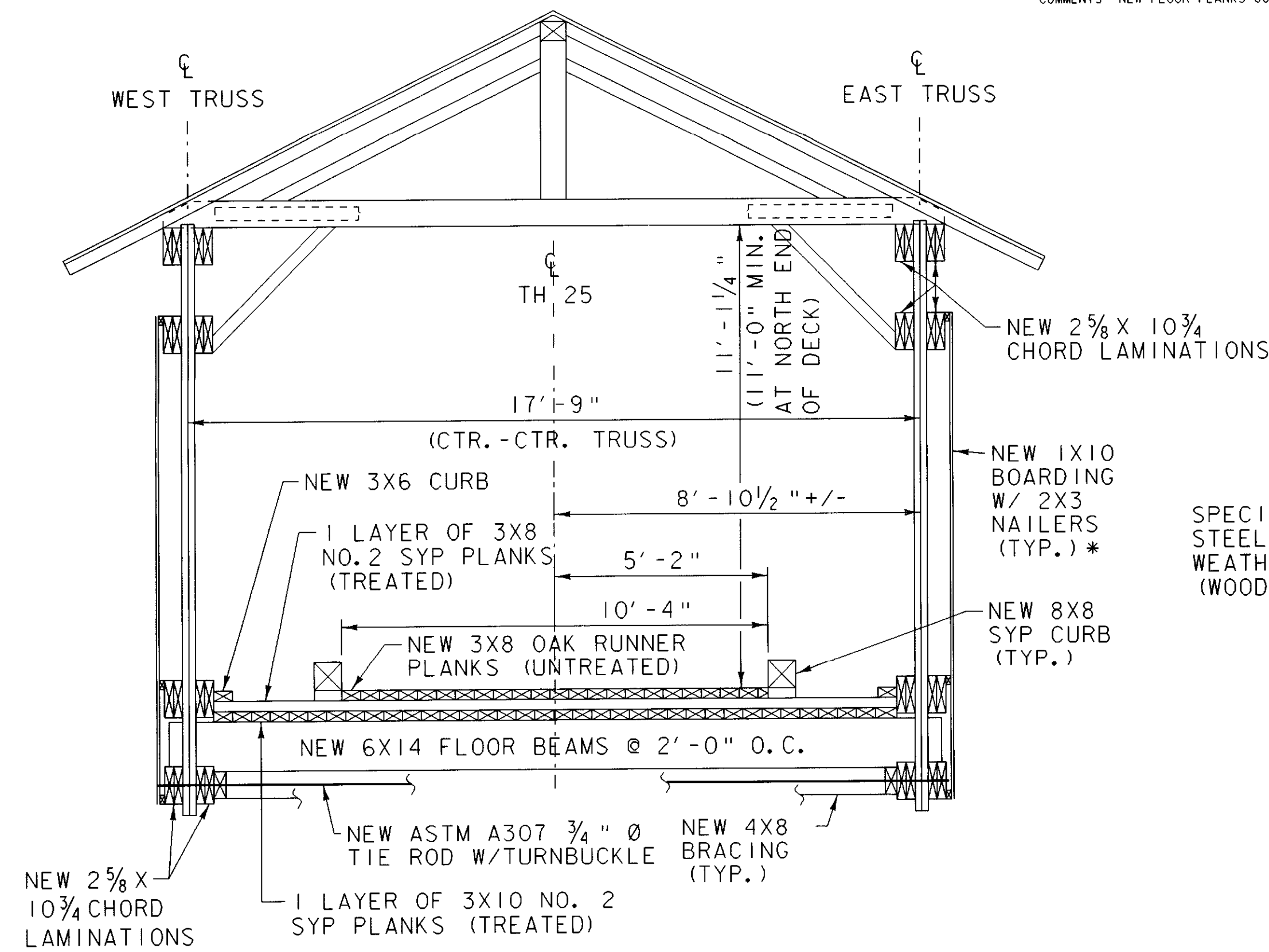


EXISTING CROSS SECTION
SCALE: 3/8" = 1'-0"



NEW CROSS SECTION**
SCALE: 3/8" = 1'-0"

* NON-STRUCTURAL LUMBER - UNTREATED: FULL LENGTH SPRUCE-PINE-FIR BOARDS AND 8'-0" (MIN) LENGTH NAILERS: NO. 3 COMMON BOARDS SHALL BE USED FOR SIDING, PORTALS AND END RETURNS. NO. 2 SPRUCE-PINE-FIR LUMBER SHALL BE USED FOR THE NAILERS.

** FOR FURTHER SUPERSTRUCTURE WORK DETAILS, SEE SHEETS 16-19

TRAFFIC DATA (EST.)

YEAR	ADT	DHV	% D	% T	ADTT
2008	30	10	73	9.0	5
2028	40	15	73	12.0	5

FLEXIBLE ESALs 2008-2028 <50,000 2008-2048 <50,000

ASD LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK				
	H	HS	3S2	6 AXLE 3A. STR.	4A. STR. 5A. SEMI.
INVENTORY	8.9				
POSTED	10.8				
OPERATING	11.8				

COMMENTS: NEW FLOOR PLANKS CONTROL LOAD RATING

VAOT FINAL HYDRAULICS REPORT

Date Sept 2006

TOWN Montgomery COUNTY Franklin
PROJECT # BHO 1448() STREAM West Hill Brook
HIGHWAY # TH 25 STRUCTURE # CB 32

HYDROLOGIC DATA

DRAINAGE AREA 8.8 sq mi
CHARACTER OF TERRAIN Mountainous, forested
STREAM CHARACTERISTICS Sinuous, incised, flashy
NATURE OF STREAMBED Gravel, ledge

PEAK FLOW DATA

Q 2.33 = 500 cfs	Q 50 = 1625 cfs
Q 10 = 1000 cfs	Q 100 = 1925 cfs
Q 25 = 1325 cfs	Q 500 = 2700 cfs

DATE OF FLOOD OF RECORD 1997
ESTIMATED DISCHARGE unknown
WATER SURFACE ELEV unknown
NATURAL STREAM VELOCITY @ Q25 = 27.2 fps
ICE CONDITIONS Moderate to heavy
DEBRIS Light to moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE

WATERSHED STORAGE 1% HEADWATERS UNIFORM IMMEDIATELY ABOVE SITE X

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE Single span timber deck covered bridge
YEAR BUILT 1883
CLEAR SPAN(NORMAL TO STREAM) 37'
VERTICAL CLEARANCE ABOVE STREAMBED 13'
WATERWAY OF FULL OPENING 430 sq ft
DISPOSITION OF STRUCTURE Rehabilitation
TYPE OF MATERIAL UNDER SUBSTRUCTURE Gravel, Cobbles, Ledge

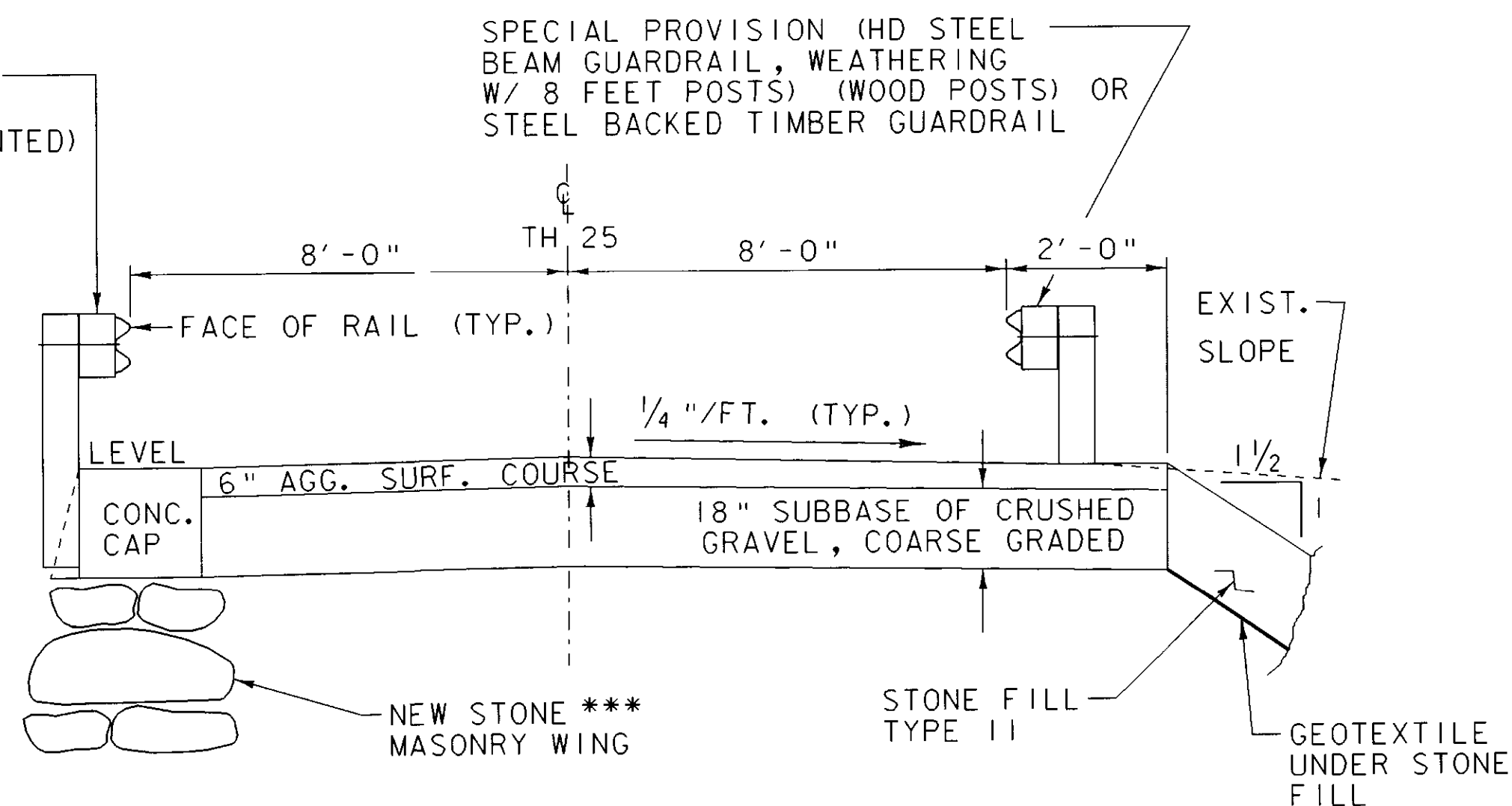
WATER SURFACE ELEVATIONS AT

Q2.33 = 859 8'	VELOCITY = 13.3 fps
Q10 = 861 5'	" 15.9 fps
Q25 = 862 1'	" 16.6 fps
Q50 = 862 5'	" 17.0 fps
Q100 = 862 8'	" 17.2 fps

LONG TERM STREAMBED CHANGES None known

IS THE ROADWAY OVERTOPPED BELOW Q100 No

FREQUENCY N/A
RELIEF ELEVATION 870.4
DISCHARGE OVER ROAD @Q100 No



TYPICAL APPROACH SECTION
SCALE: 3/8" = 1'-0"

*** FOR SUBSTRUCTURE EARTHWORK DETAILS SEE SHEETS 20-22

UPSTREAM STRUCTURE

TOWN	Montgomery	DISTANCE	6500'
HIGHWAY #	TH 11	STRUCTURE #	BR 27
CLEAR SPAN	42'	CLEAR HEIGHT	14'
YEAR BUILT	1981	FULL WATERWAY	550 sq ft
STRUCTURE TYPE	Rolled beam		

DOWNSTREAM STRUCTURE

TOWN	Montgomery	DISTANCE	14,400'
HIGHWAY #	VT 118	STRUCTURE #	B20
CLEAR SPAN	57'	CLEAR HEIGHT	10'
YEAR BUILT	1953	FULL WATERWAY	570 sq ft
STRUCTURE TYPE	3-span rolled beam		

PROPOSED STRUCTURE

STRUCTURE TYPE Existing covered bridge to be rehabilitated

CLEAR SPAN(NORMAL TO STREAM) _____
VERTICAL CLEARANCE ABOVE STREAMBED _____
WATERWAY OF FULL OPENING 430 sq ft

WATER SURFACE ELEVATIONS AT

Q2.33 = 859 8'	VELOCITY = 13.3 fps
Q10 = 861 5'	" 15.9 fps
Q25 = 862 1'	" 16.6 fps
Q50 = 862 5'	" 17.0 fps
Q100 = 862 8'	" 17.2 fps

IS THE ROADWAY OVERTOPPED BELOW Q100 _____

FREQUENCY _____
RELIEF ELEVATION 870.5'
DISCHARGE OVER ROAD @Q100 _____

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE 867.8'
VERTICAL CLEARANCE @ Q25 = 5.7'

SCOUR 2' of contraction scour calculated @Q100 Abutments are on ledge

REQUIRED CHANNEL PROTECTION Stone Fill Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW	18 cfs	DEPTH OR ELEVATION	
ORDINARY LOW WATER	9 cfs	857' at bridge	
ORDINARY HIGH WATER	215 cfs	858' at bridge	

TEMPORARY BRIDGE REQUIREMENTS

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

DESIGN CRITERIA

1 DESIGN LIVE LOAD AASHTO	H-8 (INVENTORY LEVEL)
2 DESIGN SPAN	44 FEET (TRUSS)
3 ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL	5 KSF
ON LEDGE	16 KSF
4 ALLOWABLE LOAD FOR PILING	N/A
TYPE	N/A
ESTIMATED LENGTH	N/A
5 STRUCTURAL STEEL AASHTO M270/M270M GRADE	N/A
6 REINFORCING STEEL GRADE	60
7 CONCRETE, HIGH PERFORMANCE CLASS A fc	N/A
CONCRETE, HIGH PERFORMANCE CLASS B fc	3500 psi
8 DESIGN SOIL UNIT WEIGHT	140 pcf
9 DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL	4 KSF

PROJECT NAME:	MONTGOMERY	PLOT DATE:	21-MAY-2008
PROJECT NUMBER:	BHO 1448 (37)	DRAWN BY:	J. TREI
FILE NAME:	s04j148typ	CHECKED BY:	J. WEAVER
PROJECT LEADER:	J. WEAVER	TYPICAL SECTIONS & PROJECT DATA	SHEET 2 OF 33
DESIGNED BY:	J. WEAVER		

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S 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. ALL INFORMATION, DIMENSIONS, AND DETAILS PROVIDED IN THE PLANS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING THE WORK.
3. ALL WORK IS TO BE COMPLETED WITHIN THE AVAILABLE TOWN-OWNED RIGHT-OF-WAY. THE THREE ROD R.O.W. PORTION IS ASSUMED TO BE APPROXIMATELY CENTERED ABOUT THE EXISTING CENTER LINE OF THE BRIDGE OR ROADWAY. NO PROVISIONS HAVE BEEN MADE TO GO OUTSIDE THE EXISTING RIGHT-OF-WAY AND NO WORK SHALL BE PERFORMED OR PAID FOR OUTSIDE THE EXISTING TOWN-OWNED RIGHT-OF-WAY LIMITS. SHOULD THE CONTRACTOR REQUIRE ANY ADDITIONAL R.O.W., IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL EASEMENTS.
4. GREAT CARE SHALL BE TAKEN BY THE CONTRACTOR TO PREVENT ANY MATERIAL FROM ENTERING THE STREAM BED PER SECTION 105 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ANY MATERIAL THAT DOES ESCAPE THE CONTRACTOR'S CONTAINMENT SYSTEM WILL BE RECOVERED IMMEDIATELY.
5. ALL WORK SHALL PROCEED IN A CAREFUL, ORDERLY MANNER SO THAT AFFECTED HISTORIC STRUCTURES ARE NOT DAMAGED IN ANY WAY. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO THE STRUCTURE AS A RESULT OF ITS OPERATIONS AT NO COST TO THE STATE. ALL DAMAGE WILL BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY AND NO REPAIRS WILL BE MADE UNTIL APPROVED BY THE AGENCY.
6. THE BRIDGE IS NOW CLOSED AND WILL REMAIN CLOSED DURING CONSTRUCTION. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION FOR THE ENGINEER'S APPROVAL. THE SEQUENCE OF CONSTRUCTION SUBMITTAL WILL BE CONSIDERED INCIDENTAL TO THE WORK REQUIRED FOR ITEM 635.11, MOBILIZATION / DEMOBILIZATION. DETOURS, AS DETAILED IN STANDARD E-107, WILL NOT BE ENCOUNTERED. HOWEVER, GENERAL PLACEMENT OF APPROACH SIGNING AND "ROAD CLOSED" SIGNS WILL BE AS SHOWN ON STANDARD E-107. THE CONTRACTOR MAY CHOOSE TO SUBMIT TRAFFIC CONTROL PLANS FOR REVIEW.
7. WITHIN EXISTING R.O.W. LIMITS, CLEARING AND GRUBBING SHALL INCLUDE ALL WORK REQUIRED TO REMOVE TREES, STUMPS, AND VEGETATION UP TO 6 FEET FROM EXISTING ABUTMENT AND WINGWALL FACES, AND IN OTHER AREAS AS DETERMINED BY THE ENGINEER.
8. EXCEPT AS NOTED OTHERWISE, ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE, SHALL INCLUDE ANY WORK NECESSARY TO FACILITATE AND ACCOMPLISH THE PROJECT SCOPE OF WORK AS DEFINED BY THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE ENGINEER: REMOVING AND DISPOSING OF SUPERSTRUCTURE MEMBERS AND PORTIONS OF MEMBERS; AS WELL AS REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR RE-USE, INCLUDING REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR THE CONTRACTOR'S METHODS OF REHABILITATION. NO BURNING OF REMOVED MATERIALS AT THE PROJECT SITE WILL BE ALLOWED. EXISTING COVERED BRIDGE LUMBER AND TIMBERS MAY CONTAIN HAZARDOUS WOOD PRESERVATIVES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS REGARDING THE CONTRACTOR'S HANDLING OF THESE MATERIALS AND SUBSEQUENT USE, RE-USE, AND DISPOSAL OF THIS LUMBER OR TIMBERS.
9. EXCEPT AS NOTED, ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1"x1".
10. WHERE NOT NOTED, ALL LUMBER AND TIMBER DIMENSIONS ARE IN INCHES.
11. UNLESS NOTED OTHERWISE, ALL NEW STRUCTURAL LUMBER AND TIMBER SHALL BE UNTREATED, FULL SAWN (TO THE INDICATED CROSS SECTION DIMENSIONS) ROUGH SURFACE MEMBERS OR BOARDS. WHEN SPECIFIED, PRESSURE TREATMENT SHALL BE TYPE II, PER SECTION 726 OF THE STANDARD SPECS.
12. THE WORK PAID FOR UNDER ITEM 506.60, STRUCTURAL STEEL, SHALL INCLUDE: NEW GALVANIZED 1/2"x10"x10" STEEL PLATES; 3/4" Ø TIE RODS, TURNBUCKLES, BOLTS, NUTS & WASHERS. FABRICATION PLAN AND ERECTION PLAN SUBMITTALS WILL NOT BE REQUIRED FOR STEEL COMPONENTS FURNISHED UNDER PAY ITEM 506.60. ALL ROD ASSEMBLIES SHALL BE SNUG TIGHT OR TIGHTENED AS DIRECTED BY THE ENGINEER.
13. IN THE SHORED OR UNLOADED CONDITION, THE CONTRACTOR AND RESIDENT ENGINEER WILL INSPECT THE TRUSSES TO DETERMINE IF THEY HAVE RESIDUAL POSITIVE CAMBER. IF SO, THIS CAMBER SHALL BE MAINTAINED IN THE FINAL REHABILITATED PROFILE OF THE SUPERSTRUCTURE. IF NO POSITIVE CAMBER IS EVIDENT, THEN THE TRUSSES SHALL BE REHABILITATED WITH A SLIGHT POSITIVE CAMBER AS DIRECTED BY THE ENGINEER.

DRY MASONRY NOTES:

1. DUE TO THE HISTORIC NATURE OF THE BRIDGE AND ABUTMENTS, THE WORK DEFINED IN THIS SUBSECTION IS CONSTRUCTION REQUIRING A STONE MASON WHO IS HIGHLY KNOWLEDGEABLE AND EXPERIENCED IN THE CONSTRUCTION OF DRY STONE MASONRY WALLS AND FASCIA. THE CONTRACTOR'S STONE MASON PERFORMING THE WORK MUST DEMONSTRATE AT LEAST FIVE YEARS EXPERIENCE IN THE CONSTRUCTION OF DRY STONE MASONRY WALLS. DOCUMENTATION OF EXPERIENCE, INCLUDING A LIST OF PREVIOUS PROJECTS AND REFERENCES, SHALL BE SUBMITTED TO THE ENGINEER.
2. THE FOUNDATION COURSE FOR NEW WALL CONSTRUCTION SHALL CONSIST OF LARGE STONES WITH FAIRLY UNIFORM PROFILE AND SUFFICIENTLY FLAT BASE TO PROVIDE AN EVEN LOAD DISTRIBUTION. THE LENGTH OF INDIVIDUAL FOUNDATION STONES (AS MEASURED PERPENDICULAR TO THE FACE OF WALL) SHALL BE AT LEAST ONE QUARTER TO NO LESS THAN ONE FIFTH OF THE HEIGHT OF THE WALL. WHERE STONES DO NOT EXTEND ACROSS THE FULL WIDTH OF THE BASE, THEY SHALL BE PARTNERED WITH SINGLE STONES TO MAKE UP THE DIFFERENCE; THESE 'PARTNERS' SHALL BE OF SIMILAR (BUT NOT GREATER) THICKNESS THAN THE FACE STONES. UNLESS THE STONES ARE ALL (OR MUCH) THE SAME DIMENSION, SHORTER AND LONGER FOUNDATION STONES SHALL ALTERNATE ALONG THE LENGTH OF THE WALL.
3. TO WITHSTAND VIBRATION CAUSED BY VEHICULAR TRAFFIC, THE ENTIRE NEW WALL SECTIONS SHALL BE BUILT USING LONG, HEAVY STONES OF SIMILAR SIZE THROUGHOUT, USING A GRADUAL DECREMENT IN SIZE (IN THE VERTICAL DIMENSION) FROM BOTTOM TO TOP. ALL STONES SHALL BE PLACED (LAID, SET) WITH THEIR LENGTH INTO THE WALL, I.E., THEIR LONG AXIS SHOULD BE PERPENDICULAR TO THE FACE OF THE WALL.
4. FOR NEW WALL CONSTRUCTION, FACE STONES SHALL BE OVERLAPPED BY 'BACK' STONES (THOSE LITERALLY ON THE BACK SIDE OF THE WALL) TO THE GREATEST EXTENT POSSIBLE. IN GENERAL, FACE STONES SHALL NOT BE SHORTER THAN ONE THIRD THE THICKNESS OF THE WALL. AS WITH THE FOUNDATION COURSE, BACK STONES SHALL NOT BE GREATER IN HEIGHT THAN THEIR CORRESPONDING FACE STONES.
5. FOR NEW WALL CONSTRUCTION, THROUGH STONES (THOSE ALL THE WAY THROUGH THE WALL) SHALL BE PLACED IN HORIZONTAL ROWS USING SPACINGS OF THREE FEET BETWEEN STONES AND TWO TO THREE FEET BETWEEN ROWS (ASSUMING THAT THE STONES THEMSELVES ARE SMALLER THAN THESE DIMENSIONS). THIS IS ESPECIALLY IMPORTANT IF MORE THAN 30% OF THE FACE STONES ARE SHORTER THAN ONE HALF THE WIDTH OF THE WALL.
6. THE HEARTING (PACKING STONES) OF NEW WALL SECTIONS MUST BE DENSE AND SHALL CONSIST OF STONES APPROPRIATELY SIZED TO COMPLEMENT THE MAIN BUILDING STONES AND THROUGH STONES. THE PACKING STONES SHALL NOT BE TOO LARGE OR TOO SMALL. THE CHOICE AND PLACING OF PACKING STONES SHALL REQUIRE THE SAME EFFORT AS THE CHOICE AND PLACING OF FACE STONES.
7. NO MORTAR SHALL BE USED FOR CONSTRUCTION OF DRY MASONRY.

SUGGESTED SEQUENCE OF CONSTRUCTION:

1. PERFORM ALL SUBSTRUCTURE WORK AND RE-POINTING.
2. REMOVE EXISTING PLANK ROADWAY DECK AND RUNNER PLANKS.
3. SHORE SUPERSTRUCTURE AT SITE, OR MOVE TO A WORK SITE.
4. REHABILITATE BRIDGE SUPERSTRUCTURE COMPONENTS.
5. REMOVE SUPERSTRUCTURE SHORING, OR REINSTALL AT ORIGINAL SITE.
6. INSTALL NEW FLOOR BEAMS, ROADWAY DECK, RUNNER PLANKS AND CURBS.
7. APPLY INSECTICIDE AND FIRE RETARDANT COATINGS.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)

FILE NAME: 04j148\str\s04j148n&q.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY: J. WEAVER
PROJECT NOTES

PLOT DATE: 21-MAY-2008
DRAWN BY: C. WEEBER
CHECKED BY: J. WEAVER
SHEET 3 OF 33

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES											TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES								
											ROADWAY	EROSION CONTROL	BRIDGE	ALTERNATE A	ALTERNATE B	FULL C/E ITEMS	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
												1						1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201 10			
											190							190		CY	COMMON EXCAVATION	203 15			
													168					168		CY	STRUCTURE EXCAVATION	204 25			
													95					95		CY	GRANULAR BACKFILL FOR STRUCTURES	204 30			
											145							145		CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301 25			
											50							50		CY	AGGREGATE SURFACE COURSE	401 10			
													17					17		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501 34			
													310					310		LB	STRUCTURAL STEEL	506 60			
													942					942		LB	REINFORCING STEEL	507 15			
													6					6		LF	DRILLING AND GROUTING DOWELS	507 16			
													4					4		GAL	WATER REPELLENT, SILANE	514 10			
													47					47		MFBM	STRUCTURAL LUMBER AND TIMBER - UNTREATED	522 20			
													103					103		MFBM	STRUCTURAL LUMBER AND TIMBER - TREATED	522 25			
													2					2		MFBM	NON - STRUCTURAL LUMBER-UNTREATED	522 30			
													05					05		CY	MORTAR, TYPE IV	541 58			
													2					2		CY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS III	580 15			
													58					58		CY	DRY MASONRY	602 20			
													28					28		CY	STONE FILL, TYPE II	613 11			
											78							78		LF	STEEL BACKED TIMBER GUARD RAIL	621 18			
																	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			
													45					45		SY	GEOTEXTILE UNDER STONE FILL	649 31			
												55						55		SY	GEOTEXTILE FOR SILT FENCE	649 51			
												15						15		LB	SEED	651 15			
												15						15		LB	FERTILIZER	651 18			
												05						05		TON	AGRICULTURAL LIMESTONE	651 20			
												3						3		TON	HAYMULCH	651 25			
												10						10		CY	TOPSOIL	651 35			
												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			
												25						25		SY	TEMPORARY EROSION MATTING	653 20			
												300						300		LF	PROJECT DEMARCATION FENCE	653 35			
											35							35		SF	TRAFFIC SIGNS, TYPE A	675 20			
											44							44		LF	FLANGED CHANNEL SIGN POST	675 301			
													7					7		CY	SPECIAL PROVISION (REBUILT STONE MASONRY)	900 608			
													77					77		LF	SPECIAL PROVISION (HD STEEL BEAM GUARDRAIL, WEATHERING / FASCIA MOUNTED) (WOOD POSTS)	900 640			

PROJECT NAME **MONTGOMERY**
 PROJECT NUMBER **BHO 1448(37)**
 FILE NAME s04j148n&q.dgn PLOT DATE 6/2/2008
 PROJECT MANAGER **J WEAVER** DRAWN BY **C WEEBER**
 DESIGNED BY **J WEAVER** CHECKED **J WEAVER**
 QUANTITY SHEET #1 SHEET 3A OF 35

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES										TOTALS			DESCRIPTIONS		DETAILED SUMMARY OF QUANTITIES									
										ROADWAY	EROSION CONTROL	BRIDGE	ALTERNATE A	ALTERNATE B	FULL C/E ITEMS	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
																	29		LF	SPECIAL PROVISION (HD STEEL BEAM GUARDRAIL, WEATHERING W/ 8 FEET POSTS) (WOOD POSTS)	900 640			
												1					1		LS	SPECIAL PROVISION (TIMBER PAINTING, ENVIRONMENTAL PROTECTION)	900 645			
												1					1		LS	SPECIAL PROVISION (TIMBER PAINTING, FIRE RETARDANT)	900 645			
												1					1		LS	SPECIAL PROVISION (TIMBER PAINTING, INSECTICIDE / FUNGICIDE)	900 645			
												60					60		SY	SPECIAL PROVISION (REPAIRING STONE MASONRY)	900 675			
BEGIN ALTERNATE ITEMS																								
ALTERNATE A (IN-PLACE REHABILITATION)																								
													1				1		LS	SHORNG SUPERSTRUCTURE	502 10			
													1				1		EACH	PARTIAL REMOVAL OF STRUCTURE	529 20			
													1				1		LS	SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)	900 645			
ALTERNATE B (RELOCATED REHABILITATION)																								
														1			1		EACH	PARTIAL REMOVAL OF STRUCTURE	529 20			
														1			1		LS	SPECIAL PROVISION (HANDLING, TRANSPORT AND RE-ERECTION OF COVERED BRIDGE SUPERSTRUCTURE)	900 645			
														1			1		LS	SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)	900 645			
END ALTERNATE ITEMS																								

PROJECT NAME **MONTGOMERY**
 PROJECT NUMBER **BHO 1448(37)**
 FILE NAME s04j148n&q.dgn
 PROJECT MANAGER **J WEAVER**
 DESIGNED BY **J WEAVER**
 QUANTITY SHEET #2

PLOT DATE **6/2/2008**
 DRAWN BY **C WEEBER**
 CHECKED **J WEAVER**
 SHEET **3B** OF **33**

GPS CONTROL POINTS

HVCTRL #1

STANDARD DISK STAMPED
West Hill Az
N = 862877.09
E = 1600307.60
ELEV. = 943.13

To reach from the intersection of VT route 118 and VT route 242 in Montgomery Center, go northwest along route 118 for 2.4 mi. to the intersection of South Richford Road right, at a triangular shaped park at the west end of Montgomery Village. Bear left and continue northwest along route 118 for 0.5 mi to the intersection of West Hill Road left. Turn left and go south along West Hill Road for 2.7 mi to the intersection of Enosburg Mountain Road right and Creamery Bridge Road left, in West Hill. Turn left and go east along Creamery Bridge Road for 0.2 mi to the intersection of Town Highway 55 left. Turn left and go north for 0.1 mi to the intersection of a gravel road left, at a sharp eastward bend in Town Highway 55. Bear right and go east along Town Highway 55 for about 65.5 ft to the site of the mark on the left. The mark is set 2 in below ground surface in the top of a 12 in diameter concrete monument poured 4 ft deep. It is 30 ft north northwest of pole #23/5, 58 ft east of the centerline of a gravel road, 15 ft west of pole #23/6, and 1 ft south southeast of a fiberglass witness post.

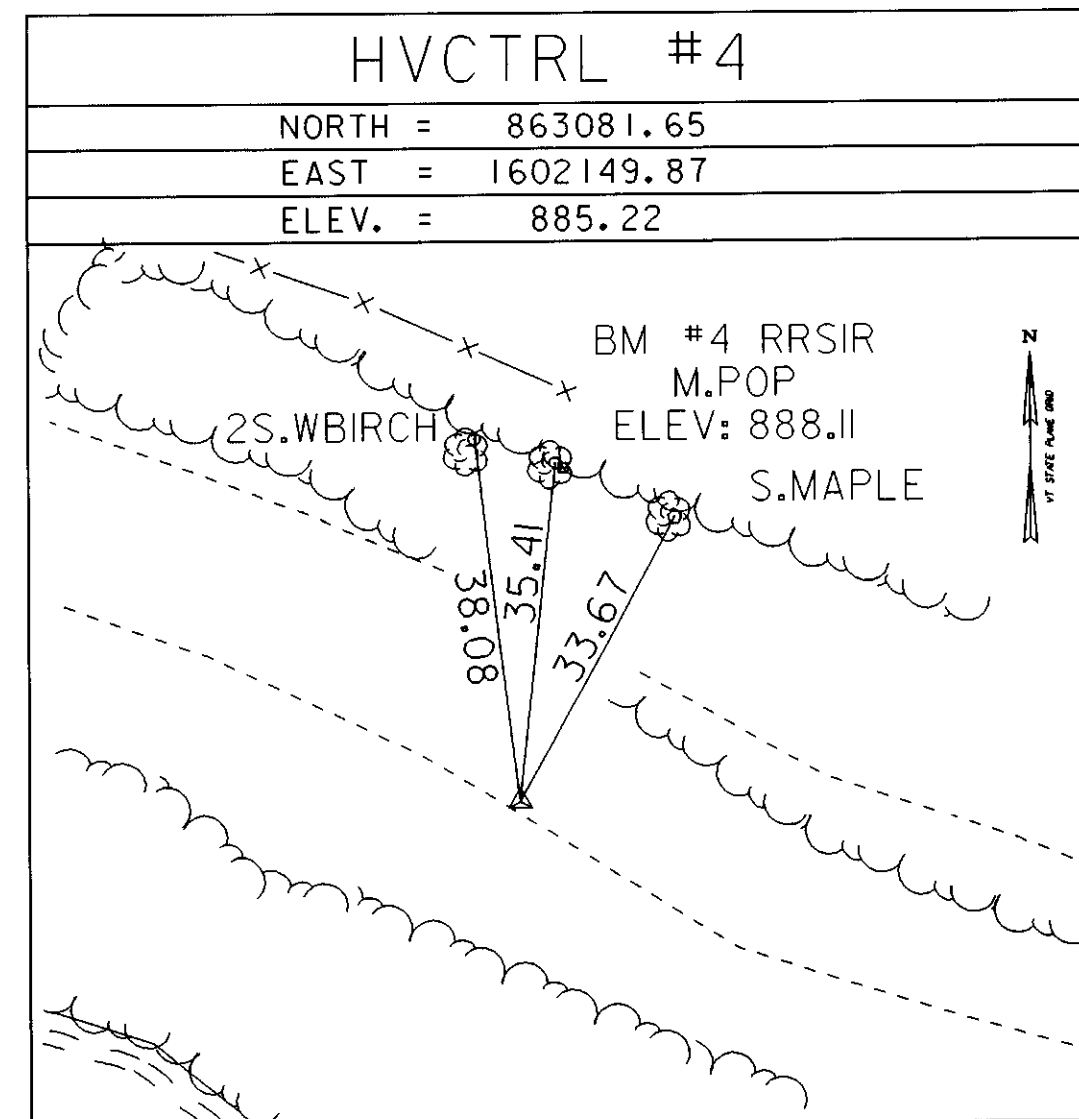
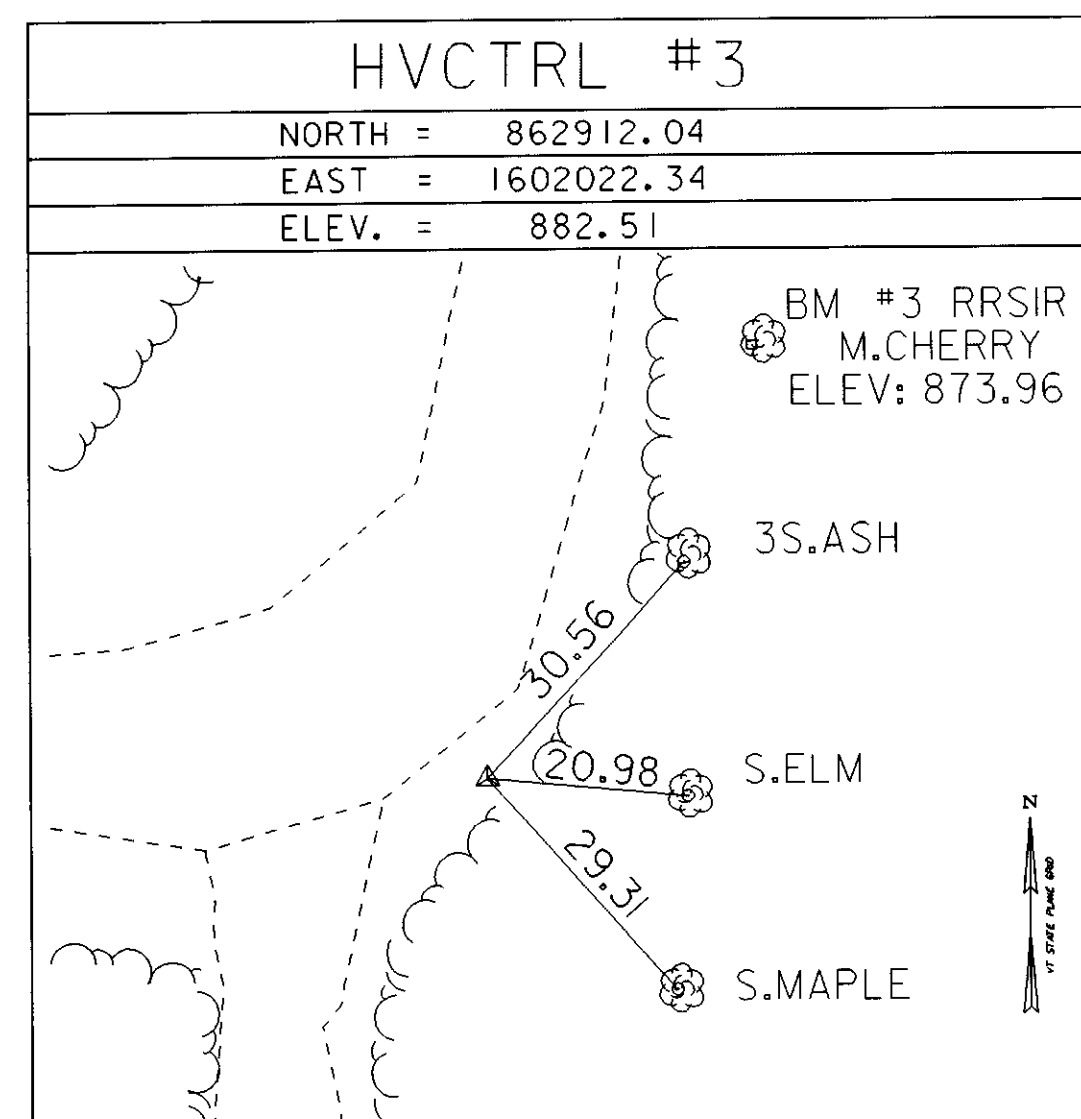
• DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

HVCTRL #2

STANDARD DISK STAMPED
West Hill
N = 862944.36
E = 1601473.27
ELEV. = 908.99

To reach from the intersection of VT route 118 and VT route 242 in Montgomery Center, go northwest along route 118 for 2.4 mi. to the intersection of South Richford Road right, at a triangular shaped park at the west end of Montgomery Village. Bear left and continue northwest along route 118 for 0.5 mi to the intersection of West Hill Road left. Turn left and go south along West Hill Road for 2.7 mi to the intersection of Enosburg Mountain Road right and Creamery Bridge Road left, in West Hill. Turn left and go east along Creamery Bridge Road for 0.2 mi to the intersection of Town Highway 55 left. Turn left and go north for 0.1 mi to the intersection of a gravel road left, at a sharp eastward bend in Town Highway 55. Bear right and go east along Town Highway 55 for 0.25 mi to the site of the mark on the right. The mark is set 2 in below ground surface in the top of a feno style monument. It is 13 ft south of and about .3 ft lower than the centerline of Town Highway 55, 160 ft east southeast of the center of the east (outlet) end of a 12 inch metal culvert with loose stone headwall, 40 ft south of a wood rail fence, 66 ft west southwest of the east end of the fence, 31 ft northwest of a 2 ft fir, and 4.6 ft north of a fiberglass witness post.

TRAVERSE TIES



• MAIN TRAVERSE COMPLETED 12/21/05 by G. Hitchcock P.C. & J. Hulett

ALIGNMENT TIES

POB 1+00.00
NORTH = 862940.91
EAST = 1602022.92
NOT TIED

PC 1+62.20
NORTH = 863001.48
EAST = 1602037.02
NOT TIED

PT 1+82.91
NORTH = 863022.01
EAST = 1602036.99
PC 1+85.06
NORTH = 863024.10
EAST = 1602036.50
PT 2+04.25
NORTH = 863042.61
EAST = 1602039.54
NOT TIED

PC 2+61.76
NORTH = 863092.05
EAST = 1602068.71
PT 2+86.33
NORTH = 863108.14
EAST = 1602086.78
PC 2+89.32
NORTH = 863109.36
EAST = 1602089.51
NOT TIED

PT 3+08.56
NORTH = 863109.79
EAST = 1602108.24
NOT TIED

• ALIGNMENT STAKED 12/28/06 by L. Orvis P.C. & G. Hitchcock

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (Conus)

PROJECT NAME: Montgomery
PROJECT NUMBER: TH 0519
FILE NAME: 041148\1\04114811.dgn
PLOT DATE: 21 MAY 2008
PROJECT LEADER: J. WEAVER
DRAWN BY: G. HITCHCOCK

PI COORDINATES

PI	NORTHING	EASTING
CURVE 1	863011.75	1602039.41
CURVE 2	863033.93	1602034.18
CURVE 3	863102.96	1602075.19
CURVE 4	863113.50	1602098.78

CURVE 1
 DELTA= 26°22'11"LT
 D = 127°19'26"
 R = 45.00 FT.
 T = 10.54 FT.
 L = 20.71 FT.
 E = 1.22 FT.

CURVE 2
 DELTA= 43°59'13"RT
 D = 229°10'59"
 R = 25.00 FT.
 T = 10.10 FT.
 L = 19.19 FT.
 E = 1.96 FT.

CURVE 3
 DELTA= 35°11'52"RT
 D = 143°14'22"
 R = 40.00 FT.
 T = 12.69 FT.
 L = 24.57 FT.
 E = 1.96 FT.

CURVE 4
 DELTA= 45°32'44"RT
 D = 236°45'34"
 R = 24.20 FT.
 T = 10.16 FT.
 L = 19.24 FT.
 E = 2.05 FT.

NOTE: FOR RAILING LAYOUT, PAY LIMITS, AND STATIONING, SEE SHEETS 14 & 15

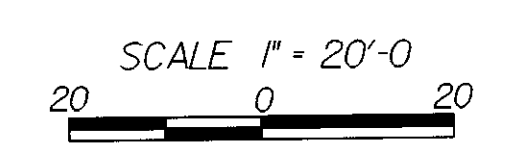
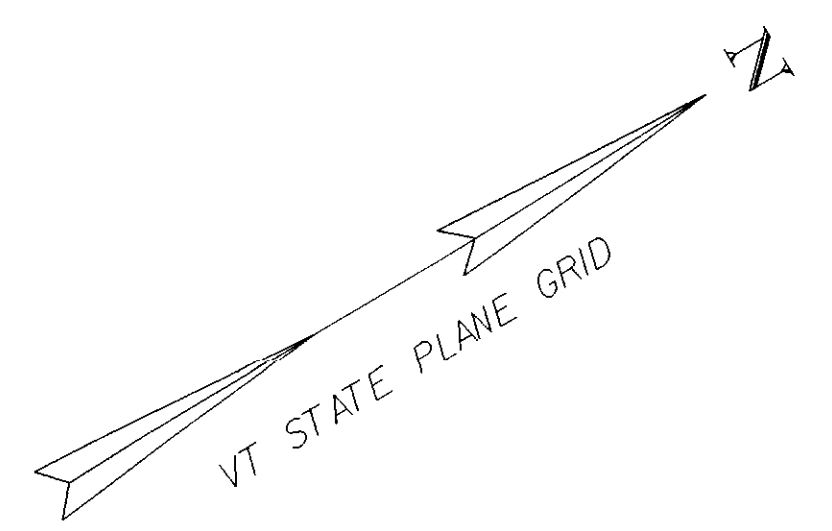
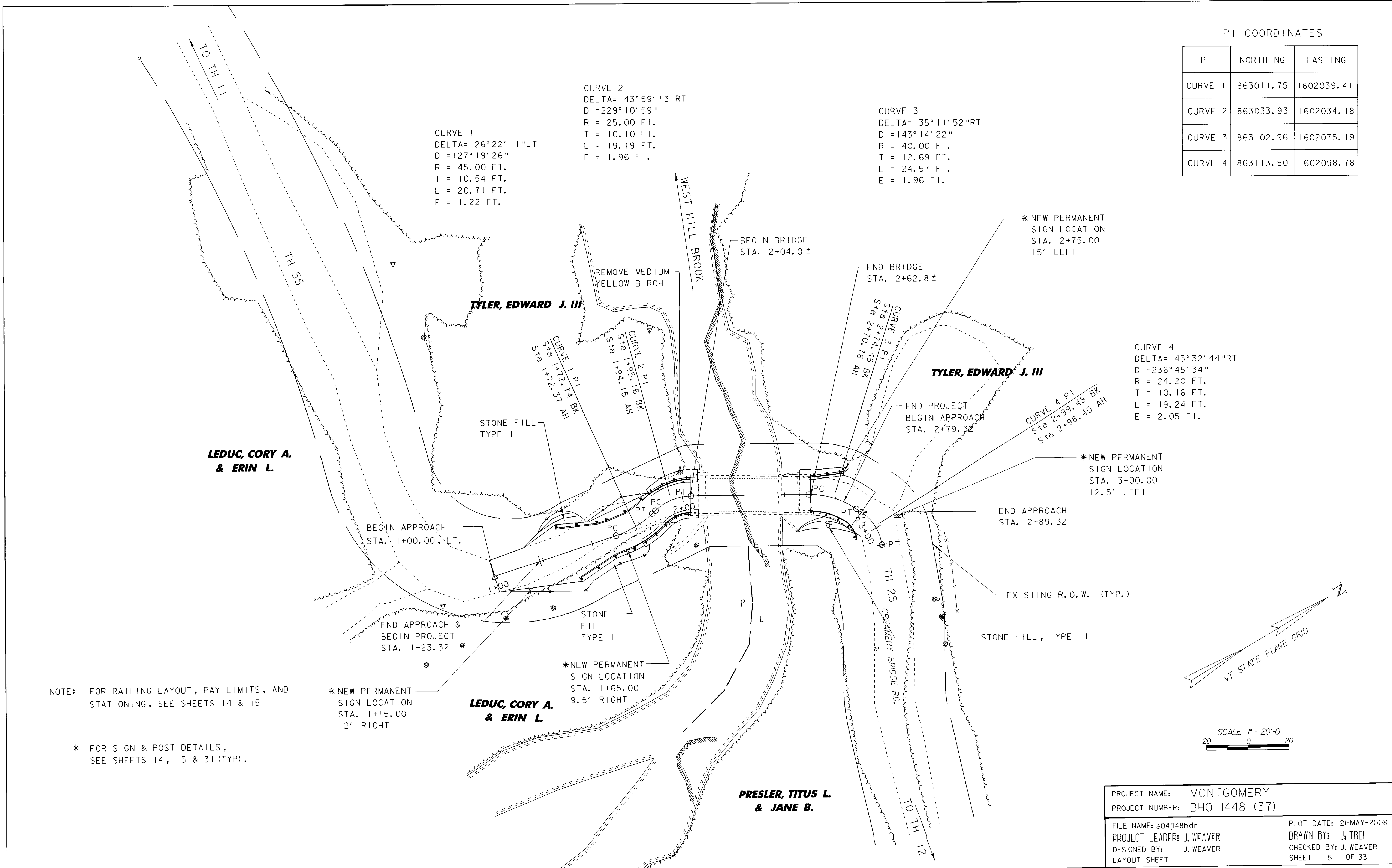
* FOR SIGN & POST DETAILS, SEE SHEETS 14, 15 & 31 (TYP).

*NEW PERMANENT SIGN LOCATION STA. 1+15.00 12' RIGHT

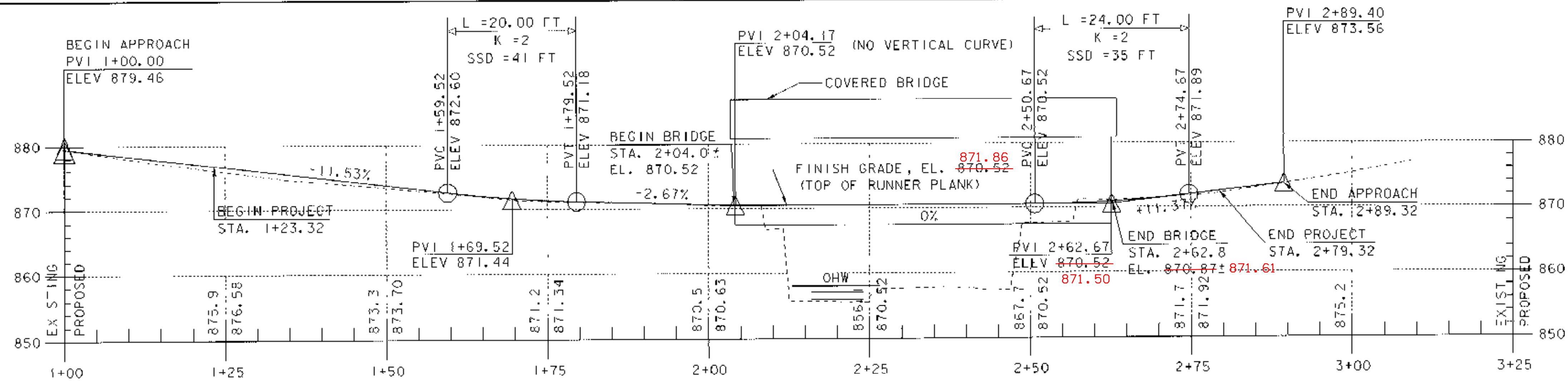
*NEW PERMANENT SIGN LOCATION STA. 1+65.00 9.5' RIGHT

*NEW PERMANENT SIGN LOCATION STA. 2+75.00 15' LEFT

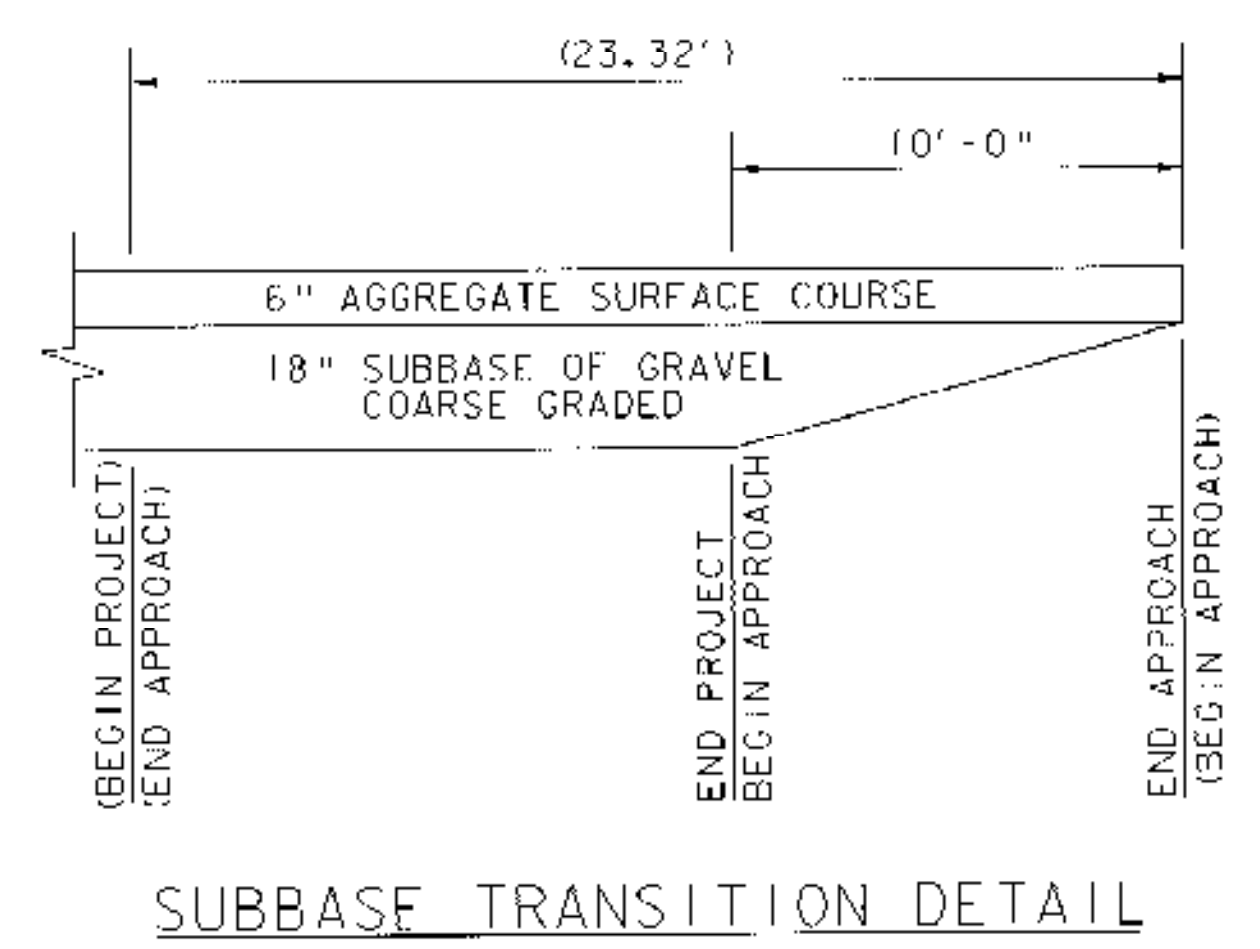
*NEW PERMANENT SIGN LOCATION STA. 3+00.00 12.5' LEFT



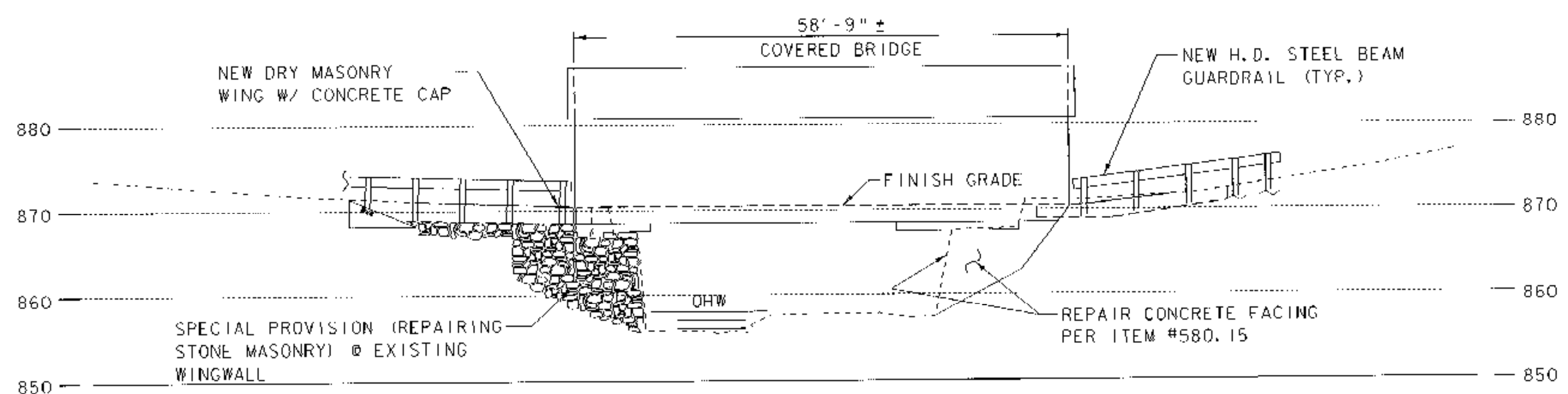
PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148bdr	CHECKED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	SHEET 5 OF 33
DESIGNED BY: J. WEAVER	
LAYOUT SHEET	



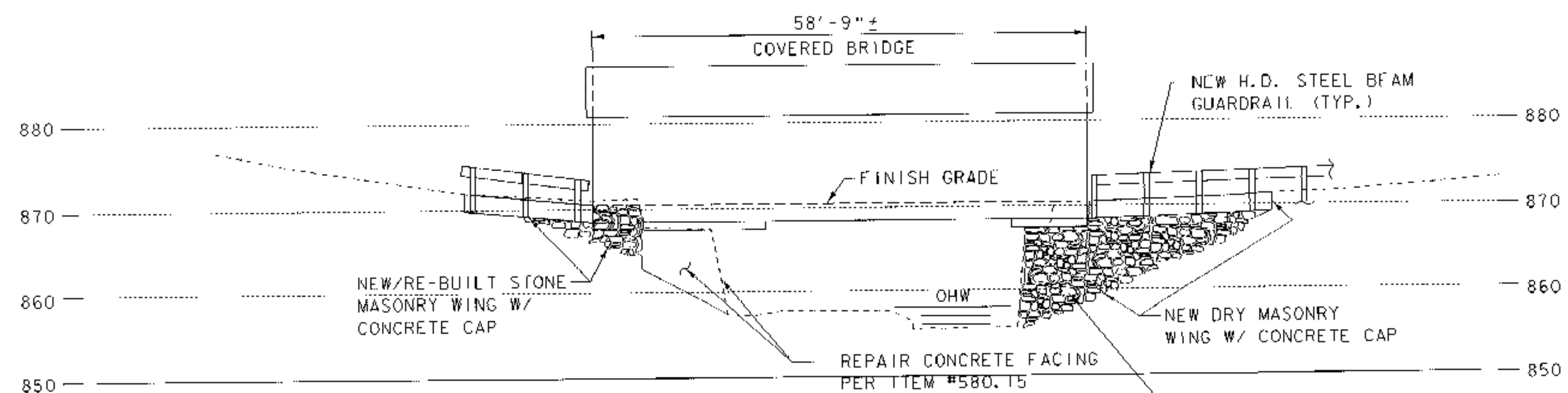
PROFILE LOOKING WEST
SCALE: 1"=10'-0"



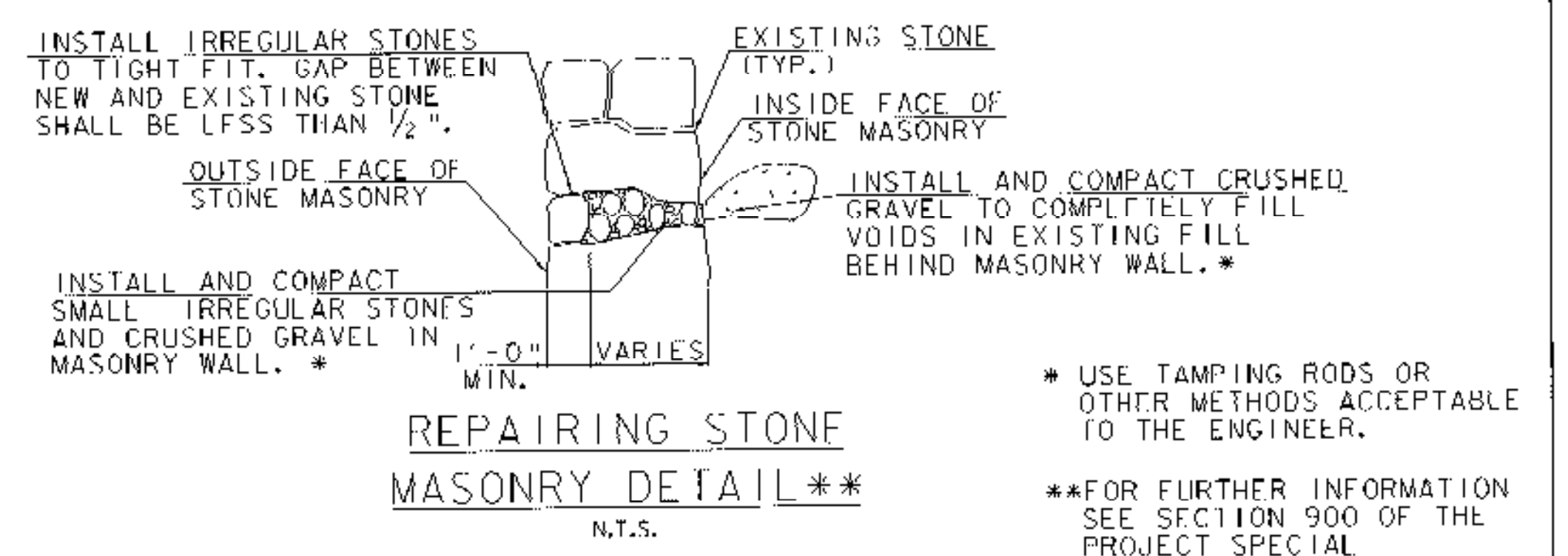
SUBBASE TRANSITION DETAIL



ELEVATION LOOKING WEST
SCALE: 1"=10'-0"



ELEVATION LOOKING EAST
SCALE: 1"=10'-0"



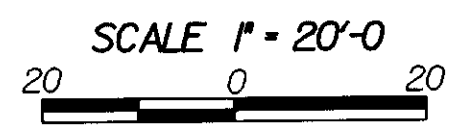
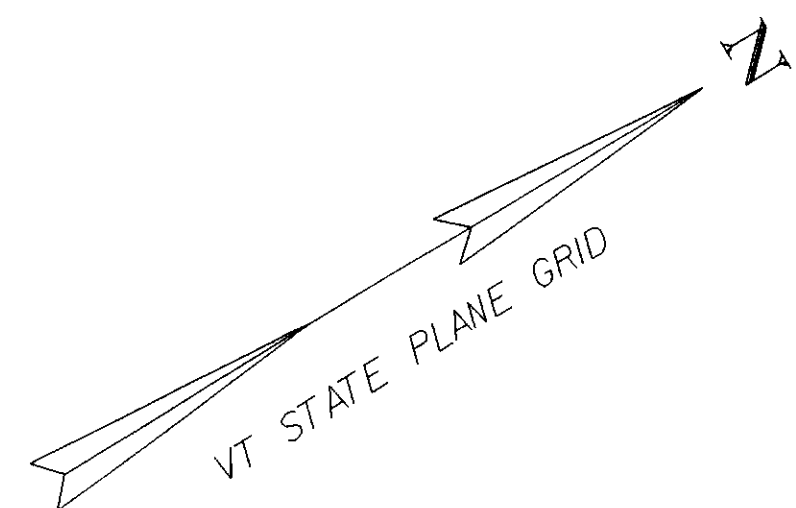
**SEEDING FORMULA
RURAL AREAS**

% 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 TREFLOIL	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.

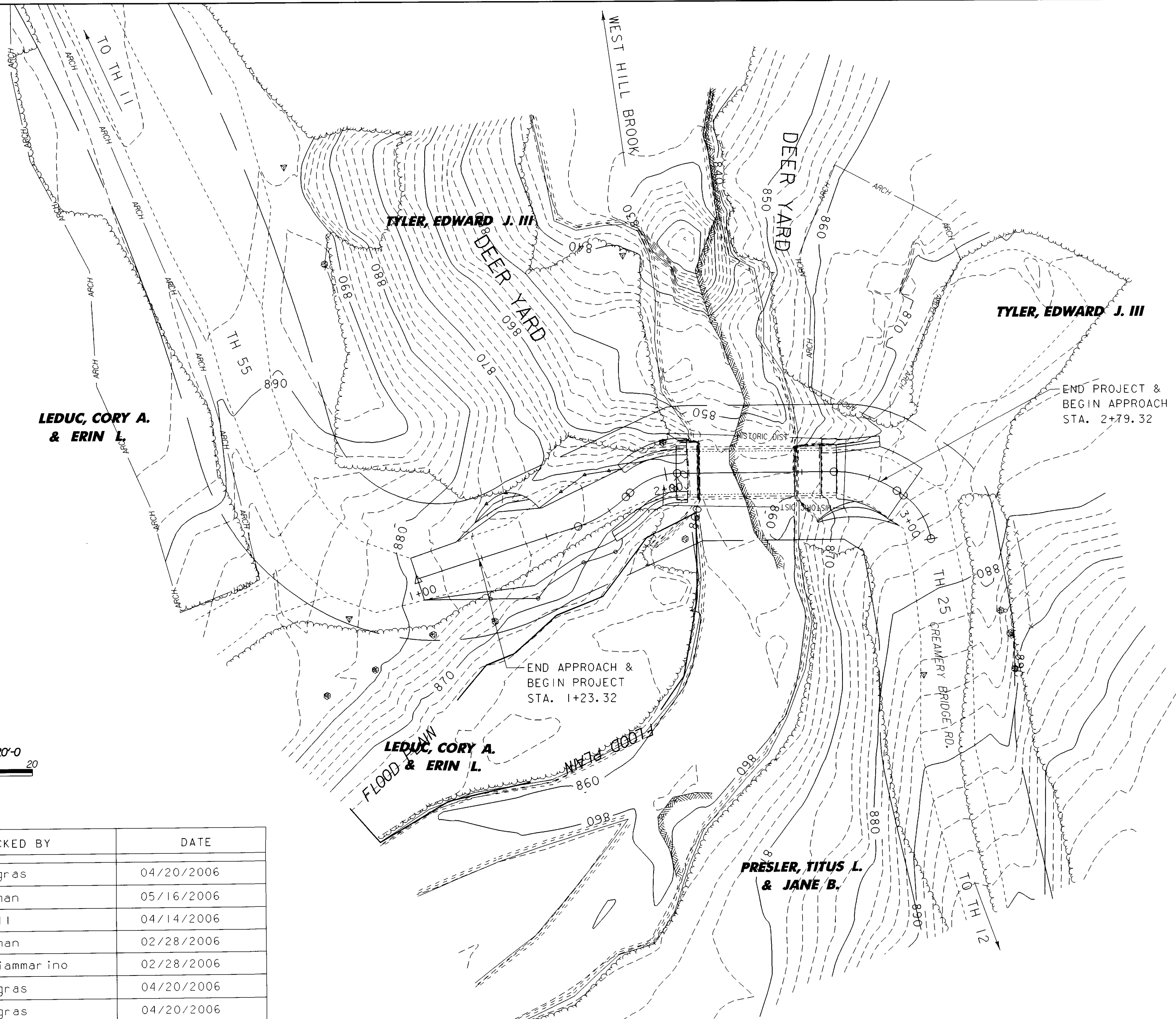
PROJECT NAME: MONTGOMERY	PROJECT NUMBER: BHO 1448 (37)
FILE NAME: s04j148prf	PLOT DATE: 02-JUN-2008
PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
DESIGNED BY: J. WEAVER	CHECKED BY: J. WEAVER
PROFILE AND ELEVATIONS	SHEET 6 OF 33



LEGEND

—— RIGHT OF WAY
 LEGEND FOR OTHER SYMBOLS GIVEN BELOW

ENVIRONMENTAL RESOURCE	LEVEL	LINESTYLE NAME	CHECKED BY	DATE
Wetlands	EWB.P	wetland-lt, wetland-rt	Glenn Gingras	04/20/2006
Historic/Historic District	MHBC	historic dist.	Scott Newman	05/16/2006
Archeological Site	LAAS	arch. area	Jen Russell	04/14/2006
4f Property	MPL	4f property	Scott Newman	02/28/2006
6f Property	MPL	6f property	Craig Digiammarino	02/28/2006
Agricultural Land	LAPB	agricult. land	Glenn Gingras	04/20/2006
Fish & Wildlife Habitat	EHA	critical hab.	Glenn Gingras	04/20/2006
Flood Plains	EWB.P	fld. plains	Glenn Gingras	04/20/2006
Endangered Species	EHA	thr. & end. spec.	Glenn Gingras	04/20/2006
Hazardous Waste	EDEFAULT	haz. waste	Craig Digiammarino	02/28/2006
Stormwater	DDEFAULT	Diamond	Jon Armstrong	06/21/2006



PROJECT NAME: MONTGOMERY
 PROJECT NUMBER: BHO 1448 (37)
 FILE NAME: s04j48rsc
 PROJECT LEADER: J. WEAVER
 DESIGNED BY: J. WEAVER
 RESOURCE SHEET
 PLOT DATE: 21-MAY-2008
 DRAWN BY: J. TREI
 CHECKED BY: J. WEAVER
 SHEET 7 OF 33

1. NARRATIVE

1.1. PROJECT DESCRIPTION

This project "Montgomery BHO 1448 (37)" will rehabilitate the Creamery West Hill Covered Bridge, Bridge 32 on Town Highway 25 over the West Hill Brook in the Town of Montgomery. This site is located approximately 0.2 miles west of the intersection of TH 25 & TH 12. The rehabilitated covered bridge will be a one lane, single span, wood deck supported by timber trusses. The project will maintain traffic on an alternate route during construction. The total length of project work, including both approaches, drives and existing roadway is approximately 189 ft., including 23 ft. of roadway subbase work south and 10 ft. of roadway subbase and ditch work north. The estimated disturbed area (including on-site or contiguous waste, borrow and staging areas) is approximately 0.09 acres. This project should last one construction season.

1.2. SITE INVENTORY & ANALYSIS

1.2.1. Off Site Drainage Characteristics (Up And Down Gradient). The land in the project area is mountainous and forested. It consists of growth of brush, softwood and hardwood trees. The soil is primarily "hilly, thin, well drained soils on flood plains of minor streams and their tributaries. These soils formed in very fine sandy loam and silt loam alluvium." Road surfaces are gravel and there are no surrounding residential properties.

1.2.2. Drainage, Waterways, Bodies of Water. The bridge crosses the West Hill Brook. The stream is sinuous, incised and flashy. The stream at the bridge is 2 ft wide at the bottom and 25 ft wide at the top and 4 ft deep from top to bottom. The watershed area is 8.8 sq. miles.

1.2.3. Topography, Existing Roads, Buildings, Utilities. The project site is on TH 25, which is a Class 4 gravel town highway through a low-lying valley. There is residential property far to the west of the project, but it is not within the vicinity of the work.

1.2.4. The vegetation on the north approach is forested with a mix of hardwoods and softwoods and the south approach is comprised of assorted brush, as well as small to medium sized hardwood, and softwood trees. Several small hardwoods, softwoods and areas of brush will be removed within the existing right-of-way to accommodate the new construction. Seed & Mulch will stabilize slopes flatter than 66%.

1.2.5. The Soil Conservation Service "Soil Survey of Franklin County" identifies two soil types in the project site.

1.2.5.1.1. SyE Stowe stony soils, 25 to 60 % slopes. This soil is the primary soil covering most of the bridge site area. The soil profile is typically: 0-60 in. of very fine sandy loam. Its erosion hazard rating is slight. The slope suggests low erodibility.

1.2.5.1.2. WnB Westbury stony fine sandy loam, 3 to 8 % slopes. The soil profile is typically: 0-60 in. very fine sandy loam. Its erosion hazard rating is severe. The slope suggests high erodibility.

1.2.6. Sensitive Resource Areas near the project include an archaeological area (outside PDF fence limits) to the immediate northwest of the covered bridge, and an historic area which is the covered bridge itself.

1.2.7. The Proximity to Natural or Man-Made Water Features in this area is as follows: The project is directly above the West Hill Brook with existing ditches running along the highway and draining to the stream.

1.3. RISK EVALUATION

1.3.1. 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. TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL (SEE EROSION CONTROL DETAILS)

1.4.1. Temporary Measures to Prevent Erosion & Control Sediment Transport include:

1.4.1.1.1. "Project Demarcation Fencing" delineates the construction area for construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

1.4.1.1.2. "Seeding & Mulching" stabilizes slopes ranging from 0% to 66%. Add biodegradable "Erosion Control Matting with all-natural fibers" (or equivalent) to slopes ranging from 33% to 66%. Use seeding for long term exposed slopes. Grass takes 2 weeks to establish itself. Stabilize slopes within 48 hours or sooner considering rain.

1.4.1.1.3. "Stone Check Dams" placed in ditches reduce flow velocities and prevent erosion. Place dams in ditches so that the elevation of the top of a check dam is level with the toe of the next upslope check dam. The check dams may be removed once the stone lining of the ditches is complete and the surrounding area stabilized.

1.4.1.1.4. "Silt Fence" placed level on slopes control sheet flow sediment transport. Place level silt fence 5'-10' from the toe of slopes. Turn the ends of silt fence slightly uphill to stop concentrated water from flowing around the ends. The maximum slope length between separate runs of silt fence is 100'. Place silt fence before beginning upslope earthwork. Silt fence shall not be placed across contours.

1.4.1.1.5. Hay bales are unacceptable alternatives to silt fences, sand bags, or check dams.

1.5. FINAL EROSION CONTROL MEASURES

1.5.1. Place "Aggregate Surface Course and "Subbase" on the roadway to prevent erosion. Compact aggregate appropriately to prevent erosion of the aggregate.

1.5.2. "Seeding & Mulching" will establish vegetation on side slopes less than 66% that prevents erosion and control sediment transport. Add biodegradable "Erosion Control Matting" (or equivalent) to slopes ranging from 33% to 66%.

1.5.3. Roadway Ditches beside the road control concentrated flows and prevent erosion. Including Erosion Matting in roadway ditches prevents erosion and controls sediment transport. See details.

1.5.4. Place stone fill on roadway slopes to prevent erosion. See project plan sheets for limits of work.

2. GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

2.1. The Erosion Control Plans are guidelines for preventing erosion and controlling sediment transport throughout the life of the project. The purpose of the plan is to minimize soil loss and the pollution and sedimentation of receiving waters.

2.2. Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. Use additional erosion control measures as necessary during the sequence of construction and as directed by the Engineer. See sub section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2006.

2.3. Maintain existing vegetated buffers along stream banks, wetlands or other sensitive areas wherever possible.

2.4. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes. Control only sediment-laden runoff from the project site.

2.5. Install erosion and sediment control measures as shown in the Erosion Control Plan or as directed by the Engineer. Do not modify the type, size or location of any control or practice without approval of the Engineer. Note any changes on the plans, in the weekly inspection report, and report them to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures promptly once damage is discovered.

2.6. 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. Establish temporary vegetation if the disturbed area is to be without construction activity for a period of 14 days. Install perimeter control measures following clearing and before the start of any grubbing or grading activity. Install other temporary controls in incremental stages as construction proceeds.

2.7. Operate construction equipment only within perimeter control measures.

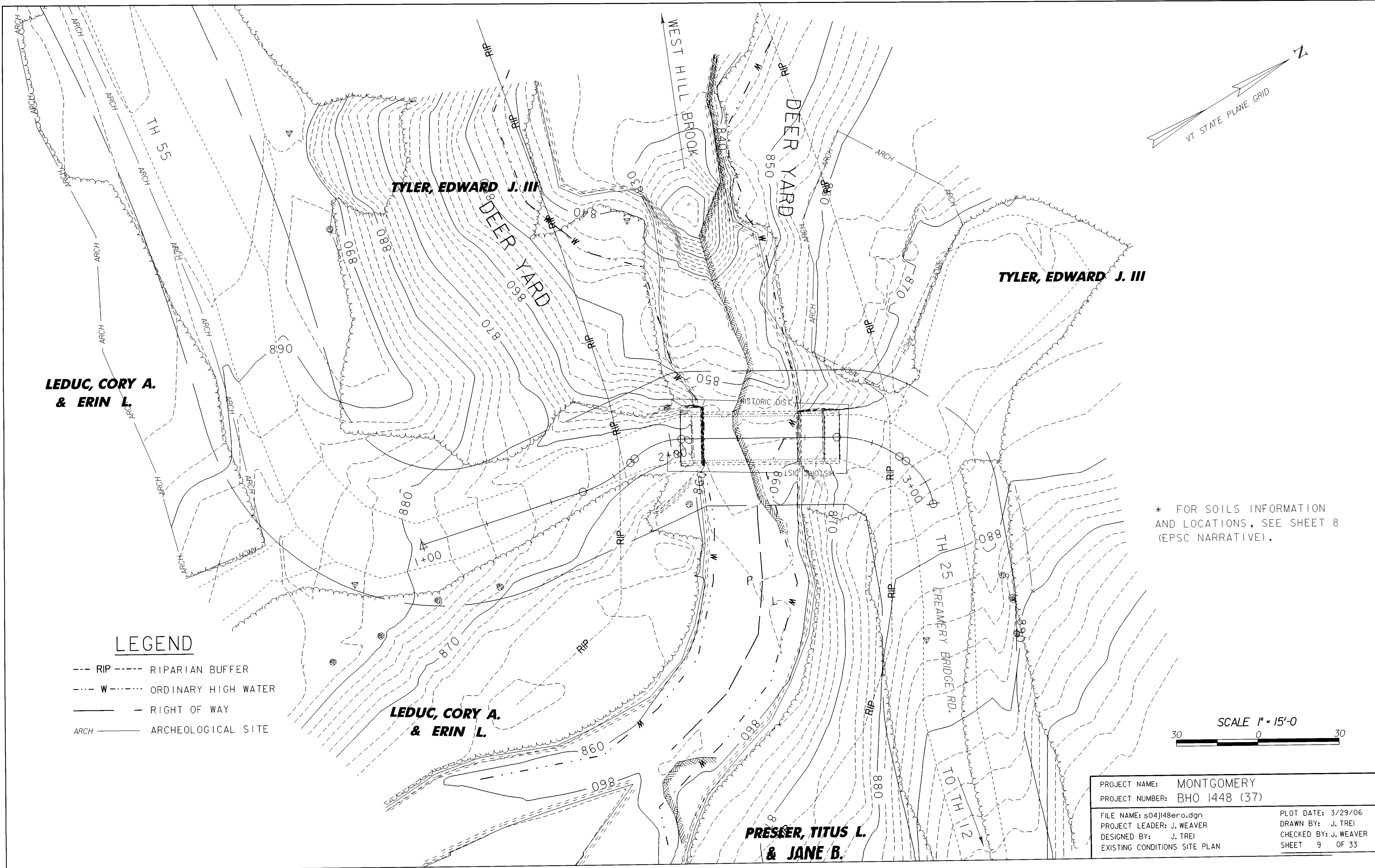
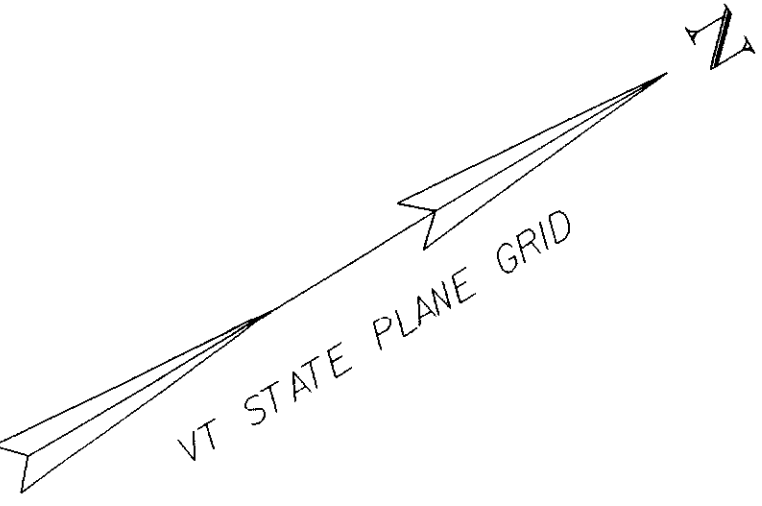
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)

FILE NAME: s04j148ero.dgn
PROJECT LEADER: J. WEAVER

PLOT DATE: 3/29/06
DRAWN BY: J. TREI

DESIGNED BY: J. TREI
EPSC NARRATIVE

CHECKED BY: J. WEAVER
SHEET 8 OF 33



**LEDUC, CORY A.
& ERIN L.**

TYLER, EDWARD J. III

TYLER, EDWARD J. III

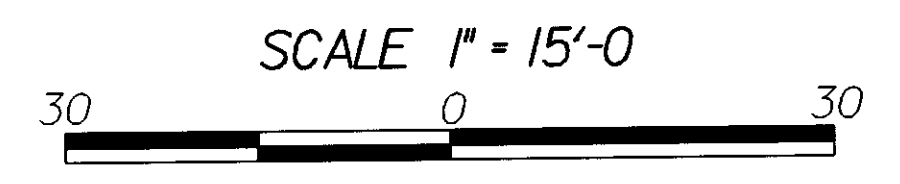
**LEDUC, CORY A.
& ERIN L.**

**PRESSER, TITUS L.
& JANE B.**

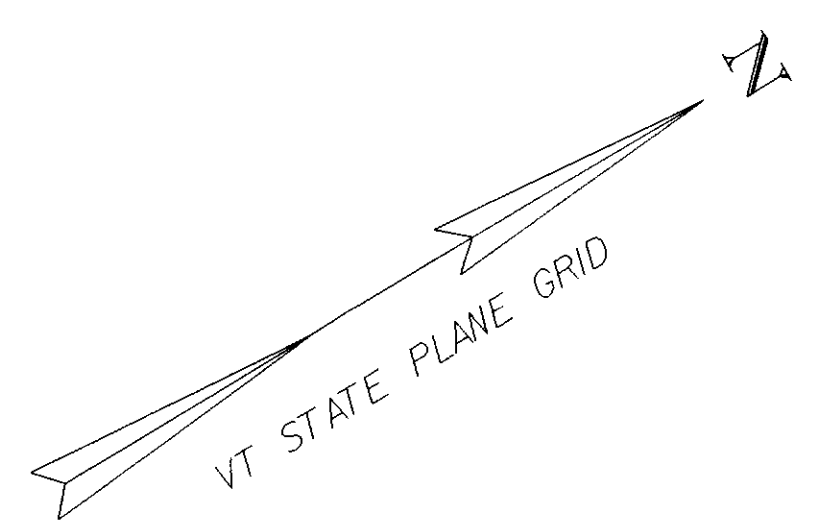
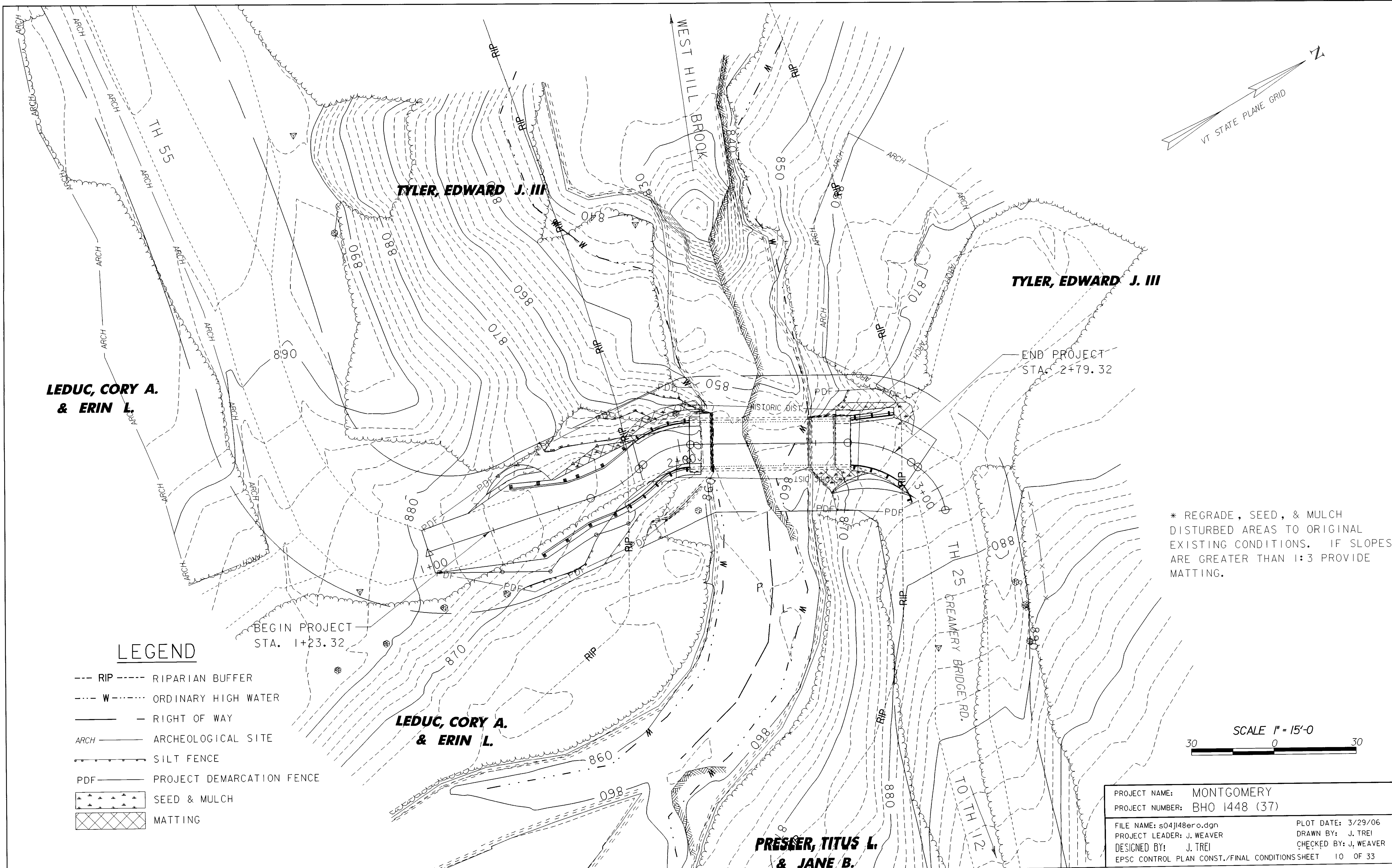
LEGEND

- RIP --- RIPARIAN BUFFER
- W ORDINARY HIGH WATER
- RIGHT OF WAY
- ARCH ——— ARCHEOLOGICAL SITE

* FOR SOILS INFORMATION AND LOCATIONS, SEE SHEET 8 (EPSC NARRATIVE).



PROJECT NAME:	MONTGOMERY	PLOT DATE:	3/29/06
PROJECT NUMBER:	BHO 1448 (37)	DRAWN BY:	J. TREI
FILE NAME:	s04j148ero.dgn	CHECKED BY:	J. WEAVER
PROJECT LEADER:	J. WEAVER	SHEET	9 OF 33
DESIGNED BY:	J. TREI		
EXISTING CONDITIONS SITE PLAN			



**LEDUC, CORY A.
& ERIN L.**

TYLER, EDWARD J. III

TYLER, EDWARD J. III

**LEDUC, CORY A.
& ERIN L.**

**PRESLER, TITUS L.
& JANE B.**

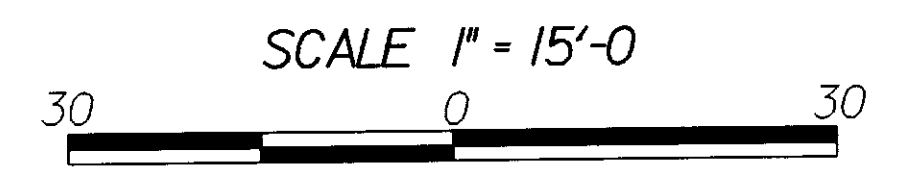
END PROJECT
STA. 2+79.32

BEGIN PROJECT
STA. 1+23.32

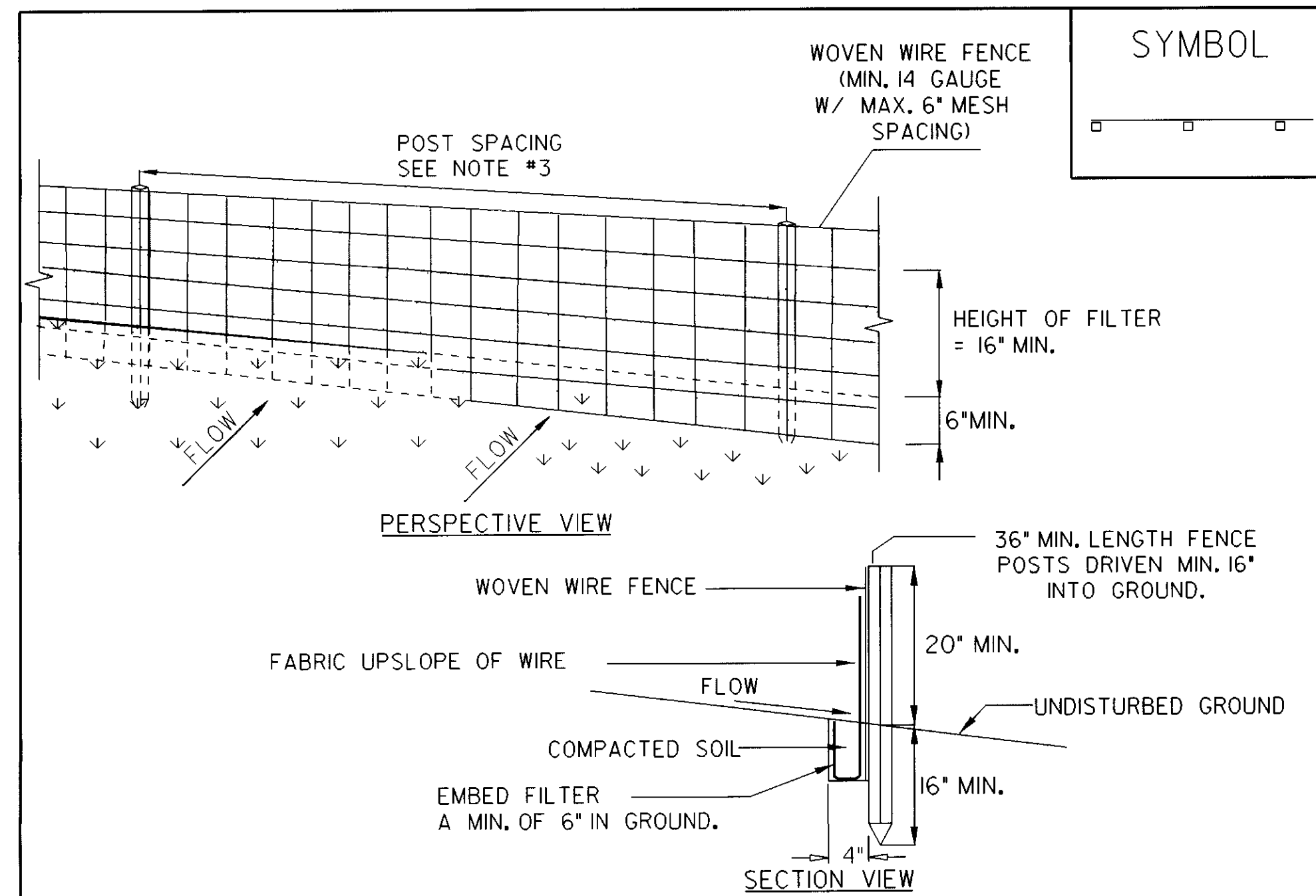
* REGRADE, SEED, & MULCH
DISTURBED AREAS TO ORIGINAL
EXISTING CONDITIONS. IF SLOPES
ARE GREATER THAN 1:3 PROVIDE
MATTING.

LEGEND

- RIP --- RIPARIAN BUFFER
- W --- ORDINARY HIGH WATER
- RIGHT OF WAY
- ARCH — ARCHEOLOGICAL SITE
- SILT FENCE
- PDF — PROJECT DEMARCATION FENCE
- [Symbol] SEED & MULCH
- [Symbol] MATTING



PROJECT NAME:	MONTGOMERY	PLOT DATE:	3/29/06
PROJECT NUMBER:	BHO 1448 (37)	DRAWN BY:	J. TREI
FILE NAME:	s04j148ero.dgn	CHECKED BY:	J. WEAVER
PROJECT LEADER:	J. WEAVER	EPSC CONTROL PLAN CONST./FINAL CONDITIONS SHEET	10 OF 33
DESIGNED BY:	J. TREI		



CONSTRUCTION SPECIFICATIONS

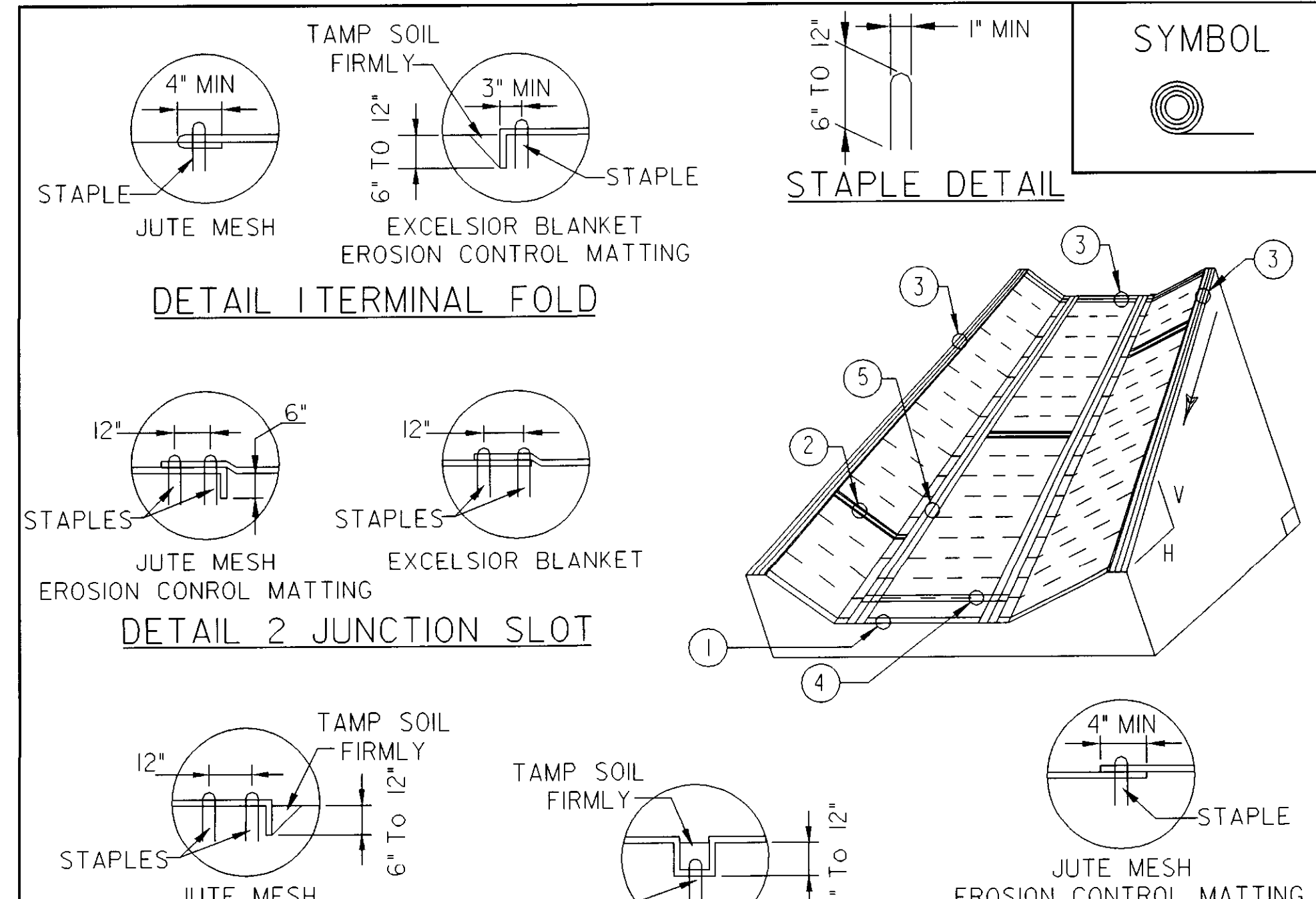
1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED 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.



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.

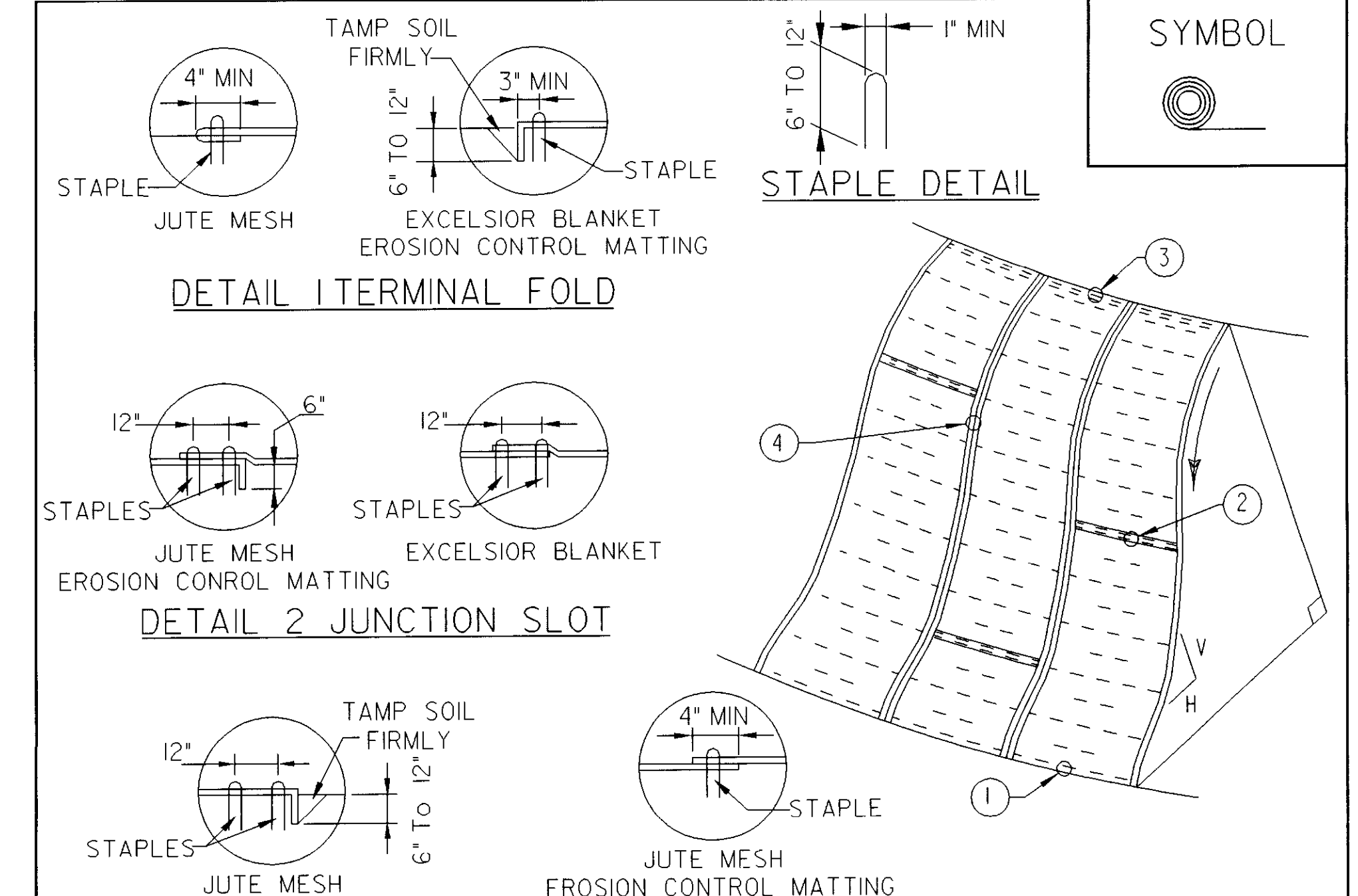
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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.

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.

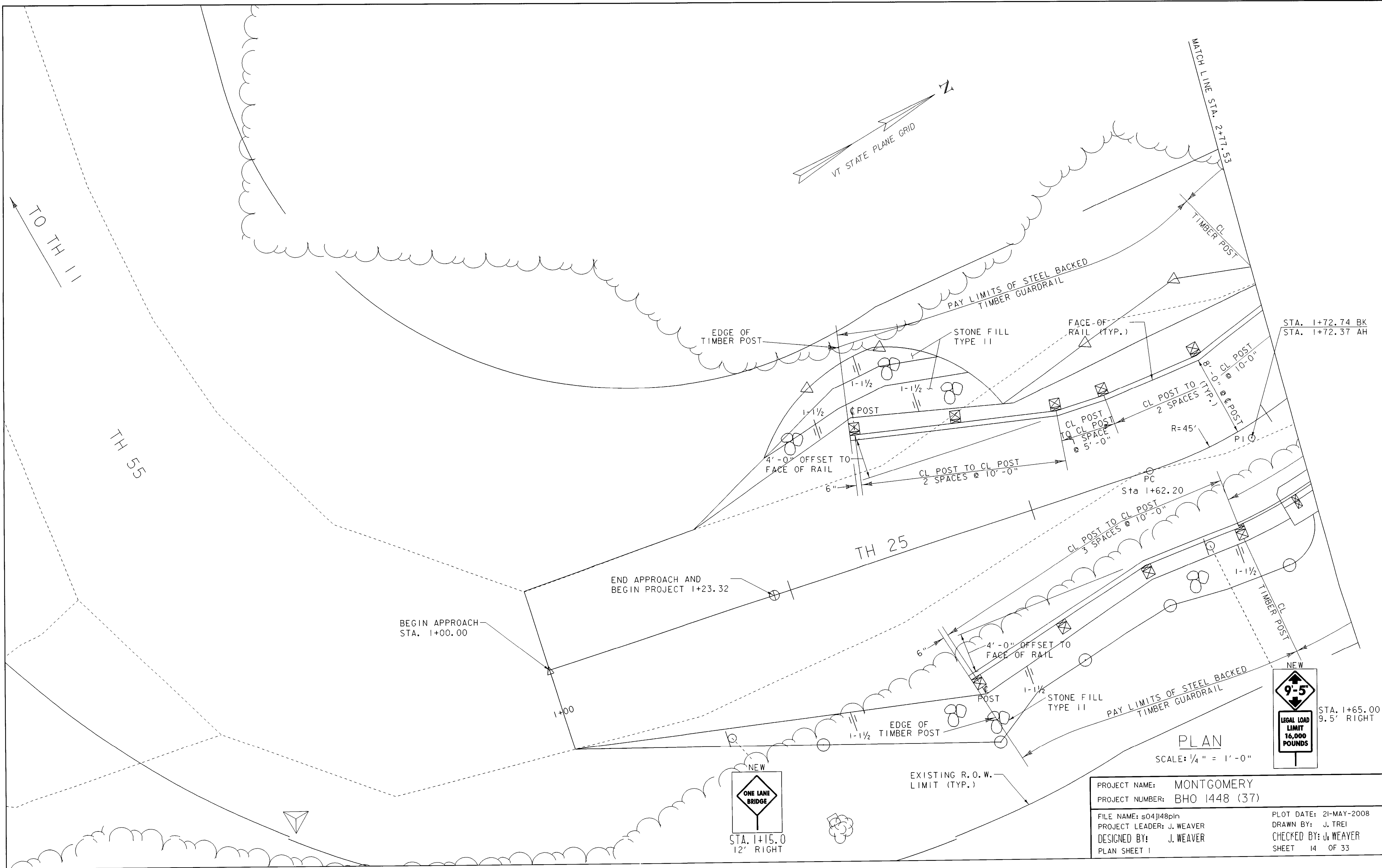
THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.20 TEMPORARY EROSION MATTING.

NEW	
APRIL 16, 2007	WHF
REVISIONS	

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)


FILE NAME: s04j148erc.dgn
PROJECT MANAGER: J. WEAVER
DESIGNED BY: N. GARBACK
Silt Fence & Erosion Matting

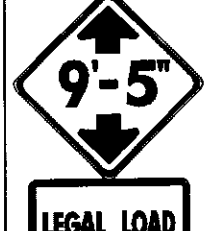
PLOT DATE: 4/11/08
DRAWN BY: C. WEEBER
CHECKED BY: J. WEAVER
SHEET 11 OF 33



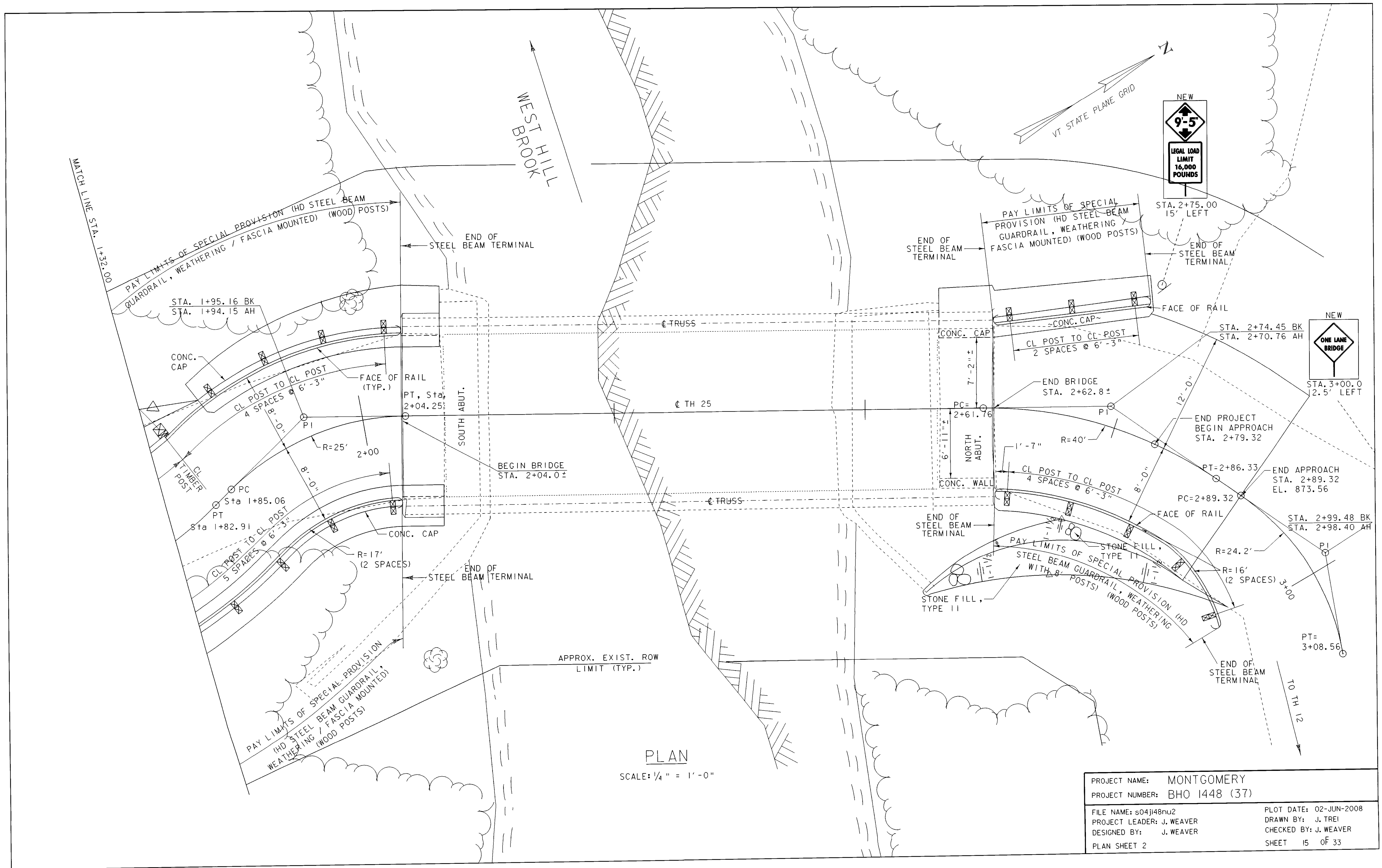
PROJECT NAME: MONTGOMERY
 PROJECT NUMBER: BHO 1448 (37)
 FILE NAME: s04j148pin
 PROJECT LEADER: J. WEAVER
 DESIGNED BY: J. WEAVER
 PLAN SHEET 1

PLOT DATE: 21-MAY-2008
 DRAWN BY: J. TREI
 CHECKED BY: J. WEAVER
 SHEET 14 OF 33

NEW

 STA. 1+15.0
 12' RIGHT

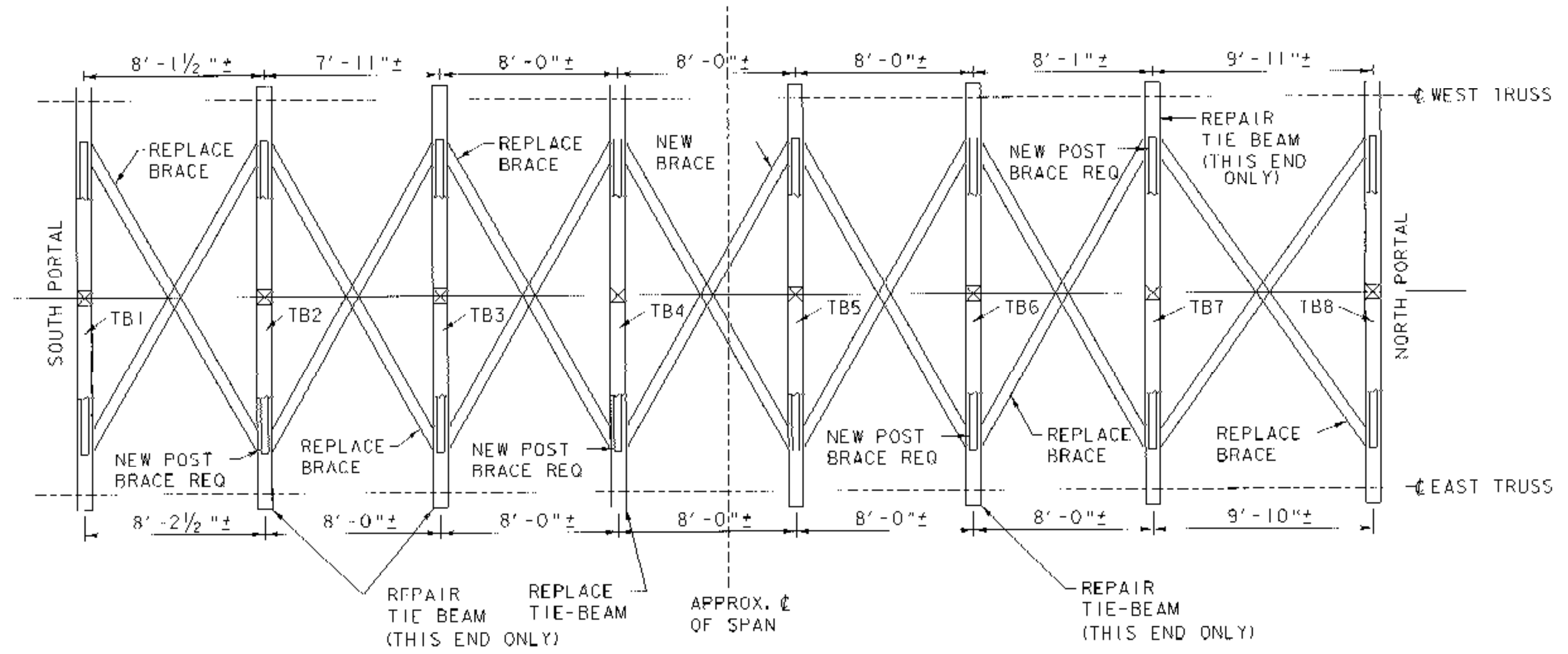
NEW

 LEGAL LOAD
 LIMIT
 16,000
 POUNDS

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



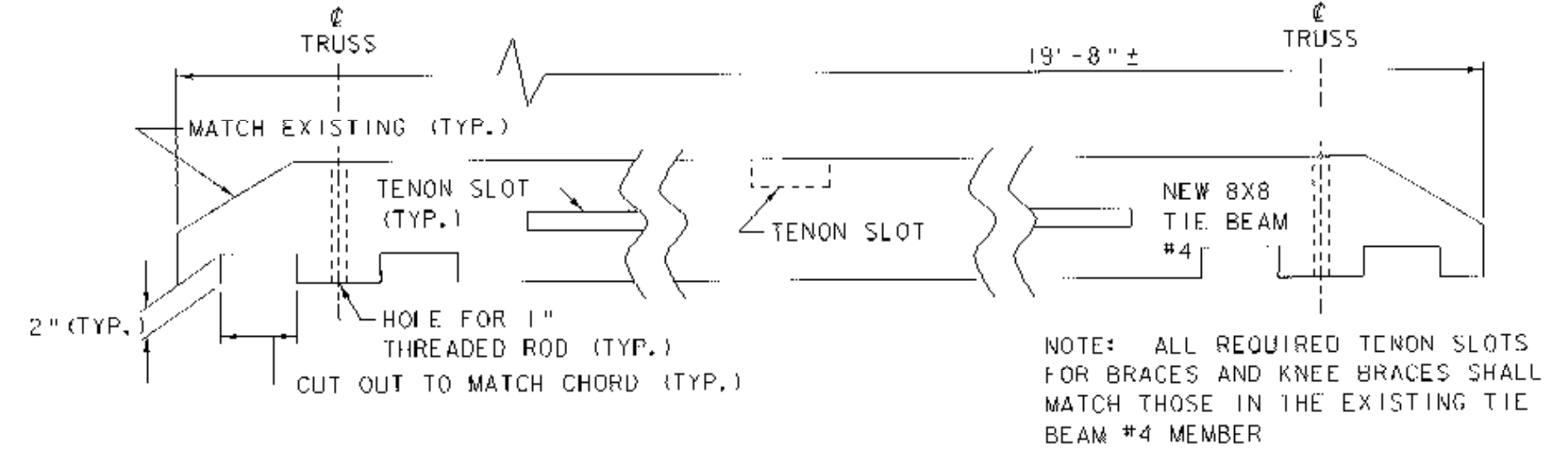
PLAN
SCALE: 1/4" = 1'-0"

PROJECT NAME:	MONTGOMERY
PROJECT NUMBER:	BHO 1448 (37)
FILE NAME:	s04j148nu2
PROJECT LEADER:	J. WEAVER
DESIGNED BY:	J. WEAVER
PLAN SHEET	2
PLOT DATE:	02-JUN-2008
DRAWN BY:	J. TREI
CHECKED BY:	J. WEAVER
SHEET	15 OF 33



TOP BRACING (RIDGE POLE NOT SHOWN)

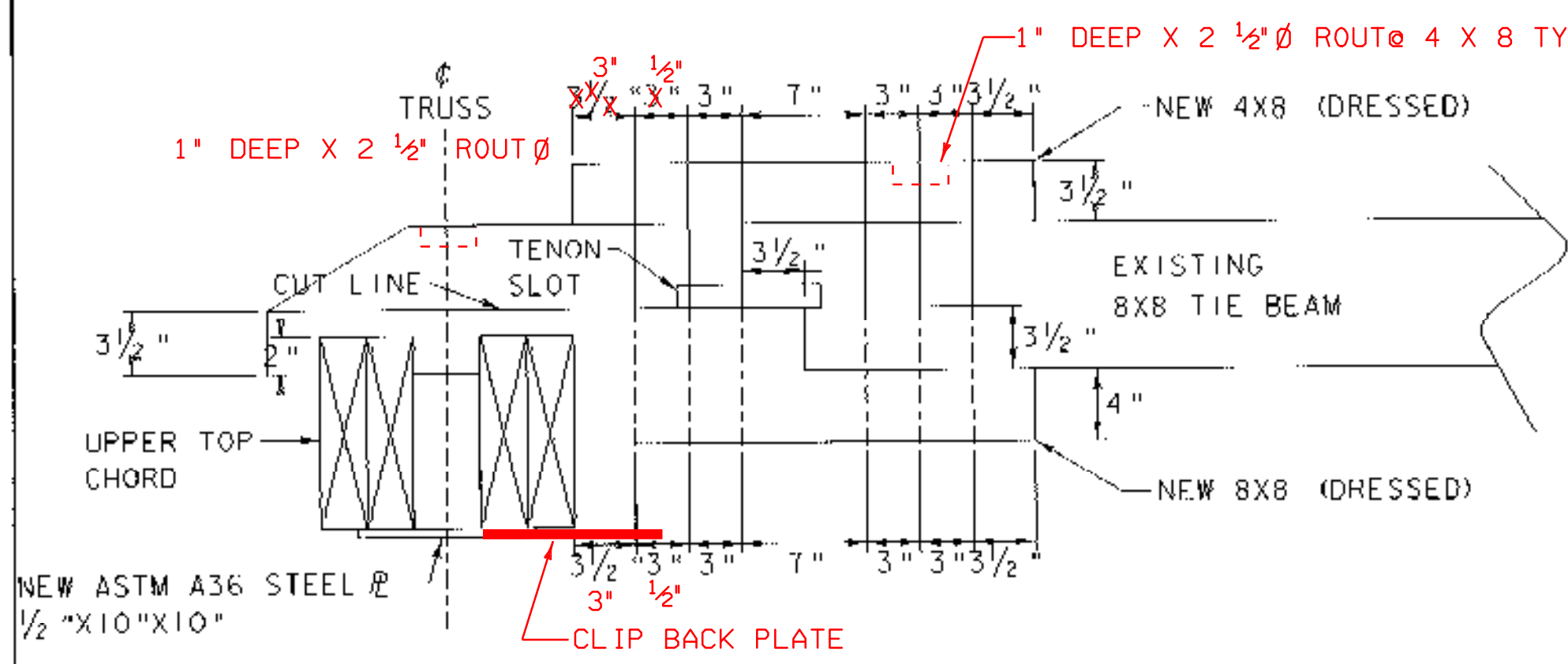
SCALE: 1/4" = 1'-0"



NEW TIE BEAM ELEVATION

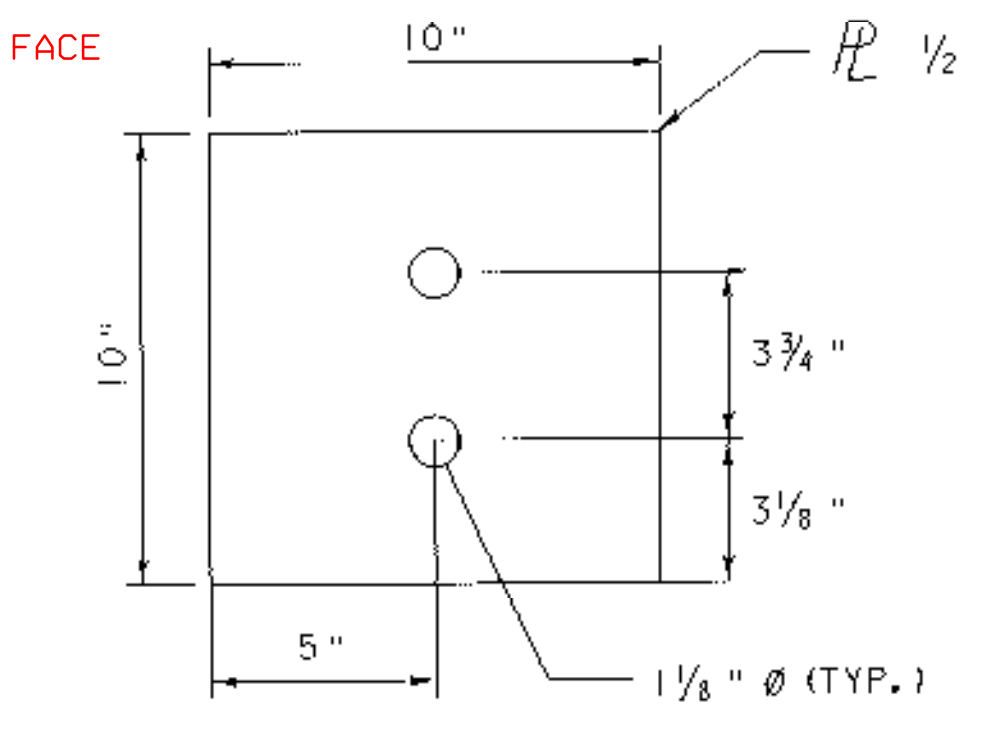
SCALE: 1/2" = 1'-0"

ALL NEW STRUCTURAL LUMBER, AND TIMBER MEMBERS, AND WEDGES SHOWN ON THIS SHEET SHALL BE SYP NO.2 GRADE.



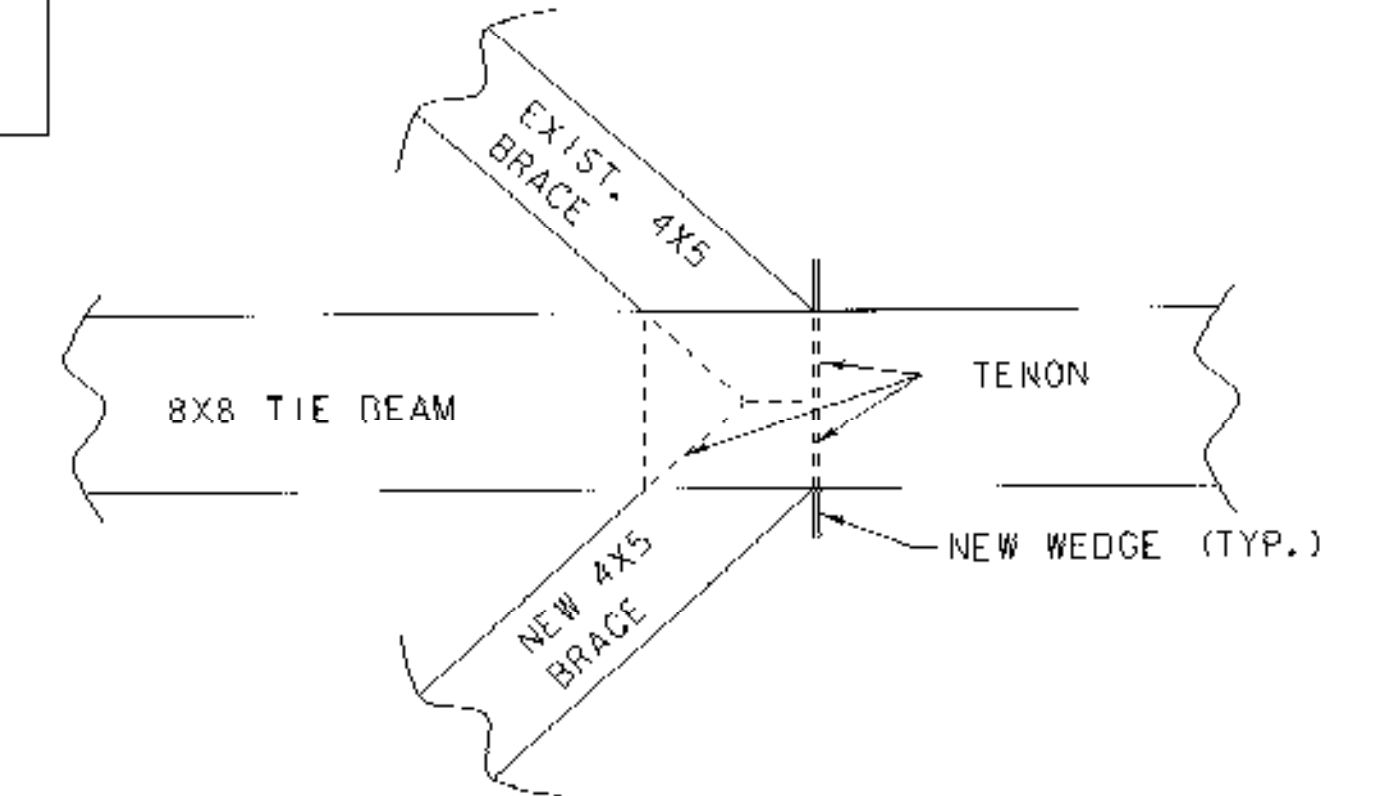
ELEVATION @ TIE BEAM REPAIR

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



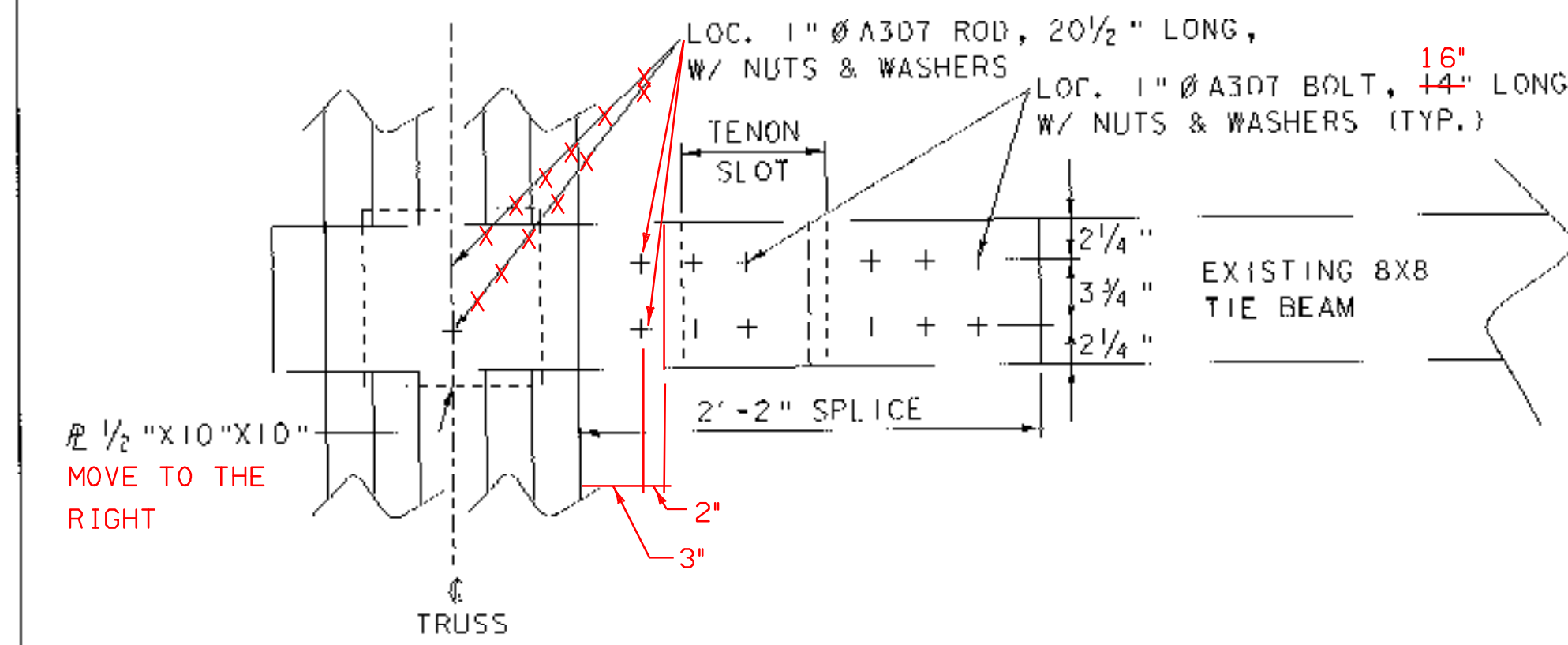
STEEL PLATE DETAIL

SCALE: 3" = 1'-0"



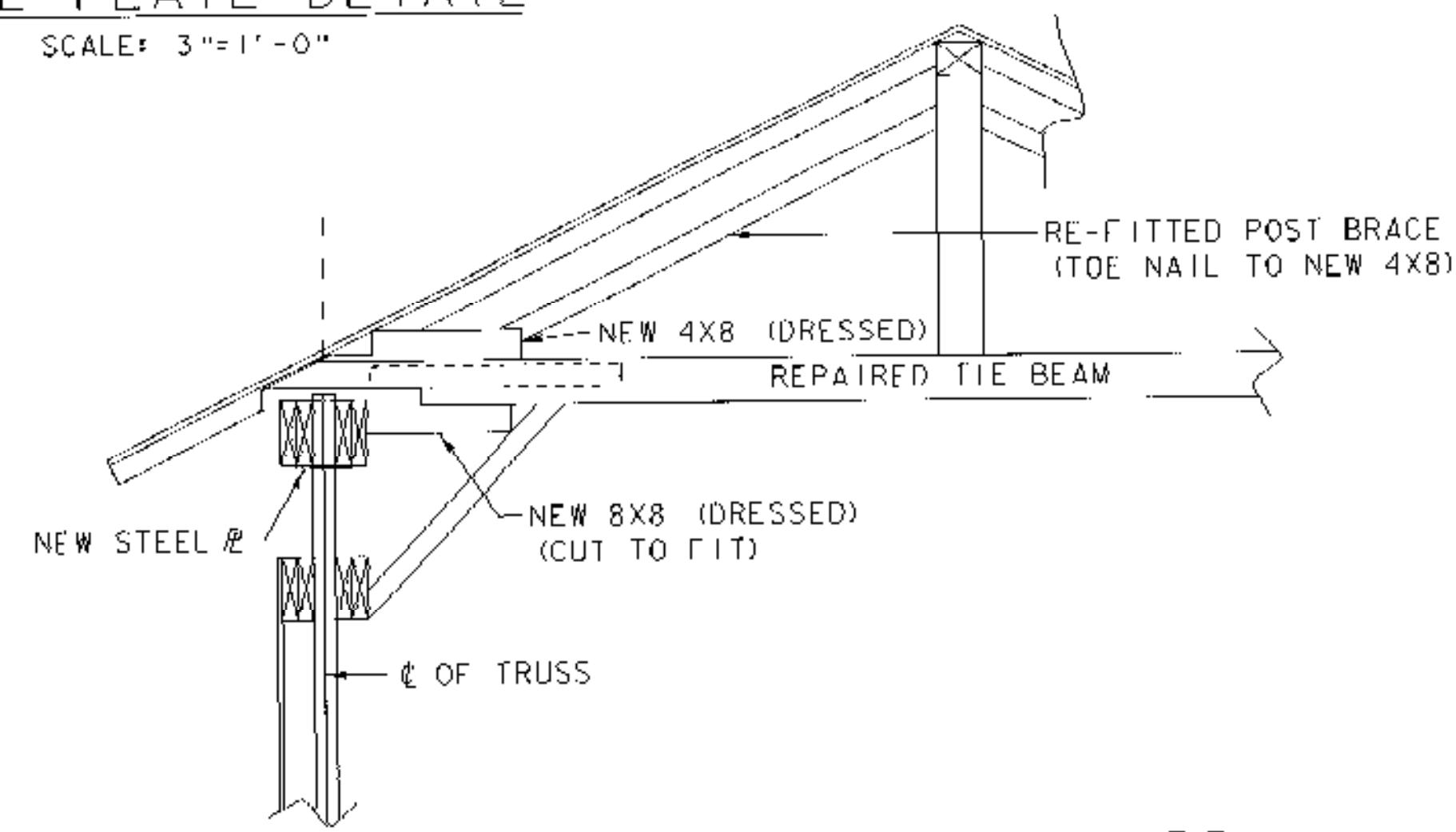
PLAN @ BRACE CONNECTION

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



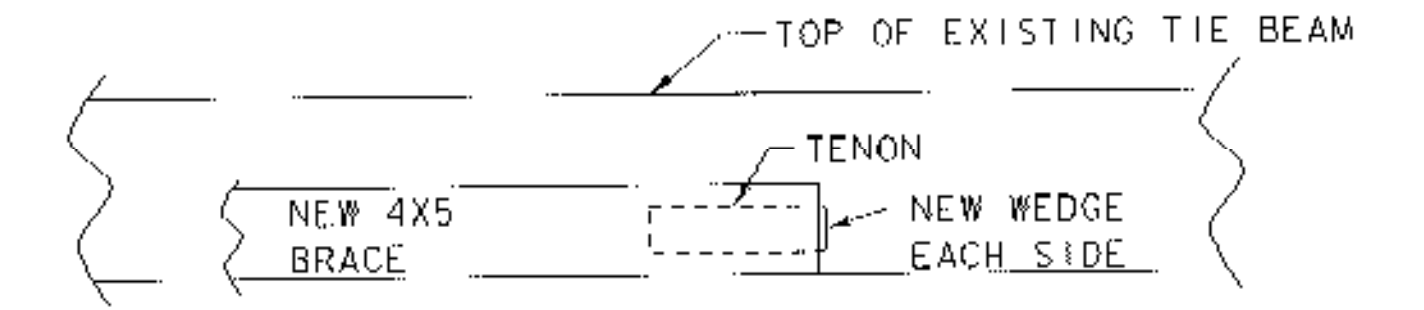
PLAN @ TIE BEAM REPAIR

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



SECTION @ UPPER TOP CHORD AT REPAIRED TIE BEAM

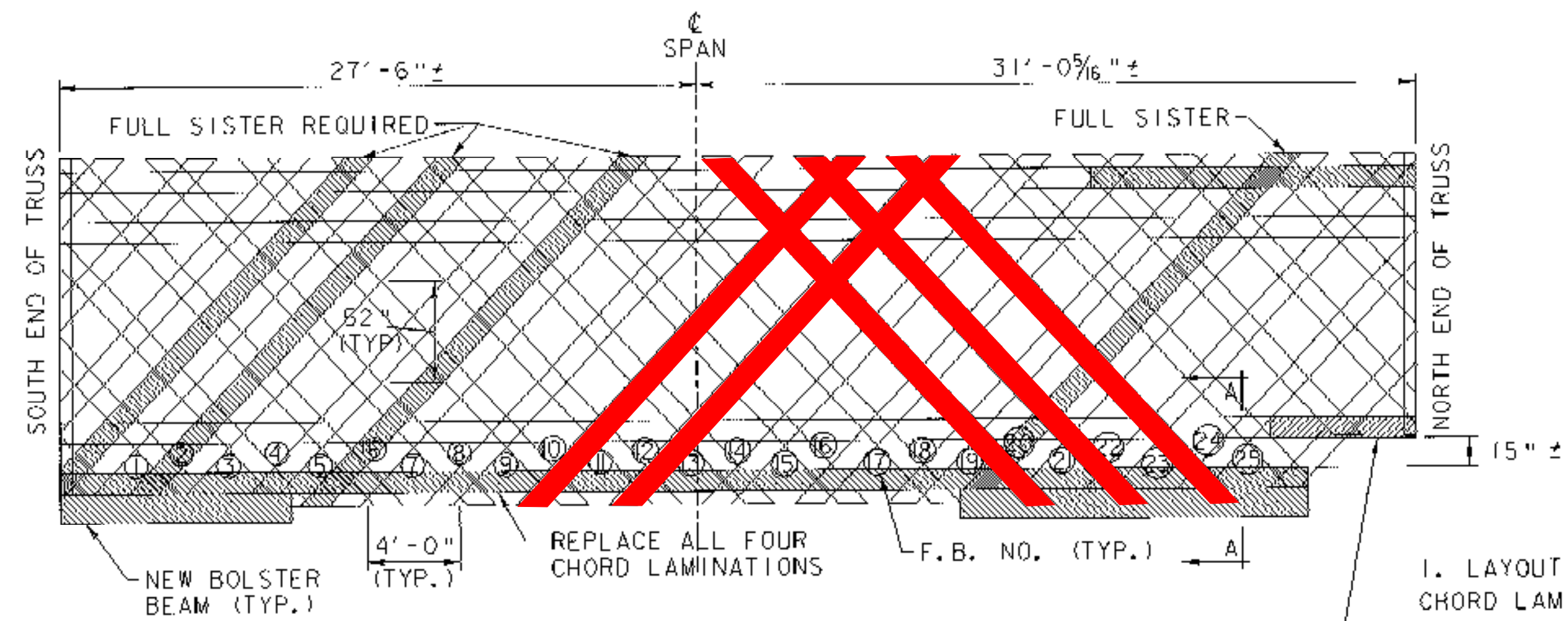
SCALE: 1/2" = 1'-0"



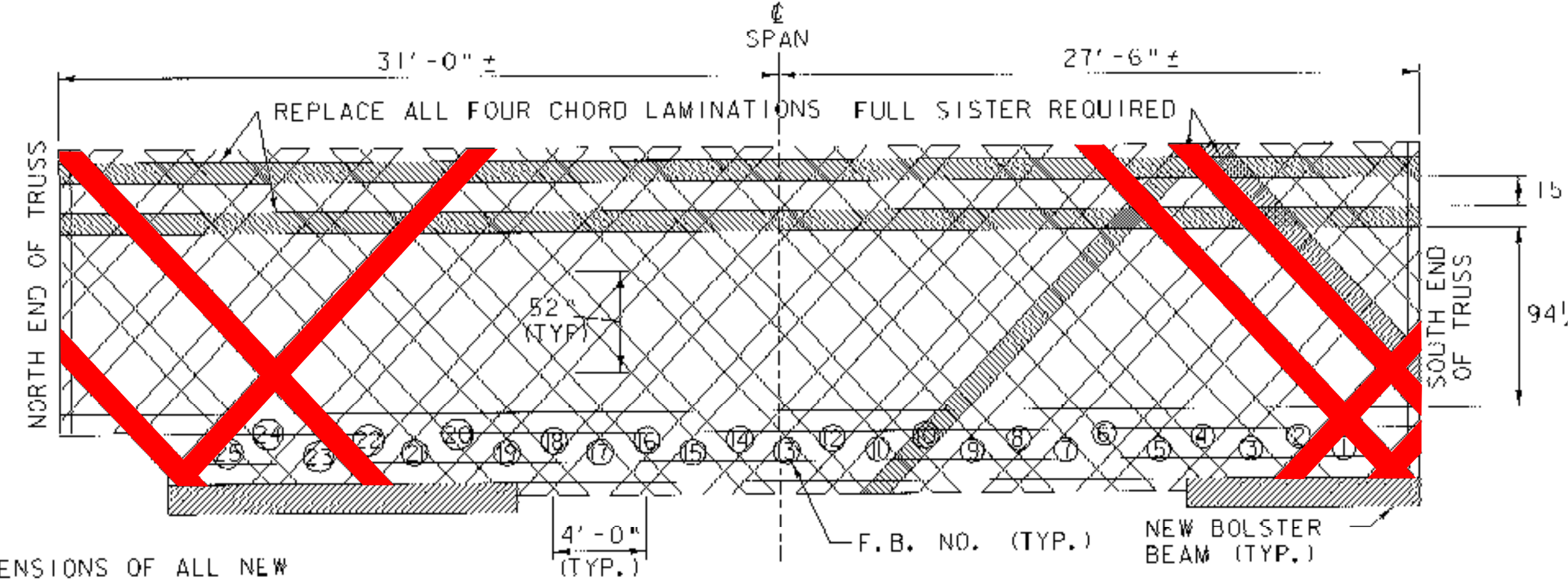
ELEVATION @ BRACE CONNECTION

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

PROJECT NAME:	MONTGOMERY	PLOT DATE:	02-JUN-2008
PROJECT NUMBER:	BHO 1448 (37)	DESIGNED BY:	J. WEAVER
FILE NAME:	s04j148d1	CONSTRUCTION DETAIL SHEET 1	
PROJECT LEADER:	J. WEAVER	CHECKED BY:	J. TREI
			SHEET 16 OF 33



WEST TRUSS - INSIDE W/ FLOOR BEAM LOCATIONS
SCALE: 1" = 5'-0"

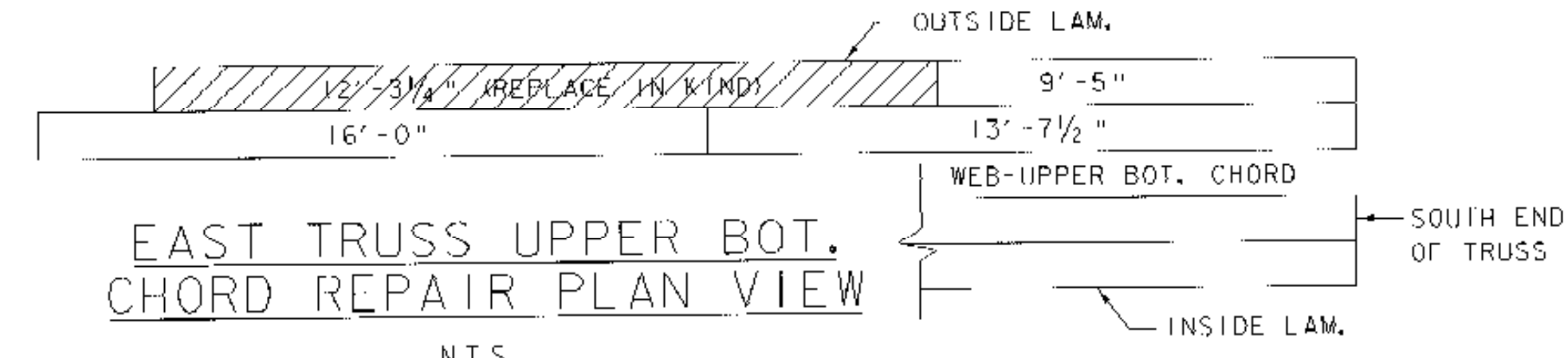


EAST TRUSS - INSIDE W/ FLOOR BEAM LOCATIONS
SCALE: 1" = 5'-0"

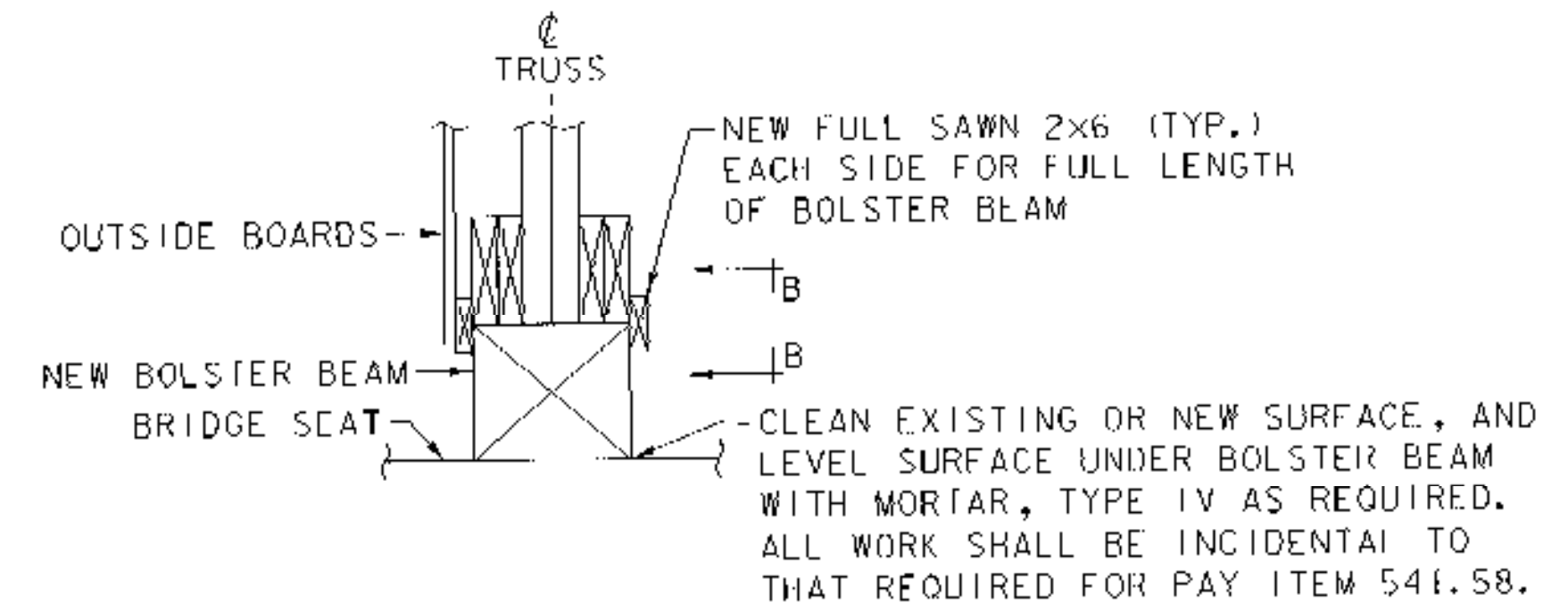
1. LAYOUT AND DIMENSIONS OF ALL NEW CHORD LAMINATIONS SO NOTED SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION

2. INDICATES NEW OR REPLACED MEMBER. RED INDICATES ADDITIONAL NEW SISTERS

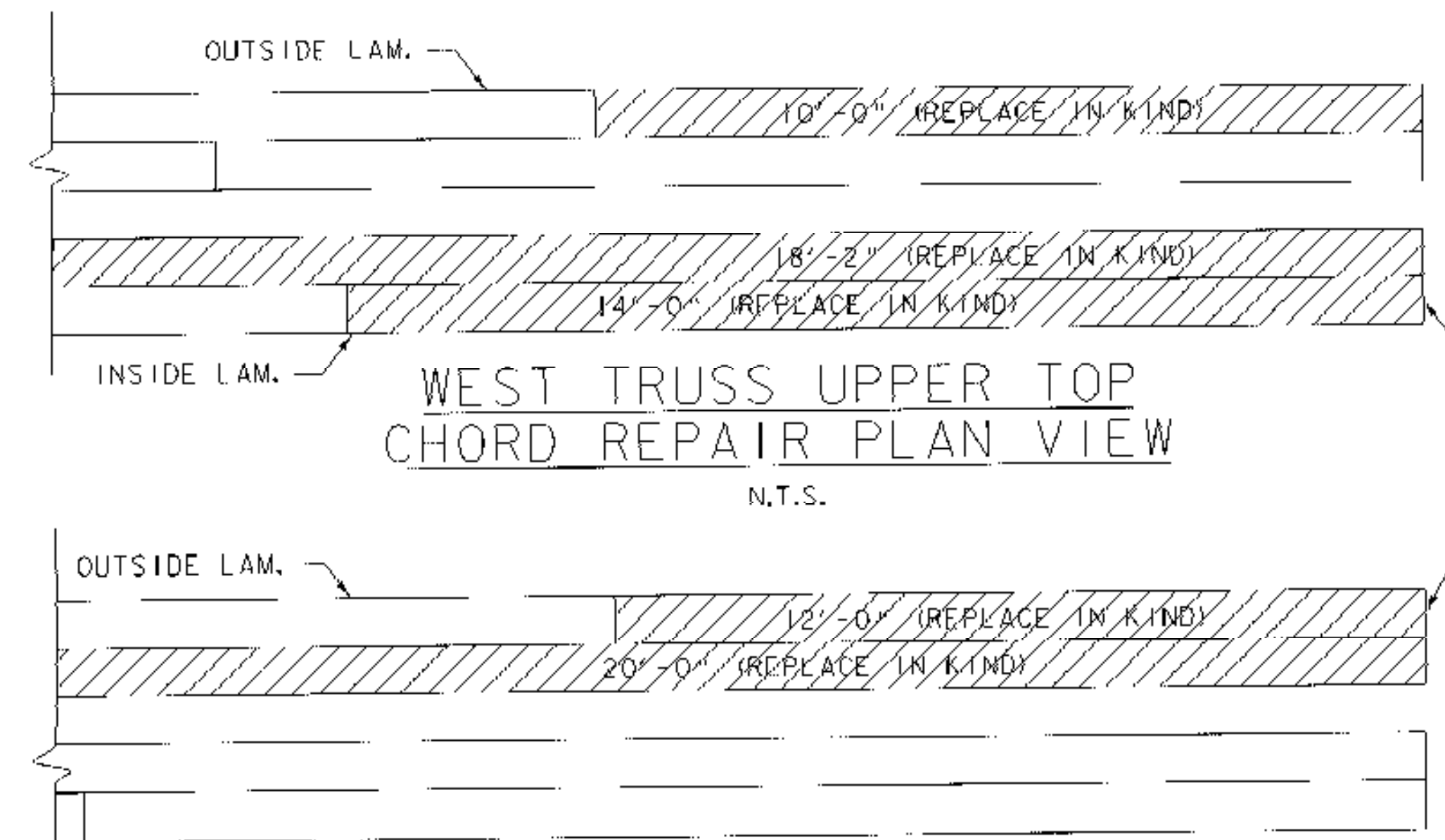
1. ALL NEW STRUCTURAL LUMBER AND TIMBER MEMBERS SHOWN ON THIS SHEET SHALL BE SYP NO. 2 GRADE.
2. NEW BOLSTER BEAMS SHALL BE PRESSURE TREATED.
3. "REPLACE IN KIND" MEANS REPLACEMENT WITH A NEW LAMINATION OF EQUAL CROSS-SECTIONAL DIMENSIONS.



EAST TRUSS UPPER BOT. CHORD REPAIR PLAN VIEW
N.T.S.

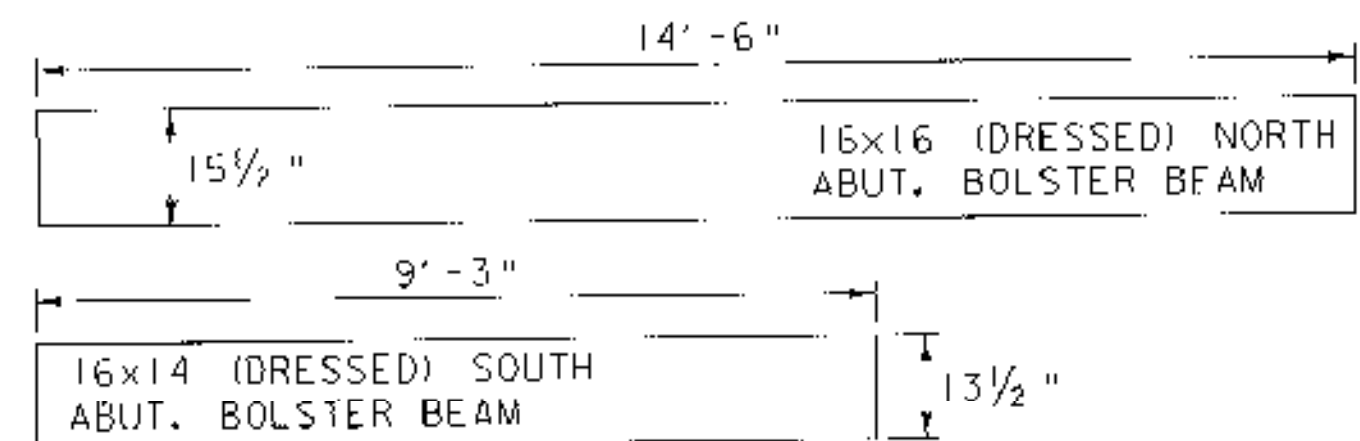


SECTION A-A*
3/4" = 1'-0"
* DETAIL SIMILAR @ NE BOLSTER BEAM LOCATION

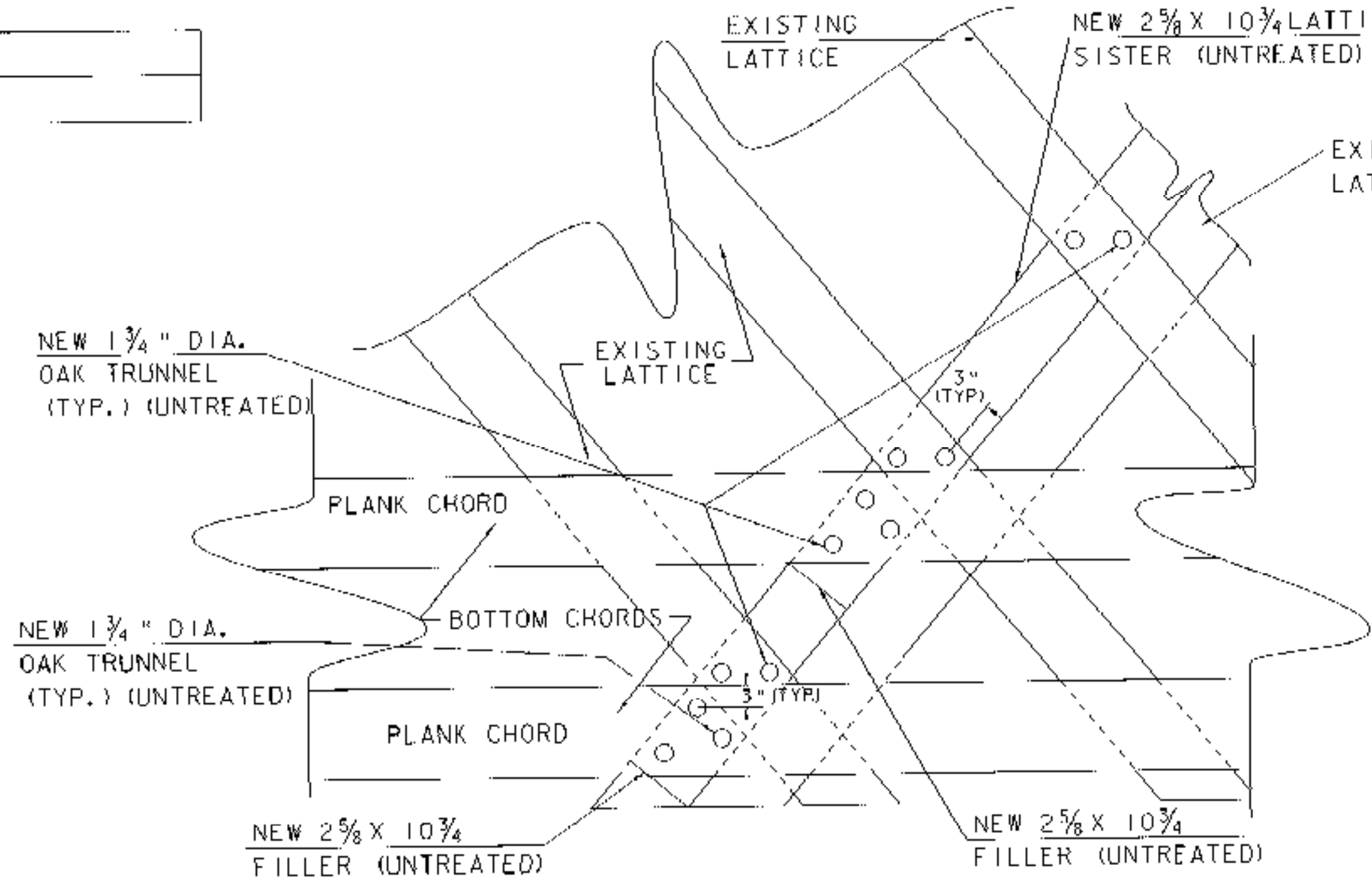


WEST TRUSS UPPER TOP CHORD REPAIR PLAN VIEW
N.T.S.

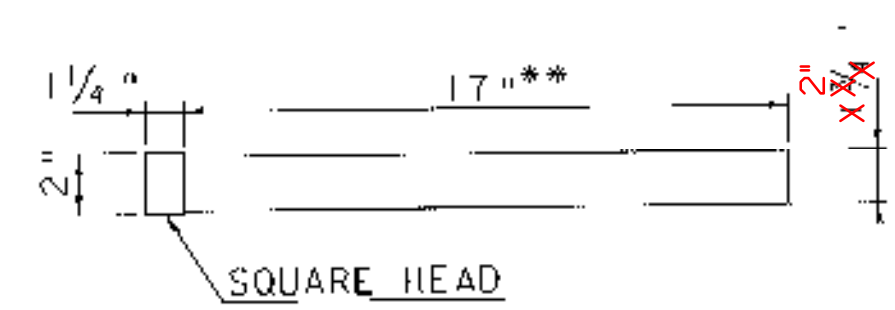
WEST TRUSS LOWER TOP CHORD REPAIR PLAN VIEW
N.T.S.



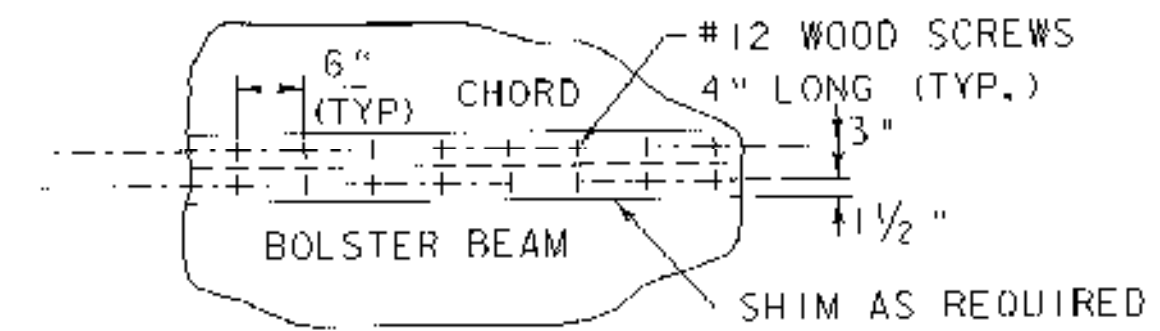
BOLSTER BEAM ELEVATIONS
SCALE: 1/2" = 1'-0"



LATTICE SISTER DETAIL

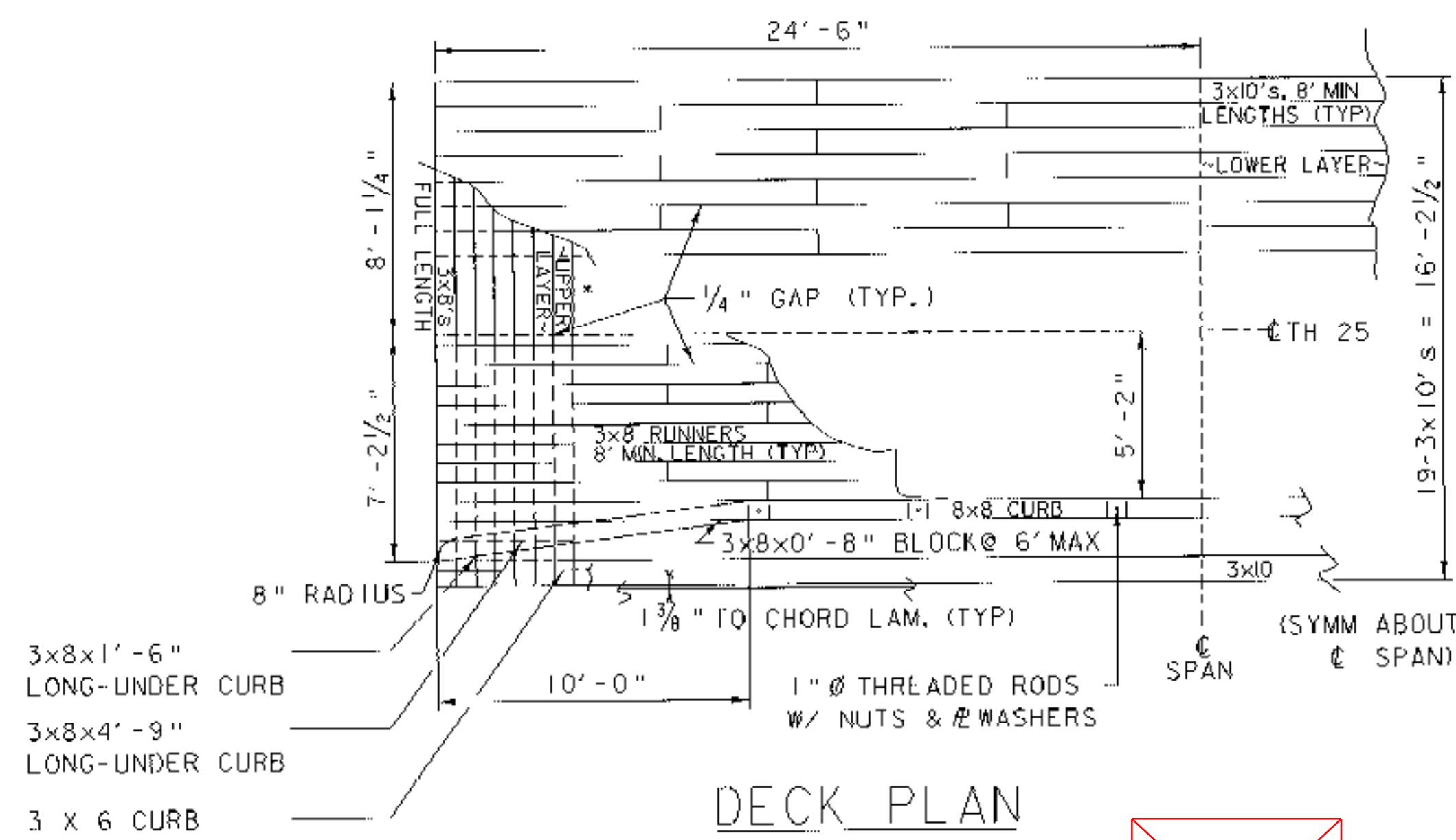


TRUNNEL DETAIL
N. T. S.

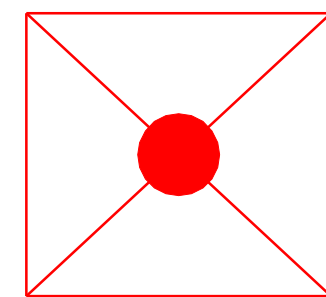


ELEVATION B-B
3/4" = 1'-0"

PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148d1	CHECKED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	SHEET 17 OF 33
DESIGNED BY: J. WEAVER	
CONSTRUCTION DETAIL SHEET 2	

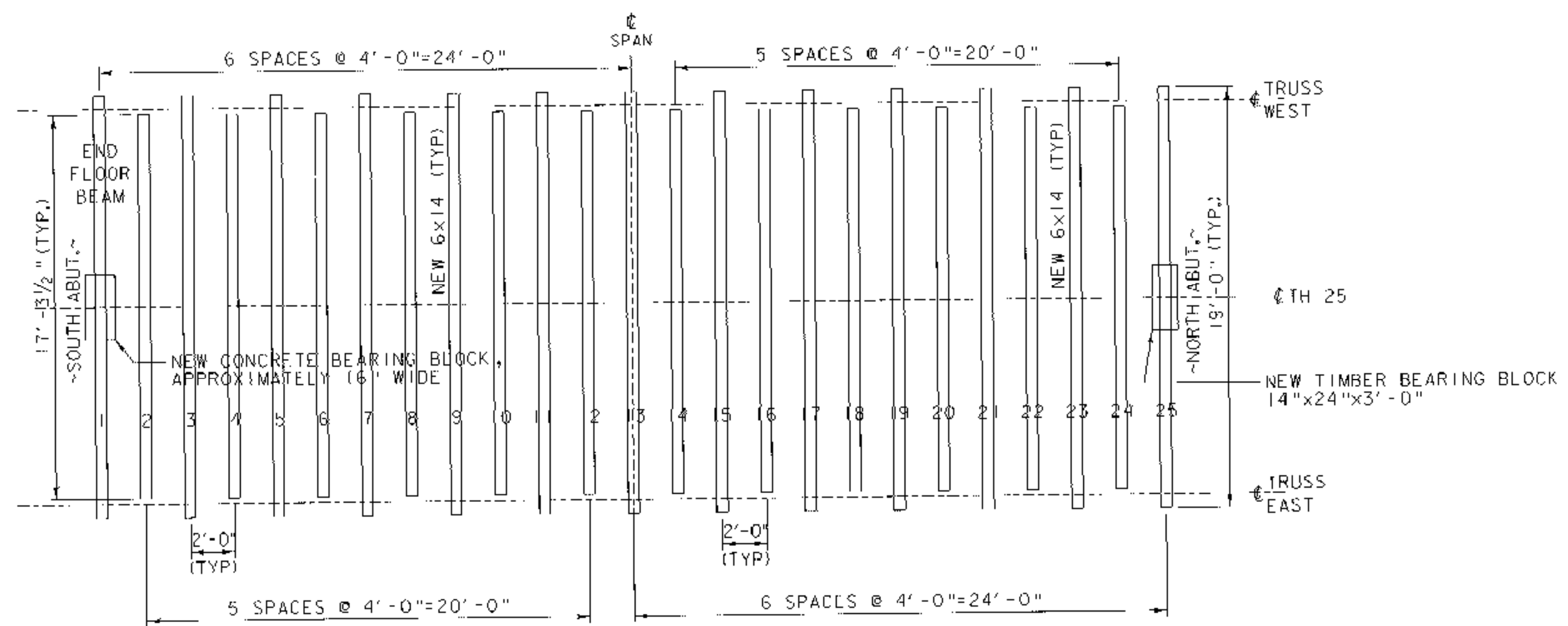


DECK PLAN
SCALE: 1/4" = 1'-0"

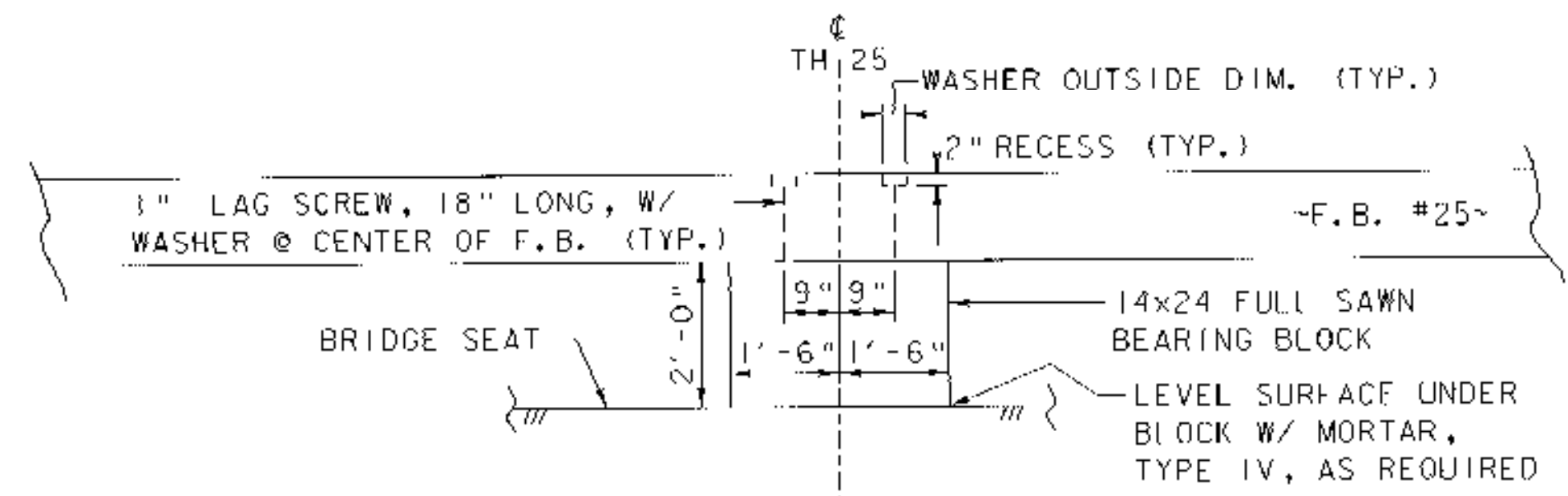


1 1/16" HOLE
R WASHER FOR CURBS, TOP, & BOTTOM

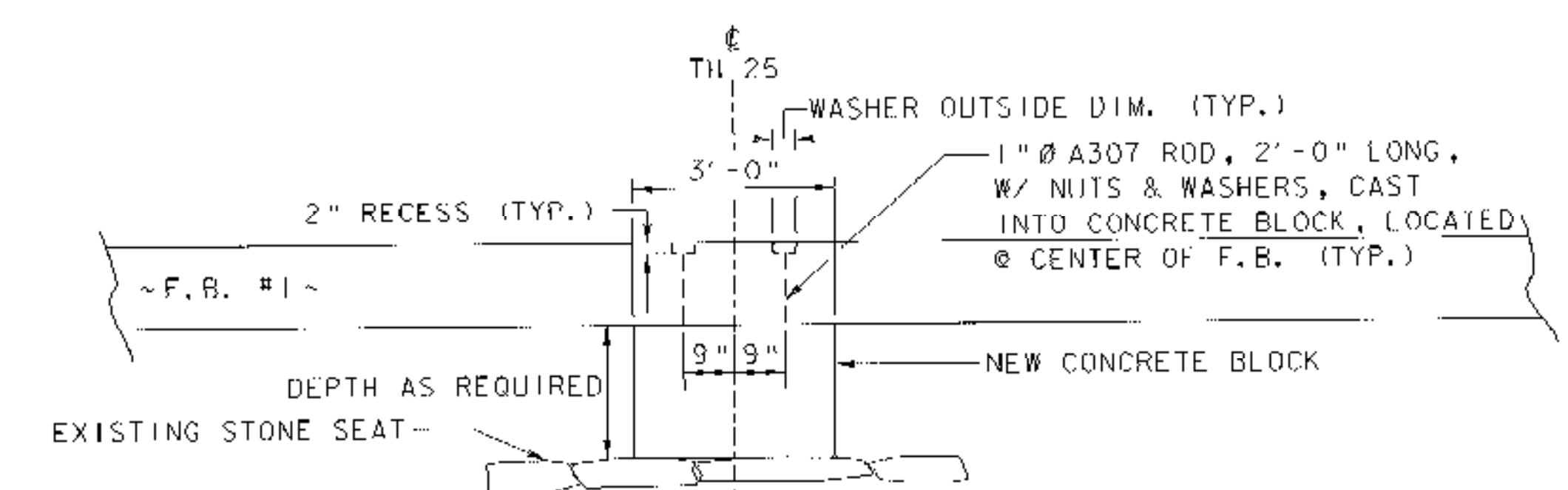
1. ALL NEW FLOOR BEAMS SHALL BE SYP NO. 1 GRADE STRUCTURAL LUMBER AND TIMBER.
2. ALL OTHER NEW STRUCTURAL LUMBER AND TIMBER SHOWN ON THIS SHEET SHALL BE SYP NO. 2 GRADE, EXCEPT 3 X 8 RUNNERS AND SHIMS, WHICH SHALL BE NO. 3 GRADE OAK OR BETTER.
3. ALL LUMBER AND TIMBER SHOWN ON THIS SHEET, EXCEPT OAK RUNNERS AND SHIMS, SHALL BE PRESSURE TREATFD.
4. PLANK FASTENERS: THE 3X10 LONGITUDINAL DECK PLANKS SHALL BE FASTENED TO EVERY FLOOR BEAM AND AT THE ENDS WITH TWO 40d COMMON WIRE NAILS, LOCATED @ 2" (PLANK FACE) EDGE DISTANCE. THE 3X8 TRANSVERSE DECK PLANKS SHALL BE FASTENED TO EVERY OTHER 3X10 PLANK AND AT THE ENDS WITH TWO 40d COMMON WIRE NAILS LOCATED @ 1 1/2" (PLANK FACE) EDGE DISTANCE. THE 3X8 RUNNER PLANKS SHALL BE FASTENED TO EVERY OTHER 3X10 TRANSVERSE PLANK AND AT THE ENDS WITH TWO 40d COMMON WIRE NAILS LOCATED @ 1 1/2" (PLANK FACE) EDGE DISTANCE.



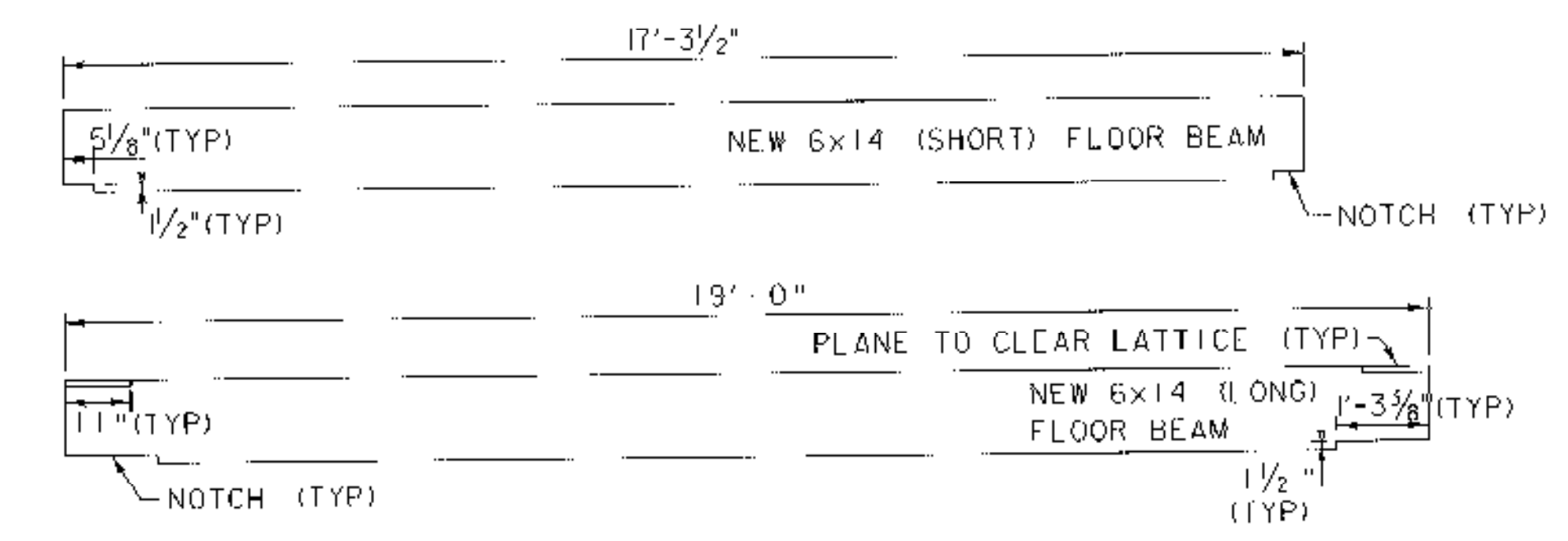
FLOOR BEAM PLAN
SCALE: 1/4" = 1'-0"



ELEVATION @ NORTH ABUTMENT
BEARING BLOCK
SCALE: 1/2" = 1'-0"

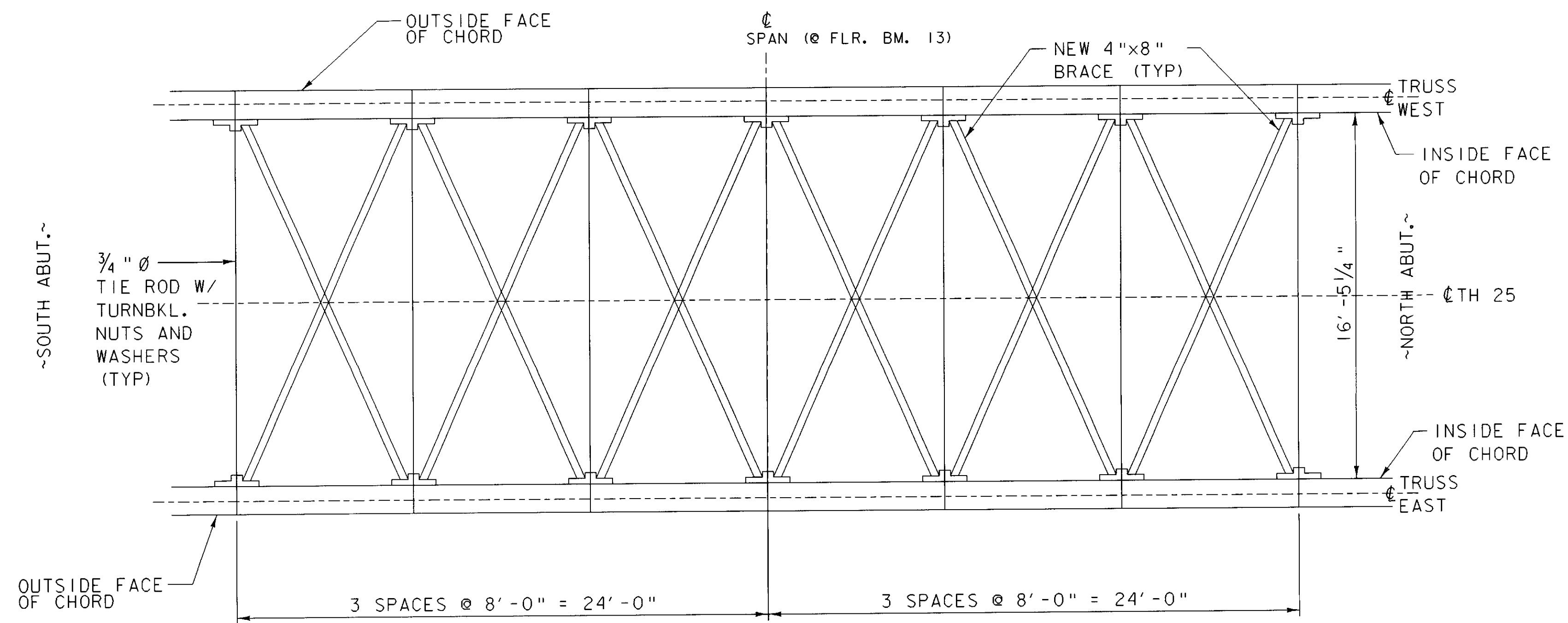


ELEVATION @ SOUTH ABUTMENT
BEARING BLOCK
SCALE: 1/2" = 1'-0"

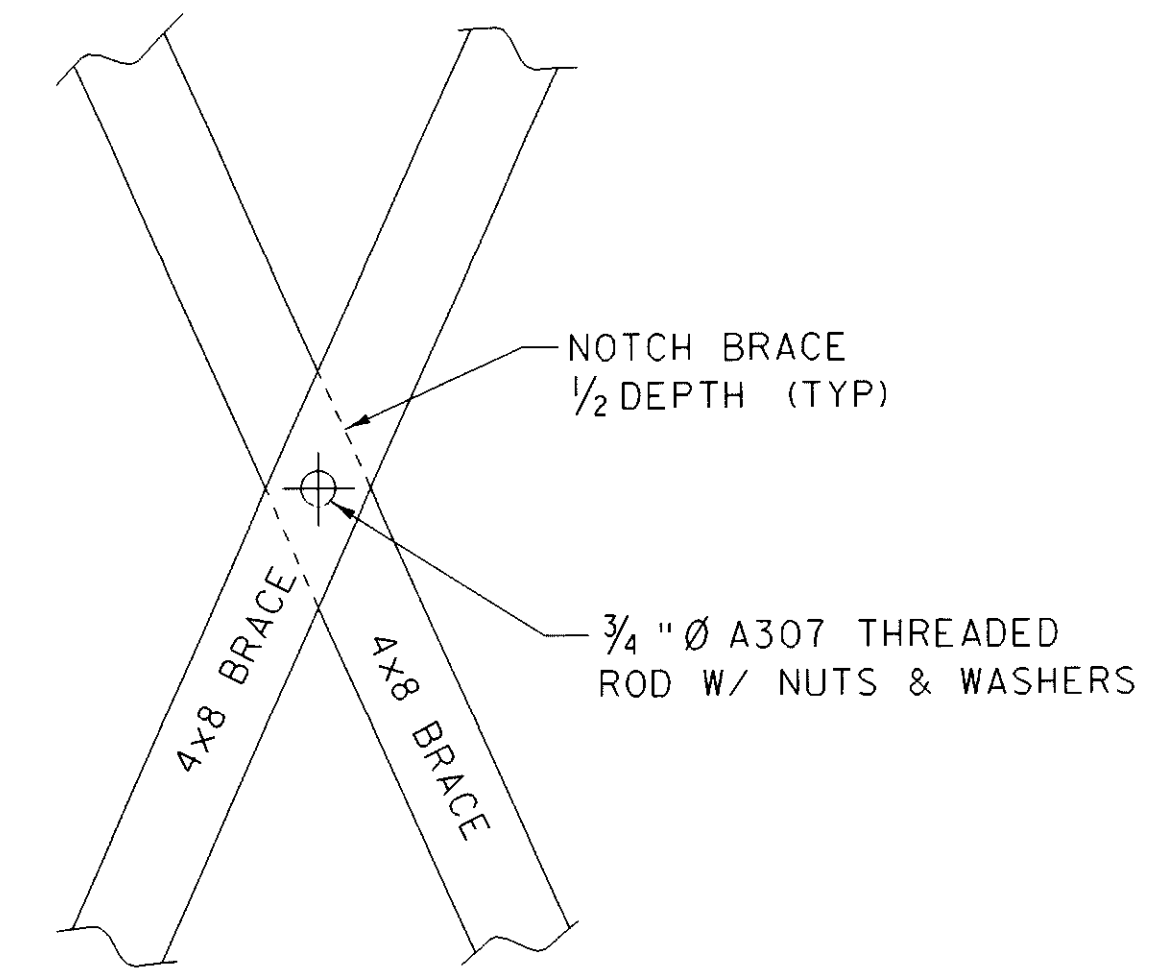


FLOOR BEAM ELEVATIONS
SCALE: 1/2" = 1'-0"

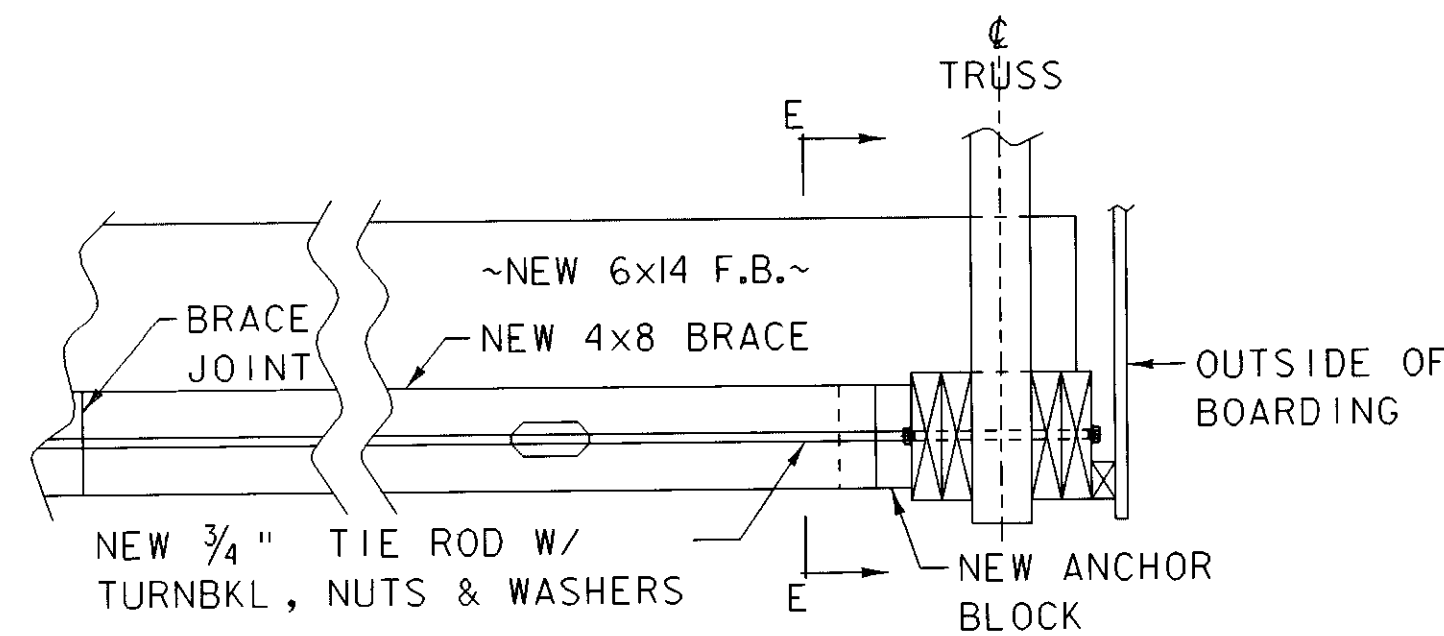
PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148.dtl	CHECKED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	CONSTRUCTION DETAIL SHEET 3
DESIGNED BY: J. WEAVER	SHEET 18 OF 33



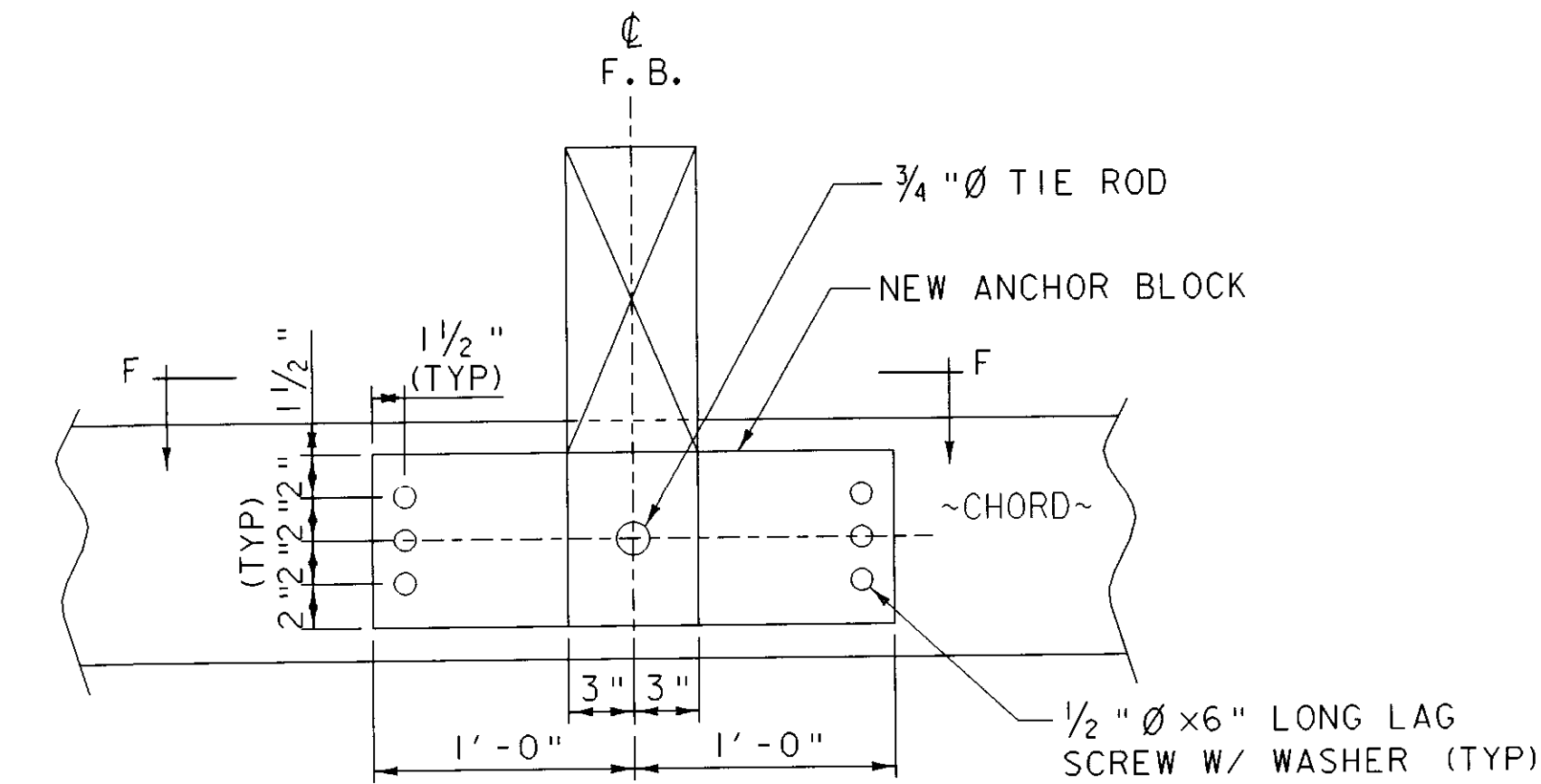
BOTTOM BRACING PLAN
SCALE: 1/4" = 1'-0"



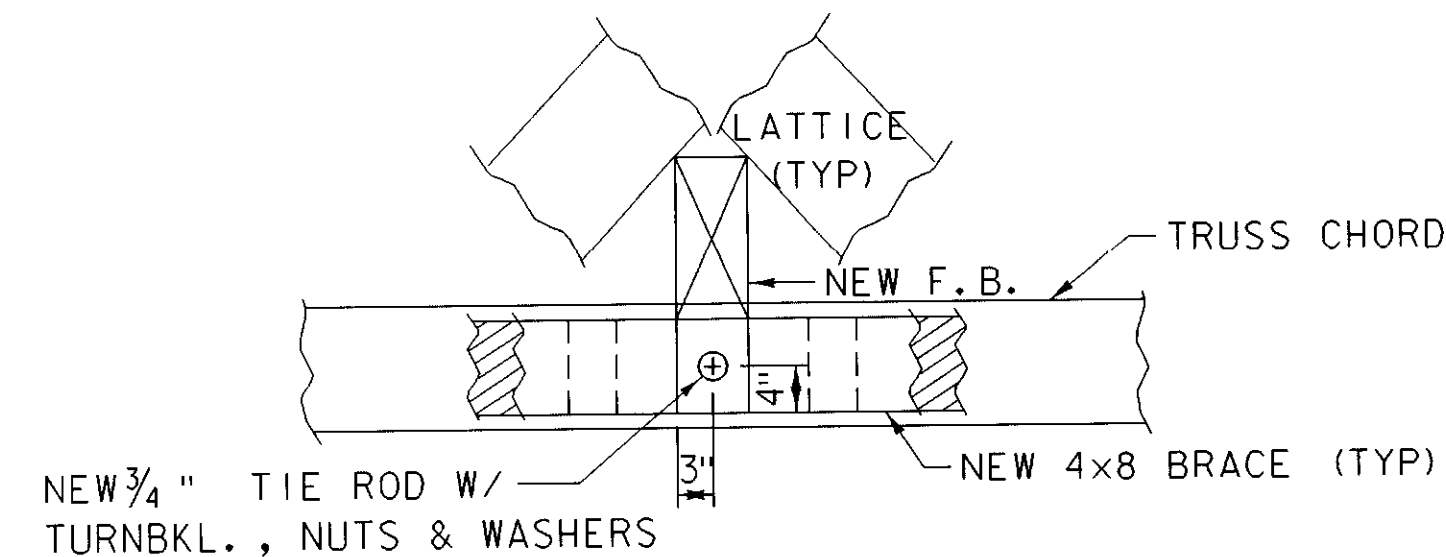
PLAN @ BRACE INTERSECTION
SCALE: 1/2" = 1'-0"



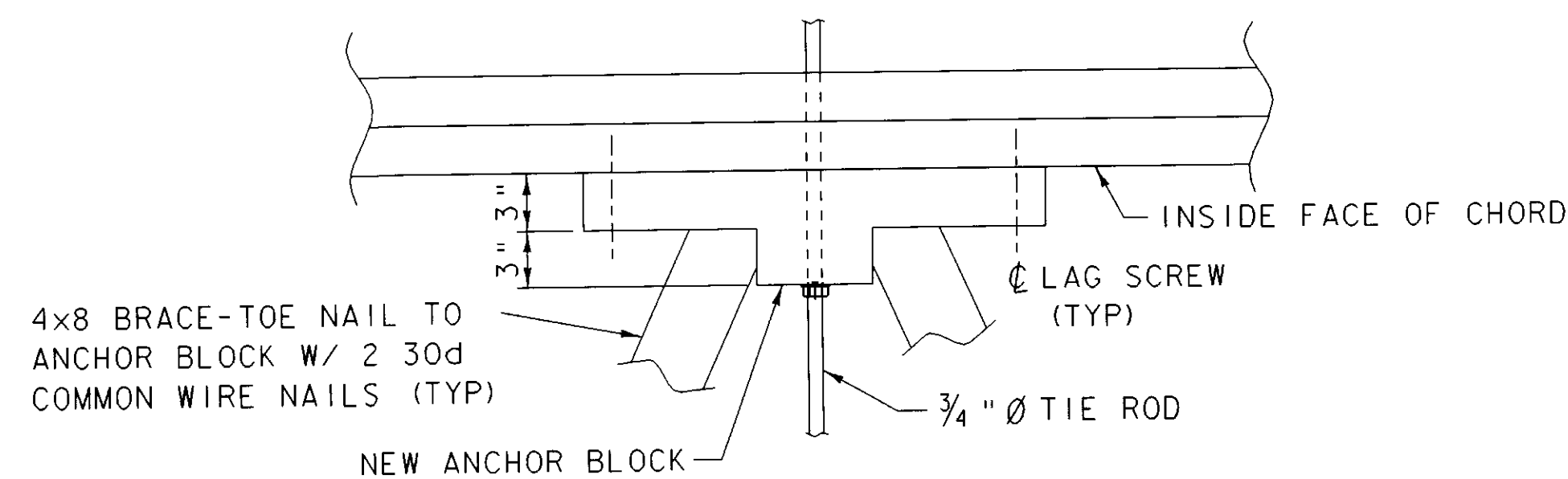
ELEVATION @ TIE ROD
SCALE: 3/4" = 1'-0"



**ELEVATION @ NEW ANCHOR BLOCK
(BRACES NOT SHOWN)**
SCALE: 1/2" = 1'-0"



SECTION E-E
SCALE: 3/4" = 1'-0"



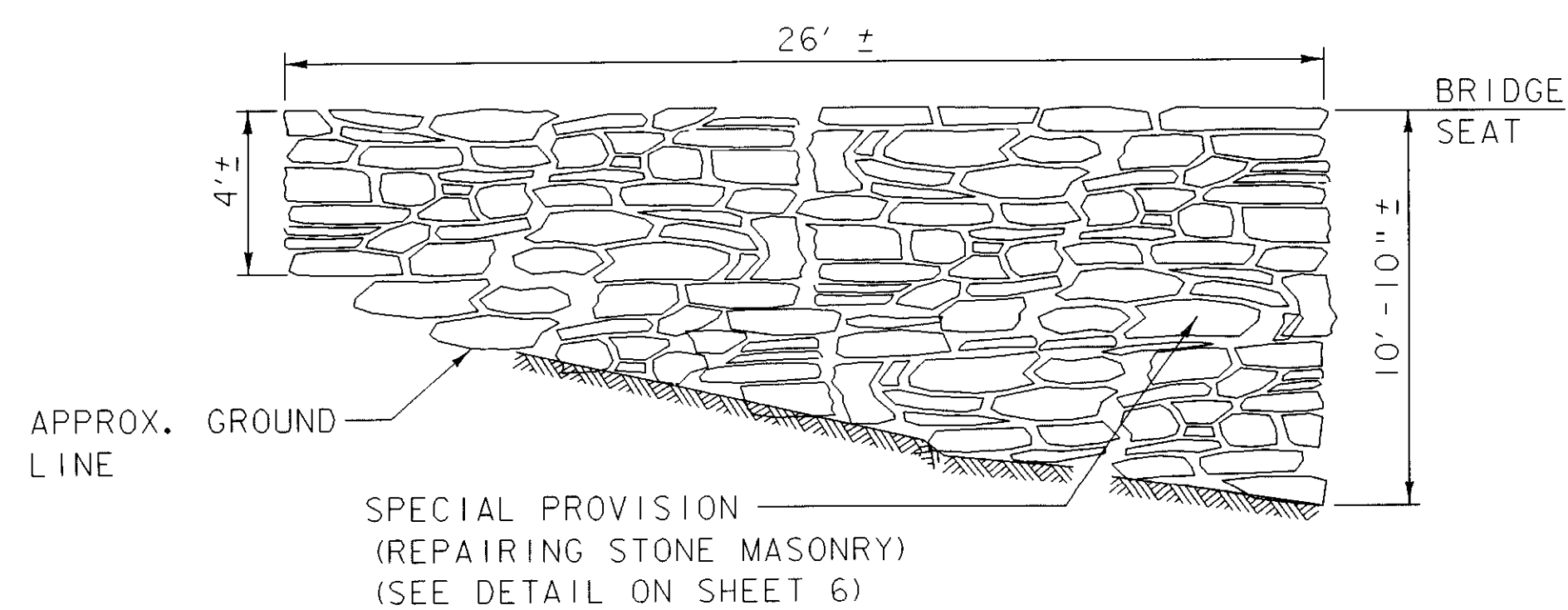
**SECTION F-F
(FLOOR BEAM NOT SHOWN)**
SCALE: 1/2" = 1'-0"

ALL NEW STRUCTURAL LUMBER AND TIMBER MEMBERS SHOWN ON THIS SHEET SHALL BE SYP NO. 2 GRADE AND PRESSURE TREATED.

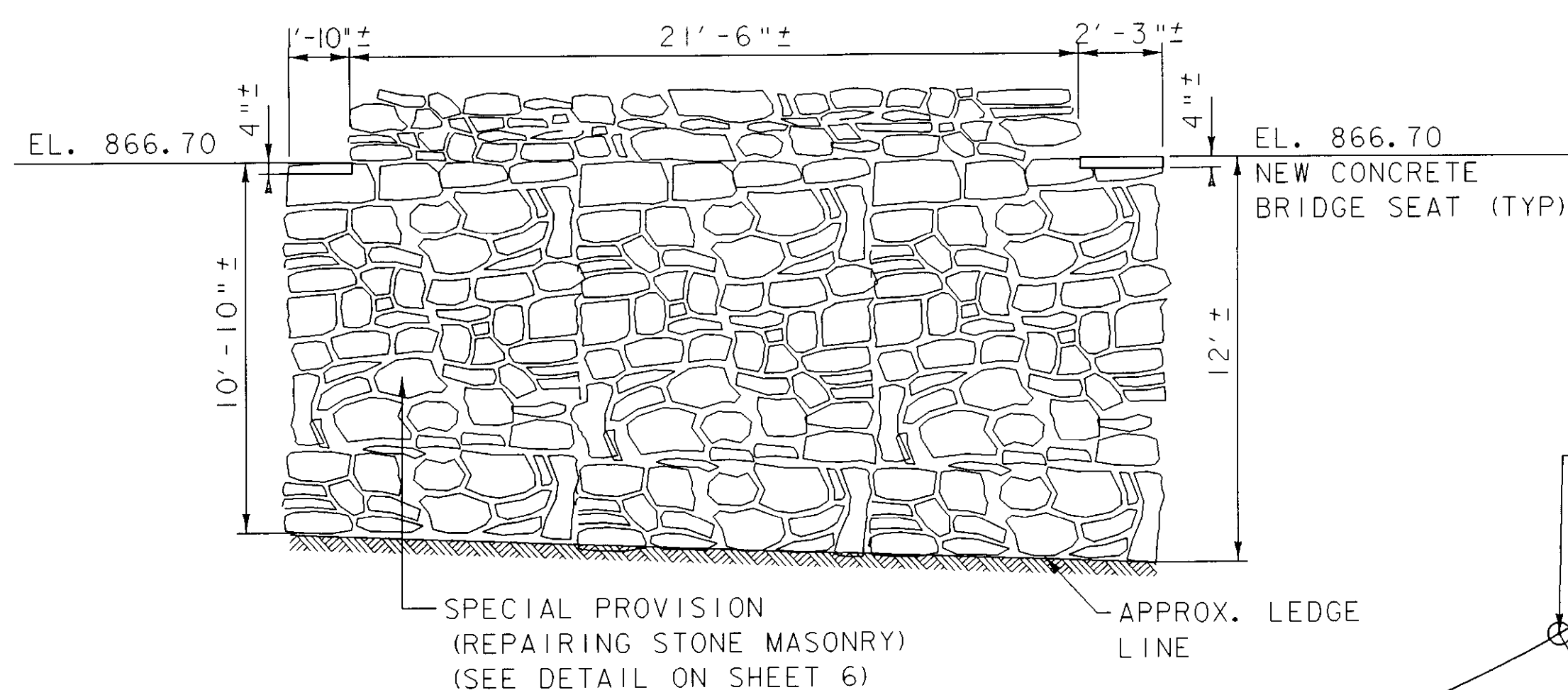
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)

FILE NAME: s04j148d11
PROJECT LEADER: J. WEAVER
DESIGNED BY: J. WEAVER
CONSTRUCTION DETAIL SHEET 4

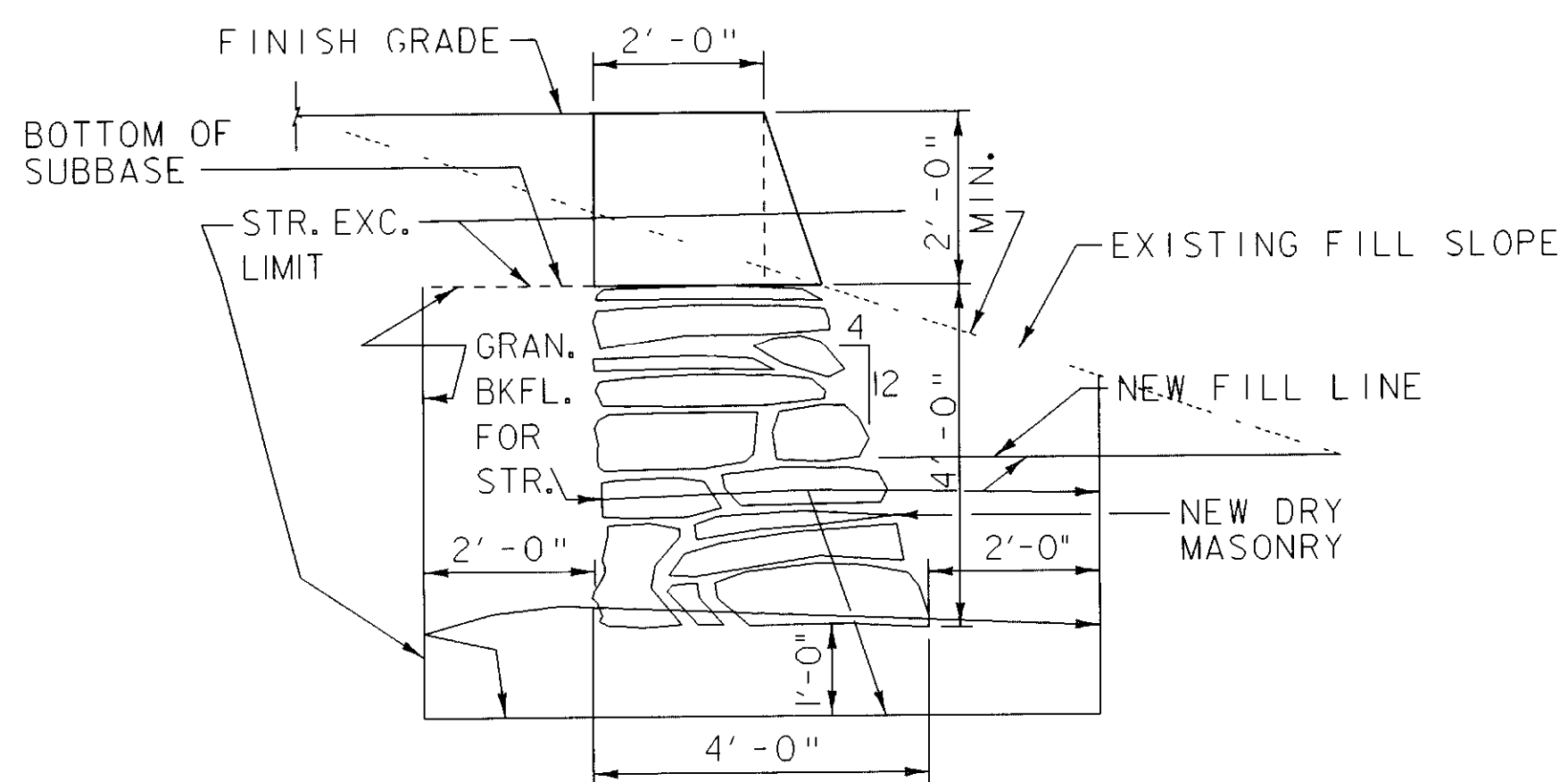
PLOT DATE: 21-MAY-2008
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER
SHEET 19 OF 33



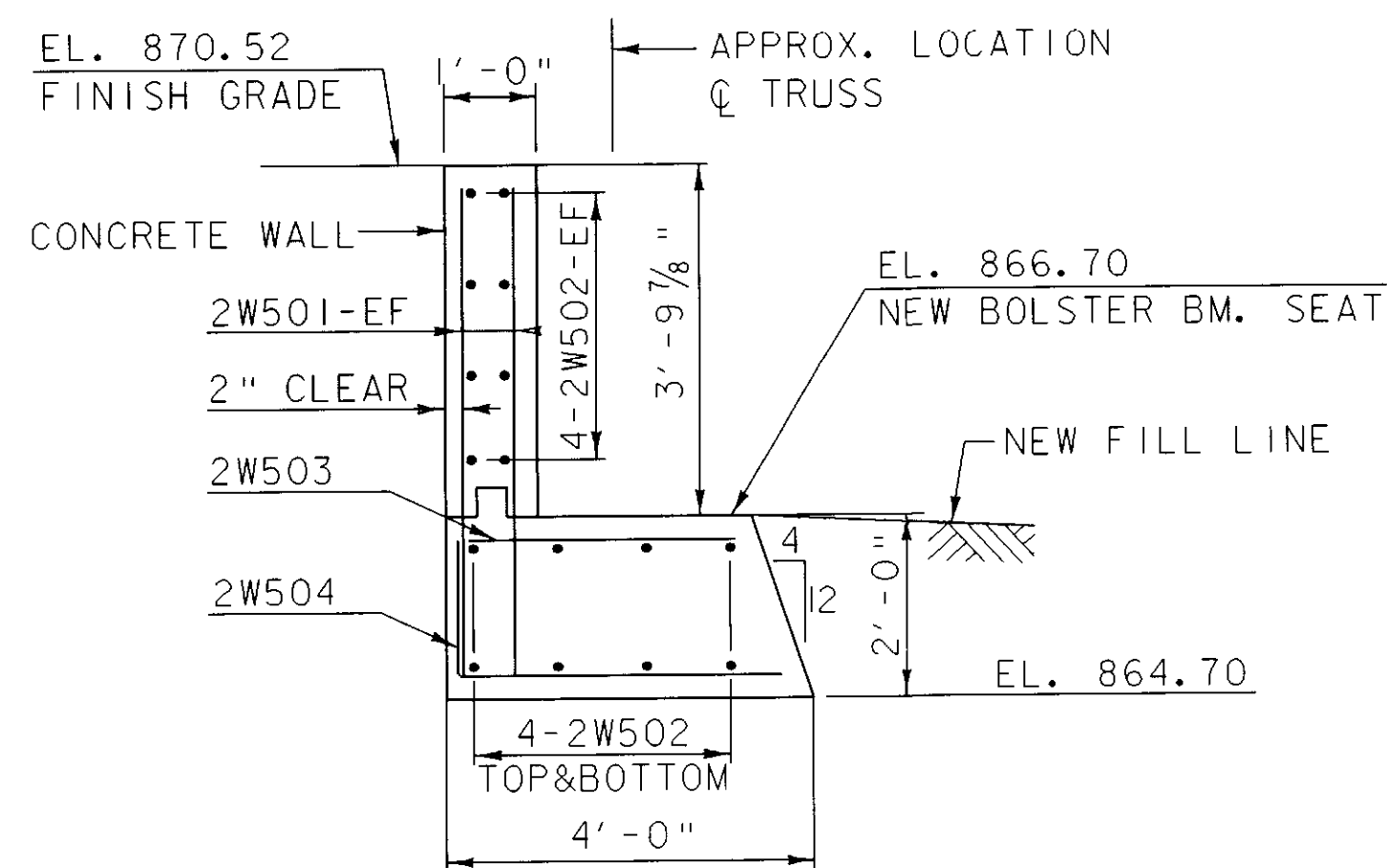
ELEVATION LOWER SOUTHEAST WING
SCALE: 1/4" = 1'-0"



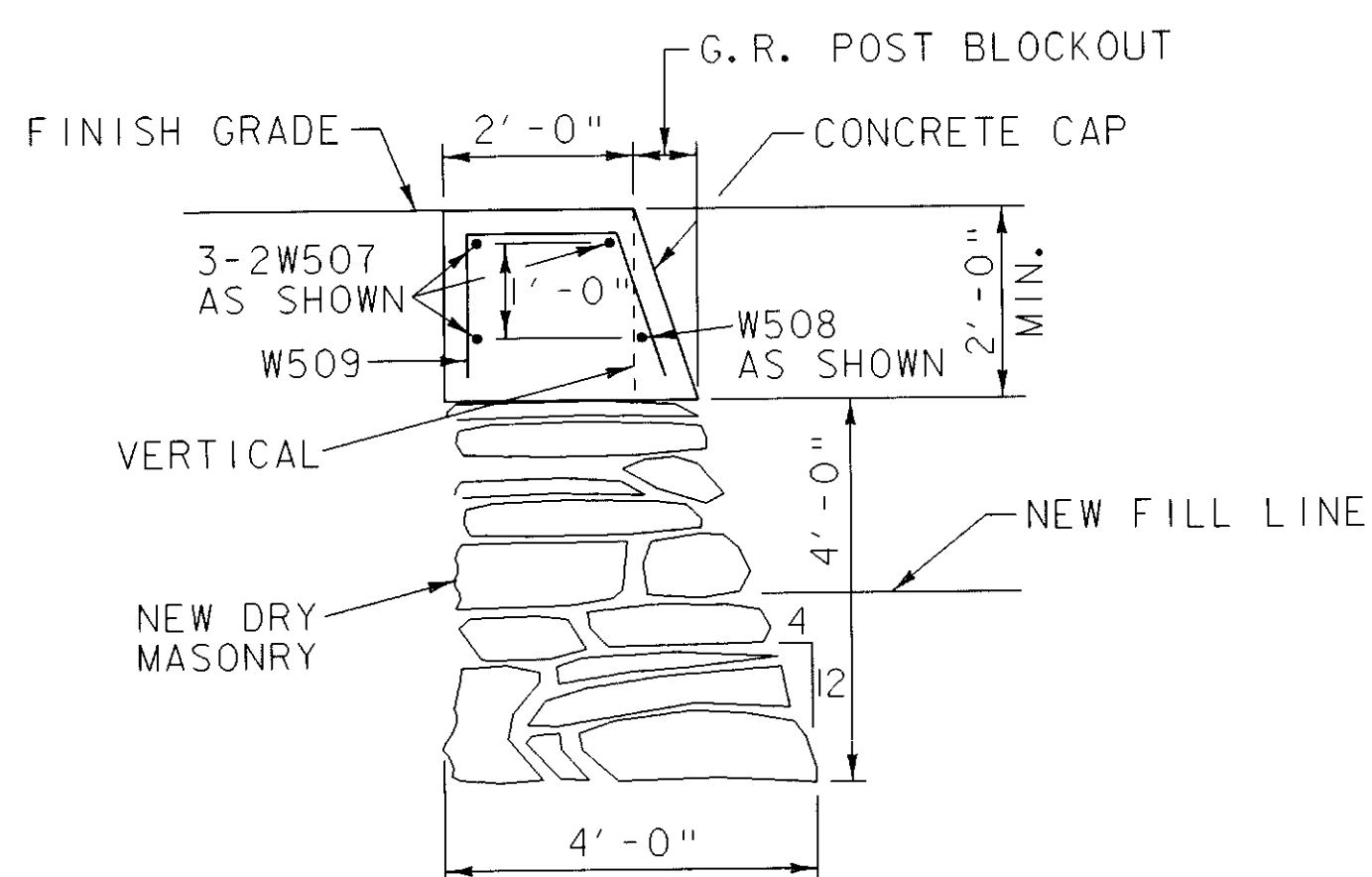
ELEVATION SOUTH ABUTMENT
SCALE: 1/4" = 1'-0"



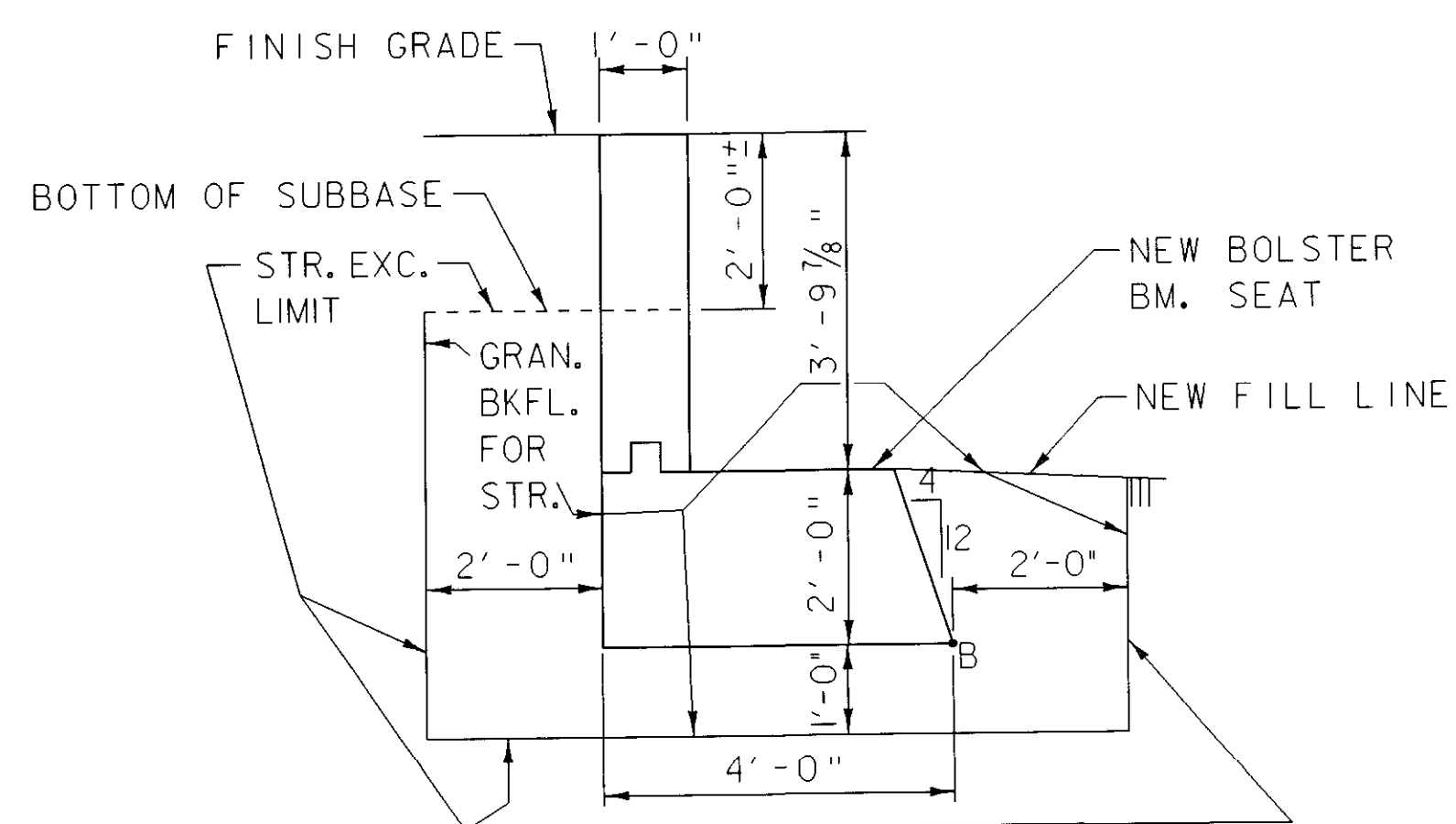
TYPICAL EARTHWORK SECTION UPPER S.E. WING
SCALE: 1/2" = 1'-0"



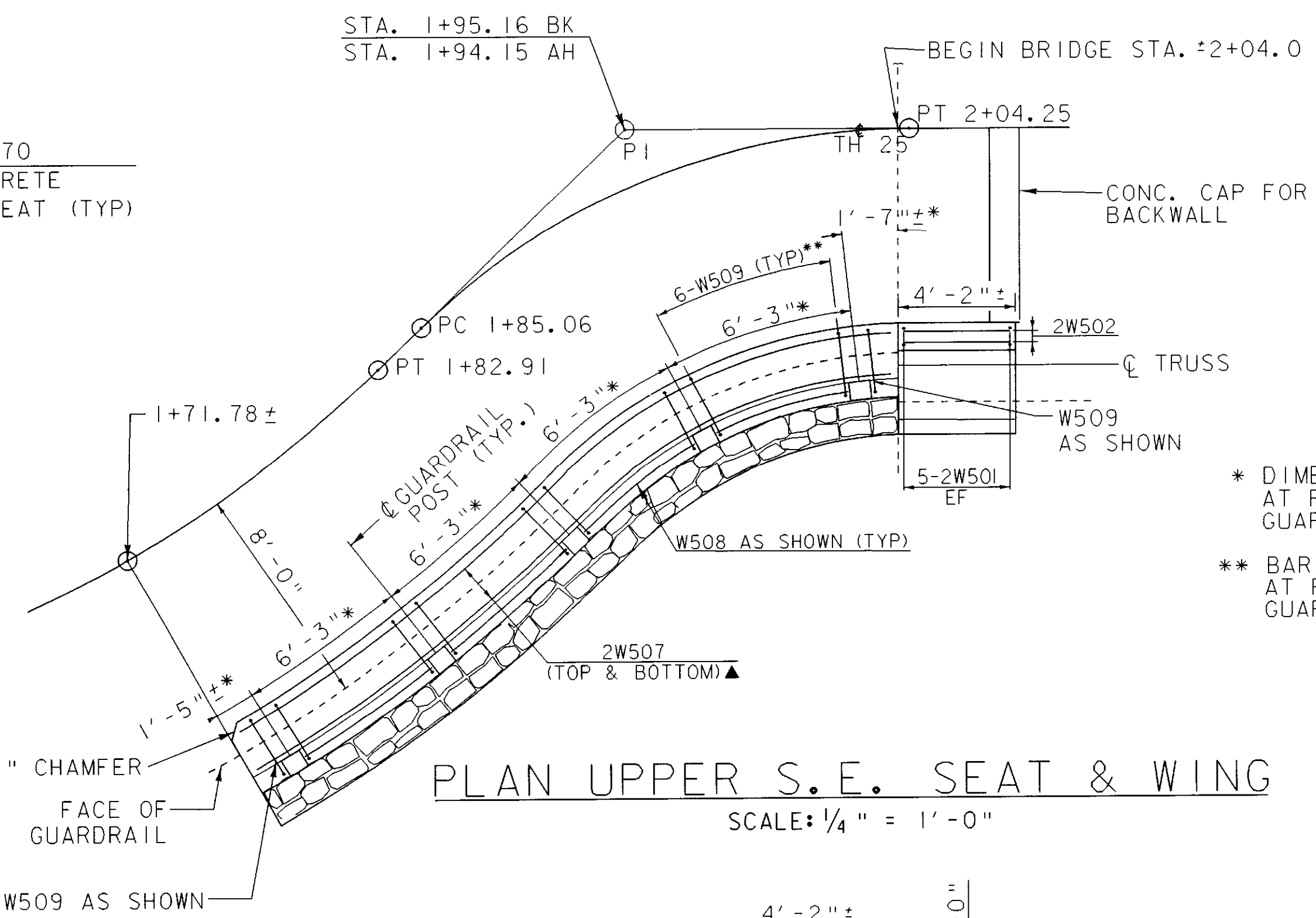
TYPICAL SECTION S.E. BRIDGE SEAT
SCALE: 1/2" = 1'-0"



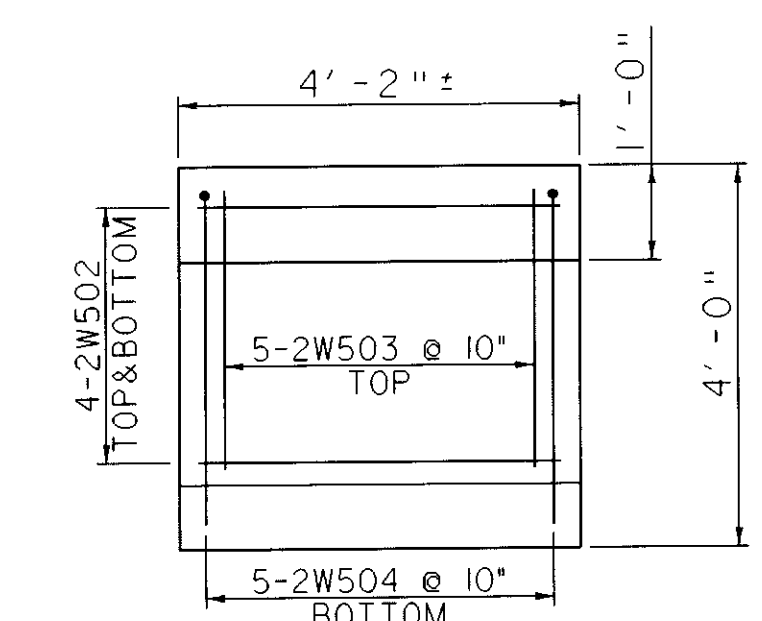
TYPICAL SECTION UPPER S.E. WING
SCALE: 1/2" = 1'-0"



TYPICAL EARTHWORK SECTION S.E. BRIDGE SEAT
SCALE: 1/2" = 1'-0"

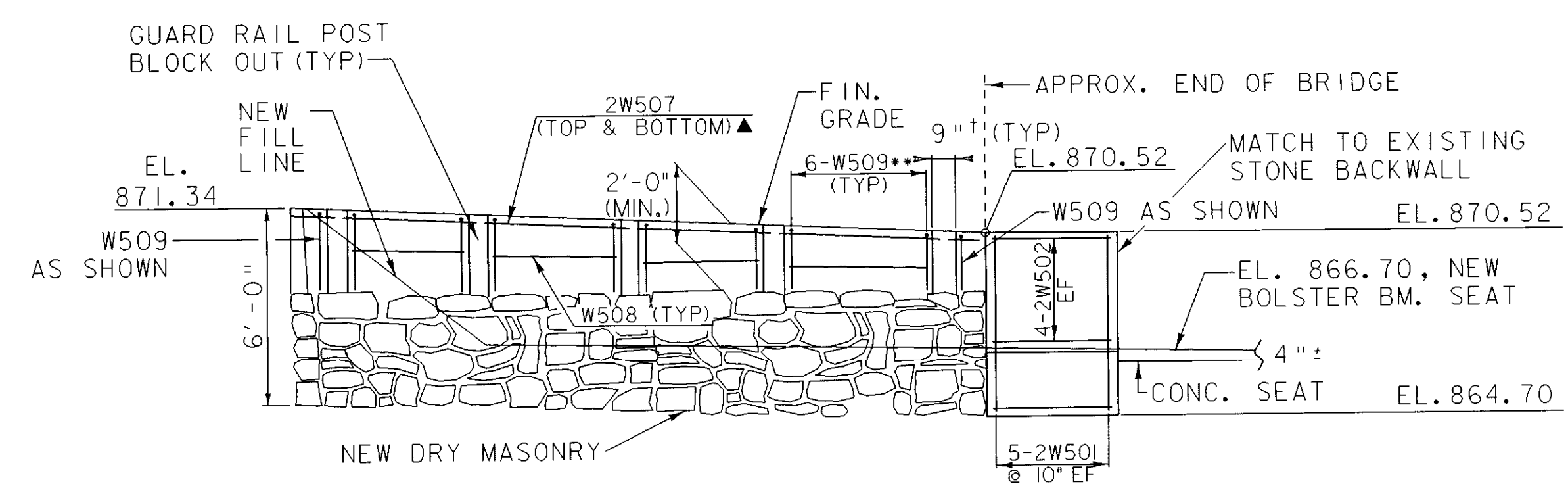


PLAN UPPER S.E. SEAT & WING
SCALE: 1/4" = 1'-0"



PLAN S.E. SEAT FOOTING
SCALE: 1/2" = 1'-0"
NOTE: SEE TYPICAL SECTION AND S.E. ELEVATION VIEW FOR ADDITIONAL REBAR INFO. NOT SHOWN.

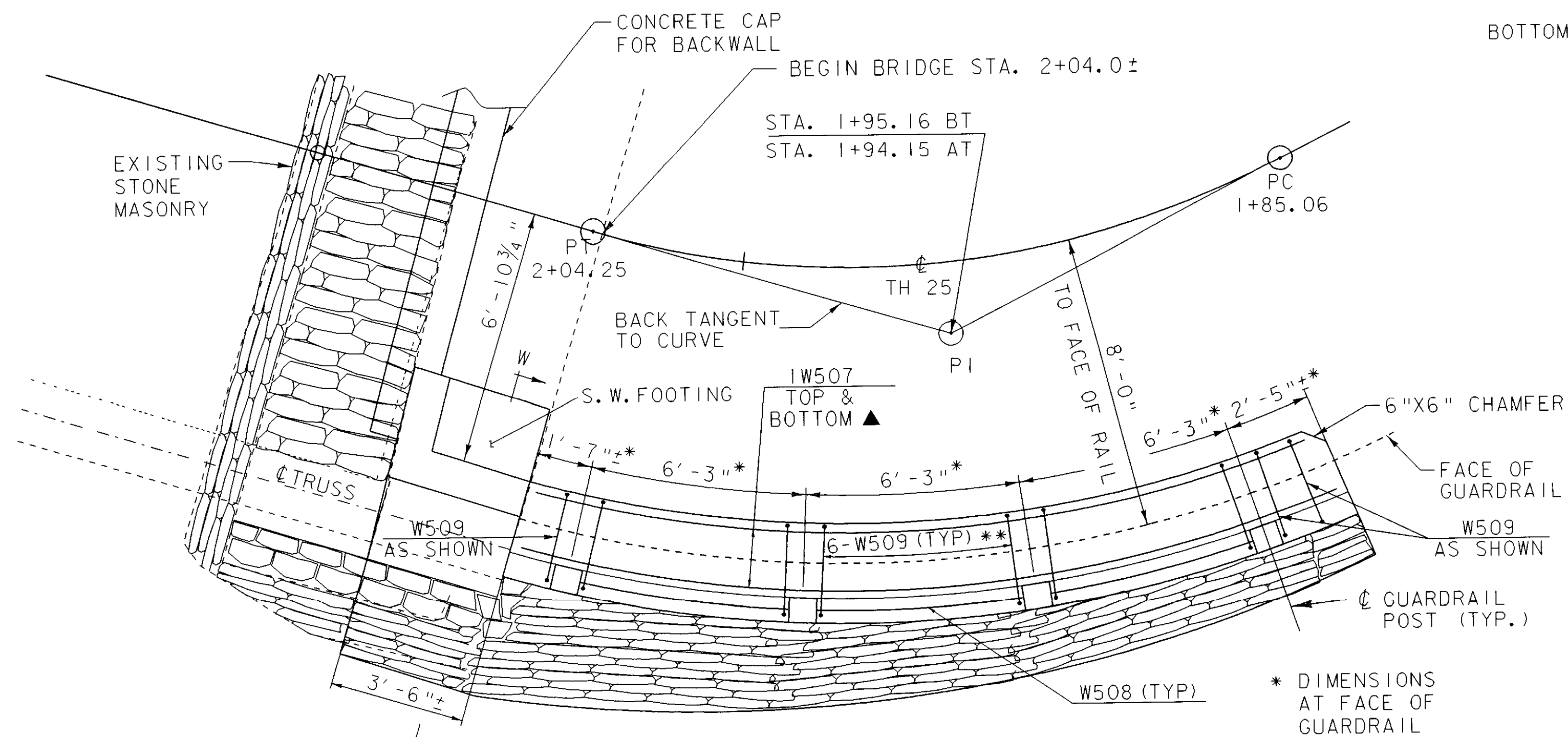
ALL BARS ARE #5s @ 12" UNLESS OTHERWISE NOTED
▲ DENOTES BARS TO BE CUT IN FIELD
MINIMUM CLEARANCE: 3" FROM ALL SURFACES, EXCEPT WHERE NOTED



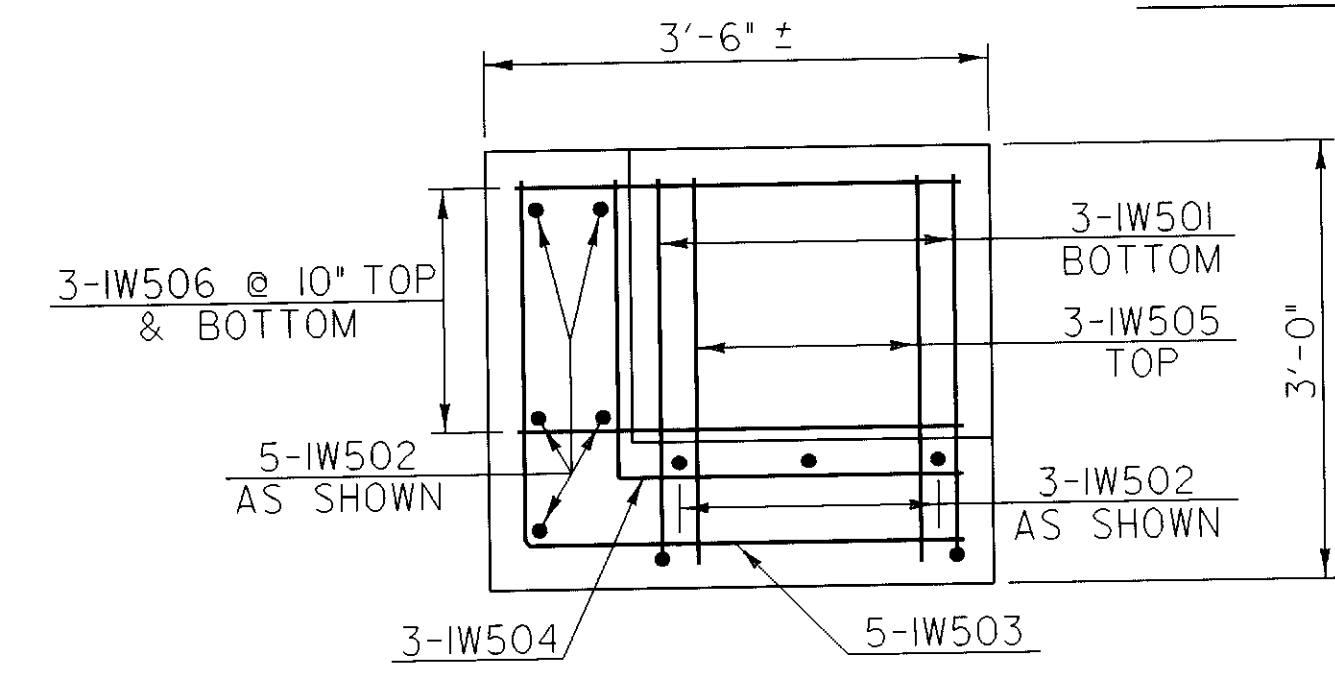
ELEVATION UPPER S.E. SEAT AND WING
SCALE: 1/4" = 1'-0"

† ALONG FACE OF WALL
** BAR SPACING AT FACE OF GUARDRAIL

PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148d1	DESIGNED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	CHECKED BY: J. WEAVER
CONSTRUCTION DETAIL SHEET 5	SHEET 20 OF 33



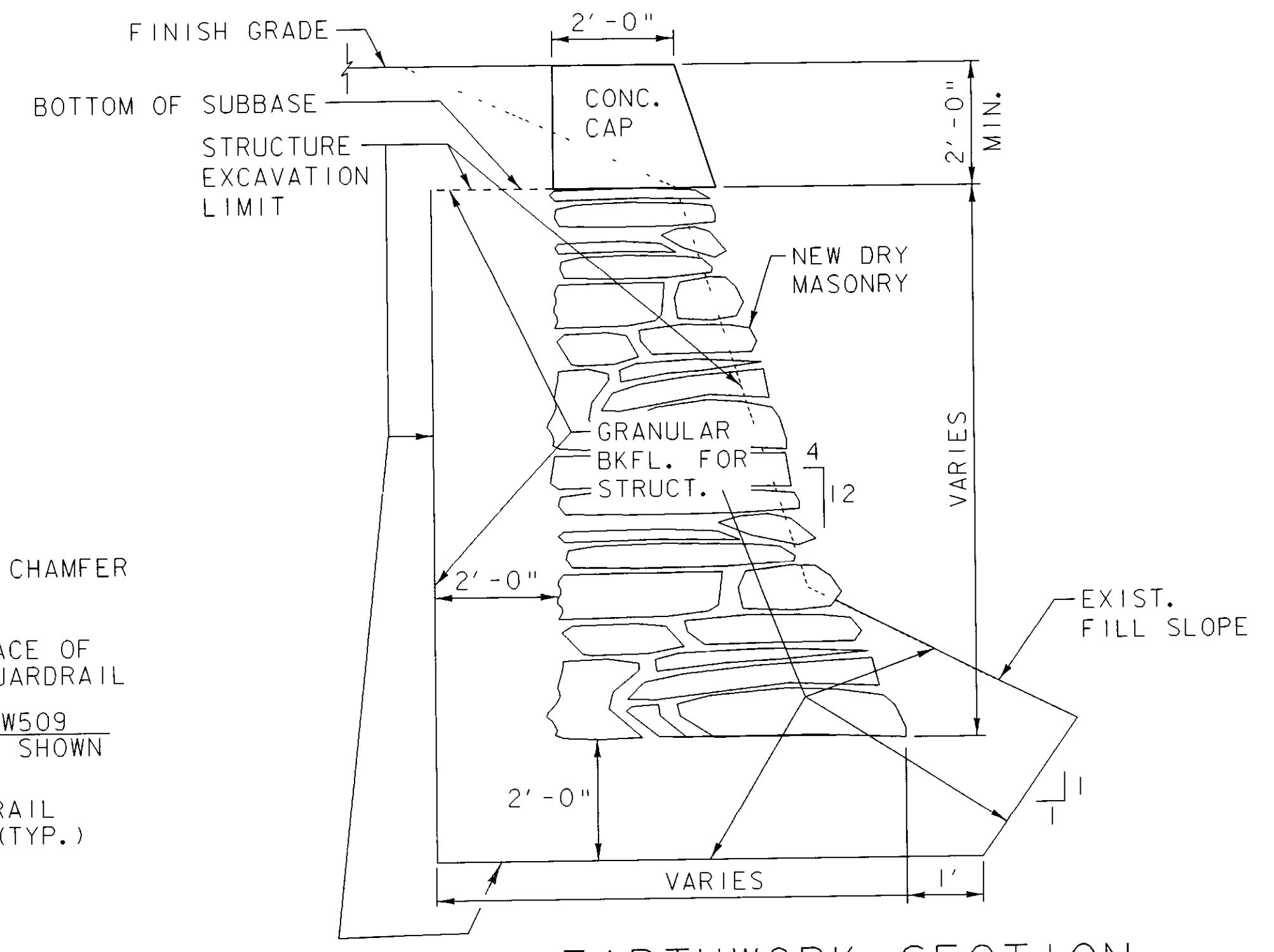
PLAN SOUTHWEST WING
 SCALE: 3/8" = 1'-0"



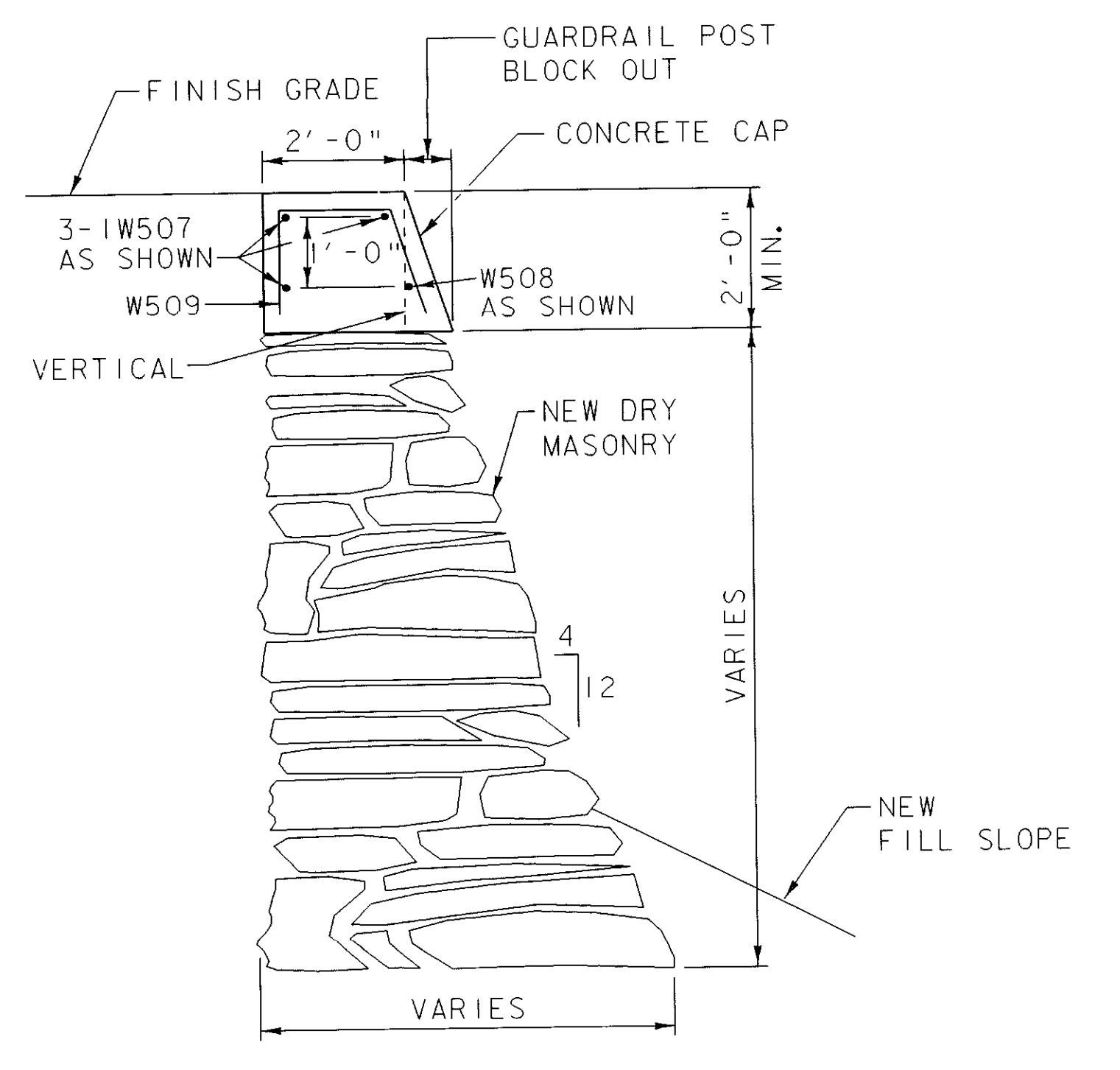
PLAN S.W. FOOTING
 SCALE: 3/4" = 1'-0"
 NOTE: SEE SECTION W-W FOR ADDITIONAL REBAR INFO.

* DIMENSIONS AT FACE OF GUARDRAIL
 ** BAR SPACING AT FACE OF GUARDRAIL

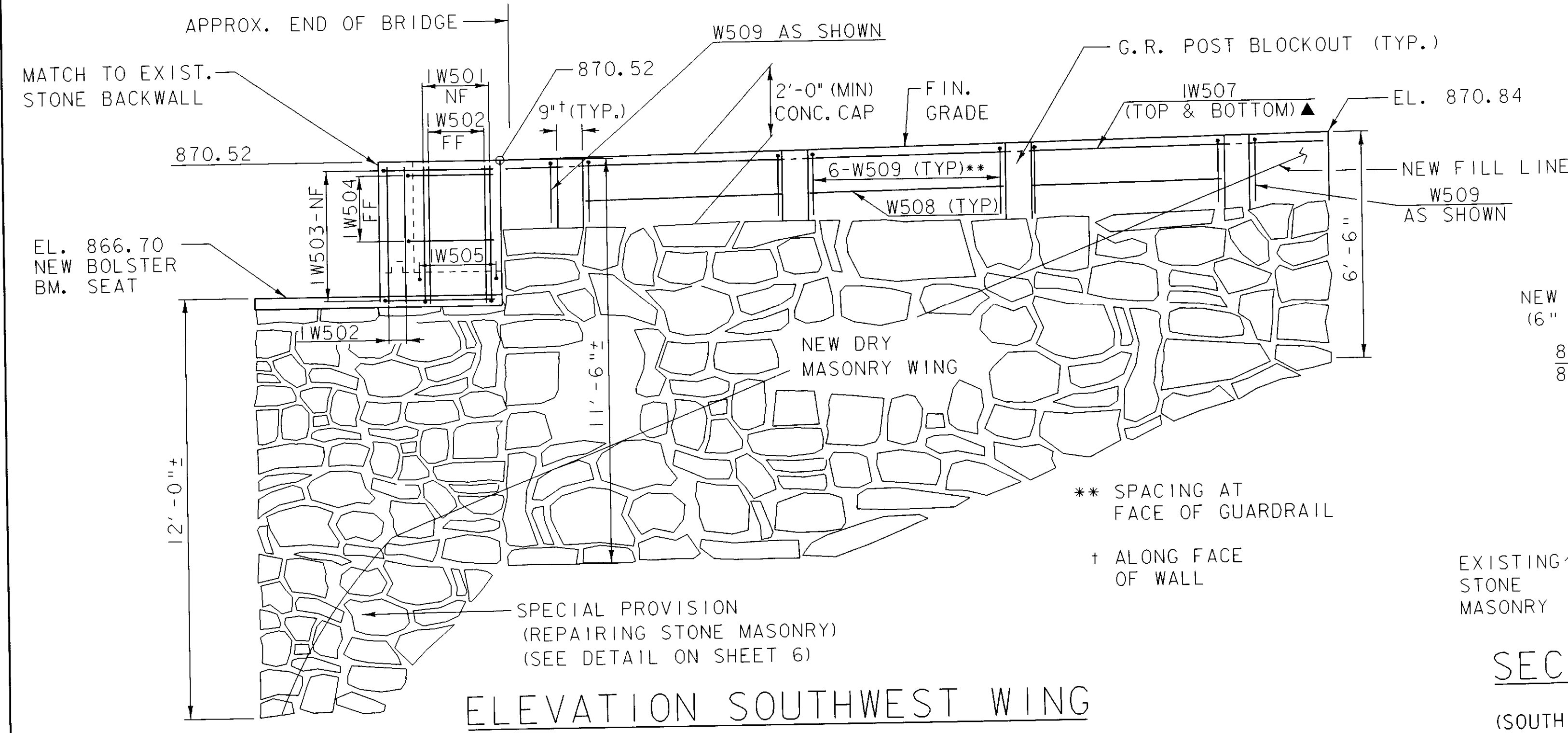
ALL BARS ARE #5s @ 12" UNLESS OTHERWISE NOTED
 ▲ DENOTES BARS TO BE CUT IN FIELD
 MINIMUM CLEARANCE: 3" FROM ALL SURFACES, EXCEPT WHERE NOTED



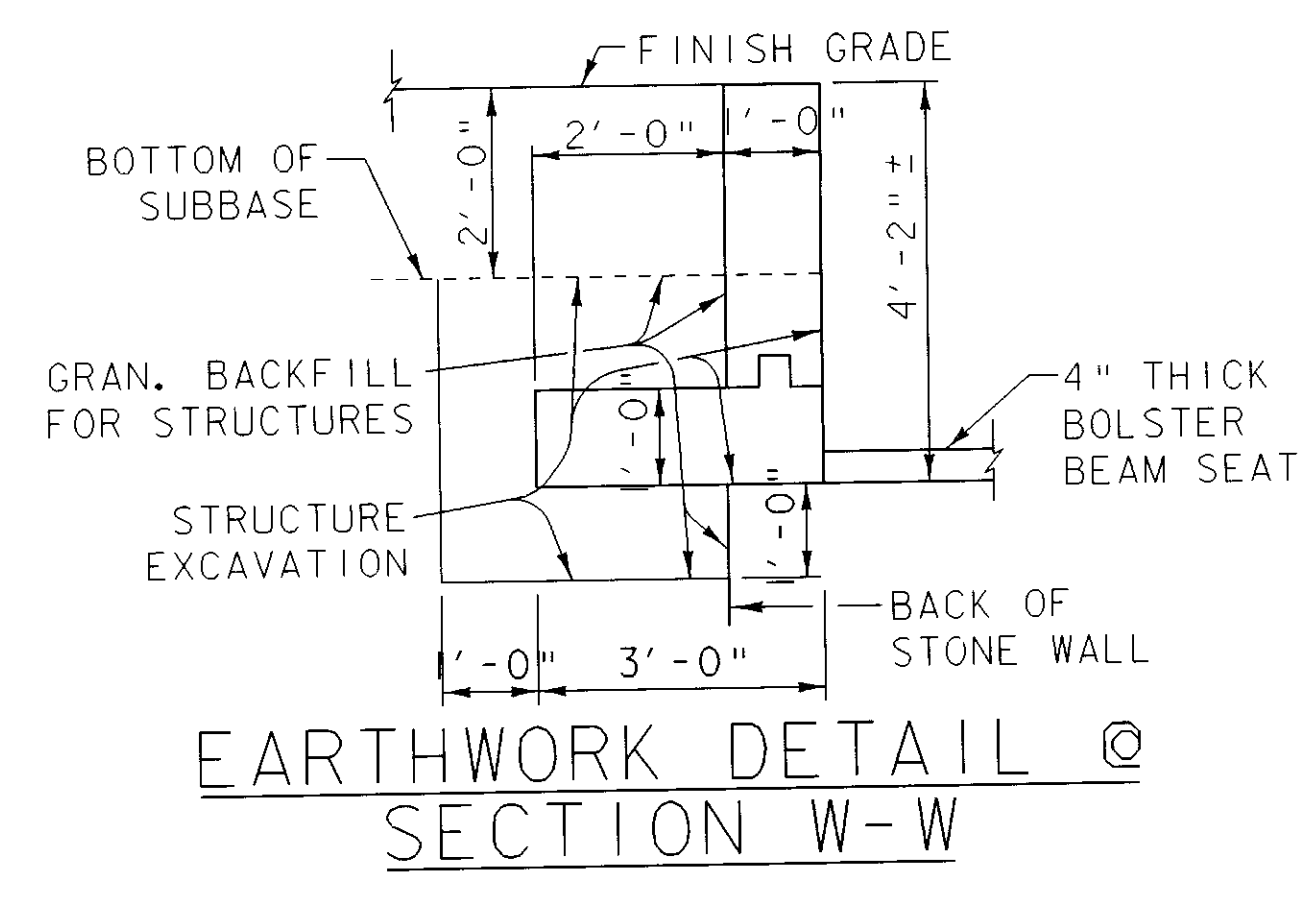
TYPICAL EARTHWORK SECTION NEW STONE WING S.W.
 SCALE: 1/2" = 1'-0"



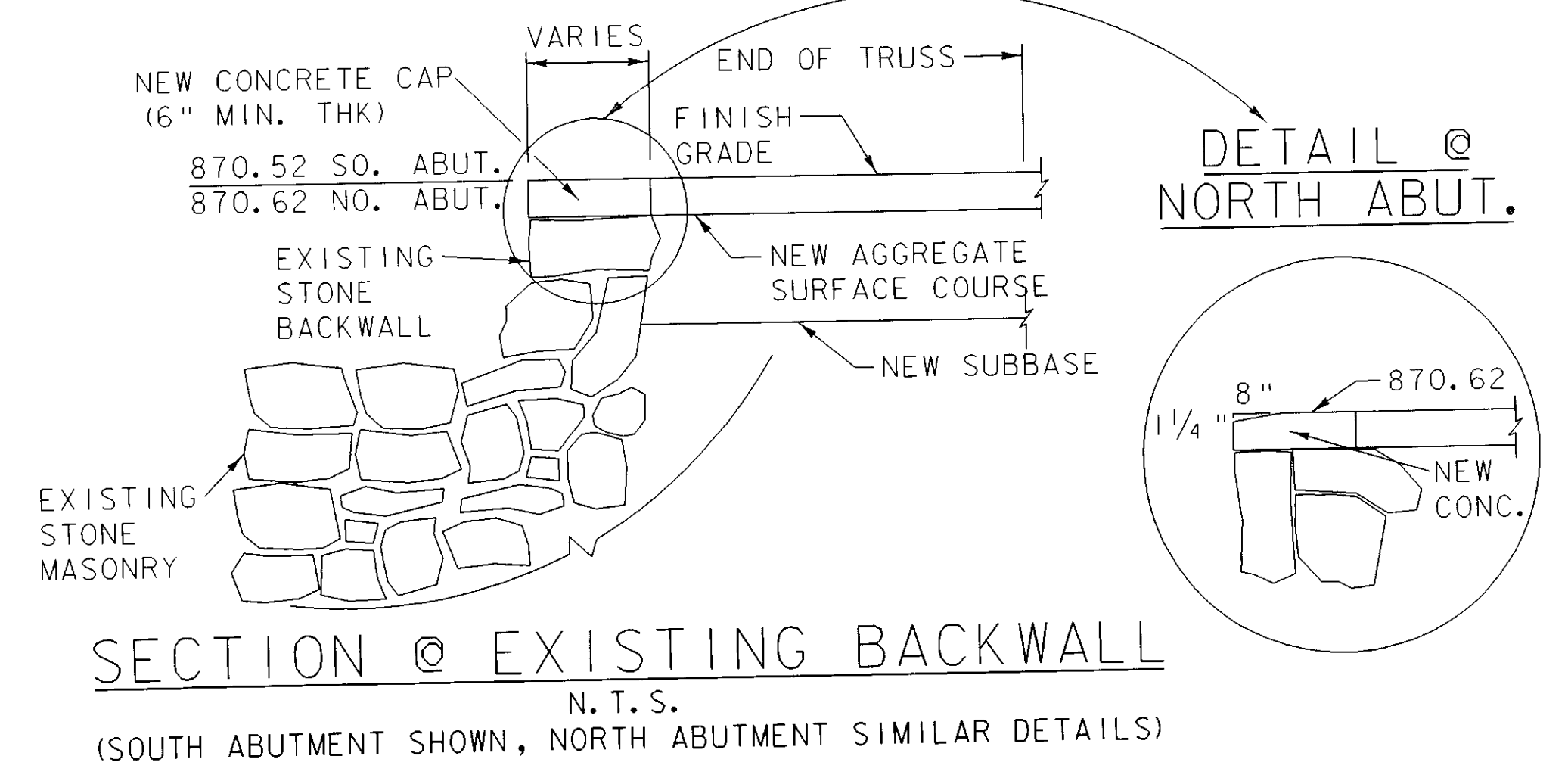
TYPICAL SECTION NEW STONE WING S.W.
 SCALE: 1/2" = 1'-0"



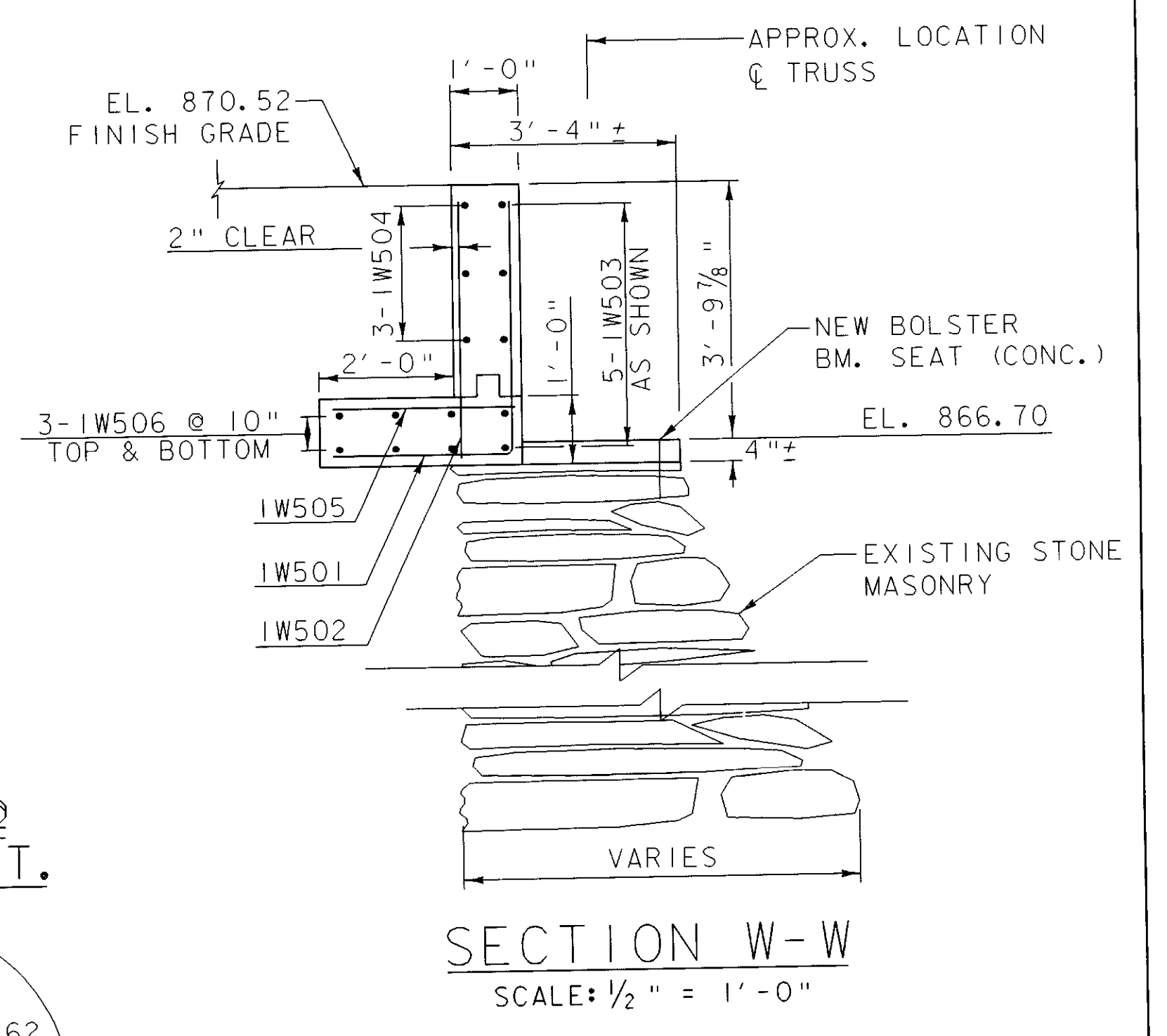
ELEVATION SOUTHWEST WING
 SCALE: 3/8" = 1'-0"



EARTHWORK DETAIL @ SECTION W-W

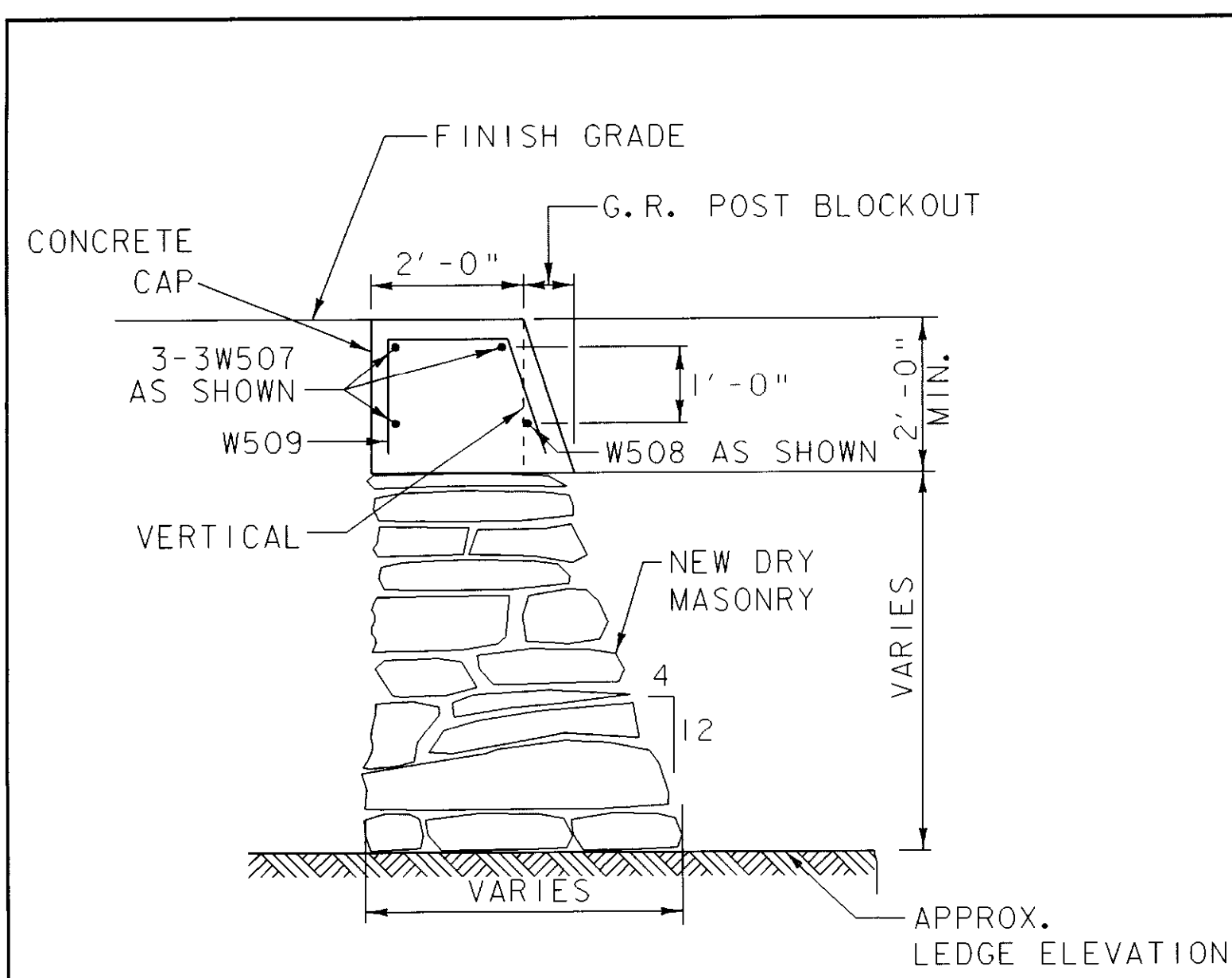


SECTION @ EXISTING BACKWALL
 N. T. S.
 (SOUTH ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR DETAILS)



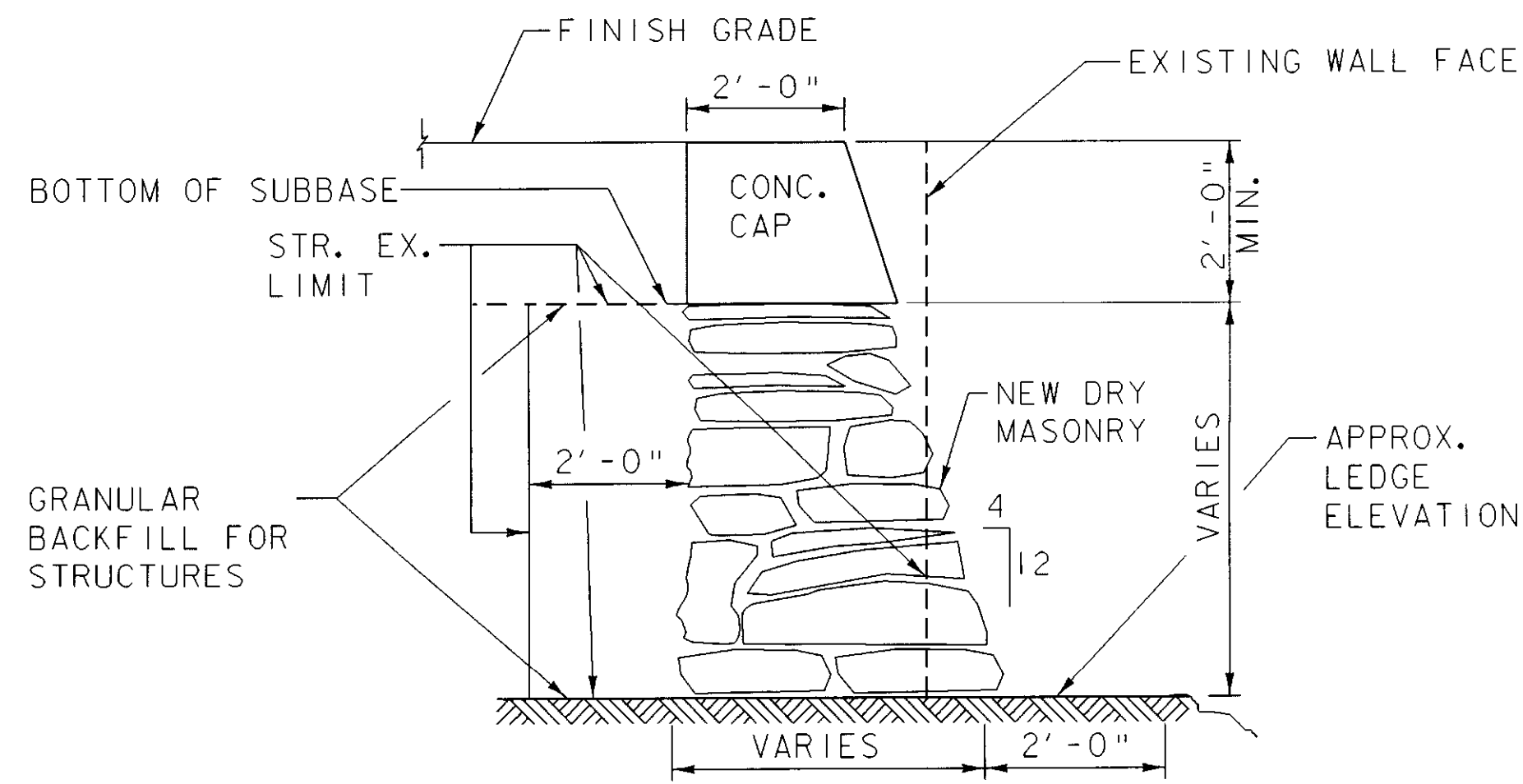
SECTION W-W
 SCALE: 1/2" = 1'-0"

PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148d1.dgn	CHECKED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	CONSTRUCTION DETAIL SHEET 6
DESIGNED BY: J. WEAVER	SHEET 21 OF 33



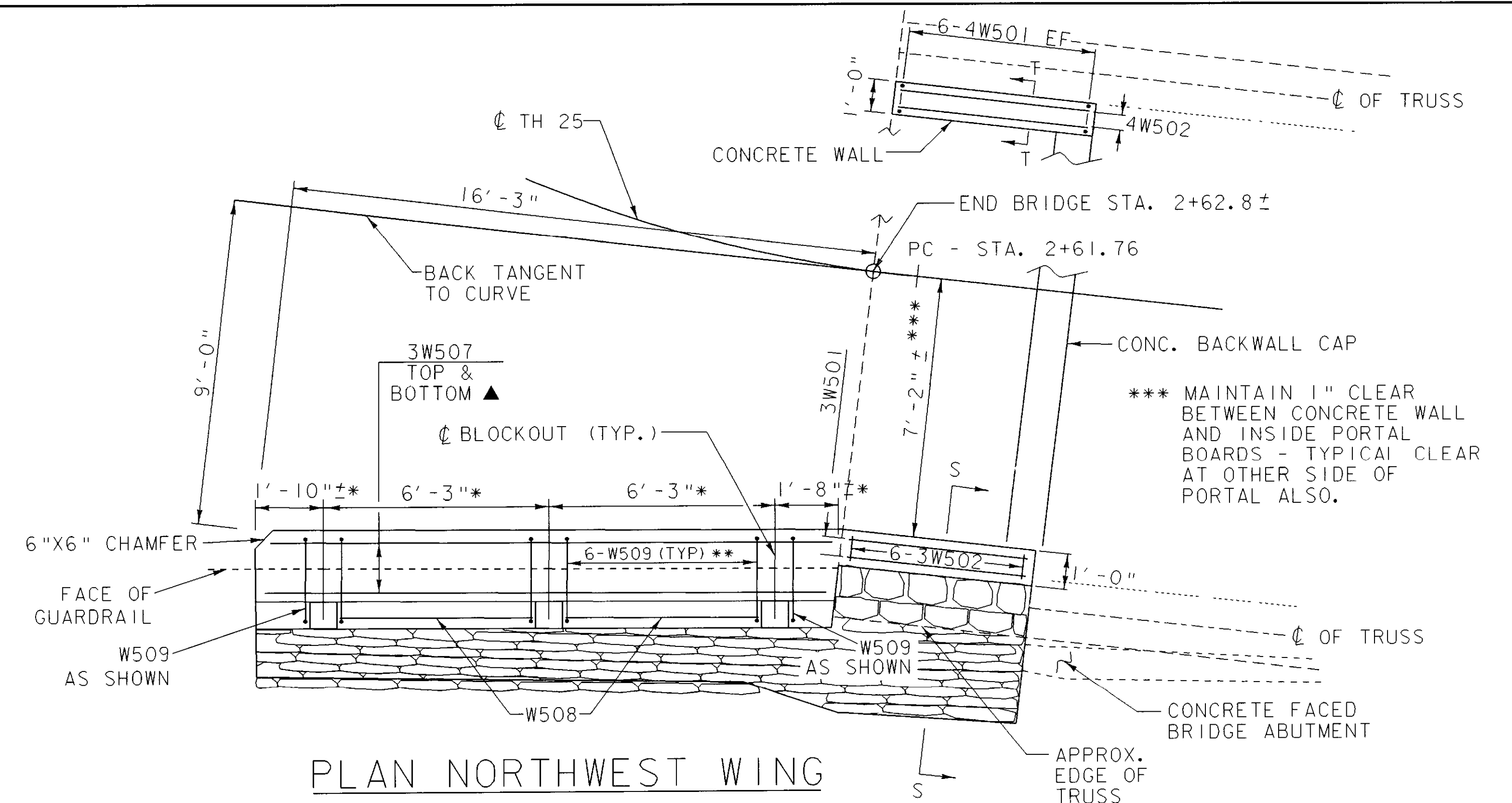
TYPICAL SECTION
NEW STONE WING N.W.

SCALE: 1/2" = 1'-0"
(SIMILAR DETAILS @ WALL SECTION S-S AREA)



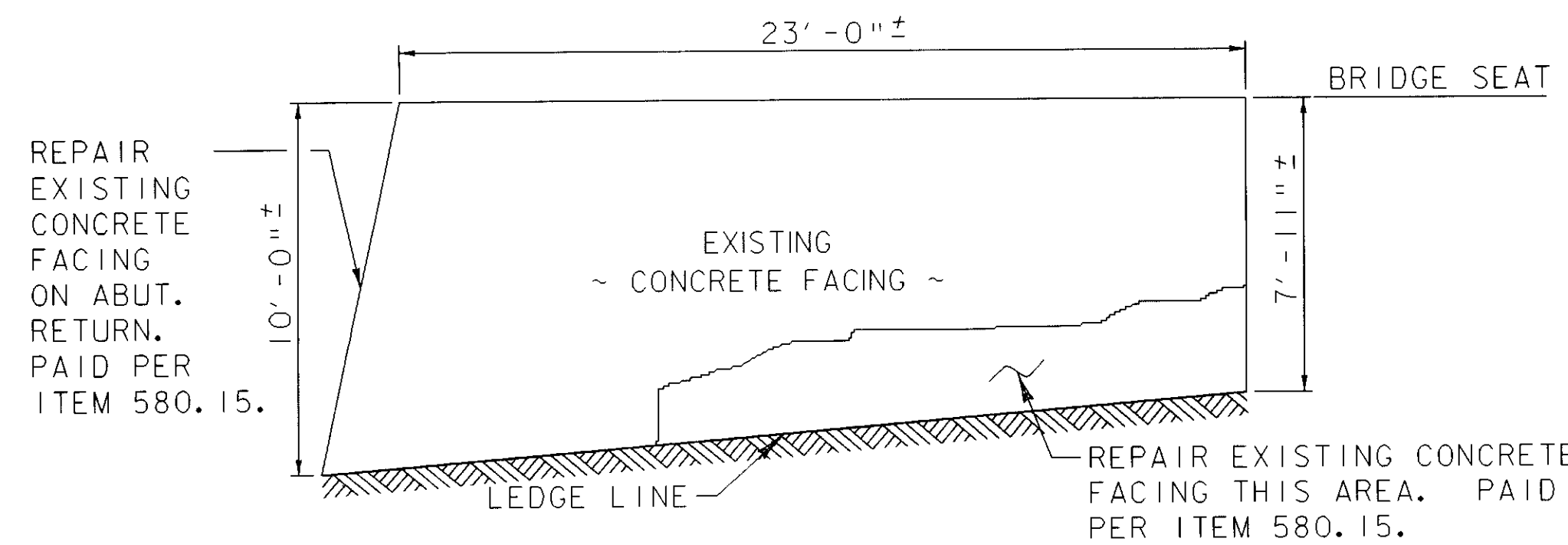
TYPICAL EARTHWORK SECTION
NEW STONE WING N.W.

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



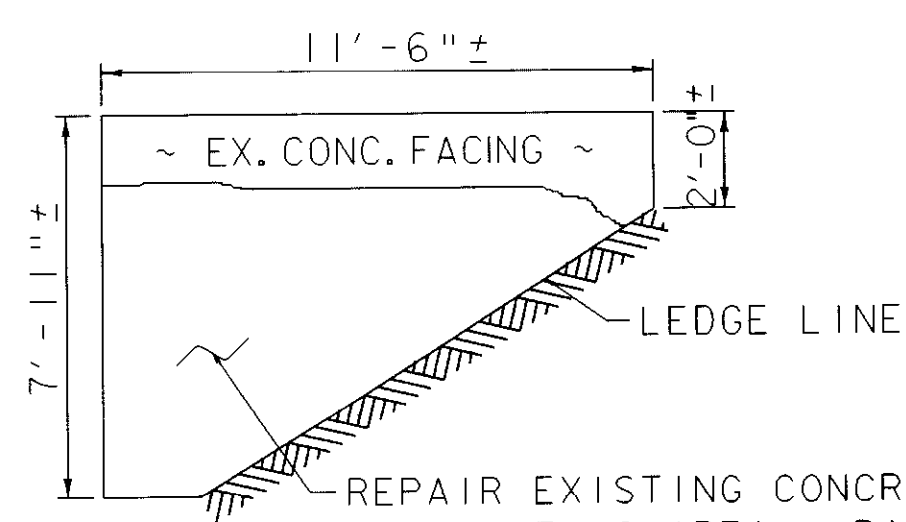
PLAN NORTHWEST WING

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



ELEVATION NORTH ABUTMENT

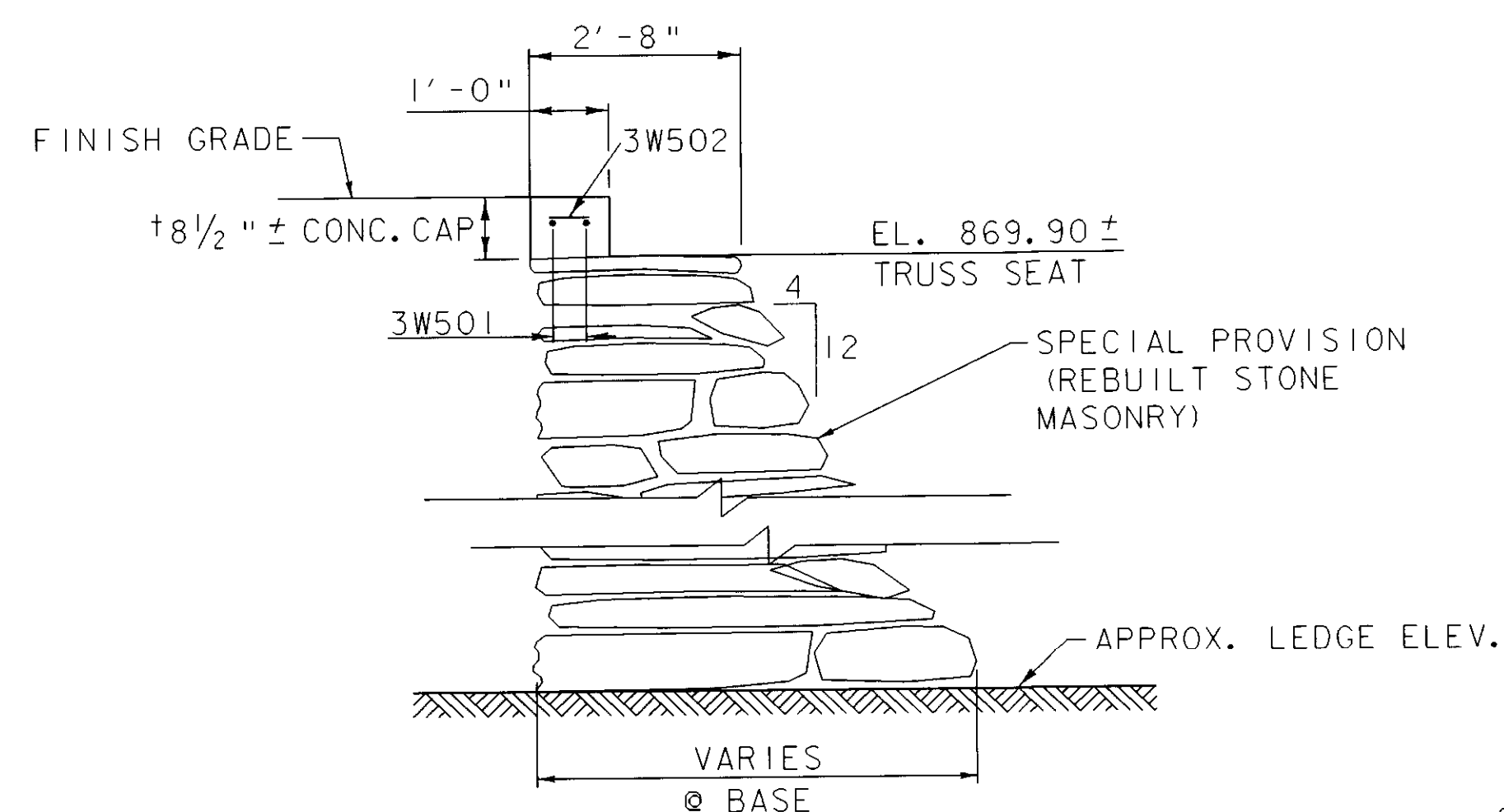
SCALE: 1/4" = 1'-0"



ELEVATION N.E. WING

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

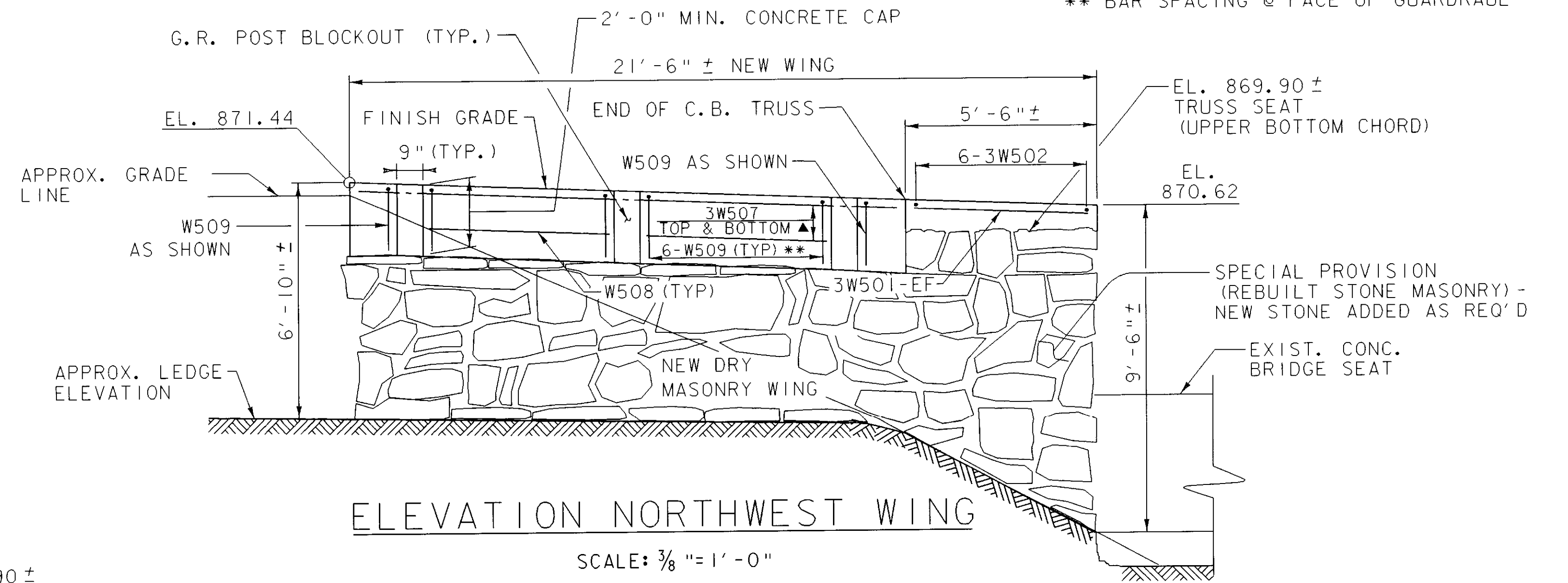
ALL BARS ARE #5s @ 12" UNLESS OTHERWISE NOTED
▲ DENOTES BARS TO BE CUT IN FIELD
MINIMUM CLEARANCE: 3" FROM ALL SURFACES, EXCEPT WHERE NOTED



SECTION S-S

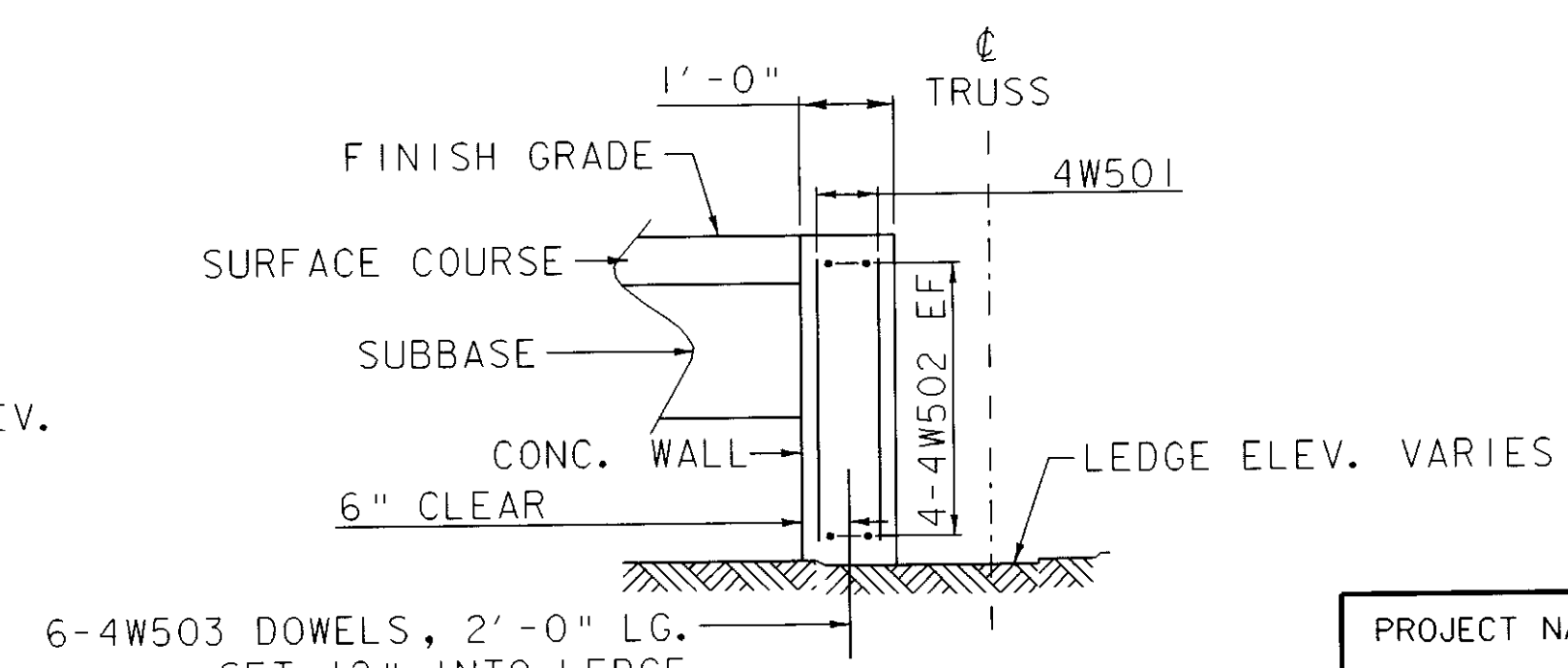
SCALE: 1/2" = 1'-0"

† CONCRETE CAP @ NORTHEAST PORTAL SIMILAR



ELEVATION NORTHWEST WING

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



SECTION T-T

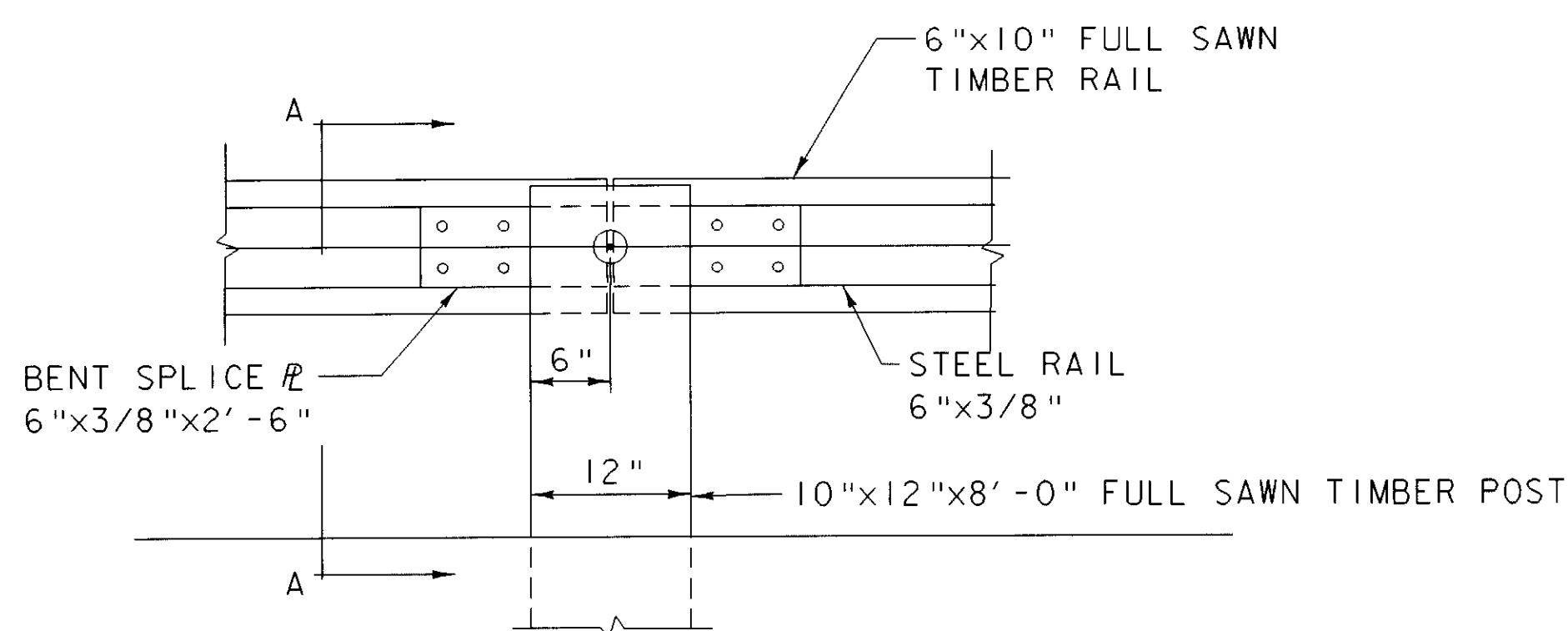
SCALE: 1/2" = 1'-0"

* DIMENSIONS @ FACE OF GUARDRAIL
** BAR SPACING @ FACE OF GUARDRAIL

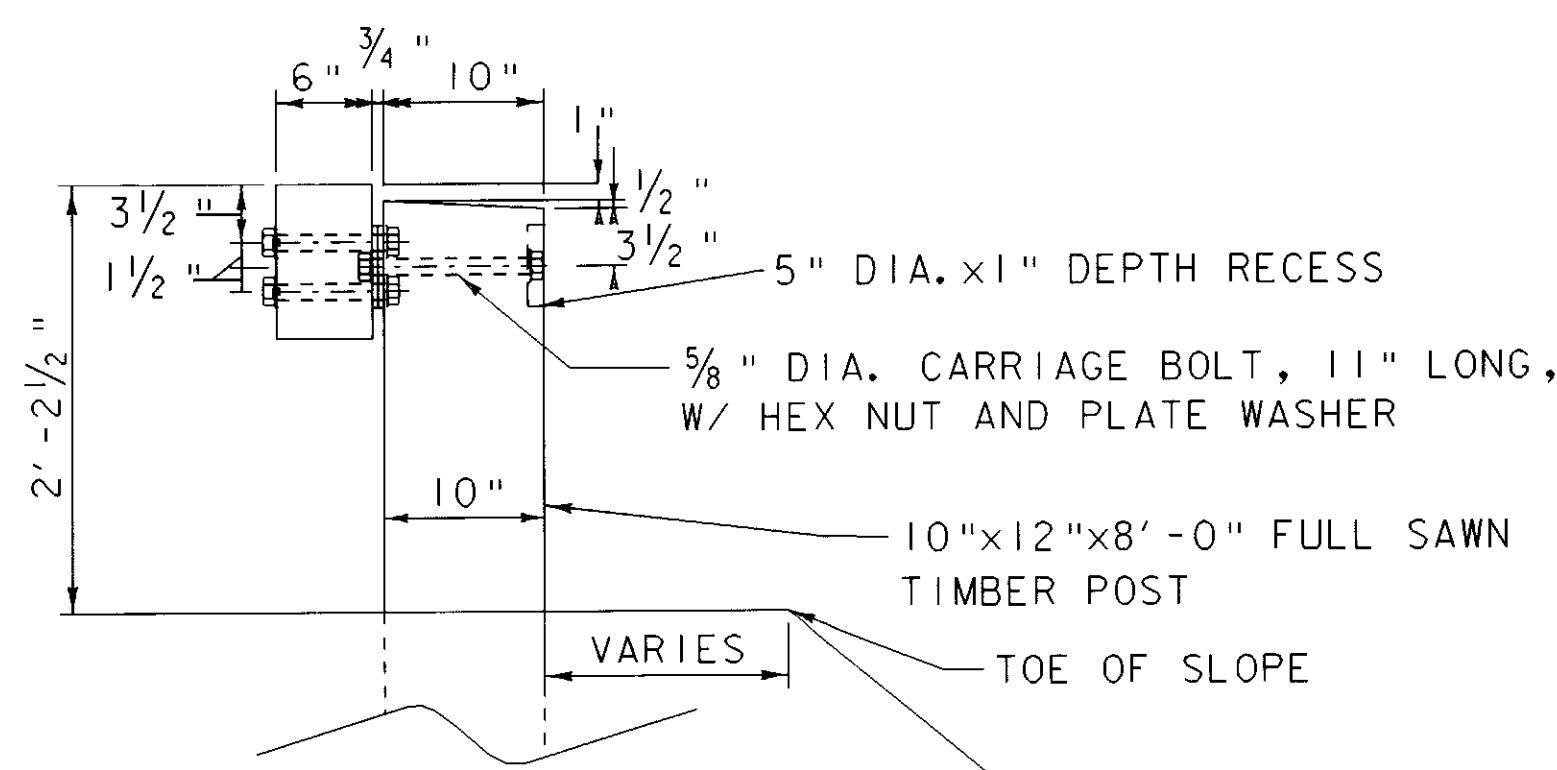
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)

FILE NAME: s04j148d1.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY: J. WEAVER
CONSTRUCTION DETAIL SHEET 7

PLOT DATE: 21-MAY-2008
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER
SHEET 22 OF 33



POST CONNECTION ELEVATION I
SCALE: 1" = 1'-0"



SECTION A-A
SCALE: 1" = 1'-0"

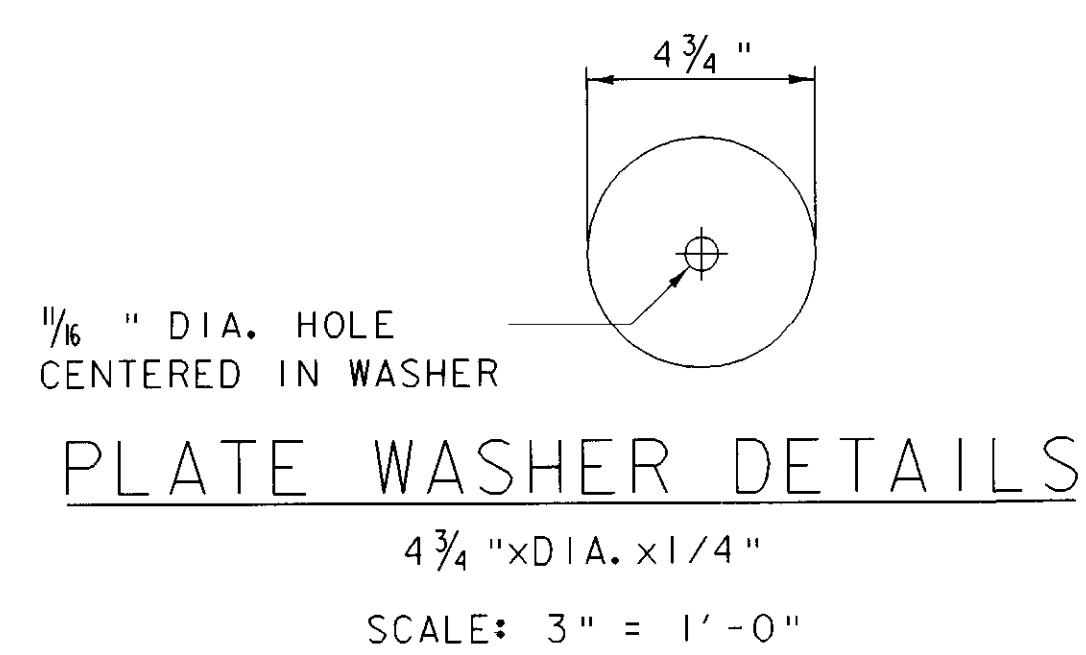
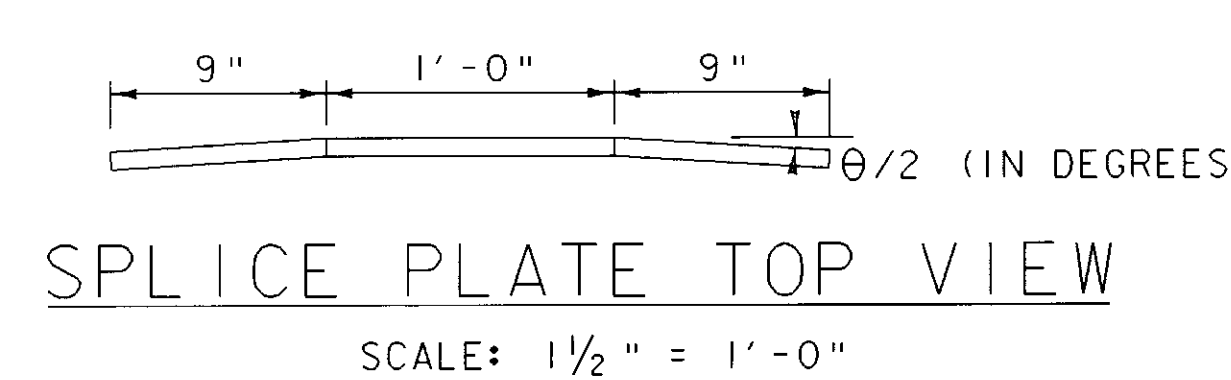
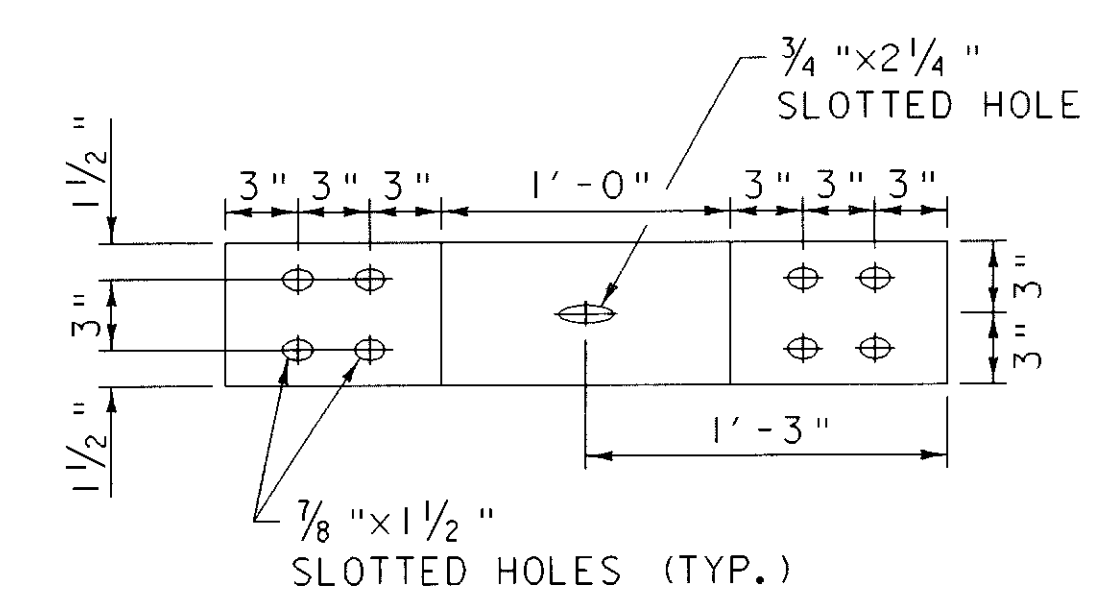


PLATE WASHER DETAILS
SCALE: 3" = 1'-0"

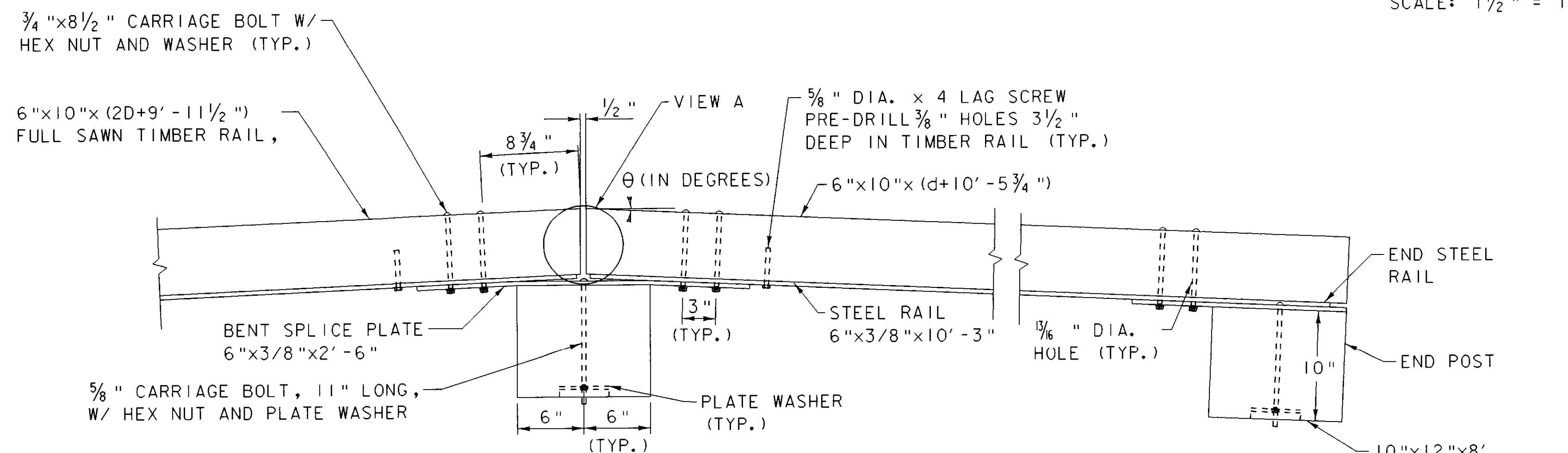


SPLICE PLATE TOP VIEW
SCALE: 1 1/2" = 1'-0"

NOTES:
1. FURNISH SHOP BENT SPLICE PLATES. USE THE MINIMUM BEND ANGLE SHOWN IN THE TABLE BELOW



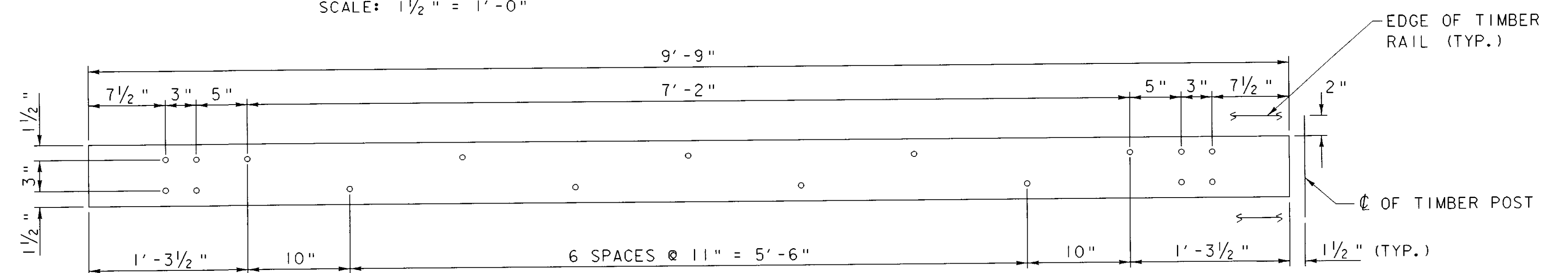
BENT SPLICE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



POST CONNECTION PLAN I
SCALE: 1 1/2" = 1'-0"

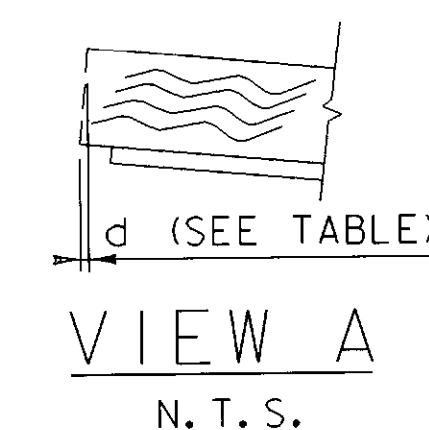
STEEL BACKED TIMBER GUARDRAIL NOTES

1. THE STEEL-BACKED TIMBER GUARD RAIL SHALL BE PAID FOR UNDER ITEM 621.18. THE QUANTITY MEASURED FOR PAYMENT SHALL BE ALONG THE FACE OF GUARDRAIL, INCLUDING TERMINAL SECTIONS. THE ORDINARY POST SPACING SHALL BE 10 FEET. IN LOCATIONS WHERE POST SPACING IS DETAILED AT 5 FEET, THE QUANTITY FOR PAYMENT WILL BE FACTORED BY 1.4.
2. THE POSTS AND THE TIMBER RAIL ELEMENTS SHALL CONFORM TO VAOT STANDARD SPECIFICATIONS SUBSECTIONS 728.01 AND 728.02. IN ADDITION, ALL TIMBER USED IN THE RAIL SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 1450 PSI.
3. THE STEEL RAILS AND SPLICE PLATES SHALL CONFORM TO AASHTO M270 M/M 270 GRADE 50 STEEL AND BE GALVANIZED PER AASHTO M111/M111 SPECIFICATIONS.
4. ALL BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 GRADE A. ALL WASHERS SHALL CONFORM TO ASTM F844. ALL NUTS SHALL CONFORM TO AASHTO M291. ALL FASTENER HARDWARE SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
5. DRIVE POSTS INTO PILOT HOLES THAT ARE PUNCHED OR DRILLED. THE DIMENSIONS OF THE PILOT HOLE SHALL NOT EXCEED THE DIMENSIONS OF THE POST BY MORE THAN 1 INCH. SET THE POSTS PLUMB, BACKFILL AND COMPACT.
6. IF AN IMPENETRABLE HOLE IS ENCOUNTERED WHILE PLACING POSTS, ENLARGE THE HOLE TO PROVIDE NOT LESS THAN 6 INCHES CLEARANCE ON ALL SIDES, AND TO A MINIMUM DEPTH OF 2.5 FEET. SET THE POST IN CONCRETE TO WITHIN 6 INCHES OF THE TOP OF THE HOLE. BACKFILL AND COMPACT THE REMAINING 6 INCHES WITH AN ACCEPTABLE MATERIAL. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 621.18.
7. FIELD CUT TIMBER RAILS TO PRODUCE A CLOSE FIT AT ALL JOINTS. TREAT FIELD CUTS WITH APPROVED TREATMENT AS DETERMINED BY THE RESIDENT ENGINEER.



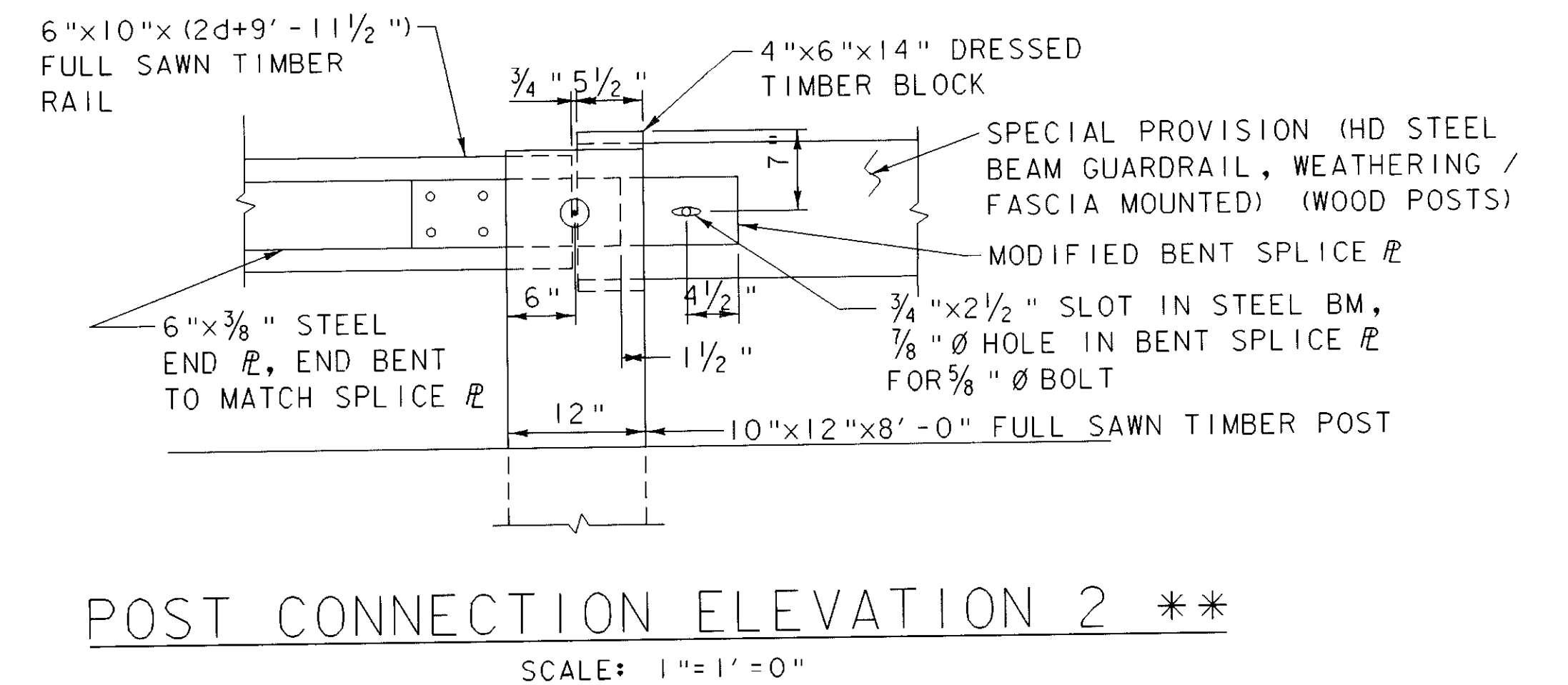
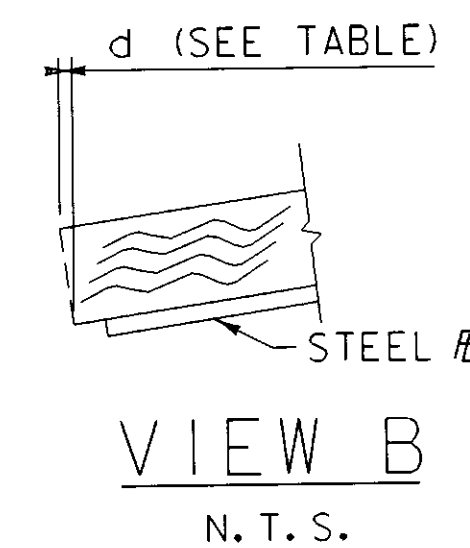
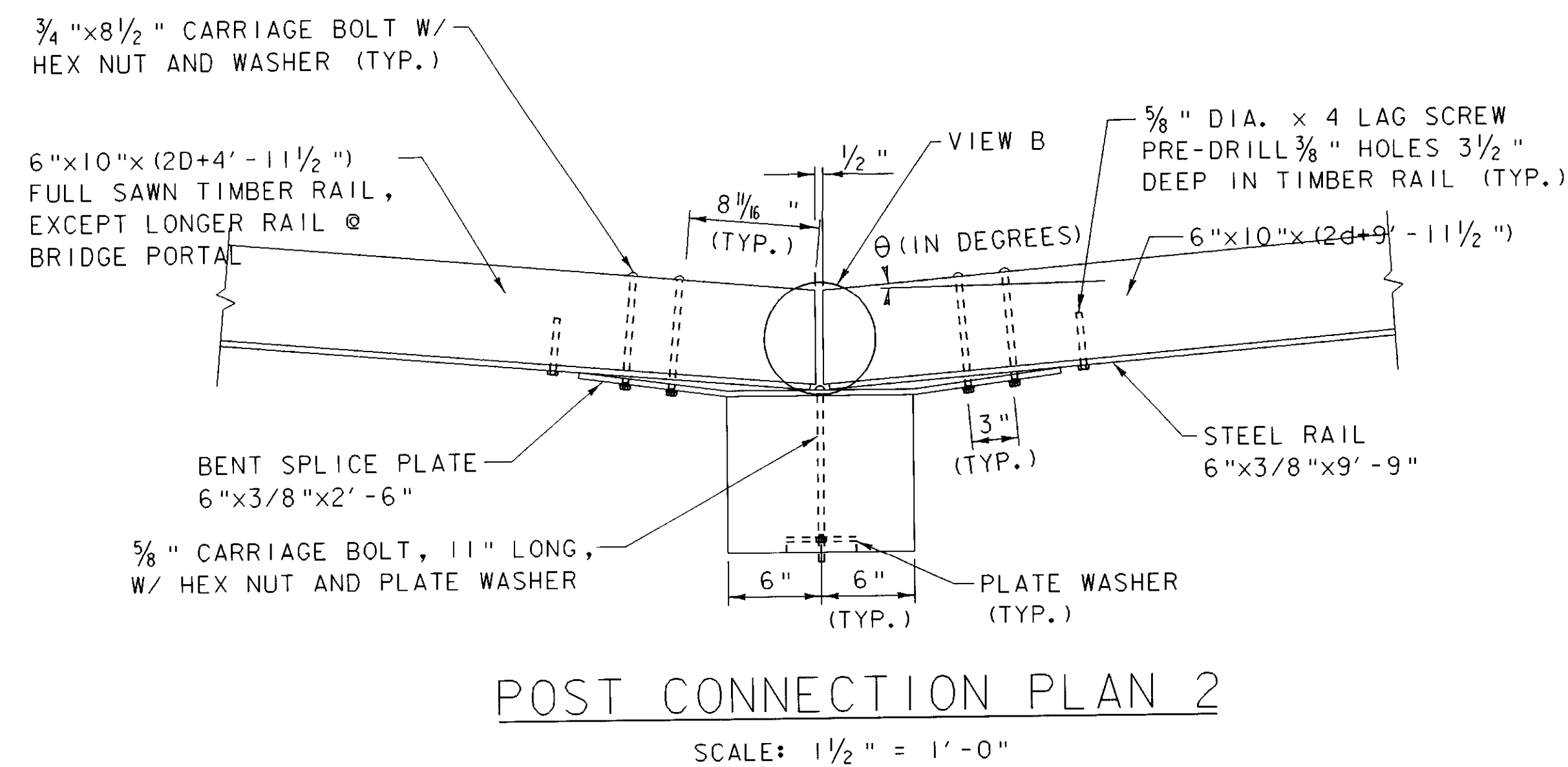
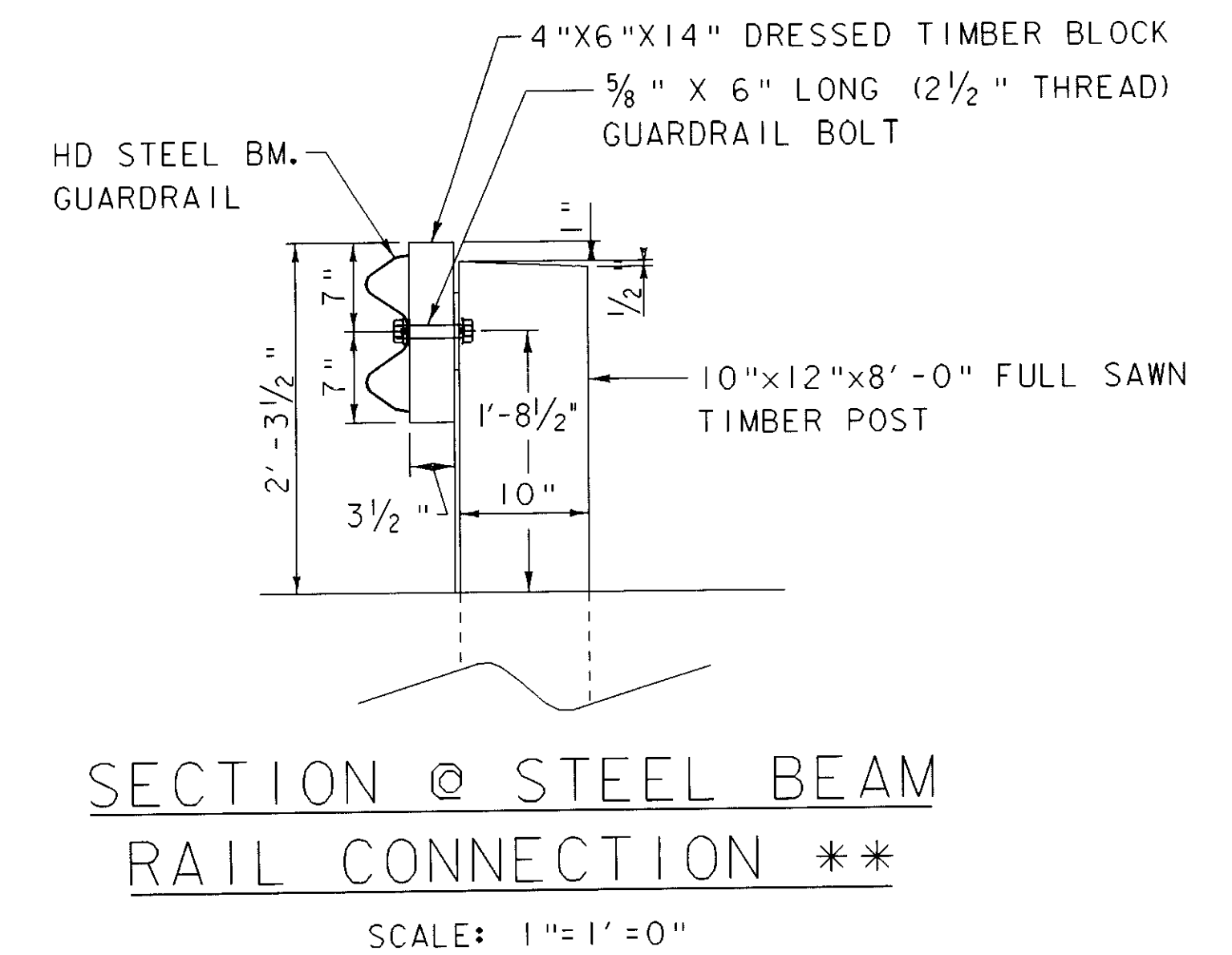
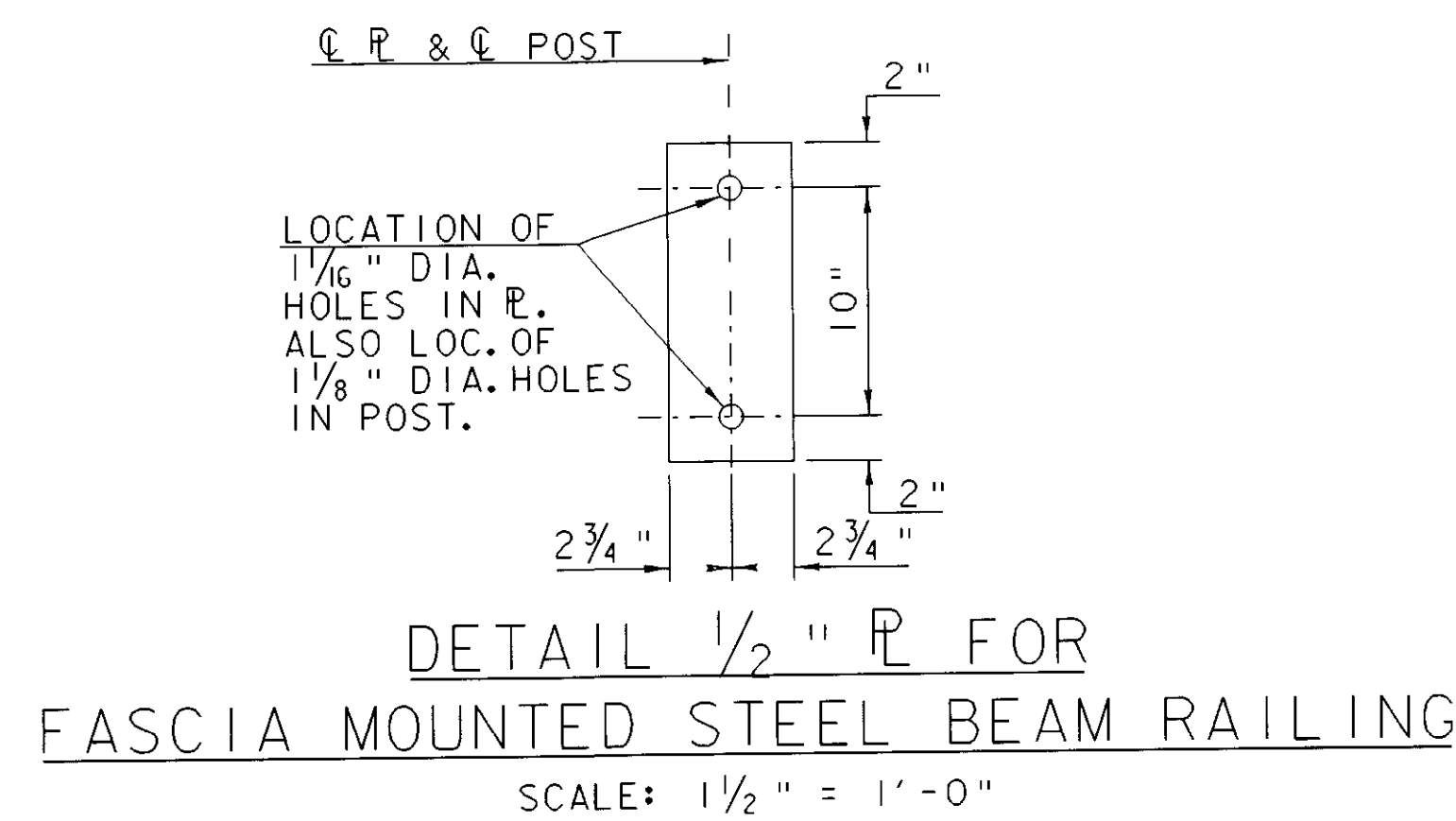
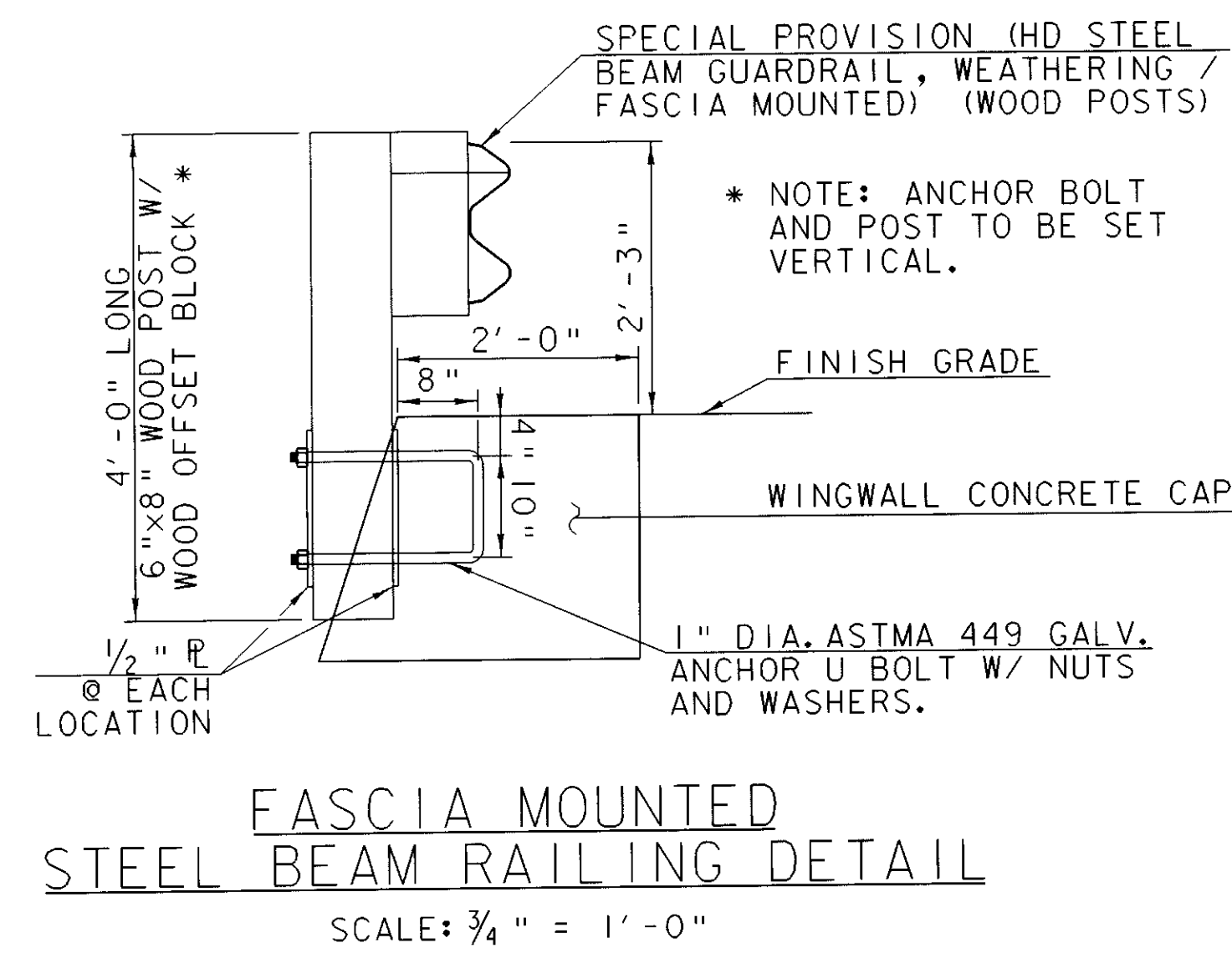
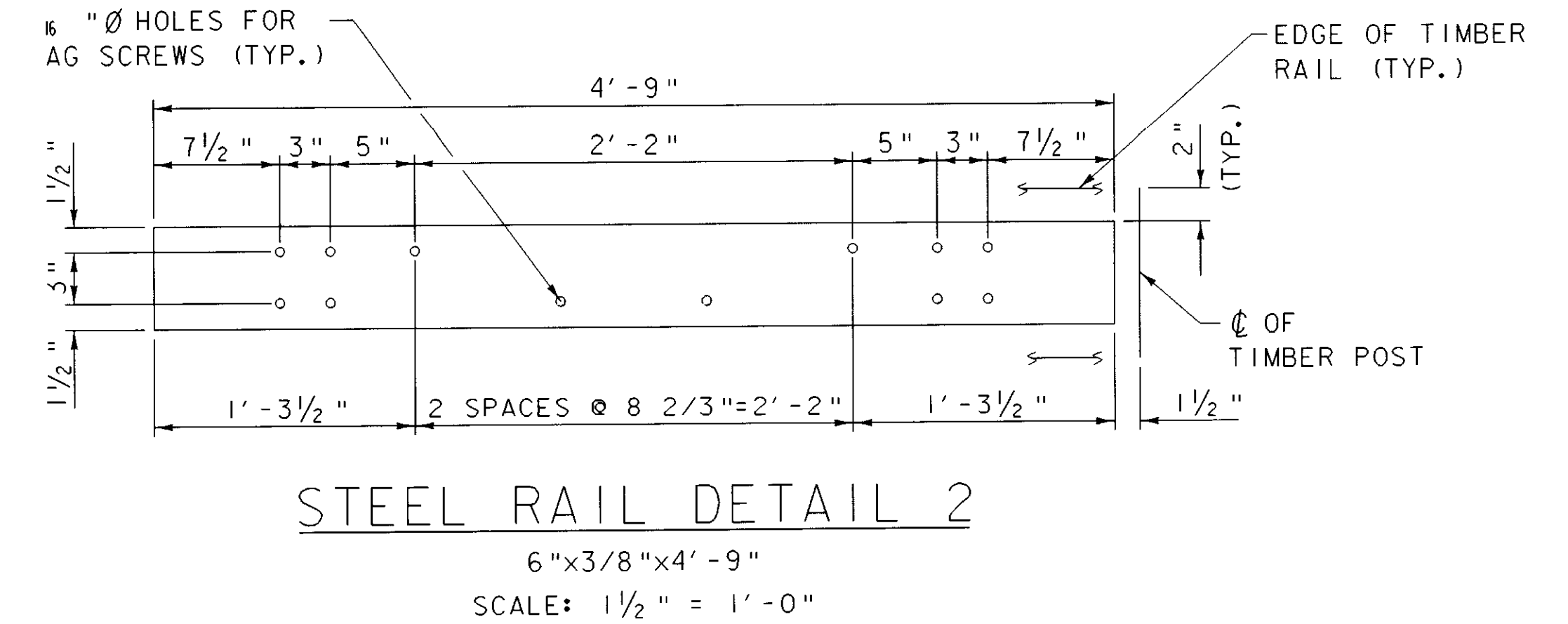
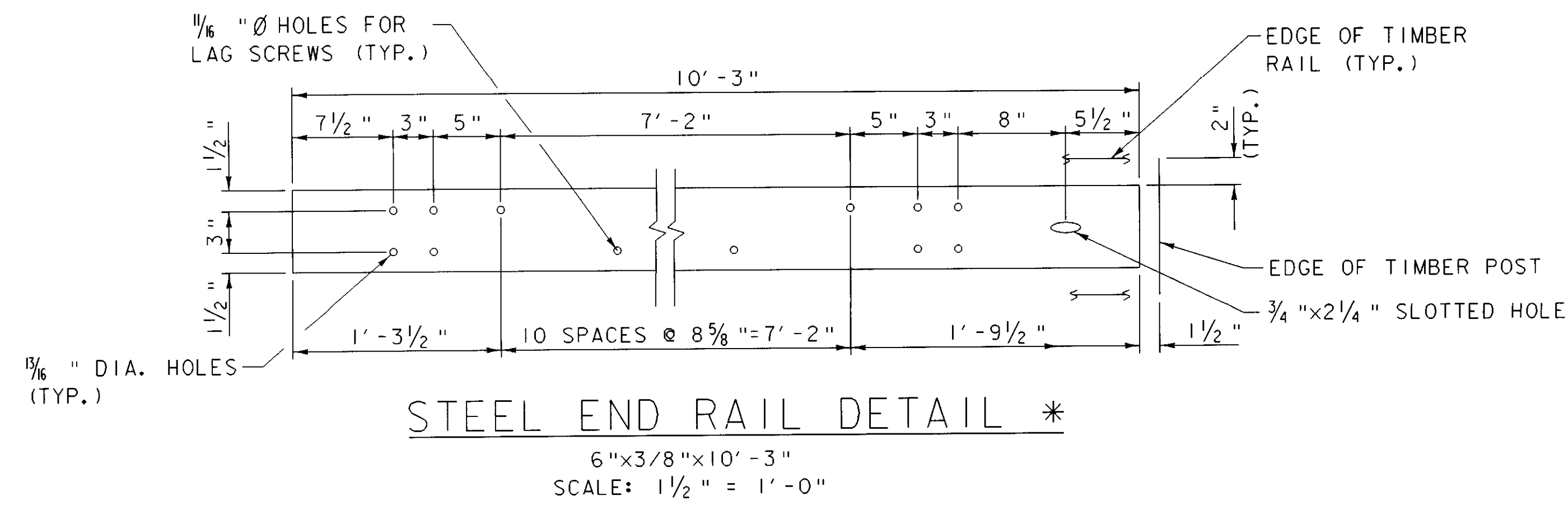
STEEL RAIL DETAIL I
SCALE: 1 1/2" = 1'-0"

LAYOUT RADIUS R @ FACE OF RAIL (FT.)	θ/2 (DEGREES)	D (INCHES)
25	5.74	5/8"
30	4.78	1/2"
35	4.10	5/16"
38	3.77	3/8"
40	3.58	3/8"
45	3.18	5/16"
50	2.86	5/16"
55	2.60	1/4"
60	2.40	1/4"
65	2.20	1/4"
70	2.05	1/4"
OVER 70	FLAT	0



PROJECT NAME: MONTGOMERY	FILE NAME: s04j148dtl.dgn	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448(37)	PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
	DESIGNED BY: J. WEAVER	CHECKED BY: J. WEAVER
	GUARDRAIL DETAIL SHEET 1	SHEET 23 OF 33

* END RAIL @ STEEL BM. RAIL CONN. SIMILAR



** FOR ADDITIONAL GUARDRAIL DETAILS SEE STD. G-1

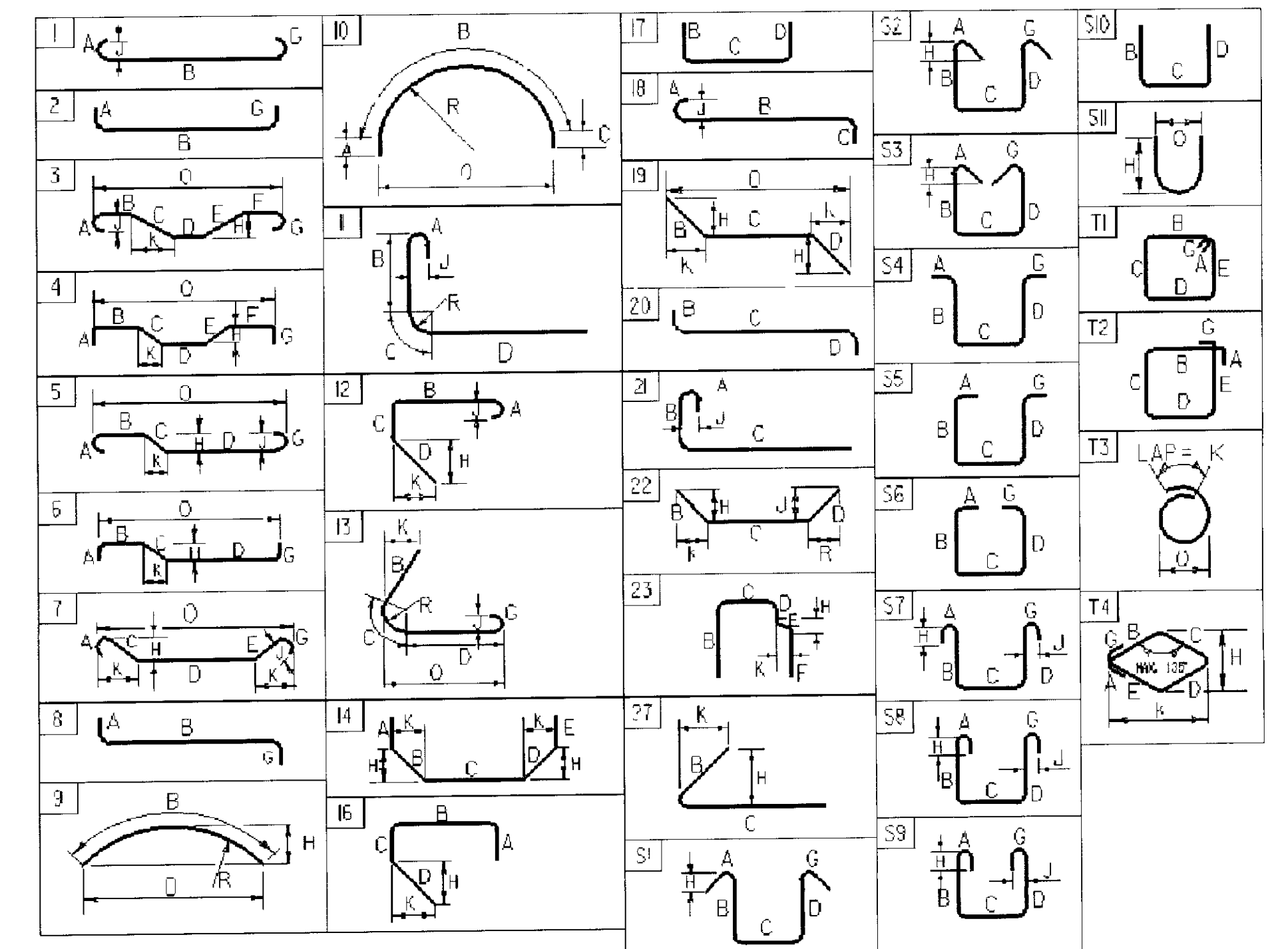
PROJECT NAME: MONTGOMERY	FILE NAME: s04j148dtl.dgn	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448(37)	PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
	DESIGNED BY: J. WEAVER	CHECKED BY: J. WEAVER
	GUARDRAIL DETAIL SHEET 2	SHEET 24 OF 33

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O					
SOUTHWEST WINGWALL																																								
3	5	6'-2"	1W501	17		3'-8"	2'-6"	0'-0"																																
8	5	3'-8"	1W502	STR																																				
5	5	5'-6"	1W503	17		3'-0"	2'-6"	0'-0"																																
3	5	4'-6"	1W504	17		2'-6"	2'-0"	0'-0"																																
3	5	2'-6"	1W505	STR																																				
6	5	3'-0"	1W506	STR																																				
▲	3	5	23'-2"	1W507	STR																																			
3	5	5'-0"	W508	STR																																				
21	5	4'-7"	W509	22		1'-6"	1'-6"	1'-7"				1'-6"	1'-6"	0'-0"	0'-6"																									
SOUTHEAST WINGWALL																																								
*	11	5	5'-4"	2W501	STR																																			
16	5	3'-8"	2W502	STR																																				
5	5	2'-10"	2W503	STR																																				
5	5	5'-0"	2W504	17		3'-6"	1'-6"	0'-0"																																
▲	3	5	28'-0"	2W507	STR																																			
4	5	5'-0"	W508	STR																																				
26	5	4'-7"	W509	22		1'-6"	1'-6"	1'-7"				1'-6"	1'-6"	0'-0"	0'-6"																									
NORTHWEST WINGWALL																																								
2	5	4'-10"	3W501	STR																																				
6	5	0'-6"	3W502	STR																																				
▲	3	5	16'-1"	3W507	STR																																			
*	3	5	5'-0"	W508	STR																																			
14	5	4'-7"	W509	22		1'-6"	1'-6"	1'-7"				1'-6"	1'-6"	0'-0"	0'-6"																									
NORTHEAST WINGWALL																																								
12	5	3'-0"	4W501	STR																																				
8	5	5'-0"	4W502	STR																																				
6	5	2'-0"	4W503	STR																																				

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- ⊕ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

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

PROJECT NAME	MONTGOMERY		
PROJECT NUMBER	BHO 1448(37)		
FILE NAME	s04j148rss.dgn	PLOT DATE	4/11/2008
PROJECT MANAGER	J Weaver	DRAWN BY	C Weeber
DESIGNED BY	J Weaver	CHECKED	J Weaver
REINFORCING STEEL SCHEDULE SHEET		SHEET	26 OF 33

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

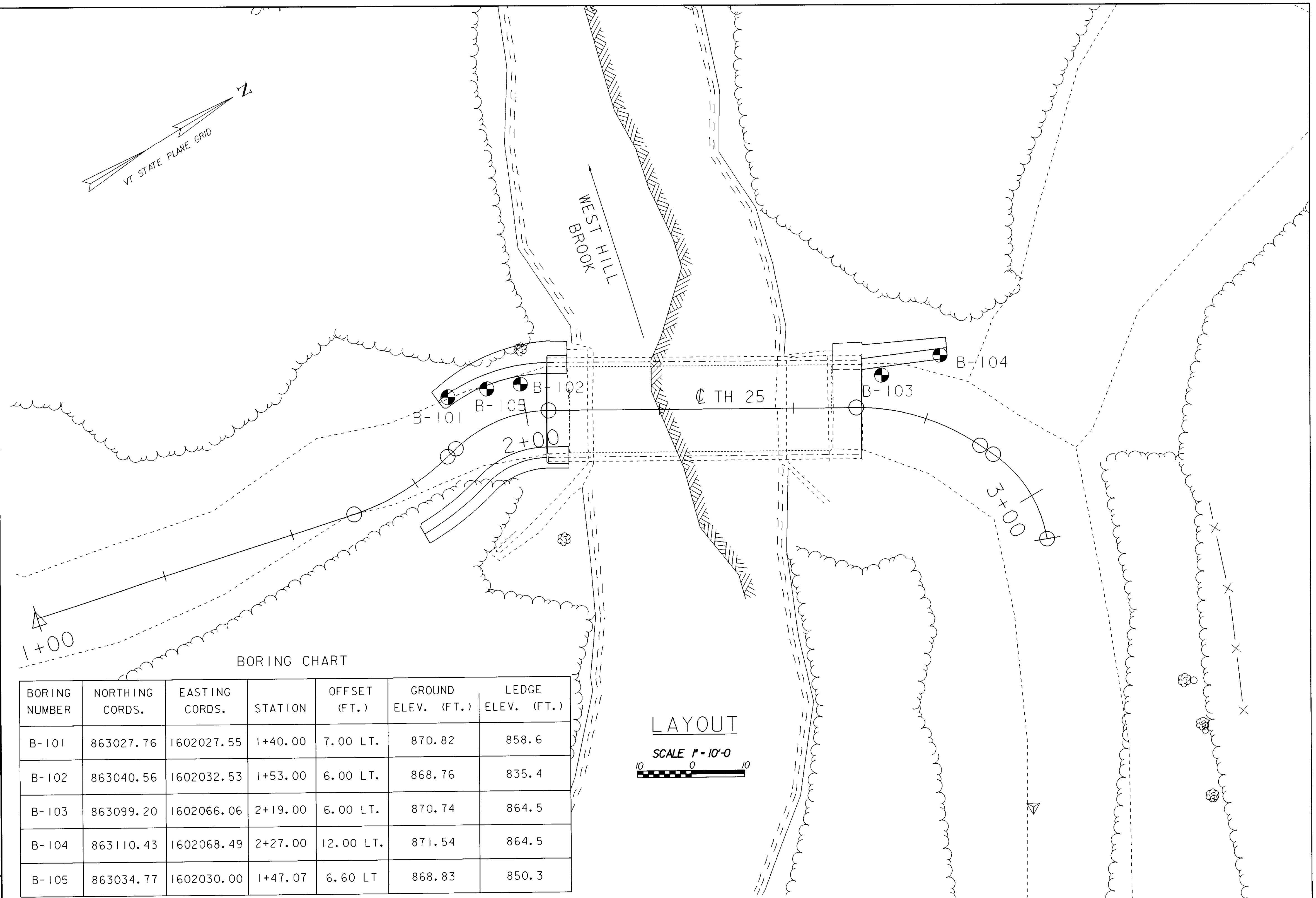
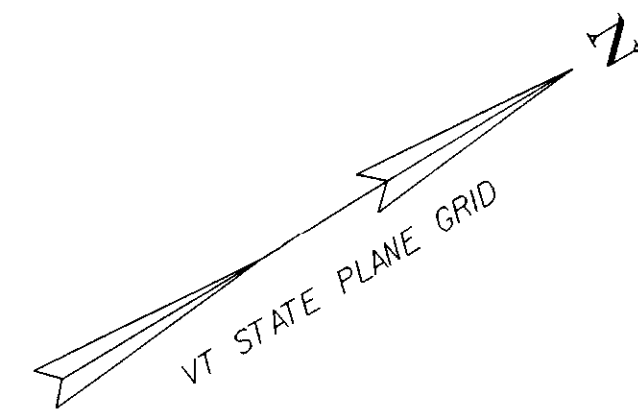
CORRELATION GUIDE OF 'N' TO DENSITY/CONSISTENCY

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

COMMONLY USED SYMBOLS

- ▼ Water Elevation
- ⊕ Standard Penetration Boring
- ⊕ Auger Boring
- Rod Sounding
- Sample
- N Standard Penetration Test
- Blow Count Per Foot For:
2" O.D. Sampler
1 3/8" I.D. Sampler
Hammer Weight Of 140 Lbs.
Hammer Fall Of 30"
- VS Field Vane Shear Test
- US Undisturbed Soil Sample
- B Blast
- DC Diamond Core
- MD Mud Drill
- WA Wash Ahead
- HSA Hollow Stem Auger
- AX Core Size 1 1/8"
- BX Core Size 1 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
- Si Silt
- Cl Clay
- HP Hardpan
- Le Ledge
- NLTD No Ledge To Depth
- CNPF Can Not Penetrate Further
- TLOB To Ledge Or Boulder
- NR No Recovery
- Rec. Recovery
- %Rec. Percent Recovery
- RQD Rock Quality Designation
- CBR California Bearing Ratio
- < Less Than
- > Greater Than
- R Refusal (N > 100)

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



DEFINITIONS (AASHTO)

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

GENERAL NOTES

- The subsurface explorations shown herein were made between January and March, 2007 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148bor.dgn	CHECKED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	SHEET 27 OF 33
DESIGNED BY:	
BORING LAYOUT SHEET	

VT <small>Working to Get You There</small>		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-101 SHEET 1 of 1 DATE STARTED 1/11/07 DATE COMPLETED 1/16/07			
PROJECT NAME: MONTGOMERY		PROJECT NUMBER: BHO 1448(37)		SITE NUMBER: BR-32			
SITE NAME: TH-25		GROUND ELEVATION: 870.82 ft		GROUNDWATER DEPTH: No Water Found			
STATION: 1+40.00		PROJECT PIN NUMBER: 04J148					
OFFSET: -7.00							
VTSPG: N 863027.76 ft E 1602027.55 ft							
BORING CREW CREW CHIEF: GARROW		BORING RIG: SMALL SKID RIG		BORING TYPE: WASH BORE			
DRILLER: GARROW		SAMPLE TYPE: SPLIT BARREL		CHECKED BY: DLG			
LOGGER: CARRIERE							
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
0		Visual Class, A-1-b, SaGr, brn, Moist, Rec = 0.5 ft, Insufficient sample for testing	6	12.7			
2.5		Visual Class, A-1-b, SaGr, brn, Moist, Rec = 0.5 ft, Insufficient sample for testing	R	7.6			
		3.0 ft - 4.0 ft, BXDC, Cleaned out casing					
5.0		Field Note, No Recovery, BXDC, Cleaned out casing	7				
7.5		A-1-b, SiGrSa, brn, MTW, Rec = 0.6 ft, BXDC, Cleaned out casing	4	24.3	36.0	39.0	25.0
		A-2-4, SaGrSi, gry-brn, Moist, Rec = 0.7 ft, BXDC, Cleaned out casing	17	27.6	33.4	31.9	34.7
10.0		Visual Class, Broken Rock, Rec = 0.5 ft	66				
12.5		Visual Class, Broken Rock, Rec = 0.2 ft	R				
		Gray complexly folded quartz rich schist with phyllite kink bands and scattered pyrite. Close to moderately closely spaced irregular jointing. Rock is fresh while joint surfaces are stained. Competent. Dip of foliation varies from 0 to 90 degrees. Moderately hard, BXDC, 12.2 ft - 17.2 ft, Rec = 4.15 ft	1	83	68		9
15.0							9
							7
17.5		Gray complexly folded quartz rich schist with phyllite kink bands and scattered pyrite. Close to moderately closely spaced irregular jointing. Rock is fresh while joint surfaces are stained. Competent. Dip of foliation varies from 0 to 90 degrees. Moderately hard, BXDC, 17.2 ft - 22.2 ft, Rec = 4.9 ft	2	98	65		6
20.0							8
							8
22.5		Hole stopped @ 22.2 ft					8

S. W. WING
EL. BOT. FTG. 863.8 ±

LOG OF BORING: MONTGOMERY, BHO 1448(37) (P.1), VT. AOT. GD. 3/26/07

S. W. WING
EL. BOT. FTG. 859.0 ±

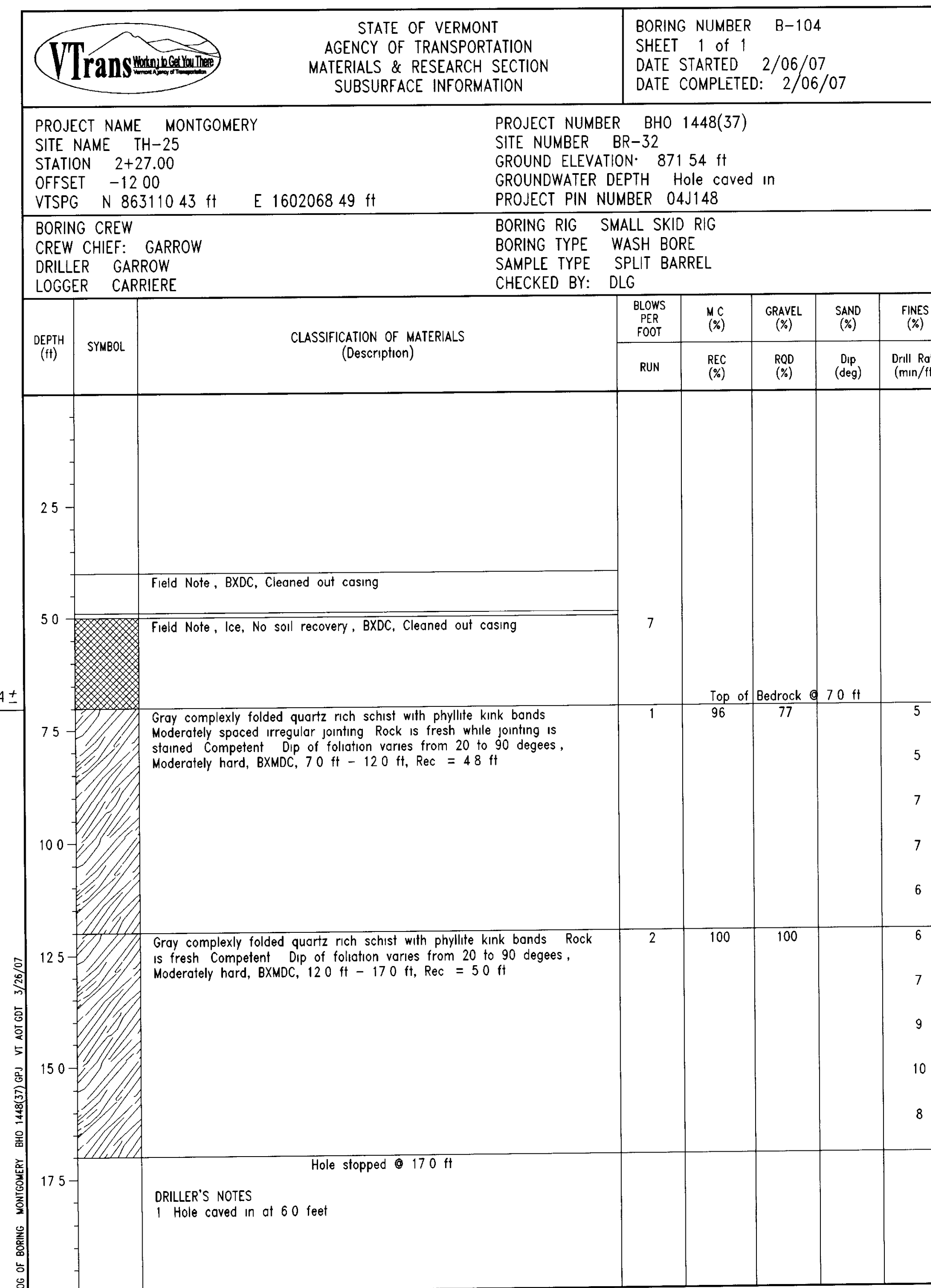
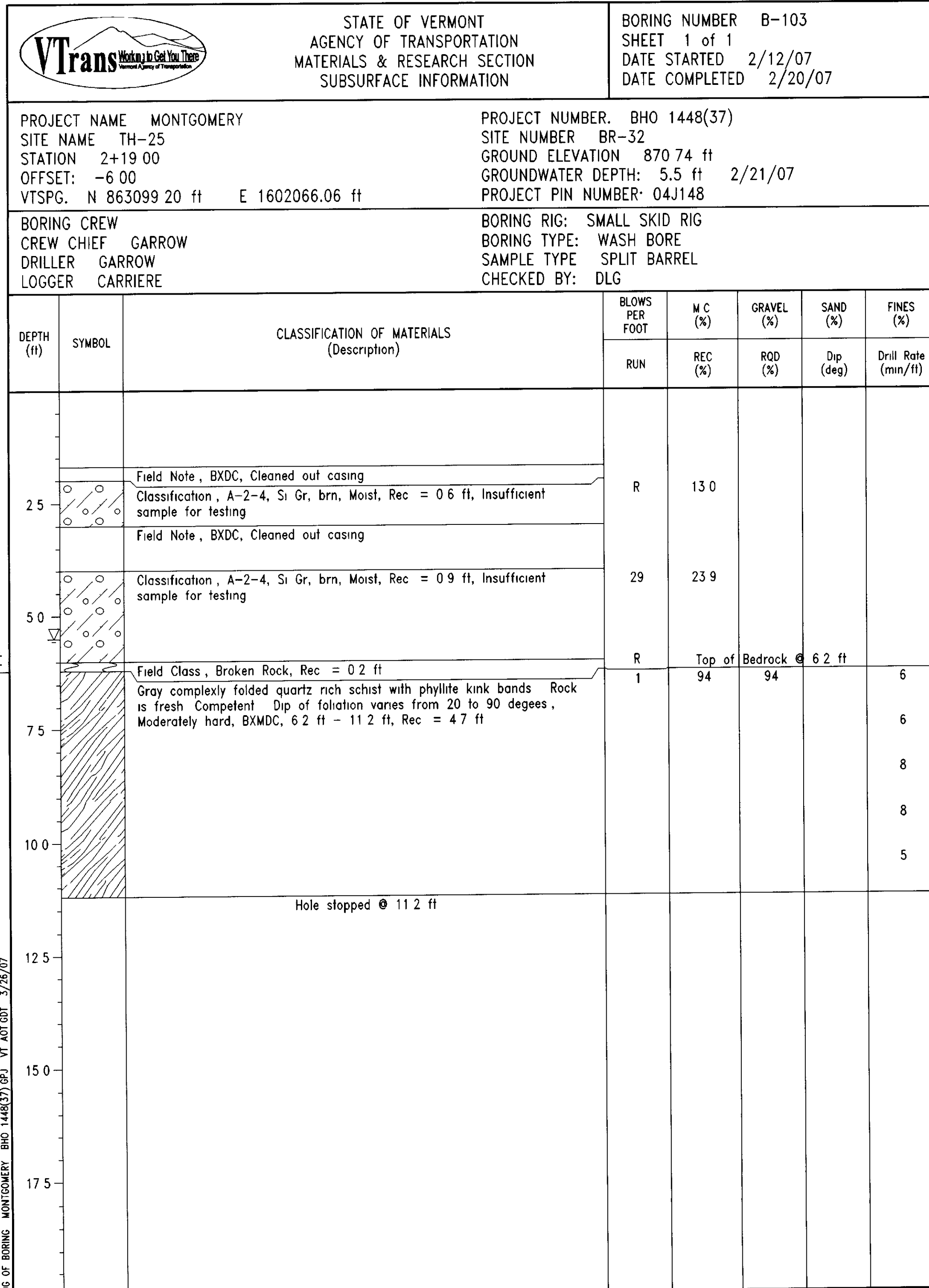
VT <small>Working to Get You There</small>		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-102 SHEET 1 of 1 DATE STARTED 1/18/07 DATE COMPLETED 1/22/07			
PROJECT NAME: MONTGOMERY		PROJECT NUMBER: BHO 1448(37)		SITE NUMBER: BR-32			
SITE NAME: TH-25		GROUND ELEVATION: 868.76 ft		GROUNDWATER DEPTH: No Water Found			
STATION: 1+53.00		PROJECT PIN NUMBER: 04J148					
OFFSET: -6.00							
VTSPG: N 863040.56 ft E 1602032.53 ft							
BORING CREW CREW CHIEF: GARROW		BORING RIG: SMALL SKID RIG		BORING TYPE: WASH BORE			
DRILLER: GARROW		SAMPLE TYPE: SPLIT BARREL		CHECKED BY: DLG			
LOGGER: CARRIERE							
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
0		A-2-4, GrSa, brn, Moist, Rec = 1.3 ft	6	26.5	24.4	41.9	33.7
		Field Note, BXDC, Cleaned out casing					
5.0		Field Class, A-1-b, Sa Gr, brn, Moist, Rec = 0.3 ft, Insufficient sample for testing	15				
10.0		Classification, Broken Rock with sand, gry, Dry, Rec = 0.5 ft, Insufficient sample for testing	23	9.1			
		Classification, Broken Rock material, brn, Moist, Rec = 0.8 ft, BXDC, Cleaned out casing					
15.0		A-2-4, GrSa with Wood, brn, MTW, Rec = 2.0 ft, High moisture content due to wood material within sample	2	72.1	20.6	61.1	18.3
20.0		A-1-b, Sa with some Wood material, brn, MTW, Rec = 0.5 ft, High moisture content due to wood material within sample	WR	53.6	19.3	74.2	6.5
25.0		A-1-a, SaGr with little Wood material, gry-brn, MTW, Rec = 0.8 ft	12	24.0	62.0	31.5	6.5
30.0		Field Class, A-1-a, Gr, gry, Moist, Rec = 0.1 ft, Insufficient sample for testing	8	10.7			
		Gray complexly folded quartz rich schist with phyllite kink bands and scattered pyrite. No significant jointing. Rock is fresh. Competent. Dip of foliation varies from 0-50 degrees. Moderately hard, BXDC, 33.3 ft - 38.3 ft, Rec = 4.0 ft	1	80	78		13
35.0							9
							9
							10
							10
40.0		No Recovery for Run #2. Equipment failure. Core barrel broke off in hole, 38.3 ft - 40.3 ft, Rec = 0.0 ft	2	0			7
		Hole stopped @ 40.3 ft					9

LOG OF BORING: MONTGOMERY, BHO 1448(37) (P.1), VT. AOT. GD. 3/26/07

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)

FILE NAME: s04j148bor.dgn
PROJECT LEADER: J. WEAVER
DESIGNED BY:
BORING SHEET 1

PLOT DATE: 21-MAY-2008
DRAWN BY: J. TREI
CHECKED BY: J. WEAVER
SHEET 28 OF 33



PROJECT NAME: MONTGOMERY	
PROJECT NUMBER: BHO 1448 (37)	
FILE NAME: s04j148bor.dgn	PLOT DATE: 21-MAY-2008
PROJECT LEADER: J. WEAVER	DRAWN BY: J. TREI
DESIGNED BY:	CHECKED BY: J. WEAVER
BORING SHEET 2	SHEET 29 OF 33



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

BORING NUMBER: B-105
 SHEET 1 of 1
 DATE STARTED: 1/31/07
 DATE COMPLETED: 2/01/07

PROJECT NAME: MONTGOMERY
 SITE NAME: TH-25
 STATION: 1+47.07
 OFFSET: -6.60
 VTSPG: N 863034.77 ft E 1602030.00 ft

PROJECT NUMBER: BHO 1448(37)
 SITE NUMBER: BR-32
 GROUND ELEVATION: 868.83 ft
 GROUNDWATER DEPTH: Hole caved in
 PROJECT PIN NUMBER: 04J148

BORING CREW
 CREW CHIEF: GARROW
 DRILLER: GARROW
 LOGGER: CARRIERE

BORING RIG: SMALL SKID RIG
 BORING TYPE: WASH BORE
 SAMPLE TYPE:
 CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M C (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
0 - 18.5		No samples taken BXDC, Cleaned out casing, 0.0 ft - 18.5 ft					
18.5		Top of Bedrock @ 18.5 ft	1	27	0	?	8
18.5 - 20.0		Gray complexly folded quartz rich schist with phyllite kink bands and scattered pyrite. Not competent. Due to poor recovery, dip of foliation difficult to determine. Moderately hard, Moderately weathered, BXDC, 18.5 ft - 20.0 ft, Rec = 0.4 ft	2	96	80		4
20.0 - 21.5		Gray complexly folded quartz rich schist with phyllite kink bands and scattered pyrite. Upper 1.5' of rock is slightly to moderately weathered. Unweathered from 21.5' to bottom of core run. Dip of foliation varies from 0-90 degrees. Competent below 21.5', Moderately hard, BXMDC, 20.0 ft - 25.0 ft, Rec = 4.8 ft					5
21.5 - 25.0							4
25.0		Hole stopped @ 25.0 ft					5
DRILLER'S NOTES		1 Per order, no soil samples were taken 2 Hole caved in at 13.2 feet					

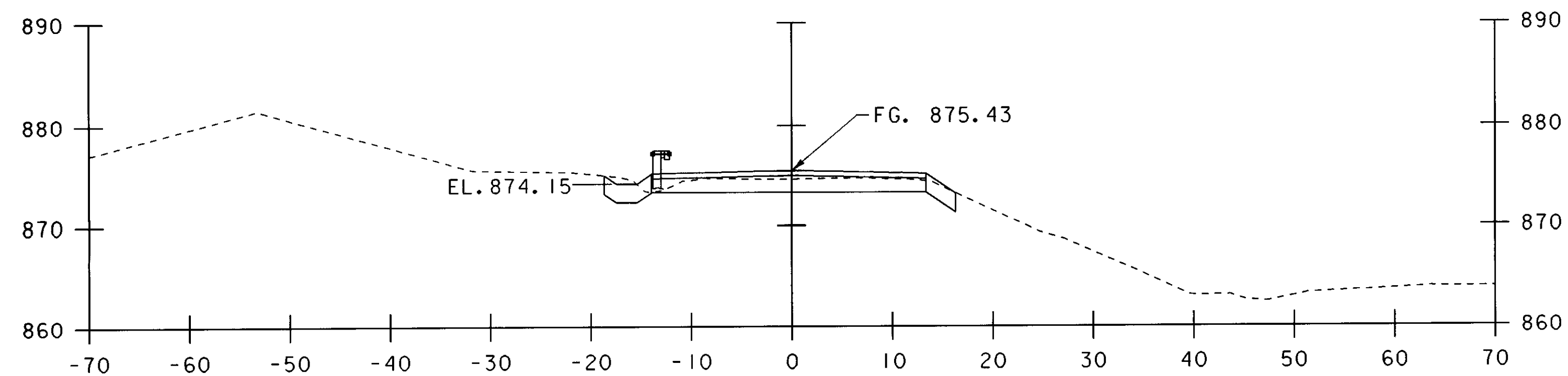
S.W. WING
 EL. BOT. FTG. 860.4 ±

LOG OF BORING: MONTGOMERY, BHO 1448(37) (B), VT AOT, 3/25/07

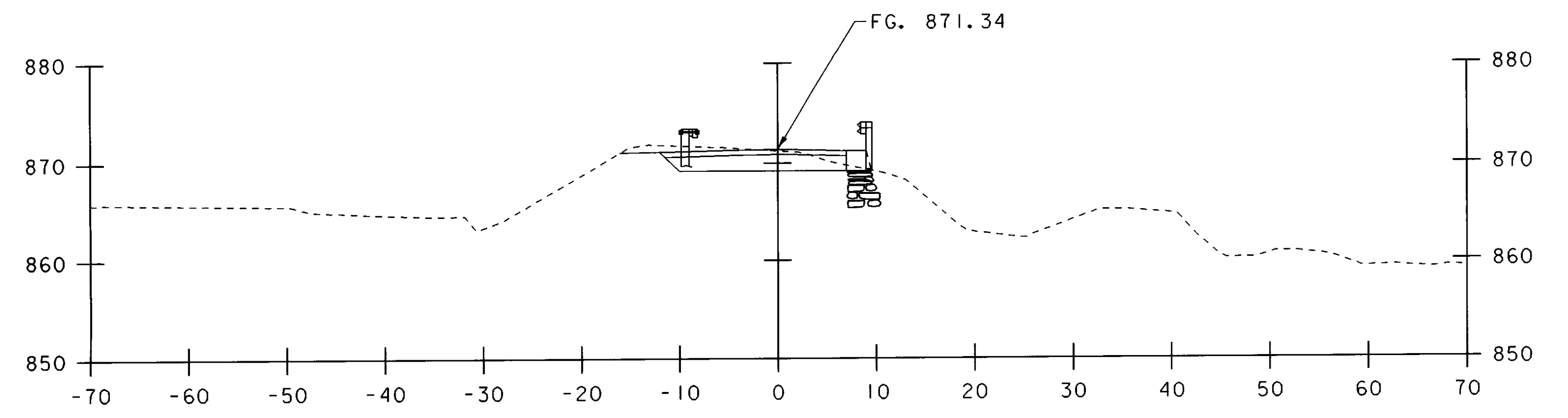
PROJECT NAME: MONTGOMERY
 PROJECT NUMBER: BHO 1448 (37)

FILE NAME: s04j148bor.dgn
 PROJECT LEADER: J. WEAVER
 DESIGNED BY:
 BORING SHEET 3

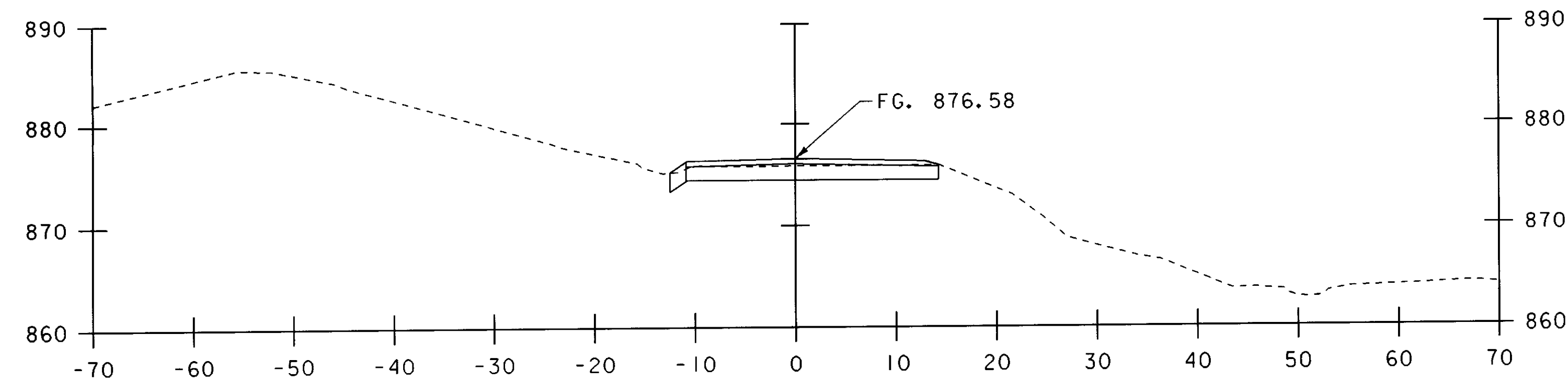
PLOT DATE: 21-MAY-2008
 DRAWN BY: J. TREI
 CHECKED BY: J. WEAVER
 SHEET 30 OF 33



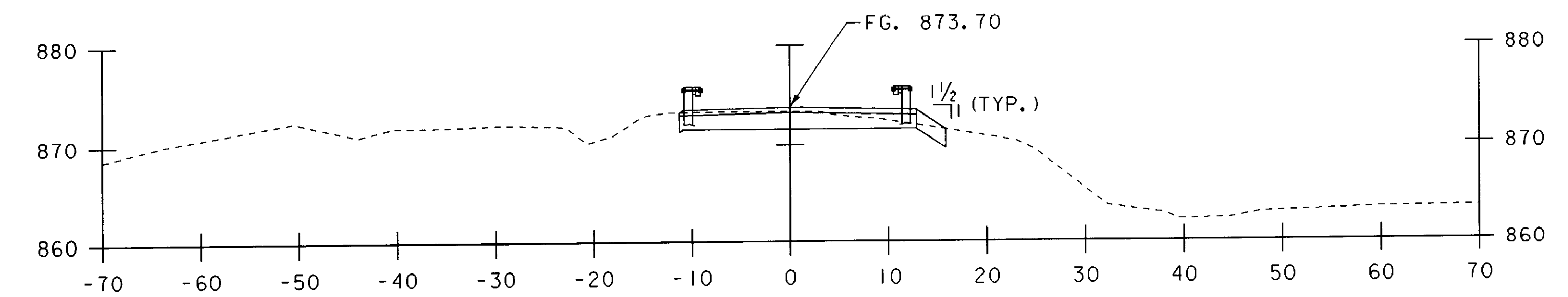
I+35



I+75

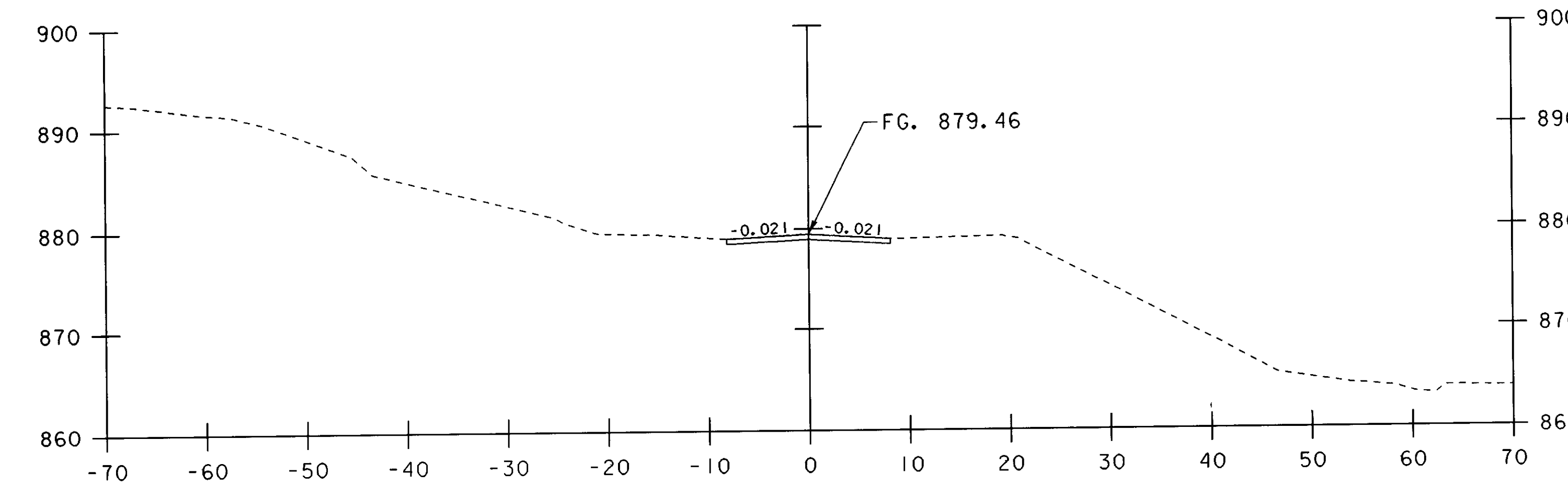


I+25

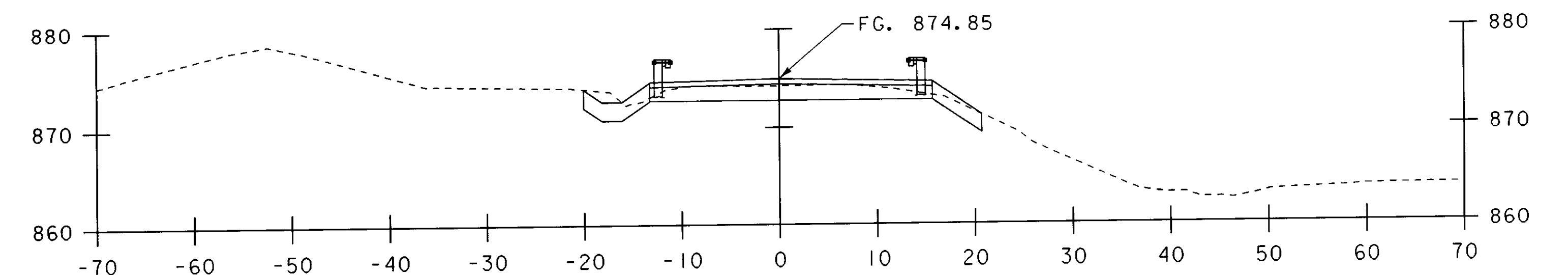


I+50

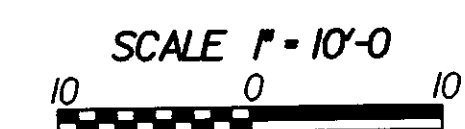
END APPROACH & BEGIN PROJECT STA. I+23.32



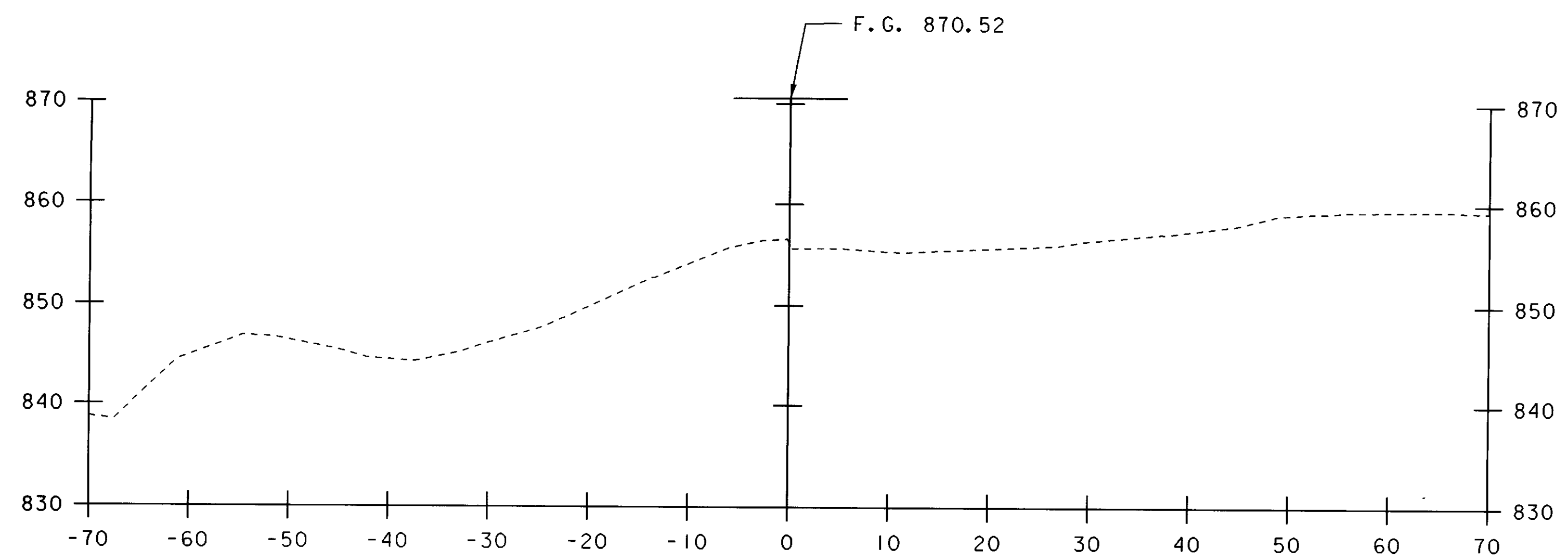
BEGIN APPROACH STA. I+00



I+40

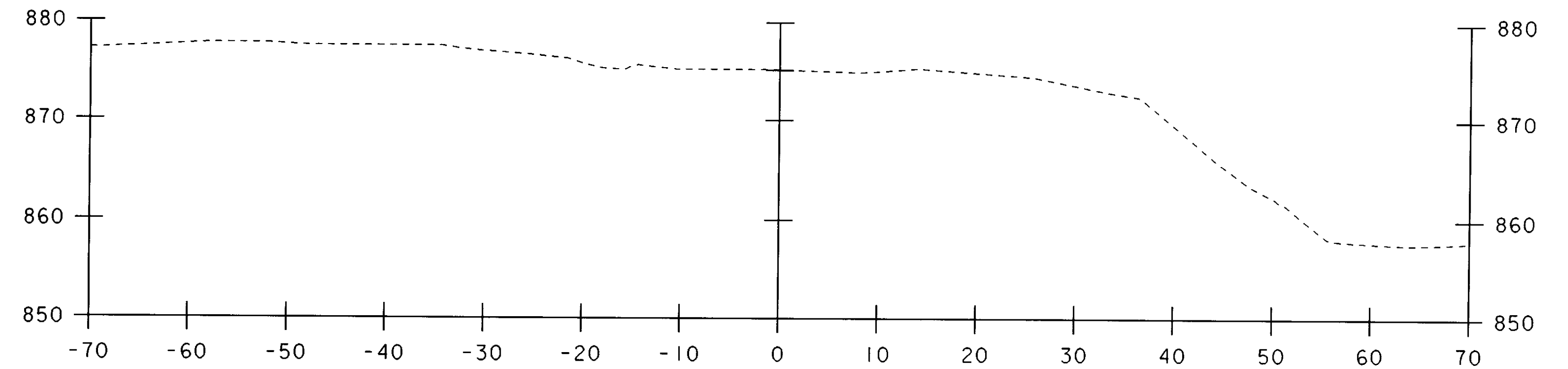


PROJECT NAME: MONTGOMERY	PLOT DATE: 21-MAY-2008
PROJECT NUMBER: BHO 1448 (37)	DRAWN BY: J. TREI
FILE NAME: s04j148xs	CHECKED BY: J. WEAVER
PROJECT LEADER: J. WEAVER	SHEET 32 OF 33
DESIGNED BY: J. WEAVER	
ROADWAY CROSS SECTIONS	



2+25

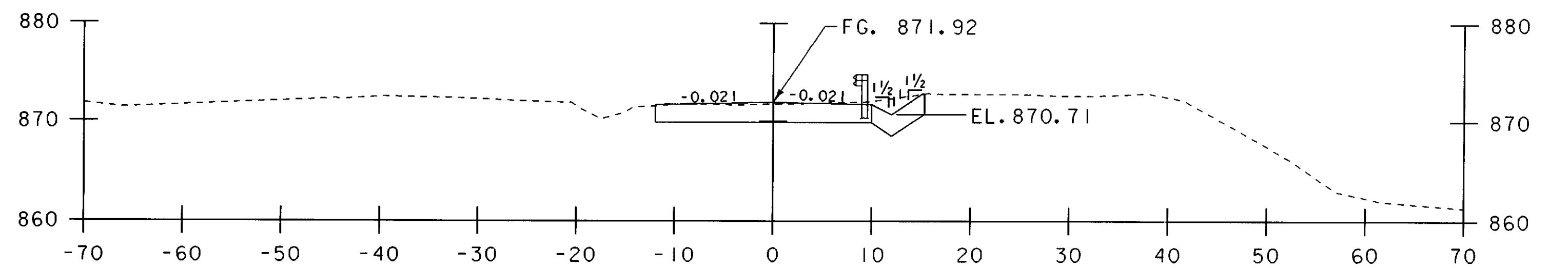
BEGIN BRIDGE STA. 2+04.0 ±



3+00

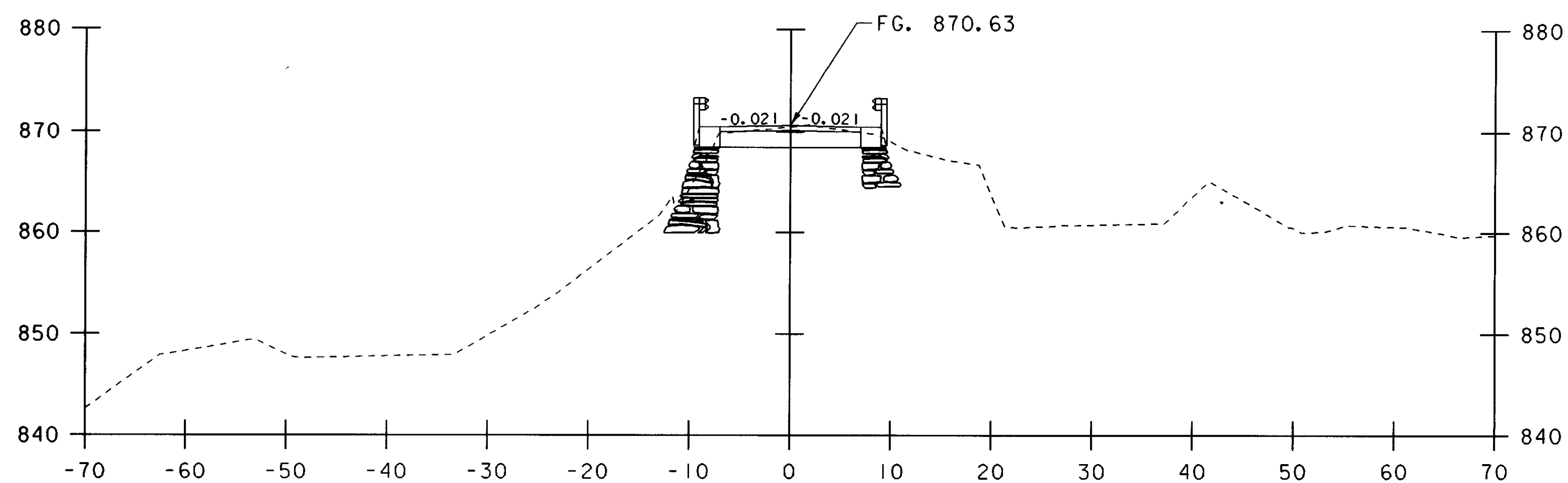
END APPROACH STA. 2+89.32

END PROJECT 2+79.32 & BEGIN APPROACH

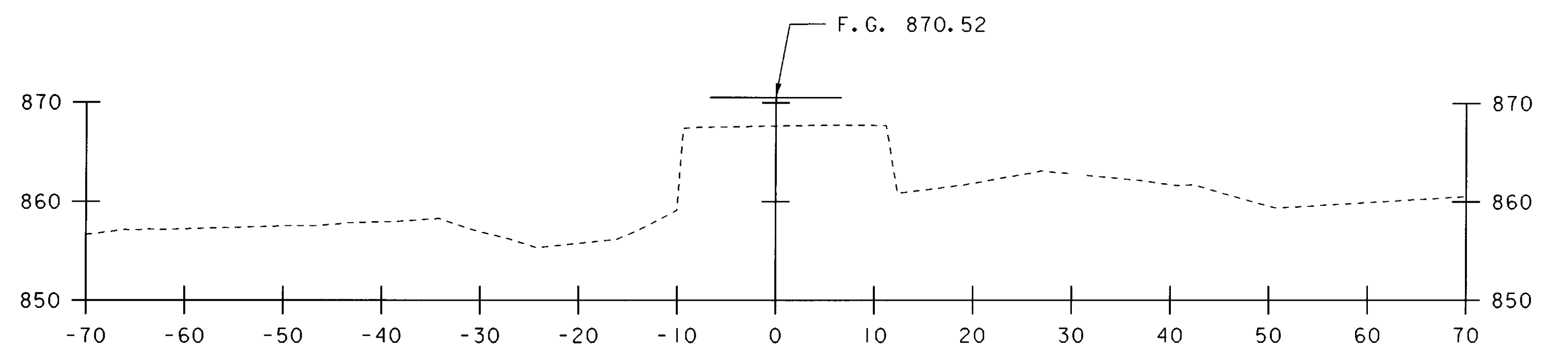


2+75

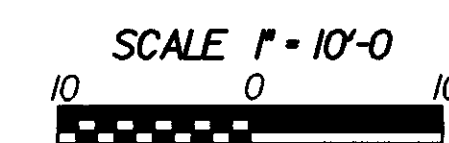
END BRIDGE STA. 2+62.8 ±



2+00



2+50



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ROADWAY CROSS SECTIONS	SHEET 33 OF 33