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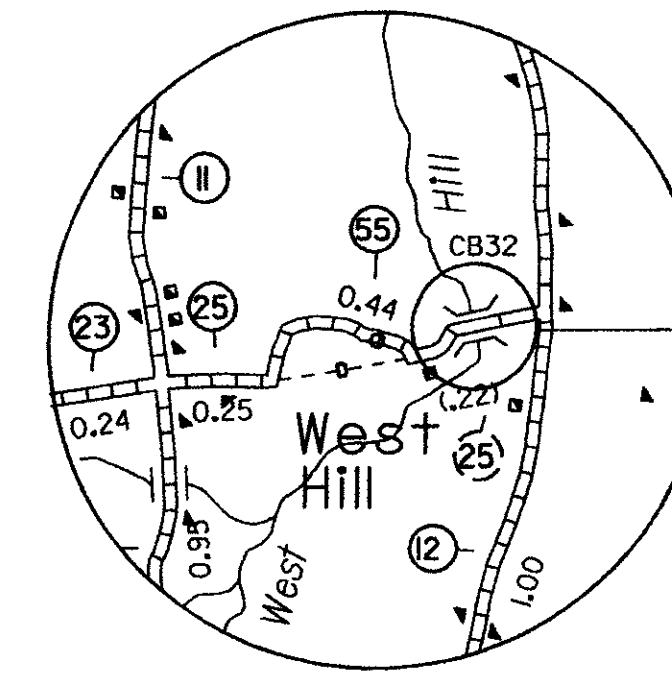
|          |                                            |           |
|----------|--------------------------------------------|-----------|
| E - 100A | SIDE ROAD CONSTRUCTION APPROACH SIGNS      | - 1/02/04 |
| E - 102  | CONSTRUCTION SIGN DETAILS                  | - 6/30/03 |
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| E - 141  | REGULATORY SIGN DETAILS                    | - 9/20/95 |
| E - 146  | REGULATORY SIGN DETAILS                    | - 9/20/95 |
| E - 155  | WARNING SIGN DETAILS                       | - 5/01/04 |
| E - 160  | FLANGED CHANNEL STEEL SIGN POST            | - 5/20/99 |
| G - 1    | STEEL BEAM GUARDRAIL WITH WOOD POSTS       | - 1/03/00 |
| G - 1d   | STEEL BEAM GUARDRAIL APPROACH END TERMINAL | - 1/03/00 |

TOWN OF: MONTGOMERY  
COUNTY OF: FRANKLIN

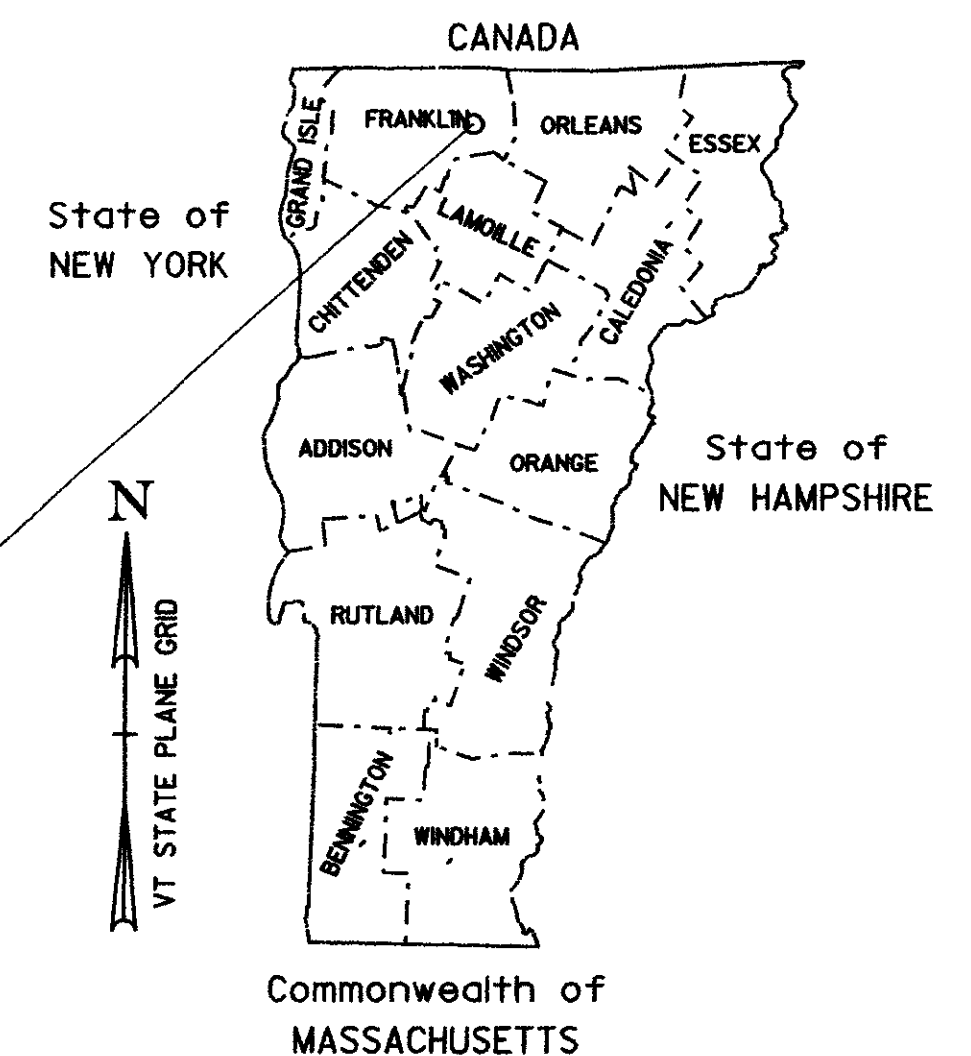
PROJECT LOCATION: ON TH 25 BEGINNING APPROXIMATELY 0.22 MILES WEST FROM ITS INTERSECTION WITH TH 12 AND EXTENDING NORTHERLY APPROXIMATELY 0.030 MILES.

PROJECT DESCRIPTION: REHABILITATION OF THE CREAMERY WEST HILL COVERED BRIDGE,  
INCLUDING TIMBER SUPERSTRUCTURE, SUBSTRUCTURE, DRY MASONRY  
AND ROADWAY APPROACH WORK.

LENGTH OF STRUCTURE: 58.8± FEET  
LENGTH OF PROJECT: 156.0 FEET



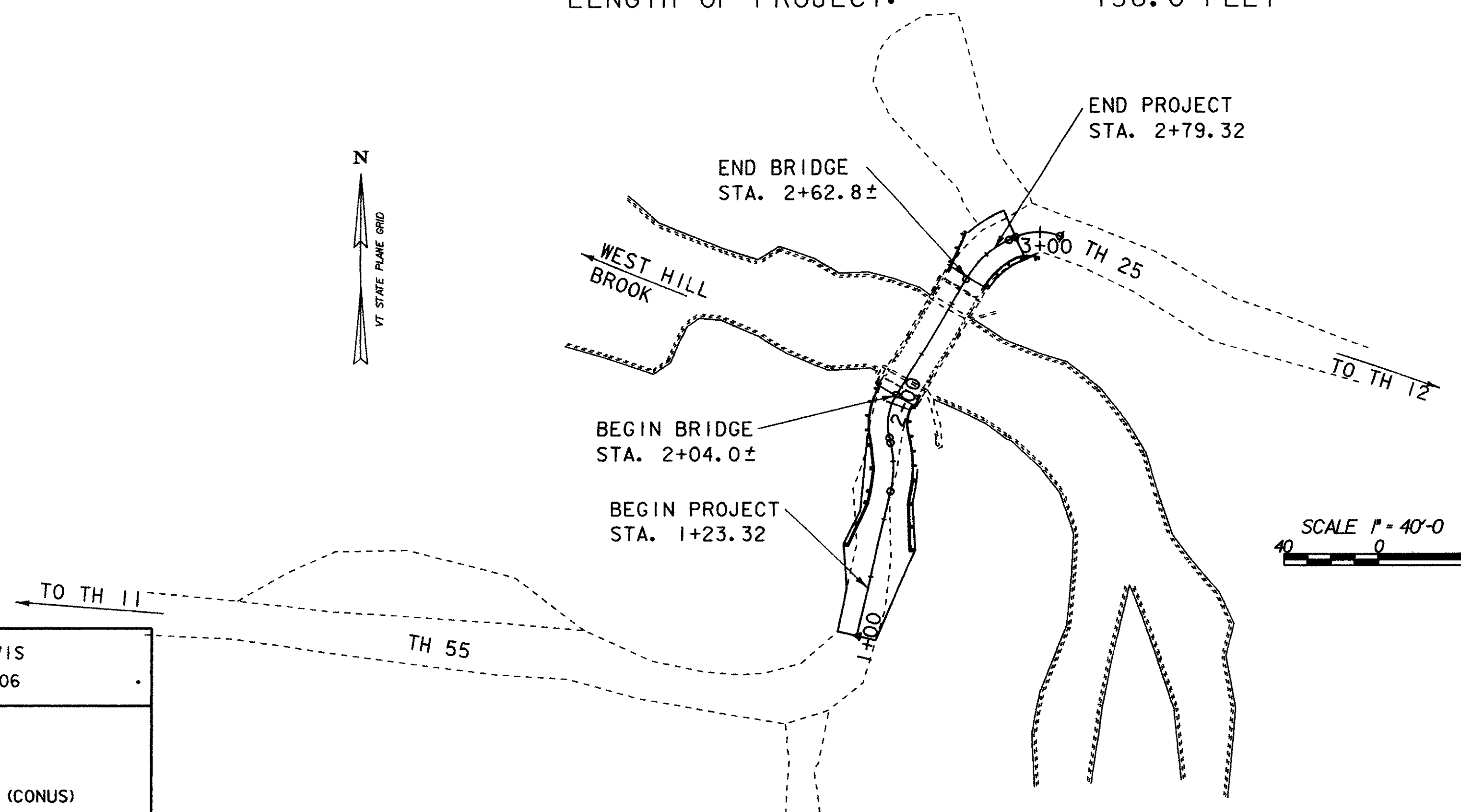
LOCATION MAP  
(TRACED FROM TOWN MAP)  
SCALE: 1"=1/2 MILE



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 : L.G. ORVIS  
SURVEYED DATE : 01/24/06

DATUM  
VERTICAL: NAVD 88  
HORIZONTAL: NAD 83 (CONUS)



CONTRACTOR ALPINE CONSTRUCTION, LLC - SCHUYLerville, NY

RESIDENT ENGINEER DELVIN WARNER

CONSTRUCTION BEGAN SEPTEMBER 15, 2008

CONSTRUCTION COMPLETE OCTOBER 7, 2009

RECORD PLANS BY DELVIN WARNER & NICK GARBACIK

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

BY  RESIDENT ENGINEER

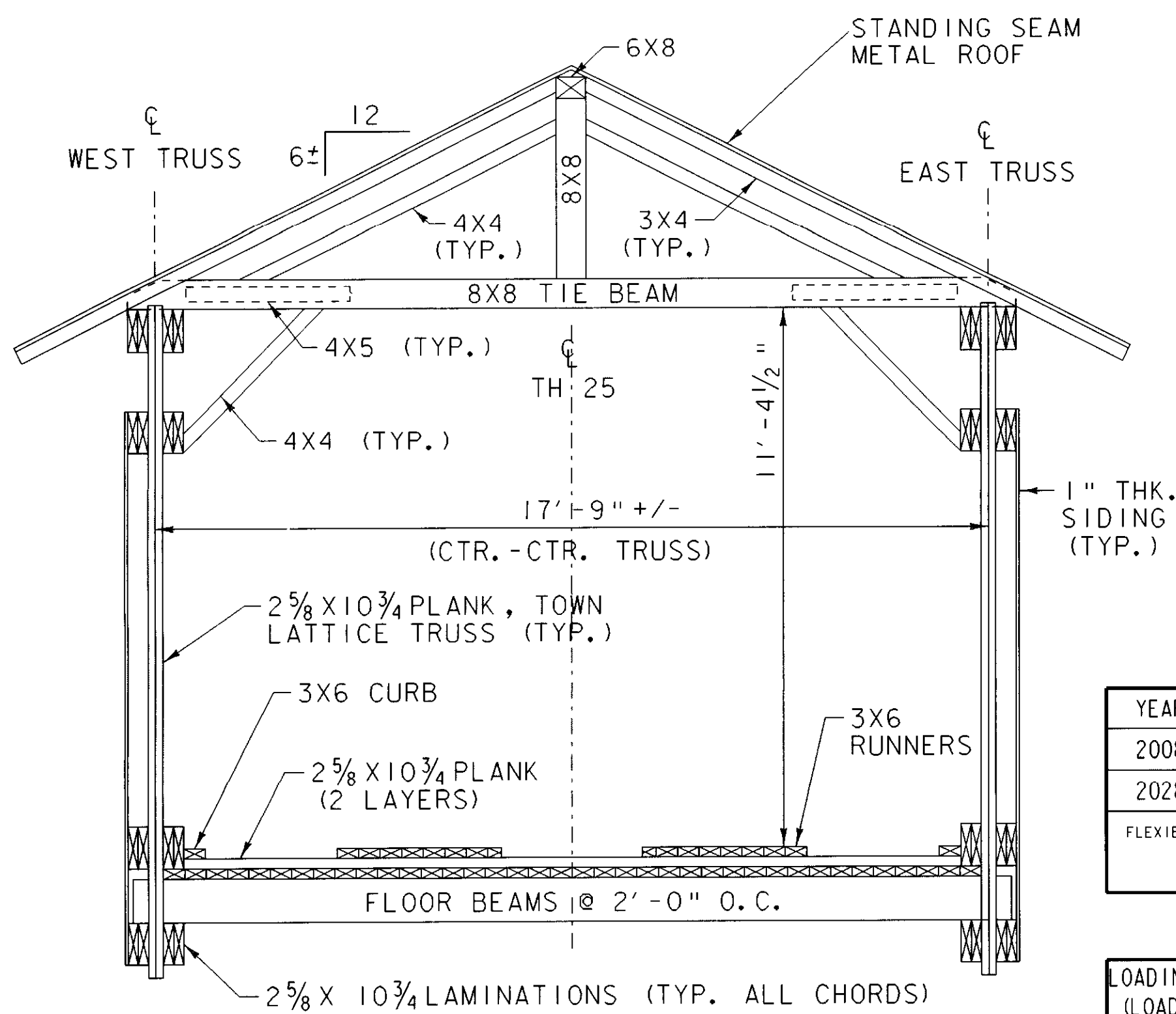
DATE 07/08/10

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

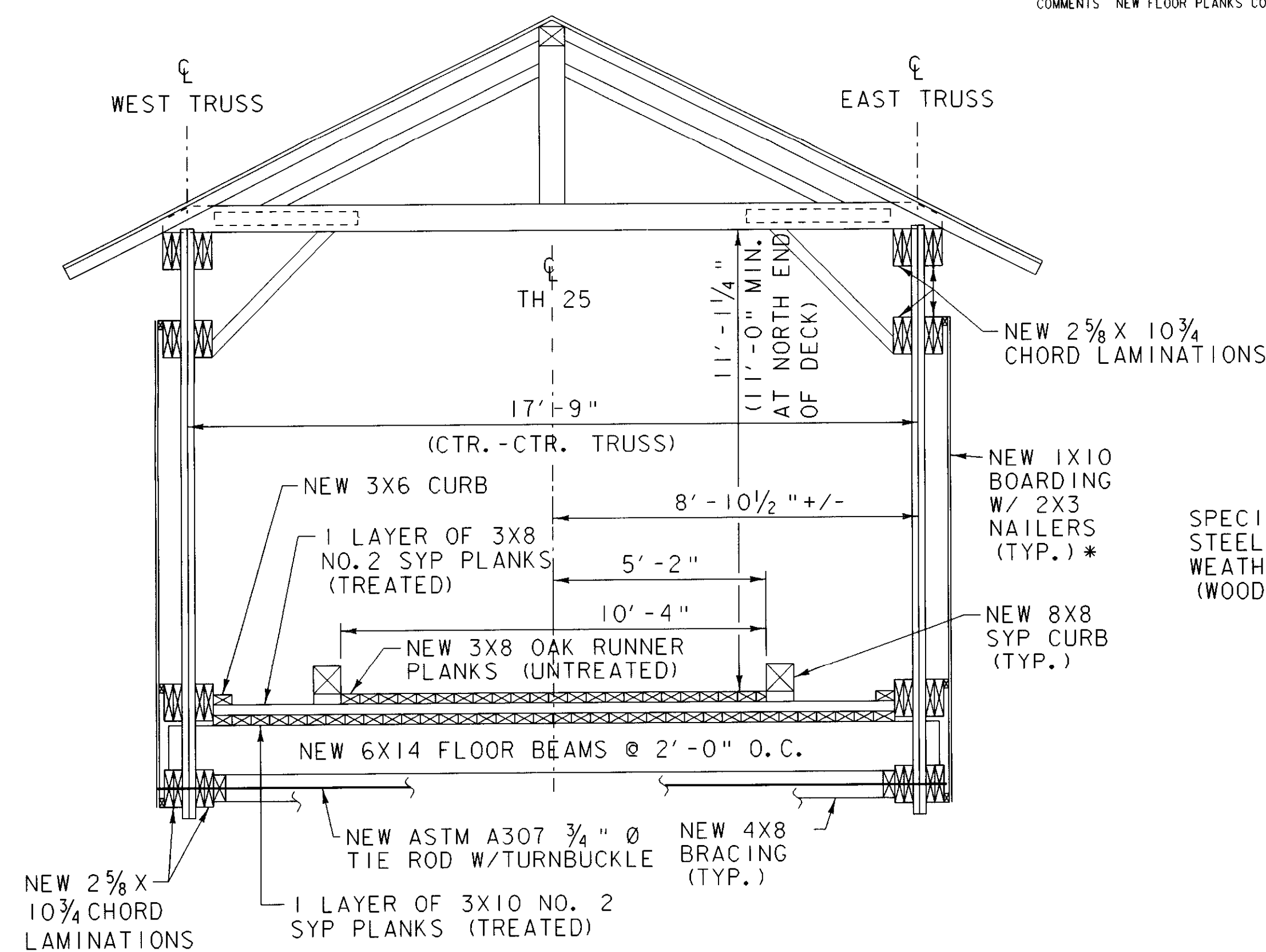
THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

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

|                                         |                     |
|-----------------------------------------|---------------------|
| DIRECTOR OF PROGRAM DEVELOPMENT         |                     |
| APPROVED <i>Richard J. Weaver</i>       | DATE <i>5/20/68</i> |
| PROJECT MANAGER : J. WEAVER             |                     |
| PROJECT NAME : MONTGOMERY BHO 1448 (37) |                     |
| SHEET 1 OF 33 SHEETS                    |                     |



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



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

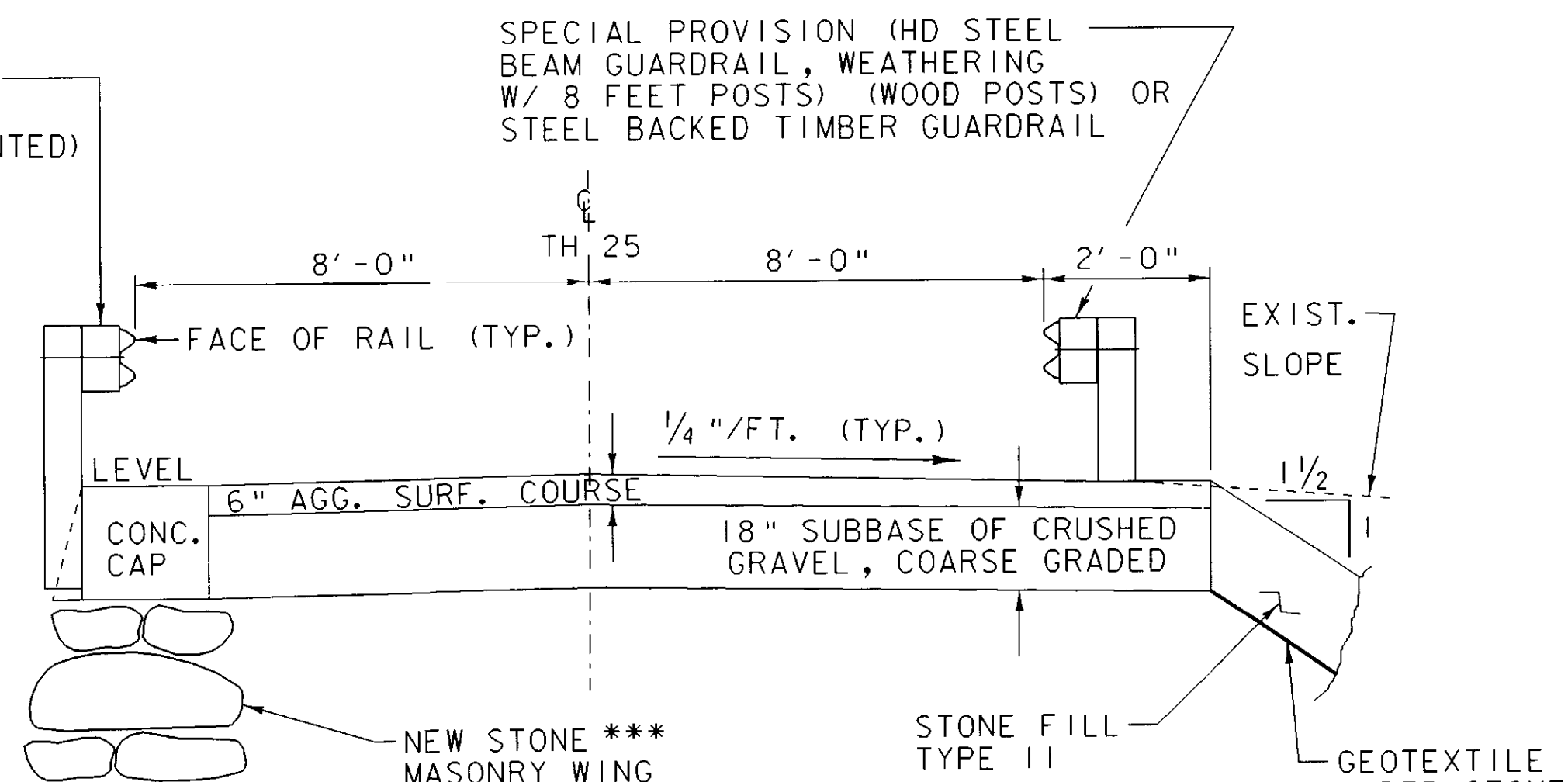
\* NON-STRUCTURAL LUMBER - UNTREATED: FULL LENGTH SPRUCE-PINE-FIR BOARDS AND 8'-0" (MIN) LENGTH NAILERS:  
NO. 3 COMMON BOARDS SHALL BE USED FOR SIDING, PORTALS AND END RETURNS.  
NO. 2 SPRUCE-PINE-FIR LUMBER SHALL BE USED FOR THE NAILERS.

\*\* 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<br>(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



TYPICAL APPROACH SECTION

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

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

## 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

### 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 | Roller 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 roller 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                 |
| 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  
PROJECT NUMBER: BHO 1448 (37)

|                                 |                        |
|---------------------------------|------------------------|
| FILE NAME: s04j148+yp           | PLOT DATE: 21-MAY-2008 |
| PROJECT LEADER: J. WEAVER       | DRAWN BY: J. TREI      |
| DESIGNED BY: J. WEAVER          | CHECKED BY: J. WEAVER  |
| TYPICAL SECTIONS & PROJECT DATA | SHEET 2 OF 33          |

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

|                 |                           |             |             |
|-----------------|---------------------------|-------------|-------------|
| PROJECT NAME:   | MONTGOMERY                |             |             |
| PROJECT NUMBER: | BHO 1448 (37)             |             |             |
| FILE NAME:      | 04j148\str\s04j148n&q.dgn | PLOT DATE:  | 21-MAY-2008 |
| PROJECT LEADER: | J. WEAVER                 | DRAWN BY:   | C. WEEBER   |
| DESIGNED BY:    | J. WEAVER                 | CHECKED BY: | J. WEAVER   |
| PROJECT NOTES   |                           | SHEET       | 3 OF 33     |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                | QUANTITY SHEET |                   |              |                |       |      |                                |                                                                                       |            |                         |       |  |
|----------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|---------|--------------------|--------|----------------|----------------|-------------------|--------------|----------------|-------|------|--------------------------------|---------------------------------------------------------------------------------------|------------|-------------------------|-------|--|
| SUMMARY OF ESTIMATED QUANTITIES              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | TOTALS         |                |                   | DESCRIPTIONS |                |       |      |                                | DETAILED SUMMARY OF QUANTITIES                                                        |            |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  | ROADWAY | EROSION<br>CONTROL | BRIDGE | ALTERNATE<br>A | ALTERNATE<br>B | FULL C/E<br>ITEMS | ROUND        | GRAND<br>TOTAL | FINAL | UNIT | ITEMS                          | ITEM NUMBER                                                                           | QUANTITIES | UNIT                    | ITEMS |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | LS                             | CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS                          | 201 10     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | CY                             | COMMON EXCAVATION                                                                     | 203 15     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 168            |                |                   |              |                |       |      | CY                             | STRUCTURE EXCAVATION                                                                  | 204 25     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 95             |                |                   |              |                |       |      | CY                             | GRANULAR BACKFILL FOR STRUCTURES                                                      | 204 30     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | CY                             | SUBBASE OF CRUSHED GRAVEL, COARSE GRADED                                              | 301 25     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | CY                             | AGGREGATE SURFACE COURSE                                                              | 401 10     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 17             |                |                   |              |                |       |      | CY                             | CONCRETE, HIGH PERFORMANCE CLASS B                                                    | 501 34     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 310            |                |                   |              |                |       |      | LB                             | STRUCTURAL STEEL                                                                      | 506 60     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 942            |                |                   |              |                |       |      | LB                             | REINFORCING STEEL                                                                     | 507 15     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 6              |                |                   |              |                |       |      | LF                             | DRILLING AND GROUTING DOWELS                                                          | 507 16     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 4              |                |                   |              |                |       |      | GAL                            | WATER REPELLENT, SILANE                                                               | 514 10     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 47             |                |                   |              |                |       |      | MFBM                           | STRUCTURAL LUMBER AND TIMBER - UNTREATED                                              | 522 20     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 103            |                |                   |              |                |       |      | MFBM                           | STRUCTURAL LUMBER AND TIMBER - TREATED                                                | 522 25     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 2              |                |                   |              |                |       |      | MFBM                           | NON - STRUCTURAL LUMBER-UNTREATED                                                     | 522 30     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 05             |                |                   |              |                |       |      | CY                             | MORTAR, TYPE IV                                                                       | 541 58     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 2              |                |                   |              |                |       |      | CY                             | REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS III                                     | 580 15     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 58             |                |                   |              |                |       |      | CY                             | DRY MASONRY                                                                           | 602 20     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 28             |                |                   |              |                |       |      | CY                             | STONE FILL, TYPE II                                                                   | 613 11     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | LF                             | STEEL BACKED TMBER GUARD RAIL                                                         | 621 18     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                | 1                 |              |                |       |      | LS                             | FIELD OFFICE-ENGINEERS                                                                | 631 10     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                | 1                 |              |                |       |      | LS                             | TESTING EQUIPMENT - CONCRETE                                                          | 631 16     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                | 1                 |              |                |       |      | LU                             | FIELD OFFICE - TELEPHONE (N A B I)                                                    | 631 25     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | LS                             | MOBILIZATION / DEMOBILIZATION                                                         | 635 11     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | LS                             | TRAFFIC CONTROL                                                                       | 641 10     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 45             |                |                   |              |                |       |      | SY                             | GEOTEXTILE UNDER STONE FILL                                                           | 649 31     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 55             |                |                   |              |                |       |      | SY                             | GEOTEXTILE FOR SILT FENCE                                                             | 649 51     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 15             |                |                   |              |                |       |      | LB                             | SEED                                                                                  | 651 15     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 15             |                |                   |              |                |       |      | LB                             | FERTILIZER                                                                            | 651 18     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 05             |                |                   |              |                |       |      | TON                            | AGRICULTURAL LIMESTONE                                                                | 651 20     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 3              |                |                   |              |                |       |      | TON                            | HAYMULCH                                                                              | 651 25     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 10             |                |                   |              |                |       |      | CY                             | TOPSOIL                                                                               | 651 35     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 1              |                |                   |              |                |       |      | LS                             | EPSC PLAN                                                                             | 652 10     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 40             |                |                   |              |                |       |      | HR                             | MONITORING EPSC PLAN                                                                  | 652 20     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 1              |                |                   |              |                |       |      | LU                             | MAINTENANCE OF EPSC PLAN (N A B I)                                                    | 652 30     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 25             |                |                   |              |                |       |      | SY                             | TEMPORARY EROSION MATTING                                                             | 653 20     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        | 300            |                |                   |              |                |       |      | LF                             | PROJECT DEMARCATION FENCE                                                             | 653 35     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | SF                             | TRAFFIC SIGNS, TYPE A                                                                 | 675 20     |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | LF                             | FLANGED CHANNEL SIGN POST                                                             | 675 301    |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | CY                             | SPECIAL PROVISION (REBUILT STONE MASONRY)                                             | 900 608    |                         |       |  |
|                                              |  |  |  |  |  |  |  |  |  |  |  |         |                    |        |                |                |                   |              |                |       |      | 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

|                   |                |                |          |
|-------------------|----------------|----------------|----------|
| 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 #2 |                | SHEET 38 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, 151 ft west of pole #23/6, and 1 ft south southeast of a fiberglass witness post.

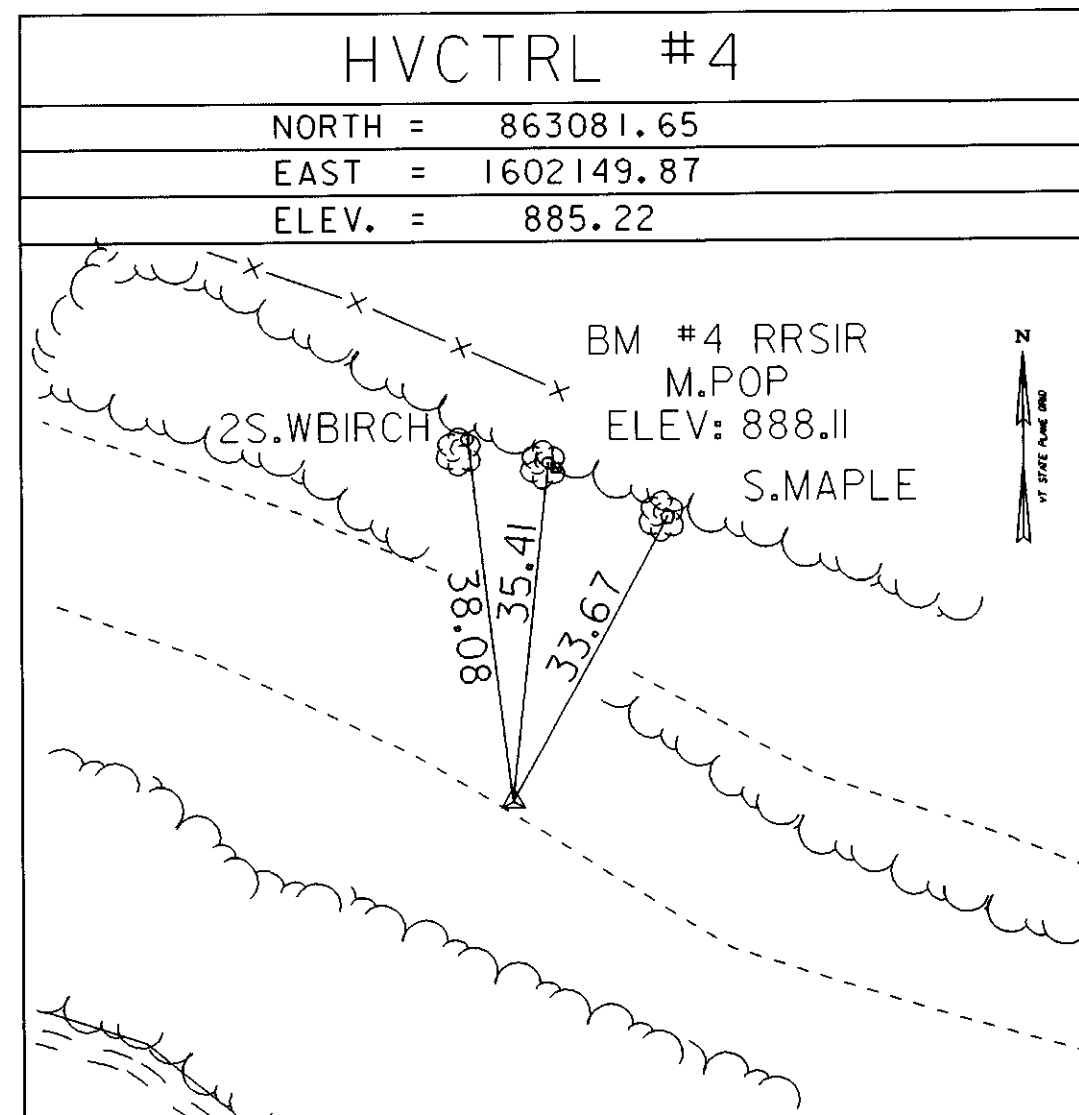
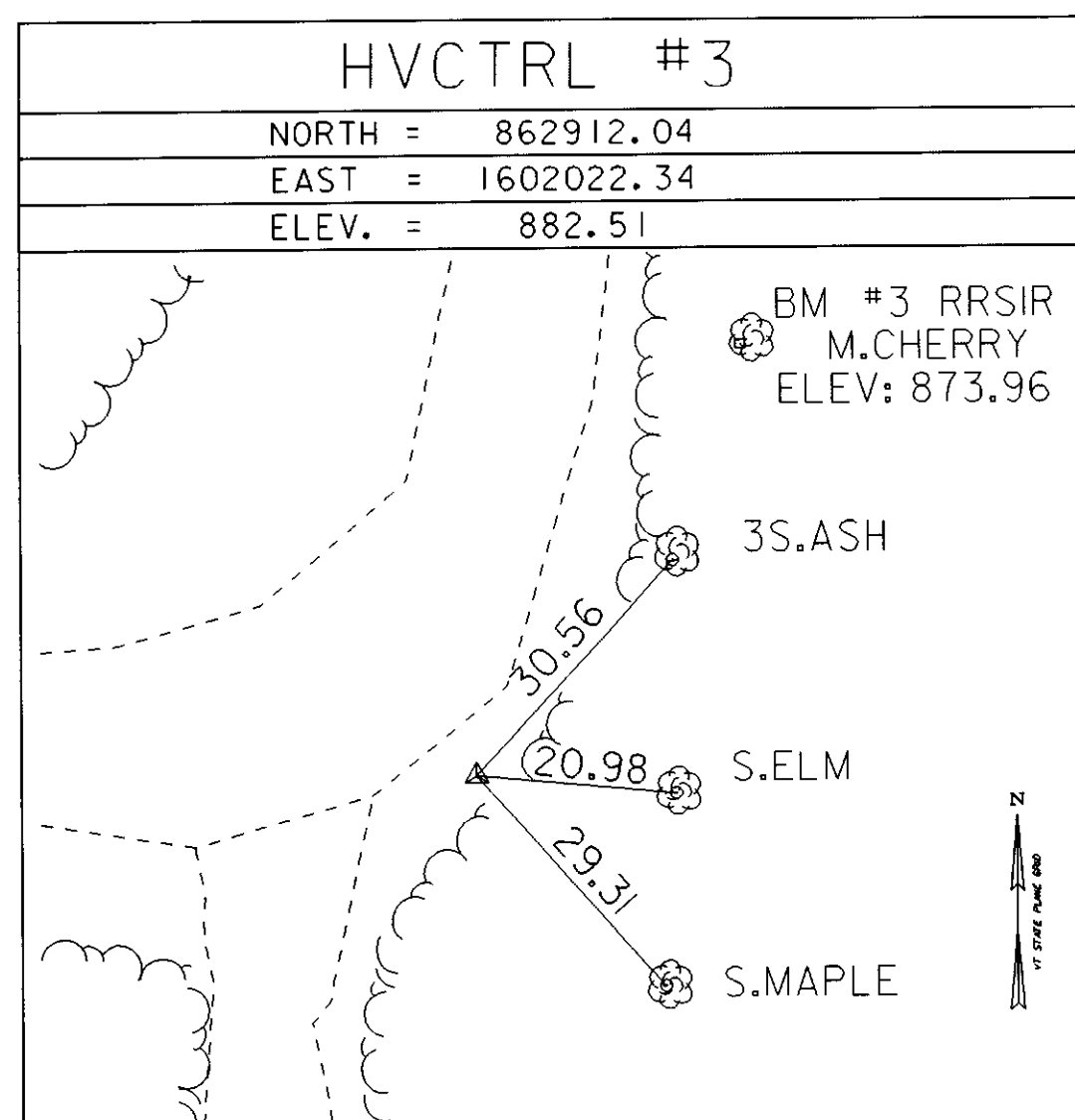
• DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

HVCTRL #2

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

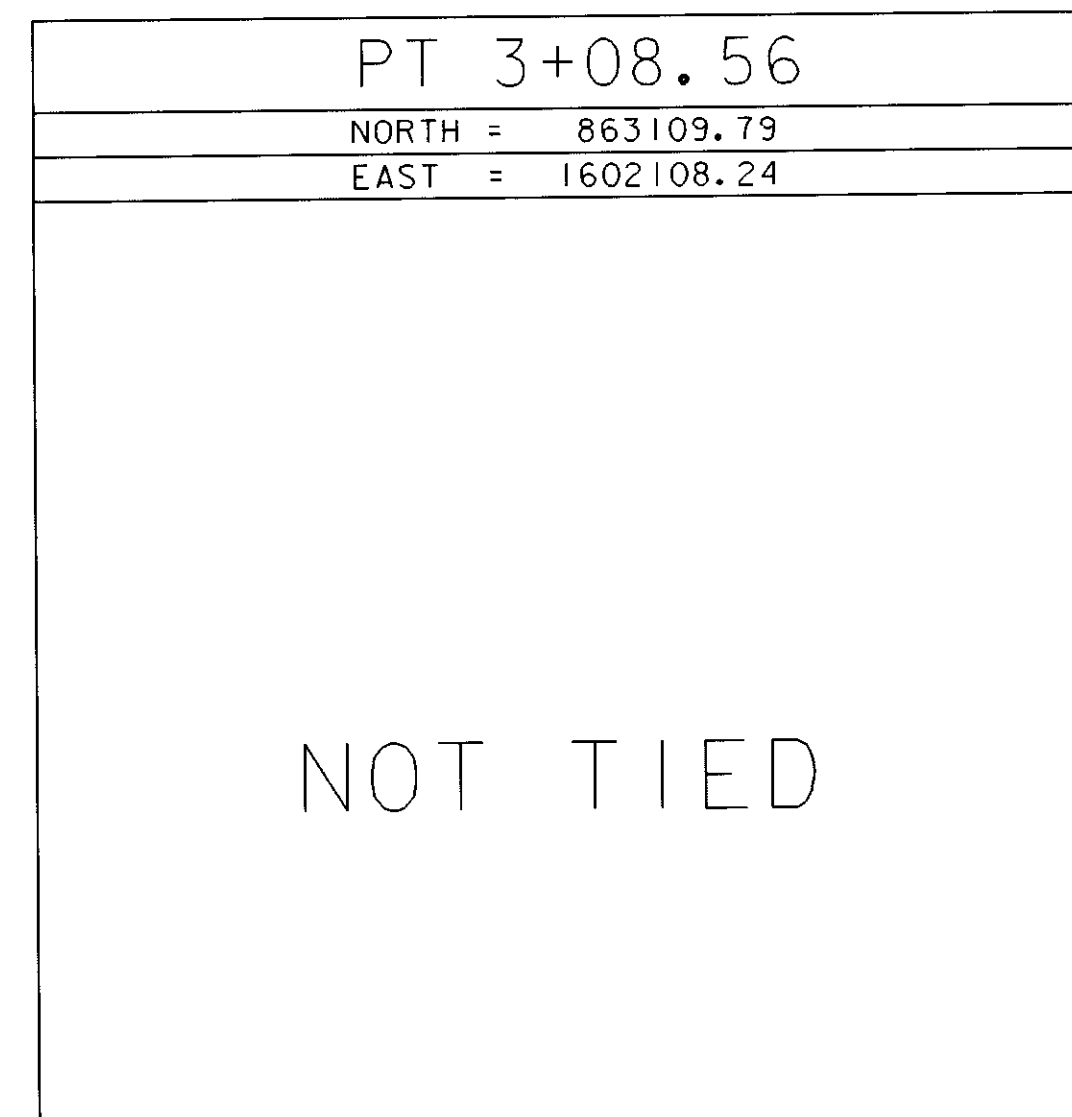
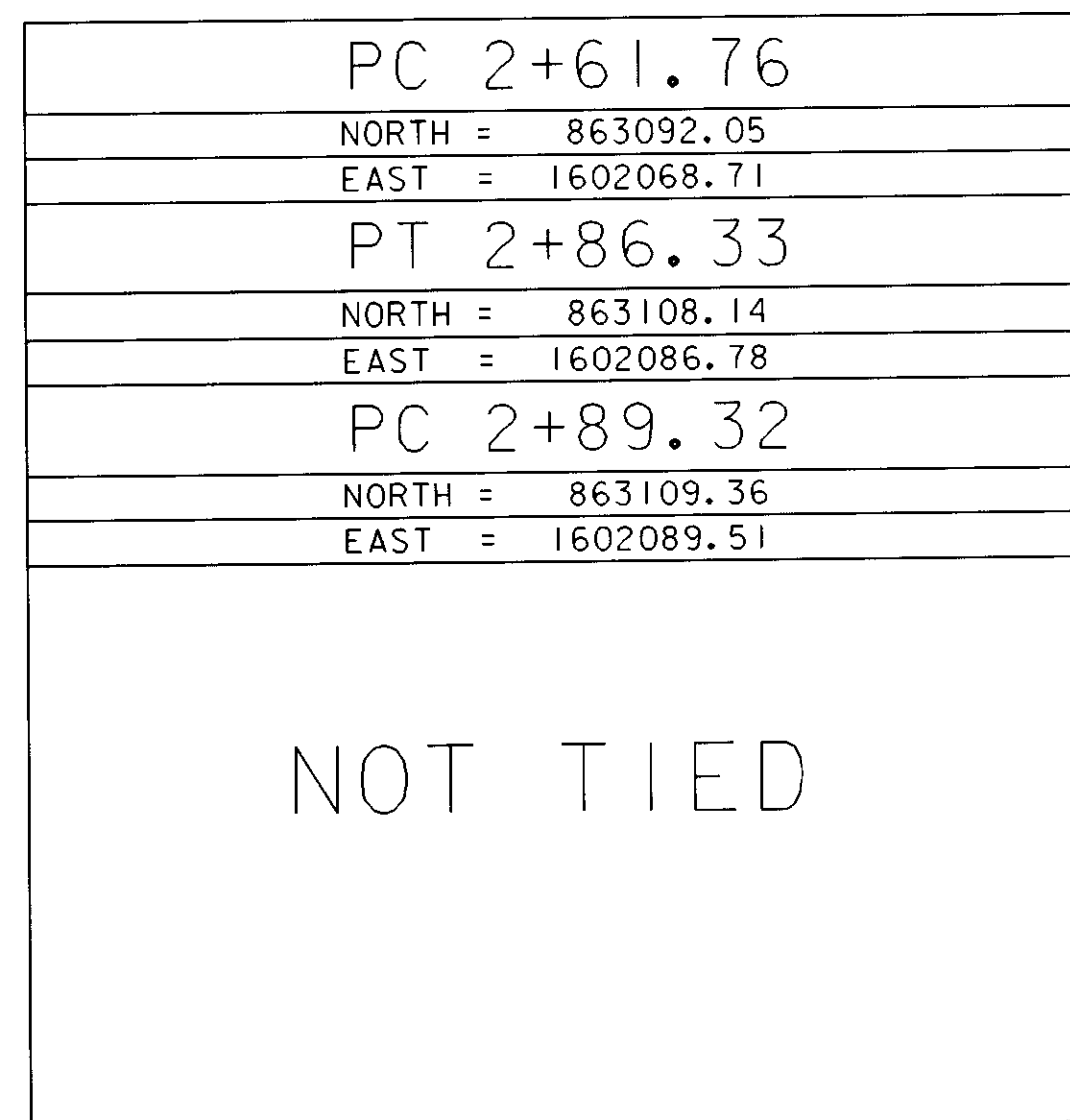
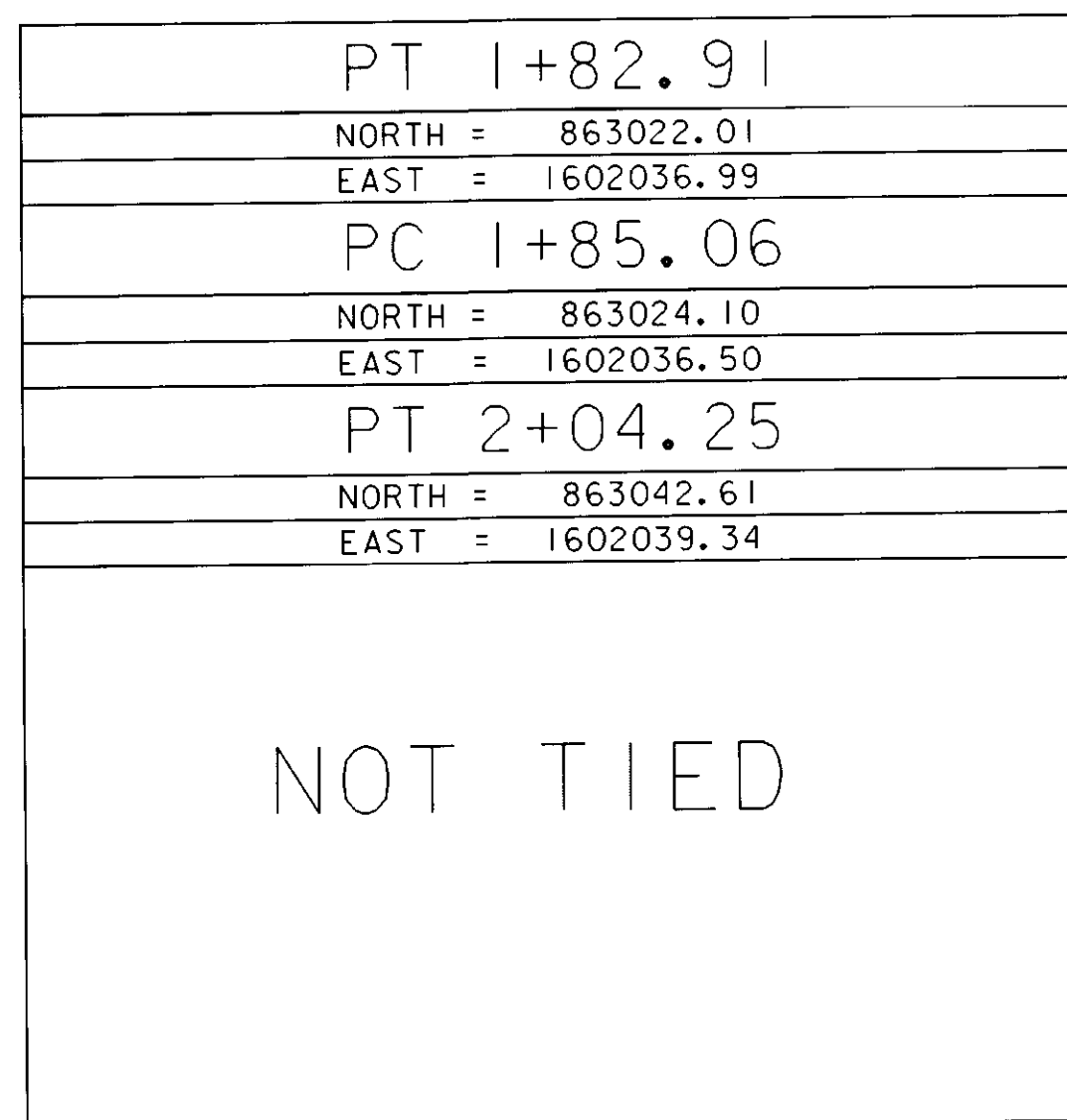
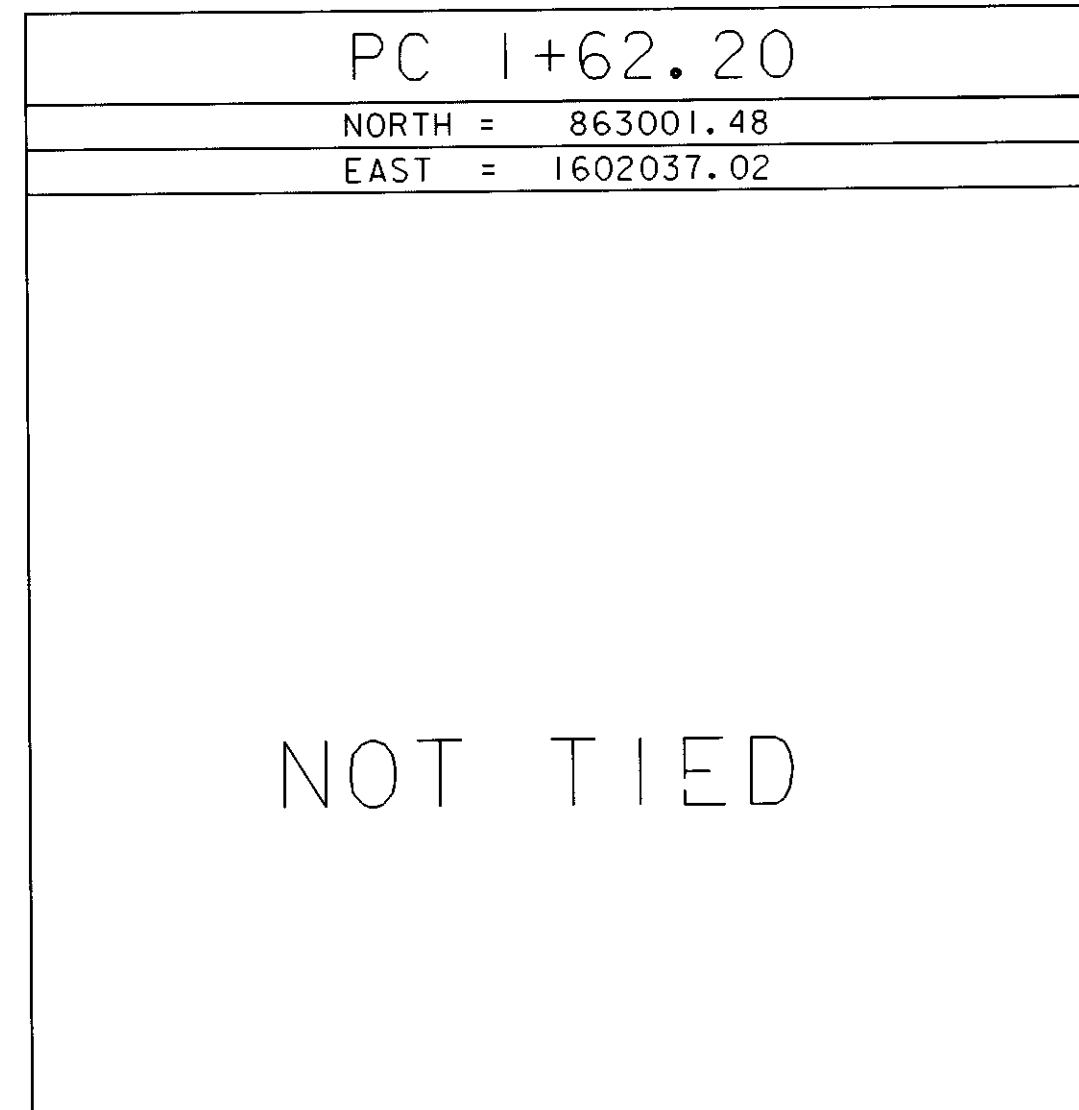
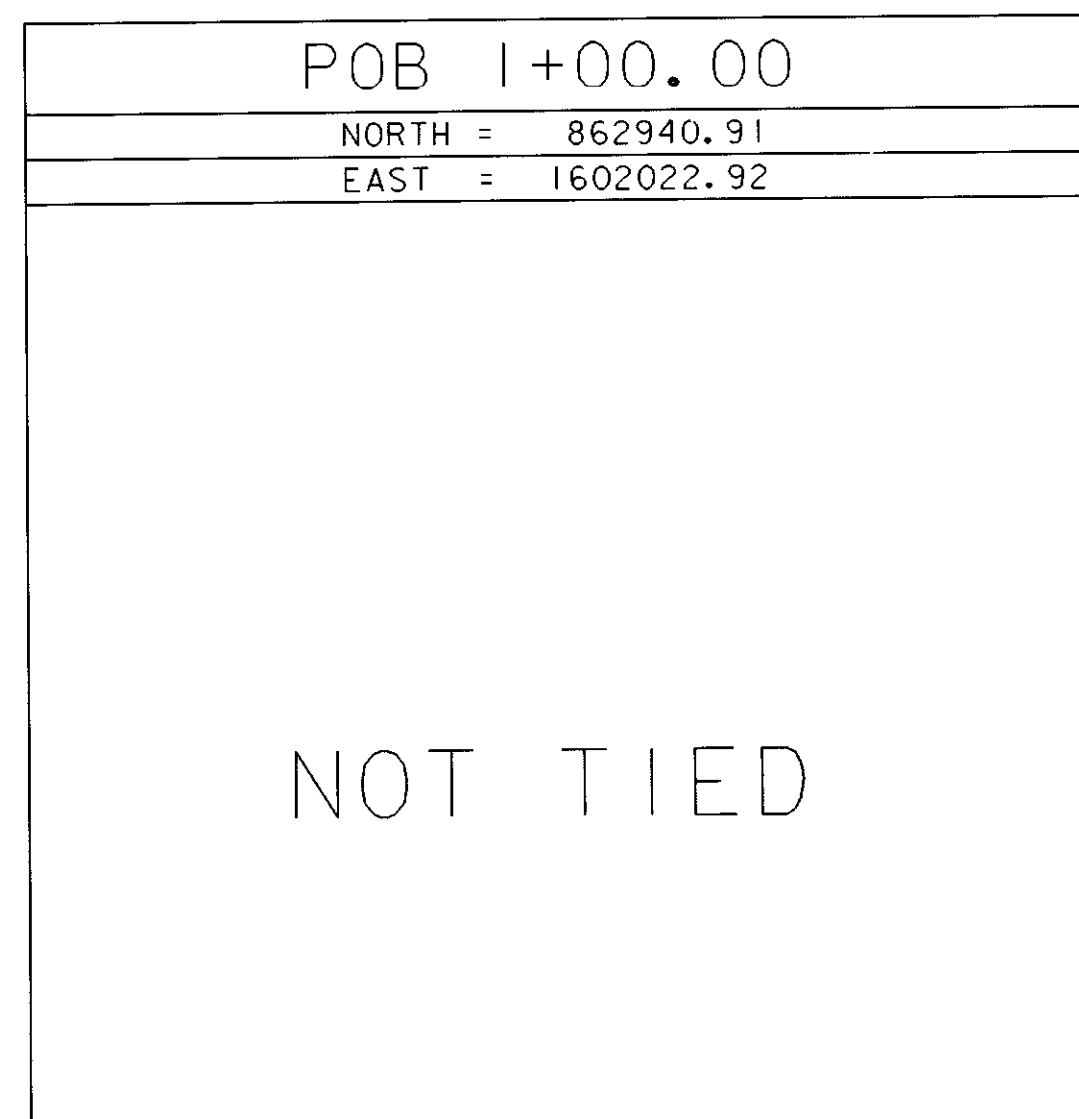
To reach from the intersection of VT route 118 and VT route 242 in Montgomery Center, go northwest along route 118 for 2.4 mi. to the intersection of South Richford Road right, at a triangular shaped park at the west end of Montgomery Village. Bear left and continue northwest along route 118 for 0.5 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



• 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: 04114811\1604114811.dgn

PLOT DATE: 21 MAY 2008

PROJECT LEADER: J. WEAVER

DRAWN BY: J. HULETT

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).

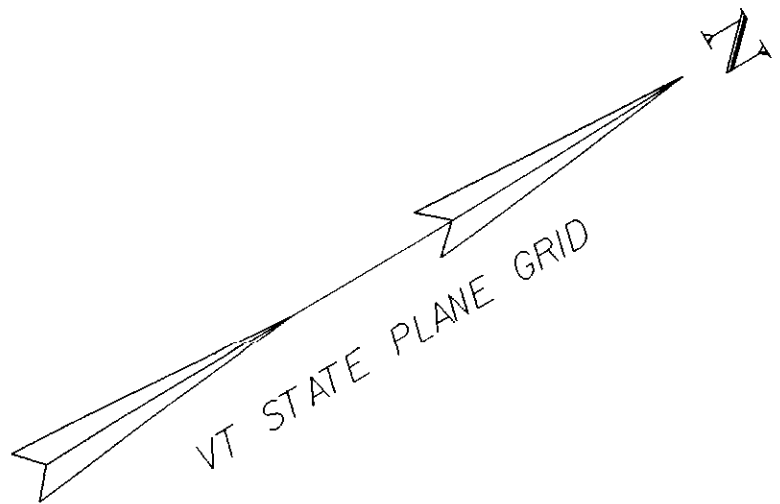
\*NEW PERMANENT SIGN LOCATION STA. 1+15.00 12' RIGHT

\*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

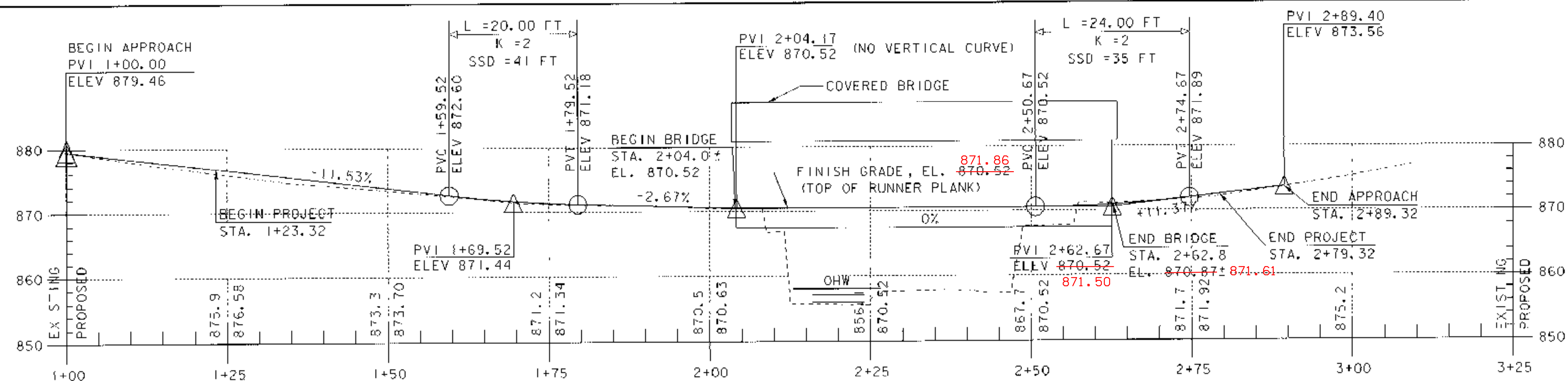
SCALE 1" = 20'-0"  
20 0 20



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

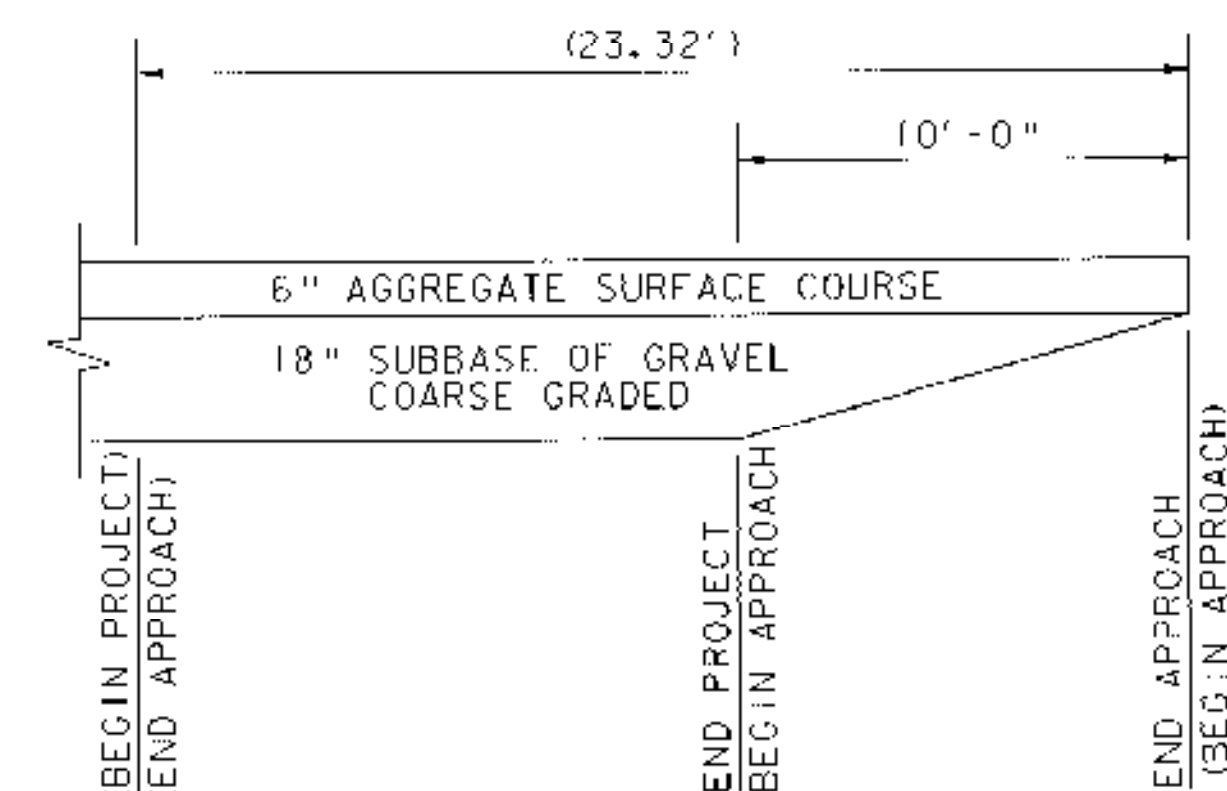
FILE NAME: s04j148bdr  
PROJECT LEADER: J. WEAVER  
DESIGNED BY: J. WEAVER  
LAYOUT SHEET

PLOT DATE: 21-MAY-2008  
DRAWN BY: J. TREI  
CHECKED BY: J. WEAVER  
SHEET 5 OF 33

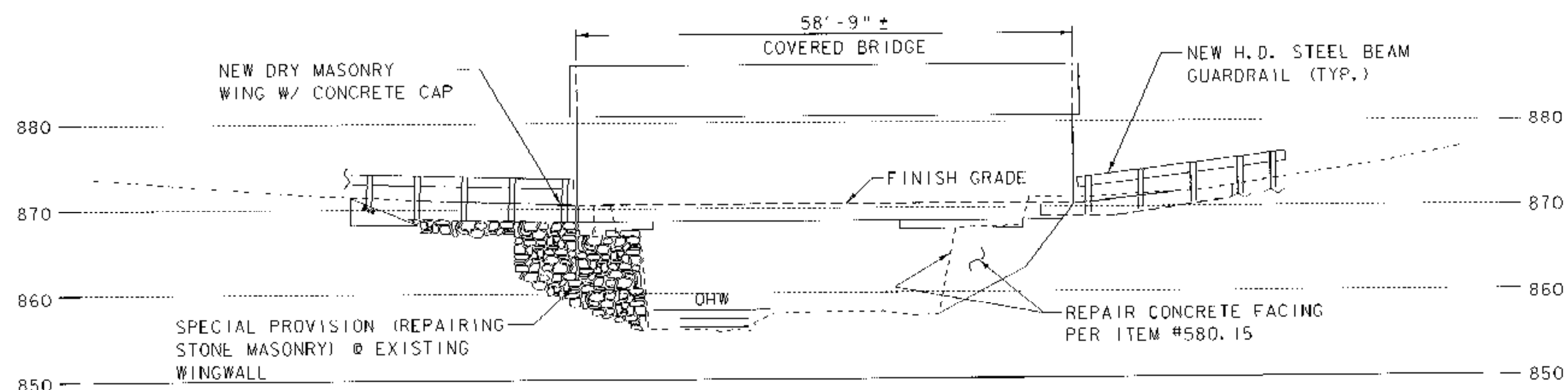


PROFILE LOOKING WEST

SCALE: 1"=10'-0"

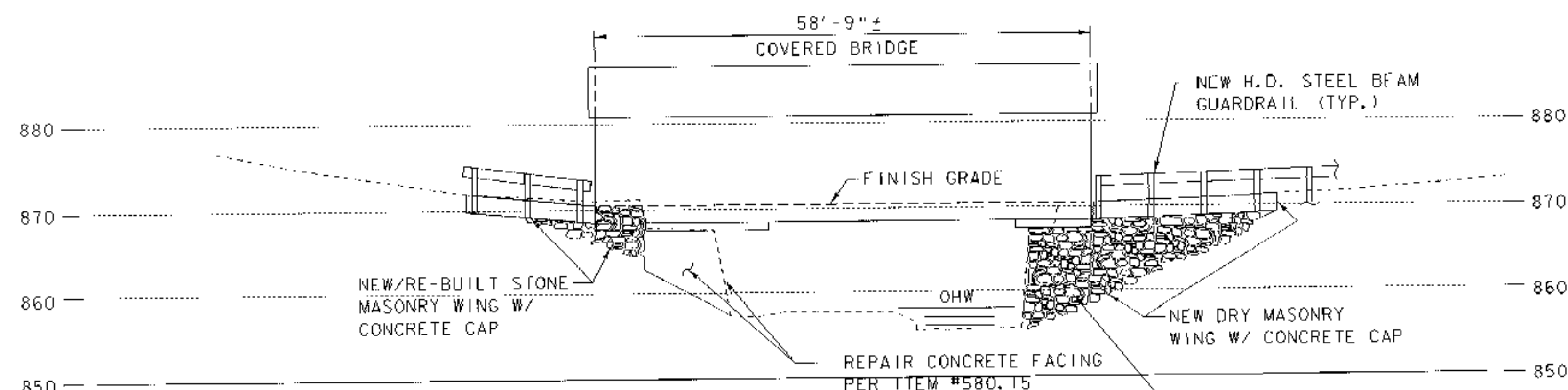


SUBBASE TRANSITION DETAIL



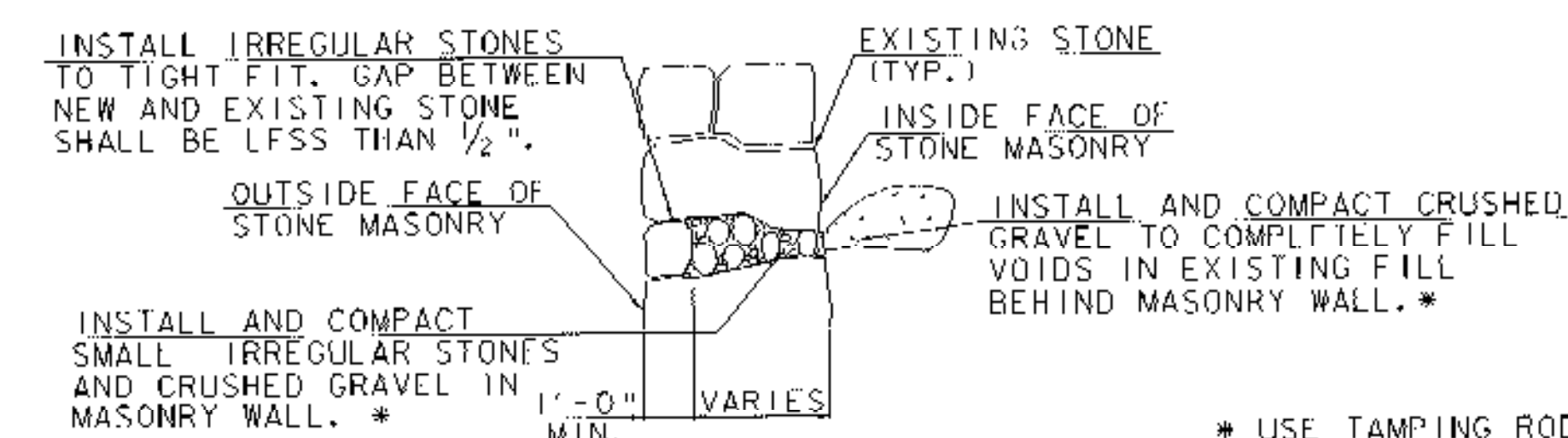
ELEVATION LOOKING WEST

SCALE: 1"=10'-0"



ELEVATION LOOKING EAST

SCALE: 1"=10'-0"



REPAIRING STONE MASONRY DETAIL

N.T.S.

\* USE TAMPING RODS OR OTHER METHODS ACCEPTABLE TO THE ENGINEER.

\*\*FOR FURTHER INFORMATION SEE SECTION 900 OF THE PROJECT SPECIAL PROVISIONS.

### SEEDING FORMULA RURAL AREAS

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

### GENERAL NOTES

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

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

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

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

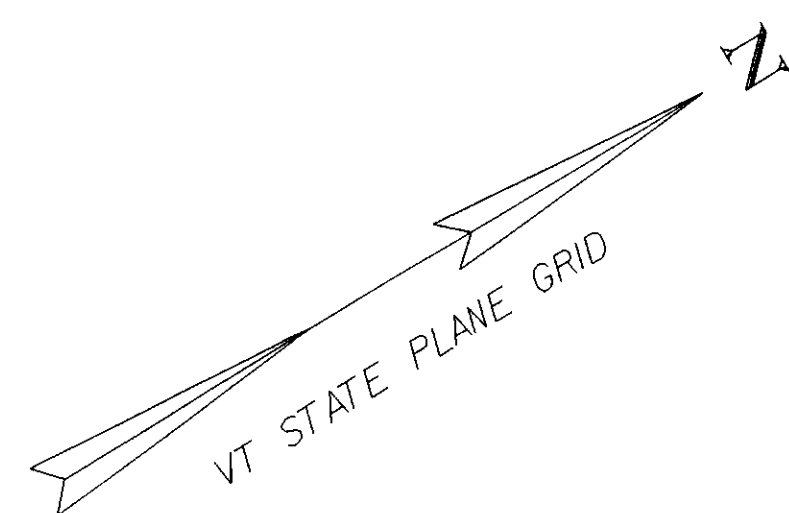
HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

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

FILE NAME: s04j148pr.f  
PROJECT LEADER: J. WEAVER  
DESIGNED BY: J. WEAVER  
PROFILE AND ELEVATIONS

PLOT DATE: 02-JUN-2008  
DRAWN BY: J. TREI  
CHECKED BY: J. WEAVER  
SHEET 6 OF 33



LEDUC, CORY A.  
& ERIN L.

TYLER, EDWARD J. III

TYLER, EDWARD J. III

END PROJECT &  
BEGIN APPROACH  
STA. 2+79.32

END APPROACH &  
BEGIN PROJECT  
STA. 1+23.32

LEDUC, CORY A.  
& ERIN L.

PRESLER, TITUS L.  
& JANE B.

## LEGEND

RIGHT OF WAY

LEGEND FOR OTHER SYMBOLS GIVEN BELOW

SCALE 1" = 20'-0"

| 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: s04j148rsc  
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.

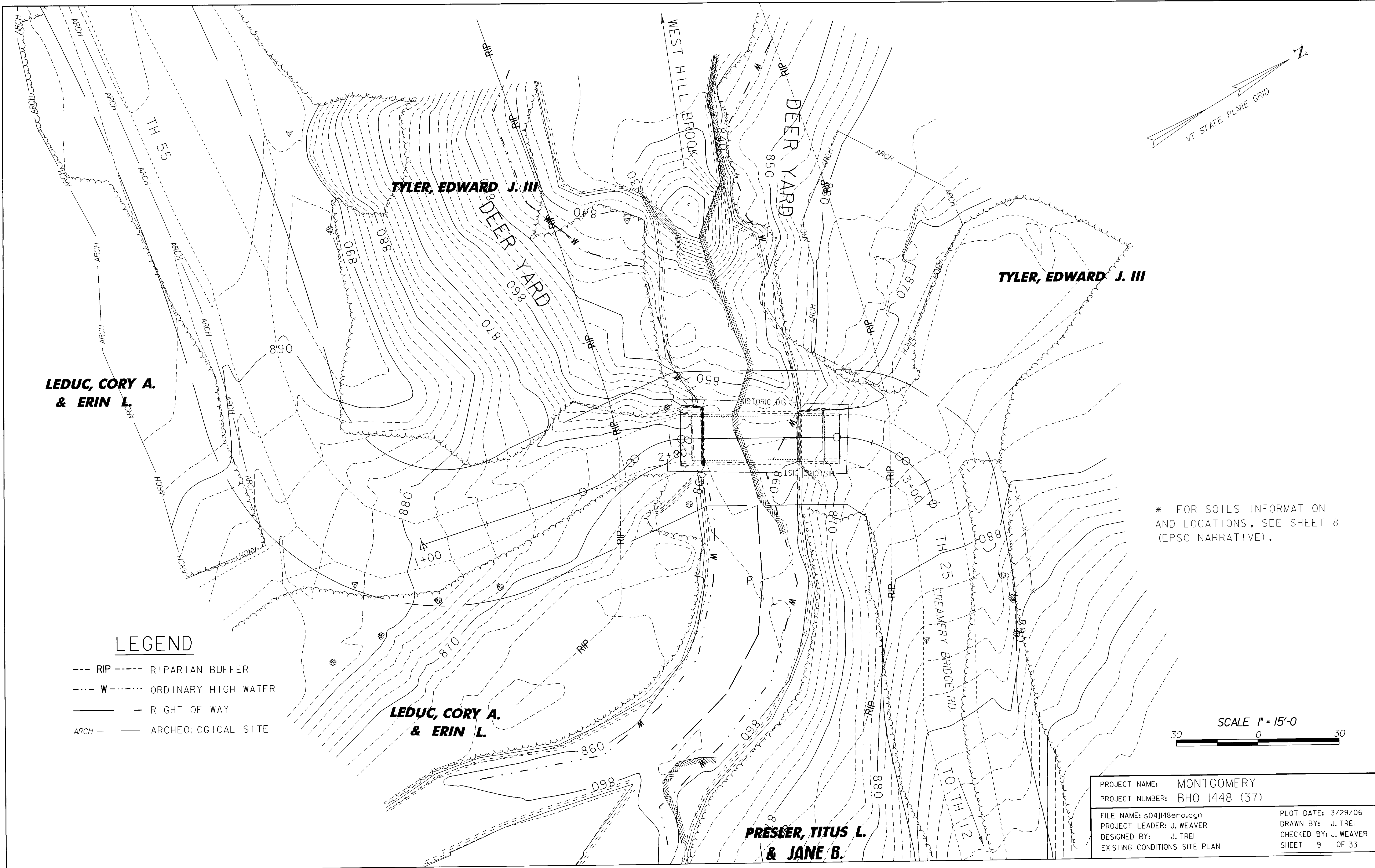
2.4. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes. Control only sediment-laden runoff from the project site.

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.

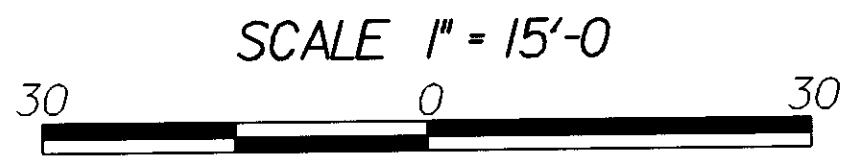
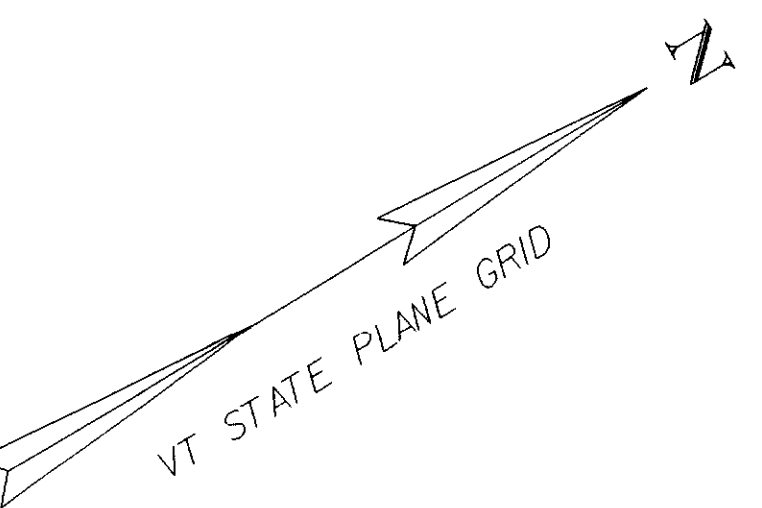
2.7. Operate construction equipment only within perimeter control measures.

|                               |                       |
|-------------------------------|-----------------------|
| PROJECT NAME: MONTGOMERY      |                       |
| PROJECT NUMBER: BHO 1448 (37) |                       |
| FILE NAME: s04j148erc.dgn     | PLOT DATE: 3/29/06    |
| PROJECT LEADER: J. WEAVER     | DRAWN BY: J. TREI     |
| DESIGNED BY: J. TREI          | CHECKED BY: J. WEAVER |
| EPSC NARRATIVE                | SHEET 8 OF 33         |

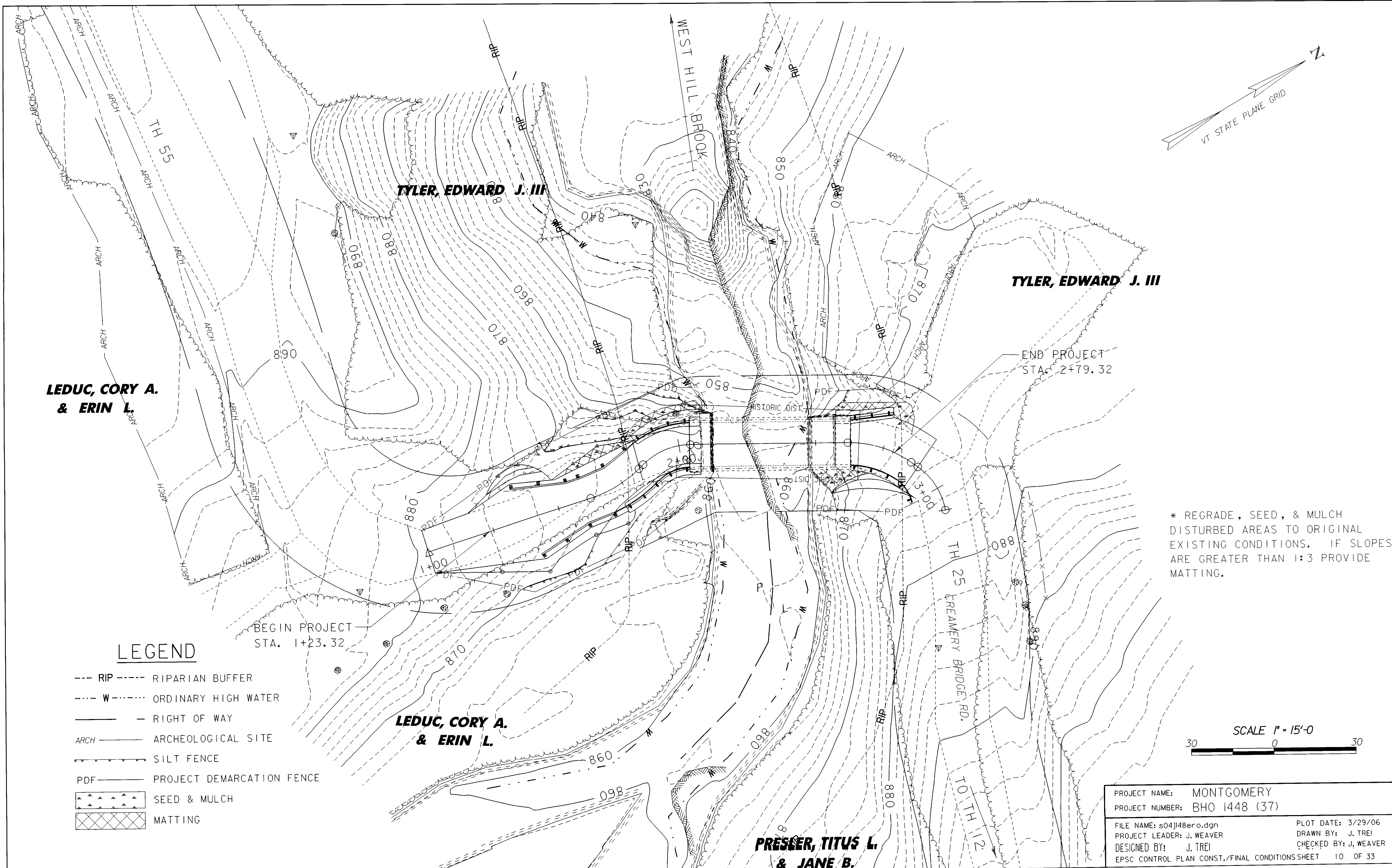


**LEGEND**

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

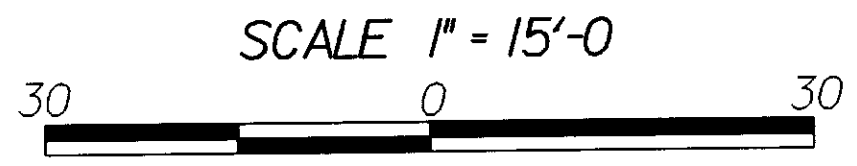
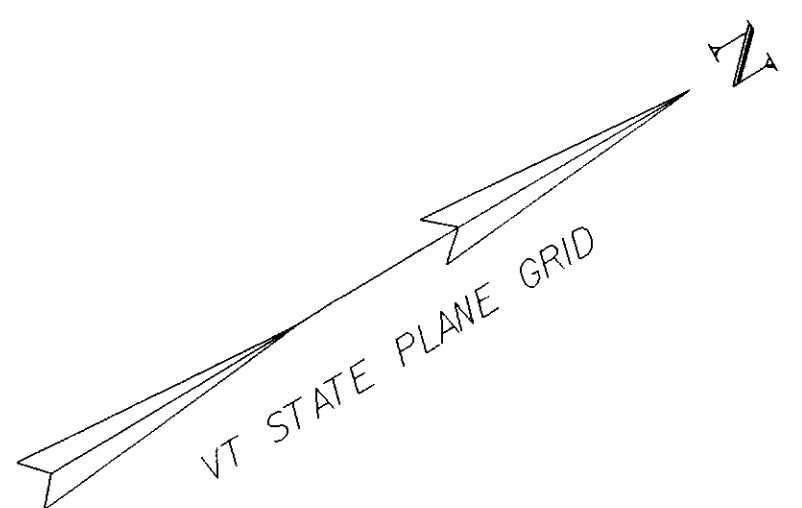


|                               |                       |
|-------------------------------|-----------------------|
| PROJECT NAME: MONTGOMERY      |                       |
| PROJECT NUMBER: BHO 1448 (37) |                       |
| FILE NAME: s04j148ero.dgn     | PLOT DATE: 3/29/06    |
| PROJECT LEADER: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

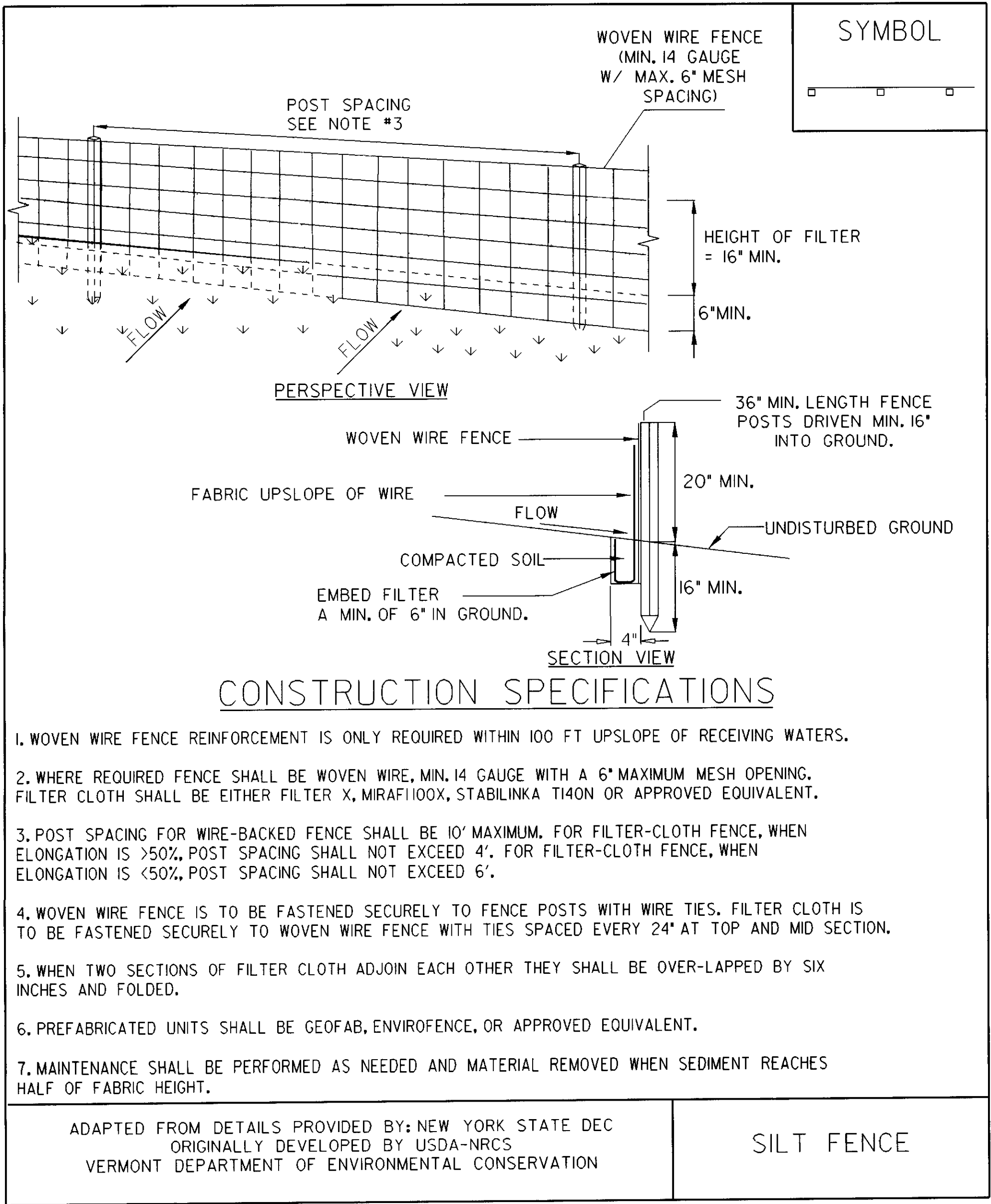


LEGEND

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

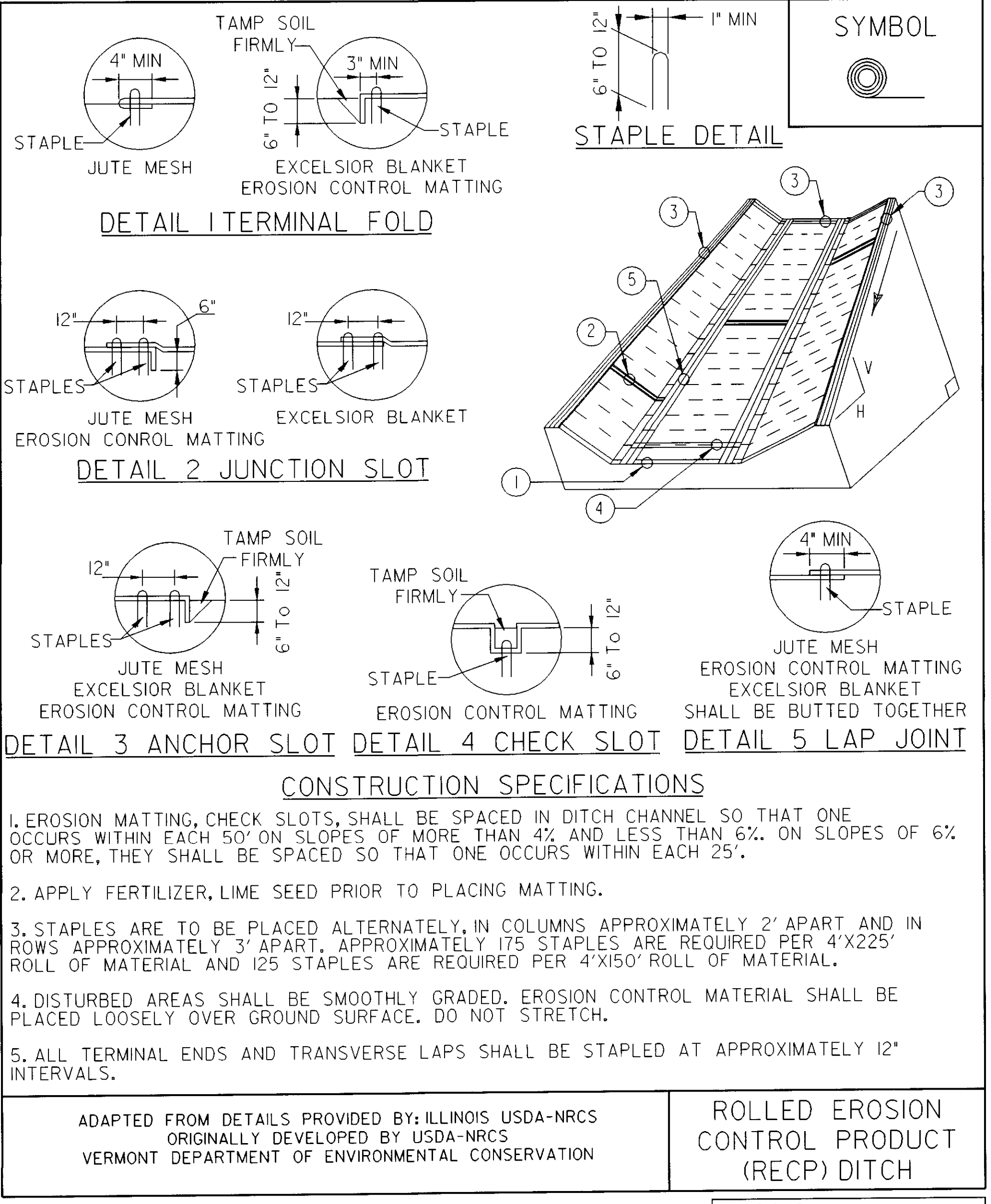


|                                                          |                       |
|----------------------------------------------------------|-----------------------|
| PROJECT NAME: MONTGOMERY                                 |                       |
| PROJECT NUMBER: BHO 1448 (37)                            |                       |
| FILE NAME: s04jl48ero.dgn                                | PLOT DATE: 3/29/06    |
| PROJECT LEADER: J. WEAVER                                | DRAWN BY: J. TREI     |
| DESIGNED BY: J. TREI                                     | CHECKED BY: J. WEAVER |
| EPSC CONTROL PLAN CONST./FINAL CONDITIONS SHEET 10 OF 33 |                       |



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

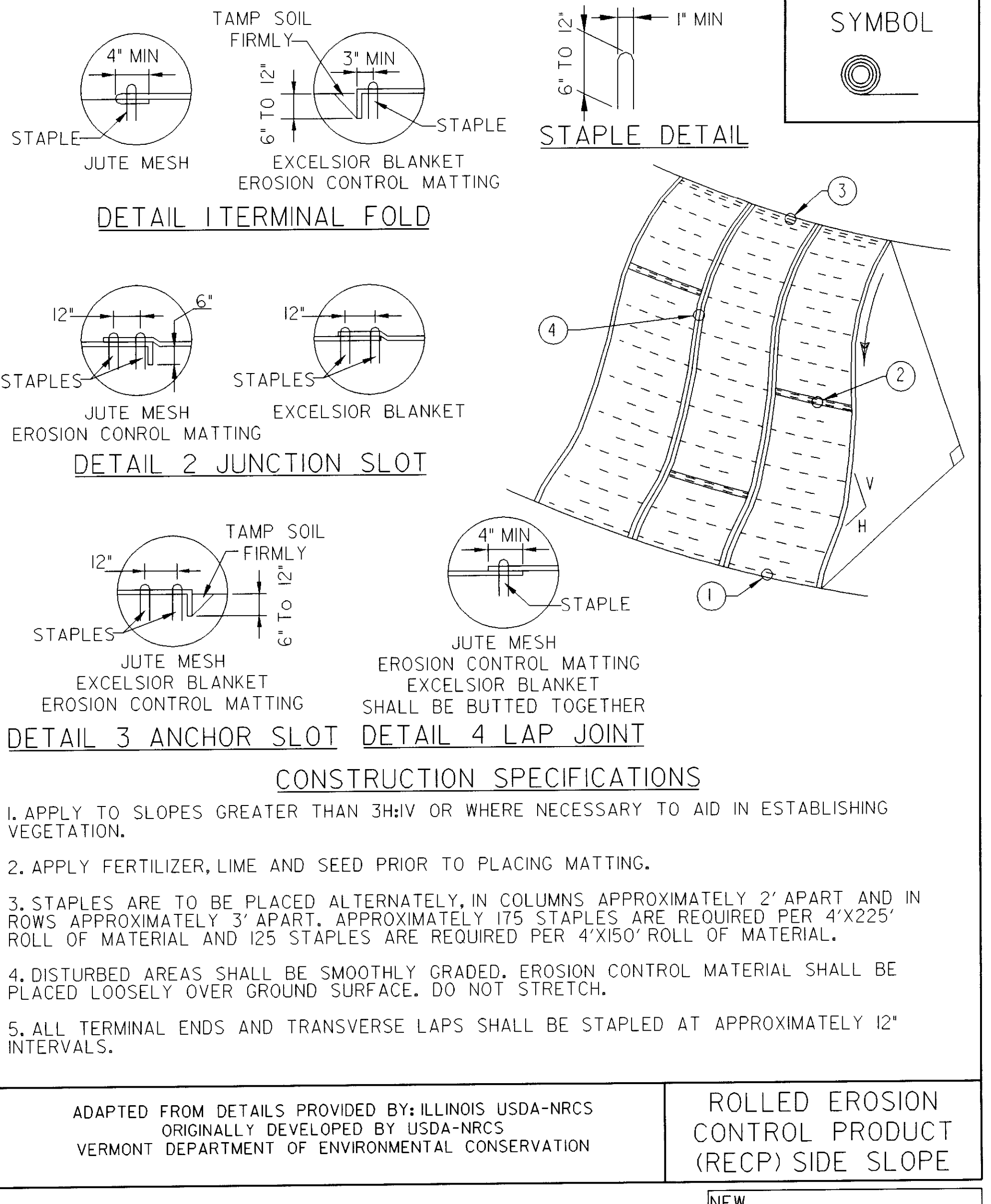
THIS ITEM SHALL BE PAID FOR UNDER ITEM  
STANDARD SPECIFICATION 649.51 GEOTEXTILE FOR SILT FENCE.



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 |
|                |     |
|                |     |
|                |     |

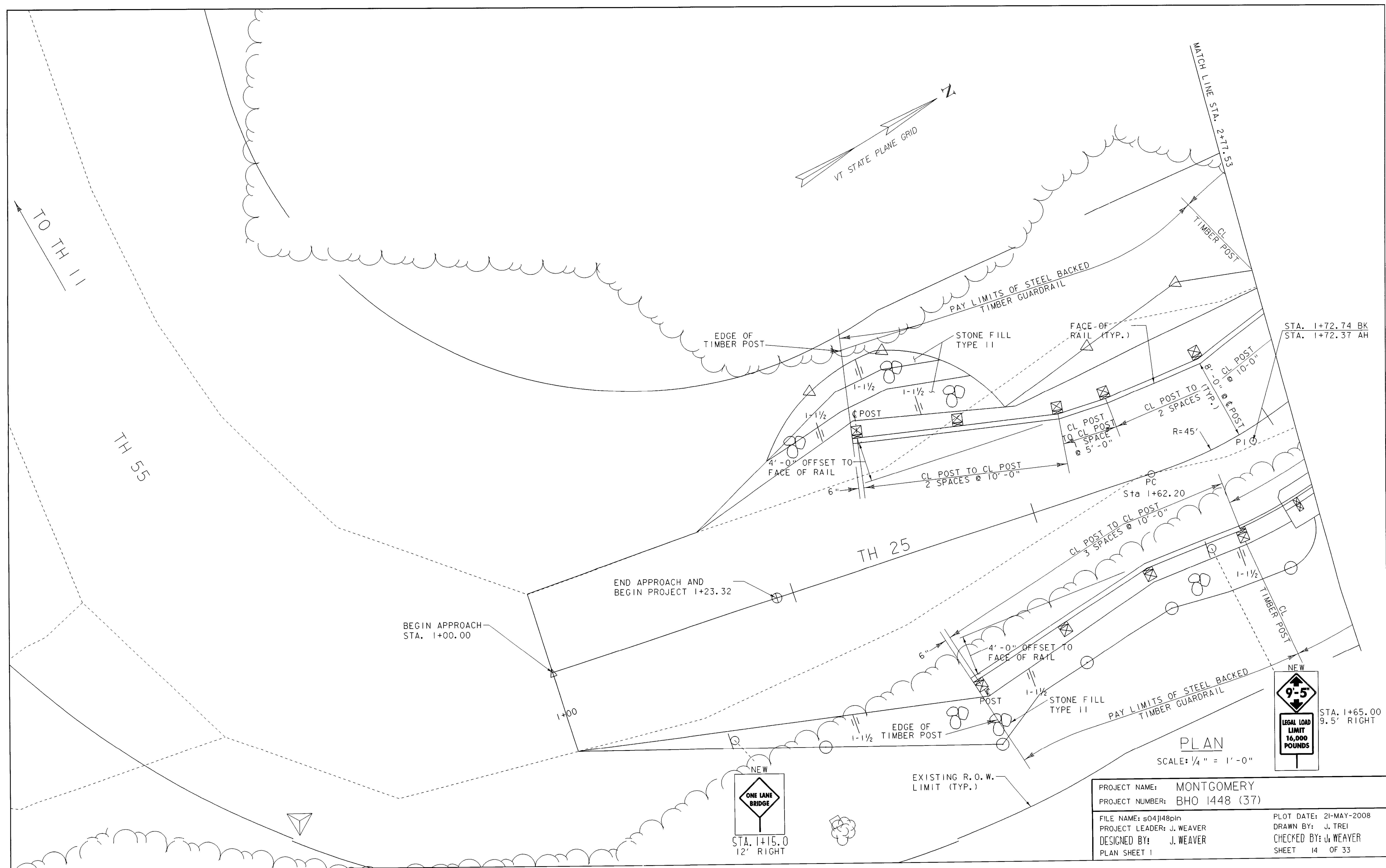


NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

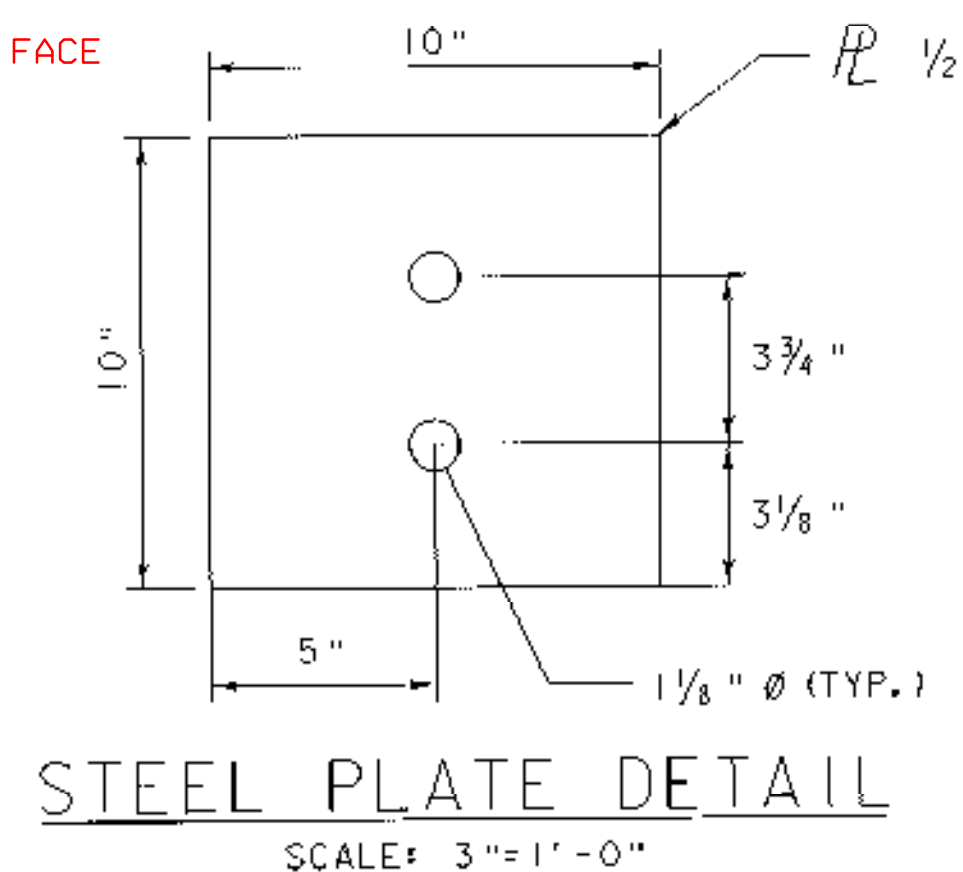
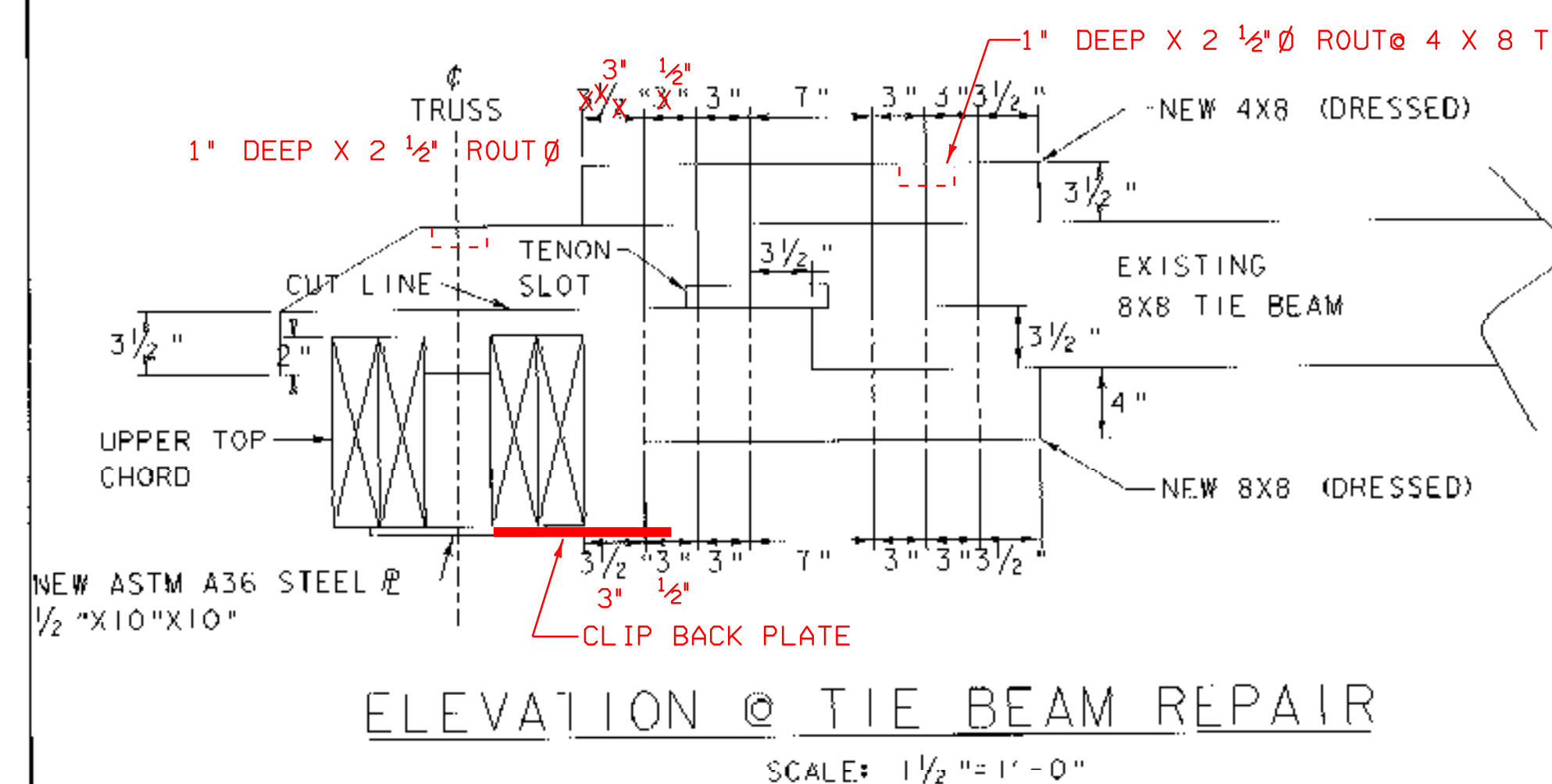
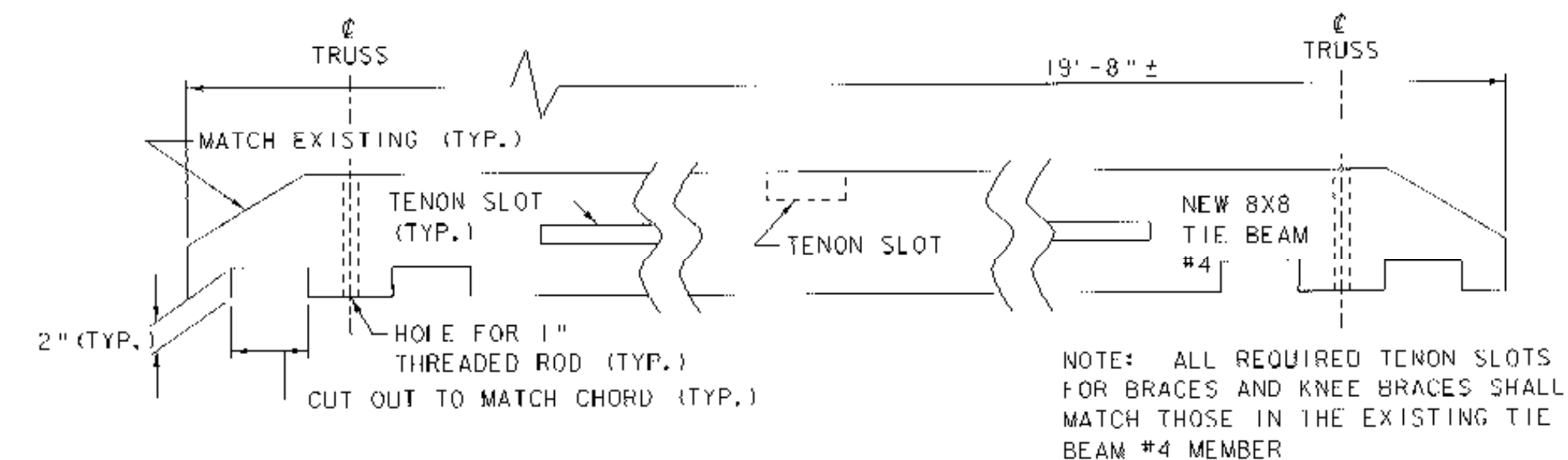
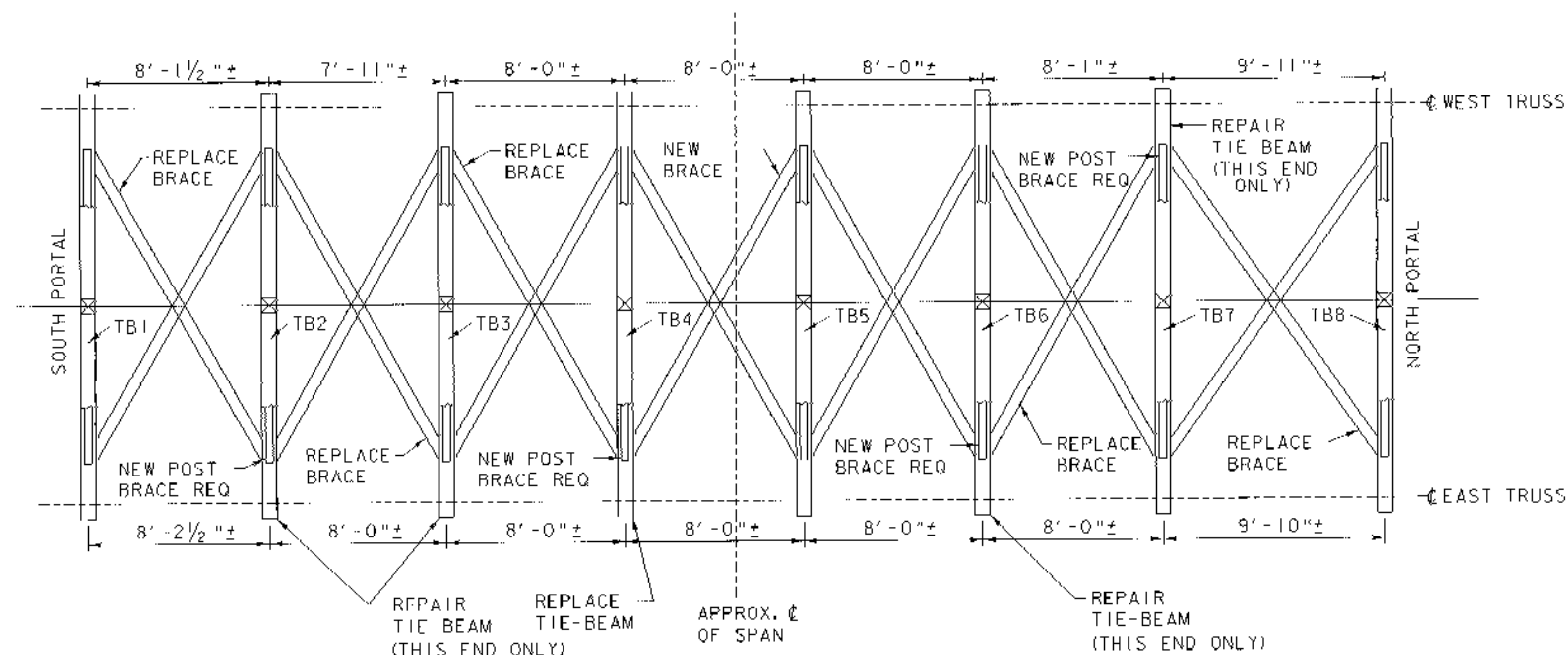
THIS ITEM SHALL BE PAID FOR UNDER ITEM  
653.20 TEMPORARY EROSION MATTING.

| NEW            |     |
|----------------|-----|
| APRIL 16, 2007 | WHF |
| REVISIONS      |     |
|                |     |
|                |     |
|                |     |

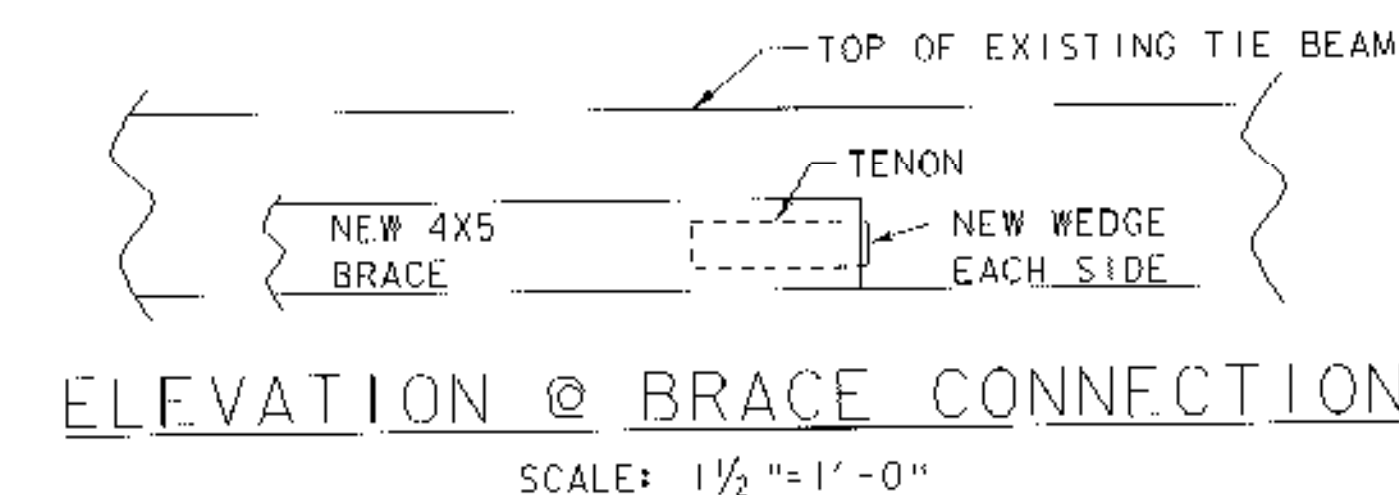
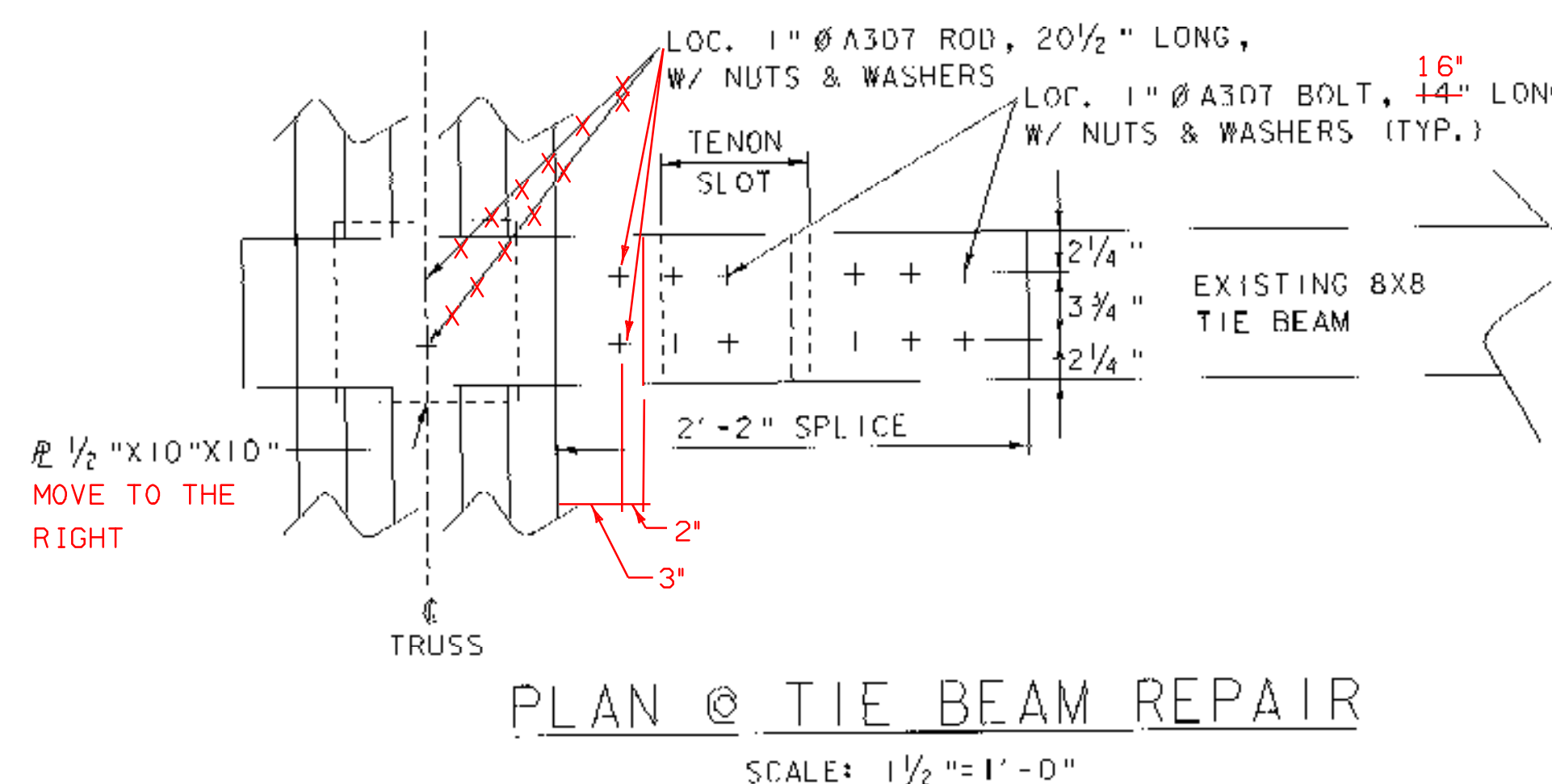
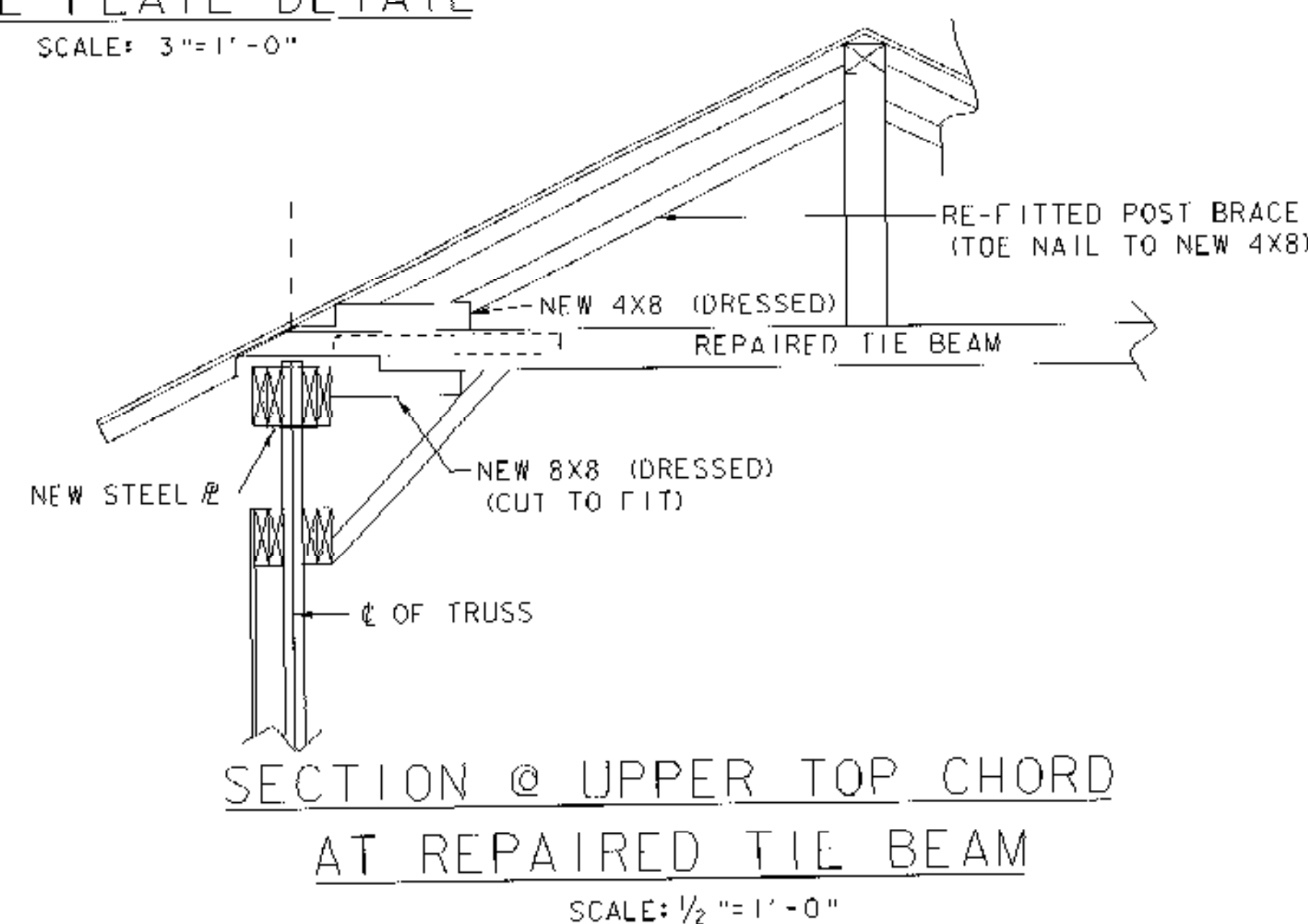
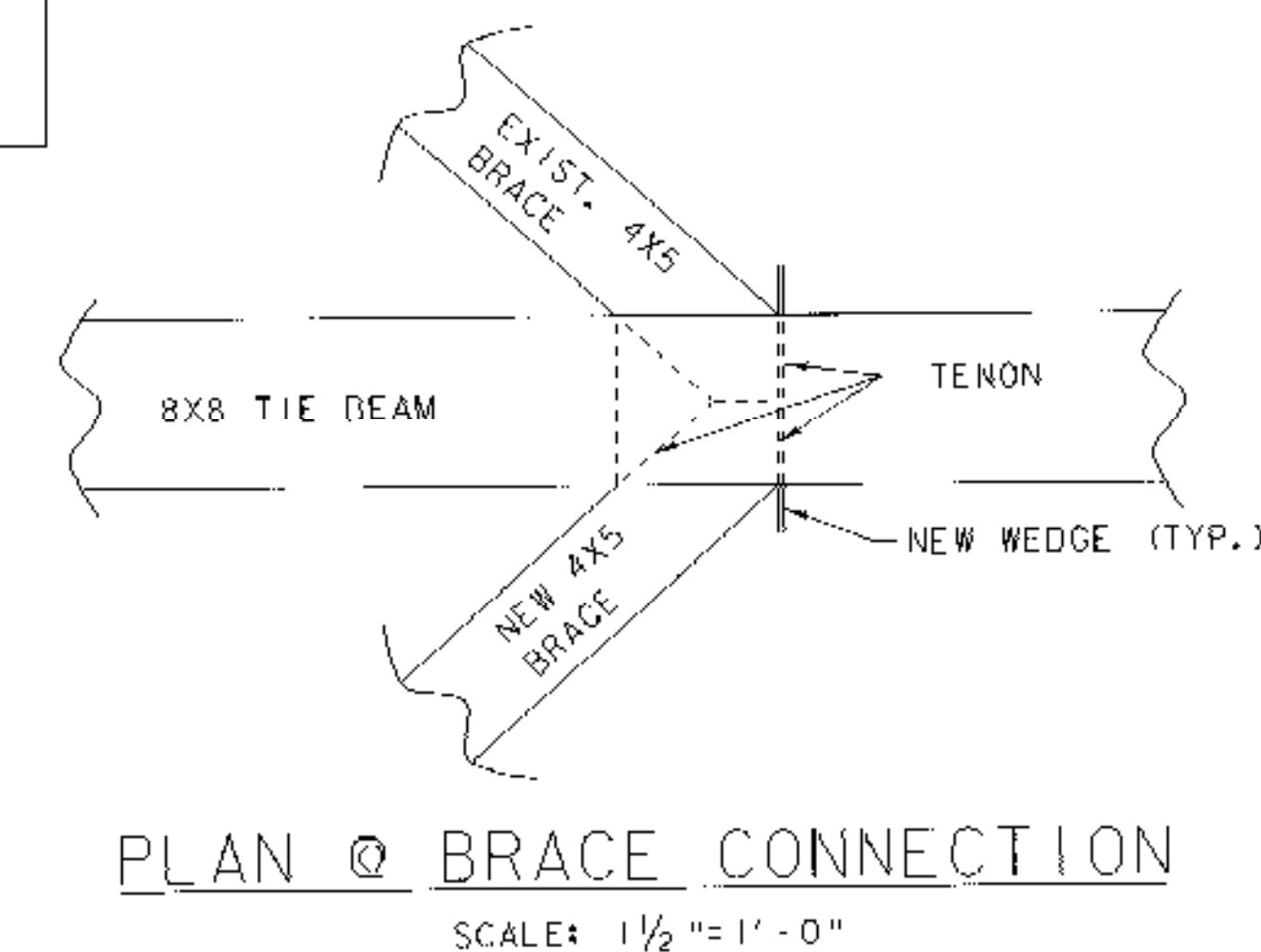
|                              |                |
|------------------------------|----------------|
| PROJECT NAME:                | MONTGOMERY     |
| PROJECT NUMBER:              | BHO 1448 (37)  |
| FILE NAME:                   | s04j148erc.dgn |
| PROJECT MANAGER:             | J. WEAVER      |
| DESIGNED BY:                 | N. CARBACK     |
| Silt Fence & Erosion Matting |                |
| PLOT DATE:                   | 4/11/08        |
| DRAWN BY:                    | C. WEEBER      |
| CHECKED BY:                  | J. WEAVER      |
| SHEET                        | II OF 33       |



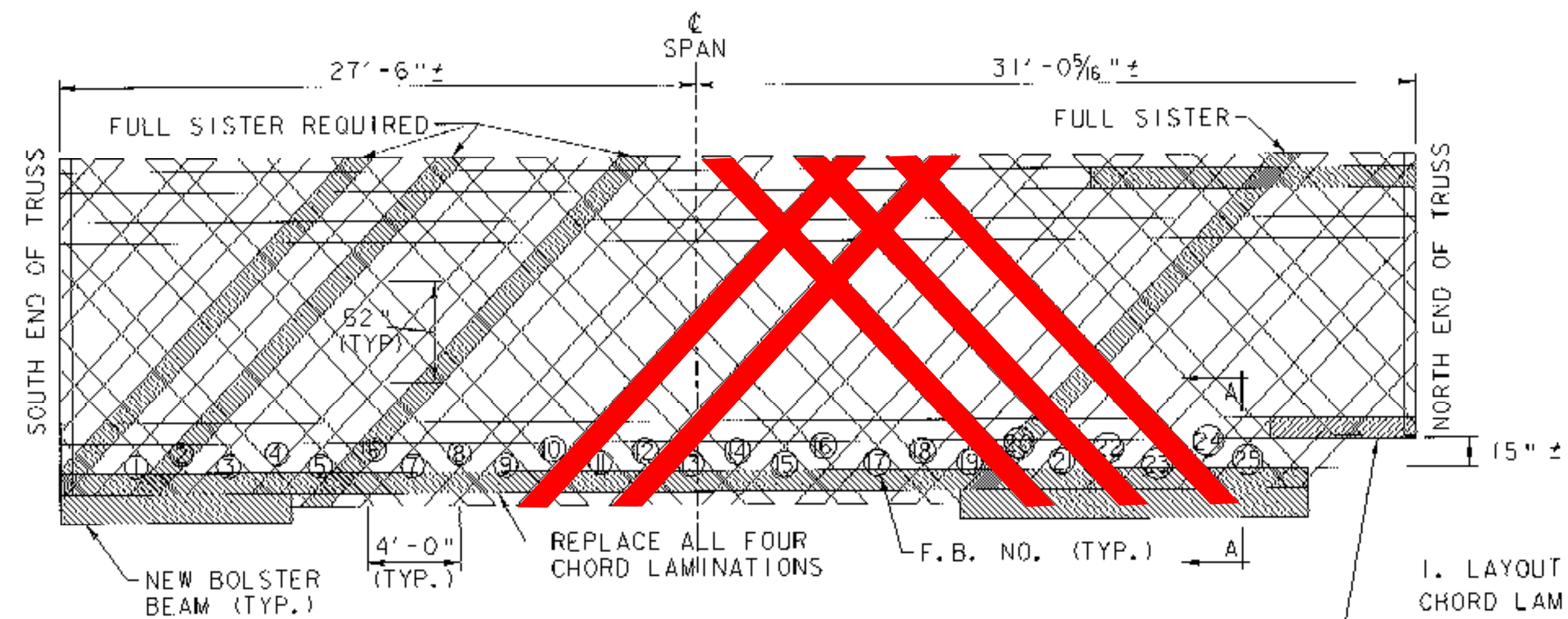




ALL NEW STRUCTURAL LUMBER, AND TIMBER MEMBERS, AND WEDGES SHOWN ON THIS SHEET SHALL BE SYP NO.2 GRADE.

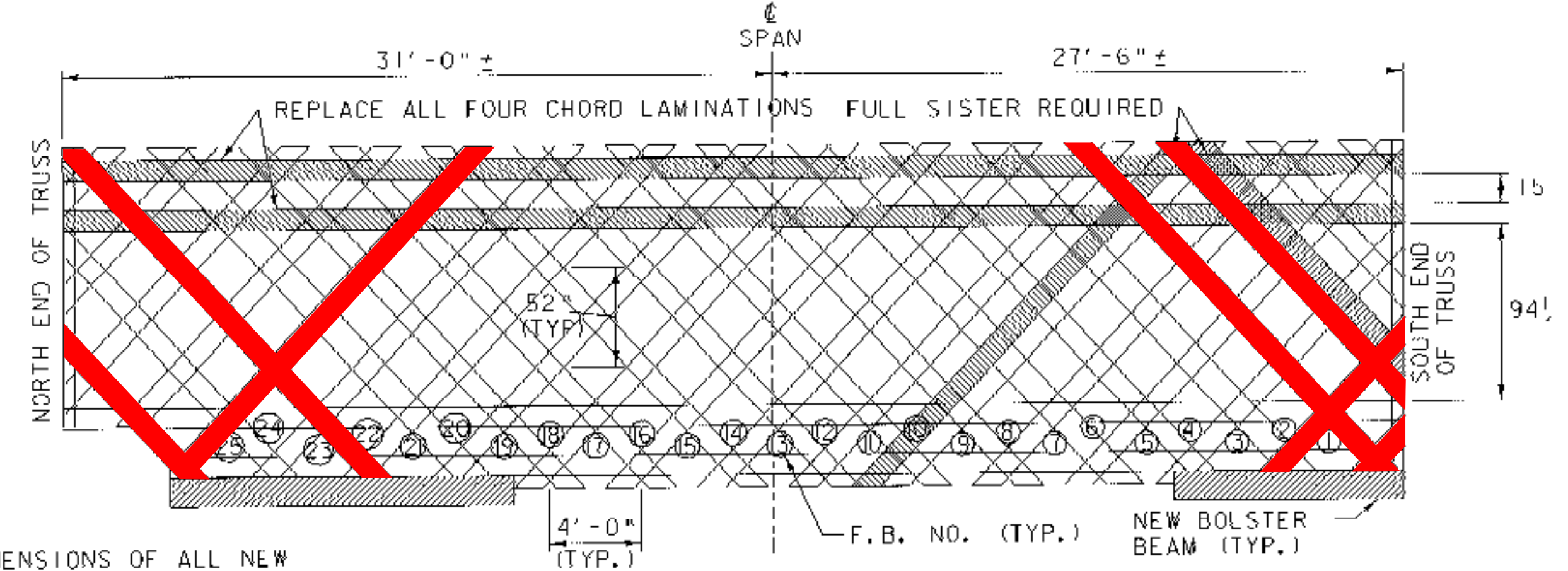


|                             |               |
|-----------------------------|---------------|
| PROJECT NAME:               | MONTGOMERY    |
| PROJECT NUMBER:             | BHO 1448 (37) |
| FILE NAME:                  | s04j148d1     |
| PROJECT LEADER:             | J. WEAVER     |
| DESIGNED BY: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



WEST TRUSS - INSIDE W/  
FLOOR BEAM LOCATIONS

SCALE: 1" = 5'-0"

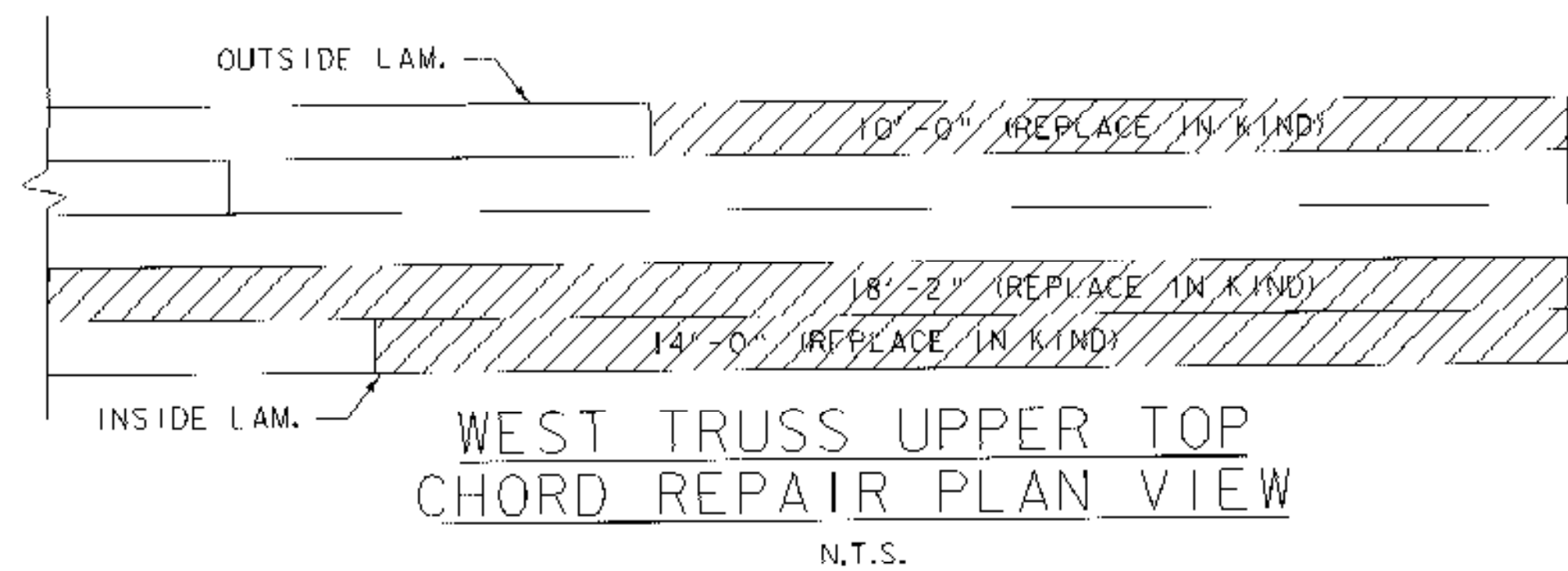


EAST TRUSS - INSIDE W/  
FLOOR BEAM LOCATIONS

SCALE: 1" = 5'-0"

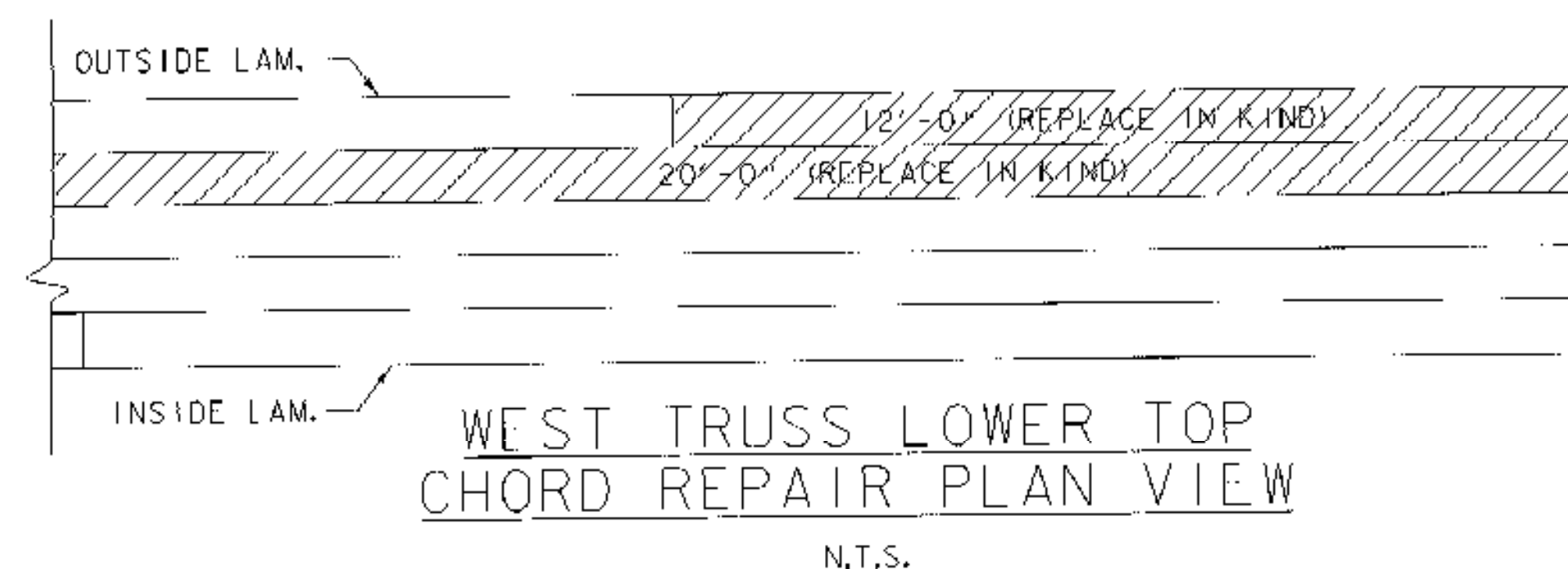
1. LAYOUT AND DIMENSIONS OF ALL NEW CHORD LAMINATIONS SO NOTED SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION

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



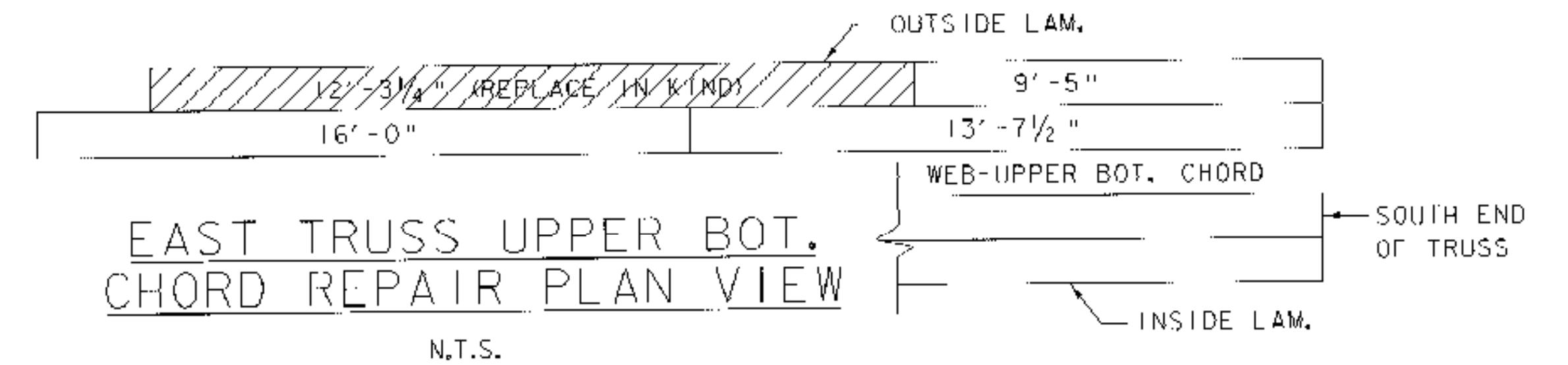
WEST TRUSS UPPER TOP  
CHORD REPAIR PLAN VIEW

N.T.S.



WEST TRUSS LOWER TOP  
CHORD REPAIR PLAN VIEW

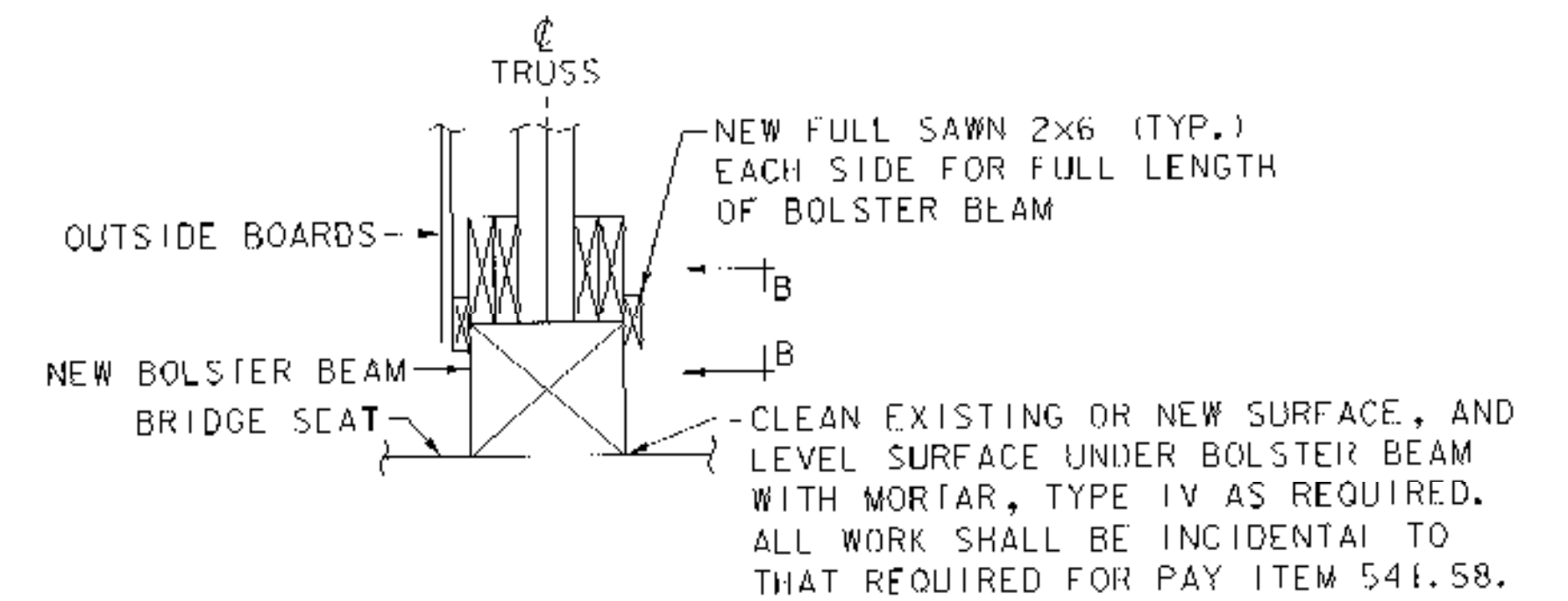
N.T.S.



EAST TRUSS UPPER BOT.  
CHORD REPAIR PLAN VIEW

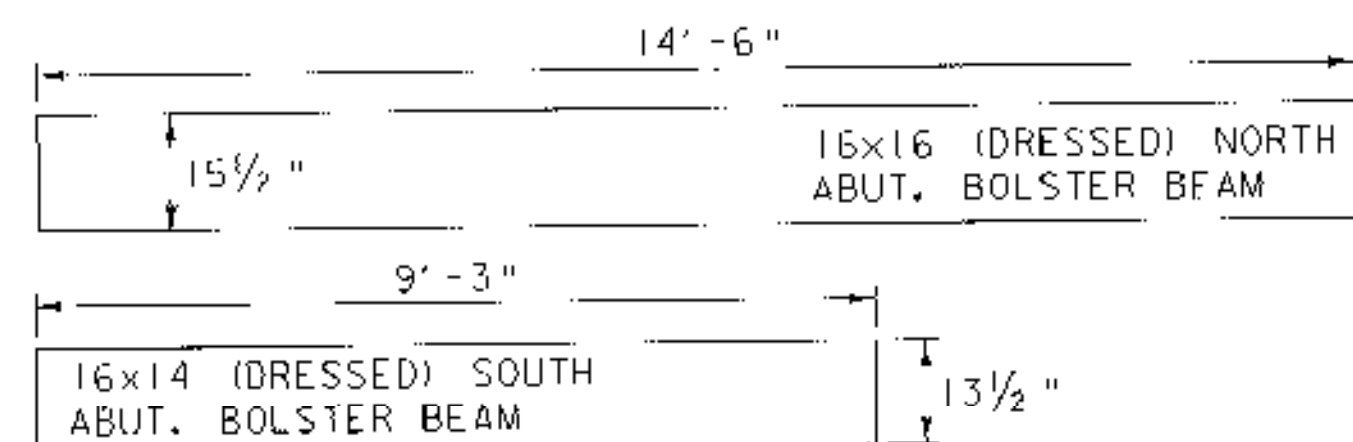
N.T.S.

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.



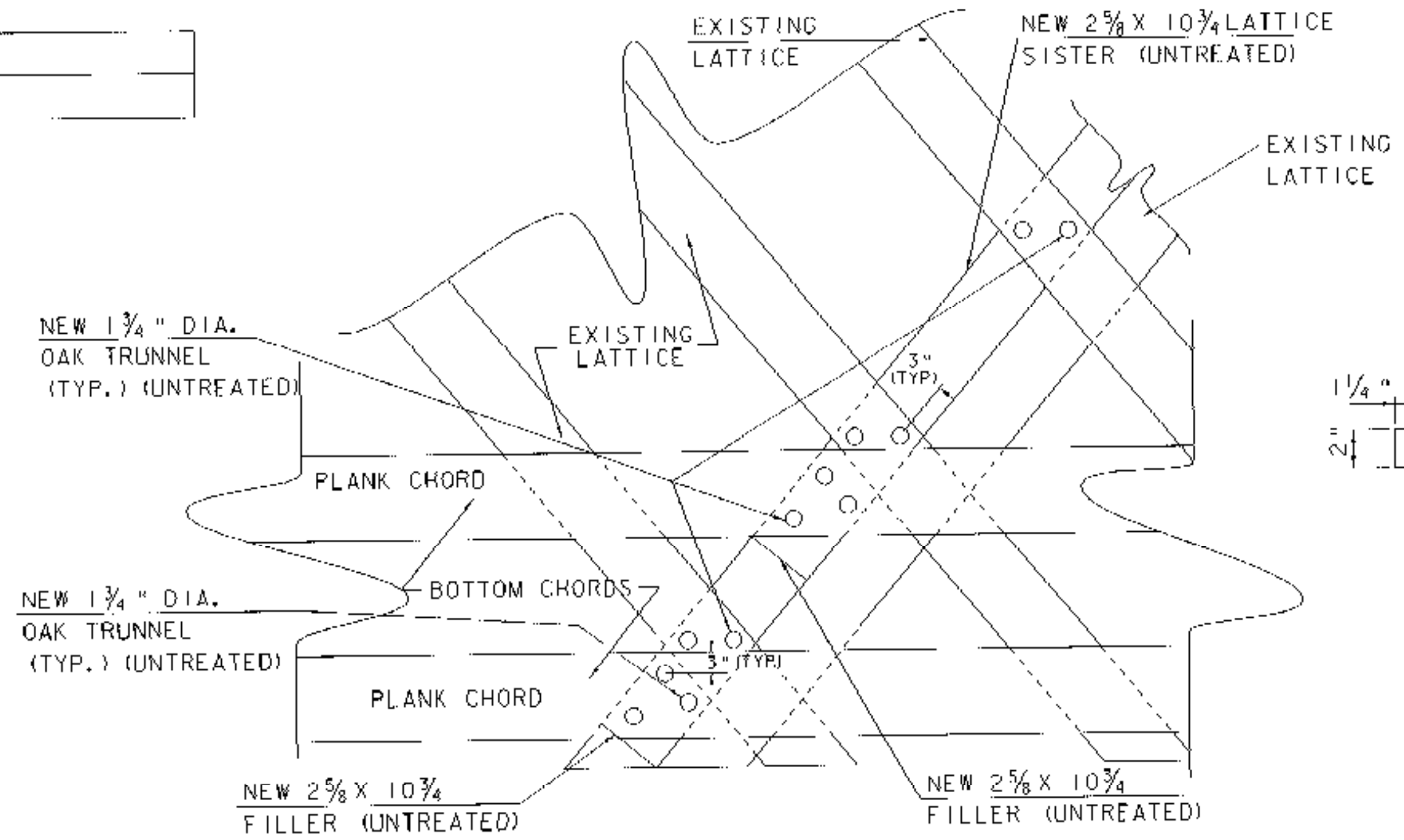
SECTION A-A\*  
3/4" = 1'-0"

\* DETAIL SIMILAR @ NE BOLSTER BEAM LOCATION

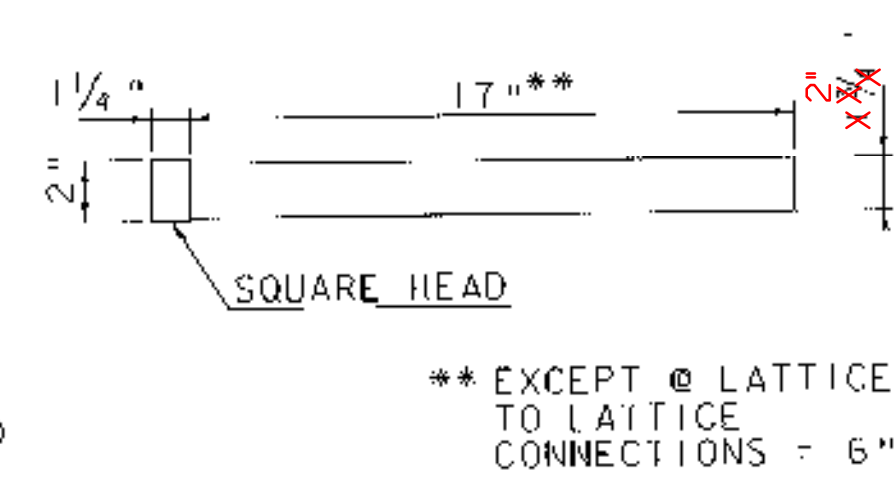


BOLSTER BEAM ELEVATIONS

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

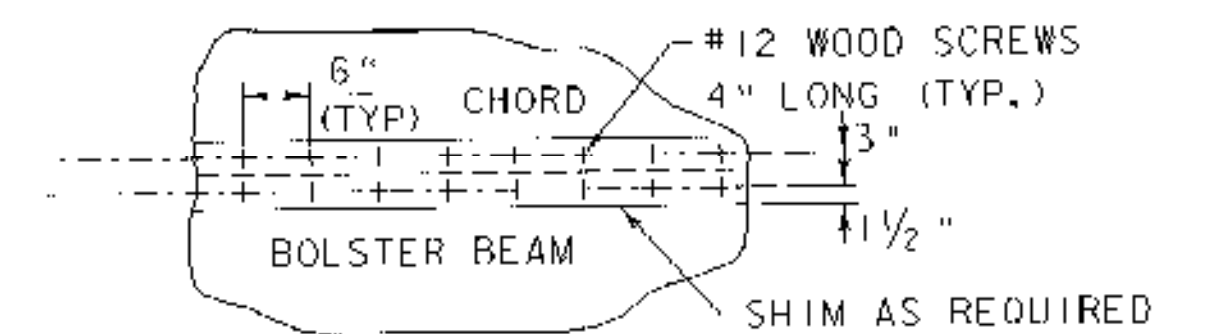


LATTICE SISTER DETAIL



TRUNNEL DETAIL

N. T. S.

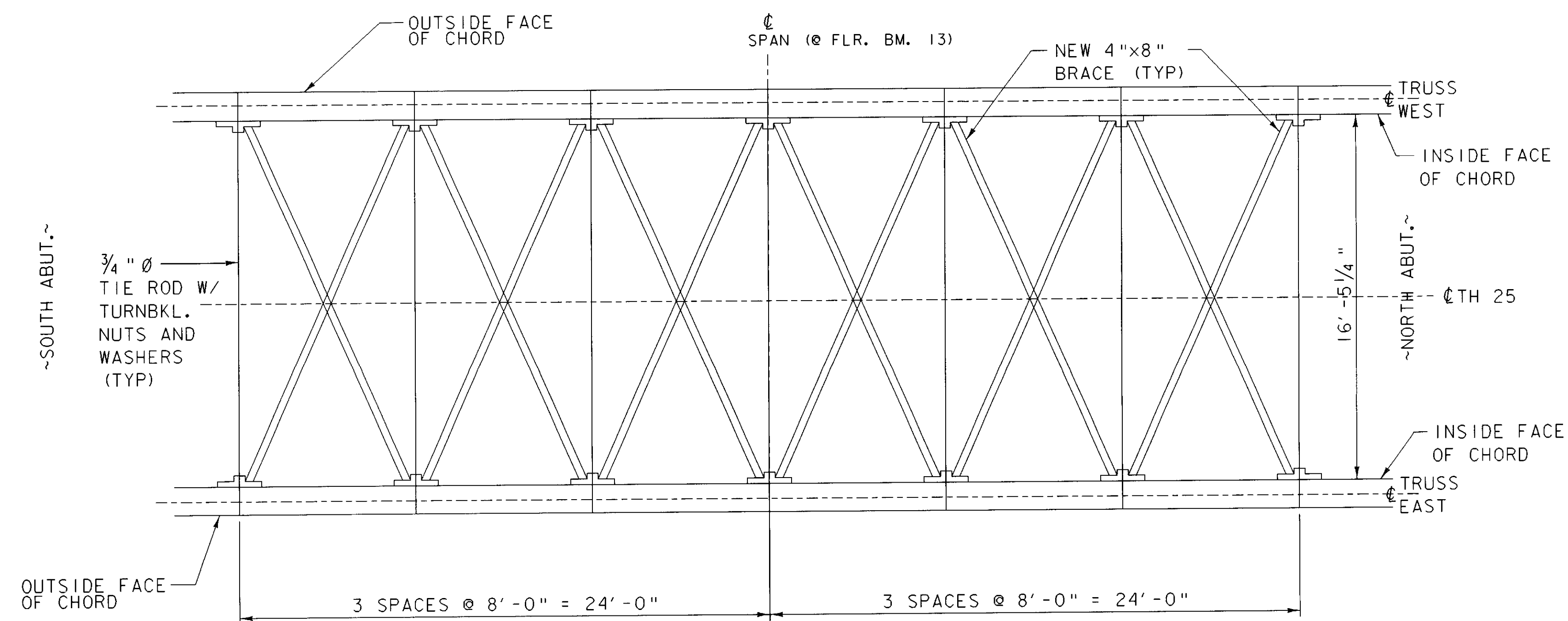


ELEVATION B-B

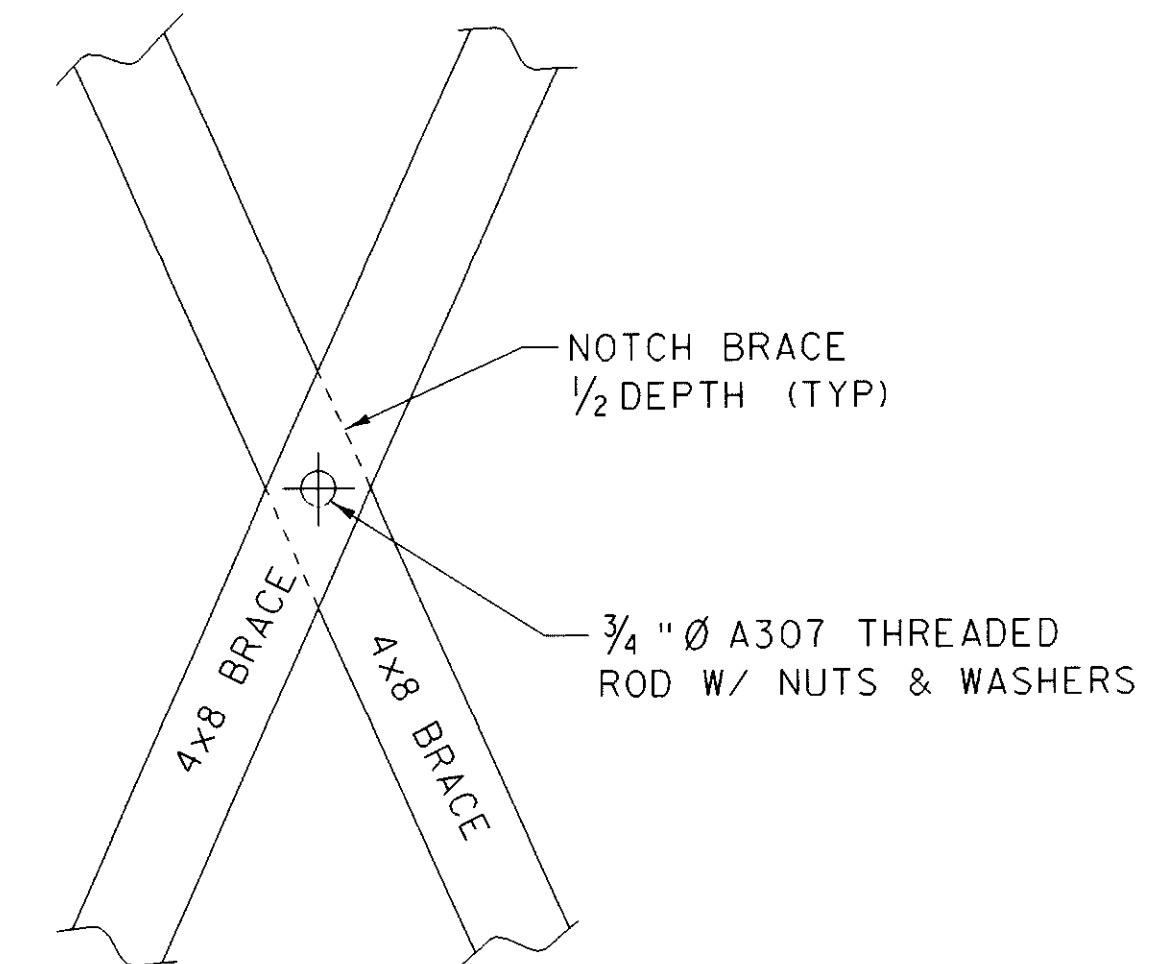
3/4" = 1'-0"

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

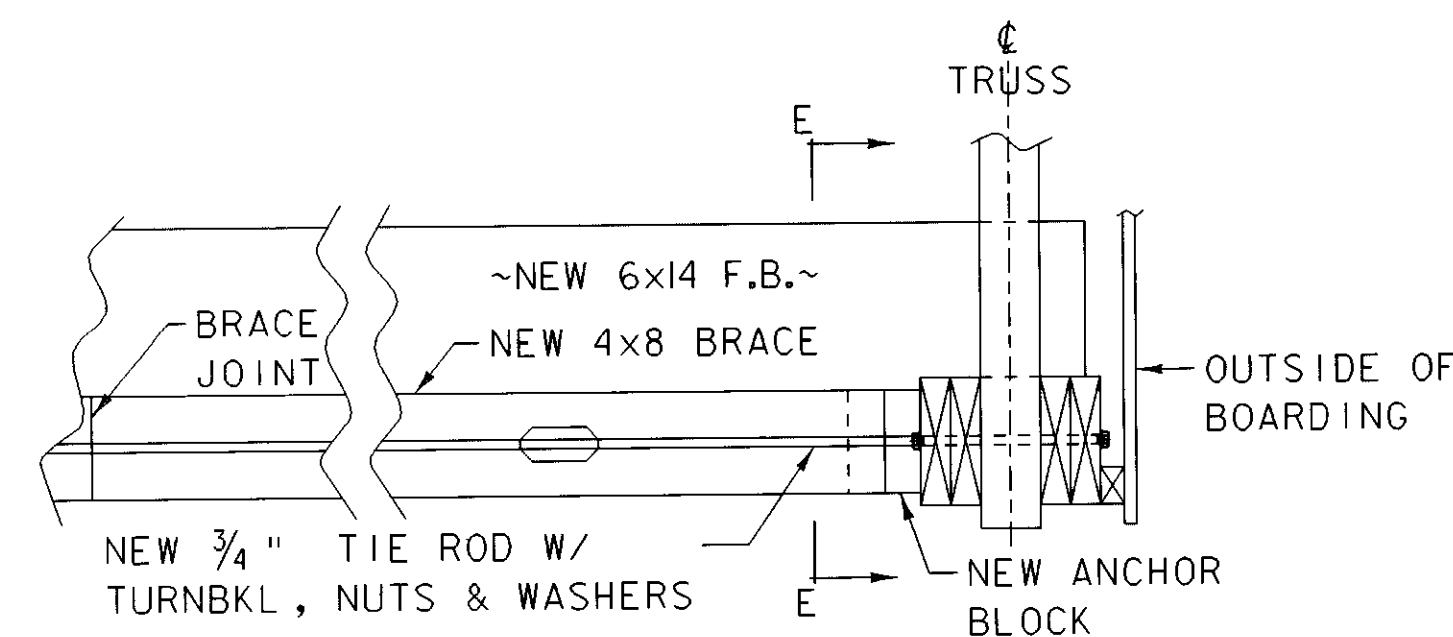




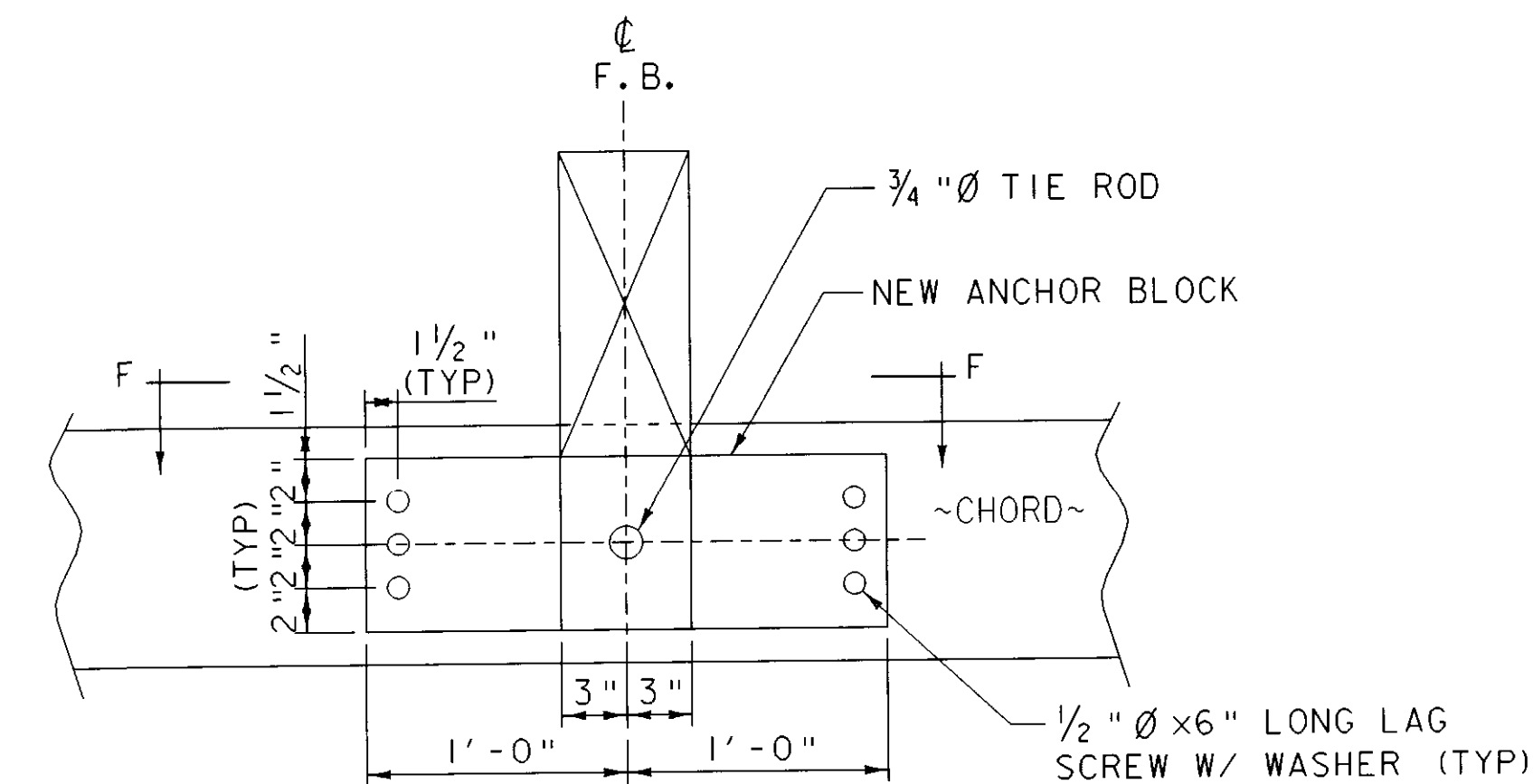
**BOTTOM BRACING PLAN**  
SCALE: 1/4" = 1'-0"



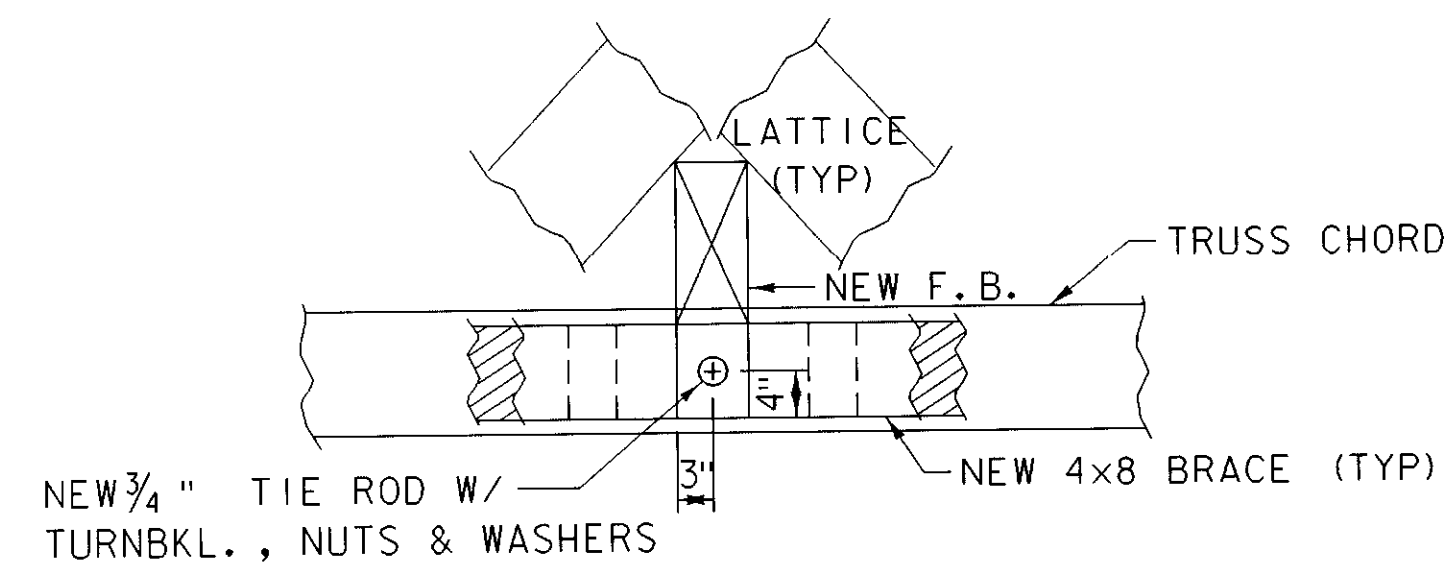
**PLAN @ BRACE INTERSECTION**  
SCALE: 1 1/2" = 1'-0"



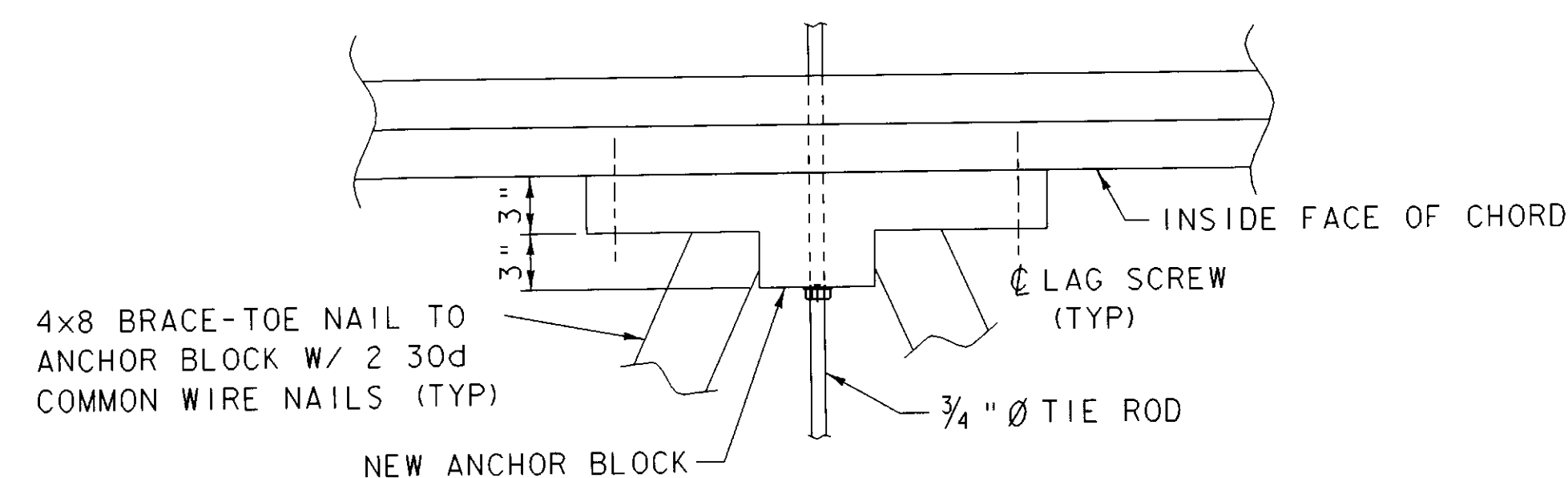
**ELEVATION @ TIE ROD**  
SCALE: 3/4" = 1'-0"



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



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



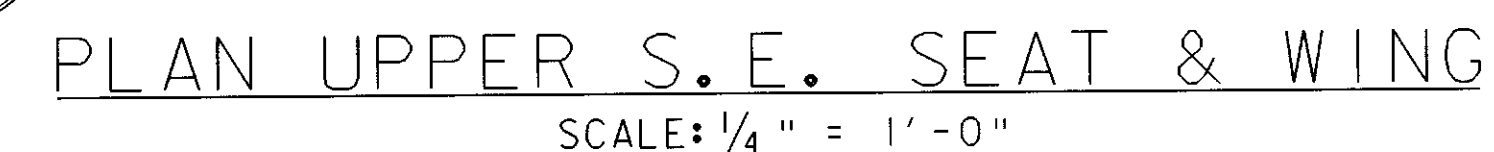
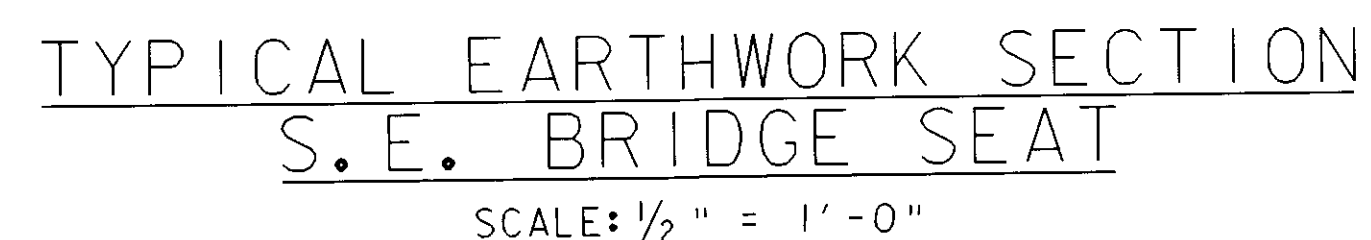
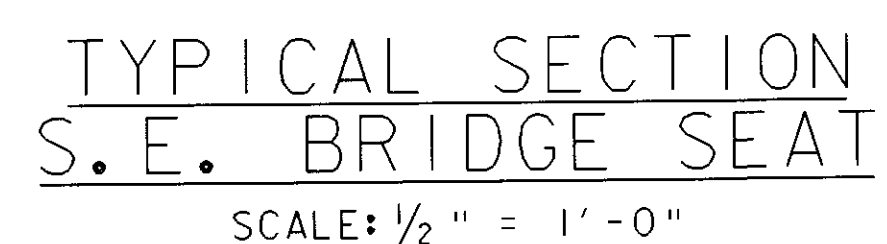
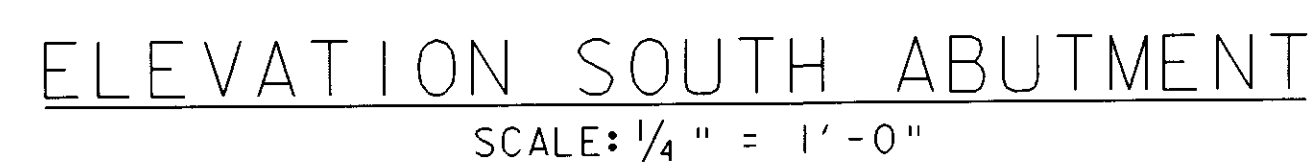
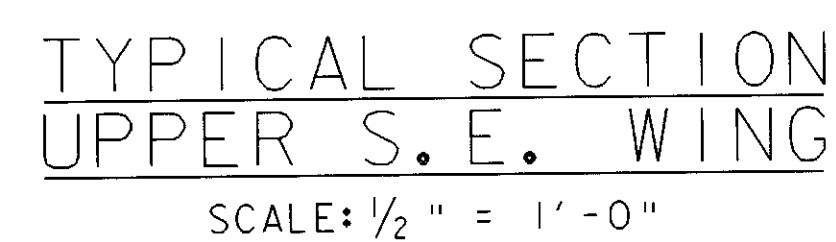
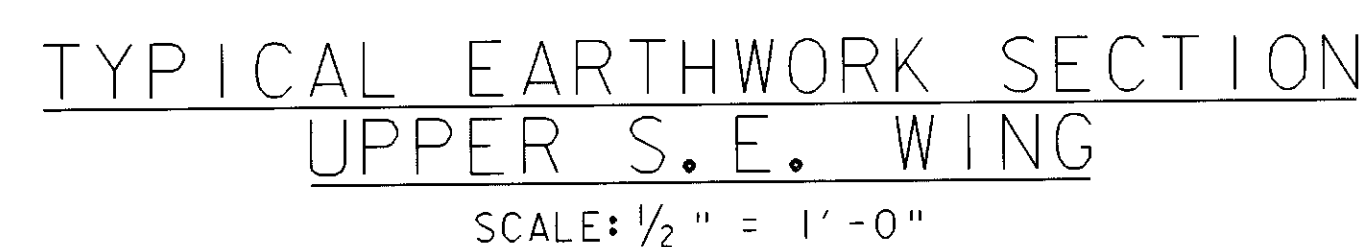
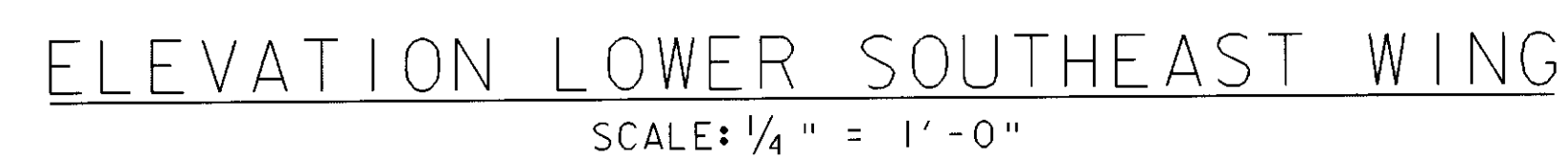
**SECTION F-F  
(FLOOR BEAM NOT SHOWN)**  
SCALE: 1 1/2" = 1'-0"

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)

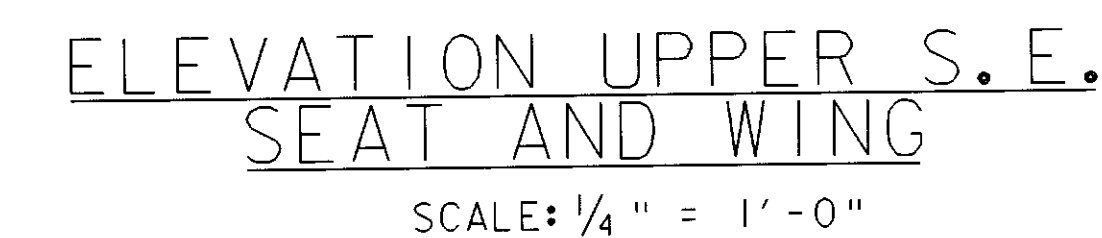
FILE NAME: s04j148d1  
PROJECT LEADER: J. WEAVER  
DESIGNED BY: J. WEAVER  
CONSTRUCTION DETAIL SHEET 4

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



MINIMUM CLEARANCE: 3" FROM  
ALL SURFACES, EXCEPT WHERE  
NOTED

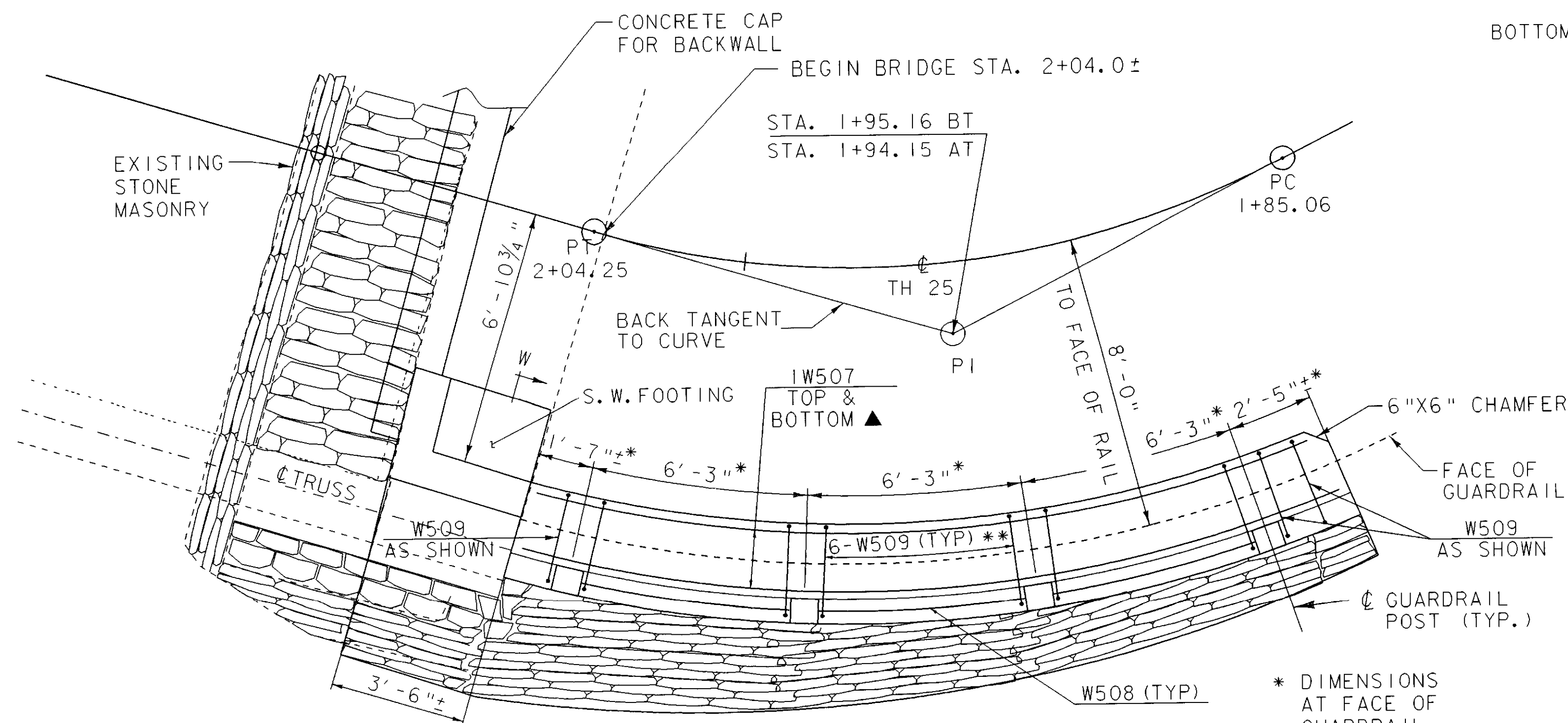
NOTE: SEE TYPICAL SECTION AND S.E.  
ELEVATION VIEW FOR ADDITIONAL REBAR INFO. NOT SHOWN.



† ALONG FACE  
OF WALL

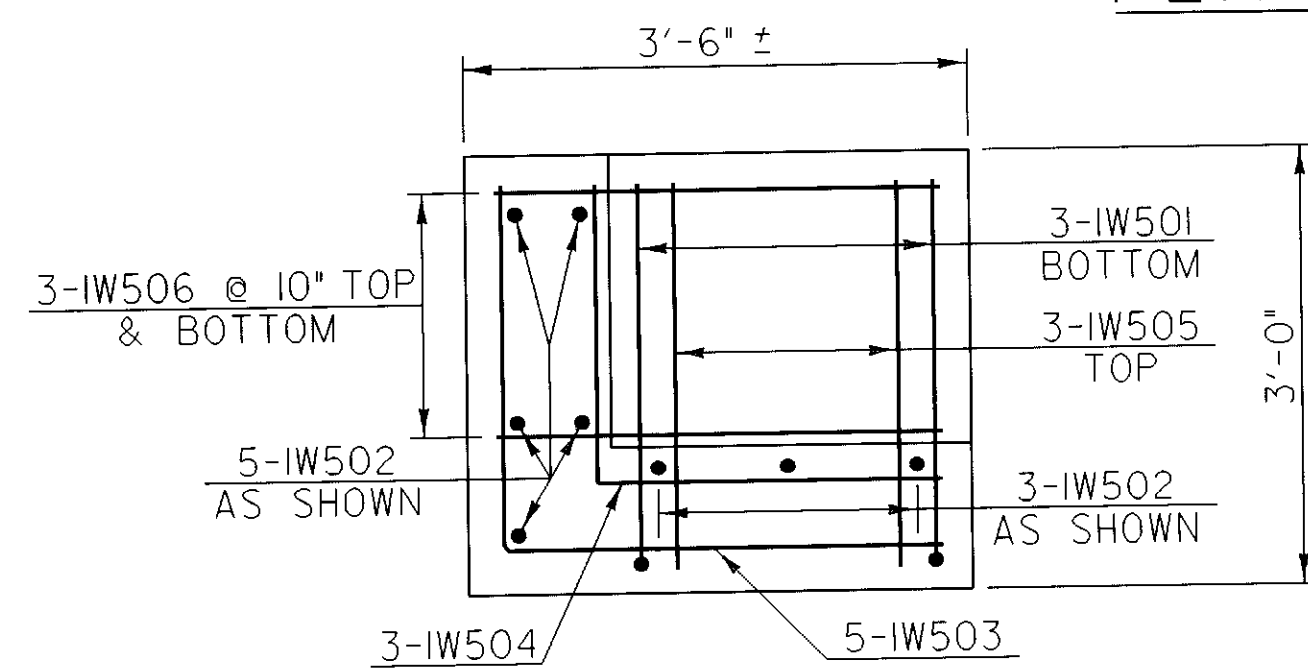
\*\* BAR SPACING  
AT FACE OF  
GUARDRAIL

PLOT DATE: 21-MAY-2008  
DRAWN BY: J. TREI  
CHECKED BY: J. WEAVER  
SHEET 20 OF 33



PLAN SOUTHWEST WING

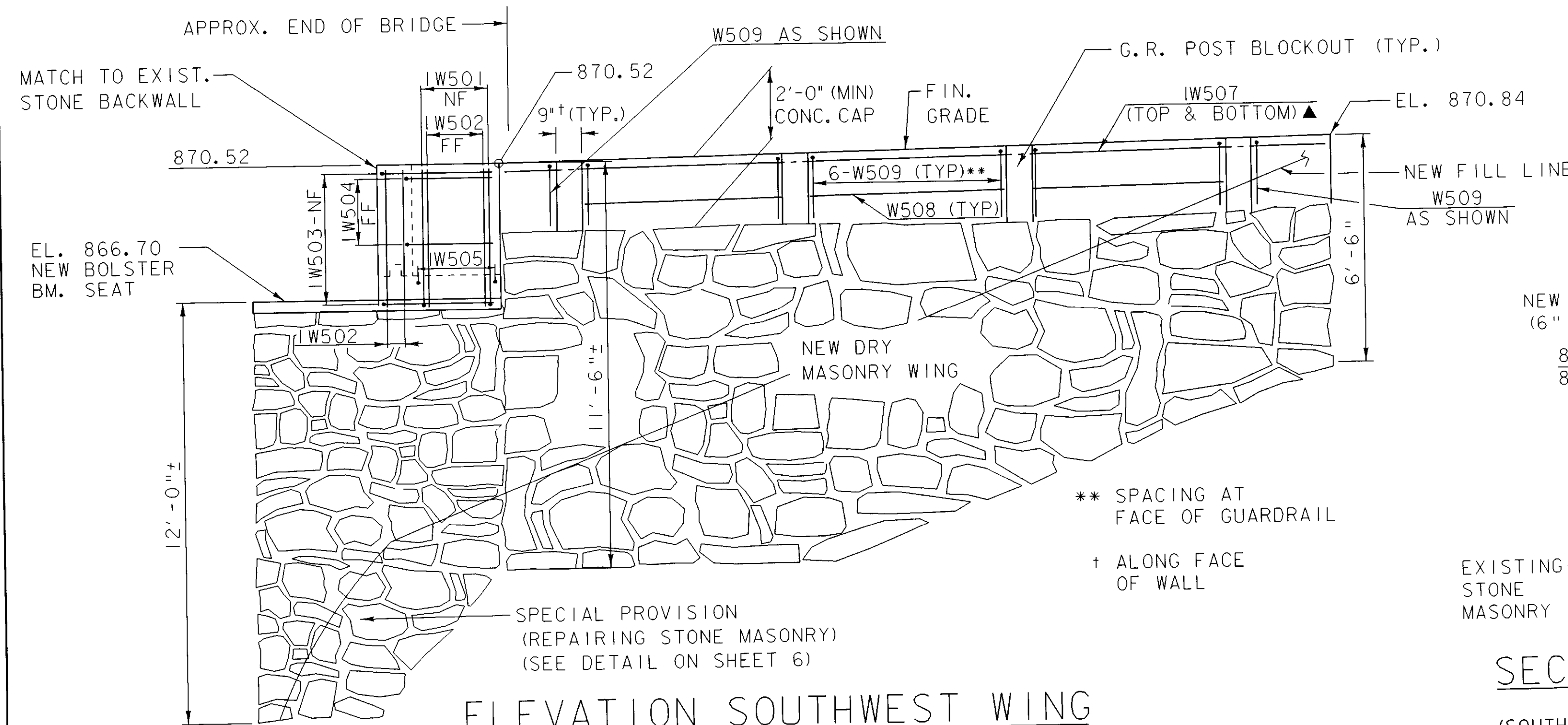
SCALE:  $\frac{3}{8}$ " = 1'-0"



PLAN S.W. FOOTING

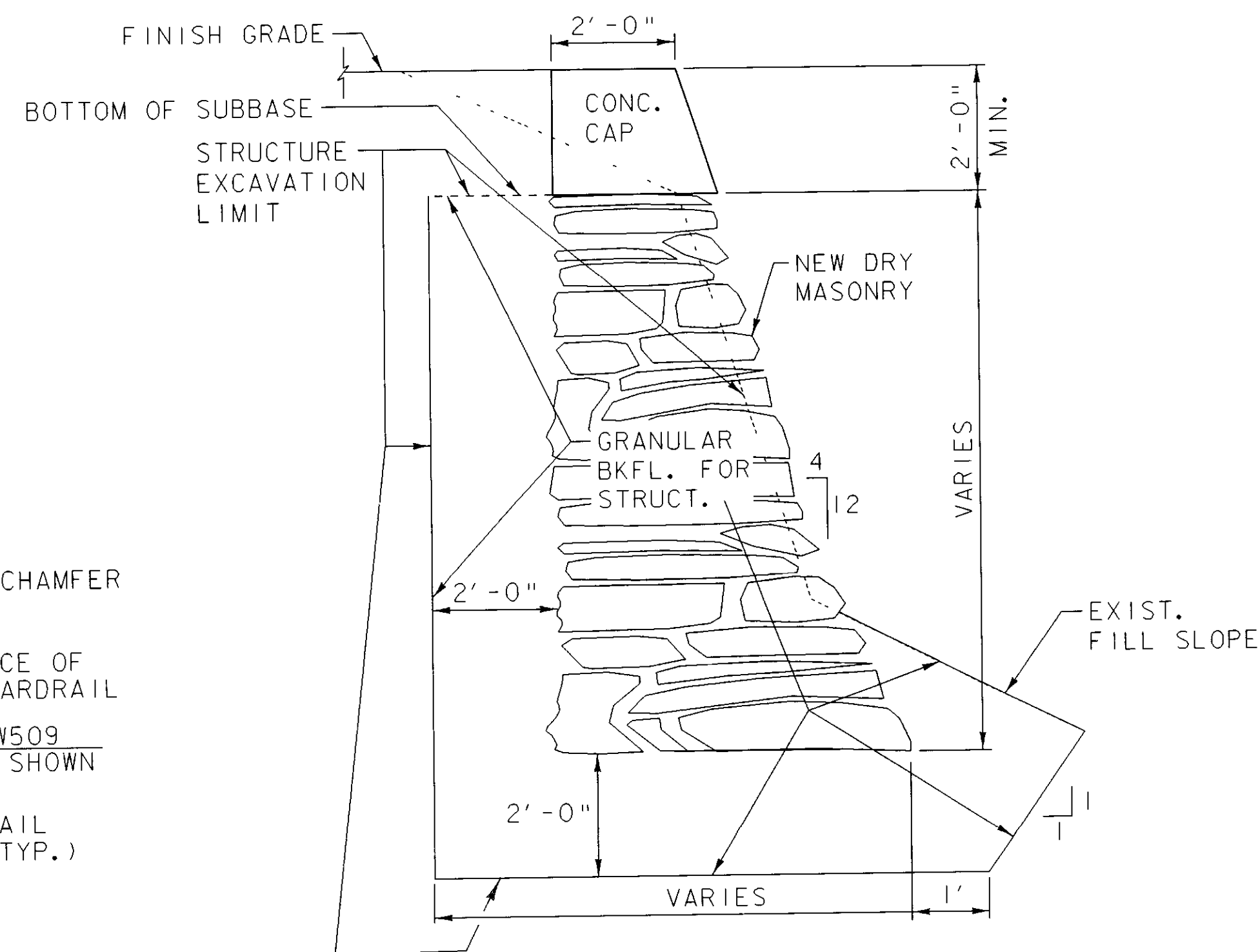
SCALE:  $\frac{3}{4}$ " = 1'-0"  
NOTE: SEE SECTION W-W FOR  
ADDITIONAL REBAR INFO.

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



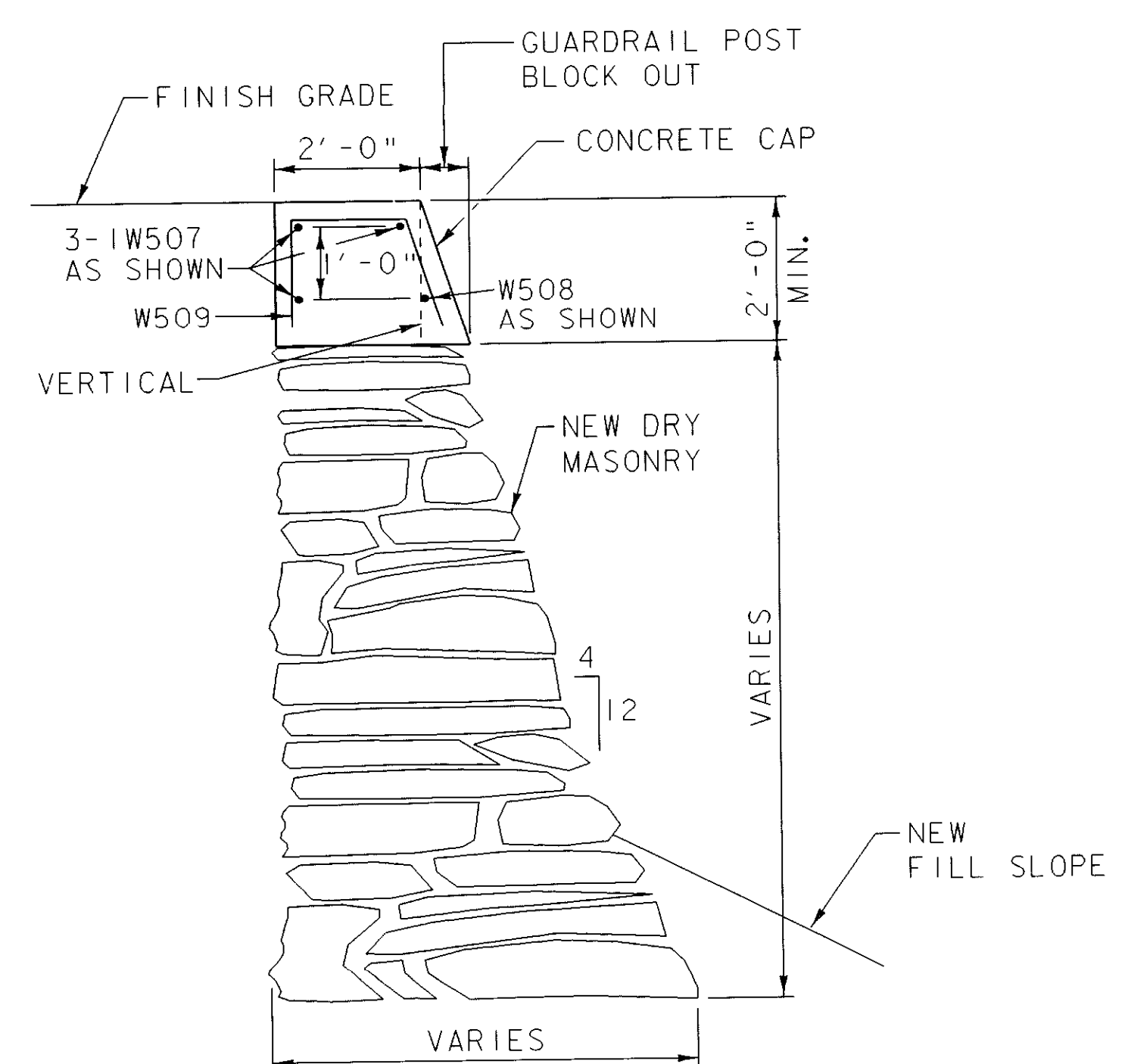
ELEVATION SOUTHWEST WING

SCALE:  $\frac{3}{8}$ " = 1'-0"



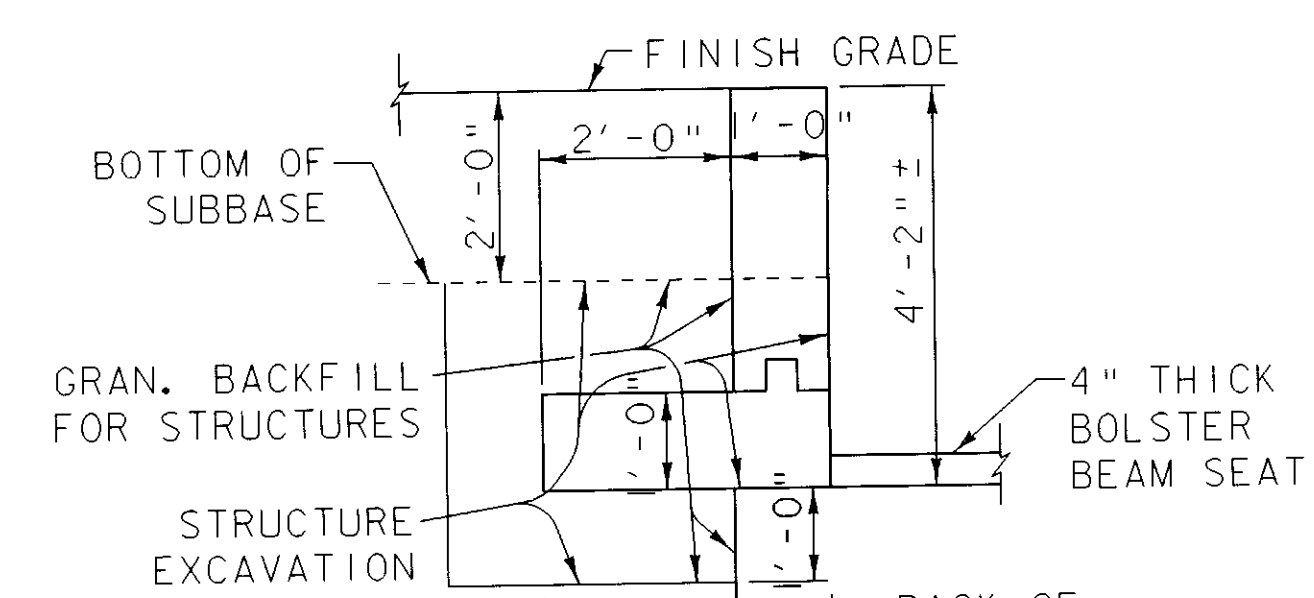
TYPICAL EARTHWORK SECTION  
NEW STONE WING S.W.

SCALE:  $\frac{1}{2}$ " = 1'-0"

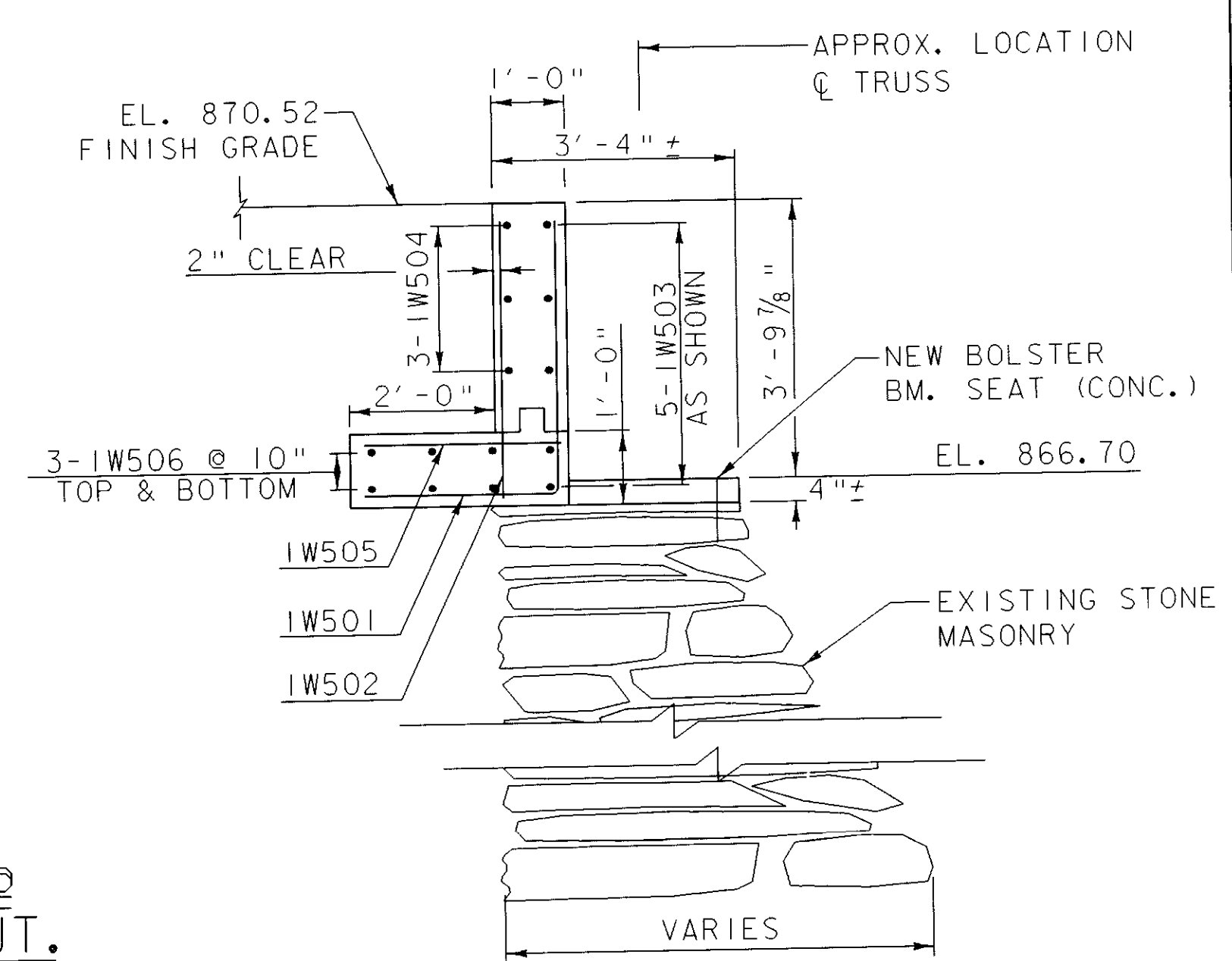


TYPICAL SECTION  
NEW STONE WING S.W.

SCALE:  $\frac{1}{2}$ " = 1'-0"

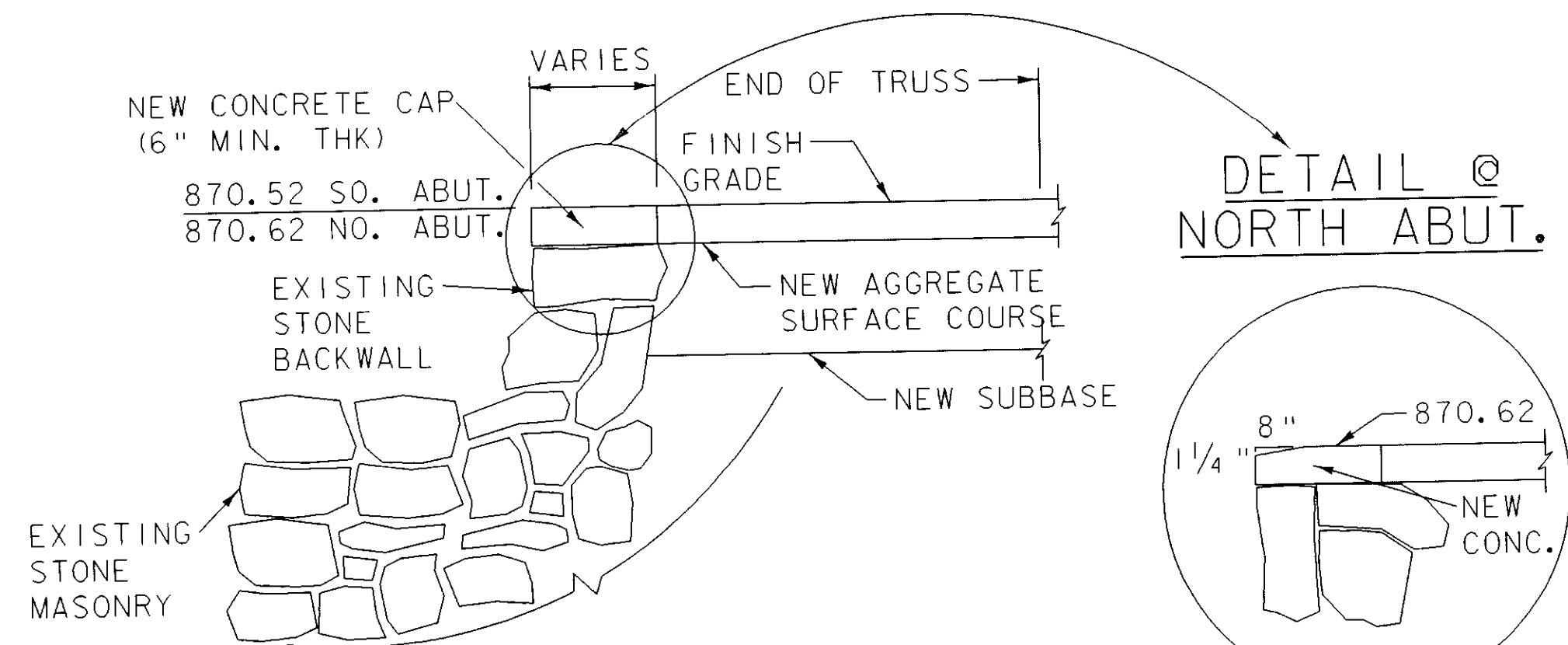


EARTHWORK DETAIL @  
SECTION W-W



SECTION W-W

SCALE:  $\frac{1}{2}$ " = 1'-0"

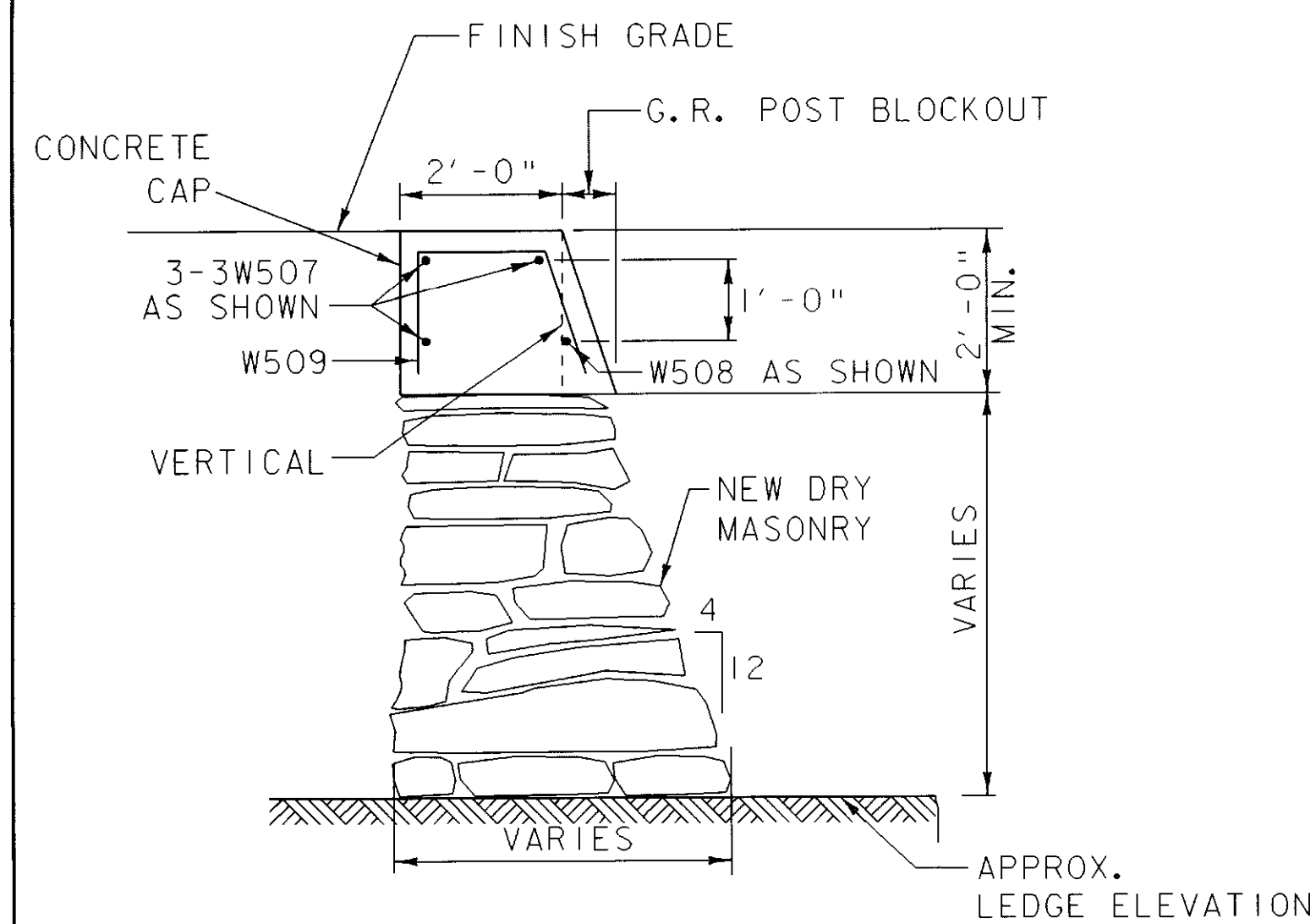


SECTION @ EXISTING BACKWALL

N.T.S.  
(SOUTH ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR DETAILS)

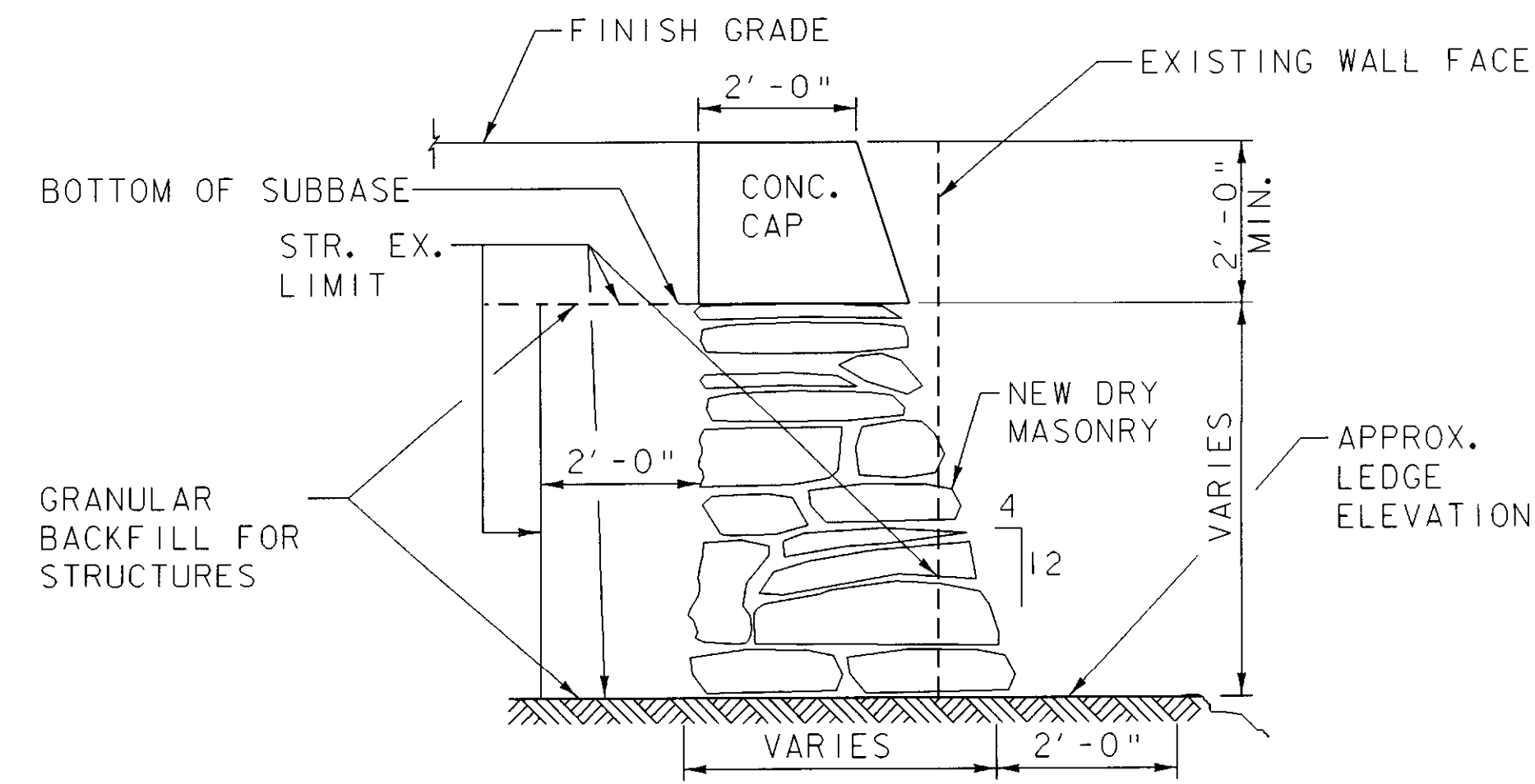
DETAIL @  
NORTH ABUT.

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



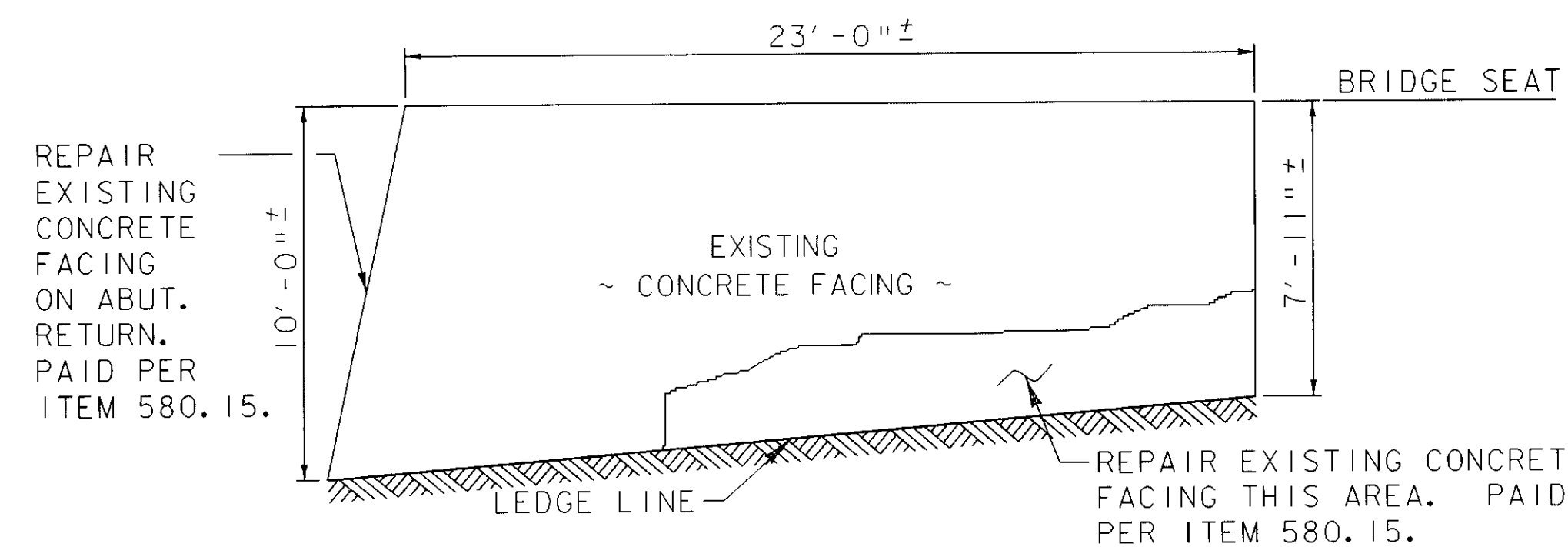
TYPICAL SECTION  
NEW STONE WING N.W.

SCALE:  $\frac{1}{2}$ " = 1'-0"  
(SIMILAR DETAILS @ WALL SECTION S-S AREA)



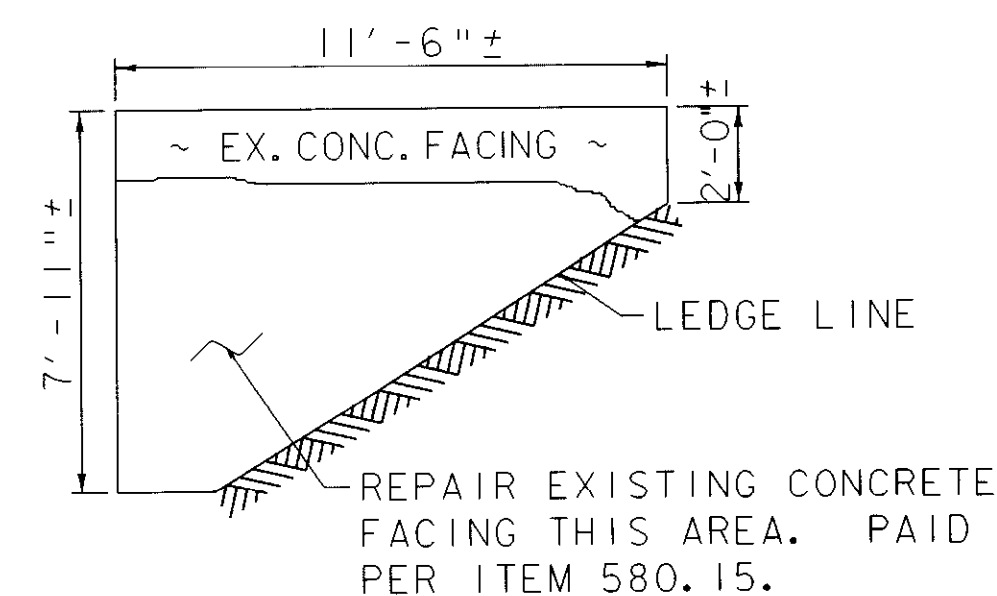
TYPICAL EARTHWORK SECTION  
NEW STONE WING N.W.

SCALE:  $\frac{1}{2}$ " = 1'-0"



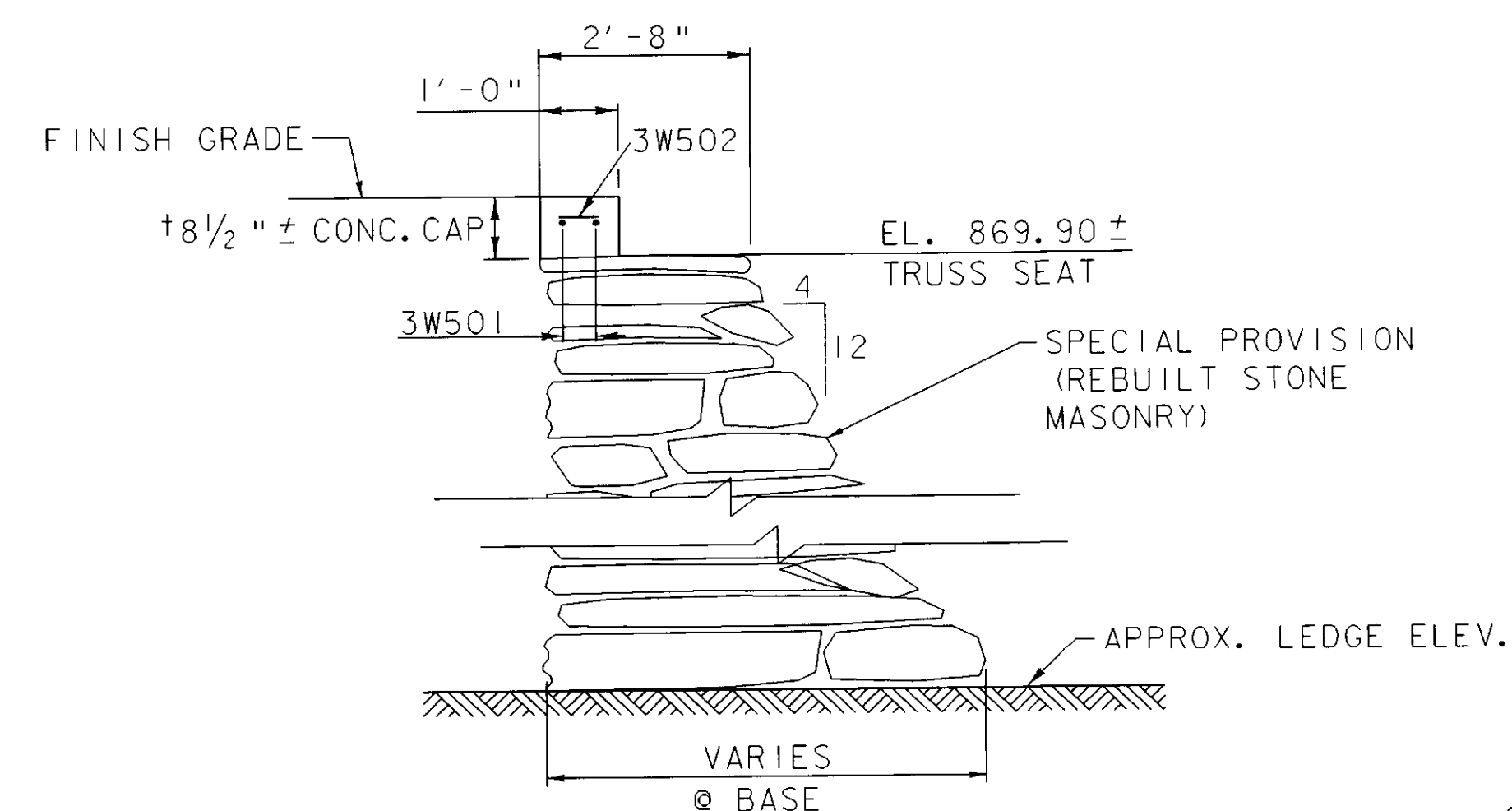
ELEVATION NORTH ABUTMENT

SCALE:  $\frac{1}{4}$ " = 1'-0"



ELEVATION N.E. WING

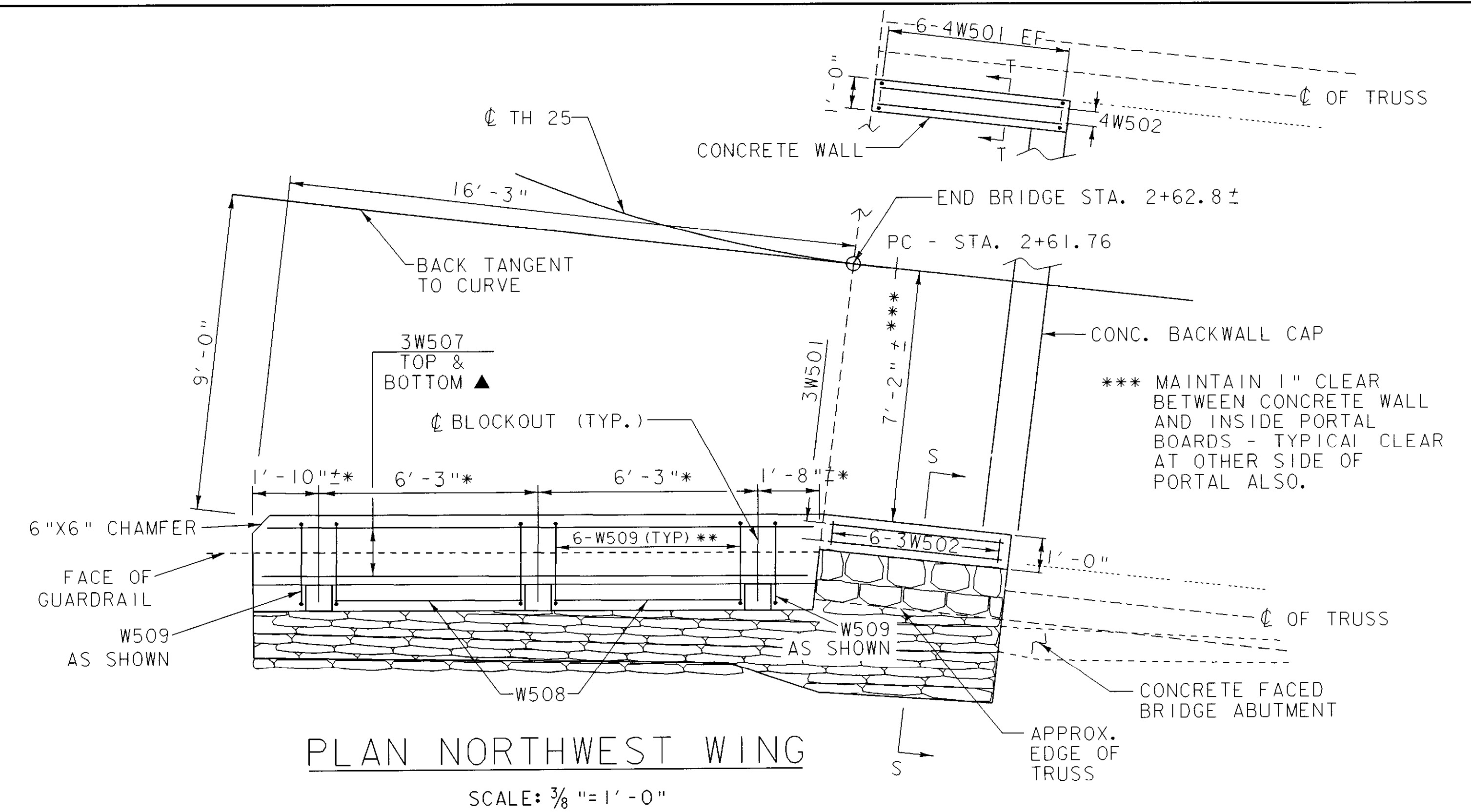
SCALE:  $\frac{1}{4}$ " = 1'-0"



SECTION S-S

SCALE:  $\frac{1}{2}$ " = 1'-0"

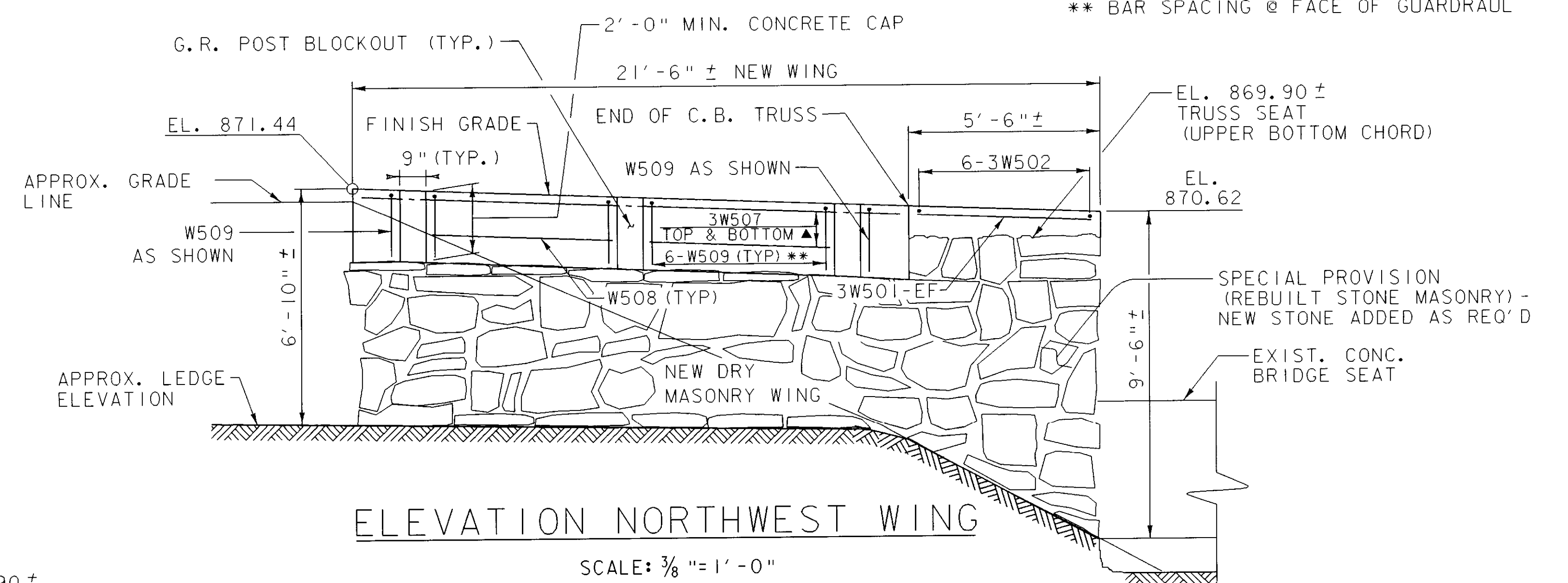
† CONCRETE CAP  
@ NORTHEAST  
PORTAL SIMILAR



PLAN NORTHWEST WING

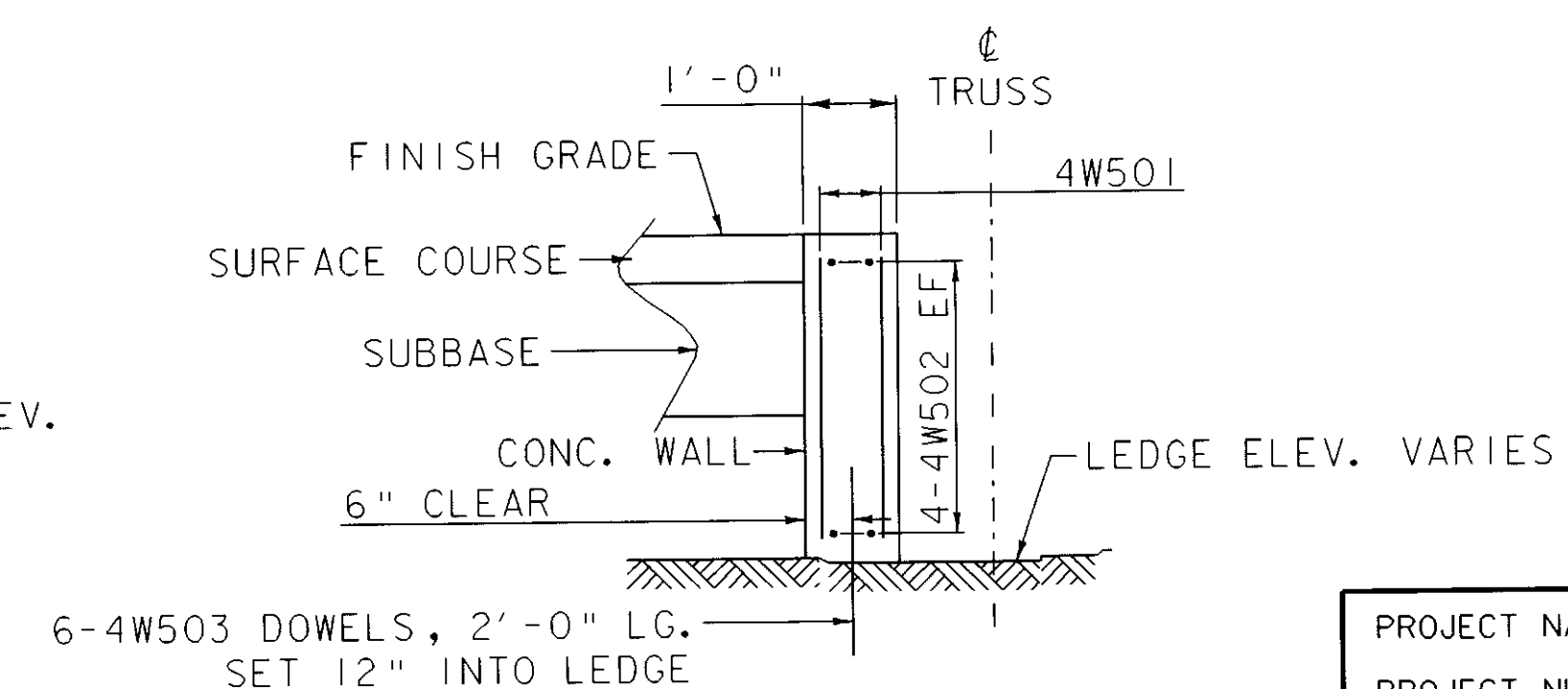
SCALE:  $\frac{3}{8}$ " = 1'-0"

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



ELEVATION NORTHWEST WING

SCALE:  $\frac{3}{8}$ " = 1'-0"



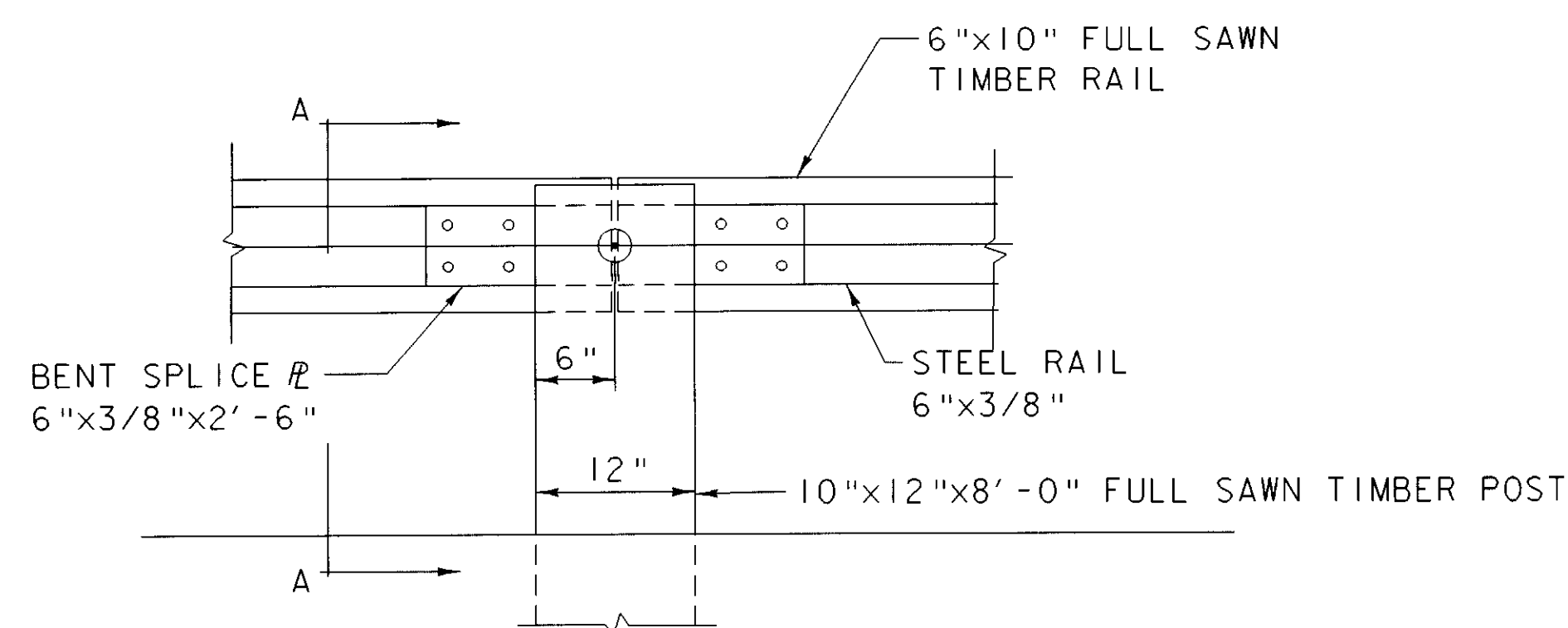
SECTION T-T

SCALE:  $\frac{1}{2}$ " = 1'-0"

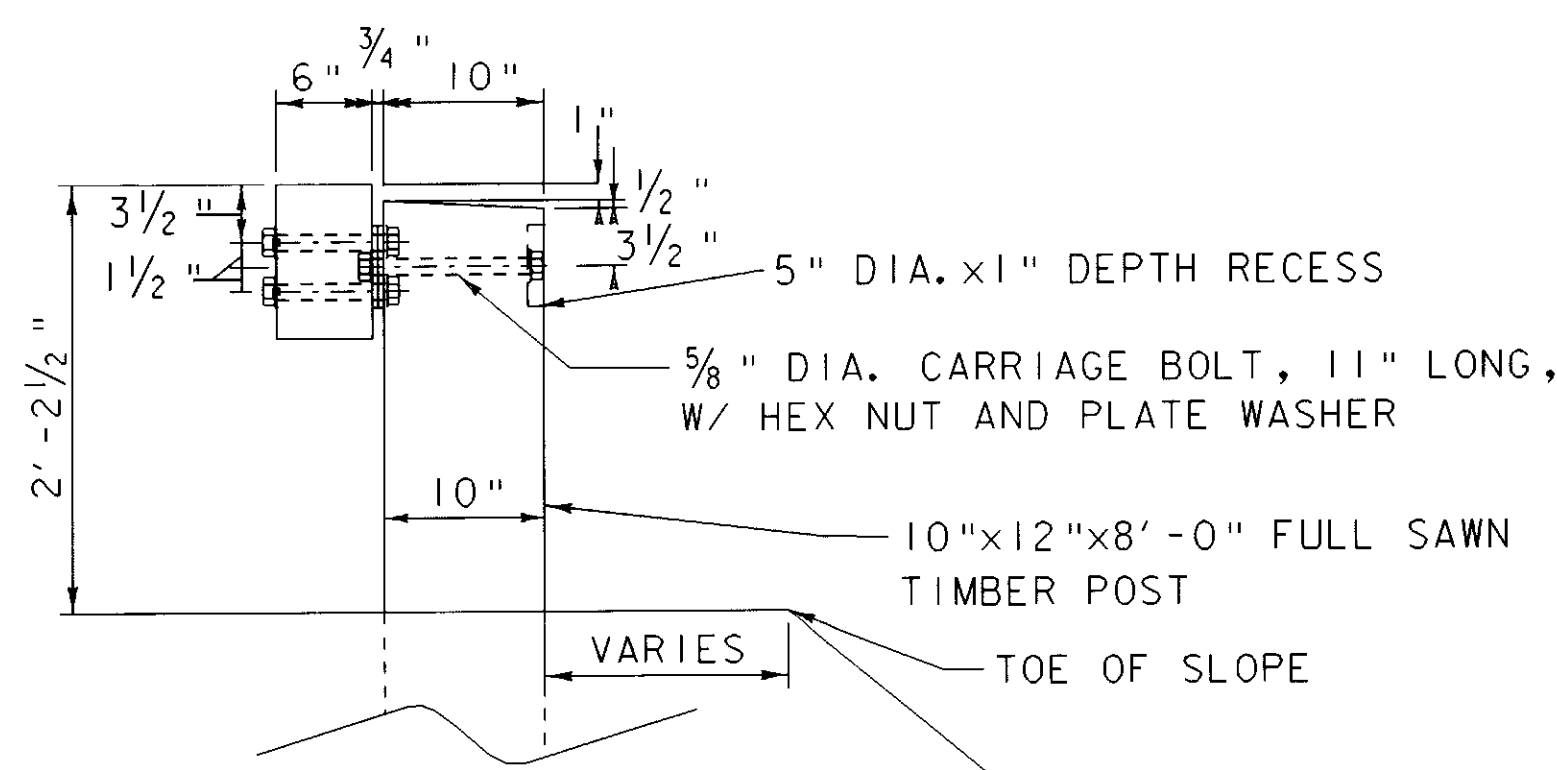
PROJECT NAME: MONTGOMERY  
PROJECT NUMBER: BHO 1448 (37)

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

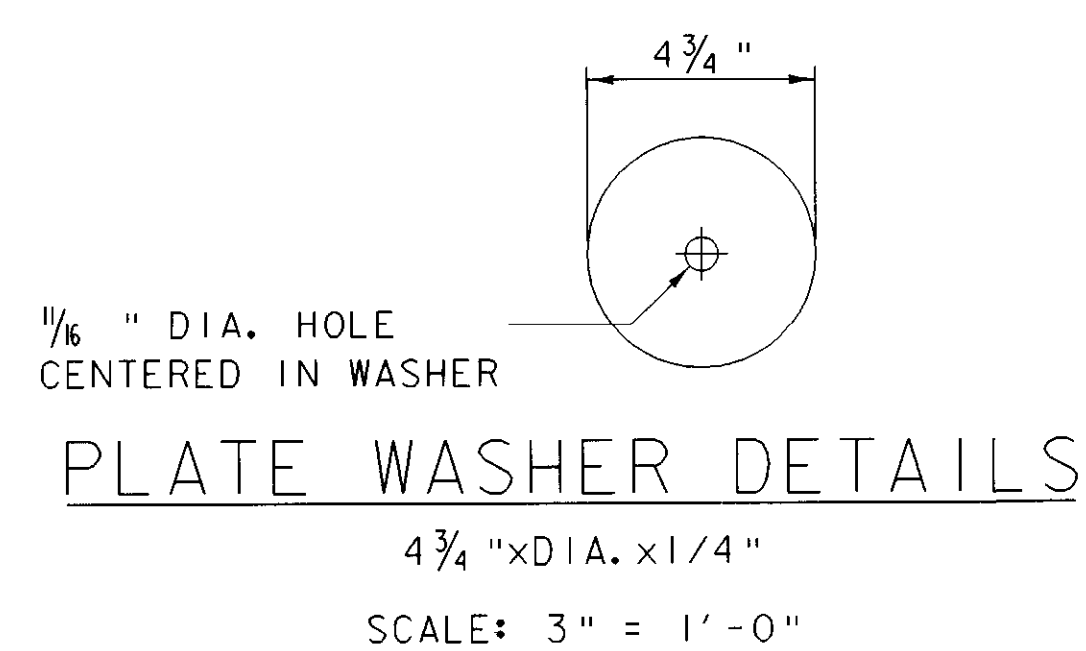
PLOT DATE: 21-MAY-2008  
DRAWN BY: J. TREI  
CHECKED BY: J. WEAVER  
SHEET 22 OF 33



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



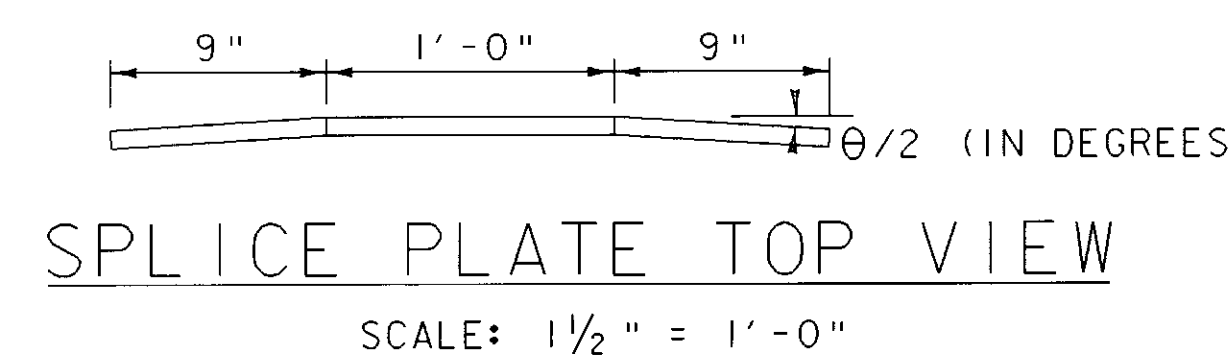
SECTION A-A  
SCALE: 1" = 1'-0"



1/8" DIA. HOLE  
CENTERED IN WASHER

### PLATE WASHER DETAILS

4 3/4" x DIA. x 1 1/4"  
SCALE: 3" = 1'-0"

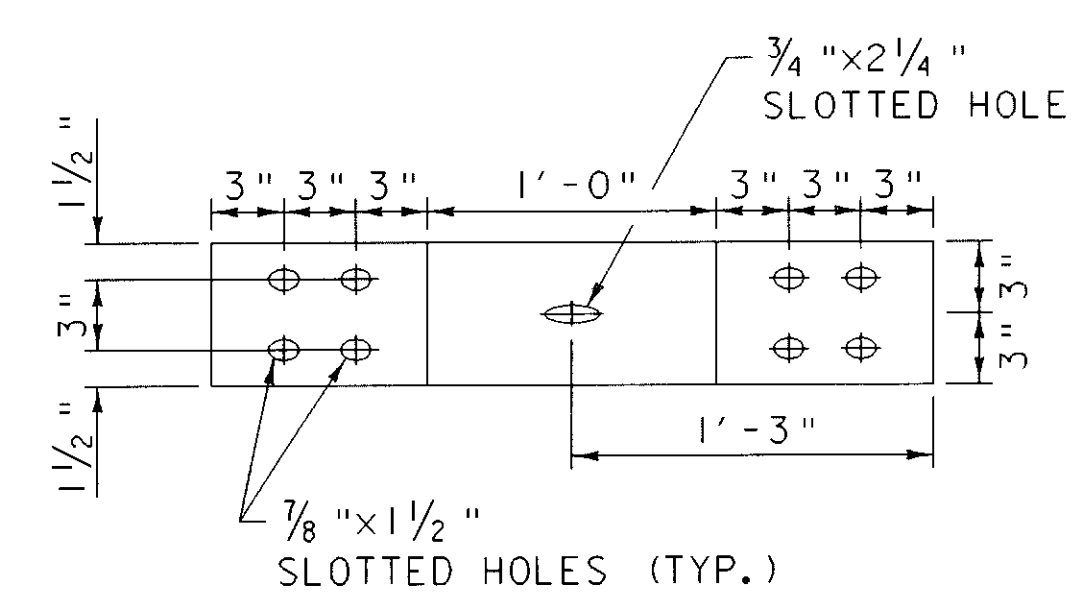


### SPLICE PLATE TOP VIEW

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

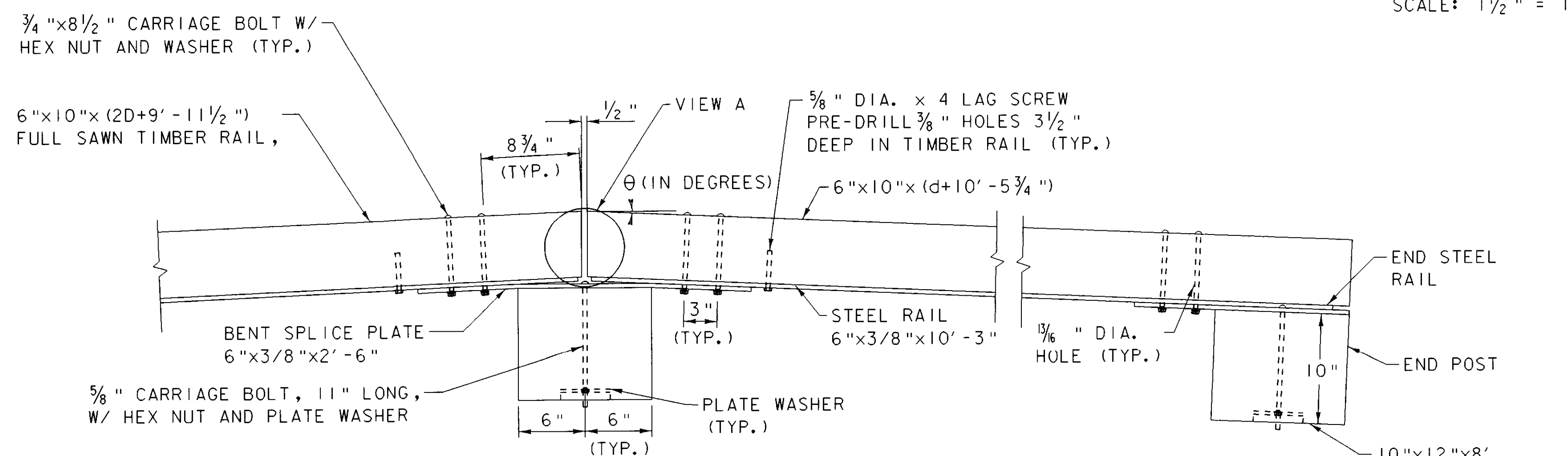
### NOTES:

- FURNISH SHOP BENT SPLICE PLATES. USE THE MINIMUM BEND ANGLE SHOWN IN THE TABLE BELOW



### BENT SPLICE PLATE DETAIL

6" x 3/8" x 2'-6"  
(END SPLICE PLATE SIMILAR)  
SCALE: 1 1/2" = 1'-0"

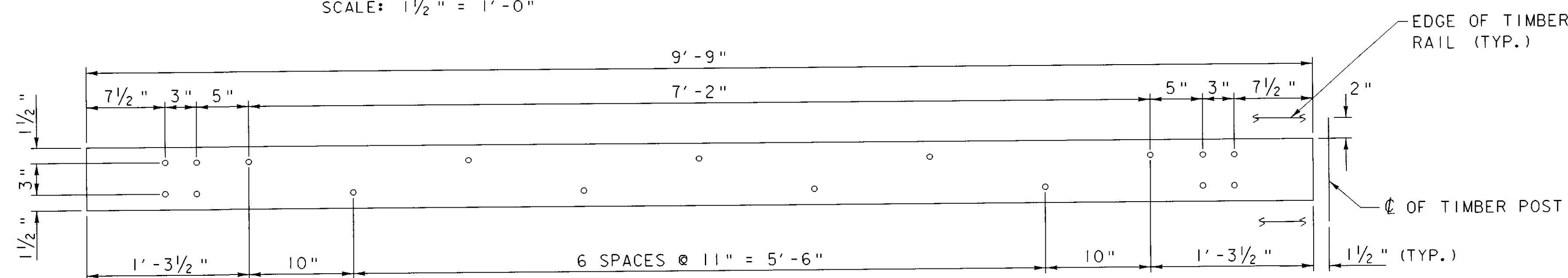


### POST CONNECTION PLAN I

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

## STEEL BACKED TIMBER GUARDRAIL NOTES

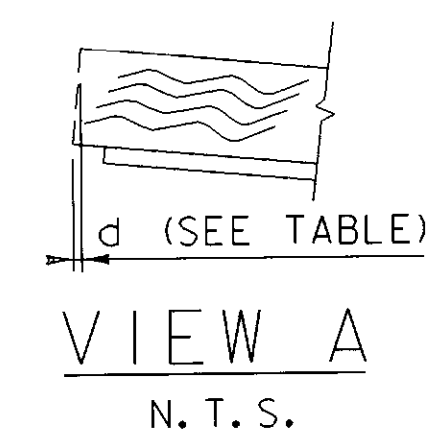
- THE STEEL-BACKED TIMBER GUARD RAIL SHALL BE PAID FOR UNDER ITEM 621.18. THE QUANTITY MEASURED FOR PAYMENT SHALL BE ALONG THE FACE OF GUARDRAIL, INCLUDING TERMINAL SECTIONS. THE ORDINARY POST SPACING SHALL BE 10 FEET. IN LOCATIONS WHERE POST SPACING IS DETAILED AT 5 FEET, THE QUANTITY FOR PAYMENT WILL BE FACTORED BY 1.4.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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

6" x 3/8" x 9'-9"  
SCALE: 1 1/2" = 1'-0"

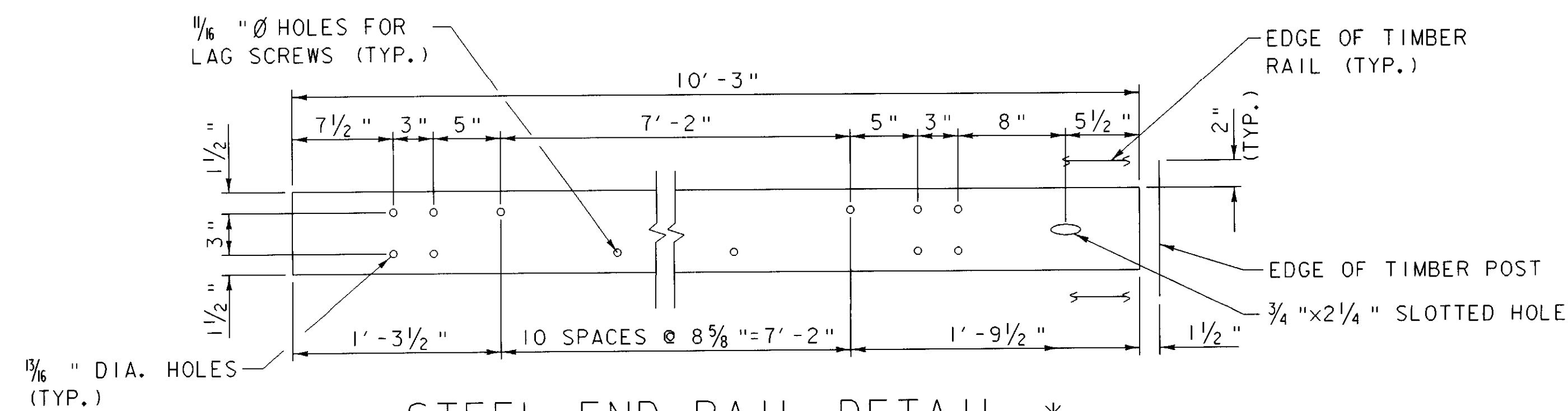
| LAYOUT<br>RADIUS R<br>@ FACE OF<br>RAIL (FT.) | θ/2<br>(DEGREES) | D (INCHES) |
|-----------------------------------------------|------------------|------------|
| 25                                            | 5.74             | 5/8"       |
| 30                                            | 4.78             | 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          |



VIEW A  
N. T. S.

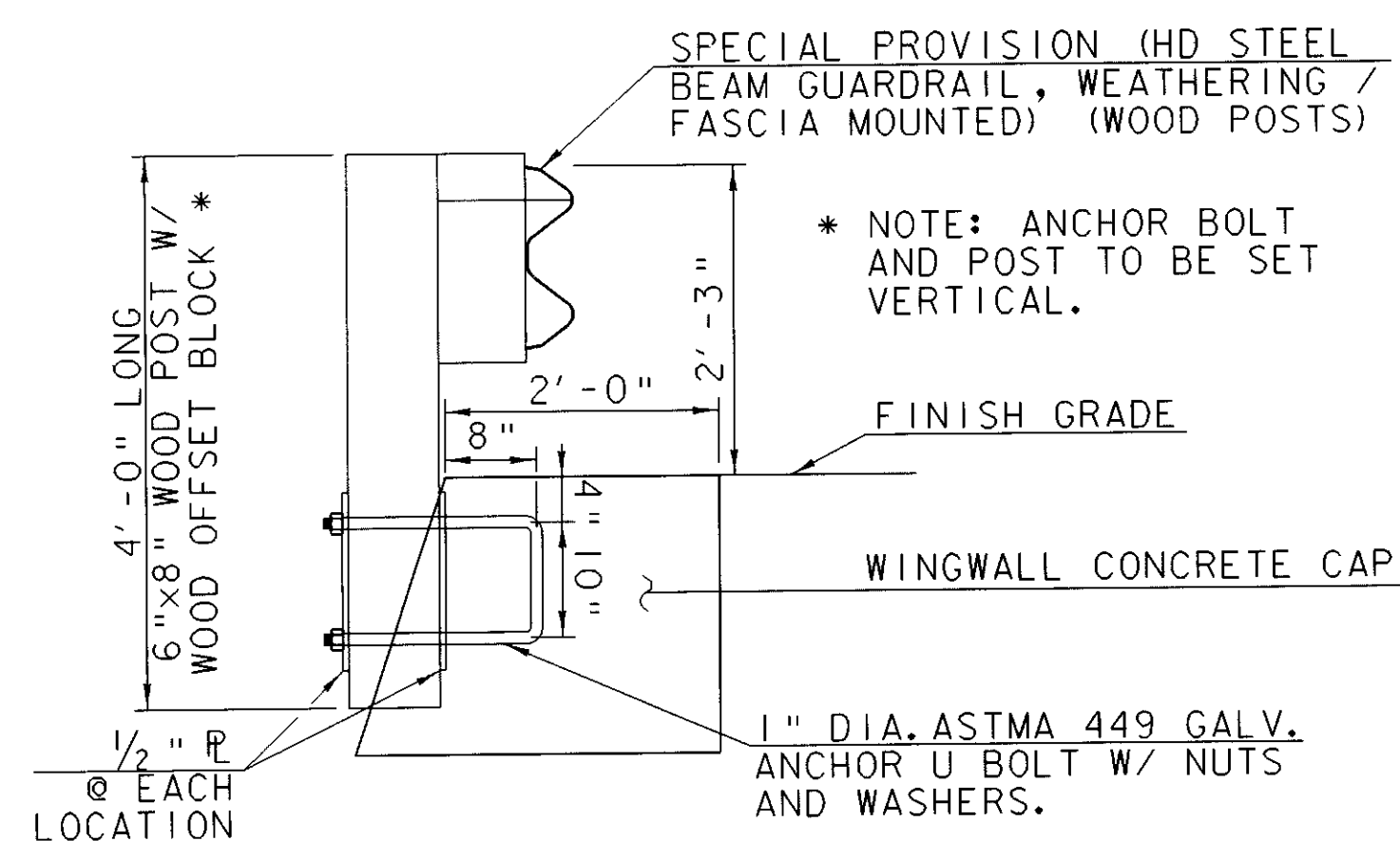
|                              |                        |
|------------------------------|------------------------|
| PROJECT NAME: MONTGOMERY     | PLOT DATE: 21-MAY-2008 |
| PROJECT NUMBER: BHO 1448(37) | DRAWN BY: J. TREI      |
| FILE NAME: s04jl48d1.dgn     | CHECKED BY: J. WEAVER  |
| DESIGNED BY: J. WEAVER       | SHEET 23 OF 33         |
| GUARDRAIL DETAIL SHEET 1     |                        |

\* END RAIL @ STEEL BM. RAIL CONN. SIMILAR



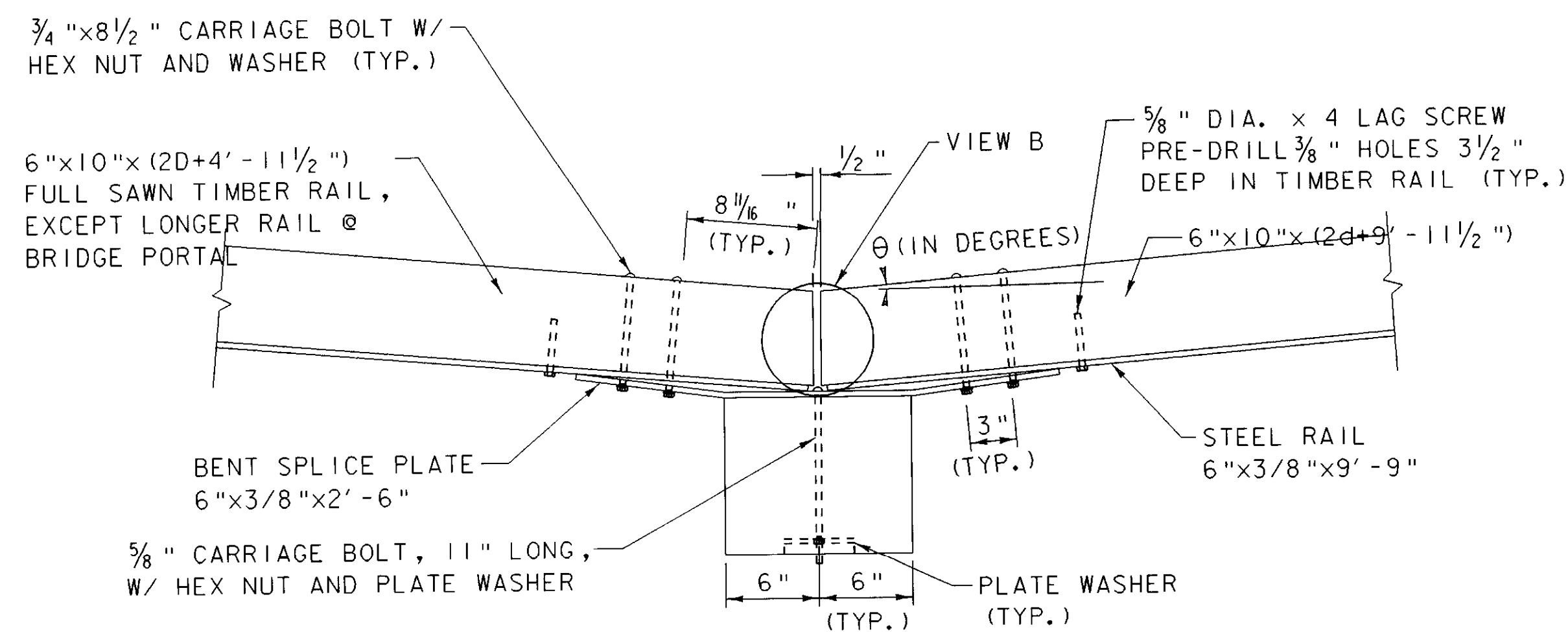
STEEL END RAIL DETAIL \*

6"x3/8"x10'-3"  
SCALE: 1 1/2" = 1'-0"



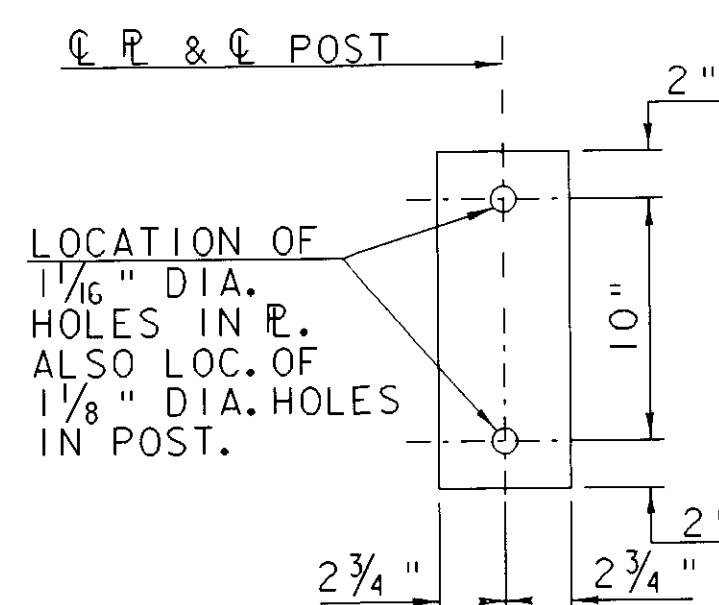
FASCIA MOUNTED  
STEEL BEAM RAILING DETAIL

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



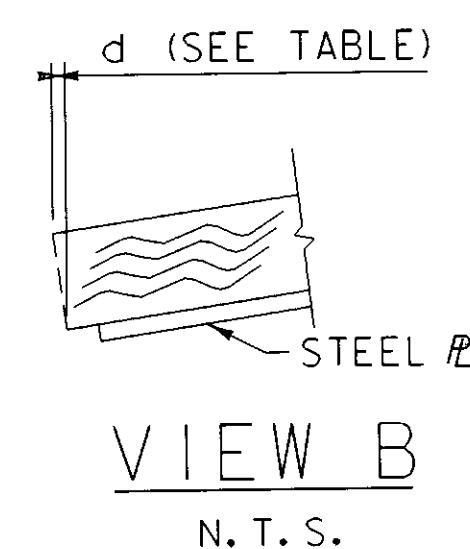
POST CONNECTION PLAN 2

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

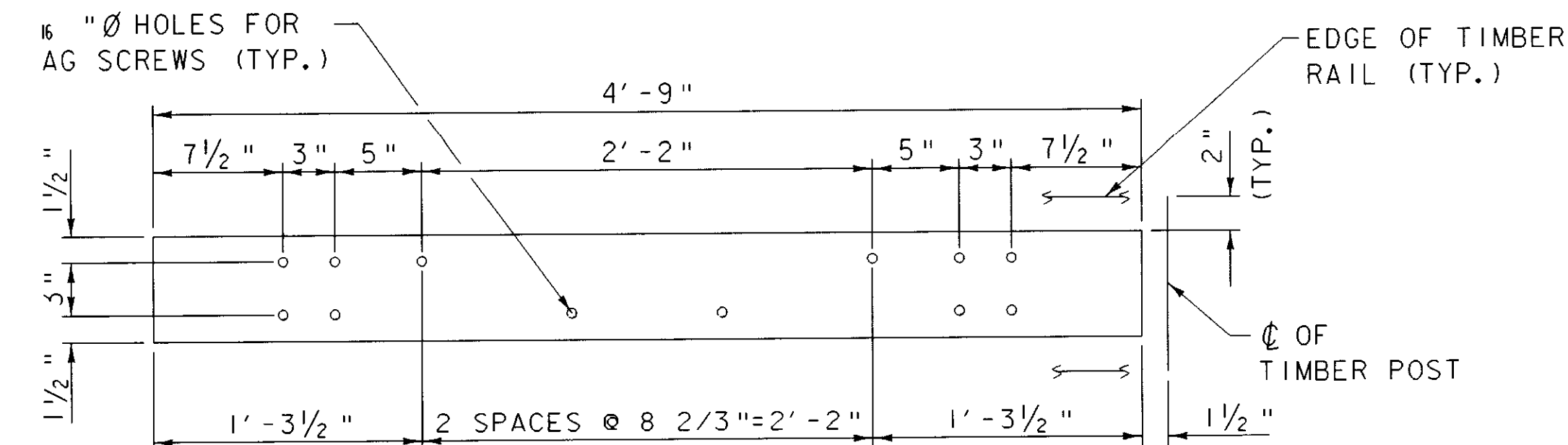


DETAIL 1/2" R FOR  
FASCIA MOUNTED STEEL BEAM RAILING

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

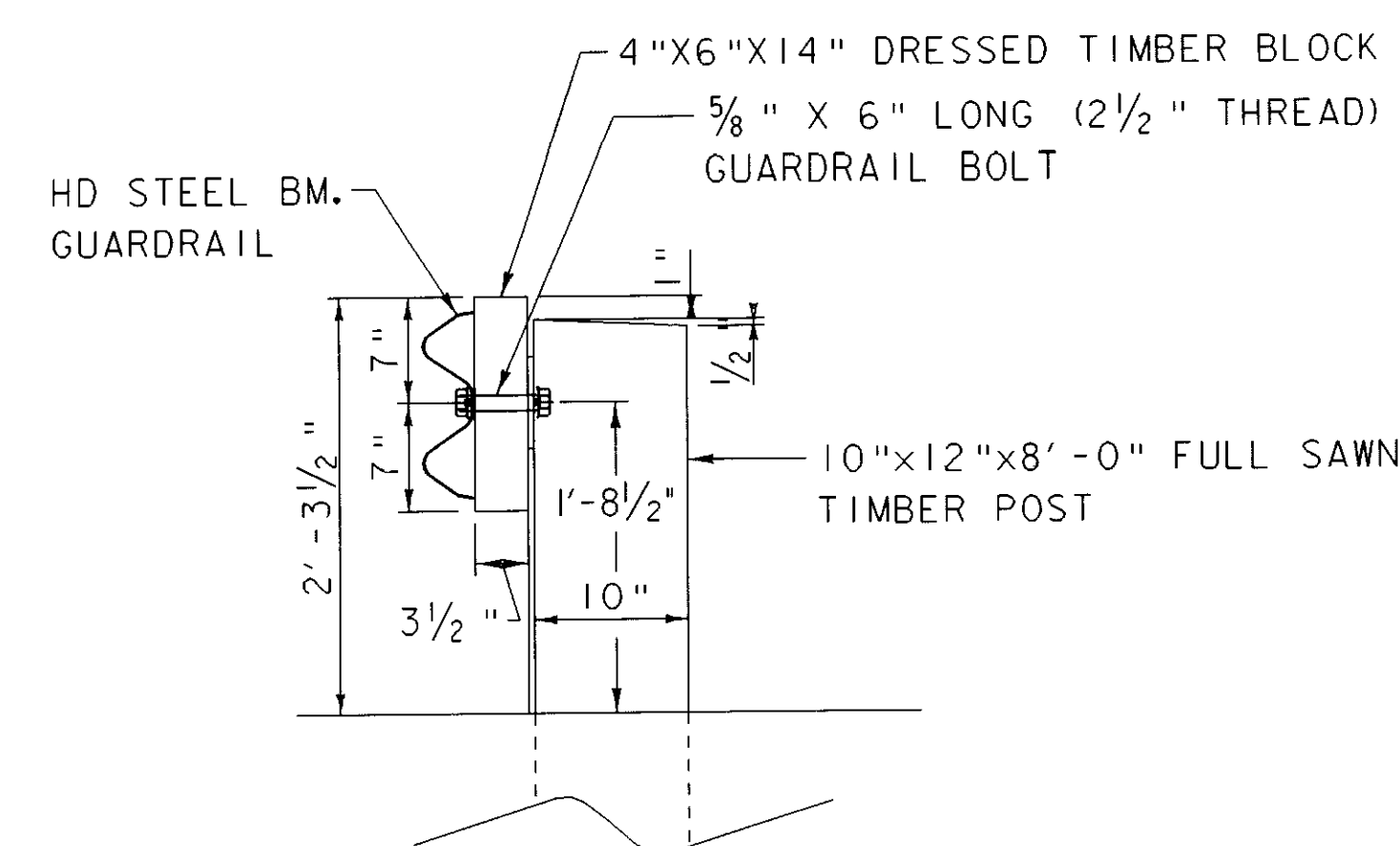


N. T. S.



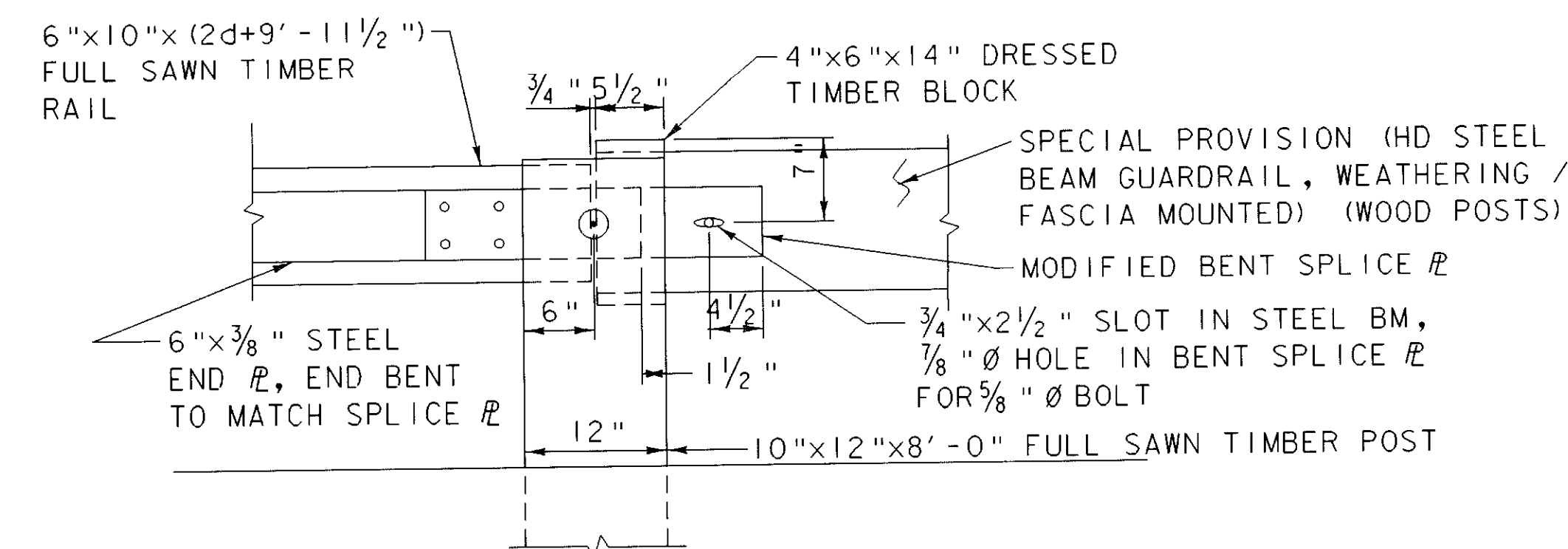
STEEL RAIL DETAIL 2

6"x3/8"x4'-9"  
SCALE: 1 1/2" = 1'-0"



SECTION @ STEEL BEAM  
RAIL CONNECTION \*\*

SCALE: 1" = 1'-0"



POST CONNECTION ELEVATION 2 \*\*

SCALE: 1" = 1'-0"

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

|                              |                            |                        |
|------------------------------|----------------------------|------------------------|
| PROJECT NAME: MONTGOMERY     | FILE NAME: s04j148d+tl.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

## ~ 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 815-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.

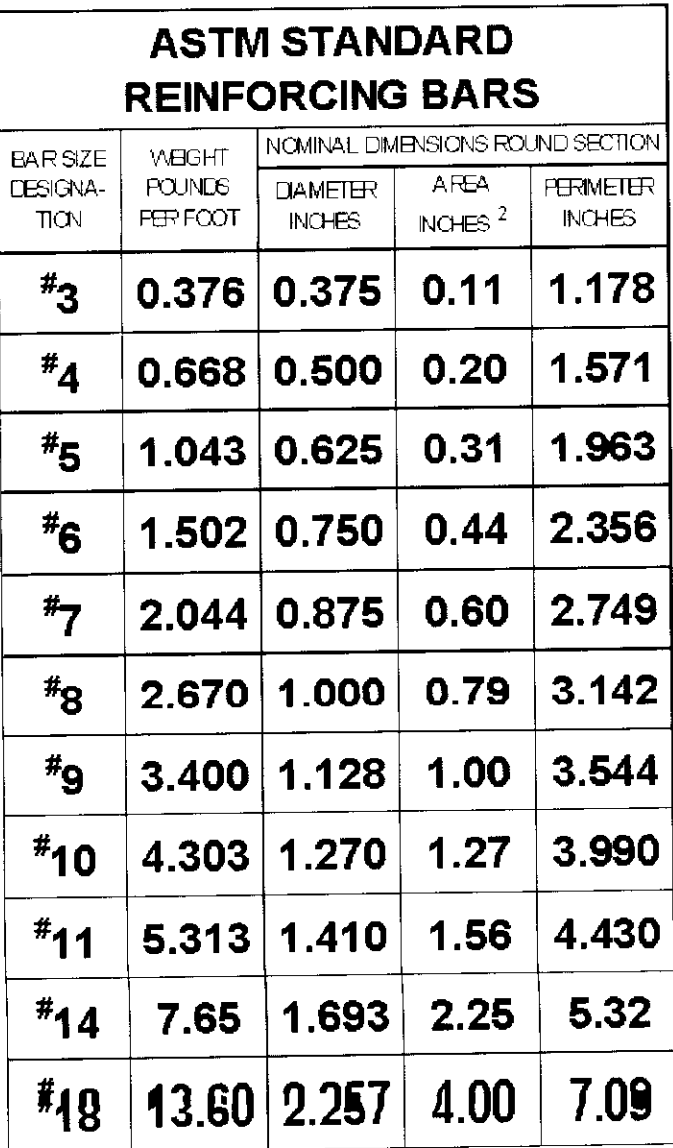
WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.

▲ 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



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

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                                                                                                                                         |
| S     | Sample                                                                                                                                               |
| N     | Standard Penetration Test<br>Blow Count Per Foot For:<br>2" O. D. Sampler<br>1 3/8" I. D. Sampler<br>Hammer Weight Of 140 Lbs.<br>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 |        |      |              |
|-------|--------|------|--------------|
| blk   | Black  | pnk  | Pink         |
| bl    | Blue   | pu   | Purple       |
| brn   | Brown  | rd   | Red          |
| dk    | Dark   | tn   | Tan          |
| gry   | Gray   | wh   | White        |
| gn    | Green  | yel  | Yellow       |
| lt    | Light  | mltc | Multicolored |
| or    | Orange |      |              |

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 > 0.0787" (#10 sieve).

**SAND** - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

**SILT** - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

**CLAY** - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

**VARVED** - Alternate layers of silt and clay.

**HARDPAN** - Extremely dense soil, cemented layer, not softened when wet.

**MUCK** - Soft organic soil (containing > 10% organic material).

**MOISTURE CONTENT** - Weight of water divided by dry weight of soil.

**FLOWING SAND** - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

**STRIKE** - Angle from magnetic north to line of intersection of bed with a horizontal plane.

**DIP** - Inclination of bed with a horizontal plane.

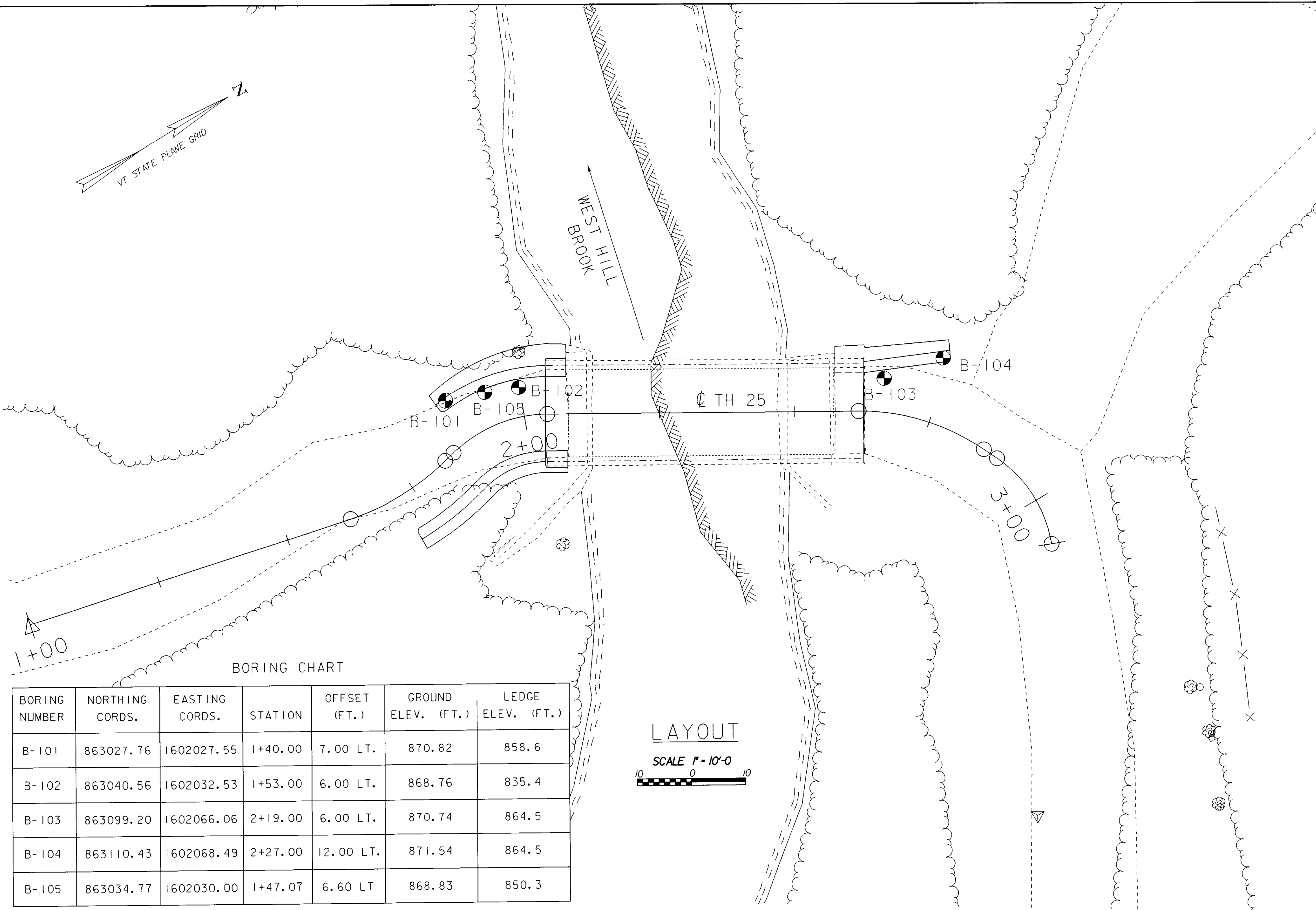
GENERAL NOTES

- 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.

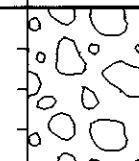
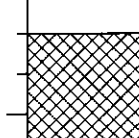
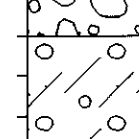
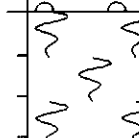
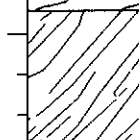
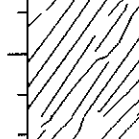
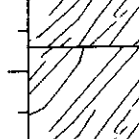
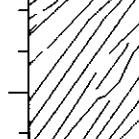
PROJECT NAME: MONTGOMERY  
PROJECT NUMBER: BHO 1448 (37)

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

PLOT DATE: 21-MAY-2008  
DRAWN BY: J. TREI  
CHECKED BY: J. WEAVER  
SHEET 27 OF 33

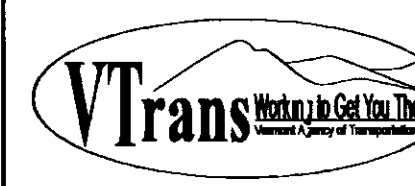
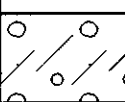
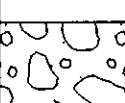
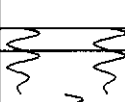
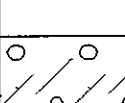
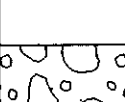
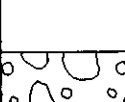
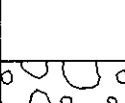


S. W. WING  
EL. BOT. FTG. 863.8 ±

|                                        |                                                                                     |                                                                                                                                                                                                                                                                                                                 | STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH SECTION<br>SUBSURFACE INFORMATION |                                                                                                                                                    |               | BORING NUMBER: B-101<br>SHEET 1 of 1<br>DATE STARTED 1/11/07<br>DATE COMPLETED 1/16/07 |                        |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------|------------------------|--|
| PROJECT NAME: MONTGOMERY<br>SITE NAME TH-25<br>STATION 1+40.00<br>OFFSET -7.00<br>VTSPG: N 863027.76 ft E 1602027.55 ft |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        | PROJECT NUMBER BHO 1448(37)<br>SITE NUMBER: BR-32<br>GROUND ELEVATION 870.82 ft<br>GROUNDWATER DEPTH: No Water Found<br>PROJECT PIN NUMBER: 04J148 |               |                                                                                        |                        |  |
| BORING CREW<br>CREW CHIEF GARROW<br>DRILLER GARROW<br>LOGGER CARRIERE                                                   |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        | BORING RIG: SMALL SKID RIG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL<br>CHECKED BY: DLG                                               |               |                                                                                        |                        |  |
| DEPTH<br>(ft)                                                                                                           | SYMBOL                                                                              | CLASSIFICATION OF MATERIALS<br>(Description)                                                                                                                                                                                                                                                                    | BLOWS<br>PER<br>FOOT                                                                                   | M C<br>(%)                                                                                                                                         | GRAVEL<br>(%) | SAND<br>(%)                                                                            | FINES<br>(%)           |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 | RUN                                                                                                    | REC<br>(%)                                                                                                                                         | ROD<br>(%)    | Dip<br>(deg)                                                                           | Drill Rate<br>(min/ft) |  |
| 2.5                                                                                                                     |    | Visual Class, A-1-b, SaGr, brn, Moist, Rec = 0.5 ft, Insufficient sample for testing                                                                                                                                                                                                                            | 6                                                                                                      | 12.7                                                                                                                                               |               |                                                                                        |                        |  |
|                                                                                                                         |                                                                                     | 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                                                                                                      |                                                                                                                                                    |               |                                                                                        |                        |  |
|                                                                                                                         |                                                                                     | A-1-b, SiGrSa, brn, MTW, Rec = 0.6 ft, BXDC, Cleaned out casing                                                                                                                                                                                                                                                 | 4                                                                                                      | 24.3                                                                                                                                               | 36.0          | 39.0                                                                                   | 25.0                   |  |
| 7.5                                                                                                                     |   | 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                                                                                                      | Top of Bedrock @                                                                                                                                   | 12.2 ft       |                                                                                        |                        |  |
| 15.0                                                                                                                    |  | 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 degees, Moderately hard, BXMDC, 12.2 ft - 17.2 ft, Rec = 4.15 ft | 1                                                                                                      | 83                                                                                                                                                 | 68            |                                                                                        | 9                      |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 9                      |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 7                      |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 8                      |  |
| 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 degees, Moderately hard, BXMDC, 17.2 ft - 22.2 ft, Rec = 4.9 ft  | 2                                                                                                      | 98                                                                                                                                                 | 65            |                                                                                        | 6                      |  |
| 20.0                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 8                      |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 8                      |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 9                      |  |
|                                                                                                                         |                                                                                     |                                                                                                                                                                                                                                                                                                                 |                                                                                                        |                                                                                                                                                    |               |                                                                                        | 8                      |  |
| 22.5                                                                                                                    |                                                                                     | Hole stopped @ 22.2 ft                                                                                                                                                                                                                                                                                          |                                                                                                        |                                                                                                                                                    |               |                                                                                        |                        |  |

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

S. W. WING  
EL. BOT. FTG. 859.0 ±

|                                      |                                                                                       | STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH SECTION<br>SUBSURFACE INFORMATION                                                                                                                                       |                      | BORING NUMBER: B-102<br>SHEET 1 of 1<br>DATE STARTED 1/18/07<br>DATE COMPLETED 1/22/07 |               |              |                          |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------------|---------------|--------------|--------------------------|
| PROJECT NAME: MONTGOMERY<br>SITE NAME TH-25<br>STATION 1+53.00<br>OFFSET -6.00<br>VTSPG. N 863040.56 ft E 1602032.53 ft |                                                                                       | PROJECT NUMBER BHO 1448(37)<br>SITE NUMBER: BR-32<br>GROUND ELEVATION 868.76 ft<br>GROUNDWATER DEPTH: No Water Found<br>PROJECT PIN NUMBER: 04J148                                                                                           |                      |                                                                                        |               |              |                          |
| BORING CREW<br>CREW CHIEF GARROW<br>DRILLER GARROW<br>LOGGER CARRIERE                                                   |                                                                                       | BORING RIG. SMALL SKID RIG<br>BORING TYPE WASH BORE<br>SAMPLE TYPE SPLIT BARREL<br>CHECKED BY: DLG                                                                                                                                           |                      |                                                                                        |               |              |                          |
| DEPTH<br>(ft)                                                                                                           | SYMBOL                                                                                | CLASSIFICATION OF MATERIALS<br>(Description)                                                                                                                                                                                                 | BLOWS<br>PER<br>FOOT | M.C.<br>(%)                                                                            | GRAVEL<br>(%) | SAND<br>(%)  | FINES<br>(%)             |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              | RUN                  | REC<br>(%)                                                                             | ROD<br>(%)    | Dip<br>(deg) | Drill Rate<br>(min/ft)   |
| 5                                                                                                                       |    | A-2-4, GrSiSa, brn, Moist, Rec = 1.3 ft                                                                                                                                                                                                      | 6                    | 26.5                                                                                   | 24.4          | 41.9         | 33.7                     |
|                                                                                                                         |                                                                                       | Field Note , BXDC, Cleaned out casing                                                                                                                                                                                                        |                      |                                                                                        |               |              |                          |
| 10                                                                                                                      |    | Field Class , A-1-b, Sa Gr, brn, Moist, Rec = 0.3 ft, Insufficient sample for testing                                                                                                                                                        | 15                   |                                                                                        |               |              |                          |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              |                      |                                                                                        |               |              |                          |
| 15                                                                                                                      |    | 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                                                                                                                                                    |                      |                                                                                        |               |              |                          |
| 20                                                                                                                      |  | 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                     |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              |                      |                                                                                        |               |              |                          |
| 25                                                                                                                      |  | 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                      |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              |                      |                                                                                        |               |              |                          |
| 30                                                                                                                      |  | A-1-a, SaGr with little Wood material, gry-brn, MTW, Rec = 0.8 ft                                                                                                                                                                            | 12                   | 24.0                                                                                   | 62.0          | 31.5         | 6.5                      |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              |                      |                                                                                        |               |              |                          |
| 35                                                                                                                      |  | Field Class , A-1-a, Gr, gry, Moist, Rec = 0.1 ft, Insufficient sample for testing                                                                                                                                                           | 8                    | 10.7                                                                                   |               |              |                          |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              |                      |                                                                                        |               |              |                          |
| 40                                                                                                                      |  | 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 degees, Moderately hard, BXMDC, 33.3 ft - 38.3 ft, Rec = 4.0 ft | 1                    | 80                                                                                     | 78            | 33.3 ft      | 13<br>9<br>9<br>10<br>10 |
|                                                                                                                         |                                                                                       |                                                                                                                                                                                                                                              |                      |                                                                                        |               |              |                          |
|                                                                                                                         |                                                                                       | 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<br>9                   |
|                                                                                                                         |                                                                                       | Hole stopped @ 40.3 ft                                                                                                                                                                                                                       |                      |                                                                                        |               |              |                          |

LOG OF BORING MONTGOMERY BHO 1448(37) GPJ VT DOT DOT 3/26/07

LOG OF BORING: MONTGOMERY, BHO 1448(37) (P.1) VT ADT GDT 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

N. W. WING  
EL. BOT. FTG. 864.54±

|                                                                                                                        |        |                                                                                                                                                                                                                                              |                |                                                                                                                                                  |            |           |                     |  |
|------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|---------------------|--|
|                                       |        | STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH SECTION<br>SUBSURFACE INFORMATION                                                                                                                                       |                | BORING NUMBER B-103<br>SHEET 1 of 1<br>DATE STARTED 2/12/07<br>DATE COMPLETED 2/20/07                                                            |            |           |                     |  |
| PROJECT NAME MONTGOMERY<br>SITE NAME TH-25<br>STATION 2+19.00<br>OFFSET -6.00<br>VTSPG. N 863099 20 ft E 1602066.06 ft |        |                                                                                                                                                                                                                                              |                | PROJECT NUMBER BHO 1448(37)<br>SITE NUMBER BR-32<br>GROUND ELEVATION 870.74 ft<br>GROUNDWATER DEPTH: 5.5 ft 2/21/07<br>PROJECT PIN NUMBER 04J148 |            |           |                     |  |
| BORING CREW<br>CREW CHIEF GARROW<br>DRILLER GARROW<br>LOGGER CARRIERE                                                  |        |                                                                                                                                                                                                                                              |                | BORING RIG: SMALL SKID RIG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL<br>CHECKED BY: DLG                                             |            |           |                     |  |
| DEPTH (ft)                                                                                                             | SYMBOL | CLASSIFICATION OF MATERIALS (Description)                                                                                                                                                                                                    | BLOWS PER FOOT | M.C (%)                                                                                                                                          | GRAVEL (%) | SAND (%)  | FINES (%)           |  |
|                                                                                                                        |        |                                                                                                                                                                                                                                              | RUN            | REC (%)                                                                                                                                          | ROD (%)    | Dip (deg) | Drill Rate (min/ft) |  |
| 25                                                                                                                     |        | Field Note, BXDC, Cleaned out casing<br>Classification, A-2-4, Si Gr, brn, Moist, Rec = 0.6 ft, Insufficient sample for testing                                                                                                              | R              | 13.0                                                                                                                                             |            |           |                     |  |
| 50                                                                                                                     |        | Field Note, BXDC, Cleaned out casing<br>Classification, A-2-4, Si Gr, brn, Moist, Rec = 0.9 ft, Insufficient sample for testing                                                                                                              | 29             | 23.9                                                                                                                                             |            |           |                     |  |
| 75                                                                                                                     |        | Field Class, Broken Rock, Rec = 0.2 ft<br>Gray complexly folded quartz rich schist with phyllite kink bands. Rock is fresh. Competent. Dip of foliation varies from 20 to 90 degrees. Moderately hard, BXMDC, 6.2 ft - 11.2 ft, Rec = 4.7 ft | R 1            | Top of Bedrock @ 94                                                                                                                              | 94         | 6.2 ft    | 6                   |  |
| 100                                                                                                                    |        |                                                                                                                                                                                                                                              |                |                                                                                                                                                  |            |           | 6<br>8<br>8<br>5    |  |
| 125                                                                                                                    |        | Hole stopped @ 11.2 ft                                                                                                                                                                                                                       |                |                                                                                                                                                  |            |           |                     |  |
| 150                                                                                                                    |        |                                                                                                                                                                                                                                              |                |                                                                                                                                                  |            |           |                     |  |
| 175                                                                                                                    |        |                                                                                                                                                                                                                                              |                |                                                                                                                                                  |            |           |                     |  |

LOG OF BORING MONTGOMERY BHO 1448(37) GPJ VT AOT G01 3/26/07

N. W. WING  
EL. BOT. FTG. 864.54±

|                                                                                                                         |        |                                                                                                                                                                                                                                                                    |                |                                                                                                                                                |            |           |                        |  |
|-------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|------------------------|--|
|                                      |        | STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH SECTION<br>SUBSURFACE INFORMATION                                                                                                                                                             |                | BORING NUMBER B-104<br>SHEET 1 of 1<br>DATE STARTED 2/06/07<br>DATE COMPLETED: 2/06/07                                                         |            |           |                        |  |
| PROJECT NAME MONTGOMERY<br>SITE NAME TH-25<br>STATION 2+27.00<br>OFFSET -12.00<br>VTSPG. N 863110 43 ft E 1602068.49 ft |        |                                                                                                                                                                                                                                                                    |                | PROJECT NUMBER BHO 1448(37)<br>SITE NUMBER BR-32<br>GROUND ELEVATION 871.54 ft<br>GROUNDWATER DEPTH Hole caved in<br>PROJECT PIN NUMBER 04J148 |            |           |                        |  |
| BORING CREW<br>CREW CHIEF: GARROW<br>DRILLER GARROW<br>LOGGER CARRIERE                                                  |        |                                                                                                                                                                                                                                                                    |                | BORING RIG: SMALL SKID RIG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL<br>CHECKED BY: DLG                                           |            |           |                        |  |
| DEPTH (ft)                                                                                                              | SYMBOL | CLASSIFICATION OF MATERIALS (Description)                                                                                                                                                                                                                          | BLOWS PER FOOT | M.C (%)                                                                                                                                        | GRAVEL (%) | SAND (%)  | FINES (%)              |  |
|                                                                                                                         |        |                                                                                                                                                                                                                                                                    | RUN            | REC (%)                                                                                                                                        | ROD (%)    | Dip (deg) | Drill Rate (min/ft)    |  |
| 25                                                                                                                      |        |                                                                                                                                                                                                                                                                    |                |                                                                                                                                                |            |           |                        |  |
| 50                                                                                                                      |        | Field Note, BXDC, Cleaned out casing<br>Field Note, Ice, No soil recovery, BXDC, Cleaned out casing                                                                                                                                                                | 7              |                                                                                                                                                |            |           |                        |  |
| 75                                                                                                                      |        | Gray complexly folded quartz rich schist with phyllite kink bands. Moderately spaced irregular jointing. Rock is fresh while jointing is stained. Competent. Dip of foliation varies from 20 to 90 degrees. Moderately hard, BXMDC, 7.0 ft - 12.0 ft, Rec = 4.8 ft | 1              | Top of Bedrock @ 96                                                                                                                            | 77         | 7.0 ft    | 5<br>5<br>7<br>7<br>6  |  |
| 125                                                                                                                     |        | Gray complexly folded quartz rich schist with phyllite kink bands. Rock is fresh. Competent. Dip of foliation varies from 20 to 90 degrees. Moderately hard, BXMDC, 12.0 ft - 17.0 ft, Rec = 5.0 ft                                                                | 2              | 100                                                                                                                                            | 100        |           | 6<br>7<br>9<br>10<br>8 |  |
| 150                                                                                                                     |        |                                                                                                                                                                                                                                                                    |                |                                                                                                                                                |            |           |                        |  |
| 175                                                                                                                     |        | Hole stopped @ 17.0 ft                                                                                                                                                                                                                                             |                |                                                                                                                                                |            |           |                        |  |
|                                                                                                                         |        | DRILLER'S NOTES<br>1 Hole caved in at 6.0 feet                                                                                                                                                                                                                     |                |                                                                                                                                                |            |           |                        |  |

LOG OF BORING MONTGOMERY BHO 1448(37) GPJ VT AOT G01 3/26/07

S.W. WING  
EL. BOT. FTG. 860.4 ±

|                           |                        |
|---------------------------|------------------------|
| 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 3            | SHEET 30 OF 33         |

# TRAFFIC SIGN SUMMARY SHEET

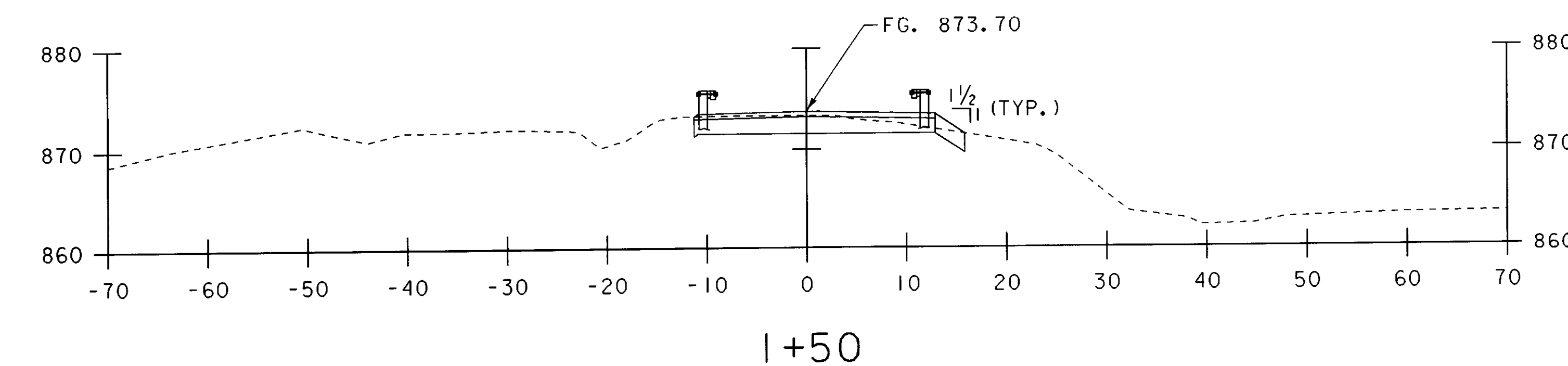
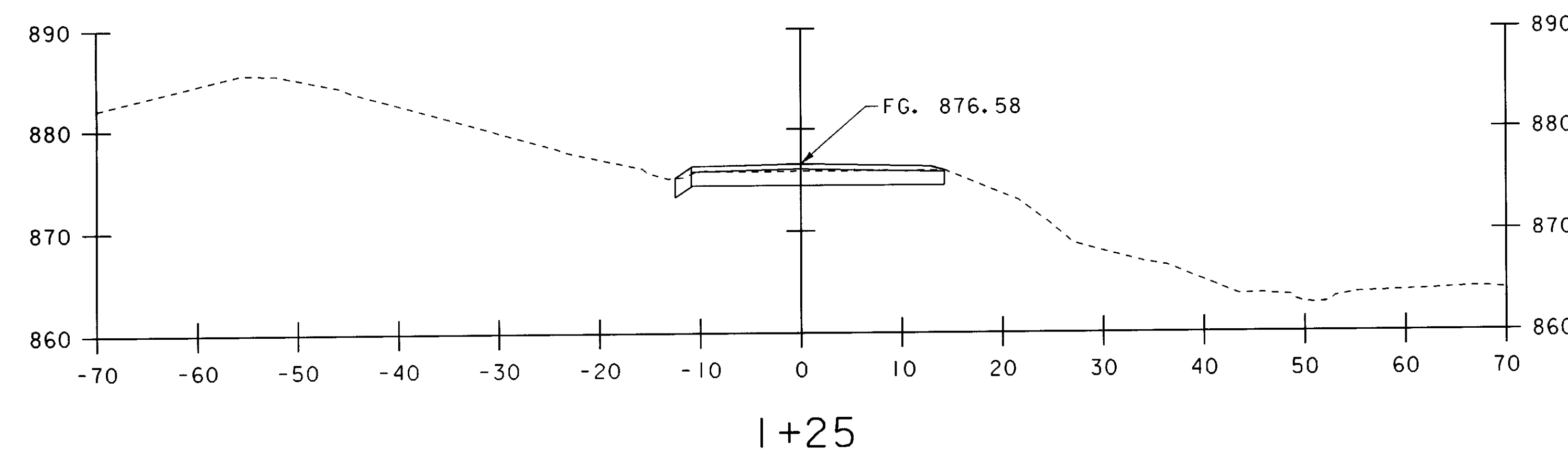
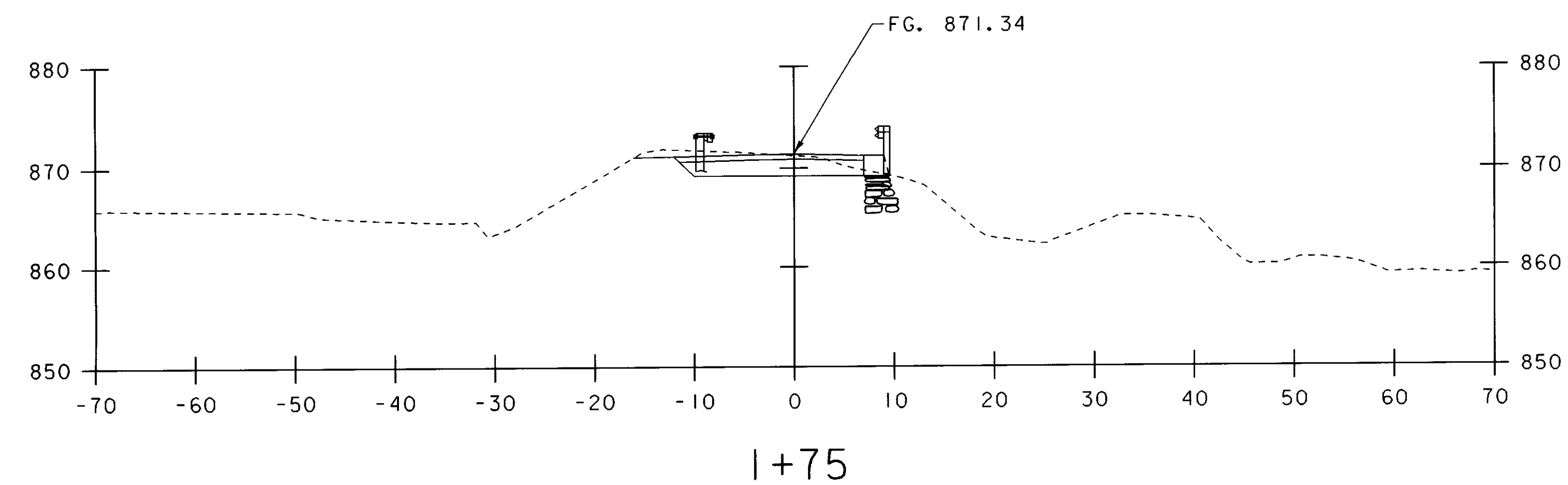
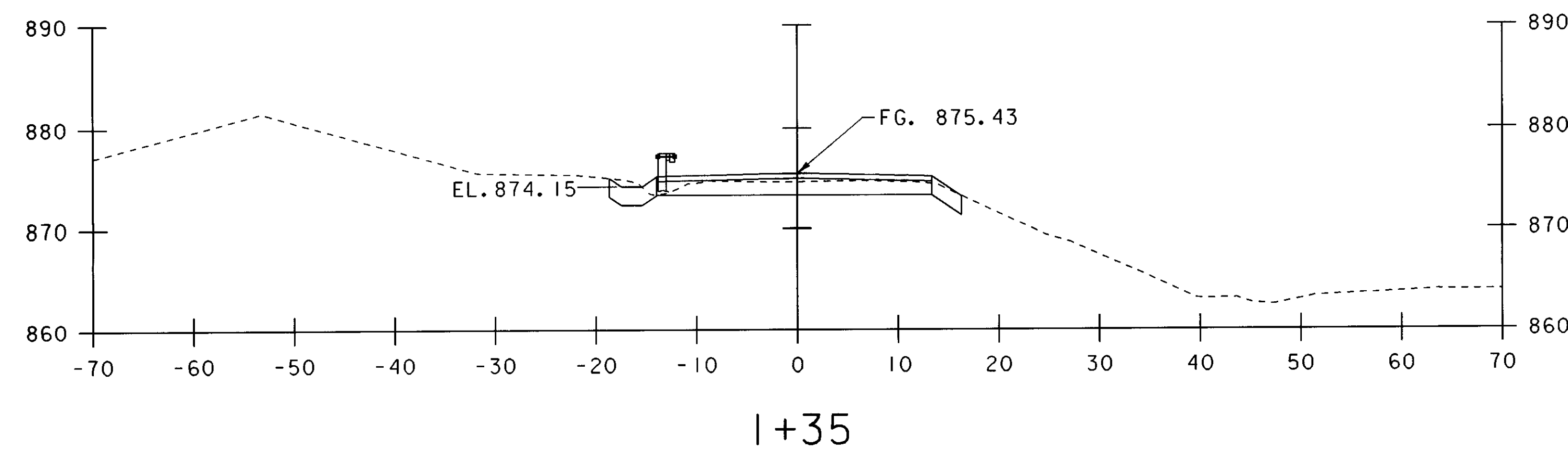
Diagram of a diamond-shaped sign with the text "ONE LANE BRIDGE". The sign is shown with various dimensions labeled: A (overall height), B (overall width), C (height of the top border), D (width of the top border), E (height of the bottom border), F (width of the bottom border), G (height of the left border), H (width of the left border), I (height of the right border), J (width of the right border), K (height of the center text area), L (width of the center text area), M (height of the center text area), N (width of the center text area), O (height of the center text area), P (width of the center text area), Q (height of the center text area), R (width of the center text area), S (height of the center text area), T (width of the center text area), U (height of the center text area), V (width of the center text area), W (height of the center text area), X (width of the center text area), Y (height of the center text area), Z (width of the center text area).

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

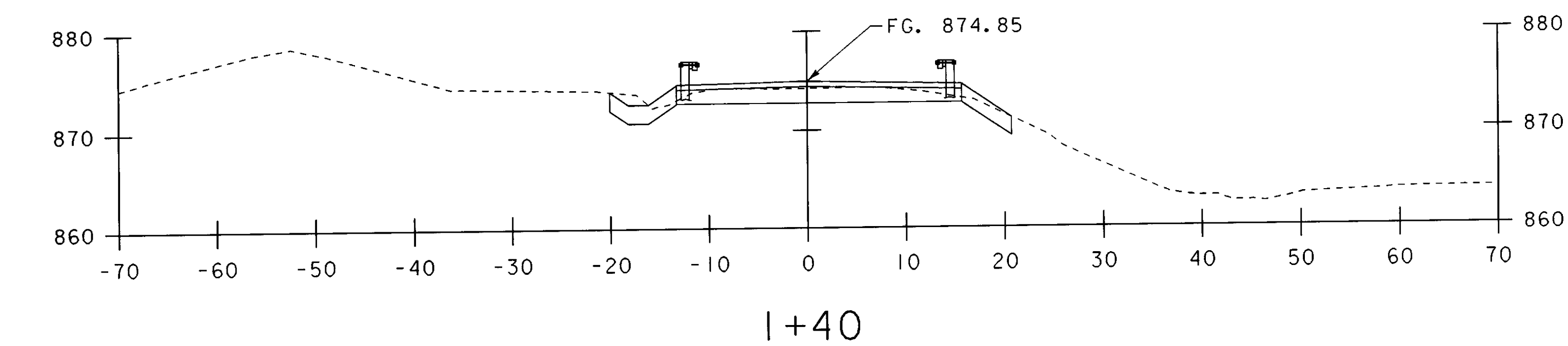
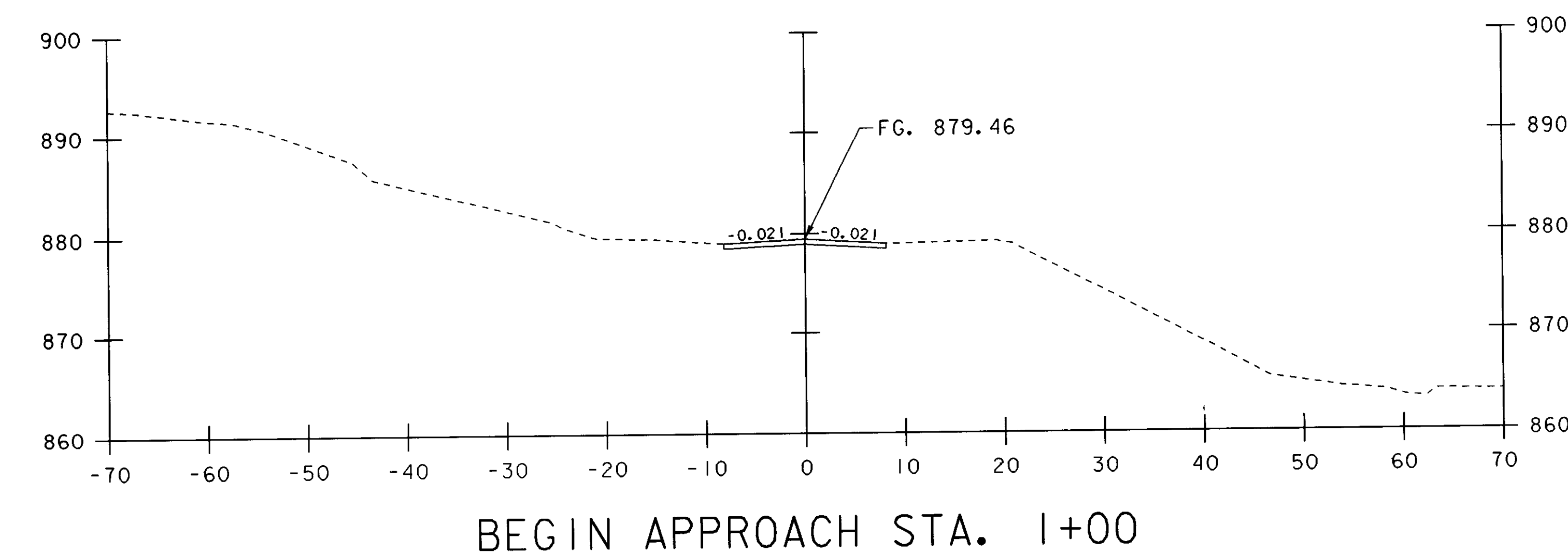
NOTE: SIGNS AND POSTS SHOWN ON THIS SHEET  
SHALL BE PAID FOR UNDER ITEM 675.20, TRAFFIC SIGNS,  
TYPE A, AND ITEM 675.301, FLANGED CHANNEL SIGN POST.

[illegible]

|                                             |            |                        |
|---------------------------------------------|------------|------------------------|
| PROJECTS:                                   | MONTGOMERY | BHO 1448 (37)          |
| DESIGN FILE NAME: 04j148\Str+s04j148\ss.dgn |            |                        |
| IPARM FILE NAME: s04j148\ss.i               |            | PLOT DATE: 21-MAY-2000 |
| DESIGNED BY: J. WEAVER                      |            | DRAWN BY: C. WEEER     |
|                                             |            | CHECKED BY: J. WEAVER  |
| TRAFFIC SIGN SUMMARY SHEET                  |            | SHEET: 31 OF 33        |



END APPROACH & BEGIN PROJECT STA. I+23.32

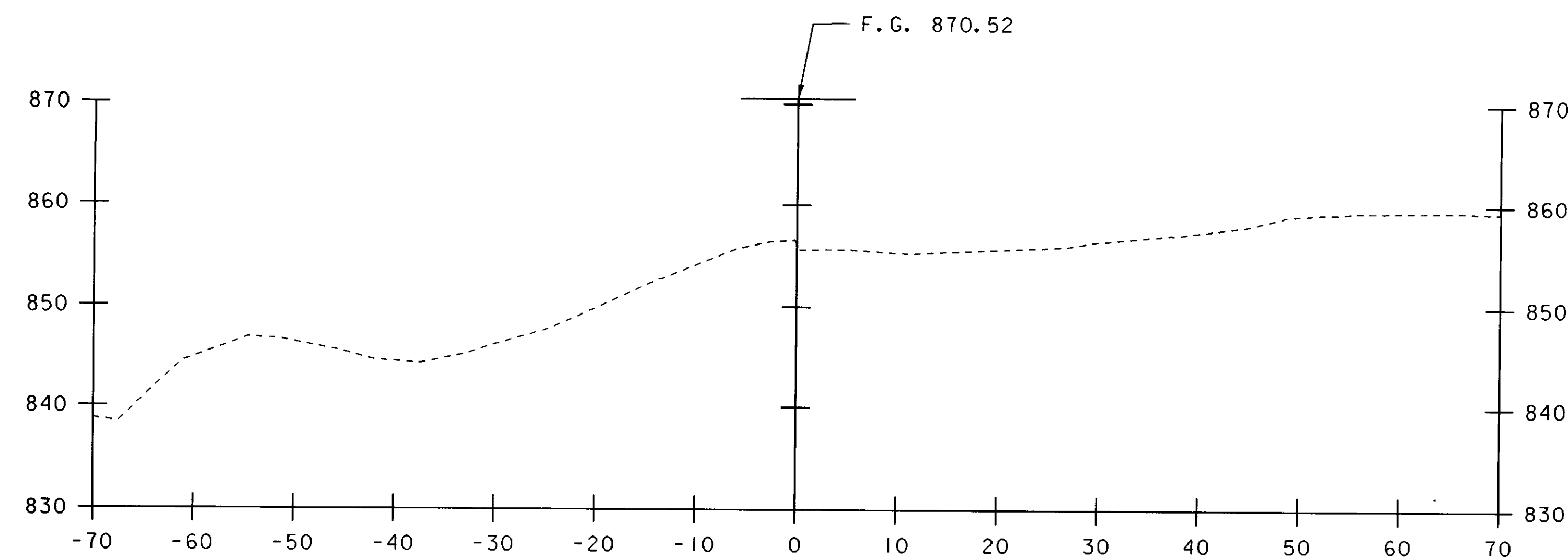


SCALE 1" = 10'-0"  
10 0 10

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

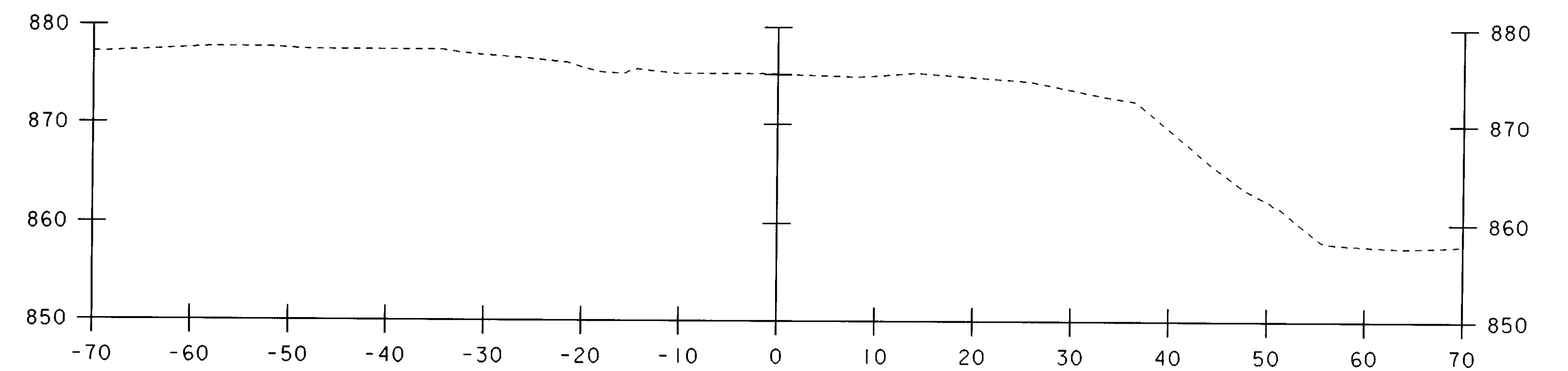
FILE NAME: s04j148xs  
PROJECT LEADER: J. WEAVER  
DESIGNED BY: J. WEAVER  
ROADWAY CROSS SECTIONS

PLOT DATE: 21-MAY-2008  
DRAWN BY: J. TREI  
CHECKED BY: J. WEAVER  
SHEET 32 OF 33



2+25

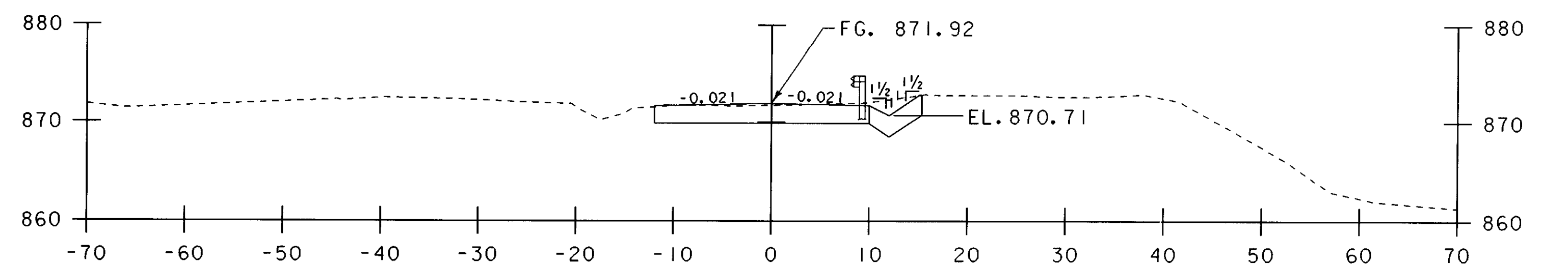
BEGIN BRIDGE STA. 2+04.0 ±



3+00

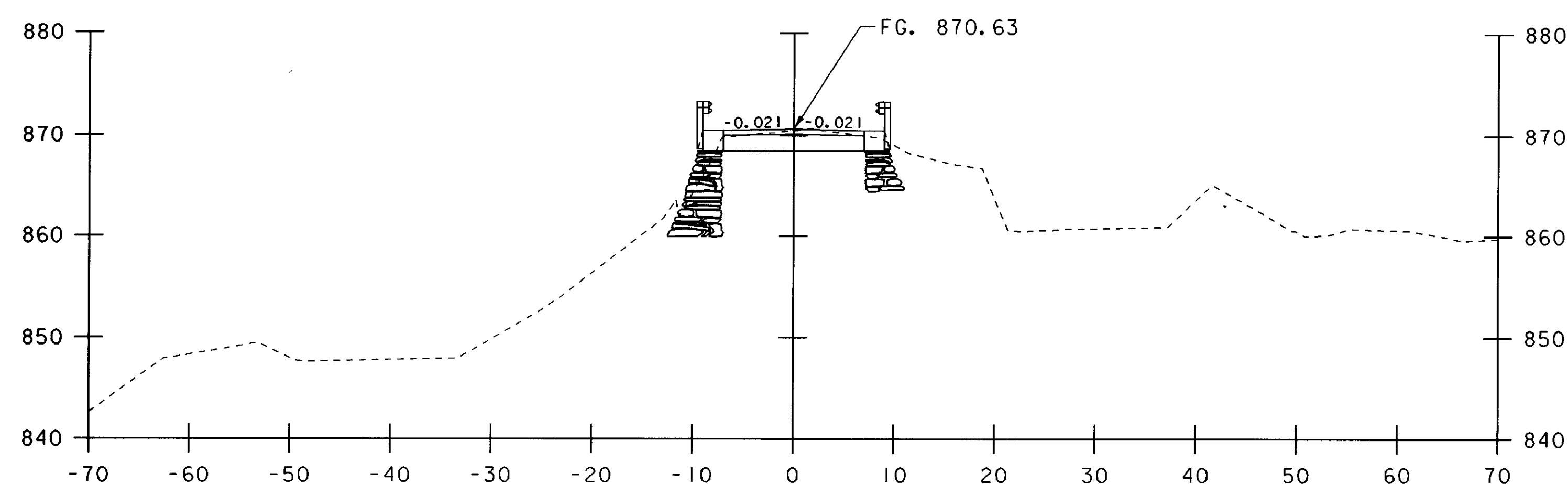
END APPROACH STA. 2+89.32

END PROJECT 2+79.32 & BEGIN APPROACH

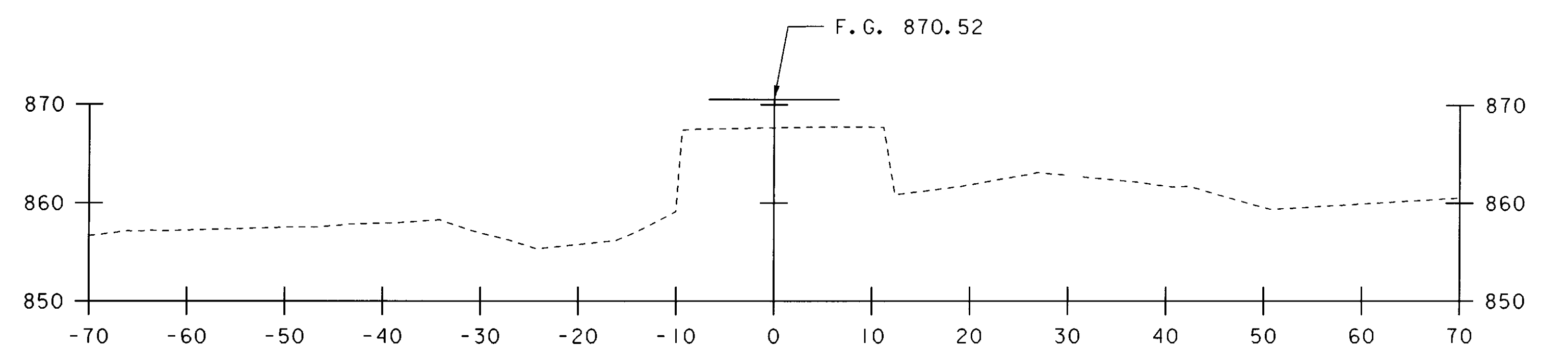


2+75

END BRIDGE STA. 2+62.8 ±



2+00



2+50

SCALE 1" = 10'-0"

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

FILE NAME: s04j148xs  
PROJECT LEADER: J. WEAVER  
DESIGNED BY: J. WEAVER  
ROADWAY CROSS SECTIONS

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