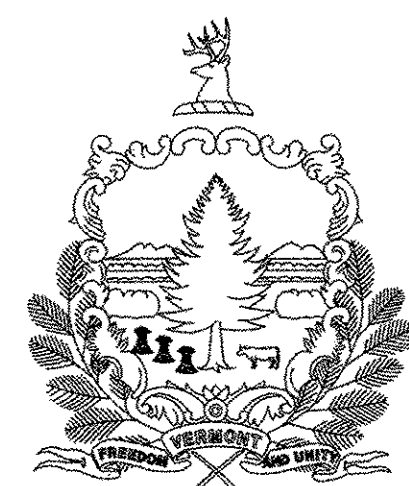


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

COOLEY COVERED BRIDGE REHABILITATION

TOWN OF PITTSFORD, VT RUTLAND COUNTY

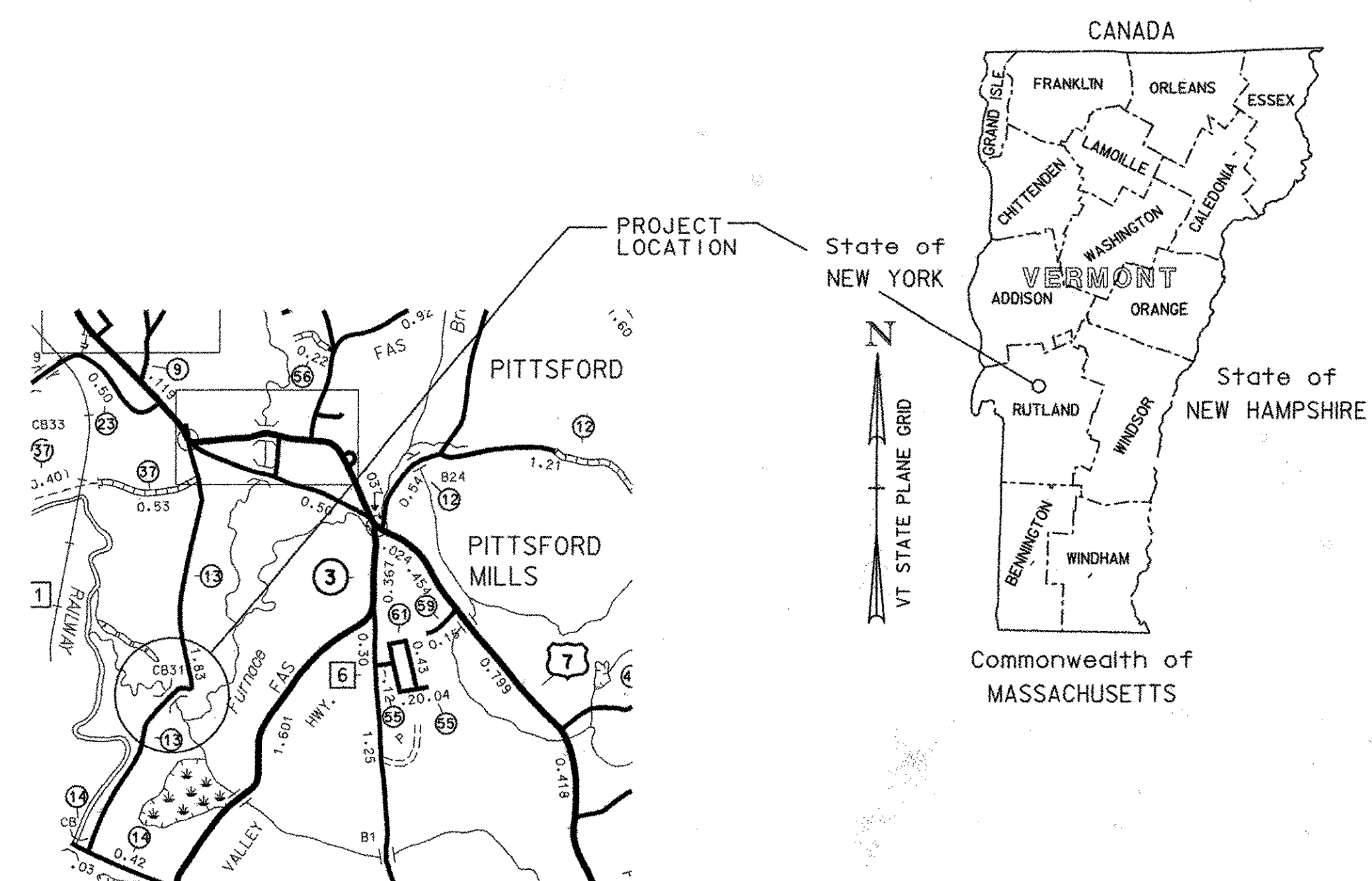
ROUTE NO : ELM STREET (TH 13)

BRIDGE NO : 31

PROJECT LOCATION : ELM STREET OVER FURNACE BROOK

PROJECT DESCRIPTION : REHABILITATION OF THE COOLEY BRIDGE TO INCLUDE NEW TIMBER DECK; NEW GLU-LAM FLOORBEAMS; REPLACEMENT OF SELECTED CHORD & LATTICE MEMBERS; NEW SIDING; APPLICATION OF WOOD PRESERVATIVE, FIRE RETARDANT, FUNGICIDE AND INSECTICIDE; REPAIR OF SLATE ROOF, ABUTMENT REPAIRS, AND INSTALLATION OF GUIDE RAILS AT APPROACHES

LENGTH OF BRIDGE: 50 FEET
 LENGTH OF ROADWAY: 75 FEET
 LENGTH OF PROJECT: 125.00 FEET

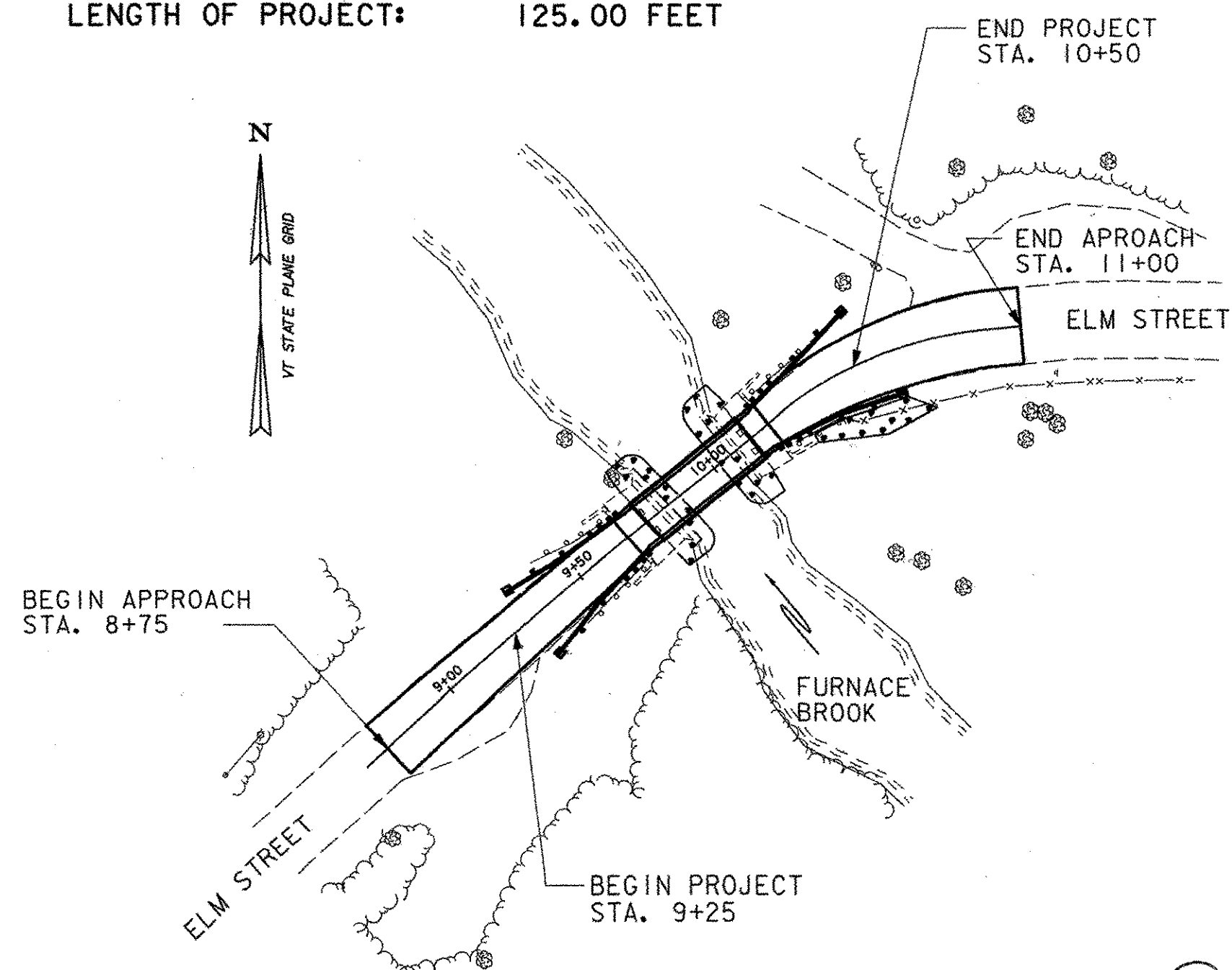


INDEX OF SHEETS	
SHEET NO.	TITLE
1	TITLE SHEET
2	PRELIMINARY INFORMATION SHEET
3	PLAN SHEET
4	BRIDGE QUANTITY SHEET
5	PROFILE AND TIE SHEET
6	GENERAL NOTES
7	GENERAL PLAN AND ELEVATION
8	TRUSS REPAIR DETAILS
9	MISCELLANEOUS DETAILS I
10	FLOORBEAM AND BRACING DETAILS
11	MISCELLANEOUS DETAILS II
12	ROOF AND CURB DETAILS
13	APPROACH RAILING DETAILS
14	CROSS SECTIONS
15	TRAFFIC SIGN SUMMARY SHEET

RECORD PLANS	
CONTRACTOR:	DANIELS NEIL H. INC - ASCUTNEY, VT
RESIDENT ENGINEER:	T. COARSE
CONSTRUCTION BEGAN:	MAY 16, 2003
CONSTRUCTION COMPLETE:	MARCH 3, 2004
RECORD PLANS BY:	T. COARSE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Anthony J. Coarse</i> RESIDENT ENGINEER
DATE	August 8, 2005
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.	

LIST OF STANDARDS

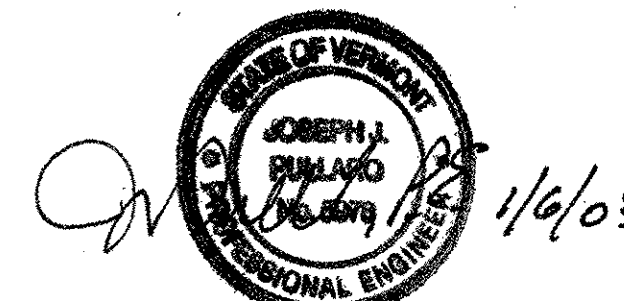
B-5	SLOPE GRADING ON EARTH	6/1/94
E-102	CONSTRUCTION SIGN DETAILS	8/8/95
E-102a	CONSTRUCTION SIGN DETAILS	8/8/95
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	8/8/95
E-107a	BREAKAWAY BARRICADE DETAILS	8/8/95
E-141	REGULATORY SIGN DETAILS	9/20/95
E-154	WARNING SIGN DETAILS	8/8/95
E-155	WARNING SIGN DETAILS	8/8/95
E-160	FLANGED CHANNEL STEEL SIGN POST	5/20/99
T-1	TEMPORARY EROSION CONTROL DETAILS	6/1/94
T-2	TEMPORARY EROSION CONTROL DETAILS	6/1/94



PLAN

0 20 40
SCALE IN FEET

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROJECT DEVELOPMENT.
 CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

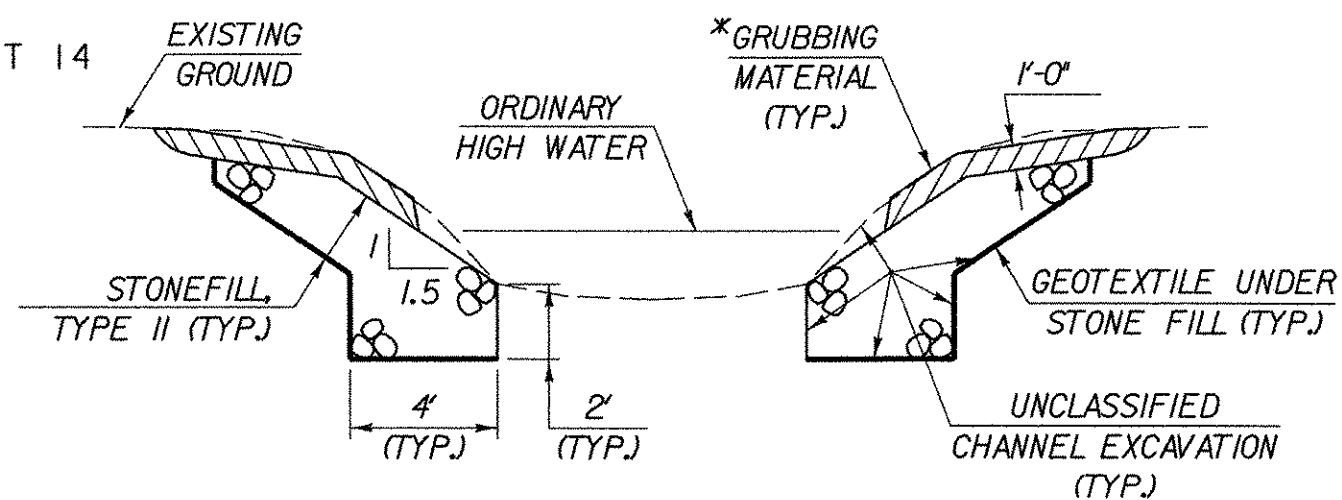
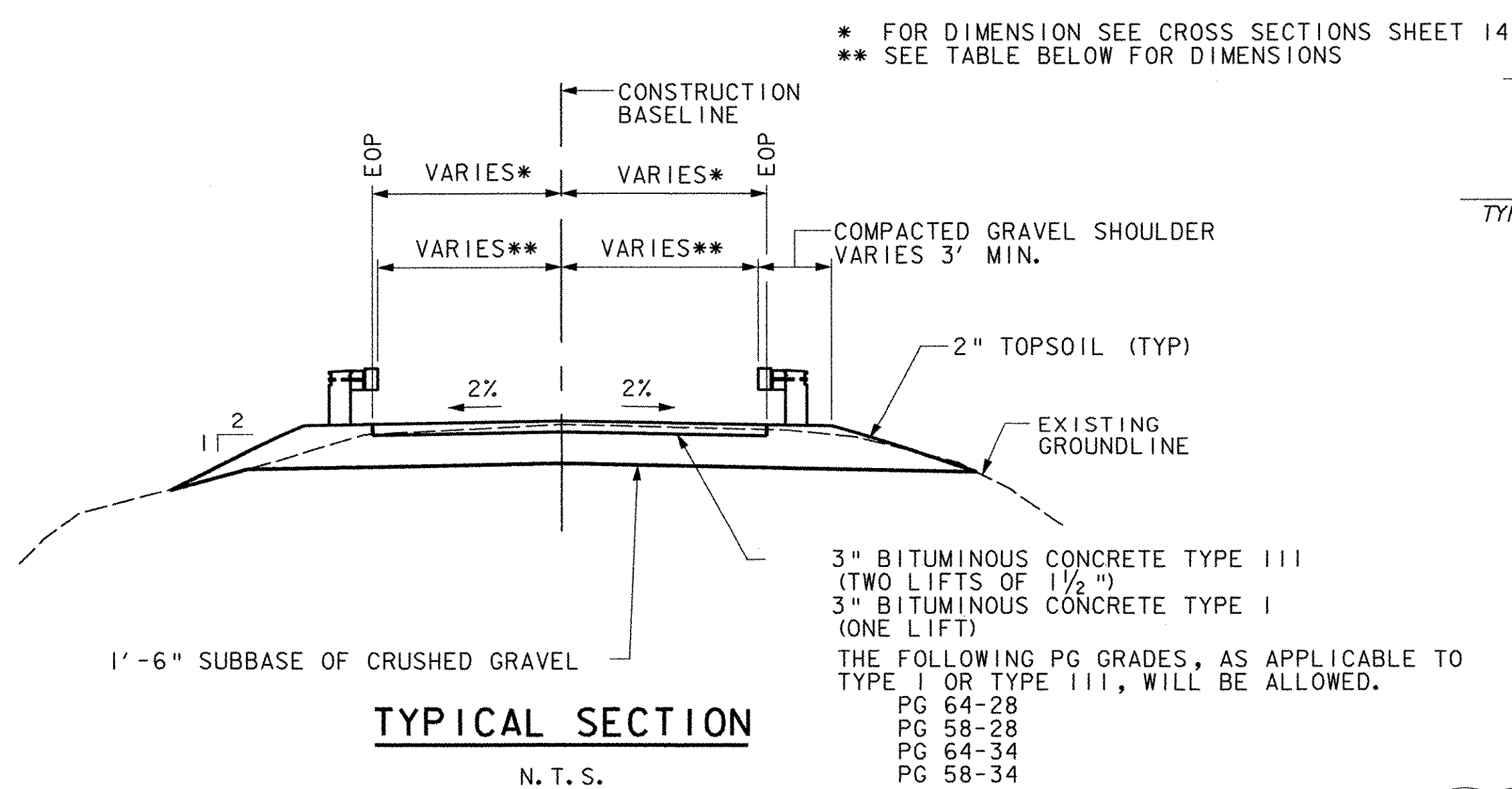


CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : VT. SURVEY & ENG. INC.
 SURVEYED DATE : JAN. 2002
 DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD-83 (96)

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATOR	APPROVED <i>[Signature]</i> DATE Jan 23, 2003
APPROVED <i>[Signature]</i>	DATE 1/6/03
VAOT DIRECTOR OF PROJECT DEVELOPMENT	
PROJECT MANAGER : SUSAN SCRIBNER	
PROJECT NAME : PITTSFORD	
PROJECT NUMBER : BHO 1443 (36)	
SHEET 1 OF 15 SHEETS	





OFFSETS FOR GUARDRAIL

BEGIN FLARE		CONCRETE ANCHOR	
STATION	OFFSET	STATION	OFFSET
STA. 9+50	8.60' LEFT	STA. 9+31	10.57' LEFT
STA. 9+50	10.10' RIGHT	STA. 9+31	12.90' RIGHT
STA. 10+36.5	10.83' LEFT	STA. 10+52	17.31' LEFT
STA. 10+28.5	8.25' RIGHT		
STA. 10+39	11.89' RIGHT	STA. 10+60	15.18' RIGHT

3 EMULSIFIED ASPHALT TO BE APPLIED BETWEEN PAVEMENT LIFTS

**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.

STRUCTURE

STRUCTURE TYPE: COVERED BRIDGE, TOWN LATTICE TRUSS
 CLEAR SPAN (NORMAL TO STREAM): 30' +/- ABUT TO ABUT
 VERTICAL CLEARANCE ABOVE STREAMBED: 15 FEET +/-
 WATER SURFACE ELEV. Q100= 368.0 (FROM FLOOD INSURANCE STUDY)
 IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES
 AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 364.0
 SCOUR: NOT AVAILABLE
 REQUIRED CHANNEL PROTECTION: STONE FILL, TYPE II

NO ADDITIONAL HYDRAULIC STUDIES WERE DONE
 THE WATERWAY OPENING AND VERTICAL CLEARANCE REMAIN UNCHANGED

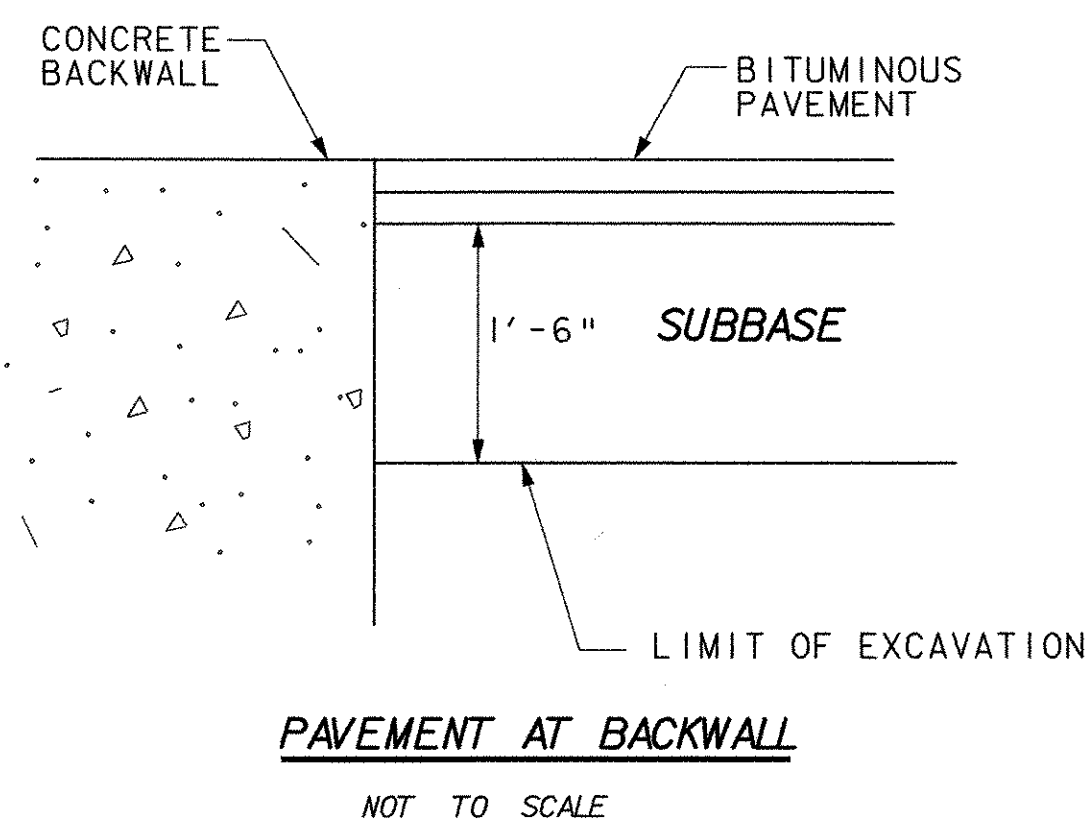
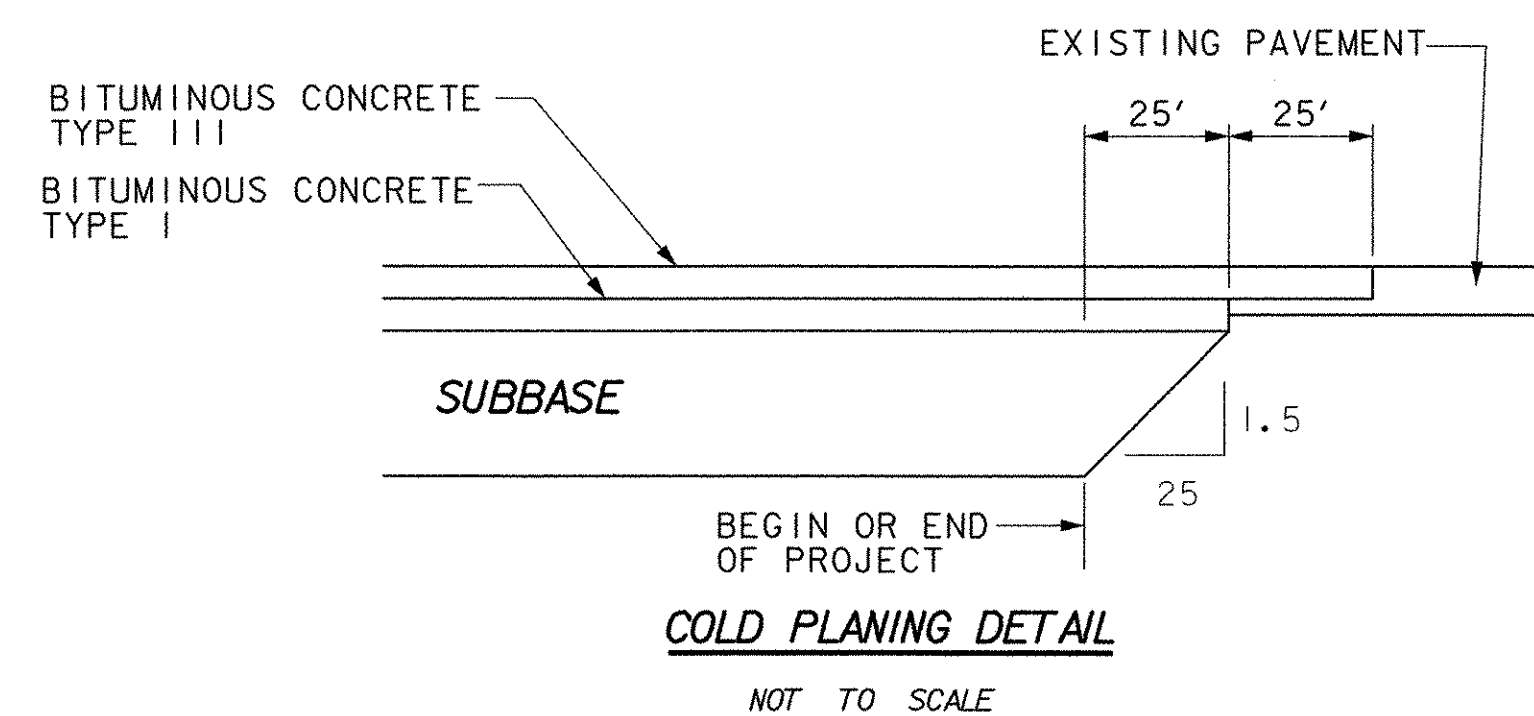
DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO H20
- DESIGN SPAN 50' +/-
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL NA ON LEDGE NA
- ALLOWABLE LOAD FOR PILING NA TYPE NA ESTIMATED LENGTH NA
- STRUCTURAL STEEL AASHTO GRADE M270
- REINFORCING STEEL GRADE 60
- CONCRETE CLASS A f_c : 4000 PSI
 CONCRETE CLASS B f_c : 3500 PSI
 SILICA-FUME CONCRETE f_c : 5000 PSI

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE NA OR ON TEMPORARY BRIDGE NA
- TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY NA TRAFFIC CONTROL SIGNALS REQUIRED NA

ARE SIDEWALKS REQUIRED? NO IF SO, ON WHAT SIDE? NA



WORKING STRESS LOAD RATING (TONS)

STRESS LEVELS	TRUCK					
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR. 5A. SEMI
INVENTORY*	20					
POSTED (I. 17 X INVENTORY ALLOWABLES)	29					
OPERATING (I. 33 X INVENTORY ALLOWABLES)						

*RATING CONTROLLED BY NEW LATTICE MEMBERS AND NEW SECTION OF BOTTOM CHORD
 NEW MATERIAL IS SOUTHERN PINE NO. 1 DENSE (NDS)
 $F_b=1350$ psi $F_v=90$ psi $F_c=1700$ psi (COMP. PARALLEL TO GRAIN)



**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH 13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
PRELIMINARY INFORMATION SHEET			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	E. ALLEN RANDALL	Bridge Design Supervisor	
Date	01/03/03	Date	
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	2 of 15

BRIDGE QUANTITY SHEET

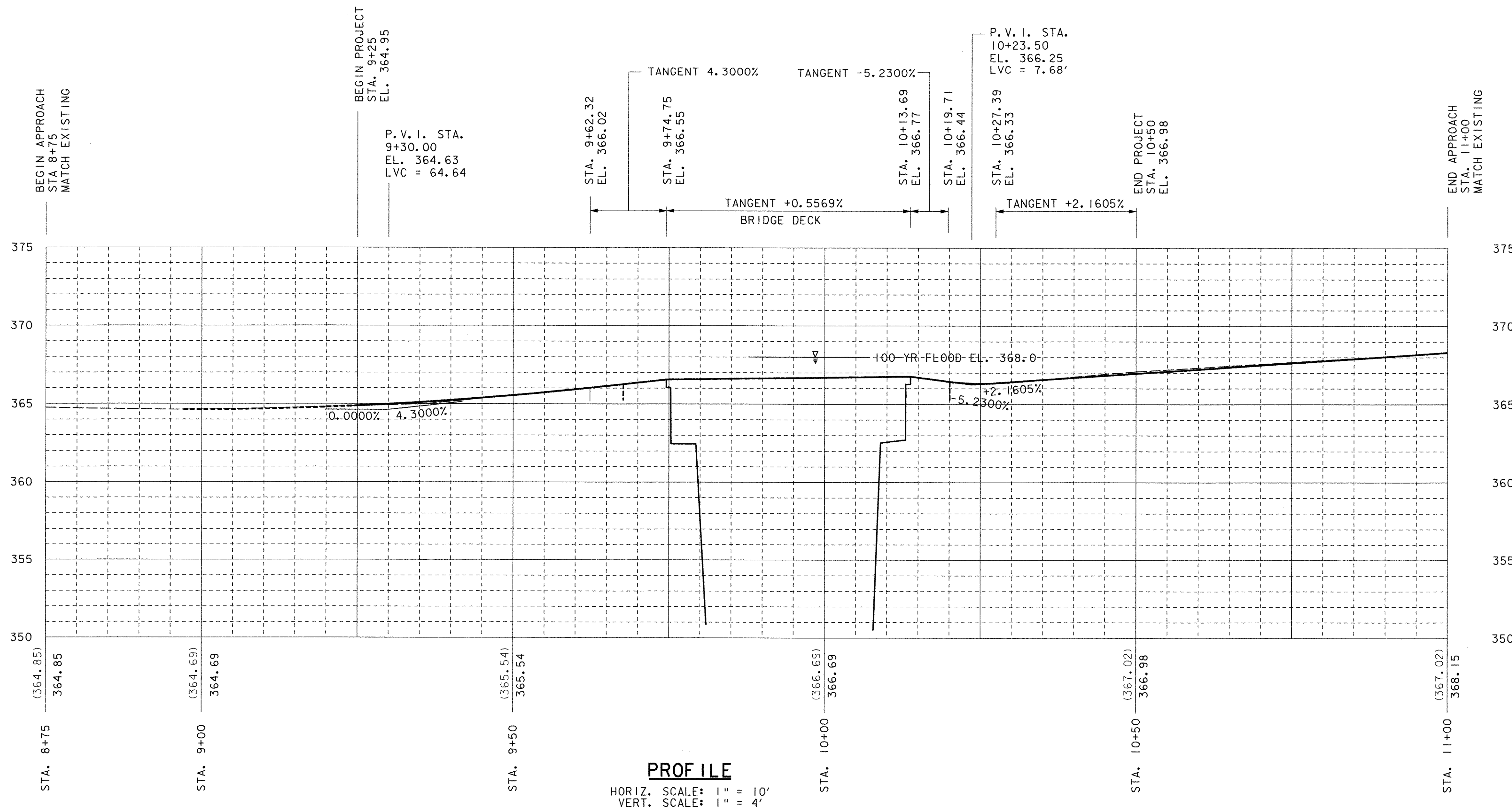
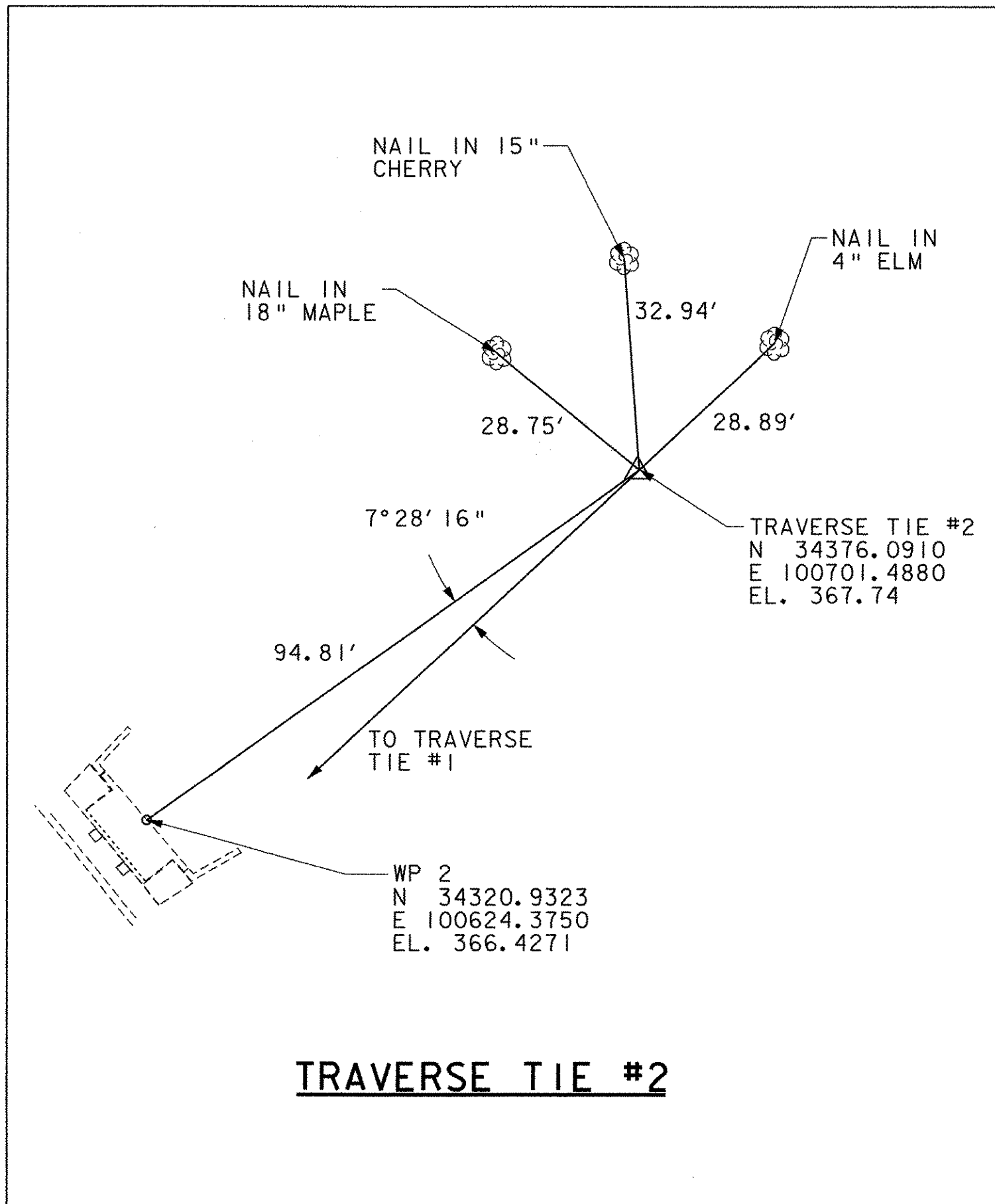
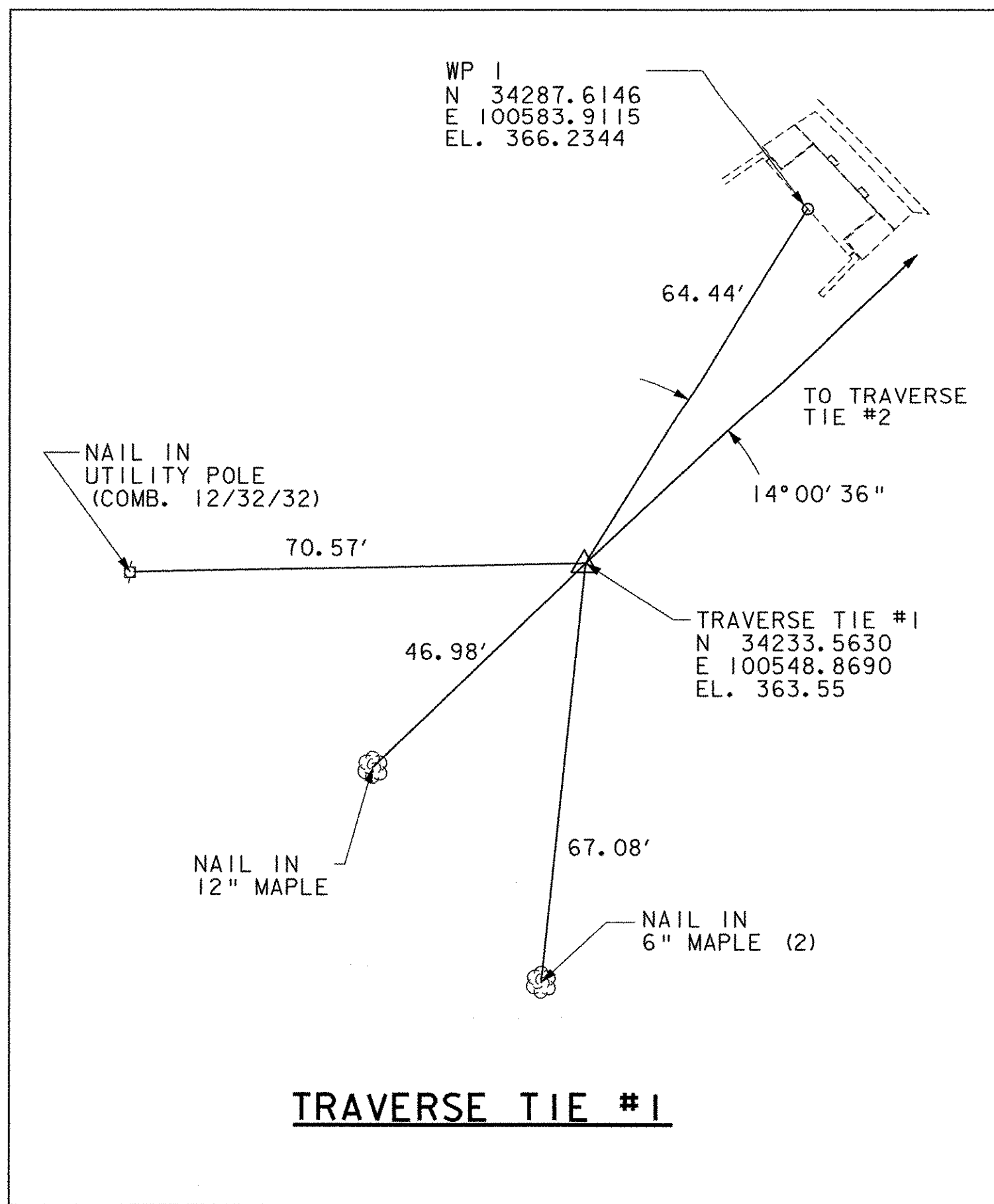
ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN					TOTAL	FINAL
			SUPER-STRUCTURE	ABUTMENT 1	ABUTMENT 2	ROADWAY			
201.10	CLEARING AND GRUBBING	LS				1		1	
203.15	COMMON EXCAVATION	CY				200		200	
203.25	CHANNEL EXCAVATION OF EARTH	CY		27	28			55	
210.10	COLD PLANING - BITUMINOUS PAVEMENT	SY				100		100	
301.26	SUBBASE OF CRUSHED GRAVEL FINE GRADE	CY				180		180	
404.65	EMULSIFIED ASPHALT	CWT				1		1	
406.25	BITUMINOUS CONCRETE PAVEMENT	TON				45		45	
406.27	MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT	TON				105		105	
502.10	SHORING SUPERSTRUCTURE (MOD)	LS	1					1	
506.75	STRUCTURAL STEEL	LS	1					1	
507.15	REINFORCING STEEL	LBS	115					115	
507.16	DRILLING AND GROUTING DOWELS	LF	10					10	
507.19	MECHANICAL BAR CONNECTOR (19") (MOD)	EA	232					232	
507.19	MECHANICAL BAR CONNECTOR (7") (MOD)	EA	76					76	
513.30	STRUCTURAL PAINTING, FIELD APPLIED (MOD)	LS	1					1	
513.36	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD (MOD)	LS	1					1	
513.41	SURFACE PREPARATION, FIELD (MOD)	LS	1					1	
522.20	STRUCTURAL LUMBER & TIMBER-UNTREATED (LATTICE)	MFBM	0.8					0.8	
522.20	STRUCTURAL LUMBER & TIMBER-UNTREATED (BOTTOM CHORD)	MFBM	0.7					0.7	
522.25	STRUCTURAL LUMBER & TIMBER - TREATED (DECK)	MFBM	3.6					3.6	
522.25	STRUCTURAL LUMBER & TIMBER - TREATED (BEARINGS)	MFBM	0.1					0.1	
522.30	NONSTRUCTURAL LUMBER - UNTREATED (ROOF SHEATHING)	MFBM	0.1					0.1	
522.30	NONSTRUCTURAL LUMBER - UNTREATED (SIDING)	MFBM	2.3					2.3	
522.35	NONSTRUCTURAL LUMBER - TREATED (CURB AT BACKWALL)	MFBM	0.2					0.2	
522.35	NONSTRUCTURAL LUMBER - TREATED (WALLERS AND CLEATS)	MFBM	0.4					0.4	
522.40	STRUCTURAL GLUED LAMINATED TIMBER	LS	1					1	
529.20	PARTIAL REMOVAL OF STRUCTURE	EACH	1					1	
531.70	BEARING DEVICE ASSEMBLY	EACH	4					4	
580.14	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS II (MOD)	SY		2.8	1.1			3.9	
613.11	STONE FILL, TYPE II ELIMINATED	CY		28	27			55	
620.50	REMOVING AND RESETTING FENCE	LF				30		30	
621.15	PLANK RAIL (MOD)	LF				160		160	
621.80	REMOVAL AND DISPOSAL OF GUARD RAIL	LF				70		70	
630.15	FLAGGER	HR				100		100	
631.17	TESTING EQUIPMENT - BITUMINOUS	LS				1		1	
635.10	MOBILIZATION	LS				1		1	
641.10	TRAFFIC CONTROL	LS				1		1	
649.31	GEOTEXTILE UNDER STONE FILL	SY		60	60			120	
649.51	GEOTEXTILE FOR SILT FENCE	SY				125		125	
649.61	GEOTEXTILE FOR FILTER CURTAIN	SY				100		100	
651.15	SEED	LB				15		15	
651.18	FERTILIZER	LB				125		125	
651.20	AGRICULTURAL LIMESTONE	TON				0.5		0.5	

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN					TOTAL	FINAL
			SUPER-STRUCTURE	ABUTMENT 1	ABUTMENT 2	ROADWAY			
651.25	HAY MULCH	TON				0.5		0.5	
651.35	TOPSOIL	CY				30		30	
651.40	GRUBBING MATERIAL	SY				50		50	
665.15	REMOVING EXISTING ROOF	SF	100					100	
665.16	REUSED SLATE ROOFING	SF	50					50	
665.17	NEW SLATE ROOFING	SF	50					50	
675.20	TRAFFIC SIGNS, TYPE A	SF				30.5		30.5	
675.30	FLANGED CHANNEL SIGN POST	LB				120		120	

BRIDGE AT STATION 9+70 TO 10+20
LOCATION ELM STREET, PITTSFORD, VT

PREPARED BY: J. MESSIER
CHECKED BY: E. ALLEN RANDALL
SUPERVISOR:

PROJECT: PITTSFORD
PROJECT NO: BHO 1443 (36)
BR OF SHEET NO: 4 OF 15



STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
PROFILE AND TIE SHEET			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	E. ALLEN RANDALL	Date	01/03/03
		Bridge Design Supervisor	
		Date	
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	5 of 15



03 JAN 2003 P:\2014\Cooley Bridge\cadd\gpn\coolpro.dgn

GENERAL NOTES:

1. EXISTING STRUCTURE VERIFICATION: THE ORIGINAL DESIGN PLANS ARE NOT AVAILABLE FOR THIS STRUCTURE. DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR TAKING FIELD MEASUREMENTS OF ALL STRUCTURAL ELEMENTS THAT WILL BE AFFECTED BY THE PROPOSED WORK TO ENSURE PROPER MODIFICATION, FABRICATION, AND FIT FOR THE PROPOSED WORK. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, EXTENT OF THE EXISTING ELEMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK. SHOP DRAWINGS REQUIRED FOR VARIOUS ITEMS OF THE WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED. NO EXTRA PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE COST OF THE PROJECT.
2. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1996, AND ITS LATEST REVISIONS.
3. ITEM 201.10 "CLEARING AND GRUBBING" SHALL INCLUDE TREES, SHRUBS BRUSH, BUSHES, ETC., EXCEPT AS NOTED, BETWEEN STATIONS 9+00 AND 10+75 THAT WILL INTERFERE WITH THE CONSTRUCTION PROCESS.
4. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68° F, UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL ON-PROJECT SIGNS AND BARRICADES. THREE TYPE III BARRICADES AT THE PROJECT LIMITS AT EACH END (6 TOTAL) SHALL BE ERECTED. THE LOCATION OF THE BARRICADES WILL BE DETERMINED BY THE ENGINEER. THE COST OF ALL CONSTRUCTION SIGNS AND BARRICADES, ERECTION AND MAINTENANCE AS WELL AS REMOVAL AND/OR RESETTING OF THE SAME SHALL BE PAID FOR UNDER ITEM 641.10 TRAFFIC CONTROL.
6. THE "COOLEY BRIDGE" SIGN SHALL BE REMOVED AND REMOUNTED ON THE NEW SIDING. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO ITEM 675.20 TRAFFIC SIGNS, TYPE A. ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF PITTSFORD.
7. ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURES" SHALL INCLUDE REMOVAL AND DISPOSAL OF THE FOLLOWING:
 - BRIDGE DECK AND RUNNING BOARDS
 - PORTIONS OF THE LOWER CHORD NOT BEING REUSED
 - EXISTING LOWER LATERAL BRACING (STEEL RODS AND BRACKETS)
 - LATTICE MEMBERS TO BE REPLACED
 - EXISTING FLOORBEAMS, DISTRIBUTION BEAMS AND HANGERS
 - BEARING BLOCKS
 - SIDING
 - ALL EXISTING NAILERS, BLOCKING AND CLEATS
8. ALL WORK SHALL PROCEED IN A CAREFUL ORDERLY MANNER SO THAT THE HISTORIC STRUCTURE IS NOT DAMAGED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, TO THE SATISFACTION OF THE ENGINEER, ANY DAMAGE TO THE BRIDGE CAUSED BY HIS OPERATIONS. THE REPAIRS WILL BE AT THE CONTRACTORS EXPENSE. MATERIALS AND METHODS FOR THESE REPAIRS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF THE OPERATION.
9. ALL IN-STREAM EXCAVATION AND EARTHWORK SHALL BE RESTRICTED TO THE PERIOD OF JUNE 1, 2003 TO OCTOBER 1, 2003. CONTRACTOR PROPOSALS FOR CONSTRUCTION ACTIVITIES IN OR ADJACENT TO FLOWING WATER DURING THE RESTRICTED PERIOD MUST BE ISOLATED FROM THE STREAM FLOW AND RECEIVE PRIOR APPROVAL FROM THE STREAM ALTERATION ENGINEER (VERMONT).
10. TEMPORARY CONSTRUCTION FILLS WITHIN THE WATERCOURSE FOR ANY PURPOSE SHALL CONSIST OF CLEAN STONE FILL ONLY. NO FILLING IN THE STREAM, EXCEPT FOR STONE FILL, TYPE II, SHALL OCCUR WITHOUT THE APPROVAL FROM THE STREAM ALTERATION ENGINEER.
11. REPAIRS TO THE SLATE ROOF SHALL BE MADE WITH MATERIALS AND EQUIPMENT SPECIFICALLY DESIGN FOR THAT PURPOSE. THE COLOR OF THE NEW MATERIAL SHALL APPROXIMATELY MATCH THE EXISTING.
12. ITEM 665.15 "REMOVING EXISTING ROOF" SHALL INCLUDE ALL WORK AND MATERIALS TO REMOVE PORTIONS OF THE EXISTING ROOF SHEATHING THAT ARE ROTTEN OR DAMAGED OR DETERMINED BY THE ENGINEER TO BE UNSUITABLE. SLATE TILES REMOVED FOR THIS PURPOSE SHALL BE CAREFULLY STORED SO AS TO PREVENT DAMAGE AND SHALL BE REINSTALLED AS SOON AS PRACTICAL AFTER THE SHEATHING IS REPLACED. ANY PREVIOUSLY DAMAGE SLATES AS DETERMINED BY THE ENGINEER SHALL BE REPLACED UNDER ITEM 665.17 "NEW SLATE ROOFING." ANY SLATES DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. ALL REINSTALLED SLATES SHALL BE PAID FOR UNDER ITEM 665.16 "SLATE ROOFING - REUSED". COPPER NAILS (MIN. 1.5") SHALL BE USED TO SECURE NEW AND REINSTALLED SLATES EXCEPT WHERE SLATE HOOKS ARE REQUIRED. NAILS AND HOOKS FOR ITEMS 665.16 AND 665.17 SHALL BE CONSIDERED SUBSIDIARY TO THESE ITEMS.
13. ITEM 522.30 "NONSTRUCTURAL LUMBER - UNTREATED ROOF SHEATHING" SHALL BE USED TO REPLACE ANY ROOF SHEATHING REMOVED BECAUSE OF ROT OR DAMAGE OR UNSUITABILITY AS DETERMINED BY THE ENGINEER. THE LUMBER SHALL BE SELECT GRADE (NELMA) SPRUCE AND SHALL BE SAWN SO AS TO CLOSELY RESEMBLE THE MATERIAL BEING REPLACED. GALVANIZED WOOD SCREWS SHALL BE USED TO SECURE THE REPLACED ROOF SHEATHING AND SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.
14. THE CONTRACTOR SHALL PROVIDE WATERPROOF TARPS AS NECESSARY TO TEMPORARILY COMPLETELY COVER ANY AREAS OF THE ROOF WHERE THE SLATE HAS BEEN REMOVED. THE TARPS SHALL BE OF ADEQUATE SIZE AND SHALL BE SECURED PROPERLY SO AS TO PROTECT THE BRIDGE FROM THE ELEMENTS. THE TARPS SHALL BE CONSIDERED SUBSIDIARY TO ITEM 665.15 "REMOVING EXISTING ROOF."
15. TREENAILS USED TO REINSTALL REPLACED OR REMOVED TRUSS MEMBERS SHALL BE PAID FOR UNDER ITEM 507.19 "MECHANICAL BAR CONNECTOR (MODIFIED)." SEE SPECIAL PROVISIONS. THE ITEM SHALL INCLUDE ALL WORK AND MATERIALS TO RECONNECT THE TRUSS MEMBERS WITH CONNECTIONS AS IN THE EXISTING STRUCTURE. THE CONTRACTOR SHALL ENSURE EACH TREENAIL IS SECURE IN THE HOLE AND THAT NO DAMAGE IS DONE TO THE SURROUNDING MATERIAL DURING INSTALLATION. EXISTING TREENAILS REMOVED FOR ANY REASON SHALL NOT BE REUSED BUT SHALL BE REPLACED WITH NEW TREENAILS.

16. ALL WORK IS TO BE COMPLETE WITHIN THE EXISTING 3-ROD RIGHT-OF-WAY. NO PROVISIONS HAVE BEEN MADE FOR WORK BEYOND THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMISSION, PERMITS AND EASEMENTS ETC, FOR ANY OPERATIONS THAT REQUIRE WORK OUTSIDE OF THE RIGHT-OF-WAY.
17. THE CONTRACTOR IS HEREBY NOTIFIED THAT THIS STRUCTURE IS PART OF AN ONGOING STUDY OF FUMIGANT TREATMENTS FOR TIMBER. THE CONTRACTOR SHALL TAKE NO ACTIONS, UNLESS SPECIFIED IN THE PLANS, THAT WILL INTERFERE WITH THIS STUDY. THE AREAS THAT HAVE RECEIVED THE TREATMENTS HAVE BEEN MARKED ON THE PLANS (SEE TYPICAL ELEVATION ON SHEET 8). MATERIAL SAFETY DATA SHEETS WILL BE PROVIDED UPON REQUEST. THIS AREA SHALL NOT BE INCLUDED IN THE AREAS SPECIFIED FOR INSECTICIDE/FUNGICIDE AND FIRE RETARDANT TREATMENT UNDER ITEM 513.30 "STRUCTURAL PAINTING, FIELD APPLIED." THIS AREA SHALL BE COMPLETELY MASKED OFF WITH HEAVY DUTY PLASTIC. THE WORK AND MATERIALS TO COMPLETE THE MASKING WILL BE PAID FOR UNDER ITEM 513.41 "SURFACE PREPARATION, FIELD."
18. THE ROAD WILL BE CLOSED TO TRAFFIC DURING THE CONSTRUCTION PROJECT. THE TOWN OF PITTSFORD SHALL BE RESPONSIBLE FOR ERECTING AND MAINTAINING THE DETOUR SIGNING. THE SIGNING SHALL BE INSTALLED PRIOR TO THE BEGINNING OF ANY WORK BY THE CONTRACTOR AND SHALL BE IN PLACE UNTIL THE PROJECT IS COMPLETE. THE CONTRACTOR SHALL NOTIFY THE TOWN OF PITTSFORD AS TO THE DATE OF CLOSURE AT LEAST TWO WEEKS PRIOR TO THAT ANTICIPATED DATE.
19. MEMBER REPLACEMENT OTHER THAN THOSE SPECIFICALLY DETAILED ON THE PLANS WILL NEED INDIVIDUAL APPROVAL FROM THE PROJECT MANAGER AFTER CONSULTATION WITH THE AGENCY OF TRANSPORTATION'S HISTORIC PRESERVATION OFFICER.
20. ITEM 506.75 "STRUCTURAL STEEL (LS)" INCLUDES THE MATERIAL, WORK, EQUIPMENT AND LABOR TO PROVIDE AND INSTALL THE LOWER LATERAL BRACING. SEE SHEET 10.

3
 THE CONTRACTOR SHALL AVOID UNNECESSARY DISASSEMBLY OF THE TOWN LATTICE TRUSSES. ONLY THE JOINTS THAT MUST BE DISASSEMBLED TO EFFECT REPAIRS TO THE TRUSSES SHALL BE DISASSEMBLED. AT NO POINT IN THE CONSTRUCTION SEQUENCE SHALL THE TRUSSES BE DISASSEMBLED TO THE EXTENT THAT THE EXISTING GEOMETRY AND MEMBER LOCATION IS LOST.

CONCRETE NOTES:

21. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING INSTITUTE."
22. REINFORCING PLACEMENT TOLERANCES SHALL BE:
 - SPACING +/- 1"
 - CLEARANCE +/- 1/4"
23. CONCRETE REPAIR MATERIAL ON THIS PROJECT WILL NOT BE MEASURED FOR PAYMENT BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM 580.14 "REPAIR CONCRETE SUBSTRUCTURE, CLASS II."

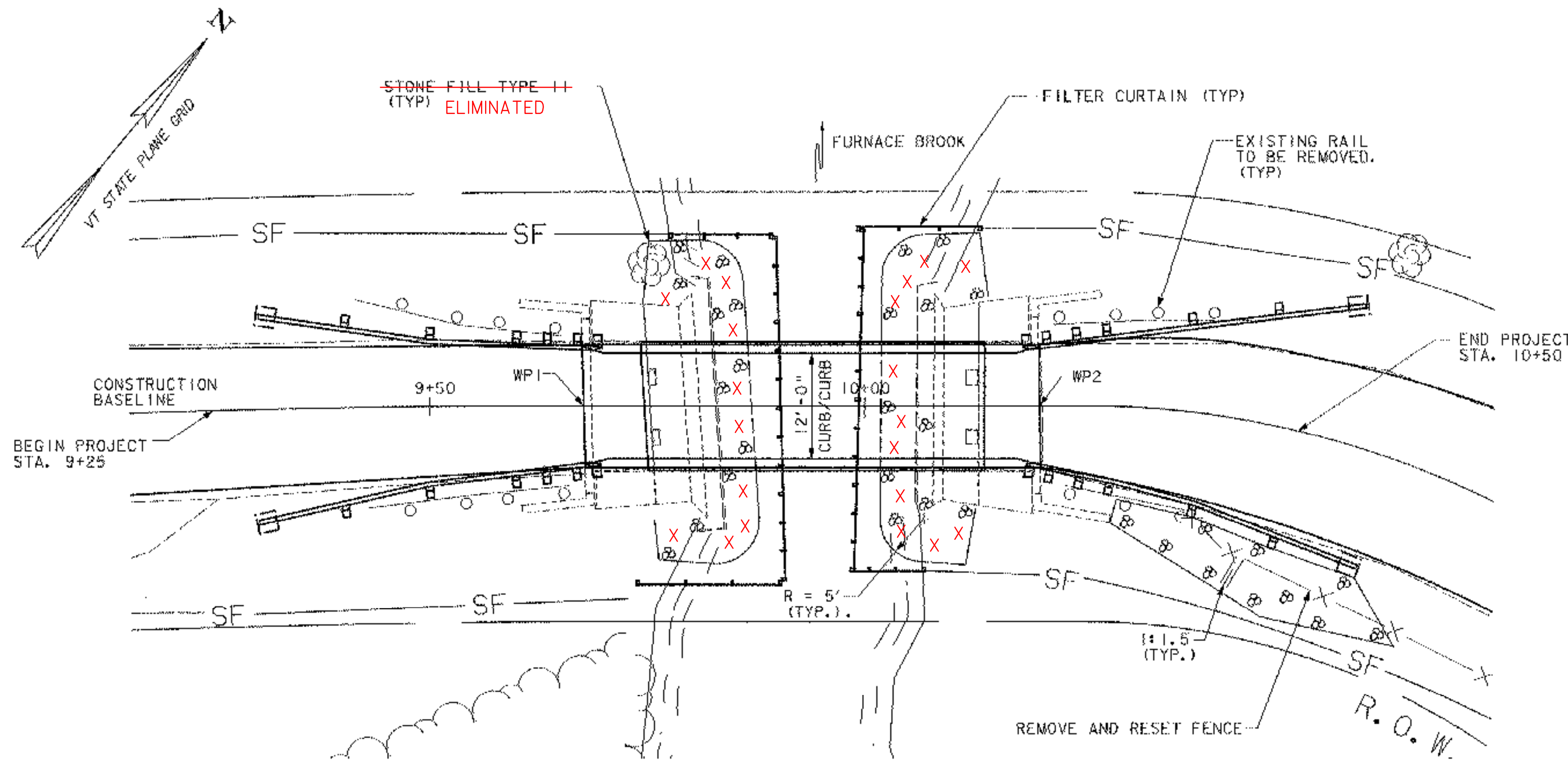
COATINGS:

24. THE COATINGS FOR LUMBER AND TIMBER ELEMENTS ARE AS FOLLOWS:
 - COATING A OR COATING B APPLIED TO ALL INTERIOR UNSEALED TIMBER SURFACES INCLUDING ALL TRUSS MEMBERS (EXCEPT AREA DESCRIBED IN NOTE 17 ABOVE), CLEATS, NAILERS, SIDING, BRACING, ROOF SHEATHING. DO NOT COAT THE DECK
 - COATING #1 APPLIED TO ALL INTERIOR UNSEALED TIMBER SURFACES INCLUDING ALL TRUSS MEMBERS, CLEATS, NAILERS, SIDING, BRACING, ROOF SHEATHING DO NOT COAT THE DECK
 - COATING #2 AND COATING #3 APPLIED TO THE EXTERIOR OF THE SIDING INCLUDING RETURNS

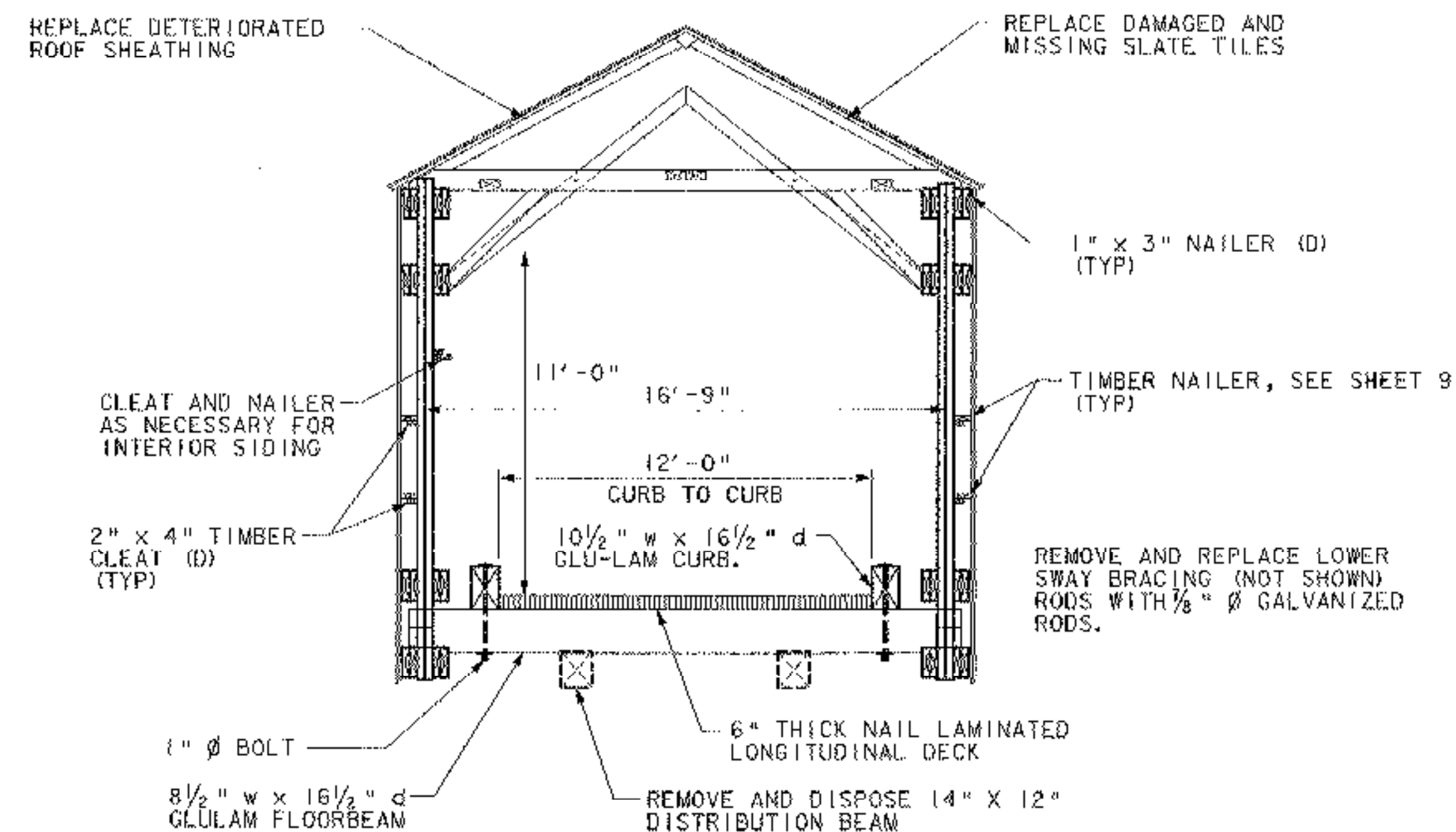
STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
GENERAL NOTE SHEET			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	E. ALLEN RANDALL	Bridge Design Supervisor	
	Date 01/03/03	Date	
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	6 of 15



06 JAN 2003 PR2074 Cooley Bridge v00da.dgn v00dgn.dgn



PLAN VIEW
SCALE: 1" = 10'



PROPOSED CROSS SECTION
SCALE: 1/4" = 1'-0"

FS = FULL SAWN
RS = ROUGH SAWN
D = DRESSED
LAMINATED TIMBER DECK: ACTUAL THICKNESS 5/8"
INDIVIDUAL LAMINATES 1/2" THICK, PRESSURE TREATED
FLOORBEAM AND CURB PRESERVATIVE TREATMENT MADE AFTER NOTCHES AND HOLES ARE CUT.

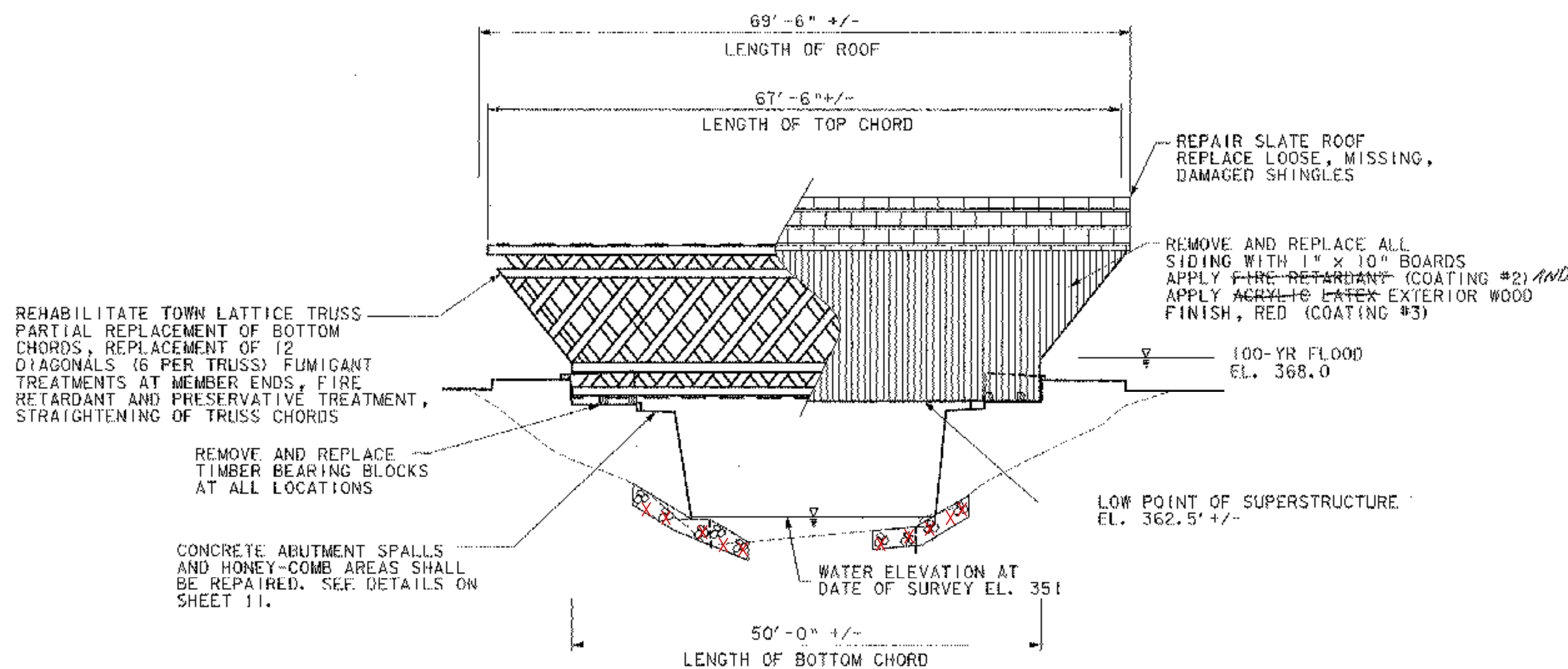
TIMBER AND LUMBER SCHEDULE

MEMBER	TYPE	SIZE	MATERIAL	STRUCTURAL GRADE	TREATMENT	PAY ITEM
CURB	GLULAM	10 1/2" w x 16 1/2" d	VISUALLY GRADED SOUTHERN PINE	24F-V3	PRESSURE TREATED	522.40 STRUCTURAL GLUED LAMINATED TIMBER
CURB (AT BACKWALL)	SAWN TIMBER	11" x 11" (FS)	SOUTHERN PINE	NO. 1	PRESSURE TREATED	522.35 NONSTRUCTURAL LUMBER - TREATED (CURB AT BACKWALL)
DECK	NAIL LAM	2" x 6" (D)	SOUTHERN PINE	NO. 1	PRESSURE TREATED	522.25 STRUCTURAL LUMBER - TREATED (DECK)
FLOORBEAM	GLULAM	8 1/2" w x 16 1/2" d	VISUALLY GRADED SOUTHERN PINE	24F-V3	PRESSURE TREATED	522.40 STRUCTURAL GLUED LAMINATED TIMBER
LATTICE MEMBERS	SAWN TIMBER	3" x 11 1/2" (FS)	SOUTHERN PINE	NO. 1 DENSE	NONE	522.20 STRUCTURAL LUMBER & TIMBER - UNTREATED (LATTICE)
TRUSS BOTTOM CHORD	SAWN TIMBER	3" x 11 1/2" (FS)	SOUTHERN PINE	NO. 1 DENSE	NONE	522.20 STRUCTURAL LUMBER & TIMBER - UNTREATED (BOTTOM CHORD)
NAILERS AND CLEATS	SAWN LUMBER	VARIES	SPRUCE	CONSTRUCTION GRADE	PRESSURE TREATED	522.35 NONSTRUCTURAL LUMBER & TIMBER - TREATED (NAILERS AND CLEATS)
SIDING	SAWN LUMBER	1" x 10" (D)	ROUGH SAWN WHITE PINE HEMLOCK	NELMA # 2 OR BTR. 54S KD	NONE	522.30 NONSTRUCTURAL LUMBER - UNTREATED (SIDING)
ROOF SHEATHING*	SAWN LUMBER	1 1/4" (D)	EAST. SPRUCE	NELMA SELECT	NONE	522.30 NONSTRUCTURAL LUMBER - UNTREATED (ROOF SHEATHING)
BEARING*	SAWN TIMBER	9" x 9" (FS)	WHITE OAK	NO. 1	PRESSURE TREATED	522.25 STRUCTURAL LUMBER & TIMBER - TREATED (BEARINGS)
TREENAILS*	SAWN TIMBER	MATCH EXISTING	WHITE OAK	NO. 1	NONE	507.19 MECHANICAL BAR CONNECTOR (19") (MOD) 507.19 MECHANICAL BAR CONNECTOR (17") (MOD)

(RS) = ROUGH SAWN
(D) = DRESSED
(FS) = FULL SAWN TO INDICATED DIMENSIONS

*CONTRACTOR TO VERIFY ALL MEMBER DIMENSIONS FOR REPLACEMENT ELEMENTS TO ENSURE COMPATIBILITY WITH EXISTING

EXISTING TIMBER MEMBERS:
LATTICE MEMBERS 3" x 11 1/2"
BOTTOM CHORD 3" x 11 1/2"
SIDING 1" x 10" +/-
DECK 6" THICK NAIL LAM
FLOORBEAMS 8" x 14"
ROOF SHEATHING 1 1/4" THICK (WIDTH VARIES)
DECK RUNNERS 1 1/2" x 8 1/2"
BEARINGS 9" +/- x 9" +/-



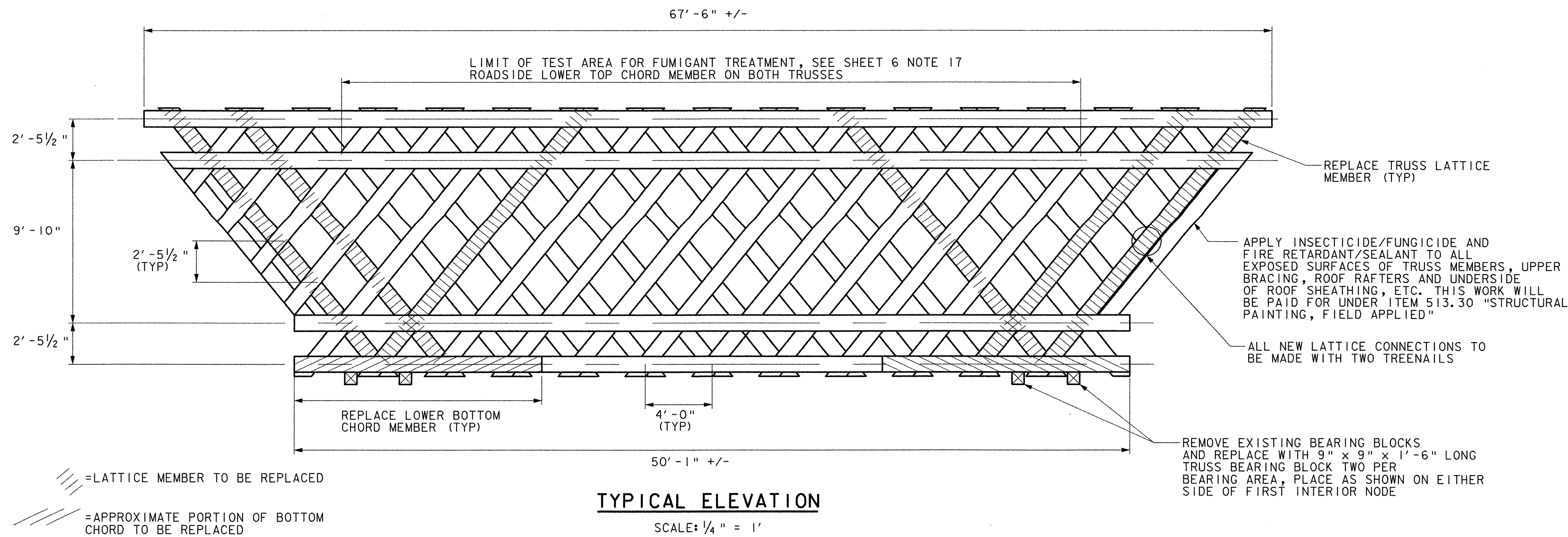
ELEVATION
SCALE: 1" = 10'

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
GENERAL PLAN AND ELEVATION			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	E. ALLEN RANDALL	Date	01/03/03
		Bridge Design Supervisor	
		Date	
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
U.G.C. Info.			
Bridge Sheet No.		Sheet 7	of 15

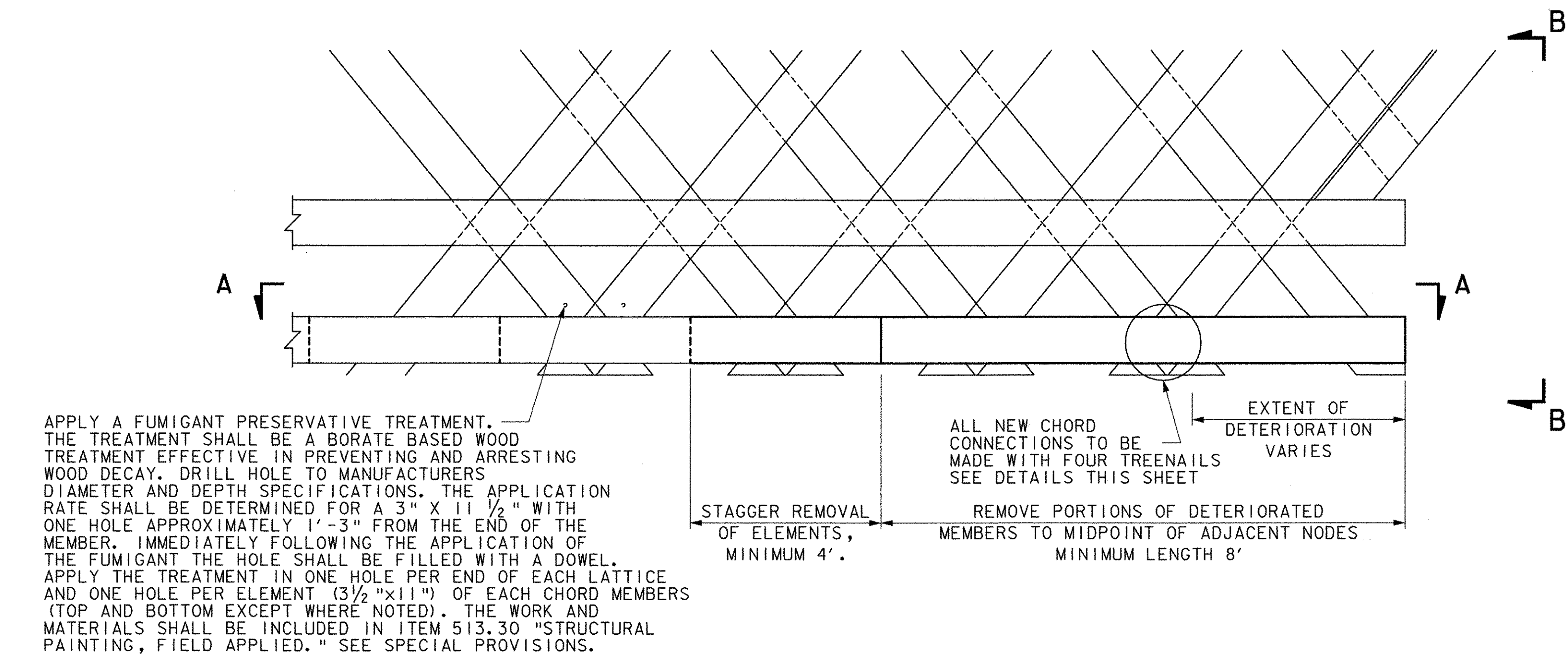


PR 12/14/03 Cooley Bridge 1443.dwg 3/10/03

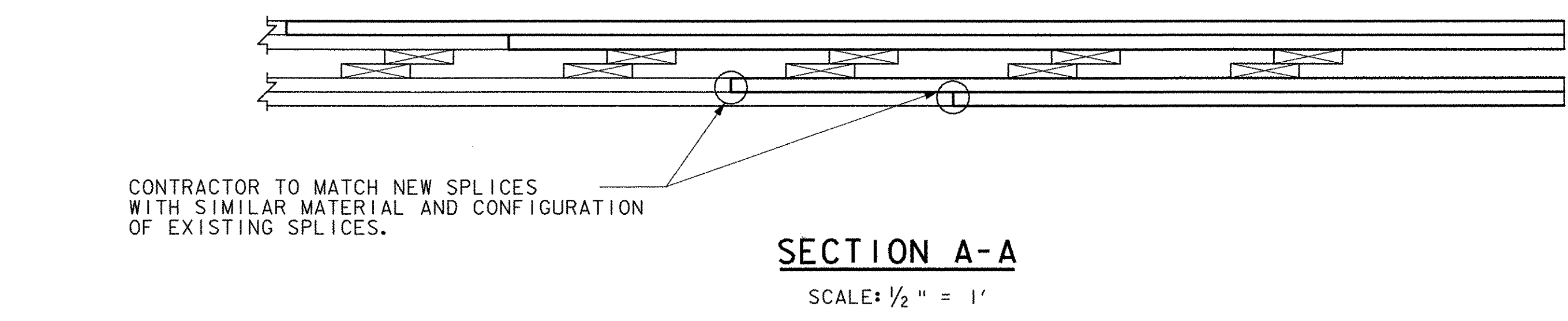


- TRUSS REHABILITATION NOTES:**
1. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO ENSURE THAT THE TRUSSES REMAIN STABLE AND THAT NO MEMBER IS SUBJECT TO LOADS BEYOND THOSE NORMALLY EXPECTED UNDER DEAD LOAD. THE WORK AND MATERIALS REQUIRED TO SATISFY THIS REQUIREMENT SHALL NOT BE PAID FOR AS A SEPARATE ITEM BUT SHALL BE CONSIDERED SUBSIDIARY TO THE TO THE ITEMS BELOW.
 2. REMOVE ENTIRE LOWER BOTTOM CHORD FROM ONE TRUSS. INSTALL THE FLOORBEAMS WITH TEMPORARY SUPPORT AS NEEDED. REPLACE END SECTIONS OF BOTH TRUSSES AS DETAILED ON THIS SHEET AND REINSTALL LOWER CHORD MEMBER. THE WORK TO REMOVE AND REINSTALL THE LOWER BOTTOM CHORD MEMBER WILL BE PAID FOR UNDER ITEM 522.20 "STRUCTURAL LUMBER - UNTREATED BOTTOM CHORD." EXISTING TREENAILS SHALL BE REMOVED IN A MANNER THAT DOES NOT DAMAGE THE SURROUNDING MATERIAL. ALL CHORD CONNECTIONS WILL BE REMADE WITH FOUR TREENAILS AS ARRANGED IN THE ORIGINAL STRUCTURE. THE WORK AND MATERIALS TO REMAKE THE TREENAIL CONNECTIONS WILL BE PAID FOR UNDER ITEM 507.19 "MECHANICAL BAR CONNECTOR (MODIFIED)" (EA). SEE SPECIAL PROVISIONS.
 3. REMOVE AND REPLACE 6 LATTICE MEMBERS ON EACH TRUSS (12 TOTAL). WORK AND MATERIAL TO ACCOMPLISH LATTICE REPLACEMENT SHALL BE PAID UNDER ITEM 522.20 "STRUCTURAL LUMBER AND TIMBER - UNTREATED LATTICE." NO MODIFICATIONS OF THE EXISTING TRUSS MEMBERS WILL BE MADE TO FACILITATE THE PLACEMENT OF NEW MEMBERS. A PORTION OF THE ROOF MAY BE TEMPORARILY REMOVED TO FACILITATE MEMBER REPLACEMENT. QUANTITIES FOR THIS PROCEDURE HAVE BEEN INCLUDED IN THE ITEMS AS DESCRIBED IN GENERAL NOTES 12 AND 13 (SEE SHEET 6). ALL NEW CONNECTIONS WILL BE REMADE WITH TREENAILS AS ARRANGED IN THE ORIGINAL STRUCTURE. THE WORK AND MATERIALS TO REMAKE THE TREENAIL CONNECTIONS WILL BE PAID FOR UNDER ITEM 507.19 "MECHANICAL BAR CONNECTOR (MODIFIED)" (EA). SEE SPECIAL PROVISIONS.
 4. EXISTING SISTER MEMBERS AND SPLICED MEMBERS SHALL REMAIN. BOLTS AND/OR TREENAILS IN THESE MEMBERS SHALL NOT BE REMOVED.
 5. COMPLETE THE FUMIGANT PRESERVATIVE TREATMENT AT ENDS OF THE TRUSS MEMBERS. THE WORK AND MATERIAL FOR THIS WILL BE PAID UNDER ITEM 513.30 "STRUCTURAL PAINTING - FIELD APPLIED." SEE SPECIAL PROVISIONS.
 6. APPLY INSECTICIDE/FUNGICIDE TO ALL EXPOSED SURFACES OF THE TRUSSES TOP CHORD BRACING, THE RAFTERS, ROOF SHEATHING, ETC. COATING A OR B (SEE SPECIAL PROVISIONS) SHALL BE USED FOR THIS COAT. APPLICATION RATE SHALL BE AS SPECIFIED IN MANUFACTURER'S SPECIFICATIONS. AFTER PROPER CURING TIME A FIRE RETARDANT/SEALER SHALL BE APPLIED TO THE SAME SURFACES. THIS COAT SHALL BE COATING #1 OR #2 (SEE SPECIAL PROVISIONS). THE WORK AND MATERIALS FOR THIS SHALL BE PAID FOR UNDER ITEM 513.30 "STRUCTURAL PAINTING - FIELD APPLIED." THE ENGINEER MAY REQUEST, AT THE TIME OF APPLICATION, THAT EITHER OF THE ABOVE COATINGS BE REAPPLIED TO AREAS WHERE APPROPRIATE COVERAGE WAS NOT ACHIEVED IN THE INITIAL APPLICATION.
 7. ITEM 502.10 "SHORING SUPERSTRUCTURE (MODIFIED)" SHALL BE USED TO STRAIGHTEN THE TRUSSES. SEE SPECIAL PROVISIONS. THE CALCULATIONS AND DETAILS SHALL INCLUDE INFORMATION AND METHODS FOR REPAIRING/STRENGTHENING THE EXISTING BRACING ('A' BRACE UPPER SWAY BRACING, KNEE BRACE) CONNECTIONS. THE CONTRACTOR SHALL NOT REPLACE OR MODIFY ANY MEMBER OR ELEMENT THAT HAS NOT BEEN SPECIFIED IN THESE PLANS UNLESS FIRST APPROVED BY THE ENGINEER. CONNECTIONS, MEMBERS OR ELEMENTS OF THE BRACING MAY BE TEMPORARILY REMOVED PROVIDED THEY ARE REINSTALLED AT THE SAME LOCATION AND CONNECTIONS REMADE IN THE MANNER OF THE EXISTING CONNECTION. SEE TRUSS MISALIGNMENT DETAIL SHEET 9.

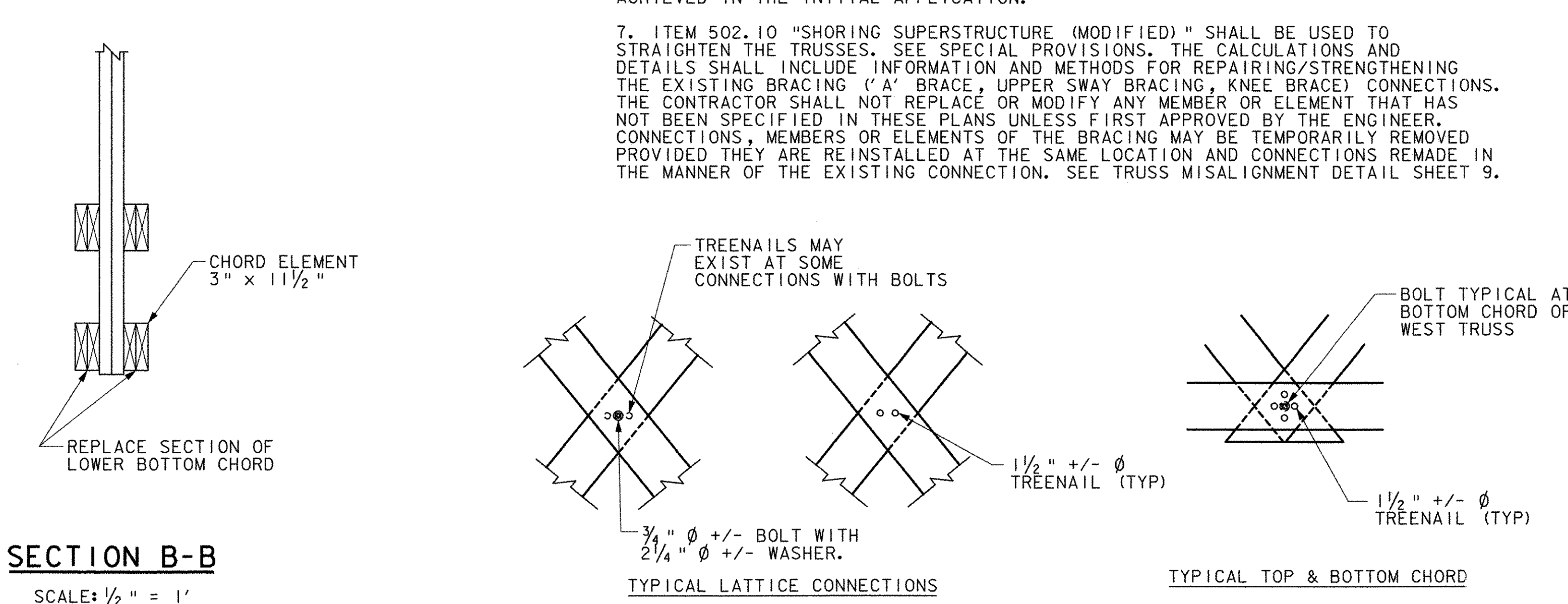
TYPICAL ELEVATION
SCALE: 1/4" = 1'



TYPICAL BOTTOM CHORD REPAIRS
SCALE: 1/2" = 1'



SECTION A-A
SCALE: 1/2" = 1'



SECTION B-B
SCALE: 1/2" = 1'

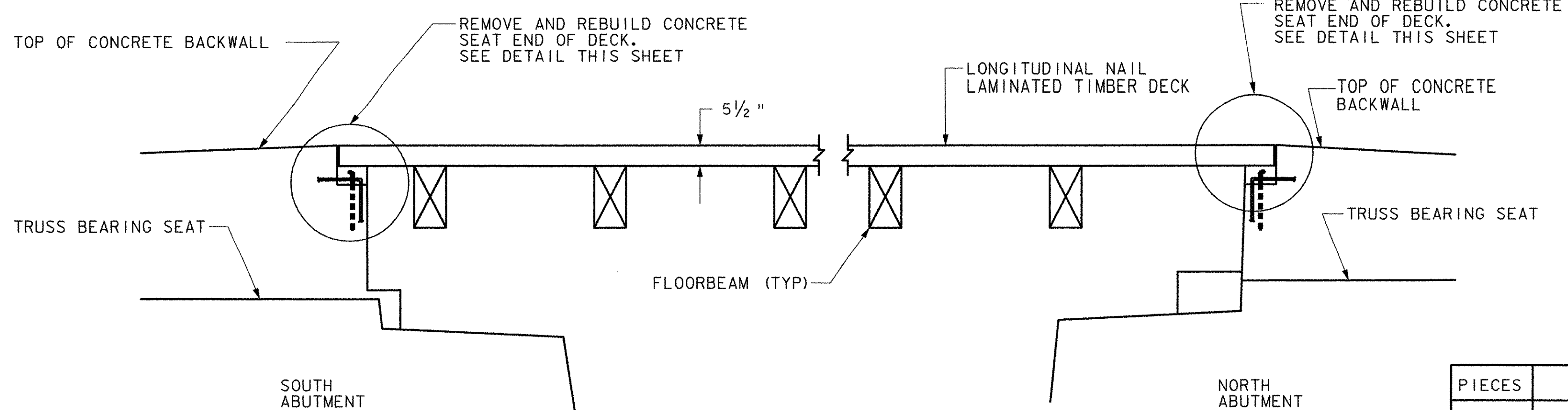
TYPICAL CONNECTIONS
SCALE: 1/2" = 1'

ALL NEW CONNECTIONS FOR INSTALLING OR REPLACING TRUSS MEMBERS WILL BE MADE WITH TREENAILS. INSTALLATION SHALL BE DONE IN SUCH A MANNER SO AS TO NOT DAMAGE THE SURROUNDING MATERIAL. THE TREENAILS SHALL BE WHITE OAK. EXISTING TREENAILS REMOVED FOR ANY REASON SHALL NOT BE REUSED BUT SHALL BE REPLACED WITH NEW TREENAILS. ANY OPEN HOLE DUE TO THE REMOVAL OF A BOLT AT A CONNECTION SHALL BE FILLED WITH A DOWEL OF THE SAME DIAMETER AS THE HOLE. ALL BOLTS REMOVED DURING DISASSEMBLY AND REPLACEMENT OF THE CHORD AND LATTICE MEMBERS SHALL NOT BE REINSTALLED BUT SHALL BE REPLACED BY TREENAILS.

THE EXTENT OF THE DETERIORATION OF THE LOWER BOTTOM CHORD ELEMENTS IS UNKNOWN. THIS REPAIR DETAIL SHALL BE USED AT THE FOUR CORNERS OF THE BRIDGE. THE DETAILS SHOWN INDICATE MINIMUM LENGTHS FOR REPLACEMENT. SPLICE LOCATIONS AT OPPOSITE ENDS TO BE VARIED TO PROVIDE REQUIRED MINIMUM LENGTH OF EXISTING MEMBER. AT THE DIRECTION OF THE ENGINEER, THE LENGTHS MAY BE EXTENDED SHOULD THE DETERIORATION BE GREATER THAN ESTIMATED. SHOULD DETERIORATION BE FOUND ON OTHER CHORD MEMBERS THIS DETAIL SHALL BE USED AS A BASIS FOR THE REPAIR. THE ENGINEER SHALL DETERMINE WHETHER OR NOT THE DETERIORATION REQUIRES REPLACEMENT OF A PORTION OF THE MEMBER. THE MINIMUM LENGTH OF ANY REPLACED ELEMENT (3" x 11 1/2") IS 8'. THE MINIMUM LENGTH OF ANY CHORD ELEMENT TO REMAIN IS 8'. ALL NEW CONNECTIONS WILL BE MADE WITH TREENAILS

STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	PITTSFORD, VT	Bridge No. 31
Highway No.	ELM STREET (TH13)	Log Sta. Surv. Sta.
COOLEY COVERED BRIDGE REHABILITATION		
TRUSS REPAIR DETAILS		
Designed By	J. MESSIER	Drawn By J. MESSIER
Checked By	Date	Bridge Design Supervisor
E. ALLEN RANDALL	01/03/03	Date
PROJECT	PITTSFORD	PROJECT NO. BHO 1443 (36)
I.G.C. Info.		
Bridge Sheet No.		Sheet 8 of 15





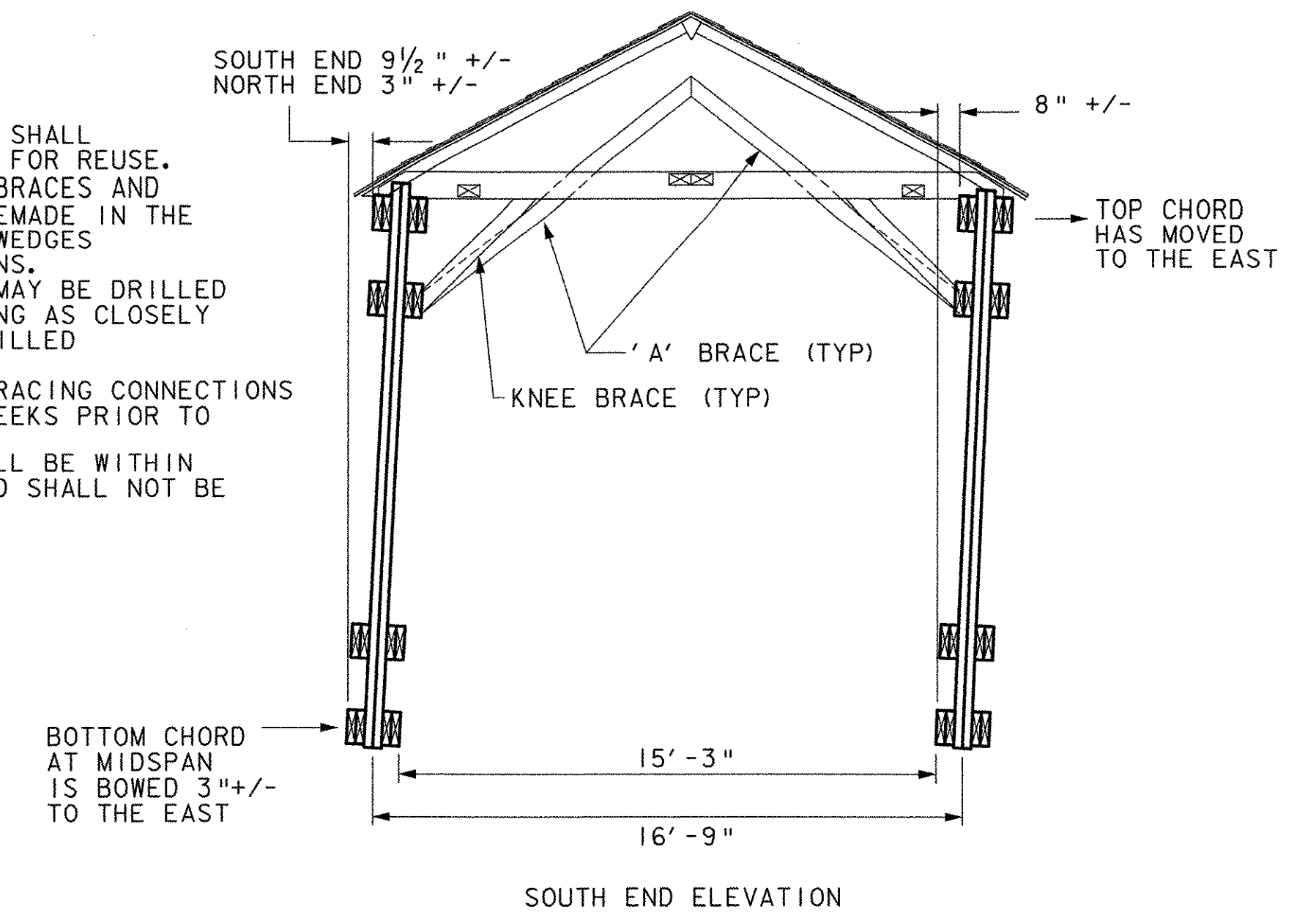
TYPICAL DECK AT ABUTMENT

SCALE: 1/2" = 1'

1. PRIOR TO STRAIGHTENING, KNEE BRACES AND 'A' BRACES SHALL BE LOOSENEED OR DISASSEMBLED. MATERIALS TO BE RETAINED FOR REUSE.
2. FOLLOWING THE STRAIGHTENING OPERATIONS, THE KNEE BRACES AND 'A' BRACES SHALL BE REINSTALLED AND THE CONNECTIONS REMADE IN THE MANNER OF THE EXISTING CONNECTION. HARDWOOD SHIMS OR WEDGES SHALL BE USED WHERE NECESSARY TO STRENGTHEN CONNECTIONS.
3. WHERE EXISTING CONNECTIONS USE BOLTS, A NEW HOLE MAY BE DRILLED FOR THE NEW BOLT. THE NEW BOLT SHALL MATCH THE EXISTING AS CLOSELY AS POSSIBLE. ALL ABANDONED HOLES SHALL BE COMPLETELY FILLED WITH A DOWEL.
4. ACTUAL DETAILS TO BE UTILIZED TO STRENGTHEN THE BRACING CONNECTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL TWO WEEKS PRIOR TO THE COMMENCEMENT OF THE STRAIGHTENING OPERATIONS.
5. THE FINAL POSITION OF THE TRUSSES AT EACH END SHALL BE WITHIN 1" OF VERTICAL AND THE MIDSPAN BOW OF THE BOTTOM CHORD SHALL NOT BE MORE THAN 1/2".

REBAR SCHEDULE

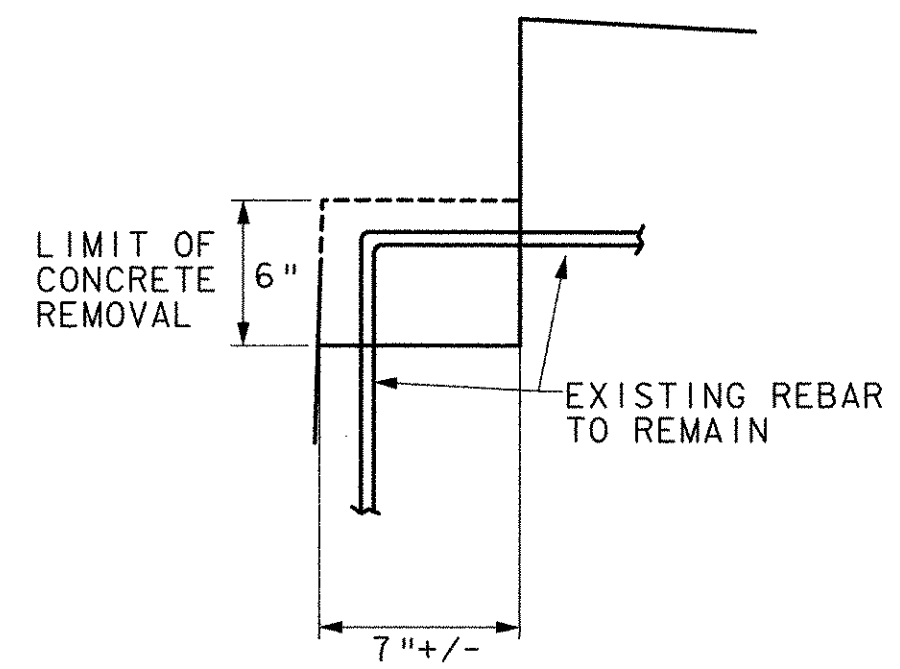
PIECES	BAR	LENGTH	LOCATION
16	NO. 8	1'-6"	NORTH AND SOUTH ABUT. DECK SEAT
2	NO. 5	15'-0"	NORTH AND SOUTH ABUT. DECK SEAT
1	WELDED MESH 4 GA.	10 SF	SOUTH ABUT. SPALL REPAIR



TRUSS MISALIGNMENT DETAILS

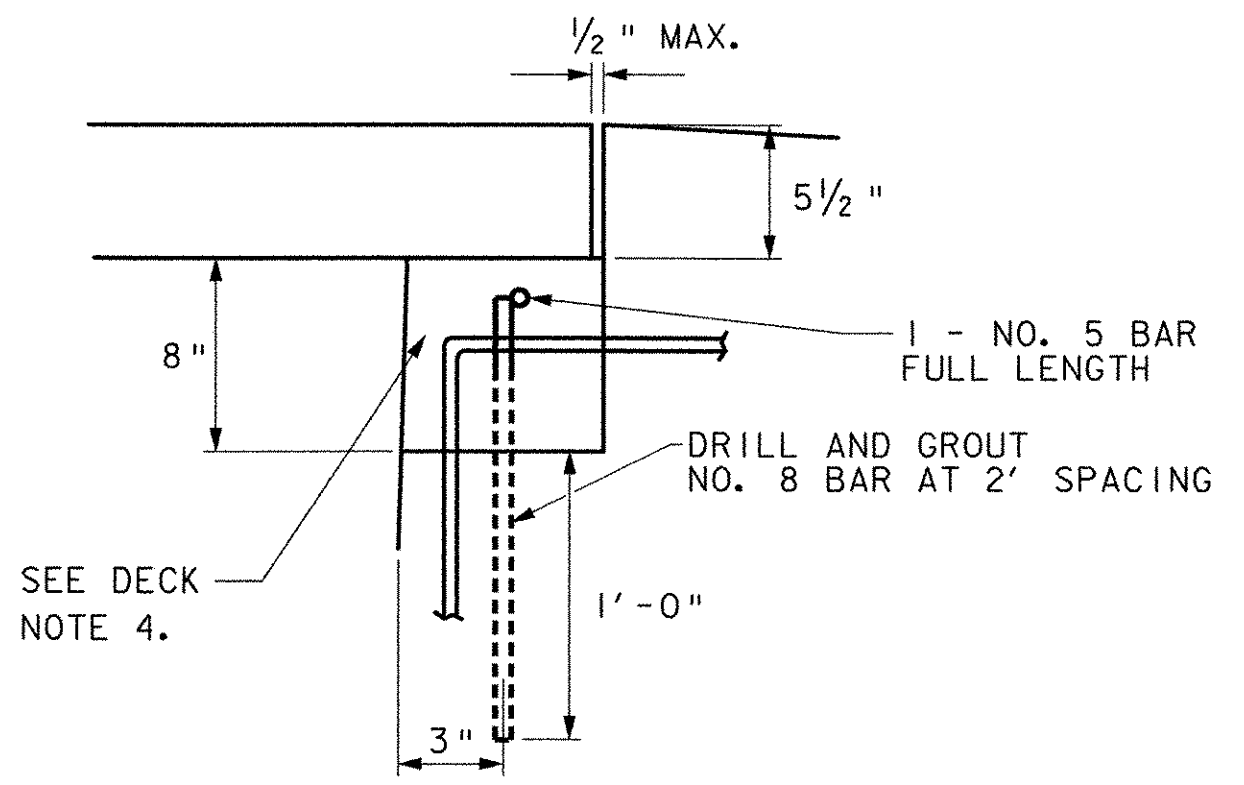
SCALE: 1/4" = 1'

- DECK NOTES:**
1. NAILS SHALL PENETRATE AT LEAST 2-1/2 LAMINATIONS AND SHALL BE COMMON WIRE OR DEFORMED SHANK GALVANIZED NAILS.
 2. IF SPLITTING OF LAMINATIONS OCCUR DURING PLACEMENT, LEAD HOLES SHALL BE PREBORED. PREBORE DIAMETERS SHALL NOT EXCEED 3/4 OF THE NAIL SHANK DIAMETER.
 3. THE LENGTH OF THE DECK VARIES APPROXIMATELY 1' FROM THE EAST SIDE TO THE WEST SIDE. THE LAMINATIONS MAY BE FIELD CUT TO ADJUST THE LENGTH. ALL LAMINATIONS CUT IN THE FIELD SHALL BE TREATED WITH PRESERVATIVE AND FIRE RETARDANT IN THE AREA OF THE CUT PRIOR TO INSTALLATION.
 4. REMOVE EXISTING CONCRETE AT SEAT FOR THE END OF THE DECK. DRILL AND GROUT NO. 8 BAR 1' DEEP AT 2' SPACING. PLACE NO. 5 BAR FULL LENGTH OF DECK SEAT. PLACE CONCRETE TO PROVIDE SEAT FOR NEW DECK. ALL WORK AND MATERIAL TO COMPLETE THIS DETAIL SHALL BE PAID FOR UNDER ITEM 580.14 "REPAIR OF CONCRETE SUBSTRUCTURE, CLASS 11." THE QUANTITY OF THE WORK SHALL BE BASED ON THE VERTICAL DIMENSION ON THE FACE OF THE ABUTMENT.
 5. THE MATERIAL FOR THE DECK SHALL BE VISUALLY GRADED SOUTHERN PINE NO. 1 OR BETTER.
 6. THE MINIMUM LENGTH OF A SINGLE LAMINATION SHALL BE 4' AND THE MINIMUM LAP LENGTH SHALL BE 2'.
 7. DECK LAMINATIONS TO BE TOE-NAILED TO THE FLOORBEAMS. APPROXIMATE SPACING OF TOE-NAILS TO BE 1' ALONG THE FLOORBEAM.



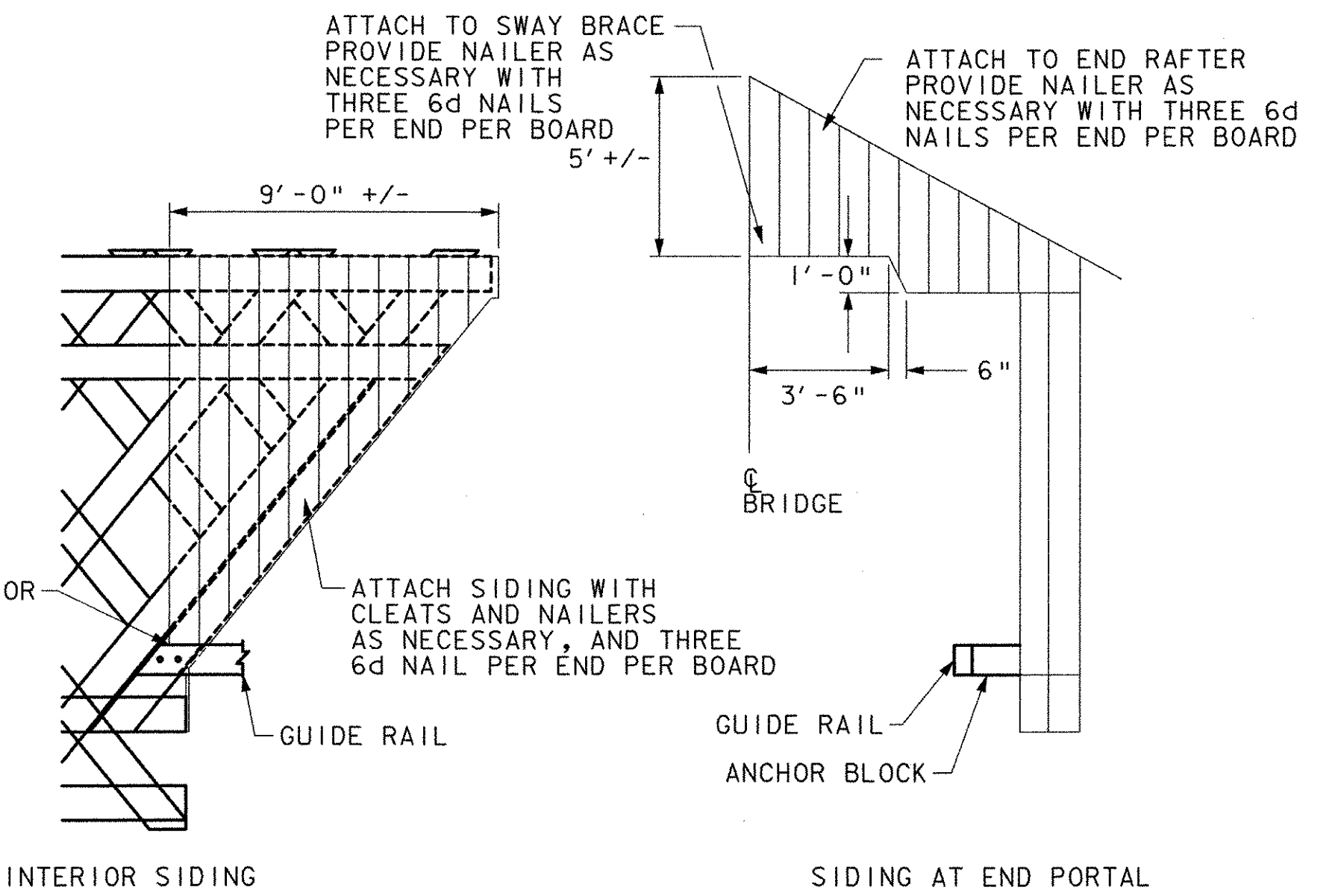
TYPICAL CONCRETE REMOVAL AT SEAT FOR END OF DECK

SCALE: 1 1/2" = 1'



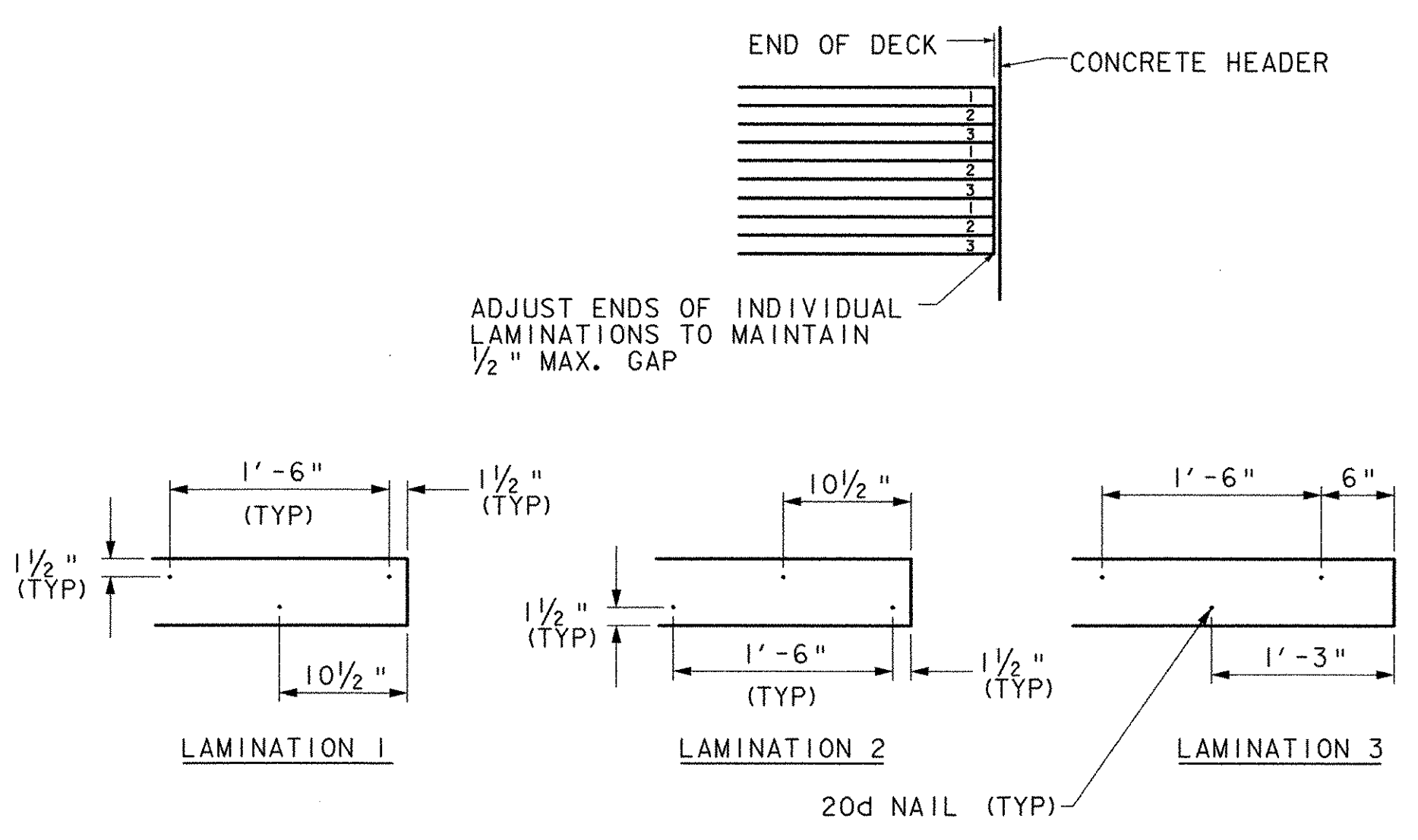
REBUILD SEAT FOR END OF DECK

SCALE: 1 1/2" = 1'



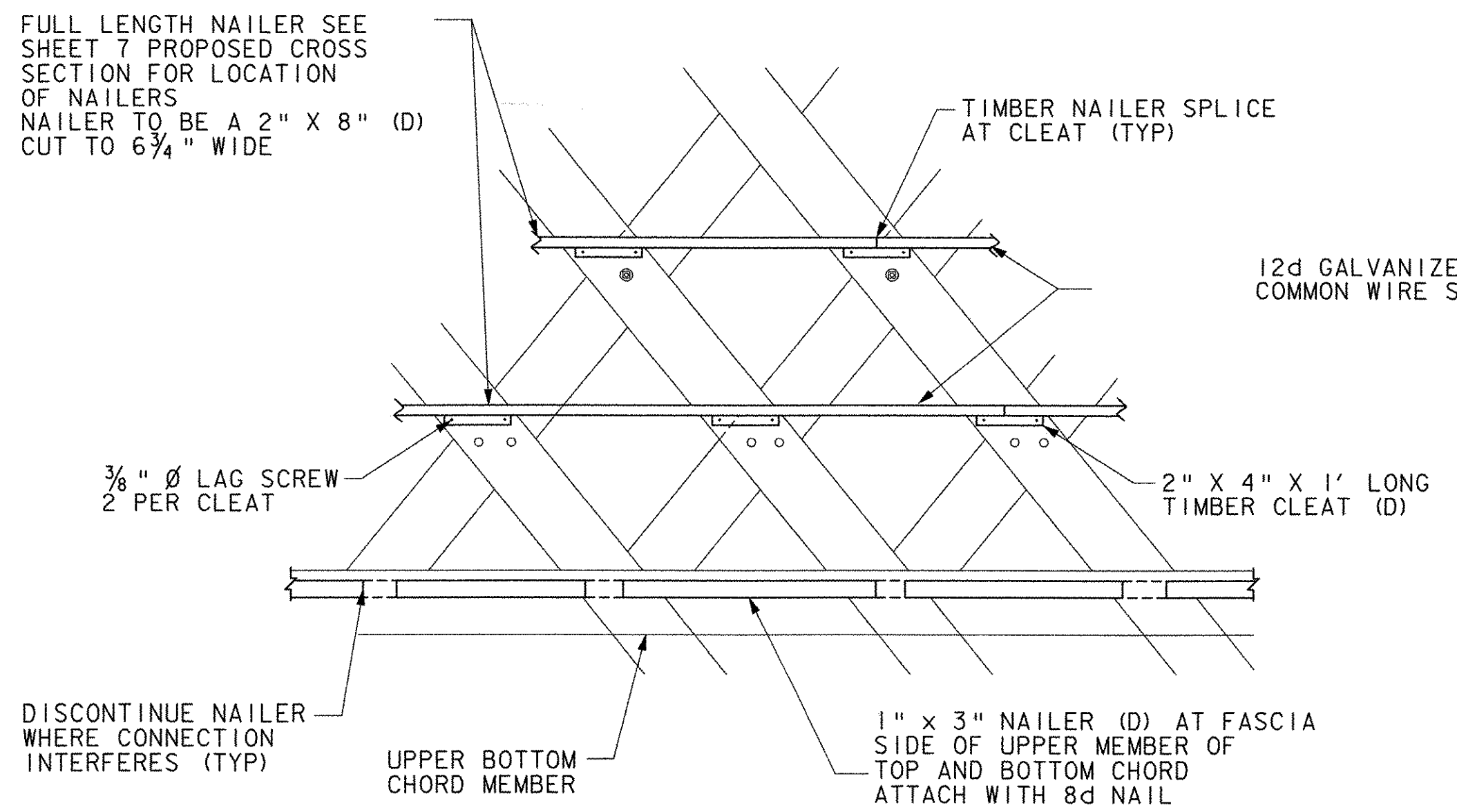
INTERIOR AND END PORTAL SIDING DETAILS

SCALE: 1/4" = 1'



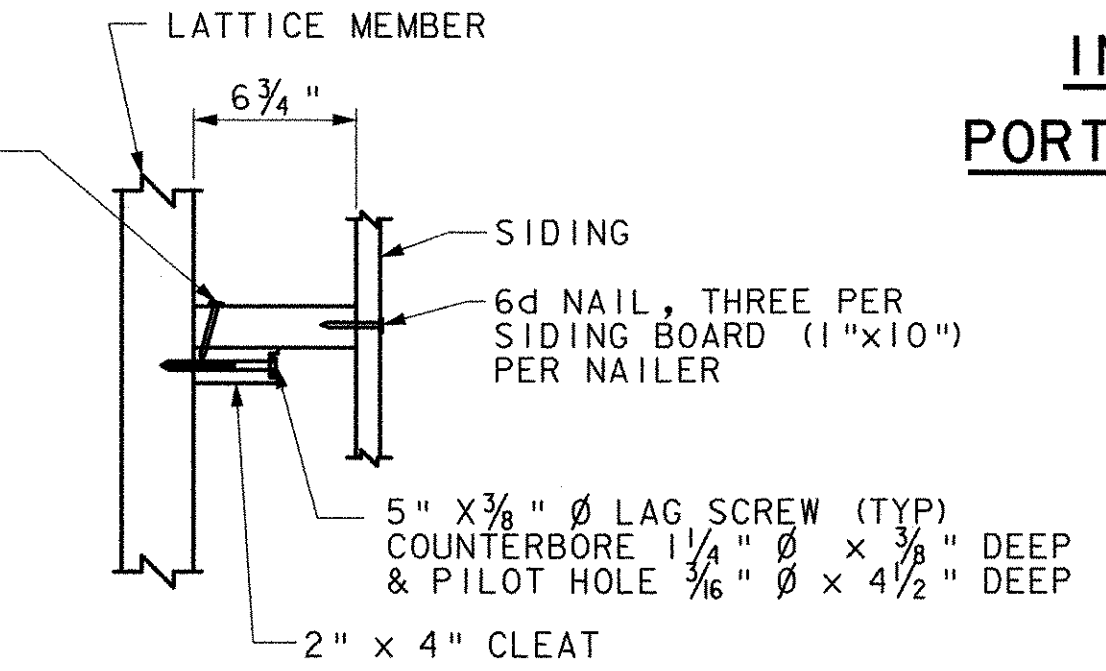
LAMINATION PLACEMENT

SCALE: 1" = 1'



TYPICAL CLEAT AND NAILER DETAILS

SCALE: 1/2" = 1'

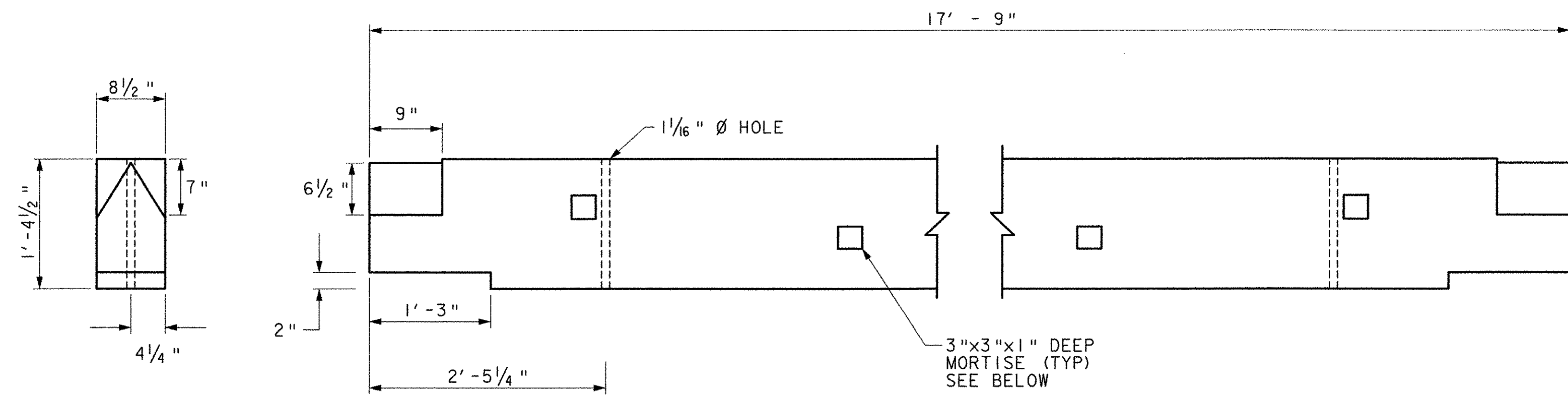


CLEAT AND NAILER INSTALLATION

SCALE: 1 1/2" = 1'

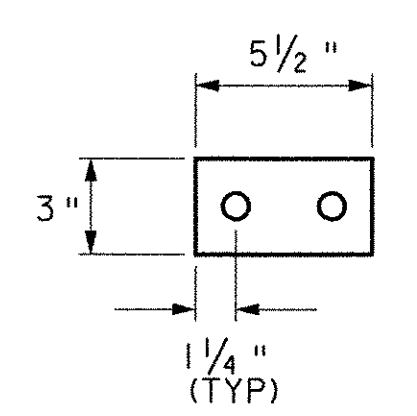
STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
MISCELLANEOUS DETAILS I			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	Date	Bridge Design Supervisor	Date
	E. ALLEN RANDALL 01/03/03		
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	9 of 15

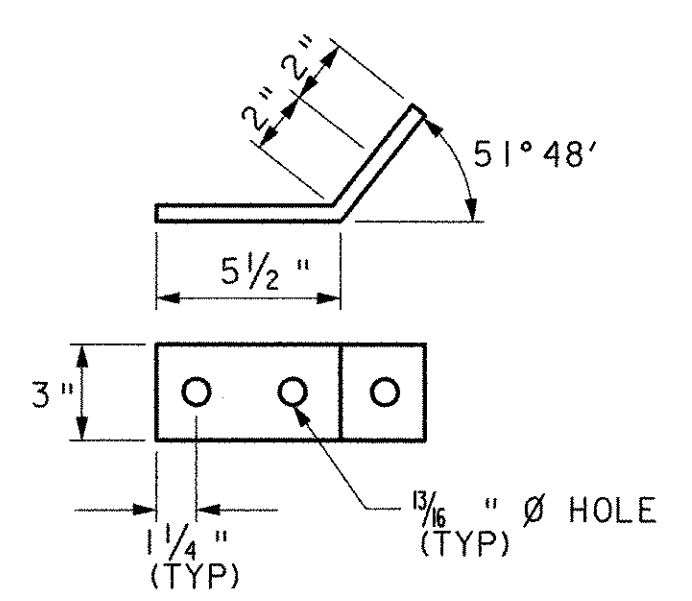


FLOORBEAM DETAILS
SCALE: 1" = 1'

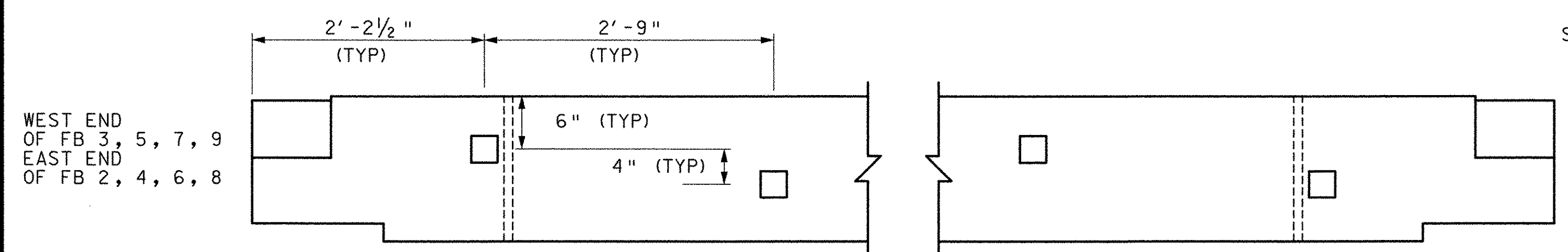
- FLOORBEAM REPLACEMENT:**
(AFTER DECK AND SIDING HAVE BEEN REMOVED)
1. REMOVE AND DISPOSE EXISTING DISTRIBUTION BEAMS
 2. REMOVE AND DISPOSE EXISTING FLOORBEAMS, RETAIN 5" X 5" (+/-) X-BRACING
 3. REMOVE LOWER MEMBERS OF BOTTOM CHORD OF ONE TRUSS, DISPOSE OF DETERIORATED SECTIONS
 4. INSTALL NEW FLOORBEAMS, INSTALL X-BRACING AS FLOORBEAMS ARE INSTALLED (SEE TENON DETAIL BELOW)
 5. REPAIR AND REINSTALL LOWER MEMBERS OF BOTTOM CHORD



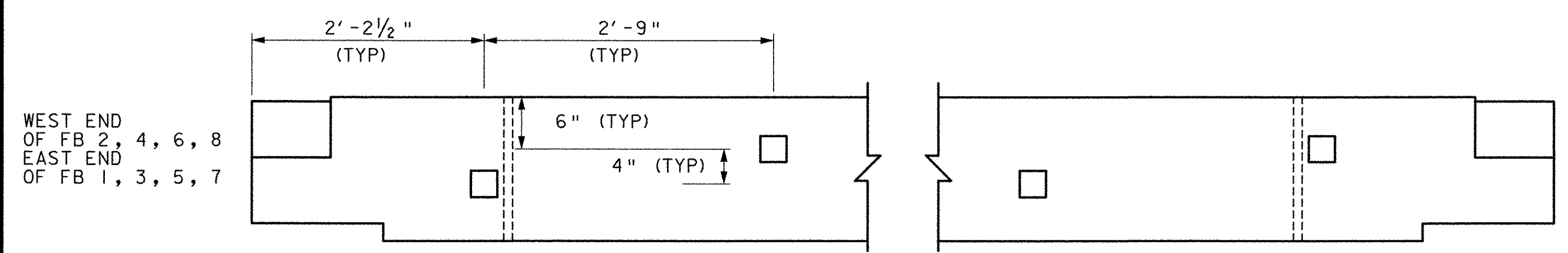
BACK UP PLATE
SCALE: 1/2" = 1'



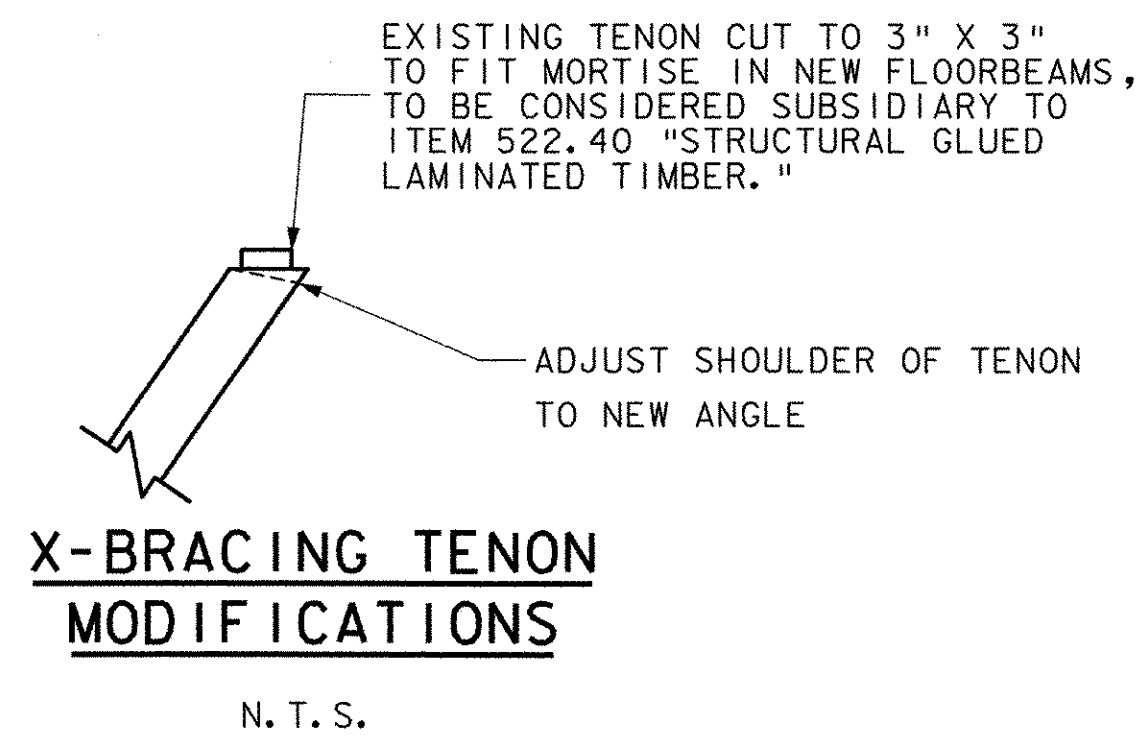
BENT PLATE
SCALE: 1/2" = 1'



SOUTH ELEVATION OF FLOORBEAMS 3, 5, 7, 9
NORTH ELEVATION OF FLOORBEAMS 2, 4, 6, 8

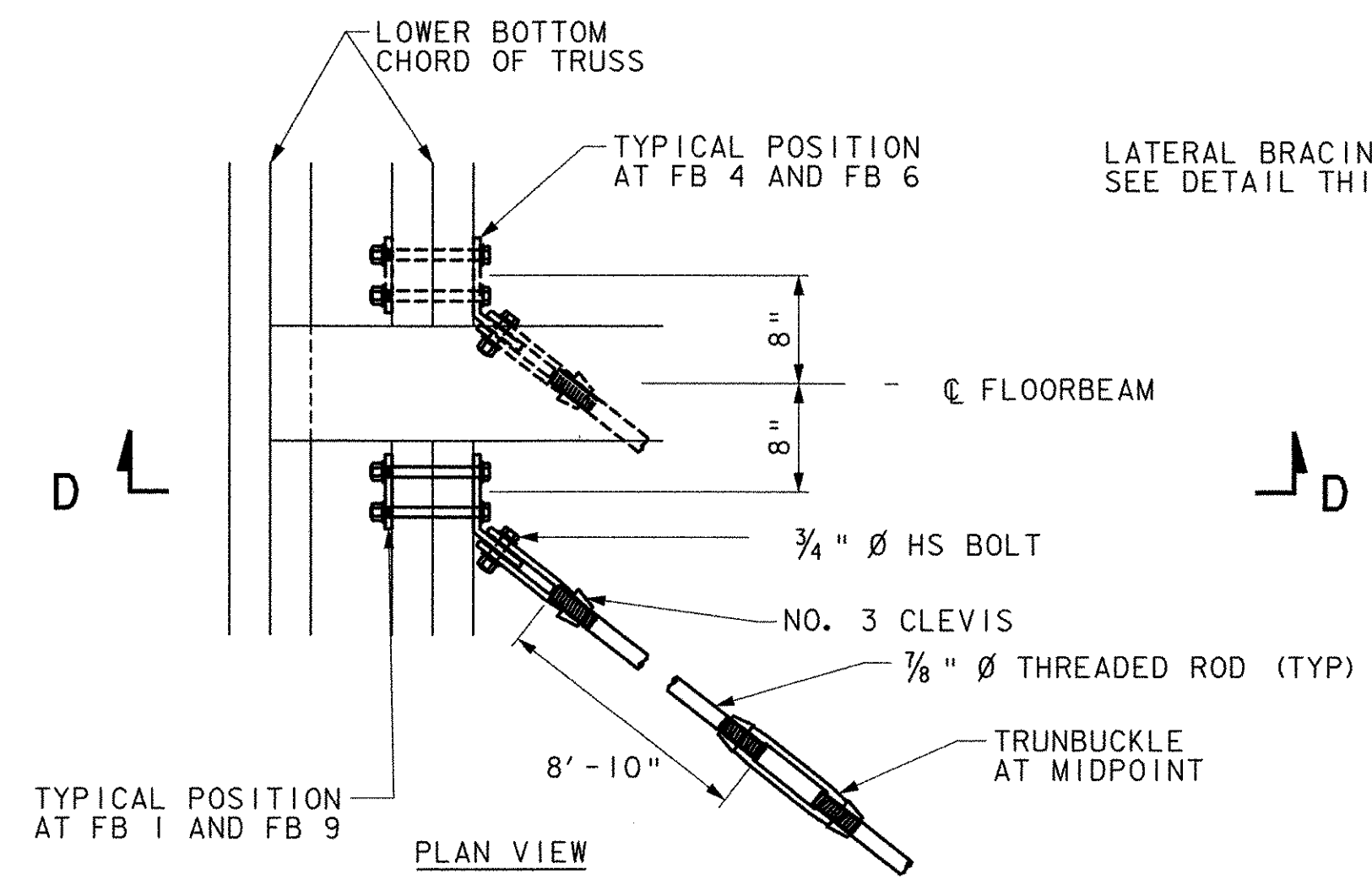


SOUTH ELEVATION OF FLOORBEAMS 2, 4, 6, 8
NORTH ELEVATION OF FLOORBEAMS 1, 3, 5, 7

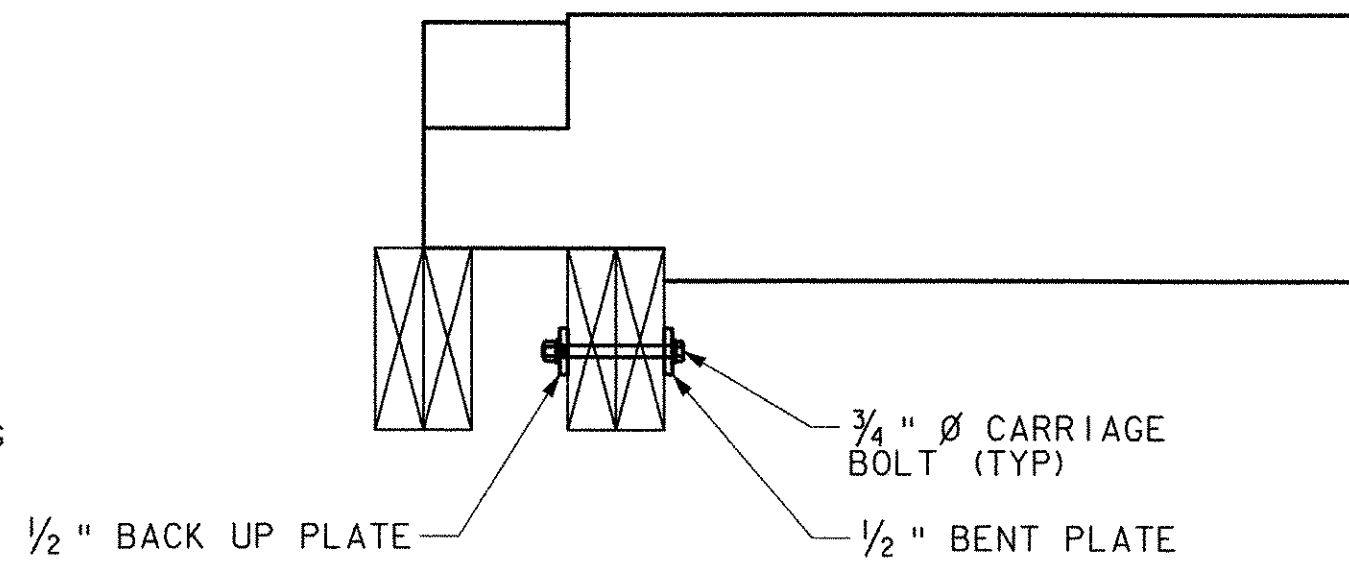


X-BRACING TENON MODIFICATIONS
N. T. S.

- NOTES:**
1. ALL BOLTS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/ASME B18.2.1-1981 GRADE 2. (EXCEPT AS NOTED)
 2. STEEL PLATES SHALL BE ASTM A36, THE THREADED ROD FOR THE SWAY BRACING SHALL BE AASHTO M270M/M270 GRADE 36
 3. ALL THE WORK AND MATERIALS TO INSTALL THE LOWER LATERAL BRACING SHALL BE PAID FOR UNDER ITEM 506.75 "STRUCTURAL STEEL (LS)"
 4. ALL STEEL COMPONENTS AND FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153
 5. ALL HOLES, NOTCHES, MORTISES ETC IN GLULAM MEMBERS TO BE MADE PRIOR TO PRESERVATIVE AND FIRE RETARDANT TREATMENTS. ALL MODIFICATIONS MADE IN THE FIELD SHALL BE RETREATED PRIOR TO INSTALLATION
 6. ALL MODIFICATIONS TO EXISTING OR NEW TIMBER MEMBERS MADE IN THE FIELD SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEING MADE. ALL MODIFICATIONS WILL BE TREATED WITH PRESERVATIVE AND FIRE RETARDANT AT TIME OF INSTALLATION



TYPICAL POSITION AT FB 1 AND FB 9
PLAN VIEW



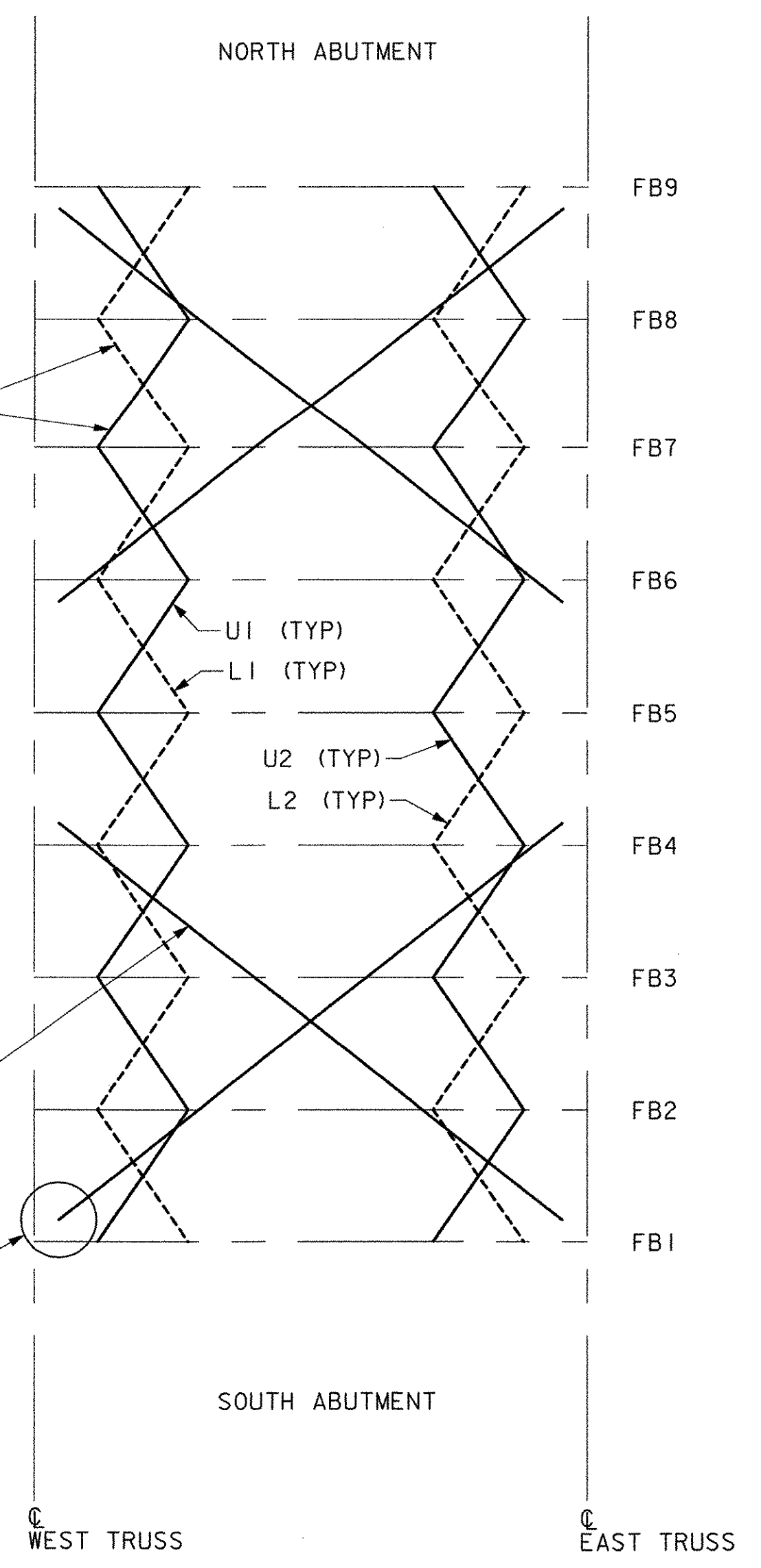
SECTION D-D LOWER LATERAL BRACING CONNECTION
SCALE: 1" = 1'

- UI = UPPER X-BRACE 1
- U2 = UPPER X-BRACE 2
- L1 = LOWER X-BRACE 1
- L2 = LOWER X-BRACE 2

REINSTALL X-BRACING AT DIFFERENT ANGLE THAN EXISTING. MODIFY TENONS AT EACH END TO FIT MORTISE IN NEW FLOORBEAM (TYP)

INSTALL NEW 7/8" Ø THREADED ROD LATERAL BRACING (TYP)

LATERAL BRACING CONNECTION SEE DETAIL THIS SHEET

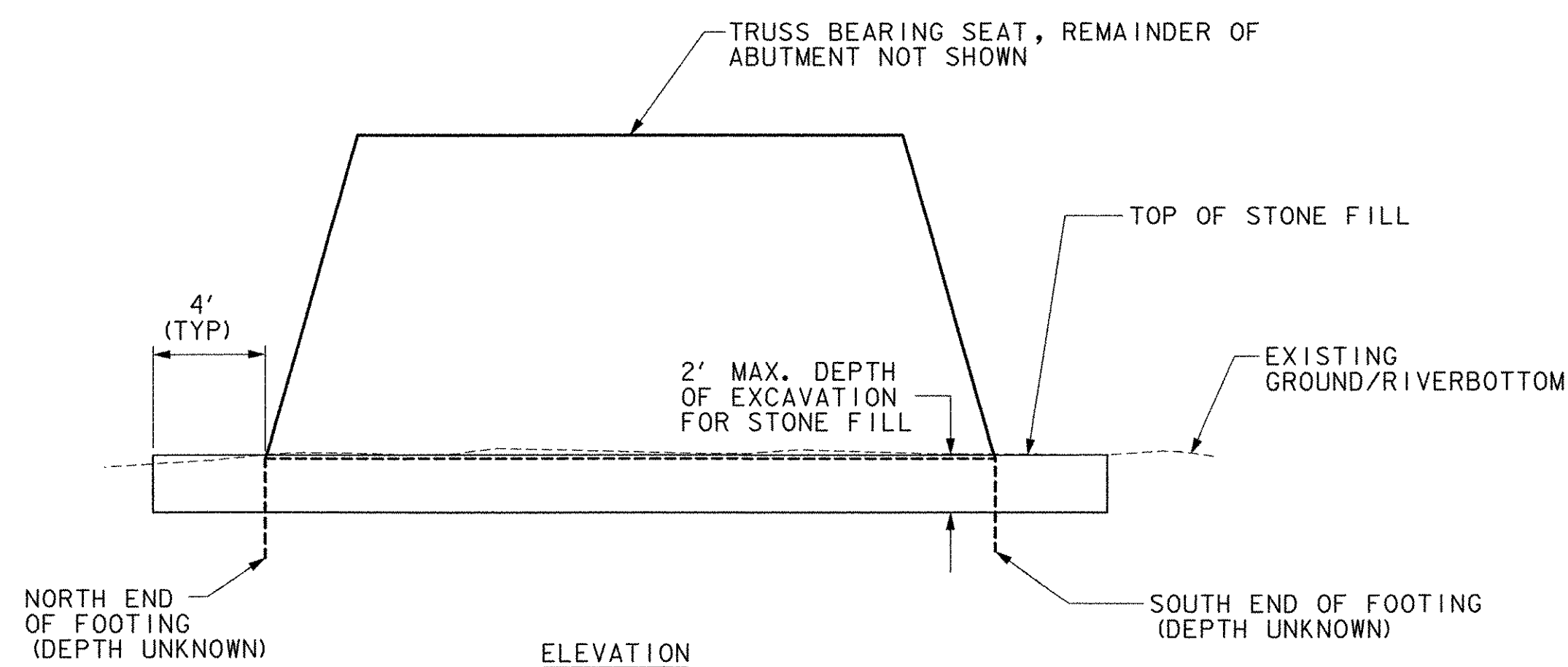


LOWER LATERAL BRACING AND 'X-BRACING'
SCALE: 1" = 10'

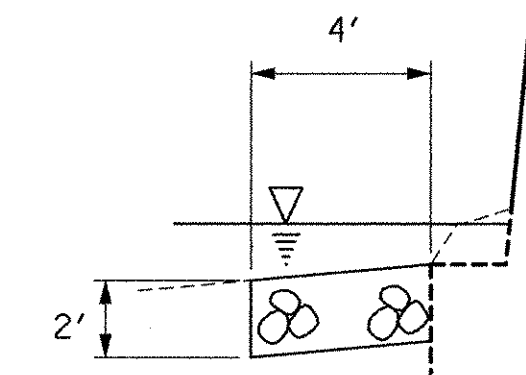
STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
FLOORBEAM AND BRACING DETAILS			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	Date	Bridge Design Supervisor	Date
E. ALLEN RANDALL	01/03/03		
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	10 of 15





ELEVATION

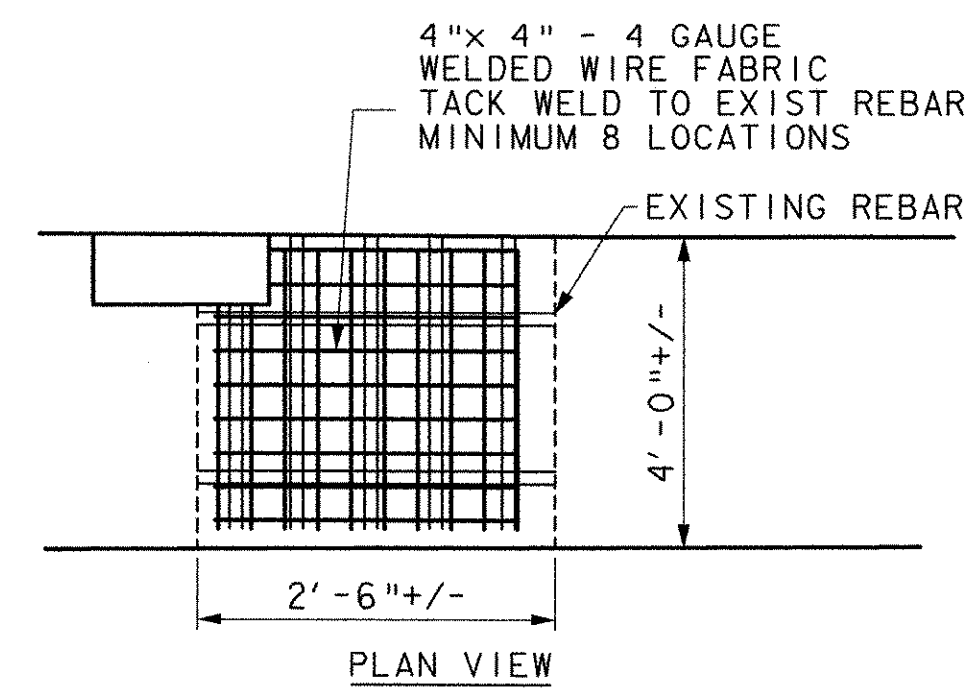


TYPICAL SECTION AT FOOTING*

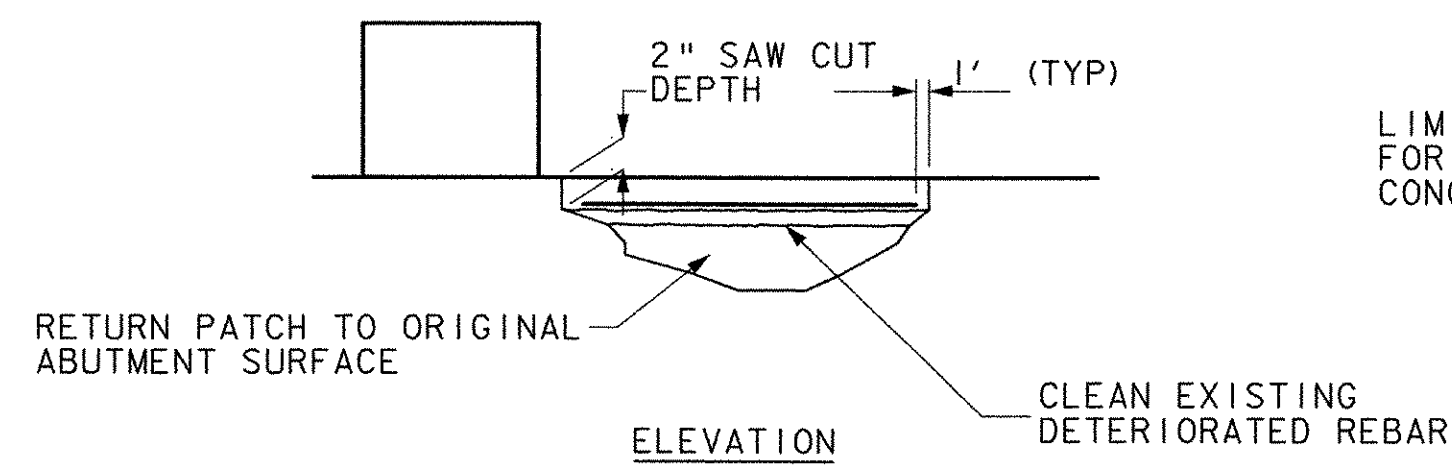
**EAST ABUTMENT
STONE FILL DETAILS**

SCALE: 1/2" = 1'

- NOTES:
 1. ALL WORK AND MATERIAL TO REPAIR THE SPALL ARE TO BE PAID UNDER ITEM 580.14 "CONCRETE SUBSTRUCTURE REPAIR, CLASS 11."
 2. THE 6 GAUGE WELDED WIRE FABRIC SHALL BE CONSIDERED SUBSIDIARY TO ITEM 580.14 "CONCRETE SUBSTRUCTURE REPAIR, CLASS 11."
 3. ANY AREAS OF CONCRETE DETERIORATION NOT SHOWN SHALL BE REPAIRED IN A LIKE MANNER, AS DIRECTED BY THE ENGINEER.
 4. ALL SUBSTRUCTURE CONCRETE REPAIRS SHALL BE MEASURED FOR PAYMENT ON THE SURFACE PROVIDING THE LARGEST AREA.



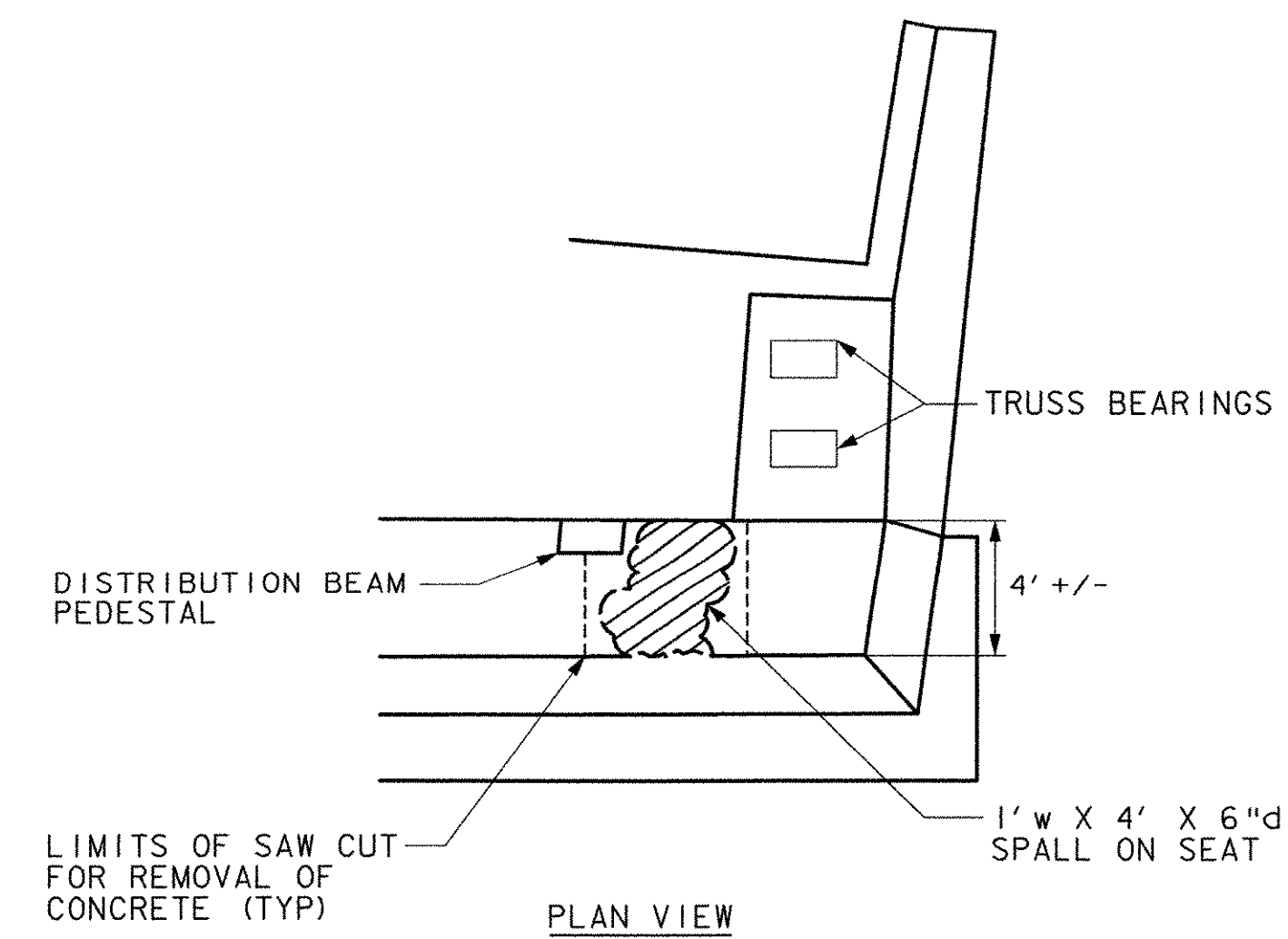
PLAN VIEW



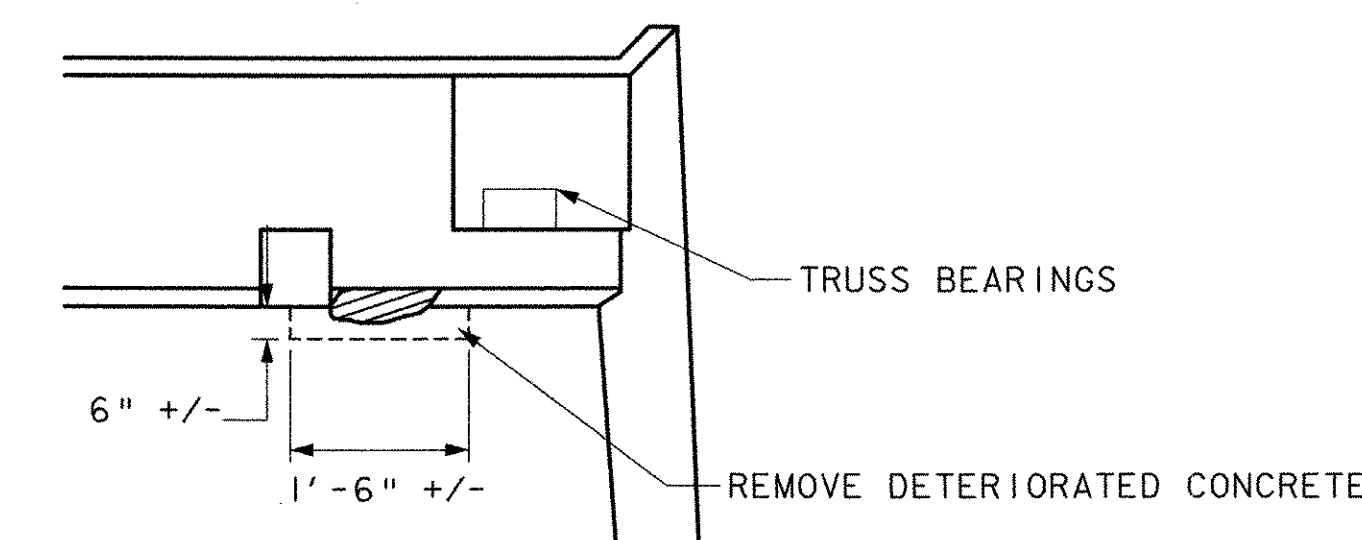
ELEVATION

CONCRETE PATCH DETAIL

N. T. S.



PLAN VIEW

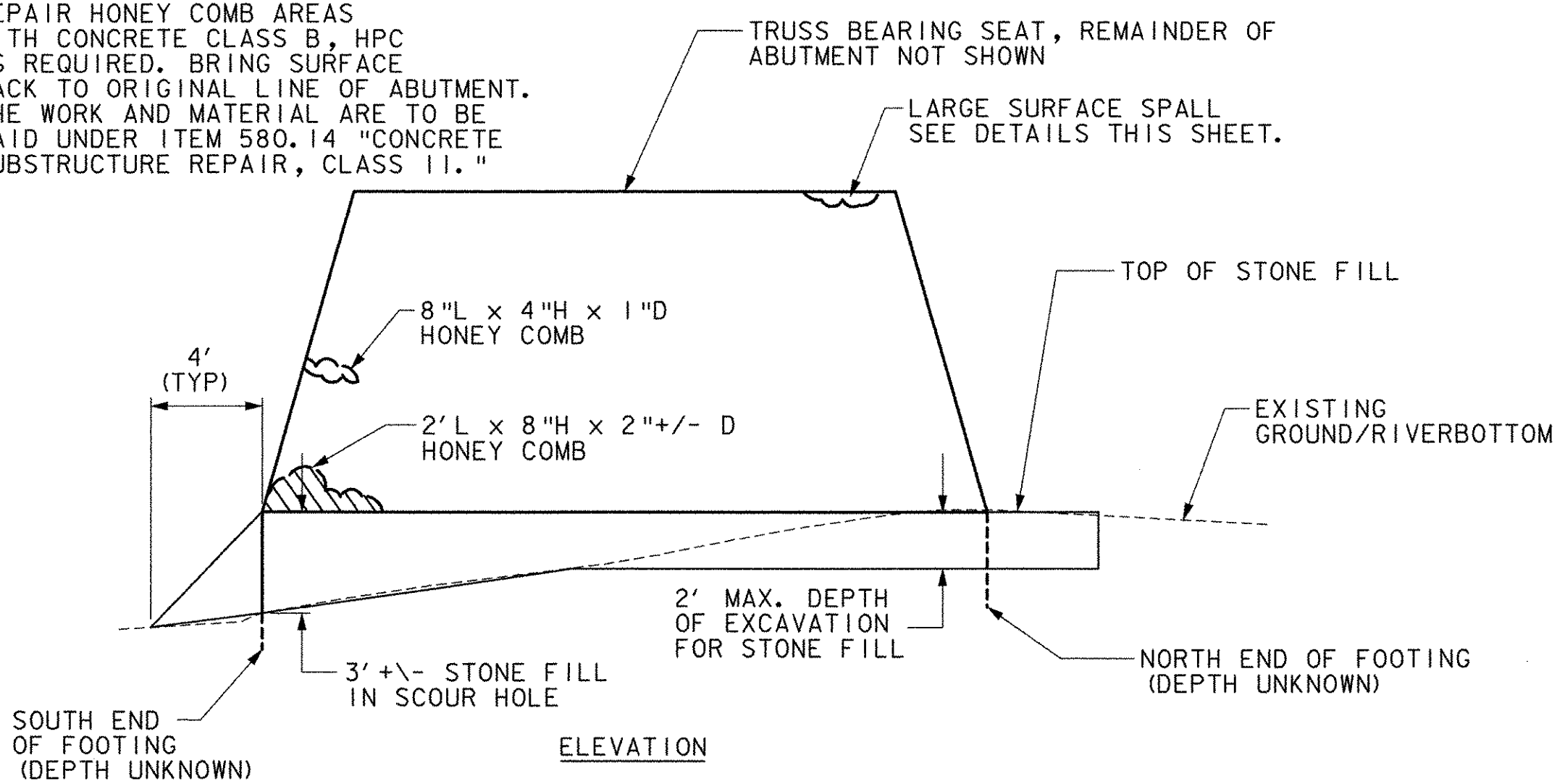


ELEVATION

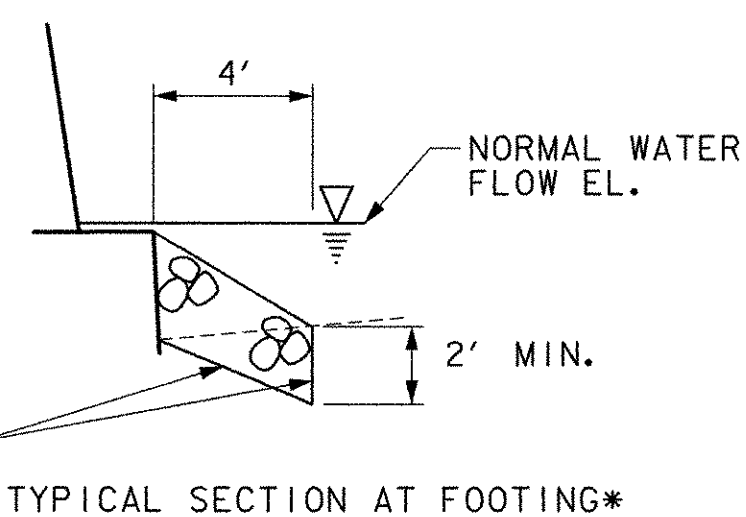
SOUTH ABUTMENT @ WEST END

N. T. S.

REPAIR HONEY COMB AREAS WITH CONCRETE CLASS B, HPC AS REQUIRED. BRING SURFACE BACK TO ORIGINAL LINE OF ABUTMENT. THE WORK AND MATERIAL ARE TO BE PAID UNDER ITEM 580.14 "CONCRETE SUBSTRUCTURE REPAIR, CLASS 11."



ELEVATION

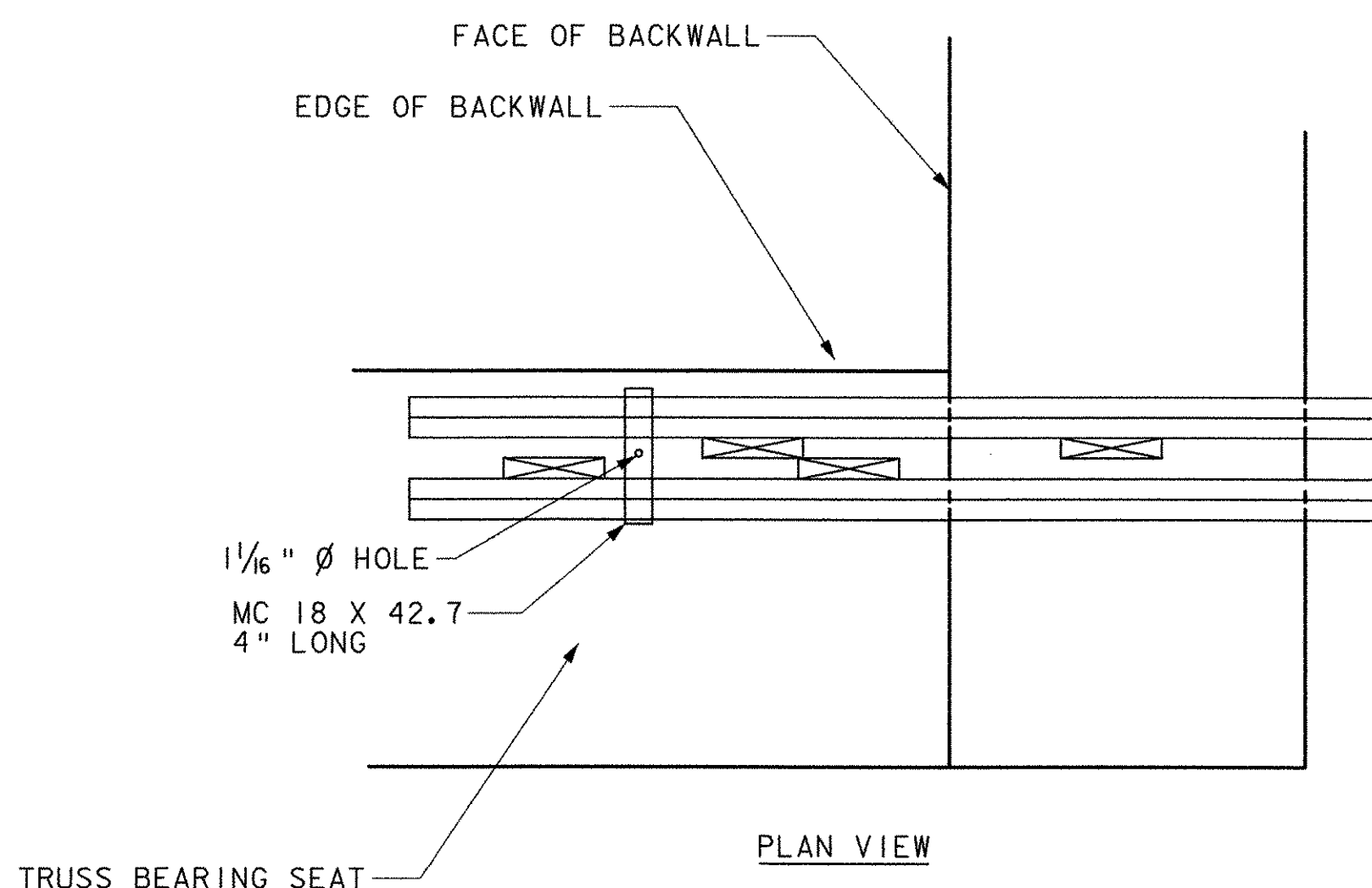


TYPICAL SECTION AT FOOTING*

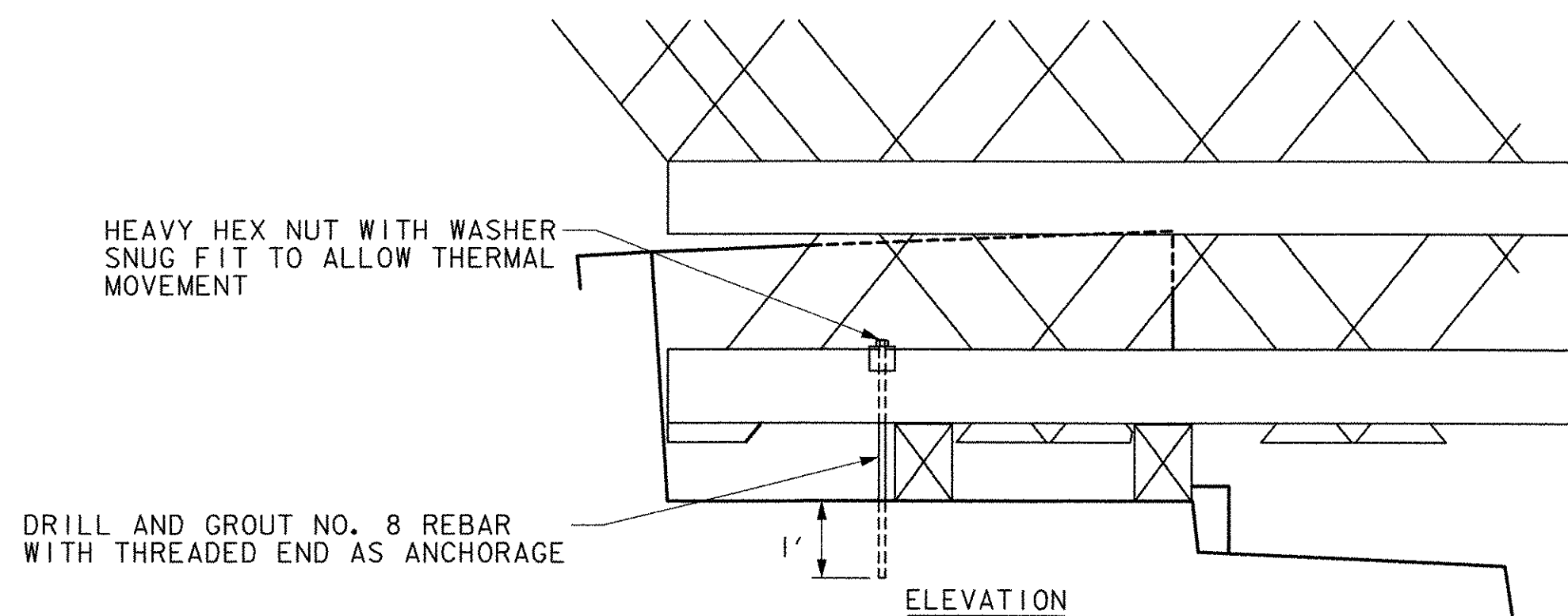
*USE DETAIL AT FRONT FACE OF ABUTMENTS FOR DETAIL AT WINGWALL SEE SHEET 2.

**WEST ABUTMENT
STONE FILL DETAILS**

SCALE: 1/2" = 1'



PLAN VIEW

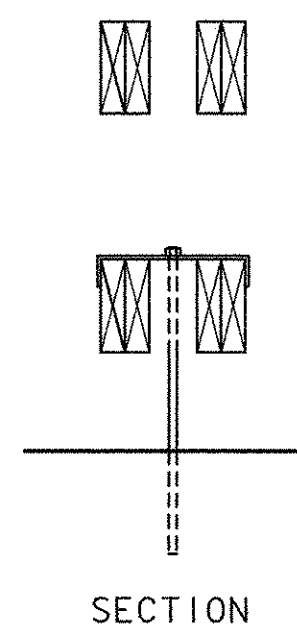


ELEVATION

TRUSS ANCHORAGE DETAILS

1/2" = 1'

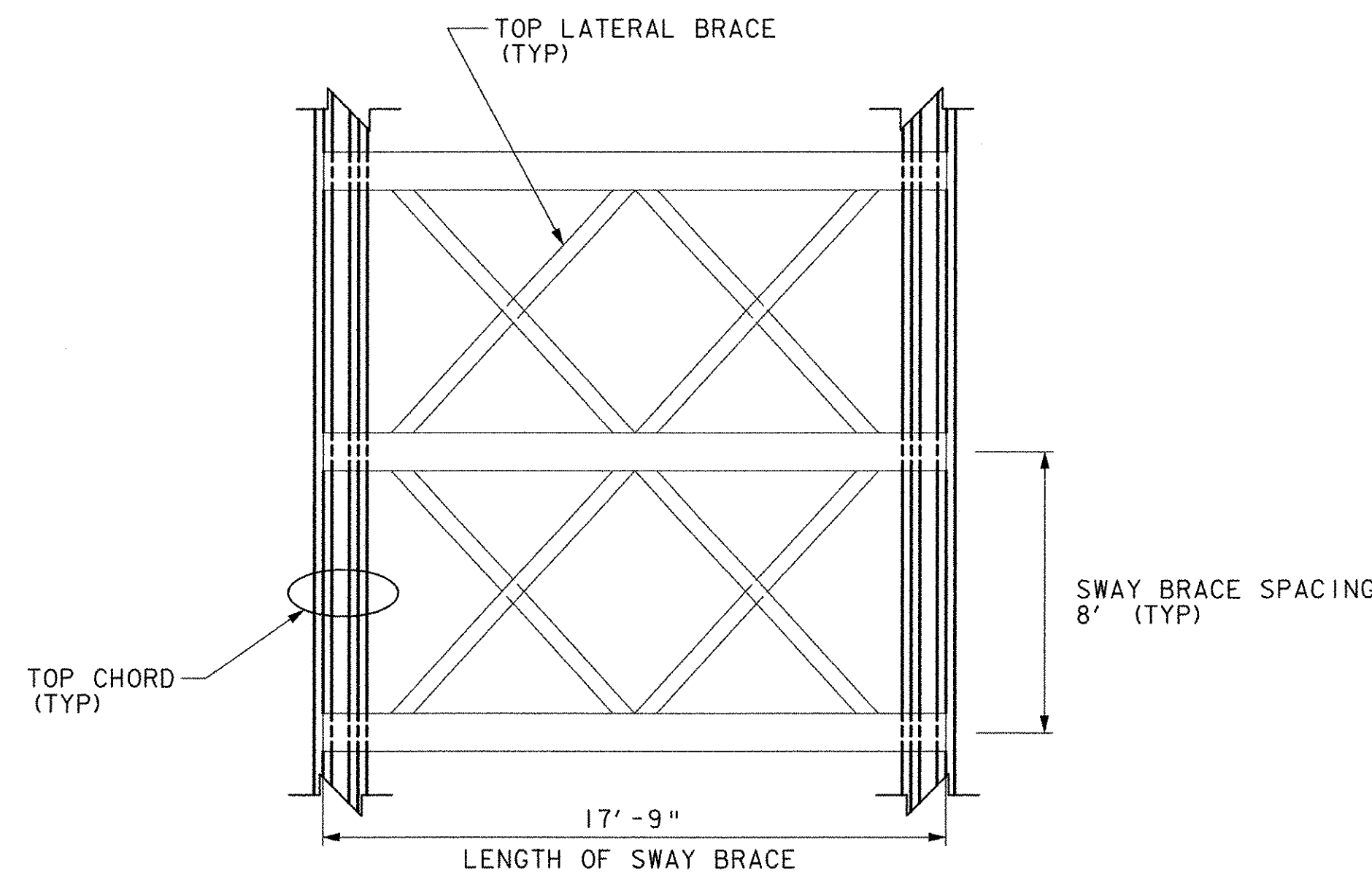
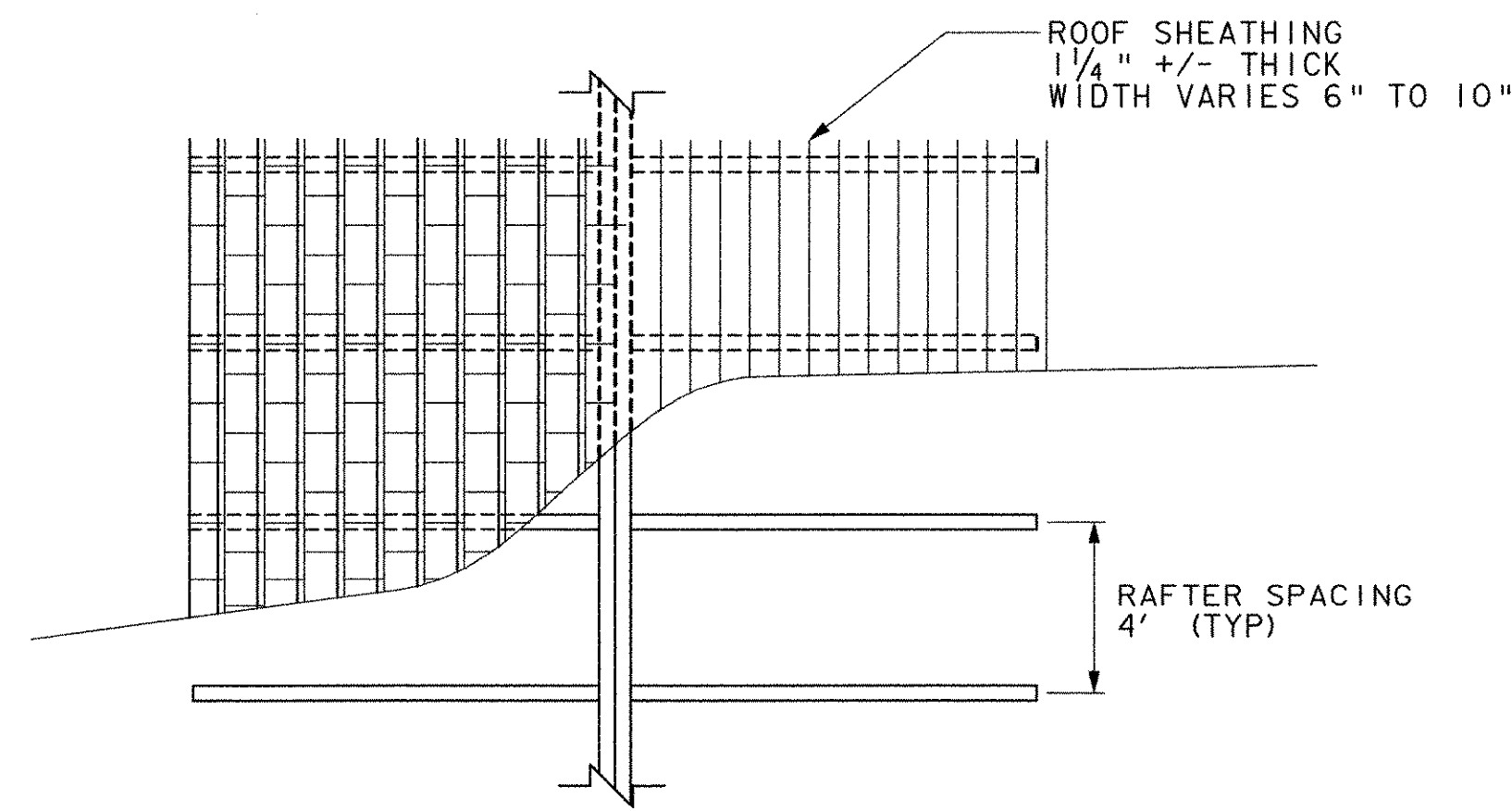
- NOTES:
 1. POSITION ANCHORAGE BETWEEN BEARING BLOCK AND BACKWALL AT FOUR CORNERS OF BRIDGE.
 2. NO. 8 REBAR GRADE 60
 3. MC18 X 42.7 AASHTO M270 GRADE 36
 4. ALL STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153.
 5. ALL WORK AND MATERIALS TO INSTALL THIS ANCHORAGE SHALL BE PAID FOR UNDER ITEM 531.10 "BEARING ASSEMBLY DEVICE". MORTAR SHALL BE TYPE IV AS SPECIFIED IN SECTION 707.03 OF THE MATERIALS SECTION OF THE VTRANS STANDARD SPECIFICATIONS.



SECTION

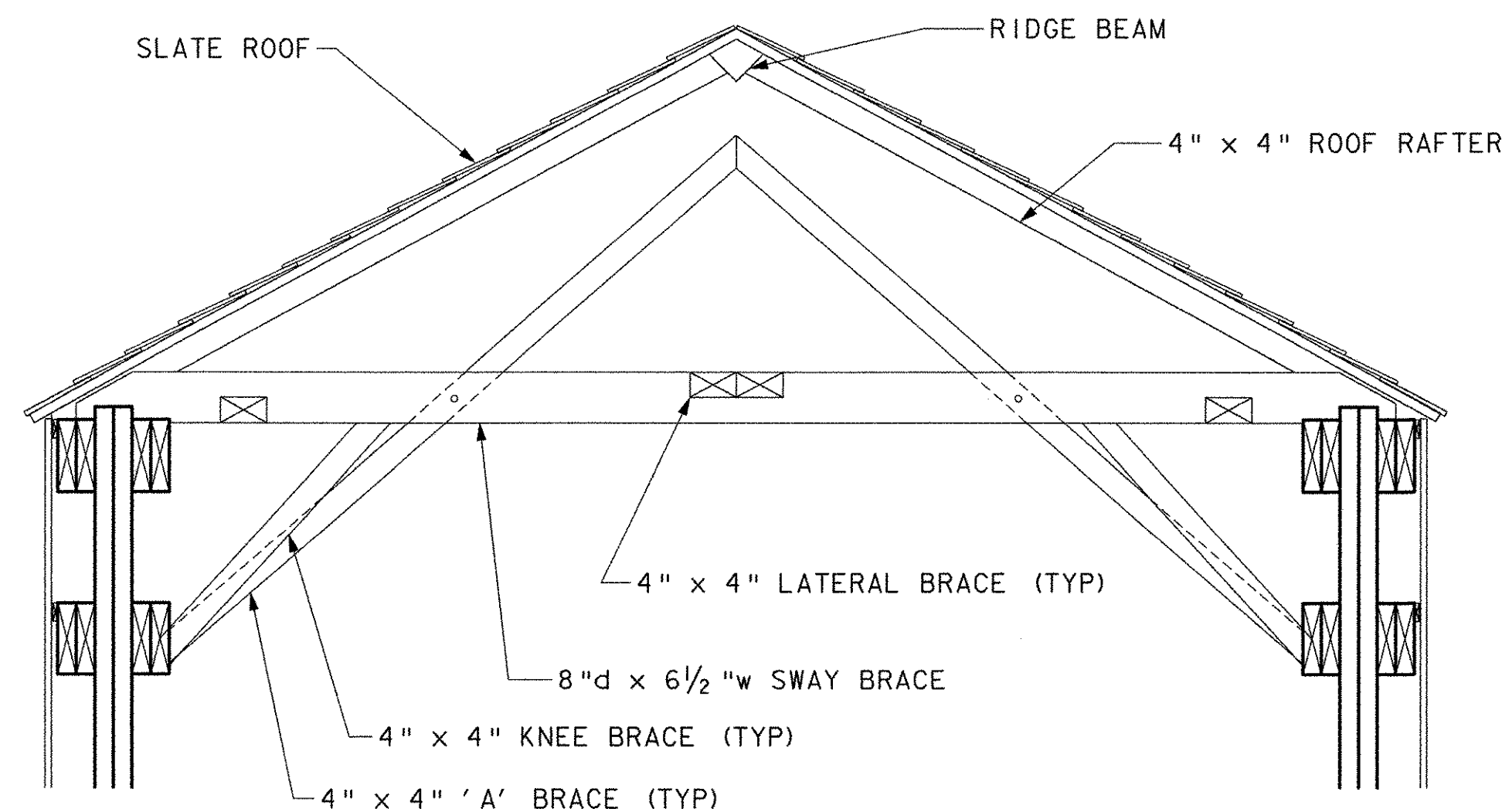
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
MISCELLANEOUS DETAILS 11			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	Date	Bridge Design Supervisor	Date
E. ALLEN RANDALL	01/03/03		
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	11 of 15



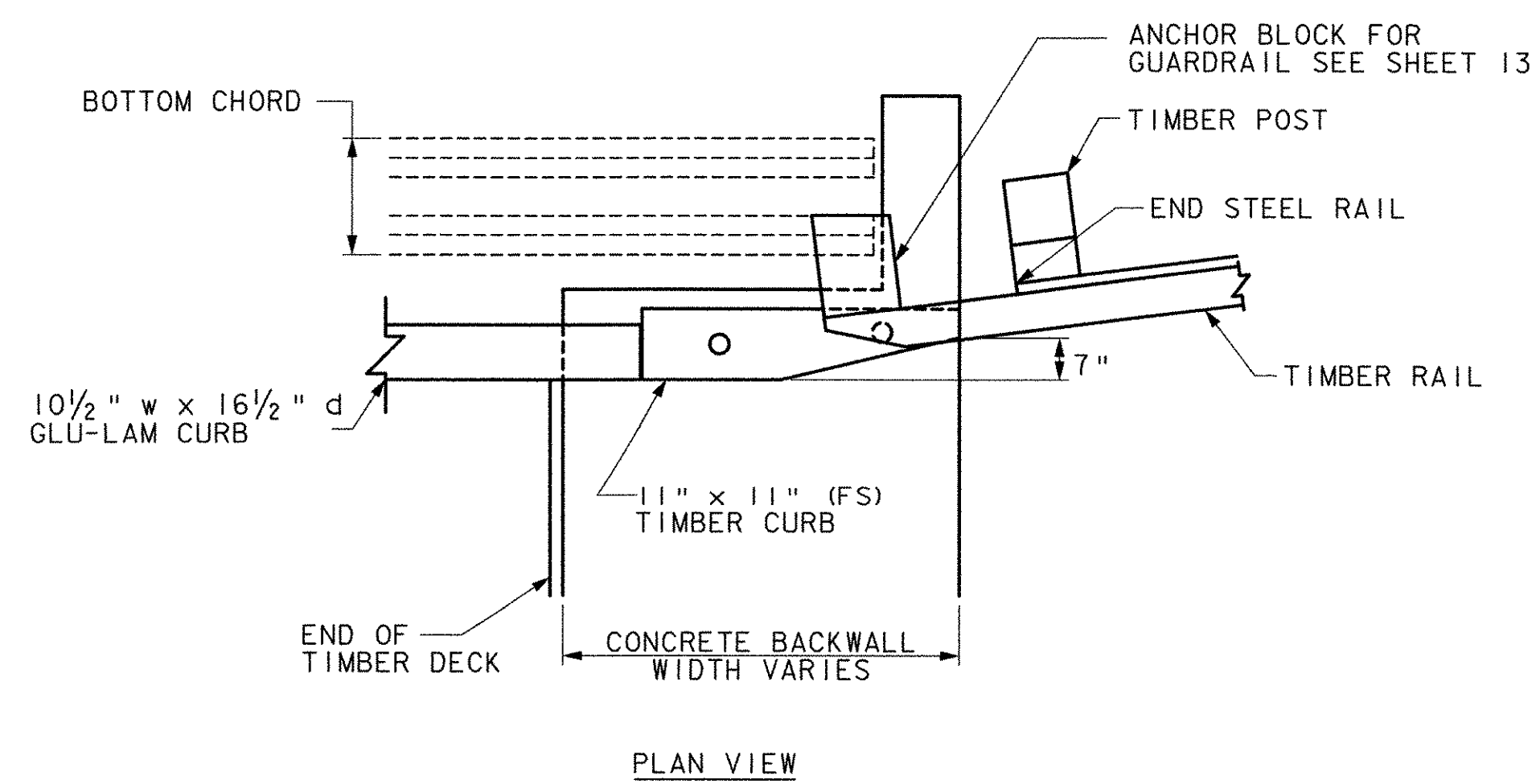
PLAN VIEW TOP CHORD BRACING

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

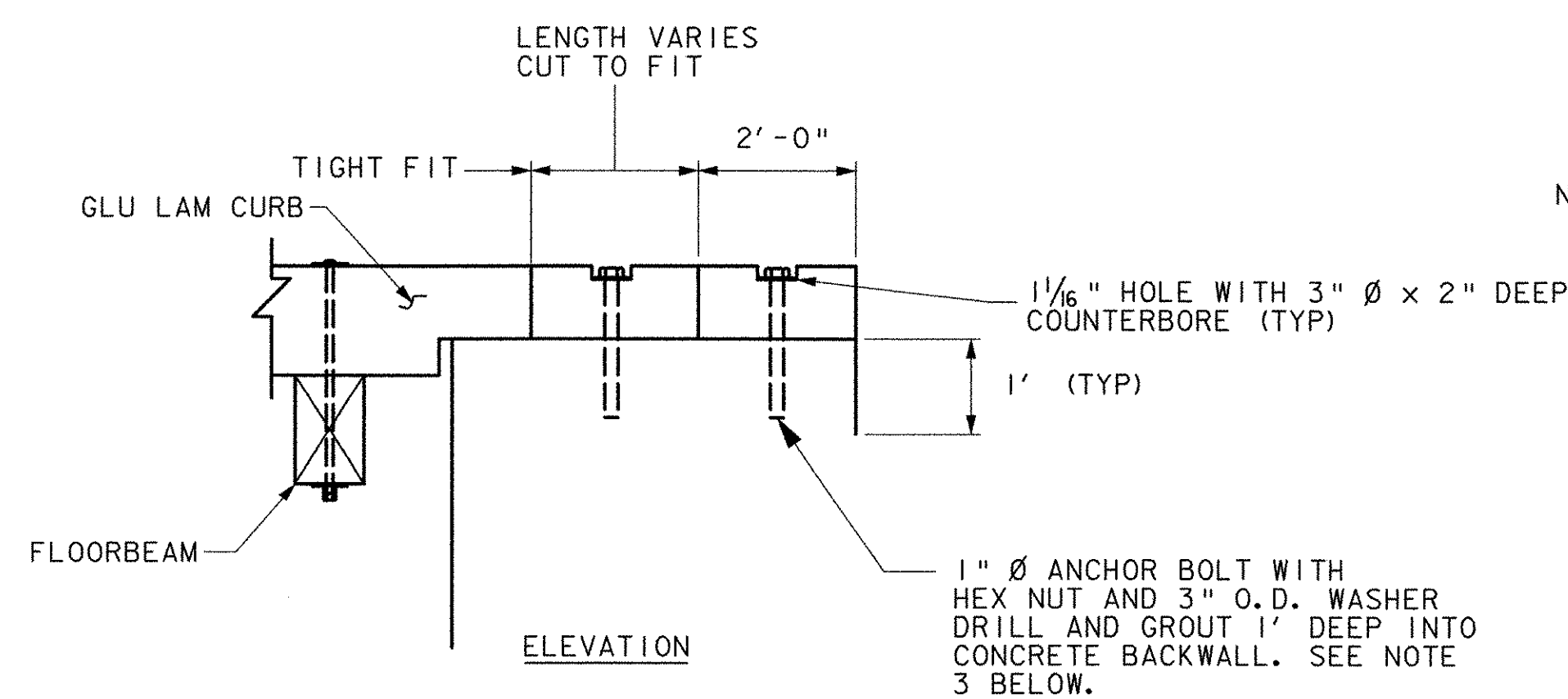


TOP CHORD BRACING

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



PLAN VIEW

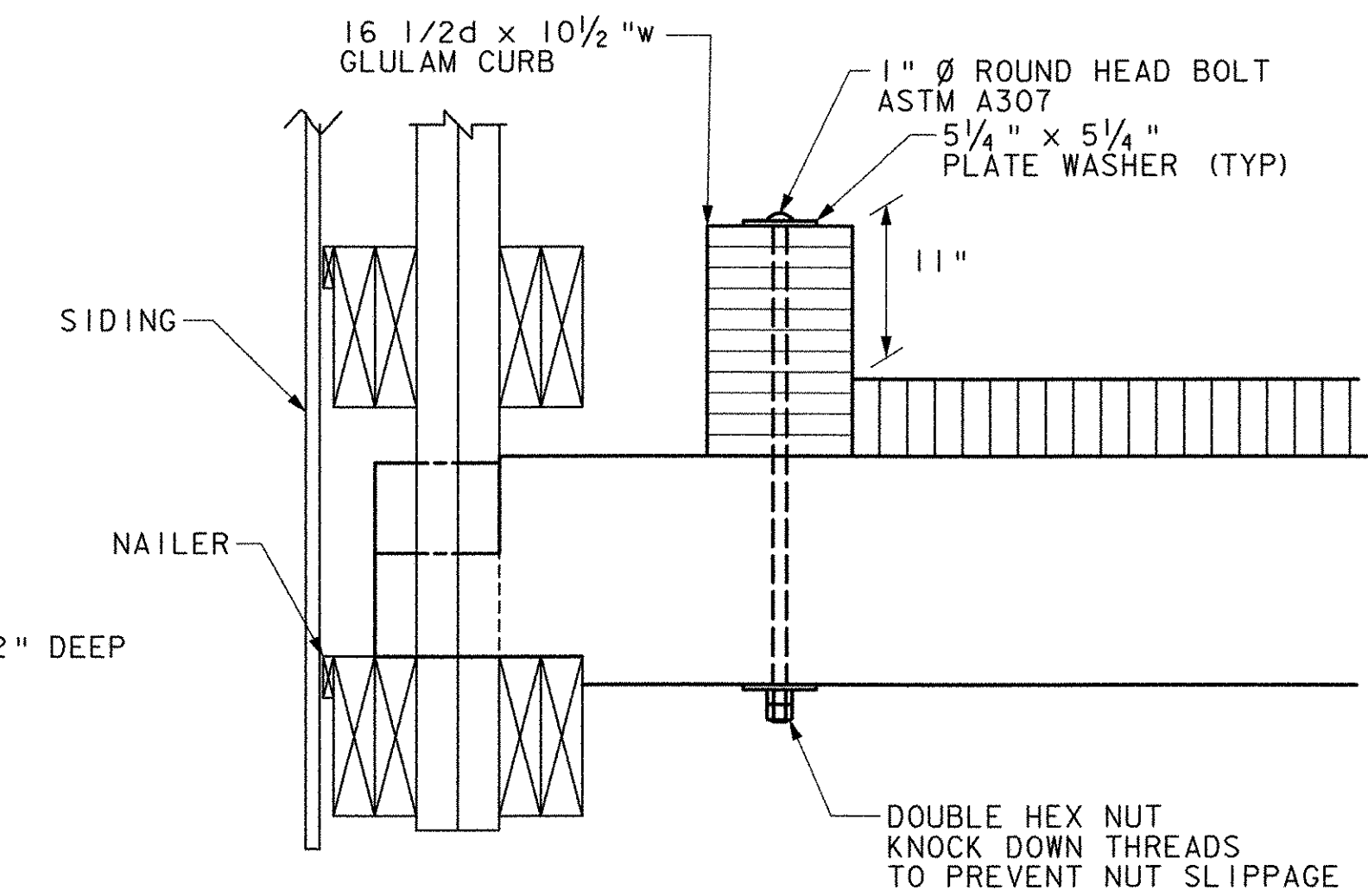
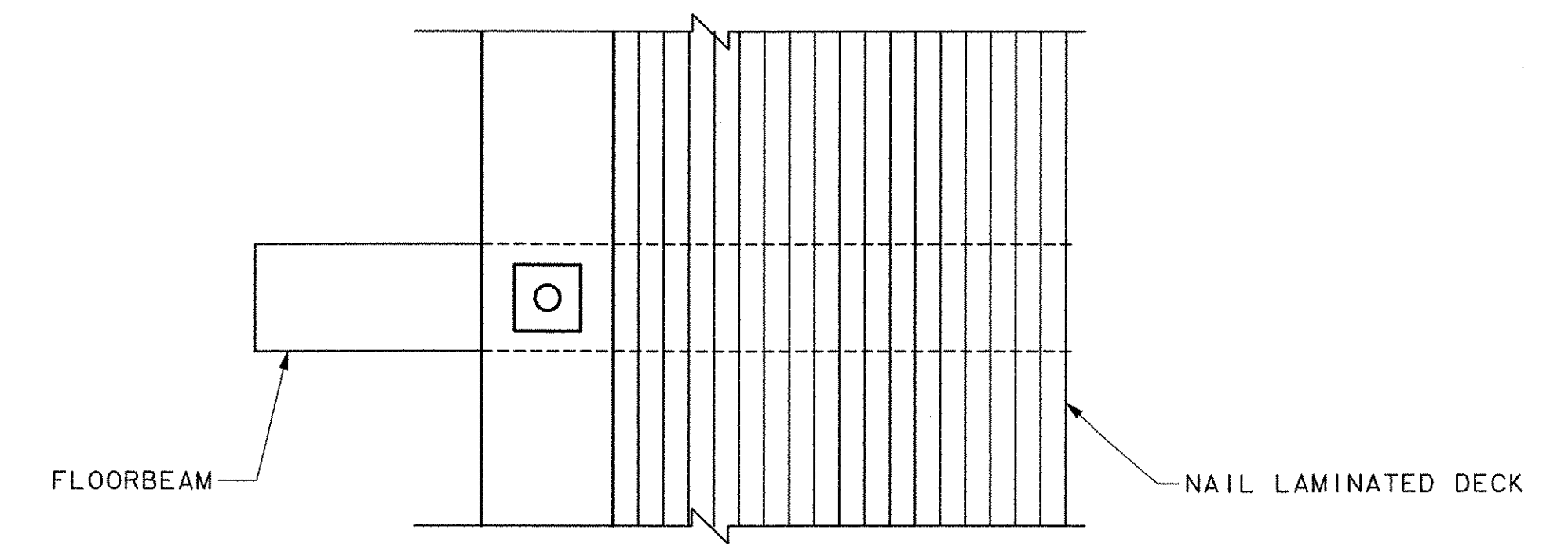


ELEVATION

TREATMENT OF TIMBER CURB

o BACKWALL

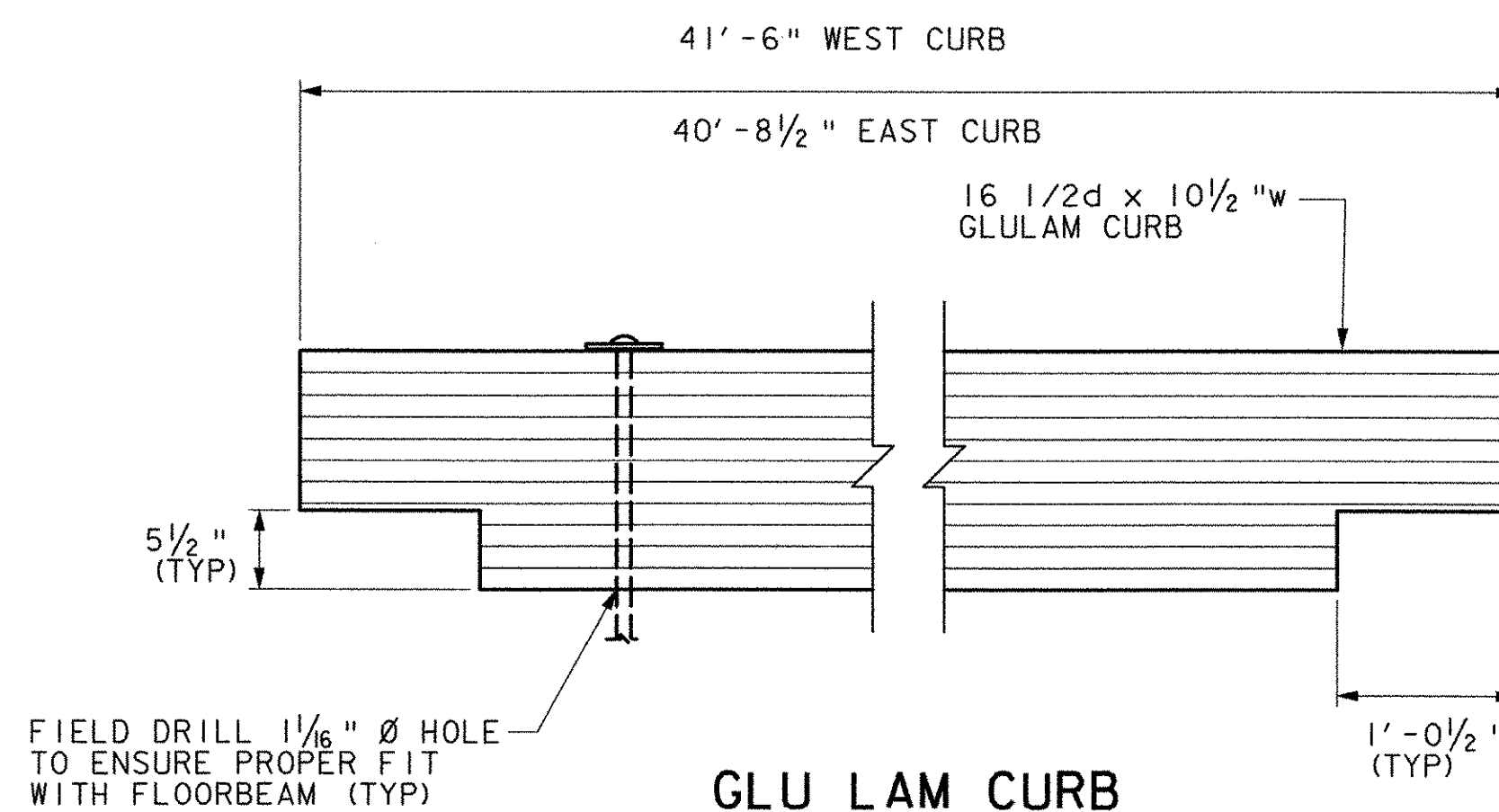
SCALE: 1/2" = 1'-0"



GLU LAM CURB CONNECTION DETAILS

SCALE: 1" = 1'

- TIMBER CURB NOTES:**
1. ALL WORK AND MATERIALS FOR ANCHOR BOLTS (INCLUDING NUTS AND WASHERS) SHALL BE PAID FOR UNDER ITEM 507.16 "DRILLING AND GROUTING OF DOWELS".
 2. TIMBER CURB TO BE PAID FOR UNDER ITEM 522.35 "NONSTRUCTURAL LUMBER - TREATED".
 3. ALL ANCHOR BOLTS AND HARDWARE TO BE EQUIVALENT TO VERMONT MATERIAL SPECIFICATION 714.08 "ANCHOR BOLTS - BEARING DEVICES" AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153.
 4. ALL HARDWARE INCLUDING ROUND HEAD BOLTS, PLATE WASHERS AND NUTS FOR GLULAM CURB ATTACHMENT SHALL BE CONSIDERED SUBSIDIARY TO ITEM 522.40 "STRUCTURAL GLUED LAMINATED TIMBER". THESE ITEMS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153.



GLU LAM CURB

SCALE: 1" = 1'-0"

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	

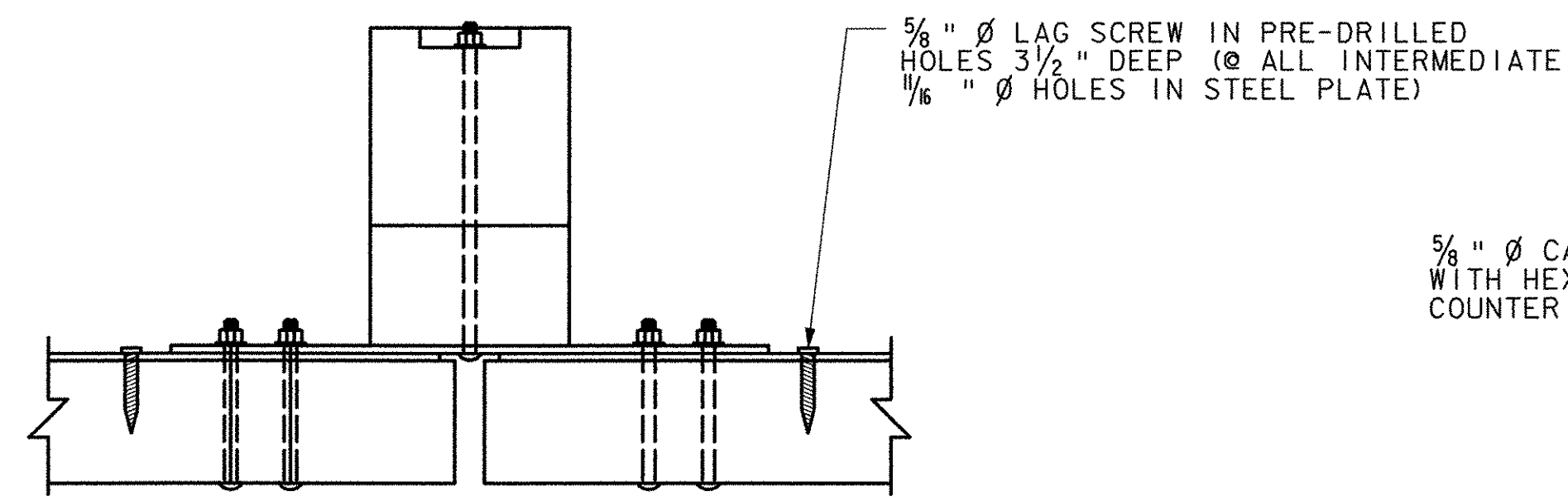
COOLEY COVERED BRIDGE REHABILITATION

ROOF AND CURB DETAILS

Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	E. ALLEN RANDALL	Date	01/03/03
		Bridge Design Supervisor	
		Date	

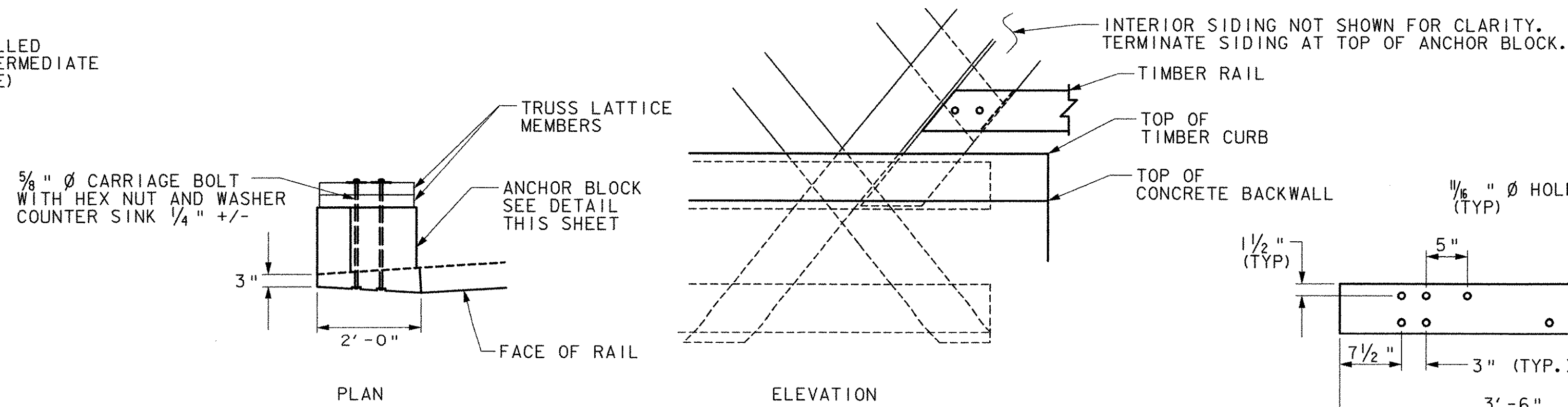
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
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I.G.C. Info.	
Bridge Sheet No.	Sheet 12 of 15



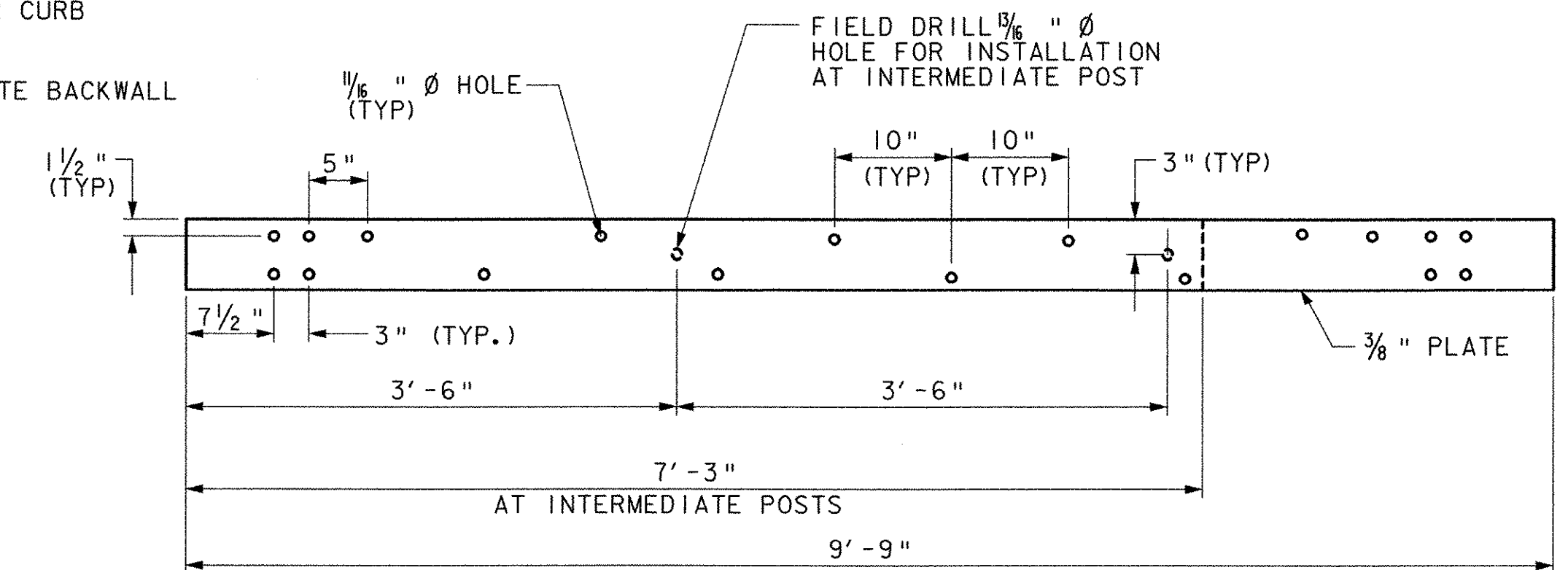
PLAN VIEW AT RAIL POST

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



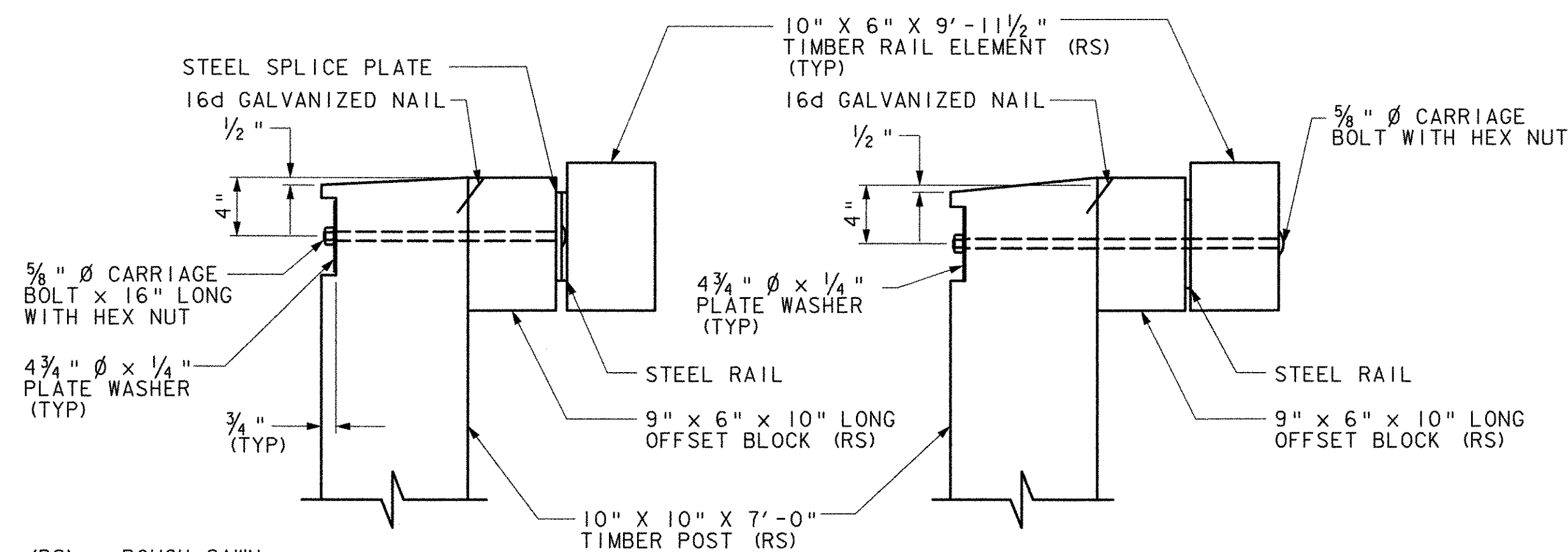
TIMBER RAIL ATTACHMENT DETAILS

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



STEEL RAIL DETAIL

SCALE: 1" = 1'-0"

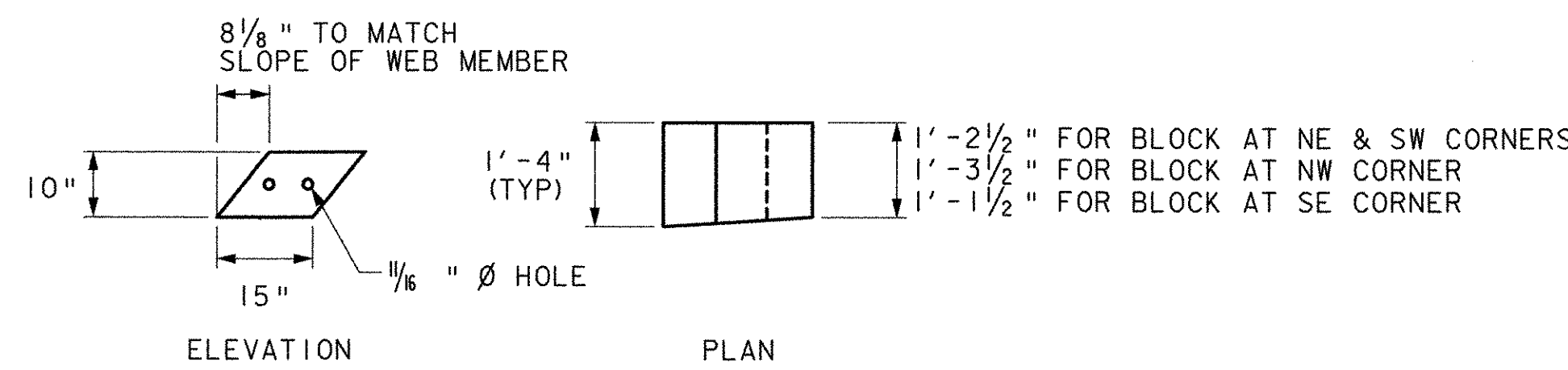


RAIL POST

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

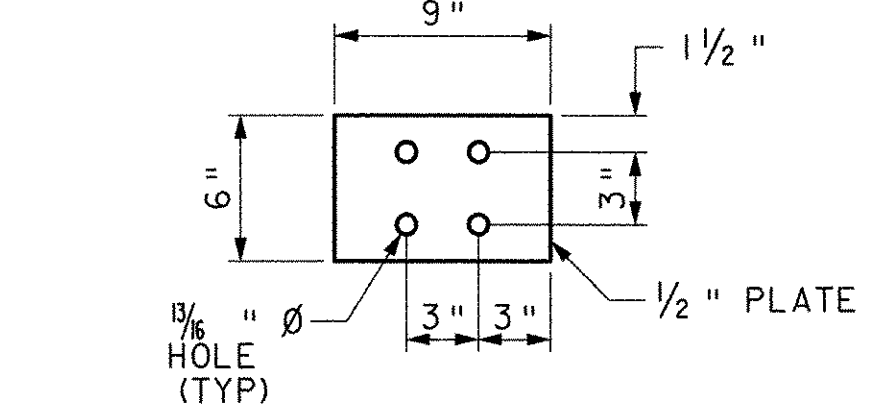
INTERMEDIATE RAIL POST

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



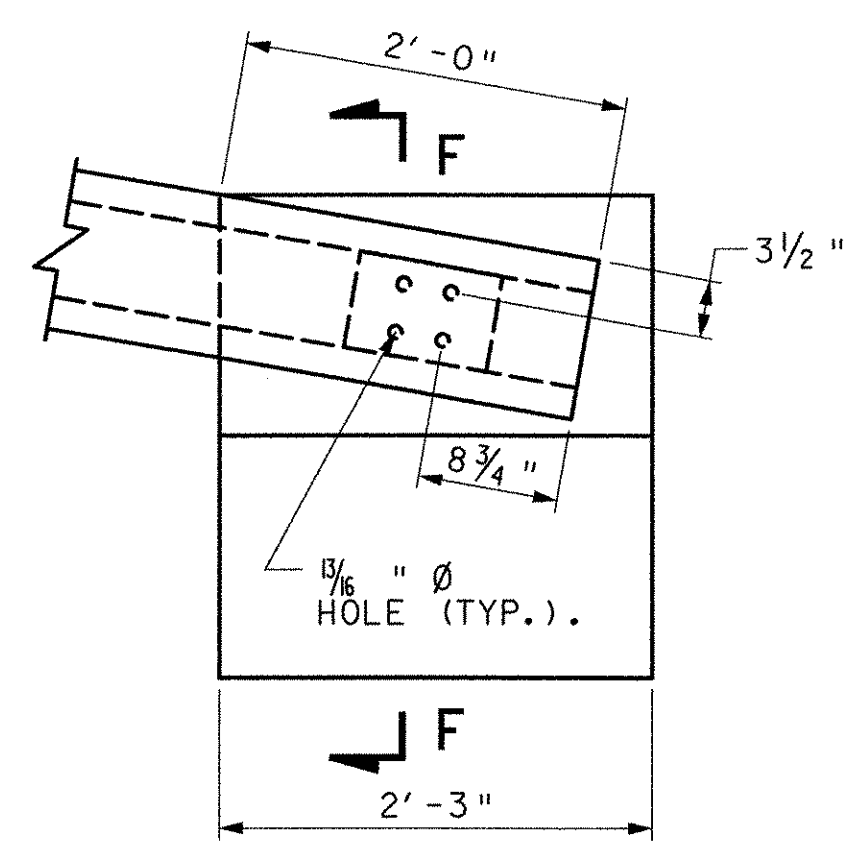
ANCHOR BLOCK DETAILS

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



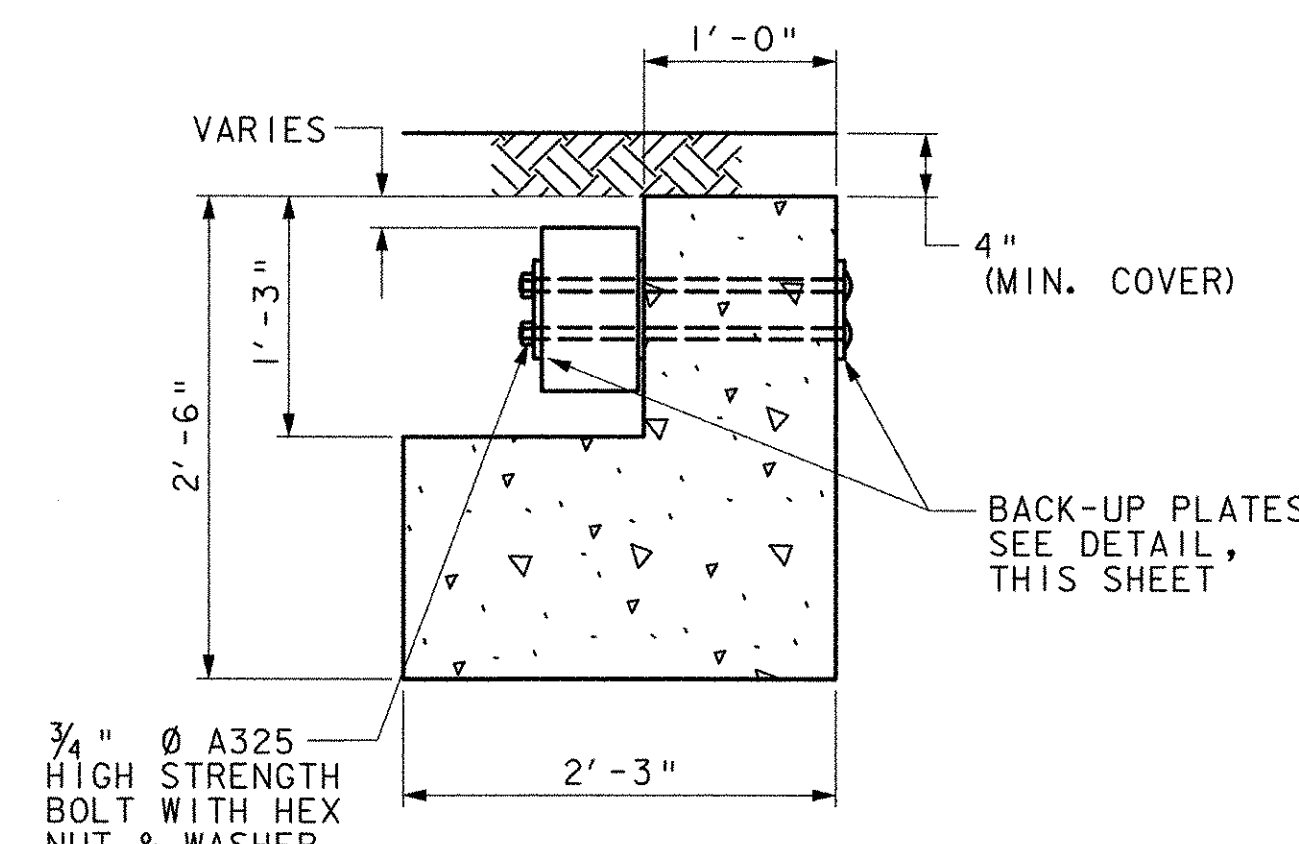
BACK-UP PLATE DETAIL

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



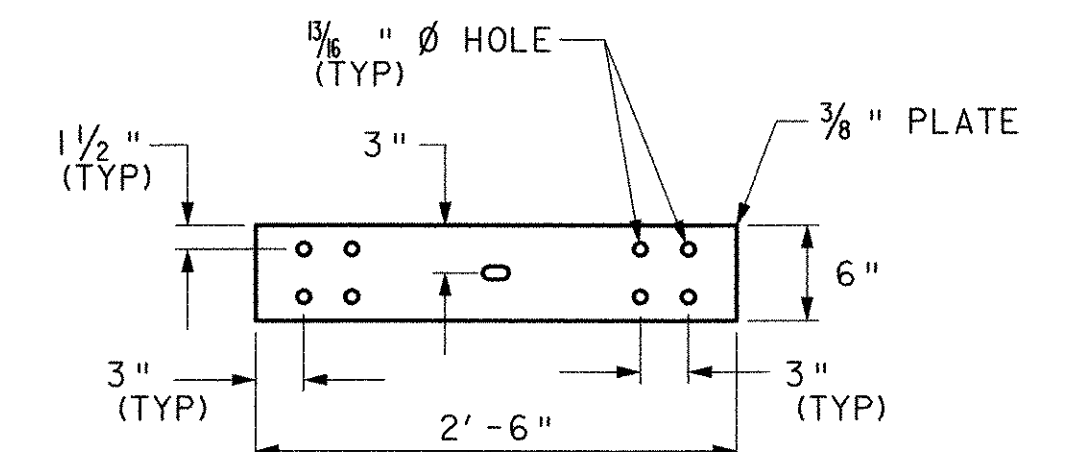
DETAIL F

SCALE: 1" = 1'-0"



SECTION F-F

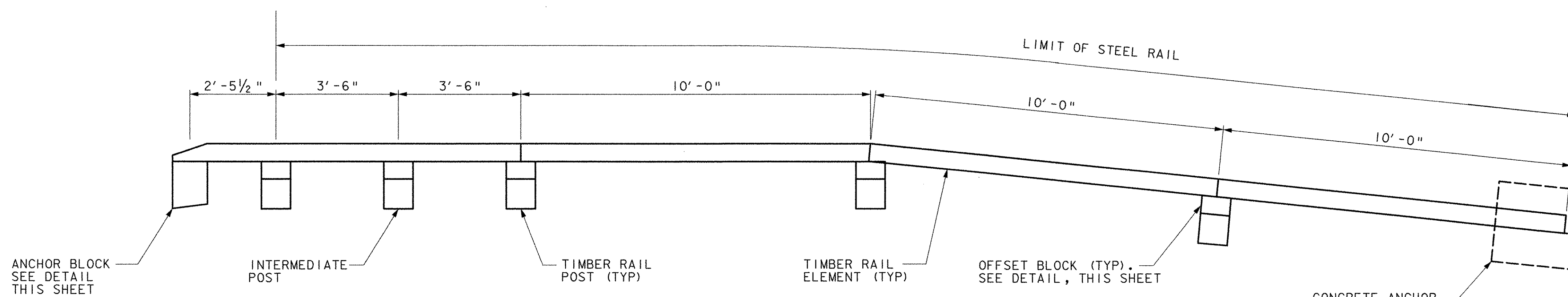
SCALE: 1" = 1'-0"



STEEL SPLICE PLATE DETAIL

SCALE: 1" = 1'-0"

- RAILING NOTES:**
1. ALL HARDWARE AND STEEL PLATES SHALL BE AASHTO M270 GRADE 36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153.
 2. ALL MATERIAL FOR POST AND TIMBER RAIL ELEMENT SHALL CONFORM TO SECTION 728 OF VTRANS STANDARD SPECIFICATIONS.
 3. ALL WORK AND MATERIALS (INCLUDING TIMBER RAIL AND POSTS, STEEL RAIL AND PLATES, BOLTS, NUTS, WASHERS, AND CONCRETE ANCHOR) TO INSTALL THE RAILING SHALL BE PAID UNDER ITEM 621.15 "PLANK RAIL (MOD)".

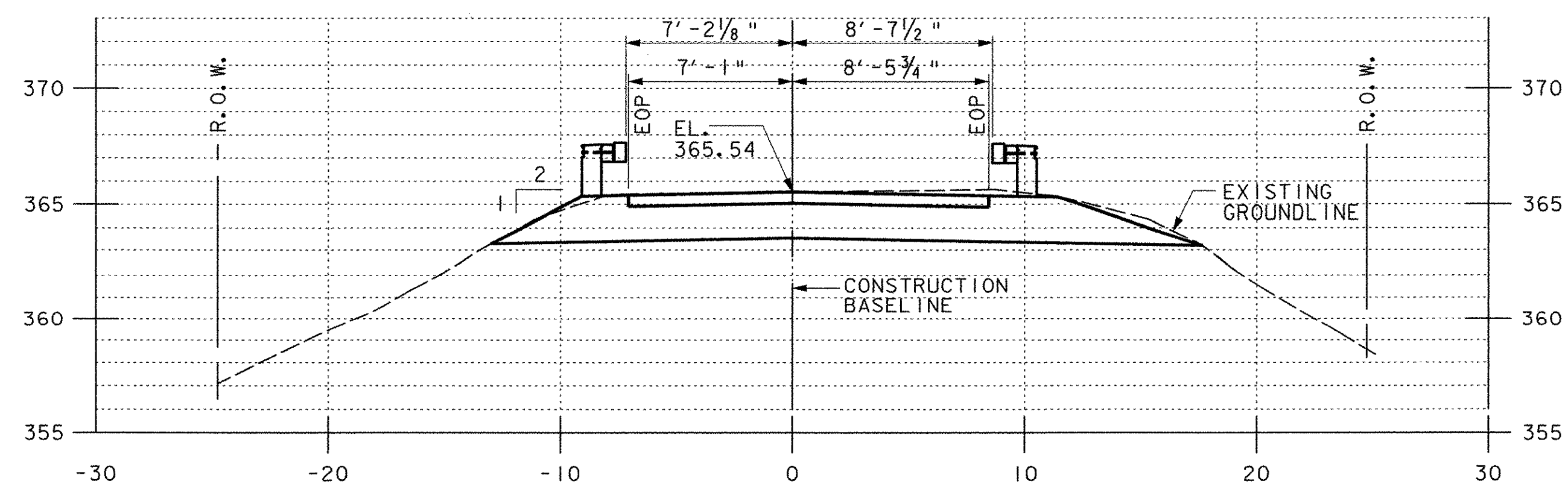


TYPICAL APPROACH GUIDE RAIL

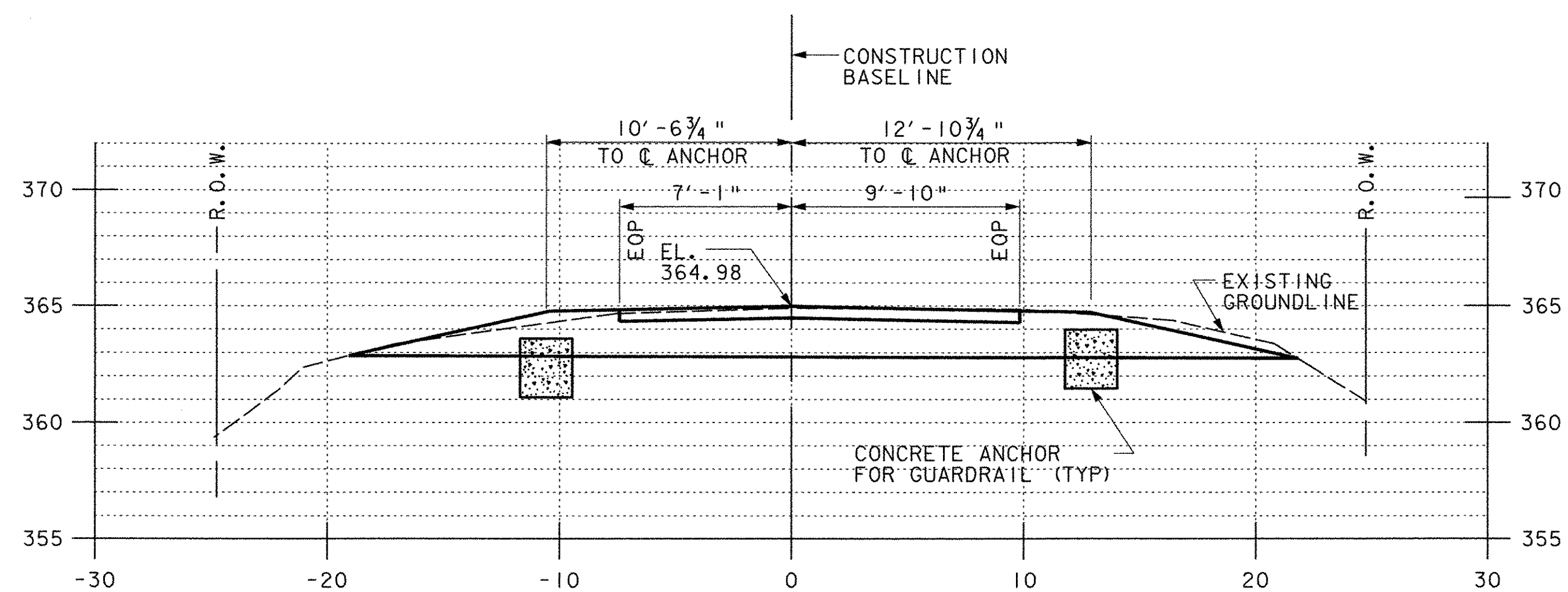
SCALE: 1/2" = 1'-0"

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

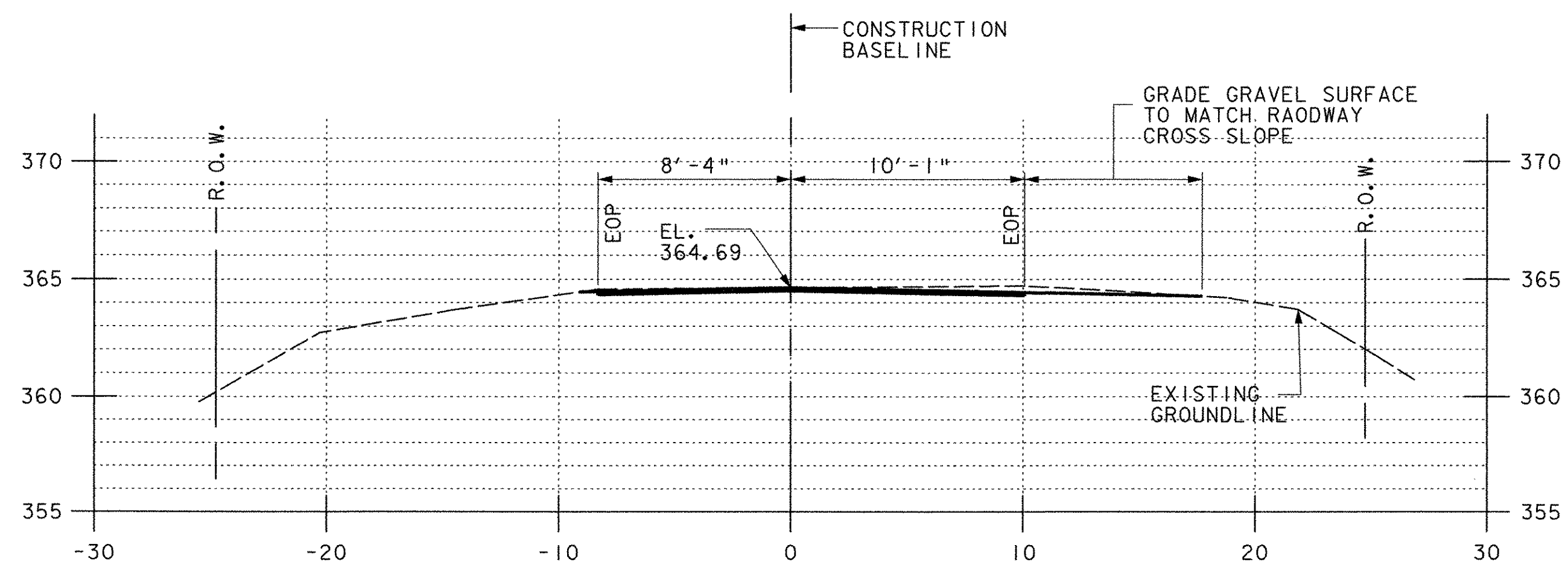
Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
APPROACH RAIL DETAILS			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	Date	Bridge Design Supervisor	Date
	E. ALLEN RANDALL 01/03/03		
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	13 of 15



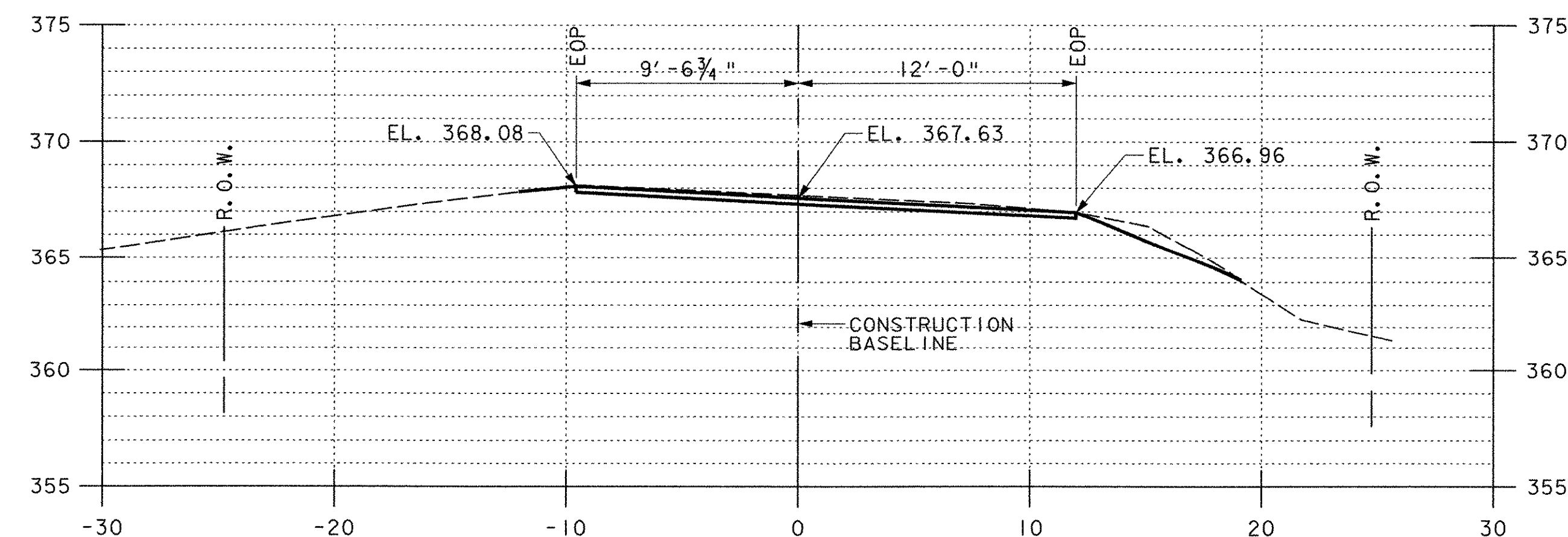
STA. 9+50



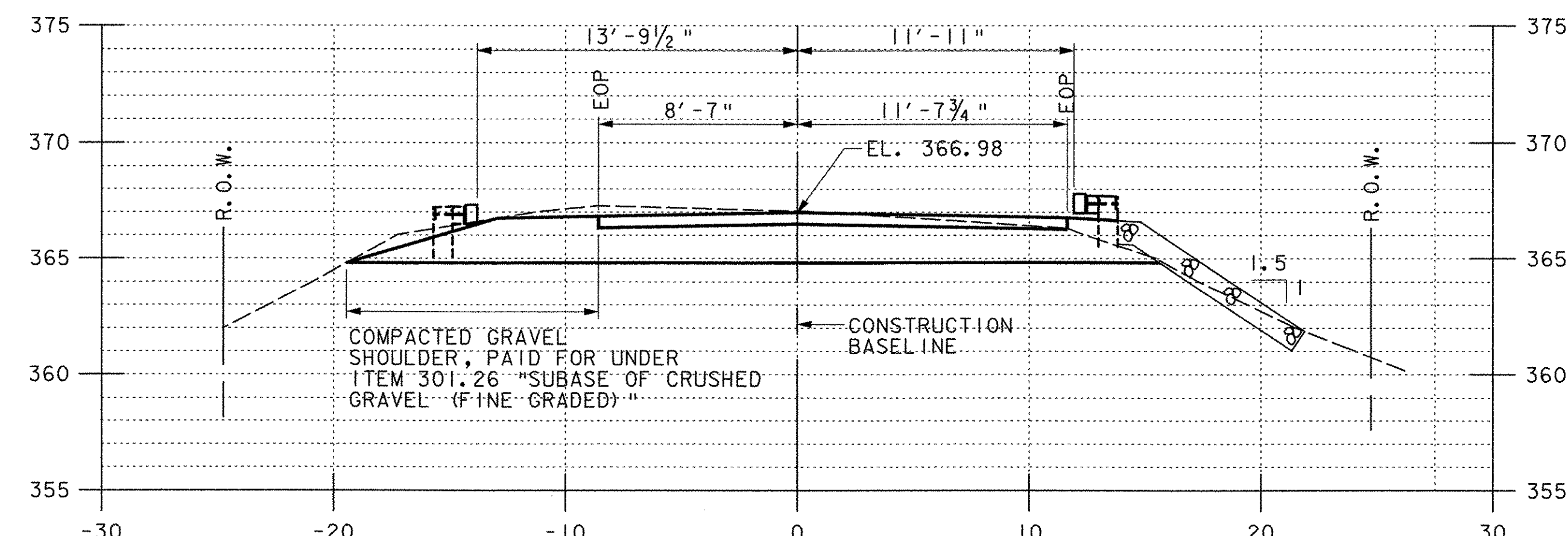
STA. 9+30



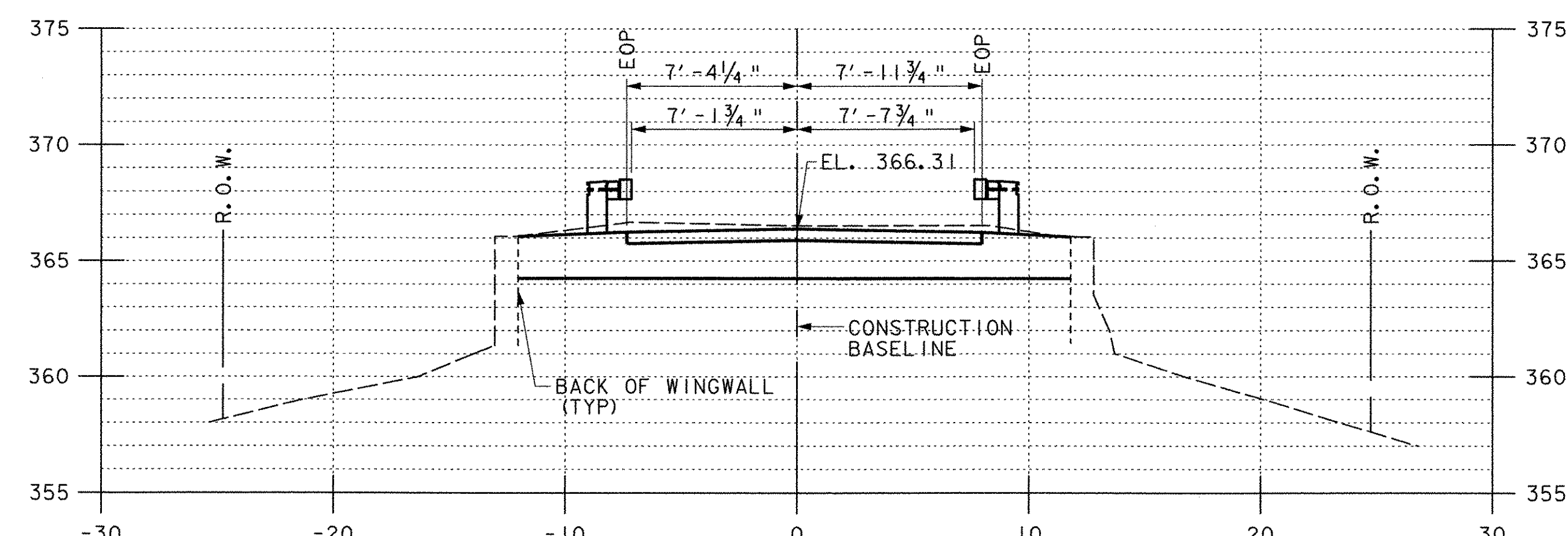
STA. 9+00



STA. 10+75



STA. 10+50



STA. 10+25

SECTION AT STATION 10+25 IS TYPICAL
AT ALL AREAS WITH WINGWALLS
STA. 9+60 TO 9+67.65
STA. 10+20.07 TO 10+28

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	PITTSFORD, VT	Bridge No.	31
Highway No.	ELM STREET (TH13)	Log Sta.	
		Surv. Sta.	
COOLEY COVERED BRIDGE REHABILITATION			
Designed By	J. MESSIER	Drawn By	J. MESSIER
Checked By	E. ALLEN RANDALL	Date	01/03/03
		Bridge Design Supervisor	
		Date	
PROJECT	PITTSFORD	PROJECT NO.	BHO 1443 (36)
I.G.C. Info.			
Bridge Sheet No.		Sheet	14 of 15



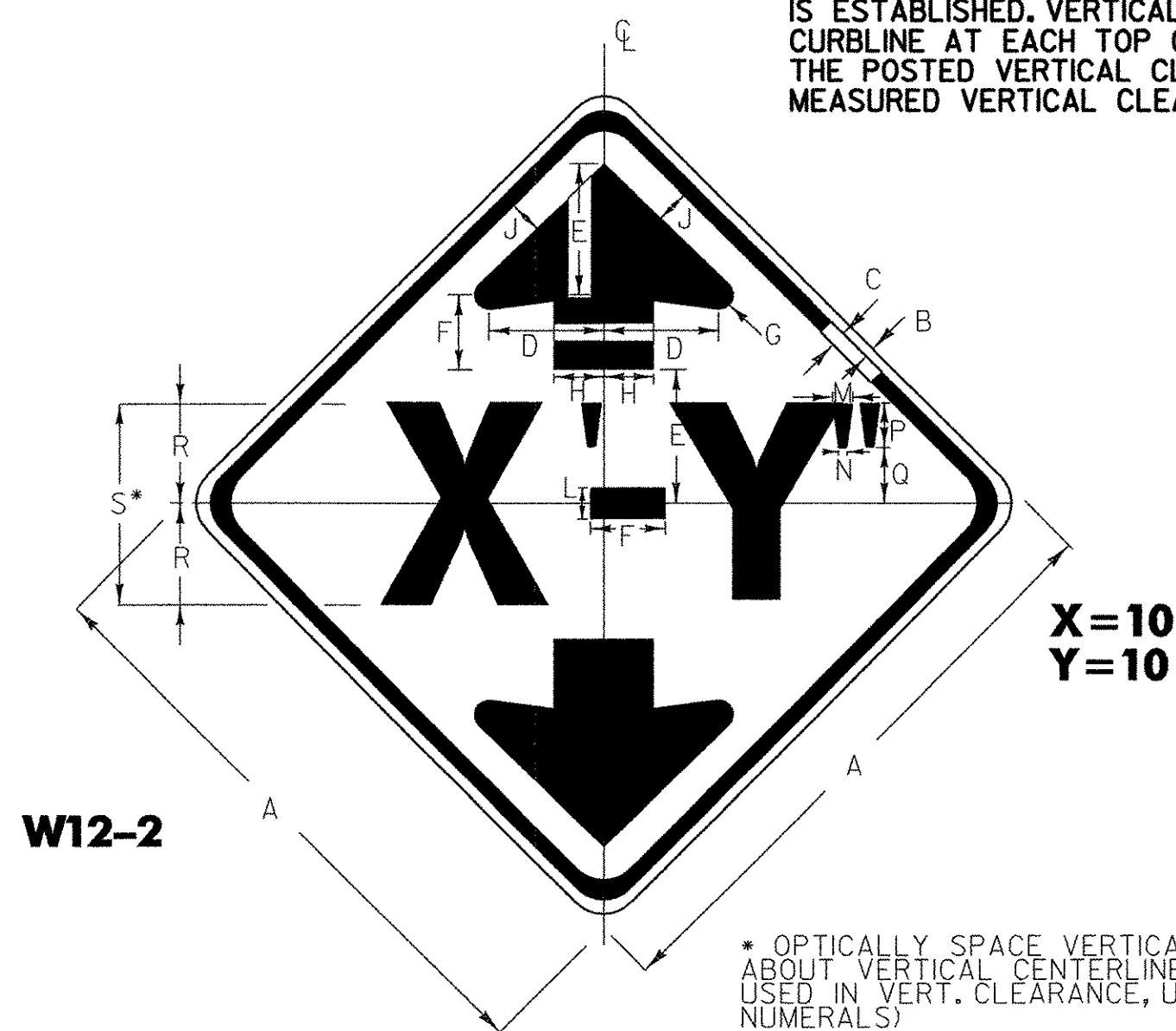
03 JAN 2003 10:20:14 Cooley Bridge.dwg\cadd\cgm\cooley.dgn

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXISTING POST	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL		
		EA	"A" (in)	HEIGHT (in)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (in)			TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)				W-SHAPE STEEL		SIGN NUMBER	STD. SHEET NUMBER	
											lb/ft	lb/ft	lb/ft	1.75	2.0	2.5	3.0	4.0	4.0 MOD	3.0	3.5	4.0	5.0	FTG. SIZE				WEIGHT
9+25 Rt. 10+50 Lt.		2	30"		12.5																					ENGINEER TO DETERMINE PLACEMNT OF SIGN		
9+59 10+29		2	36"		18.0																					ENGINEER TO DETERMINE PLACEMNT OF SIGN		
				TOTALS	SF 30.5	SF	EA.	SF		LBS 120	FT	EA.	LB	EA.	LB	EA.	EA.	LB										

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

NOTE: SIGN TO BE FABRICATED AFTER FINAL VERTICAL CLEARANCE IS ESTABLISHED. VERTICAL CLEARANCES SHALL BE MEASURED AT EACH CURBLINE AT EACH TOP CHORD SWAY BRACE AND AT THE END PORTALS. THE POSTED VERTICAL CLEARANCE SHALL BE 3" LESS THAN THE MINIMUM MEASURED VERTICAL CLEARANCE.



SIGN	DIMENSIONS (INCHES)																
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
MIN.	30	1/2	3/4	5 3/4	6 5/8	3 3/4	3/4	2 1/2	1 1/8	1 7/8	1 1/8	1	3/16	2 1/4	3 5/8	5	10D
STD. & EXPWY.	36	5/8	7/8	6 7/8	8	4 1/2	1	3	2	2 1/4	1 7/8	1 1/4	1/2	2 3/4	4	6	12D
FWY.	48	3/4	1 1/4	9 3/8	10 5/8	5 7/8	1 5/8	4	2 5/8	3	2 7/8	1 5/8	5/8	3 5/8	5 1/2	8	16D



SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MIN.	30	1/2	3/4	5C	3 1/4	13 5/16	12 1/16	9 1/8	1 7/8	
STD.	36	5/8	7/8	6C	4	16	15 1/4	11 1/2	2 1/4	
SPECIAL	48	3/4	1 1/4	8C	5	21 1/4	20 1/4	15 3/8	3	

COLORS
LEGEND-BLACK (NON - REFL)
BACKGROUND - YELLOW (REFL)

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BHO 1443(36)

FILE NAME: ...coolsgn.dgn PLOT DATE: 02 JAN 2003
PROJECT LEADER: S. SCRIBNER DRAWN BY: J. MESSIER
DESIGNED BY: J. MESSIER CHECKED BY: E.ALLEN RANDALL
SHEET 15 OF 15