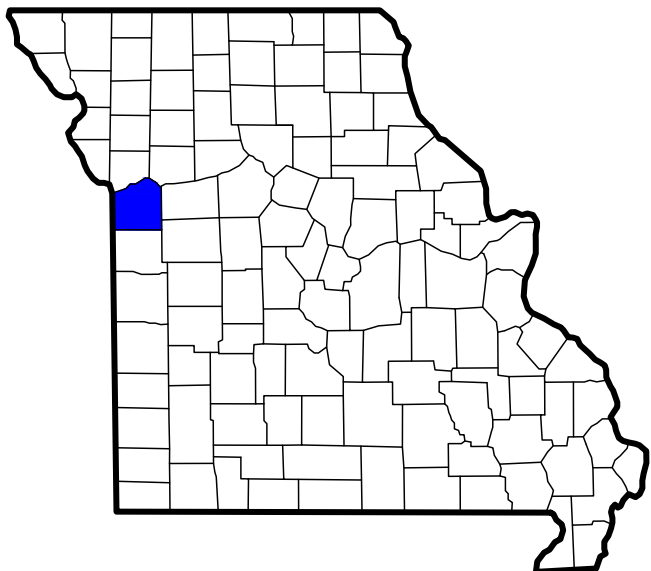




# Discovery Animal Hospital

## 1901 NE Trails Edge Boulevard

### Lee's Summit, Jackson County, Missouri



JACKSON COUNTY, MO

#### ZONING & CODE REVIEW

**PROJECT SCOPE:**  
NEW CONSTRUCTION OF AN APPROXIMATELY 6,442 SF SINGLE STORY BUILDING OVER SLAB-ON-GRADE FOUNDATION LOCATED ACCOMMODATING A B-BUSINESS USE AND LOCATED WITHIN THE CITY LIMITS OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI AND SUBJECT TO ALL STATE AND LOCAL DESIGN REQUIREMENTS WITHIN.

**BUILDING CODES IN EFFECT:**  
IBC/2018, IFC/2018, IRC/2018, NEC/2017, ICC/ANSI A117.1-2009  
AS AMENDED AND ADOPTED BY THE CITY OF LEE'S SUMMIT, MISSOURI

**ADMINISTRATION** (CHAPTER 1)  
• DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE  
JAY D. BERENDZEN, ARCHITECT  
PORTER, BERENDZEN & ASSOCIATES, P.C.  
305 EAST BROADWAY, SUITE A  
ASHLAND, MISSOURI 65010  
573.657.2022 PHONE

**USE & OCCUPANCY CLASSIFICATION** (CHAPTER 3)  
• B - BUSINESS

**GENERAL BUILDING HEIGHTS & AREAS** (CHAPTER 5)  
• (USE GROUP B, CONSTRUCTION TYPE VB - SPRINKLERED)

**HEIGHTS**  
• TABULAR ALLOWABLE BUILDING HEIGHT  
• B-BUSINESS USE: 3 STORES, 60 FEET  
• ACTUAL BUILDING HEIGHT: 1 STORES, 23 FEET

**AREA**  
• TABULAR ALLOWABLE BUILDING AREA PER FLOOR:  
• B BUSINESS USE: 36,000 SF  
• FRONTAGE INCREASE = 75% = 9,000(90.75) = 6,750 SF  
• TOTAL ALLOWABLE AREA = 42,750 SF  
• ACTUAL BUILDING AREAS: 6,442 SF NET

**TYPES OF CONSTRUCTION** (CHAPTER 6)  
• TYPE VB - SPRINKLERED

**OWNER:**  
DPLS P1 LLC

3622 Endeavor Avenue, Suite 101  
Columbia, Missouri 65201  
Brian P. Maenner  
bpmaenner@intrinsicdevelopment.com

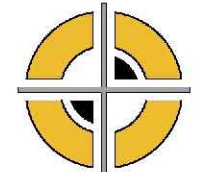
**CLIENT:**  
INTRINSIC DEVELOPMENT

3622 Endeavor Avenue, Suite 101  
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573.881.0280 phone  
intrinsicdevelopment.com  
Brian P. Maenner  
bpmaenner@intrinsicdevelopment.com

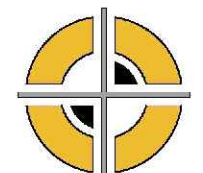
**ARCHITECT:**  
PORTER, BERENDZEN & ASSOCIATES, P.C.

 200 South Henry Clay Blvd.  
Ashland, Missouri 65010  
573.657.2022 phone  
pba-architecture.com  
Jay D. Berendzen, AIA  
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jon@pba-architecture.com


**CIVIL ENGINEERING:**  
CROCKETT ENGINEERING CONSULTANTS

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nathan@andersonengineeringinc.com  
Nolan Dixon, EIT  
NDixon@crockettengineering.com

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Jared Verslues, PE  
JVerslues@crockettengineering.com

**MECHANICAL/ELECTRICAL/PLUMBING ENGINEERING:**  
J-SQUARED ENGINEERING

 2400 Bluff Creek Drive #101  
Columbia, Missouri 65201  
573.234.4492 phone  
j-squaredeng.com  
JP Watson, PE  
jp@j-squaredeng.com  
Jeremy Patrick  
jeremy@j-squaredeng.com

#### SHEET INDEX

CVR - COVER SHEET / ARCHITECTURAL CODE REVIEW

#### CIVIL ENGINEERING DRAWINGS UNDER SEPARATE COVER

S100 - COVER / GENERAL STRUCTURAL DATA  
S200 - FOUNDATION PLAN  
S210 - FOUNDATION DETAILS  
S300 - ROOF FRAMING PLAN  
S310 - ROOF FRAMING DETAILS

A100 - FLOOR PLAN / LIFE SAFETY  
A200 - DIMENSIONAL PLAN  
A300 - REFLECTED CEILING PLAN  
A400 - ROOF PLAN  
A500 - EXTERIOR ELEVATIONS / RENDERINGS  
A501 - EXTERIOR ELEVATIONS / RENDERINGS  
A600 - BUILDING SECTIONS / DETAILS  
A601 - BUILDING SECTIONS / DETAILS  
A602 - BUILDING SECTIONS / DETAILS  
A700 - INTERIOR ELEVATIONS  
A701 - INTERIOR ELEVATIONS  
A702 - INTERIOR ELEVATIONS  
A800 - SITE DETAILS  
A900 - SCHEDULES

MEP1 - MECHANICAL ELECTRICAL PLUMBING COVER SHEET  
MEP2 - SITE UTILITY / SITE LIGHTING PLAN  
MEP3 - SITE LIGHTING PLAN  
M101 - HVAC PLAN  
M501 - HVAC DETAILS & SCHEDULES  
EP101 - POWER PLAN  
EL101 - LIGHTING PLAN  
E501 - ELECTRICAL SCHEDULES  
E601 - ELECTRICAL DETAILS  
PS101 - SANITARY SEWER PLAN  
PW101 - WATER & GAS PLAN  
P501 - PLUMBING DETAILS & SCHEDULES

#### GENERAL NOTES

IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND EACH OF HIS SUBCONTRACTORS TO REVIEW THE DRAWINGS TO ASSESS THE IMPACT OF ALL WORK AFFECTING EACH TRADE. FAILURE TO REVIEW ALL CONTRACT DOCUMENTS FOR APPLICABLE ITEMS OF WORK SHALL NOT RELIEVE THE RESPONSIBLE PARTY FROM PERFORMING ALL WORK REQUIRED.

- CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING - NOTIFY THE DESIGN TEAM & INTRINSIC DEVELOPMENT OF ALL CONFLICTS WITHIN THE WORK.
- DRAWINGS - THESE DRAWINGS SHALL NOT BE SCALED. REFER TO DIMENSIONS INDICATED, ACTUAL SIZES OF CONSTRUCTION ITEMS, OR OTHER METHODS OF LOCATING CONSTRUCTION. WHERE NO DIMENSION OR METHOD OF DETERMINING A LOCATION IS GIVEN, VERIFY CORRECT LOCATION WITH THE DESIGN TEAM & INTRINSIC DEVELOPMENT PRIOR TO INSTALLATION.
- DIMENSIONS - DIMENSIONS ON PLANS ARE FROM FACE OF CONCRETE, MASONRY, OR FRAMING UNLESS OTHERWISE NOTED. DIMENSIONS INDICATED AS "CLEAR" SHALL BE A MINIMUM DIMENSION, (FACE TO FACE) OF FINISH MATERIALS.
- COORDINATION - GENERAL CONTRACTOR SHALL COORDINATE REQUIREMENTS OF ALL TRADES TO ALLOW FOR TIMELY INCLUSION IN THE WORK SO AS NOT TO DELAY THE WORK OR THE WORK OF ANY SUBCONTRACTOR.
- EQUIPMENT - REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION. VERIFY ANY REQUIREMENTS FOR ROUGH-IN OR CONNECTION PRIOR TO CONSTRUCTION TO ASSURE CORRECT INSTALLATION, OPENINGS, ELECTRICAL, MECHANICAL, BLOCKING, ETC.
- DUCTS, PIPE, CONDUIT, ETC. - ALL VERTICAL AND HORIZONTAL DUCTS, PIPES, CONDUIT, ETC. (WHETHER SHOWN OR NOT) IN FINISHED ROOMS SHALL BE LOCATED WITHIN WALLS OR ABOVE FINISHED CEILINGS. ITEMS THAT CANNOT BE LOCATED WITHIN WALLS OR CEILINGS SHALL BE FURRED IN AND FINISHED TO MATCH ADJACENT SURFACES AND ANY REQUIRED WALL OR CEILING RATINGS. VERIFY ACCEPTABILITY WITH THE DESIGN TEAM & INTRINSIC DEVELOPMENT PRIOR TO ENCASMENT.
- FIXTURES - LAVATORIES AND SINKS SHALL BE INSTALLED A MINIMUM OF 4" FROM FINISHED SIDE WALLS. FAUCETS SHALL BE INSTALLED WITH A MINIMUM OF 5" FROM THE OUTLET TO THE FLOOD RIM OF SINKS, INCLUDING THOSE EQUIPPED WITH VACUUM BREAKERS. WATER CLOSETS SHALL BE INSTALLED A MINIMUM OF 16" FROM FINISHED SIDE WALLS TO CENTERLINE OF FIXTURES.
- BLOCKING - BLOCKING OUTSIDE THE BUILDING ENVELOPE OR SUBJECT TO MOIST OR HUMID CONDITIONS SHALL BE PRESSURE TREATED AND USE CORROSION RESISTANT FASTENERS.
- ACCESS DOORS - FURNISH AND INSTALL ACCESS DOORS IN WALLS AND NON-ACCESSIBLE TYPE CEILINGS WHERE SERVICE OR ADJUSTMENT TO MECHANICAL, FIRE PROTECTION, PLUMBING, ELECTRICAL, OR OTHER EQUIPMENT IS REQUIRED. WHERE WALL OR CEILING IS REQUIRED TO BE RATED, PROVIDE ACCESS DOORS OF FIRE RATING EQUAL TO THE ASSEMBLY IN WHICH THEY OCCUR.
- EXISTING CONDITIONS - THE EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON INFORMATION PROVIDED TO THE DESIGN TEAM & INTRINSIC DEVELOPMENT. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS ON THE JOB SITE, AND NOTIFY THE DESIGN TEAM & INTRINSIC DEVELOPMENT OF DEVIATIONS FROM THESE DRAWINGS PRIOR TO FABRICATION AND INSTALLATION OF THE WORK.
- PRECAUTIONS - IF UNFORESEEN CONDITIONS ARE DISCOVERED WHICH COULD RESULT IN DAMAGE TO THE STRUCTURE OR INJURY TO ITS OCCUPANTS, REPORT ANY SUCH CONDITION IMMEDIATELY TO THE DESIGN TEAM & INTRINSIC DEVELOPMENT. TAKE PRECAUTIONS TO PROPERLY SUPPORT THE STRUCTURE.
- HAZARDOUS MATERIALS - CONTRACTOR SHALL IMMEDIATELY REPORT THE DISCOVERY OF ANY HAZARDOUS MATERIALS TO THE DESIGN TEAM & INTRINSIC DEVELOPMENT.
- SITE USAGE - USE OF THE SITE FOR ANY CONSTRUCTION STAGING OR OTHER OPERATIONS SHALL BE COORDINATED WITH THE DESIGN TEAM & INTRINSIC DEVELOPMENT. TAKE CARE NOT TO BLOCK OR ADVERSELY AFFECT ANY PUBLIC OR ADJACENT OWNER AREAS.
- EXIT ACCESS - MAINTAIN FREE, SAFE, AND APPROVED MEANS OF EGRESS IN AND OUT OF PROJECT LOCATION IN ACCORDANCE WITH REQUIREMENTS OF APPLICABLE REGULATORY AGENCIES.

#### INTERIOR FINISHES (CHAPTER 2)

TABLE 203.13 INTERIOR WALL & CEILING FINISH REQUIREMENTS, SPRINKLERED, GROUP B)  
• EXIT ENCLOSURES & EXIT PASSAGEWAYS:  
• CLASS B - (FLAME SPREAD 26-75, SMOKE DEVELOPED 0-450)  
• CORRIDORS:  
• CLASS C - (FLAME SPREAD 76-200, SMOKE DEVELOPED 0-450)  
• ROOMS & ENCLOSED SPACES:  
• CLASS C - (FLAME SPREAD 76-200, SMOKE DEVELOPED 0-450)

#### FIRE PROTECTION SYSTEM (CHAPTER 9)

- AN AUTOMATIC FIRE SPRINKLER SYSTEM IS NOT REQUIRED, HOWEVER IS PROVIDED FOR THIS BUILDING.
- A MANUAL FIRE ALARM SYSTEM IS NOT REQUIRED FOR THIS BUILDING (907.2.2)

THE GENERAL CONTRACTOR SHALL PROVIDE & INSTALL PORTABLE FIRE EXTINGUISHER(S) WITH NO MORE THAN 75 FEET OF TRAVEL DISTANCE TO FIRE EXTINGUISHERS LOCATED AS DIRECTED BY THE FIRE MARSHAL.

A KNOX BOX IS REQUIRED AT 6'-0" ABOVE SIDEWALK IN THE LOCATION AS DIRECTED BY THE FIRE MARSHAL.

#### MEANS OF EGRESS (CHAPTER 10)

SEE LIFE SAFETY / EGRESS PLAN ON FOLLOWING SHEET A100 FOR DETAILS & INFORMATION.

#### ACCESSIBILITY (CHAPTER 11)

- ACCESSIBLE ROUTES WITHIN THE SITE SHALL BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING, ACCESSIBLE PASSENGER LOADING ZONES, AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCE SERVED (SECTION 1104.1) AT LEAST 60% OF ALL PUBLIC ENTRANCES SHALL BE MADE ACCESSIBLE.
- AT LEAST 2 PERCENT, BUT NOT LESS THAN ONE, OF EACH TYPE OF PARKING SPACE PROVIDED SHALL BE AN ACCESSIBLE SPACE.
- THIS BUILDING SHALL CONFORM TO: THE AMERICAN NATIONAL STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (ICC/ANSI A117.1-2017) AND THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT.

#### PLUMBING FIXTURES, FAUCETS, & FIXTURE FITTINGS ~ (IPC 2018)

##### MINIMUM NUMBER OF PLUMBING FACILITIES

OCCUPANT LOAD: 6,443 SF @ 1 OCCUPANT/80 SF = 43 OCCUPANTS

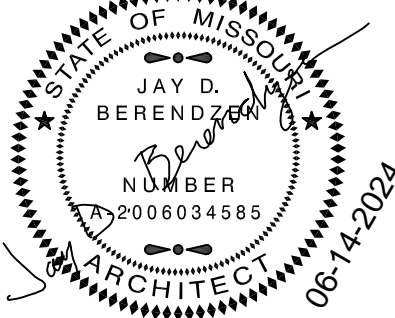
FIXTURE COUNT TO BE DESIGNED WITH A 50/50 DISTRIBUTION BETWEEN SEXES (22 MEN / 22 WOMEN)

• WATER CLOSETS: 1 WC / 25 FOR 1st 50, THEN 1 WC / 50 REMAINDER EXCEEDING 50 OCCUPANTS  
• WATER CLOSETS REQUIRED: (1) MEN'S / (1) WOMEN'S  
• WATER CLOSETS PROVIDED = (1) MEN'S / (1) WOMEN'S / (1) STAFF UNI-SEX

• LAVATORIES: 1 LAV / 40 FOR 1st 80, THEN 1 LAV / 80 REMAINDER EXCEEDING 80 OCCS  
• LAVATORIES REQUIRED: (1) MEN'S / (1) WOMEN'S  
• LAVATORIES PROVIDED = (1) MEN'S / (1) WOMEN'S / (1) STAFF UNI-SEX

• DRINKING FOUNTAINS: 1 DF / 100 OCCUPANTS  
• DRINKING FOUNTAINS REQUIRED: 1 REQUIRED  
• DRINKING FOUNTAINS PROVIDED = 1 PROVIDED

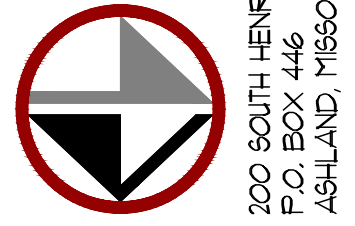
• SERVICE SINKS:  
• SERVICE SINKS REQUIRED = 1 REQUIRED  
• SERVICE SINK PROVIDED = 2 PROVIDED



EXPIRATION DATE 12-31-24  
JAY D. BERENDZEN, ARCHITECT  
MISSOURI ARC-000588  
EXP. 12/31/25

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#### PROJECT

Discovery Park  
**Discovery Animal Hospital**  
1901 NE Trails Edge Boulevard  
Lee's Summit, Jackson County, Missouri

#### ISSUE

ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024

PROJECT NO.  
FB42417

SHEET TITLE

COVER SHEET

SHEET NUMBER

CVR



## Lee's Summit, Jackson County, Missouri

COVER / GENERAL STRUCTURAL DATA  
FOUNDATION PLAN  
FOUNDATION DETAILS  
ROOF FRAMING PLAN  
ROOF FRAMING DETAILS

## SHEET:

S100



NOTE:  
ALL DIMENSIONS ARE TO EDGE OF SLAB OR  
¢ COLUMNS UNLESS NOTED OTHERWISE.

FOUNDATION NOTES

- ① REENTRANT CORNER BARS, REFER TO TYPICAL  
CRACK CONTROL REINFORCING DETAIL ON S210.
- ② TRENCH DRAIN, REFER TO MEP FOR EXACT  
LOCATION & SPECIFICATIONS.

REVISIONS:

No.	Date
PERMIT SET	06/14/2024

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SEALED AND DATED ELECTRONICALLY.



STRUCTURAL ENGINEER:  
**CROCKETT**  
ENGINEERING CONSULTANTS  
1000 W. MISSOURI DRIVE  
COLUMBIA, MISSOURI 65203  
(314) 447-0292  
www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Professional Seal No. 2500519101

CLIENT:  
**INTRINSIC  
DEVELOPMENT**  
3822 ENDEAVOR AVE. STE. 101  
COLUMBIA, MISSOURI

**Discovery Animal Hospital**  
1901 NE TRAIL EDGE BOULEVARD  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

FOUNDATION  
PLAN

DESIGNED: JWV

DRAWN: TGC

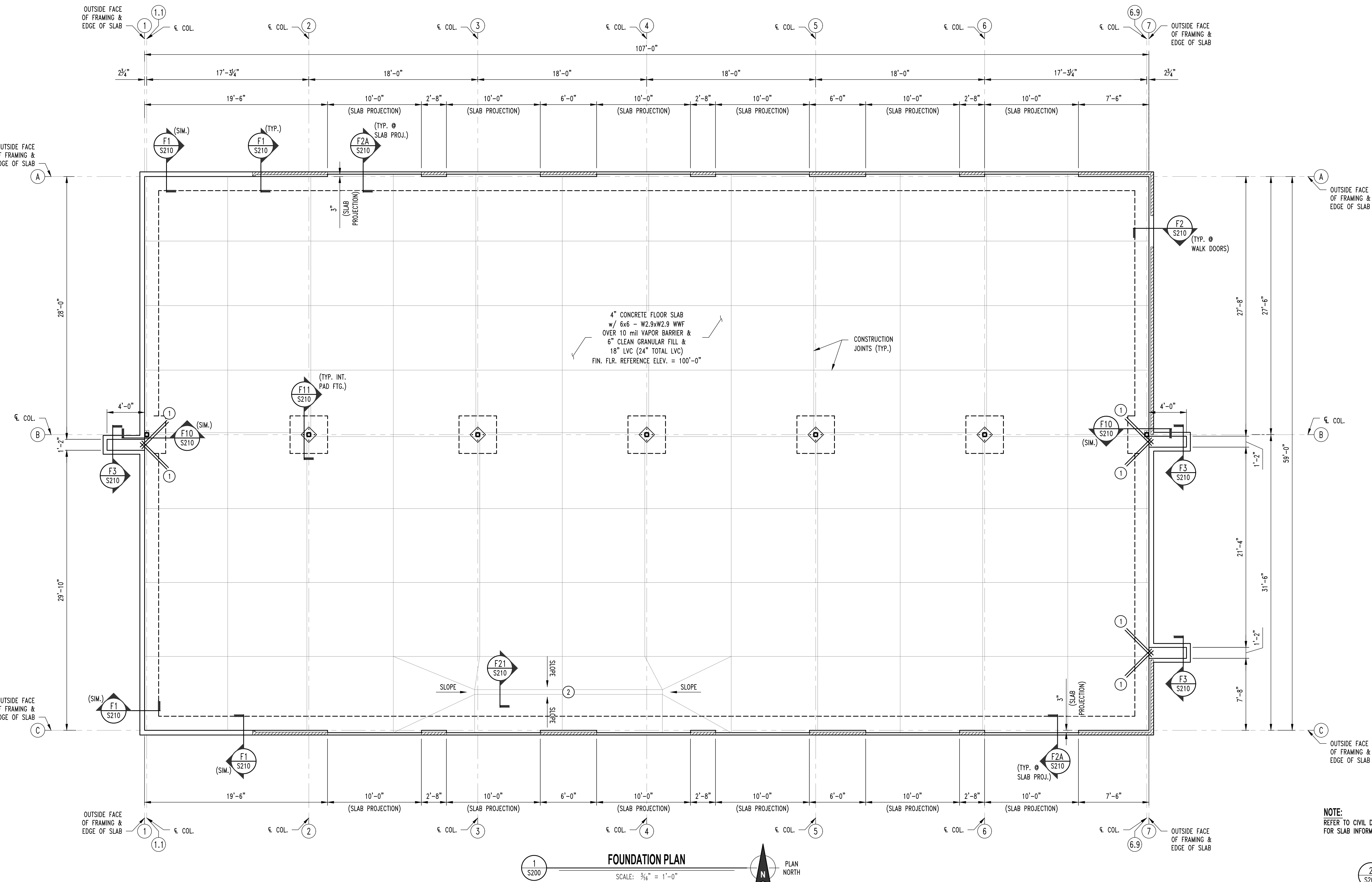
PROJECT NO.: 230286

SHEET:

S200

NOTE:

VERIFY SAW CUTS w/ OWNER PRIOR TO POURING SLAB



NOTE:  
REFER TO CIVIL DRAWING  
FOR SLAB INFORMATION.

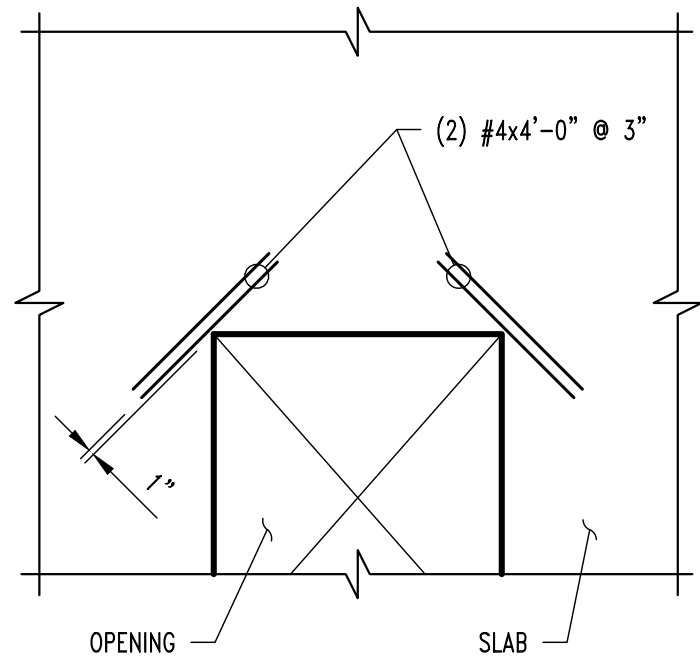
2  
S200

DUMPSTER ENCLOSURE FOUNDATION PLAN

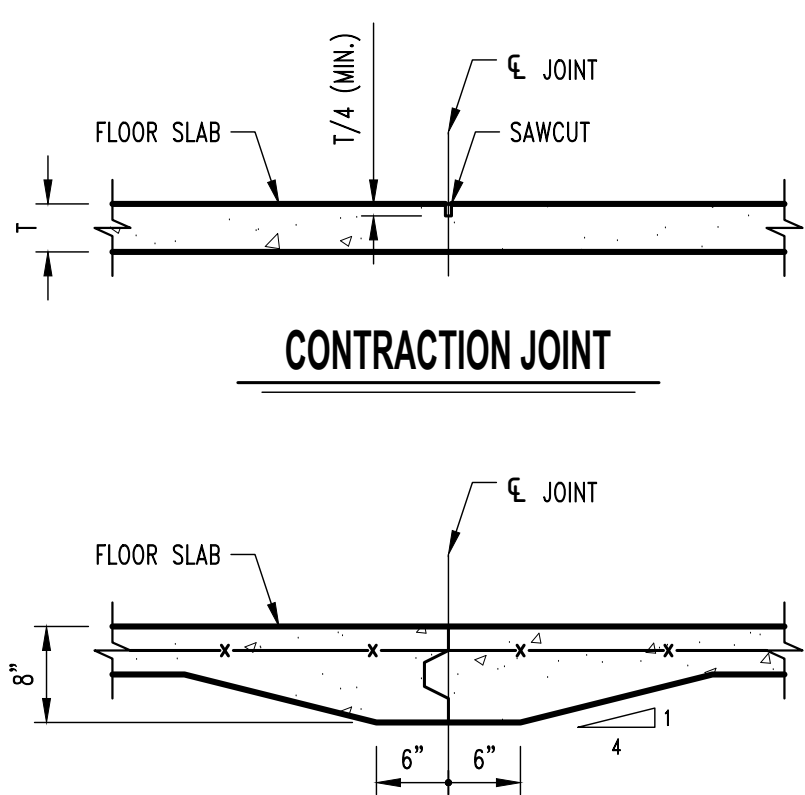
SCALE: 3/16" = 1'-0"



PLAN  
NORTH

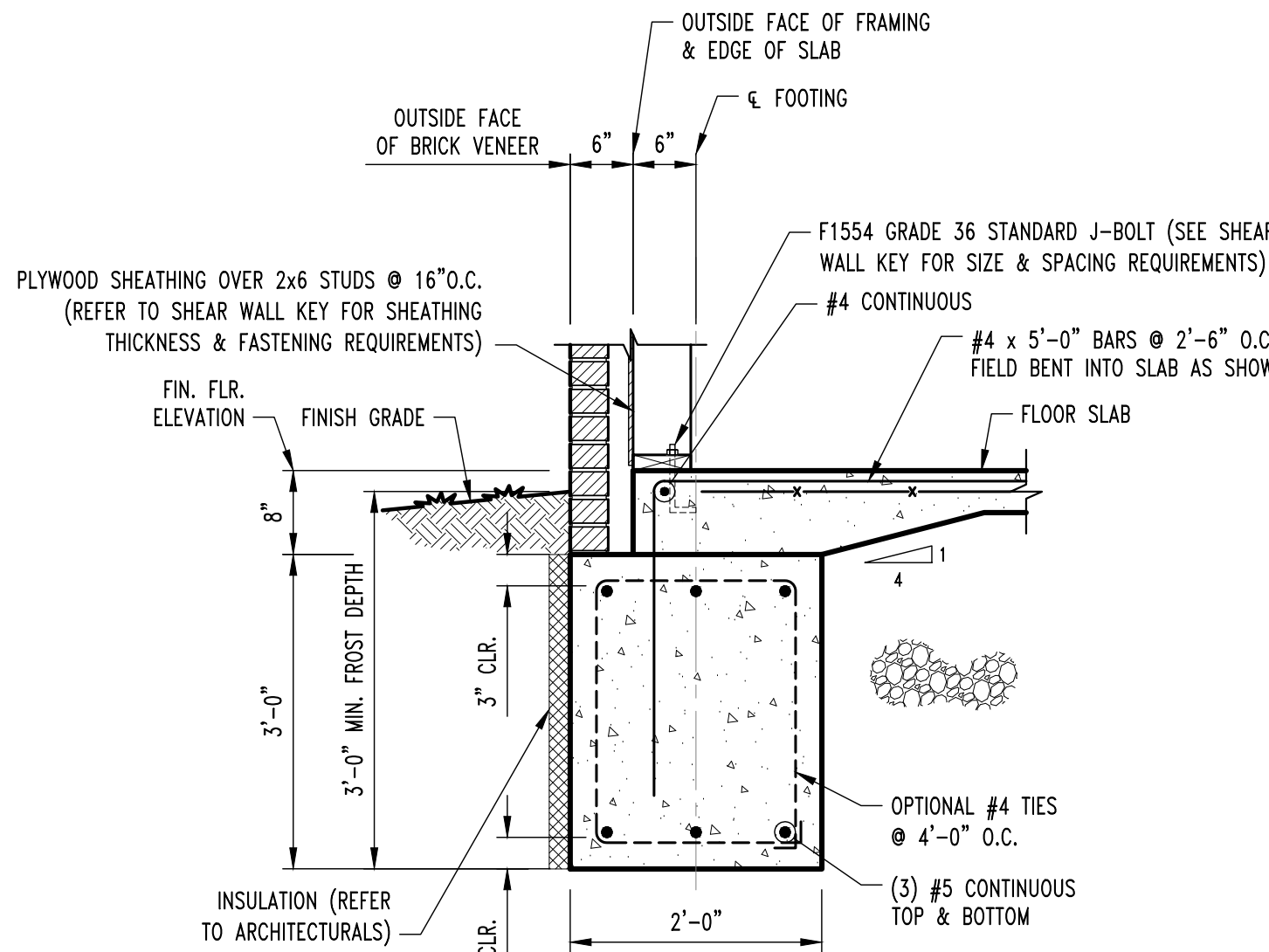


CRACK CONTROL REINFORCING

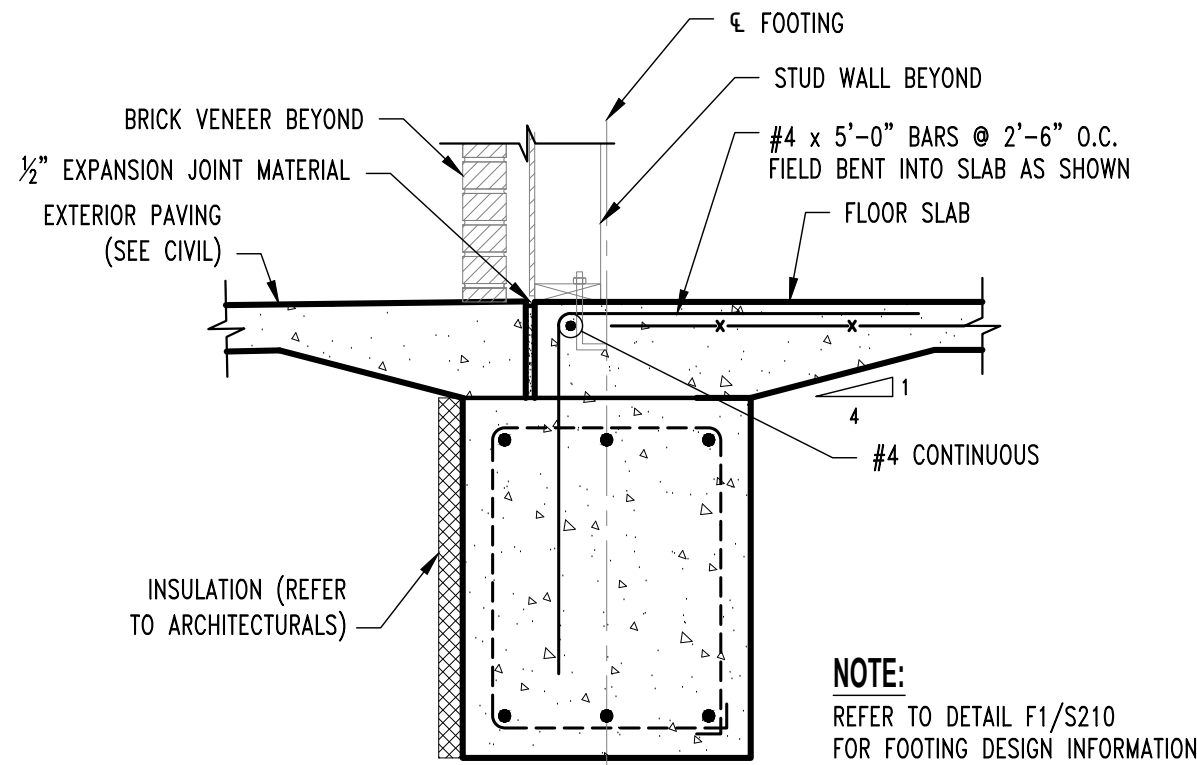


CONTRACTION JOINT

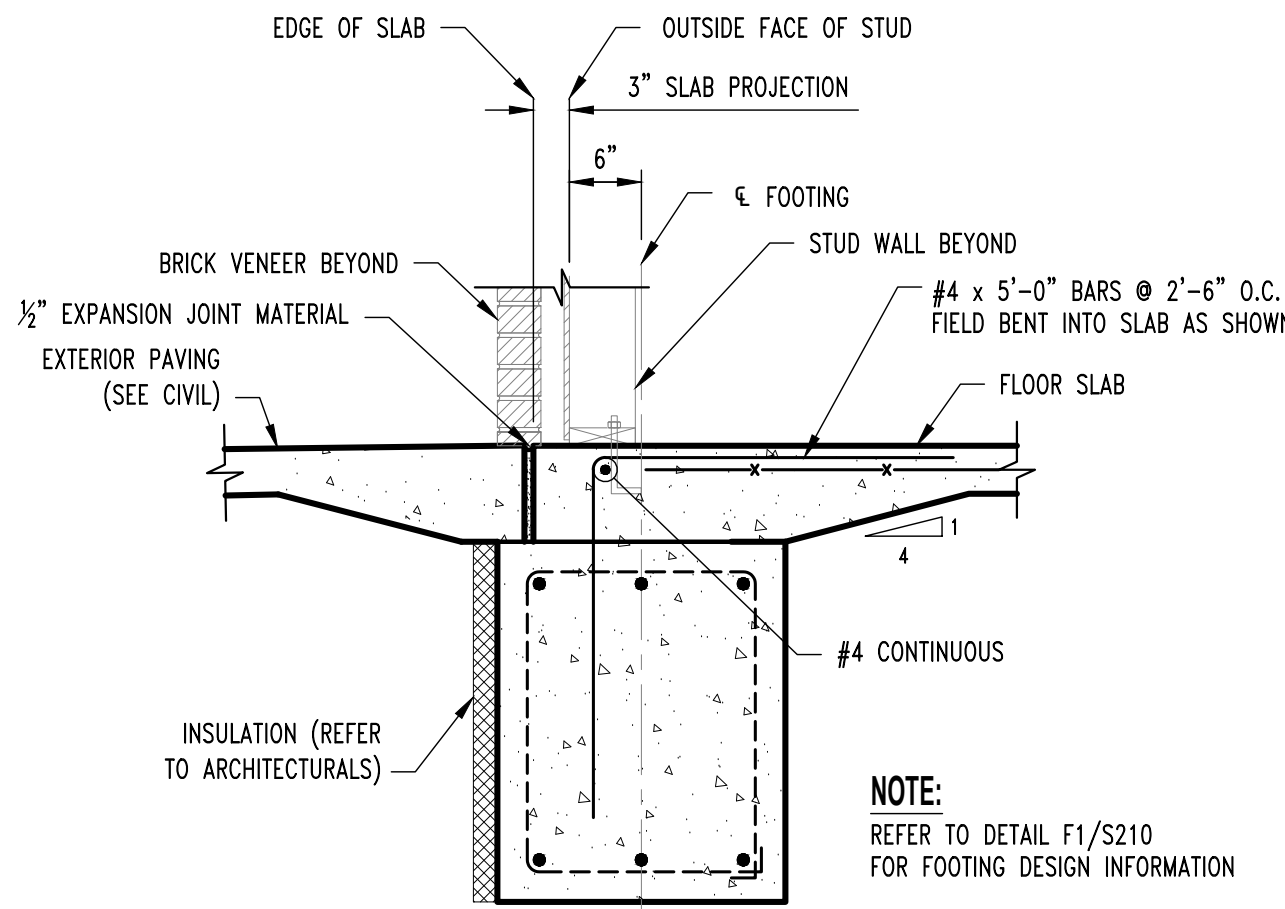
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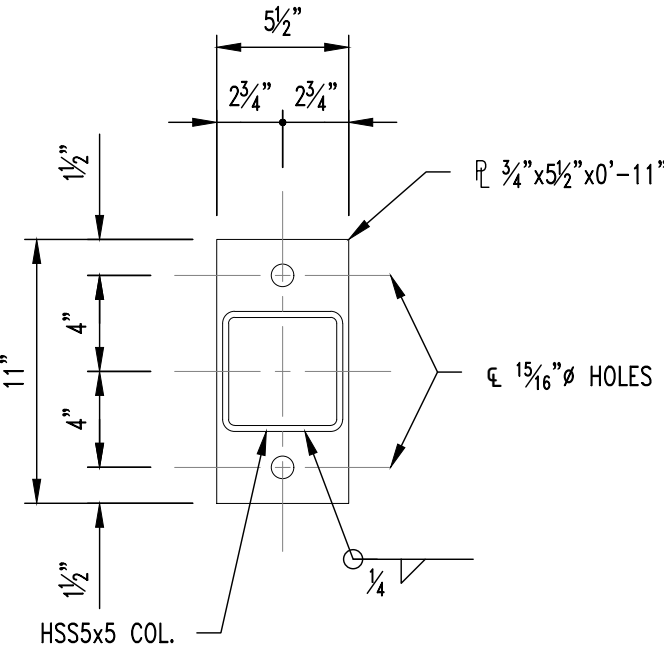
CONTINUOUS FOOTING SECTION



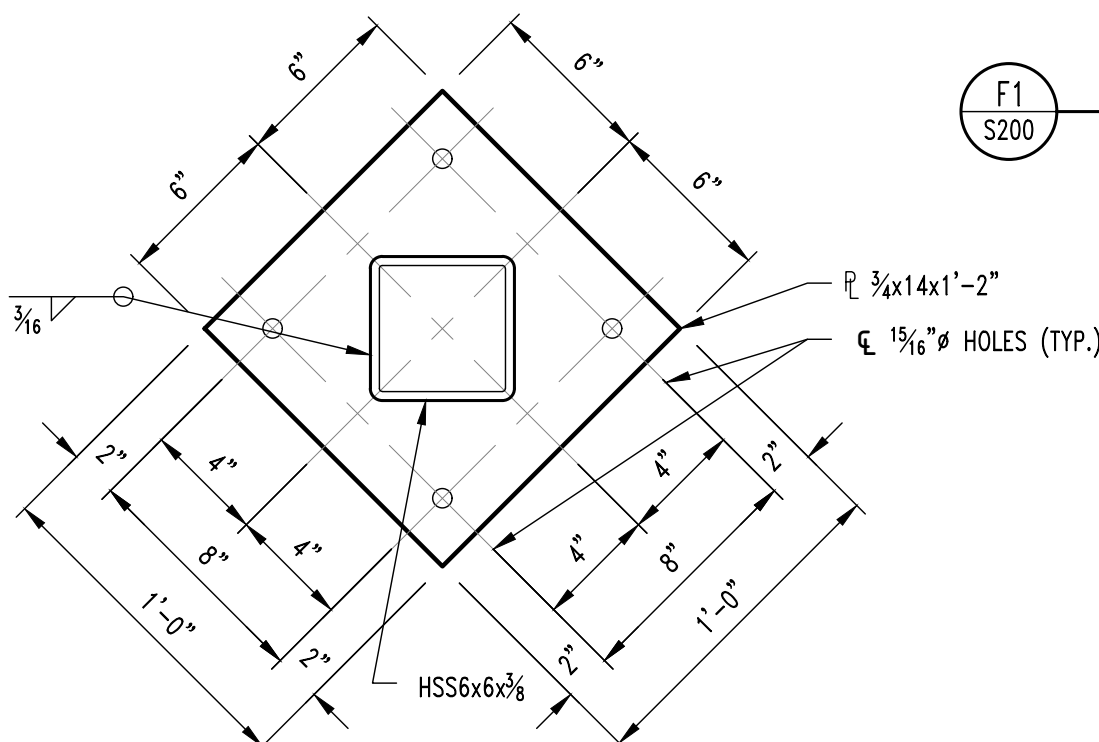
THRESHOLD FOOTING SECTION



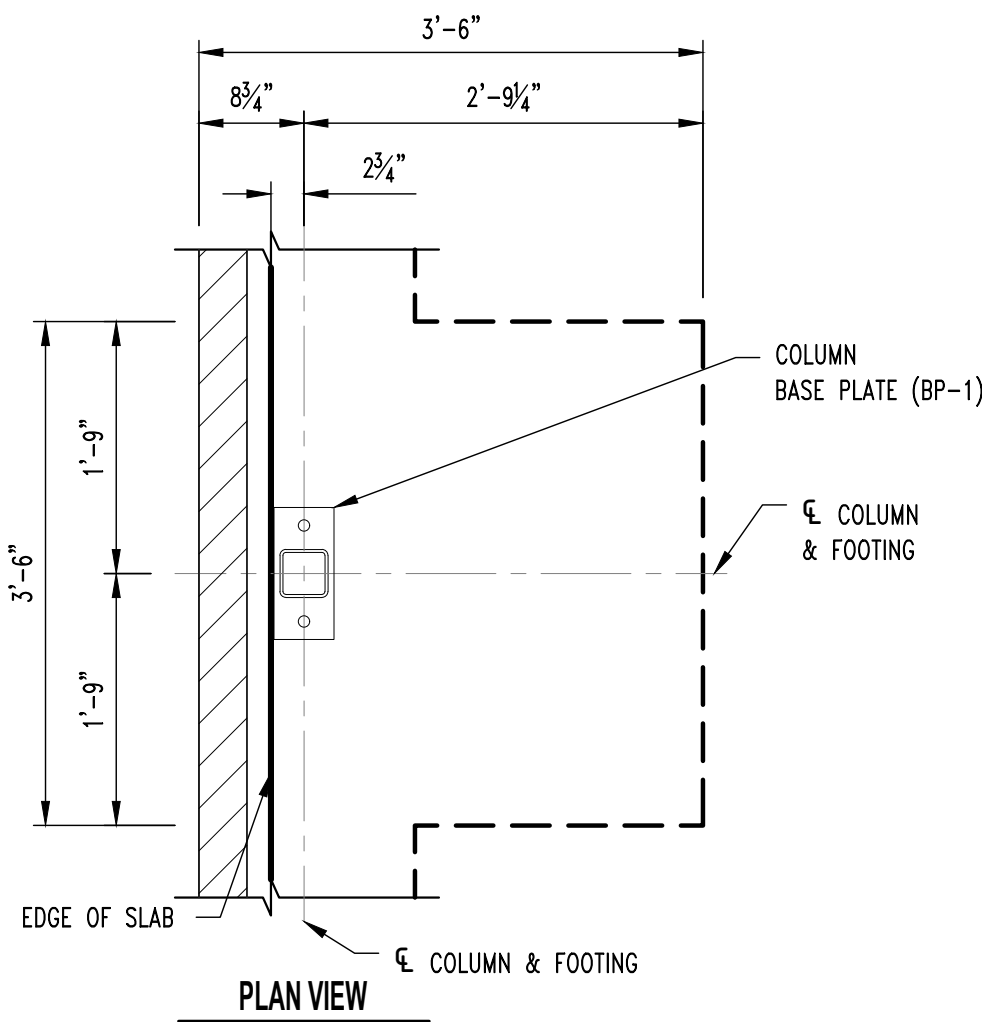
SLAB PROJECTION FOOTING SECTION



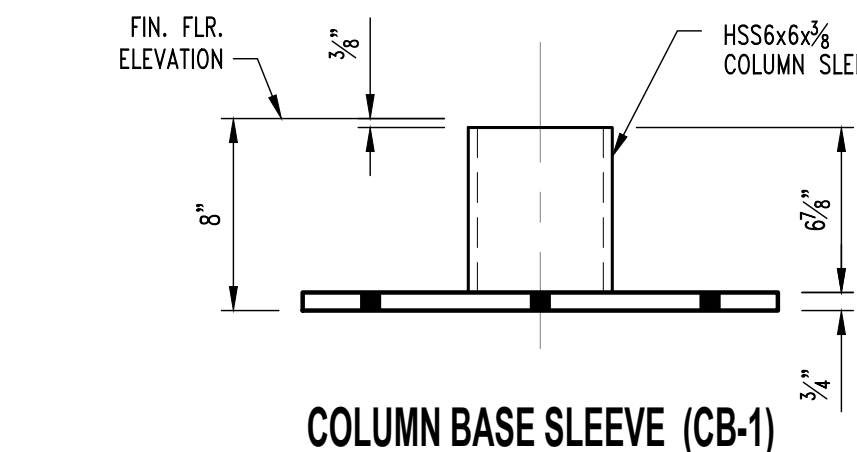
BASE PLATE (BP-1)



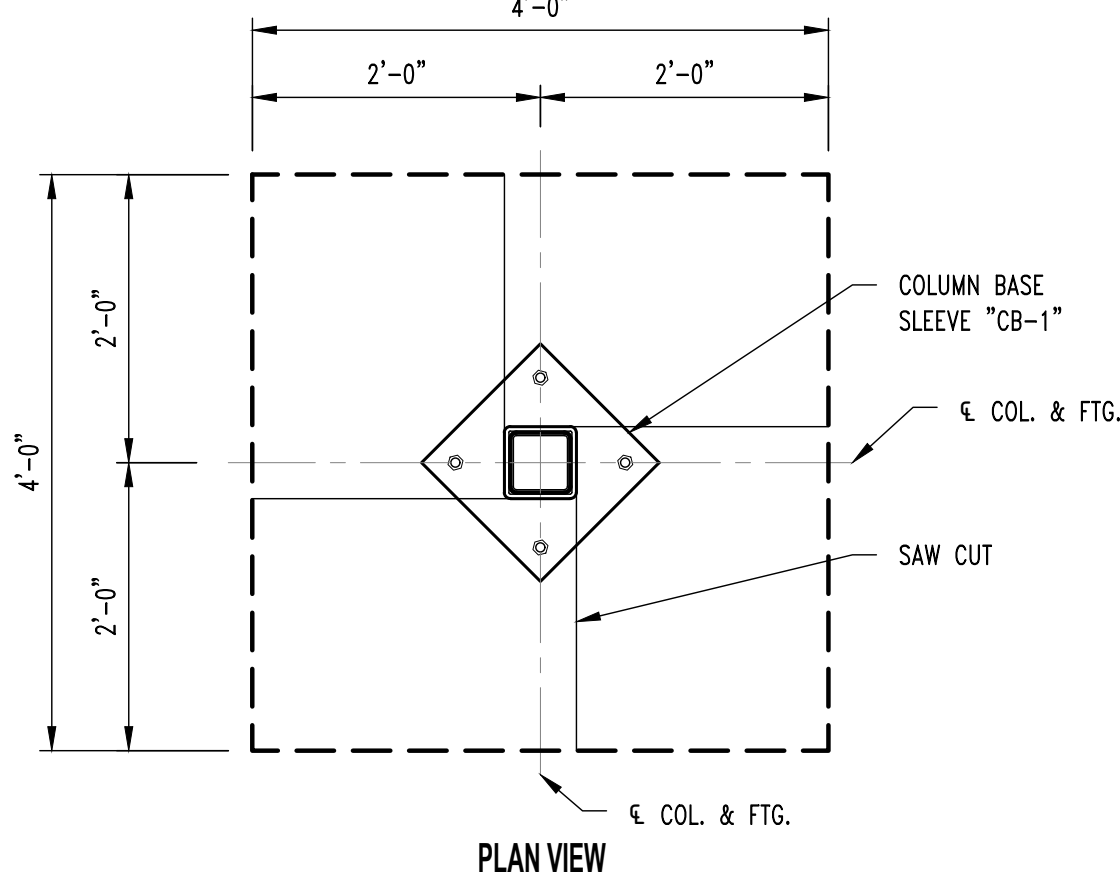
COLUMN BASE SLEEVE (CB-1)



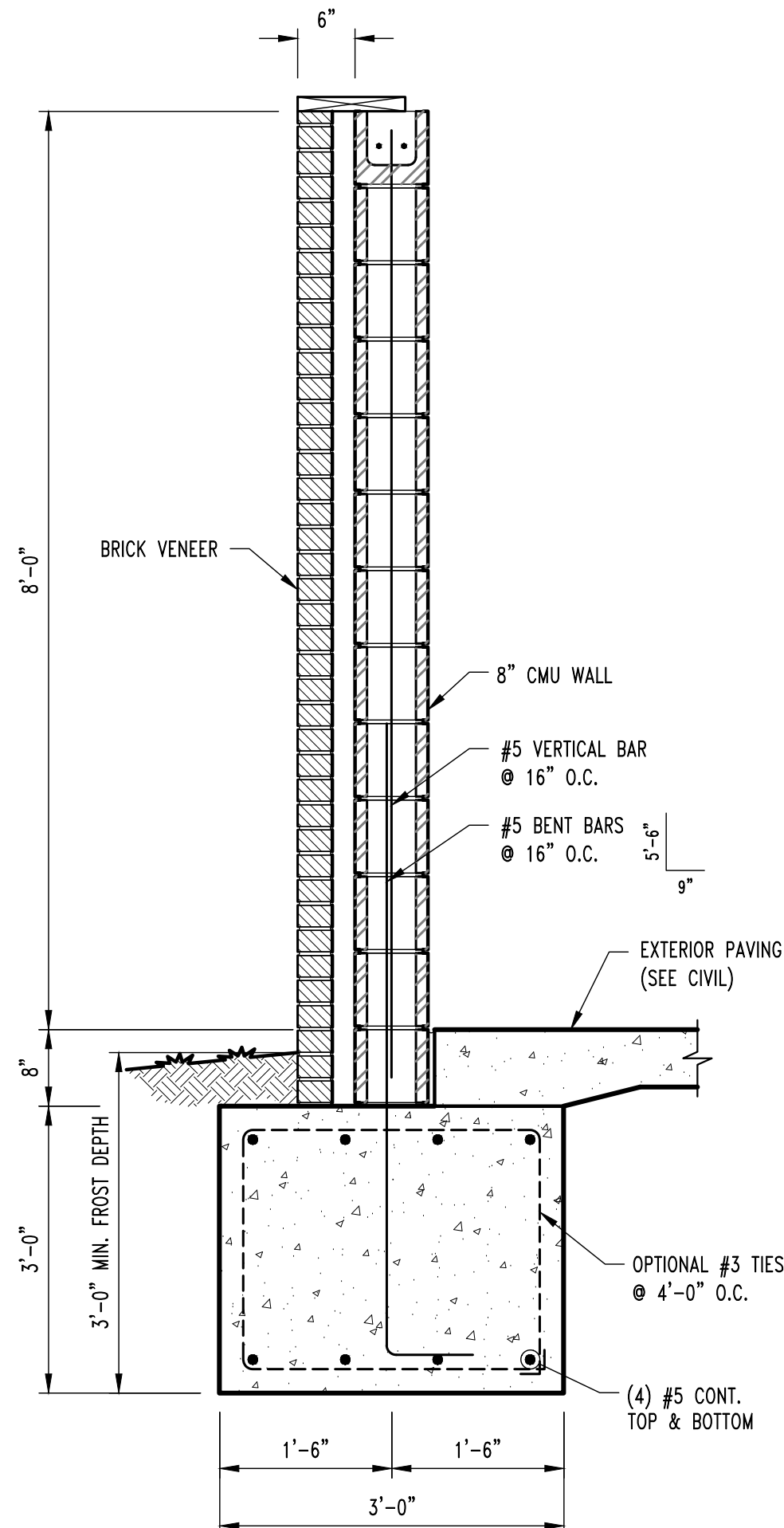
PLAN VIEW



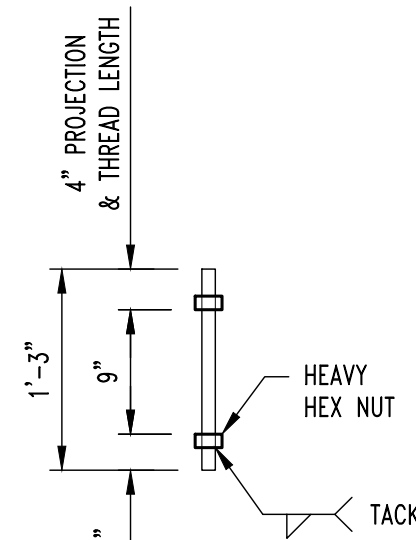
COLUMN BASE SLEEVE (CB-1)



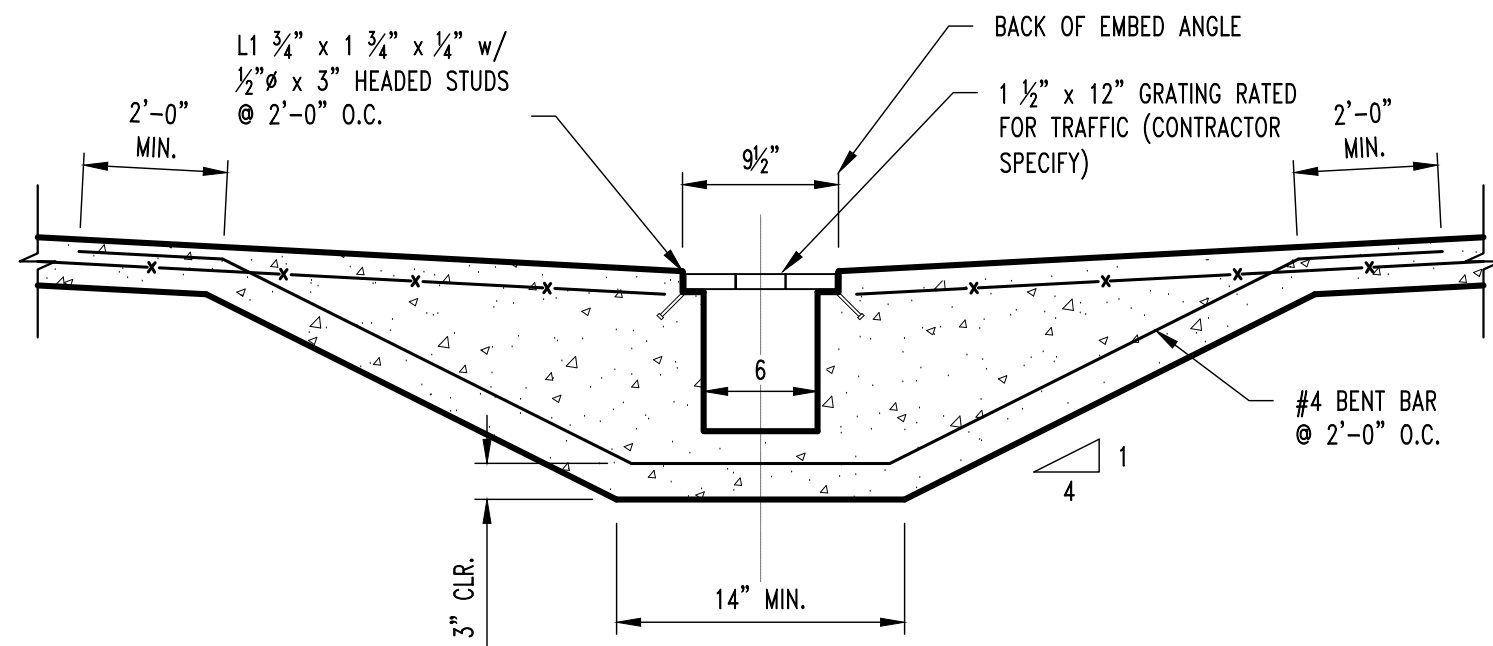
PLAN VIEW



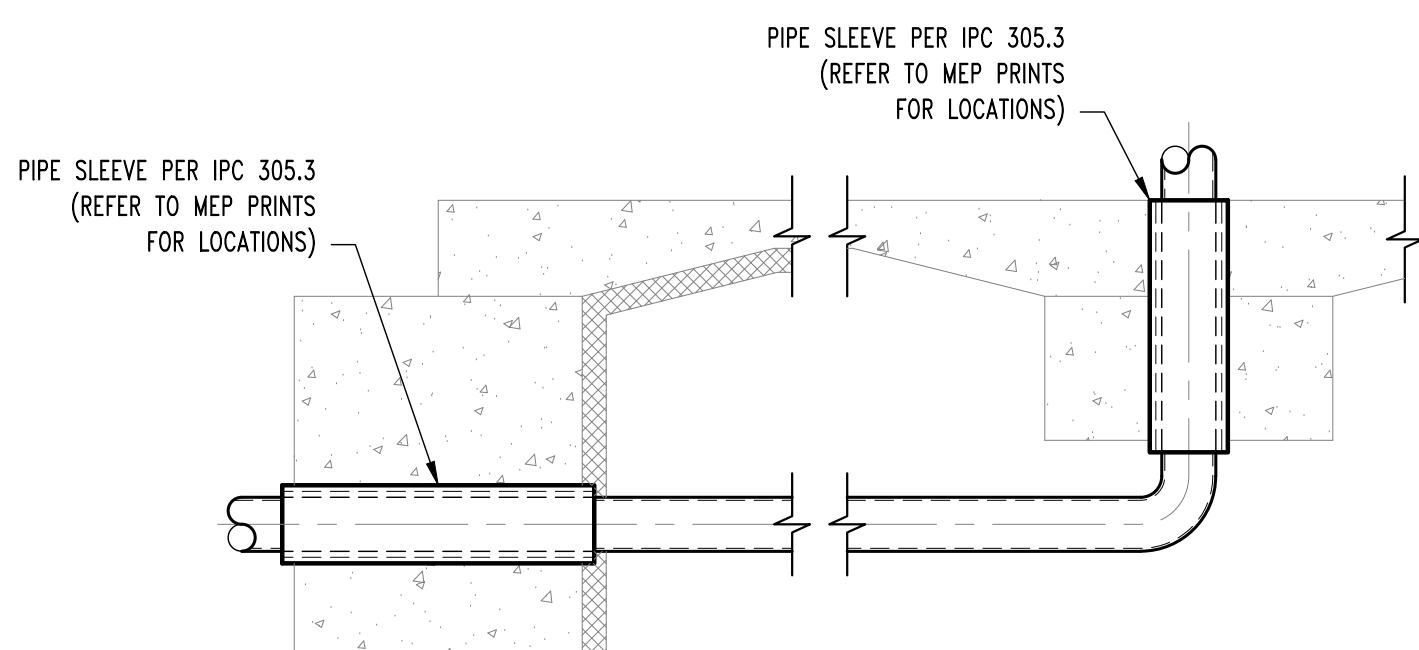
DUMPSTER ENCLOSURE SECTION



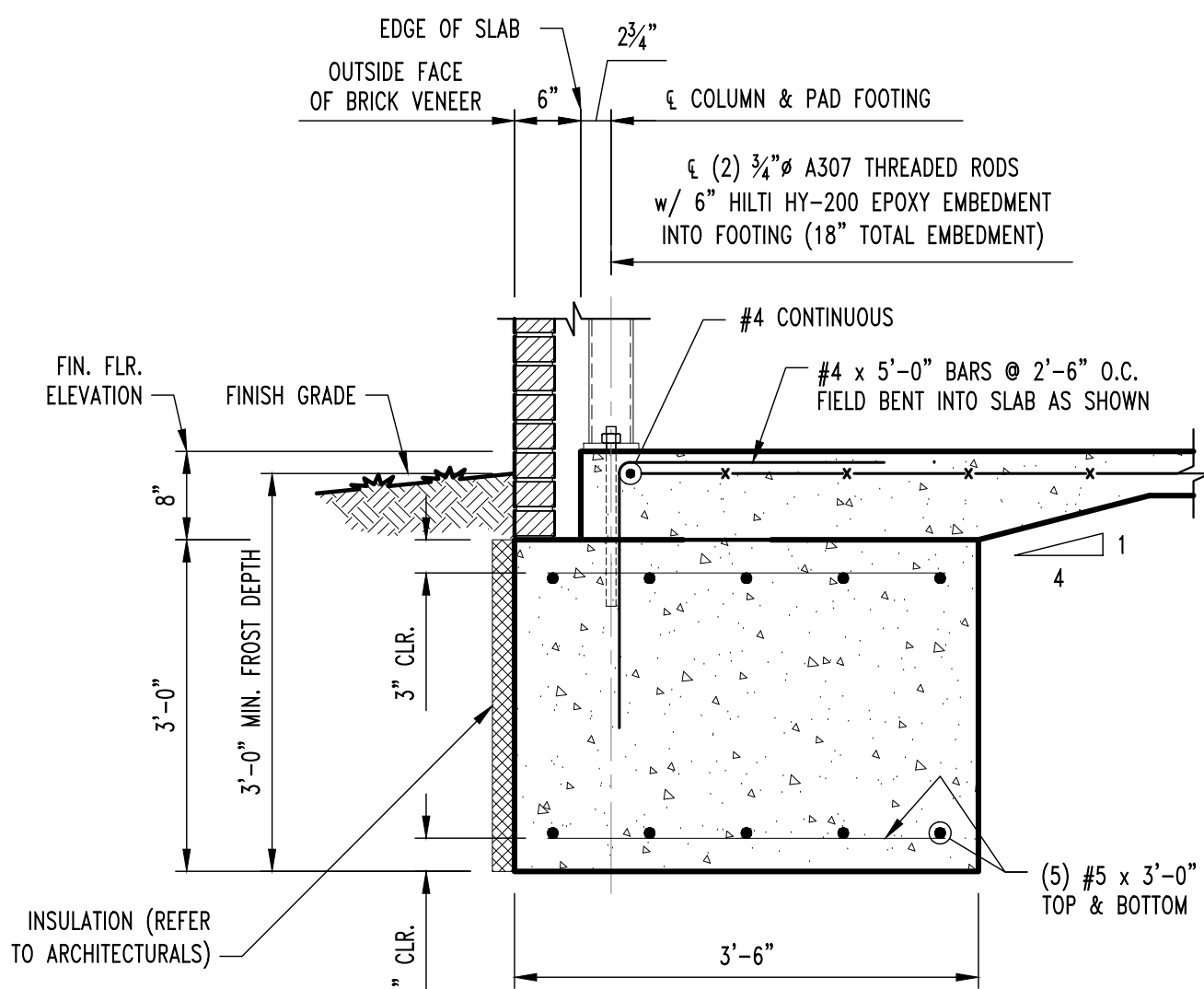
ANCHOR BOLT DETAIL (TYPE A)



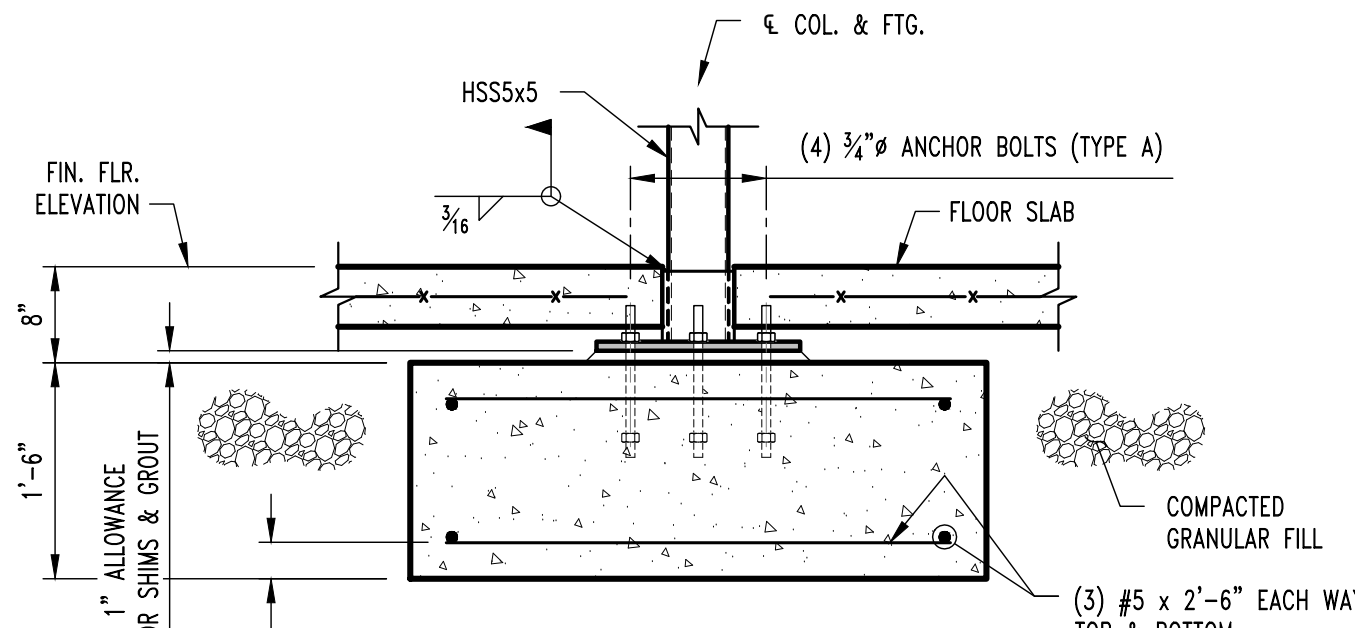
TYP. TRENCH DRAIN SECTION



TYP. PLUMBING COORDINATION DETAILS



COLUMN FOOTING SECTION



COLUMN FOOTING SECTION

REVISIONS:	
No.	Date
1	06/14/2024
2	
3	
4	
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THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI  
JARED W. CROCKETT  
PROFESSIONAL ENGINEER  
NUMBER  
PE-2017000387  
6/14/2024

STRUCTURAL ENGINEER:  
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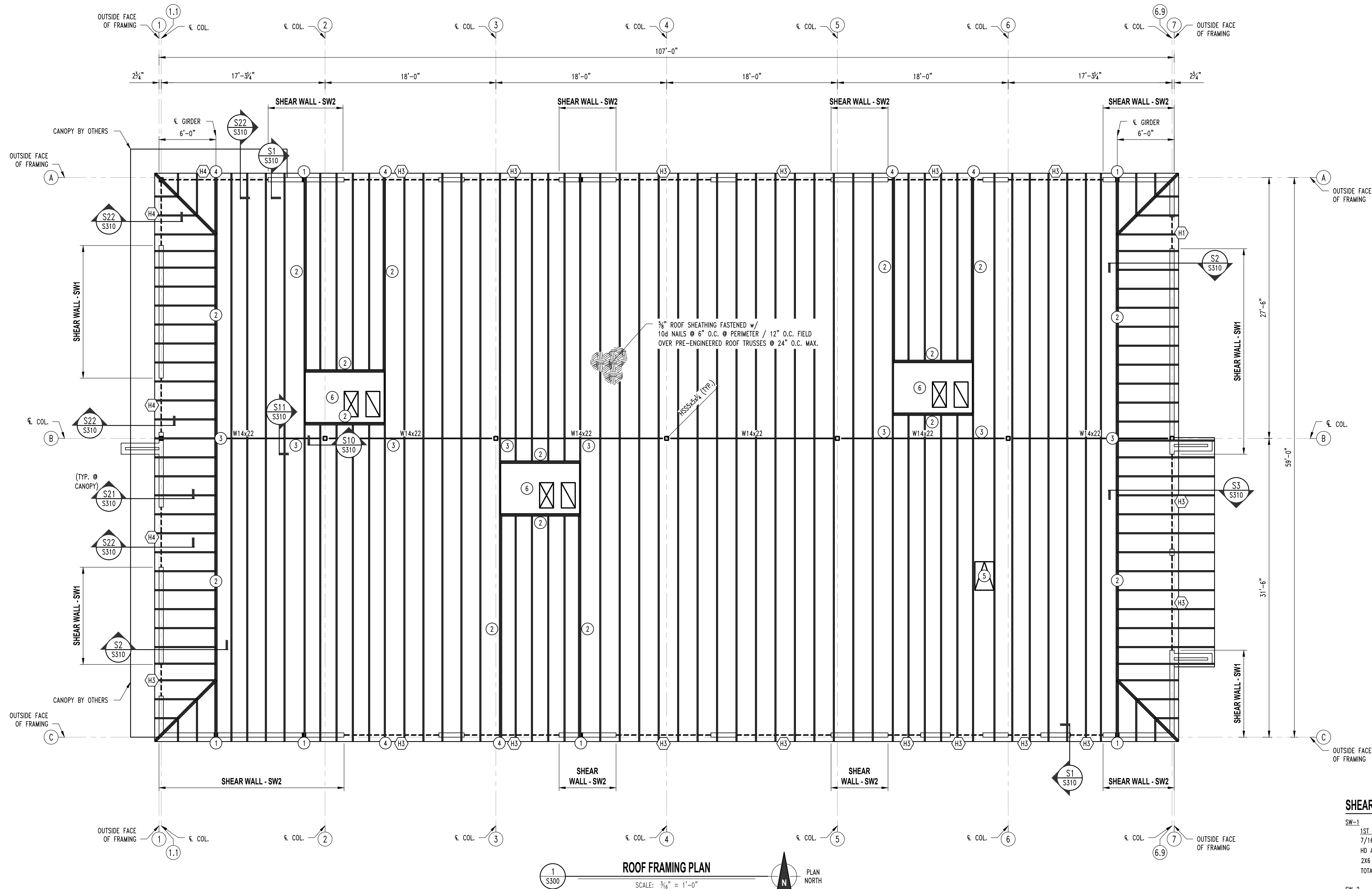
**Discovery Animal Hospital**  
1901 NE TRAIL EDGE BOULEVARD  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:  
FOUNDATION DETAILS

DESIGNED: JWV  
DRAWN: TGC  
PROJECT NO.: 230286  
SHEET: S210



NOTE:  
ALL DIMENSIONS ARE TO OUTSIDE FACE OF FRAMING  
OR ̳ COLUMNS UNLESS NOTED OTHERWISE.



### ROOF FRAMING NOTES

- INSTALL 3 PLY STUD BENEATH GIRDER TRUSS FASTENED TO GIRDER w/ SIMPSON LGT3 TIEDOWN & (16) 16d SINKER NAILS IN GIRDER & STUDS & SIMPSON HIT4 HOLDDOWN @ THE BASE FASTENED w/ (18) 10d NAILS TO STUDS & 3/8\"/>
- GIRDER TRUSS
- SIMPSON LGT3 TIEDOWN & (16) 16d SINKER NAILS INTO SOLID BLOCKING INSTALLED IN WEB OF BEAM w/ #12 TEK SCREWS.
- REFER TO S20 ON S310 FOR GIRDER TO HEADER INFORMATION.
- ROOF HATCH (REFER TO ARCHITECTURALS)
- RTU. REFER TO MEP FOR EXACT SIZE & WEIGHT.
- COORDINATE FINAL CUT SIZES PRIOR TO TRUSS FABRICATION.

### REVISIONS:

No.	Date
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**Discovery Animal Hospital**  
1901 NE TRAIL EDGE BOULEVARD  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

### DRAWING INCLUDES:

ROOF  
FRAMING  
PLAN

DESIGNED: JWV

DRAWN: TGC

PROJECT NO.: 230286

SHEET:  
S300

### SHEAR WALL KEY

#### SW-1

1ST FLOOR  
7/16\"/>

#### SW-2

1ST FLOOR  
7/16\"/>

#### NOTE:

IF WALL IS NOT LABELED AS A SHEAR WALL THE SHEATHING SHALL BE 7/16\"/>

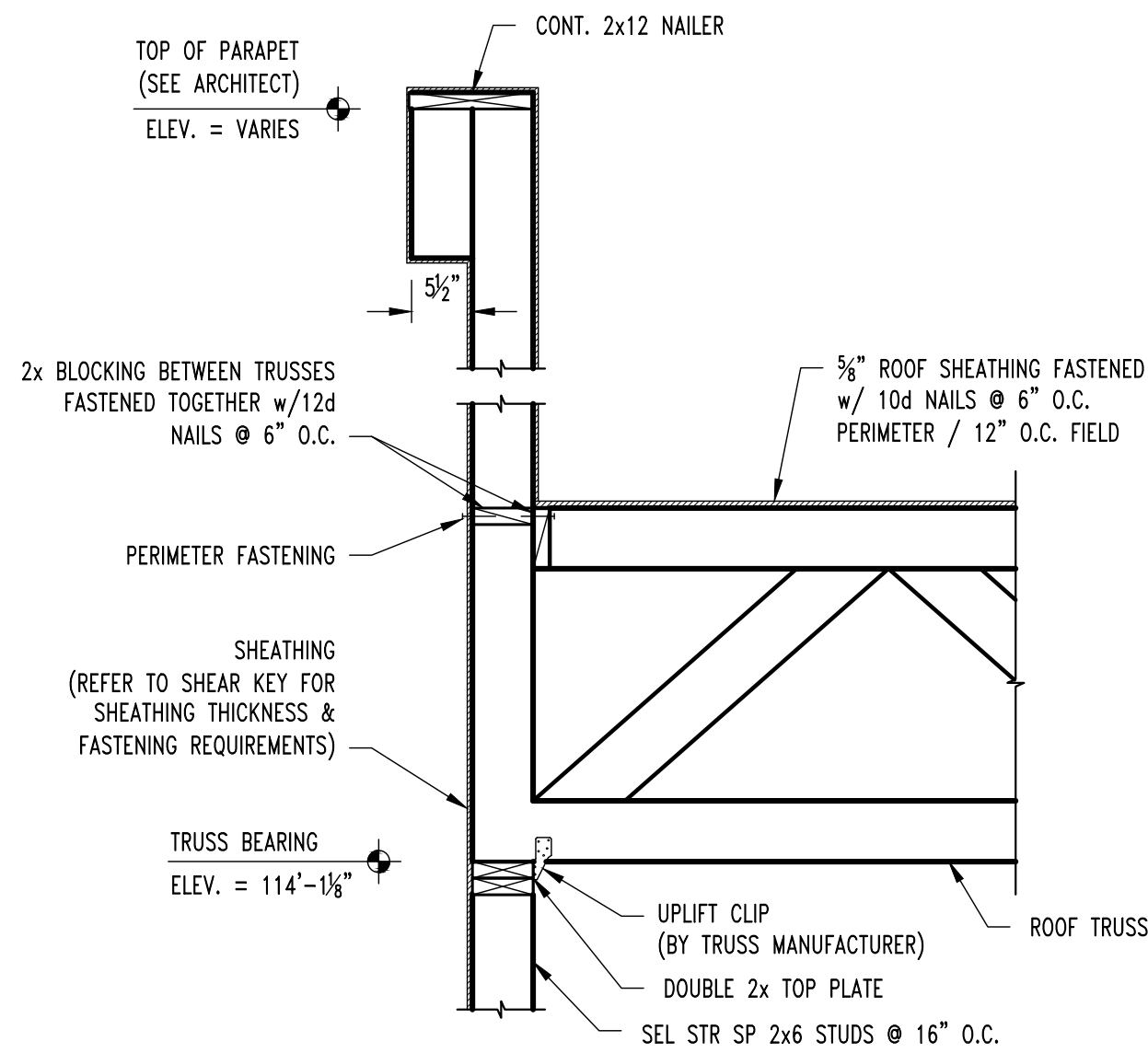
### BRICK LINTEL SCHEDULE

LENGTH	MEMBER SIZE (GALVANIZED)
L ≤ 4'-0"	L4x4x3/8 WITH 6" BEARING EACH END
L ≤ 6'-6"	L6x4x3/8 (LLV) WITH 6" BEARING EACH END
L ≤ 10'-0"	L8x4x7/16 (LLV) WITH 10" BEARING EACH END

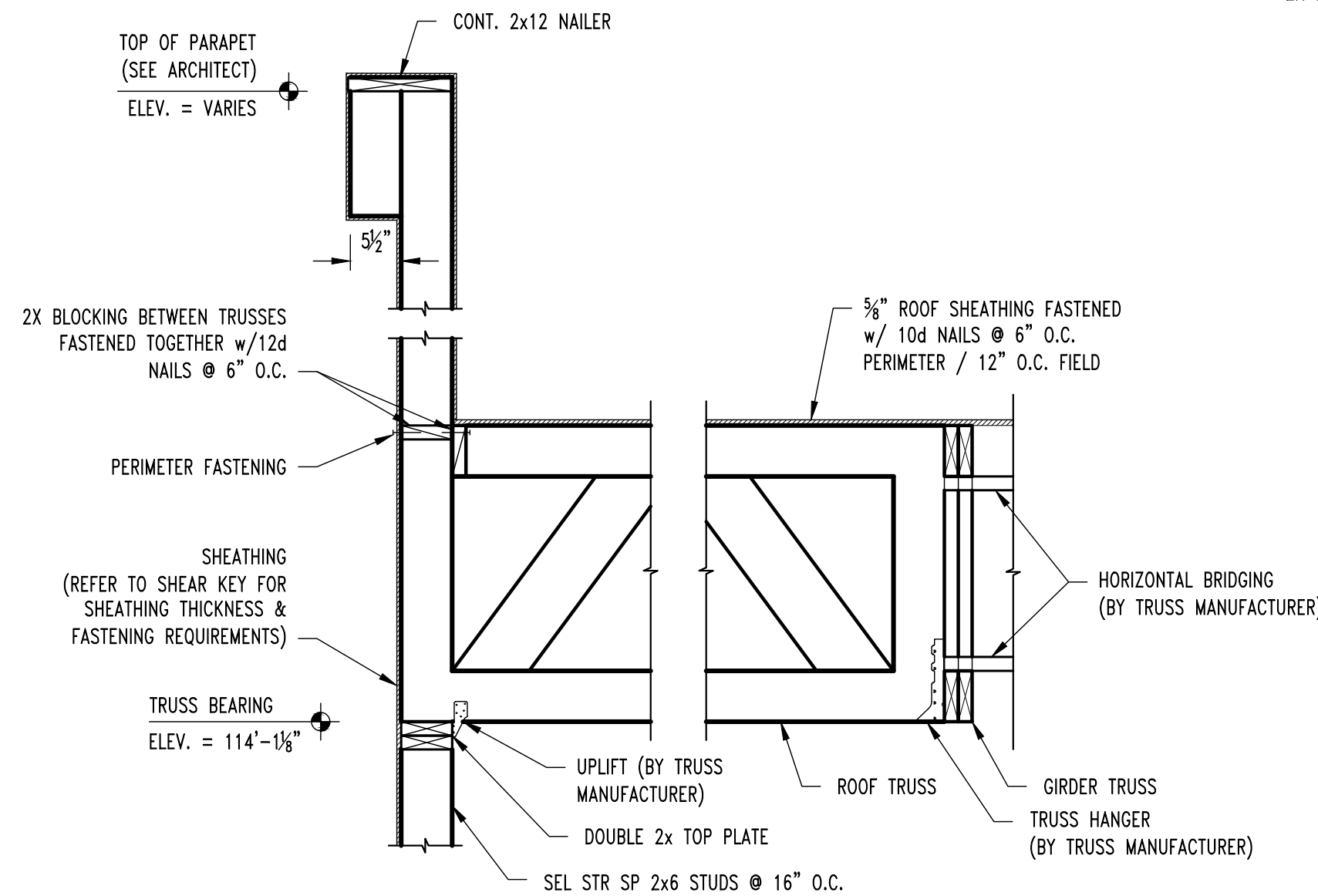
### HEADER SCHEDULE

MARK	HEADER	CRIPPLE	JAMB
"H1"	(2) Southern Pine Sel. Str. 2x6's	Southern Pine Sel. Str. 2x6	Southern Pine Sel. Str. 2x6
"H2"	(2) Doug Fir Larch Sel. Str. 2x10's	Southern Pine Sel. Str. 2x6	(2) Southern Pine Sel. Str. 2x6's
"H3"	(3) Doug Fir Larch Sel. Str. 2x10's	(2) Southern Pine Sel. Str. 2x6's	(3) Southern Pine Sel. Str. 2x6's
"H4"	(3) Microlam 2.0E 1.75x16's	(2) Southern Pine Sel. Str. 2x6's	(3) Southern Pine Sel. Str. 2x6's

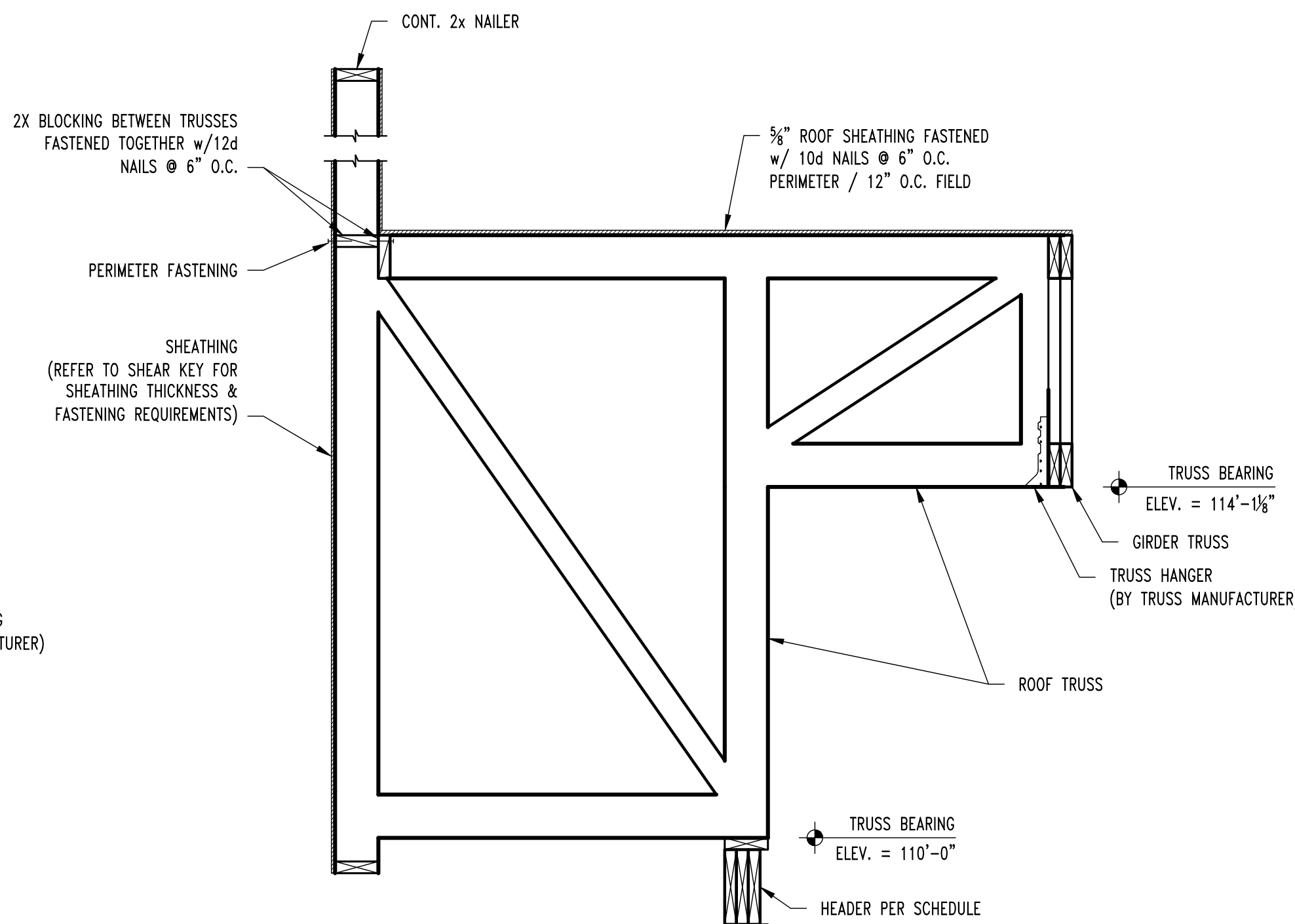




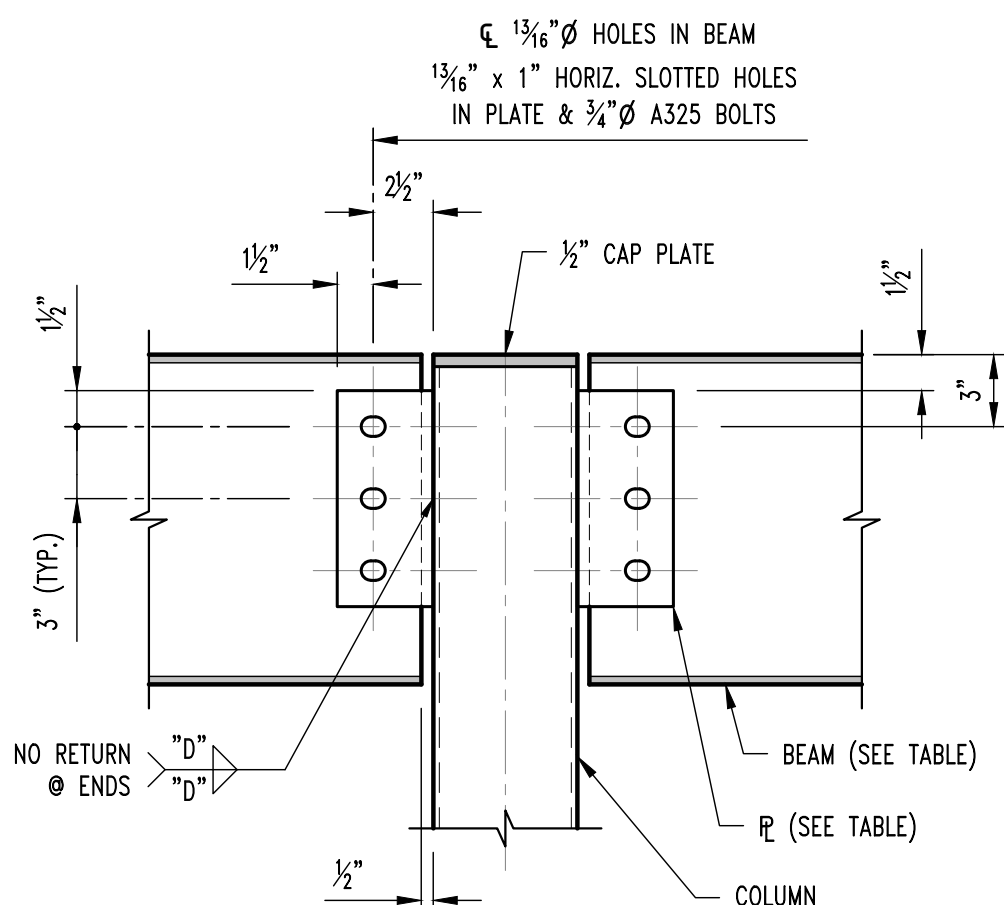
S1  
S300  
**ROOF FRAMING SECTION**  
SCALE: 3/4" = 1'-0"



S2  
S300  
**ROOF FRAMING SECTION**  
SCALE: 3/4" = 1'-0"

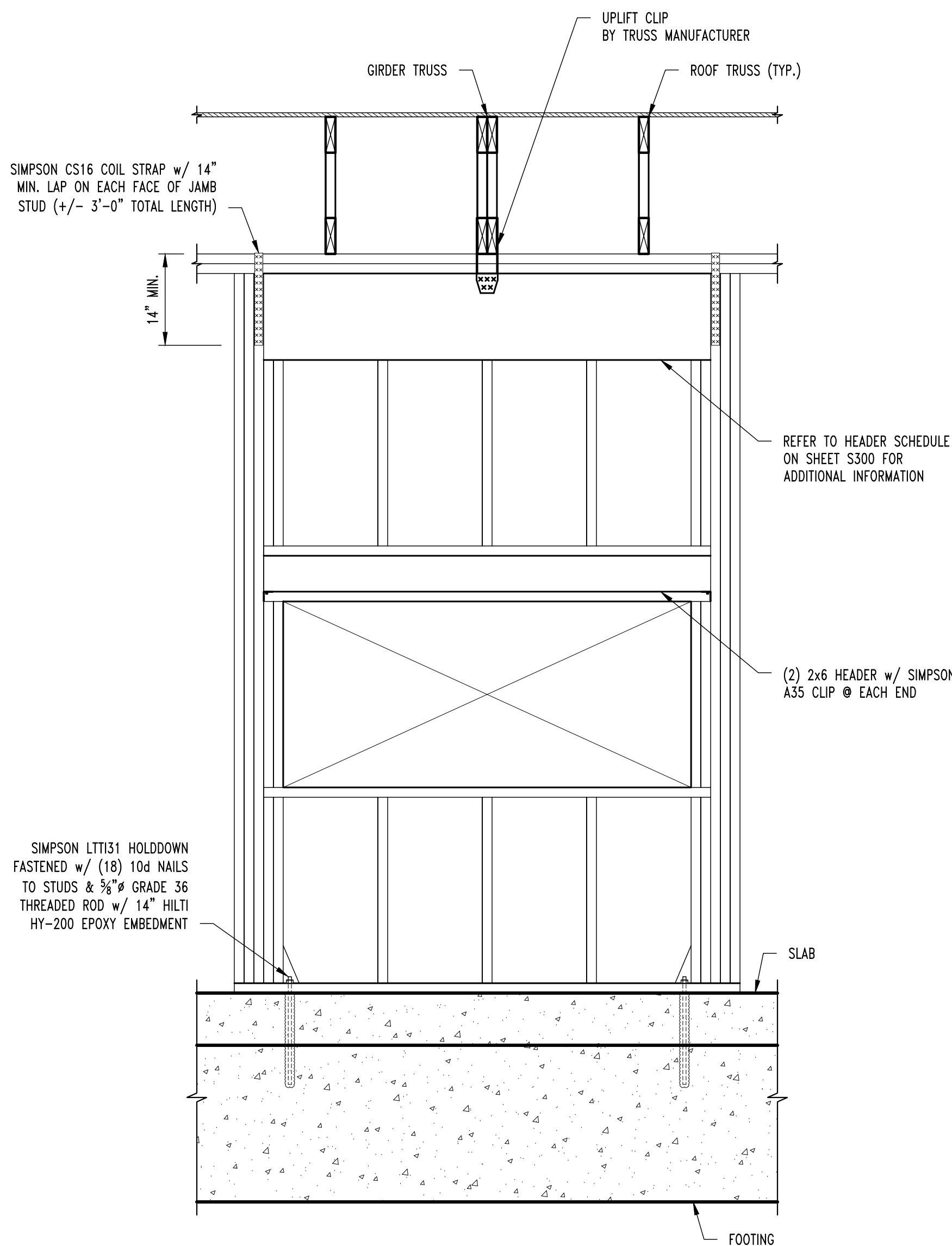


S3  
S300  
**ROOF FRAMING SECTION**  
SCALE: 3/4" = 1'-0"

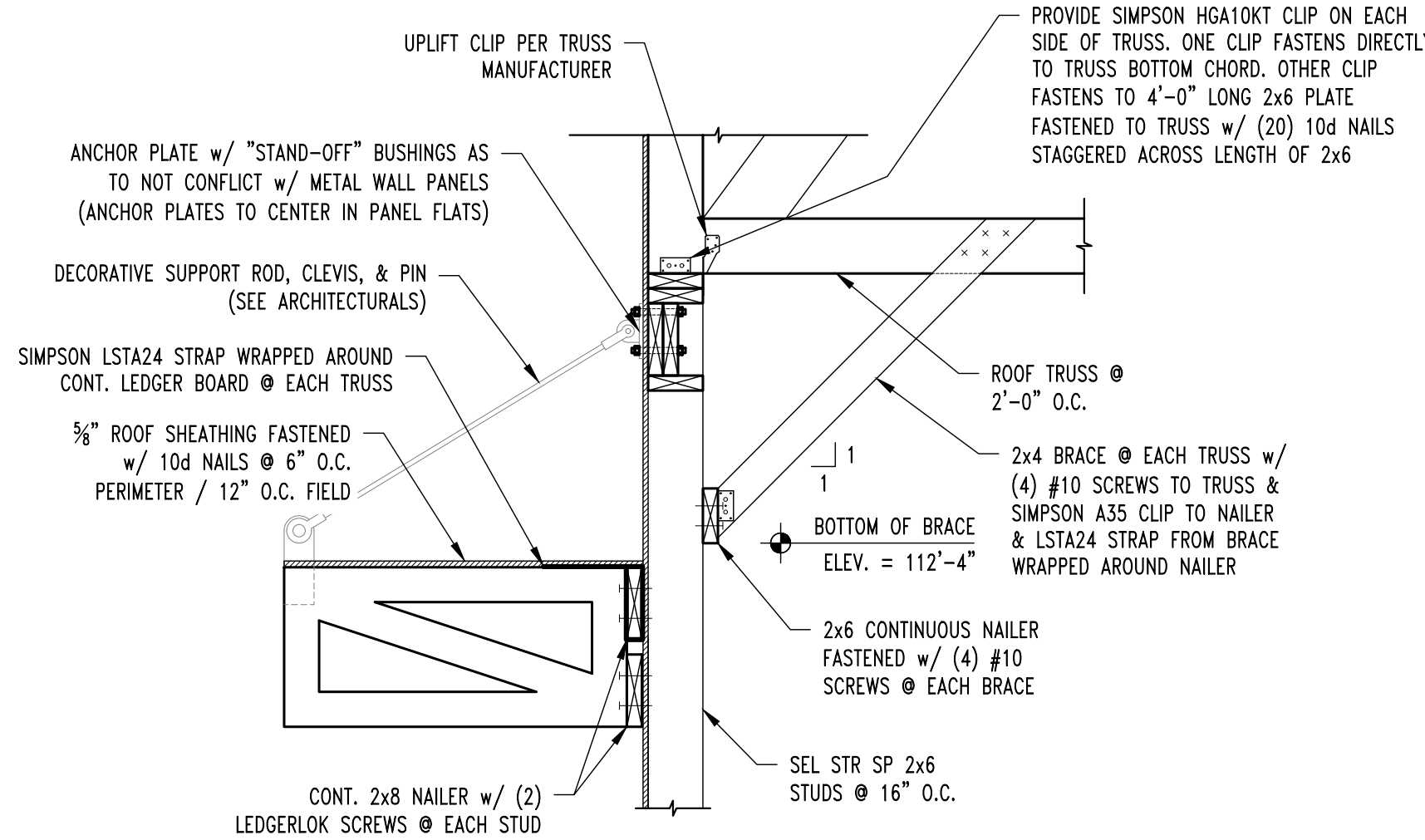


BEAM SIZE	No. OF BOLTS "N"	PLATE SIZE	WELD SIZE "D"
W14	3	3/16x4x0'-9"	3/4"

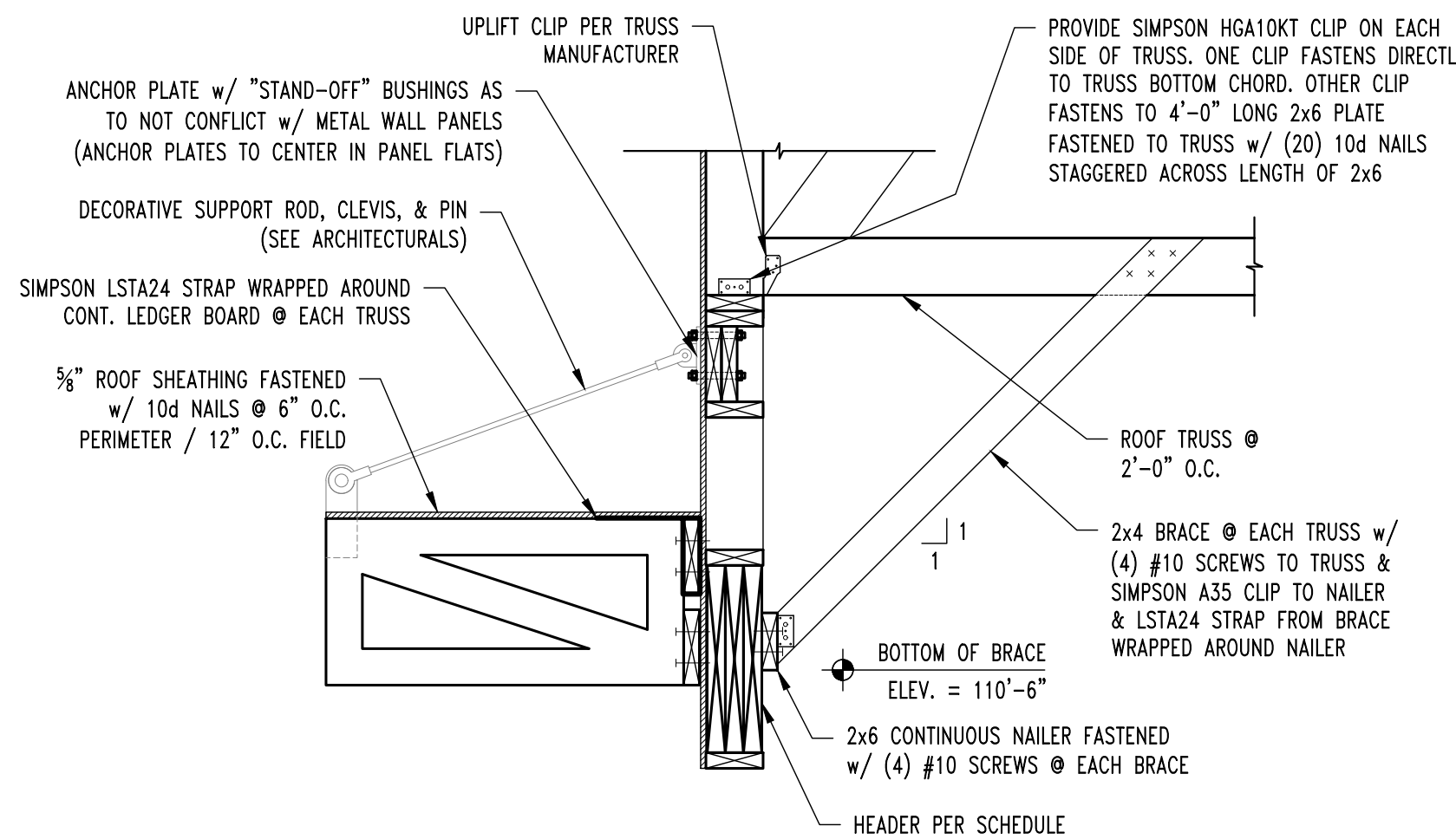
S10  
S300  
**TYP. BEAM TO COLUMN SECTION**  
SCALE: 1 1/2" = 1'-0"



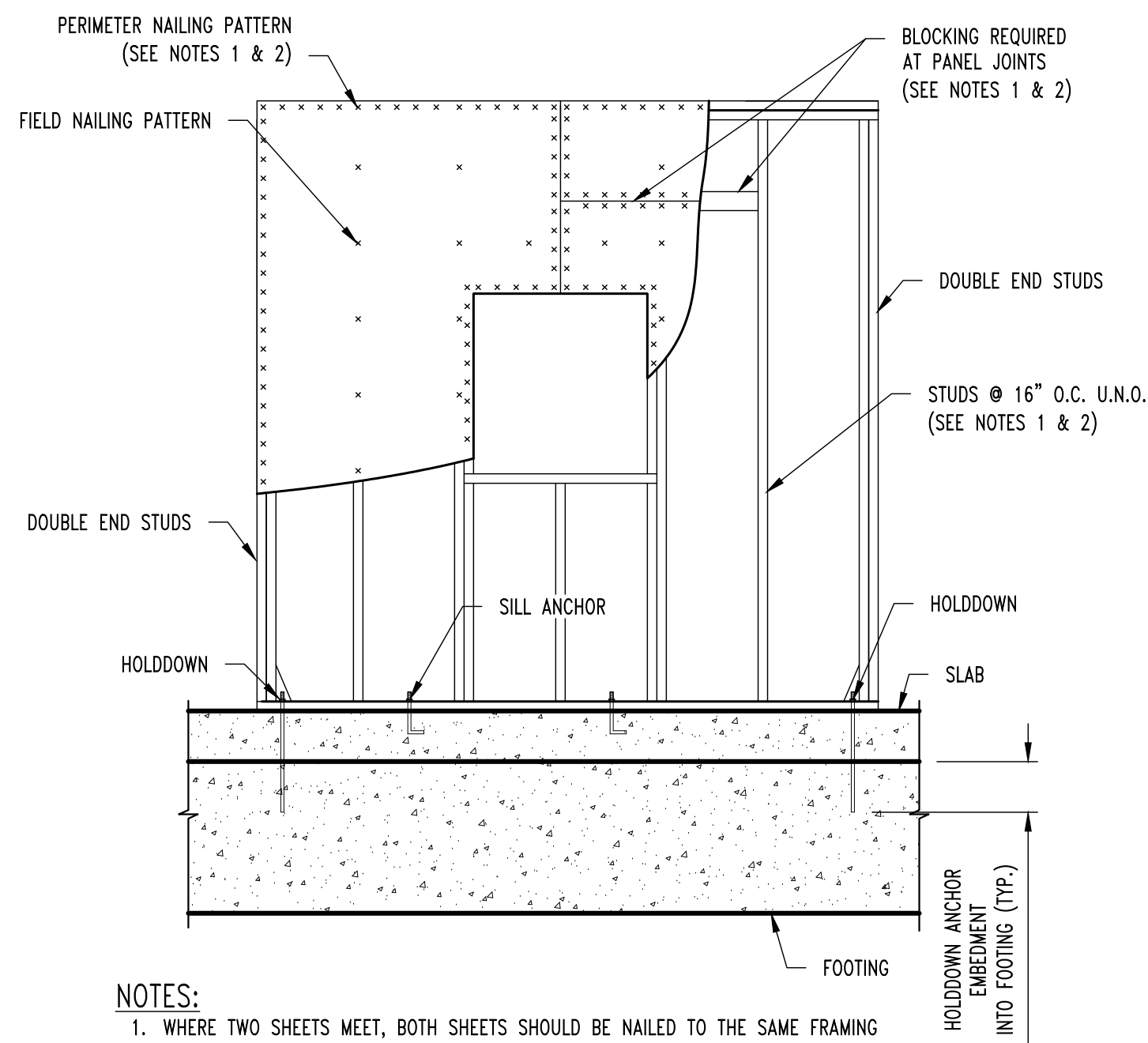
S20  
S300  
**GIRDER TO HEADER DETAIL**  
SCALE: 1 1/2" = 1'-0"



S21  
S310  
**CANOPY FRAMING SECTION**

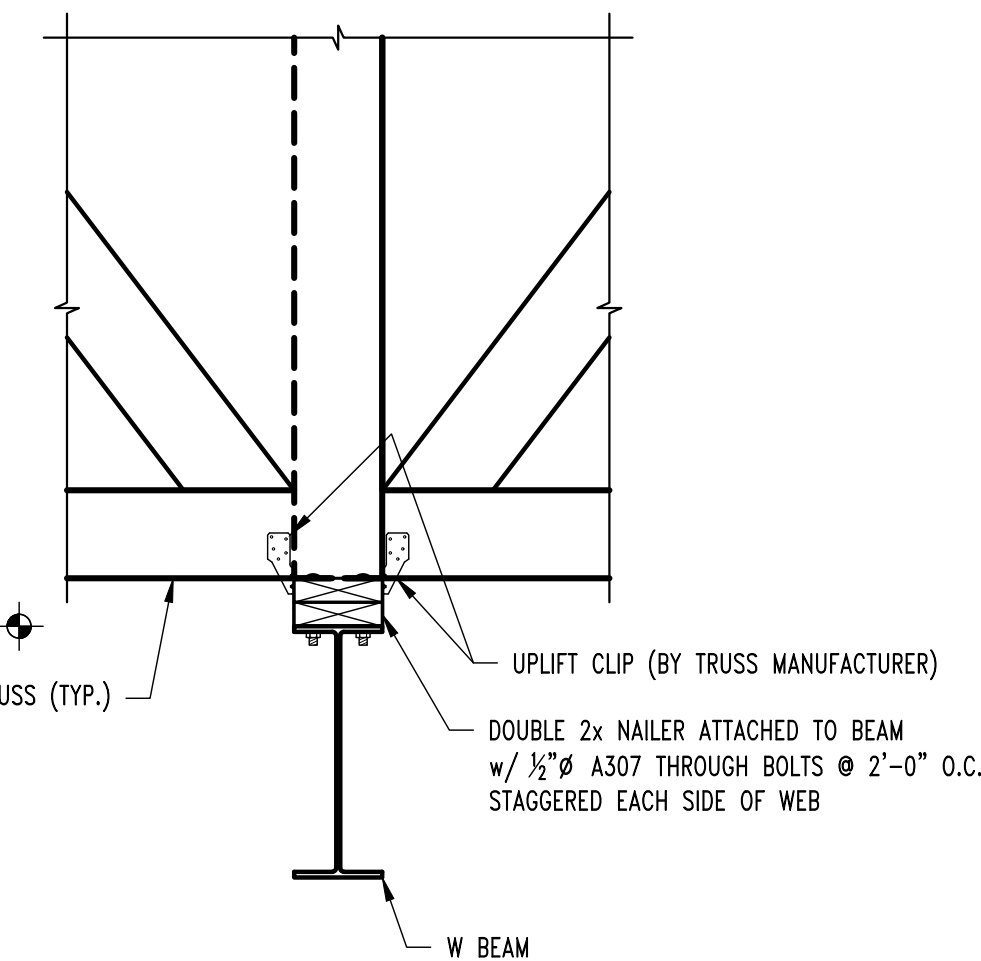


S22  
S310  
**CANOPY FRAMING SECTION**



- NOTES:
- WHERE TWO SHEETS MEET, BOTH SHEETS SHOULD BE NAILED TO THE SAME FRAMING MEMBER.
  - WHEN SHEATHING NAILS ARE SPACED AT 2" O.C. FOR 8d NAILS OR 3" O.C. FOR 10d NAILS, 3x OR DOUBLE 2x FRAMING MEMBERS ARE REQUIRED WHERE SHEETS MEET. FACE NAIL DOUBLE 2x MEMBERS TOGETHER w/ 16d NAILS @ 24" O.C. STAGGERED EACH FACE OF STUD.
  - SEE WALL SECTIONS FOR ADDITIONAL INFORMATION.

**TYP. SHEAR WALL DETAIL**



S11  
S300  
**ROOF FRAMING SECTION**  
SCALE: 1" = 1'-0"

REVISIONS:

No.	Date
PERMIT SET	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI

JARED W. CROCKETT

PROFESSIONAL ENGINEER

NUMBER

PE-2017000387

6/14/2024

STRUCTURAL ENGINEER

CROCKETT

ENGINEERING CONSULTANTS

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(314) 447-0292

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Crockett Engineering Consultants, LLC

Missouri Engineering Authority

2500515101

CLIENT:

INTRINSIC DEVELOPMENT

3822 ENDEAVOR AVE. STE. 101

COLUMBIA, MISSOURI

Discovery Animal Hospital

1901 NE TRAIL EDGE BOULEVARD

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

FRAMING DETAILS

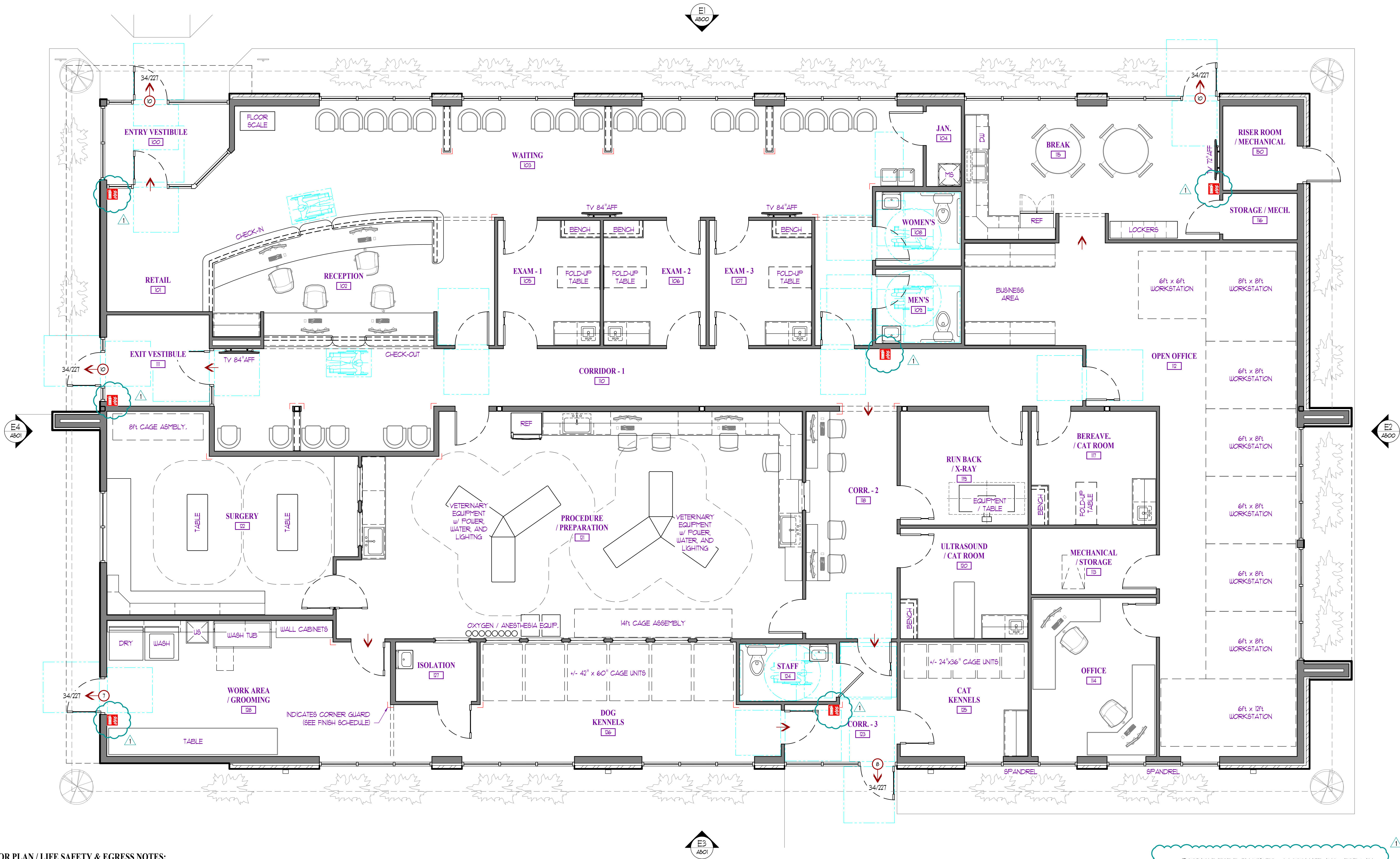
DESIGNED: JWV

DRAWN: TGC

PROJECT NO.: 230286

SHEET: S310



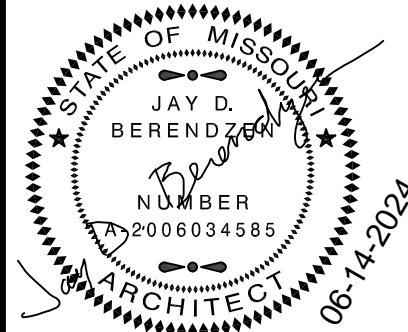


FLOOR PLAN / LIFE SAFETY & EGRESS NOTES:

CONSTRUCTION TYPE:	TYPE VB - SPRINKLERED	MINIMUM NUMBER OF EXITS REQUIRED:	2 (TRAVEL DISTANCE FACTOR)
OCCUPANCY:	BUSINESS USE OCCUPANCY	PROPOSED EXITS PROVIDED:	5
MINIMUM OCCUPANT LOAD:	43 OCCUPANTS	EXIT ACCESS TRAVEL DISTANCE:	300 FEET
CORRIDOR FIRE-RESISTANCE RATING REQUIRED:	0 HOURS (SPRINKLERED)	EGRESS WIDTH:	
MINIMUM CORRIDOR WIDTH:	44 INCHES	REQUIRED =	43 x 0.15" = 6.45"
DEAD END CORRIDORS SHALL NOT EXCEED 50 FEET		PROVIDED =	(5) 34" = 170"
		EGRESS DOORS SHALL HAVE A MINIMUM CLEAR OPENING WIDTH OF NOT LESS THAN 32"	
		EVERY EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIFIC KNOWLEDGE OR EFFORT.	

FLOOR PLAN / LIFE SAFETY PLAN  
SCALE: 1/4" = 1'-0"  
PLAN NORTH

PORTABLE FIRE EXTINGUISHER: COORDINATE AND VERIFY ALL LOCATIONS WITH FIRE CODE OFFICIAL PRIOR TO INSTALLATION



MISSOURI ARC-000588  
EXP. 12/31/25

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Lee's Summit, Jackson County, Missouri

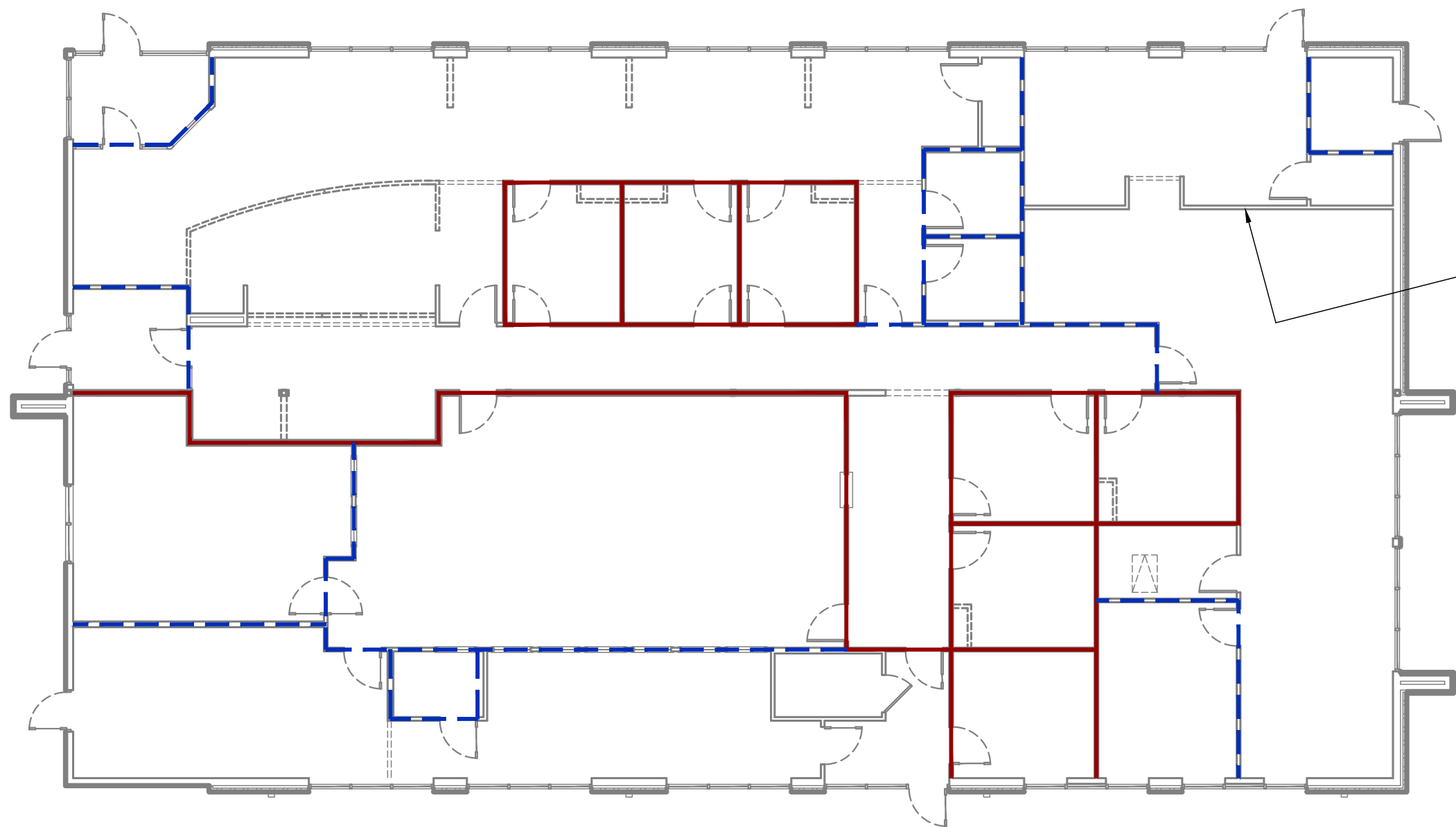
ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024
2	REVISION - 1	8/16/2024

PROJECT NO. FB42417  
SHEET TITLE  
FLOOR PLAN  
LIFE SAFETY / EGRESS  
SHEET NUMBER









WALL HEIGHT DIAGRAM

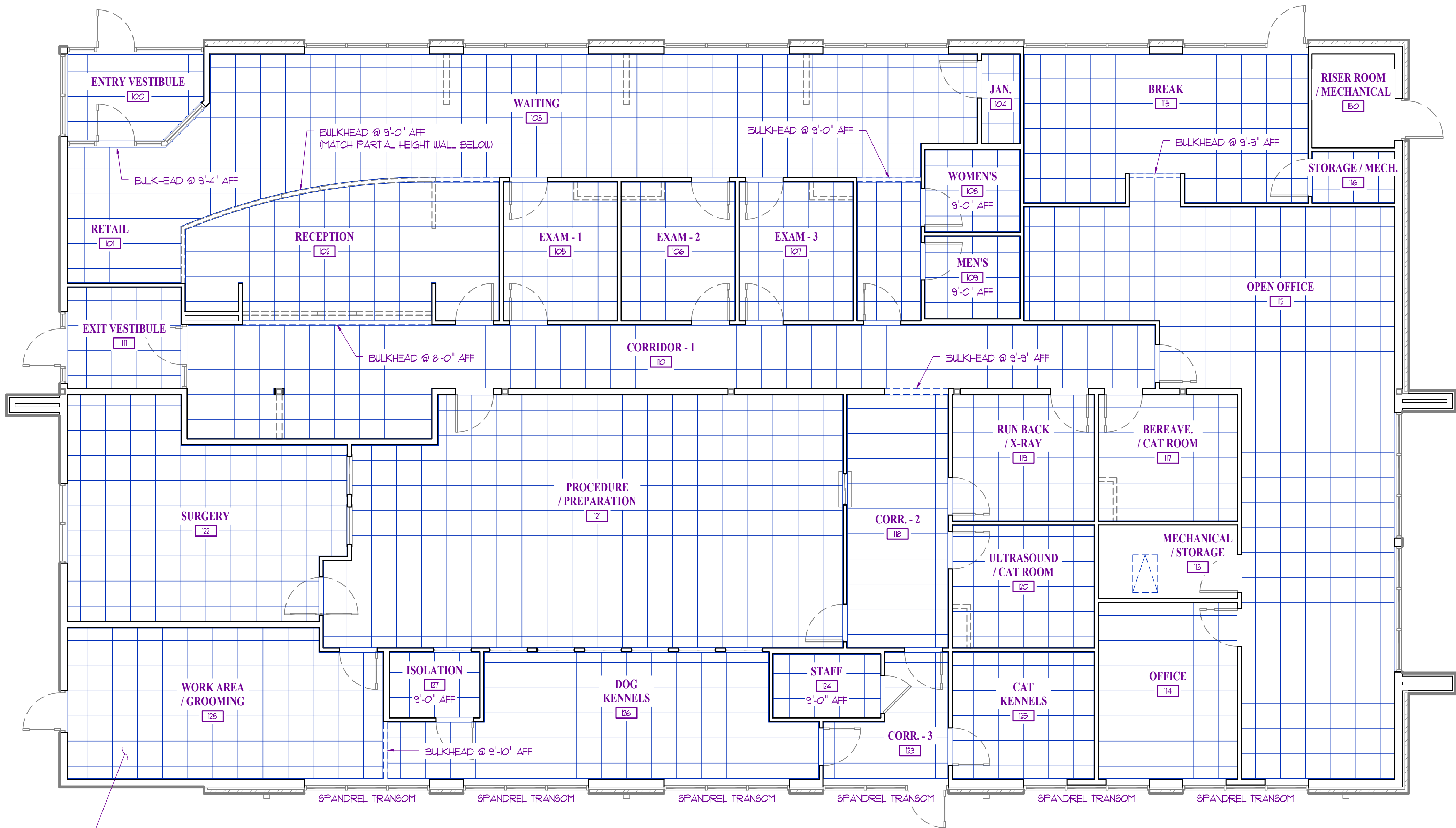
STANDARD INTERIOR WALL PARTITION:  
2x WOOD STUDS w/ 5/8" GYPSUM BOARD EACH SIDE  
A MINIMUM OF 6" ABOVE ADJACENT CEILING HEIGHT  
(BRACE TOP OF WALL WITH 2x @ 45° TO STRUCTURE @ 4'-0" O.C. MAX.)

INDICATES FRAMING & GYPSUM BOARD TO TERMINATE  
AT LONG LEG DEFLECTION TRACK BELOW ROOF L.D. / STRUCTURE  
INSTALL SOUND BATT FULL HEIGHT OF WALL.

INDICATES FRAMING & GYPSUM BOARD TO TERMINATE  
AT LONG LEG DEFLECTION TRACK BELOW ROOF L.D. / STRUCTURE

REFLECTED CEILING PLAN GENERAL NOTES:

- SEE ROOM FINISH SCHEDULE ON SHEET A900 FOR ADDITIONAL INFORMATION.
- FOR REFERENCE ONLY. TRADE CONTRACTOR TO VERIFY LOCATION OF ALL CEILING FEATURES AND CEILING MOUNTED EQUIPMENT & FIXTURES.
- REFER TO MECHANICAL-ELECTRICAL-PLUMBING DRAWINGS FOR EXACT EQUIPMENT AND LIGHTING PLACEMENT AND SPECIFICATIONS.
- METAL SUSPENSION SYSTEMS AND ACOUSTICAL TILE CEILING SHALL BE INSTALLED IN ACCORDANCE WITH IBC 2018.
- GENERAL CONTRACTOR SHALL VERIFY & COORDINATE CEILING HEIGHTS WITH ALL TRADES PRIOR TO INSTALLATION. ANY ADJUSTMENTS SHALL BE COORDINATED WITH OWNER AND GENERAL CONTRACTOR.
- CEILING TILES AND GRIDWORK TO BE CENTERED IN BOTH DIRECTIONS FOR EVERY ROOM OR SPACE UNLESS OTHERWISE DIMENSIONED.
- LIGHTING FIXTURES AND AIR DIFFUSERS SHALL BE SUPPORTED DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
- ALL DIMENSIONS TO THE FINISHED FACE OF WALL OR CENTERLINE OF CEILING GRID UNLESS NOTED OTHERWISE.



ALL CEILINGS TO BE 24" x 24" ACOUSTICAL TILE  
INSTALLED AT 9'-11" AFF UNLESS NOTED OTHERWISE  
(SEE FINISH SCHEDULE ON A900 FOR REMAINING INFO)

REFLECTED CEILING PLAN

SCALE: 3/8" = 1'-0"

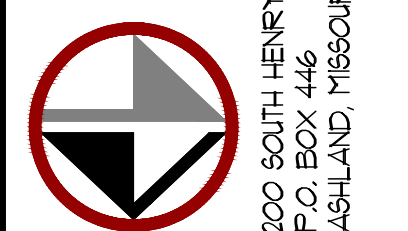
PLAN NORTH



EXPIRATION DATE 12-31-24  
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PROJECT

Discovery Park  
**Discovery Animal Hospital**  
1901 NE Trails Edge Boulevard  
Lee's Summit, Jackson County, Missouri

ISSUE

ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024

PROJECT NO.

FB242417

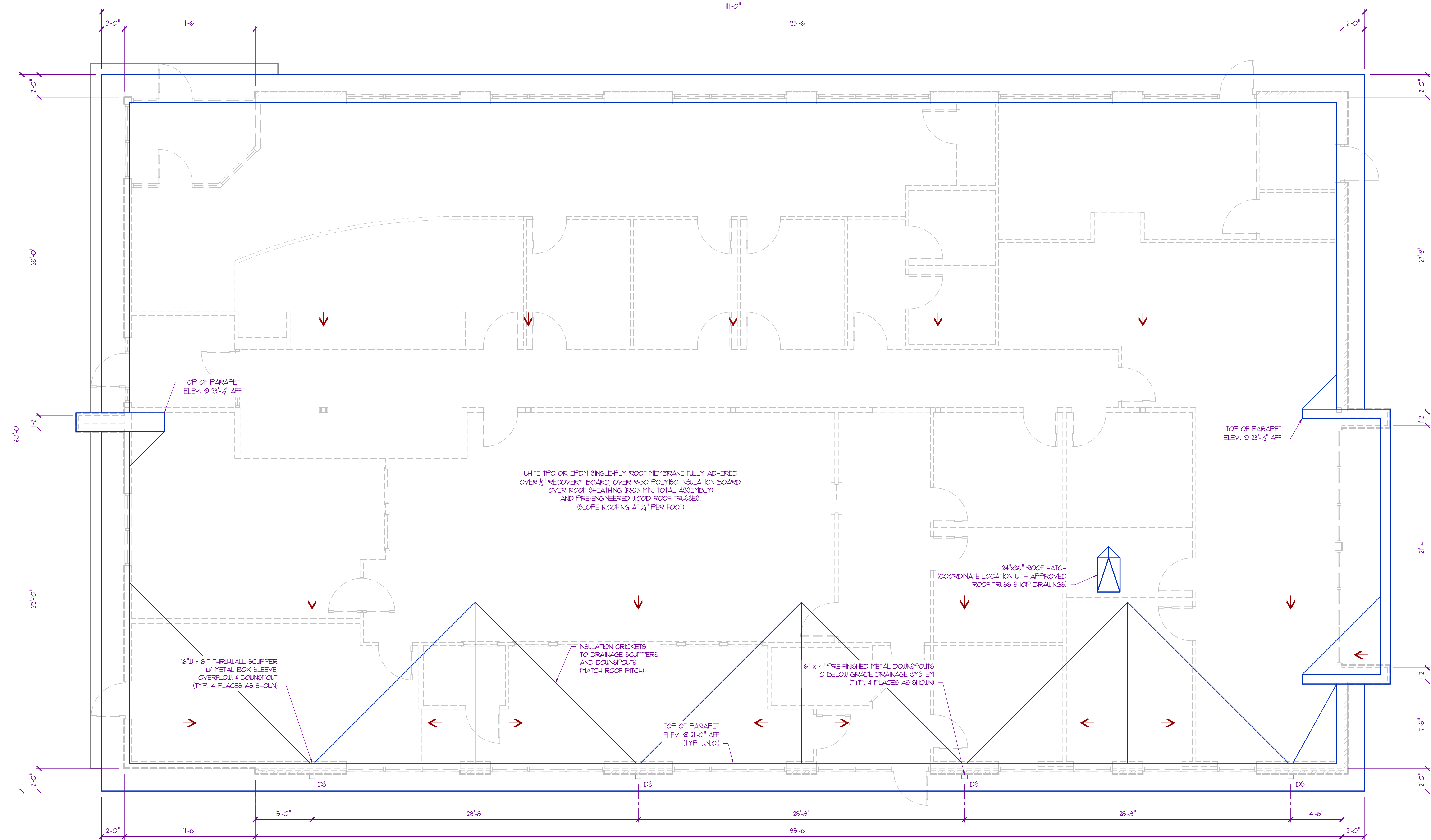
SHEET TITLE

REFLECTED  
CEILING PLAN

SHEET NUMBER

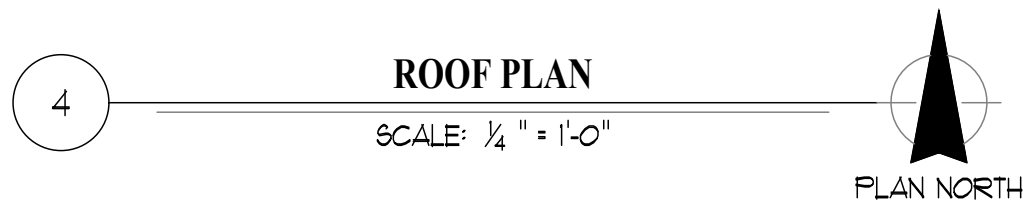
A300





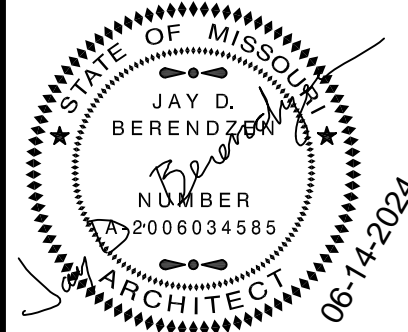
ROOF PLAN GENERAL NOTES:

1. VERIFY AND COORDINATE ALL BLOCKING, NAILERS, INSULATION STOPS, CRICKETS, FLASHING, ETC. FOR COMPLETE INSTALLATION OF ROOFING SYSTEM.
2. ROOFING SYSTEM TO BE WARRANTED AND WATER-TIGHT.
3. VERIFY AND COORDINATE ALL ROOFTOP EQUIPMENT, CURBS, GAS LINES, PLUMBING PENETRATIONS, ETC. (2" MIN. ABOVE FINISH ROOF)
4. EXHAUST FANS & VENTING TO DISCHARGE A MIN. OF 10'-0" FROM ROOFTOP UNITS.
5. PROVIDE MOLDED ROOF WALK PADS TO AND AROUND ROOFTOP UNITS & OTHER EQUIPMENT AS NECESSARY.



ROOF DRAINAGE CALCULATIONS:

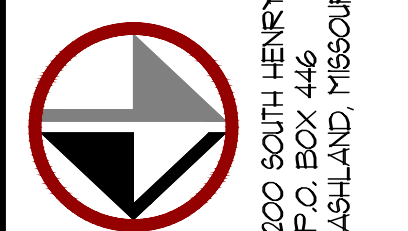
TOTAL ROOF DRAINAGE AREA: ± 7,210 SF  
PROPOSED ROOF DRAINS: (4) @ 2,130 SF MAX. DRAINAGE AREA  
RAINFALL RATE: 3.5" / HOUR  
14"W x 10"t x 12"D CONDUCTOR HEAD: 4,600 SF OF DRAINAGE AREA CAPACITY (EXTEND TOP OF CONDUCTOR TO CONCEAL SCUPPER OPENING, INSTALL OVERFLOW IN CONDUCTOR AT SCUPPER ELEVATION)



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PROJECT NO.

FB242417

SHEET TITLE

ROOF PLAN

SHEET NUMBER

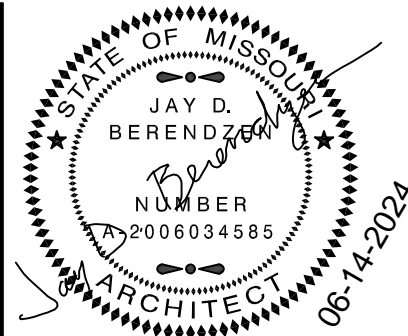
A400





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Discovery Park  
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ISSUE		
ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024

PROJECT NO.  
FBA2417  
SHEET TITLE

EXTERIOR  
ELEVATIONS

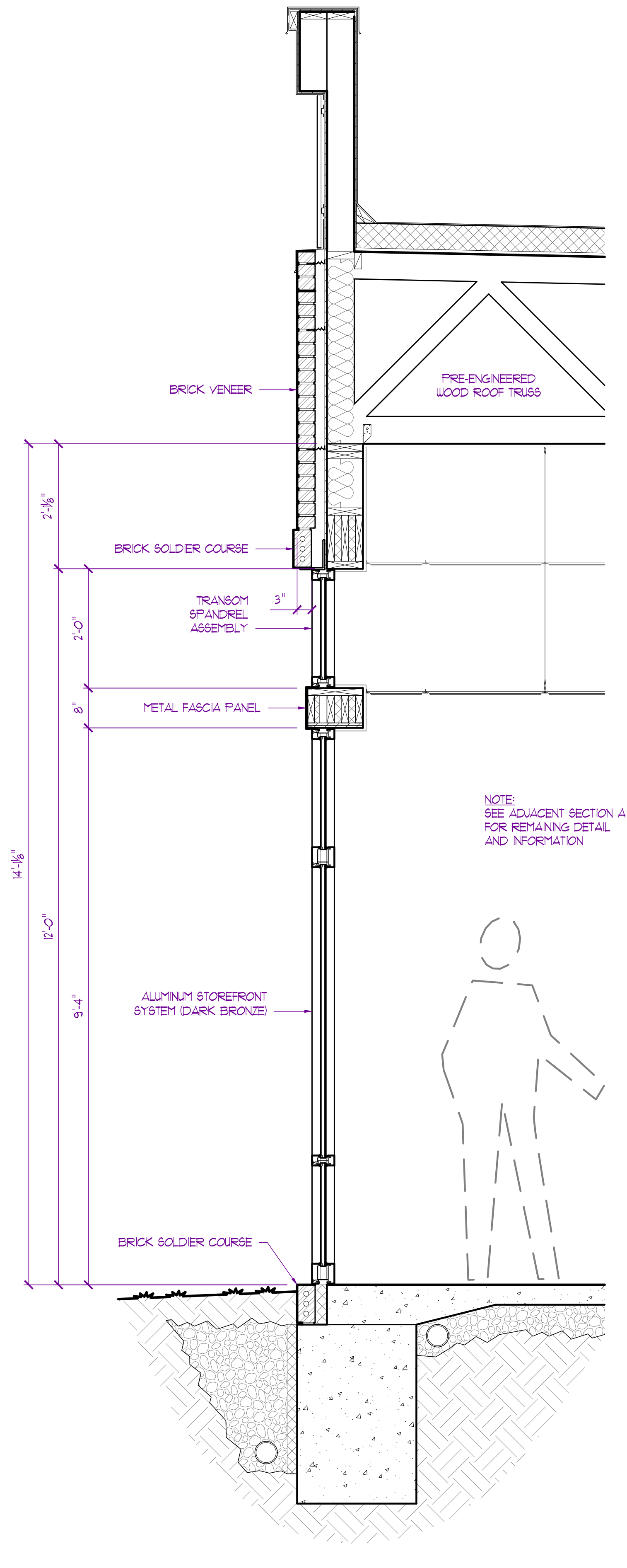
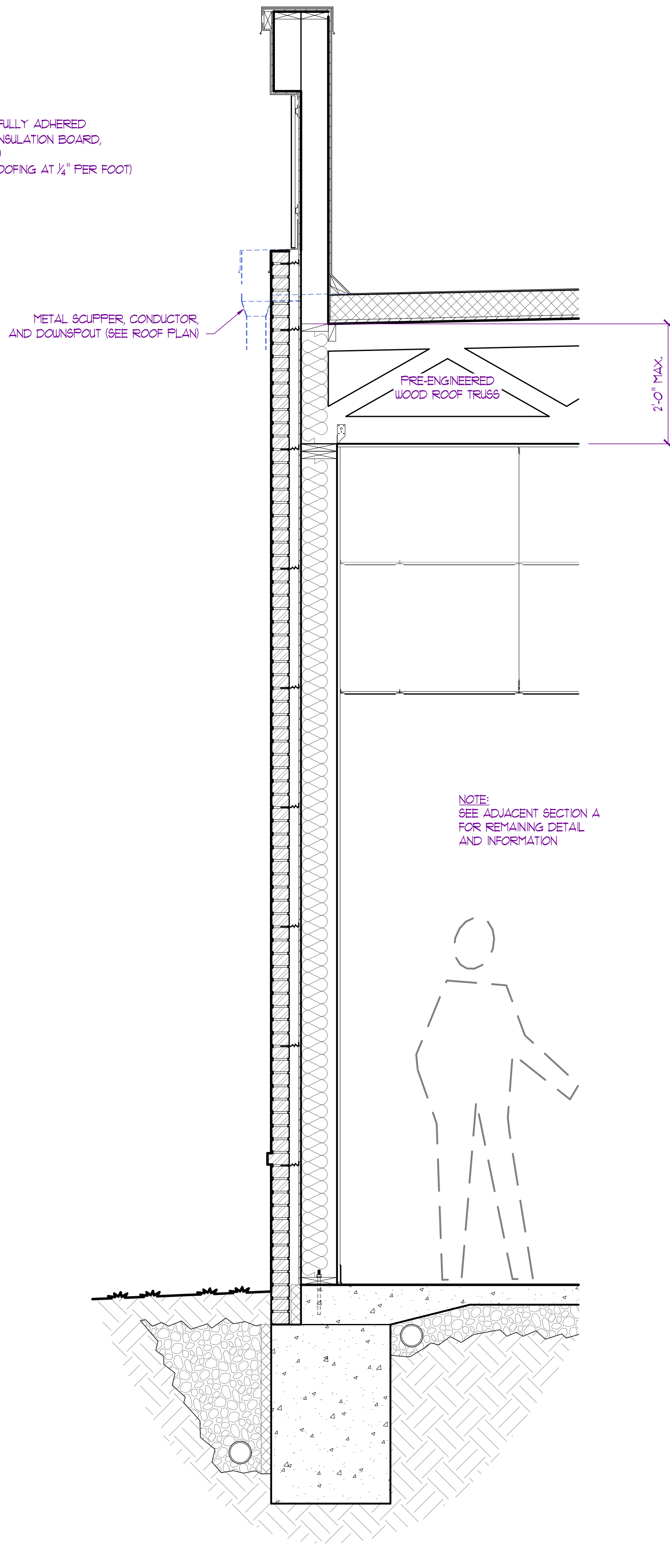
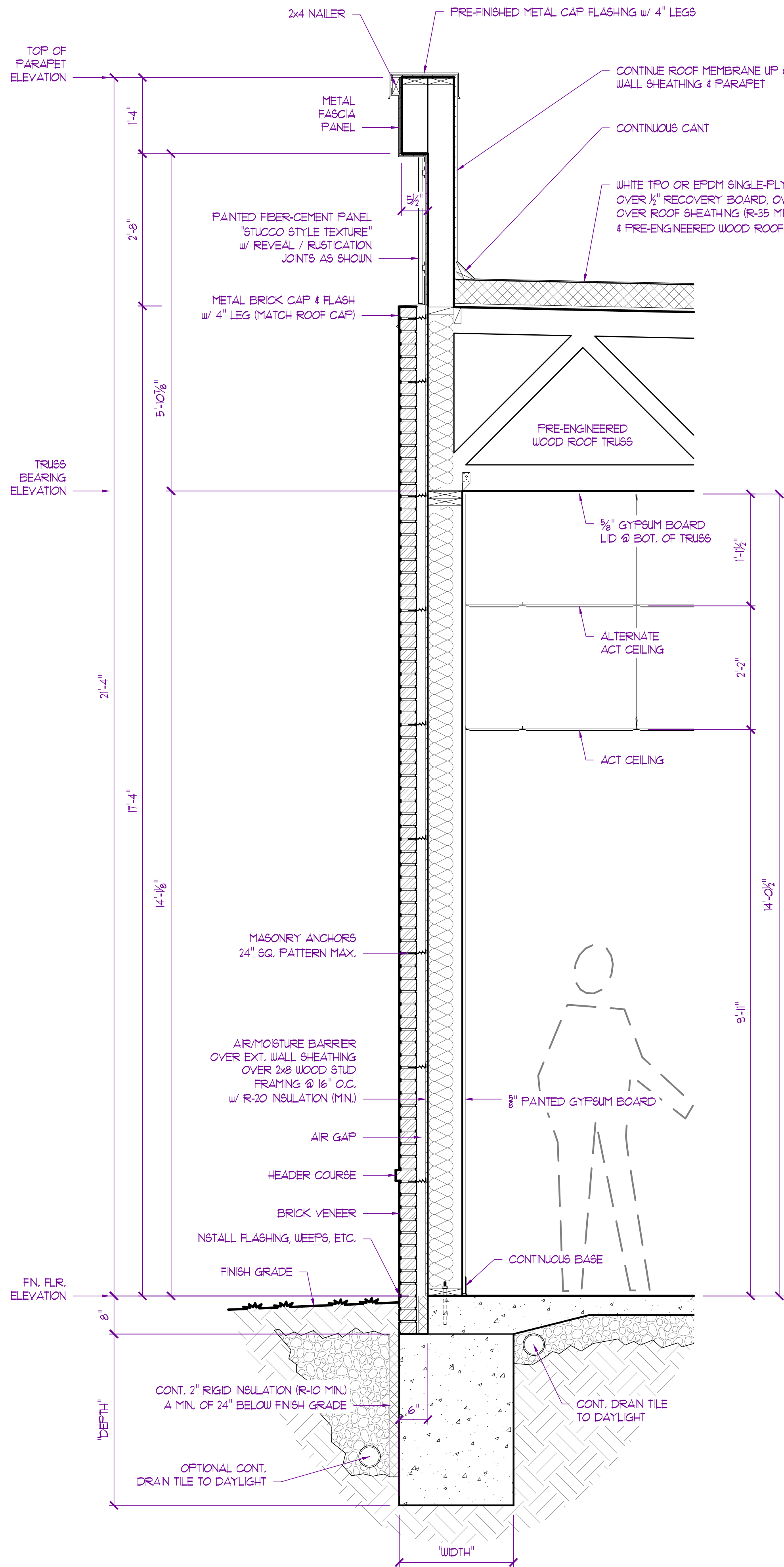
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**A500**









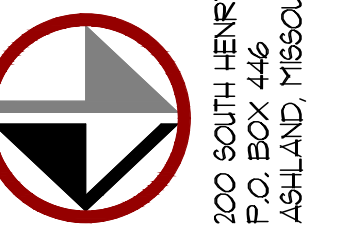
NOTE:  
REFER TO STRUCTURAL DRAWINGS PREPARED BY  
CROCKETT ENGINEERING CONSULTANTS FOR  
ALL STRUCTURAL MEMBER SIZING, SPACINGS,  
AND FASTENING REQUIREMENTS.



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PROJECT NO.

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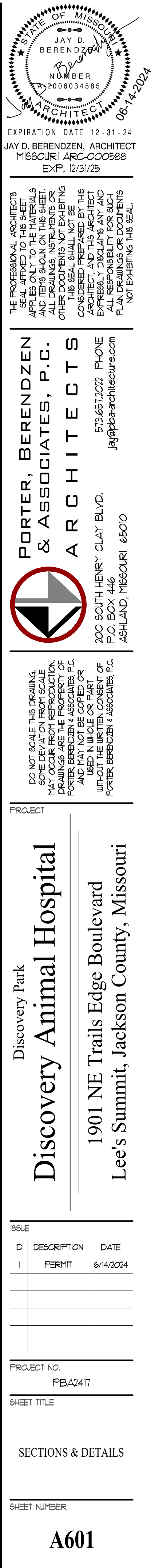
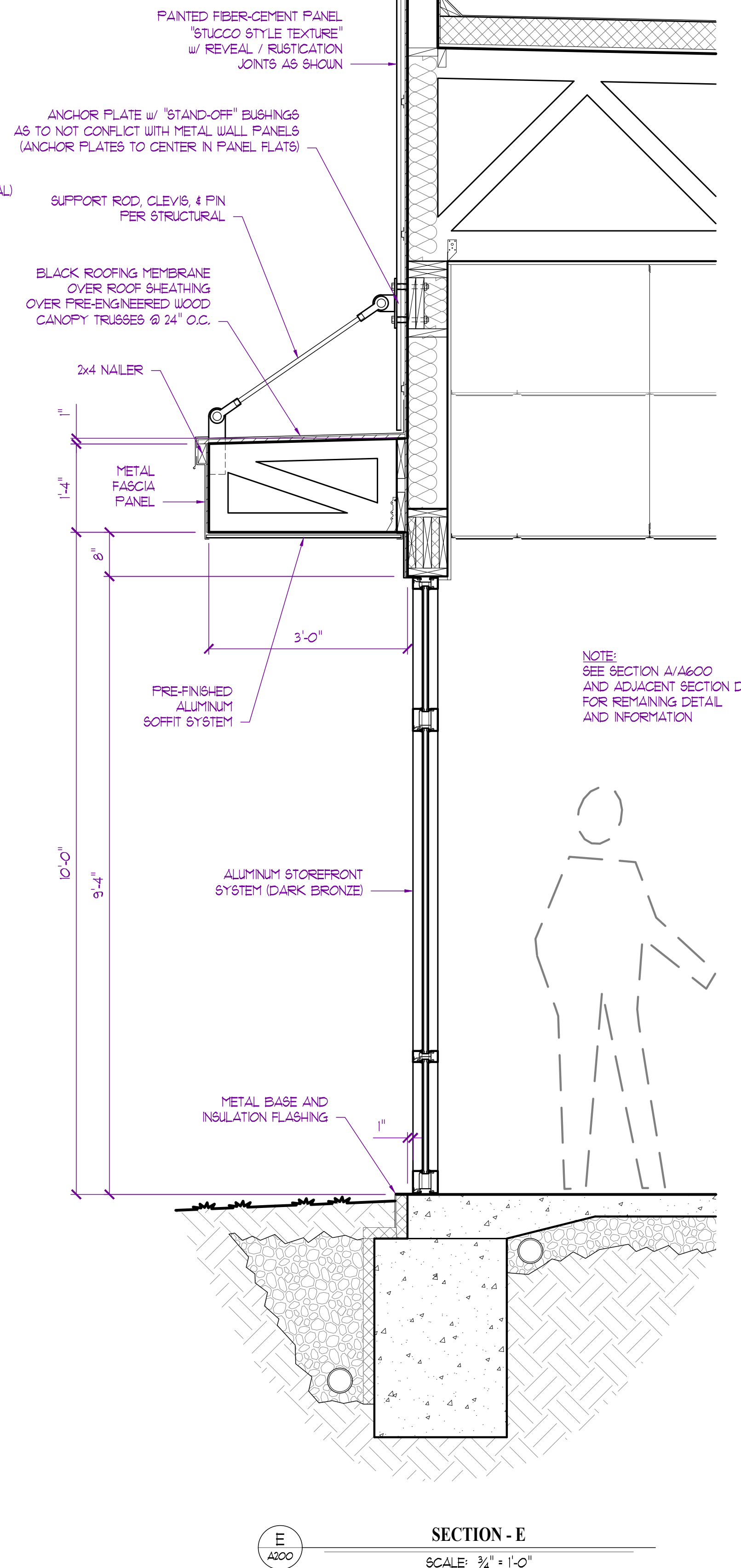
SHEET TITLE

SECTIONS & DETAILS

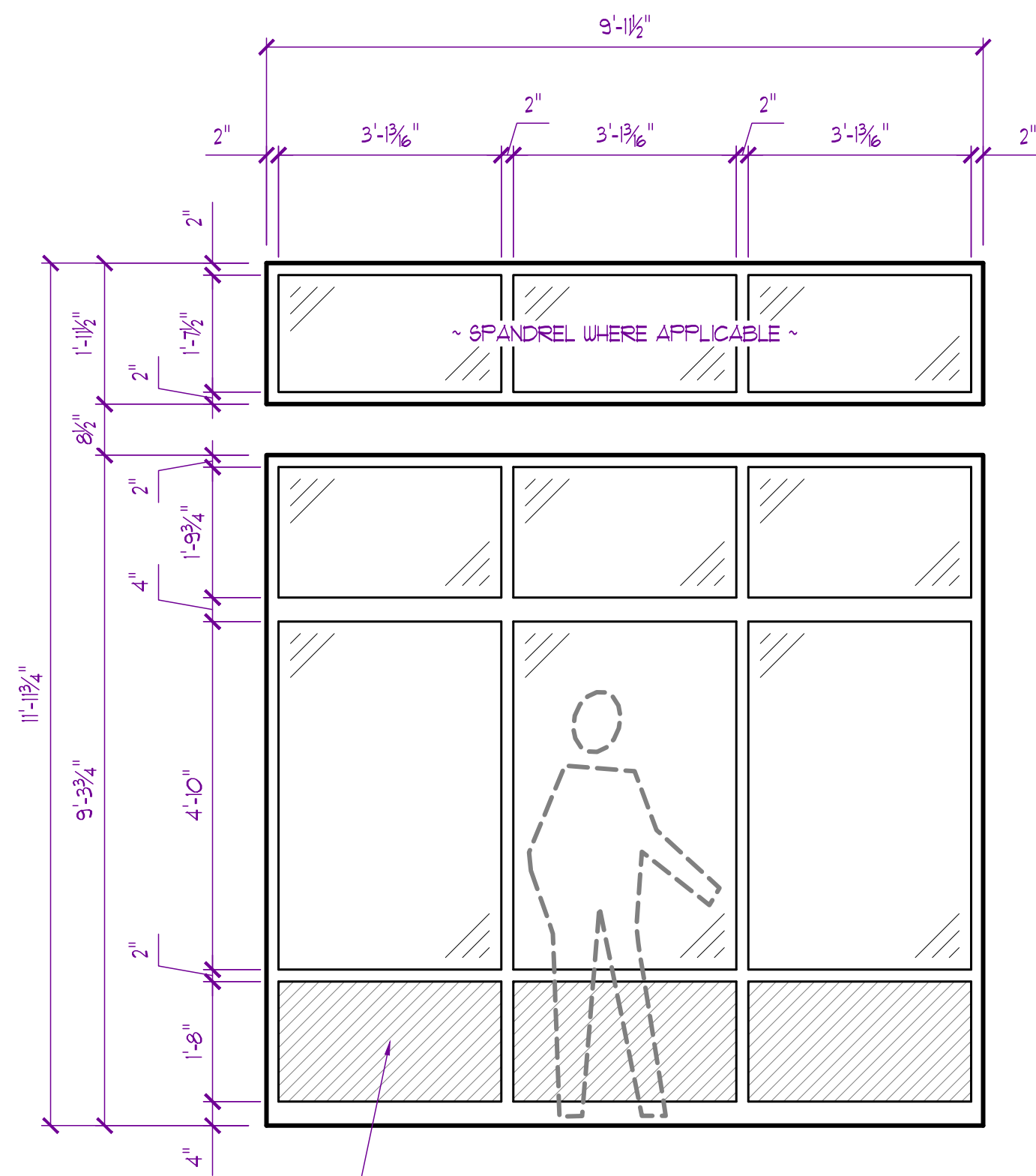
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A600



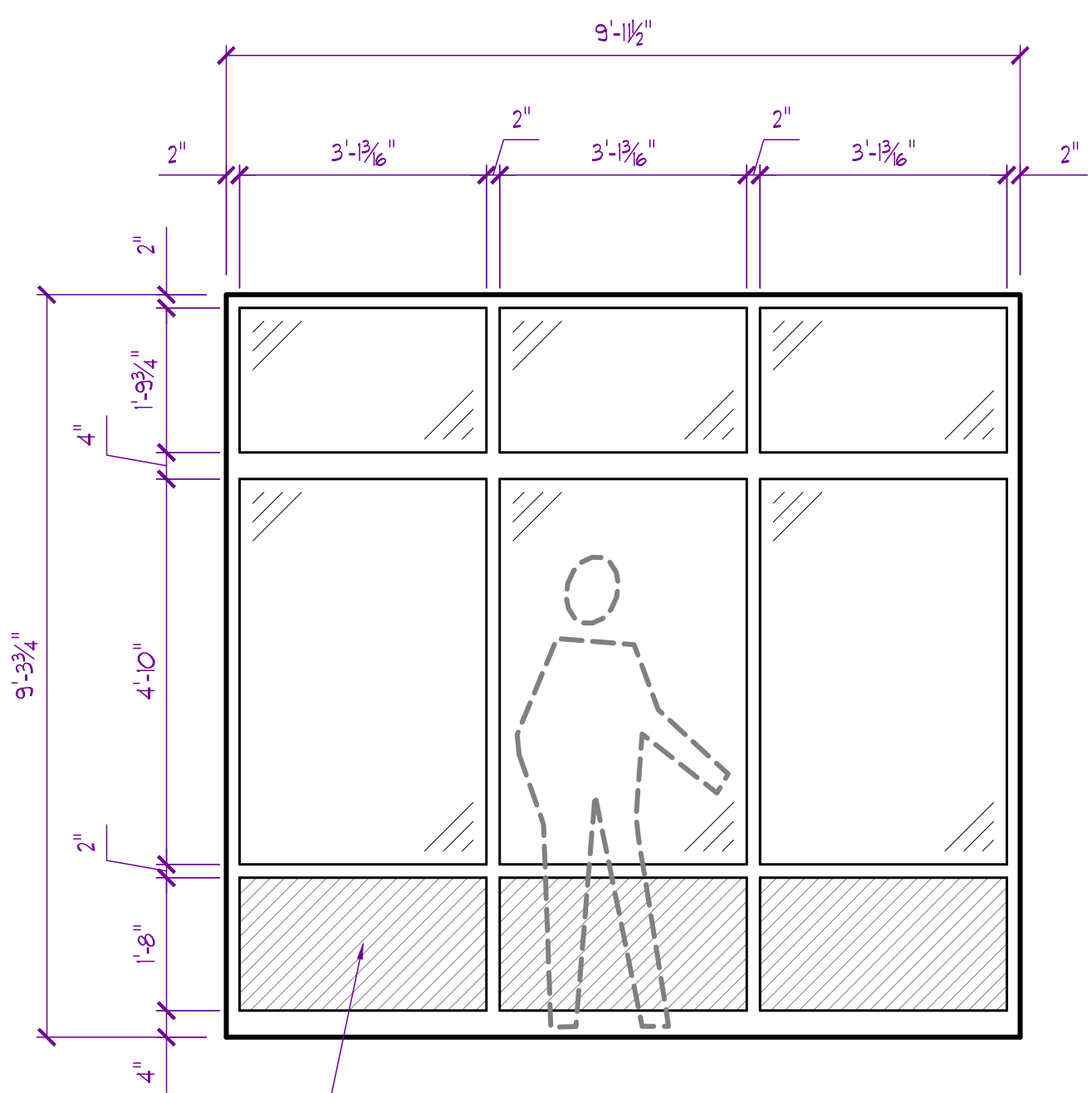






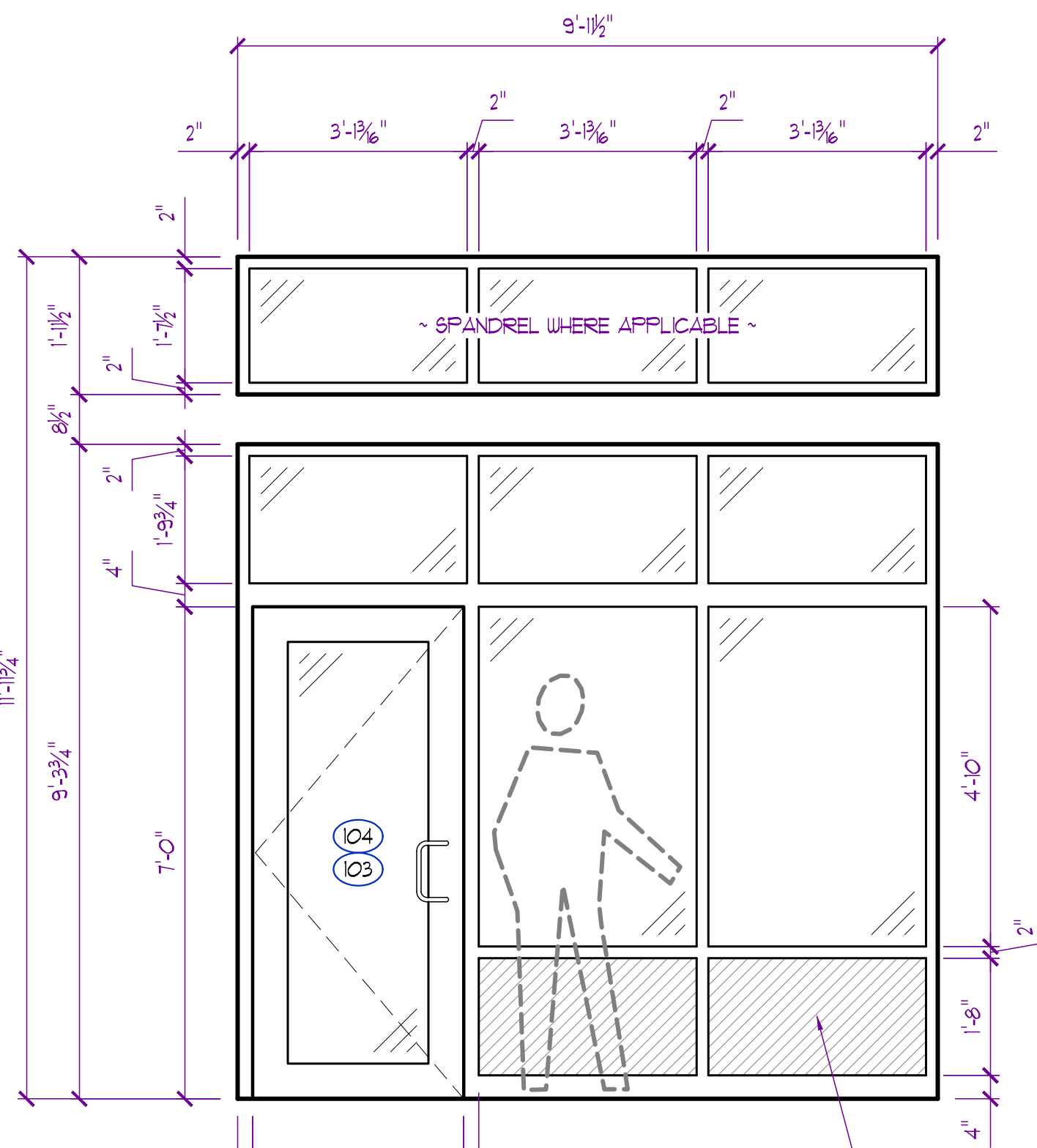
SOLID PANEL TO MATCH FRAME COLOR (TYP. INDICATED BY HATCH)

**A**  
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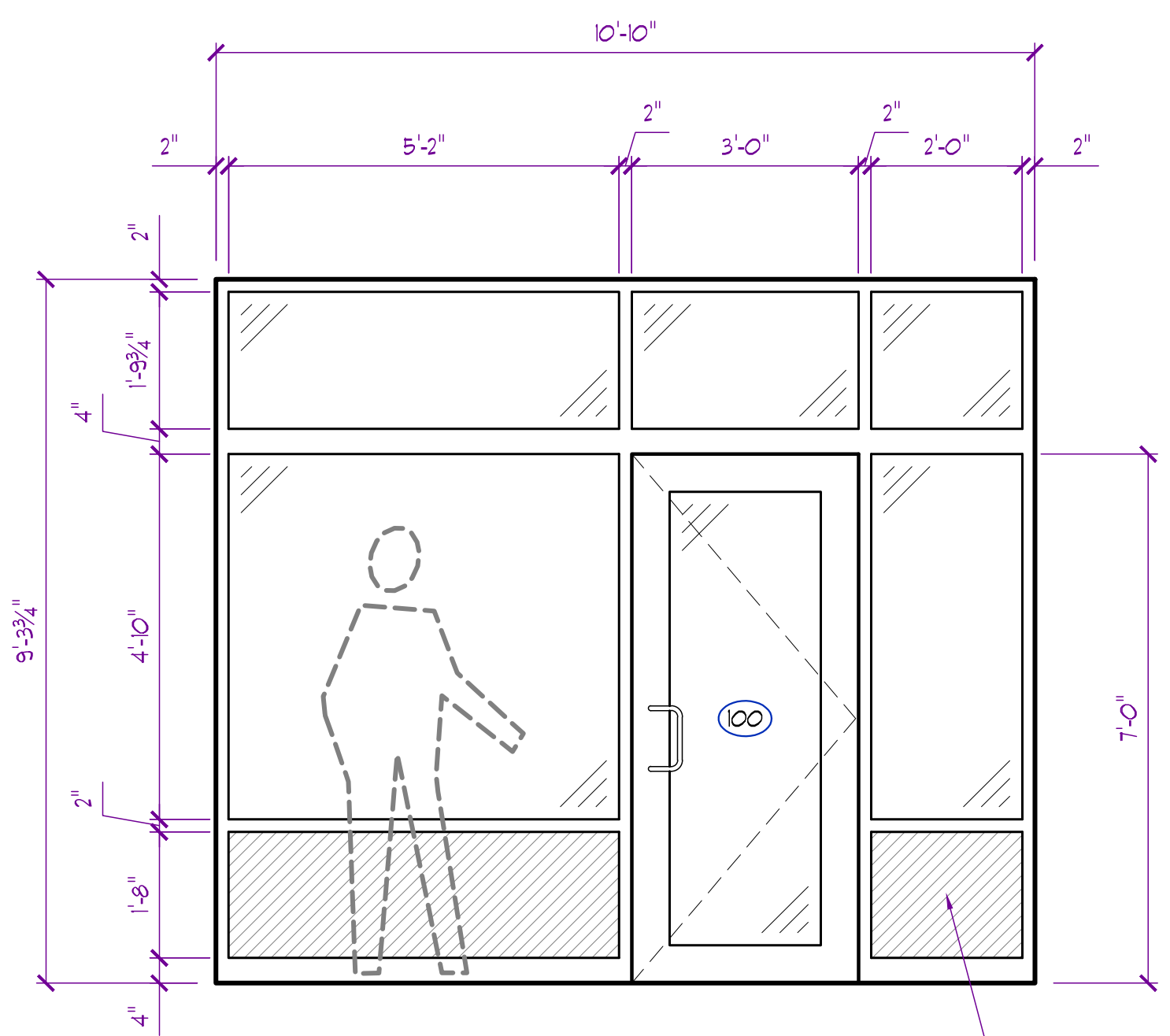


SOLID PANEL TO MATCH FRAME COLOR (TYP. INDICATED BY HATCH)

**B**  
QUANTITY = 2



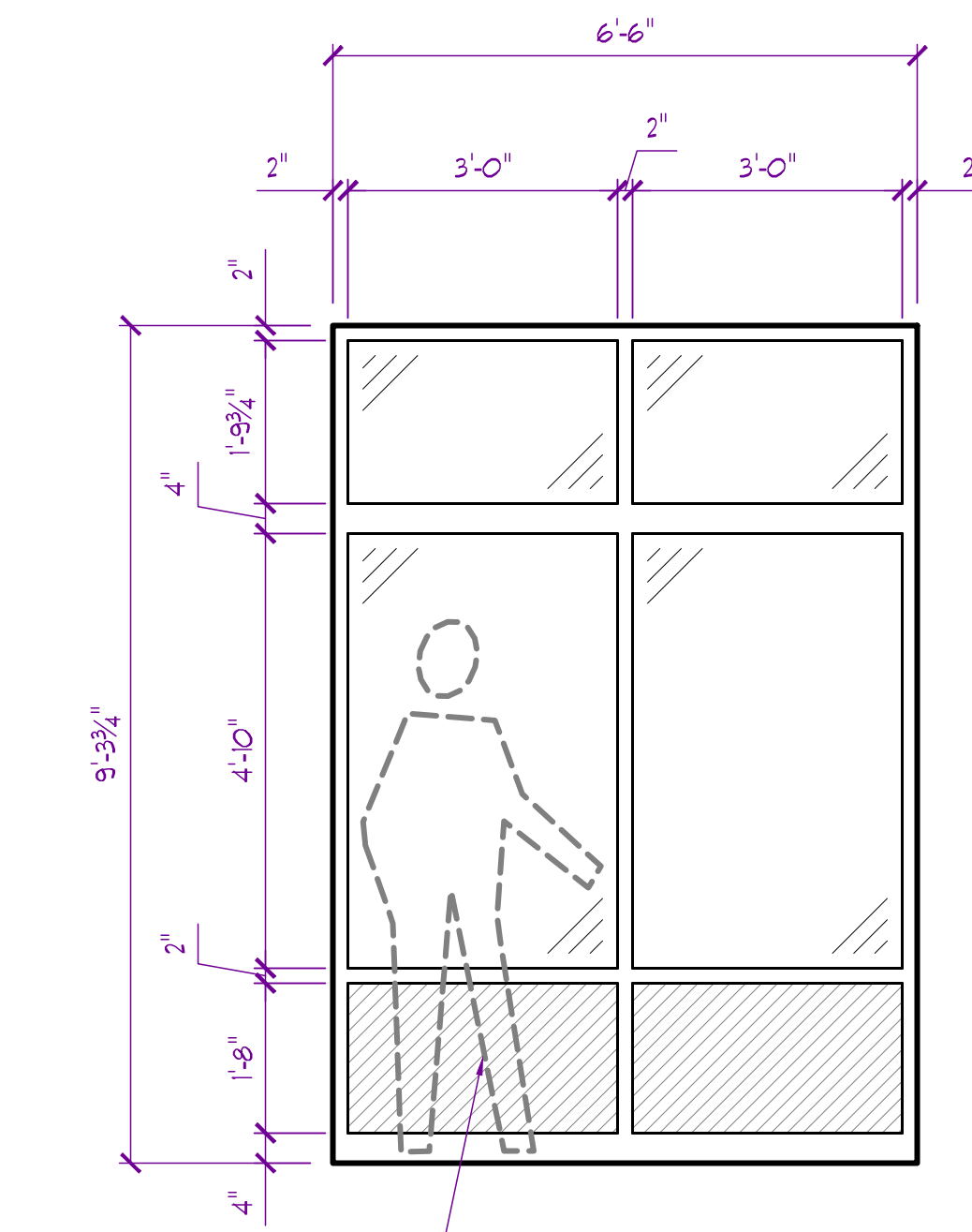
EQ. 3'-0\"/>  
**C** AS SHOWN QUANTITY = 1  
**D** OPPOSITE HAND QUANTITY = 1



SOLID PANEL TO MATCH FRAME COLOR (TYP. INDICATED BY HATCH)

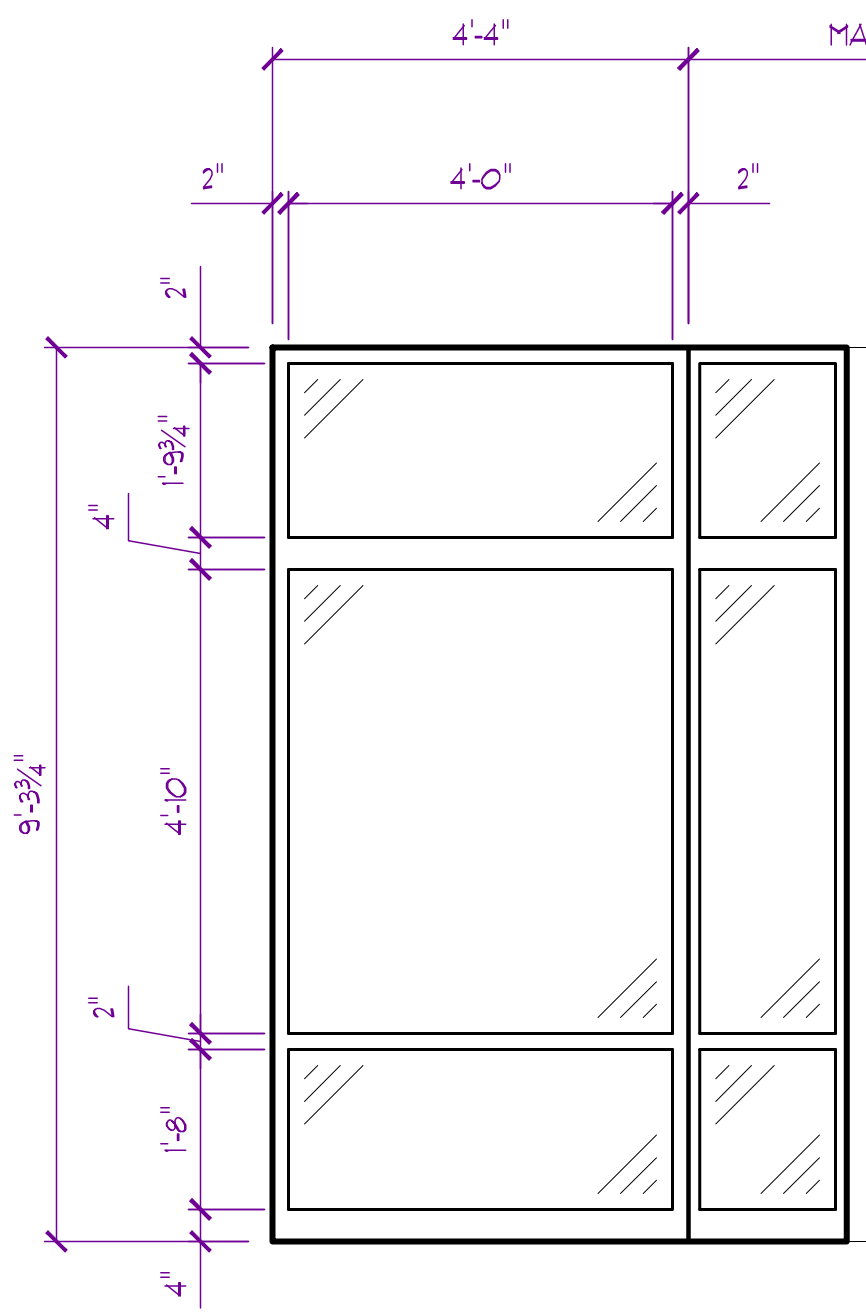
**E**  
QUANTITY = 1

- ALUMINUM STOREFRONT NOTES:
1. ALL ASSEMBLIES SHOWN ARE FROM EXTERIOR VIEW UNLESS NOTED OTHERWISE
  2. GENERAL CONTRACTOR TO FIELD VERIFY ALL DOOR / WINDOW ROUGH OPENINGS PRIOR TO FABRICATION
  3. PROVIDE SEALANT AT JOINTS AND OPENINGS FOR WEATHER TIGHT INSTALLATION
  4. ALL STOREFRONT ASSEMBLIES TO MEET U-FACTOR VALUES AS INDICATED IN BUILDING ENVELOPE REPORT
  5. ALL STOREFRONT DOORS / WINDOWS, TRIM, ACCESSORIES, BREAK METAL, ETC. PROVIDED BY SAME MANUFACTURER
  6. ALL STOREFRONT FRAMES TO BE DARK BRONZE OR EQUAL
  7. ALL EXTERIOR GLAZING TO BE LOW E INSULATED GLASS w/ GRAY TINT (SAFETY GLASS WHERE INDICATED OR REQUIRED BY CODE)
  8. ALL INTERIOR GLAZING TO BE 1/2\"



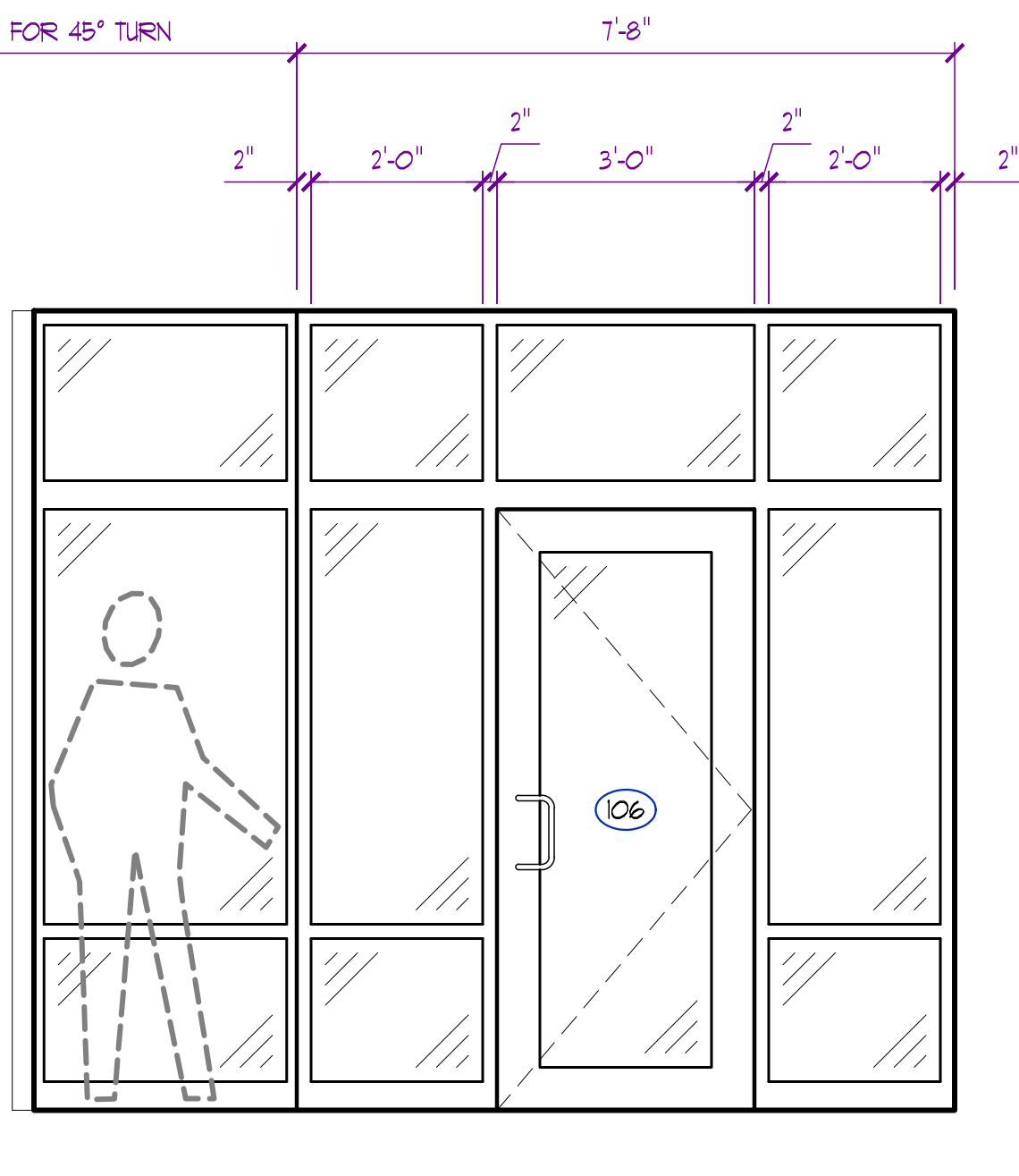
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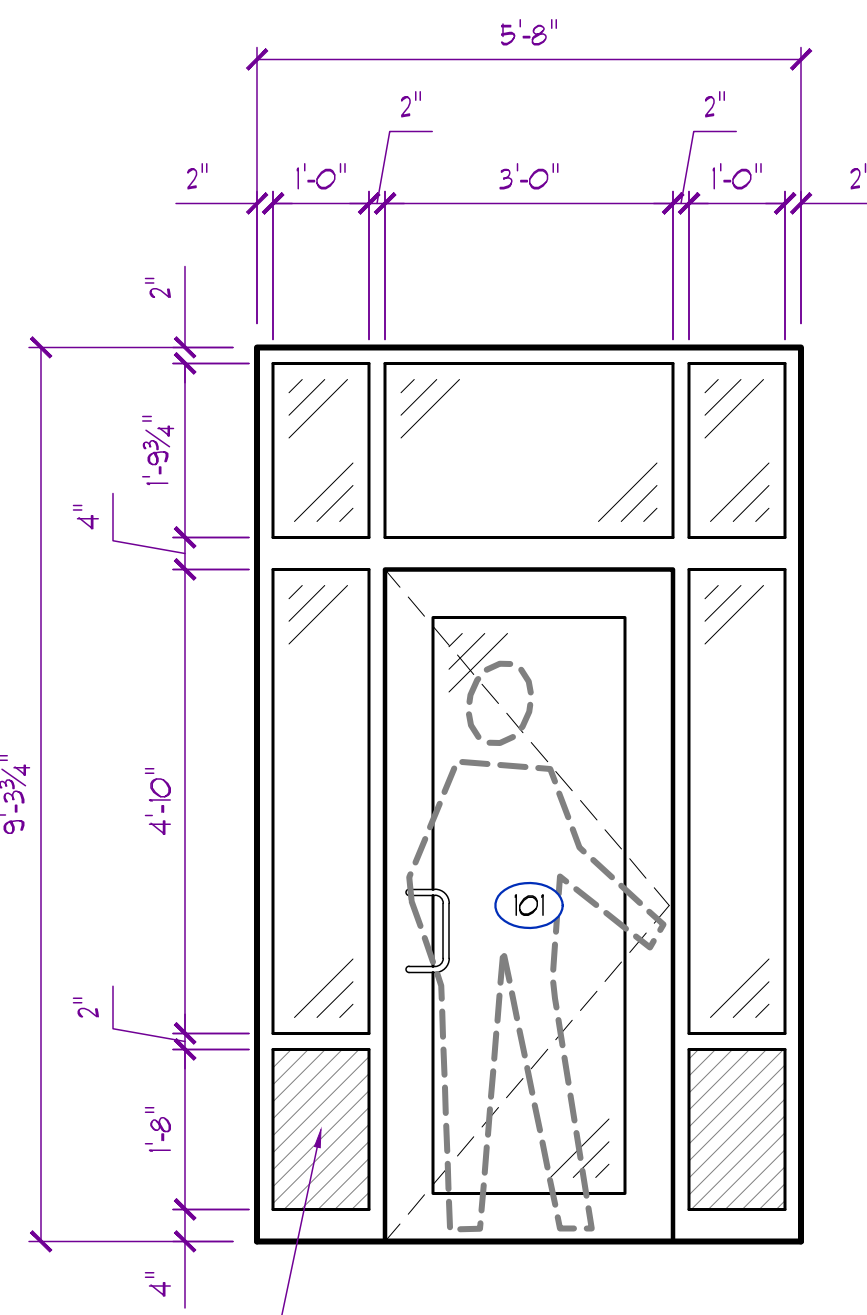
MATCHLINE FOR 45° TURN

**G**  
QUANTITY = 1



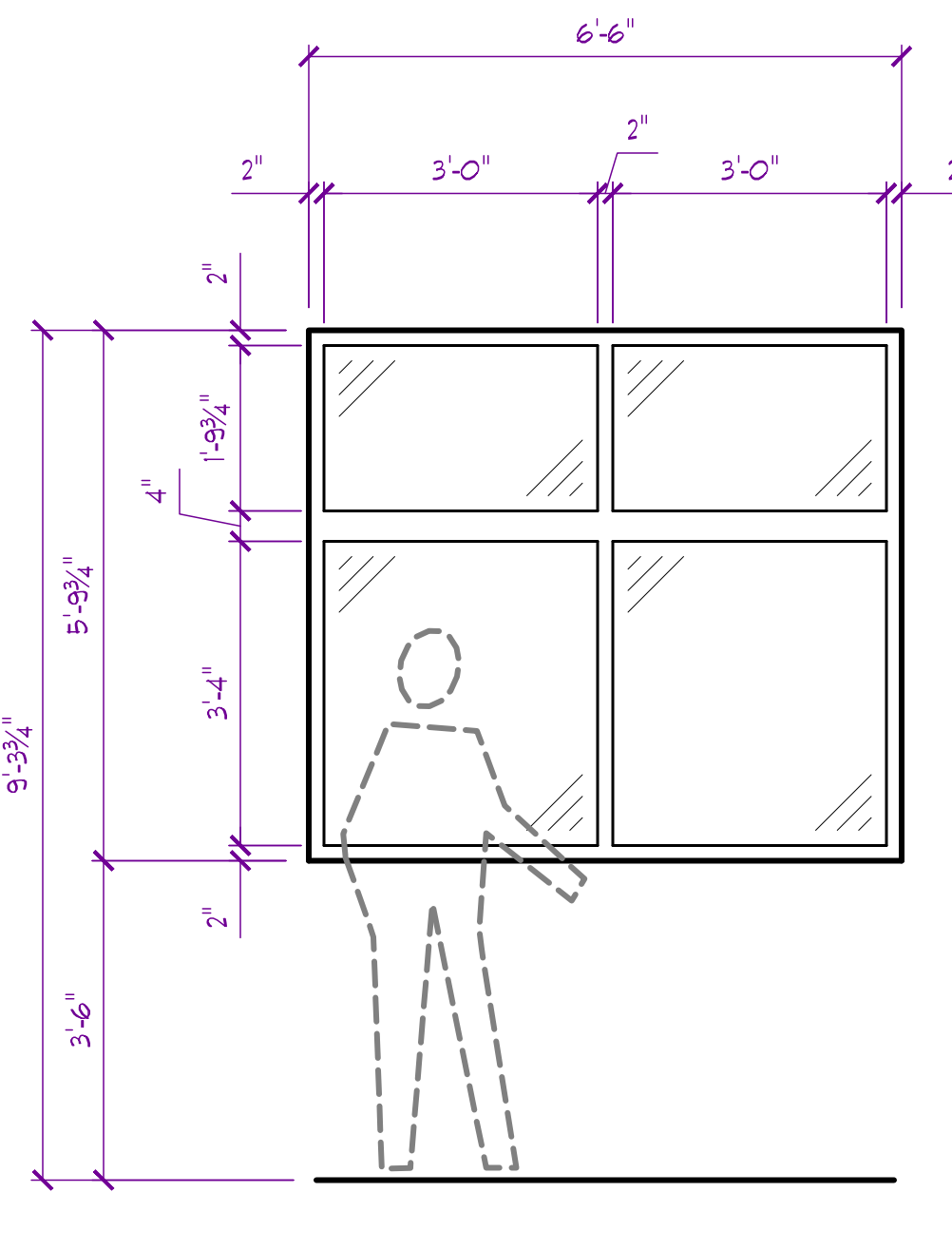
SOLID PANEL TO MATCH FRAME COLOR (TYP. INDICATED BY HATCH)

**H**  
QUANTITY = 1

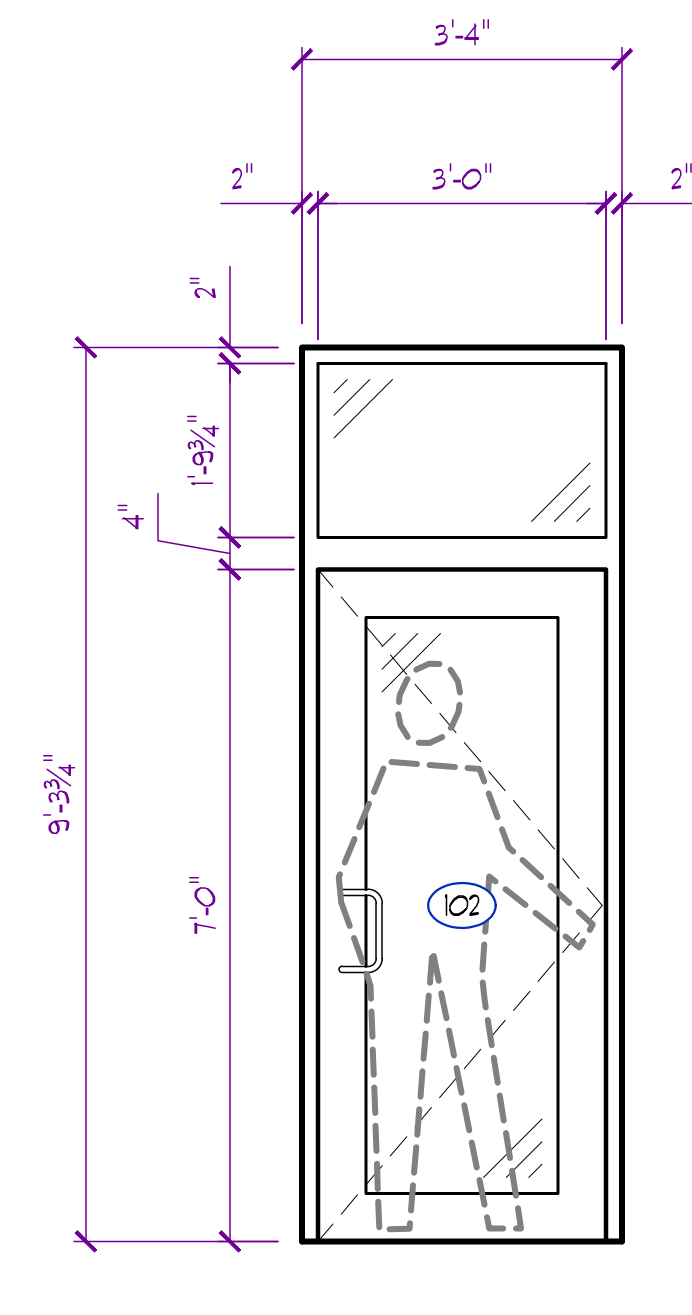


SOLID PANEL TO MATCH FRAME COLOR (TYP. INDICATED BY HATCH)

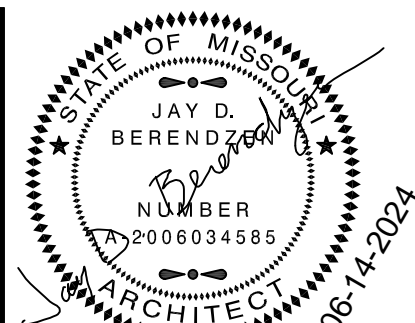
**I**  
QUANTITY = 1



**J**  
QUANTITY = 1



**K**  
QUANTITY = 1



EXPIRATION DATE 12-31-24  
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MISSOURI ARC-000588  
EXP. 12/31/25

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Discovery Park  
**Discovery Animal Hospital**  
1901 NE Trails Edge Boulevard  
Lee's Summit, Jackson County, Missouri

ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024

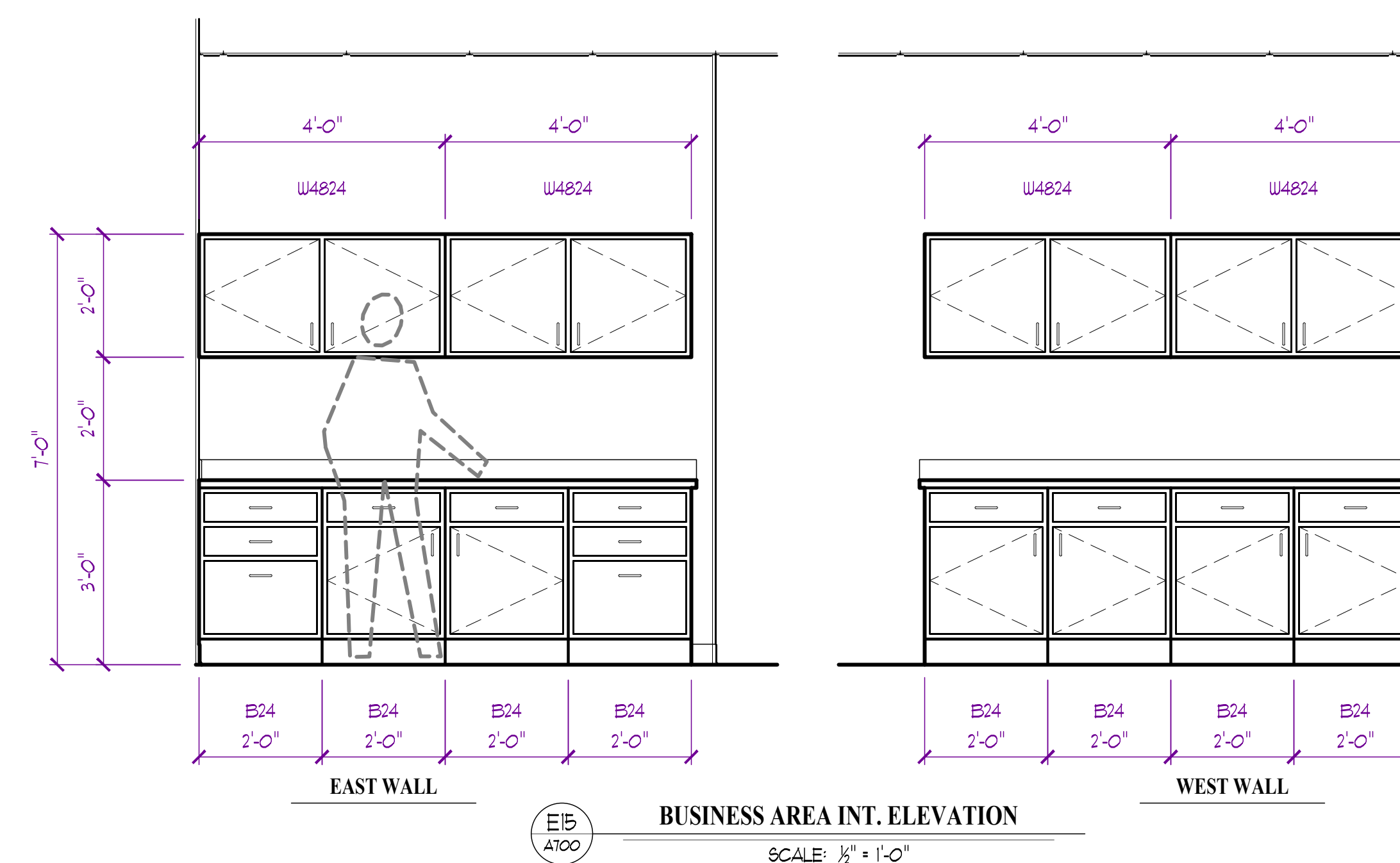
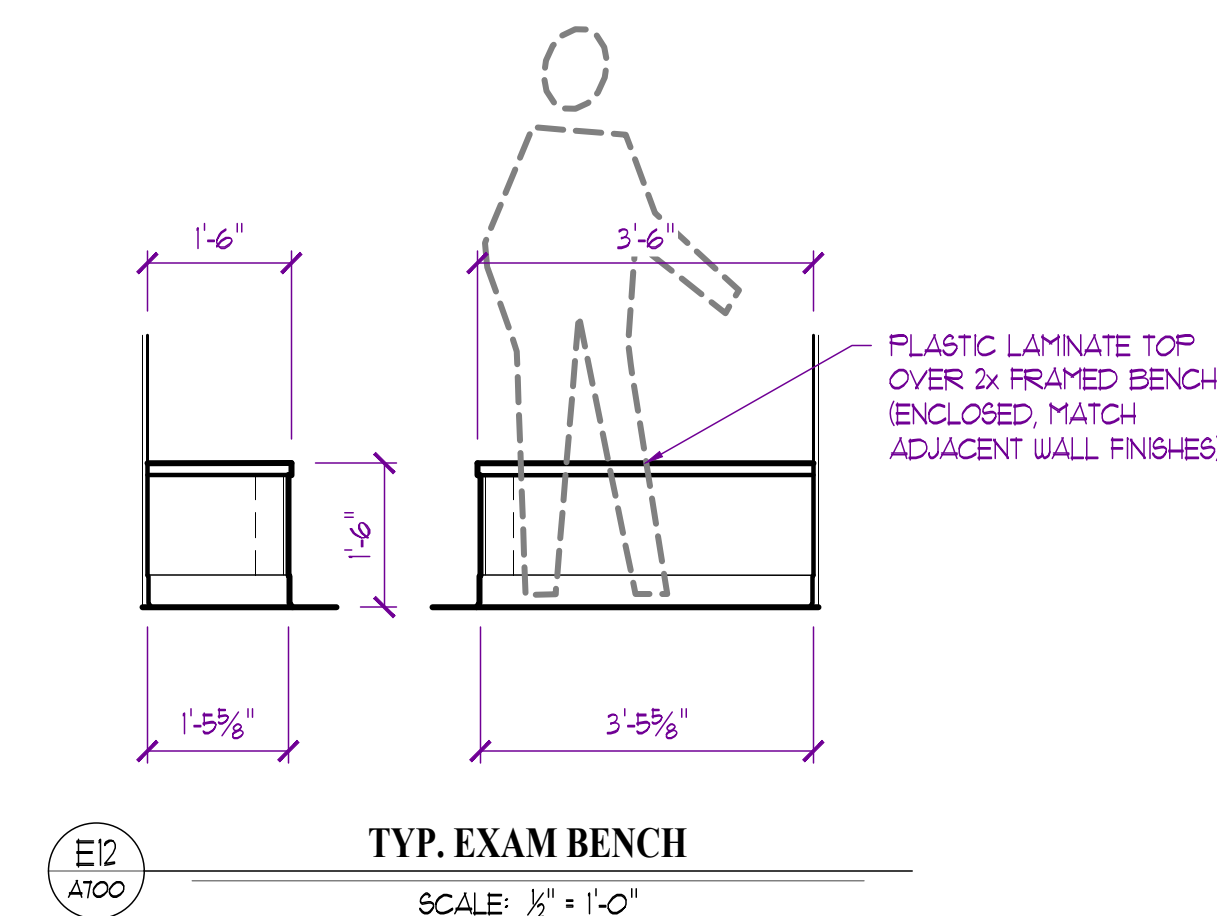
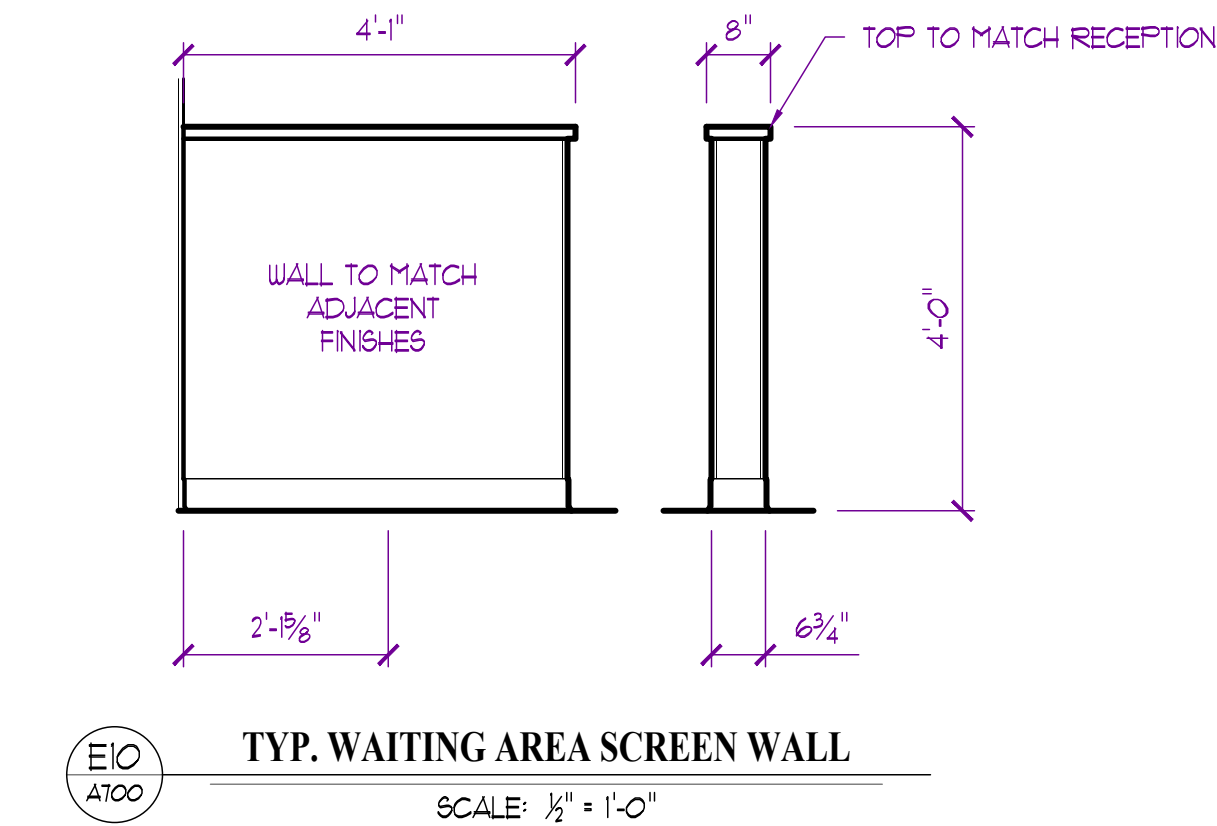
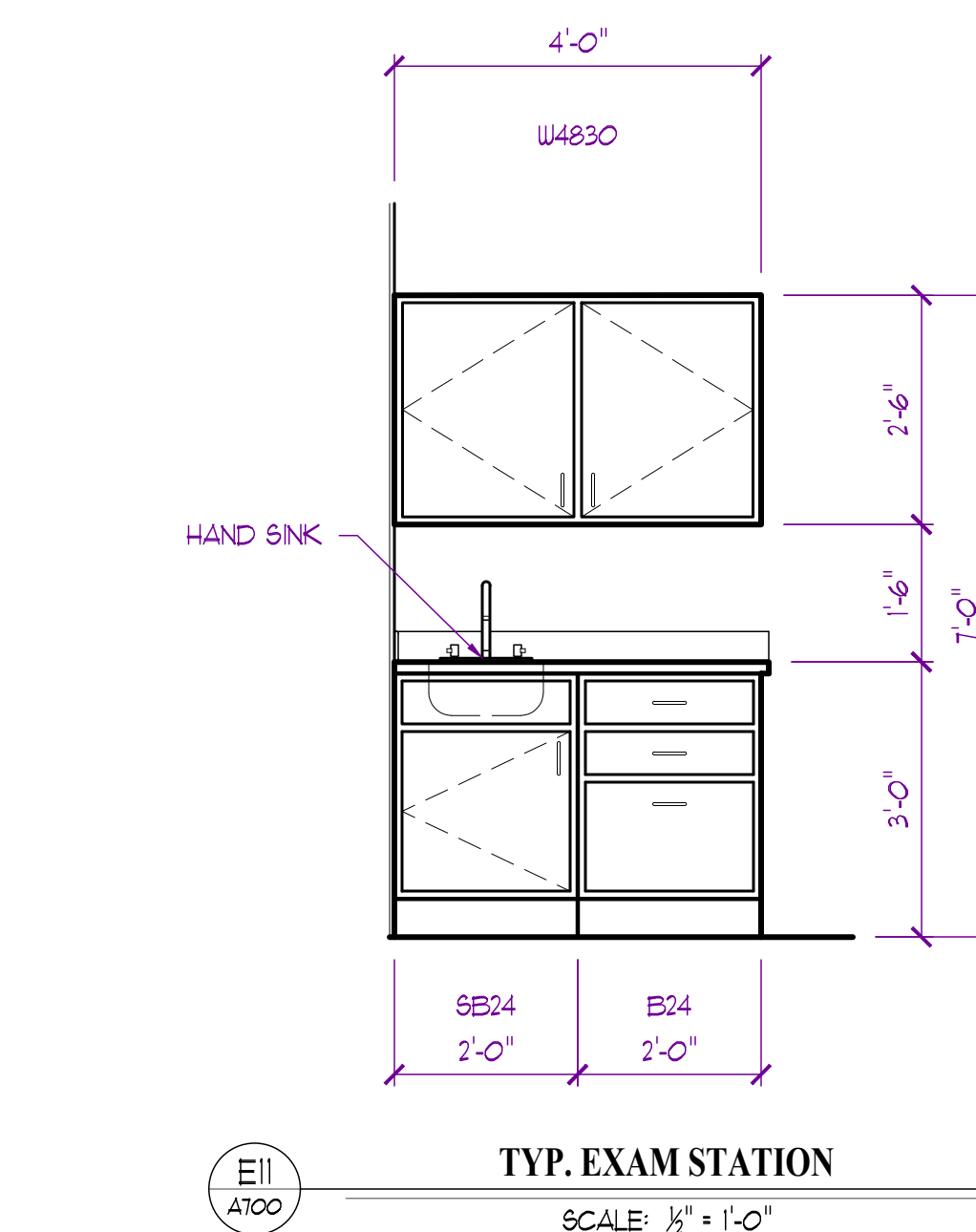
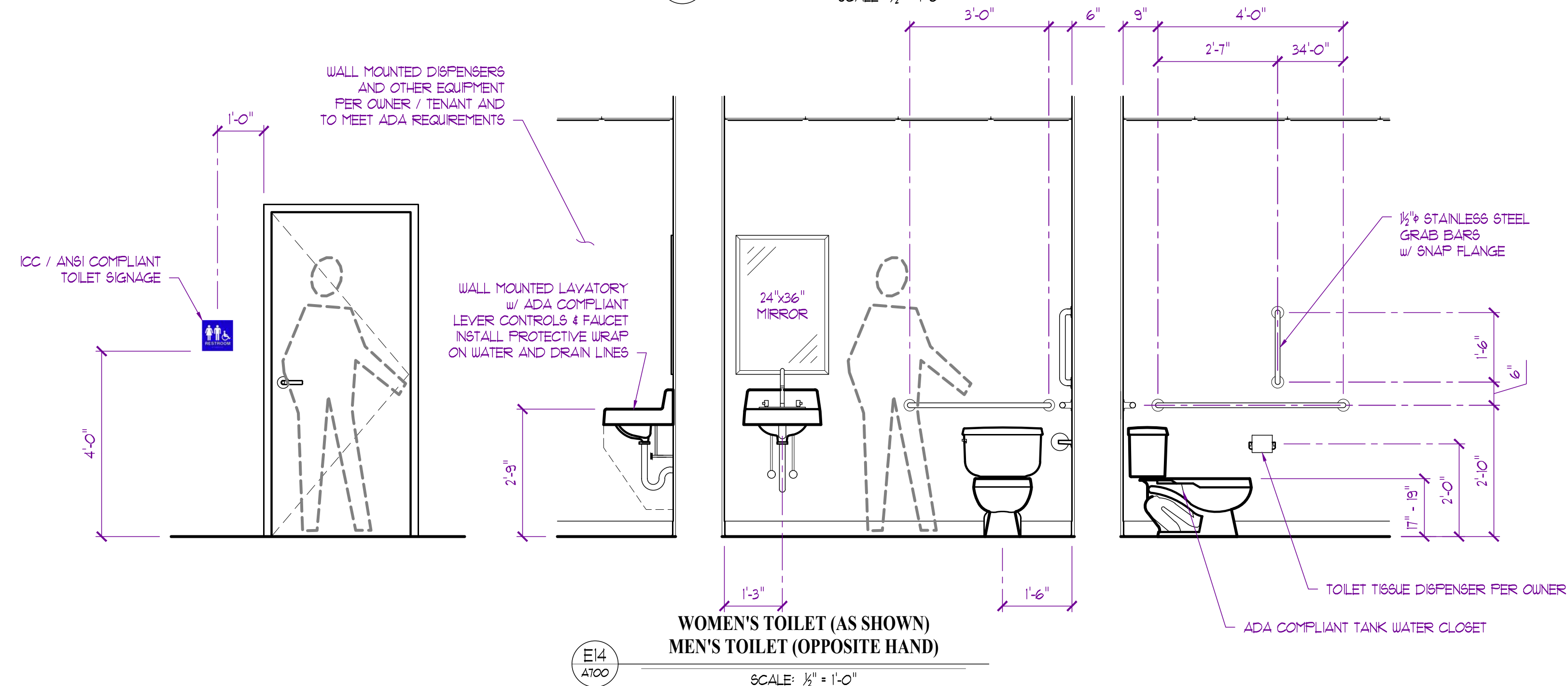
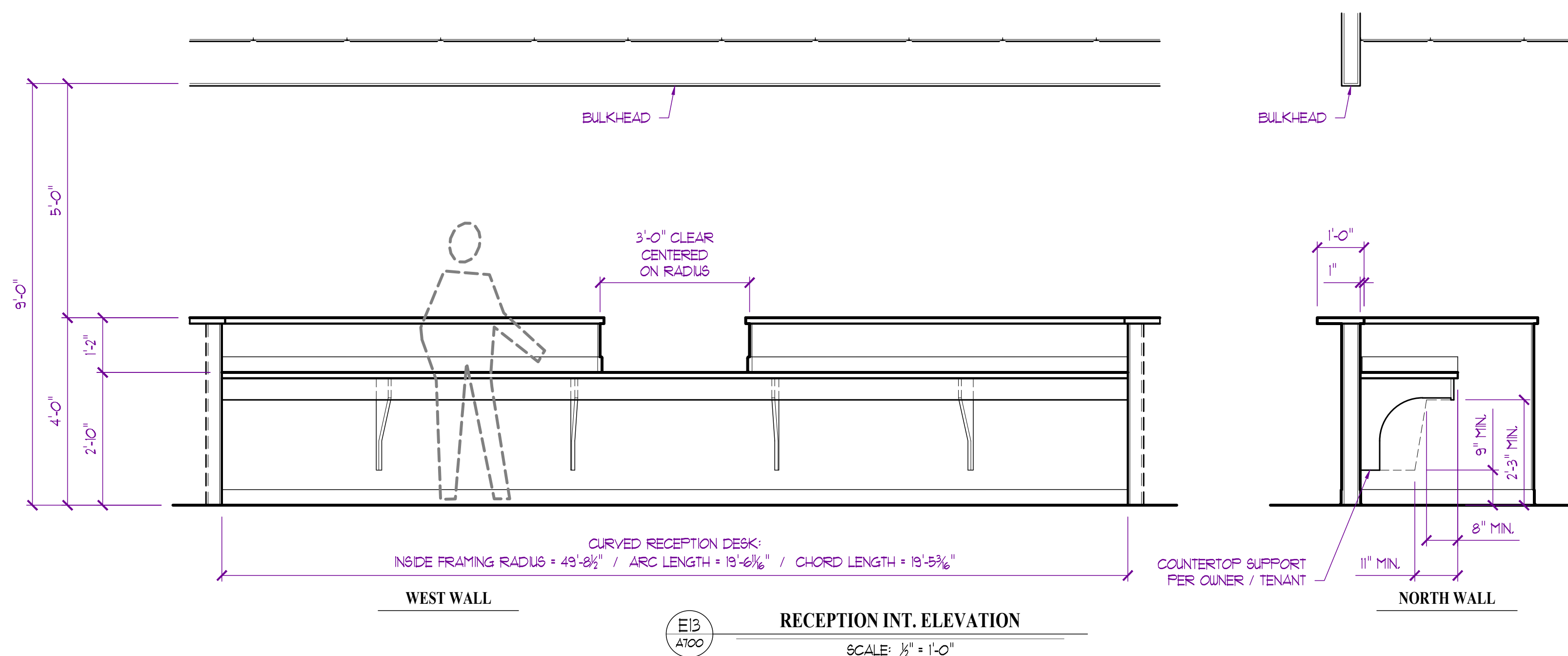
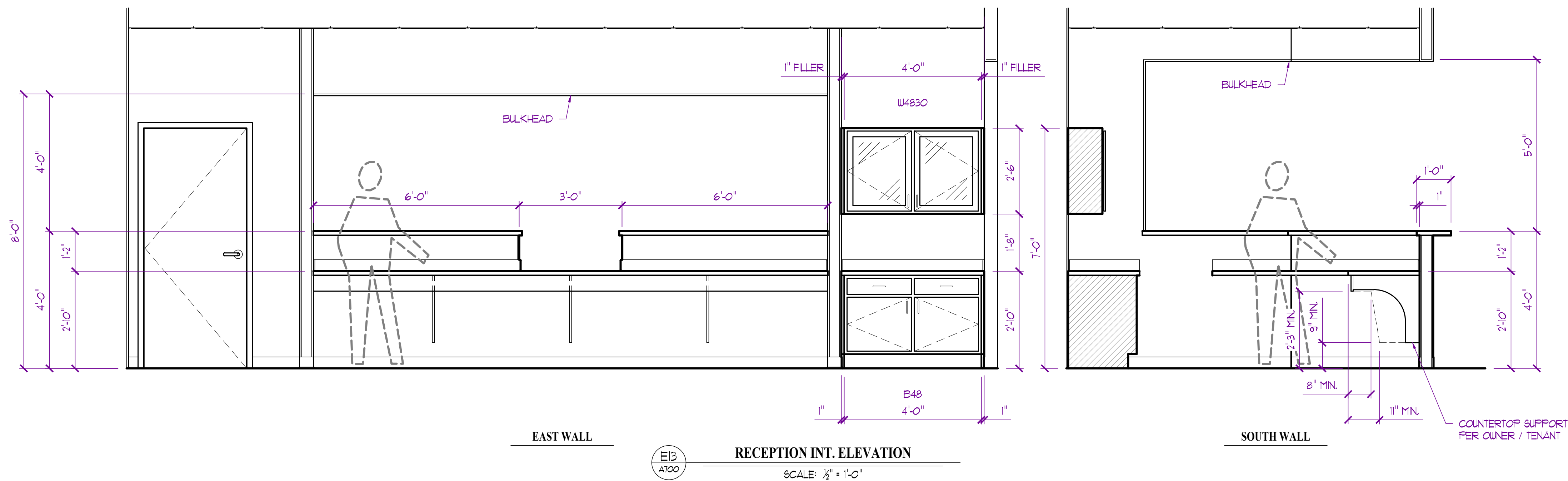
PROJECT NO. FB242417

SHEET TITLE

SECTIONS & DETAILS

SHEET NUMBER






- INTERIOR ELEVATION NOTES:**

1. ALL ELEVATIONS TAKEN FROM TOP OF FINISH FLOOR SLAB, ASSUMED AT 0'-0".
2. ALL DIMENSIONS TO **FINISH FACE OF WALL** UNLESS NOTED OTHERWISE.
3. OVERTURN/TEN TO VERIFY ALL FINISHES/MATERIALS PRIOR TO CONSTRUCTION.
4. SEE ROOM FINISH SCHEDULE ON SHEET ASOC FOR REMAINING INFORMATION.
5. ALL WORK TO COMPLY WITH AMERICAN NATIONAL STANDARD (ANSI) ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.
6. BASE CABINETS TO BE 24" IN DEPTH / WALL CABINETS TO BE 12" IN DEPTH, TYPICAL UNLESS NOTED OTHERWISE.
7. ALL COUNTERTOPS TO BE PLASTIC LAMINATE (STYLE / COLORS PER TENANT) WITH 3mm PVC EDGE BANDING, ADJACENT BACKSPLASH / SIDESPLASH TO MATCH. (25" BASE / 12" SHELVLING) TYPICAL UNLESS NOTED OTHERWISE.
8. INSTALL ALL FINISHES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

EXPIRATION DATE 12-31-24  
JAY D. BERENDZEN, ARCHITECT  
MISSOURI ARC-000588  
EXP. 12/31/25

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PROJECT \_\_\_\_\_

Discovery Park  
**Discovery Animal Hospital**  
1901 NE Trails Edge Boulevard  
Lee's Summit, Jackson County, Missouri

[illegible]

PROJECT NO.  
FBA2417

SHEET TITLE

## INTERIOR ELEVATIONS

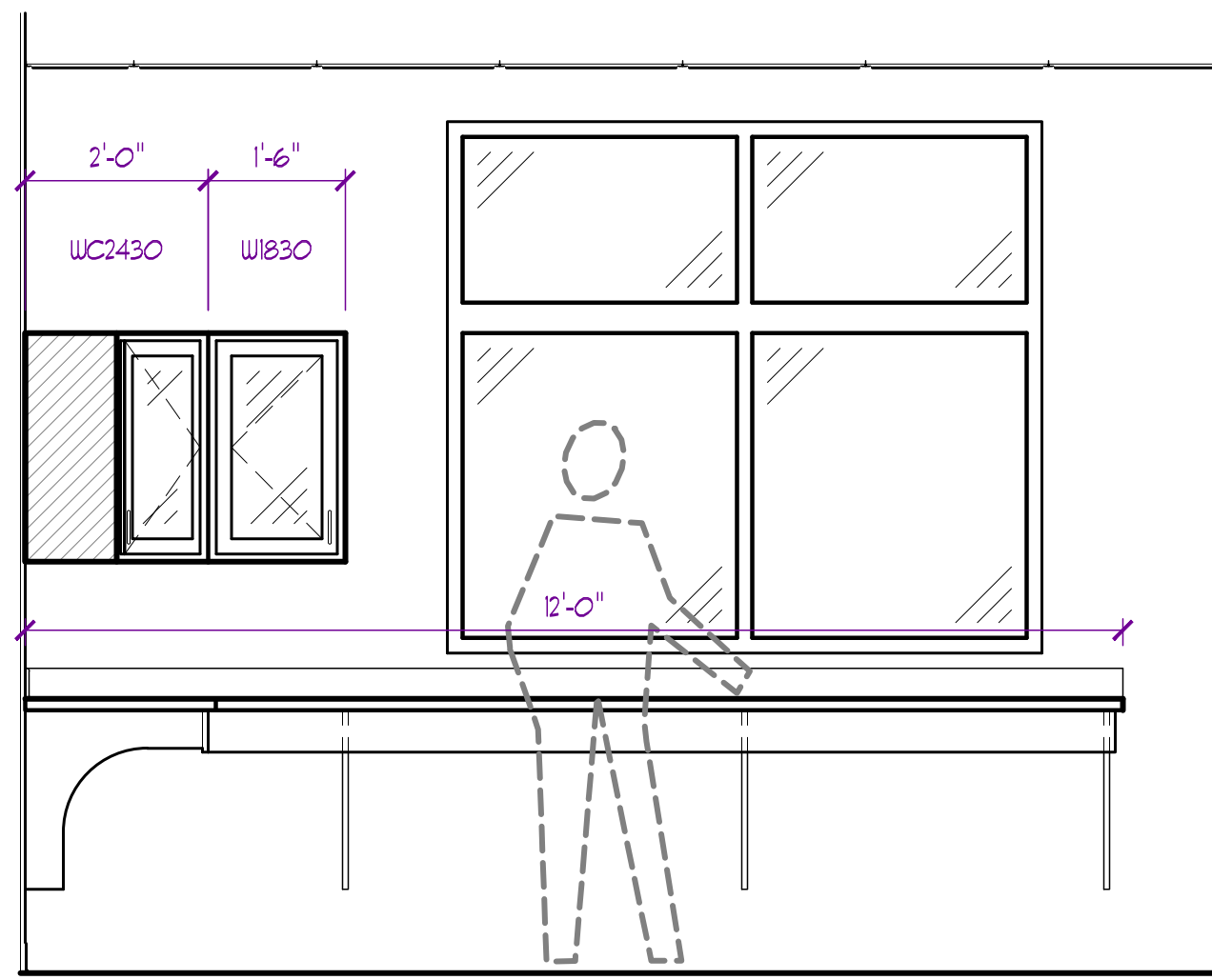
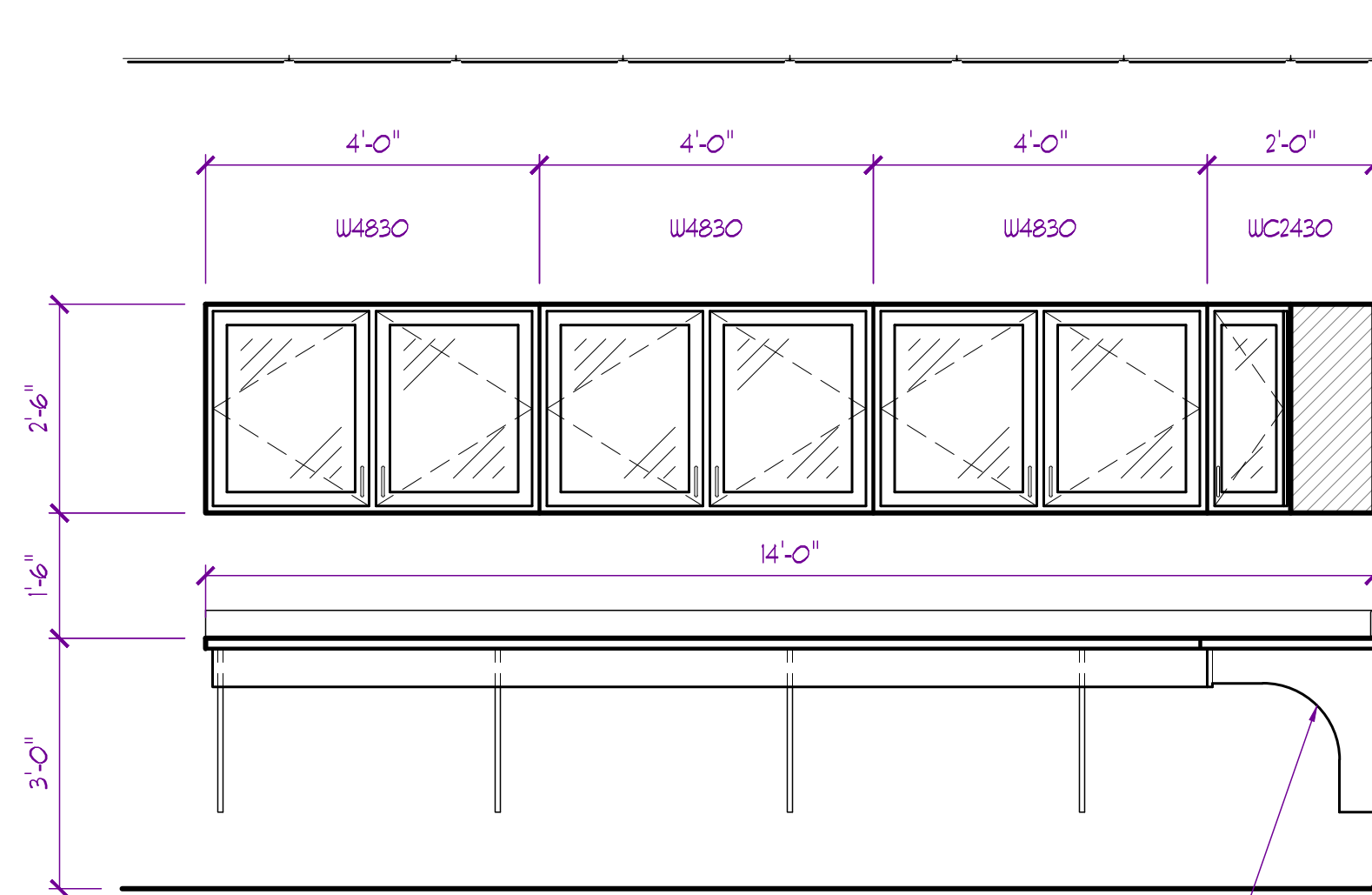
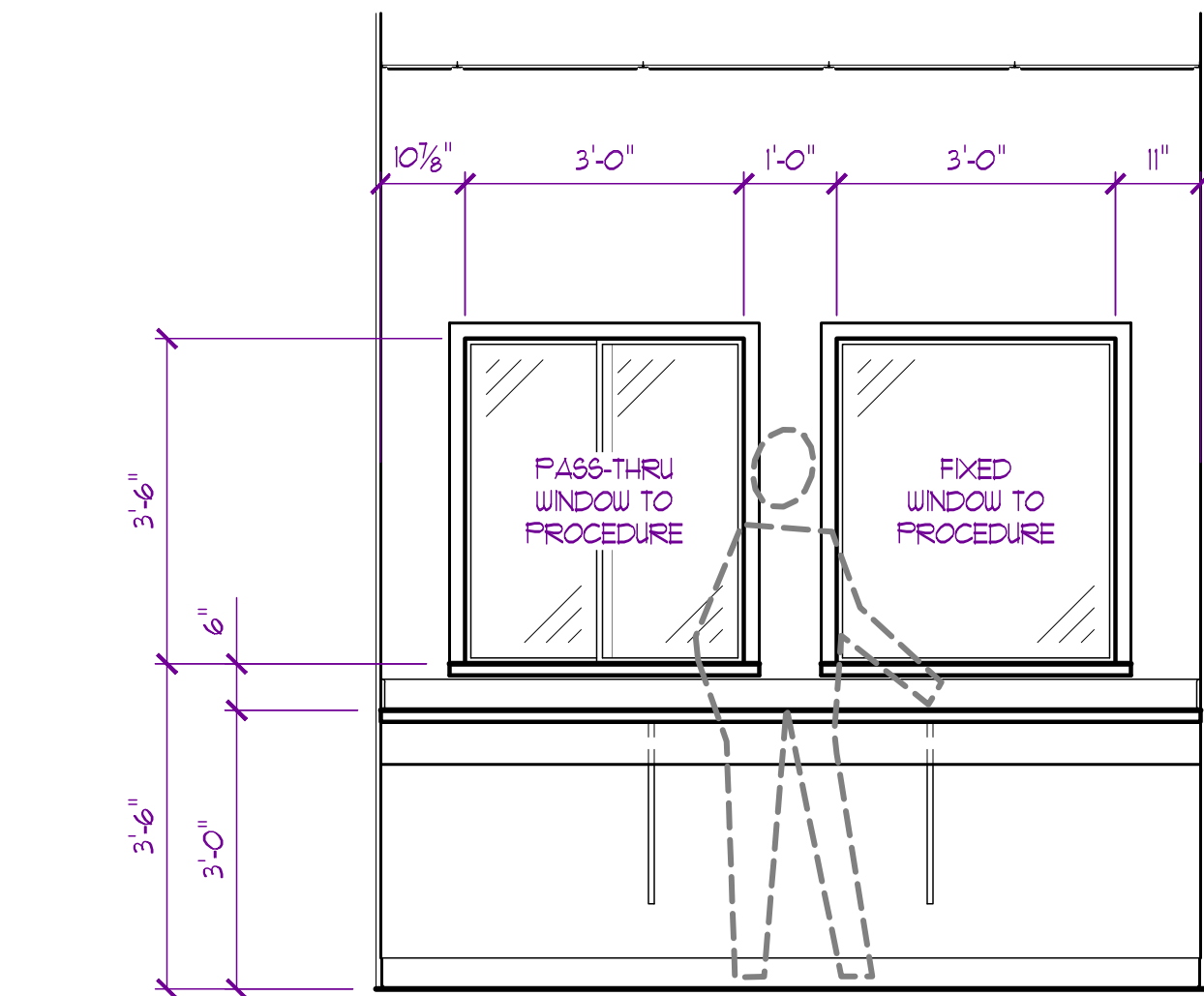
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## A700

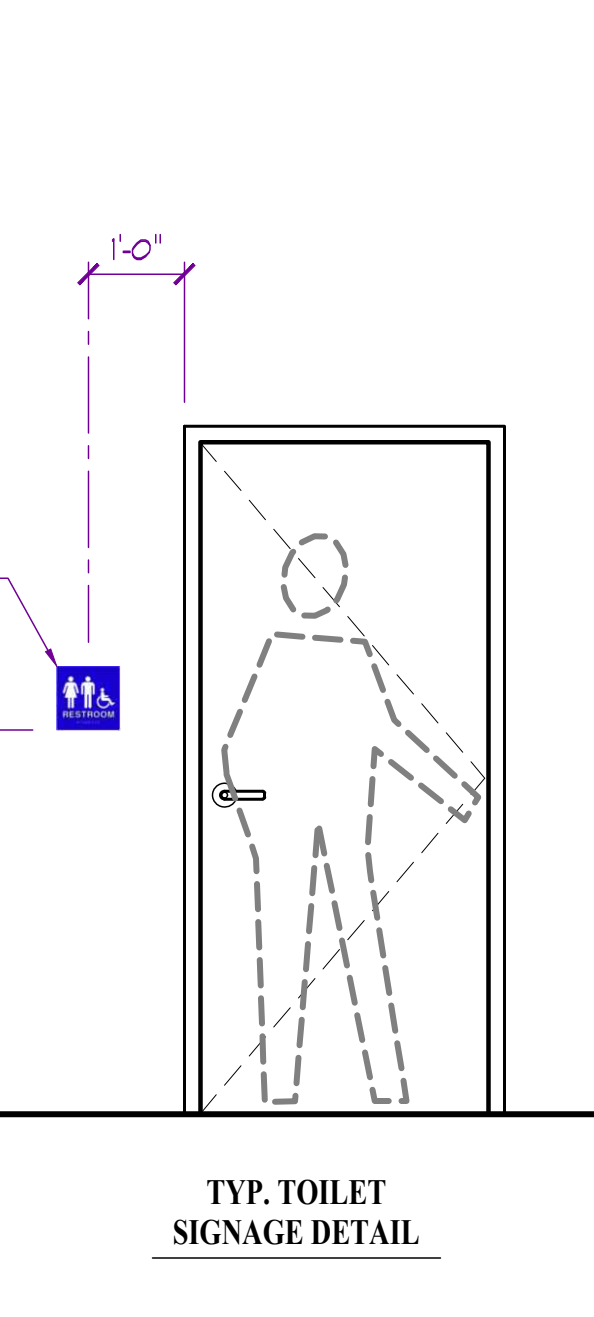
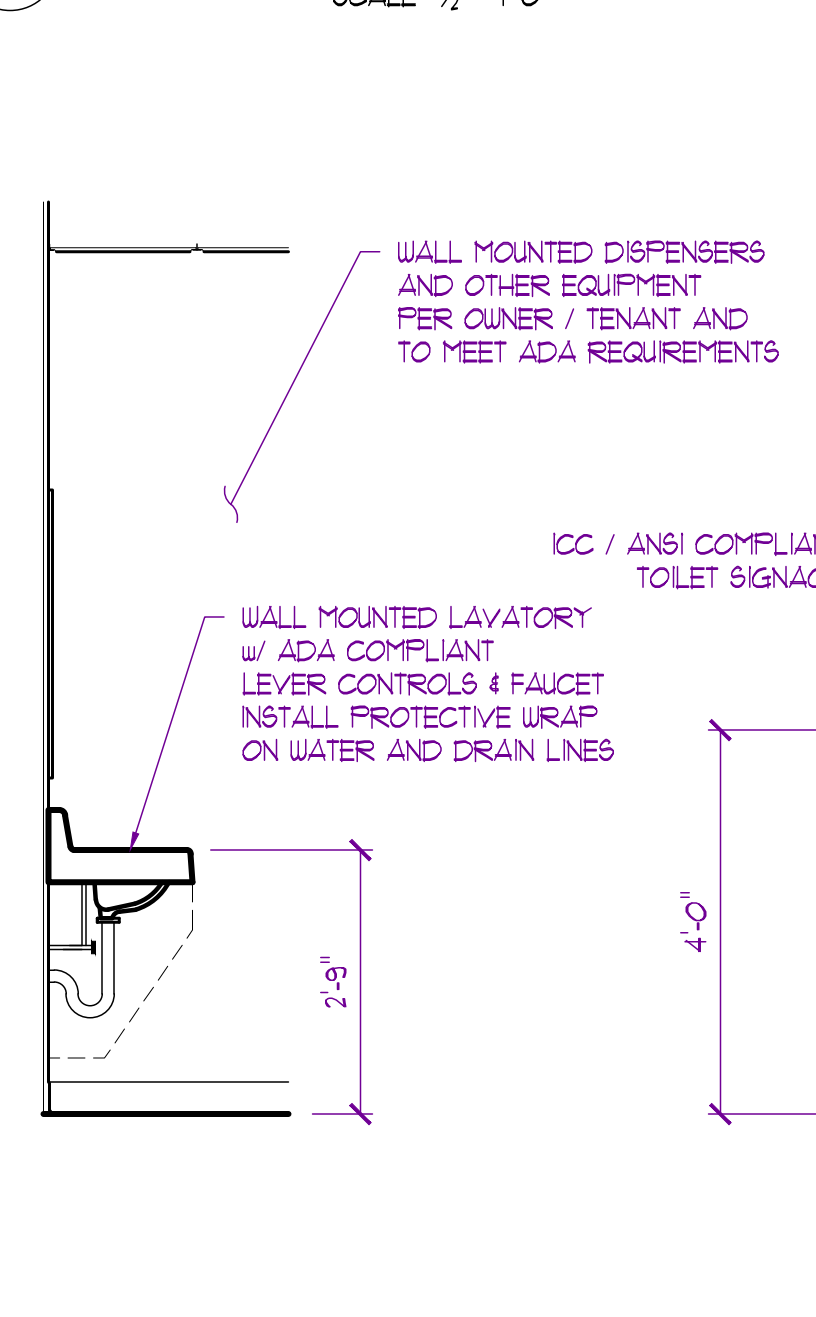
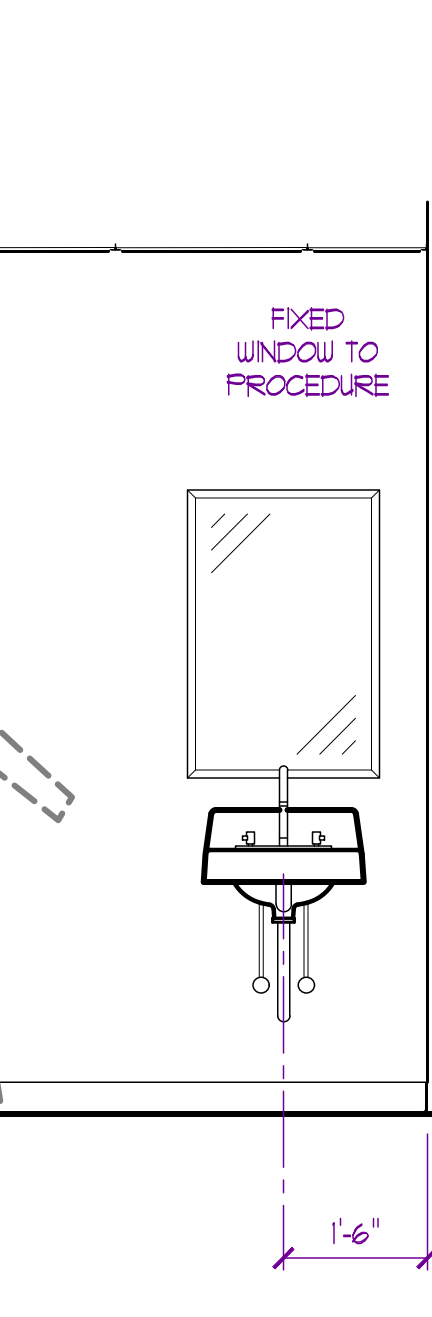
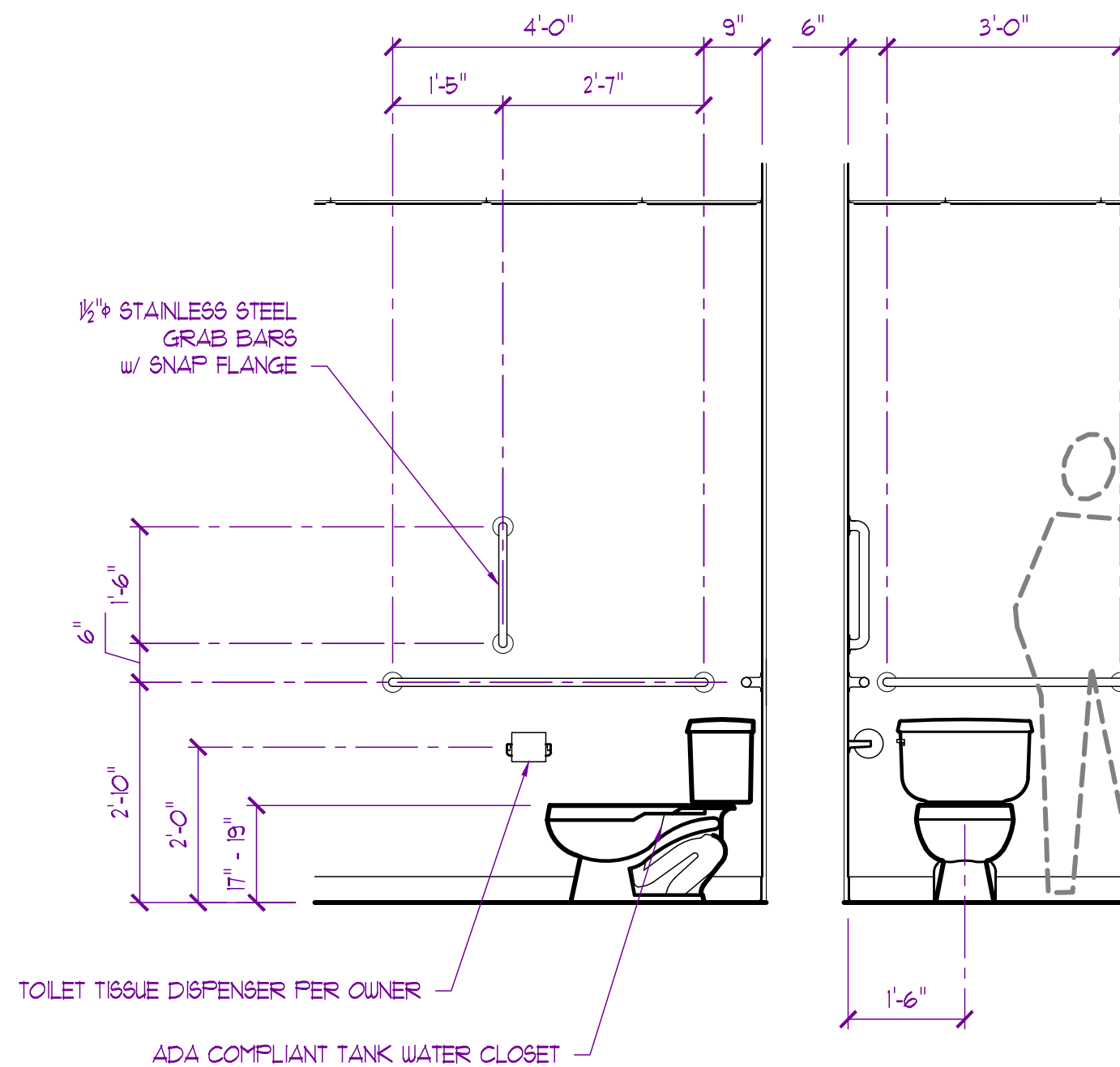




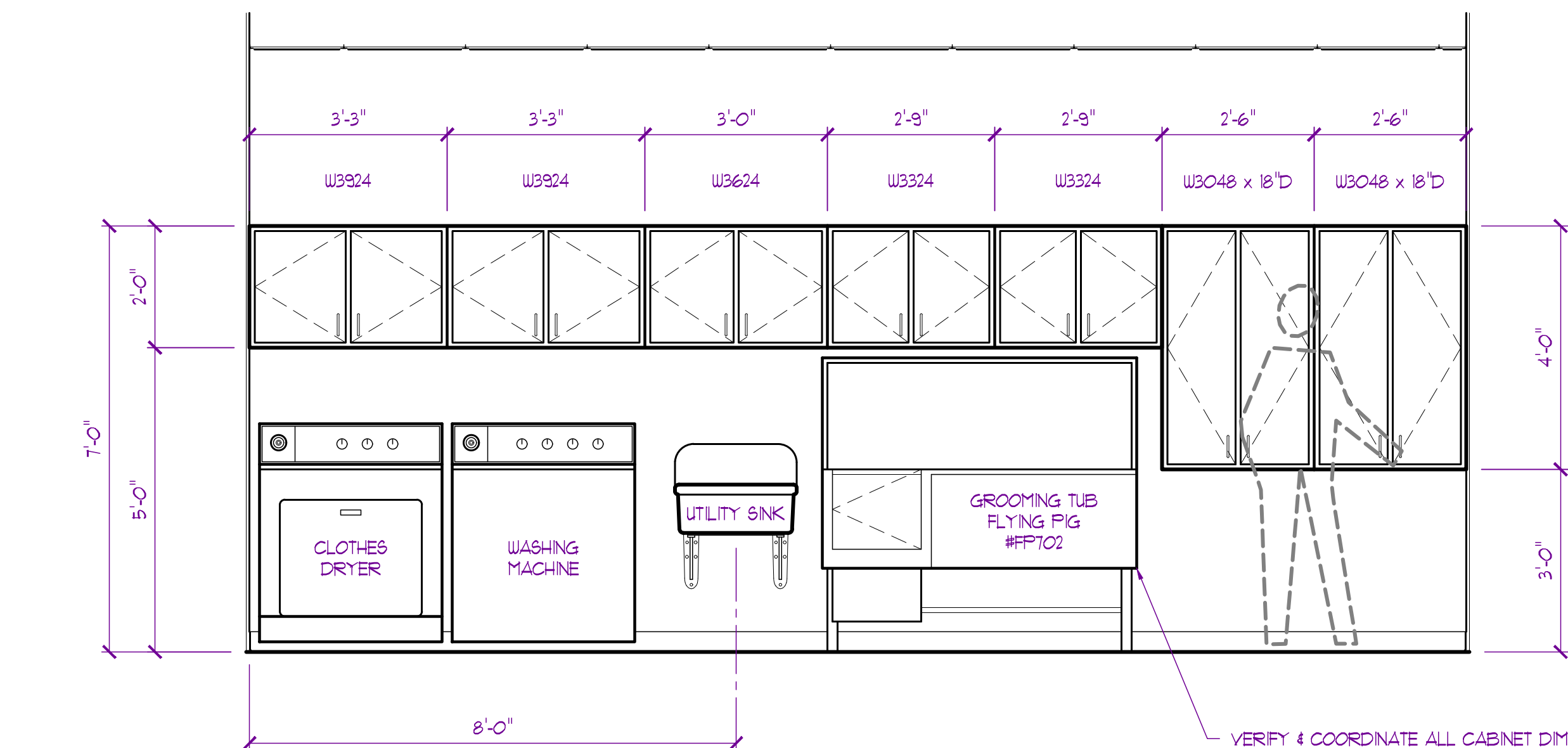




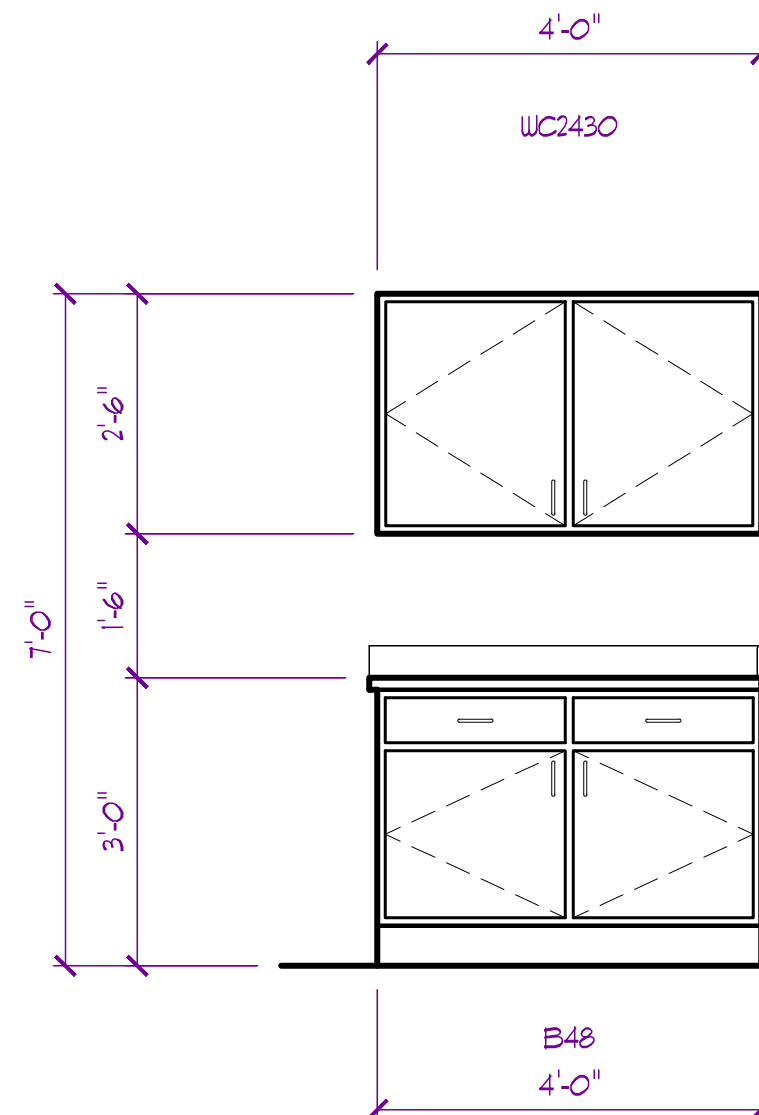
E20  
A102  
**SURGERY INT. ELEVATION**  
SCALE: 1/2" = 1'-0"



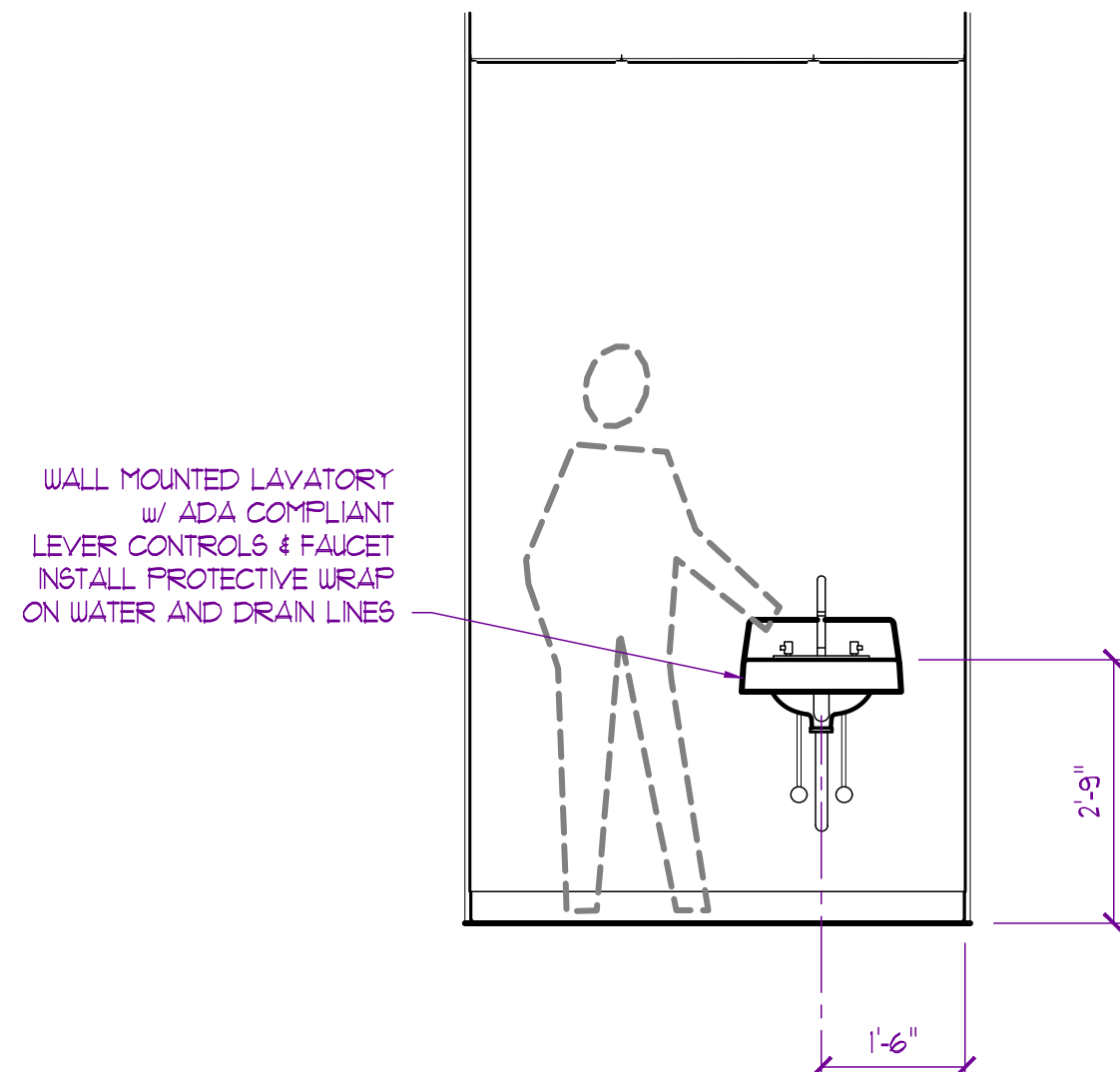
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A102  
**STAFF TOILET INT. ELEVATION**  
SCALE: 1/2" = 1'-0"



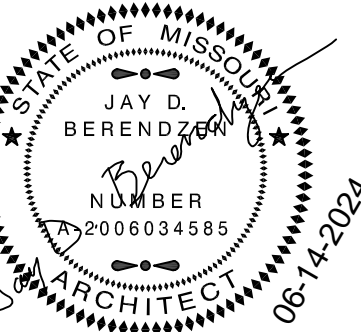
E24  
A102  
**WORK AREA / GROOMING INT. ELEVATION**  
SCALE: 1/2" = 1'-0"



E21  
A102  
**CAT KENNEL INT. ELEVATION**  
SCALE: 1/2" = 1'-0"



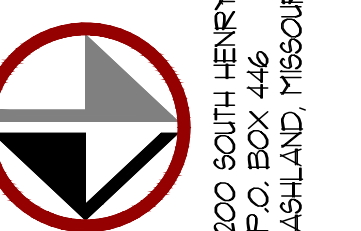
E23  
A102  
**ISOLATION INT. ELEVATION**  
SCALE: 1/2" = 1'-0"



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JAY D. BERENDZEN, ARCHITECT  
MISSOURI ARC-000588  
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PROJECT

Discovery Park  
**Discovery Animal Hospital**  
1901 NE Trails Edge Boulevard  
Lee's Summit, Jackson County, Missouri

ISSUE	ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024	

PROJECT NO.  
FB42417

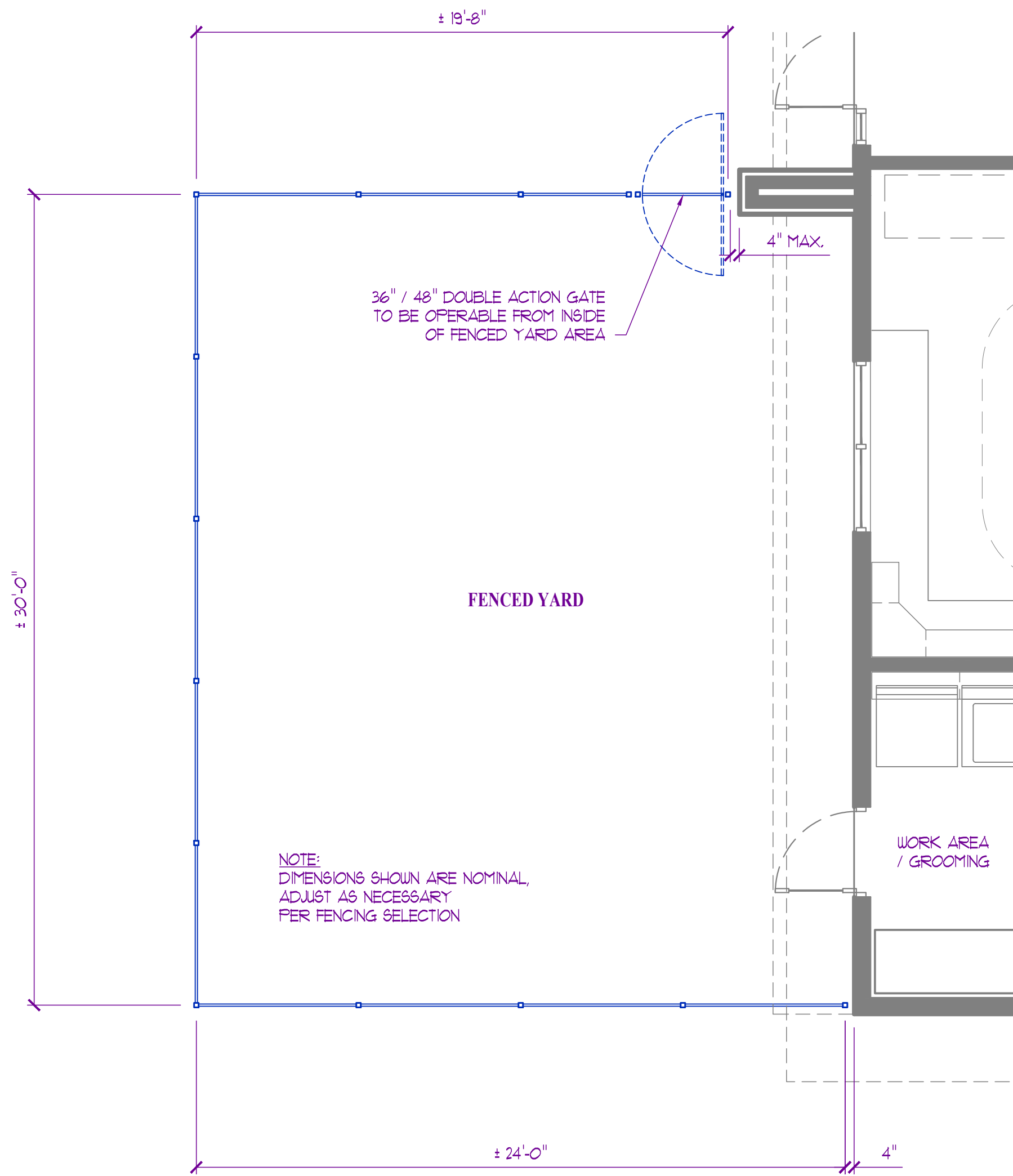
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INTERIOR ELEVATIONS

SHEET NUMBER

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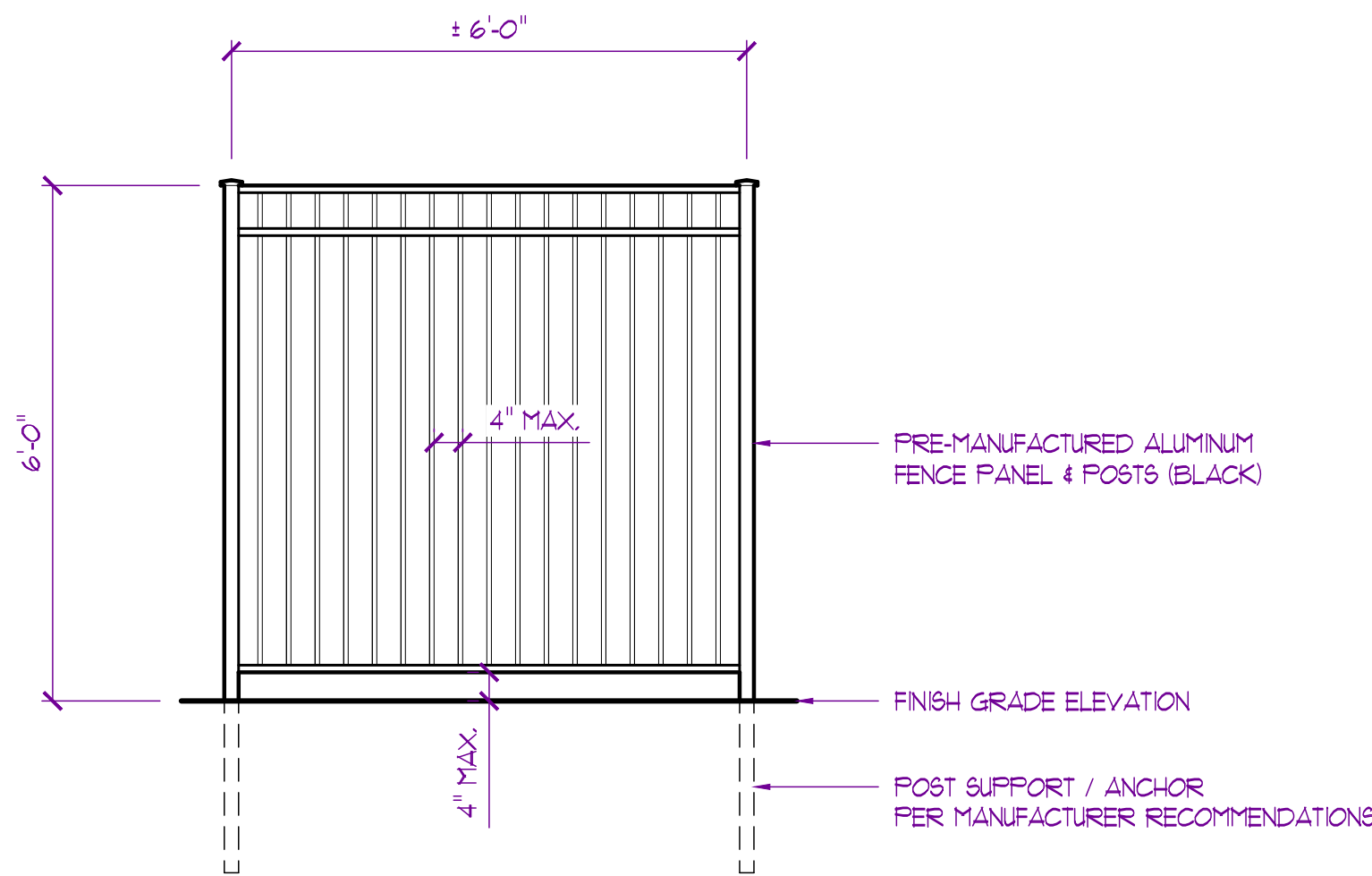




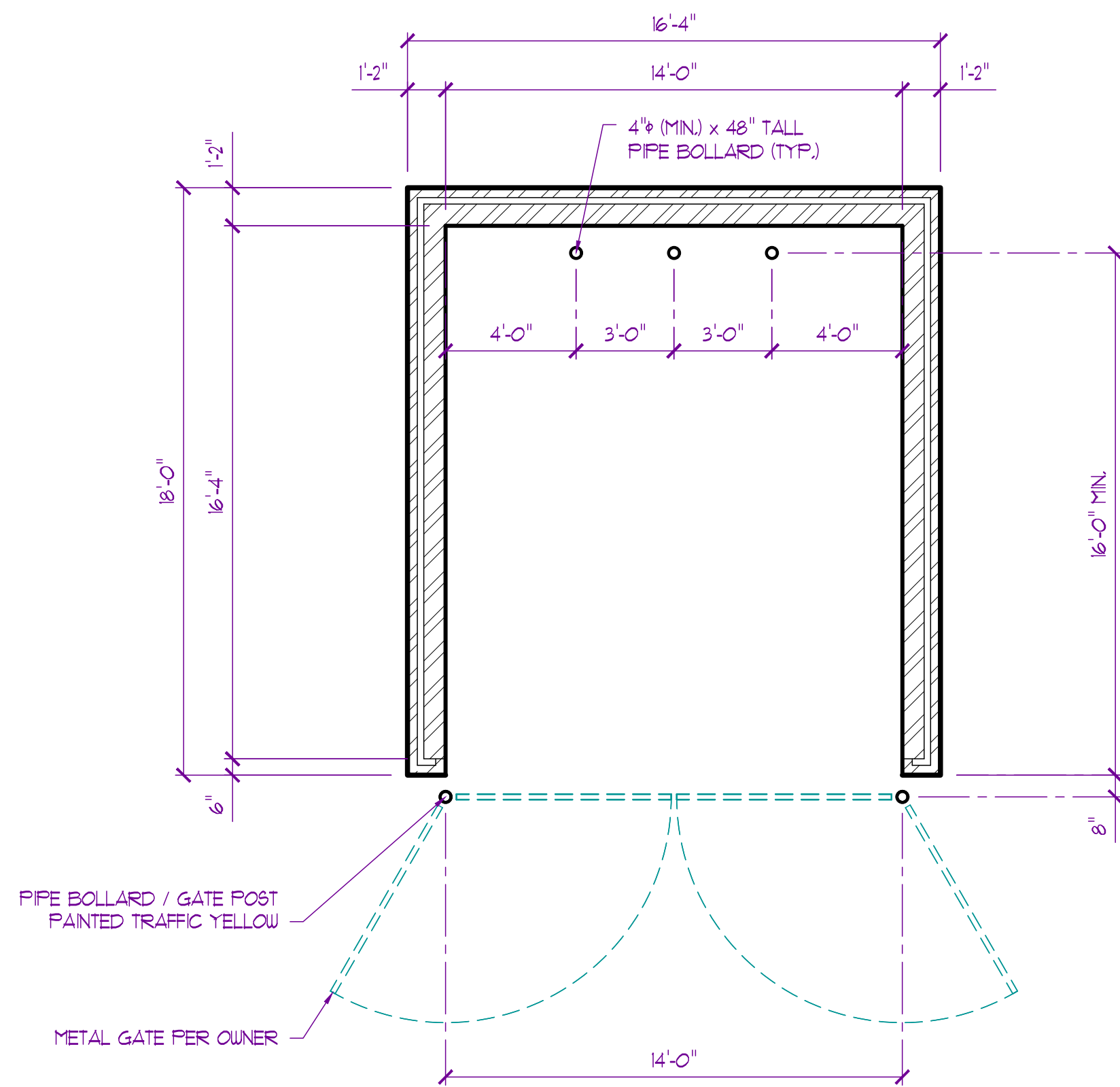
5  
A800

FENCED YARD PLAN

SCALE: 1/4" = 1'-0"



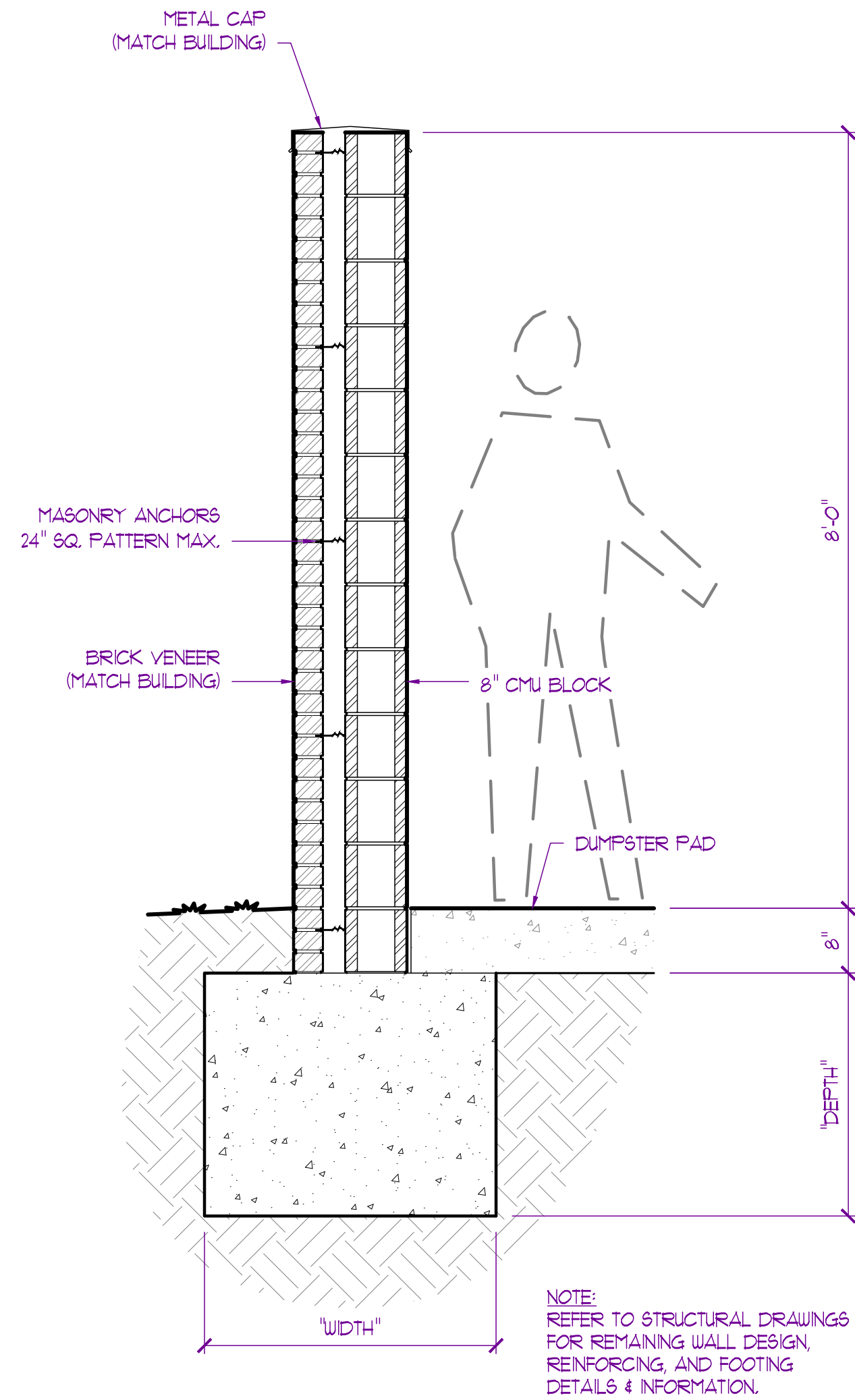
TYP. FENCE PANEL



6  
A800

DUMPSTER ENCLOSURE PLAN

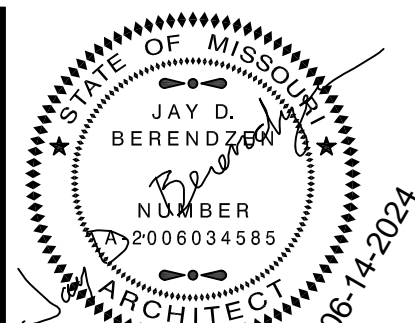
SCALE: 1/4" = 1'-0"



TYP. ENCLOSURE WALL SECTION

SITE DETAIL GENERAL NOTES:

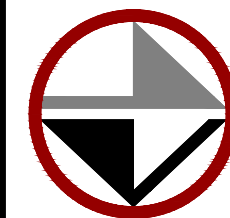
- FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR LOCATIONS
- ALL MATERIALS & FINISHES TO BE SELECTED AND APPROVED BY OWNER / TENANT PRIOR TO ANY WORK



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Lee's Summit, Jackson County, Missouri

ISSUE

ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024

PROJECT NO.

FB242417

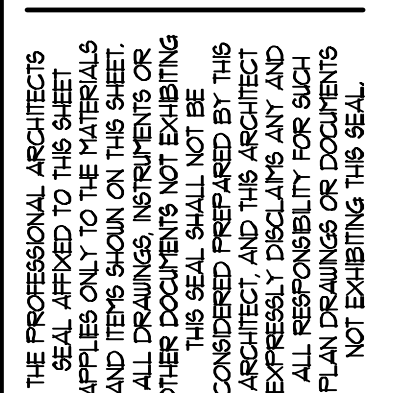
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SITE DETAILS

SHEET NUMBER

A800





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ISSUE		
ID	DESCRIPTION	DATE
1	PERMIT	6/14/2024
2	REVISION - 1	8/16/2024

A900

1

**NOTE:**  
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TO BE SELECTED AND/OR APPROVED BY OWNER/TENANT PRIOR TO CONSTRUCTION.

DOOR SCHEDULE															REMARKS / NOTES
No.	DOOR SIZE			DOOR			FRAME			HARDWARE				ACCESSORIES	
	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	ACTION	MATERIAL	FINISH	WALL THICKNESS	HINGES	LOCKERS	CLOSER	DOOR STOP		
100	3'-0"	7'-0"	BM	ASF	PF	RHR	ASF	PF		BM	DB-1	CL-1			ACCESS CONTROLS
101	3'-0"	7'-0"	BM	ASF	PF	RHR	ASF	PF		BM	DB-1	CL-1			ACCESS CONTROLS
102	3'-0"	7'-0"	BM	ASF	PF	RHR	ASF	PF		BM	DB-1	CL-1			ACCESS CONTROLS
103	3'-0"	7'-0"	BM	ASF	PF	RHR	ASF	PF		BM	DB-1	CL-1			ACCESS CONTROLS
104	3'-0"	7'-0"	BM	ASF	PF	LHR	ASF	PF		BM	DB-1	CL-1			ACCESS CONTROLS
105	3'-0"	7'-0"	1 3/4"	IHM-1	PT	LHR	HMF	PT	MSRY	H-2	SL-1	CL-1			
106	3'-0"	7'-0"	BM	ASF	PF	RHR	ASF	PF		BM	PL-1	CL-1			
107	3'-0"	7'-0"	BM	ASF	PF	LHR	ASF	PF		BM	PL-1	CL-1			
108	3'-0"	7'-0"	1 3/4"	WD-1	STN	LHR	HMF	PT	4.75"	H-1	PL-1	CL-1	D&2	AC	
109	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
110	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
111	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
112	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
113	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
114	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
115	3'-0"	7'-0"	1 3/4"	WD-1	STN	LHR	HMF	PT	4.75"	H-1	PL-1		D&2		
116	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PV-1	CL-1	D&2		
117	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PV-1	CL-1	D&2		
118	3'-0"	7'-0"	1 3/4"	WD-1	STN	RHR	HMF	PT	4.75"	H-1	PL-1	CL-1	D&2	AC	HALF LITE
119	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	6.75"	H-1	PL-1	CL-1	D&2	AC	
120	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	6.75"	H-1	PL-1		D&2	AC	NARROW LITE
121	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	6.75"	H-1	PL-1		D&2	AC	NARROW LITE
122	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PL-1	CL-1	D&1	AC	NARROW LITE
123	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&1		
124	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PV-1		D&1		NARROW LITE
125	3'-0"	7'-0"	1 3/4"	WD-1	STN	RHR	HMF	PT	4.75"	H-1	PL-1		D&1		
126	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PL-1		D&2		NARROW LITE
127	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&2		NARROW LITE
128	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	
129	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1		D&2	AC	NARROW LITE
130	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PV-1		D&3		
131	3'-0"	7'-0"	1 3/4"	WD-1	STN	RH	HMF	PT	4.75"	H-1	PL-1	CL-1	D&2	AC	HALF LITE
132	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1	CL-1	D&2	AC	HALF LITE
133	3'-0"	7'-0"	1 3/4"	IHM-1	PT	RHR	HMF	PT	4.75"	H-1	PL-1	CL-1		AIR	HALF LITE
134	3'-0"	7'-0"	1 3/4"	WD-1	STN	LH	HMF	PT	4.75"	H-1	PL-1	CL-1	D&2	AC	HALF LITE
135	3'-0"	7'-0"	BM	BM	PF	DA	HMF	PT	4.75"	BM	PPL-1	CL-2	D&2	8D	HALF LITE
BM By Manufacturer															
DOORS:															
ASF	Aluminum Glass Storefront														
WD-1	Solid Core Wood Door														
IHM-1	Insulat ed Hollow Metal Door														
HM-1	Hollow Metal Door														
FRAMES:															
HMF	Hollow Metal Frame Painted														
LOCKS & OPERATORS:															
PL-1	Passage Lockset														
PV-1	Office / Privacy Lockset														
DB-1	Dead Bolt Keyed Deadbolt w/ Deadlatch Push Paddle														
PPL-1	Push / Pull Plates 4"x16" Standard Push/Pull Plates w/ Optional Kick Plates Each Side														
HARDWARE:															
H-1	Hinges 1 1/2" Pair Full Mortise Template Ball Bearing Standard Weight Hinges, Finish Per Owner / Tenant														
H-2	Hinges 3 Pair Full Mortise Template Ball Bearing Heavy Weight Hinges, Finish Per Owner / Tenant														
C-1	Closer Surface Closer ( Finish to Match Adjacent Hardware )														
C-2	Closer Double Action Adjustable Surgical Door Closer by Door Manufacturer														
D&1	Door Stop Wall Mounted Door Stop														
D&2	Door Stop Floor Mounted Door Stop														
D&3	Door Stop Hinge Mounted Door Stop														
FINISHES:															
PF	Pre-Finished By Manufacturer ( per Owner / T enant )														
PT	Paint ( per Owner / T enant )														
ACCESSORIES:															
AC	Acoustic Set Acoustical Sweep & Gasketing														
AIR	Lab Door Laboratory Door, Gasketing to Stop Air Transfer														
SD	Surgical Door Double Action Surgical Door w/ Closer														
NOTES:															
1 Set all Thresholds in Sealant															
2 All Doors and Hardware shall meet Accessibility Standards															



Mechanical - Electrical - Plumbing Design Drawings for

Discovery Animal Hospital

1901 NE Trails Edge Avenue  
Lee's Summit, Jackson County, MO 64064

GENERAL MEP SPECIFICATIONS

1.

GENERAL
- 1.1.

ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LOCALLY ADOPTED CODES AND ORDINANCES.
- 1.2.

IT IS THE RESPONSIBILITY OF CONTRACTOR TO REVIEW AND UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS IN CONTRACT DOCUMENTS. EACH CONTRACTOR IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH THEIR TRADE, REGARDLESS OF WHERE WORK IS DEPICTED IN PROJECT DRAWINGS OR SPECIFICATIONS.
- 1.3.

LAYOUT OF SYSTEMS SHOWN ON PLANS ARE APPROXIMATE AND SCHEMATIC IN NATURE. ALL SYSTEMS WILL NEED TO BE FIELD-COORDINATED. CONTRACTOR SHALL INCLUDE THIS COORDINATION IN THEIR SCOPE AND INCLUDE ALL COSTS OF MODIFYING LAYOUT AS REQUIRED IN THEIR BID. PLANS ARE NOT INTENDED TO BE SHOP DRAWINGS FROM WHICH MATERIALS CAN BE ORDERED, FABRICATED, OR INSTALLED WITHOUT ADDITIONAL FIELD MEASUREMENTS AND COORDINATION.
- 1.4.

NOT ALL SPECIFIC PIECES AND COMPONENTS OF EACH SYSTEM ARE DETAILED OR OUTLINED ON PLANS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY PARTS AND LABOR TO PRODUCE A COMPLETE AND FULLY OPERATIONAL SYSTEM UNLESS STATED OTHERWISE ON PLANS. CONTRACTOR IS TO PROVIDE AND INCLUDE ALL EQUIPMENT AND MATERIAL NEEDED TO COMPLETE WORK ASSOCIATED WITH THEIR BID UNLESS ANY ITEMS ARE SPECIFICALLY NOTED ON PLANS AS PROVIDED BY OTHERS. ALL MATERIALS TO BE NEW, FIRST CLASS, AND INSTALLED PER MANUFACTURER'S PUBLISHED INSTRUCTIONS.
- 1.5.

WHERE CONFLICTS EXIST BETWEEN MEP PLANS AND CIVIL, ARCHITECTURAL, OR STRUCTURAL PLANS, NOTIFY MEP ENGINEER OF DISCREPANCIES FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK THAT MAY CONTRADICT INFORMATION ELSEWHERE IN THE PROJECT PLANS.
- 1.6.

THESE PLANS ARE NOT TO BE SCALED. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE THERE IS A CONFLICT BETWEEN ARCHITECTURAL DIMENSIONS AND MEP DIMENSIONS, ARCHITECTURAL SHALL GOVERN.
- 1.7.

CONTRACTOR IS TO INCLUDE IN THEIR SCOPE THE COST OF ALL PERMITS, INSPECTIONS, METERING, TAPS, ETC. ASSOCIATED WITH THEIR WORK.
- 1.8.

CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, CUTTING, CORING, PATCHING, AND BACKFILL REQUIRED TO COMPLETE THEIR WORK, UNLESS NOTED OTHERWISE ON PLANS.
- 1.9.

SPECIFIC EQUIPMENT MANUFACTURERS AND/OR MODEL NUMBERS LISTED ON PLANS ARE TO ESTABLISH A BASIS-OF-DESIGN FOR QUALITY AND PERFORMANCE. VERIFY THAT SUBSTITUTIONS WILL BE ACCEPTABLE PRIOR TO PURCHASE & INSTALLATION.
- 1.10.

NOTIFY ENGINEER OF ANY MAJOR PLAN DISCREPANCIES OR CONFLICTS PRIOR TO PROVIDING BIDS OR COMPLETING ANY WORK.
- 1.11.

SEE DISCIPLINE SHEETS FOR ADDITIONAL TRADE SPECIFIC SPECIFICATIONS.
- 1.12.

WHERE SHUTDOWN OF ANY EXISTING UTILITY OR SERVICE TO BUILDING IS REQUIRED FOR COMPLETION OF WORK, COORDINATE OUTAGE WITH OWNER AS TO NOT DISRUPT TYPICAL OPERATIONS.
2.

WORKMANSHIP
- 2.1.

SYSTEMS SHALL BE INSTALLED IN A FIRST-CLASS MANNER USING BEST ACCEPTABLE METHODS AND PRACTICES.
- 2.2.

ALL SYSTEMS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BUILDING ORIENTATION. COMPONENTS SHALL BE INSTALLED LEVEL AND PLUMB WITH ATTENTION GIVEN TO OVERALL AESTHETICS.
- 2.3.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT LOCATIONS AND SYSTEM ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION.
- 2.4.

CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE THE COMPLETED PROJECT IS RELEASED TO THE OWNER, UNLESS NOTED OTHERWISE ON PLANS.
- 2.5.

DURING INSTALLATION OF MATERIALS OR ACTIVITIES IN NEW WORK SCOPE, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. ANY DAMAGE TO EXISTING SURFACES OR EQUIPMENT SHALL BE CORRECTED AT NO COST TO OWNER.

DEFERRED SUBMITTAL NOTES

1.

FIRE ALARM SYSTEM
- 1.1.

FIRE ALARM SYSTEM COMPONENTS SHOWN (IF APPLICABLE) ARE GENERAL AND SCHEMATIC IN NATURE, SHOWN FOR APPROXIMATE ROUGH-IN LOCATIONS AND QUANTITIES ONLY. CONTRACTOR TO VERIFY EXACT DEVICE LOCATIONS AND REQUIREMENTS WITH FIRE ALARM SYSTEM DESIGNER OF RECORD PRIOR TO ROUGH-IN.
- 1.2.

FIRE ALARM CONTRACTOR SHALL PROVIDE DEFERRED SUBMITTAL PACKAGE FOR FIRE ALARM SYSTEM. SUBMITTAL SHALL INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, EQUIPMENT SPECIFICATIONS FOR DEVICES AND PANELS, ETC. DESIGN SHALL BE SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.
2.

FIRE SPRINKLER SYSTEM
- 2.1.

WHERE COMBINED FIRE & DOMESTIC WATER SUPPLY LINES ARE SHOWN ON PLANS, INSTALLING CONTRACTOR SHALL VERIFY WITH FIRE SPRINKLER CONTRACTOR THAT INCOMING LINE SIZE IS ADEQUATE FOR FIRE SUPPRESSION SYSTEM.
- 2.2.

FIRE SPRINKLER CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL PACKAGE FOR FIRE SPRINKLER SYSTEM. SUBMITTAL SHALL INCLUDE HYDRAULIC CALCULATIONS AND SPRINKLER SYSTEM DRAWINGS SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.

REFERENCED CODES IN EFFECT

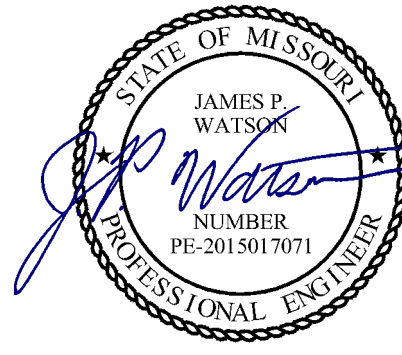
- PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES LISTED BELOW, BUT THIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND LOCAL REQUIREMENTS.
- 2018 INTERNATIONAL MECHANICAL CODE
  - 2018 INTERNATIONAL PLUMBING CODE
  - 2018 INTERNATIONAL FUEL GAS CODE
  - 2018 INTERNATIONAL FIRE CODE
  - 2017 NATIONAL ELECTRIC CODE

FIRE RATED PENETRATION NOTES

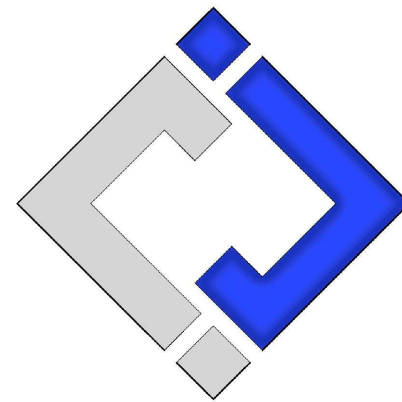
- THIS BUILDING CONTAINS FIRE RATED ASSEMBLIES. SEE ARCHITECTURAL PLANS FOR LOCATIONS AND DETAILS.
- A UL-LISTED FIRESTOP SYSTEM SHALL BE INSTALLED AT EACH PENETRATION OF A HORIZONTAL OR VERTICAL RATED ASSEMBLY IN ACCORDANCE WITH ASTM E814 OR UL 1479.
- EACH CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROTECTION FOR THEIR PENETRATIONS THRU RATED ASSEMBLIES.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING A CATALOG OF ALL UL LISTED FIRESTOP ASSEMBLIES, AND KEEPING A PHYSICAL COPY OF DETAILS FOR EACH USED FIRESTOP ASSEMBLY ON SITE FOR REFERENCE.

SHEET INDEX

SHEET #	SHEET NAME
MEP1	MECHANICAL ELECTRICAL PLUMBING COVER SHEET
MEP2	SITE UTILITY - SITE LIGHTING PLAN
MEP3	SITE LIGHTING PLAN
M101	HVAC PLAN
M501	HVAC DETAILS & SCHEDULES
EP101	POWER PLAN
EL101	LIGHTING PLAN
E501	ELECTRICAL SCHEDULES
E601	ELECTRICAL DETAILS
PS101	SANITARY SEWER PLAN
PW101	WATER & GAS PLAN
P501	PLUMBING DETAILS & SCHEDULES



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J2 PROJECT No:	J21209
J2 DESIGN:	ACW

ISSUE TITLE	DATE
PERMIT SET	06 / 14 /2024

Mechanical - Electrical - Plumbing Design Drawings for

Discovery Animal Hospital

1901 NE Trails Edge Avenue  
Lee's Summit, Jackson County, MO 64064

MECHANICAL  
ELECTRICAL  
PLUMBING  
COVER SHEET

SHEET NUMBER  
**MEP1**

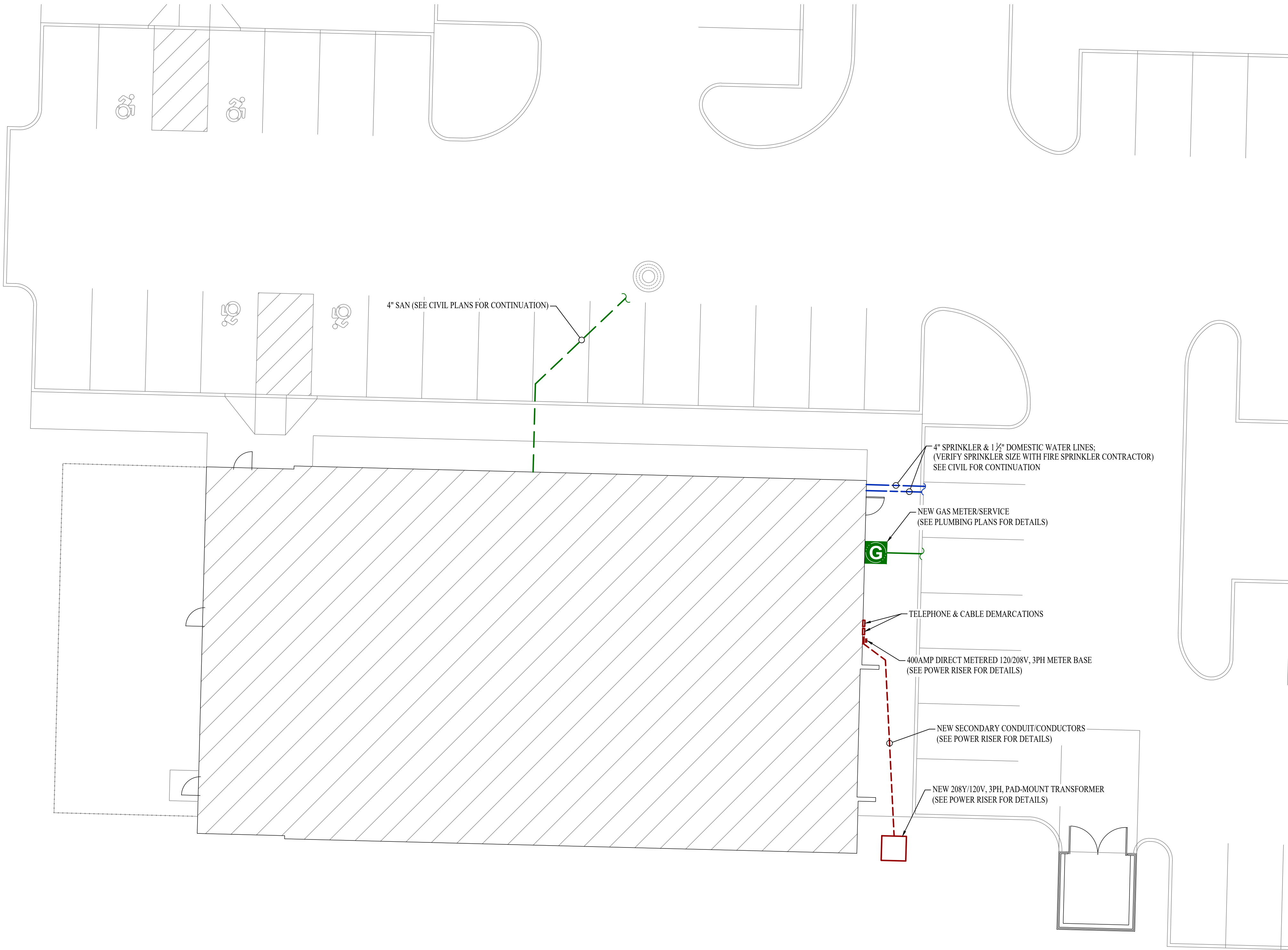


SITE UTILITIES PLAN GENERAL NOTES:

1. REFER TO CIVIL PLANS FOR EXACT UTILITY LOCATIONS, CONNECTIONS, DETAILS, ETC.

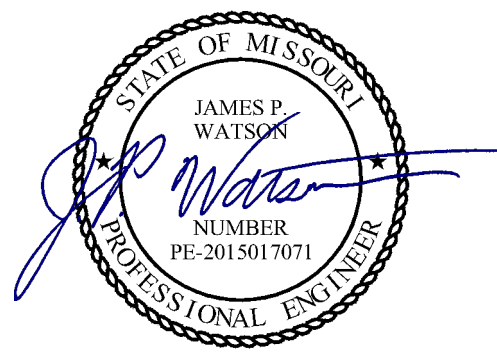
SITE PLAN SYMBOL LEGEND

- SANITARY SEWER PIPING
- COLD WATER LINE
- Ⓜ WATER METER
- ⋈ VALVE
- ... GAS LINE
- ⓐ GAS METER
- ✱ TIE INTO EXISTING
- ELECTRIC
- PX-XX CIRCUIT TAG

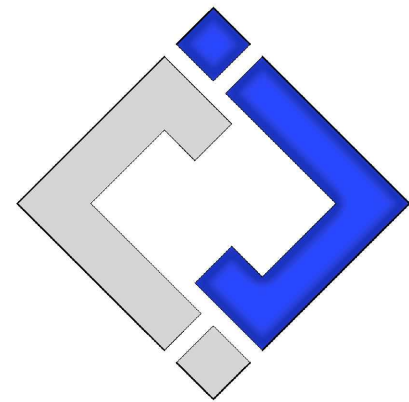


SITE UTILITIES PLAN

SCALE: 1" = 10 ft



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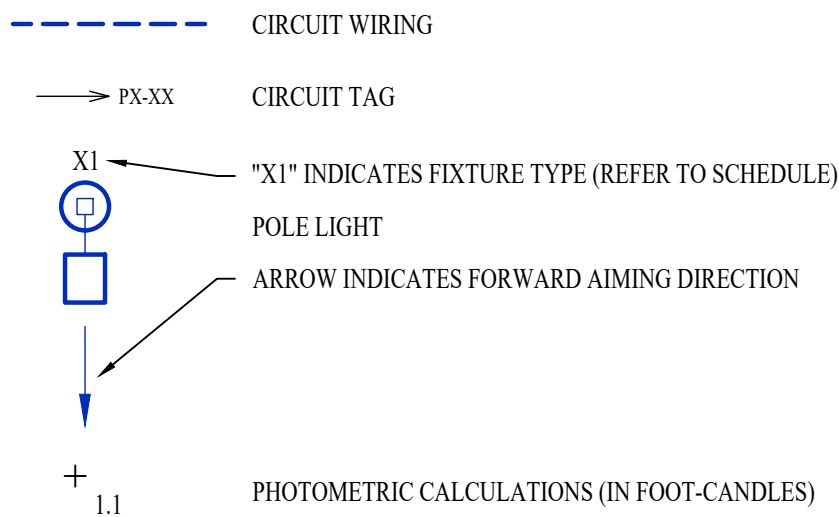
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SITE LIGHTING PLAN SYMBOL LEGEND



SITE LIGHTING PLAN GENERAL NOTES:

- SITE PHOTOMETRIC VALUES SHOWN HAVE BEEN CALCULATED PER SPECIFIED LIGHT FIXTURES AT INDICATED MOUNTING HEIGHTS. ANY CHANGES OR ALTERATIONS TO LIGHTING LAYOUT SHOWN WILL REQUIRE RECALCULATING SITE PHOTOMETRICS AND WILL THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR / EQUIPMENT SUPPLIER.
- PHOTOMETRIC CALCULATIONS SHOWN DO NOT INCLUDE EXISTING LIGHT FIXTURE(S), ONLY NEW POLE LIGHT FIXTURE(S) SHOWN.
- SEE SHEET EL101 FOR BUILDING MOUNTED EXTERIOR LIGHT FIXTURE CIRCUITING, LOCATIONS, AND ADDITIONAL DETAILS.

SITE LIGHTING PLAN KEY NOTES:

- ① 1" CONDUIT WITH (2) #10 CU. & (1) #10 CU. EQ. GRD.

POLE HEIGHT	"X" DEPTH
10ft - 14ft	4'-6"
15ft - 20ft	6'-0"
21ft - 25ft	7'-0"
26ft - 30ft	8'-0"

POLE MUST MEET EPA RATING FOR 80MPH WIND (ASCE 7-93) WITH SPECIFIED HEAD CONFIGURATION

PVC CONDUIT STUBBED UP ADJACENT TO HANDHOLE (NUMBER & SIZE REQUIRED)

HANDHOLE @ COVER PLATE

POLE ANCHOR BOLTS PER MANUFACTURER RECOMMENDATIONS

1/2" CHAMFER ALL EDGES

24" MIN. TO CURB / PAVING

CIRCUIT CONDUIT & CONDUCTORS TO POWER SOURCE / NEXT POLE

ATTACH COPPER EQUIPMENT GROUND CONDUCTOR TO INTERNAL LUG WELDED TO INTERIOR OF POLE

TYP. POLE BASE REINFORCING:  
#3 HORIZONTAL TIES (20") AT 12" O.C.  
w/ #4 VERTICAL BARS AT PERIMETER AT 6" O.C.

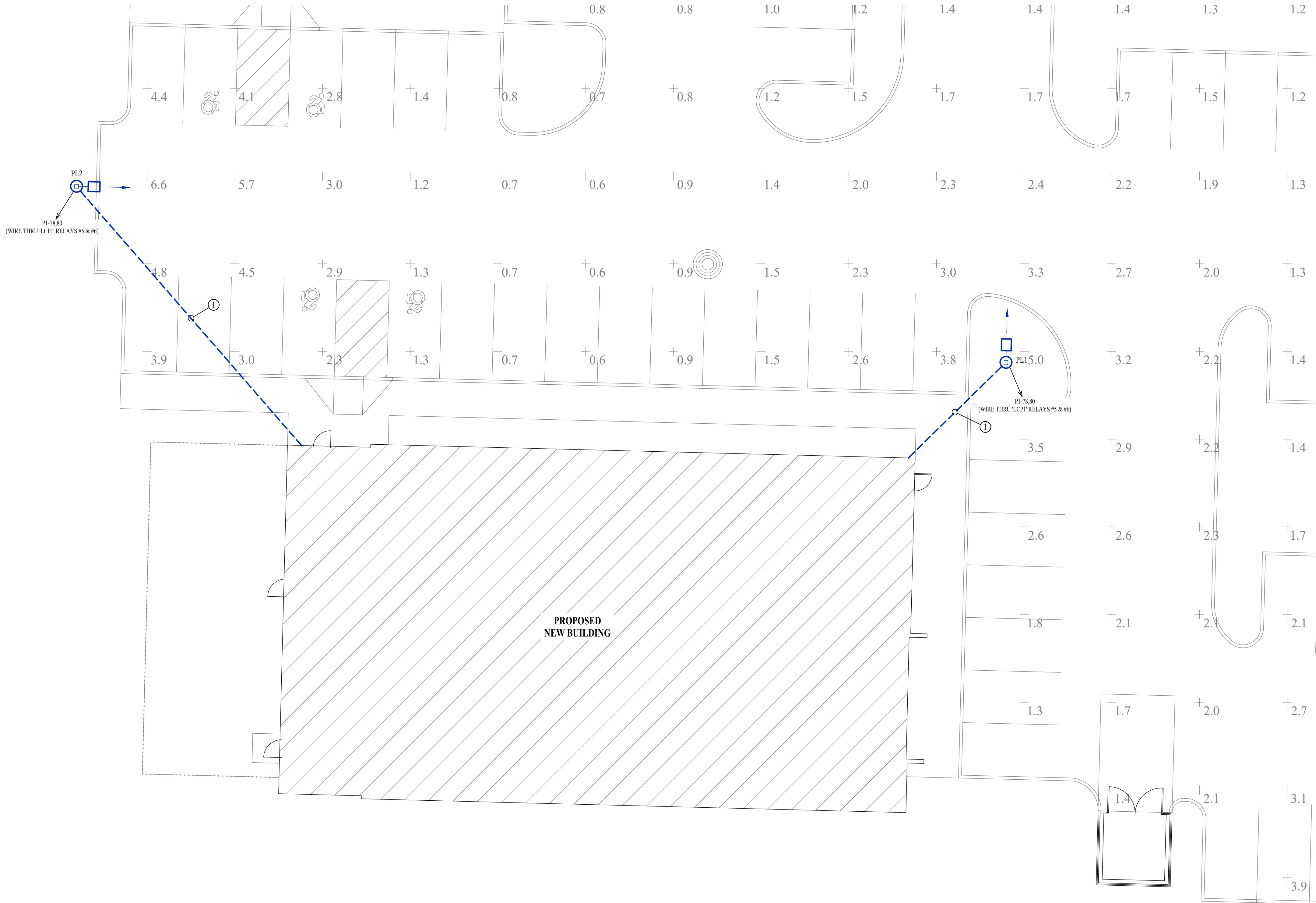
CONCRETE TO BE MIN. 3000psi

TYPICAL LIGHT POLE DETAIL - 1

SITE LIGHTING FIXTURE SCHEDULE

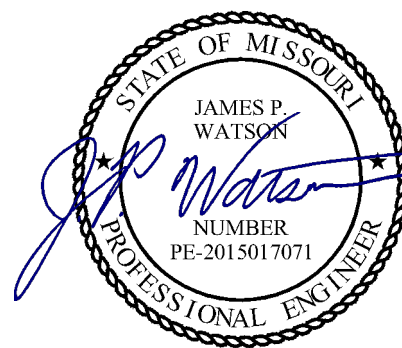
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
PL1	LUMARK	PRV-XL-PA4A-740-U-SWQ	POLE LIGHT	20' POLE ON 30" BASE	35,079	4000	70	208	245	WITH #MS/DIM-L40W MOTION SENSING DIMMING
PL2	LUMARK	PRV-XL-PA4B-740-U-T4W-HSS	POLE LIGHT	20' POLE ON 30" BASE	28,286	4000	70	208	303	WITH #MS/DIM-L40W MOTION SENSING DIMMING

NOTES:  
1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION

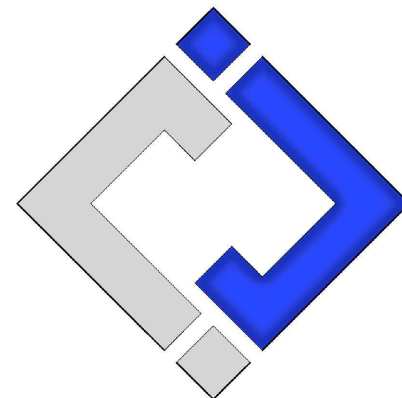


SITE LIGHTING PLAN

SCALE: 1" = 10 ft



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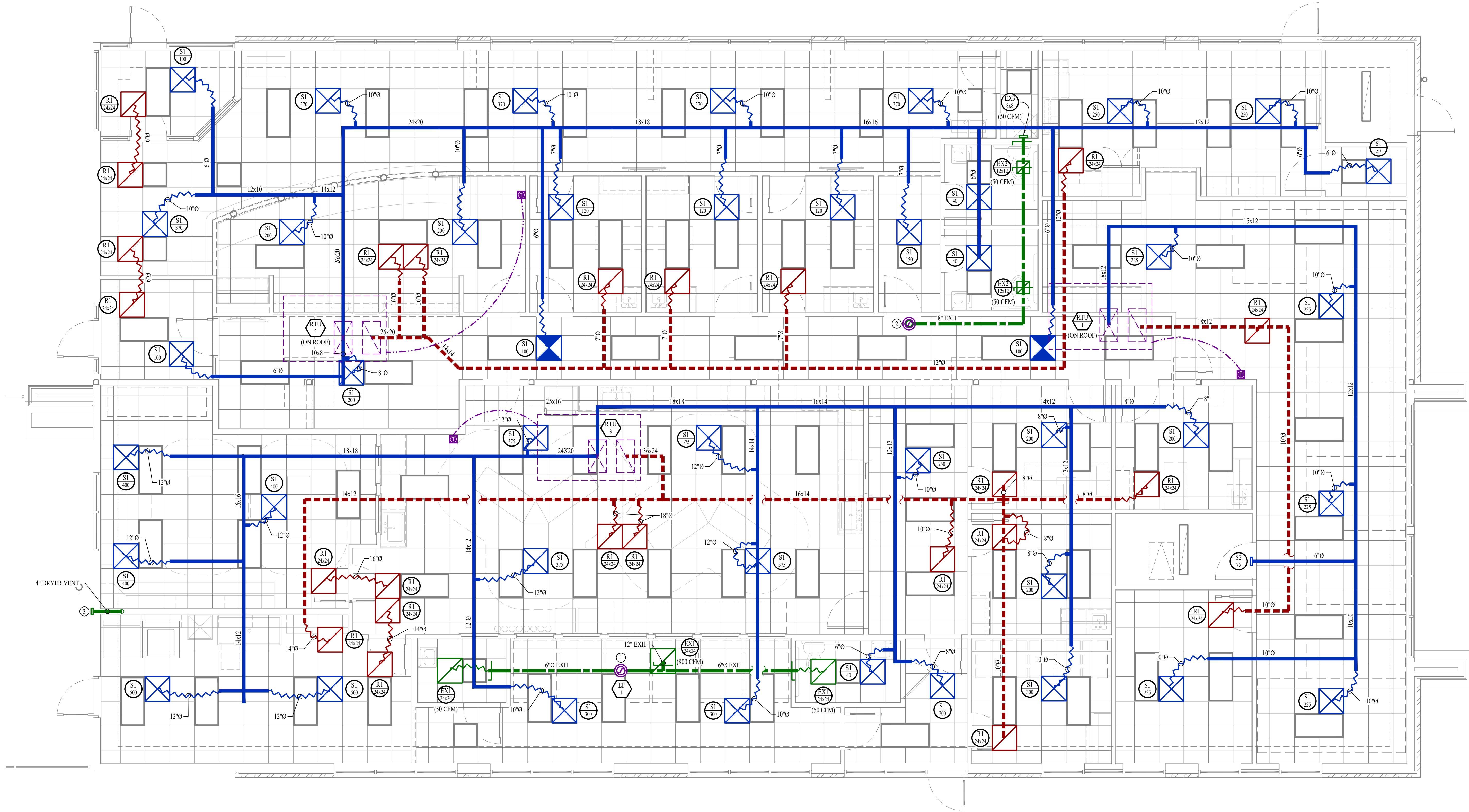
J2 PROJECT No: J21209

J2 DESIGN: ACW

ISSUE TITLE DATE

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HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.

HVAC PLAN KEY NOTES:

- ① 12" EXHAUST UP TO EF-1 THEN UP THRU ROOF TO GOOSENECK WITH 3/8" BIRDSCREEN.  
② 8" EXHAUST UP TO EF-2 THEN UP THRU ROOF TO GOOSENECK WITH 3/8" BIRDSCREEN.  
③ DRYER VENT. PAINT TO MATCH BUILDING.



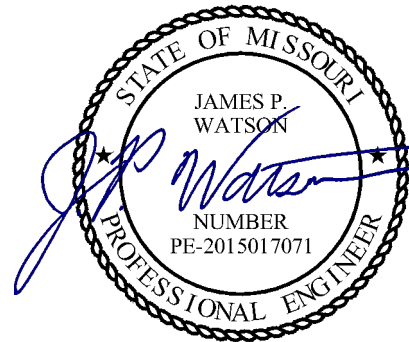
HVAC PLAN

SCALE: 1/4" = 1'-0"

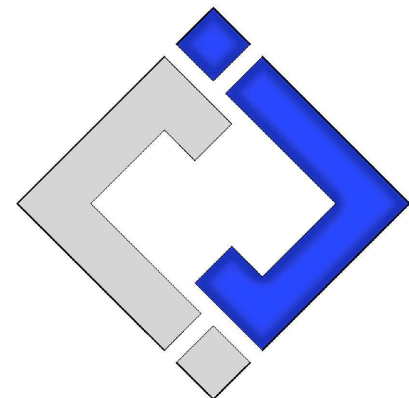
HVAC PLAN SYMBOL LEGEND

- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)  
— EQUIPMENT REFERENCE NUMBER  
— DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)  
— CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK  
— RETURN DUCTWORK  
— EXHAUST DUCTWORK  
— OUTSIDE AIR DUCTWORK  
— FLEX DUCT  
— VENT / COMBUSTION AIR  
— CONDENSATION LINE  
— REFRIGERANT LINE  
— TIE INTO EXISTING

- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")  
— RETURN DIFFUSER  
— BALANCE DAMPER  
— MOTORIZED DAMPER  
— CEILING RADIATION DAMPER  
— FIRE RATED DAMPER  
— SMOKE DAMPER  
— THERMOSTAT  
— CO2 DETECTOR  
— RETURN DUCT SMOKE DETECTOR  
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL  
TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER  
LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)  
— REMOTE SOUNDER WIRED TO RETURN DUCT SMOKE DETECTOR  
(EQUAL TO SYSTEM SENSOR #MHW)



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Discovery Animal Hospital

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Lee's Summit, Jackson County, MO 64064

SHEET TITLE

HVAC PLAN

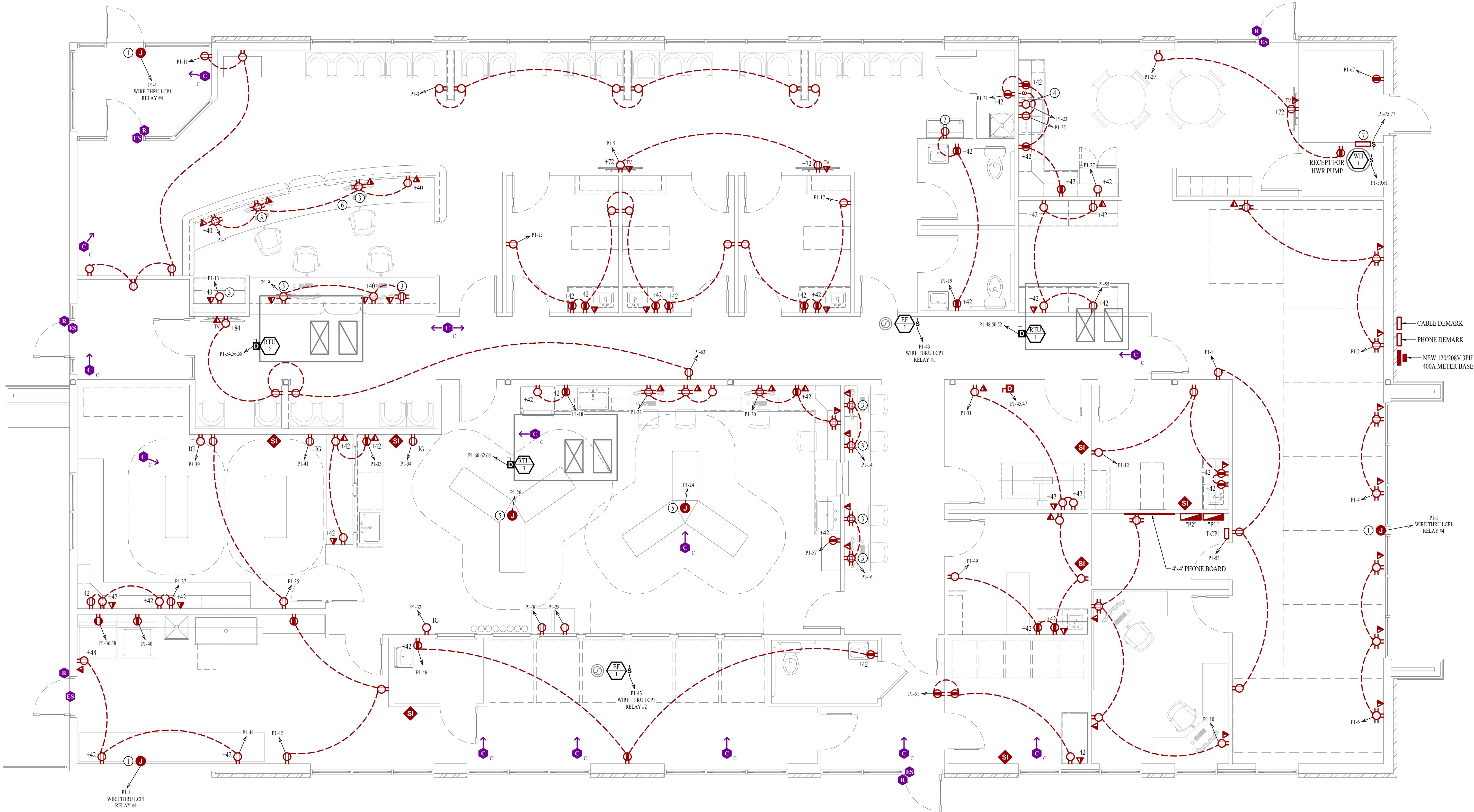
SHEET NUMBER

M101









POWER PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

POWER PLAN KEY NOTES:

- ① J-BOX IN INTERIOR SIDE OF WALL ABOVE CANOPY HEIGHT FOR EXTERIOR ILLUMINATED SIGNAGE. ELECTRICAL CONTRACTOR TO VERIFY EXACT HEIGHT AND LOCATION WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
- ② CIRCUIT DRINKING FOUNTAIN RECEPTACLE DOWNSTREAM OF GFCI RECEPTACLE SO THAT DRINKING FOUNTAIN RECEPTACLE IS GFCI PROTECTED.
- ③ PROVIDE 2" BLACK DESK GROMMET.
- ④ OUTLET IN BASE CABINET FOR DISHWASHER.
- ⑤ CONNECT TO TENANT SUPPLIED MED TOWER.
- ⑥ INSTALL PUSH BUTTON OVERRIDE FOR RELEASING ELECTRIC STRIKE AT FRONT DOOR. COORDINATE LOCATION WITH TENANT.
- ⑦ 208V, 1PH, 3KW BERKO WALL HEATER EQUAL TO VFK404

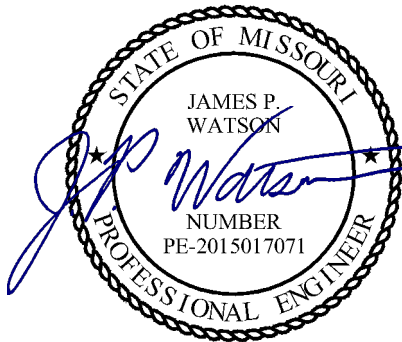


POWER PLAN

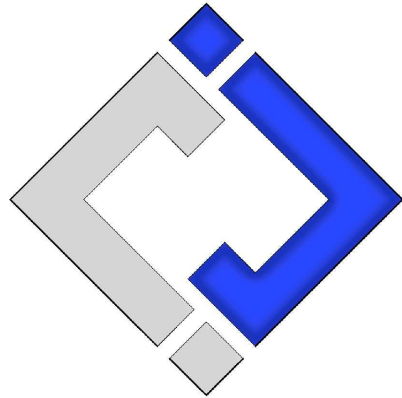
SCALE: 1/4" = 1'-0"

POWER PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- PX-XX CIRCUIT TAG
- JUNCTION BOX
- XX ○ +42 RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- "AW" = ABOVE WINDOW RECEPTACLE
- "AC" = ABOVE CEILING RECEPTACLE
- "EX" = EXISTING RECEPTACLE TO REMAIN
- "IG" = ISOLATED GROUND
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
- CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET
- DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING) UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- STEREO & INTERCOM CONTROL. ELECTRICAL CONTRACTOR TO INSTALL WIRING, TENANT TO SUPPLY STEREO/INTERCOM SYSTEM.
- READER
- ELECTRIC STRIKE



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LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

LIGHTING PLAN KEY NOTES:

① POWER FOR EXAM LIGHTING; COORDINATE EXACT LOCATION & REQUIREMENTS WITH G.C.

LIGHTING PLAN SYMBOL LEGEND

XI

EM

NL

"XI" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)

LIGHTING FIXTURE

"EM" INDICATES EMERGENCY BATTERY BACKUP

"NL" INDICATES UN-SWITCHED NIGHT LIGHT

EXIT LIGHT

INDICATES REQUIRED REMOTE HEAD

EMERGENCY EGRESS LIGHT

SWITCH (WALL MOUNTED)

SWITCH TYPE:

- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OP = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH

D<sub>X</sub>

SWITCH (WALL MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

S<sub>X</sub>

SWITCH (CEILING MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

STATE OF MISSOURI

JAMES P. WATSON

NUMBER

PE-2015017071

PROFESSIONAL ENGINEER

James Watson, P.E. June 14, 2024  
PE-2015017071  
MO Certificate of Authority # 2018029680

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Mechanical - Electrical - Plumbing Design Drawings for

Discovery Animal Hospital

1901 NE Trails Edge Avenue  
Lee's Summit, Jackson County, MO 64064

SHEET TITLE

LIGHTING PLAN

SHEET NUMBER

EL101



LIGHT FIXTURE SCHEDULE										
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
A	METALUX	24FPSL2SCT3	2X4 LED FLAT PANEL	CEILING / GRID	6300	3500	80	120	56	WITH TEL4W" BATTERY BACKUP WHERE INDICATED
B	METALUX	22FPSL2SCT3	2X2 LED FLAT PANEL	CEILING / GRID	3440	3500	80	120	31	
C	HALO	HLB4069FSIE	4" LED CAN	RECESSED	600	3500	80	120	12	
D	SURE LITES	APCH7R WITH APWR1	INTERIOR EXIT LIGHT WITH EXTERIOR REMOTE HEAD	CEILING	-	-	-	120	1	WITH RED LETTERS
E	SURE LITES	APC7R	INTERIOR EXIT LIGHT WITH HEADS	WALL / CEILING	-	-	-	120	1	WITH RED LETTERS
F	METALUX	48NLED-LD5-48SL-UNV-L835LB	4" LED STRIP	SURFACE	4827	3500	80	120	35	
G	TECH LIGHTING	7000W VEX9404ZUNV	UP / DOWN SCONCE	WALL	554	4000	90	120	19	
H	HALO	SLD612940W HUNV WITH SLD6TRMWH	SURFACE MOUNT DISK	SURFACE	1000	4000	92	120	15	FIELD PAINTED
NOTES: 1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION 2. CONTACT JUSTIN HATFIELD (573) 289-0880 (JHATFIELD@LAIWEB.NET) OR PAUL WARNER (314) 531-3500 (PWARNER@LAIWEB.NET) AT LIGHTING ASSOCIATES, INC. FOR NATIONAL ACCOUNT DETAILS. 3. CONTACT TRAVIS VOGT (417) 621-5210 (TVOGT@CED1135.COM) AT CED-PHILLIPS & COMPANY FOR NATIONAL ACCOUNT DETAILS.										

PANEL 'P2' SCHEDULE								
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH		100A MLO	SURFACE			10,000	PHASE "A" LOAD	10
NEMA RATING: 1							PHASE "B" LOAD	5
							PHASE "C" LOAD	5
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	EXAM LIGHTING	20-1	5	A			BLANK	2
3	EXAM LIGHTING	20-1	5	B			BLANK	4
5	EXAM LIGHTING	20-1	5	C			BLANK	6
7	EXAM LIGHTING	20-1	5	A			BLANK	8
9	SPARE	20-1		B			BLANK	10
11	SPARE	20-1		C			BLANK	12
13	SPARE	20-1		A			BLANK	14
15	SPARE	20-1		B			BLANK	16
17	SPARE	20-1		C			BLANK	18
19	SPARE	20-1		A			BLANK	20
21	SPARE	20-1		B			BLANK	22
23	SPARE	20-1		C			BLANK	24
25	SPARE	20-1		A			BLANK	26
27	SPARE	20-1		B			BLANK	28
29	SPARE	20-1		C			BLANK	30
31	SPARE	20-1		A			BLANK	32
33	SPARE	20-1		B			BLANK	34
35	SPARE	20-1		C			BLANK	36
37	SPARE	20-1		A			BLANK	38
39	SPARE	20-1		B			BLANK	40
41	SPARE	20-1		C			BLANK	42
NOTES:								
A. PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"								
B. ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.								
C. AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.								

PANEL 'P1' SCHEDULE									
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING			
208Y/120V 3-PH		400A MCB		SURFACE		10,000	PHASE "A" LOAD		312.7
NEMA RATING: 1							PHASE "B" LOAD		346
							PHASE "C" LOAD		351
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION		CIRCUIT NUMBER
1	EXTERIOR SIGNAGE	20-1	12	A	9	20-1	OPEN OFFICE OUTLETS		2
3	WAITING AREA OUTLETS	20-1	9	B	6	20-1	OPEN OFFICE OUTLETS		4
5	WAITING ROOM T.V.	20-1	3	C	9	20-1	OPEN OFFICE OUTLETS		6
7	CHECK IN DESK	20-1	10.5	A	4.5	20-1	OPEN OFFICE OUTLETS		8
9	CHECK IN DESK	20-1	7.5	B	9	20-1	OFFICE / STORAGE OUTLETS		10
11	WAITING ROOM OUTLETS	20-1	7.5	C	6	20-1	CAT ROOM OUTLETS		12
13	WAITING ROOM PRINTER	20-1	12	A	6	20-1	CORR-2 DESK OUTLETS		14
15	EXAM ROOM OUTLETS	20-1	12	B	6	20-1	CORR-2 DESK OUTLETS		16
17	EXAM ROOM OUTLETS	20-1	6	C	9	20-1	TREATMENT ROOM OUTLETS		18
19	BATHROOM / DRINKING FOUNTAIN OUTLETS	20-1	9	A	7.5	20-1	TREATMENT ROOM OUTLETS		20
21	BREAK ROOM OUTLETS	20-1	6	B	7.5	20-1	TREATMENT ROOM OUTLETS		22
23	DISHWASHER	20-1	6	C	3	20-1*	MED TOWER		24
25	GARBAGE DISPOSAL	20-1	6	A	3	20-1*	MED TOWER		26
27	BREAK ROOM REF.	20-1	6	B	1.5	20-1	TREATMENT ROOM OUTLET		28
29	BREAK ROOM OUTLETS	20-1	4.5	C	1.5	20-1	TREATMENT ROOM OUTLET		30
31	X-RAY ROOM OUTLETS	20-1	4.5	A	1.5	20-1	TREATMENT ROOM OUTLET		32
33	SURGERY ROOM OUTLETS	20-1	4.5	B	1.5	20-1	TREATMENT ROOM OUTLET		34
35	SURGERY ROOM OUTLETS	20-1	3	C	20	30-2	DRYER		36
37	SURGERY ROOM OUTLETS	20-1	6	A	20	-	-		38
39	SURGERY ROOM OUTLET	20-1	1.5	B	12	20-1	WASHER		40
41	SURGERY ROOM OUTLET	20-1	1.5	C	3	20-1	WORK AREA OUTLETS		42
43	EXHAUST FANS	20-1	3	A	4.5	20-1	WORK AREA OUTLETS		44
45	X-RAY EQUIPMENT	80-2	64	B	4.5	20-1	DOG KENNEL OUTLETS		46
47	-	-	64	C	20	30-3	RTU#1		48
49	ULTRASOUND CAT ROOM OUTLETS	20-1	7.5	A	20	-	-		50
51	OUTLETS	20-1	4.5	B	20	-	-		52
53	LCPI	20-1	1.5	C	49	60-3	RTU#2		54
55	BUSINESS AREA OUTLETS	20-1	6	A	49	-	-		56
57	TREATMENT ROOM OUTLETS	20-1	1.5	B	49	-	-		58
59	WATER HEATER	25-2	19	C	69	90-3	RTU#3		60
61	-	-	19	A	69	-	-		62
63	HALLWAY OUTLETS	20-1	6	B	69	-	-		64
65	EXTERIOR LIGHTING	20-1	2.5	C	10	20-1	LIGHTING		66
67	MECH ROOM OUTLETS	20-1	1.5	A	10.7	20-1	LIGHTING		68
69	PANEL "P2"	100-3	10	B	8.5	20-1	LIGHTING		70
71	-	-	5	C	10	20-1	LIGHTING		72
73	-	-	5	A	2	20-1	VESTIBULE LIGHTS		74
75	WALL HEATER	25-2	16	B	3	20-1	LIGHTING		76
77	-	-	14	C	4	20-2	POLE LIGHTS		78
79	SPARE	20-1		A	4	-	-		80
81	SPARE	20-1		B			OPEN		82
83	SPARE	20-1		C			OPEN		84
NOTES:									
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"									
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.									
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.									
D: *INDICATES GFCI BREAKER									



ELECTRICAL SPECIFICATIONS

1.

GENERAL
- 1.1.

CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL NECESSARY PIECES AND COMPONENTS TO PROVIDE A COMPLETE AND COMPLIANT ELECTRICAL SYSTEM UNLESS OTHERWISE NOTED ON PLANS.
- 1.2.

THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.
- 1.3.

ARC-FAULT CIRCUITS SHALL BE RUN WITH A DEDICATED NEUTRAL AS REQUIRED BY MANUFACTURER.
- 1.4.

PROVIDE PERMANENT ARC-FLASH LABEL AFFIXED TO EVERY DISCONNECT AND PANEL.
- 1.5.

PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL.
2.

WORKMANSHIP
- 2.1.

ALL ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED LEVEL, PLUMB, AND PARALLEL PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE.
- 2.2.

ALL ELECTRICAL DEVICES AND LIGHT FIXTURES SHALL BE INSTALLED IN A SAFE, FIRST-CLASS MANNER WITH ATTENTION GIVEN TO OVERALL AESTHETICS. CARE SHOULD BE TAKEN TO ALLOW FOR FUTURE REPLACEMENT AND ACCESS FOR SERVICE.
3.

MATERIALS
- 3.1.

CONDUIT & CONDUCTORS
- 3.1.1.

ALL CONDUCTORS SIZES INDICATED ARE COPPER UNLESS NOTED OTHERWISE ON PLANS.
- 3.1.2.

ABOVE GRADE CONDUCTORS SHALL BE TYPE THHN.
- 3.1.3.

BELOW GRADE CONDUCTORS SHALL BE TYPE XHHW-2. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG UNLESS NOTED OTHERWISE. 120-VOLT, 20-AMP CIRCUITS WITH CONDUCTOR LENGTHS GREATER THAN 100' SHALL BE #10 AWG MINIMUM. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.
- 3.1.4.

RIGID GALVANIZED OR SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR SERVICE WIRING, BELOW GRADE INSTALLATIONS, OR WHERE EXPOSED TO WEATHER.
- 3.1.5.

IN APPLICATIONS OTHER THAN THOSE LISTED IN 3.1.4, EMT OR MC CABLE IS ACCEPTABLE. WHERE CONDUCTORS ARE PROTECTED FROM DAMAGE, ENCLOSED IN BUILDING MATERIALS, AND CONSTRUCTION IS OF A PERMITTED TYPE, NM CABLE MAY BE USED.
- 3.1.6.

FOR CAST-IN-PLACE CONCRETE, TILT-UP WALL CONSTRUCTION, OR PRE-MANUFACTURED WALL SYSTEMS, COORDINATE EXACT LOCATIONS OF ALL DEVICES WITHIN WALLS WITH WALL SUPPLIER. CONDUIT EMBEDDED IN WALLS SHALL BE SCHEDULE 80 PVC OR LFMC, OR OTHER SYSTEM APPROVED BY WALL MANUFACTURER.
- 3.1.7.

EXPOSED CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACES, VERIFY COLOR WITH ARCHITECT/OWNER.
- 3.2.

DEVICES
- 3.2.1.

CONTRACTOR TO PROVIDE I-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS.
- 3.2.1.

DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT, 20-AMP, EQUAL TO LEVITON #TBR-20.
- 3.2.2.

SINGLE POLE TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS120-2.
- 3.2.3.

THREE-WAY TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS320-2.
- 3.2.3.

DIMMER SWITCHES SHALL BE TESTED WITH FIXTURES AND LAMPS FOR COMPATIBILITY. SEE LIGHTING PLANS FOR DETAILS.
- 3.2.4.

WHERE GFCI PROTECTION IS SHOWN ON PLANS AND UNLESS OTHERWISE NOTED, PROVIDE A LISTED GFCI-PROTECTED RECEPTACLE WHERE THE RECEPTACLE IS ACCESSIBLE ON PLANS. IF THE RECEPTACLE LOCATION IS NOT ACCESSIBLE AS DEFINED BY NEC, PROVIDE GFCI PROTECTION AT CIRCUIT BREAKER.
- 3.2.5.

DO NOT INSTALL OCCUPANCY/VACANCY SENSORS WITH 48" OF HVAC DIFFUSERS/GRILLES OR SIMILAR OBSTRUCTION THAT MAY AFFECT SENSOR FUNCTIONALITY. ALL SENSORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- 3.2.6.

ALL APPLICABLE SWITCHES, RECEPTACLES, CONTROLS, ETC. SHALL BE MOUNTED AT ADA-ACCESSIBLE HEIGHTS.
- 3.2.7.

WIRING DEVICES SHOWN ON PLANS NEXT TO ONE ANOTHER SHALL UTILIZE A SINGLE COVER PLATE UNLESS NOTED OTHERWISE.
- 3.2.8.

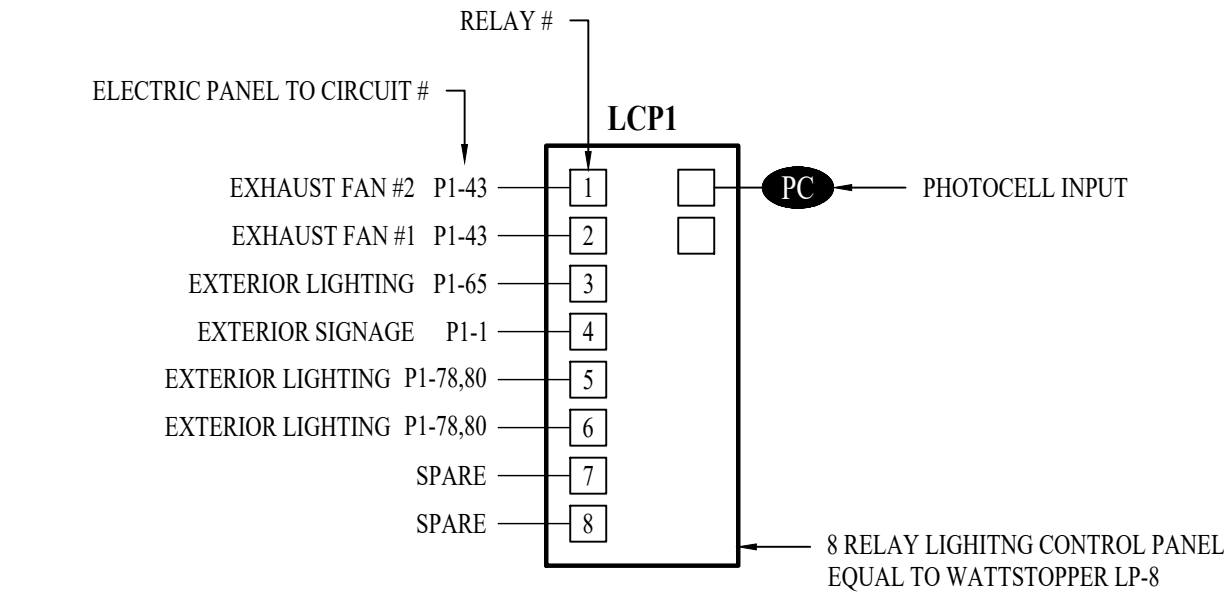
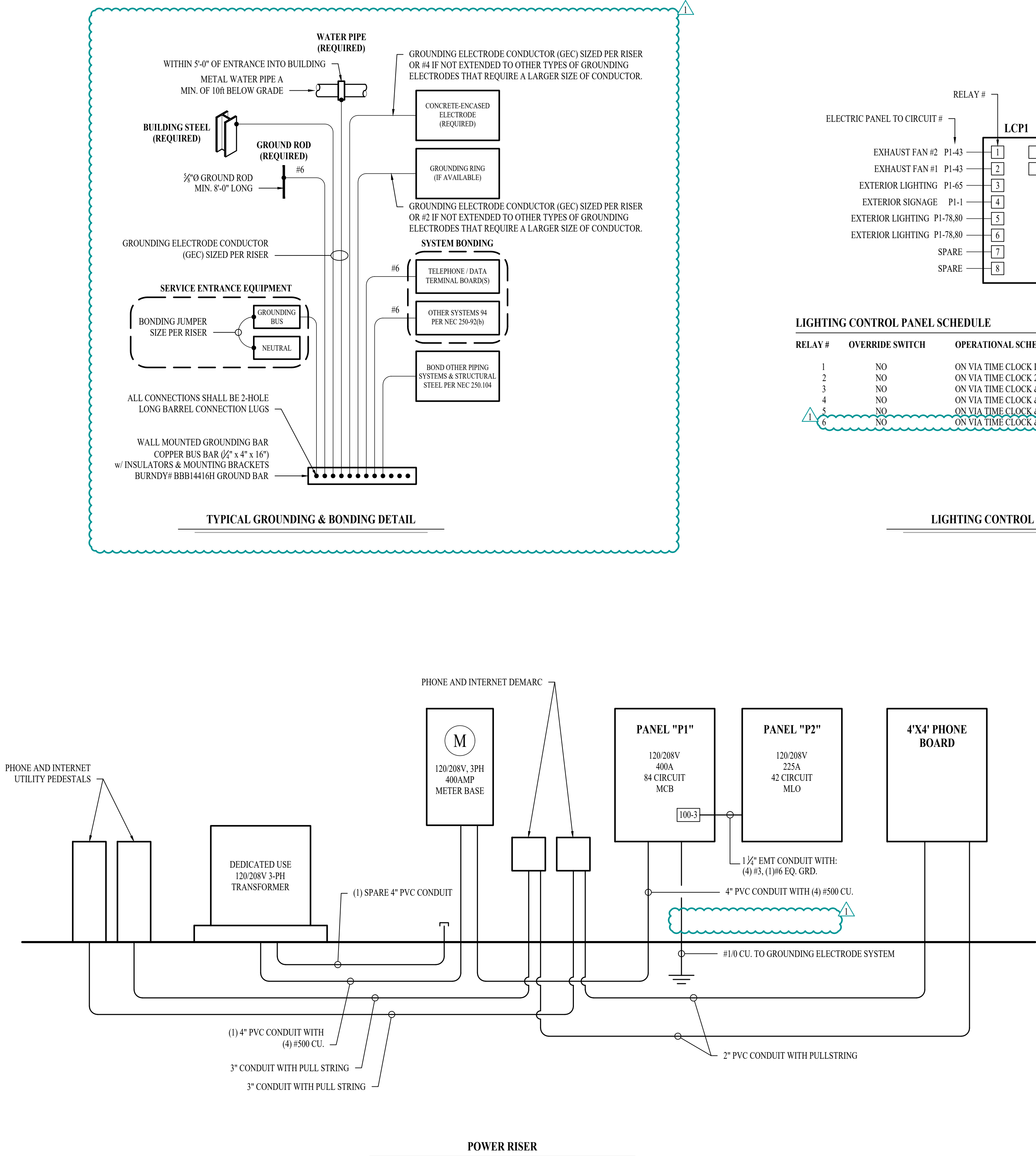
WIRING DEVICES SHOWN BACK-TO-BACK ON EACH SIDE OF A WALL SHALL BE OFFSET TO REDUCE SOUND TRANSMISSION.
- 3.2.9.

EACH RECEPTACLE COVER SHALL BE NEATLY AND LEGIBLY LABELED WITH CORRESPONDING PANEL AND CIRCUIT NUMBER FOR CIRCUIT IDENTIFICATION.
4.

EMERGENCY LIGHTING
- 4.1.

BRANCH CIRCUIT FEEDING EMERGENCY FIXTURE(S) SHALL BE SAME BRANCH CIRCUIT AS THAT SERVING NORMAL LIGHTING IN SAME AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES.
- 4.2.

EMERGENCY LIGHTING SYSTEM SHALL PROVIDE 1FC AVERAGE AND 0.1FC MINIMUM ALONG EGRESS PATHS. ADJUST ANY EMERGENCY FIXTURES AS NECESSARY TO PROVIDE PROPER ILLUMINATION WITHOUT OBSTRUCTION FROM FURNITURE OR OBSTACLES.



LIGHTING CONTROL PANEL SCHEDULE		
RELAY #	OVERRIDE SWITCH	OPERATIONAL SCHEDULE
1	NO	ON VIA TIME CLOCK DURING OCCUPIED HOURS.
2	NO	ON VIA TIME CLOCK 24/7.
3	NO	ON VIA TIME CLOCK & PHOTOCELL DURING NIGHT HOURS.
4	NO	ON VIA TIME CLOCK & PHOTOCELL DURING NIGHT HOURS.
5	NO	ON VIA TIME CLOCK & PHOTOCELL DURING NIGHT HOURS.
6	NO	ON VIA TIME CLOCK & PHOTOCELL DURING NIGHT HOURS.

- POWER RISER NOTES:
1.

COORDINATE DETAILS & REQUIREMENTS OF NEW ELECTRIC SERVICE WITH EVERYG.
2.

ALL NEW METERING EQUIPMENT MUST BE APPROVED BY EVERYG.
3.

EACH METER MUST BE PERMANENTLY LABELED.
4.

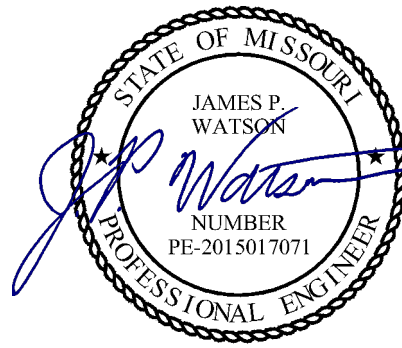
AIC-RATINGS BASED ON:
- 4.1.

TRANSFORMER: 75kVA, 100% POWER FACTOR, 3.50% Z, LOCATED APPROXIMATELY WHERE SHOWN ON PLANS.
- 4.2.

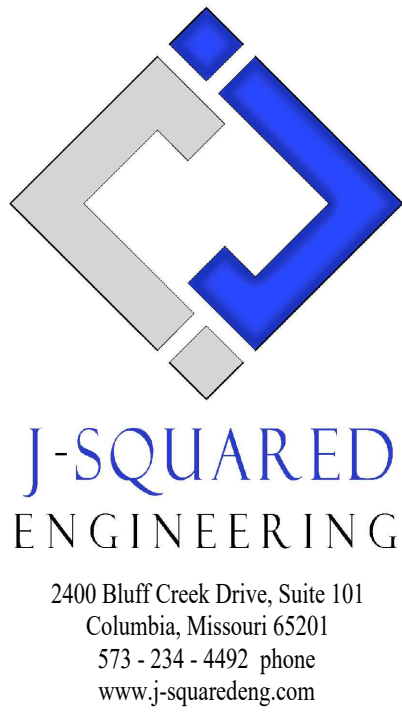
METER LOCATION INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.
- 4.3.

ELECTRICAL PANEL LOCATION INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.
- 4.4.

CONTRACTOR TO FIELD VERIFY FINAL EQUIPMENT LOCATIONS AND PERFORM ADDITIONAL AIC RATING CALCULATIONS IF NECESSARY.



James Watson, P.E. August 16, 2024  
PE-2015017071  
MO Certificate of Authority # 2018029680

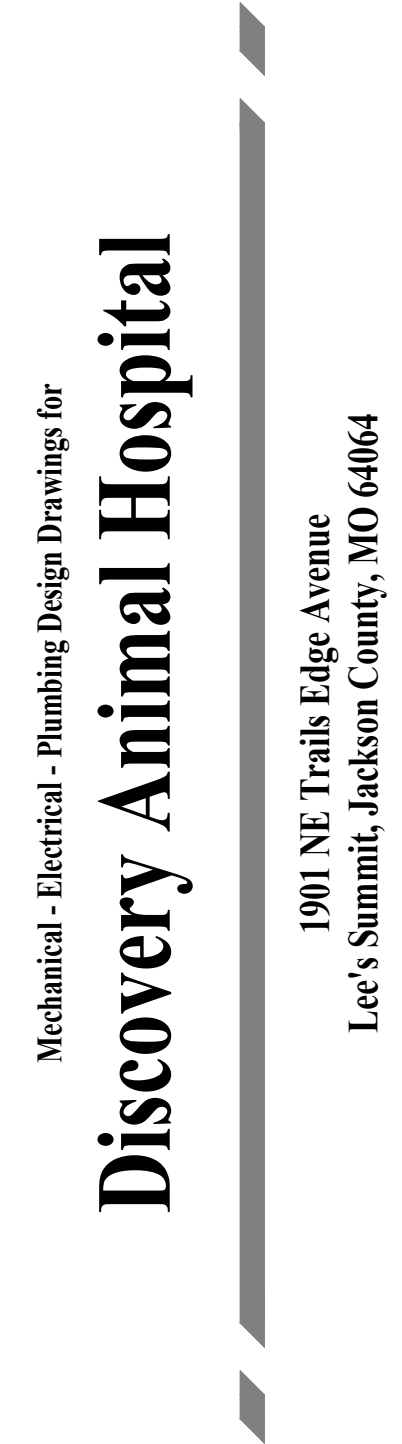


J2 PROJECT No: J21209  
J2 DESIGN: ACW

ISSUE TITLE DATE

PERMIT SET 06 / 14 /2024

REVISION #1 08 / 16 /2024

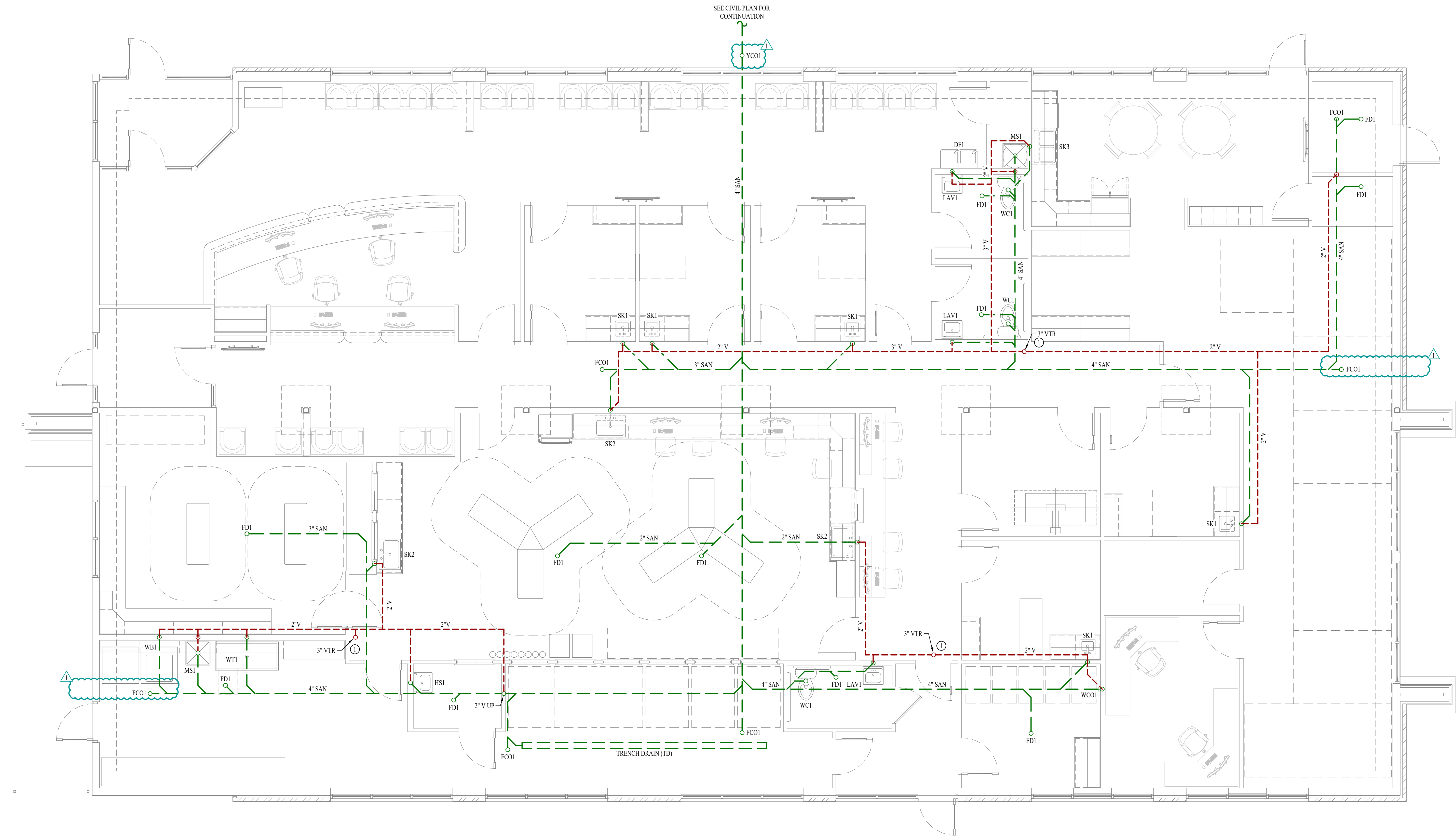
SHEET TITLE

ELECTRICAL  
DETAILS

SHEET NUMBER

E601





SANITARY SEWER PLAN

SCALE: 1/4" = 1'-0"

SANITARY SEWER PLAN SYMBOL LEGEND

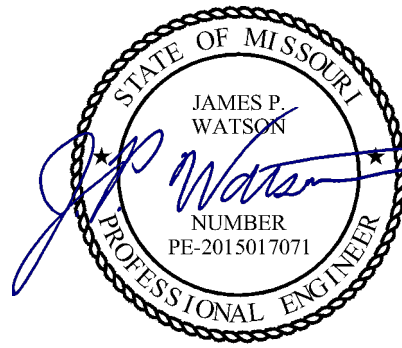
- SANITARY SEWER PIPING
- VENT PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

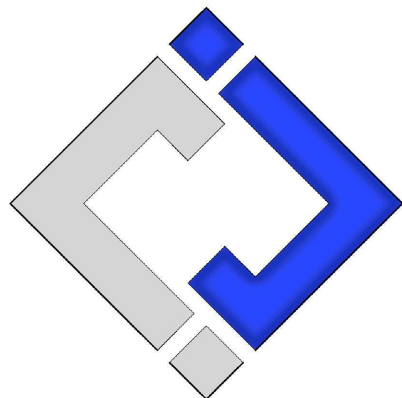
- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

- LOCATE VENT-THRU-ROOF (VTR) AT LEAST 10' FROM MECHANICAL FRESH AIR INTAKE LOCATIONS ON ROOF; COORDINATE WITH HVAC CONTRACTOR.



James Watson, P.E. August 16, 2024  
PE-2015017071  
MO Certificate of Authority # 2018029680



J-SQUARED  
ENGINEERING

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J2 PROJECT No: J21209

J2 DESIGN: ACW

ISSUE TITLE DATE

PERMIT SET 06 / 14 / 2024

REVISION #1 08 / 16 / 2024

Discovery Animal Hospital

Mechanical - Electrical - Plumbing Design Drawings for

1901 NE Trails Edge Avenue  
Lee's Summit, Jackson County, MO 64064

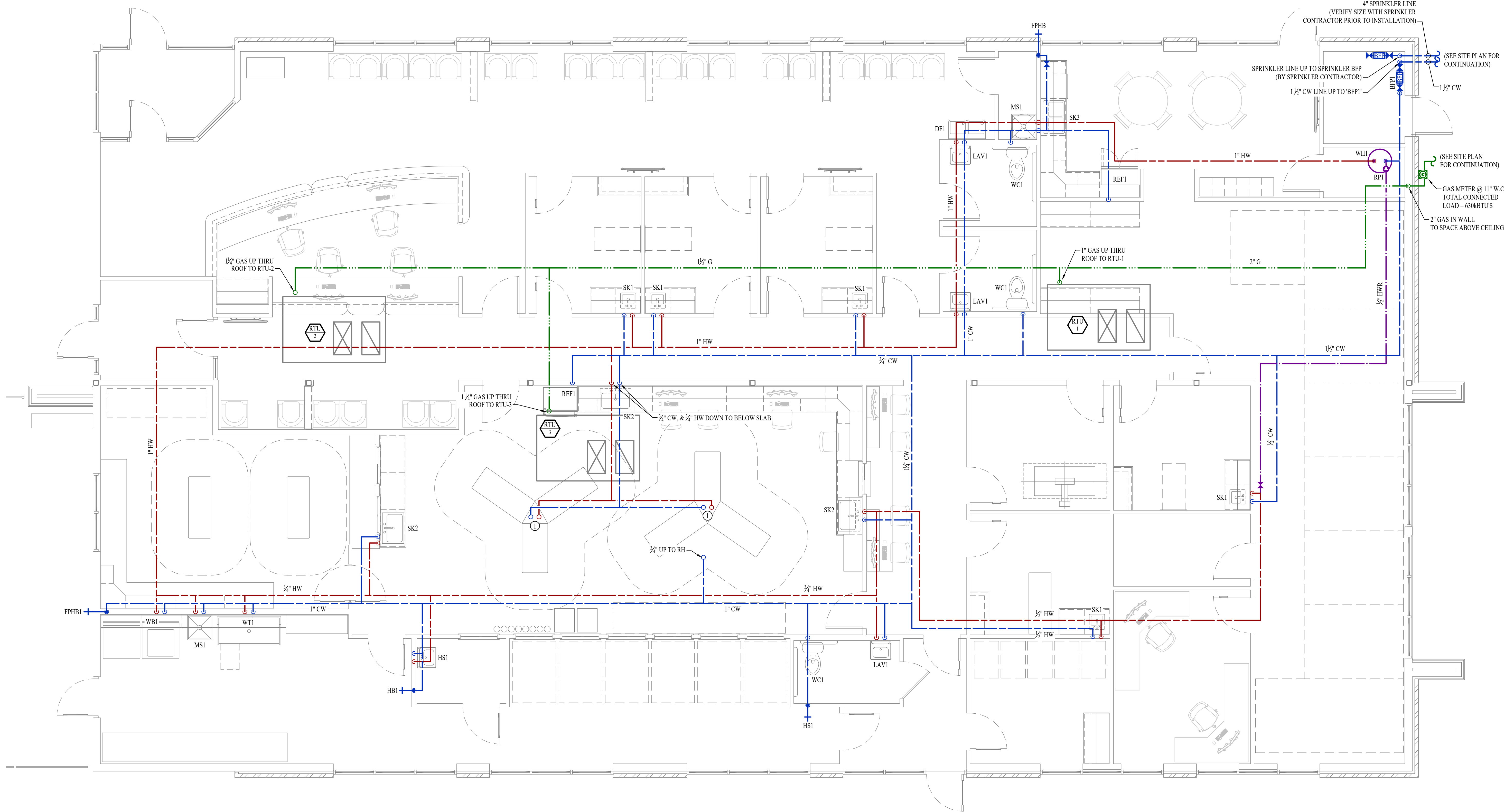
SHEET TITLE

SANITARY  
SEWER PLAN

SHEET NUMBER

PS101





WATER & GAS PLAN  
SCALE: 1/4" = 1'-0"

WATER & GAS PLAN SYMBOL LEGEND

- COLD WATER LINE
- HOT WATER LINE
- HOT WATER RECIRCULATION LINE
- FILTERED WATER LINE
- WATER METER
- VALVE
- PUMP
- GAS LINE
- GAS METER
- PIPING TURNED DOWN / TURNED UP

WATER & GAS PLAN GENERAL NOTES:

- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER & GAS PLAN KEY NOTES:

- CONNECT TO OWNER PROVIDED MED TOWER; COORDINATE EXACT LOCATION & REQUIREMENTS WITH G.C.



PLUMBING SPECIFICATIONS

1.

GENERAL
- 1.1.

PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ESCUTCHEONS, ¼ TURN STOPS, P-TRAPS, AND SUPPLY LINES TO PROVIDE A COMPLETE SYSTEM AT EACH FIXTURE INDICATED ON PLANS UNLESS NOTED OTHERWISE.
- 1.2.

ALL PLUMBING SYSTEMS SHALL BE INSTALLED LEVEL, PLUMB, AND PARALLEL/PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE.
- 1.3.

COORDINATE ALL PIPING INSTALLATIONS WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THRU STRUCTURAL ELEMENTS AS NECESSARY, VERIFY WITH STRUCTURAL ENGINEER.
- 1.4.

VERIFY ALL UTILITY CONNECTION POINTS WITH PROPOSED PLUMBING LAYOUTS PRIOR TO BEGINNING WORK.
- 1.5.

CLEAN ALL PLUMBING FIXTURES AND CHANGE FAUCET AERATORS AND SINK STRAINERS AT PROJECT COMPLETION PRIOR TO TURNING OVER TO OWNERSHIP.
2.

EQUIPMENT / FIXTURES
- 2.1.

ALL EQUIPMENT AND/OR FIXTURES MUST MEET OR EXCEED THE PERFORMANCE, FUNCTIONAL INTENT, AND AESTHETICS AS MODELS SPECIFIED ON PLANS, WHERE SPECIFIC MANUFACTURERS AND/OR MODELS ARE INDICATED ON PLANS OR WITHIN SCHEDULES, CONTRACTOR TO PROVIDE MODEL INDICATED OR APPROVED EQUAL. VERIFY SUBSTITUTION APPROVAL PRIOR TO PURCHASE OR INSTALLATION OF EQUIPMENT.
- 2.2.

CONTRACTOR TO SUPPLY SUBMITTALS FOR ALL EQUIPMENT FOR REVIEW BY ARCHITECT AND ENGINEER. FORMAL APPROVAL SHALL BE RECEIVED BY CONTRACTOR PRIOR TO EQUIPMENT PURCHASE.
- 2.3.

CONTRACTOR TO SHARE APPROVED EQUIPMENT SUBMITTALS WITH ANY PERTINENT ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTORS WITHIN TWO WEEKS OF RECEIVING APPROVED SUBMITTALS FROM ARCHITECT/ENGINEER.
3.

SANITARY
- 3.1.

BELOW AND ABOVE GRADE WASTE AND VENT PIPING IN BUILDING TO BE SOLID CORE SCHEDULE 40 PVC LISTED FOR DWV APPLICATIONS.
- 3.2.

NO WASTE OR VENT PIPING INSTALLED BELOW GRADE SHALL BE SMALLER THAN 2".
- 3.3.

MINIMUM SLOPES FOR WASTE PIPING (UNLESS NOTED OTHERWISE ON PLANS):
- 3.3.1.

2½" OR LESS DIAMETER: ¼" PER FOOT
- 3.3.2.

3" TO 6" DIAMETER: ⅜" PER FOOT
- 3.3.3.

8" OR LARGER DIAMETER: ½" PER FOOT
- 3.4.

ACCESSIBLE FULL PIPE SIZE CLEANOUTS SHALL BE PROVIDED & INSTALLED ON BUILDING SANITARY LINES AT LOCATIONS SHOWN ON PLANS, AT INTERVALS OF NO MORE THAN 100', AT EVERY CHANGE IN DIRECTION GREATER THAN 45°, AND AT THE BASE OF EACH WASTE STACK.
- 3.5.

WASTE AND VENT PIPING IN PLENUMS SHALL BE CAST IRON, PLENUM-RATED CPVC, OR PVC WITH AN INSULATION WRAP LISTED FOR USE AS SUCH AN ASSEMBLY.
- 3.6.

ALL VENT PIPE TERMINATIONS SHALL BE LOCATED EITHER 10' HORIZONTALLY OR 3' ABOVE MECHANICAL AIR INTAKE LOCATIONS. TERMINATIONS SHALL NOT BE INSTALLED UNDER ANY OPERABLE BUILDING OPENING OR OPERABLE ADJACENT BUILDING OPENING. CONTRACTOR TO OFFSET VENT PIPING AS NECESSARY TO MEET THESE REQUIREMENTS.
4.

DOMESTIC WATER
- 4.1.

ALL DOMESTIC WATER PIPING TO BE EITHER COPPER OR PEX, SHALL CONFORM TO NSF 61 AND BE LISTED FOR USE IN POTABLE WATER SYSTEMS.
- 4.1.1.

WHERE PEX PIPING IS USED, IT SHALL BE INCREASED ONE PIPE SIZE FROM WHAT IS INDICATED ON PLANS FOR ALL PORTIONS OF DISTRIBUTION SYSTEM.
- 4.1.2.

PEX-A MAY BE INSTALLED AT SIZES INDICATED ON PLANS ONLY IF AN ENGINEERED PLAN IS SUBMITTABLE SHOWING ACCEPTABLE PRESSURE DROPS AND FLUID VELOCITIES. APPROVAL MUST BE GRANTED PRIOR TO PURCHASE AND INSTALLATION.
- 4.1.3.

COPPER WATER PIPING BELOW GRADE SHALL BE TYPE "K". BELOW GRADE JOINTS SHALL BE SILVER SOLDERED. THERE SHALL BE NO JOINTS IN WATER PIPING LOCATED BENEATH BUILDING SLAB.
- 4.1.4.

COPPER WATER PIPING ABOVE GRADE SHALL BE TYPE "L".
- 4.2.

PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK-CLOSE VALVES. FIXTURES REQUIRING WATER HAMMER ARRESTORS INCLUDE BUT ARE NOT LIMITED TO FLUSH VALVES, SENSOR FAUCETS, AND WASHING MACHINE BOXES. AIR CHAMBERS SHALL NOT BE PERMITTED.
- 4.3.

ALL DOMESTIC WATER PIPING SHALL BE ROUTED WITHIN BUILDING THERMAL ENVELOPE AND WITHIN WALL CAVITIES, ABOVE FINISHED CEILINGS, OR BELOW SLAB TO REMAIN CONCEALED UNLESS OTHERWISE NOTED. NOTIFY ENGINEER OF ANY NECESSARY ADJUSTMENTS THAT REQUIRE PIPING TO BE EXPOSED.
- 4.4.

DOMESTIC WATER PIPING INSULATION
- 4.4.1.

ALL HW PIPING, WHETHER COPPER OR PEX, SHALL BE INSULATED WITH PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION.
- 4.4.1.1.

FOR PIPING LESS THAN 1½", INSULATION THICKNESS TO BE 1".
- 4.4.1.2.

FOR PIPING 1½" OR GREATER, INSULATION THICKNESS SHALL BE 1½".
- 4.4.2.

CW COPPER PIPING TO INSULATED WITH ½" PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. CW PEX NEED NOT BE INSULATED UNLESS NOTED OTHERWISE ON PLANS.
5.

GAS PIPING
- 5.1.

GAS PIPING SHALL BE INSTALLED LEVEL, PLUMB, AND PARALLEL OR PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE.
- 5.2.

QUARTER-TURN FULL-PORT SHUTOFF VALVES SHALL BE INCLUDED AT EACH APPLIANCE CONNECTION, AS WELL AS AN IN-LINE REGULATOR FROM DELIVERY PRESSURE TO APPLIANCE OPERATING PRESSURE IF REQUIRED. INCLUDE SEDIMENT TRAPS PER IFGC REQUIREMENTS.
- 5.1.

NATURAL GAS AND LIQUID PROPANE (LP) PIPING TO SHALL BE SCHEDULE 40 BLACK STEEL.
- 5.2.

PIPE JOINTS SHALL BE THREADED WITH CLASS 150 FITTINGS, OR WELDED. NOTIFY OWNER/GC OF ANY NECESSARY HOT-WORK ASSOCIATED WITH WELDED CONNECTIONS.
- 5.3.

WHERE PIPING IS EXPOSED ON EXTERIOR FACE OF BUILDING, PAINT TO MATCH BUILDING. PAINT YELLOW IN ALL OTHER LOCATIONS.
- 5.4.

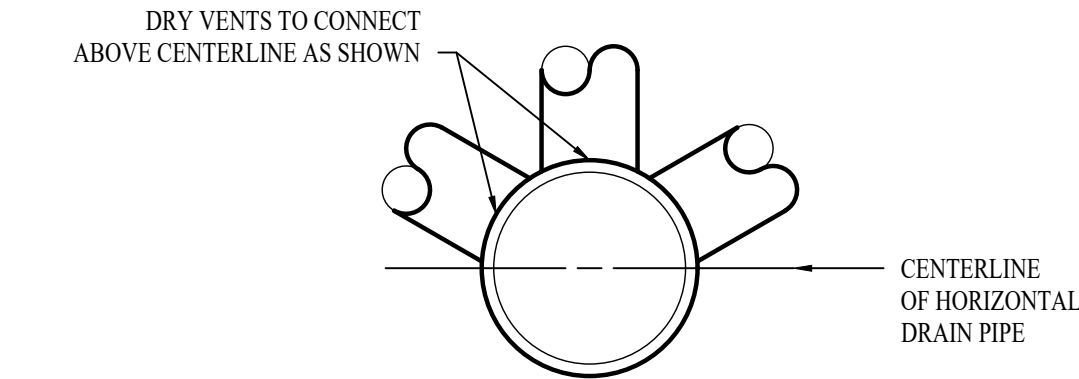
ON ROOFTOPS, INSTALL GAS PIPE WITH "ROOFTOP BLOX" PER MANUFACTURER'S INSTRUCTION.
6.

STORM DRAIN PIPING
- 6.1.

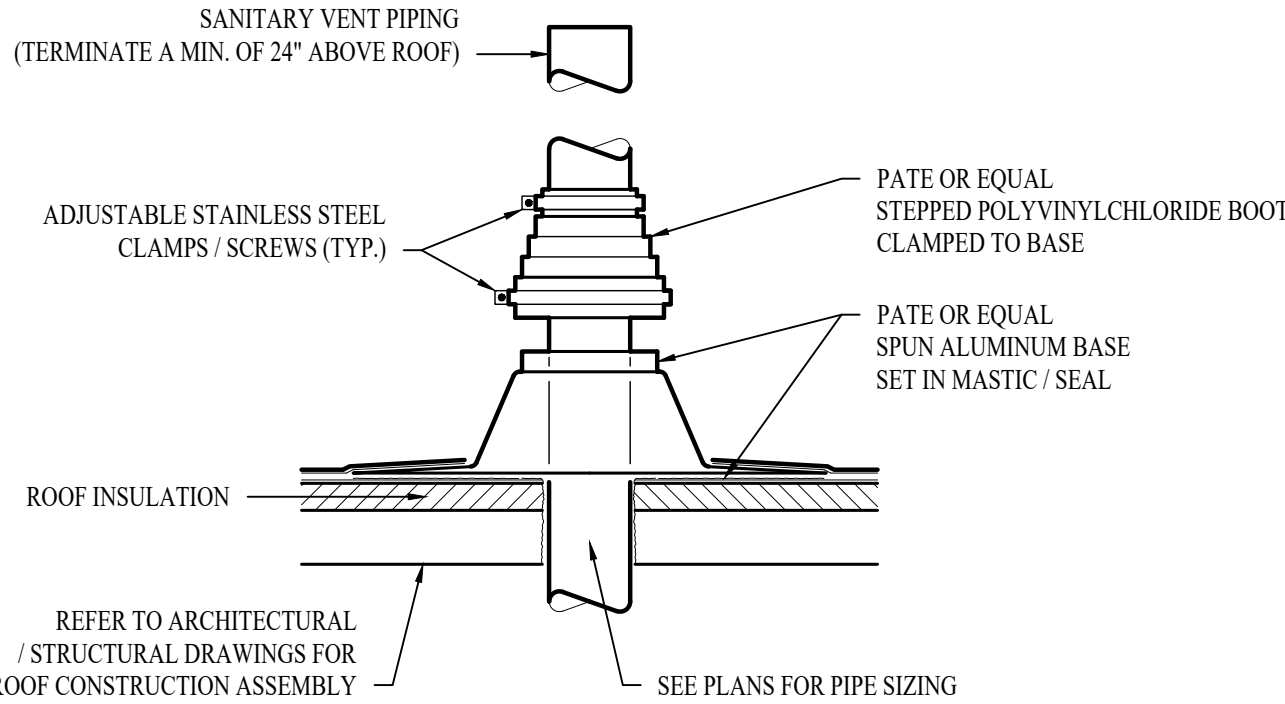
ABOVE AND BELOW GRADE STORM PIPING SHALL BE SOLID CORE SCHEDULE 40 PVC.
- 6.2.

ALL PRIMARY & SECONDARY STORM DRAIN PIPING & FITTINGS SHALL BE INSULATED WITH ½" FIBERGLASS INSULATION WITH ASI JACKET.
- 6.3.

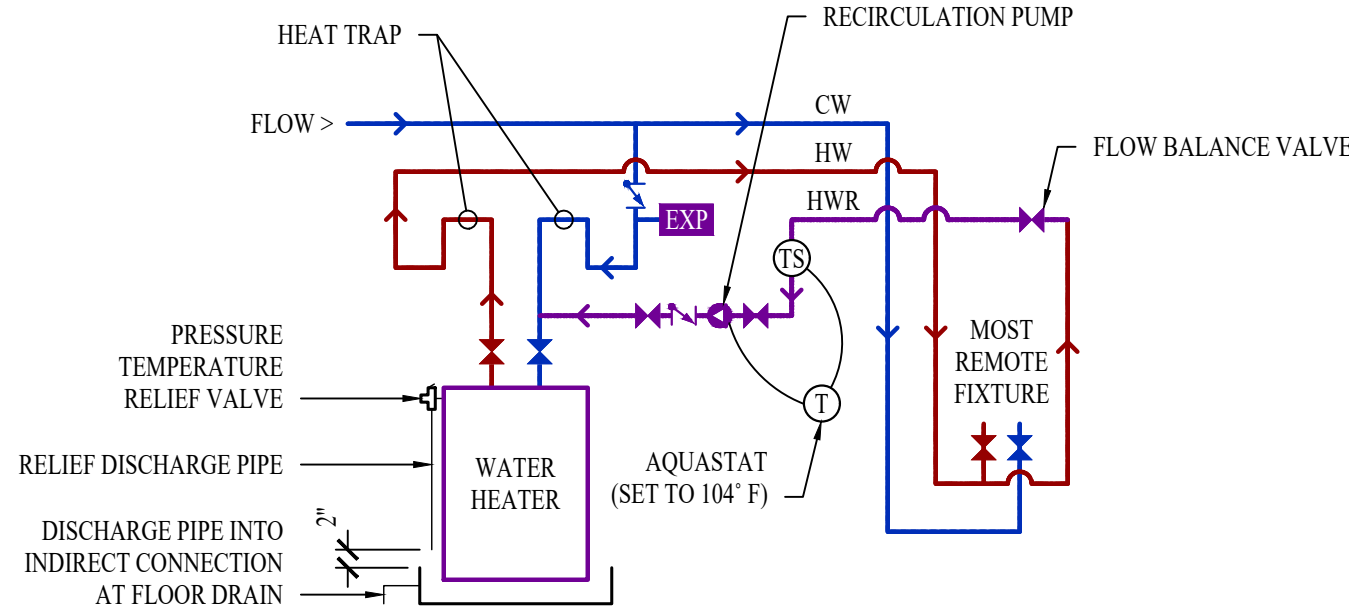
STORM DRAIN PIPING IN PLENUMS SHALL BE CAST IRON, PLENUM-RATED CPVC, OR PVC WITH AN INSULATION WRAP LISTED FOR USE AS SUCH AN ASSEMBLY.



DRY VENT DETAIL



SANITARY VENT THRU ROOF DETAIL



HOT WATER RECIRCULATION DETAIL

PLUMBING FIXTURE SCHEDULE				
TAG	DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	NOTES
BFP1	BACKFLOW PREVENTER	WILKINS	97SSX1.2	RPZ - 1.25"
DF1	DRINKING FOUNTAIN	ELKAY	EZST18LC	HIGH/LOW
EXP1	EXPANSION TANK	WATTS	PLT-5	
FCO1	FLOOR CLEANOUT	ZURN	1400	
FD1	FLOOR DRAIN	ZURN	Z415-BZ	WITH Z1072 TRAP SEAL
FPHB1	FROST PROOF HOSE BIB	WOODFORD	MODEL 67	
HBI	HOSE BIB	JR SMITH	5670-H	INTERIOR HOSE BIB WITH VACUUM BREAKER
HS1	HAND SINK	ELKAY	C181716LRSC	
LA V1	LAVATORY (WALL HUNG W/MANUAL FAUCET)	AMERICAN STANDARD	0355.012	WITH ZURN Z81104-XL FAUCET, 1/4 TURN STOPS, BRAIDED STAINLESS STEEL SUPPLIES, AND TRUBRO LAV GUARD 2
MS1	MOP SINK	FIAT	MSB2424	WITH ZURN Z848M1 FAUCET WITH WALL HOOK
REF1	REFRIGERATOR BOX	SOUIX CHIEF	696-G1000	
RH1	ROOF HYDRANT	WOODFORD	SRH-MS	
RP1	RECIRCULATION PUMP	GRUNDFOS	UP10-158UA/TLC	
SK1	SINGLE COMPARTMENT SINK (15x15x6)	ELKAY	HCR15	WITH TWO HANDLED ZURN Z871C4-XL FAUCET
SK2	SINGLE COMPARTMENT SINK (22x19x7)	ELKAY	LR2219	WITH TWO HANDLED ZURN Z871C4-XL FAUCET
SK3	DOUBLE COMPARTMENT SINK W/DISPOSAL (33x22x7)	ELKAY	CR3322	WITH TWO HANDLED ZURN Z871C4-XL FAUCET AND INSINKERATOR BADGER 1 DISPOSAL WITH POWER CORD
TD1	TRENCH DRAIN	ZURN	Z886-HPS	
WB1	WASHER BOX	OATEY	CENTRO II	
WC1	WATER CLOSET - ADA HEIGHT - TANK	AMERICAN STANDARD	215A.A.004	WITH CHURCH1 7200SLBC SEAT AND COVER, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF
WCO1	WALL CLEAN OUT			
WH1	WATER HEATER	AOSMITH	DEH.50	50 GALLON, 208V, 4000W
WT1	FAUCET FOR WASH TUB	ZURN	Z842X1-XL-AF	
YCO1	YARD CLEAN OUT	ZURN	Z1400	
NOTES: 1. VERIFY NECESSARY FIXTURES MEET ADA REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION				

PLUMBING CONNECTION SIZING SCHEDULE					
FIXTURE		SANITARY PIPING		SUPPLY PIPING	
TYPE	TYPICAL ABBREVIATION	WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
DRINKING FOUNTAIN	DF	1-1/2"	1-1/4"	1/2"	-
FLOOR DRAIN	FD	3"	2"	-	-
HAND / HAIR SINK	HS / SK	2"	1-1/4"	1/2"	1/2"
HOSE BIB/B	HB	-	-	3/4"	-
LAVATORY	LA V	1-1/2"	1-1/4"	1/2"	1/2"
MOP SINK	MS	3"	1-1/2"	1/2"	1/2"
ICE MAKER OUTLET BOX	REF	-	-	1/2"	-
SHOWER	SH	3"	1-1/2"	1/2"	1/2"
URINAL	UR	2"	1-1/4"	3/4"	-
WATER CLOSET (FLUSH TANK)	WC	3"	2"	1/2"	-
WATER CLOSET (FLUSH VALVE)	WC	3"	2"	1"	-
NOTES: 1. SIZES SHOWN ABOVE ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS					