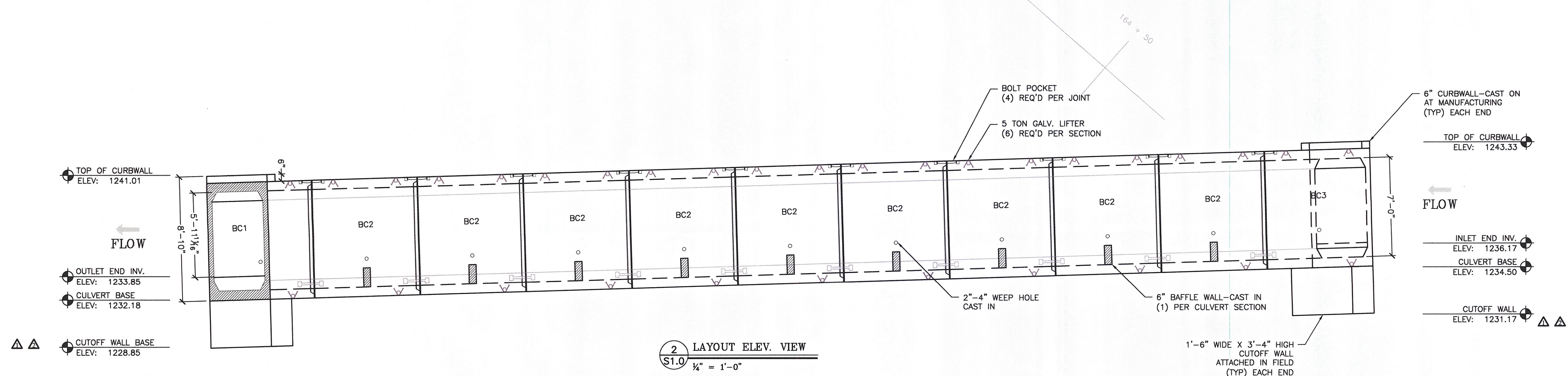
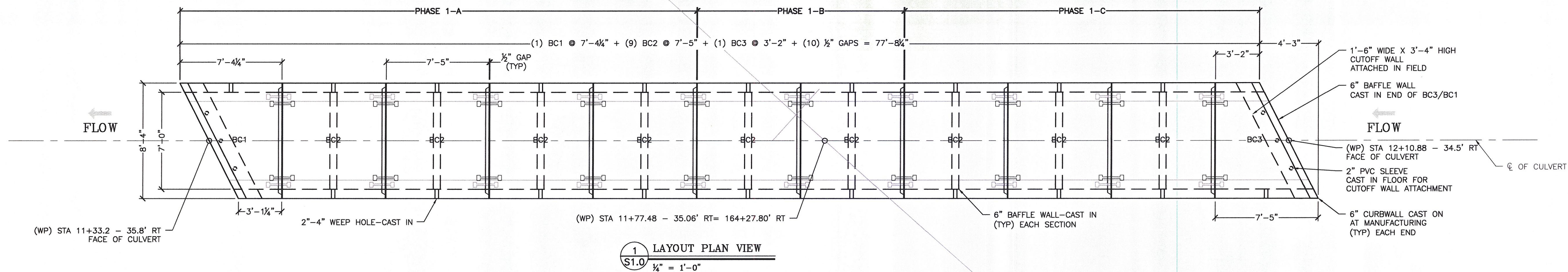
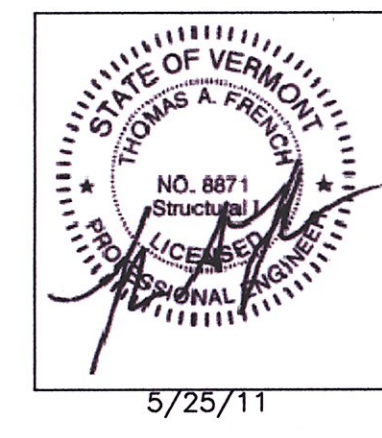


- LIST OF SHEETS:
- S1.0 - PLAN, ELEVATION & CONNECTION DETAILS
 - S2.0 - CULVERT SECTIONS & REINFORCING
 - S3.0 - CUTOFF WALL AND BAFFLE DETAILS

NO TRAFFIC INCLUDING CONSTRUCTION EQUIPMENT SHALL BE PLACED ON THE BOX CULVERT UNTIL THERE IS AT LEAST 2'-0" OF EARTH COVER.



- GENERAL NOTES:**
- DO NOT SCALE FROM THE DRAWINGS. IF A REQUIRED DIMENSION IS NOT PROVIDED, CONSULT THE ENGINEER.
 - 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.
 - 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.
 - SHOP DRAWINGS WERE DEVELOPED USING THE FOLLOWING RESOURCES FOR THE CONTRACT: STATE OF VERMONT AGENCY OF TRANSPORTATION, CONTRACT PLANS FOR: CABOT - DANVILLE FEGC F 028-3(26) C/I U.S. ROUTE 2, SHEETS 48 TO 53 OF 250 DATED 13-OCT-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.
 - IF THERE IS ADDITIONAL INFORMATION PERTINENT TO THE FABRICATION AND INSTALLATION OF THESE UNITS THAT IS NOT CONTAINED WITHIN THE RESOURCES LISTED ABOVE IT SHALL BE BROUGHT TO THE ATTENTION OF MICHE CORPORATION. FAILURE TO MAKE SUCH ADDITIONAL INFORMATION AVAILABLE SHALL RELIEVE MICHE CORPORATION OF ALL LIABILITIES ARISING FROM ERRORS OR OMISSIONS RELATED TO THE OMITTED INFORMATION.

- FABRICATION PLANT PRODUCTION SCHEDULE**
- 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 ERRECTED 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.
- PRECAST DESIGN CRITERIA**
- 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.
 - 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.
 - CONCRETE DESIGN STRENGTH: BOX CULVERTS, HEADWALLS, AND CUTOFF WALLS
F_c = 5,000 PSI @ 28 DAYS
F_{ci} = 2,500 PSI (STRIPPING)
 - THESE PLANS ARE FOR SHOP PRODUCTION AND ARE NOT INTENDED TO REPLACE THE CONSTRUCTION REQUIREMENTS OF THE CONTRACT PLANS.

- PRECAST BOX CULVERT NOTES:**
- 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
 - 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.
 - 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.
 - 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.
 - ROSTON AHT104 24" WIDE JOINT WRAP AND PRIMER ADHESIVE SHALL BE APPLIED BY OTHERS.
 - LIFTING ANCHORS SHALL BE CAST INTO EACH SECTION FOR HANDLING.
 - HAVIEST PICK = 28,265# (BC3 W/BAFFLE & HEADWALL).

- PRODUCTION CONTROL PROCEDURES**
- 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.
 - NOTE: 1 AIR TEST 1ST LOAD
 - 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.
 - QUALITY CONTROL TEST AND EQUIPMENT: CYLINDER TESTER: FORNEY 500 SERIES WITH DR-2 DIGITAL READOUT CALIBRATED ANNUALLY
AIR METER: PRESSURE METER BY FORNEY (CALIBRATED MONTHLY)
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
CYLINDER MOLDS: 4" DIAMETER X 8" PLASTIC
 - 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.

- MATERIALS**
- ALL CONCRETE SHALL COMPLY WITH VAOT STANDARD SPECIFICATIONS 540.
 - REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60, UNCOATED. ALL BARS ARE TO BE BENT COLD.
 - SUPPORTS FOR REINFORCEMENT SHALL COMPLY WITH CRSI RECOMMENDATIONS.
 - CASTING DATE SHALL BE SHOWN ON EACH PIECEMARK.
- CURING**
- 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.
- PIECE MARKS**
- EACH PIECE WILL HAVE THE FOLLOWING STENCILED ONTO IT:
- PIECEMARK NUMBER
 - DATE OF CASTING
 - LOT NUMBER - IF APPLICABLE
 - VT PROJECT NO. (FEGC F 028-3(26) C/I)
 - MICHE CORPORATION, INC.
 - CONTRACTORS NAME
- TOLERANCES:** PER AASHTO M259

- CASTING, STORAGE, SHIPPING & ERRECTING**
- 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 ERRECTED 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 ERRECTORS.
 - CUTOFF WALLS SHALL BE FABRICATED AS FOLLOWS:
-EACH SECTION SHALL BE CAST UPSIDE DOWN UTILIZING STANDARD PANEL FORMS OR A CUSTOM STEEL FORM.
-PRODUCTION RATES MAY VARY.
-PRODUCT MAY BE STORED AND/OR SHIPPED EITHER UPSIDE DOWN OR RIGHT SIDE UP.

APPROVED Approved as Noted
 Revise and Resubmit DISAPPROVED
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: *[Signature]* DATE: 5/11
 SIGNED BY: *[Signature]* DATE: 5/11

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 PRESHIPPING/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 1/2" X 1 1/2" X 18" GALV. WASHER				
80	7/8" GALV. NUT				
8	(BAGS) DAYTON SUPERIOR GROUT				
3	GREAT STUFF FOAM SEALANT				

US Route 2
Cabot-Danville, VT
FEGC F 028-3(26) C/I

7' x 7' Box Culvert - Layout Views

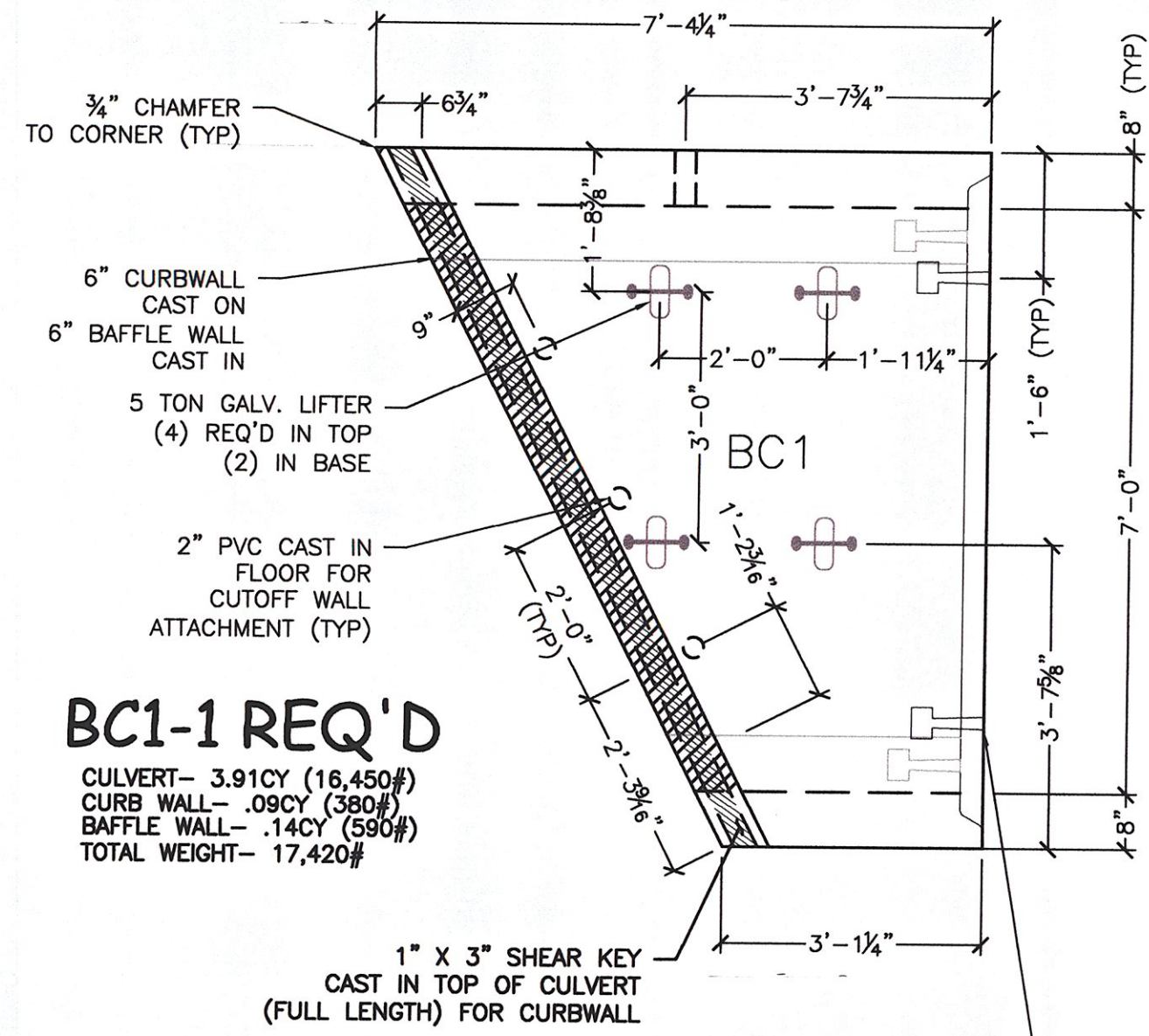
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Drawn by: CFP
Designed by: P/L

Project No. 1490
Date: 12/20/11

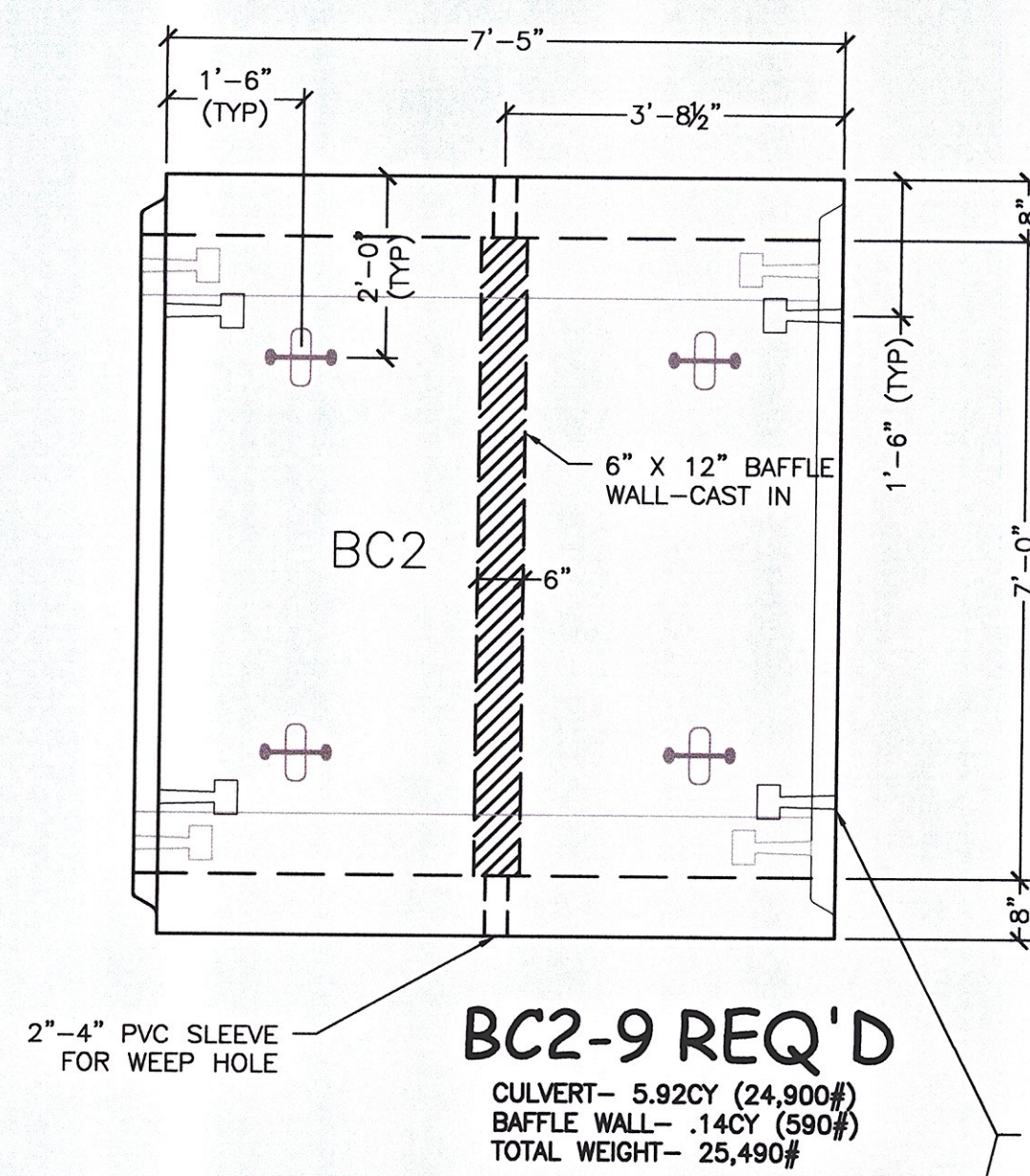
Prepared for:
Winterset Construction
PO Box 968
Lyndonville, VT 05851

DWG NO.
S1.0

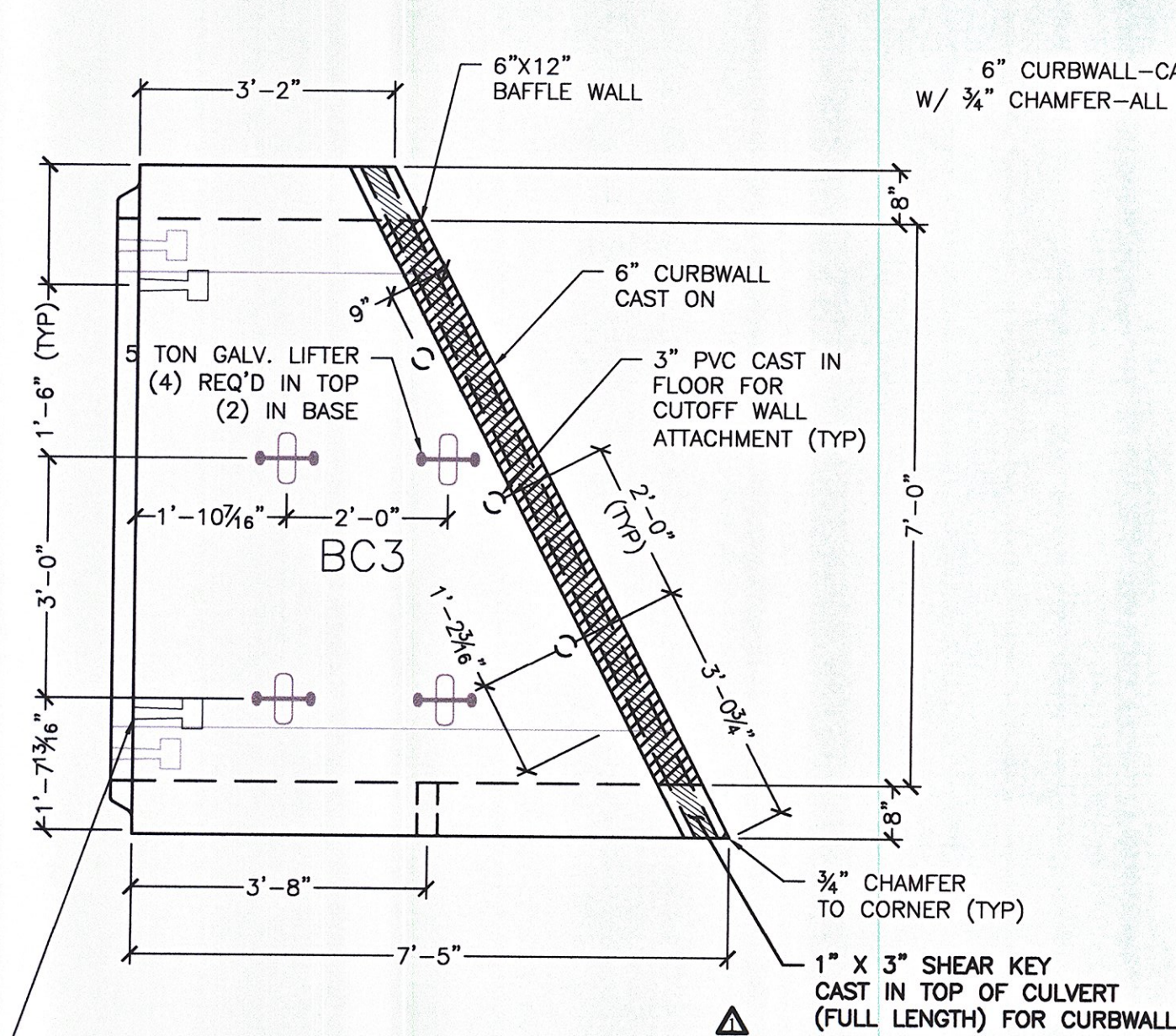
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2	5/8/2011	CFP	REVISED PER COMMENTS
3	4/26/2011	CFP	REVISED PER COMMENTS



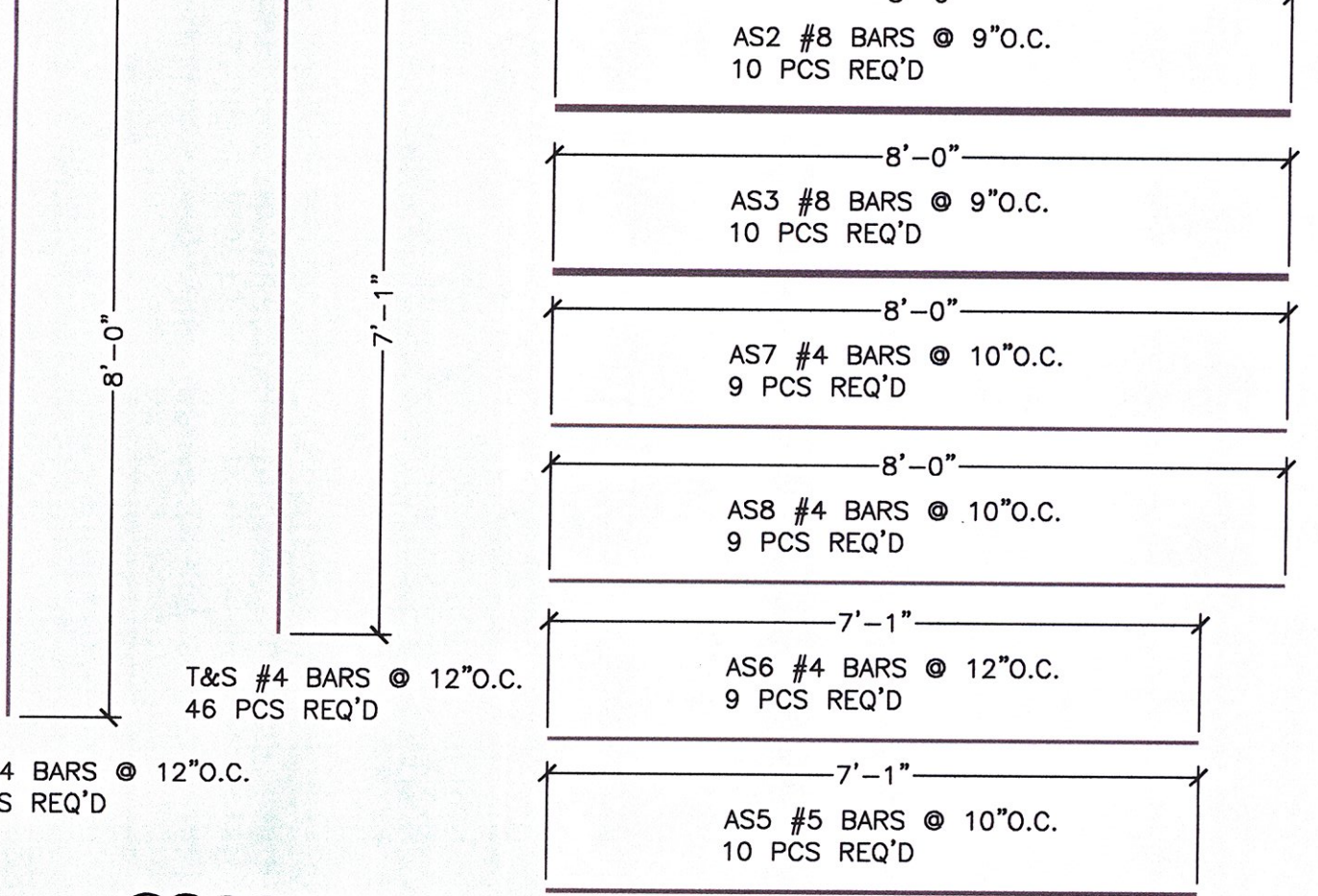
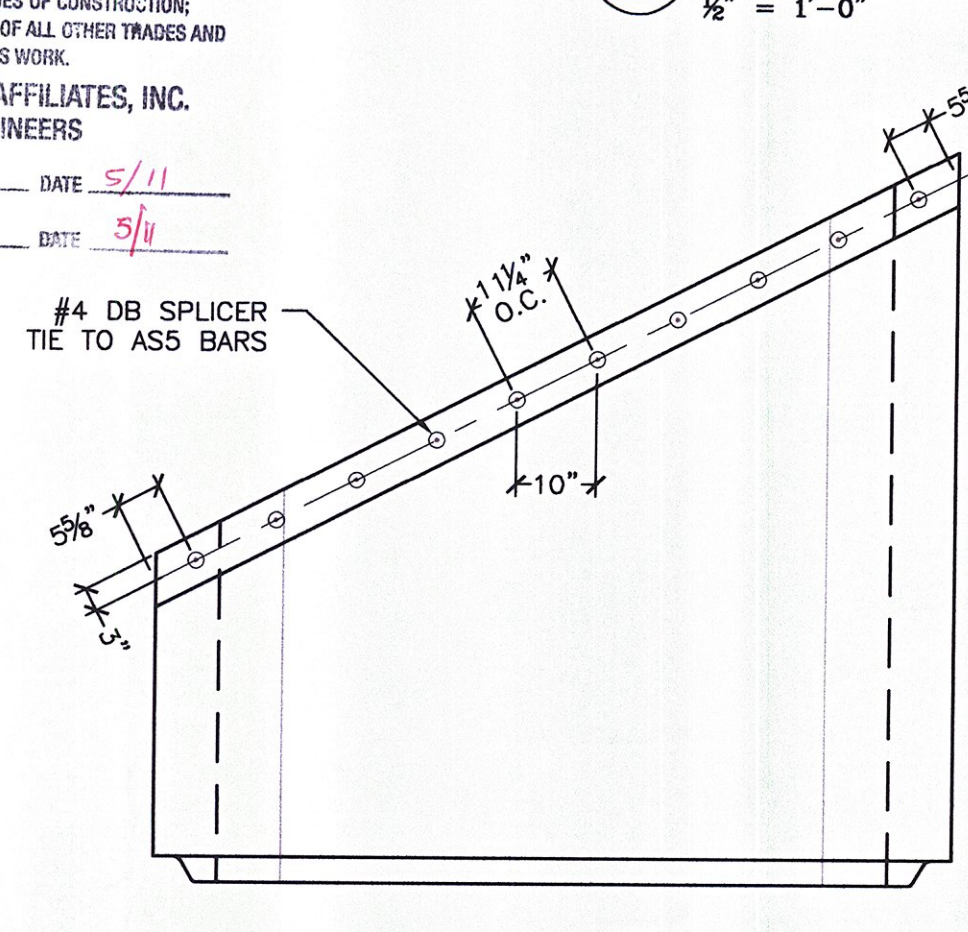
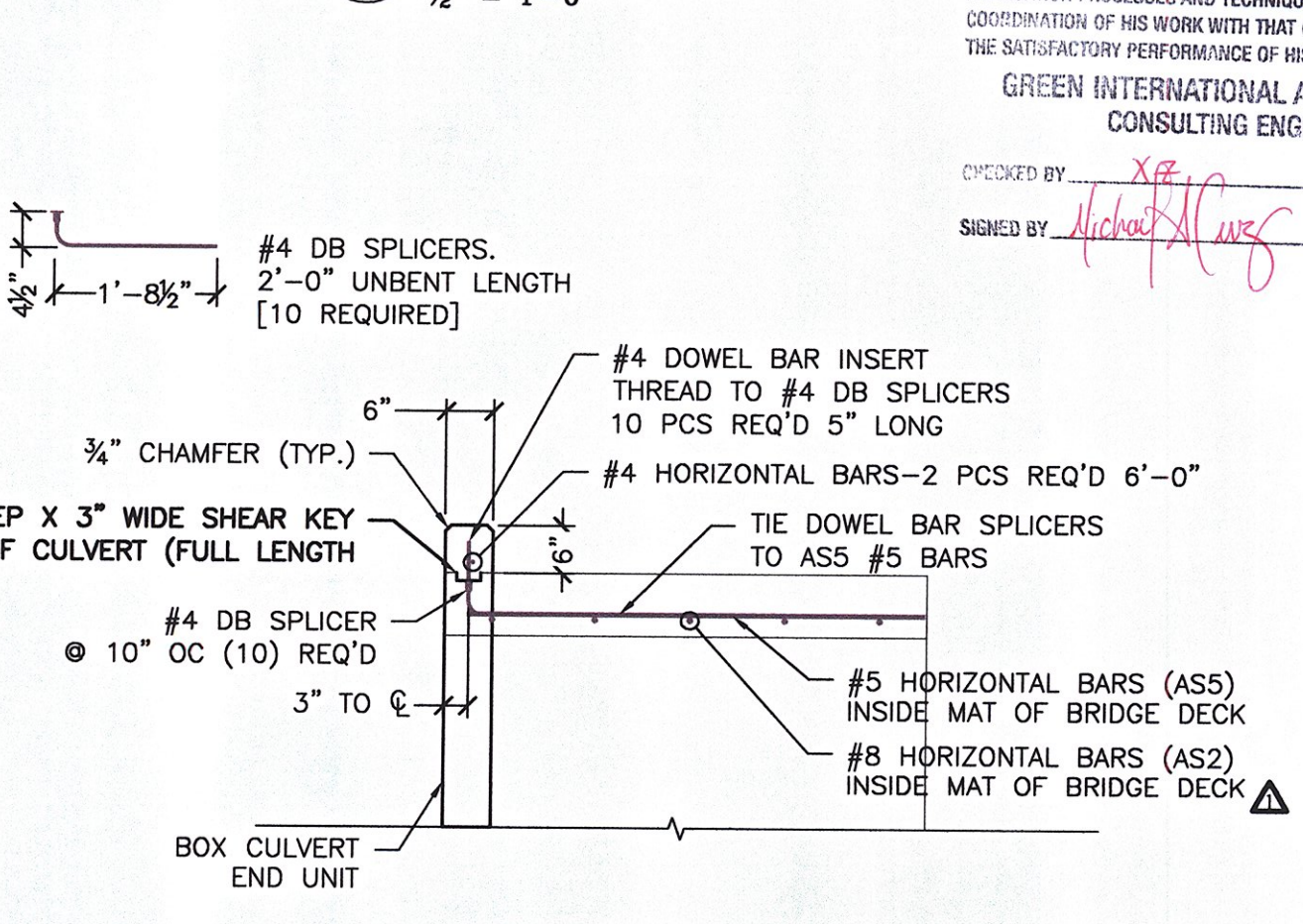
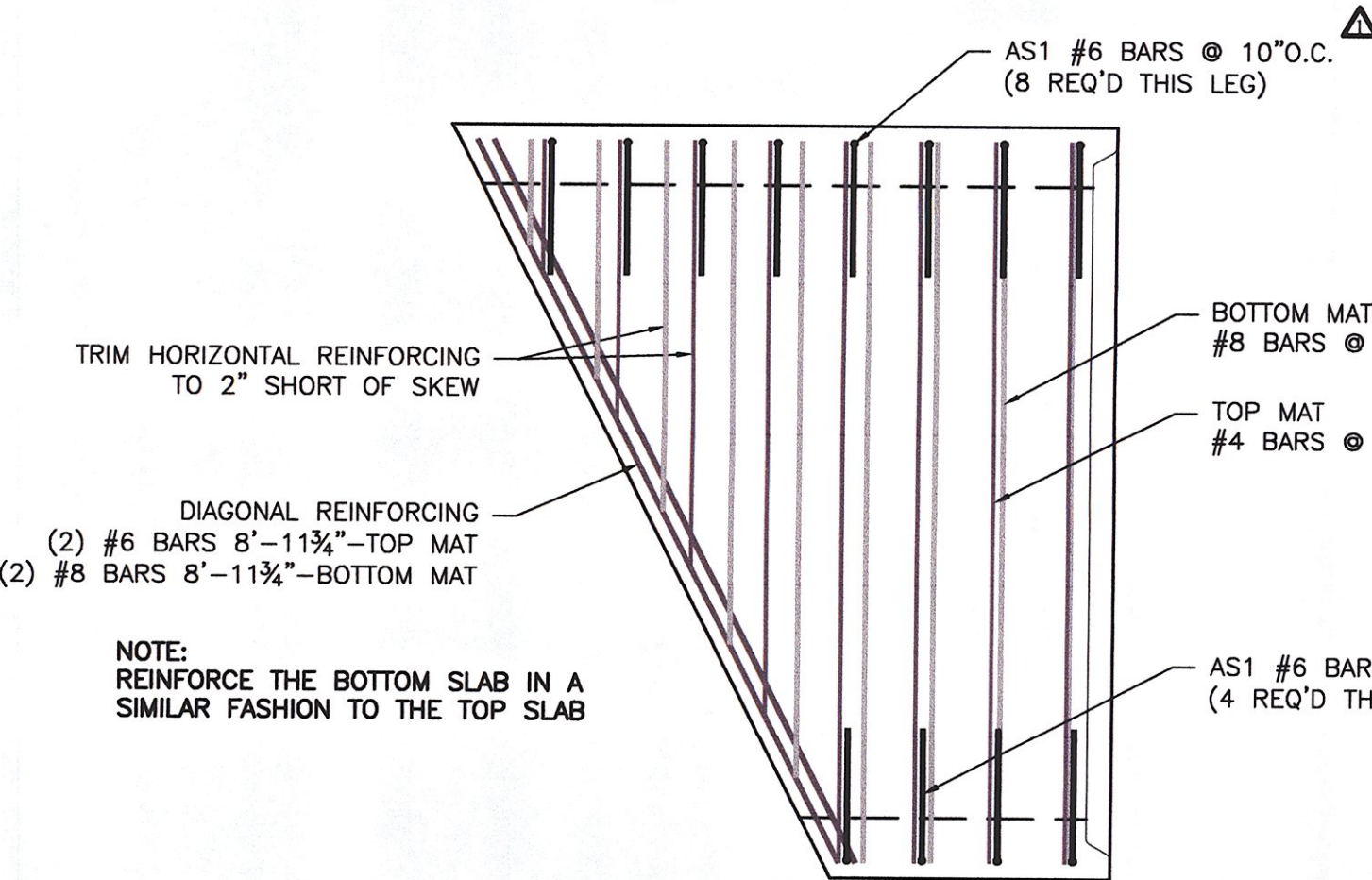
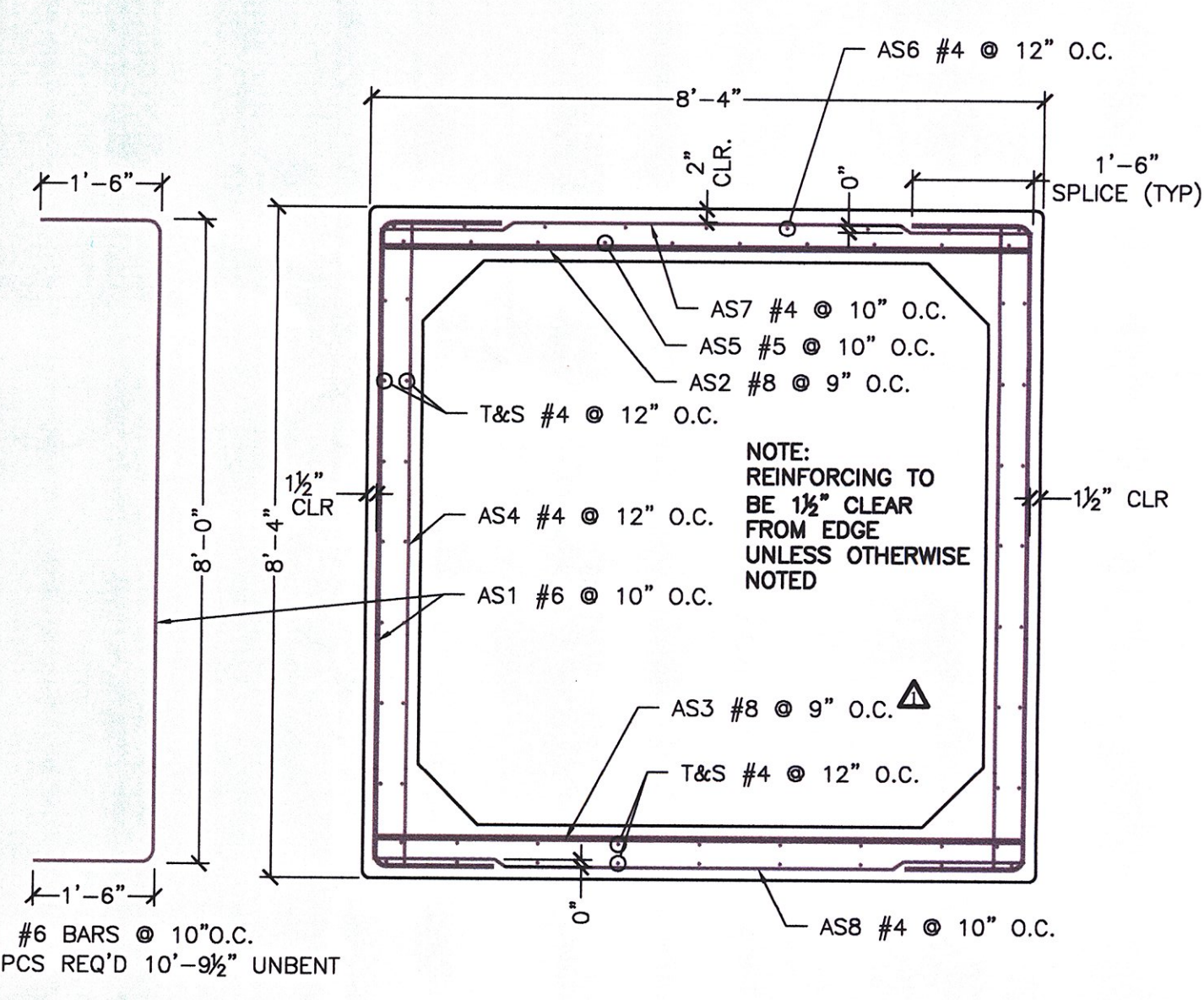
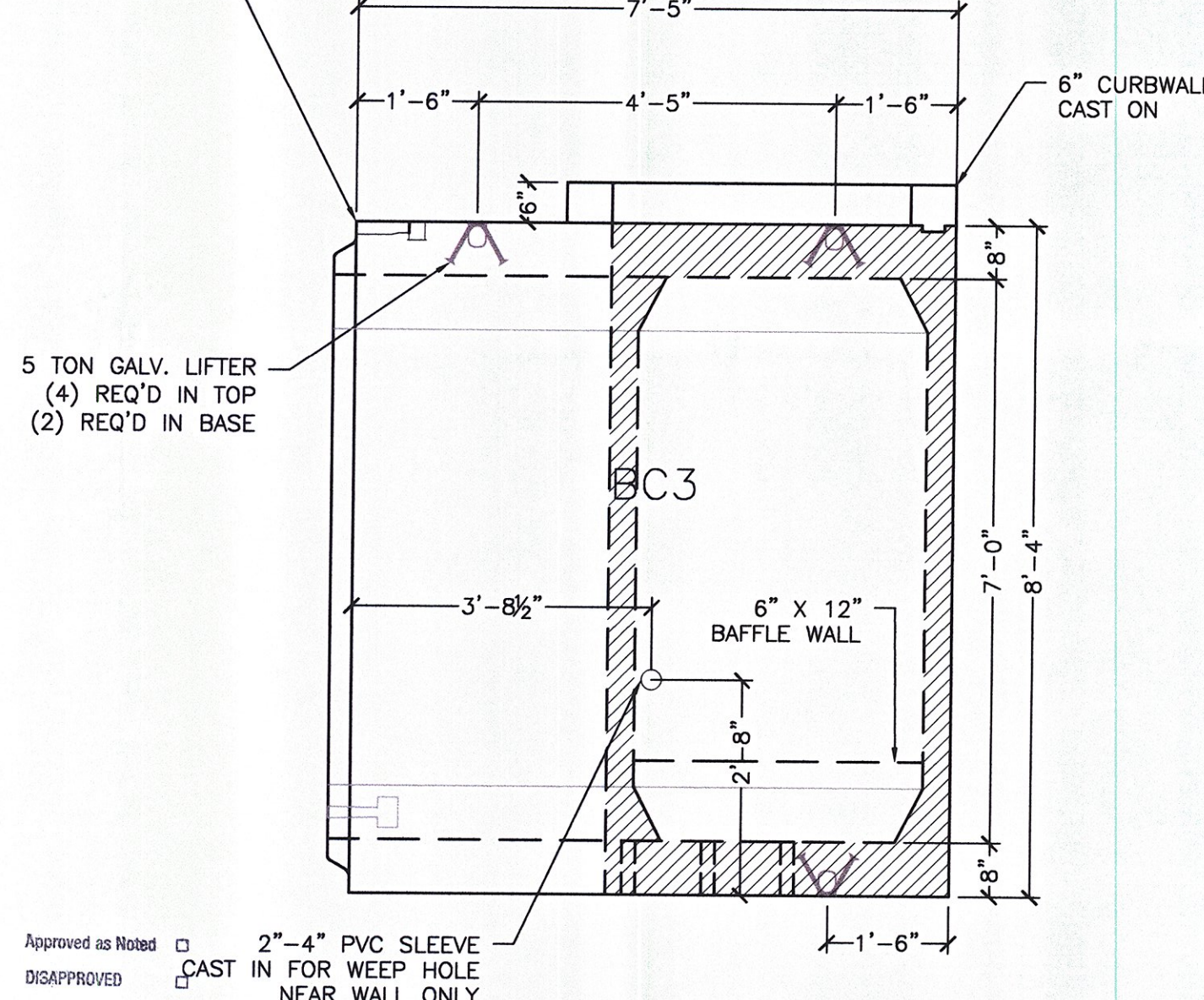
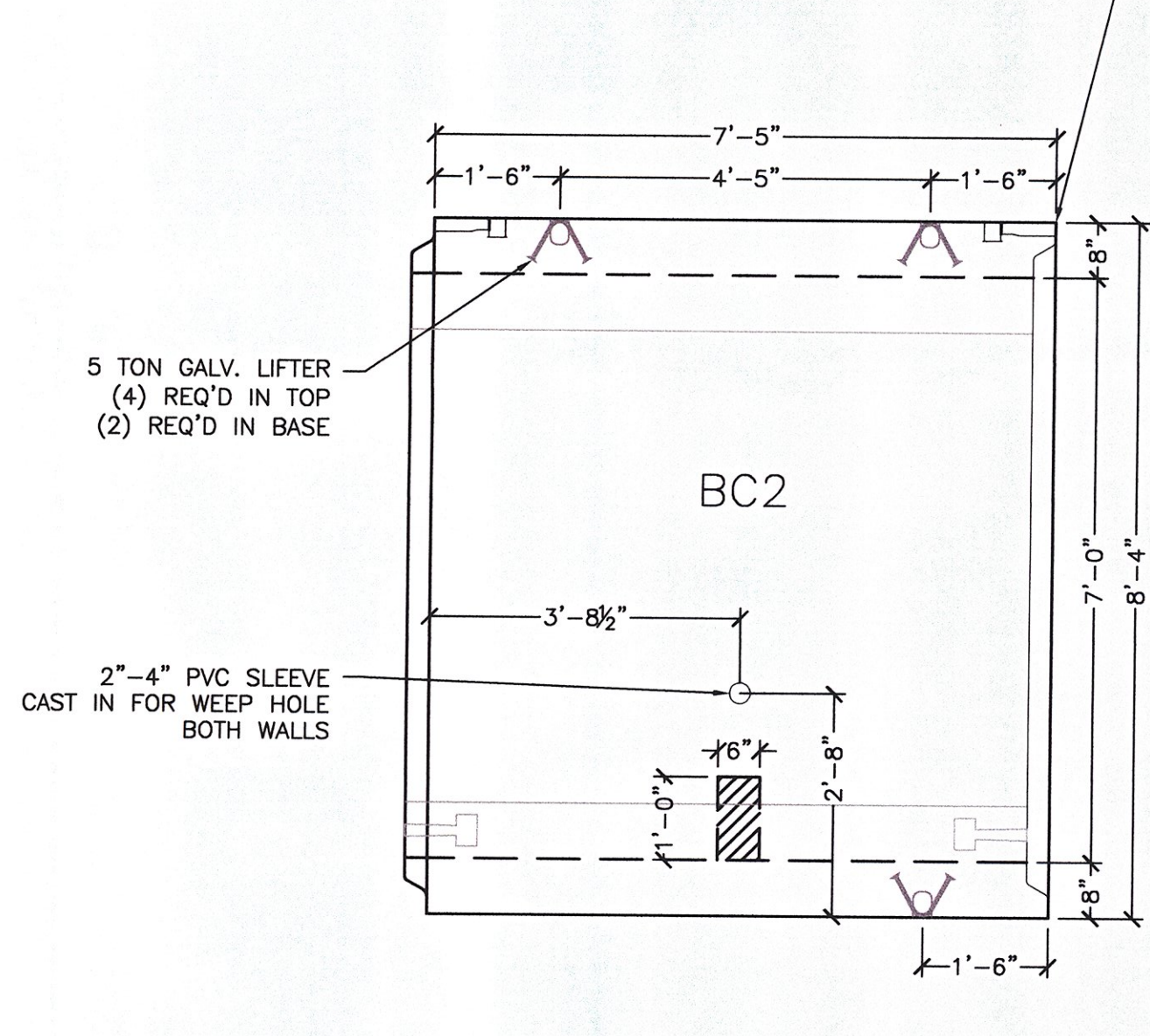
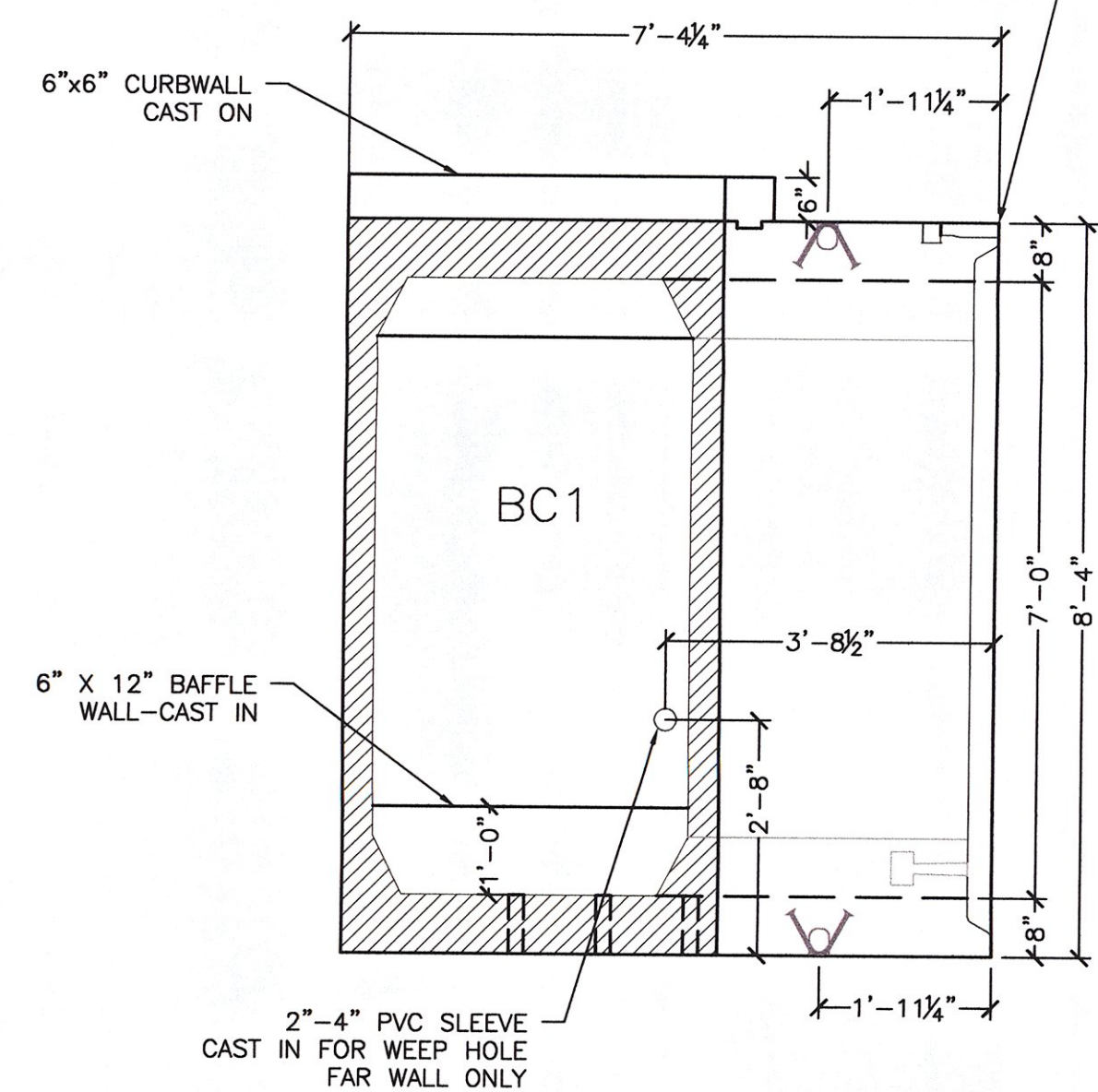
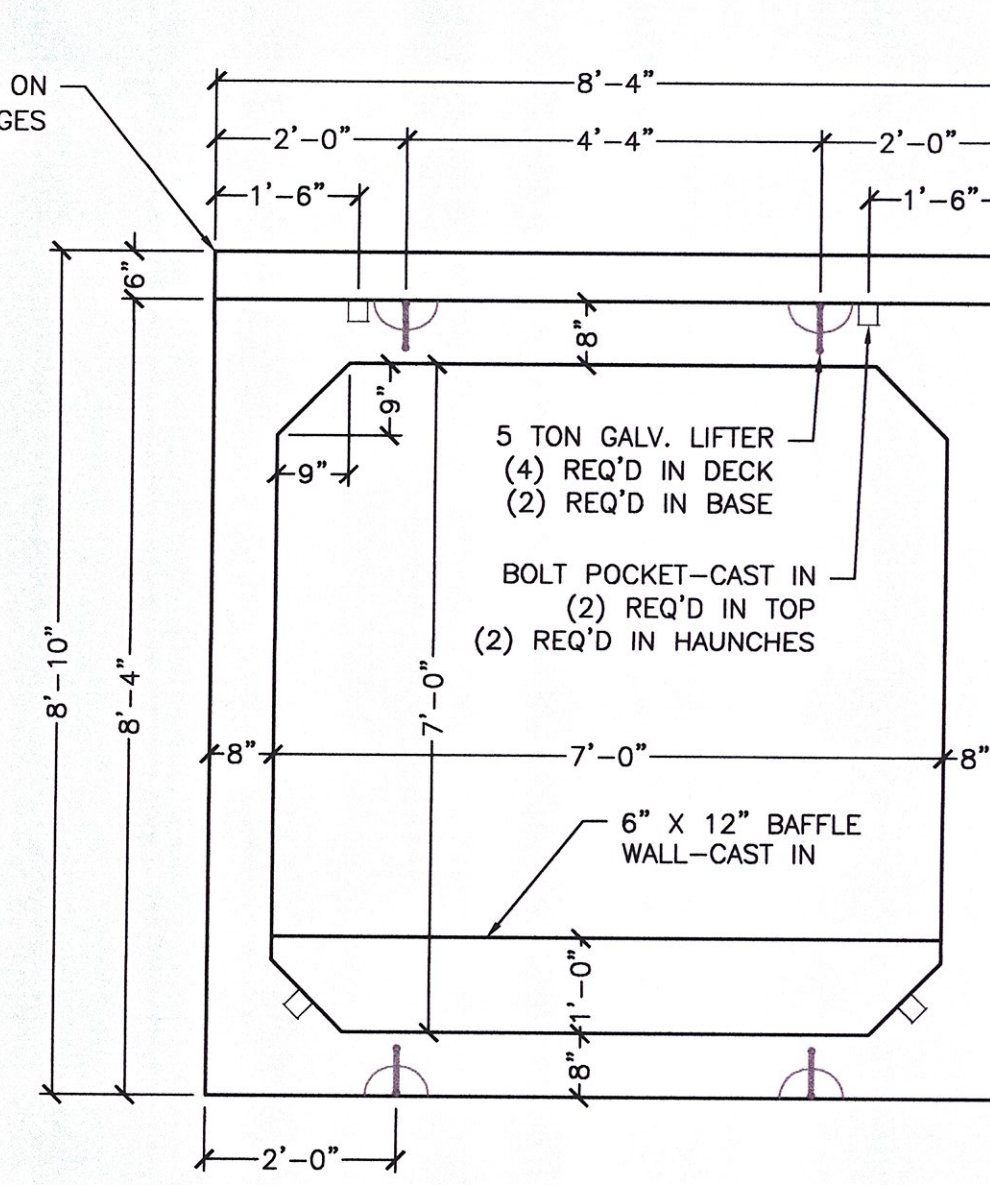
1 BC 1 PLAN VIEW
 S2.0 1/2" = 1'-0"



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



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



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

APPROVED DISAPPROVED
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS

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

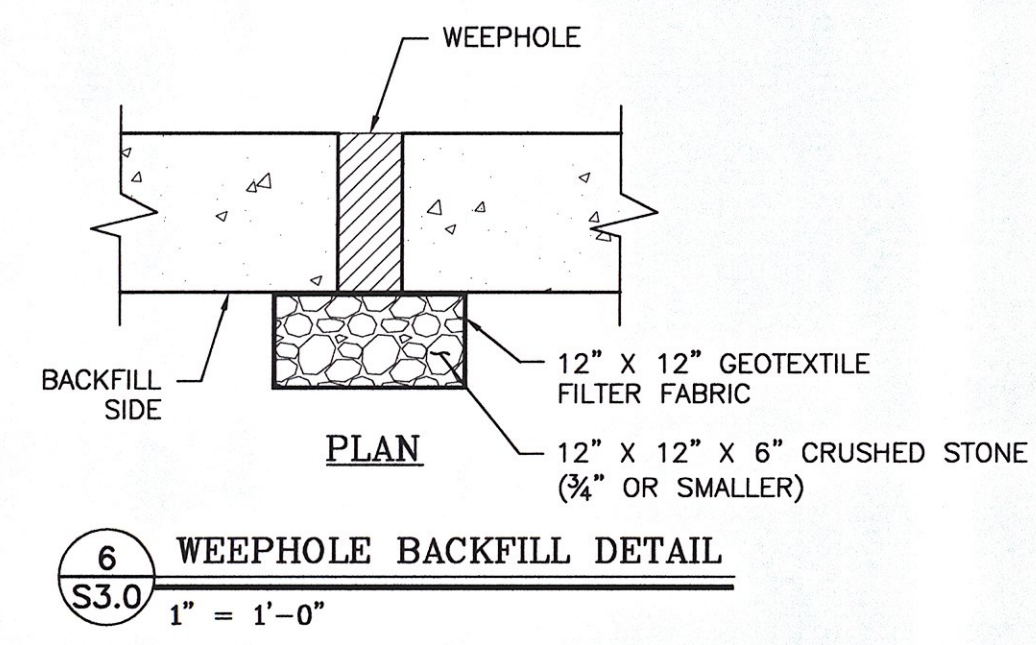
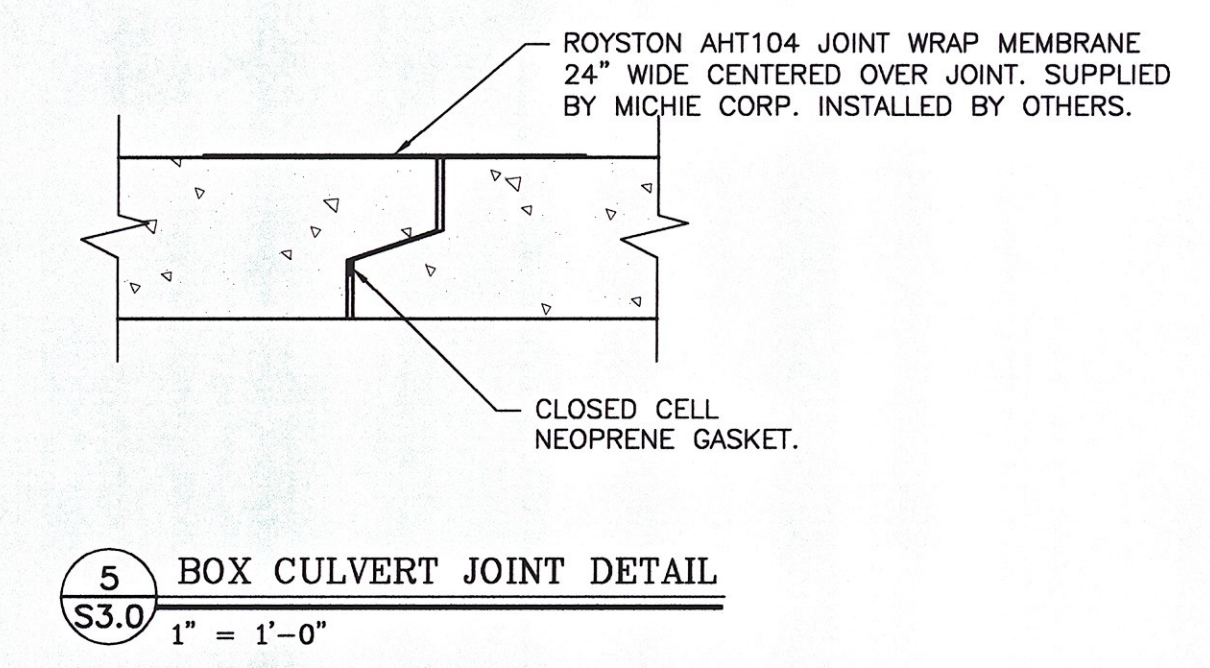
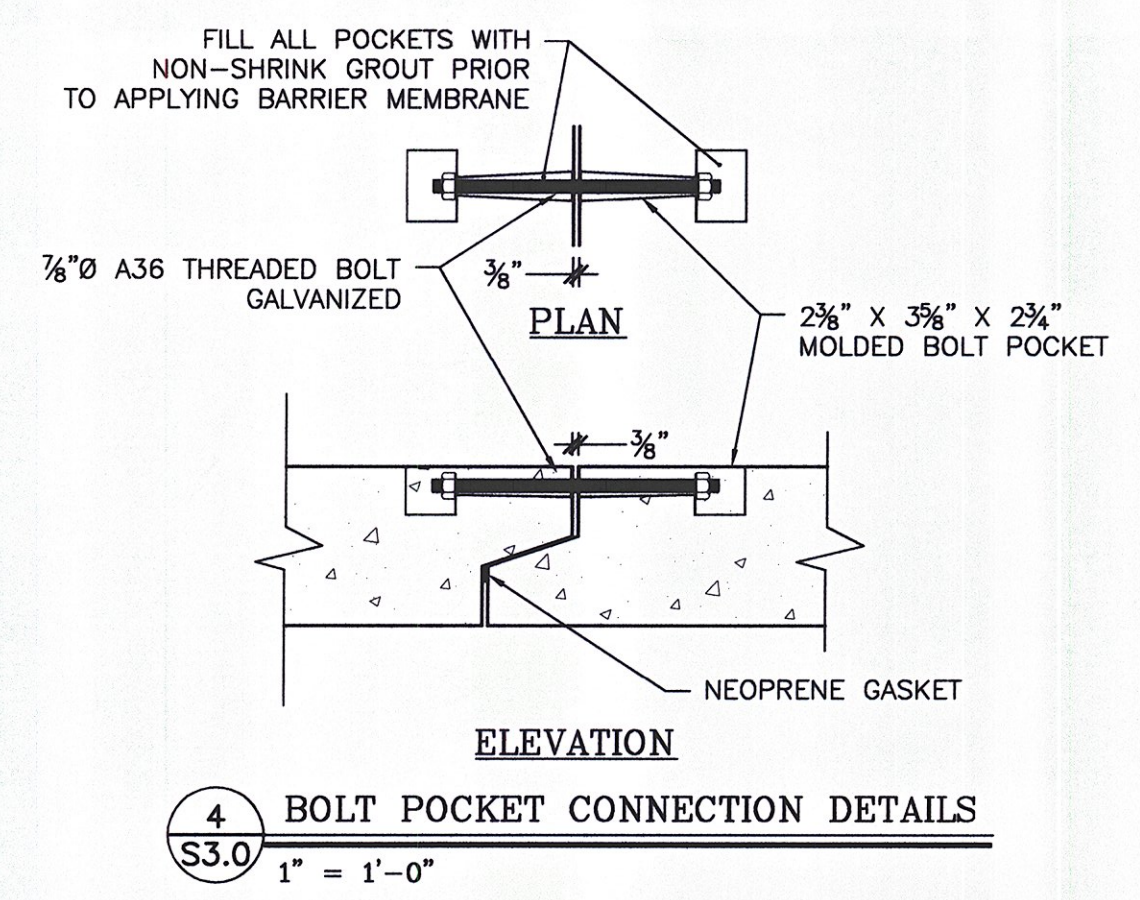
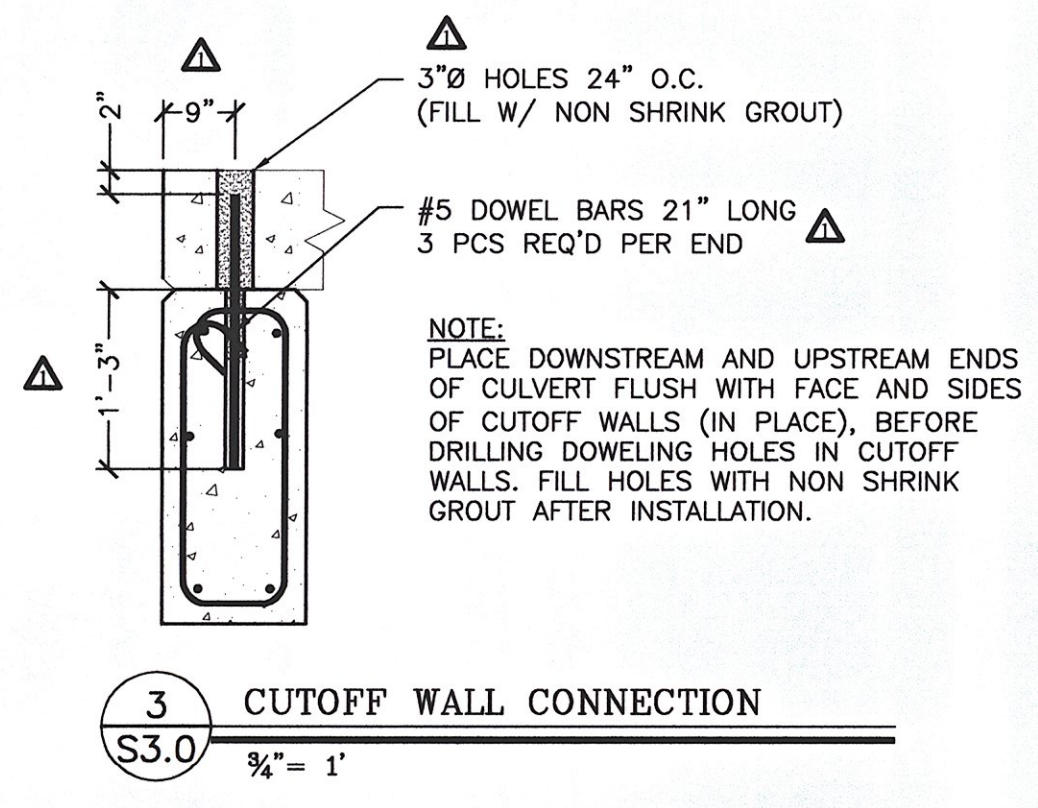
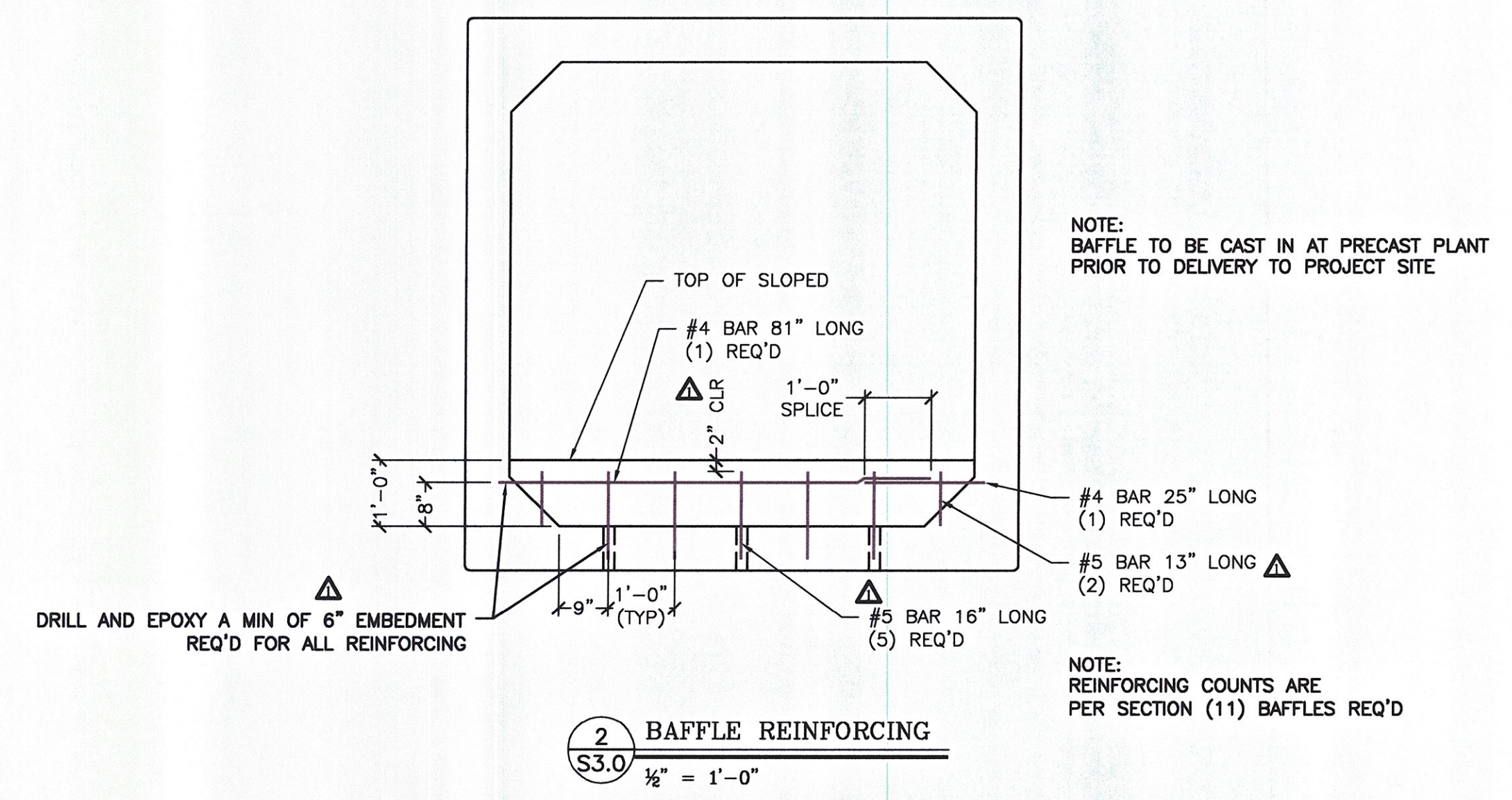
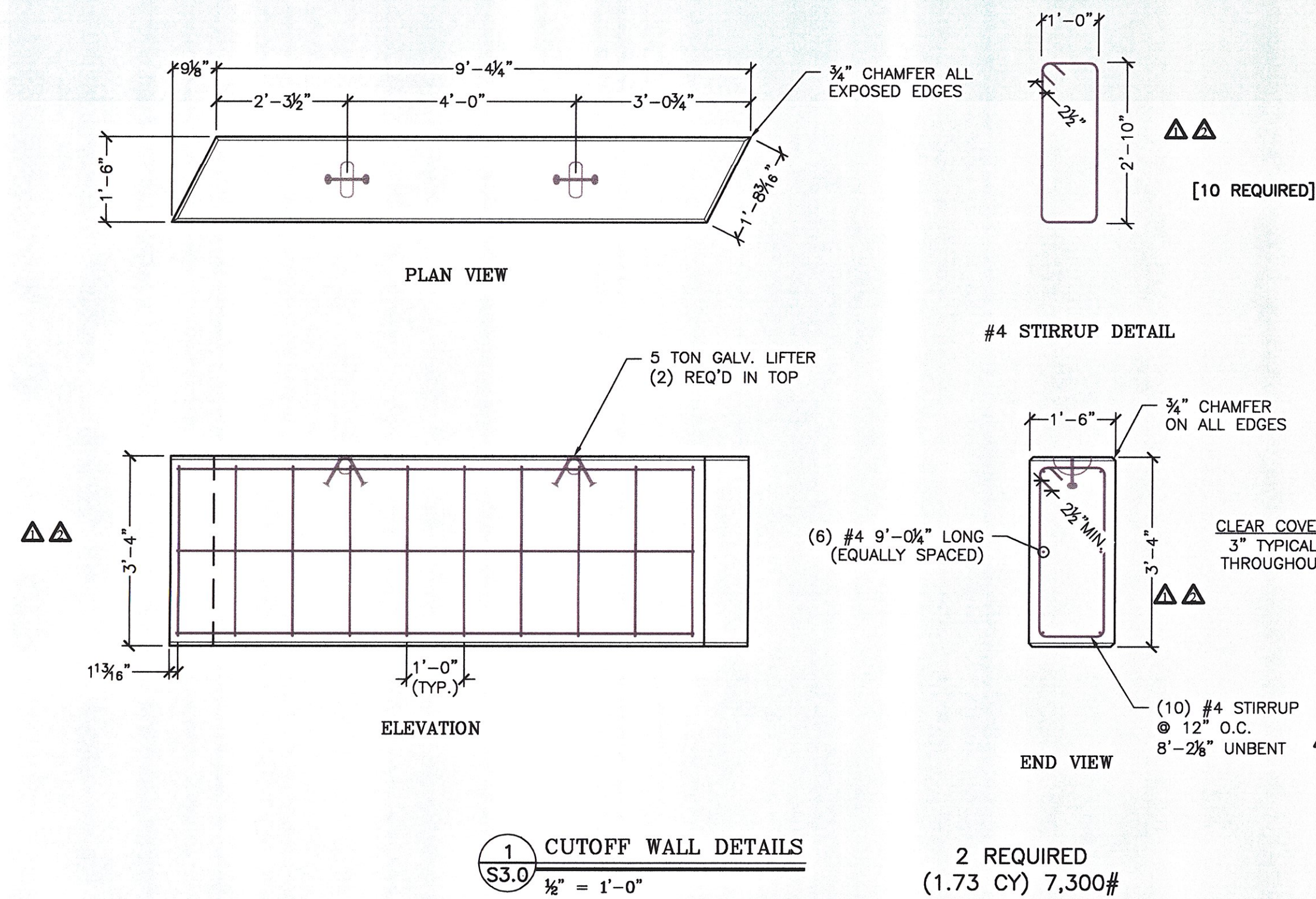
MICHE
 MICHE CORPORATION, INC.
 173 BUXTON INDUSTRIAL DRIVE-PO BOX 870
 FRENCHMOUNT, NH 03242
 PHONE: 603-428-7426
 FAX: 603-428-7426

US Route 2
 Cabot-Danville, VT
 7 x 7' Box Culvert - Culvert Sections
 Scale: AS SHOWN
 Checked by: XXX

Prepared for:
 Winterset Construction
 PO Box 968
 Lyndonville, VT 05851
 Project No. 1490
 Date: 1/22/2011
 Drawn by: CFP
 Designed by:

DWG NO.
 S2.0

No.	Date	Revision
4/26/2011		REVISED PER COMMENTS



- PRECAST CUTOFF WALL NOTES:**
- ALL CUTOFF WALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 5,000 P.S.I. CEMENT USED SHALL MEET THE REQUIREMENTS OF ASTM C-150.
 - UNLESS NOTED OTHERWISE, ALL REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A-615 GRADE 60 DEFORMED STEEL BARS FOR CONCRETE REINFORCING. ALL BARS SHALL BE BENT COLD.
 - ALL EXPOSED EDGES EXCEPT WHERE NOTED SHALL BE CHAMFERED 3/4".
 - ALL FOOTINGS SHALL BE PLACED ON 1'-0" OF 3/4" CRUSHED STONE. ALL TOPSOIL, LOOSE FILL, AND DELETERIOUS MATERIALS SHALL BE REMOVED BEFORE PLACING BACKFILL.
 - EACH CUTOFF WALL SHALL BE PROVIDED WITH 2 LIFTING ANCHORS IN THE TOP FOR SETTING.
 - EACH SECTION SHALL WEIGH AS SHOWN.

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: 5/11
 SIGNED BY: *Michael J. Lewis* DATE: 5/11

US Route 2
Cabot-Danville, VT

7 x 7' Box Culvert - Cutoff wall

Scale: AS SHOWN

Checked by: CTP

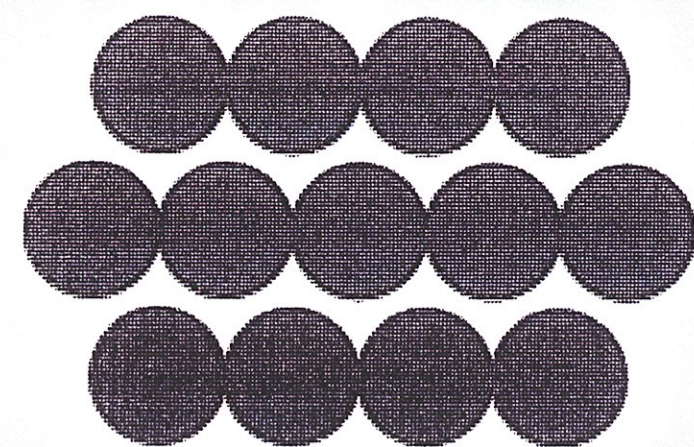
Project No. 1490
Date: 3/22/2011

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

DWG NO.
S3.0

REVISION PER COMMENTS	DATE	BY
4/20/2011		CTP
3/8/2011		CTP

MICHE CORPORATION, INC.
173 BUXTON INDUSTRIAL DRIVE-PO BOX 870
HENNINGER, NH 03242
TEL: 603-426-7468
FAX: 603-426-7468



REINFORCED EARTH®

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

- Record Plans -
FIELD COPY

GENERAL NOTES

DESIGN CRITERIA

1. 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.

2. SOILS CHARACTERISTICS USED FOR DESIGN:
(PER PROJECT SPECIAL PROVISIONS ITEM 900.670 and CONTRACT PLANS SHT. BR102)

1 SELECT GRANULAR BACKFILL
 $\phi = 34$ degrees, $c = 0$ p.s.f., $\gamma = 140$ p.c.f.

RANDOM BACKFILL
 $\phi = 33$ degrees, $c = 0$ p.s.f., $\gamma = 140$ p.c.f.

FOUNDATION MATERIAL
 $\phi = 22$ 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.

4. 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.

5. 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

6. STATIONS SHOWN ARE ALONG CENTERLINE OF US ROUTE 2.

7. REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 4.92' EACH TO MATCH DESIRED WALL ALIGNMENT.

8. FOR LOCATION AND ALIGNMENT OF REINFORCED EARTH WALLS. SEE SHEET 2 OF THESE PLANS AND SHEETS 109-111 OF THE CONTRACT PLANS.

9. 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.

10. 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.

11. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 2" (±) 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.

12. 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.)

13. 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.

14. 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.

15. 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.

16. ALL DETAILING AND CHECKING OF REINFORCING STEEL FOR ANY C.I.P. CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

17. TOP PANELS BELOW COPING SHALL EACH HAVE THREE (3) #4 REBAR DOWELS PER 4.92' WIDE STANDARD PANEL.

18. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL.

19. 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.

20. 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.

25. 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.

26. 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

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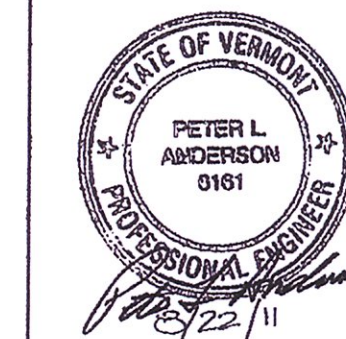
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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

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

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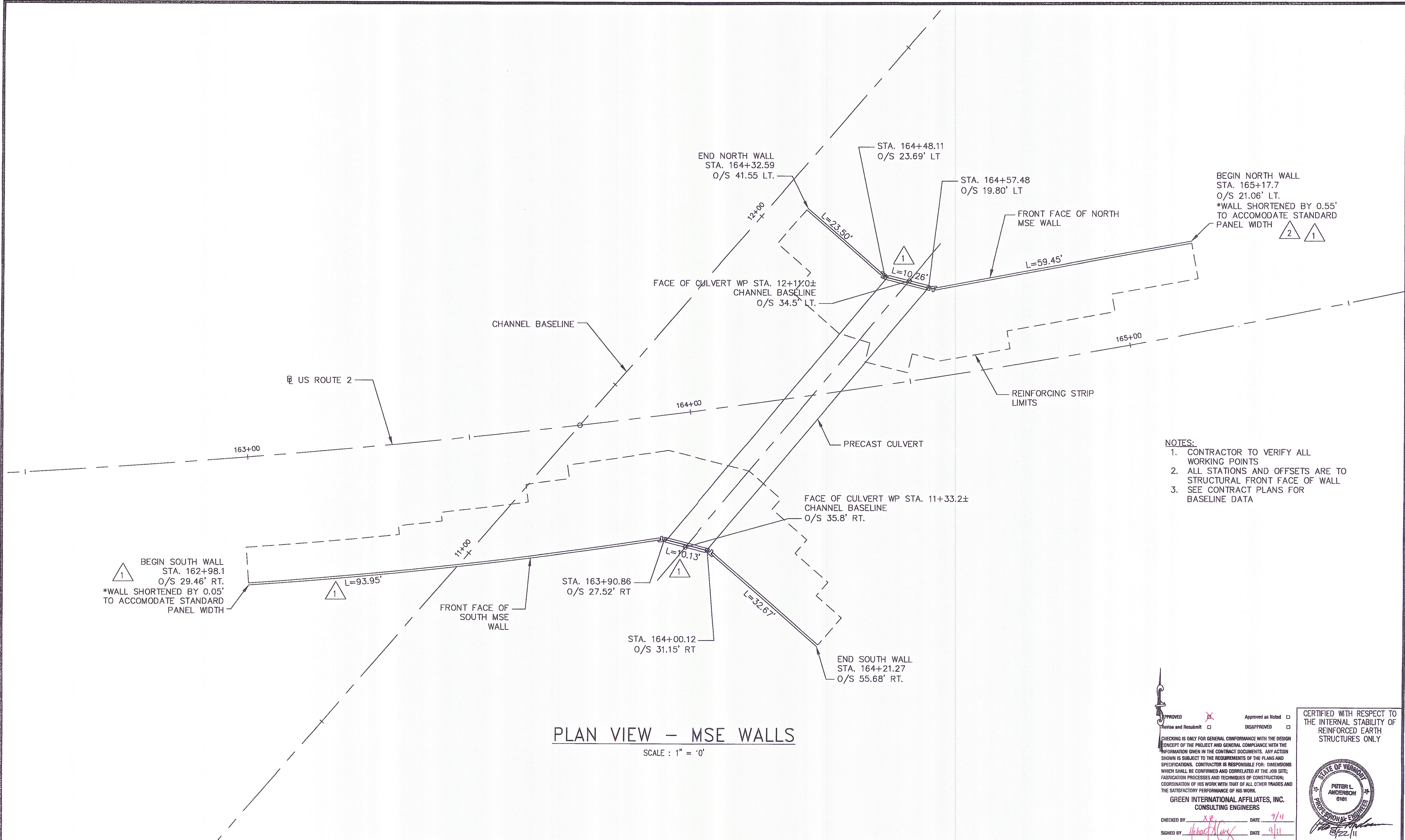
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DESIGNED BY: DTM				PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY	2	8/19/11	REV. PER GIA COMMENTS REV. HALF CONNECTOR DETAILS	LOCATION	CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	REV. PER 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



PLAN VIEW - MSE WALLS

SCALE: 1" = 10'

- NOTES:
1. CONTRACTOR TO VERIFY ALL WORKING POINTS
 2. ALL STATIONS AND OFFSETS ARE TO STRUCTURAL FRONT FACE OF WALL
 3. SEE CONTRACT PLANS FOR BASELINE DATA

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 Revise and Resubmit DISAPPROVED

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CONSULTING ENGINEERS

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

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PIETER L. ANDERSON
0161
PROFESSIONAL ENGINEER
8/22/11

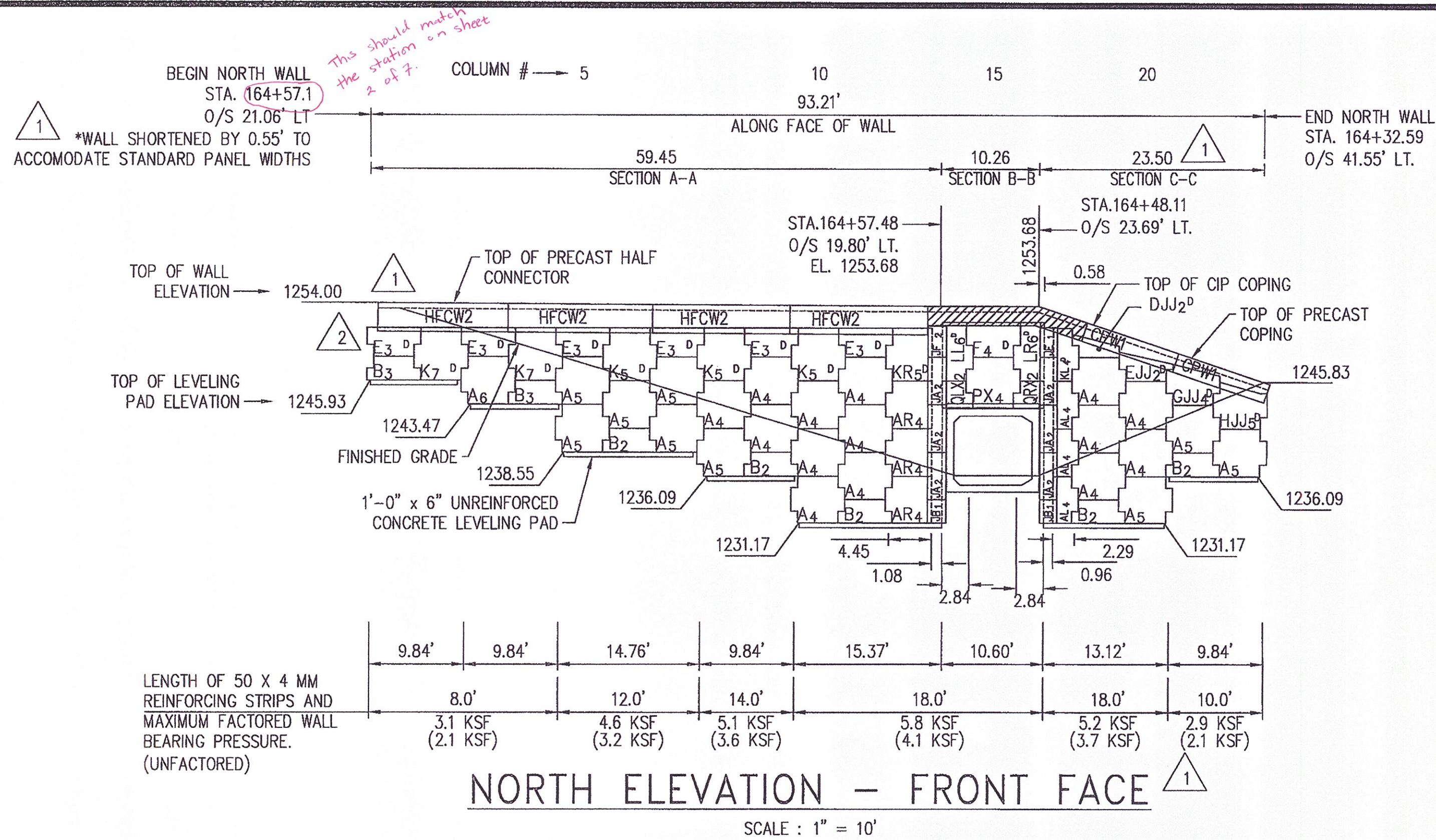
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 8614 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175

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PROJECT ENGR: LY	2	8/19/11	LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	OWNER VTAOT	DRAWING NO. 2 OF 7
REV.		DATE	DRAWING COVERS PLAN LAYOUT	SCALE AS SHOWN

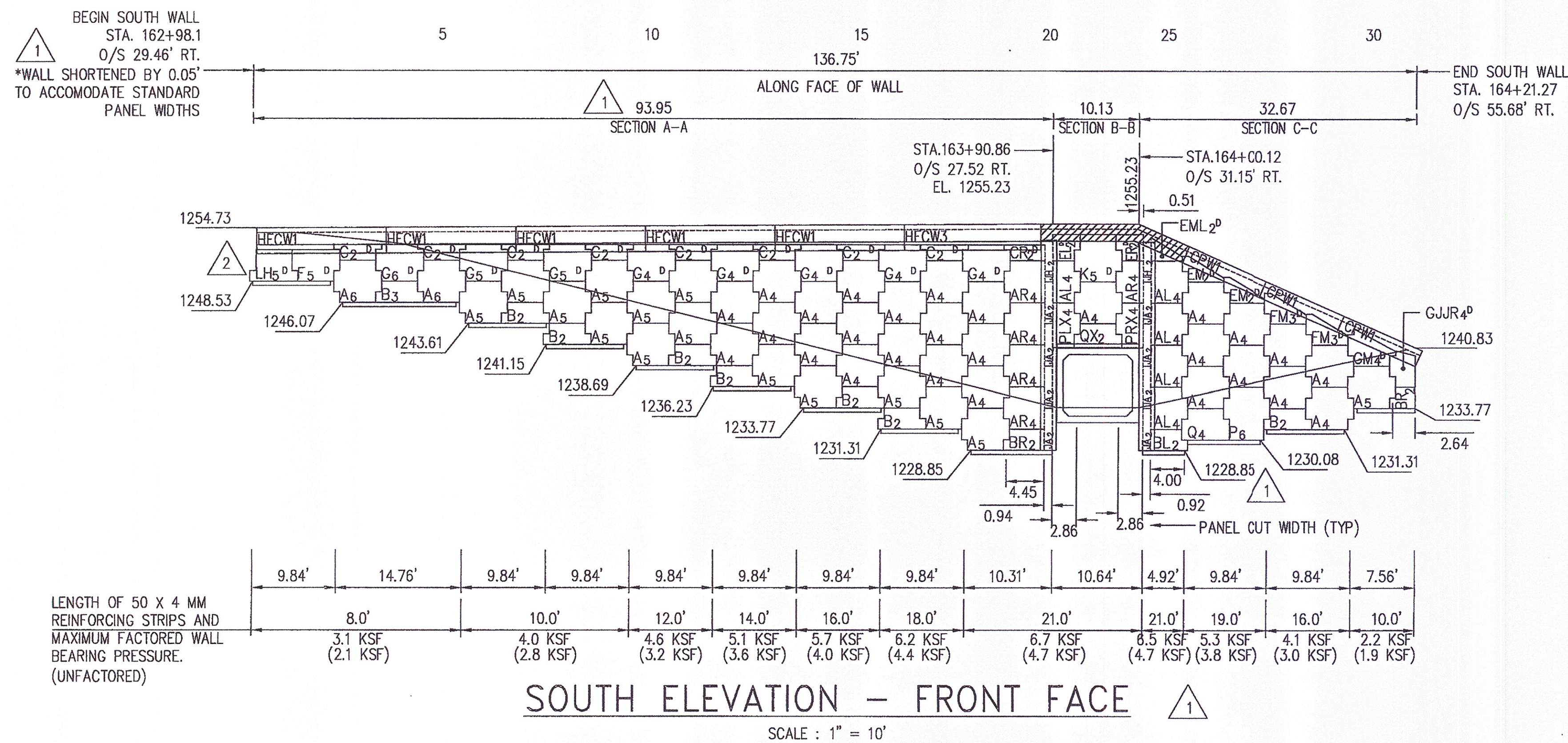


MSES WALL QUANTITIES NORTH WALL	
FACING PANEL AREA	1,212 SF
LENGTH OF WALL	93.2 LF
PRECAST COPING	CPW1-2 PCS
PRECAST HFC	HFCW2-4 PCS
CIP COPING	16.9 LF

- NOTES:**
- LENGTH OF LEVELING PAD IS BASED ON INDIVIDUAL PANEL WIDTHS. C OF PANEL JOINT TO C 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.
 - ALL STATIONS GIVEN ARE FROM BASELINE US RTE 2 TO STRUCTURAL FRONT FACE OF MSE WALL.
 - FOR TYPICAL SECTIONS, REFER TO SHEET 4.
 - FOR PRECAST TOPOUT DETAILS, REFER TO SHEET 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
A	PANEL DESIGNATION
4	NO. OF TIE STRIPS IN PANEL
A ₄	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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CONSULTING ENGINEERS

CHECKED BY: *xx* DATE: 9/11
 SIGNED BY: *Michael Curz* DATE: 9/11

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STATE OF VERMONT
 PETER L. ANDERSON
 6161
 PROFESSIONAL ENGINEER

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

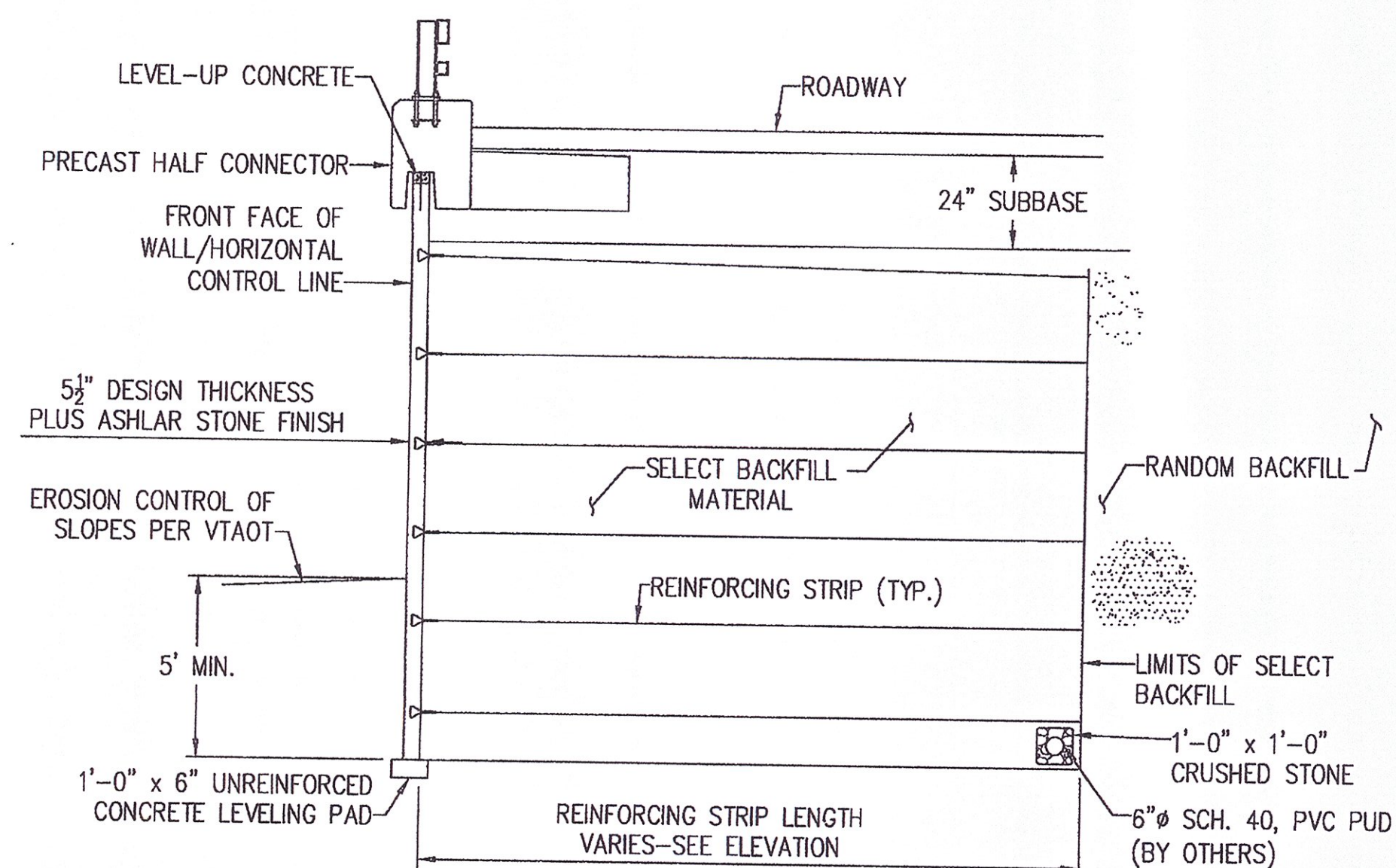
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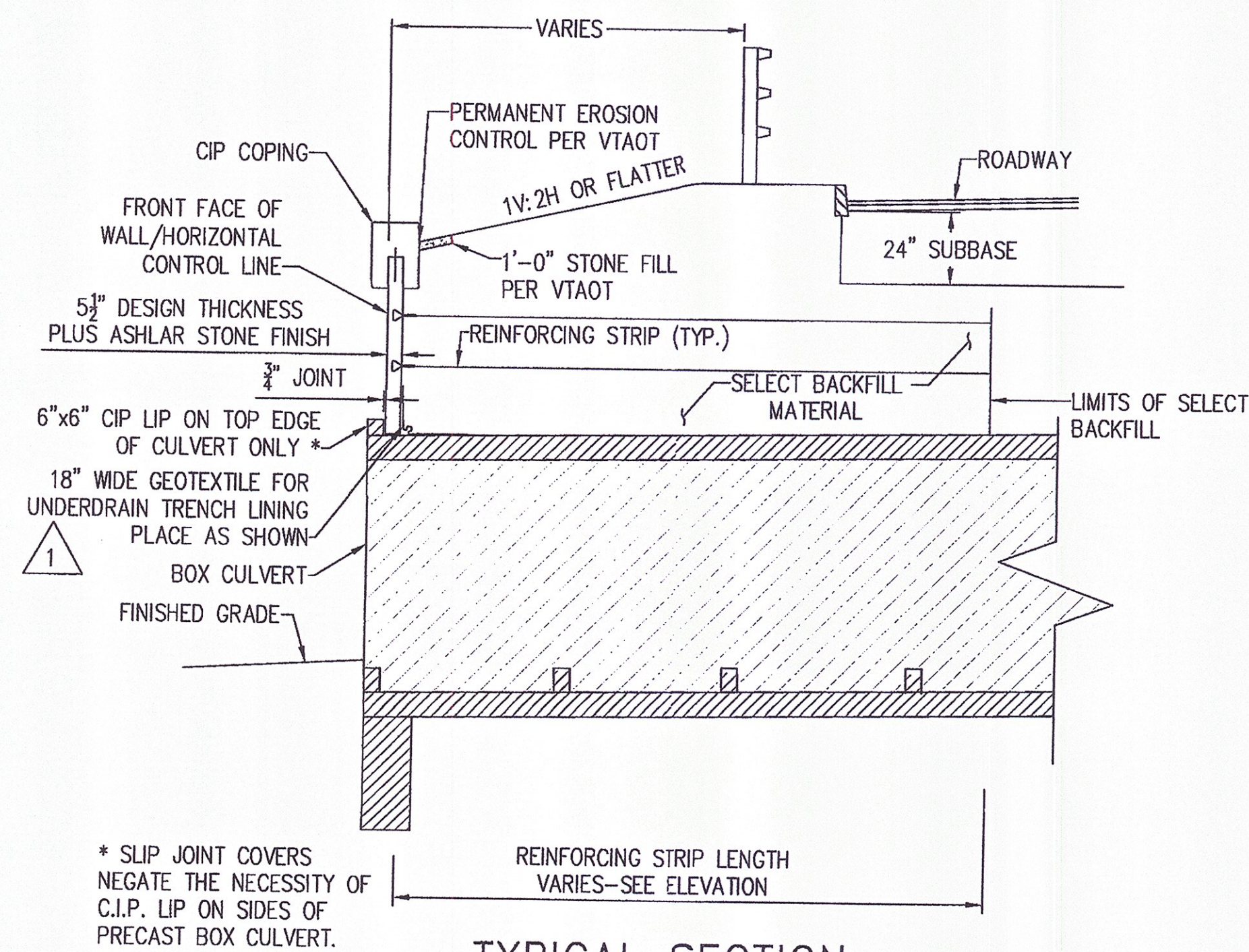


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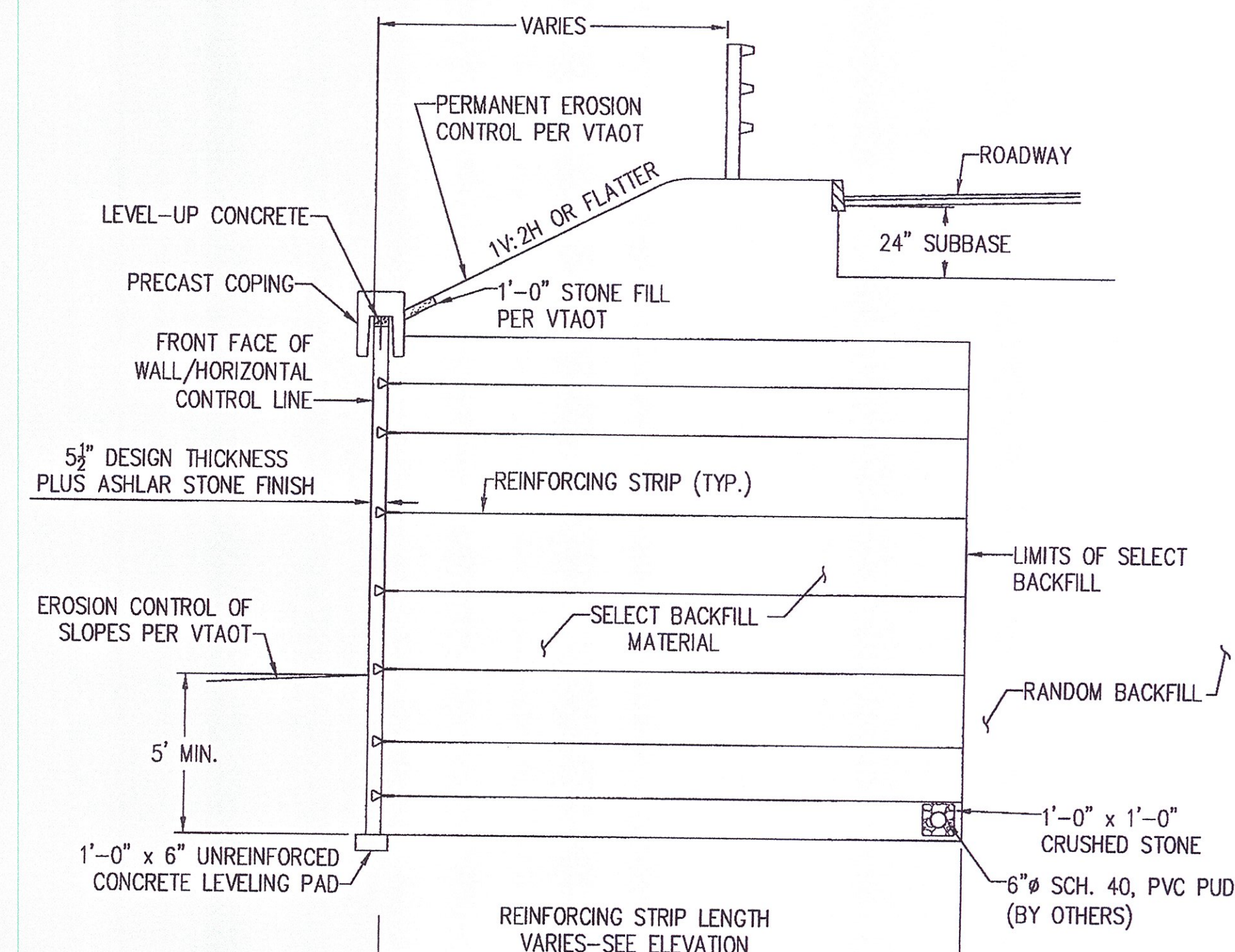
DESIGNED BY: DTM			PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY	2	8/19/11	LOCATION	CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1	7/19/11	OWNER	VTAOT	DRAWING NO. 3 OF 7
REV.	DATE	DESCRIPTION	DRAWING COVERS	WALL ELEVATIONS	SCALE AS SHOWN



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



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

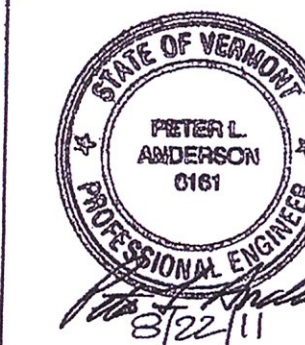


TYPICAL SECTION
C-C
SCALE 1/4"=1'-0"

* SLIP JOINT COVERS
NEGATE THE NECESSITY OF
C.I.P. LIP ON SIDES OF
PRECAST BOX CULVERT.

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 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: Michael Hays DATE: 9/11
 SIGNED BY: Michael Hays DATE: 9/11

CERTIFIED WITH RESPECT TO
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REINFORCED EARTH
STRUCTURES ONLY



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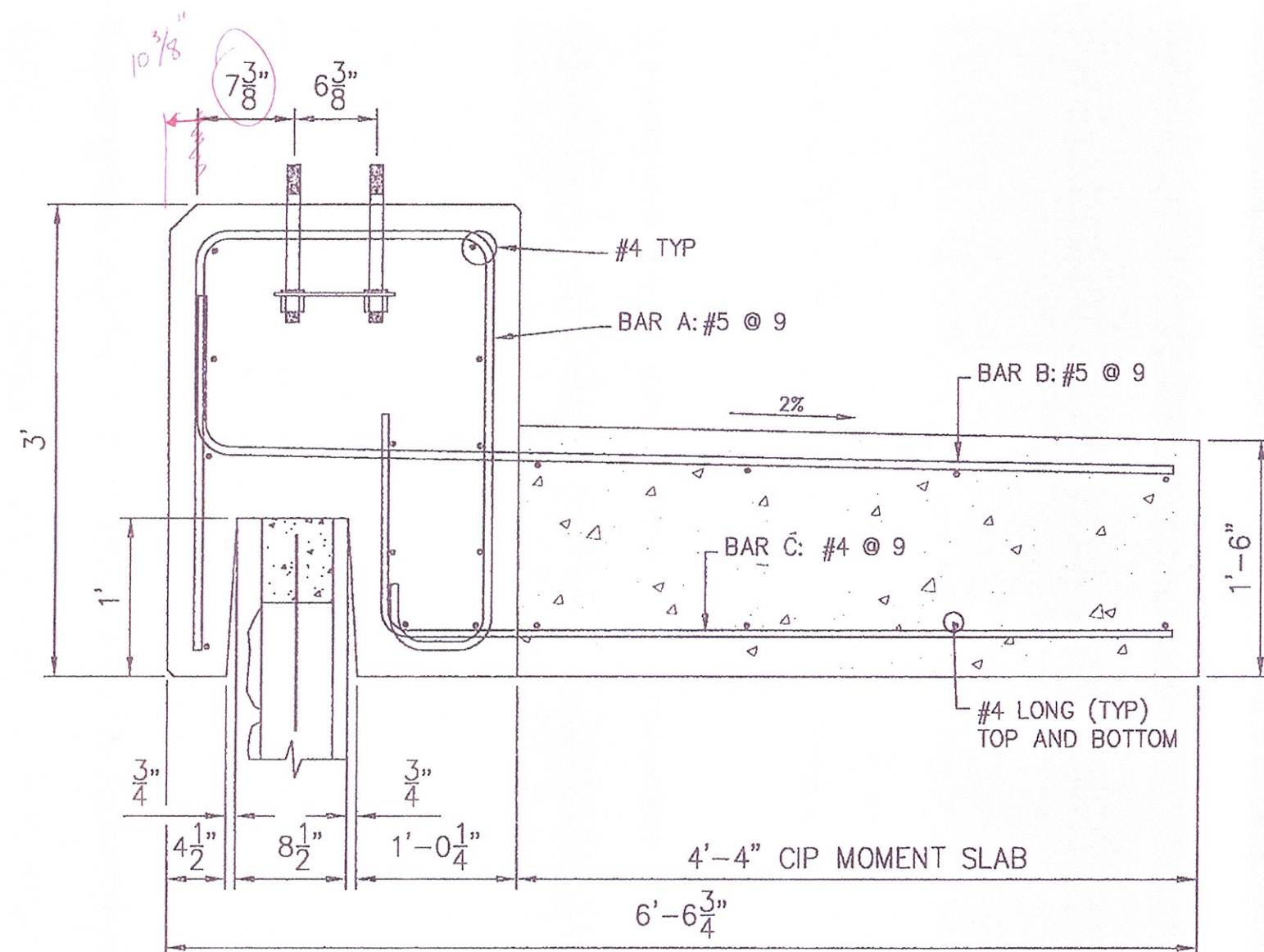
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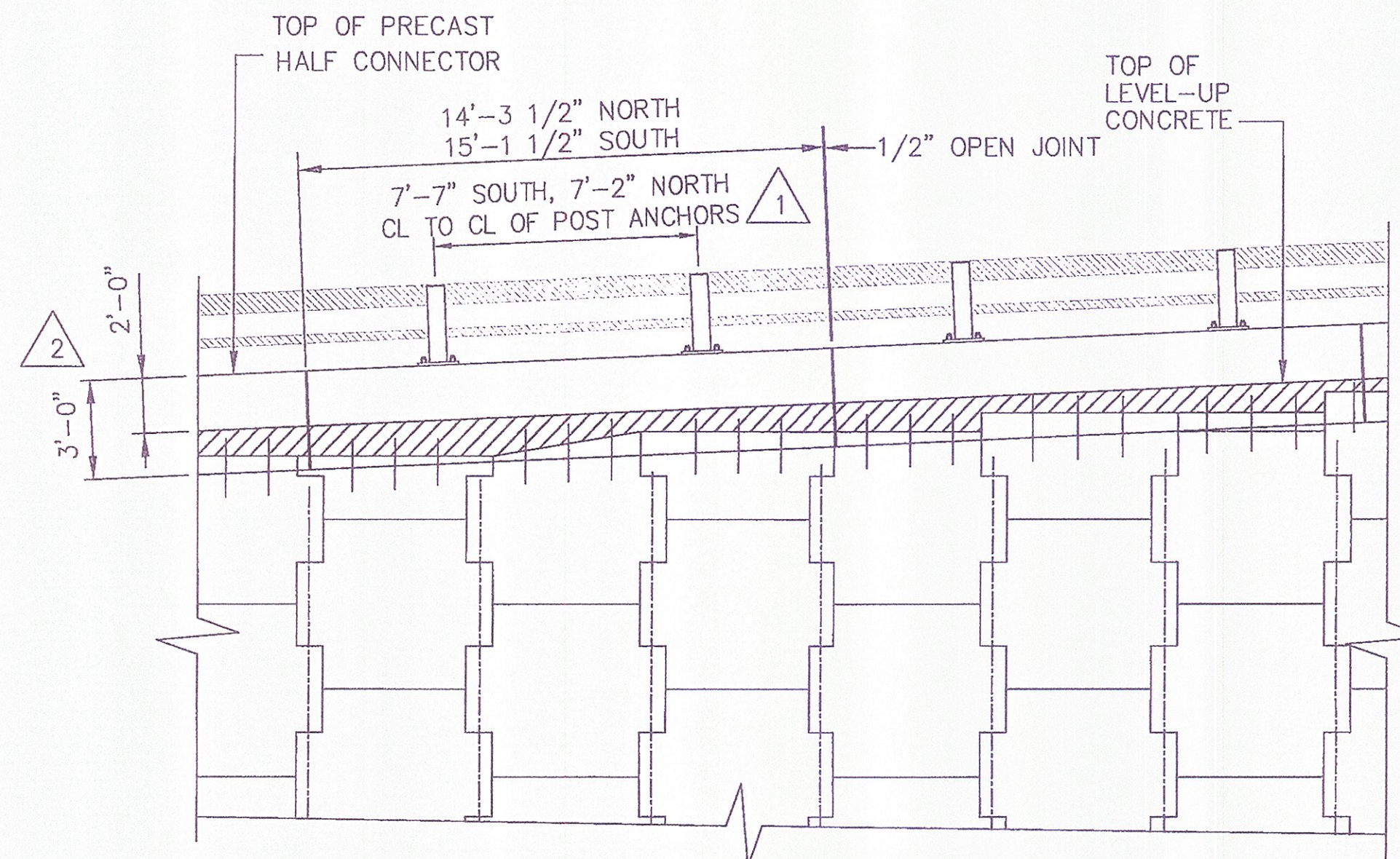
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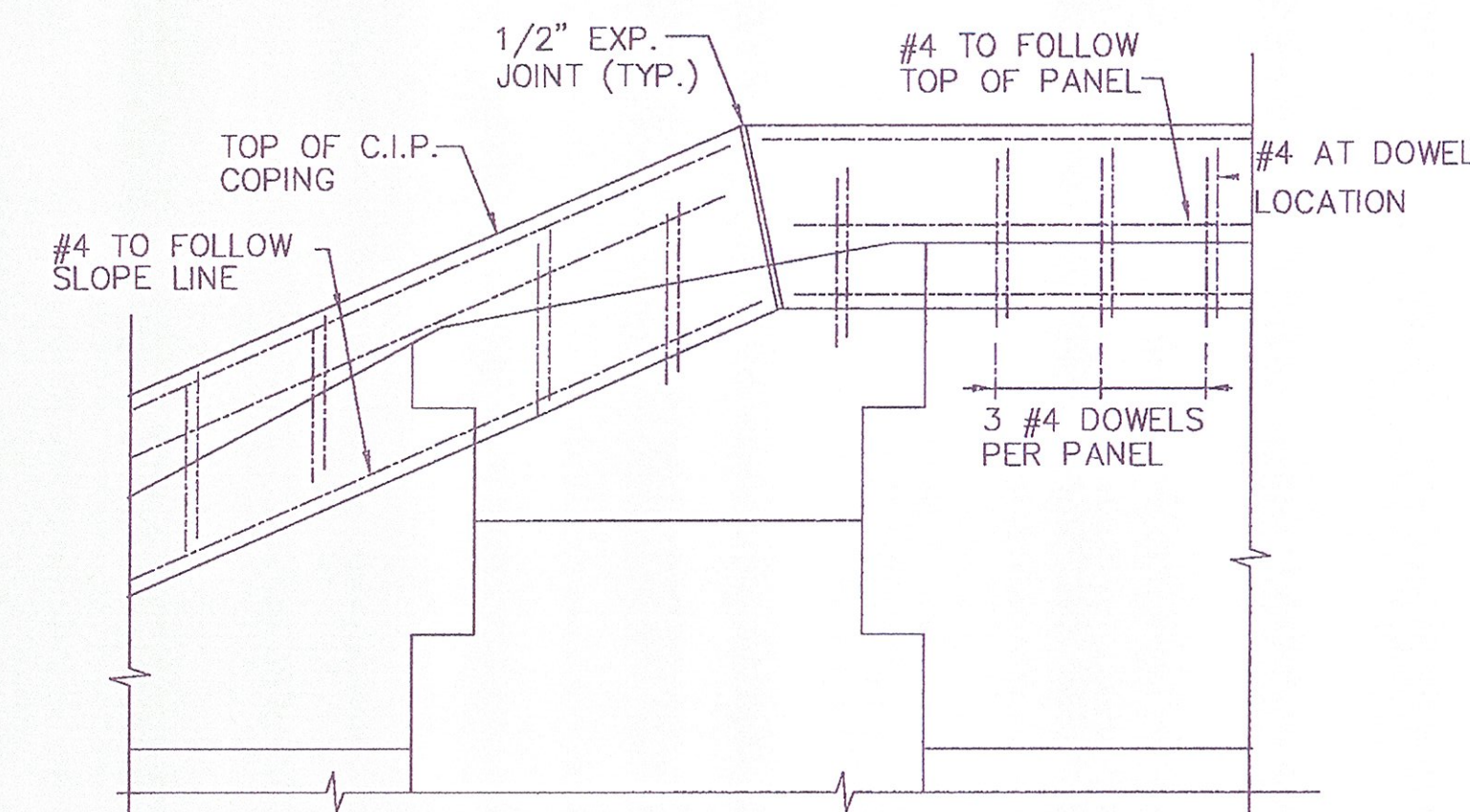
DESIGNED BY: DTM		PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY		LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	7/19/11	OWNER VTAOT	DRAWING NO. 4 OF 7
REV. DATE	DESCRIPTION	DRAWING COVERS TYPICAL SECTIONS	SCALE AS SHOWN



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

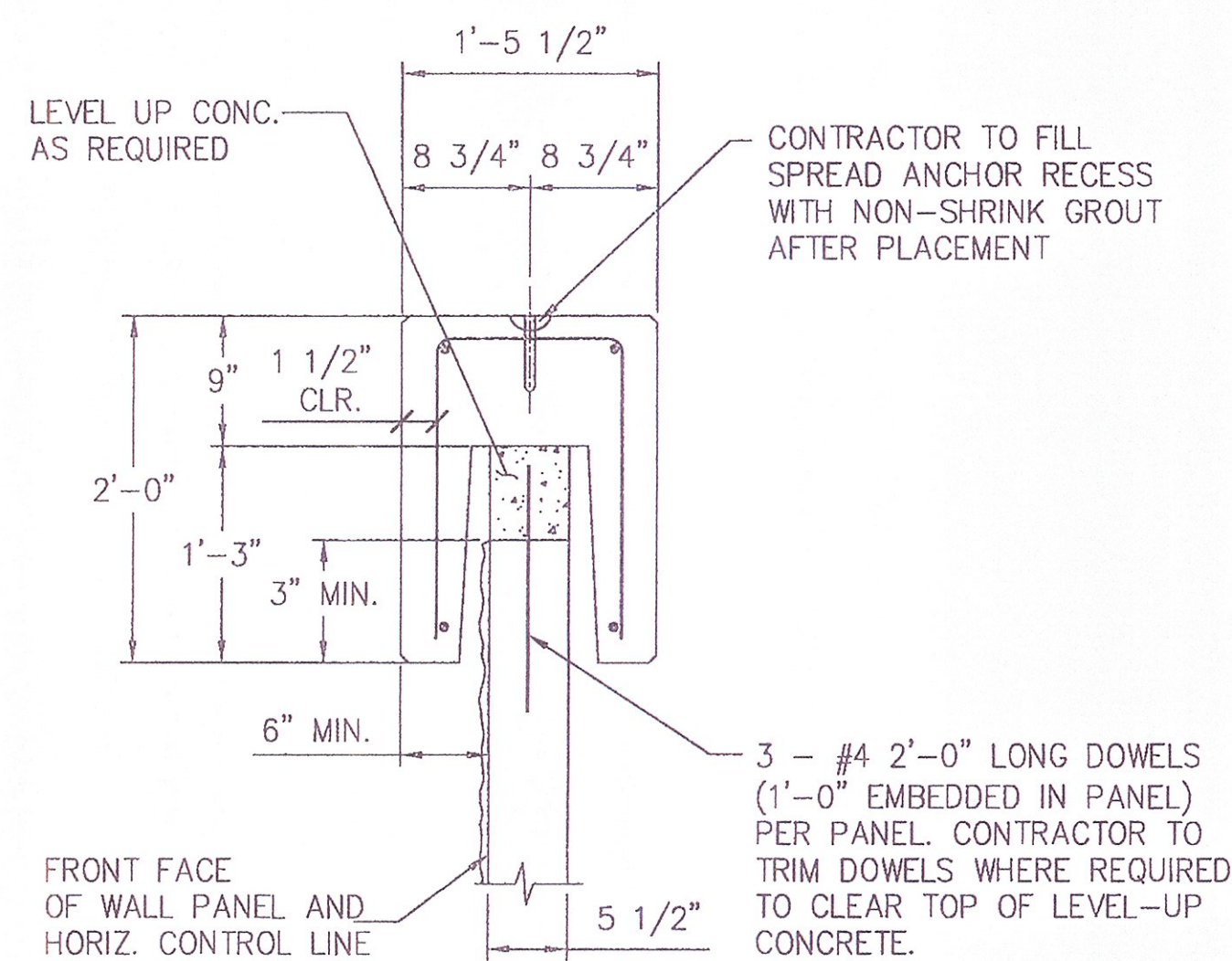


PRECAST HALF CONNECTOR PARTIAL ELEVATION
 SCALE: 1" = 1'- 0"



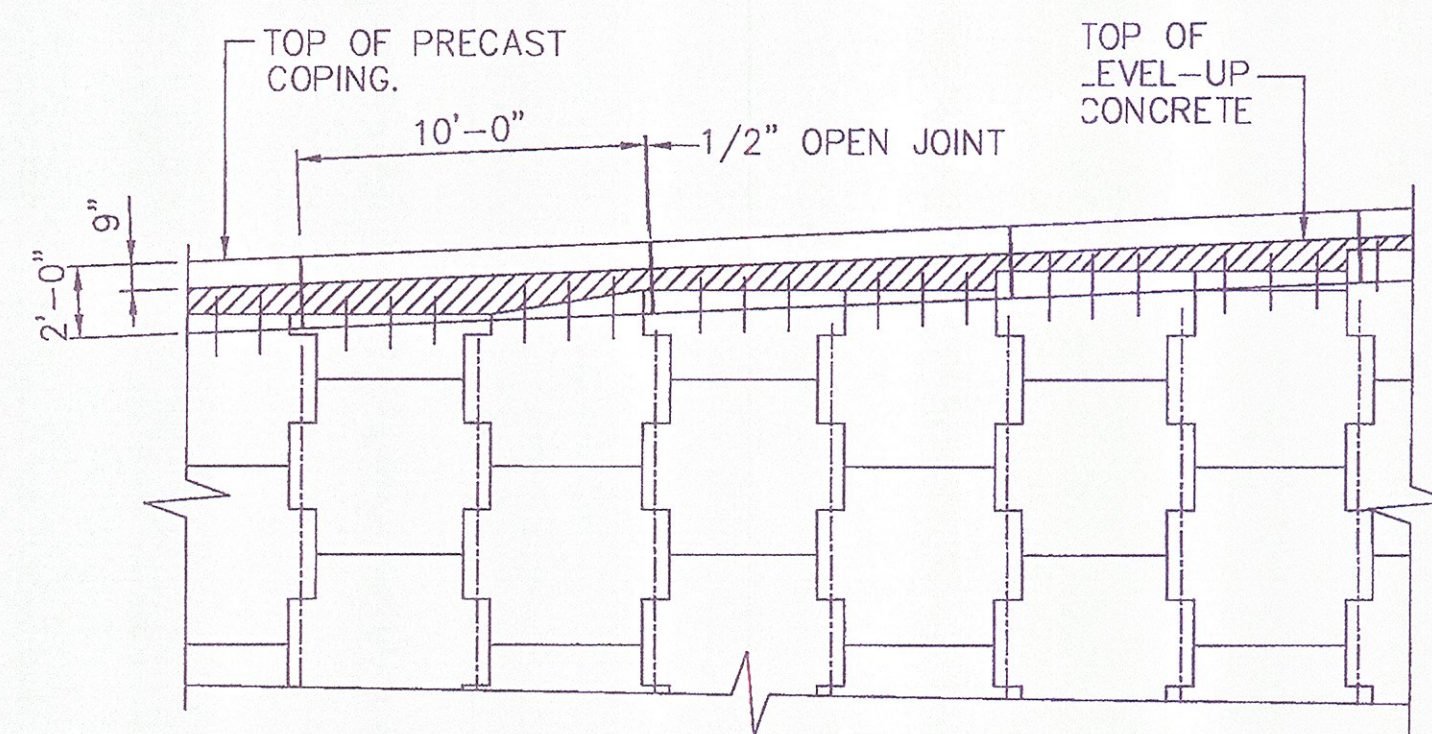
C.I.P. COPING AT KINKS PARTIAL ELEVATION
 1/2" = 1'- 0"

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.

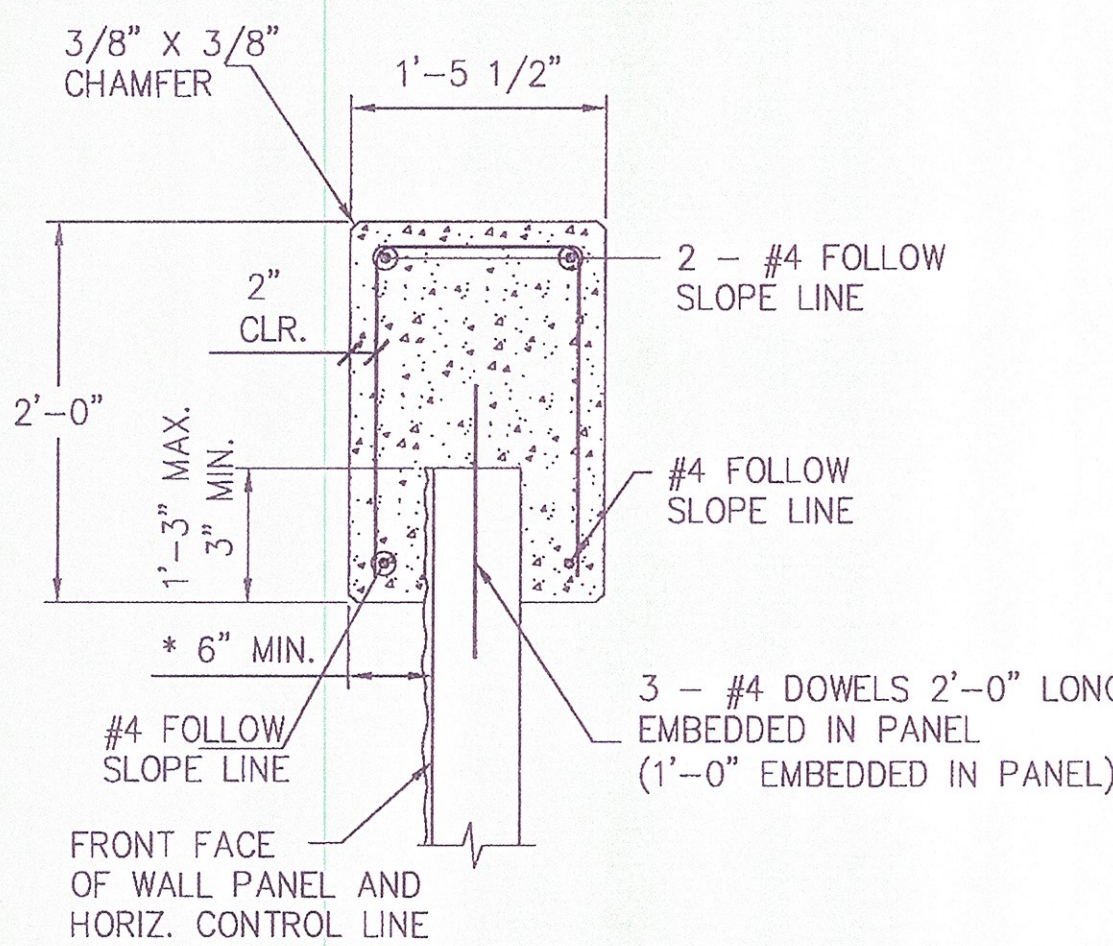


STANDARD COPING UNIT IS 10'-0" WITH SQUARE ENDS
PRECAST COPING SECTION
 SCALE: 1" = 1'- 0"

- 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"

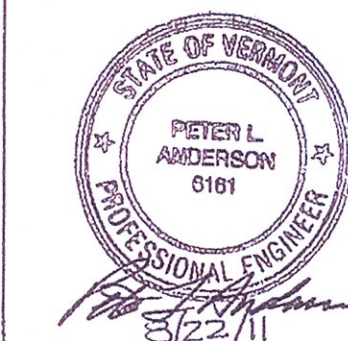


C.I.P. CONC. COPING SECTION TO MATCH PRECAST COPING
 SCALE: 1" = 1'- 0"

- 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

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

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R:\RE15053_REW_VT_CABOT_DANVILLE\DWGS\05 TOPUT DETAILS REV2.DWG

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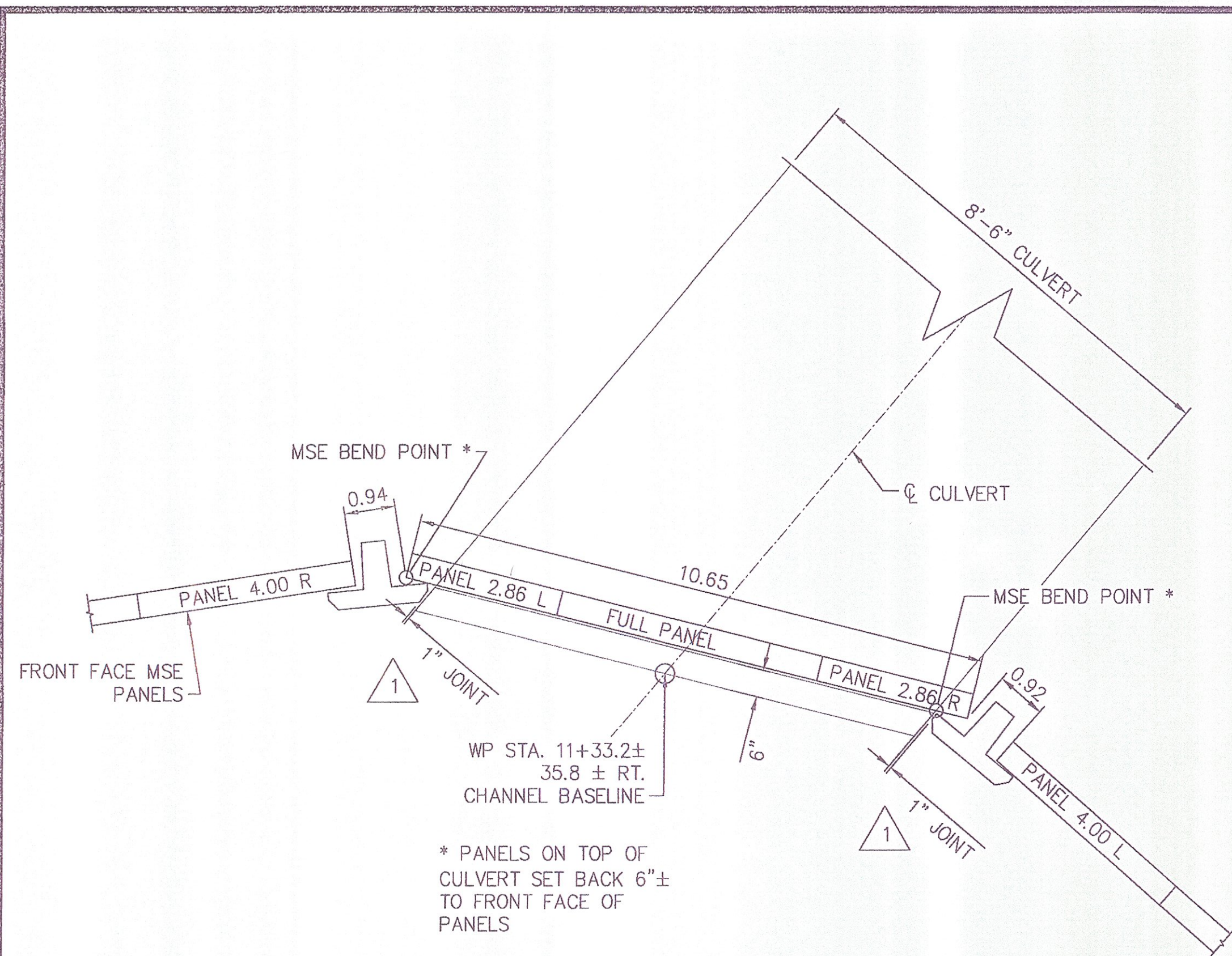
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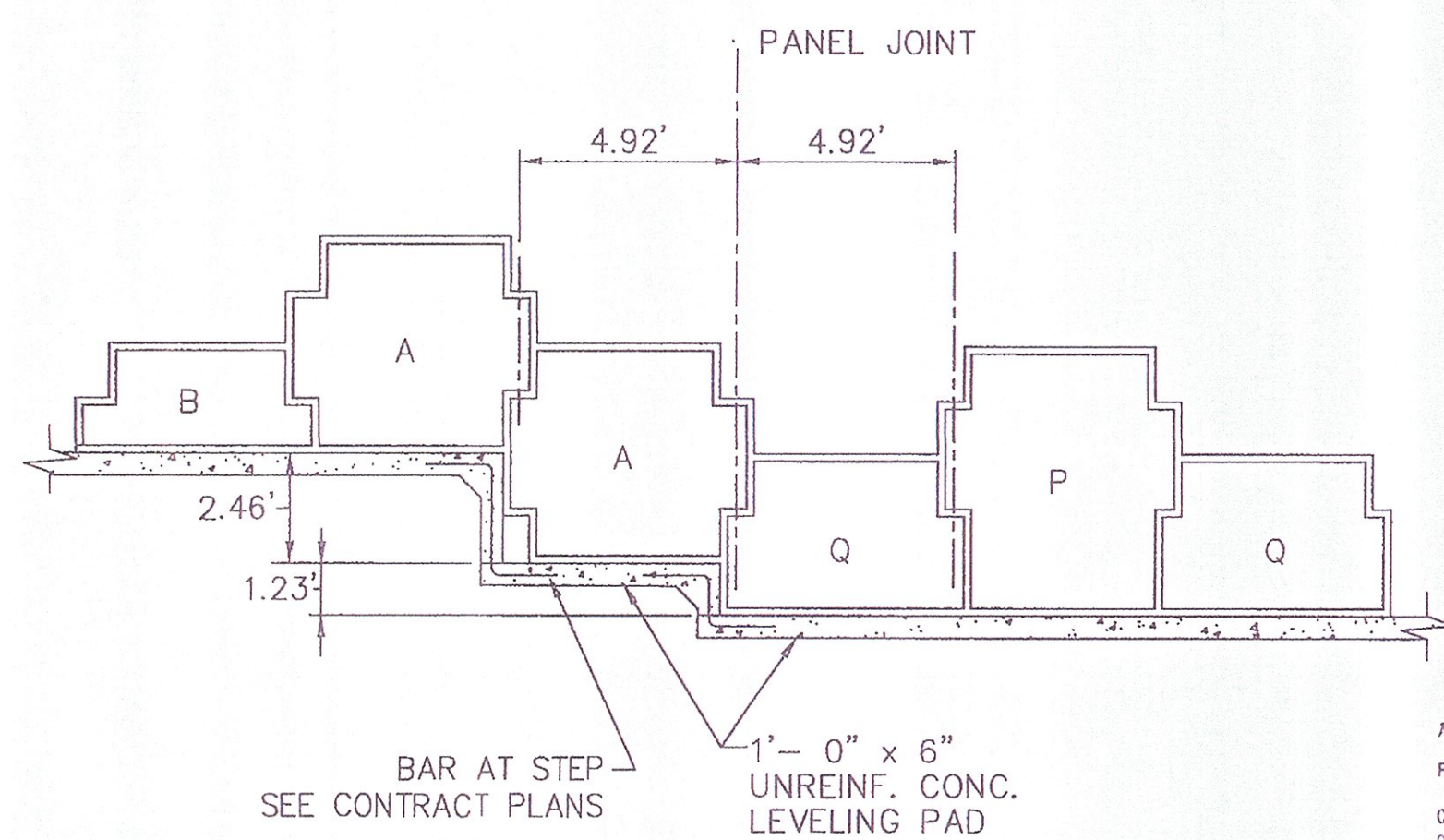
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PROJECT ENGR: LY	△ 2 8/19/11	LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	△ 1 7/19/11	OWNER VTAOT	DRAWING NO. 5 OF 7
REV.	DATE	DESCRIPTION	SCALE AS SHOWN
		DRAWING COVERS TOPOUT DETAILS	

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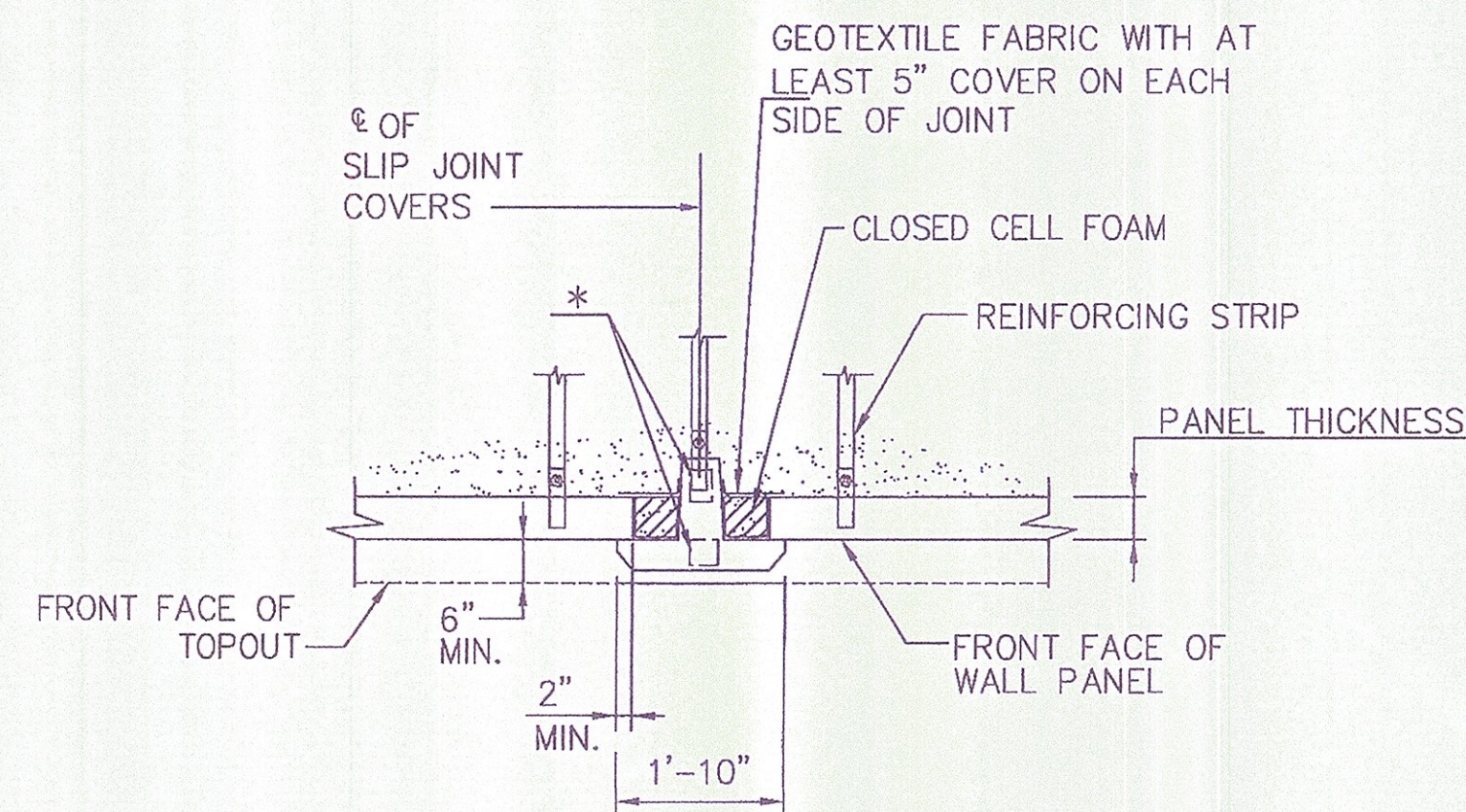
SLIP JOINT INTERFACE AT CULVERT
(SOUTH WALL SHOWN. NORTH WALL INTERFACE SIMILAR)
SCALE: 1/2" = 1'- 0"



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

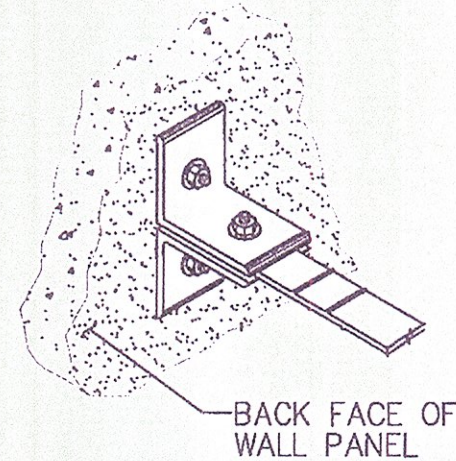
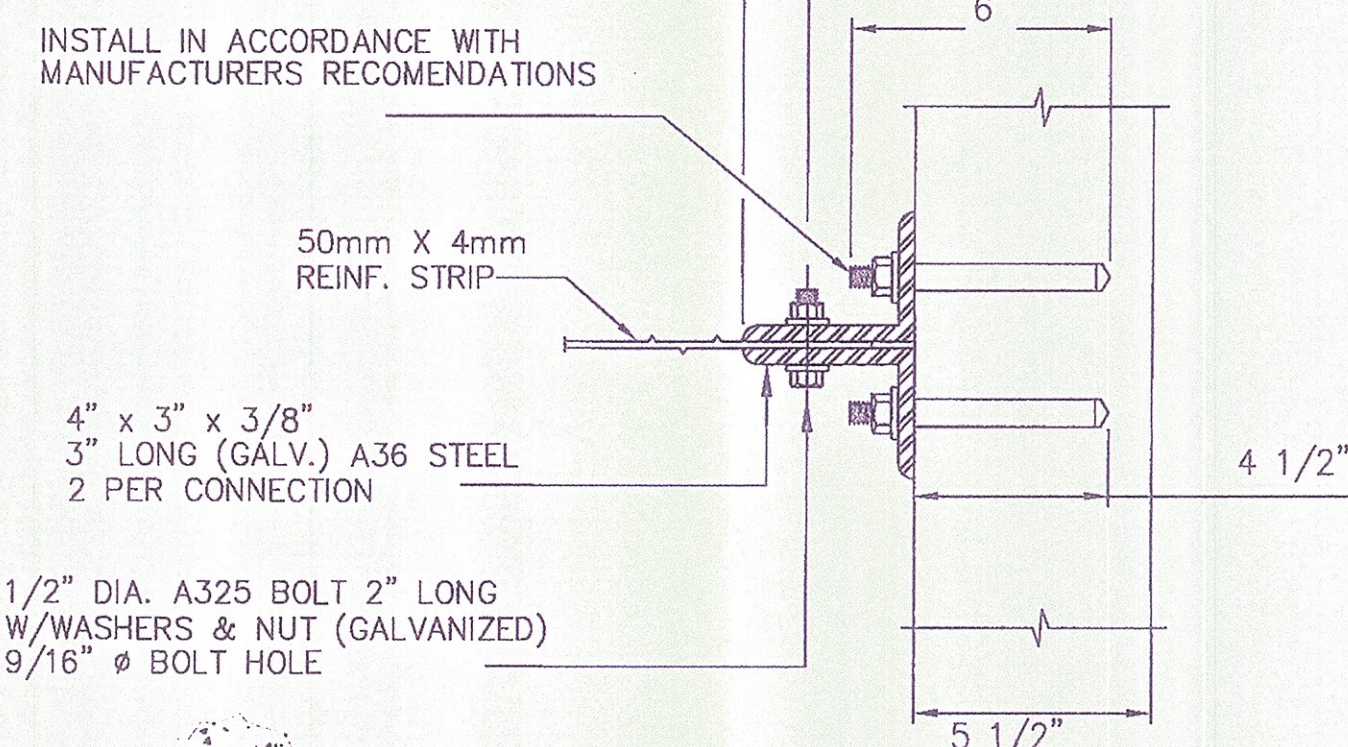
NOTE: FOR ADDITIONAL DETAILS, REFER TO LEVELING PAD STEP DETAIL ON CONTRACT PLANS SHEET 102 OF 250

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 Revise and Resubmit DISAPPROVED
 CHECKED BY: *[Signature]* DATE: 7/11
 SIGNED BY: *[Signature]* DATE: 7/11



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

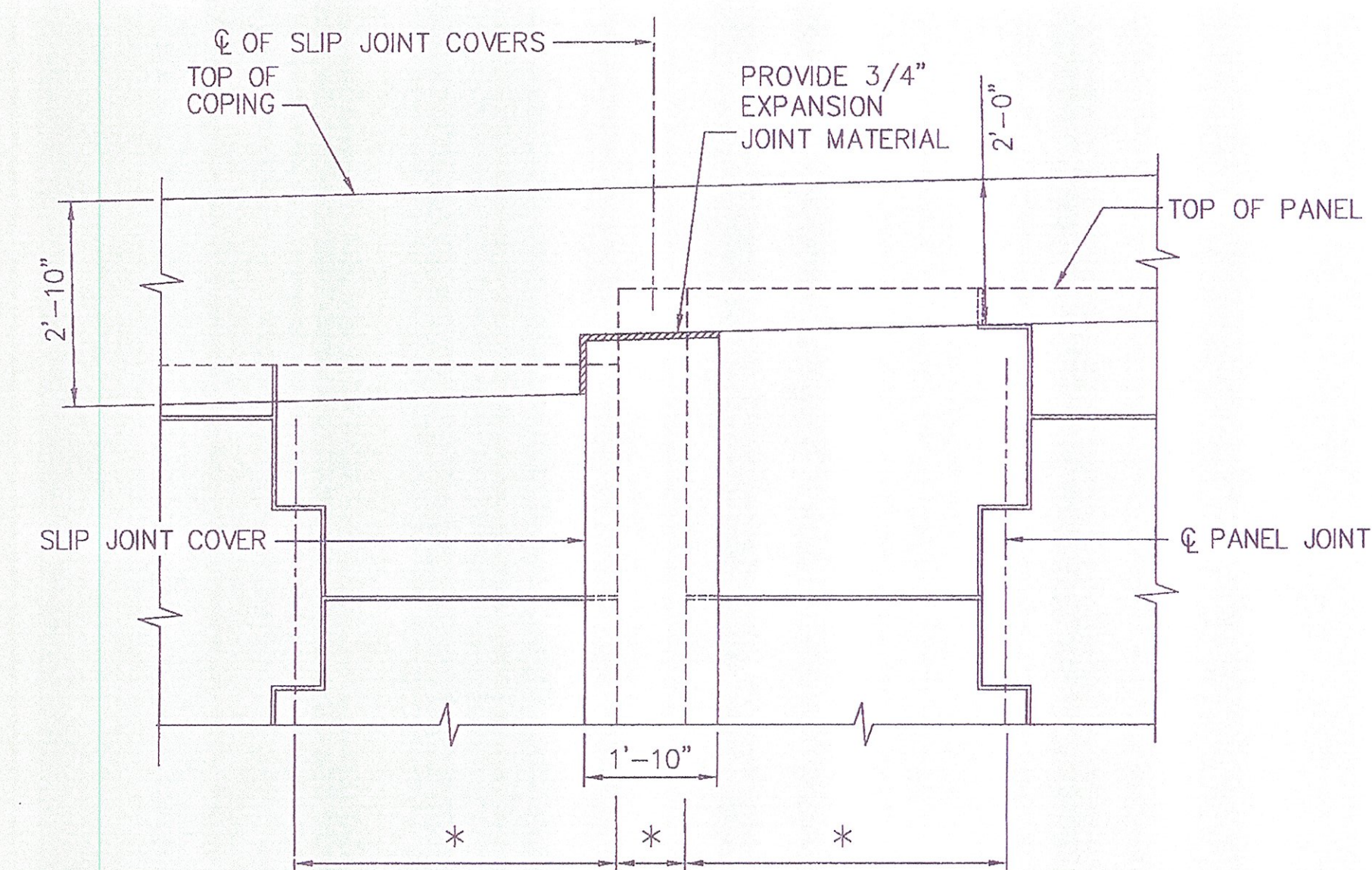
5/8" DIA. x 6" LONG HILTI HAS ANCHOR ROD (GALV.) WITH HVA ADHESIVE ANCHOR OR HILTI HY150- EMBEDDED 4 1/2".
 2 PER CONNECTION ASSEMBLY 1 1/2" MIN. ±1/16"
 11/16" BOLT HOLE IN ANGLE



- 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.

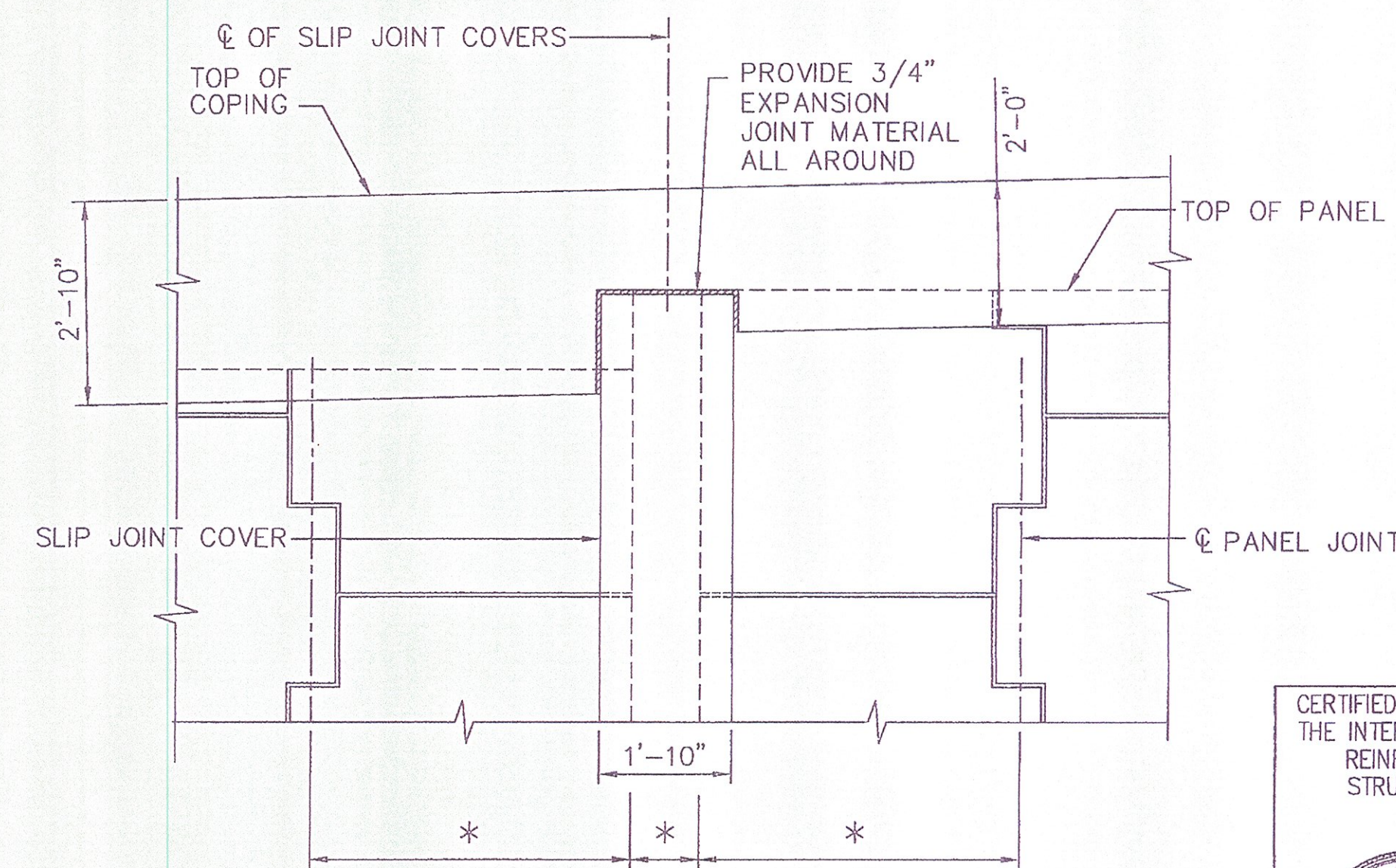
NOTE:
 DRILLED HOLES SHALL BE CLEANED COMPRESSED AIR AS PER HILTI SPECIFICATIONS
 THIS DETAIL IS PROVIDED FOR USE IN THE EVENT A TIE STRIP CONNECTION NEEDS TO BE REPLACED OR ADDED TO THE MSE FACING PANELS.

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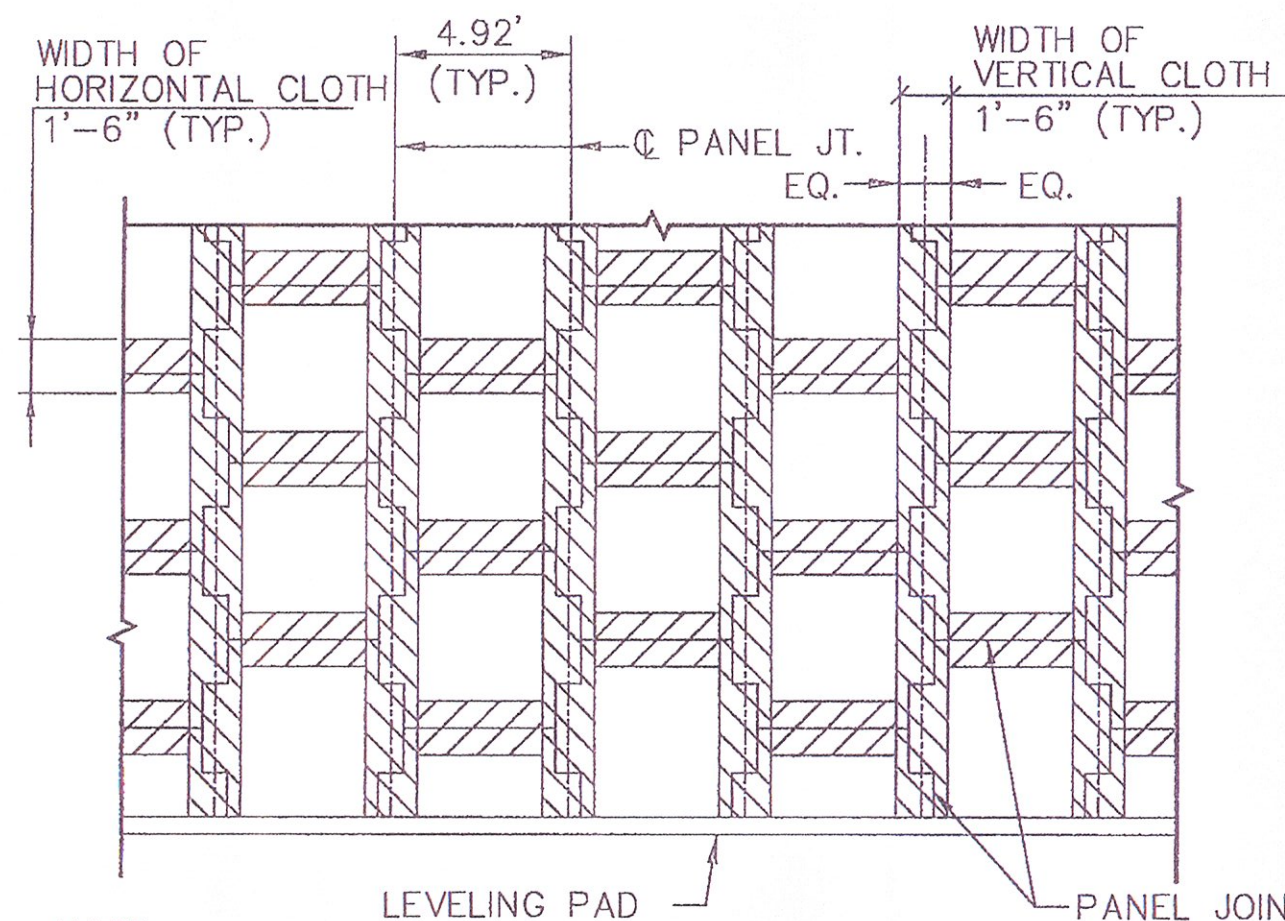
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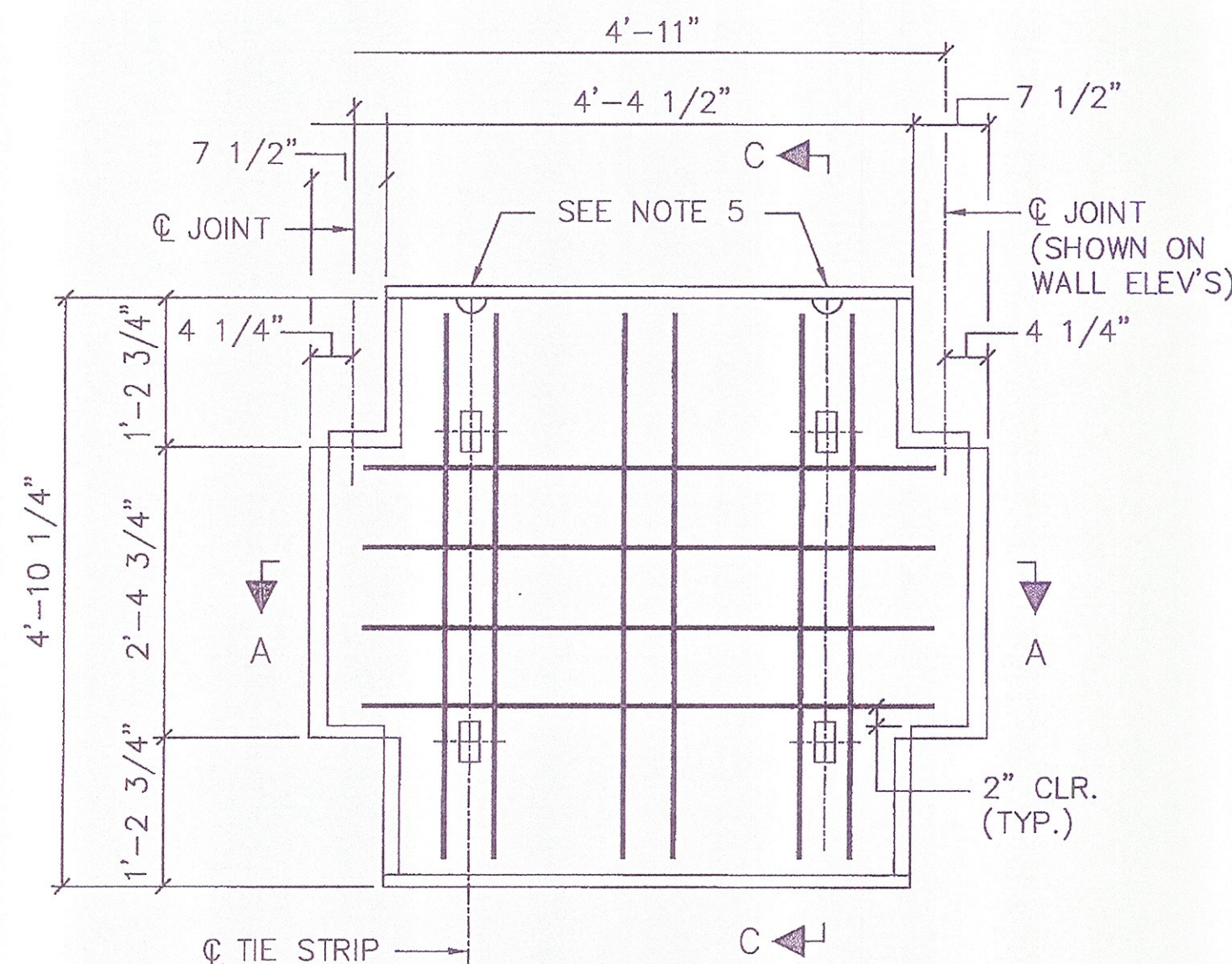
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DESIGNED BY: DTM		PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/6/11
PROJECT ENGR: LY		LOCATION CABOT-DANVILLE VERMONT	CONTRACT NO. RE-15053
CHECKED BY: PLA/EEH	1 7/19/11	OWNER VTAOT	DRAWING NO. 6 OF 7
REV.	DATE	DESCRIPTION	SCALE AS SHOWN

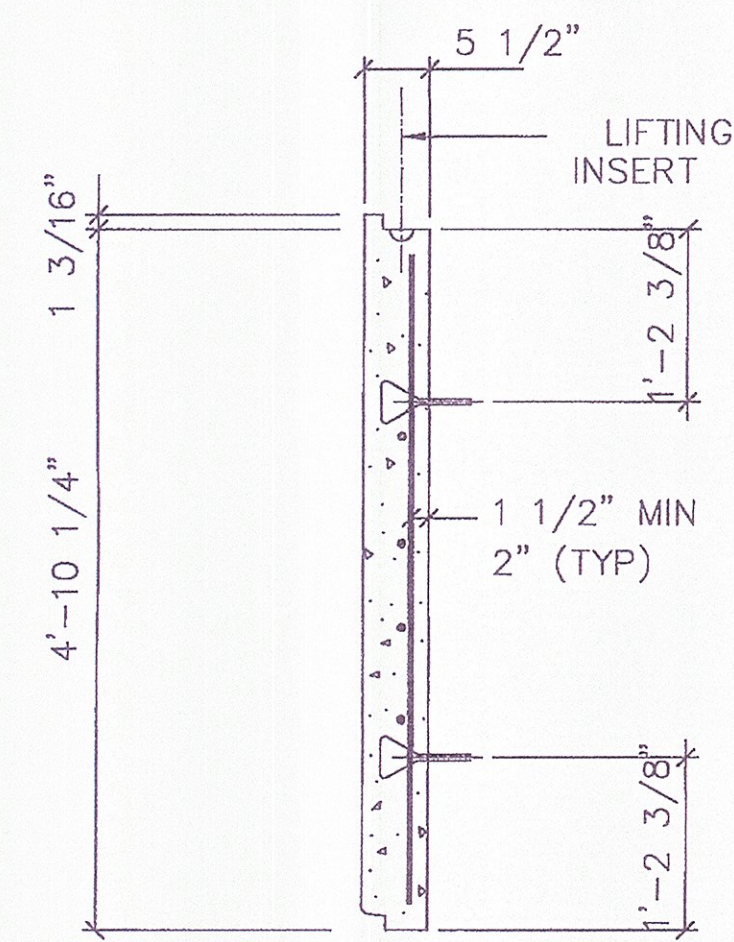


NOTE:
STRIPS OF FILTER CLOTH SHALL BE PLACED ON BACK FACE OF PANEL OVER PANEL JOINTS. FILTER CLOTH SHALL BE ADHERED TO BACK FACE OF PANELS USING AN ADHESIVE COMPOUND SUPPLIED BY THE REINFORCED EARTH COMPANY. ADHESIVE SHALL BE APPLIED TO PANEL AND THEN FILTER CLOTH SHALL BE APPLIED TO PANEL.

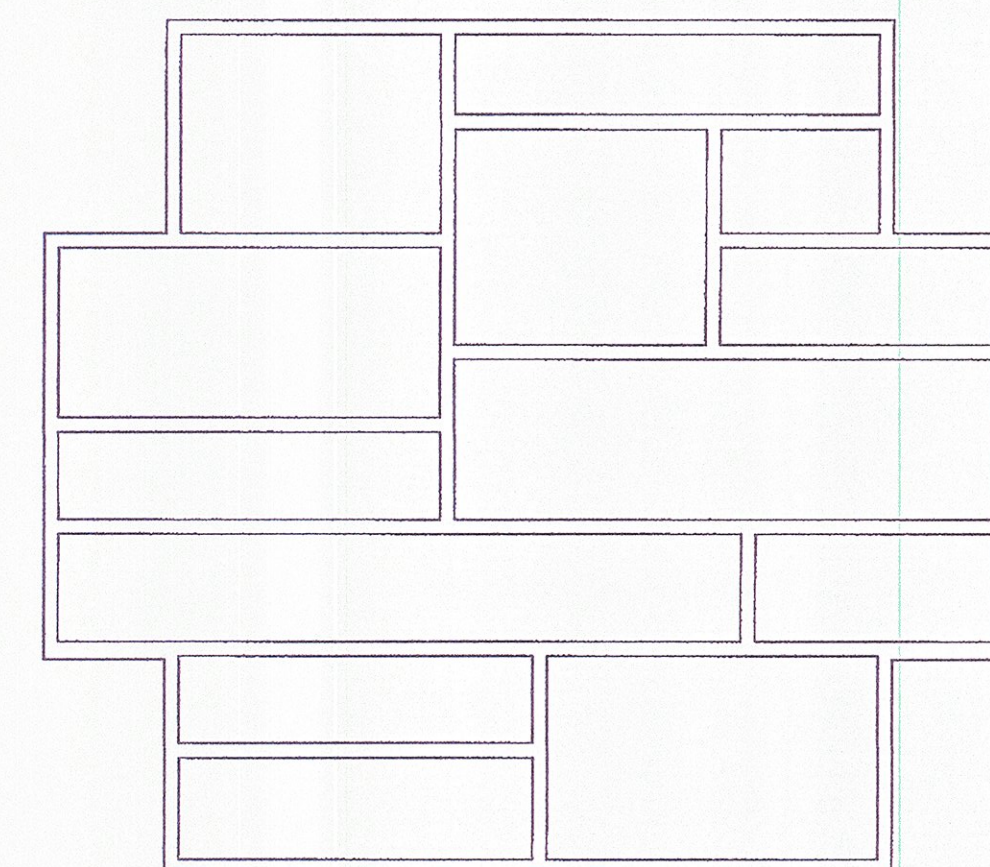
FILTER CLOTH DETAIL
PARTIAL ELEVATION - BACK FACE
SCALE: 3/16" = 1'-0"



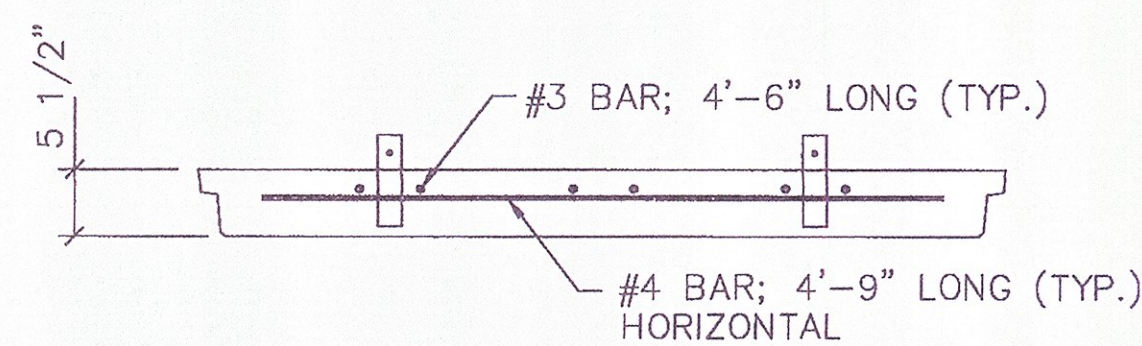
PANEL TYPE "A"
WITH R6 REINFORCEMENT
FRONT VIEW
SCALE: 3/4" = 1'-0"



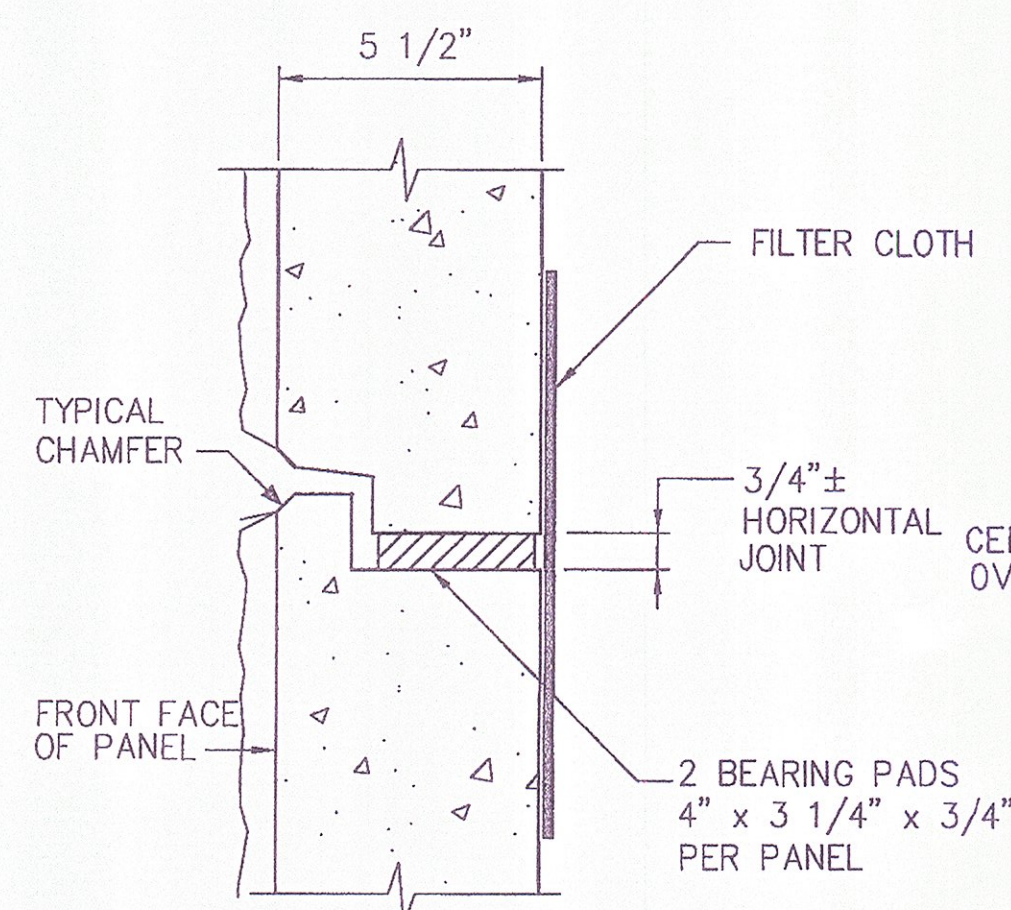
SECTION C-C
SCALE: 3/4" = 1'-0"



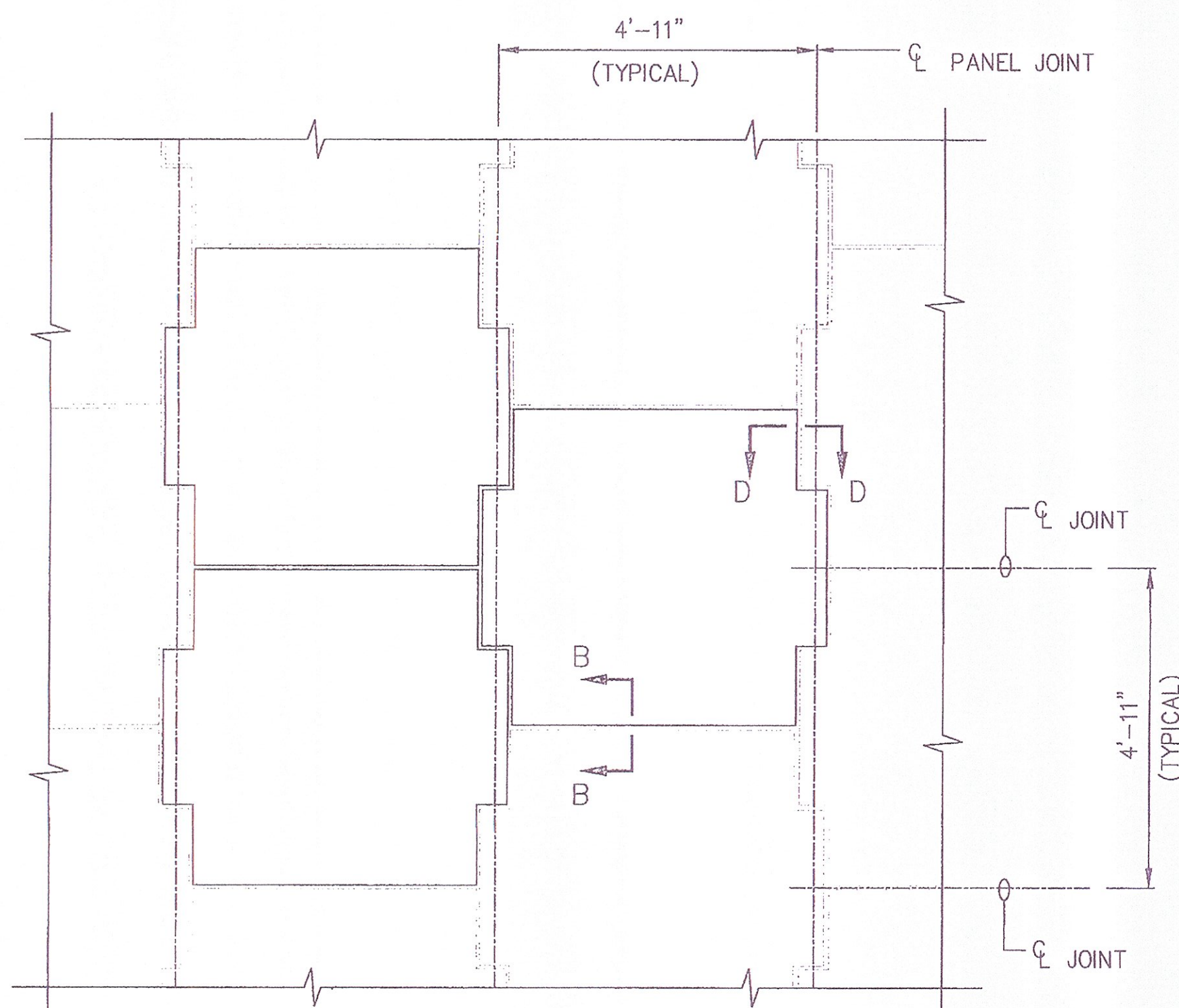
ASHLAR STONE PANEL FINISH
PANEL TYPE A
(LOOKING AT PANEL FACE)



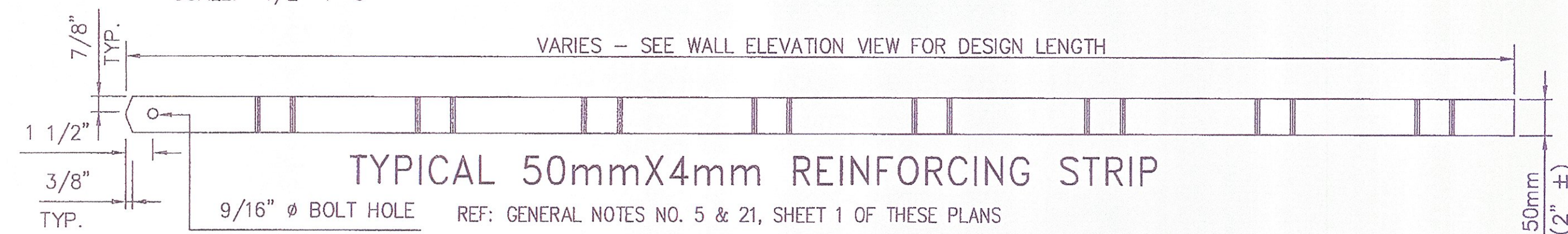
SECTION A-A
SCALE: 3/4" = 1'-0"



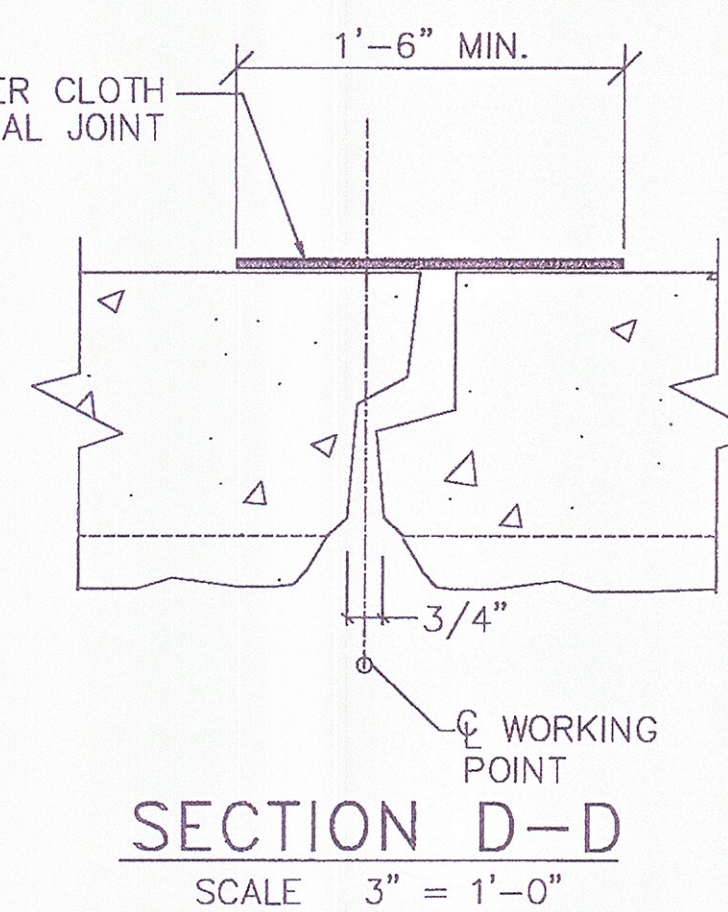
SECTION B-B
SCALE: 3" = 1'-0"



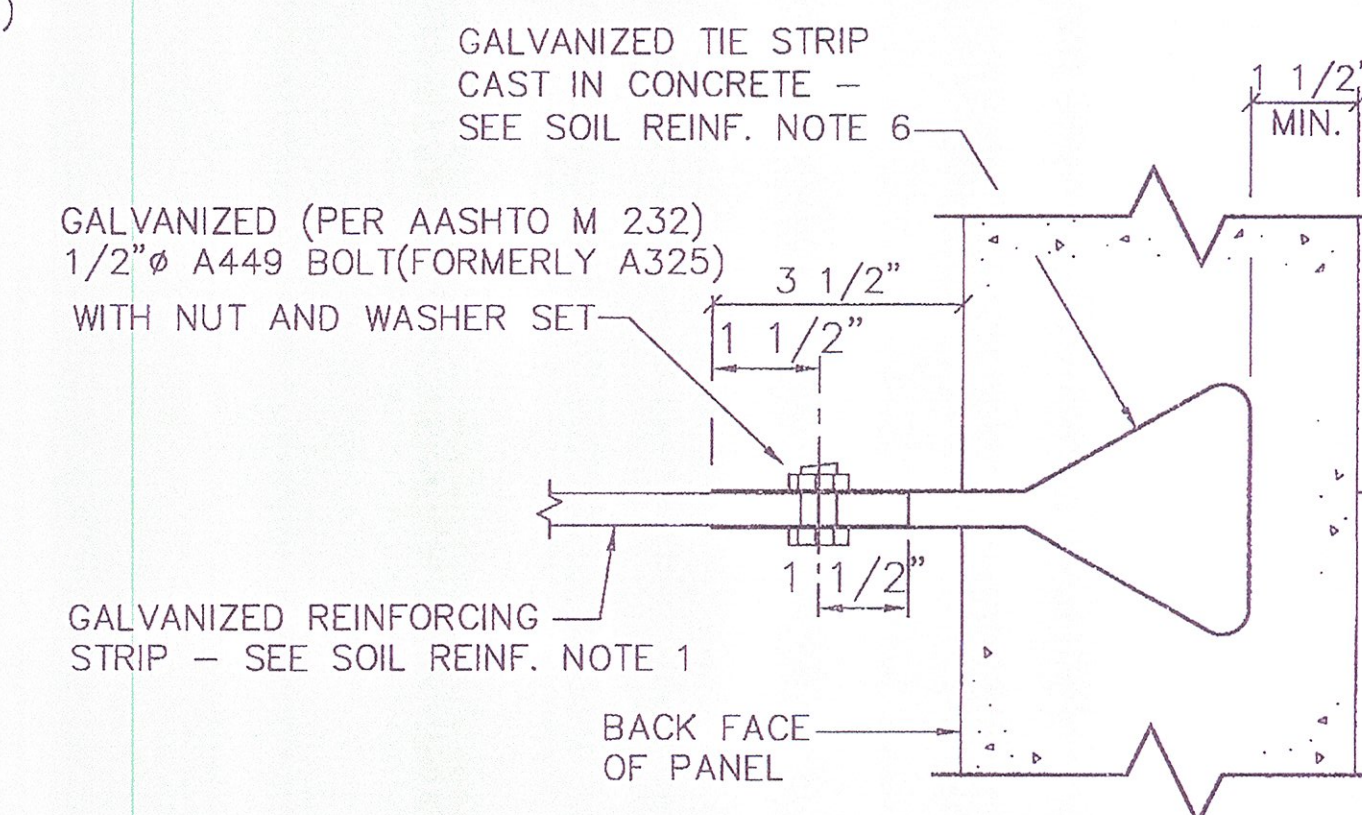
TYPICAL PANEL LAYOUT
PARTIAL ELEVATION - FRONT FACE
SCALE: 1/2" = 1'-0"



TYPICAL 50mmX4mm REINFORCING STRIP



SECTION D-D
SCALE: 3" = 1'-0"



CONNECTION DETAIL
NO SCALE

PANEL THICKNESS	REINFORCEMENT DESIGNATION	PANEL REINFORCEMENT	MAXIMUM ALLOWABLE HORIZONTAL STRESS AT FACING (ksf)
5 1/2"	R6	6-#3 VERTICAL 4-#4 HORIZONTAL	1.60

- NOTES:**
- PRECAST PANELS
- REINFORCING STEEL TO BE A615 GRADE 60(EPOXY COATED).
 - PRECAST CONCRETE PANELS SHALL CONFORM TO VTAOT SECTION 540, 28 DAY COMPRESSIVE STRENGTH OF CONCRETE = 5,000 psi.
 - 3/8" x 3/8" CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY), CHAMFER IS OPTIONAL FOR THE BOTTOM OF BOTTOM PANELS.
 - ALL PANEL TYPES AND OTHER RELATED ELEMENTS WILL BE DETAILED ON PANEL FABRICATION DRAWINGS.
 - ALL PANELS SHALL HAVE TWO LIFTING INSERTS OF ONE TON CAPACITY EACH.
 - PANEL DESIGN THICKNESS IS 5 1/2".
 - REINFORCED EARTH WALL PANELS SHALL HAVE AN ASHLAR STONE FORM LINER FINISH. SLIP JOINT COVERS SHALL HAVE A PLAIN FORM FINISH.

- SOIL REINFORCEMENT AND ACESORIES
- REINFORCING STRIPS SHALL BE 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 OR AASHTO M111 (2 oz/FT²).
 - BOLTS SHALL BE ASTM A449 (FORMERLY A325). GALVANIZED PER ASTM A153.
 - BEARING BLOKS SHALL BE EPDM RUBBER PADS WITH DUROMETER HARDNESS OF 80±5, CONFORMING TO ASTM D2000.
 - SHIMS SHALL BE EPDM RUBBER PADS WITH DUROMETER HARDNESS OF 80±5, CONFORMING TO ASTM D2000. NOMINAL DIMENSION OF SHIM IS 2"x3 1/2"x3/16" THICK.
 - FILTER FABRIC FOR PANEL JOINTS SHALL COMPLY WITH AASHTO M288 SUBSURFACE DRAINAGE, CLASS 3, MINIMUM LAP SHALL BE 4"
 - TIE STRIPS SHALL BE 10 GAGE, ASTM A1011 (FORMERLY A-570) GRADE 50, GALVANIZED AS PER ASTM A-123 OR A-153, 10 GAGE.
 - SEE CONSTRUCTION MANUAL FOR ADDITIONAL INFORMATION.

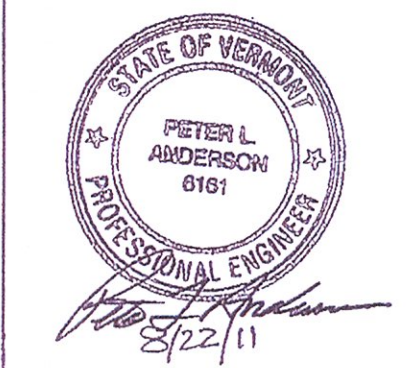
APPROVED Approved as Noted
 Revises and Resubmits DISAPPROVED

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: *KZ* DATE: 7/11
 SIGNED BY: *Michael Lutz* DATE: 9/11

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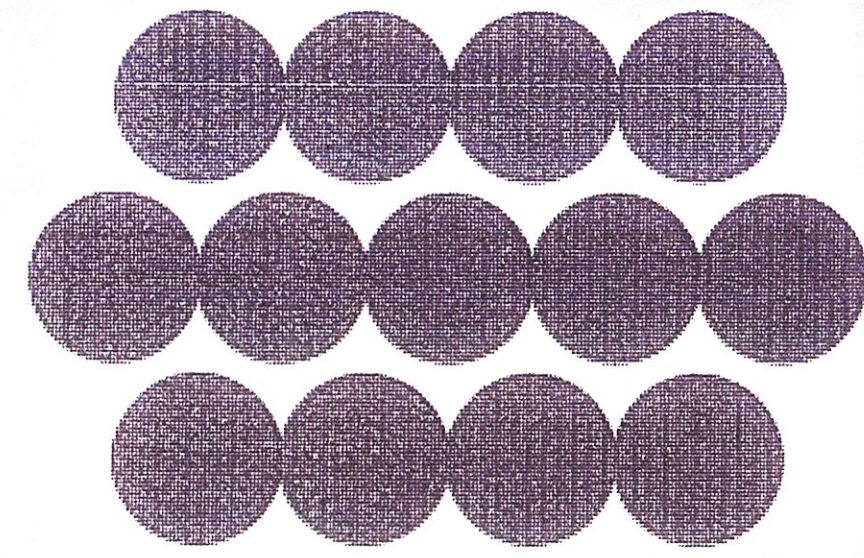
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REINFORCED EARTH
8614 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175

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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		OWNER VTAOT	DRAWING NO. 7 OF 7
REV.	DATE	DESCRIPTION	SCALE AS SHOWN
		DRAWING COVERS STANDARD PANEL DETAILS	

R:\RE15053_REW_VT_CABOT_DANVILLE\DWGS\07_STANDARD_PANEL_DETAILS.DWG



REINFORCED eARTH[®]

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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.

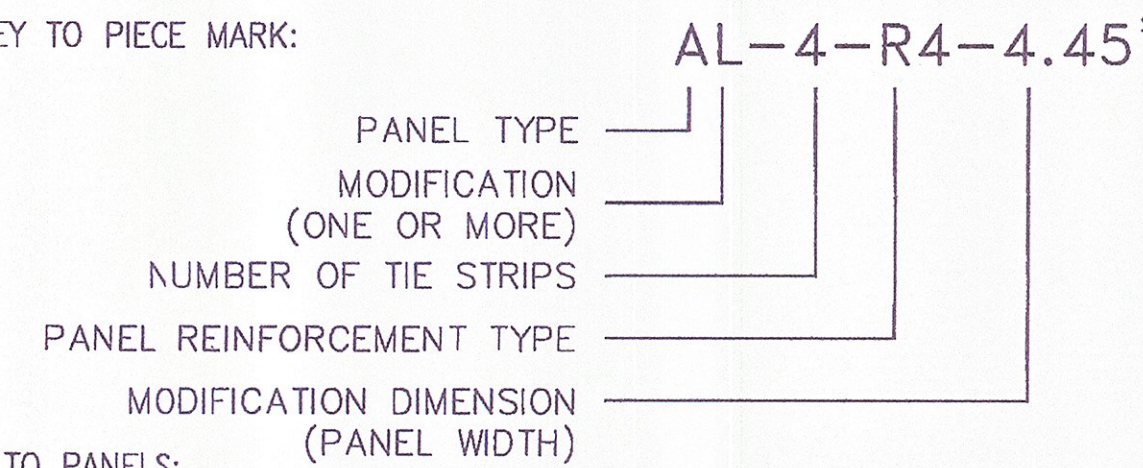
PANEL GENERAL NOTES (CONT.)

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

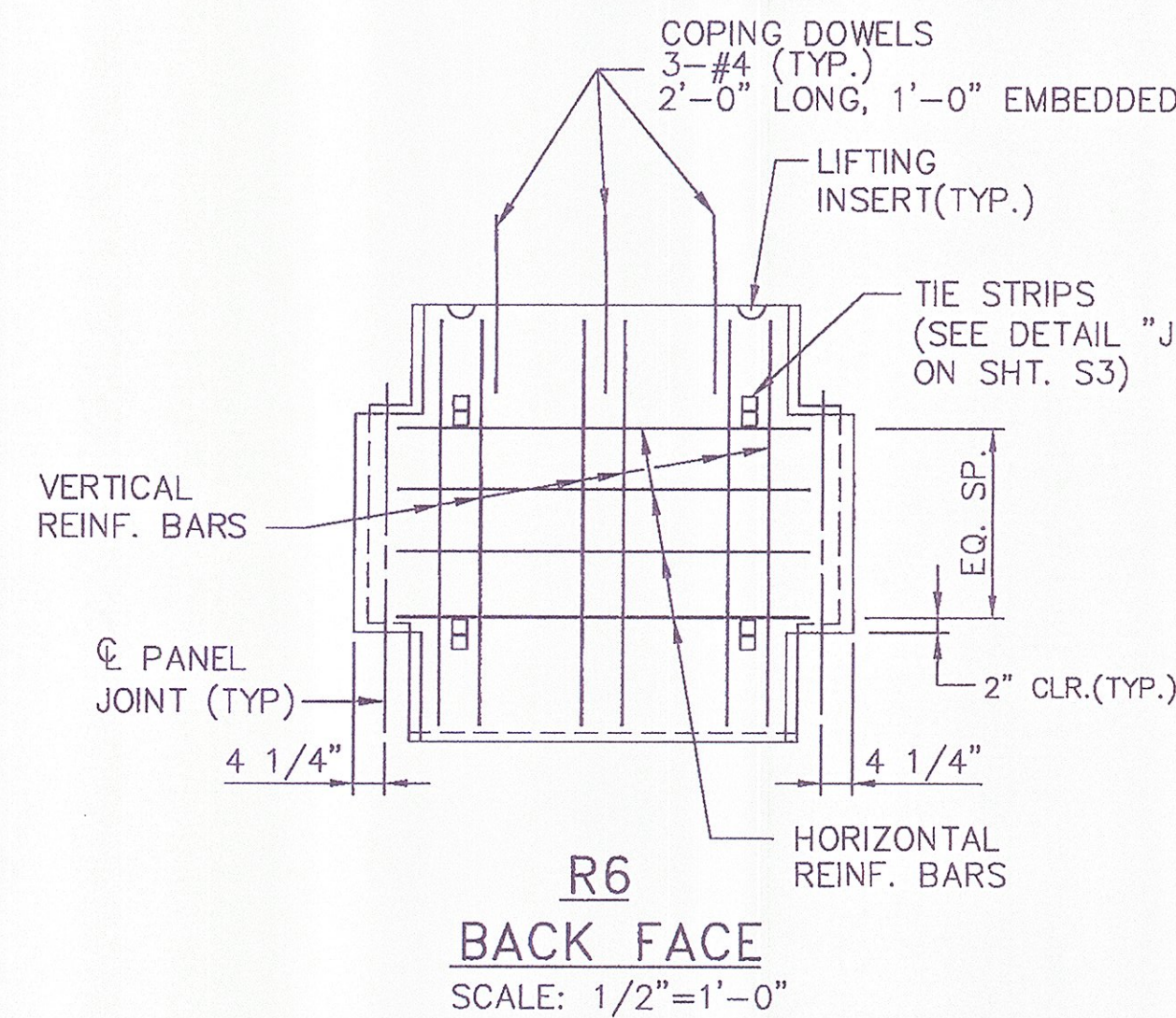
PIECE MARK	PANEL REINFORCEMENT	
	HORIZONTAL BARS	VERTICAL BARS
XX-XX-R6	4-#4	6-#3

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

- KEY TO PIECE MARK:



- 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 "CPW"
S10	SLIP JOINTS
S11	HFCW1
S12	HFCW2
S13	HFCW3

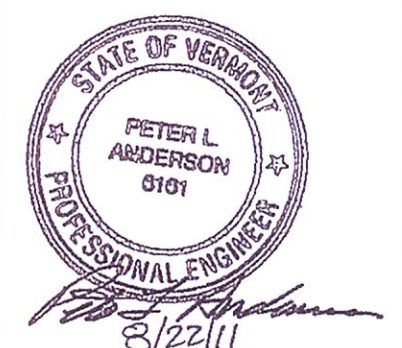
APPROVED Revisions and Resubmit Approved as Noted DISAPPROVED

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CONSULTING ENGINEERS

CHECKED BY: *KEA* DATE: 9/11
SIGNED BY: *Michael Wang* DATE: 9/11

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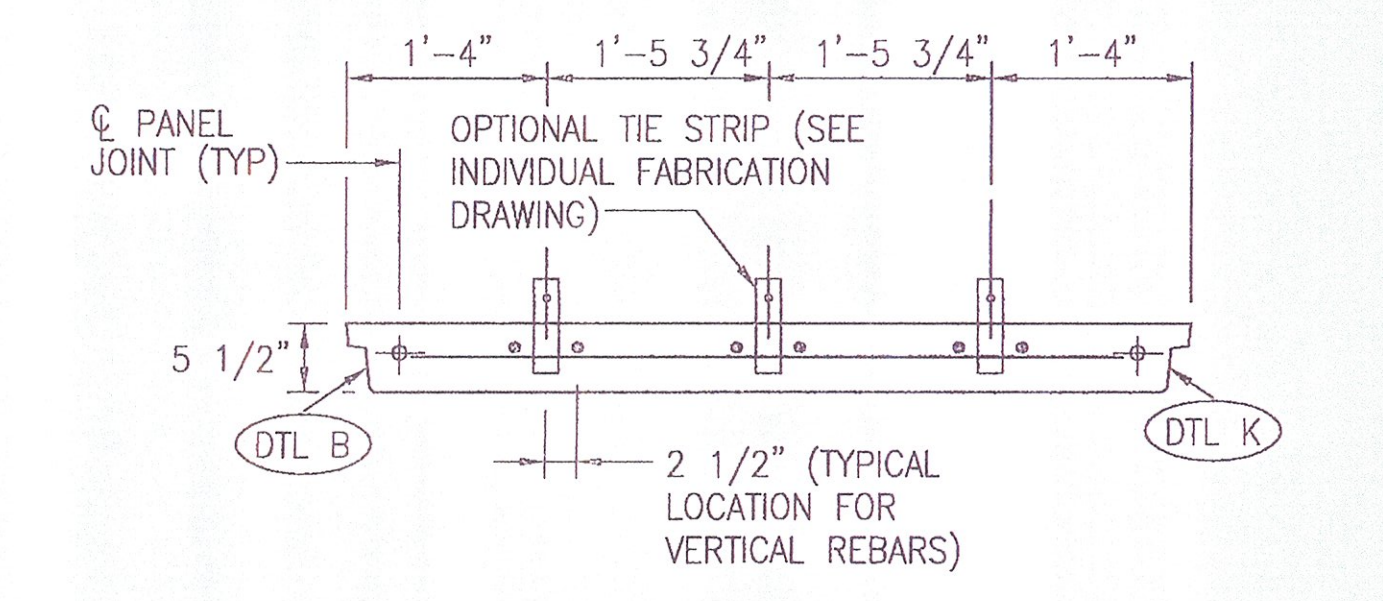
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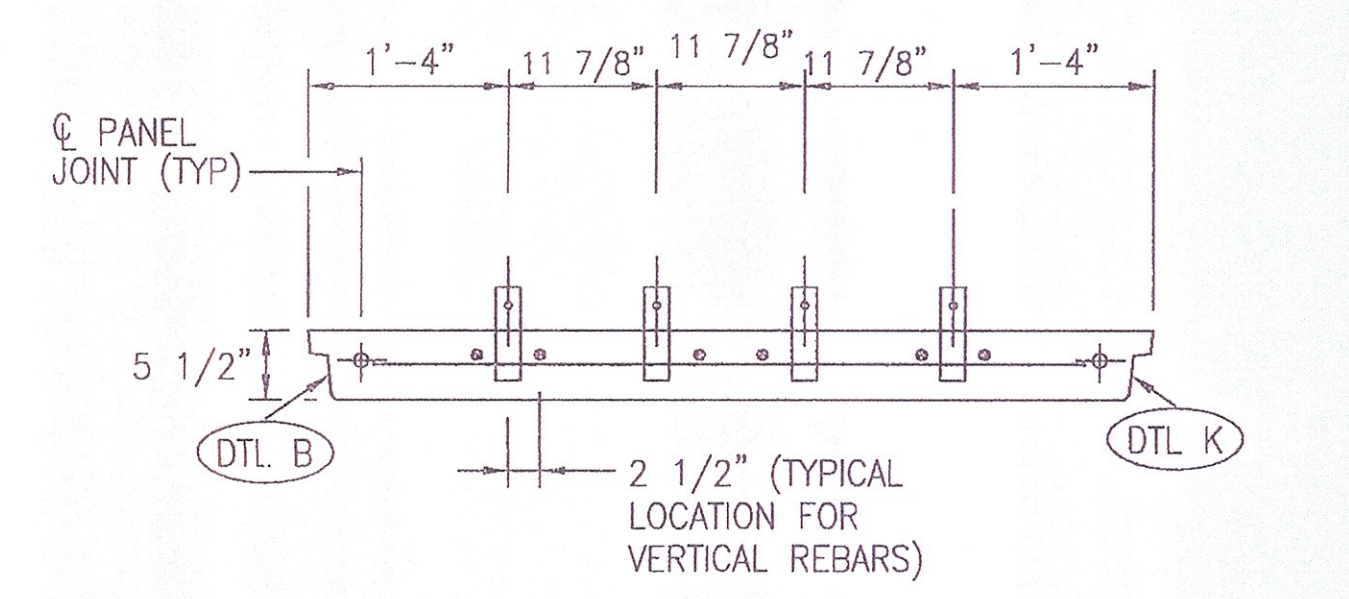


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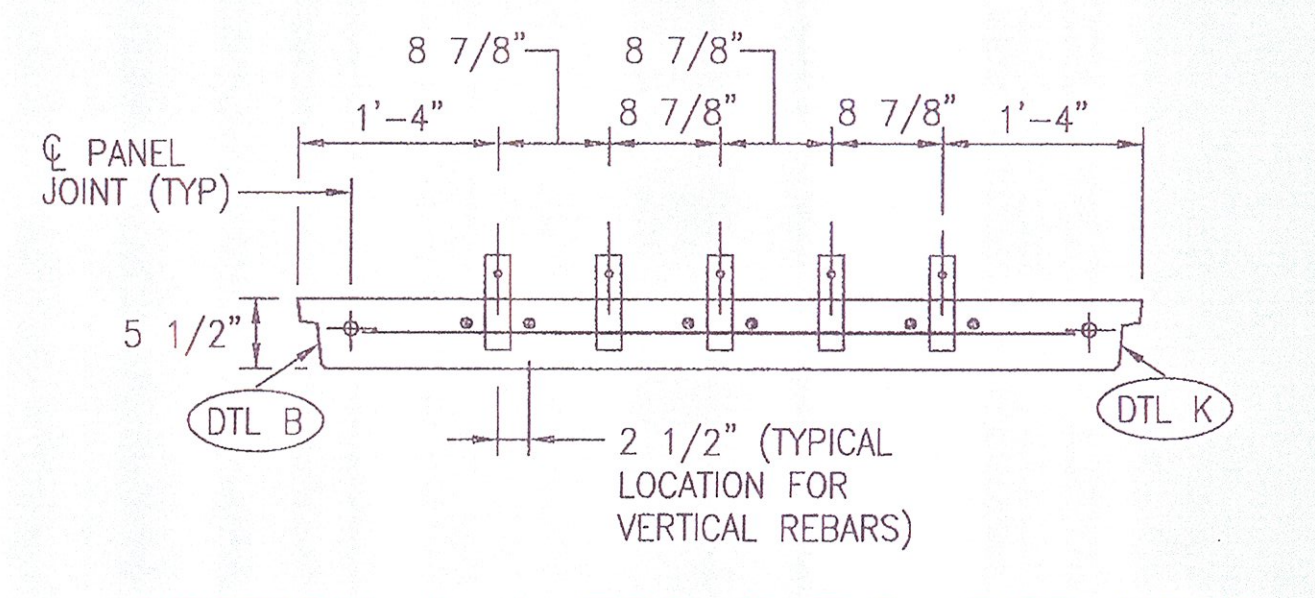
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PROJECT ENGR:	DTM	2	8/19/11	LOCATION	CABOT-DANVILLE, VERMONT	CONTRACT NO.	RE-15053
CHECKED BY:	EEH/LY	1	7/19/11	OWNER	VTAOT	DRAWING NO.	S1 OF S13
REV.	DATE			DRAWING COVERS	CASTING NOTES	SCALE	AS SHOWN



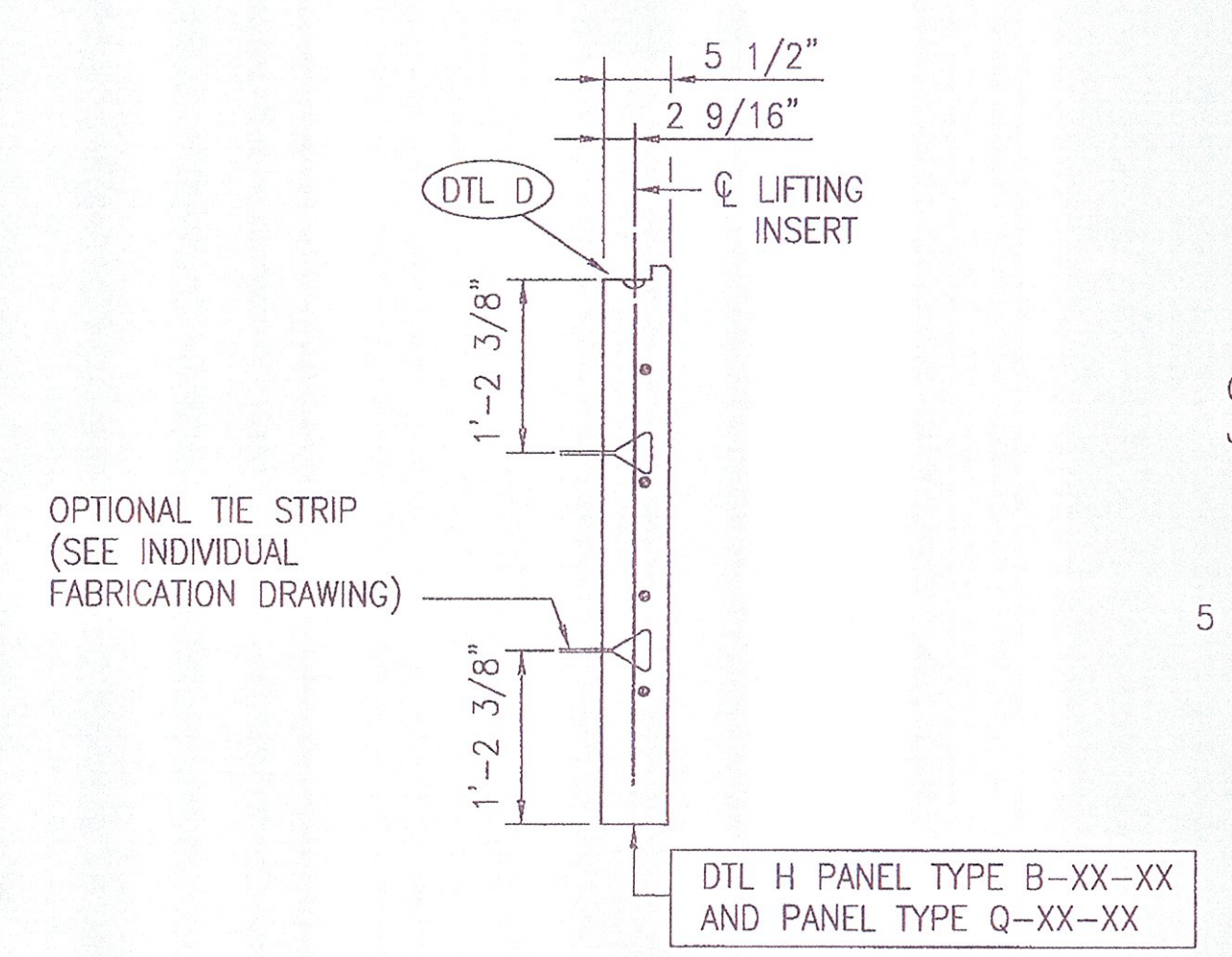
SECTION A-A FOR 2 OR 3 T.S. PER LEVEL



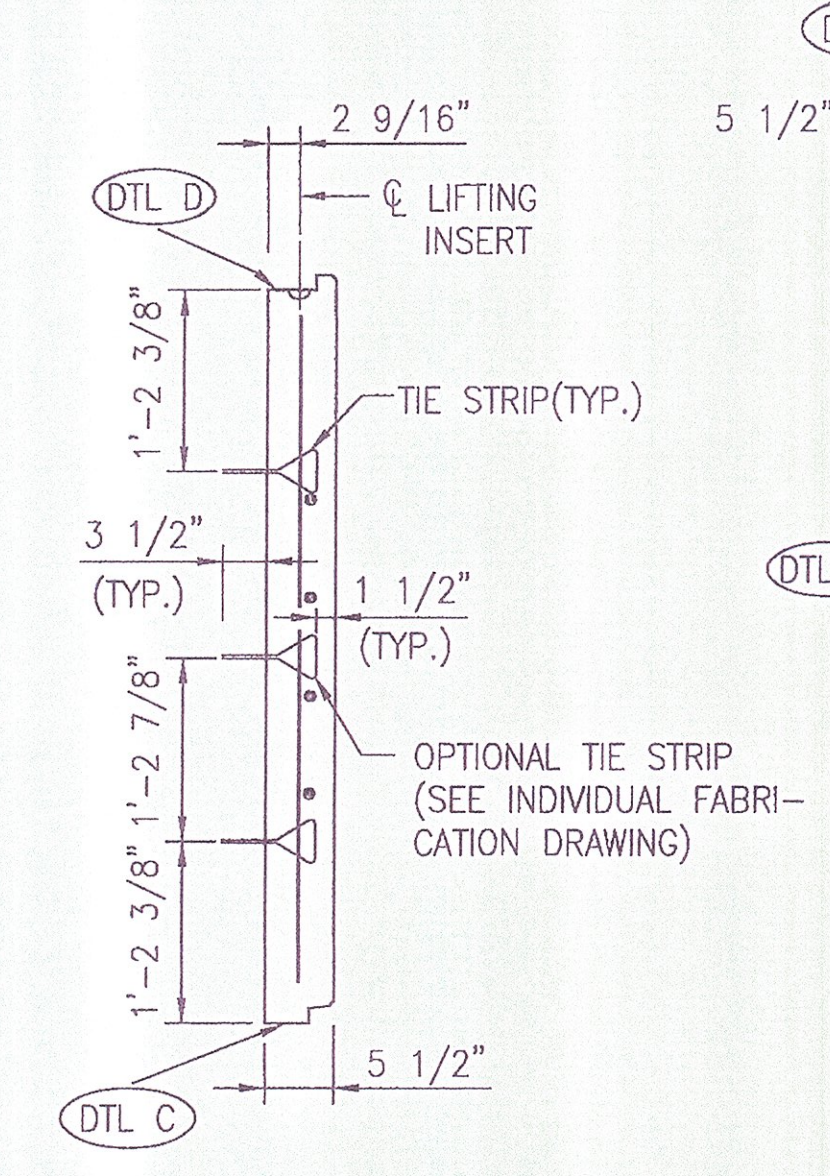
SECTION A-A FOR 4 T.S. PER LEVEL



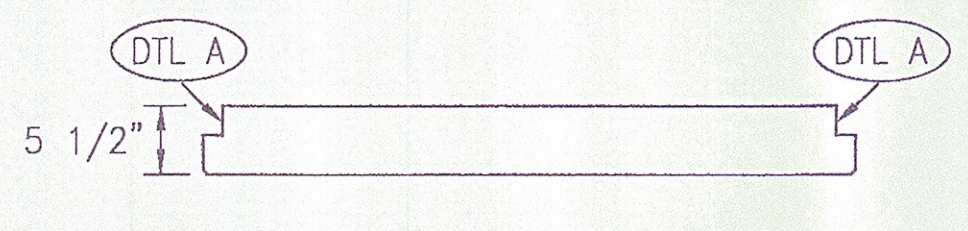
SECTION A-A FOR 5 T.S. PER LEVEL



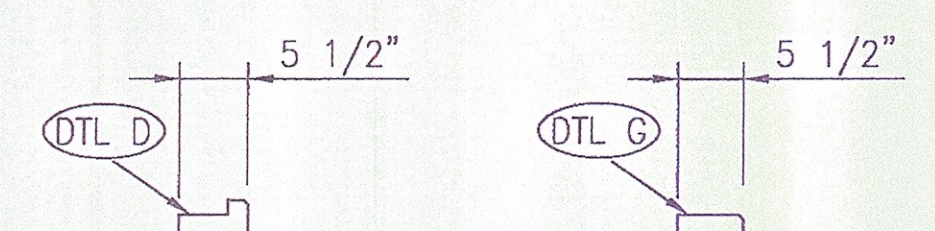
SECTION K-K



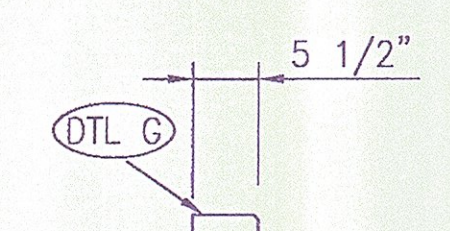
SECTION C-C



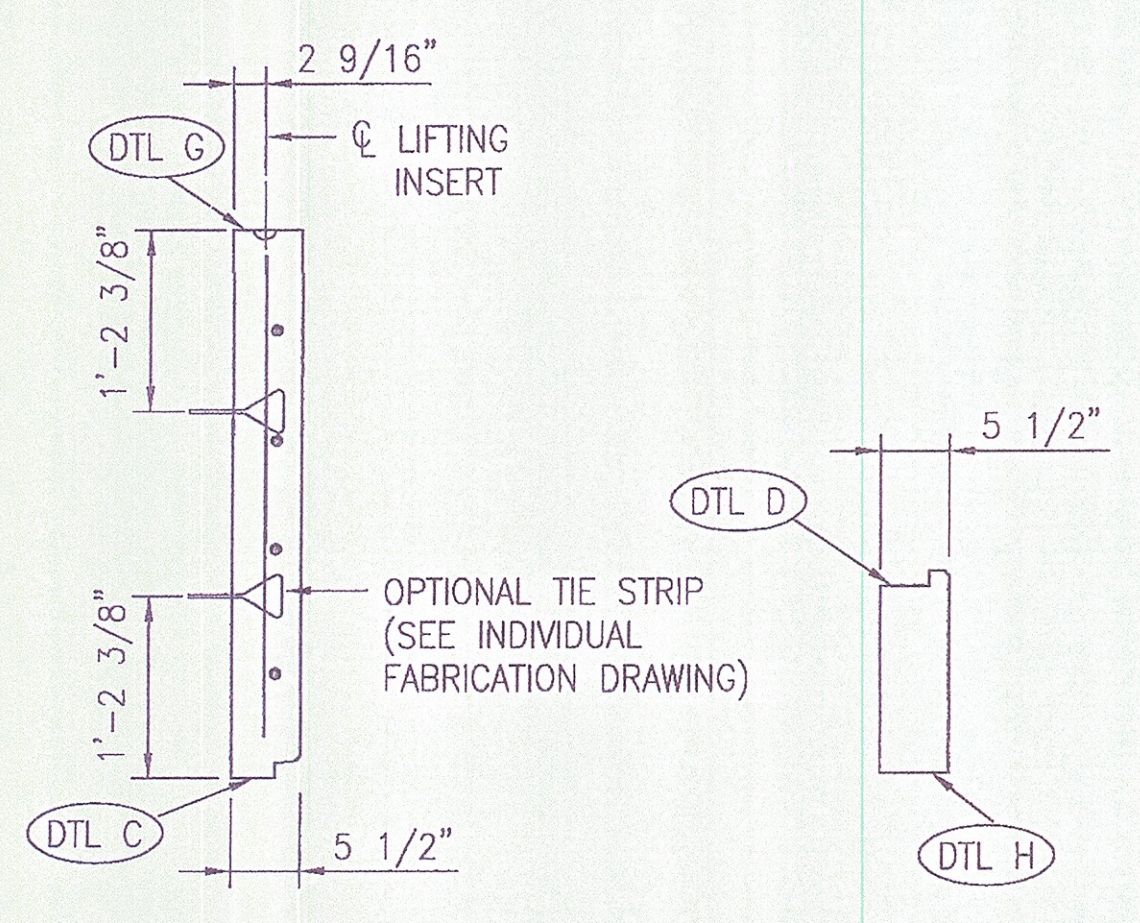
SECTION B-B



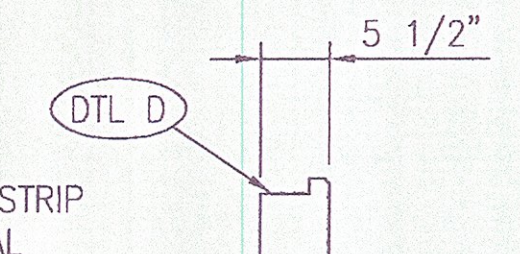
SECTION D-D



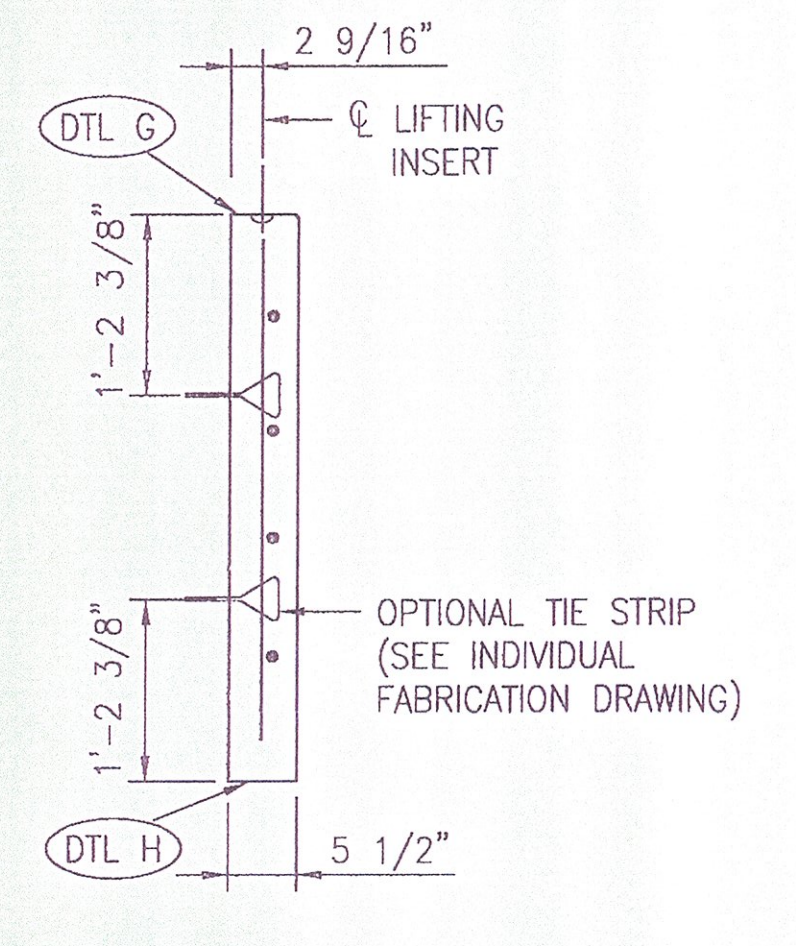
SECTION E-E



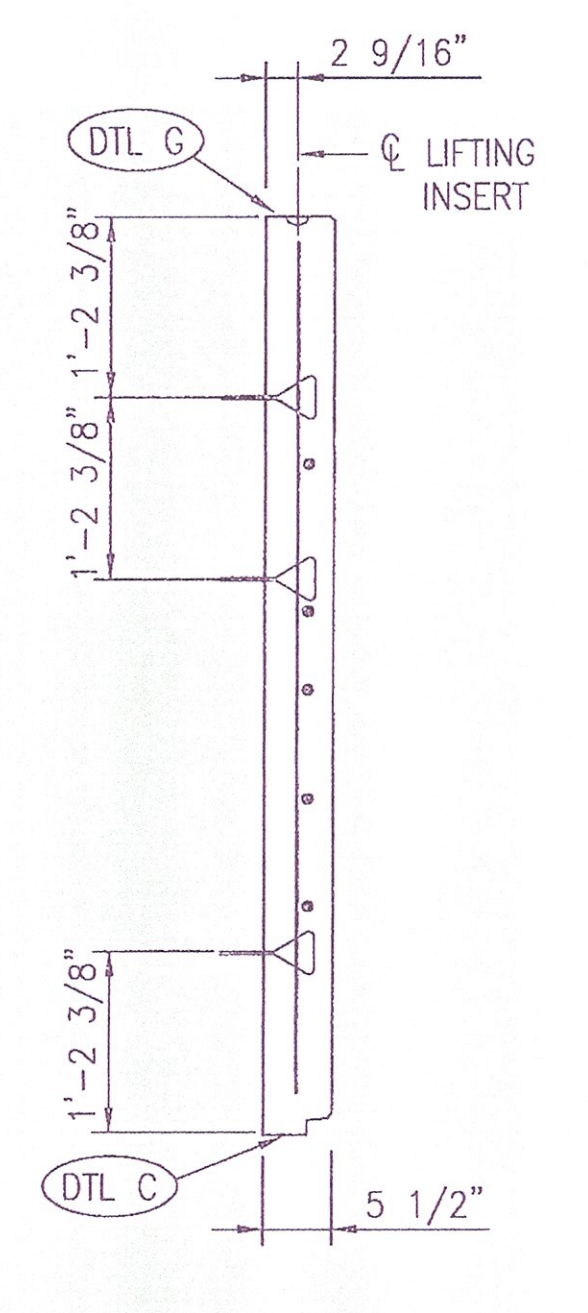
SECTION F-F



SECTION G-G

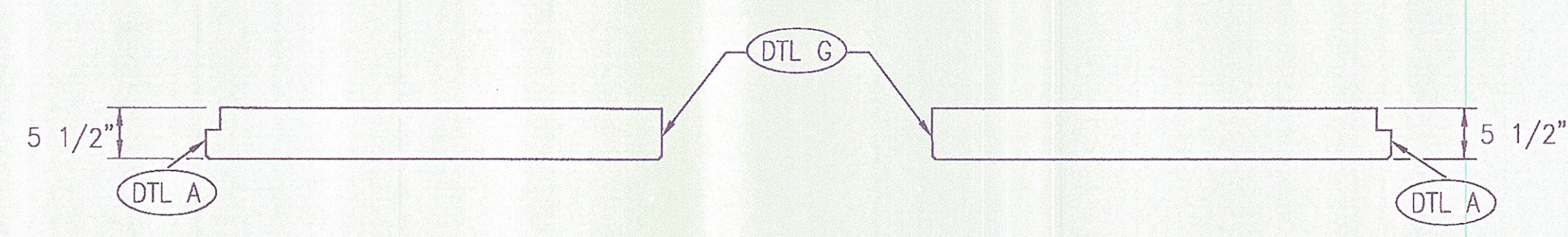


SECTION H-H

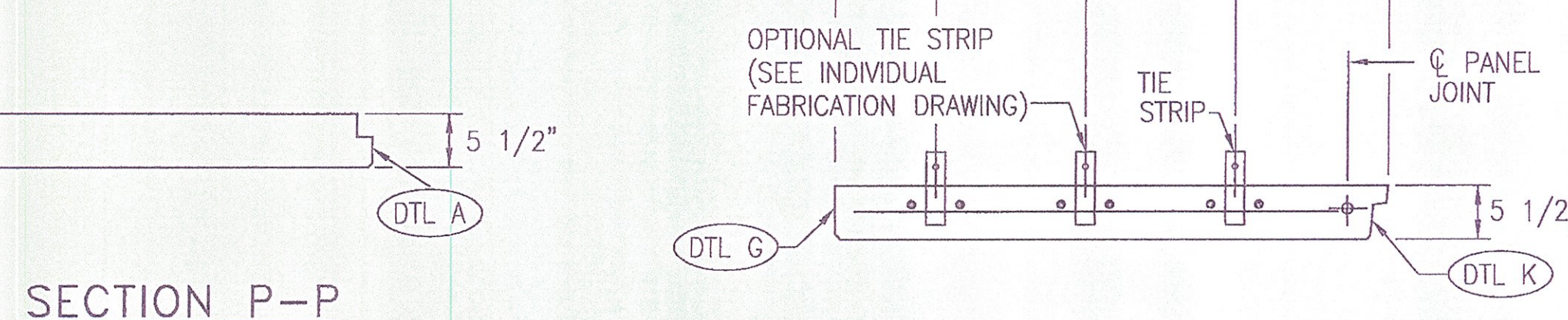


SECTION J-J

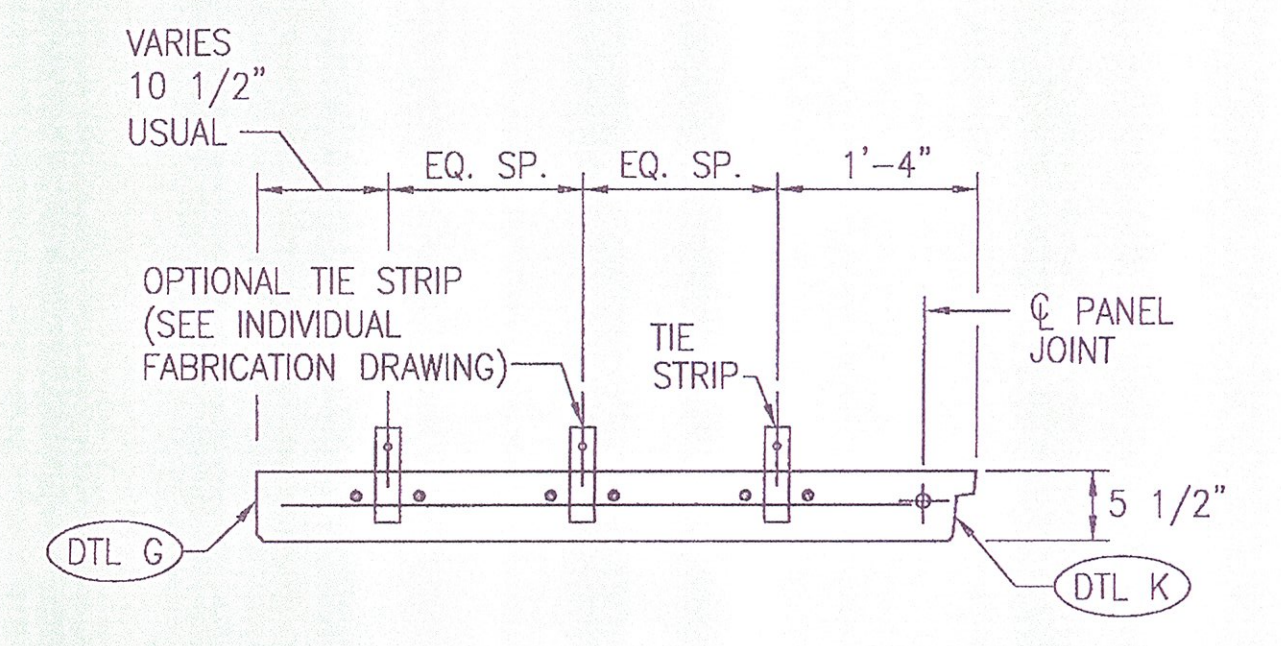
NOTE: ARCHITECTURAL FINISH NOT SHOWN FOR CLARITY



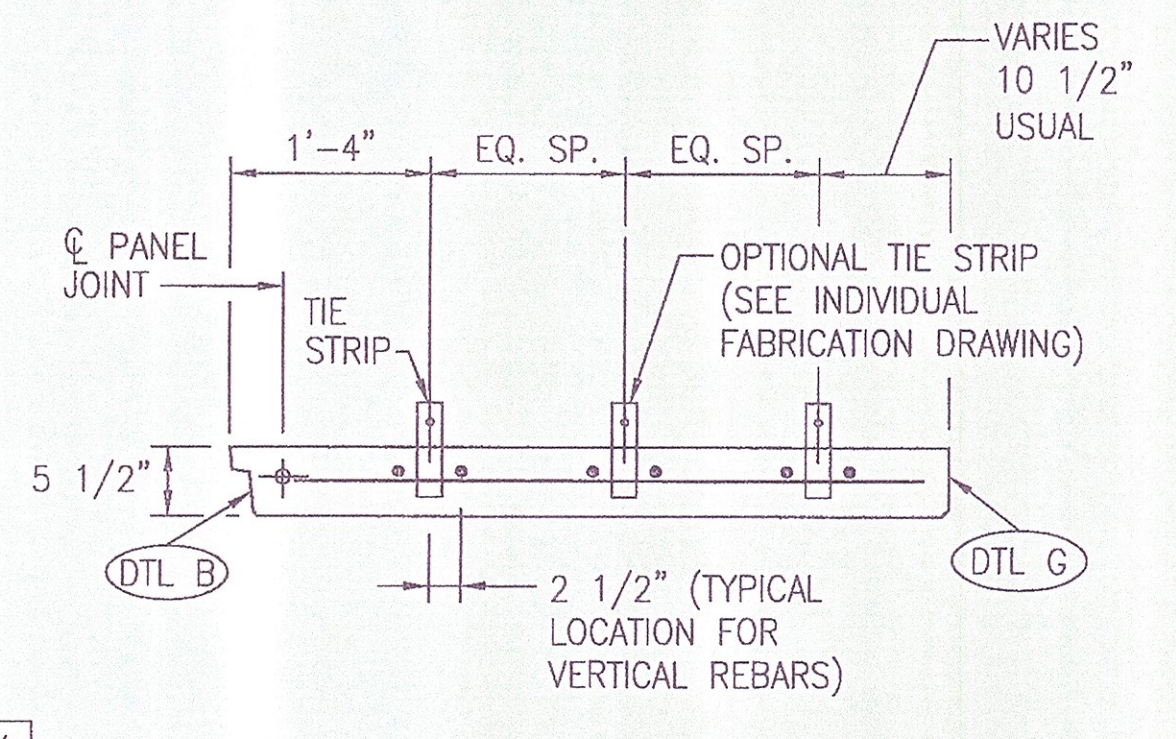
SECTION M-M



SECTION P-P



SECTION R-R



SECTION L-L

SEE INDIVIDUAL FABRICATION DRAWING FOR PLACEMENT OF REBARS.

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

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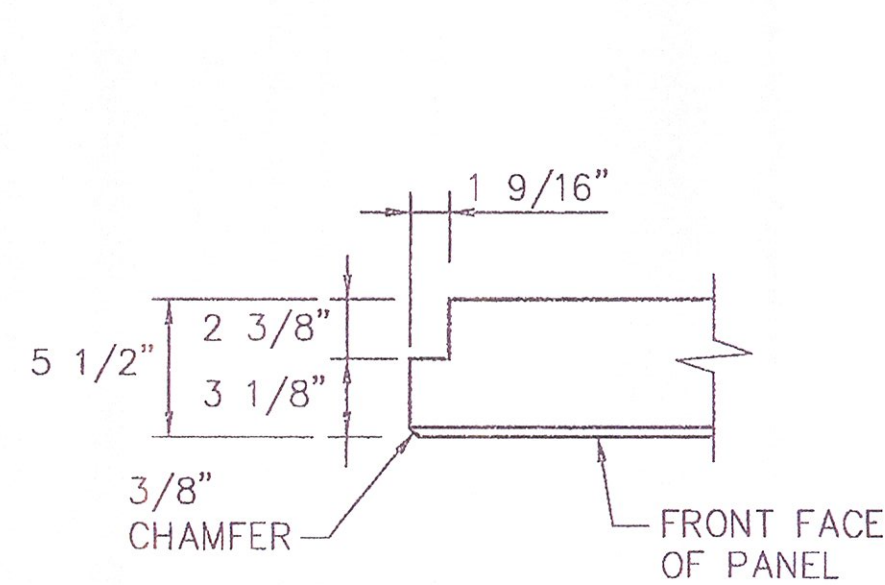
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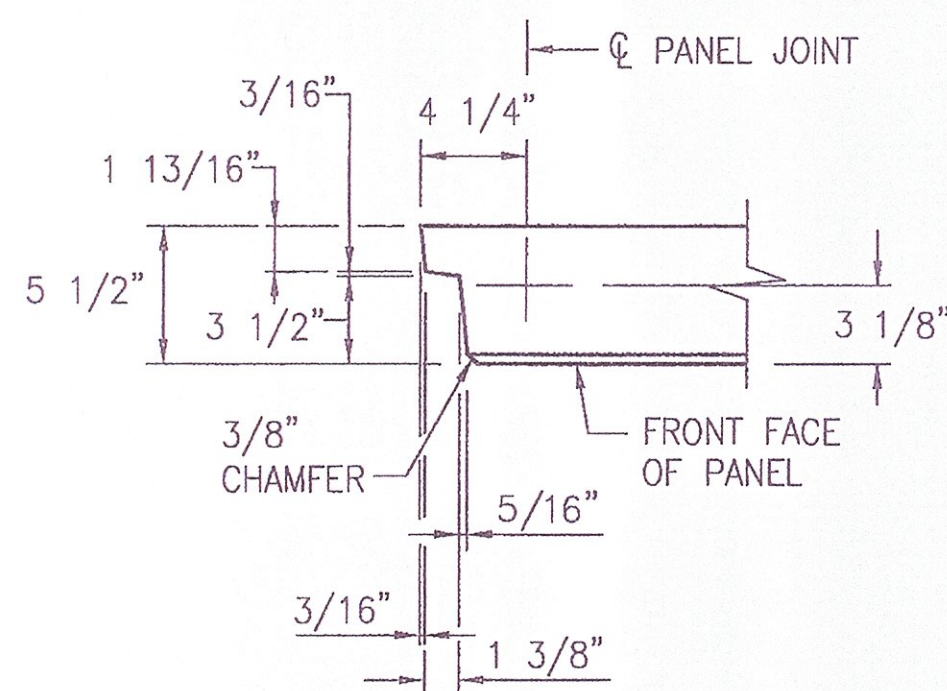
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DESIGNED BY: KC	PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/06/2011
PROJECT ENGR: DTM	LOCATION CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
CHECKED BY: EEH/LY	OWNER VTAOT	DRAWING NO. S2 OF S13
ENG. MANAGER	DRAWING COVERS CRUCIFORM PANEL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

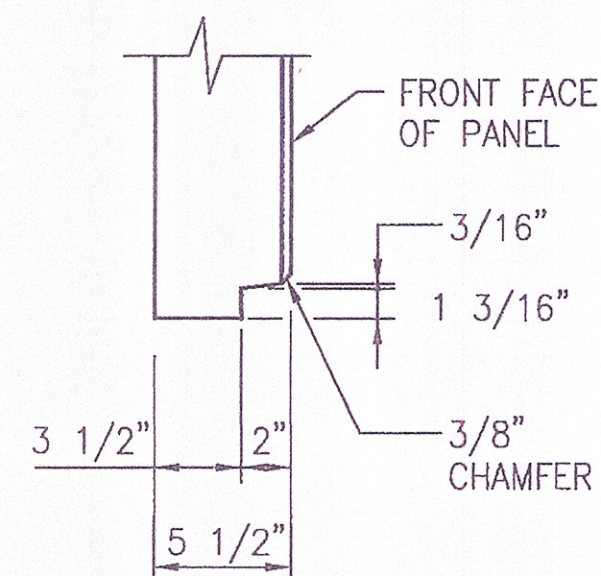
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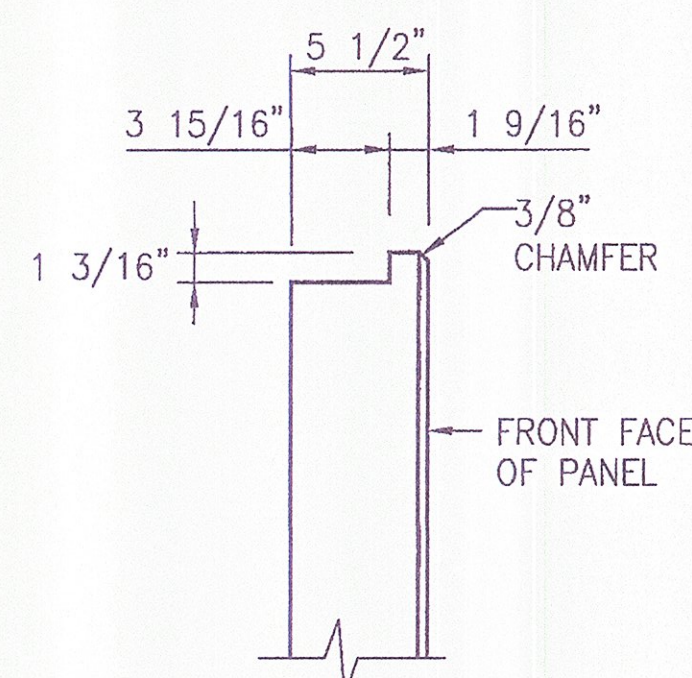
DETAIL "A"
SCALE: 1 1/2"=1'-0"



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

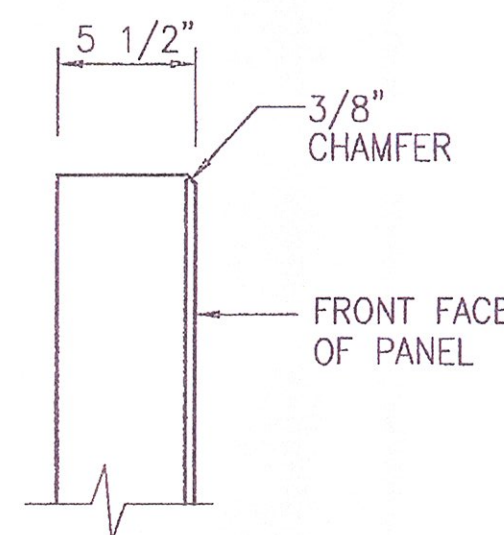


DETAIL "C"
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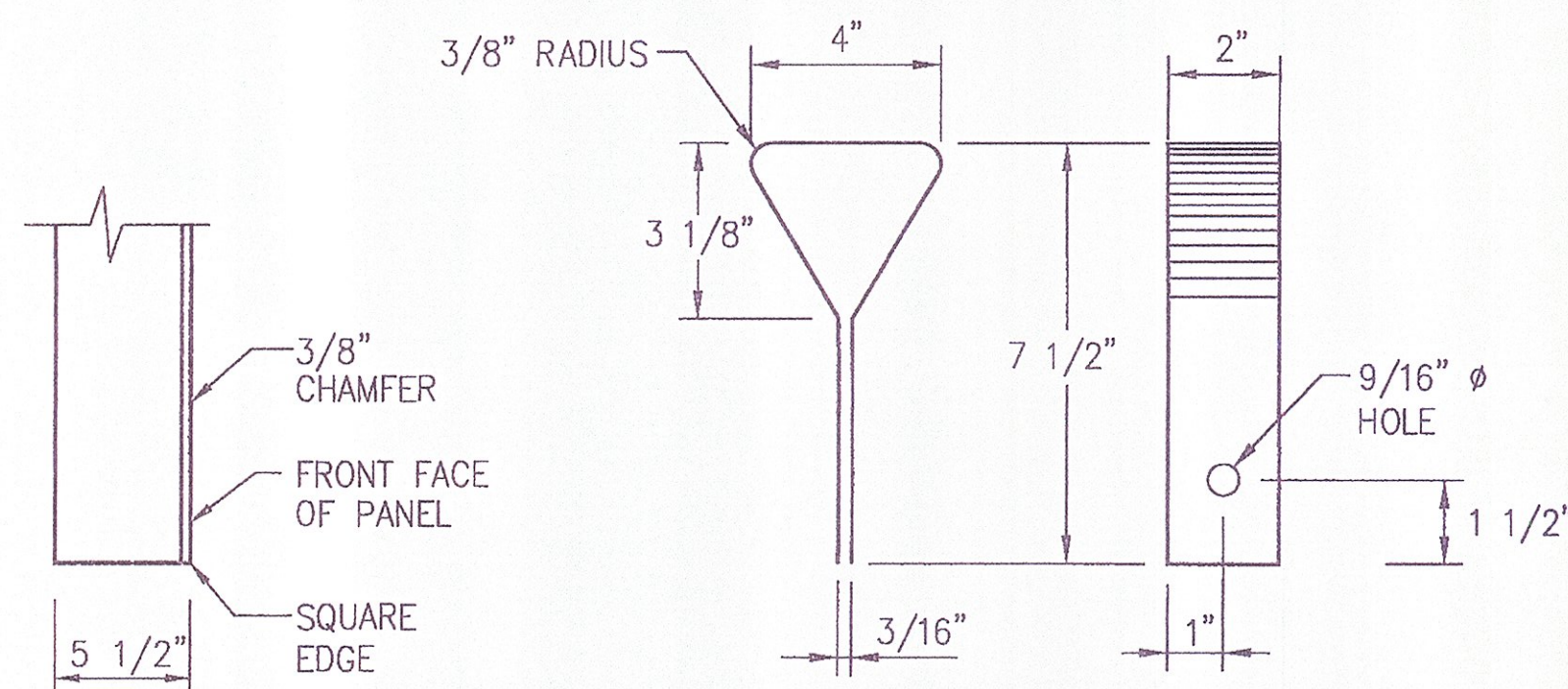


DETAIL "D"
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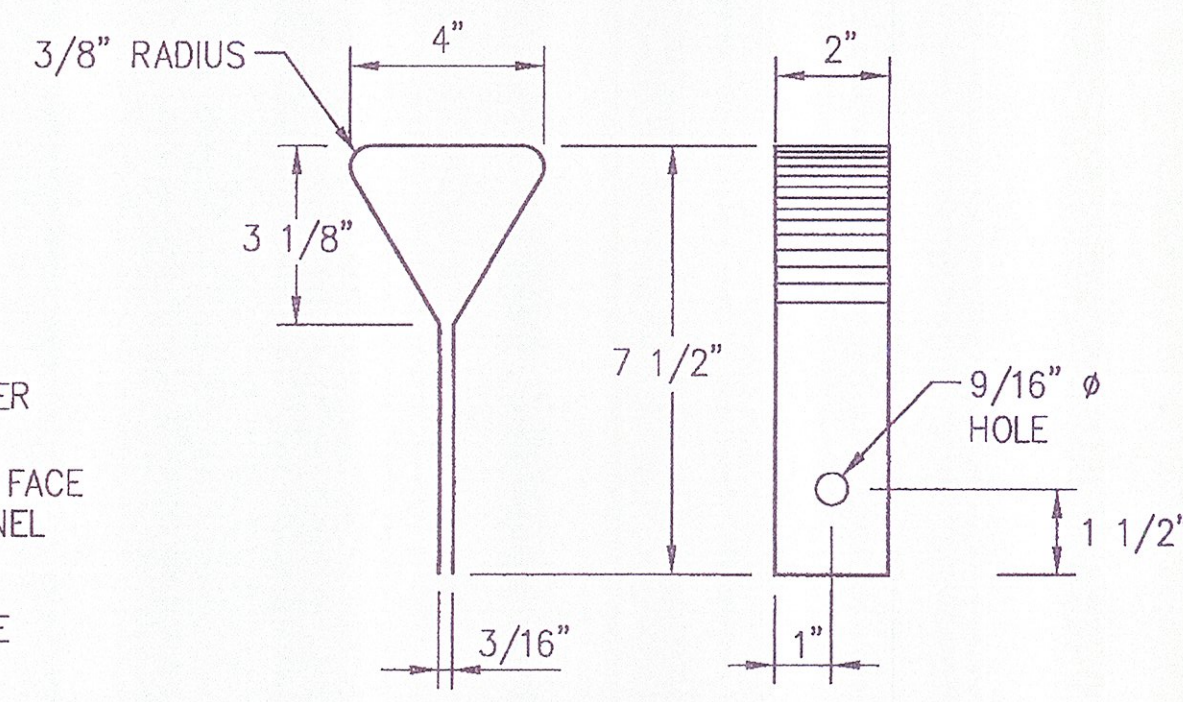
NOTE: ARCHITECTURAL FINISH NOT SHOWN FOR CLARITY



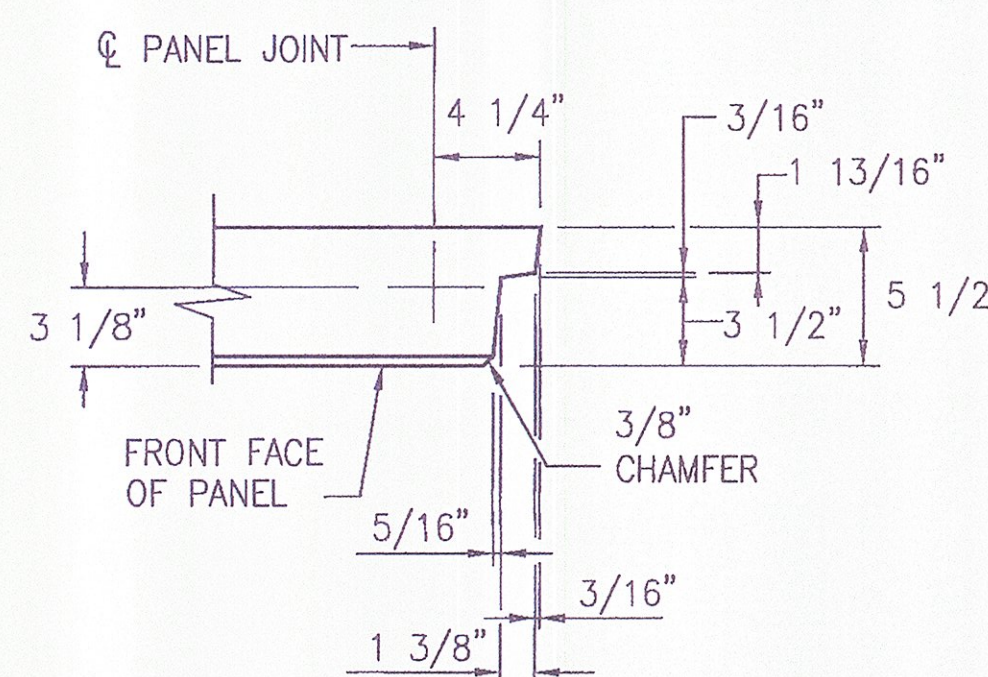
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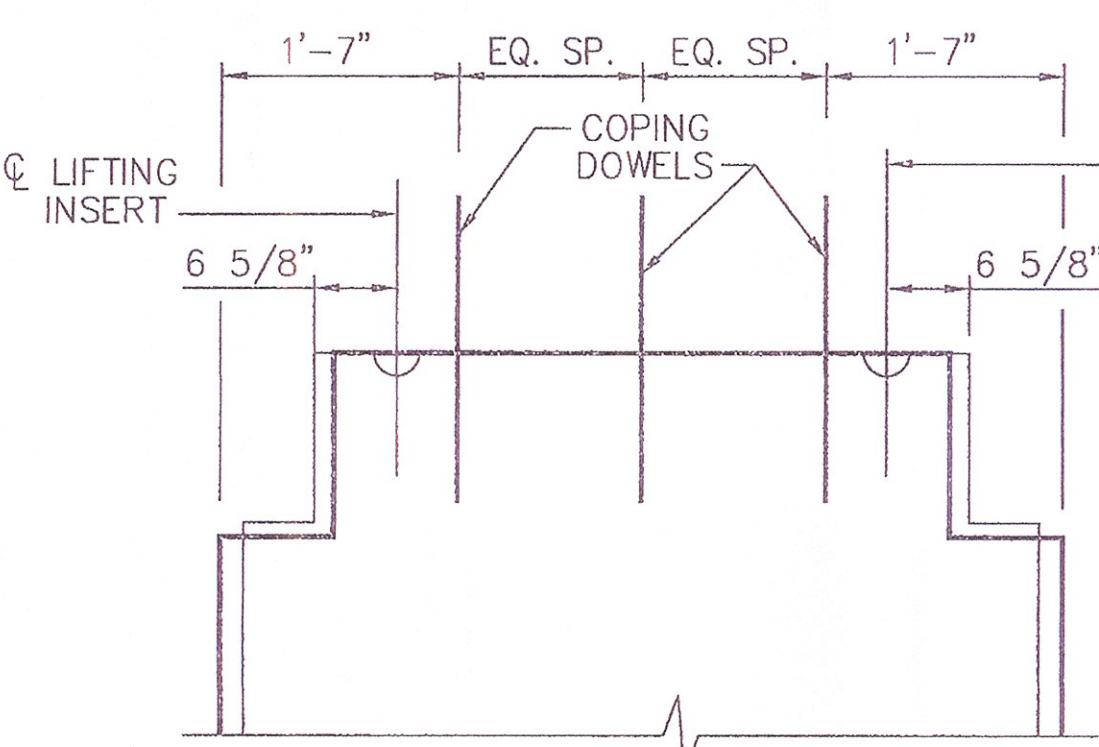
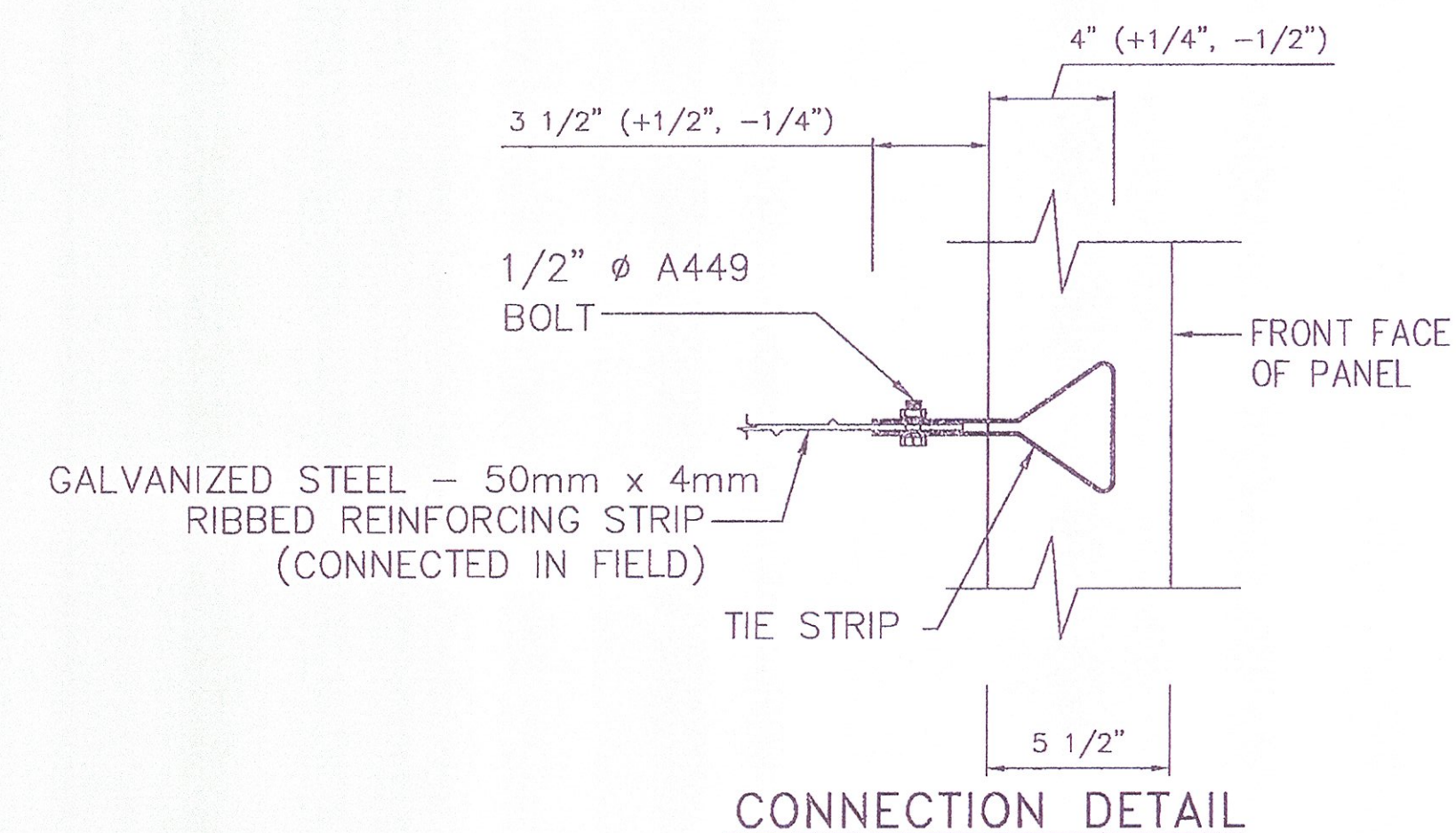
DETAIL "H"
SCALE: 1 1/2"=1'-0"



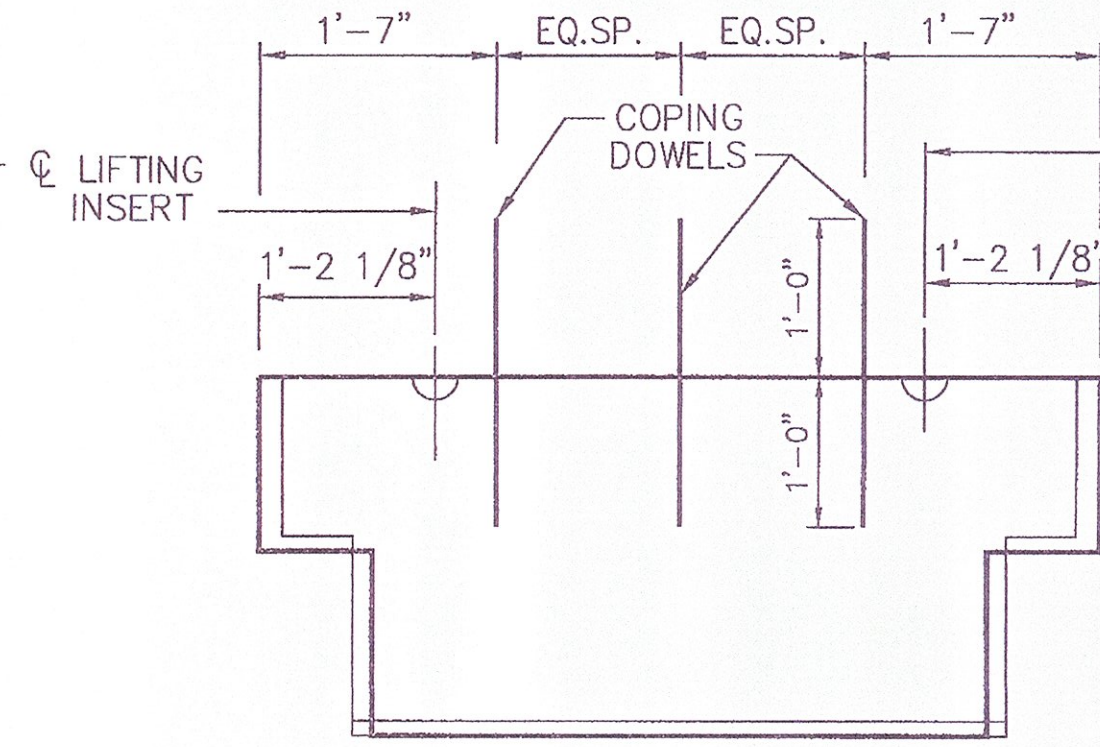
DETAIL "J"
(GENERAL NOTE No. 2, SHEET 1)
SCALE: NONE



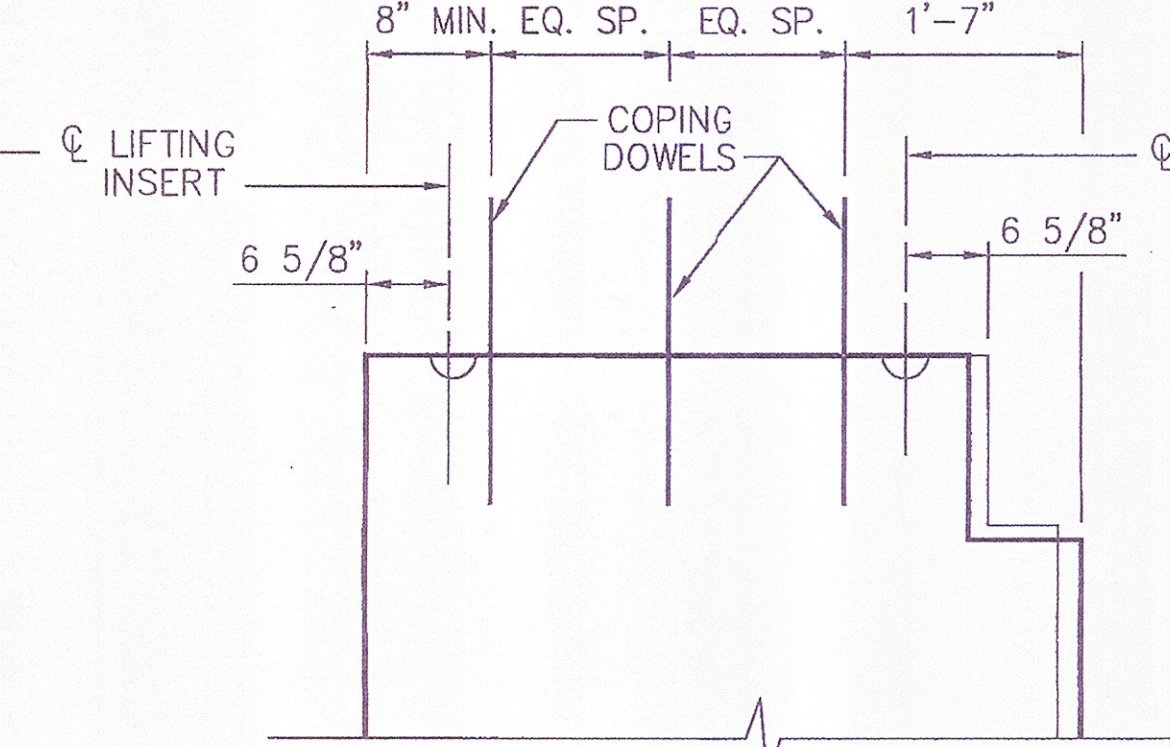
DETAIL "K"
SCALE: 1 1/2"=1'-0"



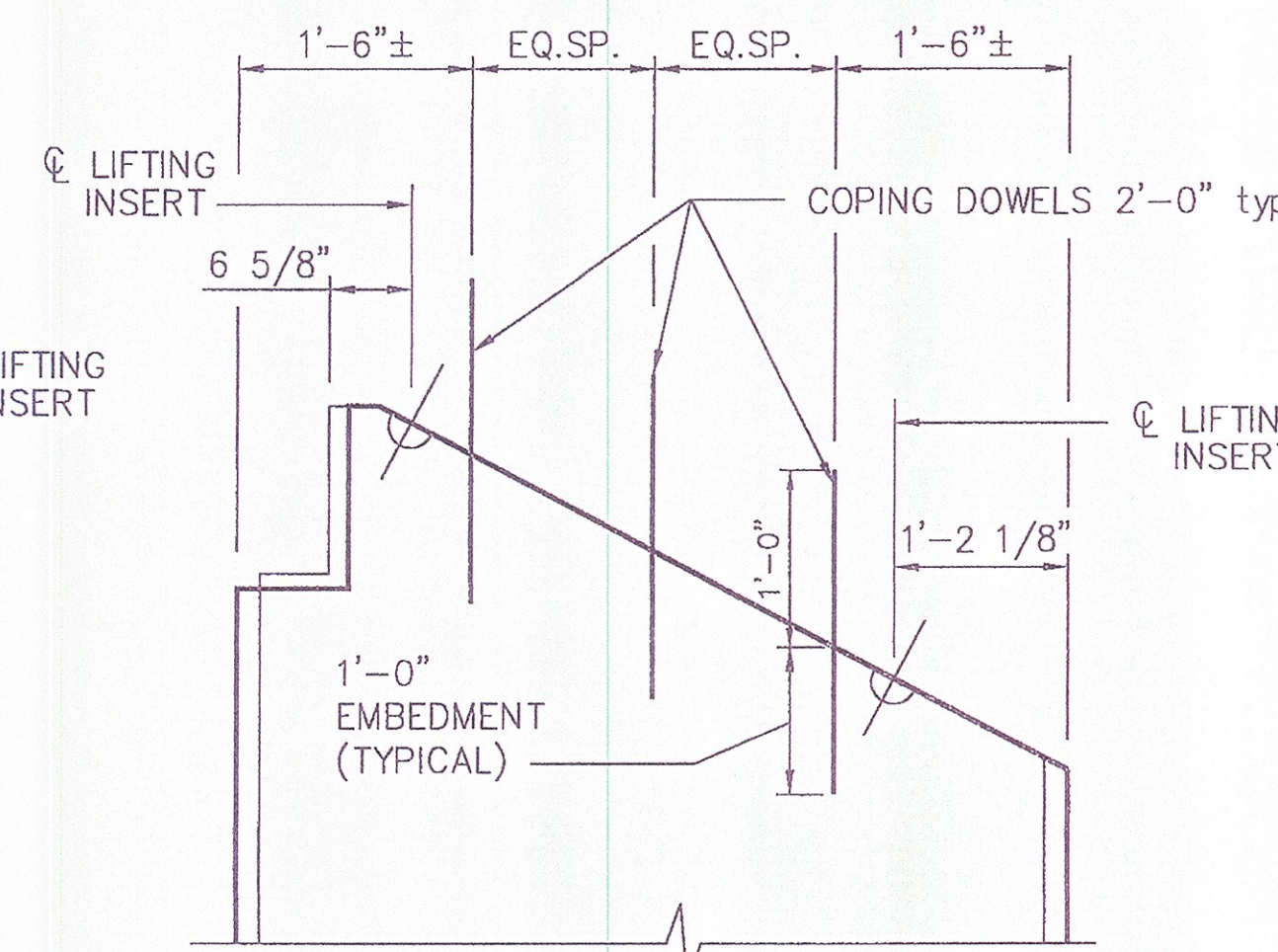
DETAIL "N"
SCALE: 3/4"=1'-0"



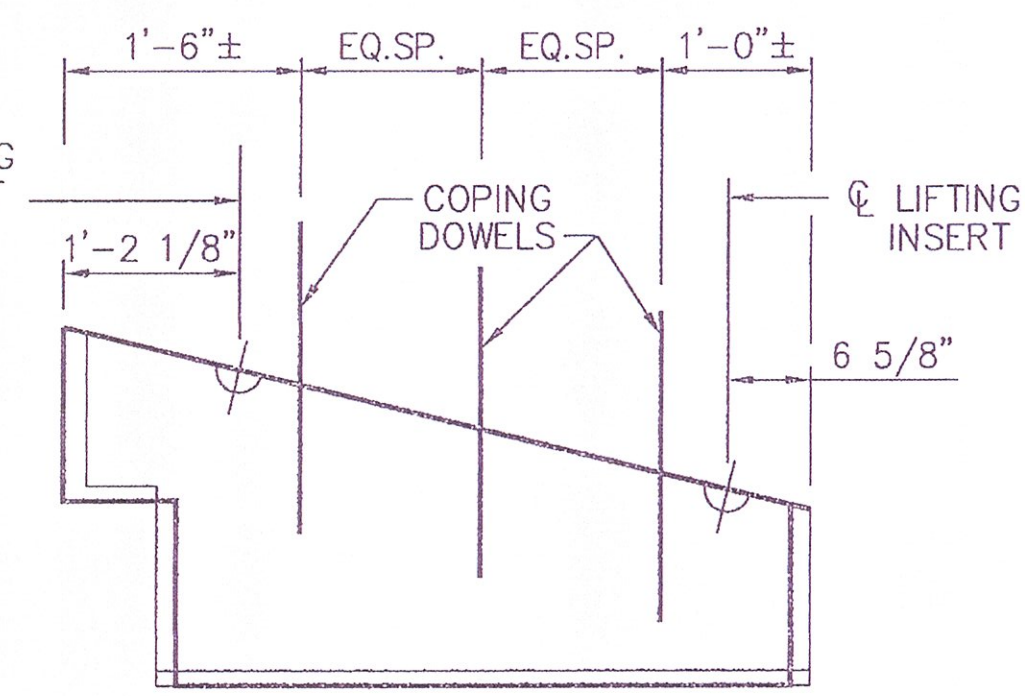
DETAIL "O"
SCALE: 3/4"=1'-0"



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



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



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

APPROVED Approved as Noted
 Revise and Resubmit DISAPPROVED
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: *XZ* DATE: 9/11
 SIGNED BY: *Michael J. Long* DATE: 9/11

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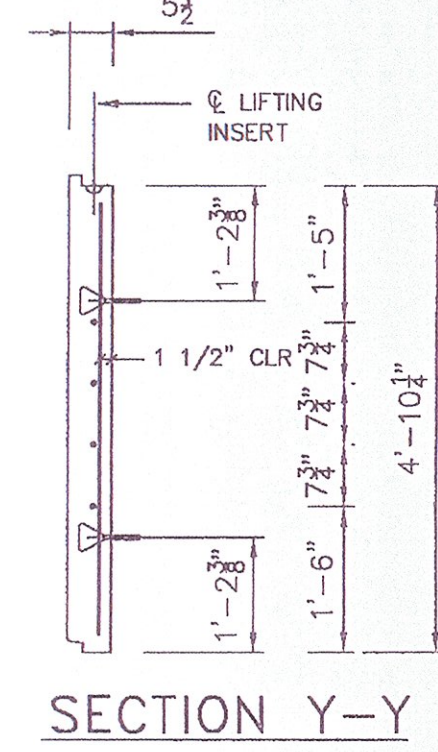
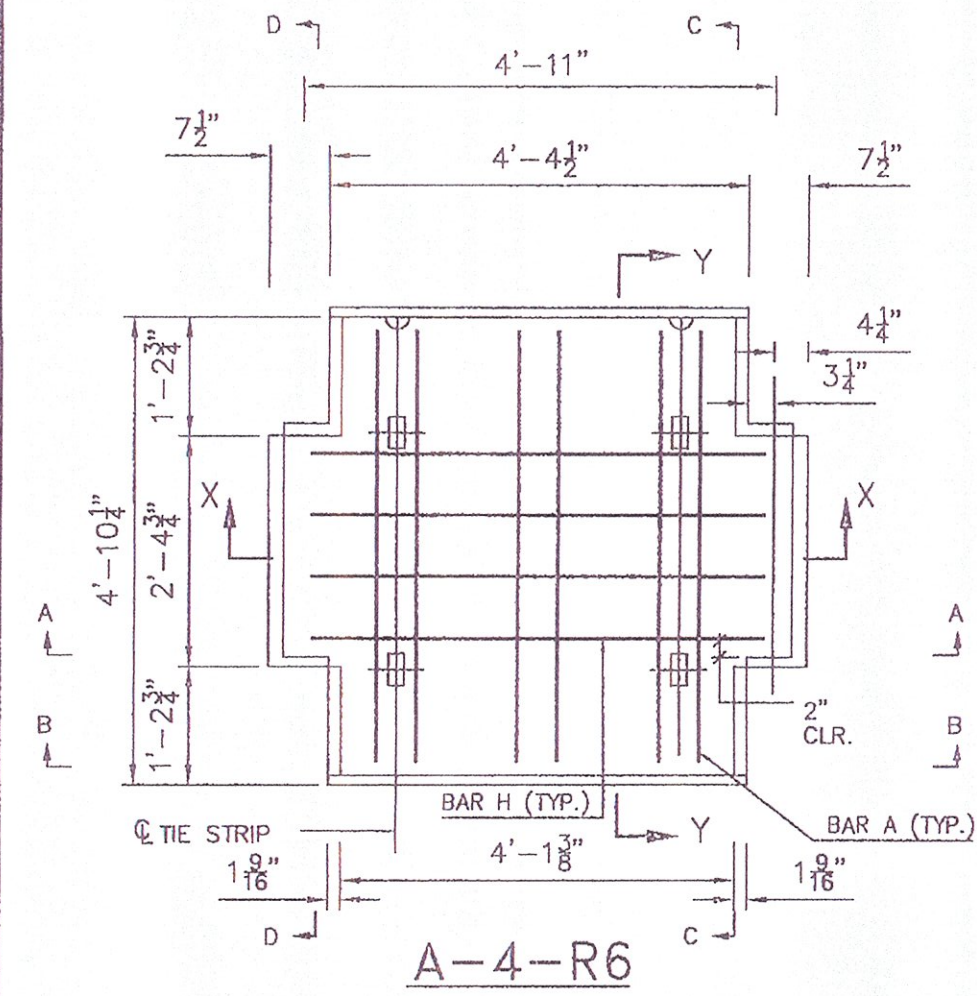
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DESIGNED BY: KC	PROJECT NAME U.S. ROUTE 2 OVER EXISTING STREAM	DATE 04/29/2011
PROJECT ENGR: DTM	LOCATION CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
CHECKED BY: EEH/LY	OWNER VTAOT	DRAWING NO. S3 OF S13
ENG. MANAGER	DRAWING COVERS CRUCIFORM PANEL DETAILS	SCALE AS SHOWN
REV.	DATE	DESCRIPTION

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



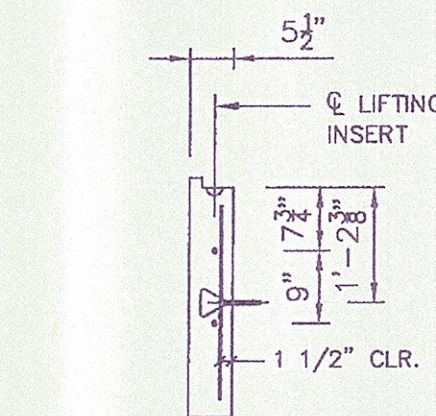
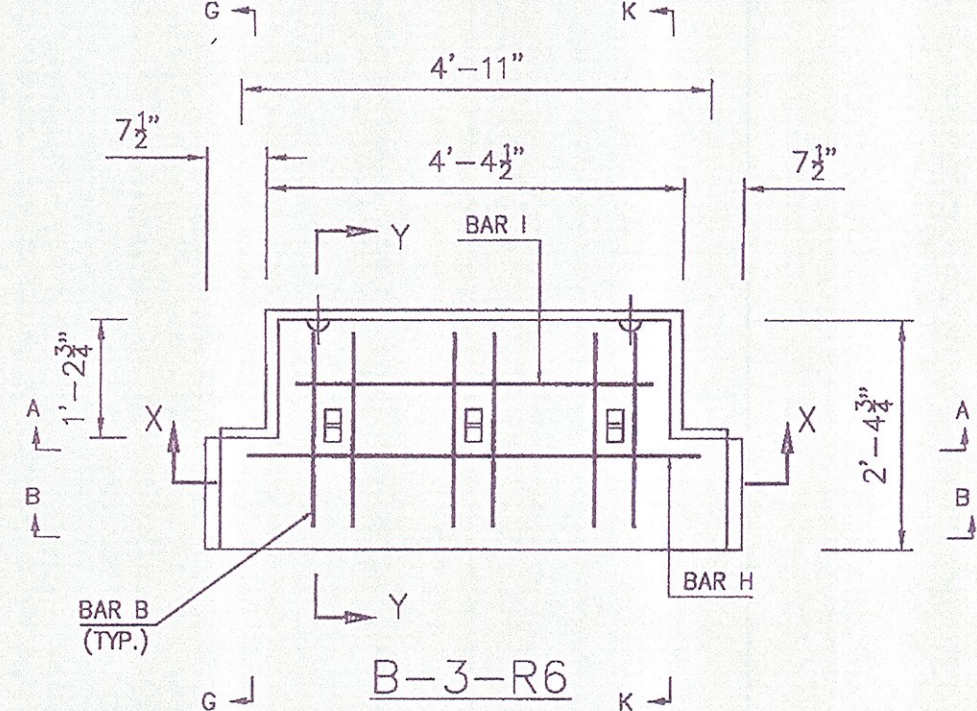
SECTION Y-Y

BILL OF MATERIALS			
REBAR - R6	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 "A"

SCALE 1/2" = 1'



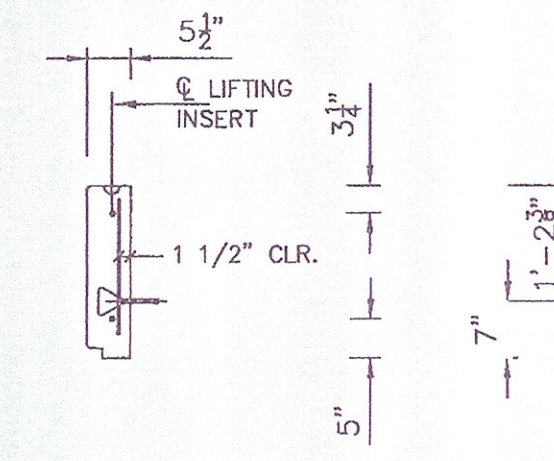
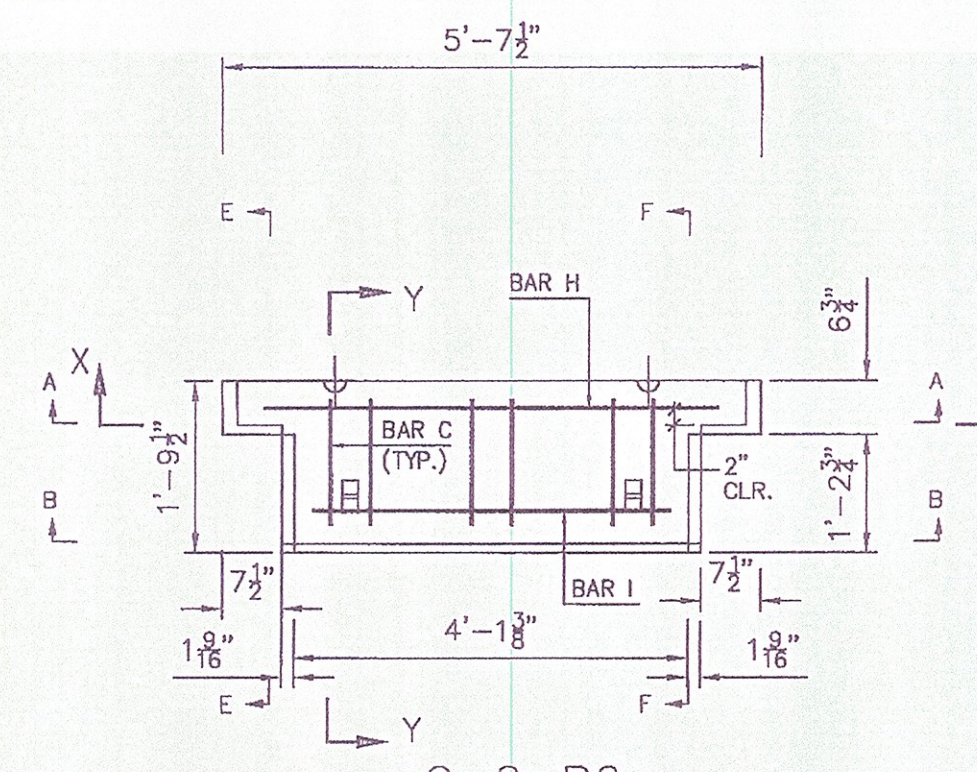
SECTION Y-Y

BILL OF MATERIALS			
REBAR - R6	MARK	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'



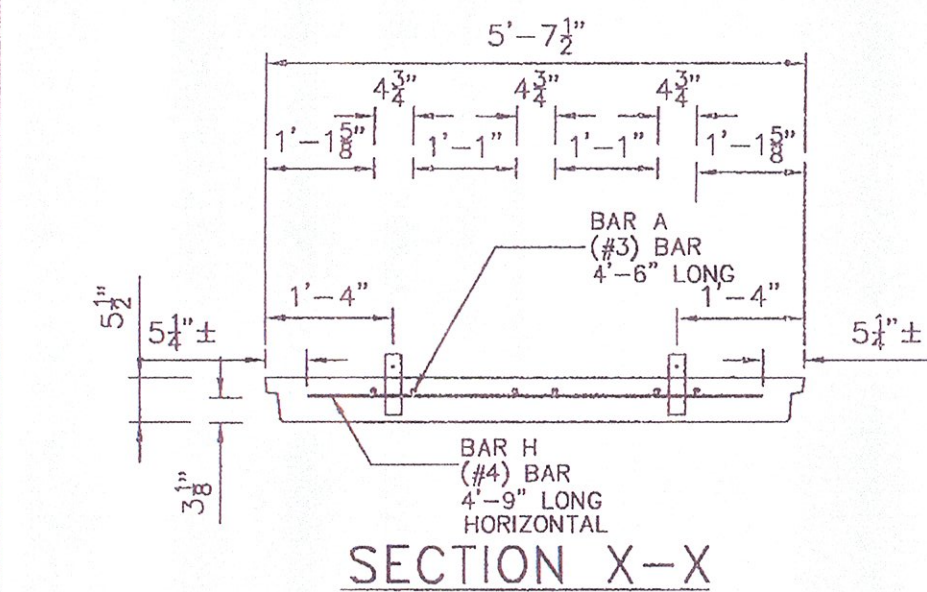
SECTION Y-Y

BILL OF MATERIALS			
REBAR - R6	MARK	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'

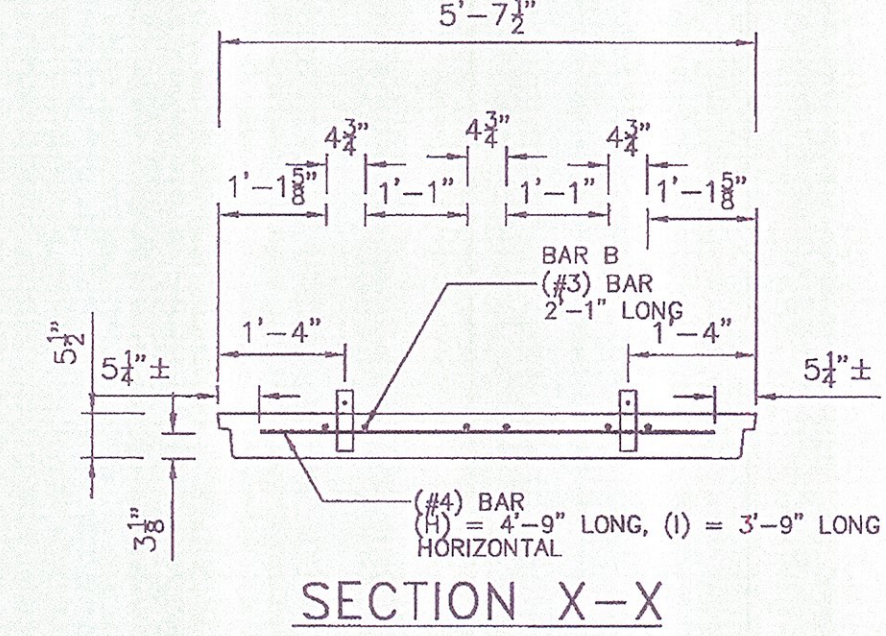


SECTION X-X

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

PANEL TYPE "A"

SCALE 1/2" = 1'

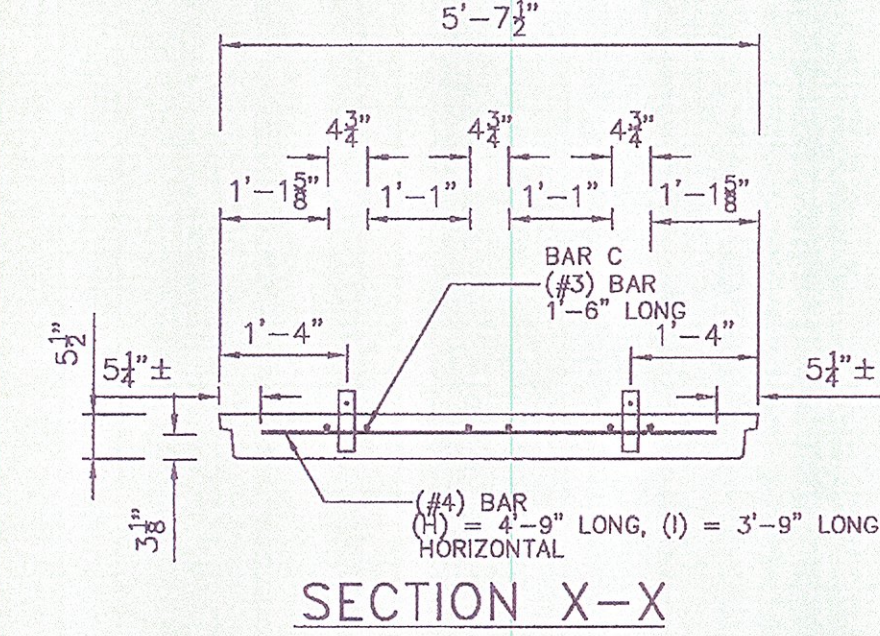


SECTION X-X

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

PANEL TYPE "B"

SCALE 1/2" = 1'

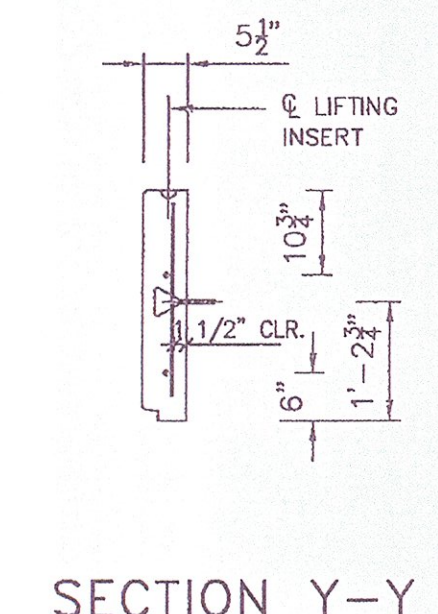
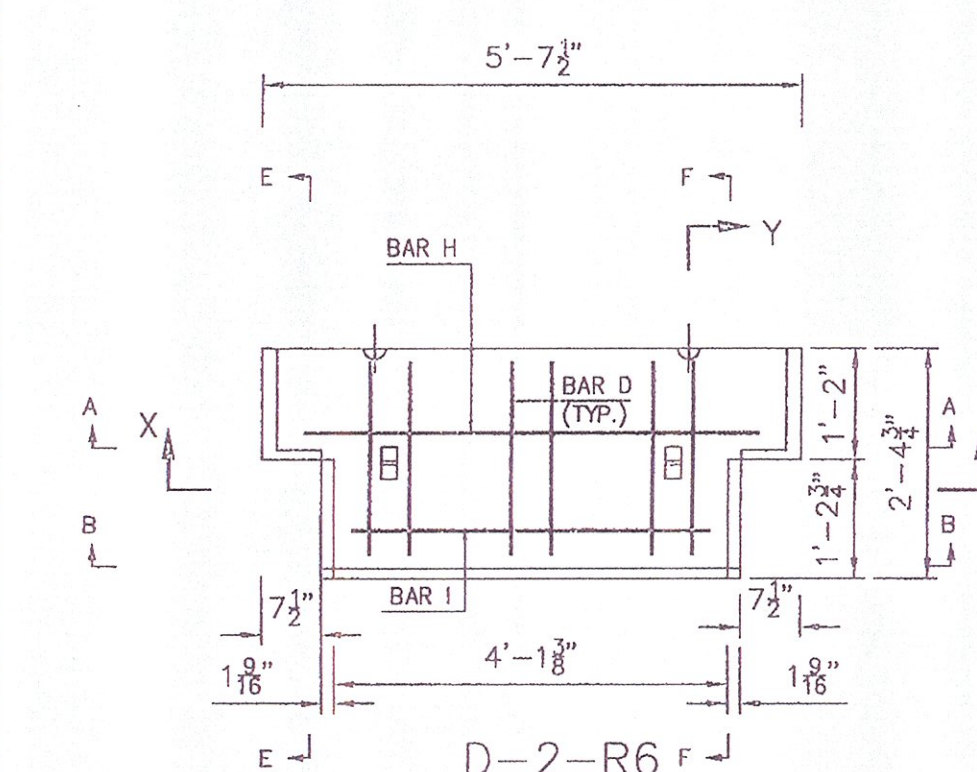


SECTION X-X

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

PANEL TYPE "C"

SCALE 1/2" = 1'



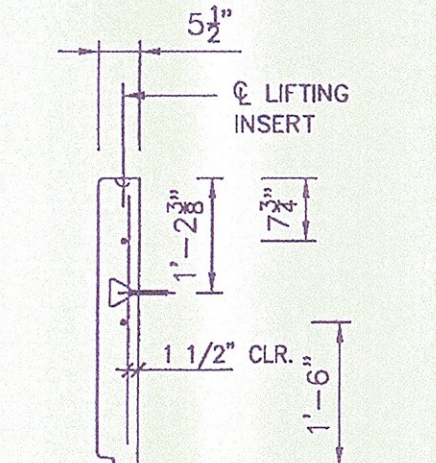
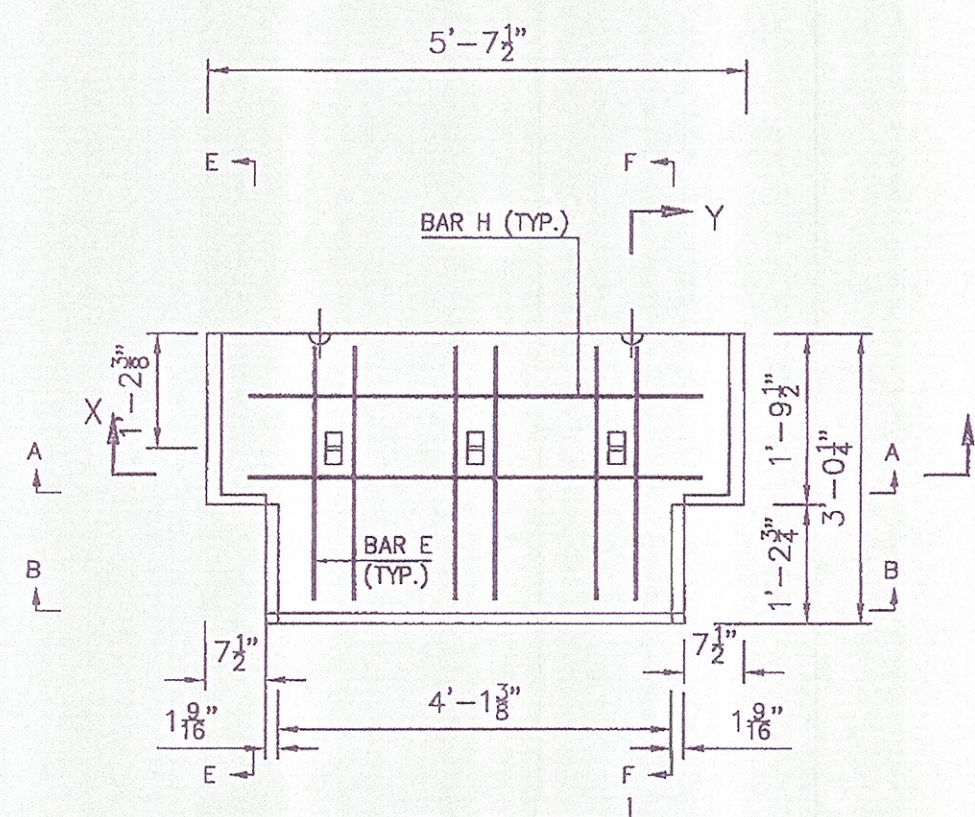
SECTION Y-Y

BILL OF MATERIALS			
REBAR - R6	MARK	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'



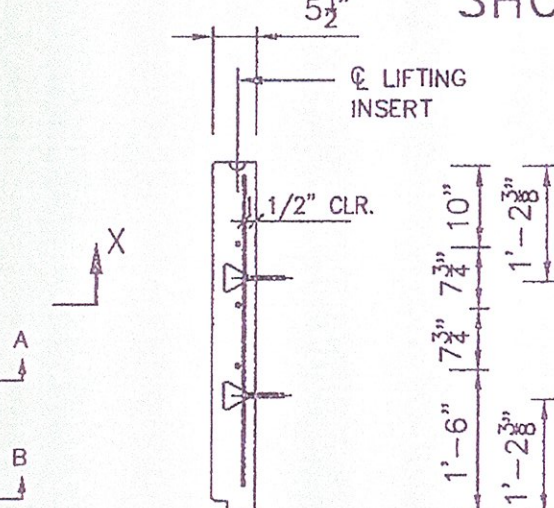
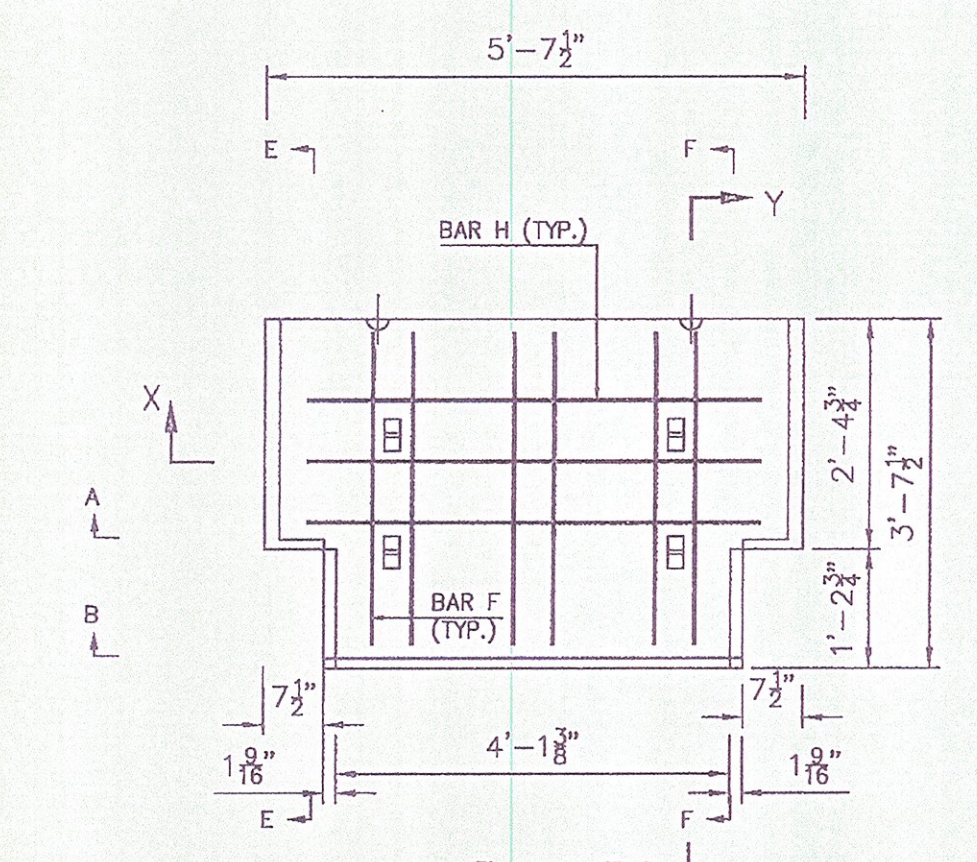
SECTION Y-Y

BILL OF MATERIALS			
REBAR - R6	MARK	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

BILL OF MATERIALS			
REBAR - R6	MARK	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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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: *XZ/L* DATE: 9/11
 SIGNED BY: *Michael J. Long* DATE: 9/11

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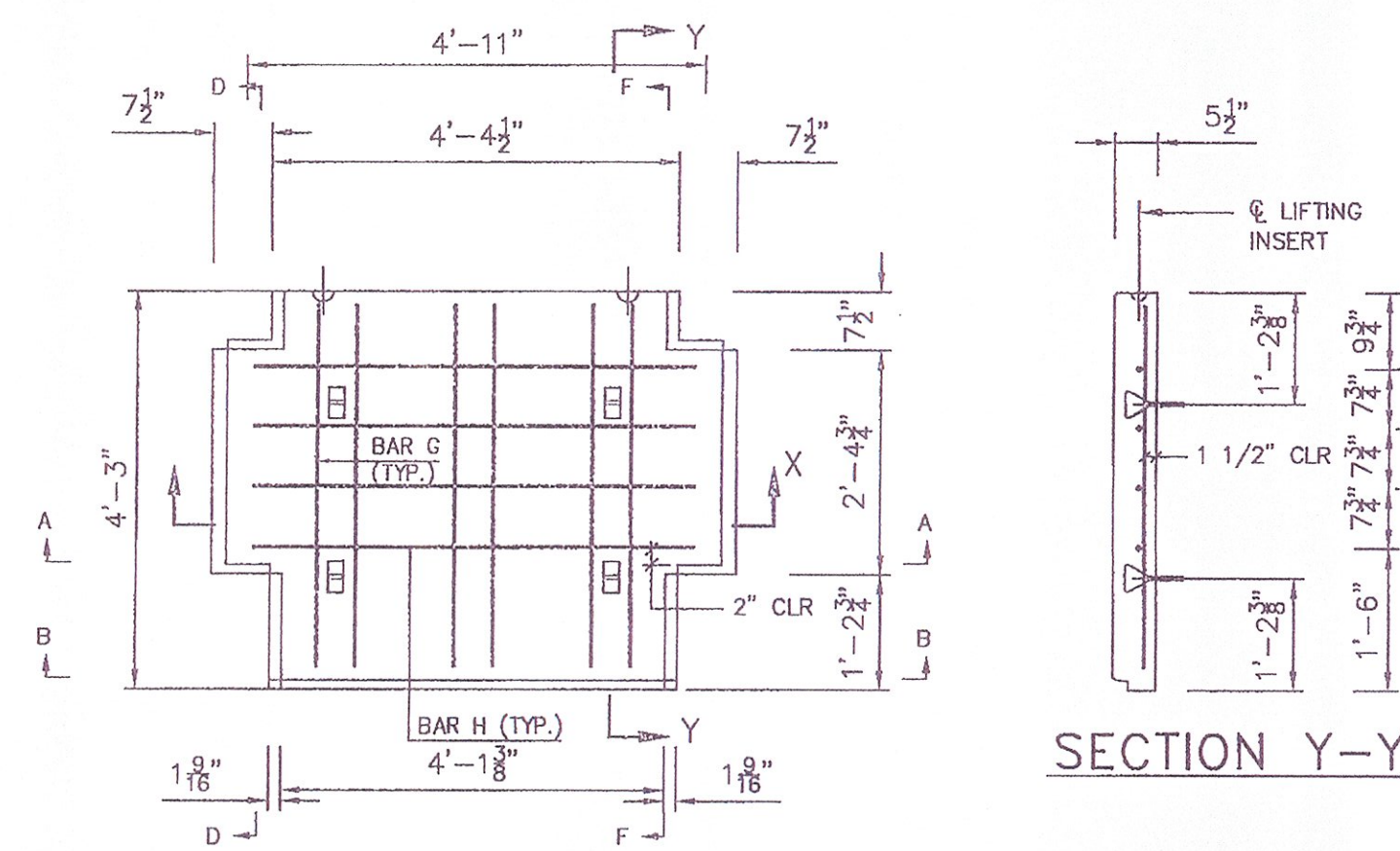
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DESIGNED BY:	KC	PROJECT NAME:	U.S. ROUTE 2 OVER EXISTING STREAM	DATE:	04/06/2011
PROJECT ENGR:	DTM	LOCATION:	CABOT-DANVILLE, VERMONT	CONTRACT NO.:	RE-15053
CHECKED BY:	EEH/LY	OWNER:	VTAOT	DRAWING NO.:	S4 OF S13
ENG. MANAGER:		DRAWING COVERS:	STANDARD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

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



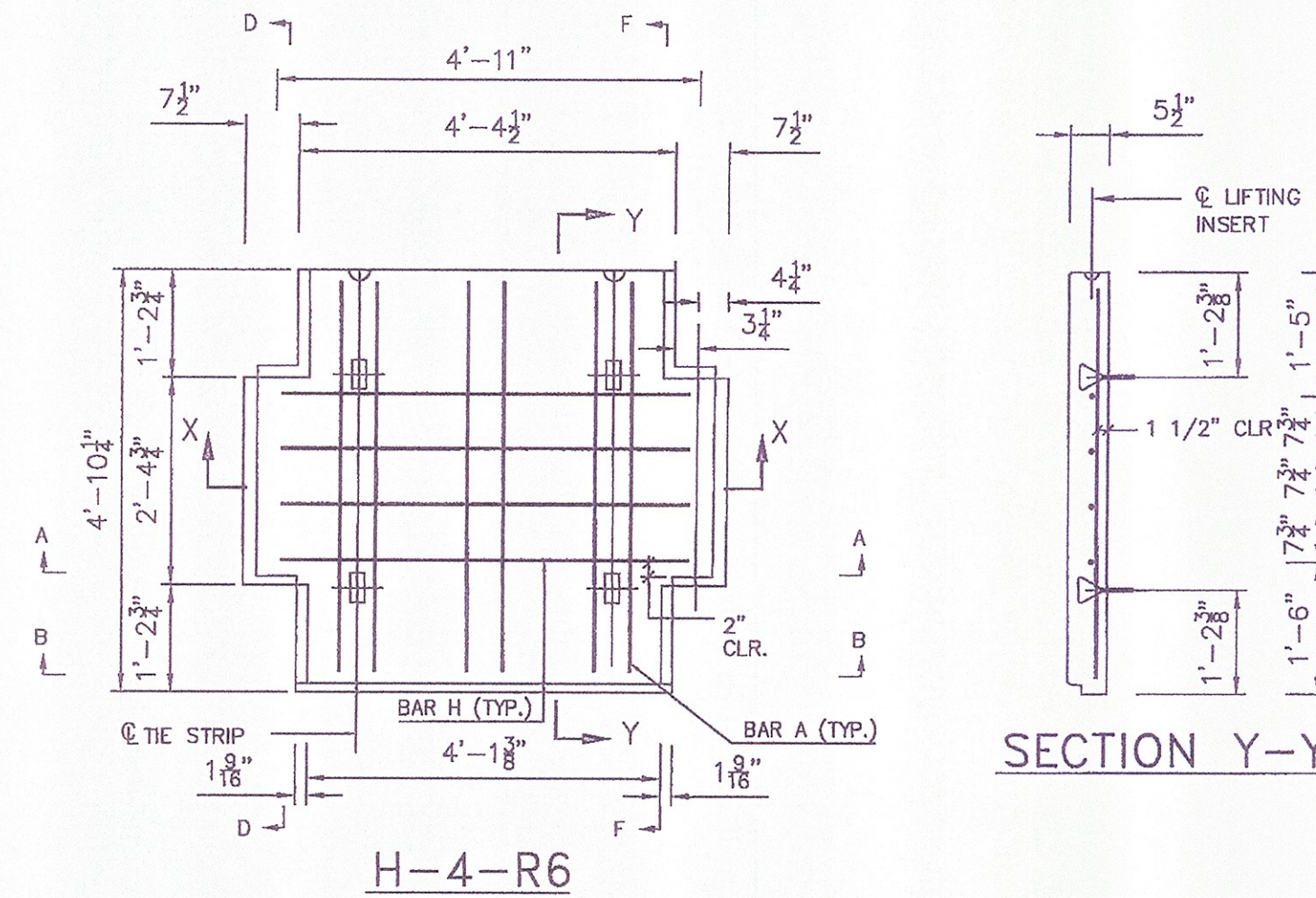
SECTION Y-Y

SECTION X-X

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

PANEL TYPE "G"

SCALE 1/2" = 1'



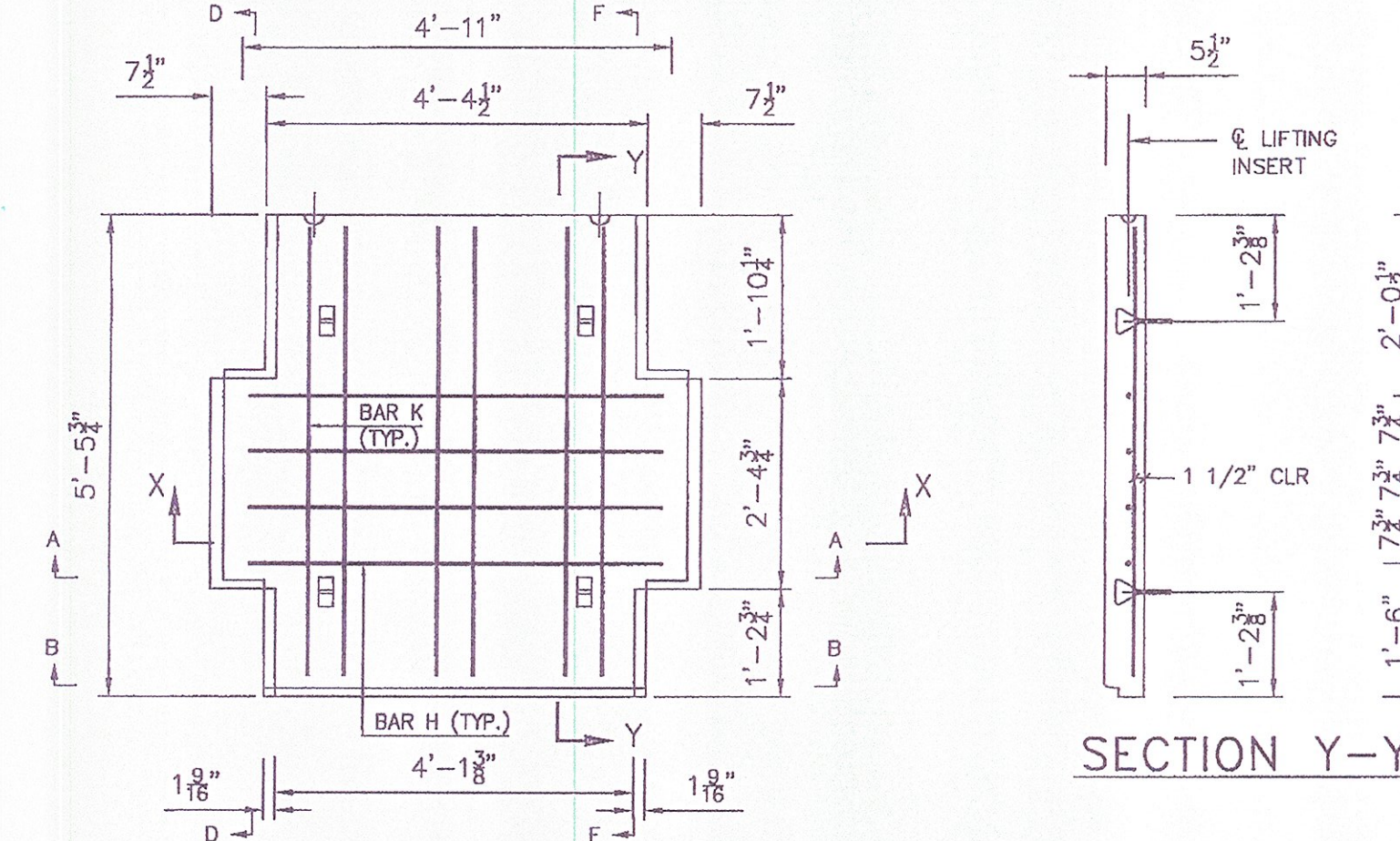
SECTION Y-Y

SECTION X-X

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

PANEL TYPE "H"

SCALE 1/2" = 1'



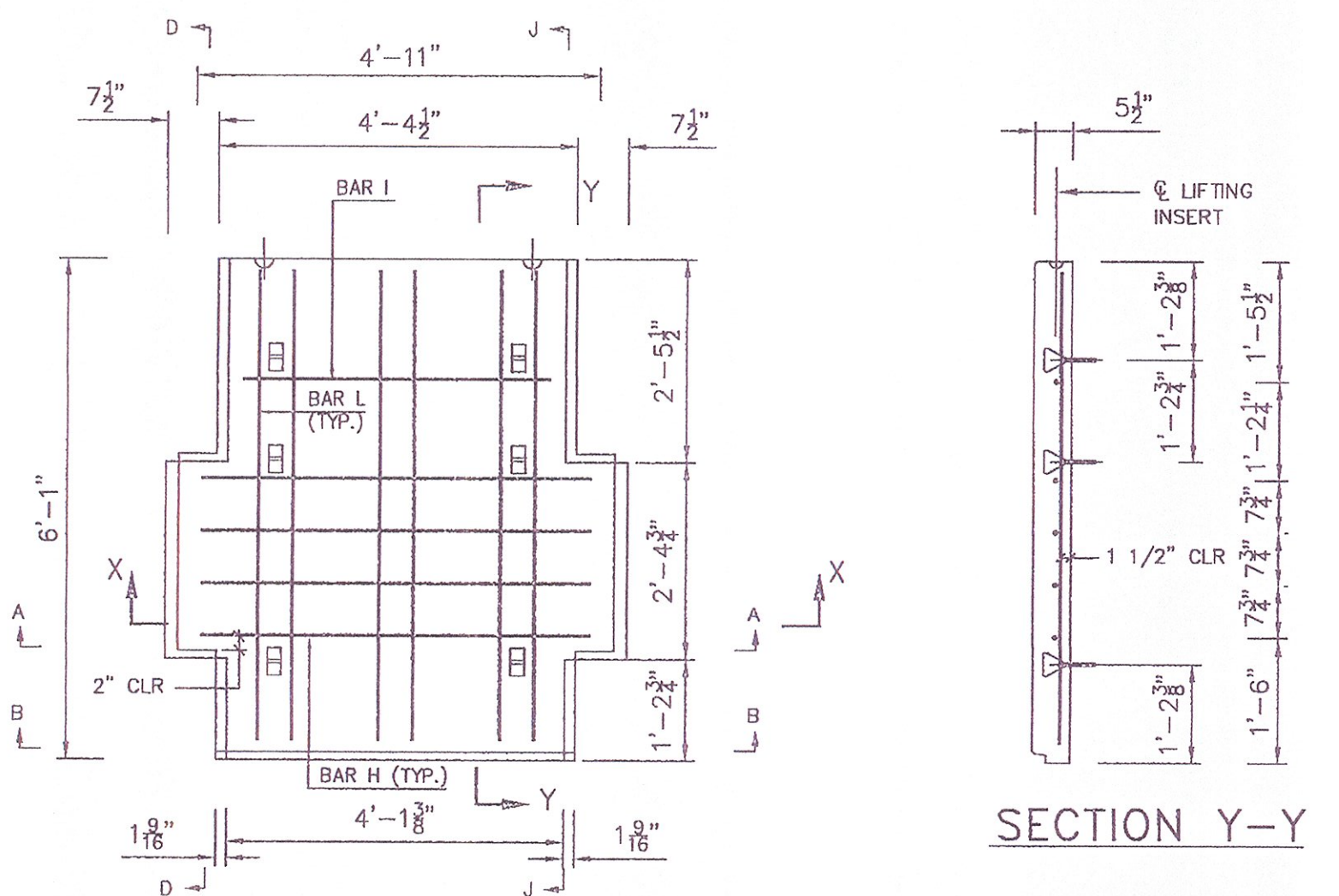
SECTION Y-Y

SECTION X-X

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

PANEL TYPE "K"

SCALE 1/2" = 1'



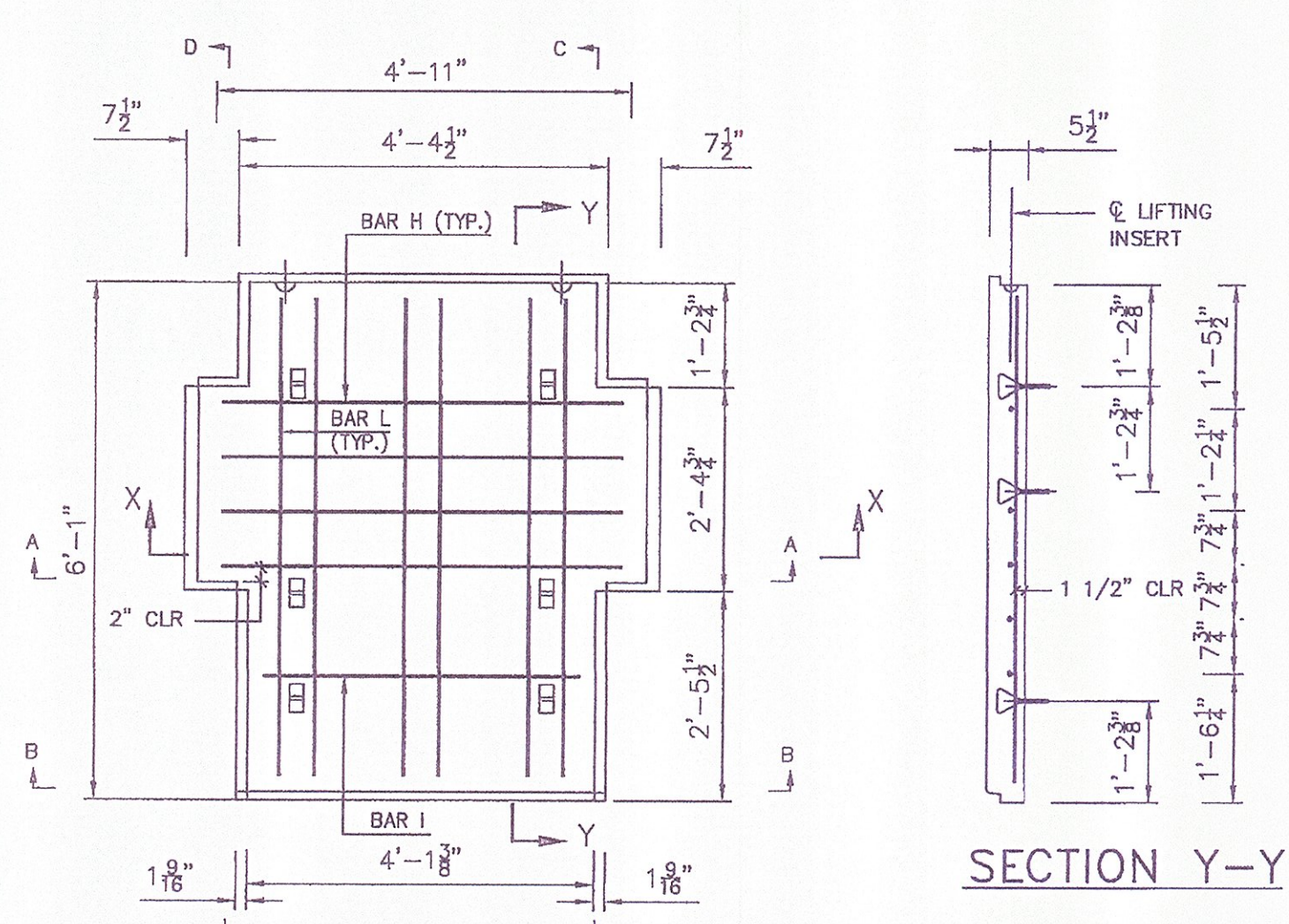
SECTION Y-Y

SECTION X-X

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

PANEL TYPE "L"

SCALE 1/2" = 1'



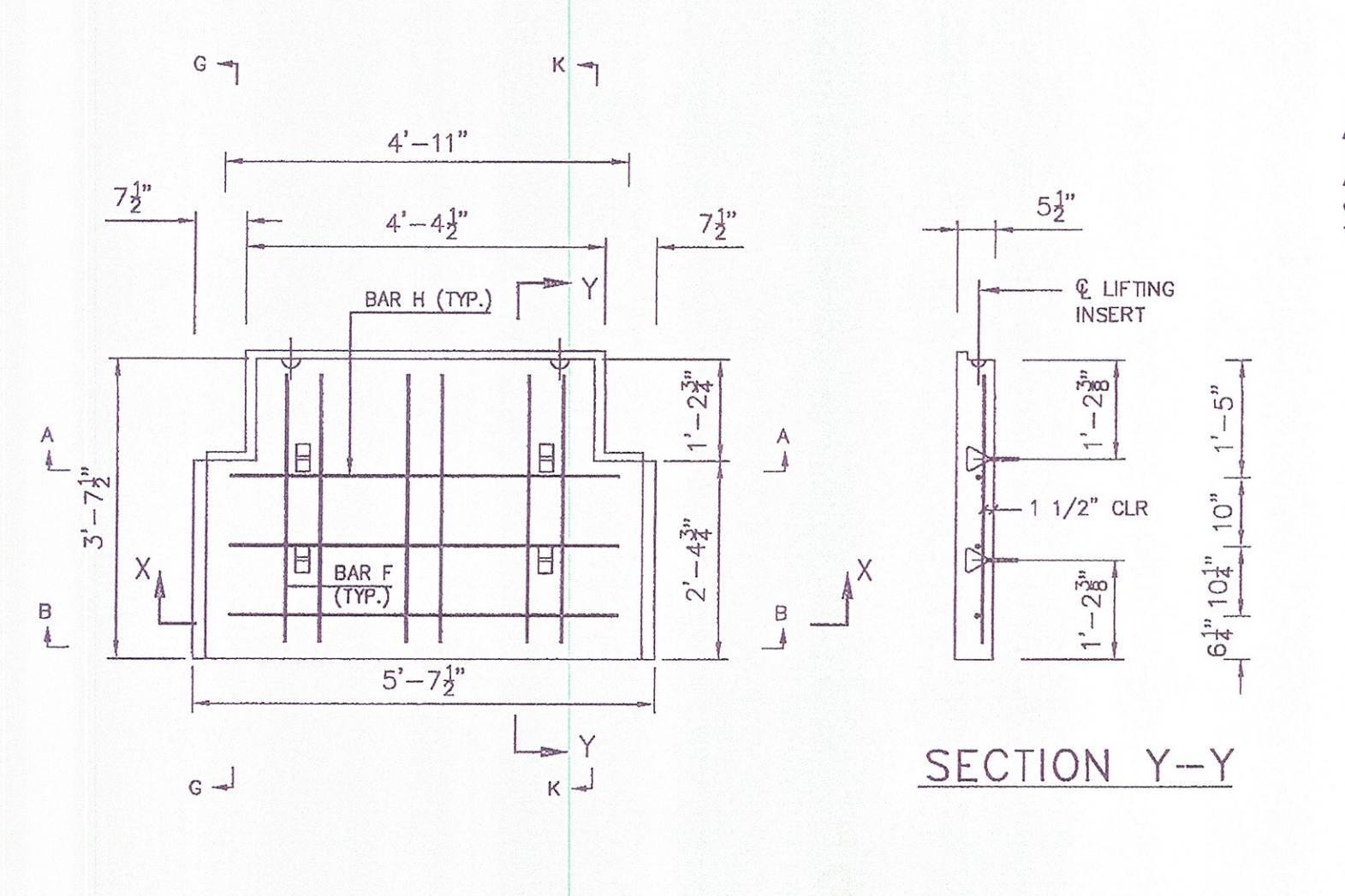
SECTION Y-Y

SECTION X-X

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

PANEL TYPE "P"

SCALE 1/2" = 1'



SECTION Y-Y

SECTION X-X

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
 Revises and Resubmits 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: *[Signature]* DATE: 9/10
 SIGNED BY: *[Signature]* DATE: 9/10

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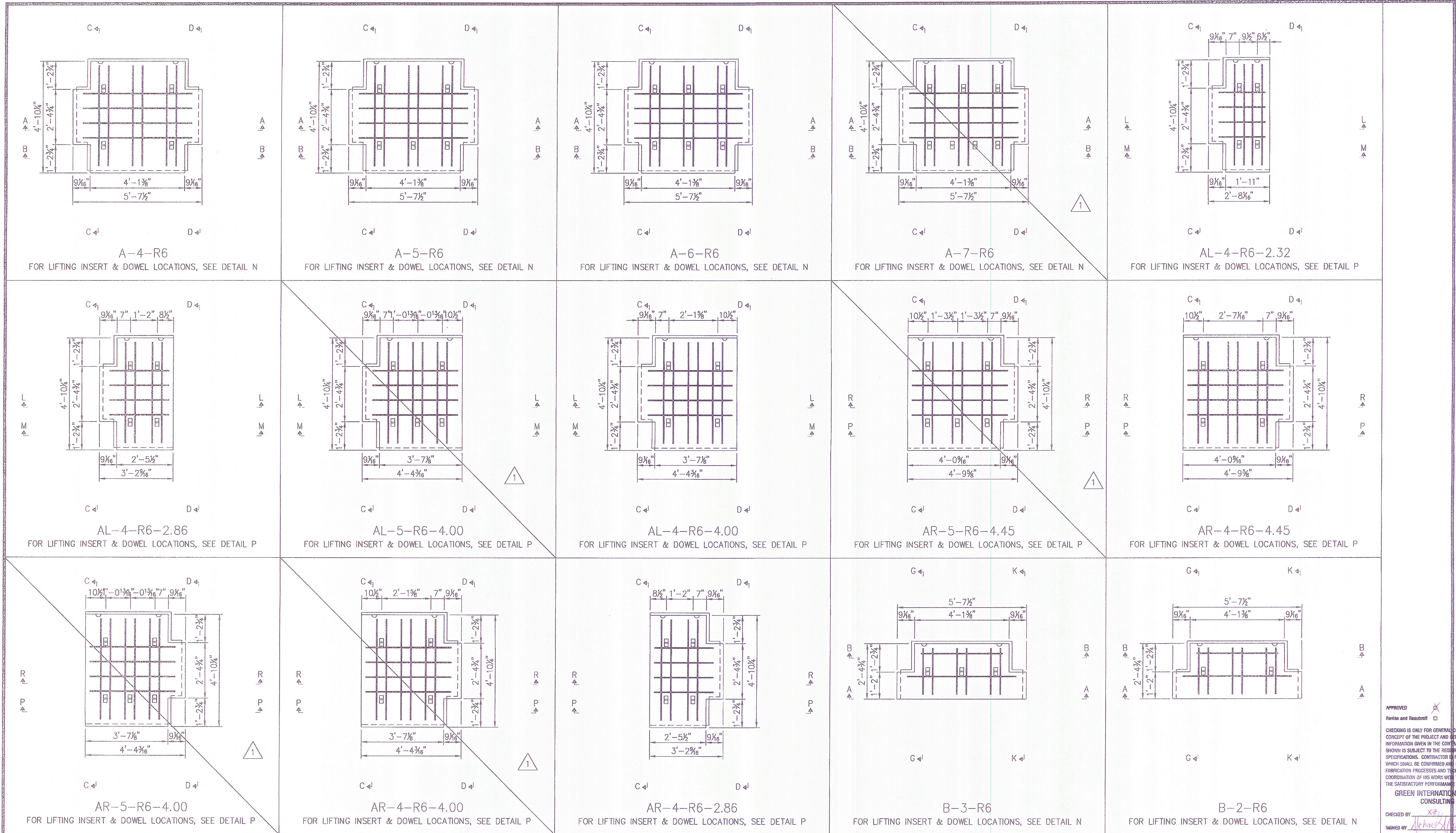
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DESIGNED BY:	KC	PROJECT ENGR:	DTM	8/19/11	REV. PER GIA COMMENTS	PROJECT NAME:	U.S. ROUTE 2 OVER EXISTING STREAM	DATE:	04/06/2011
CHECKED BY:	EEH/LY	7/19/11	REV. PER GIA COMMENTS	LOCATION:	CABOT-DANVILLE, VERMONT	OWNER:	VTAOT	CONTRACT NO.:	RE-15053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

R:\15024605.dwg



APPROVED Approved as Noted
 Revise and Resubmit DISAPPROVED

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: *XZ* DATE: 7/11
 SIGNED BY: *Thomas H. Hays* DATE: 7/11

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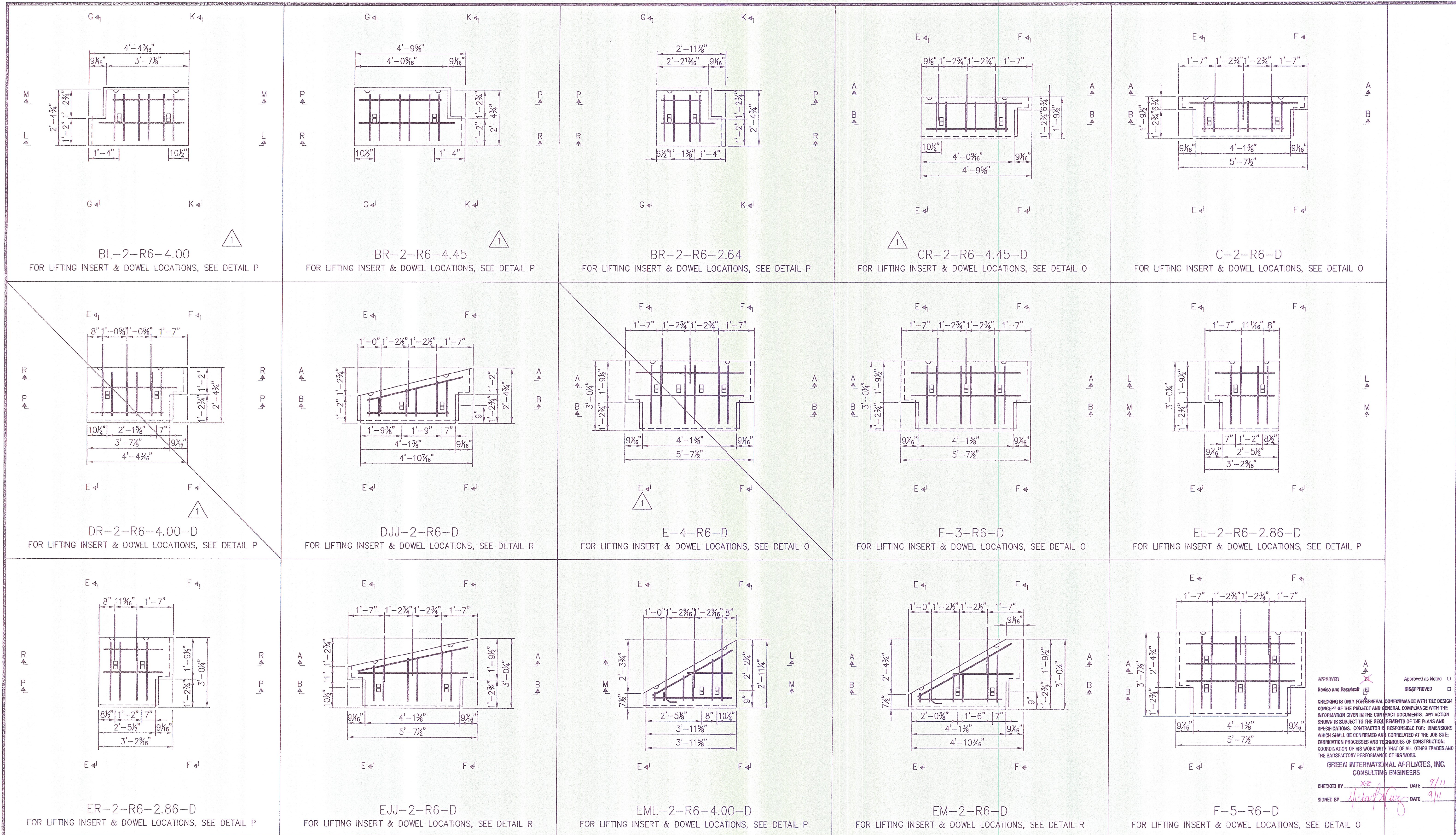
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DESIGNED BY:	KC	PROJECT NAME:	U.S. ROUTE 2 OVER EXISTING STREAM	DATE:	04/06/2011
PROJECT ENGR:	DTM	LOCATION:	CABOT-DANVILLE, VERMONT	CONTRACT NO.:	RE-15053
CHECKED BY:	EEH/LY	OWNER:	VTAOT	DRAWING NO.:	S6 OF S13
ENG. MANAGER:	REV. DATE DESCRIPTION	DRAWING COVERS:	PANEL CASTING DRAWINGS	SCALE:	AS SHOWN
	1 7/19/11 REV. PANELS PER GIA COMMENTS				

R:\15053s06.dwg



APPROVED DISAPPROVED
 Revised and Resubmit
 CHECKED 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 Curran* DATE: 9/11

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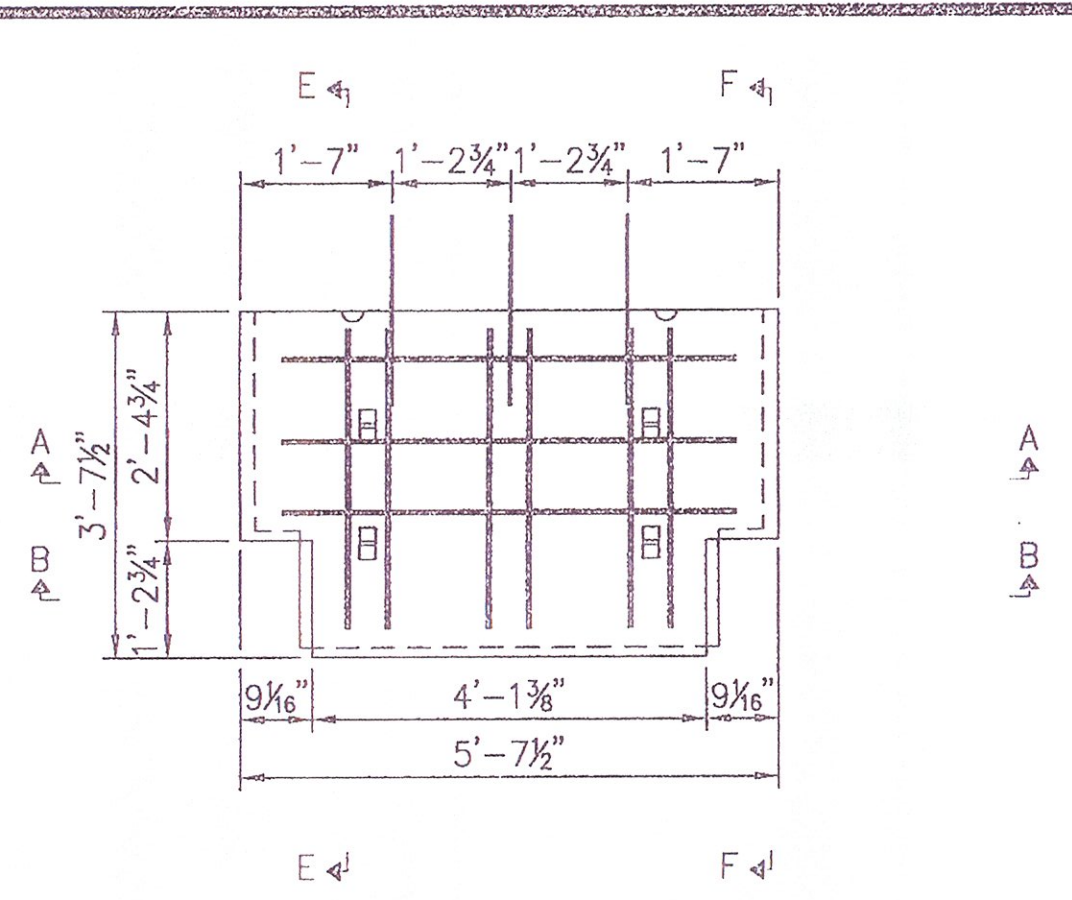
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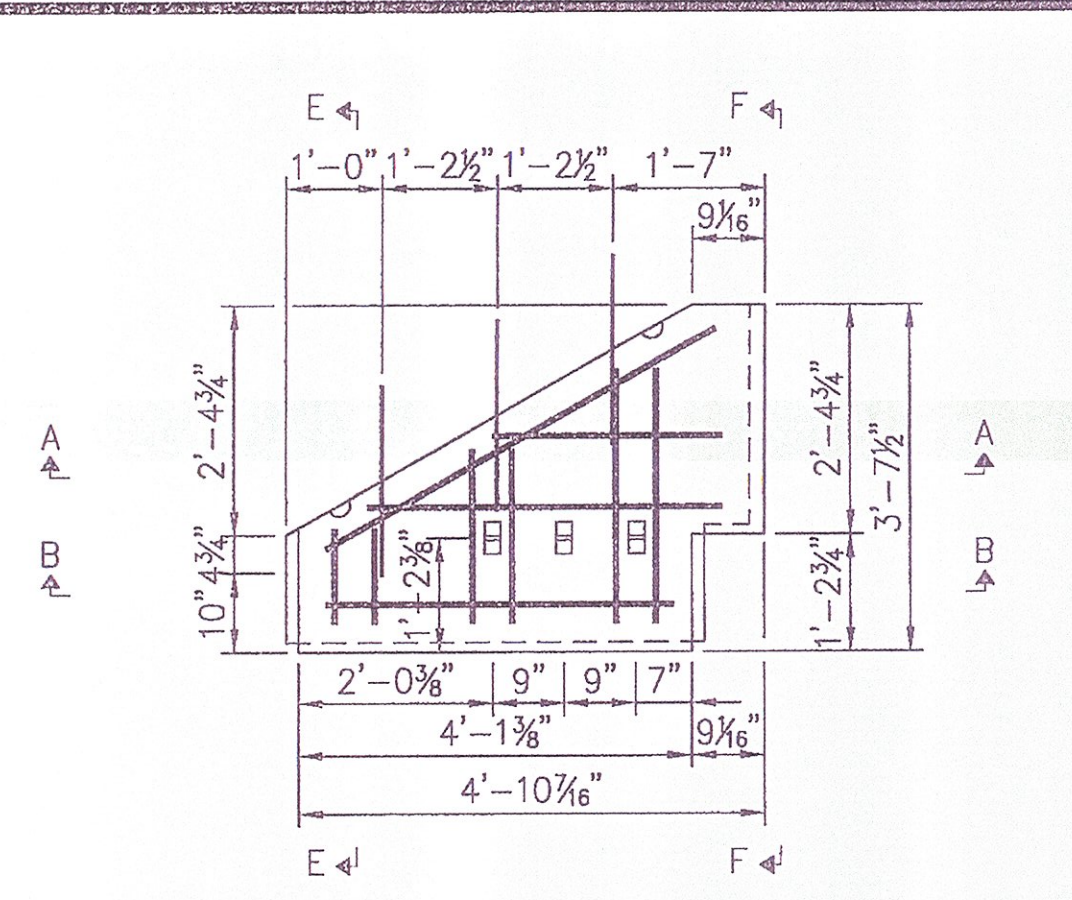
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DESIGNED BY:	KC	PROJECT ENGR:	DTM	CHECKED BY:	EEH/LY	ENG. MANAGER:	REV.	DATE:	7/19/11	REV. PANELS PER GIA COMMENTS	PROJECT NAME:	U.S. ROUTE 2 OVER EXISTING STREAM	DATE:	04/06/2011
											LOCATION:	CABOT-DANVILLE, VERMONT	CONTRACT NO.:	RE-15053
											OWNER:	VTAOT	DRAWING NO.:	S7 OF S13
											DRAWING COVERS:	PANEL CASTING DRAWINGS	SCALE:	AS SHOWN

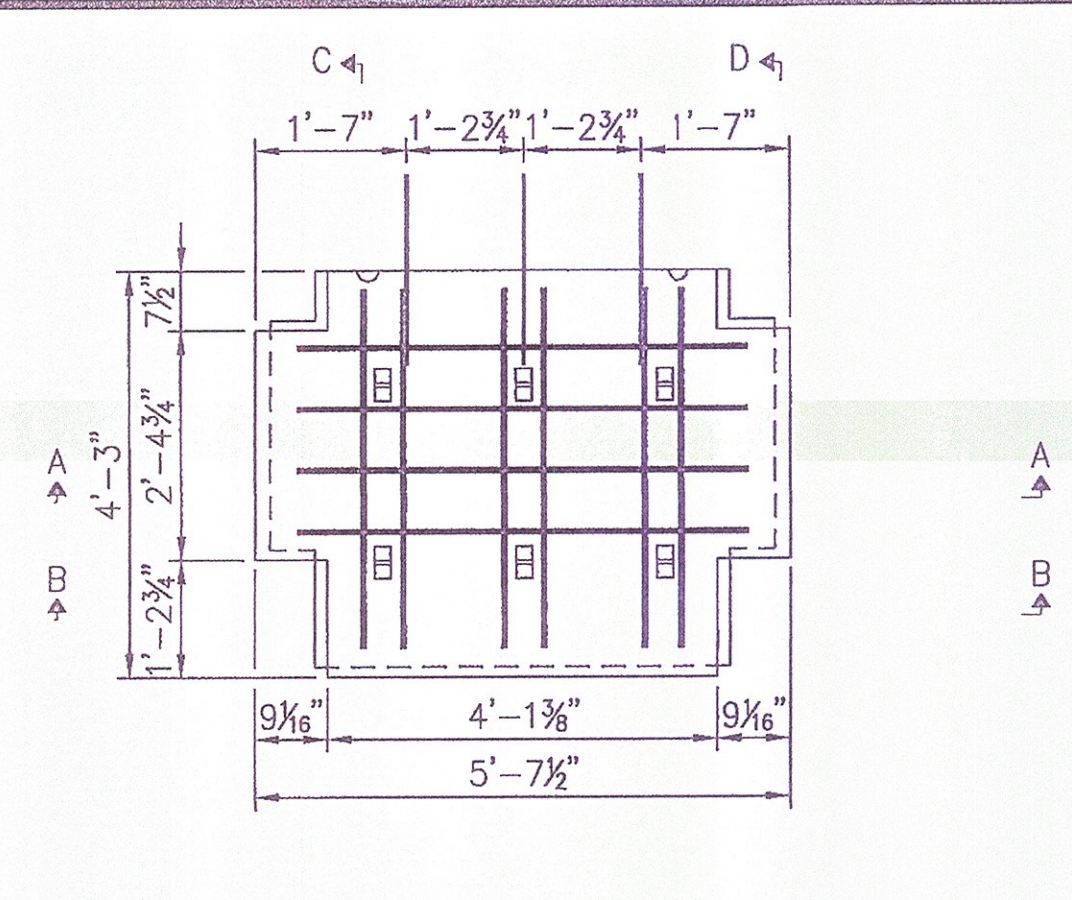
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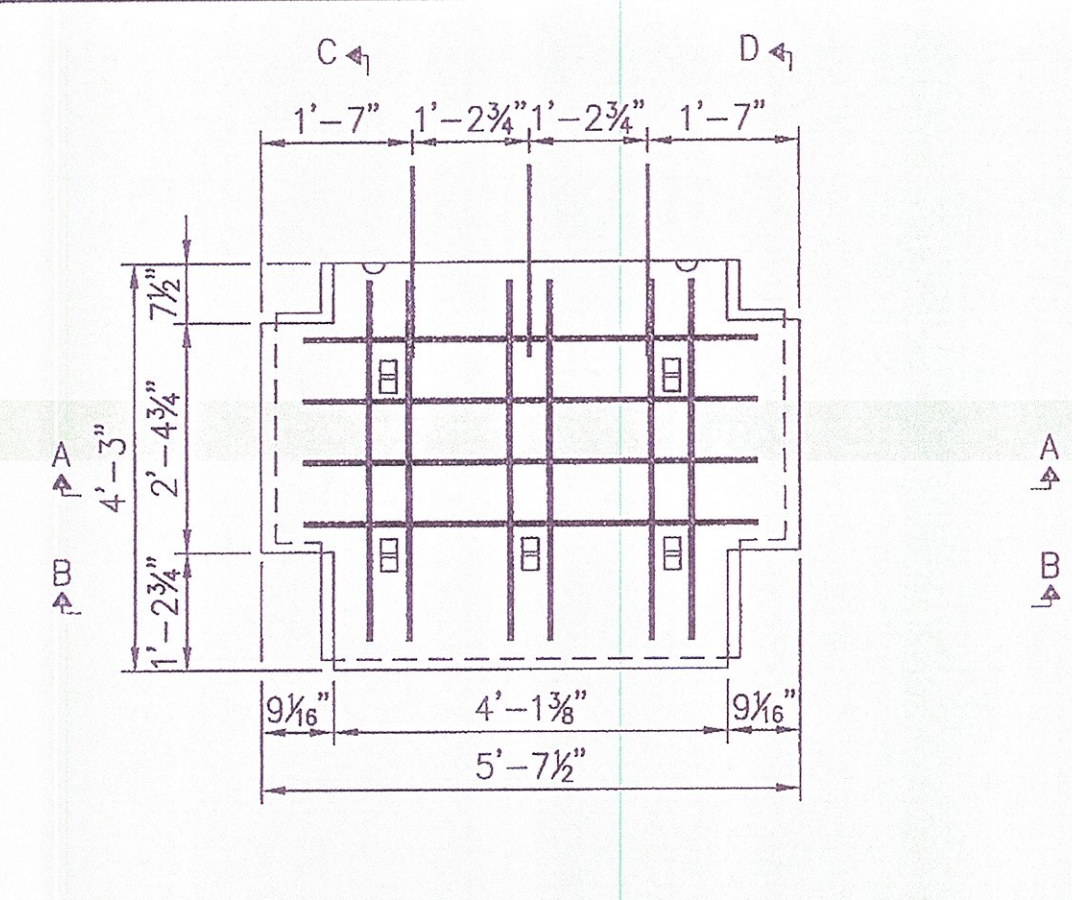
F-4-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL O



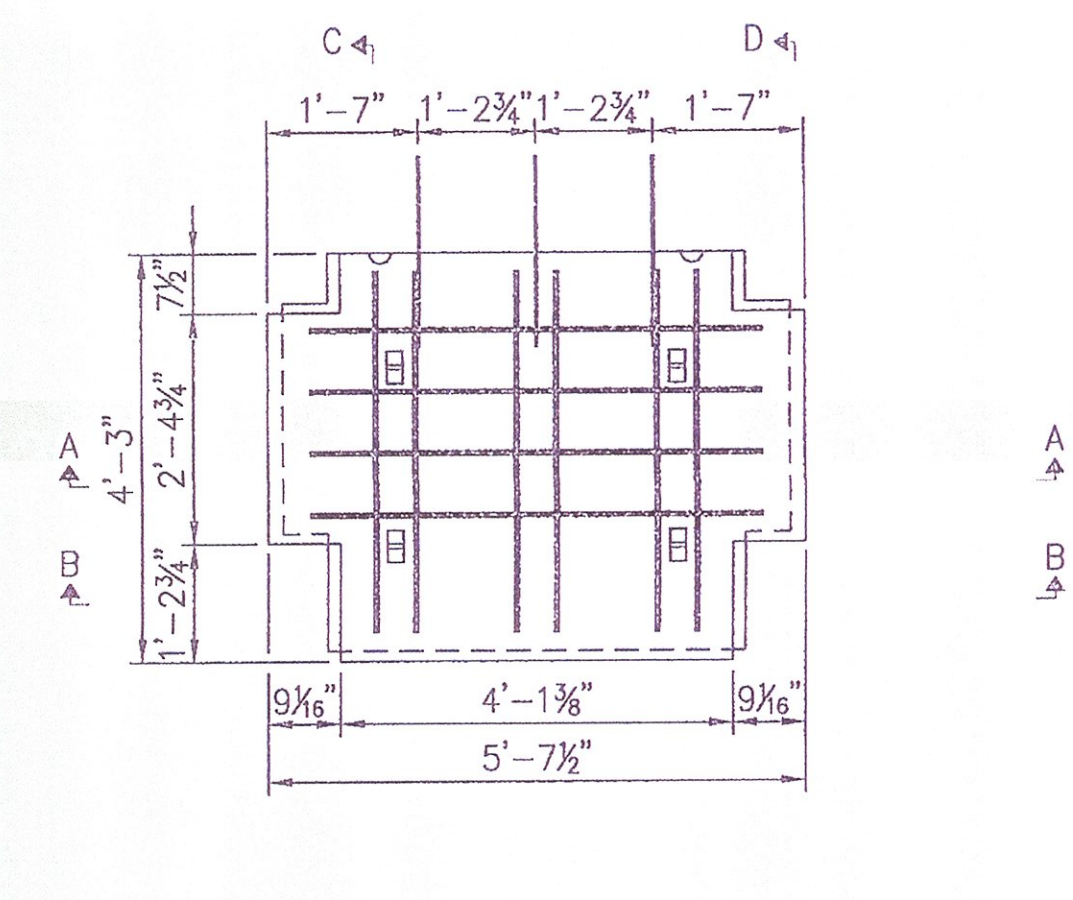
FM-3-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL R



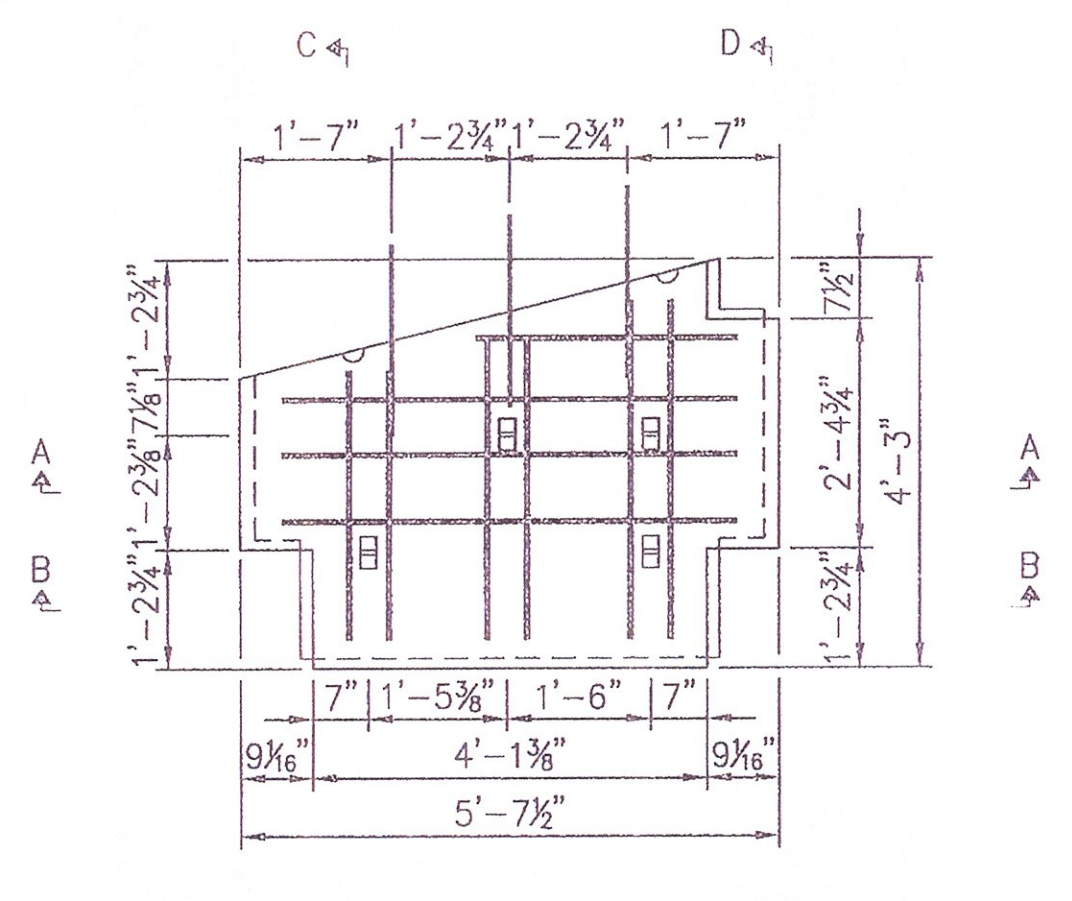
G-6-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL N



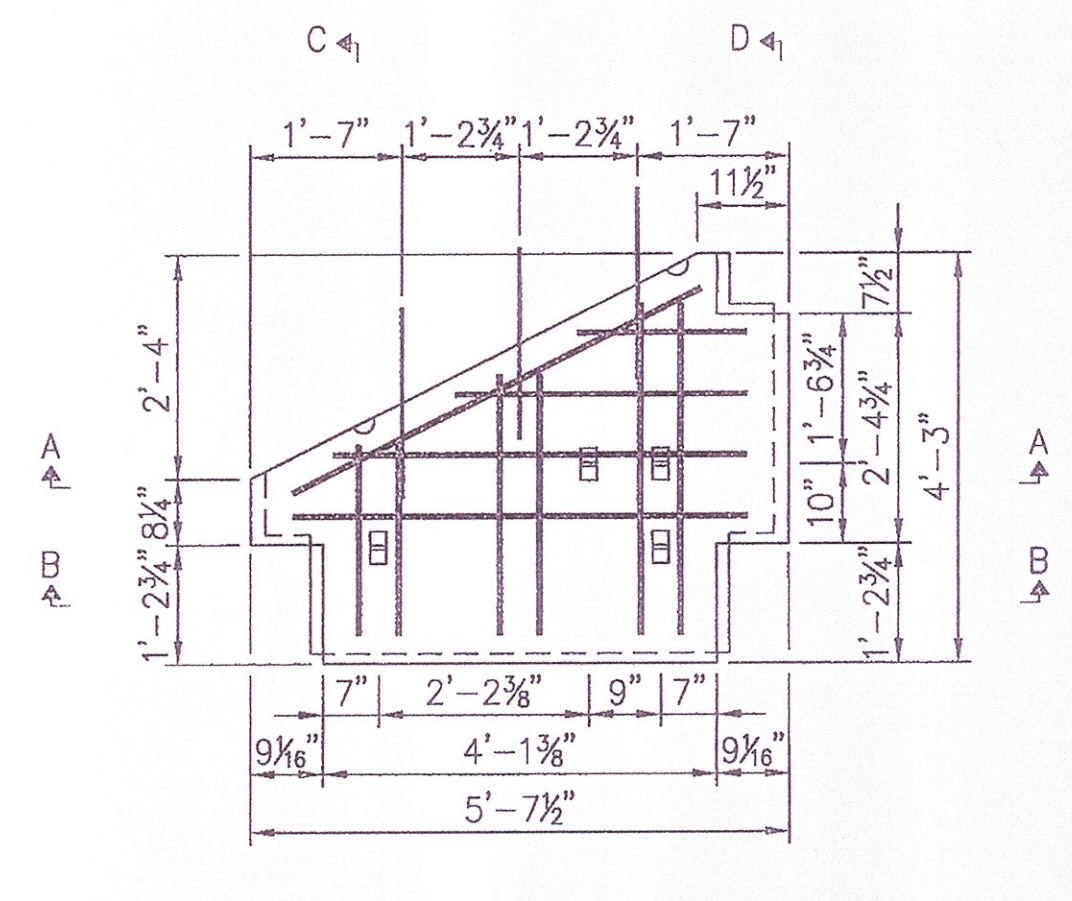
G-5-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL N



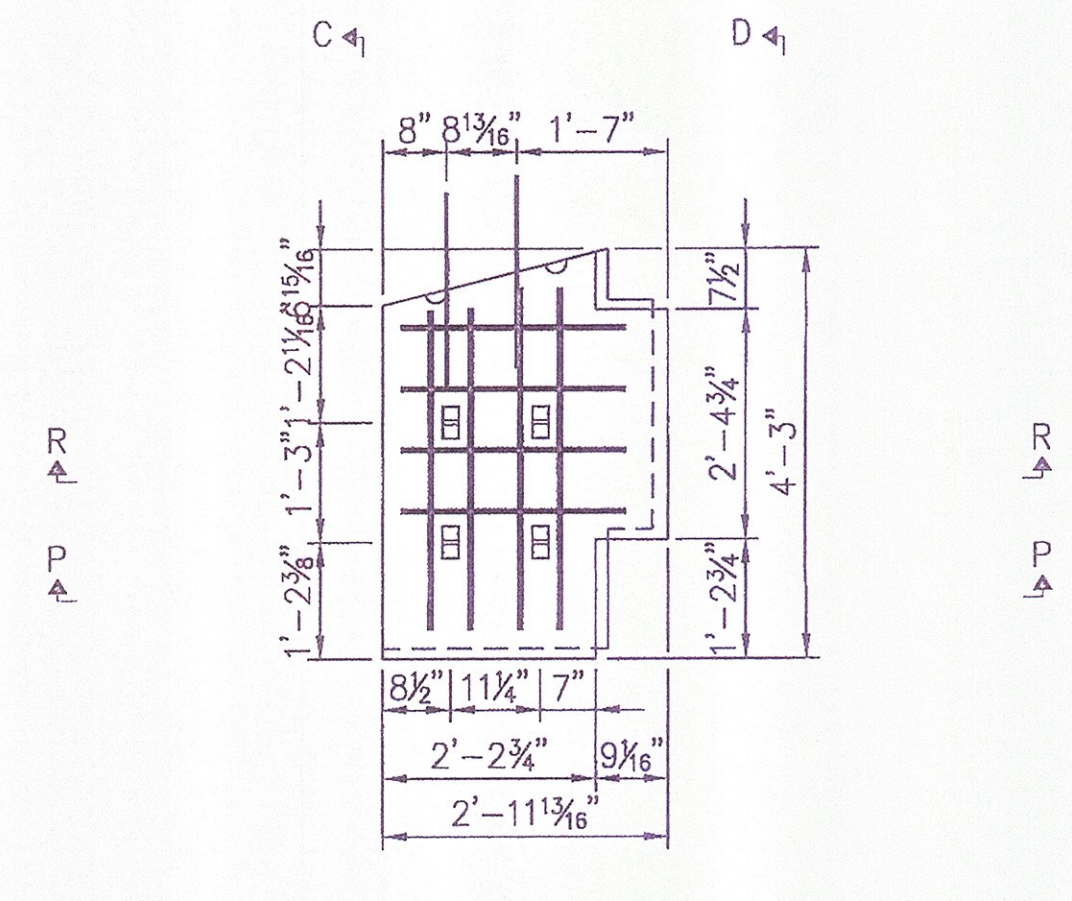
G-4-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL N



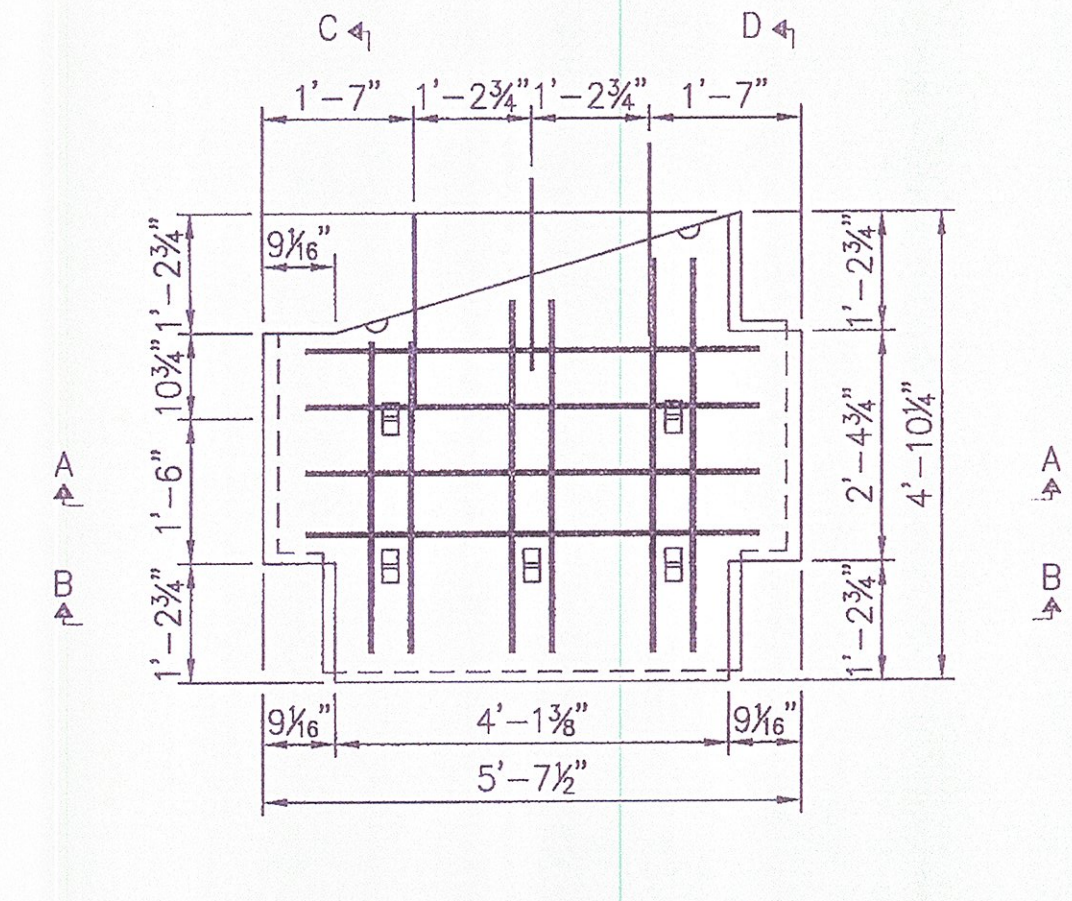
GJJ-4-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL Q



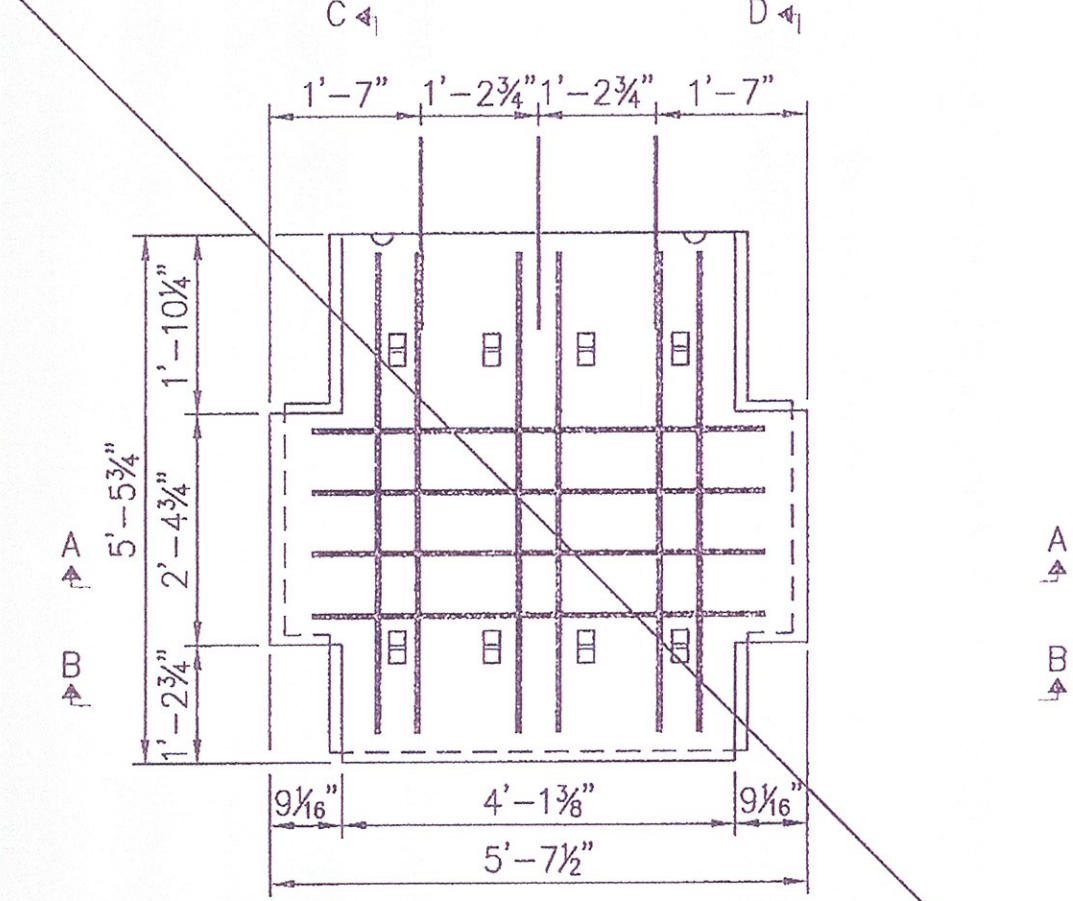
GM-4-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL Q



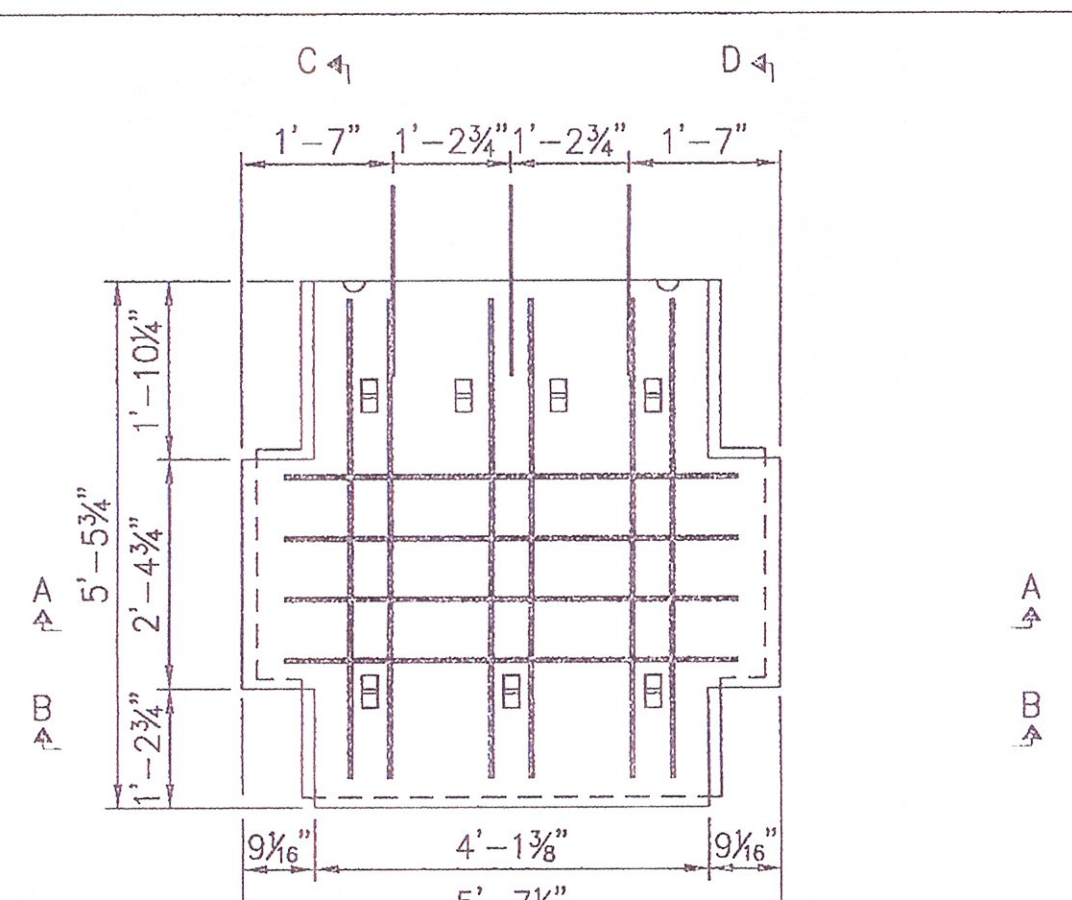
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FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL P



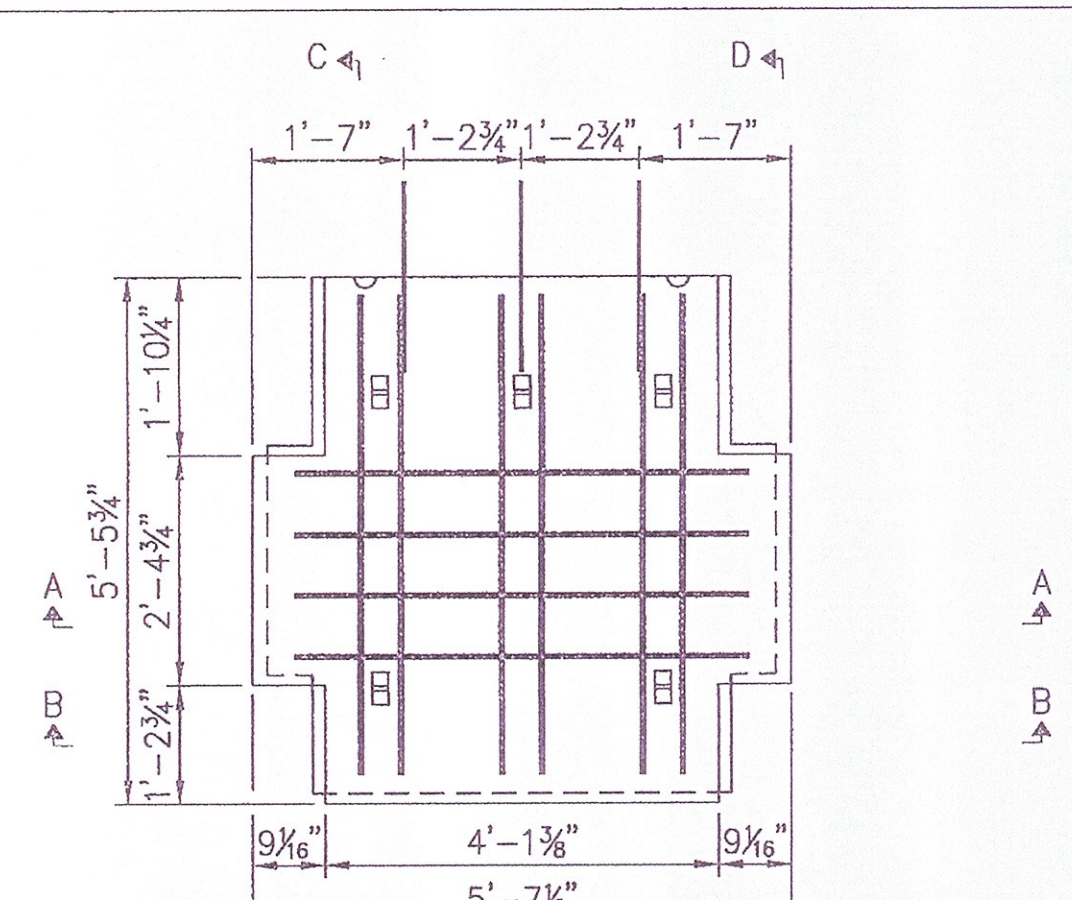
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FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL Q



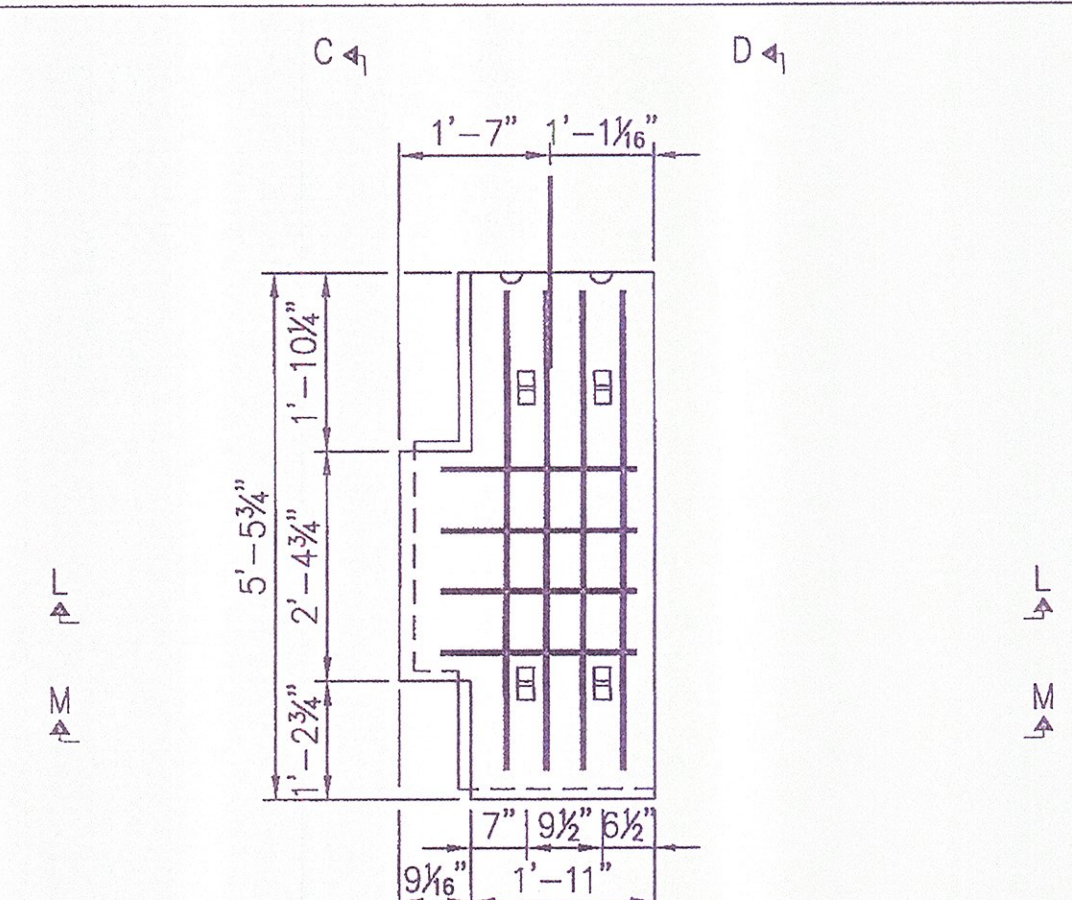
K-8-R6-D
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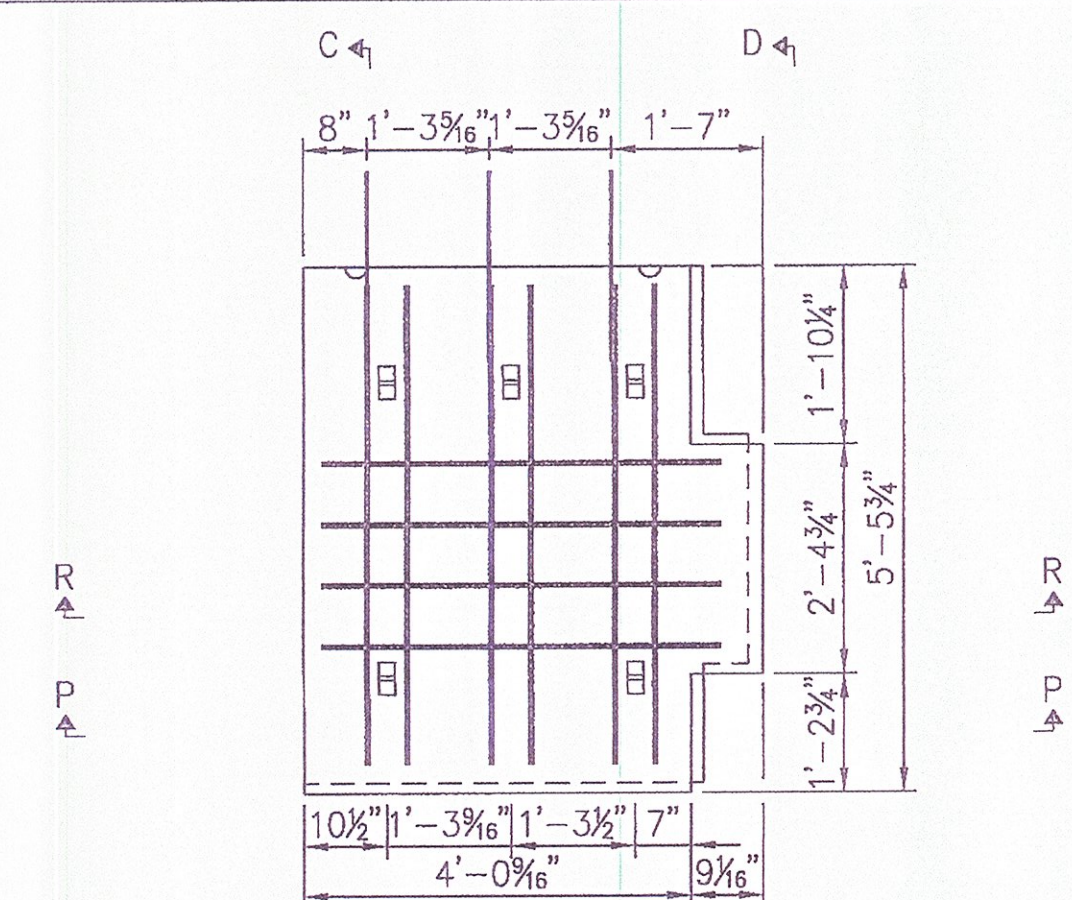
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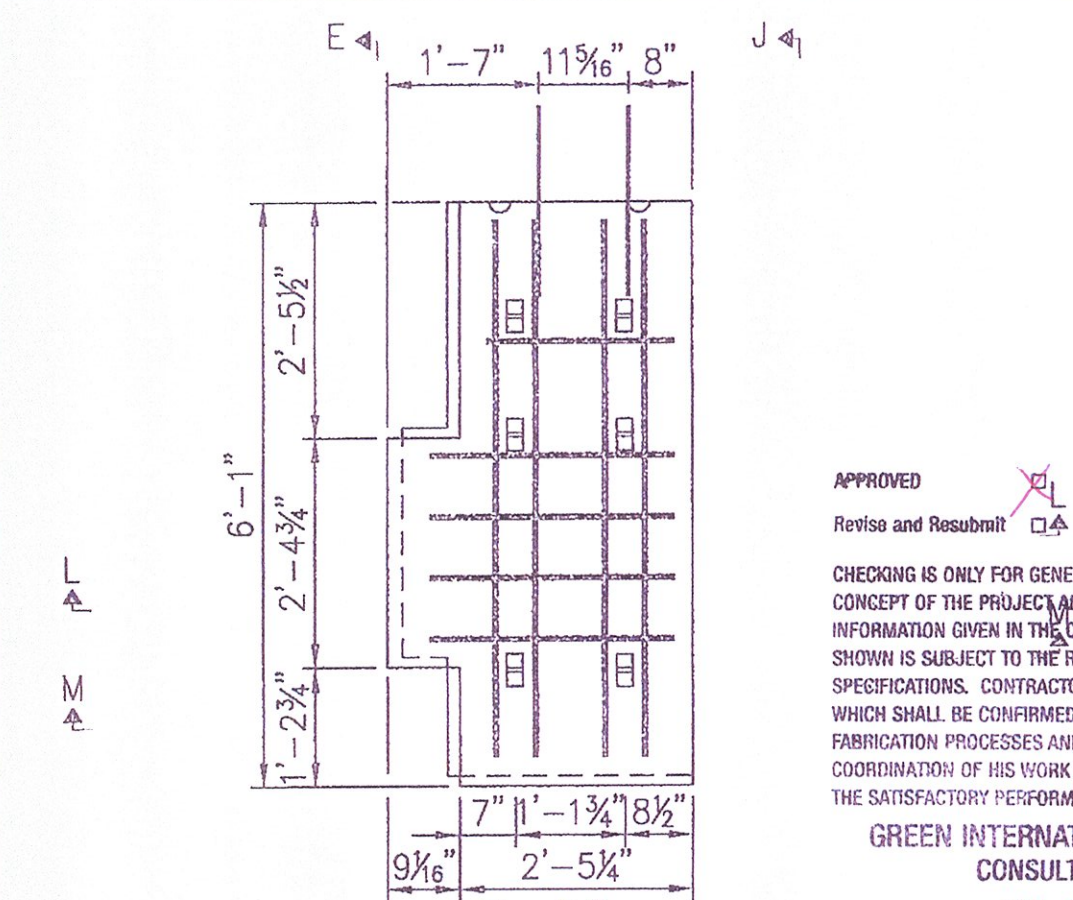
K-5-R6-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL N



KL-4-R6-2.32-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL P



KR-5-R6-4.45-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL P



LL-6-R6-2.84-D
FOR LIFTING INSERT & DOWEL LOCATIONS, SEE DETAIL P

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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: *XZ* DATE: 9/11
 SIGNED BY: *Michael J. Cause* DATE: 9/11

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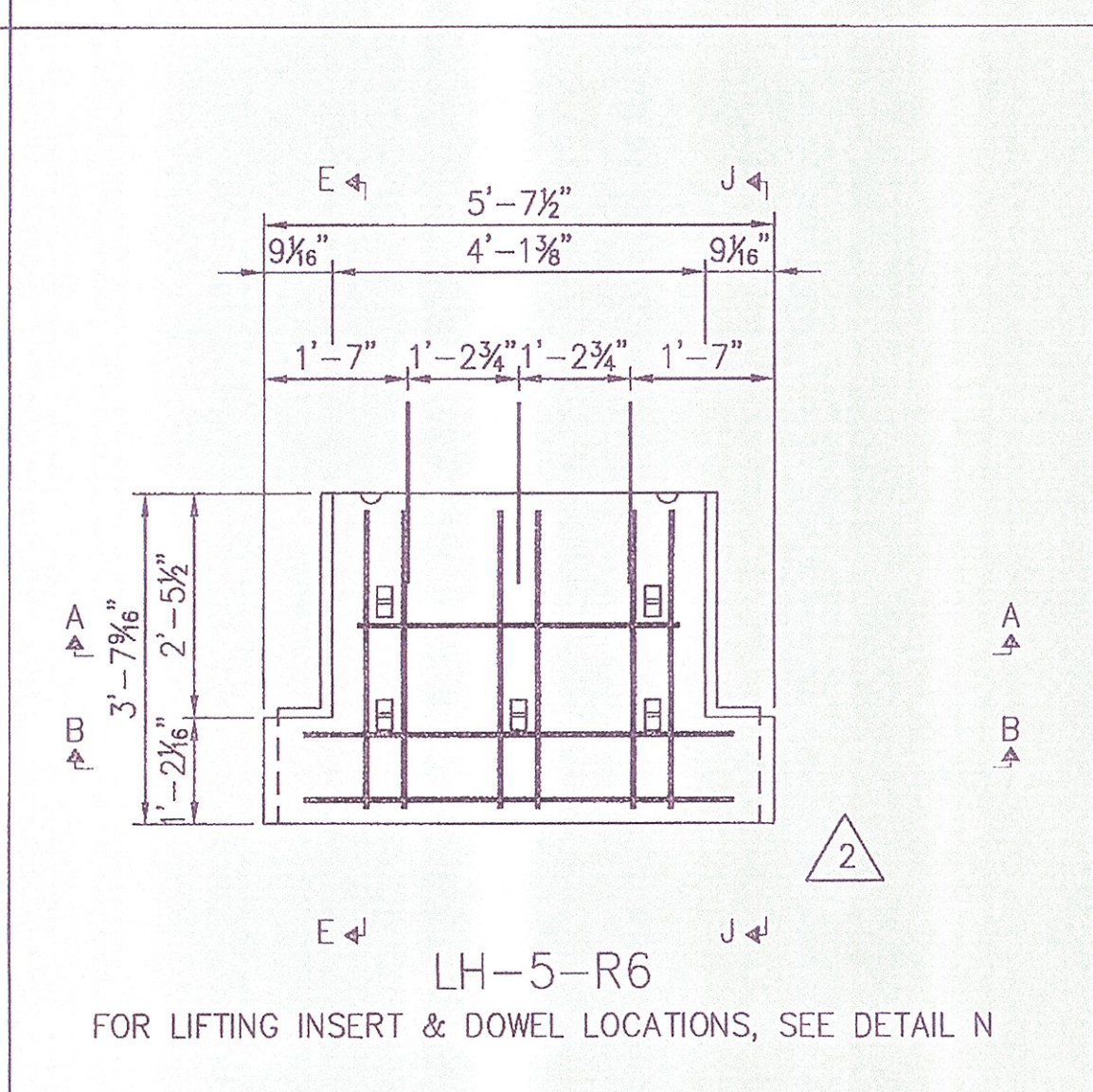
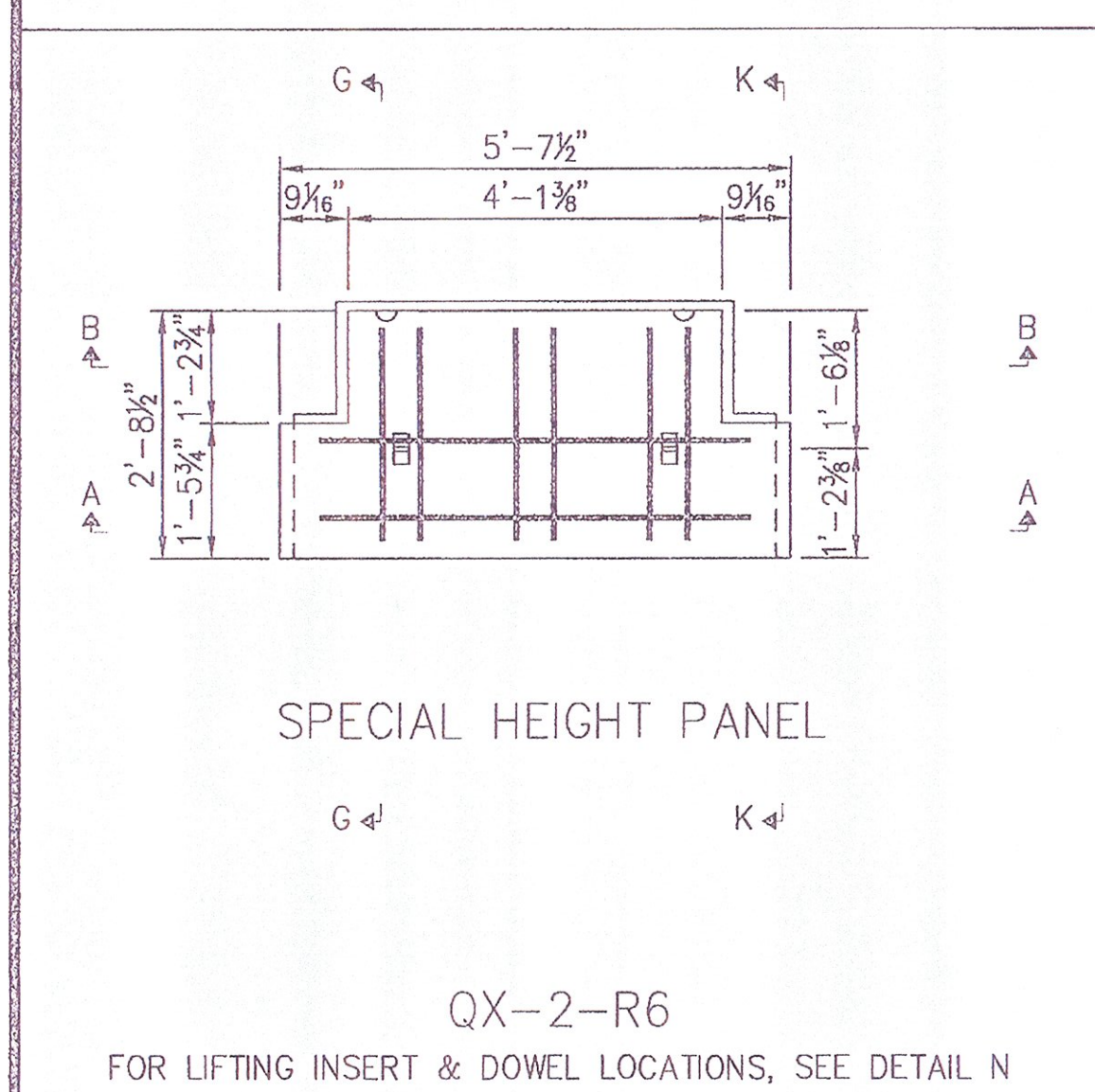
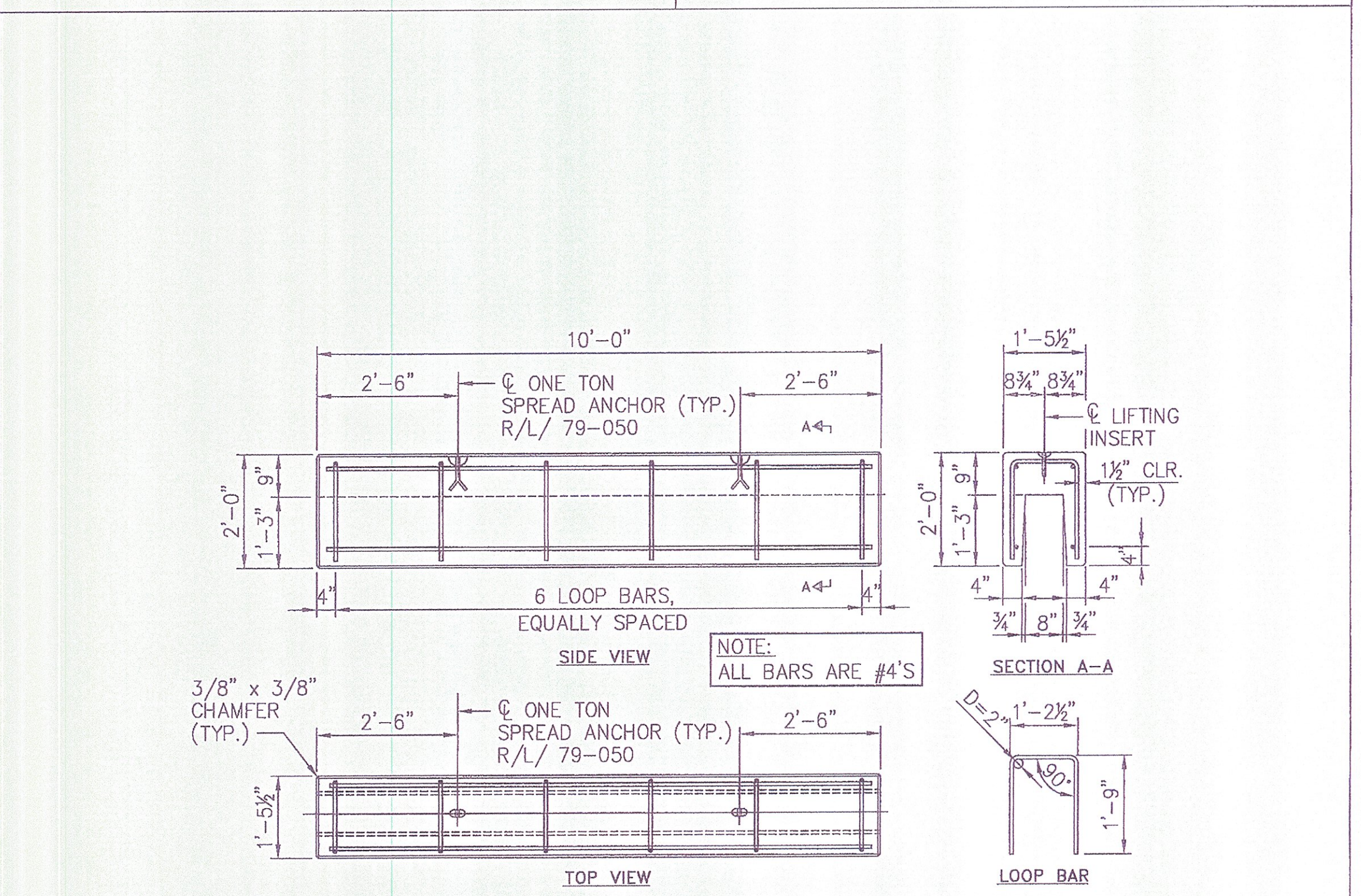
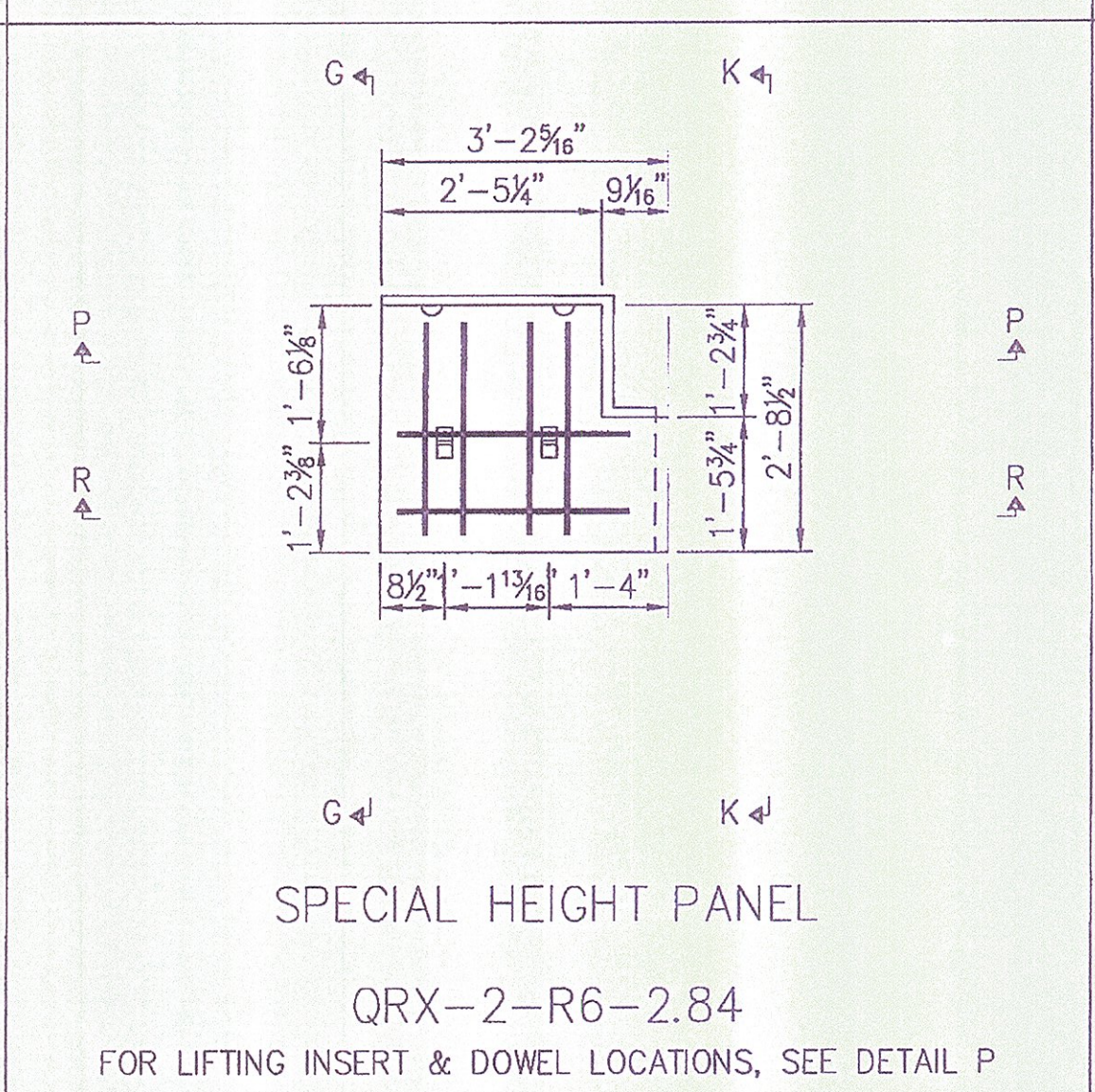
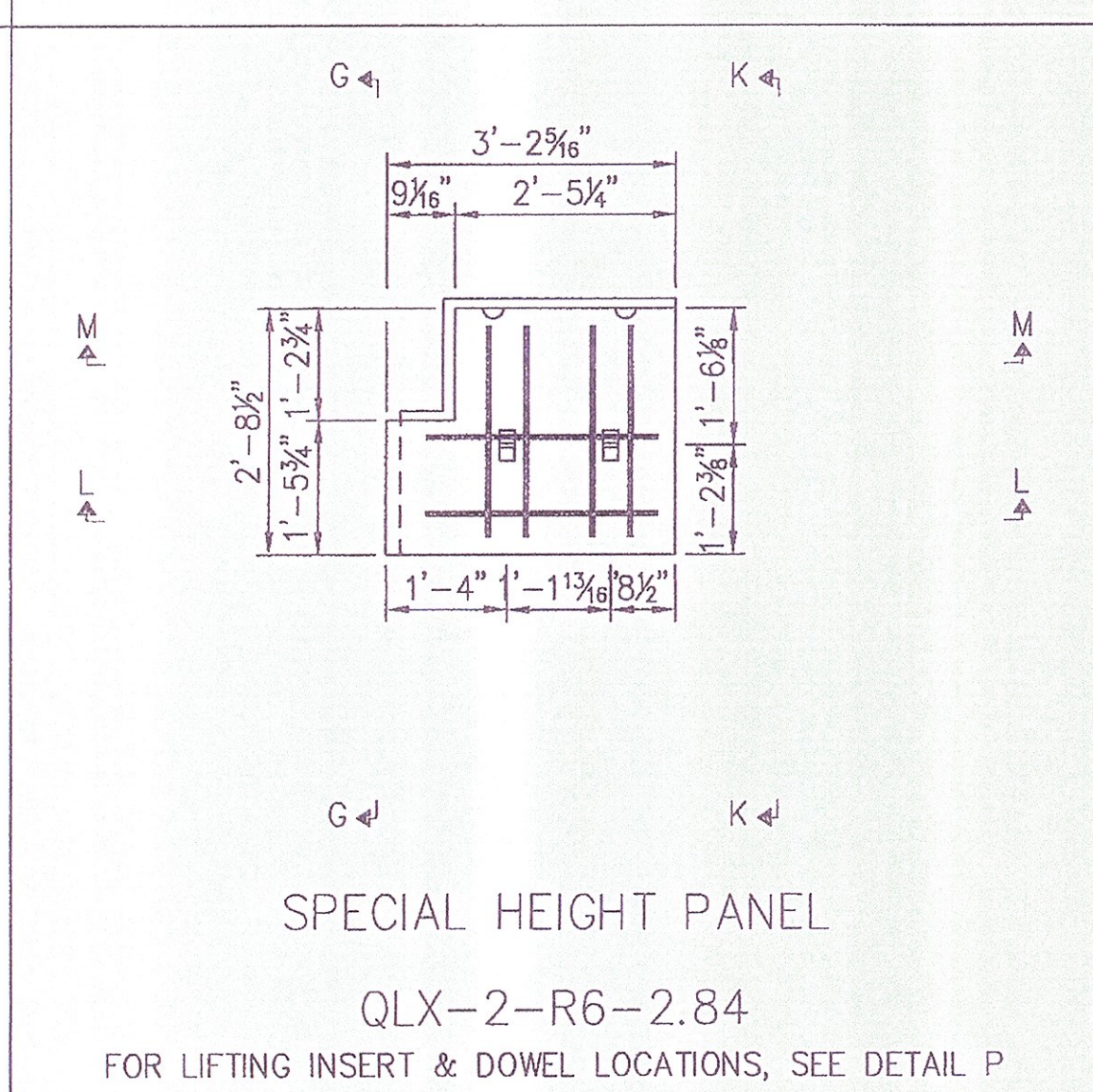
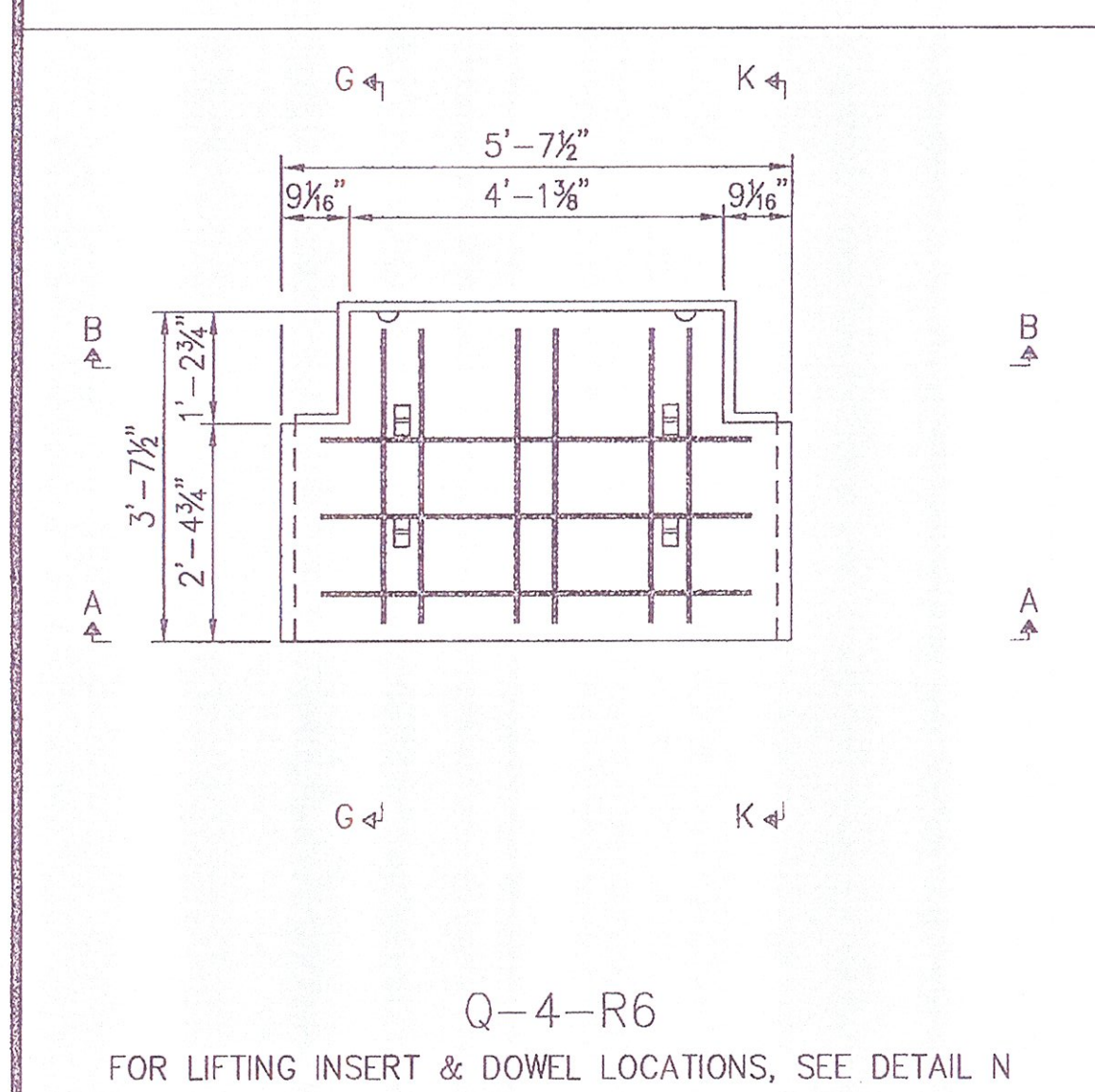
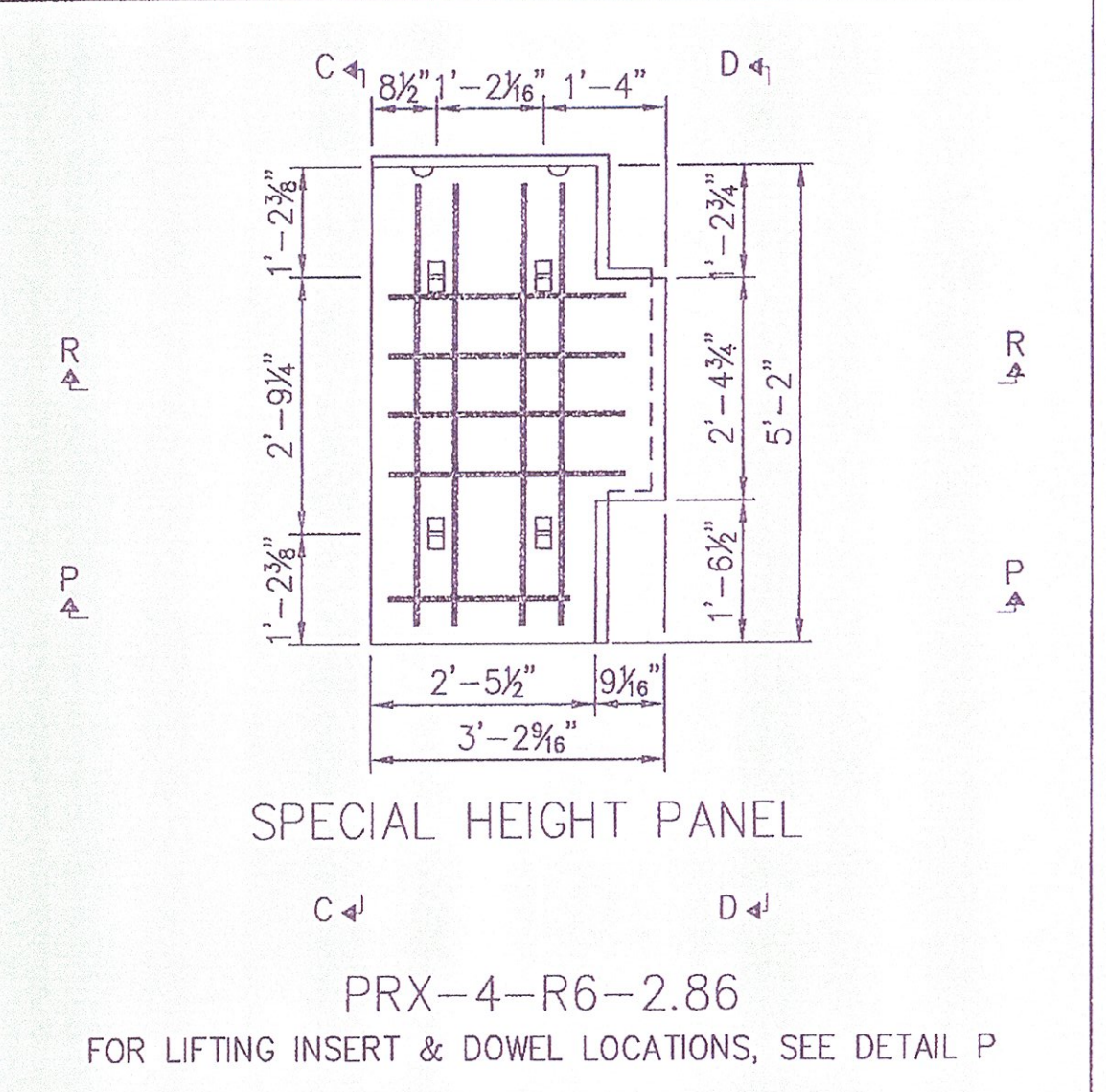
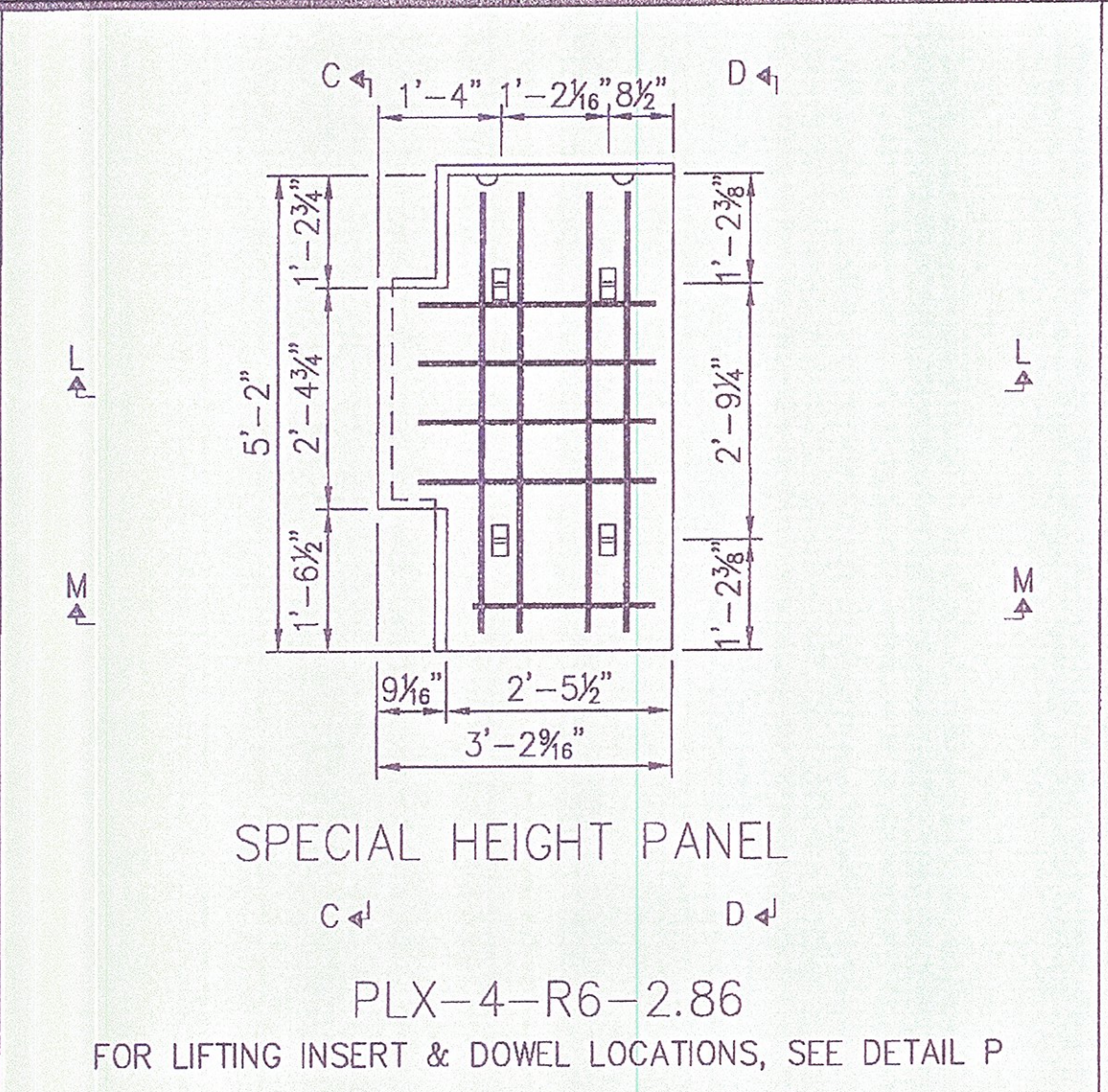
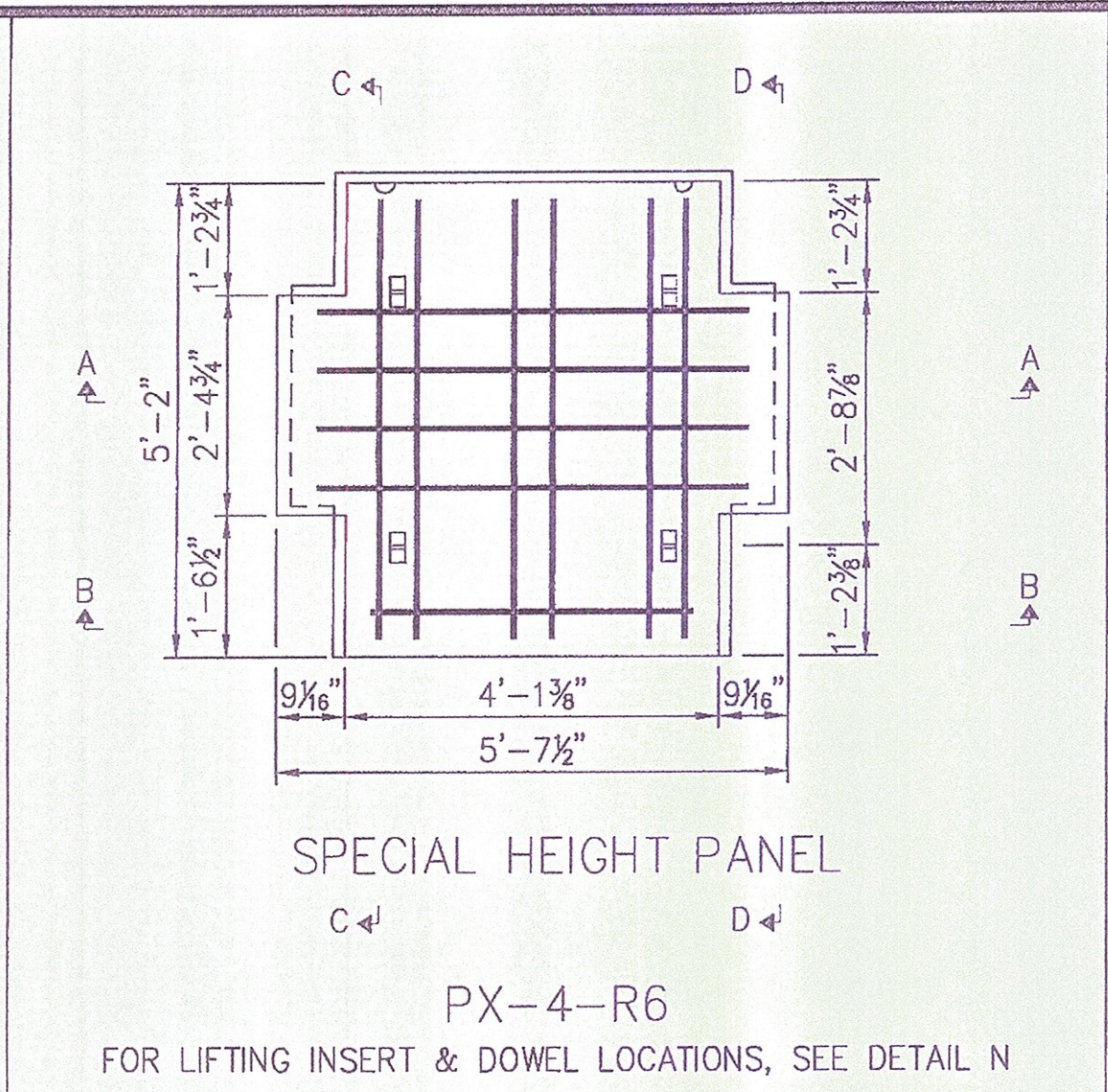
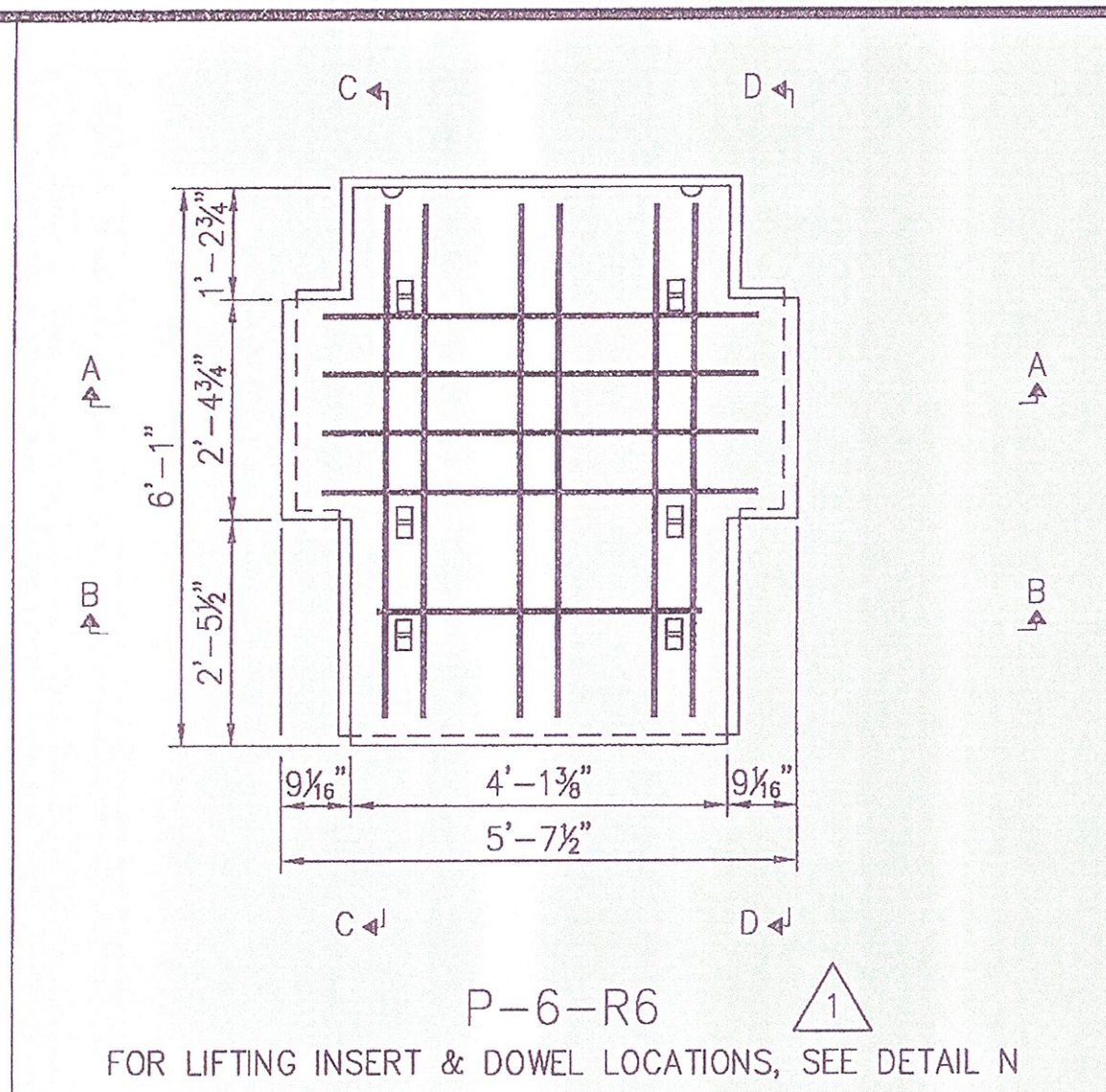
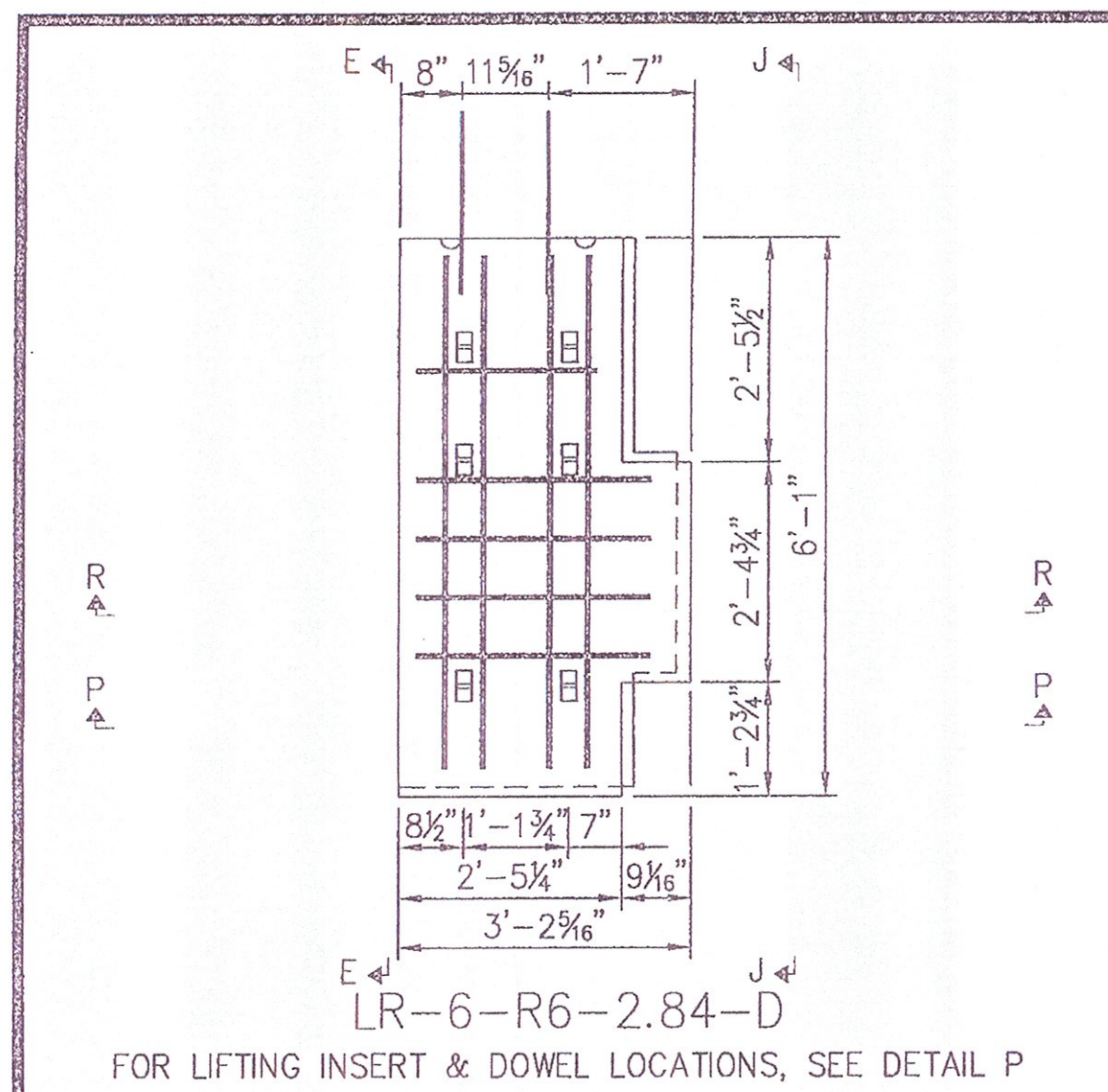
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REINFORCED EARTH
 814 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175
 "REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.

DESIGNED BY:	KC
PROJECT ENGR:	DTM
CHECKED BY:	EEH/LY
ENG. MANAGER	REV. DATE DESCRIPTION
	1 7/19/11 REV. PANELS PER GIA COMMENTS

PROJECT NAME	U.S. ROUTE 2 OVER EXISTING STREAM	DATE	04/06/2011
LOCATION	CABOT-DANVILLE, VERMONT	CONTRACT NO.	RE-15053
OWNER	VTAOT	DRAWING NO.	S8 OF S13
DRAWING COVERS	PANEL CASTING DRAWINGS	SCALE	AS SHOWN

R:\15053s08.dwg



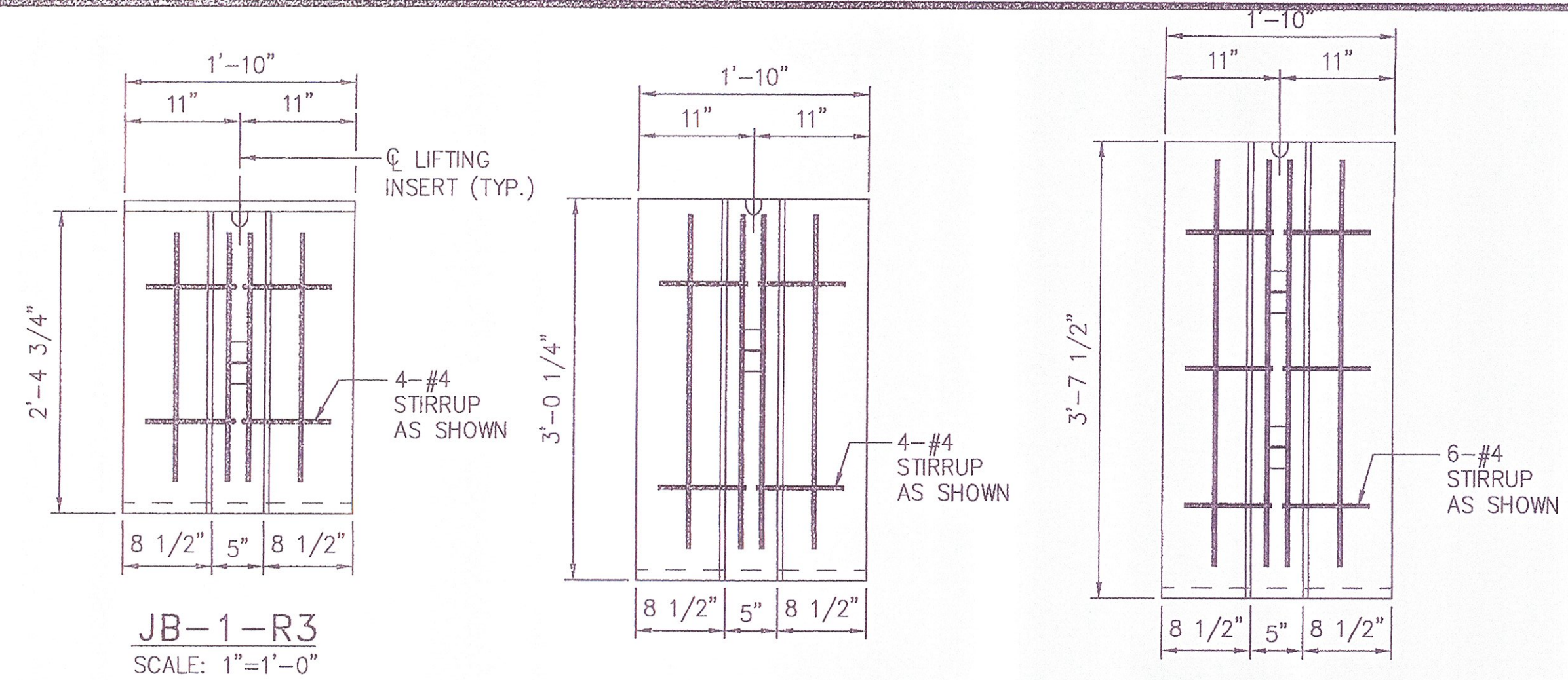
APPROVED Approved as Noted
 Revised and Resubmitted DISAPPROVED
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 GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS
 CHECKED BY: XZ DATE: 9/11
 SIGNED BY: Michael J. Cozz DATE: 9/11

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		PROJECT ENGR: DTM	LOCATION CABOT-DANVILLE, VERMONT	CONTRACT NO. RE-15053
		CHECKED BY: EEH/LY	OWNER VTAOT	DRAWING NO. S9 OF S13
		ENG. MANAGER REV. DATE DESCRIPTION	DRAWING COVERS PANEL CASTING DRAWINGS	SCALE AS SHOWN

REINFORCED EARTH
 864 Westwood Center Drive, Vienna, VA 22182 (703) 821-1175

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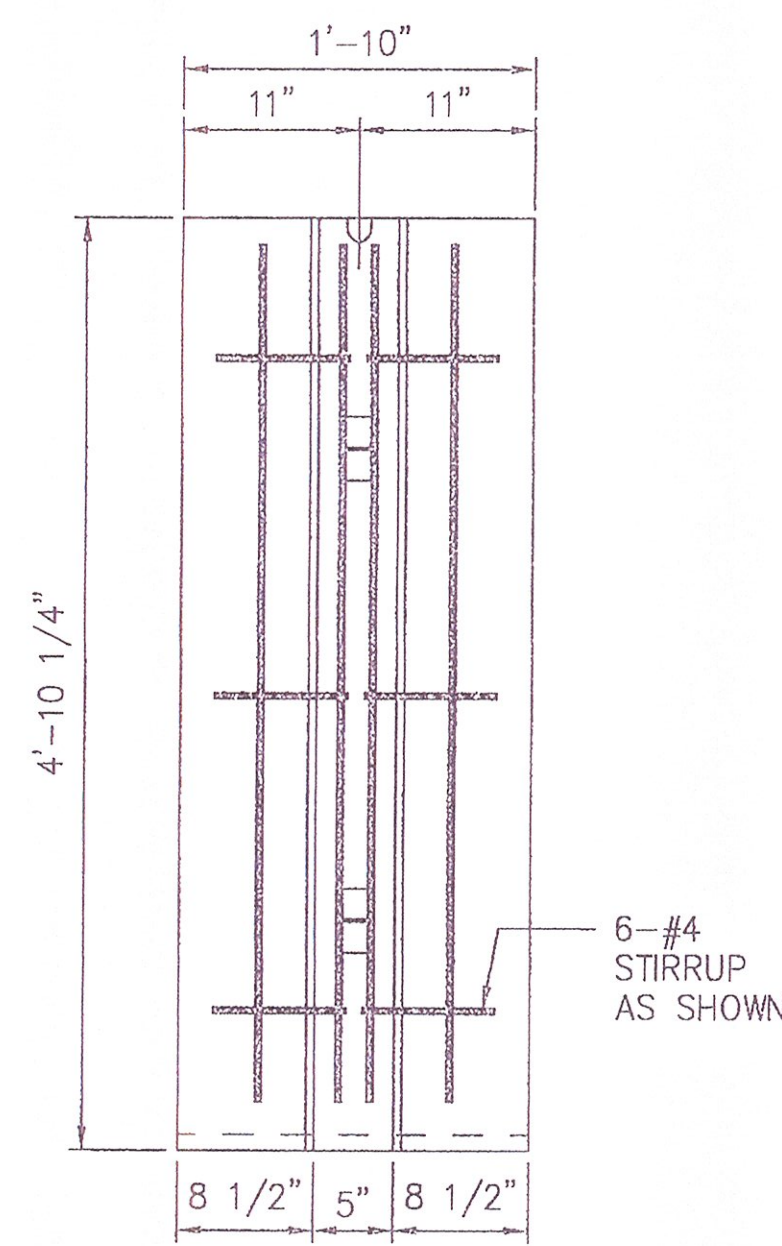
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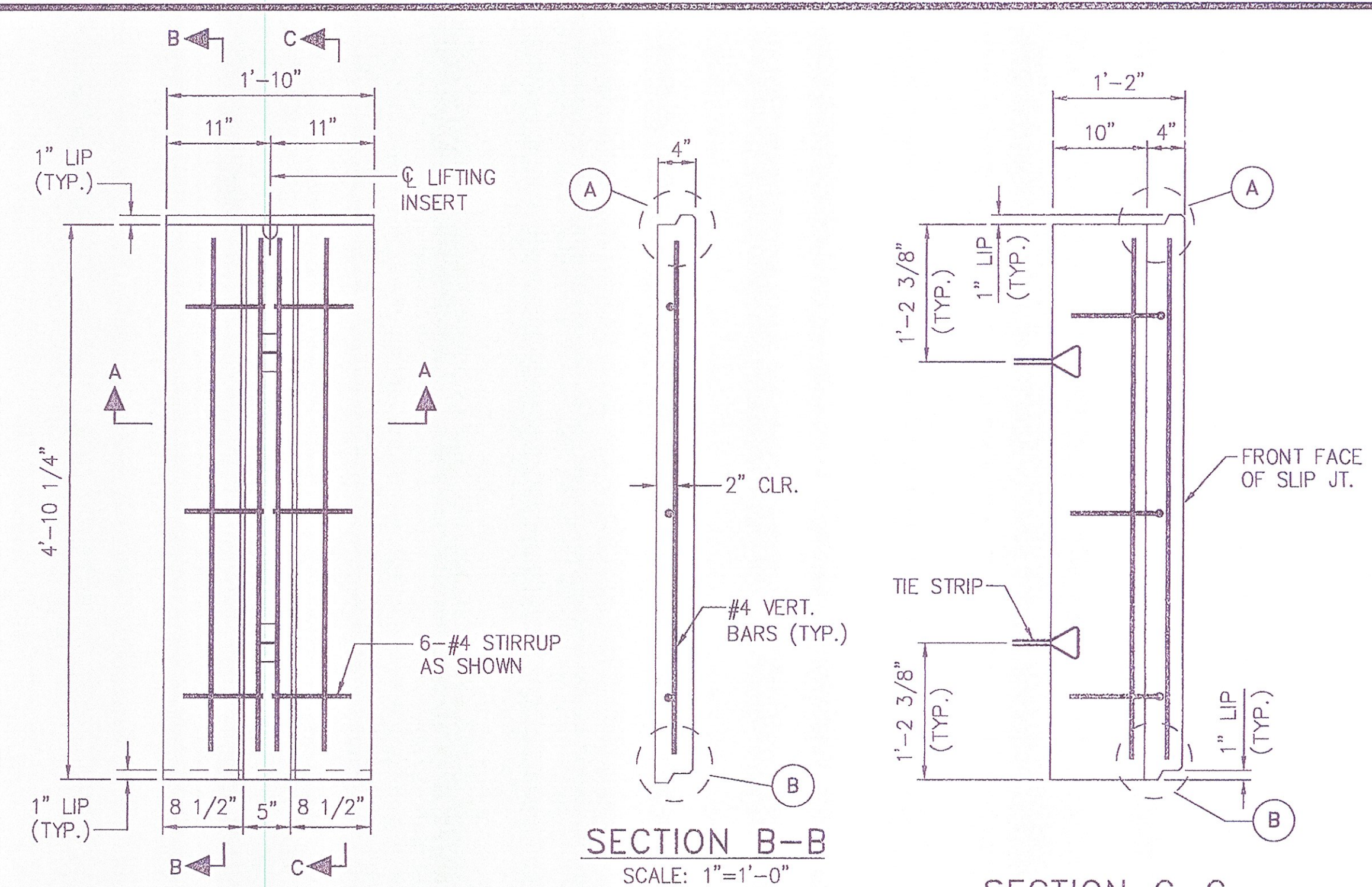
JB-1-R3
SCALE: 1"=1'-0"

JE-1-R3
SCALE: 1"=1'-0"

JF-2-R3
SCALE: 1"=1'-0"



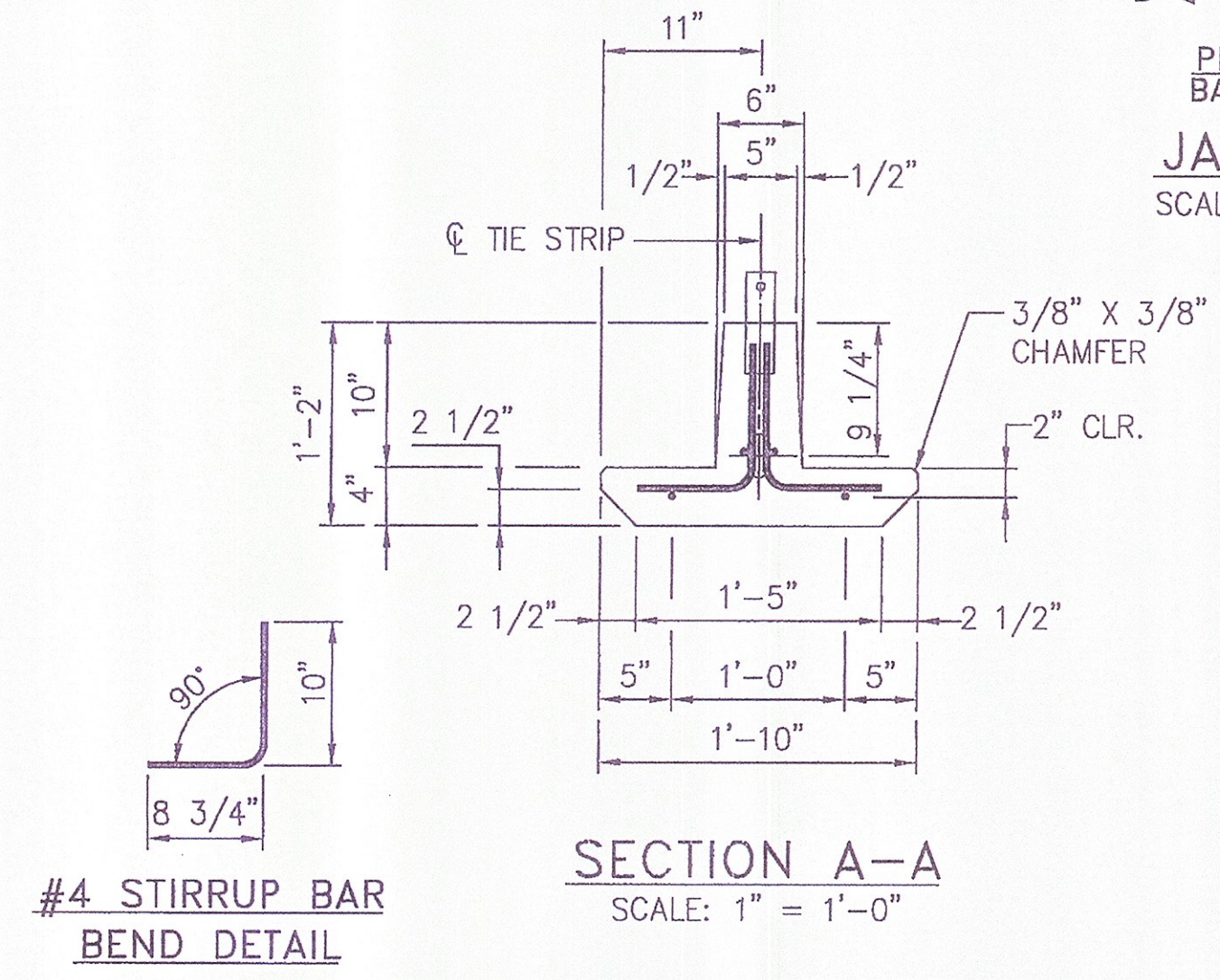
JH-2-R3
SCALE: 1"=1'-0"



PLAN VIEW
BACK FACE
JA-2-R3
SCALE: 1"=1'-0"

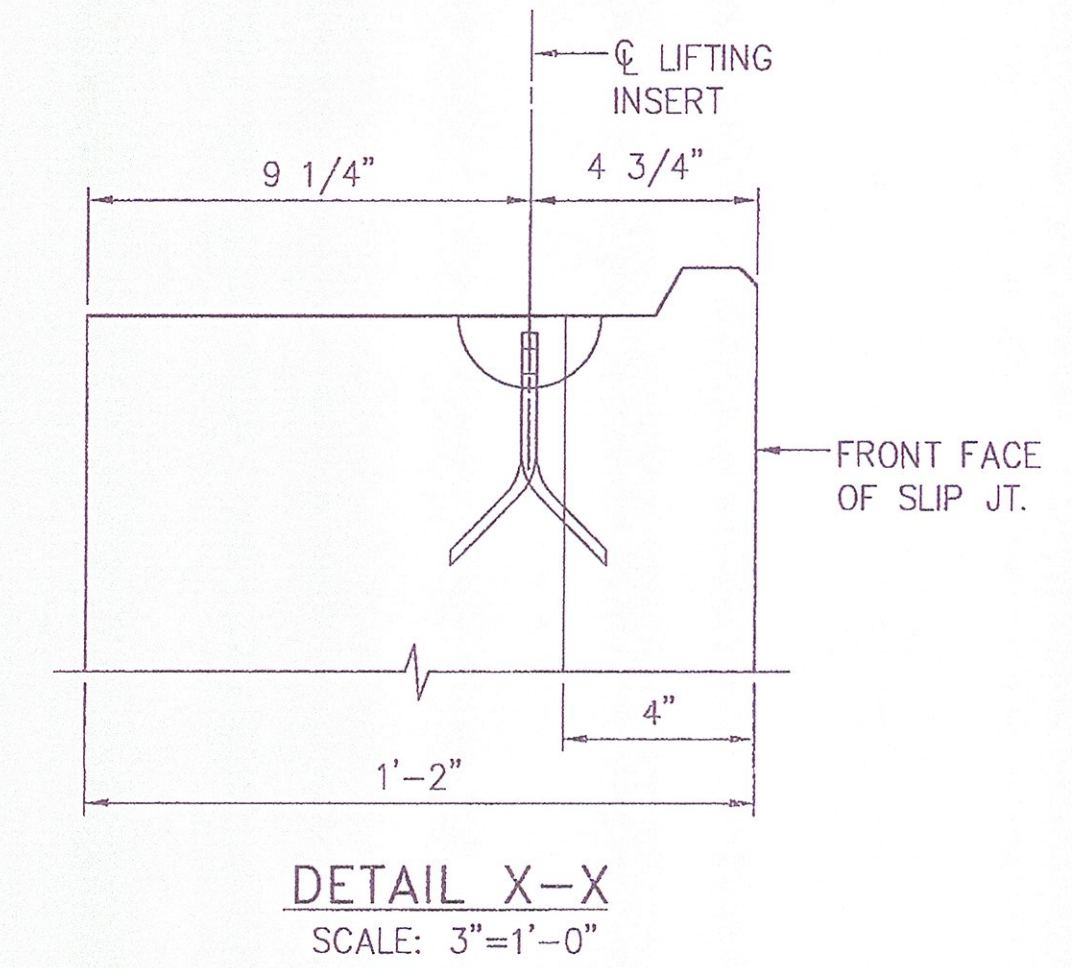
SECTION B-B
SCALE: 1"=1'-0"

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



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

#4 STIRRUP BAR
BEND DETAIL

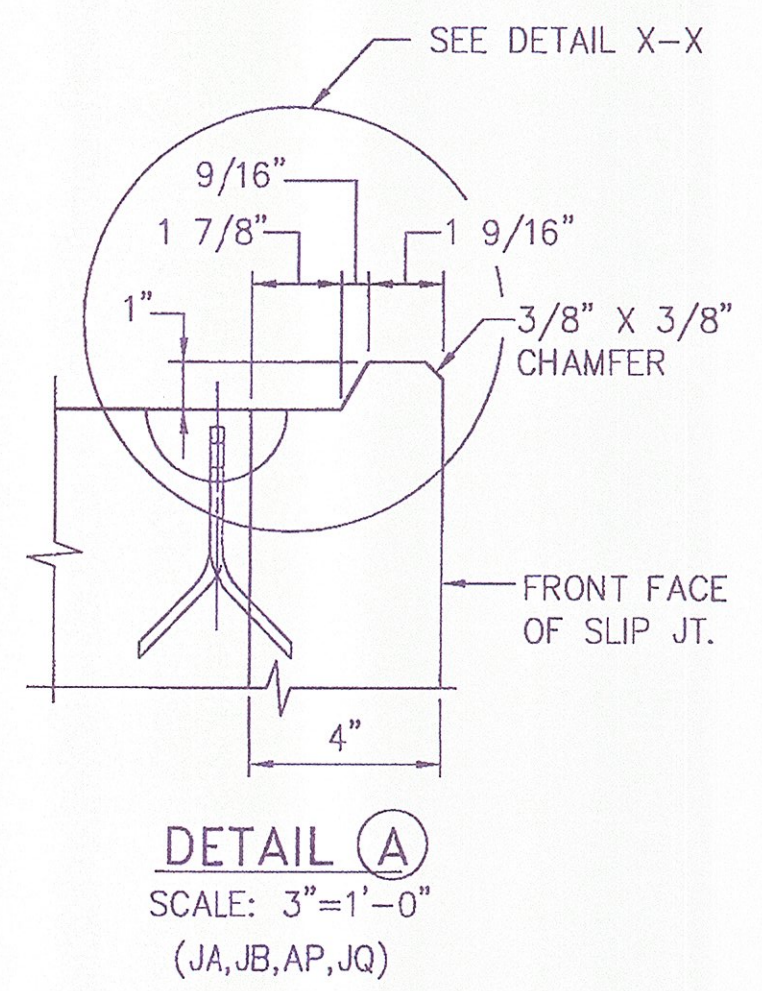


DETAIL X-X
SCALE: 3"=1'-0"

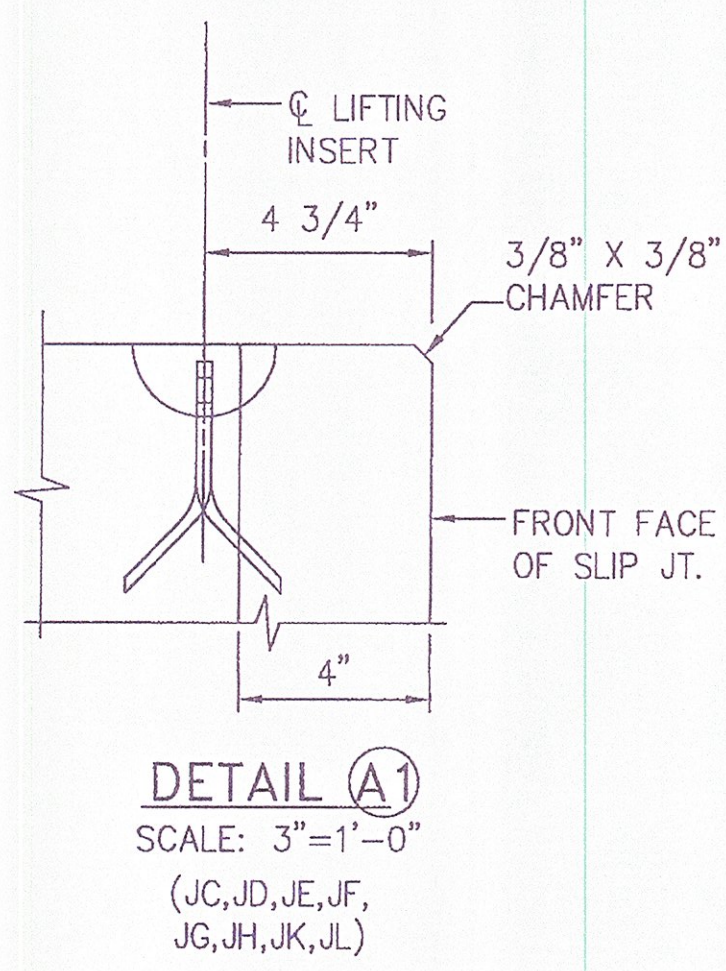
LEGEND
 JA-2-R3
 — PANEL REINFORCEMENT TYPE
 — NO. OF TIE STRIPS
 — PANEL TYPE

ALL PLAN VIEWS

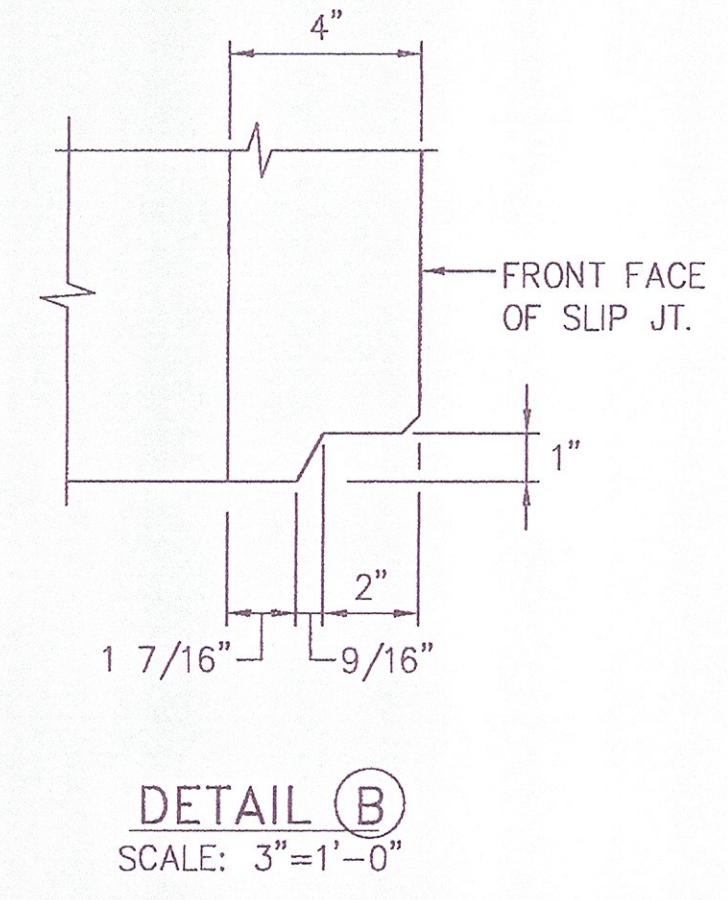
ALL SLIP JOINTS ARE SHOWN BACK FACE



DETAIL A
SCALE: 3"=1'-0"
(JA, JB, AP, JQ)



DETAIL A1
SCALE: 3"=1'-0"
(JC, JD, JE, JF, JG, JH, JK, JL)



DETAIL B
SCALE: 3"=1'-0"

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: *Alfred J. Conz* DATE: 9/11

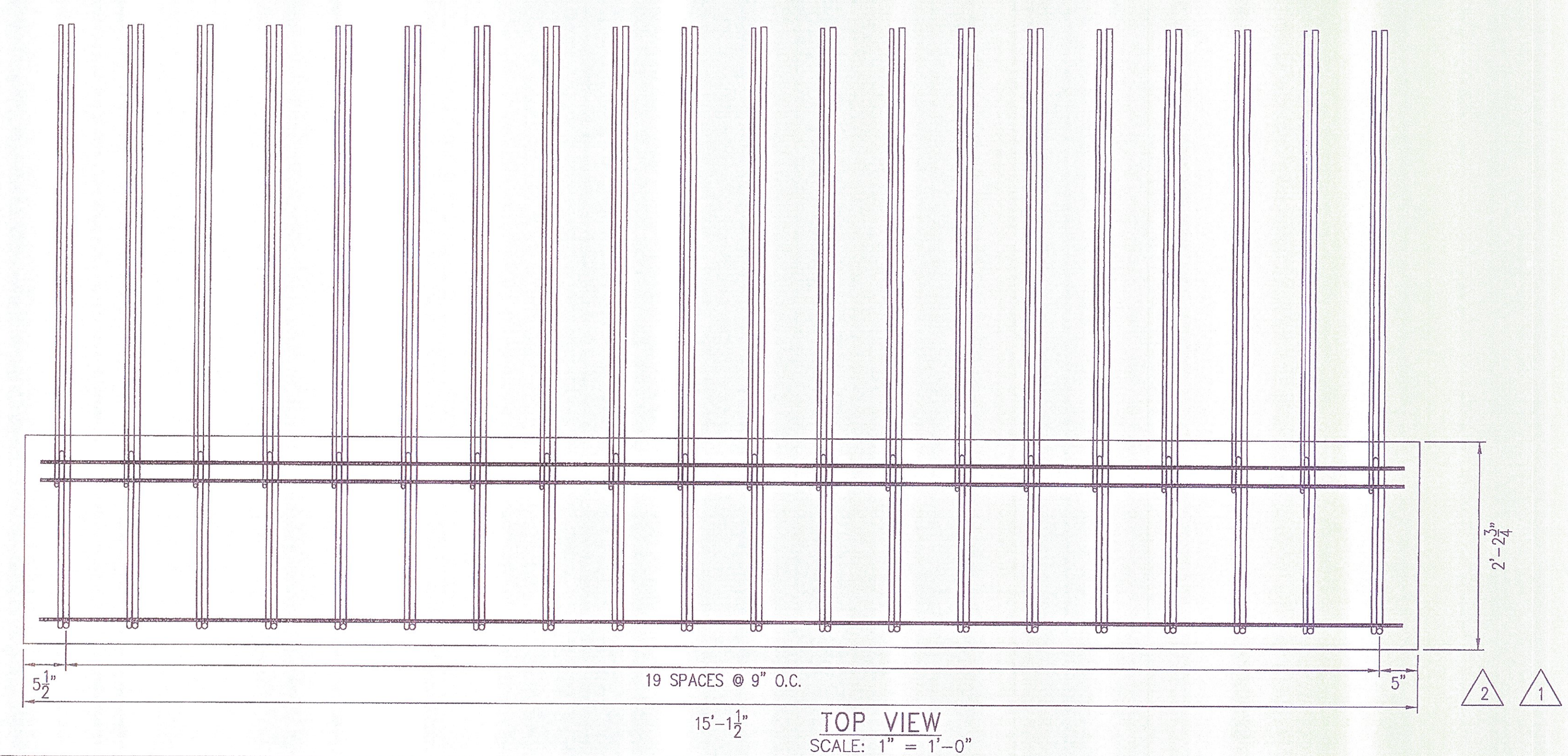
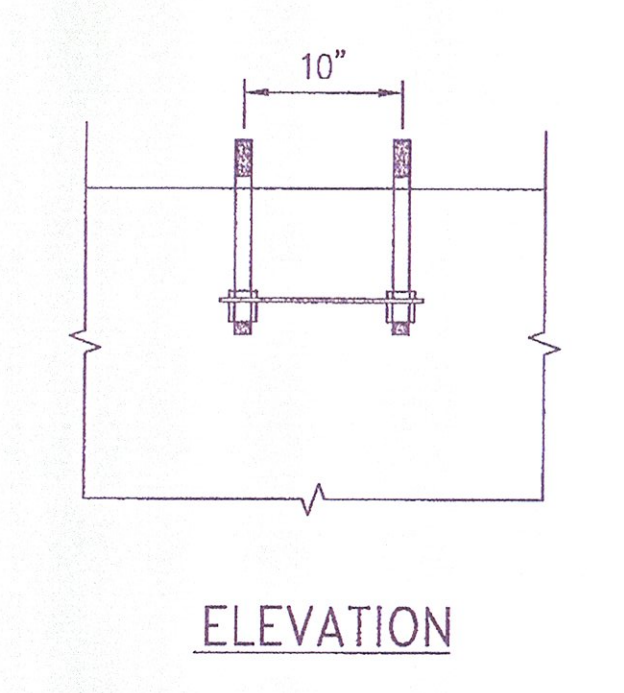
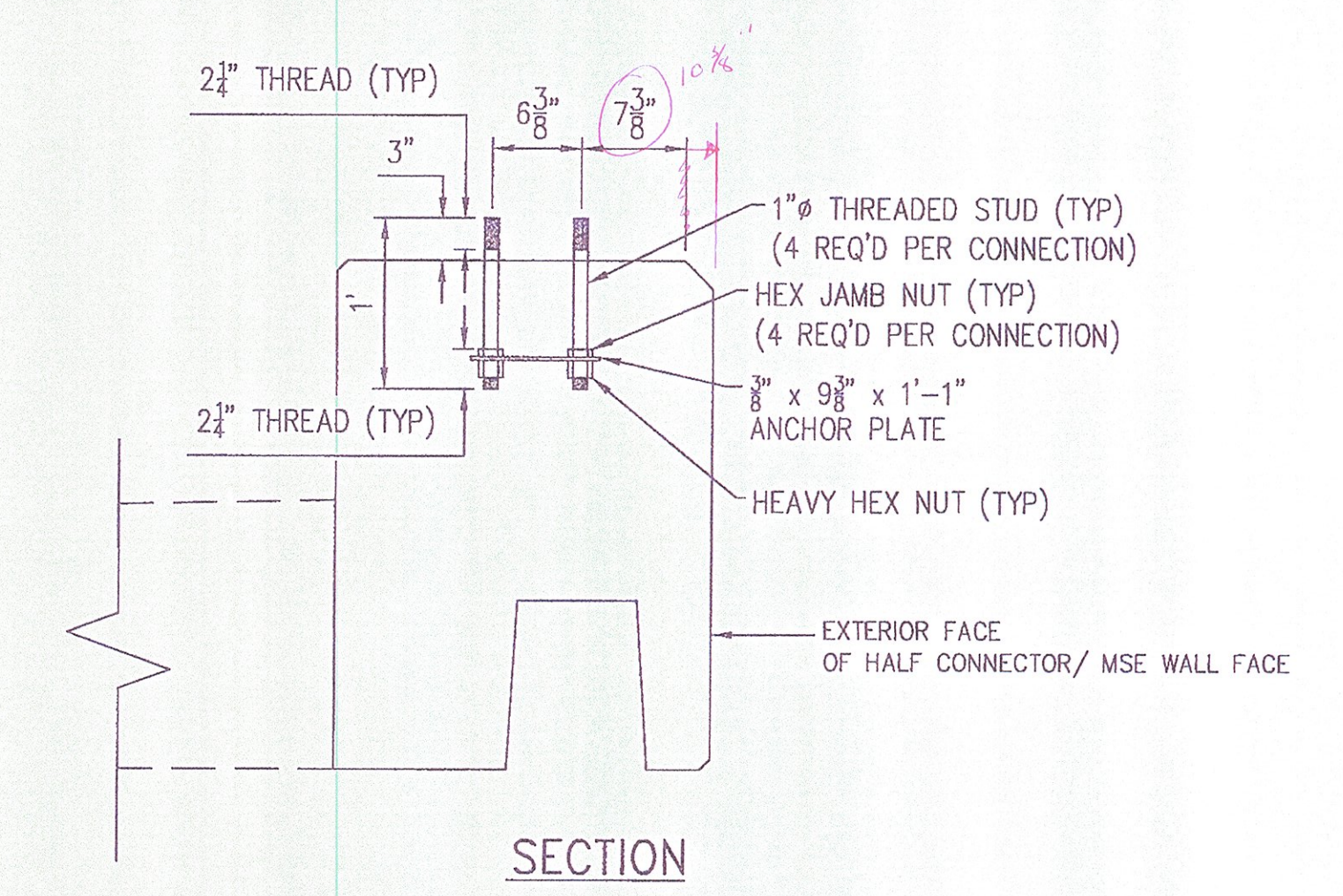
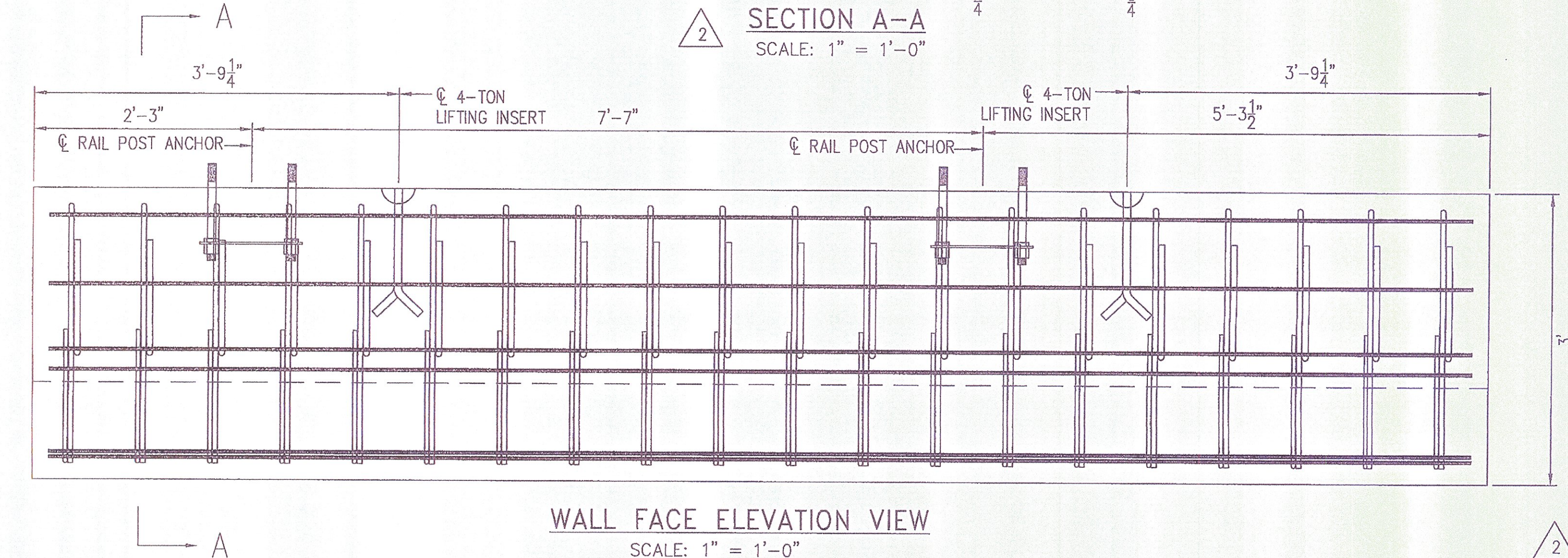
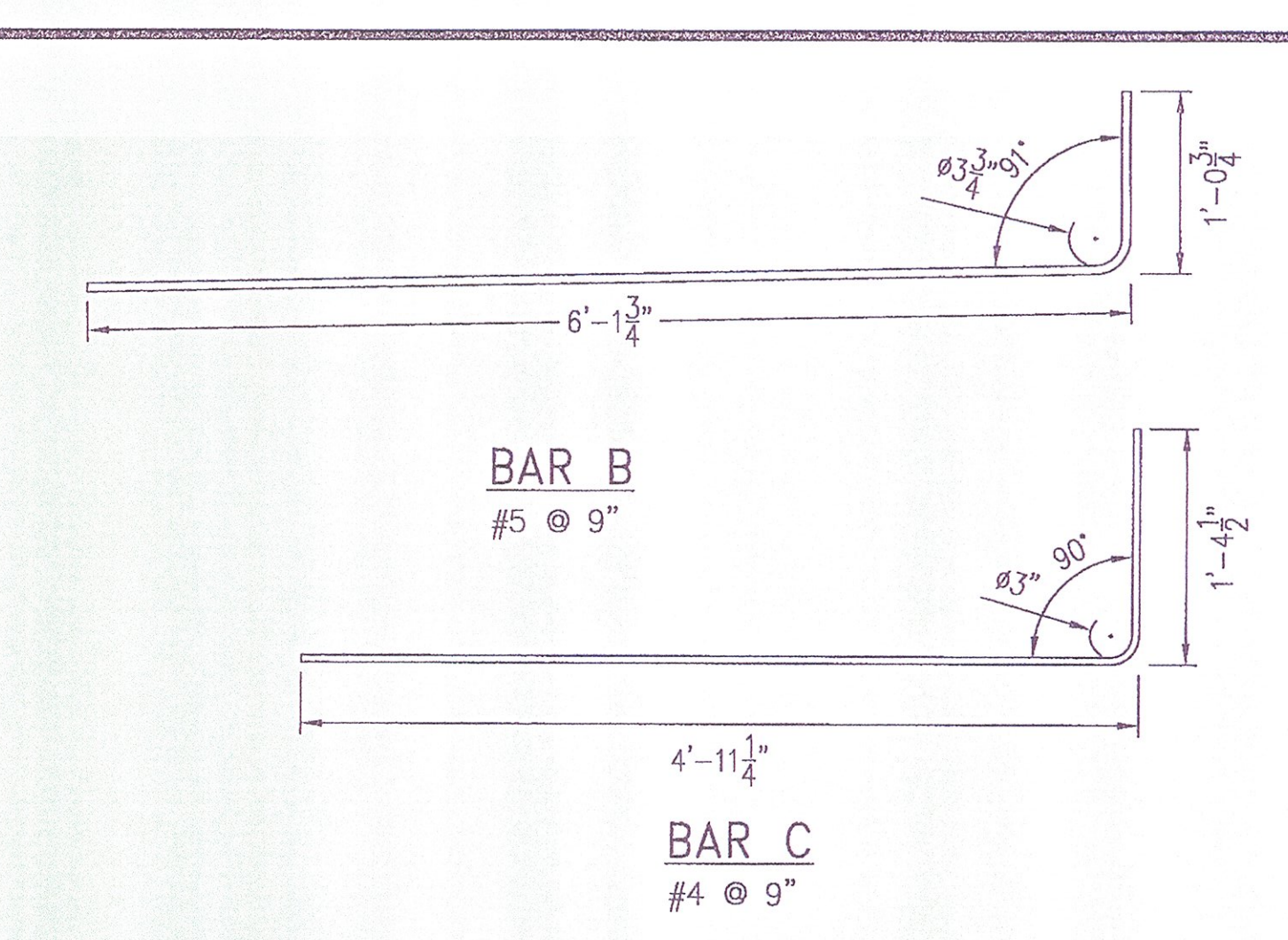
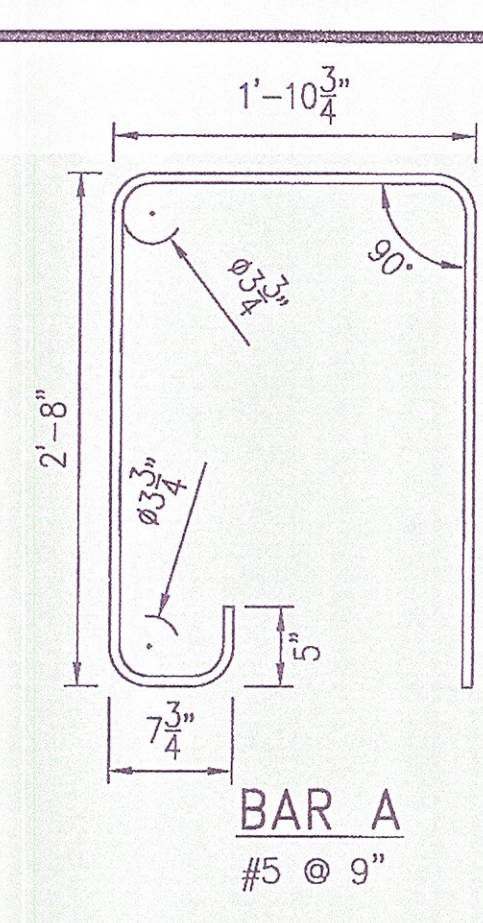
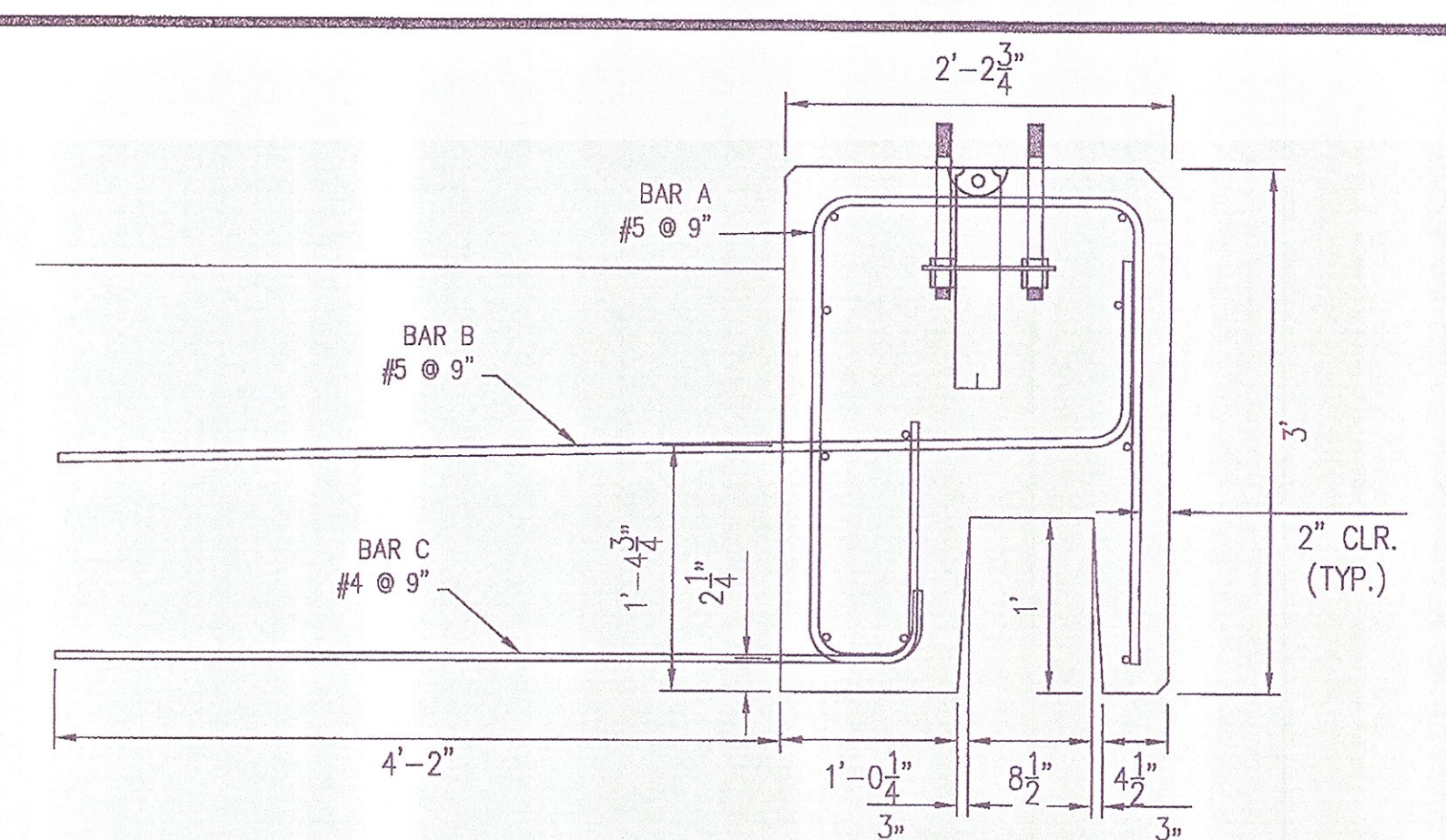
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REINFORCED EARTH
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DESIGNED BY:	KC	PROJECT NAME:	U.S. ROUTE 2 OVER EXISTING STREAM	DATE:	04/06/2011
PROJECT ENGR:	DTM	LOCATION:	CABOT-DANVILLE, VERMONT	CONTRACT NO.:	RE-15053
CHECKED BY:	EEH/LY	OWNER:	VTAOT	DRAWING NO.:	S10 OF S13
ENG. MANAGER:		DRAWING COVERS:	SLIP JOINTS	SCALE:	AS SHOWN
REV.	DATE	DESCRIPTION			



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

MATERIALS PER PIECE				
HFCW1 - 15.17' UNIT				
MARK #	QTY	WEIGHT PER BAR (LBS)	TOT. WEIGHT (LBS)	DESCRIPTION
A	20	8.3	165	#5 7'-11" LONG
B	20	7.5	150	#5 7'-2" LONG
C	20	4.2	84	#4 6'-3" LONG
L	10	9.9	98.8	#4 14'-9 1/2" LONG
TOTAL W.			497.8	

APPROVED Approved as Noted
 Revise and Resubmit USA APPROVED

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

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

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.) = 3.3 CY	WT. (LBS) = 13,350

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

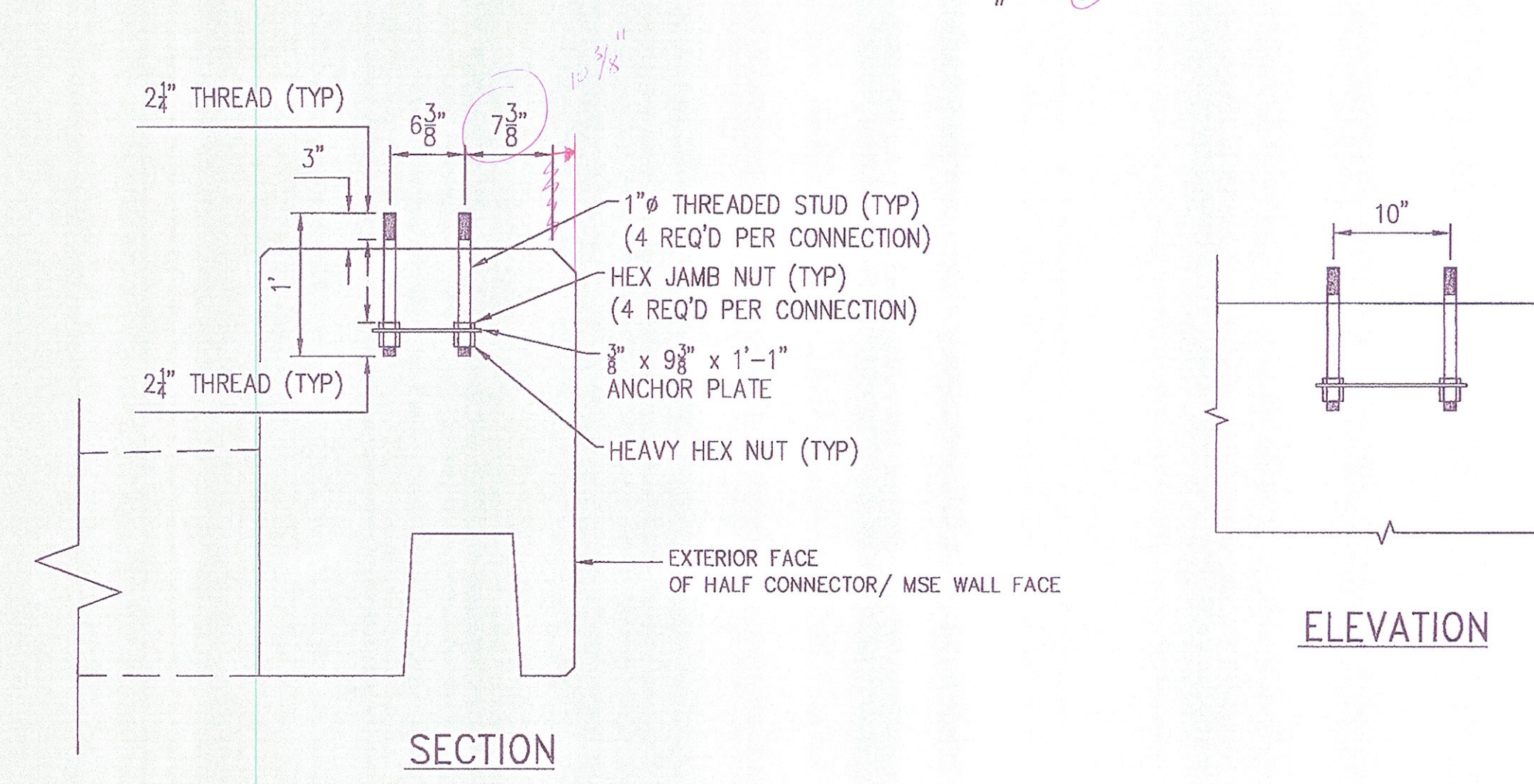
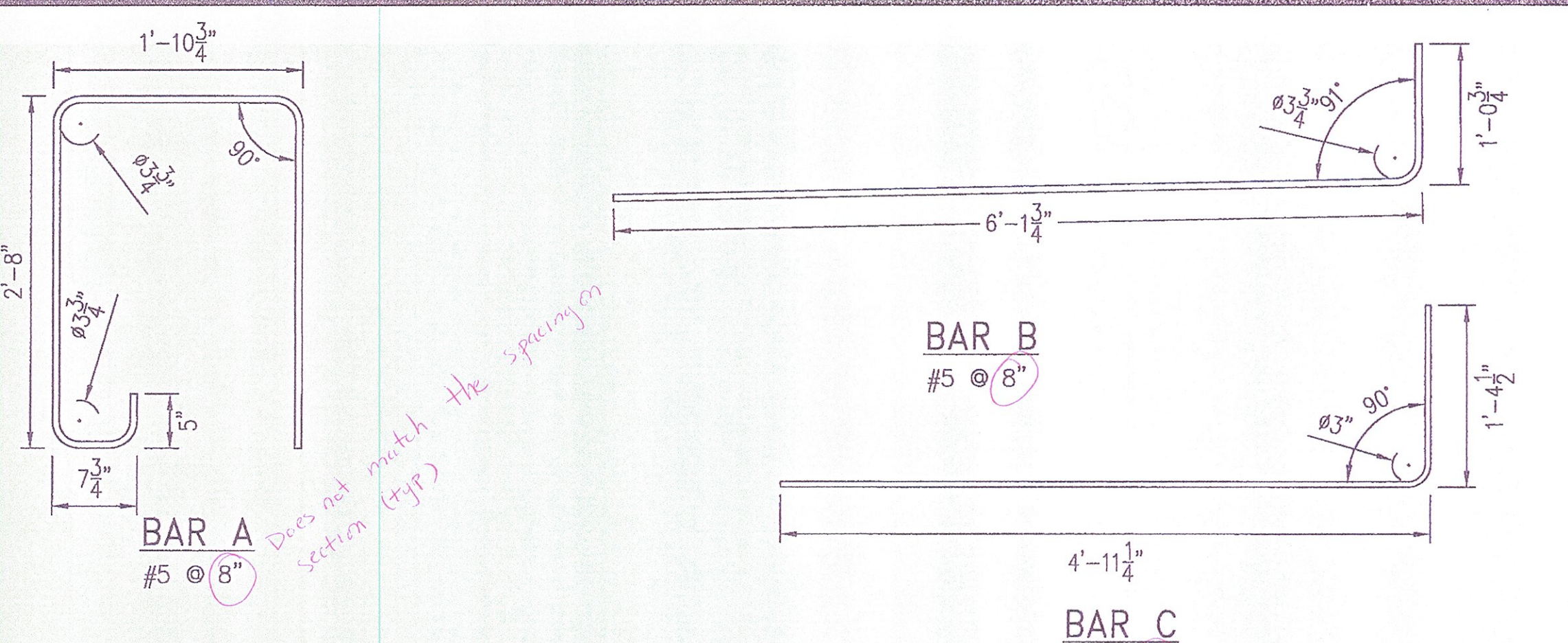
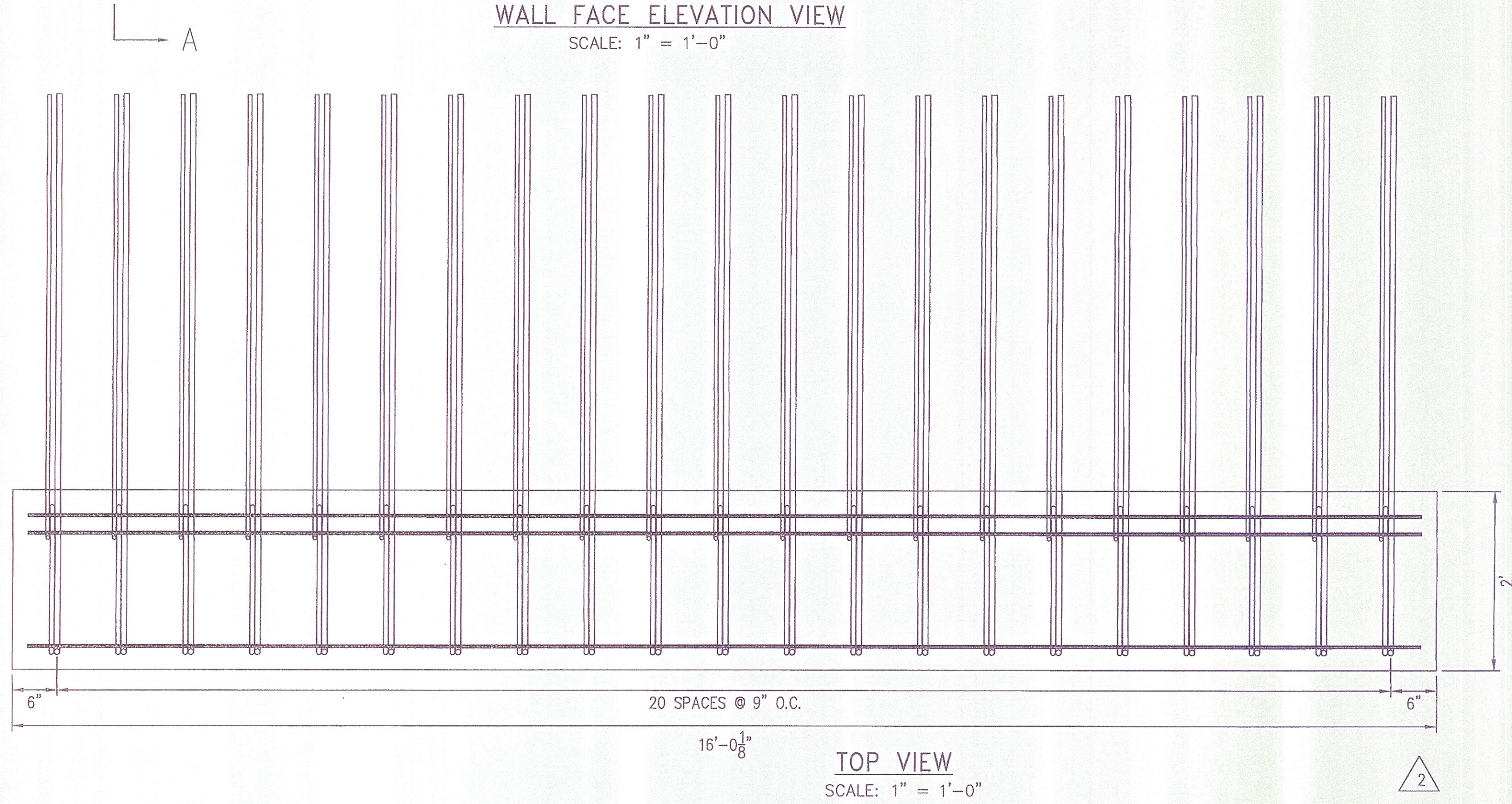
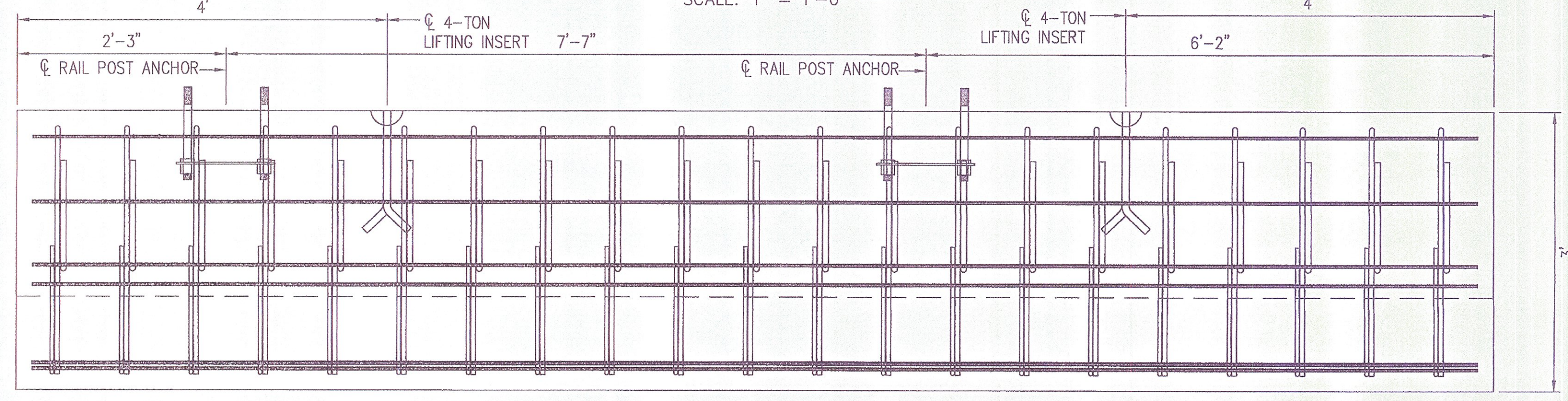
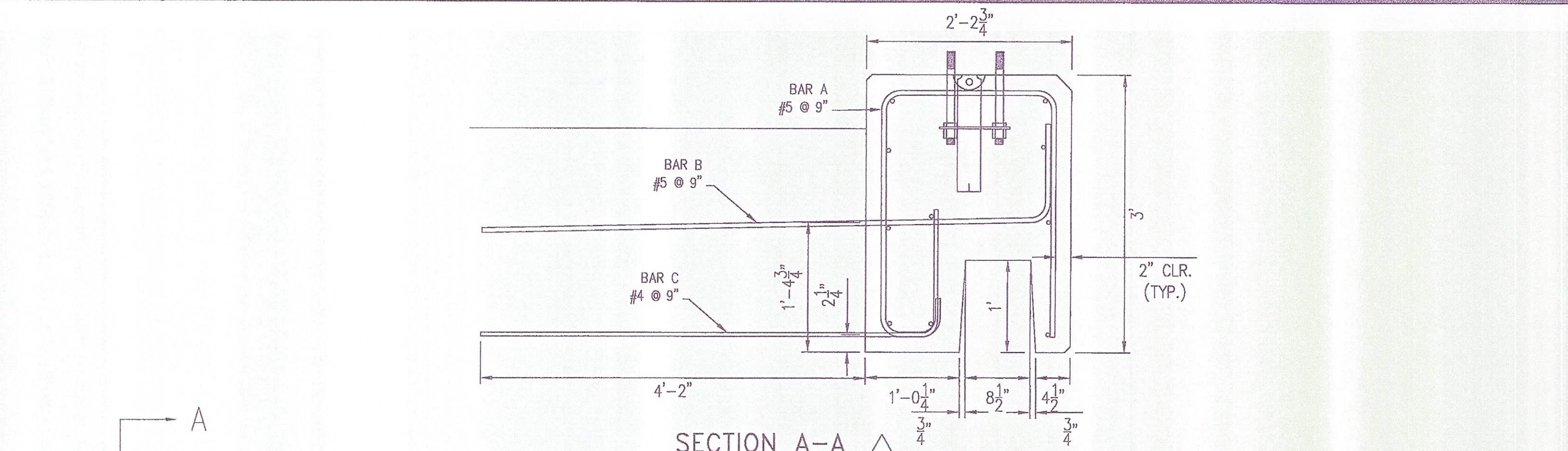
[Professional Engineer Seal]
 PETER L. ANDERSON
 PROFESSIONAL ENGINEER
 0101
 10/22/11

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		PROJECT ENGR: LY 2 8/19/11 REVISION: REVISE REBAR SPACING AND HALF CONNECTOR DIMENSION	LOCATION: CABOT-DANVILLE VERMONT	CONTRACT NO.: RE-15053
		CHECKED BY: PLA/EEH 1 7/19/11 REVISION: REVISE BAR SPACING	OWNER: VT AOT	DRAWING NO.: S11 OF S13
		REV. DATE DESCRIPTION	DRAWING COVERS: HFCW1 - HALF CONNECTOR	SCALE: AS SHOWN



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

R. 15053



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	

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

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

APPROVED

Checked and Resubmit Approved as Noted

DISAPPROVED

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY: *xxz* DATE: 8/11
SIGNED BY: *Michael A. Long* DATE: 8/11

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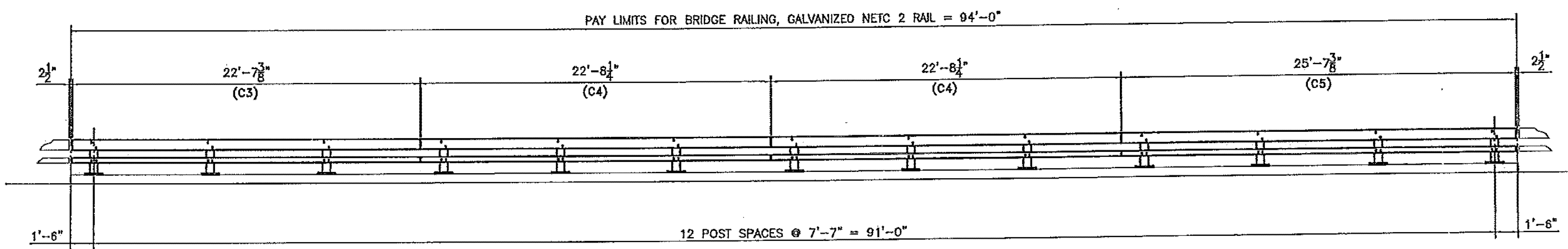
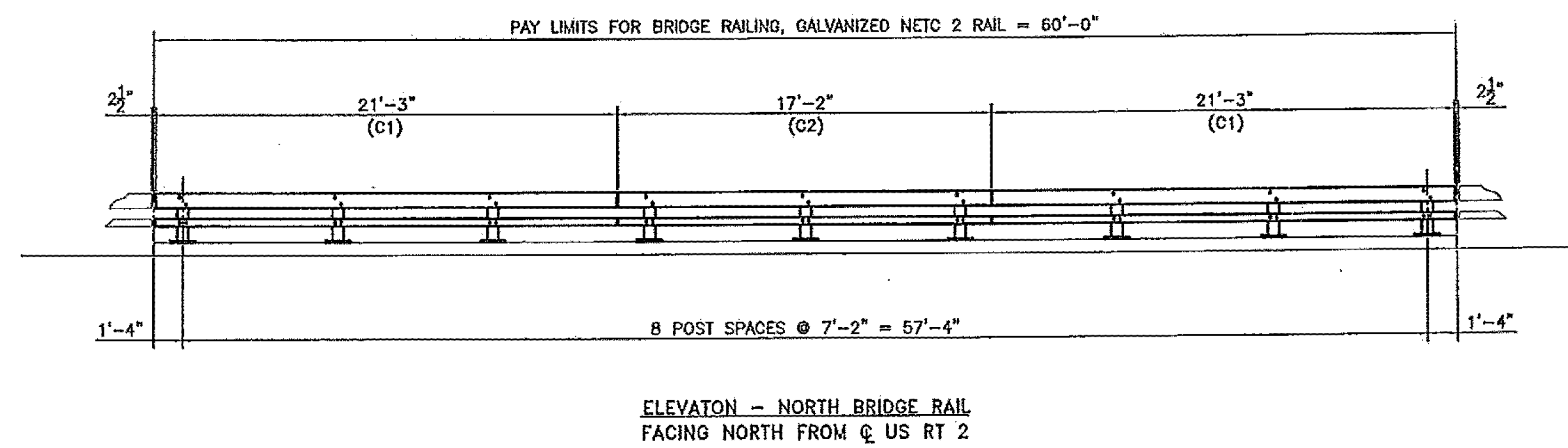
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DESIGNED BY:	DTM	PROJECT NAME:	US ROUTE 2 OVER EXISTING STREAM	DATE:	04/05/11
PROJECT ENGR:	LY	LOCATION:	CABOT-DANVILLE VERMONT	CONTRACT NO.:	RE-15053
CHECKED BY:	PLA/EEH	OWNER:	VT AOT	DRAWING NO.:	S13 OF S13
REV.	DATE	DESCRIPTION	DRAWING COVERS	HFCW3 - 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	#6 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	H164 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

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GREEN INTERNATIONAL AFFILIATES, INC.
 CONSULTING ENGINEERS

CHECKED BY: *XZ* DATE: 8/11
 SIGNED BY: *Michael A. Cury* DATE: 8/11

ELEVATION - SOUTH BRIDGE RAIL
 FACING SOUTH FROM Q US RT 2

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

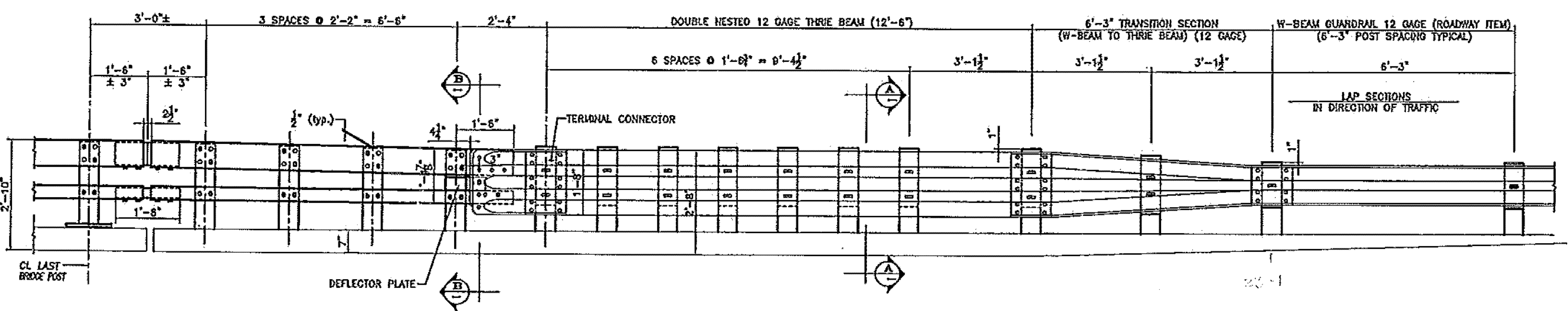
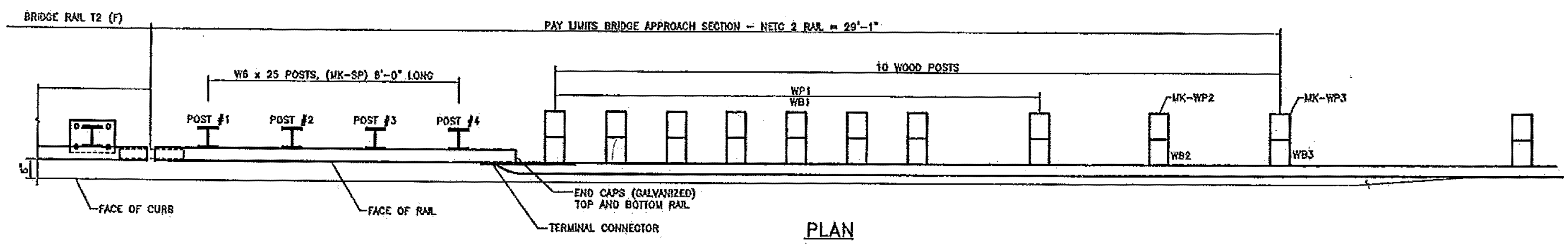
GENERAL CONTRACTOR: *[Blank]*
 SUB CONTRACTOR: **F.R. LAFAYETTE, INC.**

DATE: 3-25-11

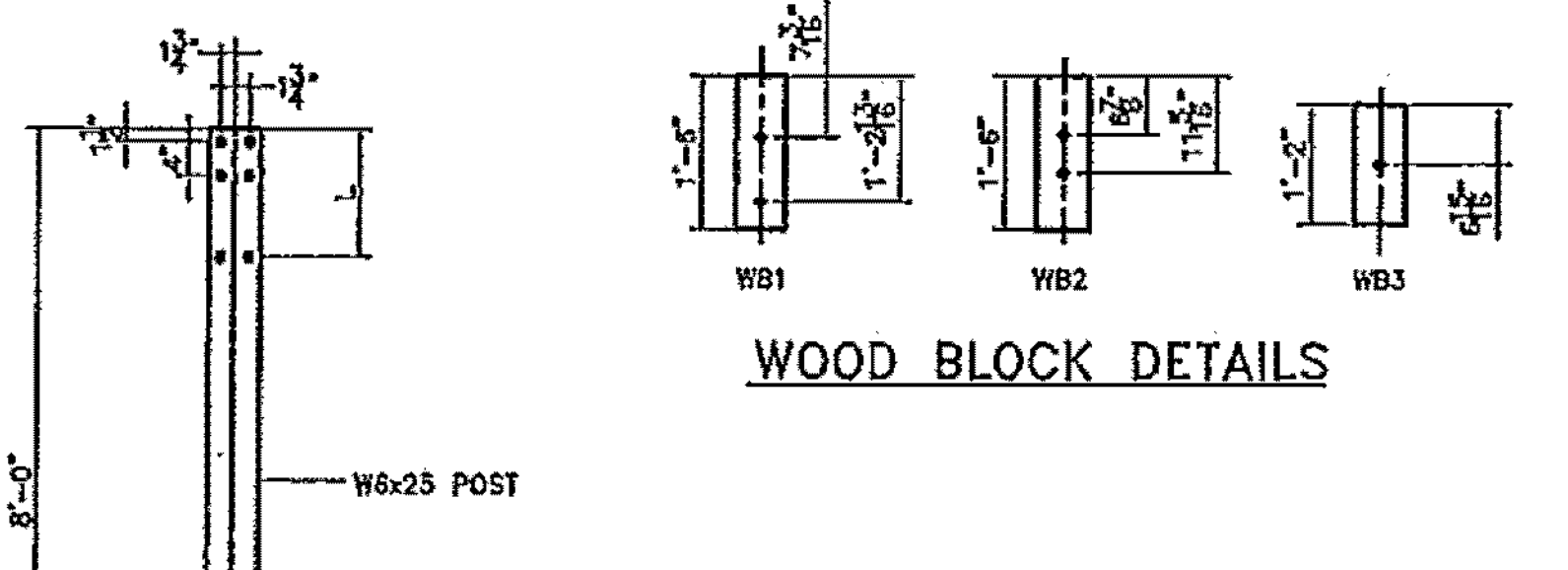
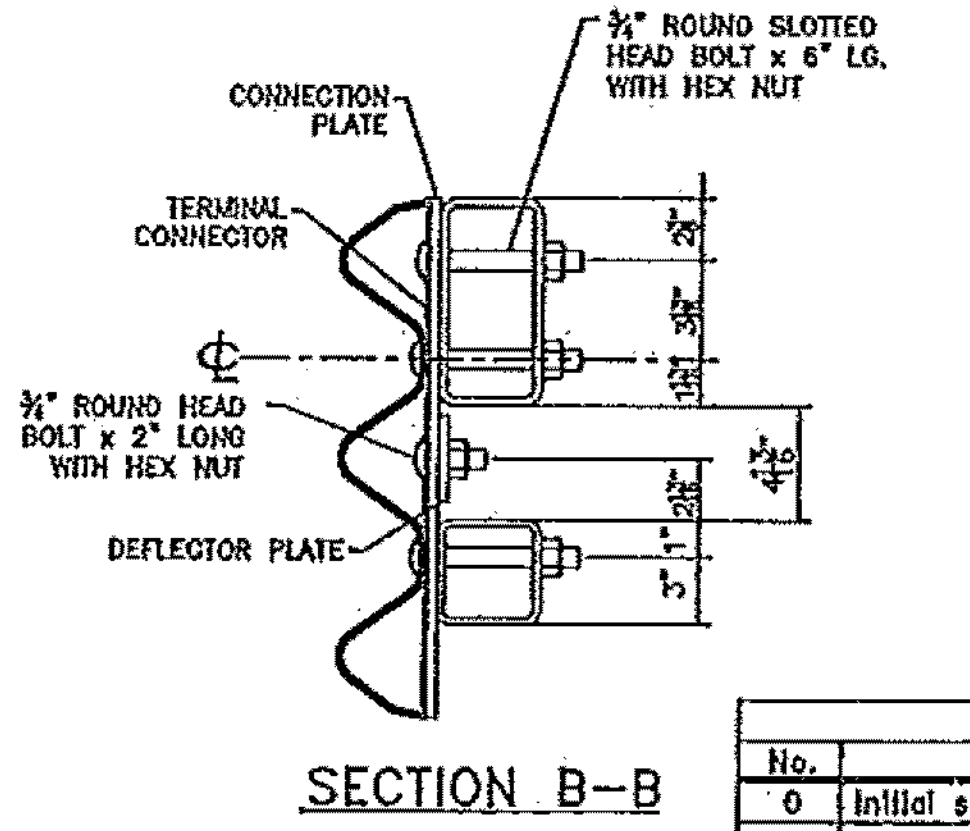
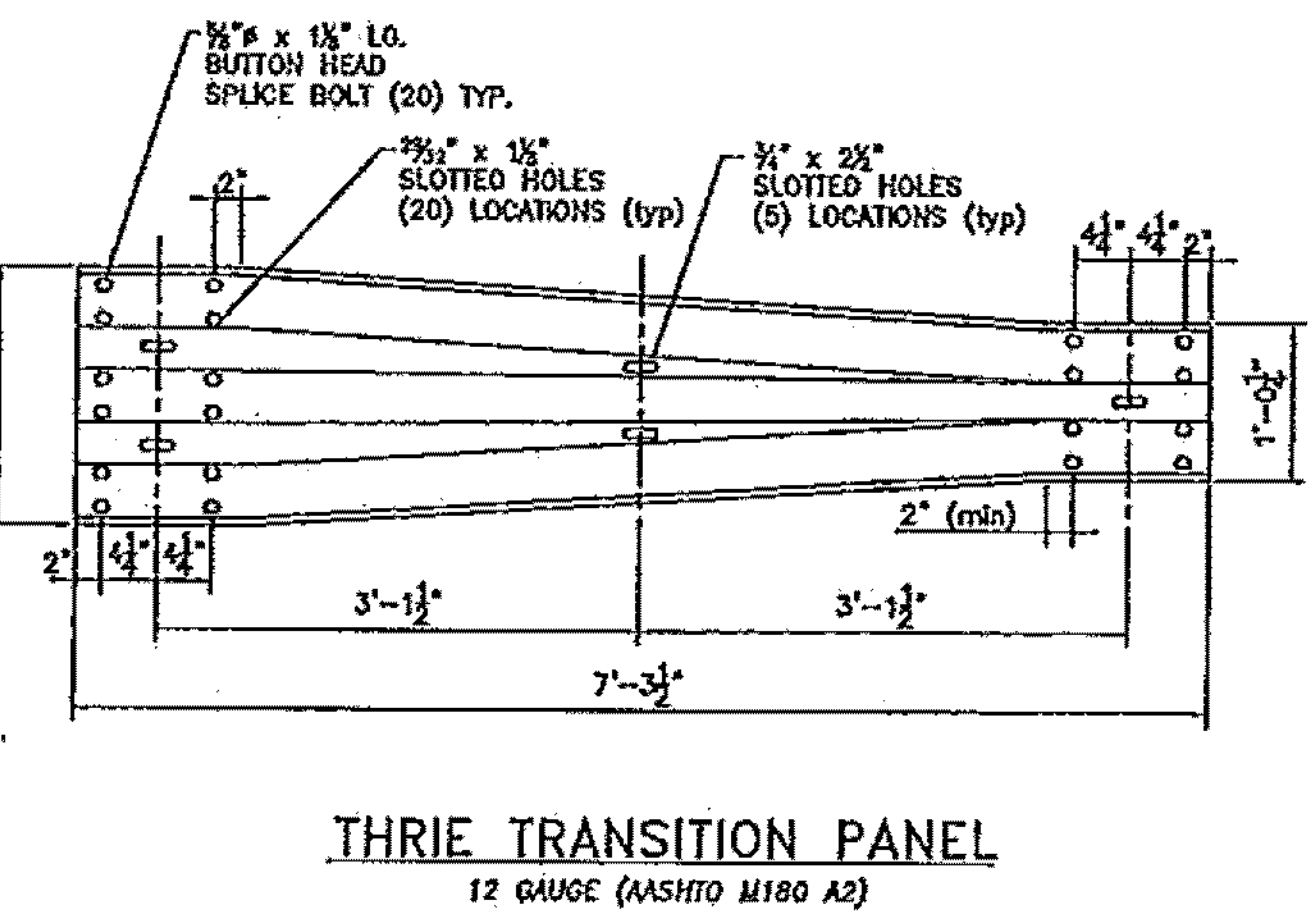
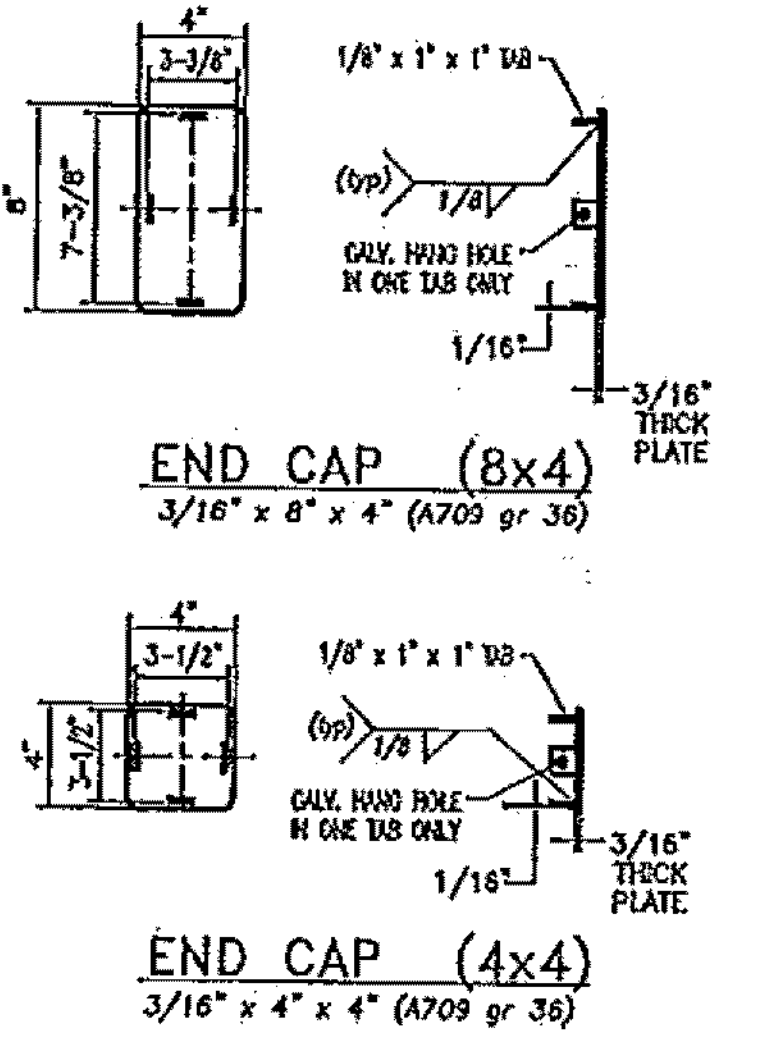
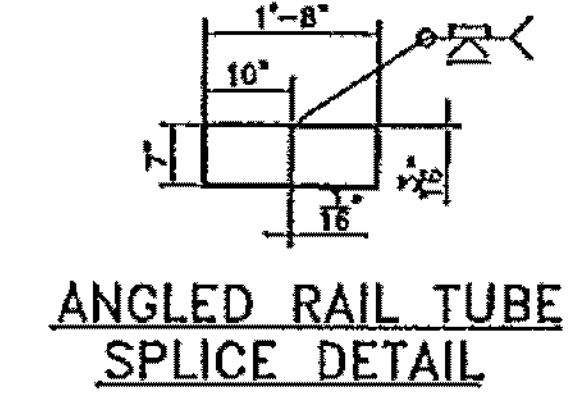
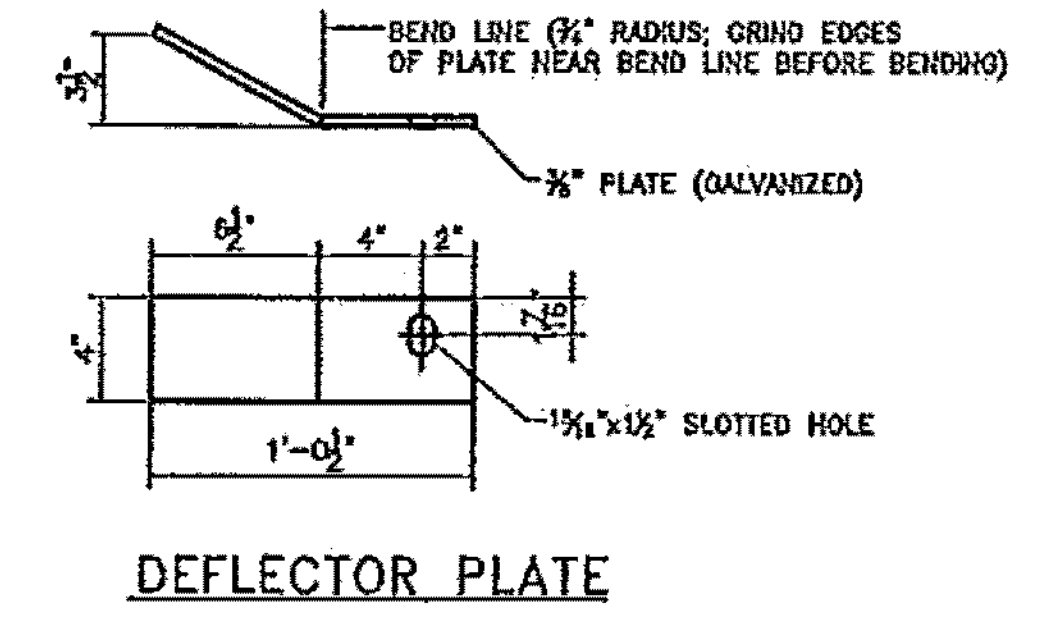
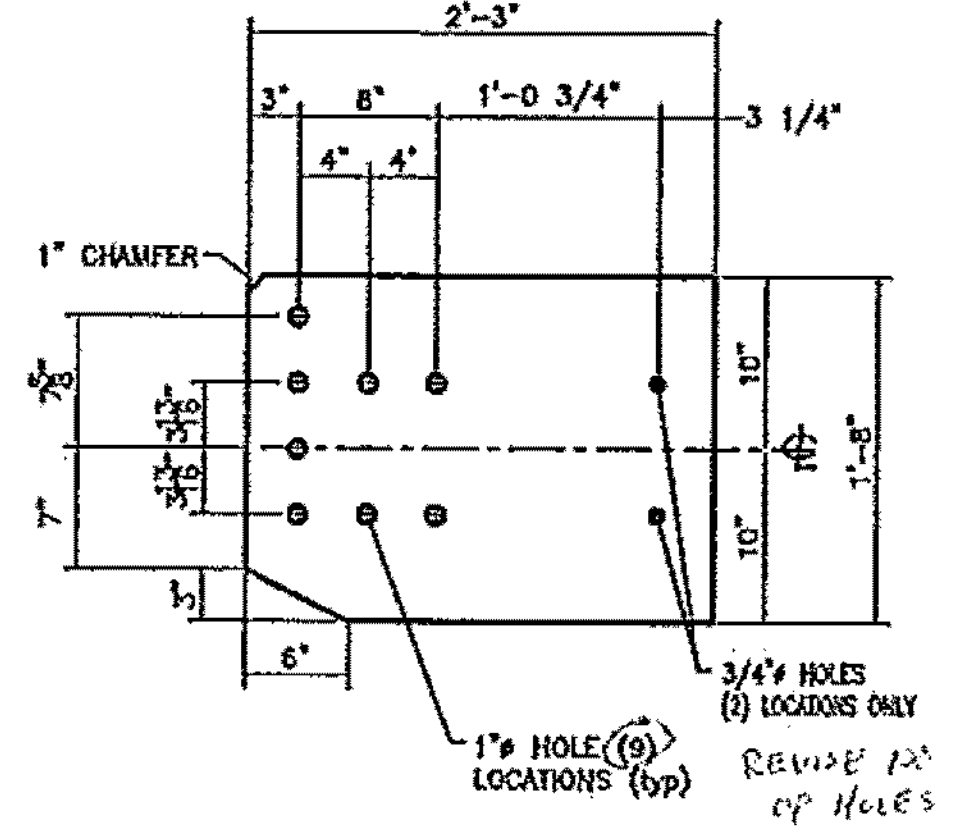
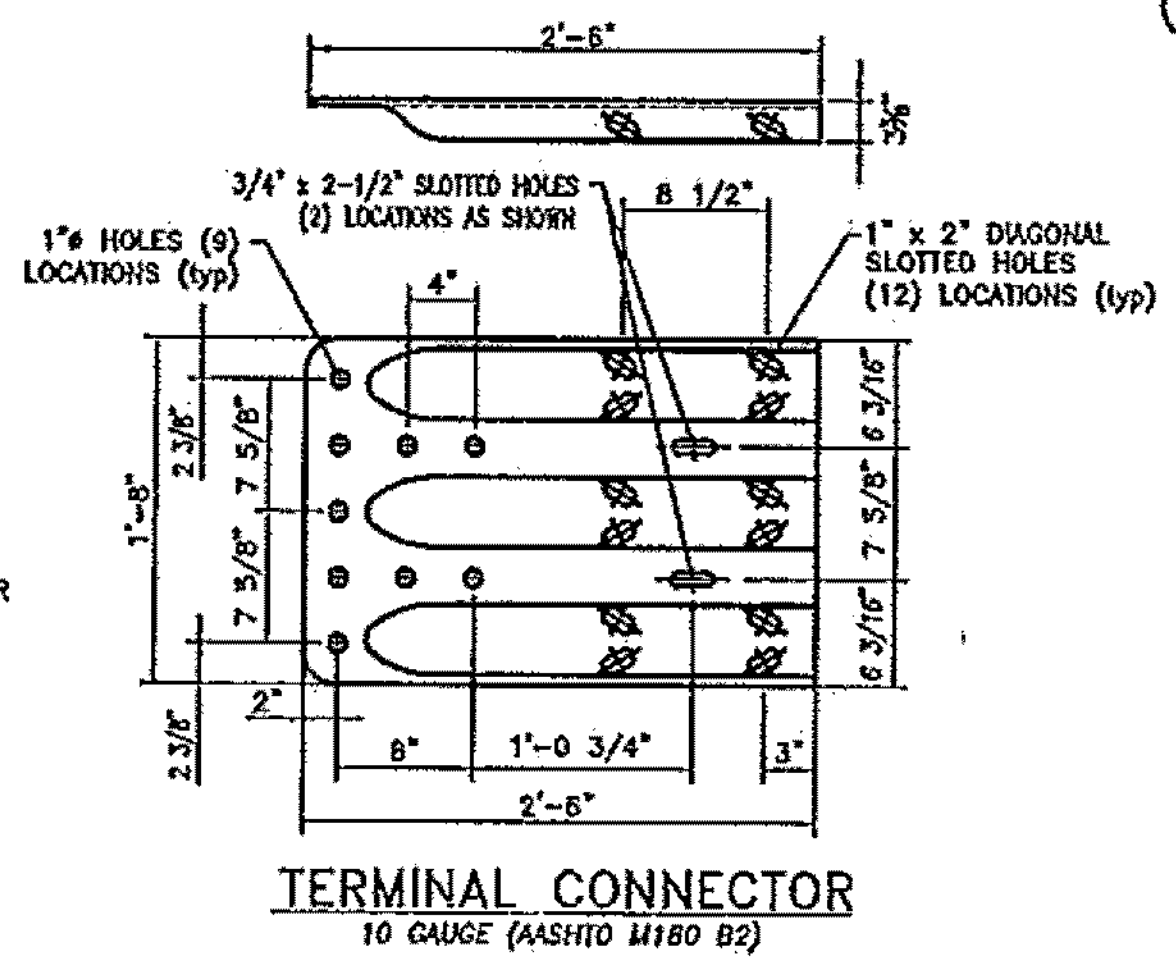
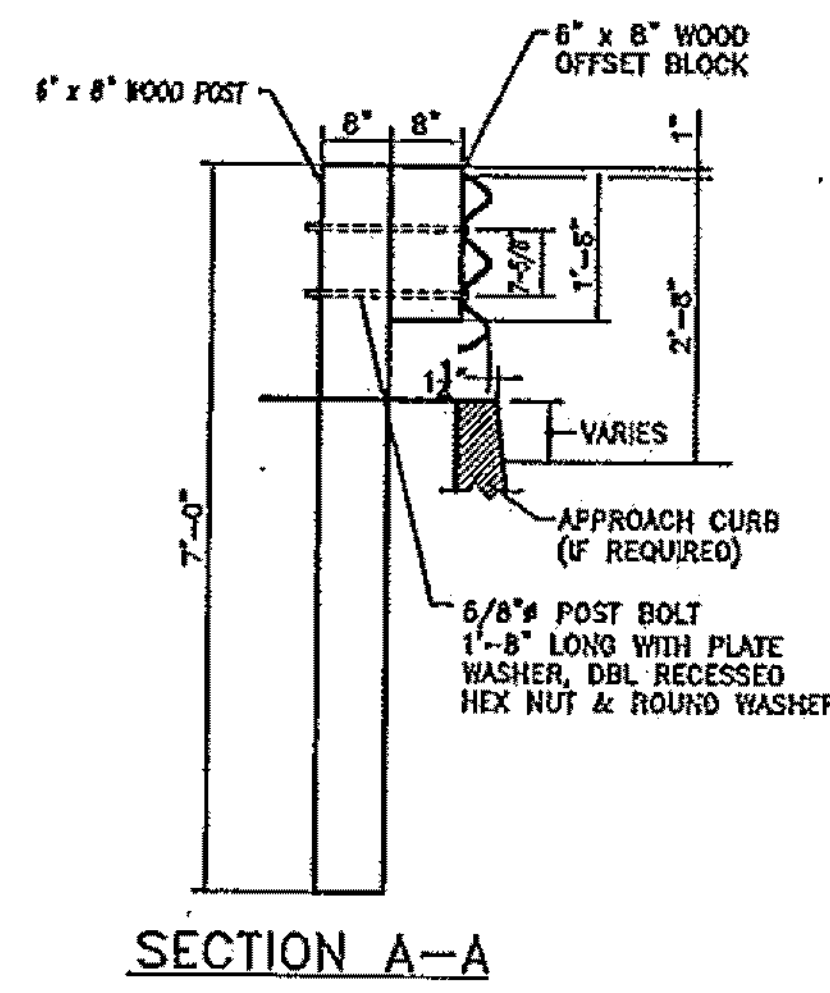
SCALE: N.T.S. SIZE: D

CERTIFIED FABRICATOR
 REG. NO. 1807
 SHEET NO. 1 of 3

REVISE WITH INITIAL TYPE
(REF. SHIT 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"

REVISIONS

No.	Remarks	Date
0	Initial submittal	

BILL OF MATERIAL (4 APPROACHES)

Mkt.	Qty.	Description	Size/Shape	Unit	Material
4	4	UPPER APPROACH RAIL	TS 8x4x0.313	8'-4"	A500 Gr. B
4	4	LOWER APPROACH RAIL	TS 4x4x0.250	8'-4"	A500 Gr. B
SP	16	STEEL POST	W6 x 25	8'-0"	A572 Gr. 50
WP1	32	WOOD POST	6" x 8"	7'-0"	T&BGR
WP2	4	WOOD POST	6" x 8"	7'-0"	T&BGR
WP3	4	WOOD POST	6" x 8"	7'-0"	T&BGR
WB1	32	WOOD BLOCK	6" x 8"	1'-6"	T&BGR
WB2	4	WOOD BLOCK	6" x 8"	1'-6"	T&BGR
WB3	4	WOOD BLOCK	6" x 8"	1'-2"	T&BGR
4	4	ANGLED SPLICE TUBE FOR TS 8x4x0.313	TS 7x3x0.250	1'-8"	A500 Gr. B
4	8	WELDED LOCK NUTS	0.625"	---	A563 Gr. A
4	4	SPLICE TUBE FOR TS 4x4x0.250	TS 3x3x0.250	1'-8"	A500 Gr. B
4	8	WELDED LOCK NUTS	0.625"	---	A563 Gr. A
4	4	TERMINAL CONNECTOR	10 Gg.	2'-8"	M180
4	4	CONNECTION PLATE	3/8" x 1'-8"	2'-3"	A709 Gr. 36
4	4	END CAP FOR TS 8x4 RAIL TUBE	PLATE 0.188" x 4"	8"	A709 Gr. 36
16	16	END CAP FOR TS 4x4 RAIL TUBE	PLATE 0.125" x 1"	1"	A709 Gr. 36
4	4	DEFLECTOR PLATE (LEFT)	PLATE 0.188" x 4"	4"	A709 Gr. 36
16	16	DEFLECTOR PLATE (RIGHT)	PLATE 0.125" x 1"	1"	A709 Gr. 36
2	2	0.75" x 2" LG. ROUND HEAD BOLT W/NUT	12 Gg.	7'-350"	M180 A2
2	2	THREE TRANSITION PANEL	12 Gg.	12'-6"	M180 A2
4	4	THREE BEAM	12 Gg.	12'-6"	M180 A2
82	82	0.75" x 6" ROUND HEAD BOLT W/NUT & ROUND WASHER			A307
8	8	0.625" x 20" LG. POST BOLT W/DBL. RECESSED NUT, PLATE & ROUND WASHER			A307
64	64	0.625" x 18" LG. POST BOLT W/DBL. RECESSED NUT, PLATE & ROUND WASHER			A307
32	32	0.625" x 1.75" LG. CAP SCREW W/WASHER			A325
128	128	0.625" x 1.25" LG. PANEL SPLICE BOLT W/DBL RECESSED NUT			A307
32	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-U2).

APPROVED Approved as Noted
 Revise and Resubmit DISAPPROVED

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GREEN INTERNATIONAL AFFILIATES, INC.
CONSULTING ENGINEERS

CHECKED BY AZ DATE 8/11
 SIGNED BY Michael [Signature] 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

F.R. LAFAYETTE, INC.
 3 of 3

DATE: 3-25-11