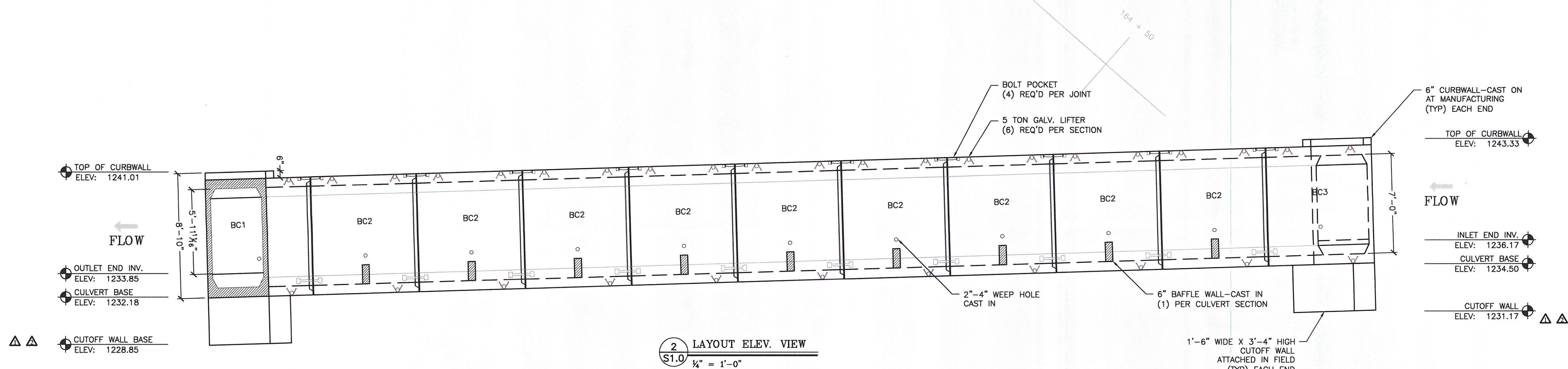
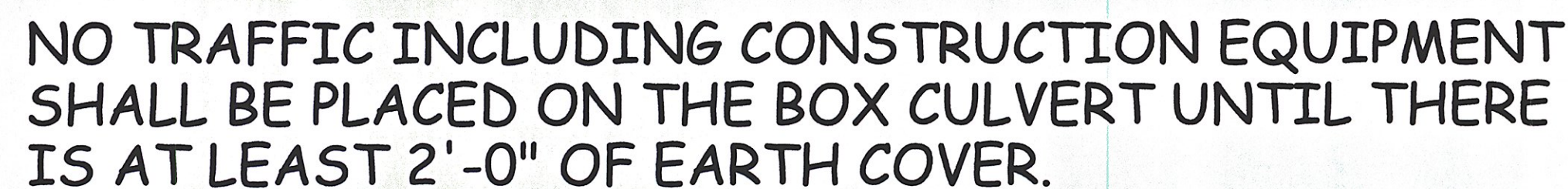


S3.0 - CUTOFF WALL AND BAFFLE DETAILS



1. DO NOT SCALE FROM THE DRAWINGS. IF A REQUIRED DIMENSION IS NOT PROVIDED, CONSULT THE ENGINEER.
2. IF ANY OF THE WORK TO BE DONE AS SHOWN ON THE DRAWINGS DOES NOT CORRESPOND WITH THE EXISTING FIELD CONDITIONS, CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
3. FIELD VERIFY ALL ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES CONSULT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
4. SHOP DRAWINGS WERE DEVELOPED USING THE FOLLOWING RESOURCES FOR THE CONTRACT:
STATE OF VERMONT AGENCY OF TRANSPORTATION, CONTRACT PLANS FOR:
CABOT - DANVILLE FEGG F 028-036 C/I U.S. ROUTE 2,
SHEETS 48 TO 53 OF 250 DATED 13-07-2010, WITH REVISION DATE OF NONE.
SHEETS 101 TO 106 OF 250 DATED 10/25/2010, WITH REVISION DATE OF NONE.
SHEETS 108 TO 111 OF 250 DATED 10/25/2010, WITH REVISION DATE OF NONE.

1. CYLINDER SAMPLING AND CURING:
A. A MINIMUM OF TWO (2) CYLINDERS PER LOT WILL BE MADE IN ACCORDANCE WITH ASTM C31. CYLINDERS WILL BE TESTED IN ACCORDANCE WITH ASTM C39.
B. AIR CONTENT (ASTM C231), SPREAD PER SCC GUIDELINES, AND TEMPERATURE TESTS WILL BE TAKEN INITIALLY FOR FIRST LOAD. NOT TO EXCEED TEN (10) CUBIC YARDS.

2. CYLINDER BREAKS:
A. FOR EARLY STRENGTH VERIFICATION, CYLINDERS MAY BE BROKEN AT ANY TIME UP TO 28 DAYS AFTER CASTING. IF THE AVERAGE STRENGTH OF TWO (2) CYLINDERS MEETS OR EXCEEDS THE REQUIRED 28 DAY STRENGTH (WITH EACH CYLINDER HAVING A MINIMUM OF 95% OF THE REQUIRED 28 DAY STRENGTH), THE LOT SHALL BE ACCEPTED FOR STRENGTH.

SLUMP CONE: STANDARD 8" BASE, 4" AT RIM, 12" IN HEIGHT MEASURED IN ACCORDANCE WITH SCC GUIDELINES

SCALES FOR UNIT WEIGHT: MEASURED IN ACCORDANCE WITH ASTM C143 100 LBS. CAPACITY CALIBRATED TO THE NEAREST 1/10TH POUND YEARLY

4. CONCRETE TESTING AND AIR METER CALIBRATION WILL BE DONE BY PLANT PERSONNEL (ACI GRADE I CERTIFIED) ALL TESTING PRODUCERS WILL BE OBSERVED BY NEW HAMPSHIRE INSPECTORS OR AUTHORIZED REPRESENTATIVES.

1. DAILY PRODUCTION WILL PROCEED AT THE RATE OF APPROXIMATELY ONE CULVERT SECTION EVERY DAY IN ONE LOT. UNIT WILL BE CAST IN A SIMILAR SEQUENCE AS IT IS TO BE TRANSPORTED AND FIELD ERECTED AS ORDERED BY THE CONTRACTOR. A DETAILED PLANT PRODUCTION SCHEDULE WILL BE KEPT AT THE PRECASTER'S FABRICATING PLANT AND MADE AVAILABLE TO INSPECTORS AS REQUIRED.

1. APPLICABLE CODES: VAOT STANDARD SPECIFICATION FOR CONSTRUCTION, 2006 AND LATEST REVISIONS; CONCRETE STEEL REINFORCING INSTITUTE; BRIDGE DESIGN SPECIFICATIONS, AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 17TH EDITION, 2002 WITH LATEST INTERIM REVISIONS.

2. DESIGN NOTES (TO BE VERIFIED BY E.O.R.):
- LIVE LOAD: AASHTO HS-25
 - DESIGN EARTH FILL: 2' to 14'-6"
 - UNIT WEIGHT OF SOIL: 140 PCF
 - 33° SOIL FRICTION ANGLE (BACKFILL).
 - 38° SOIL FRICTION ANGLE (SOIL BELOW FOOTING).
 - 0.40 SLIDING COEFFICIENT.

4. THESE PLANS ARE FOR SHOP PRODUCTION AND ARE NOT INTENDED TO REPLACE THE CONSTRUCTION REQUIREMENTS OF THE CONTRACT PLANS.

1. ALL CONCRETE SHALL COMPLY WITH VAOT STANDARD SPECIFICATIONS 540.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60, UNCOATED. ALL BARS ARE TO BE BENT COLD.
3. SUPPORTS FOR REINFORCEMENT SHALL COMPLY WITH CRSI RECOMMENDATIONS.
4. CASTING DATE SHALL BE SHOWN ON EACH PIECEMARK.

1. THIS SECTION APPLIES TO ALL SECTIONS CAST IN EACH RESPECTIVE LOT. AS SOON AS PRACTICAL AFTER CASTING, THE PIECES WILL BE COVERED AND CURED. UNITS SHALL BE CURED UNTIL THEY REACH SUFFICIENT STRENGTH TO BE HANDLED WITHOUT DAMAGE.

EACH PIECE WILL HAVE THE FOLLOWING STENCILED ONTO IT:

1. PIECEMARK NUMBER
2. DATE OF CASTING
3. LOT NUMBER - IF APPLICABLE
4. VT PROJECT NO. (FEGC F 028-3(26) C/I
5. MICHIE CORPORATION, INC.
6. CONTRACTORS NAME

TOLERANCES: PER AASHTO M259

1. REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A-615M GRADE 60 DEFORMED STEEL BARS FOR CONCRETE REINFORCING. ALL BARS SHALL BE BENT COLD

UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS SHALL BE A MINIMUM OF

BAR SIZE	SPLICE LENGTH (in.)
# 4	16
# 5	20
# 6	24

2. ALL EXPOSED EDGES EXCEPT WHERE NOTED SHALL BE FILLETED 1". ALL EXPOSED SURFACES OF THE BOX CULVERT AND HEADWALL SHALL BE TREATED WITH SILANE-SILOXANE BY OTHERS.
3. ALL BACKFILL WITHIN THE LIMITS FOR "GRANULAR BACKFILL FOR STRUCTURES" SHOWN IN THE CONTRACT PLANS SHALL COMPLY WITH VAOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 704.08, GRANULAR BACKFILL FOR STRUCTURES. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH VAOT STANDARD SPECIFICATIONS SECTION 204.
4. EACH SECTION SHALL BE PROVIDED WITH BOLT POCKETS FOR ATTACHMENT TO ADJACENT SECTIONS. 7/8" DIA. GALVANIZED THREADED ROD, WASHERS AND NUTS SHALL BE PROVIDED FOR ASSEMBLY IN THE FIELD. 1" x 1" CLOSED CELL NEOPRENE JOINT SEALANT BY PRESS-SEAL GASKET CORPORATION SHALL BE PROVIDED FOR ALL JOINTS.
5. ROYSTON AHT104 24" WIDE JOINT WRAP AND PRIMER ADHESIVE SHALL BE APPLIED BY OTHERS.
6. LIFTING ANCHORS SHALL BE CAST INTO EACH SECTION FOR HANDLING.
7. HEAVIEST PICK = 28,265# (BC3 W/BAFFLE & HEADWALL).

BOX CULVERT SHALL BE FABRICATED AS FOLLOWS:

- EACH SECTION SHALL BE CAST UTILIZING A STANDARD CULVERT FORM.
- EACH SECTION SHALL BE CAST WITH "BELL" END UP. AFTER STRIPPING STRENGTH HAS BEEN ACHIEVED, PRODUCT WILL BE MOVED AWAY FROM FORM (OR FORM WILL BE JACKED AWAY FROM PRODUCT) UTILIZING OVERHEAD CRANES OR FORKLIFTS CONNECTED TO EXTERIOR LIFTING ANCHORS

-HEADWALLS & BAFFLE WALLS SHALL BE FABRICATED AS A SECONDARY CONCRETE PLACEMENT. WEATHER DEPENDING, THESE CASTINGS MAY BE PERFORMED OUT OF DOORS.

-ALL PRODUCTS SHALL BE MOVED AND ERECTED UTILIZING CHAINS OR STRAPS ATTACHED TO PROVIDED UTILITY ANCHORS.

-IT IS THE RESPONSIBILITY OF THE ERECTOR TO PROVIDE THE PROPER EQUIPMENT, CABLES AND PULLEYS TO SAFELY AND PROPERLY HANDLE THE PRECAST PRODUCTS. DETAILED HANDLING REQUIREMENTS SHALL BE COORDINATED BETWEEN THE PRECAST FABRICATOR AND ERECTORS.

CUTOFF WALLS SHALL BE FABRICATED AS FOLLOWS:

-EACH SECTION SHALL BE CAST UPSIDE DOWN UTILIZING STANDARD PANEL FORMS OR A STEEL FORM

-PRODUCT MAY BE STORED AND/OR SHIPPED EITHER UPSIDE DOWN OR RIGHT SIDE UP.

BILL OF MATERIALS					
QTY	DESCRIPTION	IN STOCK	ORDERED FROM	DATE ORDERED	DATE DELIVERED
ITEMS CAST-IN					
74	GALV. A-ANCHOR (OXFORD A-750-7)				
ITEMS FOR PRESIPPING/PREP.					
7 ROLLS	1" CLOSED CELL NEOPRENE (320 LF)				
2 GAL	RED ADHESIVE				
ITEMS TO SHIP TO THE JOB					
5 ROLLS	ROYSTON 24" JOINT WRAP				
40	7/8"x18" GALV. THREADED ROD				
160	1"Ø X 1 1/2" X 1/8" GALV. WASHER				
60	7/8" GALV. NUT				
8	(BAGS) JOINT SUPERIOR GROUT				
3	GREAT STUFF FOAM SEALANT				

APPROVED ☒ ☐
 Review and Resubmit ☐ DISAPPROVED ☐

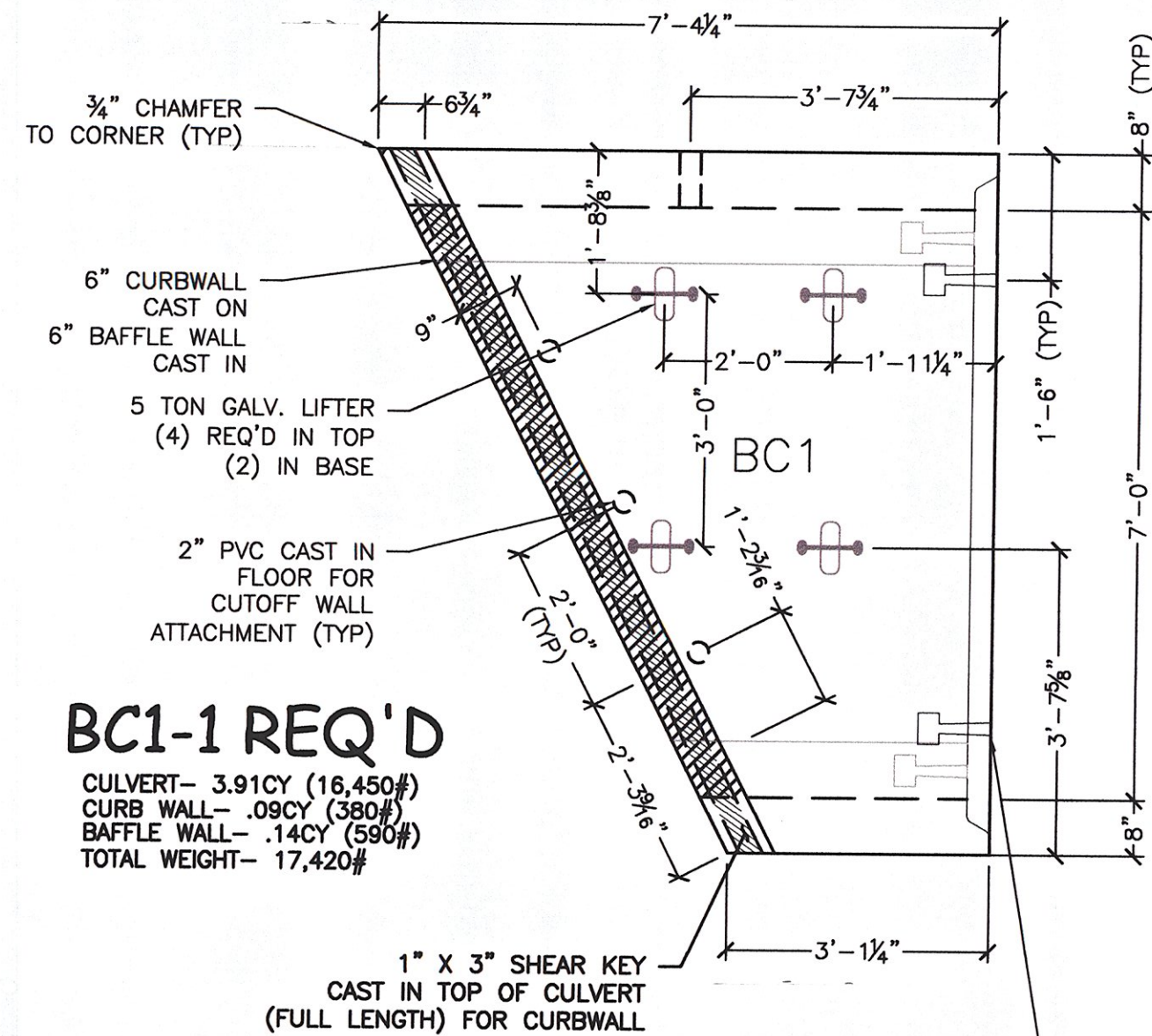
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 WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE;
 FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION;
 COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND
 THE SATISFACTORY PERFORMANCE OF HIS WORK.

GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

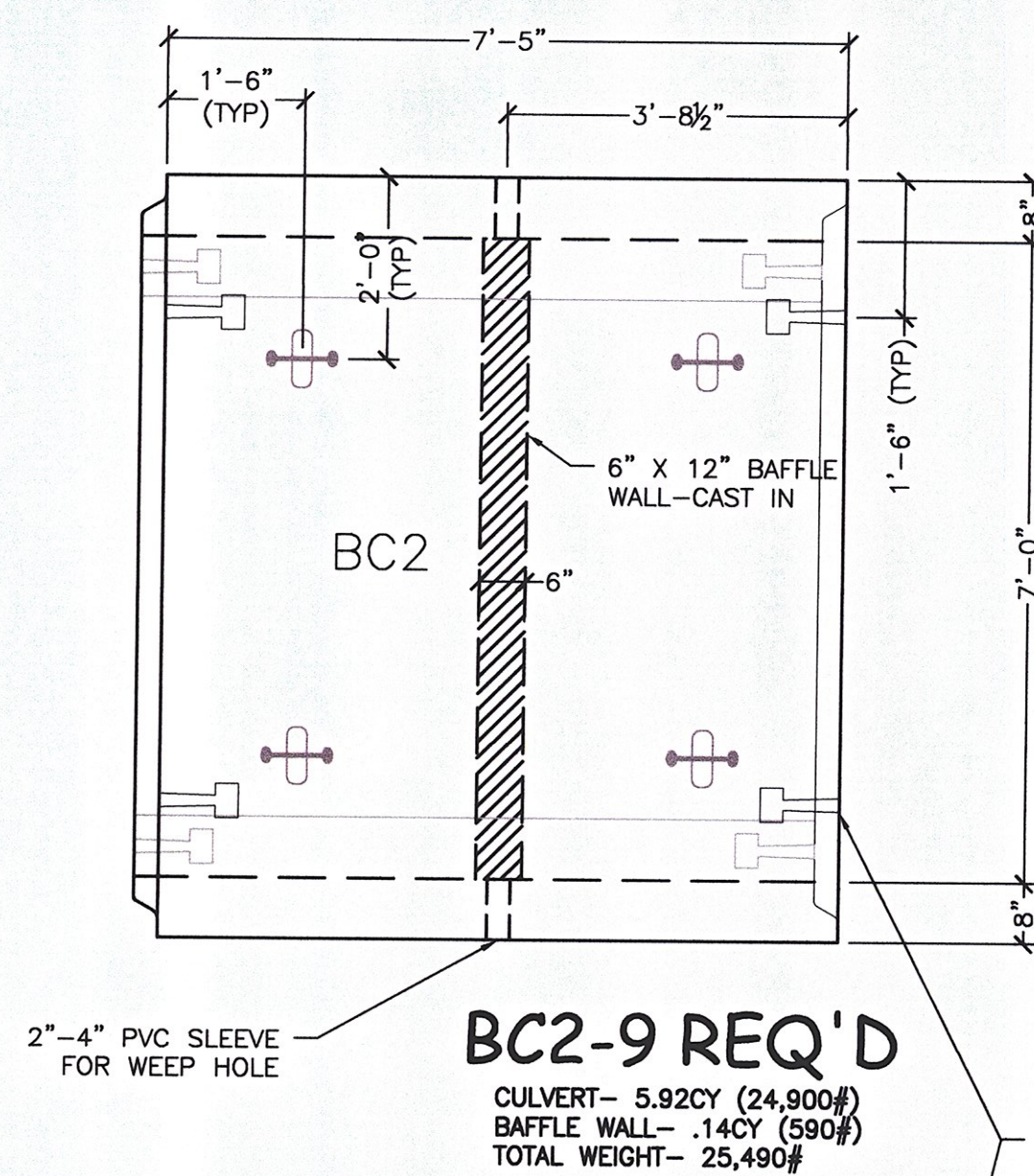
DRAWN BY: *WJZ* DATE: *5/11*
 SIGNED BY: *Michael J. Wenz* DATE: *5/11*

Prepared for:
Winterset Construction
PO Box 968
Lyndonville, VT 05851

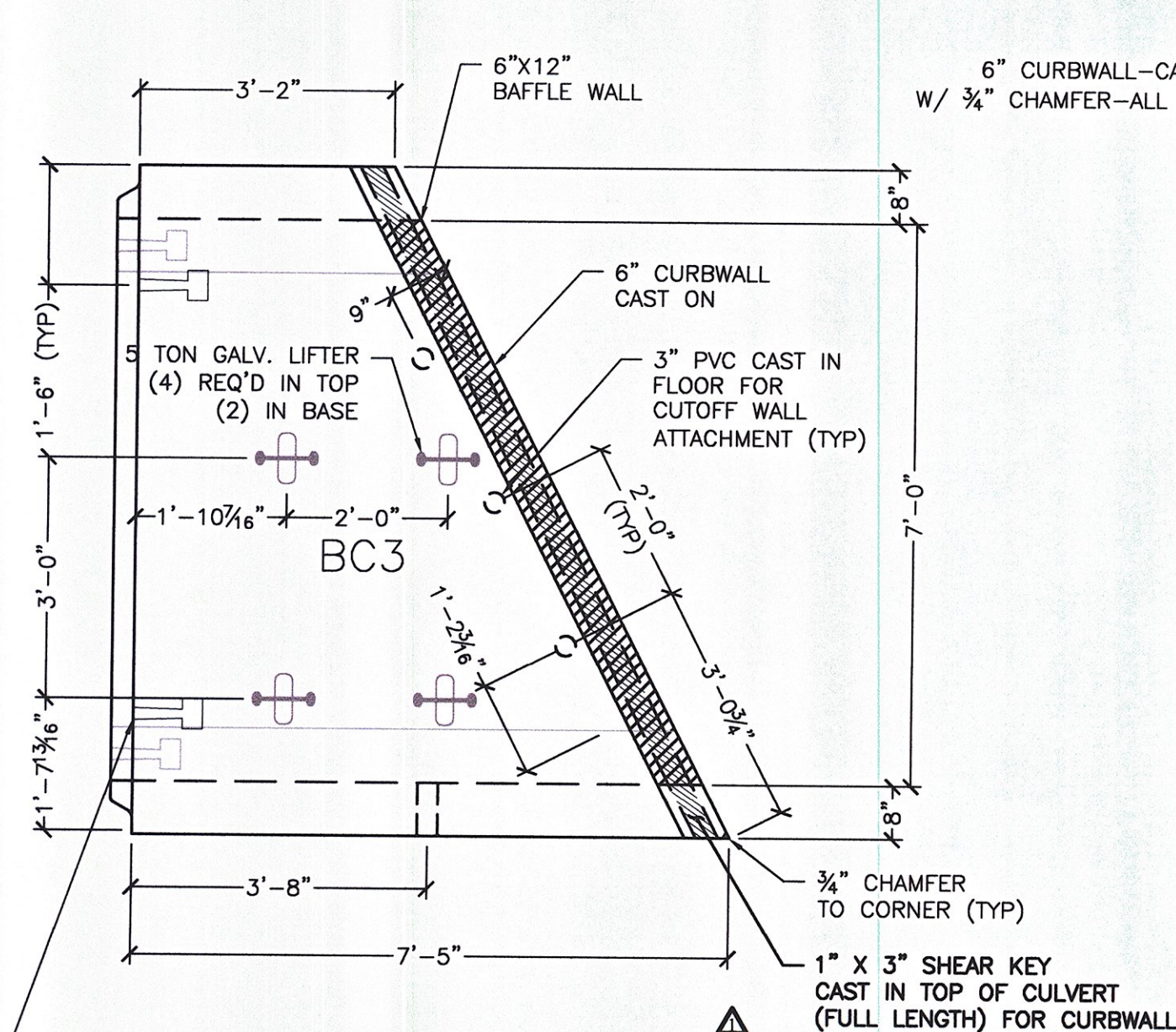
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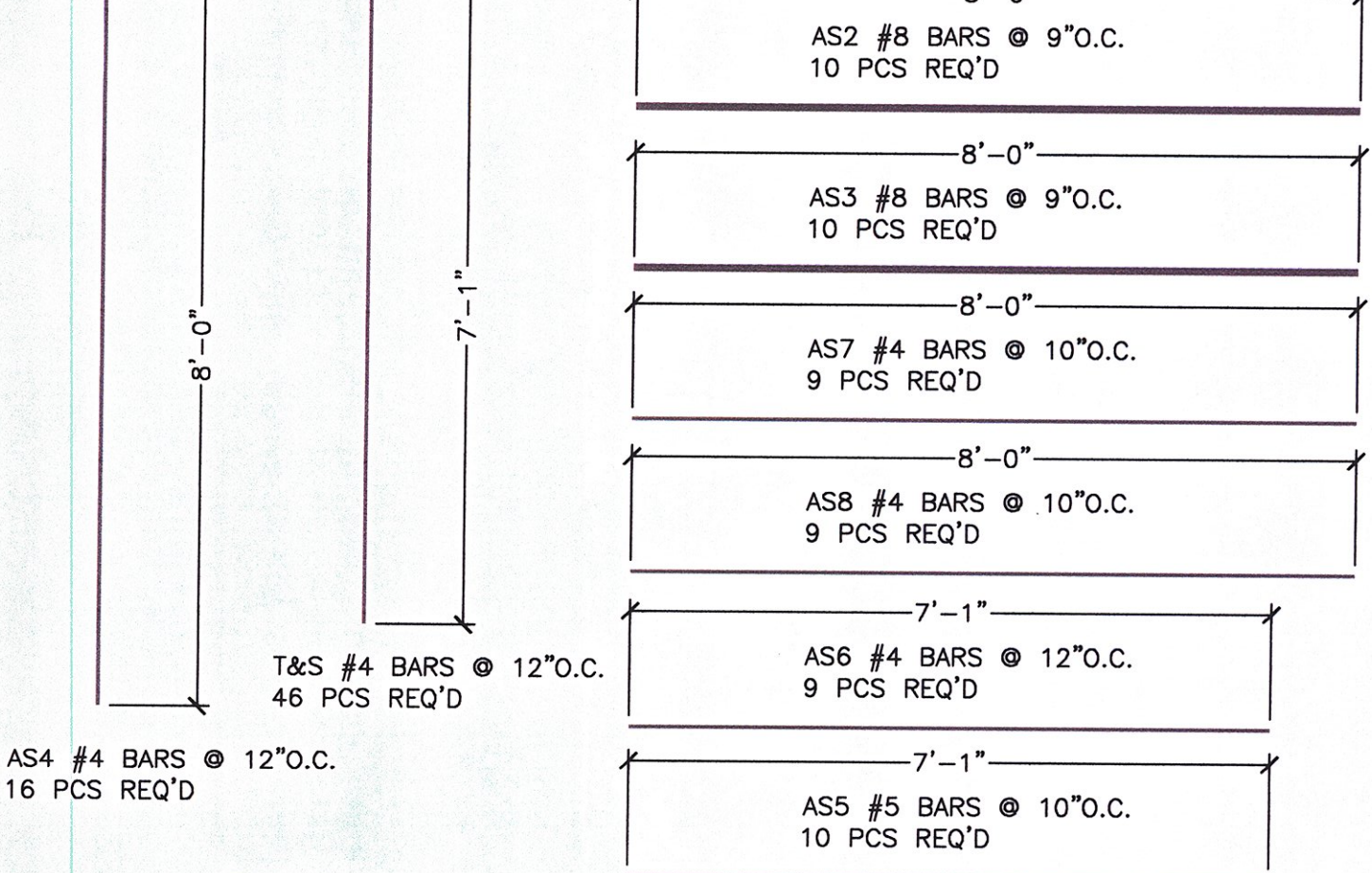
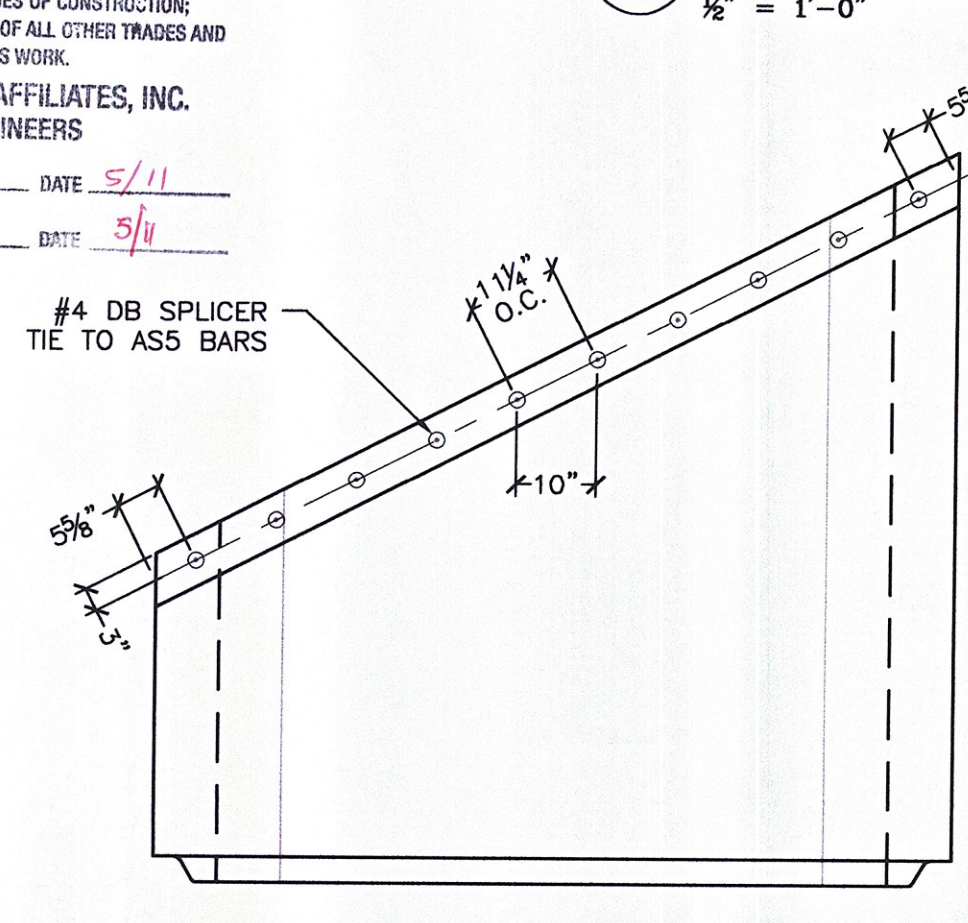
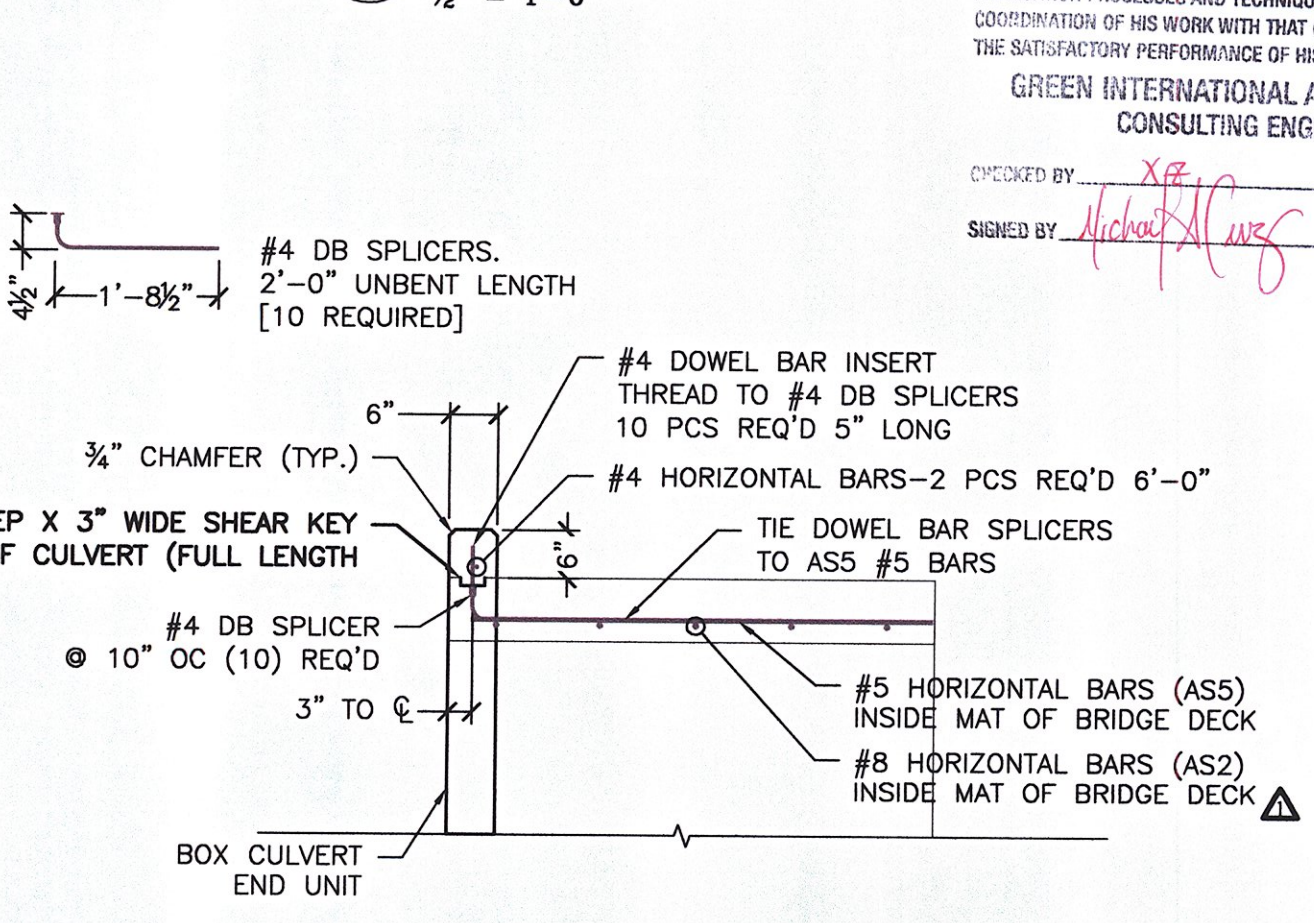
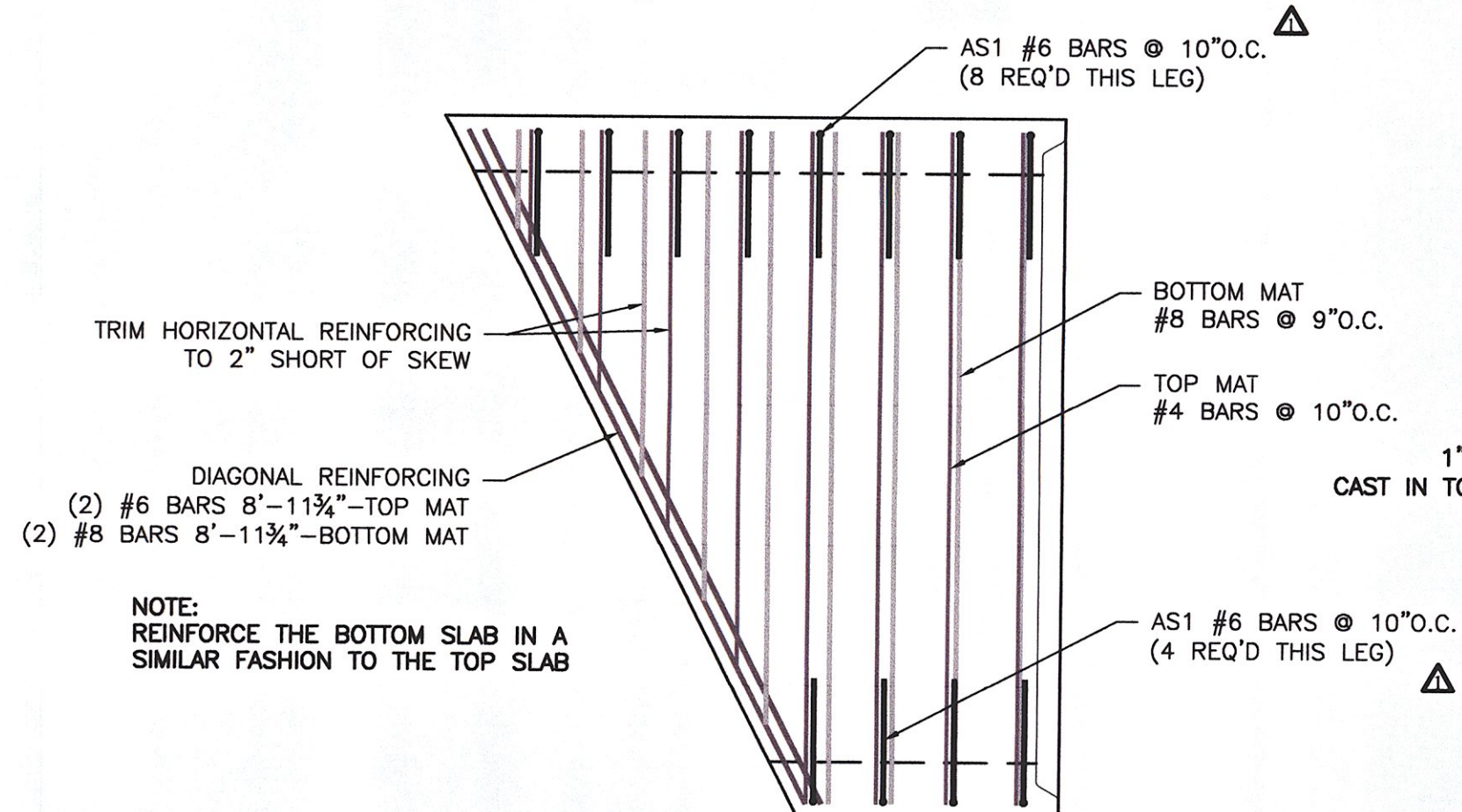
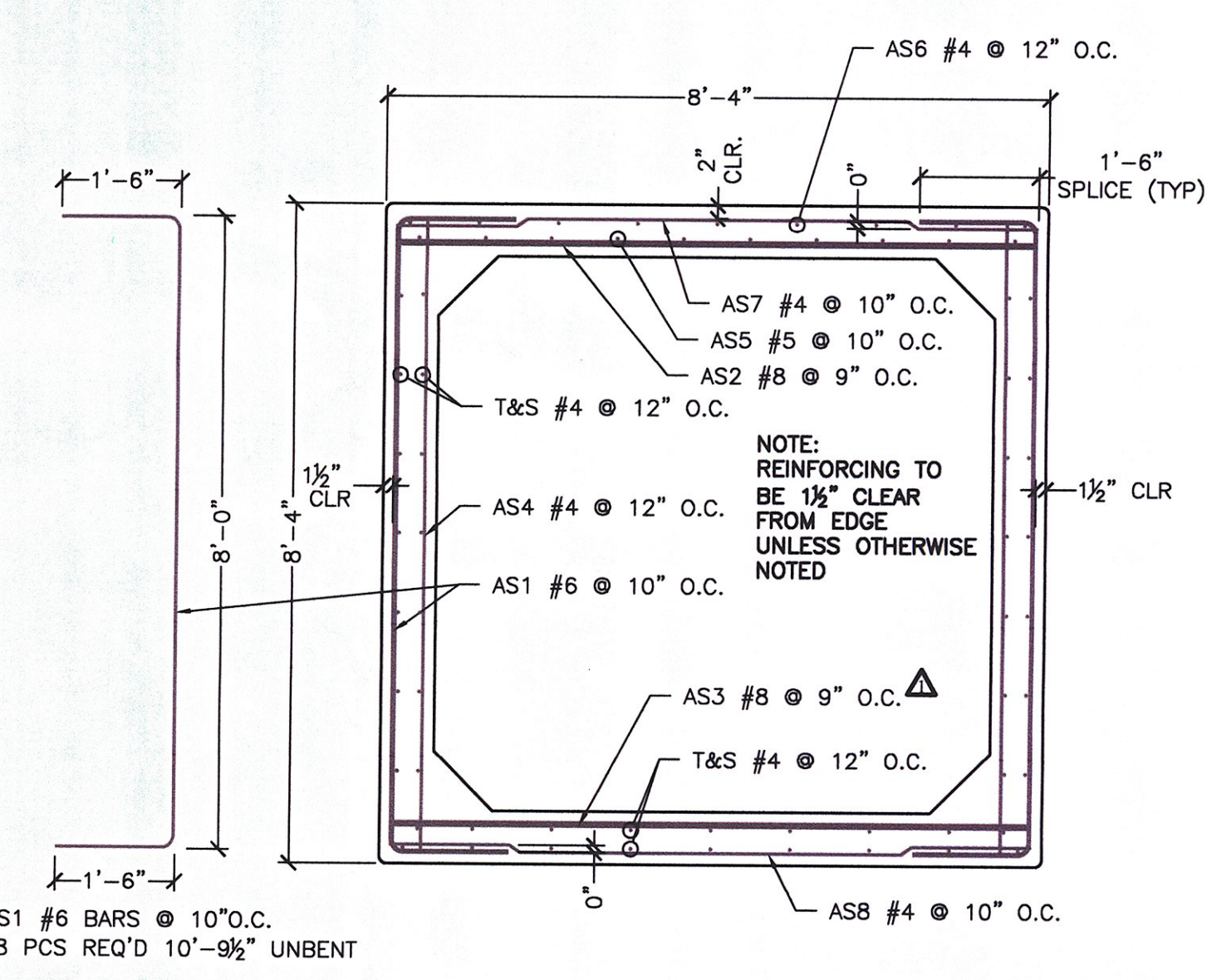
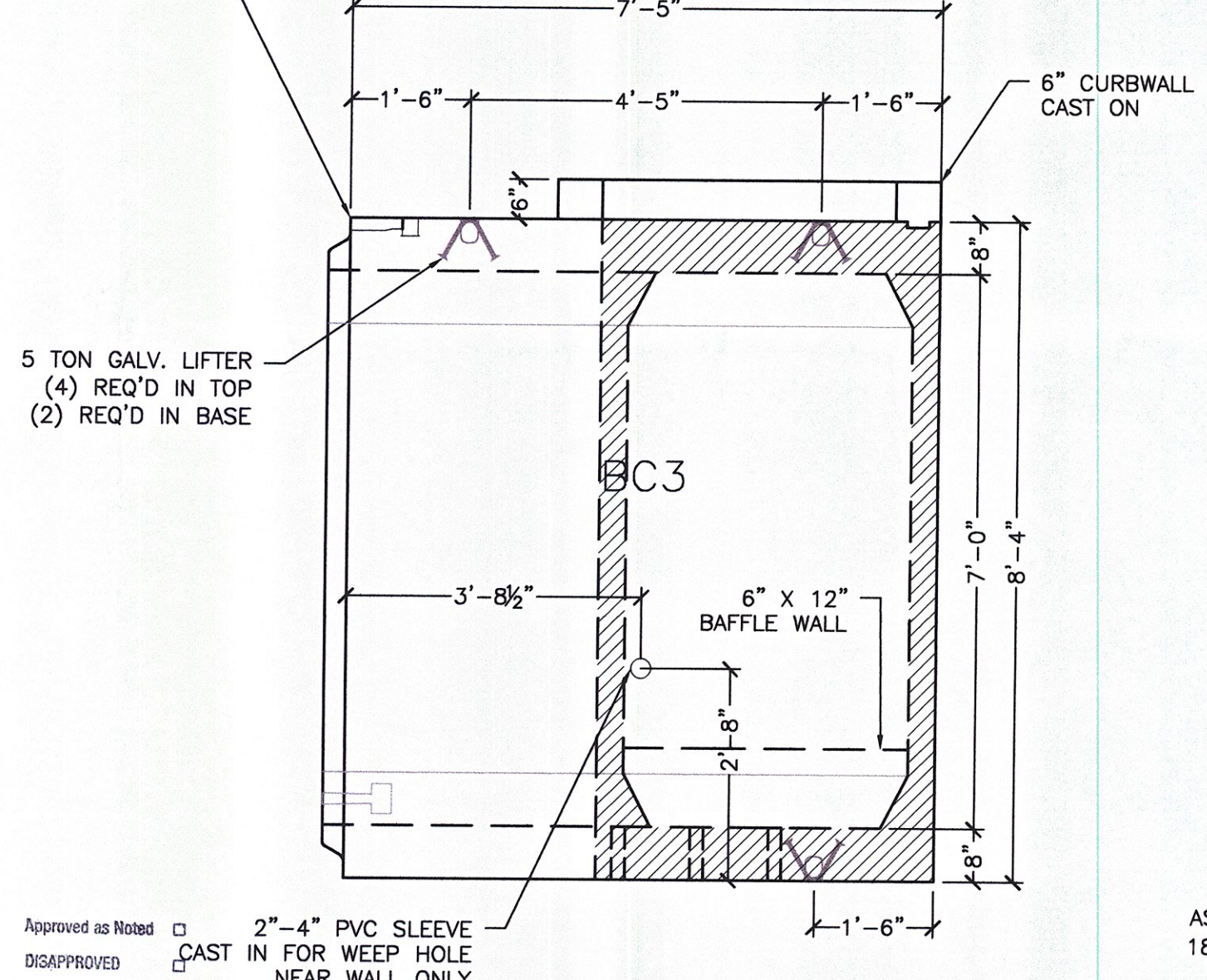
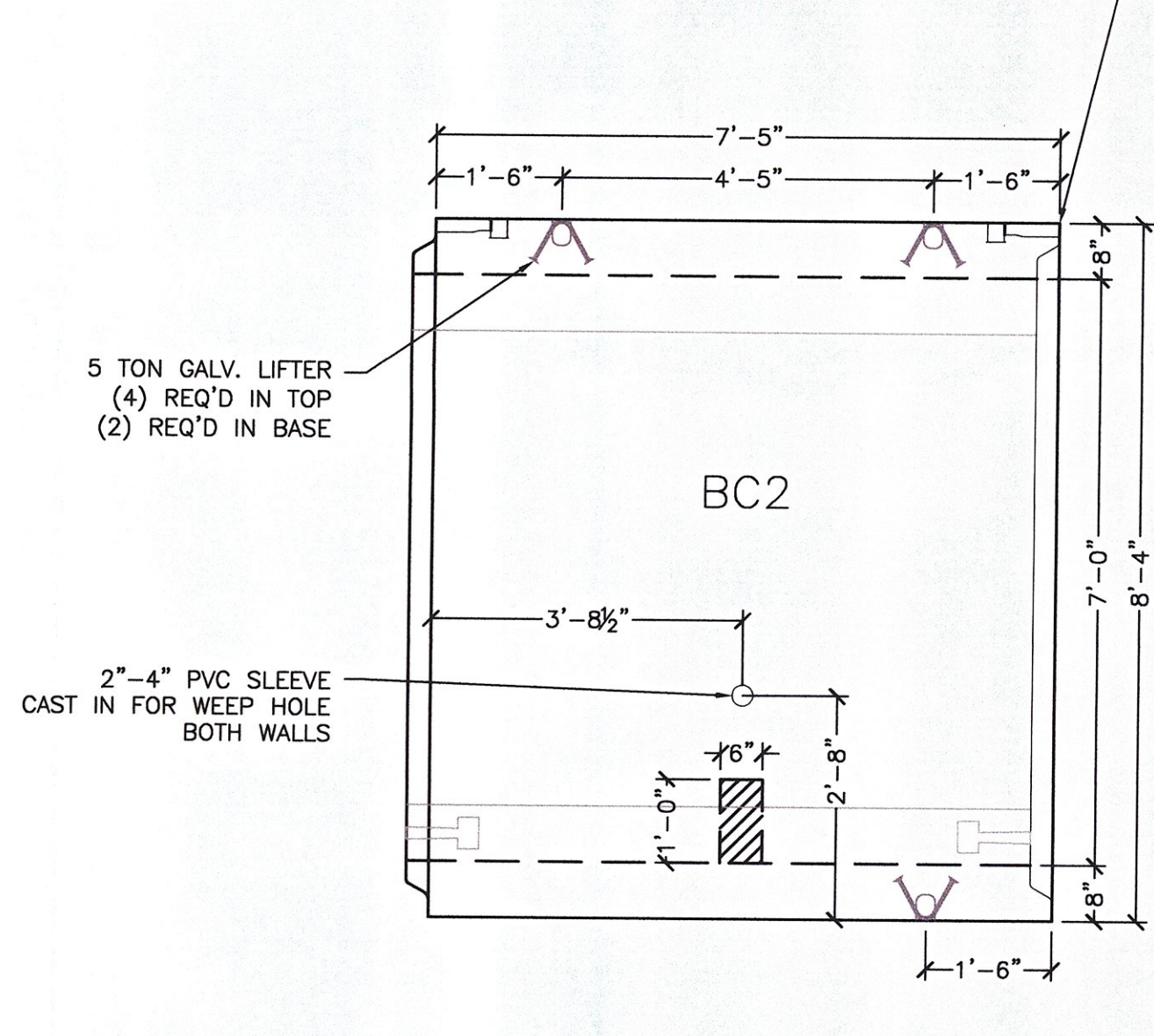
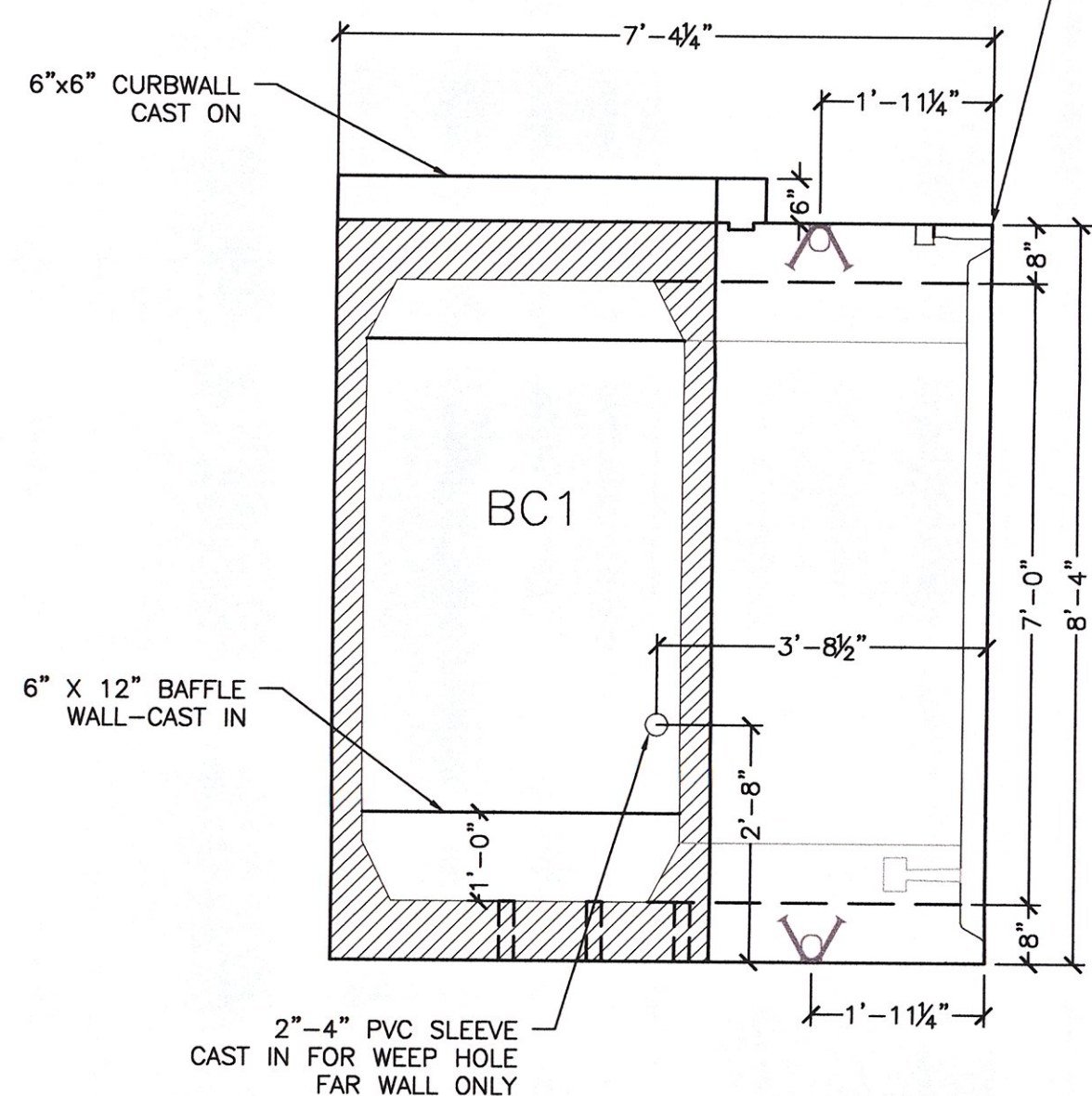
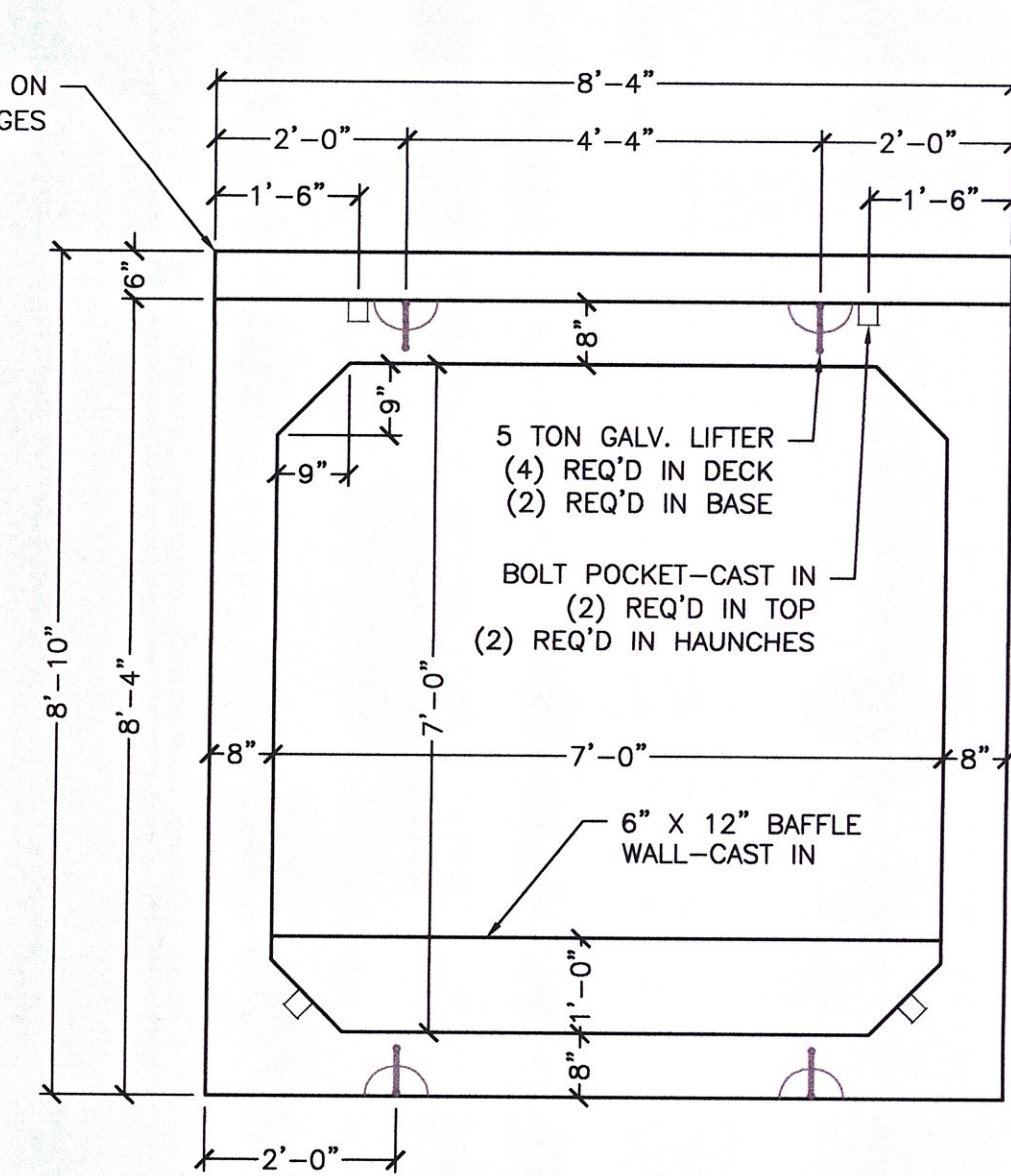
1 BC 1 PLAN VIEW
 S2.0 1/2" = 1'-0"



2 BC 2 PLAN VIEW
 S2.0 1/2" = 1'-0"



3 BC 3 PLAN VIEW
 S2.0 1/2" = 1'-0"



APPROVED
 Revised and Resubmit
 Approved as Noted
 DISAPPROVED
 CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; OBSERVATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS

CHECKED BY: *[Signature]* DATE: 5/11
 SIGNED BY: *[Signature]* DATE: 5/11

NOTE:
 REINFORCING COUNTS ARE FOR BC2
 SEE 7/S2.0 FOR AS1, AS4 COUNTS
 AND ADD'L DETAILS

MICHIE
 MICHIE CORPORATION, INC.
 173 BUXTON INDUSTRIAL DRIVE-PO BOX 870
 FARMINGTON, NH 03426
 PHONE: 603-438-7426
 FAX: 603-438-7426

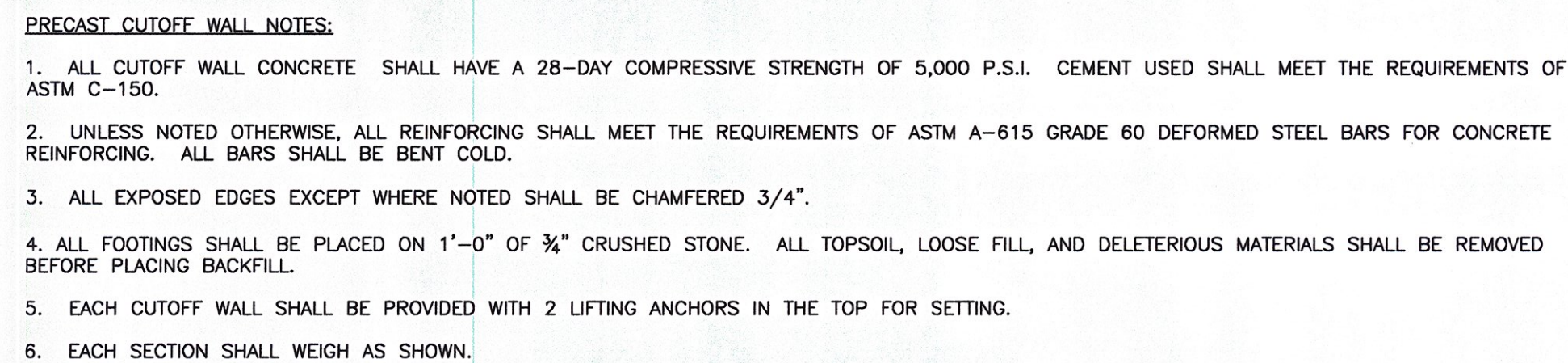
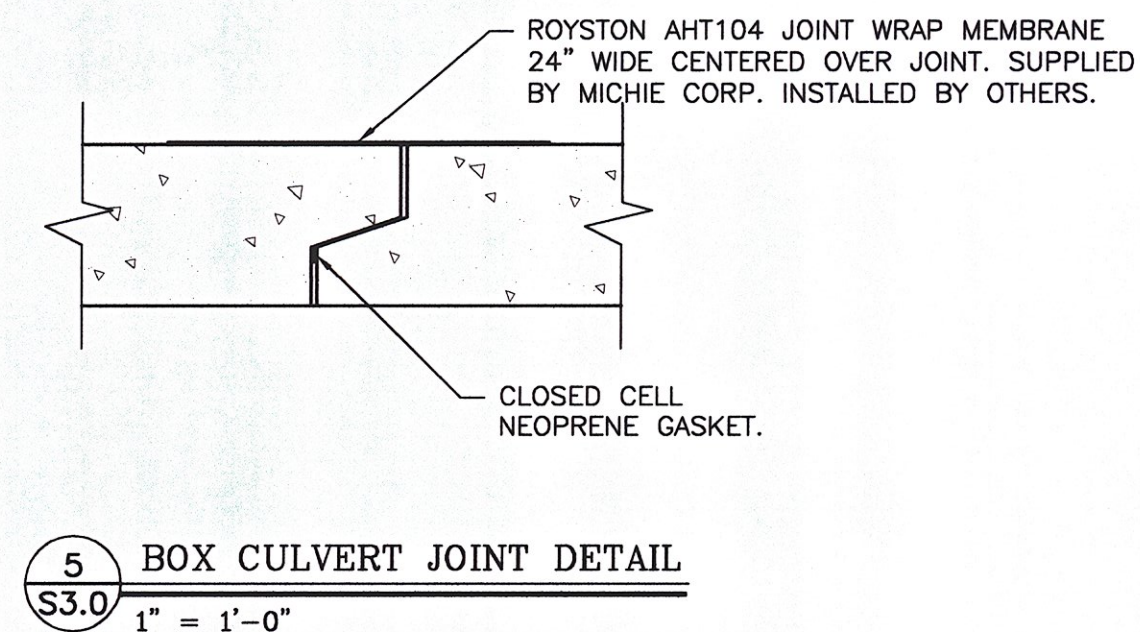
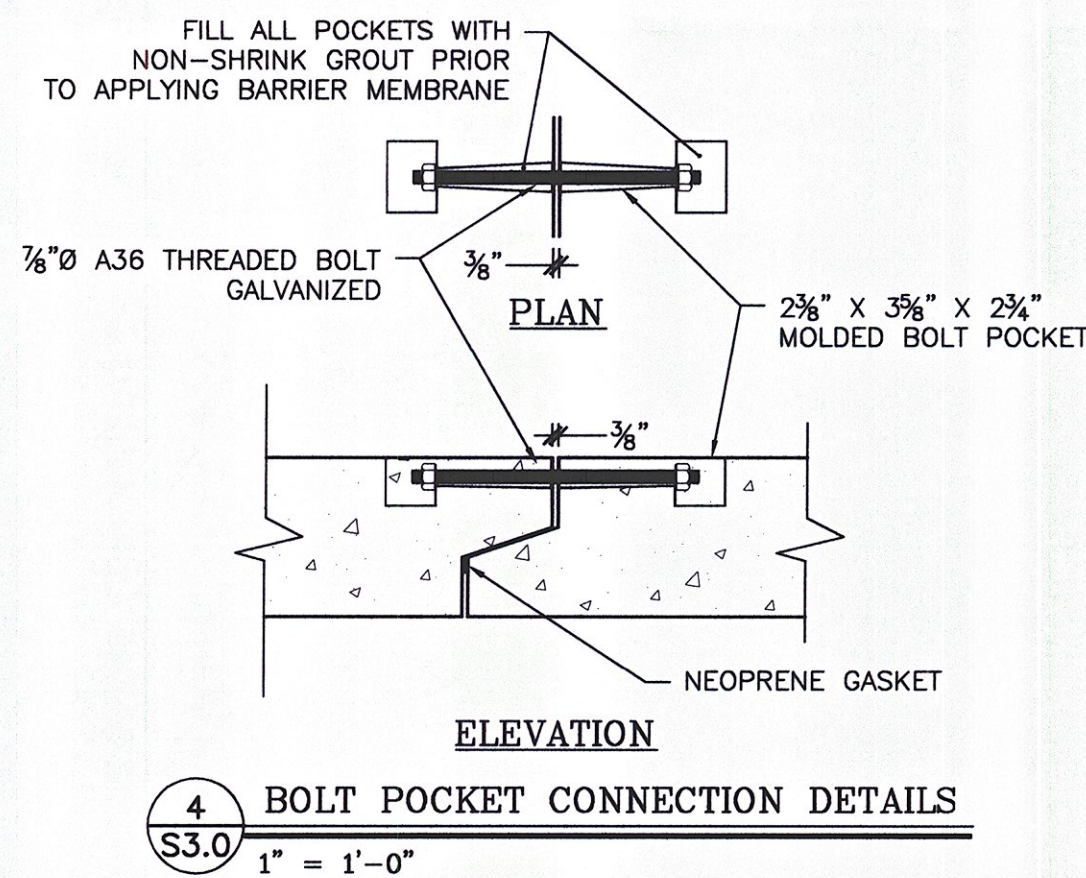
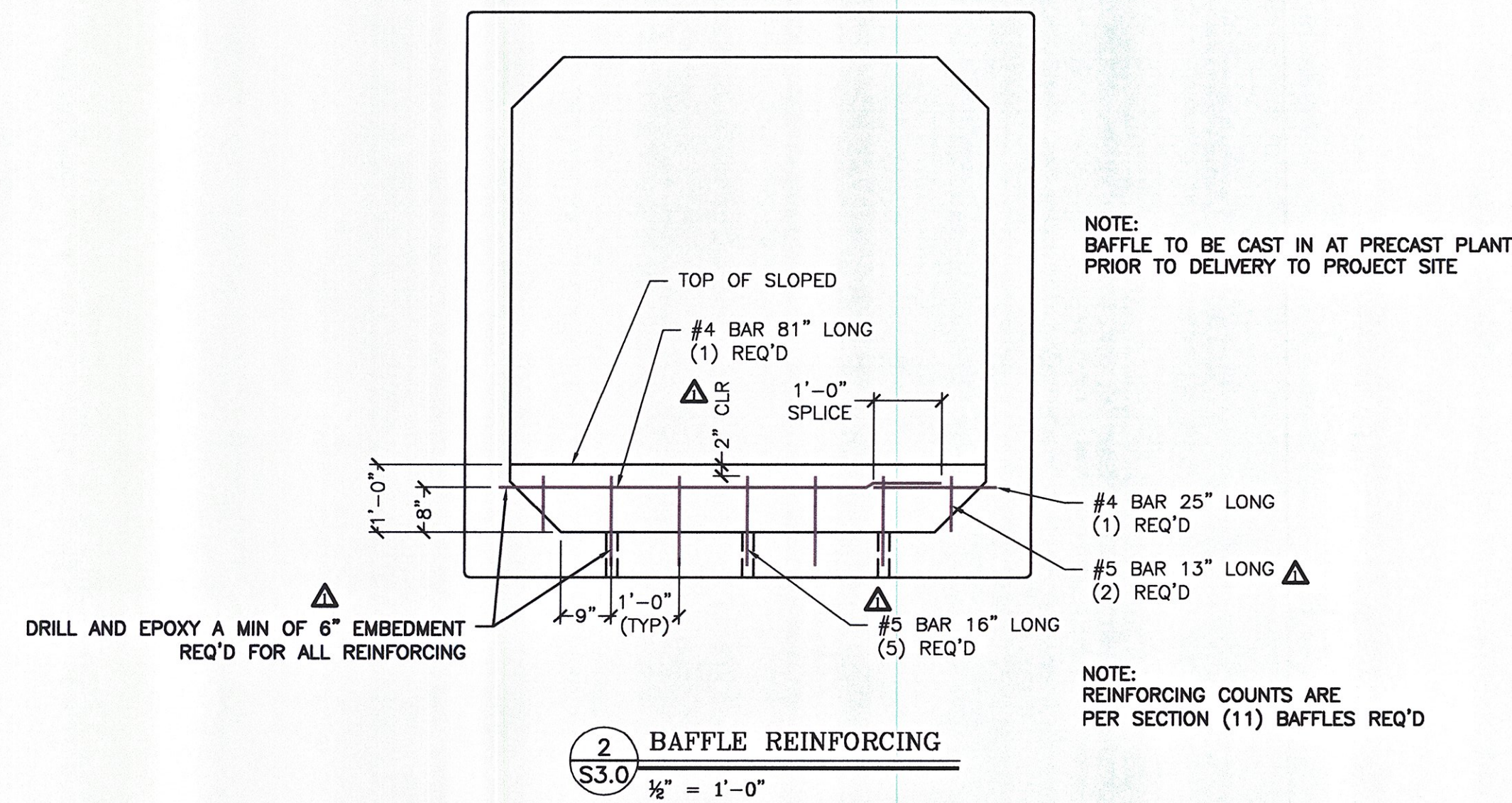
US Route 2
Cabot-Danville, VT
7' x 7' Box Culvert - Culvert Sections

Scale: AS SHOWN
 Checked by: XXX
 Drawn by: CTP

Project No. 1490
 Date: 12/20/11

Prepared for:
Winterset Construction
PO Box 968
Lyndonville, VT 05851

DWG NO.
S2.0

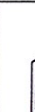


APPROVED ☒ Approved as Noted ☐
 Revise and Resubmit ☐ DISAPPROVED ☐

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: XZ DATE: 5/11
 SIGNED BY: Richard L. W... DATE: 5/11

[illegible]

MICHIE CORPORATION, INC.
 173 BUXTON INDUSTRIAL DRIVE-PO BOX 870
 HENNIKER, NH 03242
 PHONE: 603-428-3218
 FAX: 603-428-7426

**US Route 2
Cabot-Danville, VT
7' x 7' Box Culvert - Cutoff wall**

7' x 7' Box Culvert - Cutoff wall

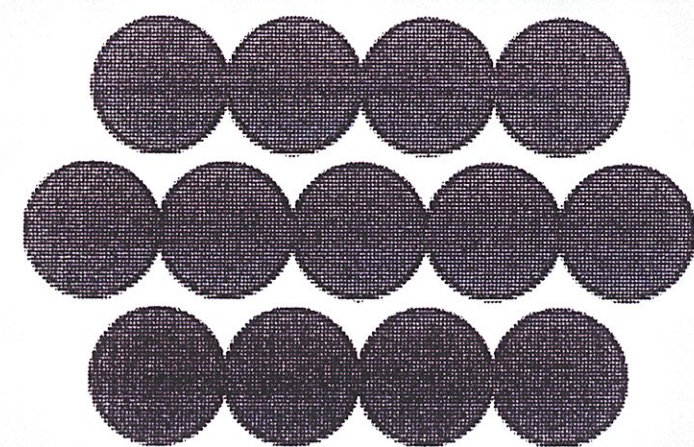
Scale: AS SHOWN

Designed by:

Project No. 1490
Date: 3/22/2011

Prepared for:
Winterset Construction
PO Box 968
Lyndonville, VT 05851

DWG NO
S3.0



Reinforced eARTH[®]

8614 Westwood Center Drive, Vienna, VA 22182 (703)821-1175

- RECORD PLANS -

FIELD COPY

GENERAL NOTES

DESIGN CRITERIA

- DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS FOR REINFORCED EARTH WALLS.
- SOILS CHARACTERISTICS USED FOR DESIGN:
(PER PROJECT SPECIAL PROVISIONS ITEM 900.670 and CONTRACT PLANS SHT. BR102)

1

SELECT GRANULAR BACKFILL

$\theta = 34$ degrees, $c = 0$ p.s.f., $\gamma = 140$ p.c.f.

RANDOM BACKFILL

$\theta = 33$ degrees, $c = 0$ p.s.f., $\gamma = 140$ p.c.f.

FOUNDATION MATERIAL

$\theta = 22$ degrees, $c = 0$ p.s.f.,

3

- THE MAXIMUM FACTORED AND ALLOWABLE(UNFACTORED) BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE OWNER TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

- ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED EARTH VOLUME, AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.

- REINFORCING STRIPS SHALL BE RIBBED 50mm WIDE AND 4mm THICK, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-572 GRADE 65. GALVANIZATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A-123, A-153, OR AASHTO M111 (2oz/ft²).

WALL CONSTRUCTION

- STATIONS SHOWN ARE ALONG CENTERLINE OF US ROUTE 2.
- REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 4.92' EACH TO MATCH DESIRED WALL ALIGNMENT.
- FOR LOCATION AND ALIGNMENT OF REINFORCED EARTH WALLS. SEE SHEET 2 OF THESE PLANS AND SHEETS 109-111 OF THE CONTRACT PLANS.
- IF MANHOLES AND DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS. IF DRAINAGE STRUCTURES OR OTHER OBSTRUCTIONS BLOCK NORMAL PLACEMENT OF REINFORCING STRIPS & SPECIFIC DETAILS ARE NOT INCLUDED HEREIN, PLEASE CONTACT THE REINFORCED EARTH COMPANY FOR APPROPRIATE DETAILS.
- IF PILES ARE LOCATED WITHIN THE REINFORCED EARTH VOLUME, THEY SHALL BE DRIVEN PRIOR TO CONSTRUCTION OF THE REINFORCED EARTH WALL UNLESS A METHOD TO PROTECT THE STRUCTURE, WHICH IS ACCEPTABLE TO THE ENGINEER AND THE REINFORCED EARTH COMPANY, AND IS PROPOSED AND APPROVED IN WRITING.
- BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 2" ($\pm$) ABOVE THE TIE STRIPS EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.
- COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 3'-0" FROM THE BACK FACE OF THE REINFORCED EARTH PANELS. COMPACTION WITHIN 3'-0" OF THE REINFORCED EARTH PANELS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VIBRATORY SYSTEM. NO COMPACTION DENSITY TESTS SHALL BE TAKEN WITHIN THE 3 FT. ZONE.

WALL CONSTRUCTION (CONT.)

- IF STRUCTURES IN EXCESS OF 20' IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 20'. FINISHED GRADE BACKFILL SHALL BE COMPACTED TO 95% OF ASTM D-698, METHODS 'c' OR 'd', UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUIDERAIL POSTS BEHIND THE REINFORCED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS, INDIVIDUAL STRIPS MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE GUIDERAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUIDERAIL POSTS WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.
- ALL DETAILING AND CHECKING OF REINFORCING STEEL FOR ANY C.I.P. CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- TOP PANELS BELOW COPING SHALL EACH HAVE THREE (3) #4 REBAR DOWELS PER 4.92' WIDE STANDARD PANEL.
- FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL.
- THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPERELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORM WATER RUNOFF IS TO BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND REINFORCED BACKFILL.

MATERIALS NOTES

21. NOMINAL STRIP LENGTHS

THE REINFORCING STRIP LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL, ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER (UP TO 6") DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL LIMIT OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.

22. SELECT BACKFILL QUANTITY

THE SELECT BACKFILL QUANTITY, IF INDICATED BY THE REINFORCED EARTH COMPANY, IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS SHOWN ON THE PLANS (PLUS 0 FT.) BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATLINE CUBIC YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO REPRESENT THE ACTUAL QUANTITIES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR MUST CALCULATE HIS OWN EXCAVATION AND BACKFILL QUANTITIES BASED UPON THE SPECIFIC CONDITIONS OF THE PROJECT.

MATERIALS NOTES (CONT.)

23. PANEL FINISH

THE PRECAST PANELS FOR THIS PROJECT SHALL HAVE AN ASHLAR STONE FORMLINER FINISH.

SLIP JOINT COVERS AND COPING/HFC UNITS SHALL HAVE A SMOOTH FORM FINISH.

24. NOTE TO CONTRACTORS

ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:

- PRECAST CONCRETE FACING PANELS
- REINFORCING STRIPS
- BOLT SETS (FOR ATTACHING PANELS TO THE REINFORCING STRIPS)
- BEARING BLOCKS
- RUBBER SHIMS
- FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY)
- PRECAST COPING UNITS
- PRECAST HALF CONNECTOR UNITS

ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL SANDBLASTING, PAINTING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED/INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.

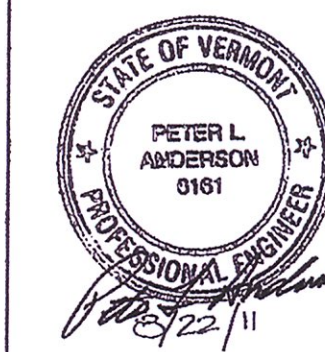
- THE REINFORCED EARTH COMPANY SUPPLIES PRECAST CONCRETE FACING PANELS AND ACCESSORIES TO BE USED IN CONJUNCTION WITH OTHER MATERIALS IN THE CONSTRUCTION OF THE REINFORCED EARTH® RETAINING WALLS DETAILED HEREIN. THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL FURNISHED BY THE REINFORCED EARTH COMPANY IS INTENDED TO PROVIDE A GENERAL EXPLANATION OF THE SYSTEM. IT IS THE CONTRACTOR'S OBLIGATION TO DEVISE AND EXECUTE A PROJECT SPECIFIC ERECTION SEQUENCE, PANEL UNLOADING, HANDLING AND BRACING SYSTEM, AND FALL PROTECTION SYSTEM. THE BRACING SYSTEM SHOWN IN THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL IS GENERAL IN NATURE AND DOES NOT ACCOUNT FOR PROJECT SPECIFIC CRITERIA. COMPLIANCE WITH THE GUIDELINES IN THIS MANUAL DOES NOT RELIEVE THE CONTRACTOR OF ITS RESPONSIBILITY TO ADHERE TO THE PROJECT PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS OR COMPLIANCE WITH ALL FALL PROTECTION, SAFETY, LAWS, STANDARDS AND PROCEDURES AT THE JOBSITE. CONTRACTORS SHOULD TAKE SPECIAL PRECAUTIONS TO PREVENT THE PANELS FROM SHIFTING OR FALLING DURING THE ERECTION PROCESS.

- SEE CONTRACT PLANS FOR ADDITIONAL NOTES.

INDEX	
DRAWING	TITLE
1	GENERAL NOTES
2	PLAN LAYOUT
3	WALL ELEVATIONS
4	TYPICAL SECTIONS
5	TOPOUT DETAILS
6	MISCELLANEOUS DETAILS
7	STANDARD PANEL DETAILS

APPROVED ☒ Approved as Noted ☐
Revise and Resubmit ☐ DISAPPROVED ☐
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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS
CHECKED BY: *[Signature]* DATE: 9/11
SIGNED BY: *[Signature]* DATE: 9/11

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THE INTERNAL STABILITY OF
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STRUCTURES ONLY



R:\RE15053_REW_VT_CABOT_DANVILLE\DWGS\01 GENERAL NOTES.DWG

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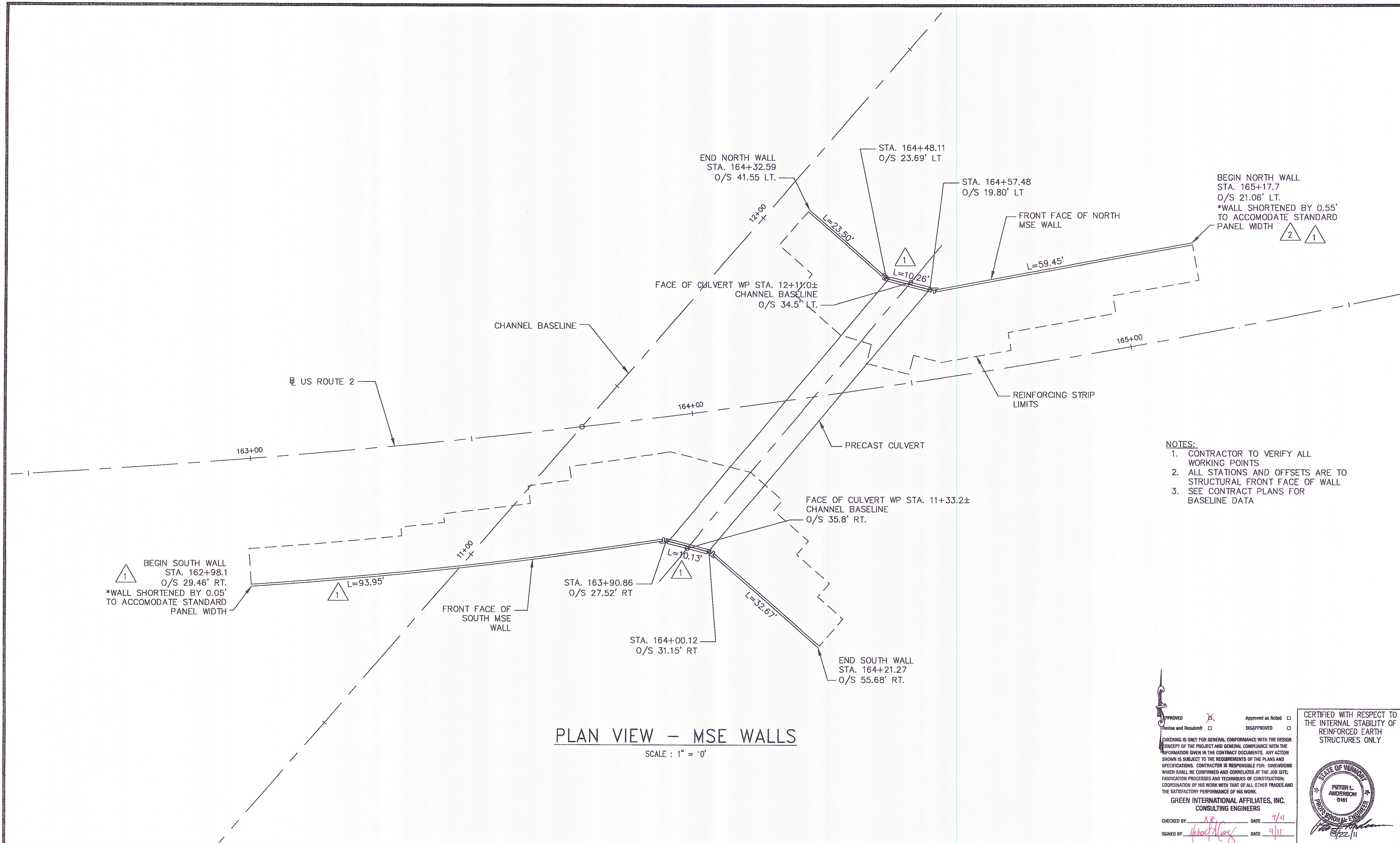


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DESIGNED BY: DTM				PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/8/11
PROJECT ENGR: LY	2	8/19/11	REV. PER GIA COMMENTS REV. HALF CONNECTOR DETAILS	LOCATION	CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	REV. PER GIA COMMENTS	OWNER	VTAOT	DRAWING NO. 1 OF 7
REV.	DATE		DESCRIPTION	DRAWING COVERS	GENERAL NOTES	SCALE AS SHOWN

R:\RE15053_REW_VT_CABOT DANVILLE\DWGS\02 PLAN LAYOUT.DWG



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CONSULTING ENGINEERS

CHECKED BY: *[Signature]* DATE: 7/11
SIGNED BY: *[Signature]* DATE: 9/11

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STATE OF VERMONT
PETER L. ANDERSON
0161
PROFESSIONAL ENGINEER
9/22/11

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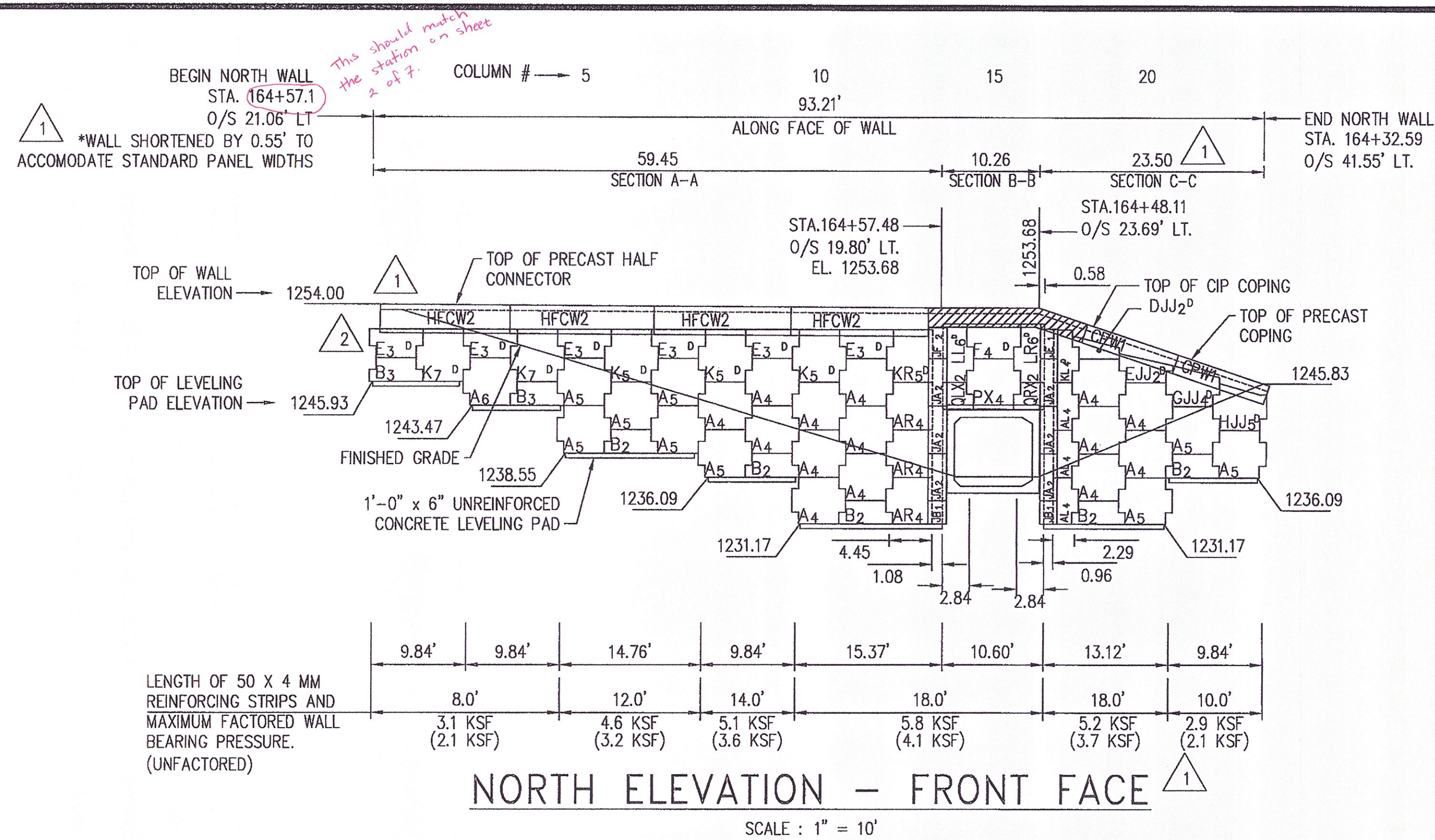
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DESIGNED BY: DTM				PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY	2	8/19/11	REV. STATION	LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	REV. PER GIA COMMENTS	OWNER VTAOT	DRAWING NO. 2 OF 7
REV.	DATE		DESCRIPTION	DRAWING COVERS PLAN LAYOUT	SCALE AS SHOWN

R:\RE15053_REW_VT_CABOT_DANVILLE\DWGS\03 ELEVATIONS REV1.DWG



MSES WALL QUANTITIES NORTH WALL	
FACING PANEL AREA	1,212 SF
LENGTH OF WALL	93.2 LF
PRECAST COPING	CPW1-2 PCS
1 PRECAST HFC	HFCW2-4 PCS
CIP COPING	16.9 LF

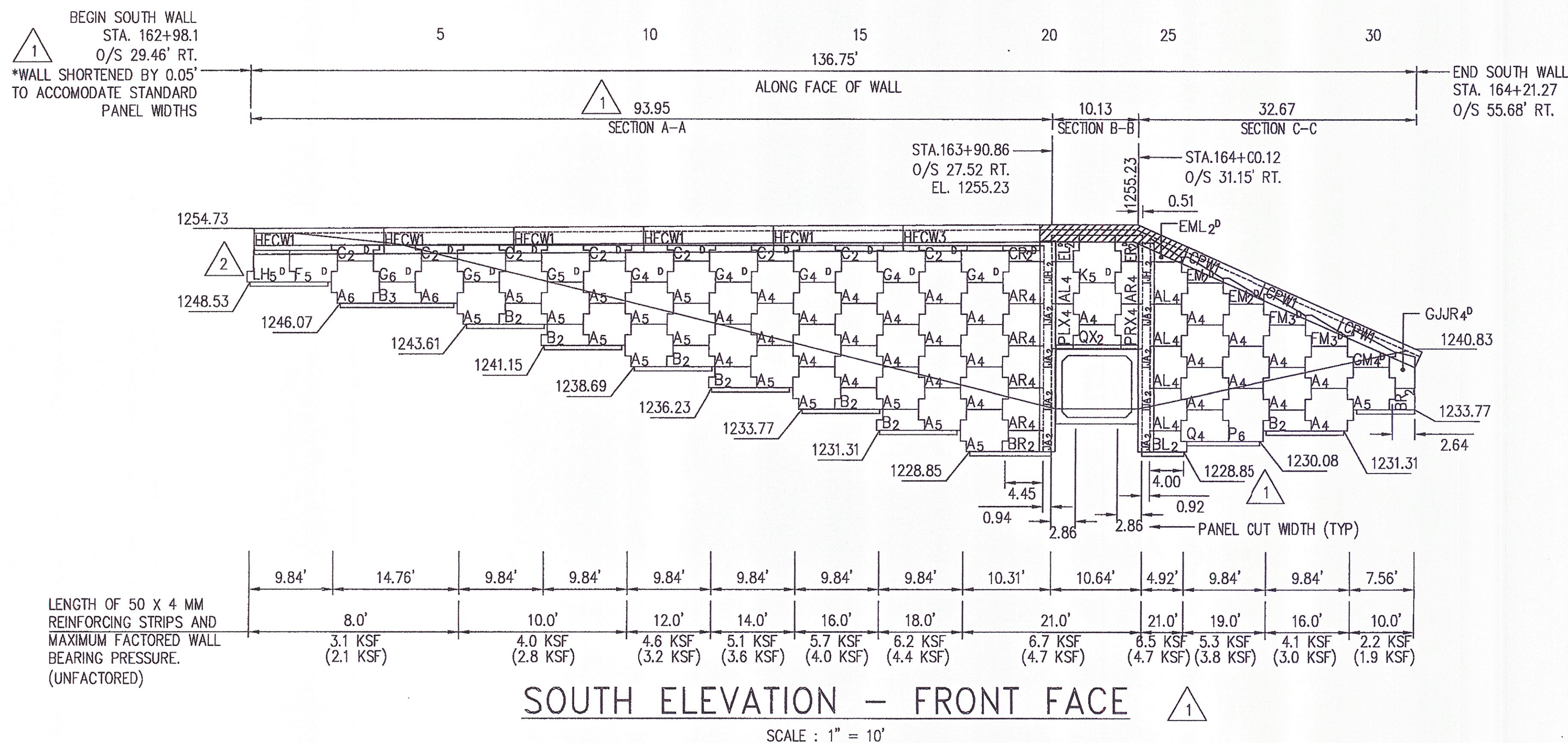
NOTES:

1. LENGTH OF LEVELING PAD IS BASED ON INDIVIDUAL PANEL WIDTHS. ϕ OF PANEL JOINT TO ϕ OF PANEL JOINT. USE STEP DETAIL ON SHEET 6 TO DETERMINE THE ACTUAL LEVELING PAD STEP LOCATION. SEE SHEET 102 OF 250 FOR LEVELING PAD STEP DETAIL.
2. ALL STATIONS GIVEN ARE FROM BASELINE US RTE 2 TO STRUCTURAL FRONT FACE OF MSE WALL.
3. FOR TYPICAL SECTIONS, REFER TO SHEET 4.
4. FOR PRECAST TOPOUT DETAILS, REFER TO SHEET 5.
5. FOR SLIP JOINT DETAIL, SEE SHEET 6.

NOTE:

INDICATES C.I.P. COPING TO MATCH PRECAST COPING UNIT, SEE SHEET 5.

KEY	
SYMBOL	DESCRIPTION
D	DOWEL IN PANEL
A4	PANEL DESIGNATION
	NO. OF TIE STRIPS IN PANEL
A4	INDICATES PANELS WITH R4 REINFORCEMENT.



MSES WALL QUANTITIES SOUTH WALL	
FACING PANEL AREA	1,908 SF
LENGTH OF WALL	136.8 LF
PRECAST COPING	CPW1-3 PCS
PRECAST HFC	HFCW1-5 PCS HFCW3-1 PC
CIP COPING	18.0 LF

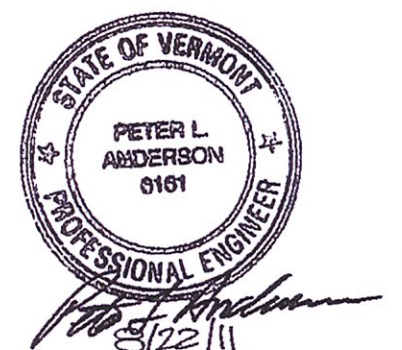
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Revise and Resubmit ☐ DISAPPROVED ☐

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: XZ DATE: 9/11
SIGNED BY: Michael Kury DATE: 9/11

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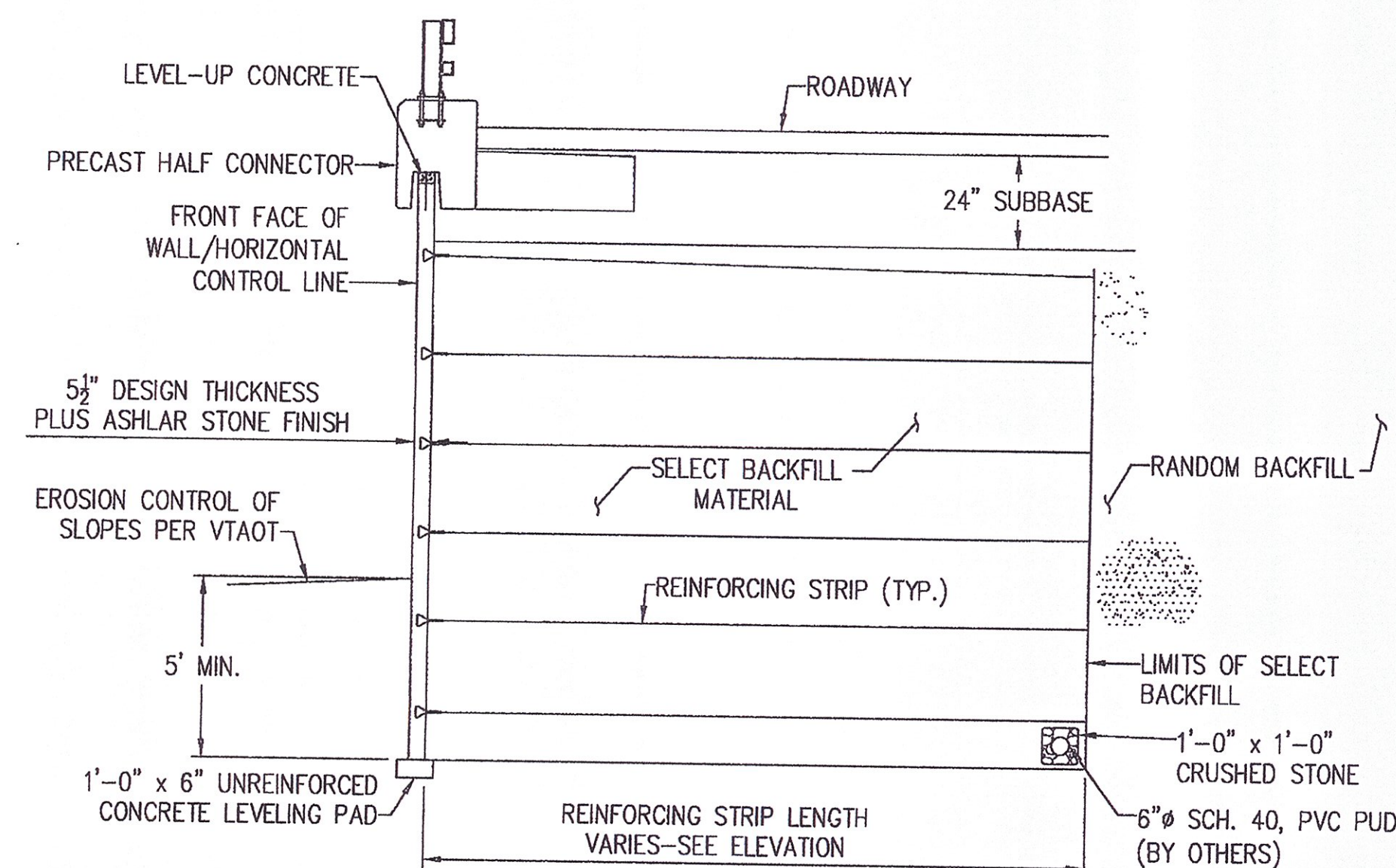


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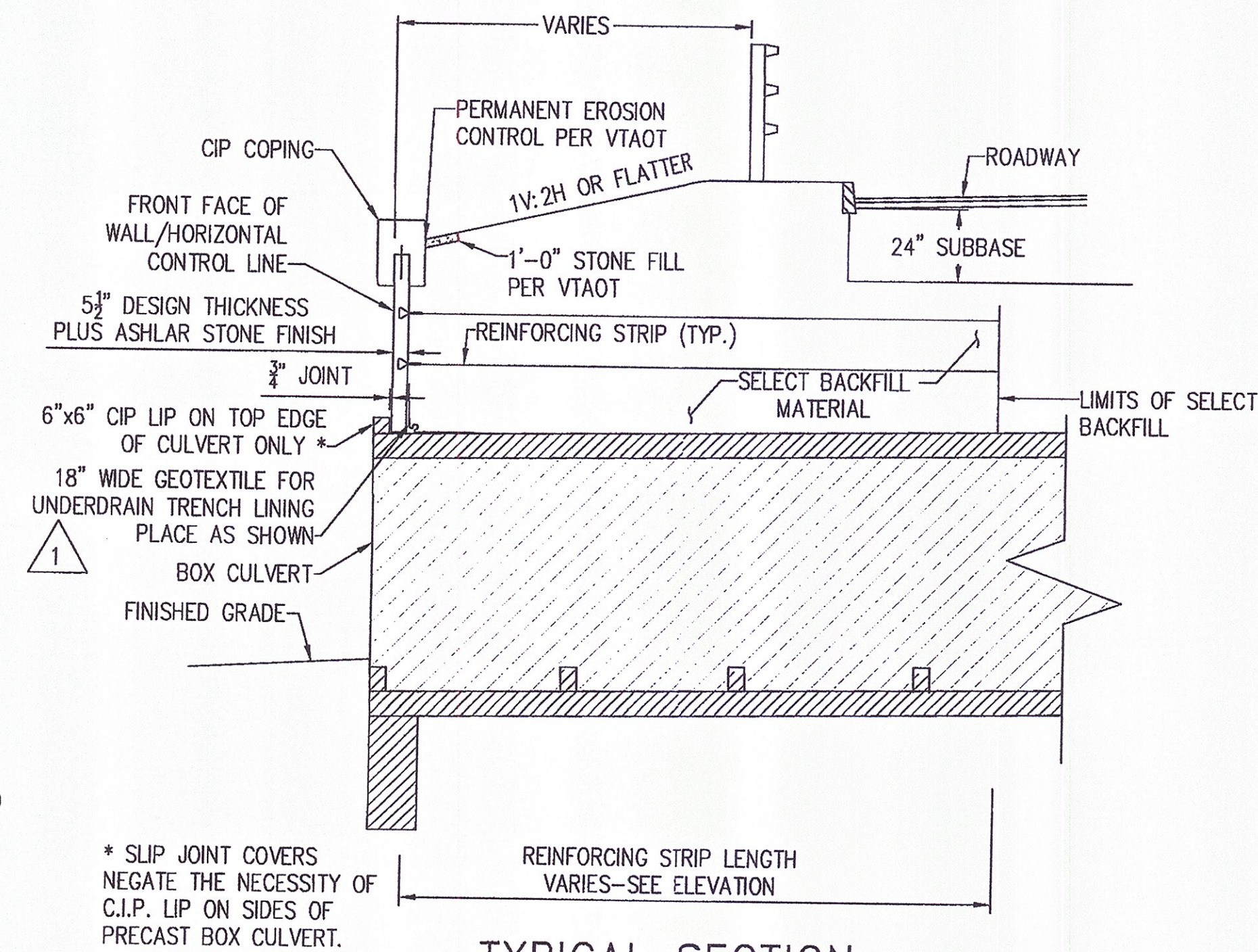
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DESIGNED BY: DTM				PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY	2	8/19/11	REVISE TOP PANEL	LOCATION	CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	REVISIONS PER GIA COMMENTS	OWNER	VTAOT	DRAWING NO. 3 OF 7
REV.	DATE		DESCRIPTION	DRAWING COVERS	WALL ELEVATIONS	SCALE AS SHOWN

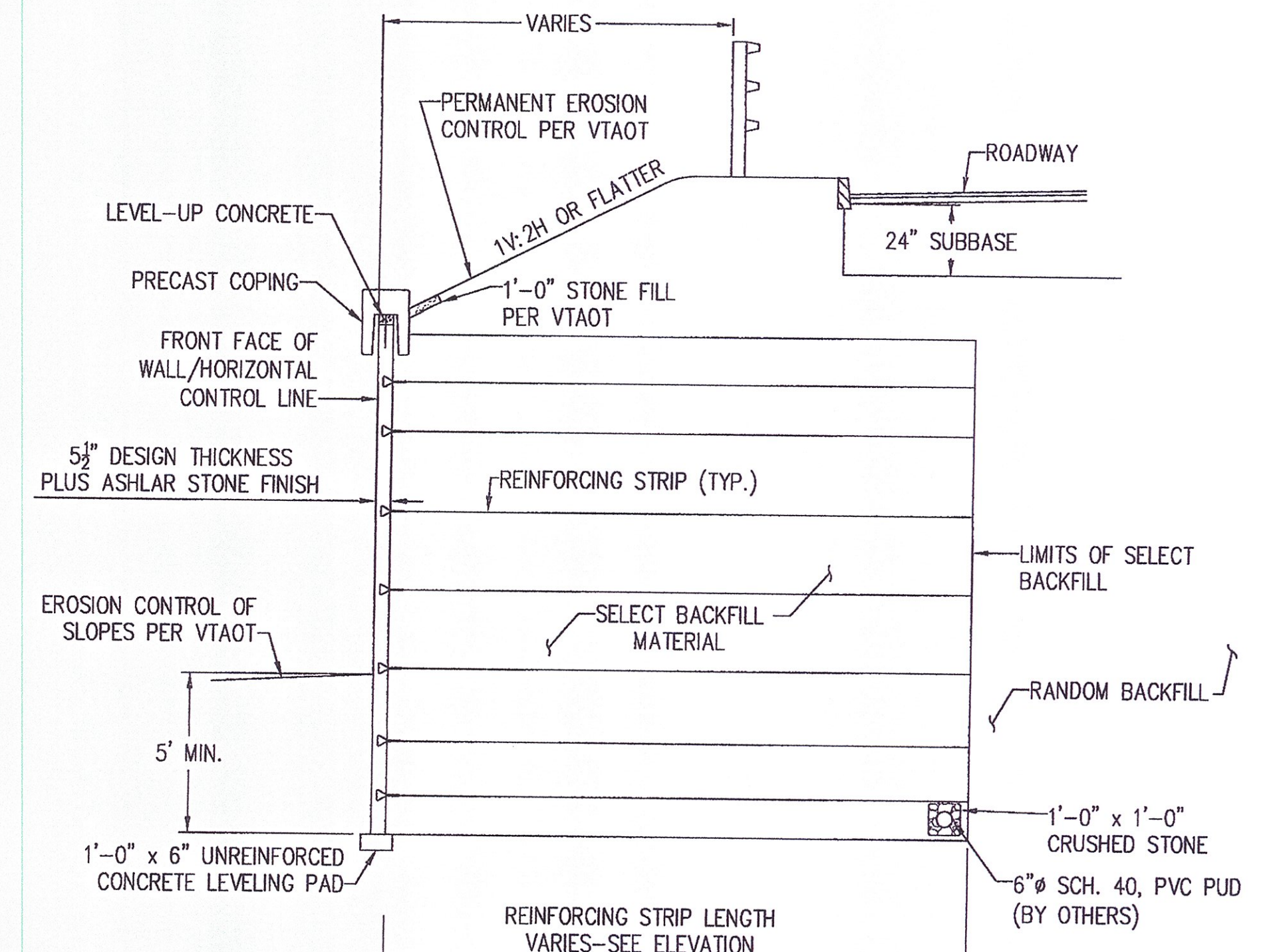
R:\RE15053_REW_VT_CABOT DANVILLE (DWG)\04 TYPICAL SECTIONS.DWG



TYPICAL SECTION
A-A
SCALE 1/4"=1'-0"



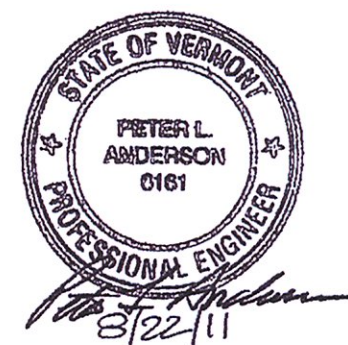
TYPICAL SECTION
B-B
SCALE 1/4"=1'-0"



TYPICAL SECTION
C-C
SCALE 1/4"=1'-0"

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CONSULTING ENGINEERS
CHECKED BY: XZ/PLA DATE: 9/11
SIGNED BY: Michael J. Cusack DATE: 9/11

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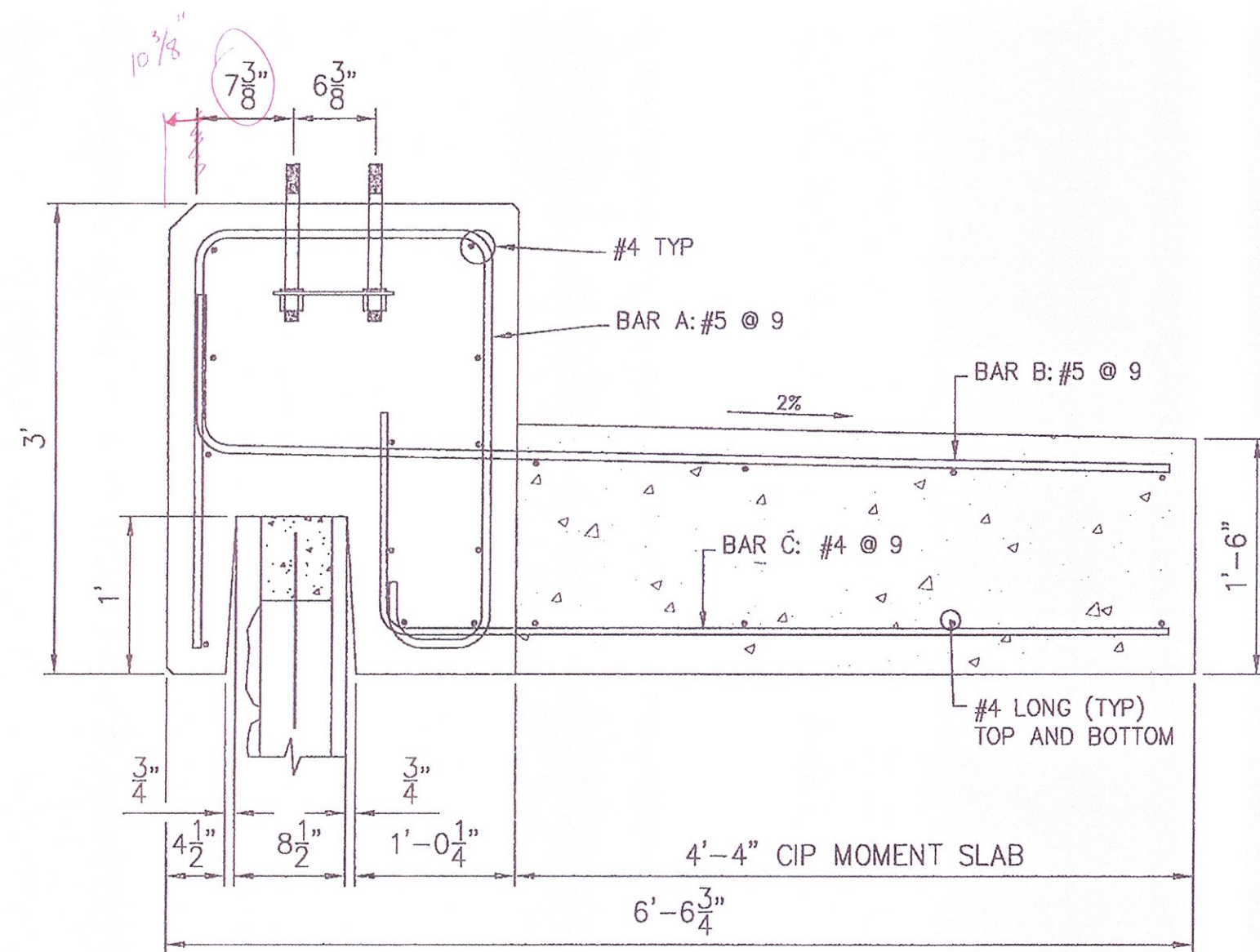
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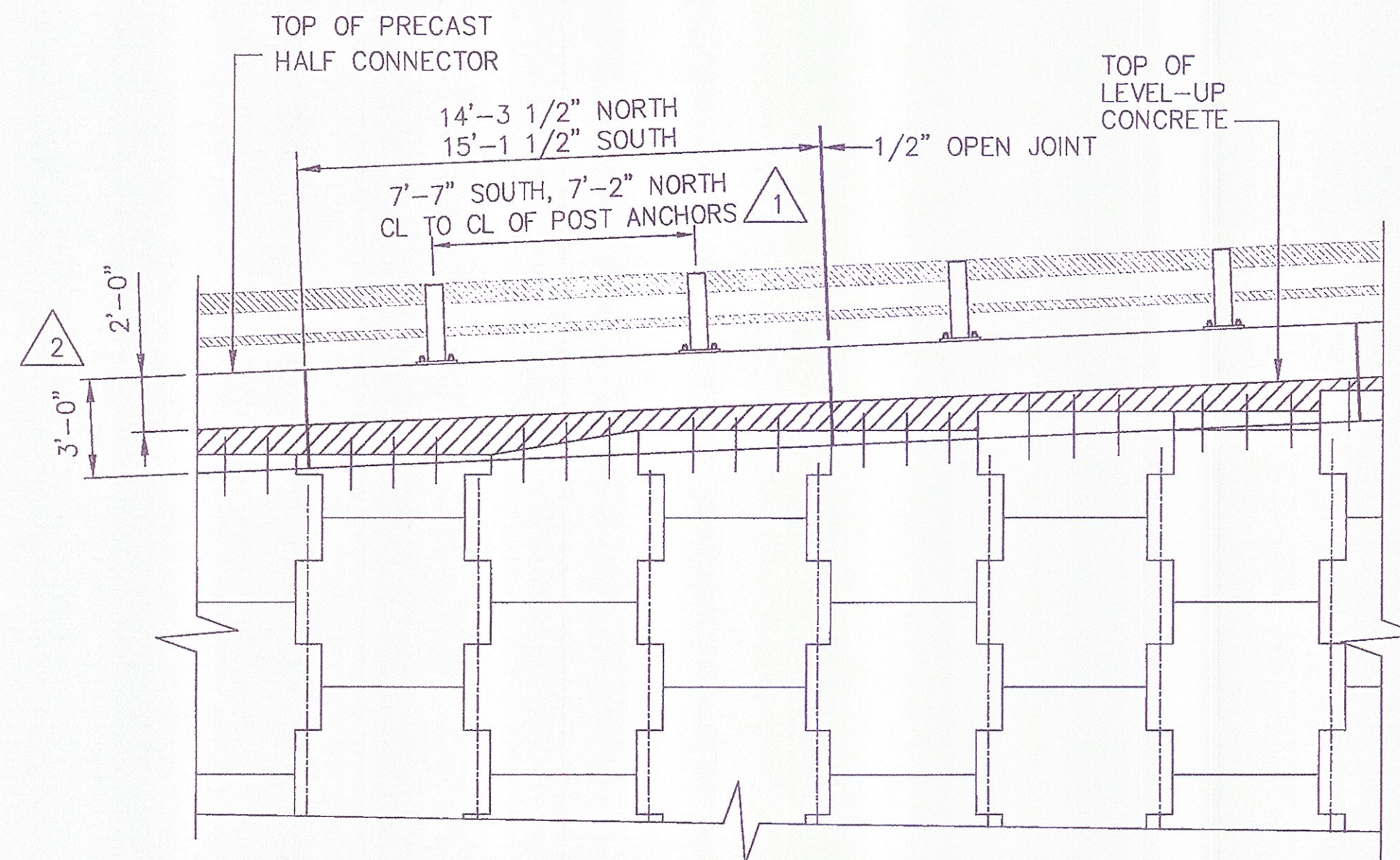


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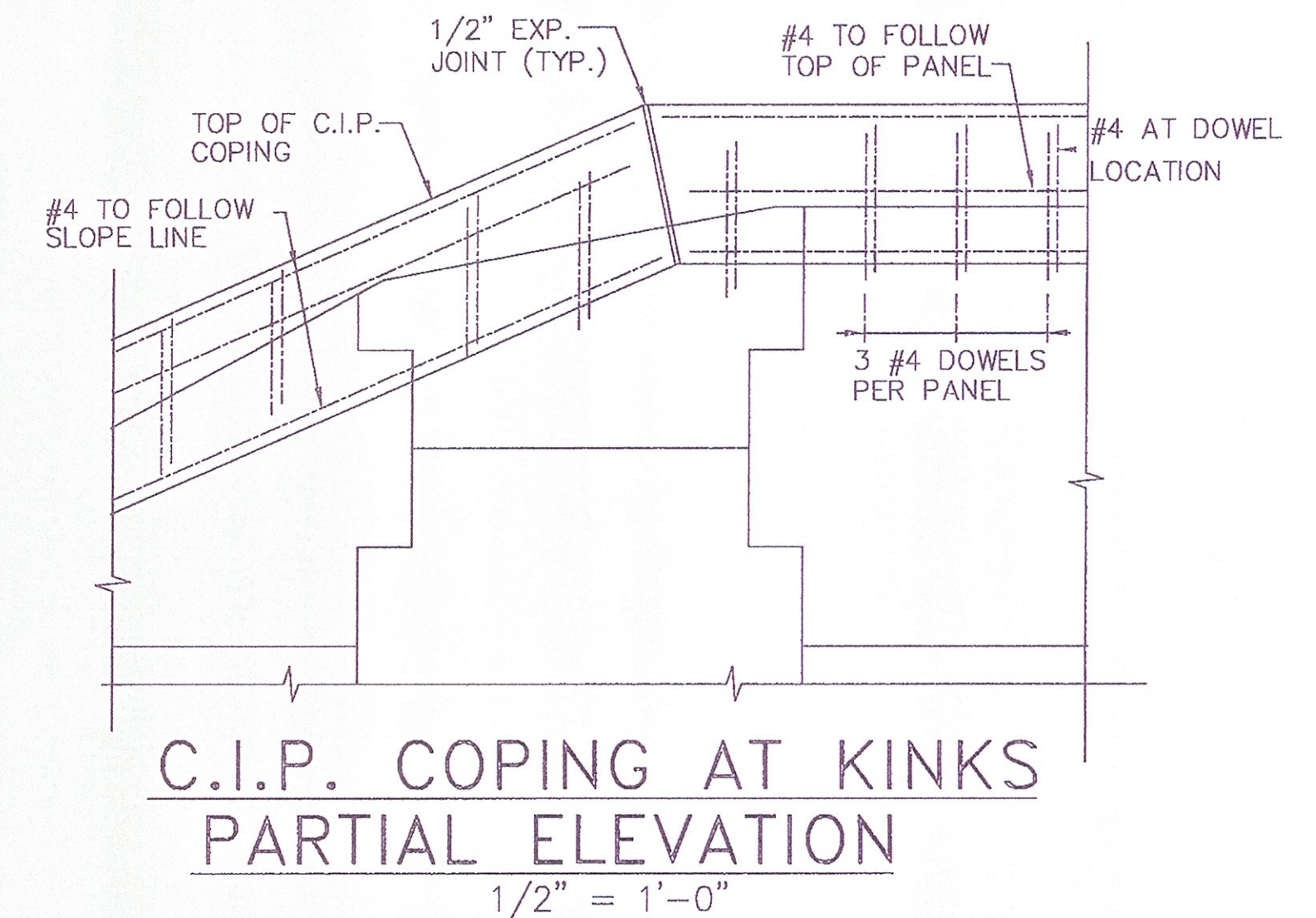
DESIGNED BY: DTM				PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY				LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	<u>1</u>	<u>7/19/11</u>	REV. PER GIA COMMENTS	OWNER VTAOT	DRAWING NO. 4 OF 7
REV.	DATE		DESCRIPTION	DRAWING COVERS TYPICAL SECTIONS	SCALE AS SHOWN



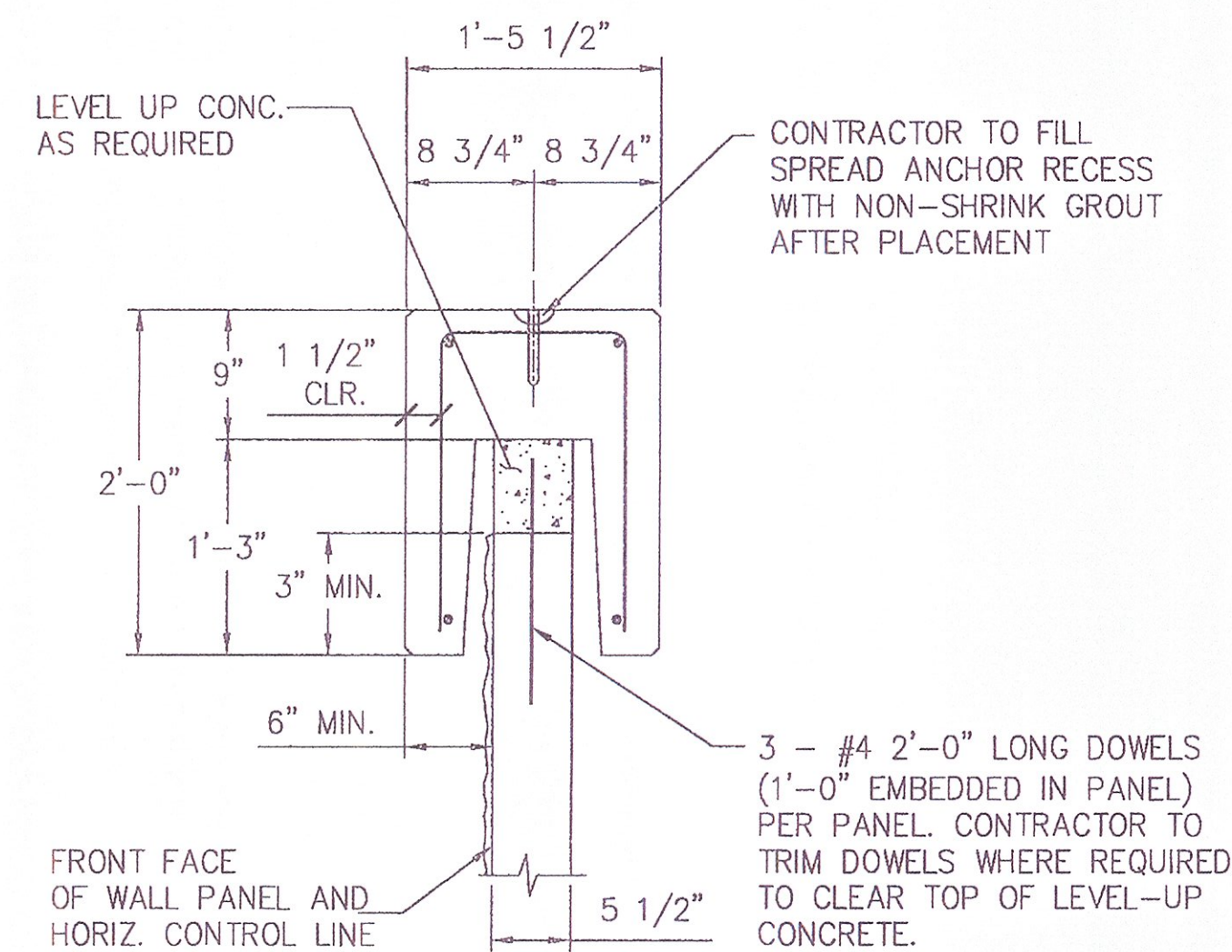
2
PRECAST HALF CONNECTOR SECTION
 SCALE: 1" = 1'- 0"



PRECAST HALF CONNECTOR PARTIAL ELEVATION
 SCALE: 1" = 1'- 0"

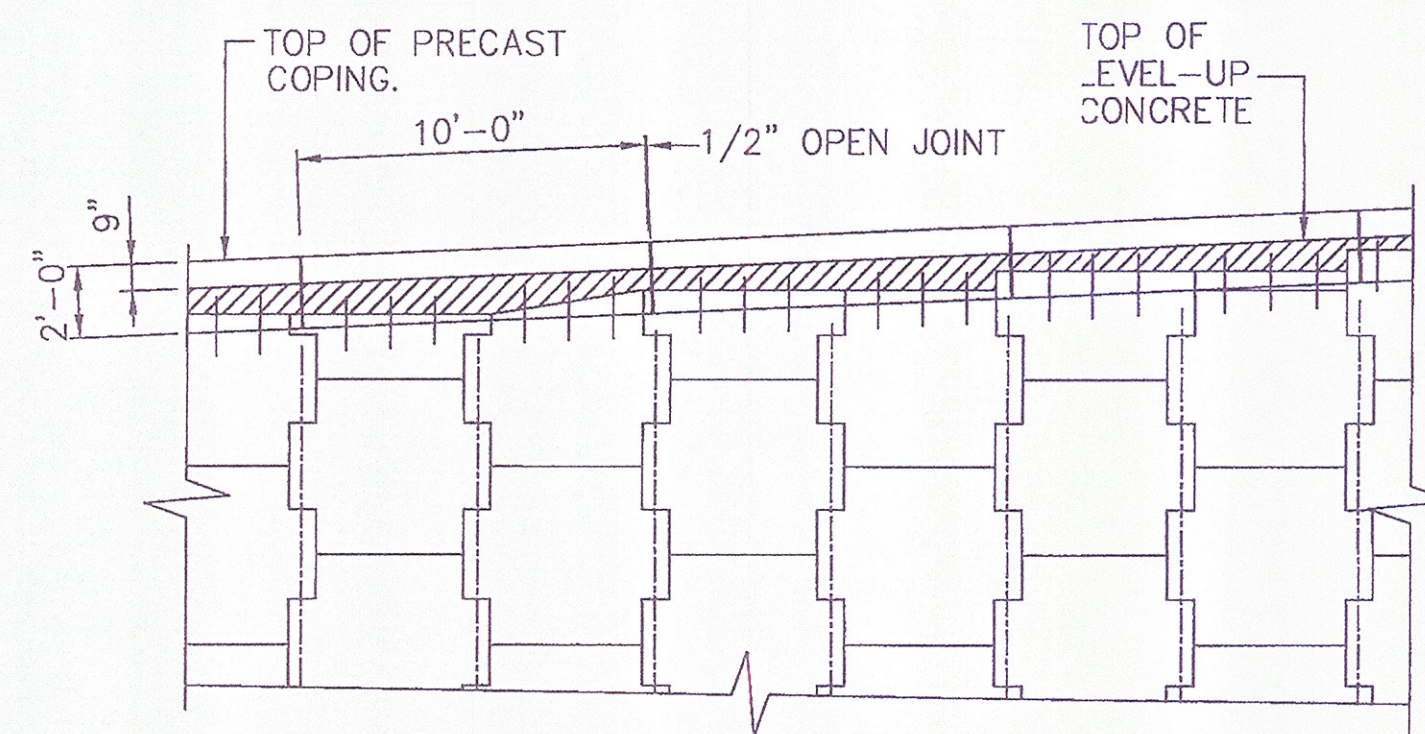


C.I.P. COPING AT KINKS PARTIAL ELEVATION
 1/2" = 1'-0"
 NOTE:
 1/2" EXPANSION JOINTS SHOULD BE PLACED AT KINKS AND CORNER POINTS WHEREBY ALL LONGITUDINAL REINFORCEMENT SHALL BE FIELD CUT 2 1/2" SHORT OF EACH SIDE OF THE EXPANSION JOINTS.

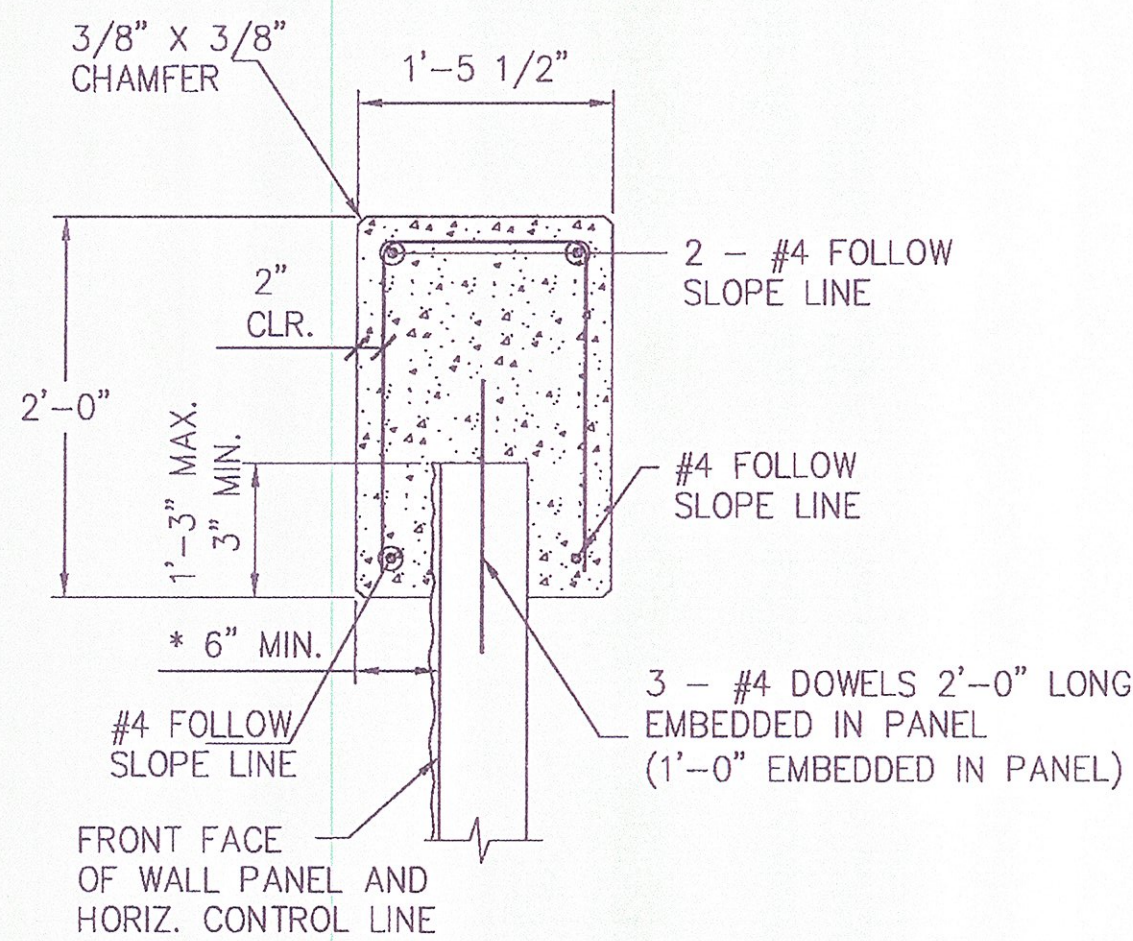


STANDARD COPING UNIT IS 10'-0" WITH SQUARE ENDS
PRECAST COPING SECTION
 SCALE: 1" = 1'- 0"

- NOTES:
 1. CONCRETE = 5,000psi
 2. STEEL = GRADE 60(EPOXY COATED)
 3. ALL LONGITUDINAL BARS ARE #4



PRECAST COPING PARTIAL ELEVATION
 SCALE: 3/16" = 1'-0"



* - TO MATCH PRECAST

C.I.P. CONC. COPING SECTION TO MATCH PRECAST COPING

SCALE: 1" = 1'- 0"

- NOTES:
 1. CONC. = 3,500 psi
 2. STEEL = GRADE 60 (EPOXY COATED)
 3. ALL LONGITUDINAL BARS ARE #4
 4. EXPANSION JOINTS (1/2") EVERY 8 PANEL JOINTS
 5. CONSTRUCTION JOINTS (1/2") EVERY 2 PANEL JOINTS

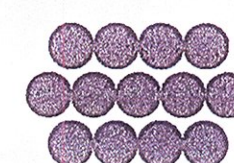
APPROVED ☐ Approved as Noted ☒
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 CONSULTING ENGINEERS
 CHECKED BY: *[Signature]* DATE: 9/11
 SIGNED BY: *[Signature]* DATE: 9/11

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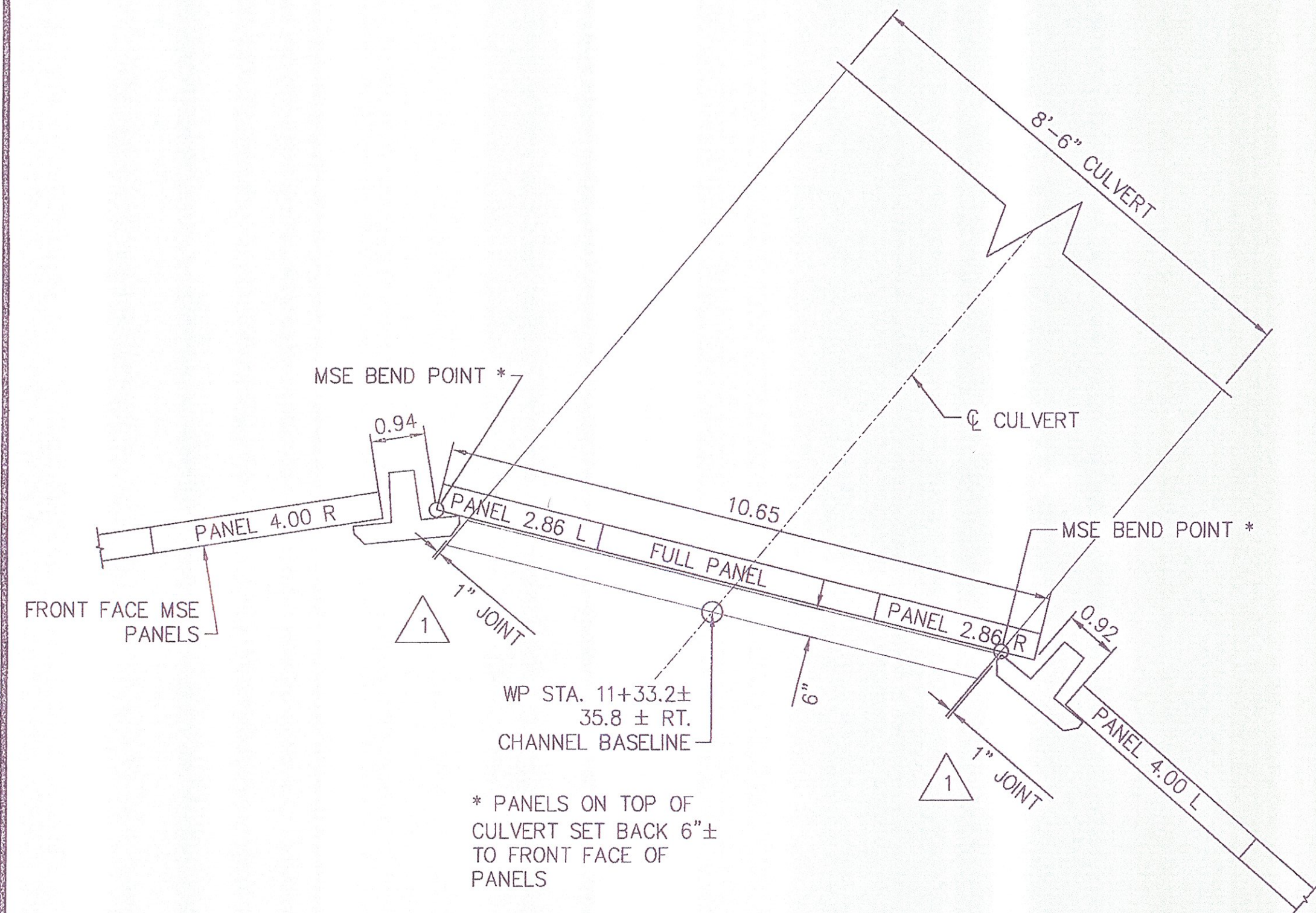


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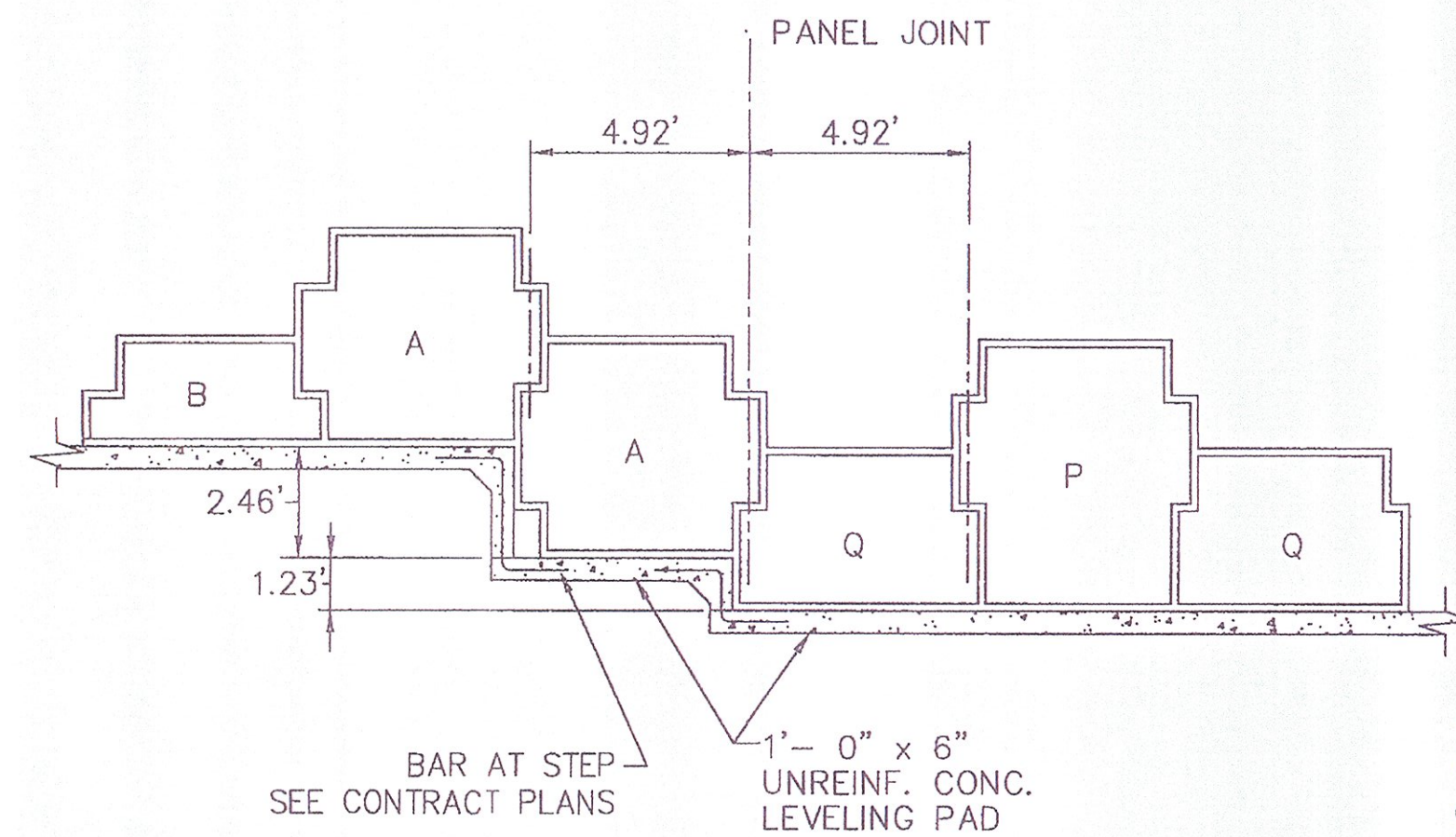
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DESIGNED BY: DTM				PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY	2	8/19/11	REVISIONS PER GIA COMMENTS AND REVISE HALF CONNECTOR DETAIL	LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	REVISIONS PER GIA COMMENTS	OWNER VTAOT	DRAWING NO. 5 OF 7
REV.		DATE	DESCRIPTION	DRAWING COVERS	SCALE AS SHOWN

R:\RE15053_REW_VT_CABOT_DANVILLE\DWGS\06_MISC_DETAILS.DWG

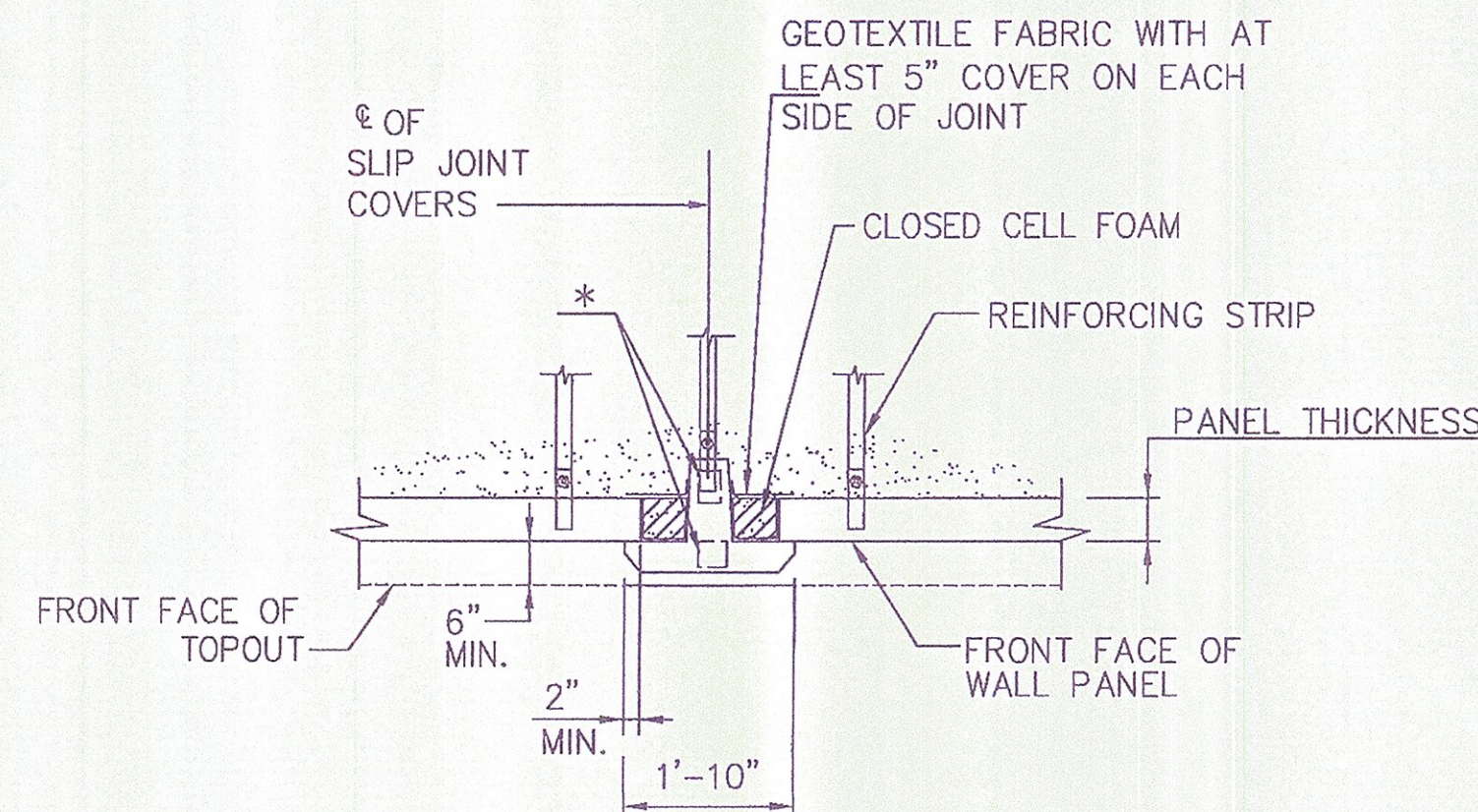


SLIP JOINT INTERFACE AT CULVERT
(SOUTH WALL SHOWN. NORTH WALL INTERFACE SIMILAR)
SCALE: 1/2" = 1'- 0"



NOTE: FOR ADDITIONAL DETAILS, REFER TO
LEVELING PAD STEP DETAIL ON CONTRACT PLANS
SHEET 102 OF 250

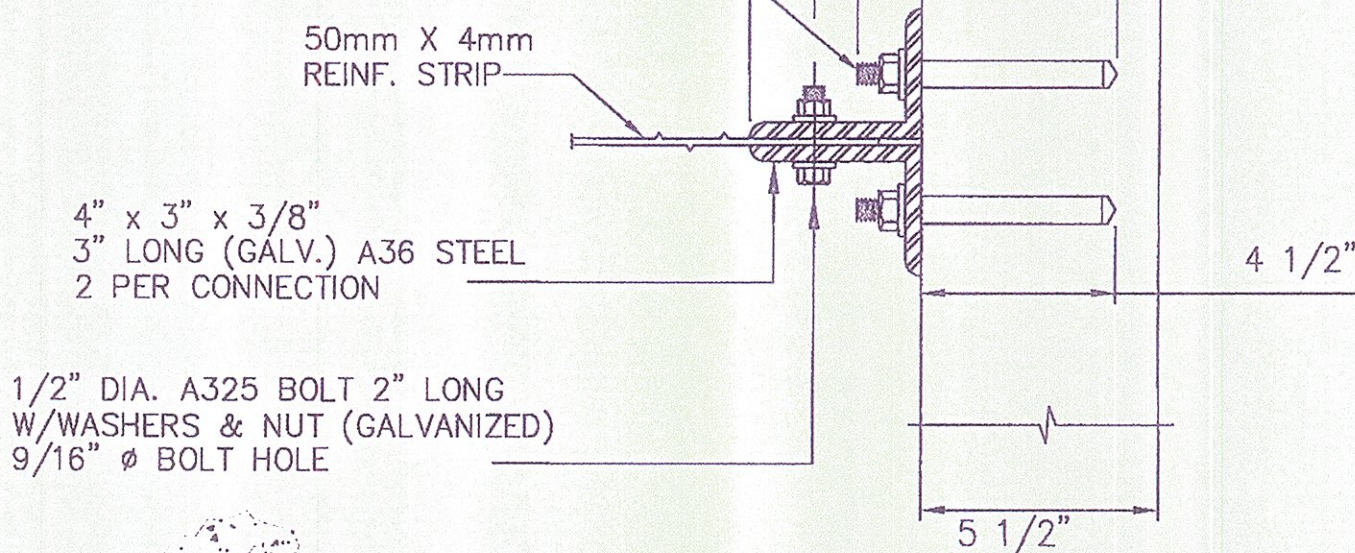
TYPICAL LEVELING PAD STEP DETAIL
SCALE: 1/4" = 1'- 0"



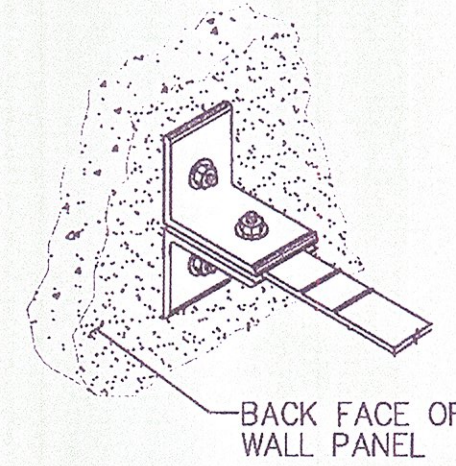
SLIP JOINT COVER DETAIL
SCALE: 1/2" = 1'- 0"
* TWO FLAT BEARING PADS PER UNIT.
FRONT PAD SHALL BE PLACED ON
INSIDE EDGE OF LIP

5/8" DIA. x 6" LONG HILTI HAS ANCHOR ROD (GALV.)
WITH HVA ADHESIVE ANCHOR OR HILTI HY150- EMBEDDED 4 1/2".
2 PER CONNECTION ASSEMBLY
1 1/2" MIN. ±1/16"

INSTALL IN ACCORDANCE WITH
MANUFACTURERS RECOMMENDATIONS



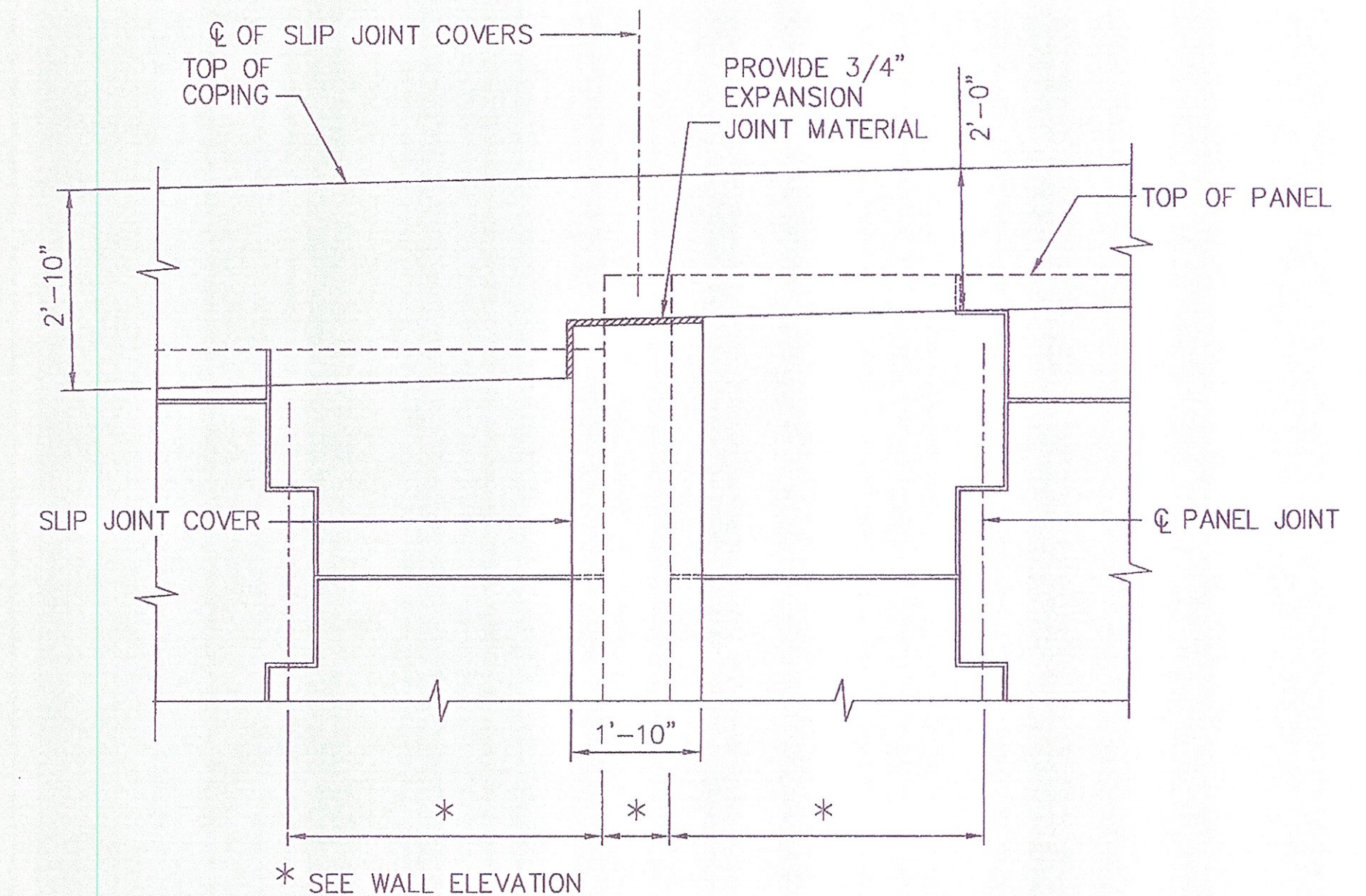
1/2" DIA. A325 BOLT 2" LONG
W/WASHERS & NUT (GALVANIZED)
9/16" Ø BOLT HOLE



- MATERIAL PROPERTIES**
- CLIP ANGLE - A36 STEEL
GALVANIZED PER ASTM A-123 OR AASHTO M111
 - 1/2" Ø BOLTS - A325 - GALVANIZED
PER ASTM A-153
 - 50mm x 4mm R.S. - A-572 GRADE 65
GALVANIZED PER ASTM A-123 OR AASHTO M111
 - HILTI COMPONENTS PER HILTI SPECS.

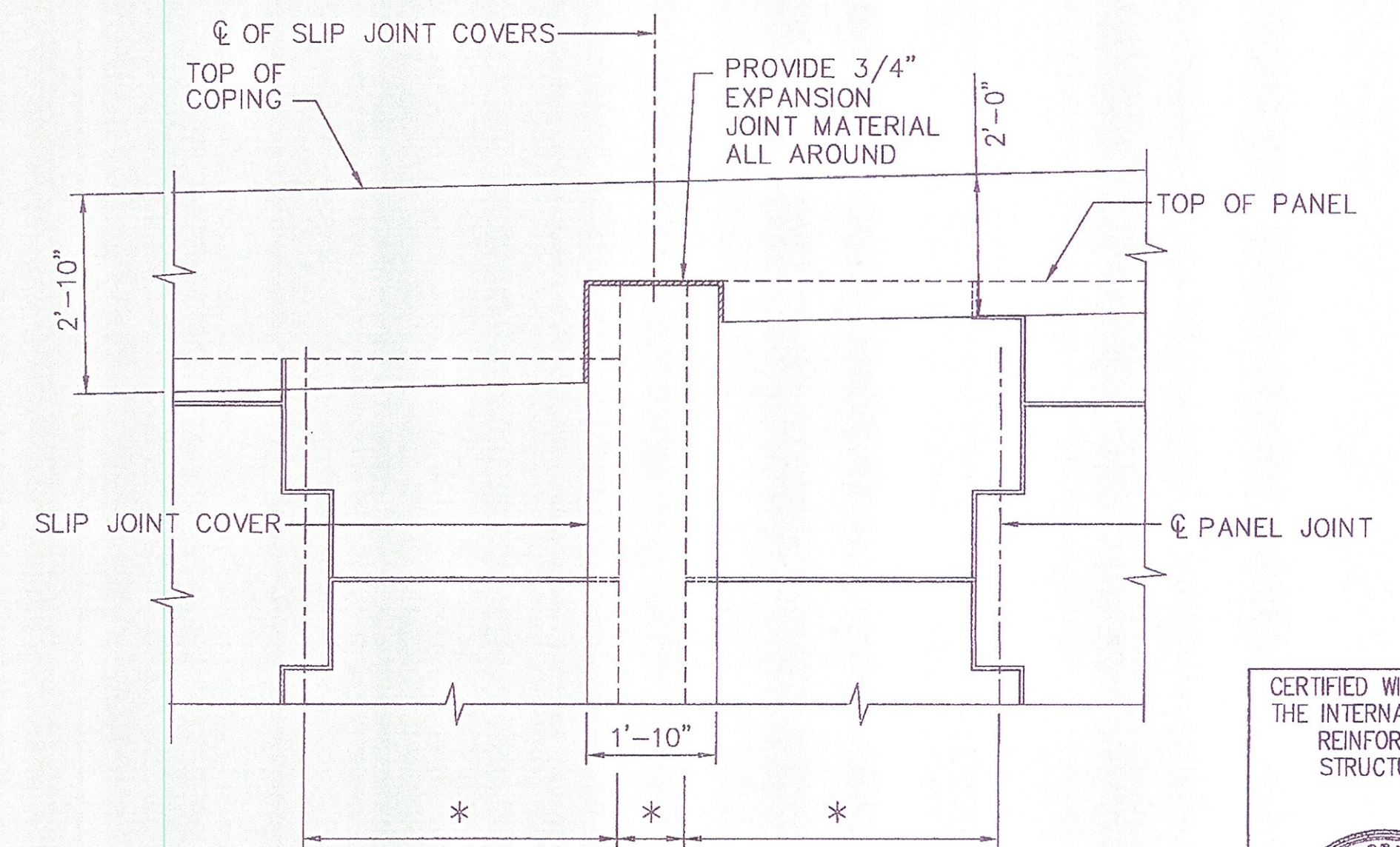
NOTE:
DRILLED HOLES SHALL BE CLEANED
COMPRESSED AIR AS PER HILTI SPECIFICATIONS
THIS DETAIL IS PROVIDED FOR USE IN THE EVENT
A TIE STRIP CONNECTION NEEDS TO BE REPLACED
OR ADDED TO THE MSE FACING PANELS.

CLIP ANGLE DETAIL
SCALE: NONE



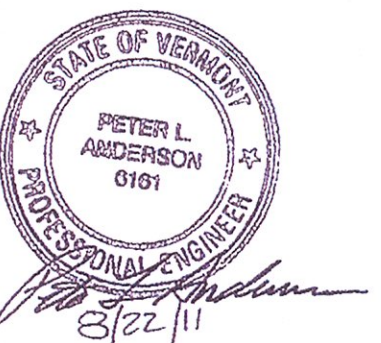
**C.I.P. COPING
OVER SLIP JOINT COVER (OPTION 1)**
SCALE: 1/2" = 1'- 0"

NOTE:
CONTRACTOR MAY CHOOSE EITHER OPTION 1 OR
OPTION 2 WHEREBY FOR OPTION 1 THE TOP SLIP
JOINT PANEL IS FIELD CUT TO FIT UNDER
BOTTOM OF COPING PROVIDING A 3/4" JOINT AS
SHOWN IN DETAIL. OPTION 2 ALLOWS FOR USE
OF THE FULL SLIP JOINT PANEL PROVIDED BY
RECO WHEREBY THE CONTRACTOR WILL CAST THE
COPING AROUND THE TOP OF SLIP JOINT COVER
PROVIDING THE 3/4" JOINT SHOWN IN THE
DETAIL.



**C.I.P. COPING
OVER SLIP JOINT COVER (OPTION 2)**
SCALE: 1/2" = 1'- 0"

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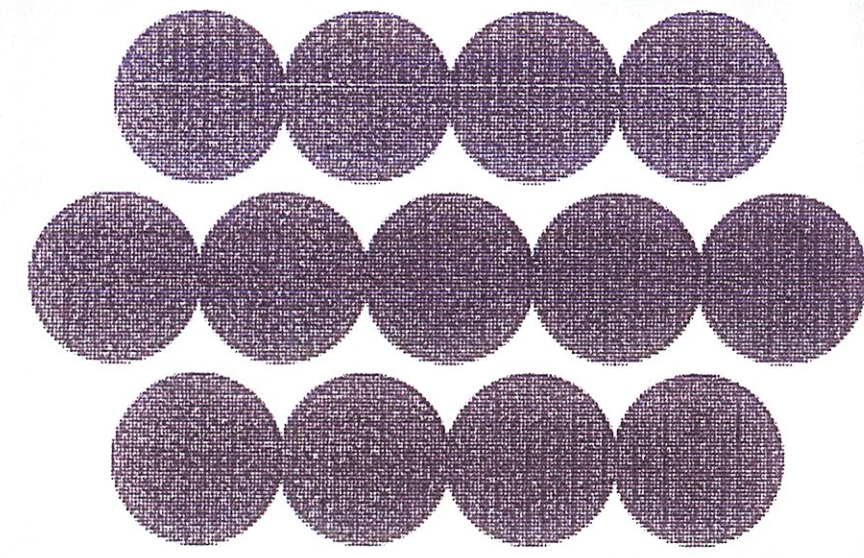
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DESIGNED BY: DTM				PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY				LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	REV. PER GIA COMMENTS	OWNER VTAOT	DRAWING NO. 6 OF 7
REV.	DATE		DESCRIPTION	DRAWING COVERS MISCELLANEOUS DETAILS	SCALE AS SHOWN



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PRECAST PANEL SHOP DRAWINGS

PANEL GENERAL NOTES

- REINFORCING BARS FOR PRECAST FACING PANELS SHALL BE STEEL ASTM A615 GRADE 60 (AASHTO M31) AND BE EPOXY COATED.
* #4 COPING DOWELS SHALL BE EPOXY COATED *
- REINFORCING BARS FOR PRECAST COPING UNITS SHALL BE STEEL ASTM A615 GRADE 60. (AASHTO M31) EPOXY COATED.
- TIE STRIPS SHALL BE ASTM A1011 (FORMERLY A-570) GRADE 50, 10 GAUGE THICKNESS, GALVANIZED AS PER ASTM A-123 OR A-153.
- ALL FRONT EDGES OF PANELS, EXCEPT THE BOTTOM EDGE OF THE BOTTOM PANEL COURSE, SHALL HAVE A 3/8" CHAMFER.
- TIE STRIPS SHALL BE PLACED WITHIN 1" OF THE DIMENSIONS SHOWN ON THE FABRICATION DRAWINGS.
- PANEL DESIGN THICKNESS IS 5 1/2" PLUS 1 1/2" ARCHITECTURAL FINISH. THE 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 5000 psi AND BE IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS ITEM 900.670 AND VTAOT SPECIFICATIONS SECTION 540.
- DIMENSIONS SPECIFIED ON INDIVIDUAL FABRICATION DRAWINGS SUPERCEDE THOSE CALLED OUT ON THE STANDARD SECTIONS AND DETAILS.
- VERTICAL REINFORCING BARS SHALL BE PLACED 1 1/2" MIN. - 2" (TYP.) CLEAR FROM THE BACK FACE OF THE 5 1/2" PANEL.
- ALL REINFORCING BARS SHALL BE STOPPED 2" CLEAR FROM ANY EDGE OF PANEL UNLESS NOTED ON INDIVIDUAL FABRICATION DRAWING OR AS INDICATED IN NOTE #9.
- IN ALL SLOPED PANELS THE TWO (2) VERTICAL REINFORCING BARS ADJACENT TO A COMMON TIE STRIP SHALL BE OF THE SAME LENGTH.
- ALL INDIVIDUAL FABRICATION DRAWINGS ARE SHOWN BACK FACE.
- PRECAST FACING PANELS FOR R.E WALLS SHALL HAVE AN ASHLAR STONE FORM LINER FINISH.
SLIP JOINT COVERS SHALL HAVE A SMOOTH FORM FINISH.
PRECAST COPING AND HALF CONNECTOR UNITS SHALL HAVE A SMOOTH FORM FINISH.

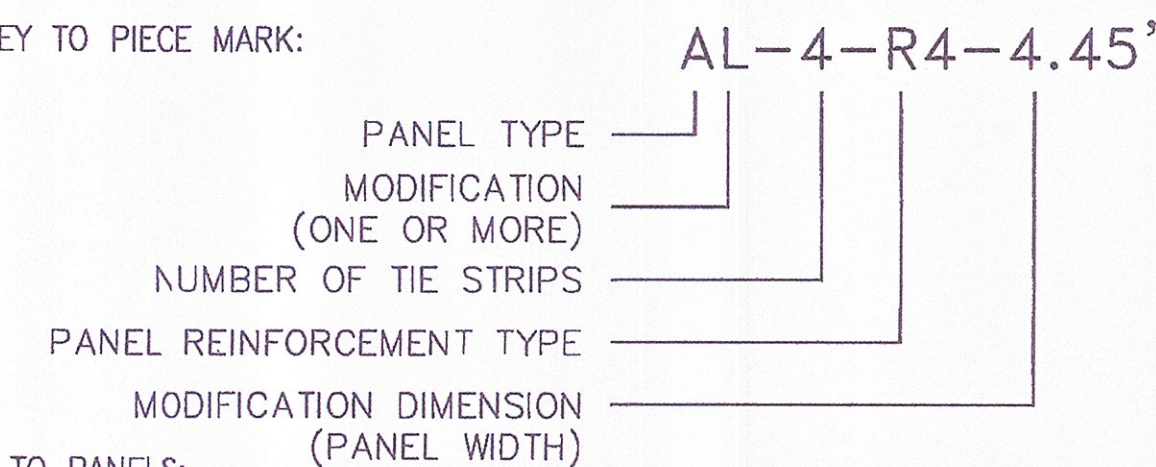
PANEL GENERAL NOTES (CONT.)

12. REINFORCING BARS IN A STANDARD "A" PANEL SHALL BE AS FOLLOWS:

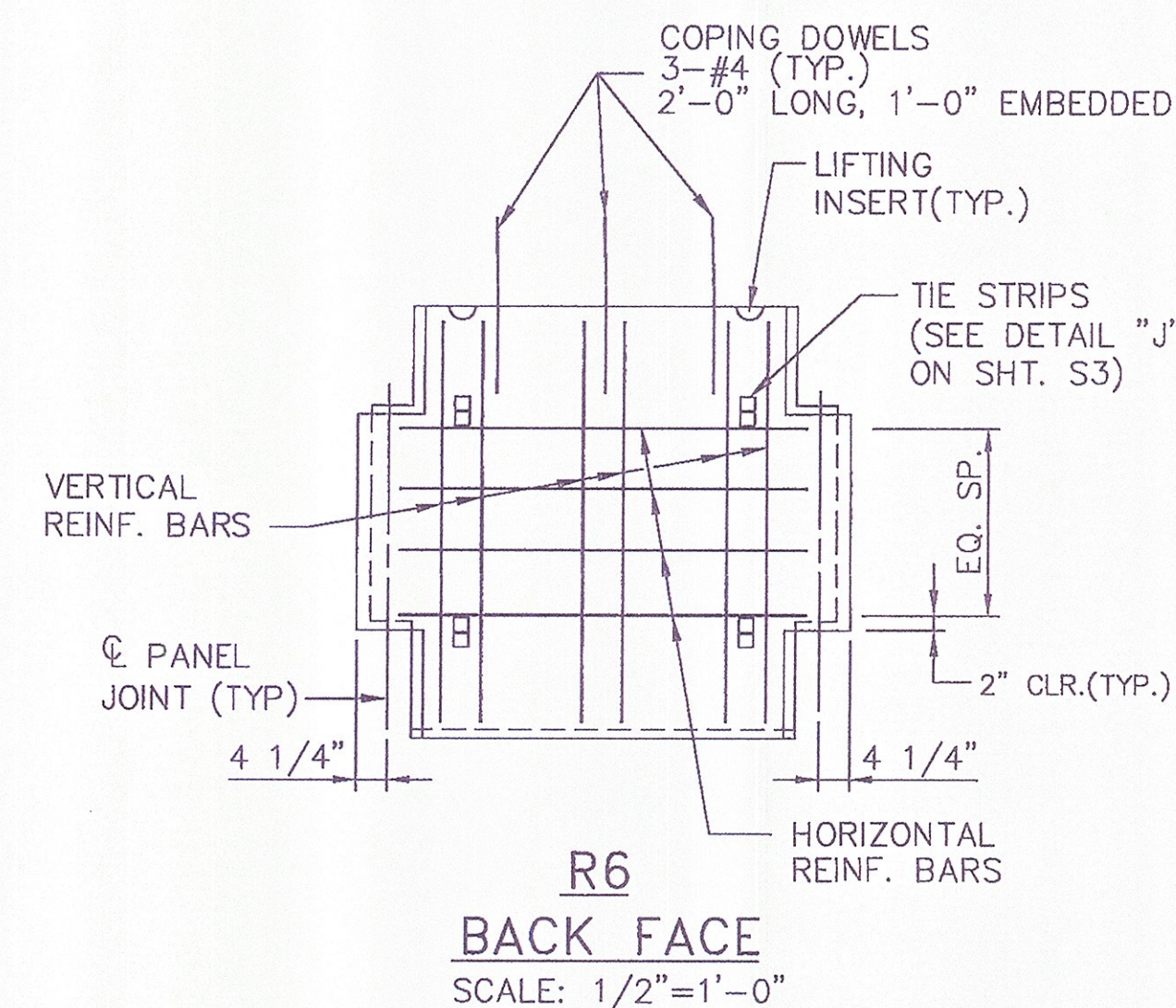
PANEL REINFORCEMENT		
PIECE MARK	HORIZONTAL BARS	VERTICAL BARS
XX-XX-R6	4-#4	6-#3

HORIZONTAL REINFORCEMENT IN THE OTHER PANEL TYPES IS PROPORTIONAL TO THEIR RELATIVE HEIGHT.

13. KEY TO PIECE MARK:



14. KEY TO PANELS:



INDEX	
SHEET NO.	CONTENTS
S01	CASTING NOTES
S02	CRUCIFORM PANEL SECTIONS
S03	CRUCIFORM PANEL DETAILS
S04	STANDARD PANEL DRAWINGS
S05	STANDARD PANEL DRAWINGS
S06	PANEL CASTING DRAWINGS
S07	PANEL CASTING DRAWINGS
S08	PANEL CASTING DRAWINGS
S09	PANEL CASTING DRAWINGS AND PRECAST COPING "CPW1"
S10	SLIP JOINTS
S11	HFCW1
S12	HFCW2
S13	HFCW3

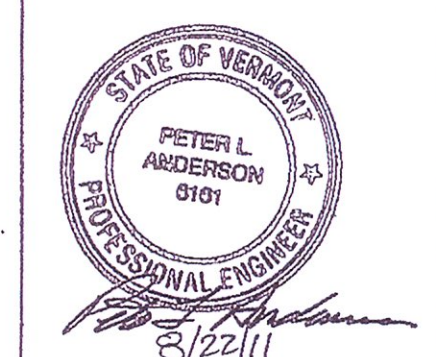
APPROVED ☒ Revisions and Resubmits ☐ Approved as Noted ☐ DISAPPROVED ☐

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: XZ DATE: 9/11
SIGNED BY: Michael H. Gung DATE: 9/11

CERTIFIED WITH RESPECT
TO THE INTERNAL
STABILITY OF REINFORCED
EARTH STRUCTURES ONLY



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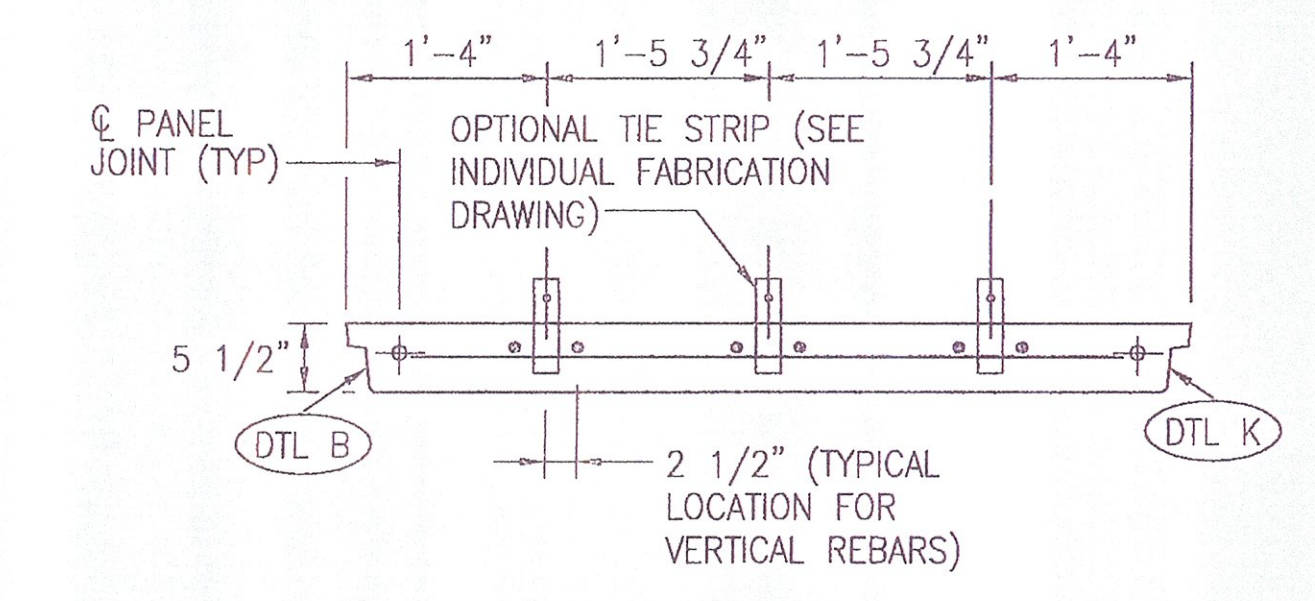
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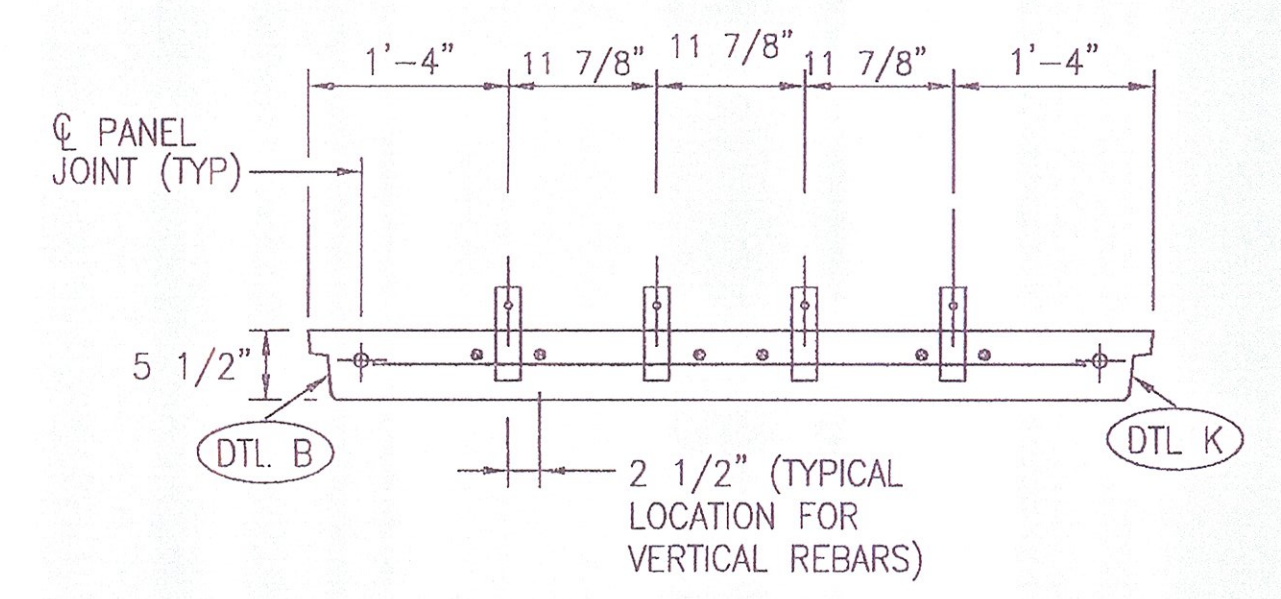
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8614 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175

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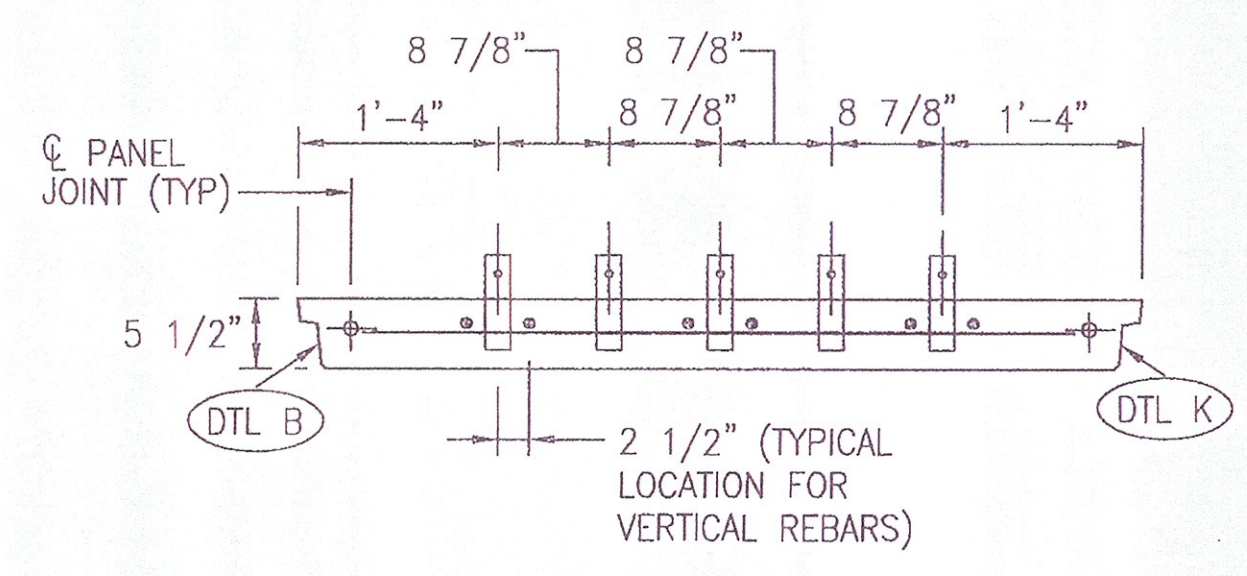
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PROJECT ENGR:	DTM	2	8/19/11	REVISE HALF CONNECTOR DETAILS	LOCATION	CABOT-DANVILLE, VERMONT	CONTRACT NO.	RE-15053
CHECKED BY:	EEH/LY	1	7/19/11	REVISIONS PER GIA COMMENTS	OWNER	VTAOT	DRAWING NO.	S1 OF S13
REV.	DATE			DESCRIPTION	DRAWING COVERS	CASTING NOTES	SCALE	AS SHOWN



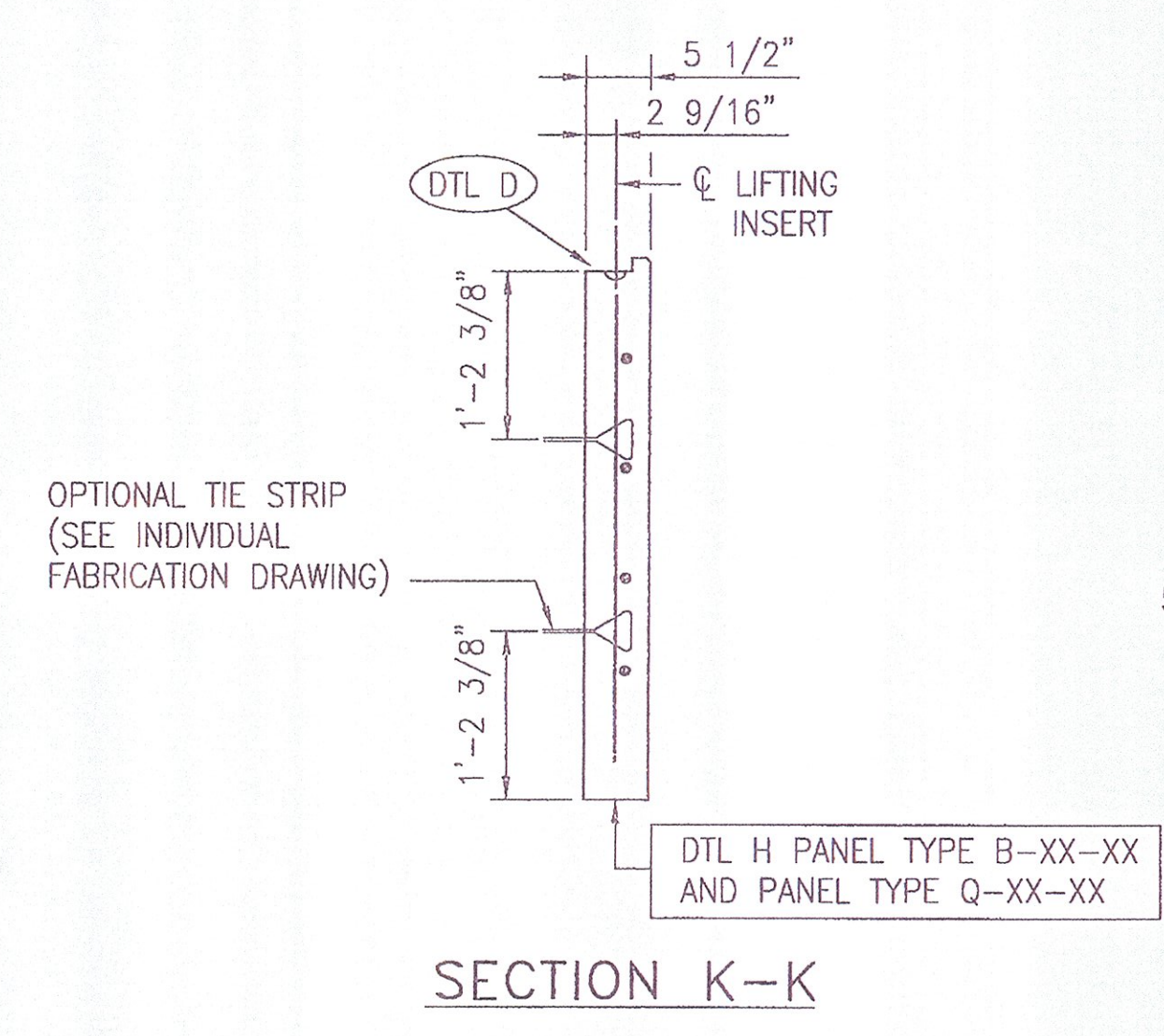
SECTION A-A FOR 2 OR 3 T.S. PER LEVEL



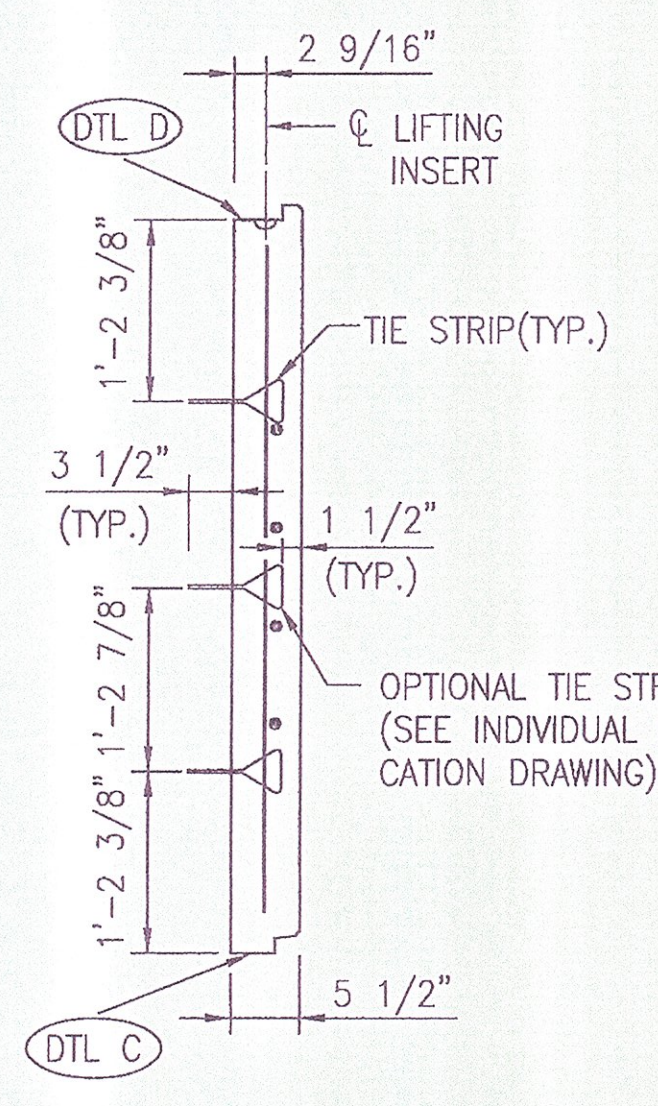
SECTION A-A FOR 4 T.S. PER LEVEL



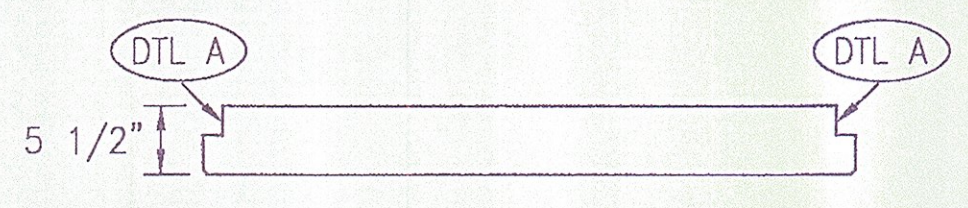
SECTION A-A FOR 5 T.S. PER LEVEL



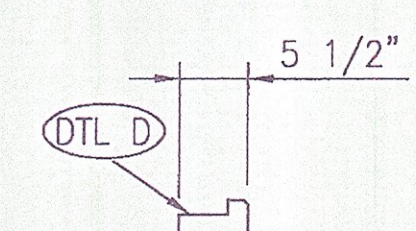
SECTION K-K



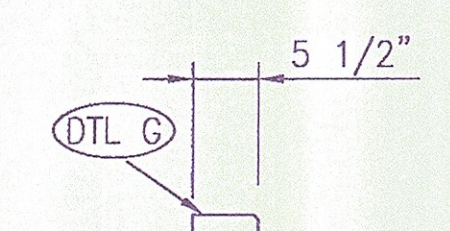
SECTION C-C



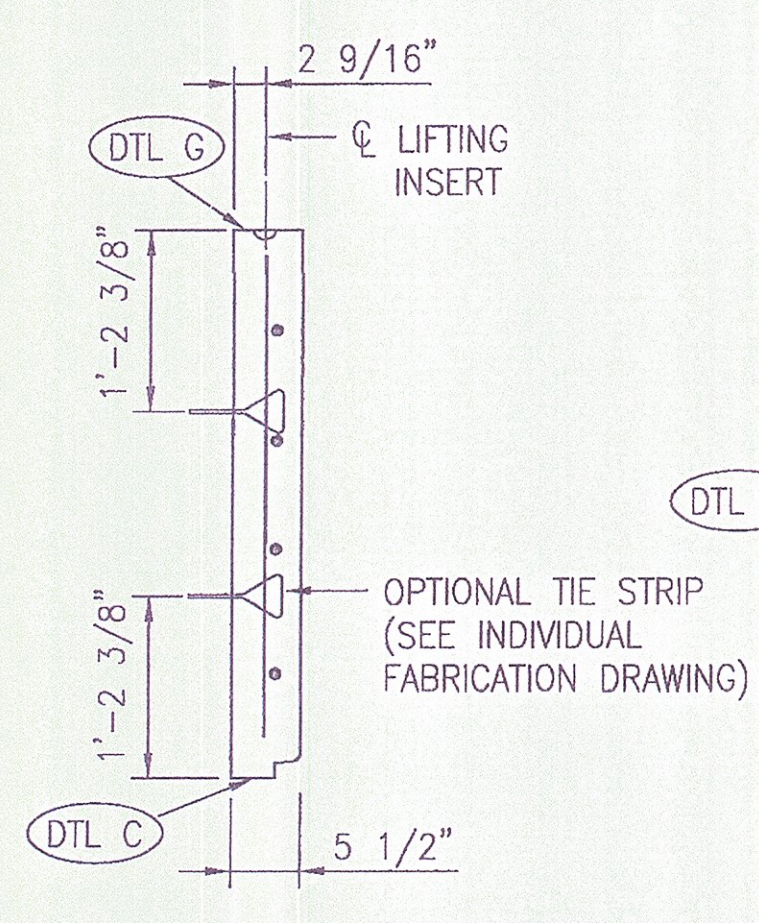
SECTION B-B



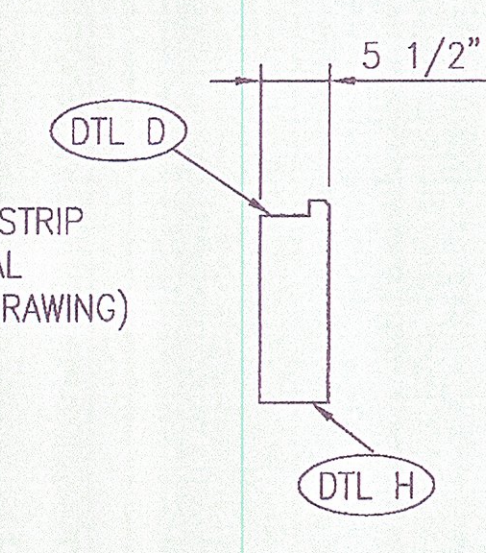
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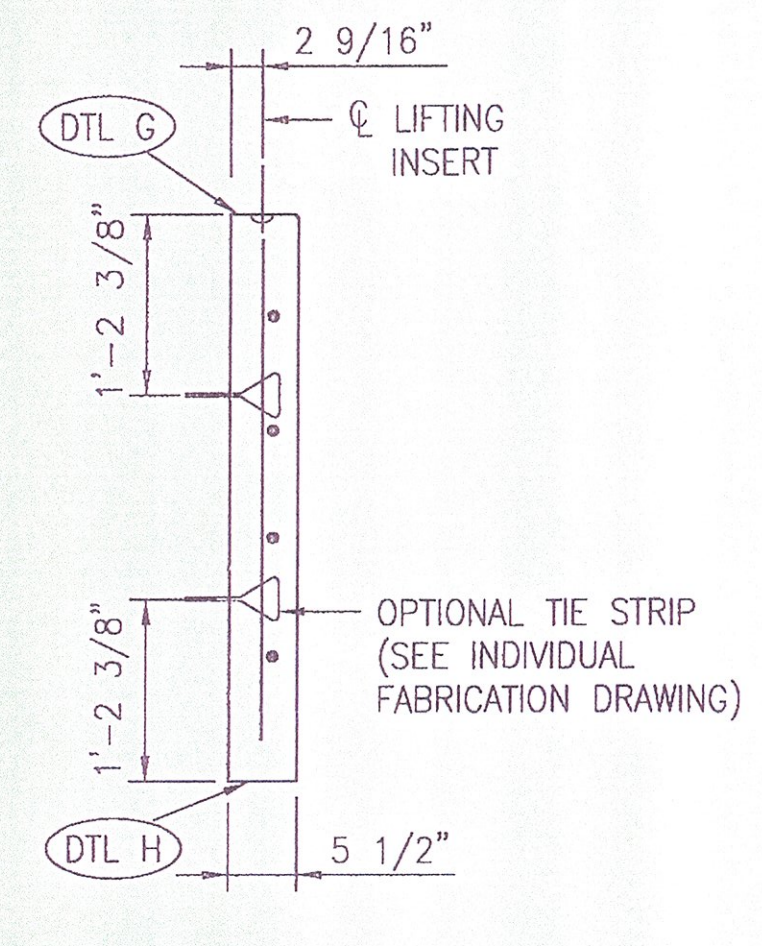
SECTION E-E



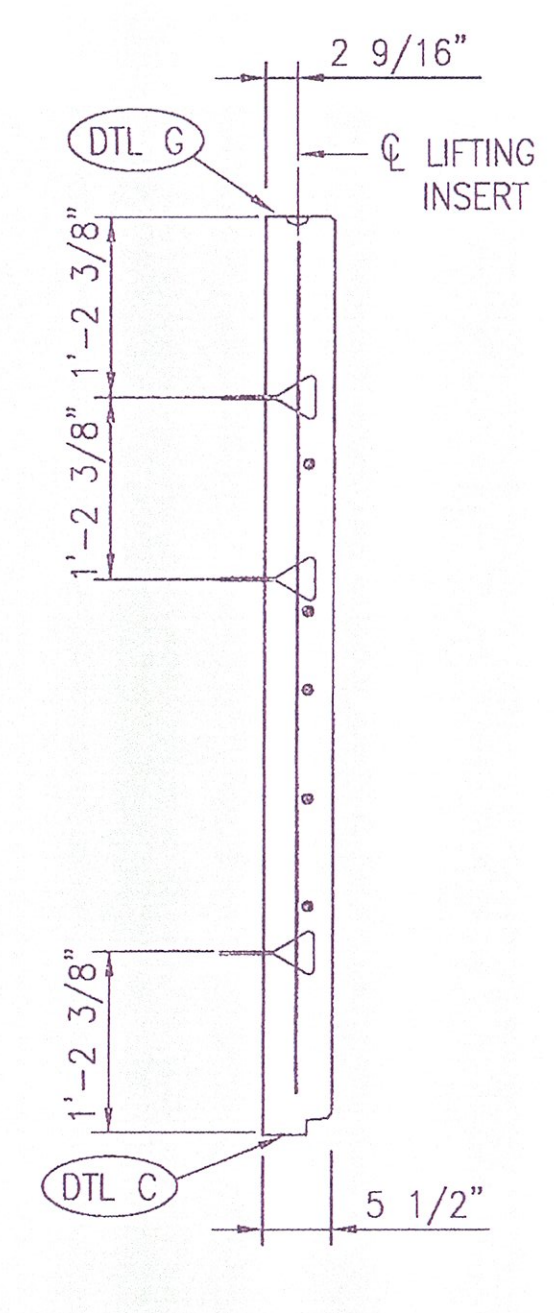
SECTION F-F



SECTION G-G

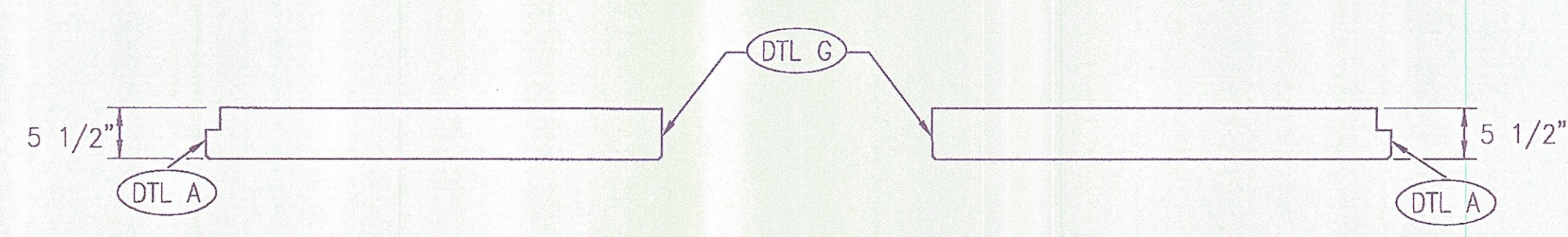


SECTION H-H



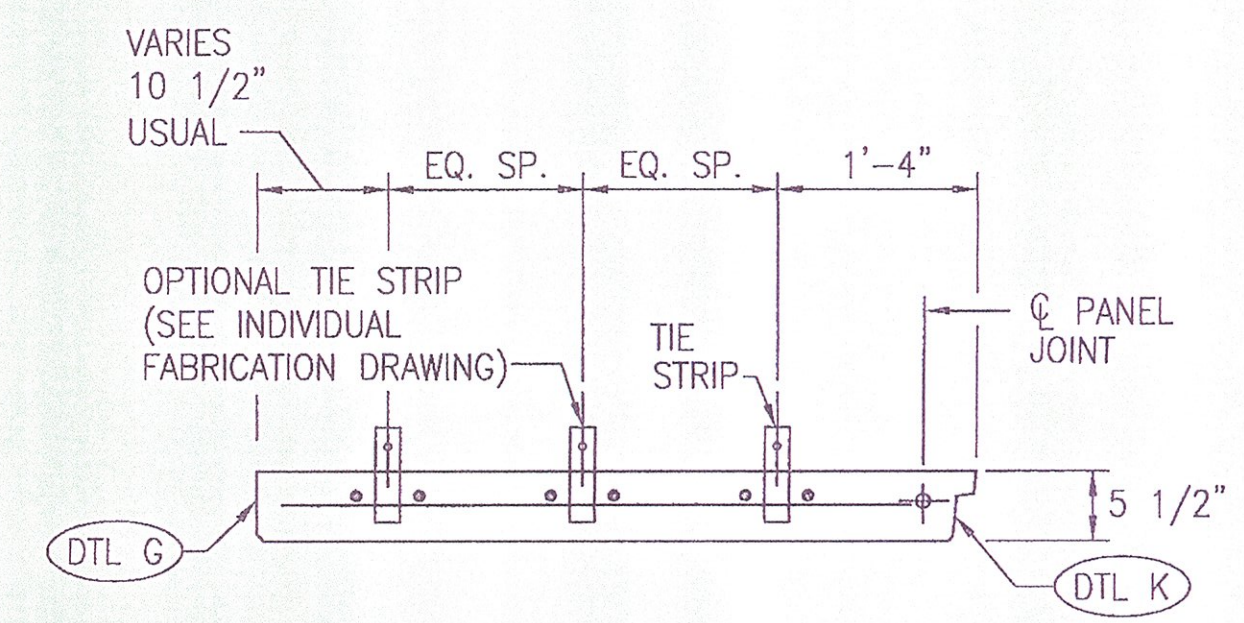
SECTION J-J

NOTE: ARCHITECTURAL FINISH NOT SHOWN FOR CLARITY

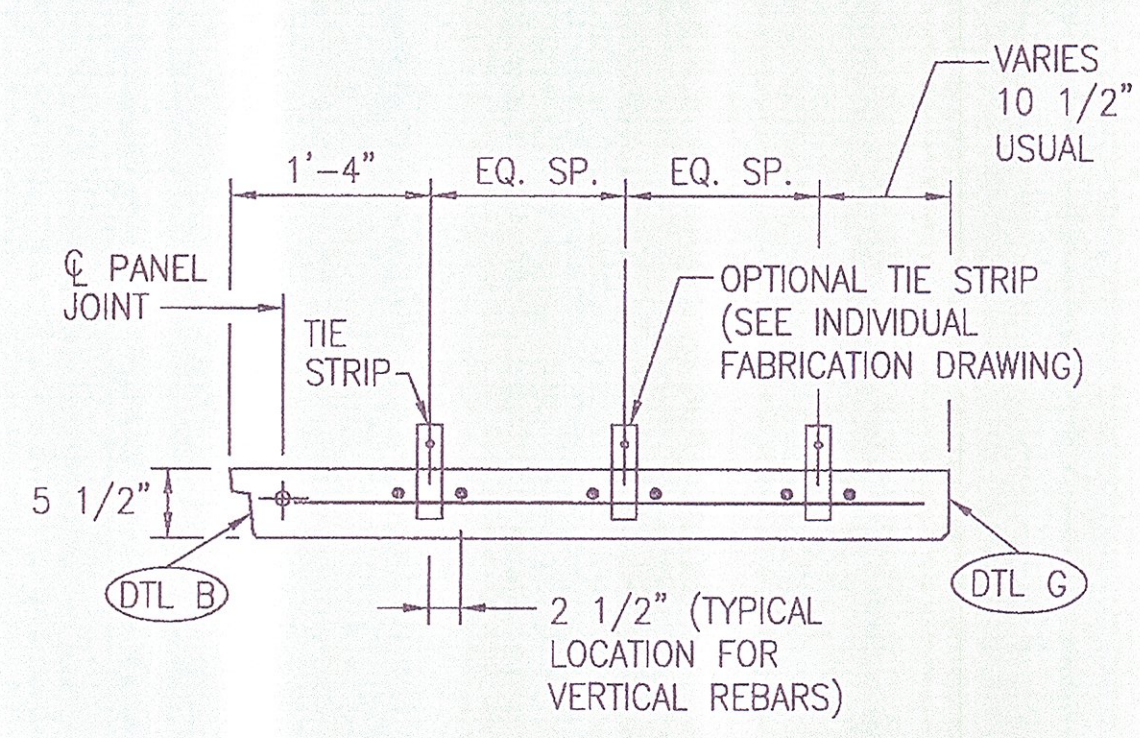


SECTION M-M

SECTION P-P



SECTION R-R



SECTION L-L

SEE INDIVIDUAL FABRICATION DRAWING FOR PLACEMENT OF REBARS.

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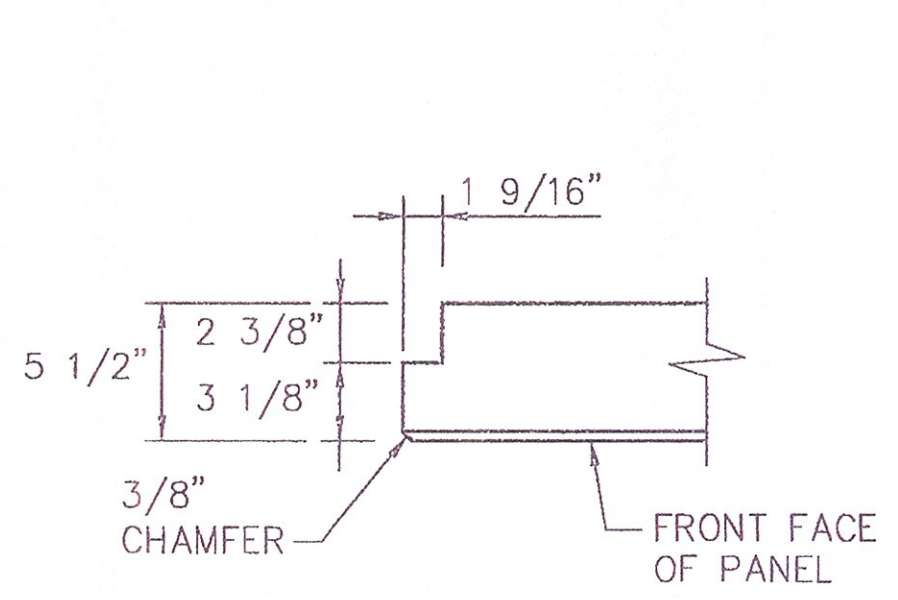
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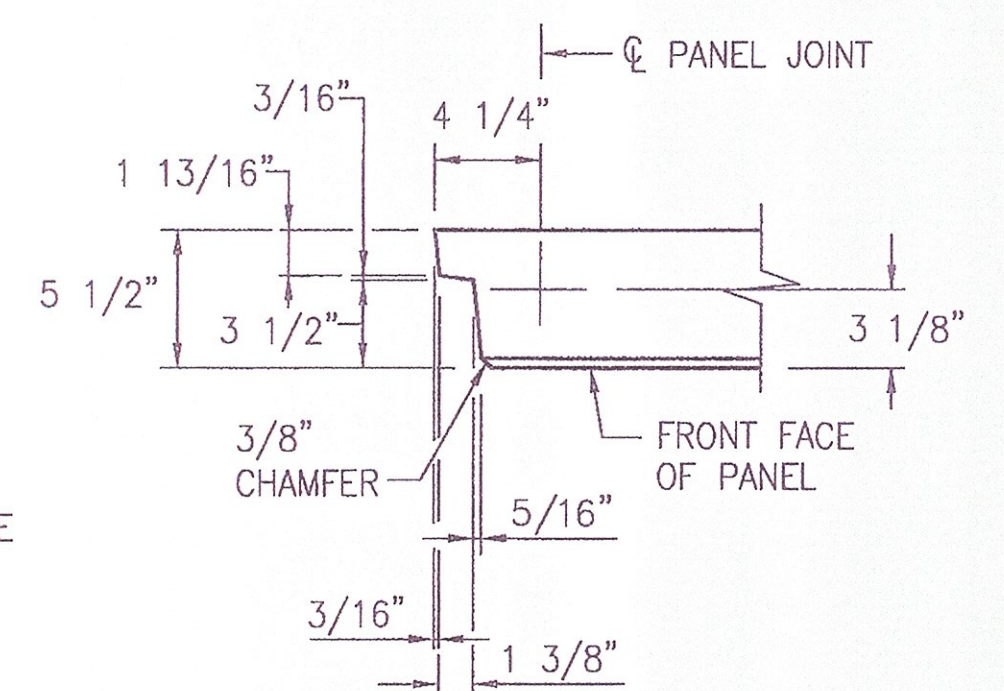
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DESIGNED BY:	KC	PROJECT ENGR:	DTM	CHECKED BY:	EEH/LY	ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	CRUCIFORM PANEL SECTIONS	SCALE	AS SHOWN
PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM			LOCATION	CABOT-DANVILLE, VERMONT			OWNER	VTAOT			CONTRACT NO.	RE-15053
DRAWING NO.	S2 OF S13			DATE	04/06/2011			CHECKED BY	XZ			DATE	9/11
SIGNED BY	Michael A. Woz			DATE	9/11			APPROVED	XZ			DATE	9/11

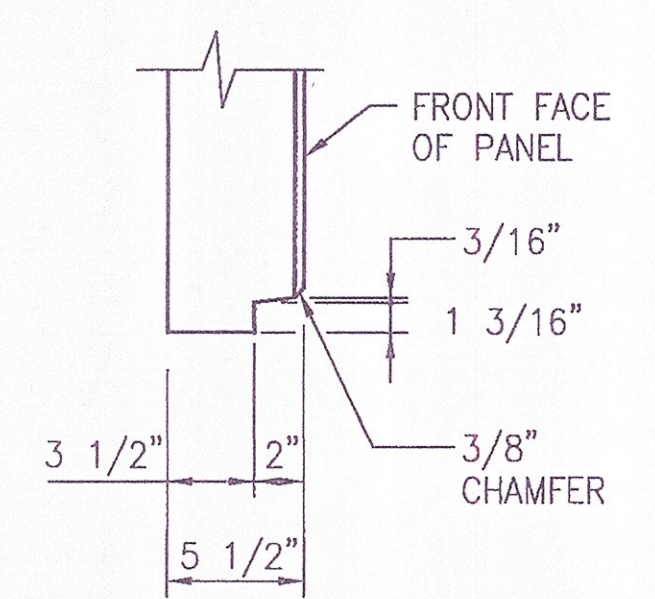
APPROVED ☒ Approved as Noted ☐
 Revised and Resubmitted ☐ DISAPPROVED ☐
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: XZ DATE: 9/11
 SIGNED BY: Michael A. Woz DATE: 9/11



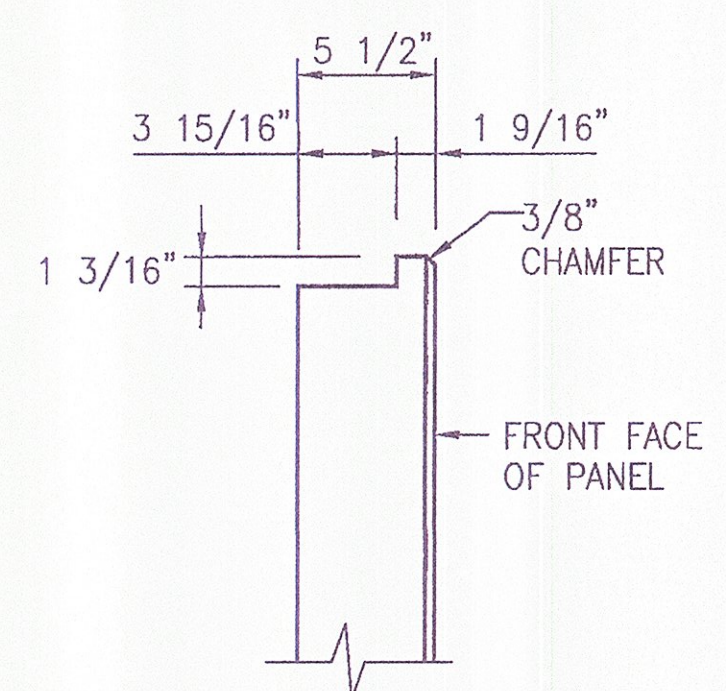
DETAIL "A"
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DETAIL "B"
SCALE: 1 1/2"=1'-0"

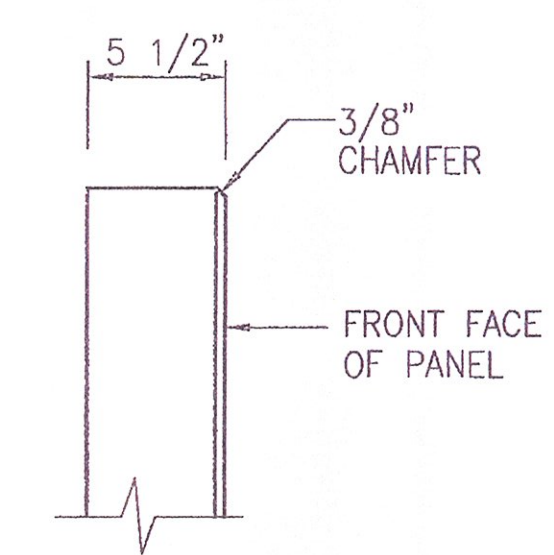


DETAIL "C"
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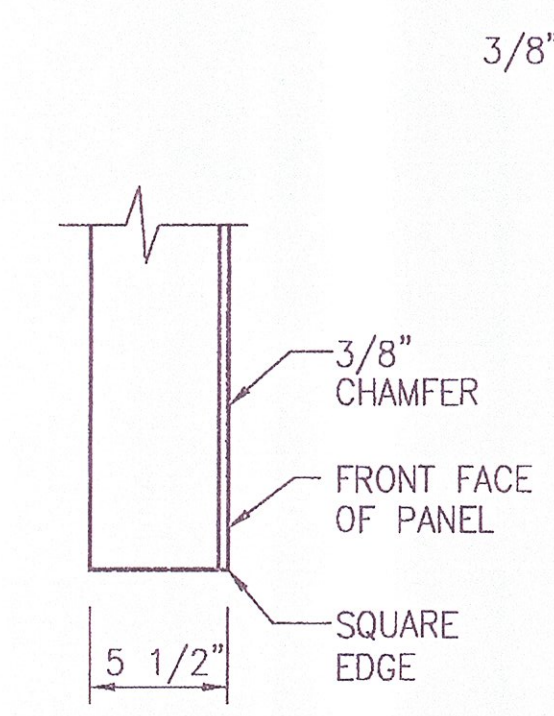


DETAIL "D"
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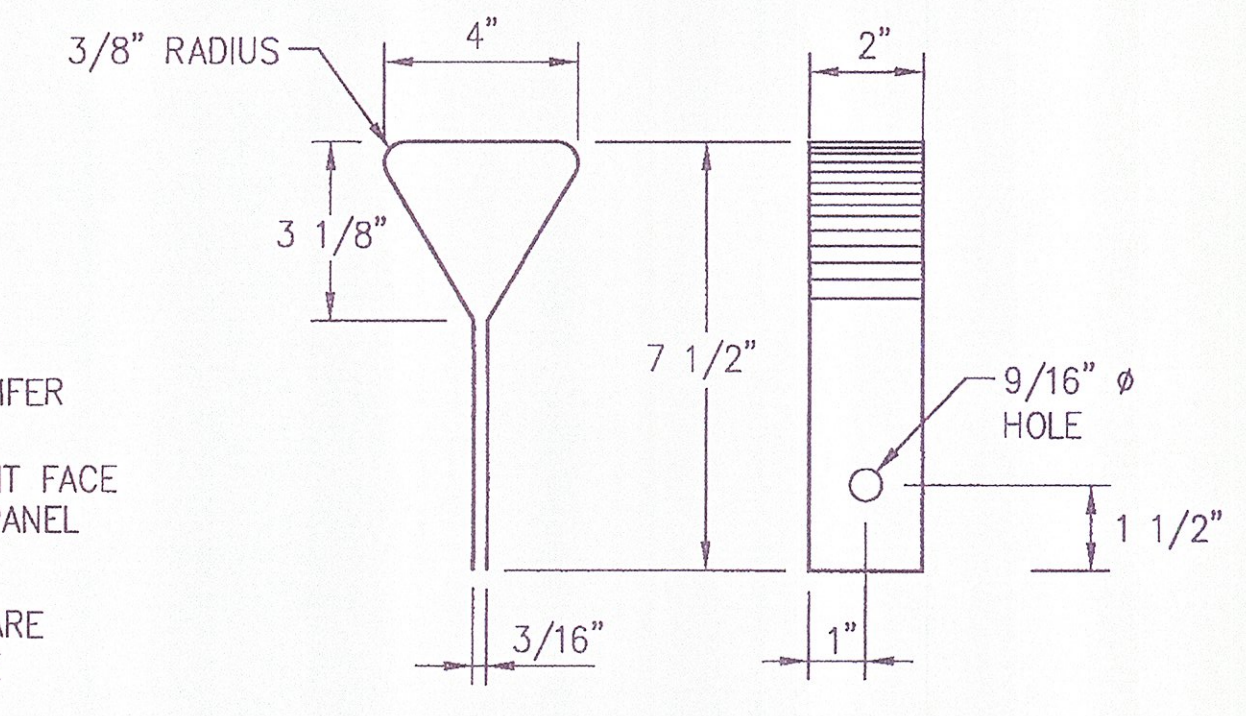
NOTE: ARCHITECTURAL FINISH
NOT SHOWN FOR CLARITY



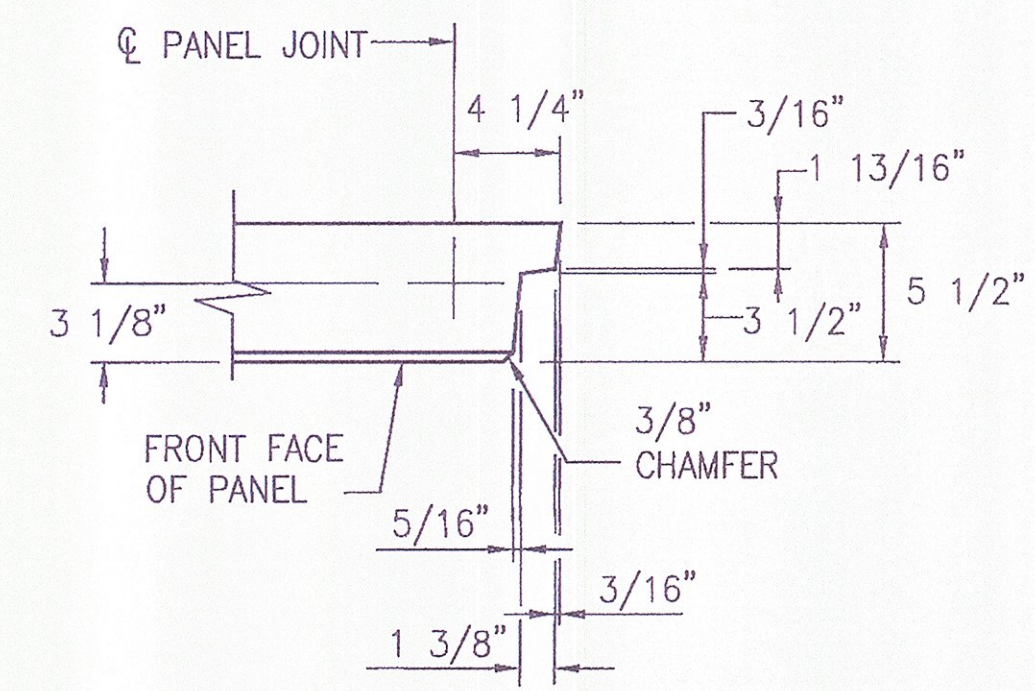
DETAIL "G"
SCALE: 1 1/2"=1'-0"



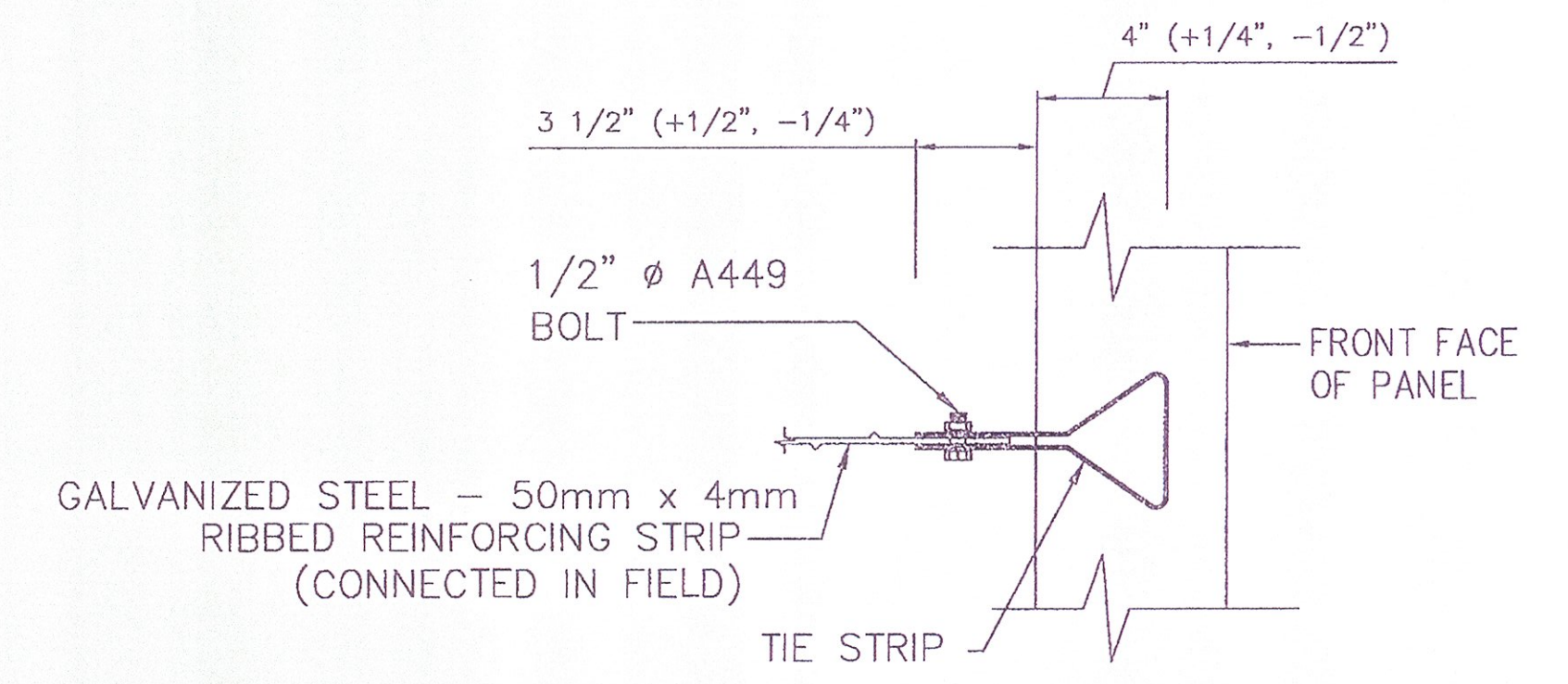
DETAIL "H"
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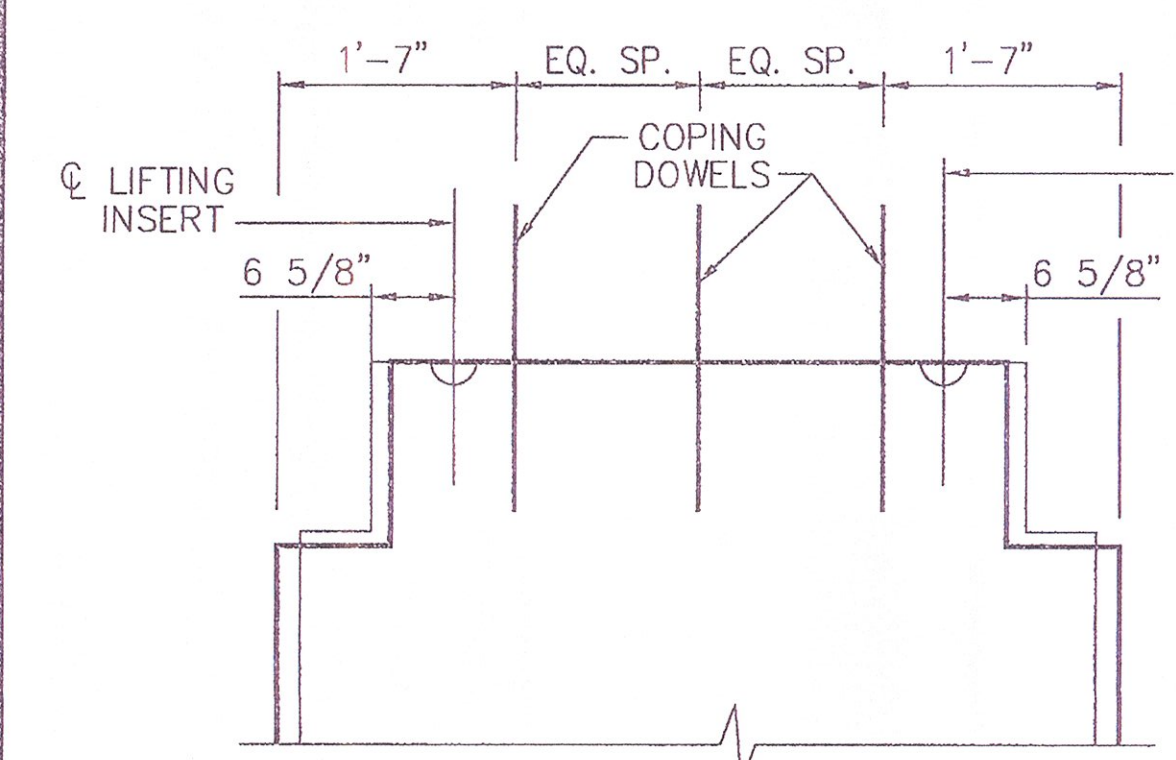
DETAIL "J"
(GENERAL NOTE No. 2, SHEET 1)
SCALE: NONE



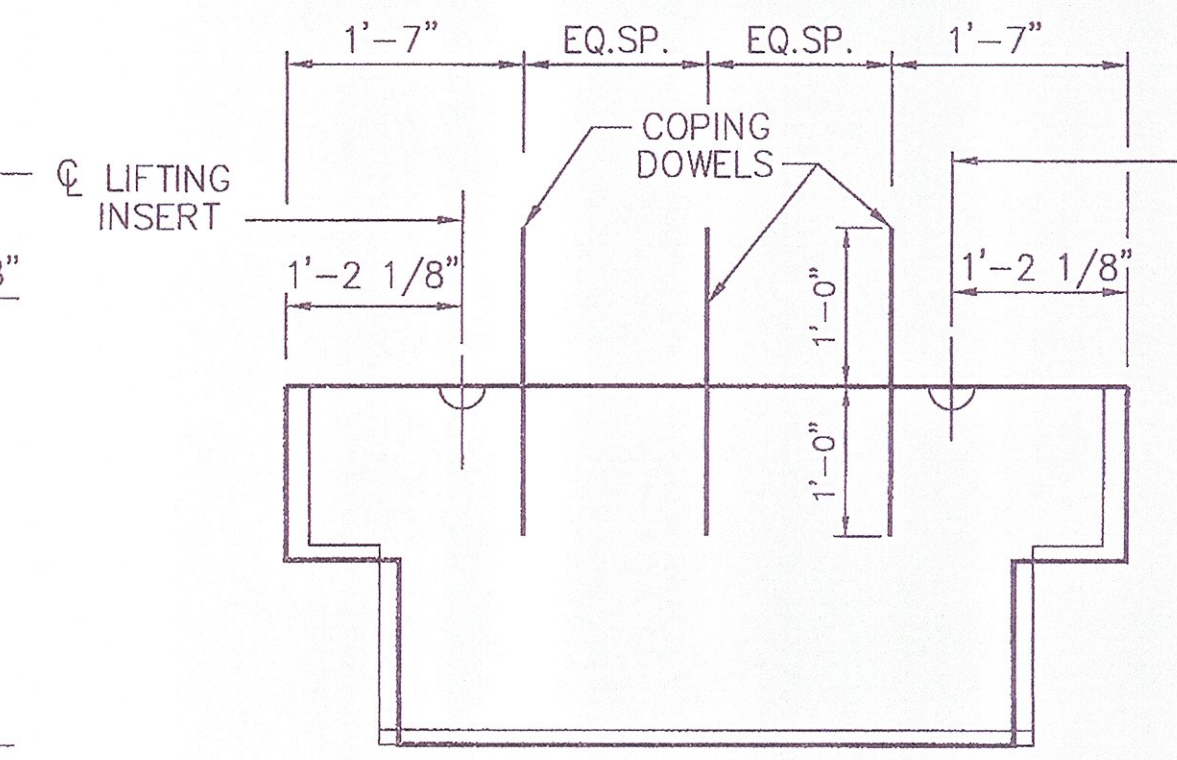
DETAIL "K"
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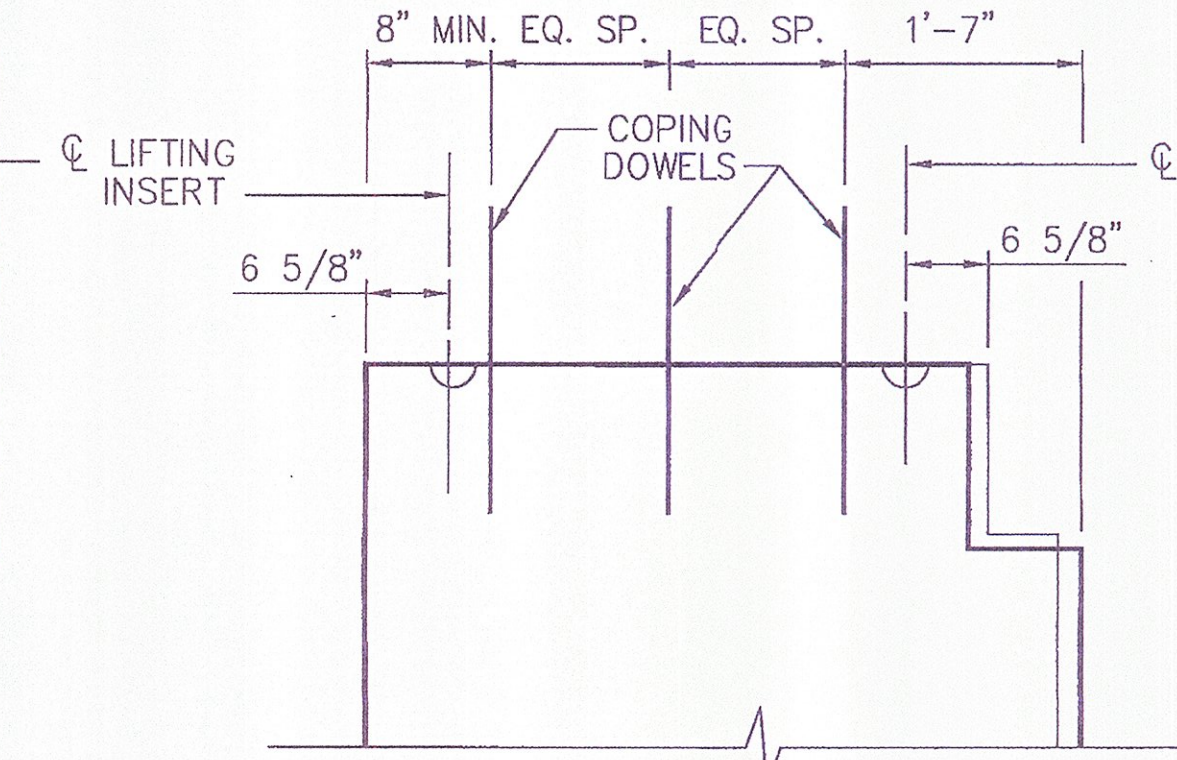
CONNECTION DETAIL



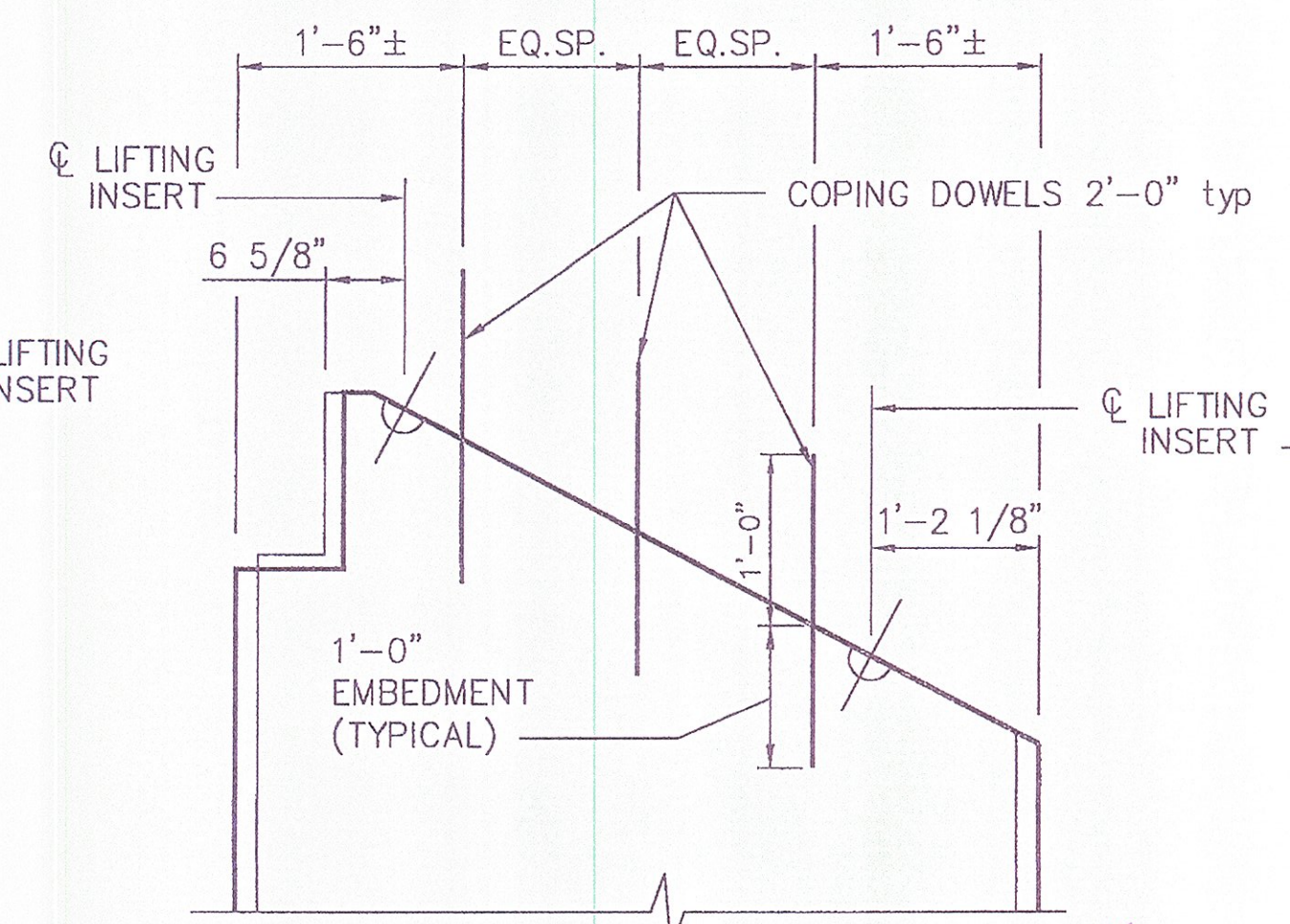
DETAIL "N"
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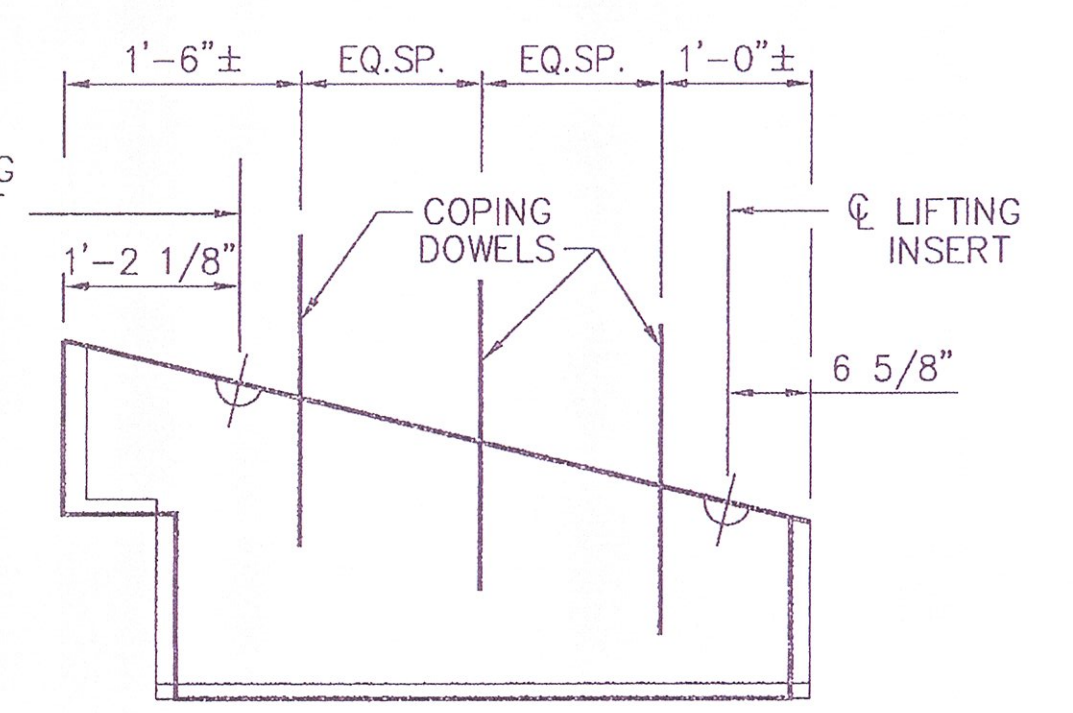
DETAIL "O"
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DETAIL "P"
SCALE: 3/4"=1'-0"



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

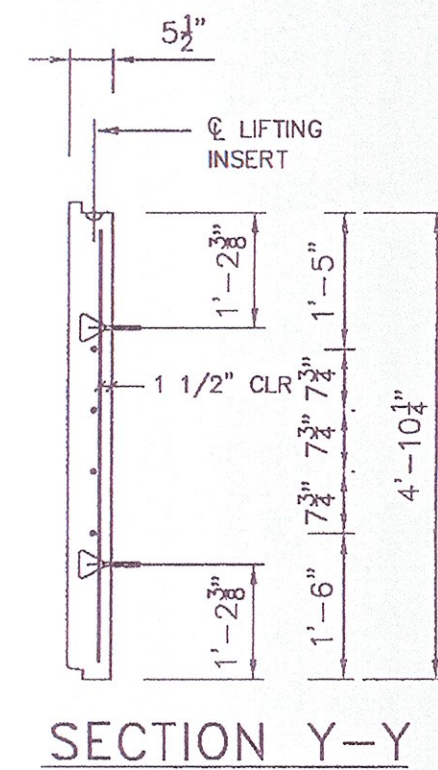
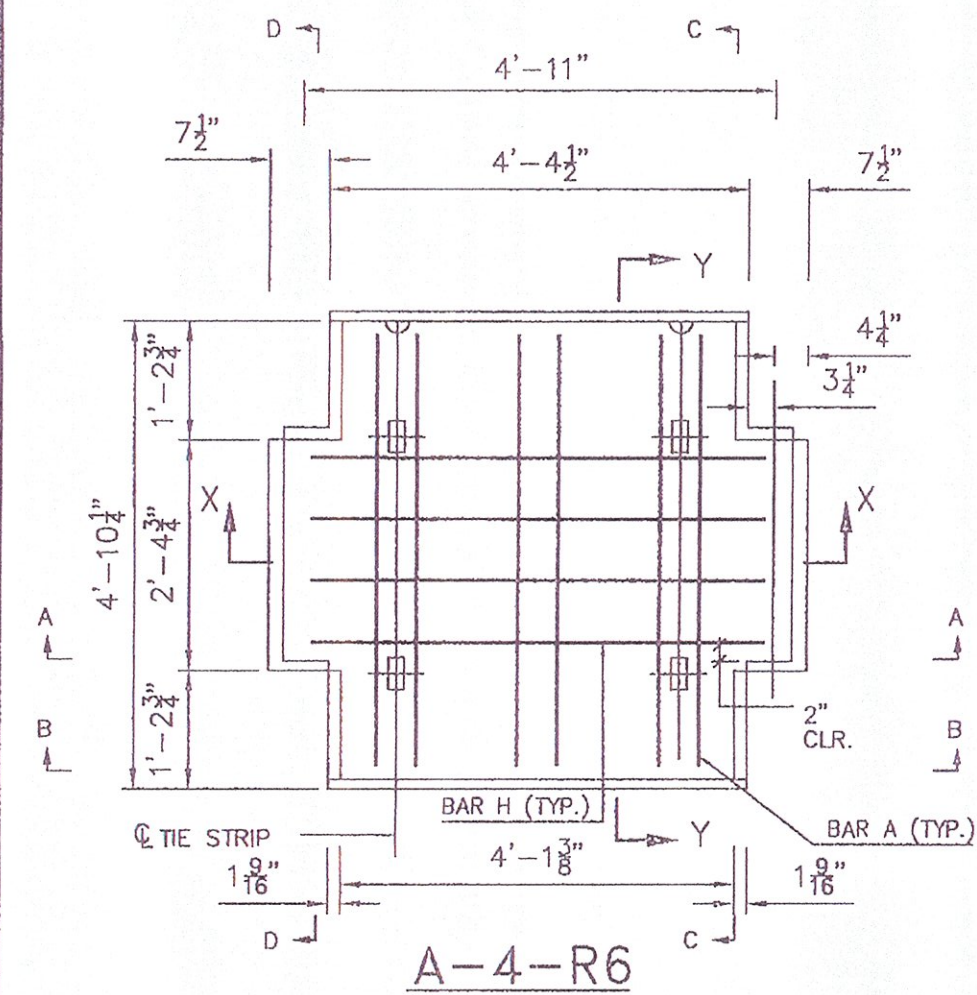


DETAIL "R"
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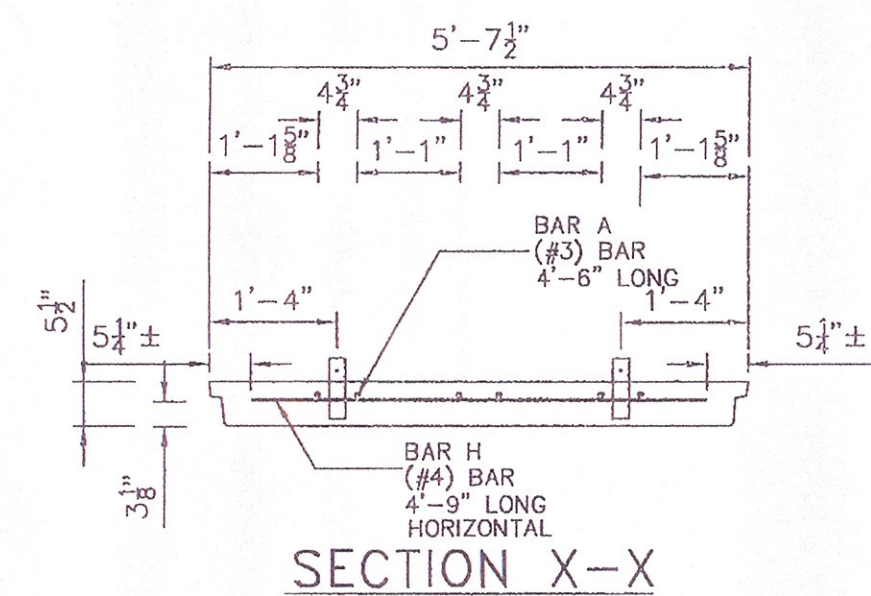
APPROVED ☒ DISAPPROVED ☐
 Revised and Resubmit ☐
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 CONSULTING ENGINEERS
 CHECKED BY: *xx* DATE: 9/11
 SIGNED BY: *Michael J. Long* DATE: 9/11

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THE PANEL DRAWINGS ON THIS SHEET ARE NOT PROJECT SPECIFIC. THESE DRAWINGS ARE INCLUDED TO DETAIL REBAR SIZES AND PLACEMENT FOR STANDARD PANELS..



SECTION Y-Y



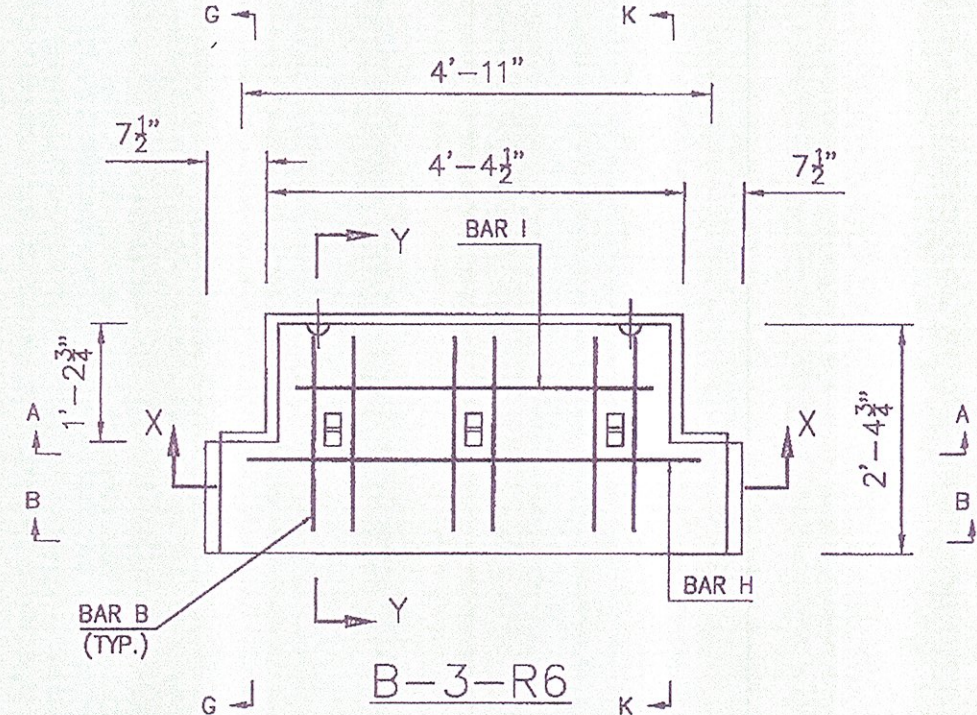
SECTION X-X

BILL OF MATERIALS			
REBAR - R6	QTY.	SIZE	LENGTH
BAR A	6	(#3)	4'-6"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

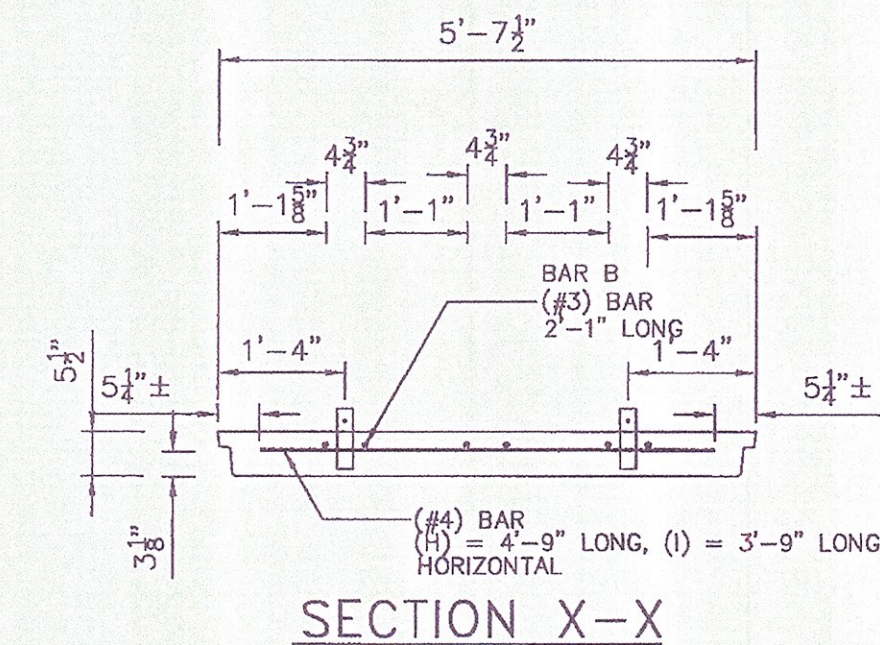
REF: SHEET S2 FOR SECTIONS A,B,C & D

PANEL TYPE "A"

SCALE 1/2" = 1'



SECTION Y-Y



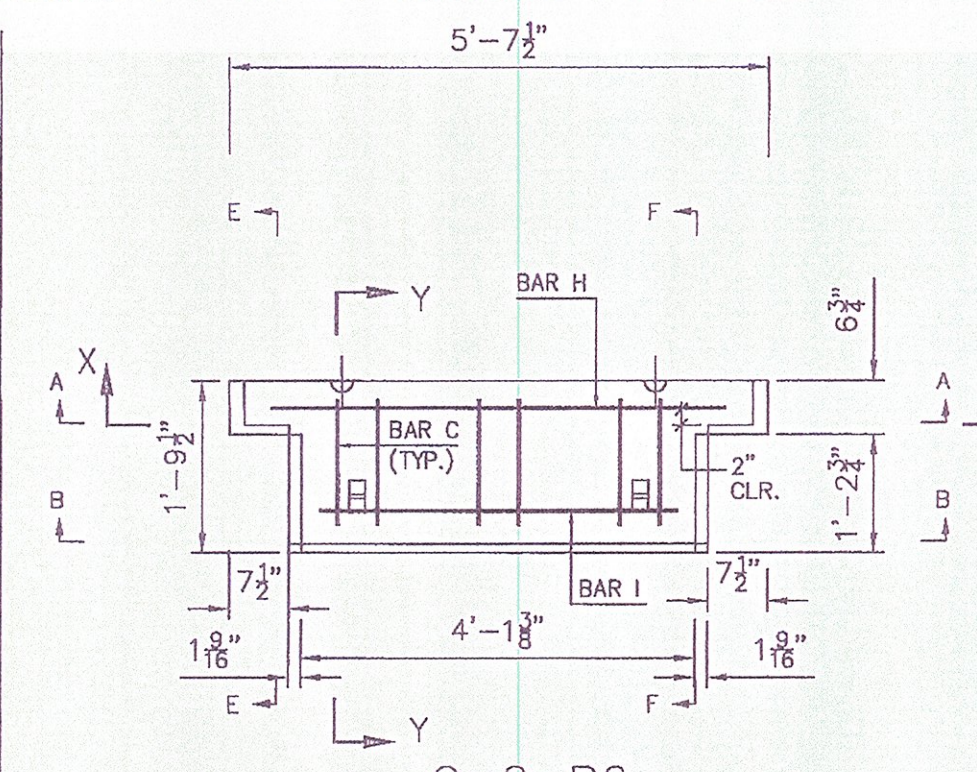
SECTION X-X

BILL OF MATERIALS			
REBAR - R6	QTY.	SIZE	LENGTH
BAR B	6	(#3)	2'-1"
BAR H	1	(#4)	4'-9"
BAR I	1	(#4)	3'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

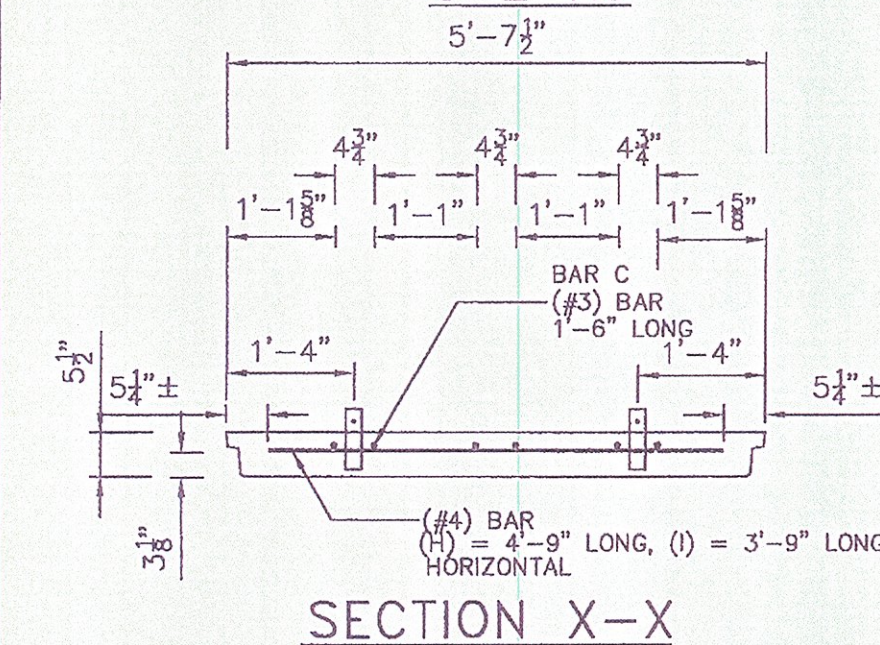
REF: SHEET S2 FOR SECTIONS A,B,G & K

PANEL TYPE "B"

SCALE 1/2" = 1'



SECTION Y-Y



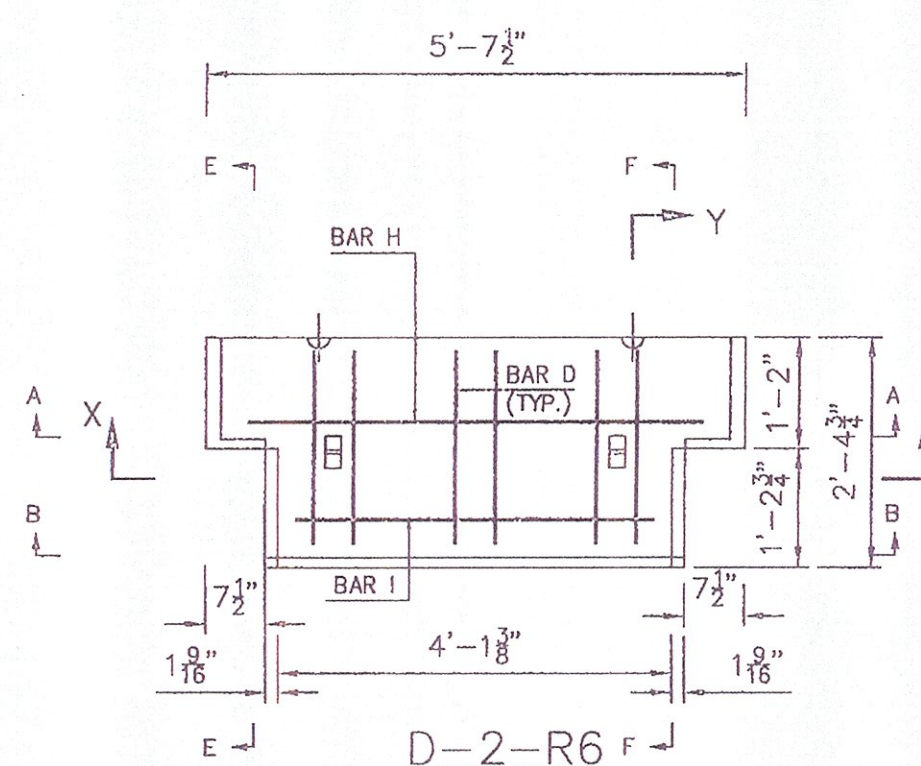
SECTION X-X

BILL OF MATERIALS			
REBAR - R6	QTY.	SIZE	LENGTH
BAR C	6	(#3)	1'-6"
BAR H	1	(#4)	4'-9"
BAR I	1	(#4)	3'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

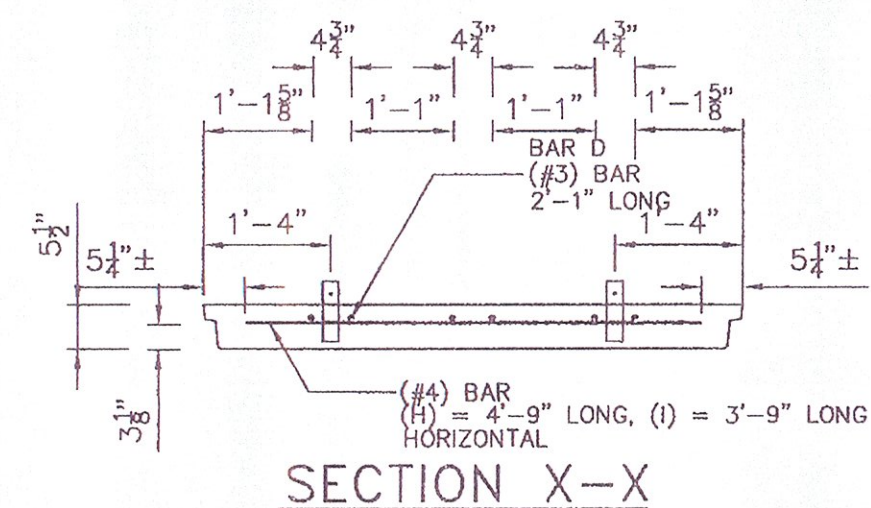
REF: SHEET S2 FOR SECTIONS A,B,E & F

PANEL TYPE "C"

SCALE 1/2" = 1'



SECTION Y-Y



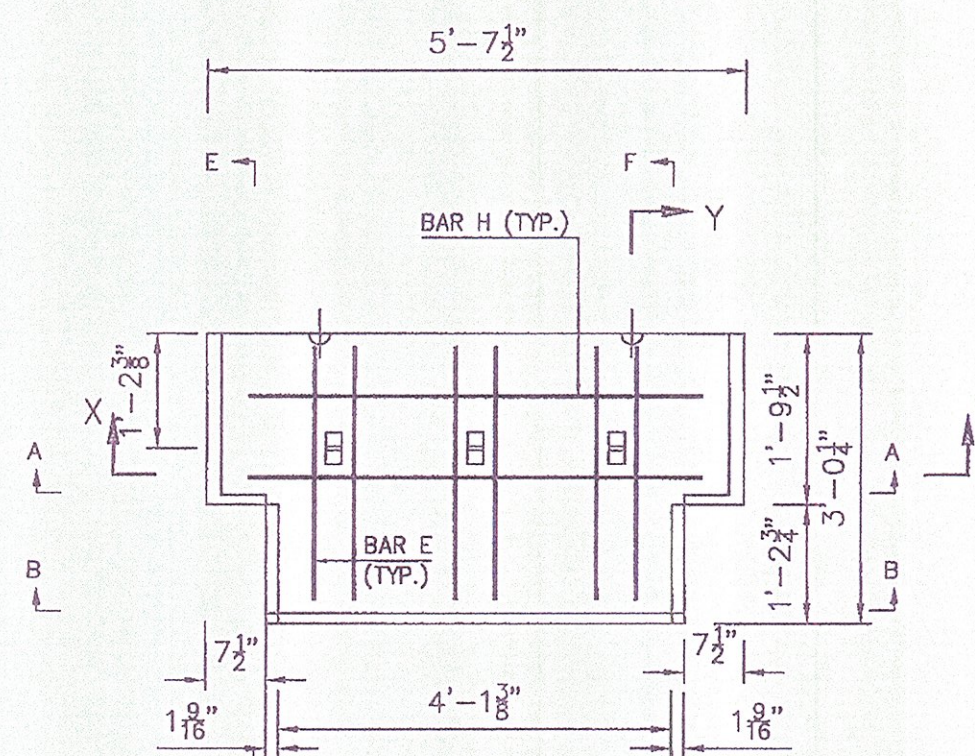
SECTION X-X

BILL OF MATERIALS			
REBAR - R6	QTY.	SIZE	LENGTH
BAR D	6	(#3)	2'-1"
BAR H	1	(#4)	4'-9"
BAR I	1	(#4)	3'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

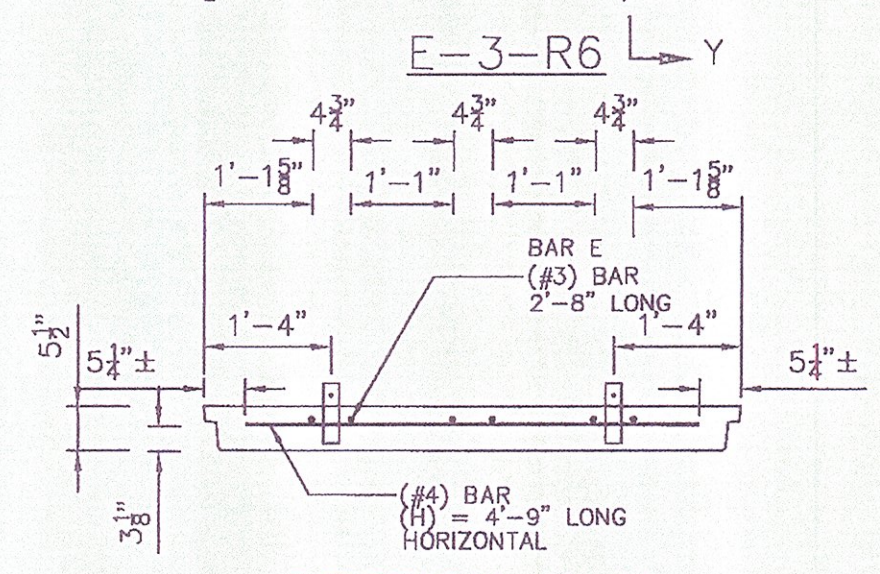
REF: SHEET S2 FOR SECTIONS A,B,E & F

PANEL TYPE "D"

SCALE 1/2" = 1'



SECTION Y-Y



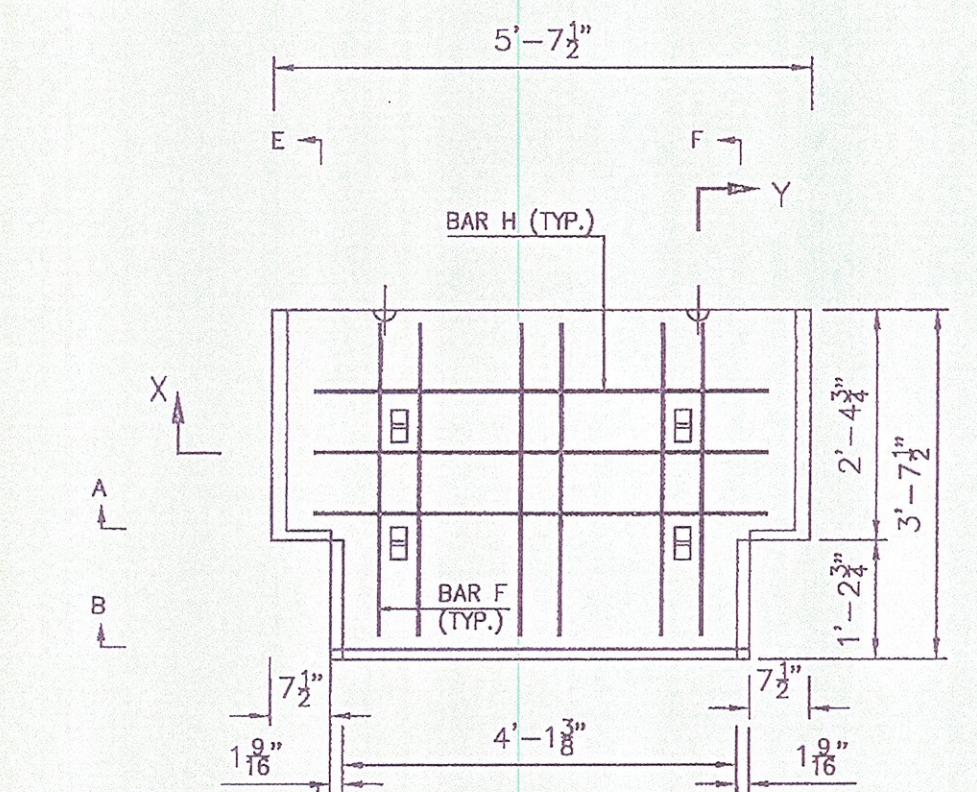
SECTION X-X

BILL OF MATERIALS			
REBAR - R6	QTY.	SIZE	LENGTH
BAR E	6	(#3)	2'-8"
BAR H	2	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

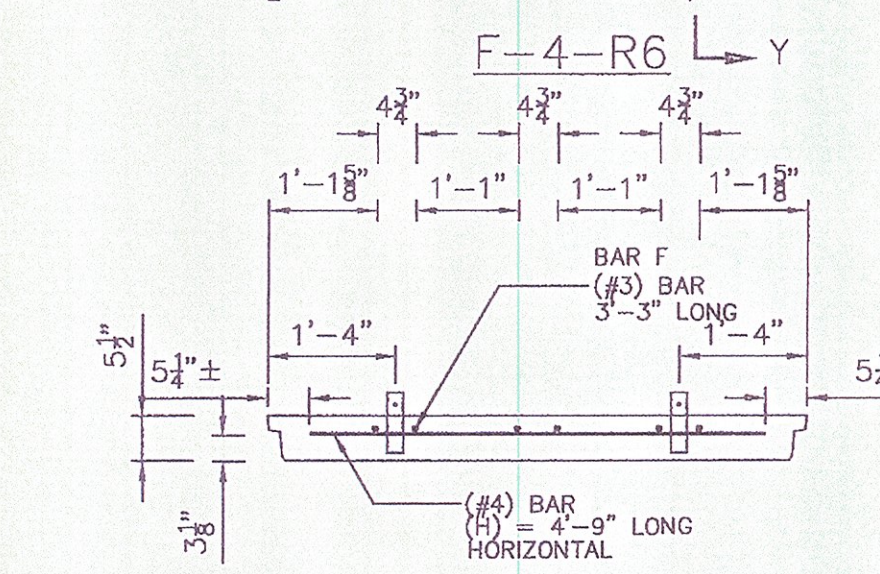
REF: SHEET S2 FOR SECTIONS A,B,E & F

PANEL TYPE "E"

SCALE 1/2" = 1'



SECTION Y-Y



SECTION X-X

BILL OF MATERIALS			
REBAR - R6	QTY.	SIZE	LENGTH
BAR F	6	(#3)	3'-3"
BAR H	3	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,E & F

PANEL TYPE "F"

SCALE 1/2" = 1'

ALL PANELS SHOWN BACKFACE.
ARCHITECTURAL FINISH NOT
SHOWN FOR CLARITY.

APPROVED ☒ Approved as Noted ☐
 Revises and Resubmits ☐ DISAPPROVED ☐
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 FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION;
 COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND
 THE SATISFACTORY PERFORMANCE OF HIS WORK.
 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY *XZ* DATE *9/11*
 SIGNED BY *Alfred C. Long* DATE *9/11*

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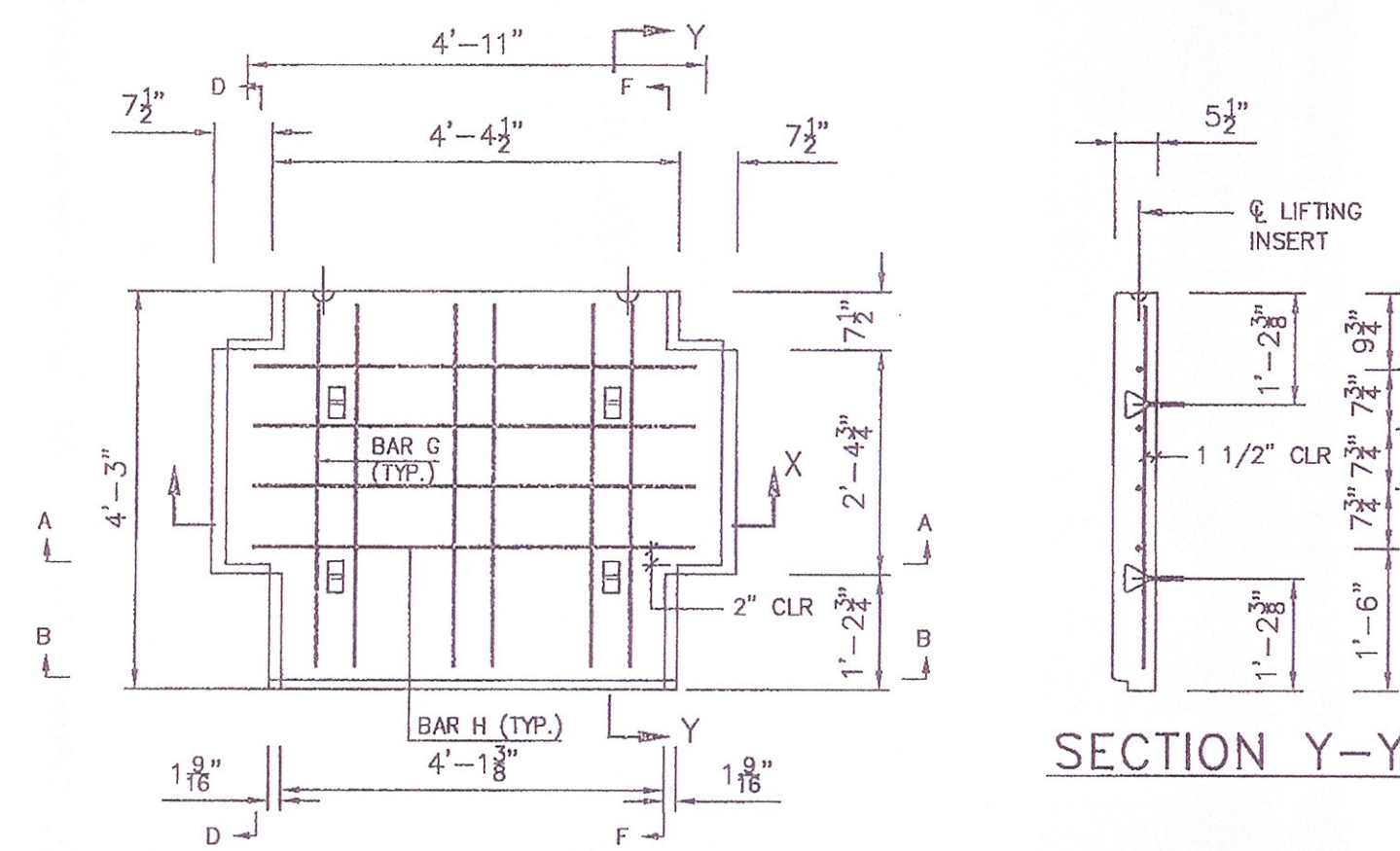
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DESIGNED BY:	KC	PROJECT NAME:	U.S. ROUTE 2 OVER EXISTING STREAM	DATE:	04/06/2011
PROJECT ENGR:	DTM	LOCATION:	CABOT-DANVILLE, VERMONT	CONTRACT NO.:	RE-15053
CHECKED BY:	EEH/LY	OWNER:	VTAOT	DRAWING NO.:	S4 OF S13
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	SCALE AS SHOWN

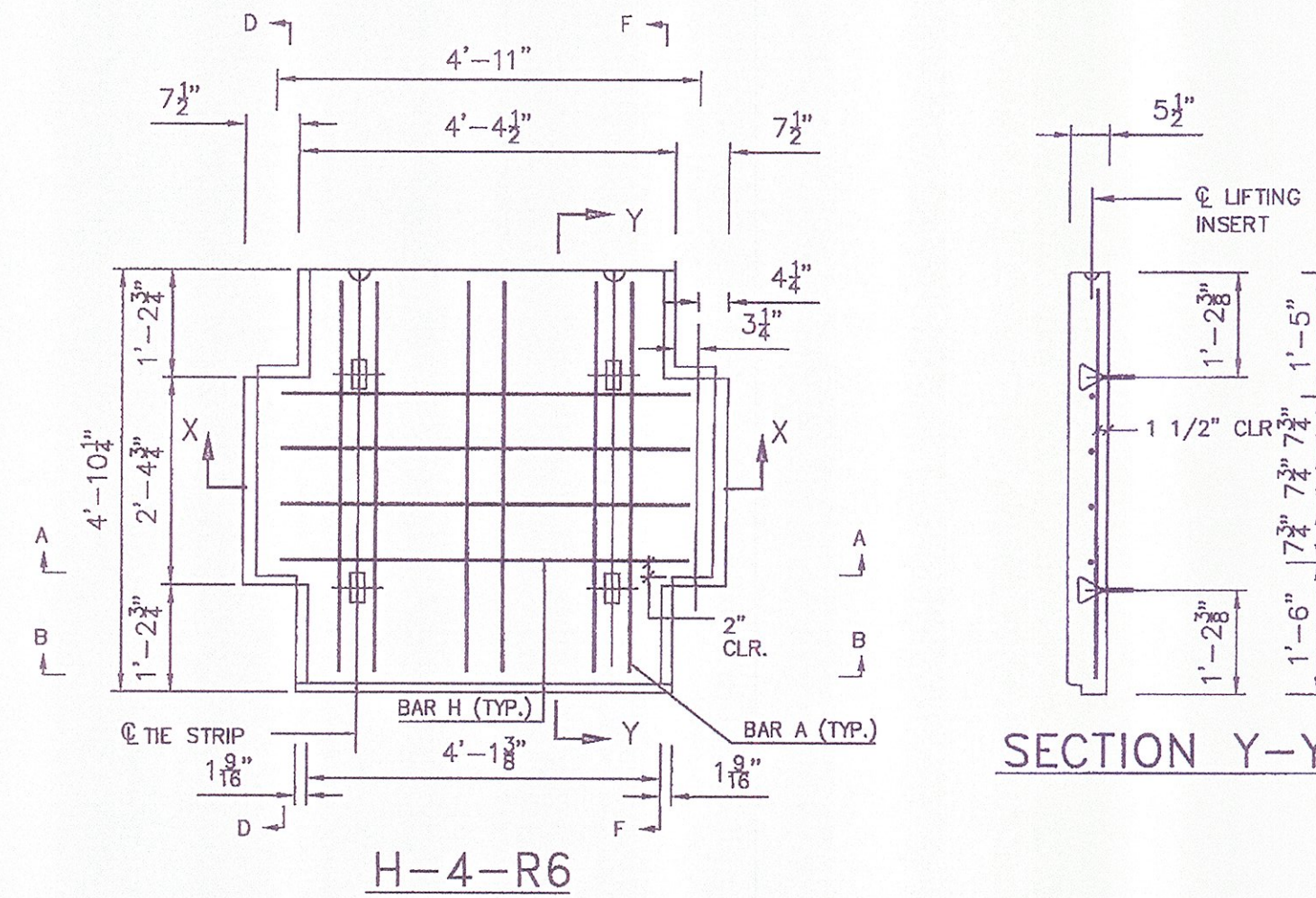
THE PANEL DRAWINGS ON THIS SHEET ARE NOT PROJECT SPECIFIC. THESE DRAWINGS ARE INCLUDED TO DETAIL REBAR SIZES AND PLACEMENT FOR STANDARD PANELS..



BILL OF MATERIALS			
REBAR MARK	QTY.	SIZE	LENGTH
BAR G	6	(#3)	5'-9"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,D & F

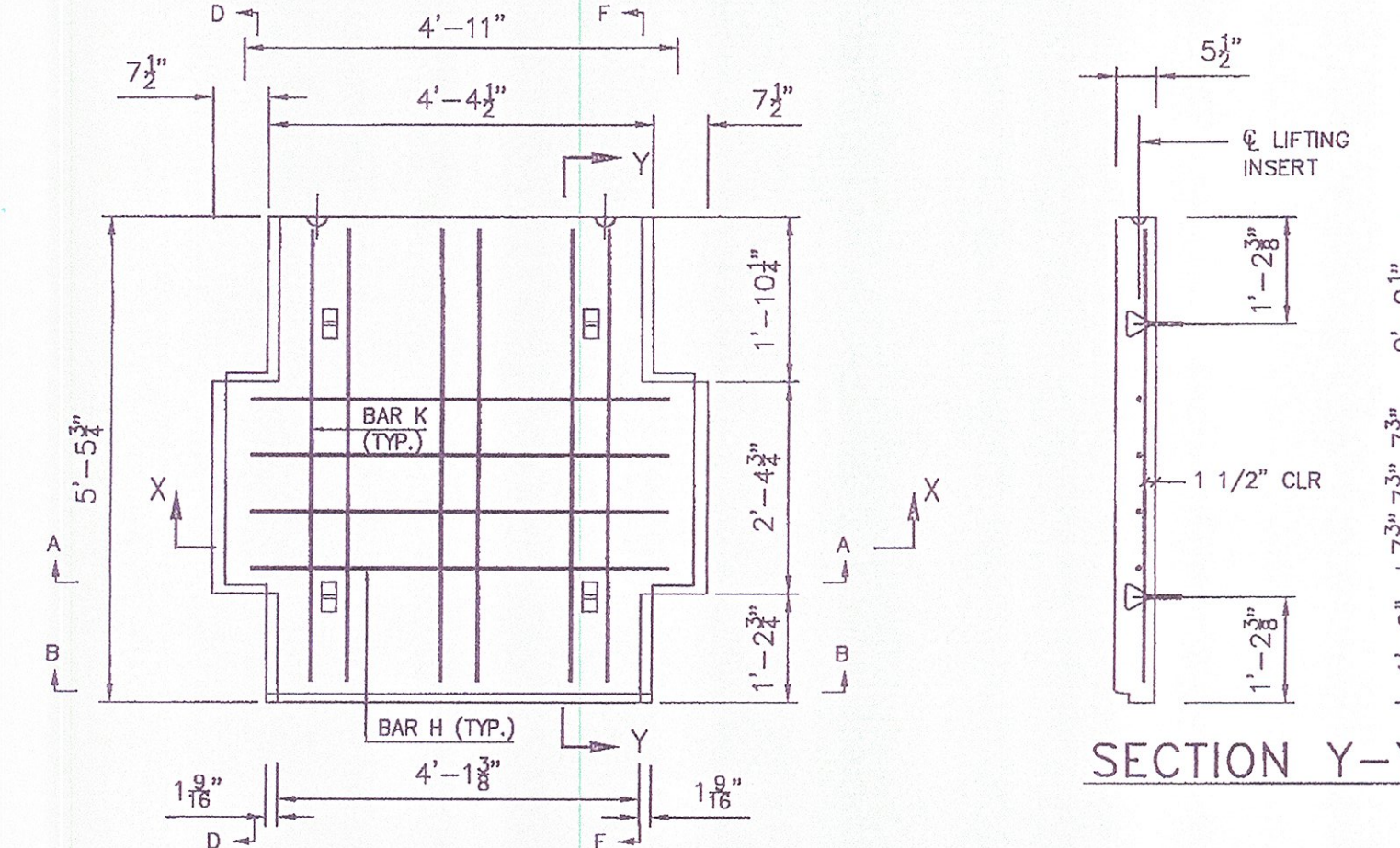
PANEL TYPE "G"
SCALE 1/2" = 1'



BILL OF MATERIALS			
REBAR MARK	QTY.	SIZE	LENGTH
BAR A	6	(#3)	4'-6"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,C & D

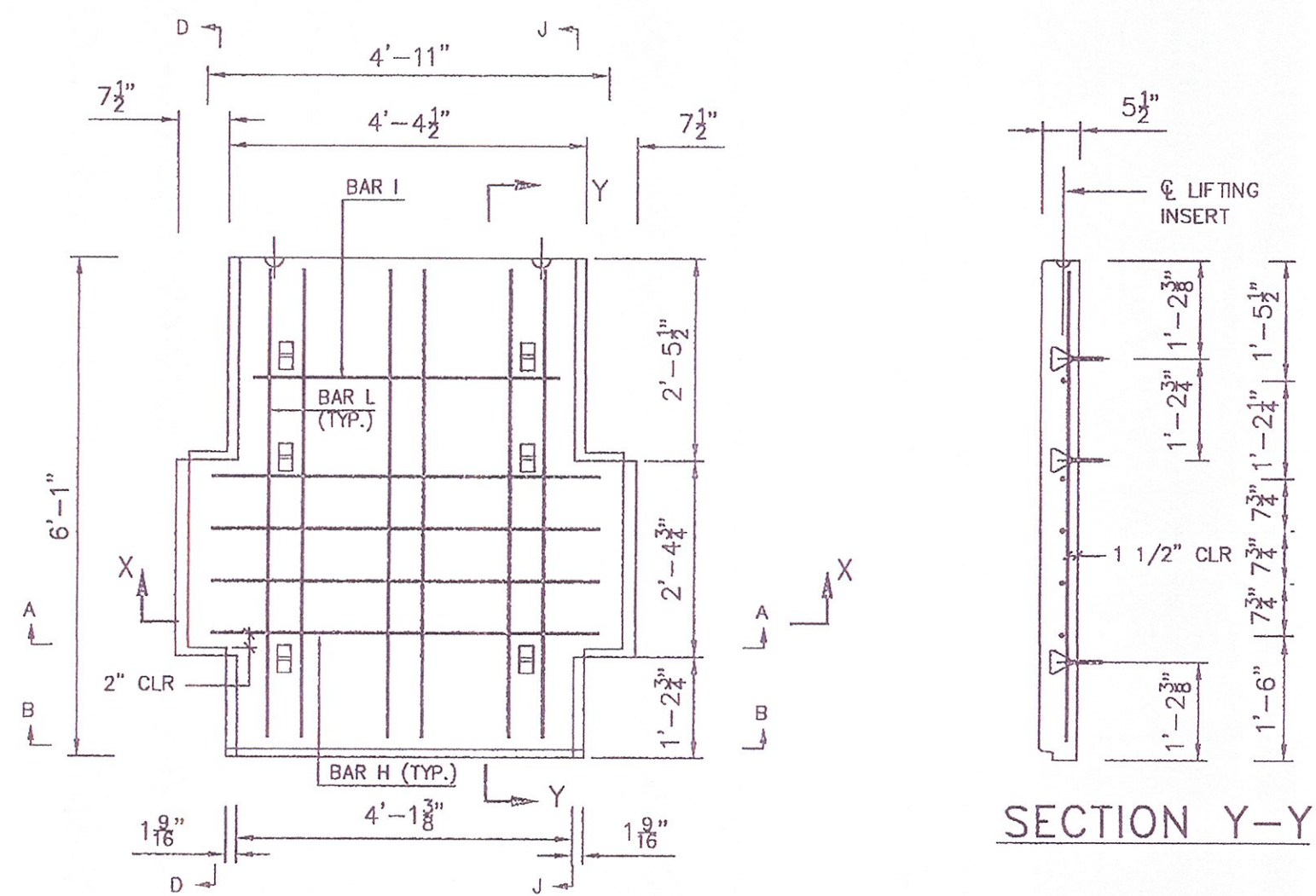
PANEL TYPE "H"
SCALE 1/2" = 1'



BILL OF MATERIALS			
REBAR MARK	QTY.	SIZE	LENGTH
BAR K	6	(#3)	5'-9"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,D & F

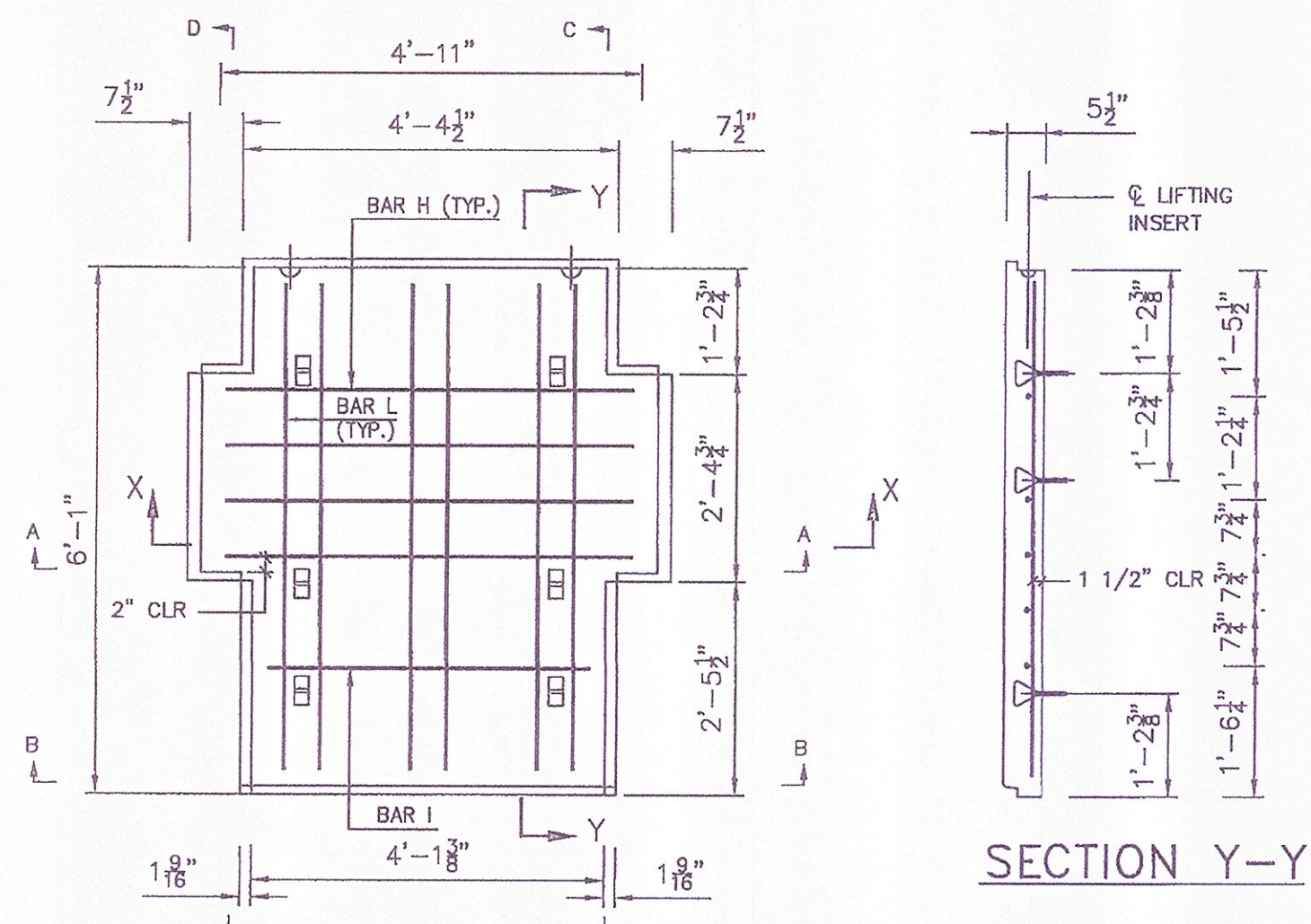
PANEL TYPE "K"
SCALE 1/2" = 1'



BILL OF MATERIALS			
REBAR MARK	QTY.	SIZE	LENGTH
BAR L	6	(#3)	5'-9"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,D & J

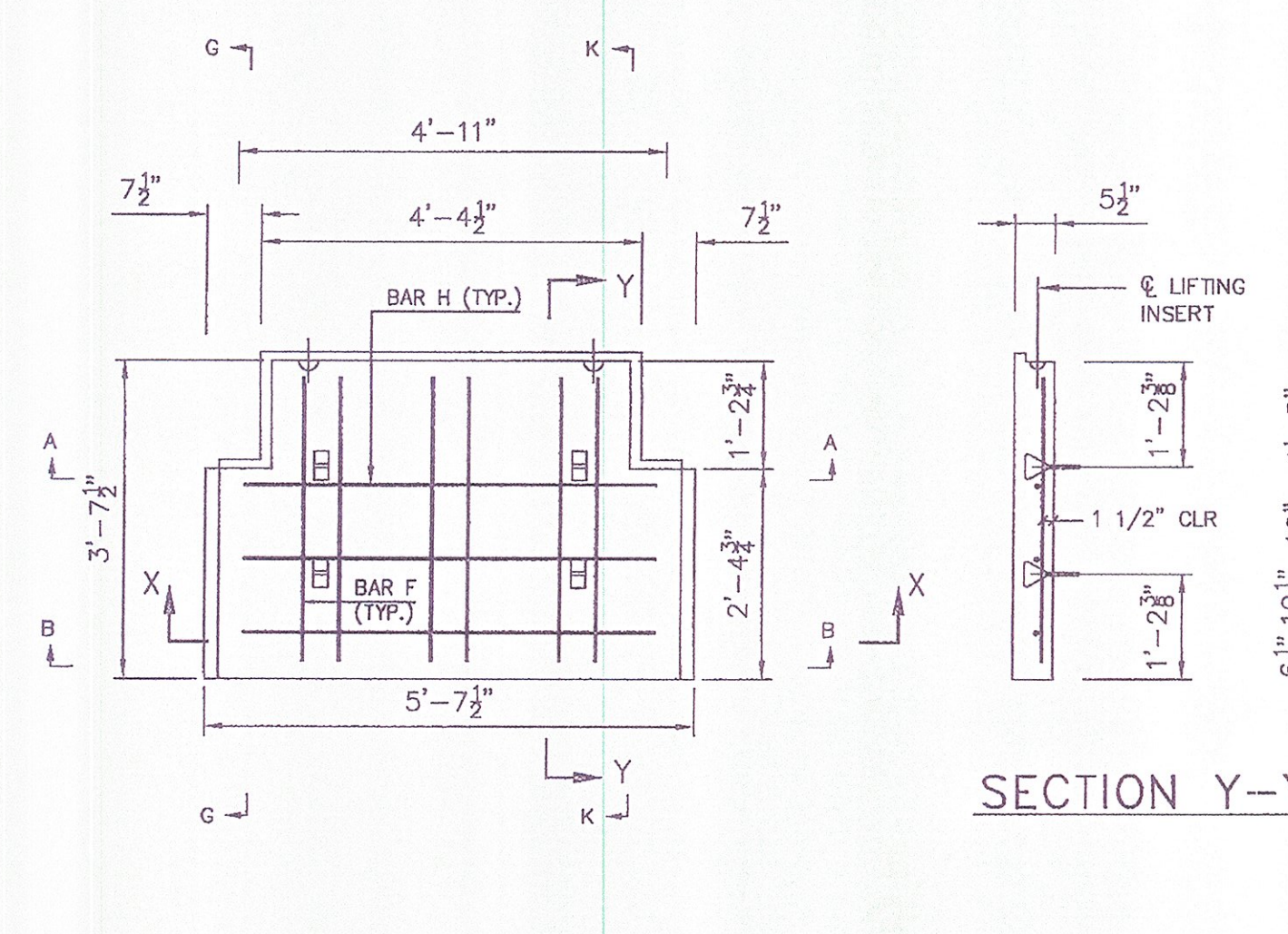
PANEL TYPE "L"
SCALE 1/2" = 1'



BILL OF MATERIALS			
REBAR MARK	QTY.	SIZE	LENGTH
BAR P	6	(#3)	5'-9"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,D & J

PANEL TYPE "P"
SCALE 1/2" = 1'



BILL OF MATERIALS			
REBAR MARK	QTY.	SIZE	LENGTH
BAR Q	6	(#3)	5'-9"
BAR H	4	(#4)	4'-9"
LIFTING INSERTS			
MANUFACTURER	PART NO.	QTY.	
BURKE	79050	2	

REF: SHEET S2 FOR SECTIONS A,B,D & J

PANEL TYPE "Q"
SCALE 1/2" = 1'

ALL PANELS SHOWN BACKFACE.
ARCHITECTURAL FINISH NOT
SHOWN FOR CLARITY.

APPROVED ☒ Approved as Noted ☐
 Revised and Resubmit ☐ DISAPPROVED ☐
 CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: *[Signature]* DATE: 9/11
 SIGNED BY: *[Signature]* DATE: 9/11

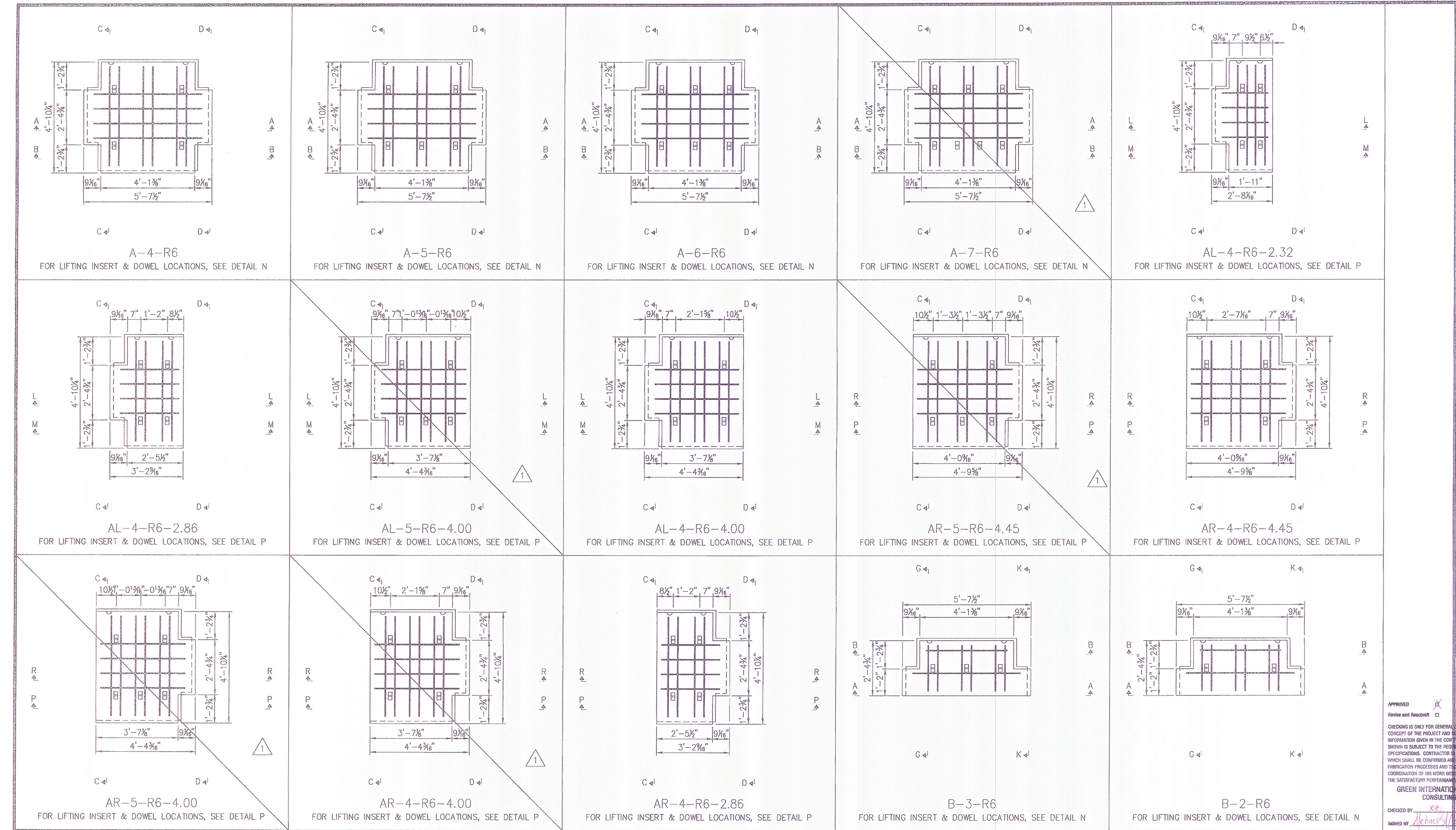
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"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.

DESIGNED BY: KC				PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/06/2011
PROJECT ENGR: DTM	8/19/11	REV. PER G/A COMMENTS		LOCATION CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
CHECKED BY: EEH/LY	7/19/11	REV. PER G/A COMMENTS		OWNER VTAOT	DRAWING NO. S5 OF S13
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	SCALE AS SHOWN

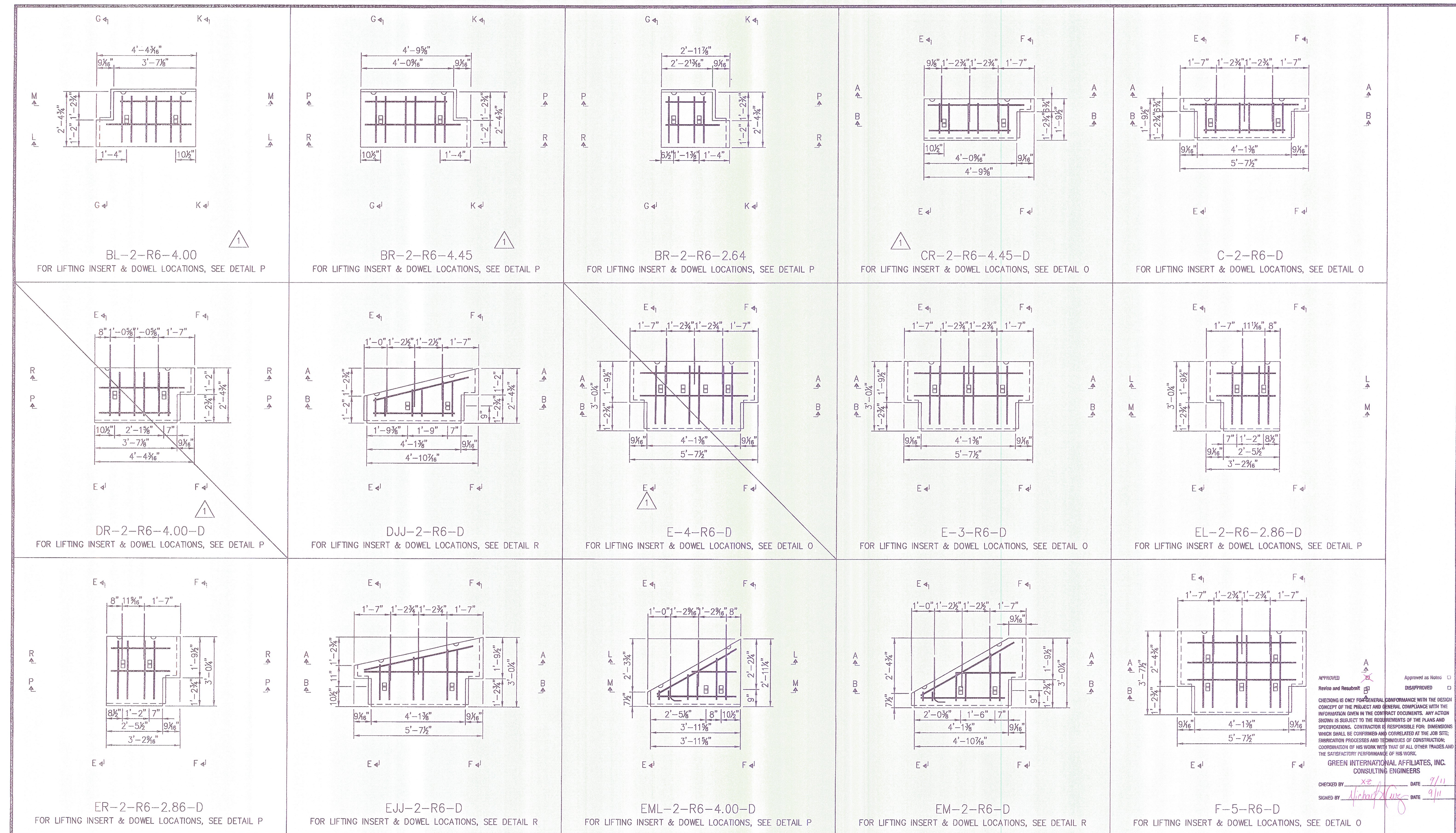


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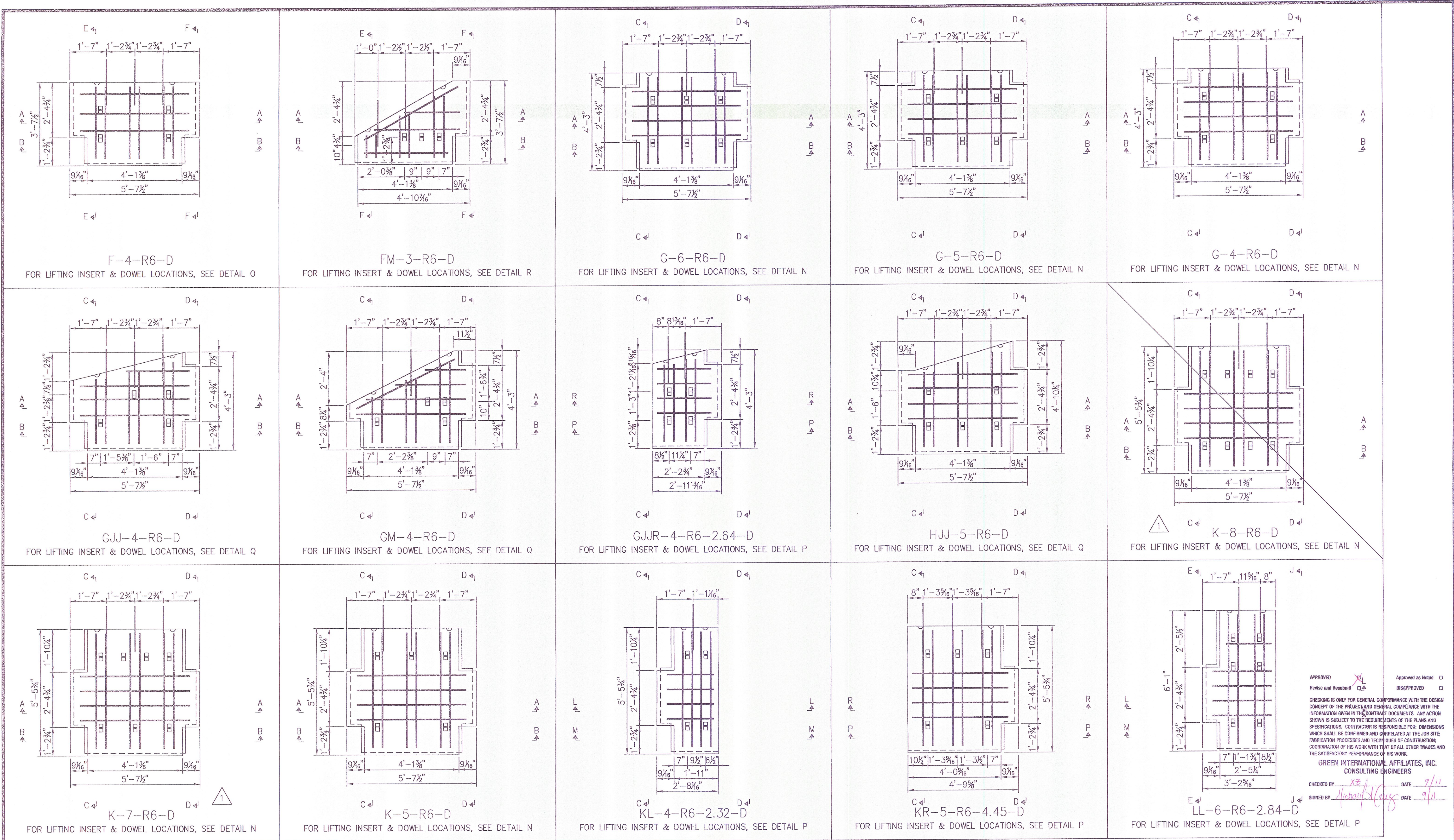
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 REINFORCED EARTH® 8614 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175		DESIGNED BY: KC				PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/06/2011
		PROJECT ENGR: DTM				LOCATION CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
		CHECKED BY: EEH/LY	1	7/19/11	REV. PANELS PER GIA COMMENTS	OWNER VTAOT	DRAWING NO. S6 OF S13
		ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	SCALE AS SHOWN
"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.							

APPROVED ☒ Approved as Noted ☐
Revise and Resubmit ☐ DISAPPROVED ☐
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THE SATISFACTORY PERFORMANCE OF HIS WORK.
GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS
CHECKED BY: EEH DATE: 7/11
SIGNED BY: Henri Vidal DATE: 7/11

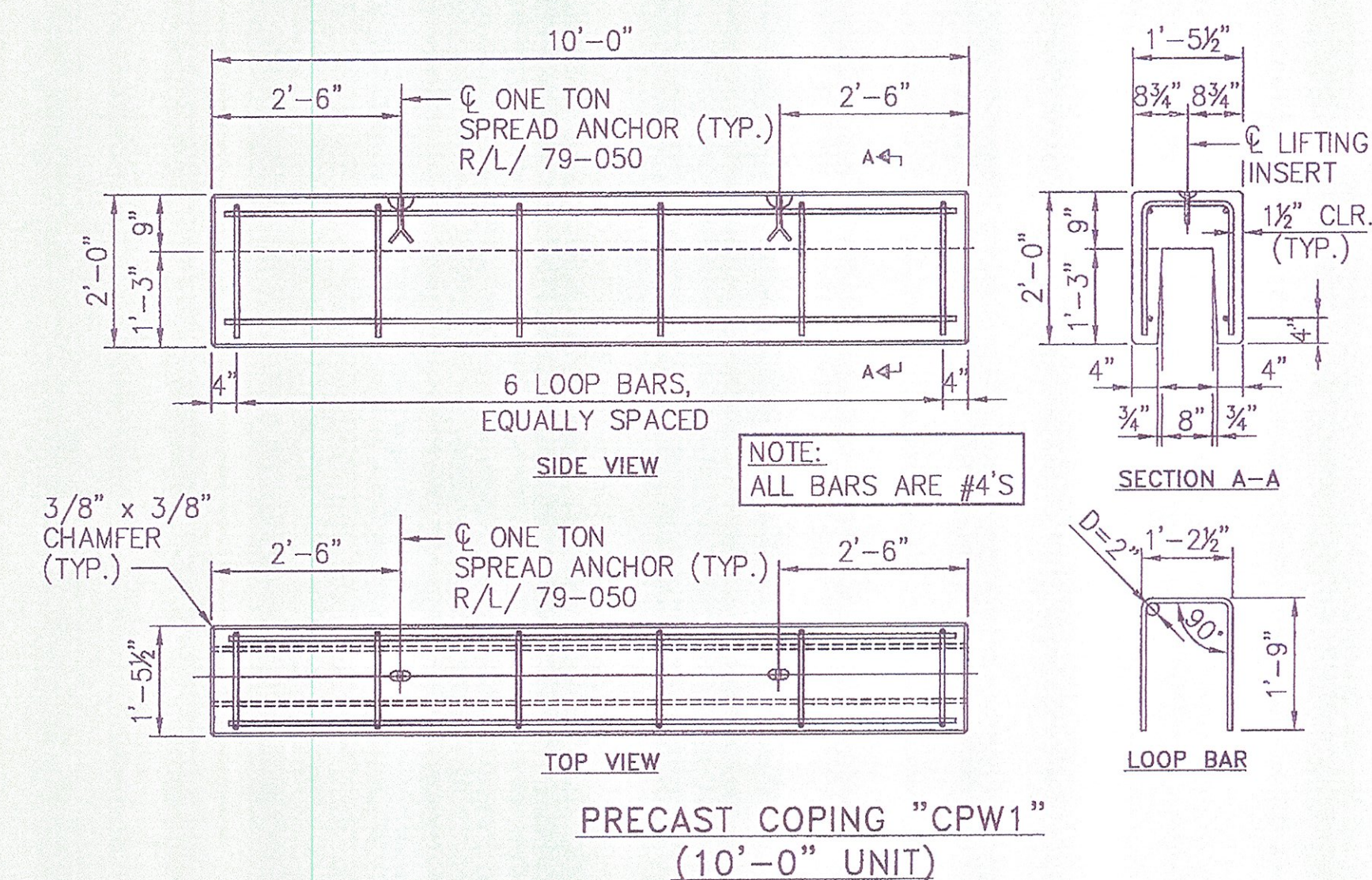
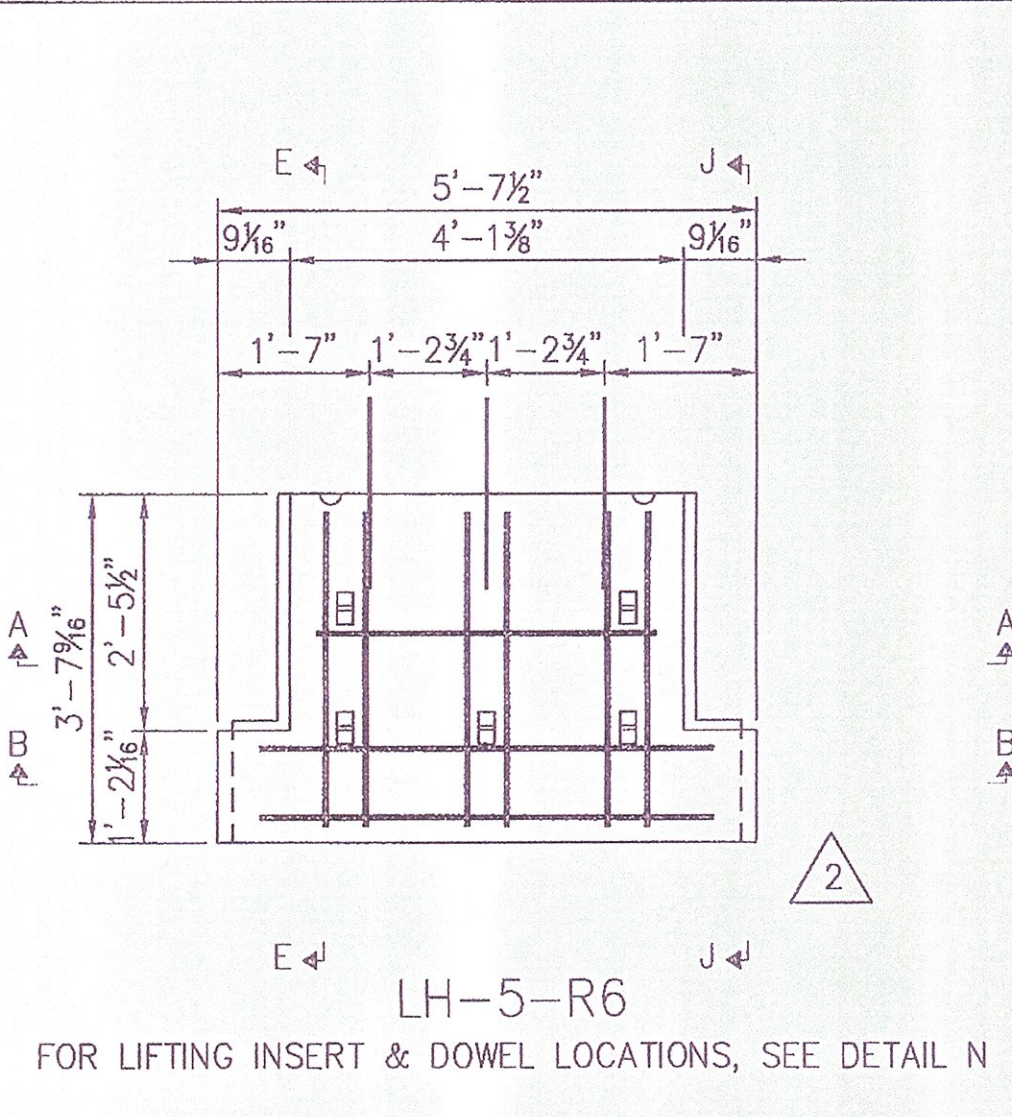
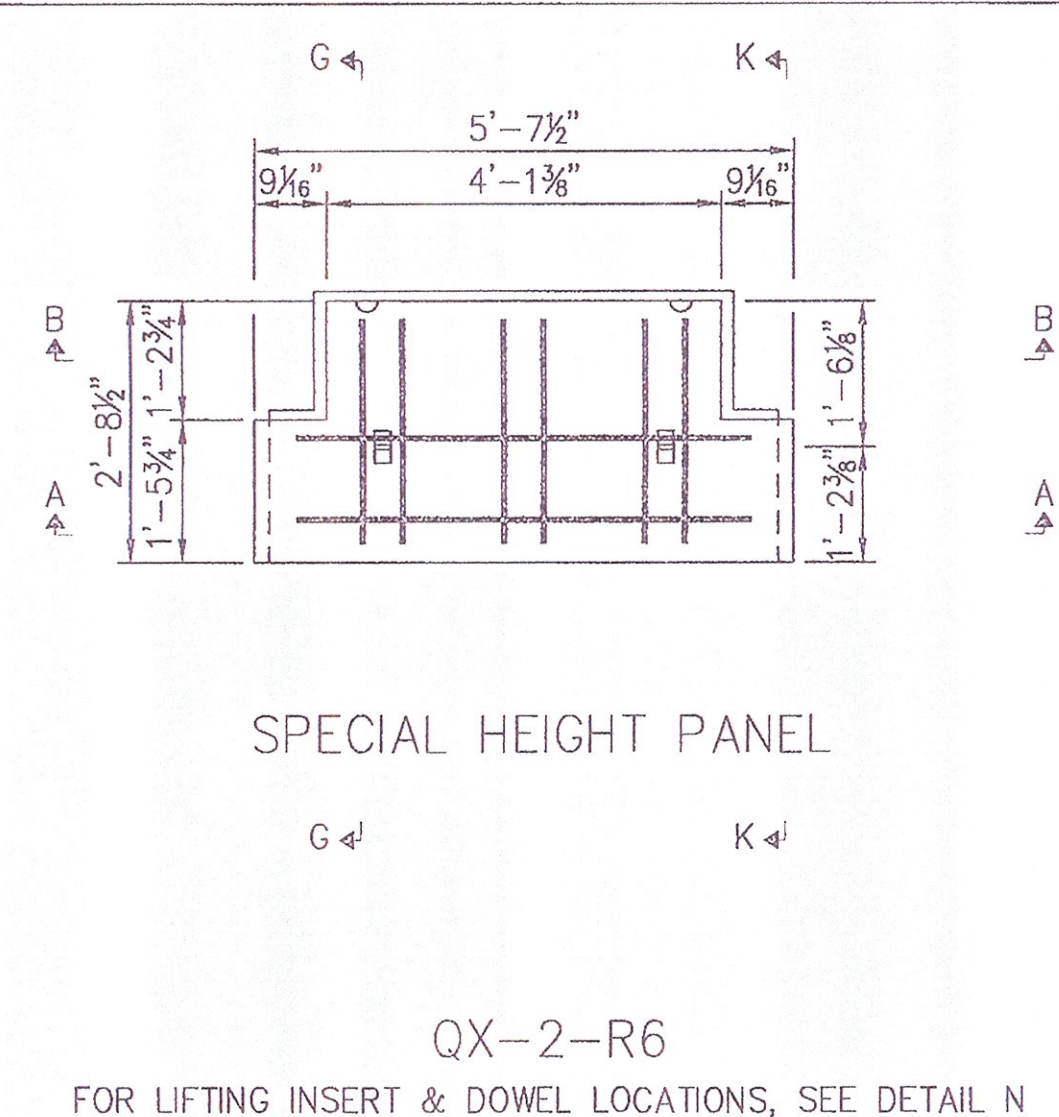
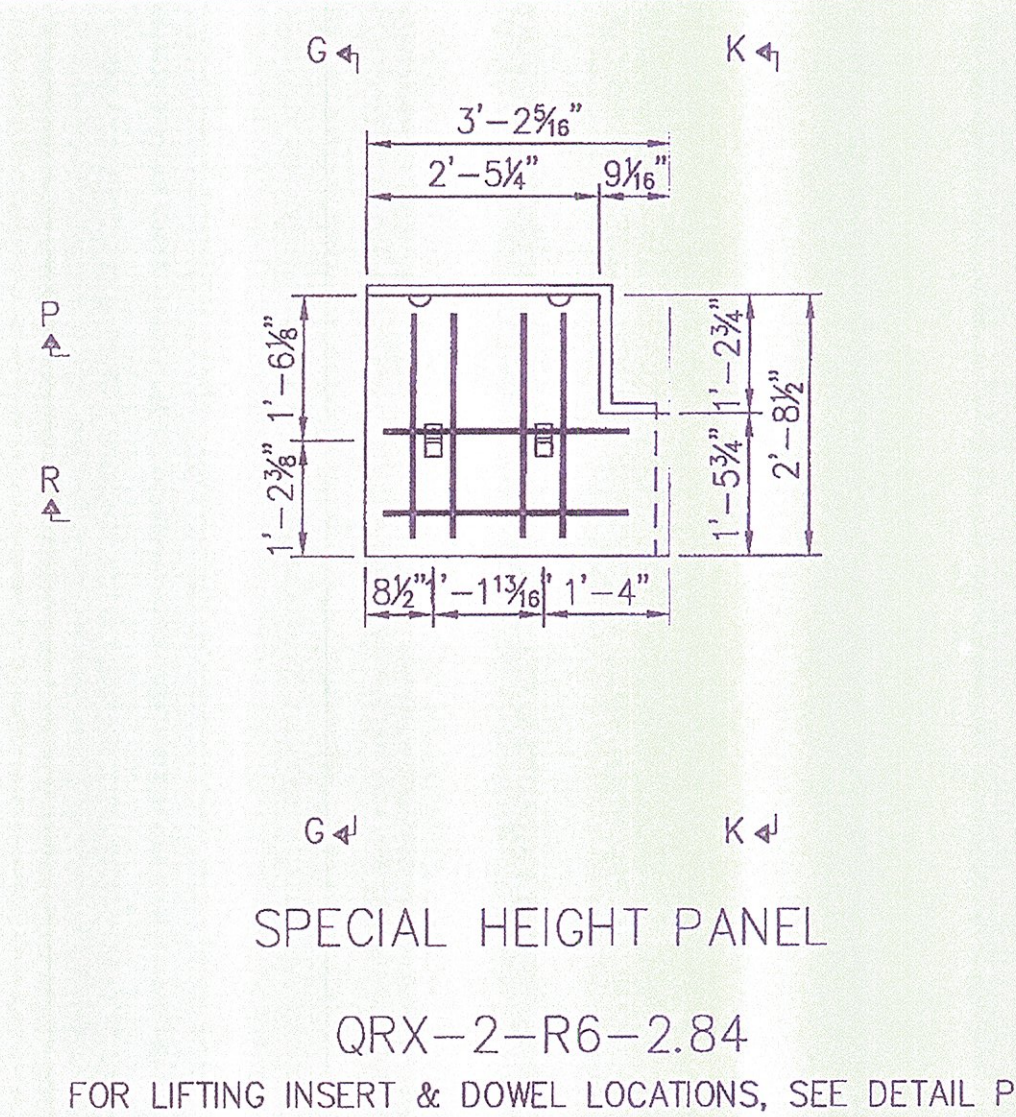
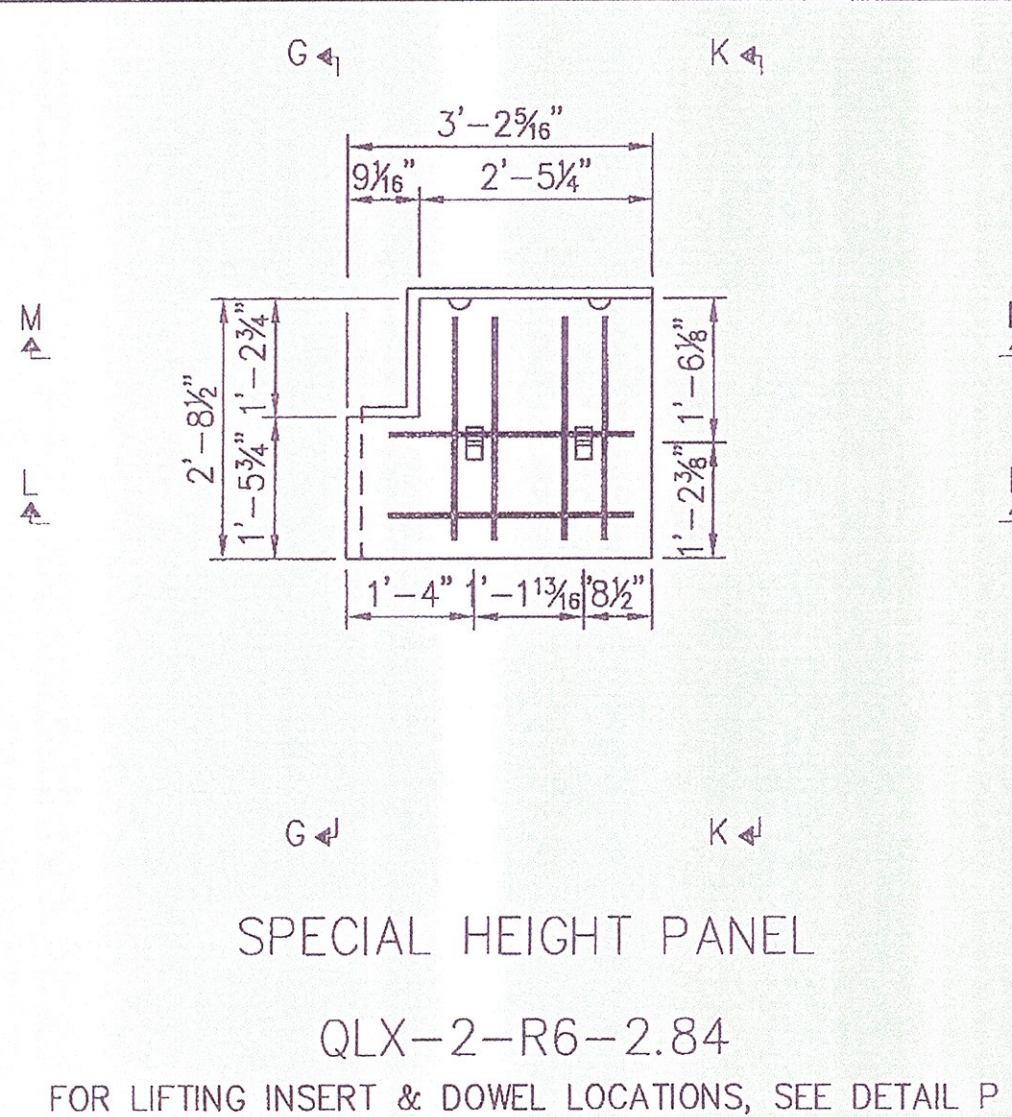
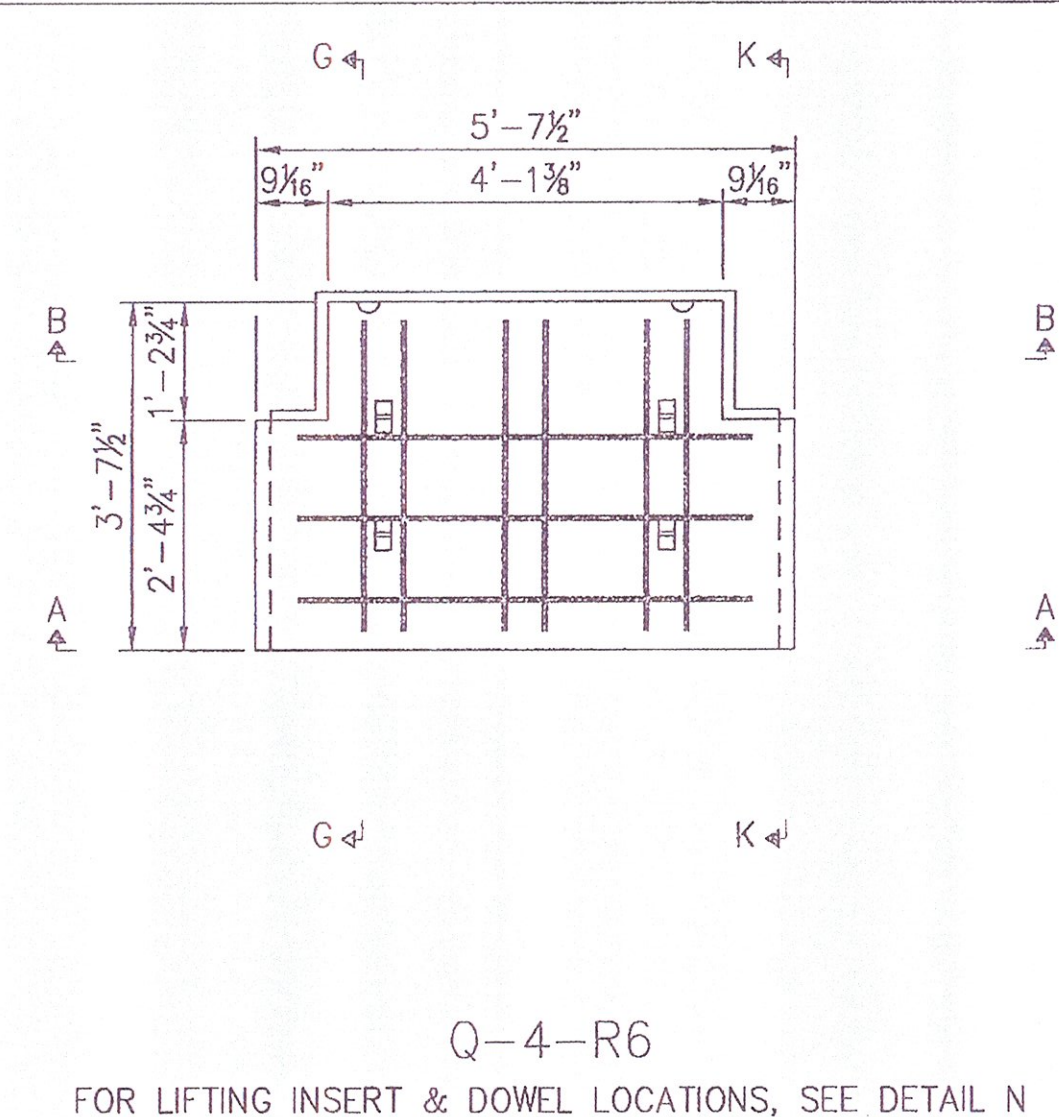
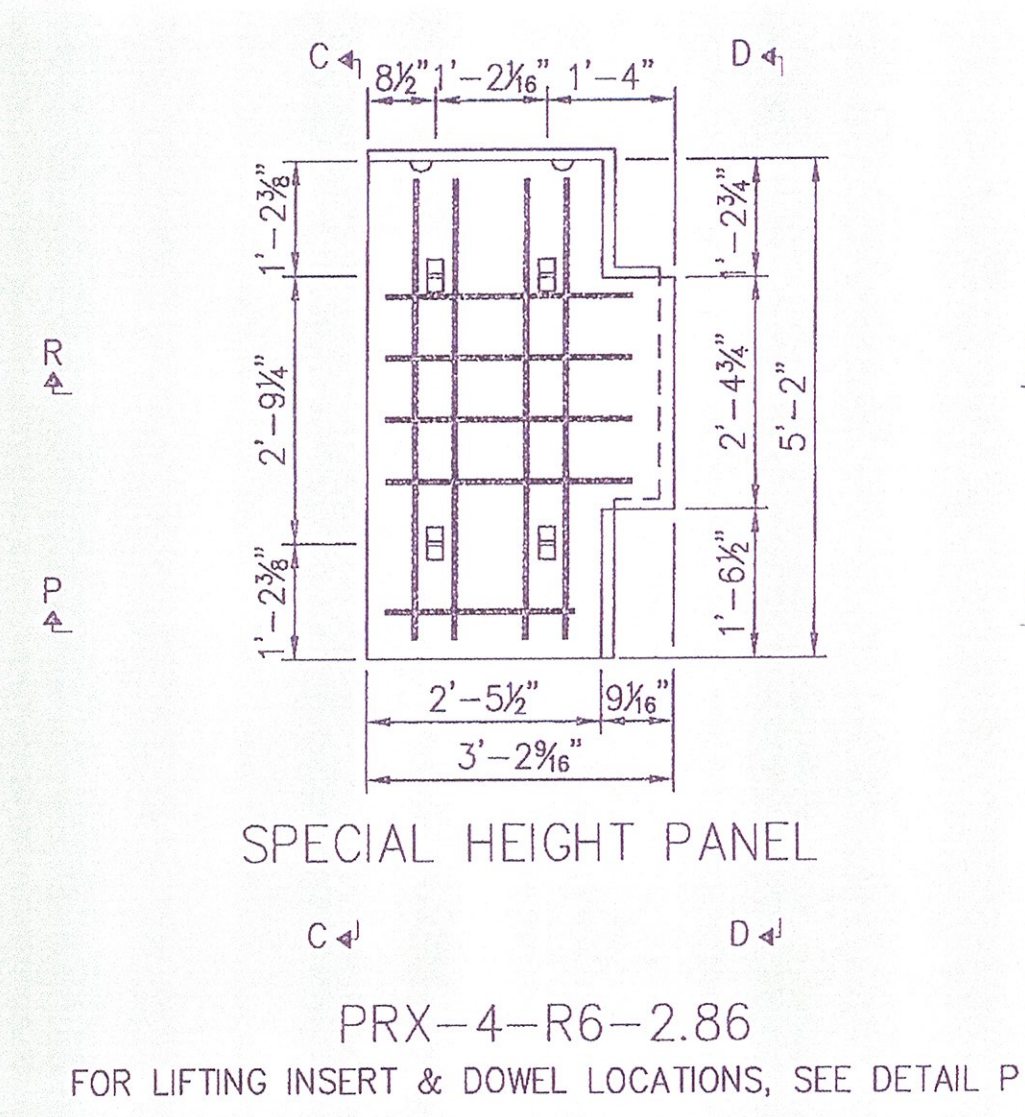
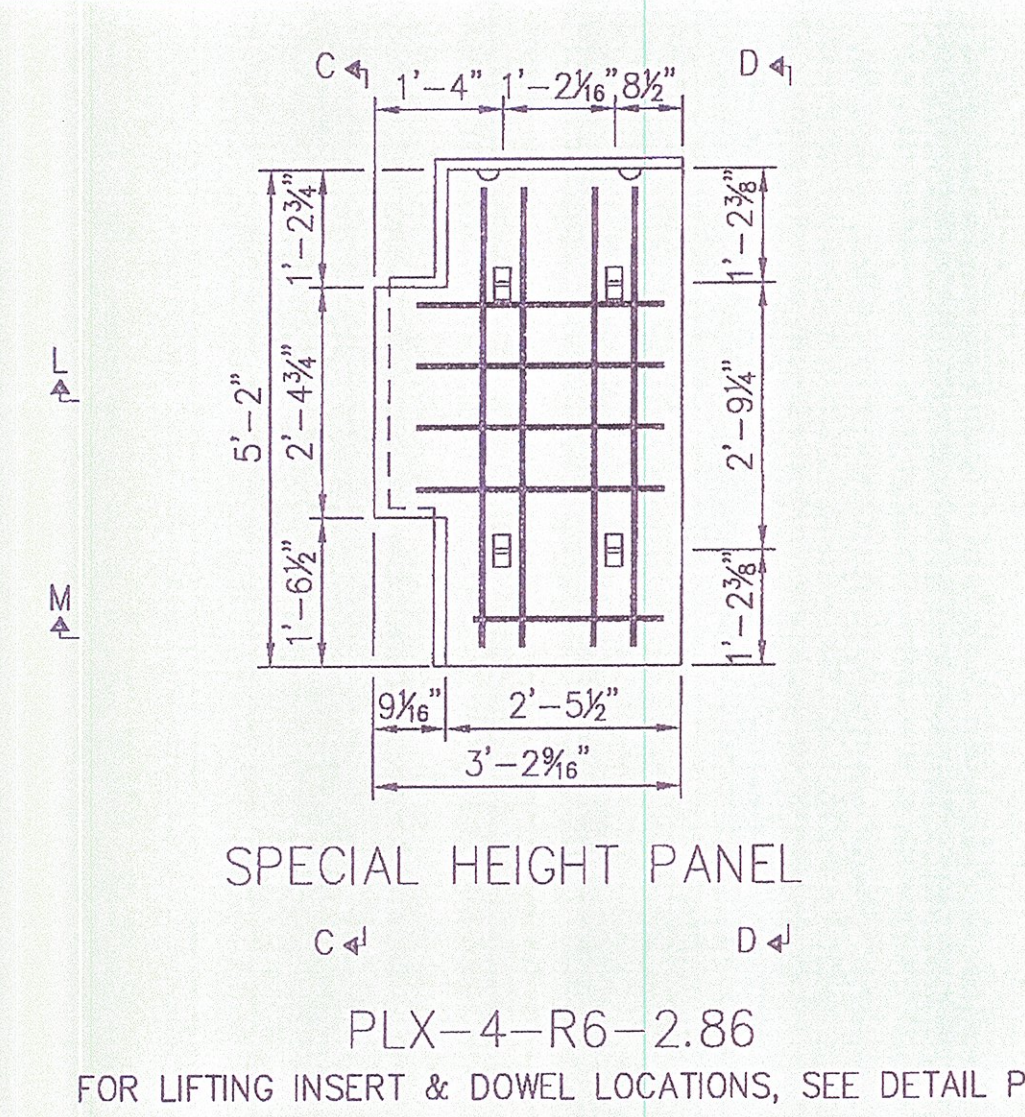
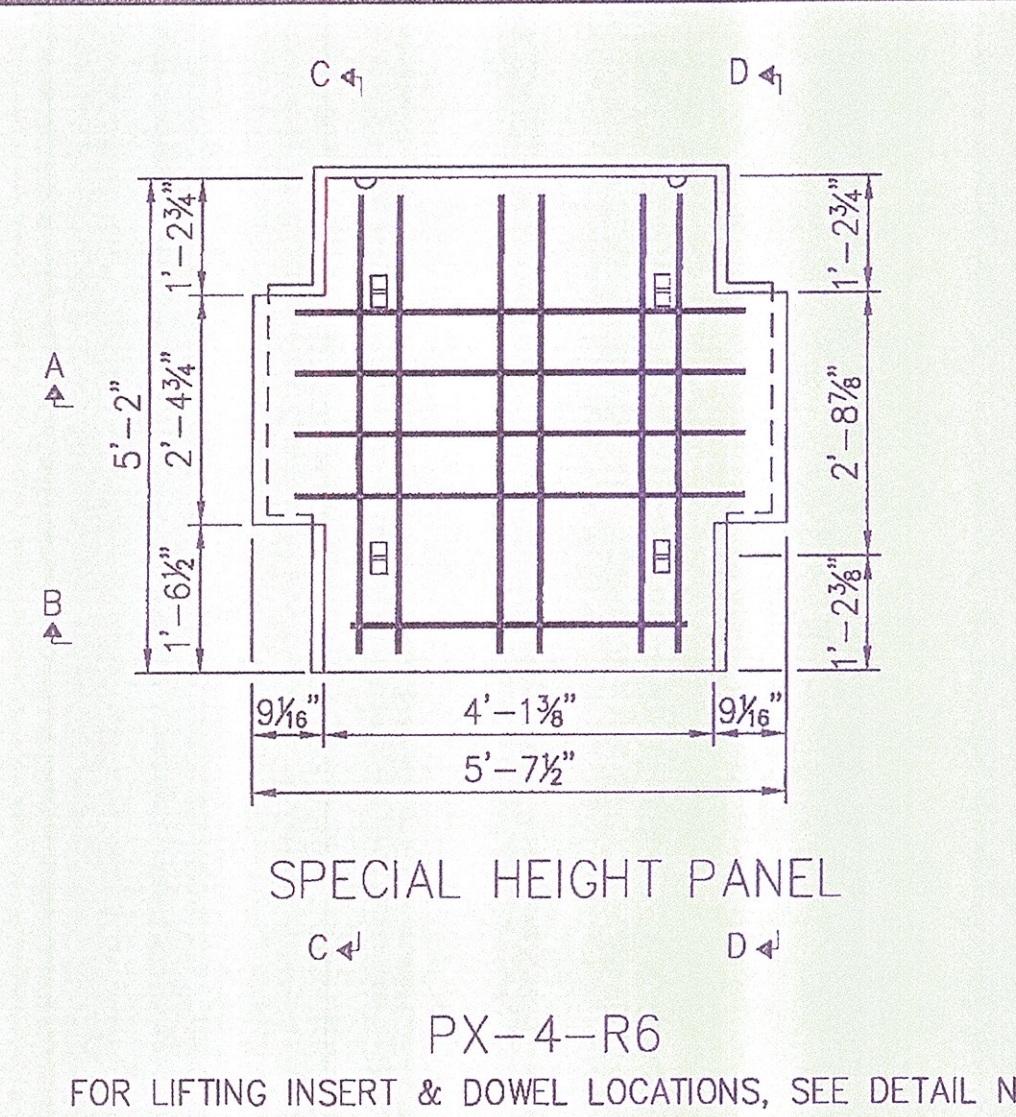
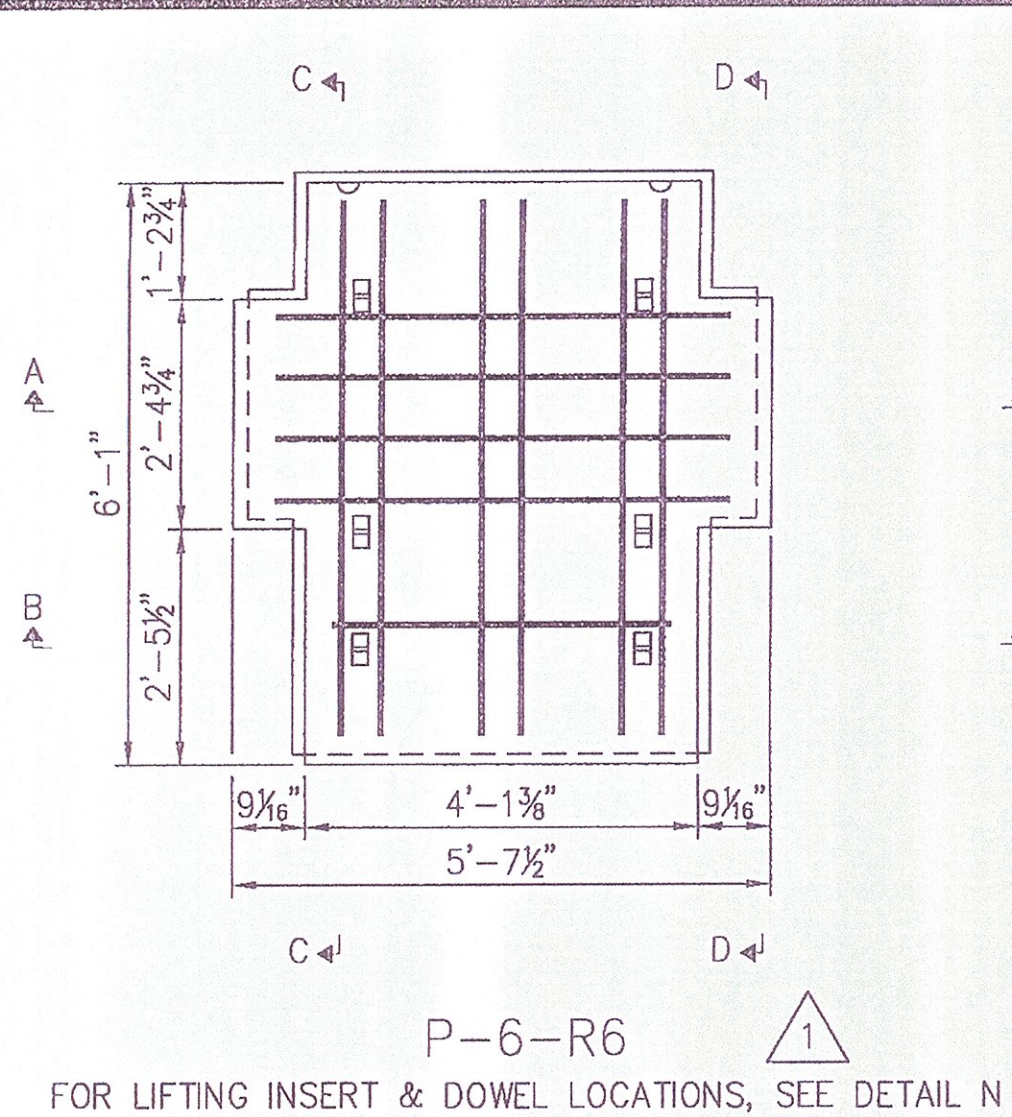
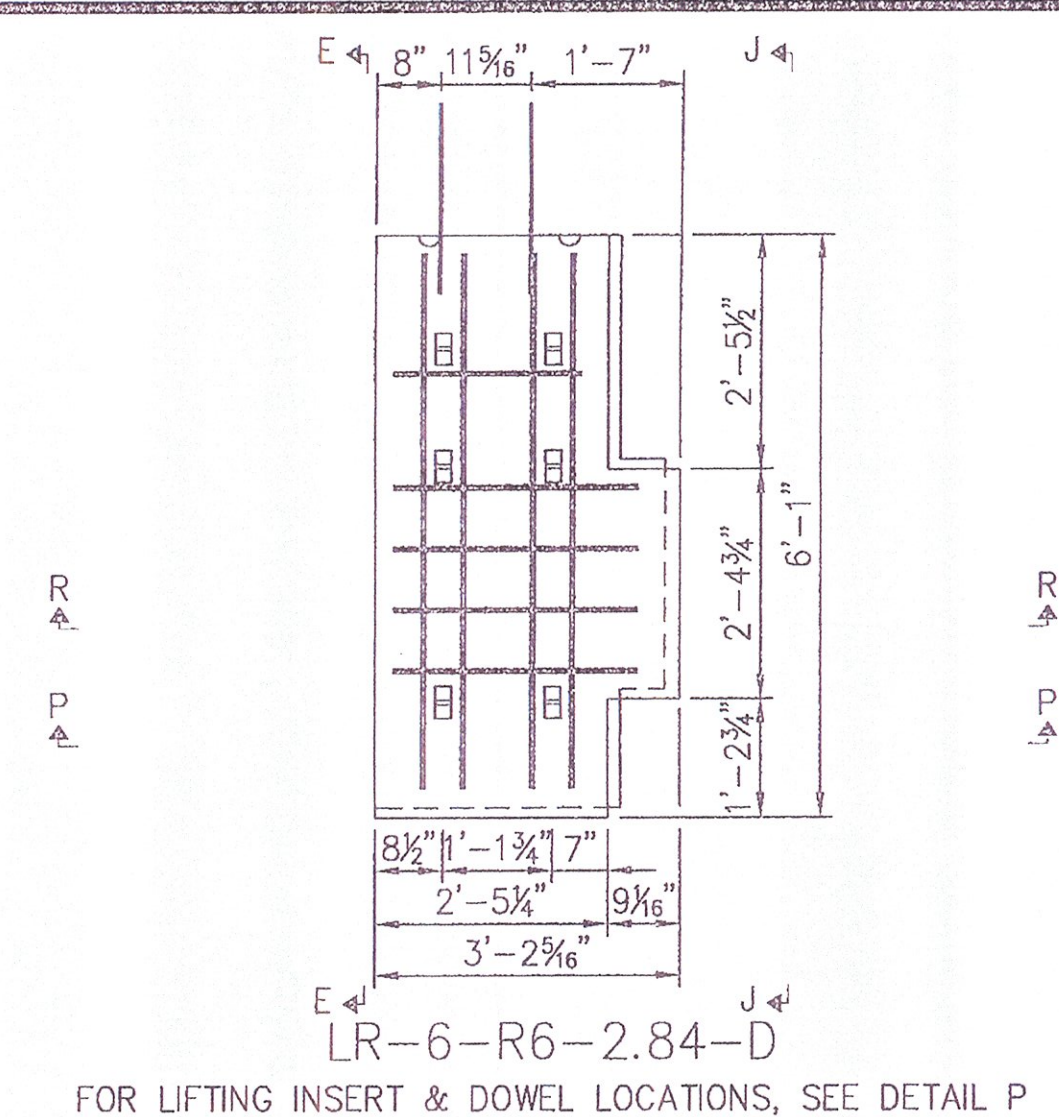


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			PROJECT ENGR: DTM				LOCATION CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
			CHECKED BY: EEH/LY	1	7/19/11	REV. PANELS PER GIA COMMENTS	OWNER VTAOT	DRAWING NO. S7 OF S13
			ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS PANEL CASTING DRAWINGS	SCALE AS SHOWN



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			PROJECT ENGR:			LOCATION	CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053		
			CHECKED BY:	1	7/19/11	REV. PANELS PER GIA COMMENTS	OWNER	VTAOT	DRAWING NO. S8 OF S13	
			EEH/LY			ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS
			"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.							

R:\15053s08.dwg



APPROVED ☒ **Not Approved** ☐

Review and Re-submit ☐ **DISAPPROVED** ☐

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRECTED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: xx DATE: 9/11

SIGNED BY: Michael J. Jones DATE: _____

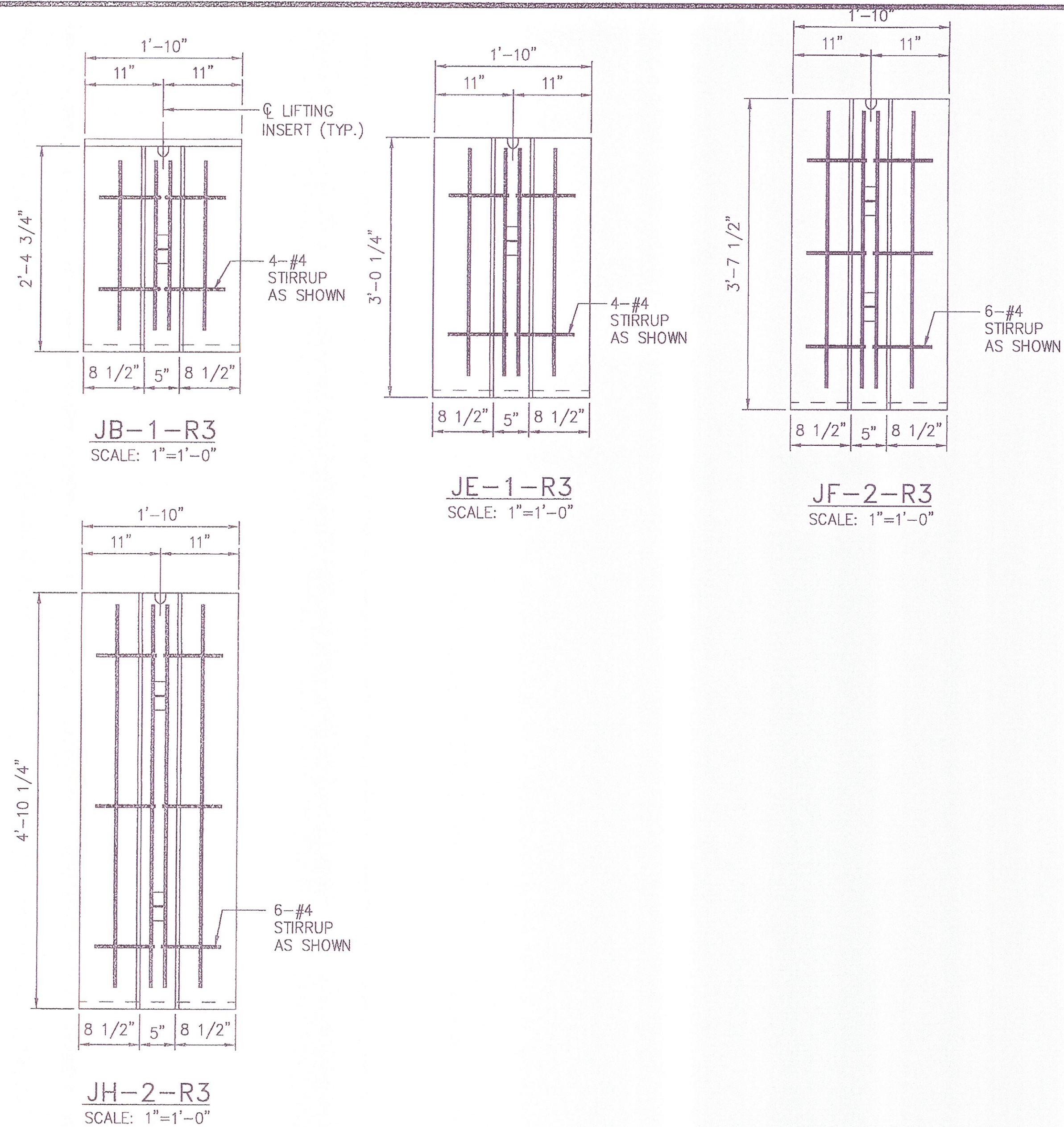
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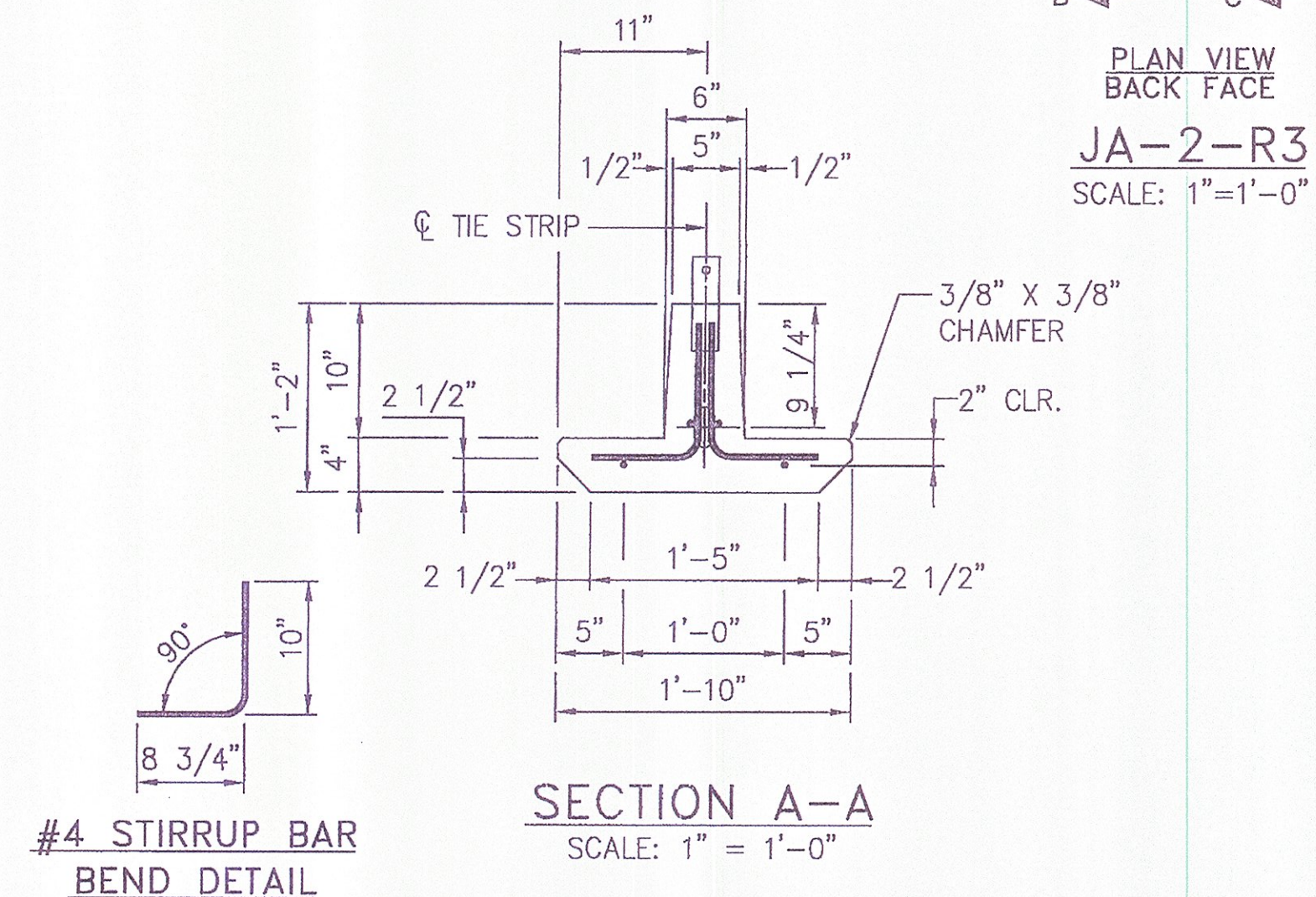
DESIGNED BY: KC				PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/06/201
PROJECT ENGR: DTM		8/19/11	NEW PANEL	LOCATION	CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
CHECKED BY: EEH/LY		7/19/11	REV. PANELS PER GIA COMMENTS	OWNER	VTAOT	DRAWING NO. S9 OF S13
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	PANEL CASTING DRAWINGS	SCALE AS SHOWN



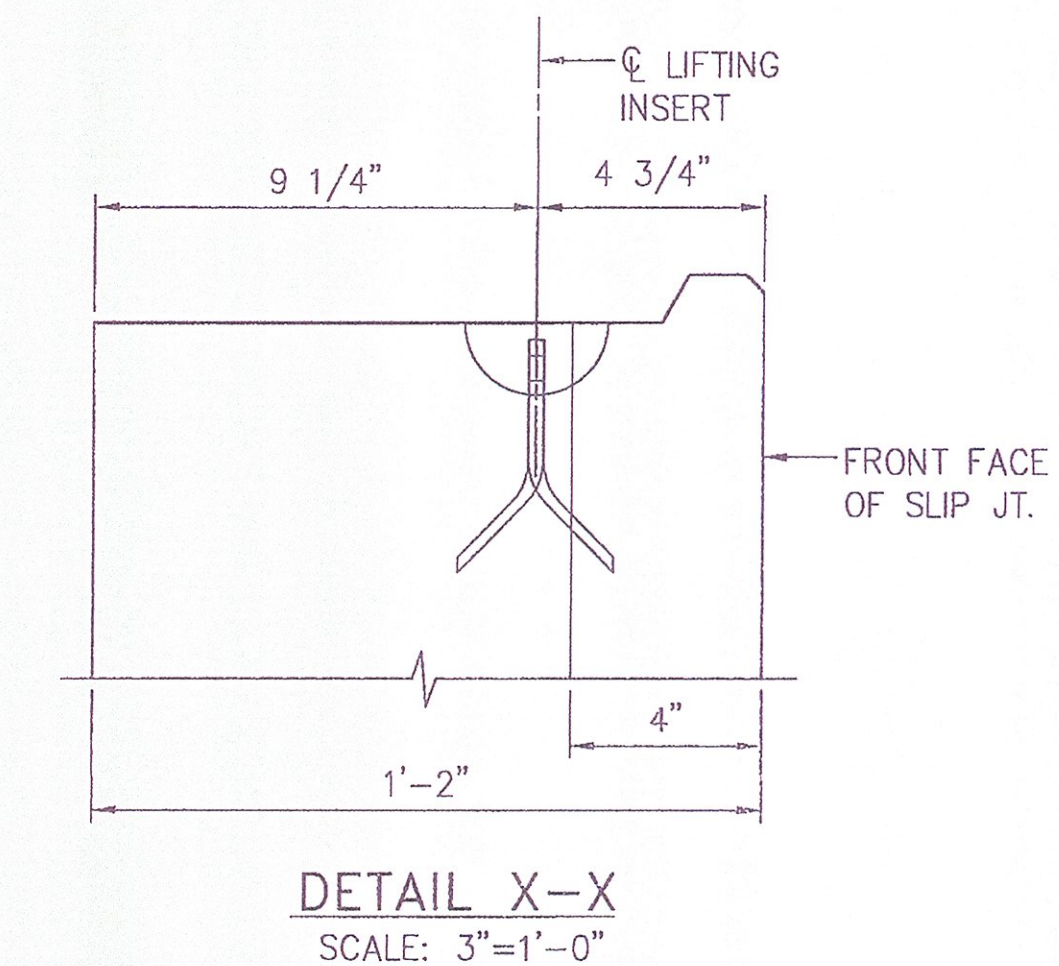
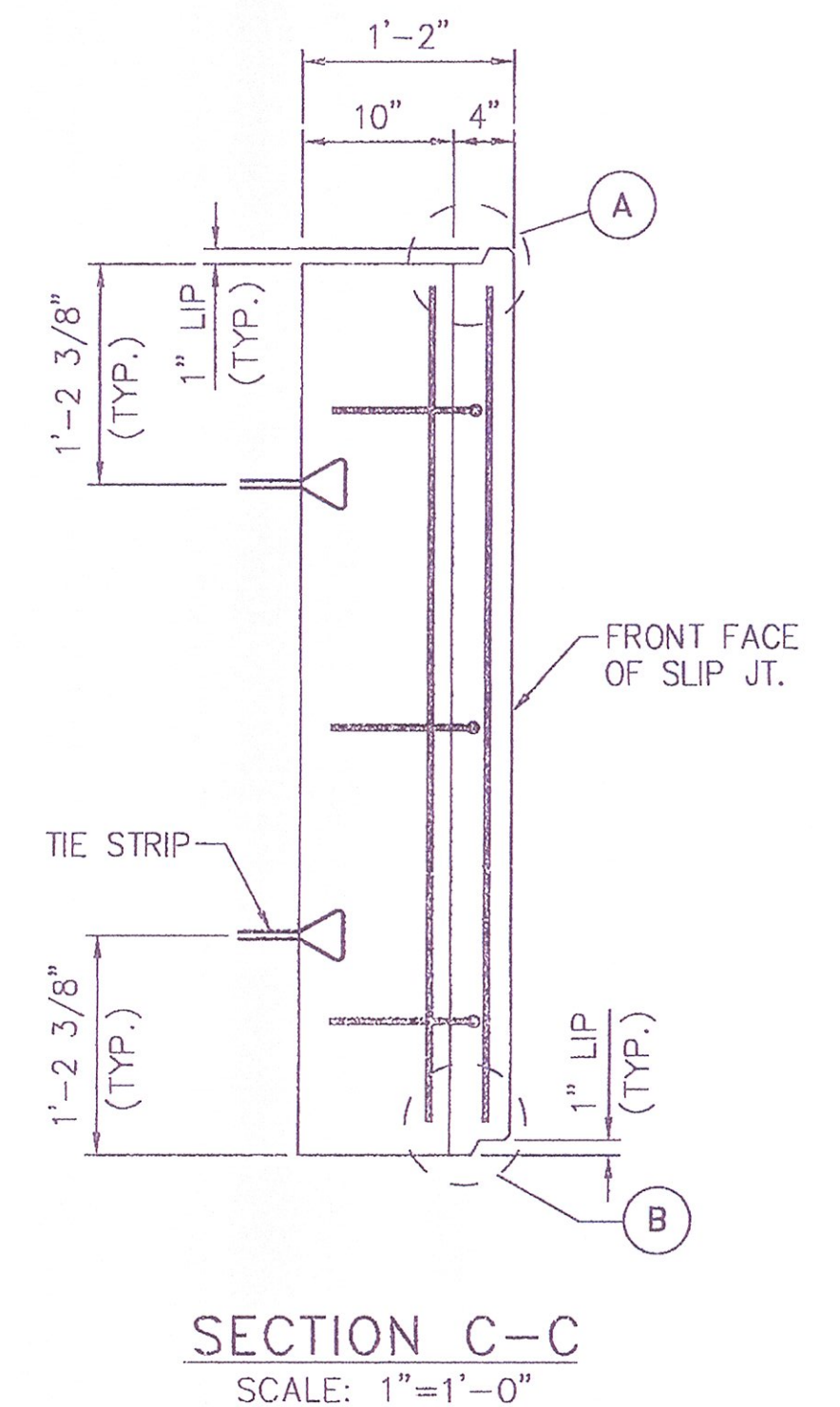
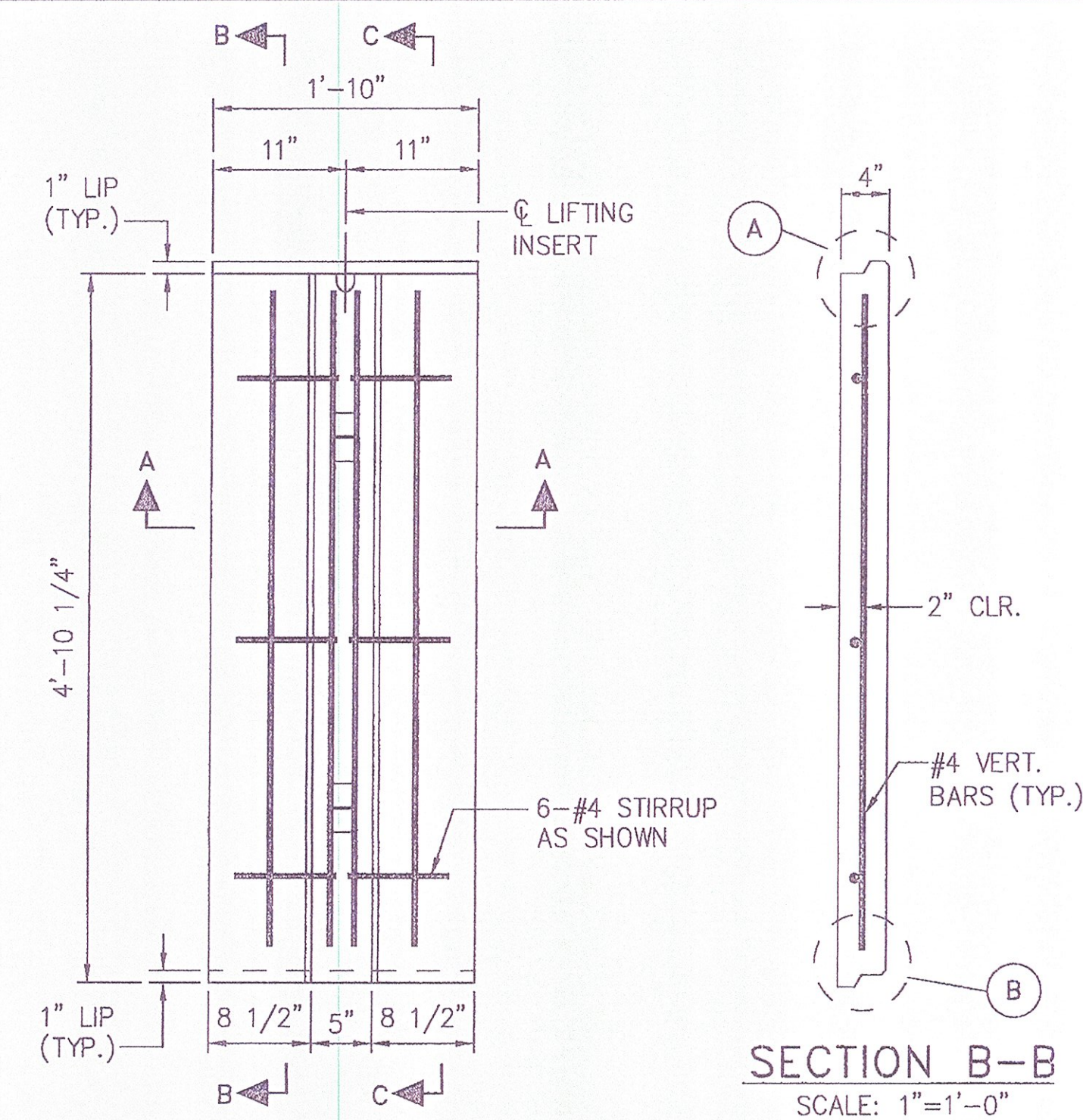
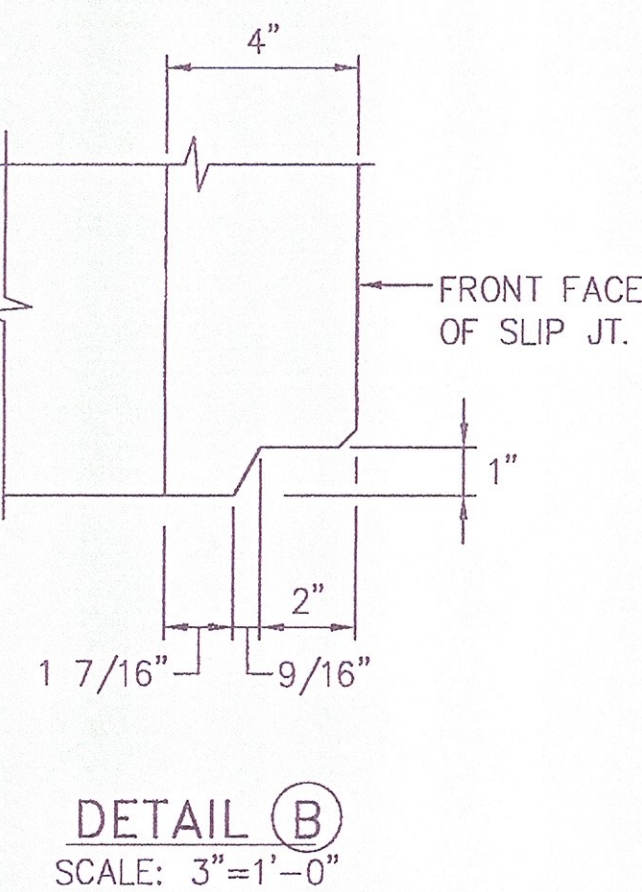
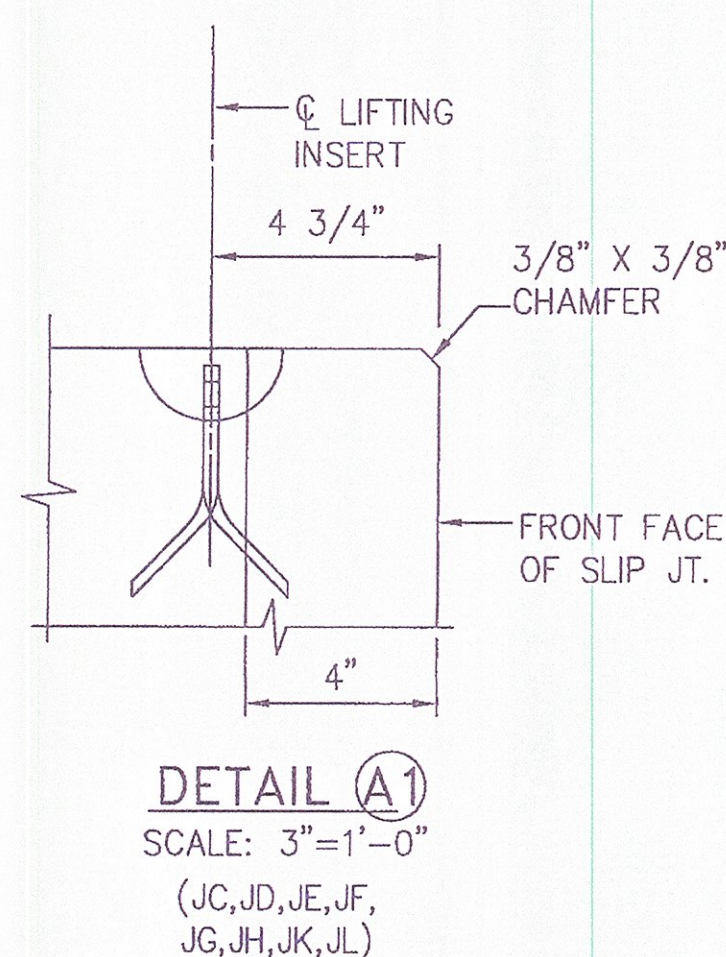
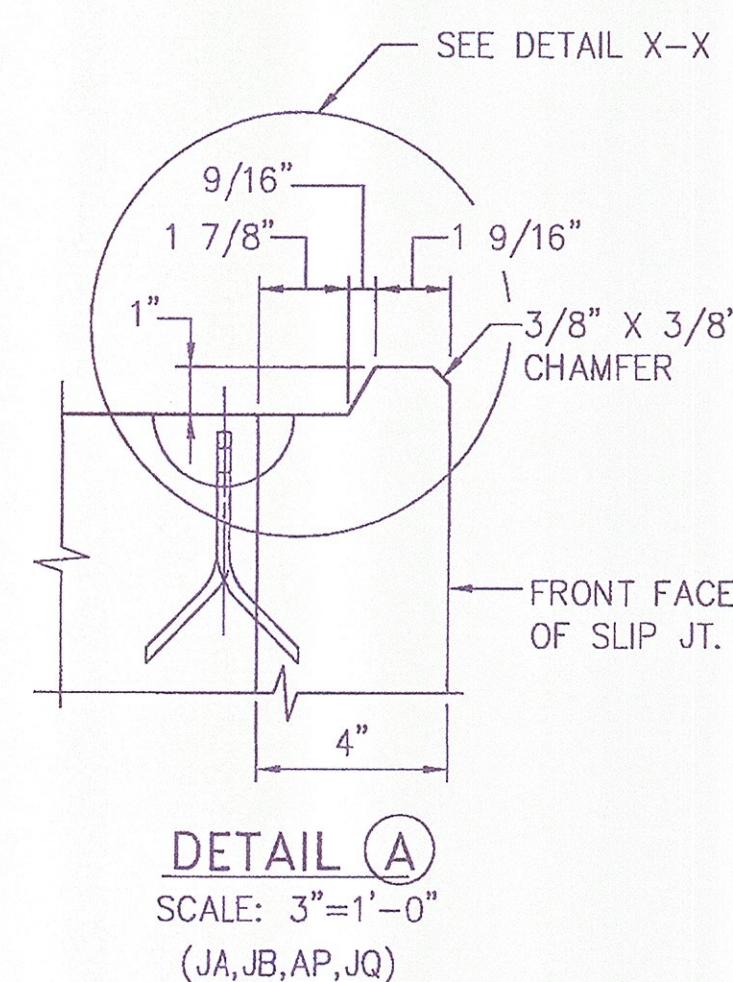
LEGEND
JA-2-R3
 PANEL REINFORCEMENT TYPE
 NO. OF TIE STRIPS
 PANEL TYPE

ALL PLAN VIEWS

ALL SLIP JOINTS ARE SHOWN BACK FACE

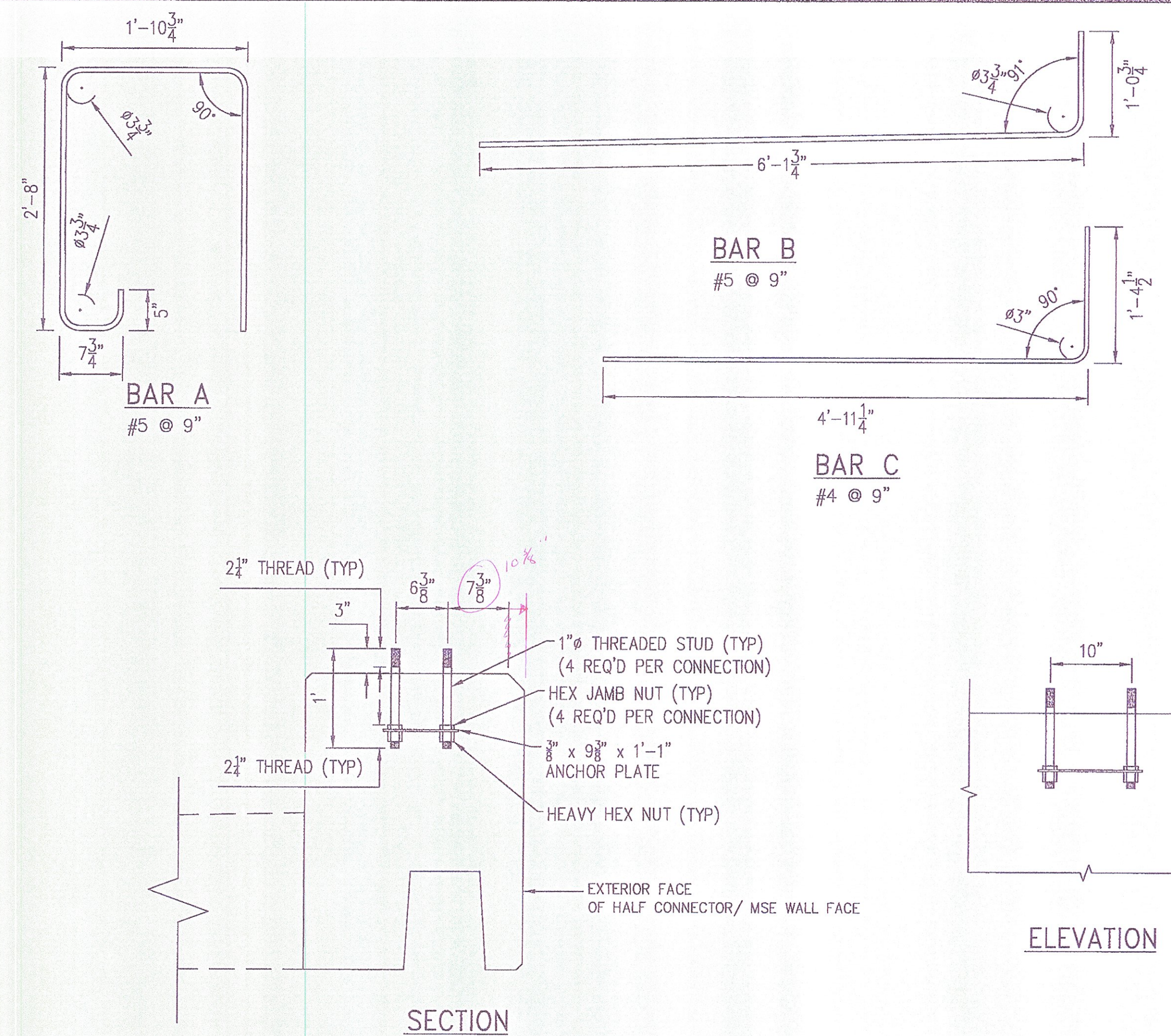


#4 STIRRUP BAR BEND DETAIL



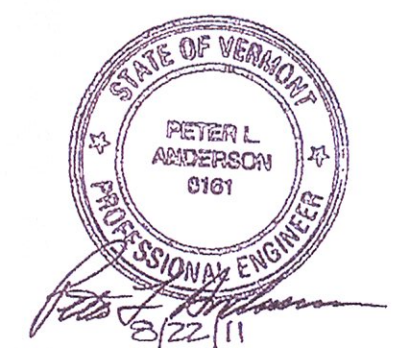
APPROVED ☒ Approved as Noted ☐
 Revised and Resubmit ☐ DISAPPROVED ☐
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: *xx* DATE: 9/11
 SIGNED BY: *Michael J. Gutz* DATE: 9/11

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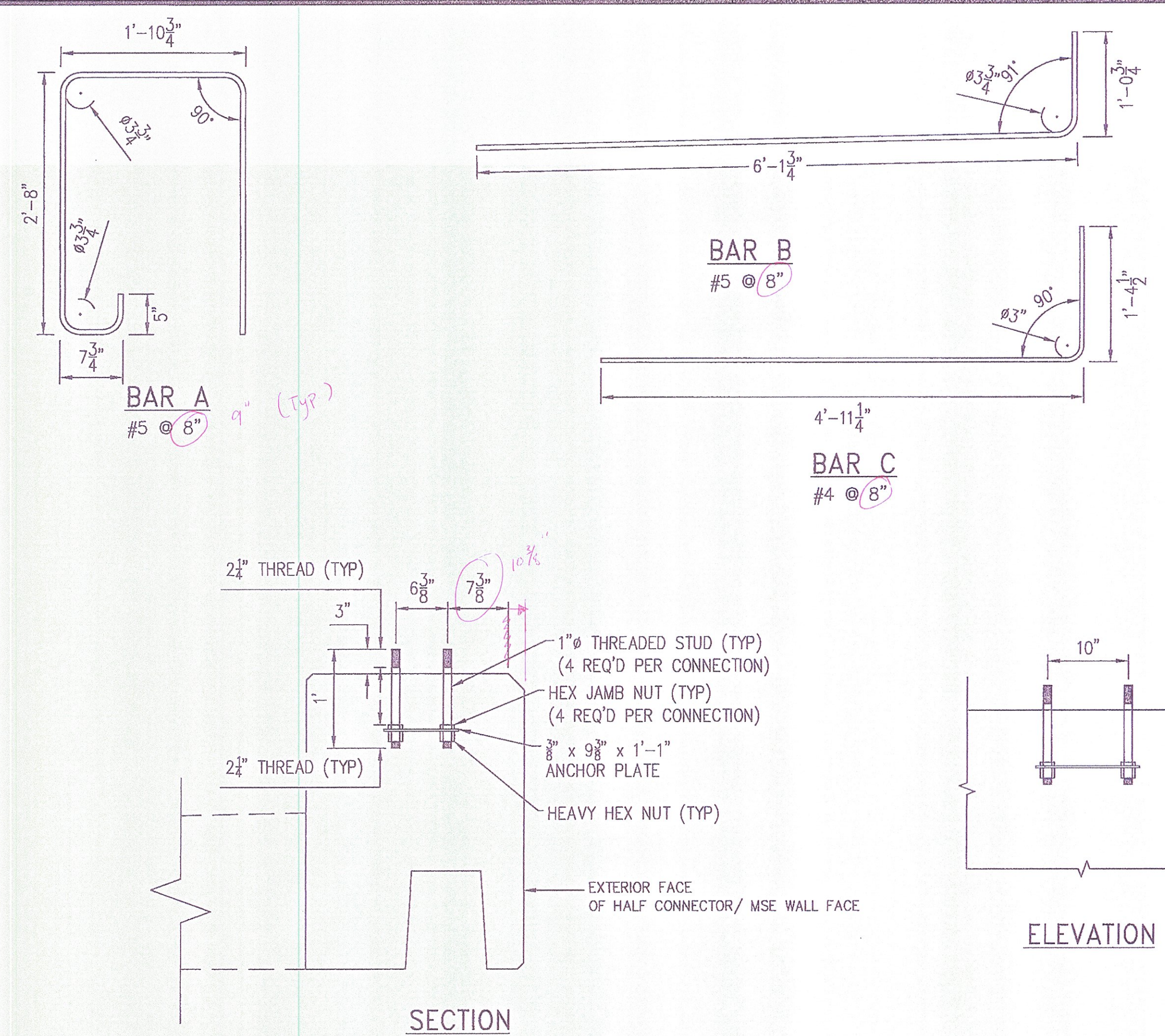
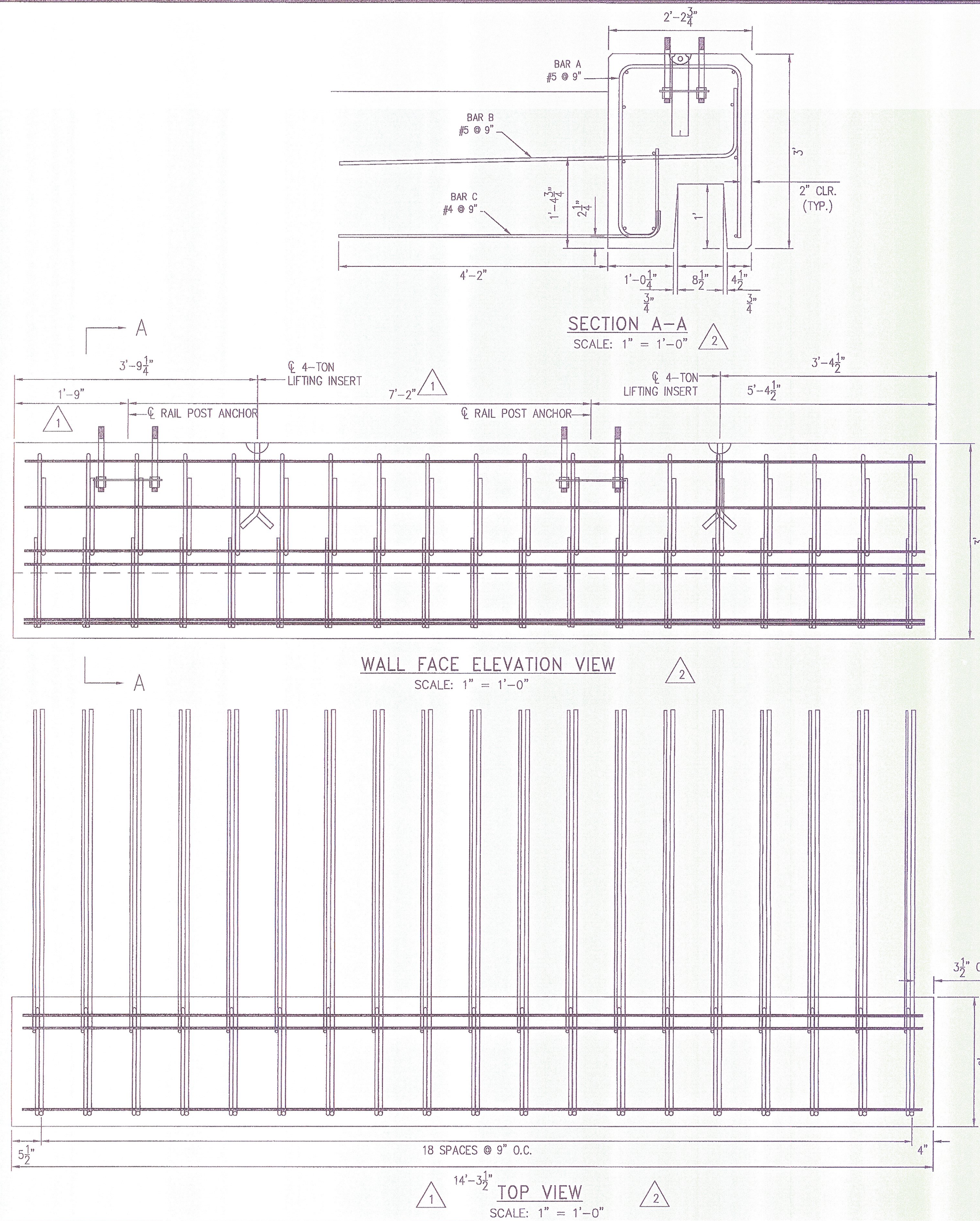


SCALE: 1" = 1'-0"
DETAIL PER VT AOT STANDARDS, DRAWING PLATE S-360d
ALL ANCHORAGE HARDWARE TO BE SUPPLIED BY CONTRACTOR

CERTIFIED WITH RESPECT TO
THE INTERNAL STABILITY OF
REINFORCED EARTH
STRUCTURES ONLY

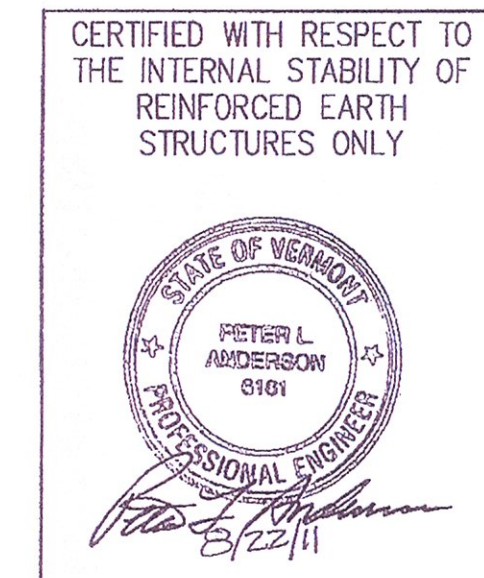


DESIGNED BY: DTM				PROJECT NAME	US ROUTE 2 OVER EXISTING STREAM	DATE 04/05/11
PROJECT ENGR: LY		8/19/11	REVISE REBAR SPACING AND HALF CONNECTOR DIMENSION	LOCATION	CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH		7/19/11	REVISE BAR SPACING	OWNER	VT AOT	DRAWING NO. S11 OF S13
	REV.	DATE	DESCRIPTION	DRAWING COVERS	HFCW1 - HALF CONNECTOR	SCALE AS SHOWN

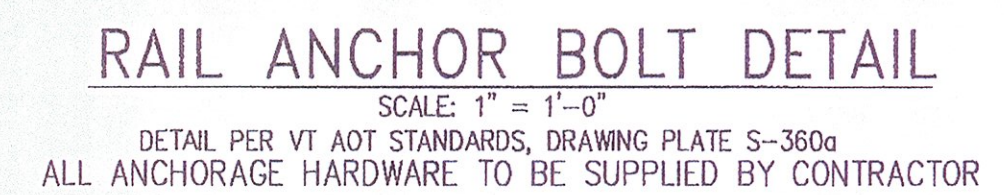
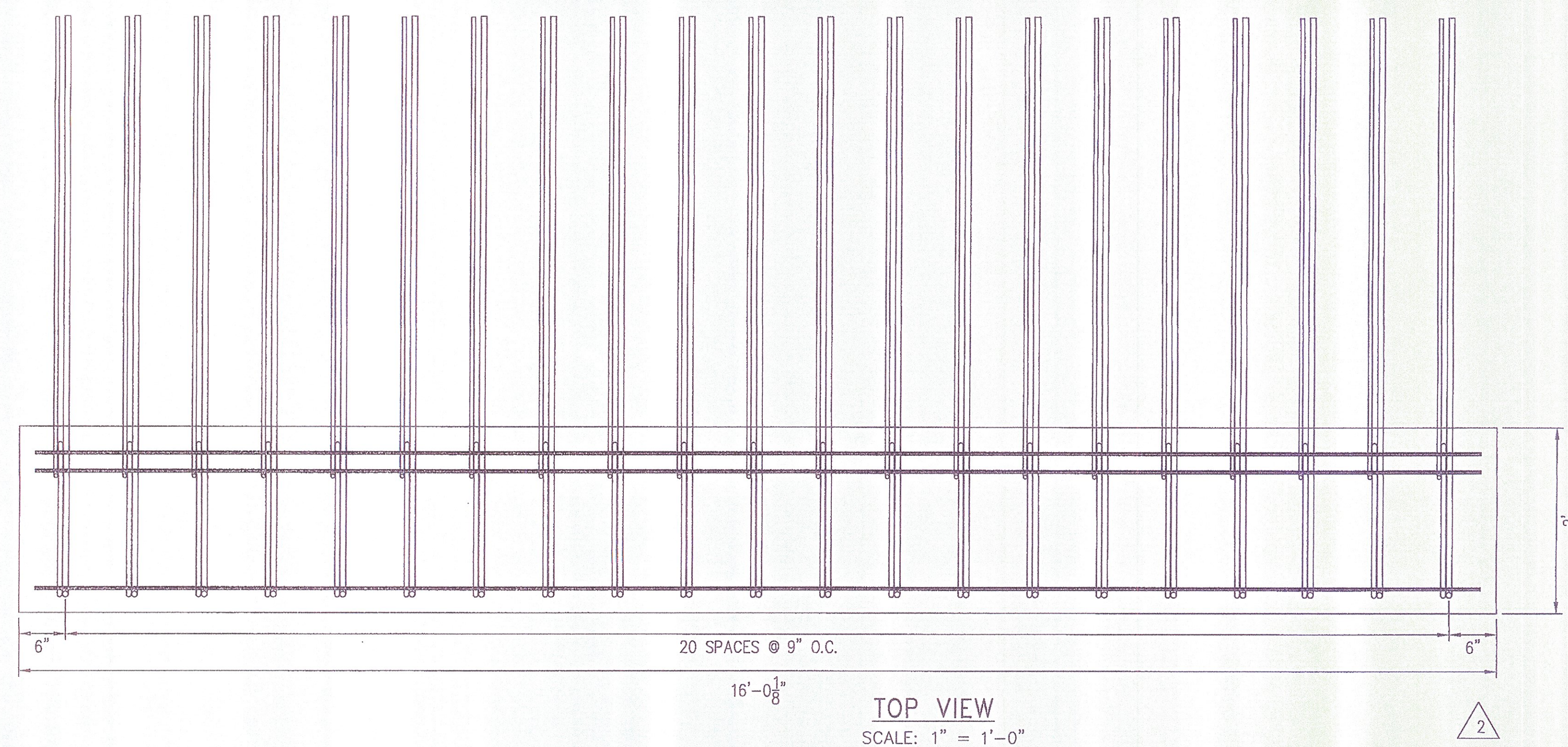


MATERIALS PER PIECE				
HFCW2 - 14.29' UNIT				
MARK #	QTY	WEIGHT PER BAR (LBS)	TOT. WEIGHT (LBS)	DESCRIPTION
A	19	8.3	157.7	#5 6'-10" LONG
B	19	7.5	142.5	#5 7'-2 3/4" LONG
C	19	4.2	79.8	#4 6'-3" LONG
L	10	8.1	81.0	#4 12'-0 3/4" LONG
TOTAL W.			461	

MATERIAL SPECIFICATIONS	
VTAOT MIX DESIGN REQUIREMENTS - PER SECTION 540	
28 DAY STRENGTH:	5,000 PSI
STRIPPING STRENGTH:	3,000 PSI
REINFORCING STEEL TO BE A615 GRADE 60, EPOXY COATED	
PRECAST HALF CONNECTOR UNITS SHALL HAVE TWO LIFTING INSERTS OF 4-TON CAPACITY EACH, MINIMUM.	
VOL. (CU.YD.) = 3.1 CY	WT. (LBS) = 12,550

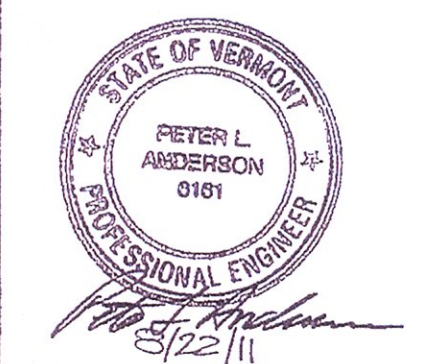


This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of VT AOT only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company. The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the furnishing of this drawing does not constitute an expressed or implied license under the Vidal patents.		The design contained on these drawings is based on information provided by the owner. On the basis of this information, The Reinforced Earth Company has designed, and is responsible for the internal stability of the structure only. External stability, including foundation (bearing capacity and settlement) and slope (global) stability, is the responsibility of the owner.		REINFORCED EARTH 8614 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175 "REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.	DESIGNED BY: DTM PROJECT ENGR: LY CHECKED BY: PLA/EEH REV. DATE	8/19/11 7/19/11 DATE	REVISE REBAR SPACING AND HALF CONNECTOR DIMENSION REVISE HALF CONNECTOR LENGTH DESCRIPTION	PROJECT NAME LOCATION OWNER DRAWING COVERS	US ROUTE 2 OVER EXISTING STREAM CABOT-DANVILLE VERMONT VT AOT HFCW2 - HALF CONNECTOR	DATE 04/05/11 CONTRACT NO. RE-15053 DRAWING NO. S12 OF S13 SCALE AS SHOWN
---	--	--	--	---	---	----------------------------	--	---	---	--



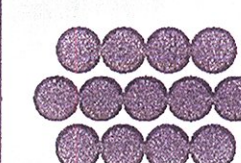
MATERIALS PER PIECE				
HFCW3 - 16.05' UNIT				
MARK #	QTY	WEIGHT PER BAR (LBS)	TOT. WEIGHT (LBS)	DESCRIPTION
A	21	8.3	174.3	#5
B	21	7.5	157.5	#5 7'-2" LONG
C	21	4.2	88.2	#4 6'-3" LONG
L	10	10.5	105.0	#4 16'-8" LONG
TOTAL W.			525	
2				
MATERIAL SPECIFICATIONS				
VTAOT MIX DESIGN REQUIREMENTS - PER SECTION 540				
28 DAY STRENGTH: 5,000 PSI				
STRIPPING STRENGTH: 3,000 PSI				
REINFORCING STEEL TO BE A615 GRADE 60, EPOXY COATED				
PRECAST HALF CONNECTOR UNITS SHALL HAVE TWO LIFTING INSERTS OF 4-TON CAPACITY EACH, MINIMUM.				
VOL. (CU.YD.) = 3.5 CY			WT. (LBS) = 14,150 2 	

CERTIFIED WITH RESPECT TO
THE INTERNAL STABILITY OF
REINFORCED EARTH
STRUCTURES ONLY



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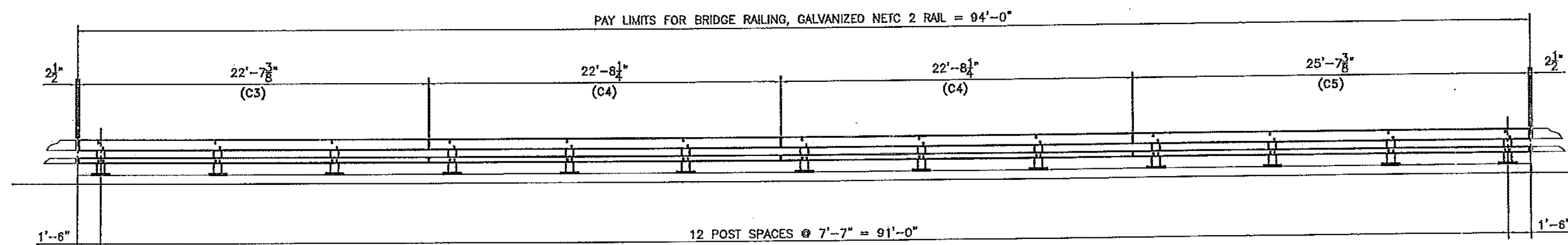
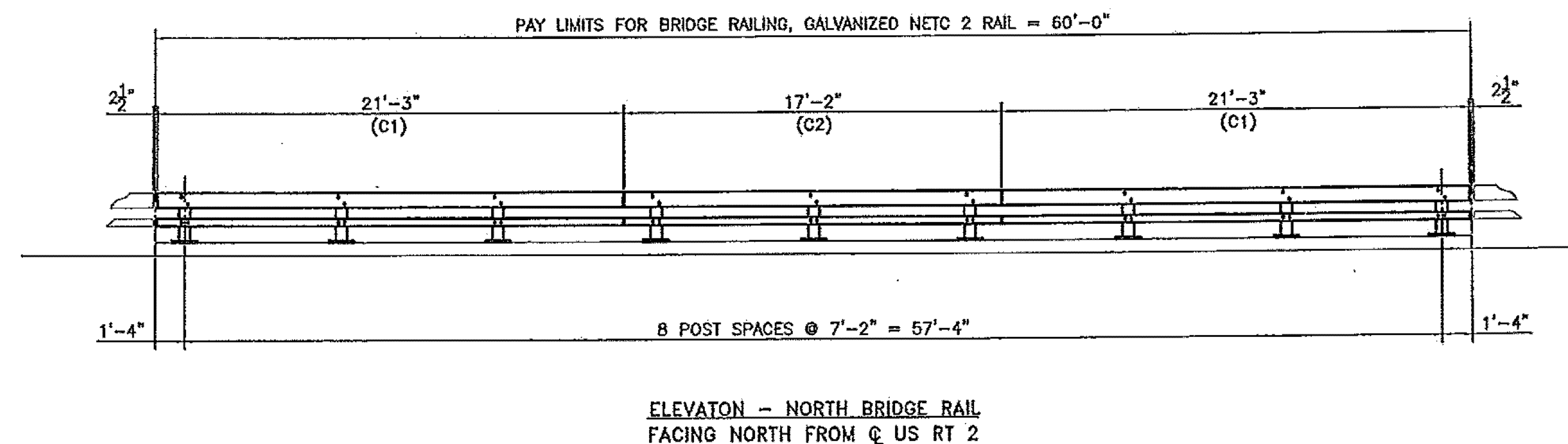
● REINFORCED eARTH®
8614 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175

"REINFORCED EARTH" is the registered trademark of
The Reinforced Earth Company.

DESIGNED BY: DTM				PROJECT NAME	US ROUTE 2 OVER EXISTING STREAM	DATE 04/05/11
PROJECT ENGR: LY				LOCATION	CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH		8/19/11	REVISE REBAR SPACING AND HALF CONNECTOR DIMENSION	OWNER	VT AOT	DRAWING NO. S13 OF S13
	REV.	DATE	DESCRIPTION	DRAWING COVERS	HFCW3 - HALF CONNECTOR	SCALE AS SHOWN

R: \15053

BILL OF MATERIAL (BOTH SIDES)				
Mk.	Qty.	Description	Size/Shape	Material
22		BRIDGE RAIL FED POST 2'-2 3/8" OAH W/ BASE PLATE		
22		POST UPRIGHT	W6 x 25	A709 Gr. 50
22		POST BASE PLATE	10" x 1"	A709 Gr. 50
5		UPPER SPLICE TUBE FOR 8 x 4 RAIL		
5		TUBE	TS 7x3x3/8	A500 Gr. B
10		WELDED LOCK NUT (OUTER HOLES ONLY)	5/8"	A563
5		LOWER SPLICE TUBE FOR 4 x 4 RAIL		
5		TUBE	TS 3x3x5/16	A500 Gr. B
10		WELDED LOCK NUT (OUTER HOLES ONLY)	5/8"	A563
C1	2	UPPER RAIL	TS 8x4x5/16	A500 Gr. B
2		LOWER RAIL	TS 4x4x1/4	A500 Gr. B
C2	1	UPPER RAIL	TS 8x4x5/16	A500 Gr. B
1		LOWER RAIL	TS 4x4x1/4	A500 Gr. B
C3	1	UPPER RAIL	TS 8x4x5/16	A500 Gr. B
1		LOWER RAIL	TS 4x4x1/4	A500 Gr. B
C4	2	UPPER RAIL	TS 8x4x5/16	A500 Gr. B
2		LOWER RAIL	TS 4x4x1/4	A500 Gr. B
C5	1	UPPER RAIL	TS 8x4x5/16	A500 Gr. B
1		LOWER RAIL	TS 4x4x1/4	A500 Gr. B
22		ANCHOR PLATE	9 3/8" x 3/8"	A36
88		ANCHOR STUD	1" DIA	A149
176		HEX NUT	1" DIA	A563
88		HEAVY HEX NUT	1" DIA	A5630H
88		WASHER	1" DIA	F436
88		ROUND HEAD BOLT	3/4" DIA	A164 type 1
88		LOCK NUT	3/4" DIA	A5630H
88		WASHER	3/4" DIA	F436
40		CAP SCREW	5/8" DIA	A325
40		WASHER	5/8" DIA	F436
20		PIPE SPACER (SCH. 40)	3/4" DIA	A53
22		BEARING PAD	1/8" x 10"	M251



APPROVED ☒ Approved as Noted ☐
Revise and Resubmit ☐ DISAPPROVED ☐

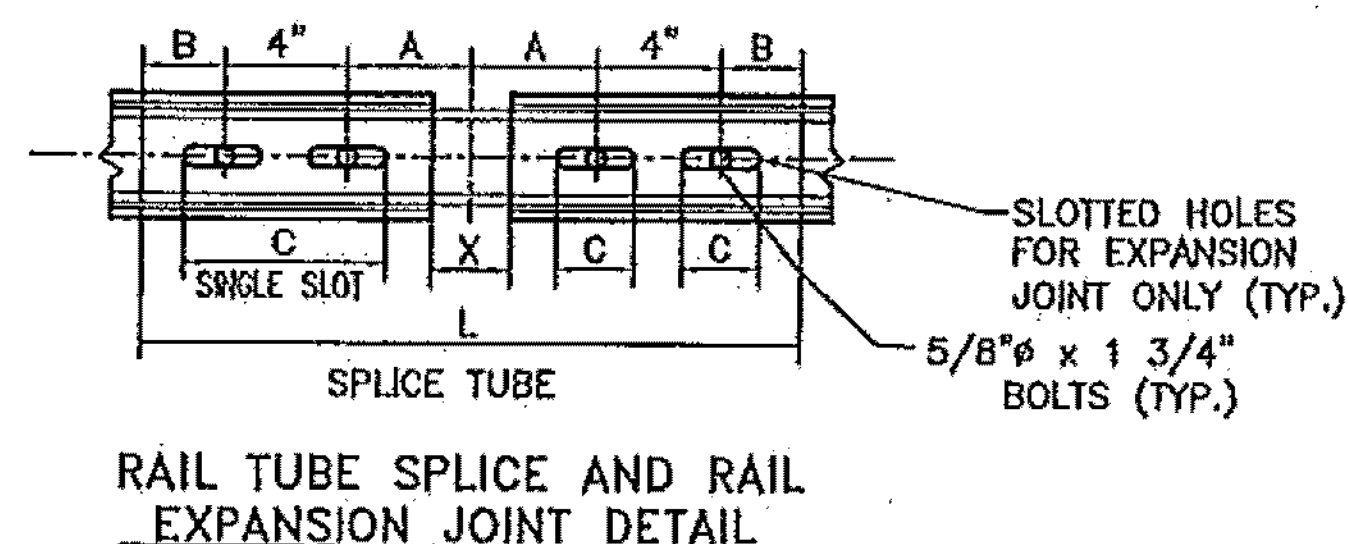
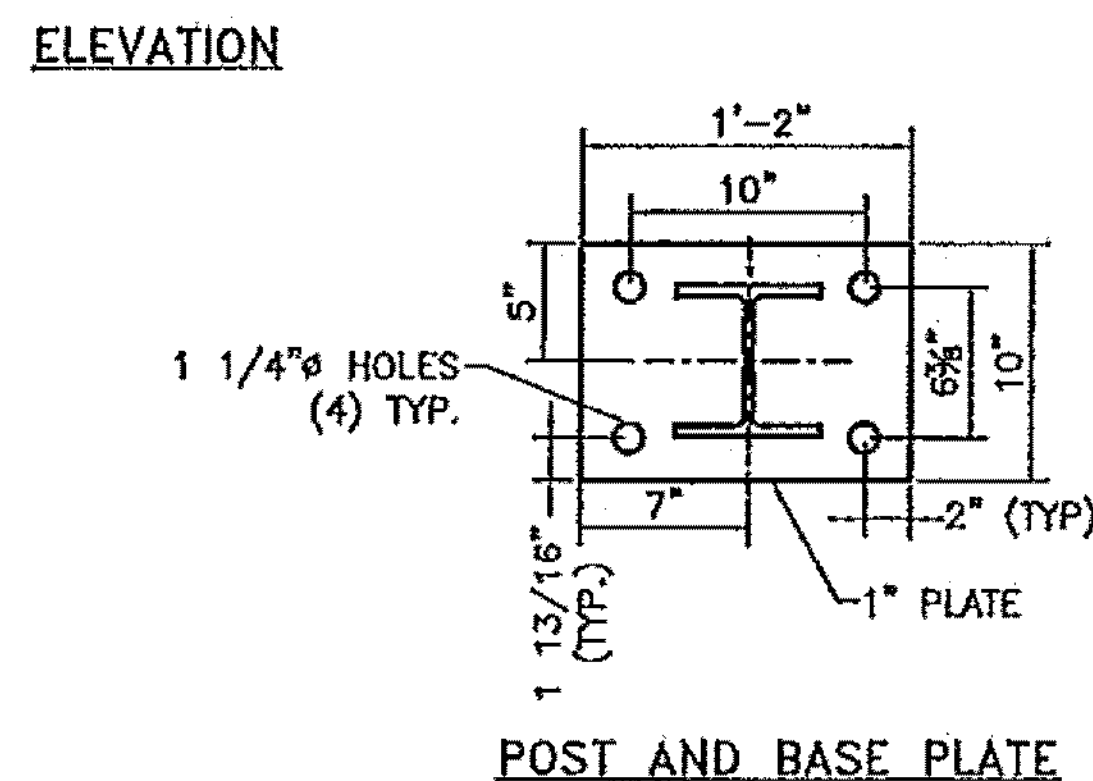
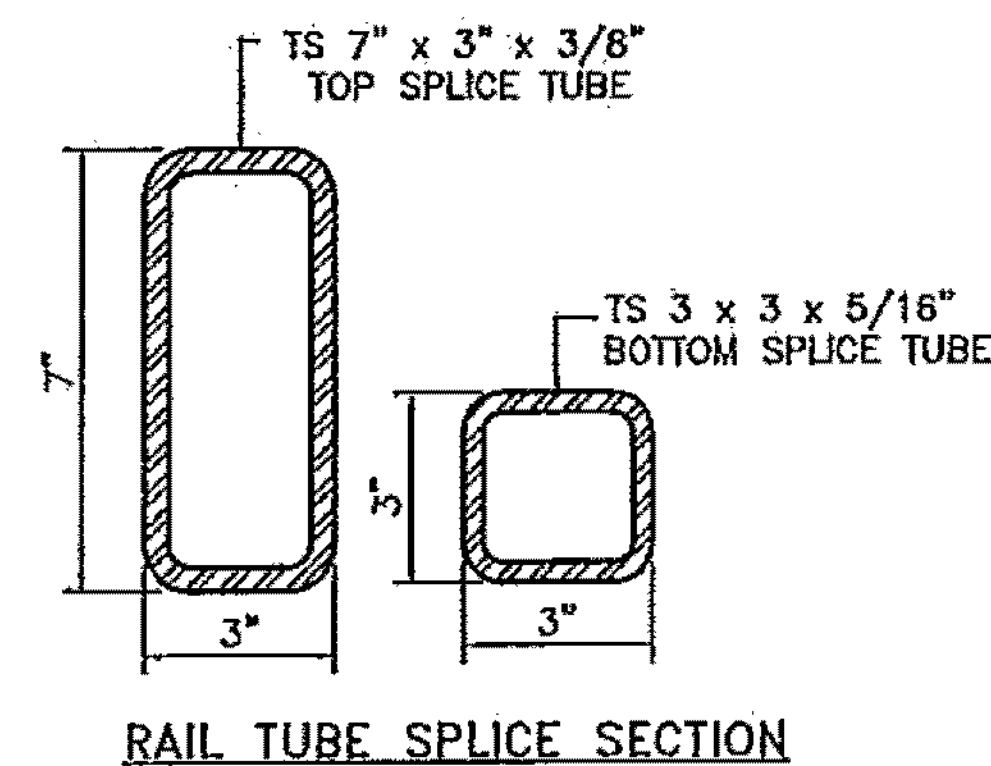
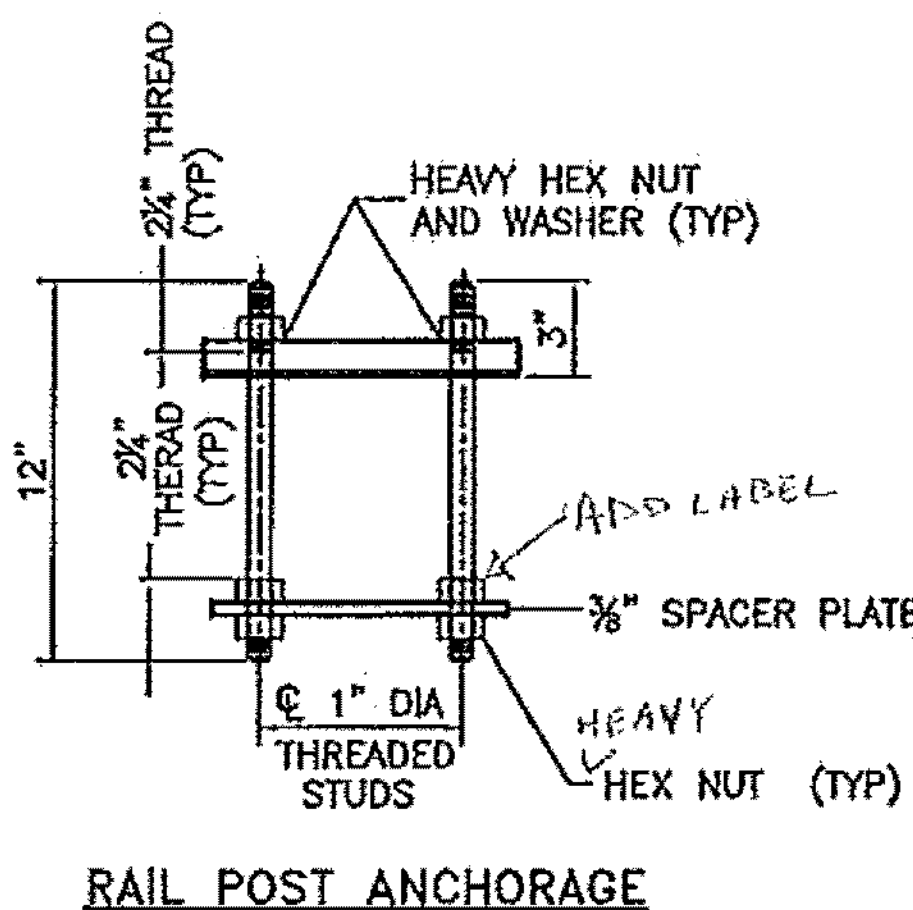
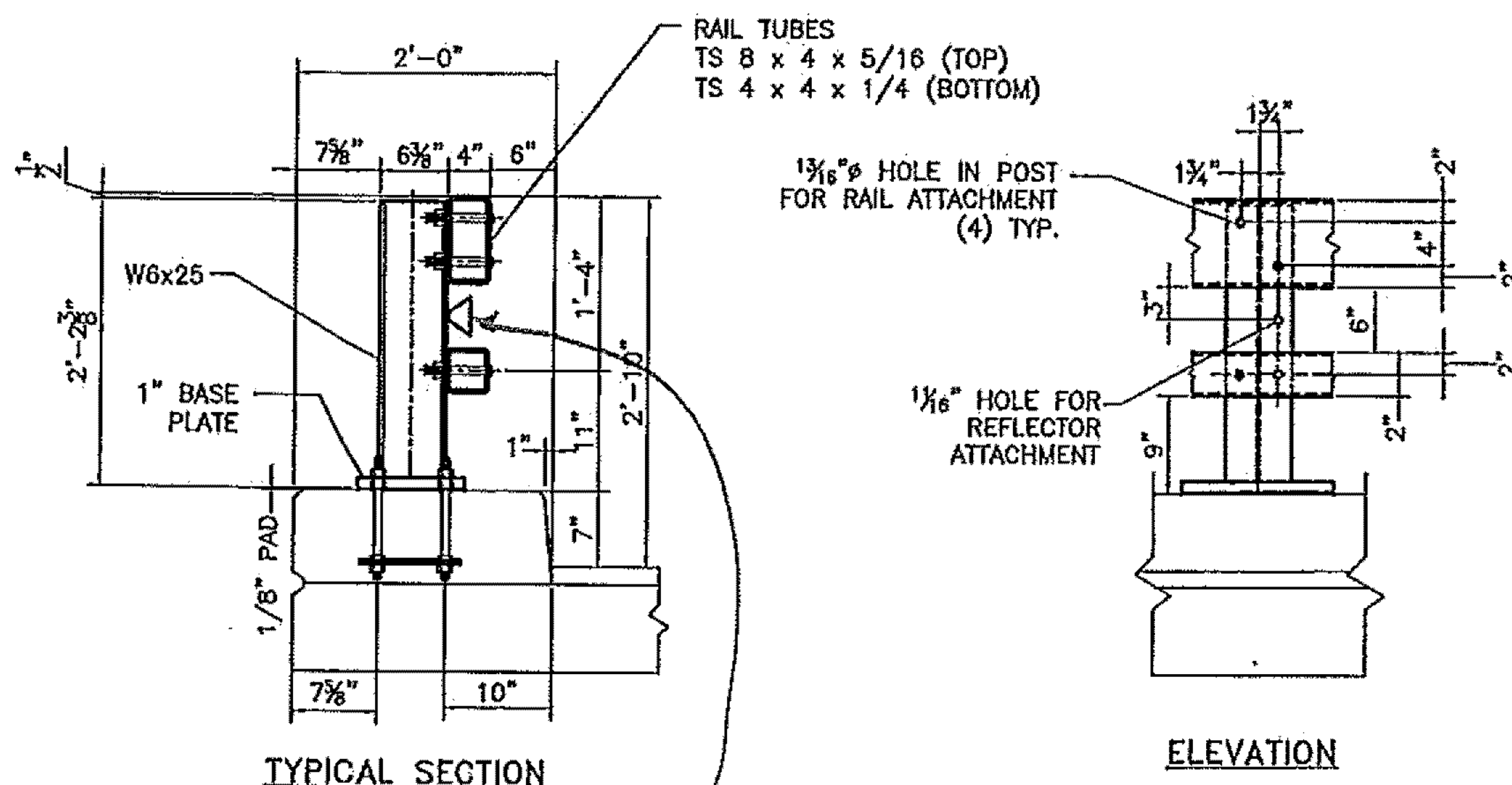
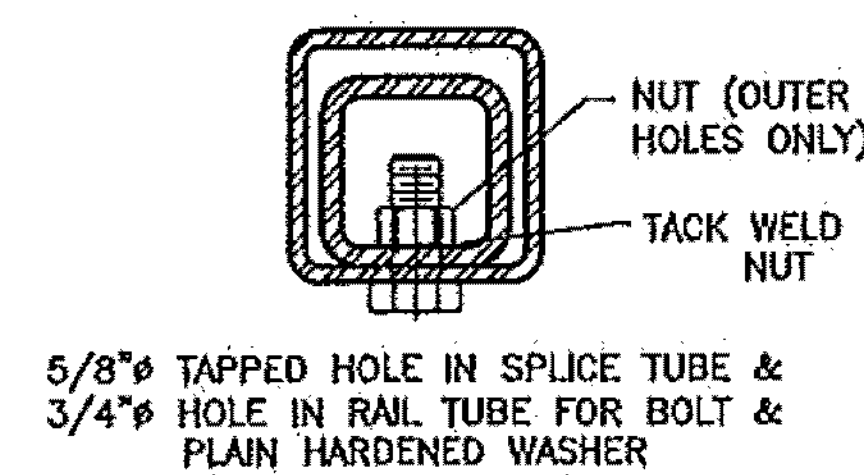
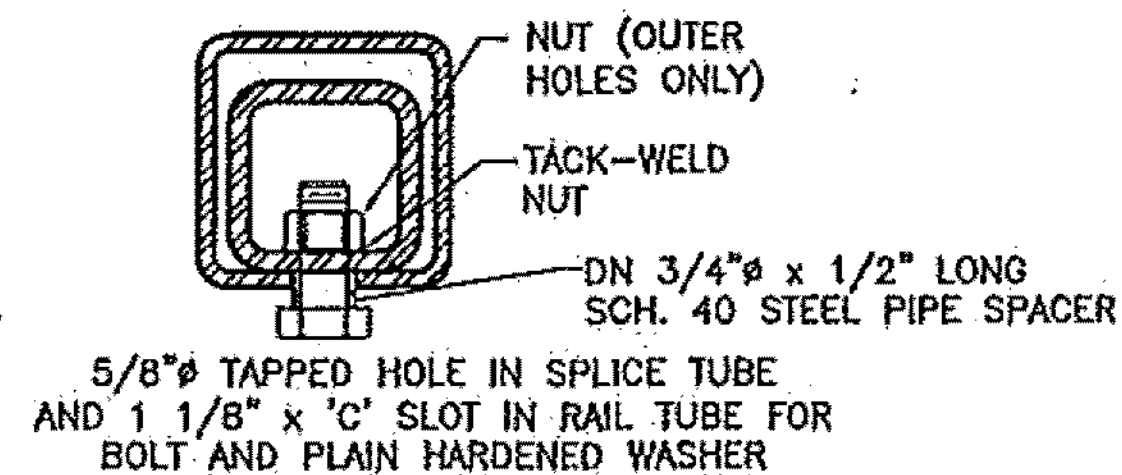
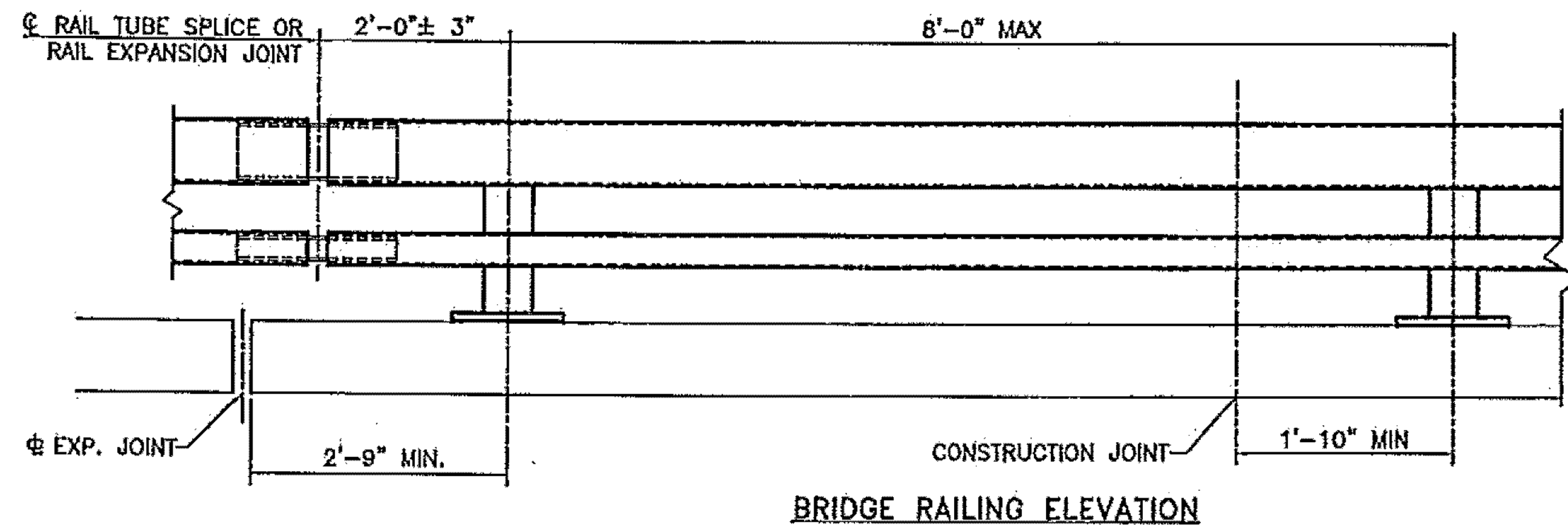
CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY XZ DATE 8/11
SIGNED BY Michael H. Wey DATE 8/11

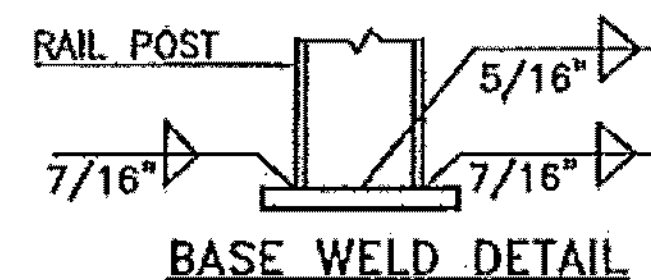
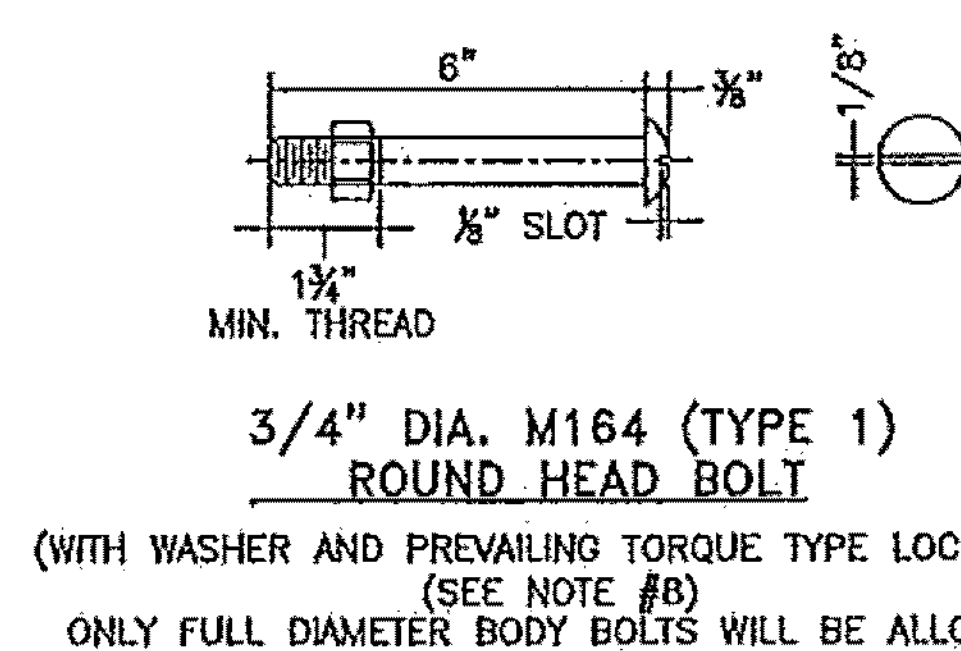
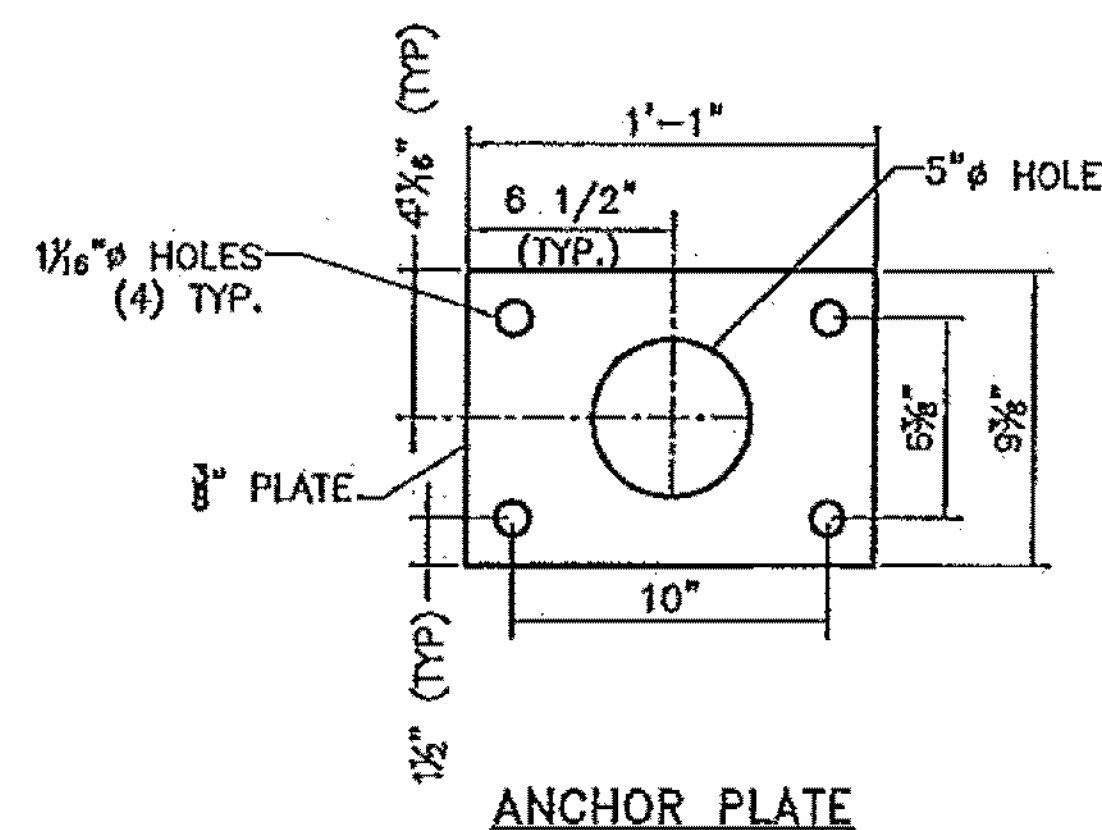
No.	Remarks	Date
0	Initial submittal	3-29-11
REVISIONS		

HIGHWAY SAFETY CORP GLASTONBURY, CT 860-633-9445	
ITEM 525.33 BRIDGE RAILING -- NETC 2 RAIL US RT 2 OVER EXISTING STREAM TOWN OF CABOT-DANVILLE, VERMONT PROJECT NUMBER: F EGC F 028-3(26)C/1	
GENERAL CONTRACTOR SUB CONTRACTOR F.R. LAFAYETTE, INC.	CERTIFIED FABRICATOR FISC. ACB NO. 1807 SHEET NO. 1 of 3
DRAWN: MMH DESIGNED: PAR DATE: 3-25-11 SCALE: N.T.S. SIZE: D	



SPLICE TABLE					
T	A	B	C	L	X
N/A	4"	2"	---	20"	3/4"
EXPANSION JOINT TABLE					
<4"	4"	2"	2 1/2"	20"	2 1/2"

T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 5



NOTES:

- ALL RAILINGS AND MATERIALS SHALL CONFORM TO THE PROVISION OF SECTION 525, "RAILINGS OF THE STANDARD SPECIFICATION FOR CONSTRUCTION".
- PRIOR TO GALVANIZING, ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
- RAIL POSTS SHALL BE SET NORMAL TO GRADE.
- SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
- RAIL TUBE EXPANSION JOINT SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
- ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M232.
- RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
- RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLT INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
- HOLES IN RAILS FOR RAIL TUBE ATTACHMENT SHALL BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
- IF THERE IS A CONFLICT BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
- ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
- THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 506.04 OF THE STANDARD SPECIFICATIONS. ALL WELDING SHALL CONFORM WITH SUBSECTION 506.10.
- RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING TYPE A SPECIMEN
- EXPANSION JOINT HARDWARE, REFLECTORS AND REFLECTOR HARDWARE PROVIDED BY OTHERS.

MATERIALS
 RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
 RAIL POSTS AND BASE PLATES.....ASTM A709/A709M, GRADE 50
 ALL OTHER SHAPES AND PLATES.....ASTM A709/A709M, GRADE 50
 ANCHOR STUDS.....ASTM A449
 ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE1
 NUTS FOR AASHTO M164 BOLTS AND FOR ANCHOR STUDS SHALL COMPLY WITH AASHTO M291 (ASTM A563).
 WASHERS SHALL COMPLY WITH AASHTO M293 (ASTM F436) SPECIFICATIONS.
 1/8" PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.

APPROVED ☐
 Revise and Resubmit ☒
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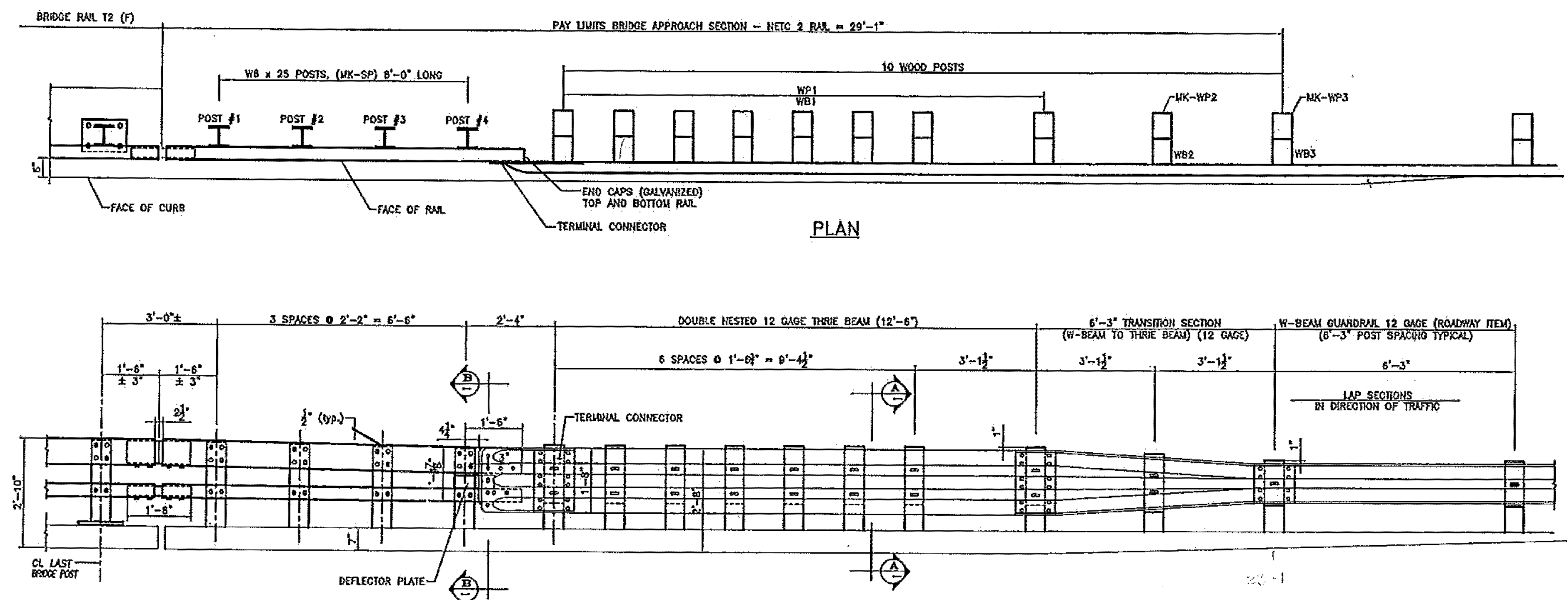
GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS

CHECKED BY: *[Signature]* DATE: 8/11
 SIGNED BY: *[Signature]* DATE: 8/11

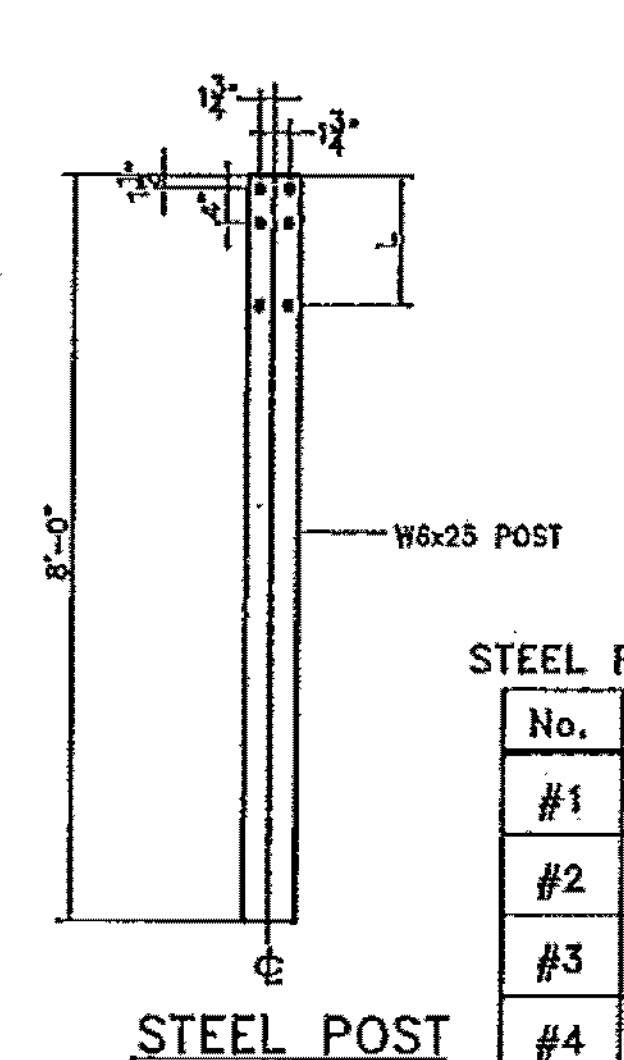
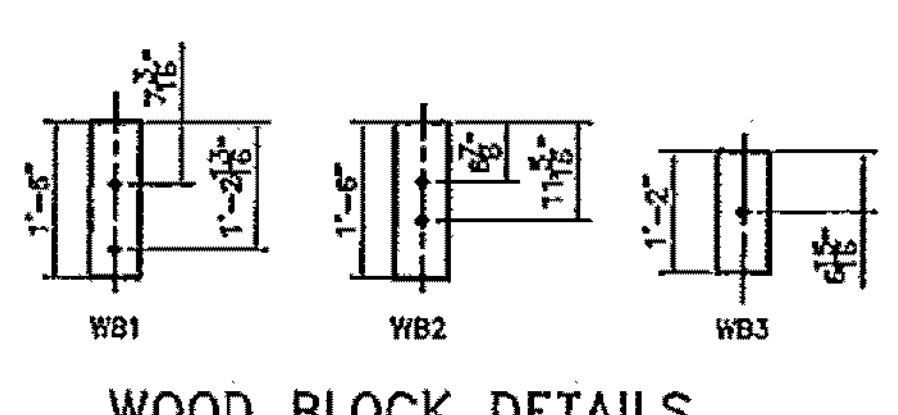
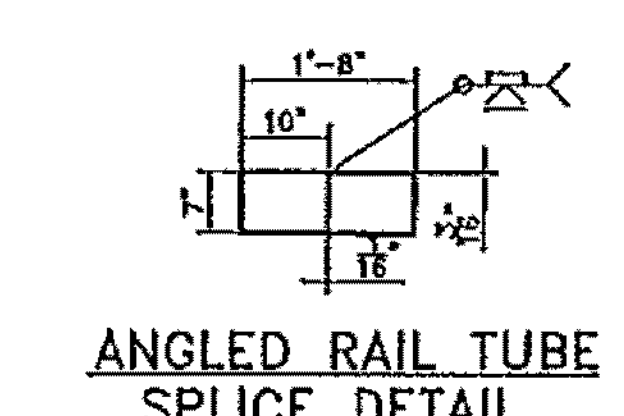
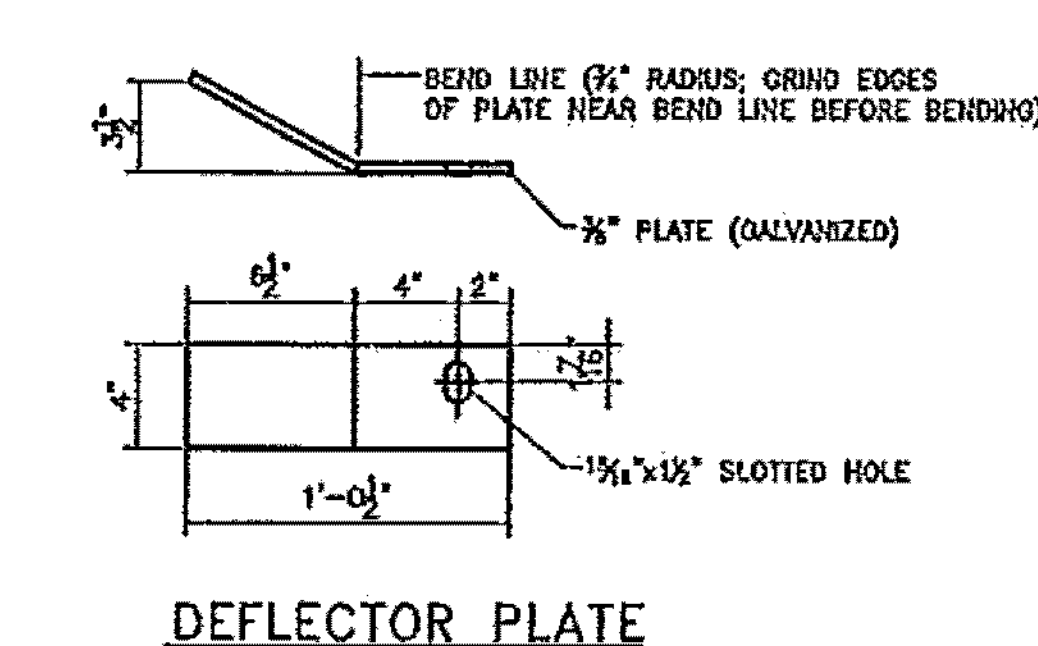
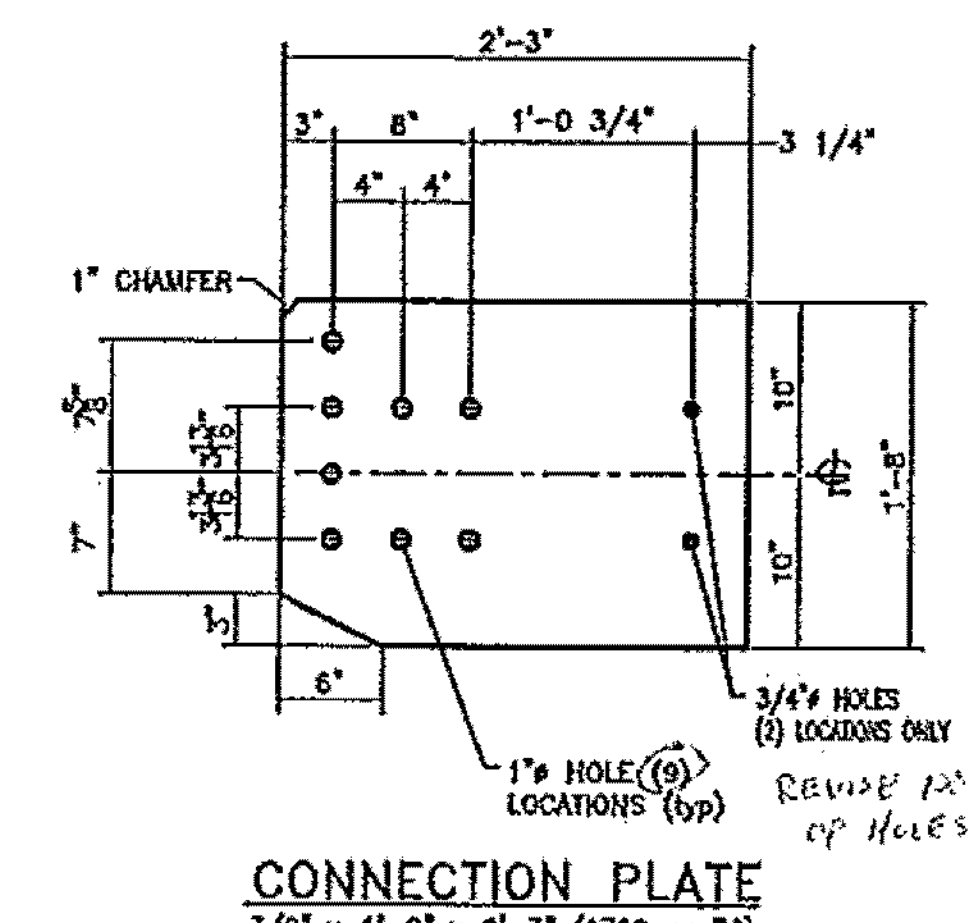
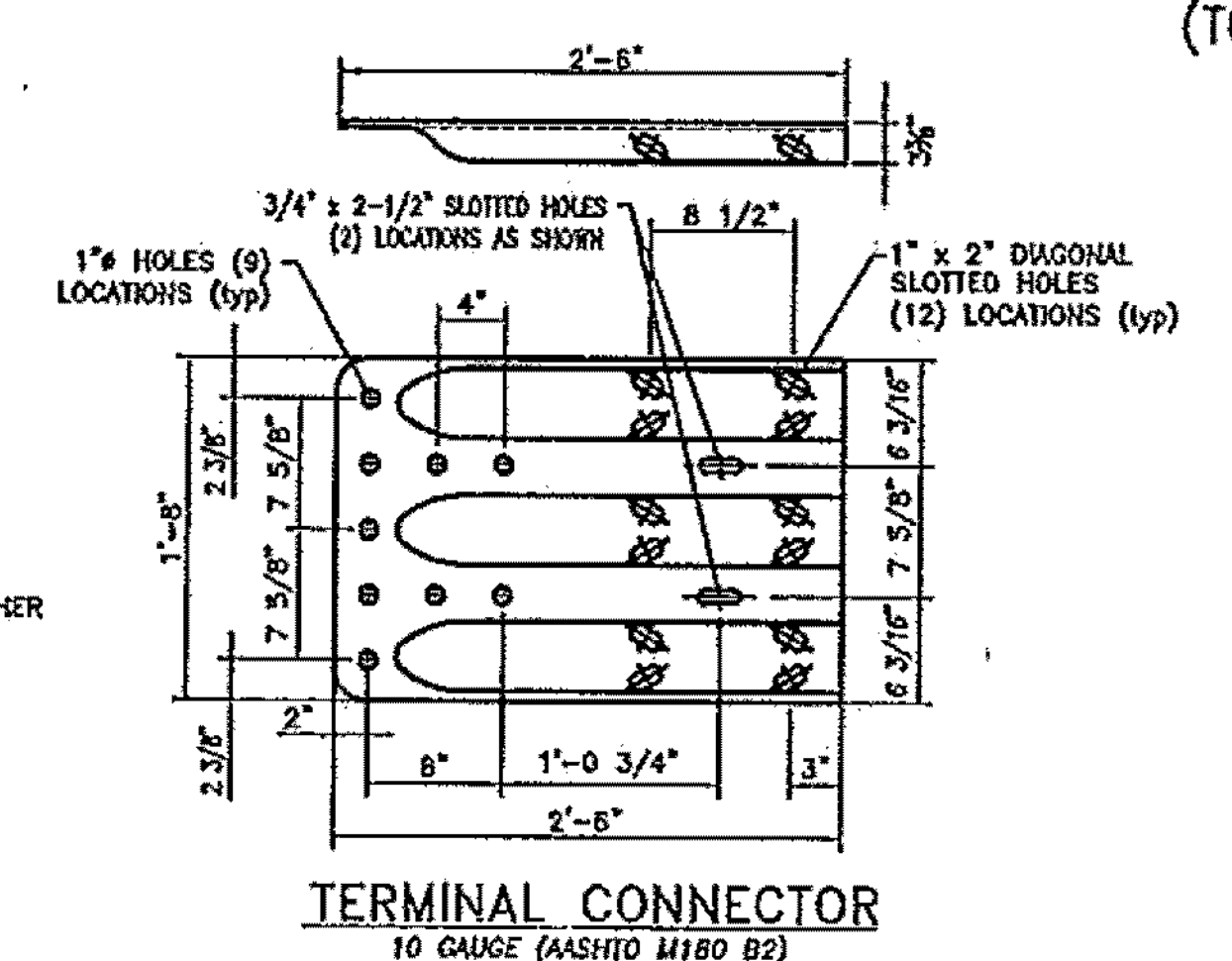
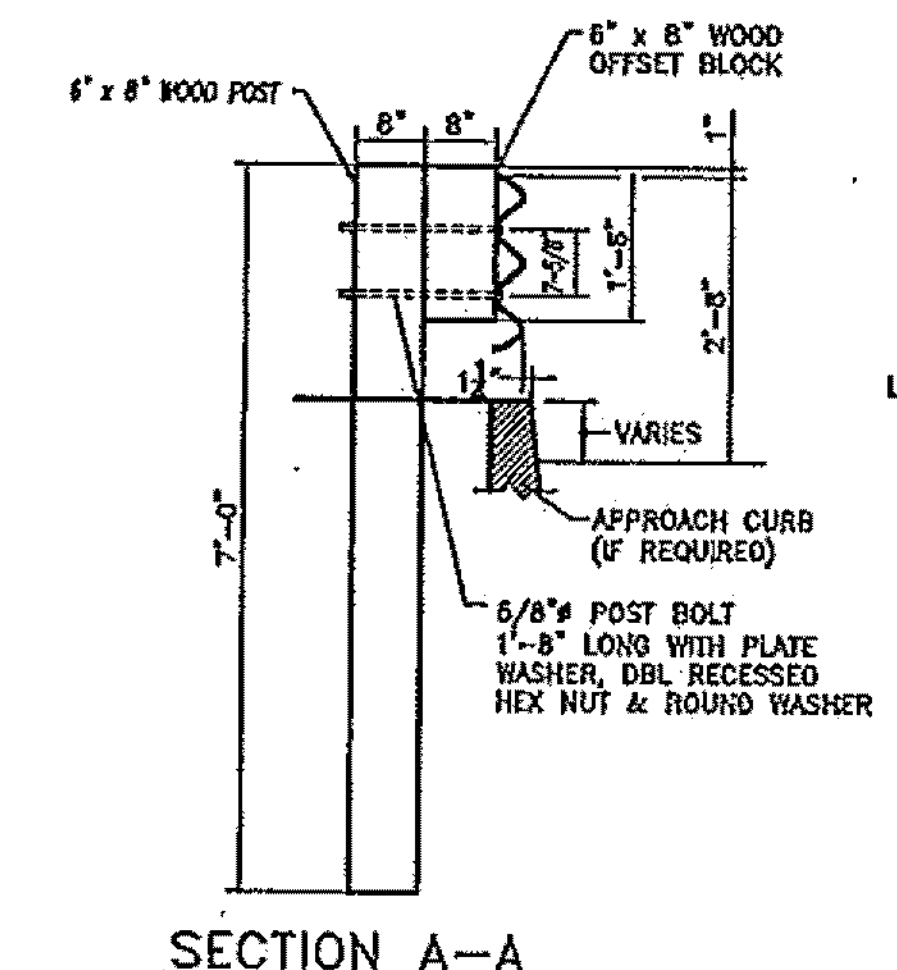
HIGHWAY SAFETY CORP	
GLASTONBURY, CT 860-633-9445	
ITEM 525.33 BRIDGE RAILING - NETC 2 RAIL US RT 2 OVER EXISTING STREAM TOWN OF CABOT-DANVILLE, VERMONT PROJECT NUMBER: F EGC F 028-3(26)C/1	
GENERAL CONTRACTOR	2 of 3
SUB CONTRACTOR	F.R. LAFAYETTE, INC.
DESIGN	SCALE
MMH	PAR 3-25-11
CHECKED	DATE
PAR	DATE
3-25-11	DATE
NONE	DATE
D	DATE

REVISIONS		
No.	Remarks	Date

REVISE WITH INITIAL TYPE
(REF. SHT 2)

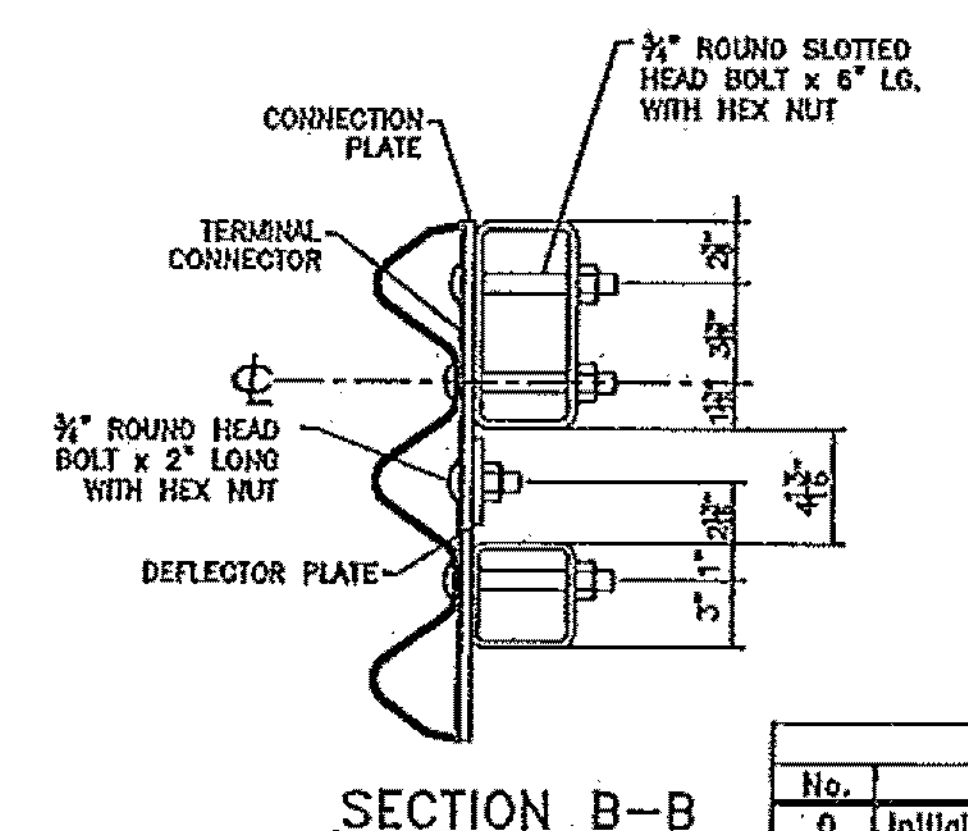
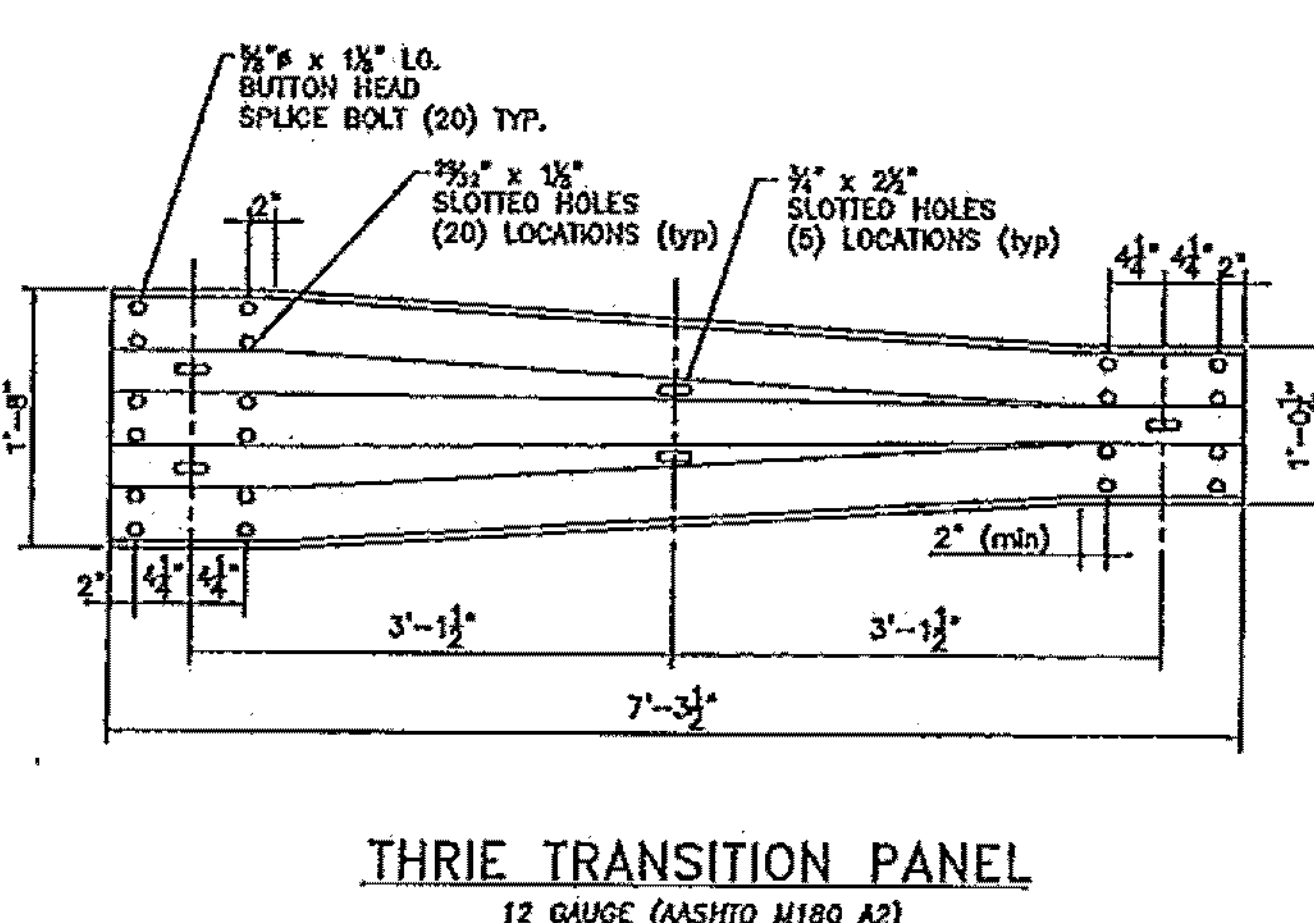
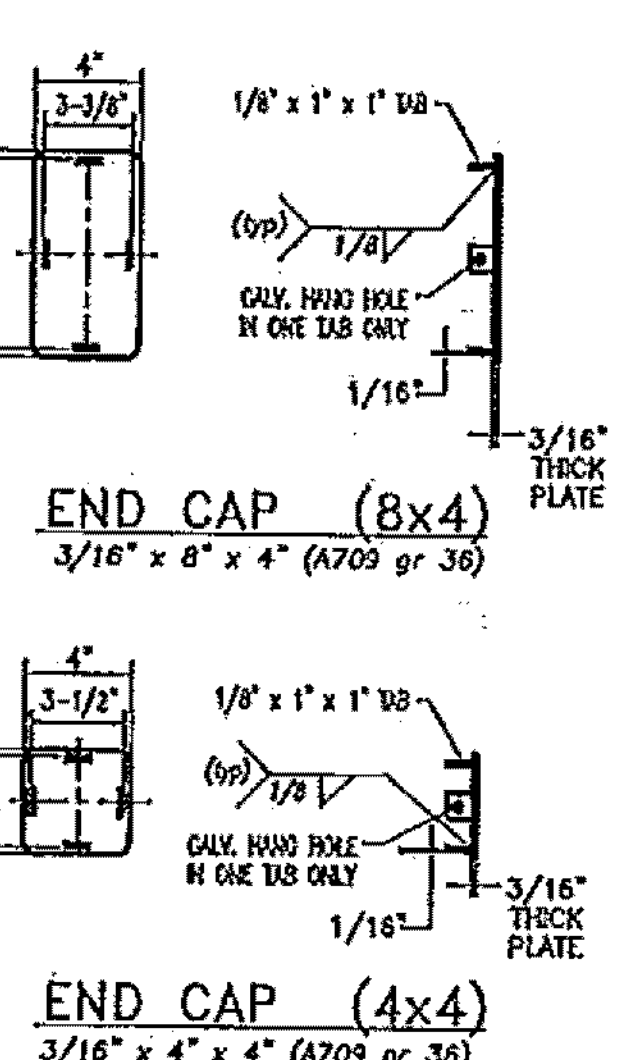


APPROACH RAIL ELEVATION
(TOTAL LIMIT ITEM 621.72 = 116.5 LF)



STEEL POST CHART

No.	L
#1	1'-3.250"
#2	1'-3"
#3	1'-2.688"
#4	1'-2.375"



BILL OF MATERIAL (4 APPROACHES)

Qty.	Description	Size/Shape	Length	Material
4	UPPER APPROACH RAIL	TS 8x4x0.313	8'-4"	A500 Gr. B
4	LOWER APPROACH RAIL	TS 4x4x0.235	8'-4"	A500 Gr. B
16	STEEL POST	W8 x 25	8'-0"	A572 Gr. 50
32	WOOD POST	6" x 8"	7'-0"	T&BGR
4	WOOD POST	6" x 8"	7'-0"	T&BGR
4	WOOD POST	6" x 8"	7'-0"	T&BGR
32	WOOD BLOCK	6" x 8"	1'-6"	T&BGR
4	WOOD BLOCK	6" x 8"	1'-6"	T&BGR
4	WOOD BLOCK	6" x 8"	1'-2"	T&BGR
4	ANGLED SPLICE TUBE FOR TS 8x4x0.313	TS 8x4x0.313	1'-8"	A500 Gr. B
4	WELDED LOCK NUTS	0.625"	---	A563 Gr. A
4	SPLICE TUBE FOR TS 4x4x0.235	TS 4x4x0.235	1'-8"	A500 Gr. B
4	WELDED LOCK NUTS	0.625"	---	A563 Gr. A
4	TERMINAL CONNECTOR	10 G.	2'-6"	M180
4	CONNECTION PLATE	0.375" x 1'-4"	2'-3"	A709 Gr. 36
4	END CAP FOR TS 8x4 RAIL TUBE	PLATE 0.188" x 4"	8"	A709 Gr. 36
16	END CAP FOR TS 4x4 RAIL TUBE	PLATE 0.125" x 1"	1"	A709 Gr. 36
4	DEFLECTOR PLATE (LEFT)	PLATE 0.188" x 4"	4"	A709 Gr. 36
2	DEFLECTOR PLATE (RIGHT)	PLATE 0.125" x 1"	1"	A709 Gr. 36
4	0.75" x 2" LG. ROUND HEAD BOLT W/ NUT	12 G.	7'-350"	A307
4	THREE TRANSITION PANEL	12 G.	7'-350"	M180 A2
4	THREE BEAM	12 G.	12'-6"	M180 A2
32	0.75" x 6" ROUND HEAD BOLT W/ NUT & ROUND WASHER	12 G.	---	A307
8	0.625" x 20" LG. POST BOLT W/ DBL RECESSED NUT, PLATE & ROUND WASHER	---	---	A307
64	0.625" x 18" LG. POST BOLT W/ DBL RECESSED NUT, PLATE & ROUND WASHER	---	---	A307
32	0.625" x 1.75" LG. CAP SCREW W/ WASHER	---	---	A307
128	0.625" x 1.25" LG. PANEL SPLICE BOLT W/ DBL RECESSED NUT	---	---	A307
32	0.75" x 0.5" LG. (SCH 40) SPACER PIPE	---	---	A53

- NOTES:
- PAYMENT FOR GUARDRAIL APPROACH SECTION - GALVANIZED NETC 2 RAIL SHALL INCLUDE THE TERMINAL CONNECTOR, THE CONNECTION PLATE, THE DEFLECTOR PLATE, RAIL, POSTS, BLOCKS AND ATTACHMENT HARDWARE.
 - REFLECTIVE MATERIAL SHALL MEET REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE A 0.063" ALUMINUM BACKING WHITE OR YELLOW REFLECTOR. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE-WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT.
 - ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
 - ALL APPROACH RAIL MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
 - APPROACH RAIL BOLTS SHALL BE ASTM A307 GRADE A AND NUTS SHALL BE ASTM A291 (ASTM A53 GRADE A OR BETTER (GALVANIZED)). WASHERS SHALL BE ASTM F844.
 - WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-12).

APPROVED ☐ Approved as Noted ☒
Revise and Resubmit ☐ DISAPPROVED ☐

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY *AZ* DATE *8/11*
SIGNED BY *Michael J. Cury* DATE *8/11*

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 621.72 BRIDGE APPROACH RAIL
US RT 2 OVER EXISTING STREAM
TOWN OF CABOT-DANVILLE, VERMONT
PROJECT NUMBER: F EGC F 028-3(26)C/1

CERTIFIED FABRICATOR
1807
3 of 3

F.R. LAFAYETTE, INC.

DATE 3-25-11

REVISIONS

No.	Remarks	Date
0	Initial submittal	