Kovert Hawkins



ADDENDUM No. 1

Project: Fire Station No. 1 Project Town of Clarksville

Clarksville, IN

Proj. No: 1639.02

Date: February 15, 2018

This addendum is a part of the bid documents. Acknowledge receipt on the Proposal Form.

General

- 1. Notify Matt Gullo of any questions regarding bidding at phone (812-913-4616) or email (<u>matt.gullo@koverthawkins.com</u>).
- 2. Pre-bid meeting set for Tuesday February 20, 2018 at Clarksville Town Hall 2nd Floor Conference Rm.

Specification

None

Drawings

Structural Drawings - Additional Drawings

- Add the following drawings to the Construction Document Set
 - S-001 (General Structural Notes)
 - S-002 (General Structural Details)
 - S-101 (Foundation Plan)
 - S-102 (Roof Framing Plan)
 - S-201 (Foundation Sections and Details)
 - S-202 (Foundation Section and Details)
 - S-301 (Framing Section and Details)
 - S-302 (Framing Section and Details)
 - S-303 (Framing Section and Details)
 - S-304 (Hose Tower Details)
 - S-305 (Framing and Section Details)
 - S-306 (Framing and Section Details)

Electrical Drawing E-302

• Add additional E-302 drawing to the Construction Document Set for the "Electrical Riser Diagram".

Prepared by,

the J. Julo

Matthew D. Gullo, RLA Director of Landscape Architecture and Planning

enclosed: Electrical and Structural Drawings

file: 1639.02

End of Addendum No. 1

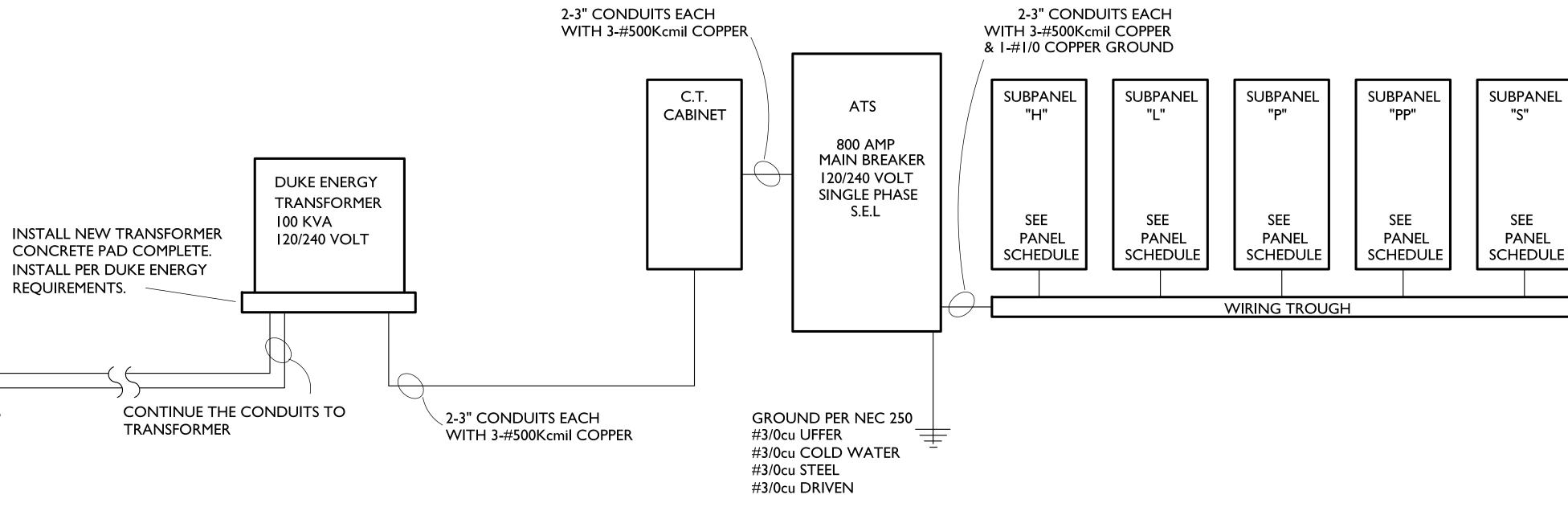


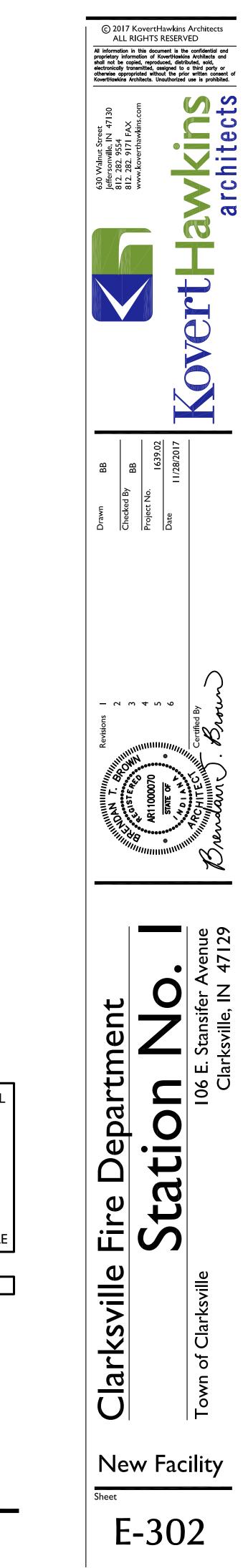
Registered Architect: Direct: Email: Indiana #LA21300004; KY#835; CLARB#33114 812. 913.4616 matt.gullo@koverthawkins.com

\frown INSTALL PRIMARY DUCTS AS PER DUKE ENERGY REQUIREMENTS (REFER TO CIVIL FOR CONTINUATION)

Notice

The Architect/Engineer does not define the scope of individual trades, subcontractors, material suppliers, or vendors. Any sheet numbering system used which identifies disciplines is solely for the Architect/Engineer's convenience, and is not intended to define a subcontractor's scope of work. Information regarding individual trades, subcontractors, material suppliers, and vendors may be detailed, described and indicated at different locations throughout these documents. No consideration will be given to requests for change orders for failure to obtain and review the complete set of drawings and specifications when preparing bids, prices, and quotations.





ELECTRIC RISER DIAGRAM

STRUCTURAL GENERAL NOTES STRUCTURAL DESIGN CRITERIA APPLICABLE BUILDING CODES: A. 2014 INDIANA BUILDING CODE 2012 INTERNATIONAL BUILDING CODE ASCE STANDARD: ASCE 7–10 2. PROJECT LOCATION: CLARKSVILLE, INDIANA (CLARK COUNTY) 3. DESIGN LOADS: A. FLOOR LIVE LOADS .100 PSF SLABS ON GRADE APPARATUS BAY FLOOR 250 PSF B. ROOF LOAD 20 PSF C. SNOW LOADS GROUND SNOW LOAD: $P_q = 20$ PSF FLAT-ROOF SNOW LOAD: $P_f = 16.8 PSF$ SNOW EXPOSURE FACTOR: $C_e = 1.0$ THERMAL FACTOR: $C_t = 1.0$ SNOW LOAD IMPORTANCE FACTOR: $I_s = 1.2$ D. WIND LOADS BASIC WIND SPEED = 120 MPH (3-SECOND GUSTS - ULTIMATE WIND) WIND IMPORTANCE FACTOR: $I_{W} = 1.0$ EXPOSURE CATEGORY: B DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING: P = 22.68 PSF (INTERIOR ZONE) & 35.07 PSF (EDGE STRIP) DESIGN WIND PRESSURE FOR MAIN WINDFORCE RESISTING SYSTEM: P = 22.10 PSF (ULTIMATE) E. EARTHQUAKE LOADS OCCUPANCY CATEGORY: IV (ESSENTIAL FACILITY) MAPPED SPECTRAL RESPONSE ACCELERATION: S_S=20.6%, S₁=10.6% SEISMIC DESIGN CATEGORY C SITE CLASS C RESPONSE MODIFCATION FACTOR = 3.5SYSTEM OVERSTRENGTH FACTOR = 2.5DEFLECTION AMPLIFICATION FACTOR = 2.25SEISMIC IMPORTANCE FACTOR = 1.50ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE SPECTRAL RESPONSE COEFFICIENTS $S_{DS} = 0.164$, $S_{D1} = 0.120$ 11. $C_s = 0.047$ 12. DÉSIGN BASE SHEAR = 0.047 W 13. BASIC STRUCTURAL SYSTEM: INTERMEDIATE REINFORCED MASONRY SHEAR WALLS FOUNDATIONS ASSUMED ALLOWABLE SOIL BEARING PRESSURE: A. CONTINUOUS WALL FOOTINGS 3,000 PSF ISOLATED COLUMN FOOTINGS 3.000 PSF FOUNDATIONS HAVE BEEN SIZED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL 2. ENGINEERING STUDY (SOILS REPORT) PREPARED BY ASHER ENGINEERING, INC., DATED NOVEMBER 27, 2017 (ASHER PROJECT NO. 17-119). THE OWNER SHALL RETAIN A QUALIFIED GEOTECHNICAL ENGINEER TO INSPECT AND APPROVE ALL BEARING SURFACES AND EARTHWORK OPERATIONS. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE FINDINGS AND RECOMMENDATIONS OF THE SOILS REPORT AND SHALL PERFORM ALL EARTHWORK OPERATIONS AND FOUNDATION INSTALLATION OPERATIONS IN ACCORDANCE WITH THESE RECOMMENDATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE, ALL EXISTING SURFACE FILL, ALL TOPSOIL AND ORGANIC MATERIAL, ALL WET, SOFT, LOOSE, OR UNDESIRABLE SOIL, AND ALL OLD ABANDONED CONCRETE SHALL BE REMOVED TO THE EXTENT RECOMMENDED BY THE SOILS REPORT AND THE GEOTECHNICAL ENGINEER. 6. CONCRETE FOR FOOTINGS SHALL BE PLACED THE SAME DAY EXCAVATIONS ARE OPENED. IF THIS IS IMPOSSIBLE, STEPS SHALL BE TAKEN TO ADEQUATELY PROTECT THE OPEN EXCAVATION. 7. FOOTINGS SHALL BEAR ON COMPETENT, SUITABLE STIFF UNDISTURBED ORIGINAL SOIL OR PROPERLY COMPACTED CONTROLLED ENGINEERED FILL, AS RECOMMENDED BY THE SOILS REPORT AND THE GEOTECHNICAL ENGINEER. SLABS ON GRADE SHALL BEAR ON A 6-INCH THICK LAYER OF FREE DRAINING GRANULAR MATERIAL AS SPECIFIED IN THE SOILS REPORT. FOLLOW THE PROCEDURES RECOMMENDED IN THE SOILS REPORT AND THE INSTRUCTIONS OF THE GEOTECHNICAL ENGINEER. ENGINEERED FILL & BACKFILL SHALL BE PLACED AND COMPACTED ACCORDING TO THE RECOMMENDATIONS OF THE SOILS REPORT, AND THE GEOTECHNICAL ENGINEER. 10. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE CONCRETE IS PLACED. THE ADEQUACY OF THE SOIL BEARING SURFACE SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER. ALL GEOTECHNICAL FIELD REPORTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER. 11. PROVIDE CONTROL AND CONSTRUCTION JOINTS IN SLAB ON GRADE AS SPECIFIED BY THE ARCHITECT (MAXIMUM SPACING = 20 FEET +/- EACH DIRECTION). CONTRACTOR SHALL SUBMIT THE SLAB JOINT PLAN TO THE ARCHITECT FOR APPROVAL PRIOR TO PLACING CONCRETE FOR THE FLOOR SLAB (SEE CONCRETE GENERAL NOTE NO. 17 FOR CONTROL JOINT INSTALLATION). <u>CONCRETE</u> ALL CONCRETE FOR GENERAL USE (INCLUDING FOOTINGS AND FOUNDATION WALLS) SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. REINFORCING STEEL SHALL BE AS FOLLOWS: 2. ASTM A615 GRADE 60 STIRRUPS AND TIES ALL OTHER REINFORCING ASTM A615 GRADE 60 ASTM A185 WELDED WIRE FABRIC* PROVIDE BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH ACI DETAILING MANUAL. ALL BAR 3. SUPPORTS, IN AREAS WHERE CONCRETE WILL BE EXPOSED, SHALL HAVE PLASTIC FEET. PRECAST CONCRETE (fc'=3000psi) BLOCKS 3"x3" x3" SHALL BE USED TO SUPPORT REINFORCING OFF OF THE GROUND. AT ALL OTHER LOCATIONS, CHAIRS OR STANDEES SHALL BE USED. 4. DETAILING, FABRICATION AND PLACING OF REINFORCING SHALL CONFORM TO APPLICABLE PROVISIONS OF ACI 315 AND ACI 318. SLABS, FOUNDATION WALLS, AND FOOTINGS SHALL HAVE NO HORIZONTAL JOINTS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL KEYED BULKHEADS. ALL REINFORCEMENT SHALL CONTINUE THROUGH JOINTS. BEFORE PLACING CONCRETE, THE CONTRACTOR SHALL NOTIFY ALL SUBCONTRACTORS TO BE SURE ALL SLEEVES, CONDUIT, CHASES, ETC. ARE PROPERLY INSTALLED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AS SOON AS PRACTICAL, BUT AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE TO ALLOW FOR INSPECTION OF REINFORCING AND EMBEDDED ITEMS. Notice The Architect/Engineer does not define the scope of individual trades, subcontractors, material suppliers, or vendors. Any sheet numbering system used which identifies disciplines is solely for the Architect/Engineer's convenience, and is not intended to define a subcontractor's scope of work. Information regarding individual trades, subcontractors, material suppliers,

CONCRETE CONTINUED

- 8.
- SEAL, BY W.R. GRACE.
- #5x5'-0" DIAGONAL BAR IN BOTH FACES AT EACH CORNER.
- PIER REINFORCEMENT
- REINFORCING BARS SHALL BE IN PLACE AND SECURED PRIOR TO POURING CONCRETE. "STICKING" OF
 - REINFORCING AFTER CONCRETE IS PLACED IS PROHIBITED. 16. REINFORCING BAR SHOP DRAWINGS SHALL SHOW NUMBER, SIZE AND LOCATION OF BARS, AS WELL AS
 - LAP LENGTH AND CLEAR COVER.
 - 17. UNLESS NOTED ON THE PLANS, ALL CONCRETE SLABS SUPPORTED BY SOIL OR GRANULAR SUB-BASE SHALL CONTAIN CONTROL JOINTS AND CONSTRUCTION JOINTS AS SPECIFIED BY THE ARCHITECT. AT SPACINGS NOT TO EXCEED 20 FEET ON CENTER IN BOTH DIRECTIONS. SAW-CUT JOINTS SHALL BE NSTALLED AS SOON AS THE CONCRETE IS HARD ENOUGH TO WITHSTAND SAWING WITHOUT RAVELLING JOINT EDGES OR DISLODGING COARSE AGGREGATE PARTICLES. LIGHTWEIGHT EARLY-CUT SAWS SHALL BE USED. CONTRACTOR SHALL SUBMIT CONSTRUCTION AND CONTROL JOINT LAYOUT TO THE ARCHITECT FOR APPROVAL PROIR TO PLACING CONCRETE SLABS.
 - 18. DOVETAIL SLOTS SHALL BE INSTALLED IN ALL CONCRETE WORK WHICH IS TO RECEIVE BRICK VENEER OR OTHER FACING MATERIALS.

REINFORCED MASONRY

- COMPRESSIVE STRENGTH OF CONCRETE MASONRY SHALL BE F'_M = 1500 PSI. GROUT FOR BOND BEAMS AND GROUTED CELLS IN CONCRETE MASONRY UNITS SHALL BE PEA GRAVEL
- CONCRETE WITH A 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.
- 3. MORTAR FOR CONCRETE MASONRY SHALL BE TYPE S.
- PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCING IN ALL REINFORCED MASONRY WALLS AT 16 INCHES ON CENTER UNLESS NOTED OTHERWISE.
- SPLICES IN VERTICAL REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETERS, UNLESS NOTED OTHERWISE
- 6. ALL MASONRY WALLS SHALL BE LATERALLY BRACED BY THE CONTRACTOR UNTIL ALL STRUCTURAL FRAMING AND DECKING HAVE BEEN INSTALLED IN UNITS OF CONSTRUCTION ADJACENT TO THE WALLS.
- 7. UNLESS NOTED OTHERWISE, A BOND BEAM WITH (2) #5 BARS SHALL BE PROVIDED AT THE TOP OF ALL WALLS, AT ALL BEARING ELEVATIONS, AND AT LOCATIONS SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 8. ALL CMU UNITS LOCATED BELOW GRADE SHALL BE GROUTED SOLID.
- 9. UNLESS OTHERWISE SHOWN OR NOTED, PLACE (1) #5 FULL-HEIGHT VERTICAL REINFORCING BAR AT ALL WALL CORNERS, ENDS OF WALLS, EACH SIDE OF CONTROL JOINTS, SIDES OF OPENINGS, AND WALL INTERSECTIONS. (UNLESS OTHERWISE SHOWN OR NOTED, PLACE (2) #5 BARS AT SIDES OF OPENINGS 10 FEET WIDE AND GREATER)
- 4. SECURE ALL VERTICAL REINFORCING STEEL IN CMU WALLS WITH DUR-O-WALL REBAR POSITIONERS OR APPROVED EQUAL.
- CONTRACTOR SHALL SUBMIT DRAWINGS COORDINATED WITH THE MASONRY AND MEP CONTRACTORS, 5. SHOWING THE MEP PENETRATIONS THROUGH LOAD BEARING WALLS. THESE DRAWINGS SHALL SHOW THE SIZE AND LOCATION OF ALL PENETRATIONS AND SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
- 6. PROVIDE VERTICAL CONTROL JOINTS IN ALL REINFORCED MASONRY. COORDINATE LOCATIONS OF CONTROL JOINTS WITH THE ARCHITECT.

STRUCTURAL STEEL

- ALL ROLLED STEEL PLATES, SHAPES (EXCLUDING WIDE FLANGE SHAPES), BARS AND MISCELLANEOUS ITEMS SHALL BE STRUCTURAL QUALITY CARBON STEEL COMPLYING WITH ASTM A36 (MINIMUM YIELD 36,000 PSI). WIDE FLANGE SHAPES SHALL BE STRUCTURAL QUALITY CARBON STEEL COMPLYING WITH ASTM A992 (MINIMUM YIELD 50,000 PSI).
- HOLLOW STRUCTURAL SECTIONS (HSS) SHALL COMPLY WITH ASTM A500, GRADE B (MINIMUM YIELD 46 KSI FOR SQUARE AND RECTANGULAR SECTIONS AND 42 KSI FOR ROUND SECTIONS).
- 3. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER ASTM F1852, TYPE 1 TWIST-OFF-TYPE TENSION-CONTROL BOLTS IN BEARING-TYPE CONNECTIONS.
- 4. ANCHOR RODS SHALL COMPLY WITH ASTM F1554, GRADE 36.
- 5. EXPANSION ANCHORS SHALL BE HILTI CARBON STEEL KWIK BOLT 3 ANCHOR MANUFACTURED BY HILTI FASTENING SYSTEMS, OR APPROVED EQUAL.
- ADHESIVE ANCHORS SHALL CONSIST OF HAS-E STEEL ANCHOR RODS WITH THE HIT HY200 ADHESIVE SUPPLIED BY HILTI FASTENING SYSTEMS, OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS.
- 7. WELDED HEADED STUDS TO BE USED AS CONCRETE ANCHORS OR SHEAR STUDS SHALL BE LOW CARBON STEEL SOLID FLUXED STUDS COMPLYING WITH ASTM A-108, WITH A MINIMUM Fu=60KSI. STUDS SHALL BE AUTOMATICALLY END WELDED. THE SPECIFIED LENGTH IS THE AFTER WELD LENGTH (AWL).
- 8. DEFORMED BAR ANCHORS (DBA) SHALL BE LOW CARBON STEEL PER ASTM A496 (Fu=80KSI), AND SHALL BE AUTOMATICALLY END WELDED
- 9. ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED TO PERFORM EACH TYPE OF WELD REQUIRED. ALL WELDS AND WELDING PROCEDURES SHALL COMPLY WITH AWS D1.1, USING E70XX ELECTRODES UNLESS NOTED OTHERWISE. ALL WELDS SHALL BE INSPECTED
- 10. WELD SIZES NOT SHOWN ON DESIGN DRAWINGS SHALL BE MINIMUM SIZE REQUIRED BY AWS D1.1 (LATEST EDITION) ACCORDING TO THE MATERIAL THICKNESS BEING WELDED. ALL WELDS SHALL BE PRE-QUALIFIED PER AWS D1.1 (LATEST EDITION).
- 11. STEEL FRAMEWORK SHALL NOT BE ASSUMED STRUCTURALLY STABLE UNTIL ALL MEMBERS ARE IN PLACE AND CONNECTIONS ARE INSTALLED. ANY USE OF THE PARTIALLY ERECTED FRAMEWORK FOR TEMPORARY SUPPORT OF ANY KIND SHALL BE DONE ONLY AT THE CONTRACTOR'S RISK.
- 12. COMPLY WITH THE PROVISIONS OF THE LATEST EDITIONS OF THE FOLLOWING CODES, SPECIFICATIONS AND STANDARDS, EXCEPT AS OTHERWISE SHOWN OR SPECIFIED HEREIN.
- A. A.I.S.C. "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES." B. A.I.S.C. "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR
- BUILDINGS. D. AWS "STRUCTURAL WELDING CODE."

and vendors may be detailed, described and indicated at different locations throughout these documents. No consideration will be given to requests for change orders for failure to obtain and review the complete set of drawings and specifications when preparing bids, prices, and quotations.

MATERIALS SHALL COMPLY WITH REQUIREMENTS OF DESIGNATED SPECIFICATIONS OF AMERICAN SOCIETY FOR TESTING AND MATERIALS, 1916 RACE STREET, PHILADELPHIA, PENNSYLVANIA

CONSTRUCTION PROCEDURES SHALL COMPLY WITH RECOMMENDATIONS SET FORTH IN DESIGNATED STANDARDS OF AMERICAN CONCRETE INSTITUTE, P.O. BOX 9094, FARMINGTON HILLS, MICHIGAN 48333.

9. ADMIXTURE OTHER THAN AIR-ENTRAINING SHALL NOT BE USED WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.

10. CURING COMPOUND SHALL CONFORM TO FEDERAL SPECIFICATION TT-C800A, AND A.S.T.M. C309. MATERIAL SHALL BE EQUAL TO SONNEBORN KUR-N-SEAL, MASTERSEAL, BY MASTER BUILDERS, OR CLEAR

11. ALL REINFORCING SPLICES SHALL BE CLASS B TENSION LAP SPLICE.

12. SPREAD BARS AROUND SMALL OPENINGS AND SLEEVES IN SLABS AND WALLS WHERE POSSIBLE AND WHERE BAR SPACING WILL NOT EXCEED 1.5 TIMES THE NORMAL SPACING. DISCONTINUE BARS AT LARGE OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED

REINFORCEMENT, DISTRIBUTING ONE-HALF OF THIS REINFORCEMENT EACH SIDE OF THE OPENING (CLASS

B TENSION LAP SPLICED). HOLES LARGER THAN 12 INCHES IN ANY DIRECTION SHALL HAVE (1)

13. PIER REINFORCEMENT SHALL BE DOWELED TO THE FOOTING. PROVIDE DOWELS EQUAL IN SIZE, NUMBER

AND GRADE TO THE PIER REINFORCEMENT UNLESS OTHERWISE INDICATED. DOWELS SHALL BE HOOKED

90 DEGREES AT THE BOTTOM LEVEL OF FOOTING REINFORCEMENT. DOWELS SHALL BE LAPPED WITH THE

14. ALL VERTICAL CONCRETE SURFACES SHALL BE FORMED. HOWEVER, VERTICAL SURFACES OF FOOTINGS

MAY BE EARTH-FORMED IF THE SOIL IS SUFFICIENTLY STIFF TO PREVENT CAVE-INS.

STIFFENERS SHALL EXTEND TO FULL DEPTH OF BEAM AND THE BOUNDARY OF FLANGE WITH MINIMUM THICKNESS OF 3/8".

17. NATURAL MILL CAMBER EXISTING IN BEAMS SHALL BE TURNED POSITIVE UPWARD.

18. BURNING OF HOLES IN STRUCTURAL STEEL IS NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD.

13. ALL CONNECTIONS NOT INDICATED ON THE DESIGN DRAWINGS SHALL BE DESIGNED BY A STRUCTURAL

ENGINEER REGISTERED IN THE STATE WHERE STRUCTURAL STEEL IS TO BE ERECTED, RETAINED BY THE

REVIEW. STAMPING AND SIGNING OF SHOP DRAWINGS SHALL BE FOR THE EXCLUSIVE PURPOSE OF

STRUCTURAL ENGINEER. FAILURE TO SUBMIT STAMPED AND SIGNED CALCULATIONS AND STAMPED AND

SIGNED SHOP DRAWINGS SHALL BE SUFFICIENT CAUSE FOR REJECTION OF SHOP DRAWINGS. THE

CONTRACTOR SHALL BE LIABLE FOR THE DIMENSION, FIT, TOLERANCES, FABRICATION AND ERECTION.

14. THE CONTRACTOR SHALL BE LIABLE FOR DIMENSIONS, FIT, TOLERENCES, FABRICATION, AND ERECTION OF

15. SIMPLE SPAN CONNECTIONS FOR BEAMS SHALL CONSIST OF STANDARD DOUBLE-ANGLE BOLTED AND/OR

16. LENGTH OF CONNECTION ANGLES FOR BEAM-TO-COLUMN OR BEAM-TO-BEAM CONNECTIONS SHALL BE

THE LARGEST STANDARD LENGTH LESS THAN OR EQUAL TO THE "T" DIMENSION OF THE BEAM.

STANDARD LENGTHS AND AVAILABLE STRENGTH OF CONNECTION ANGLES ARE FOUND IN "A.I.S.C.

16. PROVIDE VERTICAL WEB STIFFENERS ON EACH SIDE OF WEB OF BEAM AT ALL POINTS SUBJECTED TO

CONCENTRATED LOADS, SUCH AS COLUMN RESTING ON BEAM AND BEAM FRAMING INTO A BEAM. THE

AISC TABLE 3-6 "MAXIMUM TOTAL UNIFORM LOAD" (AISC MANUAL, 131" EDITION).

MANUAL OF STEEL CONSTRUCTION" (13TH EDITION), TABLES 10-1 THRU 10-3.

STEEL FABRICATOR. ALL CALCULATIONS AND SHOP DRAWINGS SHALL BE DULY STAMPED AND SIGNED BY

THE REGISTERED STRUCTURAL ENGINEER AND SUBMITTED TO THE ARCHITECT/STRUCTURAL ENGINEER FOR

CERTIFYING THAT THE CONNECTIONS ARE DETAILED AS PER THE DESIGN PERFORMED BY THE REGISTERED

WELDED CONNECTIONS, AND SHALL BE DESIGNED FOR ONE-HALF THE BEAM LOAD CAPACITY AS GIVEN IN

19. MAINTAIN WORK IN A SAFE AND STABLE CONDITION DURING ERECTION. PROVIDE TEMPORARY SHORING AND BRACING MEMBERS AS REQUIRED, WITH CONNECTIONS OF SUFFICIENT STRENGTH TO BEAR IMPOSED LOADS. REMOVE TEMPORARY MEMBERS AND CONNECTIONS WHEN PERMANENT MEMBERS ARE IN PLACE AND FINAL CONNECTIONS ARE MADE. PROVIDE TEMPORARY GUY LINES TO ACHIEVE PROPER ALIGNMENT AND STABILITY OF THE STRUCTURE AS ERECTION PROCEEDS.

20. MOMENT CONNECTIONS DESIGNATED BY ► SHALL BE DESIGNED BY THE STEEL SUPPLIER IN ACCORDANCE WITH AISC "MANUAL OF STEEL CONSTRUCTION". THE CONNECTION SHALL BE DESIGNED FOR THE MOMENT CAPACITY OF THE BEAM AND BEAM VERTICAL LOAD CAPACITY

21. HIGH STRENGTH BOLTED CONNECTIONS AND WELDED CONNECTIONS SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY. ALL COMPLETE-PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED BY A QUALIFIED INSPECTOR. INSPECTION AND TESTING WILL BE PAID FOR BY THE OWNER.

21. SHOP PRIME ALL STRUCTURAL STEEL (EXCEPT STEEL THAT IS TO RECEIVE FIREPROOFING) WITH STANDARD RED OXIDE PRIMER TO A MINIMUM OF 2 MIL DRY FILM THICKNESS, UNLESS NOTED OTHERWISE. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED. TOUCH-UP ANY DAMAGED GALVANIZING ON EXTERIOR EXPOSED STRUCTURAL STEEL WITH ZINC CHROMATE PAINT CONTAINING A MINIMUM 6% ZINC CHROMATE SOLIDS.

<u>STEEL JOISTS</u>

STRUCTURAL STEEL CONTINUED

ALL STRUCTURAL STEEL ELEMENTS.

- 1. STEEL JOISTS SHALL MEET ALL REQUIREMENTS OF THE S.J.I. AND A.I.S.C. STANDARD SPECIFICATIONS FOR THE TYPE AND SERIES SHOWN.
- 2. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH LATEST S.J.I. AND A.I.S.C. SPECIFICATIONS. JOIST DESIGN SHALL BE PERFORMED BY A LICENSED STRUCTURAL ENGINEER.
- 3. DESIGN OF STEEL JOISTS AND THEIR CONNECTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SUBMIT SHOP DRAWINGS SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE JOISTS ARE TO BE ERECTED INDICATING THE MANUFACTURER'S NAME, JOIST LAYOUT, AND DETAILS. REVIEW OF SHOP DRAWINGS SHALL BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS AND CONTRACT DOCUMENT DETAILS. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE DESIGN OF THE STEEL JOISTS AND THEIR CONNECTIONS.
- 4. STEEL JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR A NET UPLIFT (DUE TO WIND LOADING) OF 15 PSF. DIAGONAL BRIDGING OR BRACING TO LATERALLY BRACE THE BOTTOM CHORD SHALL BE PROVIDED AS REQUIRED.
- STEEL JOISTS DESIGNATED "SPECIAL" (SPECIAL, NON-STANDARD) SHALL BE DESIGNED BY THE MANUFACTURER FOR THE LOADS INDICATED ON THE DRAWINGS. DESIGN SHALL CONFORM TO AISC AND SJI STANDARD SPECIFICATIONS AND SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.
- BRIDGING SHALL BE FURNISHED AND INSTALLED AS REQUIRED BY THE A.I.S.C. AND S.J.I. STANDARD SPECIFICATIONS AND/OR AS INDICATED ON PLANS. BRIDGE JOIST IMMEDIATELY AFTER ERECTION AND BEFORE CONSTRUCTION LOADS ARE APPLIED.
- 7. THE ENDS OF BRIDGING LINES TERMINATING AT MASONRY WALLS SHALL BE ANCHORED BY STRAP ANCHORS ATTACHED TO THE WALL UNLESS OTHERWISE SHOWN OR NOTED.
- 8. FURNISH AND INSTALL BOTTOM AND TOP CHORD LATERAL BRACING AS REQUIRED FOR STRENGTH AND STABILITY OF JOISTS AND JOIST GIRDERS.
- 9. ENDS OF STEEL JOISTS SHALL BE ANCHORED TO THE STEEL SUPPORTS BY WELDING.

METAL ROOF DECK

- 1. 1 1/2 INCH ROOF DECK SHALL BE 20 GAUGE GAUGE GAUGE (G90) WITH A FABRICATED DEPTH OF 1 1/2 INCHES AND A VALLEY SPACING OF 6 INCHES. DECKING SHALL BE FACTORY GALVANIZED. DECKING SHALL CONFORM TO ASTM A653-94 STRUCTURAL QUALITY GRADE 33 OR HIGHER. DECKING SHALL BE FASTENED TO STEEL SUPPORTING MEMBERS AT 12 INCHES ON CENTER, MAXIMUM SPACING, WITH NO. 12 SELF-TAPPING METAL SCREW. SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED WITH NO. 10 METAL SCREWS, AT 12 INCHES ON CENTER, MAXIMUM SPACING. SHEETS SHALL BE CONTINUOUS FOR AT LEAST THREE SPANS WHERE POSSIBLE.
- 2. COMPLY WITH THE PROVISIONS OF THE LATEST EDITIONS OF THE FOLLOWING CODES, SPECIFICATIONS AND STANDARDS, EXCEPT AS OTHERWISE SHOWN OR SPECIFIED. A. A.I.S.I. "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AWS D1.3 "STRUCTURAL WELDING CODE". C. SDI "STEEL DECK DESIGN MANUAL"
- 3. ACCESSORIES SHALL BE STANDARD WITH THE MANUFACTURER AND SHALL BE FURNISHED AS NECESSARY TO COMPLETE THE ROOF DECK INSTALLATION.
- ATTENTION IS CALLED TO THE FACT THAT THE METAL ROOF DECK IS DESIGNED FOR DIAPHRAGM ACTION. THEREFORE, ADDED CARE MUST BE TAKEN TO ASSURE PROPER INSTALLATION PROCEDURES ARE FOLLOWED.
- 5. A TESTING COMPANY SHALL BE RETAINED TO ENSURE THAT THE DECK IS FASTENED PROPERLY PRIOR TO PLACEMENT OF COVER MATERIALS. WRITTEN APPROVAL OF DECK INSTALLATION MUST BE SUBMITTED TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

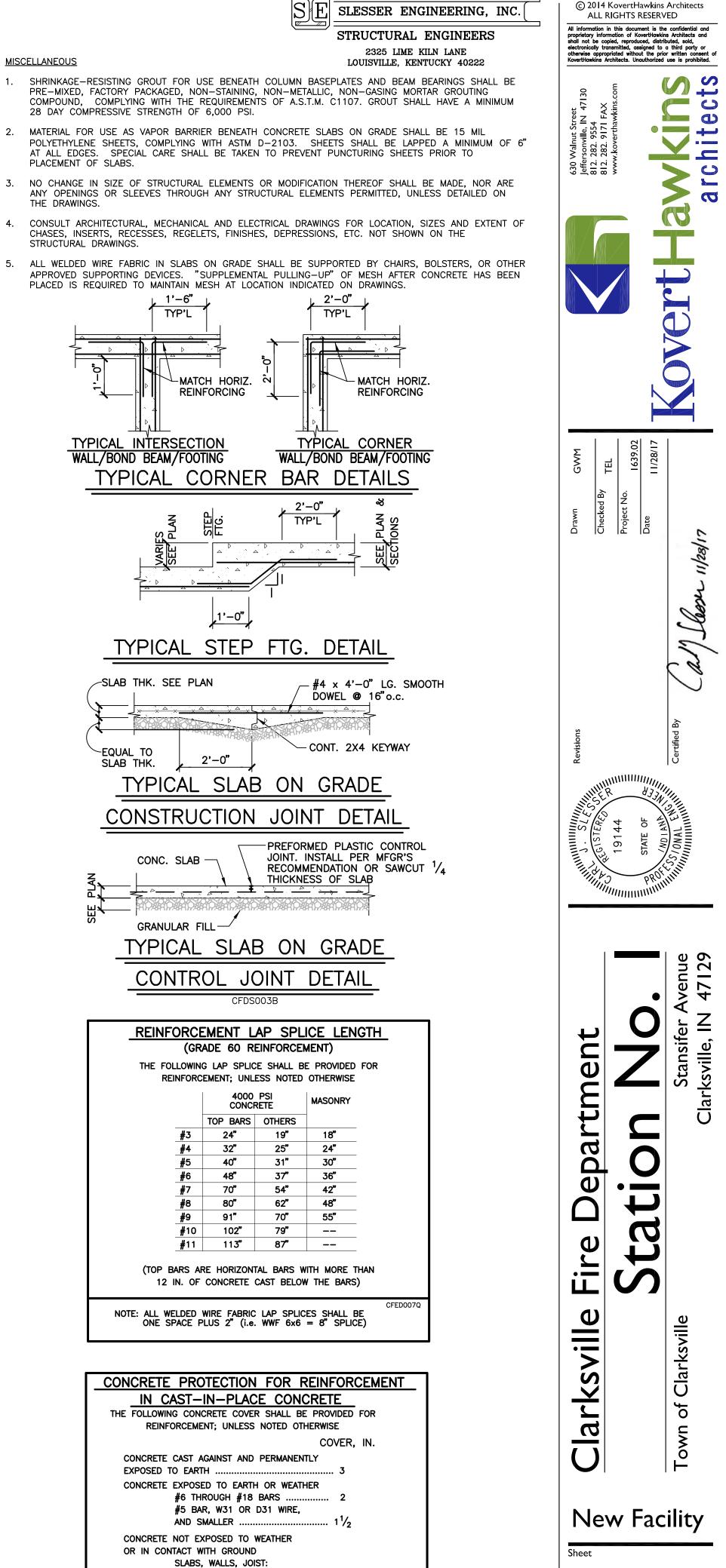
CONTRACTOR RESPONSIBILITIES

- 1. MATERIAL, WORKMANSHIP, AND DESIGN SHALL CONFORM TO THE REFERENCED BUILDING CODE.
- 2. COORDINATE STRUCTURAL DOCUMENTS WITH THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DOCUMENTS. ARCHITECT/STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR OMISSION
- 3. VERIFY THE DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. ANY DISCREPANCY BETWEEN SUCH DETAILS AND DIMENSIONS AS MAY OCCUR SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- NOTIFY, IN WRITING, THE STRUCTURAL ENGINEER OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN IN THE STRUCTURAL DOCUMENTS.
- CONTRACTOR HAS SOLE RESPONSIBILITY FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.
- 6. CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC.
- 7. CONTRACTOR HAS SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA SAFETY REGULATIONS.
- 8. SUBMITTALS

FURNISH ONE HARD COPY & ONE ELECTRONIC COPY OF ALL SHOP DRAWINGS AND SUBMITTALS. THE HARD COPY WILL BE RETAINED BY THE ENGINEER. THE ELECTRONIC COPY WILL BE RETURNED WITH COMMENTS

REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

C. A.I.S.C. "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS."



#14 AND #18 BARS

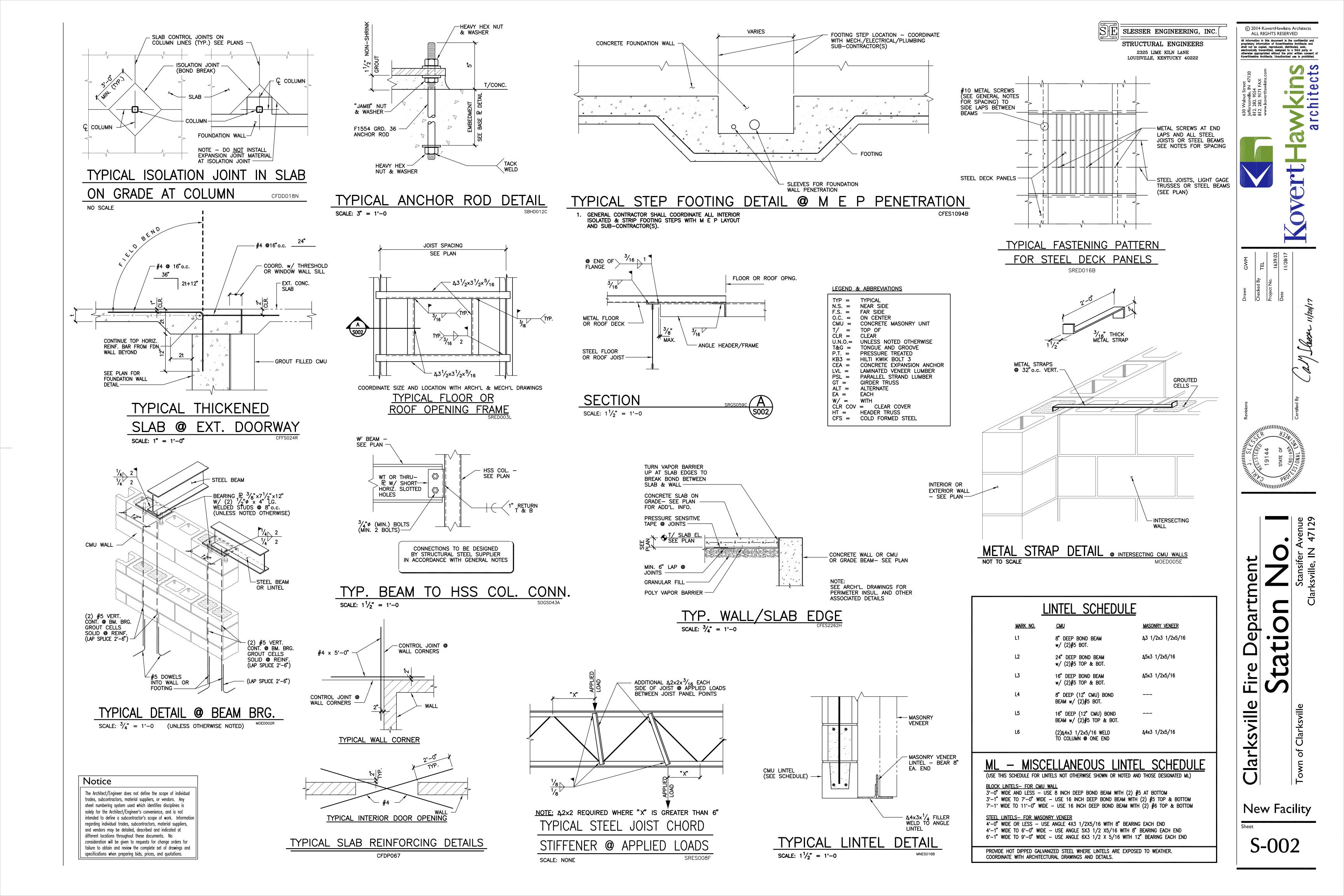
#11 BAR AND SMALLER .

PRIMARY REINFORCEMENT, TIES,

CFED007

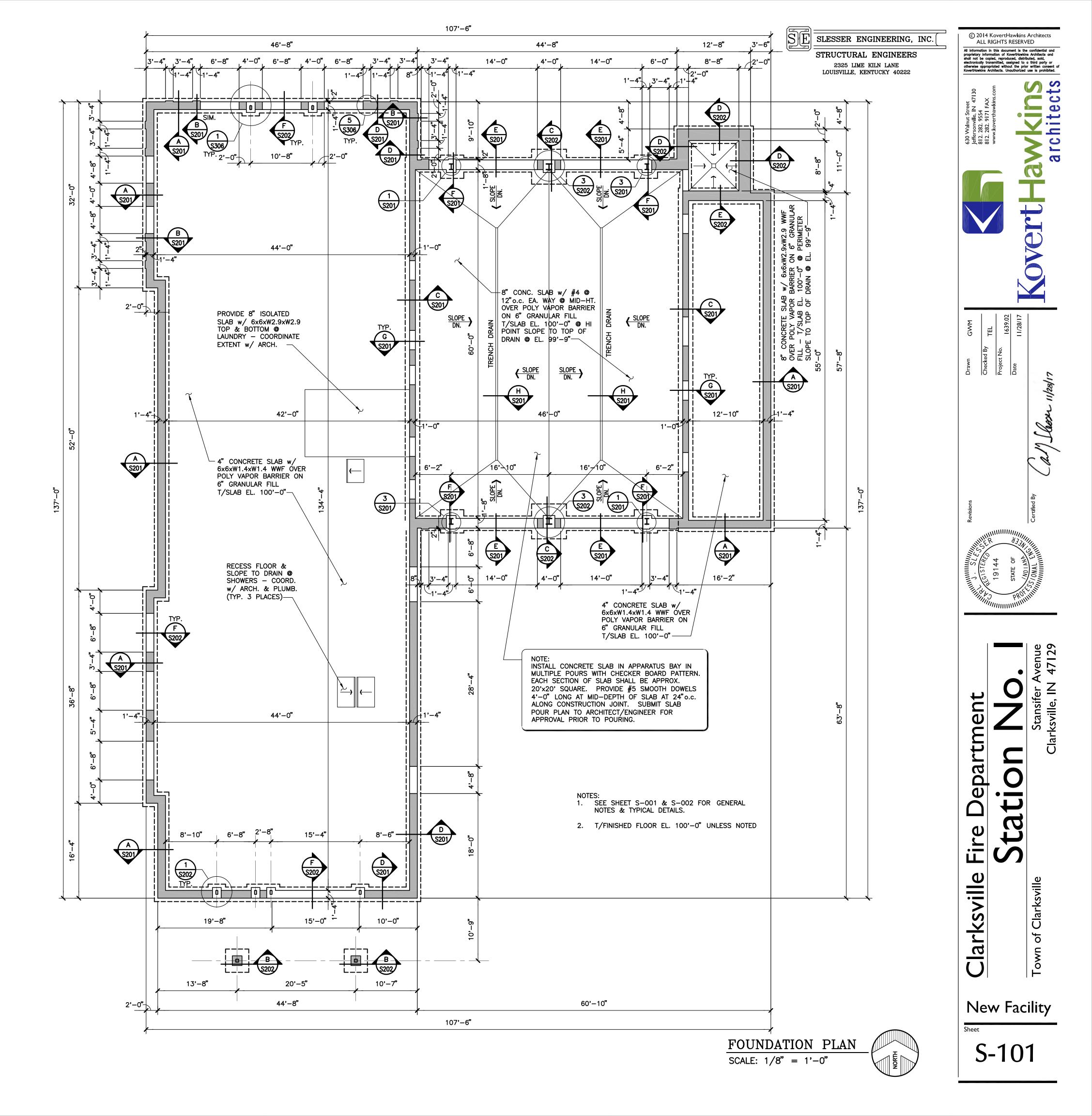
BEAMS AND COLUMNS:

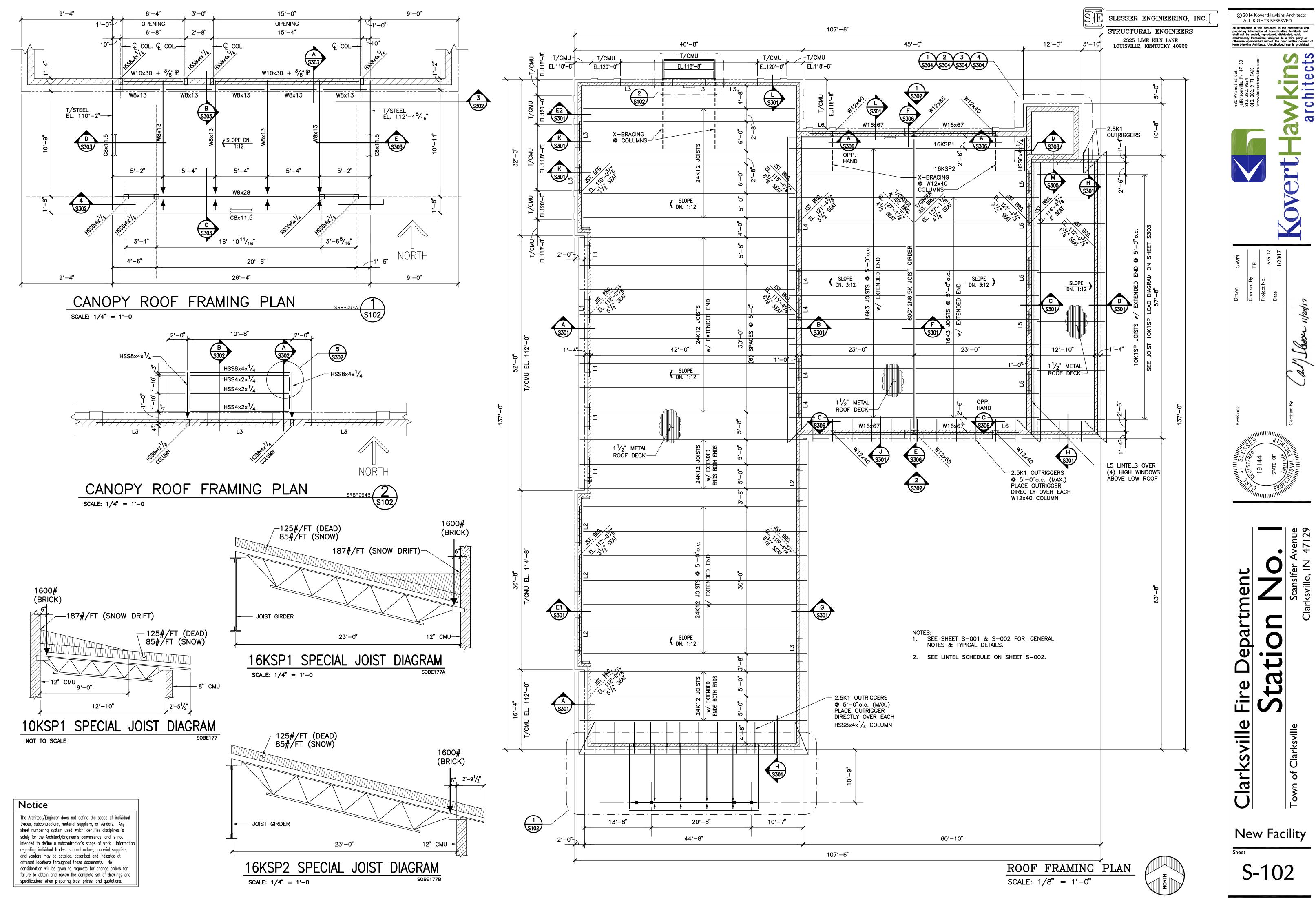
STIRRUPS, SPIRALS



Notice

The Architect/Engineer does not define the scope of individual trades, subcontractors, material suppliers, or vendors. Any sheet numbering system used which identifies disciplines is solely for the Architect/Engineer's convenience, and is not intended to define a subcontractor's scope of work. Information regarding individual trades, subcontractors, material suppliers, and vendors may be detailed, described and indicated at different locations throughout these documents. No consideration will be given to requests for change orders for failure to obtain and review the complete set of drawings and specifications when preparing bids, prices, and quotations.





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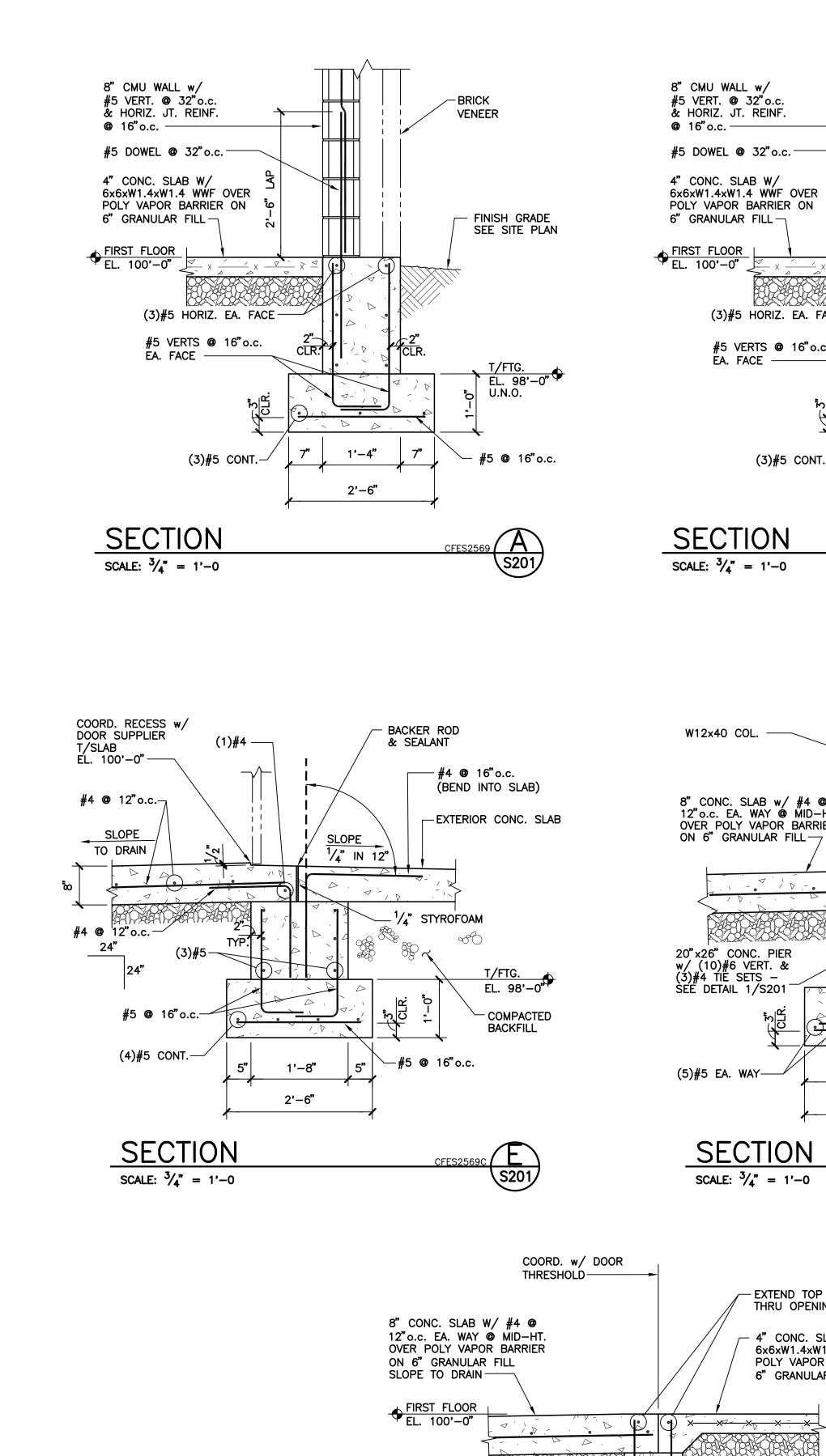
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of

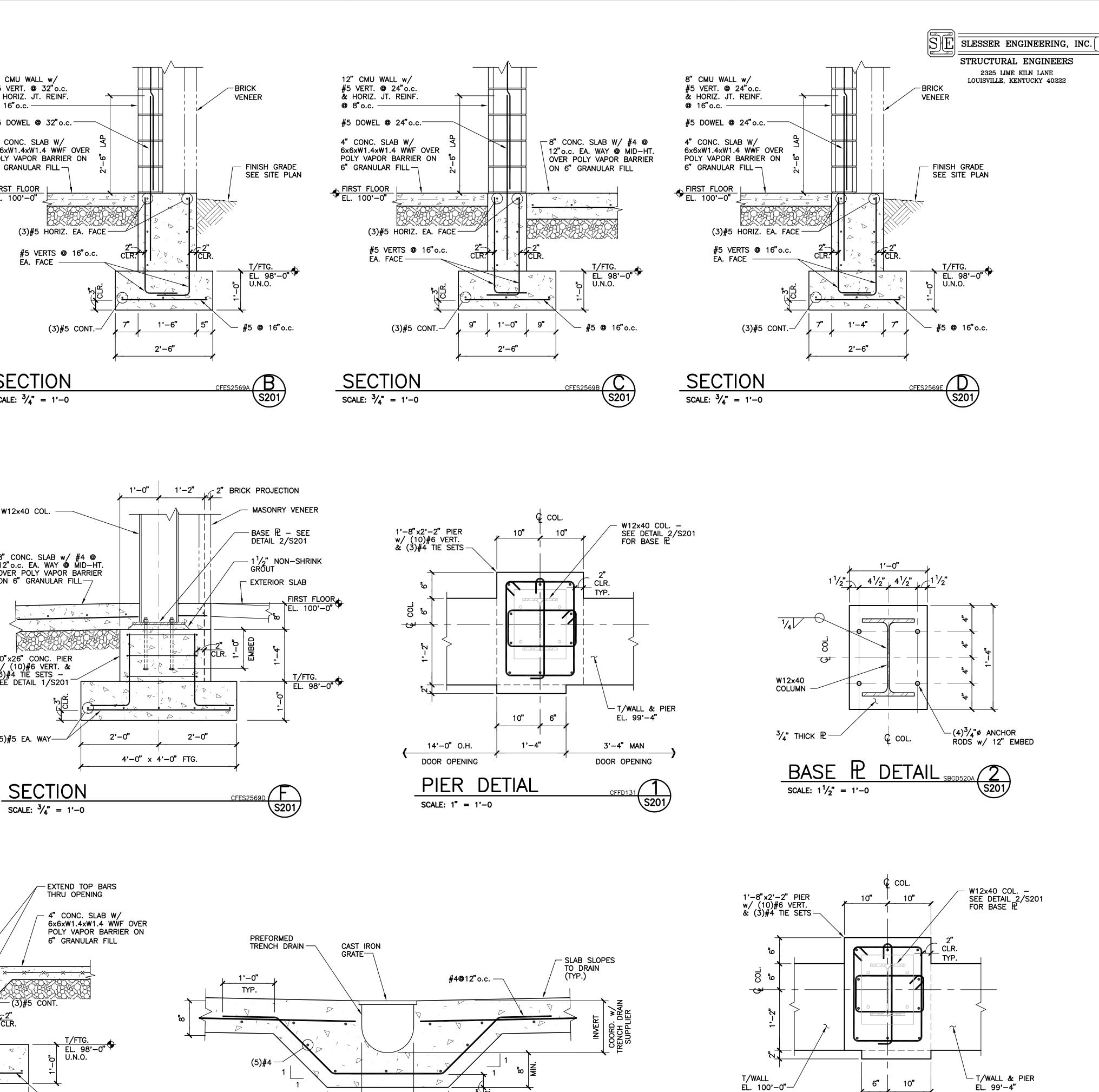


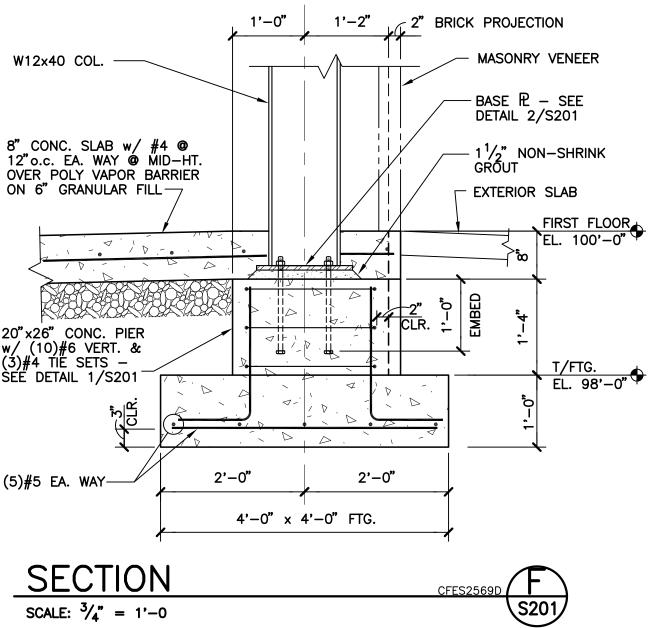
NOTE: THIS DRAWING IS INTENDED TO BE PLOTTED IN COLOR. IF THIS SHEET APPEARS IN BLACK AND WHITE, IT IS PLOTTED INCORRECTLY. DISCARD AND OBTAIN AN ACCURATE DRAWING

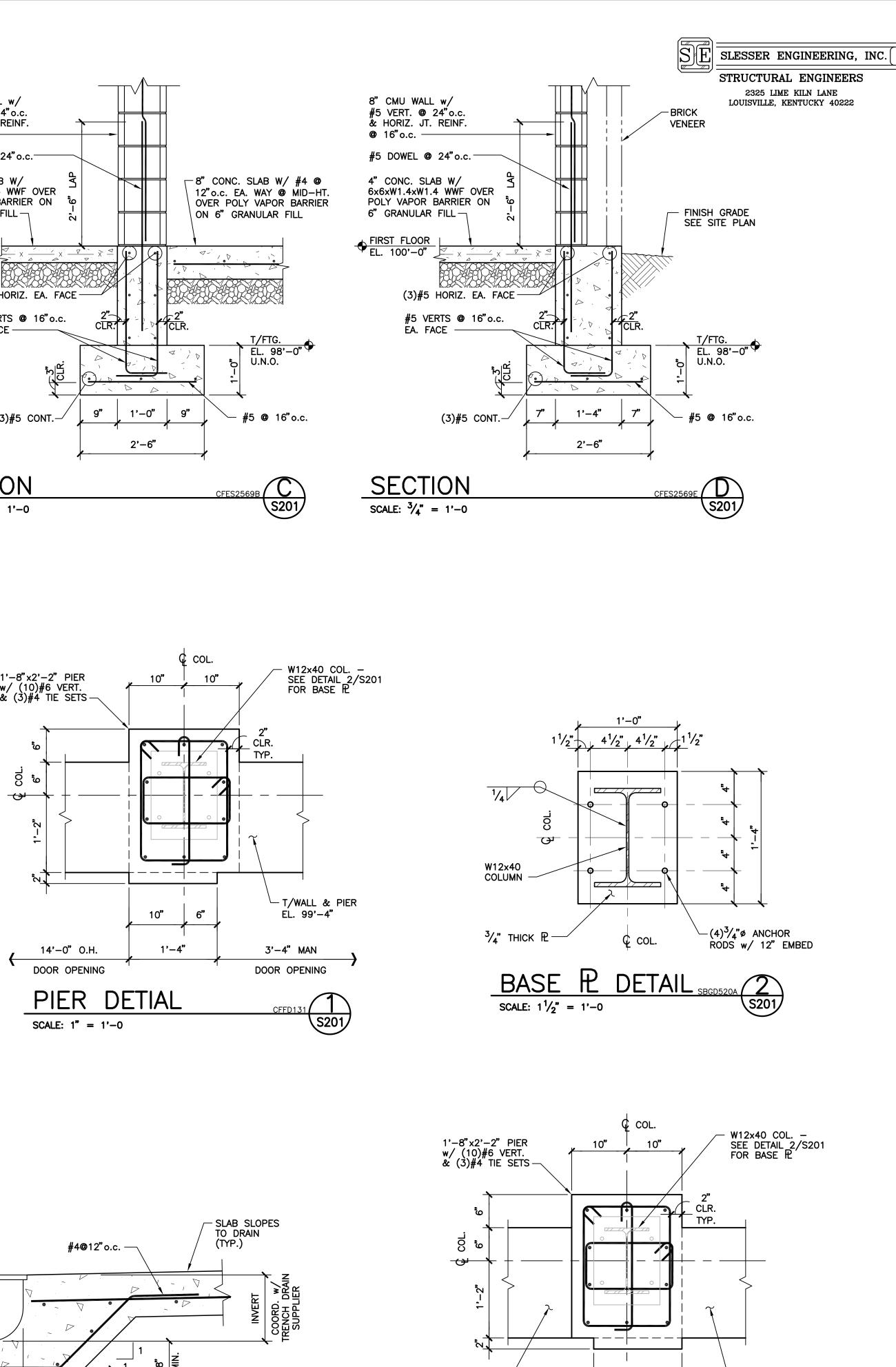
Notice

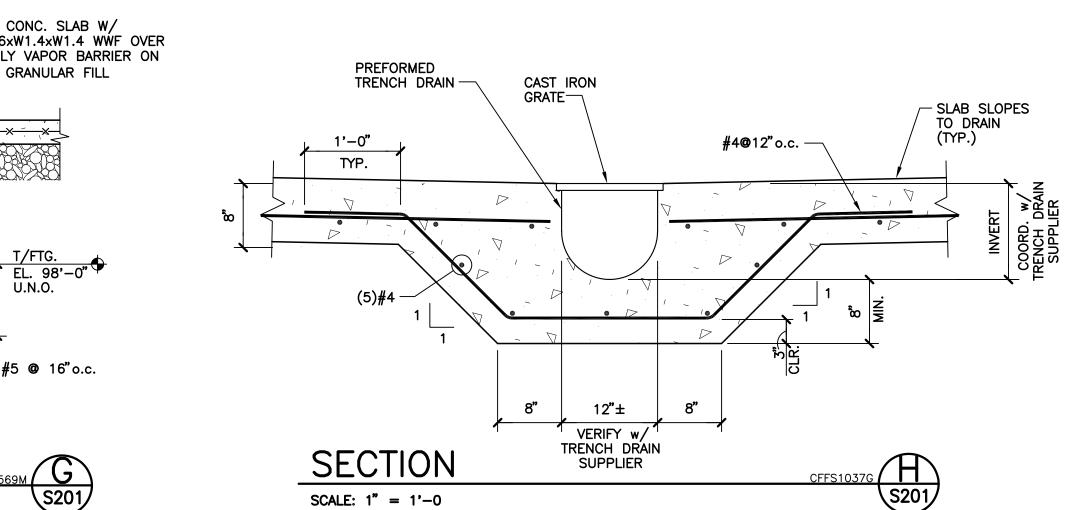
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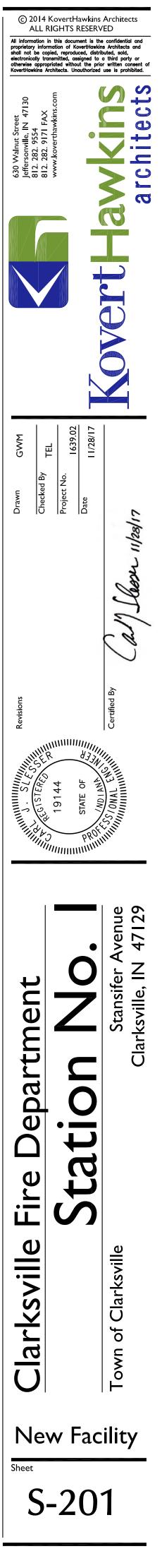
-(3)#5 CONT. CLR. #5 VERTS @ 16"o.c. ËA. FACE — 1'-0" 9" 9" (3)#5 CONT.-2'-6" SECTION SCALE: $\frac{3}{4} = 1' - 0$











- T/WALL & PIER

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<u>S201</u>

EL. 99'—4"

14'–0" O.H.

DOOR OPENING

10"

1'-4"

6"

PIER DETIAL

SCALE: 1'' = 1' - 0

