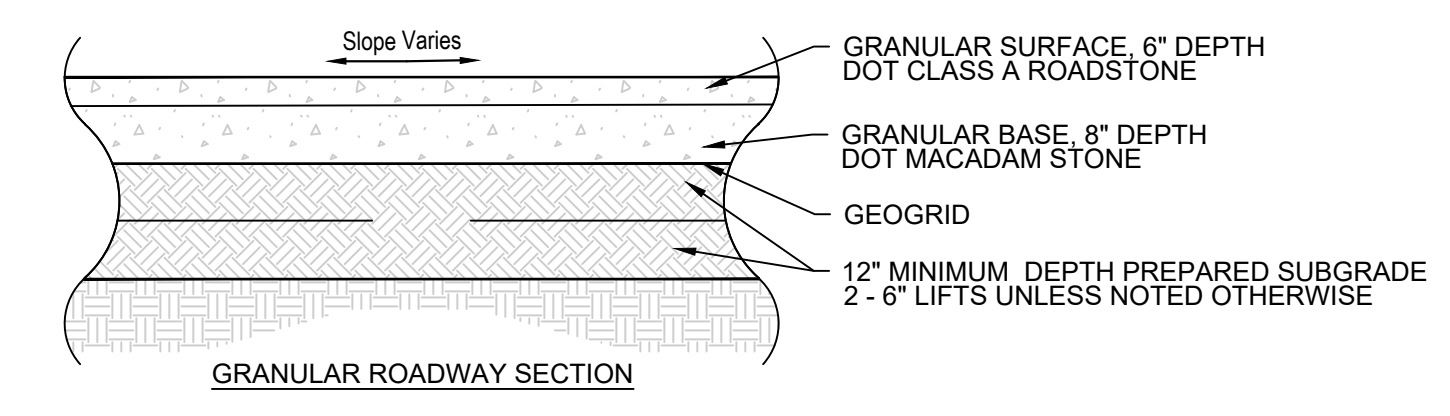


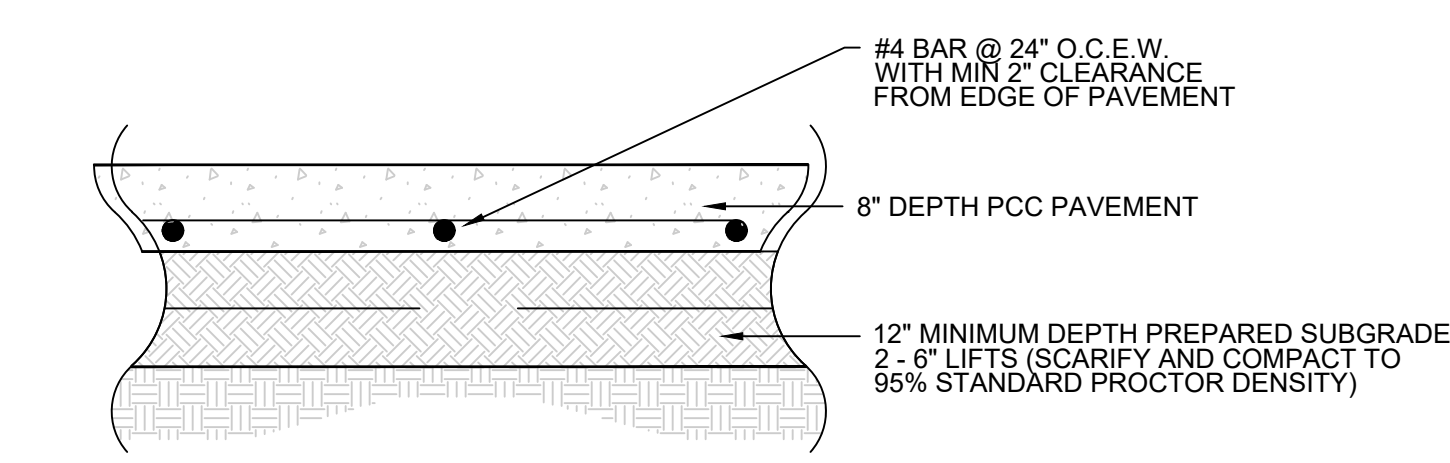


DIMENSION PLAN CONSTRUCTION NOTES

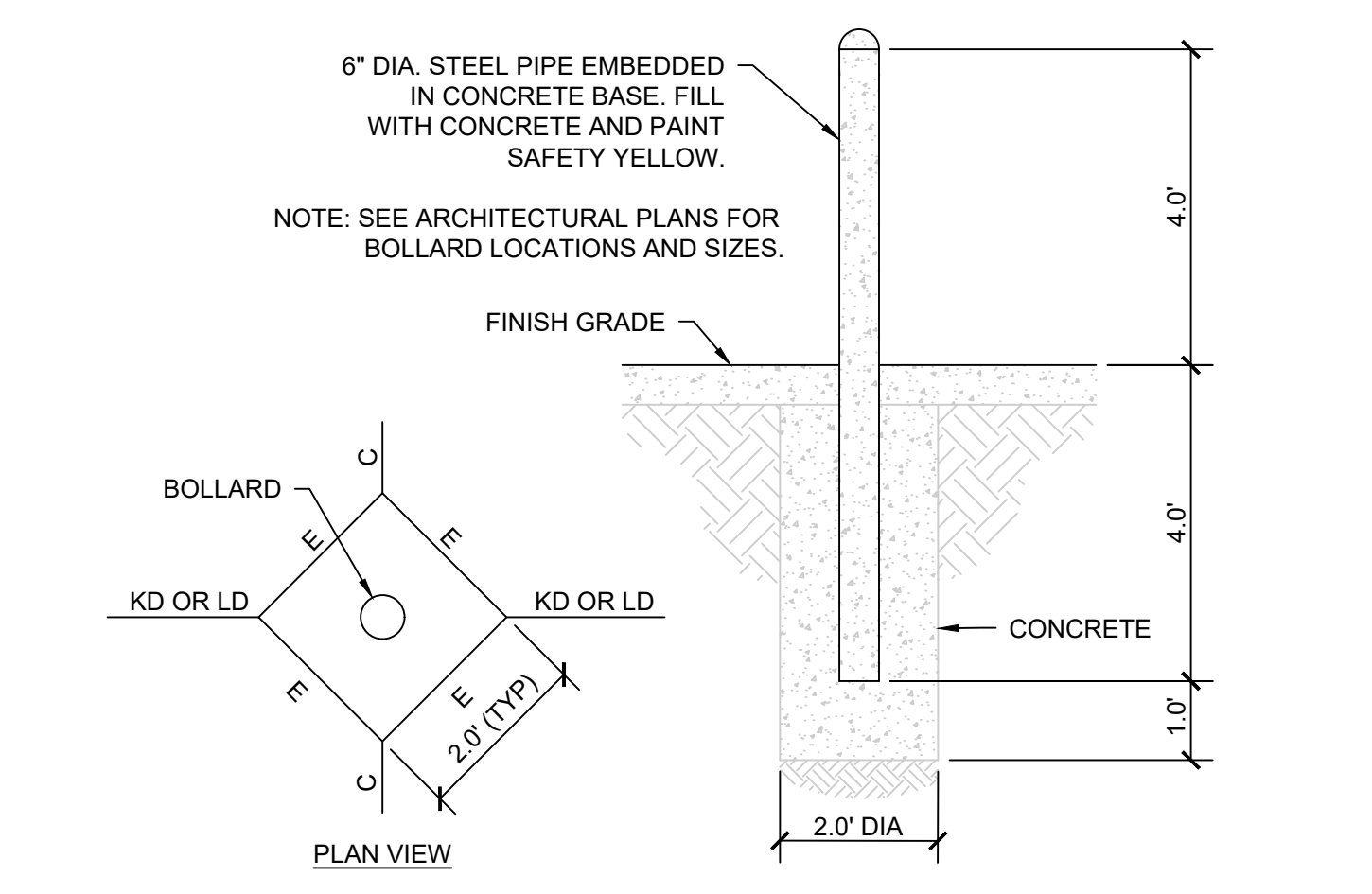
- EXISTING CONDITIONS. PROTECT THE FOLLOWING:
 - EXISTING UTILITIES.
 - EXISTING PAVEMENTS.
- PAVEMENTS. PROVIDE THE FOLLOWING:
 - GRANULAR DRIVE. 14" DEPTH GRANULAR SURFACE ON MINIMUM 12" PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. SEE DETAIL BELOW. CONTRACTOR TO REFER TO SPECIFICATIONS AND ALLENDER BUTZKE GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS.
 - 8" DEPTH PCC SURFACE ON MINIMUM 12" PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. CONTRACTOR TO REFER TO SPECIFICATIONS AND ALLENDER BUTZKE GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS.
 - GRANULAR DRIVE CONNECTION. THIS DRIVE CONNECTION WILL NEED APPROVED IOWA DOT UTILITY ACCOMMODATION IN THE ROW PERMIT PRIOR TO CONSTRUCTION.
 - 2' x 2' x 5" PCC VALVE PROTECTION COLLAR.
- SITE WATER. PROVIDE THE FOLLOWING:
 - 8" WATER MAIN.
 - 6" WATER.
 - DIRECTIONAL BORE WITH 16" CASING PIPE. CONTRACTOR TO COORDINATE EXACT LOCATION AND ELEVATIONS OF EXISTING TIE IN LOCATION WITH THE CITY OF JOHNSTON AND FRANCHISE UTILITY COMPANY PRIOR TO CONSTRUCTION. DIRECTIONAL BORE CONSTRUCTION WILL NEED APPROVED IOWA DOT UTILITY ACCOMMODATION IN THE ROW PERMIT PRIOR TO CONSTRUCTION.
 - HYDRANT ASSEMBLY.
 - 8" VALVE.
- SITE ELECTRICAL. PROVIDE THE FOLLOWING:
 - TRANSFORMER / PEDestal. SEE ELECTRICAL PLANS FOR DETAILS.
 - ELECTRICAL SERVICE. COORDINATE LOCATION WITH FRANCHISE UTILITY COMPANY AND ELECTRICAL PLANS PRIOR TO CONSTRUCTION.
- SITE AMENITIES. PROVIDE THE FOLLOWING:
 - 6" BOLLARDS. CONTRACTOR TO COORDINATE EXACT LOCATION AND PLACEMENT WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
- BUILDING FEATURES. SEE BUILDING PLANS.
 - WALK DOOR.
 - OVERSIZED DOOR.
 - EXTERIOR STAIRCASE COLUMN FOOTINGS.
 - WALL SCUPPER.



1 TYPICAL GRANULAR CROSS SECTIONS
NO SCALE



2 8" DEPTH PCC PAVEMENT SECTION
NO SCALE



3 PIPE BOLLARD DETAIL
NO SCALE



100 Court Ave., Suite 100
Des Moines, IA 50309
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Owner
SOI - DEPARTMENT OF PUBLIC SAFETY

Project
SOI - DPS Fire Service Training Tower
7105 NW 70TH AVENUE
JOHNSTON, IOWA 50131

Construction Manager
DCI Group
220 SE 6th Street, Suite 200
DES MOINES, IA 50309
P. 515-244-5043

Civil Engineer
Snyder & Associates
2727 SW Snyder Blvd.
ANKENY, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering
4717 Grand Avenue
DES MOINES, IA 50312
P. 515-277-0275

Electrical Engineer
KCL Engineering
300 4th Street
WEST DES MOINES, IA 50265
P. 515-724-7938

Key Plan

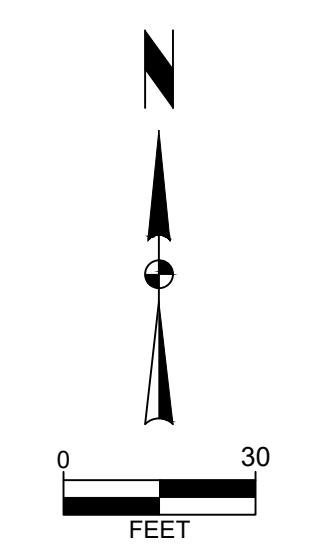
Revision Description Date

OPN Project No.
23820000

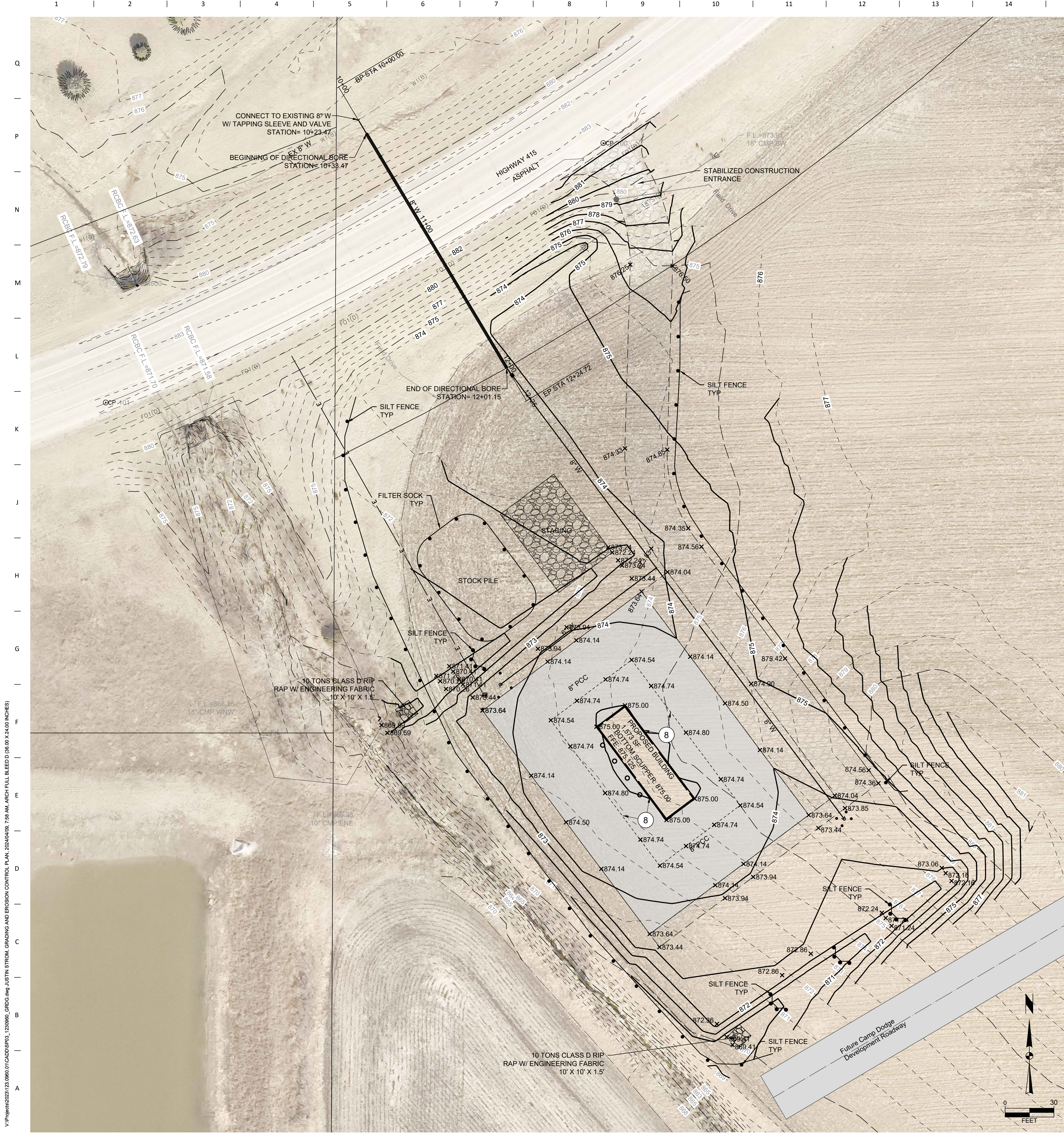
Sheet Issue Date
BID SET 03/22/2024

Sheet Name
DIMENSION AND UTILITY PLAN

Sheet Number



C200



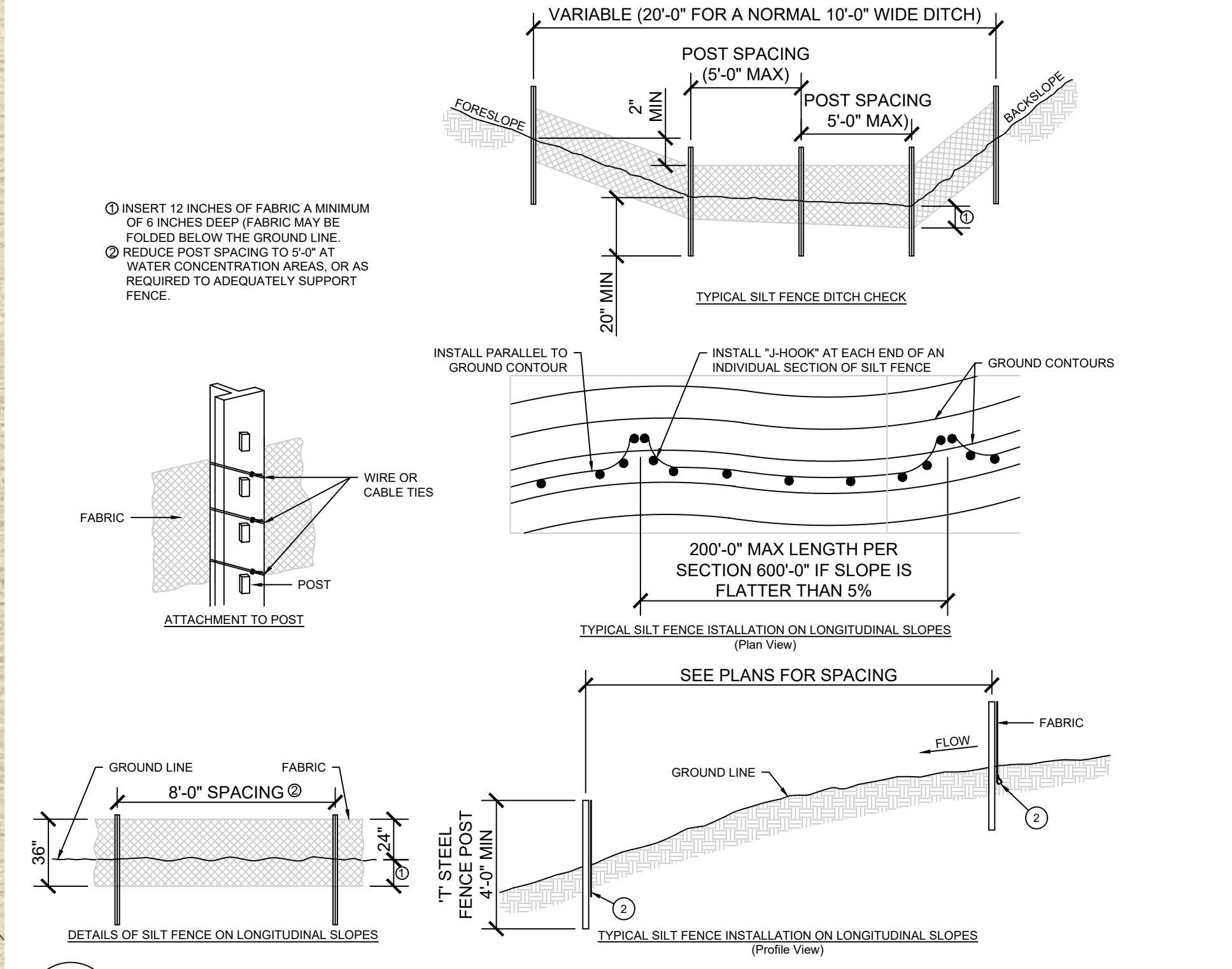
GRADING NOTES

- CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL ON ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 8" DEPTH TO FINISH GRADES.
- ANY EXCESS CUT TO BE SPREAD ON SITE AS DIRECTED BY ENGINEER DURING CONSTRUCTION. PLACE TOPSOIL OVER ALL AREAS DISTURBED.
- ALL DRAINAGE SWALES AND SLOPES 5 TO 1 OR GREATER TO BE SEEDED USING COMMERCIALY AVAILABLE EROSION CONTROL SEED. MIXTURE APPLIED AT RATE RECOMMENDED BY SUPPLIER.
- EROSION CONTROL: SEED THE SITE AFTER ROUGH GRADING HAS BEEN COMPLETED. PLACE SILT FENCE AND MAINTAIN IN PROBLEM AREAS AFTER GROUND COVER HAS BEEN ESTABLISHED. COMPLY WITH EROSION CONTROL LAW.
- CONTRACTOR TO PROVIDE STABILIZED CONSTRUCTION ENTRANCE, MINIMUM 6" DEPTH ROCK, MINIMUM 20' WIDTH, MINIMUM 50' LENGTH.
- CONTRACTOR RESPONSIBLE FOR TEMPORARY STAGING AND PARKING AREA. STAGING AREA BE INSTALLED WITH TEMPORARY ROCK. CONTRACTOR TO DETERMINE EXTENTS NECESSARY.
- CONTRACTOR SHALL MAINTAIN VEGETATION AND WEED CONTROL AT ALL TIMES WITH PROXIMITY TO DOT HIGHWAY. ANY NATIVE GRASS SHALL BE MOWED AND MAINTAINED AT ACCEPTABLE HEIGHTS. ALL WEEDS SHOULD BE REMOVED AND ENSURED THAT NO GROWTH IS SPREAD TO ADJACENT PROPERTIES OR ROW.
- GRADE FROM BOTTOM OF SCUPPERS AT 875.00 AND FROM DOOR OPENINGS AT 85.125 TO 20' OUTSIDE THE BUILDING. TRANSITION GRADES BETWEEN DOORS AND SCUPPERS AS NEEDED. PROVIDE MINIMUM PAVEMENTS LOPES OF 1.0%.

BENCHMARKS

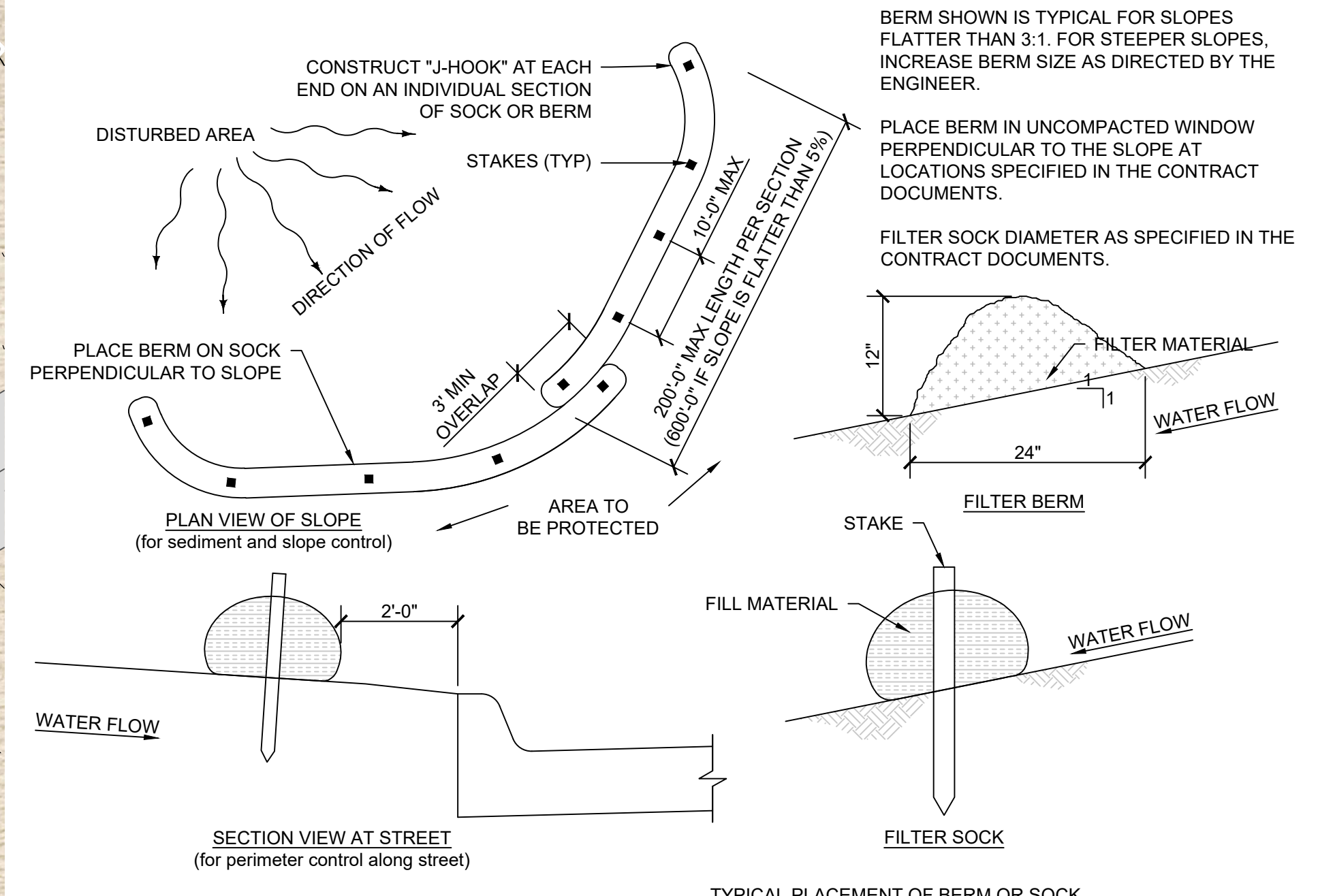
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A)
 IARTN DERIVED - US SURVEY FEET

BM500 ELEV=902.04
 BURY BOLT ON HYDRANT LOCATED +25' NORTH OF 78TH AVE, +5' EAST OF PARKING LOT, AND +50' NORTH OF A9.
 (AS SHOWN ON SURVEY)



1 SILT FENCE DETAIL

C300 NO SCALE



2 FILTER SOCK DETAIL

C300 NO SCALE



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Key Plan

Revision	Description	Date

OPN Project No.
23820000

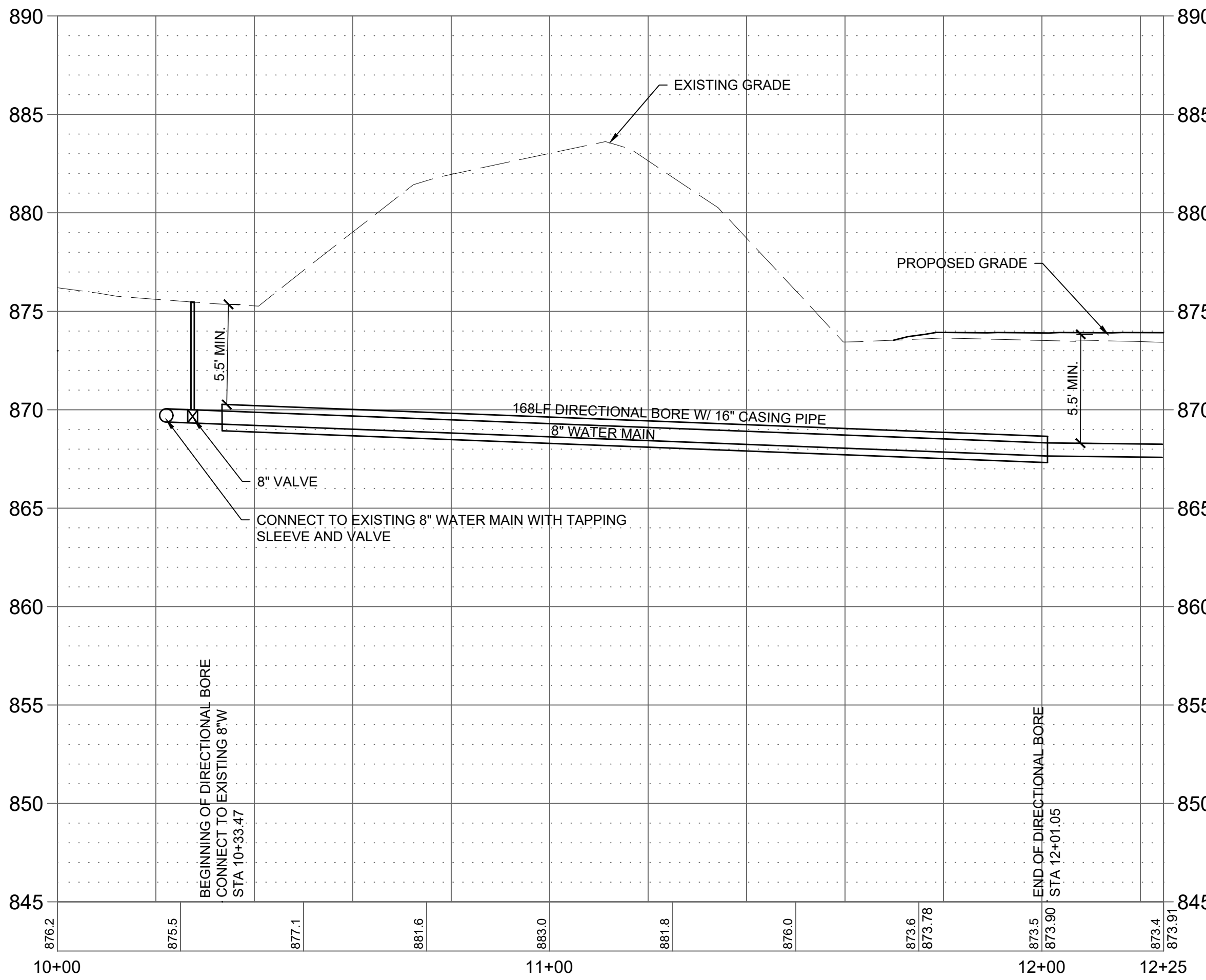
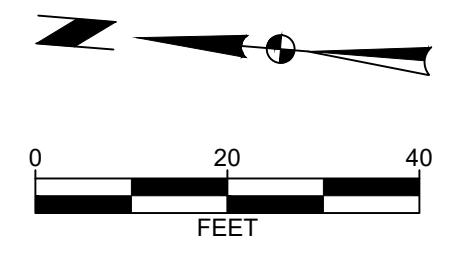
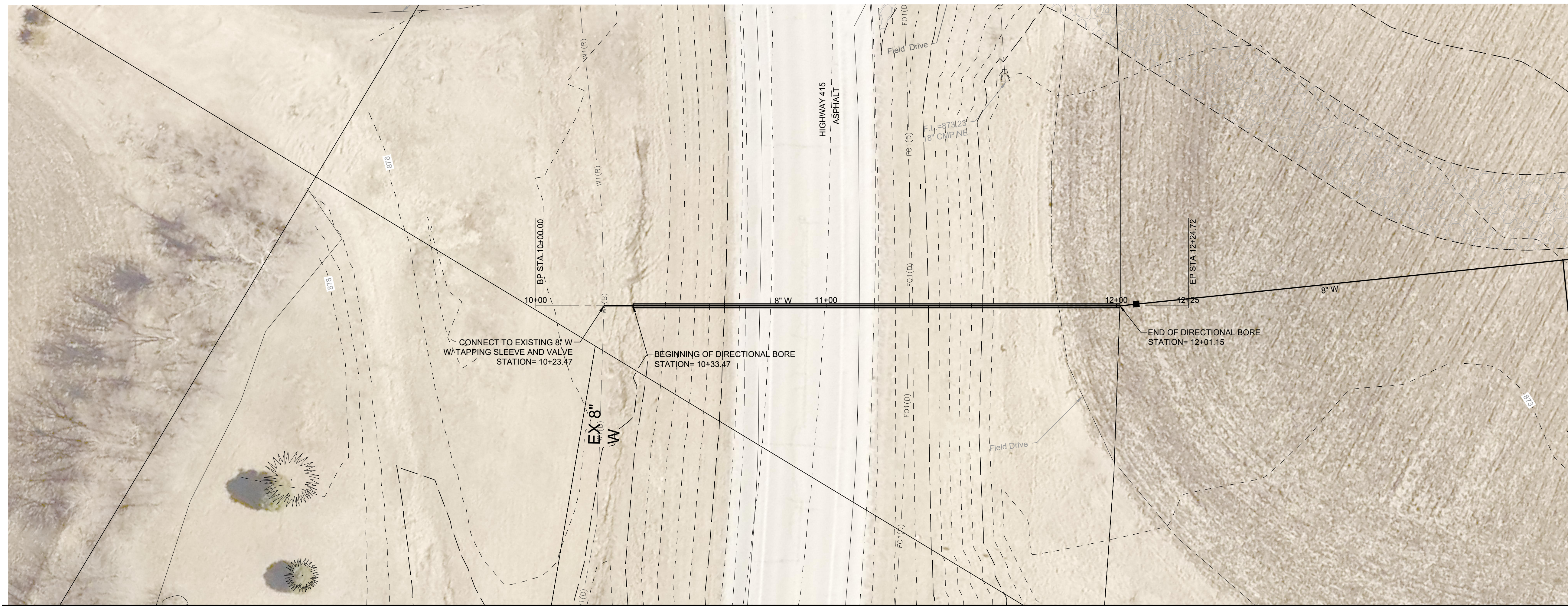
Sheet Issue Date
BID SET 03/22/2024

Sheet Name
GRADING AND EROSION CONTROL PLAN

Sheet Number

C300

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M
L
K
J
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E
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C
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A



V:\Projects\2023\123.0000.01\CADD\1200960_PRF.dwg JUSTIN STROM, WATER MAIN PLAN AND PROFILE, 2024/03/09, 7:56 AM, ARCH (FULL BLEED) (8.50 X 24.00 INCHES)

Key Plan

Revision	Description	Date

GENERAL NOTES

- 1) THIS INFORMATION CONFORMS TO ALL APPLICABLE STANDARDS FOR FIRE TRAINING SIMULATORS AT THE TIME OF PREPARATION.
- 2) THE ERECTION CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL MATERIALS, AT THE TIME OF DELIVERY. THIS CONTRACTOR IS ALSO RESPONSIBLE TO ACCOUNT FOR ALL MATERIAL, AT TIME OF DELIVERY. IF THERE IS A DISCREPANCY IN THE MATERIAL DELIVERED, CONTACT WHP TRAININGTOWERS IMMEDIATELY IN ORDER TO MAKE PROPER ARRANGEMENTS TO PROVIDE THE NECESSARY MATERIAL.
- 3) THIS SET OF DRAWINGS IS INTENDED AS A CONCEPTUAL SET, PROVIDED FOR SECONDARY REFERENCE ONLY. REFER TO BEHLEN INDUSTRIES CONSTRUCTION DRAWINGS AND THE MISCELLANEOUS METALS DRAWINGS AS PRIMARY REFERENCE FOR EXACT MATERIAL DIMENSIONS, ERECTION, AND PROCEDURES.
- 4) THESE DRAWINGS, SPECIFICATIONS, IDEAS, DESIGNS, AND ARRANGEMENTS ARE AND SHALL REMAIN THE PROPERTY OF WHP TRAININGTOWERS AND NO PART THERE OF SHALL BE COPIED, REPRODUCED, OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED WITHOUT WRITTEN CONSENT FROM WHP TRAININGTOWERS.
- 5) WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. INSTALLING CONTRACTORS OR OWNERS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND WHP TRAININGTOWERS SHALL BE NOTIFIED IMMEDIATELY OF ANY VARIATIONS OR DISCREPANCIES FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. ANY FIELD CHANGES OR MODIFICATIONS TO EITHER THE STRUCTURE OR ADDITIVE COMPONENTS MUST BE REPORTED AND APPROVED BY WHP TRAININGTOWERS PRIOR TO PERFORMING ANY WORK.
- 6) MISCELLANEOUS FIELD CUTTING AND FITTING OF BOTH STRUCTURAL AS WELL AS LIGHT GAUGE FRAMING COMPONENTS WILL BE NECESSARY TO BE ABLE TO PERFORM THE INSTALLATION PROCEDURES REQUIRED AND WILL BE CONSIDERED AS A STANDARD CONDITION AND REQUIREMENT FOR ERECTION OF THIS LIVE FIRE TRAINING SIMULATOR AND ITS COMPONENTS.
- 7) DOORS SHALL BE PAINTED 11 GA STEEL REINFORCED WITH STEEL CHANNEL. EACH EXTERIOR NON-BURN ROOM DOOR SHALL BE PROVIDED WITH (1) HEAVY-DUTY STAINLESS STEEL CONTINUOUS HINGE AND (1) COMMERCIAL GRADE KEYS LOCKSET. EACH INTERIOR NON-BURN ROOM DOOR SHALL BE PROVIDED WITH (1) HEAVY-DUTY STAINLESS STEEL CONTINUOUS HINGE AND (1) COMMERCIAL GRADE PASSAGE SET. EACH BURN ROOM DOOR SHALL BE PROVIDED WITH (1) HEAVY-DUTY STAINLESS STEEL CONTINUOUS HINGE, (1) SPRING-TYPE CLOSING DEVICE, (1) DOOR PULL, (1) ROLLER CATCH, AND (1) HASP FOR USE IN SECURING THE BUILDING WHEN NOT IN USE. ANY DOUBLE DOORS SHALL BE PROVIDED WITH (1) METAL ASTRIGAL, (1) INACTIVE LEAF, AND (1) CANE BOLT. DOOR HINGES SHALL BE MOUNTED TO STUDS A MINIMUM OF 4" X 12 GA. ALL FRAMED DOOR OPENINGS THAT DO NOT SIT ON THE CONCRETE STEM WALL SHALL EXTEND 6" FROM THE BOTTOM OF DOOR SLAB TO PROVIDE A 6" OPENING UNDER THE DOOR. ALL DOORS SHALL HAVE (1) HIGH-TEMP DOOR SWEEP INSTALLED ON THE OUTSWING SIDE OF THE DOOR TO COVER THE 6" OPENING. THE DOOR SWEEP SHALL DRAG AGAINST THE FINISHED FLOOR LEVEL.
- 8) WINDOW CLOSURES SHALL BE PAINTED 12 GA HOT-DIPPED GALVANIZED SINGLE LEAVES WITH A 1" DEEP PAN FRAME DESIGN. EACH NON-BURN ROOM CLOSURE ACCESSIBLE FROM THE GROUND SHALL BE PROVIDED WITH (1) STAINLESS STEEL CONTINUOUS HINGE, (1) SLAM LATCH, (1) KEYS LEVER ON THE EXTERIOR SIDE OF THE CLOSURE, (1) PASSAGE LEVER ON THE INTERIOR SIDE OF THE CLOSURE, AND (1) HOLD-OPEN DEVICE. EACH NON-BURN ROOM CLOSURE NOT ACCESSIBLE FROM THE GROUND SHALL BE PROVIDED WITH (1) STAINLESS STEEL CONTINUOUS HINGE, (1) SLAM LATCH, (1) PASSAGE LEVER ON THE EXTERIOR SIDE OF THE CLOSURE, (1) PASSAGE LEVER ON THE INTERIOR SIDE OF THE CLOSURE, AND (1) HOLD-OPEN DEVICE. EACH BURN ROOM CLOSURE SHALL BE PROVIDED WITH ONE OF THE ABOVE HARDWARE SETS AND SHALL INCLUDE (3) "PADGENITE" MOUNTING CHANNELS WELDED ON THE INTERIOR SIDE OF THE CLOSURE. ALL CLOSURES SHALL BE INSTALLED WITH EQUAL SPACING BETWEEN THE FRAMED OPENING AND THE CLOSURE PAN. ALL SILL ELEVATIONS SHALL BE 42" ABOVE FINISHED FLOOR ELEVATION.
- 9) FLOOR DECKS ABOVE GRADE SHALL BE CONCRETE OVER GALVANIZED 1.5" "C" DECK FASTENED DIRECTLY TO LEVEL FLOOR JOISTS PER THE BEHLEN INDUSTRIES CONSTRUCTION DRAWINGS. ALL FLOOR DECKS SHALL REQUIRE FIELD CUTTING AND FITTING AS REQUIRED TO ACCOMMODATE THE BUILDING CONFIGURATION. CONCRETE FILL SHALL BE PROVIDED OVER THE "C" DECK WITH MINIMUM 4" DEPTH AT THE EXTERIOR WALLS. CONCRETE SHALL BE A SMALL AGGREGATE CONCRETE WITH FIBER MESH REINFORCING. CONCRETE SHALL BE PITCHED TO EXTERIOR WALLS AND/OR DRAINS. FINISH SHALL BE A SLIP RESISTANT FINISH. (CONCRETE FILL BY OTHERS)
- 10) ALL CORRUGATED WALL PANELS ARE TO BE PREFINISHED IN ONE OF 9 STANDARD COLORS. COMPOUND CORRUGATED WALL PANELS ARE 3'-5" WIDE AND 4 1/2" DEEP. COMPOUND CORRUGATED ROOF PANELS ARE TO BE GALVANIZED 3'-5" WIDE AND 7 1/2" DEEP. ALL WALL AND ROOF PANELS ARE TO BE BOLTED AT 6" O.C. INCREMENTS UTILIZING 3/8" DIAMETER BOLT FASTENERS PROVIDED IN A COLOR TO MATCH THE WALL OR ROOF PANEL COLOR.
- 11) ALL INTERIOR WALL PARTITIONS SHALL BE CONSTRUCTED OF 4" X 18 GA GALVANIZED METAL STUDS AT 24" O.C. AND 4-1/8" X 18 GA GALVANIZED METAL TRACK. STUDS AT DOOR JAMB HINGES SHALL BE 4" X 12 GA. ALL SIDES OF INTERIOR PARTITIONS NOT RECEIVING BURN ROOM PANELS SHALL RECEIVE 18 GA GALVANIZED SHEETING FASTENED WITH #8 X 5/8" LOW PROFILE TEK SCREWS AT 12" O.C.

DESIGN LOADS

ROOF LOAD -- 100 PSF
 FLOOR LOAD -- 100 PSF
 ATTIC LOAD -- 100 PSF
 WIND LOAD -- -- MPH
 WIND EXPOSURE -- --



FIFTH ALARM - FOUR STORY
 IOWA DEPARTMENT OF PUBLIC SAFETY

WINDOW SHUTTER HARDWARE PACKAGES							
MARK #	DESCRIPTION	ROUGH OPENING	SHUTTER LEAF	LOCKING HANDLE KIT	NON-LOCKING HANDLE KIT	HOLD OPEN	THERMAL LTNING CHANNELS
W1	LOCKING WINDOW SHUTTER	38"x49"	1	1		1	
W2	LOCKING BURN ROOM SHUTTER	38"x49"	1	1		1	1
W3	LOCKING ATTIC SHUTTER	38"x37"	1	1		1	
W4	NON-LOCKING WINDOW SHUTTER	38"x49"	1		1	1	
W5	NON-LOCKING BURN ROOM SHUTTER	38"x49"	1		1	1	1
W6	NON-LOCKING ATTIC SHUTTER	38"x37"	1		1	1	

DOOR HARDWARE PACKAGES														
MARK #	DESCRIPTION	ROUGH OPENING	DOOR LEAF	INACTIVE LEAF	STAINLESS STEEL HINGE	DOOR SWEEP	DOOR SWEEP MOUNT KIT	DOOR KNOB PLATE	LOCKING KNOB SET	PASSING KNOB SET	BURN DOOR KIT	SLIDE LATCH	BARREL BOLT	CANE BOLT
D1	EXTERIOR SINGLE PLATE DOOR	38"x91"	1		1	1	1	1	1					
D2	EXTERIOR SINGLE BURN ROOM DOOR	38"x91"	1		1	1	1	1			1	1	1	1
D3	EXTERIOR DOUBLE PLATE DOOR	79"x91"	1	1	2	2	2	1	1			1	1	1
D4	EXTERIOR DOUBLE BURN ROOM DOOR	79"x91"	1	1	2	2	2	1			1	1	1	1
D5	INTERIOR SINGLE PLATE DOOR	38"x91"	1		1	1	1	1		1				
D6	INTERIOR SINGLE BURN ROOM DOOR	38"x91"	1		1	1	1				1	1		
D7	INTERIOR DOUBLE PLATE DOOR	79"x91"	1	1	2	2	2	1		1			1	1
D8	INTERIOR DOUBLE BURN ROOM DOOR	79"x91"	1	1	2	2	2				1	1	1	1

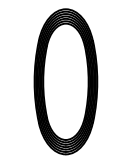
WHP
 A DIV. OF JAHNKE AND SONS CONSTRUCTION, INC.
 519 DUCK RD GRANDVIEW, MO 64030
 TEL. 913-385-3663 info@trainingtowers.com
 TOLL FREE 1-800-351-2525 www.trainingtowers.com

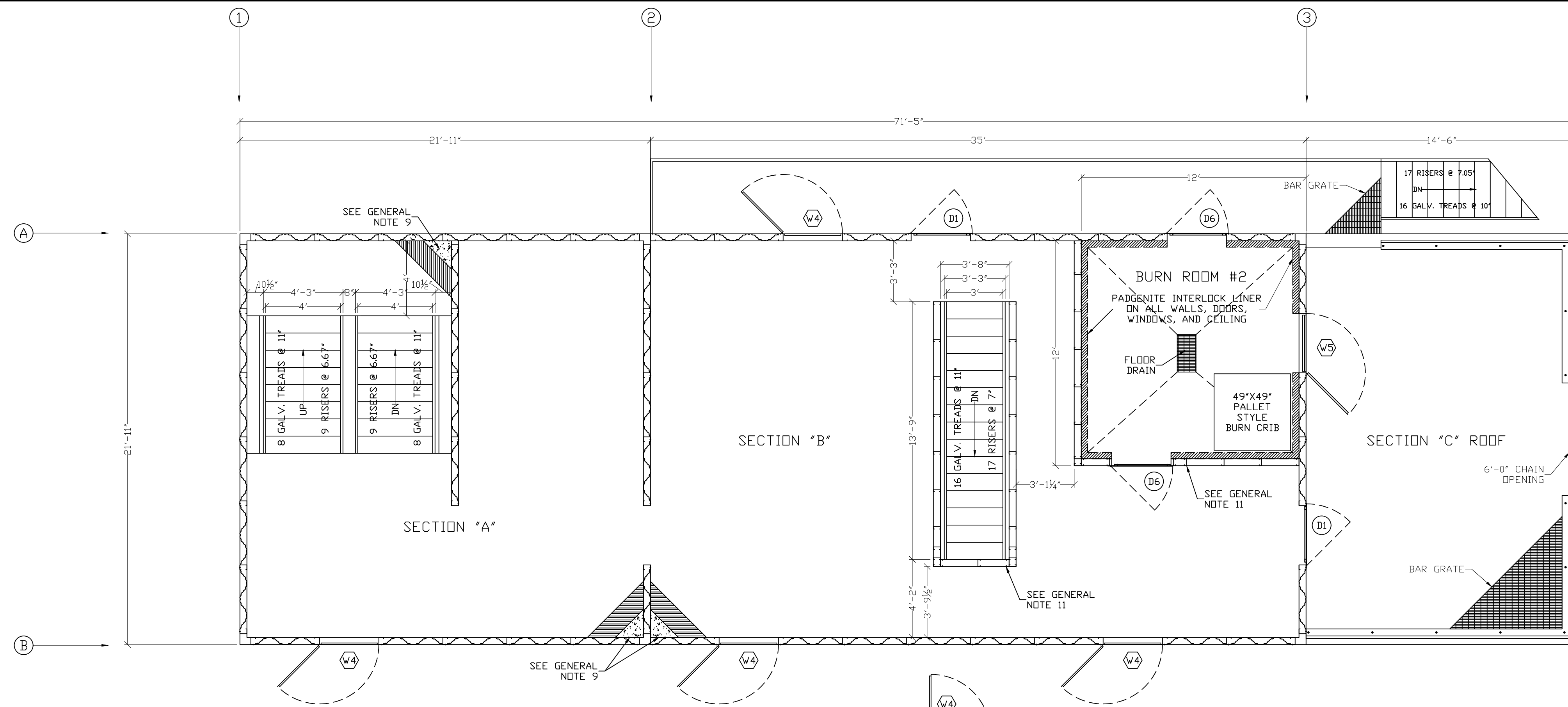
**5TH ALARM - FOUR STORY
 FIRE TRAINING SIMULATOR**
 IOWA DEPARTMENT OF PUBLIC SAFETY TRAINING SIMULATOR

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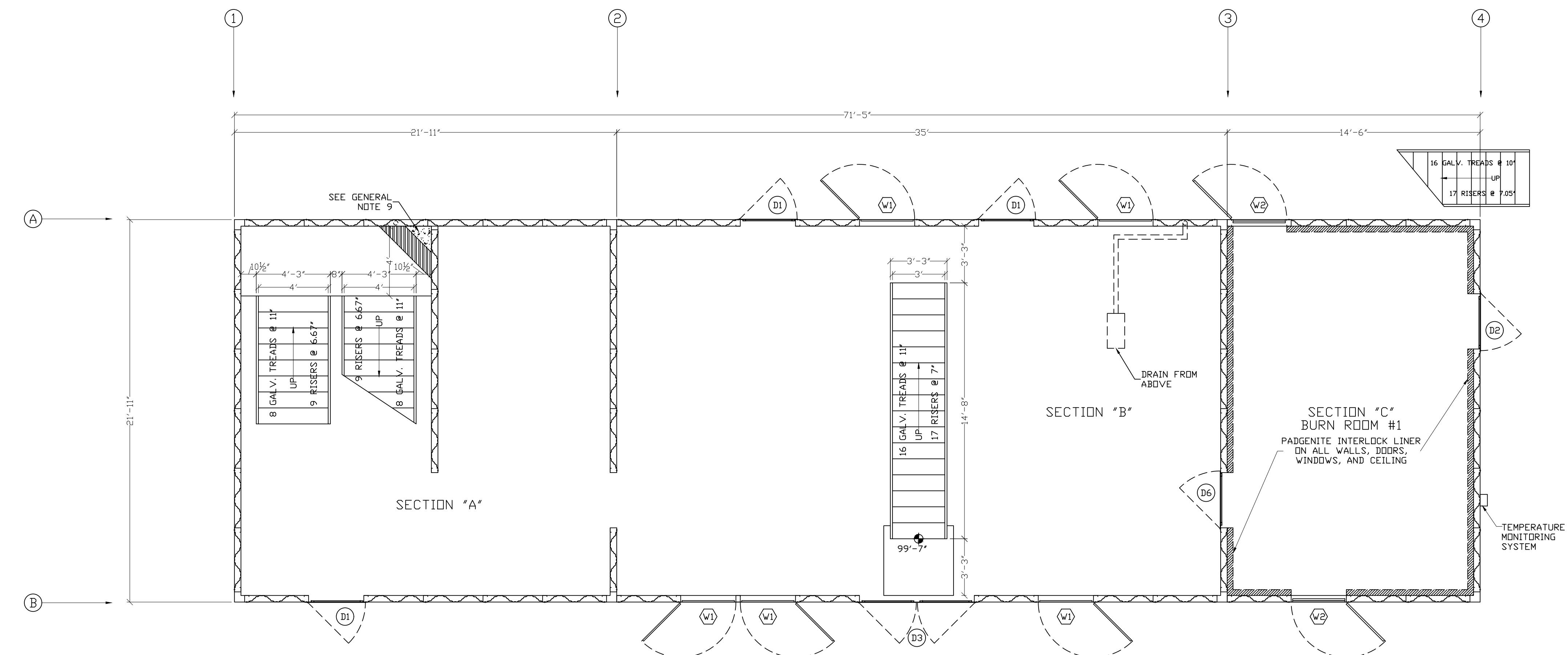
PROJECT NUMBER: 00-14-000	REVISION DATES:
PROJECT ERECTOR: JCM	1
DRAWN BY: JCM	2
CHECKED BY: JPK	3
PRINT DATE: 12-27-23	4

COVER PAGE





TOWER AND RESIDENTIAL 2ND FLOOR PLAN AND ANNEX ROOF PLAN
SCALE: 1/4" = 1'-0"



TOWER, RESIDENTIAL, AND ANNEX 1ST FLOOR PLAN
SCALE: 1/4" = 1'-0"

**5TH ALARM - FOUR STORY
FIRE TRAINING SIMULATOR**
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PROJECT NUMBER:	00-14-000	REVISION DATE:
PROJECT DIRECTOR:	JCM	1
DRAWN BY:	JKK	2
REVIEWED BY:		3
PRINT DATE:	12-27-23	4

FIRST FLOOR AND
SECOND FLOOR PLANS

**5TH ALARM - FOUR STORY
 FIRE TRAINING SIMULATOR**
 IOWA DEPARTMENT OF PUBLIC SAFETY TRAINING SIMULATOR

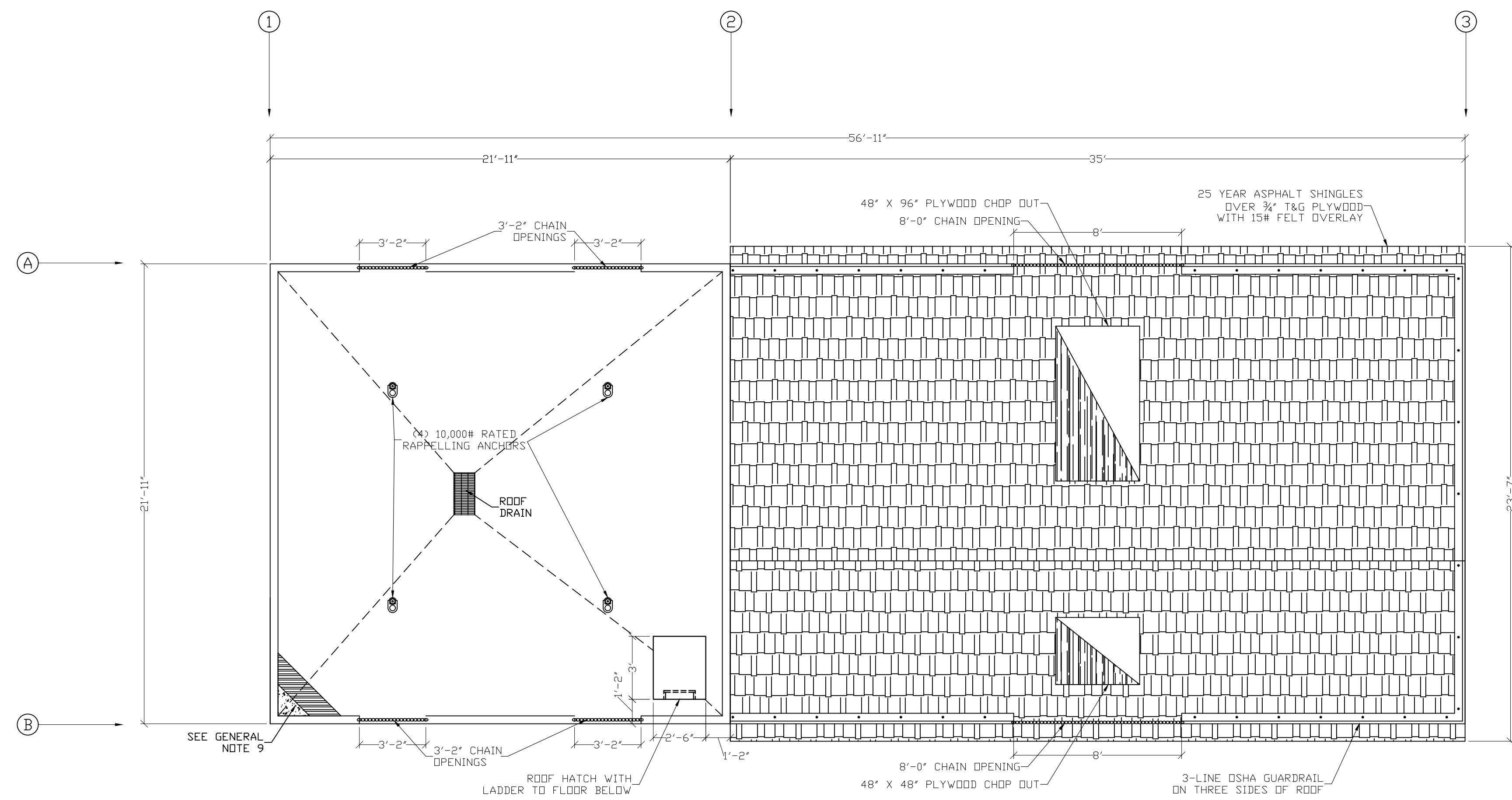
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PROJECT NUMBER: 00-14-000 REVISION DATES:

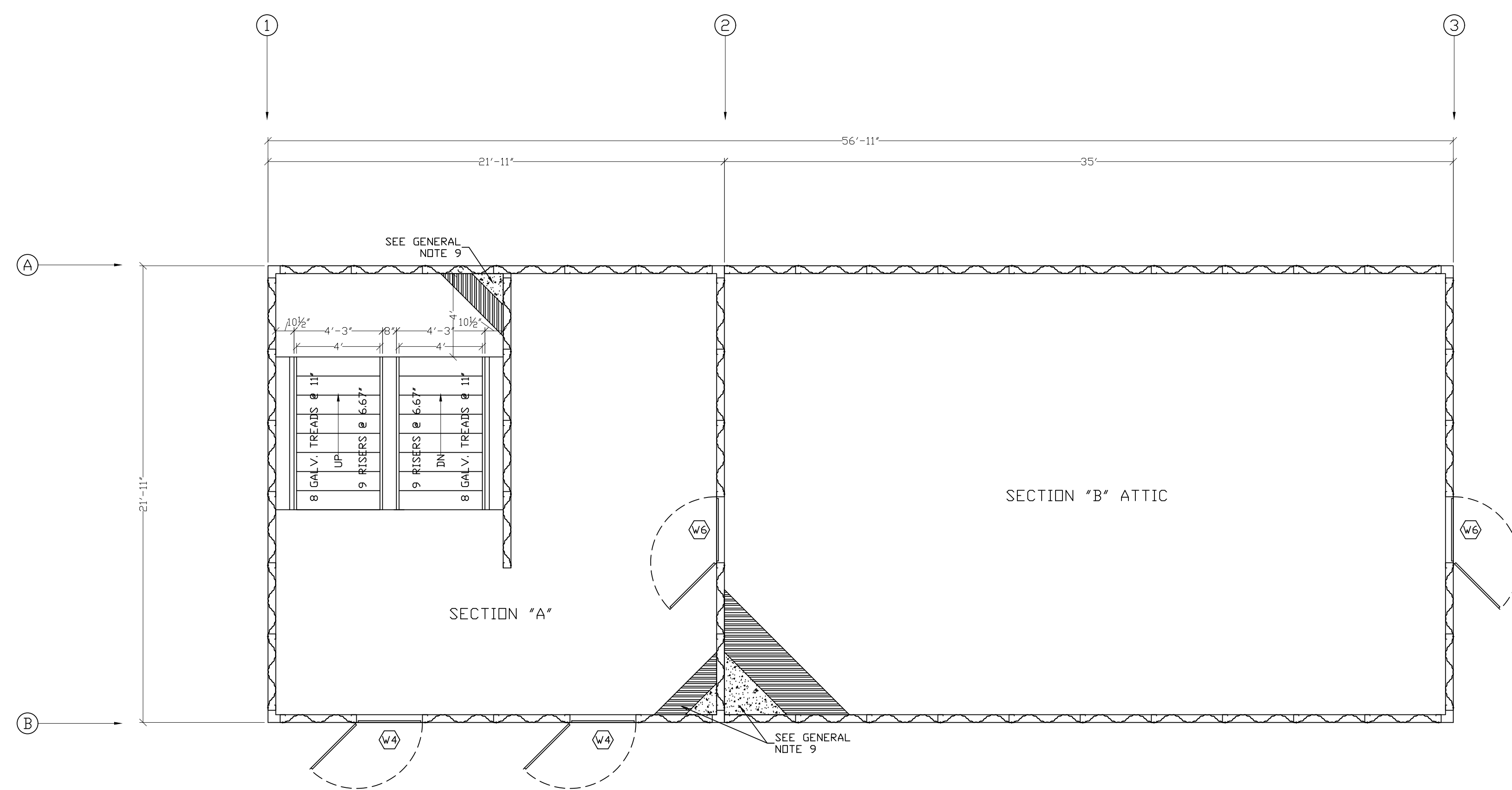
NO.	DATE	DESCRIPTION
1	JCM	1
2	JKY	2
3	JKY	3
4	12-27-23	4

PROJECT DIRECTOR:
 DRAWN BY:
 REVIEWED BY:
 EJECT DATE:

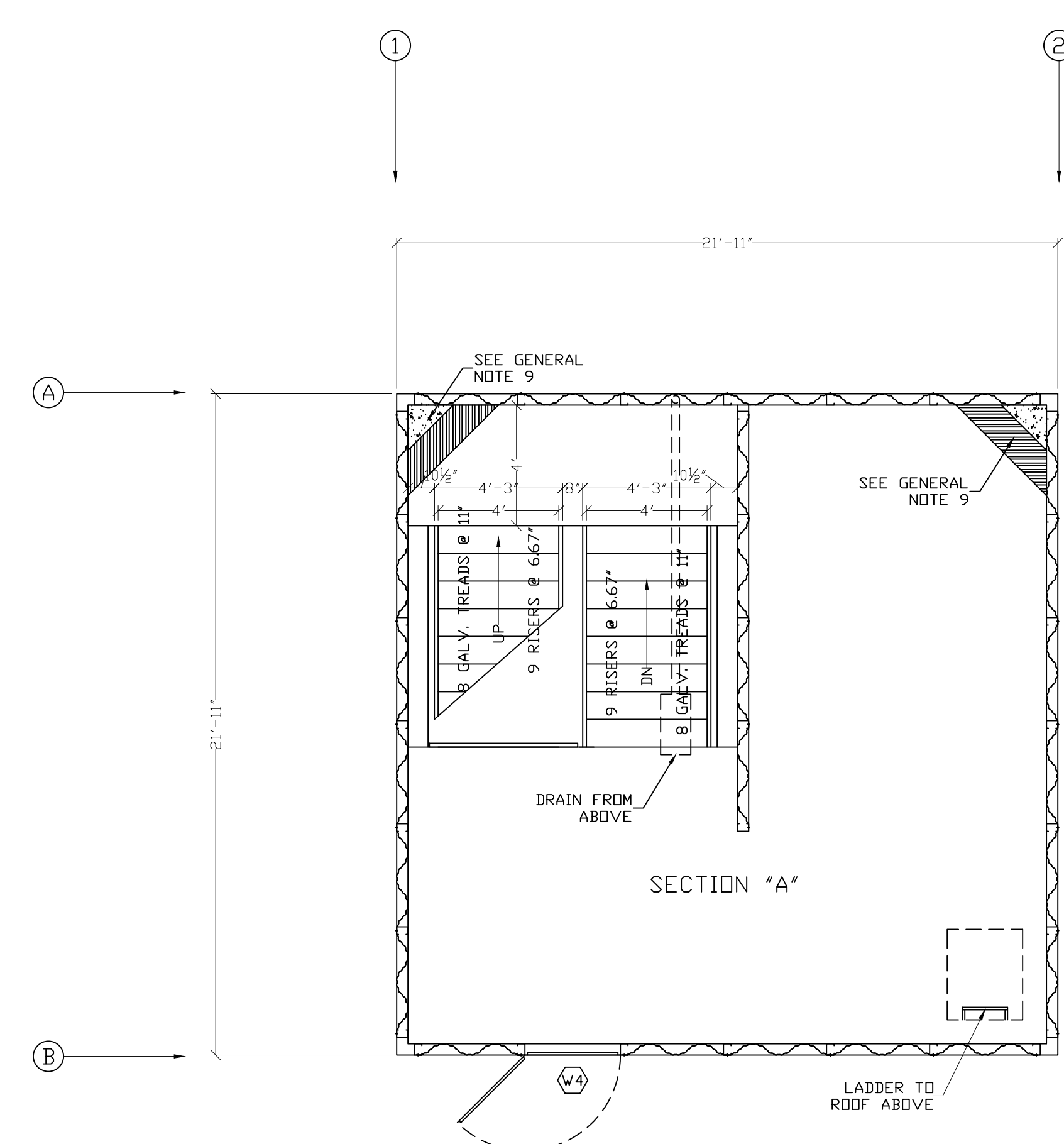
THIRD FLOOR,
 FOURTH FLOOR,
 AND TOWER ROOF PLANS



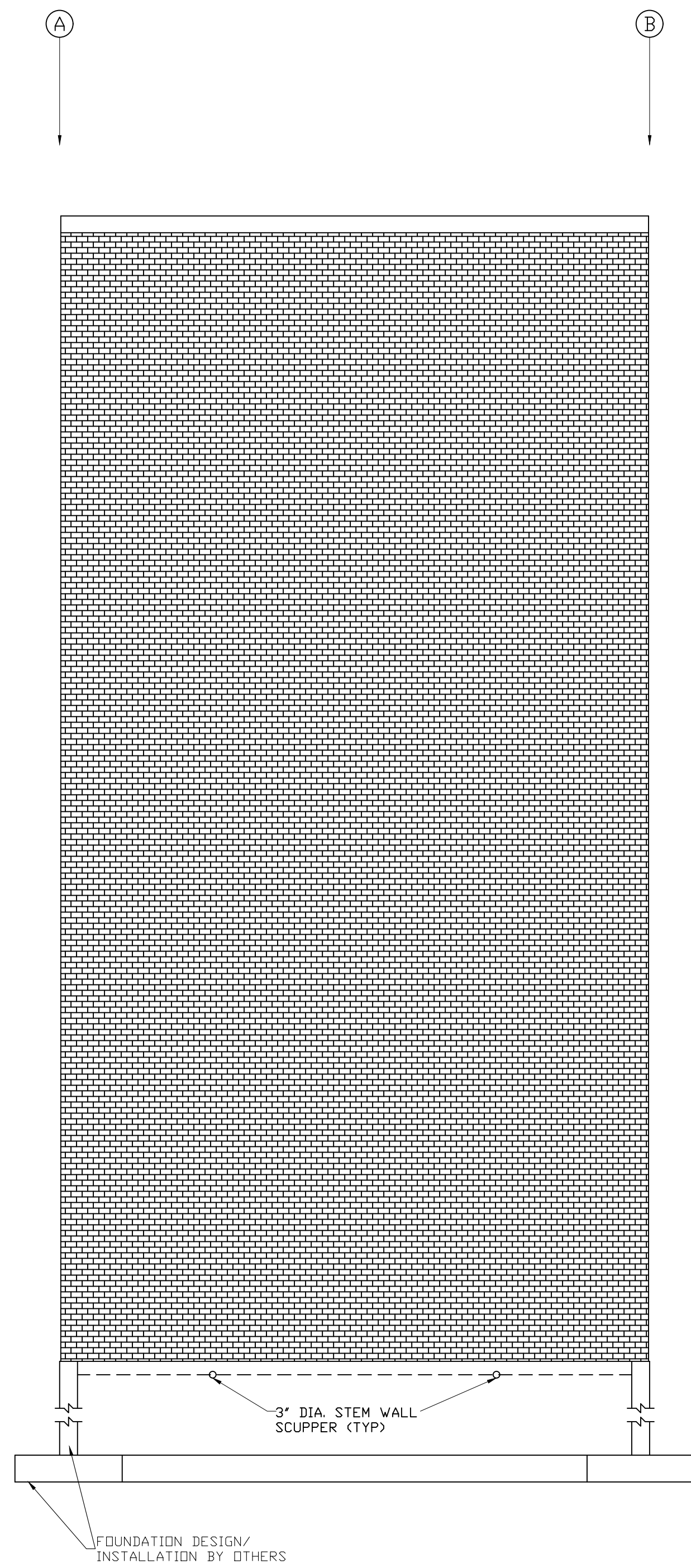
TOWER AND RESIDENTIAL ROOF PLAN
 SCALE: 1/4" = 1'-0"



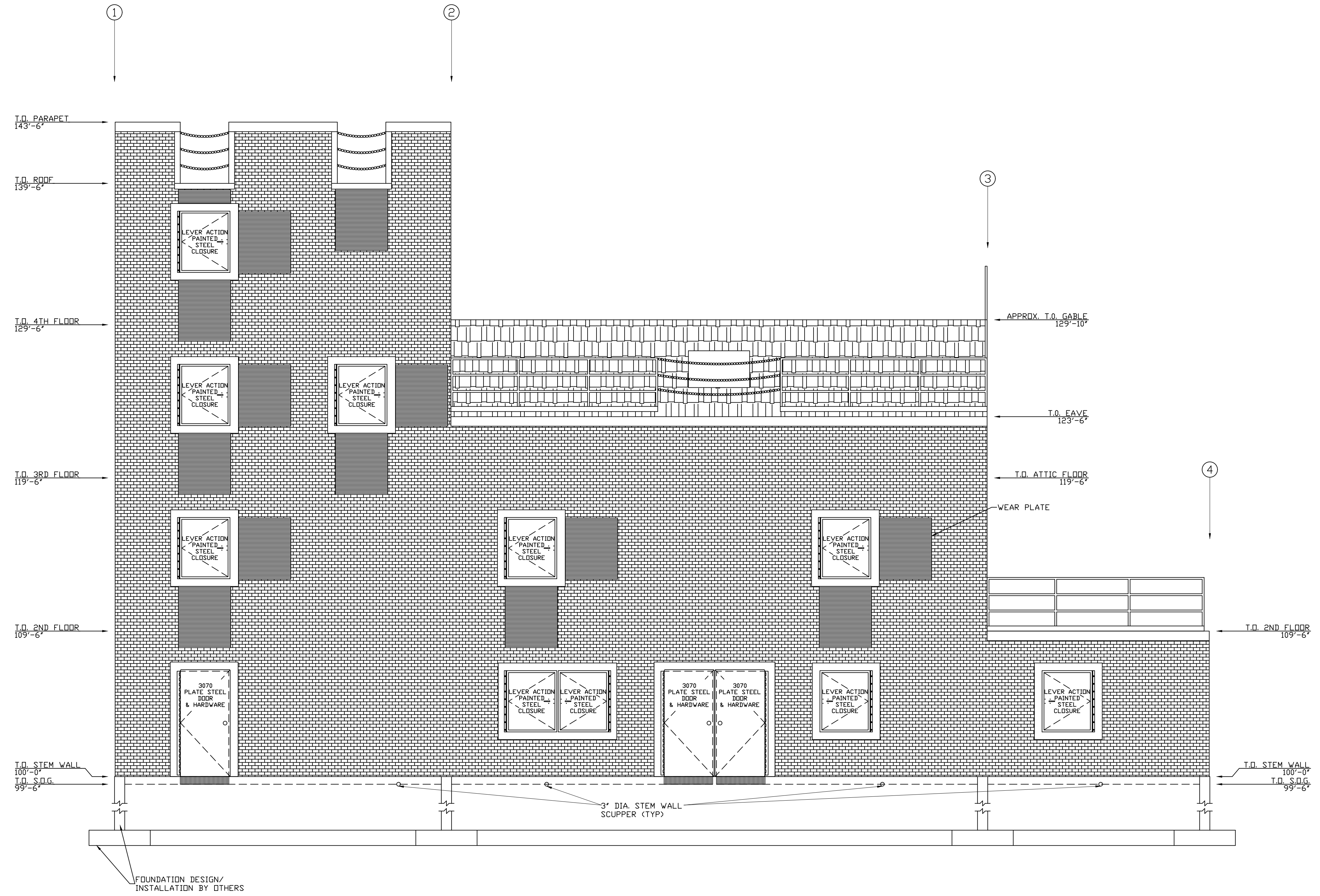
TOWER 3RD FLOOR PLAN AND RESIDENTIAL ATTIC PLAN
 SCALE: 1/4" = 1'-0"



TOWER 4TH FLOOR PLAN
 SCALE: 1/4" = 1'-0"



LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



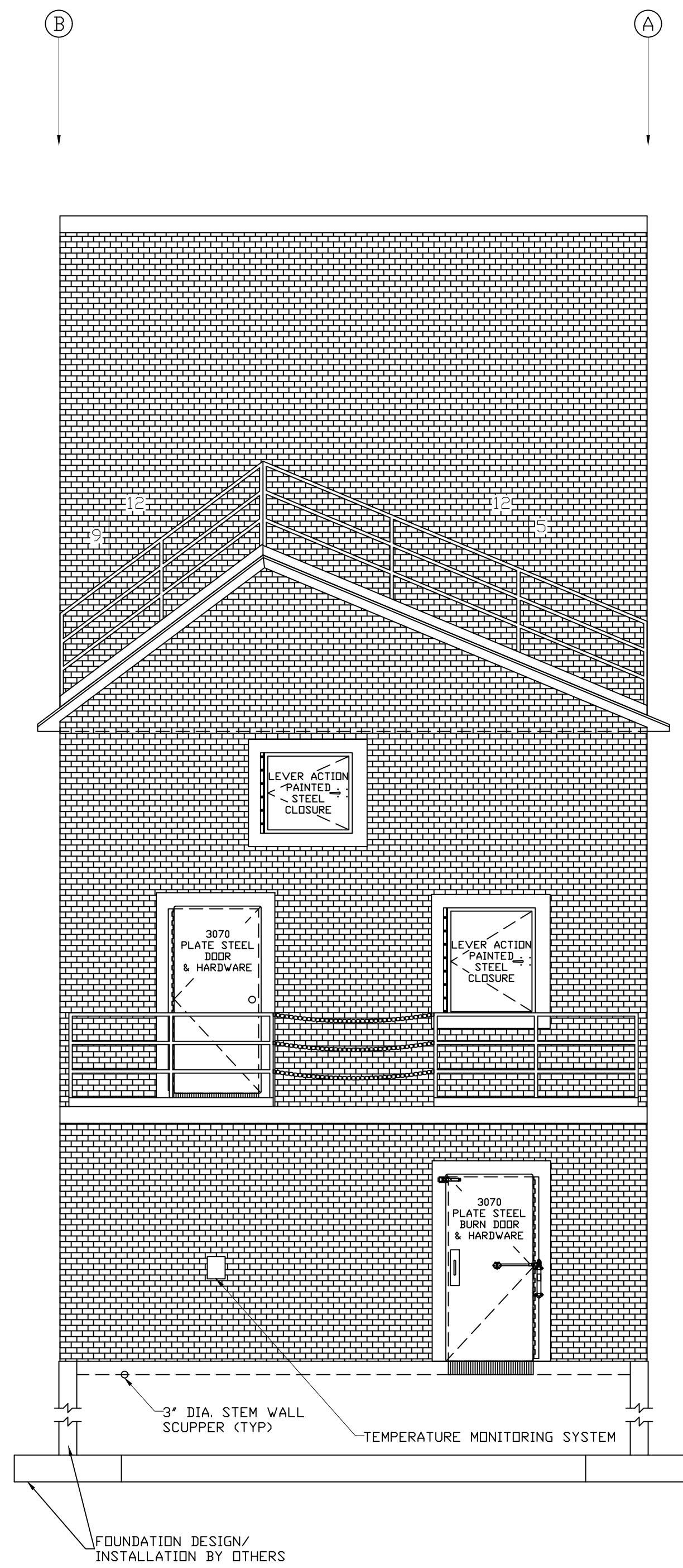
FRONT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

**5TH ALARM - FOUR STORY
FIRE TRAINING SIMULATOR**
IOWA DEPARTMENT OF PUBLIC SAFETY TRAINING SIMULATOR

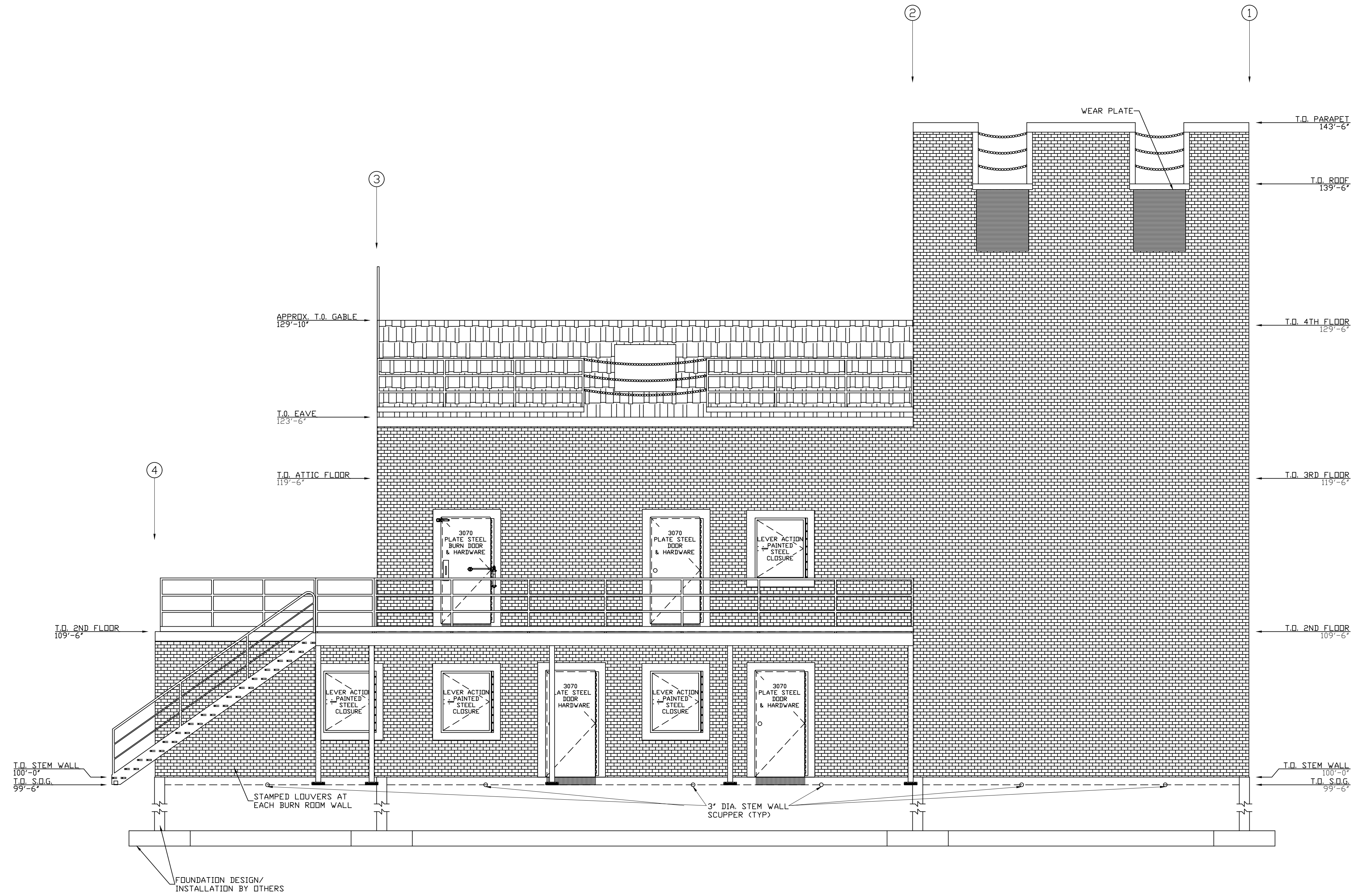
THIS INFORMATION CONFORMS TO ALL APPLICABLE STANDARDS FOR FIRE TRAINING SIMULATORS AT THE TIME OF PREPARATION.
THE DIRECTOR/CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL MATERIALS AT THE TIME OF DELIVERY. THIS CONTRACTOR IS ALSO RESPONSIBLE TO ACCOUNT FOR ALL MATERIALS AT TIME OF DELIVERY. IF THERE IS A DISCREPANCY IN THE MATERIAL, IMMEDIATELY CONTACT THE ARCHITECTS IMMEDIATELY IN ORDER TO MAKE PROPER ARRANGEMENTS TO PROVIDE THE NECESSARY MATERIALS.
THIS SET OF DRAWINGS IS INTENDED AS A CONCEPTUAL SET, PROVIDED FOR SECONDARY REFERENCE ONLY. REFER TO BOWEN INDUSTRIES CONSTRUCTION DRAWINGS AND THE STAIRWALKING DRAWINGS AS PRIMARY REFERENCE FOR EXACT MATERIAL, DIMENSIONS, FINISHES, AND PROCEDURES.
THESE DRAWINGS, SPECIFICATIONS, IDEAS, DESIGN, AND ARRANGEMENTS ARE AND SHALL REMAIN THE PROPERTY OF WHP TRAININGTOWERS AND NO PART THERE OF SHALL BE COPIED, REPRODUCED OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED WITHOUT WRITTEN CONSENT FROM WHP TRAININGTOWERS.

PROJECT NUMBER:	00-14-000	REVISION DATE:
PROJECT DIRECTOR:	JCM	1
DRAWN BY:	JK	2
CHECKED BY:	JK	3
FRONT DATE:	12-27-23	4

FRONT SIDE AND LEFT SIDE ELEVATIONS



RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



REAR SIDE ELEVATION
SCALE: 1/4" = 1'-0"

**5TH ALARM - FOUR STORY
FIRE TRAINING SIMULATOR**
IOWA DEPARTMENT OF PUBLIC SAFETY TRAINING SIMULATOR

THIS INFORMATION CONFORMS TO ALL APPLICABLE STANDARDS FOR FIRE TRAINING SIMULATORS AT THE TIME OF PREPARATION.
THE DIRECTOR CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL MATERIALS AT THE TIME OF DELIVERY. THIS CONTRACTOR IS ALSO RESPONSIBLE TO ACCOUNT FOR ALL MATERIALS AT THE TIME OF DELIVERY. IF THERE IS A DISCREPANCY IN THE MATERIAL DELIVERED, CONTACT WITH TRANNOVERTERS IMMEDIATELY IN ORDER TO MAKE PROPER ARRANGEMENTS TO PROVIDE THE NECESSARY MATERIALS.
THIS SET OF DRAWINGS IS INTENDED AS A CONCEPTUAL SET, PROVIDED FOR SECONDARY REFERENCE ONLY. REFER TO BOWEN INDUSTRIES CONSTRUCTION DRAWINGS AND THE STAIRWALKING DRAWINGS AS PRIMARY REFERENCE FOR EXACT MATERIAL, DIMENSIONS, EJECTION, AND PROCEDURES.
THESE DRAWINGS, SPECIFICATIONS, IDEAS, DESIGN, AND ARRANGEMENTS ARE AND SHALL REMAIN THE PROPERTY OF WHP TRANNOVERTERS AND NO PART THERE OF SHALL BE COPIED, REPRODUCED OR USED IN CONNECTION WITH ANY WORK OF PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED WITHOUT WRITTEN CONSENT FROM WHP TRANNOVERTERS.

PROJECT NUMBER:	00-14-1000	REVISION DATE:
PROJECT DIRECTOR:	JCM	1
DRAWN BY:	JKK	2
REVIEWED BY:		3
PRINT DATE:	12-27-23	4

REAR SIDE AND RIGHT SIDE ELEVATIONS

GENERAL NOTES

- DIMENSIONS ARE MEASURED FACE-OF-FINISH TO FACE-OF-FINISH OR ROUGH MASONRY OPENING UNLESS NOTED OTHERWISE - TYPICAL FOR ALL DRAWINGS.
- FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS - TYPICAL FOR ALL DRAWINGS.
- IN THE EVENT OF A DISCREPANCY BETWEEN ARCHITECTURAL AND CONSULTANT DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING WORK - TYPICAL FOR ALL DRAWINGS.
- BUILDING CONSTRUCTION WILL BE PROVIDED BY WHP. SEE WHP DRAWINGS FOR REFERENCE ARCHITECTURE DRAWINGS PROVIDED FOR COORDINATION OF WORK ONLY.

KEYNOTE LEGEND

ACCESSORIES LEGEND

Key Plan

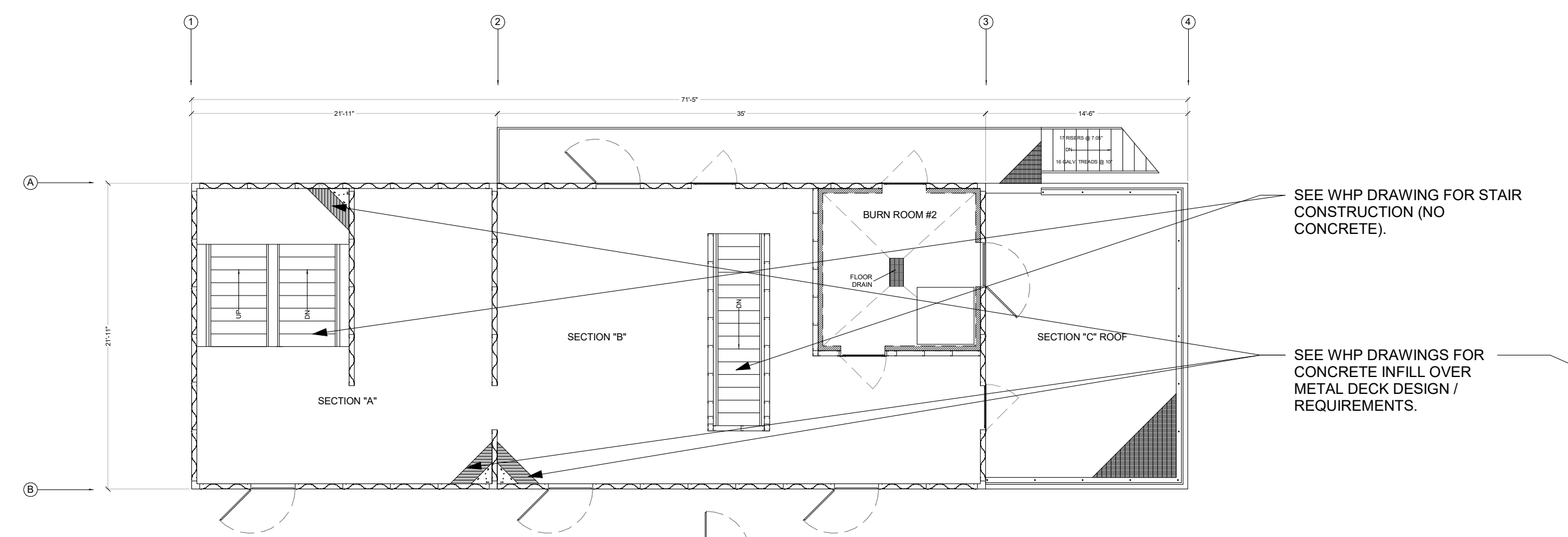
Revision Description Date

OPN Project No.
23820000

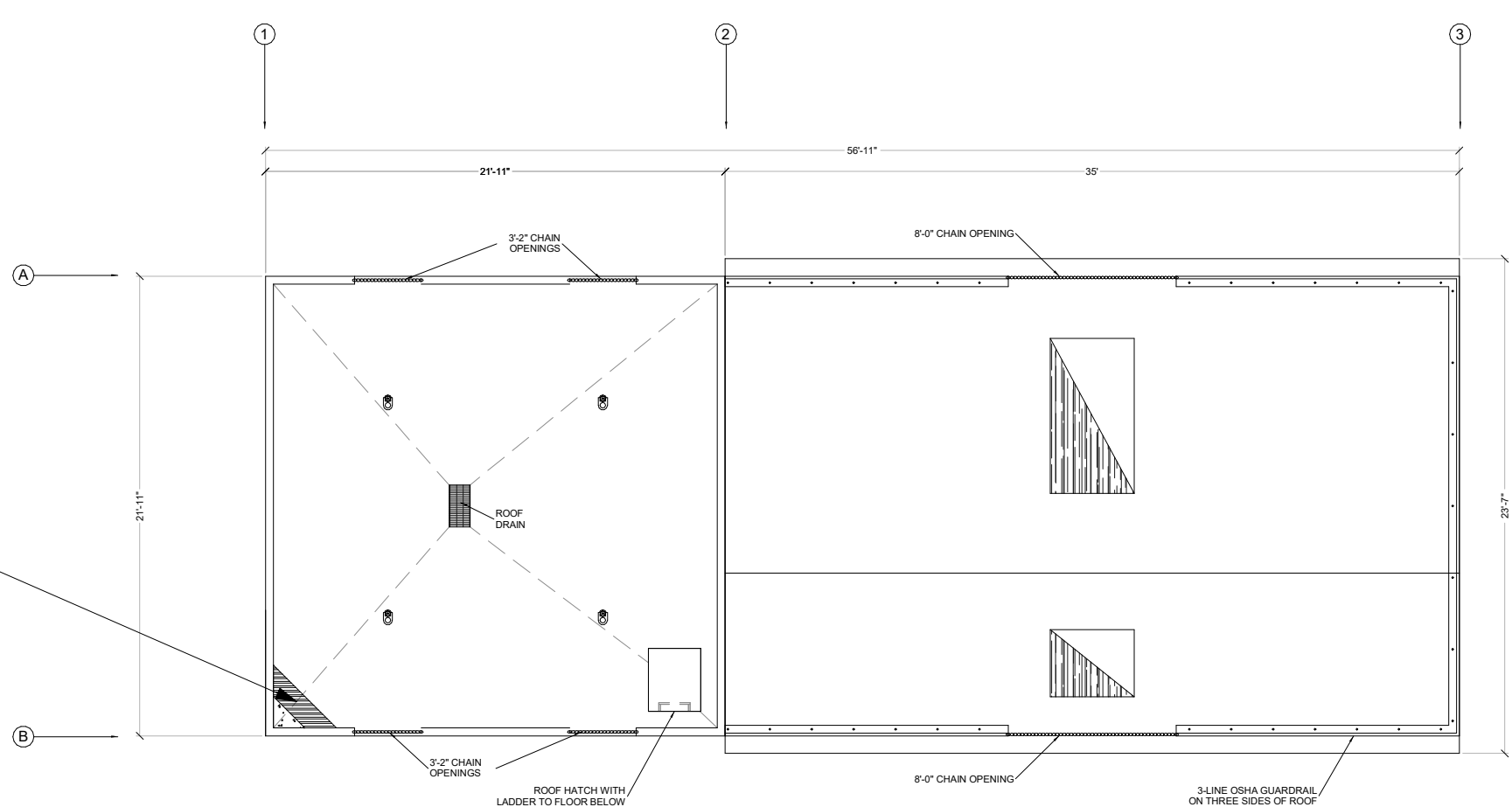
Sheet Issue Date
BID SET 04/05/2024

Sheet Name
FLOOR PLANS

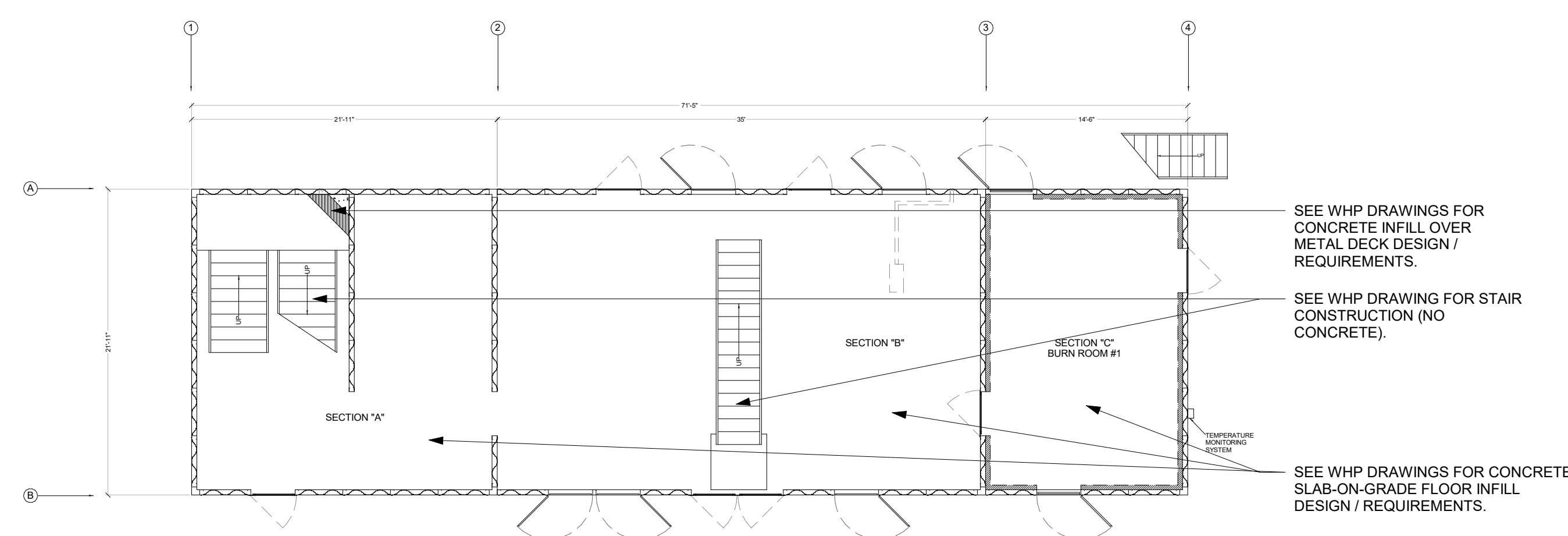
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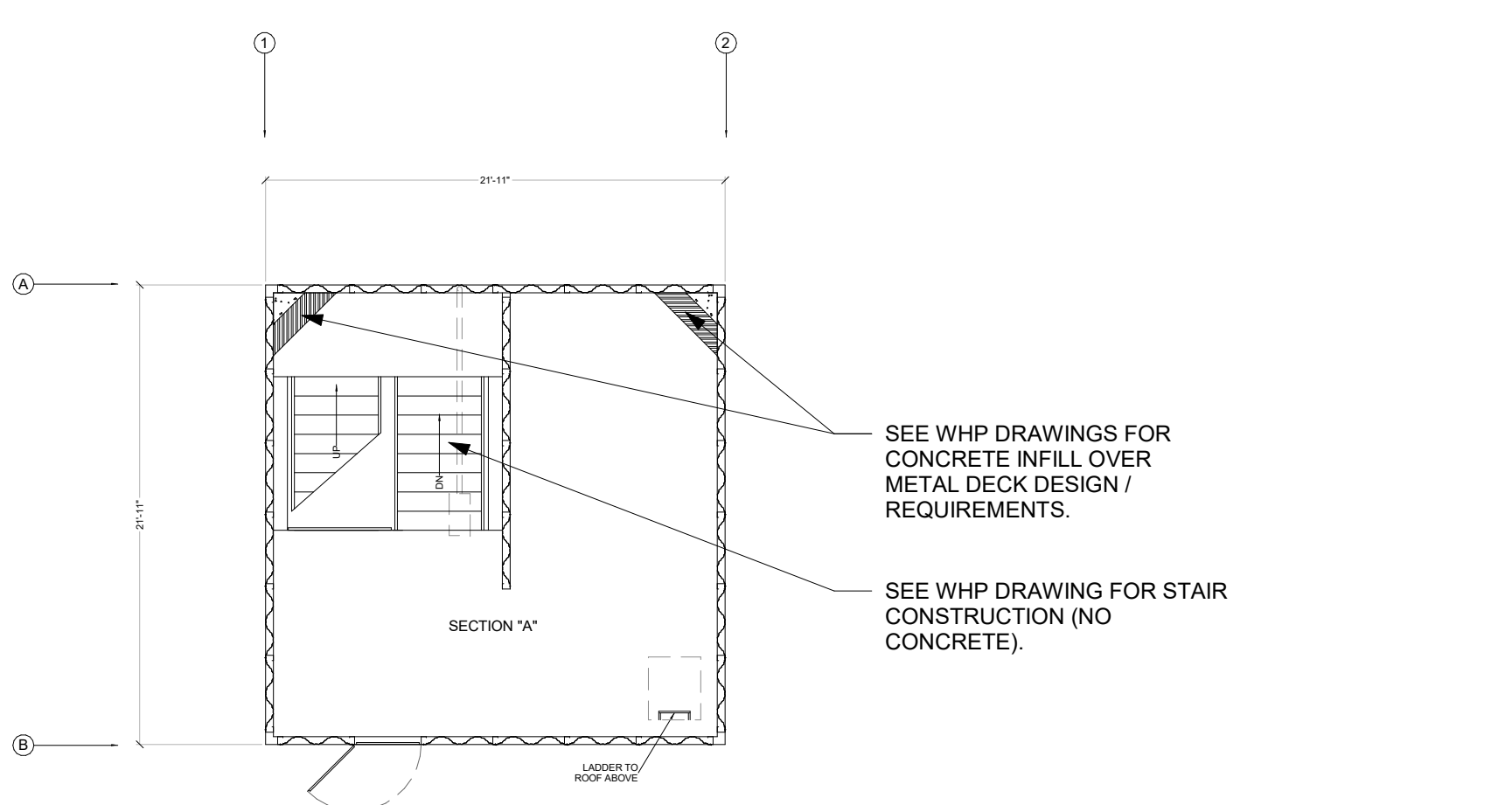
TOWER AND RESIDENTIAL 2ND FLOOR PLAN AND ANNEX ROOF PLAN
SCALE: 1/4" = 1'-0"



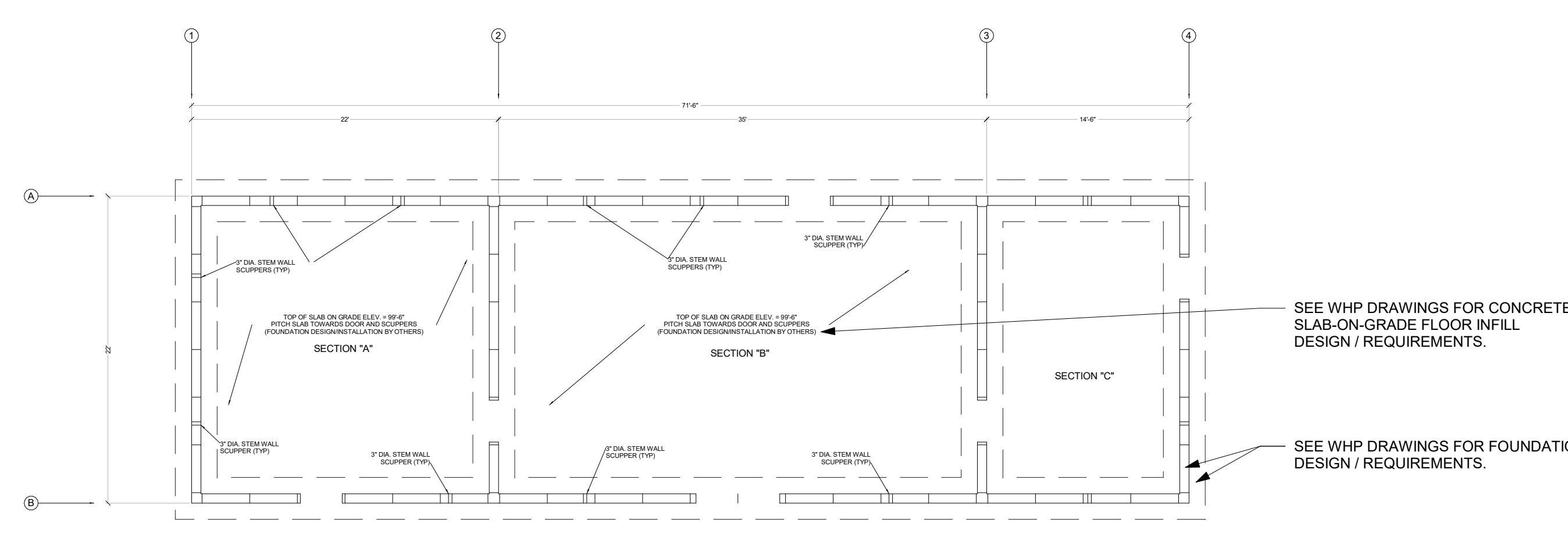
TOWER AND RESIDENTIAL ROOF PLAN
SCALE: 1/4" = 1'-0"



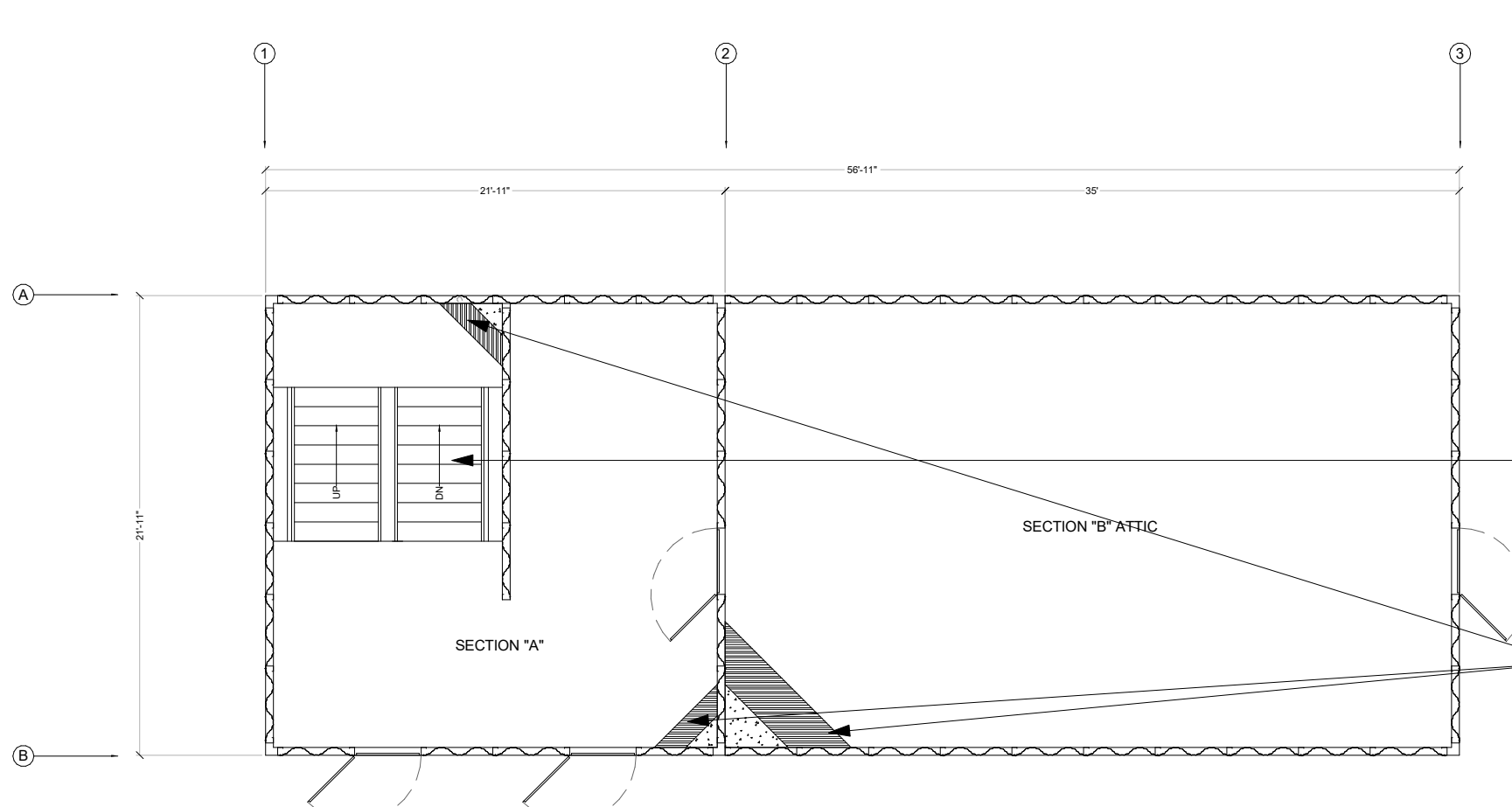
TOWER, RESIDENTIAL, AND ANNEX 1ST FLOOR PLAN
SCALE: 1/4" = 1'-0"



TOWER 4TH FLOOR PLAN
SCALE: 1/4" = 1'-0"



CONCEPTUAL FOUNDATION LAYOUT
NOT TO SCALE



TOWER 3RD FLOOR PLAN AND RESIDENTIAL ATTIC PLAN
SCALE: 1/4" = 1'-0"

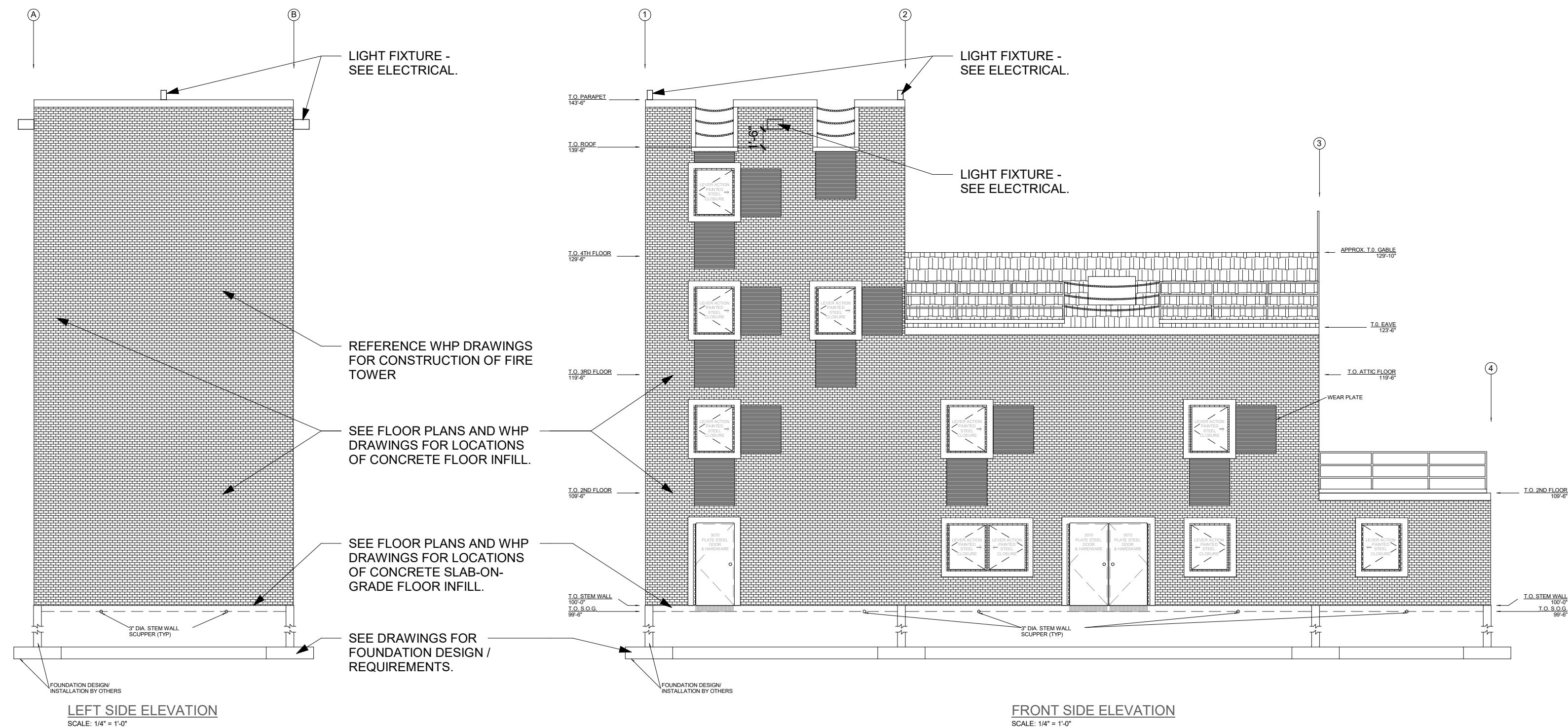
LEVEL 1 FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES

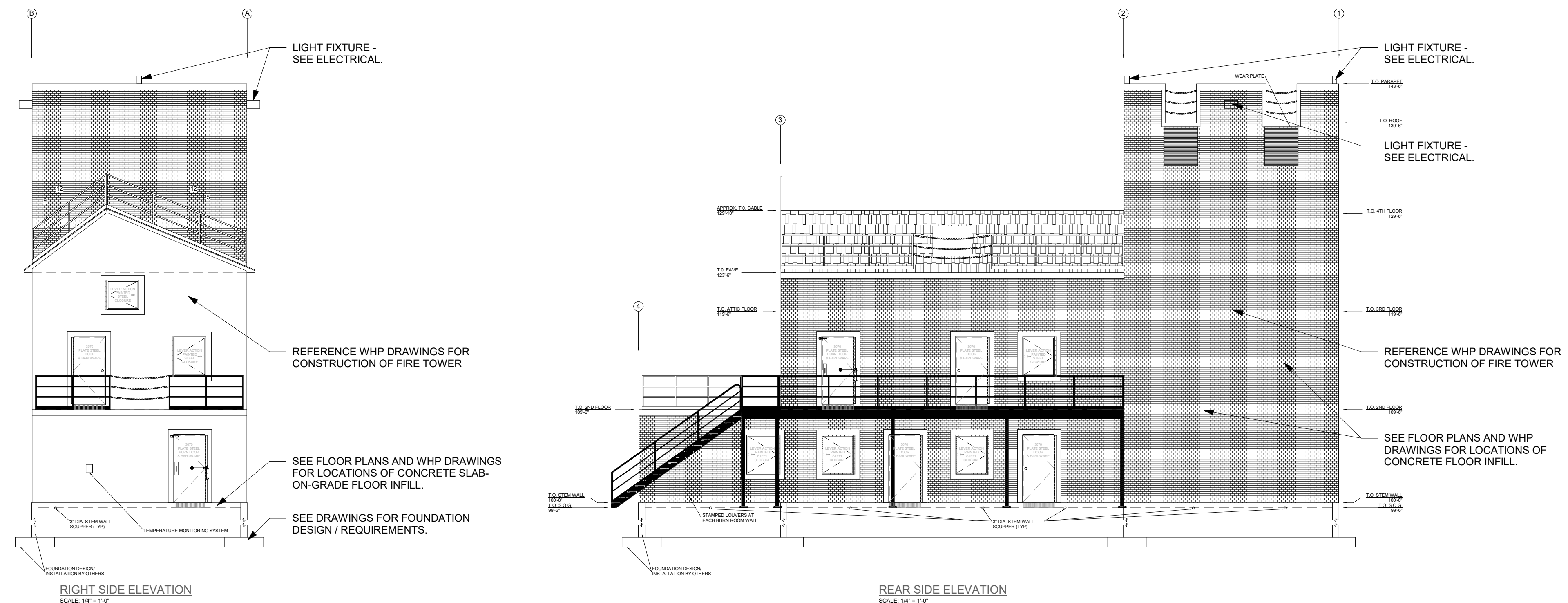
- DIMENSIONS ARE MEASURED FACE-OF-FINISH TO FACE-OF-FINISH OR ROUGH MASONRY OPENING UNLESS NOTED OTHERWISE - TYPICAL FOR ALL DRAWINGS.
- FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS - TYPICAL FOR ALL DRAWINGS.
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- BUILDING CONSTRUCTION WILL BE PROVIDED BY WHP. SEE WHP DRAWINGS FOR REFERENCE ARCHITECTURE DRAWINGS PROVIDED FOR COORDINATION OF WORK ONLY.

KEYNOTE LEGEND

ACCESSORIES LEGEND



H1 LEVEL 1 FLOOR PLAN - ELEVATIONS (LEFT / FRONT)
1/8" = 1'-0"



A1 LEVEL 1 FLOOR PLAN - ELEVATIONS (RIGHT / BACK)
1/8" = 1'-0"

Key Plan

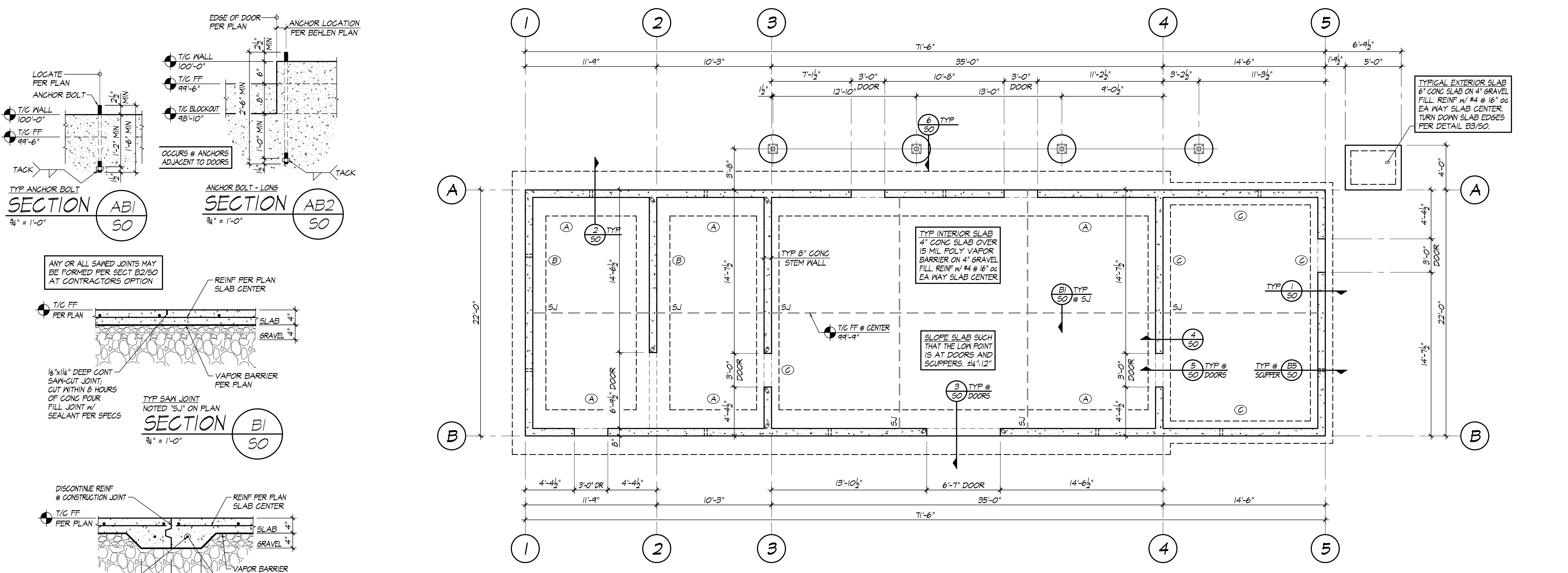
Revision Description Date

OPN Project No.
23820000

Sheet Issue Date
BID SET 04/05/2024

Sheet Name
EXTERIOR ELEVATIONS

Sheet Number

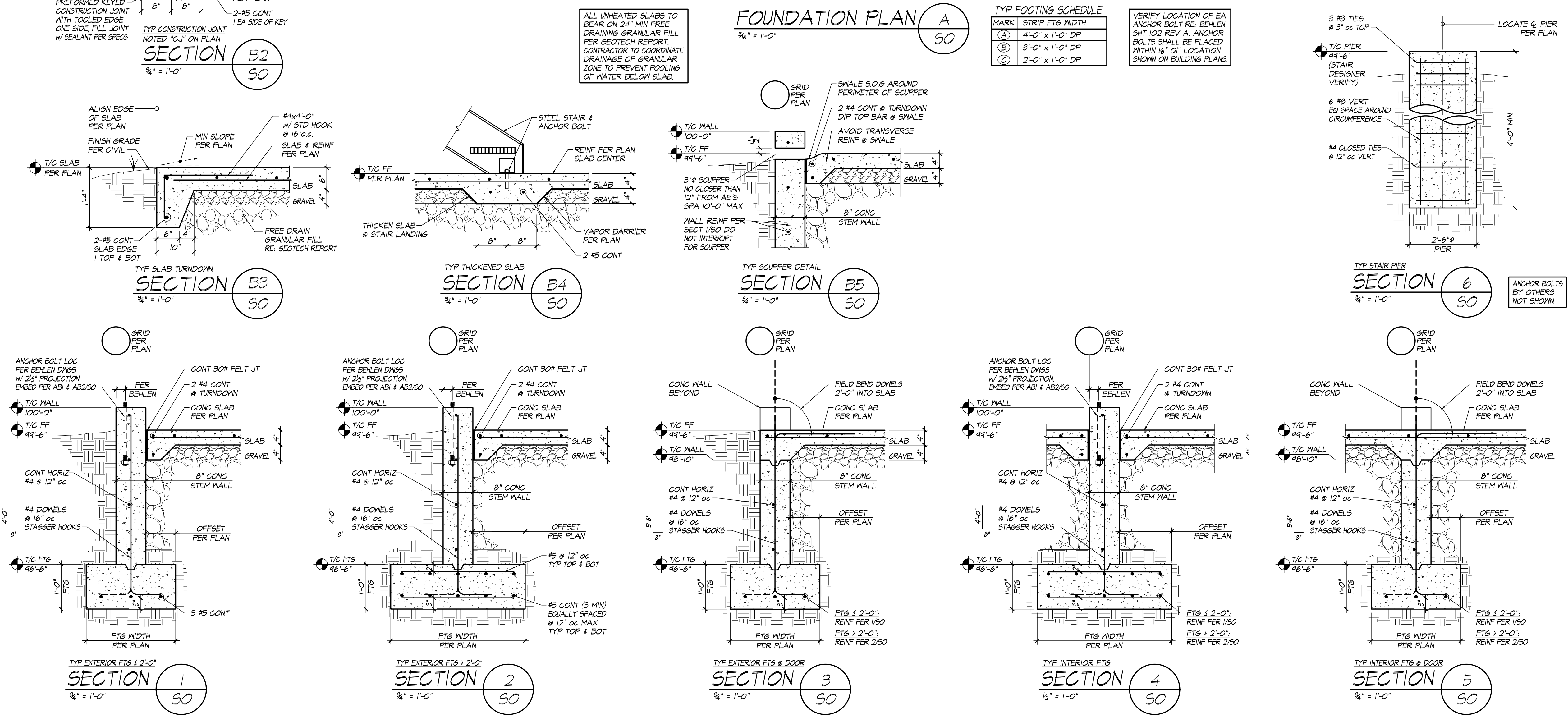


STRUCTURAL NOTES:

- GENERAL
 - Design and construction shall conform to the 2018 International Building Code as amended by the City of Granger, Iowa.
 - The Contractor shall notify the Structural Engineer when actual conditions vary from those shown on drawings. The Engineer is not responsible for the consequences of construction that does not conform with the requirements specified or the reasonable intent conveyed in these drawings or approved revisions thereof.
 - This design is valid only for the dimensions shown. This design may not be valid if actual constructed dimensions vary substantially from what is shown.
 - On the drawings details marked "Typical" shall apply to all situations occurring on the project that are the same or similar, as may be ascertained by the title of the detail, whether the section is on the drawing at each required location or not. If it is not clear from a particular typical detail applies to a specific location, the Contractor shall seek clarification from the Engineer before proceeding with construction.
 - The Contractor shall take all necessary and prudent precautions to maintain the full integrity of the structure during construction. The Contractor is also solely responsible for designing and installing all temporary shoring and bracing.
 - Structural members shall not be cut, notched or otherwise penetrated unless specifically approved by the engineering in advance or as shown on these drawings.
 - If geotechnical investigation is not provided, structural engineer is not responsible for the consequences of inadequate bearing on soil, including heave or settlement.
 - These drawings and notes are for this specific project and no other use is authorized.
- DESIGN CRITERIA [Occupancy II]
 - Dead: Fire/Roof 5 psf self + 38 psf for 4" concrete slab + 9 psf for pendants (fire insulation panel) + 5 psf collateral = 57 psf total.
3 psf self + 5 psf Nichols brick on exterior walls.
 - Live: Fire/Roof 100 psf (includes snow and rain loads).
Ground 100 psf sub-grade.
 - Lateral: Wind Ultimate Velocity 110 mph. Exposure C. Importance 1.00
Seismic S_s = 0.062, S₁ = 0.052, Soil site class "D", Importance 1.00
Seismic Design Category C, R
R = 6.50, [Per ASCE 7-16 TB 12-1 #A16: Steel Shear Walls],
C_s = 0.011, Seismic Lateral Force Procedure.
Ultimate Seismic Base Shear = 2600 lbs.
 - Soil: Bearing Allow 2500 psf.
- FOUNDATIONS
 - Reference Project Geotechnical Report prepared by Allender Bultke Engineers, Inc. Report #PN 23194 dated 12/15/23, sealed by Matthew Drummond, PE (#214073).
 - All foundation excavations shall be approved by a project geotechnical engineer licensed in Iowa prior to placement of excavations for other surface water or seepage. The moisture content in soils prior to excavation should not be allowed to change relevantly after the excavation is made. Concrete for foundations shall not be placed on frozen ground or on ground softened from excess water.
 - The base of the excavation shall be free of water and loose soil prior to placement of reinforcing and concrete. Footing excavations left open for more than 24 hours shall be covered over and protected to reduce evaporation or entry of moisture. Ideally, foundation concrete shall be placed the same day the excavation is made.
 - Establish grades so that drainage flows positively away from the building perimeter.
 - Shrubs, trees or other plants with deep roots requiring large quantities of water shall not be planted within 20' of the building perimeter.
 - Unless noted otherwise, all concrete slab-on-grade shall be poured upon 4" gravel on stabilized compacted fill. The gravel shall consist of well-graded crushed stone with 3/4" maximum particle size and less than 5% passing through No. 4 sieve. Prior to concrete placement, the gravel shall be compacted with a minimum of 4 passes of a vibratory plate compactor or vibratory drum roller.
 - For interior slabs only, place a continuous imperviable 15 mil polyethylene vapor barrier on the gravel directly under the concrete slab according to ACI 302.1 R-04.
- STRUCTURAL CONCRETE
 - All concrete shall be designed and constructed according to ACI 318-14 "Building Code Requirements for Reinforced Concrete," and Commentary (ACI 318-14R).
 - All concrete shall develop a minimum ultimate compressive strength of 2800 psi in 3 days and 4500 psi in 28 days, with not less than 500 pounds of Type III Portland cement per cubic yard of concrete, regardless of the strengths obtained, not more than 6 gallons of water for each 100 pounds of cement, with aggregate not larger than 3/4" diameter, and slump that does not exceed 4'-1/2".
 - All concrete other than finishwork may have up to 15% of Portland cement weight replaced with an equivalent weight of an approved Class F fly ash.
 - All admixtures shall be approved by the structural engineer in writing before use. Exposed exterior concrete shall be finished with 6% w/w silane.
 - All concrete is reinforced unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as similar sections or areas. Any sections not shown shall be detailed per ACI 315, "Details and Detailing of Concrete Reinforcement," current edition.
 - Clear minimum coverage of concrete over reinforcing steel shall be minimized, but it shall not be less than the largest nominal bar diameter, nor less than the following unless noted otherwise:

1. Concrete placed against trench earth:	3"
2. Concrete placed against form in earth:	2"
3. Un-tied elements (columns and walls):	1 1/2"
4. Tied elements (columns & elevated beams):	1-1/2"
 - No aluminum items shall be embedded in any concrete.
 - Limit control joints in slab-on-grade slab areas to 16'-0" apart along any side.
 - Control joints in slab-on-grade concrete maximum 8 hours after concrete pour.
- REINFORCING STEEL
 - Fabrication, erection and placement of reinforcing steel shall conform to Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice".
 - Bar reinforcing shall conform to ASTM A630 or 60 deformed reinforcing steel, except stirrups and ties shall comply with CRSI requirements for improved bendability.
 - Reinforcing steel shall not be heated or welded. All bar bends shall be made cold.
 - Reinforcing steel shall be clear of all grease or other material likely to impair bond.
 - Fabricate reinforcing bars in continuous lengths as is practicable. Where discrete rebars require splicing, use direct contact bar laps according to the Schedule:

BAR SIZE	MIN LAP IN CONC	90° HOOK IN CONC	BAR SIZE	MIN LAP IN CONC	90° HOOK IN CONC
#3	10"	6"	#6	30"	12"
#4	20"	8"	#7	42"	14"
#5	24"	10"	#8	48"	16"
 - Place dowels between adjacent or sequential pours and as indicated. All dowels shall be same size and spacing as adjoining main bars. Unless noted otherwise, set equal legs into adjoining members and lap according to the Schedule above.
 - All reinforcing shall be secured from displacement prior to pouring concrete using wire ties and anchorage devices.
 - At all corners, supply corner bars minimum 2'-0" or 48 bar diameters in each direction in outside face, matching the size and spacing of horizontal bars.
 - At all holes in concrete slabs and slabs-on-ground, along each side of the hole place 2 #4's (one top, one bottom) continuous, extending 2'-0" straight beyond the corners.
 - At all re-entrant corners in concrete slab-on-grade not otherwise reinforced with edge bars, provide 2 #4's x 4'-0" (one top, one bottom) placed transverse diagonally and centered across the corner.
 - All concrete slabs, stairs, porches and stoops not otherwise noted shall be 6" thick and reinforced with #4 @ 12" each way slab-center. Porches shall be dowelled to adjacent foundation walls or grade beams, and sloped 1/8" per foot for drainage, unless shown or required otherwise by plan or by the architect.
 - Allow 400 lbs of reinforcing bars #4 and #5 to be used as directed in the field by the Structural Engineer for special conditions. Labor for placing same to be included.
- EPOXY ANCHORING
 - Anchor bolts cannot be post-installed without approval from the engineer of record prior to pouring concrete stem walls.
 - Drill clean holes not to exceed 1-1/2 times the diameter of the bar or anchor being installed. Prior to epoxying, the holes shall be cleaned of lint and debris.
 - The bar or anchor shall be drilled to such depth as required to withstand 2-1/2 times the yield capacity of the anchor or reinforcing steel.
 - The epoxy product shall be waterproof and be able to maintain bond within the range of 10 degrees F below zero up to 120 degrees F above zero.
- STRUCTURAL STEEL
 - Design, fabrication and erection of steel shall be according to the AISC, "Manual of Steel Construction", 14th Edition, 2011 (F1554-36 with 36 ksi yield, hot dip galvanized, all steel 16" min, which includes a 2" minimum projection above top-of-concrete, and threaded-end nut tack welded to prevent turning).
 - Reference Beaten drawings for anchor bolt size and locations.
- CONSTRUCTION ADMINISTRATION
 - The Contractor shall submit shop drawings for (+) concrete mix design, and (+) placement drawings for reinforcing steel (including bar lists, bar & quantities) to be reviewed and approved by the structural engineer prior to construction and fabrication.
- COPYRIGHT & DISCLAIMER
 - Structural drawing marked SO (1-24x36 drawings) dated April 2024 is the copyrighted work of CEO Structural Engineers, Inc. and shall not be reproduced in any manner whatsoever without the expressed written permission of Alison Parker, I, Alison Parker, registered engineer and a representative of CEO Structural Engineers, Inc. No liability or professional responsibility is assumed as required by the professional registration laws of the State of Iowa only for the aforementioned drawings prepared under my direct supervision and control.
 - I hereby disclaim responsibility for all other drawings in the document package, they possibly being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.



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**FIRE TRAINING SIMULATOR
 DPS JOH FIRE SERVICE TRAINING
 GRANGER, IA**

FOUNDATION NOTES, PLAN & DETAILS

DATE	REVISIONS	BY
4/5/2024	REUSE WIND EXPOSURE	AMP

DRAWN BY: AMP
 DESIGNED BY: AMP
 CHECKED BY: WMG
 DATE: 3/8/2024
 PROJECT #: WH02.24

SO

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GENERAL NOTES - ELECTRICAL

- COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN ONLY AFTER PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE WITH BUILDING STRUCTURE, ARCHITECTURE, MECHANICAL SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, EQUIPMENT ACCESS/CLEARANCE, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK OF INSTALLED EQUIPMENT RESULTING FROM INSUFFICIENT COORDINATION.
- ELECTRICAL DRAWINGS ARE ONLY A PORTION OF THE COMPLETE CONSTRUCTION DOCUMENTS. THE ELECTRICAL SCOPE OF WORK IS DEFINED BY THE COMPLETE SET OF CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO REFERENCING: ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS; EQUIPMENT PLANS FOR ROUGH-IN REQUIREMENTS.

CODE NOTES - ELECTRICAL

- PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ALL LOCAL, STATE, AND CODES.
- THE CURRENT ADOPTED EDITION OF THE ELECTRICAL CODE IS THE STANDARD FOR THE ELECTRICAL INSTALLATION. VERIFY WITH LOCAL OFFICIALS WHEN PERMITS ARE OBTAINED. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES BETWEEN THE PROJECT MANUAL OR DRAWINGS AND THE GOVERNING CODE.
- INSTALLATION SHALL FOLLOW REQUIREMENTS OF THE ADAAG – AMERICANS WITH DISABILITIES ACT.
- REFER TO PROJECT MANUAL AND PROJECT CODE REVIEW SHEET FOR LIST OF APPLICABLE CODES.

INSTALLATION NOTES - ELECTRICAL

- INCREASE CONDUCTOR SIZES ON 20A 120V-1 PHASE CIRCUITS EXCEEDING 100 FEET TO CENTER OF LOAD TO ACCOUNT FOR VOLTAGE DROP.
- LOCATE CONDUIT EXTERIOR TO THE BUILDING, WITH PUNCH-THROUGH PATHWAYS TO DEVICES AND LUMINAIRES. RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.
- LIGHT FIXTURES, SWITCHES, ETC. ARE SHOWN IN PREFERRED LOCATION. MODIFY CONDUIT, CIRCUITING, ETC. TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- PROVIDE A DEDICATED GREEN INSULATED GROUND CONDUCTOR TO ALL DEVICES. DO NOT USE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUNDING METHOD.
- BALANCE PANEL LOADS DURING INSTALLATION. CIRCUIT NUMBERING SHOWN ON PLANS MAY BE ADJUSTED TO ACCOMMODATE.
- PROVIDE TYPED PANEL DIRECTORY AT PROJECT COMPLETION FOR NEW PANELS AND EXISTING PANELS WITH CIRCUITS MODIFIED AS A RESULT OF THIS PROJECT. USE OWNER'S CURRENT ROOM NUMBERS AND EQUIPMENT NAMES.
- CONTRACTOR IS RESPONSIBLE FOR OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOFS THAT ARE REQUIRED TO COMPLETE THEIR SCOPE OF WORK. SEAL PENETRATIONS IN ACCORDANCE WITH THE RATING OF THE AFFECTED ASSEMBLY. REFER TO ARCHITECTURAL CODE PLAN FOR RATED WALLS, FLOORS, AND CEILINGS.

DEVICE INSTALLATION AND MATERIALS - ELECTRICAL

- PROVIDE NORMAL WIRING DEVICES AS WHITE UNLESS OTHERWISE NOTED.
- PROVIDE DEVICES COVER PLATES AS STAINLESS STEEL.
- INSTALL WALL MOUNTED LIGHT SWITCHES AT +48" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. EXCEPTION; INSTALL DEVICES ABOVE AN OBSTRUCTED HIGH FORWARD REACH OBSTACLE GREATER THEN 20 INCHES IN DEPTH AT +42".



GENERAL NOTE:

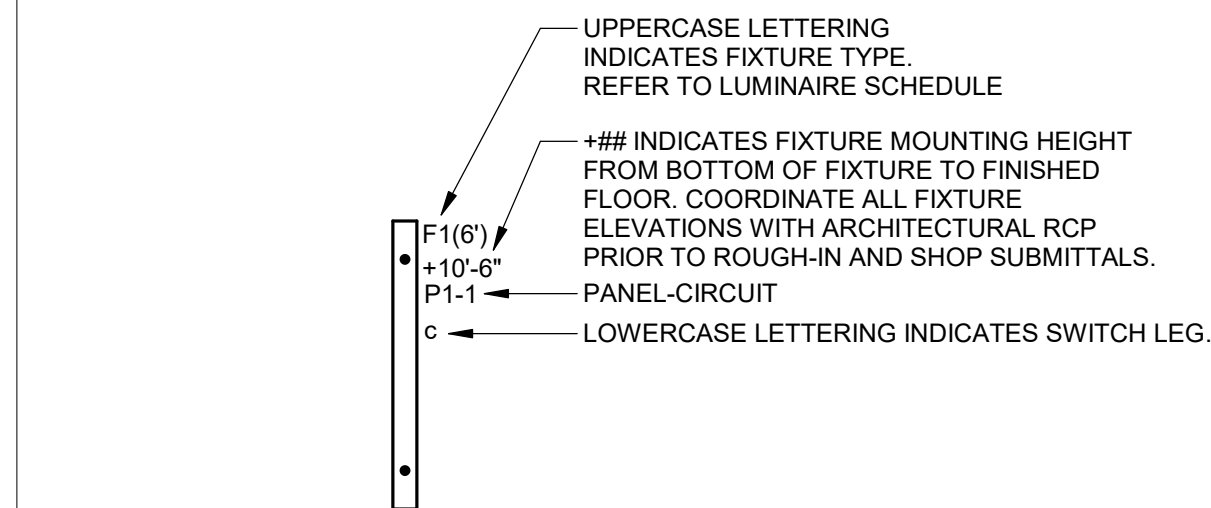
UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES IN EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.



ELECTRICAL ABBREVIATIONS

A	DEVICE MOUNTED +8" ABOVE COUNTER TOP (VERIFY LOCATION)	NIC	NOT IN CONTRACT
AFF	ABOVE FINISHED FLOOR	NM	NONMETALLIC
ATS	AUTOMATIC TRANSFER SWITCH	NTS	NOT TO SCALE
C	CEILING	OC	ON CENTER
CB	CIRCUIT BREAKER	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CT	CURRENT TRANSFORMER	OFOI	OWNER FURNISHED, OWNER INSTALLED
E	EXISTING ITEM TO REMAIN	R	EXISTING ITEM TO BE REMOVED
EC	ELECTRICAL CONTRACTOR	RR	EXISTING ITEM TO BE REMOVED AND RELOCATED
EM	EMERGENCY LIGHT FIXTURE	RN	EXISTING ITEM TO BE REMOVED AND REPLACED WITH NEW
ER	NEW LOCATION OF EXISTING ITEM	SCCR	SHORT CIRCUIT CURRENT RATING
F	ROUGH IN FOR FUTURE DEVICE	T	TAMPER PROOF DEVICE
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TCC	TEMPERATURE CONTROL CONTRACTOR
FACP	FIRE ALARM CONTROL PANEL	TV	TELEVISION
FSD	FIRE SMOKE DAMPER	TYP	TYPICAL
G	GROUND FAULT CIRCUIT INTERRUPTER	UPS	UNINTERRUPTIBLE POWER SUPPLY
GND	GROUND	V	VOLTS
KVA	KILO-VOLT-AMPERES	VA	VOLT-AMPERES
KW	KILOWATTS	WG	WIREGUARD COVER
MC	MECHANICAL CONTRACTOR	WP	WEATHERPROOF DEVICE
MCB	MAIN CIRCUIT BREAKER	WR	WEATHER RESISTANT DEVICE
MDP	MAIN DISTRIBUTION PANEL	+24"	INDICATES MOUNTING HEIGHT CENTER LINE OF DEVICE TO FINISHED FLOOR
MLO	MAIN LUGS ONLY		
N	NEW DEVICE IN EXISTING LOCATION		

LIGHTING PLANS NOTATION KEY



****NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT****

GENERAL SYMBOLS

- JUNCTION BOX, CEILING OR FLOOR MOUNTED.
- JUNCTION BOX, WALL MOUNTED, ELEVATION AS NOTED.
- KEYNOTE
- DETAIL DRAWING REFERENCE TAG, SIM-SIMILAR, TYP-TYPICAL, OPP-OPPOSITE SHEET REFERENCE
- SECTION CUT REFERENCE TAG, SIM-SIMILAR, TYP-TYPICAL, OPP-OPPOSITE SHEET REFERENCE

POWER SYMBOLS

- DUPLEX RECEPTACLE, WALL MOUNT +18", OR AS NOTED
- DUPLEX GFCI WEATHER RESISTANT RECEPTACLE WITH WEATHER-PROOF IN-USE COVER, TAMPER-RESISTANT, WALL MOUNT +24", OR AS NOTED
- UTILITY TRANSFORMER
- UTILITY METER
- PANELBOARD - SURFACE MOUNTED
- DISTRIBUTION PANELBOARD/SWITCHBOARD - SURFACE MOUNTED AS NOTED.
- GROUND RING

LIGHTING SYMBOLS

- EXTERIOR FLOOD LIGHT FIXTURE, REFER TO LIGHT FIXTURE SCHEDULE
- PADLOCKED-SECURED, SINGLE POLE SWITCH WALL MOUNT +48", OR AS NOTED, LOWERCASE LETTER INDICATES SWITCH LEG
- WALL MOUNTED EXTERIOR RATED PHOTOCELL



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Key Plan

Revision Description Date

OPN Project No.
23820000

Sheet Issue Date
BID SET 04/05/2024

Sheet Name
ELECTRICAL GENERAL NOTES & SYMBOLS

Sheet Number

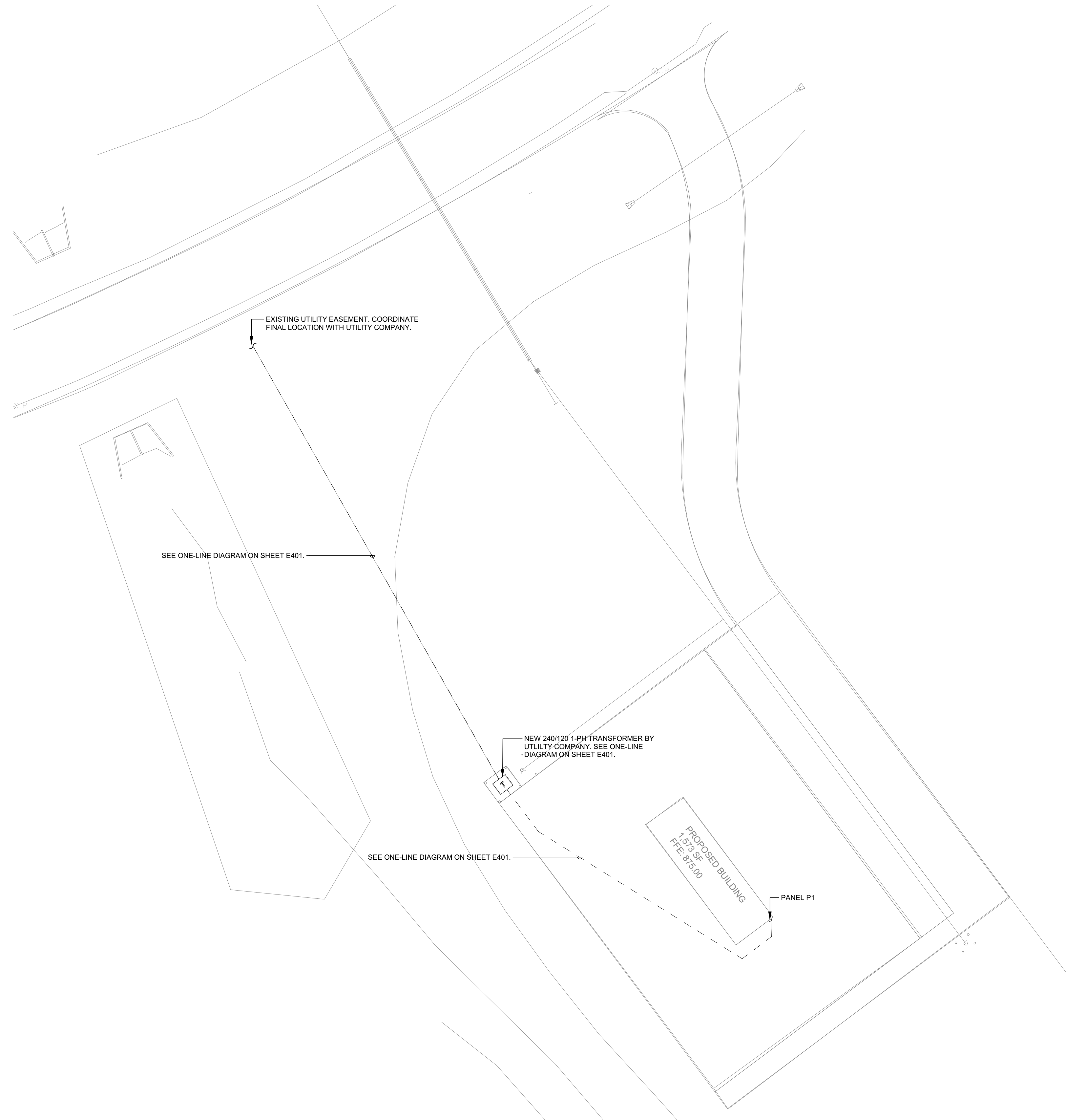
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SITE NOTES - ELECTRICAL

1. UTILITIES SHOWN ON ELECTRICAL SITE PLAN ARE SCHEMATIC ONLY. VERIFY ALL SITE CONDITIONS AND DIMENSIONS ON SITE PRIOR TO SUBMITTING BID AND ORDERING EQUIPMENT.
2. REPAIR ALL AFFECTED SURFACES AND RESTORE TO EXISTING CONDITIONS AT COMPLETION OF PROJECT.
3. WARNING - CALL BEFORE YOU DIG: LAW REQUIRES ANYONE DOING EXCAVATION, FENCING, PLANTING OR DRILLING TO CALL 48 HOURS IN ADVANCE. HAND DIG WITHIN 18 INCHES OF ANY LOCATE MARK OR FLAG. ONE-CALL 811.



1 OVERALL ELECTRICAL SITE PLAN
1" = 30'-0"

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21



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Owner

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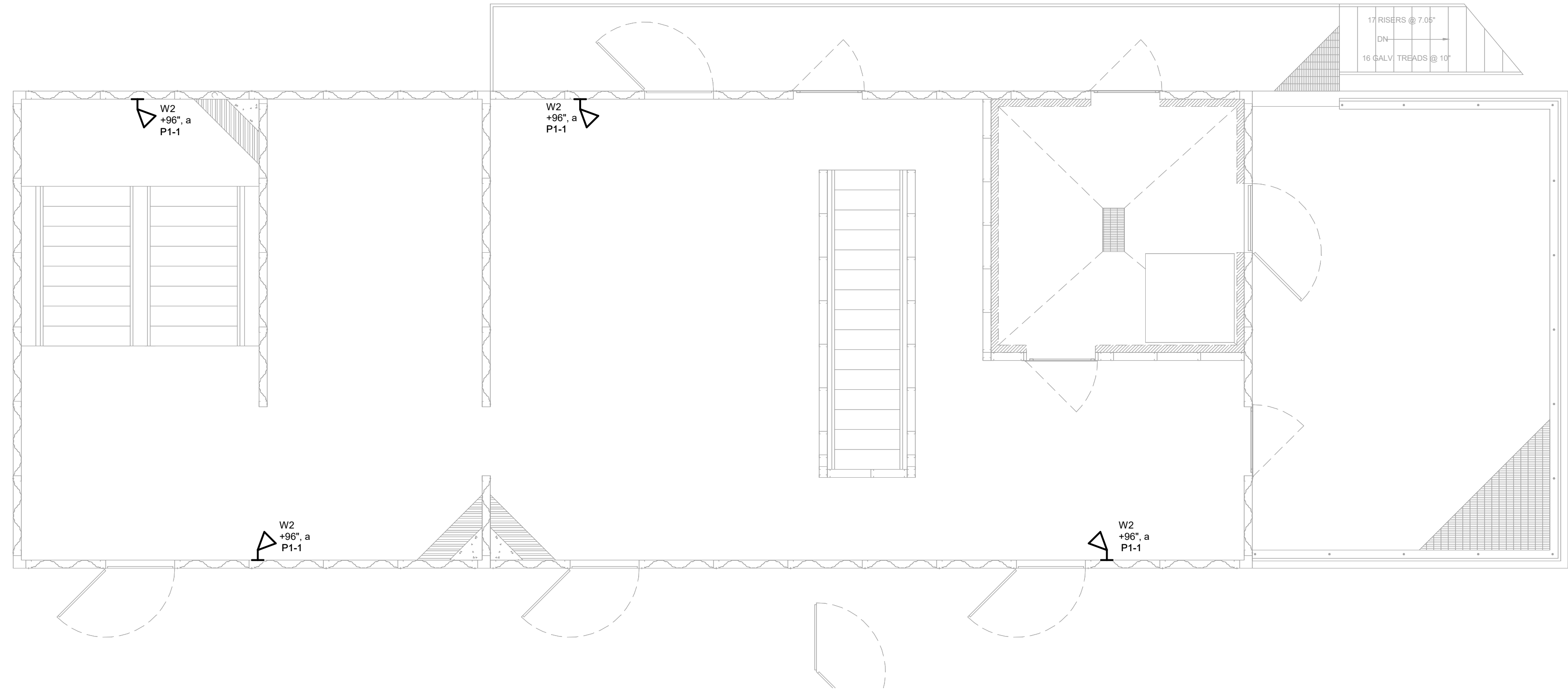
Sheet Name

ELECTRICAL SITE PLAN

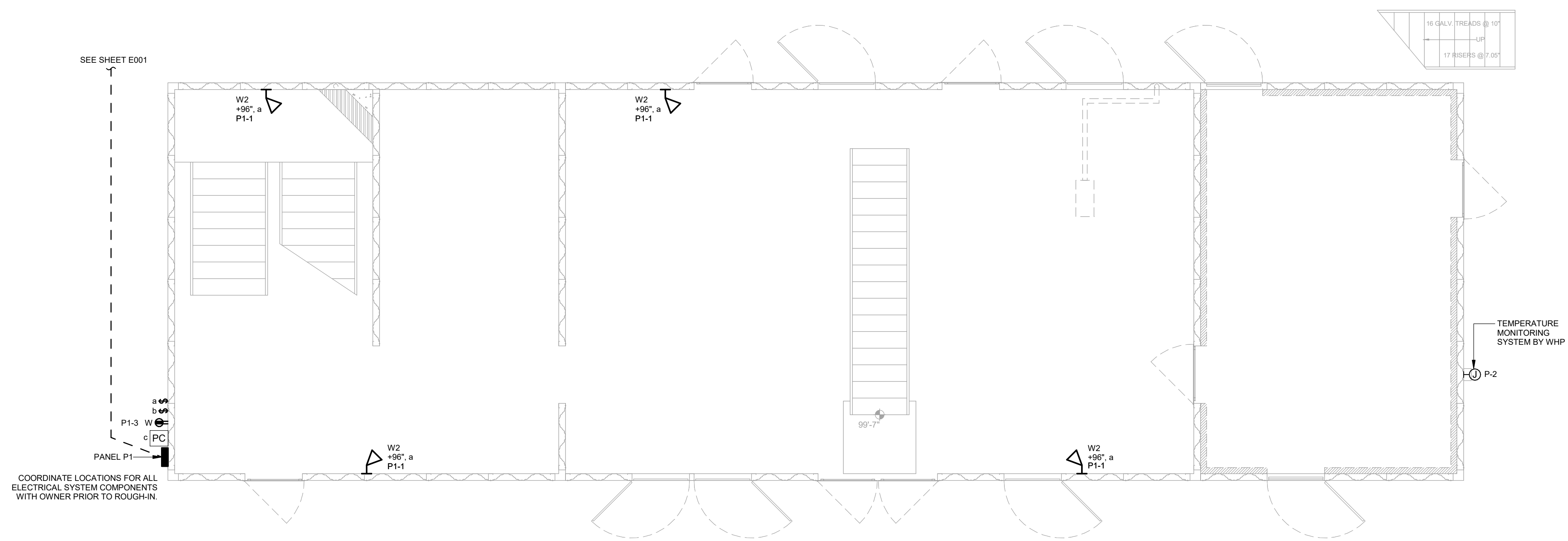
Sheet Number

E001

1 2ND FLOOR POWER AND LIGHTING PLAN
1/4" = 1'-0"



2 1ST FLOOR POWER AND LIGHTING PLAN
1/4" = 1'-0"



POWER GENERAL NOTES

- A. COORDINATE LOCATION/INSTALLATION OF ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, ETC. REFER TO ALL GENERAL MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- B. PROVIDE PENETRATIONS REQUIRED FOR ROUTING RACEWAYS THROUGH THE BUILDING. COORDINATE FIRE RATED WALL PENETRATIONS AND PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN RATING.
- C. LOCATE CONDUIT EXTERIOR TO THE BUILDING, WITH PUNCH-THROUGH PATHWAYS TO DEVICES AND LUMINAIRES, RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.

LIGHTING CONTROL SEQUENCE

- 1. EXTERIOR FLIGHT GUIDE LIGHT TO BE AUTOMATICALLY ACTIVATED AND DEACTIVATED BY PHOTOCELL CONTROL.
- 2. EXTERIOR FLOOD LIGHTING TO BE AUTOMATICALLY ACTIVATED AND DEACTIVATED BY PHOTOCELL CONTROL WITH PADLOCK-SECURED OVERRIDE SWITCH ADJACENT TO PANEL P1.
- 3. INTERIOR GENERAL LIGHTING TO BE MANUALLY ACTIVATED BY PADLOCK-SECURED OVERRIDE SWITCH NEAR PANEL P1.



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Key Plan

Revision	Description	Date

OPN Project No.
23820000

Sheet Issue Date
BID SET 04/05/2024

Sheet Name
ELECTRICAL PLANS

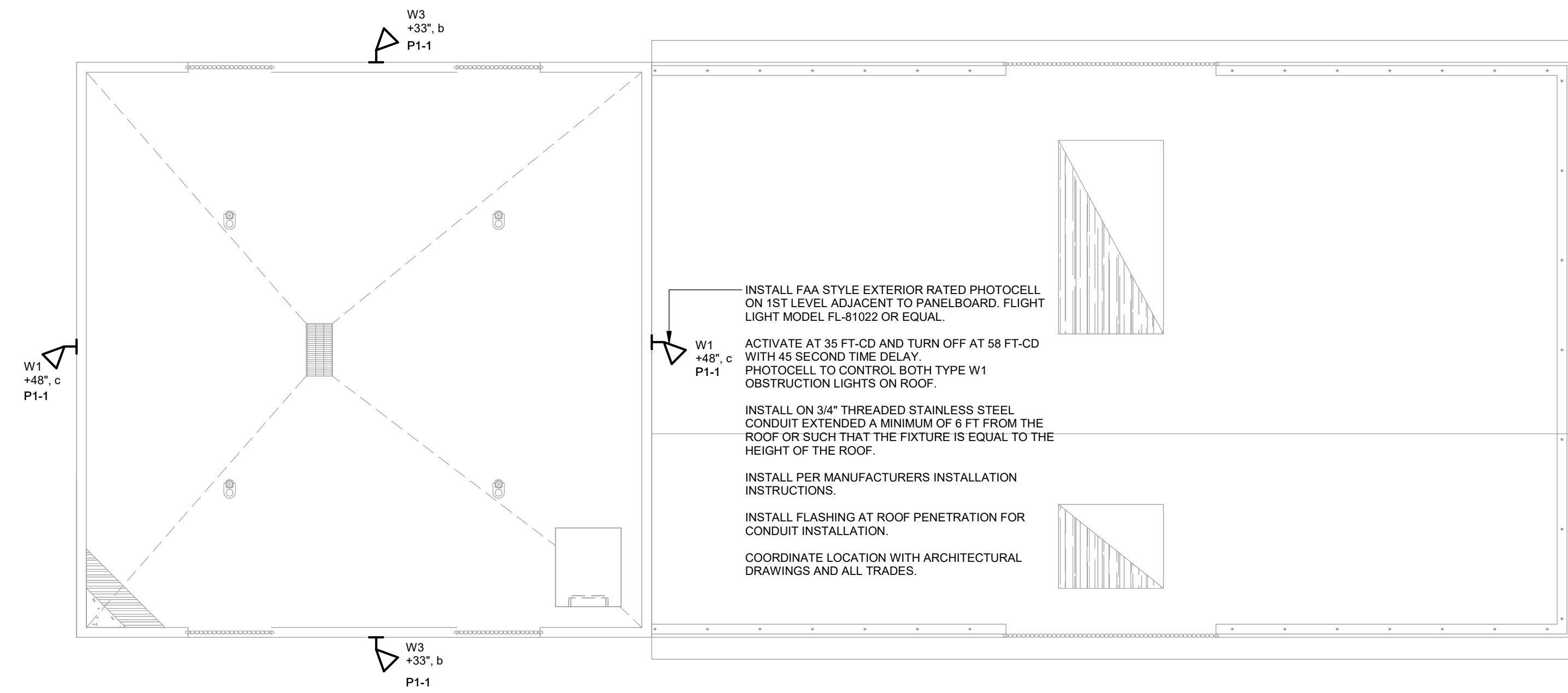
Sheet Number
E101

POWER GENERAL NOTES

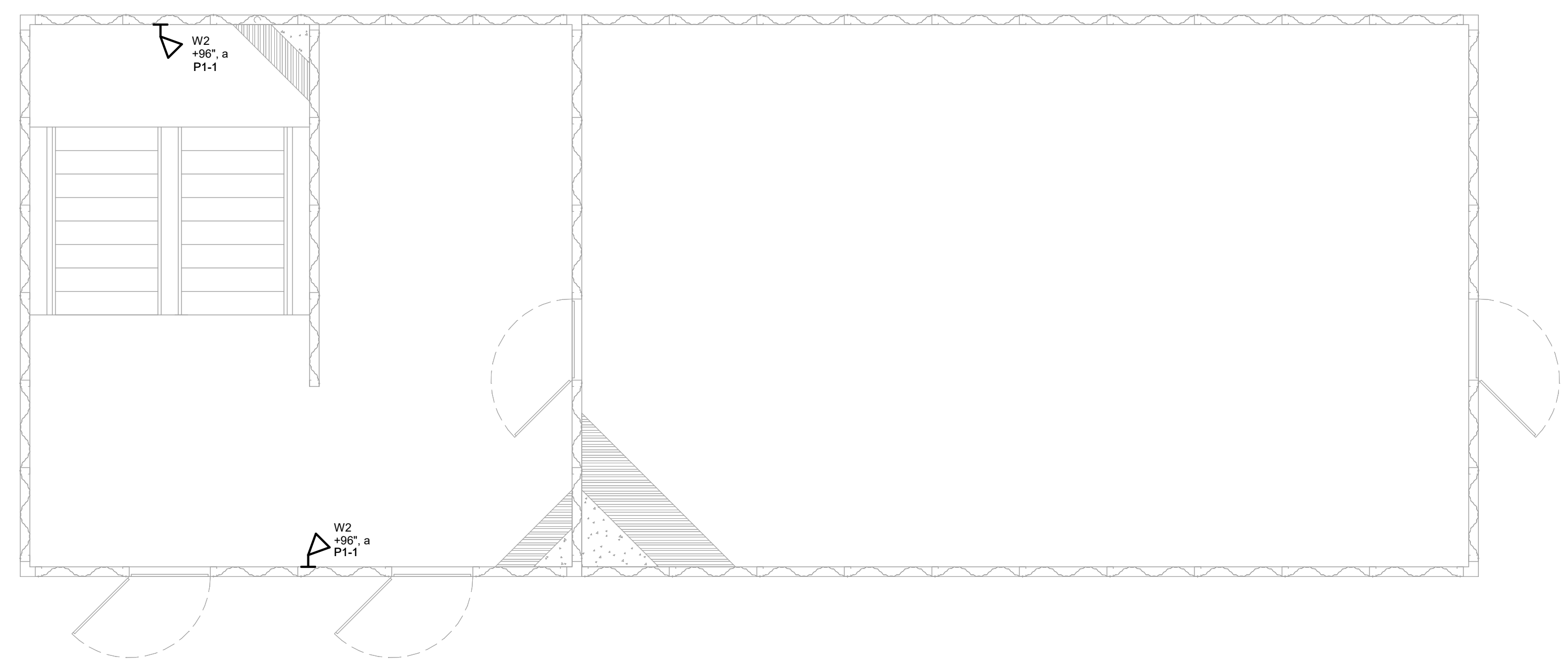
- A. COORDINATE LOCATION/INSTALLATION OF ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- B. PROVIDE PENETRATIONS REQUIRED FOR ROUTING RACEWAYS THROUGH THE BUILDING. COORDINATE FIRE RATED WALL PENETRATIONS AND PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN RATING.
- C. LOCATE CONDUIT EXTERIOR TO THE BUILDING, WITH PUNCH-THROUGH PATHWAYS TO DEVICES AND LUMINAIRES. RACEWAYS AND BOXES ARE SHOWN DIAGMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.

LIGHTING CONTROL SEQUENCE

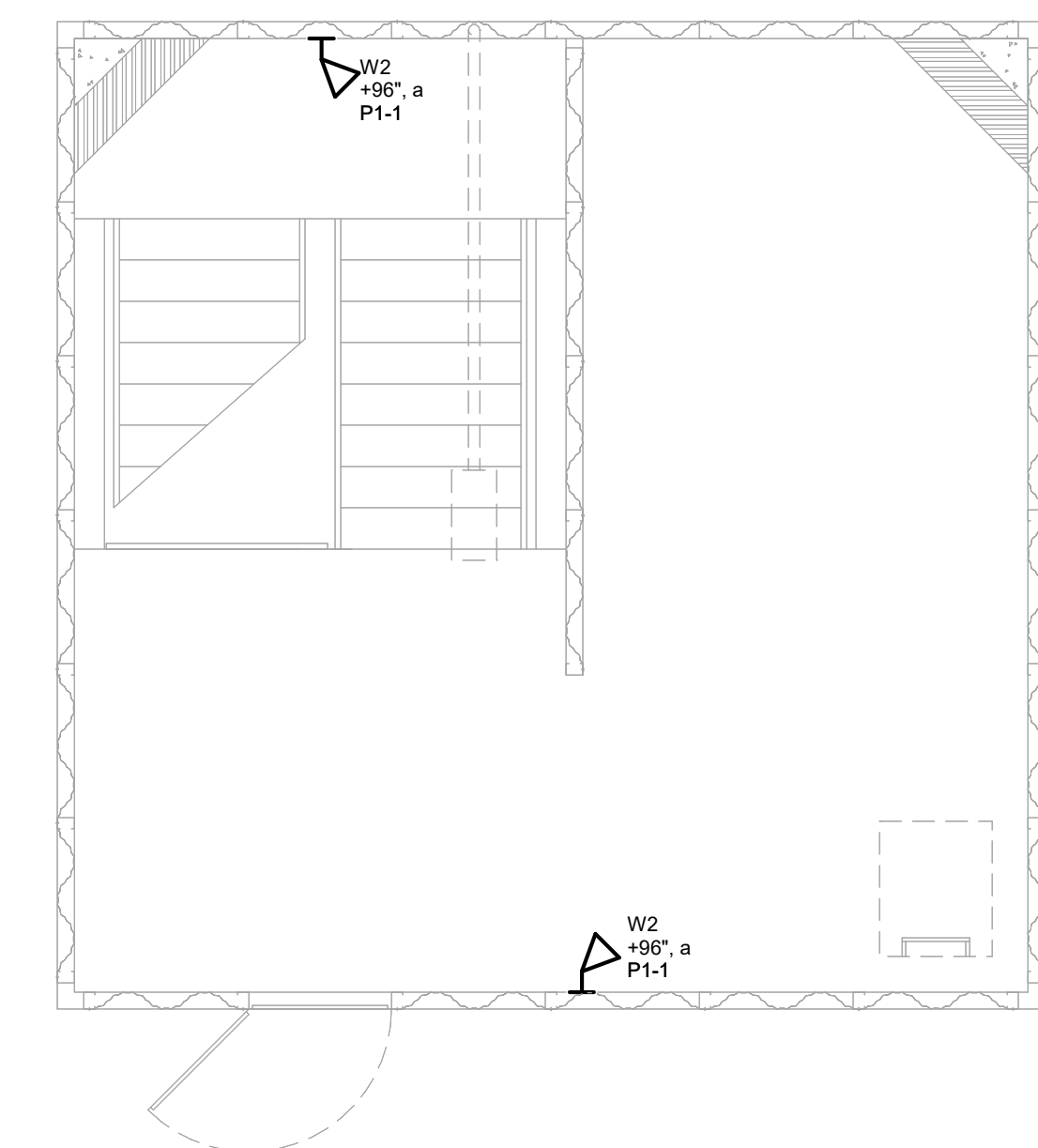
- 1. EXTERIOR FLIGHT GUIDE LIGHT TO BE AUTOMATICALLY ACTIVATED AND DEACTIVATED BY PHOTOCELL CONTROL.
- 2. EXTERIOR FLOOD LIGHTING TO BE AUTOMATICALLY ACTIVATED AND DEACTIVATED BY PHOTOCELL CONTROL WITH PADLOCK-SECURED OVERRIDE SWITCH ADJACENT TO PANEL P1.
- 3. INTERIOR GENERAL LIGHTING TO BE MANUALLY ACTIVATED BY PADLOCK-SECURED OVERRIDE SWITCH NEAR PANEL P1.



1 ROOF POWER AND LIGHTING PLAN
1/4" = 1'-0"



2 3RD FLOOR POWER AND LIGHTING PLAN
1/4" = 1'-0"



3 4TH FLOOR POWER AND LIGHTING PLAN
1/4" = 1'-0"

Key Plan

Revision Description Date

OPN Project No.
23820000

Sheet Issue Date
BID SET 04/05/2024

Sheet Name
ELECTRICAL PLANS

Sheet Number
E102

PRINTED: 4/7/2024 10:20:32 PM

BRANCH PANEL: P1

LOCATION: VOLTAGE: 120/240 SINGLE φ
 SUPPLY FROM: PHASES: 1
 MOUNTING: SURFACE WIRES: 3
 ENCLASURE: TYPE 1

SCCR RATING: 10,000 A
 MAINS TYPE: MCB
 MAINS RATING: 100 A
 MCB RATING: 100 A

NOTES:

CIRCUIT DESCRIPTION	P	AMP	CKT NO	A	B	CKT NO	AMP	P	CIRCUIT DESCRIPTION	
INTERIOR AND EXTERIOR LIGHTING	1	20 A	1	328	100	2	20 A	--	TEMPERATURE MONITORING SYSTEM	
RCPT	1	20 A	3		180	0	4	20 A	--	SPARE
SPARE	1	--	20 A	5	0	0	6	20 A	--	SPARE
SPARE	1	--	20 A	7		0	8	20 A	--	SPARE
SPARE	1	--	20 A	9	0	0	10	20 A	--	SPARE
SPARE	1	--	20 A	11		0	12	20 A	--	SPARE
				428 VA	180 VA					
				4 A	2 A					

LEGEND:
 "G" INDICATES GFCI TYPE BREAKER
 "F" INDICATES RED LOCK-ON HASP

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED...	PANEL TOTALS
LIGHTING	328 VA	125.00%	410 VA	
RECEPTACLE	180 VA	100.00%	180 VA	TOTAL CONN. LOAD: 508 VA
Spare	100 VA	100.00%	100 VA	TOTAL EST. DEMAND: 590 VA
				TOTAL CONN.: 2 A
				TOTAL EST. DEMAND: 2 A

NOTES:

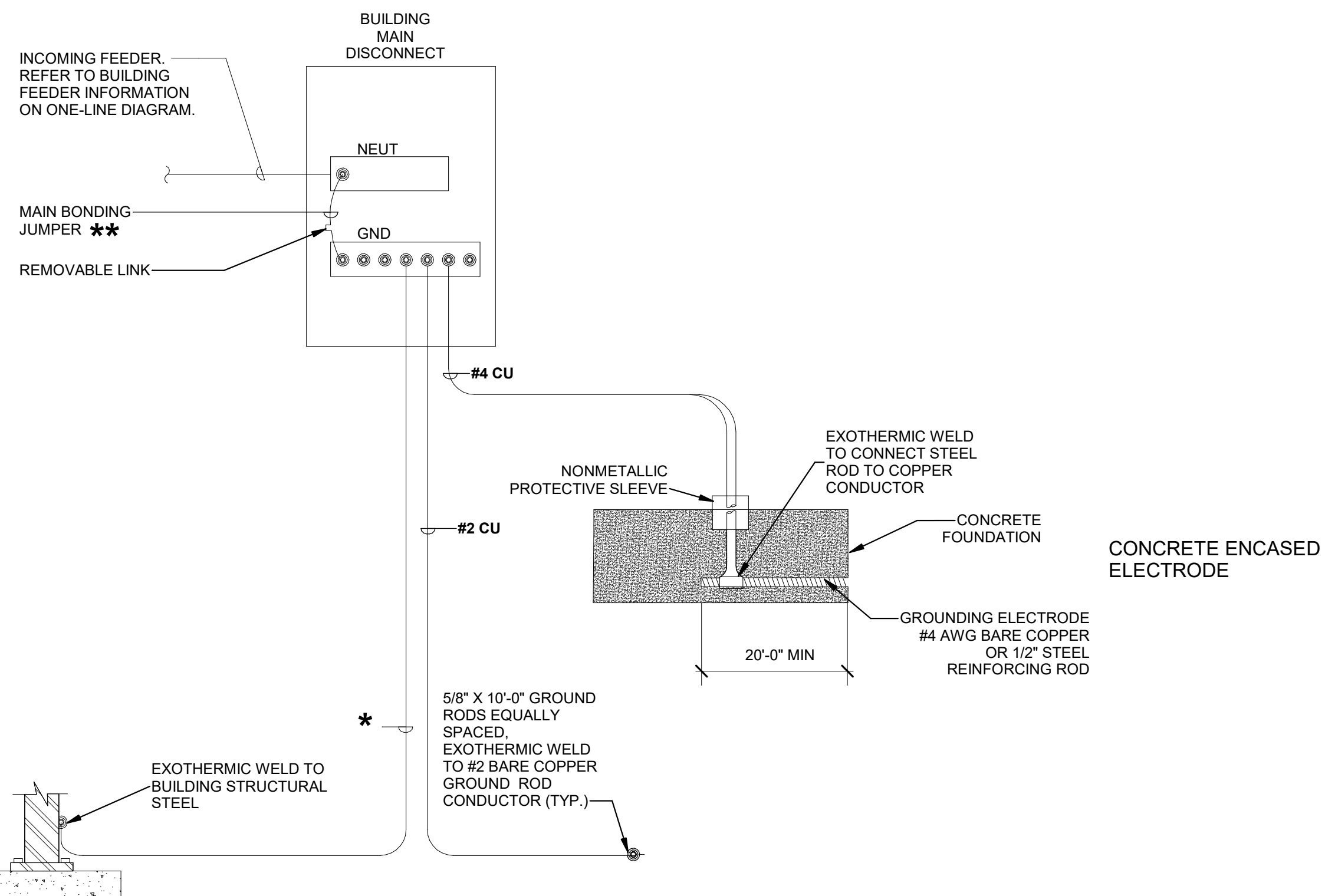
LIGHTING FIXTURE SCHEDULE

NOTES:

- ALL FIXTURES SHALL BE U.L. OR SIMILARLY LISTED.
- INCLUDE A MINIMUM 5 YEAR WARRANTY FOR LIGHTING FIXTURES, WHERE NOT OTHERWISE SPECIFIED.
- REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS, DETAILS, AND CONFIGURATIONS OF ALL LUMINAIRES. IF ARCHITECTURAL DRAWINGS DO NOT CLARIFY EXACT MOUNTING LOCATION OR DETAIL, ISSUE AN RFI FOR ARCHITECT TO SPECIFICALLY CLARIFY PRIOR TO FIXTURE ROUGH-IN.
- VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH CEILING MATERIAL, ADJACENT CONSTRUCTION, AND ADJACENT FINISHES PRIOR TO SHOP DRAWINGS SUBMITTAL NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.
- CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL AND SUPPORT THE LUMINAIRES.
- AIM AND TARGET ADJUSTABLE INTERIOR AND EXTERIOR LIGHT FIXTURES UNDER THE OBSERVATION AND IN COMPLIANCE WITH RECOMMENDATIONS OF THE ARCHITECT. INCLUDE LABOR AND MATERIAL COSTS MADE NECESSARY BY THIS REQUIREMENT.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FILLING OUT ALL UTILITY REBATE FORMS FOR OWNER.

DESIGNED BY: DLB

TYPE	MANUFACTURER	MODEL	DESCRIPTION	FINISH	DRIVER TYPE	SOURCE-CCT	VOLTAGE	LOAD-VA	APPROVED EQUALS
W1	POINT LIGHTING	POL-21006-1F-R-34B-S 2,3-P	WALL MOUNTED FLIGHT GUIDE LIGHT, ENCLOSED AND GASKETED LENS, IP65 RATED	YELLOW	NON-DIMMING	RED LED	120 V	4 VA	FLASH TECHNOLOGY, FLIGHT LIGHT, OR HUGHEY & PHILIPS.
W2	LEDRAYS LIGHTING	LR-HCF	WALL OR CEILING MOUNTED HARSH ENVIRONMENT JELLY JAR, ENCLOSED AND GASKETED LENS, NEMA 4X RATED, IK 10 RATED, C1D1 EXPLOSION RATED	SILVER	NON-DIMMING	4000K LED	120 V	20 VA	REDSKY LIGHTING, LDPI INDUSTRIAL, OR AS APPROVED BY ENGINEER
W3	LEDRAYS LIGHTING	LR-HLX-IL-VL	WALL MOUNTED HARSH ENVIRONMENT FLOOD LIGHT, ENCLOSED AND GASKETED LENS, NEMA 4X RATED, IK 10 RATED, C1D1 EXPLOSION RATED	SILVER	NON-DIMMING	4000K LED	120 V	40 VA	REDSKY LIGHTING, LDPI INDUSTRIAL, OR AS APPROVED BY ENGINEER



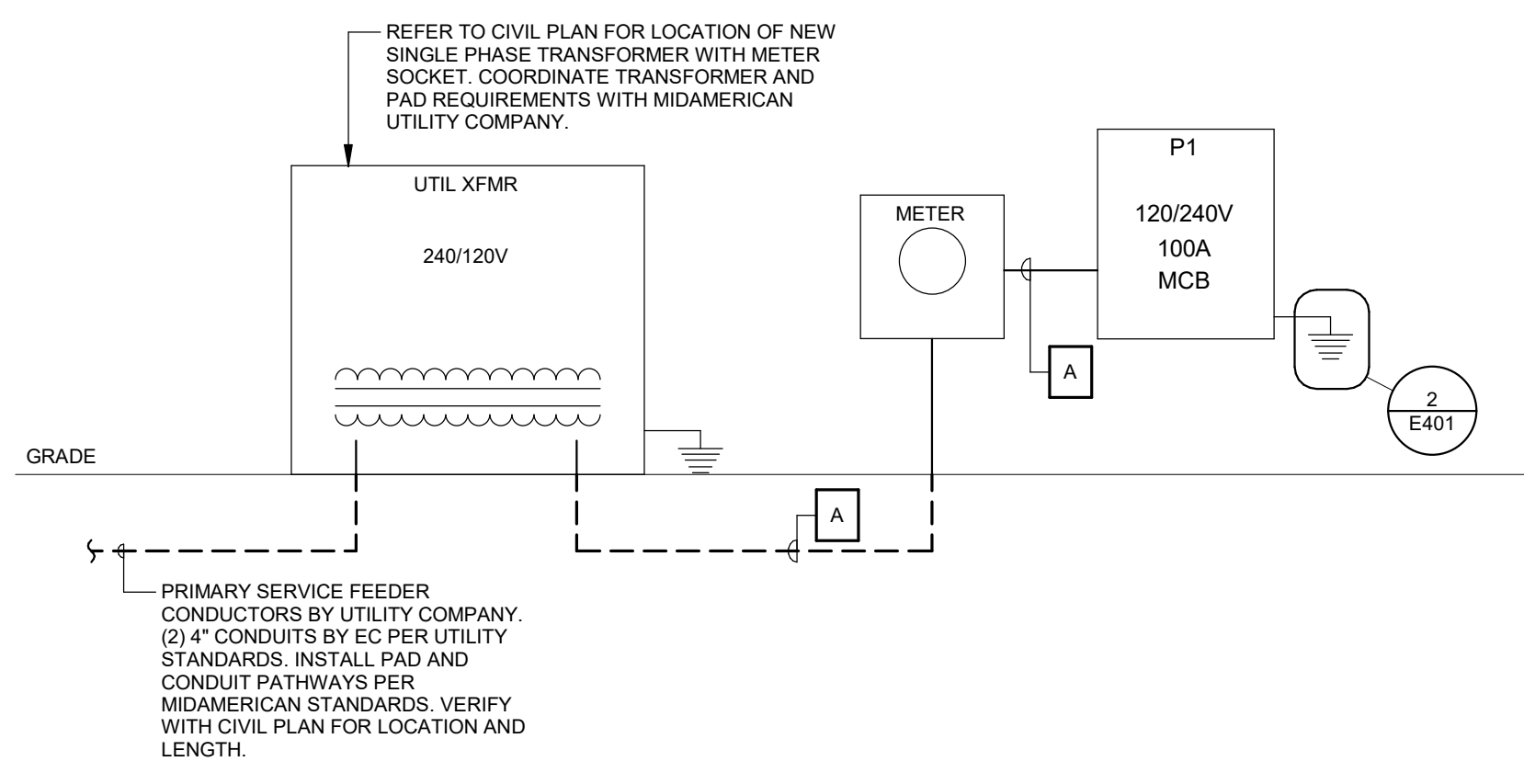
RISER DIAGRAM GENERAL NOTES

- DIAGRAM INDICATES OVERALL LAYOUT OF ELECTRICAL DISTRIBUTION SYSTEM. REFER TO FLOOR PLANS FOR EQUIPMENT LOCATIONS.
- USE COPPER CONDUCTORS UNLESS OTHERWISE INDICATED.
- MATCH NEUTRAL CONDUCTOR SIZE TO THE PHASE CONDUCTORS UNLESS OTHERWISE NOTED.
- ALL WIRING SHALL BE IN RACEWAY AS NOTED. REFER TO SPECIFICATIONS FOR CONDUIT APPLICATION REQUIREMENTS.
- INSTALL UTILITY TRANSFORMER PAD, METERING EQUIPMENT, AND SERVICE ENTRANCE FEEDERS IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.

FEEDER SCHEDULE

NOTE: ALL CONDUCTORS THHN COPPER UNLESS OTHERWISE NOTED.

TAG	PHASE	GROUND	CONDUIT
A	1-SET (3) #3	-	(1) 1 1/4"



* SIZE GROUNDING ELECTRODE CONDUCTOR AND BONDING PER NEC 250.66 AND TABLE BELOW. ALL CONDUCTORS TO BE COPPER. TABLE BASED ON NEC 2020. TABLE 250.66 GROUNDING ELECTRODE CONDUCTOR FOR ALTERNATING-CURRENT SYSTEMS

SIZE OF LARGEST UNGROUNDING CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS (AWG/KCMIL)	SIZE OF GROUNDING ELECTRODE CONDUCTOR (AWG/KCMIL)
COPPER	COPPER
#2 OR SMALLER	#8
#1 OR #1/0	#6
#2/0 OR #3/0	#4
OVER #3/0 THROUGH 350	#2
OVER 350 THROUGH 600	#1/0
OVER 600 THROUGH 1100	#2/0
OVER 1100	#3/0

** SIZE BONDING JUMPER PER NEC 250.102. USE TABLE ABOVE FOR ALL CONDUCTORS BETWEEN #2 AND 1100. ALL INCOMING CONDUCTORS OVER 1100 CU OR 1750 AL SHALL BE SIZED PER THE TABLE 250.102(C). SERVICE EQUIPMENT SHALL BE SUPPLIED WITH BONDING JUMPER FROM THE MANUFACTURER.

NOTES

- ALL AVAILABLE GROUNDING ELECTRODES WHICH ARE PRESENT AT THE BUILDING OR STRUCTURE SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM (GES). ADDITIONAL CODE-REQUIRED GROUNDING CONNECTIONS NOT SHOWN SHALL BE PROVIDED. CONNECTIONS WHICH ARE ENCASED, UNDERGROUND, OR INACCESSIBLE SHALL BE EXOTHERMIC WELD.
- ALL BONDING JUMPERS CONNECTING GROUNDING ELECTRODES TO THE GES SHALL BE SIZED EQUAL TO THE GROUNDING ELECTRODE CONDUCTOR (GEC) IN ACCORDANCE WITH NEC 250.53(C). OTHER BONDING JUMPERS SHALL BE SIZED AS OTHERWISE DESCRIBED IN NEC ARTICLE 250. CONDUCTORS SHALL BE BARE COPPER UNLESS OTHERWISE NOTED.
- REFER TO SPECIFICATIONS FOR ADDITIONAL PRODUCT AND MATERIAL REQUIREMENTS. GROUNDING AND BONDING METHODS AND MATERIALS SHALL COMPLY WITH NEC ARTICLE 250.
- REFER TO TECHNOLOGY DETAILS FOR ADDITIONAL REQUIREMENTS RELATED TO TELECOM GROUNDING.



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Sheet Name
ELECTRICAL ONE-LINE AND SCHEDULES

Sheet Number

E401