FOSTER•GEOTECHNICAL
A Division of L. B. Foster Company

6455 OLD PEACHTREE ROAD
NORCROSS, GA 30071
Telephone: (770) 446-3000
Fax: (770) 242-7493

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 RETAINED EARTH WALLS.

2. FACTORS OF SAFETY

   OVERTURNING 2.0
   INTERNAL PULLOUT 1.5 (ALLOW DEFORMATION 3/4")
   OVERALL STABILITY 1.5
   SLIDING 1.5
   BEARING 2.5

   SOIL REINFORCEMENT MESH 0.4ϕ Fy AT END OF DESIGN LIFE

3. SOIL CHARACTERISTICS ASSUMED FOR DESIGN:

   SOIL PARAMETERS:

   SEE WALL CONTROL DRAWINGS FOR SOIL CHARACTERISTICS OF FOUNDATION MATERIAL TO BE USED IN THE DESIGN OF THE WALL SYSTEM. THE CONTRACTOR SHALL PROVIDE SOIL DESIGN PARAMETERS FOR BACKFILL MATERIAL BASED ON THE ACTUAL SOIL CHARACTERISTICS UTILIZED AT THE SITE. THE VALUES OF ϕ, C AND ϒ SHALL BE PROVIDED IN THE SHOP DRAWINGS.

4. THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

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

REINFORCING ELEMENTS

6. REINFORCING MESH ELEMENTS SHALL BE SHOP FABRICATED FROM COLD DRAWN STEEL ROD CONFORMING TO THE MINIMUM REQUIREMENTS OF ASTM A-82 AND SHALL BE WELDED AT THE JUNCTIONS BETWEEN LONGITUDINAL AND TRANSVERSE WIRES IN ACCORDANCE WITH ASTM A-185. GALVANIZATION SHALL BE APPLIED AFTER MESH FABRICATION AND SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF ASTM A-123.

   LOOP EMBEDS SHALL BE FABRICATED FROM COLD DRAWN STEEL ROD CONFORMING TO ASTM A-510 OR ASTM A-82. LOOP EMBEDS SHALL BE WELDED IN ACCORDANCE WITH ASTM A-185. LOOP EMBEDS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM B-633.

DESIGN:

7. THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED ON INFORMATION PROVIDED BY OTHERS. ON THE BASIS OF THIS INFORMATION, THE WALL COMPANY IS RESPONSIBLE FOR INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY DESIGN INCLUDING FOUNDATION AND SLOPE STABILITY IS THE RESPONSIBILITY OF OTHERS.

WALL CONSTRUCTION

8A. (SQUARE PANELS) RETAINED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 5.0' EACH TO MATCH DESIRED WALL ALIGNMENT.

8B. (HEX PANELS) RETAINED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 4.33' EACH TO MATCH DESIRED WALL ALIGNMENT.

9. FOR LOCATION AND ALIGNMENT OF RETAINED EARTH WALLS. SEE RETAINING WALL CONTROL PLANS.

10. IF MANHOLES AND DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS.

11. IF PILES ARE LOCATED WITHIN REINFORCED SOIL 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 FOSTER GEOTECHNICAL COMPANY AND IS PROPOSED AND APPROVED IN WRITING.

12. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 548 TO A LEVEL OF 2" (+/-) ABOVE THE TIE MESH EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING MESH SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.

13. WALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 548.

14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS BEHIND RETAINED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING MESH, INDIVIDUAL REINFORCING MESH MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE ENGINEER (NO CUTTING OF SOIL REINFORCEMENT GRIDS ALLOWED UNLESS SHOWN ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER). ANY DAMAGE DONE TO THE REINFORCING MESH DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

15. IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN REINFORCED SOIL VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING MESH AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

16. TOP PANELS BENEATH CAST-IN-PLACE COPING SHALL HAVE #4 BARS PROTRUDING FROM THEIR TOP EDGE.

17. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO FOSTER GEOTECHNICAL CONSTRUCTION MANUAL.

18. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING MESH DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPER ELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.

MATERIALS NOTES

19. NOMINAL MESH LENGTHS

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

20. REINFORCED BACKFILL QUANTITY

    THE REINFORCED BACKFILL QUANTITY INDICATED BY FOSTER GEOTECHNICAL IS CALCULATED BY MULTIPLYING THE NOMINAL MESH LENGTHS SHOWN ON THE PLANS BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATER CUBIC METER QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO PRESENT 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.

21. PANEL FINISH

    THE PRECAST PANELS FOR THIS PROJECT SHALL BE A PLAIN STEEL FORM FINISH UNLESS OTHERWISE SPECIFIED ON THE RETAINED EARTH CONTROL PLANS.

22. NOTE TO CONTRACTORS

    ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY FOSTER GEOTECHNICAL

    - PRECAST PANELS
    - REINFORCING MESH
    - LOOP EMBED
    - HDPE BEARING PAD (NOMINAL 4.0 MELT / .950 DENSITY)
    - NON-WOVEN FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY) (WEBTECH-TERRATEX NO. 4 OR EQUAL)

    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.

23. FOSTER GEOTECHNICAL SUPPLIES PRECAST CONCRETE FACING PANELS AND ACCESSORIES TO BE USED IN CONJUNCTION WITH OTHER MATERIALS IN THE CONSTRUCTION OF RETAINED EARTH WALLS DETAILED HEREIN THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL FURNISHED BY FOSTER GEOTECHNICAL 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.

SQUARE / HEX PANELS

THIS SYSTEM SHALL BE USED IN MODERATELY OR SLIGHTLY AGRESSIVE ENVIRONMENTS ONLY.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED EARTH WALL

	Names	Dates
Designed By	TCNA	11/98
Drawn By	CAD	11/98
Checked By	GEO	11/98

Approved By _____
State Structures Design Engineer

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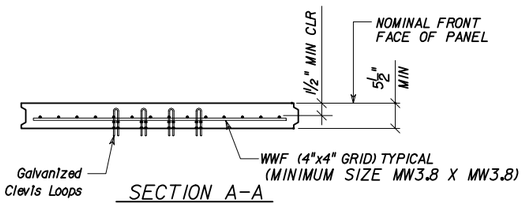
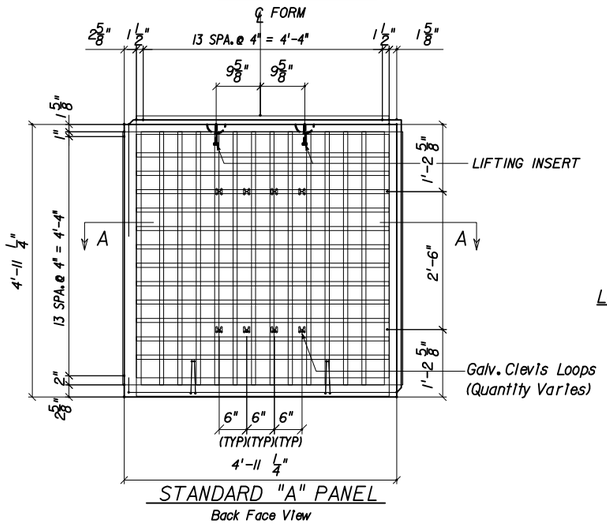
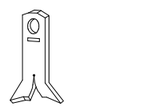
$$$$$$$$DGNSPECIFICATION$$$$$$$$
$$$$$$$SYTIME$$$$$$$



SECTION A-A



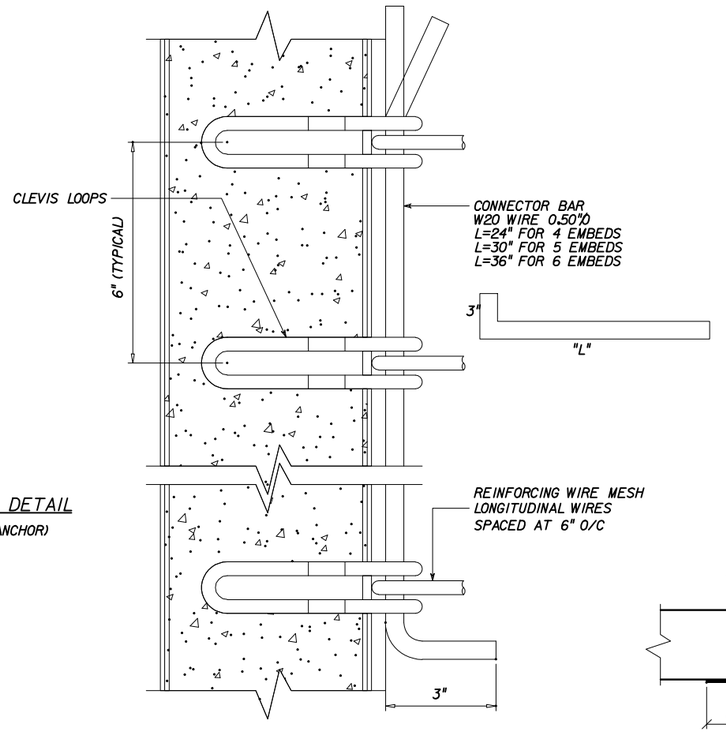
STANDARD "A" PANEL
Back Face View



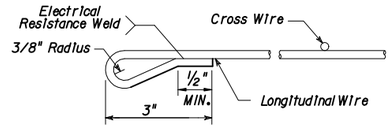
LIFTING INSERT DETAIL
(BURKE ®SPREAD ANCHOR)
(ONE TON)

OR

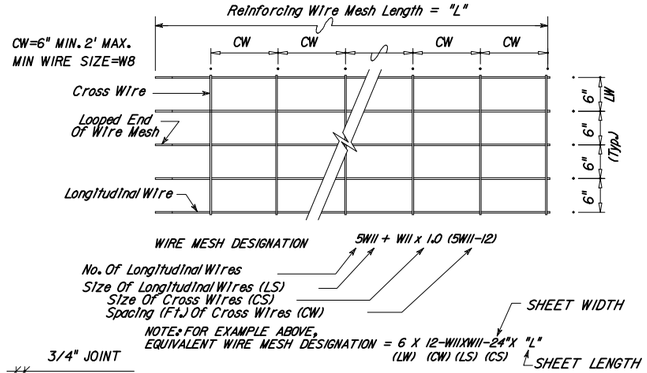
LIFTING INSERT DETAIL
(DAYTON SUPERIOR SWIFT LIFT ANCHOR)
(1 TON x 4 3/4")



REINFORCING MESH CONNECTION DETAIL



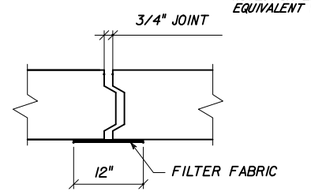
WIRE MESH LOOP DETAIL



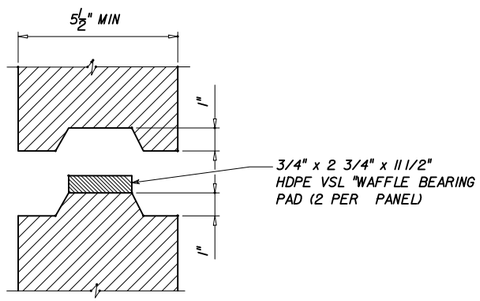
REINFORCING MESH DETAIL

NOTE: Steel Wire Material And Welding Of Cross Wires And Loops Shall Conform To ASTM A82 And ASTM A185, Fy = 65 KSI.
Mesh Shall Be Galvanized To ASTM A123

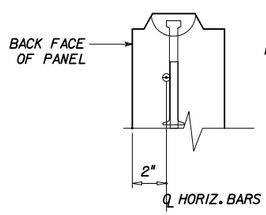
6 X 12-WIIXWII-24"X "L"
(LW) (CW) (LS) (CS) SHEET LENGTH



HORIZONTAL JOINT DETAIL



PANEL JOINT DETAIL



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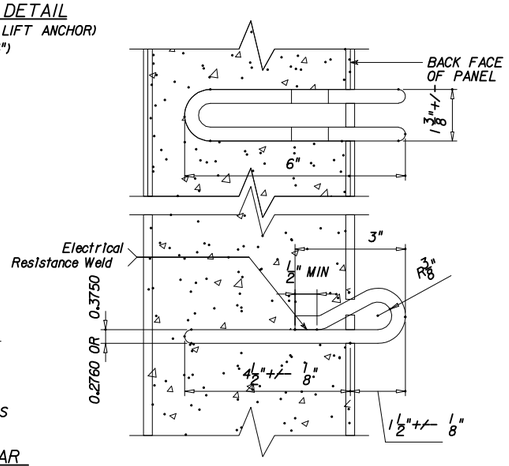
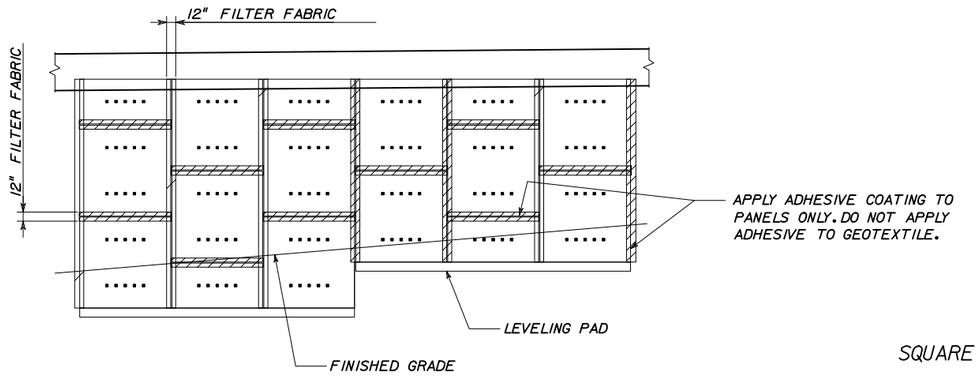


CLEVIS LOOP DETAIL



PARTIAL WALL ELEVATION
(BACK FACE)

SQUARE PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED EARTH WALL

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Drawn By	CAD	11/98
Checked By	GEO	11/98

Approved By _____
State Structures Design Engineer

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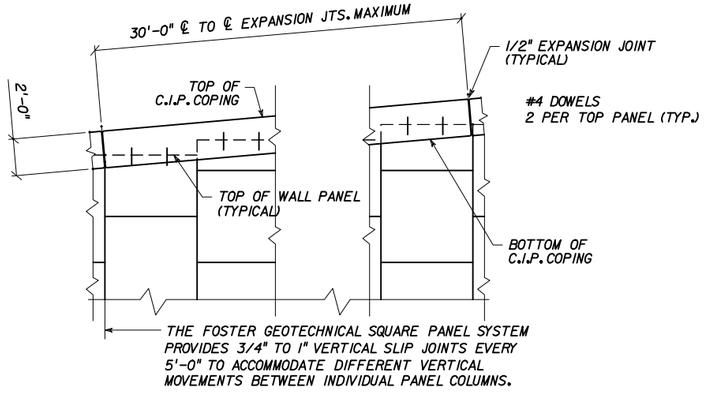
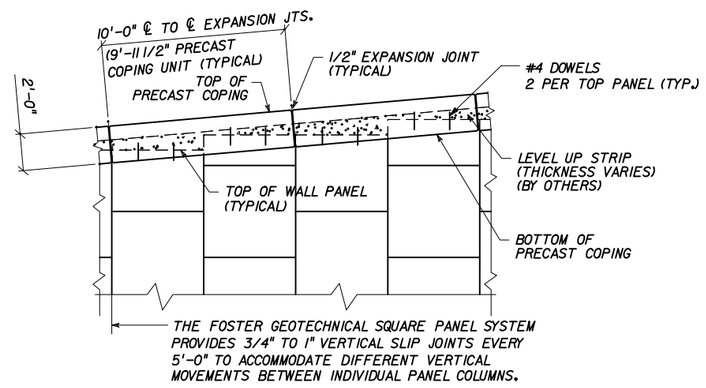
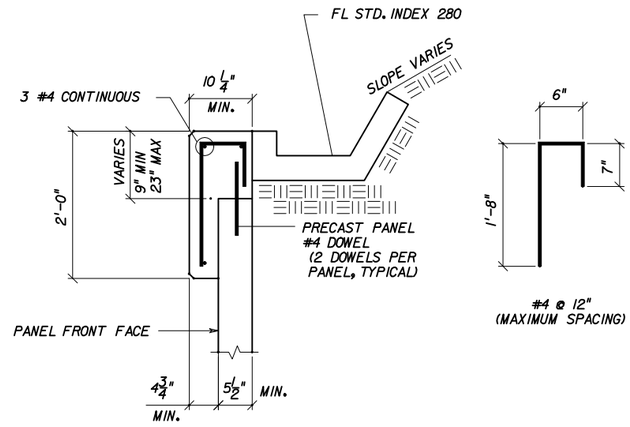
$$$$$$$$DGNSPECIFICATION$$$$$$$$
$$$$$$$SYTIME$$$$$$$



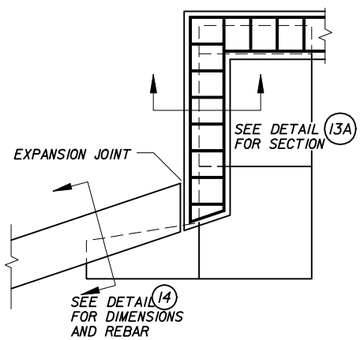
14A PARTIAL ELEVATION C.I.P. COPING
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



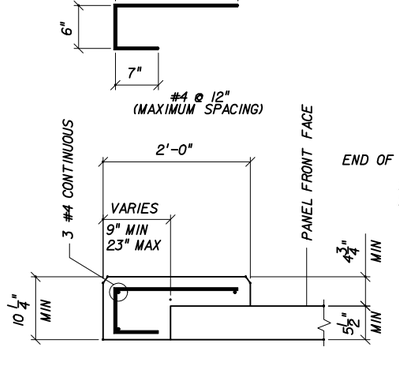
20A PARTIAL ELEVATION PRECAST COPING
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



14 C.I.P. COPING W/ DITCH
(2" MIN. COVER TYP.)



13 VERTICAL COPING (C.I.P.)
(SQUARE PANELS SHOWN, HEX PANELS SIMILAR)



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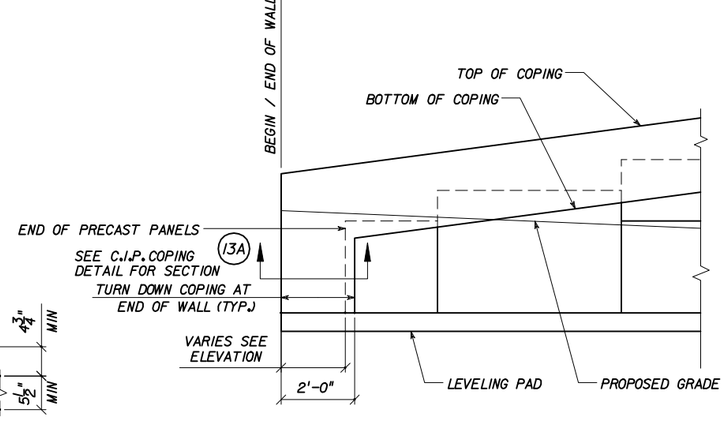
(2" MIN. COVER TYP.)



15 COPING ENCLOSURE (C.I.P.)
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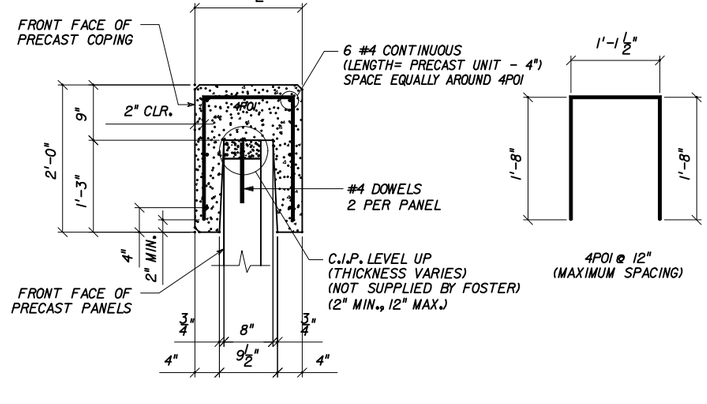

20 TYPE H_ PRECAST COPING
(STANDARD PRECAST COPING)

SQUARE / HEX PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED EARTH WALL

	Names	Dates
Designed By	TCNA	11/98
Drawn By	CAD	11/98
Checked By	GEO	11/98

Approved By W. M. Bhatt
State Structures Design Engineer

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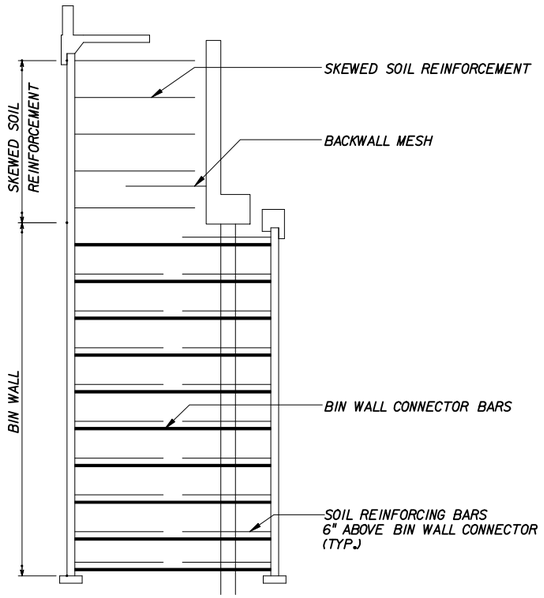
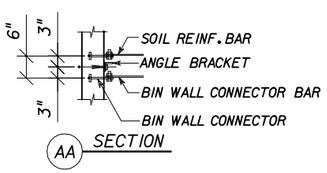
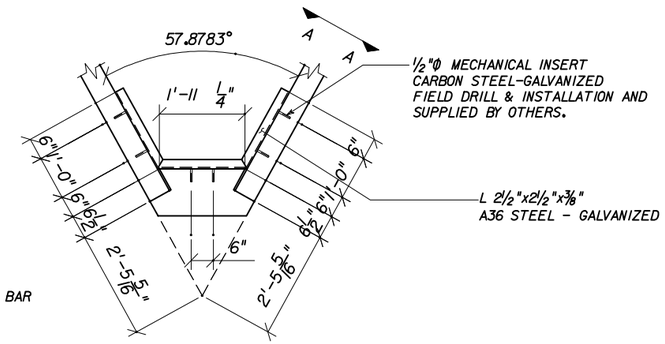


CC TYPICAL SECTION @ BIN WALL



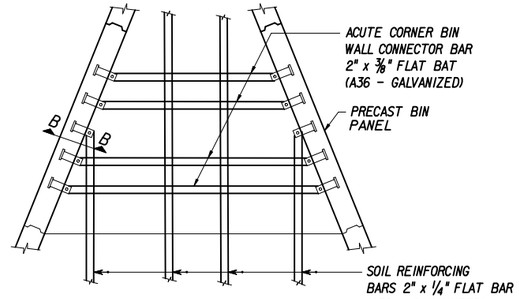
AA SECTION



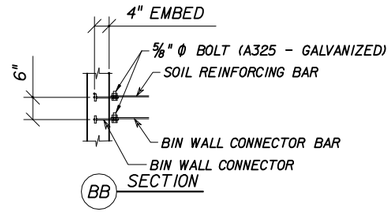
NOTES: BRACKETS TYPICALLY LOCATED IN THE CORNER BETWEEN BIN WALL CONNECTOR & SOIL REINFORCING BAR ELEVATION

BIN WALL CONNECTOR BARS & SOIL REINF. BARS NOT SHOWN

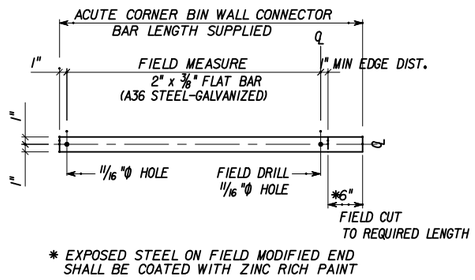
30 ANGLE BRACKET DETAIL



31 CORNER PLAN

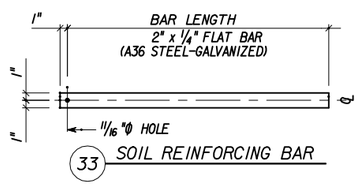


BB SECTION

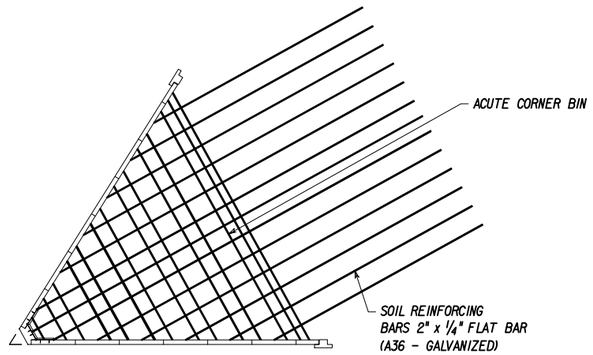


* EXPOSED STEEL ON FIELD MODIFIED END SHALL BE COATED WITH ZINC RICH PAINT

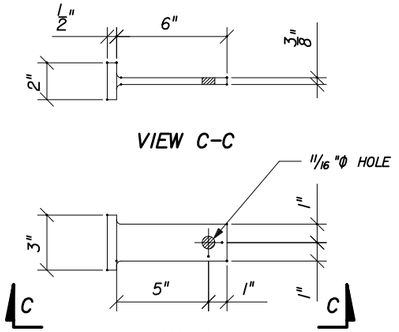
32 BIN WALL CONNECTOR BAR



33 SOIL REINFORCING BAR



BIN WALL CONNECTOR & SOIL REINF. BAR LAYOUT



BIN WALL CONNECTOR
(A36 GALVANIZED)

SQUARE / HEX PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED EARTH WALL

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Designed By	TCNA	11/98
Drawn By	CAD	11/98
Checked By	GEO	11/98

Approved By
State Structures Design Engineer

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$$$$$$$$DGNSPECIFICATION$$$$$$$$
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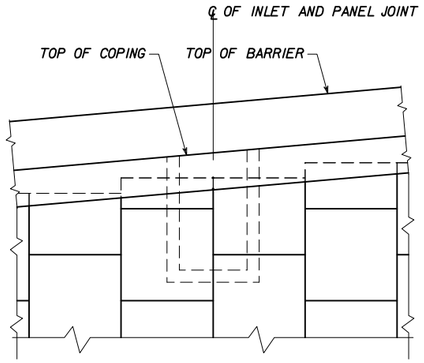
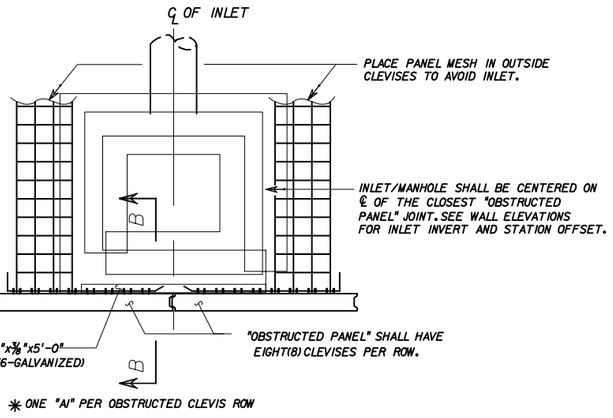
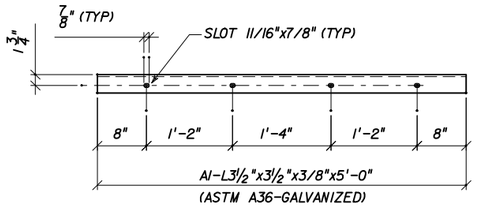


65 PARTIAL ELEVATION WALL @ DRAINAGE INLET



65A OBSTRUCTION DETAIL (VERTICAL)
INLETS ≤ 5'-0" (TYP.)



65B OBSTRUCTED PANEL CONNECTOR (AI)
(ASTM A36 ANGLE - GALVANIZED)

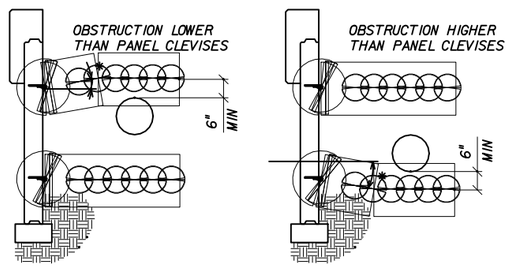
VERTICAL OBSTRUCTION NOTES

OBSTRUCTION SHALL BE CONSTRUCTED BEFORE WALL INSTALLATION.

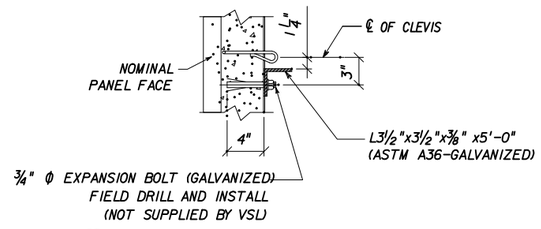
FIELD CUT AND SKEW MESH AROUND OBSTRUCTION AS REQUIRED. THESE AREAS WILL BE CLEARLY INDICATEDON THE RETAINED EARTH SHOP DRAWINGS AND APPROVED BY THE ENGINEER OF RECORD.

CUT MESH/DAMAGED GALV. SHALL BE COATED WITH ZINC RICH PAINT.

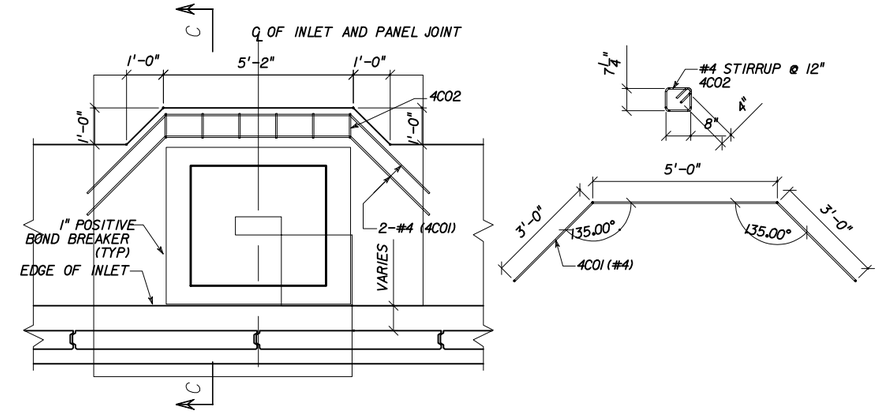
NO CUTTING OF SOIL REINFORCEMENT GRIDS ALLOWED UNLESS SHOWN ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER



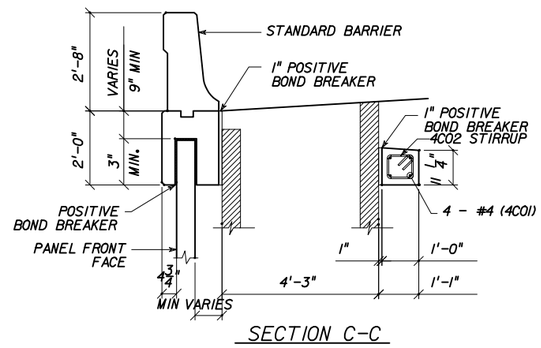
61 OBSTRUCTION (HORIZONTAL)
* 15 DEGREES MAX BEND



65C CONNECTOR INSTALLATION DETAIL
(SECTION B-B)



66 PARTIAL PLAN - JUNCTION SLAB AROUND INLET
(REBAR NOT SUPPLIED BY FOSTER GEOTECHNICAL)



SECTION C-C

SQUARE / HEX PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED EARTH WALL

	Names	Dates
Designed By	TCNA	11/98
Drawn By	CAD	11/98
Checked By	GEO	11/98

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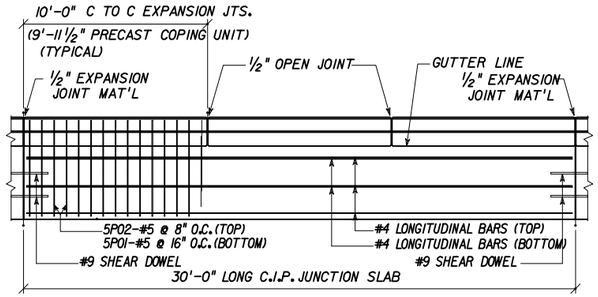
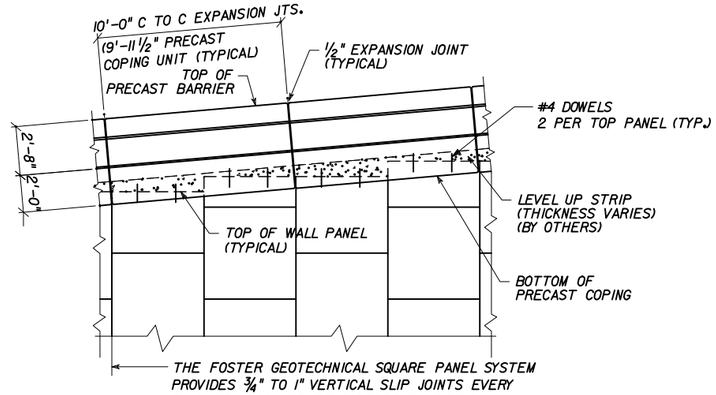


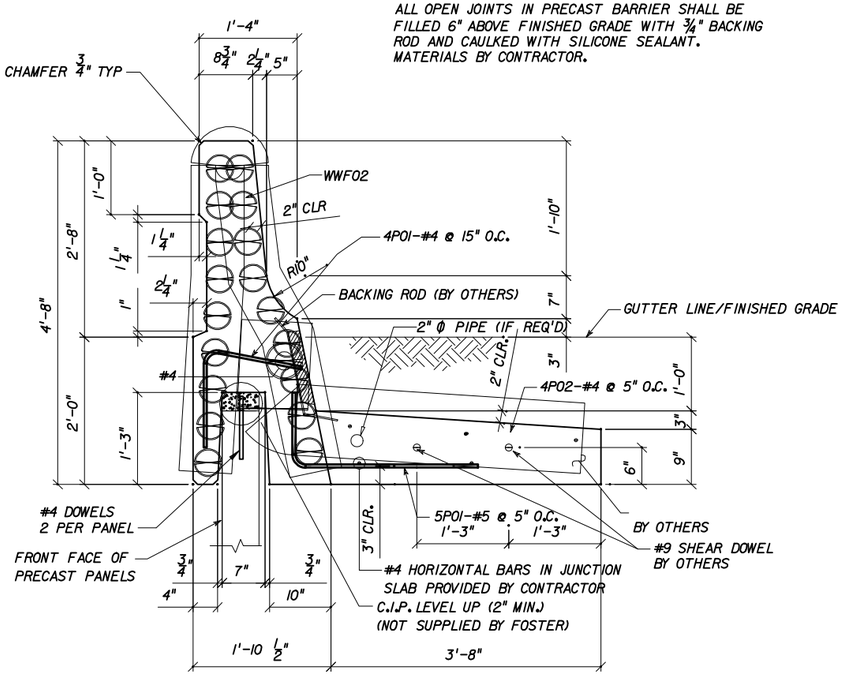
24A PLAN VIEW - PRECAST TRAFFIC BARRIER

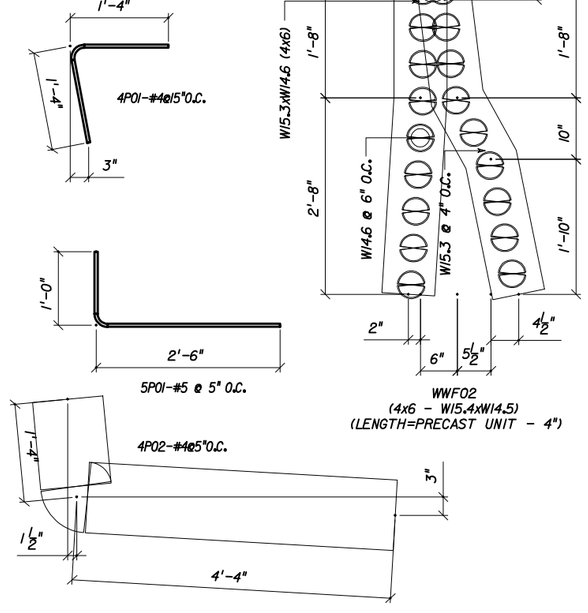
(HORIZONTAL BARS IN JUNCTION SLAB & #9 SHEAR DOWELS, NOT BY VSL)



24B PARTIAL ELEVATION PRECAST BARRIER

ALL OPEN JOINTS IN PRECAST BARRIER SHALL BE FILLED 6" ABOVE FINISHED GRADE WITH 3/4" BACKING ROD AND CAULKED WITH SILICONE SEALANT. MATERIALS BY CONTRACTOR.





SQUARE / HEX PANELS

24 TYPE HTB_ PRECAST BARRIER W/COPING & JUNCTION SLAB

U.S. PATENT NO. 4,494,892

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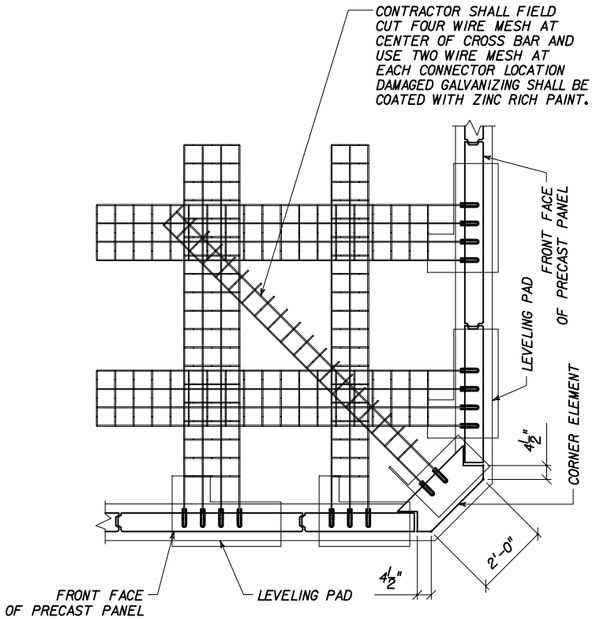
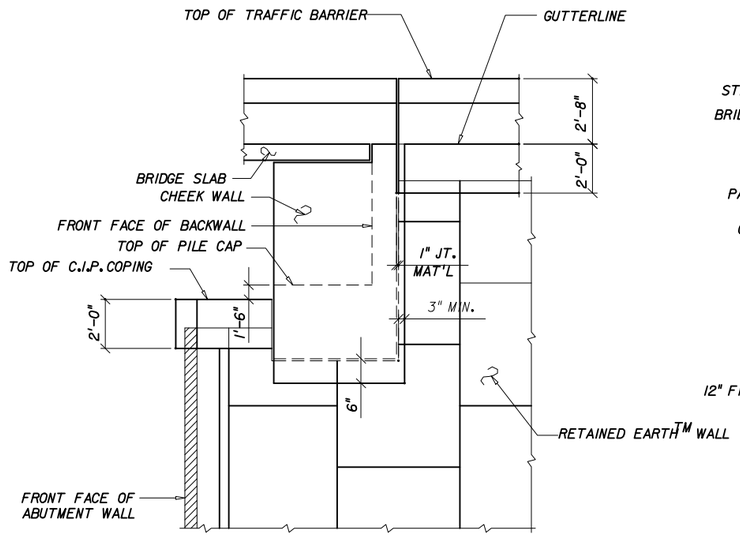
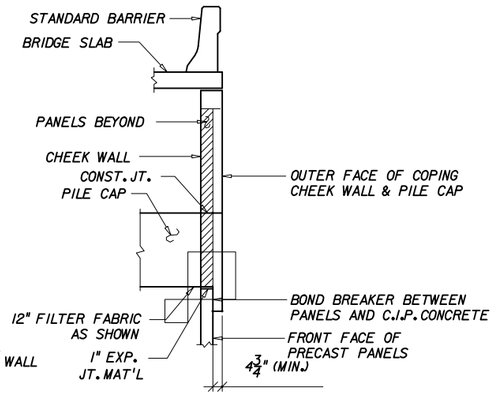


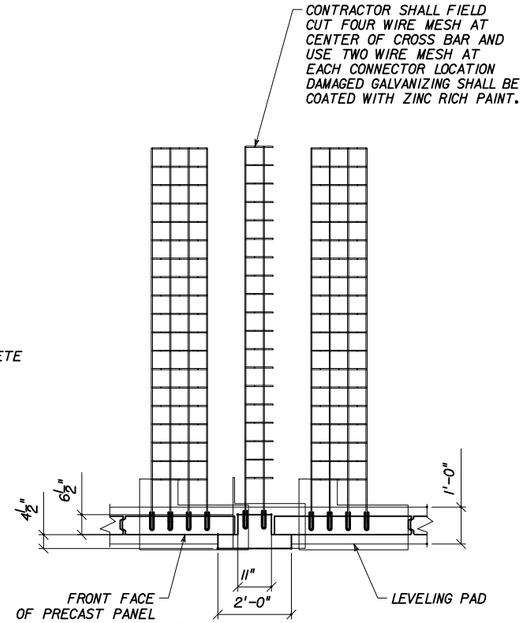
80 PLAN AT BEND



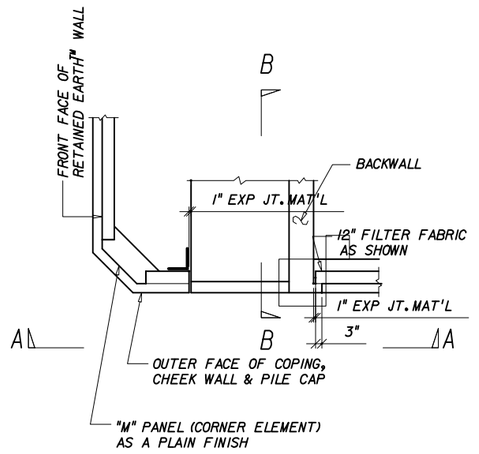
SECTION A-A



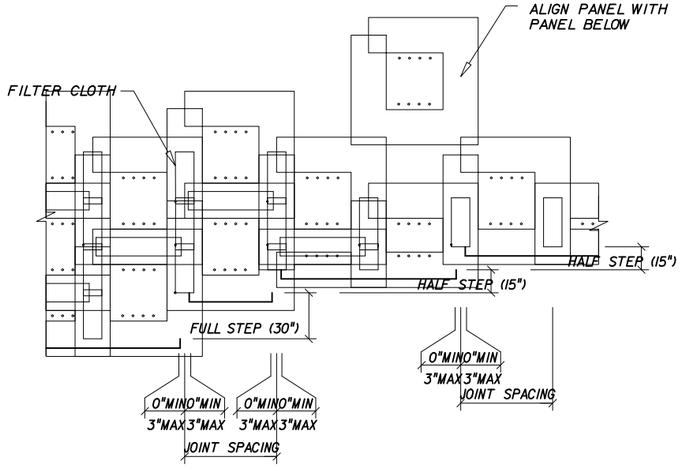
SECTION B-B



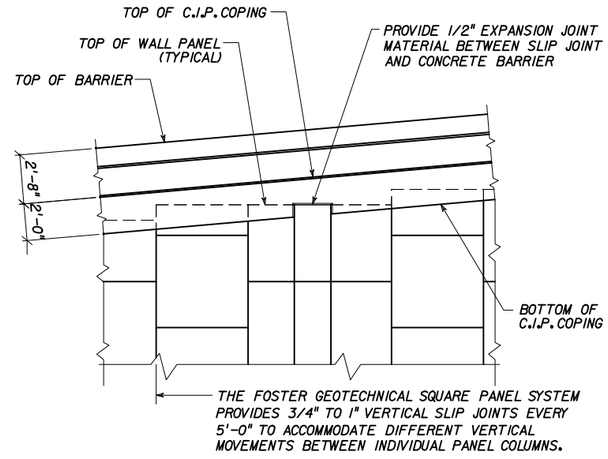
81 PLAN AT SLIP JOINT



PLAN VIEW AT END BENT



5 TYPICAL LEVELING PAD STEPS
(BACK FACE SHOWN)



80A PARTIAL ELEVATION C.I.P. BARRIER OVER SLIP JOINT

SQUARE PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

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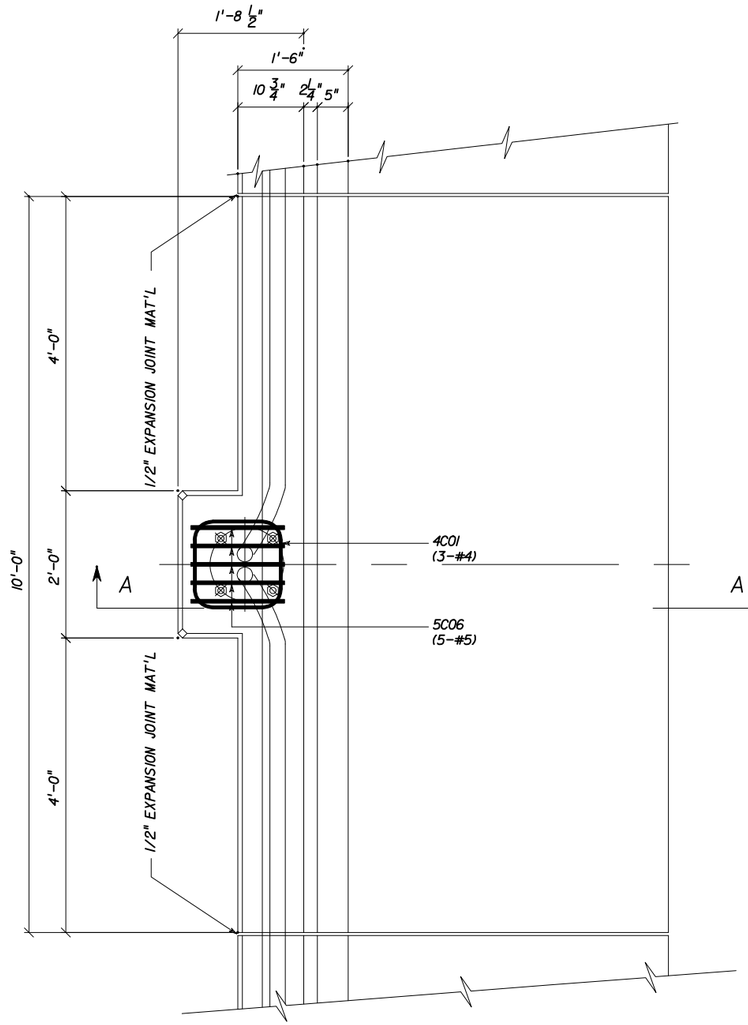
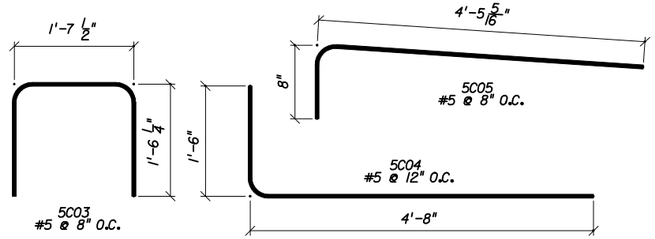
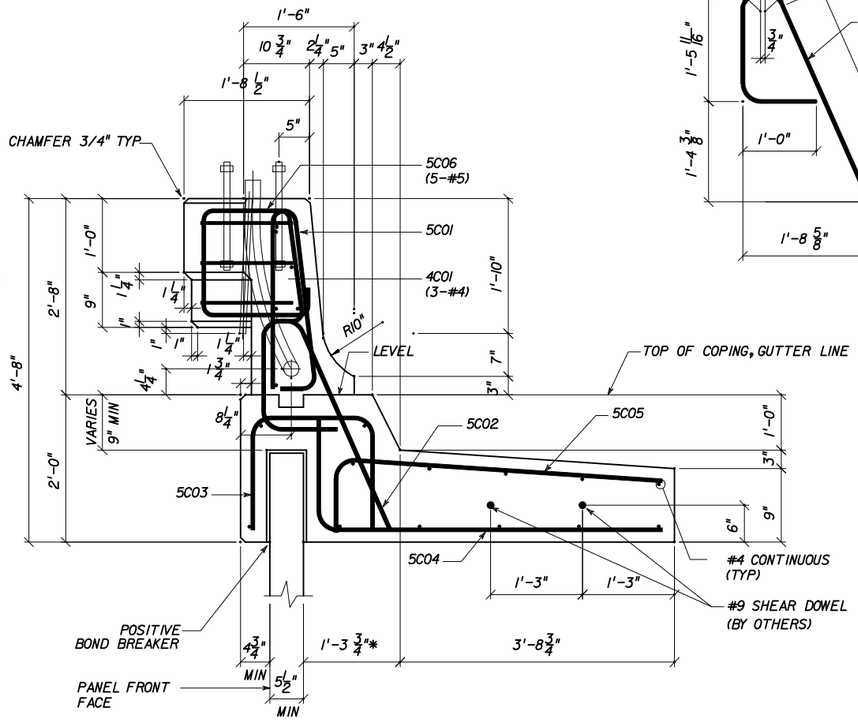


29 CAST IN PLACE LIGHT POLE

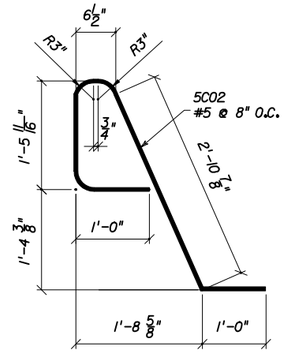
(ALL REBAR BY OTHERS)
(LIGHT POLE/BARRIER COPING)

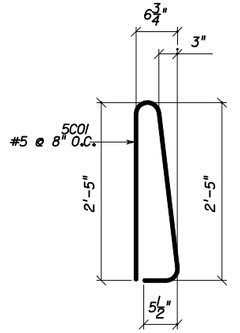


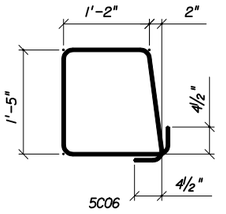


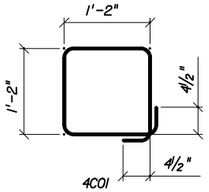
SECTION A-A

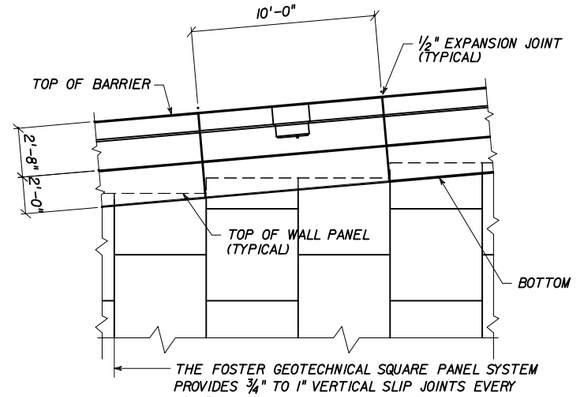
(SEE STRUCTURES STANDARD DRAWING 500 FOR ADDITIONAL DETAILS)











29A PARTIAL ELEVATION AT LIGHT POLE

SQUARE / HEX PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED
EARTH WALL

	Names	Dates
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Checked By	GEO	11/98

Approved By W. N. [illegible]
State Structures Design Engineer

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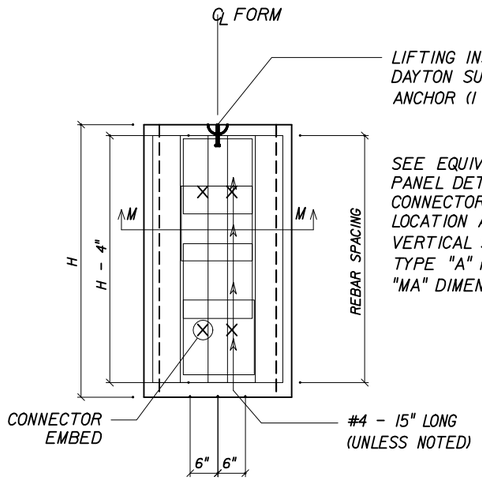


M_ TYPE M REBAR

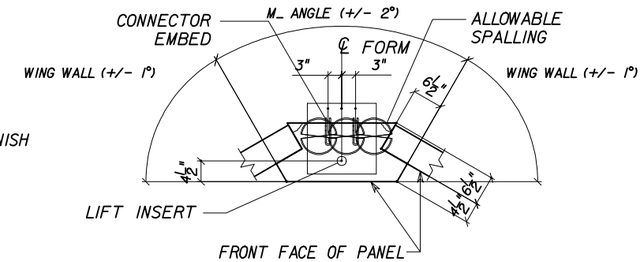
"M" PANELS SHALL HAVE AN PLAIN SURFACE FINISH

PANEL AREAS	
PANEL NAME	SQ. FT.
MA	13.75
MD	11.46
MD2	9.17
MC2	6.55
MD4	4.58
MB6	10.31
MB2	6.88
MB4	3.44

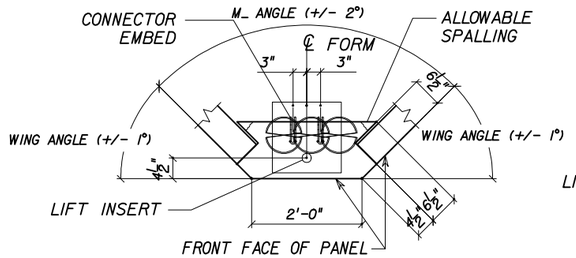
MA_162
- M_ANGLE — "M" PANEL WITH "A" PANEL HEIGHT

MI.25_162
- M_ANGLE — "M" PANEL WITH 1.25 HEIGHT

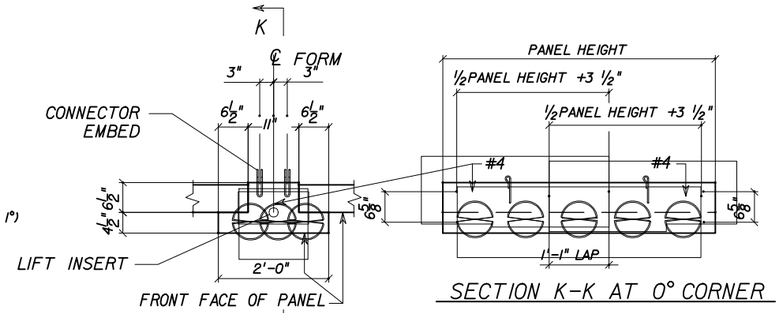
TYPICAL PANEL DESIGNATION



SECTION M-M AT INSIDE CORNER



SECTION M-M AT OUTSIDE CORNER



SECTION M-M AT 0° CORNER

SECTION K-K AT 0° CORNER

PANEL REINFORCEMENT NOTES:

1. PANELS ARE SHOWN BACK FACE.
2. RIGHT END PANELS ARE OPPOSITE TO LEFT END.
3. DIMENSIONS ARE TO FORM INSIDE BACK FACE.
4. VERTICAL REINFORCEMENT SHALL HAVE 2" MINIMUM COVER TO THE BACK FACE.
5. HORIZONTAL REINFORCEMENT SHALL HAVE 1½" MINIMUM COVER TO THE BACK FACE.
6. ALL REINFORCEMENT SHALL HAVE 2" MINIMUM COVER TO THE SIDES.
7. REINFORCEMENT LABELS INDICATE BAR SIZE AND LENGTH. EXAMPLE: 454 IS A #4 BAR 54" LONG.
8. REINFORCEMENT SHALL BE GRADE 60.
9. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
10. SEE RETAINED EARTH™ PRECASTING SPECIFICATIONS FOR CONCRETE REQUIREMENTS.
11. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
12. ALL PANELS TO USE .276" Ø CLEVIS LOOPS, EXCEPT PANELS WITH A "Q" SUFFIX WHICH REQUIRE .374" Ø CLEVIS LOOPS.
13. ALL "M" PANEL (CORNER ELEMENTS) SHALL HAVE A PLAIN FINISH.

SQUARE / HEX PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

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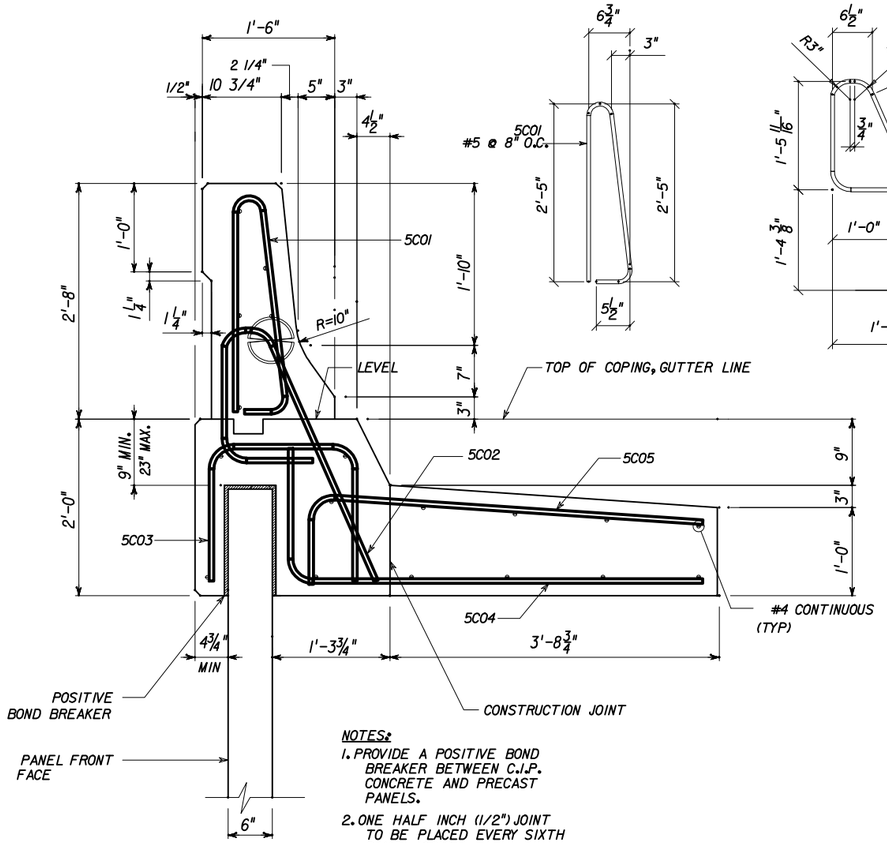
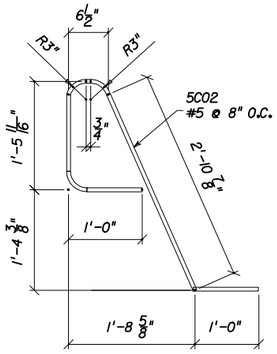
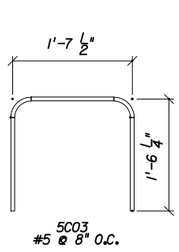


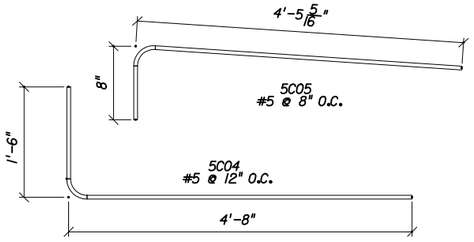
NOTES:

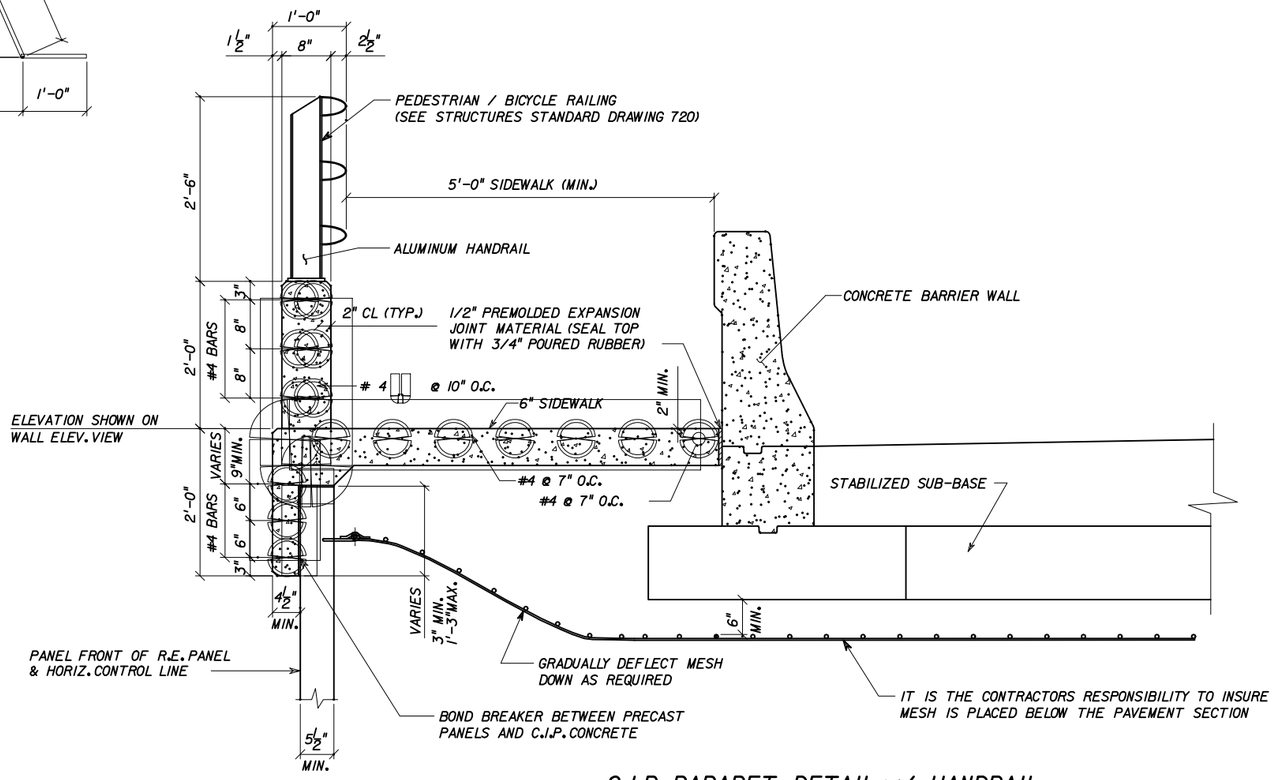
1. PROVIDE A POSITIVE BOND BREAKER BETWEEN C.I.P. CONCRETE AND PRECAST PANELS.
2. ONE HALF INCH (1/2") JOINT TO BE PLACED EVERY SIXTH PANEL JOINT.
3. SEE STRUCTURES STANDARD DRAWING 700 FOR ADDITIONAL 700 AND DETAILS.

6B C.I.P. BARRIER W/ COPING & JUNCTION SLAB STEEL









C.I.P. PARAPET DETAIL w/ HANDRAIL

SQUARE / HEX PANELS

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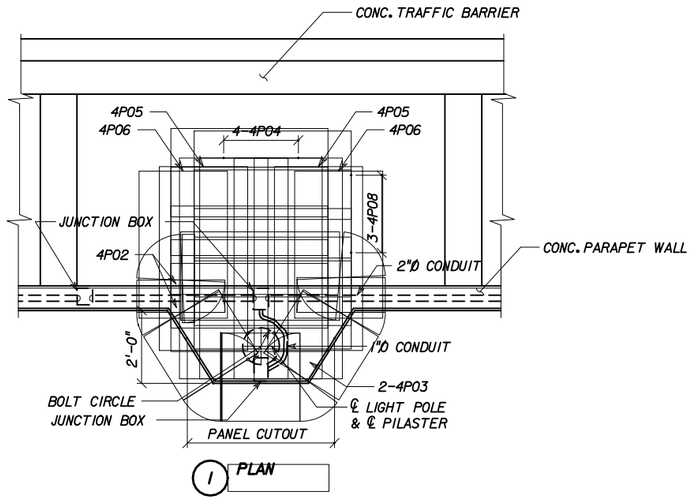
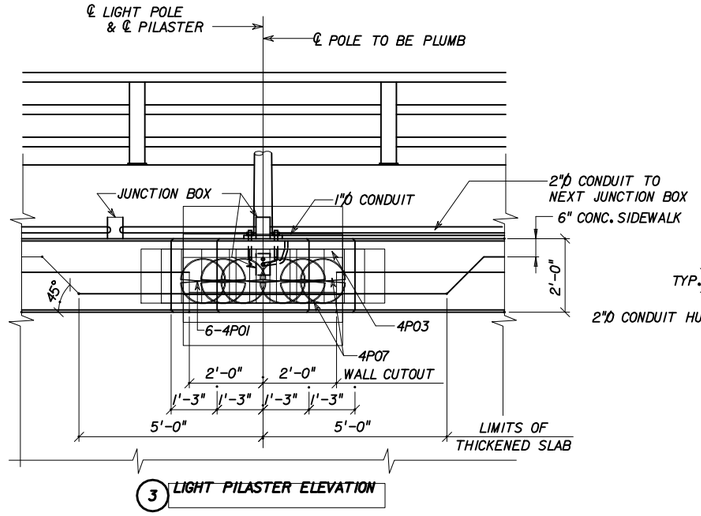


1 PLAN



3 LIGHT PILASTER ELEVATION

NOTES:

1. ADDITIONAL CONCRETE AND REINFORCING STEEL REQUIRED FOR THE CONSTRUCTION OF THE PILASTER SHALL MEET THE SAME REQUIREMENTS AS THAT OF THE PARAPET WALL.

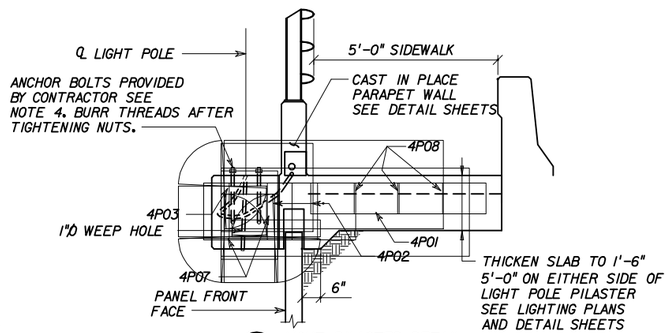
2. TOP OF PILASTER SHALL BE FINISHED TO A TRUE LEVEL AREA.

3. LIGHT POLE PILASTER IS DESIGNED TO RESIST WORKING LOADS (IN ANY DIRECTION) FROM THE LIGHT POLE APPLIED AT THE TOP OF THE PILASTER AS FOLLOWS:

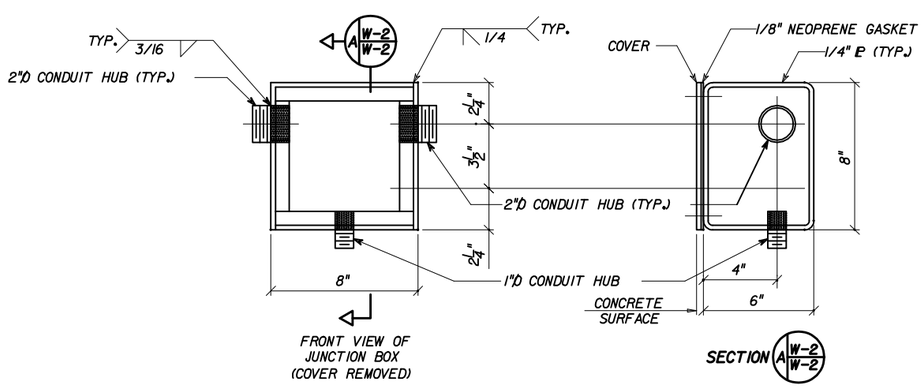
LONGITUDINAL MOMENT	=	30,000 FT. POUNDS
TRANSVERSE MOMENT	=	6,000 FT. POUNDS
LONGITUDINAL SHEAR	=	1,000 POUNDS
TRANSVERSE SHEAR	=	200 POUNDS
TORSION	=	3,000 FT. POUNDS
AXIAL	=	400 POUNDS

IF THE LIGHT POLE PROVIDED APPLIES LOADS THAT ARE IN EXCESS OF THOSE SHOWN ABOVE. THE CONTRACTOR SHALL REDESIGN THE PILASTER AND SUBMIT HIS DESIGN TO THE DEPARTMENT FOR REVIEW. THE CONTRACTOR'S REDESIGN SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. AND QUALIFIED TO PERFORM THE WORK.

4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANCHOR BOLTS THAT EFFECTIVELY TRANSMIT THE LIGHT POLE LOADS TO THE PILASTER AND THAT FIT THE REINFORCING CAGE. CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA SHALL BE SUBMITTED BY THE CONTRACTOR TO THE DEPARTMENT FOR REVIEW AND APPROVAL SHOWING THAT THESE REQUIREMENTS HAVE BEEN MET PRIOR TO CONSTRUCTION.



2 LIGHT PILASTER DETAIL

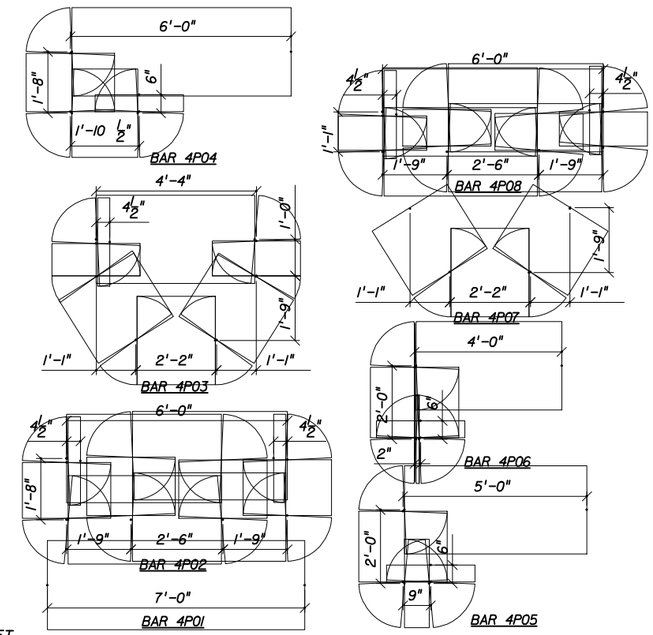


5. STEEL FOR JUNCTION BOXES SHALL CONFORM WITH ASTM-A36. THE BOXES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. IN LIEU OF STEEL BOXES THE CONTRACTOR MAY SUBMIT FOR APPROVAL MOLDED P.V.C. BOXES (SCHEDULE 80).

6. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL OR SCHEDULE 80 P.V.C.

7. THE COST OF ANCHOR BOLTS SHALL BE INCLUDED IN THE BID PRICE FOR LIGHT POLES.

8. PAYMENT: THE COST OF ALL LABOR, CONCRETE AND REINFORCING STEEL REQUIRED FOR THE CONSTRUCTION OF THE PILASTERS AND ALL CONDUITS. EXPANSION COUPLINGS, JUNCTION BOXES AND MISCELLANEOUS HARDWARE REQUIRED FOR COMPLETION OF THE ELECTRICAL INSTALLATION WITHIN THE LIMITS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR THE MSE WALLS.



BILL OF REINFORCING STEEL			
MARK	SIZE	NO. REQ'D	LENGTH
4P01	#4	6	7'-0"
4P02	#4	2	24'-5"
4P03	#4	1	13'-1"
4P04	#4	4	10'-0 1/2"
4P05	#4	2	8'-3"
4P06	#4	2	6'-8"
4P07	#4	2	6'-4"
4P08	#4	3	22'-1"

4 BAR BENDING DETAIL

SQUARE / HEX PANELS

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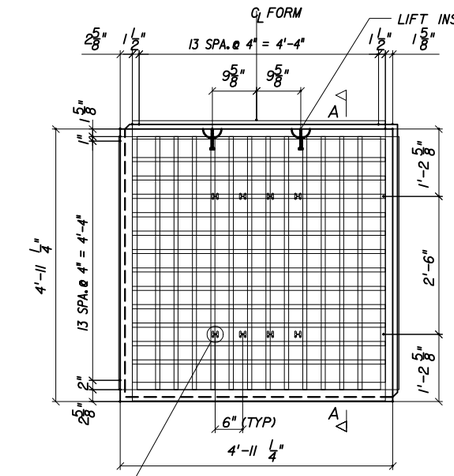
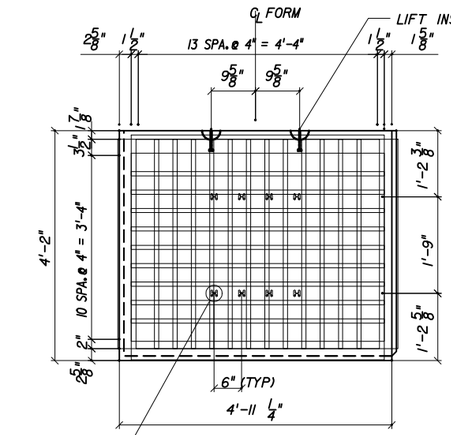
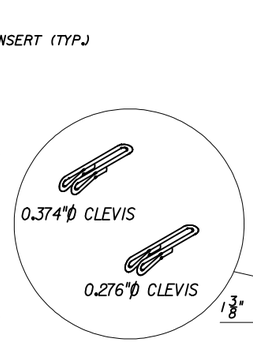
$$$$$$$$DGNSPECIFICATION$$$$$$$$
$$$$$$$SYTIME$$$$$$$

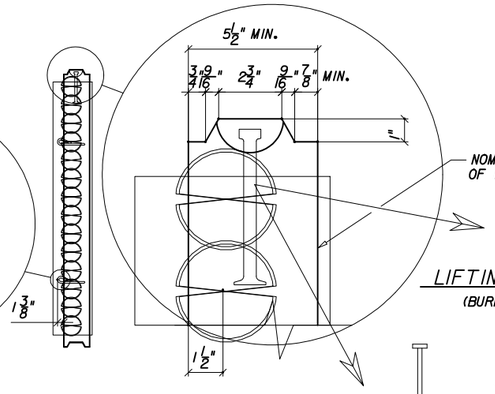


A TYPE A REINFORCING
(AREA = 25.0 SQ.FT.)



D TYPE D REINFORCING
(AREA = 20.83 SQ.FT.)





A-A SECTION A-A

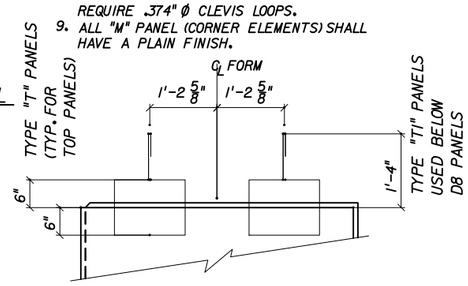
LIFTING INSERT DETAIL
(BURKE® SPREAD ANCHOR)
(ONE TON)

OR

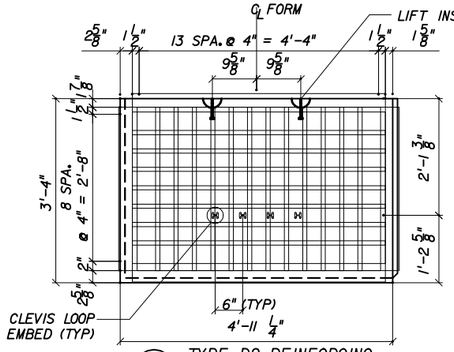
LIFTING INSERT DETAIL
(DAYTON SUPERIOR SWIFT LIFT ANCHOR)
(1 TON X 4 3/4")

PANEL REINFORCEMENT NOTES:

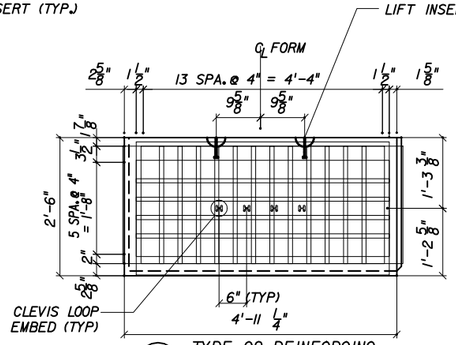
1. PANELS ARE SHOWN BACK FACE.
2. RIGHT END PANELS ARE OPPOSITE TO LEFT END.
3. DIMENSIONS ARE TO FORM INSIDE BACK FACE.
4. ALL REINFORCEMENT SHALL HAVE 1 1/2" MINIMUM COVER TO THE SIDES AND BACK OF PANEL.
5. REINFORCEMENT SHALL BE WELDED WIRE FABRIC MINIMUM W.W.F. W3.8 x W3.8 x 4" x 4" GRID.
6. SEE RETAINED EARTH™ PRECASTING SPECIFICATIONS FOR CONCRETE REQUIREMENTS.
7. FOSTER RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
8. ALL PANELS TO USE .276" Ø CLEVIS LOOPS, EXCEPT PANELS WITH A "Q" SUFFIX WHICH REQUIRE .374" Ø CLEVIS LOOPS.
9. ALL "M" PANEL (CORNER ELEMENTS) SHALL HAVE A PLAIN FINISH.



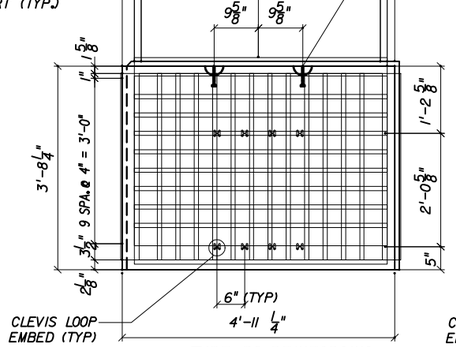
T TYPE T REINFORCING
TYPE T PANELS TO HAVE 2-#4x12" DOWELS
TYPE TI PANELS TO HAVE 2-#4x22" DOWELS



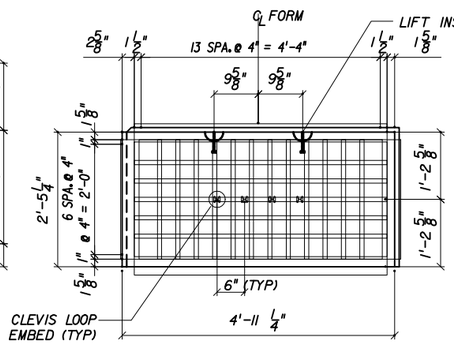
D2 TYPE D2 REINFORCING
(AREA = 16.67 SQ.FT.)



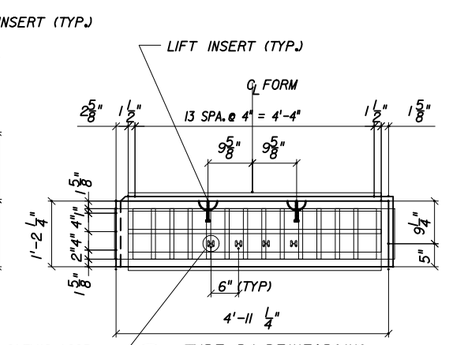
C2 TYPE C2 REINFORCING
(AREA = 12.50 SQ.FT.)



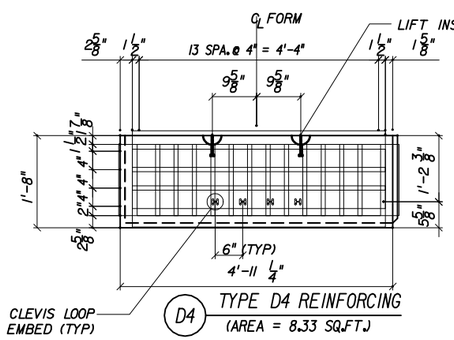
B6 TYPE B6 REINFORCING
(AREA = 18.75 SQ.FT.)



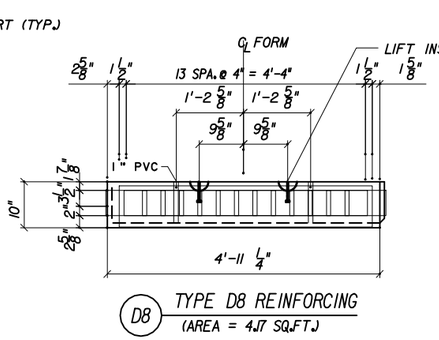
B2 TYPE B2 REINFORCING
(AREA = 12.50 SQ.FT.)



B4 TYPE B4 REINFORCING
(AREA = 6.25 SQ.FT.)



D4 TYPE D4 REINFORCING
(AREA = 8.33 SQ.FT.)



D8 TYPE D8 REINFORCING
(AREA = 4.17 SQ.FT.)

SQUARE PANELS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
FOSTER GEOTECHNICAL RETAINED EARTH WALL

	Names	Dates
Designed By	TCNA	11/98
Drawn By	CAD	11/98
Checked By	GEO	11/98

Approved By _____
State Structures Design Engineer

Revision	Sheet No.	Index No.
00	12 of 12	5005

$$$$$$$$DGN:SPECIFICATION$$$$$$$$
$$$$$$$SYT:IME$$$$$$$