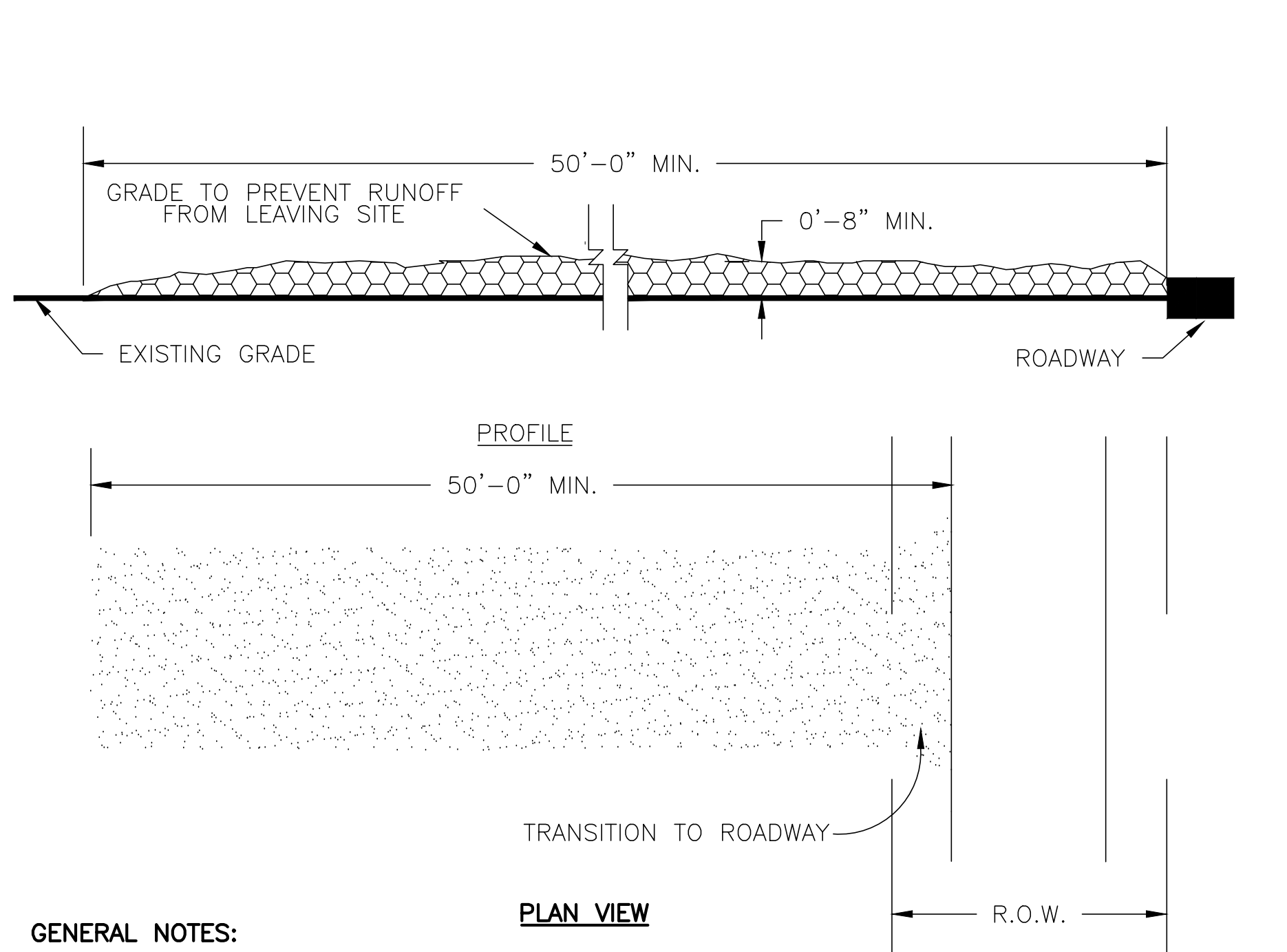


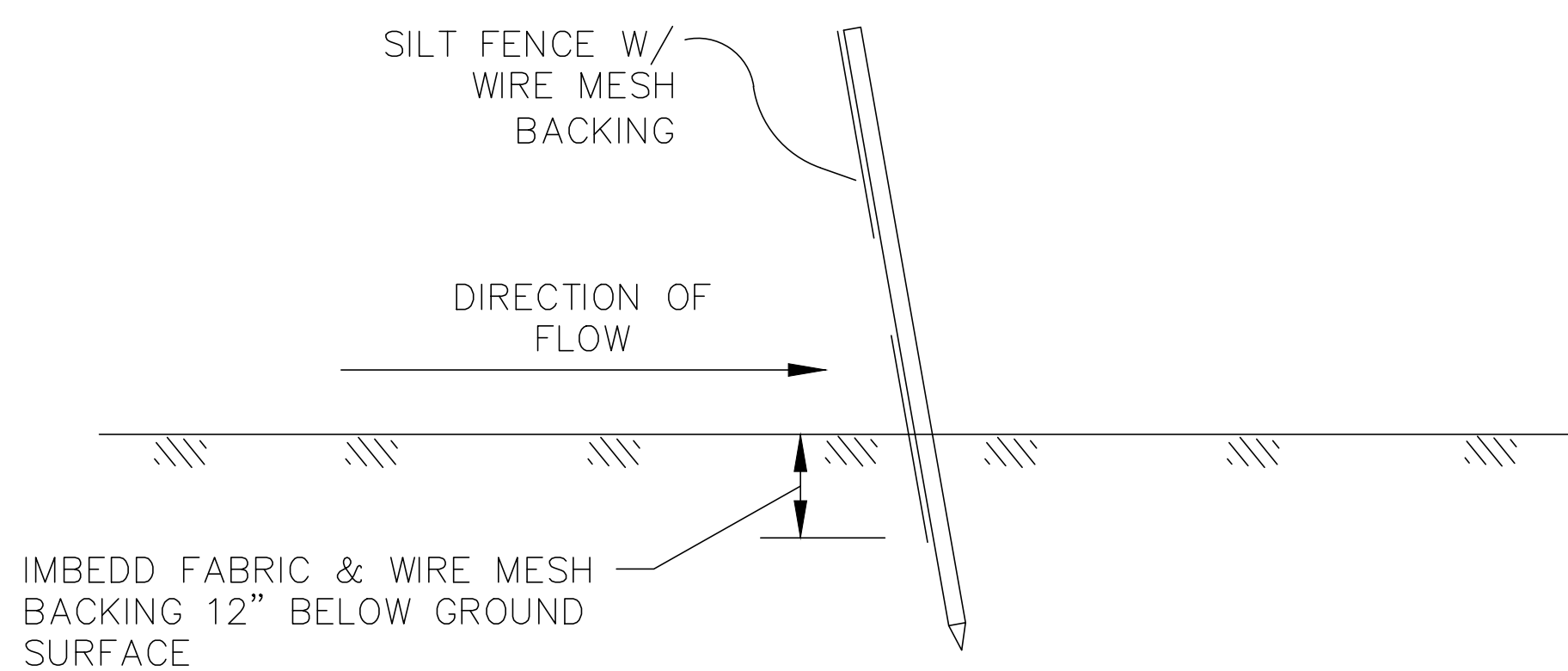


- GENERAL NOTES:**
1. STONE SIZE — 1 1/2" TO 2 INCH OPEN GRADED ROCK.
 2. LENGTH — AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
 3. THICKNESS — NOT LESS THAN 8 INCHES.
 4. WIDTH — NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
 5. WASHING — WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
 6. MAINTENANCE — THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED WASHED, OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
 7. DRAINAGE — ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

1 STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.

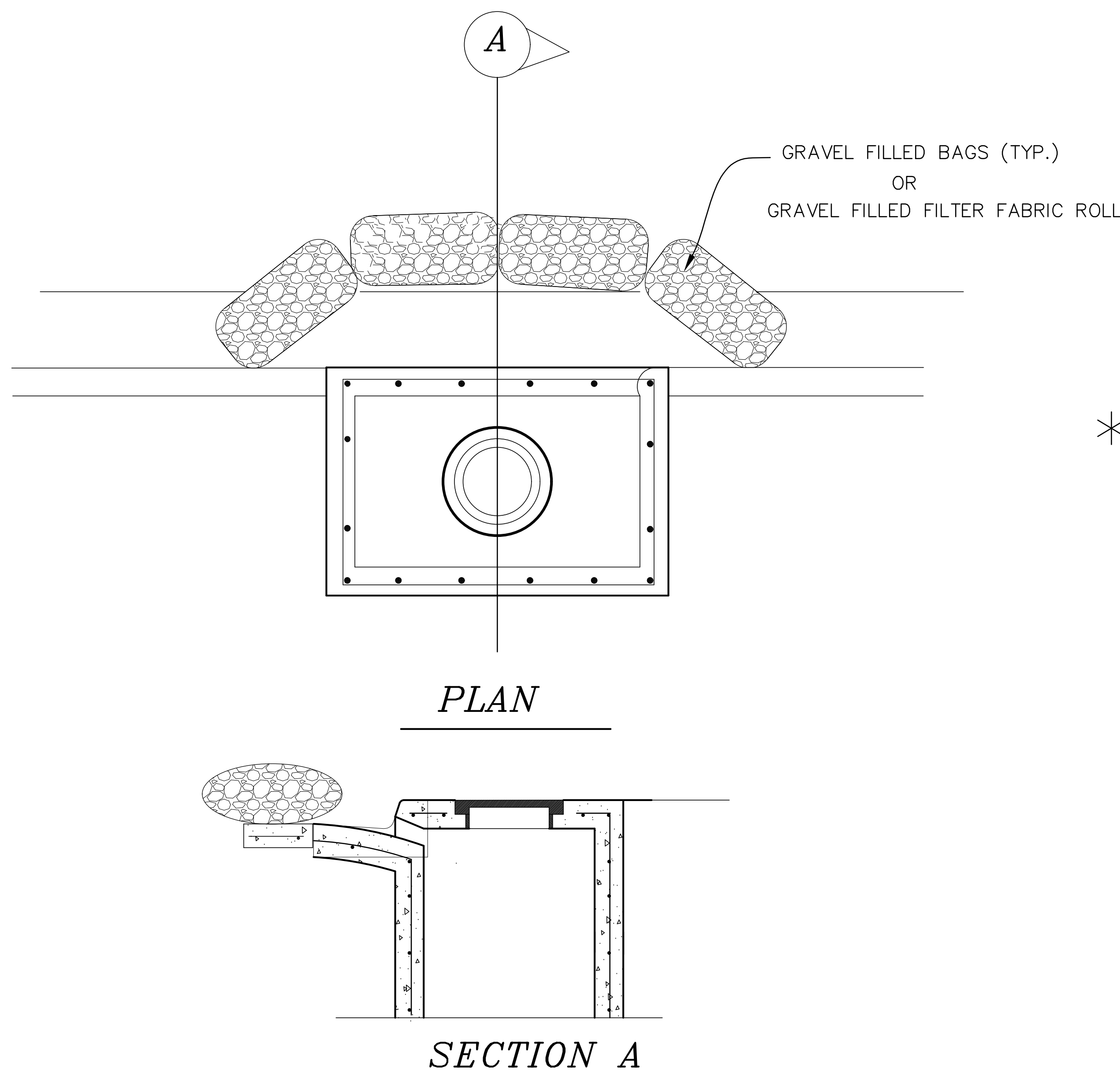
MAY NOT BE NECESSARY IF EXISTING PAVED ENTRANCES ARE USED SUBJECT TO NOTES NO. 5 AND NO. 6



2 SILT FENCE INSTALLATION

N.T.S.

TO BE INSTALLED WHEREVER THERE IS POTENTIAL FOR RUNOFF TO LEAVE SITE OR ENTER DRAINAGE SYSTEM.



3 GRAVEL FILLED BAGS AT INLETS

* NOTE: THE TOTAL AREA OF THIS PROJECT IS APPROXIMATELY 2.8 ACRES (LESS THAN 5 ACRES). THEREFORE, THE FILING OF NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) IS NOT REQUIRED. ALL OTHER REQUIREMENTS SHALL APPLY.

CONTRACTOR'S RESPONSIBILITY FOR PREPARATION AND IMPLEMENTATION OF STORMWATER POLLUTION PREVENTION PLAN

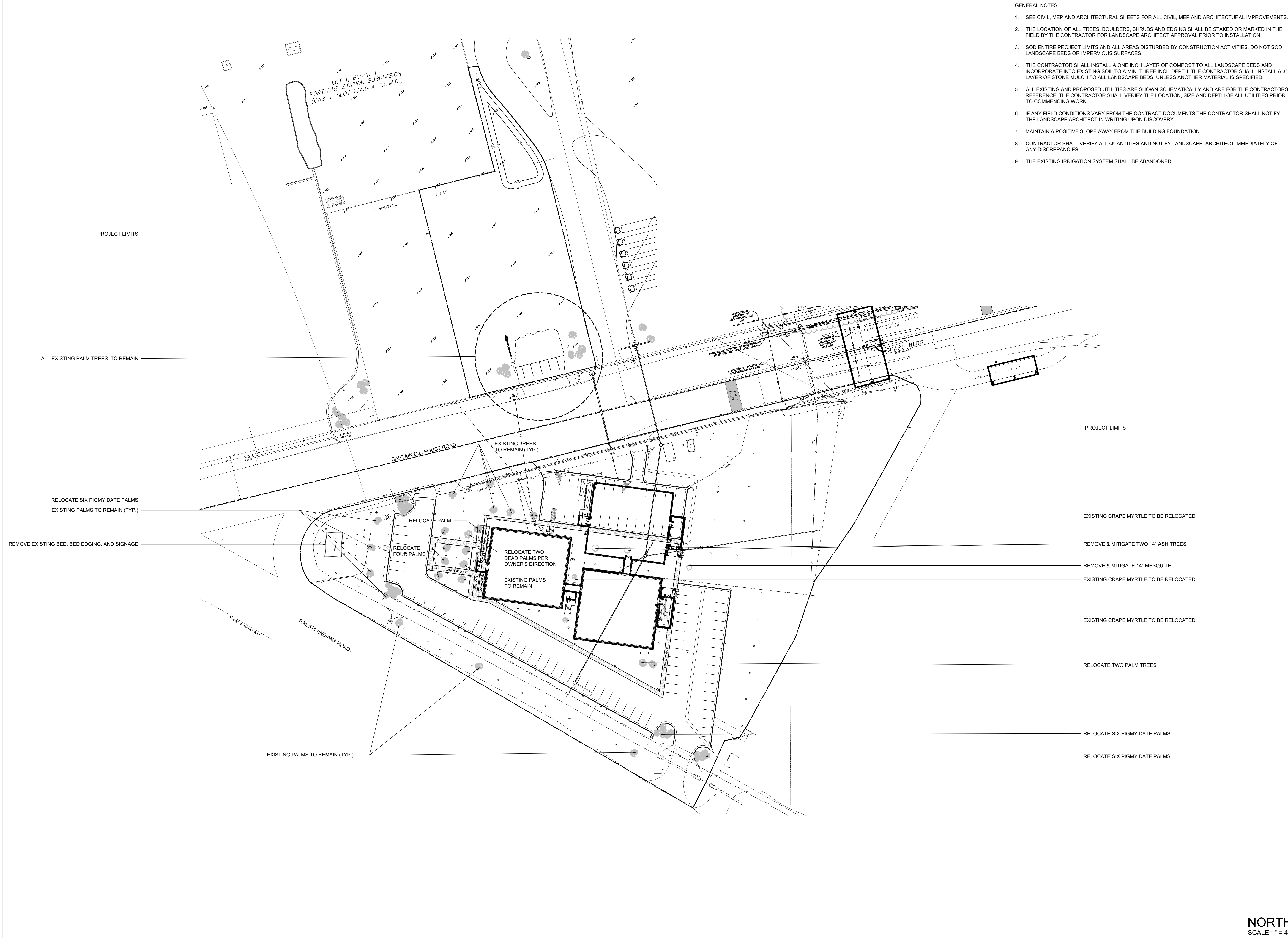
1. IT IS THE INTENT OF THE INFORMATION PROVIDED WITHIN THESE SPECIFICATIONS TO BE USED BY THE CONTRACTOR AS THE GENERAL GUIDELINES OF THE **STORM WATER POLLUTION PREVENTION PLAN** FOR THIS PROJECT TO ESTABLISH A MINIMUM BASIS OF COMPLIANCE WITH THE FEDERAL REGULATIONS.
2. THE CONTRACTOR'S **STORM WATER POLLUTION PREVENTION PLAN** SHOULD ADDRESS THREE GOALS:
 - A. DIVERSION OF UPSLOPE WATER AROUND DISTURBED AREAS OF THE SITE;
 - B. LIMITS THE EXPOSURE OF DISTURBED AREAS TO THE SHORTEST DURATION POSSIBLE; AND
 - C. REMOVAL OF SEDIMENT FROM STORM WATER BEFORE IT LEAVES THE SITE.
- * 3. IF AREA OF THE PROJECT REQUIRES, THE CONTRACTOR SHALL PREPARE AND FILE TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STORM WATER & GENERAL PERMITS TEAM (TCEQ) NOTICE OF INTENT (NOI) FORMS BEFORE (SEVEN DAYS IF BY MAIL—24 HOURS IF ON LINE) BEGINNING ANY CONSTRUCTION.
4. THE CONTRACTOR SHALL MAKE THE **STORM WATER POLLUTION PREVENTION PLAN** AVAILABLE, UPON REQUEST, TO TCEQ.
5. THE CONTRACTOR MUST AMEND PLANS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PLAN, OR WHEN THE EXISTING PLAN PROVE INEFFECTIVE. MODIFICATIONS INCLUDING DESIGN AND ALL ADDITIONAL MATERIALS AND WORK, SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
6. STABILIZATION MEASURES ARE TO BE INSPECTED AT A MINIMUM OF ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES. REPAIRS AND INADEQUACIES REVEALED BY THE INSPECTION MUST BE REMEDIED WITHIN 7 CALENDAR DAYS.
7. ALL INSPECTION REPORTS SUMMARIZING INSPECTION ACTIVITIES, REMEDIAL ACTION TAKEN, AND ACTUAL IMPLEMENTATION OF THE **STORM WATER POLLUTION PREVENTION PLAN** SHALL BE RETAINED AND MADE PART OF THE PLAN.
8. ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN THE PLAN MUST CERTIFY AS TO AN UNDERSTANDING OF THE TPDES GENERAL PERMIT BEFORE CONDUCTING ANY ACTIVITY IDENTIFIED IN THE **STORM WATER POLLUTION PREVENTION PLAN**.
9. THE CONTRACTOR SHALL ADOPT APPROPRIATE CONSTRUCTION SITE MANAGEMENT PRATICES TO PREVENT THE DISCHARGE OF OILS, GREASE, PAINTS, GASOLINE, AND OTHER POLLUTANTS TO STORM WATER. APPROPRIATE PRACTICES CAN INCLUDE:
 - DESIGNATED AREAS FOR EQUIPMENT MAINTENANCE AND REPAIR;
 - REGULAR COLLECTION OF WASTE;
 - CONVENIENTLY LOCATED WATER RECEPTACLES; AND
 - DESIGNATING AND CONTROLLING EQUIPMENT WASH-DOWN.
10. THE CONTRACTOR SHALL AMEND OR MODIFY THIS PLAN AS REQUIRED BY CONSTRUCTION MEANS, METHODS AND SEQUENCE. MODIFICATIONS SHALL NOT COMPROMISE THE INTENT OF THE REQUIREMENTS OF THE LAW OR THE PLANS. MODIFICATIONS SHALL NOT BE BASIS FOR ADDITIONAL COST TO THE OWNER.
11. THE CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL TRAFFIC ENTRANCE/EXIT POINTS PRIOR TO EXITING ONTO AND PAVED ROADWAYS. (SEE DETAIL 1.)
12. THE CONTRACTOR SHALL PROTECT ALL POTENTIAL POINTS OF DISCHARGE OF RUNOFF (INLETS, GUTTERS, SWALES AND UNVEGETATED RESACA BANK AREAS) WITH SILT FENCING HAY BALES, GRAVEL FILLED BAGS AS SHOWN ON DETAILS 2, 3, AND 4 OR EQUIVALENT MEANS APPROVED BY ENGINEER.
13. FINAL STABILIZATION SHALL BE ACCOMPLISHED BY INSTALLING A 2 FEET WIDE STRIP OF SOD BEHIND CURB OR SIDEWALK AS SHOWN IN DETAIL NO. 5. CONTRACTOR SHALL WATER THE SOD IMMEDIATELY AFTER INSTALLATION AND 3 TIMES PER WEEK FOR 2 WEEKS AFTER INSTALLATION.

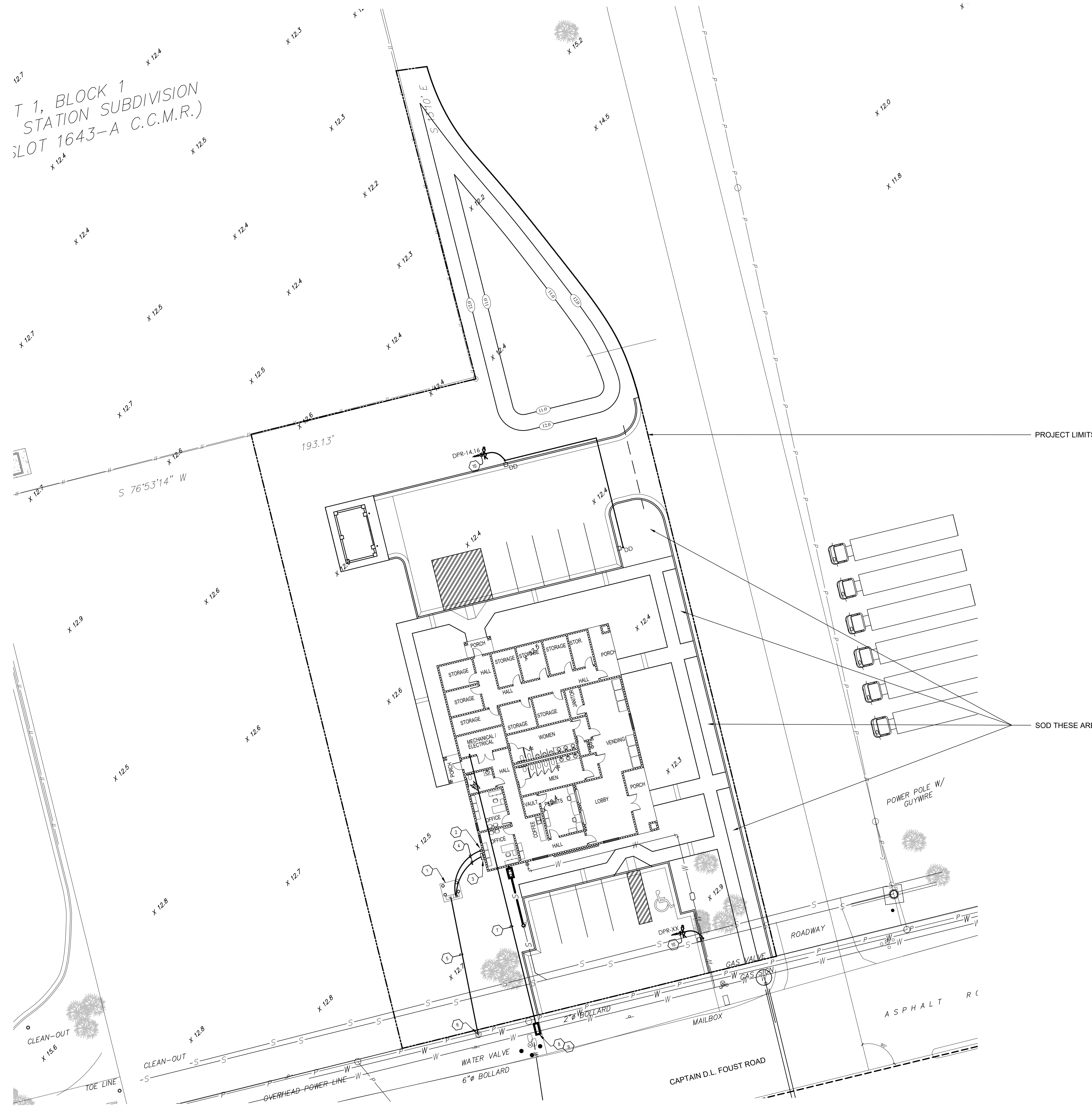
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JAMES E. ROSE, P.E. 44096 9/19/16 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

Mejia & Rose, Incorporated
Engineering Surveying
T.B.P.E. Reg. No. F-2670
T.B.P.L.S. Reg. No. 10023900
1643 West Price Road (956) 544-3022
P.O. Box 3761 Brownsville, Texas 78520
Fax (956) 544-3068

SHEET NO.	C16
OF	
SET NUMBER	
REVISED:	
DATE: 9/19/16	DRAWN BY: S.S.
	PROJECT NO.: 19092
ROBERTO J. RUIZ ARCHITECT, INC. 615 W. TANDY ROAD BROWNSVILLE TEXAS 78520 (956) 350-9195 OFFICE (956) 350-9196 FAX ARCHRUIZ@AOL.COM	
STATE OF TEXAS JAMES E. ROSE 44096 LICENSED PROFESSIONAL ENGINEER	
BROWNSVILLE NAVIGATION DISTRICT OF CAMEROON COUNTY, TEXAS PORT OF BROWNSVILLE WORLD CLASS	
PROJECT: ADMINISTRATION COMPLEX REHABILITATION AND BUILDING ADDITIONS OWNER: BROWNSVILLE NAVIGATION DISTRICT PORT OF BROWNSVILLE BROWNSVILLE, TEXAS	
SHEET TITLE: STORM WATER POLLUTION PREVENTION REQUIREMENTS	

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T 1, BLOCK 1
STATION SUBDIVISION
LOT 1643-A C.C.M.R.)

NORTH
SCALE 1" = 20'

SHEET TITLE:

PERMIT & STORAGE BUILDING
LANDSCAPE PLAN

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS
PORT of BROWNSVILLE
• WORLD CLASS •

ROBERTO J. RUIZ
ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78620
(956) 358-9195 OFFICE
(956) 358-9196 FAX
ARCHIRUIZ@AOL.COM
DATE: 09-30-16

ROBERTO J. RUIZ
ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78620
(956) 358-9195 OFFICE
(956) 358-9196 FAX
ARCHIRUIZ@AOL.COM

DATE: 9/30/2016
DRAWN BY: JRR
PROJECT NO.:

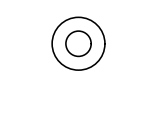
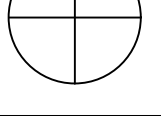
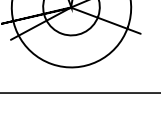
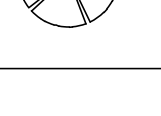
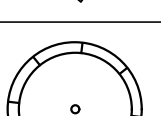
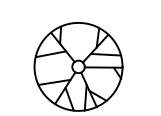
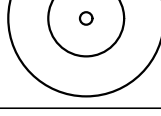
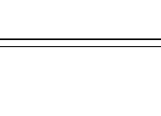
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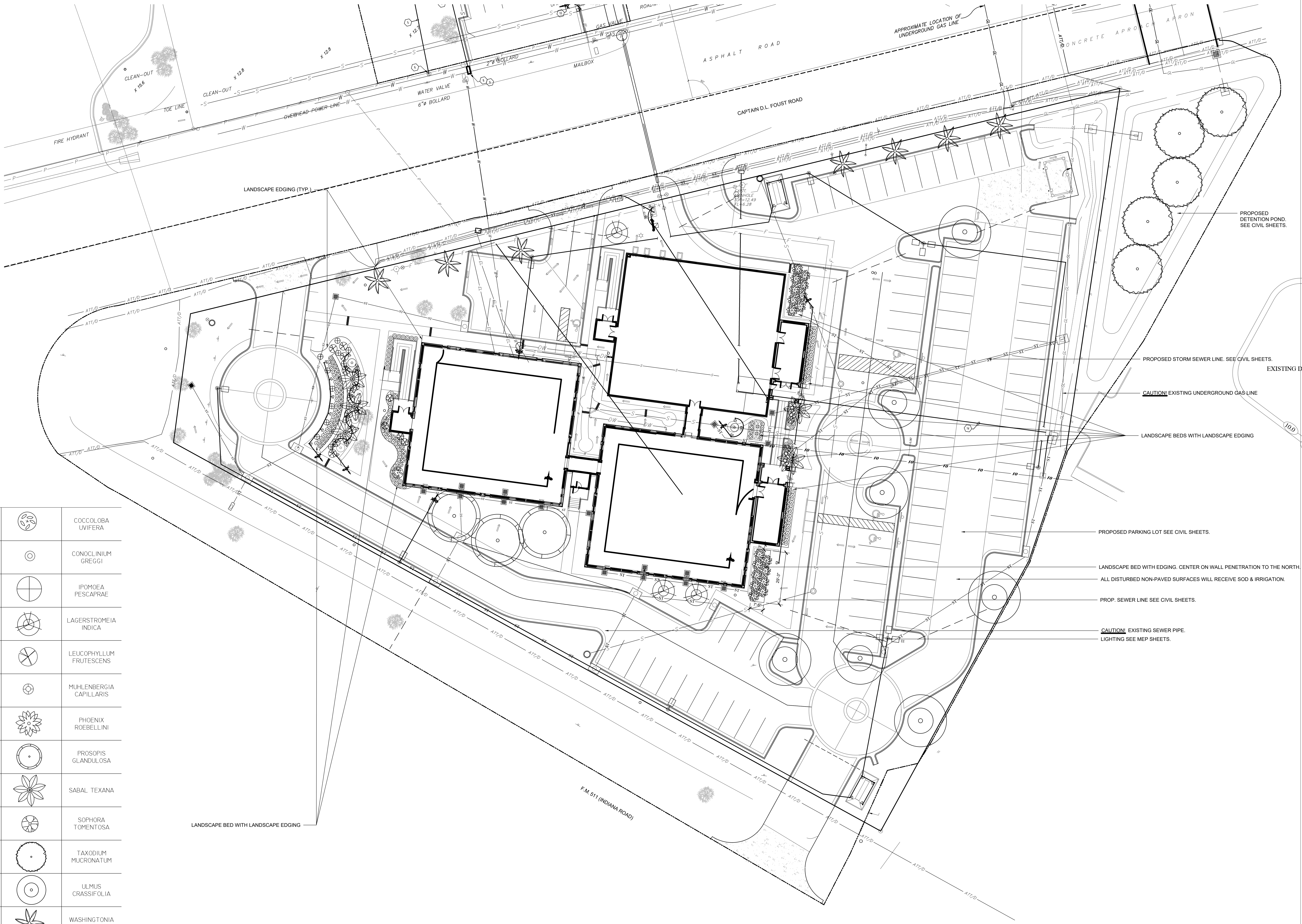
SET NUMBER

OF

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ALTERNATE BID ITEM		COCCOLOBA UVIFERA
ALTERNATE BID ITEM		CONOCLINIUM GREGGII
ALTERNATE BID ITEM		IPOMOEA PESCAPRAE
BASE BID ITEM		LAGERSTROMEIA INDICA
ALTERNATE BID ITEM		LEUCOPHYLLUM FRUTESCENS
ALTERNATE BID ITEM		MUHLENBERGIA CAPILLARIS
BASE BID ITEM		PHOENIX ROEBELLINI
ALTERNATE BID ITEM		PROSOPIS GLANDULOSA
ALTERNATE BID ITEM		SABAL TEXANA
ALTERNATE BID ITEM		SOPHORA TOMENTOSA
ALTERNATE BID ITEM		TAXODIUM MUCRONATUM
ALTERNATE BID ITEM		ULMUS CRASSIFOLIA
BASE BID ITEM		WASHINGTONIA ROBUSTA
ALTERNATE BID ITEM		WEDELIA TEXANA
ALTERNATE BID ITEM		LANDSCAPE BED EDGING



NORTH
SCALE 1" = 20'

SHEET NO.

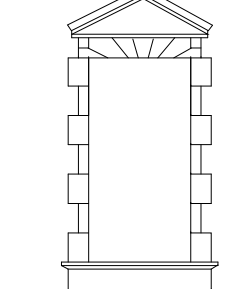
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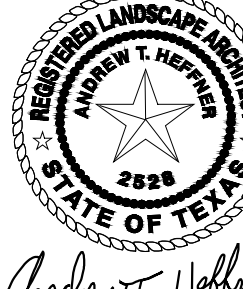
SET NUMBER

REVISIONS:

DATE: 9/30/2016
DRAWN BY: JAR
PROJECT NO.:

ROBERTO J. RUIZ
ARCHITECT, INC.


615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78201
(956) 350-9195 OFFICE
(956) 350-9196 FAX
ARCHRUIZ@AOL.COM


DATE: 09-30-16
Antonio J. Hoffa

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS


PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

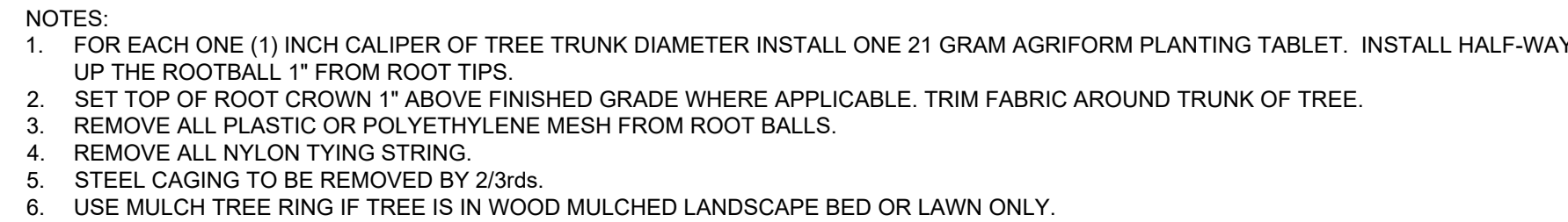
PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS

OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

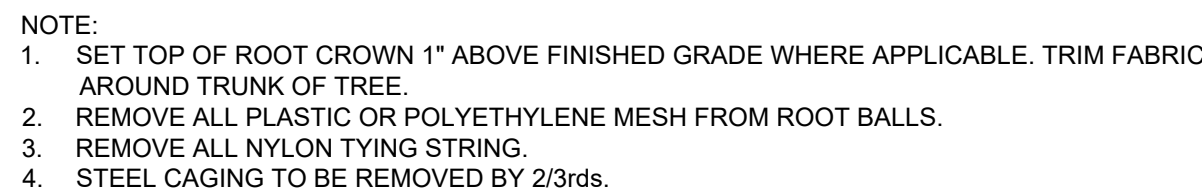
SHEET TITLE:

ADMINISTRATION BUILDING
LANDSCAPE PLAN

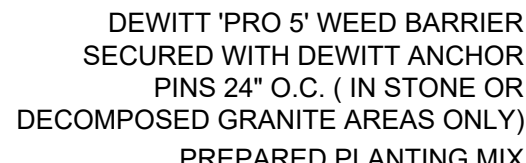
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N.T.S.



N.T.S.



N.T.S.

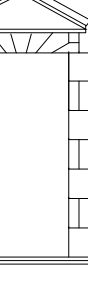


1. INSTALL PER MANUFACTURER'S "INSTALLATION GUIDELINES".
2. 8'-0" (2.44 M) SECTIONS TO INCLUDE (3) 12" (305 MM) ALUMINUM STAKES.
3. 16'-0" (4.88 M) SECTIONS TO INCLUDE (5) 12" (305 MM) ALUMINUM STAKES
4. CORNERS - CUT BASE EDGING UP HALFWAY AND FORM A CONTINUOUS CORNER.
5. PERMALOC PROLINE AS MANUFACTURED BY PERMALOC CORPORATION HOLLAND MI. (800) 356-9660, (616) 399-9600 OR APPROVED EQUAL.
6. CONTRACTOR'S NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT: WWW.PERMALOC.COM

2
L4

N.T.S.

PLANT MATERIAL SPACING
AND GROUP VARY

SHEET TITLE: LANDSCAPE DETAILS & MATERIAL SCHEDULE	PROJECT: ADMINISTRATION COMPLEX REHABILITATION AND BUILDING ADDITIONS OWNER: BROWNSVILLE NAVIGATION DISTRICT PORT OF BROWNSVILLE BROWNSVILLE, TEXAS BROWNSVILLE NAVIGATION DISTRICT OF CAMERON COUNTY, TEXAS  PORT OF BROWNSVILLE • WORLD CLASS •  <i>Architect's Office</i> DATE: 09-30-16
PROJECT: ADMINISTRATION COMPLEX REHABILITATION AND BUILDING ADDITIONS OWNER: BROWNSVILLE NAVIGATION DISTRICT PORT OF BROWNSVILLE BROWNSVILLE, TEXAS	
BROWNSVILLE NAVIGATION DISTRICT OF CAMERON COUNTY, TEXAS  PORT OF BROWNSVILLE • WORLD CLASS •	
 <i>Architect's Office</i> DATE: 09-30-16	
ROBERTO J. RUIZ ARCHITECT, INC.  615 W. TANDY ROAD BROWNSVILLE, TEXAS 77820 (956) 350-9195 OFFICE (956) 350-9196 FAX ARCHIT@RUIZ.AOL.COM	
SHEET NO. OF	SET NUMBER REVISED: DATE: 9/30/2016 DRAWN BY: JRR PROJECT NO.:
ROBERTO J. RUIZ ARCHITECT, INC.	

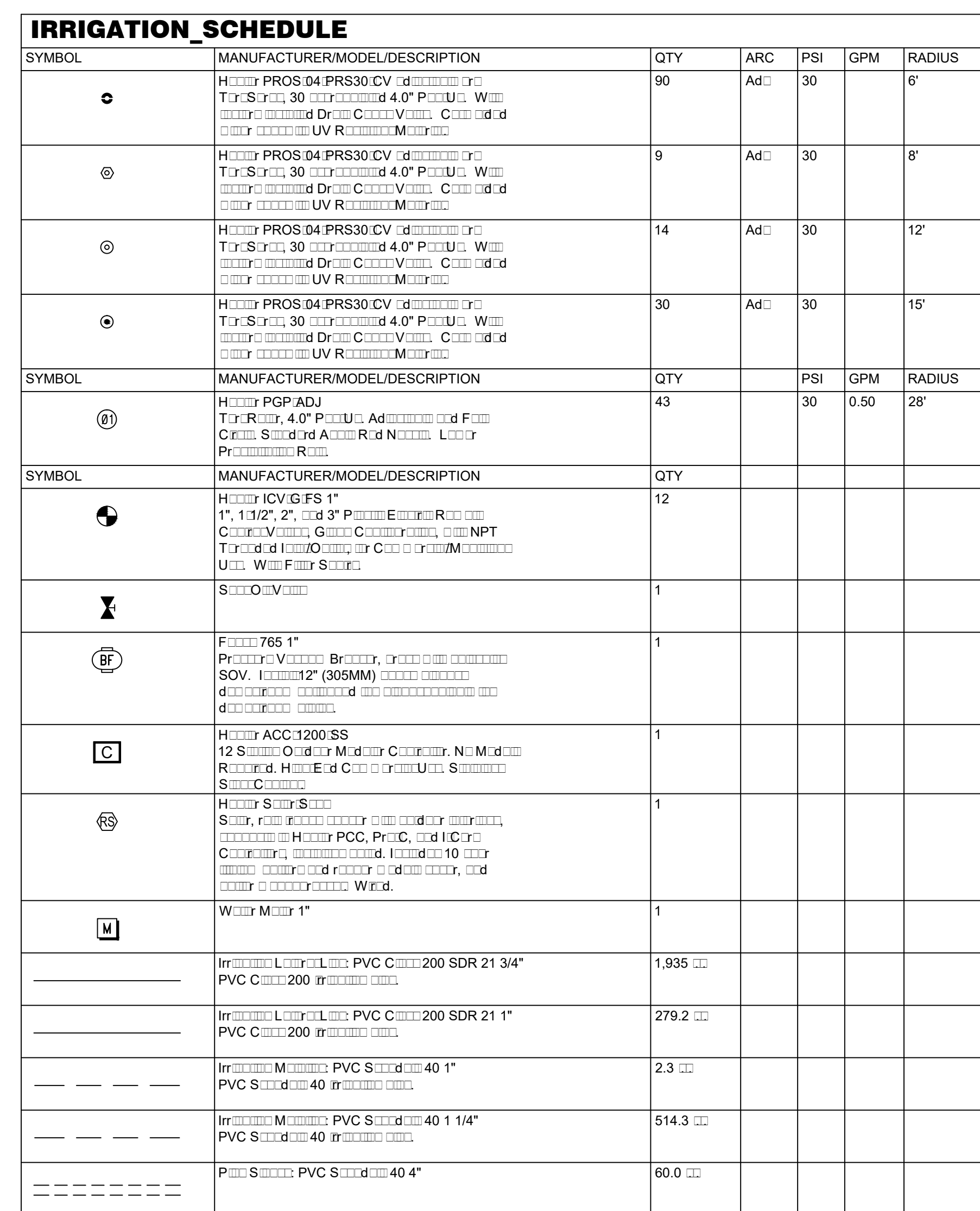


Diagram illustrating the layout of a valve callout:

- VALVE CALLOUT
- VALVE NUMBER
- VALVE FLOW
- VALVE SIZE

PERMIT & STORAGE BUILDING
IRRIGATION PLAN & SCHEDULE

**PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS**

**OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE**
BROWNSVILLE, TEXAS

**PORT of
BROWNSVILLE**
•WORLD CLASS•

ROBERTO J. RUIZ
ARCHITECT, INC.

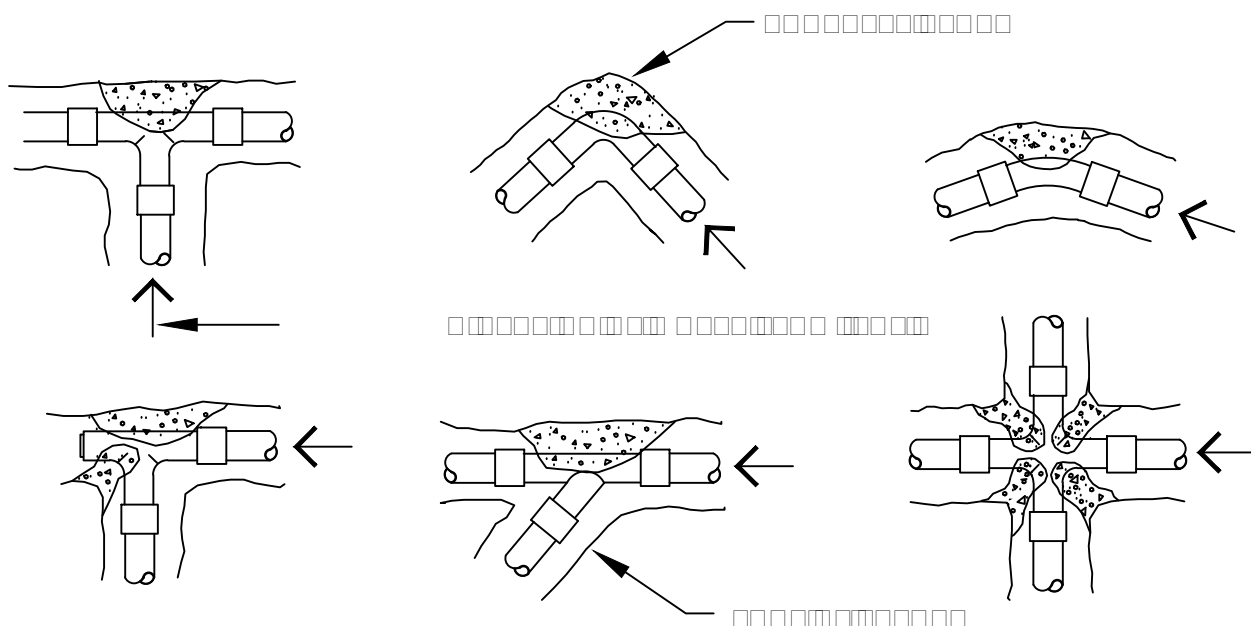


615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78520
(956) 350-9195 OFFICE
(956) 350-9196 FAX
ARCHIRUIZ@AOL.COM

DATE: 9/30/2016	REVISED:
DRAWN BY: JRR	
PROJECT NO.:	

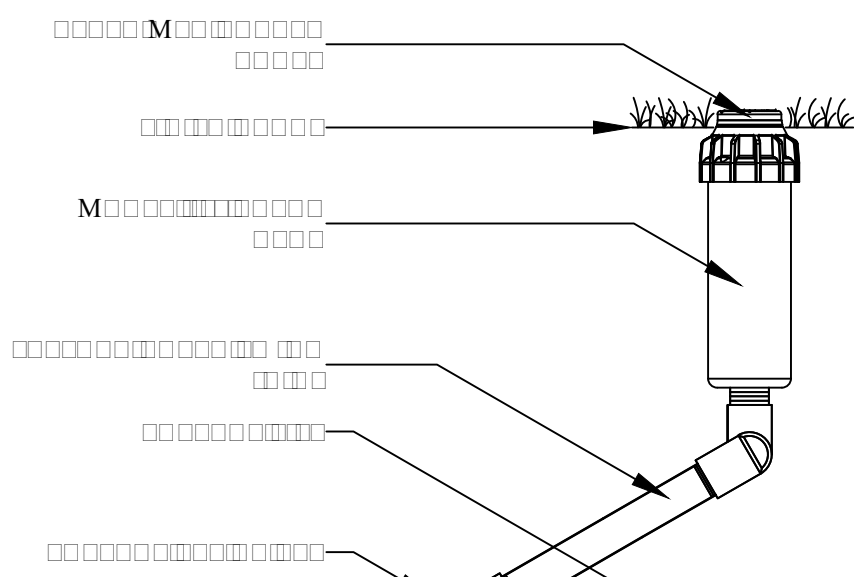
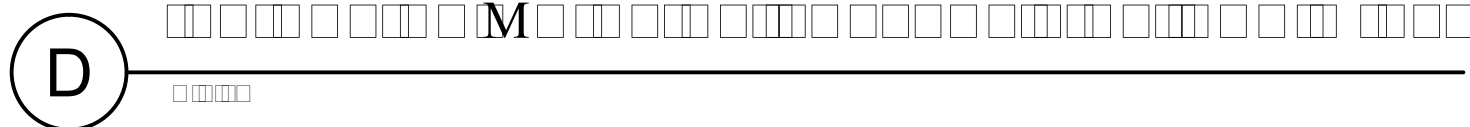
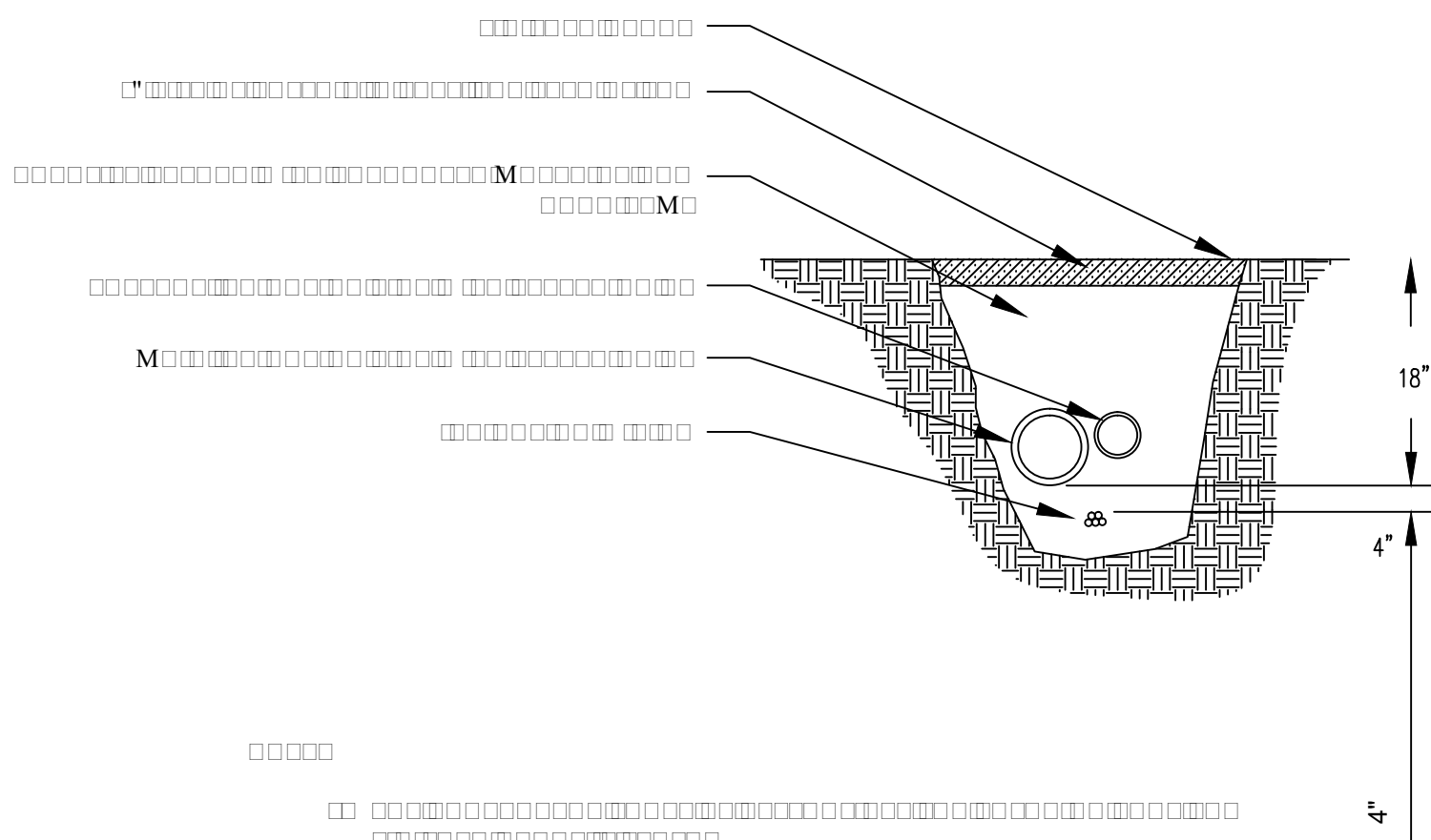
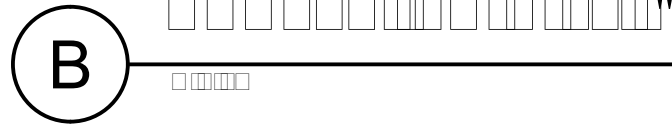
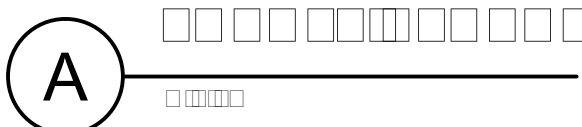
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NO. IR1



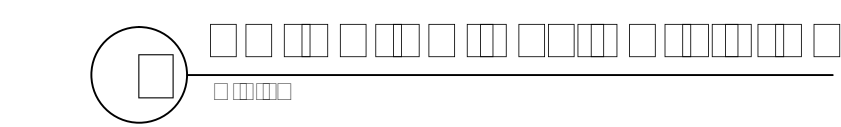
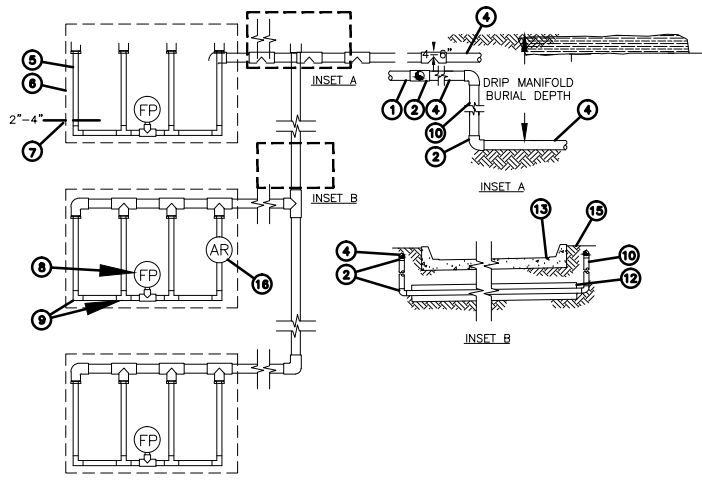
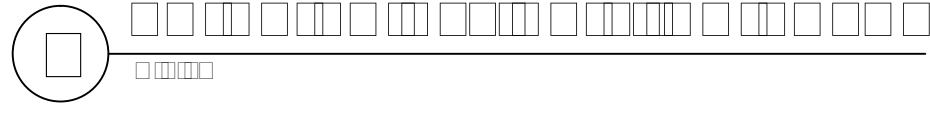
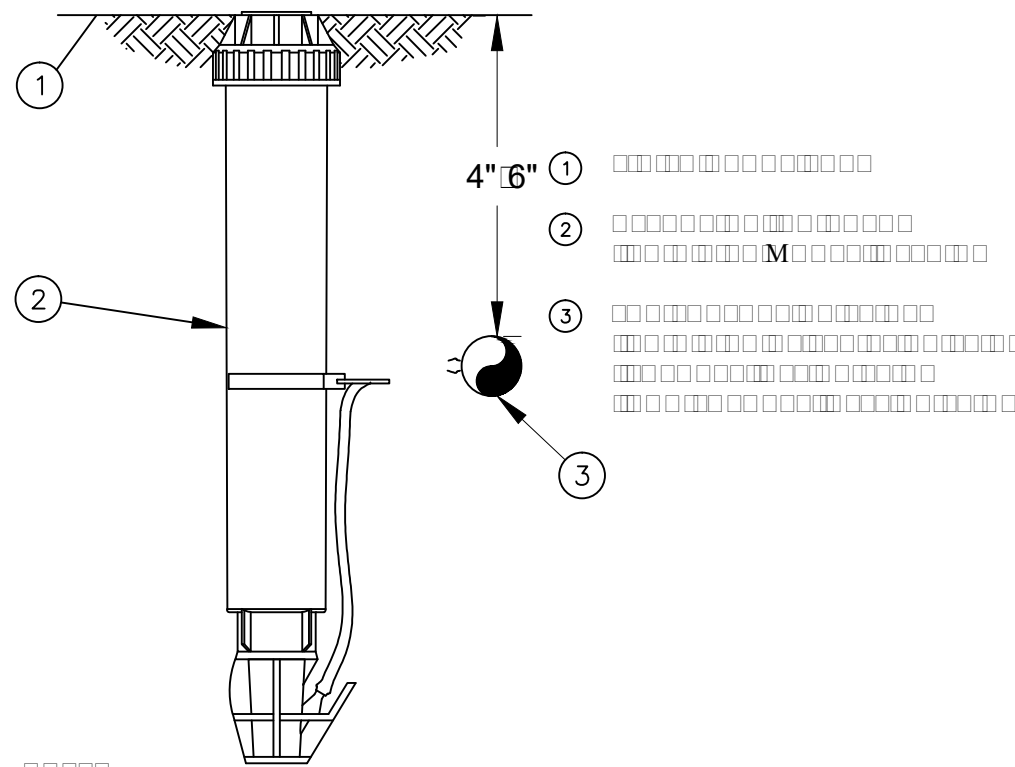
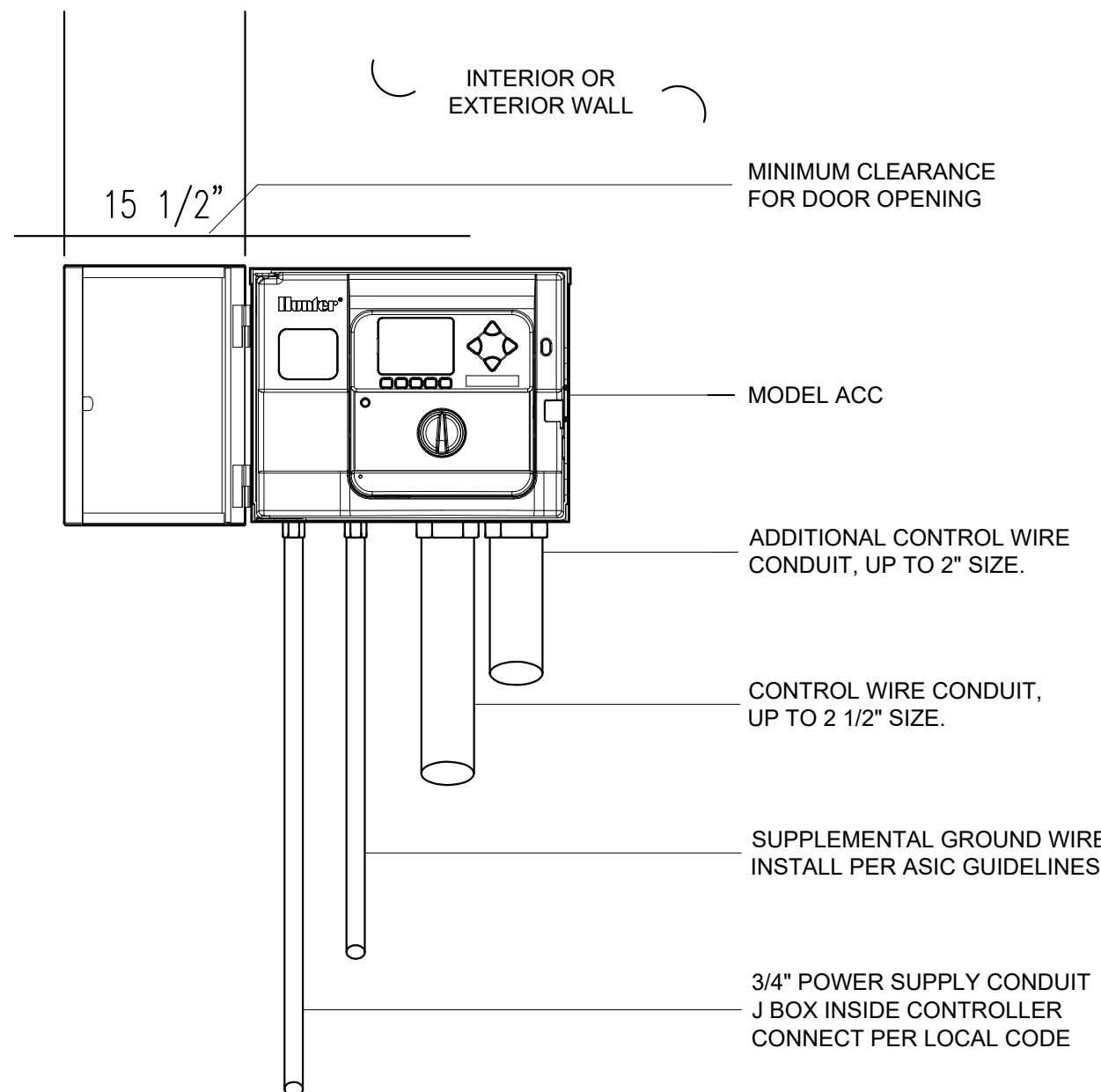
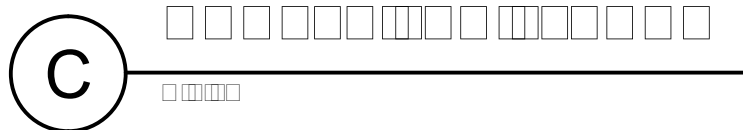
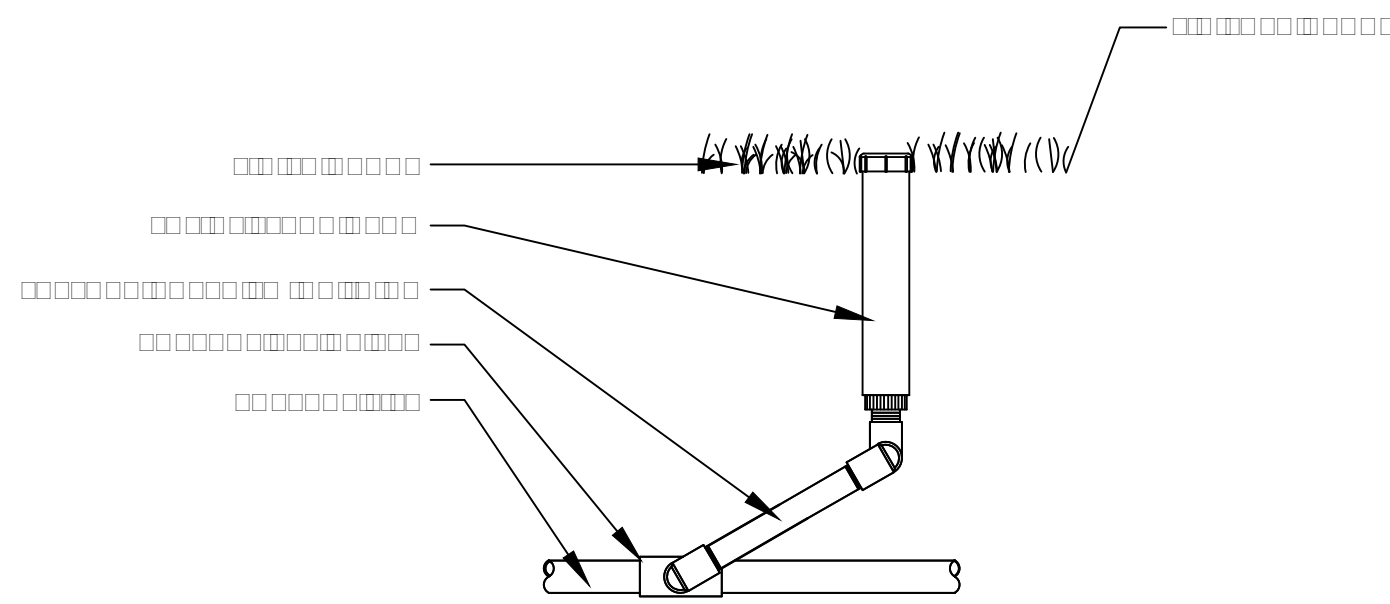
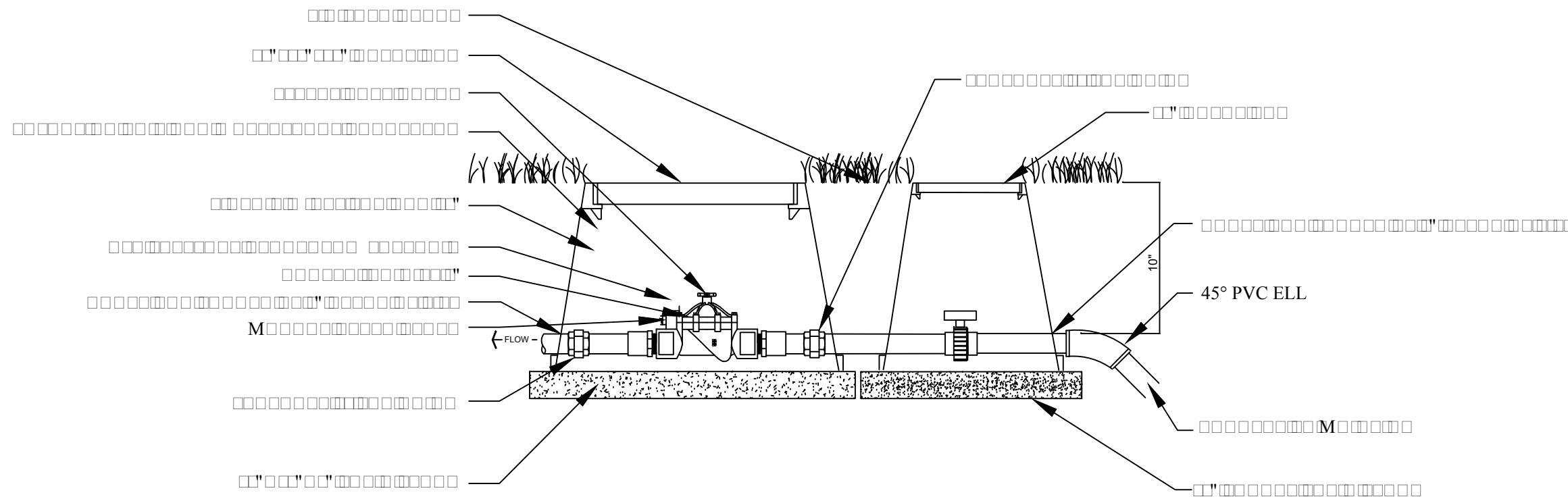
THRUST BLOCK REQUIREMENTS VS. FITTING TYPE				
	1 1/4" - 2 1/2"	3"	4"	6"
TEES/ELLS	1.00	1.00	1.40	3.2
90° BEND	1.00	1.25	2.00	4.5
45° BEND	1.00	1.00	1.00	2.4

THRUST BLOCK SHALL BEAR ON FULL 180° OF PIPE CIRCUMFERENCE.



NOTES

- ALL IRRIGATION WORK TO BE PERFORMED BY A TEXAS LICENSED IRRIGATOR.
- INSTALL ALL VALVES IN AN ARMOR VALVE BOX WITH COVER OR EQUAL. VALVE SHOULD BE CENTERED IN BOX TO FACILITATE ACCESS TO SOLENOID ASSEMBLY AND MANUAL OPERATORS.
- PIPE AS SHOWN IS DIAGRAMMATIC BUT SHOULD BE REASONABLY FOLLOWED. LOCATION OF SPRINKLER HEADS SHALL BE ESTABLISHED BY THE CONTRACTOR BUT DESIGN SPACING MAY NOT BE EXCEEDED WITHOUT AUTHORIZATION FROM THE OWNER.
- ALLOW A MINIMUM OF 6" CLEARANCE FROM ANY STRUCTURE, INCLUDING SIDEWALKS, CURBS, BUILDINGS, ETC. WHEN INSTALLING SPRINKLER HEADS
- ALL SLEEVES SHALL BE SCH. 40 PVC, SHALL EXTEND 12" BEYOND EDGE OF PAVEMENT OR STRUCTURE, SHALL BE PLACED 24" BELOW TOP OF PAVEMENT AND SHALL BE CAPPED WITH PVC CAPS. DO NOT PENETRATE STRUCTURES WITHOUT PRIOR APPROVAL. LOCATION OF SLEEVES TO BE MARKED IN PAVEMENT WITH AN "S" CONCRETE STAMP.
- AFTER INSTALLATION, SYSTEM MUST BE BALANCED BY ADJUSTING PRESSURE REGULATOR CONTROLS ON VALVES.
- SYSTEM SHALL REQUIRE A MINIMUM OF 50 LBS. STATIC PRESSURE FOR SYSTEM TO OPERATE PROPERLY. IRRIGATION CONTRACTOR SHALL NOTIFY THE OWNER OF PRESSURE DEFICIENCIES OR IF THE PRIMARY WATER SUPPLY LINES ARE SMALLER THAN 4" AND/OR LONGER THAN 120' FROM THE SOURCE. NOTIFY THE OWNER OF ANY OTHER SITE PROBLEMS THAT MAY ALTER THE EFFECTIVENESS OF THE SYSTEM.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SPECIFICATIONS FOR THE LANDSCAPE IRRIGATION SYSTEM.
- THE CONTRACTOR SHALL PREPARE "AS BUILT" DRAWINGS IN AN AUTOCAD FORMAT WHICH SHALL SHOW LOCATIONS OF MAIN LINES, VALVES, CONTROLLERS AND SLEEVES. THE AUTOCAD DRAWINGS SHALL BE DELIVERED ON DISC TO THE OWNERS REPRESENTATIVE FOR REVIEW AND APPROVAL.
- ALL SPLICES ARE TO BE CAPPED WITH TAN KING LOW VOLTAGE CONNECTORS. NO FIELD SPLICES WILL BE PERMITTED. WHERE SPLICES ARE NECESSARY ALL MUST BE IN VALVE BOXES.
- NO PIPE CROSSES ARE PERMITTED.
- HAND DIG TRENCHES WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL MAIN & LATERAL LINES SHALL BE SET AT A MINIMUM DEPTH OF 18" TO THE TOP OF THE PIPE. ALL LATERAL LINES SHALL BE SET AT A MINIMUM DEPTH OF 18" TO THE TOP OF THE PIPE. ALL ELECTRIC VALVES SHALL BE SET TO A DEPTH OF 18" TO THE TOP OF ADJACENT PIPE.
- ALL PIPING TO BE LAID WITH LETTERING UP.
- ALL 3/4" 1/2" LATERAL PIPING SHALL BE CLASS 200 SOLVENT WELD PVC.
- PROVIDE THRUST BLOCKS AS PER DETAILS. ALL THRUST BLOCKING SHALL BE INSPECTED AND APPROVED BY THE OWNER PRIOR TO BACKFILL.
- ALL VALVE WIRING SHALL BE 14 UF.
- PROVIDE PRESSURE GAUGE ON INLET AND OUTLET.
- PROVIDE QUICK COUPLERS AS INDICATED.
- DO NOT LOCATE VALVE BOXES IN MULTI-USE ATHLETIC FIELD AREAS. ALL PIPES GOING TO AND FROM RP AND PUMP SHALL BE SCH. 80 PVC PIPE. WRAP PIPE WITH 1/8" 2" INSULATION TAPE (42173W3 BY NJ CALGON WHOLESALE INC. ST. LOUIS, MO. 63146.
- ALL SPRINKLER HEADS SHALL BE SET LEVEL TO FINISH GRADES, PLACED VERTICAL IN THE GROUND, ADJUSTED TO COVER HEAD TO HEAD WITH MINIMAL SPRAY IN AREAS NOT IRRIGATED.
- TEN (10) DAYS PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE WATER STATIC PRESSURE. CONFIRM WITH OWNER THE WATER STATIC PRESSURE BEFORE COMMENCING WORK.
- THE CONTRACTOR SHALL PROVIDE TWO QUICK COUPLER KEYS TO MATCH QUICK COUPLER SPECIFIED.
- THE CONTRACTOR SHALL OBTAIN THE PROPER PERMIT FOR IRRIGATION WORK FROM THE CITY OF BROWNSVILLE AND TXDOT PRIOR TO COMMENCING WORK.



GENERAL NOTES

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE DESIGNER'S INTENT. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.
2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO VARIOUS DISCREPANCIES OR OMISSIONS WILL BE CORRECTED BY THE ENGINEER.
4. IN CASE OF CONFLICT, NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.
5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS, WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.
6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.
7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT EXCEEDS WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.
9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
10. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.
11. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT SUBSTITUTIONS MAY IMPLY.
12. THE ARCHITECT'S ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.
13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.
14. ANY AND ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.
15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT OR FORCED BY DUCTS, ETC. UNLESS NOTES OR CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN CRITERIA

DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:

1. CODE:	IBC 2012
2. LATERAL LOADS:	
A. WIND SPEED (V ₃):	139 MPH
B. EXPOSURE CATEGORY:	C
C. IMPORTANCE FACTOR:	1.0
D. BUILDING CATEGORY:	II
E. SEISMIC DESIGN CATEGORY:	D
F. SITE CLASS:	D
G. SEISMIC COEFFICIENTS:	
Ss	0.009 g
S1	0.14 g
Fa	2.5
Fv	3.5
Sms	0.140 g
Sml	0.050 g
Sds	0.093 g
Sd1	0.033 g
3. VERTICAL LOADS:	
A. COLLATERAL LOAD:	0 PSF
B. DEAD LOAD:	ACTUAL WEIGHT PSF
C. LIVE LOAD (REDUCIBLE):	20 PSF
D. WIND UPLIFT LOAD (NET):	AS CALCULATED BY SUB-CONTRACTOR PSF
E. GROUND SNOW LOAD:	0 PSF
F. CRANE LOADS:	NONE
G. MECHANICAL UNITS:	SEE PLANS
FLOOR:	
A. DEAD LOAD:	50 PSF
B. LIVE LOAD, OFFICE:	50 PSF
C. LIVE LOAD, LIGHT STORAGE:	125 PSF
D. LIVE LOAD, HEAVY STORAGE:	250 PSF
E. LIVE LOAD, ROOMS:	40 PSF
F. LIVE LOAD, CORRIDOR:	100 PSF
G. MECHANICAL UNITS:	SEE PLANS
4. SUBSURFACE INFORMATION:	
A. PREPARED BY:	ORIGINAL REPORT
B. SHALLOW FOUNDATION:	
MINIMUM FOOTING DEPTH:	24 INCHES
MINIMUM FOOTING WIDTH:	12 INCHES
ALLOWABLE BEARING PRESSURE (CONTINUOUS FOOTINGS):	2100 PSF
ALLOWABLE BEARING PRESSURE (ISOLATED FOOTINGS):	2400 PSF
WIRE REINFORCEMENT INSTITUTE (WRI) CRITERIA	
CLIMATE RATING (Cw)	15
EFFECTIVE PLASTICITY INDEX (UNDISTURBED, NATIVE SOIL)	25
EFFECTIVE PLASTICITY INDEX (SITE IMPROVED SOIL)	18
PVR (UNDISTURBED SOIL)	1.0 TO 1.5 INCH
PVR (WITH SITE IMPROVEMENT)	1.0 INCH

ABBREVIATIONS

TYP	TYPICAL
SIM	SIMILAR
T&S	TYPICAL AND SIMILAR
U.N.O.	UNLESS NOTED OTHERWISE
CLEAR	CLEAR
(V)	VERTICAL
CA	COLUMN ABOVE

SPECIAL NOTES TO OWNER

1. UNLESS FORM, CONDITIONS AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.
2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.
3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.1 INCH MAY NEED TO BE PRESSURE EPOXYED.
4. REFER TO THE NOTES UNDER "ALLOWANCES".
5. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERMIT.

SHOP DRAWINGS AND SUBMITTALS

1. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION.
2. SHOP DRAWINGS SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.
3. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO VARIOUS DISCREPANCIES OR OMISSIONS WILL BE CORRECTED BY THE ENGINEER.
5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS, WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.
6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.
7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT EXCEEDS WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.
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9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
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12. THE ARCHITECT'S ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.
13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.
14. ANY AND ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.
15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT OR FORCED BY DUCTS, ETC. UNLESS NOTES OR CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1, GRADE 40 - #3 AND SMALLER GRADE 60 - #4 AND LARGER.
2. DETAILS OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIRED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS OR 48" O.C. WHICH EVER IS LESS. IN MASONRY CONSTRUCTION, THE REINFORCING STEEL SHALL BE SECURED IN PLACE WITH BEARS SPACERS AND SHALL NOT BE SPACED APART MORE THAN 48 INCHES IN CENTER.
4. ALL STEEL SHALL BE PROVIDED IN ACCORDANCE WITH ASTM A108.
5. WALLS, PILASTER, COLUMNS SHALL BE DOVELEDED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTER, OR COLUMNS.
6. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE CODE OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
7. REINFORCING STEEL SHALL BE LAPPED 40 BAR DIAMETERS AT SPICES.
8. EXTEND THE SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OF THE SLAB REINFORCING BAR OF PERIMETER BEAMS.
9. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3".
10. THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL 40 BAR DIAMETERS.
11. ALL CONDUIT OR PLUMBING LINES SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT TO BE NO GREATER THAN 1" DIAMETER AND TO BE PLACED IN CENTER OF SLAB. NO PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB.
12. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
13. WELDING OF REINFORCING STEEL, IF PERMITTED BY THE STRUCTURAL ENGINEER, SHALL BE PERFORMED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE REINFORCING STEEL" ON THE AMERICAN WELDING SOCIETY. AWS D1.4:88 AS INCORPORATED IN CBC CHAPTER NO. 19, AND BY CERTIFIED WELDERS QUALIFIED USING PROCEDURES CONTAINED THEREIN. EXOTIC ELECTRODES SHALL BE USED IN WELDING GRADE 60 REINFORCEMENT. REINFORCEMENT SHALL NOT BE WELDED UNTIL A CHEMICAL ANALYSIS SUFFICIENT TO DETERMINE THE CARBON EQUIVALENT (C.E.) IS PERFORMED. THE C.E. OF REINFORCING STEEL SHALL BE LESS THAN 0.55. IF THE C.E. IS GREATER THAN 0.55, IT SHALL BE WELDED. THE C.E. SHALL NOT EXCEED AS CALCULATED PER IRC CHAPTER 19. A COPY OF THE MILL TEST OF REINFORCING STEEL IN CONCRETE MEMBERS. (SPECIAL FABRICATION AND INSTALLATION).
14. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
15. CONCRETE COVER FOR REINFORCING AS FOLLOWS:

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND; TO WEATHER OR SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:	3"	3/8"
FOR BARS 5/8" IN DIAMETER	2"	1/4"
FOR BARS 5/8" OR LESS IN DIAMETER	1 1/2"	1/4"
WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:	1 1/2"	1/4"
FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
FOR BEAMS, COLUMNS	1"	1/8"
FOR JOISTS AND SLABS	1"	1/8"

16. LAPS AT BAR SPICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

MASONRY - GRADE 60 LAP 80 DIA. (30" MIN.)
GRADE 40 LAP 48 DIA. (24" MIN.)

CONCRETE - LAP PER SCHEDULE BELOW

BAR SIZE	BAR SPICE LAP LENGTH IN CONCRETE	f _c =
#4	2000 PSI	3000 PSI
#5	2000 PSI	4000 PSI
#6	2000 PSI	5000 PSI
#7	2000 PSI	6000 PSI
#8	2000 PSI	7000 PSI
#9	2000 PSI	8000 PSI
#10	2000 PSI	9000 PSI
#11	2000 PSI	10000 PSI

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

ALLOWANCE

MATERIAL	ALLOWANCE
CONCRETE	10 CU. YD.
REINFORCING STEEL	5000 LBS.
STRUCTURAL STEEL	2000 LBS.
CRU	200 SQ. FT.
Match decking, match existing profile, 20 gauge	1000 SQ. FT.
CONCRETE SPALL REPAIR AT SLABS (x 4" DEEP)	200 SQ. FT.
CONCRETE SPALL REPAIR (x 6" DEEP)	800 SQ. FT.
CONCRETE SPALL REPAIR TIES/REBAR (x 3" DEEP)	100 FT.
CONCRETE SPALL REPAIR BEAMS (x 3" DEEP)	120 FT.

ON BID, CONTRACTOR TO PROVIDE AT LEAST THE FOLLOWING COST BREAKDOWN:

1. COST PER UNIT ITEM FOR SPALL REPAIRS OF CONCRETE COLUMNS.
2. COST PER UNIT ITEM FOR SPALL REPAIRS OF CONCRETE BEAMS.
3. COST PER UNIT ITEM FOR SPALL REPAIRS AT REINFORCING TIES.
4. COST PER UNIT ITEM FOR SPALL REPAIRS AT BOTTOM OF SLABS.
5. COST PER UNIT ITEM FOR SPALL REPAIRS AT TOP OF SLABS.
6. COST PER UNIT ITEM FOR LEDGE

STRUCTURAL STEEL

1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING ASTM DESIGNATIONS:
- | MATERIAL | DESIGNATION | STRENGTH |
|----------------------------------|-------------|-------------------|
| ANCHOR BOLTS | A308 | Fy=36 ksi |
| PLATES | A36 | Fy=36 ksi |
| ANGLES | A36 | Fy=36 ksi |
| CHANNELS | A36 | Fy=36 ksi |
| WIDE FLANGE SHAPES | A572 | Fy=50 ksi |
| STEEL PIPE | A53 | Fy=35 ksi |
| SQUARE & RECT. STEEL TUBES (HSS) | A500 | GRADE B Fy=46 ksi |
| ROUND TUBES (HSS) | A500 | GRADE B Fy=46 ksi |
3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
- SECTION 4.2.1. DELETE FIRST TWO SENTENCES.
- SECTION 7.9.1. ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
- SECTION 7.9.3. THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF WELDING.
- SECTION 7.9.4. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.5. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.6. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.7. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.8. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.9. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
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- SECTION 7.9.60. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.61. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.62. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
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- SECTION 7.9.69. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.70. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.71. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.72. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.73. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.74. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.75. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.76. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
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- SECTION 7.9.82. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.83. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.84. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
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- SECTION 7.9.92. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.93. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
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- SECTION 7.9.98. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.99. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
- SECTION 7.9.100. THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.

CAST-IN-PLACE CONCRETE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, AC 308-145, OR LATEST EDITION. DRILLED PIERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 308-145.
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING AND ERECTION OF REINFORCED CONCRETE. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:
- | LOCATION | STRENGTH AT 28 DAYS | MAXIMUM SIZE OF LARGE AGGREGATE | WATER/CEMENT RATIO |
|---------------|---------------------|---------------------------------|--------------------|
| FOUNDATIONS | 3000 PSI | 5" | 1 1/2" |
| SLAB ON GRADE | 3000 PSI | 5" | 1 1/2" |
| ROOF BEAMS | 3000 PSI | 5" | 1 1/2" |
| WALL | 3000 PSI | 6" | 3/4" |
4. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.
5. VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER.
6. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2" SEALANT 24" DEEP. LEAKAGE THROUGH SLAB FLOORS SHOULD BE PREVENTED WITH EITHER SOME degree OF FLEXIBILITY OR FLEXIBILITY IN ORDER TO DESIGN DAMAGE TO THESE LINES SHOULD NOT OCCUR.
7. BACKFILL AROUND PERIMETER TO PROVIDE POSITIVE DRAINAGE AWAY FROM SLAB.
8. FLOOR TOLERANCES
- | FLOOR NUMBER | COMPOSITE | MINIMUM LOCAL VALUE |
|--------------|-----------|---------------------|
| 1 | 30 | 25 |
| 2 | 25 | 19 |
9. IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS.
10. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
11. REFER TO ARCHITECT FOR MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS, GROOVES, REGELS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS. ALL CONDUITS AND OVERSIZED SLEEVES SHALL BE NOTED AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGN BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LAPPING.
12. ALL WELD CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
13. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION W/ WASHERS ASTM F436, U.N.O. ON DESIGN DRAWINGS. SPECIAL INSPECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563.
14. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.
15. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED, INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER, EIFS OR STUCCO. SEE ARCHITECTURAL PLANS & STRICTER REQUIREMENTS ARE REQUIRED.
16. ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC. SECTION 10 OF THE CODE ADDRESSES ARCHITECTURALLY EXPRESSED STRUCTURAL STEEL (AESS).
17. CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNECTION MANUAL BY AISC. WHERE STEEL MEMBER PASS THROUGH CMU WALLS, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER, PROVIDE ELASTOMERIC MATERIAL BETWEEN THE STEEL MEMBER AND CMU WALL.
18. ALL BEAMS NOT SHOWN SHALL BE W14x26. ALL COLUMNS NOT SHOWN SHALL BE HS44x14.
19. STEEL SHOP SHALL BE ALSO CERTIFIED.
20. HOLES FOR BOLT IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED, UNLESS NOTED OTHERWISE. HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT.
21. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS.
22. HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
- A. HE SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
- B. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
- C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL, CALIBRATIONS INTERSECTIONS BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL BARS SHALL LAP BEAM REINFORCEMENT 40 BAR DIAMETERS.
- D. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THAT THE PILES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
- E. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION IN THE BOLT.
- F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
23. WELDING IN THE FIELD SHALL BE CONTINUOUSLY INSPECTED, BY A SPECIAL INSPECTOR FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
- A. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
- B. HE SHALL VERIFY THE WELDERS QUALIFICATIONS.
- C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
- D. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
24. ALL NON SHRINK GROUT FOR LEVELING OF BASE PLATES SHALL HAVE A MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD-C 621.
25. AT ALL TUBES, PROVIDE 3/8" THICK END PLATE, U.N.O.

EVAPORATION RETARDER:

1. WATER-REDUCING, NON-CORROSIVE, NON-FLAMMABLE, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
2. ACCEPTABLE PRODUCTS:
- A. "SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT: PHIL BRANDT (877) 438-3828
3. CURING MATERIALS:
4. EXTERIOR CURING: ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE FORMING CURING COMPOUND. THE LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-1151 WITH A MAXIMUM V.O.C. CONTENT OF 700 GL.
5. ACCEPTABLE PRODUCTS:
- A. "SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3828
6. INTERIOR CURING: ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A REDUCED ODOR, DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND THAT IS FORMULATED FROM HYDROCARBON RESINS. THE DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-1151 WITH A MAXIMUM V.O.C. CONTENTS IN ACCORDANCE TO EPA 40 CFR, PART 59, TABLE I, SUBPART D FOR CONCRETE CURING COM

SPECIAL INSPECTION, MATERIALS TESTING.

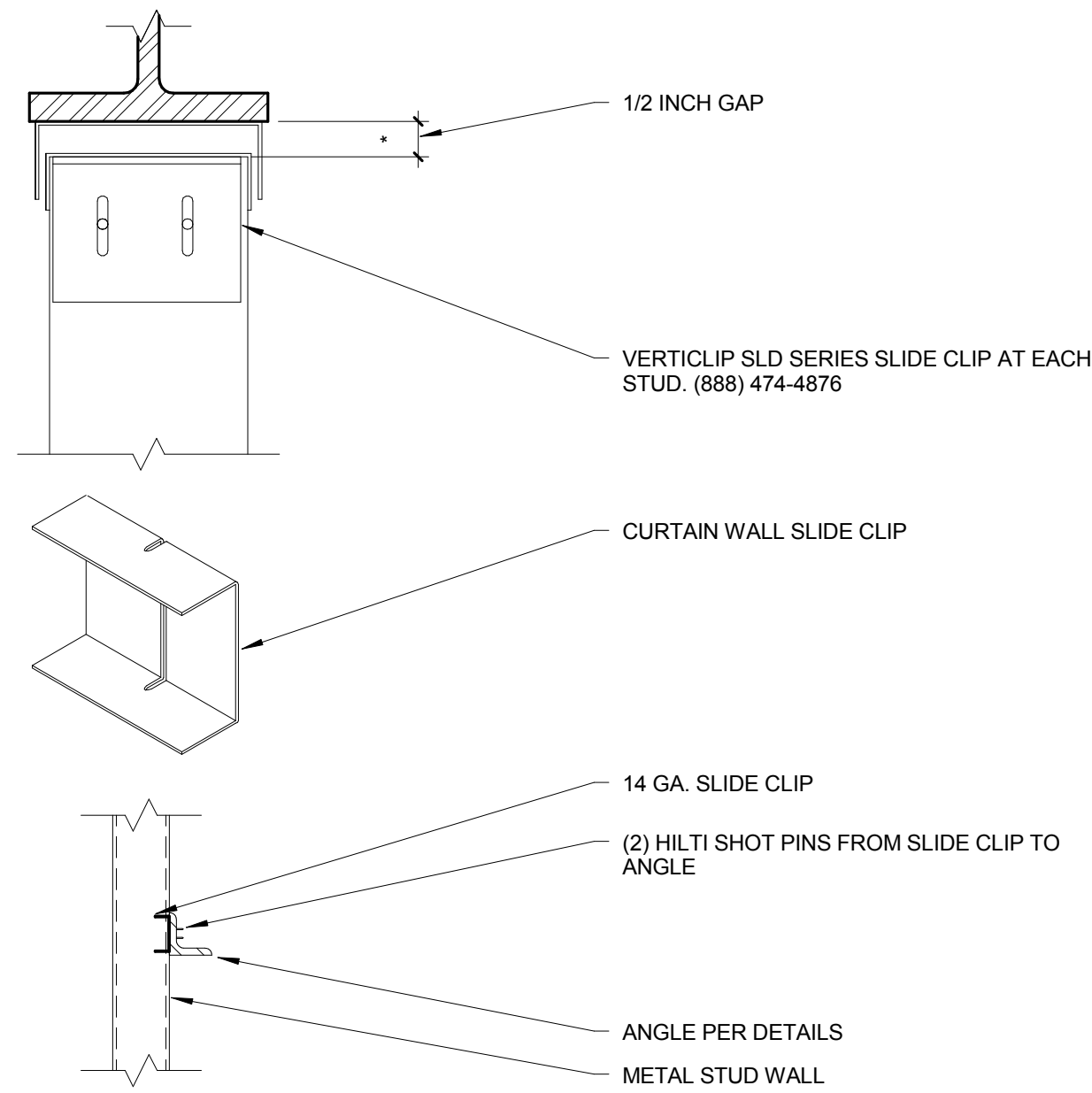
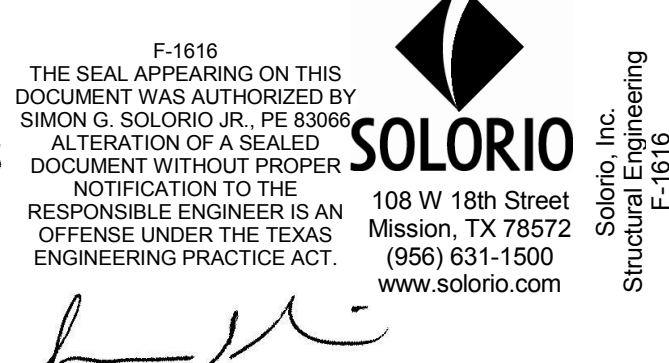
1. RESPONSIBILITIES OF THE OWNER
- A. EMPLOY AND PAY THE SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- B. EMPLOY AND PAY THE MATERIALS TESTING LABORATORY TO PERFORM TESTS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
1. RE-TESTING - THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR RE-TESTING WHERE RESULTS OF INSPECTIONS AND TESTS PROVE UNSATISFACTORY AND INDICATE NONCOMPLIANCE WITH REQUIREMENTS.
- C. EMPLOY THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN OR ANOTHER ENGINEER OR ARCHITECT DESIGNATED BY THE (DPR) TO PERFORM STRUCTURAL OBSERVATION (REF 1702).
2. DEFINITIONS
- A. APPROVED FABRICATOR, A FABRICATOR REGISTERED AND OFFERED BY THE BUILDING OFFICIALS AND ENGINEER OF RECORD, TO PERFORM WORK, OFF SITE, REQUIRING INSPECTION WITHOUT SPECIAL INSPECTION. THE DESCRIPTION IN SECTION 1701.1 OF THE 2012 MINIMUM BUILDING CODE IS APPLICABLE.
- B. SPECIAL INSPECTION AGENCY, THE ACCREDITED INSPECTION BODIES DESIGNATED HEREIN AND APPROVED BY THE ENGINEER OF RECORD TO PERFORM SPECIAL INSPECTION AS REQUIRED BY THE BUILDING CODE AND THE PROJECT SPECIFICATIONS AND AS DESCRIBED IN SECTION 1701.2 International BUILDING CODE.
- C. SPECIAL INSPECTOR, A QUALIFIED PERSON, EMPLOYED BY THE SPECIFIED SPECIAL INSPECTION AGENCY, WHO HAS DEMONSTRATED COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. DUTIES INCLUDE VISUAL OBSERVATIONS AND FIELD MEASUREMENTS OF MATERIALS, OBTAINING SPECIMENS FOR TESTS AND RELATED ACTIONS INCLUDING PREPARATION OF REPORTS.
- D. TESTING LABORATORY, AN ACCREDITED MATERIALS TESTING LABORATORY, APPROVED BY THE ENGINEER OF RECORD, TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS.
- E. CONTINUOUS INSPECTION, ON SITE INSPECTION BY THE SPECIAL INSPECTOR ON A CONTINUOUS BASIS OBSERVING ALL WORK REQUIRING SPECIAL INSPECTION.
- F. PERIODIC INSPECTION, INTERMITTENT INSPECTION AS PERMITTED BY THE PLAN SPECIFICATIONS AT PREDETERMINED INTERVALS OR MORE FREQUENTLY AS WORK PROGRESSES. NO SIGNIFICANT ELEMENTS OR AREAS SHALL BE COVERED BY ADDITIONAL WORK UNTIL APPROVED BY THE MUNICIPAL BUILDING INSPECTOR AND/OR THE SPECIAL INSPECTOR.
- G. STRUCTURAL OBSERVATION, THE VISUAL OBSERVATION, BY THE ENGINEER OF RECORD OR HIS DESIGNER, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY CODES AND SPECIFICATIONS.
- H. EOR, ENGINEER OF RECORD
- I. DPR, ENGINEER OF RECORD/DESIGN PROFESSIONAL OF RECORD
- J. SPECIAL INSPECTION AND MATERIALS TESTING
- THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE DESCRIBED IN IBC 1701.1 AND 1701.2.
1. DURING CONSTRUCTION, DOCUMENTED METHODS AND PROCEDURES SHALL BE USED FOR INSPECTION AND TESTING REQUIRED TO CONTRACTUAL DOCUMENTS, AND FOR ESTABLISHING ACCEPTANCE CRITERIA. ALL INSTRUCTIONS, STANDARDS, PROCEDURES, CHECKLISTS RELEVANT TO THE WORK WILL BE KEPT UP TO DATE AND READILY AVAILABLE FOR USE. NO INSPECTION OR TEST WILL BE PERFORMED IF THE SAFETY OF THE TESTING PERSONNEL IS IN QUESTION DUE TO JOB SITE CONDITIONS. PRIOR TO PROJECT COMMENCEMENT, THE TESTING AGENCY WILL CONFER WITH AND OBTAIN THE APPROVAL FROM THE MUNICIPAL BUILDING INSPECTOR AND/OR THE SPECIAL INSPECTOR.
2. TESTING PROCEDURES OR SPECIFICATIONS INCLUDING ANY APPROPRIATE ASTM METHODS, CODE REQUIREMENTS OR PROJECT SPECIFICATION REQUIREMENTS, AT THE START OF EACH DURING EACH INSPECTION, THE SPECIAL INSPECTOR SHALL VERIFY THE CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS, AS REQUIRED, AND PROCEDURES WITH APPLICABLE CODES, PLANS, AND SPECIFICATIONS.
1. ALL INSPECTIONS SHALL BE PERFORMED BY AN ACCREDITED, APPROVED SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER OR OWNER'S AGENT, NOT THE CONTRACTOR OR SUBCONTRACTOR.
2. ACCREDITED TO ASTM A-639-02, STANDARD SPECIFICATIONS FOR AGENCIES ENGAGED IN THE TESTING AND/OR INSPECTION OF CONSTRUCTION MATERIALS, THE SPECIAL INSPECTOR SHALL BE FURNISHED TO THE ENGINEER OF RECORD (EOR) IN ADDITION TO OTHER NORMAL DISTRIBUTIONS.
3. THE SPECIAL INSPECTOR SHALL IMMEDIATELY NOTIFY THE EOR, TESTING FREQUENCY SHALL BE PER APPLICABLE STRUCTURAL, MASONRY, REINFORCED CONCRETE AND STRUCTURAL STEEL BUILDING CODES AND STANDARDS AND ARE PART OF THIS SPECIFICATION.
- A. CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DIVISION BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND/OR INSPECTION FIRM WITH A CONSTRUCTION SCHEDULE TO FACILITATE THE PROPER COORDINATION.
4. THE SPECIAL INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE ENGINEER AT A MINIMUM PER WEEK FREQUENCY. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT, SIGNED BY BOTH HE AND HIS SUPERVISOR, STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE WORKSMANSHIP PROVISIONS OF THE CBC.
5. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
6. SPECIAL INSPECTION REPORTS SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION:
- A. PERMIT NUMBERS
- B. NAME OF THE MUNICIPAL INSPECTOR, IF AVAILABLE, AND OF THE GOVERNING MUNICIPALITY
- C. SPECIAL INSPECTION AGENCY NAME, ADDRESS, AND PHONE NUMBER
- D. UNIQUE IDENTIFICATION OF THE REPORT AND OF EACH PAGE
- E. CLIENT NAME AND ADDRESS
- F. NAME AND ADDRESS OF THE DESIGN PROFESSIONAL OF RECORD, AND OTHER DESIGNERS OR ENGINEERS APPLICABLE TO THE PROJECT
- G. DESCRIPTION OF THE TYPE OF INSPECTION PERFORMED
- H. ANY UNRESOLVED DISCREPANCIES, EXCLUSIONS, ADDITIONS TO OR FROM THE APPROVED DRAWINGS AND SPECIFICATIONS RELEVANT TO THE SPECIFIC INSPECTION OR TEST
- I. COMPLIANCE FINDINGS AND REFERENCE
- J. DESCRIPTION OF LOCATION WHERE THE INSPECTION WAS PERFORMED WITHIN THE PROJECT
- K. TIME AND DATE OF THE INSPECTION
- L. MEASUREMENTS, EXAMINATIONS, AND DERIVED RESULTS SUPPORTED BY TABLES, SKETCHES, OR DRAWINGS
- M. THE NAME, SIGNATURE, TITLE, AND IDENTIFICATION NUMBER, AS APPROPRIATE, OF THE FIELD INSPECTOR PERFORMING THE INSPECTION
- N. THE NAME AND ADDRESS OF THE SUBCONTRACTORS EMPLOYED TO CARRY OUT TESTS OR PARTS OF TESTS
7. TESTS REPORTS
- A. LABORATORY TESTS AND MILL CERTIFICATIONS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER OF RECORD. THESE REPORTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
1. CONCRETE COLUMNS
2. REINFORCING STEEL
3. STRUCTURAL STEEL
4. CONCRETE MIXES
5. CONCRETE ANCHORS
6. SPECIAL INSPECTION BY A SPECIAL OR DEPUTY INSPECTOR FROM AN ACCREDITED, EOR APPROVED INSPECTION AGENCY AND WITH THE APPROPRIATE CURRENT MUNICIPAL LICENSES AND CERTIFICATIONS SHALL BE REQUIRED FOR THE TYPE OF WORK LISTED BELOW.

PIERS

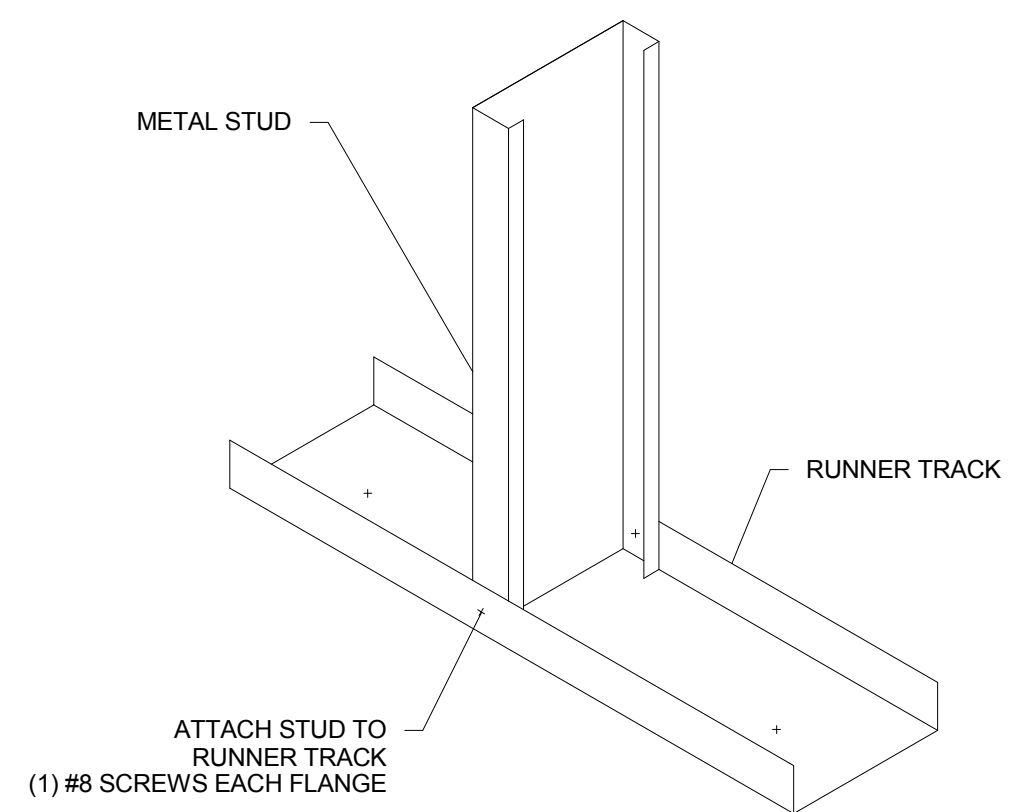
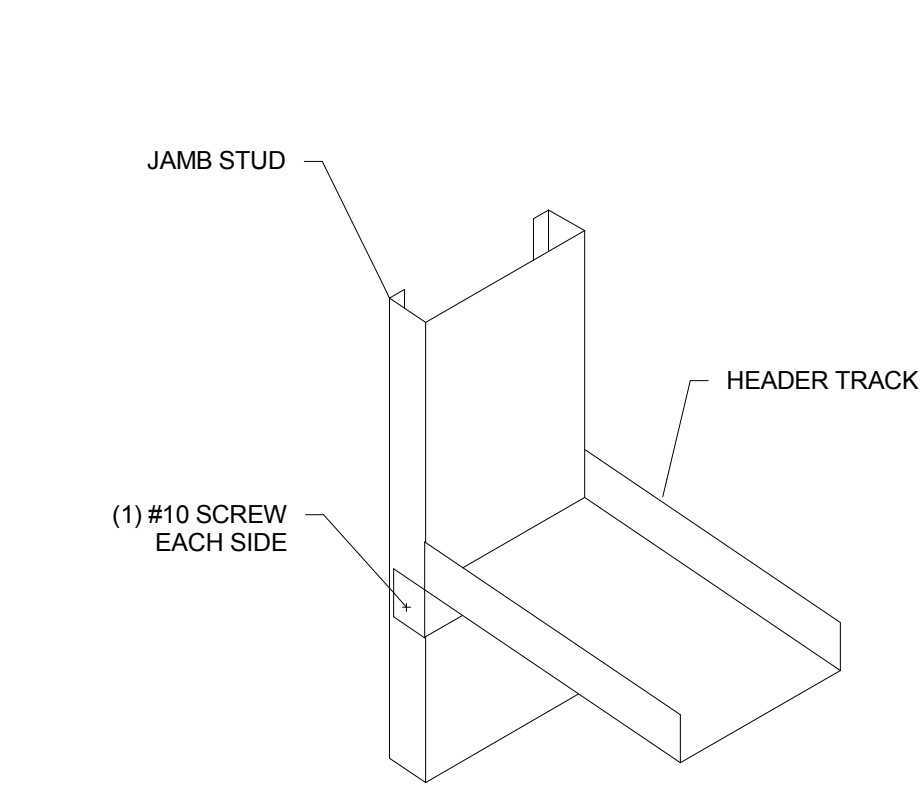
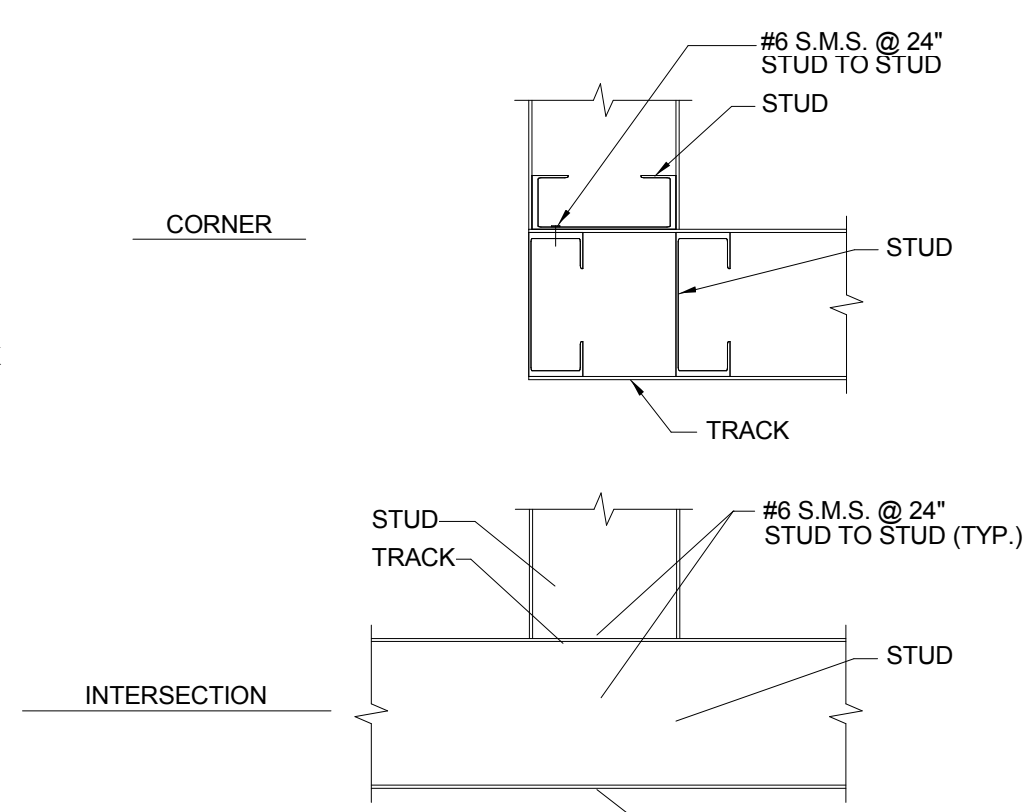
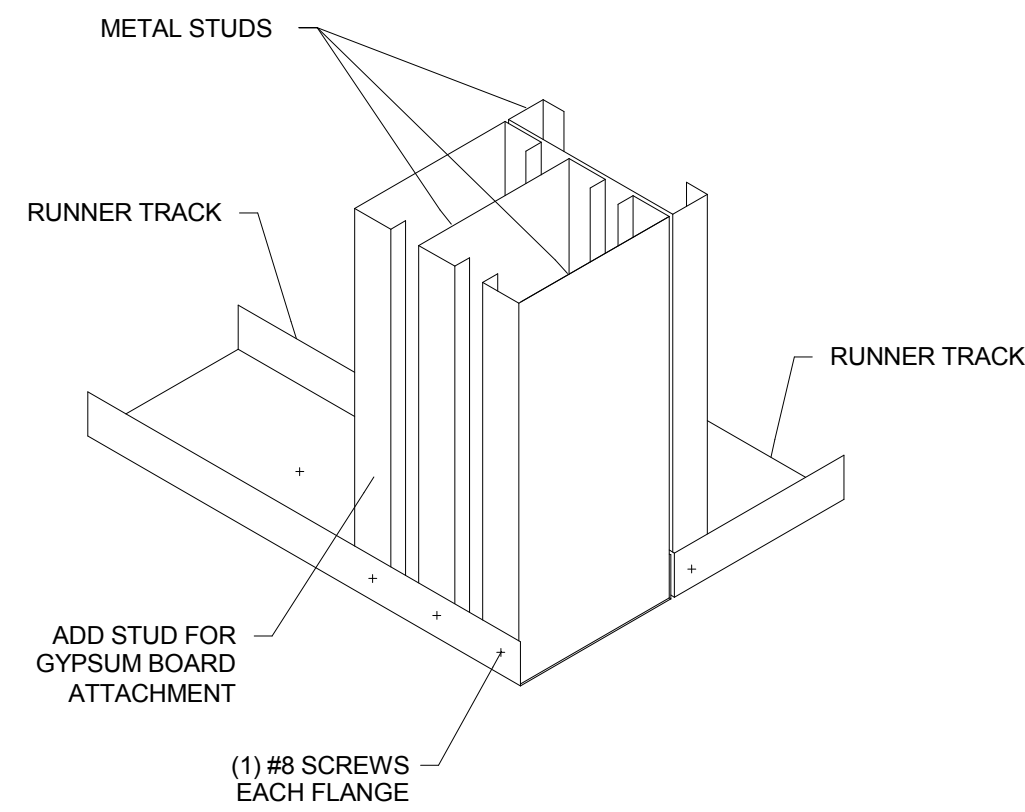
1. CONCRETE PIERS SHALL BE PER SCHEDULE OR DETAIL. THE ACTUAL ELEVATION SHALL BE DETERMINED IN THE FIELD BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF TEXAS WITH EXPERIENCE IN THIS AREA.
2. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL AND SHALL CONFORM TO ASTM A-615, GRADE 60.
3. ALL REINFORCING STEEL SHALL BE CONTINUOUS WITH SPLICES LAPPED 75 BAR DIAMETERS.
4. CENTER FOOTING UNDER COLUMN OR WALL UNLESS DIMENSIONED OTHERWISE.
5. PER SHAFT SHALL BE DRILLED PILING LONG ITS TOTAL LENGTH (1" PER 10'-0" MAXIMUM TOLERANCE)
6. BOTTOM OF PIER TO BE CLEAN AND FREE OF ALL LOOSE MATERIALS AND WATER.
7. CENTER STEEL GAGE IN SHAFT WITH A MINIMUM 1' LEVEL OF CONCRETE BLOCK SPACERS (8" P.I. MAXIMUM SPACING), AT BOTTOM WITH A MINIMUM OF 3" CONCRETE SEAT BLOCKS.
8. DO NOT RAISE GAGE OFF OF PIER BOTTOM DURING CONCRETE PLACEMENT.
9. CONCRETE AND REINFORCING IN SHAFTS SHALL BE PLACED THE SAME DAY AS
10. PIERS SHALL BE FOUND IN UNDISTURBED NATURAL SOIL.
11. CONTRACTOR SHALL COORDINATE WITH GEOTECHNICAL ENGINEER FOR VERIFICATION OF PIERS DEARING WHICH CAN BE OBTAINED FROM THE GEOTECHNICAL ENGINEER.
12. WIDEN AND DEEPEN GRADE BEAMS ALL AROUND PIER LOCATIONS TO ASSURE CONCRETE COVERAGE.
13. PROVIDE INSPECTING ENGINEER WITH AN ELECTRIC LIGHT AND PLUMB-BOB TO OBSERVE ALL DRILLED PIERS.
14. ALL DRILLED PIERS SHALL BE FREE OF WATER PRIOR TO PLACING OF CONCRETE. PIER HOLES SHALL NOT BE LEFT OPEN OVERNIGHT (NO EXCEPTS).
15. CONTRACTOR SHALL INCLUDE IN BID DOCUMENTS UNIT COSTS FOR GREATER AND DEEPER DRILLING.
16. REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR CONCRETE PLACEMENT FOR THE PIER.
17. SEE GEOTECHNICAL INVESTIGATION REPORT FOR ADDITIONAL INFORMATION.

CONTINUOUS INSPECTION REQUIRED FOR THE FOLLOWING:

- A. REINFORCED CONCRETE
1. DURING THE PLACEMENT OF REINFORCED CONCRETE WHERE THE STRUCTURAL DESIGN IS BASED ON FC GREATER THAN 3,000 PSI AND THE TAKING TEST SPECIMENS. THE NUMBER OF AND THE FREQUENCY OF TAKING TEST SPECIMENS SHALL BE THE MINIMUM REQUIRED BY THE GOVERNING MUNICIPAL BUILDING CODE OR AS SPECIFIED BY THE APPROVED STRUCTURAL PLANS, WHICHEVER IS THE GREATER NUMBER.
2. DURING THE PLACEMENT OF REINFORCING STEEL AND PRE STRESS TENDONS UNLESS THE SPECIAL INSPECTOR HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.
3. DURING THE PLACEMENT OF REINFORCING STEEL AND CONCRETE FOR CAST-IN-PLACE DRILLED PILES OR CAISSONS, EVEN IF FC IS LESS THAN 3,000 PSI.
4. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS WHEN STRESS INCREASES PERMITTED BY FOOTNOTE 5 OF TABLE 19E, SECTION 1925 OF THE UNIFORM BUILDING CODE FOR THE USE OF FULL VALUES FOR EMBEDDED BOLTS.
6. PRIOR TO AND DURING THE INSTALLATION OF ANCHORS REQUIRING TO BE DRILLED INTO CONCRETE.
7. DURING THE STRESSING AND GROUTING OF TENDONS IN PRE STRESSED.
8. CONTINUOUS INSPECTION FOR THE PLACEMENT OF THE REINFORCEMENT AND CONCRETE AT CONCRETE MOMENT FRAMES WITHIN SEISMIC ZONES 3 & 4.
9. SHORT CURE PLACEMENT AND DURING THE TAKING OF TEST SPECIMENS.
- PERIODIC INSPECTION FOR REINFORCED CONCRETE SHALL BE PERFORMED WHEN THE FOLLOWING INFORMATION IS AS A MINIMUM:
1. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
2. REINFORCEMENT VERIFICATION PRIOR TO THE PLACEMENT OF CONCRETE.
3. DURING THE PLACEMENT OF CONCRETE.
4. DURING THE MOLDING, CONSTRUCTION OF TAKING OF COMPRESSION SAMPLES.
5. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STRUTS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT, INCLUDING BUT NOT LIMITED TO THE ELATION AND CONNECTIONS OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY CODES AND SPECIFICATIONS.
- B. STRUCTURAL WELDING - GENERAL - INSPECTORS DUTIES
1. THE SPECIAL INSPECTOR SHALL CHECK EACH WELDER'S CERTIFICATION AND VERIFY THAT THE WELDER DOES WORK ONLY AS QUALIFIED BY HIS CERTIFICATION.
2. THE SPECIAL INSPECTOR SHALL KEEP A WRITTEN RECORD OF EACH WELDER BY NAME, IDENTIFICATION NUMBER AND HIS IDENTIFYING STEEL MARK, IF APPLICABLE, AND THE PERCENTAGE OF REJECTABLE WELDS.
3. INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DIVISION BY THE CONTRACTOR.
4. THE SPECIAL INSPECTOR SHALL CHECK EACH WELDER'S IDENTIFIABLE WELD (EITHER VISUALLY OR BY NONDESTRUCTIVE TEST), THE INSPECTOR OF RECORD WILL NOTIFY THE WELDER AND HIS FOREMAN FOR VERIFICATION OF THE WELDER'S IDENTIFICATION NUMBER AND HIS IDENTIFYING STEEL MARK, OR REPAIRS.
5. THE SPECIAL INSPECTOR SHALL CHECK STRUCTURAL MEMBERS FOR THICKNESS ADJACENT TO WELDS, OPENING, ETC. REWORK, OR REPAIRS.
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2. THE SPECIAL INSPECTOR SHALL CHECK STRUCTURAL MEMBERS FOR THICKNESS ADJACENT TO WELDS, OPENING, ETC. REWORK, OR REPAIRS.
3. THE SPECIAL INSPECTOR SHALL INSPECT JOINTS FOR PROPER PREPARATION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
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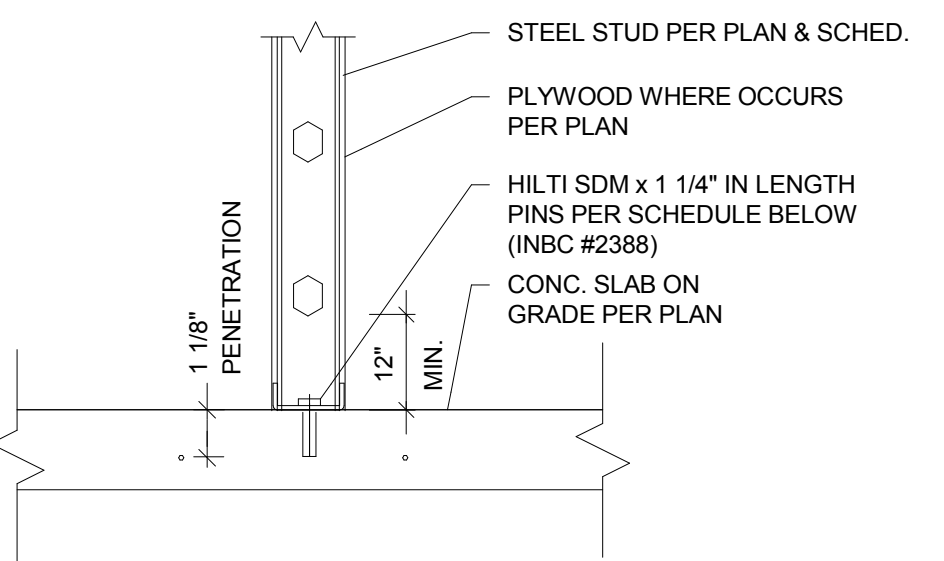
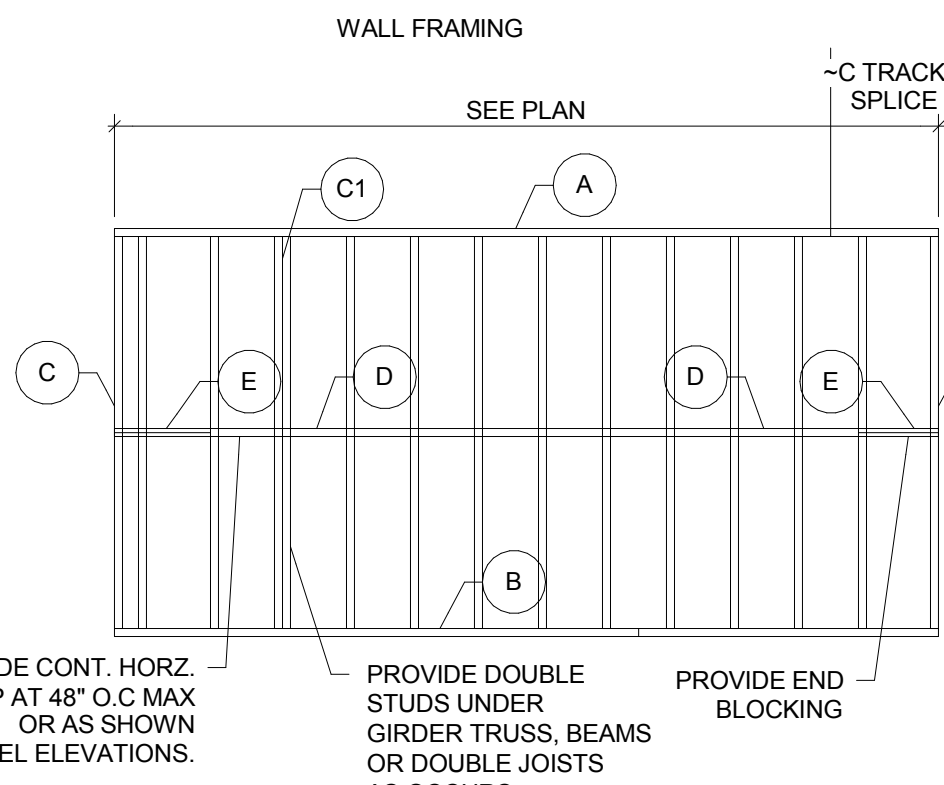
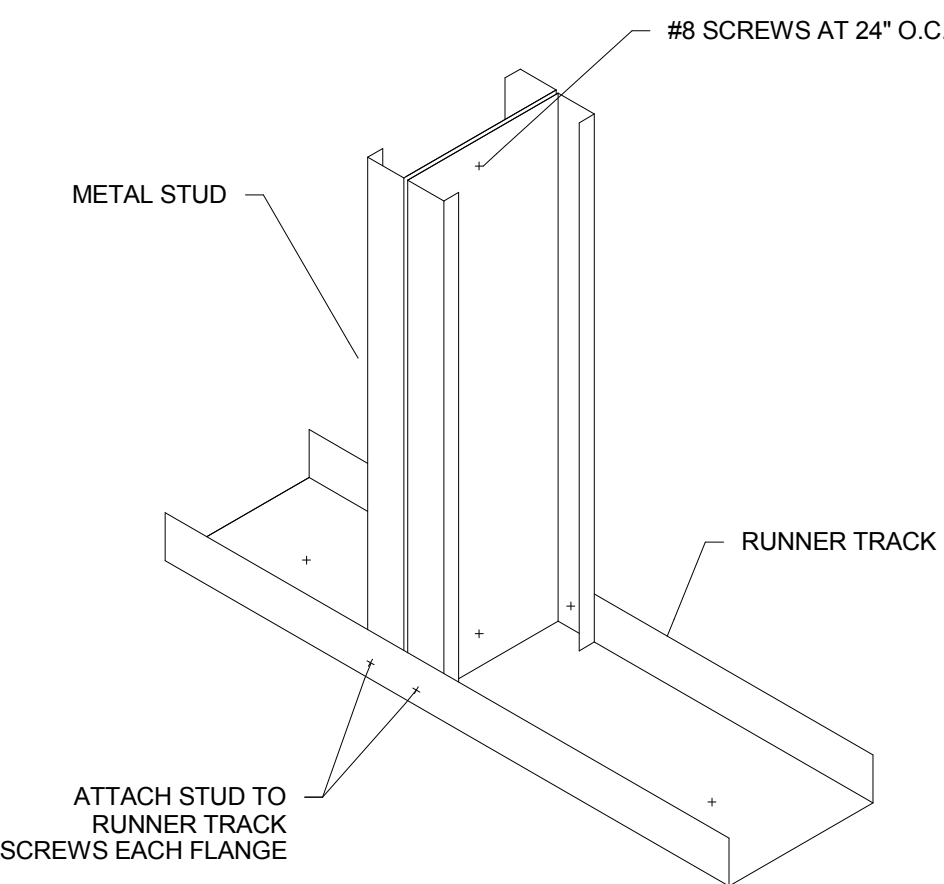
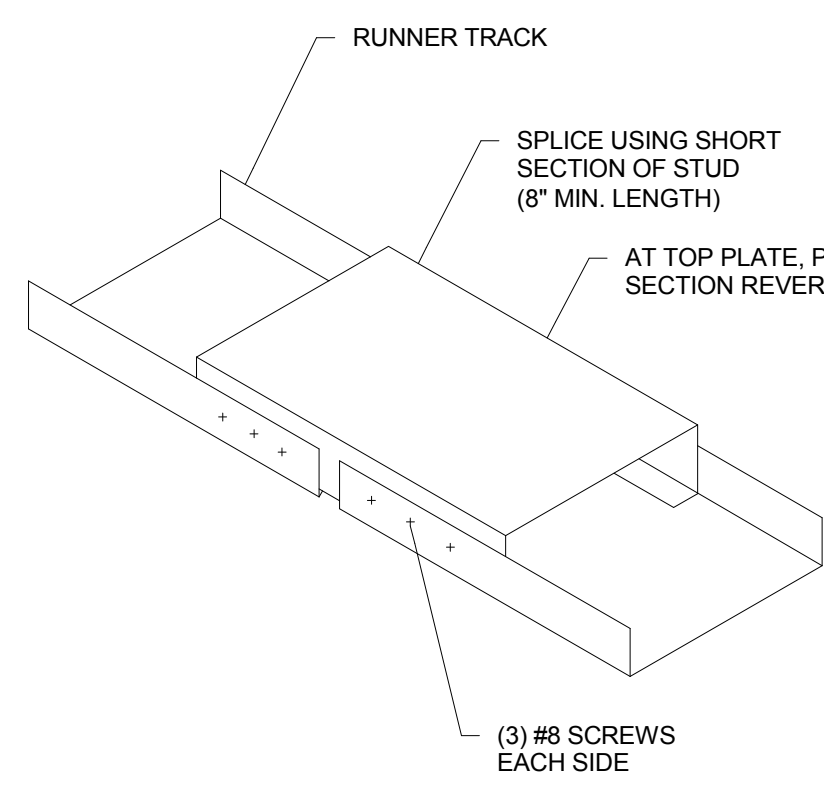
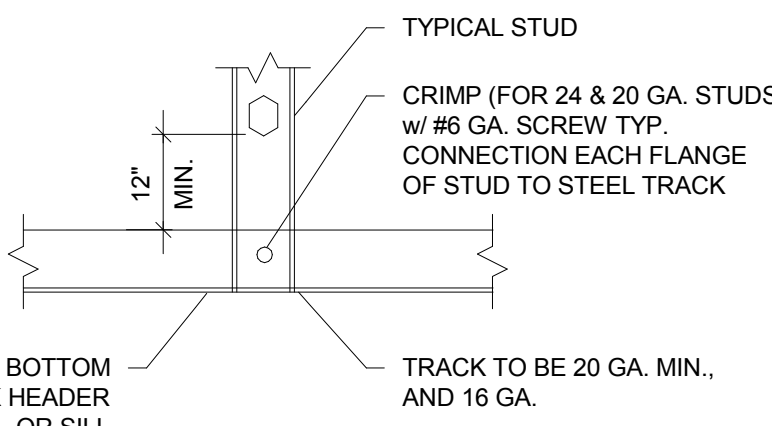
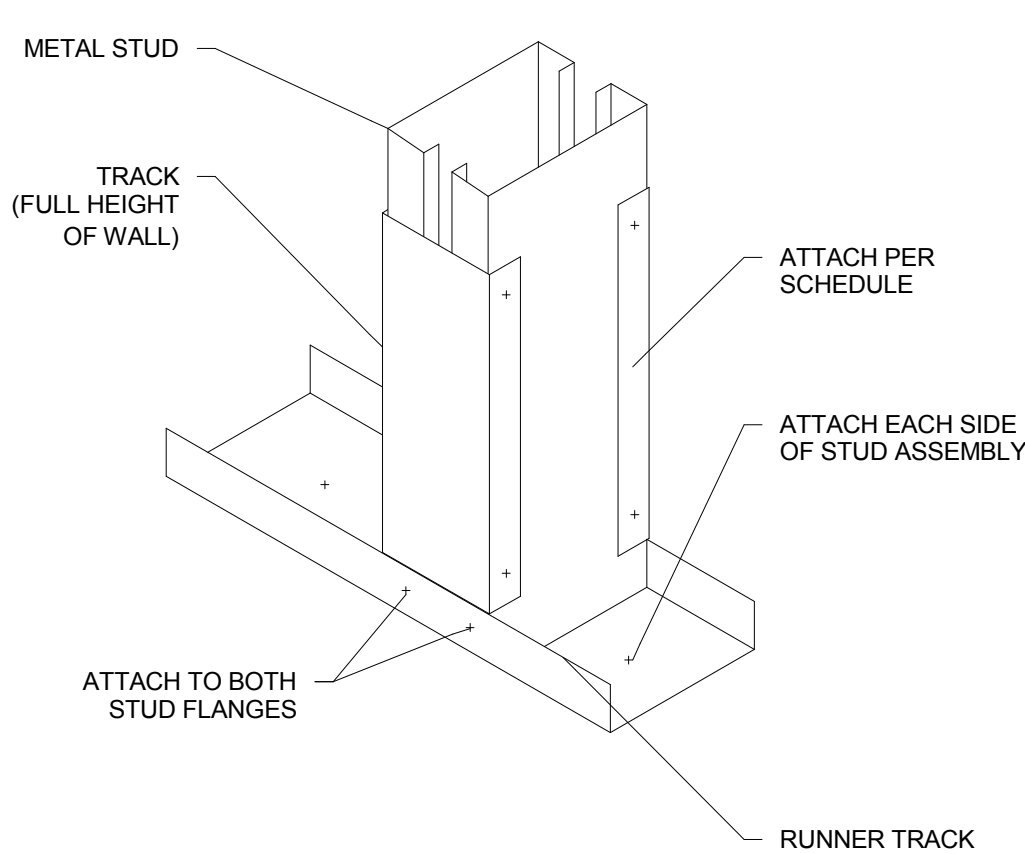
Metal Stud Slide Clip	2
1" = 1'-0"	8103



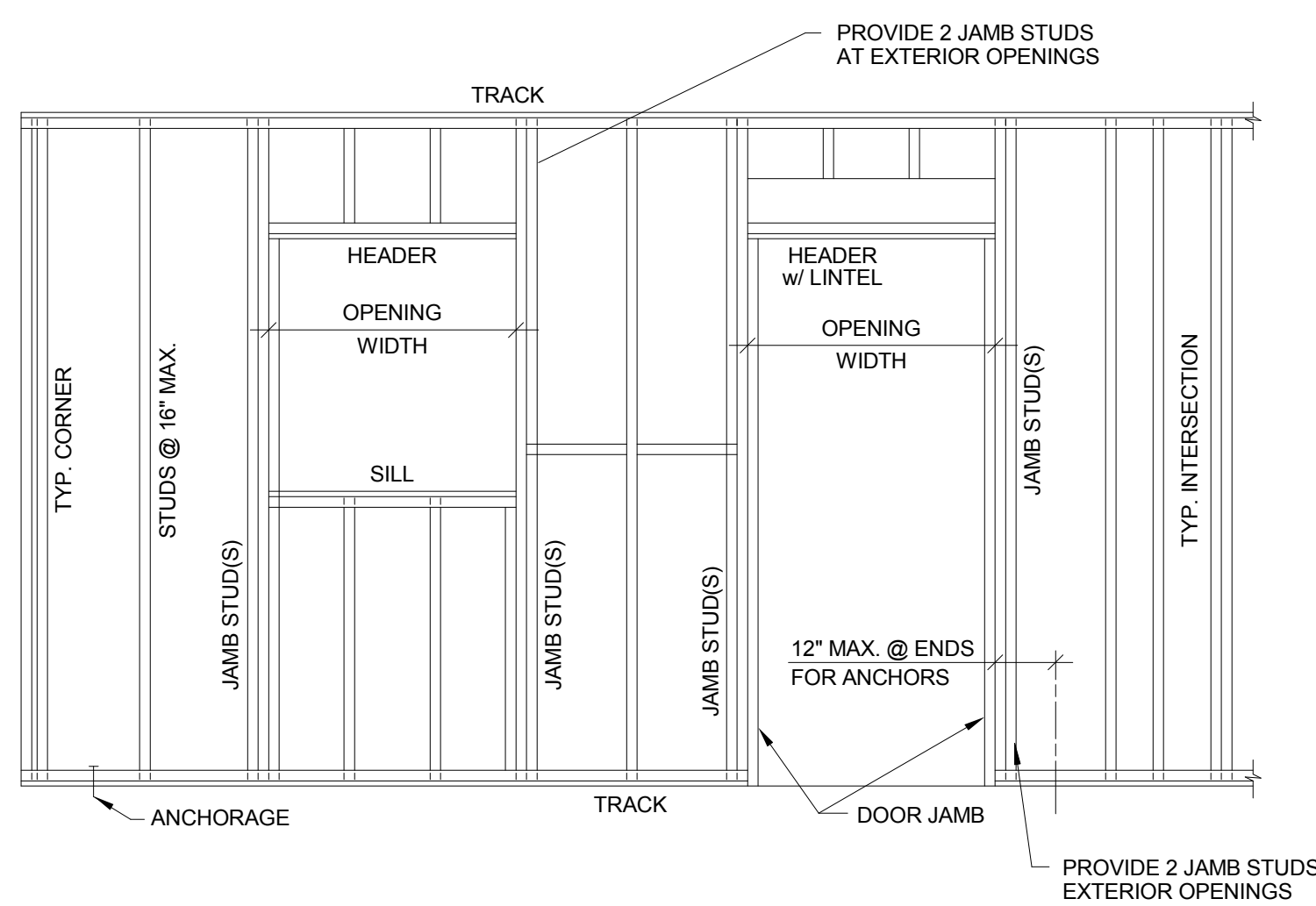
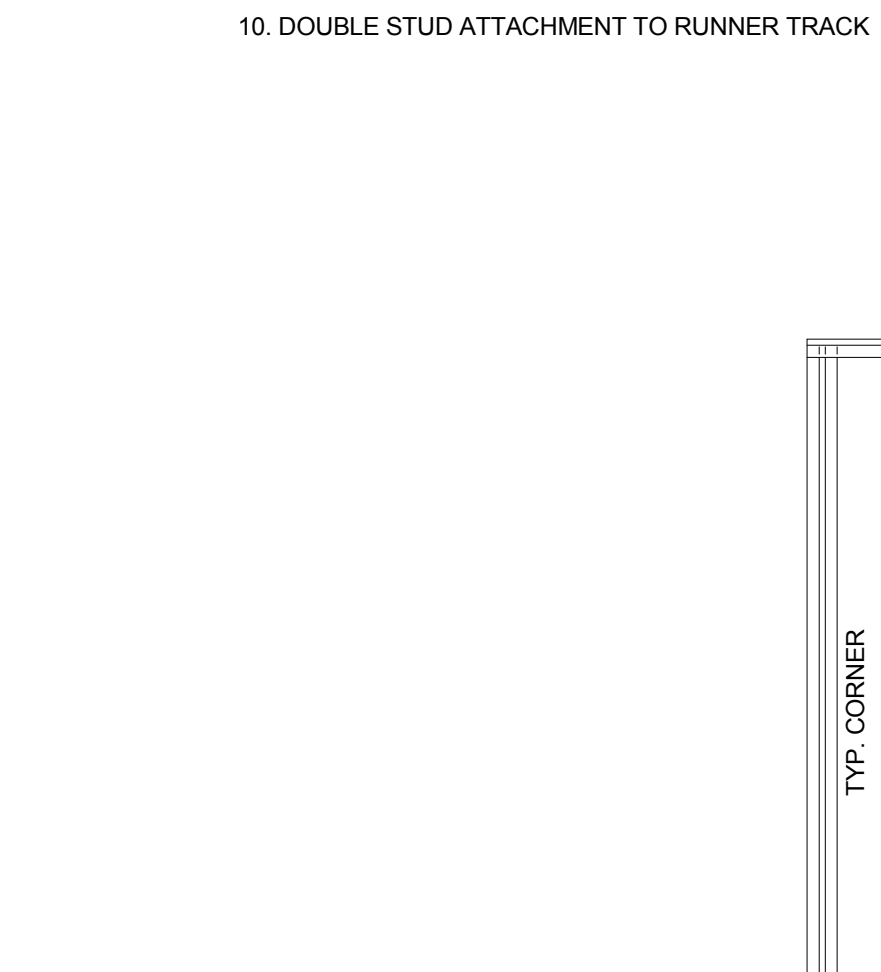
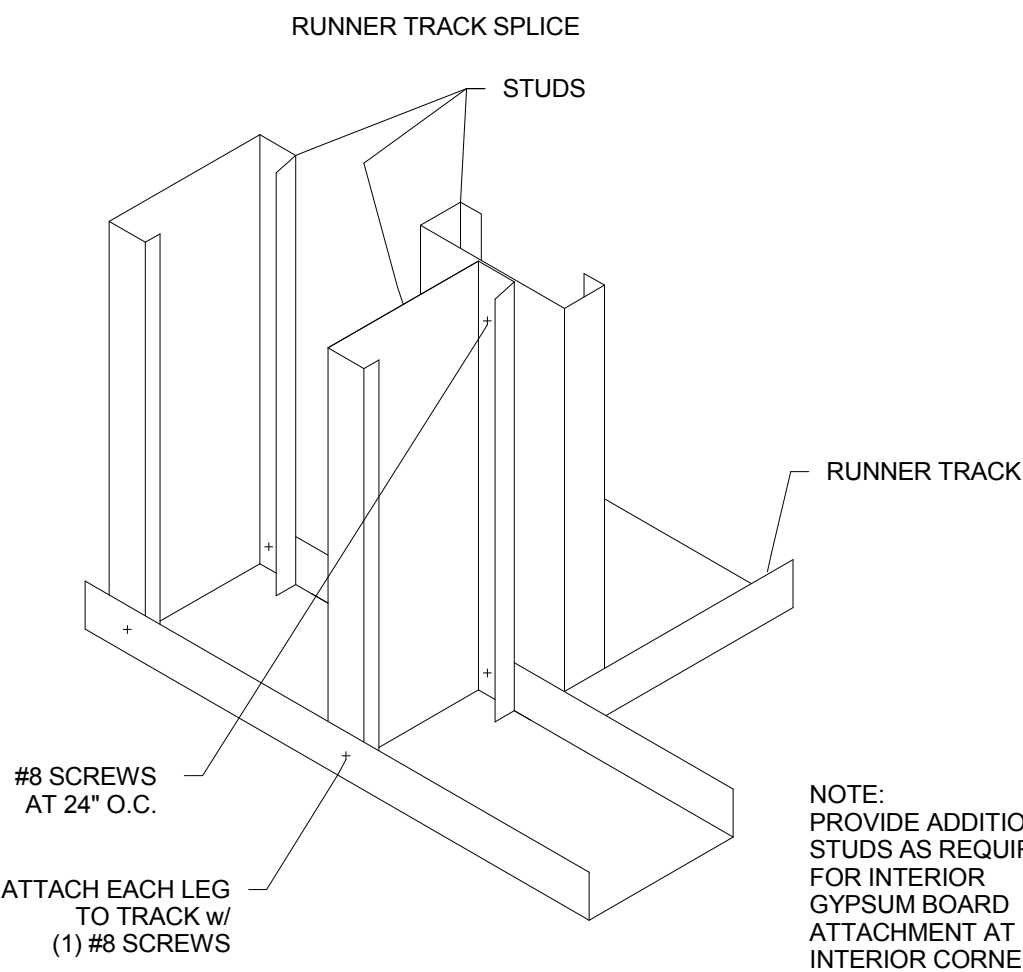
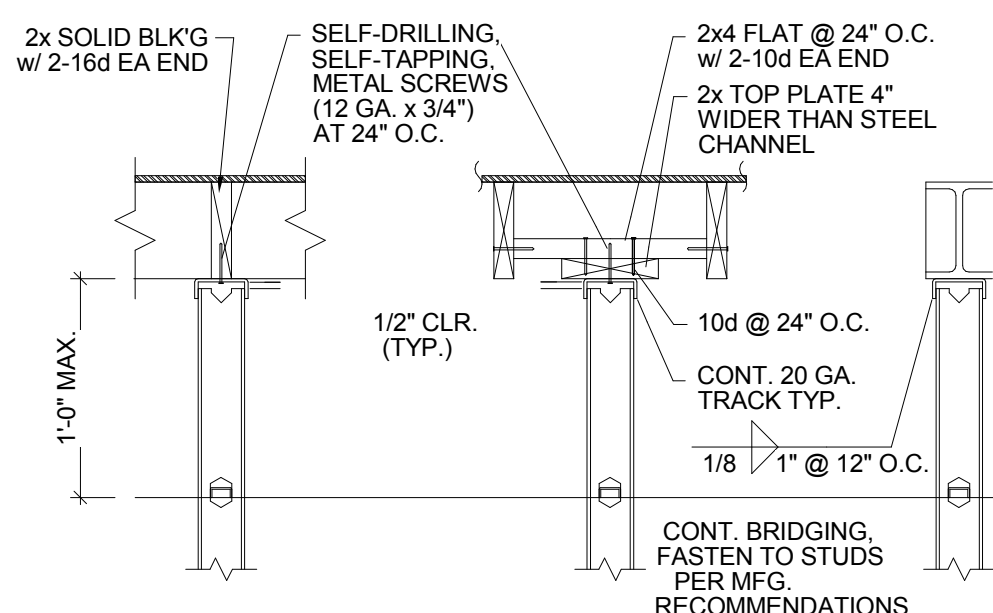
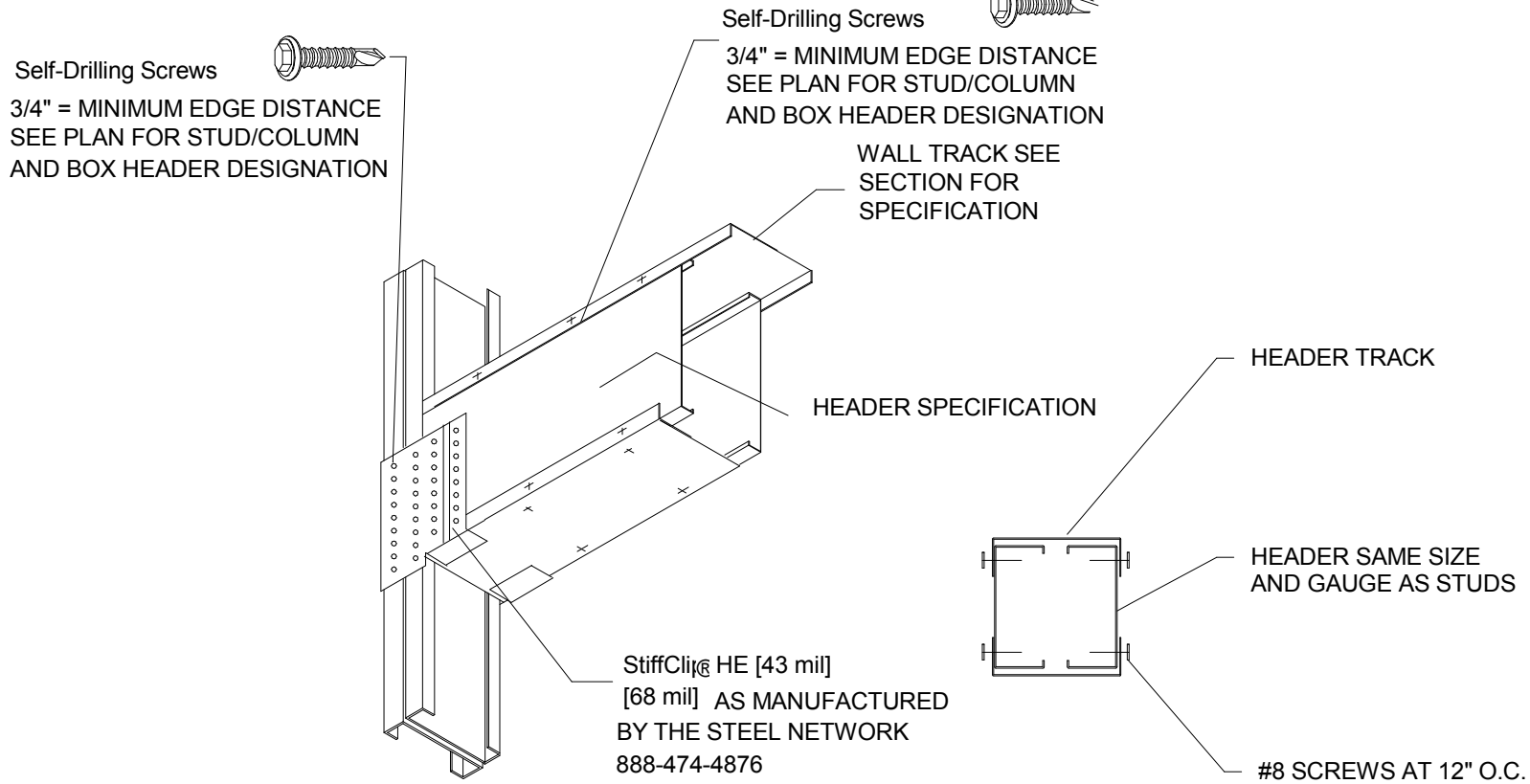
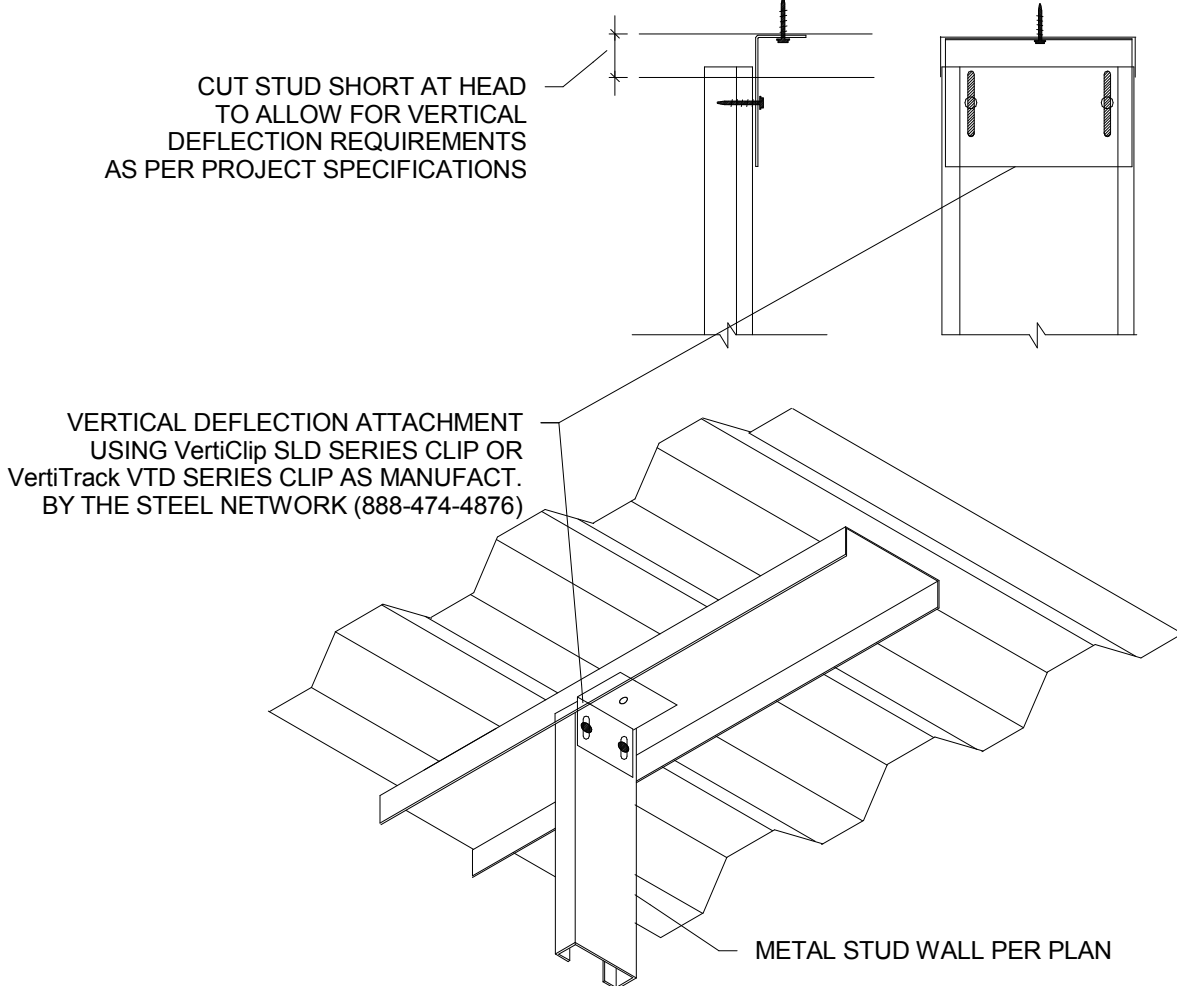
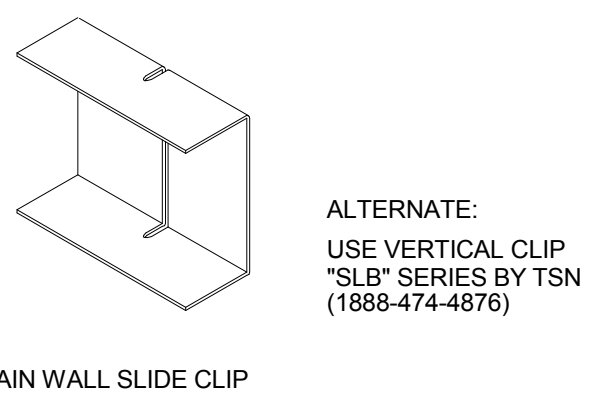
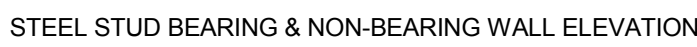
MARK	DESCRIPTION	SIZE ("
A	TOP TRACK	6 x 20 Ga.
B	BOTTOM TRACK	6 x 20 Ga.
C	STUD	6 x 18 Ga.
C1	DOUBLE STUD	(2) 6 x 18 Ga.
D	STRAP	2 x 16 Ga.
E	BLOCKING	6 x 20 Ga.

NOTE:

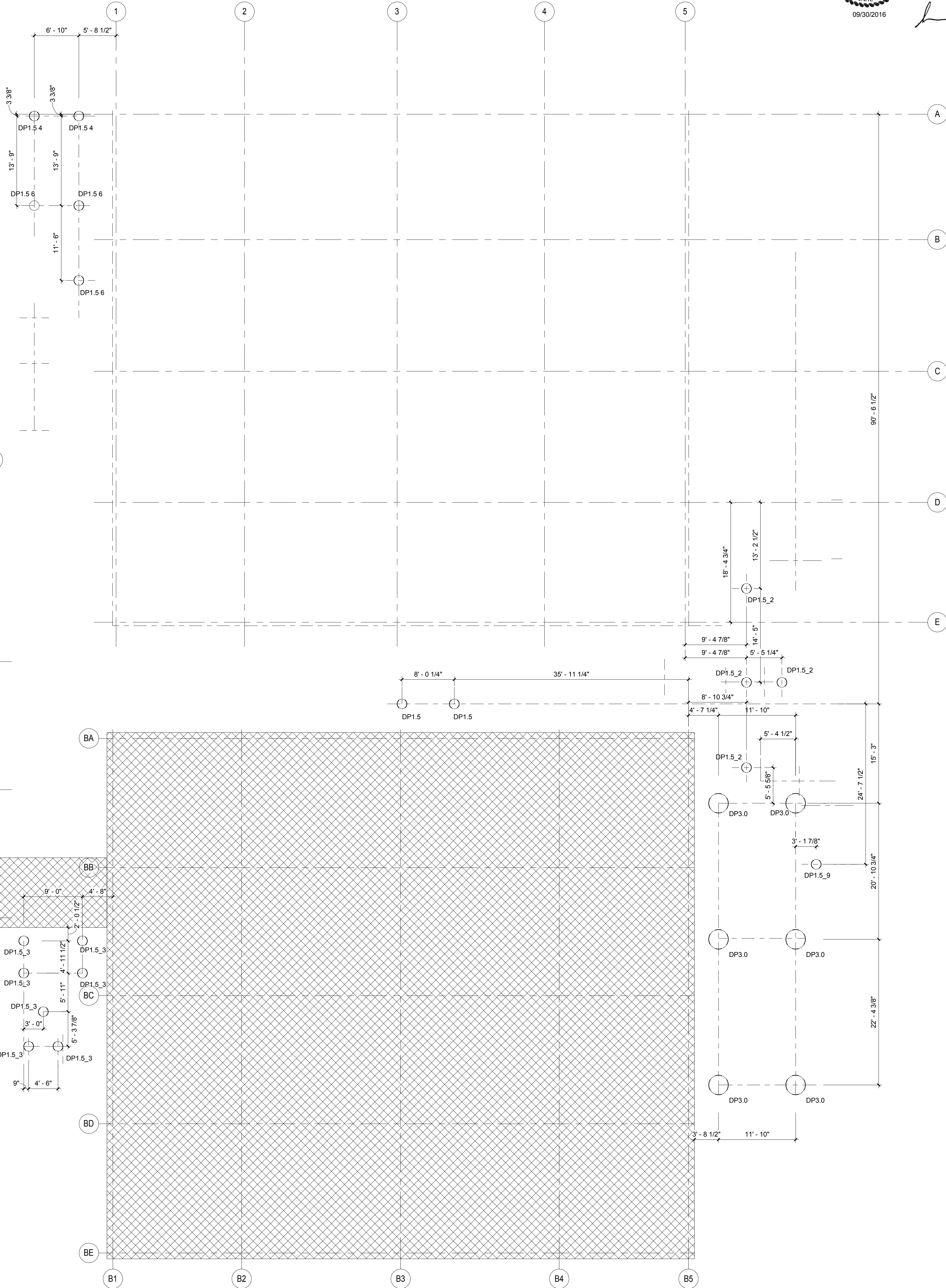
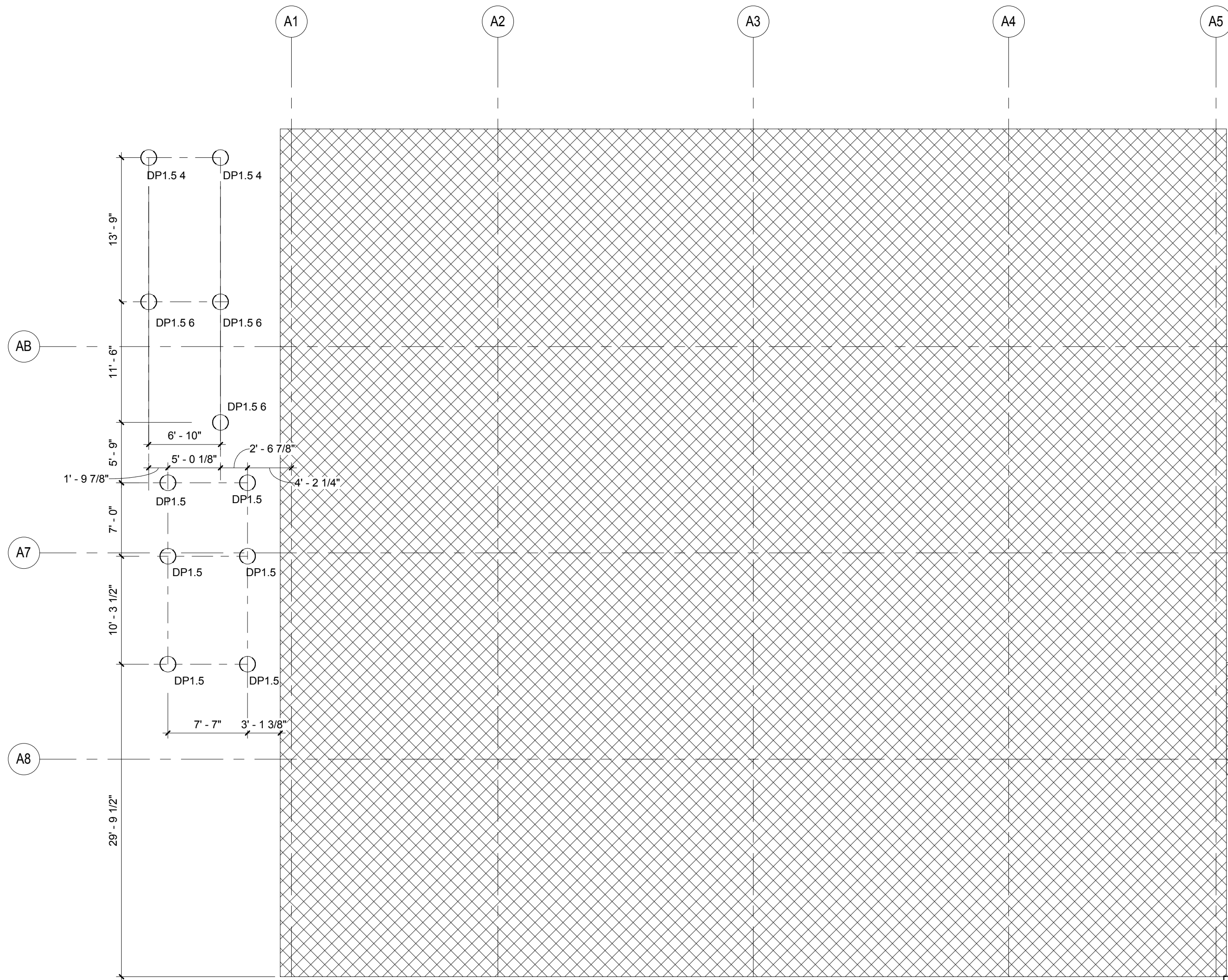
1. MEMBER SIZES SHOWN IN THIS DETAIL ARE TYPICAL EXCEPT AS OTHERWISE SHOWN ON THE PLANS OR SPECIFIC PANEL ELEVATIONS.
2. ALL STUDS SHALL BE SPACED AT 16" O.C. EXCEPT AS SHOWN OTHERWISE AND AS NOTED BELOW.
3. LOAD BEARING STUDS SHALL BE SPACED SO AS TO FALL DIRECTLY UNDER ROOF TRUSSES / RAFTER OR UNDER FLOOR JOISTS.



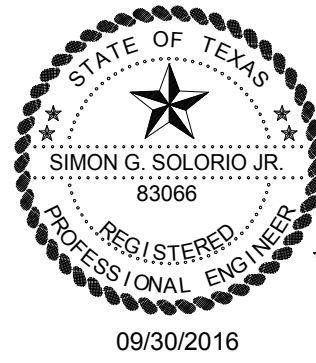
LOCATION	SPACING
EXT. WALL	16" O.C. MAX
INT BRG	24"
INT NON-BRG	32"

15. STEEL STUD AT CONC. SLAB ON GRADE

Drilled Pier Schedule									
Family	MARK	DIMENSIONS		BELL HEIGHT	Reinforcing Longitudinal Quantity	Reinforcing Longitudinal Size	Reinforcing Transverse Size	Reinforcing Transverse Spacing	Comments
		SHAFT DIAMETER	BELL DIAMETER						
Pile-Drilled Pier with Bell_USACE	DP1.5	1'-6"	4'-6"	3'-0"	5	6	3	1'-0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.4	1'-6"	4'-6"	3'-0"	5	6	3	1'-0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.6	1'-6"	4'-6"	3'-0"	5	6	3	1'-0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.2	1'-6"	4'-6"	3'-0"	8	6	3	1'-0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.3	1'-6"	4'-6"	3'-0"	5	6	3	1'-0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.9	1'-6"	4'-6"	3'-0"	8	6	3	1'-0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP3.0	3'-0"	7'-6"	4'-6"	8	6	3	1'-0"	10' below existing grade



Pier Base - Building A - C
1/8" = 1'-0"



F-1616
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Professional Engineering
Structural PE 1616

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Sheet Title
Pier Plan Building A - C

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS
PORT of BROWNSVILLE
•WORLD CLASS•

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ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78201
(956) 350-9196 OFFICE
(956) 350-9196 FAX
ARCHRUIZ@AOL.COM

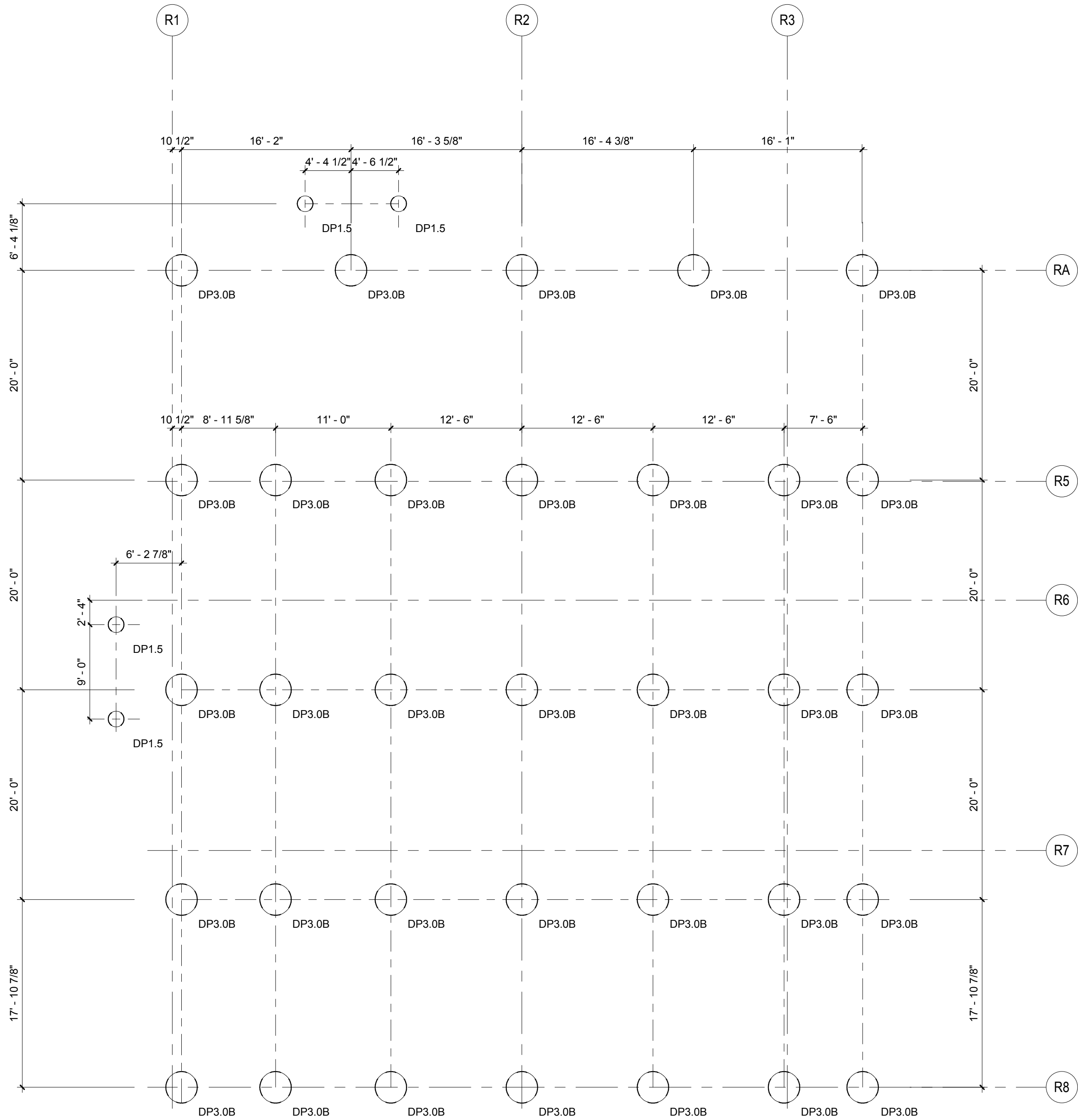
Date
09/30/2016
Drawn by: Author
Project No.: 16152

REVISED:

Set
Number

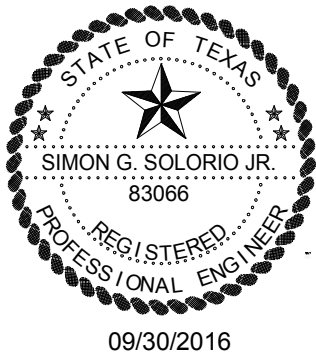
SHEET
NO. S201

Drilled Pier Schedule									
Family	MARK	DIMENSIONS		BELL HEIGHT	Reinforcing Longitudinal Quantity	Reinforcing Longitudinal Size	Reinforcing Transverse Size	Reinforcing Transverse Spacing	Comments
		SHAFT DIAMETER	BELL DIAMETER						
Pile-Drilled Pier with Bell_USACE	DP1.5	1'- 6"	4'- 6"	3'- 0"	5	6	3	1'- 0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.4	1'- 6"	4'- 6"	3'- 0"	5	6	3	1'- 0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.6	1'- 6"	4'- 6"	3'- 0"	5	6	3	1'- 0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.2	1'- 6"	4'- 6"	3'- 0"	8	6	3	1'- 0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.3	1'- 6"	4'- 6"	3'- 0"	5	6	3	1'- 0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP1.5.9	1'- 6"	4'- 6"	3'- 0"	8	6	3	1'- 0"	10' below existing grade
Pile-Drilled Pier with Bell_USACE	DP3.0	3'- 0"	7'- 6"	4'- 6"	8	6	3	1'- 0"	10' below existing grade



Alternate, Pier Layout Plan - Permit/Records

1
1/8" = 1'-0"



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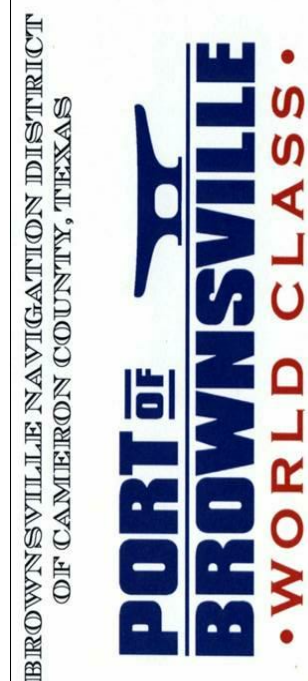
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Since 1978

09/30/2016

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Sheet Title
Alternate Pier Plan, Permit/Records

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS



ROBERTO J. RUIZ
ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78201
(956) 350-9198 OFFICE
(956) 350-9196 FAX
ARCHRUIZ@AOL.COM

REVISION:
Date: 09/30/2016
Drawn by: Author
Project No.: 15152

SHEET NO. S202A

FOUNDATION NOTES

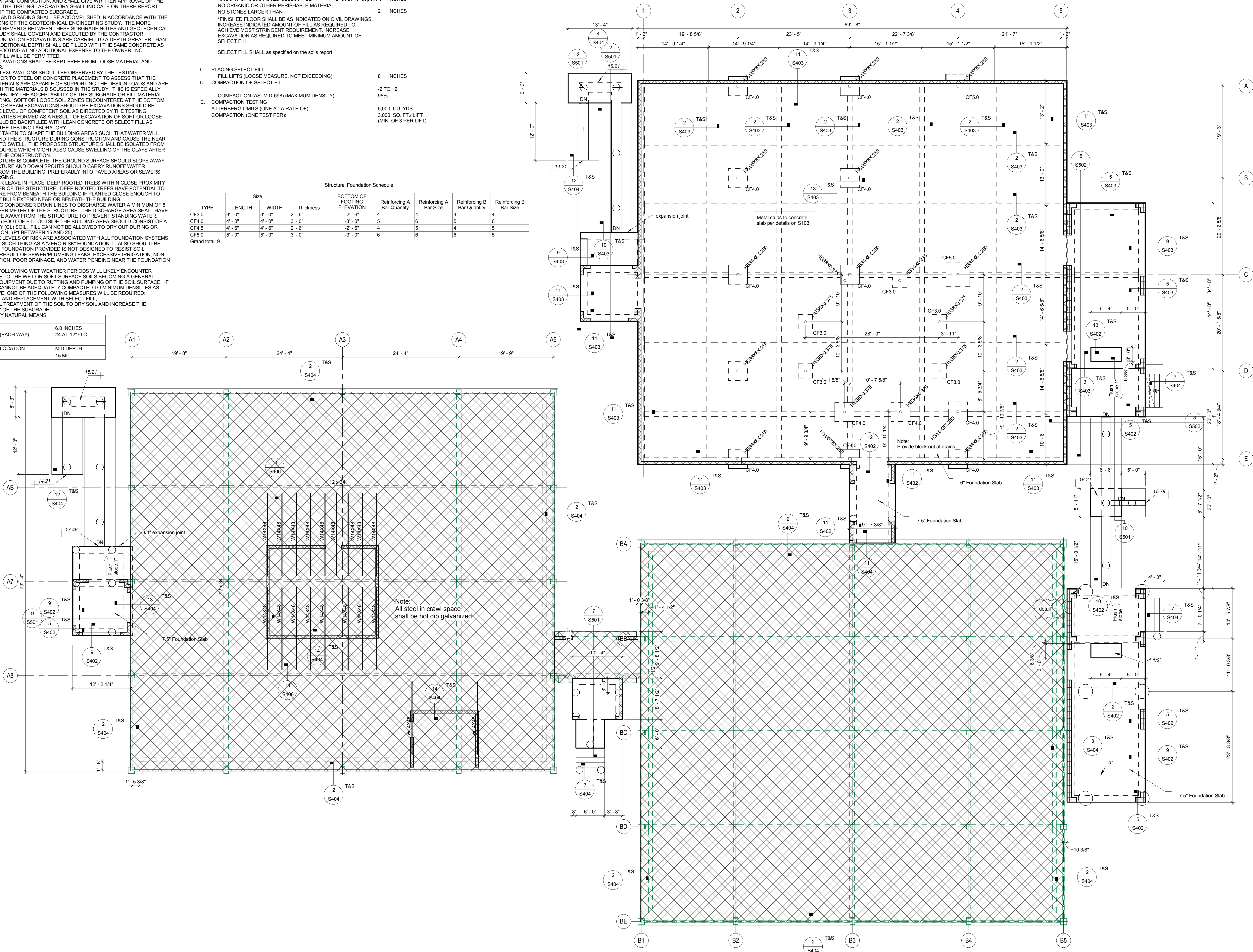
- FOR GENERAL NOTES SEE SHEET S101 AND S102
- FOR TYPICAL DETAILS SEE SHEETS NUMBER S403
- CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN.
- REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
- REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAIN LOCATIONS.
- SLOPE SLAB TO DRAINS. SEE ARCHITECTURAL PLANS FOR SLOPE.
- REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISHES. ENGINEER IS NOT RESPONSIBLE FOR TYPE OF FLOOR FINISHES.
- THE TESTING LABORATORY SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE TESTING LABORATORY SHALL APPROVE THE SUBGRADE PREPARATION, THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, AND COMPACTION, AND SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL. THE TESTING LABORATORY SHALL INDICATE ON THEIR REPORT THE ELEVATION OF THE COMPACTED SUBGRADE.
- ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING STUDY. THE MORE STRINGENT REQUIREMENTS BETWEEN THESE SUBGRADE NOTES AND GEOTECHNICAL ENGINEERING STUDY SHALL GOVERN AND EXECUTED BY THE CONTRACTOR.
- IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
- THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
- THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE TESTING LABORATORY PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE STUDY. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL, AS DIRECTED BY THE TESTING LABORATORY. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH CLEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE TESTING LABORATORY.
- CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
- WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR SEWERS, BEFORE DISCHARGING.
- DO NOT PLANT, OR LEAVE IN PLACE, DEEP ROOTED TREES WITHIN CLOSE PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULBS EXTEND UNDER THE BUILDING.
- AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.
- THE FINAL ONE (1) FOOT OF FILL OUTSIDE THE BUILDING AREA SHOULD CONSIST OF A COHESIVE CLAYEY (CL) SOIL. FILL CAN NOT BE ALLOWED TO DRY OUT DURING OR AFTER COMPACTION. (P1 BETWEEN 15 AND 25)
- NOTE THAT SOME LEVELS OF RISK ARE ASSOCIATED WITH ALL FOUNDATION SYSTEMS AND THERE IS NO SUCH THING AS A "ZERO RISK" FOUNDATION. IT ALSO SHOULD BE NOTED THAT THE FOUNDATION PROVIDED IS NOT DESIGNED TO RESIST SOIL MOVEMENT AS A RESULT OF SEWER/PLUMBING LEAKS, EXCESSIVE IRRIGATION, NON UNIFORM IRRIGATION, POOR DRAINAGE, AND WATER PONDING NEAR THE FOUNDATION SYSTEM.
- CONSTRUCTION FOLLOWING WET WEATHER PERIODS WILL LIKELY ENCOUNTER DIFFICULTIES DUE TO THE WET OR SOFT SURFACE SOILS BECOMING A GENERAL HINDRANCE TO EQUIPMENT DUE TO RUTTING AND PUMPING OF THE SOIL SURFACE. IF THE SUBGRADE CANNOT BE ADEQUATELY COMPACTED TO MINIMUM DENSITIES AS DESCRIBED ABOVE, ONE OF THE FOLLOWING MEASURES WILL BE REQUIRED:
 - REMOVAL AND REPLACEMENT WITH SELECT FILL;
 - CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE;
 - DRYING BY NATURAL MEANS.

THICKNESS		6.0 INCHES
REINFORCING (EACH WAY)		#4 AT 12" O.C.
REINFORCING LOCATION		MID DEPTH
VISQUEEN		15 MIL

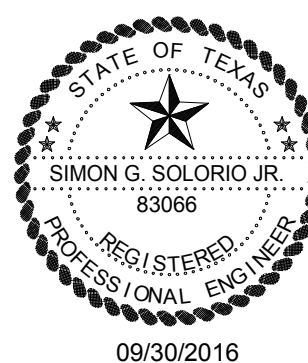
SUBGRADE PREPARATION

- SITE PREPARATION
 - PREPARATION OF EXISTING GROUND
ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL.
ADDITIONAL DEPTH OF REMOVAL (STOCKPILE):
EXTEND BEYOND BUILDING FOOT PRINT:
EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF:
MOISTURE: (OPTIMUM MOISTURE CONTENT):
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):
95%
6 INCHES
18 INCHES
5 FEET
8 INCHES
0 TO +4%
95%
 - SELECT FILL MATERIAL
AMOUNT OF COMPACTED SELECT FILL:
NO ORGANIC OR OTHER PERISHABLE MATERIAL
NO STONES LARGER THAN
72" at C, 48" at permit
INCHES
2 INCHES
"FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL.
SELECT FILL SHALL as specified on the soils report
- PLACING SELECT FILL
FILL LIFTS (LOOSE MEASURE, NOT EXCEEDING):
8 INCHES
- COMPACTION OF SELECT FILL
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):
-2 TO +2
95%
5,000 CU. YDS.
3,000 SQ. FT. / LIFT
(MIN. OF 3 PER LIFT)
- COMPACTION TESTING
ATTERBERG LIMITS (ONE AT A RATE OF):
COMPACTION (ONE TEST PER):

Structural Foundation Schedule								
TYPE	Size	LENGTH	WIDTH	Thickness	BOTTOM OF FOOTING ELEVATION	Reinforcing A Bar Quantity	Reinforcing A Bar Size	Reinforcing B Bar Quantity
CF3.0	3'-0"	3'-0"	3'-0"	2'-6"	-2'-6"	4	4	4
CF4.0	4'-0"	4'-0"	3'-0"	3'-0"	-3'-0"	5	5	5
CF4.5	4'-6"	4'-6"	2'-6"	2'-6"	-2'-6"	4	5	4
CF5.0	5'-0"	5'-0"	3'-0"	3'-0"	-3'-0"	6	6	5
Grand total: 9								



Foundation Base - Building A - C
1/8" = 1'-0"



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FOUNDATION NOTES

1. FOR GENERAL NOTES SEE SHEET S101 AND S102
2. FOR TYPICAL DETAILS SEE SHEETS NUMBER S400'S
3. CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN.
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10. IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
11. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
12. THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE TESTING LABORATORY PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE STUDY. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL AS DIRECTED BY THE TESTING LABORATORY. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH LEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE TESTING LABORATORY.
13. CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
14. WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR SEWERS, BEFORE DISCHARGING.
15. DO NOT PLANT, OR LEAVE IN PLACE, DEEP ROOTED TREES WITHIN CLOSE PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULB EXTEND NEAR OR BENEATH THE BUILDING.
16. AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.
17. THE FINAL ONE (1) FOOT OF FILL OUTSIDE THE BUILDING AREA SHOULD CONSIST OF A COHESIVE CLAYEY (CL) SOIL. FILL CAN NOT BE ALLOWED TO DRY OUT DURING OR AFTER COMPACTION. (P1 BETWEEN 15 AND 25)
18. NOTE THAT SOME LEVELS OF RISK ARE ASSOCIATED WITH ALL FOUNDATION SYSTEMS AND THERE IS NO SUCH THING AS A "ZERO RISK" FOUNDATION. IT ALSO SHOULD BE NOTED THAT THE FOUNDATION PROVIDED IS NOT DESIGNED TO RESIST SOIL MOVEMENT AS A RESULT OF SEWER/PLUMBING LEAKS, EXCESSIVE IRRIGATION, NON UNIFORM IRRIGATION, POOR DRAINAGE, AND WATER PONDING NEAR THE FOUNDATION SYSTEM.
19. CONSTRUCTION FOLLOWING WET WEATHER PERIODS WILL LIKELY ENCOUNTER DIFFICULTIES DUE TO THE WET OR SOFT SURFACE SOILS BECOMING A GENERAL HINDRANCE TO EQUIPMENT DUE TO RUTTING AND PUMPING OF THE SOIL. SURFACE IF THE SUBGRADE CANNOT BE ADEQUATELY COMPACTED TO MINIMUM DENSITIES AS DESCRIBED ABOVE, ONE OF THE FOLLOWING MEASURES WILL BE REQUIRED:
 - a) REMOVAL AND REPLACEMENT WITH SELECT FILL.
 - b) CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE.
 - c) DRYING BY NATURAL MEANS.

SLAB ON GRADE	
THICKNESS	7.5 INCHES
REINFORCING (EACH WAY)	#4 AT 10" O.C.
REINFORCING over beam	#4 x 10" AT 10" O.C.
REINFORCING LOCATION	(T) & (B)
VISQUEEN	15 MIL

SUBGRADE PREPARATION

1. SITE PREPARATION
 - A. PREPARATION OF EXISTING GROUND
ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL.
ADDITIONAL DEPTH OF REMOVAL (STOCKPILE):
EXTEND BEYOND BUILDING FOOT PRINT:
EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF:
MOISTURE: (OPTIMUM MOISTURE CONTENT)
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):
2. SELECT FILL MATERIAL
AMOUNT OF COMPACTED SELECT FILL: 72" at C, 48" at permit
NO ORGANIC OR OTHER PERISHABLE MATERIAL.
NO STONES LARGER THAN:
*FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL
SELECT FILL SHALL AS specified on the soils report
 - C. PLACING SELECT FILL
FILL LIFTS (LOOSE MEASURE, NOT EXCEEDING):
D. COMPACTION OF SELECT FILL
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):
COMPACTION TESTING
ATTERBERG LIMITS (ONE AT A RATE OF):
COMPACTION (ONE TEST PER):
- E. COMPACTION TESTING
ATTERBERG LIMITS (ONE AT A RATE OF):
COMPACTION (ONE TEST PER):

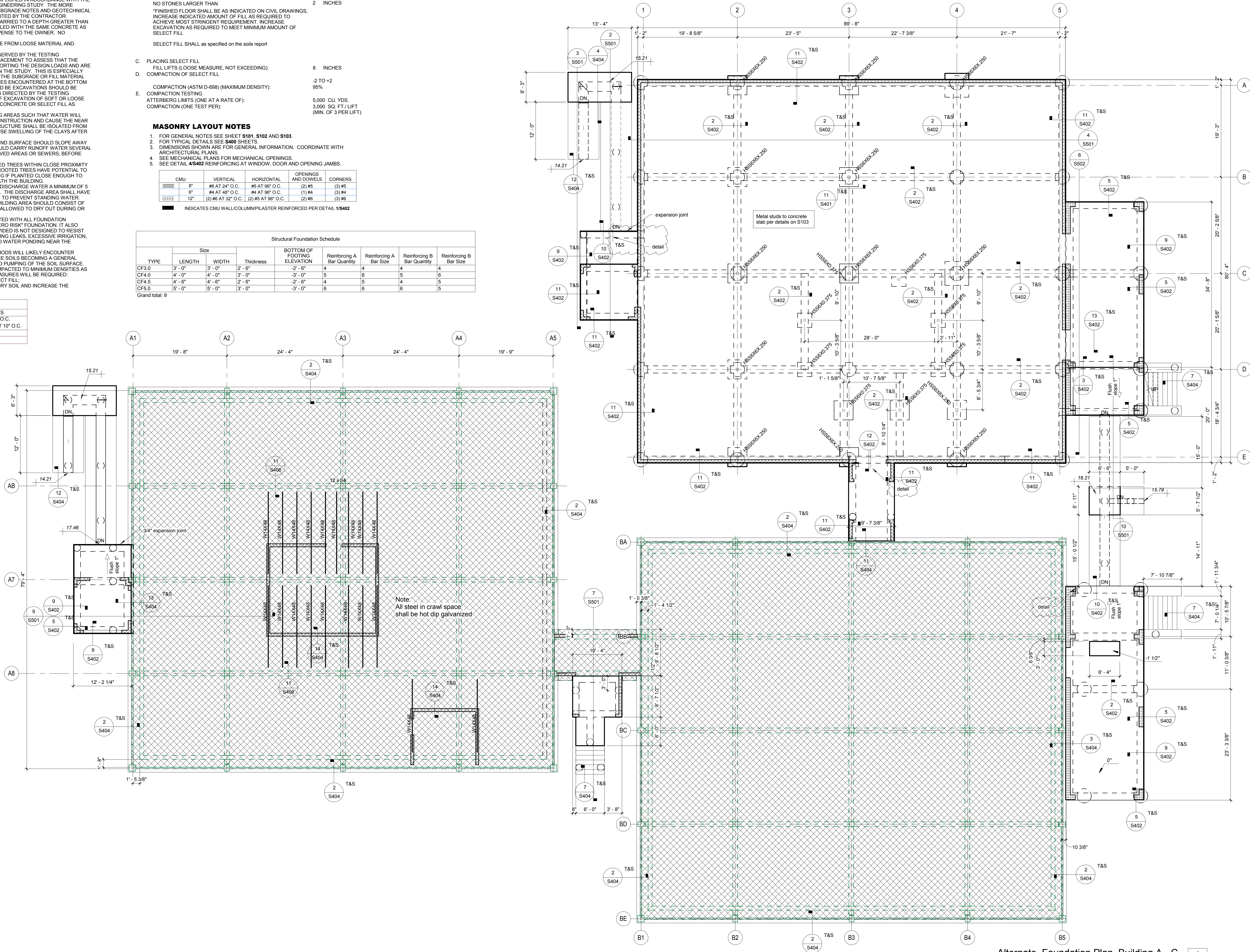
MASONRY LAYOUT NOTES

1. FOR GENERAL NOTES SEE SHEET S101, S102 AND S103.
2. FOR TYPICAL DETAILS SEE S400 SHEETS.
3. DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
4. SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
5. SEE DETAIL 4/S402 REINFORCING AT WINDOW, DOOR AND OPENING JAMBS.

CMU	VERTICAL	HORIZONTAL	OPENINGS AND DOWELS	CORNERS
8"	#4 AT 24" O.C.	#5 AT 96" O.C.	(2) #5	(3) #5
6"	#4 AT 48" O.C.	#4 AT 96" O.C.	(1) #4	(3) #4
12"	(2) #6 AT 32" O.C.	(2) #5 AT 96" O.C.	(2) #6	(3) #6

INDICATES CMU WALL/COLUMN/PLASTER REINFORCED PER DETAIL 1/S402

Structural Foundation Schedule							
TYPE	Size		Thickness	BOTTOM OF FOOTING ELEVATION	Reinforcing A Bar Quantity	Reinforcing A Bar Size	Reinforcing B Bar Quantity
	LENGTH	WIDTH					Reinforcing B Bar Size
CF3.0	3'-0"	3'-0"	2'-6"	-2'-6"	4	4	4
CF4.0	4'-0"	4'-0"	3'-0"	-3'-0"	5	6	5
CF4.5	4'-0"	4'-6"	2'-6"	-2'-6"	4	5	4
CF5.0	5'-0"	5'-0"	3'-0"	-3'-0"	6	6	5
Grand total: 9							



Alternate, Foundation Plan, Building A - C
1/8" = 1'-0"



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SIMON G. SOLORIO JR., P.E. 83069, NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.
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108 W 18th Street
Mission, TX 78572
(956) 631-1500
www.solorio.com
Solorio, Inc. Engineering
Sheet No. 1616

Sheet Title
Alternate Foundation Plan Building A - C

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

95% check set, For Review Only

SHEET NO. S211A

Set Number

REVISED

Date 09/30/2016

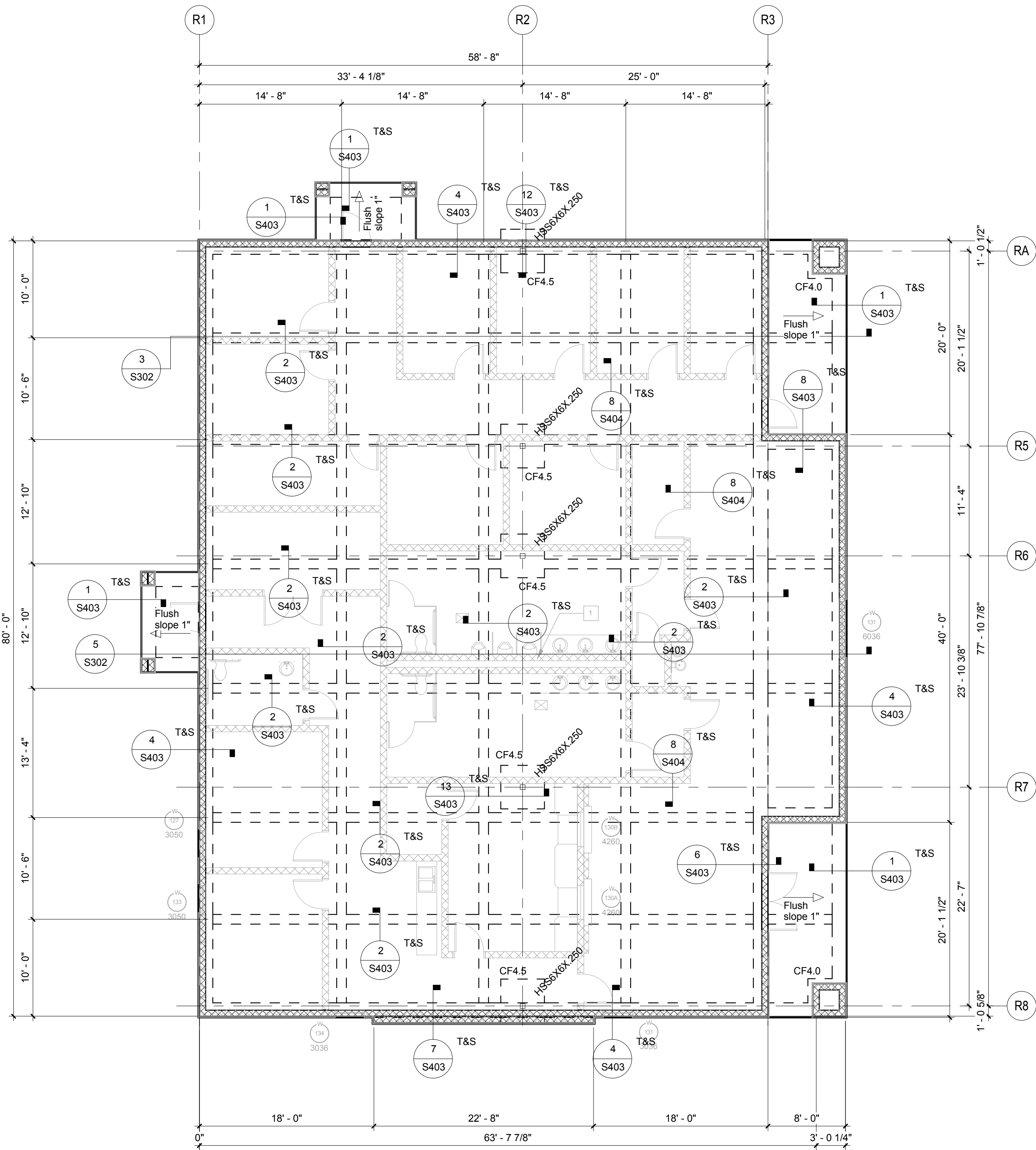
Drawn by: Author

Project No. 15152

ROBERTO J. RUIZ ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78201
(956) 350-9198 OFFICE
(956) 350-9196 FAX
ARCHRUIZ@GOL.COM

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS
PORT of BROWNSVILLE
WORLD CLASS

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Foundation Plan - Permits/Records
1/8" = 1'-0"

Structural Foundation Schedule							
TYPE	Size		Thickness	BOTTOM OF FOOTING ELEVATION	Reinforcing A Bar Quantity	Reinforcing A Bar Size	Reinforcing B Bar Quantity
	LENGTH	WIDTH					Reinforcing B Bar Size
CF3.0	3'-0"	3'-0"	2'-6"	-2'-6"	4	4	4
CF4.0	4'-0"	4'-0"	3'-0"	-3'-0"	5	5	5
CF4.5	4'-6"	4'-6"	2'-6"	-2'-6"	4	4	5
CF5.0	5'-0"	5'-0"	3'-0"	-3'-0"	6	6	5
Grand total: 9							

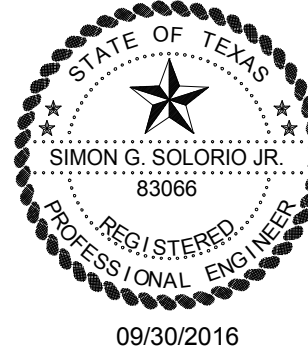
FOUNDATION NOTES

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- CONTRACTOR OR SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN.
- REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
- REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAIN LOCATIONS.
- SLOPE SLAB TO DRAINS. SEE ARCHITECTURAL PLANS FOR SLOPE.
- REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISHES. ENGINEER IS NOT RESPONSIBLE FOR TYPE OF FLOOR FINISHES.
- THE TESTING LABORATORY SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE TESTING LABORATORY SHALL APPROVE THE SUBGRADE PREPARATION, THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, AND COMPACTION, AND SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL. THE TESTING LABORATORY SHALL INDICATE ON THERE REPORT THE ELEVATION OF THE COMPACTED SUBGRADE.
- ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING STUDY. THE MORE STRINGENT REQUIREMENTS BETWEEN THESE SUBGRADE NOTES AND GEOTECHNICAL ENGINEERING STUDY SHALL GOVERN AND EXECUTED BY THE CONTRACTOR.
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 - REMOVAL AND REPLACEMENT WITH SELECT FILL.
 - CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE.
 - DRYING BY NATURAL MEANS.

SLAB ON GRADE	
THICKNESS	8.0 INCHES
REINFORCING (EACH WAY)	#4 AT 12" O.C.
REINFORCING LOCATION	MID DEPTH
VISQUEEN	15 MIL

SUBGRADE PREPARATION

- SITE PREPARATION
 - PREPARATION OF EXISTING GROUND
 - ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL: 6 INCHES
 - ADDITIONAL DEPTH OF REMOVAL (STOCKPILE): 18 INCHES
 - EXTEND BEYOND BUILDING FOOT PRINT: 5 FEET
 - EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF: 9 INCHES
 - MOISTURE: (OPTIMUM MOISTURE CONTENT) 0 TO +4%
 - COMPACTION (ASTM D-698) (MAXIMUM DENSITY): 95%
 - SELECT FILL MATERIAL
 - AMOUNT OF COMPACTED SELECT FILL: 72" at C, 48" at permit INCHES
 - NO ORGANIC OR OTHER PERISHABLE MATERIAL 2 INCHES
 - NO STONES LARGER THAN
 - *FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS. INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL
 - SELECT FILL SHALL as specified on the soils report
- PLACING SELECT FILL
 - FILL LIFTS LOOSE MEASURE, NOT EXCEEDING): 8 INCHES
 - COMPACTION OF SELECT FILL
 - COMPACTION (ASTM D-698) (MAXIMUM DENSITY): -2 TO +2
 - COMPACTION TESTING 95%
 - ATTERBERG LIMITS (ONE AT A RATE OF): 5,000 CU. YDS.
 - COMPACTION (ONE TEST PER): 3,000 SQ. FT./LIFT (MIN. OF 3 PER LIFT)



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SIMON G. SOLORIO, JR., PE 83098, AS A CONDITION OF HIS REGISTRATION AS A PROFESSIONAL ENGINEER UNDER THE TEXAS ENGINEERING PRACTICE ACT.

SOLORIO
108 W 18th Street
Mission, TX 78572
(956) 631-1500
www.solorio.com
Structural Engineer
Since 1976

SHEET NO. S212

of

Set Number

REVISED:

09/30/2016

Date

Drawn by: sgs

Project No.: 16102

ROBERTO J. RUIZ ARCHITECT, INC.

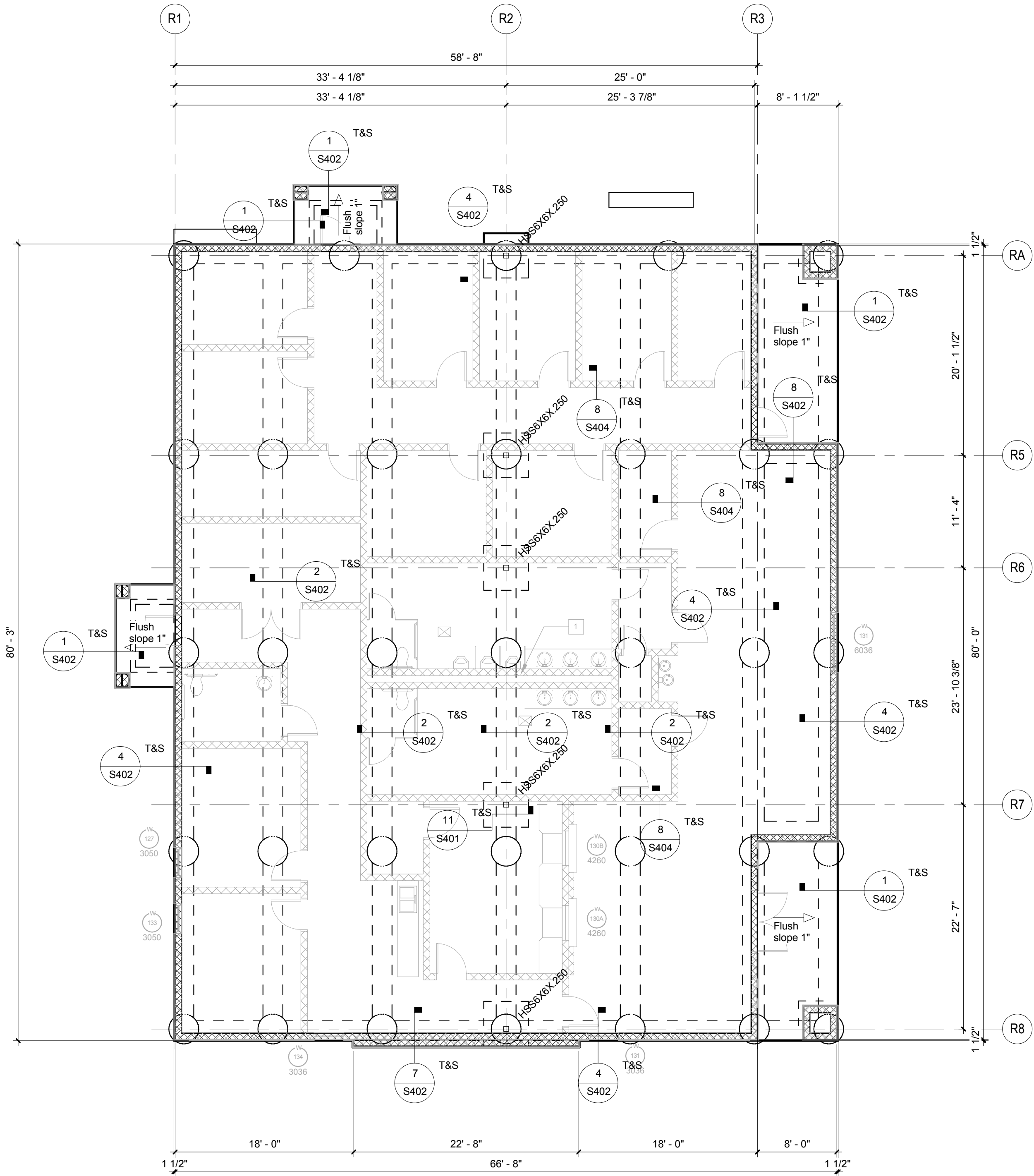
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78020
(956) 350-9196 OFFICE
(956) 350-9196 FAX
ARCHRUIZ@AOL.COM

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS

OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

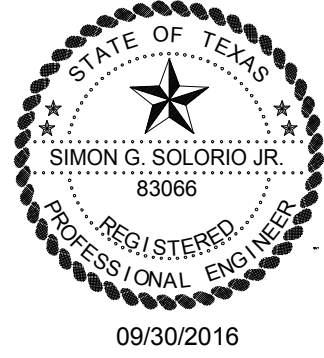
BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS

PORT of BROWNSVILLE
•WORLD CLASS•



Foundation Plan - Permits/Records

1/8" = 1'-0"



SOLORIO
108 W 18th Street
Mission, TX 78572
(956) 631-1500
www.solorio.com

Simon G. Solorio, Inc.
Structural Engineer
09/30/2016

FOUNDATION NOTES

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 - REMOVAL AND REPLACEMENT WITH SELECT FILL.
 - CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE.
 - DRYING BY NATURAL MEANS.

SLAB ON GRADE	THICKNESS
REINFORCING (EACH WAY)	#4 AT 10" O.C.
REINFORCING over beam	#4 x 10' AT 10" O.C.
REINFORCING LOCATION	(1) & (B)
VISQUEEN	15 MIL

MASONRY LAYOUT NOTES

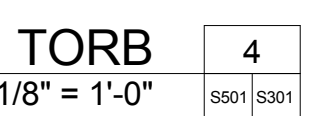
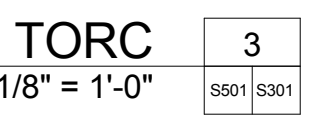
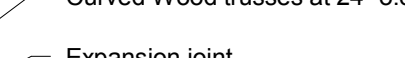
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- SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
- SEE DETAIL 4/S402 REINFORCING AT WINDOW, DOOR AND OPENING JAMBS.

CMU	VERTICAL	HORIZONTAL	OPENINGS AND DOWELS	CORNERS
XXXX	8" #5 AT 24" O.C.	#5 AT 96" O.C.	(2) #5	(3) #5
XXXX	6" #4 AT 48" O.C.	#4 AT 96" O.C.	(1) #4	(3) #4
XXXX	12" (2) #6 AT 32" O.C.	(2) #5 AT 96" O.C.	(2) #6	(3) #6

INDICATES CMU WALL/COLUMN/PLASTER REINFORCED PER DETAIL 1/S402

SUBGRADE PREPARATION

- SITE PREPARATION
- PREPARATION OF EXISTING GROUND
 - ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL: 6 INCHES
 - ADDITIONAL DEPTH OF REMOVAL (STOCKPILE): 18 INCHES
 - EXTEND BEYOND BUILDING FOOT PRINT: 5 FEET
 - EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF: 8 INCHES
 - MOISTURE (OPTIMUM MOISTURE CONTENT) 0 TO +4%
 - COMPACTION (ASTM D-698) (MAXIMUM DENSITY): 95%
- SELECT FILL MATERIAL
 - AMOUNT OF COMPACTED SELECT FILL: 72" at C, 48" at permit INCHES
 - NO ORGANIC OR OTHER PERISHABLE MATERIAL
 - NO STONES LARGER THAN 2 INCHES
 - *FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL.
- SELECT FILL SHALL as specified on the soils report
- PLACING SELECT FILL
 - FILL LIFTS (LOOSE MEASURE, NOT EXCEEDING): 8 INCHES
- COMPACTION OF SELECT FILL
 - COMPACTION (ASTM D-698) (MAXIMUM DENSITY): -2 TO +2
 - COMPACTION (ASTM D-698) (MAXIMUM DENSITY): 95%
- COMPACTION TESTING
 - ATTERBERG LIMITS (ONE AT A RATE OF): 5,000 CU. YDS.
 - COMPACTION (ONE TEST PER): 3,000 SQ. FT./LIFT (MIN. OF 3 PER LIFT)



1. FOR GENERAL NOTES SEE SHEET **S101, S102 AND S103.**
2. FOR TYPICAL DETAILS SEE SHEET **S104.**
3. DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
4. SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
5. SEE DETAIL **45402** REINFORCING AT WINDOW, DOOR AND OPENING JAMBS.

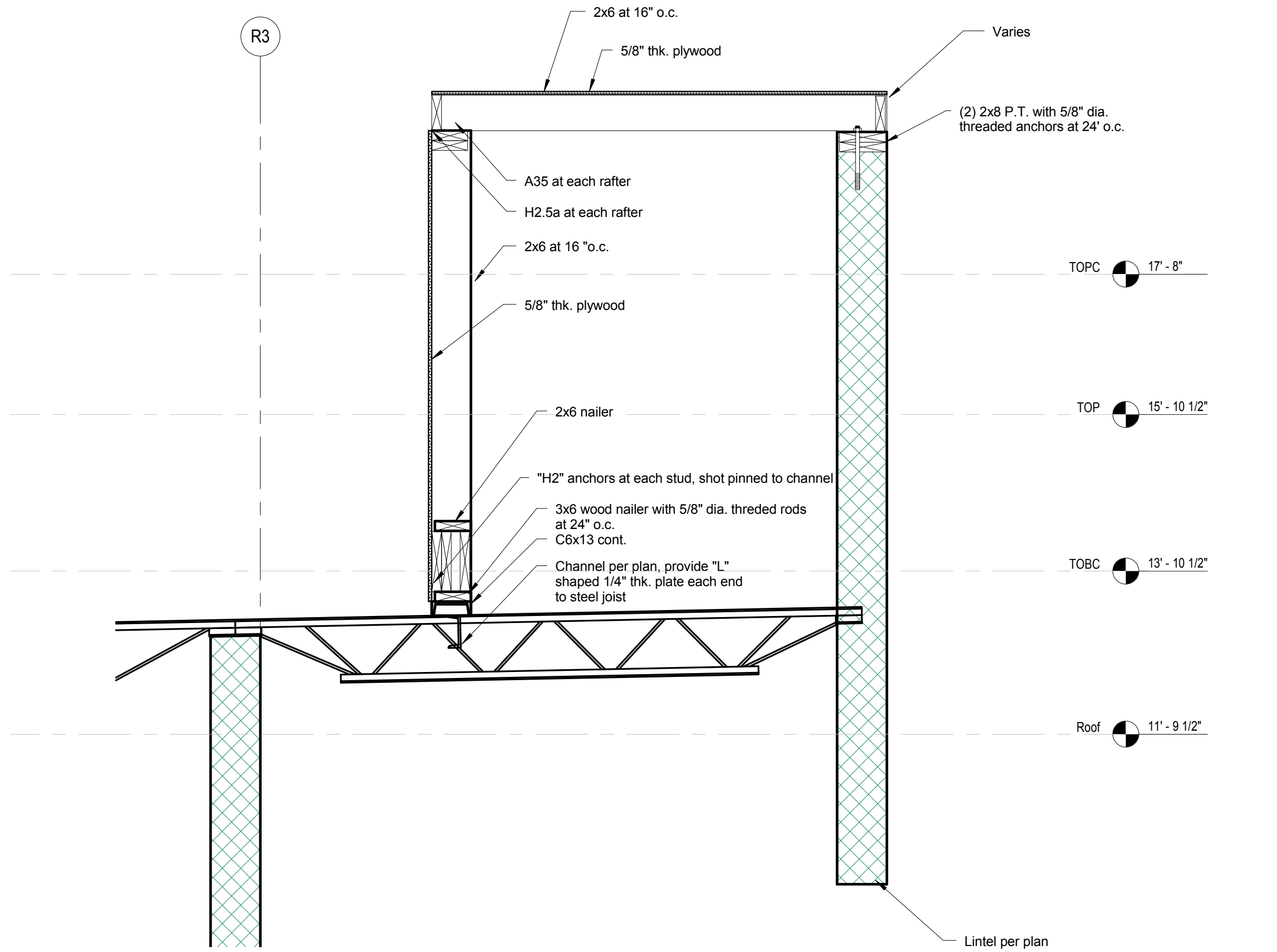
	8"	VERTICAL CORNERS	OPENINGS AND DOWELS	CORNERS
=====	8"	#5 AT 24" C.	#5 AT 90" C.	(1) #5
=====	12"	#4 AT 48" C.	#4 AT 96" C.	(1) #4
=====	6"	#2 AT 32" C.	#2 AT 96" C.	(1) #2

===== INDICATES CM WALL/COLUMN/PLASTER REINFORCED PER DETAIL **15402**

INDICATES CMU WALL/COLUMN/PILASTER REINFORCED PER DETAIL 1/S402

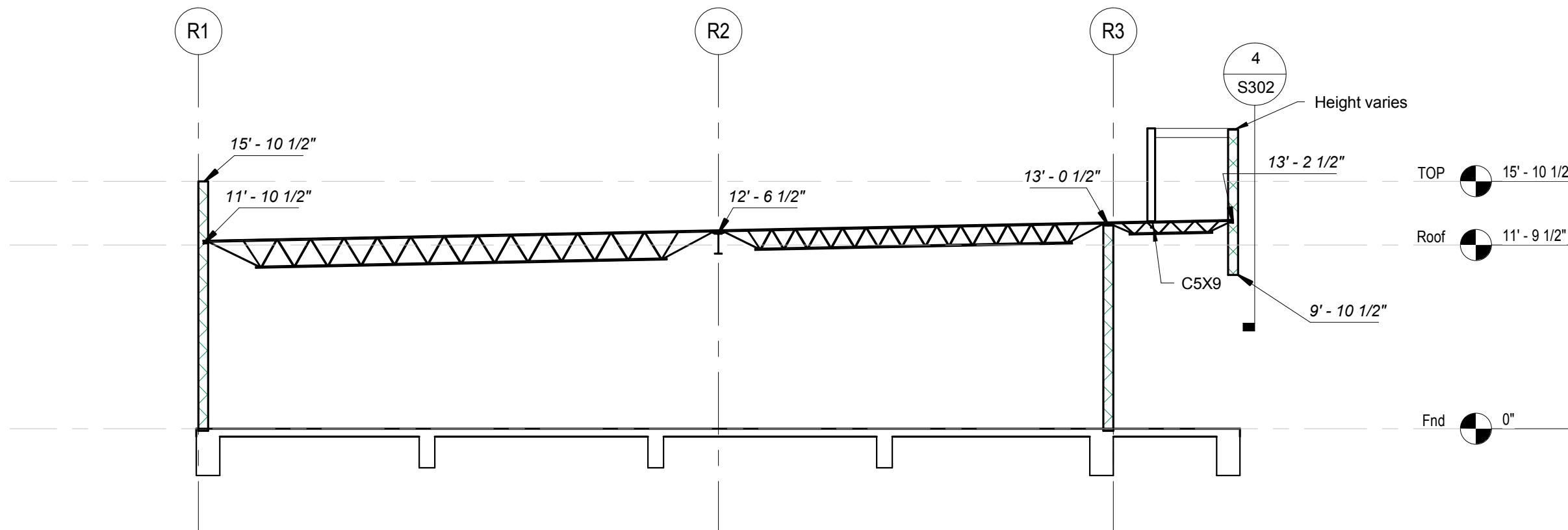
INDICATES CMU WALL/COLUMN/PILASTER REINFORCED PER DETAIL 1/S402

1
SS02 SS01



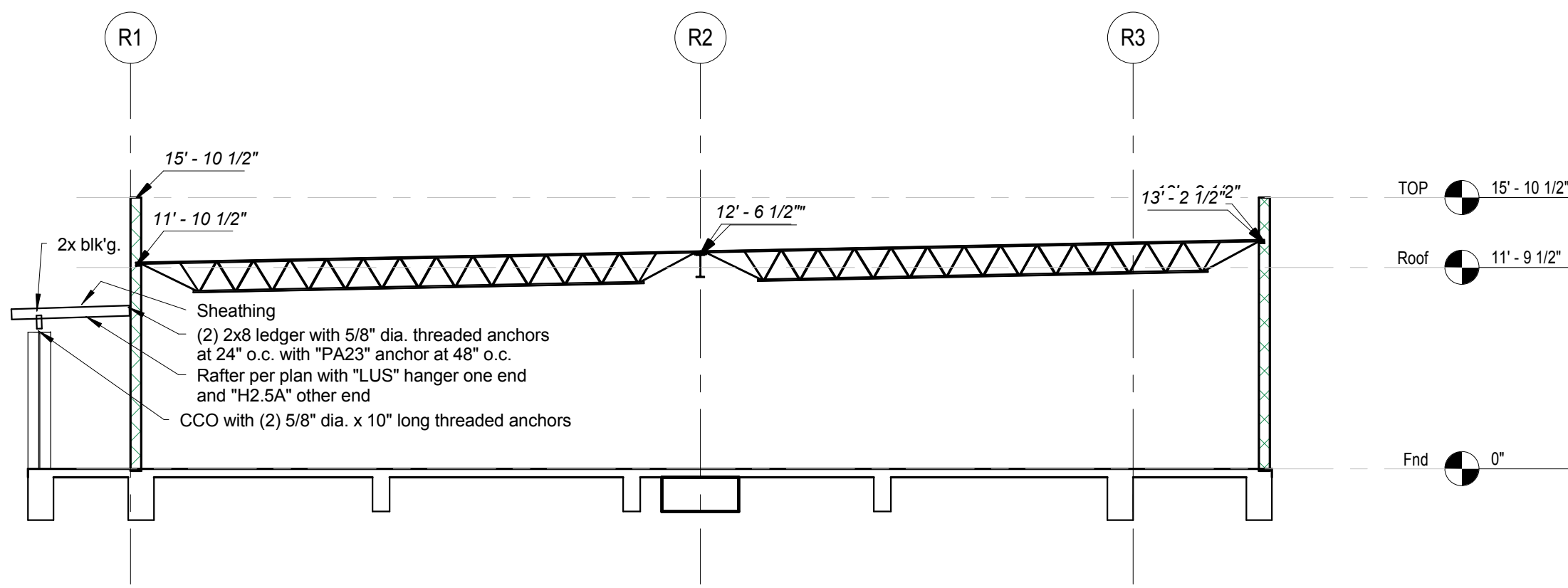
Detail 9
3/4" = 1'-0"

2
S302 S302



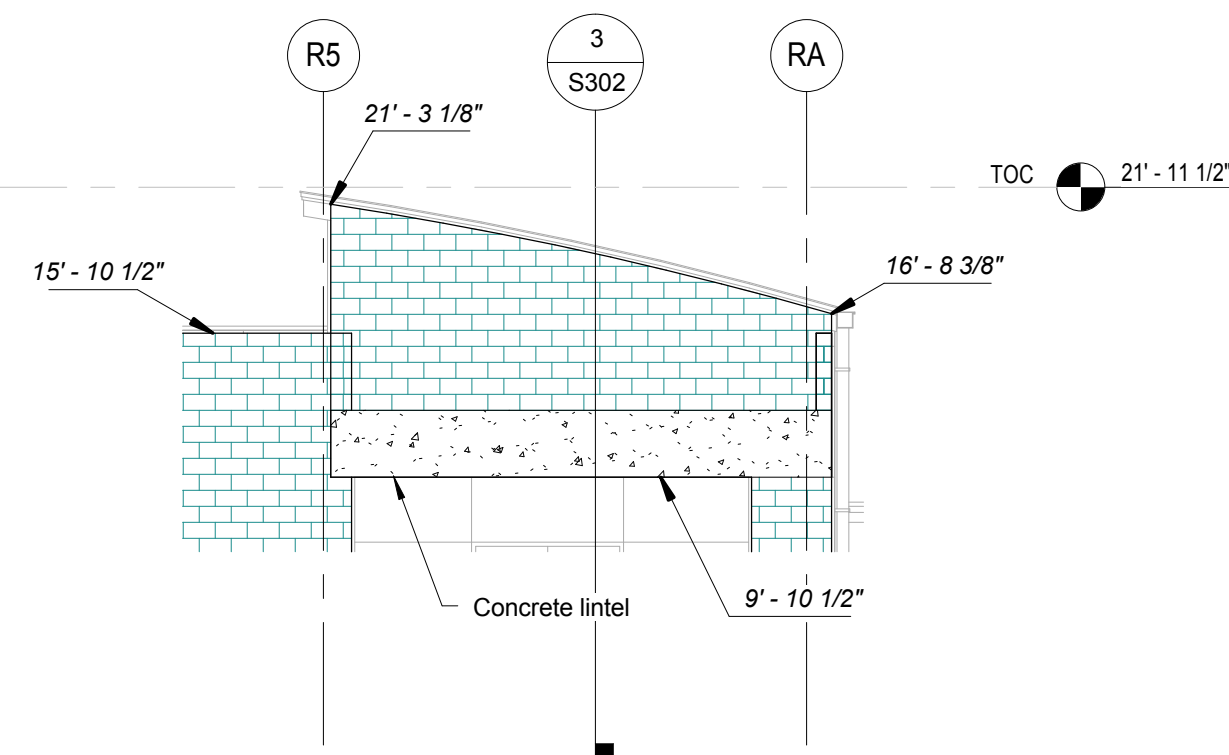
Detail 9
1/8" = 1'-0"

3
S212 S302



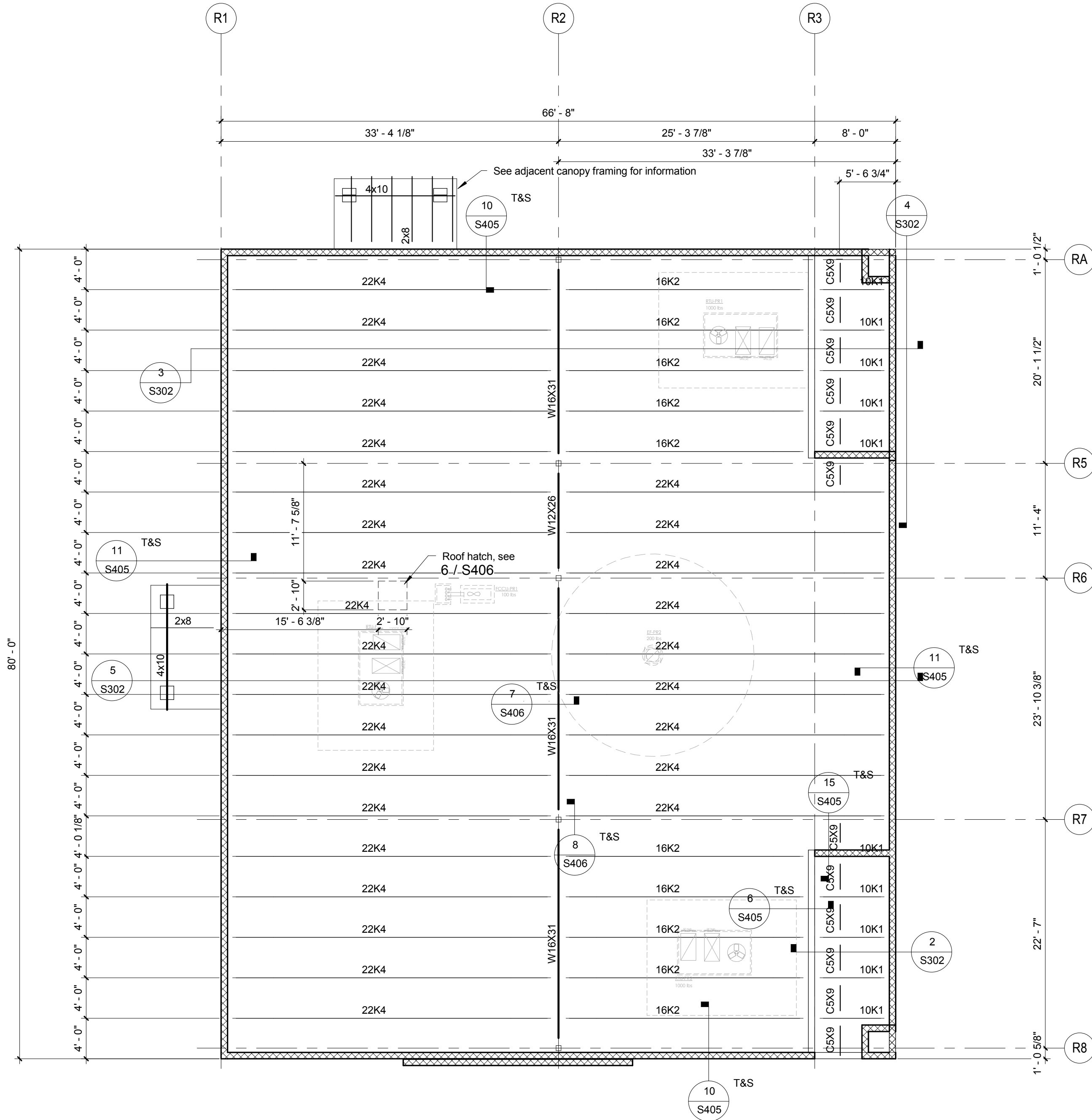
Detail 1
1/8" = 1'-0"

5
S212 S302



Typical CMU Parapet
1/8" = 1'-0"

4
S302 S302



Roof Framing Plan - Permits/Records

1/8" = 1'-0"

1
S302 S302

LIGHT WEIGHT COLD-FORMED STEEL

- DESIGN, MANUFACTURE AND INSTALLING OF LIGHT GAUGE, COLD-FORMED STEEL JOISTS, PURLINS AND STUDS SHALL CONFORM WITH THE LATEST EDITION OF THE LIGHT GAUGE, COLD-FORMED STEEL DESIGN MANUAL ISSUED BY THE AISI.
- LIGHT GAUGE, COLD-FORMED STEEL DESIGN MANUAL ISSUED BY THE AISI, FABRICATED USING THE FOLLOWING MATERIALS: (GALVANIZED STEEL), MANUFACTURER: DIETRICH INDUSTRIES, INC.
- ALL STUDS (AND/OR) JOISTS SHALL BE OF THE TYPE, SIZE AND GAGE AS SHOWN ON THE PLANS.
- THE PHYSICAL AND STRUCTURAL PROPERTIES LISTED BY THE ABOVE MANUFACTURER SHALL BE CONSIDERED THE MINIMUM PERMITTED FOR ALL FRAMING MEMBERS.
- ALL WELDING SHALL BE IN CONFORMANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL". QUALIFICATIONS OF WELDERS SHALL BE IN ACCORDANCE WITH AWS D1.1 CHAPTER 5, PART C, "WELDER QUALIFICATIONS". SEE LATEST EDITION OF THE AISI SPECIFICATIONS FOR THE "DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" FOR ALLOWABLE WELD VALUES.
- FRAMING SHALL BE ERRECTED PLUMB, LEVEL AND SQUARE. BRIDGING AND DIAGONAL TENSION STRAPS SHALL BE USED.
- PROVISION FOR POSSIBLE VERTICAL MOVEMENT OF FLOORS AT NON-STRUCTURAL WALLS SHALL BE BY USE OF "SLIDE CLIPS".
- TEMPORARY BRACING SHALL BE PROVIDED AS REQUIRED UNTIL ERECTION IS COMPLETE AND SAFELY SECURED TO STRUCTURE.
- AT TRACK BUTT JOINTS, ADJUTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT WELDED OR SPLICED TOGETHER.
- WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED AT 4'-0" O.C. VERTICAL (MAX.) U.N.O. ON PLANS.
- PRIOR TO PREFABRICATION OF FRAMING, THE CONTRACTOR SHALL SUBMIT FABRICATION AN ERECTION DRAWINGS TO THE ARCHITECT AND ENGINEER FOR REVIEW.
- LOAD BEARING STEEL FRAMING MEMBERS SHALL BE COLD-FORMED TO SHAPE FROM STRUCTURAL QUALITY SHEET STEEL COMPLYING WITH THE REQUIREMENTS OF ASTM A563.
- COLD-FORMED STEEL FRAMING COMPONENTS SHALL HAVE A METALLIC COATING COMPLYING WITH A563 OF G60.
- COPPER MATERIALS SHALL NOT BE USED IN DIRECT CONTACT WITH GALVANIZED STEEL MEMBERS OR COMPONENTS.
- FLANGE OF JOISTS, STUDS, HEADERS, AND OTHER STRUCTURAL MEMBERS SHALL NOT BE CUT OR NOTCHED WITHOUT AN APPROVED DESIGN.
- BEARING STIFFENERS (ALSO CALLED WEB STIFFENERS) SHALL BE AT LEAST AS THICK AS THE MEMBERS TO WHICH THEY ARE ATTACHED.
- ALL SCREWS SHALL BE CORROSION RESISTANT.
- SELF-DRILLING TAPPING SCREWS SHALL CONFORM TO SAE J78.
- A MINIMUM OF THREE EXPOSED THREADS SHALL EXTEND THROUGH THE STEEL FOR STEEL TO STEEL CONNECTIONS, AND WHEN ATTACHING OTHER MATERIALS TO STEEL FRAMING.
- FIELD IDENTIFICATION SYSTEM: LOAD BEARING STEEL FRAMING MEMBERS SHALL HAVE A LEGIBLE LABEL, STAMP, FOLLOWING INFORMATION AS A MINIMUM:
 - THE MANUFACTURER'S IDENTIFICATION
 - THE MINIMUM UNCOATED STEEL THICKNESS IN MILS (SUCH AS 43 MILS).
 - "S1" FOR STRUCTURAL MEMBERS.
 - METALLIC COATING WEIGHT (MASS).
 - MINIMUM YIELD STRENGTH IN KIPS PER SQUARE INCH.

Framing Notes

- FOR GENERAL NOTES SEE SHEET S101, S102
- FOR TYPICAL DETAILS SEE S400 SHEETS.
- DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
- SEE ARCHITECTURAL ROOF PLAN FOR ROOF HATCHES.
- SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
- STEEL BEAM TO STEEL BEAM CONNECTION PER TYPICAL DETAILS, U.N.O.
- STEEL BRACE TO STEEL COLUMN CONNECTION PER TYPICAL DETAILS, U.N.O.
- STEEL BRACE TO STEEL BEAM AND STEEL COLUMN CONNECTION PER TYPICAL DETAILS U.N.O.
- DESIGN JOISTS UNDER MECHANICAL UNITS WITH LOADS INDICATED ON THE DRAWINGS PER DESIGN CRITERIA STEEL JOIST MANUFACTURER TO PROVIDE STEEL JOIST SIZE (MAX. JOIST DEPTH TO BE AS SHOWN ON PLANS) DESIGN JOIST FOR L/600. (MECHANICAL WEIGHT+ DEAD LOAD ONLY) COORDINATE OPENINGS WITH MECHANICAL PLANS.
- JOIST MANUFACTURE TO VERIFY THE MINIMUM ROW OF BRIDGING AND BRIDGING SIZE, AS REQUIRED BY SJI.
- MAXIMUM JOIST SPACING SHALL BE 48 INCHES ON CENTER.
- JOISTS UNDER MECHANICAL UNITS MAY BE DOUBLED IF REQUIRED. Design steel joists for dead load, live load, wind uplift pressure and concentrated load from mechanical. Steel joist designations noted on plans are for bidding purposes only.
- FOR OPENING IN ROOF AND AT MECHANICAL UNITS, SEE TYPICAL DETAILS.

MASONRY LAYOUT NOTES

- FOR GENERAL NOTES SEE SHEET S101, S102 AND S103
- FOR TYPICAL DETAILS SEE S400 SHEETS.
- DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
- SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
- SEE DETAIL S402 REINFORCING AT WINDOW, DOOR AND OPENING JAMBS.

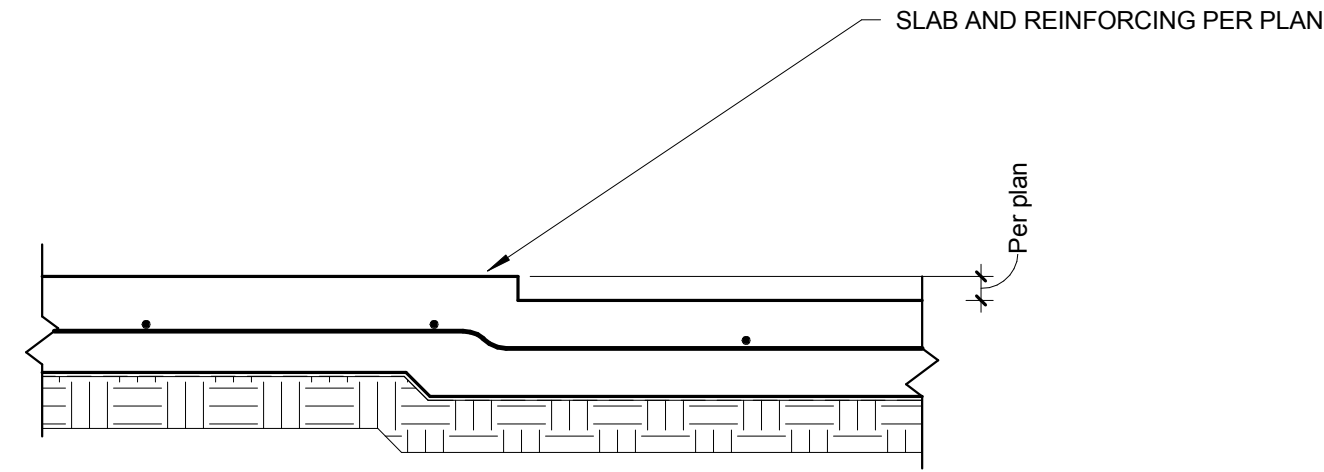
CMU	VERTICAL	HORIZONTAL	OPENINGS AND DOWELS	CORNERS
8"XXXX	8" #4 AT 24" O.C.	#4 AT 96" O.C.	(2) #5	(3) #5
6"XXXX	6" #4 AT 48" O.C.	#4 AT 96" O.C.	(1) #4	(3) #4
12"XXXX	(2) #5 AT 32" O.C.	(2) #5 AT 96" O.C.	(2) #5	(3) #5

INDICATES CMU WALL/COLUMN/PLASTER REINFORCED PER DETAIL S402



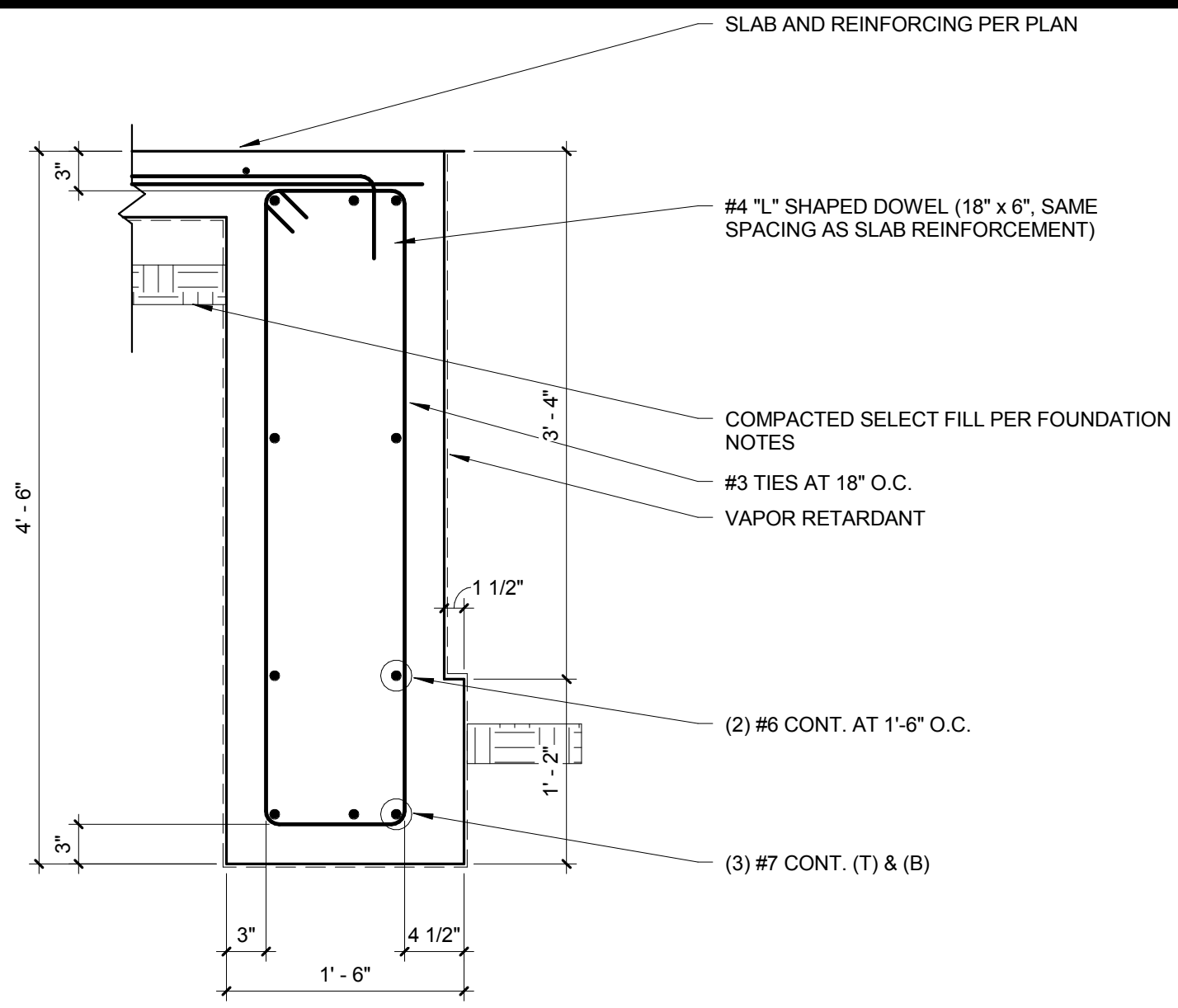
F-1616
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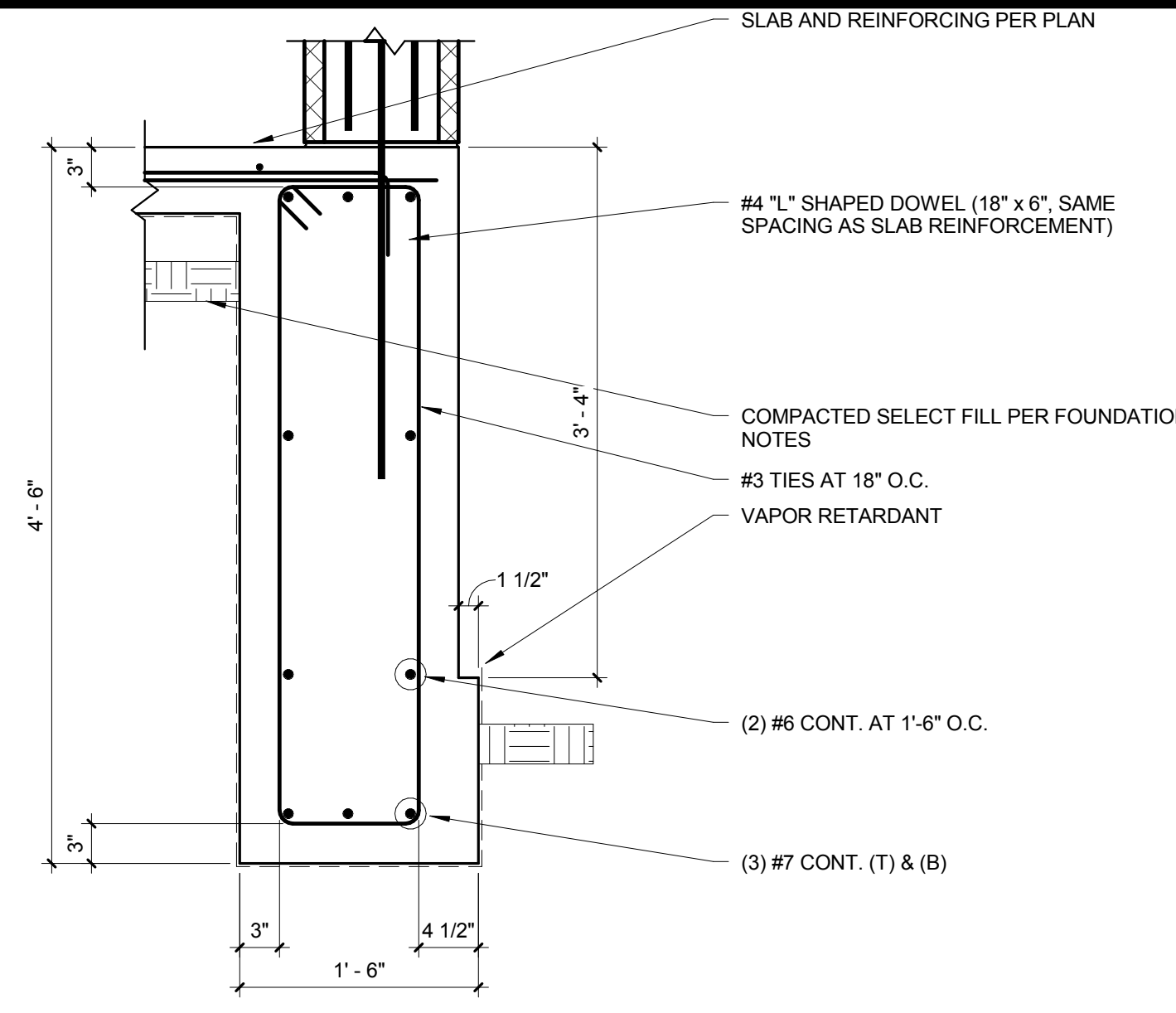
Footing at Interior Slab Drop
1" = 1'-0"

13
S211/S402



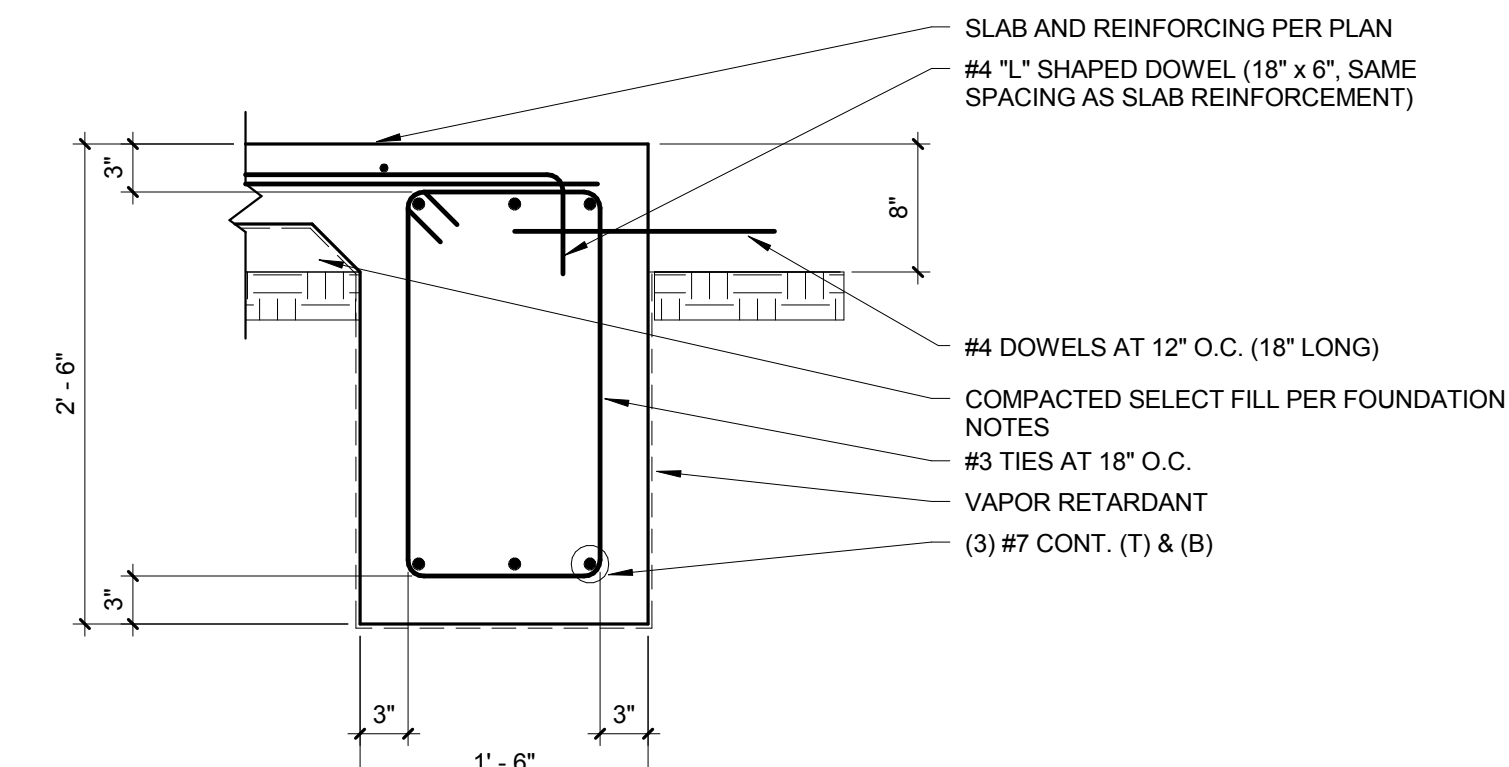
Footing SP, CMU
1" = 1'-0"

9
S211/S402



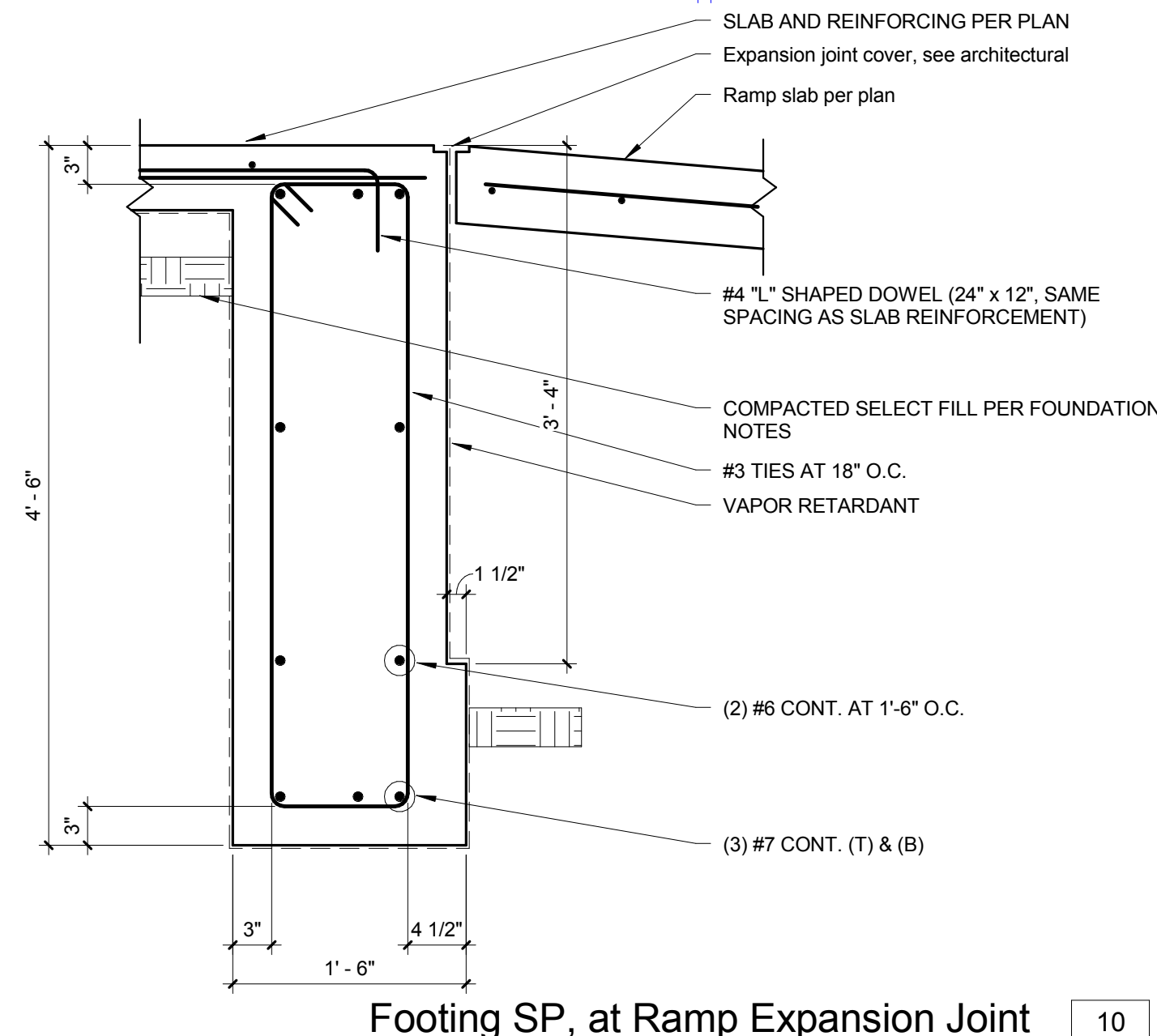
Footing SP, CMU 12"
1" = 1'-0"

5
S211/S402



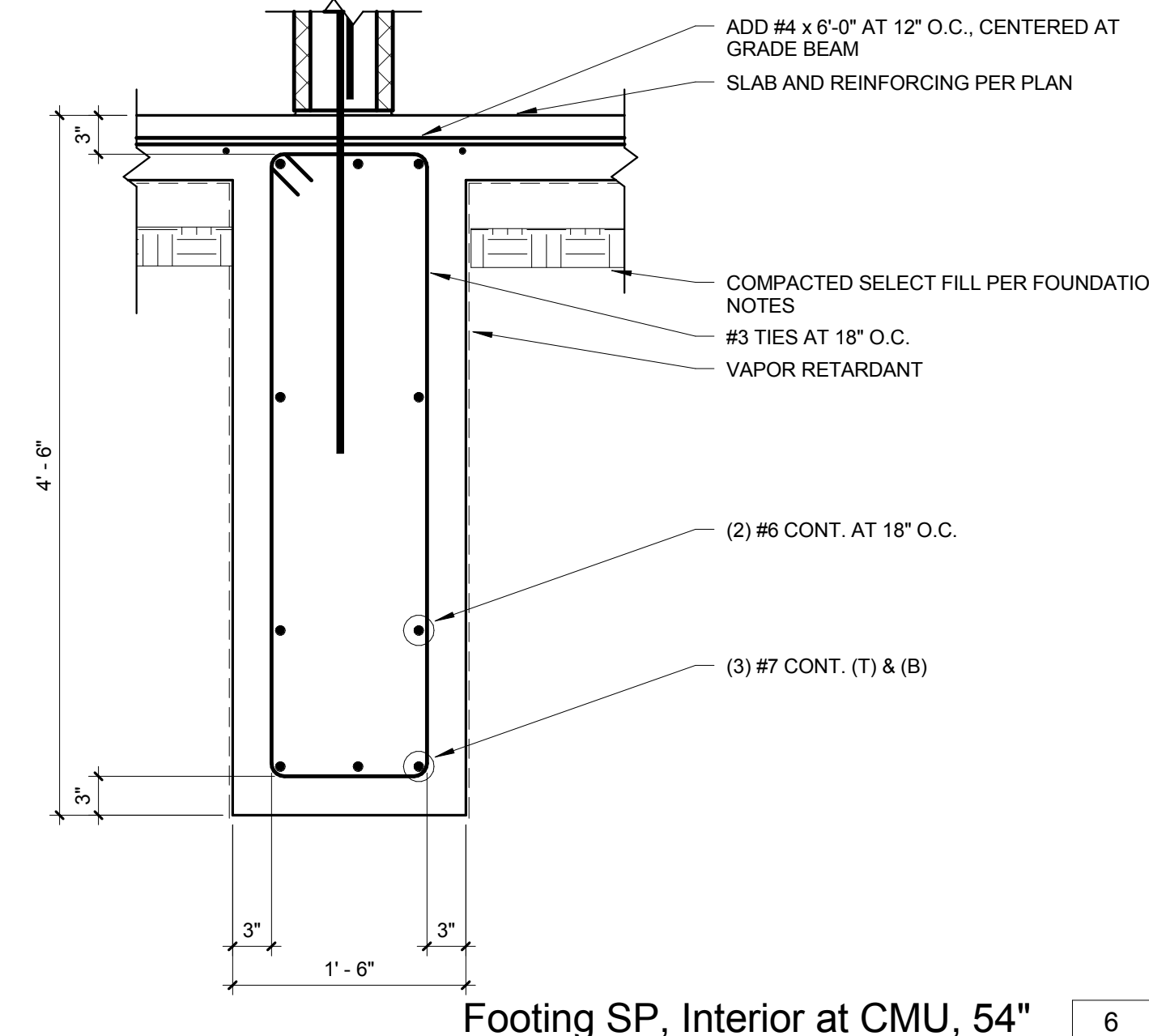
Footing SP, at Exterior
1" = 1'-0"

1
S211/S402



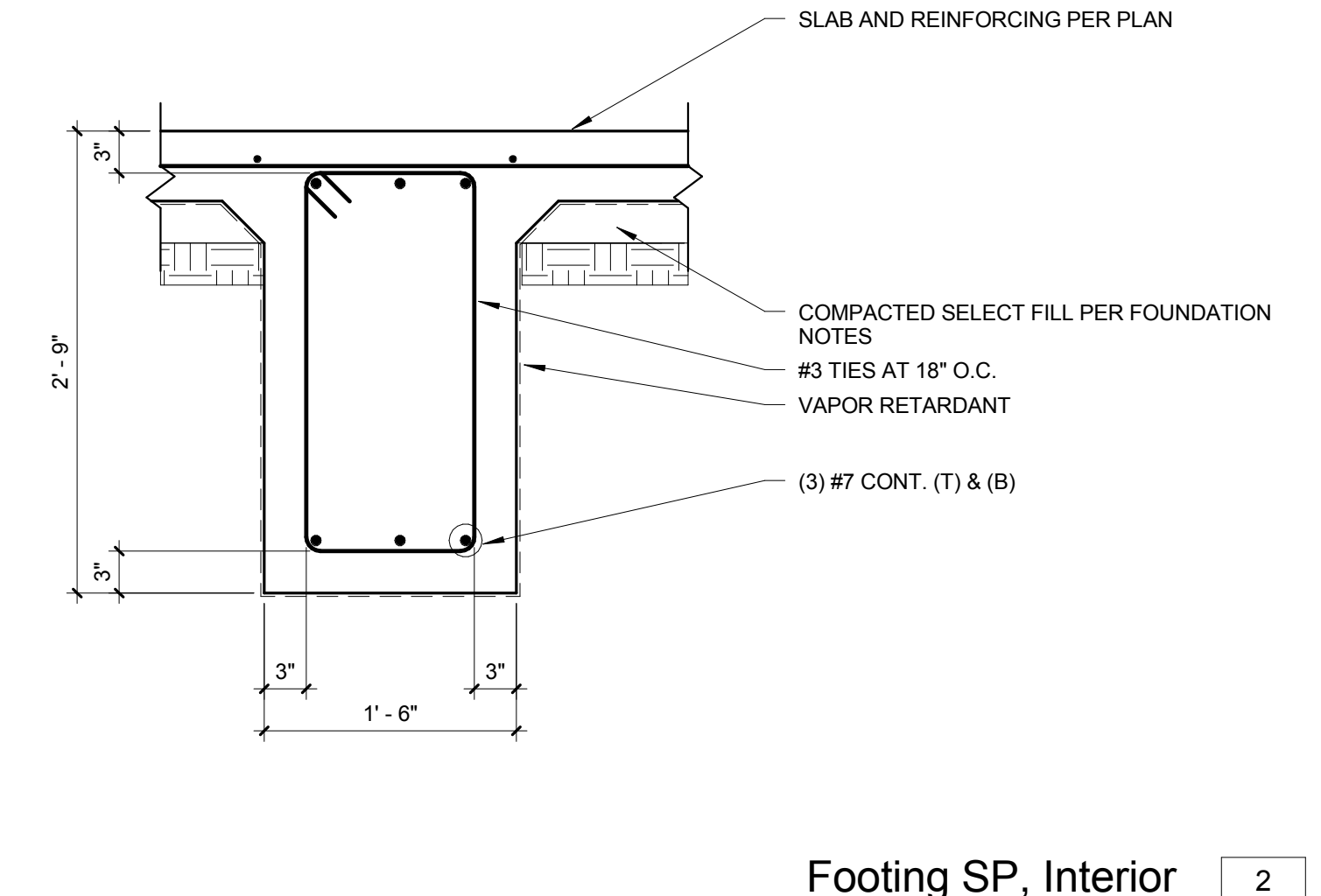
Footing SP, at Ramp Expansion Joint
1" = 1'-0"

10
S211/S402



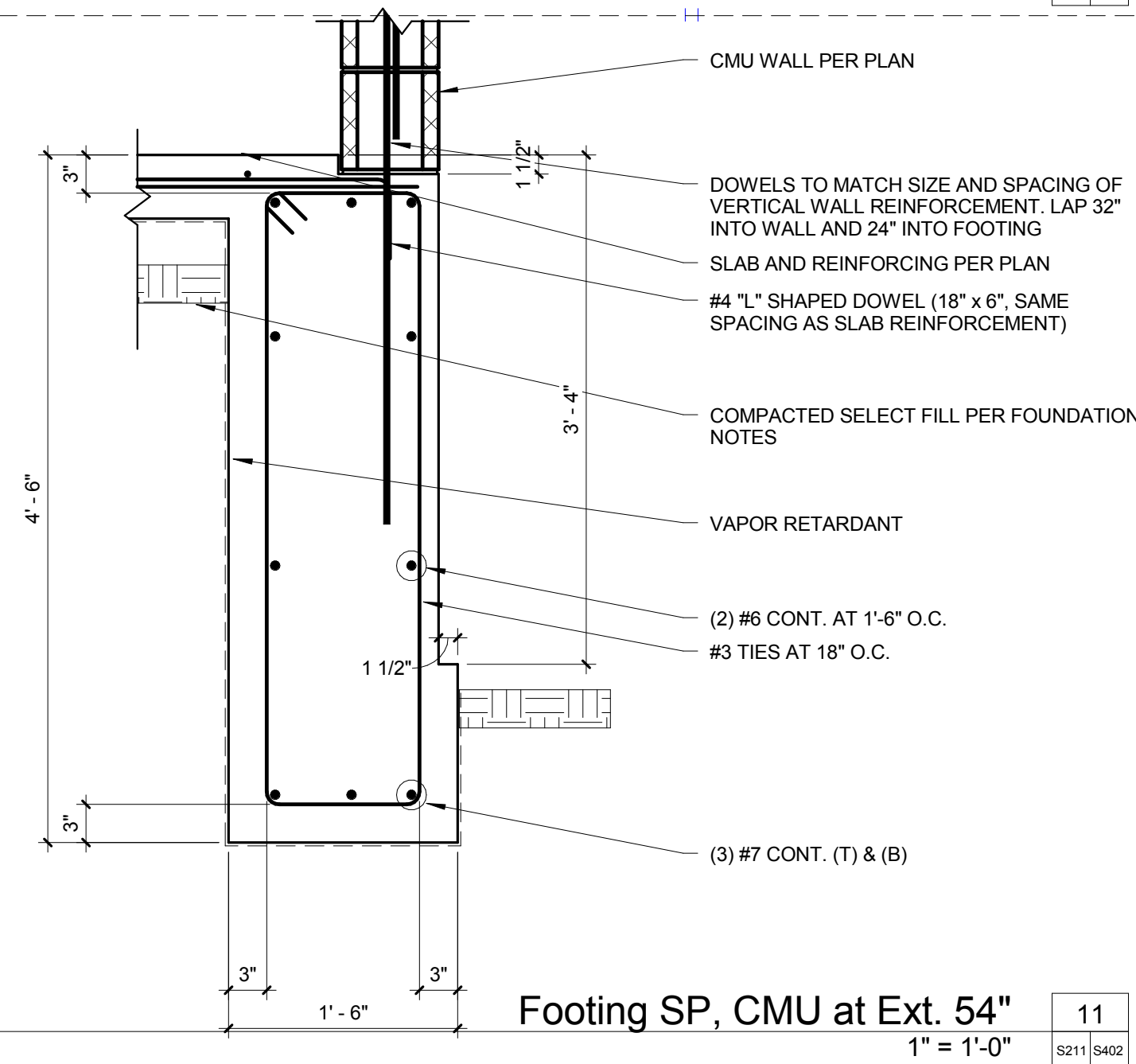
Footing SP, Interior at CMU, 54"
1" = 1'-0"

6
S402



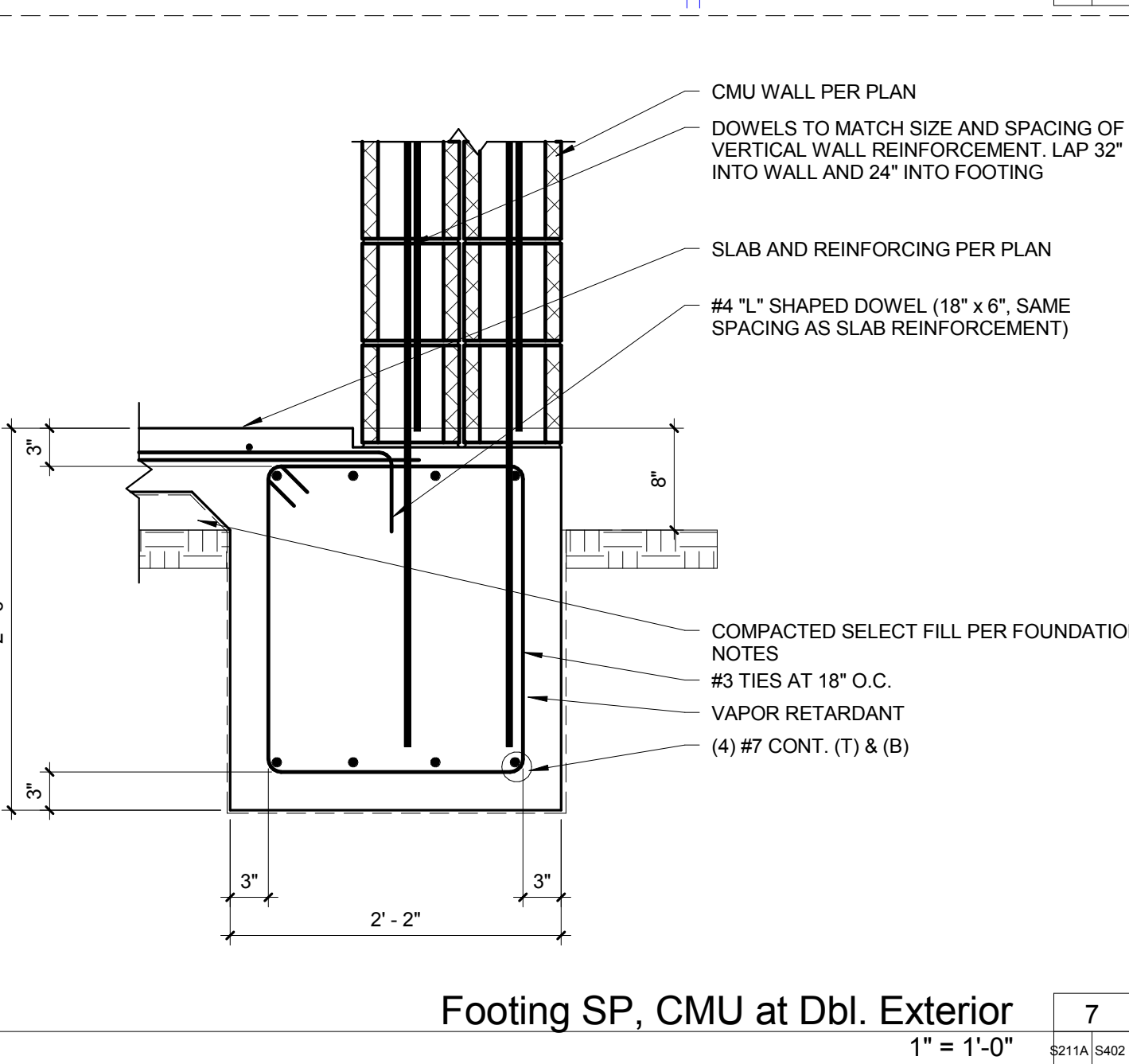
Footing SP, Interior
1" = 1'-0"

2
S211/S402



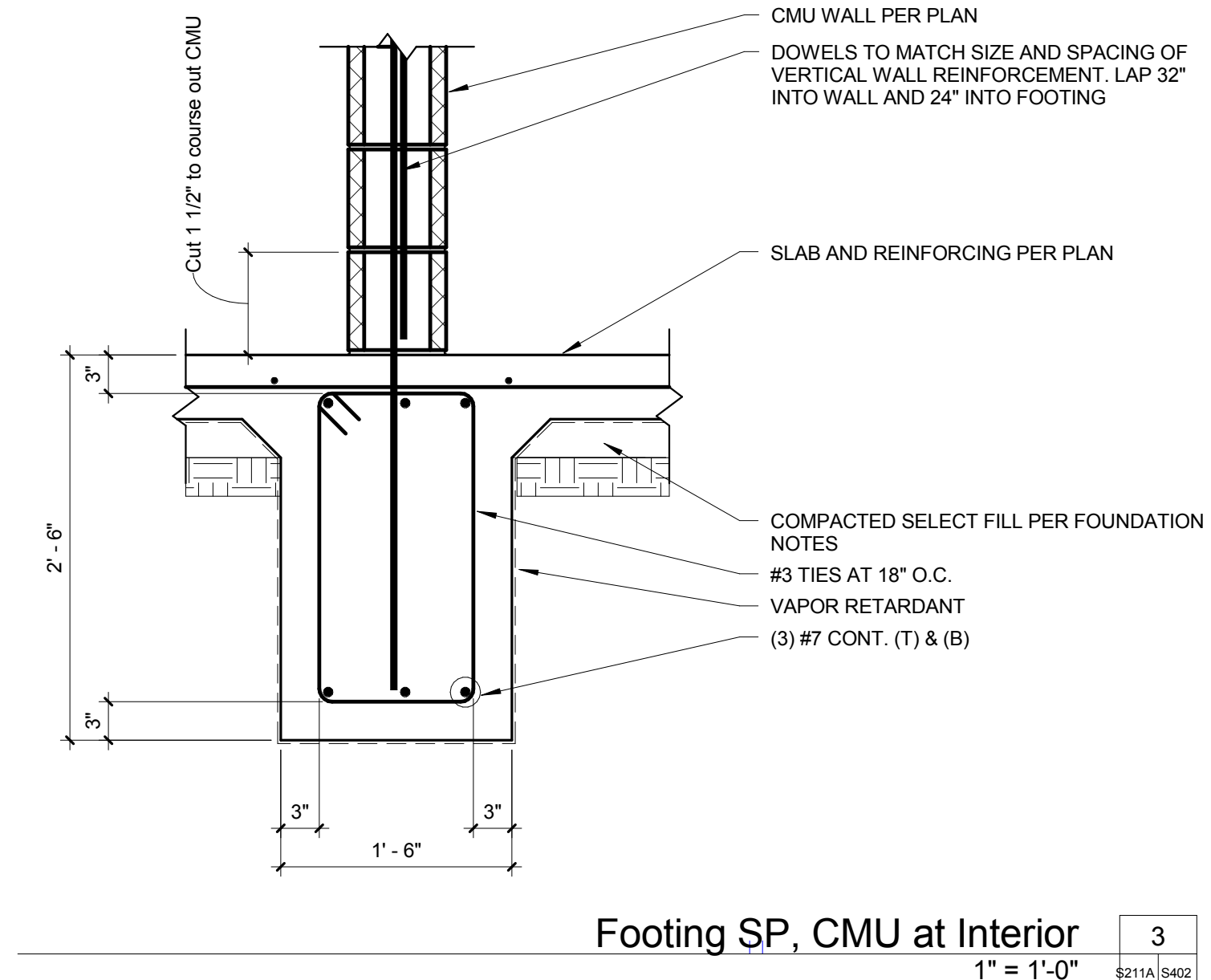
Footing SP, CMU at Ext. 54"
1" = 1'-0"

11
S211/S402



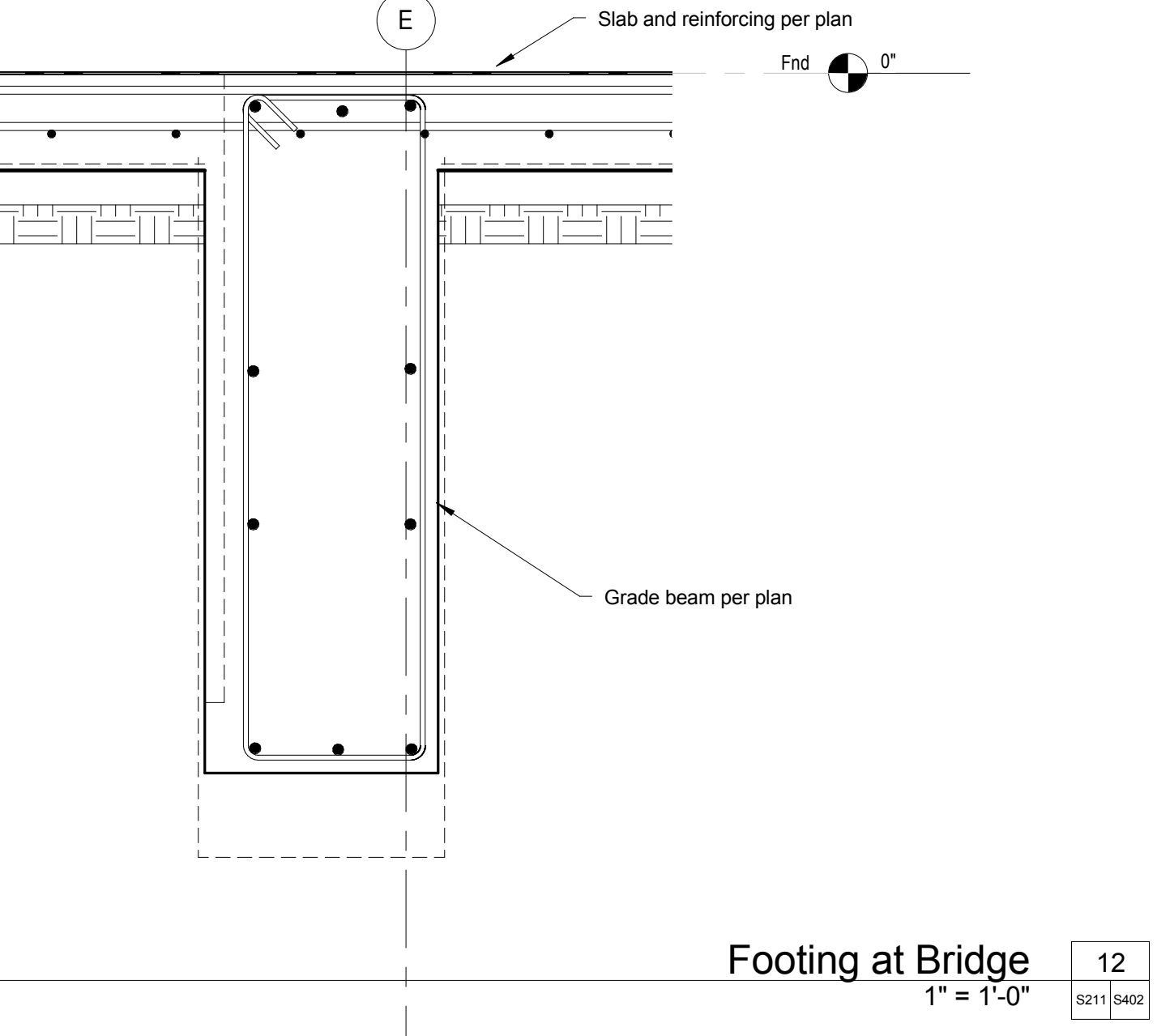
Footing SP, CMU at Dbl. Exterior
1" = 1'-0"

7
S211A/S402



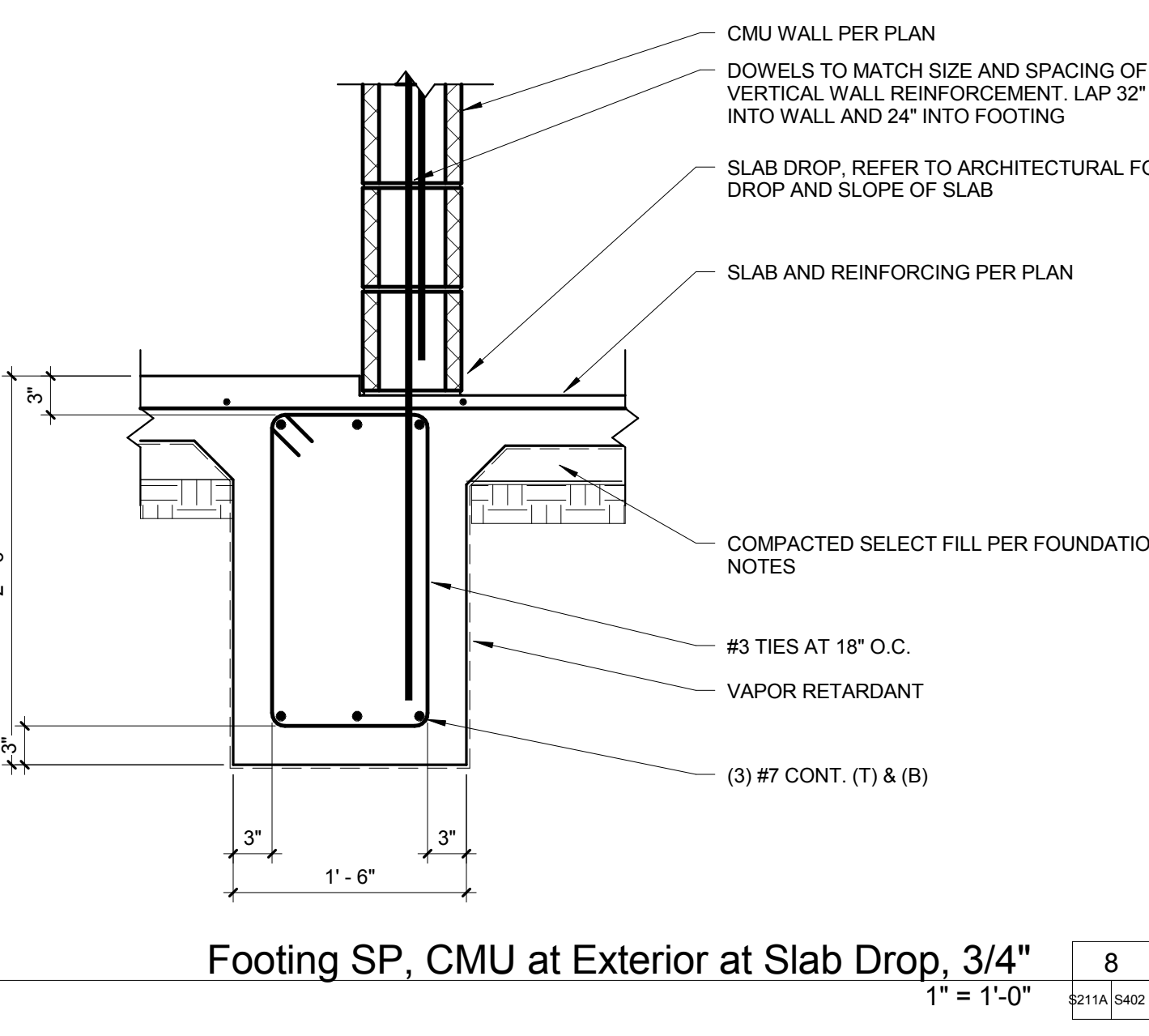
Footing SP, CMU at Interior
1" = 1'-0"

3
S211A/S402



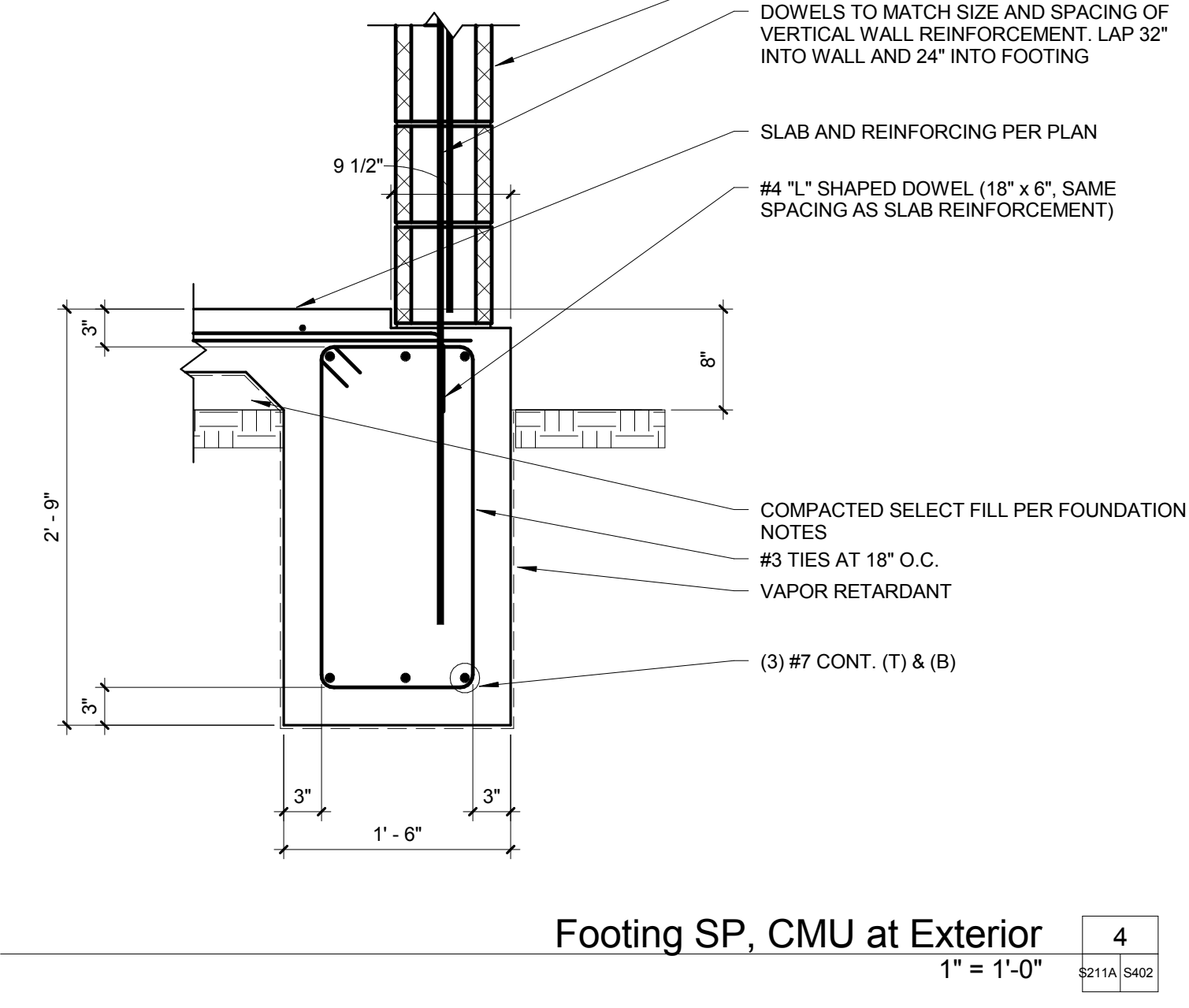
Footing at Bridge
1" = 1'-0"

12
S211/S402



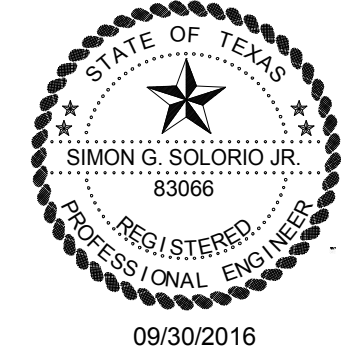
Footing SP, CMU at Exterior at Slab Drop, 3/4"
1" = 1'-0"

8
S211A/S402



Footing SP, CMU at Exterior
1" = 1'-0"

4
S211A/S402



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Sheet Title
Foundation Details

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

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Sheet NO. S402

Set Number

REVISED:

Date 09/30/2016

Drawn by: Author

Project No. 15152

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615 W. TANDY ROAD
BROWNSVILLE, TEXAS 78201
(956) 350-9196 FAX
ARCHRUIZ@GOL.COM

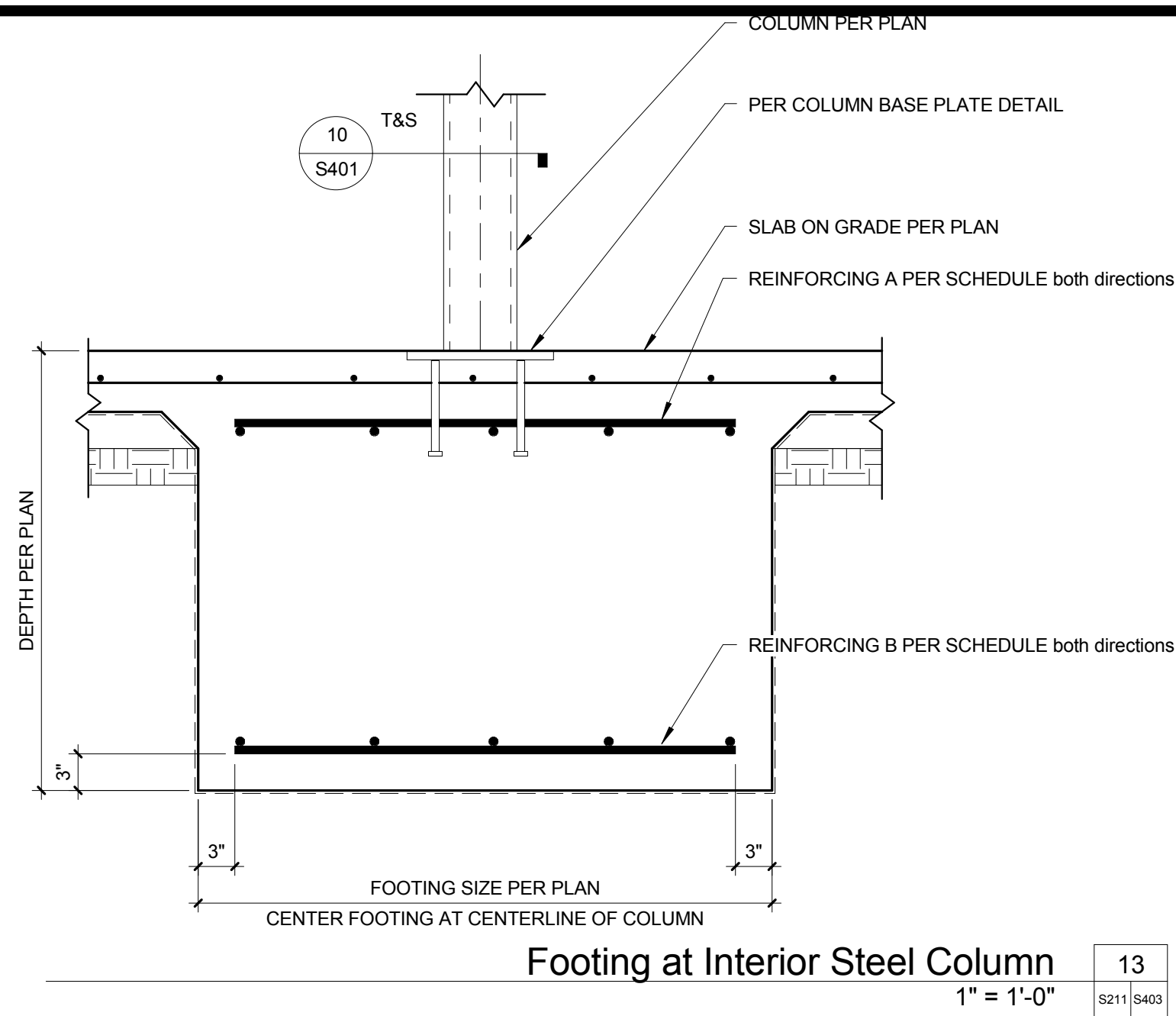
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BROWNSVILLE, TEXAS 78201
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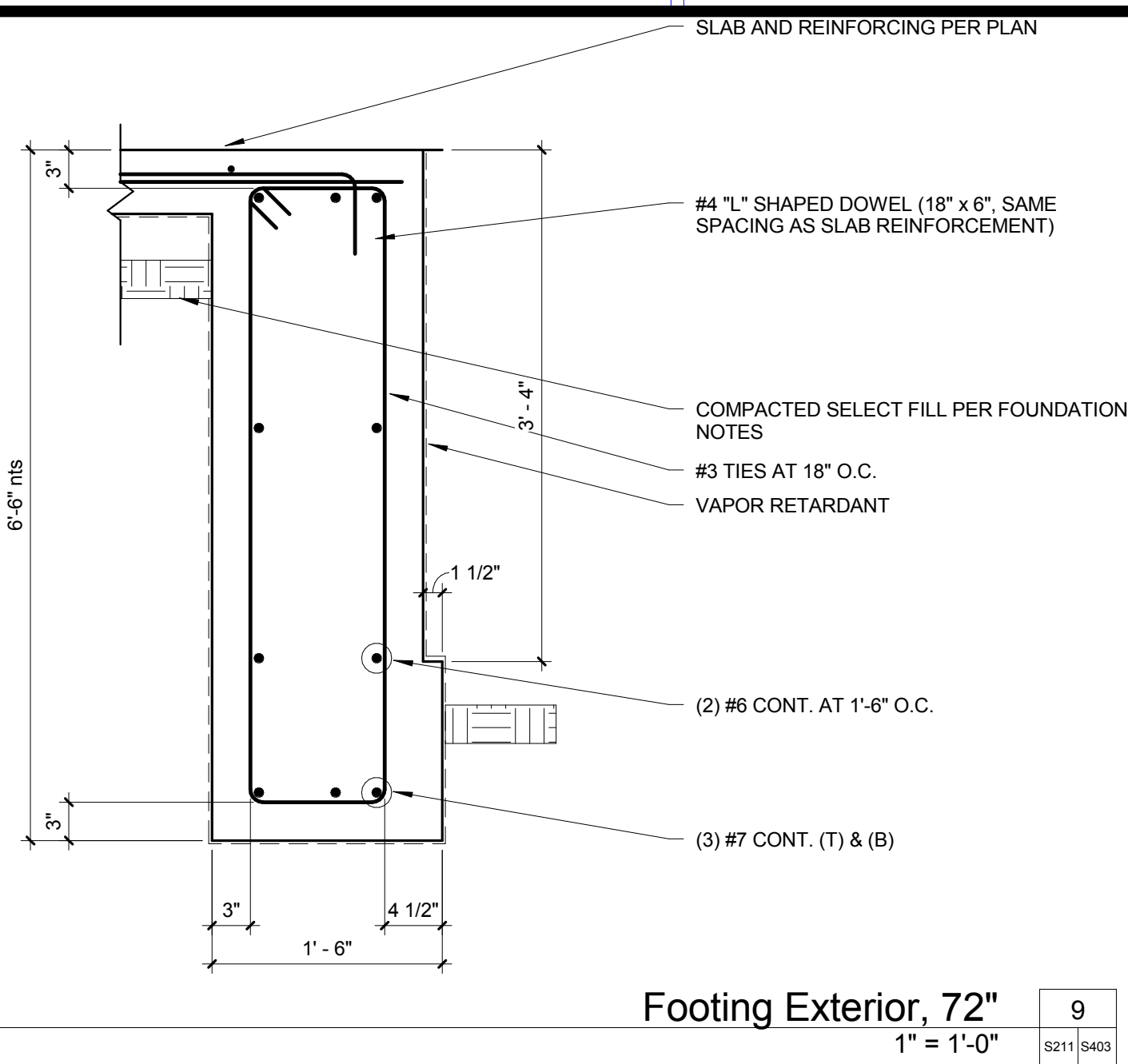
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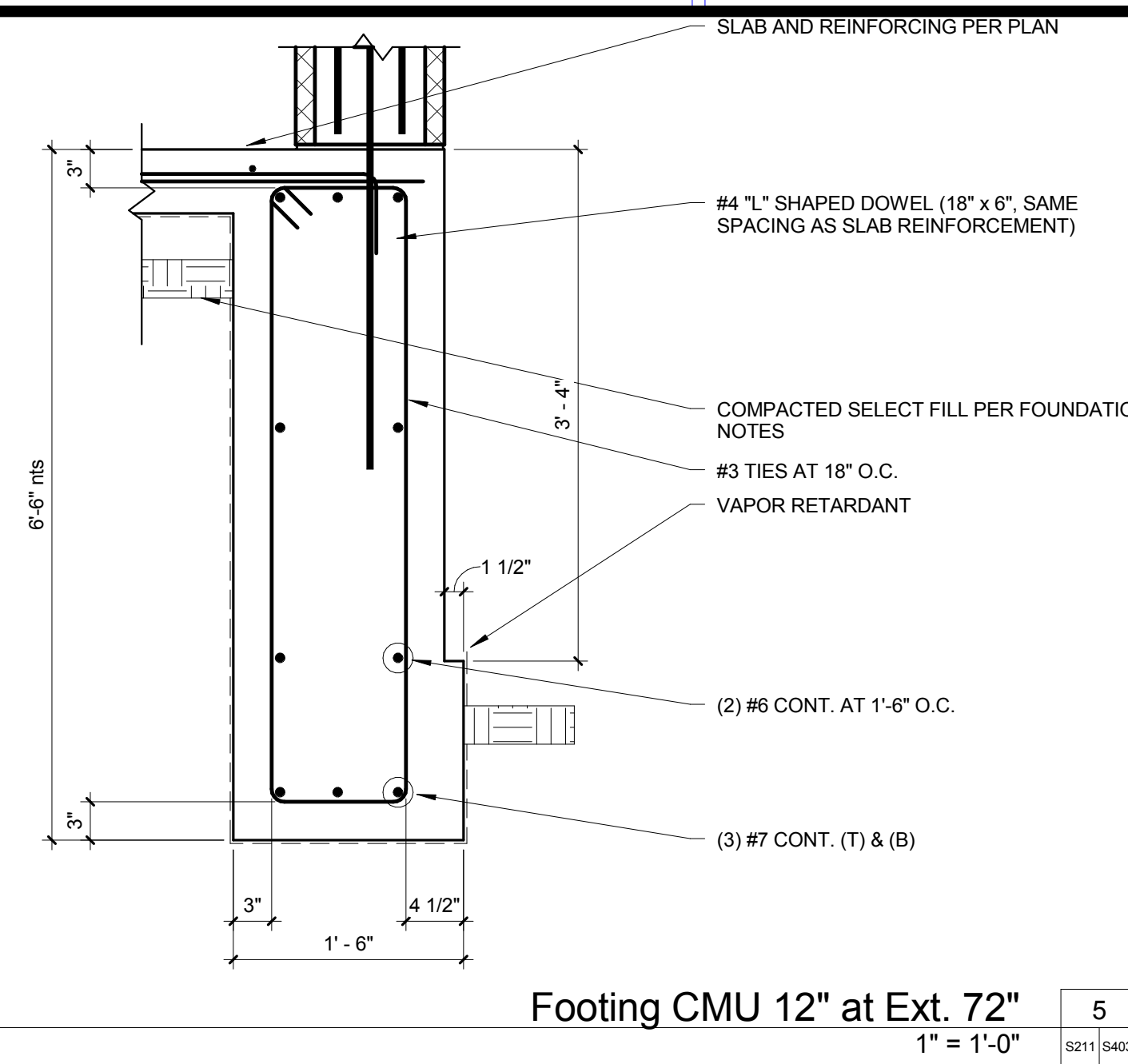
Footings at Interior Steel Column

1" = 1'-0"



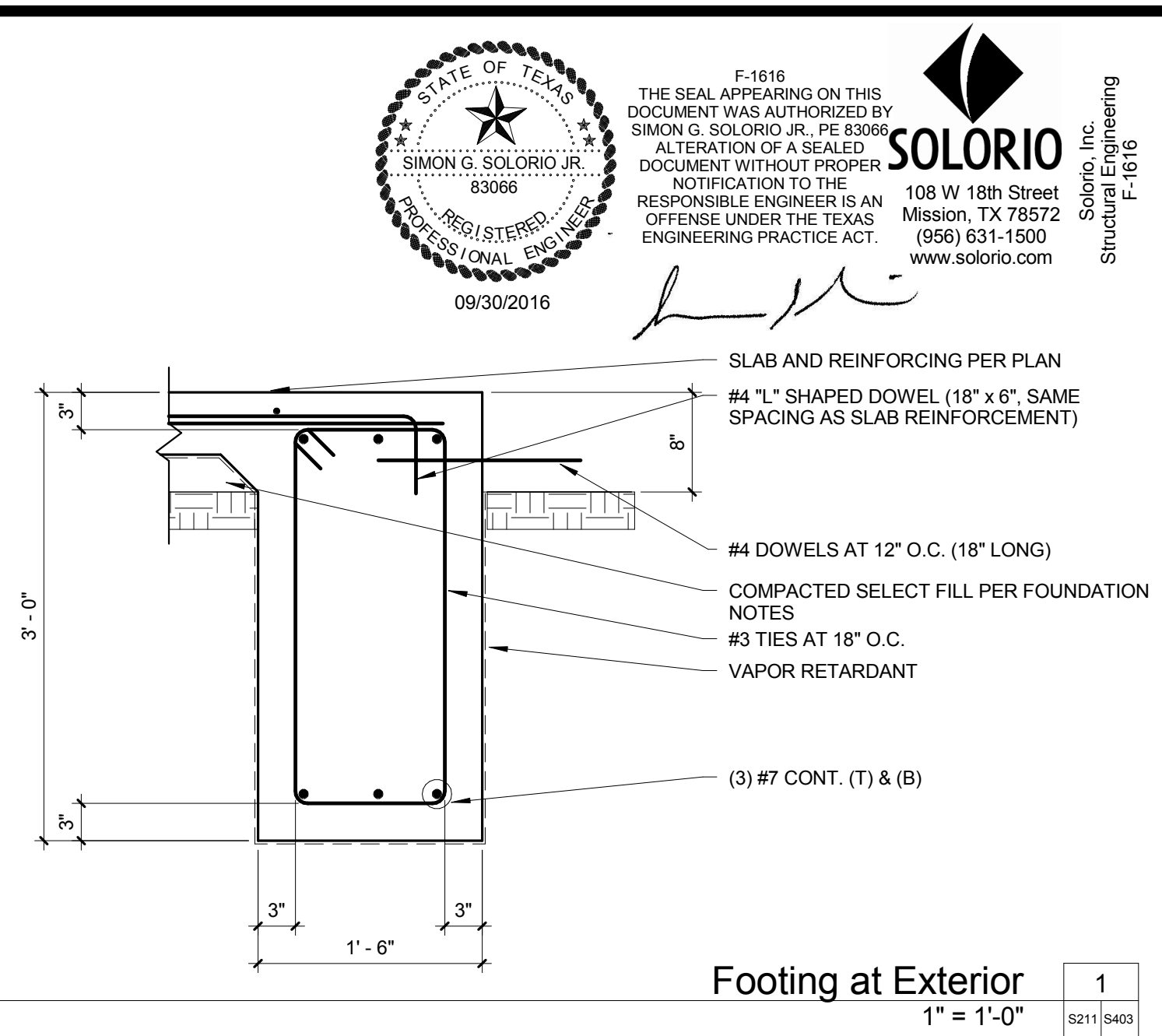
Footings Exterior, 72"

1" = 1'-0"



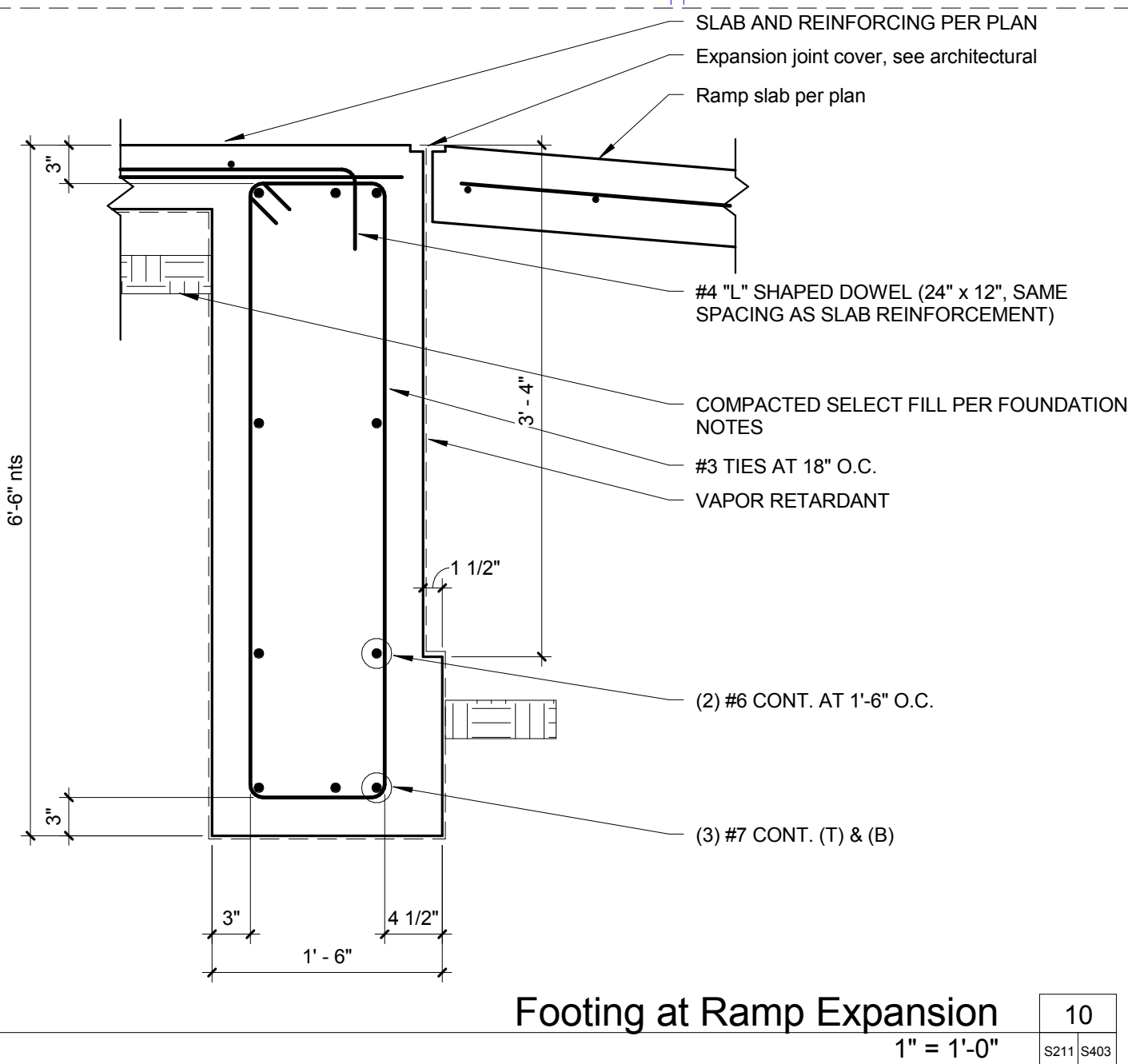
Footings CMU 12" at Ext. 72"

1" = 1'-0"



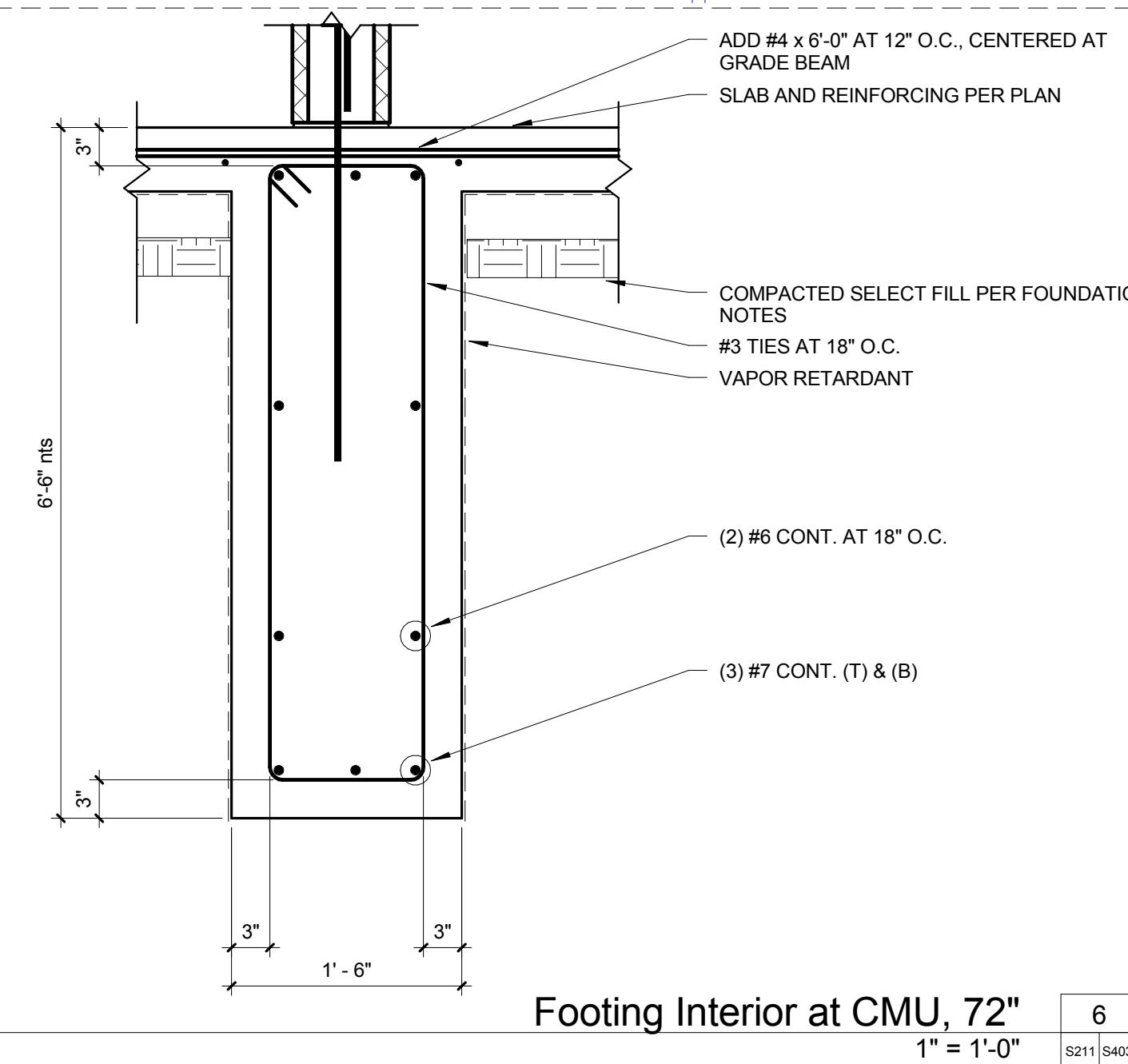
Footings at Exterior

1" = 1'-0"



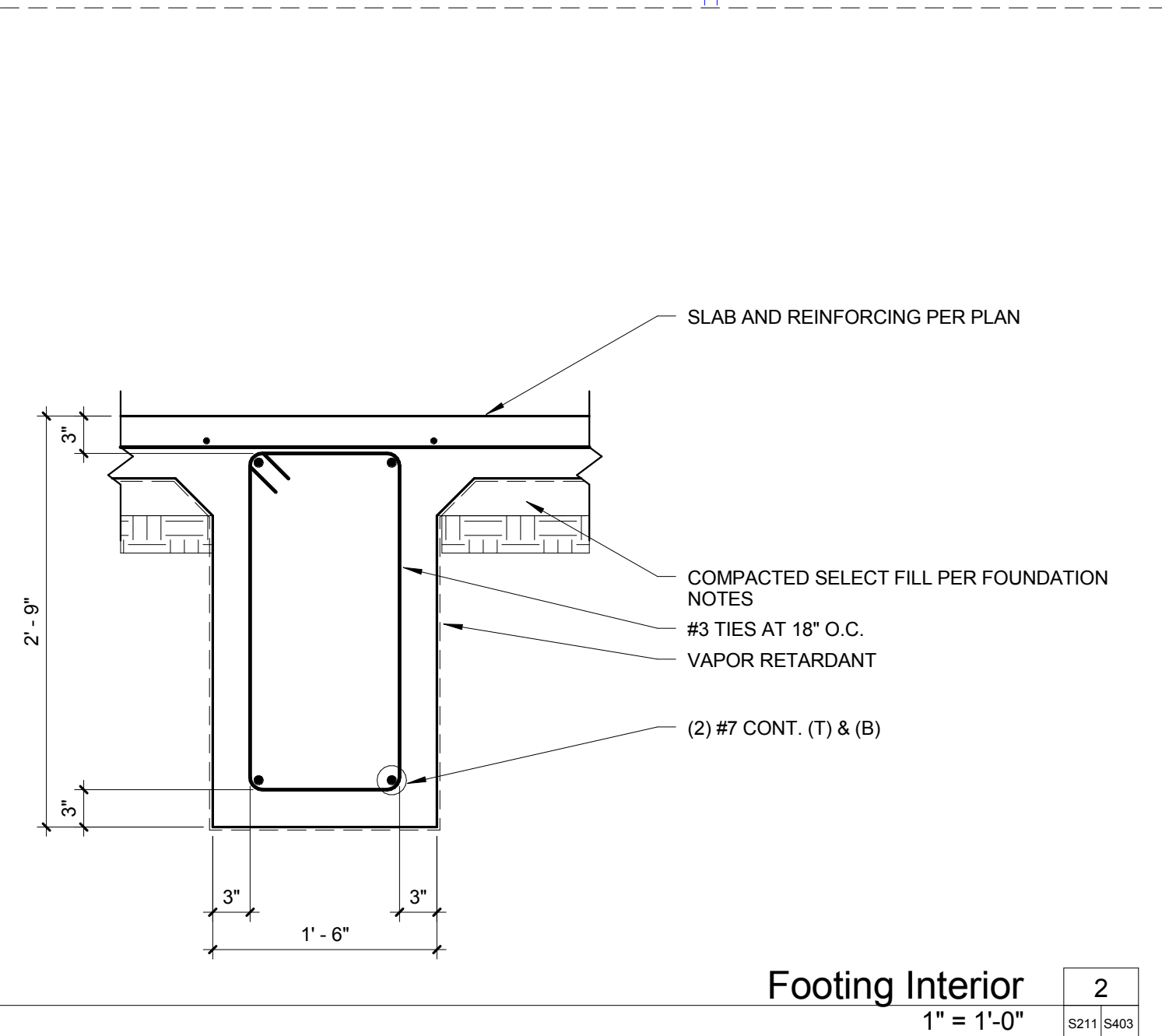
Footings at Ramp Expansion

1" = 1'-0"



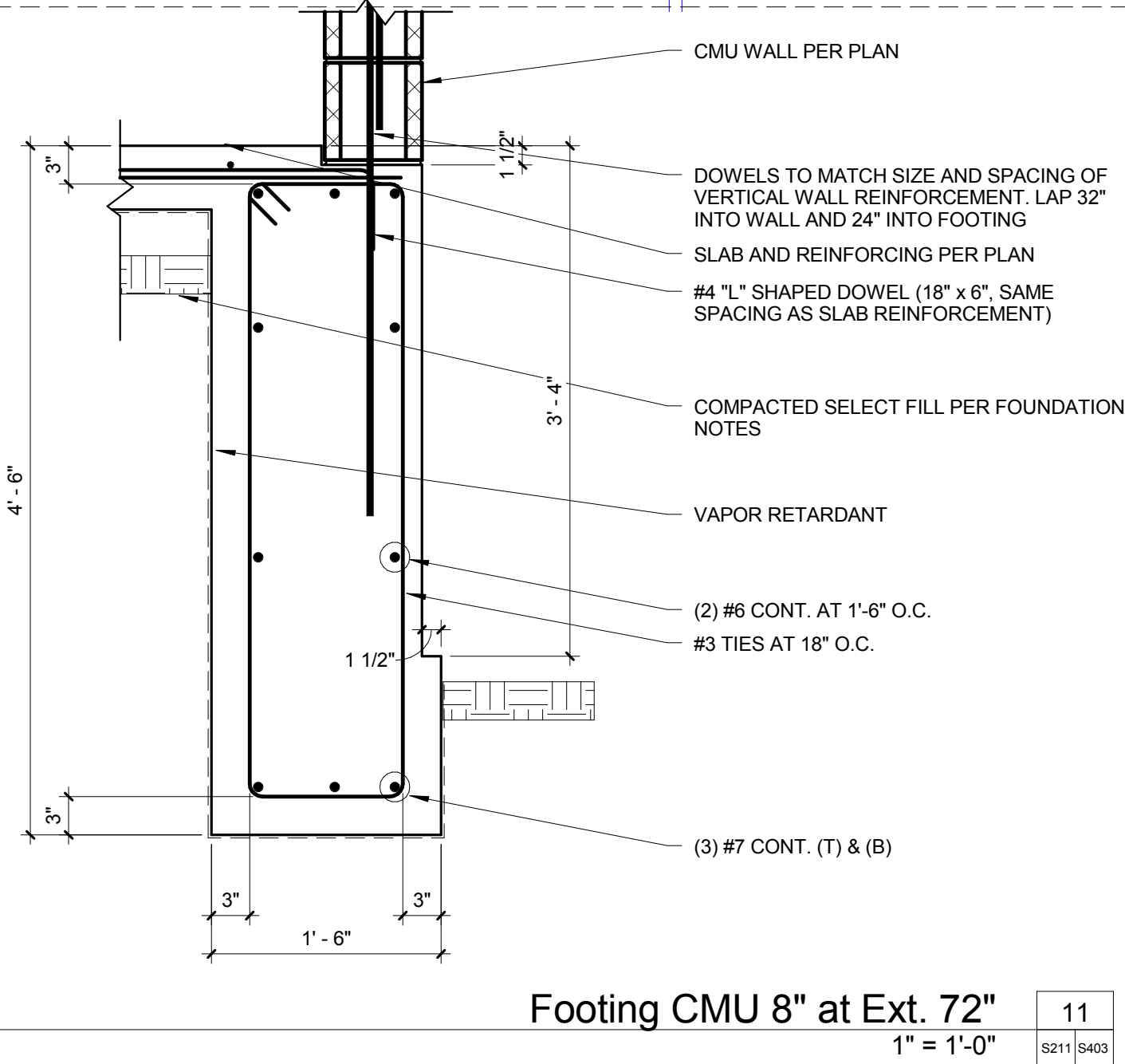
Footings Interior at CMU, 72"

1" = 1'-0"



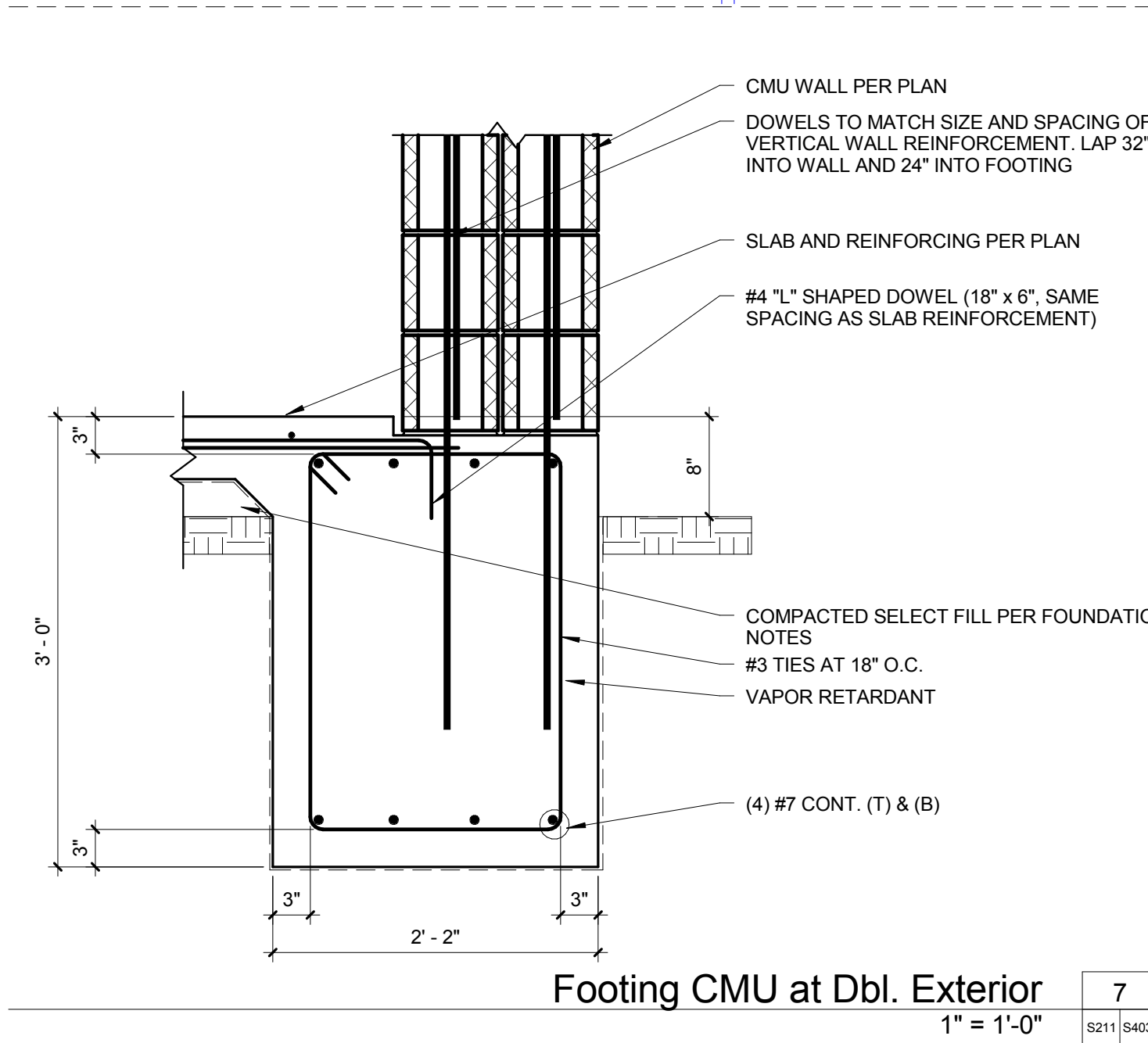
Footings Interior

1" = 1'-0"



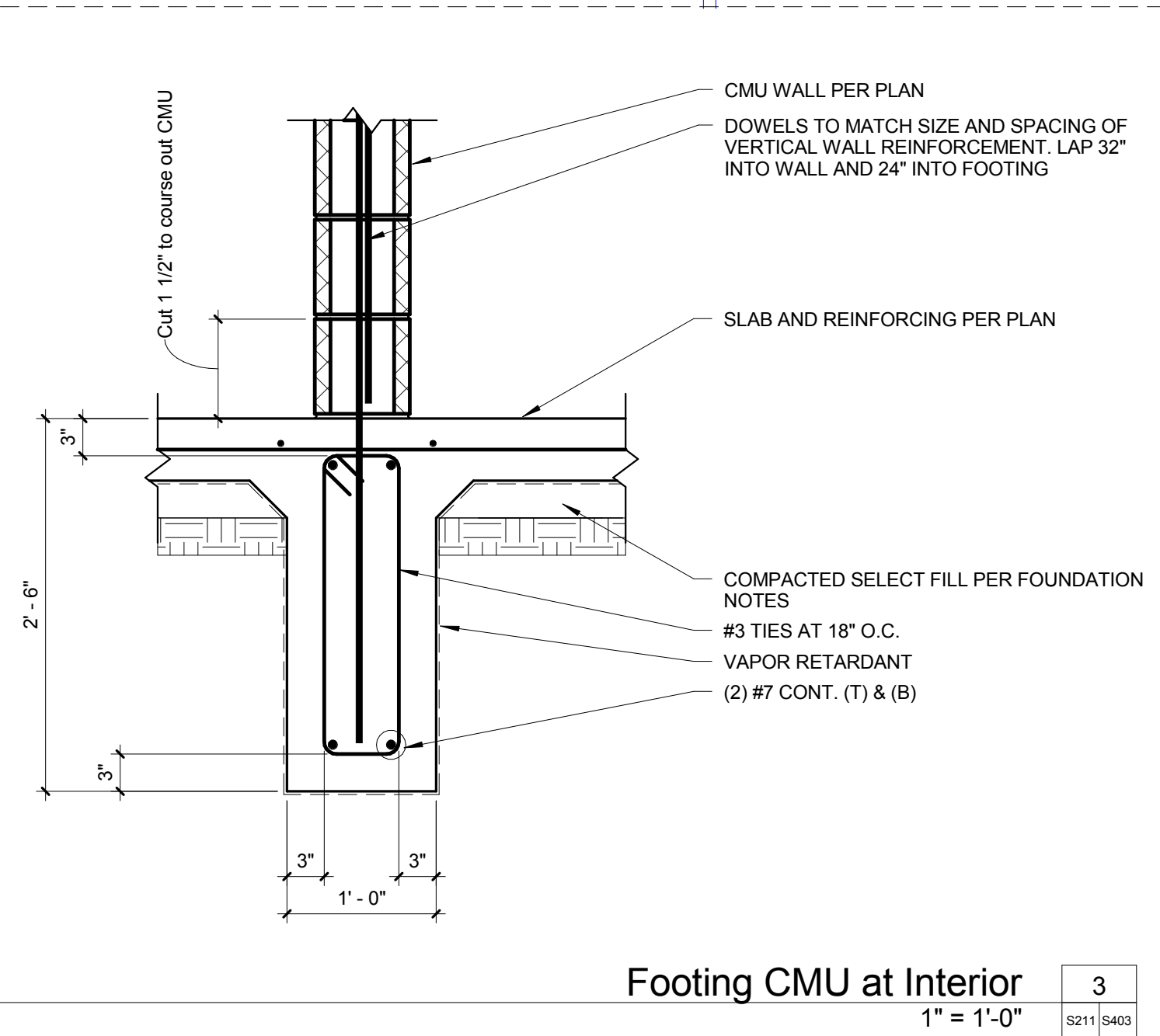
Footings CMU 8" at Ext. 72"

1" = 1'-0"



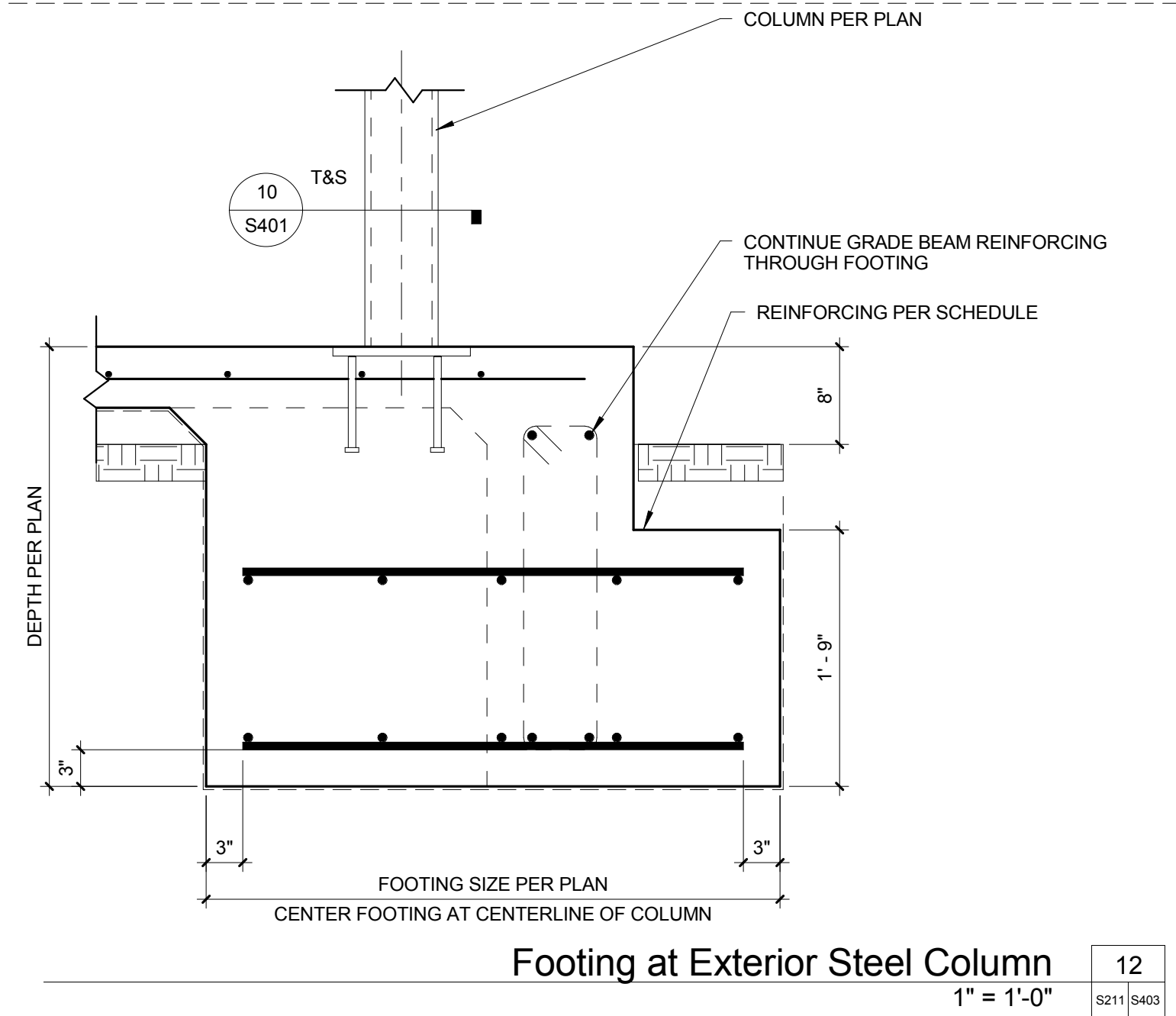
Footings CMU at Dbl. Exterior

1" = 1'-0"



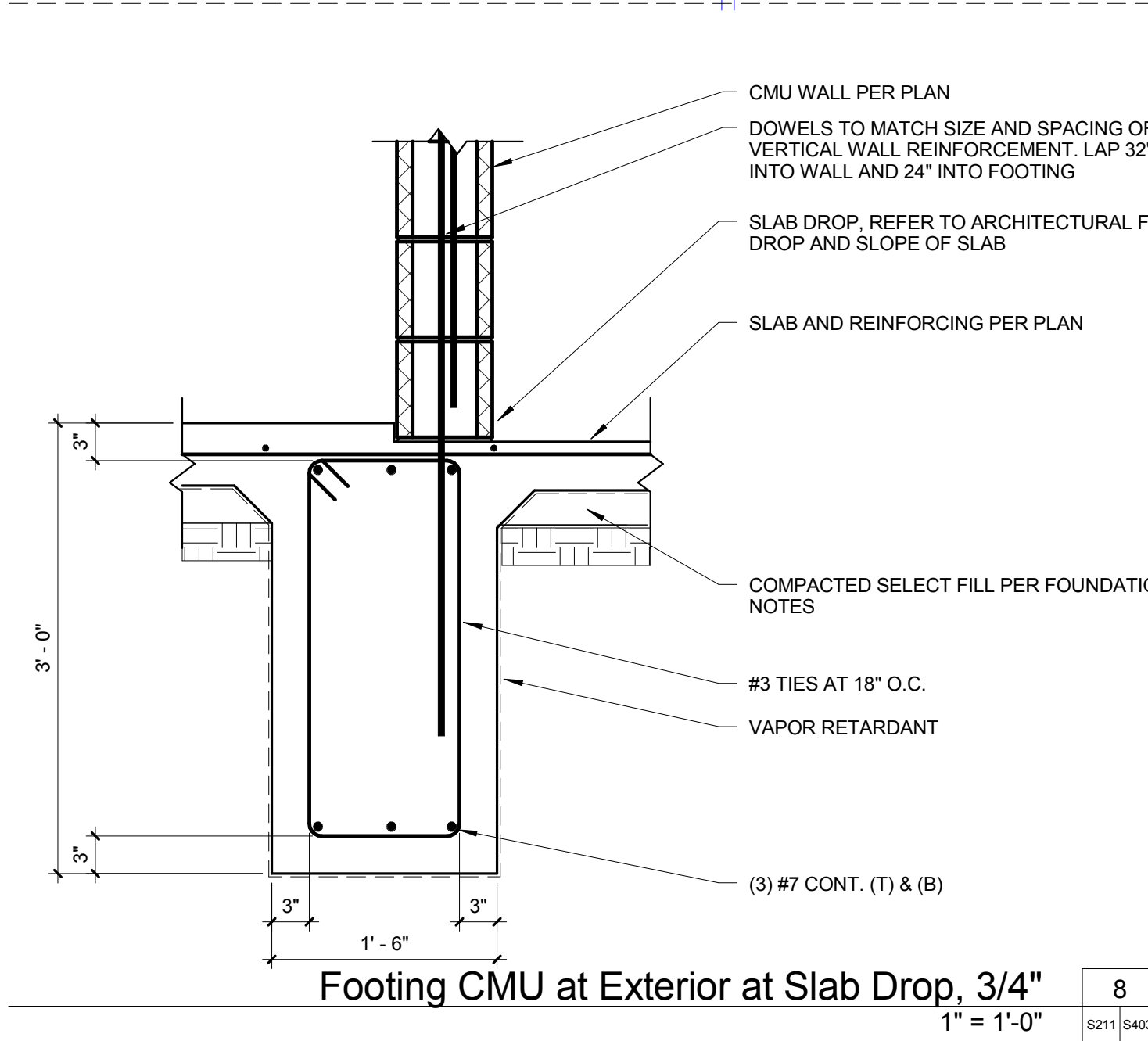
Footings CMU at Interior

1" = 1'-0"



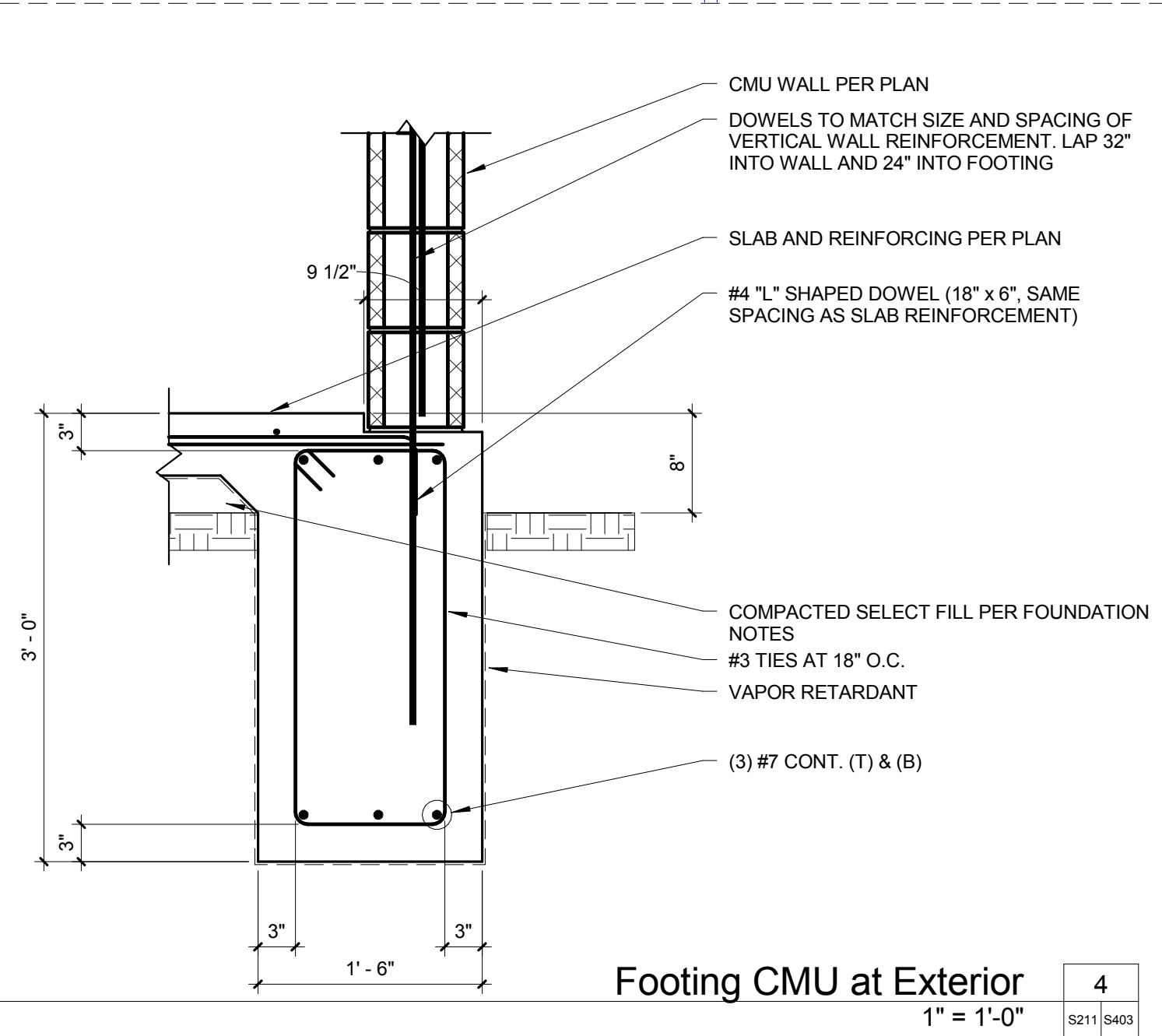
Footings at Exterior Steel Column

1" = 1'-0"



Footings CMU at Exterior at Slab Drop, 3/4"

1" = 1'-0"



Footings CMU at Exterior

1" = 1'-0"

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Sheet Title

Foundation Details

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS

PORT of
BROWNSVILLE
WORLD CLASS

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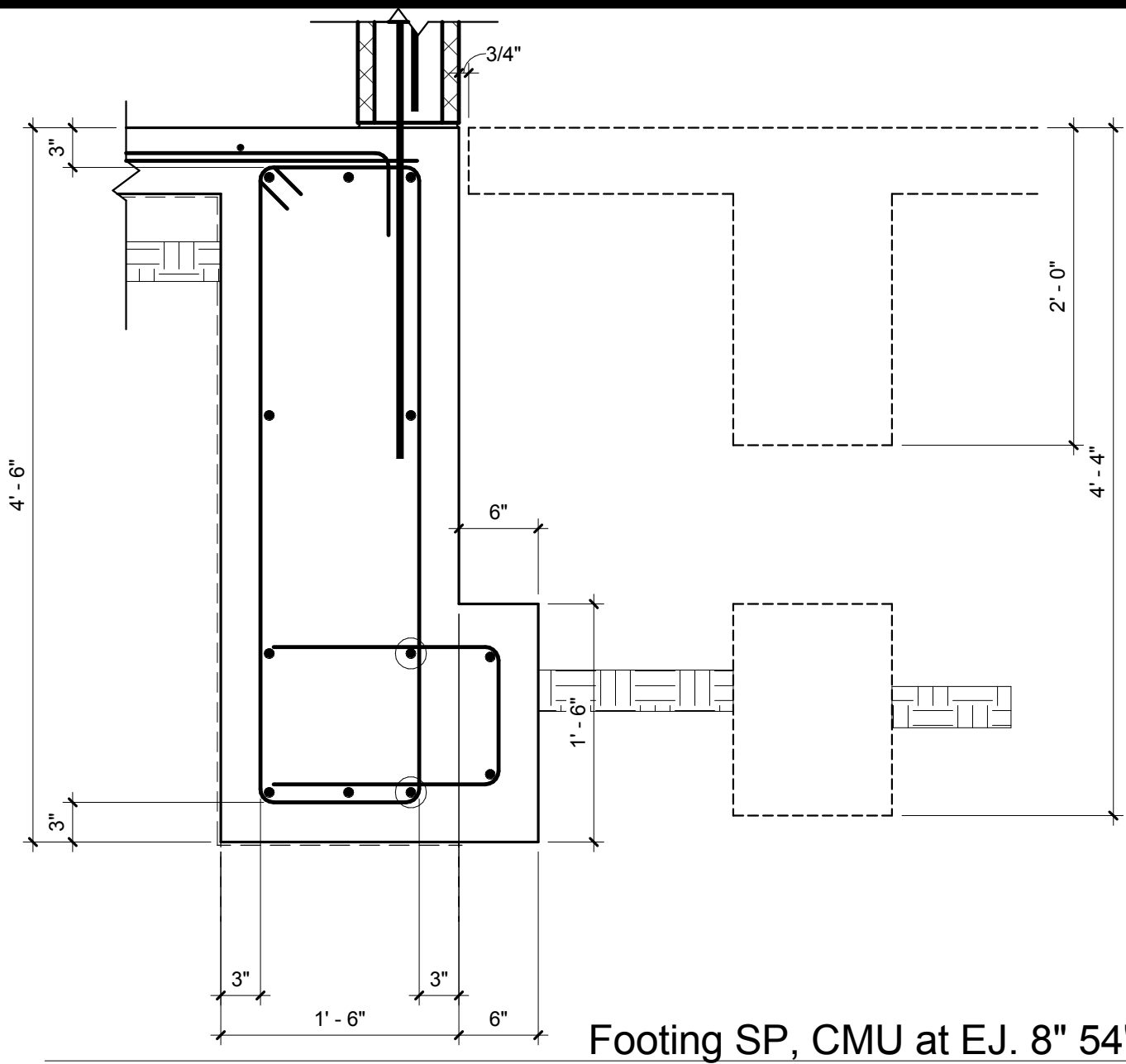
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Drawn by: Author
Project No.: 15152

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Number

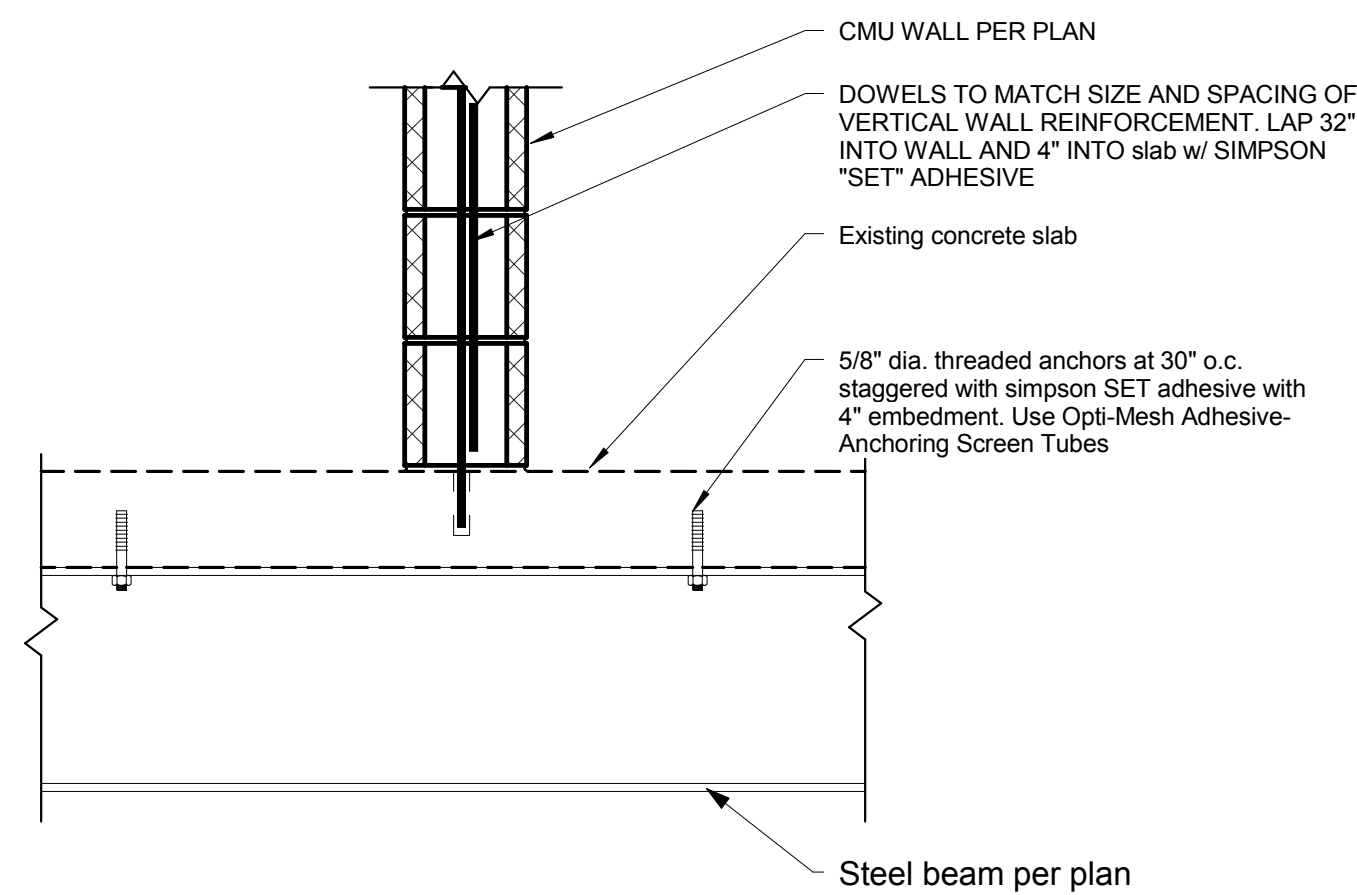
SHEET
NO. S403

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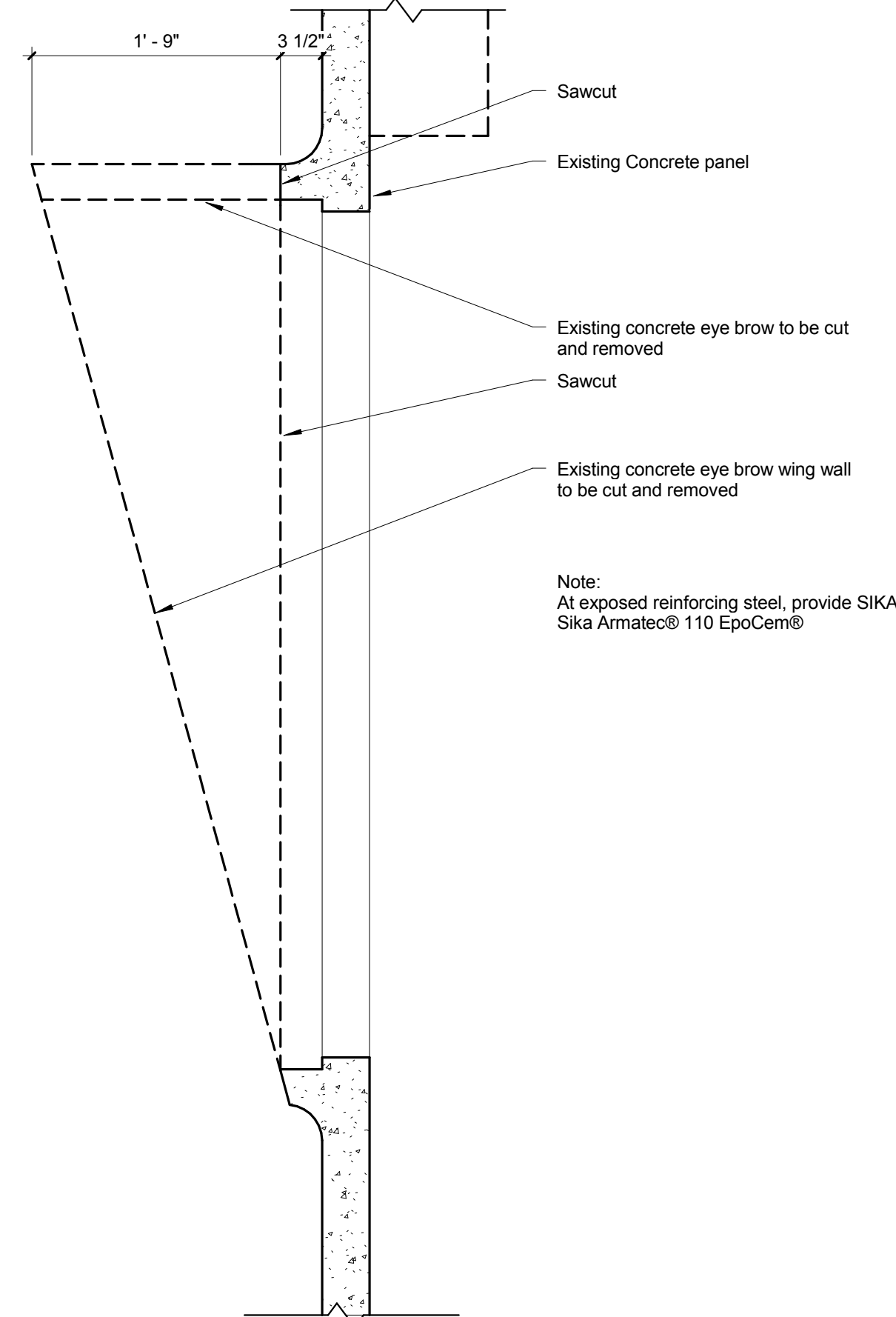
Footing SP, CMU at EJ. 8" 54"
1" = 1'-0"

13
S211 | S404



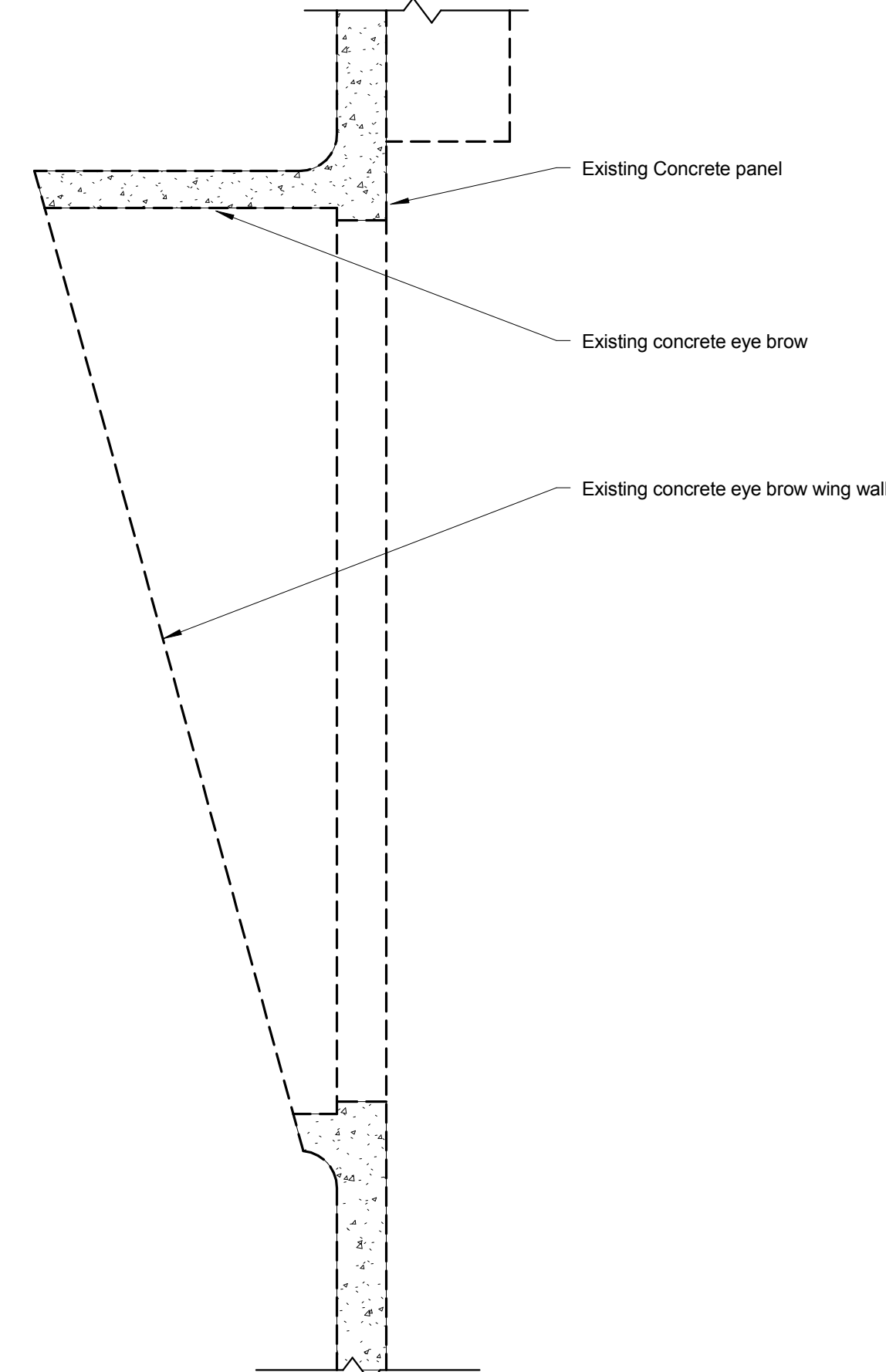
Footing at Interior Non Bearing CMU to Existing
1" = 1'-0"

14
S211 | S404



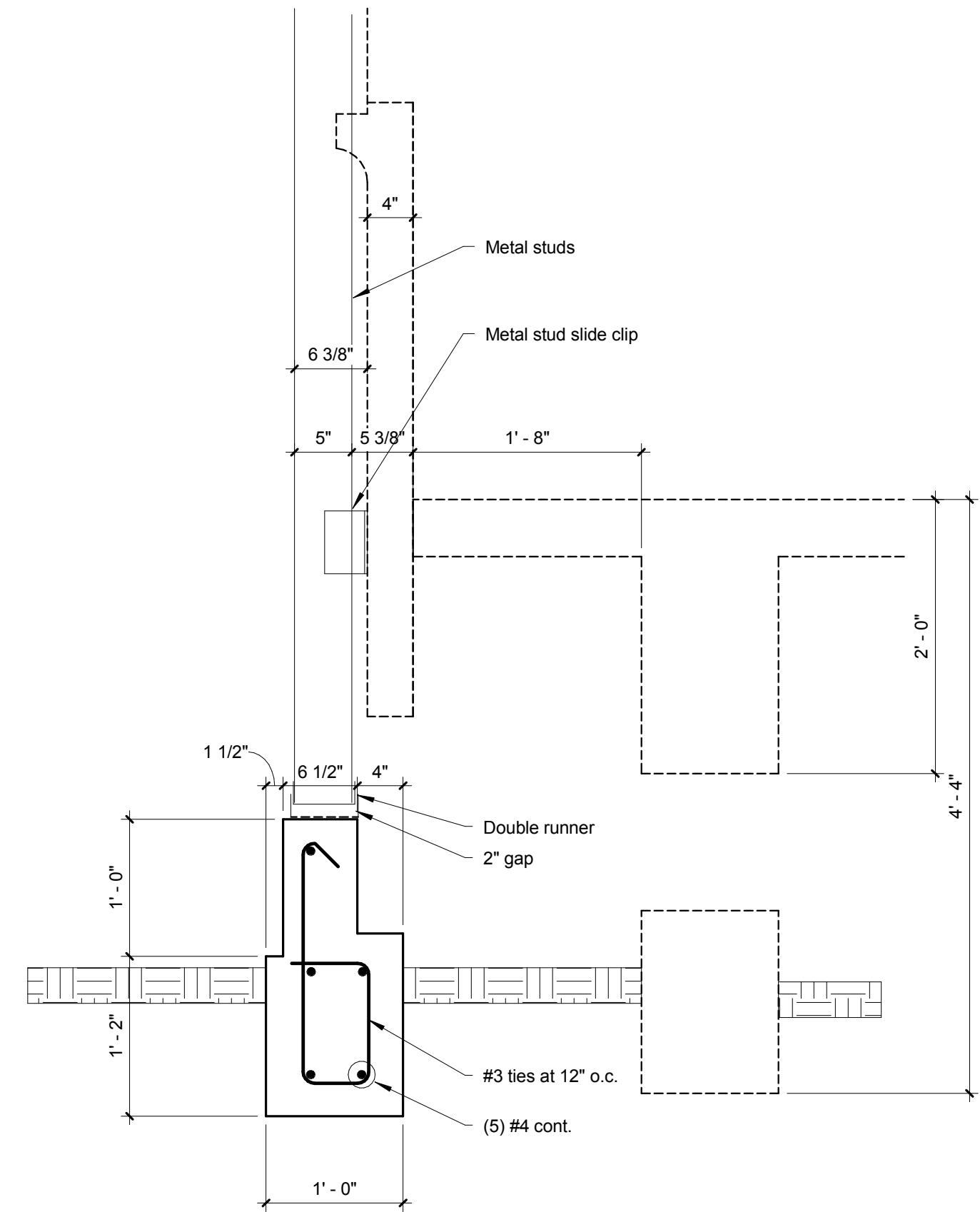
Partial Demolition of eyebrow
1" = 1'-0"

10
S404



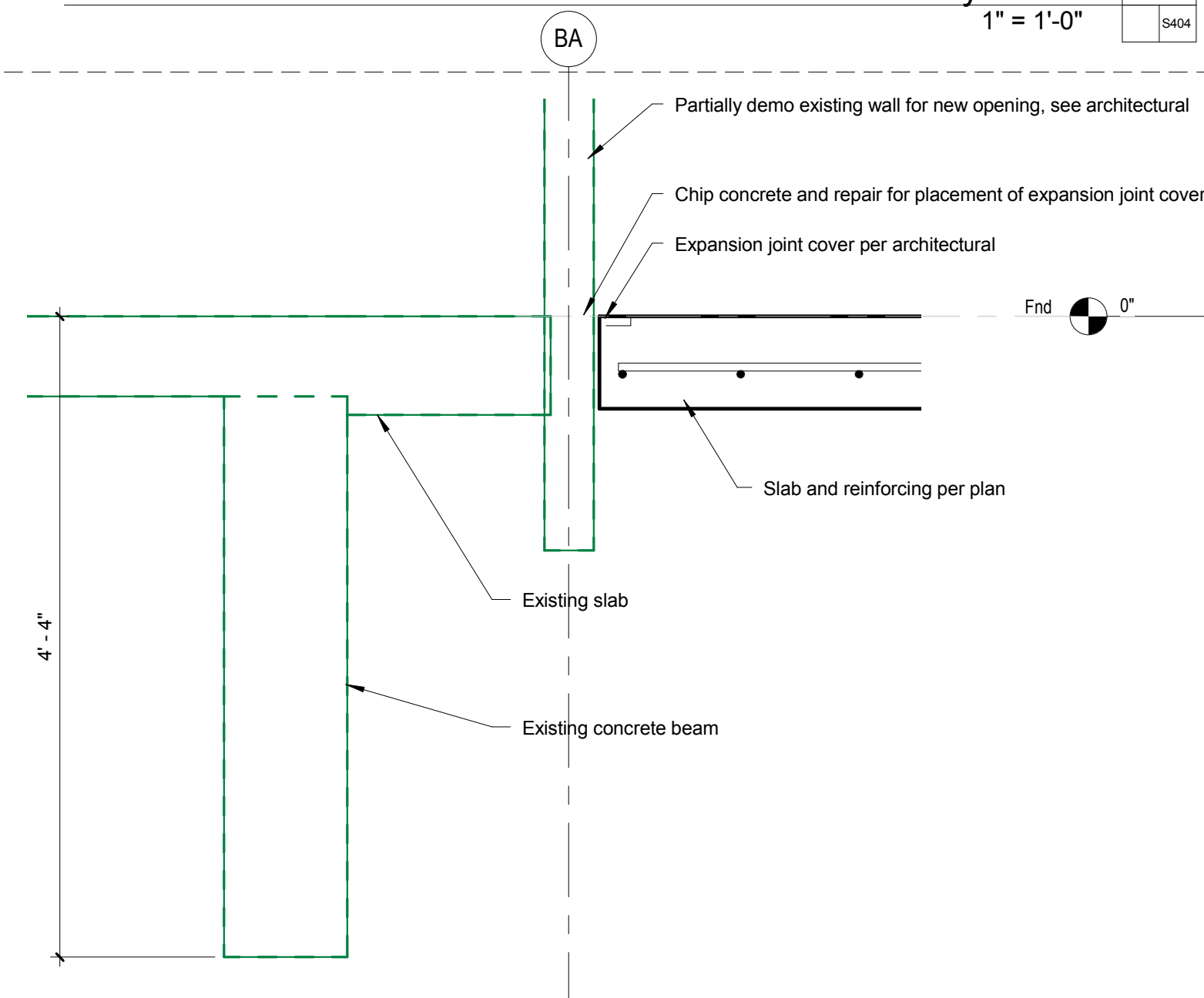
Existing eyebrow
1" = 1'-0"

6
S404



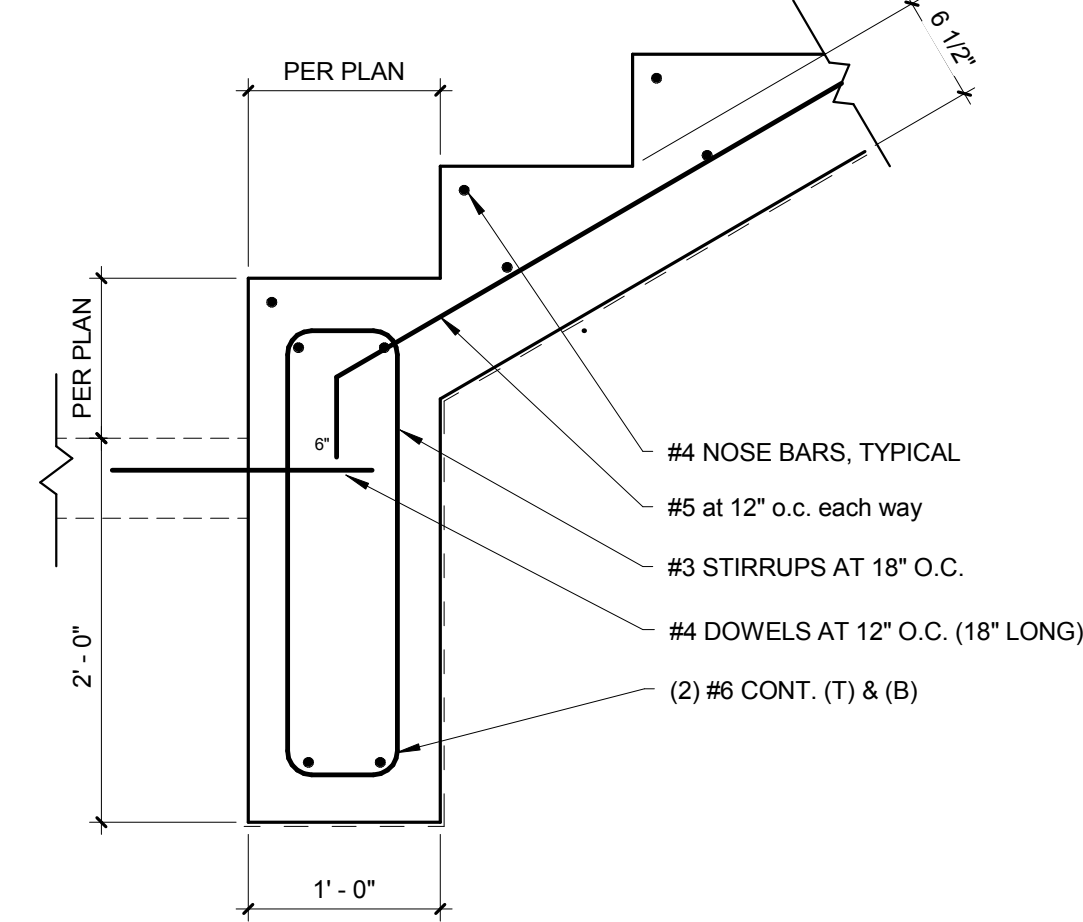
Exterior Footing at Existing
1" = 1'-0"

2
S211 | S404



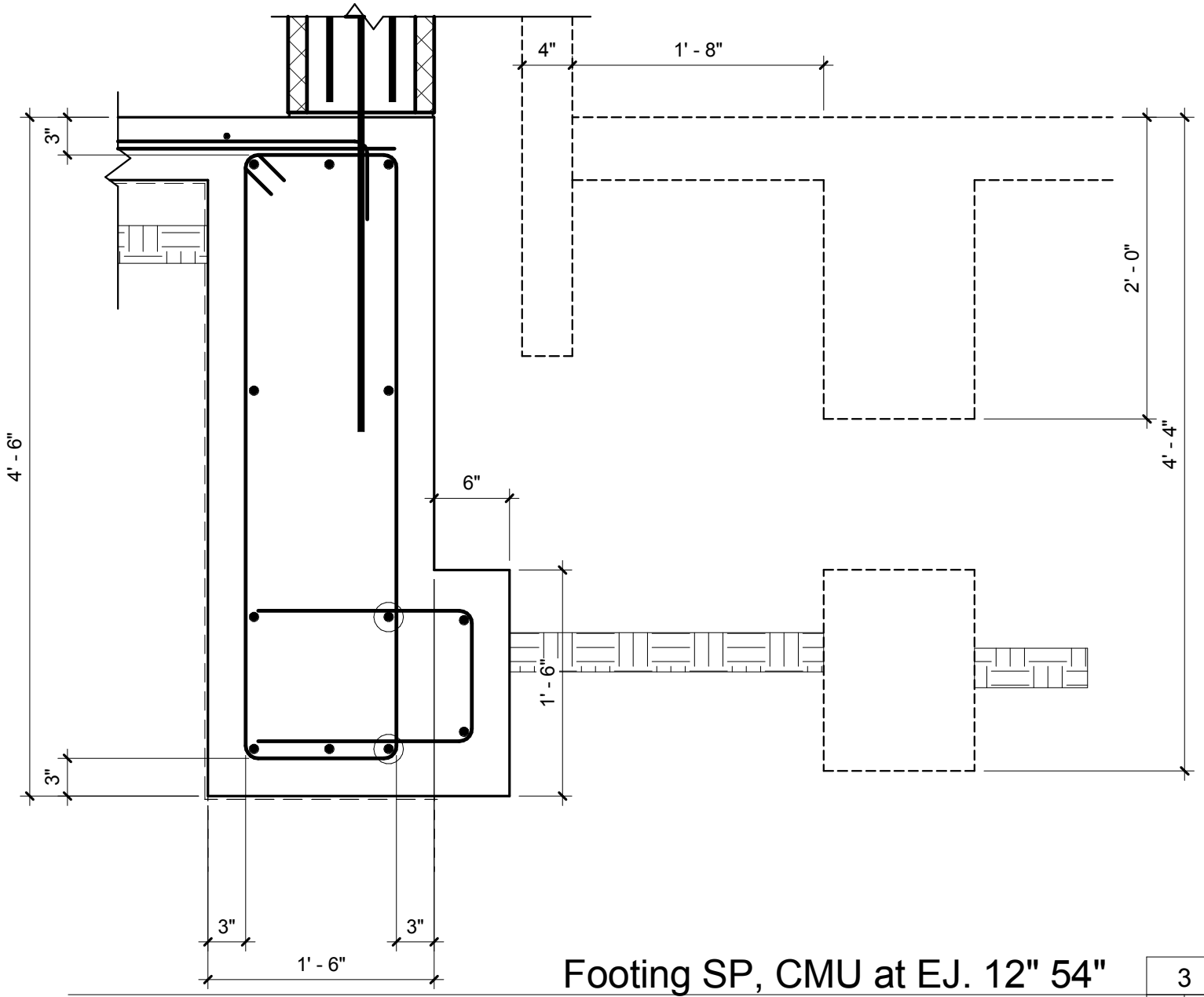
Existing to New Slab
1" = 1'-0"

11
S211 | S404



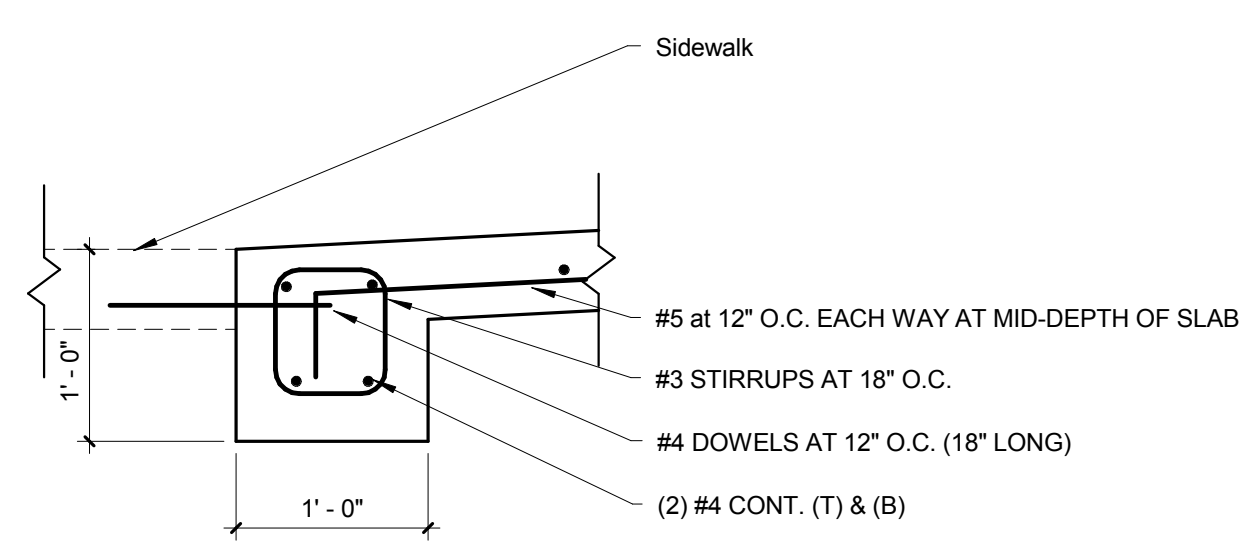
Footing at Concrete Steps, Exterior
1" = 1'-0"

7
S211 | S404



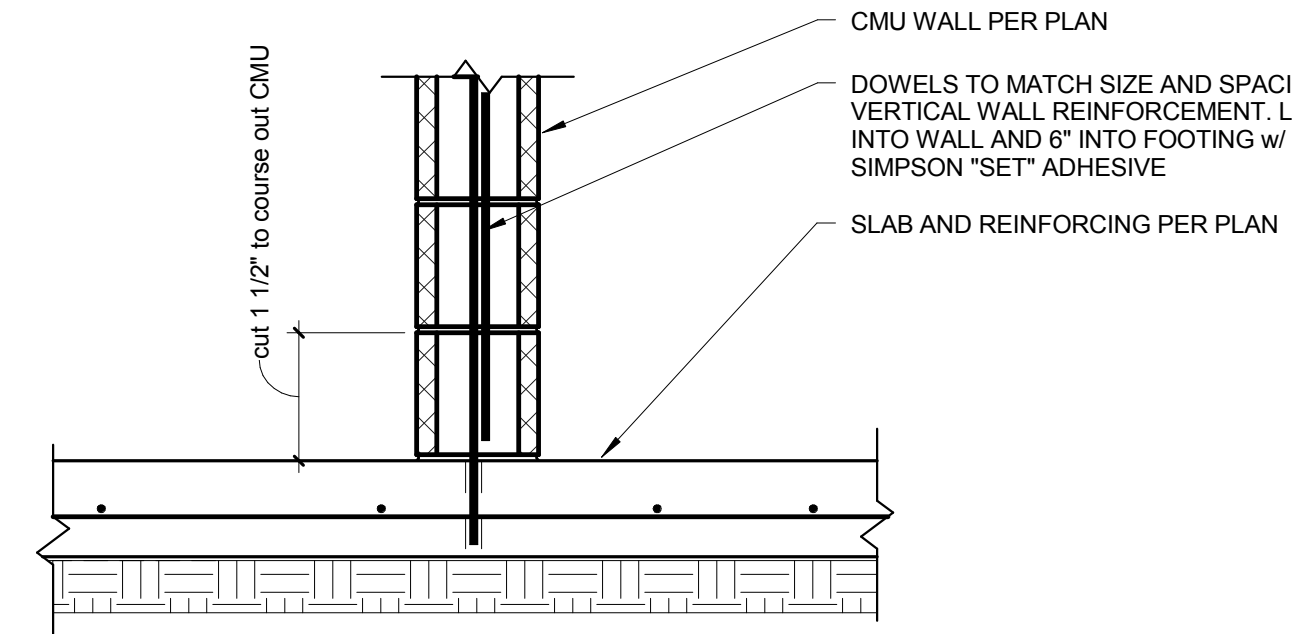
Footing SP, CMU at EJ. 12" 54"
1" = 1'-0"

3
S211 | S404



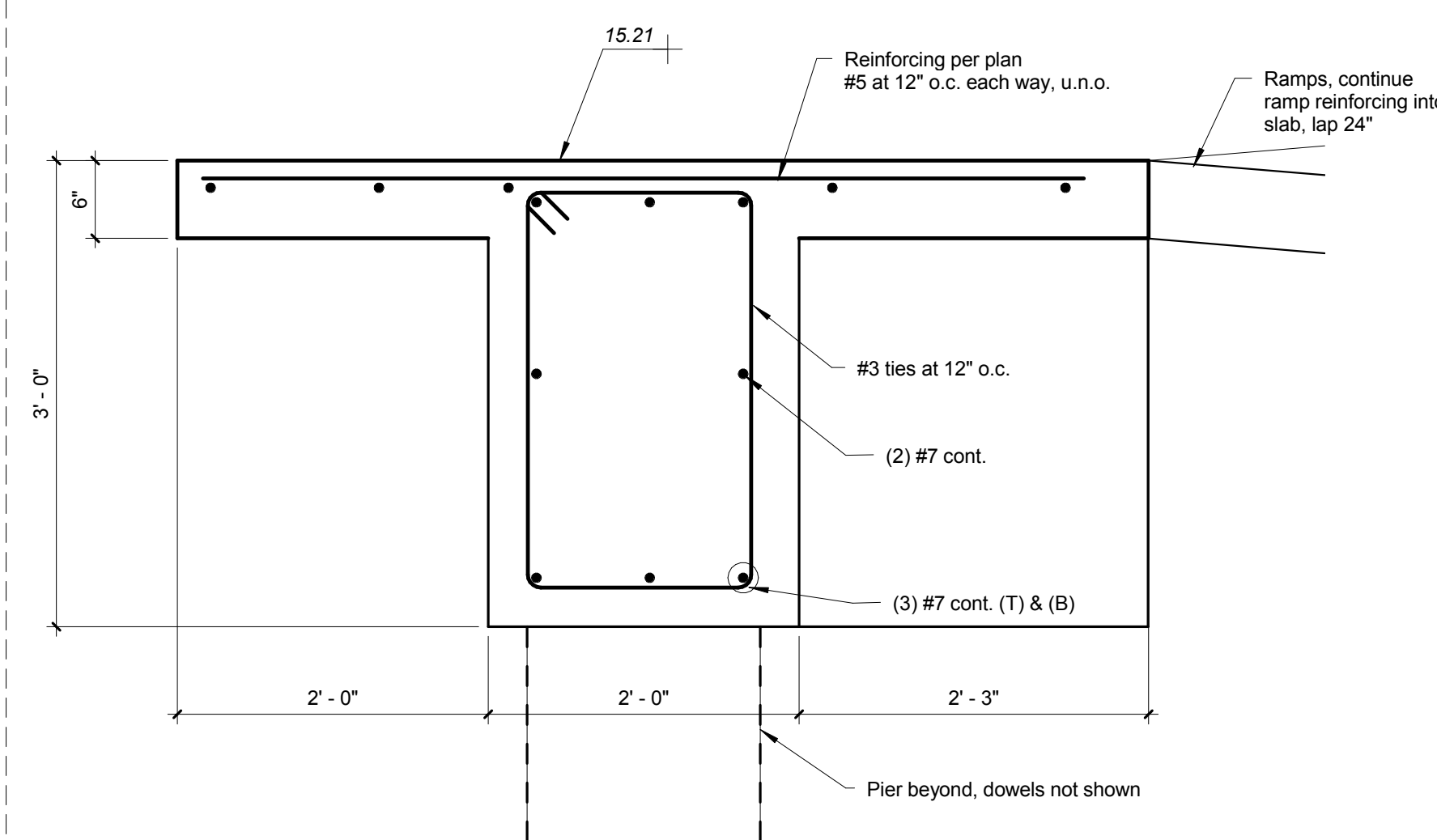
Footing at Concrete Ramp, Exterior
1" = 1'-0"

12
S211 | S404



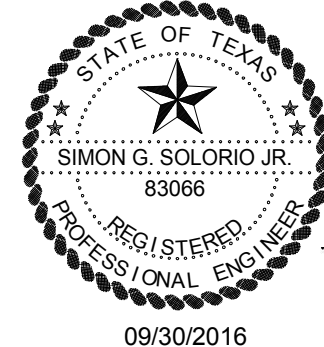
Footing at Interior Non Bearing CMU
1" = 1'-0"

8
S211 | S404



Slab/grade beam at Ramp Landing
1" = 1'-0"

4
S211 | S404



F-1616
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Sheet Title
Foundation Details

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PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

Sheet No.
S404

Set
Number

REVISED:

Date
09/30/2016

Drawn by:
Author

Project No.:
15152

ROBERTO J. RUIZ
ARCHITECT, INC.

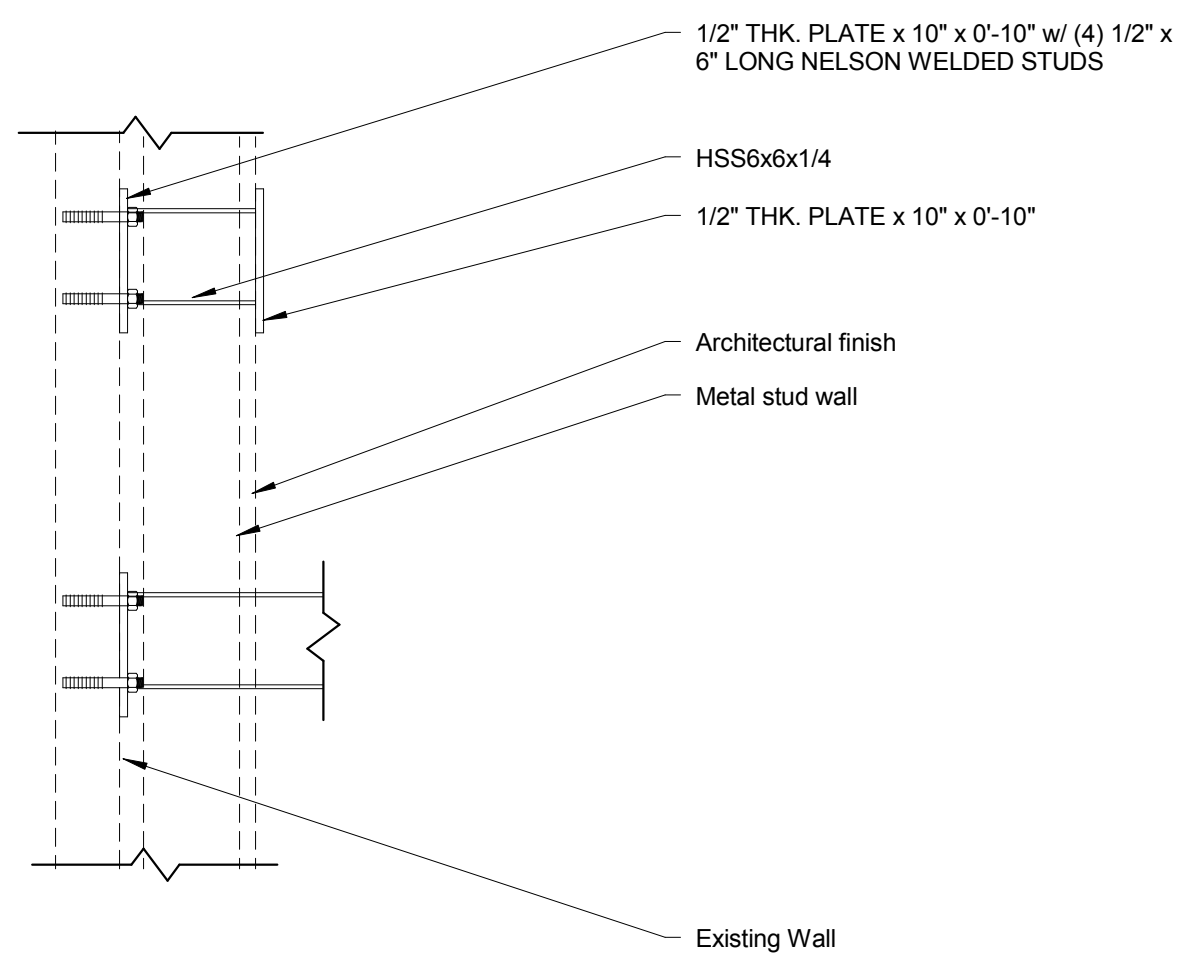
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 77820
(956) 350-9198 OFFICE
(956) 350-9196 FAX
ARCHRUIZ@AOL.COM

PORT OF
BROWNSVILLE
WORLD CLASS

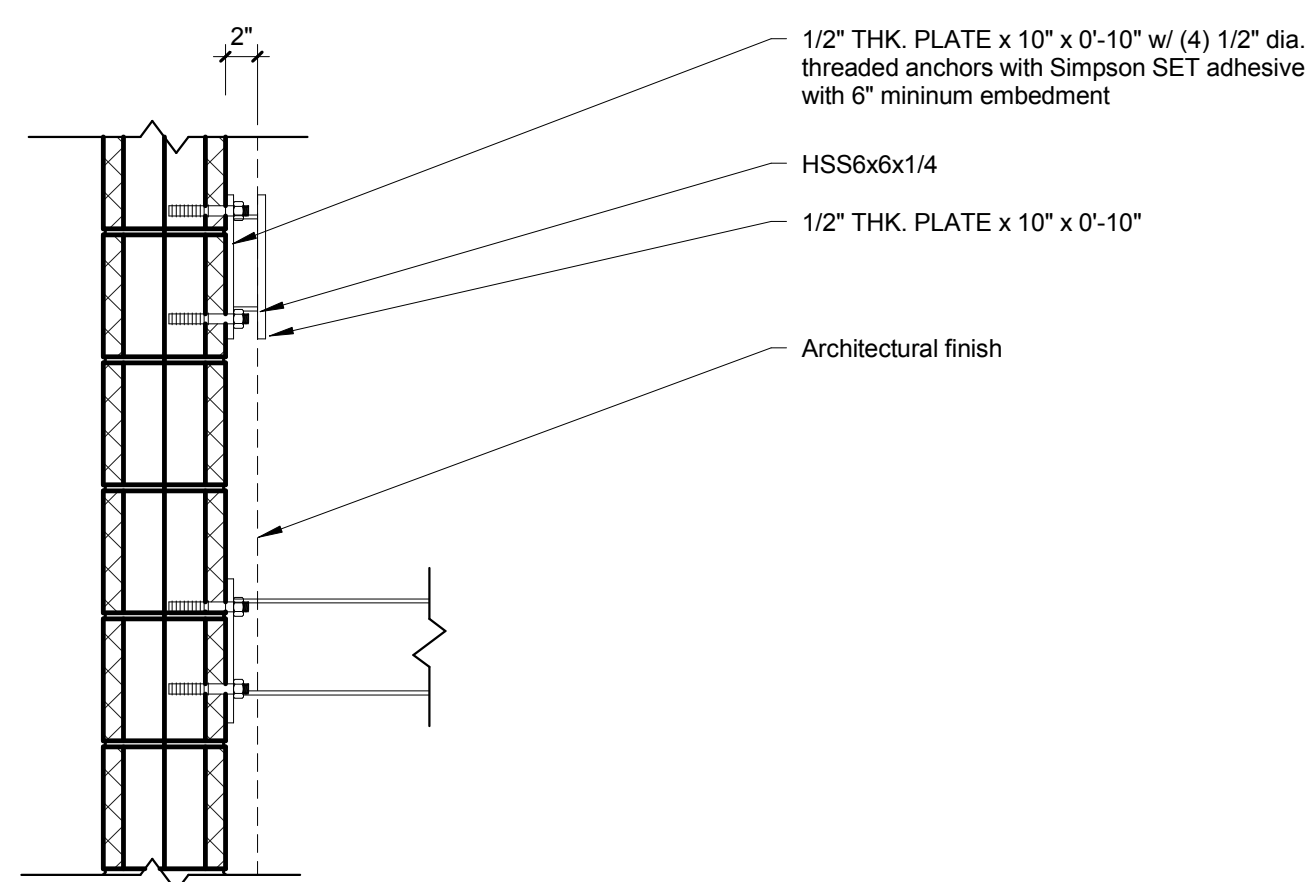
BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS

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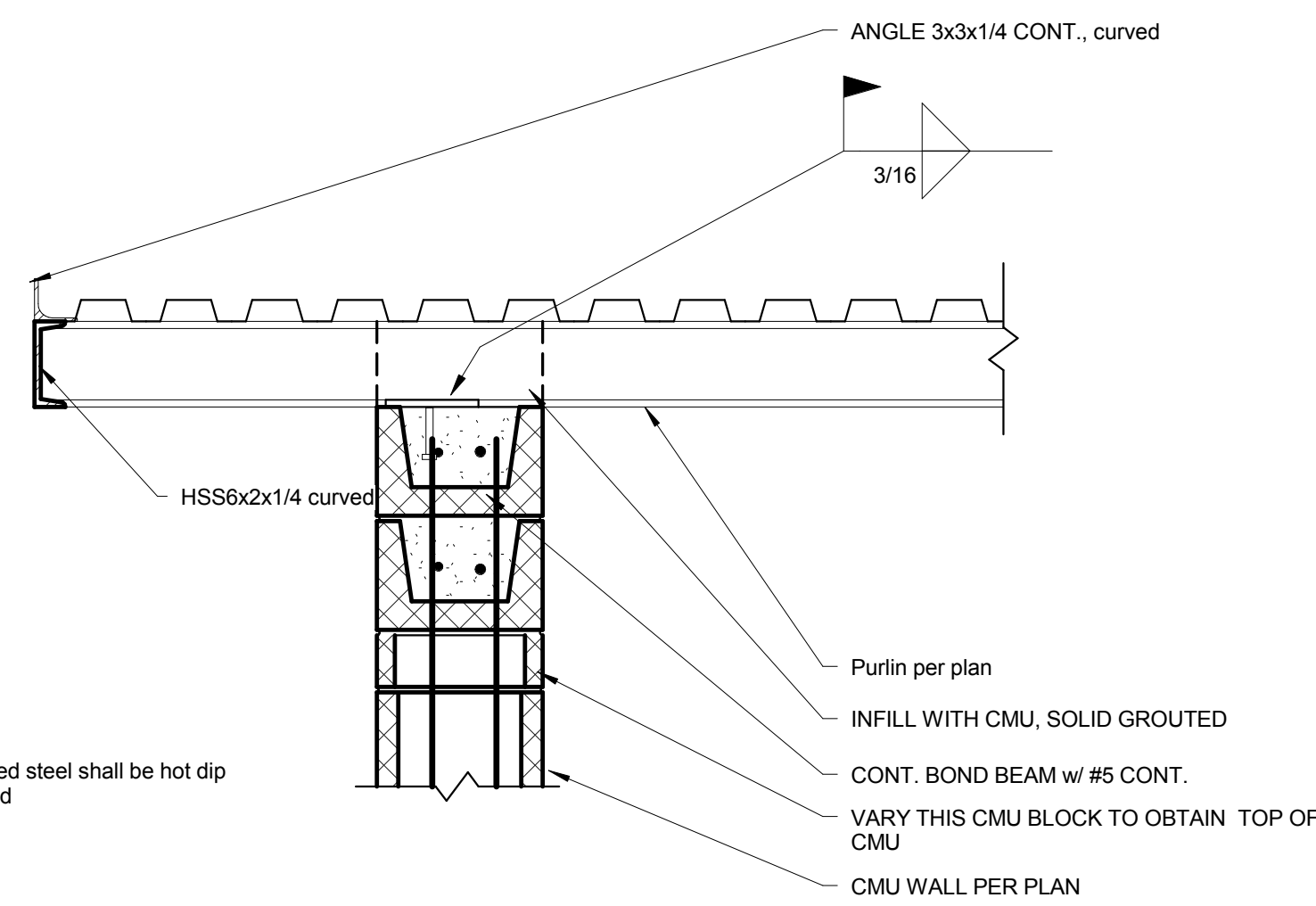
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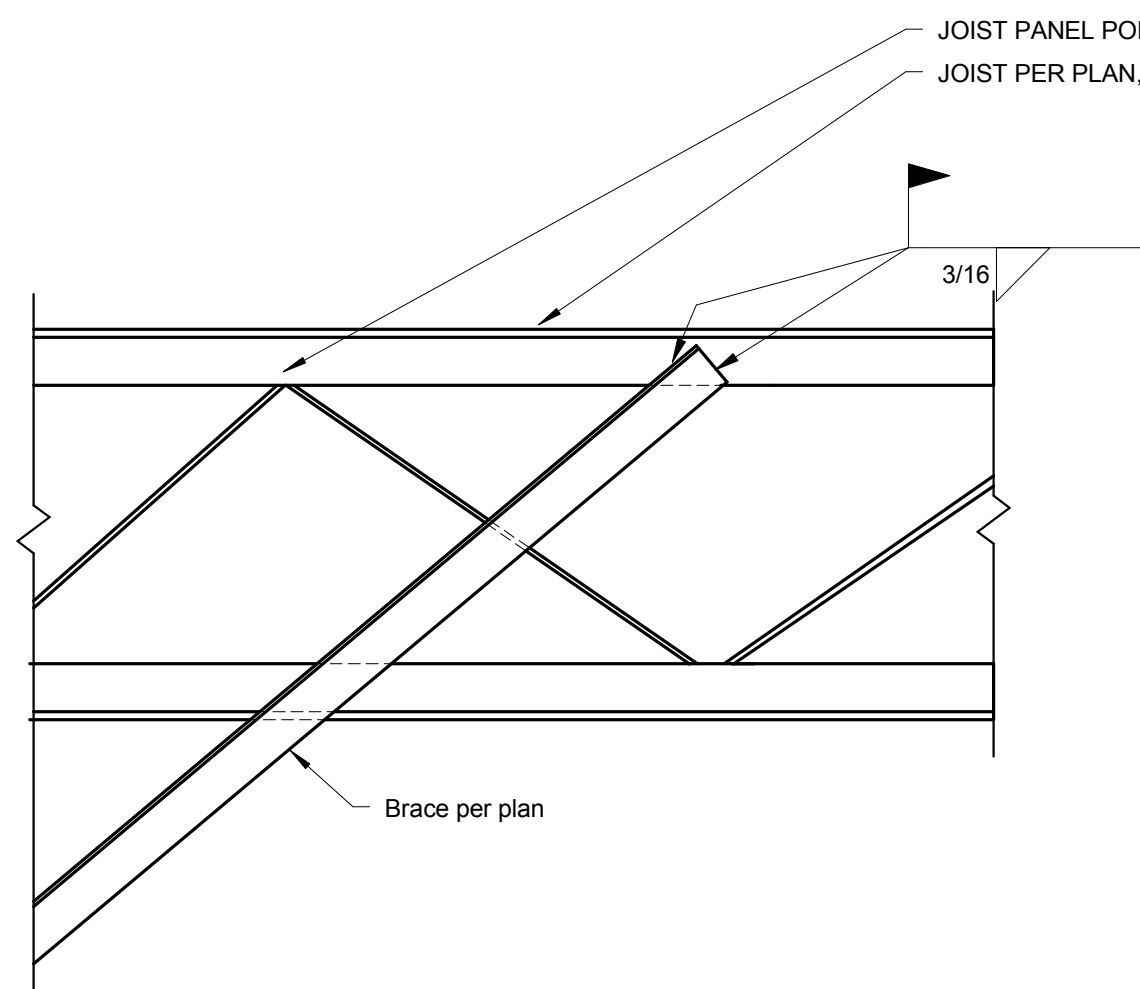
Bracket for Canopy Support Existing
1" = 1'-0"

13
S406

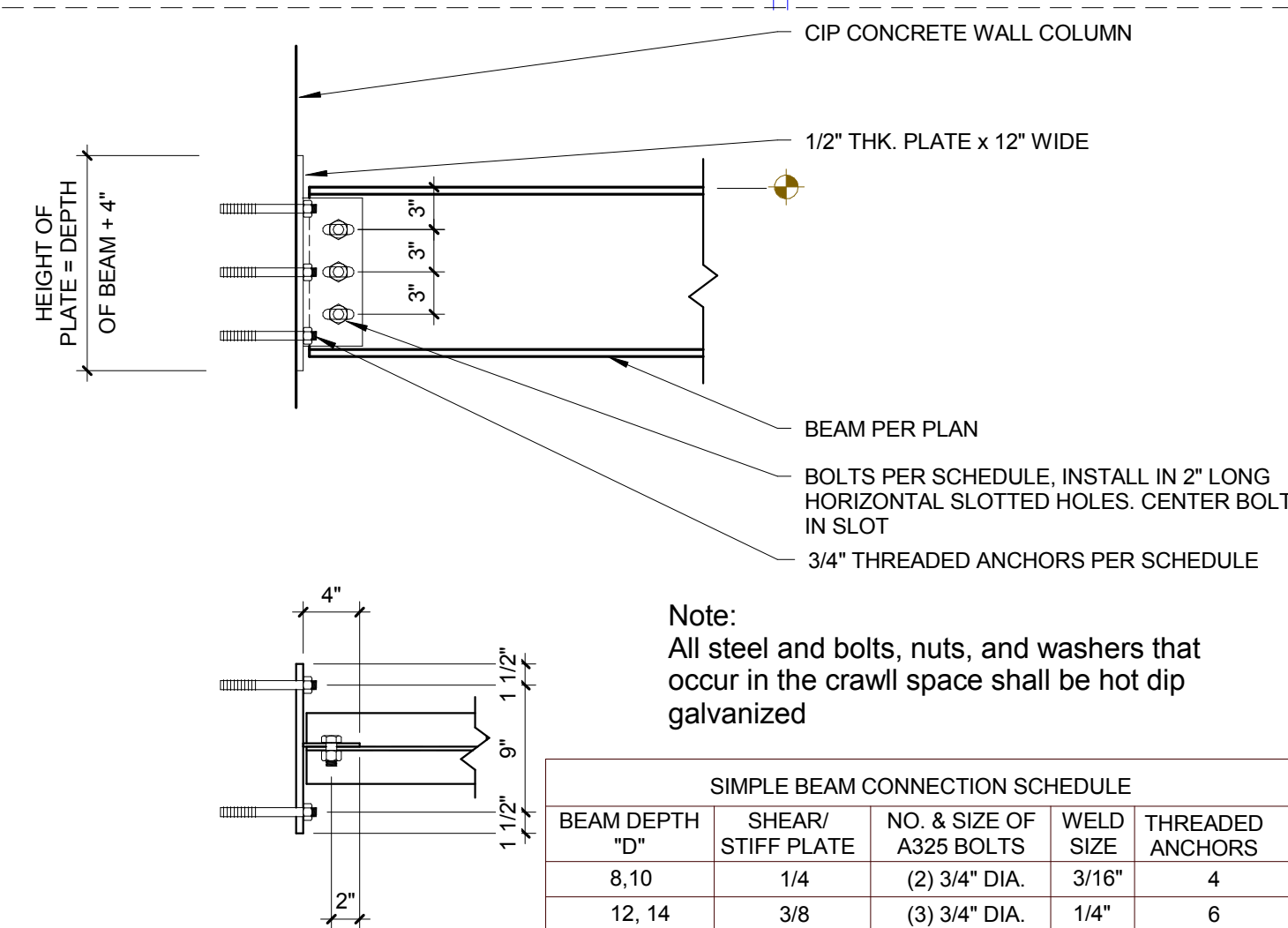
Bracket for Canopy Support Option 2
1" = 1'-0"

14
S406

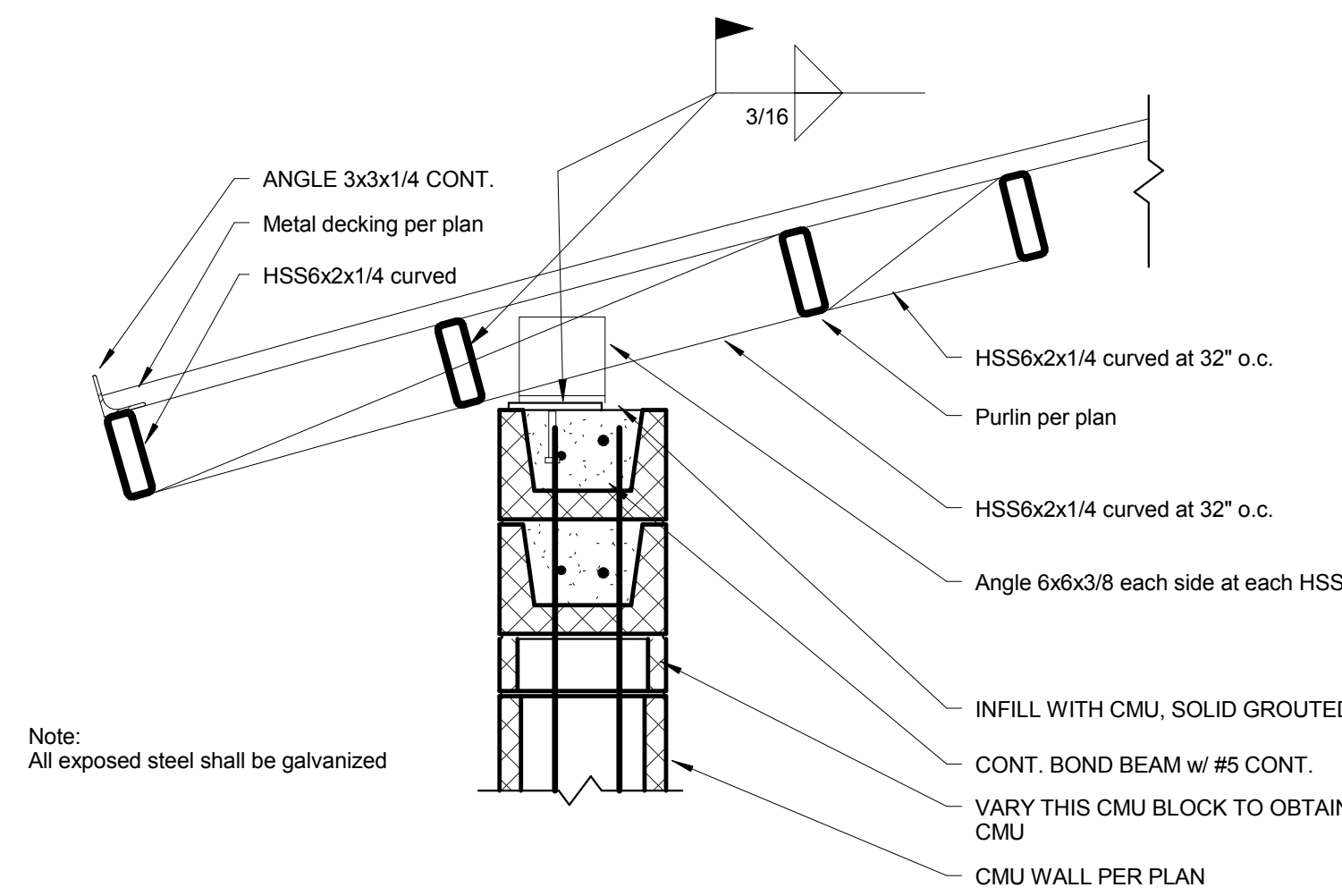
HSS to CMU Wall
1" = 1'-0"

9
S302 S406

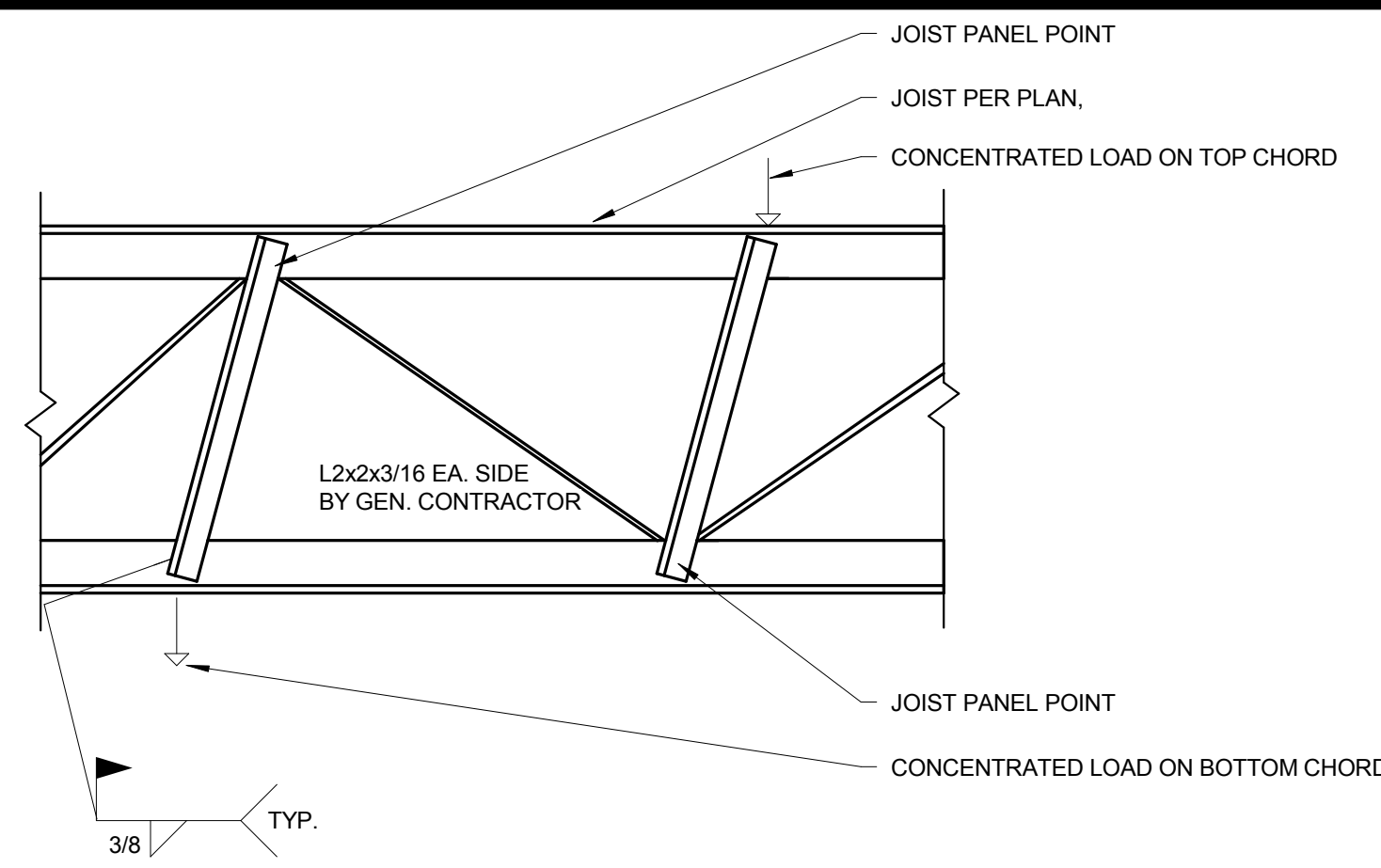
Typical Steel Joist Bracing Detail
1" = 1'-0"

10
S406

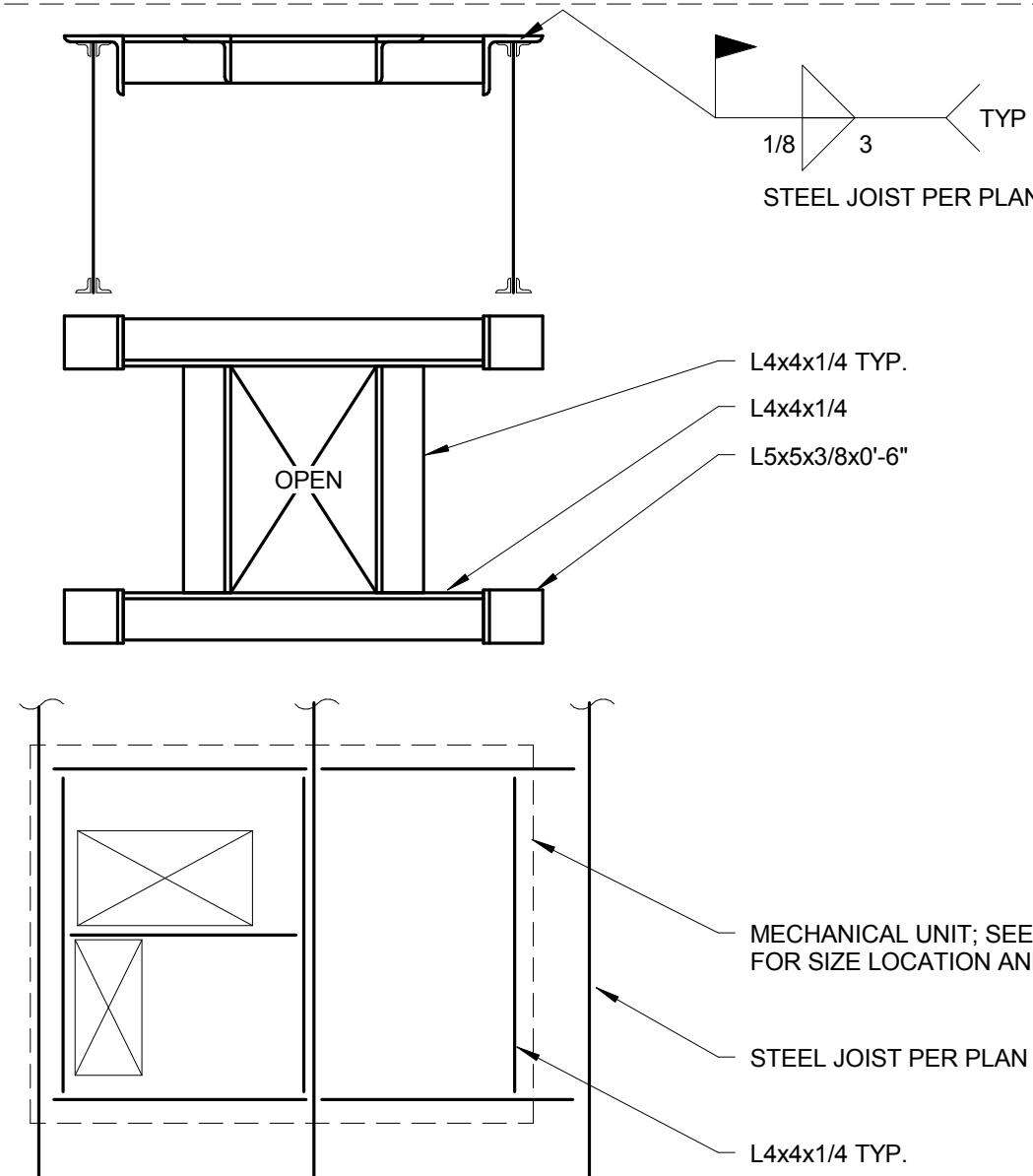
Steel Beam to Existing Concrete Beam
1" = 1'-0"

11
S211 S406

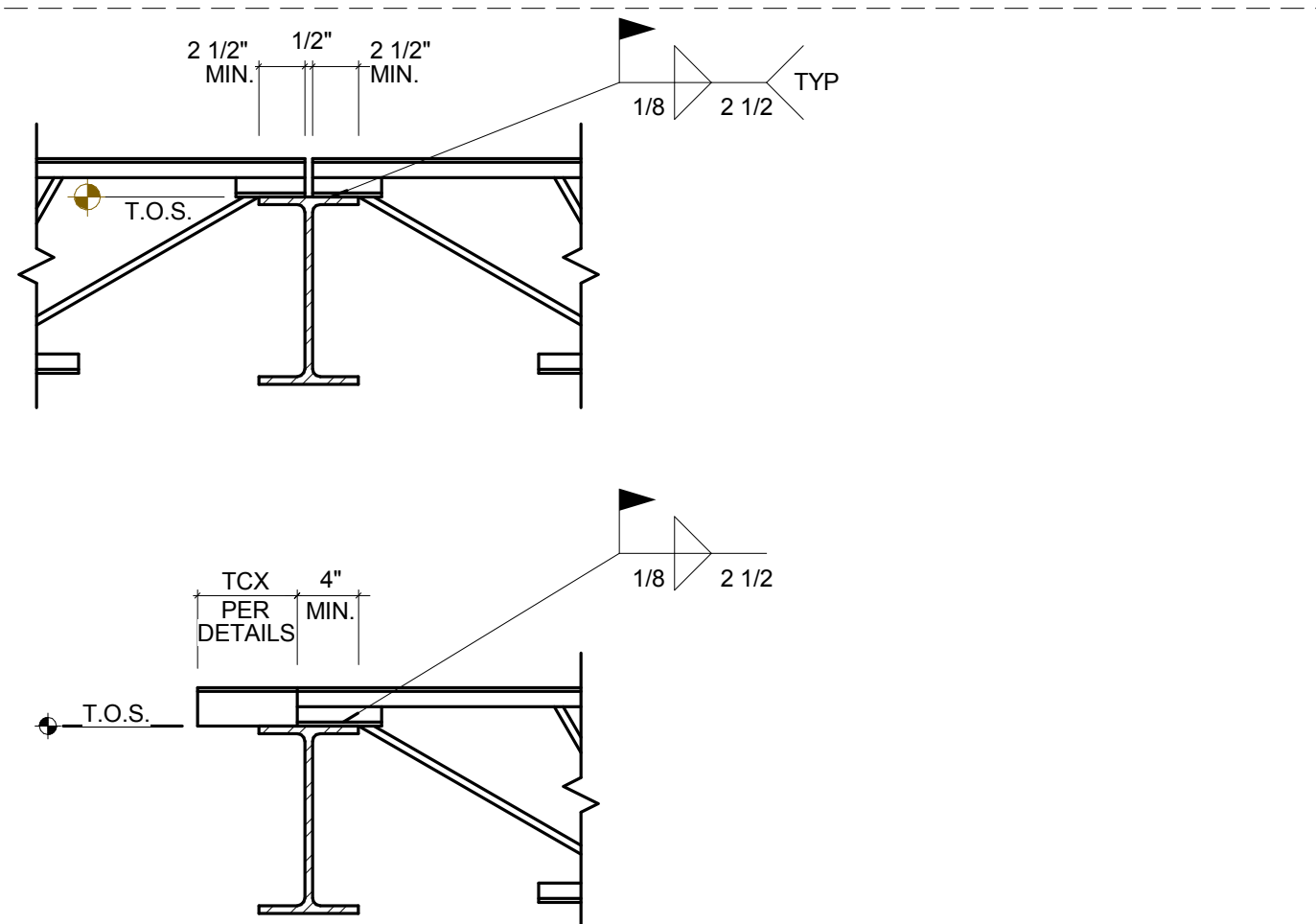
HSS to CMU Wall Parallel
1" = 1'-0"

12
S302 S406

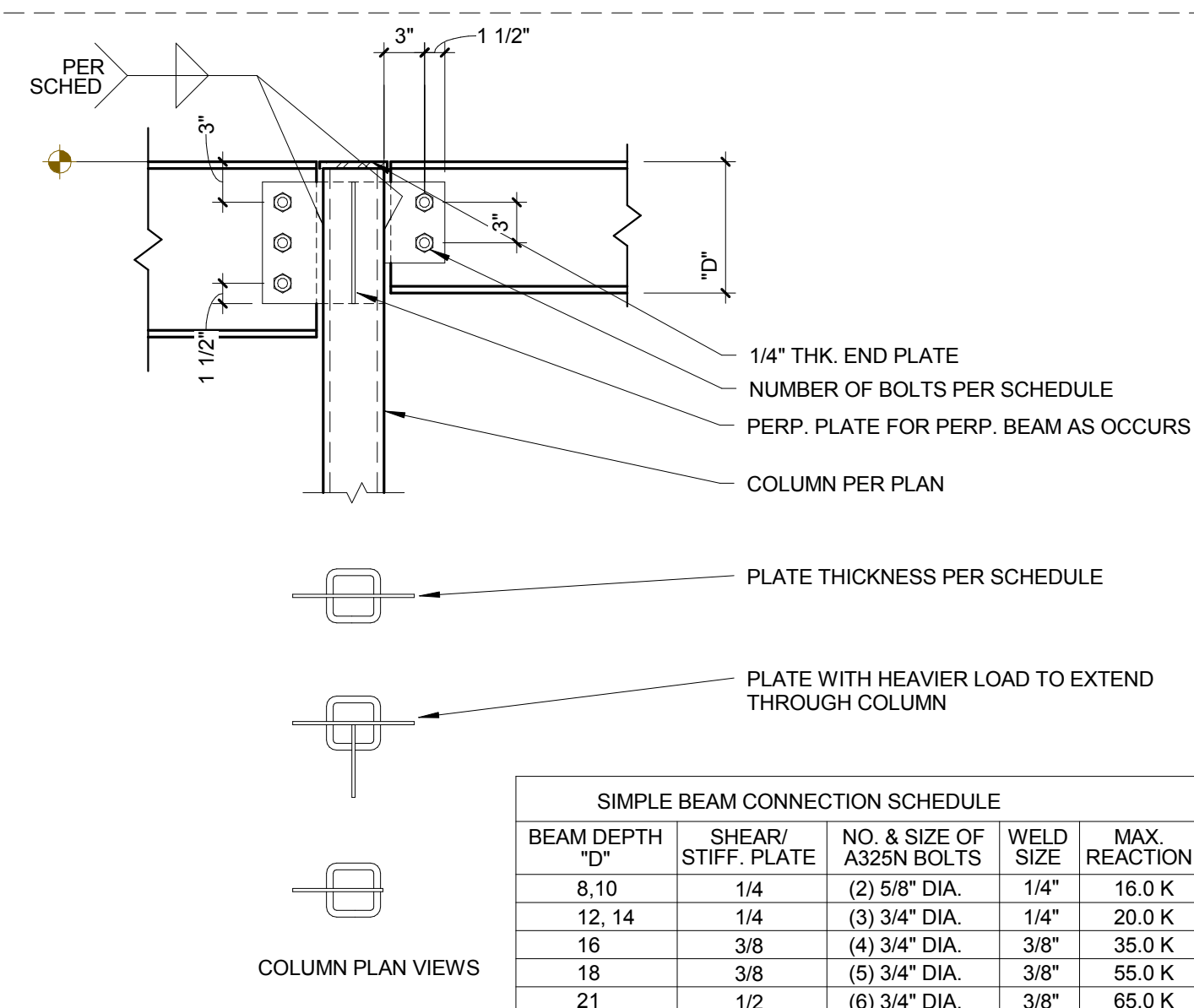
Typical Steel Joist Bracing Reinforcement
1" = 1'-0"

5
S406

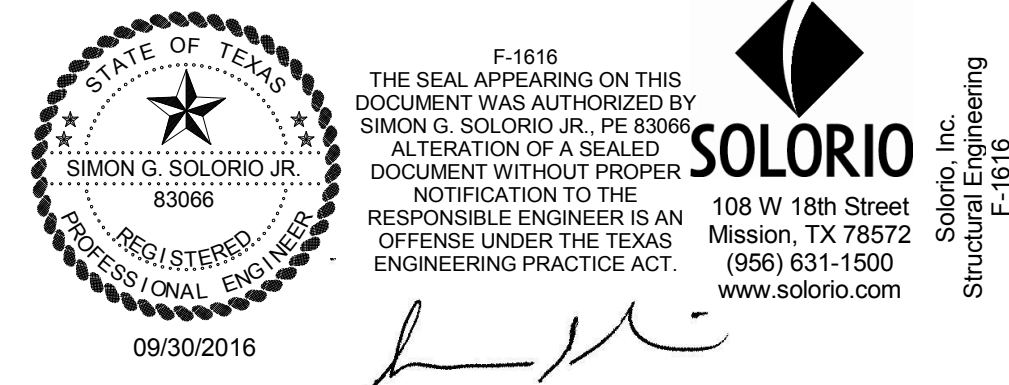
Typical Steel Joist Reinforcement at Openings
1" = 1'-0"

6
S406

Steel Joist to Steel Beam
1" = 1'-0"

7
S302 S406

Typical Steel Beam to Steel Column
1" = 1'-0"

8
S302 S406SHEET
NO. S406Set
Number

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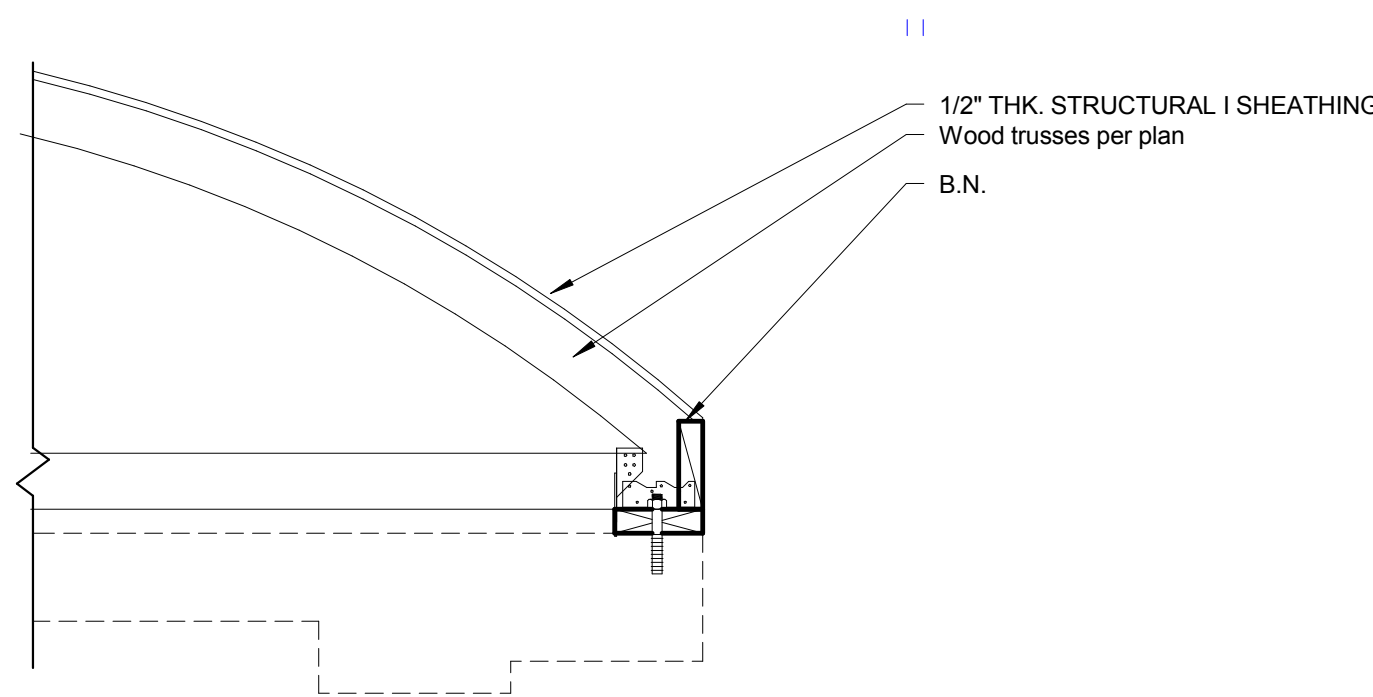
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(361) 350-9196 FAX
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OF CAMERON COUNTY, TEXASPROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXASSheet Title
Steel Details

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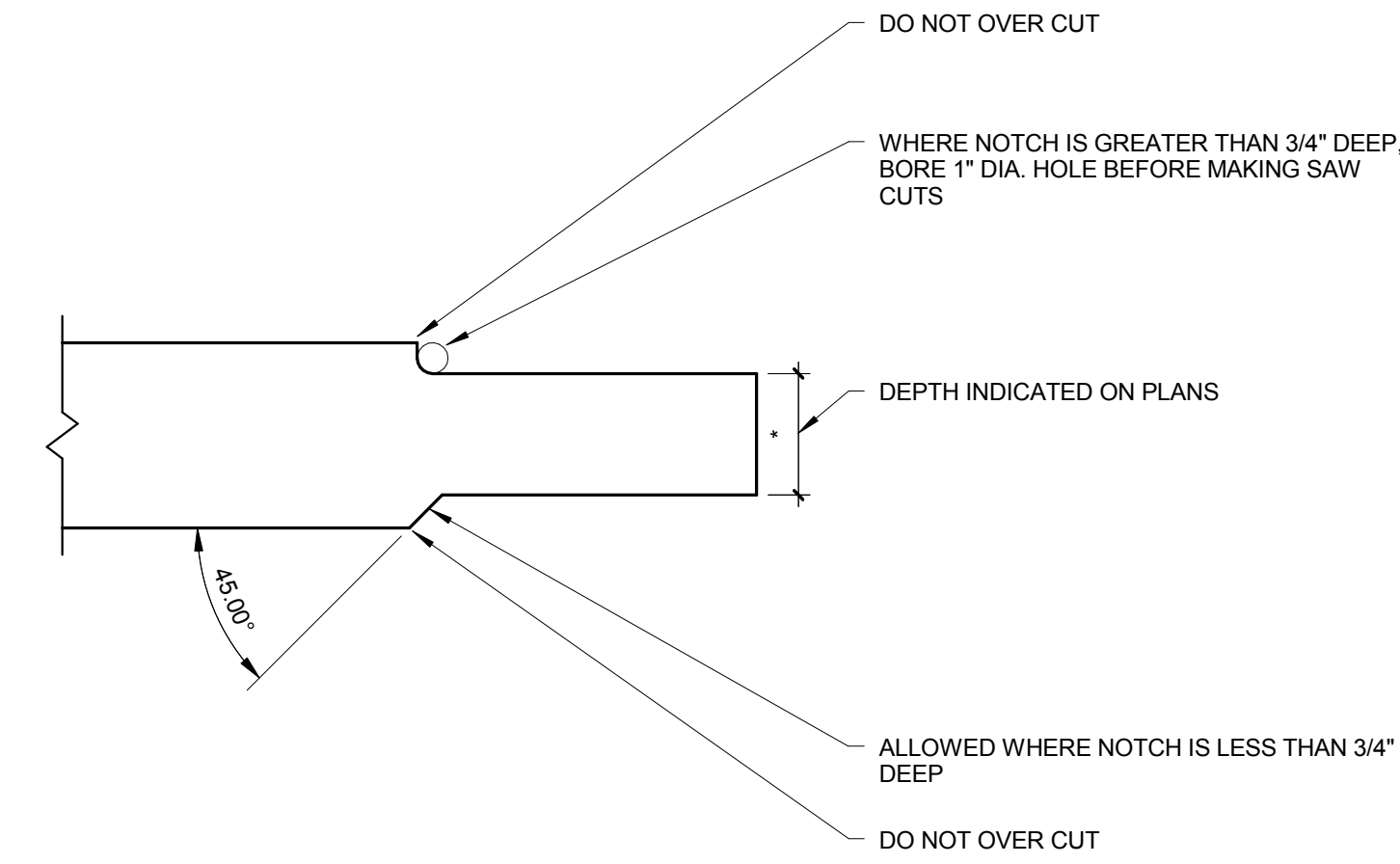
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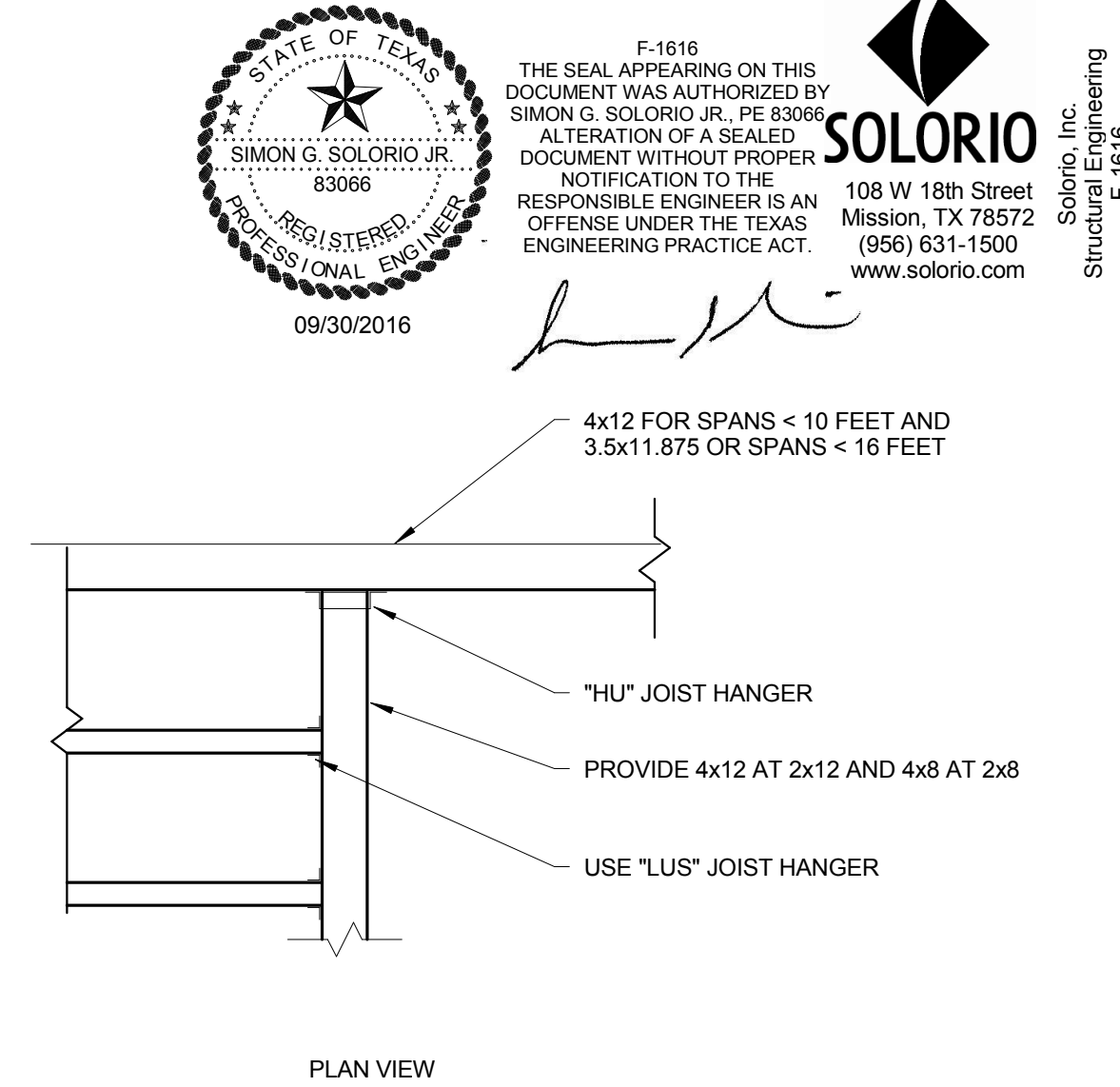
Roof at Vest
1" = 1'-0"

9
S301 S407



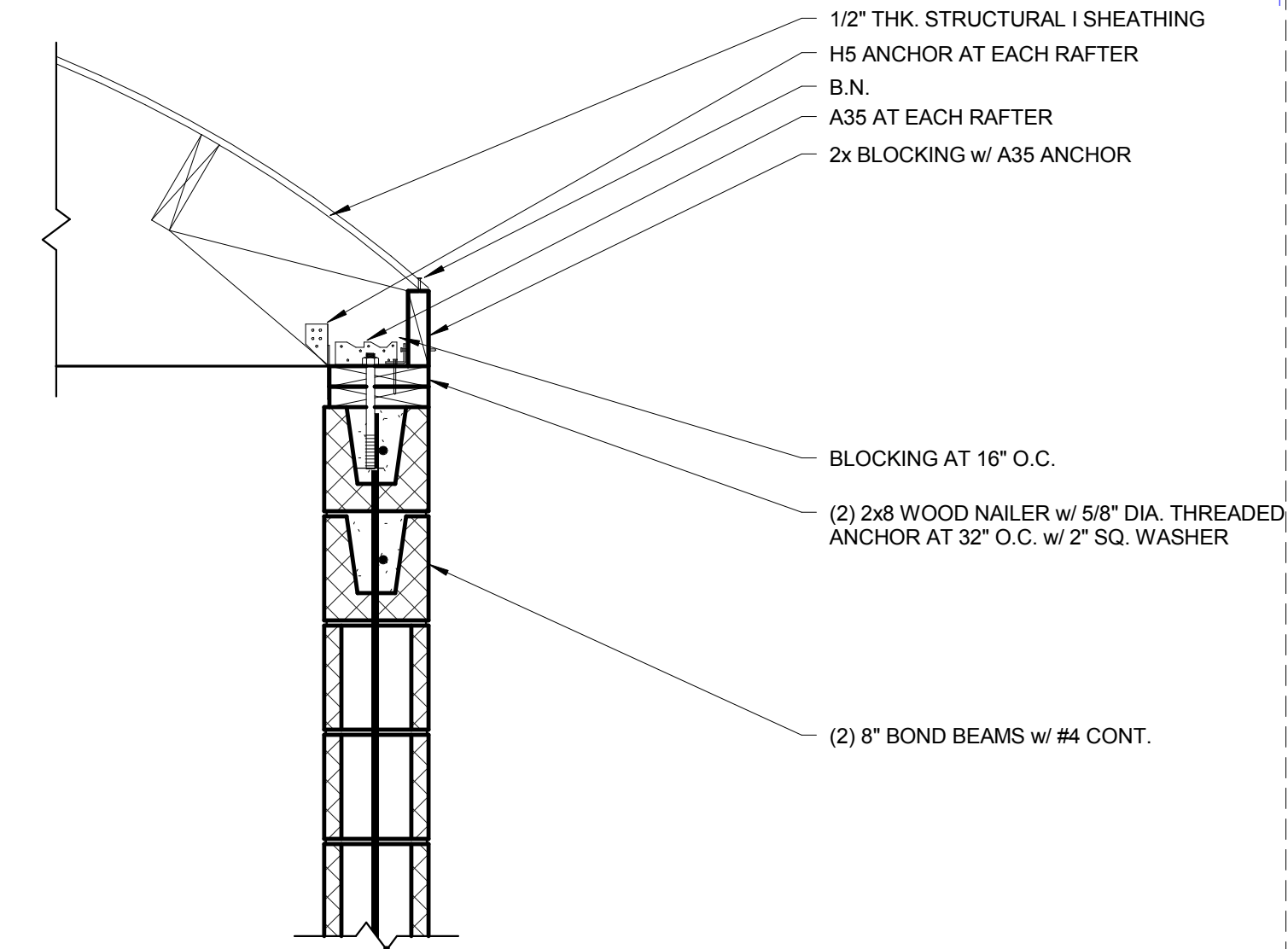
Typical Joist and Rafting Notching
1" = 1'-0"

5
S407



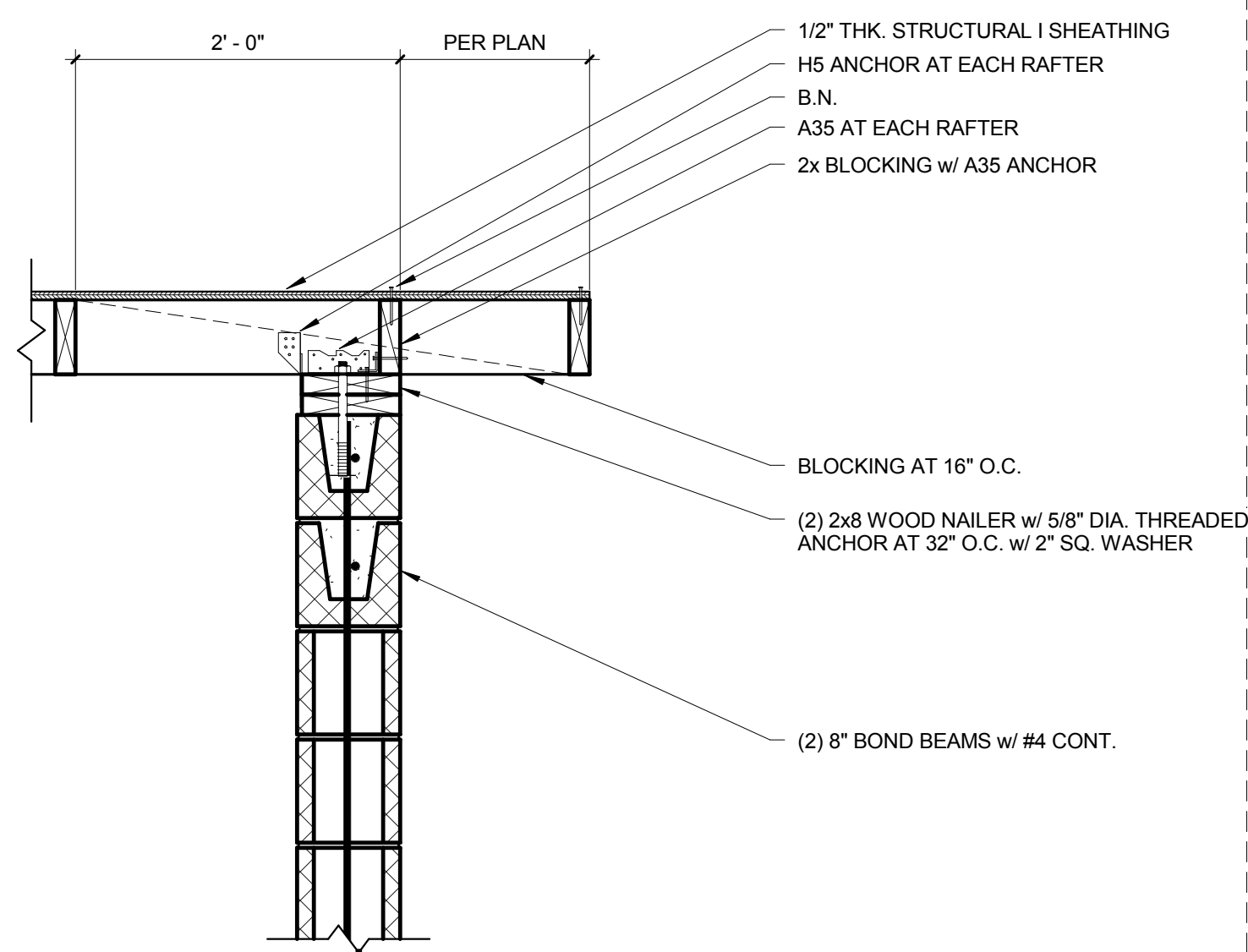
Typical Support at Wood Openings
1" = 1'-0"

1
S407



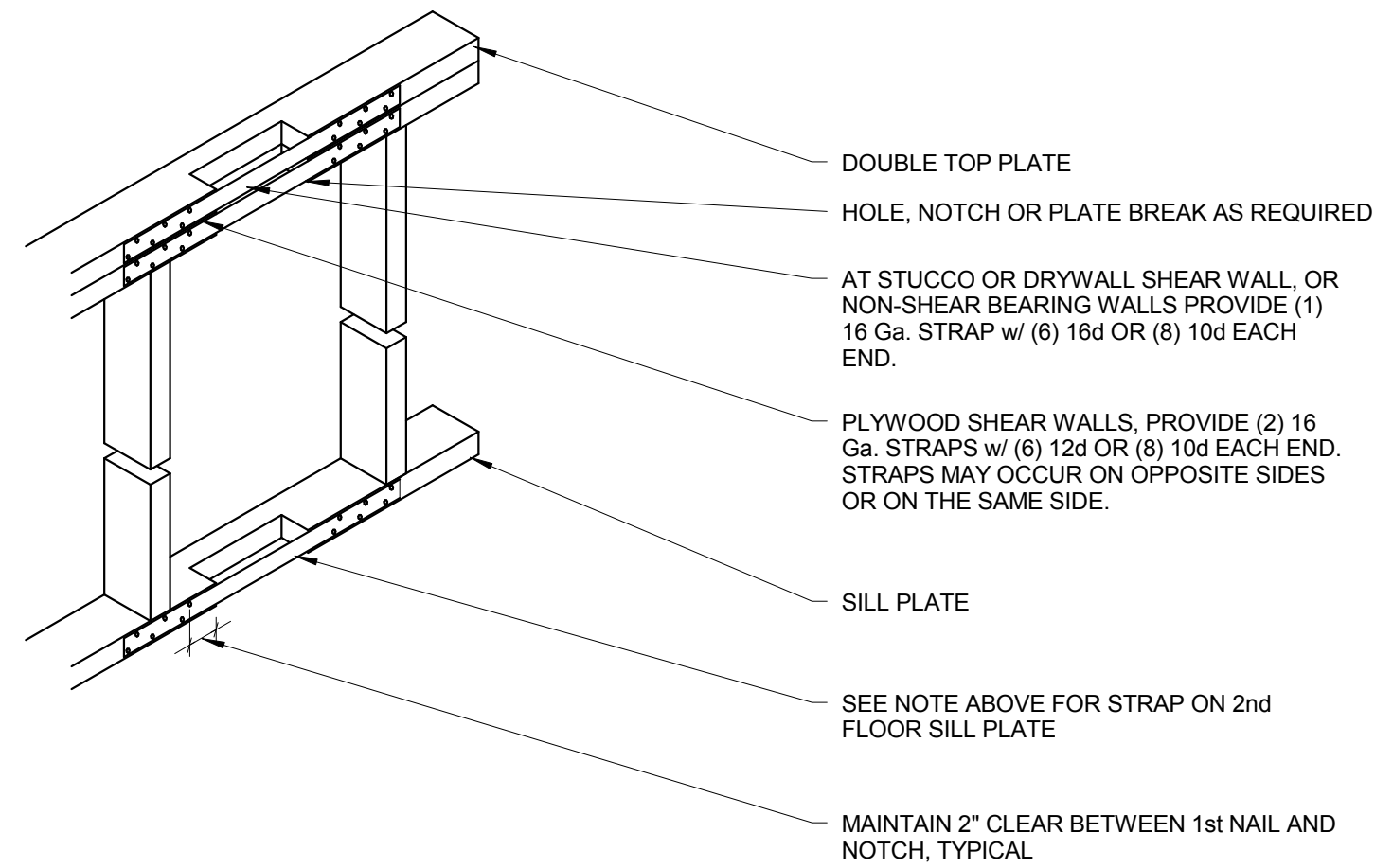
Rafter to CMU, Parallel Curved
1" = 1'-0"

10
S301 S407



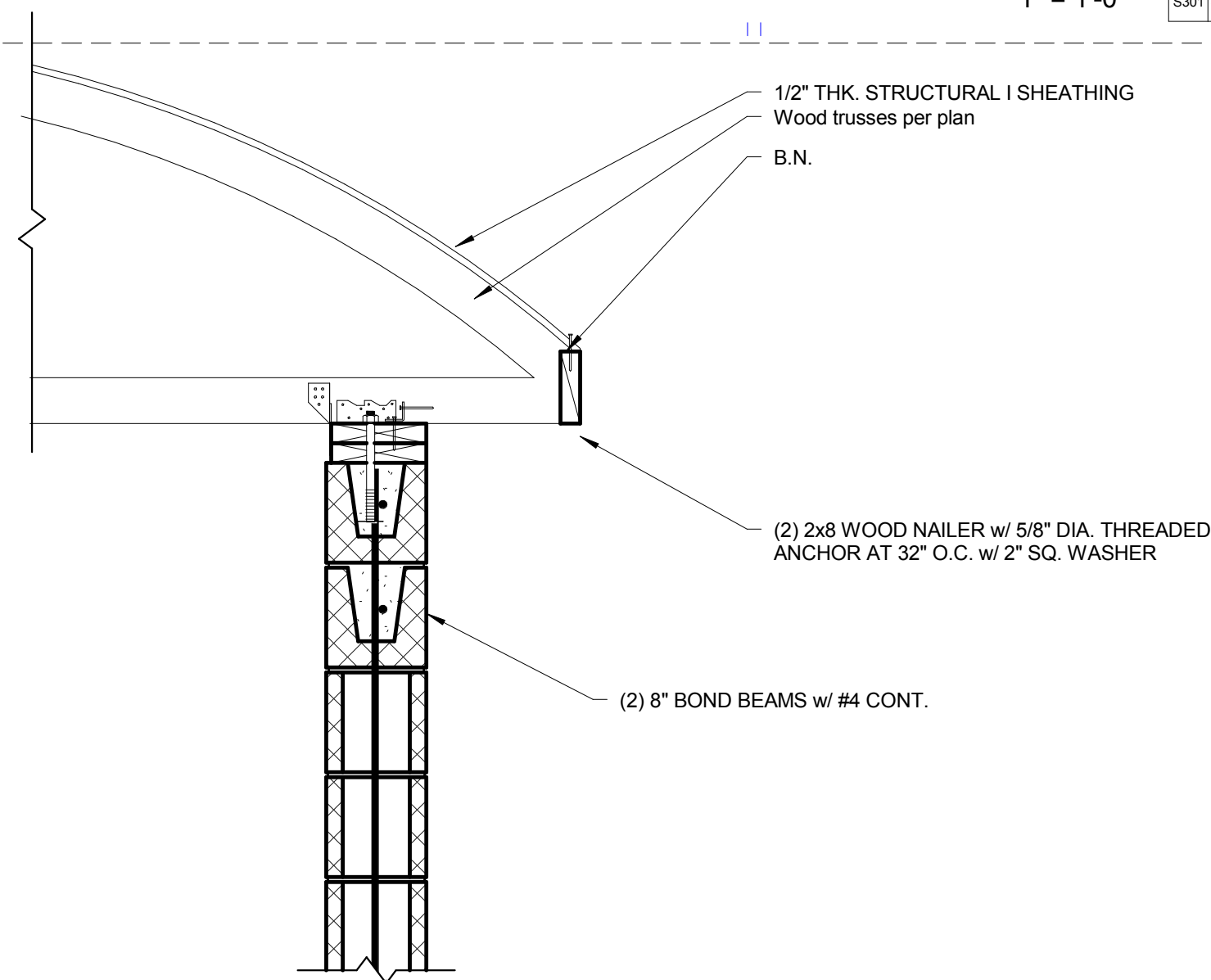
Rafter to CMU, Parallel
1" = 1'-0"

6
S407



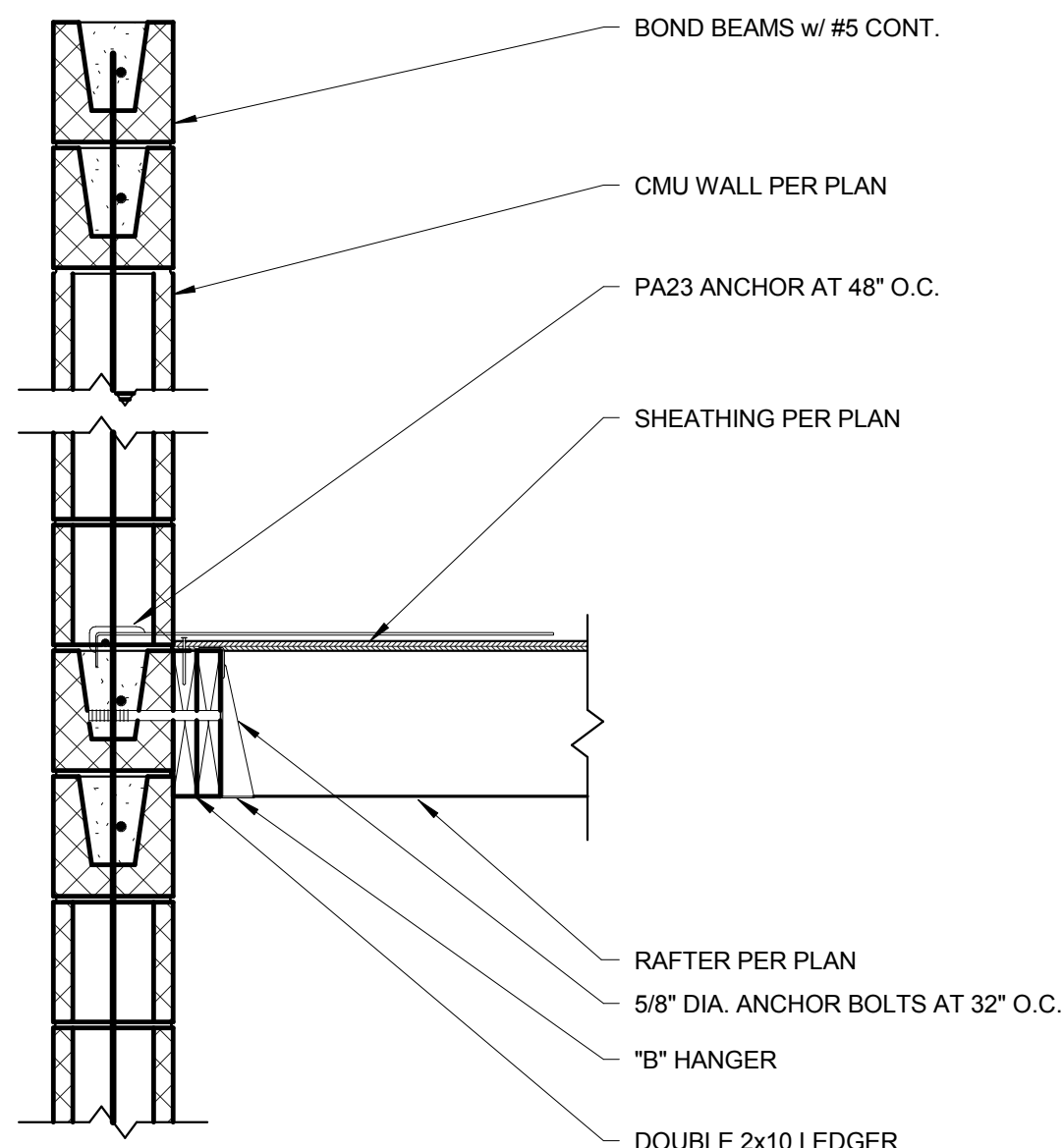
Typical Straps at Notched Wood Plates
1" = 1'-0"

2
S407



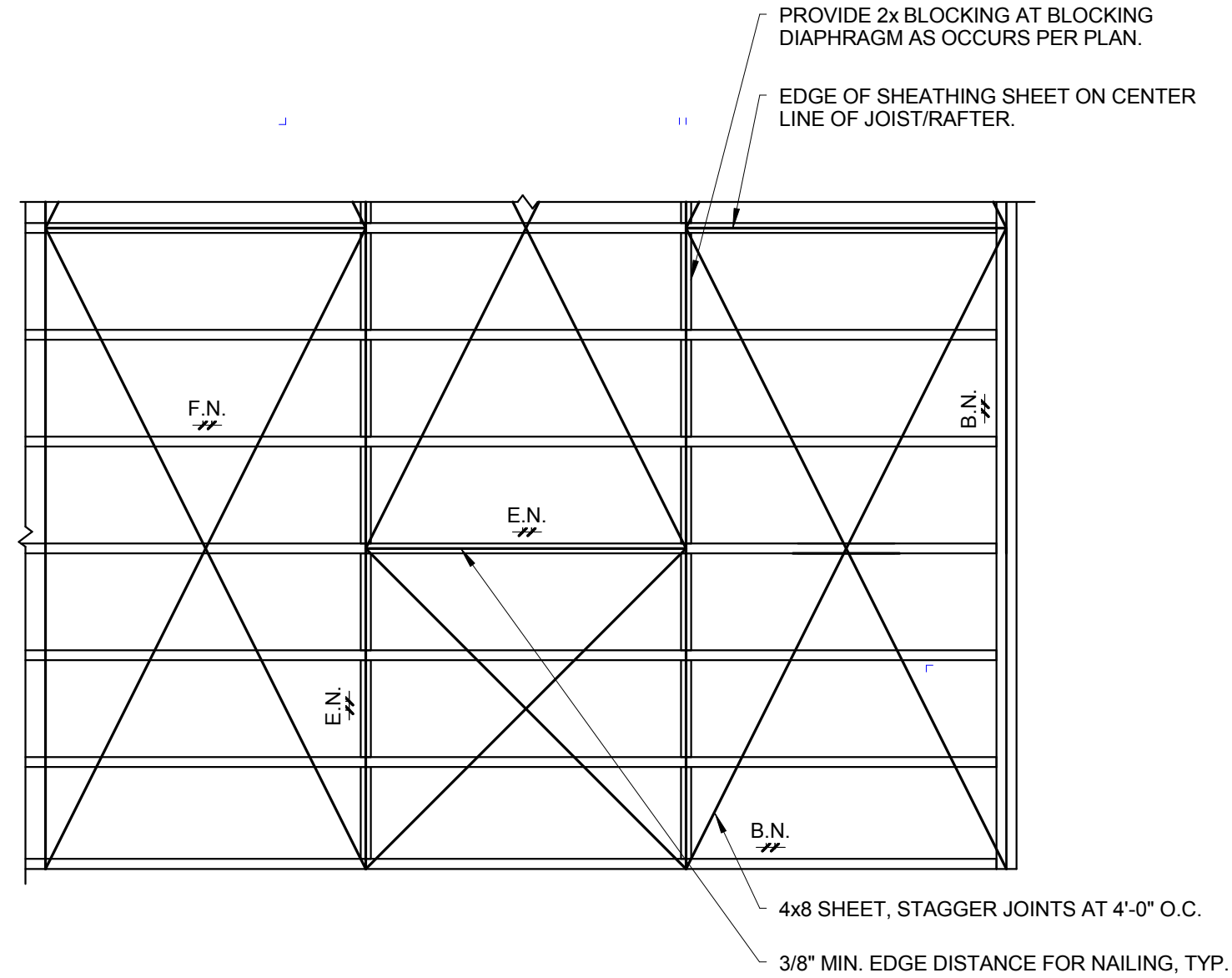
Roof at Vest New
1" = 1'-0"

11
S301 S407



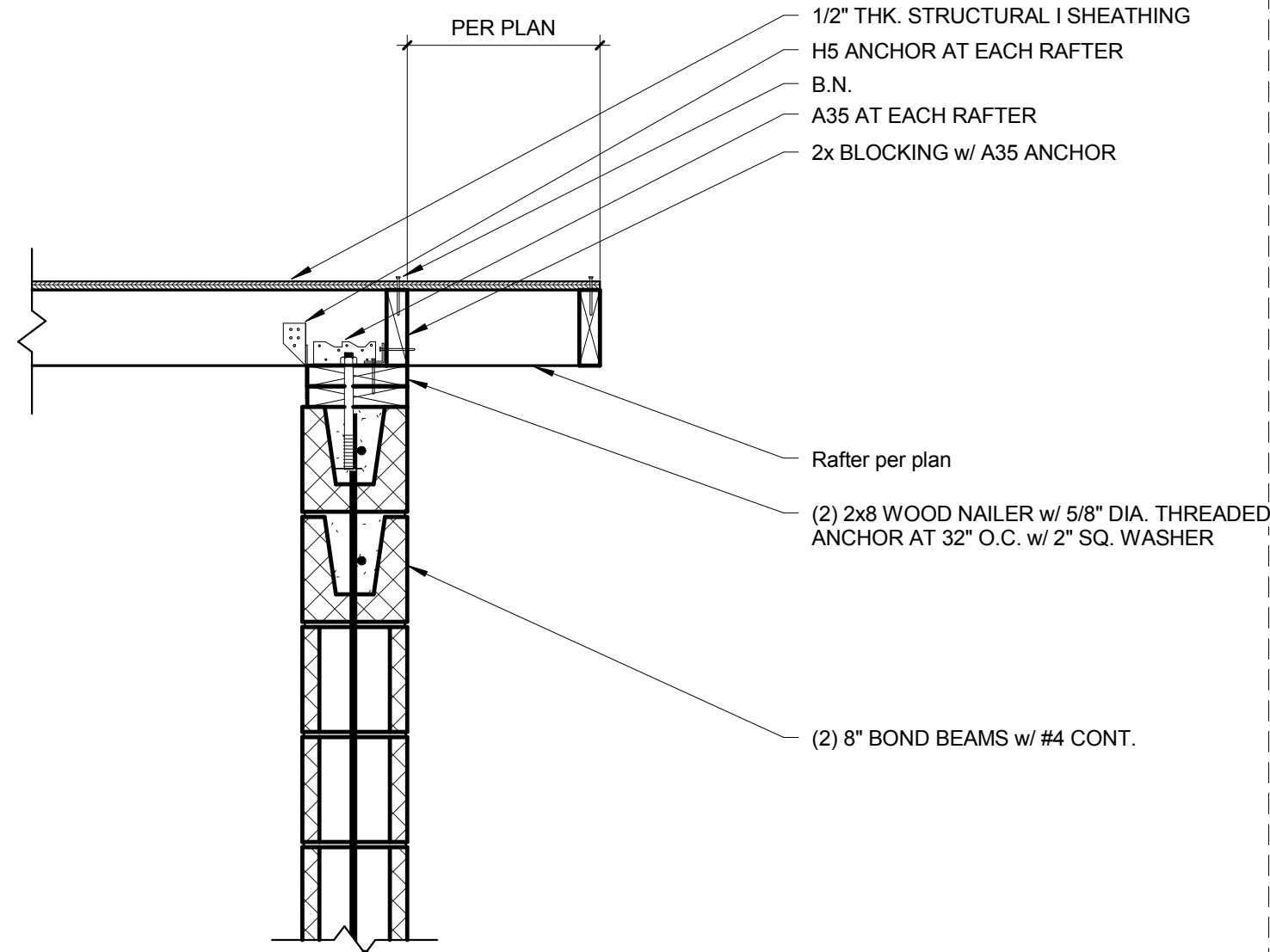
Rafter to CMU Wall, Parallel
1" = 1'-0"

7
S301 S407



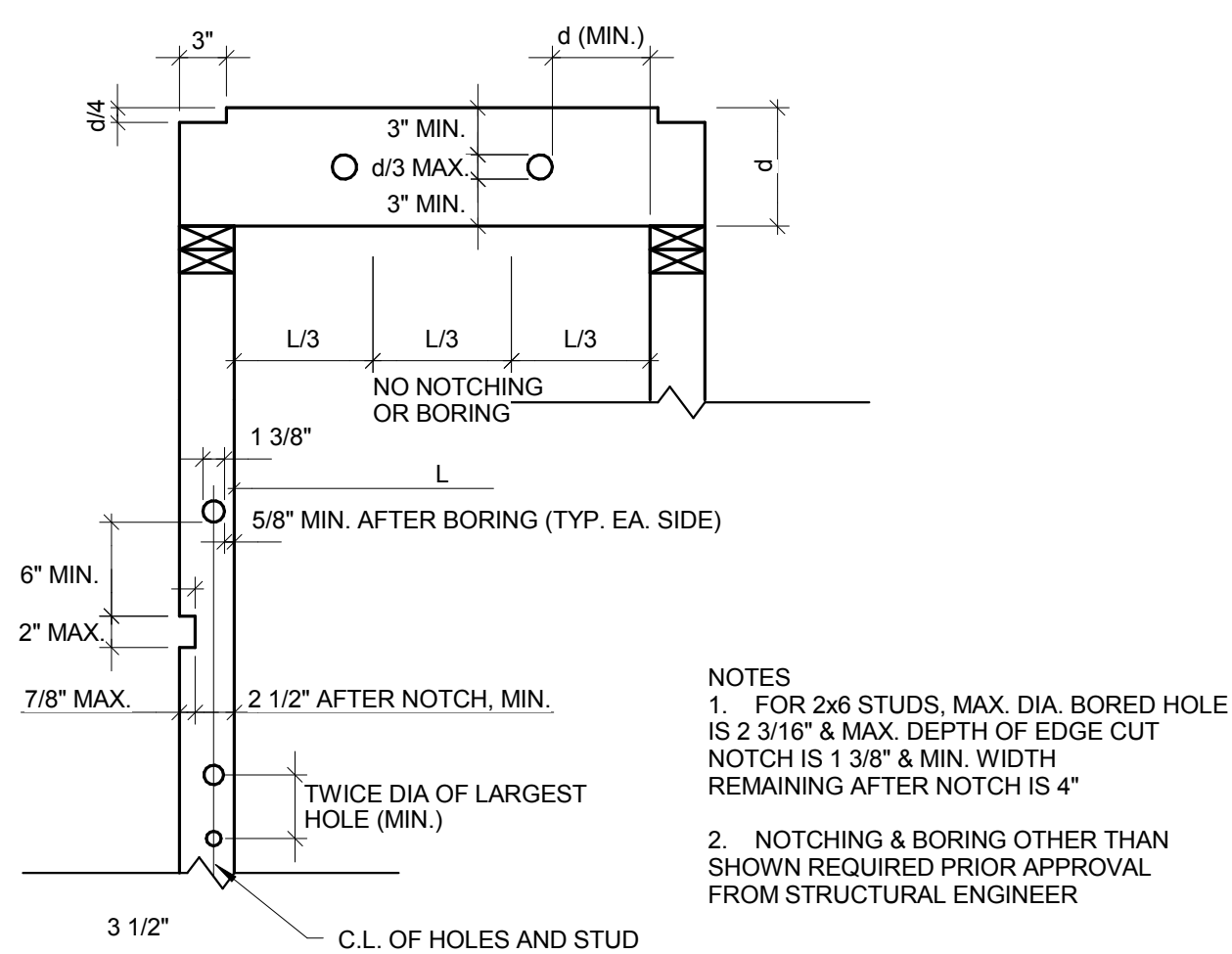
Typical Horizontal Plywood Layout
1/2" = 1'-0"

3
S407



Rafter to CMU, Perp
1" = 1'-0"

8
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Typical Notching and Boring
1" = 1'-0"

4
S407



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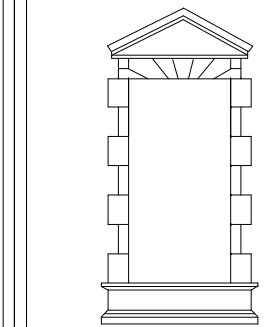
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Drawn by: sgs
Project No.: 15152

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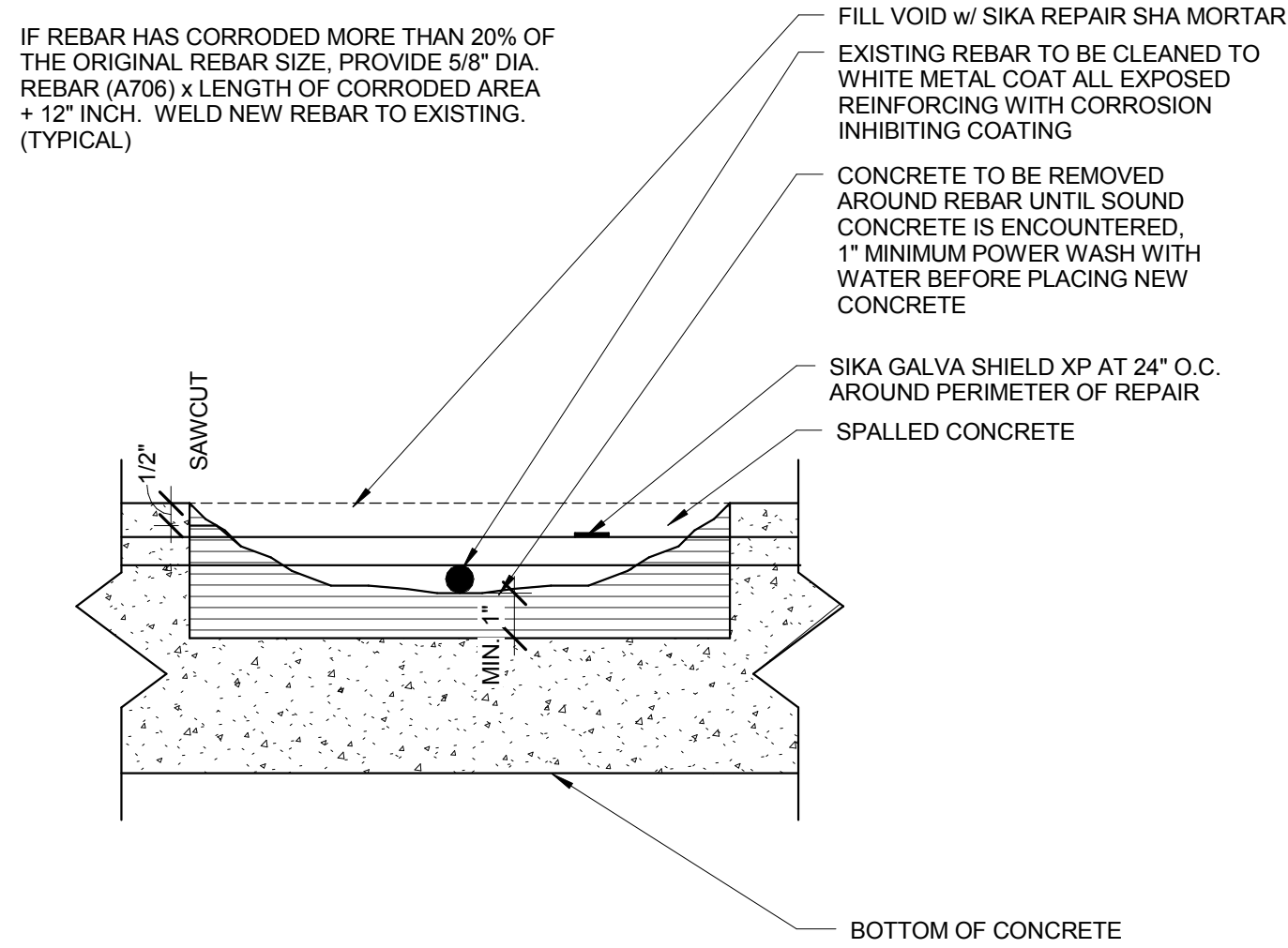
BROWNSVILLE NAVIGATION DISTRICT
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PORT of BROWNSVILLE
WORLD CLASS

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

Sheet Title
Typical Framing Details

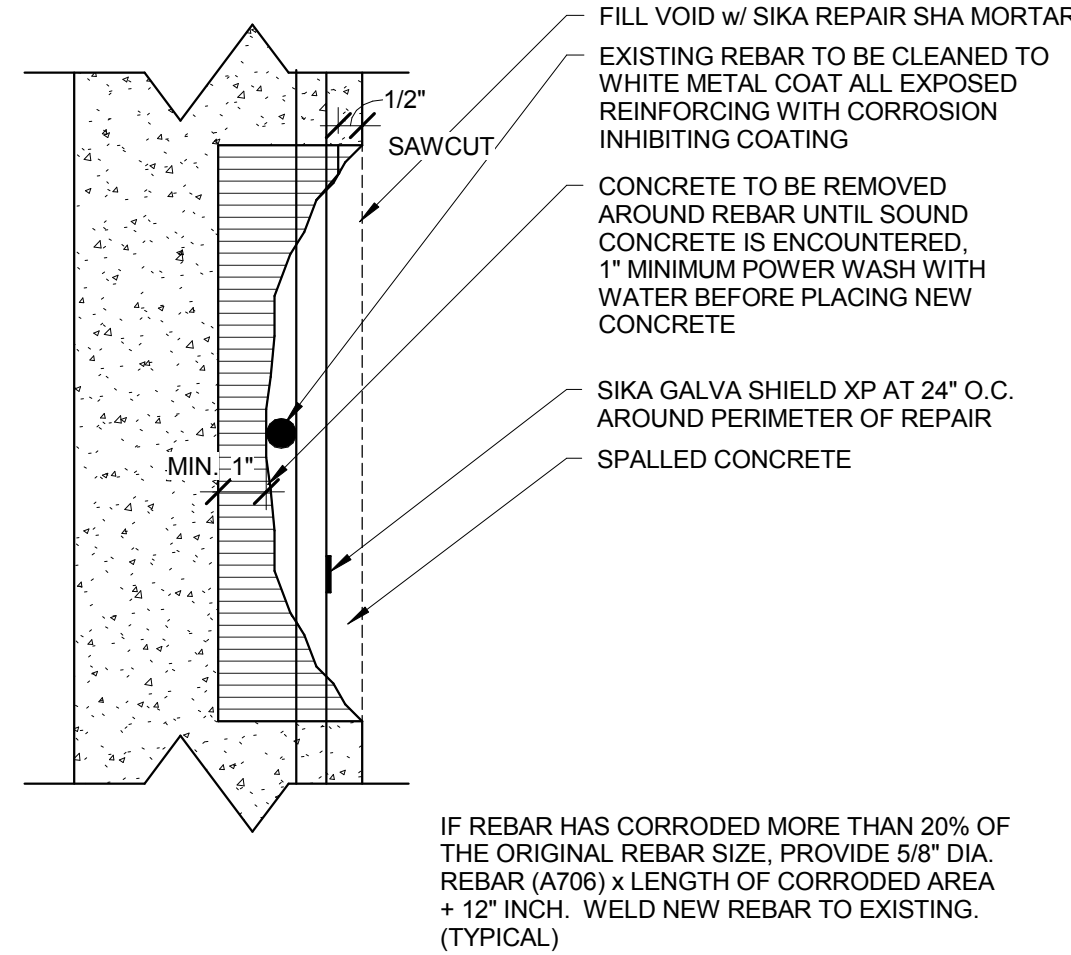
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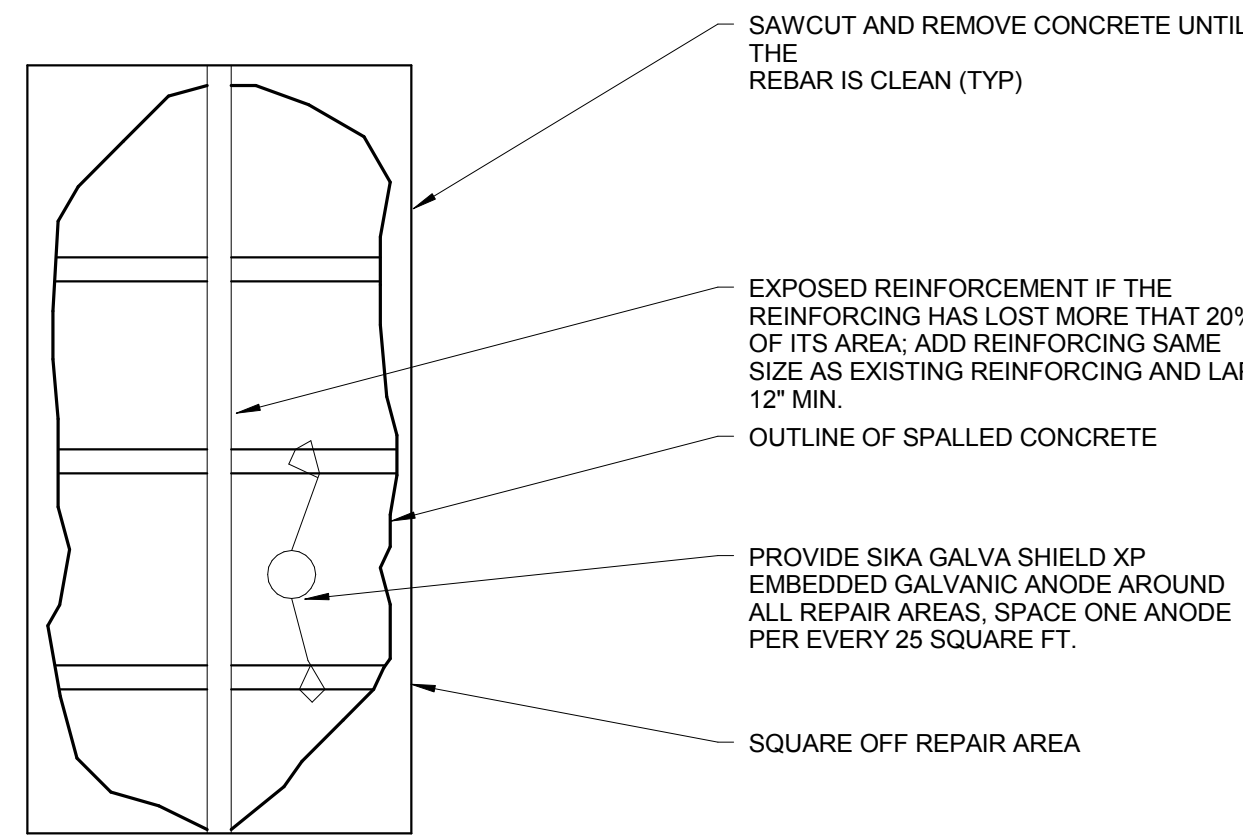
Spalled Concrete Repair, Top of Slab
3" = 1'-0"

7
[S408]



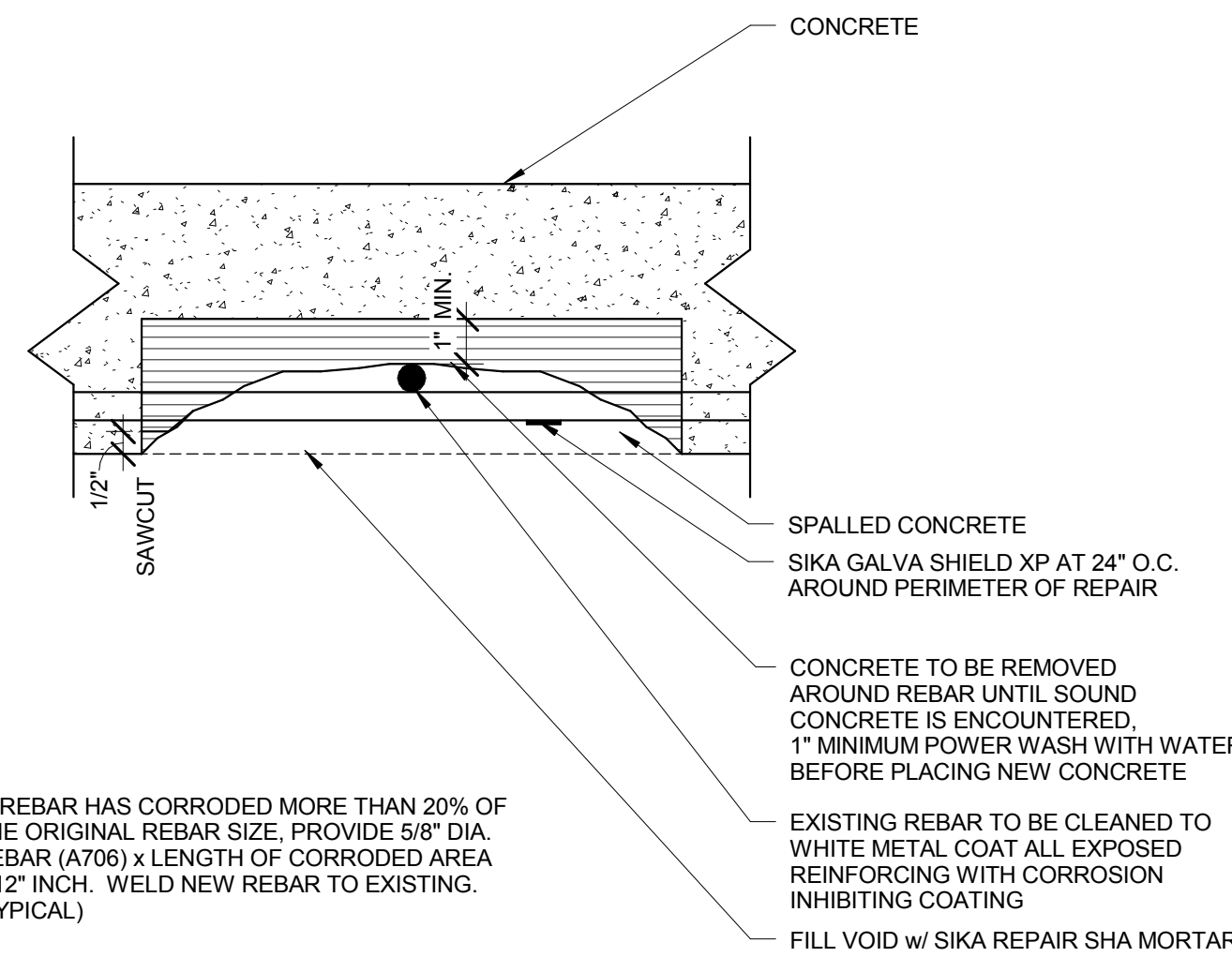
Spalled Concrete Repair, Columns and Walls
3" = 1'-0"

4
[S408]



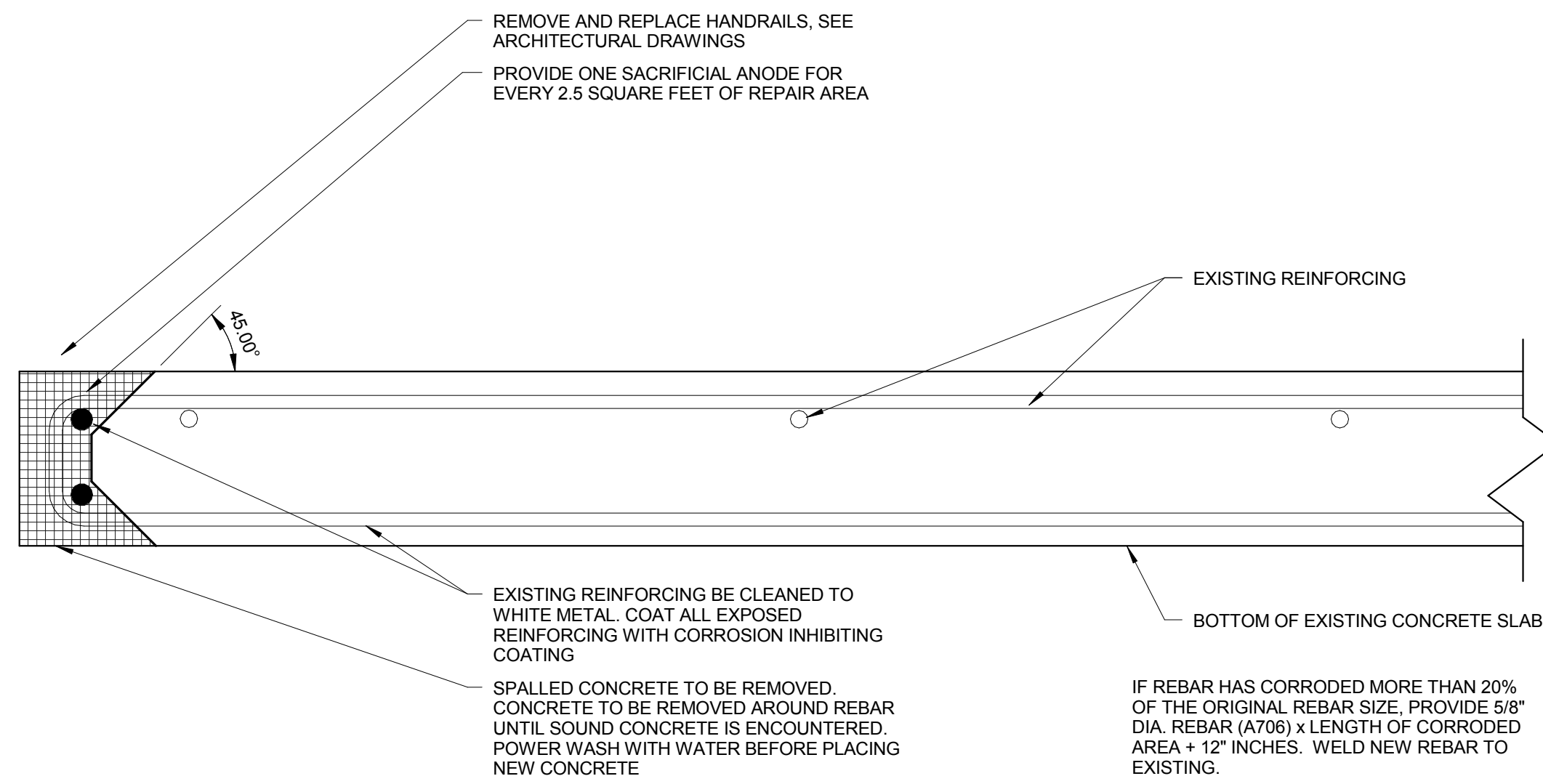
Spalled Concrete Repair Slab
1" = 1'-0"

1
[S408]



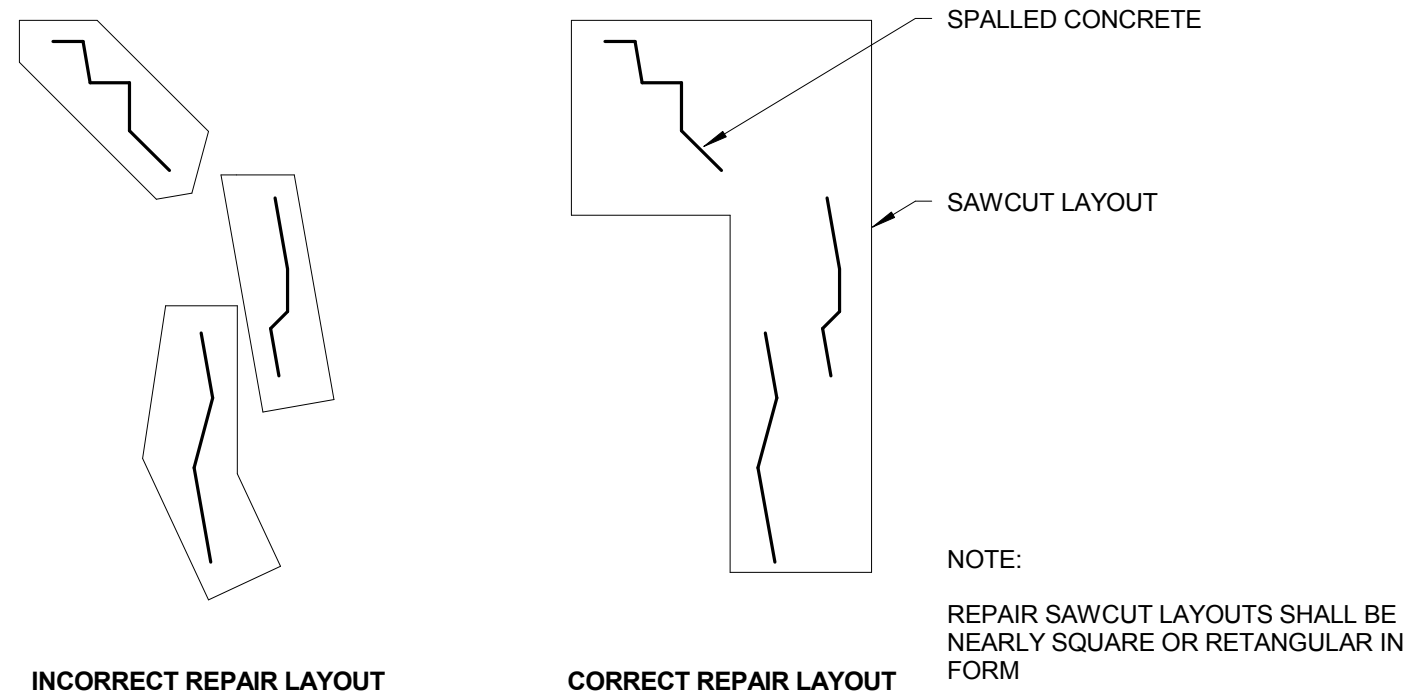
Spalled Concrete Repair, Bottom of Slab
3" = 1'-0"

8
[S408]



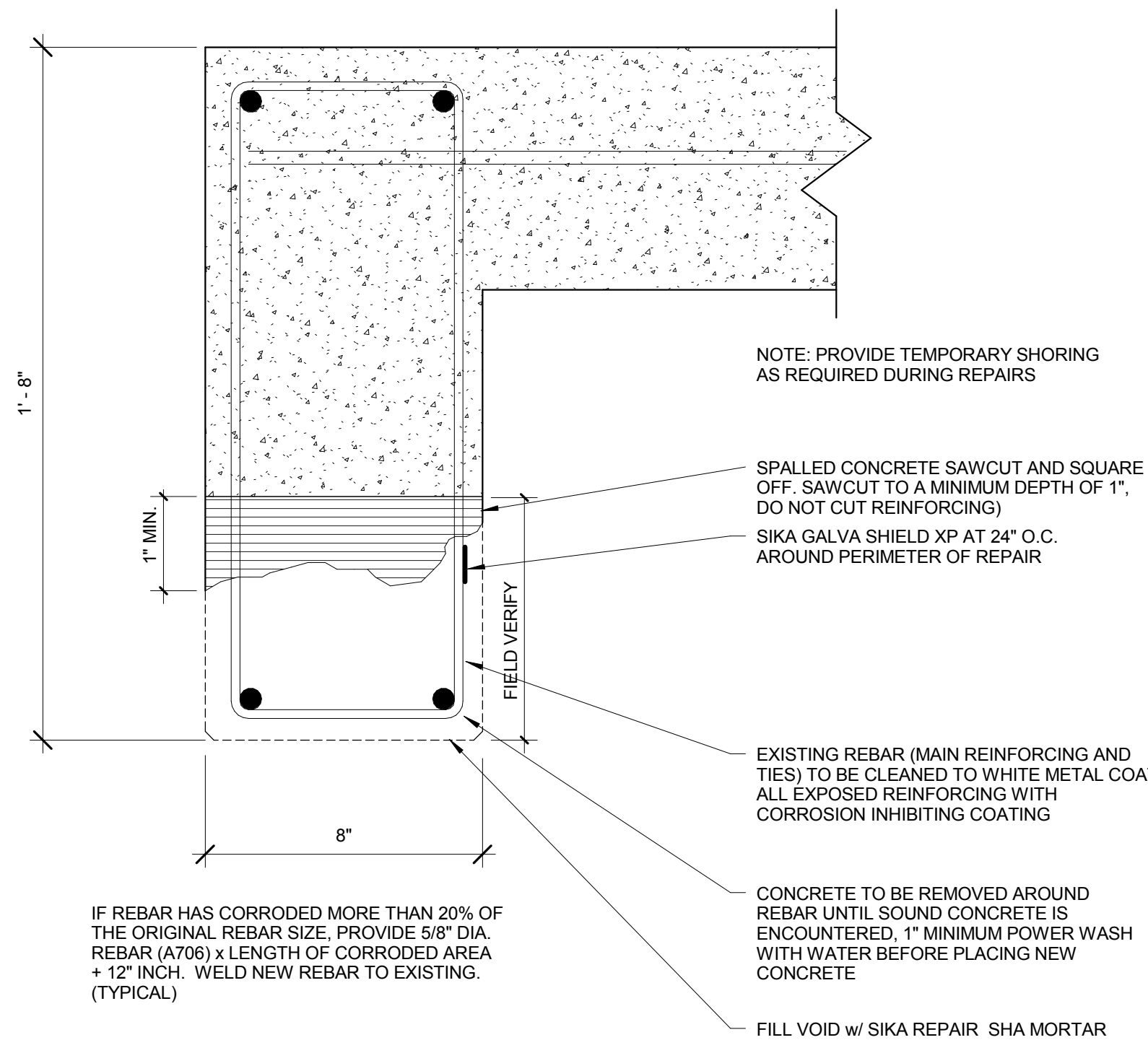
Slab Edge Repair
3" = 1'-0"

2
[S408]



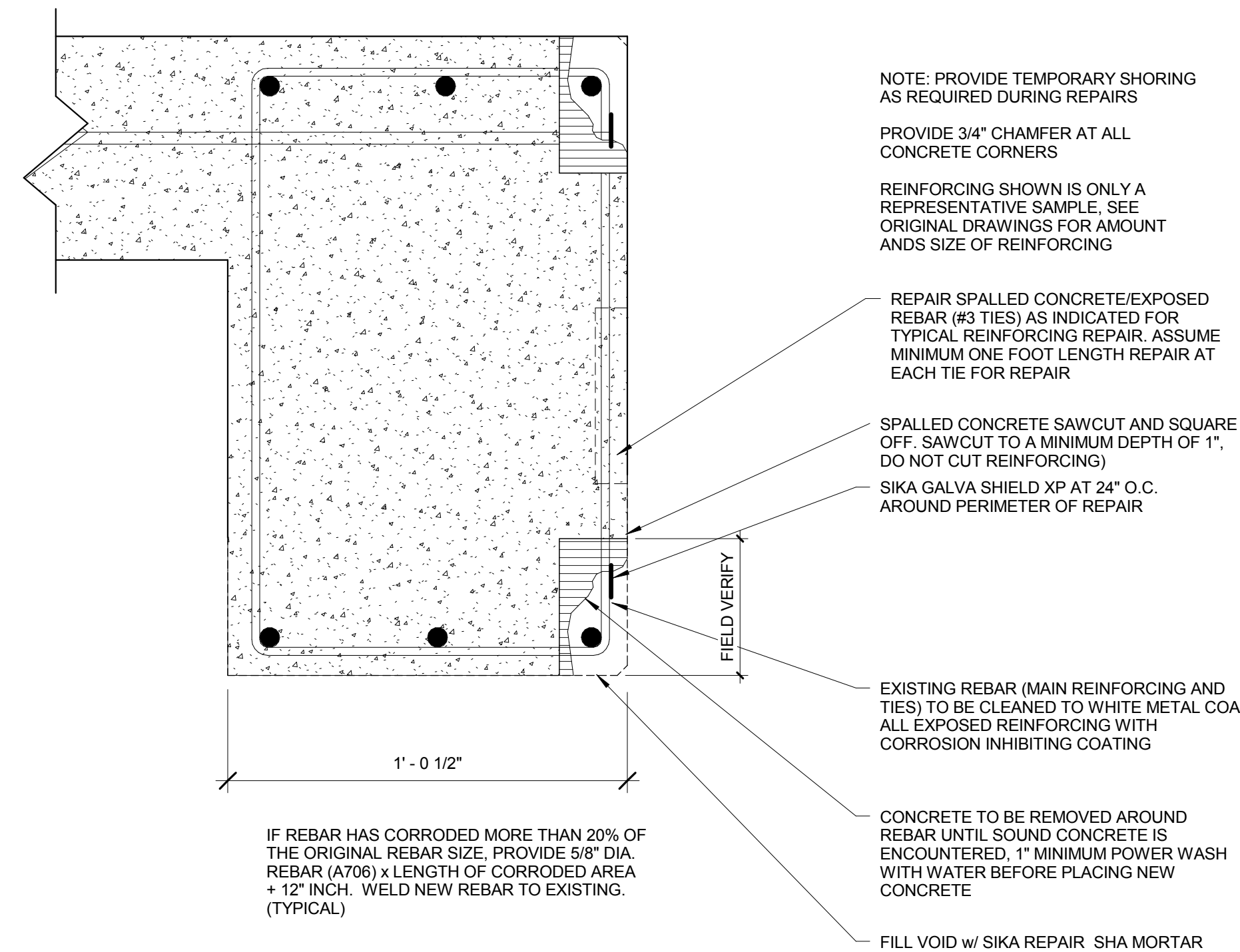
Spalled Concrete Layout
1" = 1'-0"

9
[S408]



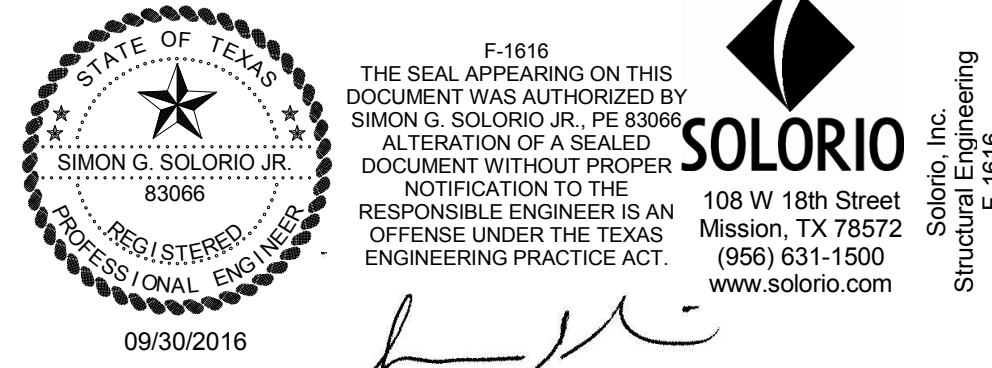
Spalled Concrete Repair, Edge Beam
3" = 1'-0"

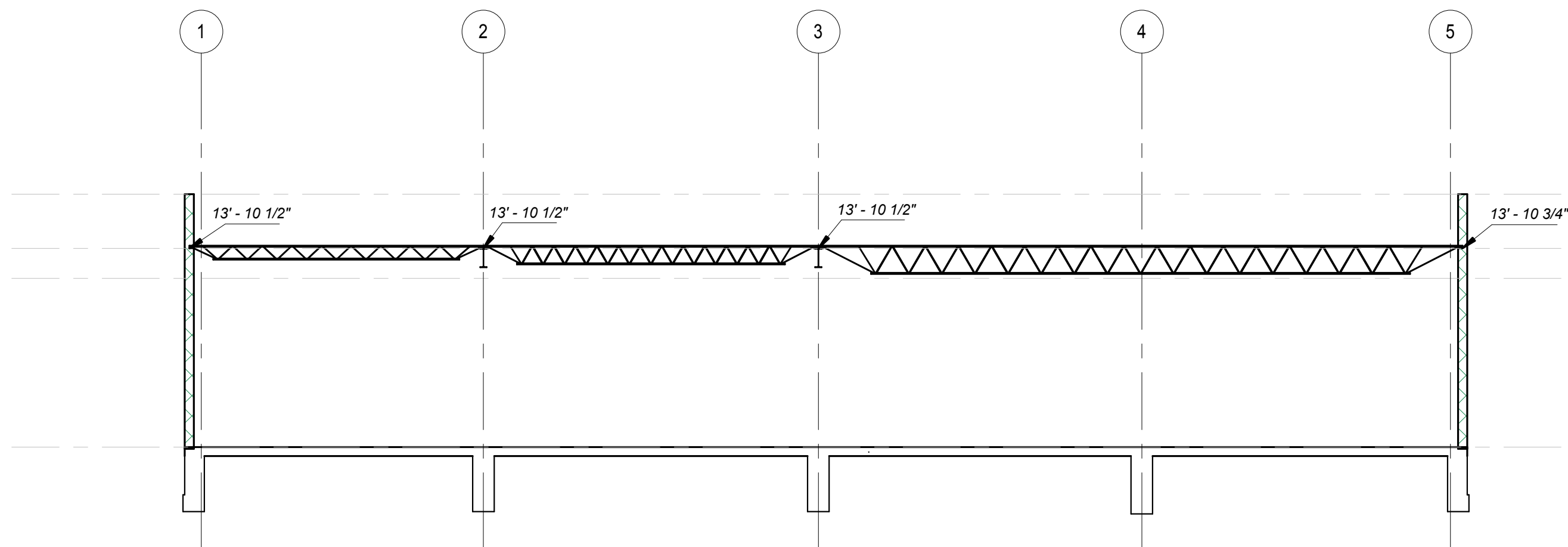
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[S408]



Spalled Concrete Repair, Exterior Beam
3" = 1'-0"

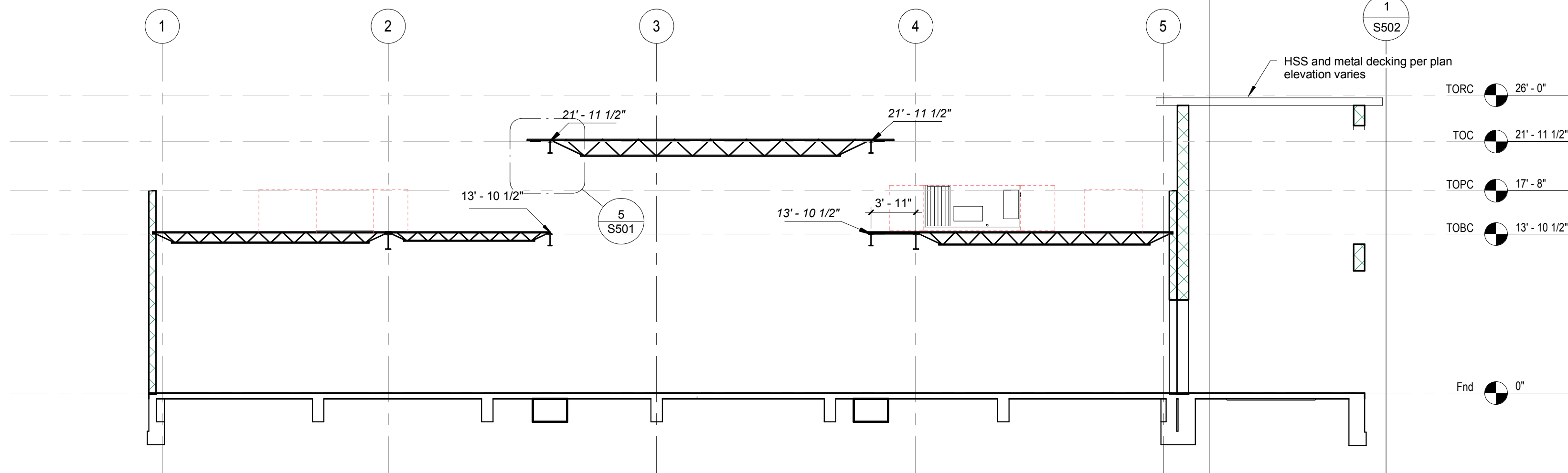
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[S408]





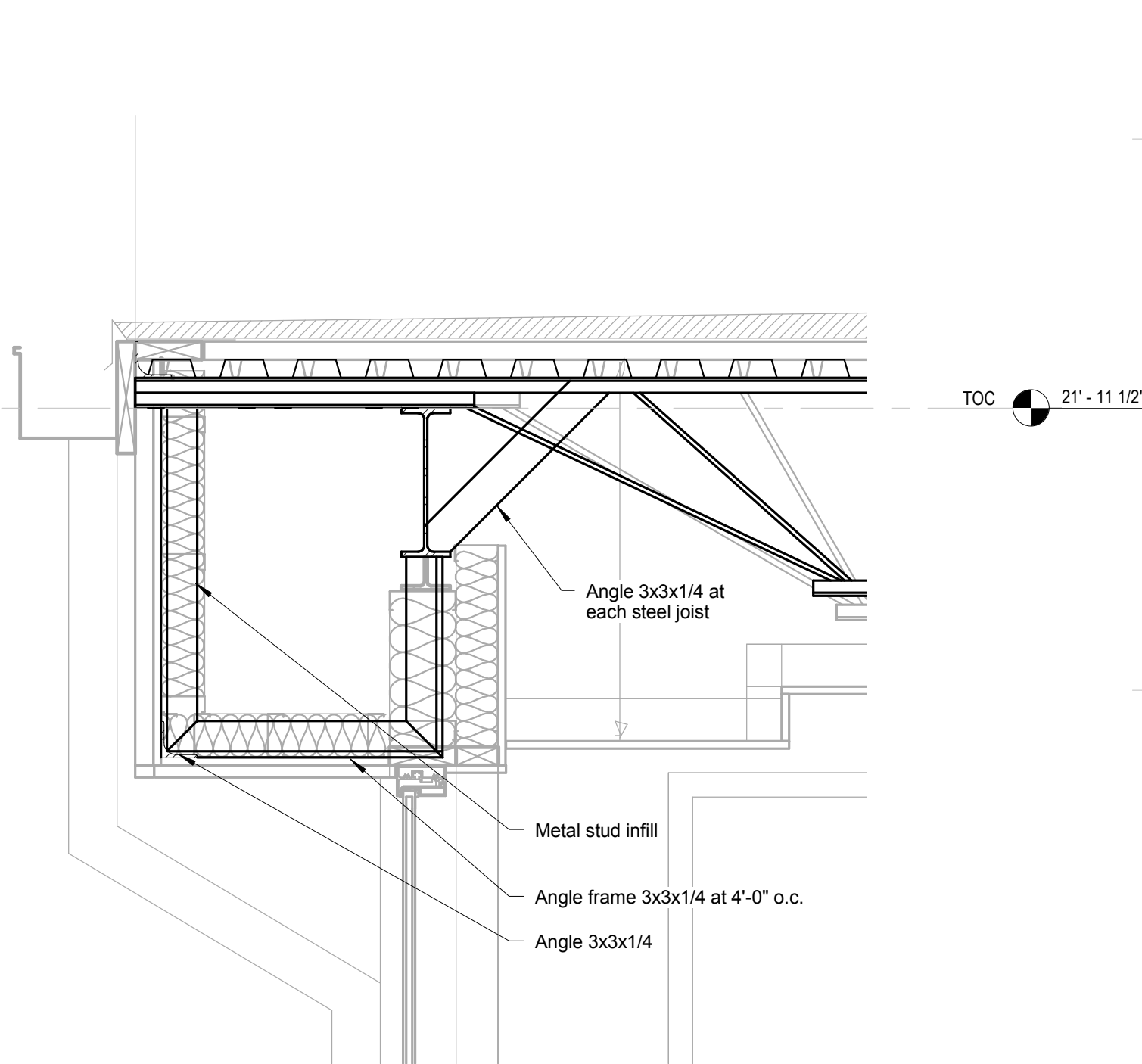
Building Section at Building C
1/8" = 1'-0"

4
S211A | S501



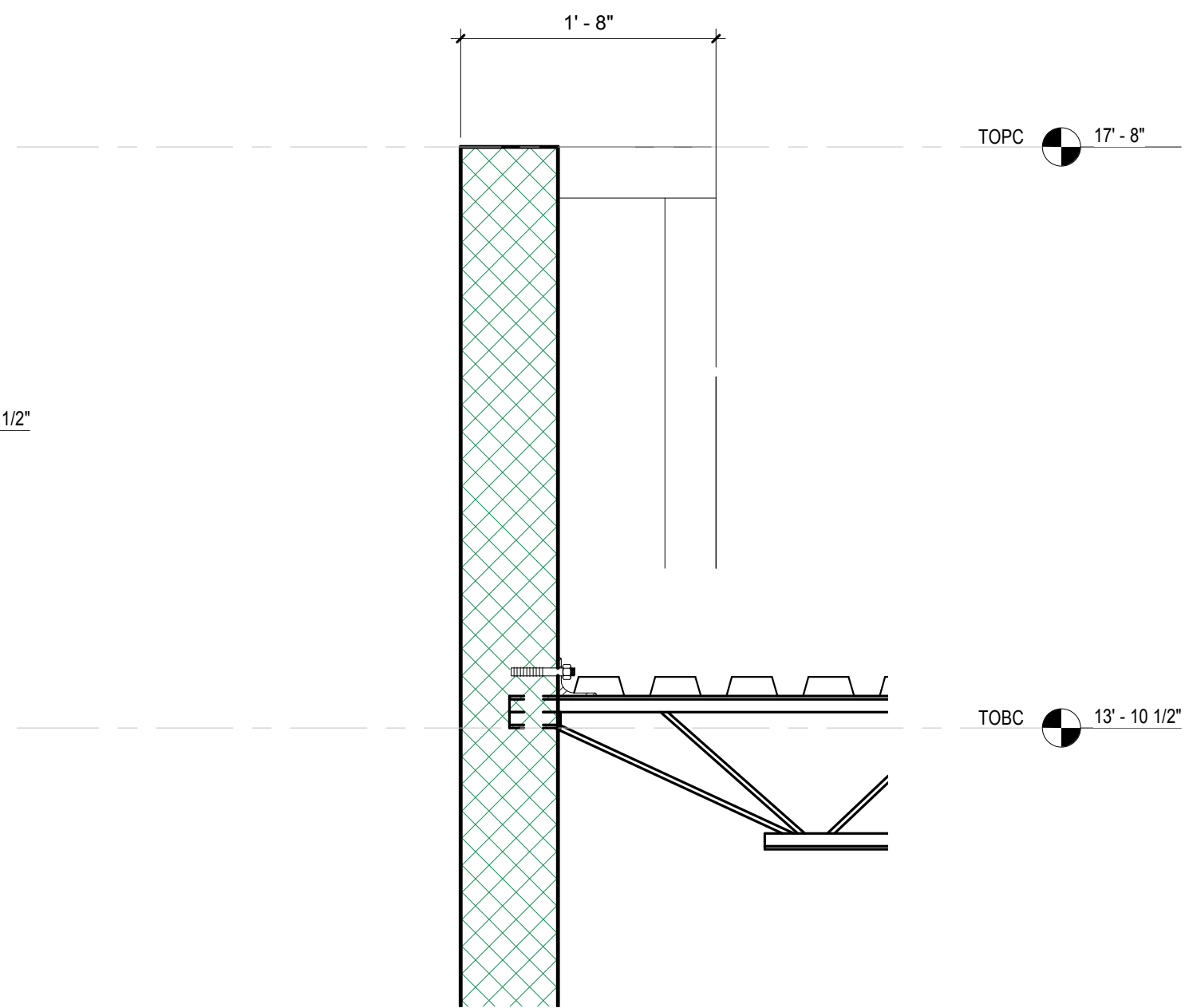
Building Section at Building C, Cleatory
1/8" = 1'-0"

1
S301 | S501



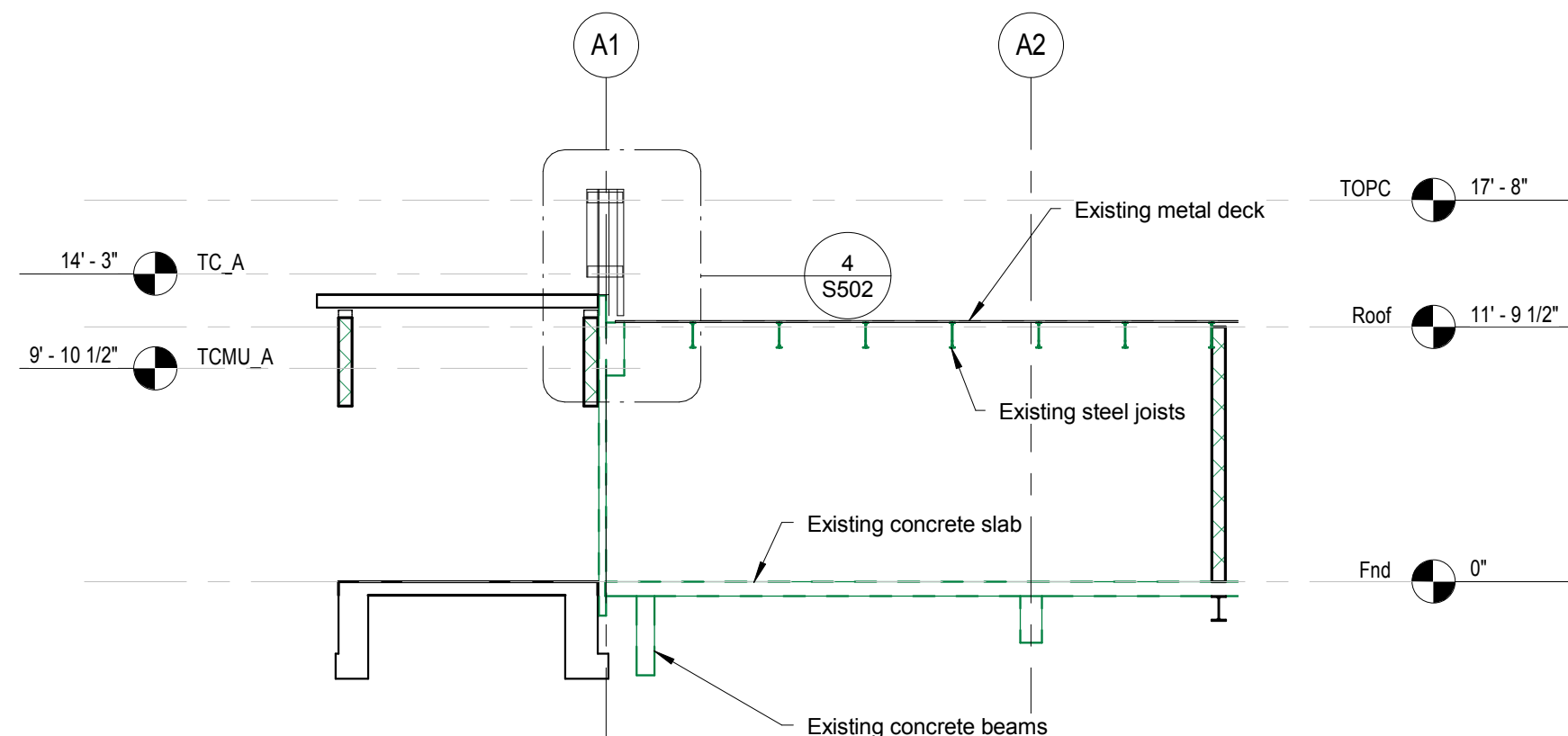
Steel Joist to Steel Beam
1" = 1'-0"

5
S301 | S501



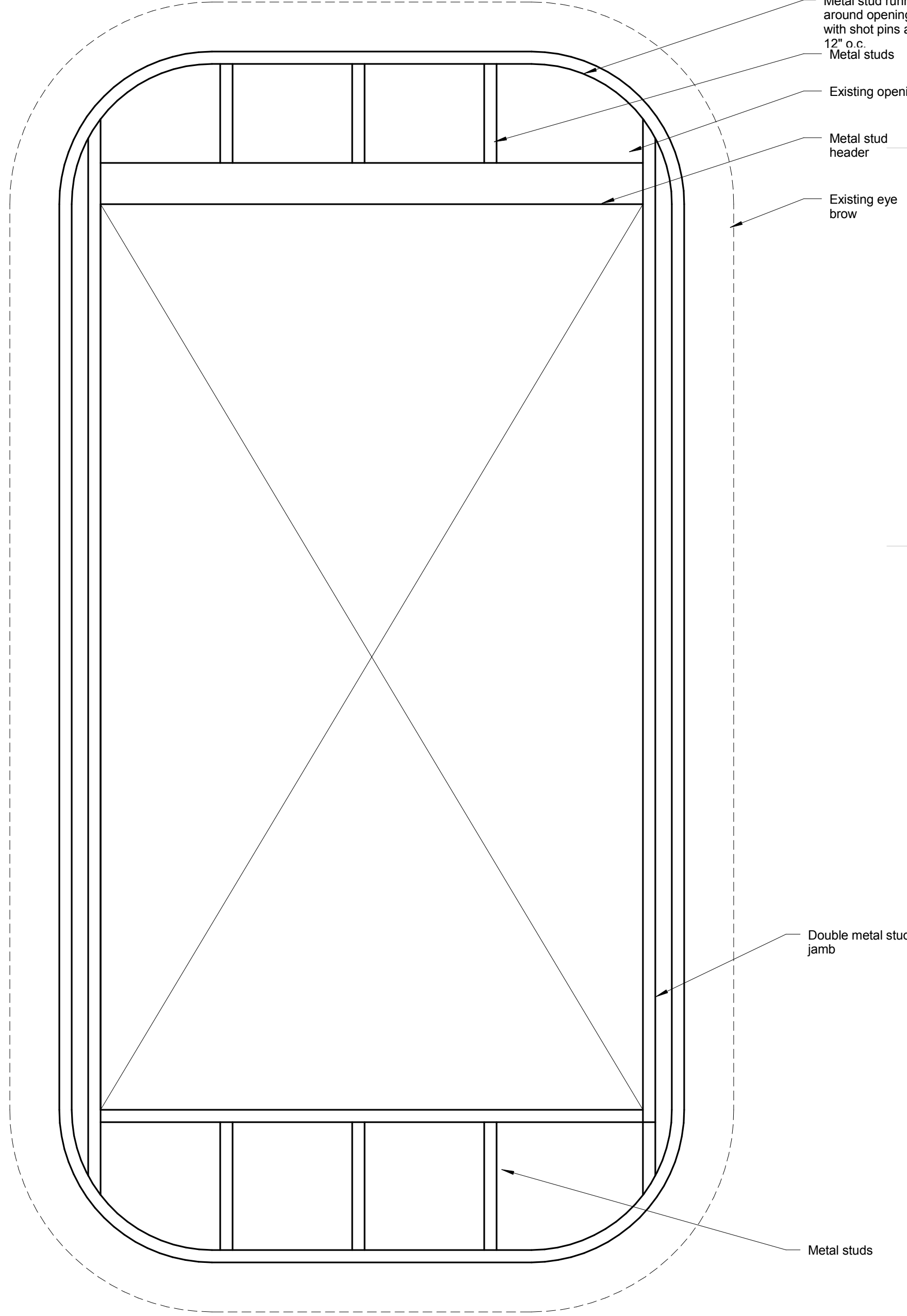
Steel Joist to CMU Wall at Metal Stud Wall
1" = 1'-0"

6
S301 | S501



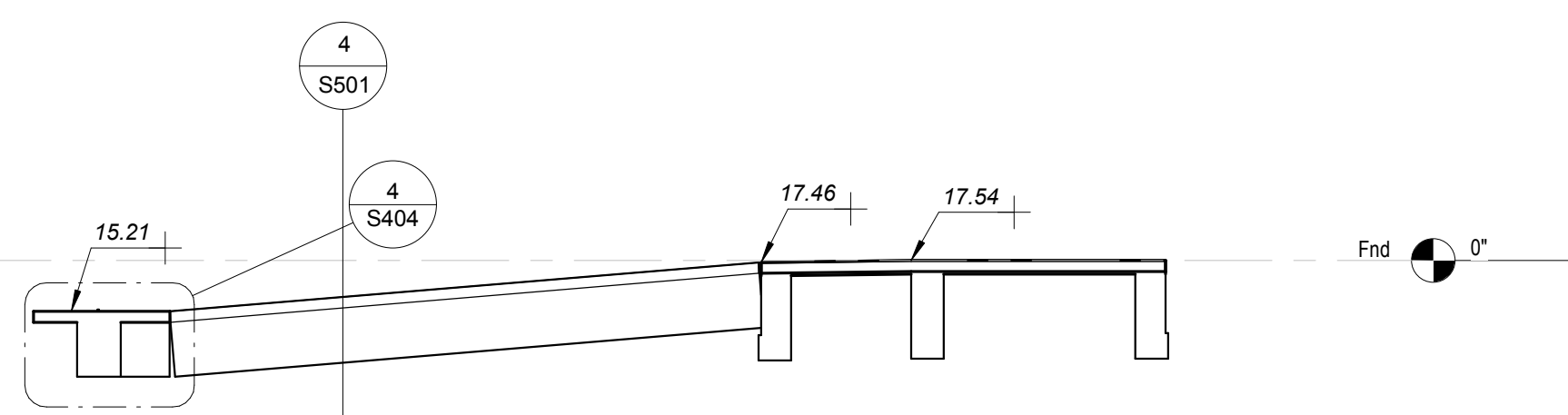
Section at Building A Entry
1/8" = 1'-0"

9
S211 | S501



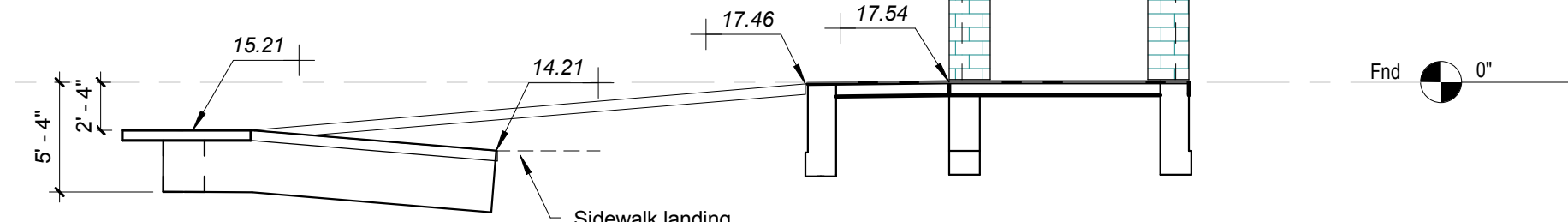
Framing around Existing Opening
1" = 1'-0"

8
S501



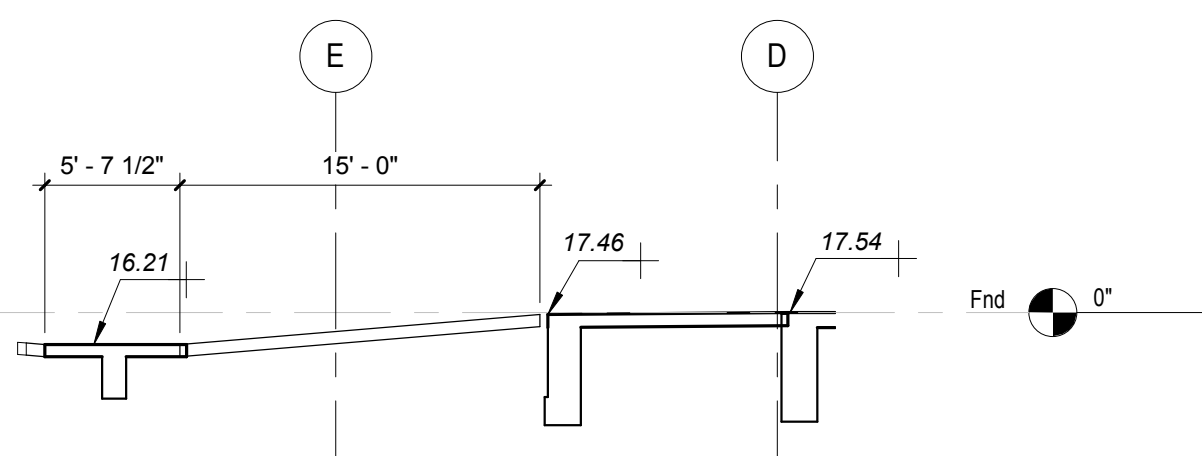
Ramp C top
1/8" = 1'-0"

2
S211 | S501



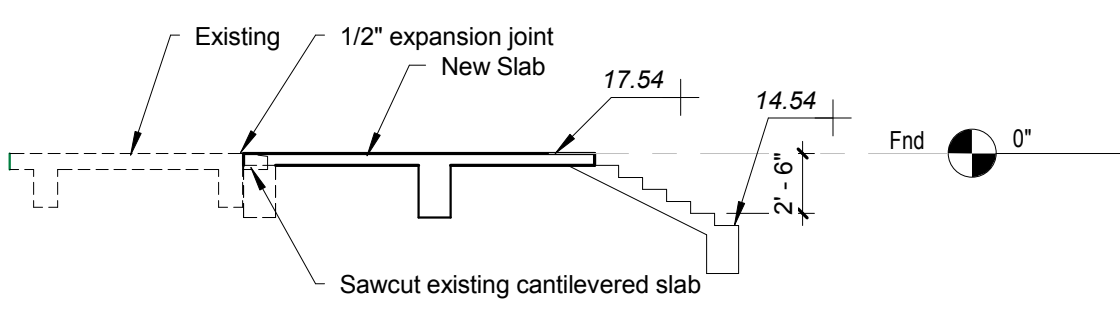
Ramp C, Low
1/8" = 1'-0"

3
S211 | S501



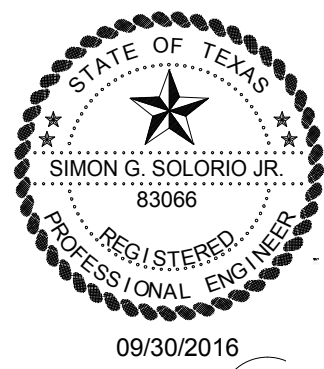
Ramp Entrance
1/8" = 1'-0"

10
S211 | S501



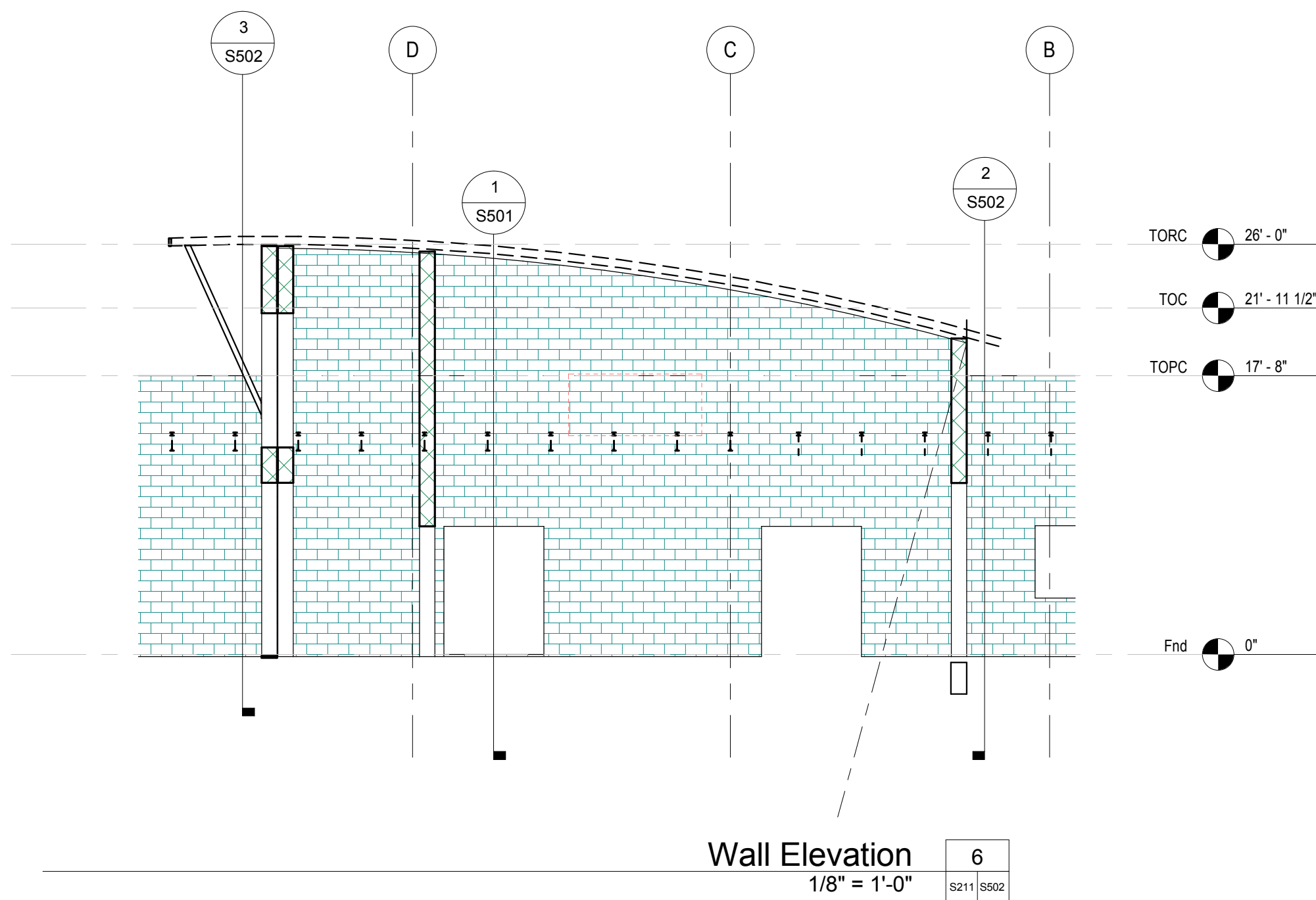
Stair at Entrance
1/8" = 1'-0"

7
S211 | S501



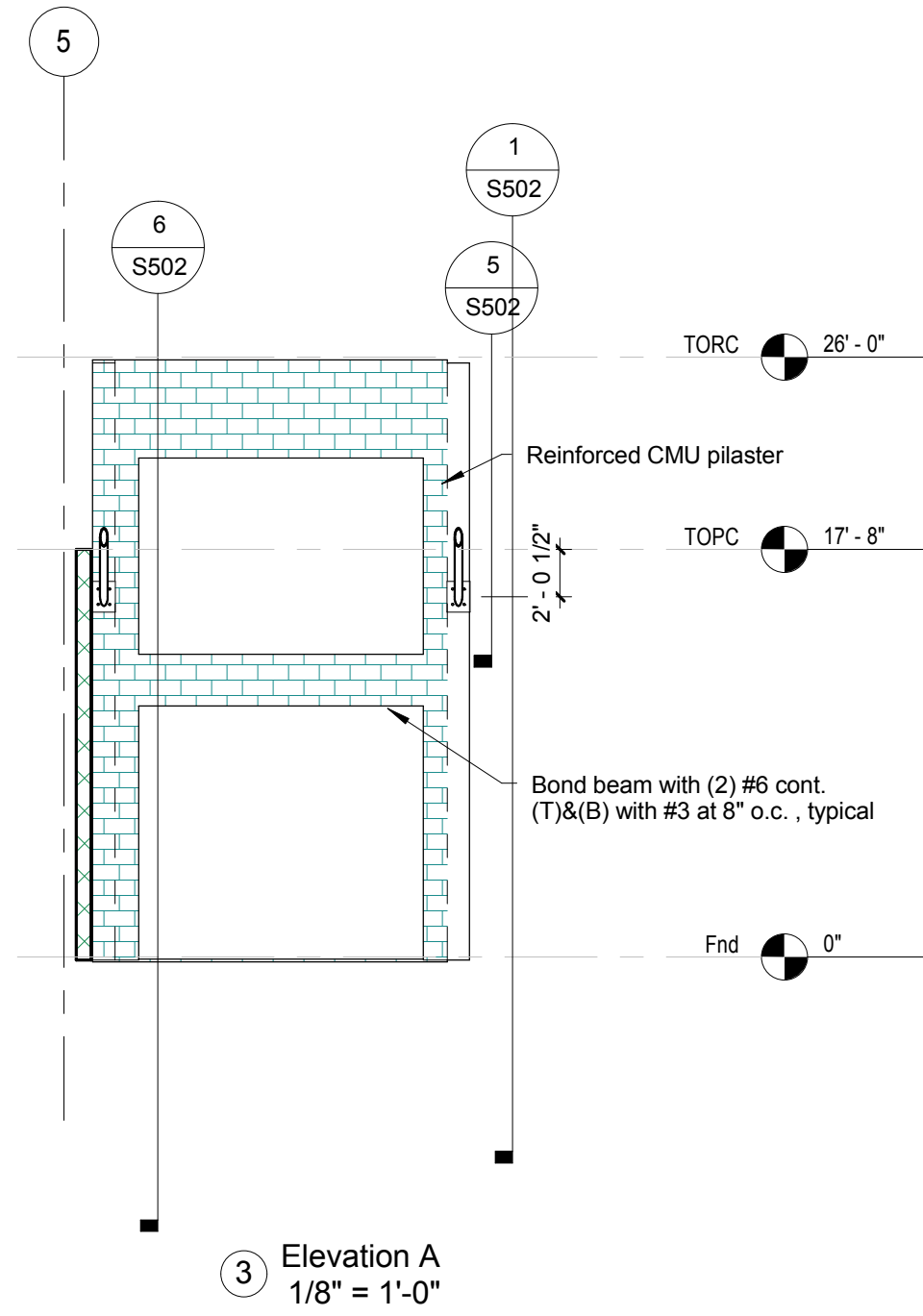
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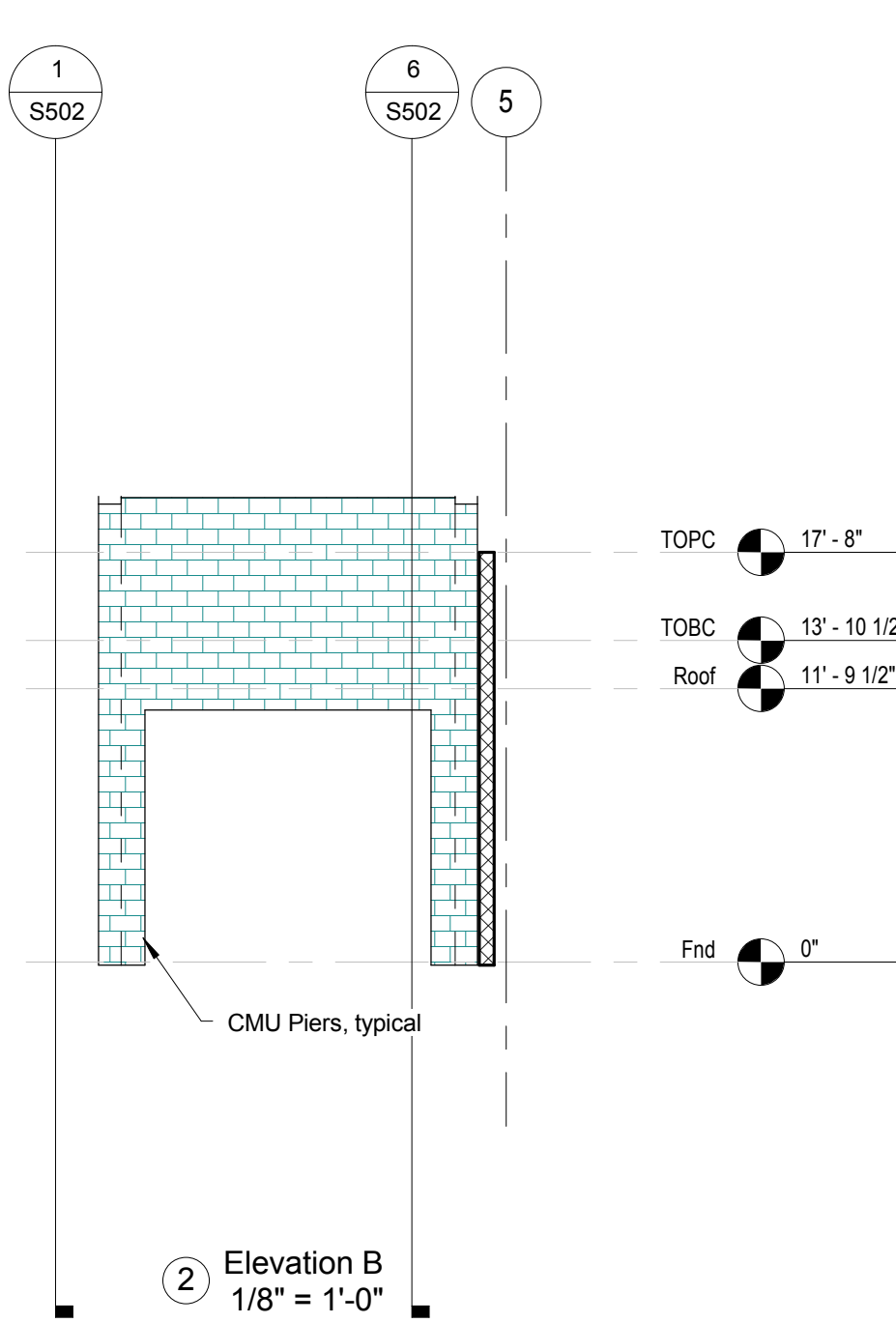


Wall Elevation
1/8" = 1'-0"

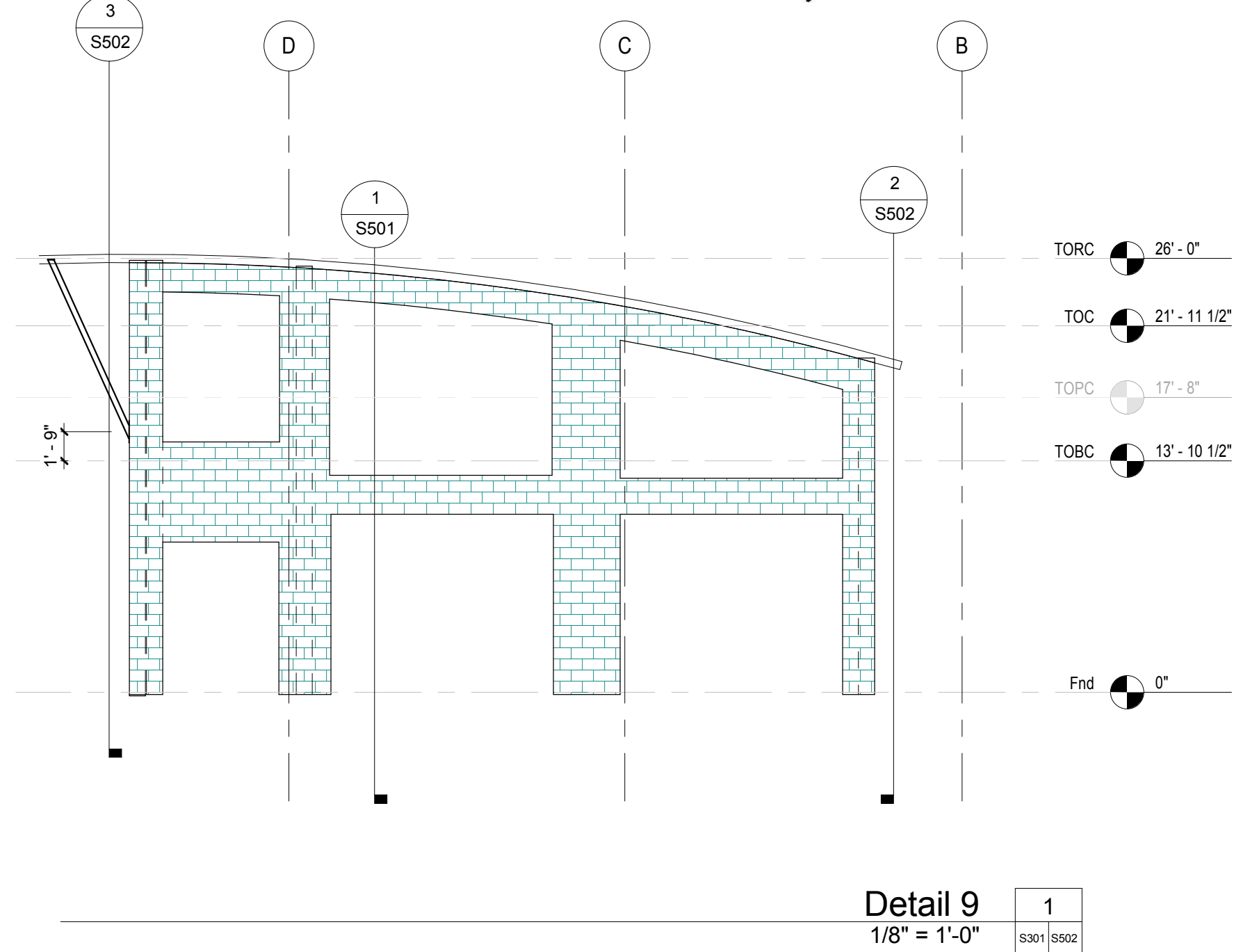
6
S301 S502



Elevation A
1/8" = 1'-0"

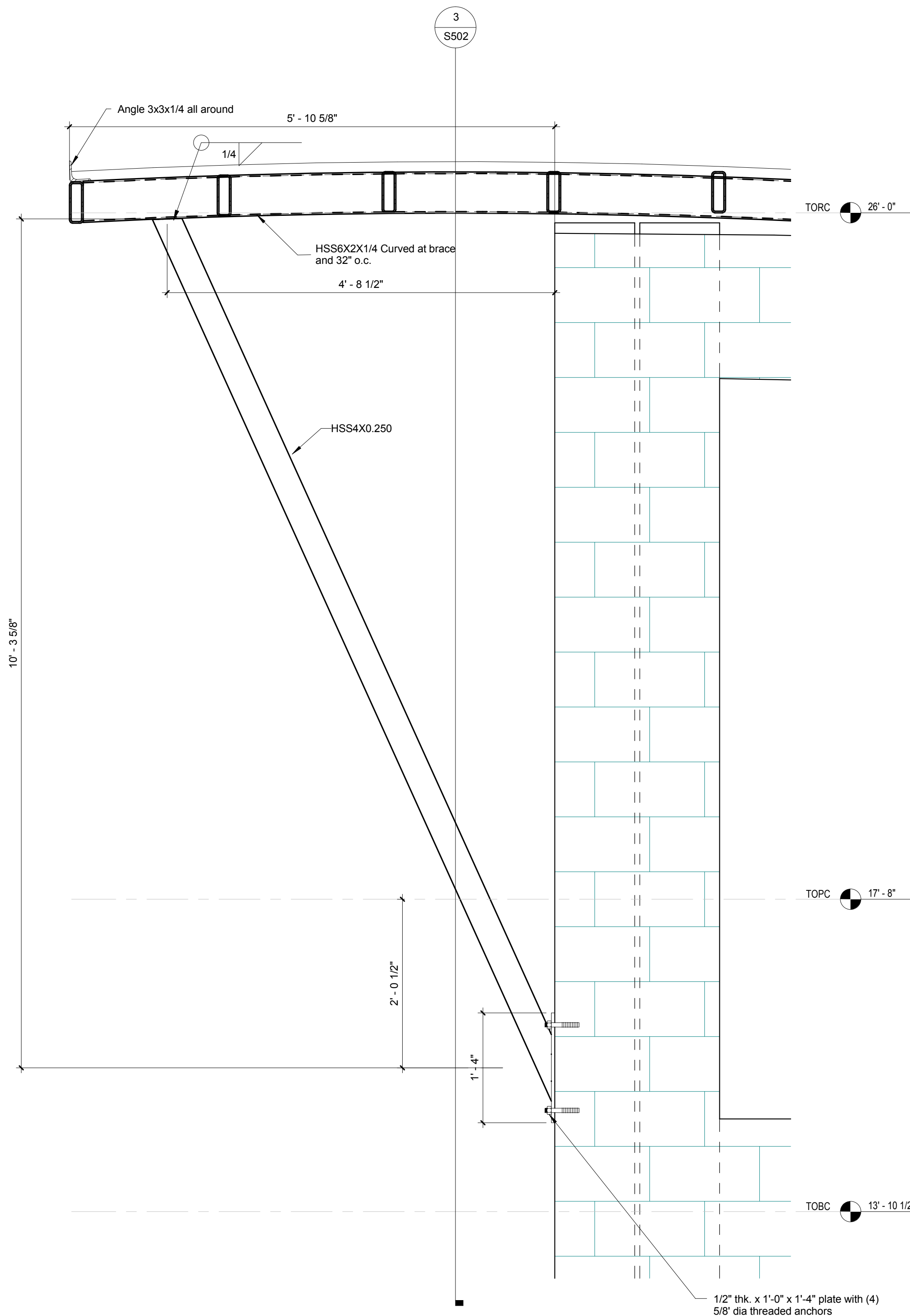


Elevation B
1/8" = 1'-0"



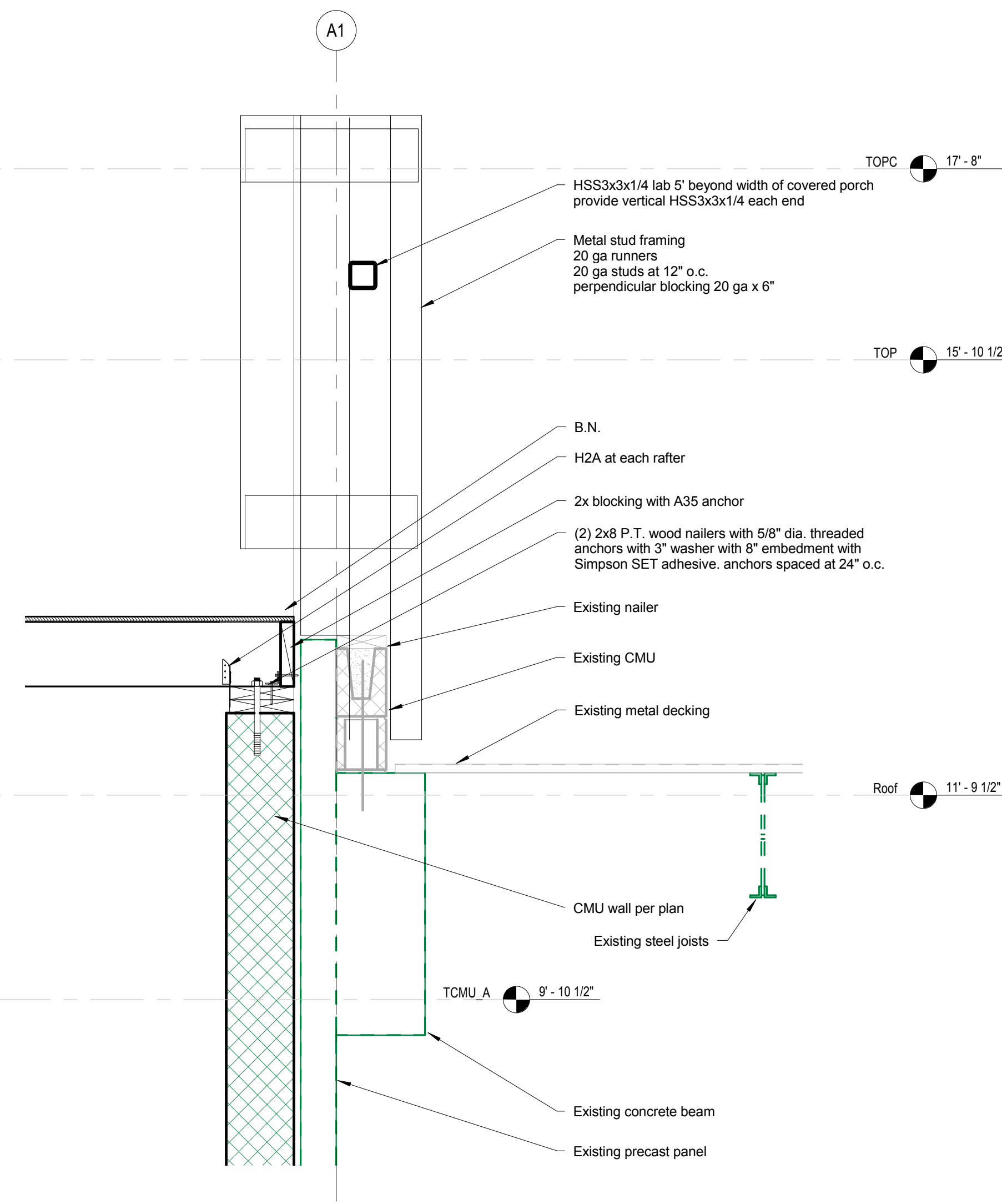
Detail 9
1/8" = 1'-0"

1
S301 S502



Detail at Roof Brace
1" = 1'-0"

5
S301 S502



Building A, Wall section at Expansion
1" = 1'-0"

4
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Sheet Title
Sections and Elevations

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS
PORT of BROWNSVILLE
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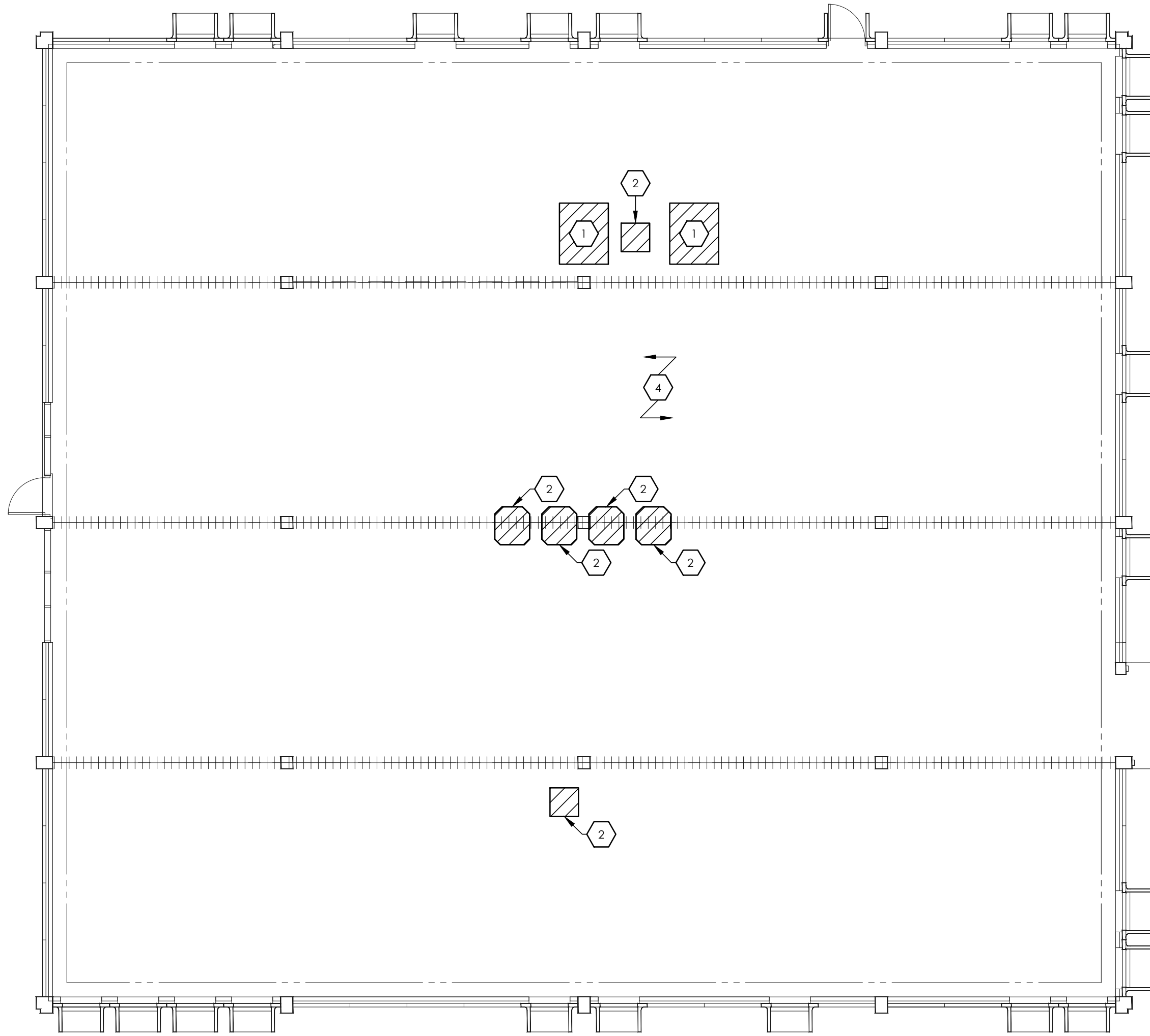
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Drawn by: Author
Project No.: 15152

SHEET
NO.

S502

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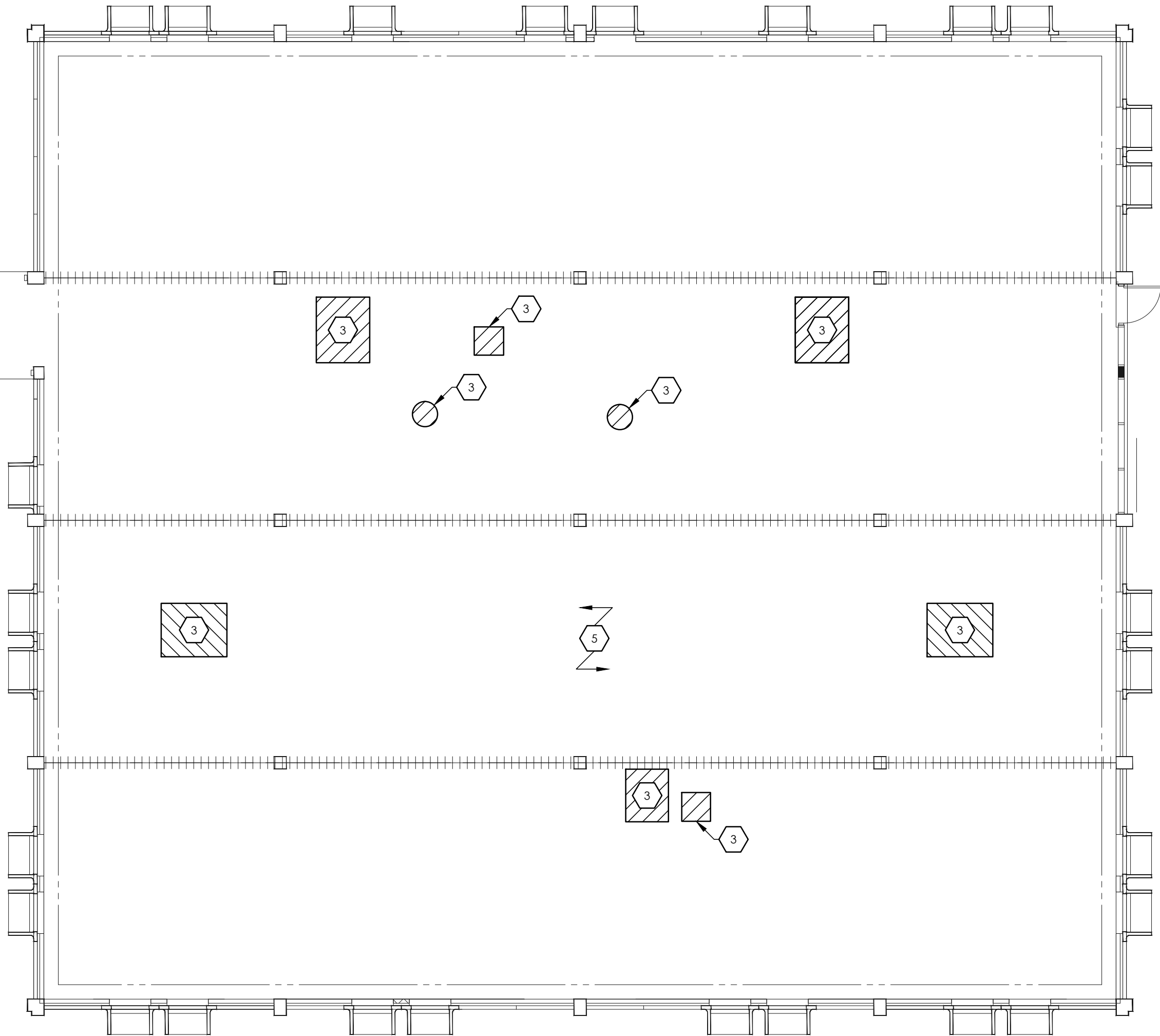


GENERAL DEMOLITION NOTES

- A. THE EXTENT OF DEMOLITION WORK IS INDICATED ON THE ARCHITECTURAL DRAWINGS AND BY THE REQUIREMENTS OF THIS SECTION. A VISIT TO THE SITE WILL BE REQUIRED TO PROPERLY BID THE DEMOLITION WORK.
- B. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL AND/OR RELOCATION OF HVAC FIXTURES AND EQUIPMENTS AND ASSOCIATED SERVICES TO PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
- C. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW THE ARCHITECTURAL DOCUMENTS IN ADDITION TO THE DIVISION 15 AND 16 DOCUMENTS TO DETERMINE THE COMPLETE SCOPE OF WORK.
- D. WHERE EQUIPMENT IS INDICATED OR REQUIRED TO BE REMOVED, THE ASSOCIATED SERVICES SHALL BE CAPPED AT A CONCEALED LOCATION.
- E. WHERE SERVICES RUN ABOVE INACCESSIBLE CEILINGS OR IN WALLS WHICH ARE TO REMAIN UNDISTURBED, SERVICES SHALL BE CAPPED AT CONCEALED LOCATION AND ABANDONED.
- F. WHERE THE REMOVAL OF EQUIPMENT RENDERS EQUIPMENT DOWNSTREAM INOPERABLE, SERVICES SHALL BE EXTENDED TO THE DOWNSTREAM EQUIPMENT SO THAT THE FIXTURES ARE LEFT IN OPERATING CONDITION.
- G. COORDINATE DEMOLITION OF DIVISION 15 SYSTEMS AS REQUIRED WITH ALL OTHER TRADES.
- H. ALL EXISTING H.V.A.C. AND EQUIPMENT REMOVED DURING CONSTRUCTION THAT ARE NOT TO BE REUSED SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
- I. WHERE EXISTING EQUIPMENT IS TO BE RELOCATED, BE CAUTIOUS TO PREVENT DAMAGE DURING THE REMOVAL AND REINSTALLATION. WHERE DAMAGE OCCURS, THE EQUIPMENT SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION AND APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- J. EXISTING EQUIPMENT TO BE REUSED SHALL BE CLEANED AND REPAIRED AT THE DISCRETION OF THE ARCHITECT WHERE APPLICABLE.
- K. ALL DEVICES ATTACHED TO WALLS OR CEILINGS SHALL BE REMOVED PER DEMOLITION NOTE A - L WHETHER SHOWN ON DRAWINGS OR NOT.
- L. THE OWNER MAY AT ANY TIME REMOVE CERTAIN ITEMS PRIOR TO THE BID DATE.

KEYED NOTES: MECHANICAL

- 1 REMOVE ALL INDOOR AIR HANDLERS. RETURN TO OWNER OF EQUIPMENT IS LESS THAN 5 YEARS OLD; ELSE, DISPOSE OF.
- 2 REMOVE ALL ROOFTOP EQUIPMENT. RETURN TO OWNER OF EQUIPMENT IS LESS THAN 5 YEARS OLD; ELSE, DISPOSE OF.
- 3 REMOVE ALL ROOFTOP EQUIPMENT. RETURN TO OWNER OF EQUIPMENT IS LESS THAN 5 YEARS OLD; ELSE, DISPOSE OF. REMOVE EXISTING ROOF CURB & COMPLETELY PATCH EXISTING RTU OPENINGS W/ STRUCTURAL & ROOFING MATERIALS SPECIFIED ON ARCH DOCUMENTS.
- 4 REMOVE ALL HVAC DUCTWORK, AIR DEVICES, TAPS, DAMPERS, REFRIGERANT LINES, CONDENSATE LINES, AND ALL OTHER ASSOCIATED ACCESSORIES & HARDWARE.
- 5 REMOVE ALL HVAC DUCTWORK, AIR DEVICES, TAPS, DAMPERS, REFRIGERANT LINES, CONDENSATE LINES, AND ALL OTHER ASSOCIATED ACCESSORIES & HARDWARE.



1 MECHANICAL-DEMOLITION FLOOR PLAN
1/8"=1'-0"

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Project number: 16.1.01

SHEET TITLE: MECHANICAL — DEMOLITION FLOOR PLAN

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS
PORT OF BROWNSVILLE
•WORLD CLASS•

09/30/16
STATE OF TEXAS
Willford L. McGee III
121839

ROBERTO J. RUIZ
ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 77820
(956) 350-9195 OFFICE
(956) 350-9198 FAX
ARCHRUIZ@AOL.COM

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DATE: 09/30/16

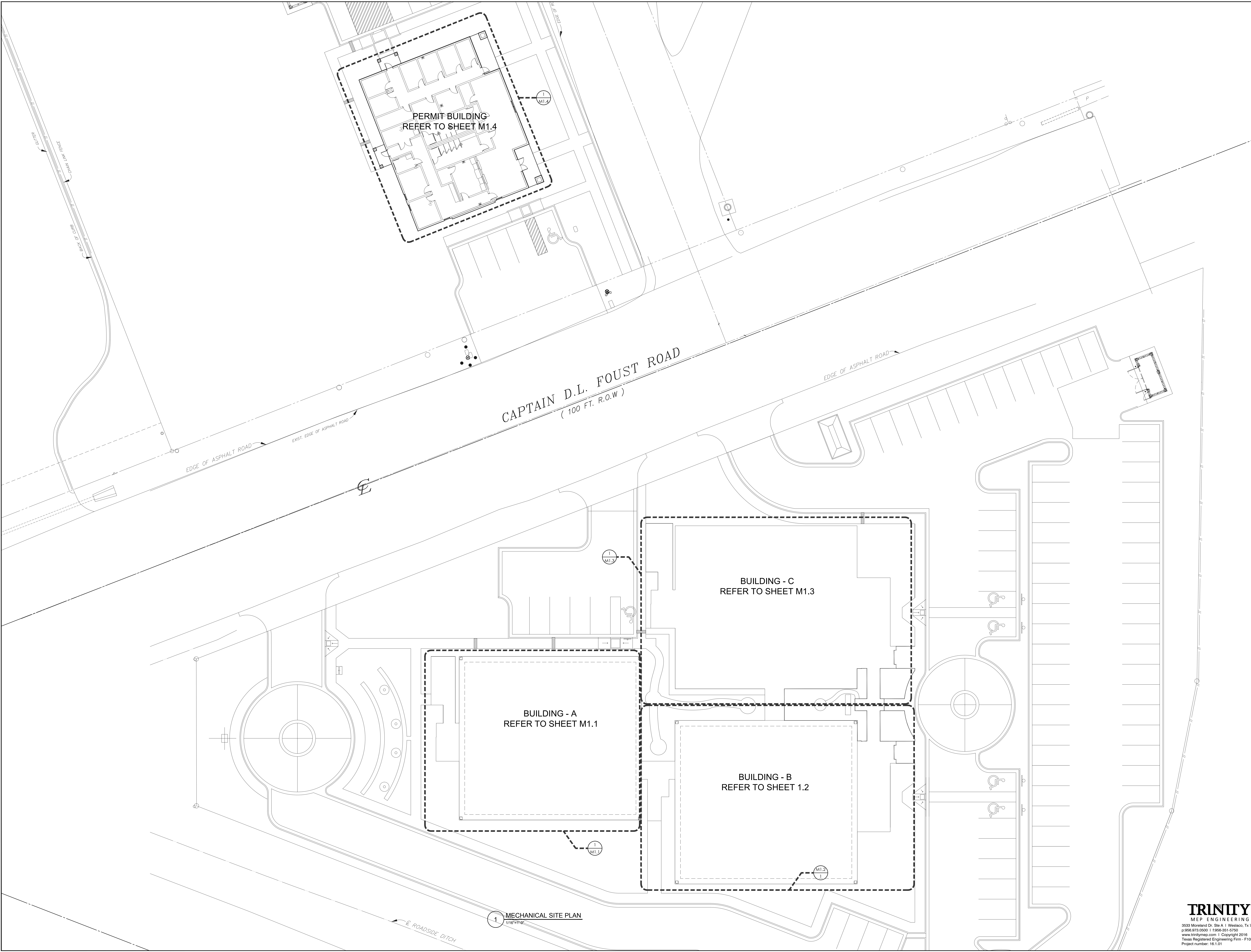
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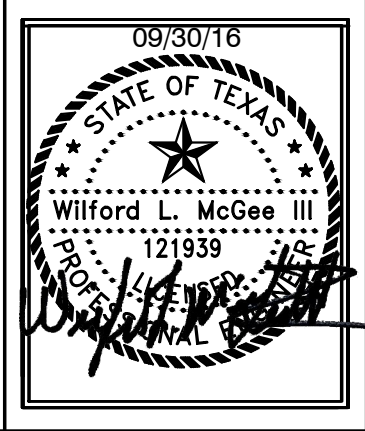
1 MECHANICAL SITE PLAN
1/16"=1'-0"

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Project number: 16.1.01

SHEET TITLE:
MECHANICAL SITE PLAN

PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

BROWNSVILLE NAVIGATION DISTRICT
OF CAMERON COUNTY, TEXAS
PORT of BROWNSVILLE
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ROBERTO J. RUIZ
ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 77820
(956) 350-9195 OFFICE
(956) 350-9198 FAX
ARCHRUIZ@AOL.COM

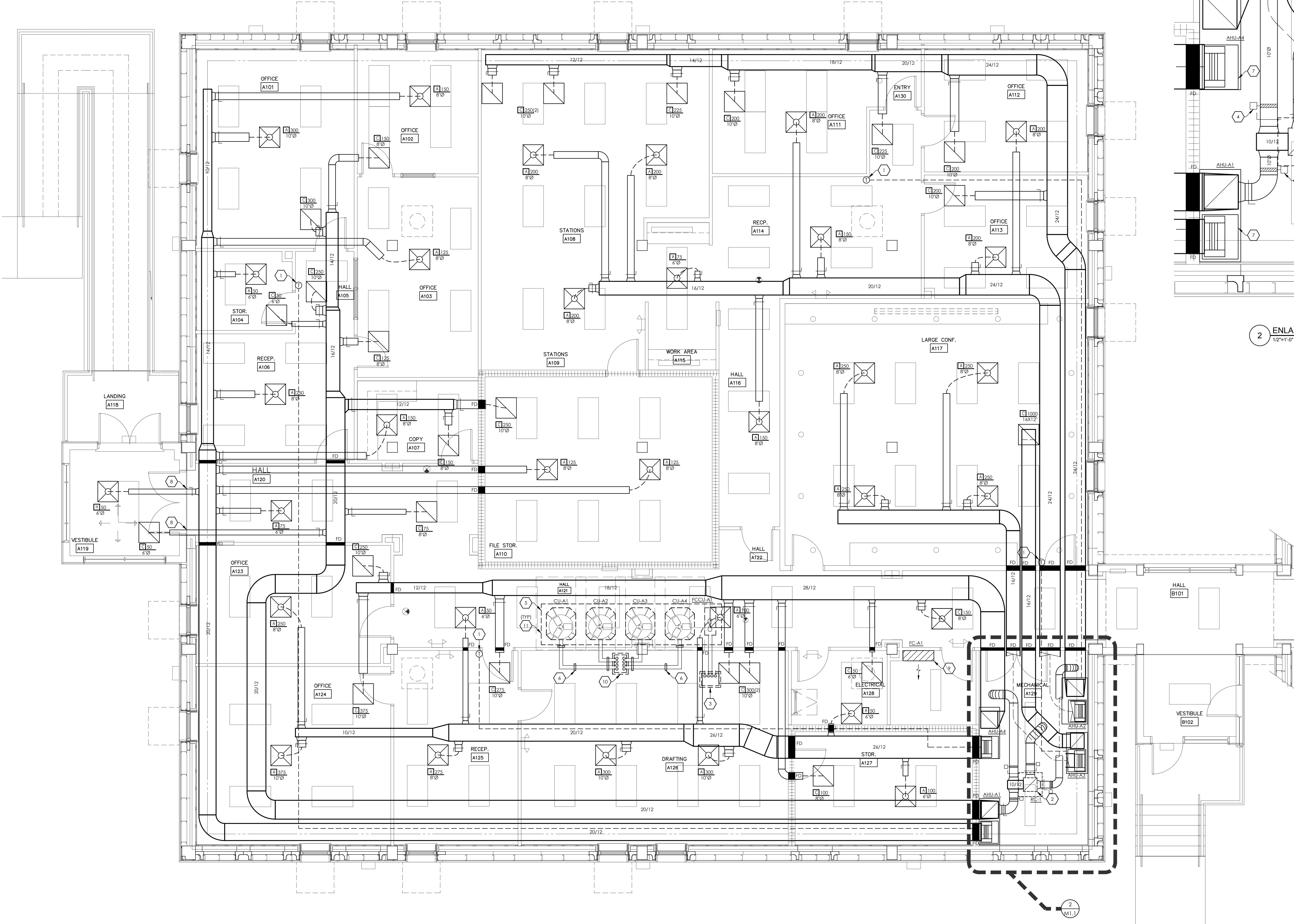
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PROJECT NO.: 16.1.01

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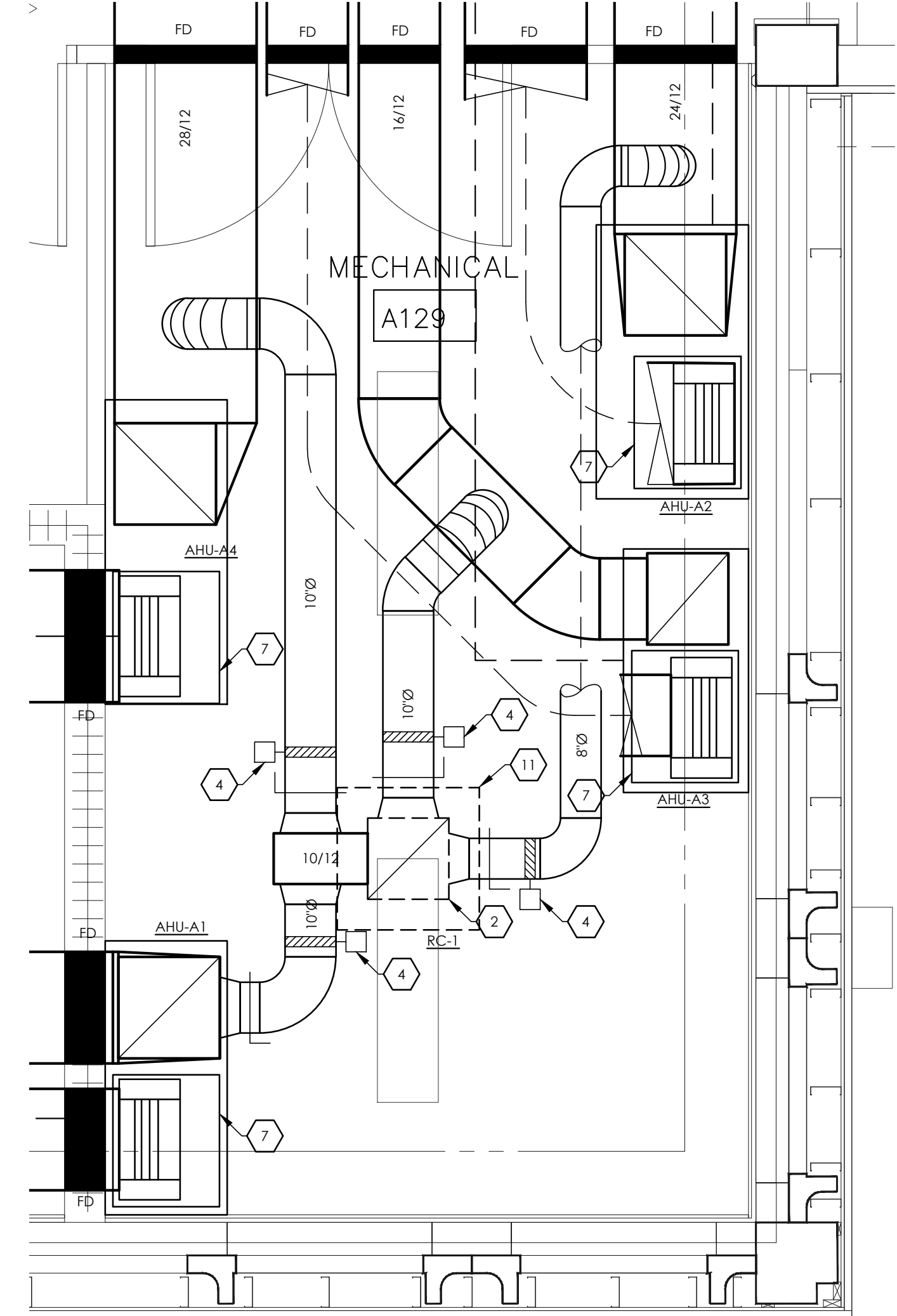
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1 MECHANICAL FLOOR PLAN-BUILDING A
1/4"=1'-0"



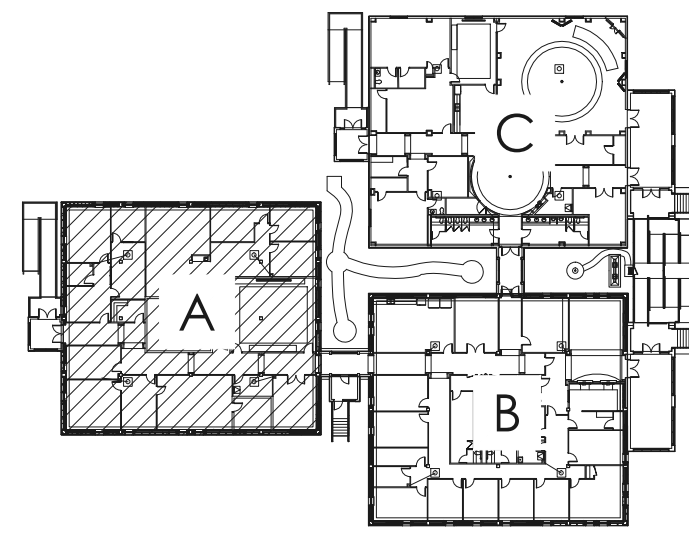
2 ENLARGED FLOOR PLAN-MECHANICAL ROOM
1/2"=1'-0"

GENERAL NOTE:

- (1) ALL DUCT INTERIOR SHALL BE PAINTED W/ GRAY RUST INHIBITOR PAINT.

KEYED NOTES: MECHANICAL

- 1 CONTROLS THERMOSTAT SHOWN ON A DIGITAL DISPLAY. MOUNT THERMOSTAT AT 6" ABOVE FINISHED FLOOR. PROVIDE WITH KEYS CLEAR PLASTIC COVER.
- 2 16"x16" DUCT FOR OUTSIDE AIR TO BE ROUTED DOWN INTO MECHANICAL ROOM.
- 3 ROUTE REFRIGERANT LINES AND CONDENSER ELECTRICAL CONDUIT BELOW ROOF VIA A "ROOF PENETRATION HOUSING" EQUAL TO "SMALL VAULT" FROM ROOFPENETRATIONHOUSING.COM. ROUTE REFRIGERANT LINES TO RESPECTIVE AIR HANDLER. ANCHOR LINES TO STRUCTURE AND SEAL ALL PENETRATIONS WATER TIGHT. ALL PIPING SUPPORTS & FASTENERS TO BE OF STAINLESS STEEL OR ALUMINUM. PROVIDE REF. PIPING W/ ALUMINUM JACKETING.
- 4 PROVIDE W/ MOTORIZED DAMPER W/ OPEN/CLOSE OPERATION. DAMPER TO BE ACTUATED TO MAX ONLY WHEN COMPRESSOR OR HEATER IS ENERGIZED & ACTUATED TO THE CLOSED POSITION IS ALL OTHER TIMES. PROVIDE W/ ADDITIONAL MANUAL BALANCING DAMPER TO BALANCE CFM AMOUNTS OF OUTSIDE AIR. MECHANICAL CONTRACTOR TO PROVIDE W/ ANY ELECTRICAL HARDWARE TO POWER DAMPER.
- 5 PROVIDE NEW ROOF CURB FOR CONDENSING UNITS. REFER TO ARCHITECTURAL DETAILS/DOCUMENTS FOR CURB TYPE & FLASHING. ANCHOR UNIT TO CURB AND CURB TO STRUCTURE.
- 6 PROVIDE ALUMINUM PIPING SUPPORTS AT EVERY 4 FEET. PROVIDE ALUMINUM JACKETING ON ALL LINES EXTERIOR TO THE BUILDING.
- 7 UNIT TO BE MOUNTED ON A 24" HIGH PLATFORM CONSTRUCTED OF 1-1/2" ANGLE IRON 1" SQUARE METAL TUBING. WRAP PLATFORM IN GALVANIZED SHEET METAL. LINE INTERIOR OF PLATFORM W/ 1" DUCT BOARD, W/ FOIL FACING AIRSTREAM. COAT INSIDE W/ MASTIC (TO FACILITATE CLEANING) & SEAL AIR TIGHT.
- 8 PROVIDE WITH FLEXIBLE DUCT CONNECTOR BETWEEN BUILDINGS. SEE DETAILS.
- 9 MOUNT AIR CONDITIONING UNIT CENTERED ABOVE DOOR. REFER TO PLUMBING PAGES FOR CONDENSATE ROUTING.
- 10 ROUTE REFRIGERANT LINES AND CONDENSER ELECTRICAL CONDUIT BELOW ROOF VIA A "ROOF PENETRATION HOUSING" EQUAL TO "MEDIUM VAULT" FROM ROOFPENETRATIONHOUSING.COM. ROUTE REFRIGERANT LINES TO RESPECTIVE AIR HANDLER. ANCHOR LINES TO STRUCTURE AND SEAL ALL PENETRATIONS WATER TIGHT. ALL PIPING SUPPORTS & FASTENERS TO BE OF STAINLESS STEEL OR ALUMINUM. PROVIDE REF. PIPING W/ ALUMINUM JACKETING.
- 11 PROVIDE IBC 2015 COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB & CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
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B.) CURB TO STRUCTURE.
C.) CURB AND ATTACHMENT HARDWARE STRENGTH.
REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS. EQUIPMENT OR CURB MANUFACTURER ENGINEERED ANALYSIS & THE ENGINEERED INSTALLATION DRAWINGS SHALL BE PERFORMED SPECIFICALLY FOR THIS BUILDING & PROJECT SITE & STAMPED & SEALED BY A TEXAS LICENSED ENGINEER. SUBMITTALS WILL NOT BE APPROVED UNTIL ALL DOCUMENTATION LISTED ABOVE IS PROVIDED ACCURATELY.



KEY PLAN

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ARCHITECT, INC.

615 W. TANDY ROAD
BROWNSVILLE, TEXAS 77820
(956) 350-9195 OFFICE
(956) 350-9198 FAX
ARCHRUIZ@AOL.COM

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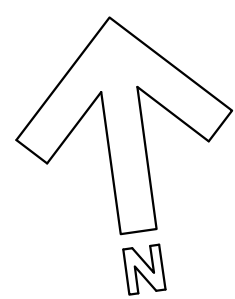
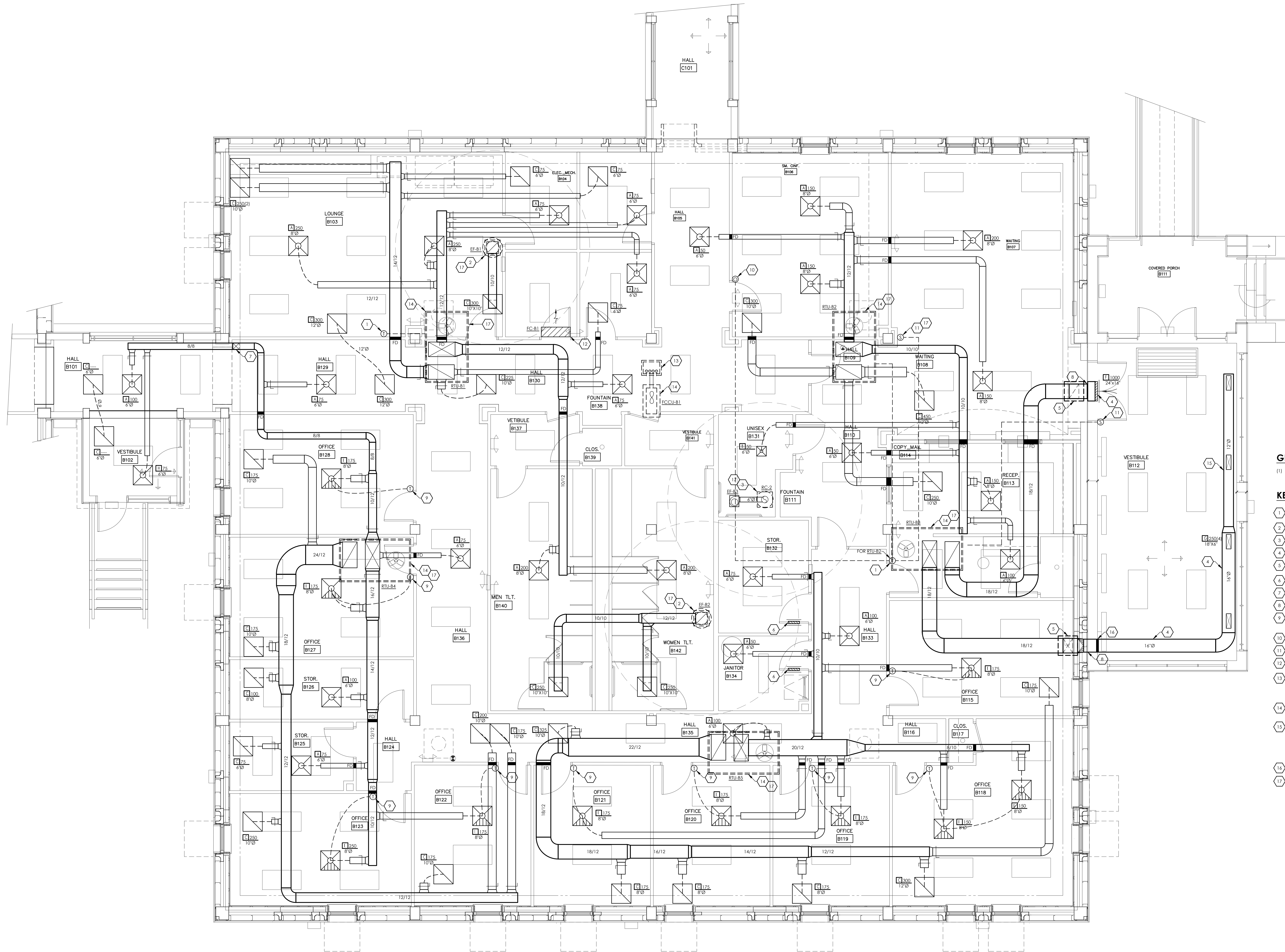
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OF CAMERON COUNTY, TEXAS

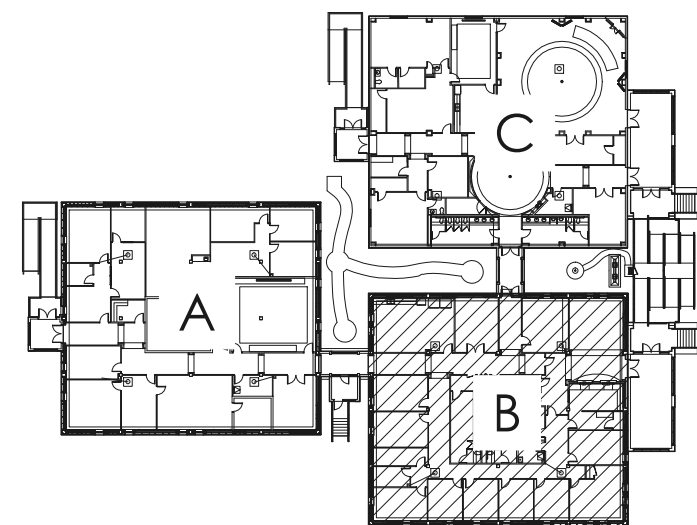
PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

SHEET TITLE:
MECHANICAL FLOOR PLAN - BUILDING A

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1 MECHANICAL FLOOR PLAN-BUILDING B
1/4"=1'-0"



KEY PLAN

GENERAL NOTE:

- (1) ALL DUCT INTERIOR SHALL BE PAINTED W/ GRAY RUST INHIBITOR PAINT.

KEYED NOTES: MECHANICAL

- 1 CONTROLS THERMOSTAT SHOWN ON A DIGITAL DISPLAY. MOUNT THERMOSTAT AT 48" ABOVE FINISHED FLOOR. PROVIDE WITH KEVED CLEAR PLASTIC COVER.
- 2 EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN.
- 3 6" ROUND DUCT FOR RESTROOM EXHAUST ROUTED UP TO ROOF CAP.
- 4 CENTER OF DUCT TO BE @ 14'-0".
- 5 RISE DUCTS ABOVE DECK THROUGH PARAPET VOID TO SERVE VESTIBULE. VOID TO BE 2X2".
- 6 MOUNT AIR TRANSFER LOUVER AT 4" FROM BOTTOM OF DOOR.
- 7 DUCT TO DROP DOWN TO LOWER CEILING.
- 8 PROVIDE WITH FLEXIBLE DUCT CONNECTOR BETWEEN BUILDINGS. SEE DETAILS.
- 9 THERMOSTAT FOR VAV DIFFUSERS TO BE MOUNTED @ 48" A.F.F. TO INCLUDE A DIGITAL READOUT & 1/2" OF INDIVIDUAL CONTROL. TO BE TIED INTO CONTROLS VIA BACKNET INTERFACE.
- 10 OVERRIDE TEMPERATURE SENSOR MOUNTED @ 48" A.F.F.
- 11 CONTROLS SENSOR FOR TEMPHUMIDITY. MOUNTED @ 72" A.F.F.
- 12 MOUNT AIR CONDITIONING UNIT CENTERED ABOVE DOOR. REFER TO PLUMBING PAGES FOR CONDENSATE ROUTING. IE CONTROLS FOR STATUS & TEMPS.
- 13 ROUTE REFRIGERANT LINES AND CONDENSER ELECTRICAL CONDUIT BELOW ROOF VIA A "ROOF PENETRATION HOUSING" EQUAL TO "SMALL RHY FROM 'WOOFPENETRATIONHOUSING.COM' ROUTE REFRIGERANT LINES TO RESPECTIVE AIR HANDLER. ANCHOR LINES TO STRUCTURE AND SEAL ALL PENETRATIONS WATER TIGHT.
- 14 PROVIDE NEW ROOF CURBS FOR CONDENSING UNIT. REFER TO ARCHITECTURAL DETAILS/DOCUMENTS FOR CURB TYPE & FLASHING. ANCHOR UNIT TO CURB.
- 15 EXPOSED DUCT TO BE OF SINGLE WALL CONSTRUCTION. INTERNALLY LINE DUCT W/ 1" OF ACOUSTIC INSULATION EQUAL TO "KNAUF INSULATION" SONIC XP DUCT LINER OR EQUAL. DUCT TO BE GALVANIZED SHEET METAL PHOSPHATIZED (PAINT GRIP) OR OF GALVANNEAL CONSTRUCTION & PREPARED FOR PAINTING. COORDINATE W/ ARCH/OWNER FOR PAINT COLOR. DUCT TO BE TIGHT TO STRUCTURE. ANCHORS & SUPPORTS SHALL BE OF PREMIUM GRADE NON-CORROSIVE MATERIALS.
- 16 PROVIDE W/ ROUND ESCUTCHEON PLATE WHERE DUCT PENETRATES WALL.
- 17 PROVIDE IBC 2015 COMPLAINT CURBS AND ATTACHMENTS FROM UNIT TO CURBS & CURBS TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
A.) ATTACHMENT OF EQUIPMENT TO CURB.
B.) CURB TO STRUCTURE.
C.) CURB AND ATTACHMENT HARDWARE STRENGTH.
REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS. EQUIPMENT OR CURB MANUFACTURER ENGINEERED ANALYSIS & THE ENGINEERED INSTALLATION DRAWINGS SHALL BE PERFORMED SPECIFICALLY FOR THIS BUILDING & PROJECT SITE & STAMPED & SEALED BY A TEXAS LICENSED ENGINEER. SUBMITTALS WILL NOT BE APPROVED UNTIL ALL DOCUMENTATION LISTED ABOVE IS PROVIDED ACCURATELY.

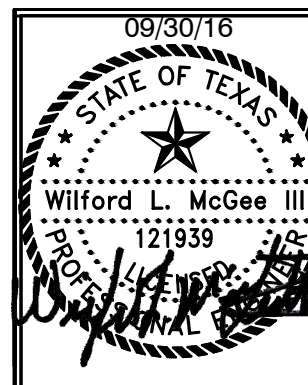
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ARCHITECT, INC.

615 W. TANDY ROAD
BROWNSVILLE, TEXAS 77820
(956) 350-9196 OFFICE
(956) 350-9198 FAX
ARCHRUIZ@AOL.COM



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OF CAMERON COUNTY, TEXAS
PORT OF BROWNSVILLE
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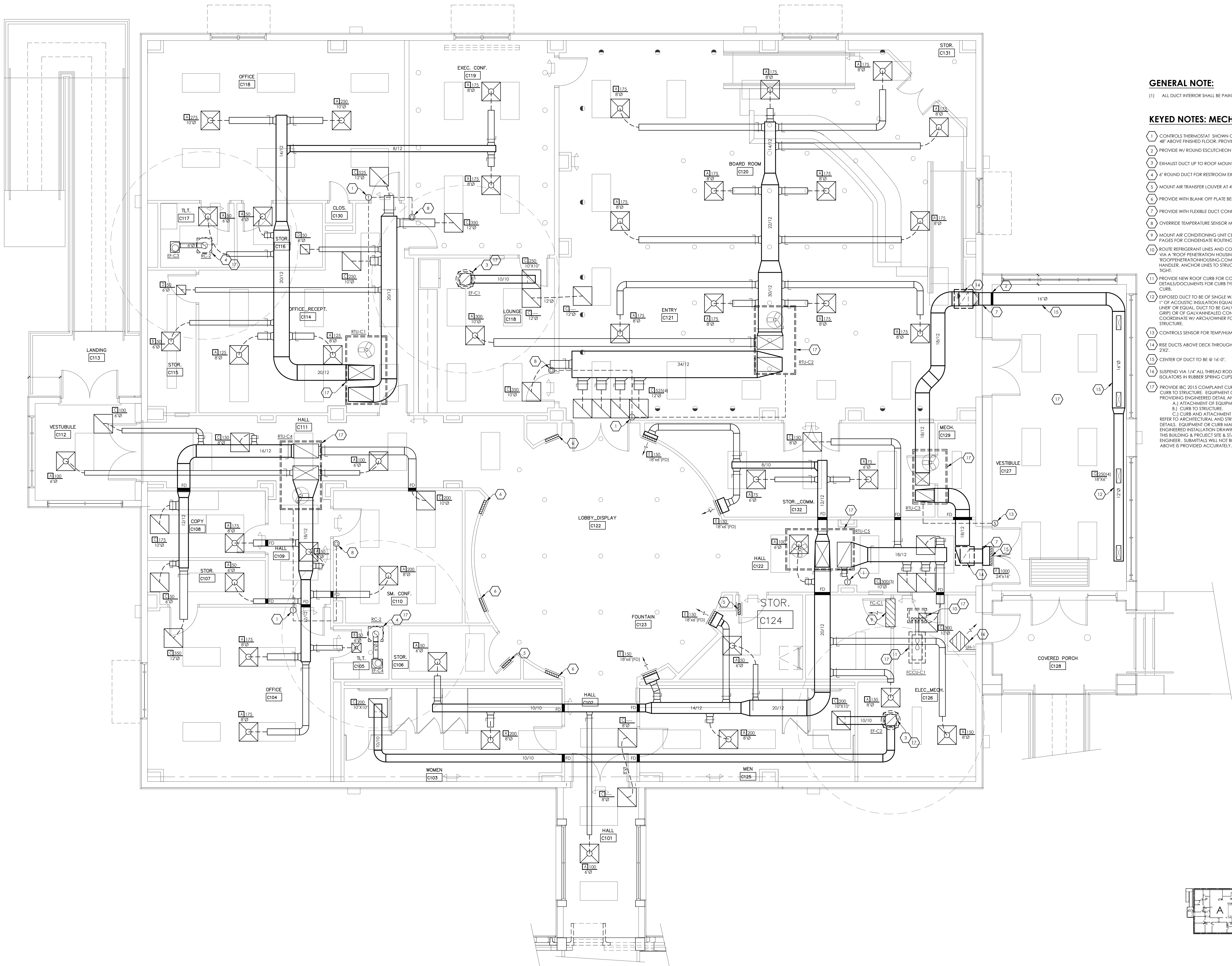
PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

SHEET TITLE:
MECHANICAL FLOOR PLAN - BUILDING B

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3533 Moreland Dr. Ste A I Webster, Tx 77598
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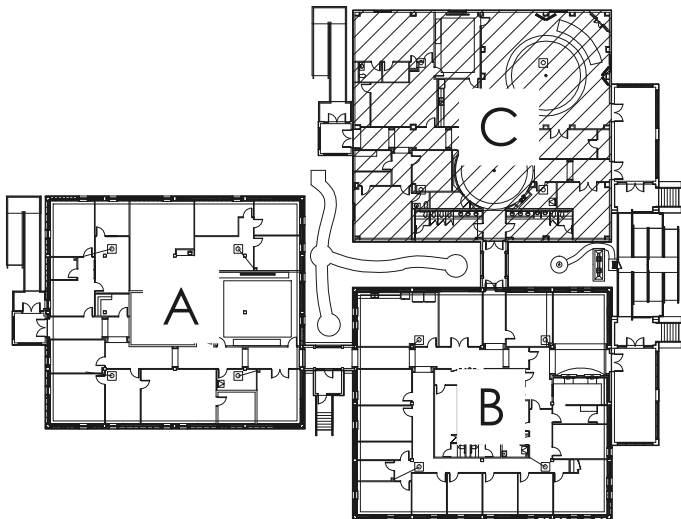


GENERAL NOTE:

(1) ALL DUCT INTERIOR SHALL BE PAINTED W/ GRAY RUST INHIBITOR PAINT.

KEYED NOTES: MECHANICAL

- 1 CONTROLS THERMOSTAT SHOWN ON A DIGITAL DISPLAY. MOUNT THERMOSTAT AT 48" ABOVE FINISHED FLOOR. PROVIDE WITH KEYED CLEAR PLASTIC COVER.
- 2 PROVIDE W/ ROUND ESCUTCHEON PLATE WHERE DUCT PENETRATES WALL.
- 3 EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN.
- 4 6" ROUND DUCT FOR RESTROOM EXHAUST UP TO ROOF CAP.
- 5 MOUNT AIR TRANSFER LOUVER AT 4" FROM BOTTOM OF DOOR.
- 6 PROVIDE WITH BLANK OFF PLATE BEHIND AIR DEVICE. TO BE PAINTED BLACK.
- 7 PROVIDE WITH FLEXIBLE DUCT CONNECTOR BETWEEN BUILDINGS. SEE DETAILS.
- 8 OVERRIDE TEMPERATURE SENSOR MOUNTED @ 48" A.F.F.
- 9 MOUNT AIR CONDITIONING UNIT CENTERED ABOVE DOOR. REFER TO PLUMBING PAGES FOR CONDENSATE ROUTING.
- 10 ROUTE REFRIGERANT LINES AND CONDENSER ELECTRICAL CONDUIT BELOW ROOF VIA A "ROOF PENETRATION HOUSING" EQUAL TO "SMALL RPH" FROM ROOFPENETRATIONHOUSING.COM. ROUTE REFRIGERANT LINES TO RESPECTIVE AIR HANDLER. ANCHOR LINES TO STRUCTURE AND SEAL ALL PENETRATIONS WATER TIGHT.
- 11 PROVIDE NEW ROOF CURB FOR CONDENSING UNIT. REFER TO ARCHITECTURAL DETAILS/DOCUMENTS FOR CURB TYPE & FLASHING. MECHANICALLY FASTEN UNIT TO CURB.
- 12 EXPOSED DUCT TO BE OF SINGLE WALL CONSTRUCTION. INTERNALLY LINE DUCT W/ 1" OF ACOUSTIC INSULATION EQUAL TO "MAUFF INSULATION" SONIC 3P DUCT LINER OR EQUAL. DUCT TO BE GALVANIZED SHEET METAL PHOSPHATIZED (PAINT GRIPT) OR OF GALVANNEALED CONSTRUCTION & PREPARED FOR PAINTING. COORDINATE W/ ARCH/OWNER FOR PAINT COLOR. DUCT TO BE TIGHT TO STRUCTURE.
- 13 CONTROLS SENSOR FOR TEMP/HUMIDITY. MOUNTED @ 72" A.F.F.
- 14 RISE DUCTS ABOVE DECK THROUGH PARAPET VOID TO SERVE VESTIBULE. VOID TO BE ZXX.
- 15 CENTER OF DUCT TO BE @ 16'-0".
- 16 SUSPEND VIA 1/4" ALL THREAD ROD AND PROVIDE WITH SPRING VIBRATION ISOLATORS IN RUBBER SPRING CUPS.
- 17 PROVIDE IBC 2015 COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB & CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
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B) CURB TO STRUCTURE.
C) CURB AND ATTACHMENT HARDWARE STRENGTH.
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KEY PLAN

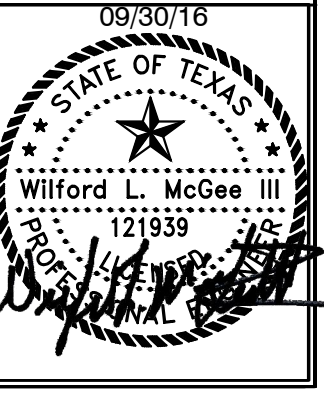
1 MECHANICAL FLOOR PLAN-BUILDING C
1/4"=1'-0"

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PROJECT: ADMINISTRATION COMPLEX
REHABILITATION AND BUILDING ADDITIONS
OWNER: BROWNSVILLE NAVIGATION DISTRICT
PORT OF BROWNSVILLE
BROWNSVILLE, TEXAS

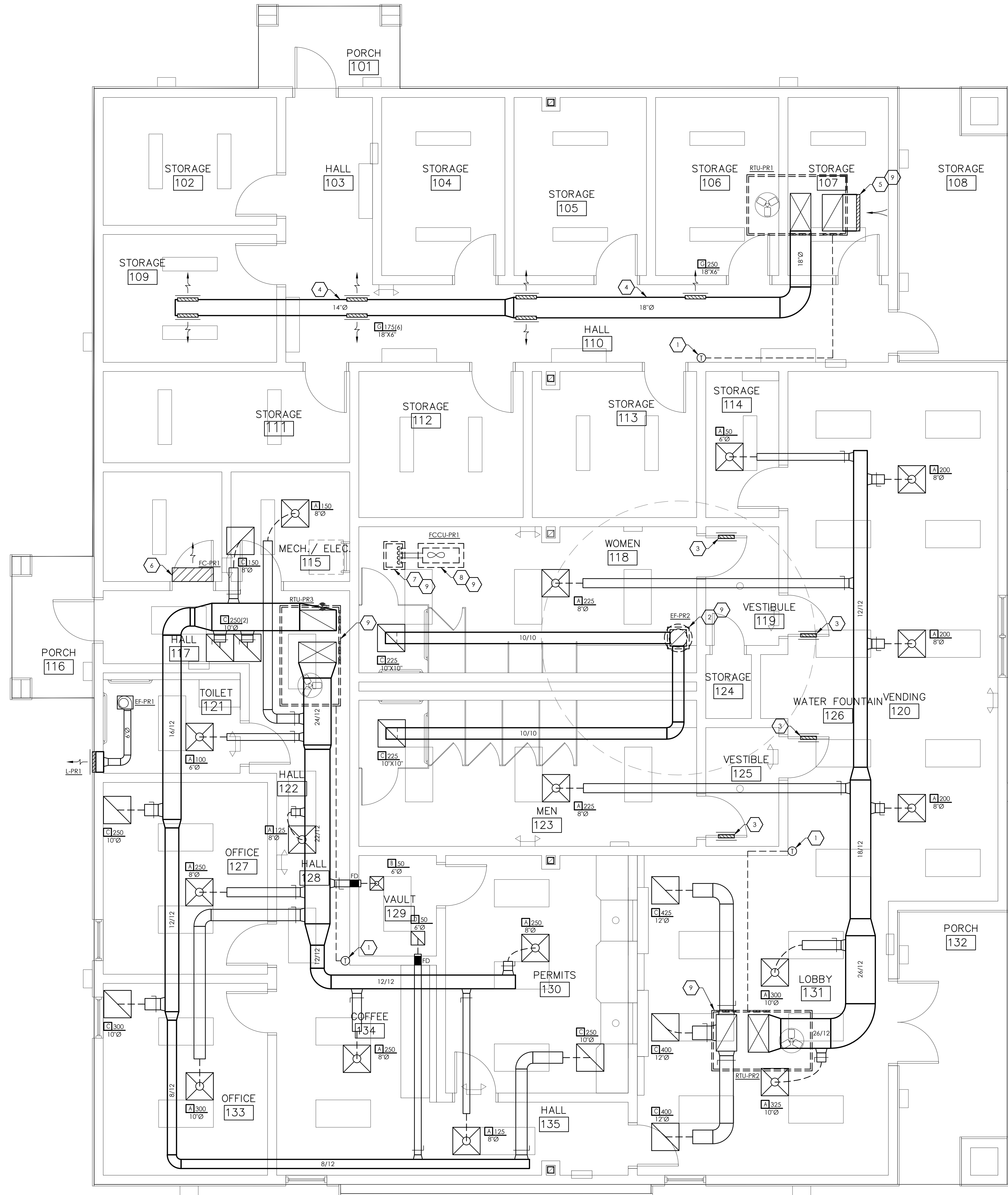
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MECHANICAL FLOOR PLAN - BUILDING C

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or
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DATE: 09/30/16
DRAWN BY: TC
PROJECT NO.: 16.1.01
ROBERTO J. RUIZ
ARCHITECT, INC.
615 W. TANDY ROAD
BROWNSVILLE, TEXAS 77820
(956) 350-9195 OFFICE
(956) 350-9198 FAX
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BROWNSVILLE NAVIGATION DISTRICT
OFF CAMERON COUNTY, TEXAS
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WORLD CLASS

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1 FLOOR PLAN
1/4"=1'-0"

GENERAL NOTE:

- (1) ALL DUCT INTERIOR SHALL BE PAINTED W/ GRAY RUST INHIBITOR PAINT.

KEYED NOTES: MECHANICAL

- (1) CONTROLS THERMOSTAT SHOWN ON A DIGITAL DISPLAY. MOUNT THERMOSTAT AT 48" ABOVE FINISHED FLOOR. PROVIDE WITH KEYS CLEAR PLASTIC COVER.
- (2) EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN.
- (3) MOUNT AIR TRANSFER LOUVER AT 4" FROM BOTTOM OF DOOR.
- (4) EXPOSED DUCT TO BE OF SINGLE WALL CONSTRUCTION. INTERNALLY LINE DUCT W/ 1" OF ACOUSTIC INSULATION EQUAL TO "KNAUFF INSULATION" SONIC XP DUCT LINER OR EQUAL. DUCT TO BE GALVANIZED SHEET METAL PHOSPHATIZED (PAINT GRIP) OR OF GALVANNEALED CONSTRUCTION & PREPARED FOR PAINTING. COORDINATE W/ ARCH/OWNER FOR PAINT COLOR. DUCT TO BE TIGHT TO STRUCTURE. DUCT TO BE TIGHT TO STRUCTURE.
- (5) 90° BOOT, WIRE MESH, INTERNALLY LINE DUCTWORK W/ 1" ACOUSTIC INSULATION EQUAL TO "KNAUFF INSULATION" SONIC XP DUCT LINER OVER DUCT OPENING. DUCT TO BE PHOSPHATIZED FOR PAINTING.
- (6) MOUNT AIR CONDITIONING UNIT CENTERED ABOVE DOOR. REFER TO PLUMBING PAGES FOR CONDENSATE ROUTING.
- (7) ROUTE REFRIGERANT LINES AND CONDENSER ELECTRICAL CONDUIT BELOW ROOF VIA A "ROOF PENETRATION HOUSING" EQUAL TO "MEDIUM RPH" FROM "ROOFPENETRATIONHOUSING.COM" ROUTE REFRIGERANT LINES TO RESPECTIVE AIR HANDLER. ANCHOR LINES TO STRUCTURE AND SEAL ALL PENETRATIONS WATER TIGHT.
- (8) PROVIDE NEW ROOF CURB FOR CONDENSING UNIT. REFER TO ARCHITECTURAL DETAILS/DOCUMENTS FOR CURB TYPE & FLASHING. MECHANICALLY FASTEN UNIT TO CURB.
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