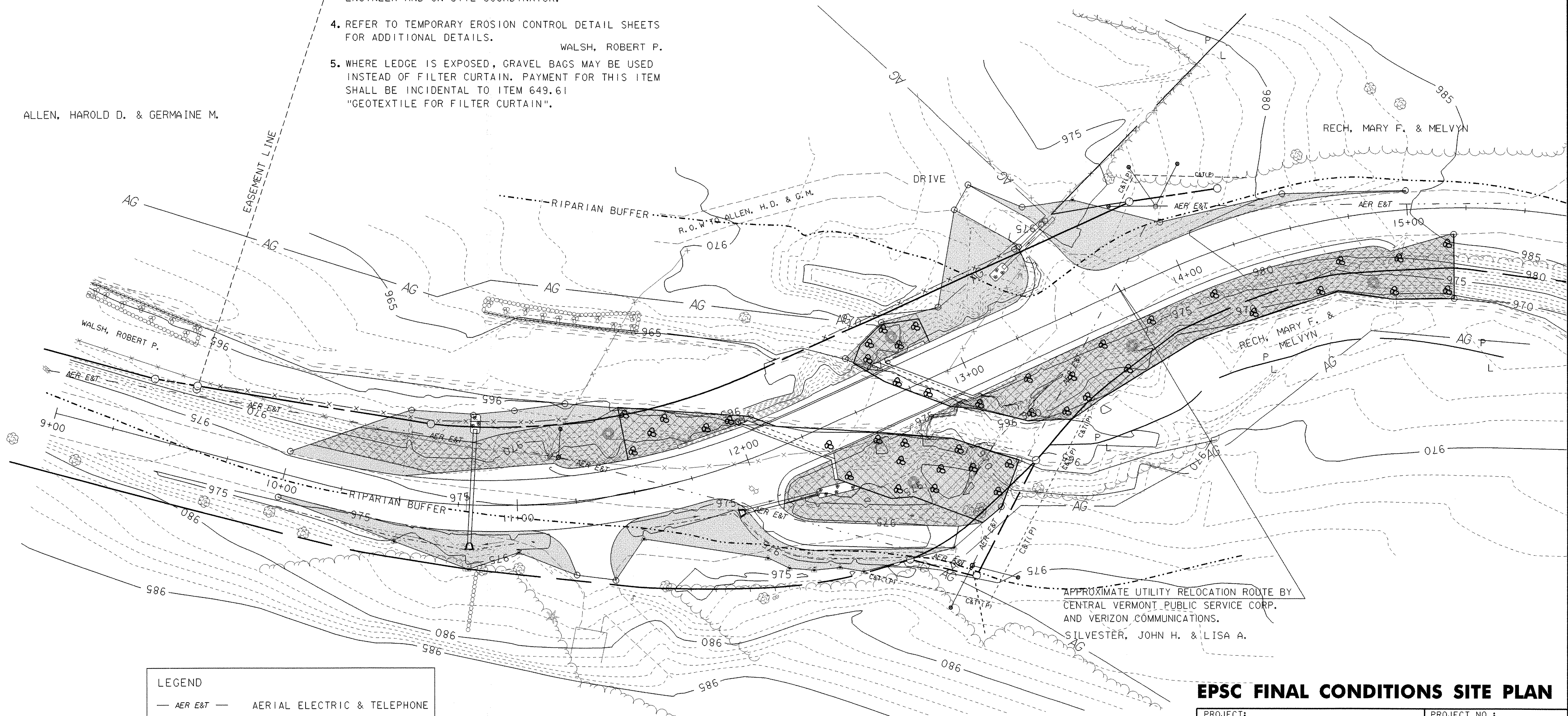
1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
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WALSH, ROBERT P.

ALLEN, HAROLD D. & GERMAINE M.

WALSH, ROBERT P.

RECH, MARY F. & MELVYN

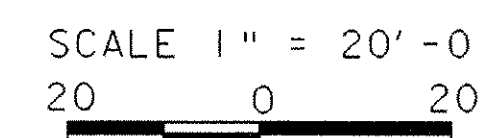


APPROXIMATE UTILITY RELOCATION ROUTE BY CENTRAL VERMONT PUBLIC SERVICE CORP. AND VERIZON COMMUNICATIONS.
SILVESTER, JOHN H. & LISA A.

LEGEND	
— AER E&T —	AERIAL ELECTRIC & TELEPHONE
- - - - -	RIPARIAN BUFFER ZONE
AG	AGRICULTURAL LAND

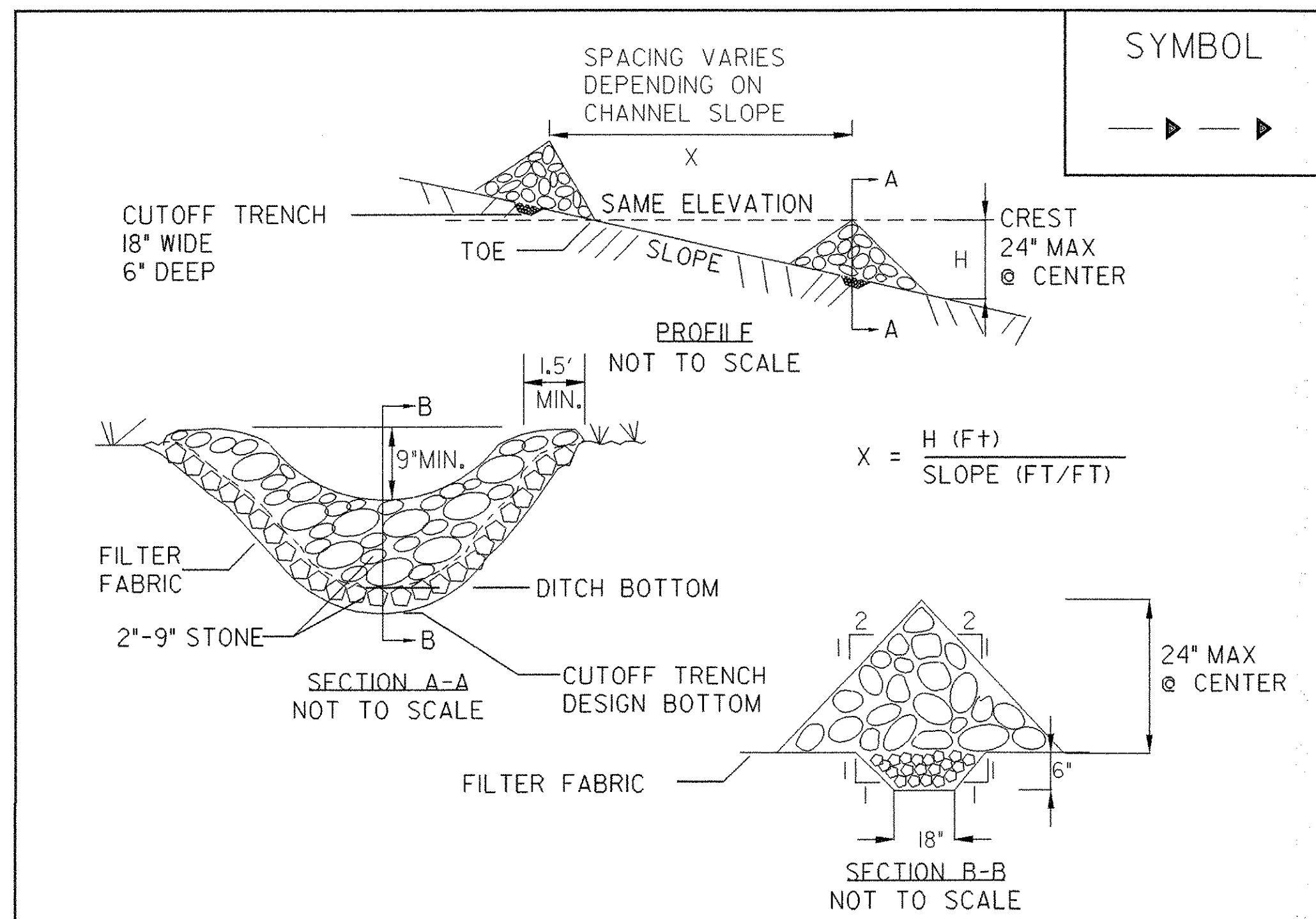
DATUM	
VERTICAL	USGS 1928
HORIZONTAL	ASSUMED

SILVESTER, JOHN H. & LISA A.



EPSC FINAL CONDITIONS SITE PLAN

PROJECT:	READING	PROJECT NO.:	BRZ 1444 (23)
DESIGN FILE NAME:	90j058\structures\s90j058bdr_ero.dgn	PLOT DATE:	13-FEB-2008
IPARM FILE NAME:	s90j058fincon.i	SURVEY DATE:	12/2000
SURVEYED BY:	R. GILMAN	DRAWN BY:	M. FESSEL
SQUAD LEADER:	C. P. WILLIAMS	SHEET:	34 OF 49
EPSC FINAL CONDITIONS SITE PLAN			



CONSTRUCTION SPECIFICATIONS

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

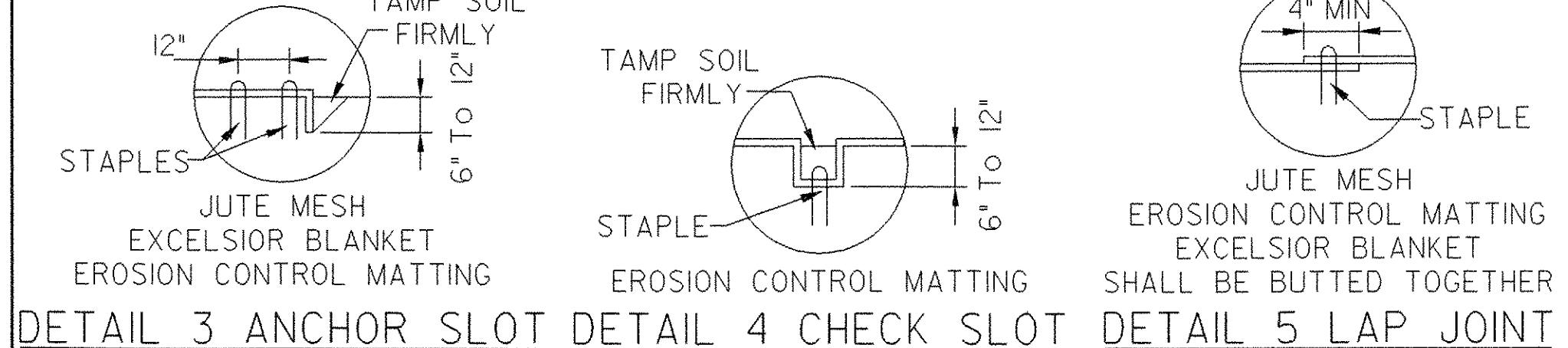
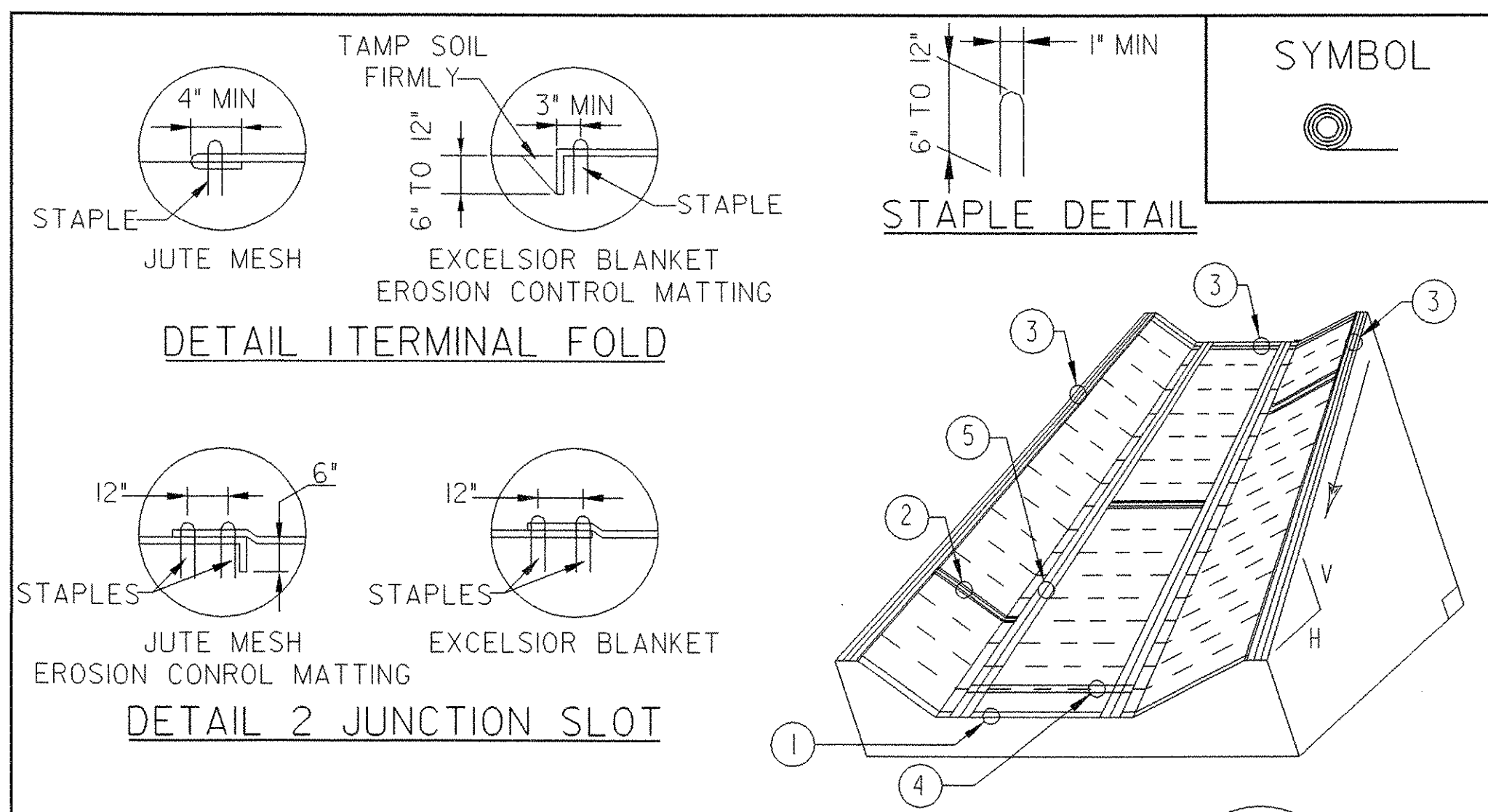
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DECORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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 ITEM SHALL BE PAID FOR UNDER ITEM 653.25 TEMPORARY STONE CHECK DAM, TYPE I

REVISIONS	
MARCH 8, 2007	JMF



CONSTRUCTION SPECIFICATIONS

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
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'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' 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.

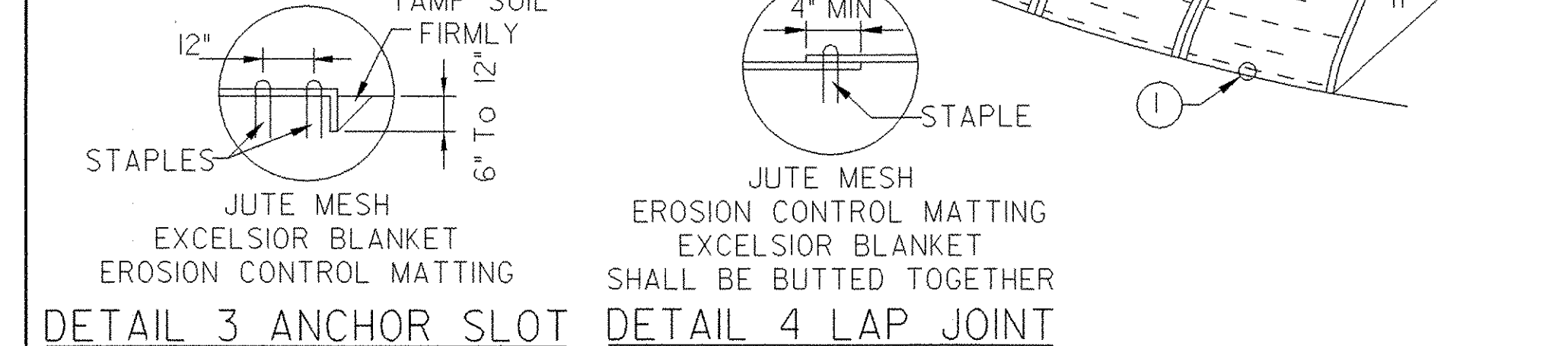
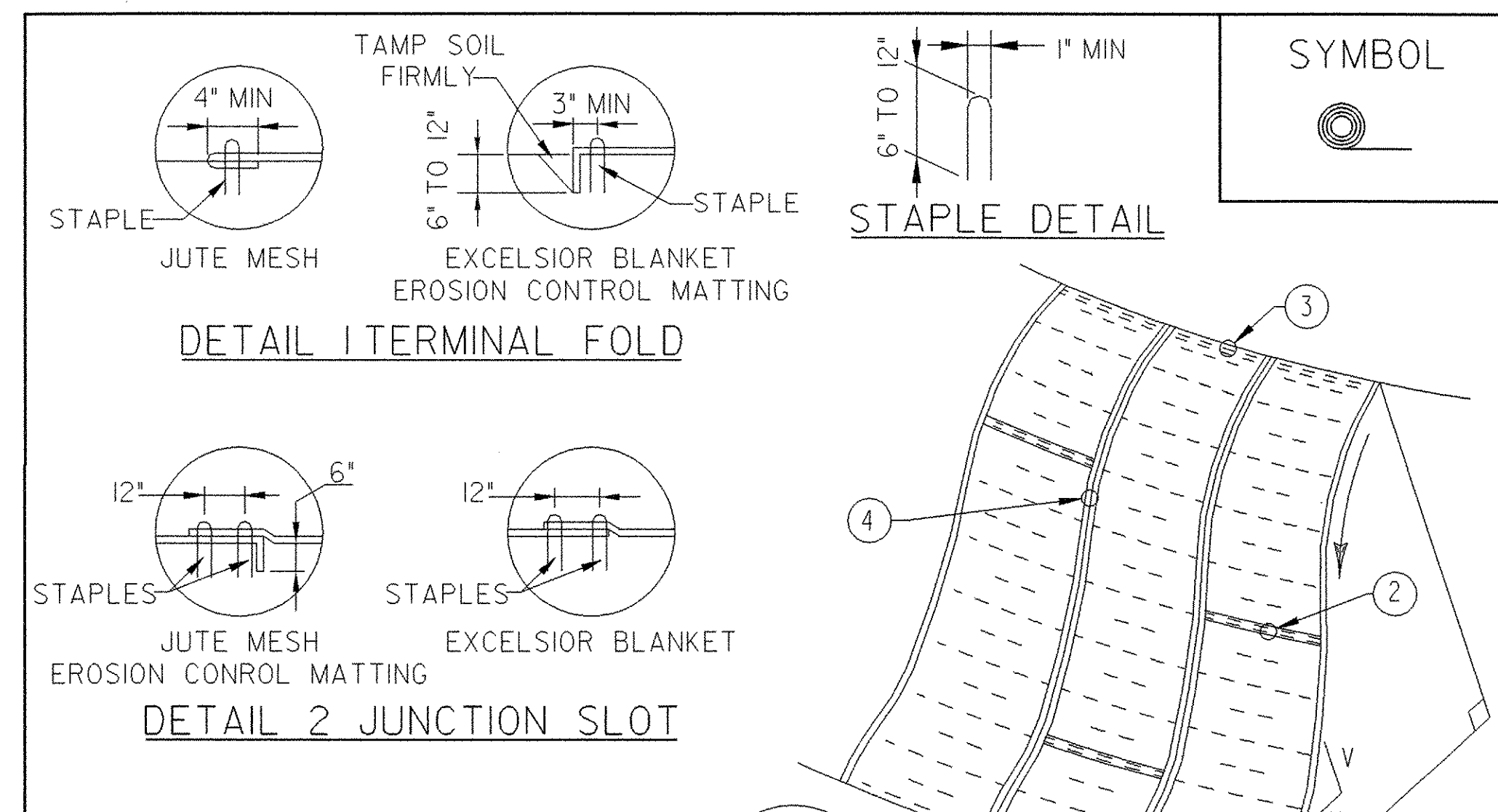
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING OR 653.21 PERMANENT EROSION MATTING

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND 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'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' 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: ILLINOIS USDA-NRCS 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.

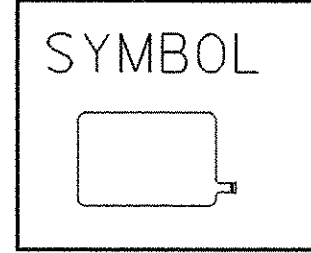
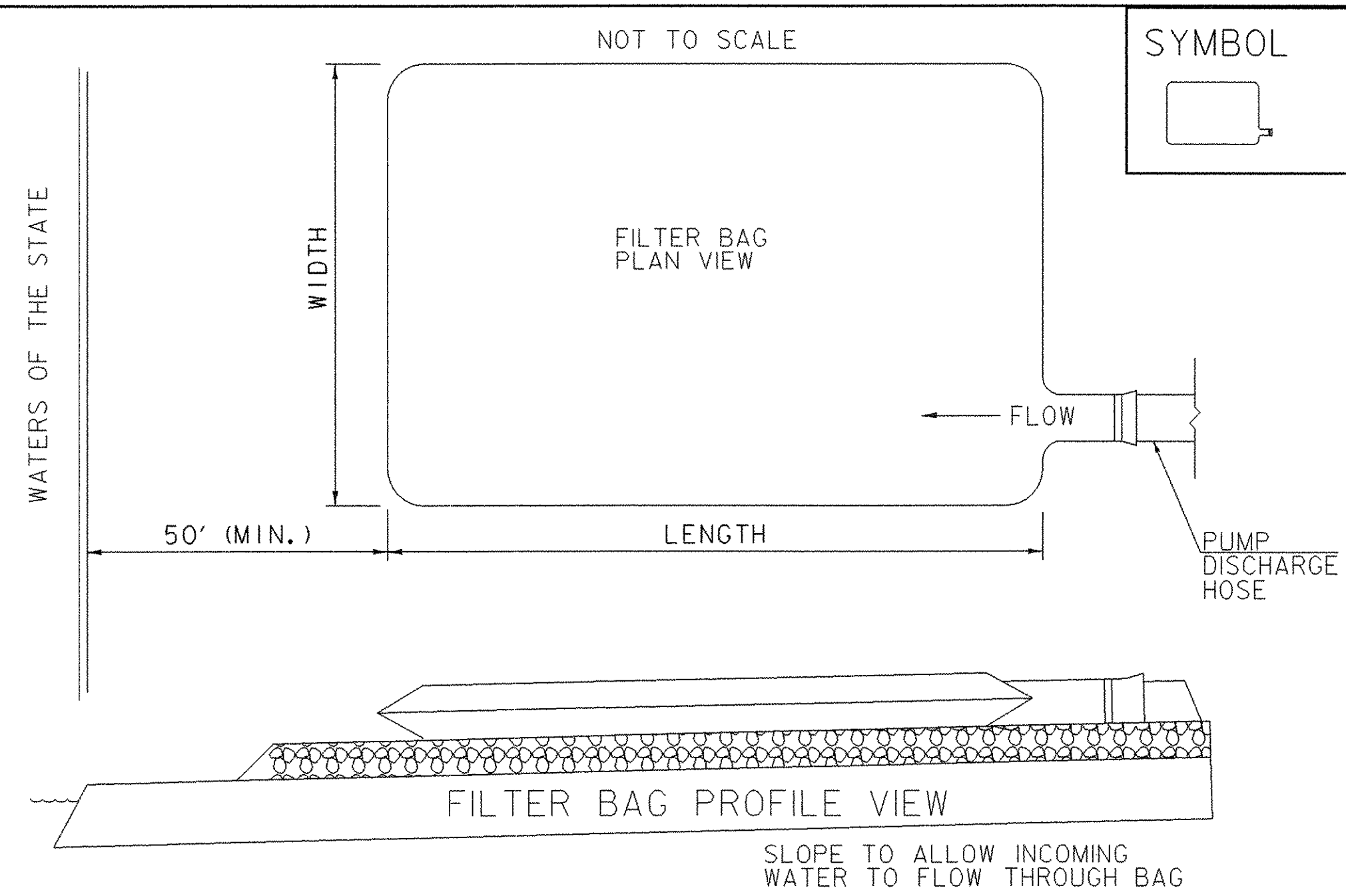
THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING OR 653.21 PERMANENT EROSION MATTING

NEW	
APRIL 16, 2007	WHF

EPSC DETAIL SHEETS

PROJECT: READING	PROJECT NO. : BRZ 1444 (23)
DESIGN FILE NAME: 90j058\Structures\s90j058erodetail.dgn IPARM FILE NAME: sj058epsc.l.i DESIGNED BY: CONST. ENV. SECTION SQUAD LEADER: C. P. WILLIAMS EROSION DETAILS - SHEET 1	PLOT DATE: 13-FEB-2008 DRAWN BY: CONST. ENV. SECT. CHECKED BY: SHEET: 35 OF 49

NTS



APPLICATION NOTES:

THE PRIMARY PURPOSE OF THE FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS WHILE ALLOWING WATER TO PASS THROUGH THE BAG.

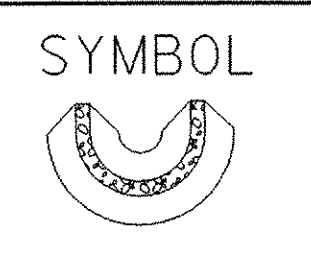
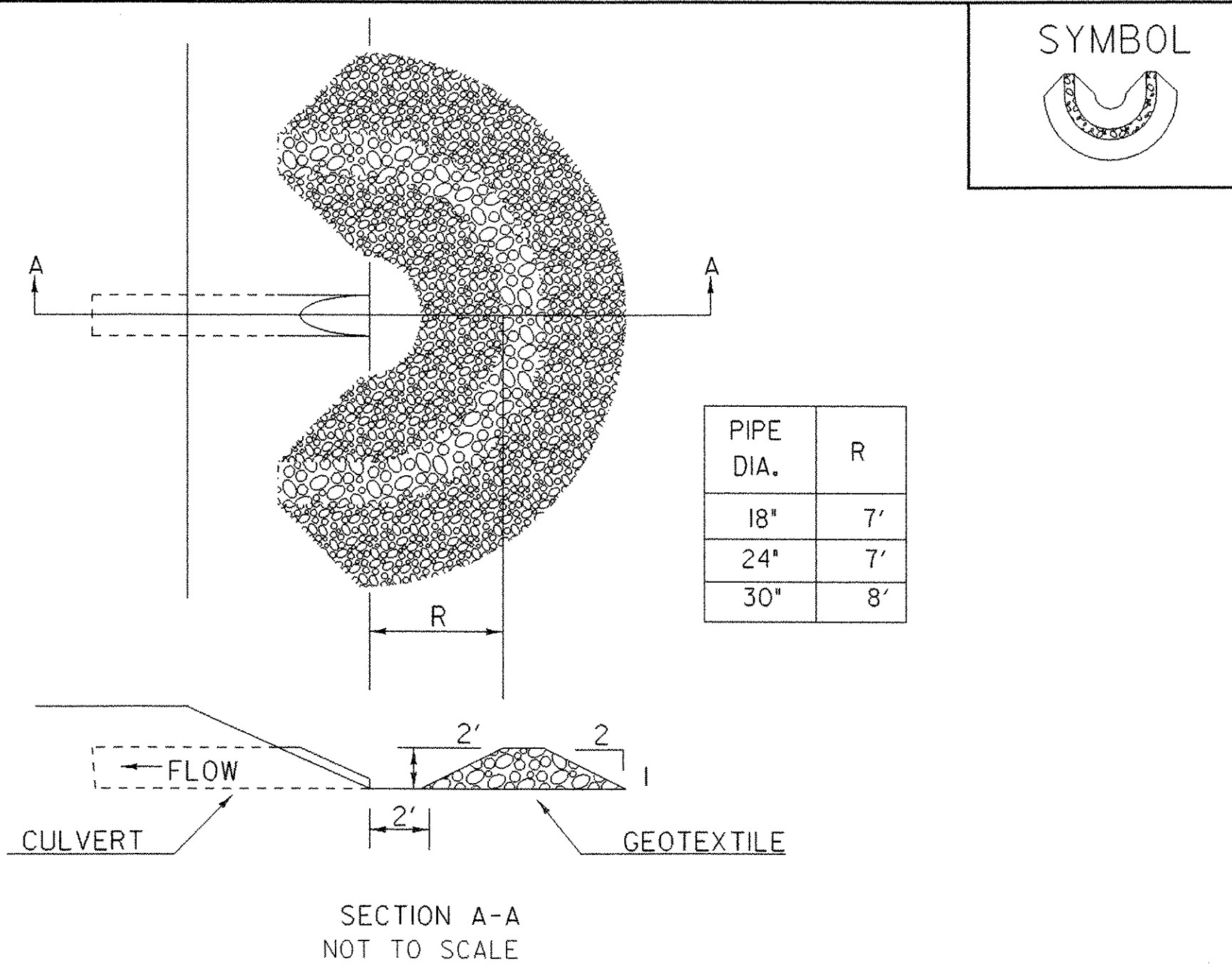
GENERAL NOTES:

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

FILTER BAG

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.45 FILTER BAG

REVISIONS	
SEPTEMBER 18, 2007	WHF
DECEMBER 13, 2007	WHF



PIPE DIA.	R
18"	7'
24"	7'
30"	8'

NOTES:

CONSTRUCTION SPECIFICATIONS

1. USE 2" TO 3" STONE.
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE. (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROCK DAM

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.40 INLET PROTECTIN DEVICE, TYPE I

REVISIONS	
SEPTEMBER 24, 2007	WHF

**SEEDING FORMULA
RURAL AREAS**

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREeping RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

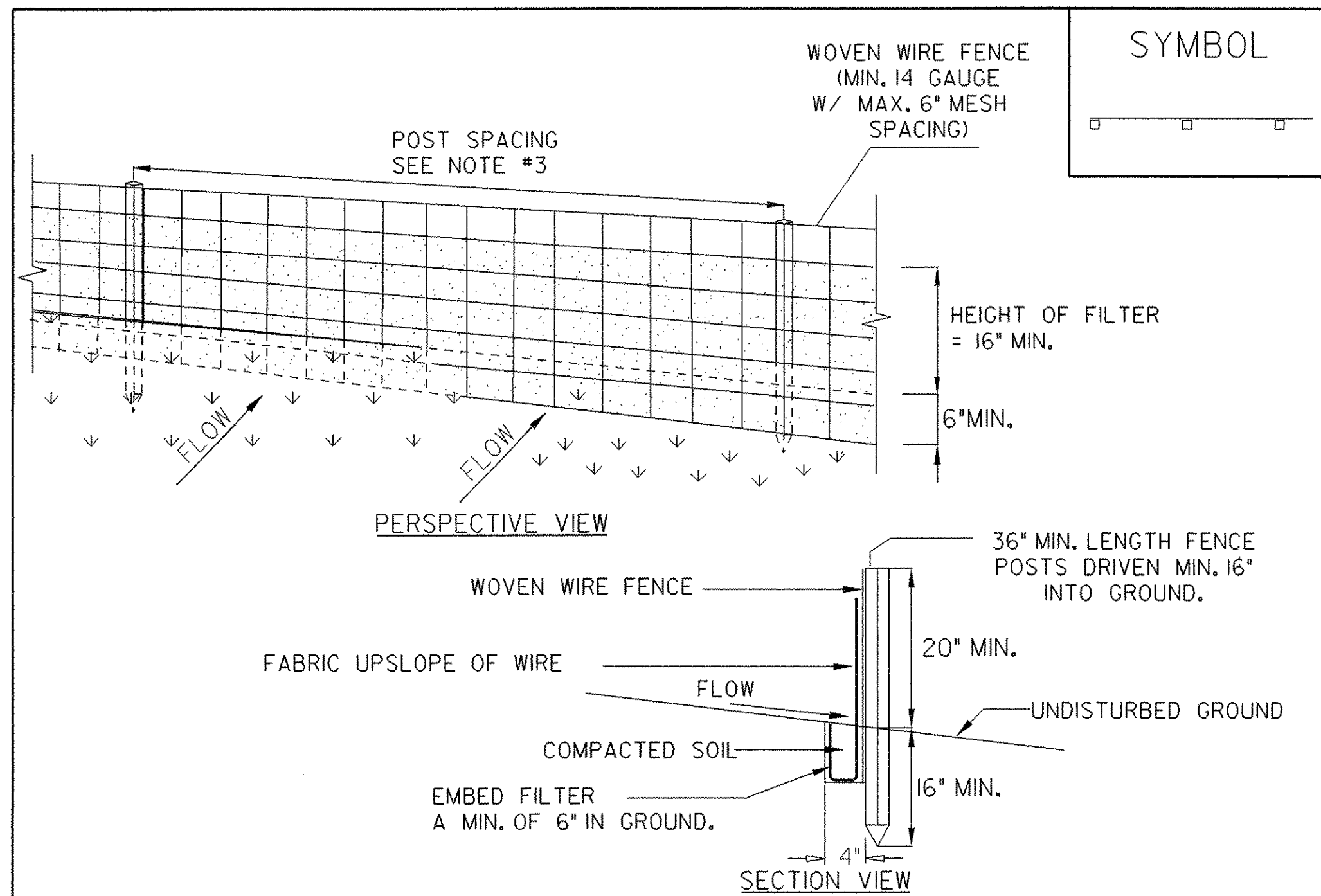
HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

EPSC DETAIL SHEETS

PROJECT: READING	PROJECT NO.: BRZ 1444 (23)
DESIGN FILE NAME: 99j058\Structures\sj058erodetails.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: sj058epsc2.i	DRAWN BY: CONST. ENV. SECT.
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY:
SQUAD LEADER: C.P. WILLIAMS	SHEET: 36 OF 49
EROSION DETAILS - SHEET 2	

NTS



CONSTRUCTION SPECIFICATIONS

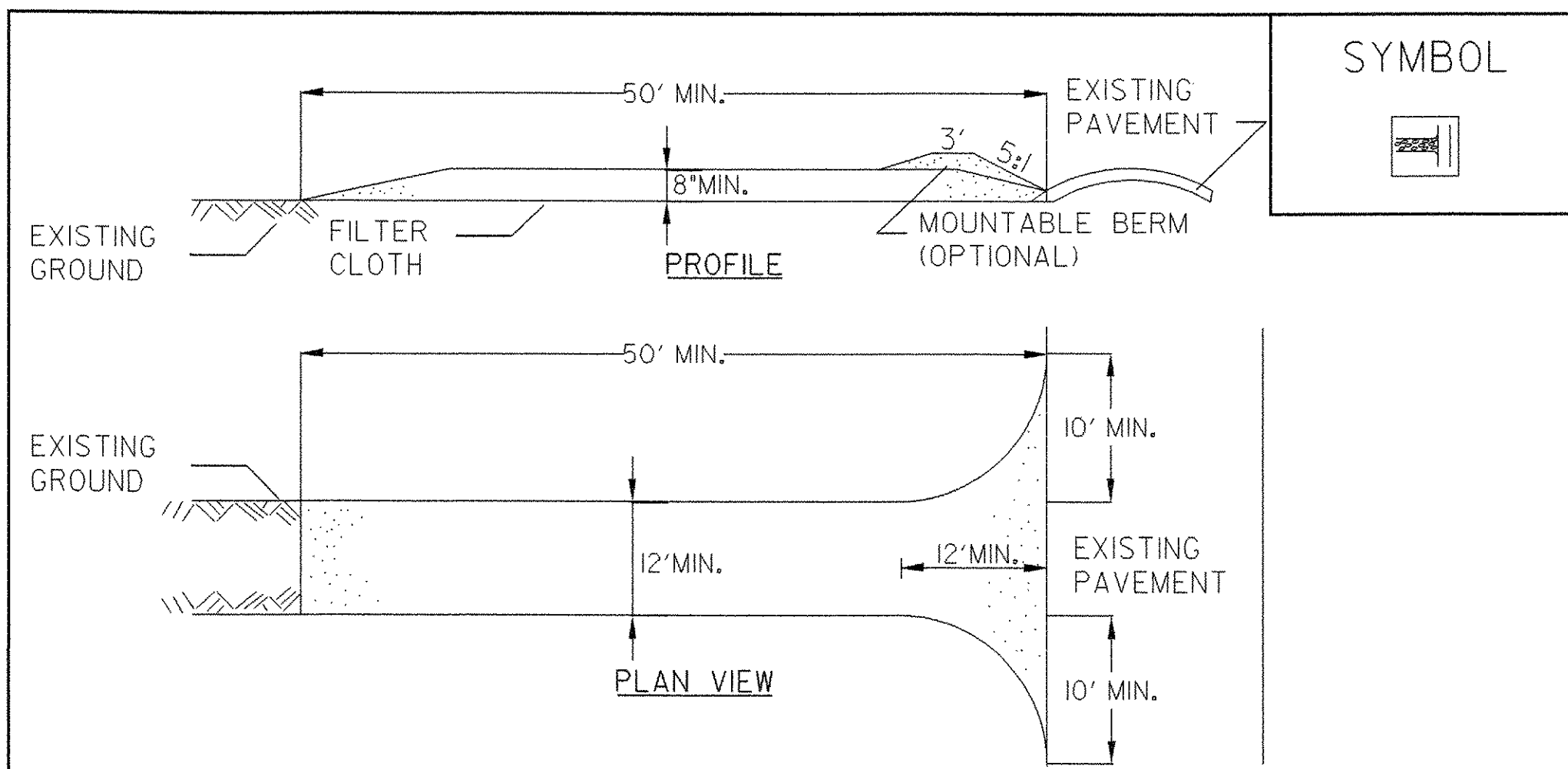
1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFIBROX, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, 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 SIX INCHES AND FOLDED.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
7. 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 ITEM SHALL BE PAID FOR UNDER ITEM STANDARD SPECIFICATION 649.51 GEOTEXTILE FOR SILT FENCE OR SPECIAL PROVISION 900.675 (GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED)



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT 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.

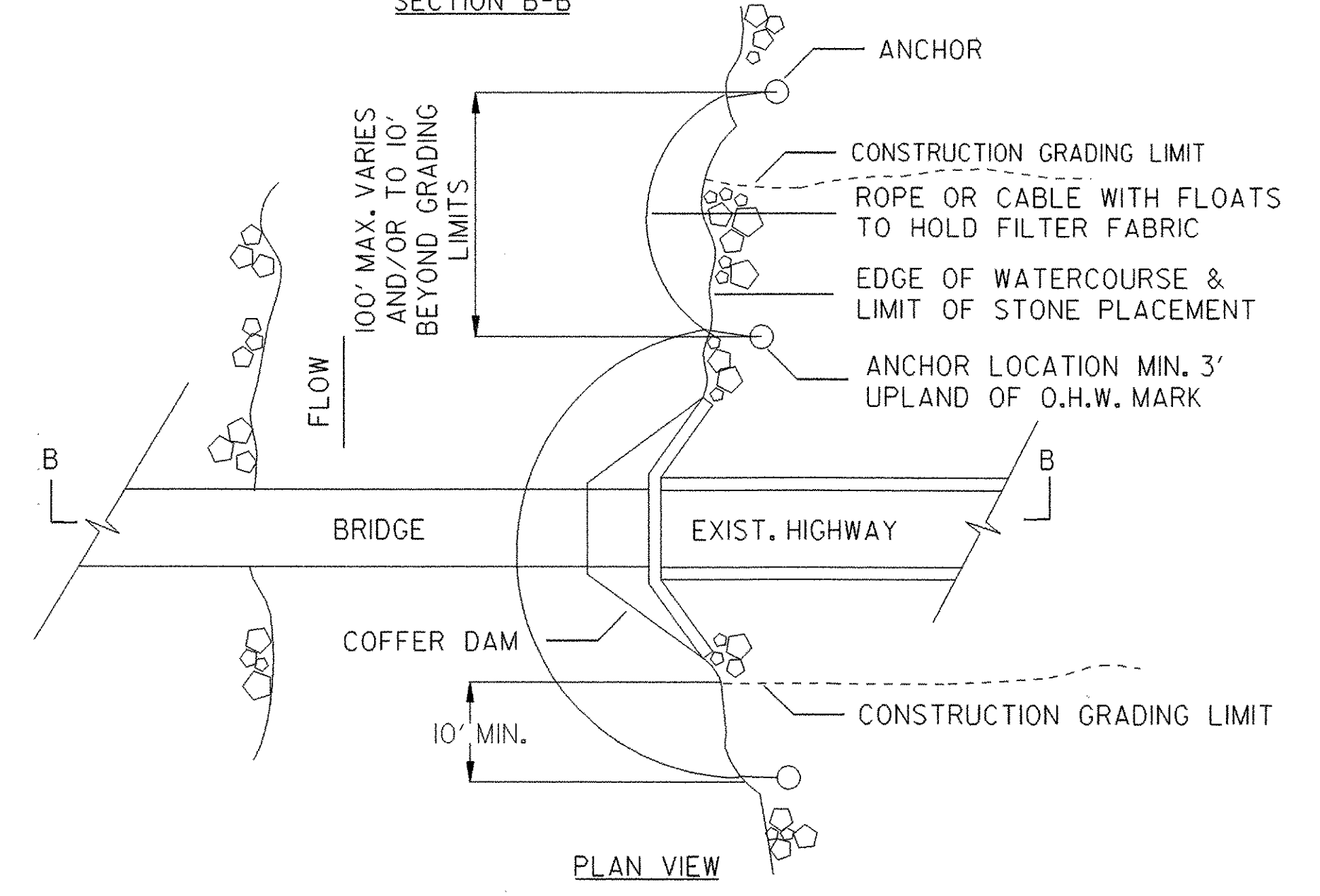
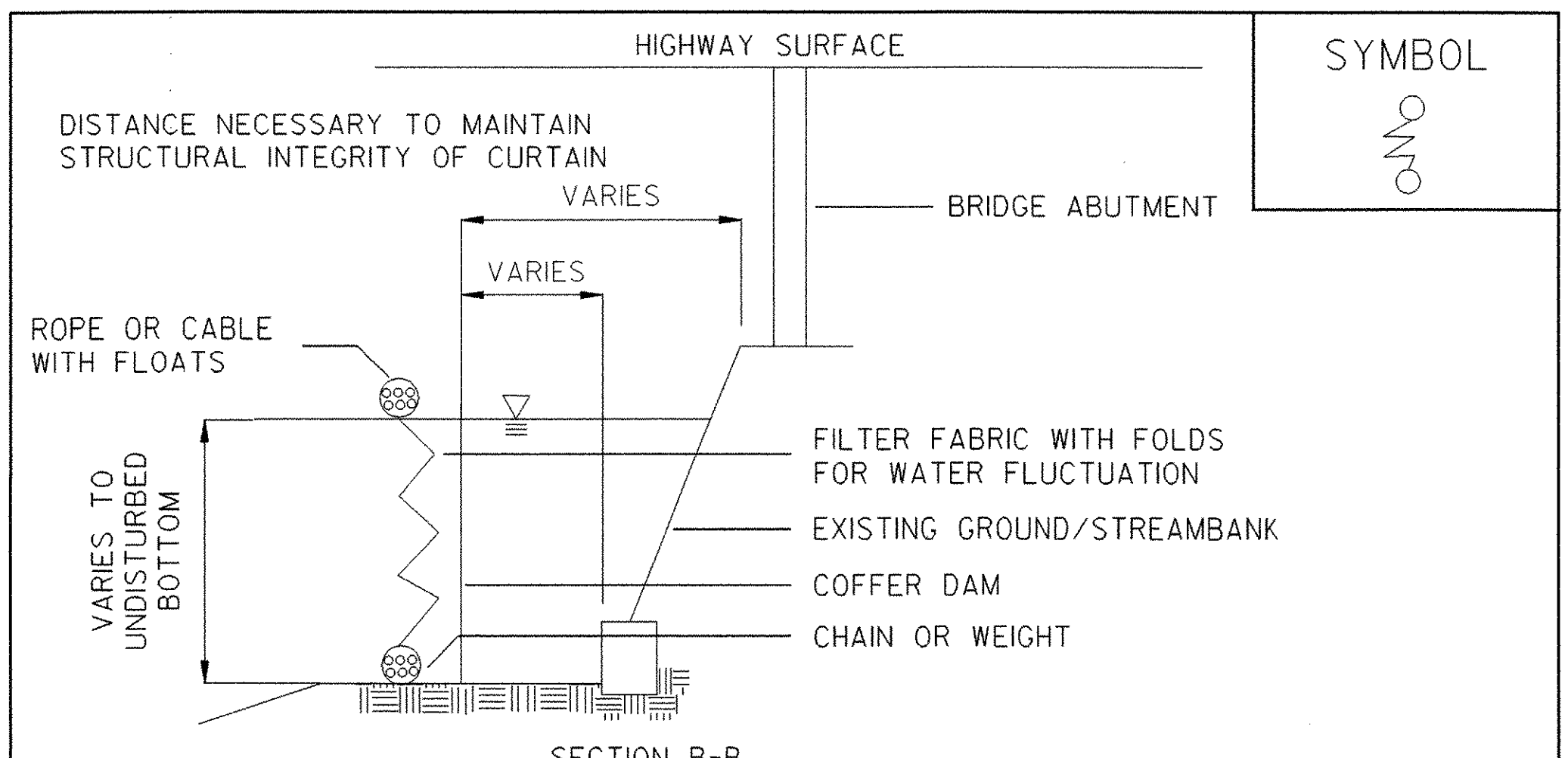
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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 ITEM SHALL BE PAID FOR UNDER ITEM 653.35 VEHICLE TRACKING PAD

REVISIONS		
FEBRUARY 9, 2007	WHF	
MARCH 8, 2007	JMF	



ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT AGENCY OF TRANSPORTATION

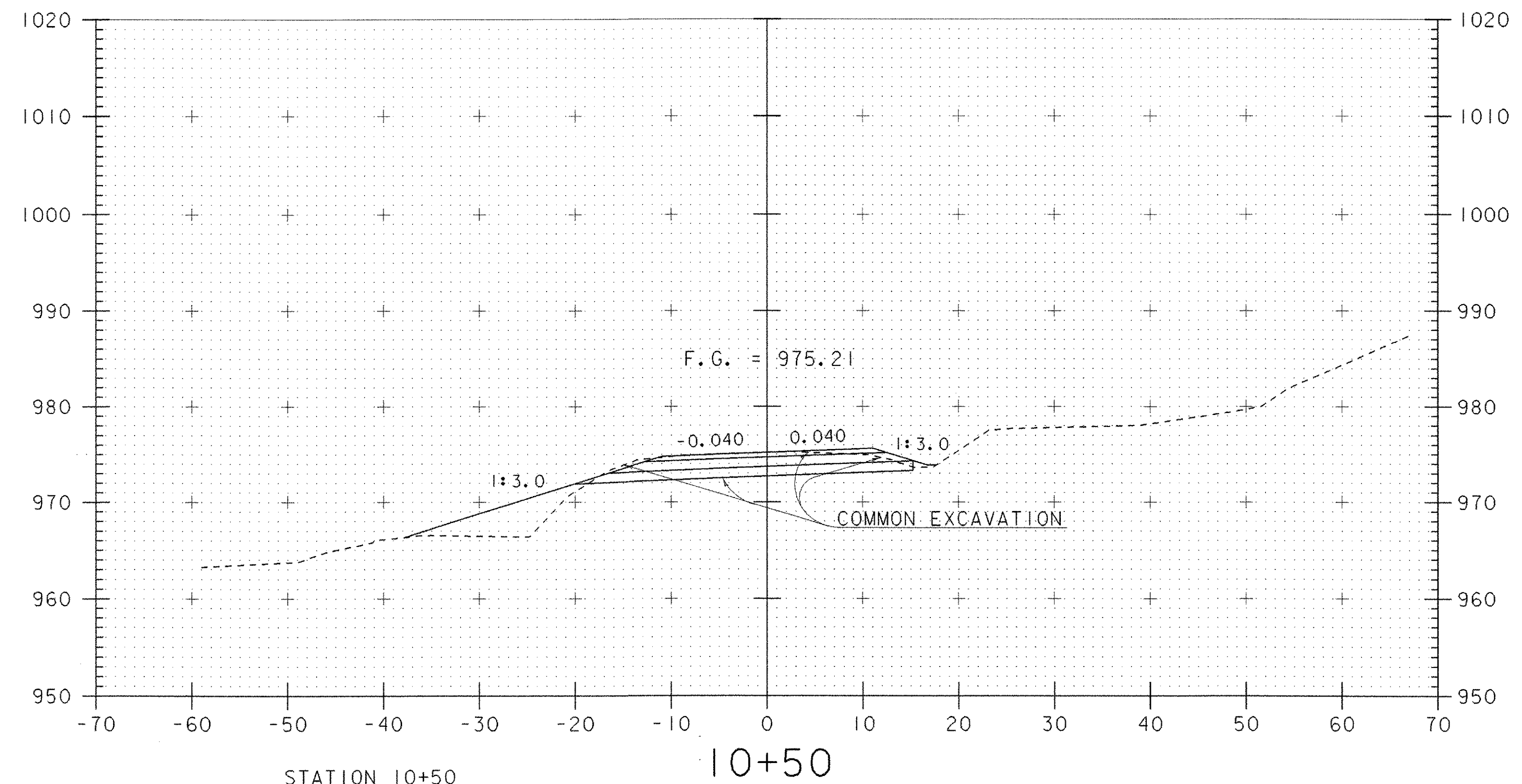
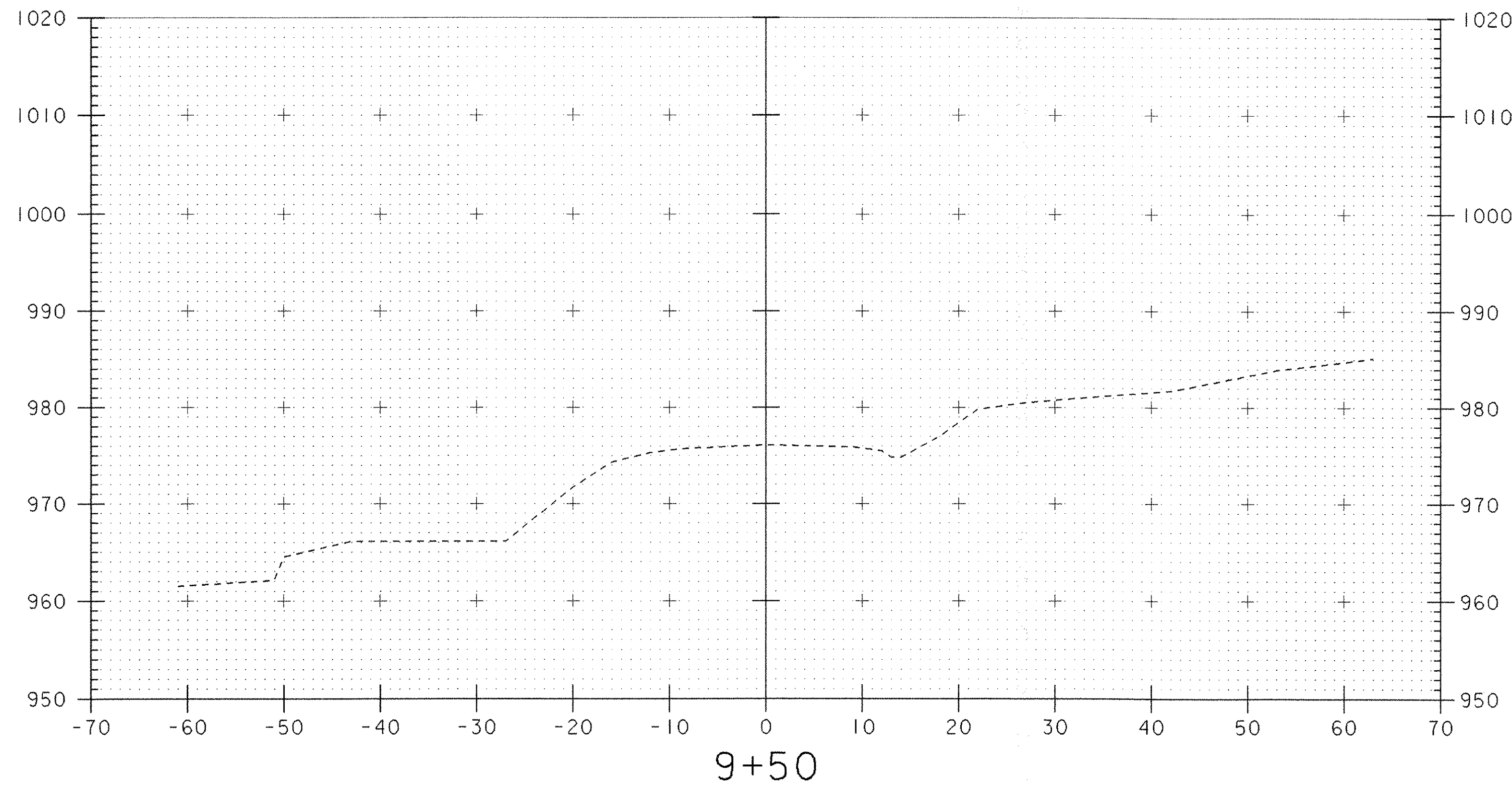
TURBIDITY CURTAIN

NOTES:
THIS ITEM SHALL BE PAID FOR UNDER ITEM 649.61 GEOTEXTILE FOR FILTER CURTAIN

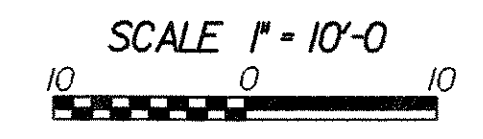
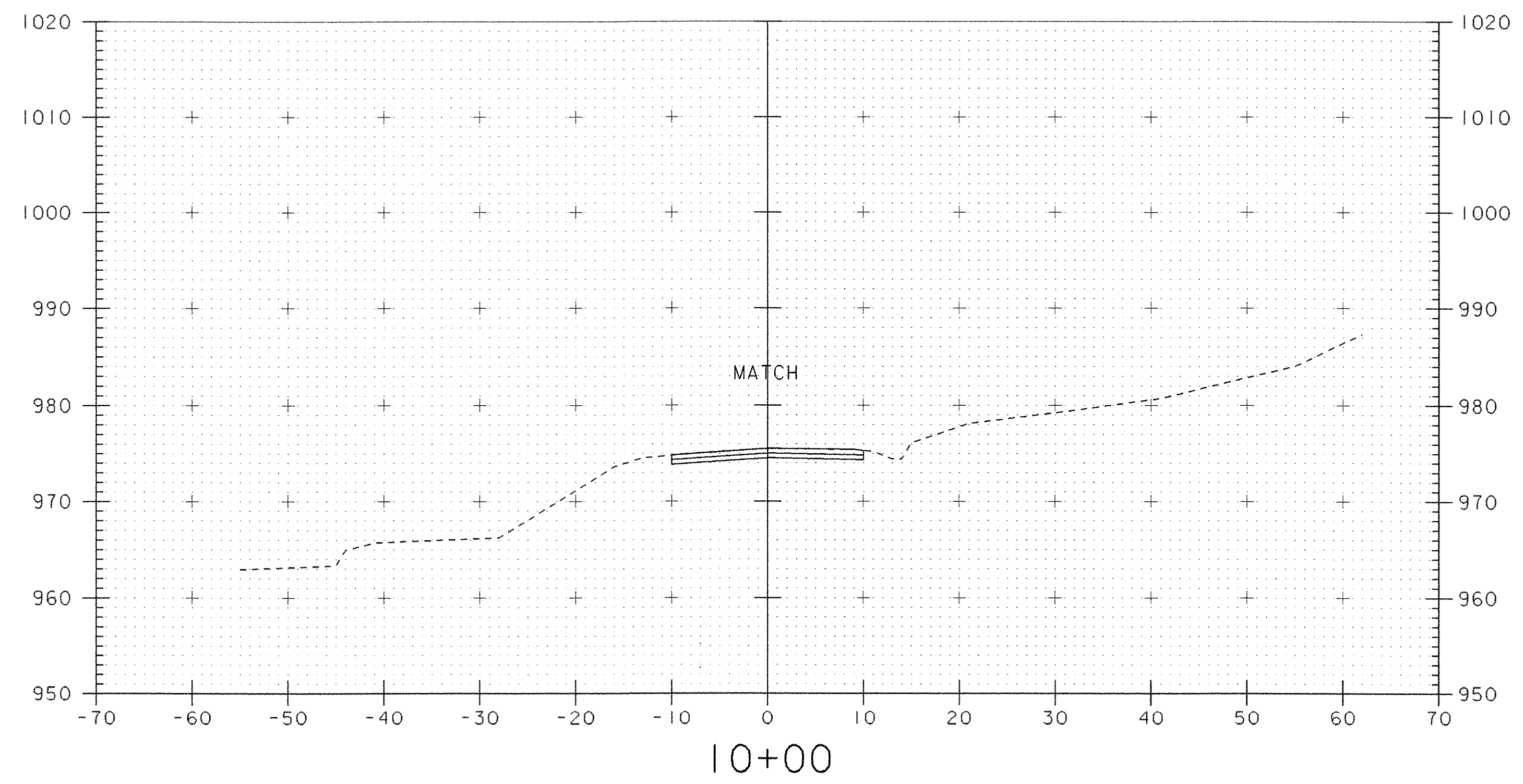
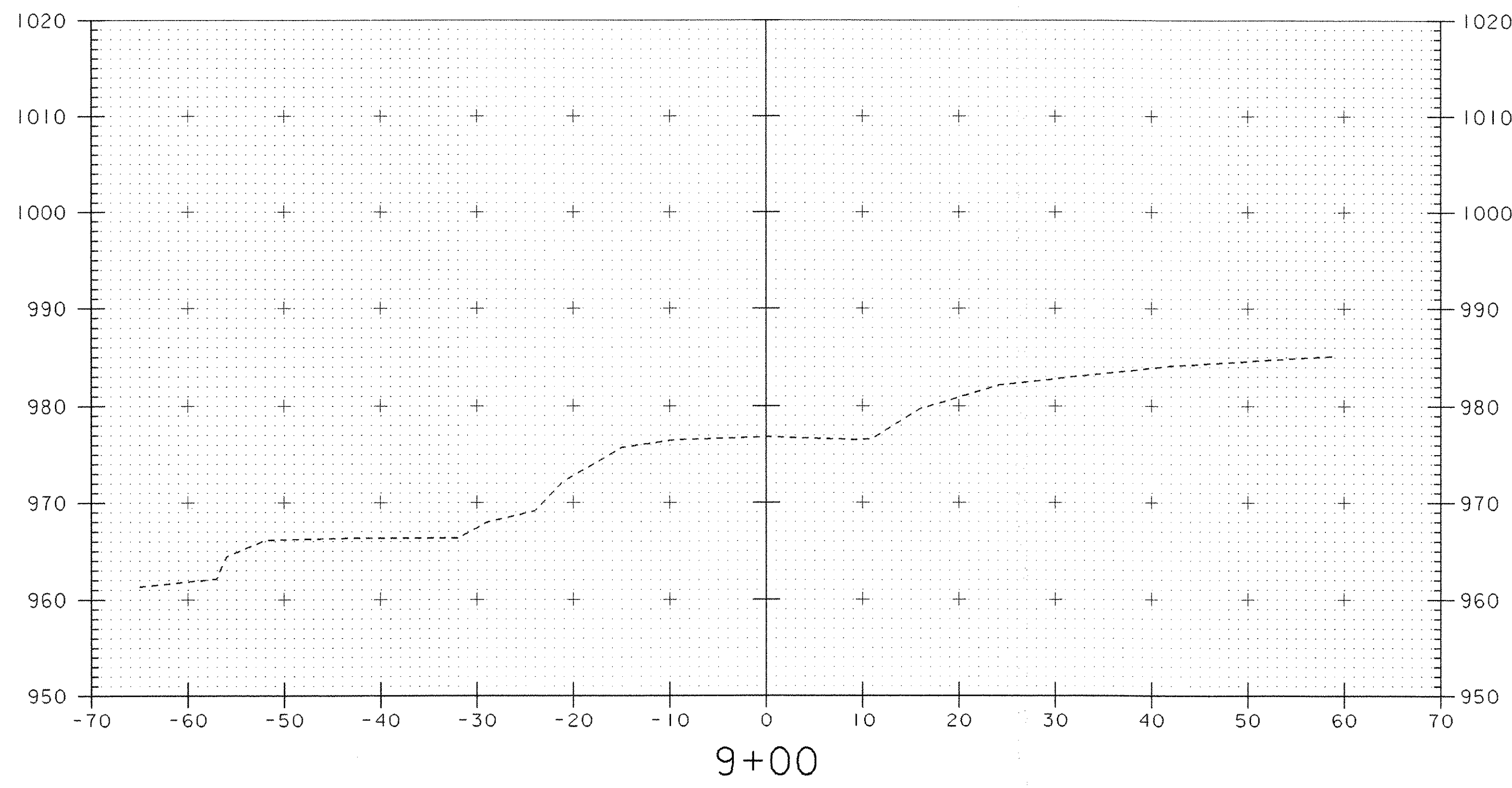
EPSC DETAIL SHEETS

PROJECT: READING	PROJECT NO.: BRZ 1444 (23)
DESIGN FILE NAME: 90j058\Structures\sj058erodetails.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: sj058epsc3.i	DRAWN BY: CONST. ENV. SECT.
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY:
SQUAD LEADER: C.P. WILLIAMS	SHEET: 37 OF 49
EROSION DETAILS - SHEET 3	

NTS

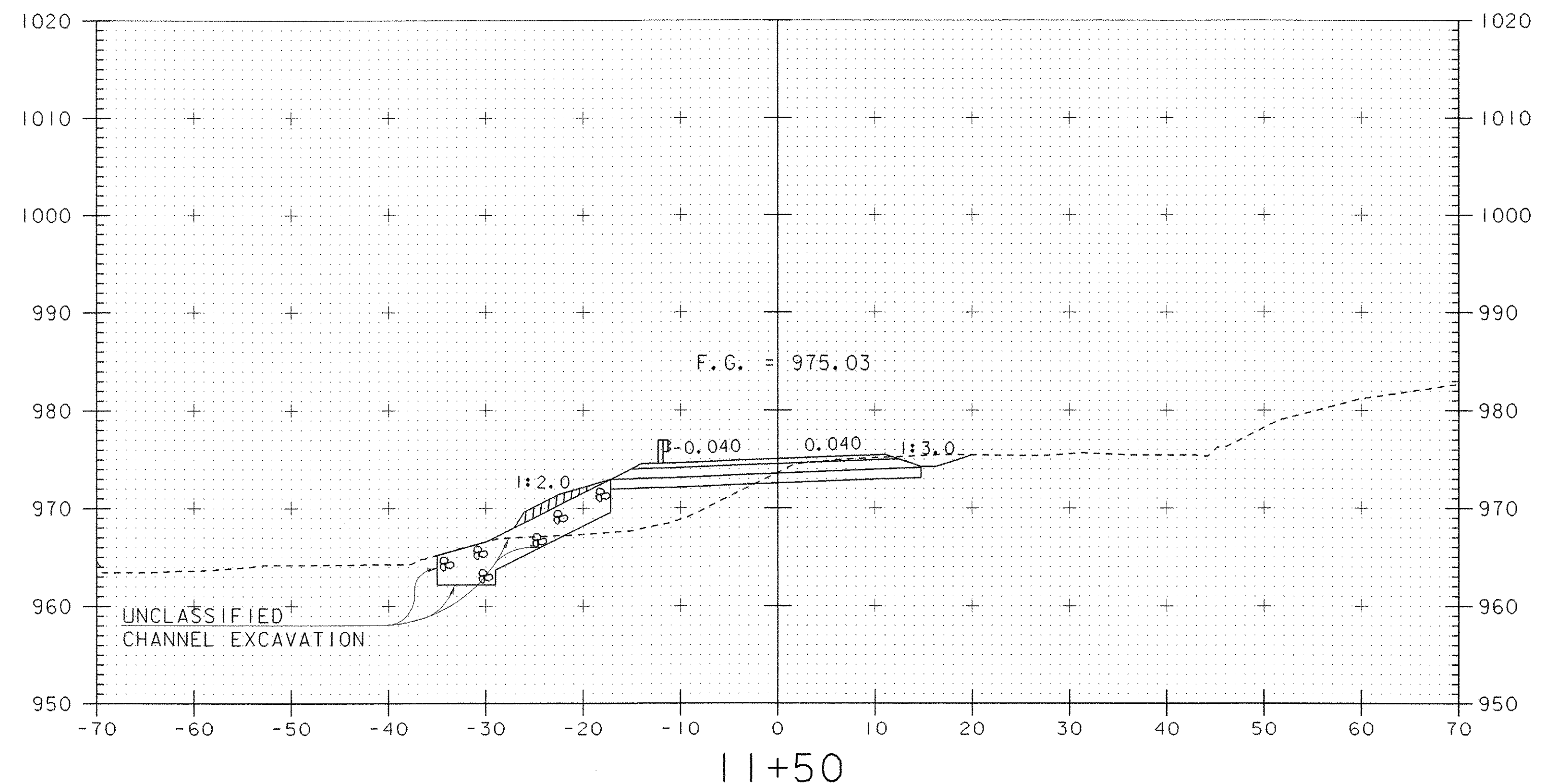
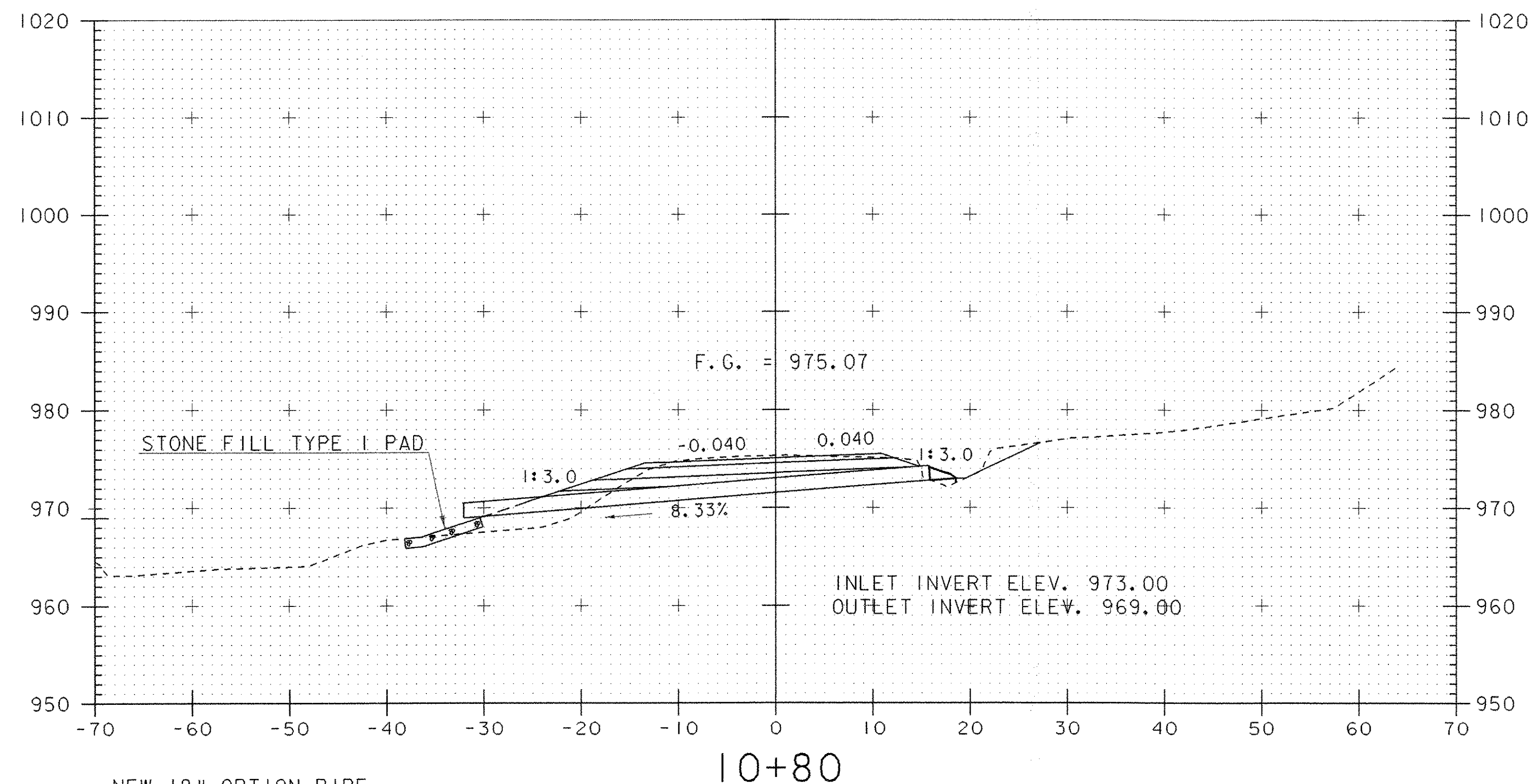
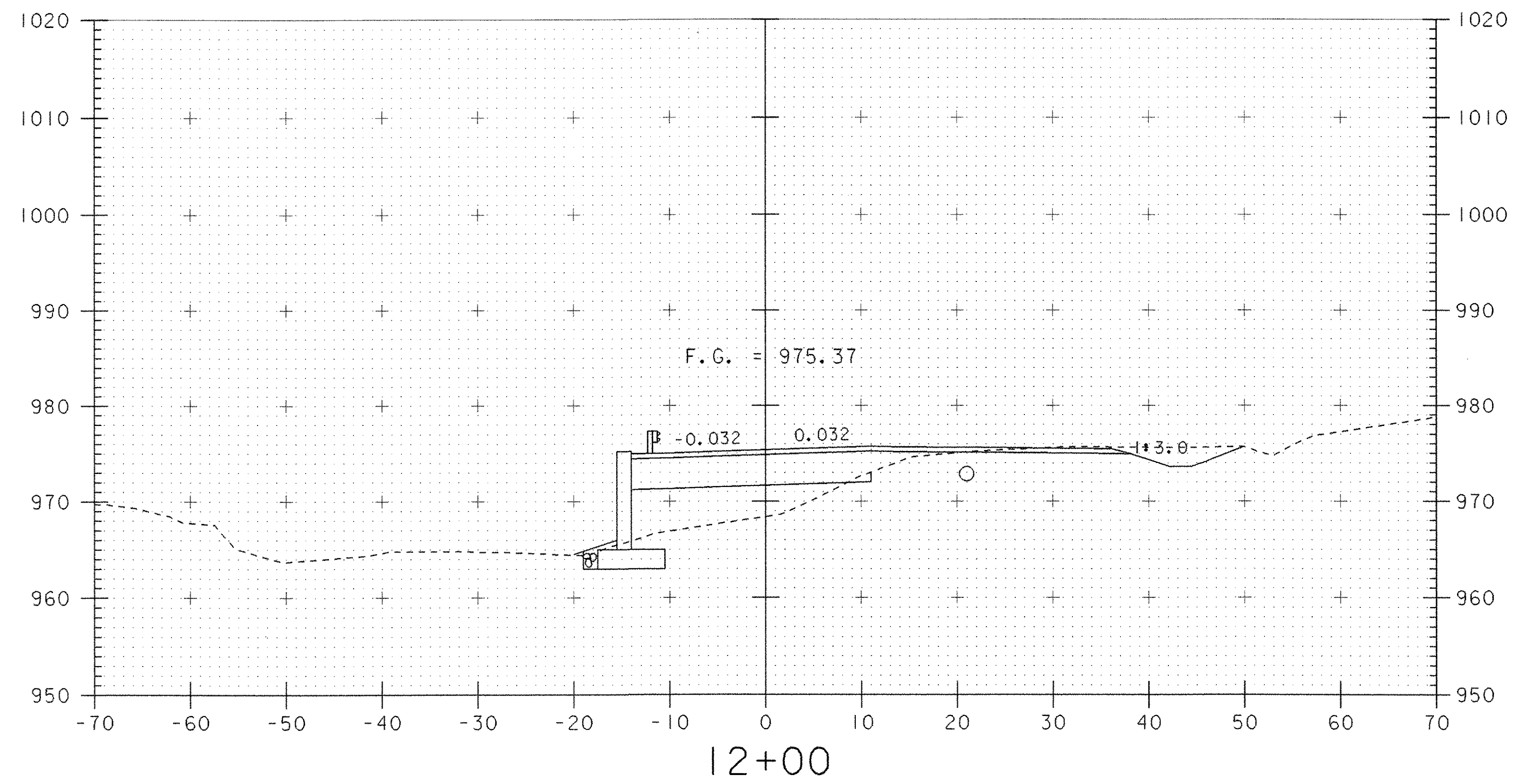
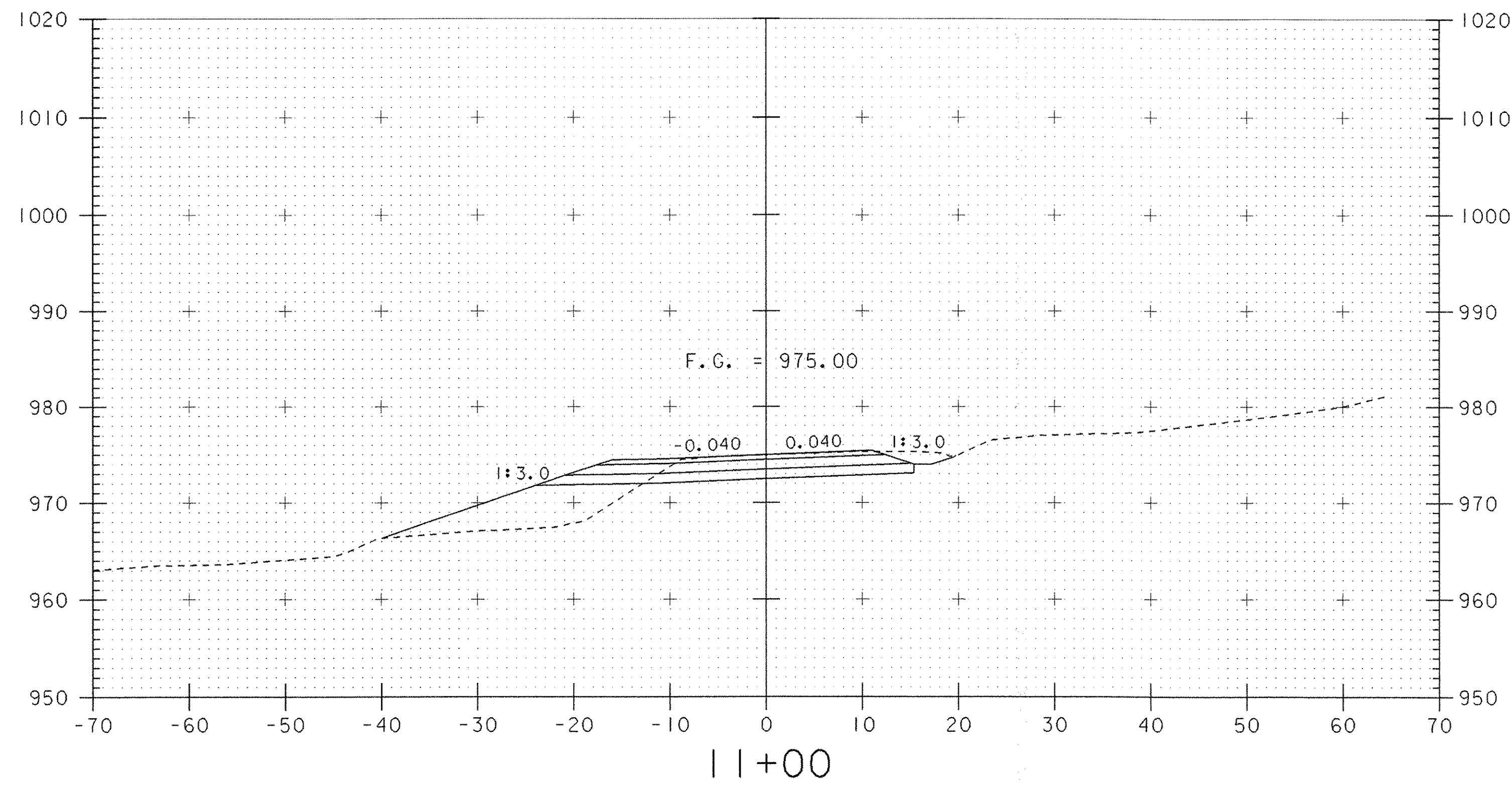


STATION 10+50
 END APPROACH / BEGIN PROJECT
 BEGIN SAND FULL DEPTH (BOX CUT)

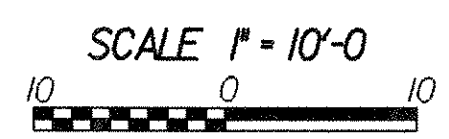


STATION 10+00
 BEGIN APPROACH
 BEGIN 6" AGGREGATE SURFACE COURSE
 TRANSITION SUBBASE FROM EXISTING TO PROPOSED TYPICAL
 IN 50' WITH 6" MINIMUM THICKNESS OF SUBBASE

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058msc.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058mx1.l	
MAINLINE SECTIONS 9+00 THRU 10+50	
SHEET: 38 OF 49 49	

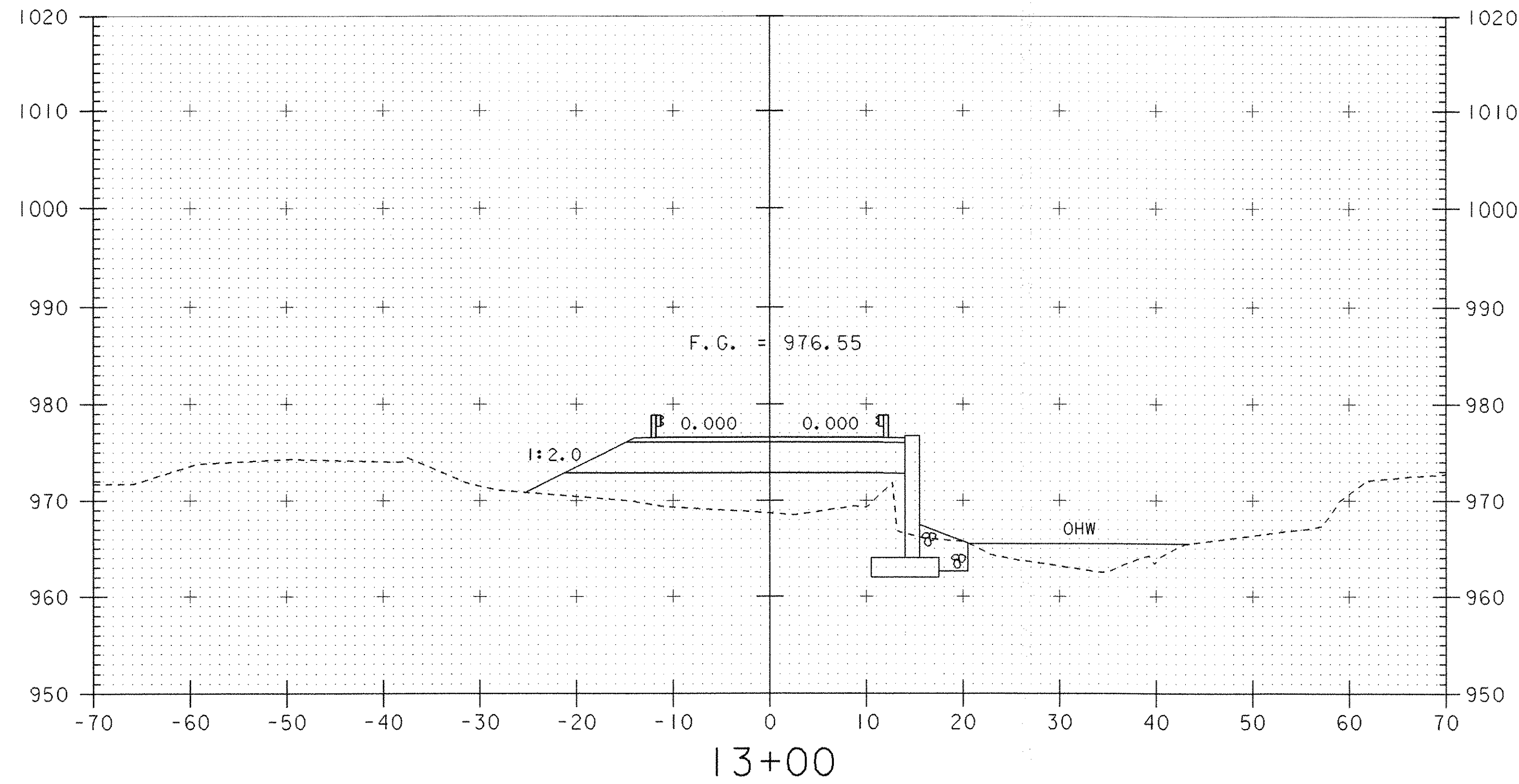


NEW 18" OPTION PIPE
AND PIPE END SECTION WITH TOE PLATE
STA. 10+80 16' RT. TO 32' LT

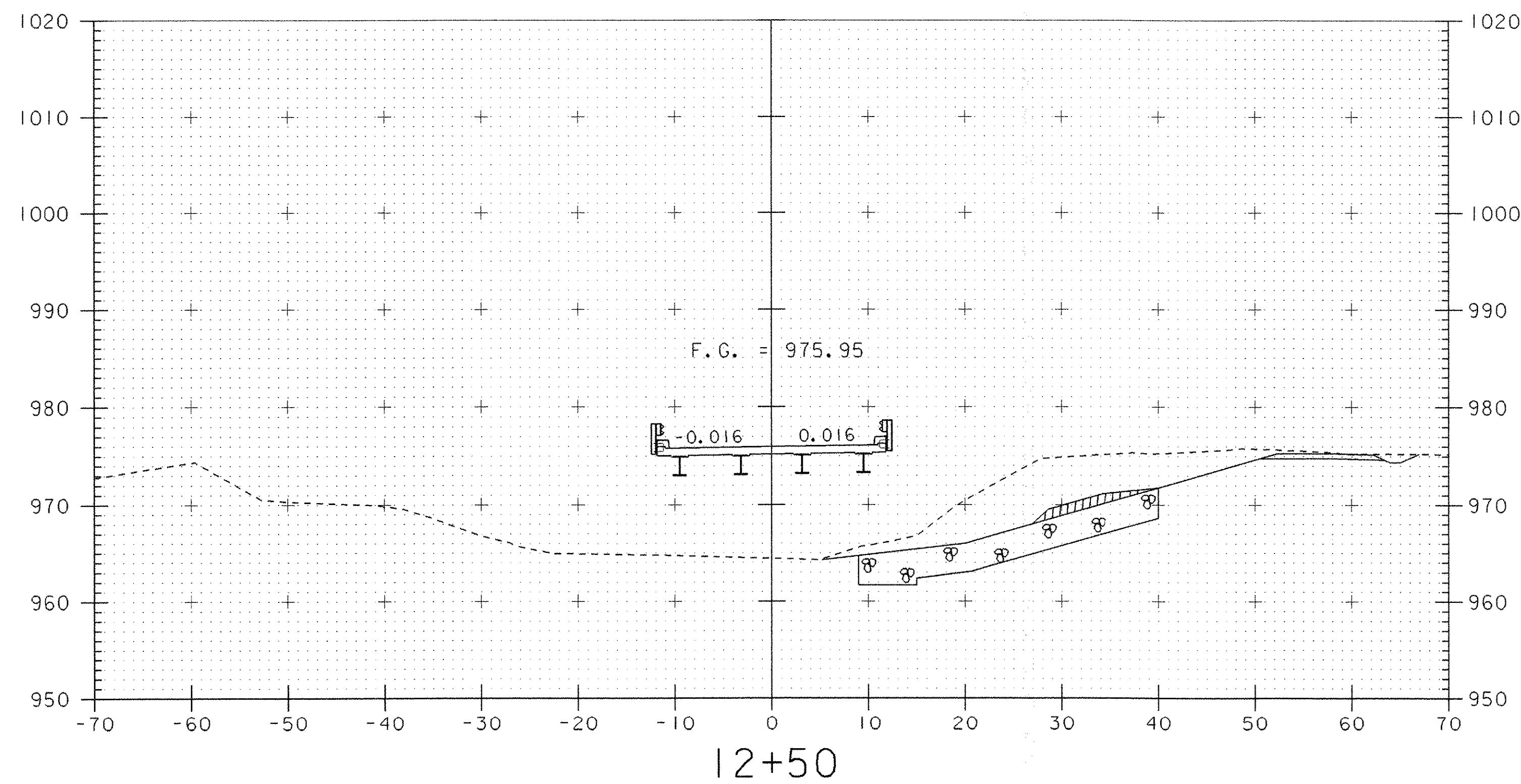
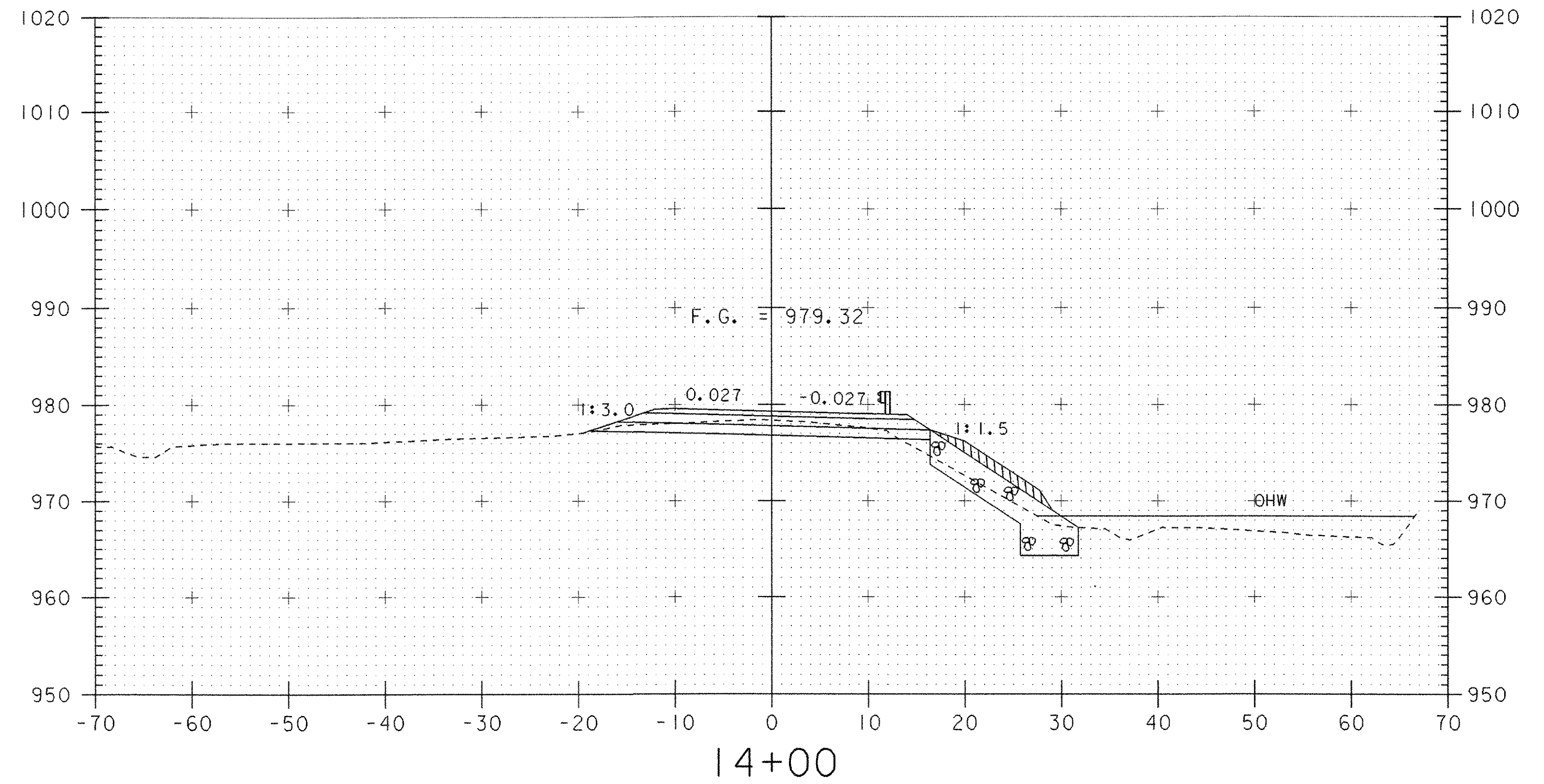


SEE SHEET 43 FOR DRIVE
SECTION AT STA 11+25

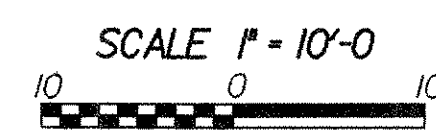
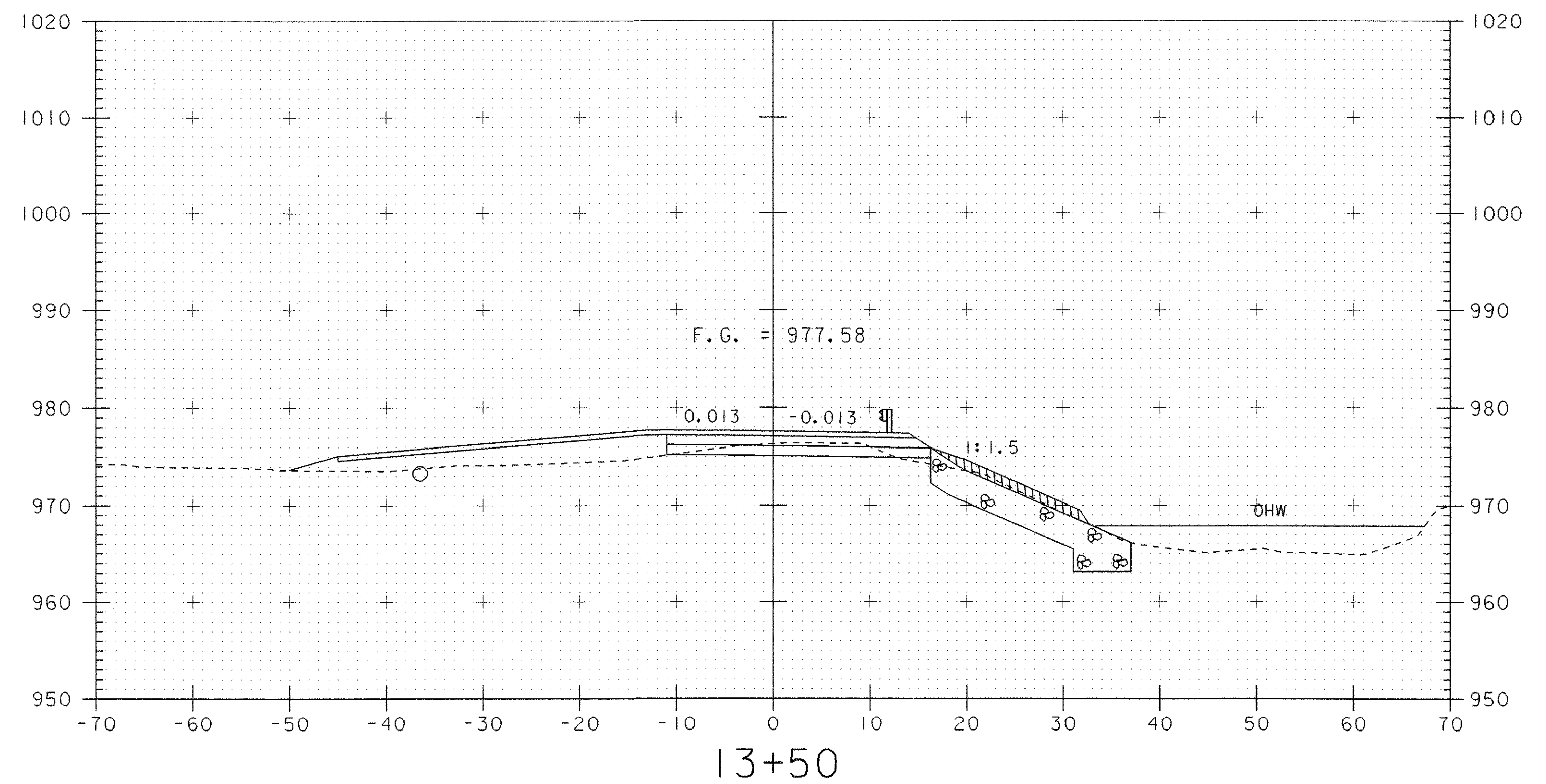
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DESIGN FILE NAME: /usr/str4/90j058/sj058msc.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058mx2.i	
MAINLINE SECTIONS 10+80 THRU 12+00	
SHEET: 39 OF 49	



STA. 12+83.83
END BRIDGE

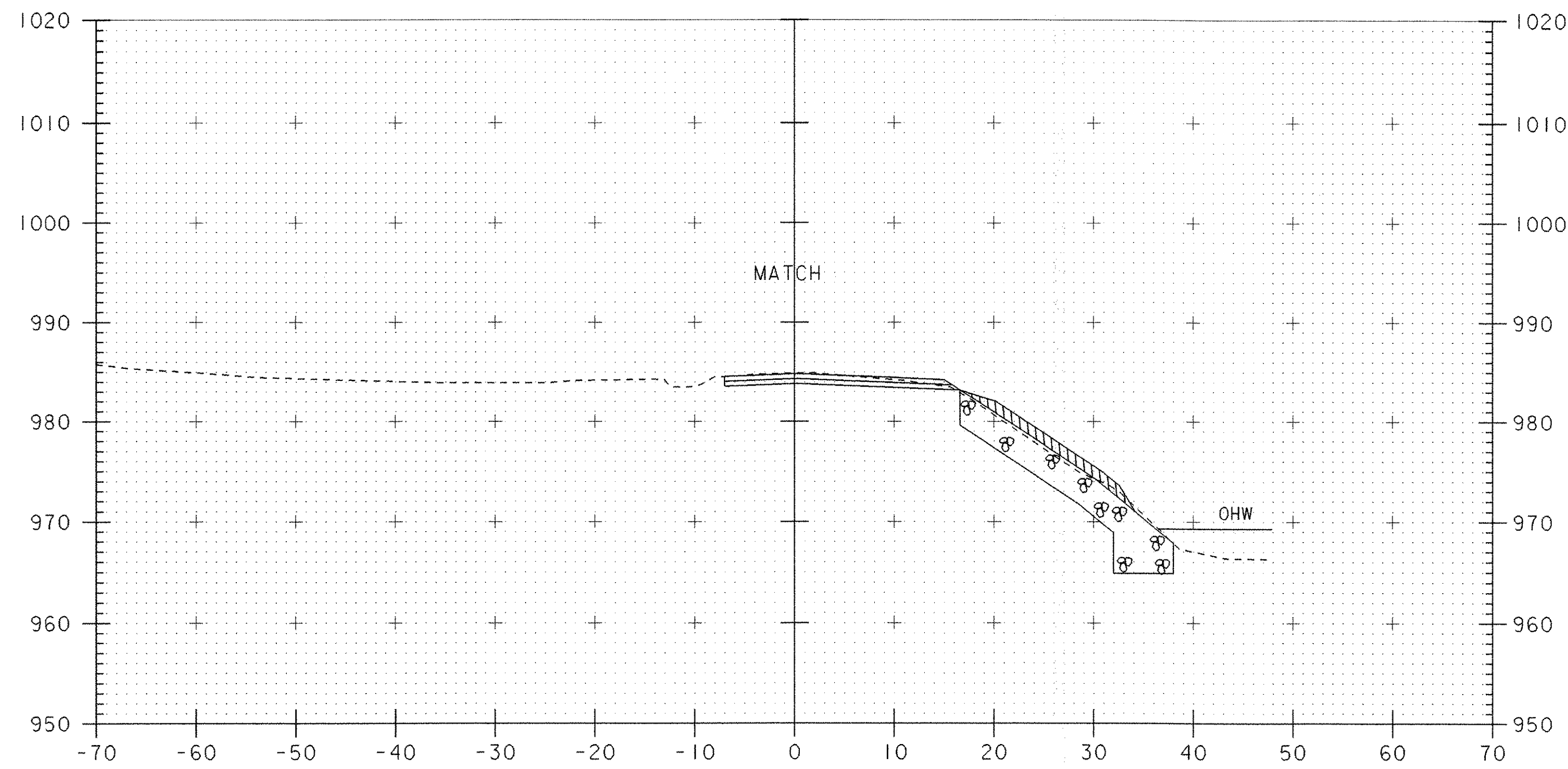


STA. 12+18.17
BEGIN BRIDGE



SEE SHEET 42 FOR PIPE
CROSS SECTION @ STA. 13+32

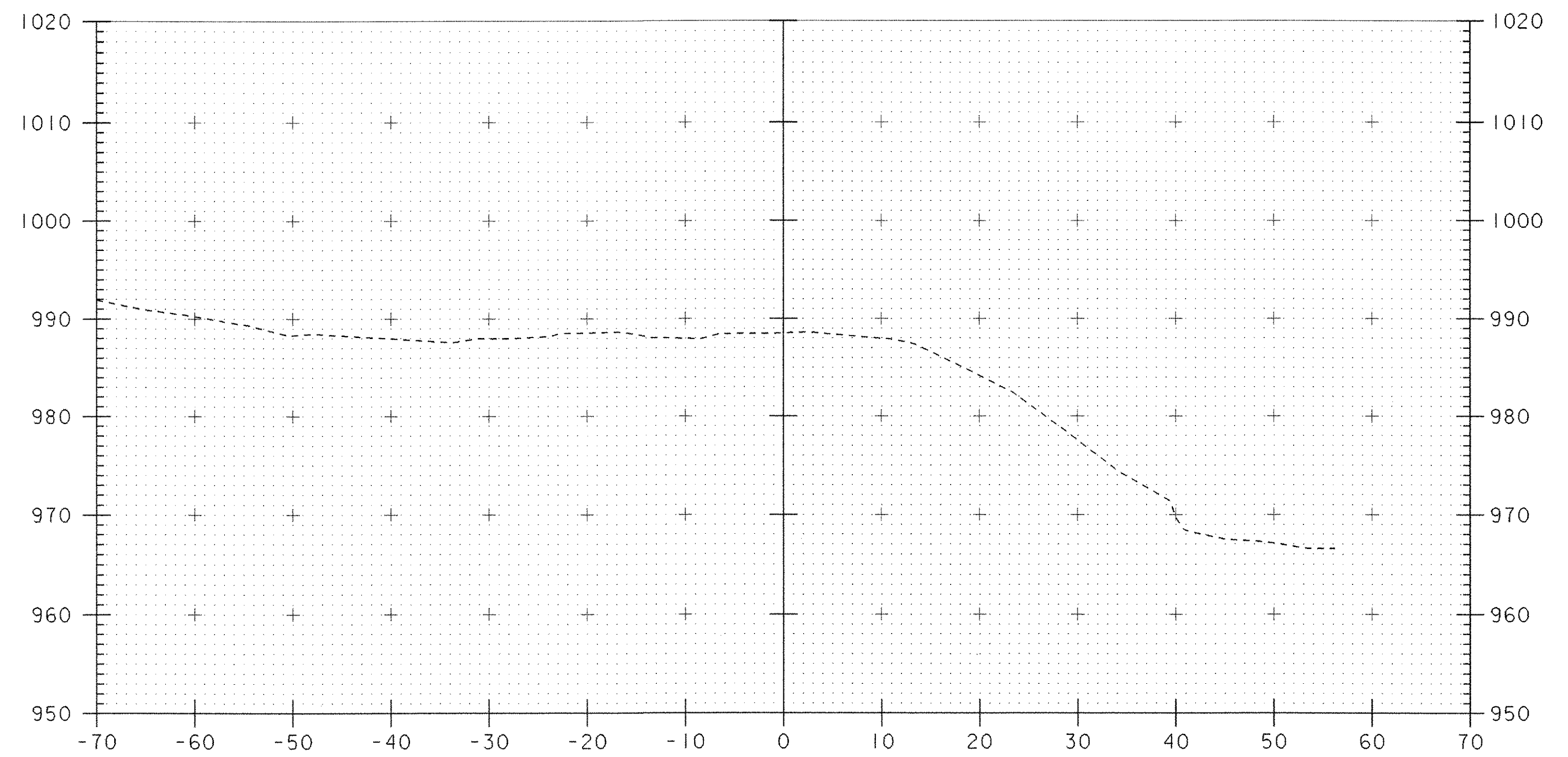
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IPARM FILE NAME: /str4/90j058/sj058mx3.1	
MAINLINE SECTIONS 12+50 THRU 14+00	
SHEET: 40 OF 49	



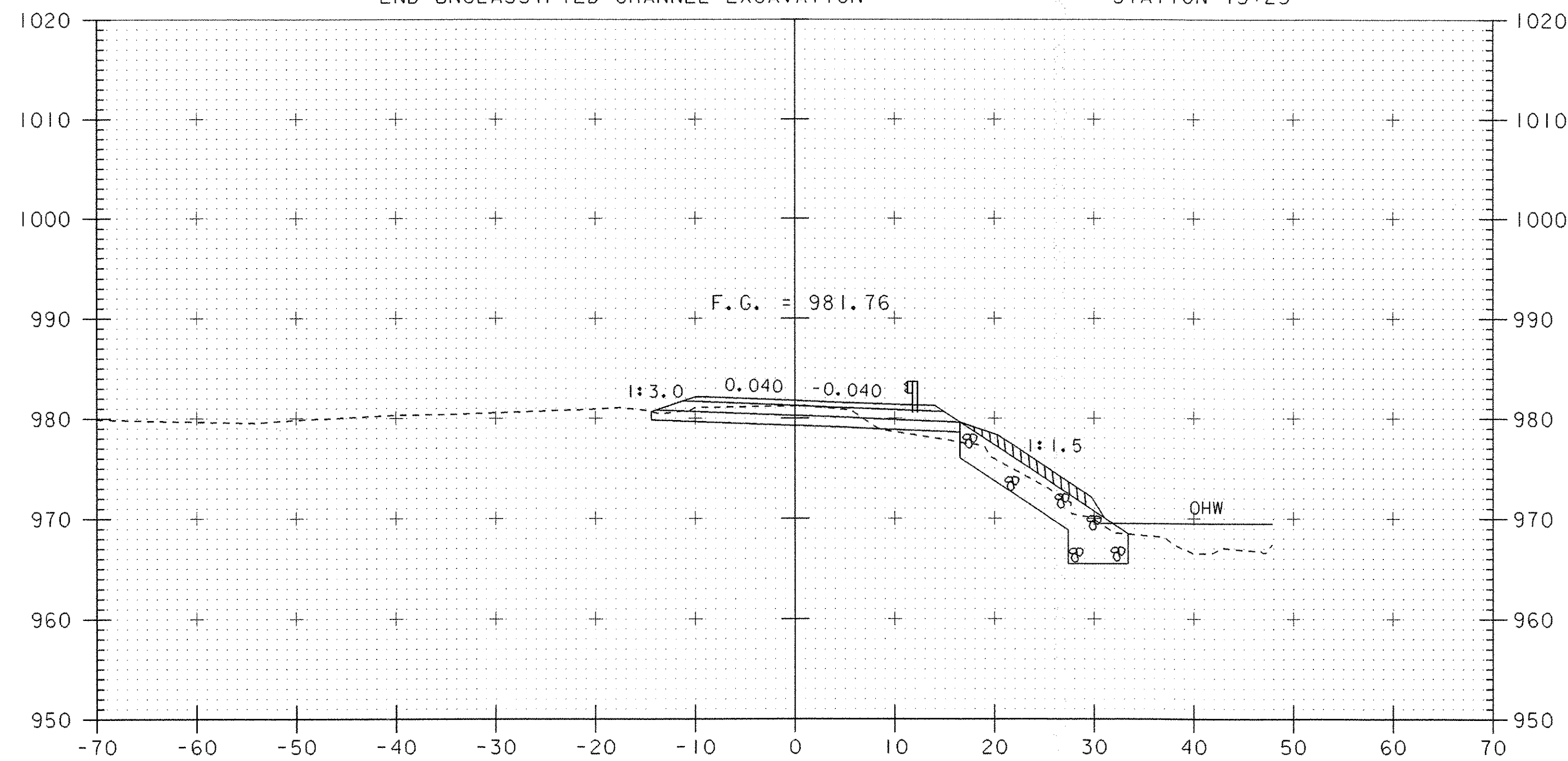
STA. 15+20
 (FROM CHANNEL SECTIONS)
 END STONE FILL
 END GRUBBING MATERIAL
 END GEOTEXTILE UNDER STONE FILL
 END UNCLASSIFIED CHANNEL EXCAVATION

15+00

STA. 15+00
 END 6" AGGREGATE SURFACE COURSE
 USE AGGREGATE SURFACE COURSE TO
 CONSTRUCT GUARD RAIL FLARE TO
 STATION 15+25

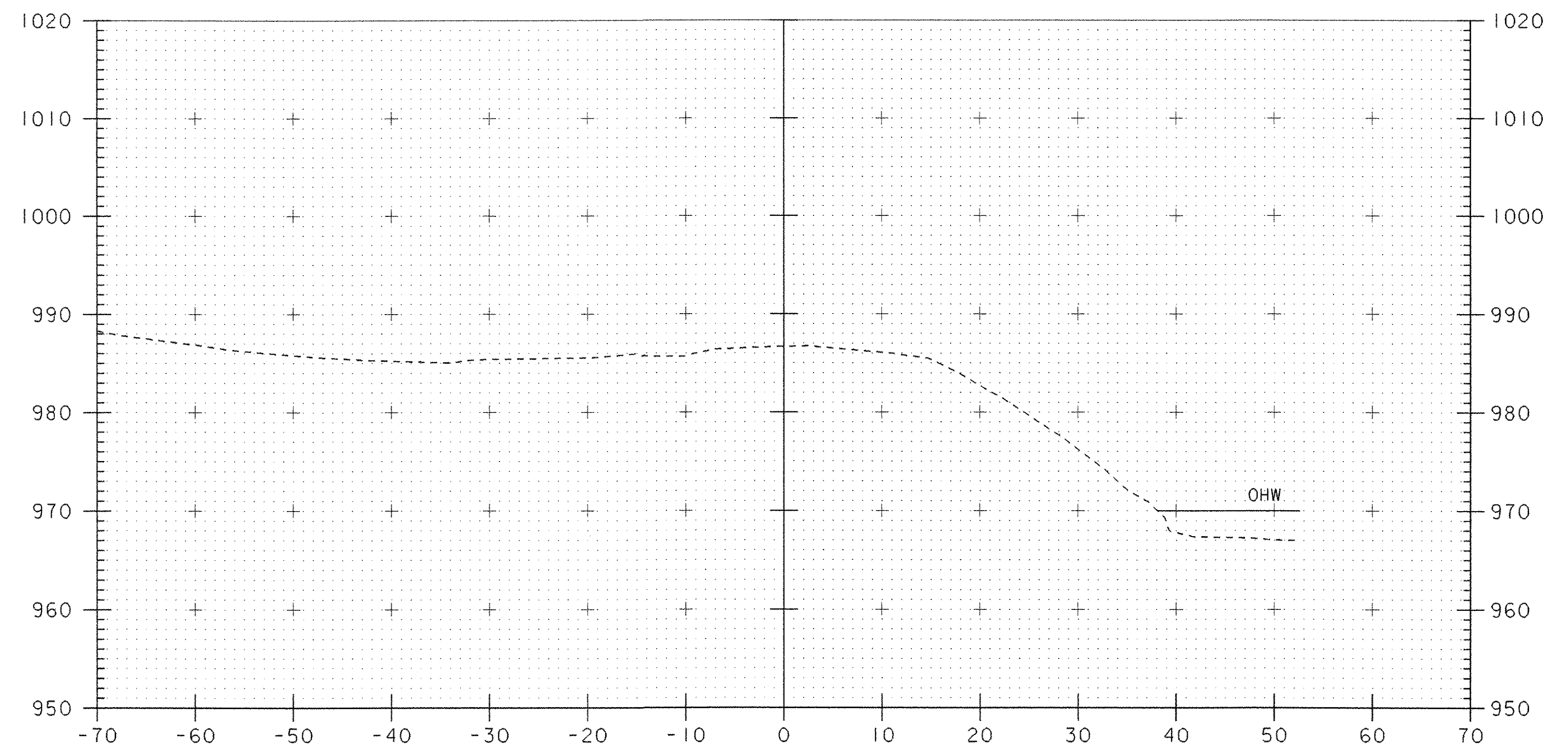
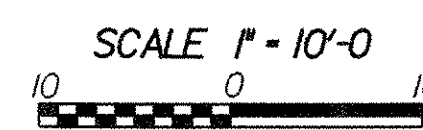


15+50



STA. 14+50
 END PROJECT / BEGIN APPROACH
 TAPER AGGREGATE SURFACE COURSE FROM PROPOSED
 TYPICAL TO EXISTING IN 50' WITH 6" MINIMUM DEPTH.
 END SAND (BOX CUT)

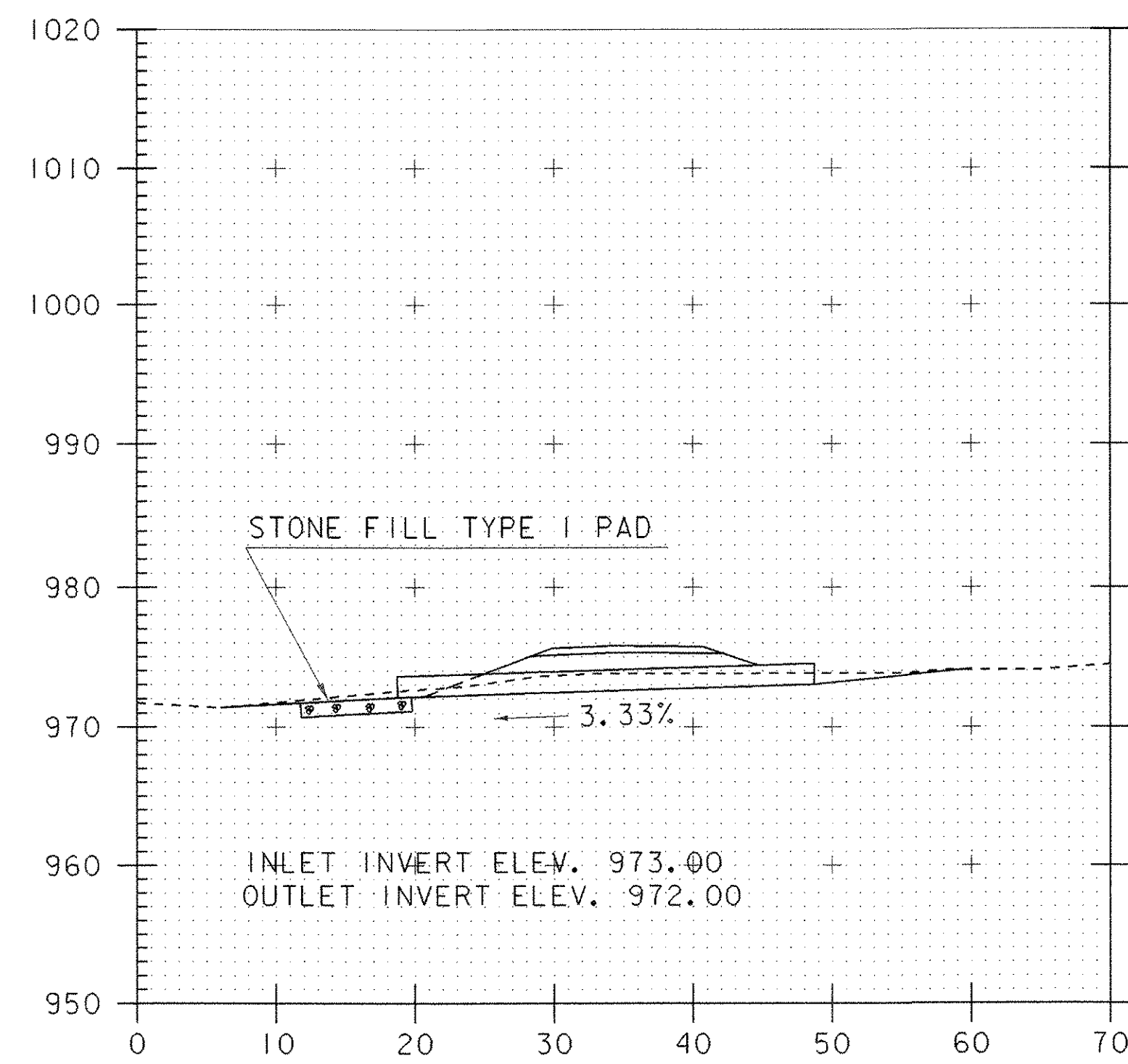
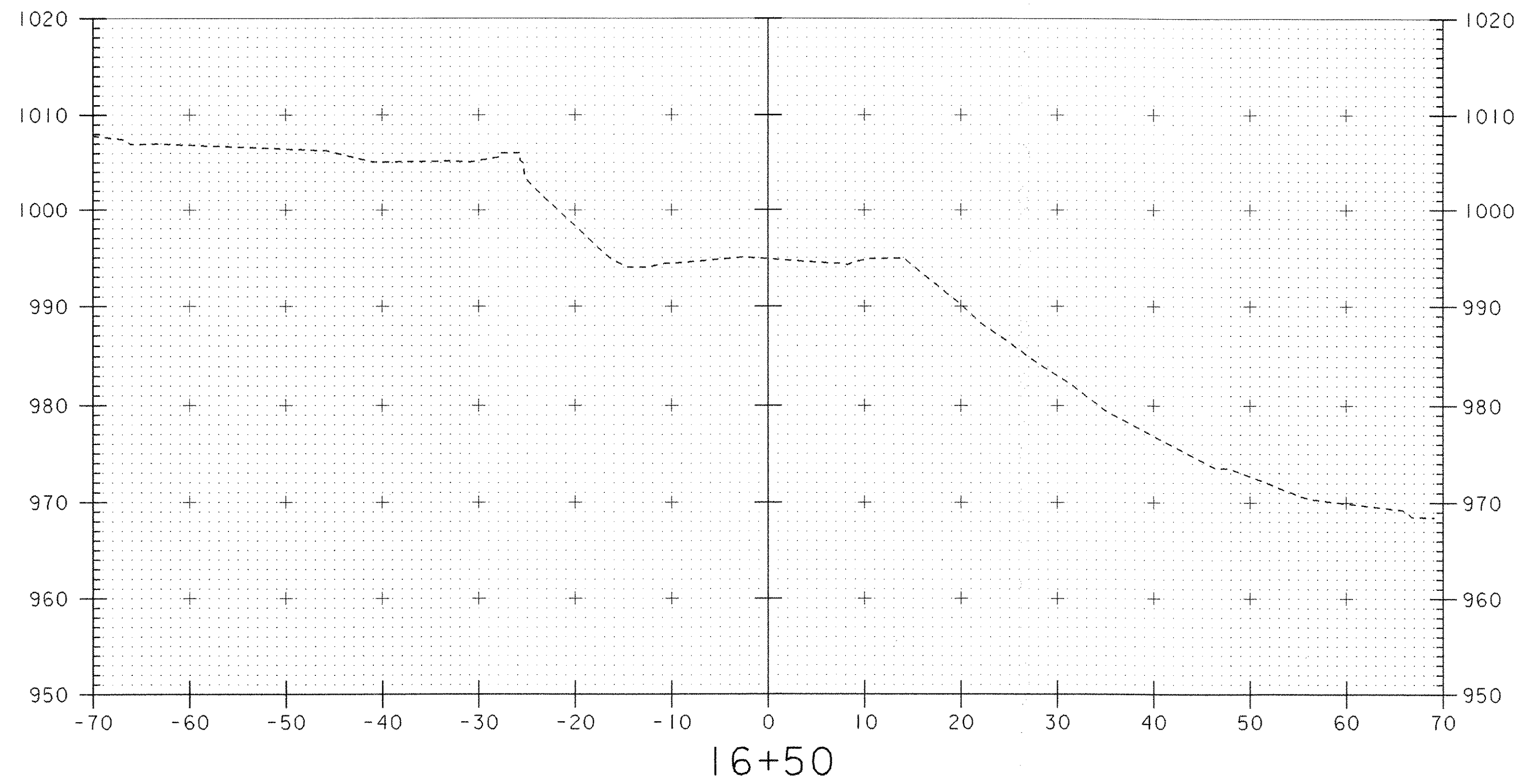
14+50



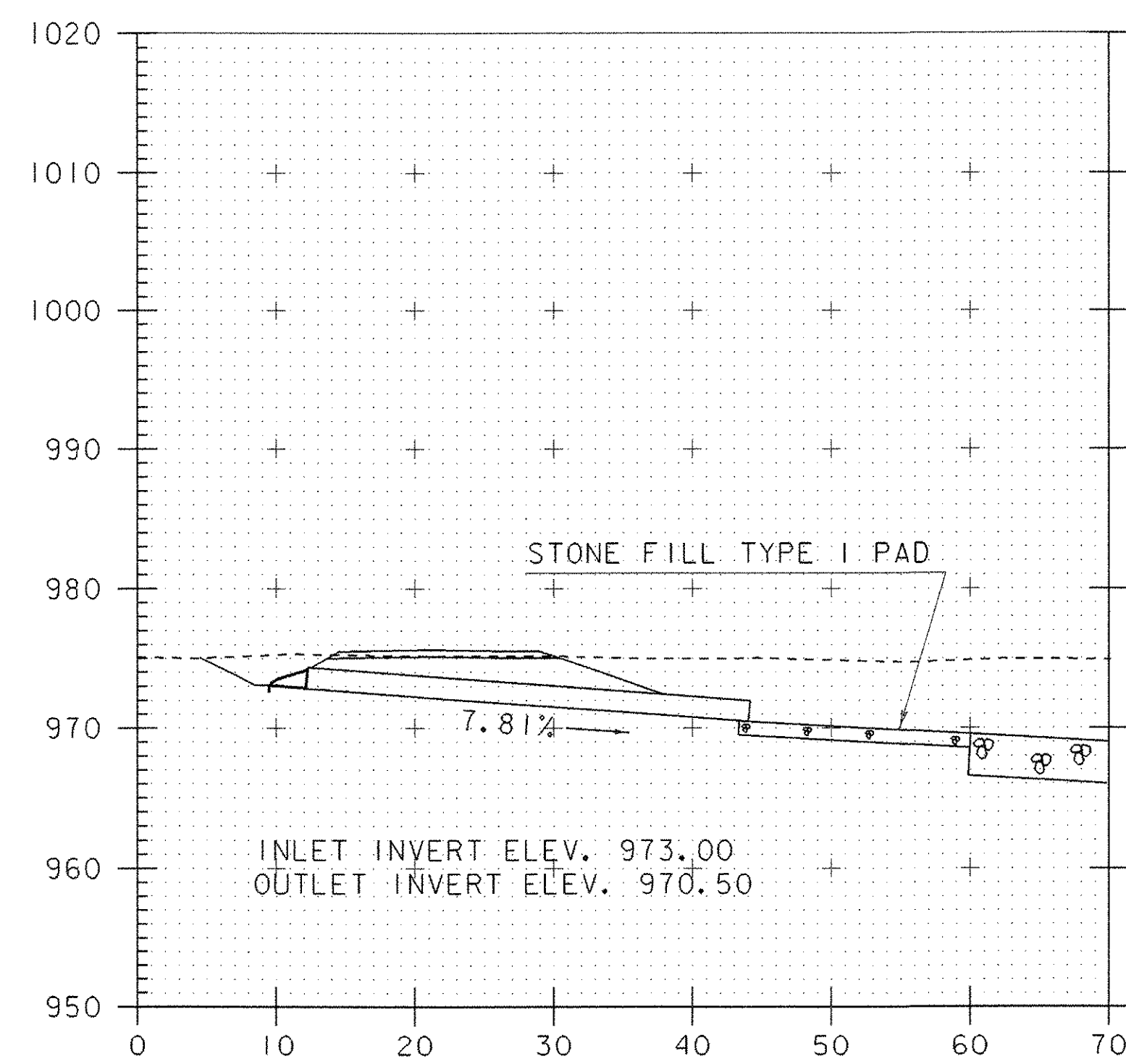
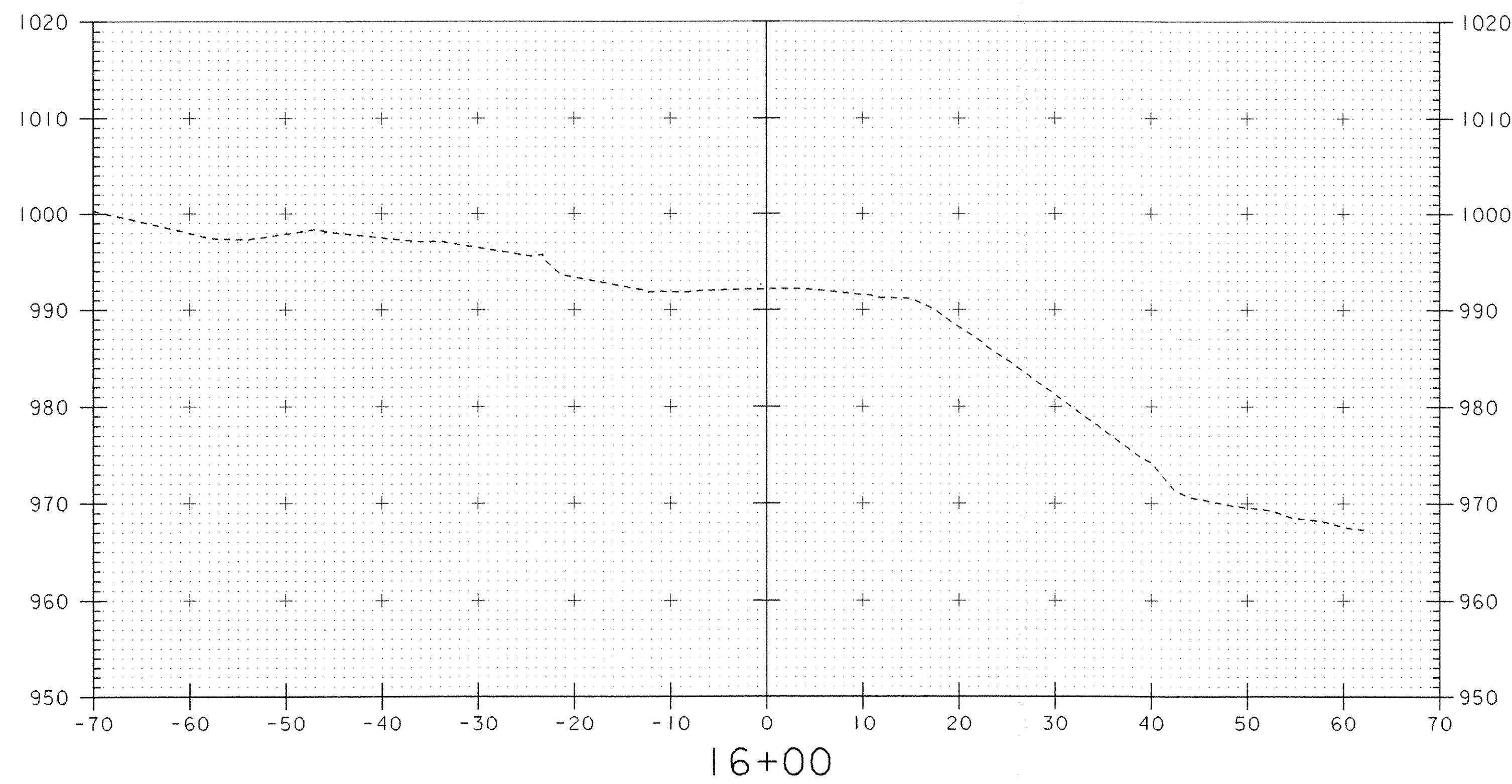
15+25

STA. 15+25
 END APPROACH

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058msc.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058mx4.i	
MAINLINE SECTIONS 14+50 THRU 15+50	
SHEET: 41 OF 49	



NEW 18" OPTION PIPE
STA. 13+32 29.5' LT. TO STA. 13+60 40' LT

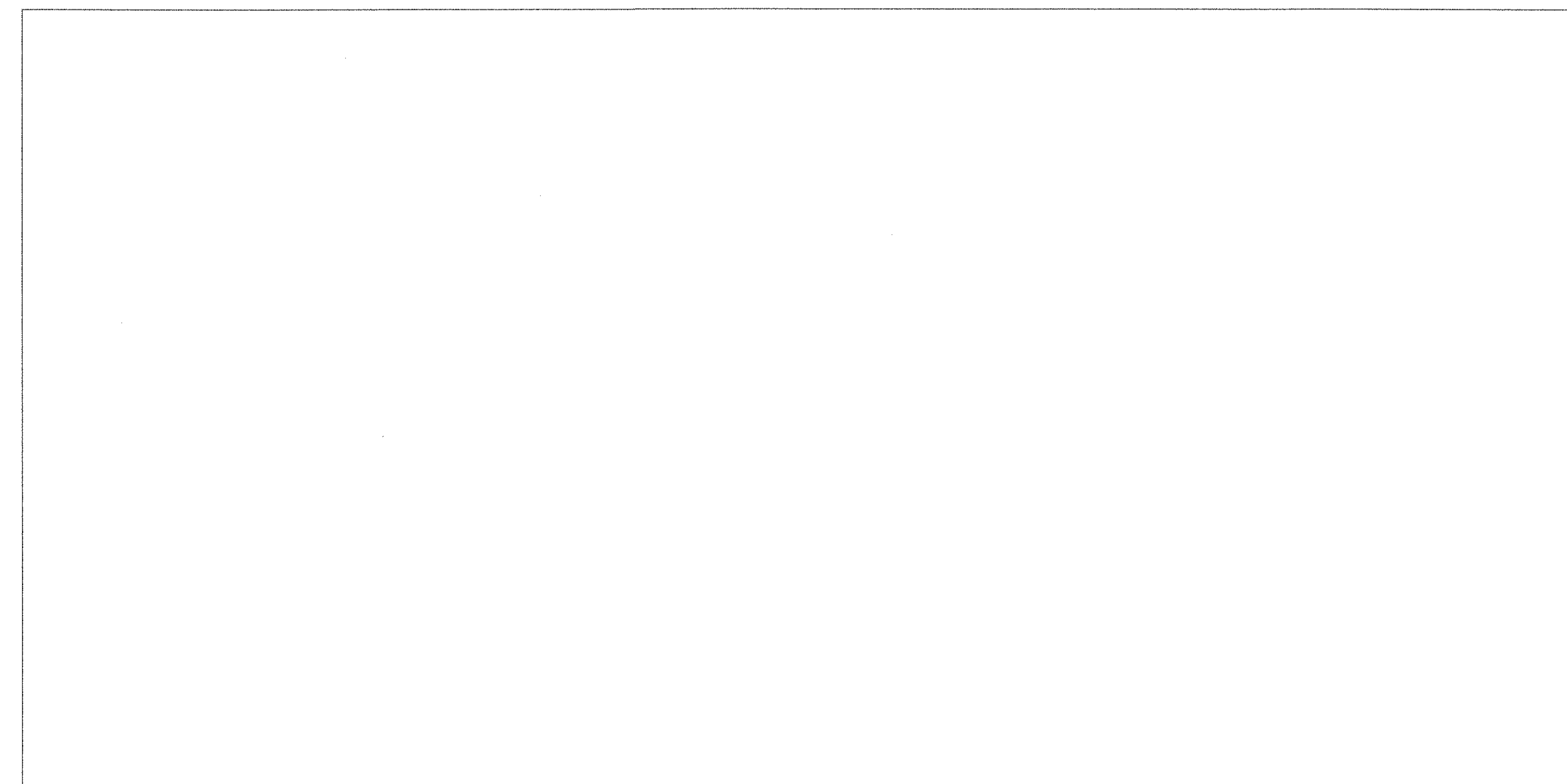
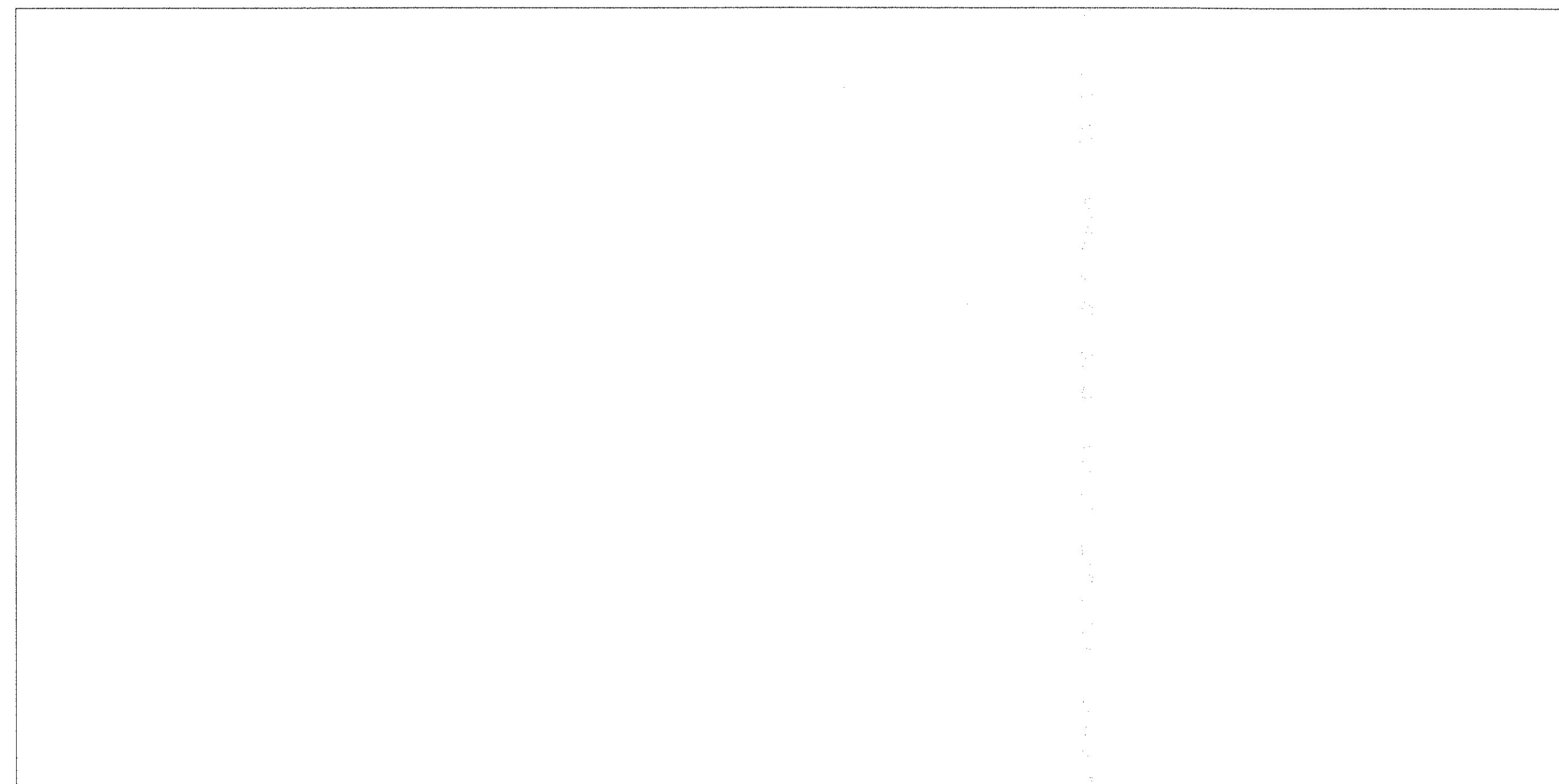
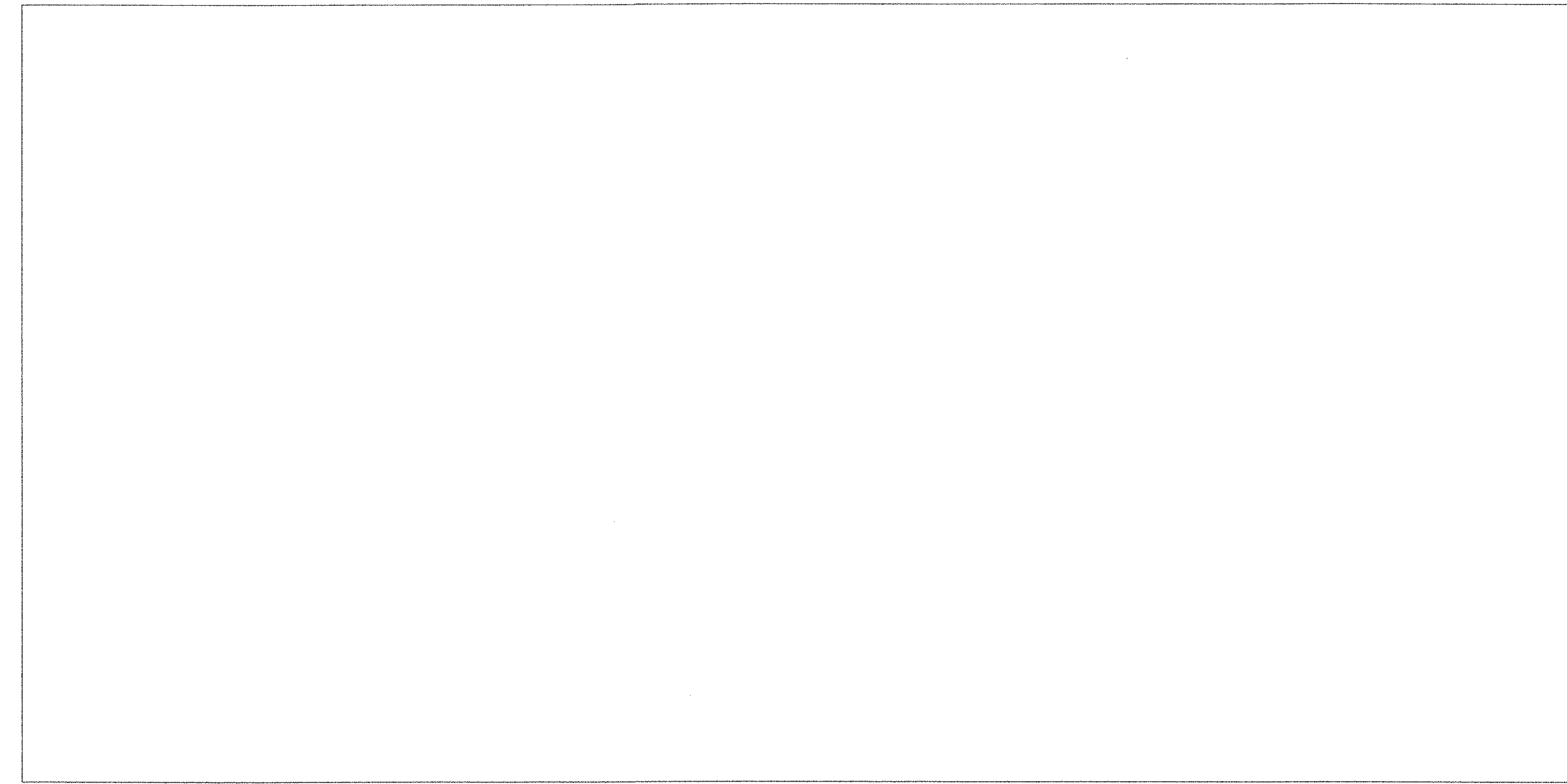
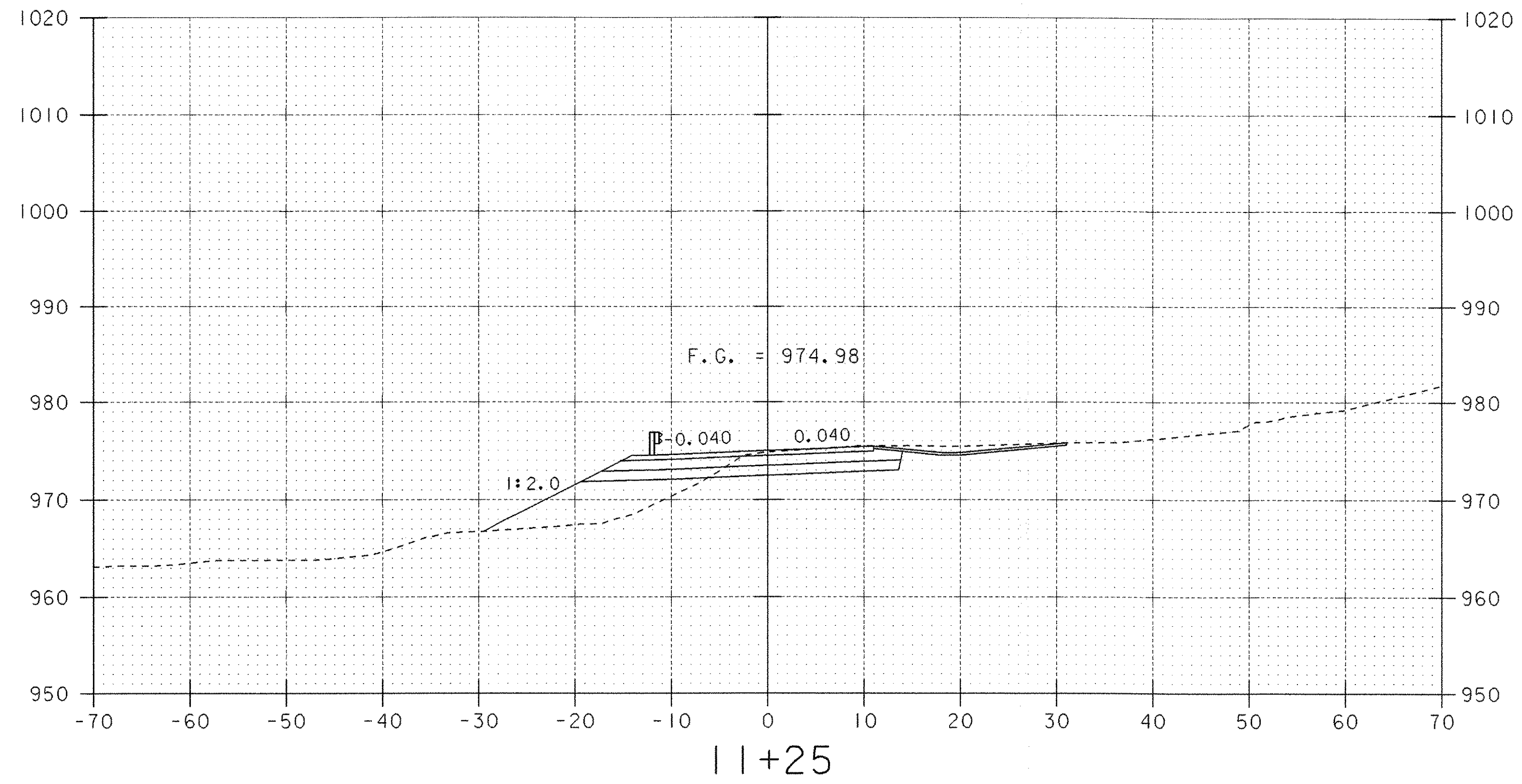


NEW 18" OPTION PIPE
AND PIPE END SECTION WITH TOE PLATE
STA. 11+92 20' RT. TO STA. 12+22 25' RT

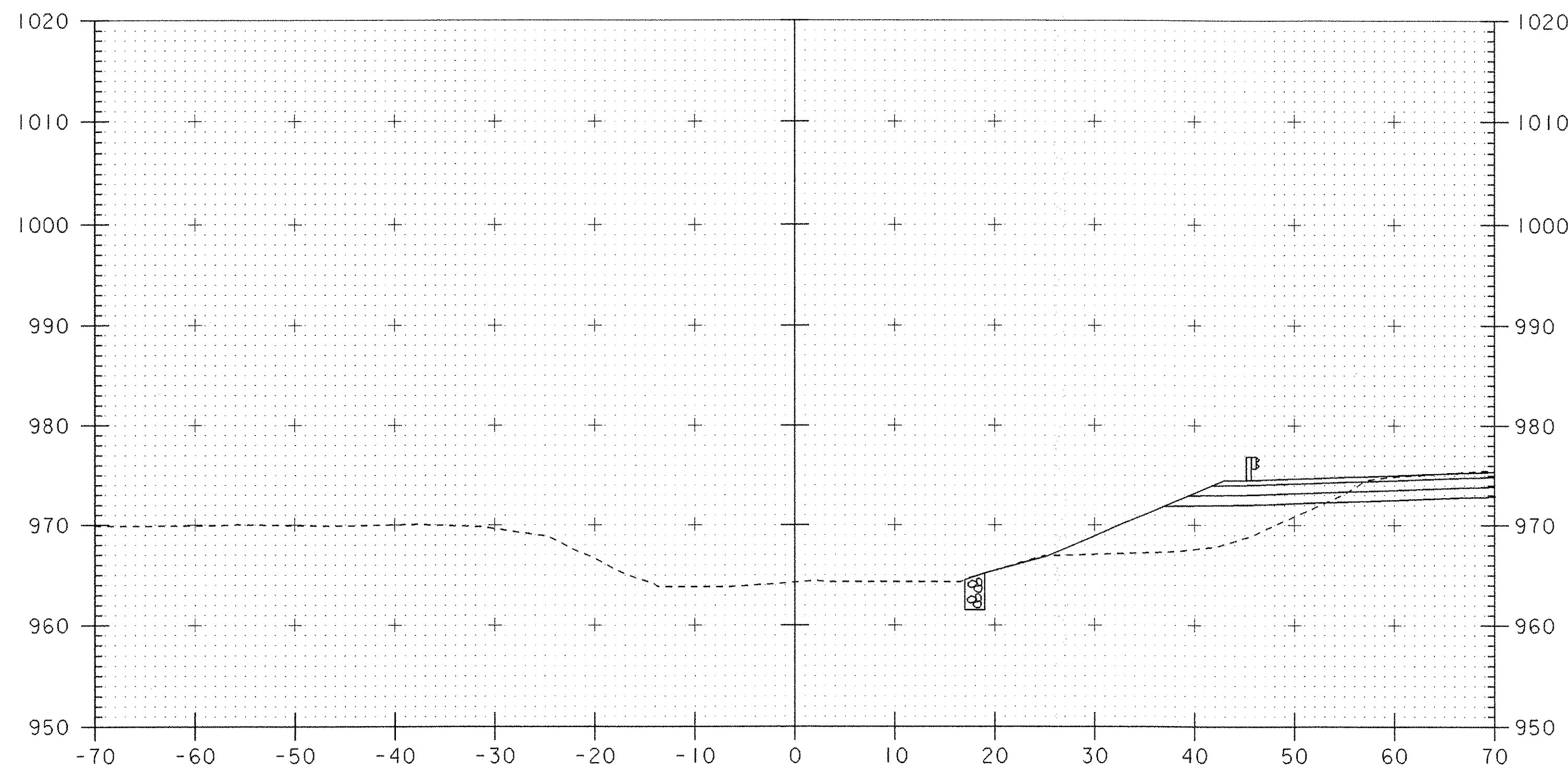
SCALE 1" = 10'-0"

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058msc.dgn	PLOT DATE: 13-FEB-2008
MAILLINE SECTIONS 16+00 THRU 16+50 AND PIPE SECTIONS	
SHEET: 42 OF 49	

ADDITIONAL CRITICAL SECTION

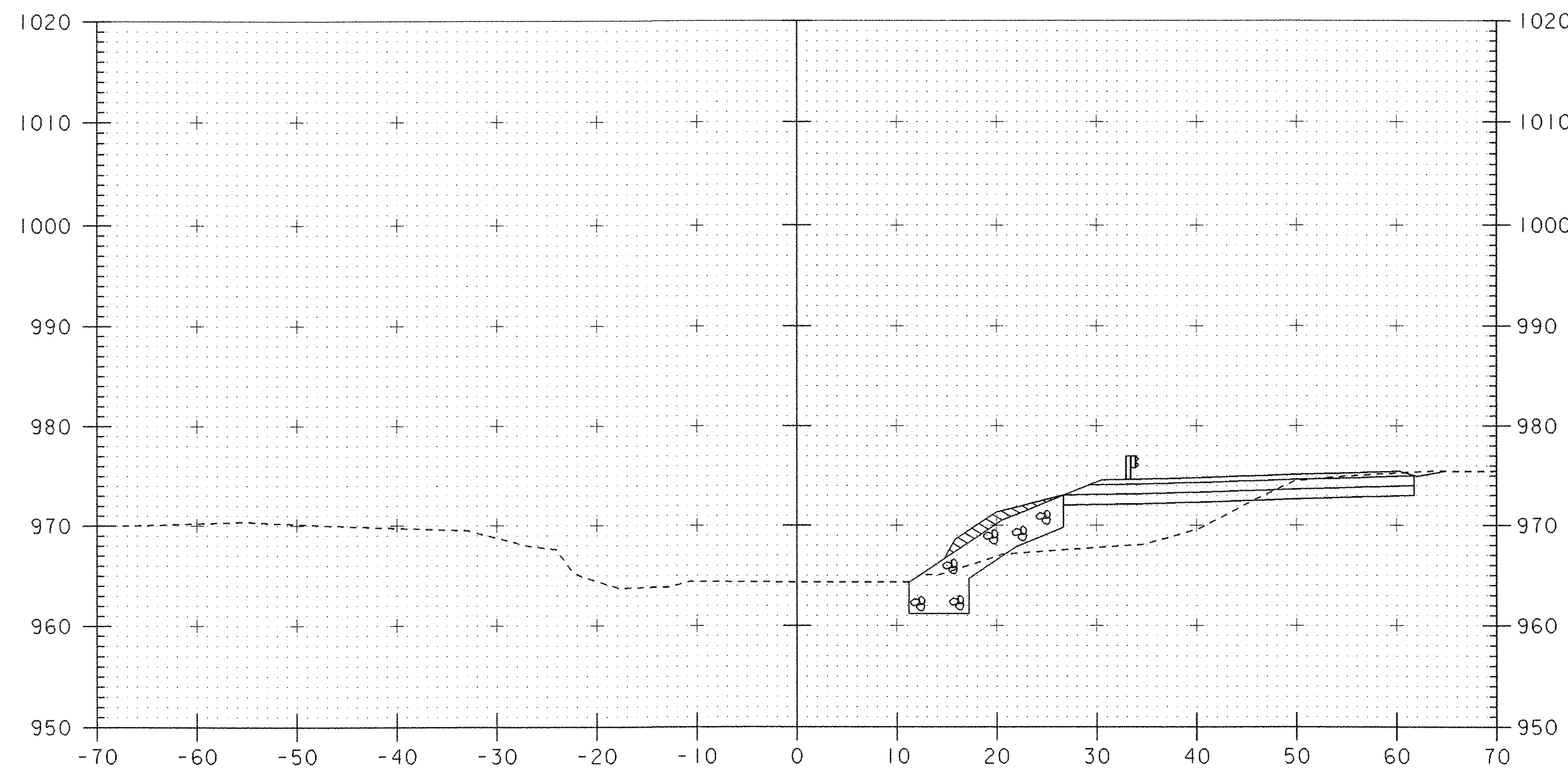


PROJECT: READING	PROJECT NO.: BRZ 1444(23)
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ADDITIONAL CRITICAL SECTIONS	
SHEET: 43 OF 49	

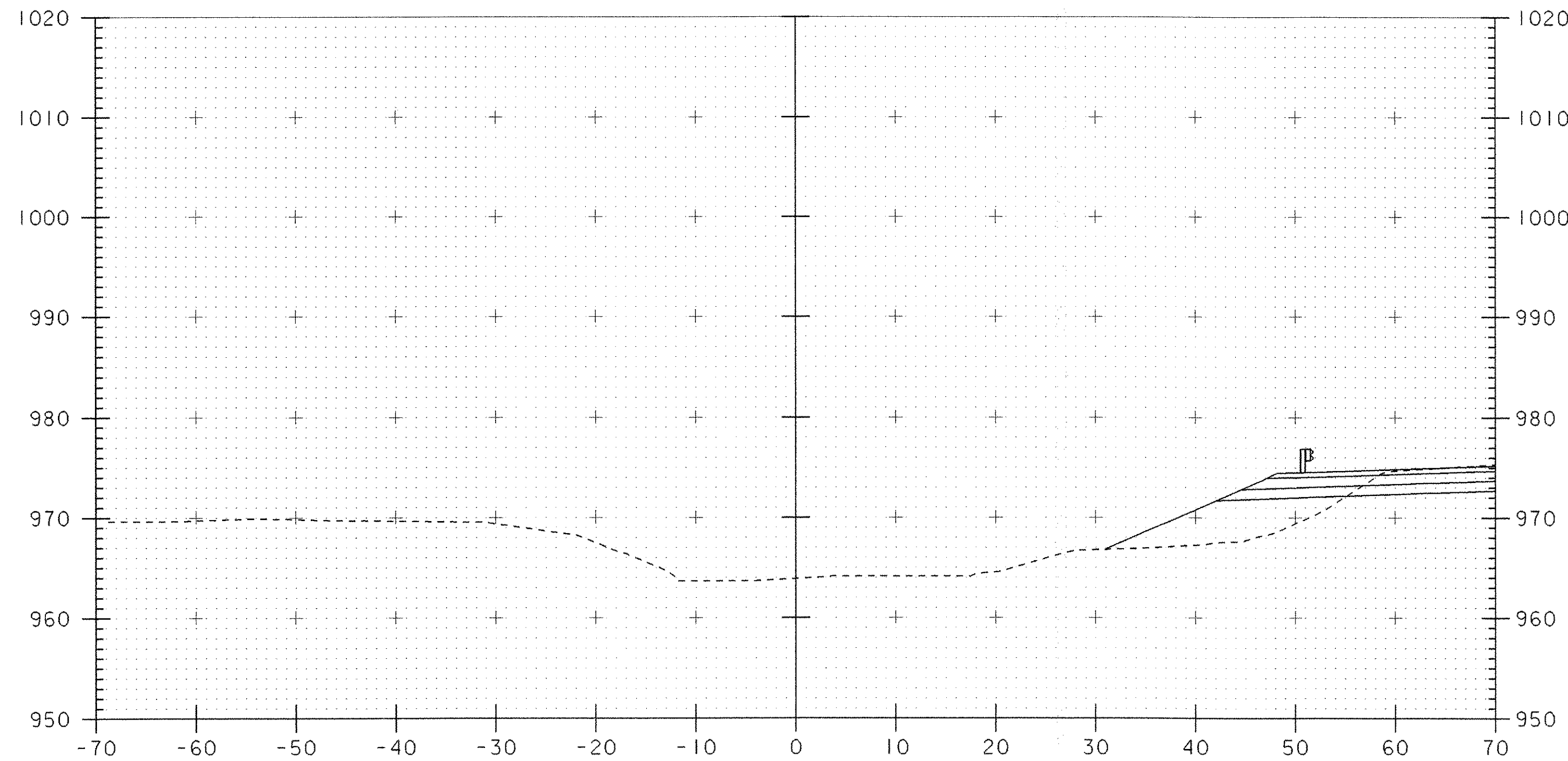


STA. 52+09 RT
 BEGIN STONE FILL TYPE III
 BEGIN GRUBBING MATERIAL
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION

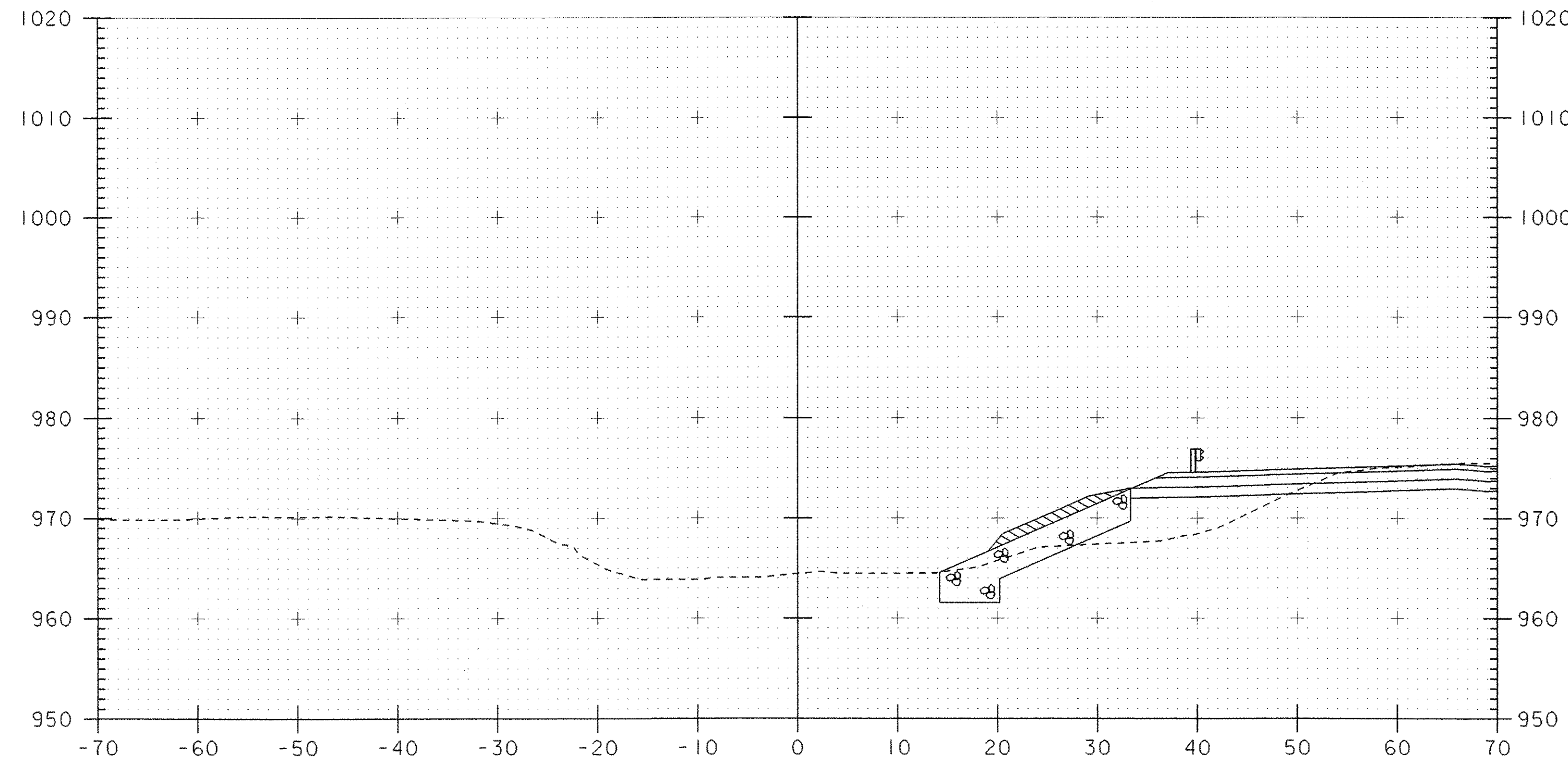
52+10



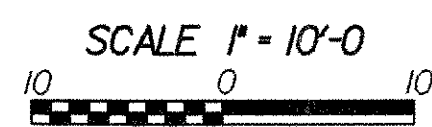
52+30



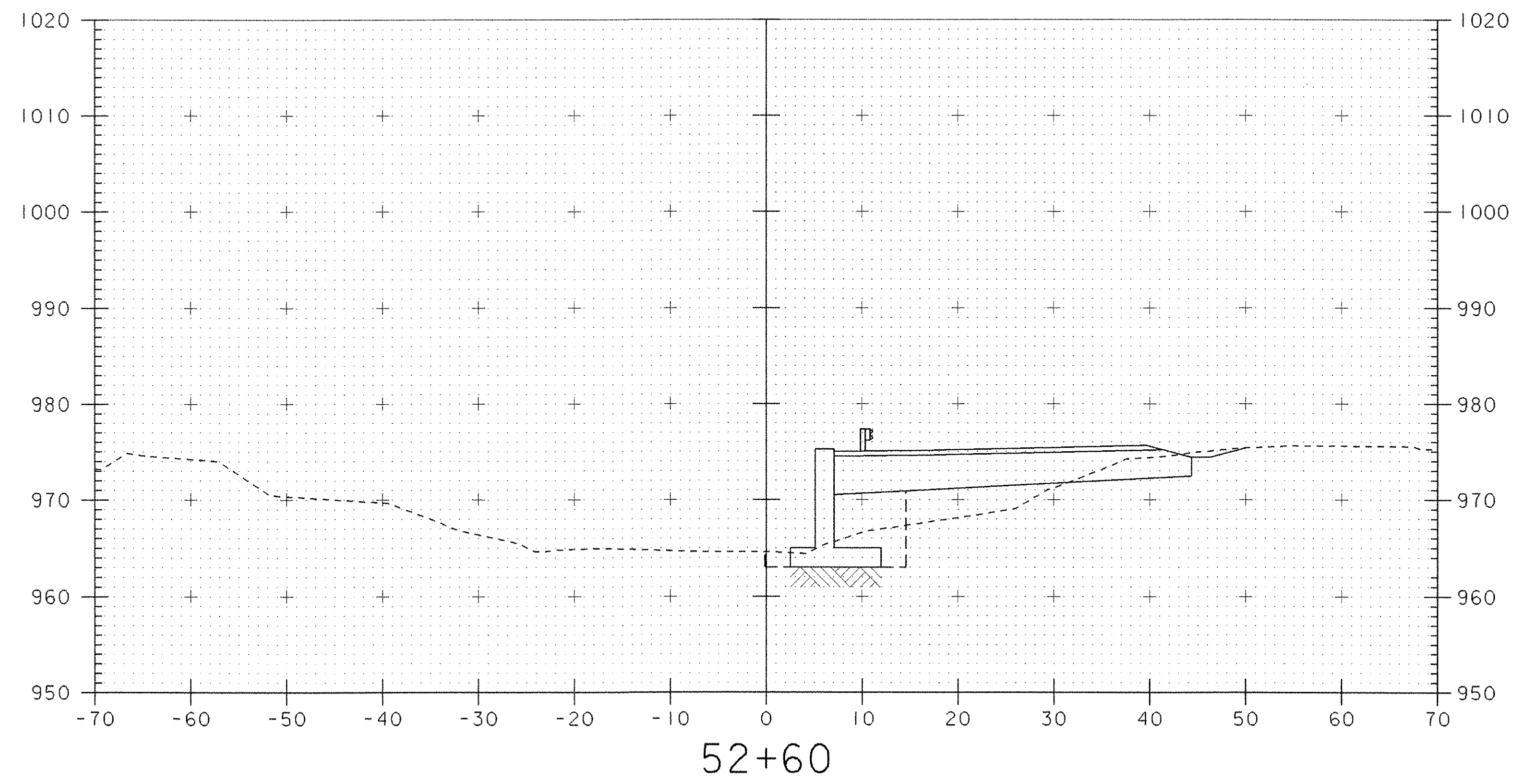
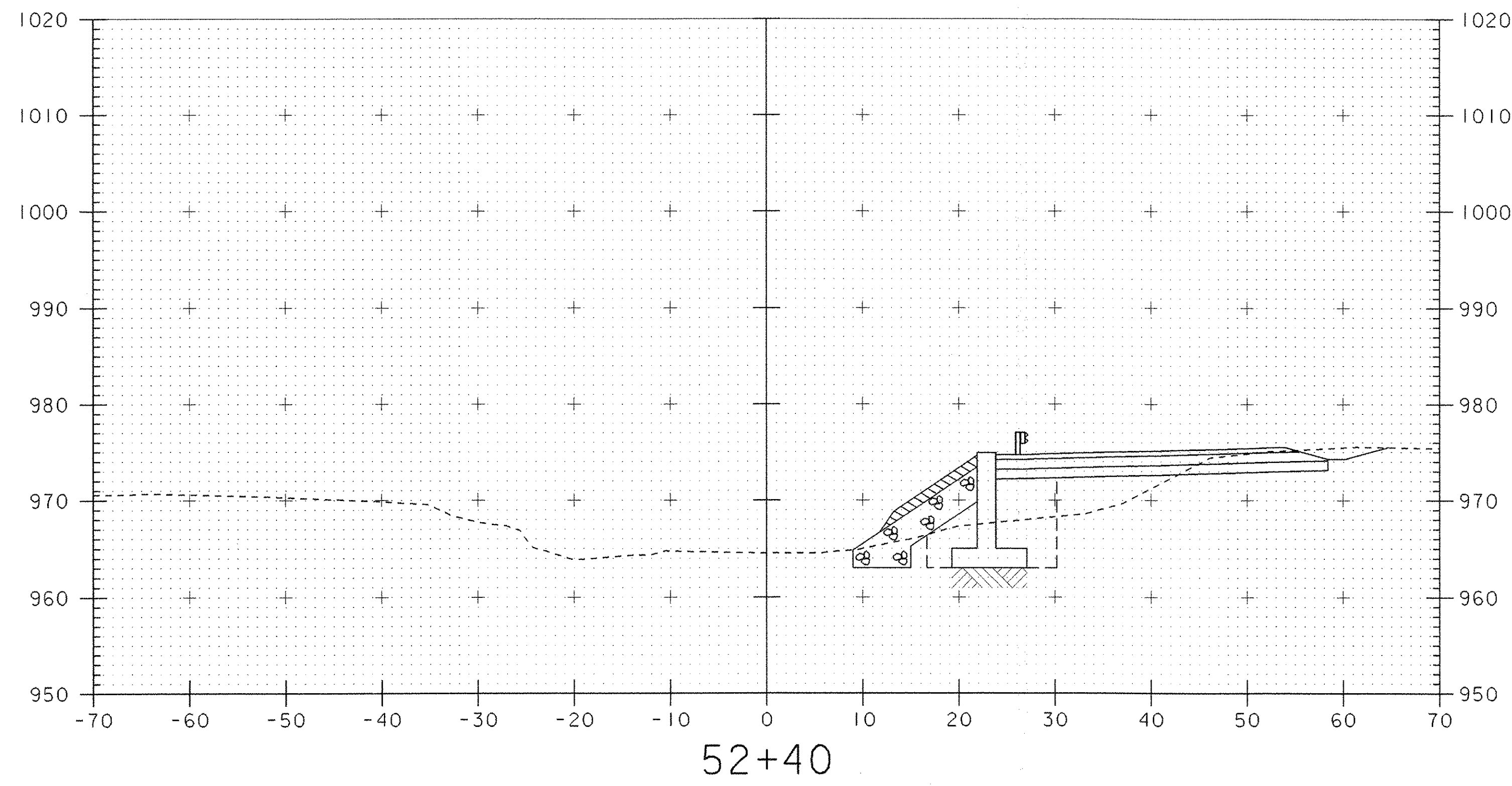
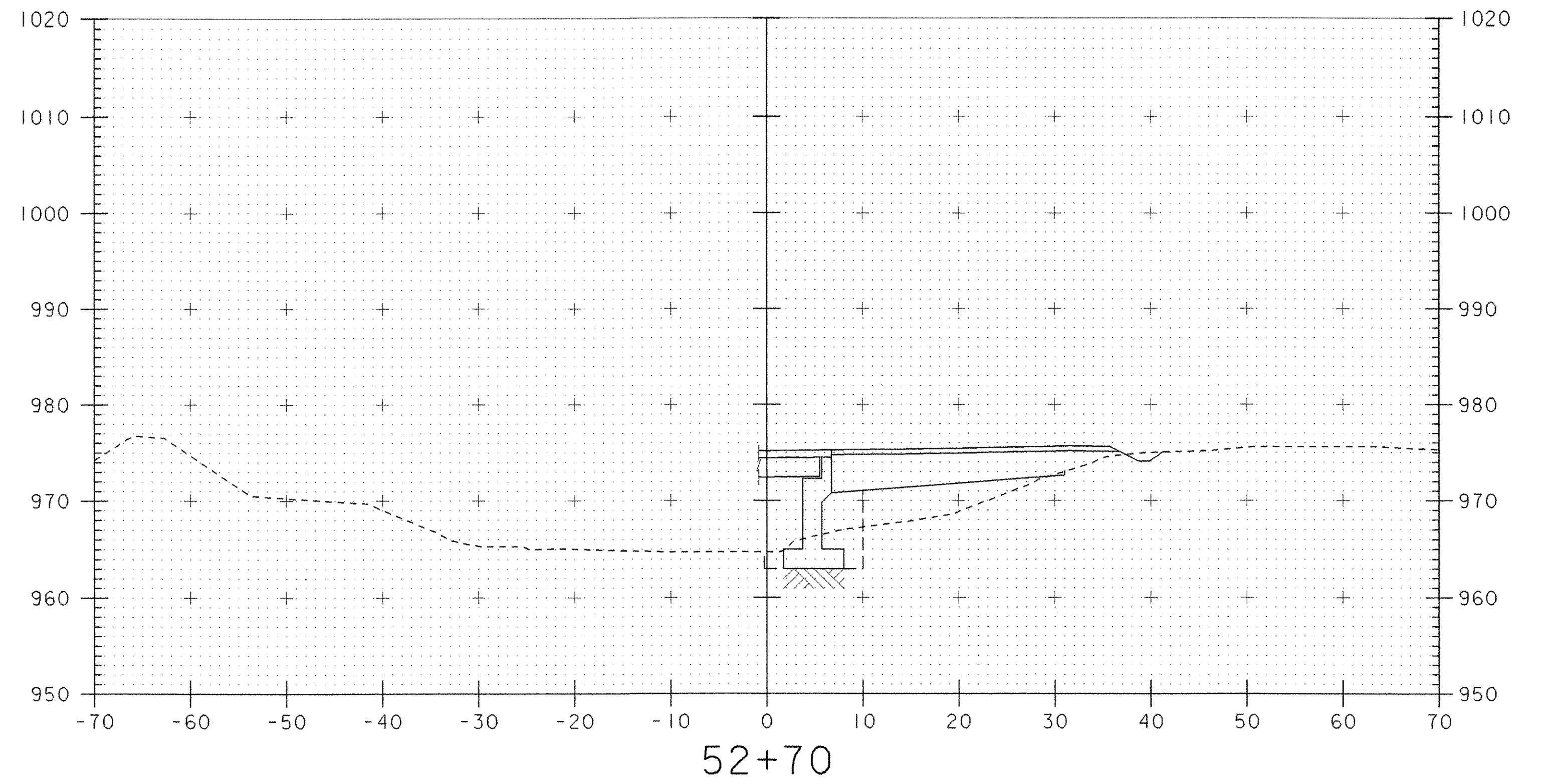
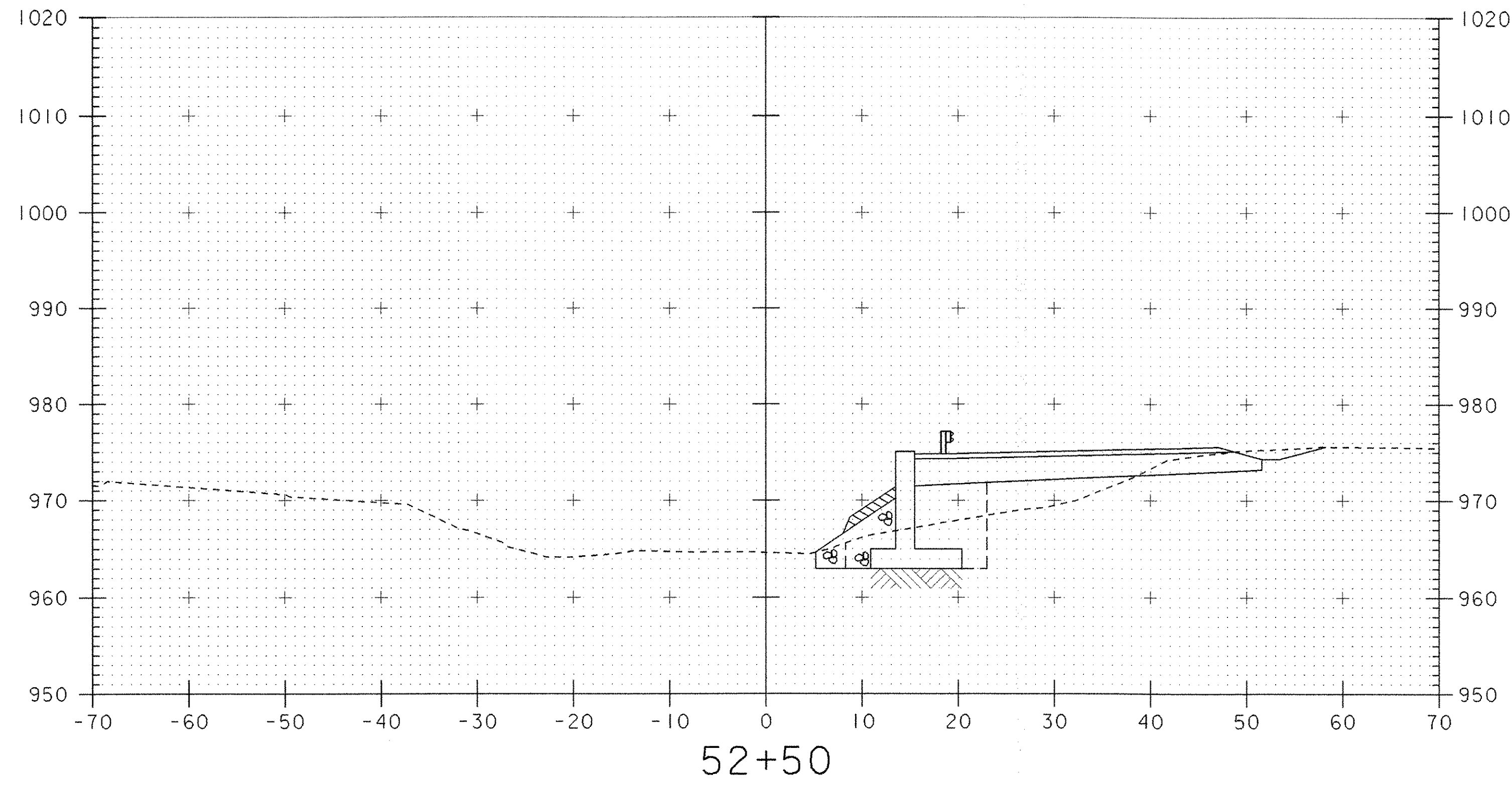
52+00



52+20

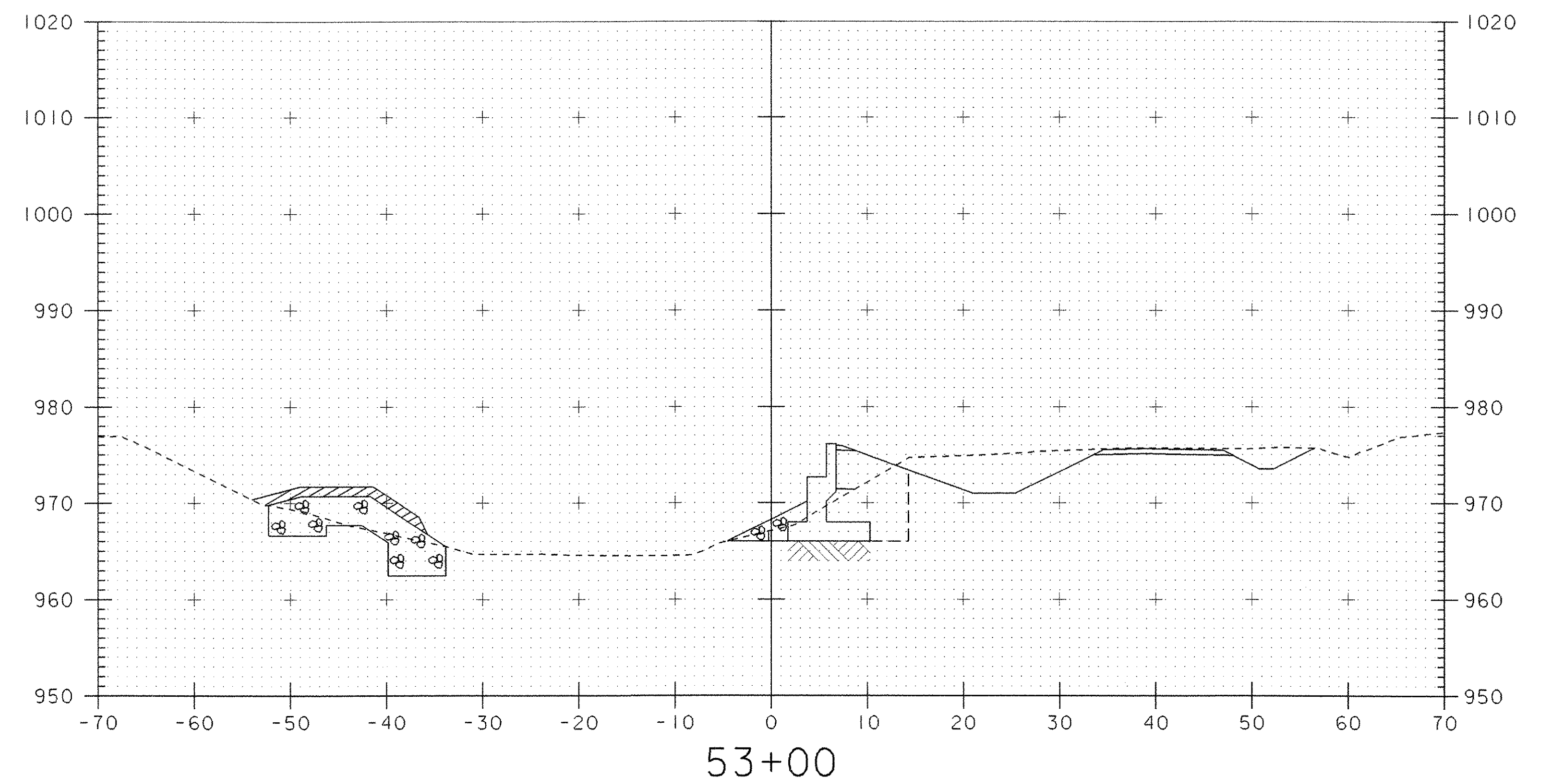
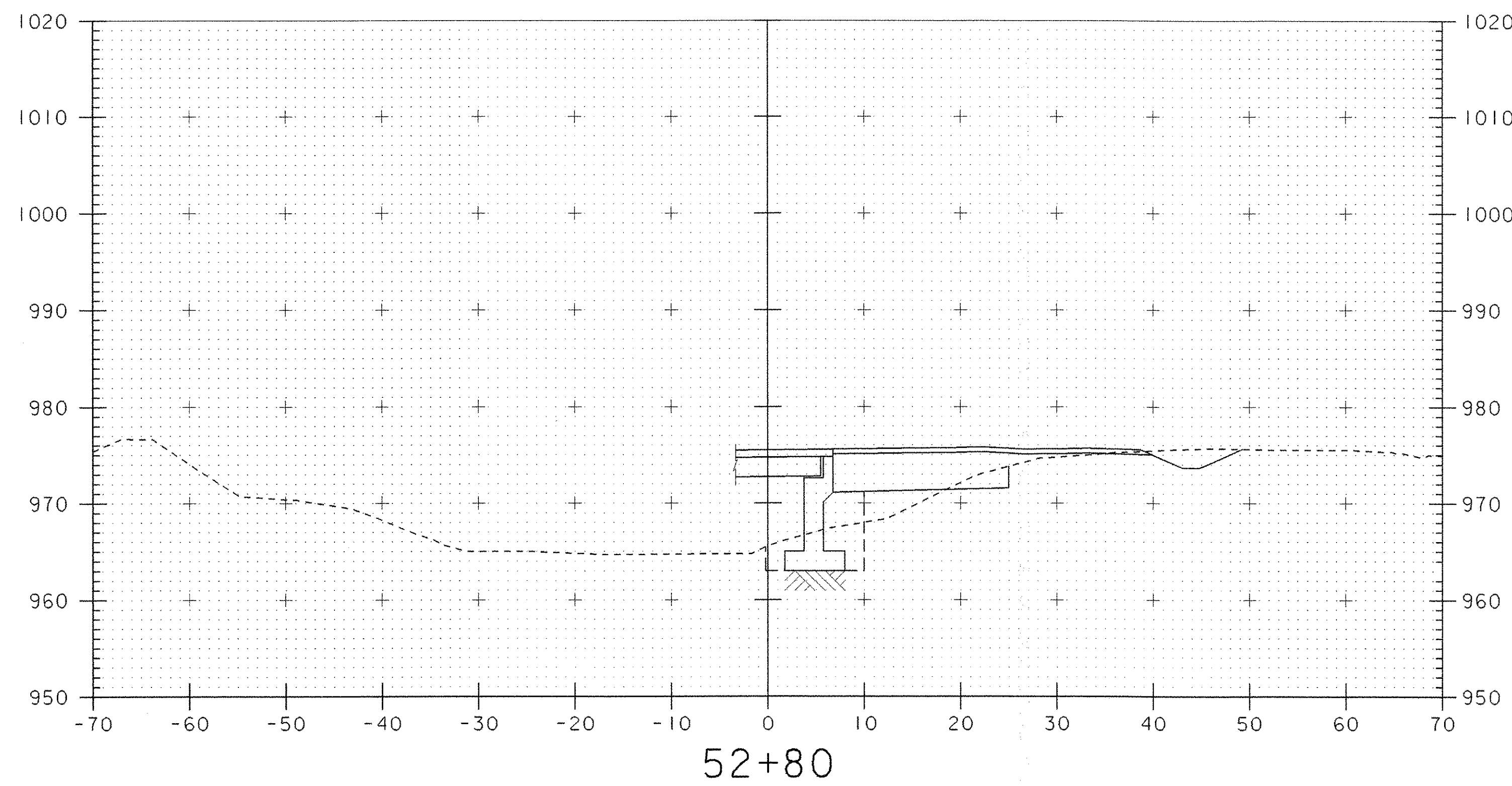
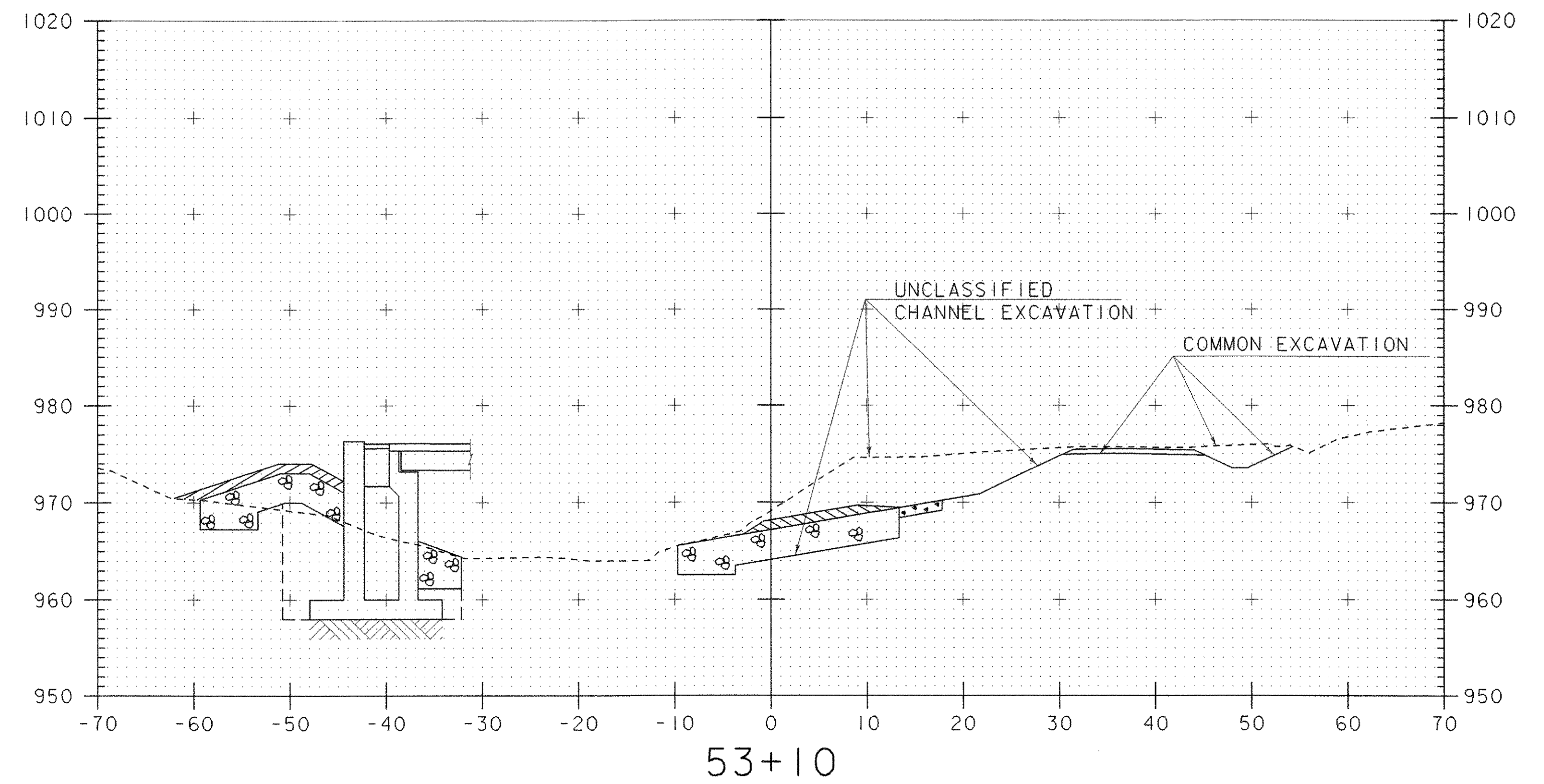
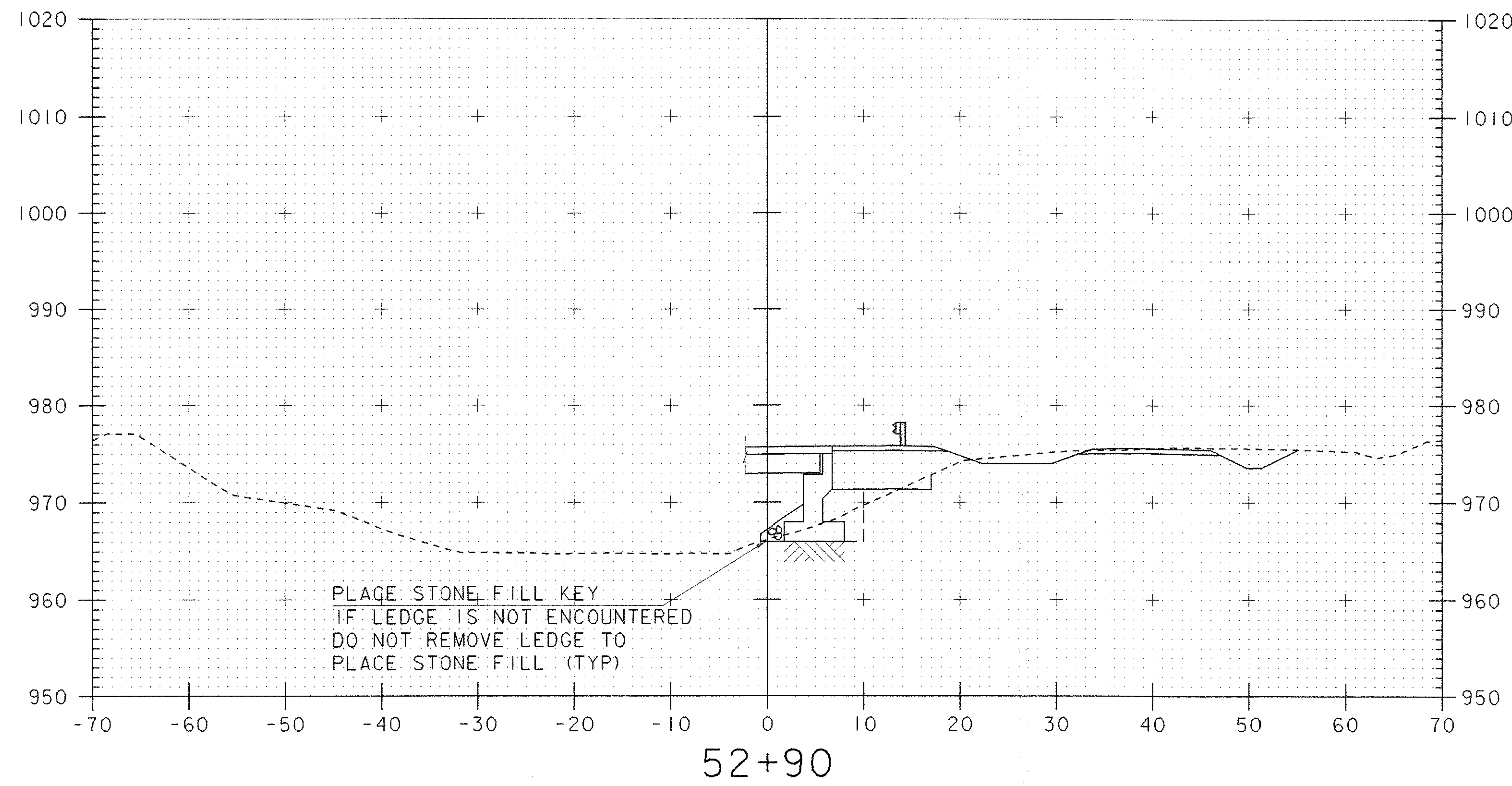


PROJECT: READING	PROJECT NO. : BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058csc.dgn	PLOT DATE: 13-FEB-2008
CHANNEL LINE SECTIONS 52+00 THRU 52+30	
SHEET: 44 OF 49	



SCALE 1" = 10'-0"

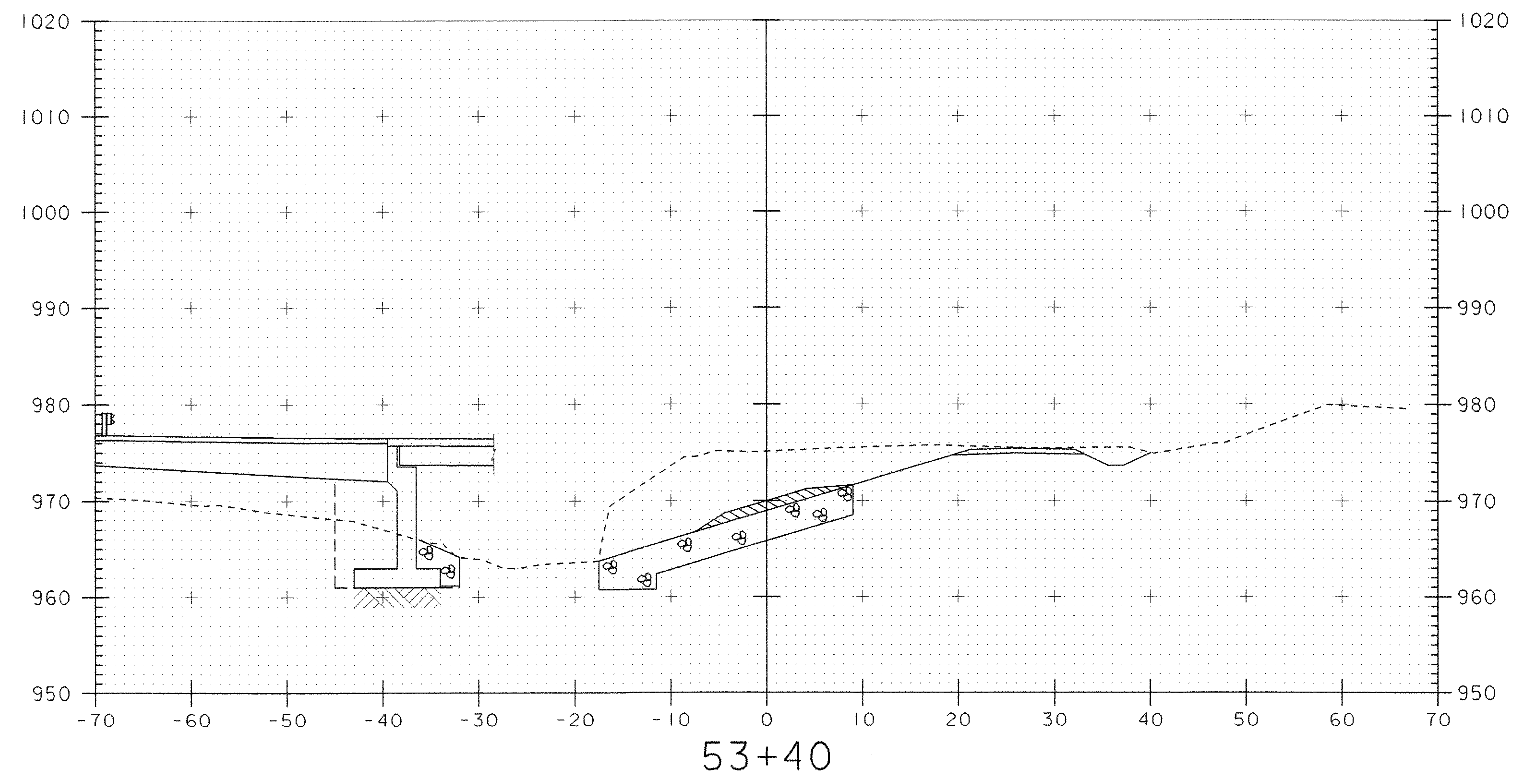
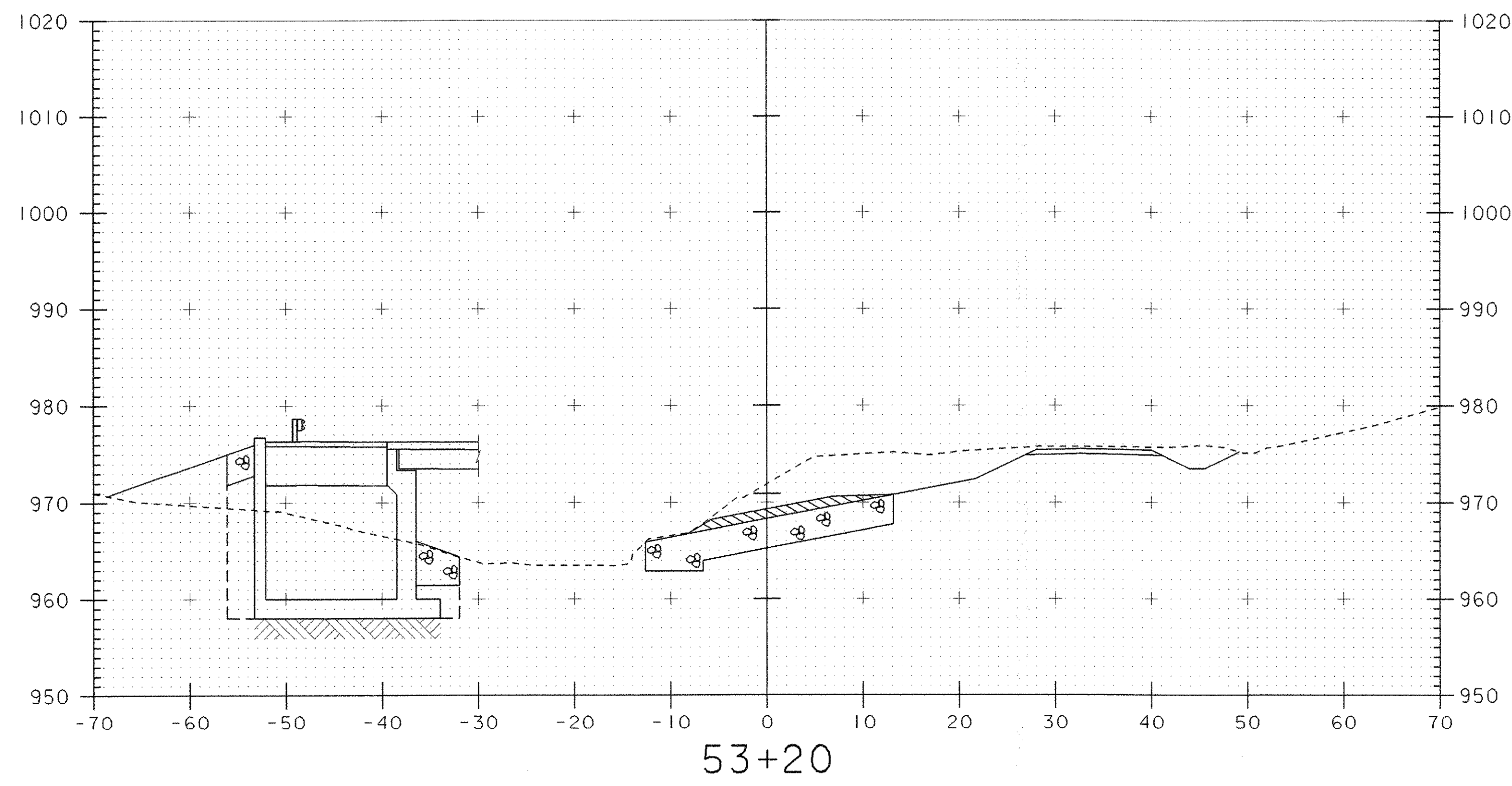
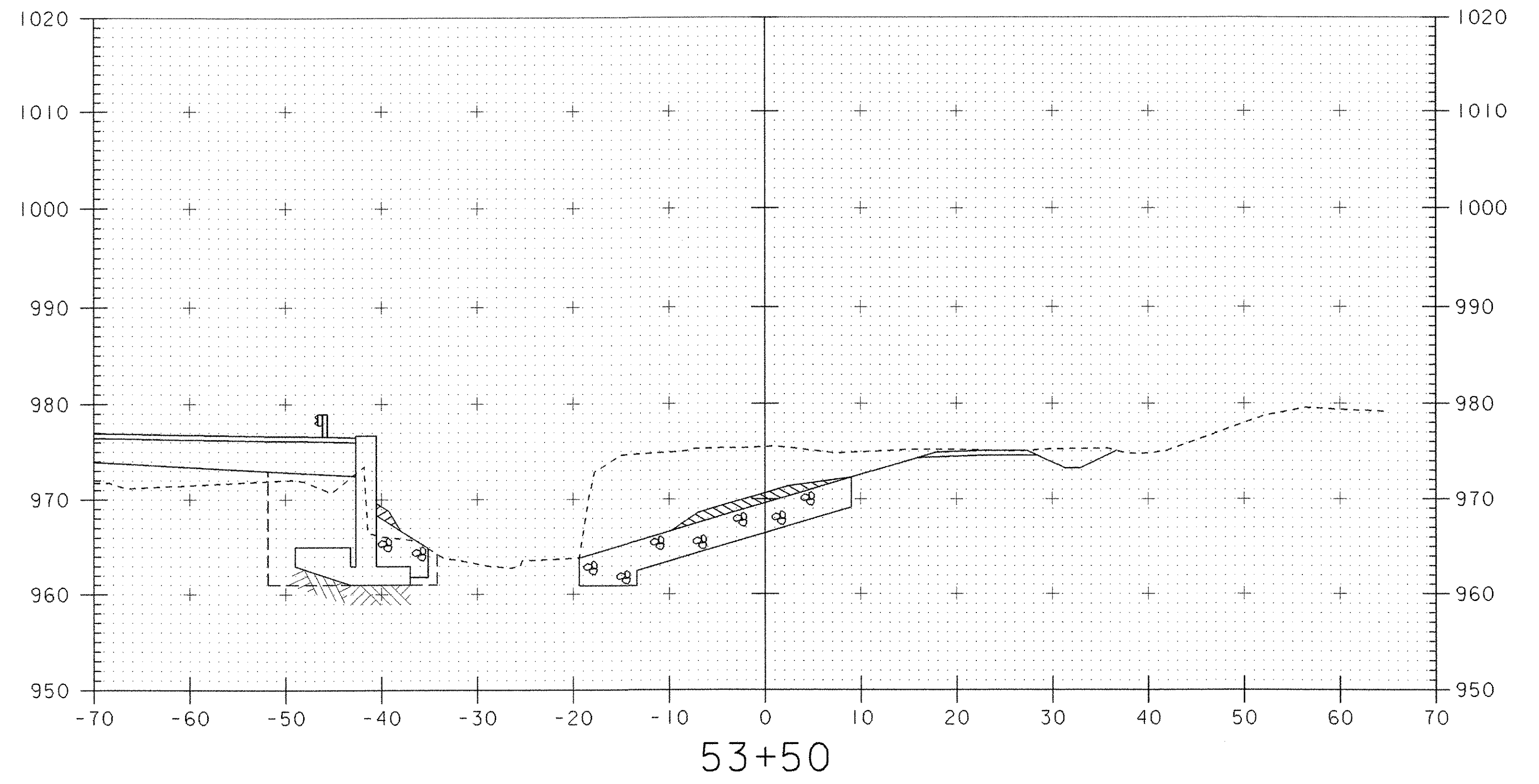
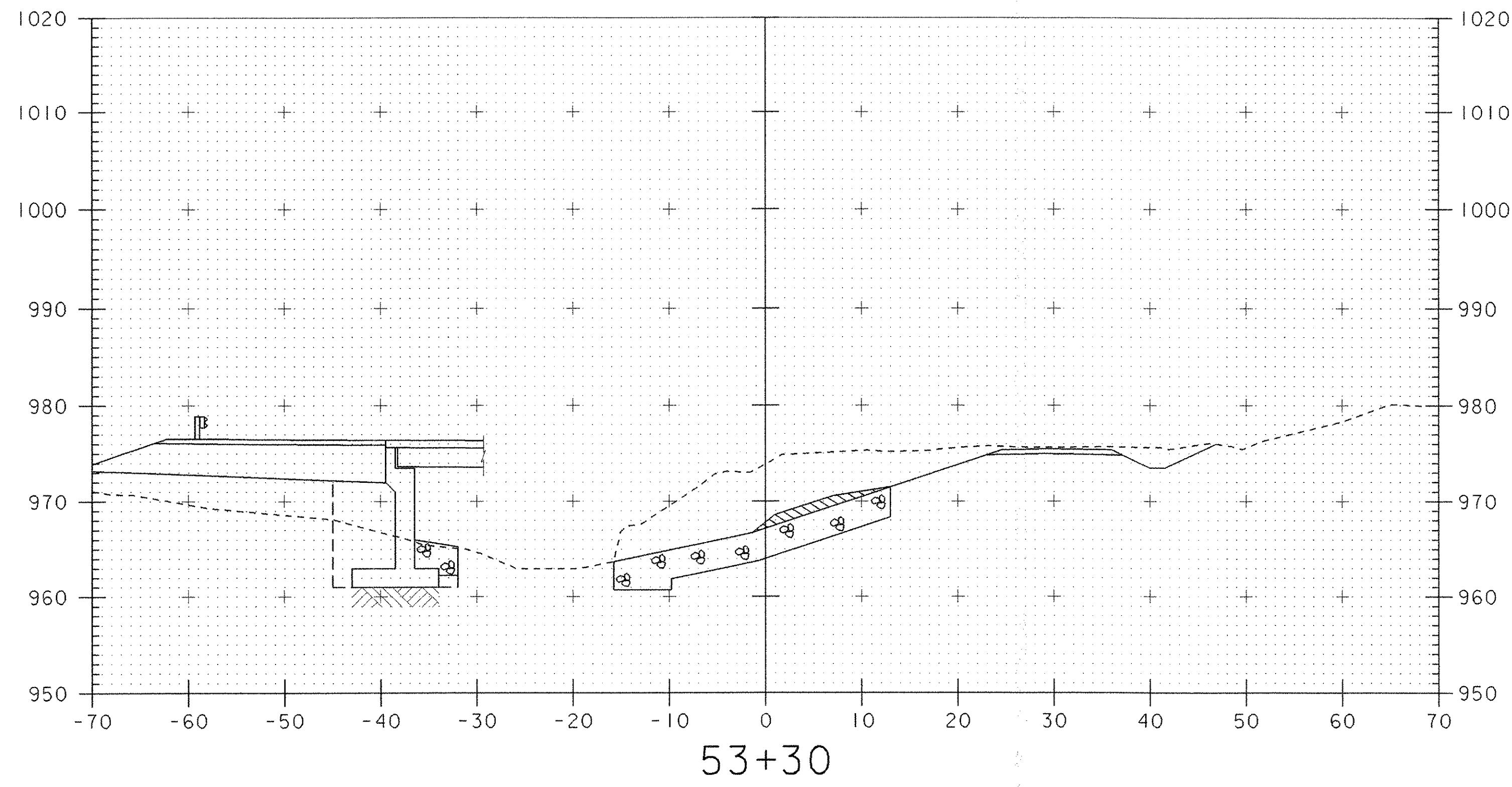
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DESIGN FILE NAME: /usr/str4/90j058/sj058csc.dgn	PLOT DATE: 13-FEB-2008
CHANNEL LINE SECTIONS 52+40 THRU 52+70	
SHEET: 45 OF 49	



SCALE 1" = 10'-0"

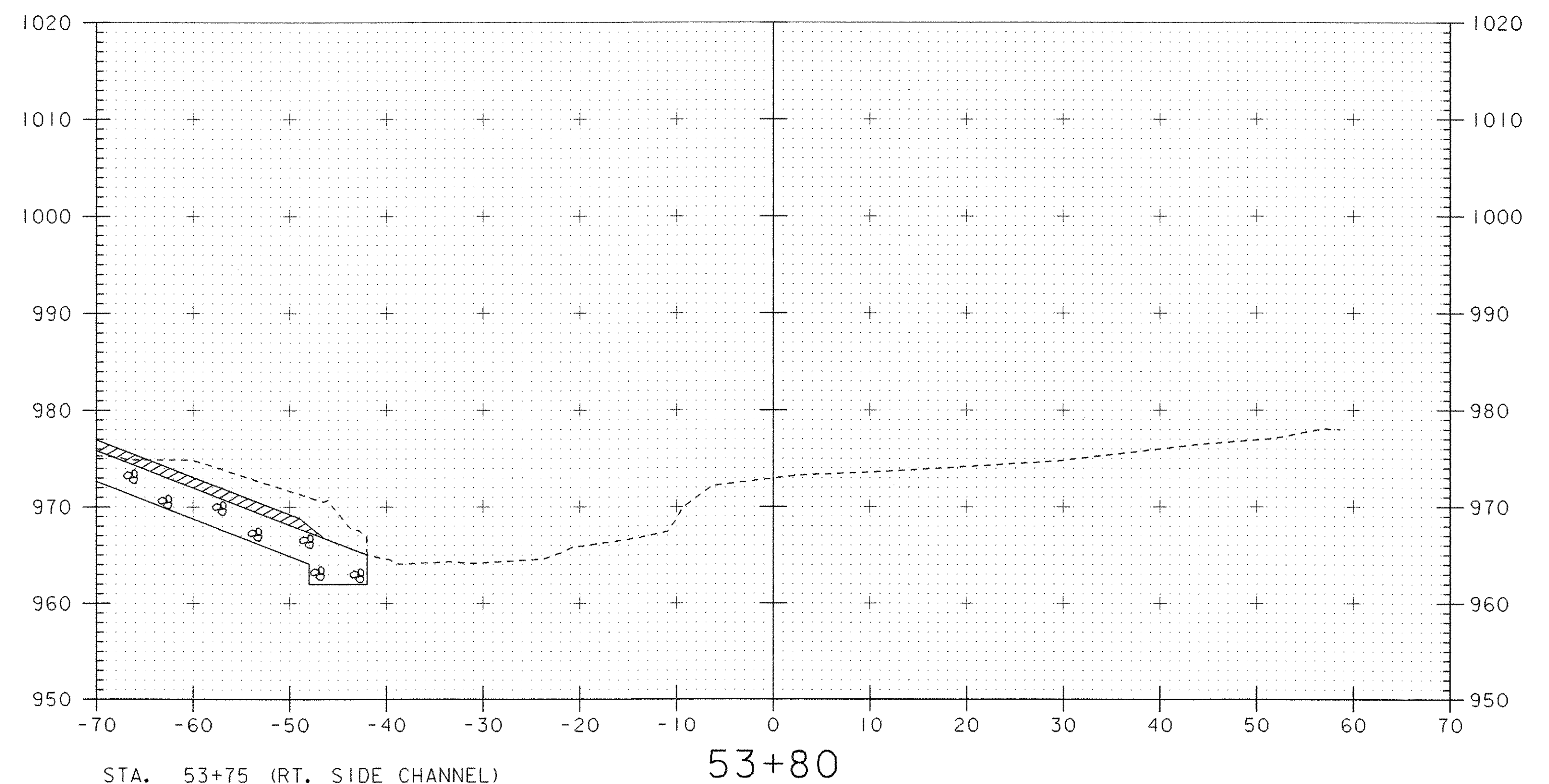
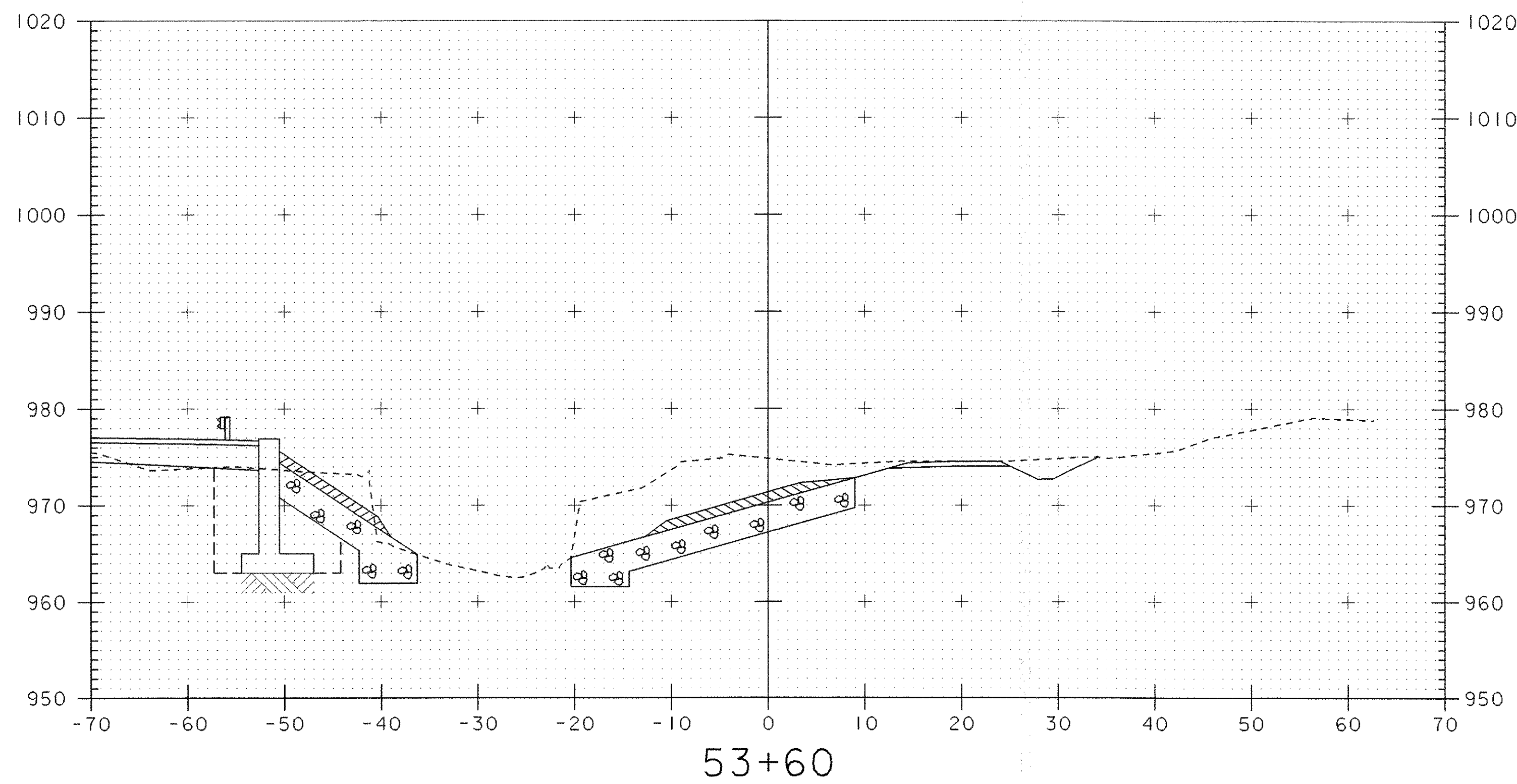
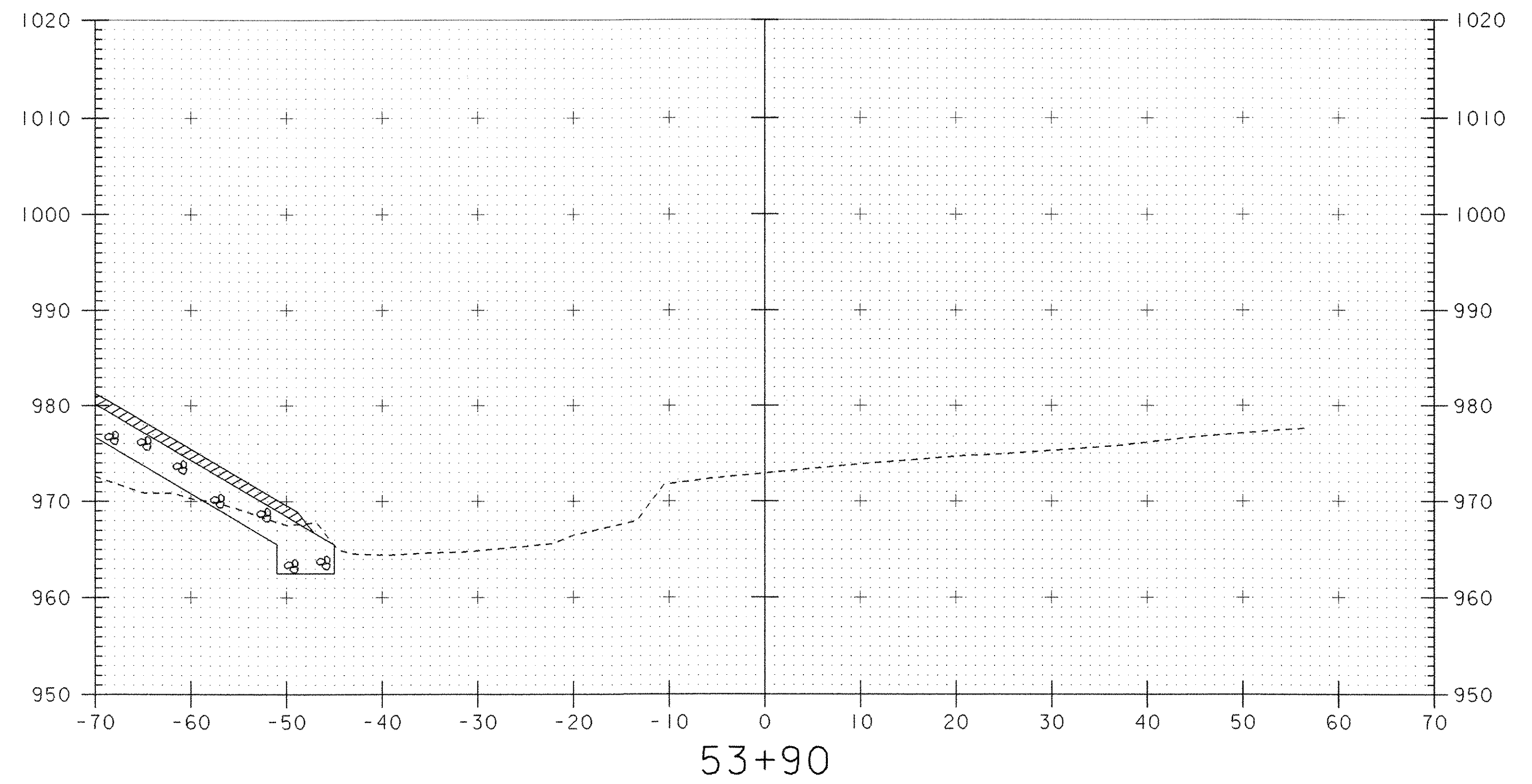
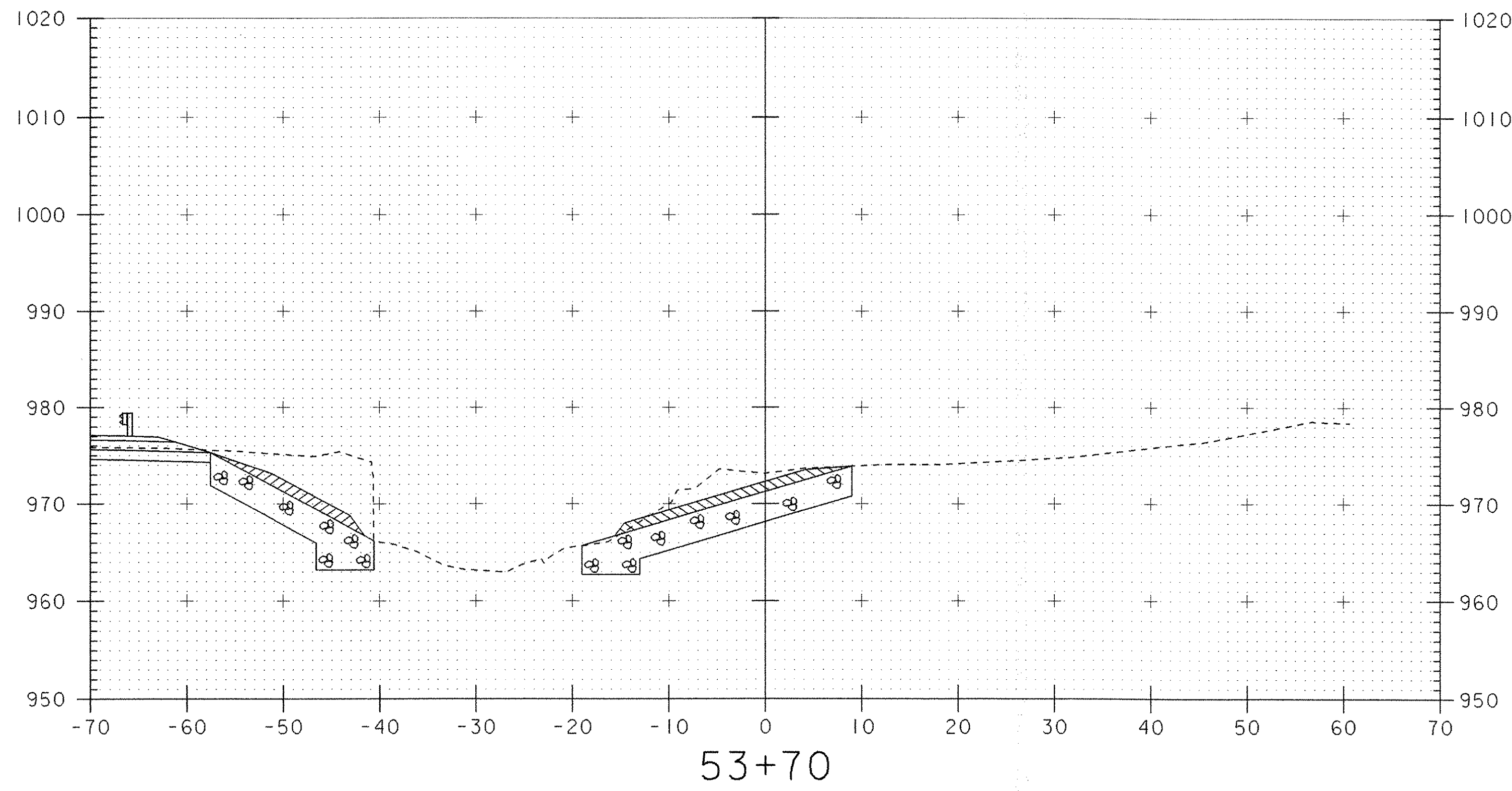
STA. 52+95 LT
 BEGIN STONE FILL TYPE III
 BEGIN GRUBBING MATERIAL
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058csc.dgn	PLOT DATE: 13-FEB-2008
CHANNEL LINE SECTIONS 52+80 THRU 53+10	
SHEET: 46 OF 49	



SCALE 1" = 10'-0"

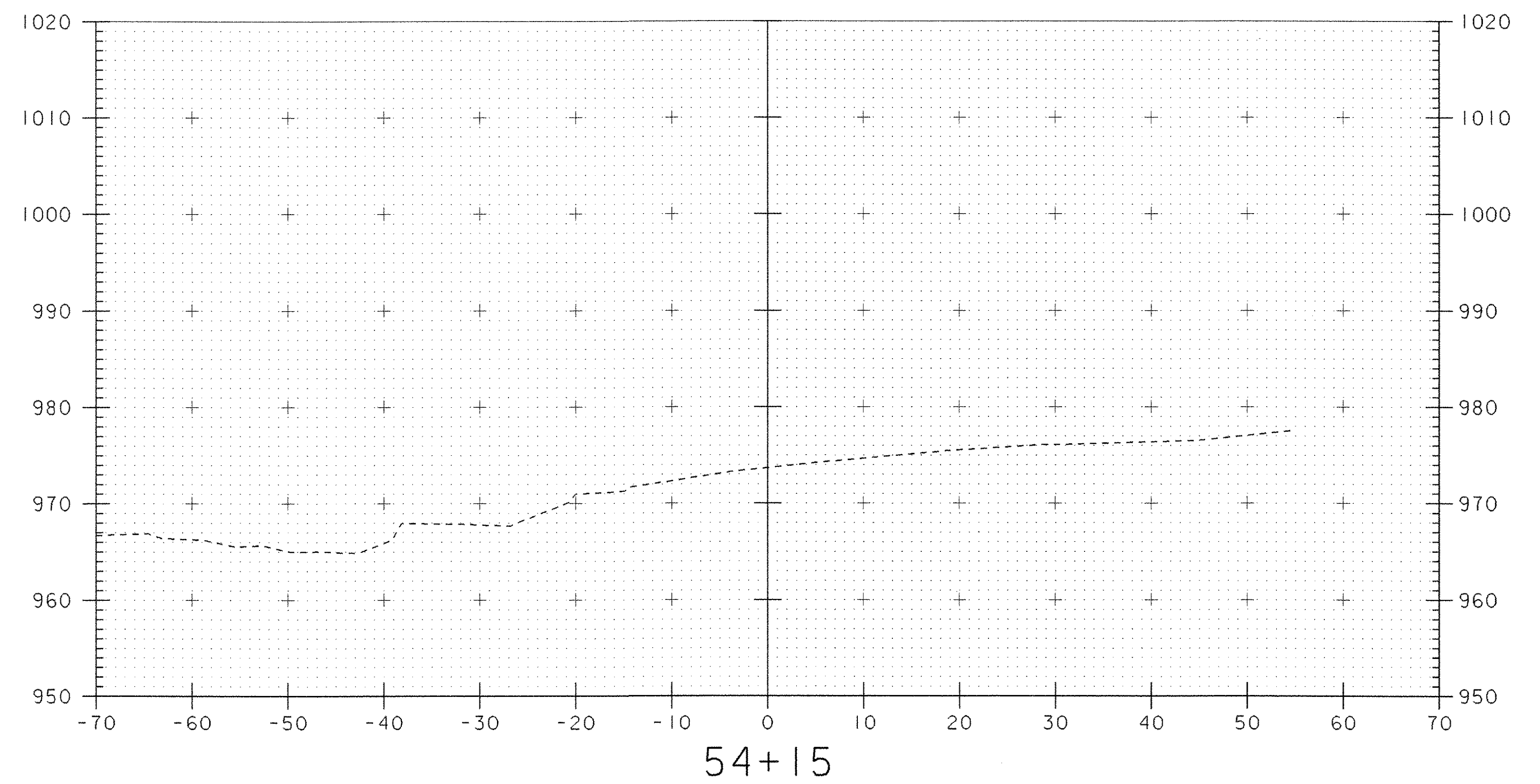
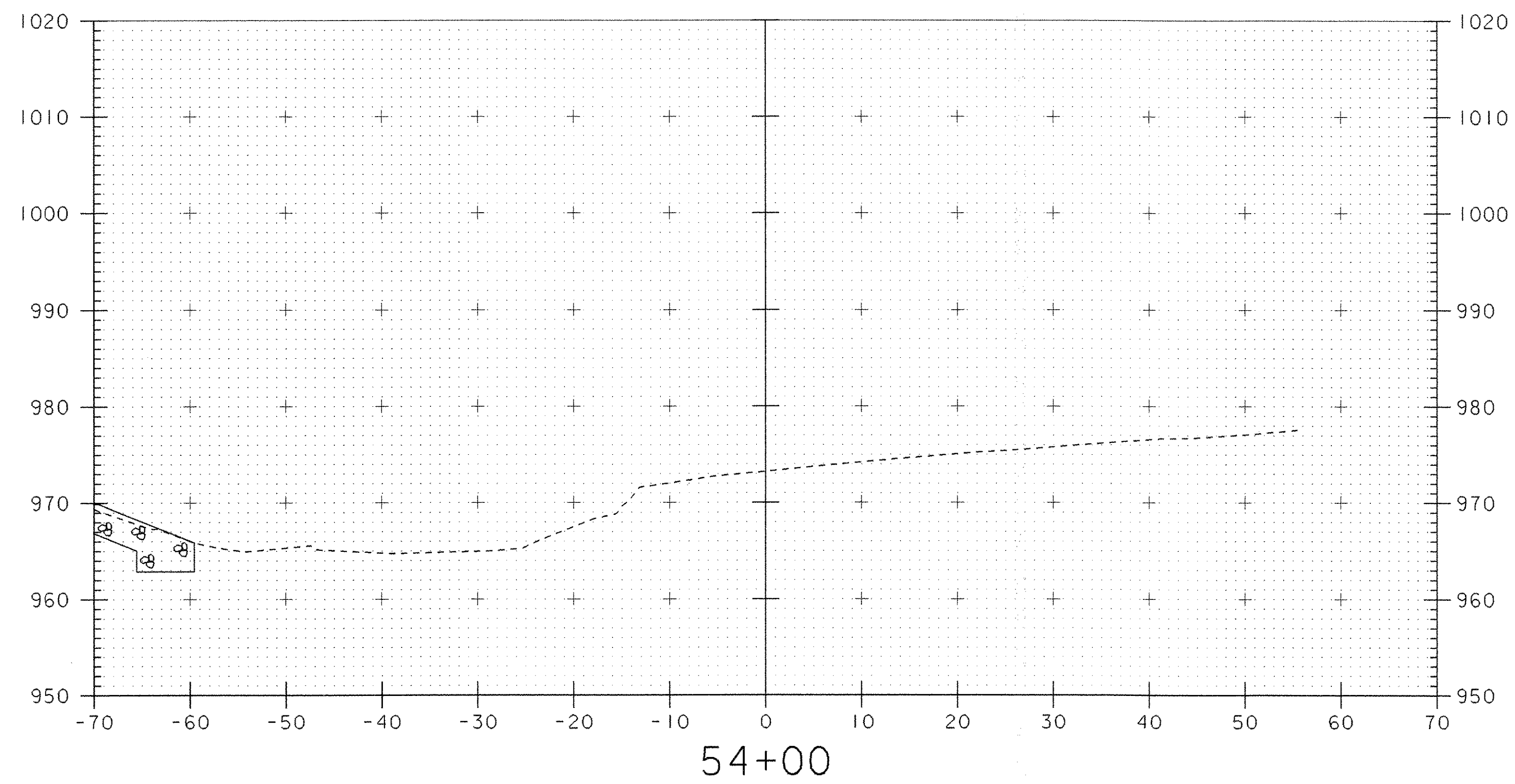
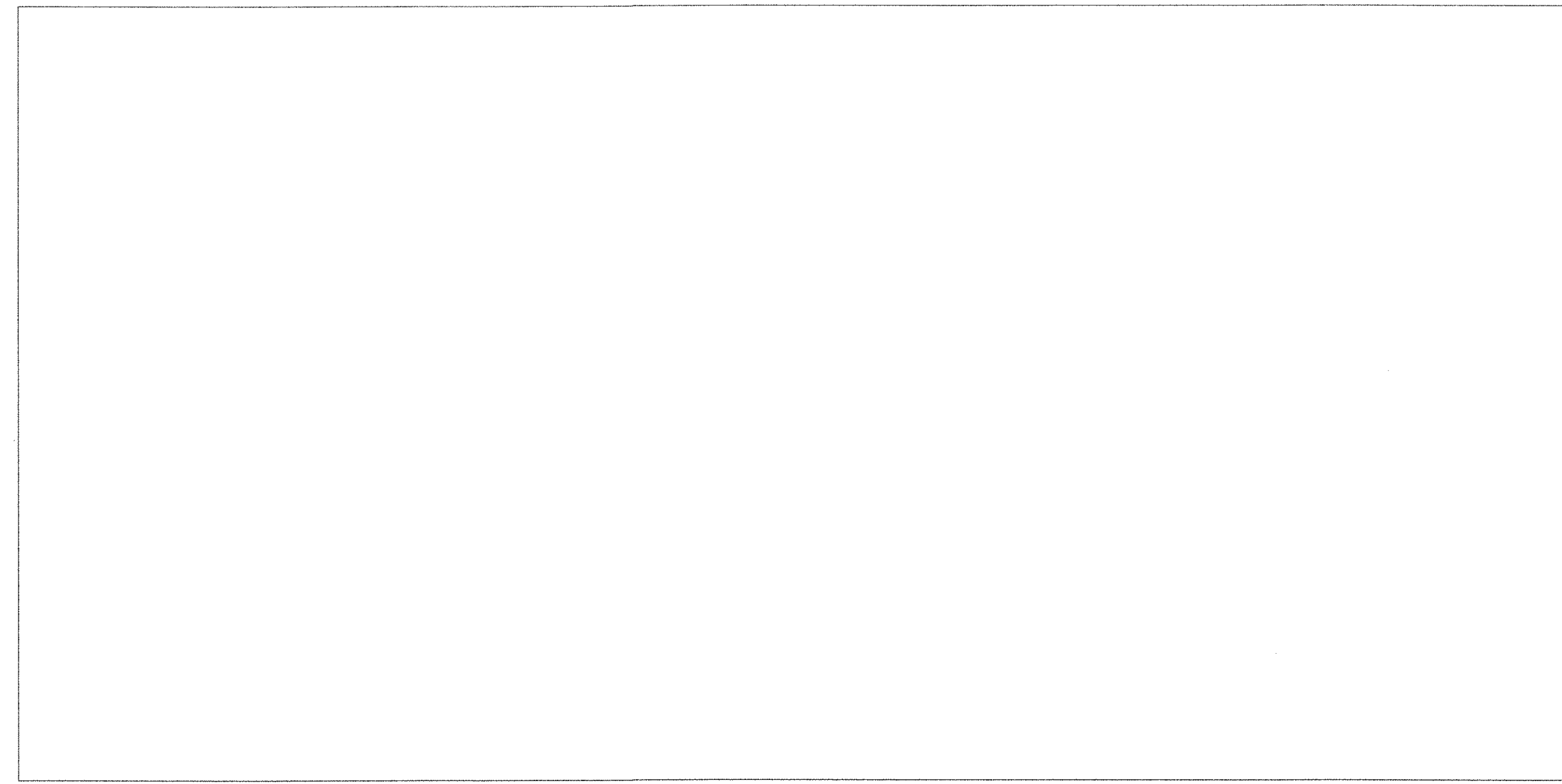
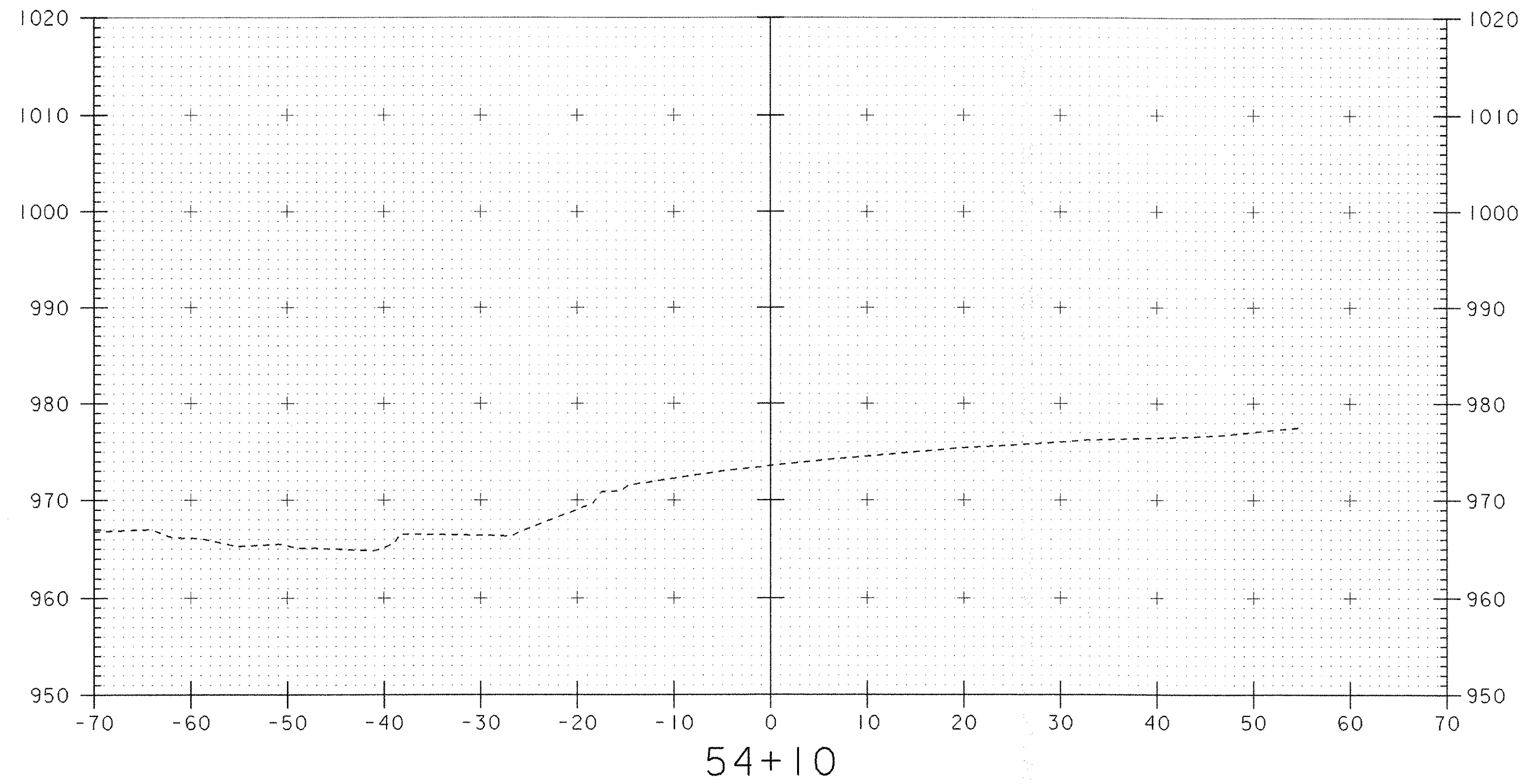
PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058csc.dgn	PLOT DATE: 13-FEB-2008
IPARM FILE NAME: /str4/90j058/sj058cll.i	CHANNEL LINE SECTIONS 53+20 THRU 53+50
SHEET: 47 OF 49	



SCALE 1" = 10'-0"

STA. 53+75 (RT. SIDE CHANNEL)
 END STONE FILL
 END GRUBBING MATERIAL
 END GEOTEXTILE UNDER STONE FILL
 END UNCLASSIFIED CHANNEL EXCAVATION
 SEE MAIN LINE SECTIONS FOR LT SIDE CHANNEL QUANTITIES

PROJECT: READING	PROJECT NO.: BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058csc.dgn	PLOT DATE: 13-FEB-2008
CHANNEL LINE SECTIONS 53+60 THRU 53+90	
SHEET: 48 OF 49	



SCALE 1" = 10'-0"

PROJECT: READING	PROJECT NO. : BRZ 1444(23)
DESIGN FILE NAME: /usr/str4/90j058/sj058csc.dgn	PLOT DATE: 13-FEB-2008
CHANNEL LINE SECTIONS 54+00 THRU 54+15	
SHEET: 49 OF 49	

COSMEC, INC.
70 SOUTH STREET
WALPOLE, MA 02081
PH# 508-668-6600
FAX# 508-660-1022

EMS-QC-110
VTRANS
RECEIVED
OK'D BY _____ OK'D BY JWC
JUN 16 2008
RESUBMIT _____ APPROVED ✓
BY _____ DATE 6/16/08

ENGINEERING AND MANUFACTURING STANDARD
PTFE FACING AND STEEL
OR PREFORMED FABRIC SUBSTRATE
SURFACE PREPARATION AND ADHESIVE PROCEDURE

The PTFE facing shall be prepared for bonding to a substrate material by chemically etching the face to be bonded using the sodium ammonia process.

The mating surface of the substrate shall be prepared for bonding using a three-step process as follows:

1. preliminary degrease using methyl ethyl ketone.
2. mechanically roughen to approx. 125 RMS and thoroughly brush and clean for final degreasing.
3. final degrease using methyl ethyl ketone

The PTFE and substrate mating surfaces shall be clean and dry with final degreasing performed within 30 minutes of bonding. Adhesive shall consist of a two-part epoxy adhesive system conforming to Military Specification MDM-A-134

The adhesive shall be applied to the full area of the contact surface in an even manner so as to establish a glue line not less than .002 inch nor more than .010 inch thick. Surfaces being bonded are to be assembled immediately with open assembly time not to exceed 20 minutes.

The PTFE material shall be greater in width and length than the substrate material by at least 1/4 inch when bonded. The PTFE shall be applied with contact starting at one edge and with contact progressing across entire bonded surface to eliminate air entrapment. The PTFE is to be in full contact with the steel or preformed fabric substrate. Curing of the bond shall be done under pressure of approx. 2-100 psi for 10-12 hours at approx. 70°F or other schedules as established by the manufacturer of the adhesive.

The PTFE shall be carefully trimmed to the same size as the substrate after bond curing and all bonds shall be visually inspected for bond retention.

Proj #: BRZ-1444 (23)

COSMEC INC.

WELDING PROCEDURE SPECIFICATION

SPECIFICATIONS AND CODE: D1.6
 MATERIAL SPECIFICATION ASTM A240 TYPE 304 TO ASTM A709 GR 50W
 WELDING PROCESS GTAW
 MANUAL OR MACHINE MANUAL
 POSITION OF WELDING 1F & 2F
 FILLER METAL SPECIFICATION ER309L CLASSIFICATION: A5.9
 MANUFACTURER: HARRIS WELCO TRADENAME:
 FLUX INTERNAL FLOW RATE 45 CFH
 SHIELDING GAS ARGON
 SINGLE OR MULTIPLE PAS S SINGLE
 SINGLE OR MULTIPLE ARC SINGLE
 WELDING CURRENT DC
 POLARITY: REVERSE (EN)
 WELDING PROGRESSION
 ROOT TREATMENT CLEANED & PREPARED BRIGHT METAL
 PREHEAT AND INTERPASS TEMPERATURE SEE BELOW
 POSTHEAT TEMPERATURE N/A
 HEAT INPUT MIN. MAX.

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	WELDING CURRENT AMPERES	VOLTS	TRAVEL SPEED	JOINT DETAIL
ALL	3/32"	130-155	14-17	6.75-8.5	LAP JOINT

16 GA THRU 10 GA
 BM THICKNESS

PREHEAT TEMPS. ***PREHEAT UNTIL NO MOSITURE PRESENT
 THICKNESS T TEMP.
 UP TO 3/4" 100 DEG.
 OVER 3/4" TO 1 1/2" 100 DEG.
 OVER 1 1/2" TO 2 1/2" 100 DEG.
 OVER 2 1/2" 100 DEG.

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT-UP, PASS SIZE, ETC.
 WITHIN THE LIMITATION OF VARIABLES GIVEN IN SECTION 5.

SUPPORTING PQR: GTAW-WF-05
 PROCEDURE NO. GTAW-WF
 REVISION NO. 1

CONTRACTOR: COSMEC INC.
 AUTHORIZED BY: DONALD VOSE
 CW#01100651 *Donald Vose*

DATE: 2/1/2005

TRANS RECEIVED
 OK'D BY: *JWC*



JUN 16 2008
 RESUBMIT APPROVED
 BY: DATE: *6/16/08*

051



PO Box 210 1023 Temple Street Stoughton, MA 02072
T (508) 341-3655 or 1-800-322-7352 F (508) 341-3583
E info@fabreeka.com www.fabreeka.com

FABREEKA #700 EPOXY ADHESIVE APPLICATION SHEET

This two-part, multi-purpose Epoxy Adhesive is ideal for bonding Fabreeka Pad, SA-47, PTFE, Steel, Aluminum and Stainless Steel to a variety of compatible materials, such as wood, rubber, plastics, ceramics, metal and concrete. It will bond equally well to some of the more difficult substrates, such as polyethylene, polypropylene, nylon and teflon. It can be cured (set) at room temperature or heat may be used to speed the cure. * PTFE must be protected from debris and direct sunlight with a "light obstructing" layer of black plastic. Exposing PTFE to direct sunlight can deteriorate adhesive bond.

Bond Surface Preparation

- Etch-clean and/or sandblast bond surface on concrete/metal thoroughly.
- Buff and clean rubber bond surface thoroughly.

Adhesive Mixing

- Mix Fabreeka #700 epoxy adhesive following manufacturer's instructions, mix 50-50, Base and Activator, (A&B).

Application

- Apply the mixed adhesive to bond surface to be bonded using a "V" notched serrated applicator with a 1/4" deep notch.
- Disposable plastic applicators are available from McMaster Carr, called a "thrifty trowel" spreader scraper.
- Place unit to be bonded securely in place by blocking and/or clamping to prevent movement during the 240 hour epoxy full cure time. (Blocks may have to be made for this step). The epoxy full cure time may be decreased by the application of heat. Please note the following: 2.75 hrs. @ 165°F, 1.75 hrs. @ 216°F or .75 hrs. @ 300°F.
- Remove all restraints and place unit under normal load.

Characteristics

- Operating temperature: -90 to +300°F
- Specific gravity: 1.20 to 1.35
- Exhibits high shear bond strength

Military Specifications

- Meets the requirements of MIL-A-8623, MIL-A-14202, MIL-A-134 and Naval Ordinance #2662718.

SCM 03/04

RECEIVED

ORDER BY CK'D BY

JUN 16 2008

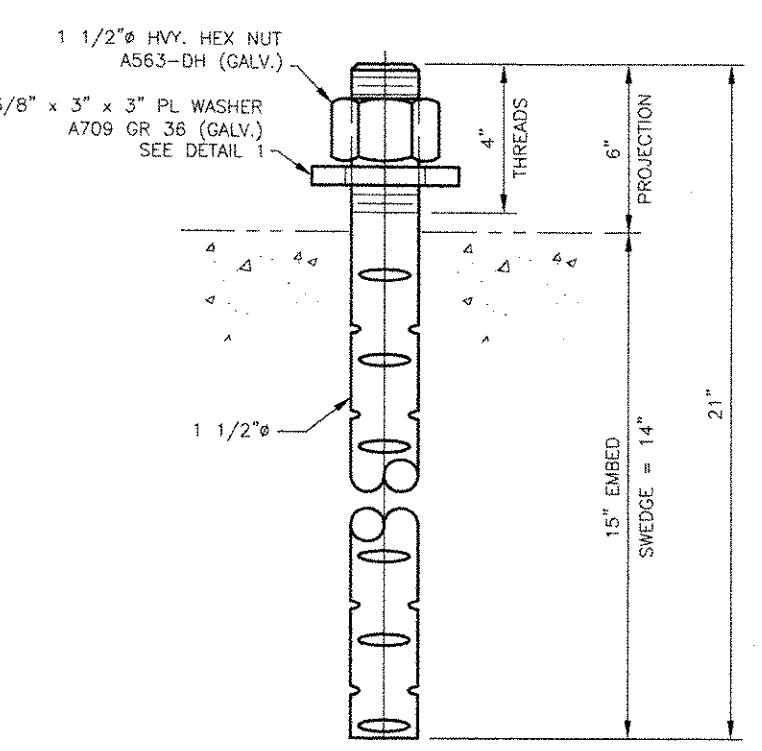
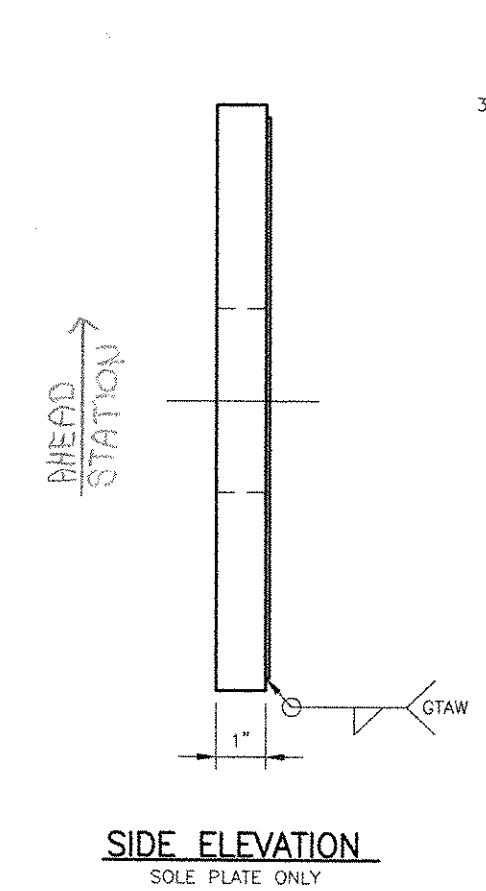
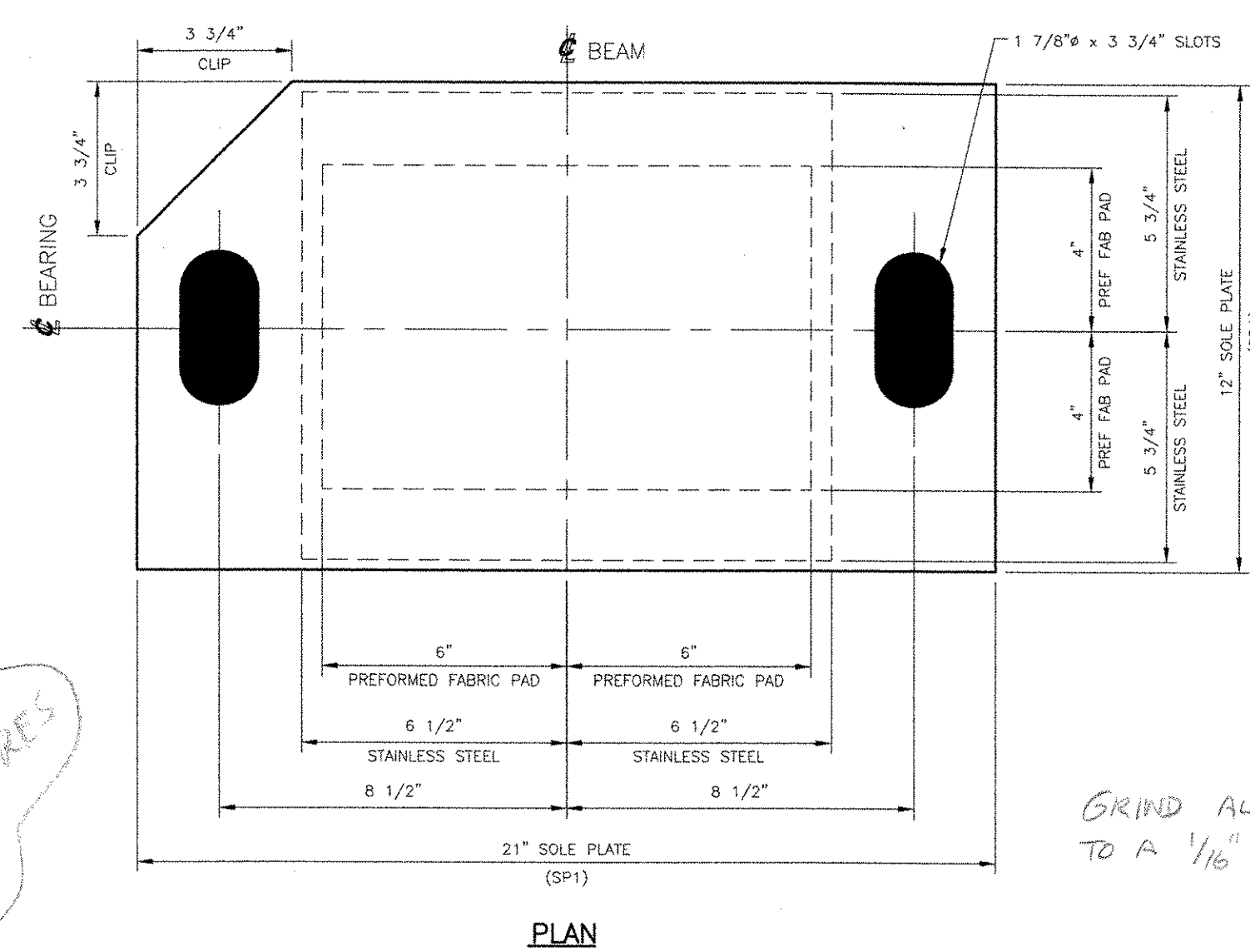
RESUBMIT APPROVED

BY CPW DATE 6/18/08

Manufacturing Plants
Boston • Canada • England • Iceland • Germany

053

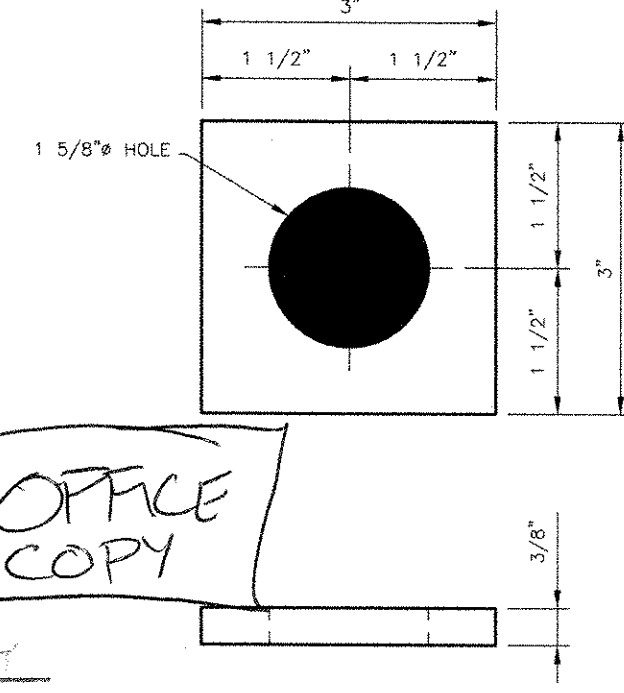
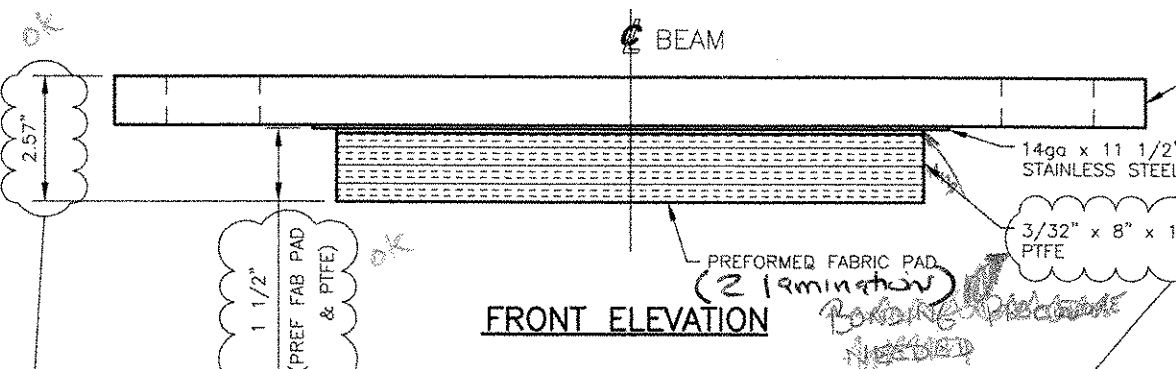
STRUCTURES
COPY



16 ANCHOR BOLTS, AB1
RD 1 1/2" x 21"
ASTM A307 (GALVANIZED)
USE WITH
EXPANSION & FIXED BEARINGS

NOTES:

1. BEARING SHALL CONFORM TO THE APPLICABLE SUBSECTION 531 AND 731 OF STANDARD SPECIFICATIONS.
2. STEEL - ASTM A709 GR 36 (METALLIZED)
3. SURFACES TO BE METALLIZED SHALL BE SEALED WITH AN APPROVED PRIMER.
4. PREFORMED FABRIC PAD - MIL-C-882
5. SHOP TO MARK HIGH SIDE OF THE PLATE AND AHEAD STATIONS AS NOTED.
6. DYNAMIC RUBBER REPRESENTATIVE - MR. ROBERT PATRICK (903) 677-2871



DETAIL 1 - PLATE WASHER
QUANTITY: 16
USE WITH
EXPANSION & FIXED BEARINGS

APPROVER: PLEASE VERIFY DIMENSIONS

RECEIVED
MAY 28 2008
APPROVED BY [Signature]

RESUBMIT APPROVED BY [Signature]

BY [Signature] DATE 6/18/08

OFFICE COPY

ELASTOMERIC BEARING ASS'Y
TYPE: EXPANSION

TOWN OF READING
ROUTE NO. TH 8, CL. 3

STATE	COUNTY	BRIDGE NO.
VERMONT	WINDSOR	B25

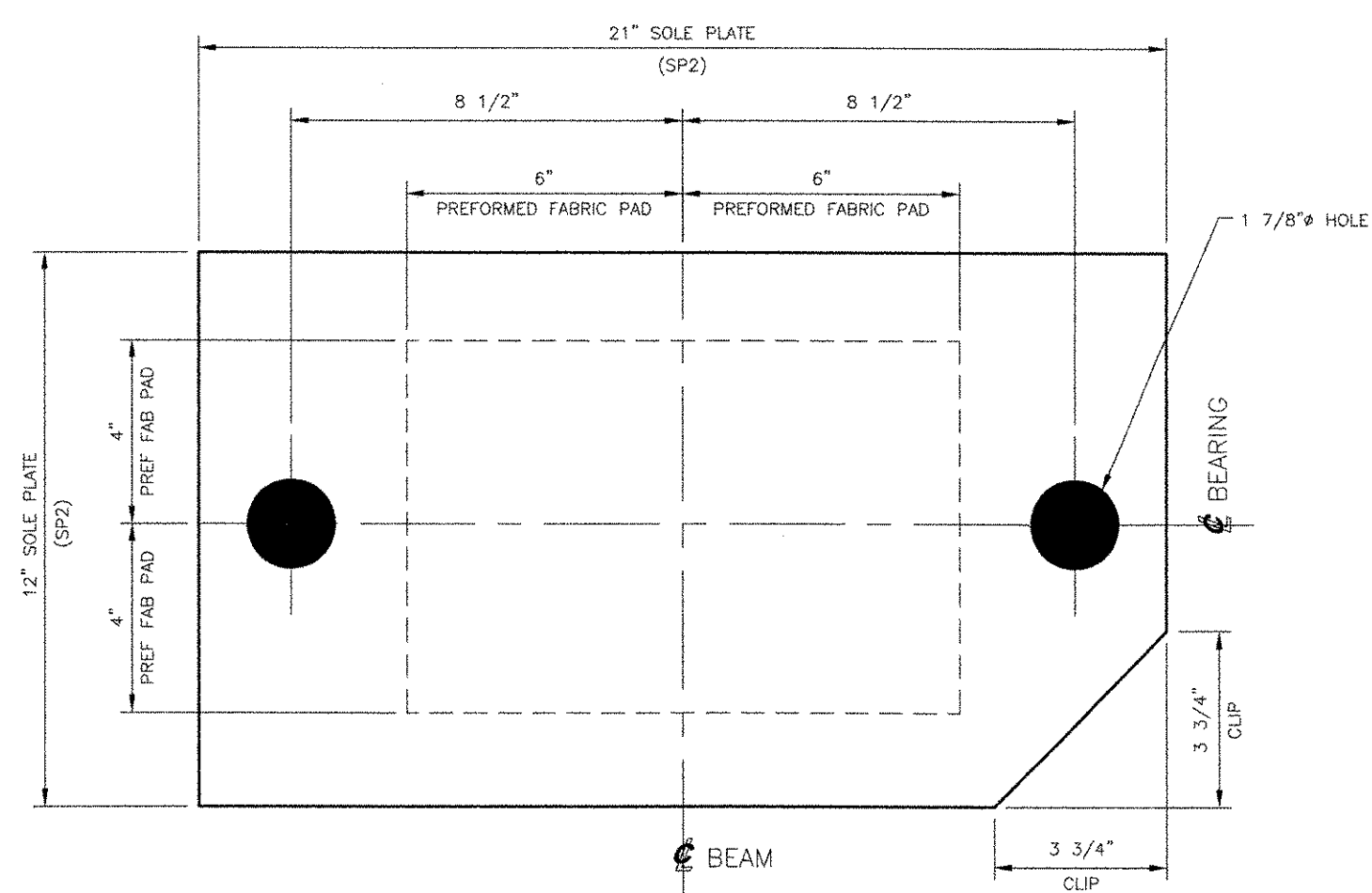
FED. AID PROJECT NO.: BR2 1444 (23)
DYNAMIC RUBBER
A DIVISION OF COSMEC, INC.

SCALE: NONE	DRAWN BY: SM	CHECKED BY: KRW
SHEET 1 OF 2	DATE: 5/9/2008	DATE: 5/23/2008

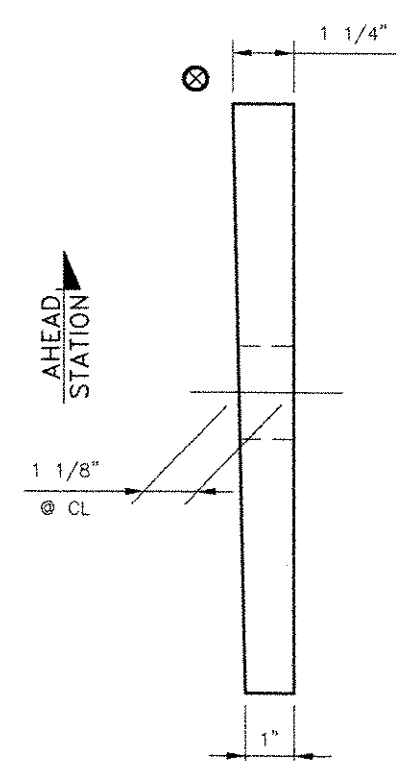
DRP NO.: 9854

EXPANSION BEARING ASSEMBLY

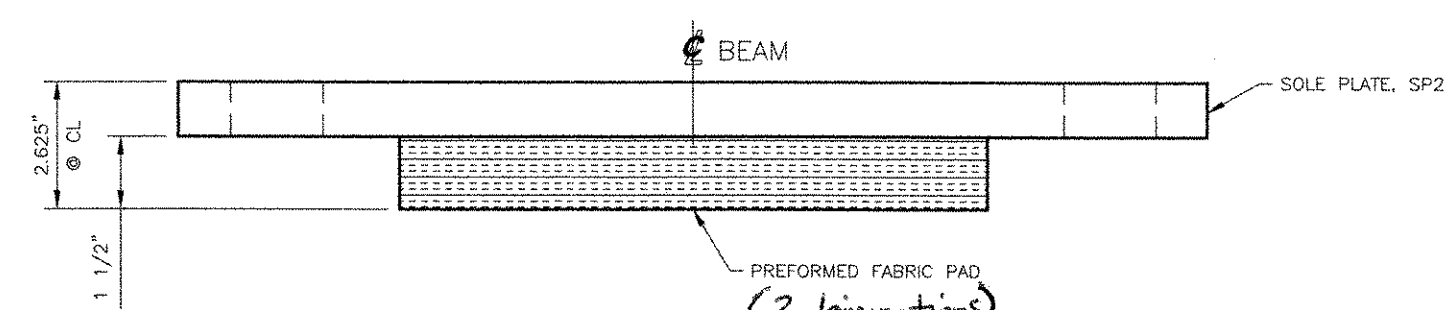
QUANTITY: 4
LOCATE AT
APERTMENT 2 BEAMS 1 - 4



PLAN



SIDE ELEVATION
SOLE PLATE ONLY



FRONT ELEVATION

FIXED BEARING ASSEMBLY

QUANTITY: 4
LOCATE AT:
ASSEMBLY: 1 REPAIR 1 - 4

RECEIVED
CK'D BY: *LJS* OK'D BY: *RCY*
MAY 28 2008
RESUBMIT: _____ APPROVED: *As Noted*
BY: *CPW* DATE: *6/1/08*

ELASTOMERIC BEARING ASS'Y
TYPE: FIXED

TOWN OF READING
ROUTE NO. TH 8, CL. 3

STATE	COUNTY	BRIDGE NO.
VERMONT	WINDSOR	B25

FED. AID PROJECT NO.: BR2 1444 (23)

DYNAMIC RUBBER 1501 ROCKY RIDGE #
A DIVISION OF COSMED, INC. ATHENS, TX 75751

SCALE: NONE	DRAWN BY: SWT	CHECKED BY: KRW
DATE: 5/15/08	DATE: 5/15/08	DATE: 5/15/08

SHEET 2 OF 2
DRP NO.: 9854

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

- 1). ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 WITH LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 2002 AND ITS LATEST REVISIONS.

MATERIAL SPECIFICATIONS

- 1). UNLESS OTHERWISE NOTED, ALL STEEL TO BE AASHTO M270 (ASTM A709) GRADE 50W.
- 2). MATERIAL NOTED "CVN" OR "H2-3" ON DETAIL DRAWINGS SHALL BE CHURPY V-NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS SECTION 714.01.
- 3). HIGH STRENGTH BOLTS: $\frac{7}{8}$ " ϕ ASTM A325 TYPE 3 IN $\frac{15}{16}$ " ϕ HOLES. NUTS SHALL BE A563 GRADE C3. BOLTS & NUTS SHALL BE ROTATIONAL CAPACITY TESTED. DO NOT MIX NUTS & BOLTS FROM DIFFERENT CONTAINERS UNLESS ALL BOLTS & NUTS HAVE THE SAME LOT NUMBER.

FABRICATION

- 1). ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE (UN).

WELDING

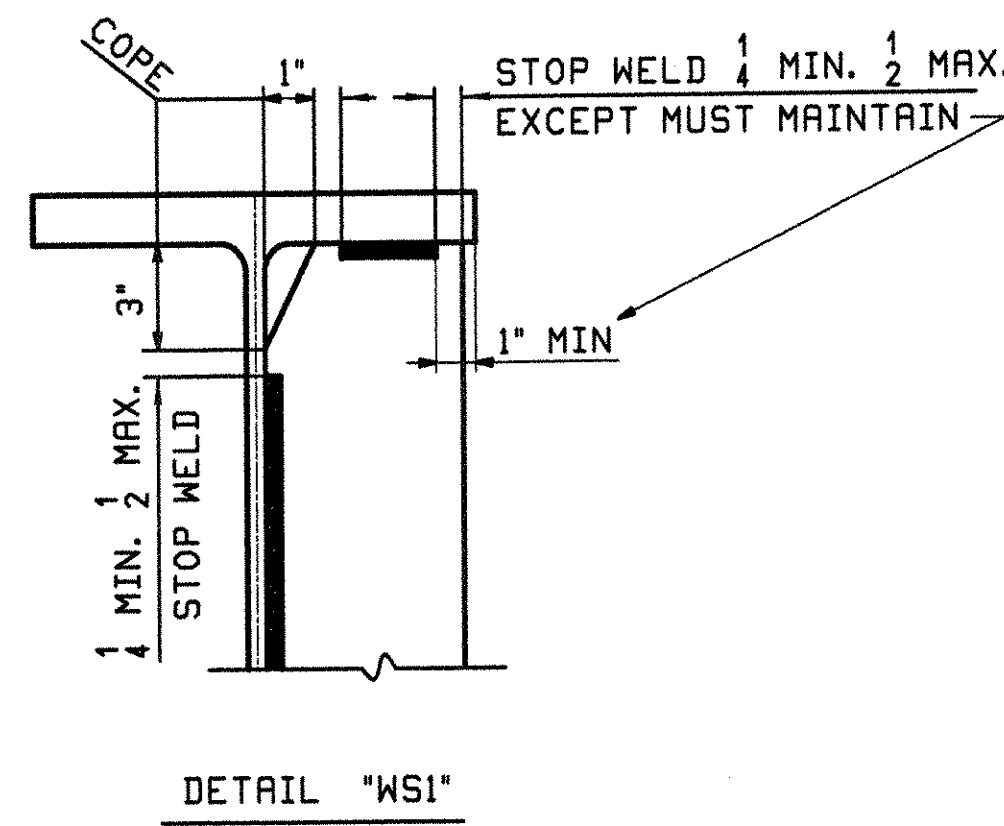
- 1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-02 BRIDGE WELDING CODE AND IN ADDITION TO SPECIFICATIONS SHOWN ABOVE. ALL WELDING WILL BE DETAILED TO PRE-QUALIFIED JOINTS, UNLESS PROHIBITED BY THE DESIGNER.
- 2). NON DESTRUCTIVE TESTING OF WELDS SHALL BE IN ACCORDANCE WITH THE REFERENCED SPECIFICATION.
- 3). SEE DETAIL "WS1" ON THIS DRAWING FOR WELD TERMINATION DETAIL.

CLEANING

1. ALL STEEL SHALL BE BLAST CLEANED IN ACCORDANCE WITH SSPC SP-10.
2. STRUCTURAL STEEL SHALL NOT BE PAINTED.

FIELD CONNECTIONS

- 1). ALL FIELD CONNECTIONS SHALL BE MADE WITH $\frac{7}{8}$ " DIAMETER HIGH STRENGTH A-325 TYPE 3 BOLTS (UN), INSTALLED PER SECTION 506.19(c). SEE DWG E1 FOR FIELD BOLT SIZES.
- 2). BOLTS SHALL HAVE HEAVY HEX NUT, HEAVY HEX HEAD, AND AT LEAST ONE FLAT WASHER EACH. WASHER TO BE PLACED UNDER TURNED ELEMENT.
- 3). PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWINGS.

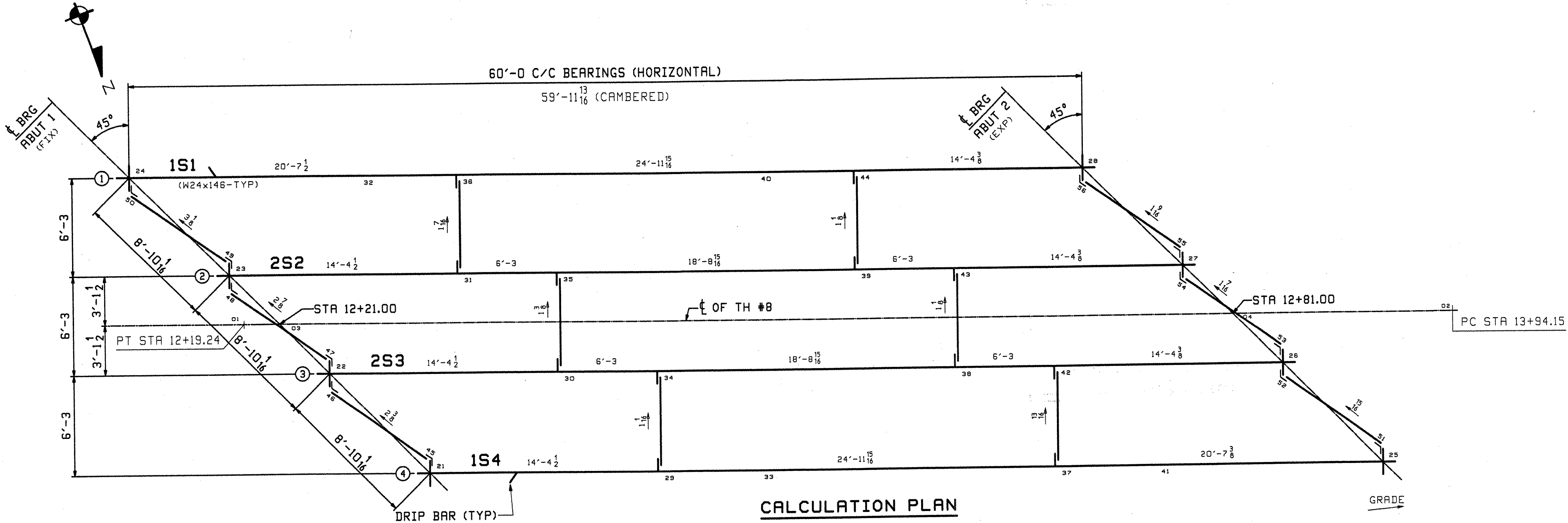


RECEIVED
 OK'D BY ISS OK'D BY RAY
 APR 30 2008
 RESUBMIT _____ APPROVED as noted
 BY CPW DATE 5/7/08

STRUCTURES COPY

0					4-22-08	
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
DESCRIPTION: GENERAL NOTES						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: TH 8 OVER MILL BROOK BRIDGE NO. B25 COUNTY OF WINDSOR			DRAWN: JTB	DATE: 04/10		
			CHKD: JF	DATE: 04/18		
LOCATION: TOWN OF READING			JOB NO. 366	DWG NO. GN1		
PROJ NO. BRZ 1444(23)					REV.	
CUSTOMER: VERMONT R.O.T.						

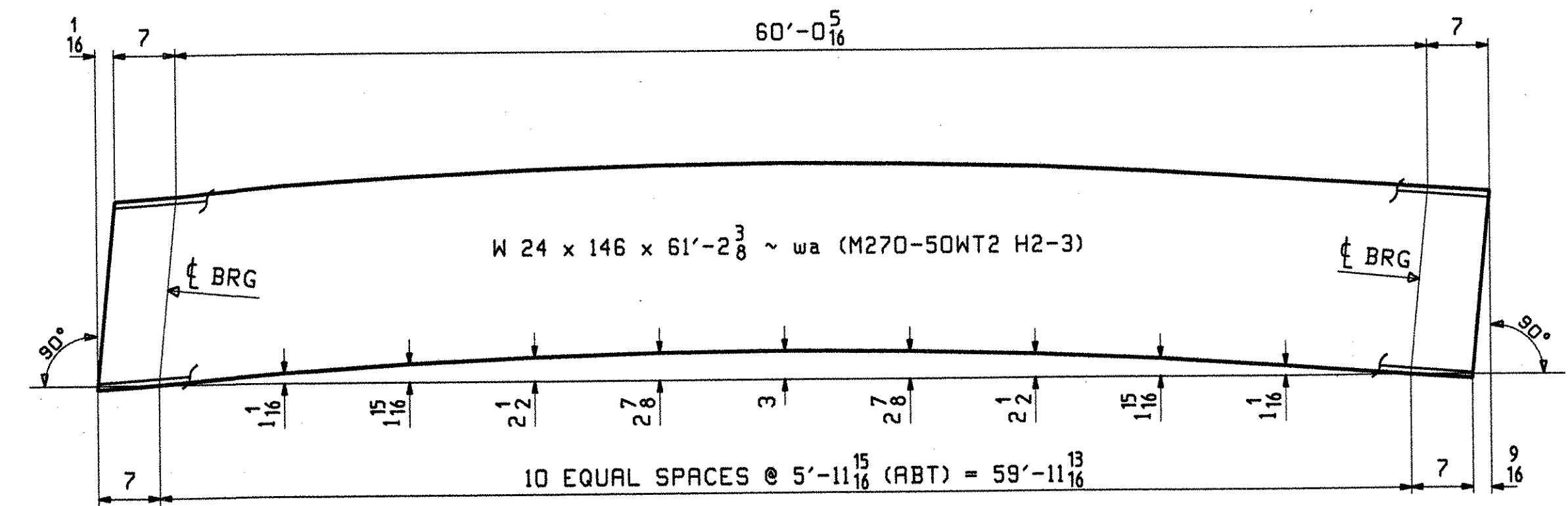
NOTE TO ENGINEER:
 THESE NOTES ARE NOT INTENDED TO BE ALL INCLUSIVE AND COMPLIANCE WITH RELEVANT SPECIFICATIONS REMAIN UNCHANGED.



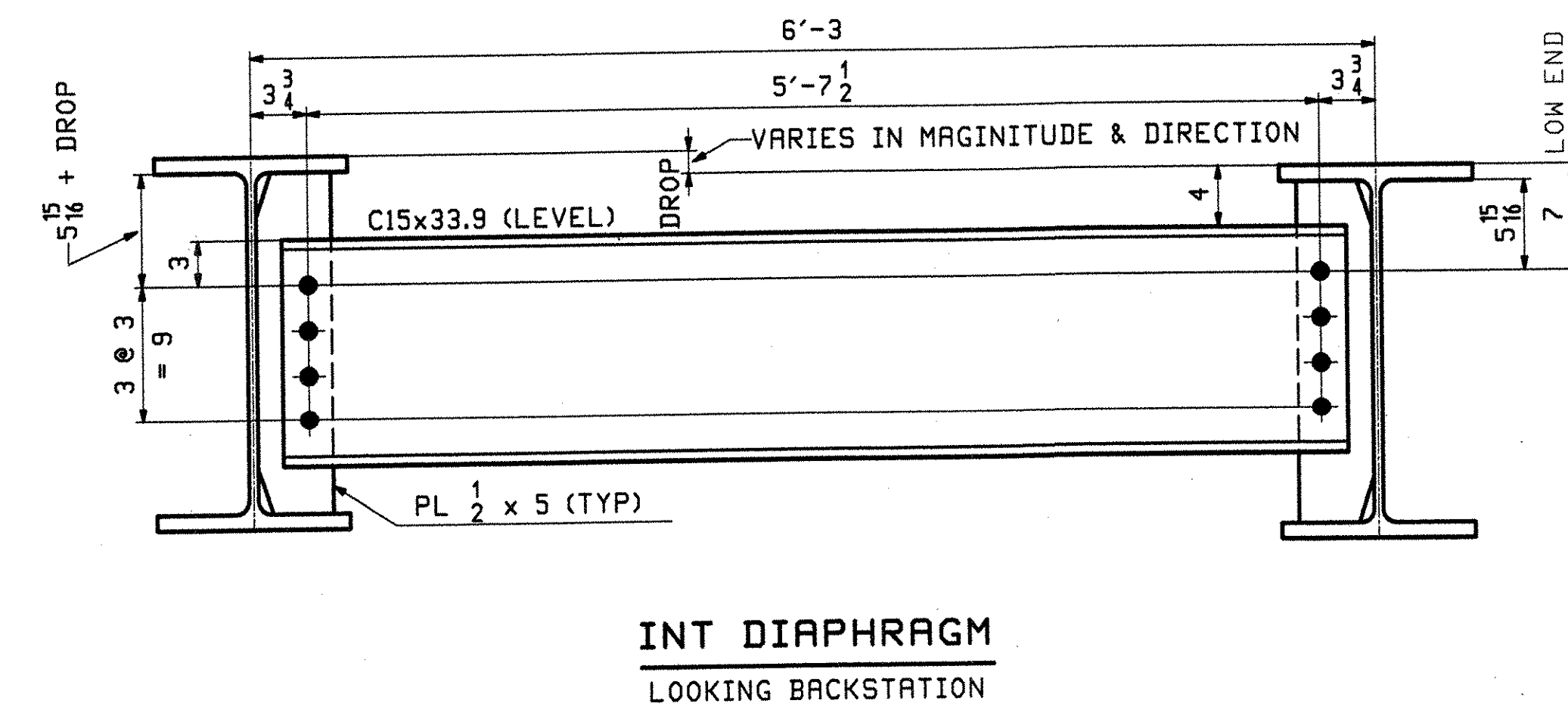
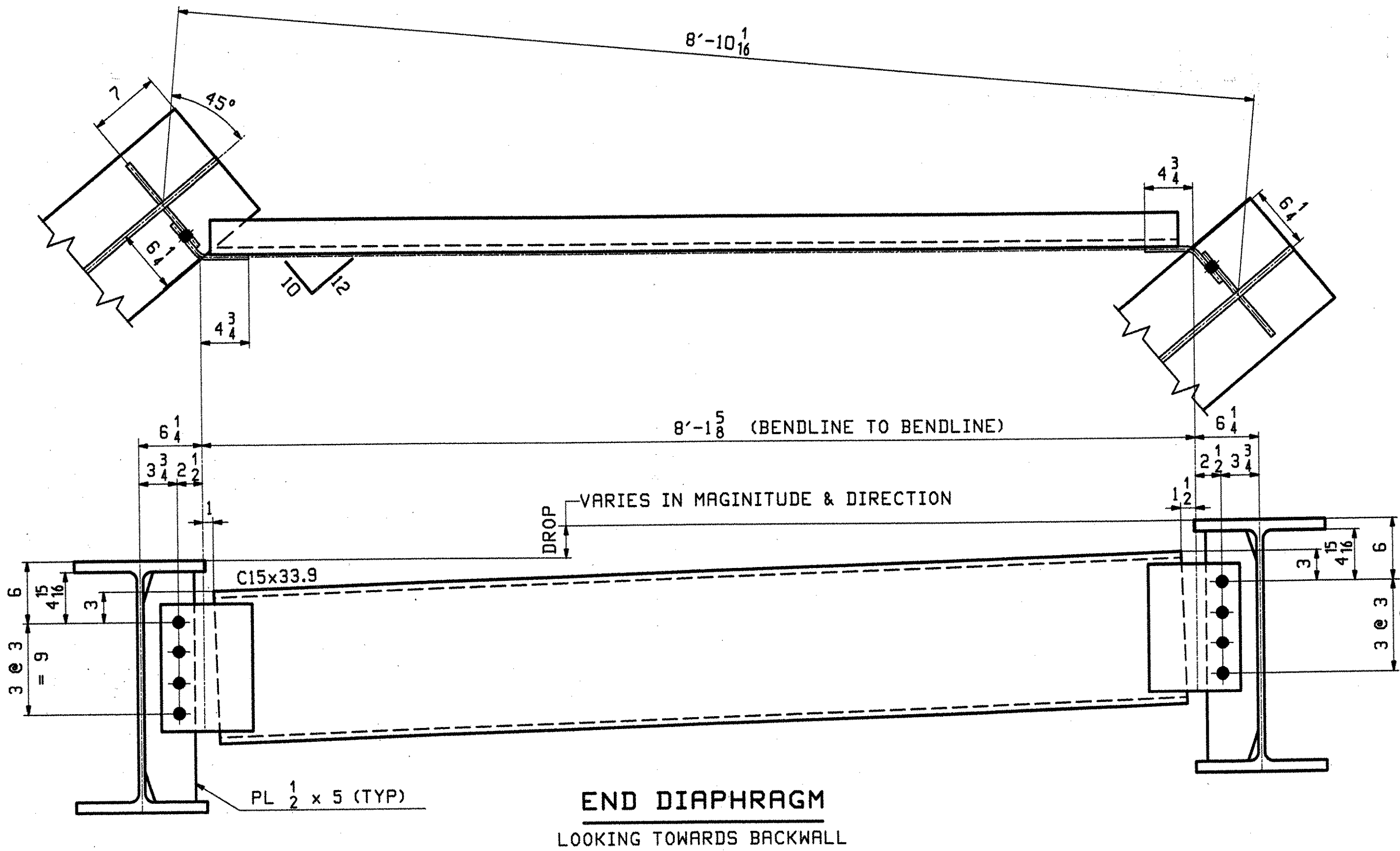
RECEIVED
CHK'D BY: LJS OK'D BY: RSY
APR 30 2008
RESUBMIT APPROVED AS NOTED
BY: cpw DATE: 5/7/08

Line	ABUT 1	ABUT 2
1	.0202	.0098
2	.0180	.0076
3	.0160	.0056
4	.0140	.0036

- CALCULATION PLAN NOTES:**
1. LONGITUDINAL DIMENSIONS ARE SLOPING ALONG BOTTOM OF STRINGERS WITH CORRECTIONS MADE FOR DL CAMBER, V.C. & GRADE (UN).
 2. TRANSVERSE DIMENSIONS ARE IN A HORIZONTAL PLANE (UN).
 3. ARROW POINTS TOWARD LOW END OF MEMBER.
 4. ENDS OF GIRDERS ARE VERTICAL AFTER DL ROTATION.
 5. DIAPHRAGM STIFFENERS ARE NORMAL TO GRADE.
 6. BOTTOM POINT NUMBERS = TOP POINT NUMBERS + 100
 7. COMBINE INT. CROSSFRAMES FOR DIFF IN DROPS OF +/- 3/16

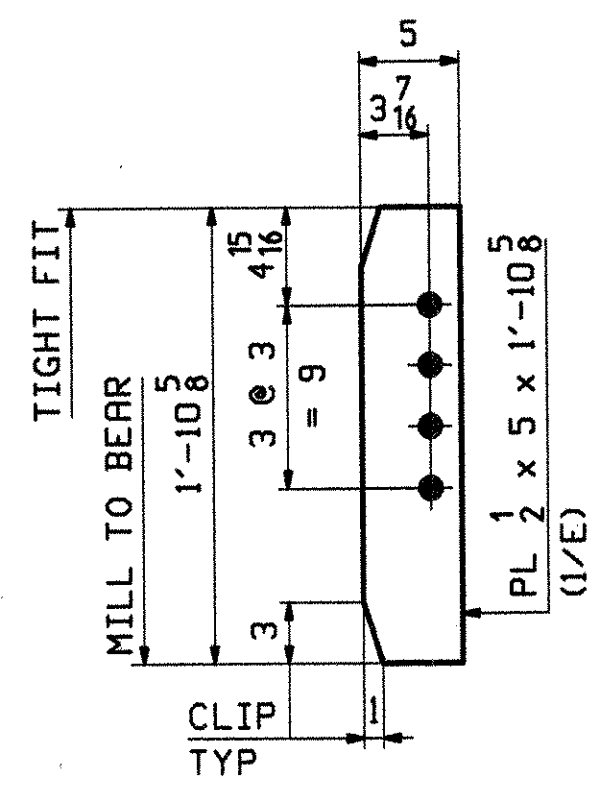


CAMBER DIAGRAM - 1S1, 2S2, 2S3 & 1S4

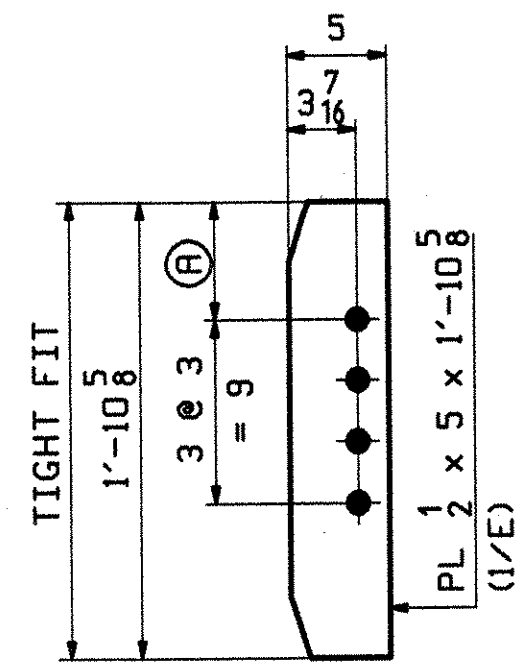


- NOTES:**
1. MATERIAL SHALL BE ASTM M270 GRADE 50W.
 2. ALL BOLT HOLES SHALL BE 15/16" FOR 7/8" HSB (UN).

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						4-22-08
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP BOLTS:	
DESCRIPTION: CALCULATION PLAN						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: TH 8 OVER MILL BROOK BRIDGE NO. B25 COUNTY OF WINDSOR				DRAWN: JTB	DATE: 04/07	
				CHKD: JF	DATE: 04/18	
LOCATION: TOWN OF READING				JOB NO. 366	DWG NO. WS1	
PROJ NO. BRZ 1444(23)						
CUSTOMER: VERMONT A.O.T.						REV. Δ

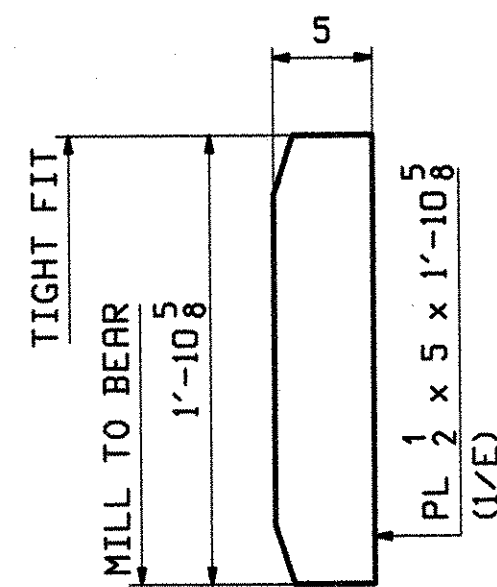


12 ~ x1a
END DIAPHR CONN.

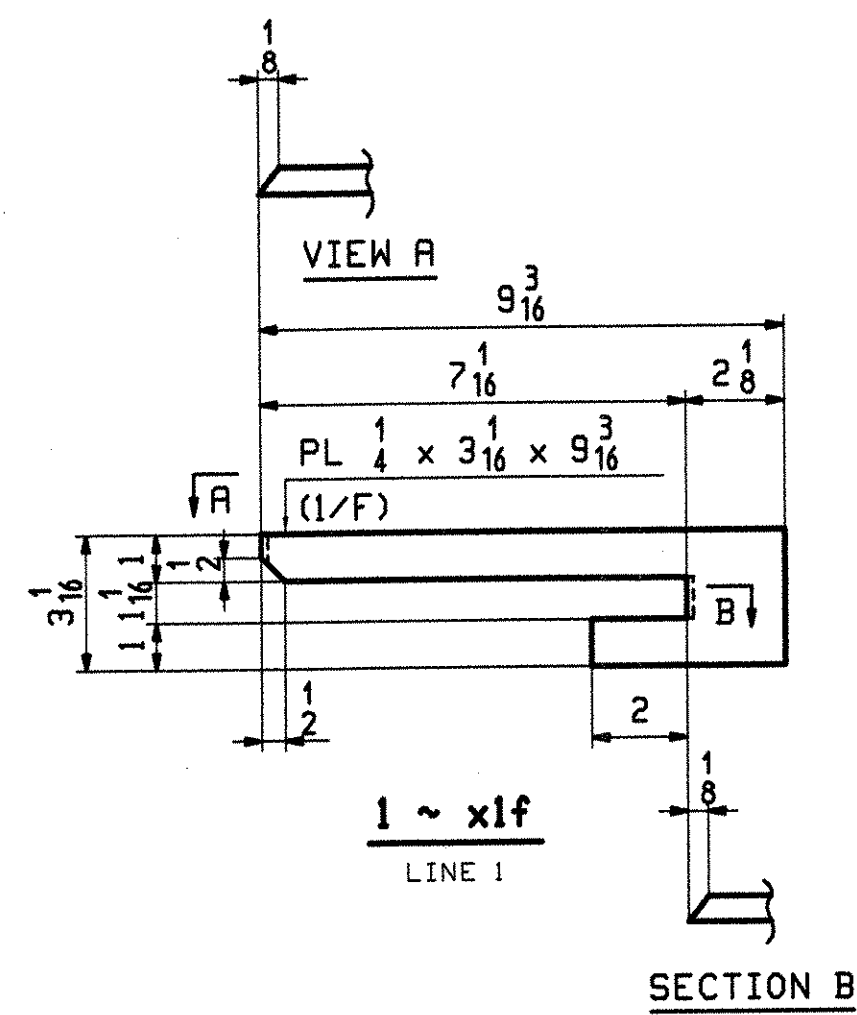


MARK "A"
INT DIAPHR CONN.

MARK "A"	QTY	ⓐ	
x1b	6	5 15/16	LOW END
x1c	4	6 15/16	DROPS 3/8 - 1/8
x1d	2	7 5/16	DROPS 3/8 & 1/4

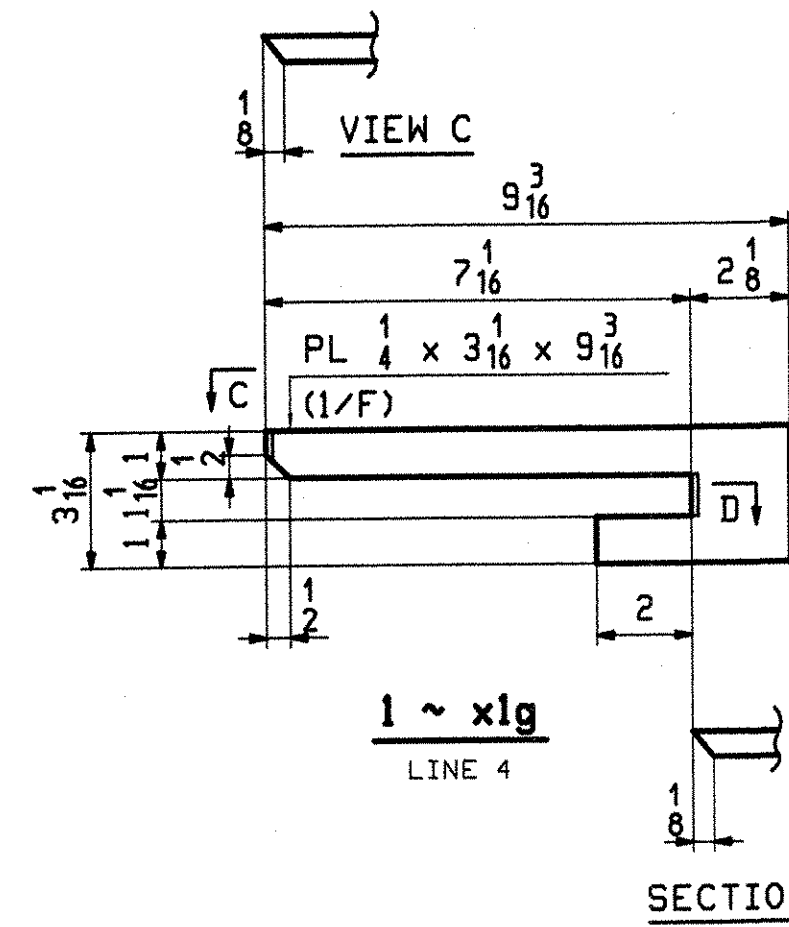


4 ~ x1h
BRG FASCIA STIFF



1 ~ x1f
LINE 1

SECTION B



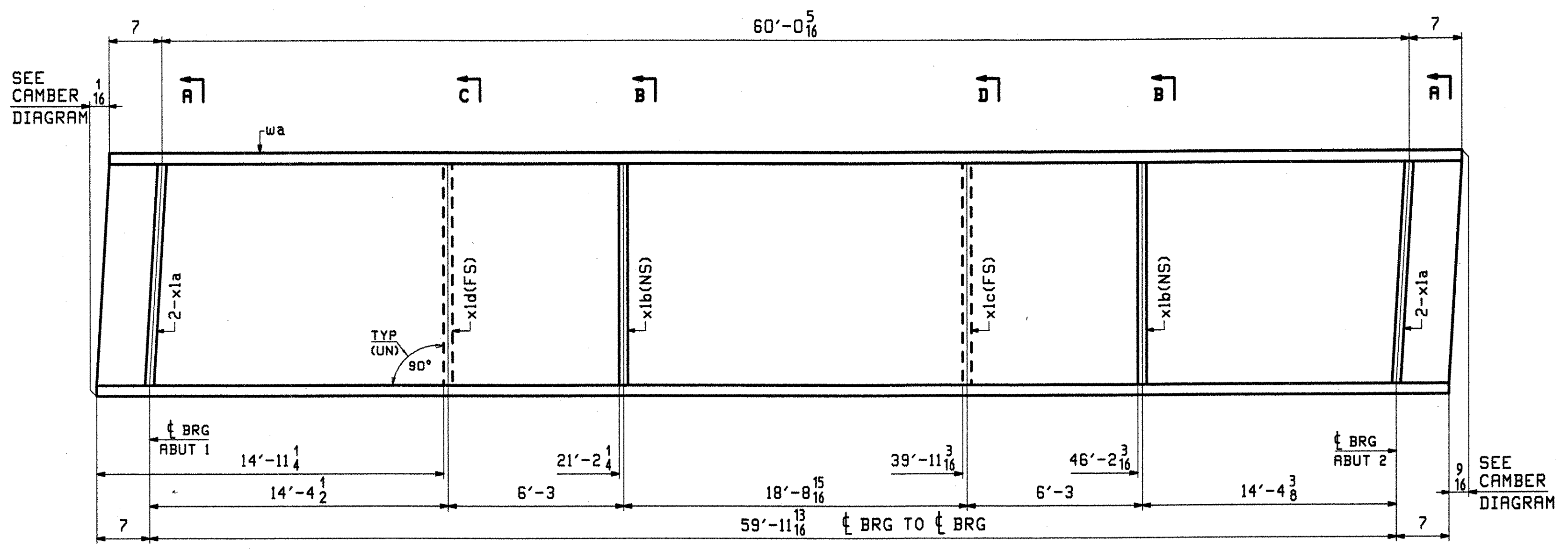
1 ~ x1g
LINE 4

SECTION D

RECEIVED
 CK'D BY LSJ OK'D BY RSY
 APR 30 2008
 RESUBMIT _____ APPROVED _____
 BY OPW DATE 5/7/08

NOTES:
 ALL MATERIAL SHALL BE M270-50W.
 ALL BOLT HOLES SHALL BE 15/16" FOR 7/8" HSB.
 FOR GENERAL NOTES SEE DRAWING GNI.

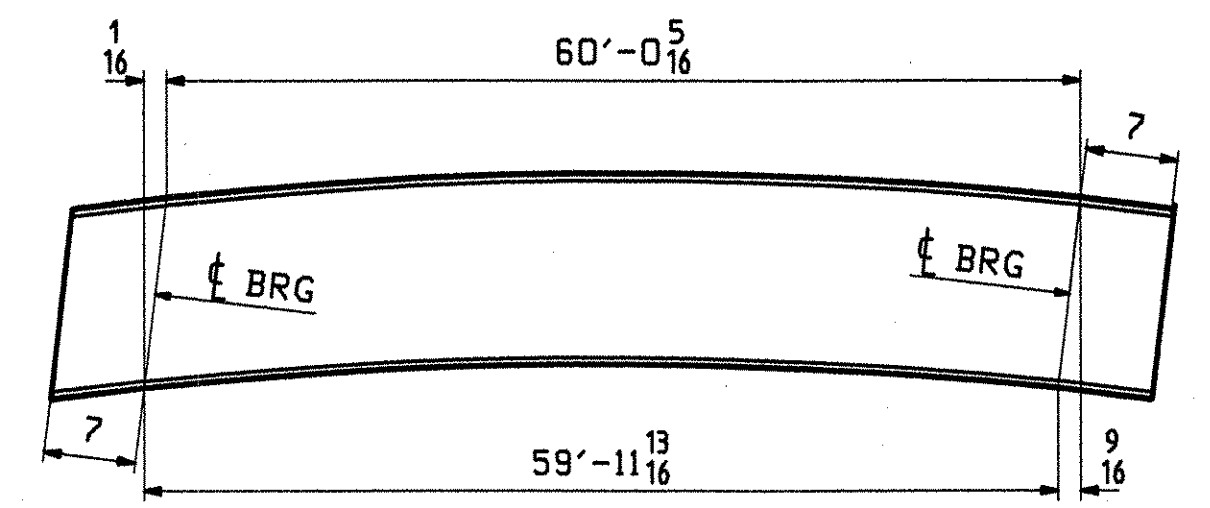
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						4-26-08
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W		AS NOTED ON GNI		15/16"		NONE
DESCRIPTION: STRINGER STANDARDS						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: TH 8 OVER MILL BROOK BRIDGE NO. B25 COUNTY OF WINDSOR			DRAWN: JTB	DATE: 04/10		
			CHKD: JF	DATE: 04/18		
LOCATION: TOWN OF READING			JOB NO.	DWG NO.		
PROJ NO. BRZ 1444(23)			366	X1		
CUSTOMER: VERMONT A.O.T.				REV.	▲	



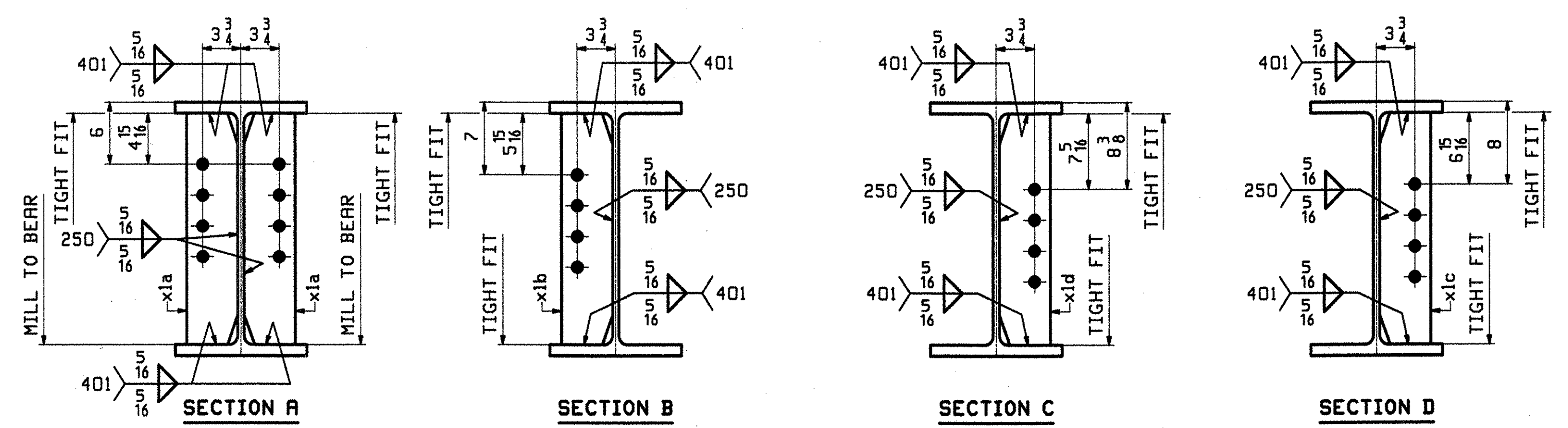
ONE - STRINGER - 2S2 } ALIKE EXCEPT
 ONE - STRINGER - 2S3 } FOR MARK

BHM INFO		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
						366	2	
PAGE LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES
	2S2	1		STRINGER				906
	2S3	1		STRINGER				906
1	B	2	wa	W 24x146	61 2 3/8	(M270-50WT2) (H2-3)		
1	E	8	x1a	PL 1/2x5	1 10 5/8	MIE		
1	E	4	x1b	PL 1/2x5	1 10 5/8			
1	E	2	x1c	PL 1/2x5	1 10 5/8			
1	E	2	x1d	PL 1/2x5	1 10 5/8			

RECEIVED
 CHK'D BY LSS OK'D BY R54
 APR 30 2008
 RESUBMIT _____ APPROVED _____
 BY CPW DATE 5/7/08



ORIENTATION DIAGRAM - STRINGERS 2S2 & 2S3
 FOR CAMBER SEE DWG W51



NOTES:
 FOR STRINGER STANDARD DETAILS SEE DRAWING XI.
 FOR CAMBER DIAGRAMS SEE DRAWING W51.
 FOR GENERAL NOTES & WELD PROCEDURES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					4-22-08	
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W		AS NOTED ON GNI		15 16 Ø		NONE
DESCRIPTION: STRINGERS - 2S2 & 2S3						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: TH 8 OVER MILL BROOK BRIDGE NO. B25 COUNTY OF WINDSOR			DRAWN: JTB	DATE: 04/10		
			CHKD: JF	DATE: 04/18		
LOCATION: TOWN OF READING			JOB NO.	DWG NO.		
PROJ NO. BRZ 1444(23)			366	2		
CUSTOMER: VERMONT A.O.T.				REV.		

