			1						2	2		
D	NW High Poline D.	W Lowenstein D.		PROJECT L	COCATION		S	TF	SEE.	T (	5 (	BUILD OF V R ROA
		LOCATION N SCALE: NOT TO SCALE	<b>\$</b> MAP		NW Chipma	in Rd.	<b>GRAPHIC</b>		OLS B3 A-202 B3 B3	MATCHL	ION MARK	<u>A-101 / 1</u> A-101 / 1 A-101 / 1
C	PLAN OR S	<ul> <li>ACOUSTIC TILE (SECTION</li> <li>BATT INSULATION</li> <li>BRICK</li> <li>CARPET</li> <li>CONCRETE</li> <li>CONCRETE MASONRY UN</li> <li>CONCRETE, PLASTER CUT STONE, STUCCO</li> <li>EARTH COMPACTED/ DISTURBED</li> <li>METAL</li> <li>METAL STUDS</li> </ul>		RIGID INSULATION SAND, GRAVEL, DRYWALL, CUT GROUT TILE (LARGE SC WOOD BLOCKIN WOOD MEMBER (CONTINUOUS) WOOD STUDS, PARALAM, FINISHED ELEVATION BRICK GLASS WOOD	, PLASTER STONE, CALE)	,	WALL SECTION DETAIL CALL PARTITION T WINDOW TAG DOOR TAG ROOM TAG	SIM OUT ( YPE TAG G	A2 $A-202$ $A2$ $A-202$ $A2$ $A-202$ $A2$ $A2$ $A-202$ $A2$ $A-202$	CENTER SPOT EL DEMOLI <sup>TI</sup> GENERA NEW CO MARK REVISIO	LINE MARK EVATION TION MARK AL NOTE MAR	¢
DRAWN BY: Author B	ABBREV A AFF AE ACS PNL AC ACC AC ACT AC ACOUS PNL A ACC AC ADMIN AE APC AC ADMIN AE APC AC ADJ AE AHU AI ALT AL ALUM AL ALT AL ALUM AL AB AN APPROX AF ASPH AS B BSMT BA BSMT BA BRG PL BE BRG PL BE BRG PL BE BRG PL BE BRG PL BE BRG PL BE BRG BE BRG PL BE BRG BE BRG PL BE BRG CA COL CC CCC CC CCC CCC CC CCC CC CCC CCC CC CCC CC CCC CCC CC CCC CC CCC CC CCC CCC CC C		DW DR DBL DN DS DWG DF E EA EW ESMT E ELEC ELEV EQ EQUIP EXH FN EXIST EXP EJ EXT EIFS F F C BRK FOF FGL FIN FF EL FEC FIXT FLASH FLOR FLUO	NTINUED DISHWASHER DOOR DOUBLE DOWN DOWNSPOUT DRAWING DRINKING FOUNTAIN EACH EACH EACH WAY EASEMENT EAST ELECTRIC, ELECTRICAL ELEVATION ELEVATOR EQUAL EQUIPMENT EXHAUST FAN EXISTING EXPANSION JOINT EXTERIOR EXTERIOR INSULATION & FINISH SYSTEM FACE BRICK FACE OF FINISH FIBERGLASS FINISH FINISH FLOOR ELEVATION FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE EXTINGUISHER FIRE EXTINGUISHER FLOOR FLOOR CLEANOUT FLOOR DRAIN FLUORESCENT FLOW LINE FOOT FOOTING FOUNDATION FRAME FRESH AIR FURNACE FURNACE FURNING FUUL SIZE GAUGE GALVANIZED STEEL GENERAL CONTRACTOR GLASS GRAB BAR GYPSUM BOARD HANDICAPPEN HI	H C HW HYD I INCL ID INSUL INT J JAN K KIT L LAB LAM LAU LAV LWC LCMU IF LL LR LLH LV C MAINT MFD MFG MOR MATL MIN MFD MFG MOR MATL MIN MIN MIN MIN MIN MIN MIN MIN MIN MIN	LIGHTWEIGH MASONRY LINEAR FOO LIVE LOAD LIVING ROOI LONG LEG H LONG LEG V MAINTENAN MANHOLE MANUFACTU MANU	ETER ETER ETER ETER ETER ETCONCRETE T MORIZONTAL ERTICAL CE JRED JRER JRING PENING DROOM L E INUTE OUS RESISTANT ICTION ENT ECUS RESISTANT ICTION ENT ENT ICTION ENT ICTION ENT ICTION ENT ENT ENT ICTION ENT ICT	P PT PR PT PR PT PR PR PR PR PD PT PR PR PD PT PD PT PS PER PD PL PVC PR PEF PS PC PR PF PS PC PR PF PS PC PR PS PC PC PR PS PC PC PS PC PC PC PC PS PC PC PC PS PC PC PC PS PC PC PC PS PC PC PC PC PC PC PC PC PC PC PC PC PC	PAINT PAIR PANEL PAPER TOWEL DISPENSEI PARTICLE BOARD PARTITION PAVING PERFORATED PERIMETER PLASTER PERPENDICULAR PLASTIC LAMINATE PLYWOOD POLYVINYL CHLORIDE POUND POUNDS PER CUBIC FOOT POUNDS PER CUBIC FOOT POUNDS PER SQUARE FOO POUNDS PER SQUARE INC PRECAST CONCRETE PREFABRICATE PREFINISH PROJECT PROPERTY LINE QUARRY TILE REFERENCE, REFRIGERATOR REFLECTED CEILING PLAN REINFORCE REQUIRED RESILIENT RESTROOM RETURN AIR REVISION RISER, RADIUS, RANGE ROOF DRAIN ROOFING ROOM ROUGH OPENING ROOM ROUGH OPENING ROOF DRAIN ROOFING SANITARY NAPKIN DISPEN SANITARY NAPKIN DISPEN SANITARY NAPKIN DISPEN SANITARY SEWER SCHEDULE SECTION SHEET SHEET VINYL SHELVING SHOWER SIMILAR SOLID CORE WOOD SOUND TRANSMISSION CH SOUTH SPECIFICATION SPLASH BLOCK SQUARE FOOT SQUARE TOCH SOT H SPECIFICATION SPLASH BLOCK SQUARE FOOT SQUARE FOOT	SER SAL UNIT	STRUCT SUSP CLG SW T TK BD TEL TV TMPD TER THK TPD T&G T&B TCC TOF TOM TOS TOC TOF TOM TOS TOW TB TRANS *TF T TYP U UNFIN UH UNO V V V V V V V V V V V V V V V V V V V	TINUED STRUCTURAL SUSPENDED CEILING SWITCH TACKBOARD TELEPHONE TELEVISION TEMPERED TERRAZZO THICKNESS TOILET PAPER HOLDER TONGUE AND GROOVE TOP AND BOTTOM TOP OF CURB, TOP OF CONCRETE TOP OF FOOTING TOP OF MASONRY TOP OF STEEL TOP OF WALL TOWEL BAR TRANSPARENT TRANSPARENT TRANSPARENT TRANSPARENT WOOD FINISH TREAD TYPICAL UNFINISHED UNIT HEATER UNLESS NOTED OTHERWISE VAPOR RETARDER VENER VENTILATION VERTICAL VESTIBULE VINYL COMPOSITION TILE VINYL WALL COVERING VINYL WALL COVERING VINYL WALL FABRIC VOLT WAINSCOT VALL COVERING, WORKING POINT VEIGHT VELDED WIRE FABRIC WEST, WIDE VINDOW WIRED GLASS VITH WITHOUT VOOD

FILE F

# LDING WEST PRYOR LOT 13 OAD, LEES SUMMIT, MISSOURI

3

# CODE SUMMARY

PROJECT SCOPE:
CORE & SHELL DOCUMENTS. DRAWINGS FOR TENANT IMPROVEMENT WILL BE ISSUED A SEPARATE PERMIT AND PROVIDED BY OTHERS.

	JURISDICTIONAL BUILDI	NG CODES:
-	INTERNATIONAL BUILDING CODE INTERNATIONAL MECHANICAL CODE NATIONAL ELECTRICAL CODE INTERNATIONAL PLUMBING CODE INTERNATIONAL FIRE CODE INTERNATIONAL FUEL GAS CODE	2018 2018 2017 2018 2018 2018
	AND USABLE BUILDINGS AND FACILITIE	2009 S
*	CONSTRUCTION INFORM	<u>MATION:</u>
•	BUILDING TYPE: OCCUPANCY TYPES: CONSTRUCTION TYPE: ALLOWABLE HEIGHT: ACTUAL HEIGHT: ALLOWABLE STORIES: ACTUAL STORIES: GROSS BUILDING AREA:	NEW CONSTRUCTION M (MERCANTILE) V-B (SPRINKLERED) 40 FT 26 FT 1 1 13,989 SF
	ALLOWABLE FLOOR ARE ALLOWABLE FLOOR AREA (M): *FRONTAGE INCREASE N/A DUE TO ACT LESS THAN ALLOWABLE FLOOR AREA	9,000 SF

2-HR SEPARATION ••••• EXIT

### NOTE: 2-HR SEPARATION WALL WILL BE CONSTRUCTED AS A FIRE BARRIER, UL #U423,

EXTENDING FROM FOUNDATION TO UNDERSIDE OF ROOF SHEATHING.

3

### **GROSS BUILDING AREA:** 2,494 SF 1,999 SF 2,499 SF TENANT A: TENANT C: TENANT E: 6,997 SF TENANT G TOTAL GROSS AREA: 13,989 SF OCCUPANT LOAD CALCS: TENANT B (M): IBC TABLE 1004.5

TOTAL NÈT SF <u>MERCANTILE</u> OCCUPANTS	13,989 SF 60 GROSS 234 OCC
EXITS REQUIRED: TENANT A (M): IBC TABLE 1006.2.1 EXITS REQUIRED EXITS PROVIDED	1 EXIT 3 EXITS
TENANT C (M): IBC TABLE 1006.2.1 EXITS REQUIRED EXITS PROVIDED	1 EXIT 2 EXITS
TENANT E (M): IBC TABLE 1006.2.1 EXITS REQUIRED EXITS PROVIDED	1 EXIT 2 EXITS
TENANT G (M): IBC TABLE 1006.2.1 EXITS REQUIRED EXITS PROVIDED	2 EXITS 3 EXITS

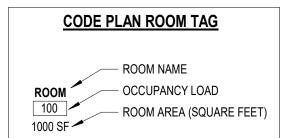
# STRUCTURAL FIRE PROTECTION (IBC TABLE 601)

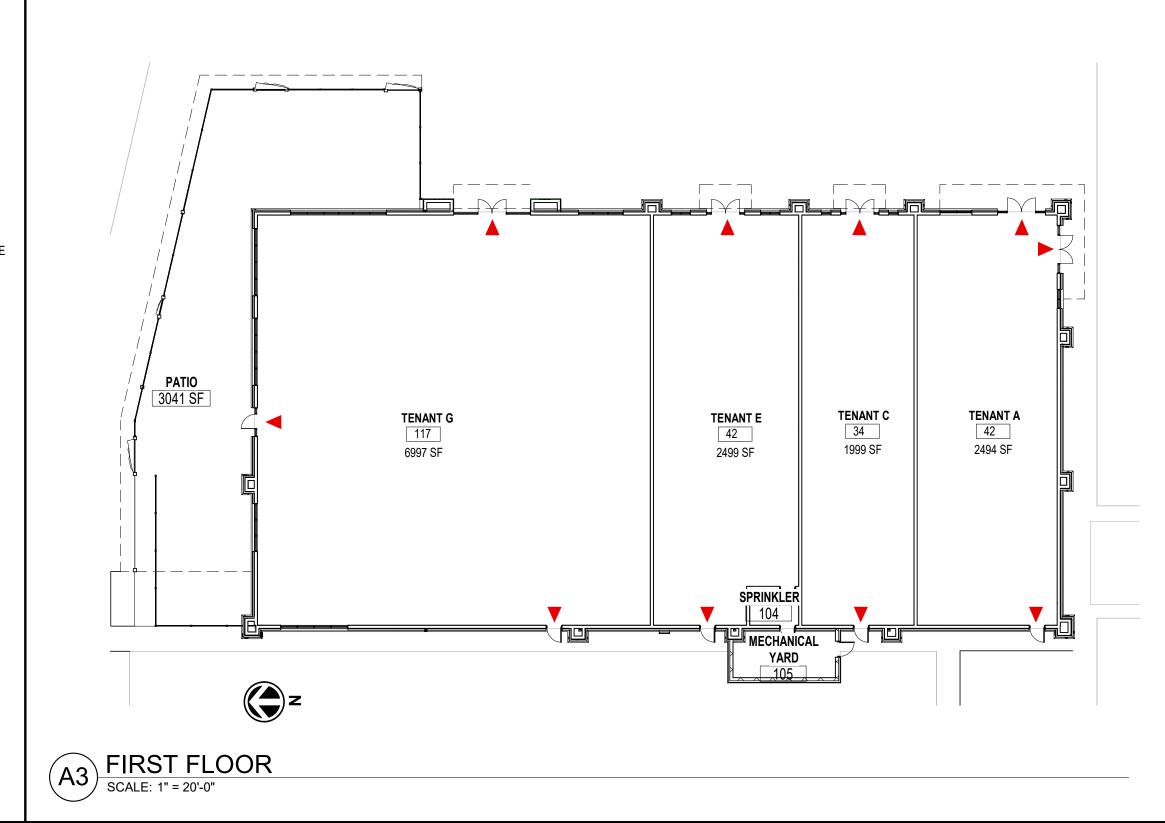
PRIMARY STRUCTURAL FRAME	(0) HOUF
EXTERIOR BEARING WALLS	(0) HOUF
NTERIOR BEARNING WALLS	(0) HOUF
EXTERIOR NON-BEARING WALLS & PARTITIONS	Ň/A
NTERIOR NON-BEARING WALLS & PARTITIONS	(0) HOUI
STRUCTURAL FRAME	(0) HOUI
LOOR CONSTRUCTION	(0) HOUI
ROOF CONSTRUCTION	(0) HOUI

4

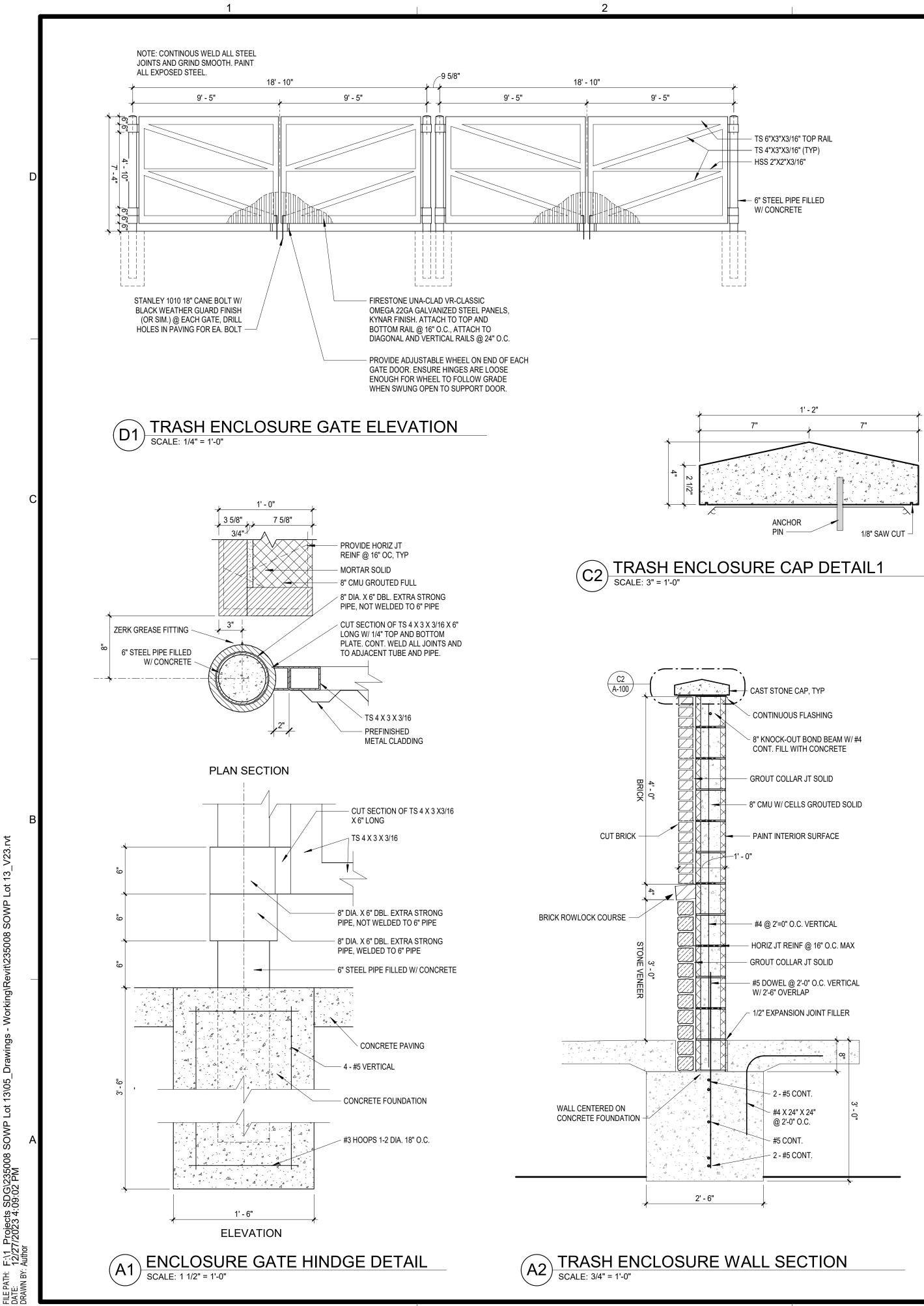
STRUCTURAL FIRE PROTECTION (IBC TABLE 601)

AUTOMATIC SPRINKLER SYSTEM (YES)
 EXIT LIGHTING PROVIDED





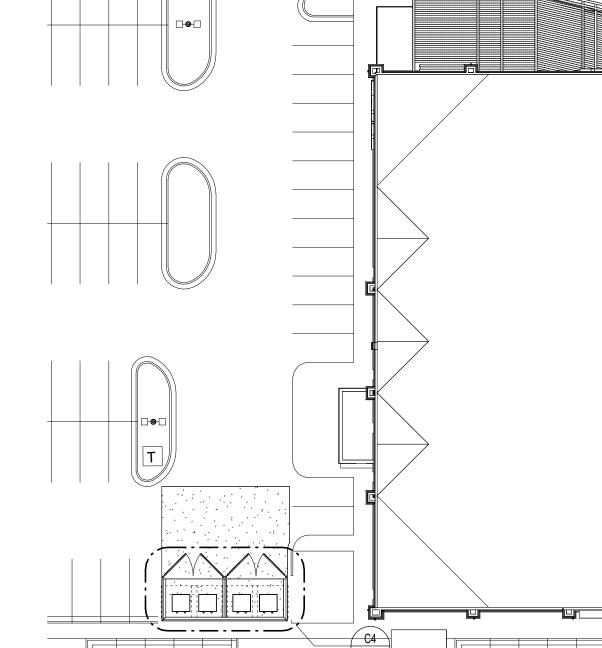
DESIGN TEAM	
ARCHITECTURAL DESIGN SCHWERDT DESIGN GROUP 2231 SW WANAMAKER RD SUITE 303 TOPEKA, KANSAS 66614 CONTACT: MICHAEL HAMPTON & RYMAN PHONE: 785-273-7540 DIRECT: 785-730-0914 E-MAIL: MKH@SDGARCH.COM RAK@SDGARCH.COM	
MECHANICAL & ELECTRICAL DESIGN         PKMR ENGINEERS       CONTACT: BRYAN LEINWETTER PE.         13300 WEST 98TH STREET       PHONE: 913-492-2400         LENEXA, KANSAS, 66215       E-MAIL: BRYAN.LEINWETTER@PKMRE	
STRUCTURAL DESIGNCERTUS STRUCTURAL ENGINEERSCONTACT: AARON SCOTT PE.900 S KANSAS AVENUE SUITE 400PHONE: 785-291-0400TOPEKA, KANSAS, 66612E-MAIL: AARON.SCOTT@CERTUSSE.C	D topeka, kansas 66614-4275 phone: 785.273.7540 fax: 785.273.7579 500 north broadway suite 200 oklahoma city, ok 73102 phone: 405.231.3105 for: 405.231.3105
CIVIL DESIGN SM ENGINEERING CONTACT: SAM MALINOWSKI, PE 919 W STEWART ROAD PHONE: 785-341-9747 COLUMBIA, MISSOURI 65203 E-MAIL: SMCIVILENGR@GMAIL.COM	A-2000/7042
SHEET INDEX ARCHITECTURAL G-001 COVER SHEET ARCHITECTURAL	MICHAEL K HAMPTON ARCHITECT (MO# A-2008027042) SCHWERDT DESIGN GROUP INC MISSOURI STATE CERTIFICATE OF AUTHORITY #F00353876
<ul> <li>A-100 SITE PLAN &amp; DETAILS</li> <li>A-101 FIRST FLOOR PLAN</li> <li>A-102 ROOF PLAN</li> <li>A-201 EXTERIOR ELEVATIONS</li> <li>A-202 EXTERIOR ENLARGED ELEVATION &amp; FENCE DTLS</li> <li>A-301 WALL SECTIONS</li> <li>A-302 WALL SECTIONS</li> <li>A-501 BUILDING DETAILS</li> </ul>	с <b>Г</b>
A-502 BUILDING DETAILS A-503 BUILDING DETAILS A-601 GLASS & DOOR SCHEDULES STRUCTURAL	R LO
<ul> <li>S-001 GENERAL NOTES</li> <li>S-101 FOUNDATION PLAN</li> <li>S-102 CANOPY FOUNDATION &amp; FRAMING PLANS</li> <li>S-103 WALL FRAMING PLAN</li> <li>S-104 ROOF FRAMING PLAN</li> <li>S-201 NW FRAMING ISOMETRIC</li> <li>S-202 SE FRAMING ISOMETRIC</li> <li>S-301 CONCRETE DETAILS &amp; SECTIONS 1</li> <li>S-601 FRAMING DETAILS &amp; SECTIONS 1</li> <li>S-602 FRAMING DETAILS &amp; SECTIONS 2</li> <li>S-603 FRAMING DETAILS &amp; SECTIONS 3</li> </ul>	DING EST PRYO UMMIT, MISSOURI
MECHANICAL M-101 PLUMBING PLAN M-201 HVAC PLAN M-301 MECHANICAL DETAILS & SCHEDULES ME-101 MEP NOTES & SPECIFICATIONS	ILL BUIL OF W OAD, LEES \$
ELECTRICAL E-101 POWER PLAN E-102 ELECTRICAL DETAILS & SCHEDULES E-201 LIGHTING PLAN E-202 SITE LIGHTING PLAN E-203 SITE PHOTOMETRIC PLAN	CORE & SHELL STREETS O 1020 NW PRYOR ROAD
	SUBMISSION DATES PROGRESS PRINT ONLY
	A SHEET TITLE COVER SHEET
	PROJECT NUMBER 235008
5	SHEET NUMBER

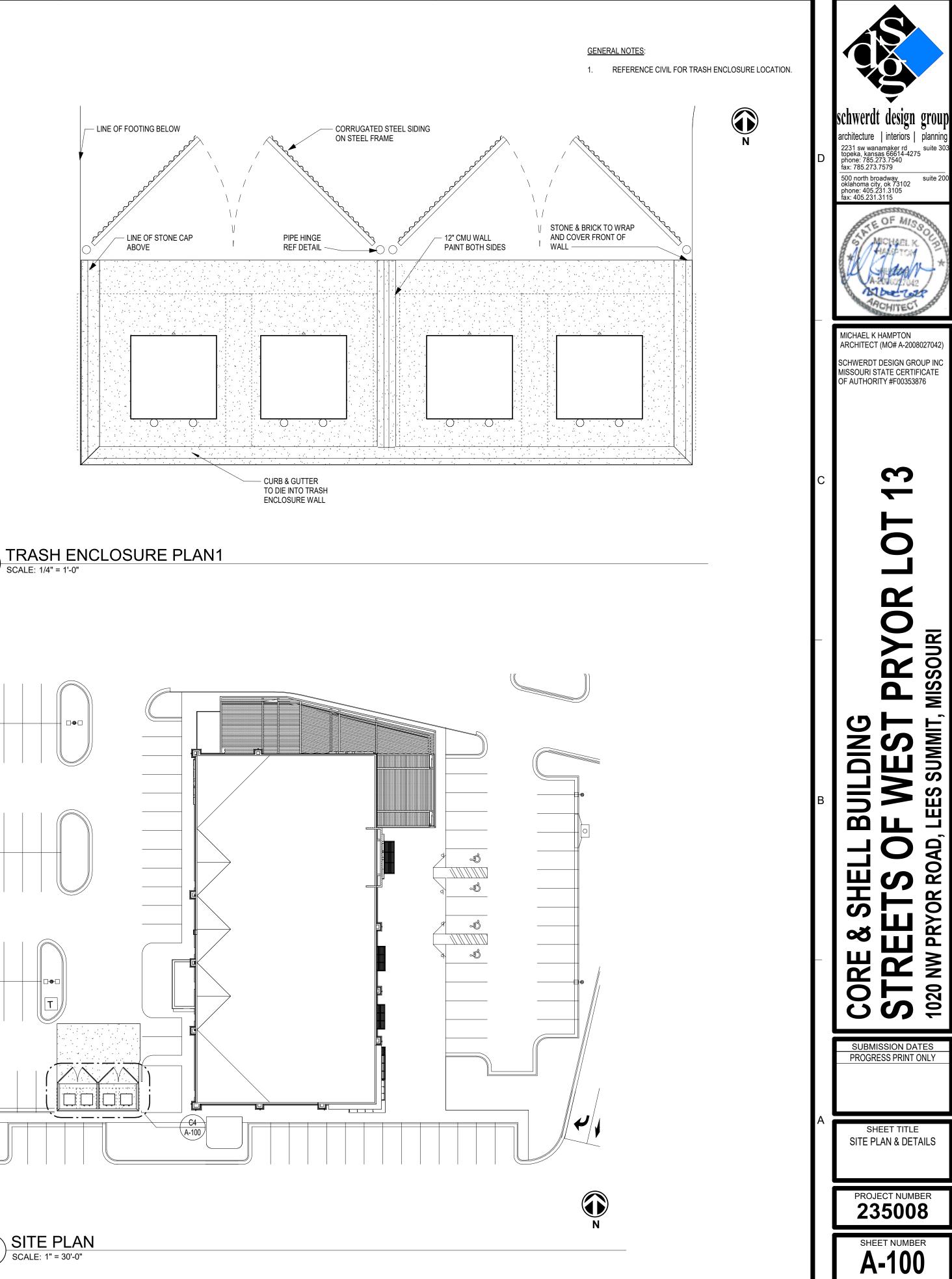


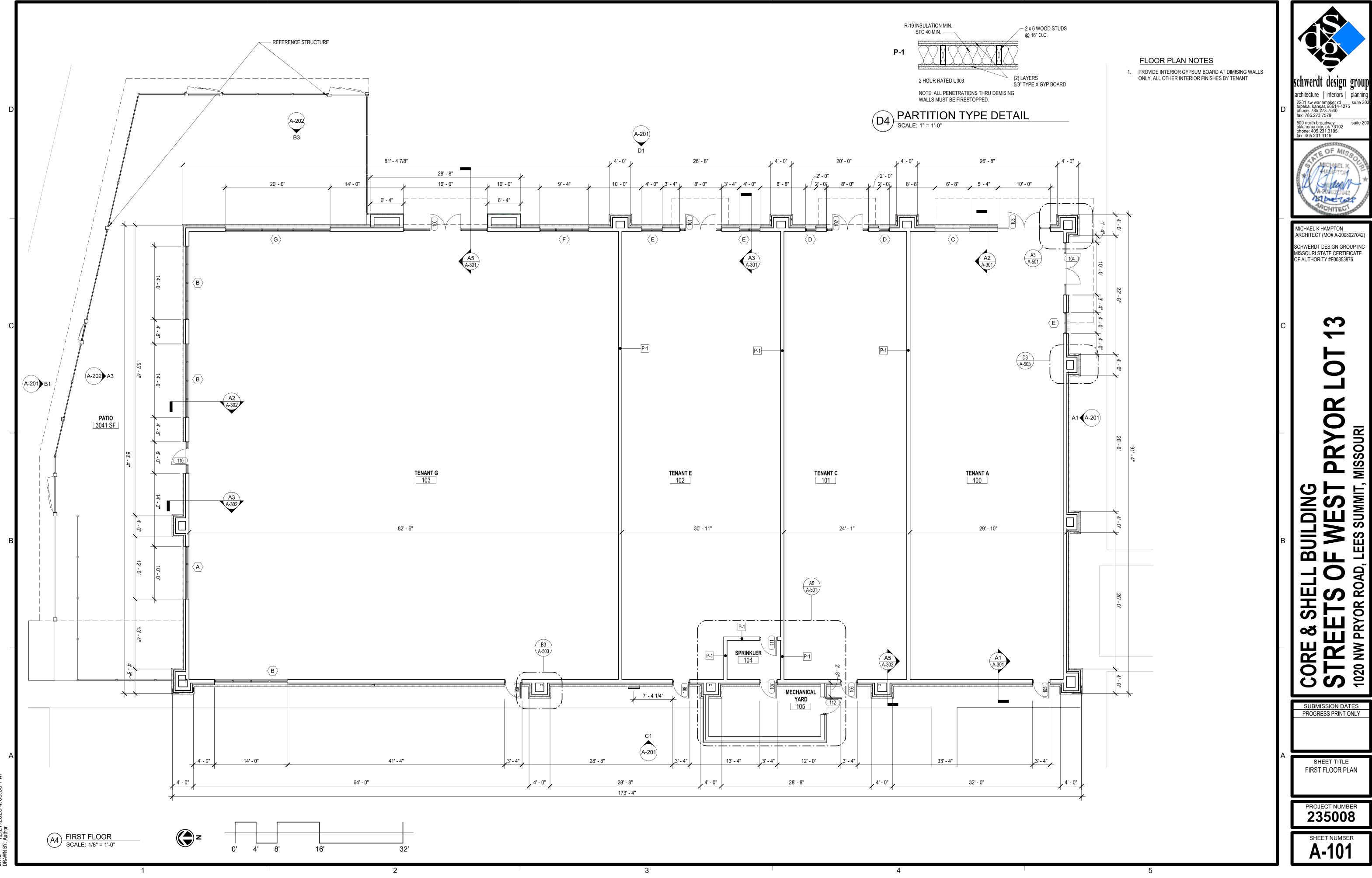
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(C4)

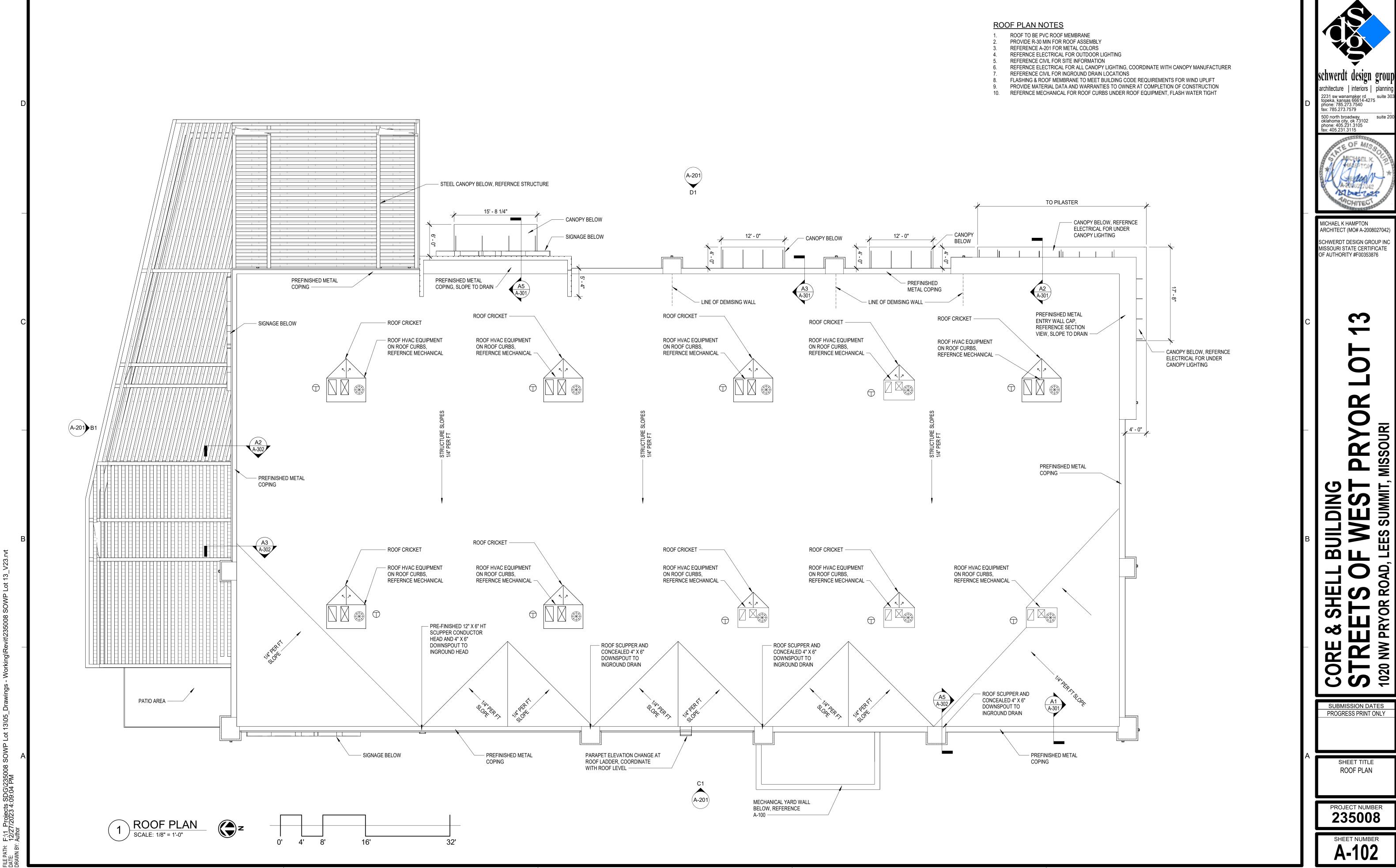






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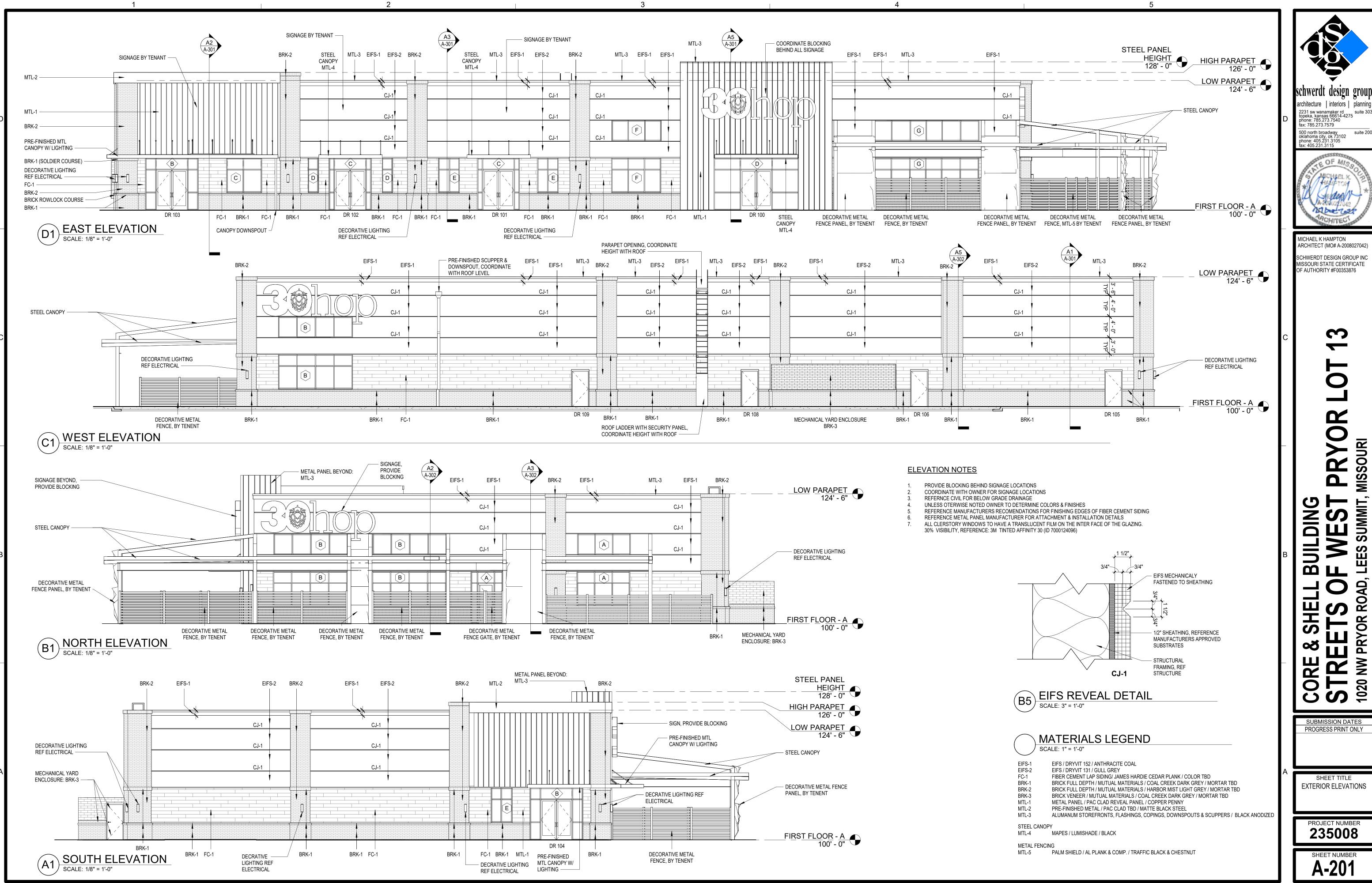
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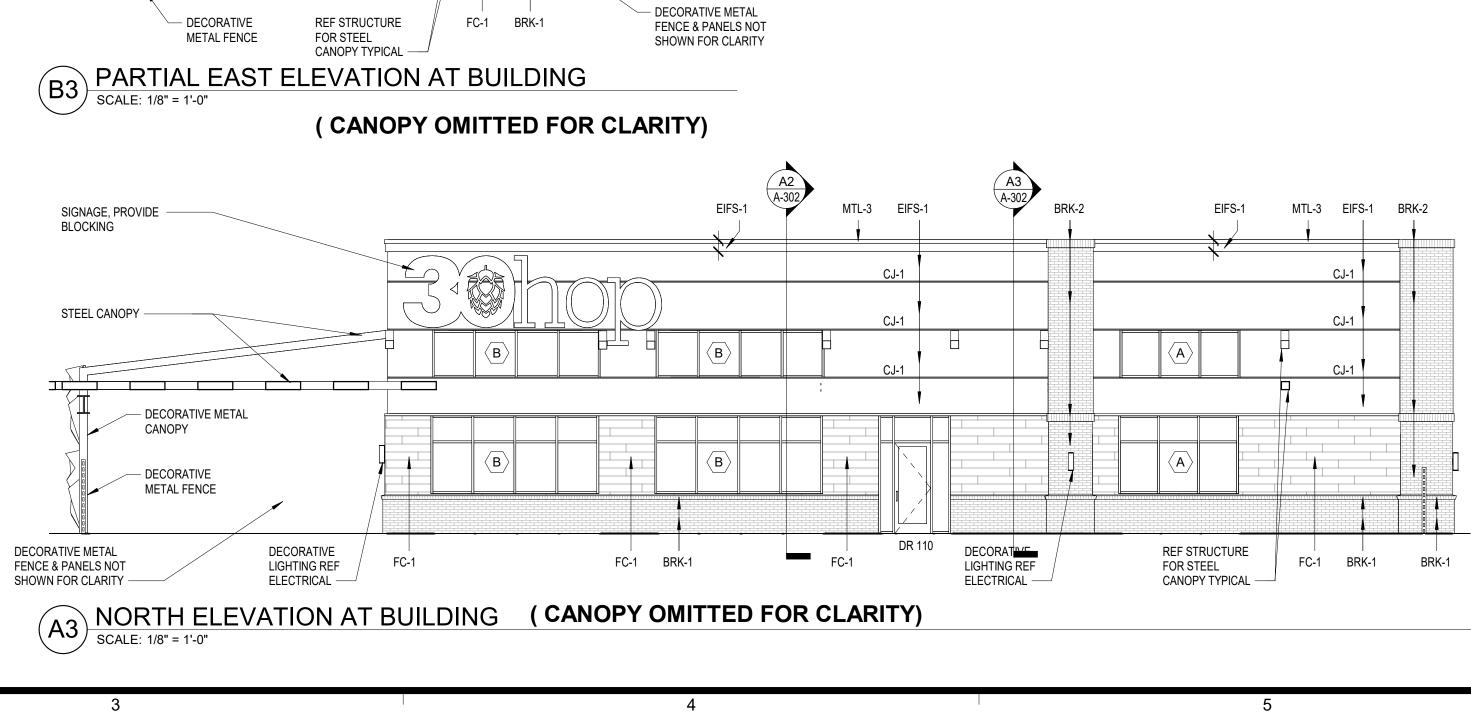


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2



1



STEEL CANOPY
 REF STRUCTURE

DECORATIVE
 LIGHTING REF
 ELECTRICAL

\_\_\_\_\_

4

METAL PANEL

MTL-1

\_\_\_\_\_

EIFS-1

MTL-3 EIFS-1

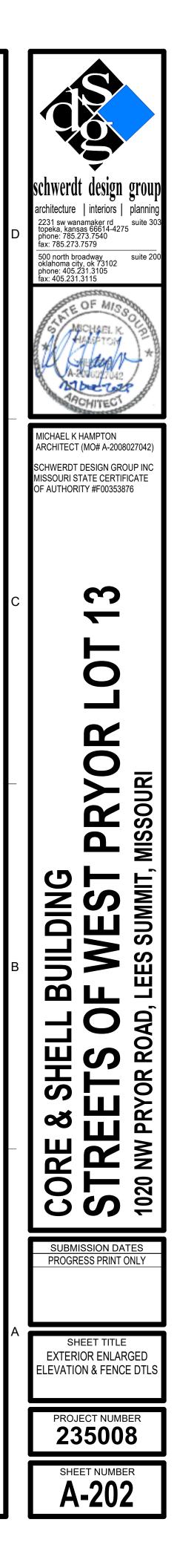
CJ-1

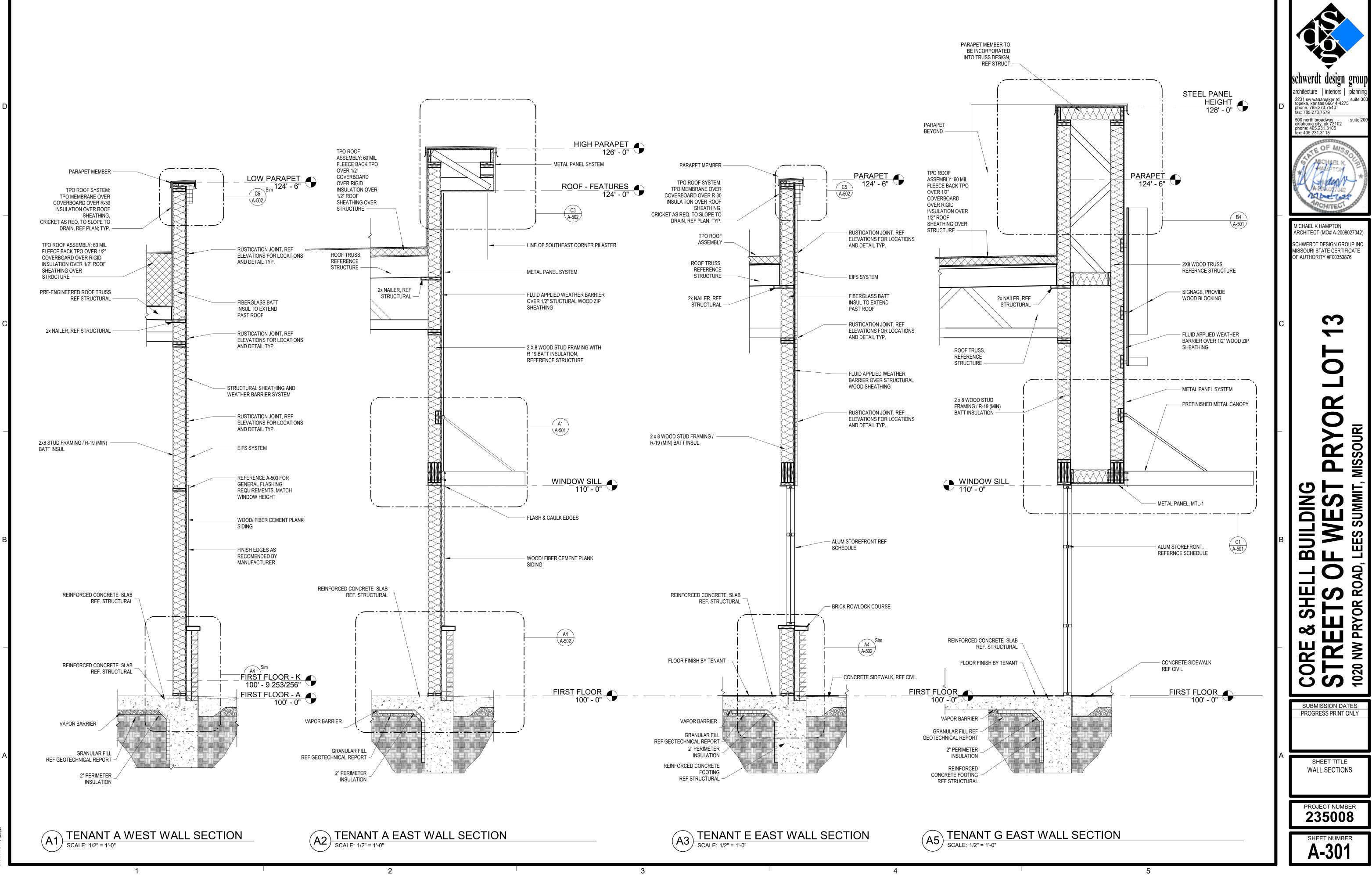
CJ-1

CJ-1

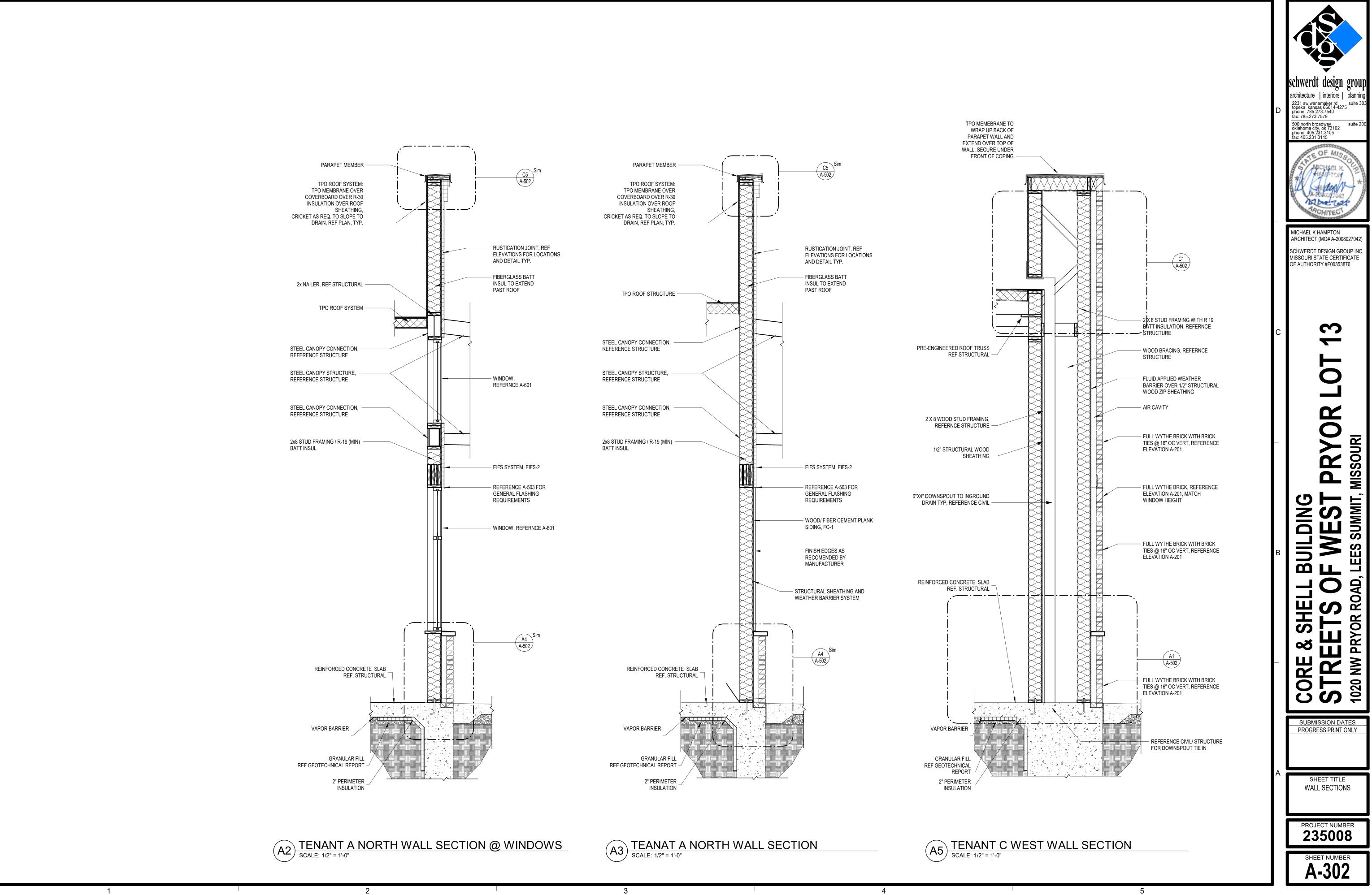
FC-1 BRK-1

H





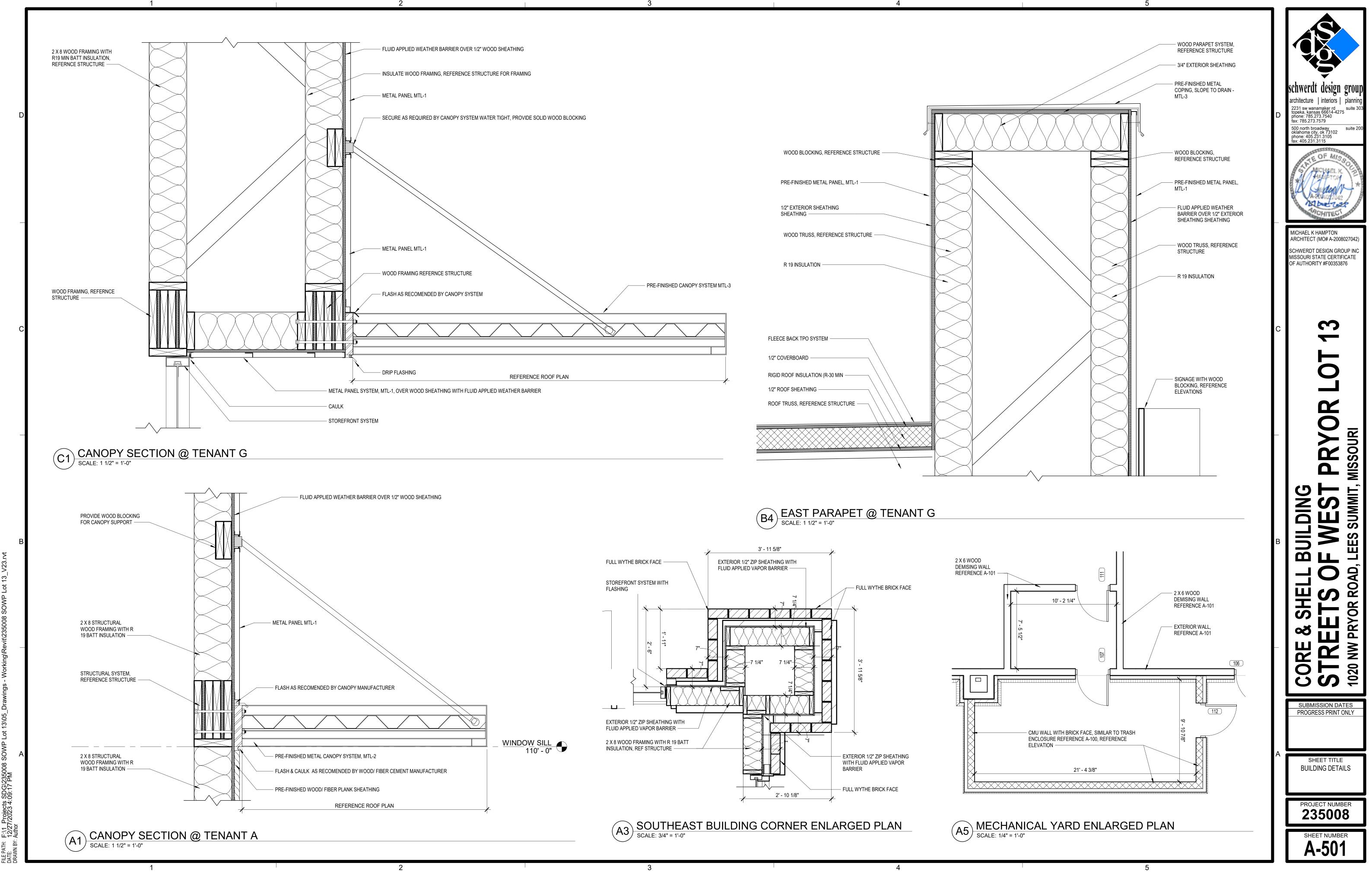
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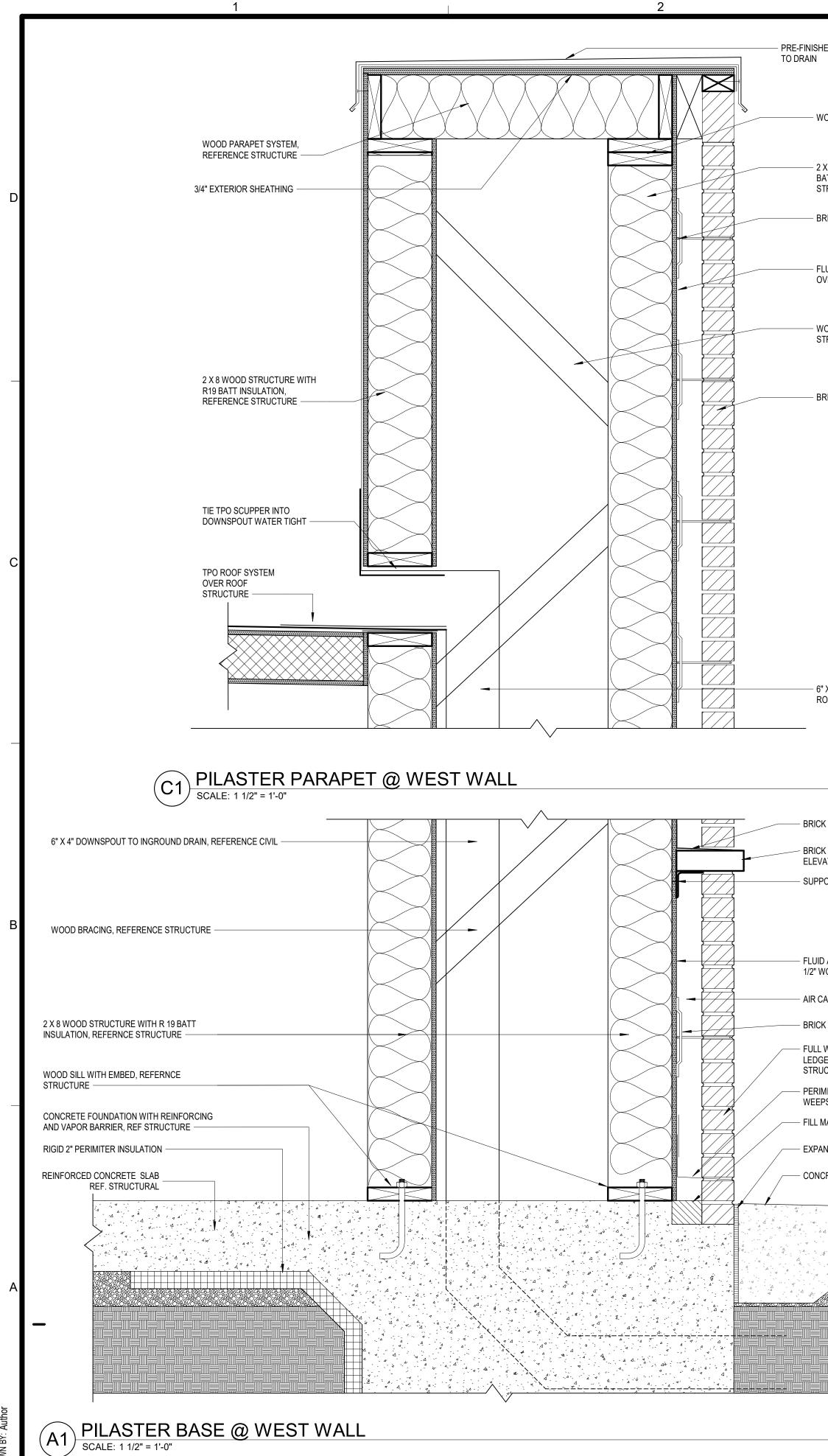
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5



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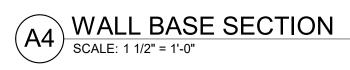


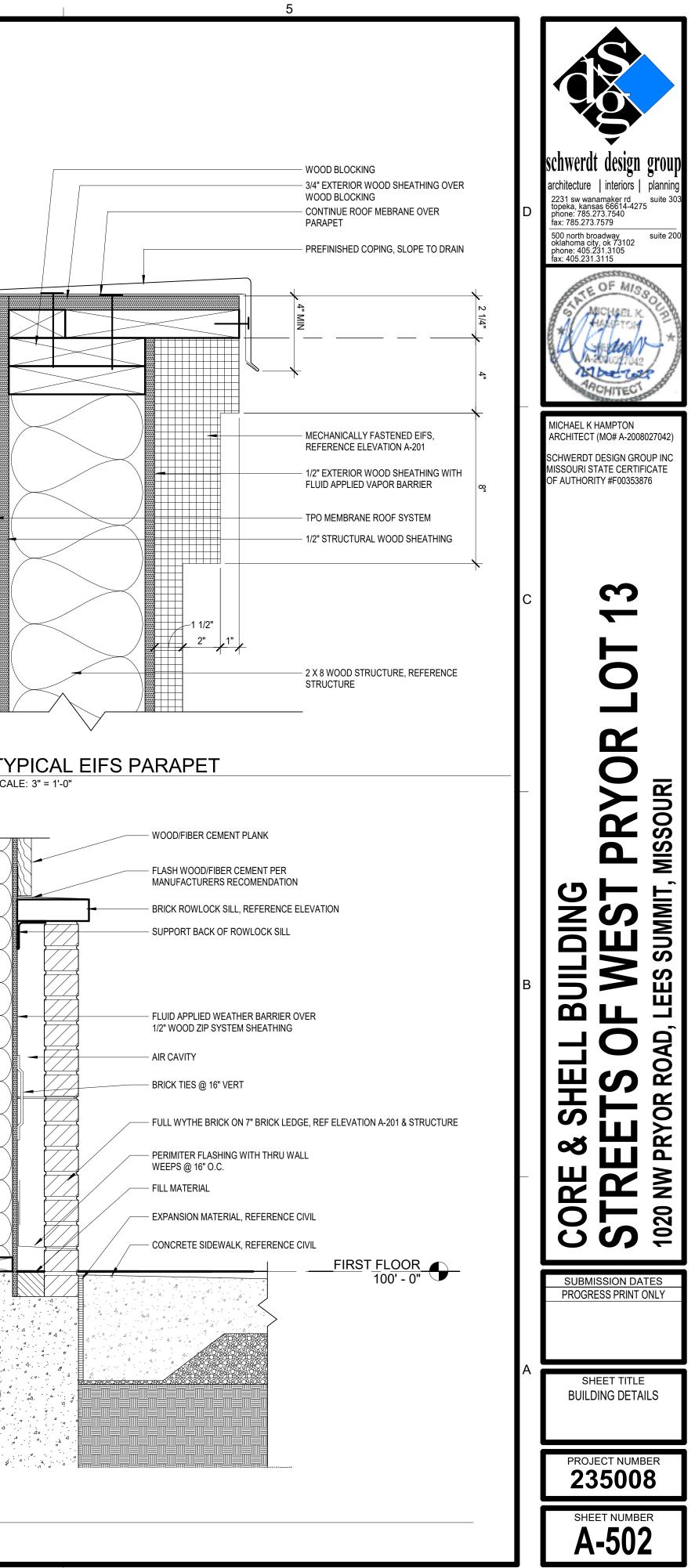


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2

	3	4	
ED METAL COPING, SLOPE	ALIGN WITH CORNER PILASTER, REFEREN	ICE A-501	
		3/4" EXTERIOR WOOD SHEATHING OVER WOOD BLOCKING	
OOD BLOCKING		WOOD BLOCKING, REFERENCE STRUCTURE	
X 8 WOOD STRUCTURE WITH R19 ATT INSULATION, REFERENCE		WOOD BRACING, REFERENCE STRUCTURE	
RUCTURE		CONTINUE ROOF MEBRANE OVER PARAPET	
RICK TIES @ 16" OC VERT		PREFINISHED COPING, SLOPE TO DRAIN	
UID APPLIED WEATHER BARRIER			
/ER 1/2" WOOD ZIP SHEATHING		<u>HIGH PARAPET</u> 126' - 0"	
OOD BRACING REFERENCE RUCTURE			
RICK TIES @ 16" OC VERT		METAL PANEL SYSTEM, MTL-2	
		ROOF - FEATURES 124' - 0"	
	EXT	IID APPLIED WEATHER BARRIER OVER 1/2" "ERIOR WOOD ZIP SHEATHING TAL PANEL SYSTEM, MTL-1	
		8 WOOD STRUCTURE, REFERENCE	
	STF	RUCTURE	
		D MEMBRANE ROOF SYSTEM	
X 4" DOWNSPOUT, TIE INTO TPO DOF DRAIN WATER TIGHT			
	C3 TENANT A PARAPET @ SCALE: 1 1/2" = 1'-0"	EASTWALL	C5 TYP SCALE
SILL FLASHING			
KROWLOCK SILL, REFERNCE ATIONS			
ORT BACK OF ROWLOCK SILL			
APPLIED WEATHER BARRIER OVER			
OOD ZIP SYSTEM SHEATHING			
TIES @ 16" VERT		2 X 8 WOOD STRUCTURE WITH R 19 BATT INSULATION, REFERNCE STRUCTURE	
WYTHE BRICK ON 7" BRICK E, REF ELEVATION A-201 & CTURE		WOOD SILL WITH EMBED, REFERNCE	
1ITER FLASHING WITH THRU WALL 'S @ 16" O.C.		STRUCTURE	
IATERIAL		CONCRETE FOUNDATION WITH REINFORCING AND VAPOR BARRIER, REF STRUCTURE	
NSION MATERIAL, REFERENCE CIVIL		RIGID 2" PERIMITER INSULATION	
RETE SIDEWALK, REFERENCE CIVIL			
	<		

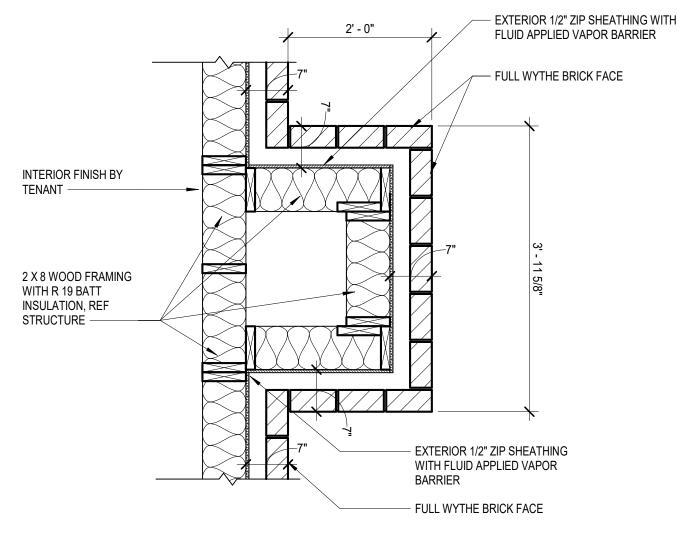




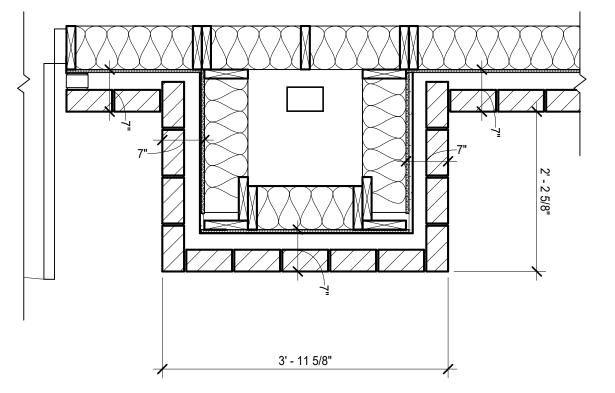


- APPROXIMATES THE ACTUAL CONDITION.

SCALE: 12" = 1'-0"

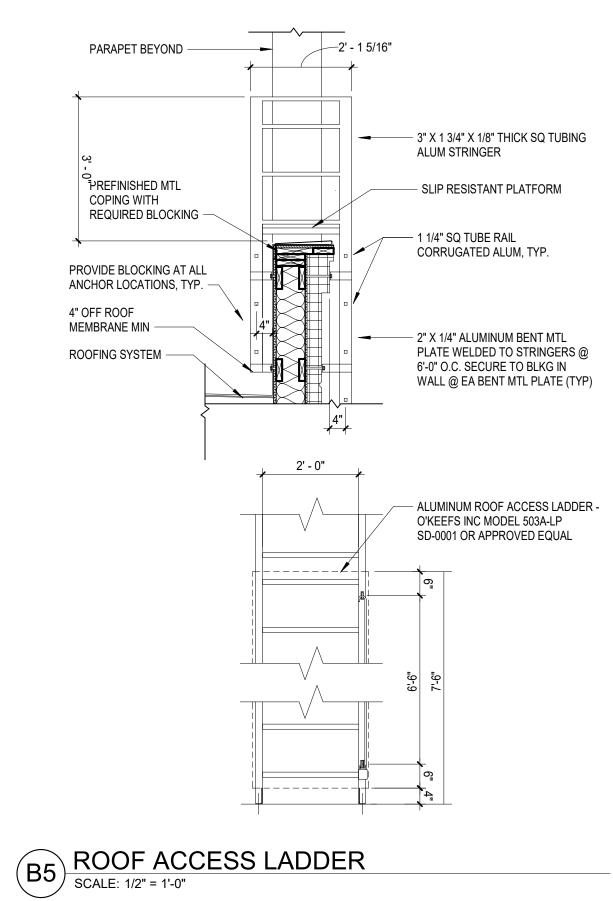


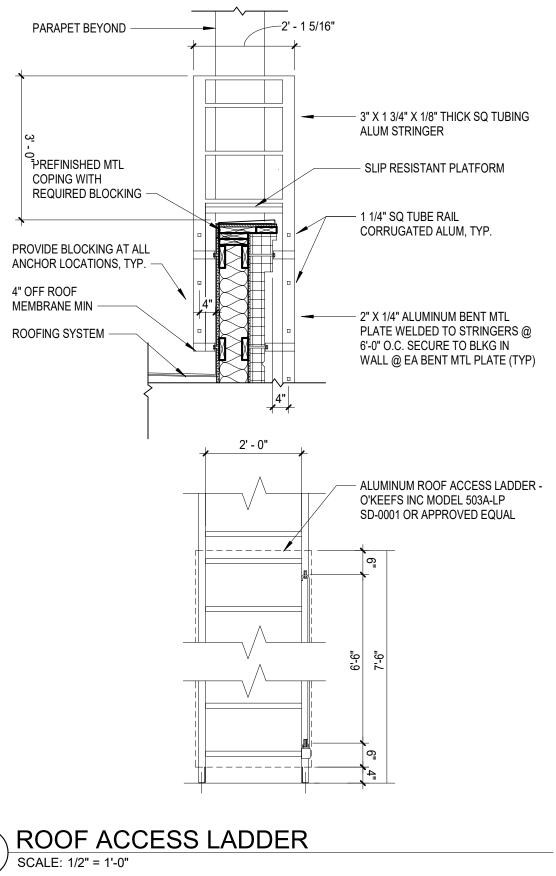


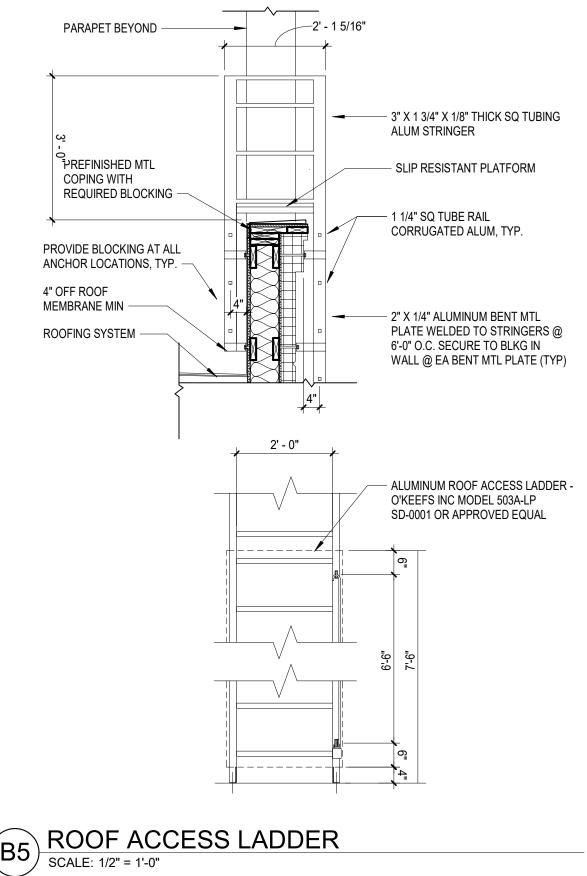




3







4

A. PROPERLY WEEP FLASHING POINTS AND NORMAL DRAINAGE POINTS WITH WEEPS @ 1'-4" O.C. MAX. SPACING. WEEP POINTS ARE TO BE LOCATED DIRECTLY ON TOP OF FLASHING.

B. WHERE FLASHING IS LOCATED TERMINATE AND/OR SEPARATES MATERIALS, DO NO SEAL (U.N.O.) -REFER TO DIAGRAM "C" WHERE IT IS DETERMINED BY THE MATERIAL MANUFACTURER OR OTHERWISE THAT SEALING IS REQUIRED (TO PREVENT WATER PENETRATION BEYOND FLASHING DUE TO WIND DRIVEN RAIN), THEN SEALANT MUST BE WEEPED IN ACCORDANCE WITH NOTE "A" ABOVE.

C. UNLESS NOTED OTHERWISE, TURN FLASHING UP A MIN. OF 4" BEHIND APPROPRIATE MATERIALS.

D. FLASHING CONDITIONS, WHETHER DETAILED OR NOT, ARE TO BE IN ACCORDANCE WITH S.M.A.C.N.A. SPECIFICATIONS. WHERE ATYPICAL CONDITIONS OCCUR THAT ARE NOT DETAILED, FLASHING IS TO BE INSTALLED AS CLOSELY AS POSSIBLE TO THE S.M.A.C.M.A. DETAIL THAT IS MOST CLOSELY

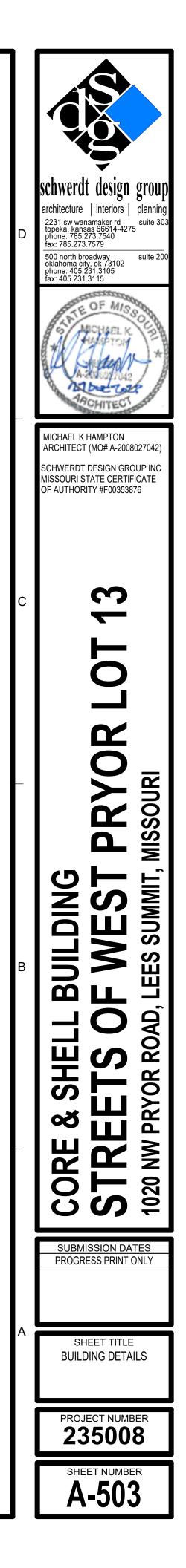
E. UNLESS NOTED OTHERWISE, AT FLASHING HIGH POINTS SEAL WATER TIGHT TO BACK-UP SUBSTRATE.

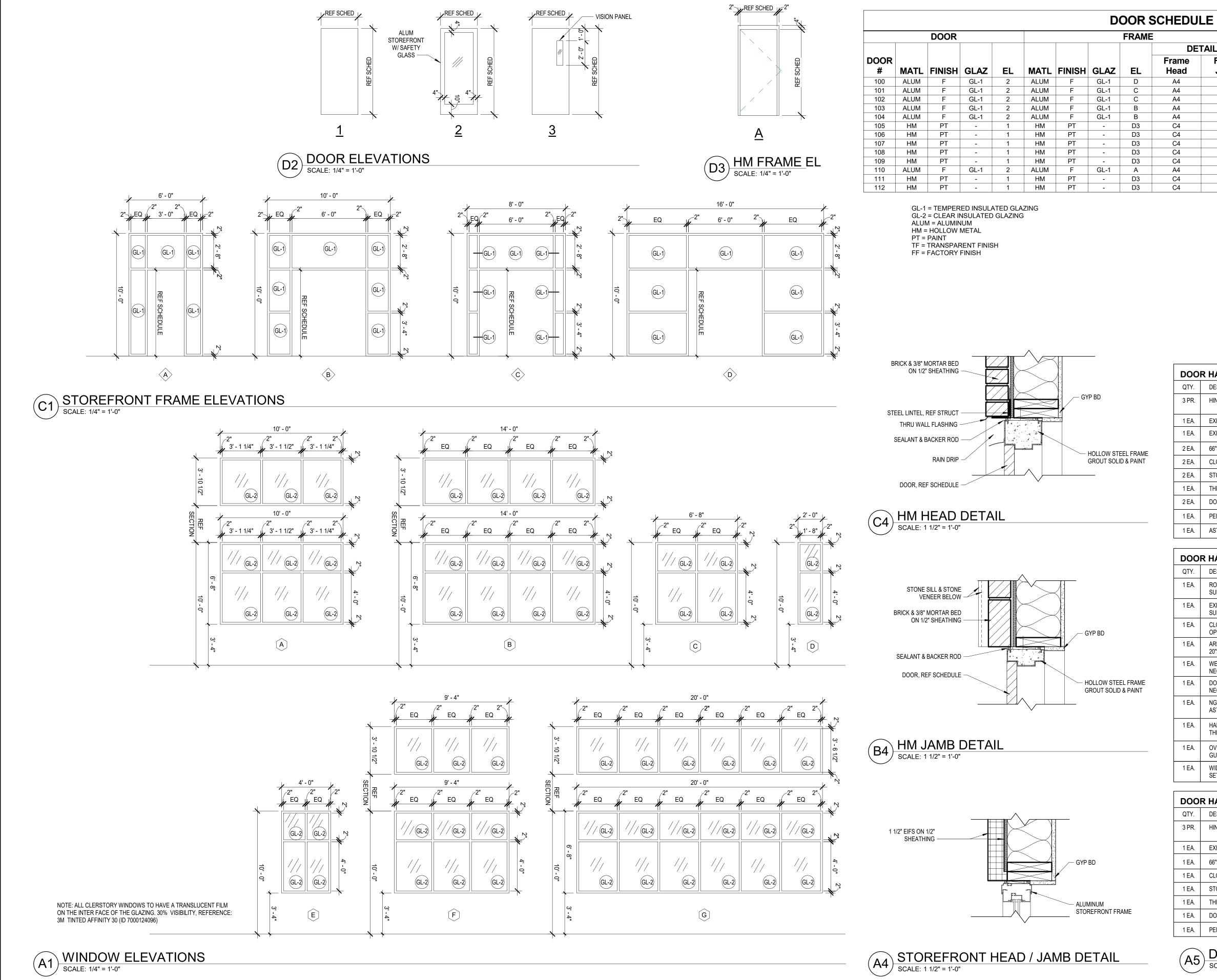
NO SEALANT, U.N.O.

DIAGRAM 'C'

VINYL, WOOD, OR METAL





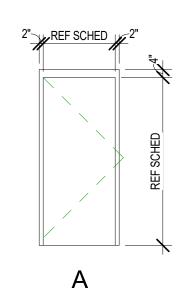


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DAT

2







3

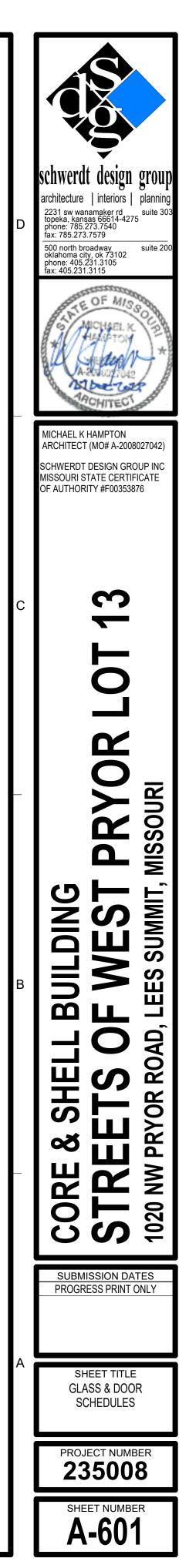
DE	TAIL	_			
Frame Head Jamb		HARDWARE	DOOR WIDTH	DOOR HEIGHT	NOTE
A4	A4	01	3' - 0"	7' - 0"	
A4	A4	01	3' - 0"	7' - 0"	
A4	A4	01	3' - 0"	7' - 0"	
A4	A4	01	3' - 0"	7' - 0"	
A4	A4	01	3' - 0"	7' - 0"	
C4	B4	02	3' - 0"	7' - 0"	
C4	B4	02	3' - 0"	7' - 0"	
C4	B4	02	3' - 0"	7' - 0"	
C4	B4	02	3' - 0"	7' - 0"	
C4	B4	02	3' - 0"	7' - 0"	
A4	A4	03	3' - 0"	7' - 0"	
C4	B4	02	3' - 0"	7' - 0"	NO RAIN DRIP
C4	B4	02	3' - 0"	3' - 0"	

DOO	R HARDWARE SCH	EDULE - SET 01	STOREFR	ONT
QTY.	DESCRIPTION	MODEL	FINISH	MFG.
3 PR.	HINGES	BB1191 4 1/2" x 4 1/2" NRP	US10B	HAGER
1 EA.	EXIT DEVICE	1692	DC13	FALCON
1 EA.	EXIT DEVICE	1690	DC13	FALCON
2 EA.	66" LADDER PULL	66LPBS	US26/626	CRL
2 EA.	CLOSER	SC70-18	DC13	FALCON
2 EA.	STOP	100S	DC13	FALCON
1 EA.	THRESHOLD	350	DKB	NGP
2 EA.	DOOR SWEEP	200NA	DKB	NGP
1 EA.	PERIMETER SEAL	160S	DKB	NGP
1 EA.	ASTRAGAL	672	DKB	NGP

OOR HARDWARE SC	HEDULE - SET 0	2 SERVICE	DOOR
QTY. DESCRIPTION	MODEL	FINISH	MFG.
1 EA. ROTON HINGE SURFACE MOUNT	70-210HD-84	ALUM	ROTON
1 EA. EXIT DEVICE RIM SURFACE MOUNT	4501-48-26D	26D/626	HAGER
1 EA. CLOSER 5100 HOLD OPEN STOP	5100-HDHOS-ALUM	ALUM	HAGER
1 EA. ARMOR PLATE 20"x40" S.S.	190S-20X40-32D	32D	HAGER
1 EA. WEATHER STRIPPING NEOPRENE	873S-N-4284-MILL	ML	HAGER
1 EA. DOOR BOTTOM SWEEP NEOPRENE	750SN-42-CLR	CL	HAGER
1 EA. NGP STEEL SECURITY ASTRAGAL 83"	1392SP-USP-83	PRIME COAT	NGP
1 EA. HALF SADDLE THRESHOLD 5"x1/2"x42"	431S-42-MIL	MIL	HAGER
1 EA. OVERHEAD RAIN DRIP GUARD	810S-46-MIL	AL	HAGER
1 EA. WIDE ANGLE PEEP HOLE SET @ 45" AFF			

DOO	DOOR HARDWARE SCHEDULE - SET 03 STOREFRONT						
QTY.	DESCRIPTION	MODEL	FINISH	MFG.			
3 PR.	HINGES	BB1191 4 1/2" x 4 1/2" NRP	US10B	HAGER			
1 EA.	EXIT DEVICE	1692	DC13	FALCON			
1 EA.	66" LADDER PULL	66LPBS	US26/626	CRL			
1 EA.	CLOSER	SC70-18	DC13	FALCON			
1 EA.	STOP	100S	DC13	FALCON			
1 EA.	THRESHOLD	350	DKB	NGP			
1 EA.	DOOR SWEEP	200NA	DKB	NGP			
1 EA.	PERIMETER SEAL	160S	DKB	NGP			

(A5) DOOR HARDWARE SCHEDULES SCALE: 1" = 1'-0"



# **STRUCTURAL GENERAL NOTES**

### GENERAL NOTES

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE OTHER PROJECT DRAWINGS AND SPECIFICATIONS. THE MATERIAL REQUIREMENTS IN THESE NOTES ARE TO BE CONSIDERED AS MINIMUM. SPECIFICATIONS SHALL GOVERN WHEN MORE STRINGENT.

VERIFY ALL DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION. DISCREPANCIES SHALL BE RESOLVED BEFORE PROCEEDING WITH CONSTRUCTION. CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND MAKE NECESSARY INVESTIGATIONS AND FIELD MEASUREMENTS. INFORM ENGINEER OF ALL DISCREPANCIES.

THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATIONS OF PENETRATIONS AND EMBEDDED ITEMS THROUGH THE STRUCTURE FOR ALL TRADES. PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

SEE MECHANICAL, ELECTRICAL, ARCHITECTURAL DRAWINGS FOR ANCHORS, PIPE SLEEVES, CONDUITS OR OTHER ITEMS TO BE EMBEDDED IN OR PASS THROUGH CONCRETE. IN GENERAL, EMBEDMENTS AND PENETRATIONS LESS THAN 12 INCHES IN DIAMETER ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS.

SEE ARCHITECTURAL DRAWINGS FOR DOOR HEIGHTS AND WALL OPENING DIMENSIONS.

STRUCTURAL ELEMENTS ARE NON-SELF SUPPORTING AND REQUIRE INTERACTION WITH OTHER ELEMENTS FOR STABILITY. FRAMING AND WALLS SHALL BE TEMPORARILY BRACED BY THE CONTRACTOR UNTIL PERMANENT BRACING, FLOOR AND ROOF DECKS AND WALLS HAVE BEEN INSTALLED AND CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.

SUPPORT OF ALL NON-STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NON-STRUCTURAL ELEMENTS ARE THOSE THAT DO NOT CONTRIBUTE TO THE DIRECT LOAD PATH OF BOTH THE GRAVITY AND LATERAL FORCE RESISTING SYSTEMS. THESE ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO PARTITIONS, FINISHES, MILLWORK, MECHANICAL EQUIPMENT, DUCTWORK, PIPING, LIGHT FIXTURES, ELECTRICAL CONDUIT, STORAGE RACKS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THESE ELEMENTS ARE ADEQUATELY CONNECTED TO THE STRUCTURE TO RESIST ALL APPLIED LOADS. NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF UNUSUAL SUPPORT CONDITIONS EXIST.

WORK REQUIRING SPECIAL INSPECTIONS SHALL BE INSPECTED ACCORDING TO THE BUILDING CODE AND INCLUDES: CONCRETE, REINFORCING STEEL, STRUCTURAL WELDING, HIGH-STRENGTH BOLTING, AND MASONRY. RE: SPECIAL INSPECTION PROGRAM TABLE WHEN APPLICABLE.

### DESIGN CRITERIA:

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI.

**RISK CATEGORY: I** 

LIVE LOADS: ROOF: 20 PSF

SNOW LOADS: GROUND SNOW LOAD, Pg: 20 PSF FLAT-ROOF SNOW LOAD, Pf: 20 PSF SNOW EXPOSURE FACTOR, Ce: 0.9 SNOW LOAD IMPORTANCE FACTOR, Is: 1.0 THERMAL FACTOR, Ct: 1.0

WIND LOAD: BASIC WIND SPEED: 115 MPH EXPOSURE CATEGORY: C BASIC INTERNAL PRESSURE COEFFICIENT, GCpi: ±0.18 BASIC COMPONENTS AND CLADDING PRESSURE (ADJUSTED TO COMPLY WITH BUILDING CODE): ±20 PSF @ INTERIOR ZONES ±25 PSF @ END ZONES

SEISMIC LOAD: SEISMIC IMPORTANCE FACTOR, le: 1.0 SPECTRAL RESPONSE ACCELERATIONS: Ss: 0.1563 S1: 0.0570 SPECTRAL RESPONSE COEFFICIENTS:

Sds: 0.167

Sd1: 0.091

SITE CLASS: D

SEISMIC DESIGN CATEGORY: B BASIC SEISMIC-FORCE-RESISTING SYSTEM: LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS & STEEL ORDINARY MOMENT FRAMES

DESIGN BASE SHEAR: Cs x W SEISMIC RESPONSE COEFFICIENTS, Cs: 0.0256 & 0.0476 RESPONSE MODIFICATION FACTOR, R: 6.5 & 3.5 ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

MASONRY NOTES: WOOD NOTES: CONSTRUCT MASONRY IN ACCORDANCE WITH THE IBC. MASONRY REQUIRES LEVEL 1 GENERAL STRUCTURAL WOOD FRAMING SHALL MEET THE MINIMUM STRESS QUALITY ASSURANCE (RE: SPECS). ALL MASONRY SHALL BE LAID IN RUNNING REQUIREMENTS FOR DOUGLAS-FIR #2 AND SHALL BEAR THE STAMP OF AN APPROVED (COMMON) BOND USING THE LOW-LIFT METHOD OF GROUTING. REFER TESTING AGENCY. ARCHITECTURAL PLAN FOR ALL BLOCK COURSING. ROOF SHEATHING SHALL BE 5/8" (19/32" MIN) PLYWOOD WITH A SPAN RATING OF AT MASONRY DESIGN IS BASED ON A MINIMUM COMPRESSIVE STRENGTH (F'm) OF LEAST 32/16. PANELS SHALL BE NAILED WITH 10d NAILS AT 6" O.C. AT PANEL EDGES ASSEMBLY OF 1,500 PSI. AND 12" O.C. AT INTERMEDIATE SUPPORTS. 1/8" GAP BETWEEN INDIVIDUAL SHEETS. PLYWOOD SHALL BE APA RATED C-D EXTERIOR AND SHALL BEAR THE STAMP OF AN MASONRY UNITS SHALL MEET THE REQUIREMENTS OF ASTM C-90, GRADE N, WITH A APPROVED TESTING AGENCY. NET AREA COMPRESSIVE STRENGTH OF 1,900 PSI. ALL WOOD-TO-WOOD CONNECTIONS SHALL MEET THE MINIMUM NAILING REQUIREMENTS OF THE BUILDING CODE. MORTAR SHALL BE PREPARED IN ACCORDANCE WITH ASTM C-270. PROVIDE TYPE M MORTAR AT ALL MASONRY BELOW GRADE AND TYPE S AT ALL OTHER MASONRY. PROVIDE SIMPSON CONNECTION HARDWARE AS SHOWN ON THE DRAWINGS. GROUT SHALL BE PREPARED IN ACCORDANCE WITH ASTM C-476, WITH A MINIMUM SUBSTITUTIONS MUST BE APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS. PRIOR TO USE. INSTALL CONNECTION HARDWARE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. WALL SHEATHING SHALL BE 1/2" OSB ON THE EXTERIOR FACE OF ALL EXTERIOR WALLS. LAP SPLICE BAR REINFORCEMENT FOR MASONRY PER LAP SCHEDULE AND JOINT PANELS SHALL BE NAILED WITH 10d GALVANIZED NAILS AT 4" O.C. AT PANEL EDGES REINFORCEMENT A MINIMUM OF 6 INCHES. AND 12" O.C. AT INTERMEDIATE SUPPORTS. ALL PANEL EDGES SHALL BE BLOCKED. CONCRETE MASONRY UNITS BELOW GRADE SHALL BE SOLID GROUTED. INSTALL ALL ROOF PLYWOOD SHEATHING WITH THE LONG DIMENSION OF THE PANEL PERPENDICULAR TO THE SUPPORTS WITH A MINIMUM OF TWO SPANS FOR EACH CELLS WITH REINFORCING SHALL BE SOLID GROUTED AND VIBRATED. PANEL. STAGGER ALL END JOINTS. PROVIDE 1/8" SPACE AT PANEL JOINTS FOR EXPANSION PER APA. STRUCTURAL STEEL NOTES: PREFABRICATED WOOD TRUSS NOTES: STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE SPECIAL INSPECTIONS OF THE FABRICATION PROCESS OF PRE-FABRICATED WOOD NOTED STRUCTURAL ELEMENTS AND ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE IBC. WIDE FLANGE SHAPES (W, WT): ASTM A992 (Fy=50 KSI) OTHER ROLLED SHAPES (M, S, HP, C, L): ASTM A36 (Fy=36 KSI) TRUSSES SHALL BE CONFIGURED TO FOLLOW FINAL ROOF LINES, UNLESS NOTED STEEL PIPE: ASTM A53, GRADE B (Fy=35 KSI) OTHERWISE. SQUARE AND RECTANGULAR TUBE: ASTM A500, GRADE B (Fy=46 KSI) ANCHOR BOLTS: ASTM F1554, GRADE 36 TRUSSES SHALL BE DESIGNED FOR ALL LOAD COMBINATIONS REQUIRED BY THE HEADED ANCHOR STUDS: ASTM A108, GRADES 1010 TO 1020 BUILDING CODE. IN NO CASE SHALL THE DEAD LOAD BE LESS THAN 15 PSF ON THE TOP PLATES AND BARS: ASTM A36 (Fy=36 KSI) CHORD AND 10 PSF ON THE BOTTOM CHORD. SHEAR CONNECTORS AND HEADED WELDED STUDS OF TYPE AND SIZE NOTED SHALL TRUSS MANUFACTURER SHALL SUPPLY ALL TRUSS CONNECTIONS USING BF TYPF B. PREFABRICATED STEEL CONNECTORS AS REQUIRED. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH GOOD CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY AND STANDARD PRACTICE AND IS THE RESPONSIBILITY OF THE CONTRACTOR. PERMANENT BRACING IN ADDITION TO ANY BRACING INDICATED ON THE PLANS. PROPER FIT IN THE FIELD OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH ALL TEMPORARY AND PERMANENT BRACING FOR INDIVIDUAL TRUSS MEMBERS SHALL GOOD STANDARD PRACTICE AND IS THE RESPONSIBILITY OF THE CONTRACTOR. BE DESIGNED BY AND STAMPED BY A PROFESSIONAL ENGINEER PROVIDED BY CONTRACTOR AND/OR TRUSS MANUFACTURER. APPLIED ROOF SHEATHING AND THE FABRICATOR SHALL BE RESPONSIBLE FOR THE DESIGN AND PERFORMANCE OF ALL OTHER ROOFING MATERIALS SHALL NOT BE ASSUMED TO PROVIDE SUFFICIENT CONNECTIONS NOT FULLY DESIGNED OR DETAILED ON THE CONTRACT DOCUMENTS. BRACING FOR TRUSS CHORDS. ANCHOR BOLTS SHALL BE ASTM F1554, A36 UNO. ANCHOR BOLTS SHALL BE SET WITH SHOP FABRICATED WOOD TRUSSES SHALL MEET DESIGN SPECIFICATIONS FOR METAL TEMPLATES WITH THE APPROPRIATE BOLT PROJECTION, 4" MINIMUM UNO. PROVIDE PLATE CONNECTED WOOD TRUSSES BY THE TRUSS PLATE INSTITUTE. PROVIDE DOUBLE NUTS AND DOUBLE WASHERS FOR STEEL COLUMN ANCHOR BOLTS TO ALLOW PERMANENT AND TEMPORARY BRACING ACCORDING TO THE MANUFACTURER'S FOR ADJUSTMENT IN BASE PLATE ELEVATION. **RECOMMENDATIONS.** 5-20% RETAINED ON 3/4", 1/2", 3/8", NO. 4, NO. 8, NO. 16, NO. 30 AND NO. 50 NON-SHRINK GROUT UNDER BASE PLATES SHALL BE NON-METALLIC WITH A MINIMUM COORDINATE ALL TRUSS DETAILS WITH ARCHITECTURAL PLANS SIEVES; LESS THAN 5% PASSING NO. 50 SIEVE. COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS. HIGH STRENGTH BOLTED CONNECTIONS SHALL CONFORM TO THE AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 BOLTS. UNLESS OTHERWISE NOTED, HIGH STRENGTH BOLTS MAY BE TIGHTENED BY ANY METHOD THEREIN. REGARDLESS OF THE METHOD USED IN TIGHTENING, A HARDENED WASHER SHALL BE USED UNDER THE TURNED ELEMENT. UNLESS OTHERWISE NOTED, BOLTED CONNECTIONS SHALL BE MADE WITH 3/4"Ø, ASTM A325 HIGH STRENGTH BOLTS. CONNECTIONS REQUIRING FULL PRETENSIONING ARE SLIP-CRITICAL, AND INCLUDE BOLTED COLUMN SPLICES AND CONNECTIONS SUBJECT TO DIRECT TENSION. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STRUCTURAL WELDING CODE, AWS D1.1. UNLESS NOTED OTHERWISE, MINIMUM WELD SIZE SHALL BE PER AISC 360, BUT SHALL BE NO LESS THAN 3/16" FILLET. FIELD WELDING SHALL NOT BE STARTED UNTIL JOINT ELEMENTS ARE BOLTED IN INTIMATE CONTACT AND/OR ADJUSTED TO DIMENSIONS INDICATED WITH ALLOWANCE FOR EXPECTED WELD SHRINKAGE. MAINTAIN PLUMBNESS AND TRUENESS OF THE STRUCTURE. FIELD WELDS FOR STRUCTURAL STEEL SHALL BE MADE WITH LOW HYDROGEN ELECTRODES. WELD FILLER METAL SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI.

ALL EXTERIOR AND CONCRETE EXPOSED TO FREEZE/THAW CYCLES SHALL BE AIR-

	MAX WATER/ CEMENT RATIO	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
INTERIOR SLAB ON GRADE	0.45	3,000 PSI
FOOTINGS	0.45	4,500 PSI
FOUNDATION WALLS	0.45	4,500 PSI
GRADE BEAMS	0.45	4,500 PSI
DRILLED PIERS	0.50	4,000 PSI
CONCRETE ON STEEL DECK	0.45	3,000 PSI

FOUNDATION AND EARTHWORK NOTES: REFER TO THE GEOTECHNICAL EXPLORATION AND FOUNDATION RECOMMENDATIONS: THE FOUNDATION BEARING MATERIAL SHALL BE INSPECTED AND APPROVED BY A FOUNDATIONS HAVE BEEN DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 2,500 PSF FOR CONTINUOUS FOOTINGS AND 3,000 PSF FOR ISOLATED SPREAD THE GEOTECHNICAL REPORT, SECTION 7.2. WALL FOUNDATION SHALL BEAR AT MINIMUM OF 3'-0" BELOW ADJACENT FINISH GRADE, UNLESS OTHERWISE NOTED. UNUSUAL CONDITIONS OR CHANGES TO THE FOUNDATIONS AS REQUIRED BY FIELD CONDITIONS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREP REQUIREMENTS FOR SLAB-ON-GRADE CONSTRUCTION. PREPARED SUBGRADES EXCAVATED TO INSTALL UTILITIES MAINTAIN ALL EXCAVATIONS FREE OF WATER. PROPORTIONS FOR CONCRETE IN ACCORDANCE WITH ACI 318): REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. CEMENT SHALL CONFORM TO ASTM C150. TYPE I OR II. AGGREGATES SHALL CONFORM TO ASTM C33. COARSE AGGREGATE SHALL CONSIST OF 1" MAXIMUM AGGREGATE SIZE. COMBINED GRADATION SHALL HAVE A UNIFORM DISTRIBUTION AS FOLLOWS: MATERIALS AND ADMIXTURES SHALL NOT CONTAIN CALCIUM CHLORIDE. ENTRAINED 6%(±) BY VOLUME. THIS INCLUDES BUT IS NOT LIMITED TO FOOTINGS, FOUNDATION WALLS AND GRADE BEAMS. SLEEVES, OPENINGS, OR OTHER ATTACHMENTS NOT SHOWN ON DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING CONCRETE. MINIMUM TENSION LAP SPLICE LENGTHS AND TENSION DEVELOPMENT LENGTHS SHALL BE AS SCHEDULED, UNLESS NOTED OTHERWISE ON THE DRAWINGS. WELDED WIRE FABRIC SHALL LAP ONE (1) FULL SQUARE PLUS TWO (2) INCHES. MAINTAIN CONCRETE COVER AS SCHEDULED. REINFORCING STEEL FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI MANUAL OF STANDARD PRACTICE. ALL REINFORCING AND EMBEDDED ANCHOR BOLTS SHALL BE ACCURATELY PLACED AND TIED PRIOR TO POURING CONCRETE. "STABBING" OF DOWELS OR ANCHOR BOLTS IS NOT ALLOWED. CONSTRUCTION JOINTS IN WALLS AND ELEVATED FORMED SLABS SHALL BE KEYED (1 1/2" DEEP BY 1/3 MEMBER AREA) AND REINFORCING SHALL CONTINUE THROUGH JOINT OR BE TENSION LAP SPLICED. CONSTRUCTION JOINTS SHALL BE LOCATED BY THE CONTRACTOR TO LEAST IMPAIR THE STRUCTURE. JOINT LOCATIONS SHALL BE APPROVED BY THE ENGINEER. EMBEDDED CONDUIT SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED. THEY SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER. CONDUIT LOCATED WITH CONCRETE SECTIONS SHALL COMPLY WITH ACI 318 REQUIREMENTS. INTERIOR FLOOR SLABS SHALL COMPLY WITH ACI 117, SHALL MEET THE REQUIREMENTS OF A TYPE 5, SINGLE COURSE, HARD STEEL-TROWELED FINISH AS DESCRIBED IN AC1 302, AND SHALL ACHIEVE AN OVERALL FF25/FL20 TOLERANCE.

WEST PRYORVILLAGE, LEE'S SUMMIT, MISSOURI / COOK, FLATT, & STROBEL ENGINEERS PA, KANSAS CITY, KANSAS (CFS NO 18-5125) / JUNE 15, 2018. GEOTECHNICAL ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED. AT STEPPED FOOTINGS, THE LOWER FOOTING SHALL BE PLACED FIRST. FOOTINGS. FOUNDATIONS SHALL BEAR DIRECTLY ON A 24-INCH THICK, GEOGRID REINFORCED AGGREGATE PAD (GRAP) DESIGNED AND CONSTRUCTED AS OUTLINED IN BELOW FLOOR SLABS SHALL BE BACKFILLED AND COMPACTED AS SPECIFIED BY THE GEOTECHNICAL ENGINEER. REFER TO GEOTECHNICAL REPORT FOR COMPACTION REQUIREMENTS. CONCRETE NOTES: CONCRETE SHALL HAVE THE FOLLOWING UNLESS OTHERWISE SPECIFIED (SELECT

ADHESIVE ANCHORS IN CONCRETE OR FULLY GROUTED MASONRY SHALL BE ITW RAMSET/REDHEAD EPCON CERAMIC 6 SYSTEM, HILTI HY200, OR SIMPSON AT-XP. ADHESIVE ANCHORS FOR HOLLOW BLOCK AND OTHER MASONRY SHALL BE HILTI HY270 OR SIMPSON SET-XP.

STRUCTURAL STEEL ENCASED WITHIN CONCRETE SHALL COMPLY WITH AISC TOLERANCES.

### BAF SIZ

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\*TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. HORIZONTAL BARS IN WALLS ARE TO BE CONSIDERED AS TOP BARS. VERTICAL BARS MAY BE CONSIDERED AS OTHER BARS.

### SPLICE & DEVELOPMENT LENGTHS FOR REINFORCEMENT (UNLESS NOTED OTHERWISE ON THE DRAWINGS) fy = 60,000 psi

ry – 60,000 psi
f'c = 3,000 psi

						10 3,000	P31
R E	LENGTH OF LAPPED SPLICES FOR REINFORCEMENT (INCHES)		LENGTH OF END ANCHORAGE FOR DEVELOPMENT OF REINFORCEMENT (INCHES)			HOOK LENGTH	BAR SIZE
	<b>TOP BARS*</b>	OTHERS	<b>TOP BARS*</b>	OTHERS	HOOKED BARS		
	28	22	22	17	9	6	3
	38	29	29	22	11	8	4
	47	36	36	28	14	10	5
	56	43	43	33	17	12	6
	81	63	63	48	20	14	7
	93	72	72	55	22	16	8
	105	81	81	62	25	20	9
)	118	91	91	70	28	22	10
L	131	101	101	78	31	24	11
1			121	93	38	31	14
3			161	124	50	41	18
		•					

UNLESS EITHER OF THE FOLLOWING TWO CASES EXIST FOR STRAIGHT BARS, THE DEVELOPMENT OR SPLICE LENGTH FOR STRAIGHT BARS IN THE ABOVE TABLE MUST BE MULTIPLIED BY 1.5:

I. THE CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED IS GREATER THAN OR EQUAL TO ONE BAR DIAMETER, THE CLEAR COVER IS GREATER THAN OR EQUAL TO ONE BAR DIAMETER, AND STIRRUPS OR TIES PROVIDED THROUGHOUT THE DEVELOPMENT OR SPLICE LENGTH MEET OR EXCEED THE CODE MINIMUM.

II.THE CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED IS GREATER THAN OR EQUAL TO TWO BAR DIAMETERS AND THE CLEAR COVER IS GREATER THAN OR EQUAL TO ONE BAR DIAMETER.

THE DEVELOPMENT LENGTH FOR HOOKED BARS, SIZE 11 AND SMALLER, PLACED WITH SIDE COVER GREATER THAN OR EQUAL TO 2 1/2" AND COVER ON THE BAR EXTENSION BEYOND THE HOOD (90° HOOK ONLY) GREATER THAN OR EQUAL TO 2", MAY BE MULTIPLIED BY 0.7.

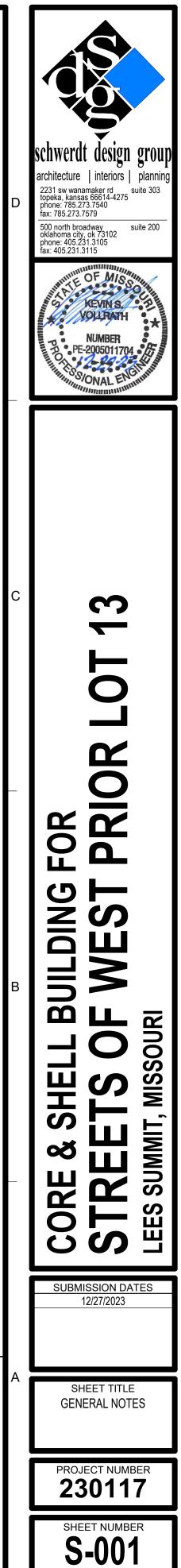
VALUES IN THE ABOVE TABLE ARE NOT TO BE USED FOR EPOXY COATED REINFORCING AND/OR REINFORCING PLACED IN CONCRETE CONTAINING LIGHTWEIGHT AGGREGATE.

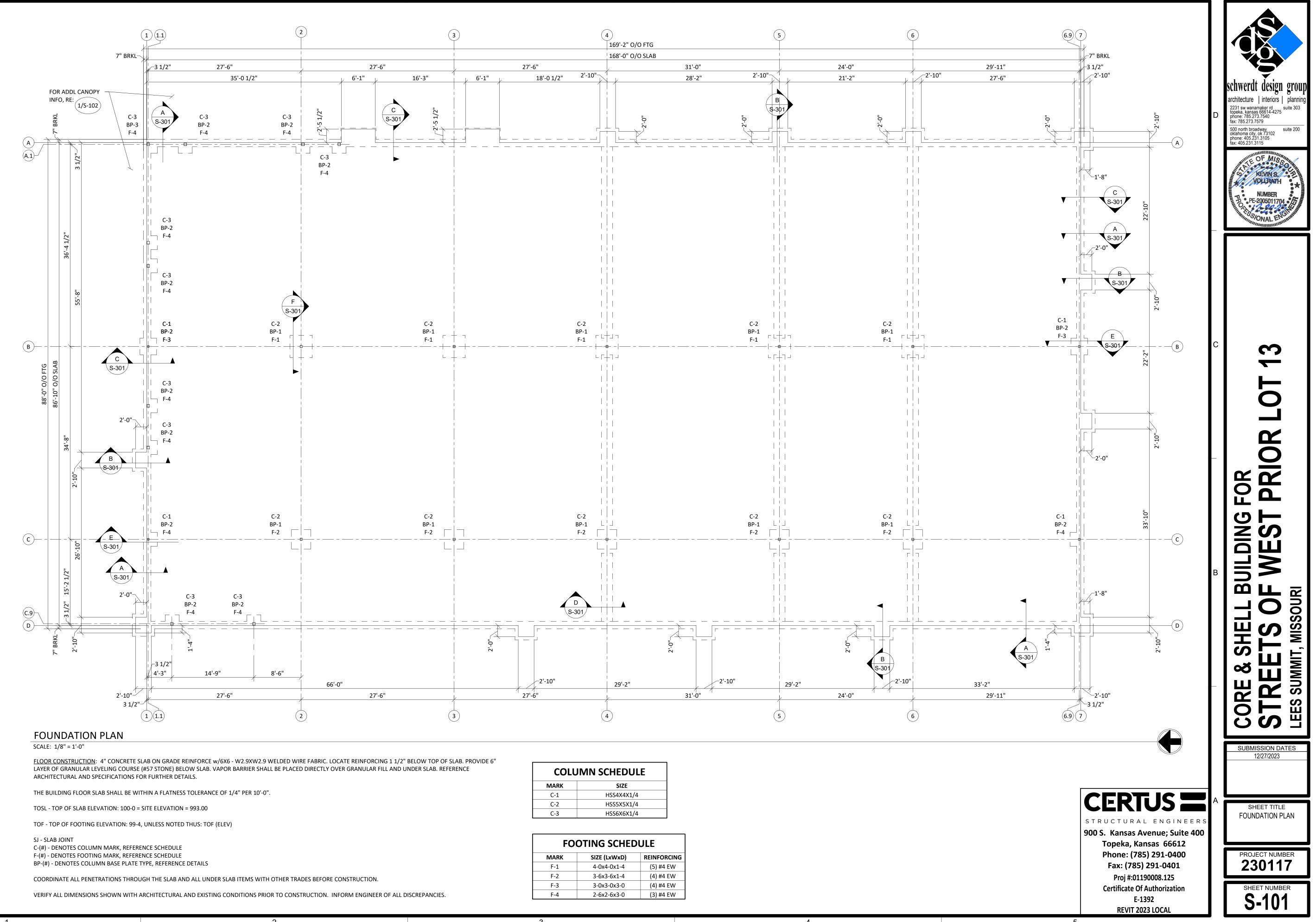
CONCRETE COVER FOR REINFORCEMENT (UNLESS NOTED OTHERWISE ON THE DRAWINGS)					
LOCATION	MINIMUM COVER				
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"				
CONCRETE EXPOSED TO EARTH OR WEATHER:					
#6 AND LARGER	2"				
#5 AND SMALLER	1 1/2"				

	,
CONCRETE NOT EXPOSED TO WEATHER	
OR IN CONTACT WITH THE GROUND:	
SLABS, WALLS, AND JOISTS:	
#14 AND LARGER	1 1/2"
#11 AND SMALLER	3/4"
BEAMS AND COLUMNS	1 1/2"



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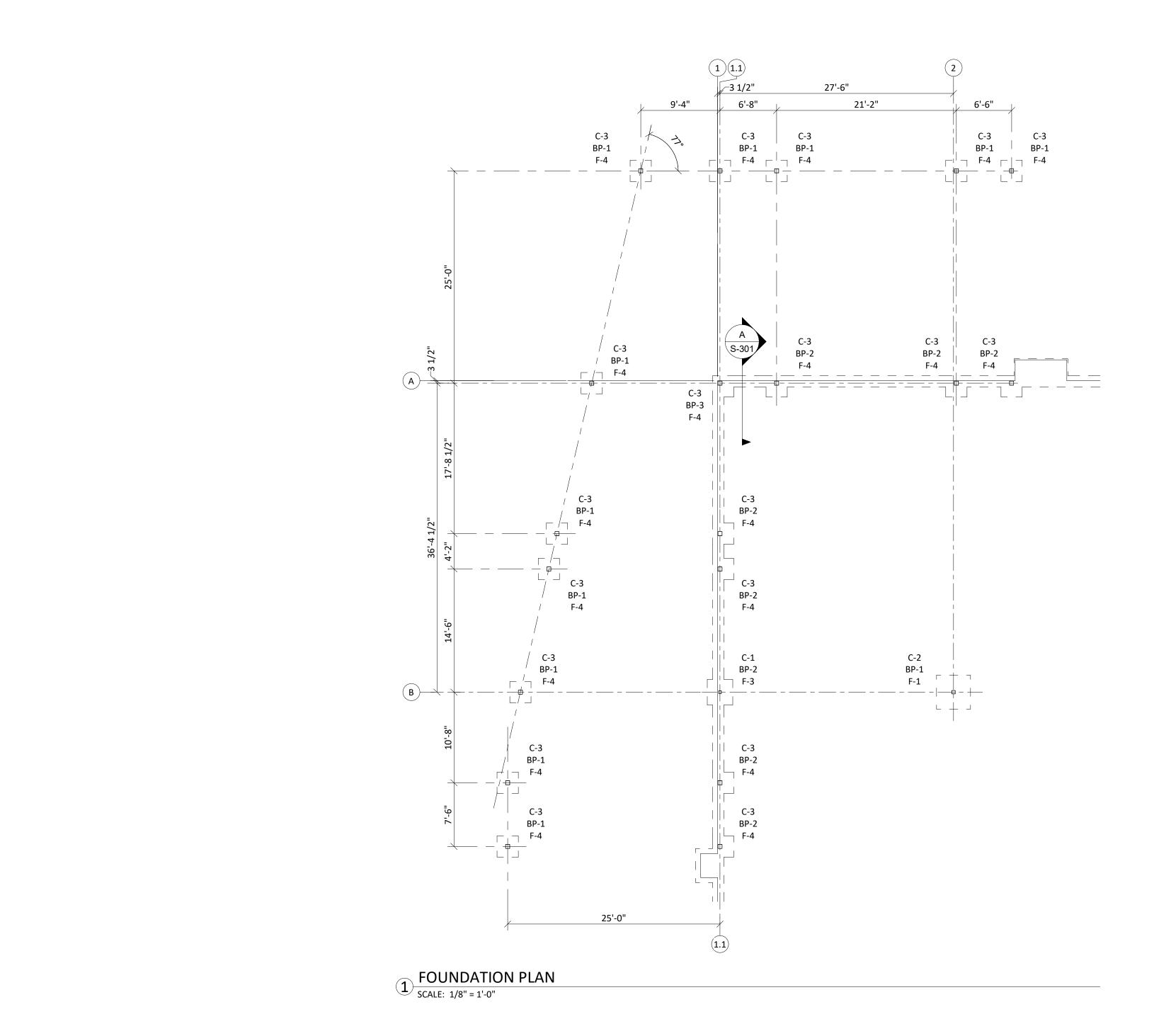
COLUMN SCHEDULE				
MARK	SIZE			
C-1	HSS4X4X1/4			
C-2	HSS5X5X1/4			
C-3	HSS6X6X1/4			

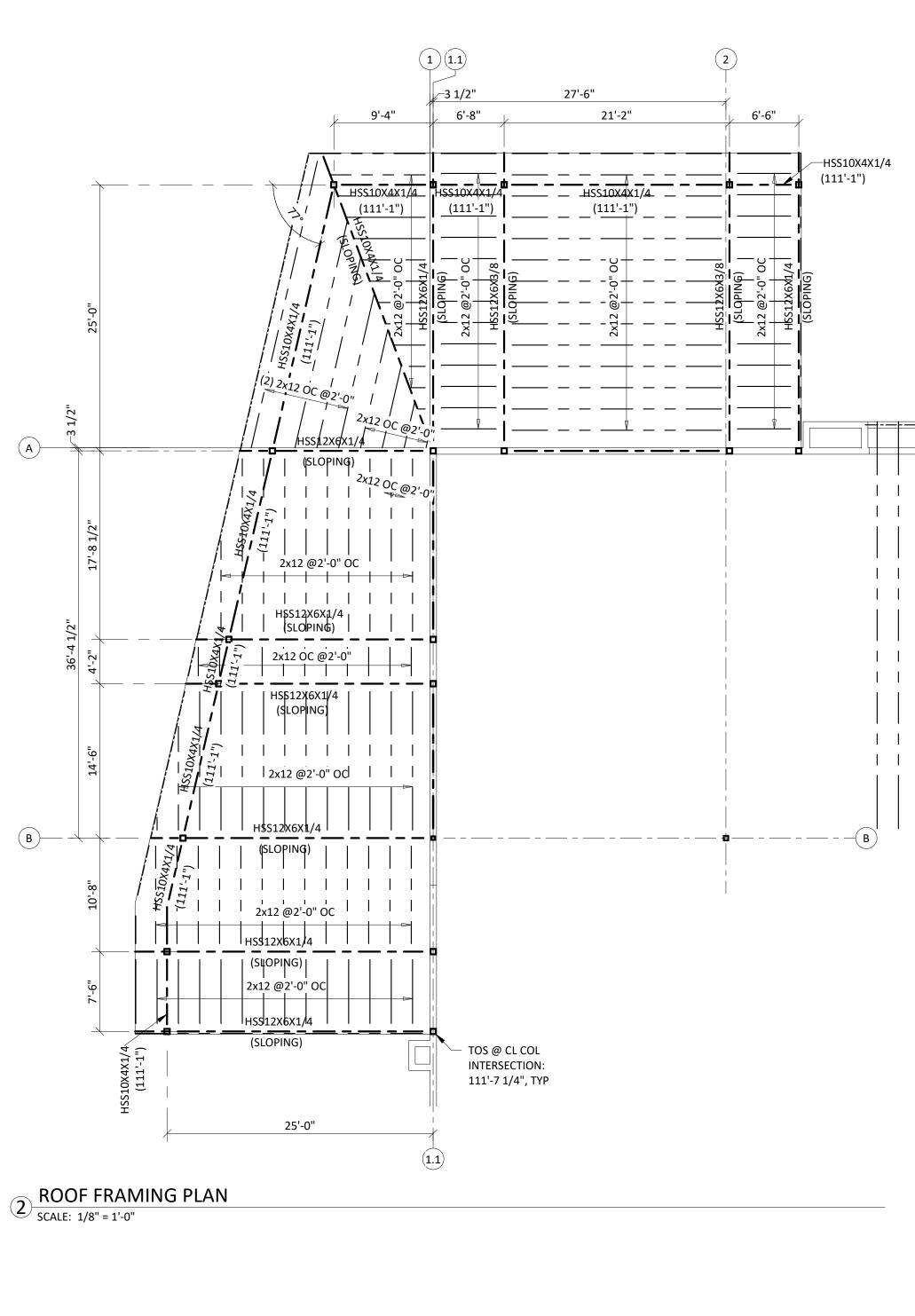
FOOTING SCHEDULE				
SIZE (LxWxD)	REINFORCIN			
4-0x4-0x1-4	(5) #4 EW			
3-6x3-6x1-4	(4) #4 EW			
3-0x3-0x3-0	(4) #4 EW			
2-6x2-6x3-0	(3) #4 EW			
	SIZE (LxWxD)           4-0x4-0x1-4           3-6x3-6x1-4           3-0x3-0x3-0			

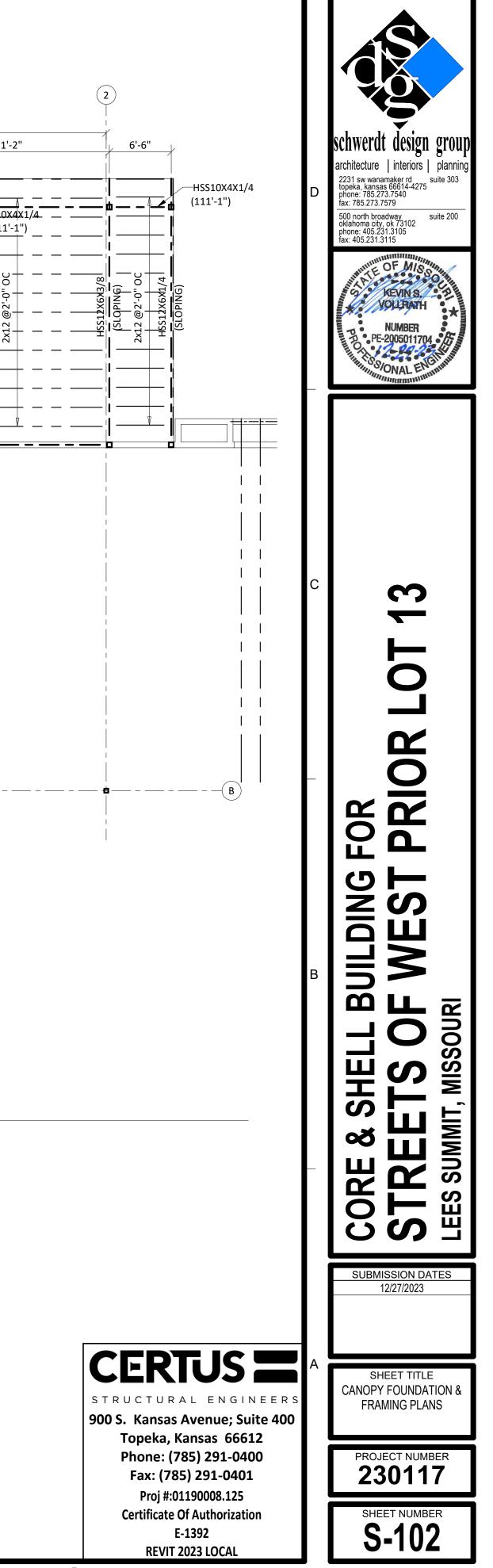


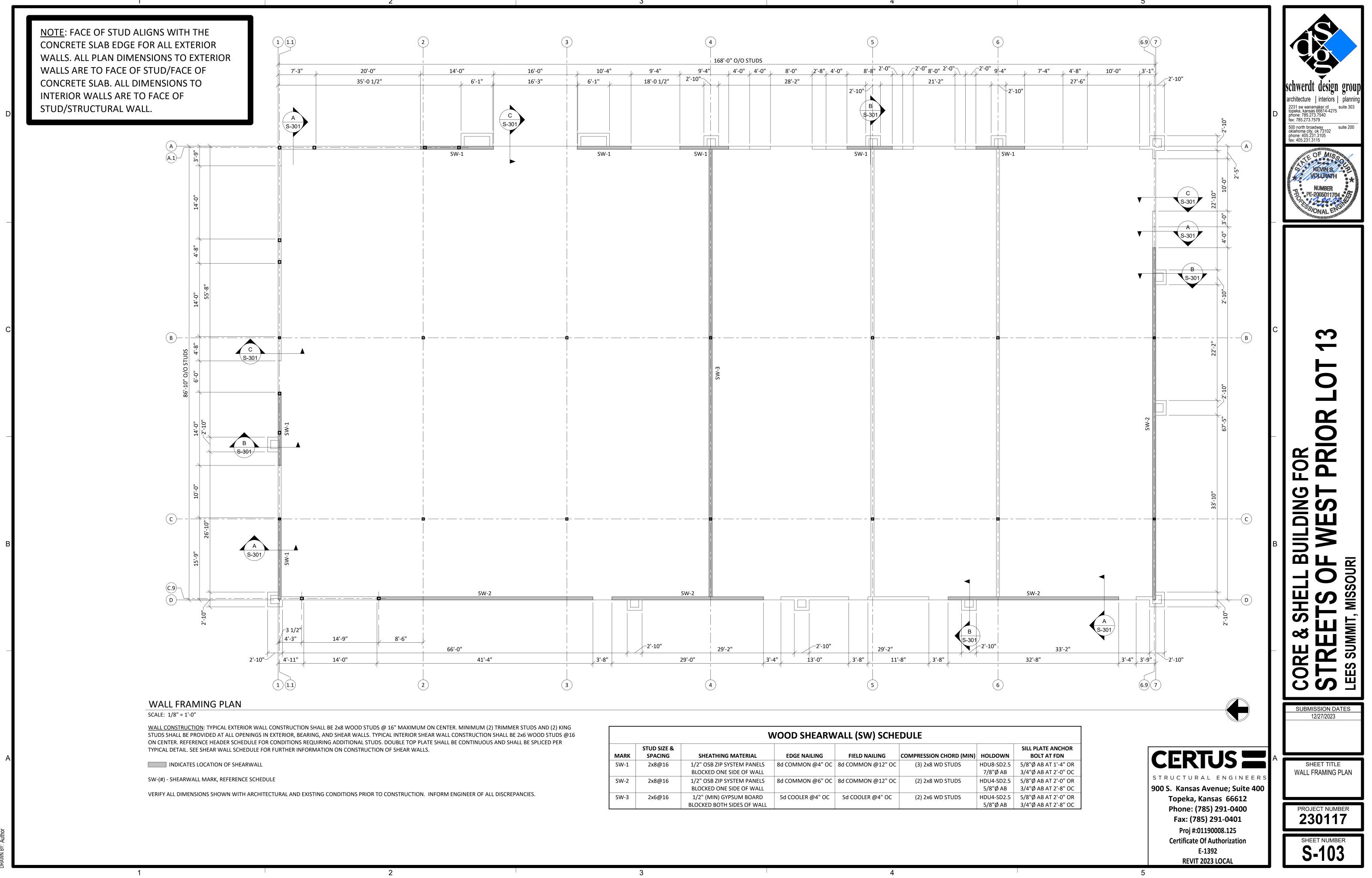
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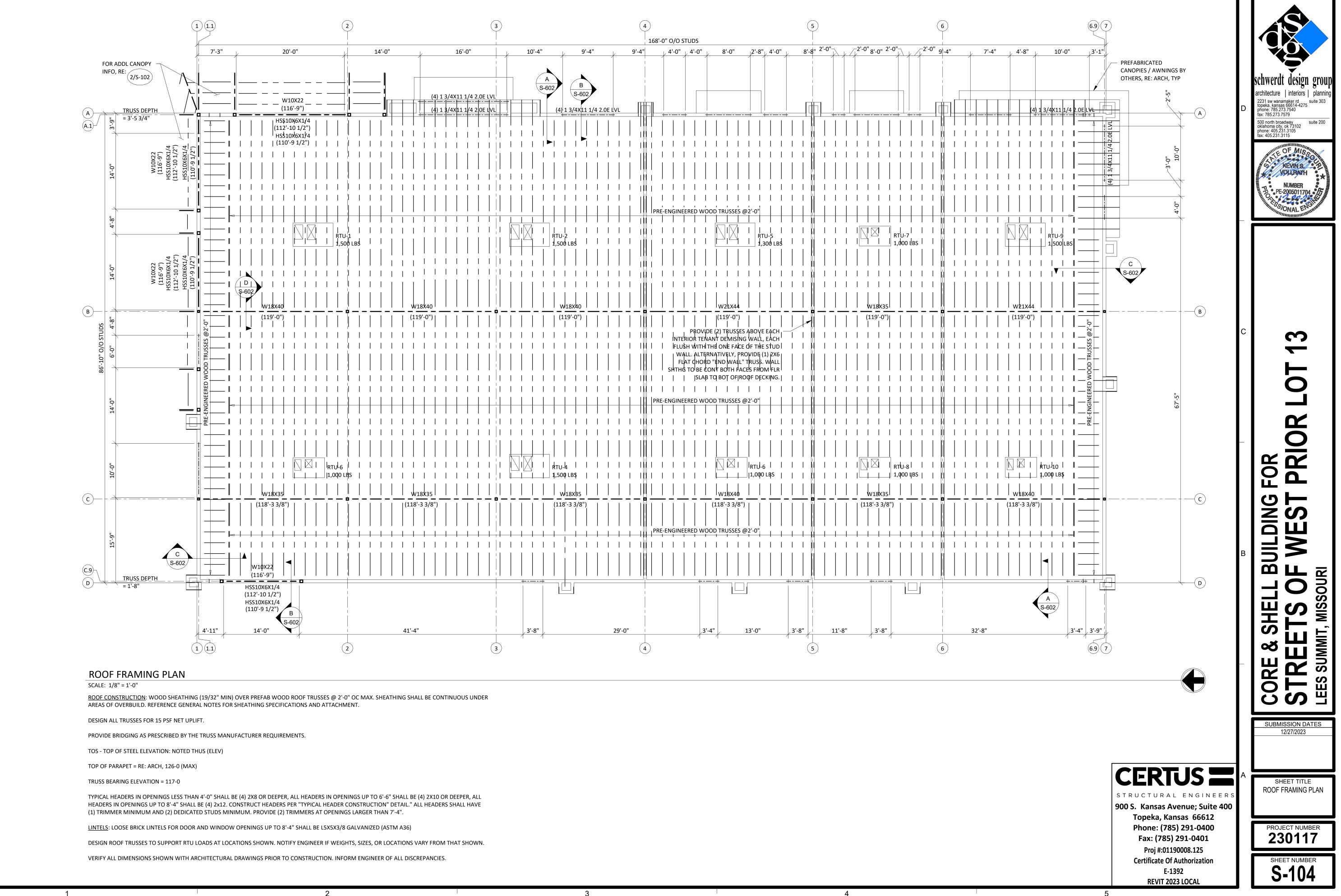


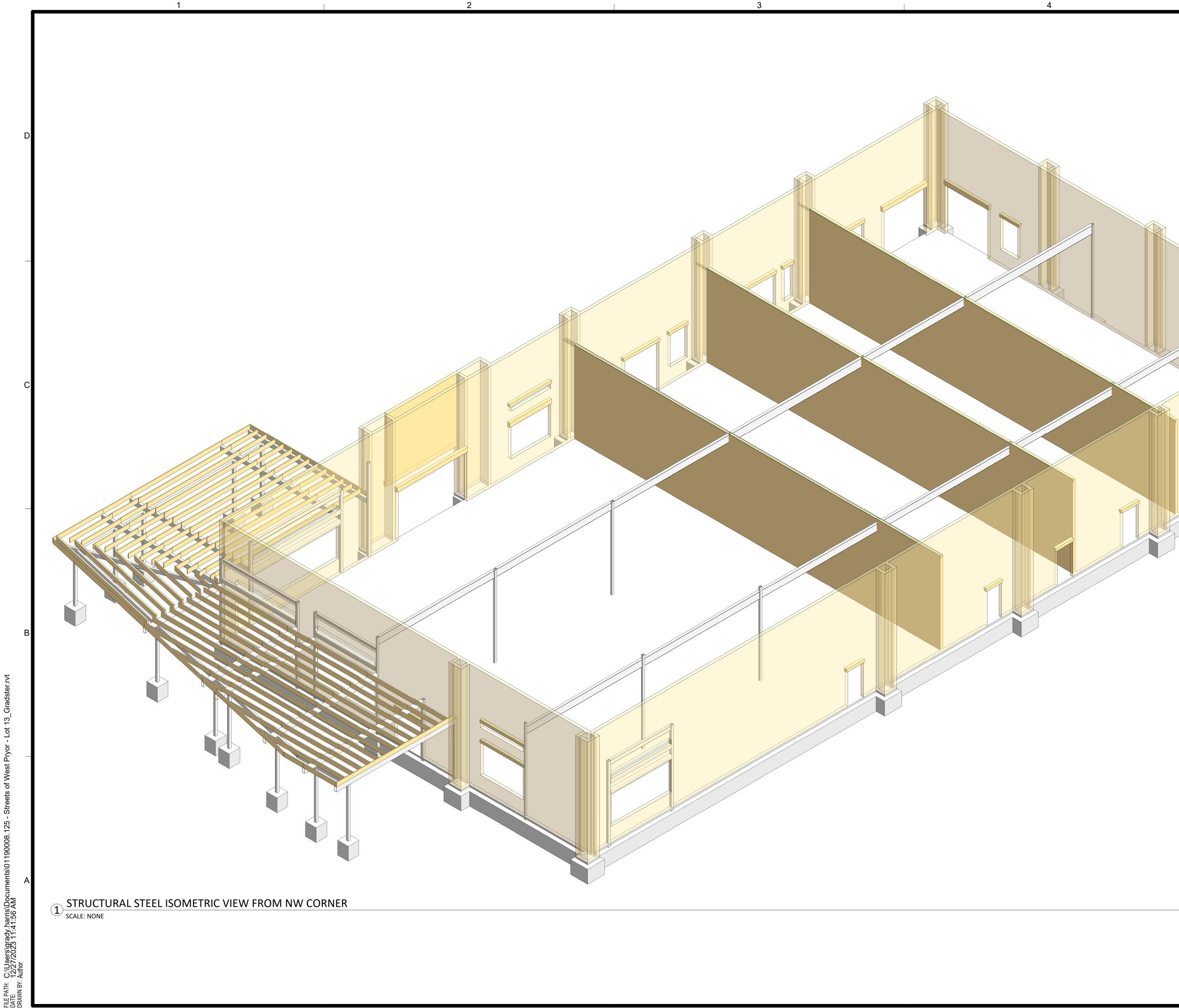




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MMER STUDS AND (2) KING LL BE 2x6 WOOD STUDS @16	WOOD SHEARWALL (SW) SCHEDULE						
D SHALL BE SPLICED PER	MARK	STUD SIZE & SPACING	SHEATHING MATERIAL	EDGE NAILING	FIELD NAILING	COMPRESSION CHORD (MIN)	HOLDOWN
	SW-1	2x8@16	1/2" OSB ZIP SYSTEM PANELS BLOCKED ONE SIDE OF WALL	8d COMMON @4" OC	8d COMMON @12" OC	(3) 2x8 WD STUDS	HDU8-SD2.5 7/8"Ø AB
	SW-2	2x8@16	1/2" OSB ZIP SYSTEM PANELS BLOCKED ONE SIDE OF WALL	8d COMMON @6" OC	8d COMMON @12" OC	(2) 2x8 WD STUDS	HDU4-SD2.5 5/8"Ø AB
SCREPANCIES.	SW-3	2x6@16	1/2" (MIN) GYPSUM BOARD BLOCKED BOTH SIDES OF WALL	5d COOLER @4" OC	5d COOLER @4" OC	(2) 2x6 WD STUDS	HDU4-SD2.5 5/8"Ø AB

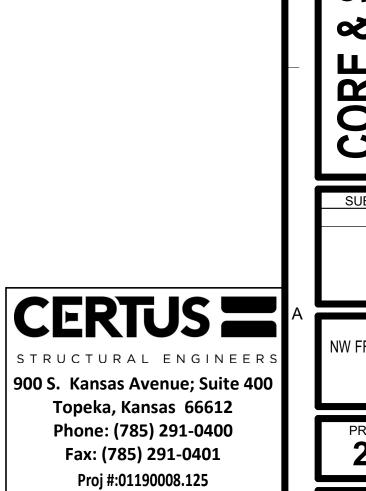




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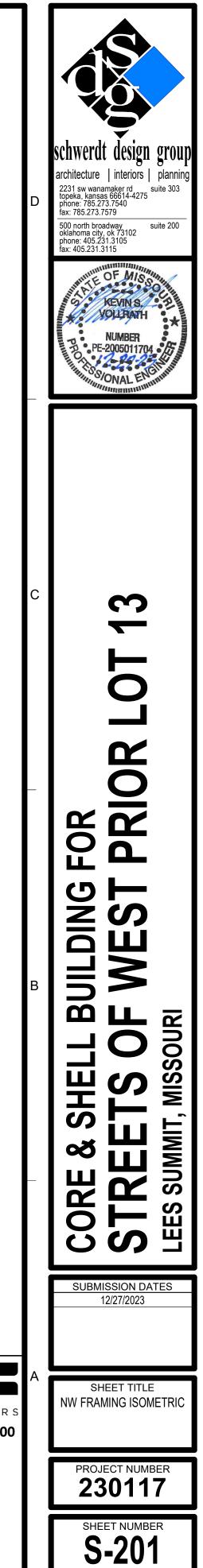
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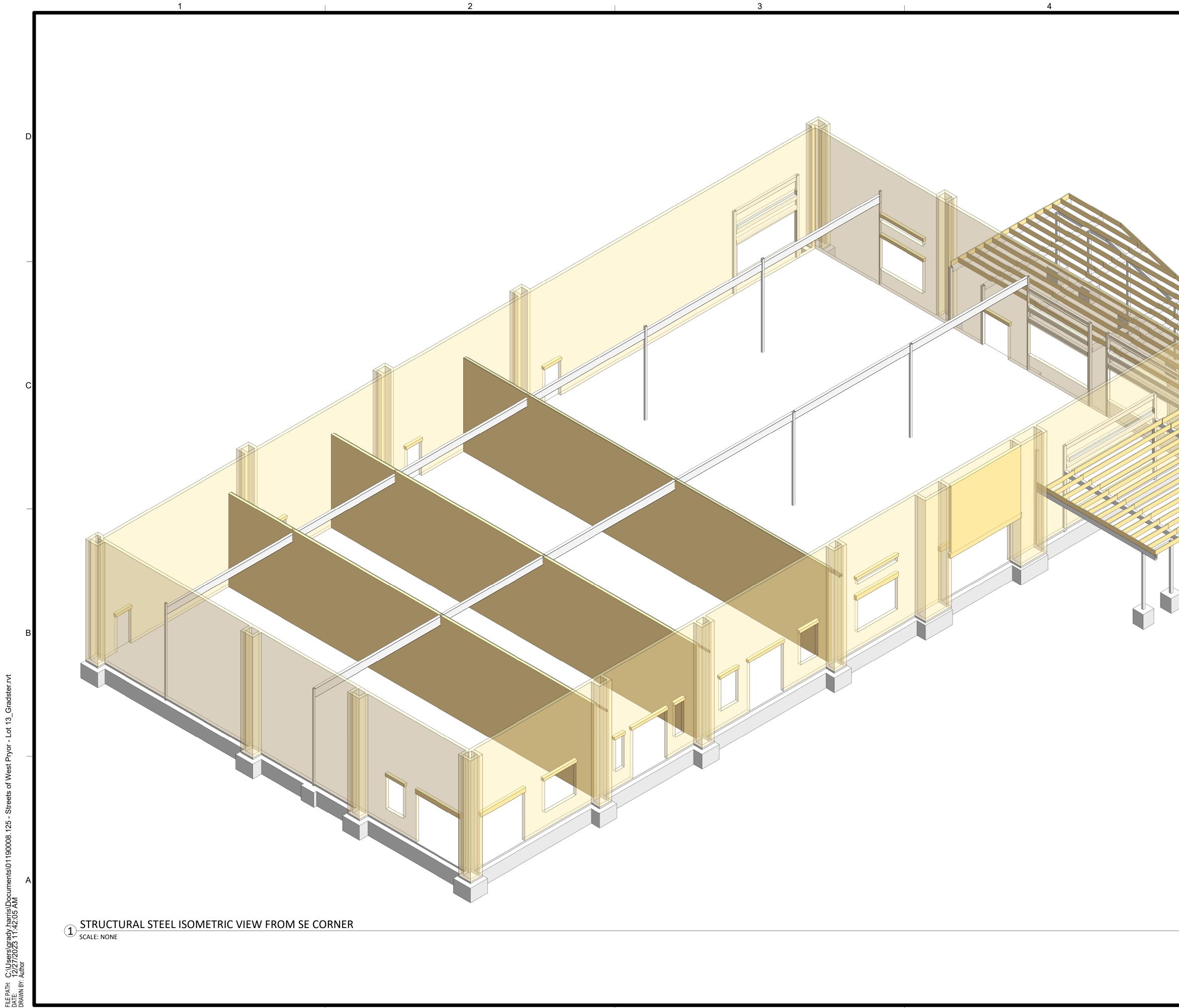
**ISOMETRIC VIEWS ARE INTENDED TO SHOW** GENERAL FRAMING CONFIGURATIONS AND ARE FOR REFERENCE ONLY. IN NO WAY SHALL THESE VIEWS BE USED TO CONVEY THE FULL EXTENT OF FRAMING MATERIALS REQUIRED. QUANTITY OF MATERIALS SHALL BE BASED UPON STRUCTURAL PLANS, DETAILS, ARCHITECTURAL DRAWINGS, AND THE FULL EXTENT OF CONSTRUCTION DOCUMENTS.



**Certificate Of Authorization** 

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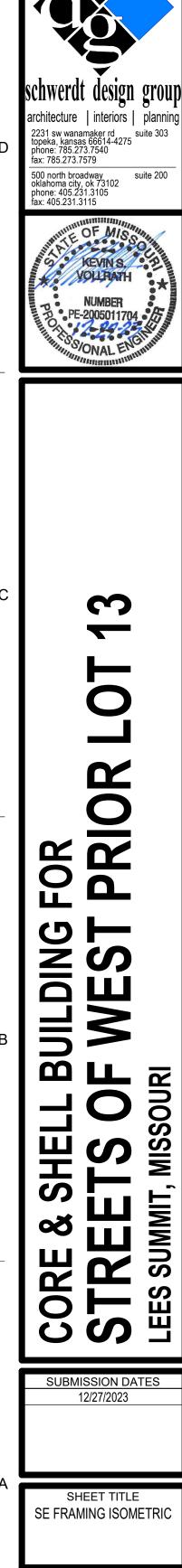


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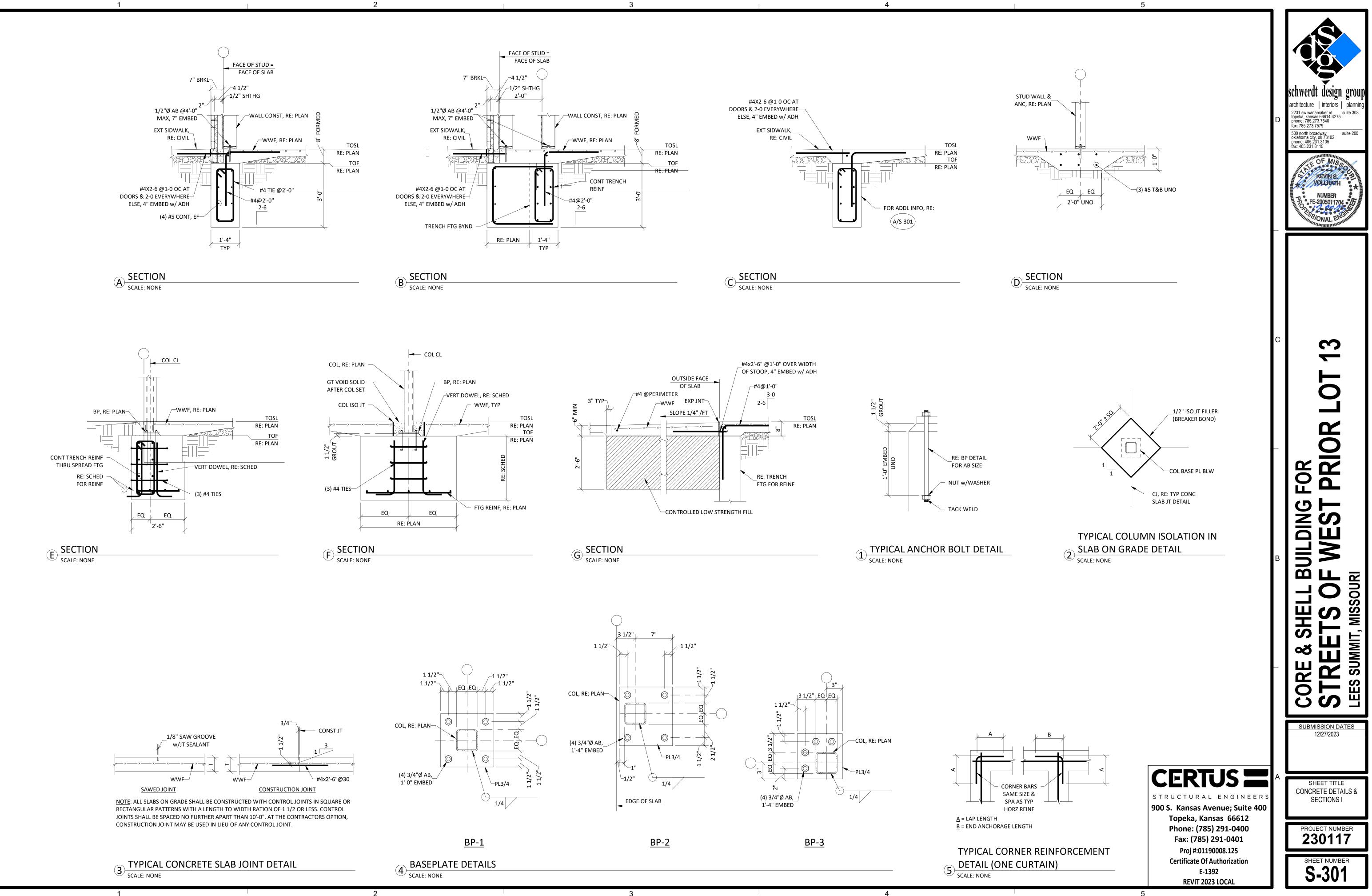


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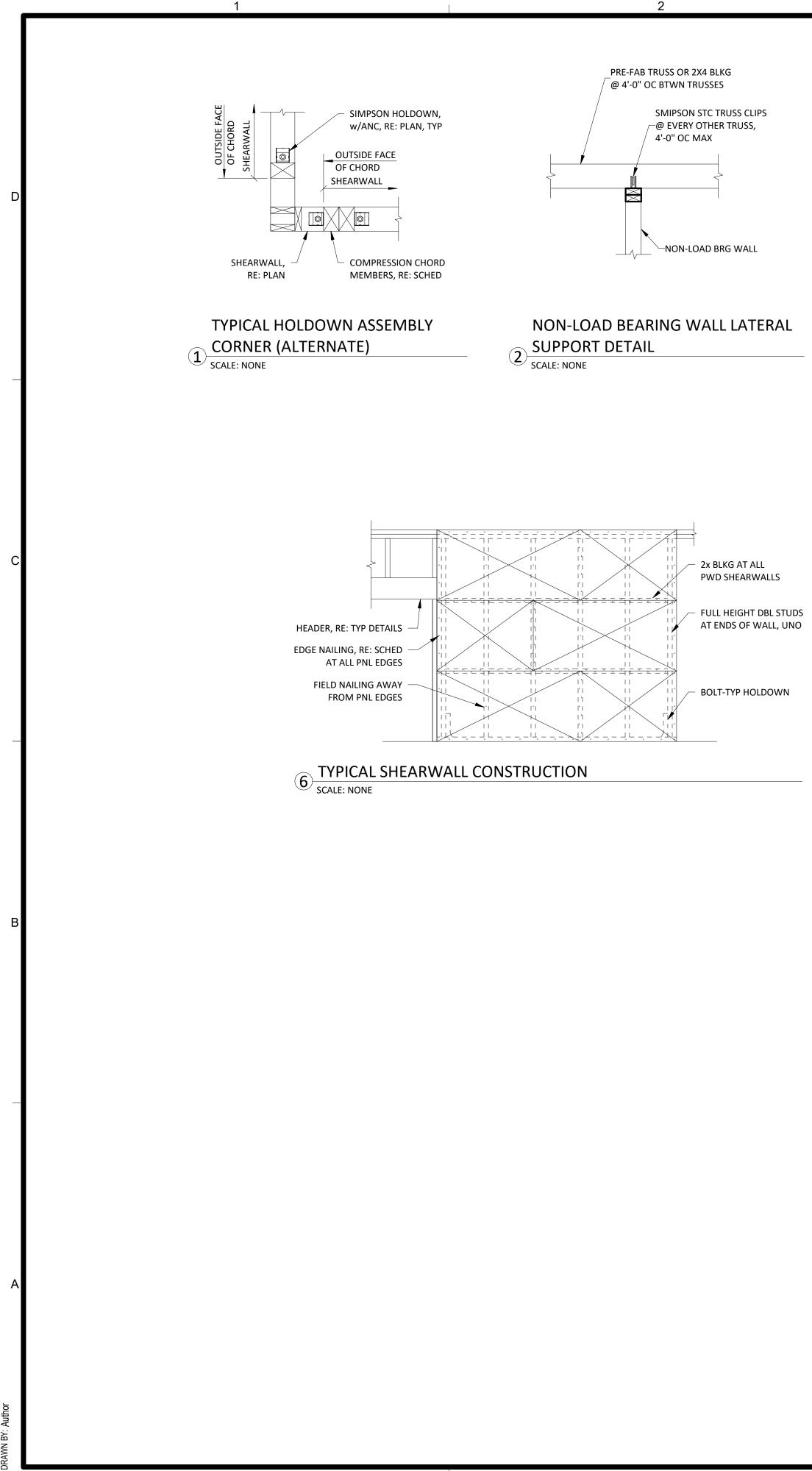


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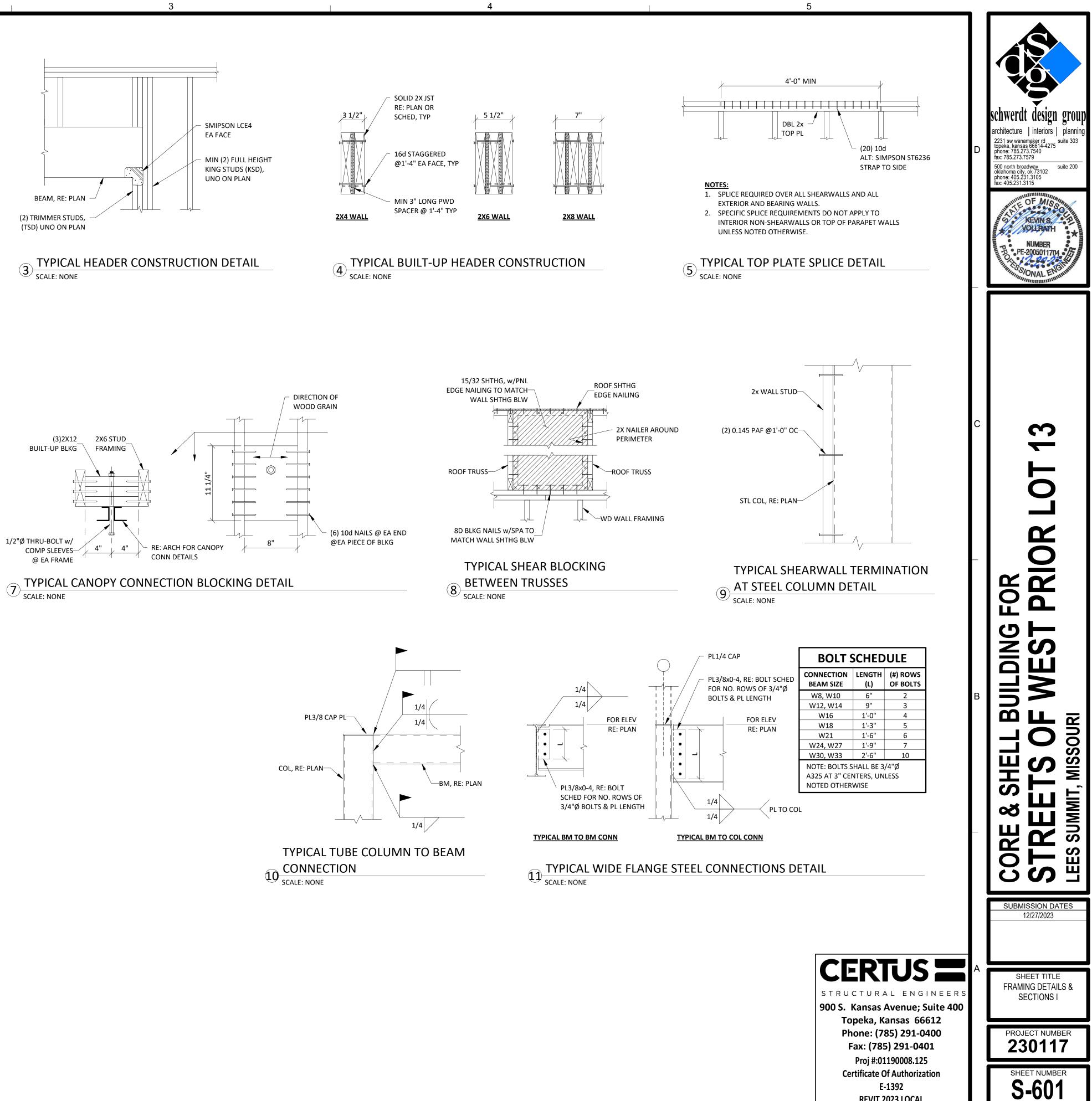


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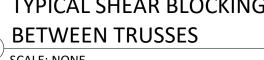


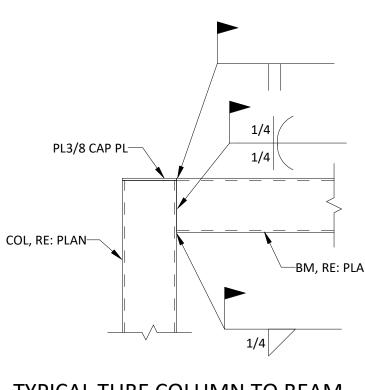


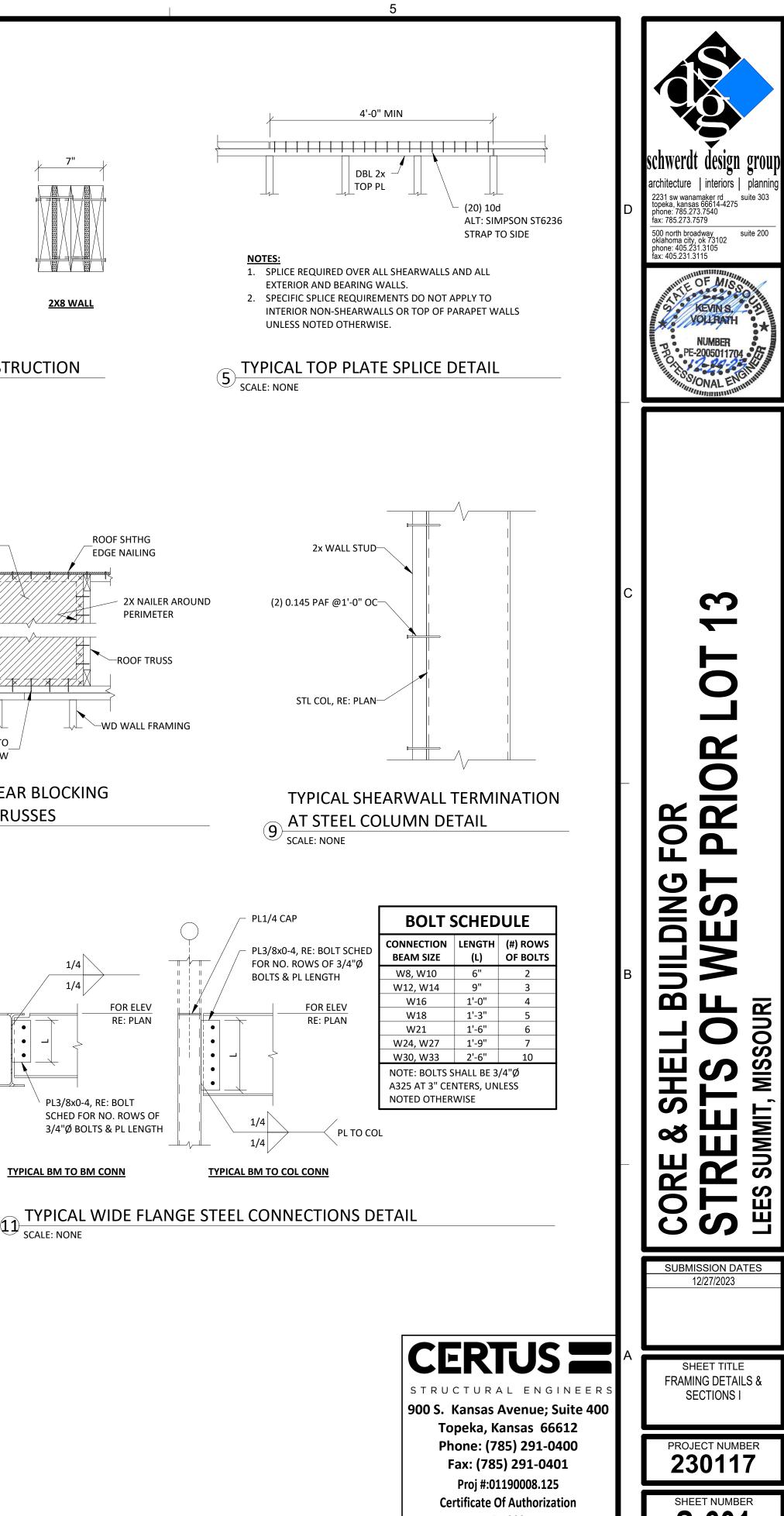


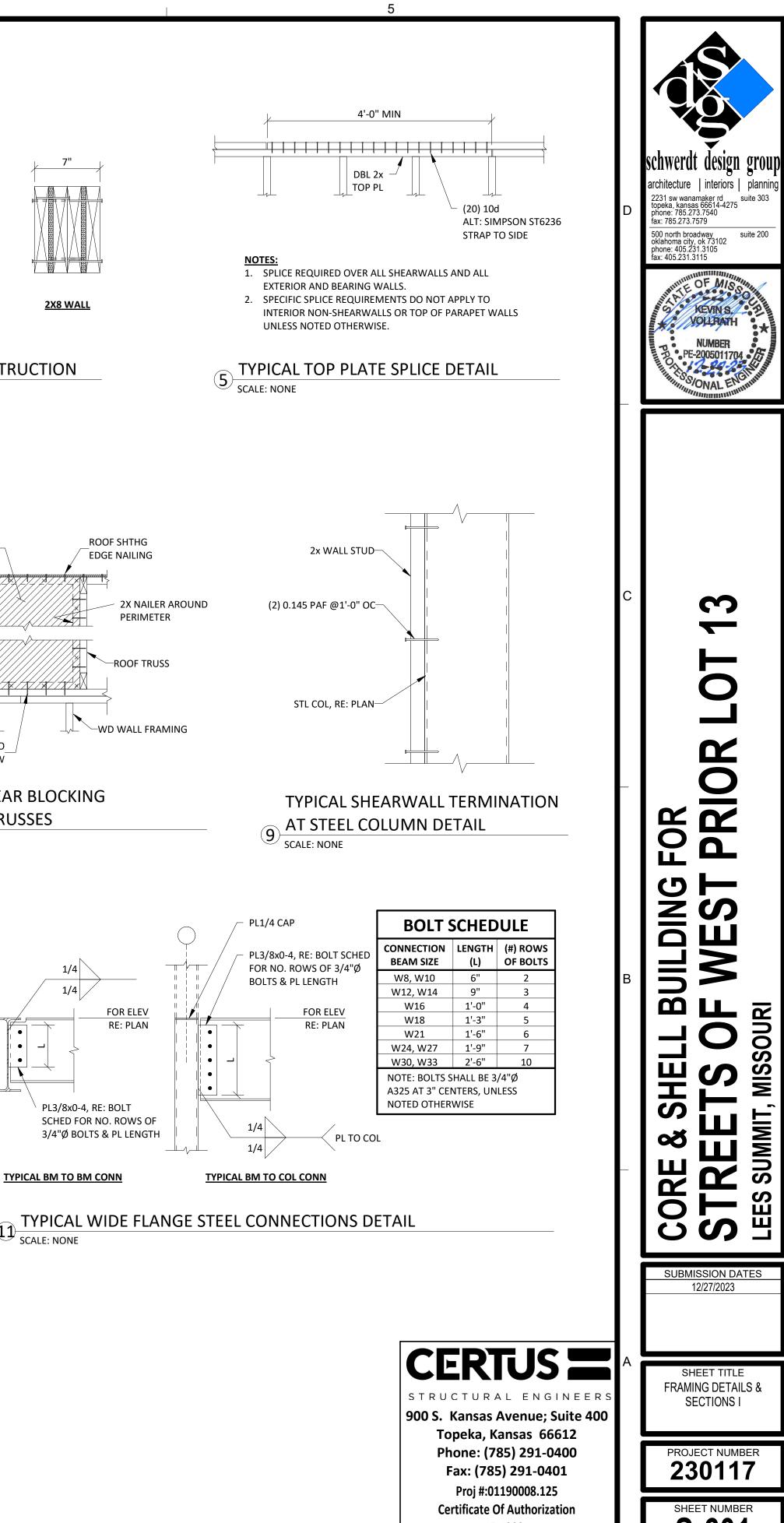


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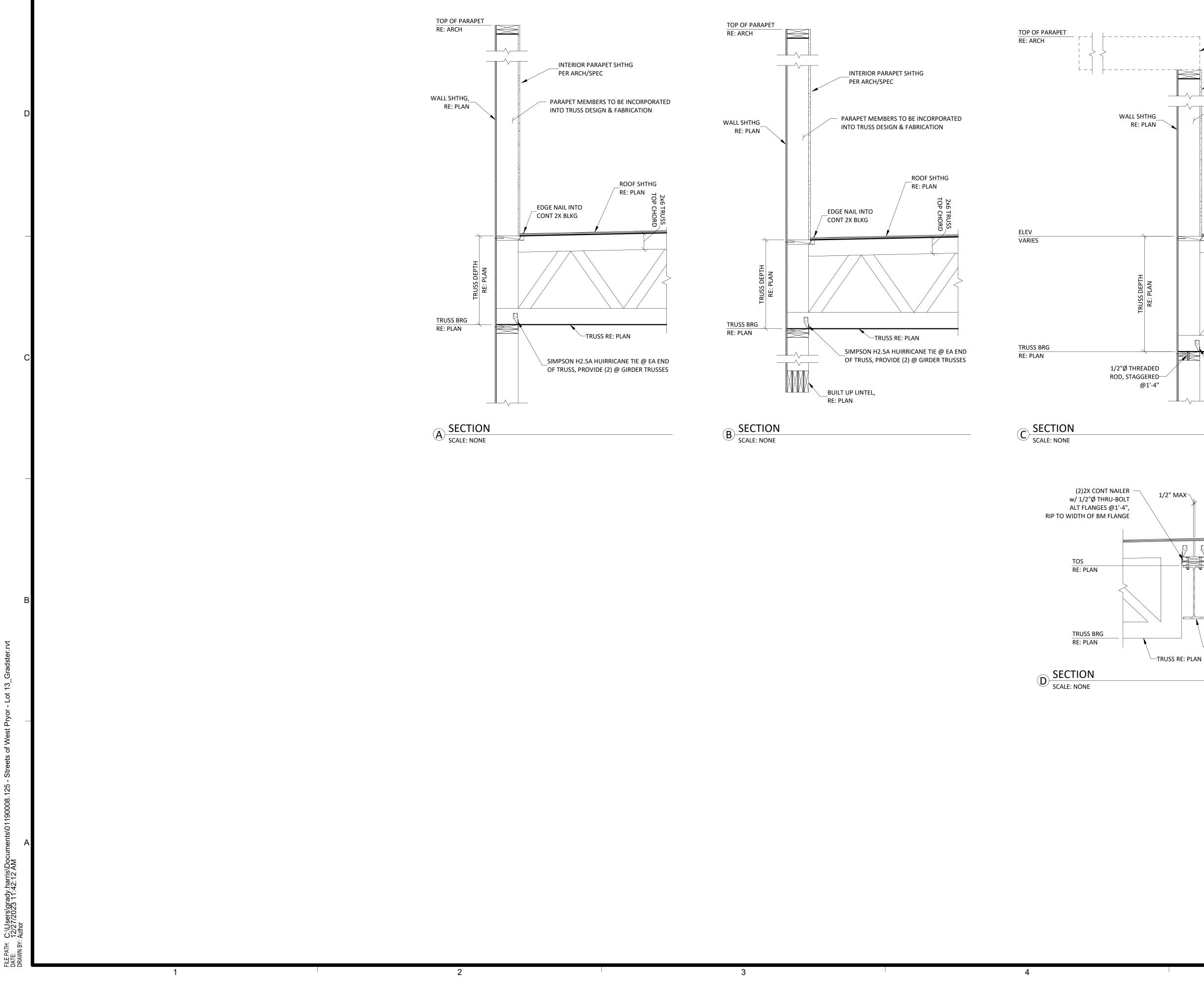




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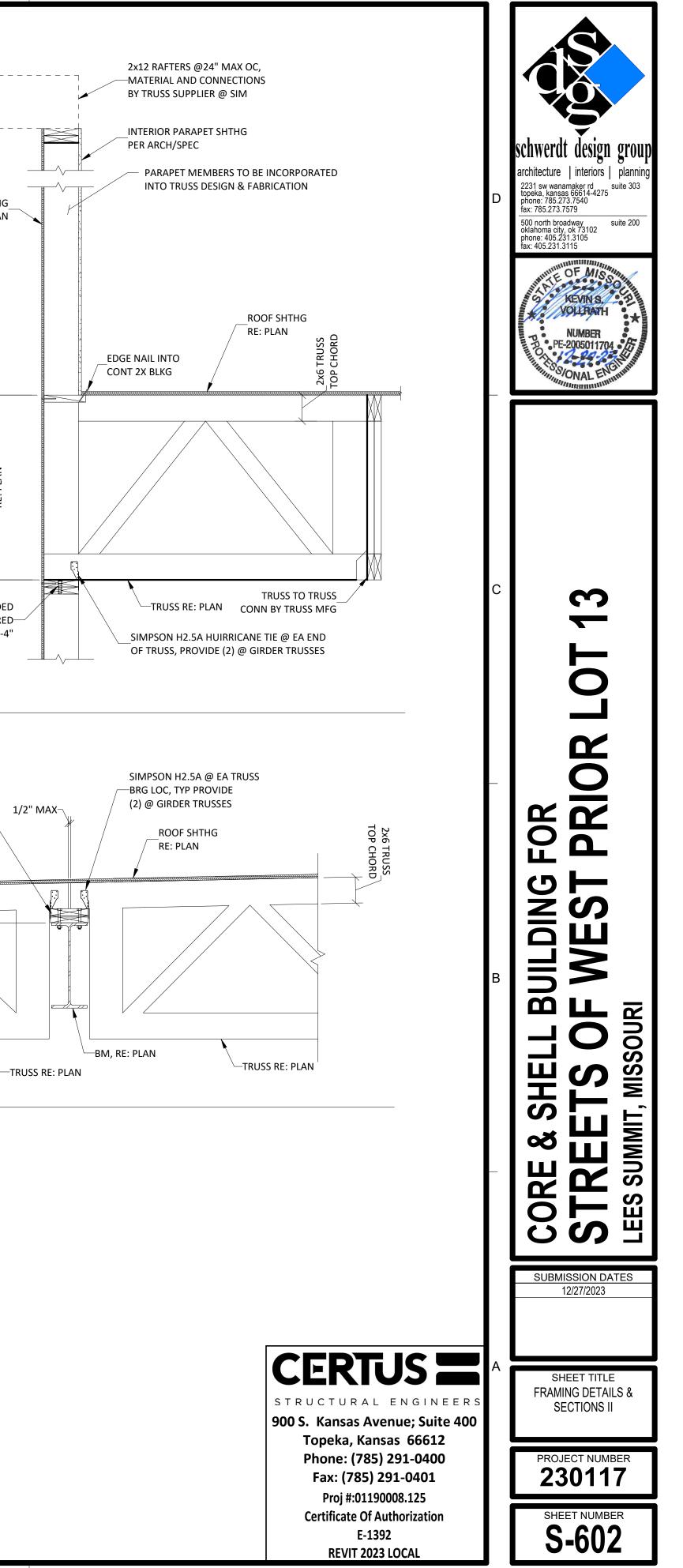


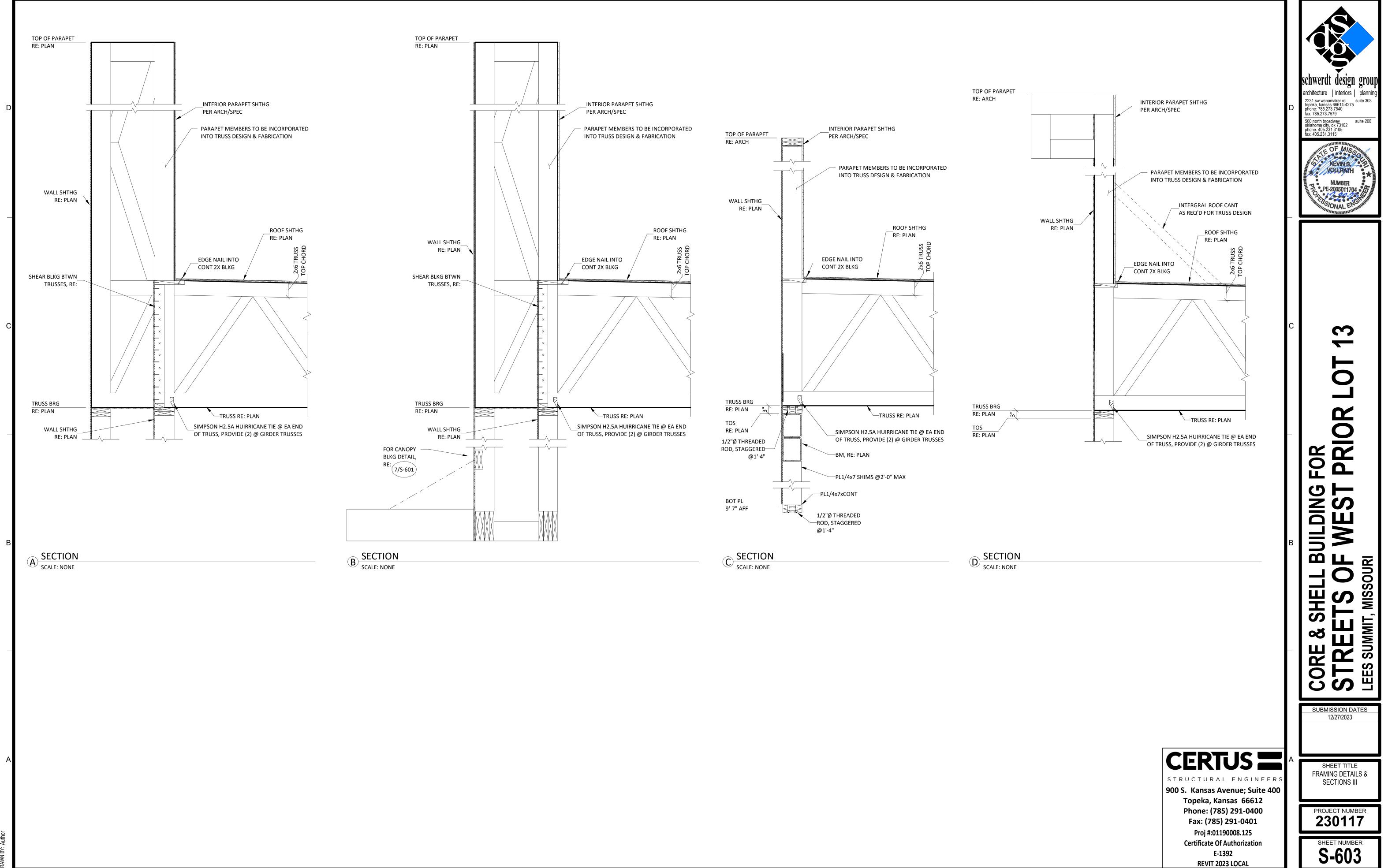
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# ABBREVIATIONS

- A/E ARCHITECT / ENGINEER
- AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE
- AG ABOVE GRADE
- AHJ AUTHORITY HAVING JURISDICTION
- ARCH ARCHITECT BFP BACKFLOW PREVENTER
- BG BELOW GRADE
- BLDG BUILDING BMS BUILDING MANAGEMENT SYSTEM
- CONDUIT
- CD CANDELA CD
- СМ COORDINATE MOUNTING HEIGHT
- CO CLEAN OUT

- DDC DIRECT DIGITAL CONTROLS
- DRINKING FOUNTAIN DF
- DHWR DOMESTIC HOT WATER RETURN
- DIA DIAMETER
- DN DOWN
- EA EXHAUST AIR
- EM EMERGENCY FIXTURE/DEVICE
- FIRE SEALING NOTES
- 1. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL REQUIREMENTS.
- 2. COORDINATE SIZING OF SLEEVES. OPENINGS. CORE-DRILLED HOLES. OR CUT OPENINGS TO ACCOMMODATE THROUGH-PENETRATION FIRESTOP SYSTEMS.
- 3. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS UNTIL EXAMINED BY NSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- 4. COMPATIBILITY: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER; WITH THE SUBSTRATES FORMING OPENINGS; AND WITH THE ITEMS, IF ANY, PENETRATING THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION. AS DEMONSTRATED B THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.
- 5. PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED.
- 6. PROVIDE SLEEVES THROUGH ALL FIRE RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE STOP PUTTY WITH U.L. LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
- 7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH FIRE RATED WALLS.
- 8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS. FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING FOR CONSTRUCTION.

# **GENERAL NOTES**

- 1. SOME ROOM NAMES MAY NOT BE SHOWN FOR PURPOSE OF CLARIFYING PLAN. REFER TO ARCHITECTURAL PLANS FOR REFERENCE TO ROOM NAMES NOT SHOWN.
- 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF "RECORD DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY.
- 3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION.
- 4. FINAL LOCATIONS OF ALL DEVICES, LIGHT FIXTURES, EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS.
- 5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS. APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

# **GEN. MECHANICAL NOTES**

- 1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERISION OF THE INTERNATIONAL MECHANICAL
- CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. ANY POWER FOR CONTROL SYSTEMS TO BE PROVIDED BY E/C IS INDICATED ON ELECTRICAL PLANS. ANY ADDITIONAL LINE VOLTAGE OR LOW VOLTAGE POWER REQUIRED BY THE M/C OR SUBCONTRACTORS TO HAVE A FULLY FUNCTIONING SYSTEM SHALL BE
- PROVIDED BY THE M/C CONTRACTOR OR SUBS. 3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED
- AND FASTENED FROM STRUCTURE. 4. ALL EQUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING ACCESS SHALL BE PROVIDED WITH ACCESS DOORS MEETING ANY FIRE REQUIREMENTS OF THE WALL/CEILING THEY ARE INSTALLED.
- 5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS REQUIRED BY AHJ. COORDINATE WITH OTHER TRADES.
- 6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN OPERATE IN ACCORDANCE WITH THEIR INTENDED PURPOSES. SUBMIT BALANCE AND START UP REPORTS TO THE A/E. REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

1

- EWT ENTERING WATER TEMPERATURE EX EXISTING ITEM
- FFA FROM FLOOR ABOVE FFB FROM FLOOR BELOW
- FFCO FINISHED FLOOR CLEAN OUT
- FGCO FLUSH GRADE CLEAN OUT FL FLOW LINE

FPM FEET PER MINUTE

G GROUND / GANG

FWCO FLUSH WALL CLEAN OUT

G/C GENERAL CONTRACTOR

GPM GALLONS PER MINUTE

HOT DECK

IG ISOLATED GROUND

LED LIGHT EMITTING DIODE

LWT LEAVING WATER TEMPERATURE

M/C MECHANICAL CONTRACTOR

MCB MAIN CIRCUIT BREAKER

MECH MECHANICAL

MLO MAIN LUGS ONLY

NFA NET FREE AREA

OA OUTSIDE AIR

MH MANHOLE

HEATING

HD

HTG

- FLR FLOOR

- COLD DECK
- CLG COOLING
- CTE CONNECT TO EXISTING
- DCVA DOUBLE CHECK VALVE ASSEMBLY JB JUNCTION BOX
- DCW DOMESTIC COLD WATER
- DHW DOMESTIC HOT WATER

- E/C ELECTRICAL CONTRACTOR
- ELEV ELEVATION
- ORD OVERFLOW ROOF DRAIN P/C PLUMBING CONTRACTOR

GFCI GROUND FAULT CIRCUIT INTERUPTER TFB TO FLOOR BELOW

# **GENERAL ELECTRICAL NOTES**

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE,

PSI POUNDS PER SQUARE INCH

RPZ REDUCED PRESSURE ZONE

SPD SURGE PROTECTIVE DEVICE

UNO UNLESS NOTED OTHERWISE

PVC POLYVINYLCHLORIDE

RE/REF REFER / REFERENCE

RA RETURN AIR

RF RELIEF FAN

RR RESTROOM

SA SUPPLY AIR

TA TRANSFER AIR

TYP TYPICAL

TFA TO FLOOR ABOVE

TAMPERPROOF

VTR VENT THROUGH ROOF

WP WEATHERPROOF

RL RELOCATED ITEM

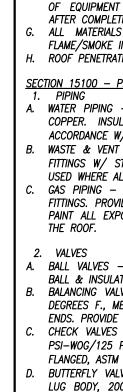
- LOCAL AND STATE CODES. AND REQUIREMENTS OF THE AHJ.
- 2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS
- 3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.
- 4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED
- 5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.

# GENERAL PLUMBING NOTES

- 1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERISION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT TO
- FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF BUILDING INSULATION, INSULATED AND THE CHASE SHALL BE VENTILATED WITH GRILLES ALLOWING INDOOR AMBIENT CONDITIONS TO CIRCULATE THROUGH THE CHASE.
- 3. PROVIDE CLEANOUTS IN THE FOLLOWING LOCATIONS: 3.1. IN ALL HORIZONTAL DRAINS (WITHIN THE BUILDING) NOT MORE THAN 100 FEET APART.
- 3.2. IN BUILDING SEWERS LOCATED NO MORE THAN 100 FEET APART MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT. 3.3. EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR
- HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES.WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE
- 3.4. AT THE BASE OF EACH WASTE OR SOIL STACK. 3.5. NEAR THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER

# **COORDINATION NOTES**

- 1. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.
- 2. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, PIPES, DUCTS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.
- 3. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS.
- 4. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.
- 5. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.
- 6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS.
- 7. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.
- 8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
- 9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
- 10. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES AND HEADROOM.
- 11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED SUBCONTRACOTRS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.
- 12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.





# 15000 -SECTION 15000 GENERAL

2

1	5000 - MECHANICAL SPECIFICATION	S	
<u>SEC</u>	<u> TION 15000 – MECHANICAL REQUIREMENTS</u>		
	GENERAL REQUIREMENTS		CUTION
А.	ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING,	А.	PROVIDE UNIONS
	MECHANICAL & PLUMBING CODES, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL		EQUIPMENT TO ,
	OTHER APPLICABLE CODES.		& CONTROL VAL
В.	FURNISH & INSTALL ALL LABOR & MATERIALS REQUIRED FOR COMPLETE, FUNCTIONING,		END VALVES W/
	MECHANICAL & PLUMBING SYSTEMS W/ ALL ASSOCIATED EQUIPMENT & APPARATUS AS		REMOVED FROM
	SHOWN ON PLANS. "PROVIDE" MEANS TO FURNISH & INSTALL.	В.	AFTER PIPING IS
C.	OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL	С.	ALL PIPING & E
	MAKE ARRANGEMENTS FOR MODIFICATIONS TO WATER, GAS & SEWER CONNECTIONS TO	D.	ESCUTCHEONS -
	BUILDING AS REQUIRED.		WHEN PASSING
D.	VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY	Ε.	VERIFY FLOOR
	DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO SUBSEQUENT		CLEANOUT TOPS
	ALLOWANCE WILL BE MADE IN CONTRACT FOR ANY ERROR OR NEGLIGENCE ON		CERAMIC TILE.
	CONTRACTOR'S PART.	F.	PROVIDE WATER
Ε.	FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS,		UTILIZING FLUSH
<b>L</b> .	EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED &		FIXTURES SERVE
	INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL		
	EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS.	SEC	TION 15300 - H
F.	WARRANT TO OWNER QUALITY OF MATERIAL, EQUIPMENT, WORKMANSHIP & OPERATION	GEN	IERAL
••	OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM &	А.	PROVIDE COMP
	AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER.		NECESSARY EQ
G.	ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE		OPERATING & M
0.	FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM E 84.	В.	ALL HVAC WORK
Н.	ROOF PENETRATIONS - MADE BY AUTHORIZED ROOFING CONTRACTOR WHEN REQUIRED.		LOCAL BUILDING
	ROOF TENEINATIONS - WADE DI AUTIONZED ROOFING CONTRACTOR WHEN REQUIRED.		JURISDICTION.
SEC	<u> TION 15100 – PLUMBING</u>		
	PIPING	DUC	CTWORK
A		A.	HVAC DUCTWORK
	COPPER. INSULATE W/ FIBERGLASS W/ ASJ & PVC COVERS. THINCKNESS IN		IN SMACNA MAN
	ACCORDANCE W/ ASHRAE 90.1.	В.	VOLUME DAMPER
D	WASTE & VENT PIPING - CI BELL & SPIGOT OR HUBLESS CI W/ NEOPRENE GASKET	С.	ALL DUCTWORK
В.		D.	WRAP ALL SUPP
	FITTINGS W/ STAINLESS STEEL BANDS. SCHED 40 PVC W/ SOLVENT WELDS MAY BE		INSULATION W/
~	USED WHERE ALLOWED BY LOCAL CODE. PVC NOT ALLOWED IN PLENUMS.		SUPPLY DUCTW
С.	GAS PIPING – PROVIDE SCHED 40 CONT. WELD CARBON STEEL W/ CORRESPONDING		RETURN AIR DU
	FITTINGS. PROVIDE THREADED FITTINGS. PROVIDE IRON BODY-BRASS PLUG GAS STOPS.		NETONN AIN DO
	PAINT ALL EXPOSED GAS PIPING ON THE EXTERIOR OF THE BUILDING INCLUDING ON	FOI	JIPMENT
	THE ROOF.	A.	
~		<i>/</i>	AAON, DAIKIN.
	VALVES		
А.	BALL VALVES – 2" & UNDER – BRONZE FULL PORT W/ TEFLOW SEATS, BRONZE		LEVEL UNIT IN
_	BALL & INSULATED HANDLE.	_	CONTROL. 2" N
В.	BALANCING VALVES - ARMSTRONG MODEL CBV I OR CBV II, 125 PSI-WP AT 250	В.	
	DEGREES F., METER CONNECTIONS W/ BUILT-IN CHECK VALVES SCREWED OR FLANGED		REQUIRED BY S
	ENDS. PROVIDE POLYURETHANE INSULATION COVER.		DAY PROGRAMM
C.	CHECK VALVES – 2"7 SMALLER SCREWED OR SOLDER BRONZE CHECK VALVE, 200		CHANGE OVER.
	PSI-WOG/125 PSI-WSP, TEFLON OR BRONZE DISC & SEAT RING. 2-1/2" & LARGER		INTERFACES TO
	FLANGED, ASTM 126 IRON BODY, BRONZE TRIMMED, 200 PSI-WOG/125 PSI-WSP.		JOHNSON CONT
D.	BUTTERFLY VALVES – 3" & LARGER LEVER ASTM A126 CI DRILLED & TAPPED FULL		APPROVED EQUA
υ.	LUG BODY, 200 PSI-WOG, EXTENDED NECK, BRONZE DISC, STAINLESS STEEL STEM,		
	FIELD-REPLACEABLE EPDM SLEEVE & STEM SEALS.	EXE	CUTION
Е.	EQUIVALENT VALVE MANUFACTURERS: MILWAUKEE, STOCKHAM, POWELL, RED-WHITE,	В.	COORDINATE W
L.			THERMOSTATS
	CRANE, APPOLO, MUELLER, MUESSCO, WATTS, HAYS, ROCKWELL-NORDSTROM.		REQUIRED INTER
		С.	PROVIDE GROUN
	TURES – SEE SCHEDULES DRAINS RY WARE ZURN WOODEORD SNITH JOSAN	U.	
A.	DRAINS BY WADE, ZURN, WOODFORD, SMITH, JOSAM.	<u> </u>	THAN UNIT ON E
В.	WALL HYDRANTS JOSAM SERIES 71000 W/ CONNECTIONS FOR 3/4" PIPE & HOSE.	D.	
	NON-FREEZING W/ KEY, VACUUM BREAKER, LOCKING COVER. EQUIVALENT BY J.R.	-	SUPPORTS
	SMITH, WADE, WOODFORD OR ZURN.	Ε.	PROVIDE FACTO

### S OR FLANGED JOINTS IN EACH PIPE LINE PRECEDING CONNECTIONS TO ALLOW REMOVAL FOR REPAIR OR REPLACEMENT. PROVIDE ALL SCREWED ALVES W/ UNIONS ADJACENT TO EACH CONNECTION. PROVIDE SCREWED UNION ADJACENT TO VALVE UNLESS VALVE CAN BE OTHERWISE EASILY

- IN PLACE TEST LINES TO ENSURE NO LEAKS. EQUIPMENT SHALL BE SUPPORTED PROPERLY FROM STRUCTURE.
- PROVIDE NICKEL-BRASS OR CHROME PLATED ON ALL EXPOSED PIPES THRU WALL OR CEILING OF FINISHED ROOMS. MATERIALS USED FROM ARCHITECTURAL PLANS & PROVIDE PROPER
- 'S, WHERE THEY OCCUR IN CARPET, QUARRY TILE, VINYL TILE OR HAMMER ARRESTORS FOR ALL PLUMBING BANKS W/ FIXTURES
- TH VALVES IN ANY CAPACITY. LOCATE ARRESTER BETWEEN LAST TWO ED ON BRANCH LINE.

HVAC

PREVENTIVE MAINTENANCE

- PLETE HVAC SYSTEM AS SHOWN ON DRAWINGS INCLUDING ALL QUIPMENT. DUCTWORK. DIFFUSERS, GRILLES, & FILTERS. PROVIDE MAINTENANCE INSTRUCTIONS ON ALL EQUIPMENT. K SHALL BE DONE IN STRICT ACCORDANCE W/ ALL REQUIREMENTS OF
- CODE, ASHRAE, NEC, NFPA, & ALL OTHER APPLICABLE CODES HAVING
- SHALL BE GALV SHEET METAL OF GAUGES & JOINT TYPES SPECIFIED NUAL. PROVIDE TURNING VANES IN ELBOWS. rs shall be manual locking blade type.
- MUST BE SUPPORTED PROPERLY FROM STRUCTURE.
- PLY & OUTSIDE AIR HVAC DUCTWORK W/ CERTAINTEED 1-1/2" THICK VAPOR BARRIER IN CONCEALED LOCATIONS. ALSO LINE FIRST 10' OF WORK FOR SOUND ATTENUATION ( IN ADDITION TO WRAP) LINE ALL JCTS & TRANSFER BOOTS W/ 1/2" LINER.

### AS SCHEDULED. EQUIVALENTS BY TRANE. CARRIER. YORK. LENNOX. MIN 14" ROOF CURB. PROVIDE SLOPED CURB AS REQUIRED FOR NSTALLATION. ECONOMIZER W/ BAROMETRIC RELIEF, FIXED DRY BULB MERV 7 FILTERS. LOUVERED HAIL GUARDS. 30 DEG LOW AMBIENT.

- RAMMABLE THERMOSTATS W/ STAGES OF HEATING AND COOLING AS STAGES OF HEATING AND COOLING ON SPECIFIED EQUIPMENT. SEVEN (7) MING CAPABILITY W/ 2 OCC/UNOCC PERIODS/DAY. AUTO HEAT/COOL LOCKING SETPOINTS TO PREVENT TAMPERING. PROVIDE W/ ALL OTHER EQUIPMENT AS REQUIRED. THERMOSTATS BY HONEYWELL, ITROLS, WHITE–ROGERS, TRANE, CARRIER, AAON, LENNOX, DAIKIN, OR
- V/ E/C TO PROVIDE ALL WIRING BETWEEN EQUIPMENT, DAMPERS, & ALL OTHER REQUIRED CONTROLS & DEVICES. PROVIDE ANY RFACES TO FIRE ALARM OR SIMILAR SYSTEMS.
- IND-MOUNTED UNITS ON 4", REINFORCED CONCRETE BASE, 4" LARGER EACH SIDE. UNITS ON EQUIPMENT SUPPORTS OR CURBS. ANCHOR UNITS TO
- PROVIDE FACTORY-AUTHORIZED SERVICE START UP ON EQUIPMENT. TRAIN OWNER'S MAINTENANCE PERSONNEL ON STARTUP, SHUTDOWN, TROUBLESHOOTING, SERVICING,

# 16000 - ELECTRICAL SPECIFI

<u>SECTION 16000 - ELECTRICAL REQUIREMENTS</u>

- GENERAL REQUIREMENTS A. ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERN
- CODE, NATIONAL ELECTRICAL CODE, NFPÁ, CODES AS ADOPTED BY CI STATE & ALL OTHER APPLICABLE CODES. B. ALL MATERIALS & EQUIPMENT SHALL BE NEW & SHALL BEAR U.L. LA
- APPLICABLE. PROVIDE WATERPROOF EQUIPMENT ENCLOSURES WHERE C. OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS MAKE ARRANGEMENTS FOR MODIFICATIONS TO ELECTRICAL CONNECTION
- AS REQUIRED. D. CONTRACTOR SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED TO
- FUNCTIONING ELECTRICAL LIGHTING & POWER SYSTEMS TOGETHER W/ EQUIPMENT & APPARATUS AS SHOWN ON PLANS. . WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHO
- PROVIDED AS THOUGH FULLY SHOWN & SPECIFIED. . Contractor shall visit site & observe conditions under which DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTEN SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION FOR A
- NEGLIGENCE ON CONTRACTOR'S PART. G. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEM EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS.
- H. WARRANT TO OWNER QUALITY OF MATERIALS, EQUIPMENT, WORKMANSH OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YE AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SY
- I. ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/

# SECTION 16100 - CONDUIT & CONDUCTORS

- A. FOLLOW CIRCUITING SHOWN ON PLANS. USE NO CONDUIT SMALLER CONDUCTORS SMALLER THAN #12 GA. UNLESS NOTED OTHERWISE. B. WIRE SHALL BE IN NON-FLEXIBLE METALLIC CONDUIT (EMT. IMC OR CIRCUITS AND FEEDERS GREATER THAN 30A, LIGHT SWITCH RISERS,
- & HOME RUNS. C. MC CABLE ACCEPTABLE FOR BRANCH CONVENIENCE CIRCUITS AND LI DO NOT DAISY CHAIN LIGHT FIXTURES. PROVIDE MC LUMINARY CABL TWISTED JACKETED PAIR FOR LIGHTING CIRCUITS FOR LIGHTING CONT
- HEALTH CARE RATED MC FOR MEDICAL TREATMENT AREAS WHEN NOT D. CONDUIT INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC HE CONDUIT MEETING NEMA STANDARDS & UL LISTED FOR UNDERGROUM USE. PROVIDE GRS RADIUS BENDS & RISERS AS CONDUITS RISE AE
- ABOVE FLOOR SLAB. E. PROVIDE INTERLOCKING SPACERS FOR MULT RUNS OF UG CONDUITS F. LIGHTING & RECEPTACLE CIRCUIT CONDUCTORS SHALL BE COPPER 1 VOLT. 75 DEG C. COLOR CODED AS DESCRIBED UNDER APPLICABLE ROMEX, PLASTIC FLEX TUBING ETC PERMITTED. LIGHT FIXTURE WIRE SHALL HAVE TEMP RATING NOT LESS THAN INDIVIDUAL FIXTURE MANU
- G. CIRCUITS W/ NO. 8 OR LARGER CONDUCTORS, MOTOR CIRCUITS, POW
- CIRCUITS & BUILDING SERVICE FEEDERS SHALL BE COPPER THWN/TH 75 DEG C.
- H. ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUI STRUCTURE. PIPE SLEEVES, HANGERS & SUPPORTS SHALL BE FURN CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER & PERMANENT L

# <u>SECTION 16200 – GROUNDING</u>

- A. SUPPLEMENT GROUNDED NEUTRAL OF SECONDARY DISTRIBUTION SYST EQUIPMENT GROUNDING SYSTEM, INSTALLED SO THAT METALLIC STRUC ENCLOSURES, RACEWAYS, JUNCTION BOXES, OUTLET BOXES, CABINET FRAMES PORTABLE FOUIPMENT & OTHER CONDUCTIVE ITEMS OPERAL AT GROUND POTENTIAL & PROVIDE LOW IMPEDANCE PATH FOR GROU CURRENTS.
- B. SYSTEM SHALL COMPLY W/ NATIONAL ELECTRICAL CODE, DRAWINGS C. PROVIDE EQUIPMENT GROUND BUS IN BASE OF LOW VOLTAGE. SWITC OR OTHERWISE ADEQUATELY CONNECTED BY AN APPROVED METHOD
- D. PROVIDE IN CONDUIT GREEN INSULATED COPPER GROUND CONDUCTO METALLIC WATER SERVICE ENTRANCE & CONNECT BY MEANS OF ADEC
- E. EQUIPMENT GROUNDING CONDUCTORS FOR BRANCH CIRCUIT HOME R DRAWINGS SHALL INDICATE AN INDIVIDUAL & SEPARATE GROUND CON THAT BRANCH CIRCUIT WHICH SHALL BE TERMINATED AT BRANCH CIR SWITCHBOARD, OR OTHER DISTRIBUTION EQUIPMENT.

	NICAL AND PLUMBING	SYMBO	L LEGEND
SHEET METAL		MECHANICAL PI	IPING
	HIGH EFFICIENCY ROUND DUCT TAKEOFF	-	- REFRIGERANT LIQUID
	(WITH & WITHOUT MANUAL DAMPER)		- REFRIGERANT SUCTION
	SPIN-IN ROUND DUCT TAKEOFF		DRAIN (CONDENSATE)
╽╷┟╫╷╷┟┤	(WITH & WITHOUT MANUAL DAMPER)		- COMPRESSED AIR
			- REFRIGERANT VENT
╽╶╶┟╟┘	CONICAL BELLMOUTH ROUND TAKEOFF	RD	- RUPTURE DISK
	ROUND DUCT RUNOUT WITH FLEX DUCT	PLUMBING PIPI	NG
			DOMESTIC COLD WATER
	DUCTWORK ELBOW (WITH & WITHOUT TURNING VANES)		DOMESTIC HOT WATER
╽╵┸┯╨╵┸┯╨			RECIRCULATING DOMESTIC HOT WATER
	RETURN GRILLE OR EXHAUST REGISTER	SAN	WASTE ABOVE GRADE OR FLOOR
	SUPPLY AIR FLOW INDICATOR		WASTE BELOW GRADE OR FLOOR
N	RETURN AND EXHAUST AIR FLOW INDICATOR	ST	STORM ABOVE GRADE OR FLOOR
	THERMOSTAT	— — ST — —	STORM BELOW GRADE OR FLOOR
Ŭ Ŏ	TEMPERATURE SENSOR	—— ST/0 ——	STORM OVERFLOW ABOVE GRADE OR FLOOR
-Ŵ	HUMIDISTAT	— — ST/0 — —	STORM OVERFLOW BELOW GRADE OR FLOOR
	CONTROL WIRING	— v —	PLUMBING VENT
		—— <i>W</i> ——	WATER SERVICE
GENERAL SYME	BOLS	G	GAS (NATURAL)
	INDICATES CONNECT TO EXISTING	PIPING SYMBOL	_8
$\square$	INDICATES ELEVATION	$-\bowtie$	SHUTOFF VALVE
Ψ		—+ <b>&gt;</b>	SHUTOFF VALVE IN RISER
PLUMBING FIXT	URES/EQUIPMENT	$-\not\!$	BALANCING VALVE
II HB	HOSE BIBB	$-\not\!$	PLUG VALVE
— <del>– – –</del> WH	WALL HYDRANT	<b>—</b>	AUTO FLOW CONTROL VALVE
	CLEAN OUT	—ю	PIPING ELBOW UP
RPZ	REDUCED PRESSURE BACKFLOW PREVENTER	<del>ci –</del>	PIPING ELBOW DOWN
DCBP	DOUBLE CHECK BACKFLOW PREVENTER	+ <del>+</del> +	PIPING TEE
	PLUMBING FIXTURE AND CALLOUT	+ <sub>1</sub> -	PIPING ELBOW
<u>WC-1 <u>S-1</u></u>		—-Ю—	PIPING TEE UP
<b>₽</b> <u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	FD: FLOOR DRAIN, AD: AREA DRAIN, FS: FLOOR SINK		PIPING TEE DOWN
	RD: ROOF DRAIN		INCREASER / REDUCER
	ORD: OVERFLOW ROOF DRAIN	<del>  </del>	UNION
		]	CAP
		<del></del>	PIPE FLEX
			STRAINER
			CHECK VALVE
		·ل-	INLINE STRAINER
		<u> </u>	TEST PLUG
		PIPING SPECIA	LTIES
		HI ► LOW	PRESSURE REDUCING VALVE

		0)/1			
ELECT	RICAL	SYN	IROL	LE	GEN
SOME SYMBOLS	AND ABBREVIATI	ONS ON TH	IIS LEGEND	MAY NOT	BE USED
<u>CIRCUITING</u>					
	HOME RUN	(2#12 1#1	2G UNO)		

	HOME RUN (2#12 1#12G UNO)
$\rightarrow \mathbb{H}_{\mathbf{x}}$	INDICATES 2 PHASE, 1 N, & 1 GRD CONDUCTOR
	HOME RUN: INDICATES SHARED CIRCUIT
	HOME RUN: INDICATES #10 CONDUCTORS ENTIRELY
<u>TILITIES</u> UGE	UNDERGROUND ELECTRICAL
	OVERHEAD ELECTRICAL
	TELECOMMUNICATIONS CONDUIT
UGT	UNDERGROUND TELECOMMUNICATIONS CONDUIT
IGHTING	
•	SURFACE/RECESSED LIGHT FIXTURE
Ю	WALL-MOUNTED LIGHT FIXTURE
머 머	POLE-MOUNTED LIGHT FIXTURE
TC	TIMECLOCK – REFER TO PLANS / DETAILS
QUIPMENT	
C	DISCONNECT SWITCH. RE: PLANS FOR INFORMATION.
$\boxtimes$	MAGNETIC MOTOR STARTER
<b>⊠</b> <sup>4</sup>	COMBINATION DISCONNECT SWITCH / MOTOR STARTER
\$	TOGGLE-TYPE DISCONNECT. FURNISH WITH THERMAL MOTOR PROTECTION WHERE SERVING FANS/PUMPS.
	SURFACE PANELBOARD
	RECESSED PANELBOARD
	DISTRIBUTION PANELBOARD
	SWITCHBOARD. FEEDER/MAIN CIRCUIT BREAKER SECTION AND DISTRIBUTION SECTION.
ENERAL SYMBO	DLS
	INDICATES CONNECT TO EXISTING
$\tilde{\Phi}$	INDICATES ELEVATION

ICATION	S		
NATIONAL BUILDING ITY, COUNTY, ABEL WHERE	<ul> <li>F. PROVIDE LOW VOLTAGE DISTRIBUTION SYSTEM W/ SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR EACH SINGLE OR THREE-PHASE FEEDER. SINGLE PHASE 120 VOLT BRANCH CIRCUITS FOR LIGHTING &amp; POWER SHALL CONSIST OF PHASE &amp; NEUTRAL CONDUCTORS &amp; GREEN GROUND CONDUCTOR INSTALLED IN COMMON CONDUIT WHICH SHALL SERVE AS GROUNDING CONDUCTOR.</li> <li>G. GROUNDING CONDUCTORS SHALL BE AS SHOWN ON PLANS OR IF NOT SPECIFICALLY SHOWN SHALL BE NO SMALLER THAN THAT REQUIRED BY NEC.</li> </ul>		
REQUIRED. 5 WORK & SHALL DNS TO BUILDING 1 HAVE COMPLETE 7 ALL ASSOCIATED	<u>SECTION 16300 – ELECTRICAL EQUIPMENT</u> A. JUNCTION BOXES & OUTLET BOXES SHALL BE GALVANIZED KNOCKOUT TYPE. LIGHTING FIXTURE BOXES IN CEILINGS SHALL NOT BE LESS THAN 4" OCTAGONAL KNOCKOUT TYPE. OUTLETS SHALL BE INSTALLED IN LOCATIONS SHOWN ON DRAWINGS EXCEPT OUTLETS MAY BE MOVED 4 FEET IN EITHER DIRECTION IF SO DIRECTED, WITHOUT ADDITIONAL COST. BOXES SHALL BE FLUSH MOUNTED ON WALLS FOR CONCEALED WORK. GANGABLE BOXES SHALL BE USED IN ALL GYPBOARD SURFACES.	D	schwerdt design group architecture interiors planning 2231 sw wanamaker rd topeka, kansas 66614-4275 phone: 785,273,7540
WN, IT SHALL BE TH WORK WILL BE ENTION. NO ANY ERROR OR T ALL SYSTEMS, DESIGNED & MS & CONTROL	PANELBOARDS A. BRANCH CIRCUIT 208/240V PANELS SHALL BE CAPACITY SHOWN W/ TIN PLATED COPPER BUSSING & BRACED FOR MINIMUM OF 22,000A AIC OR AS OTHERWISE NOTED OR REQUIRED (SERIES RATED ACCEPTABLE). BOLT ON CIRCUIT BREAKERS. 480V PANELS SAME EXCEPT 25,000A AIC MIN. MINIMUM 20" WIDE W/ GALV STEEL ENCLOSURE W/ HINGED DOOR & KEYED LOCK. COORD TRIM WITH MOUNTING		fax: 785.273.7579 500 north broadway suite 200 oklahoma city, ok 73102 phone: 405.231.3105 fax: 405.231.3115
HIP & OPERATION EAR FROM & 'STEMS BY OWNER. OR HAVE / ASTM E 84.	LOCATION. PÀNELS TO BE RECESSED WHENEVER POSSIBLE. B. DISTRIBUTION PANELS SHALL BE CAPACITY SHOWN & SHALL BE SQUARE D I-LINE W/ TIN PLASTED COPPER BUSSING. 65KAIC MIN OR AS OTHERWISE NOTED/REQ'D. BOLT ON CIRCUIT BREAKERS (SERIES RATED ACCEPTABLE). GALV STEEL ENCLOSURE. C. EQUIVALENT BY SQUARE D, SIEMENS, CUTLER HAMMER, OR GE.		BRYAN ★ LEINWETTER NUMBER PE-2020020297
THAN 1/2" & NO RMC) FOR ALL	SECTION 16350 - ELECTRICAL IDENTIFICATION A. MANUFACTURED LABELS FOR EACH PANELBOARD & TRANSFORMER. TYPEWRITTEN PANEL SCHEDULES MOUNTED IN PANELS B. PRINTED TAPE STYLE LABEL FOR EACH RECEPTACLE INDICATING PANEL & CIRCUIT #. C. MANUFACTURED LABELS FOR ALL DISCONNECT SWITCHES INDICATING EQUIPMENT SERVED.		Bryan Leinwetter - Engineer MO# PE-2020020297
KITCHEN CIRCUITS IGHTING CIRCUITS. LE WITH BUILT-IN ROLS. PROVIDE T IN CONDUIT.	D. BRANCH CIRCUITS — IDENTIFY EACH CIRCUIT W/ WIRE MARKERS WHEN ENCLOSURE LABEL AND WIRE COLORS DO NOT PROVIDE ENOUGH INFORMATION TO IDENTIFY EACH CIRCUIT WITHOUT TRACING. FEEDERS & BRANCH CIRCUIT HOME RUNS W/ WIRE MARKER W/ PANEL & CKT #. BOX COVERS ABOVE LAY—IN CEILINGS NEATLY MARKED W/ INDELIBLE MARKER.		
AVY WALL PLASTIC ID & EXPOSED BOVE GRADE OR IN SAME TRENCH. HWN/THHN 600 CODES NO	<u>SECTION 16400 – WIRING DEVICES</u> A. CONVENIENCE OUTLETS – SPEC GRADE 20 AMP DUPLEX W/ GROUND & SS WALL PLATES. OTHER OUTLETS SHALL BE VERIFIED W/ EQUIPMENT SUPPLIERS FOR PROPER NEMA CONFIGURATIONS. PROVIDE GFIC RATED DEVICES WHERE INDICATED AND AS REQ'D PER CODE. B. PROVIDE GFIC RATED DEVICES WHERE INDICATED AND ANYWHERE REQUIRED PER THE		
CODES. NO 'INSULATION JF RECOMMENDED WER & FEEDER HHN 600 VOLT,	NEC. C. PROVIDE AFCI PROTECTION ON ALL CIRCUITS REQUIRED PER THE NEC. D. LIGHT SWITCHES – SPEC GRADE 20 AMP TOGGLE SWITCHES W/ SS WALL PLATES. E. WALL MOTION SWITCHES – SPEC GRADE, PIR, OVERRIDE. F. CEILING MOTION SWITCHES – SPEC GRADE, DUAL TECHNOLOGY, MODEL AS REQ'D BY		G
IPPORTED FROM NISHED & SET & OCATIONS. TEM W/	ROOM CONFIGURATION, ALL NECESSARY POWER PACKS AND RELAYS. G. COLOR OF DEVICES AS DIRECTED BY ARCHITECT. H. EQUIVALENT DEVICES BY LEVITON, BRYANT, HUBBEL, WATTSTOPPER, LITHONIA, SENSOR SWITCH. EXECUTION A. ALL OUTLETS, SHALL BE MOUNTED W/ BOTTOM AT 18" AFF & SWITCHES W/ BOTTOM	С	
ctures, S, Machine E continuously IND Fault	AT 44" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE ON PLANS. REFER TO ARCH FOR OTHER REQUIRED ELEVATIONS AND CABINETRY COORDINATION. <u>SECTION 16500 – LED LUMINAIRES</u> LUMINAIRES		
& AS SPECIFIED. HGEAR BRAZED TO GROUND RODS. R TO MAIN QUATE GROUND	A. PROVIDE LIGHTING FIXTURES W/ ALL ACCESSORIES REQ'D FOR HANGING. COORD MOUNTING OF LIGHTING FIXTURES W/ ARCHITECT & G/C. ADDITIONAL FIXTURE SUPPORTS SHALL BE PROVIDED BY E/C. SUPPORTS SHALL COMPLY W/ LATEST EDITION OF NEC. PROVIDE LIGHTING FIXTURE SECURING CLIPS AS REQUIRED. CONSULT ARCH PLANS FOR CEILING TYPES & PROVIDE SURFACE & RECESSED LIGHTING FIXTURES W/ APPROPRIATE MOUNTING COMPONENTS & ACCESSORIES.		R R R
UNS SHOWN ON DUCTOR FOR CUIT PANELBOARD,	B. REFER TO LIGHTING FIXTURE SCHEDULE PLANS FOR FIXTURE TYPES. C. EQUIVALENT LUMINAIRES BY CREE, COOPER, HUBBELL, INFINITY, LITHONIA, WILLIAMS, COLUMBIA, EXITRONICS, LITEALARM, EXIDE, MULE, DUALLITE		RYO
<b>ID</b>			Ъ Ц
POWER DEVICE	<u>=S</u>		N Z
⇔	DUPLEX RECEPTACLE. LINE THRU DEVICE INDICATES ABOVE COUNTER		
↔ ⊕	SPECIAL DUPLEX RECEPTACLE (GFCI, ISOLATED GROUND, ETC.)		
	QUADPLEX RECEPTACLE	В	55
$\ominus_{\overline{5}-50R}$	SIMPLEX RECEPTACLE W/NEMA CONFIG AS NOTED		
$\bigoplus_{5-50R}$	MULTI-POLE RECEPTACLE W/NEMA CONFIG AS NOTED		
$\mathbf{\Phi}$	CEILING MOUNTED RECEPTACLE		<b>D O D</b>
_ <del>©_</del> ⊙	RECEPTACLE/DEVICE MOUNTED IN "TOMBSTONE" POKE-THRU WITH POWER		
	POKE-THRU WITH TELECOMMUNICATIONS		
٥	POKE-THRU W/POWER AND TELECOM		
<u>1</u>	SINGLE GANG FLOOR BOX (2, 3, 4 GANG SIMILAR)		
C	DIVIDED POWER POLE		∞ш≥
	CLOCK RECEPTACLE PLUG MOLD / WIRE MOLD AS SPECIFIED	+	
J	JUNCTION BOX		
, ĘD	THERMOSTAT - ELECTRIC		
	PUSH BUTTON MOTOR		
FIRE ALARM	DUCT SHOKE DETECTOR		SUBMISSION DATES DECEMBER 27, 2023
<u> (D</u> )	DUCT SMOKE DETECTOR		
		A	SHEET TITLE MEP NOTES & SPECIFICATIONS
	<b>D</b> kmr	23.293	PROJECT NUMBER
			L

PEARSON KENT MCKINLEY RAAF ENGINEERS I

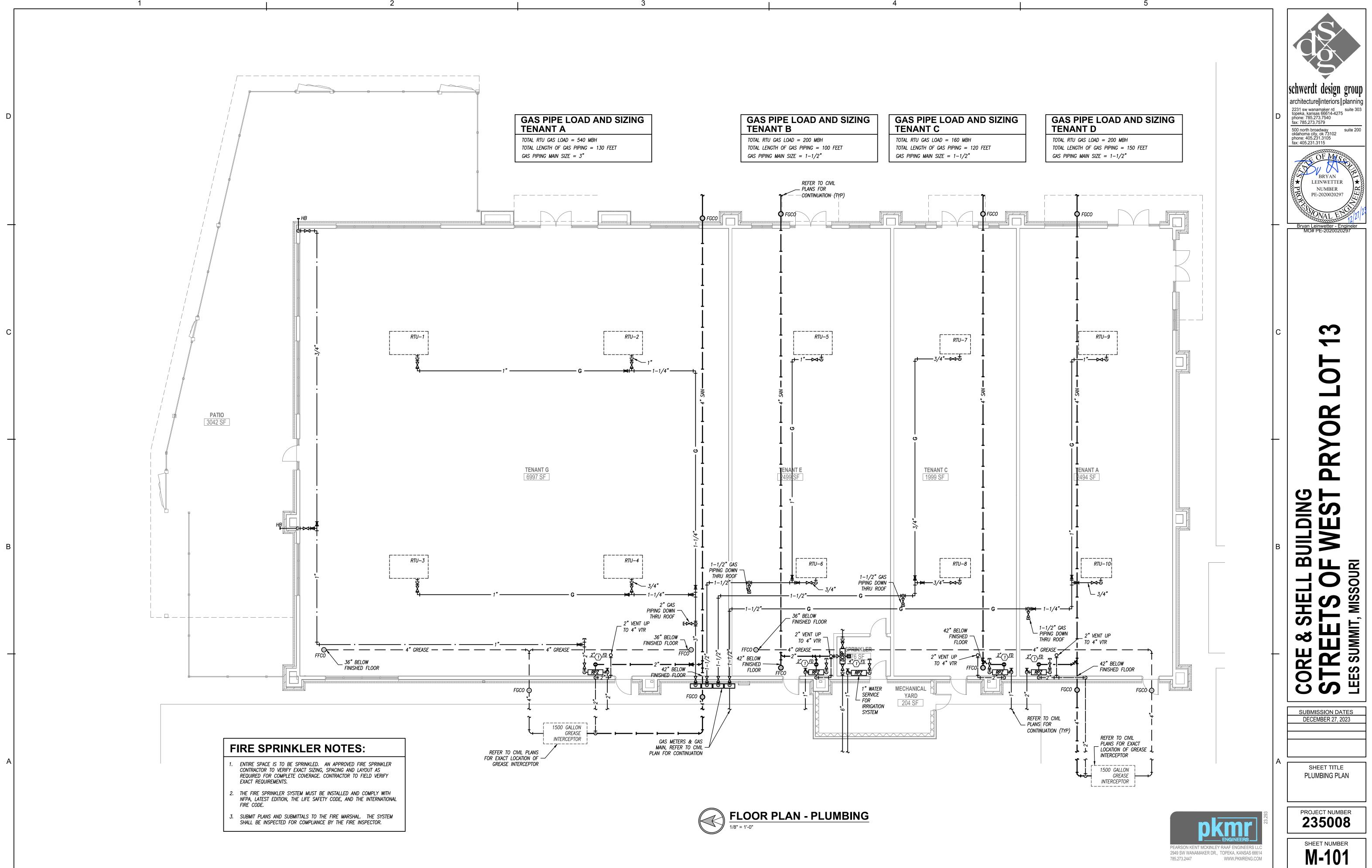
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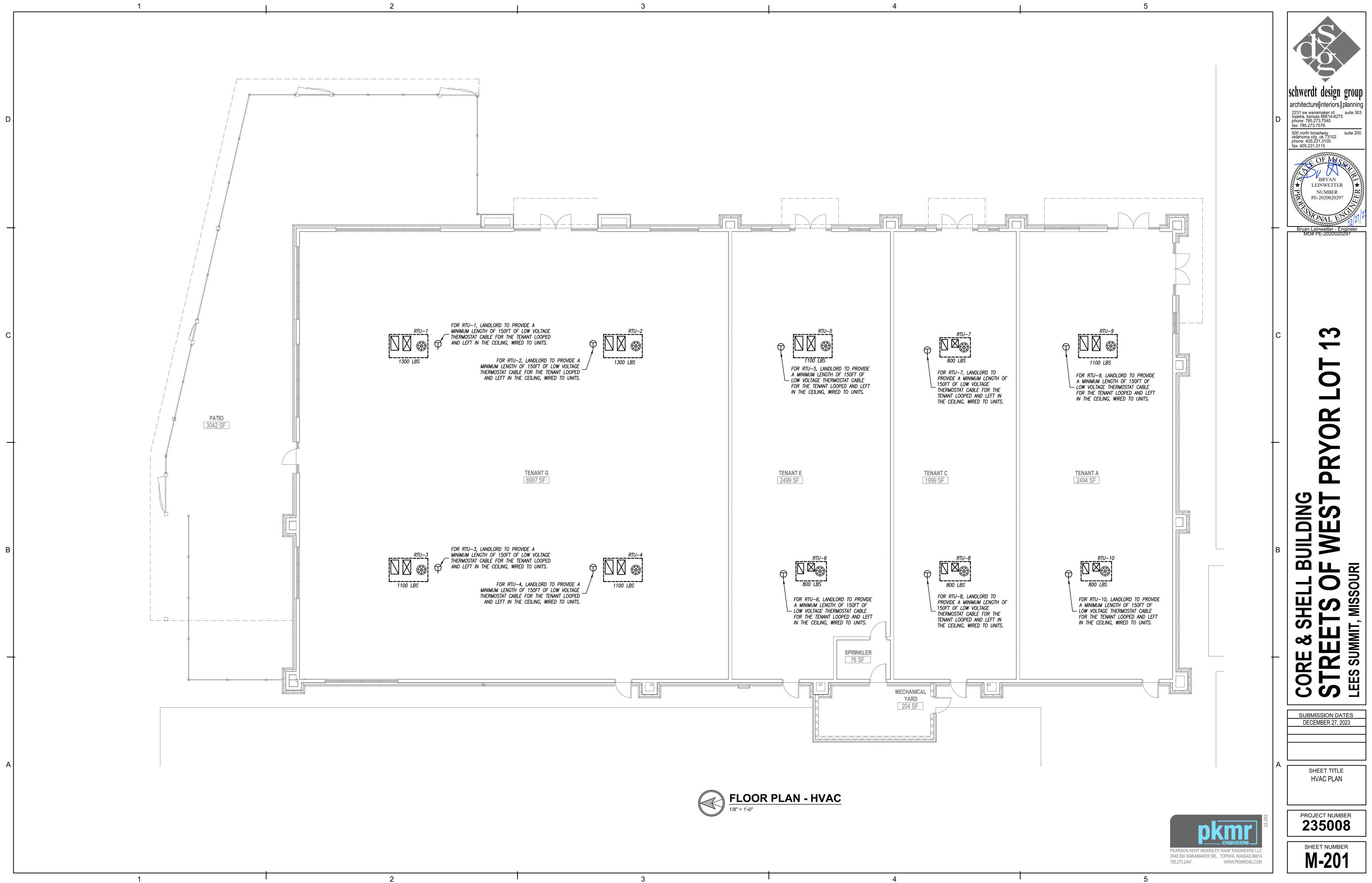
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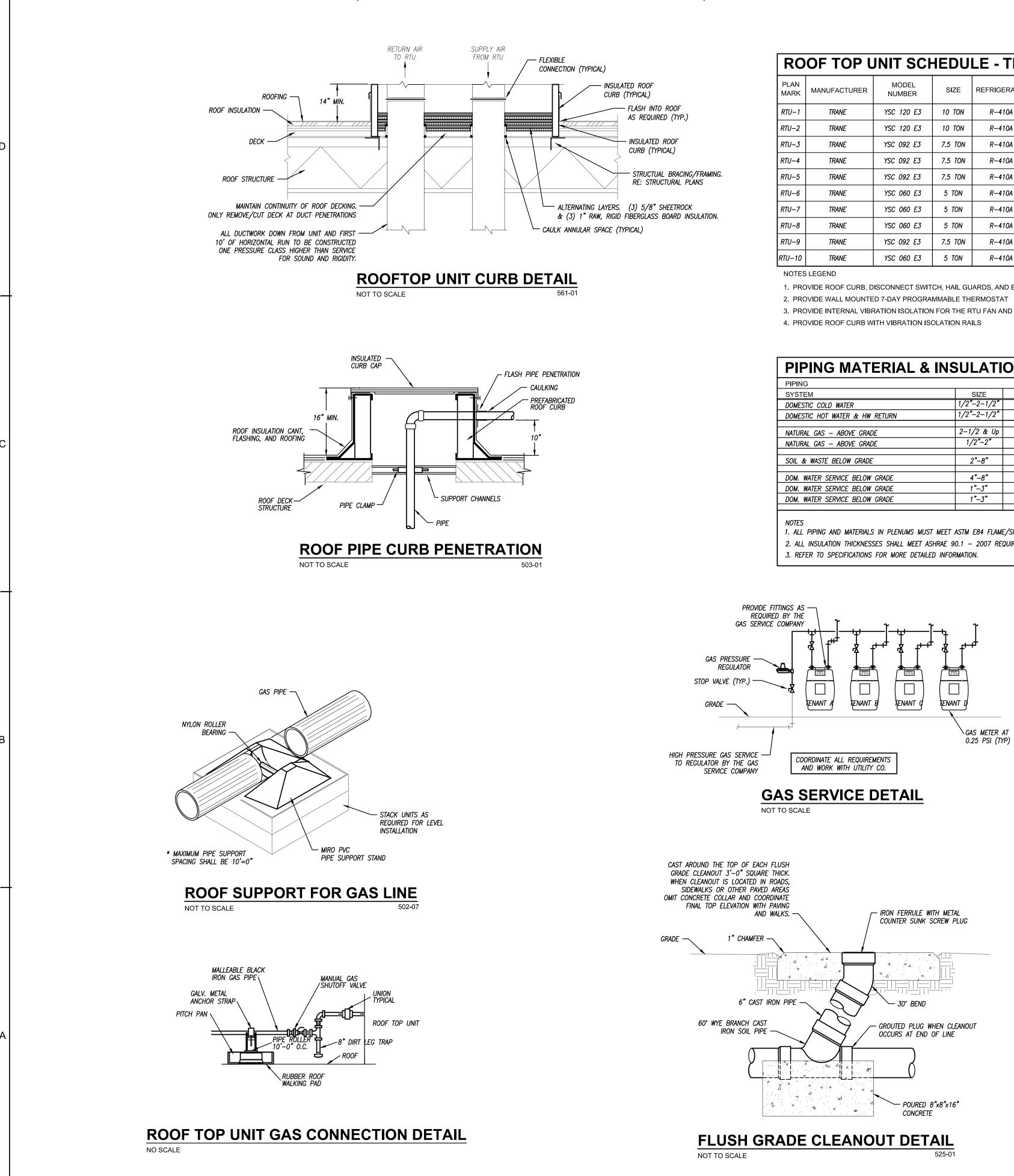
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SHEET NUMBER

**ME-10**<sup>4</sup>







PLAN MARK	MANUFACTURER	MODEL NUMBER	SIZE	REFRIGERANT	MINIMUM EFFICIENCY	AIRFLOW	COMPRESSORS	COOLING CAPACITY	CFM	EXTERNAL STATIC	OA CFM	HEATING CAPACITY	ELECTRICAL	WEIGHT	FILTER	NOTES
RTU–1	TRANE	YSC 120 E3	10 TON	R-410A	14.6 IEER	DOWN OR HORIZONTAL	(2) SCROLLS	119,000 BTUH	4,000	1.5"	400	150 MBH	208 V., 3 PH, 60 AMP	1300 LBS	MERV 13	1,2,3
RTU–2	TRANE	YSC 120 E3	10 TON	R-410A	14.6 IEER	DOWN OR HORIZONTAL	(2) SCROLLS	119,000 BTUH	4,000	1.5"	400	150 MBH	208 V., 3 PH, 60 AMP	1300 LBS	MERV 13	1,2,3
RTU–3	TRANE	YSC 092 E3	7.5 TON	R-410A	14.6 IEER	DOWN OR HORIZONTAL	(2) SCROLLS	94,000 BTUH	3,000	1.2"	300	120 MBH	208 V., 3 PH, 50 AMP	1100 LBS	MERV 13	1,2,3
RTU-4	TRANE	YSC 092 E3	7.5 TON	R-410A	14.6 IEER	DOWN OR HORIZONTAL	(2) SCROLLS	94,000 BTUH	3,000	1.2"	300	120 MBH	208 V., 3 PH, 50 AMP	1100 LBS	MERV 13	1,2,3
RTU–5	TRANE	YSC 092 E3	7.5 TON	R-410A	14.6 IEER	DOWN OR HORIZONTAL	(2) SCROLLS	94,000 BTUH	3,000	1.2"	300	120 MBH	208 V., 3 PH, 50 AMP	1100 LBS	MERV 13	1,2,3
RTU-6	TRANE	YSC 060 E3	5 TON	R-410A	14 SEER	DOWN OR HORIZONTAL	(1) SCROLL	60,100 BTUH	2,000	1.0"	200	80 MBH	208 V., 3 PH, 40 AMP	800 LBS	MERV 13	1,2,3
RTU–7	TRANE	YSC 060 E3	5 TON	R-410A	14 SEER	DOWN OR HORIZONTAL	(1) SCROLL	60,100 BTUH	2,000	1.0"	200	80 MBH	208 V., 3 PH, 40 AMP	800 LBS	MERV 13	1,2,3
RTU-8	TRANE	YSC 060 E3	5 TON	R-410A	14 SEER	DOWN OR HORIZONTAL	(1) SCROLL	60,100 BTUH	2,000	1.0"	200	80 MBH	208 V., 3 PH, 40 AMP	800 LBS	MERV 13	1,2,3
RTU–9	TRANE	YSC 092 E3	7.5 TON	R-410A	14.6 IEER	DOWN OR HORIZONTAL	(2) SCROLLS	94,000 BTUH	3,000	1.2"	300	120 MBH	208 V., 3 PH, 50 AMP	1100 LBS	MERV 13	1,2,3
RTU-10	TRANE	YSC 060 E3	5 TON	R-410A	14 SEER	DOWN OR HORIZONTAL	(1) SCROLL	60,100 BTUH	2,000	1.0"	200	80 MBH	208 V., 3 PH, 40 AMP	800 LBS	MERV 13	1,2,3

1. PROVIDE ROOF CURB, DISCONNECT SWITCH, HAIL GUARDS, AND ECONOMIZER

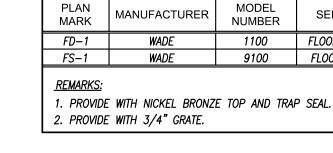
3. PROVIDE INTERNAL VIBRATION ISOLATION FOR THE RTU FAN AND COMPRESSORS

PIPING		FIELD TEST	ALLOWABLE IN	INSULATION				
SYSTEM	SIZE	TYPE/SCHED	MATERIAL	ACCEPTABLE FITTINGS	PRESSURE/TIME	PLENUMS	TYPE	THICKNESS
DOMESTIC COLD WATER	1/2"-2-1/2"	L	COPPER	SOLDER, PRO-PRESS	130 PSI – 1/2HR	YES	FIBERGLASS W/ ASJ	1/2"
DOMESTIC HOT WATER & HW RETURN	1/2"-2-1/2"	L	COPPER	SOLDER, PRO-PRESS	130 PSI – 1/2HR	YES	FIBERGLASS W/ ASJ	1"
NATURAL GAS – ABOVE GRADE	2-1/2 & Up	SCH. 40	STEEL- SEEMED	WELDED	75 PSI – 1HR	YES		
NATURAL GAS – ABOVE GRADE	1/2"-2"	SCH. 40	STEEL- SEEMLESS	THREADED IRON	75 PSI – 1HR	YES		
SOIL & WASTE BELOW GRADE	2"-8"	SCH. 40	PVC	SOLVENT JOINED	10 FT - 1/2HR	NO		
DOM. WATER SERVICE BELOW GRADE	4"-8"	AWWA C151	DUCTILE IRON	AWWA C111. MECH JOINTS	130 PSI – 1/2HR	YES		
DOM. WATER SERVICE BELOW GRADE	1"-3"	K	COPPER	CONTINUOUS TUBING, BRAZED	130 PSI – 1/2HR	YES		
DOM. WATER SERVICE BELOW GRADE	1"-3"	DR 9	HDPE	CONTINUOUS TUBING, FUSED	130 PSI – 1/2HR	NO		

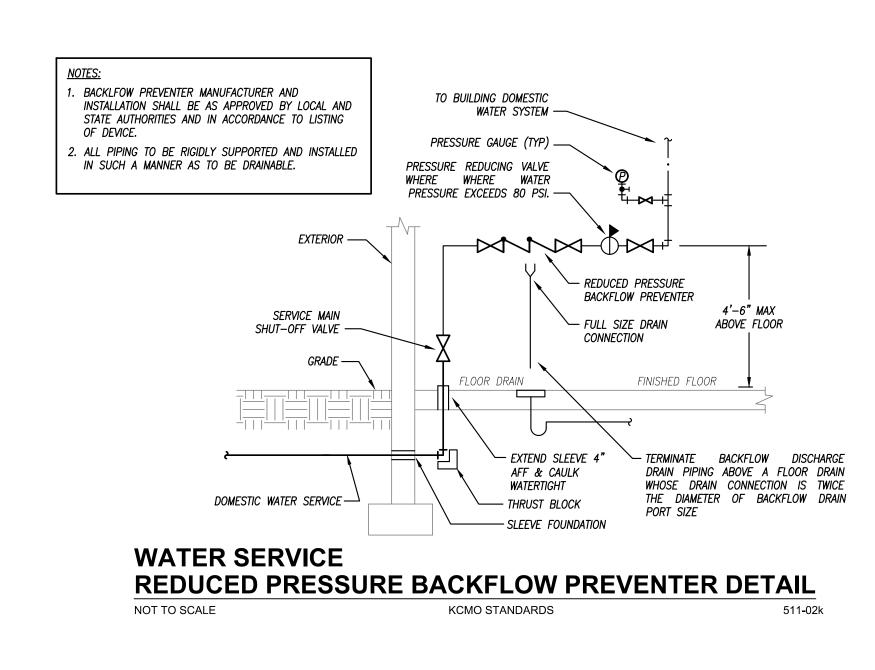
1. ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.

2. ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.

A	<u>S</u> :	SE	R٧	<u>/IC</u>	Ε	D	E



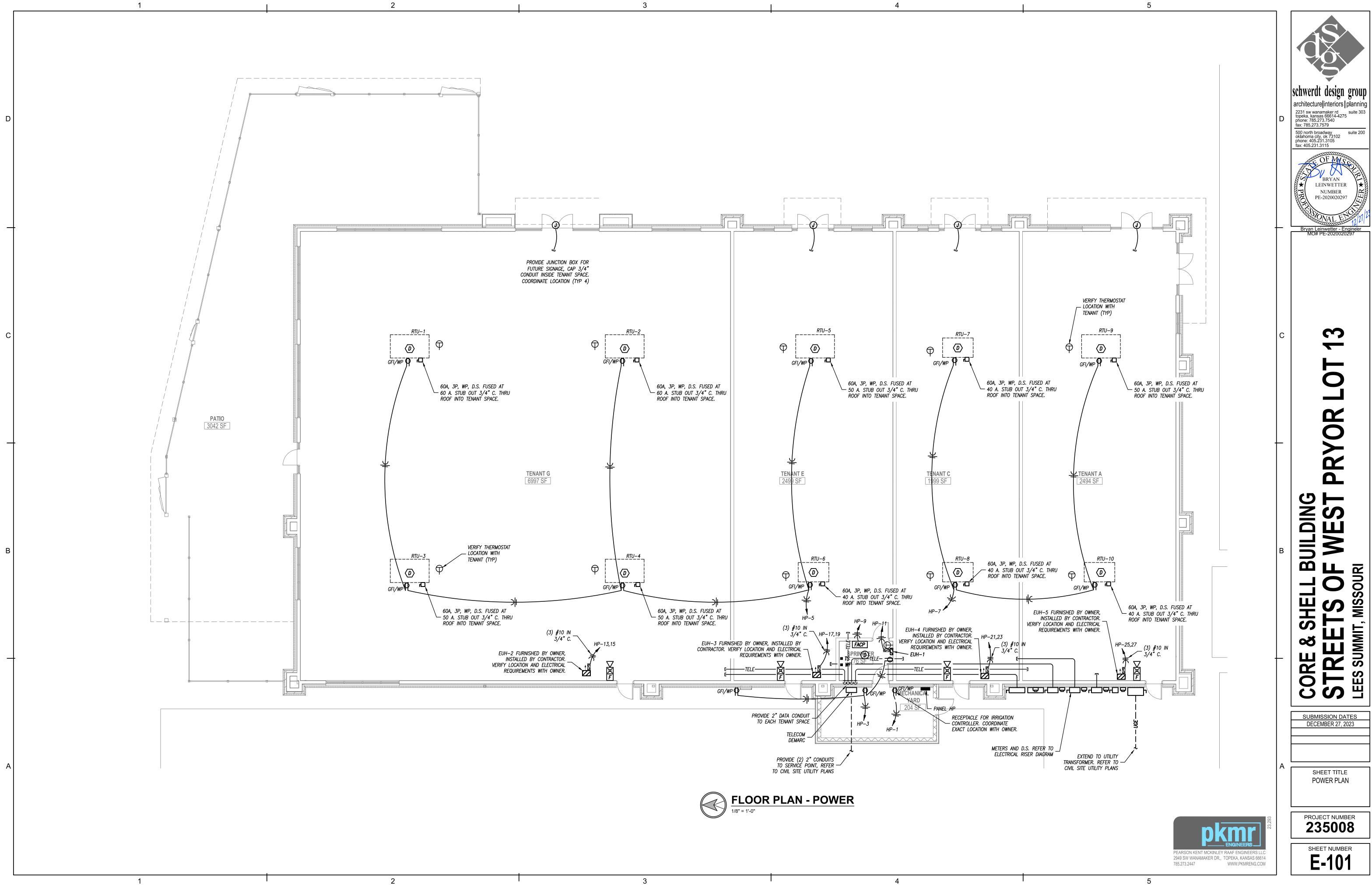
FLOOR DRAIN SCHEDU

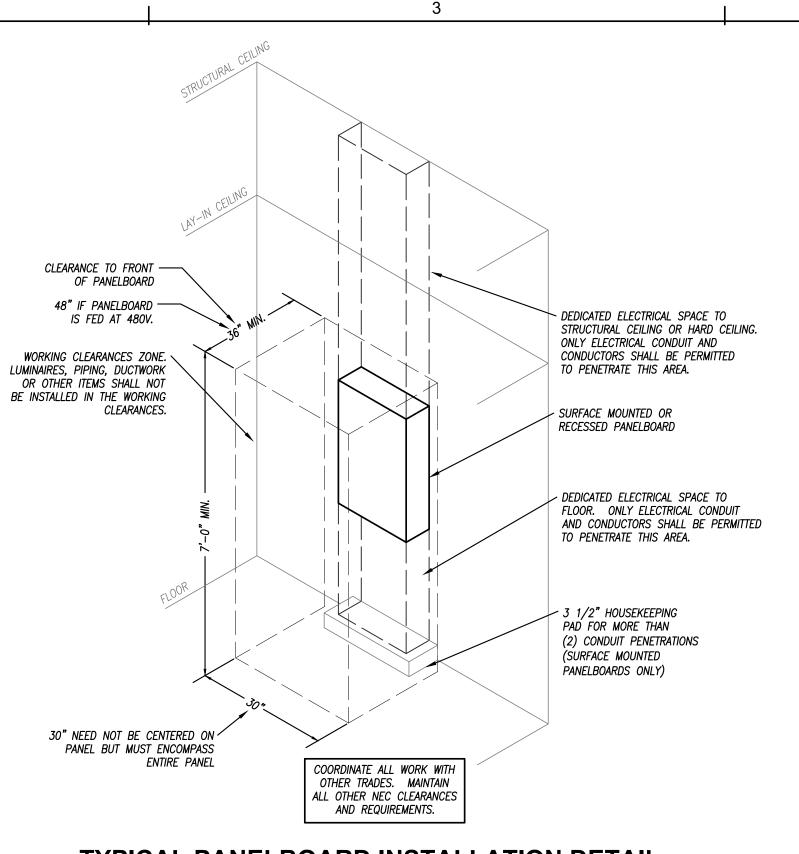


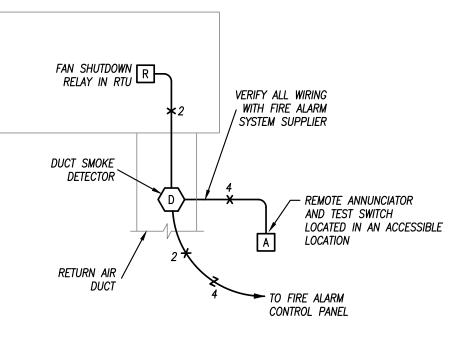
ERVICE	TOP/GRATE SIZE	WASTE SIZE	REMARKS
OR DRAIN	6 <b>"</b> Ø	3"	1
OR SINK	12"x12"	4"	2



_	
D	Architecture interiors planning 2231 sw wanamaker rd topeka, kansas 66614-4275 phone: 785.273.7540 fax: 785.273.7540 fax: 785.273.7579 S00 north broadway oklahoma city, ok 73102 phone: 405.231.3105 fax: 405.231.3105 fax: 405.231.3105 fax: 405.231.3105 mumber PE-2020020297 BRYAN LEINWETTER NUMBER PE-2020020297 MOH PE-2020020297
С	LOT 13
-	PRYOR
В	ETS OF WEST I MIT, MISSOURI
-	CORE & STREI LEES SUMM
A	SUBMISSION DATES DECEMBER 27, 2023 SHEET TITLE MECHANICAL DETAILS & SCHEDULES
	PROJECT NUMBER 235008 SHEET NUMBER M-301







# **DUCT SMOKE DETECTOR DIAGRAM**

NOT TO SCALE

ELI	ELECTRIC UNIT HEATER SCHEDULE											
PLAN MARK	MANUFACTURER	MODEL NUMBER	CAPACITY (WATTS)	ELECTRICAL	NOTES							
EUH—1	BERKO	FRA1512F	1500 WATTS	120V., 1ø, 20 AMP	1							
EUH–2	_	BY OWNER	5000 WATTS	208V., 1ø, 30 AMP	2							
EUH–3	_	BY OWNER	5000 WATTS	208V., 1ø, 30 AMP	2							
EUH–4	-	BY OWNER	5000 WATTS	208V., 1ø, 30 AMP	2							
EUH–5	_	BY OWNER	5000 WATTS	208V., 1ø, 30 AMP	2							

NOTES LEGEND

1

1

1. PROVIDE SURFACE WALL MOUNTED HEATER WITH ADJUSTABLE THERMOSTAT AND DISCONNECT 2. FURNISHED BY OWNER, INSTALLED BY CONTRACTOR. VERIFY ALL ELECTRICAL REQUIREMENTS WITH OWNER.

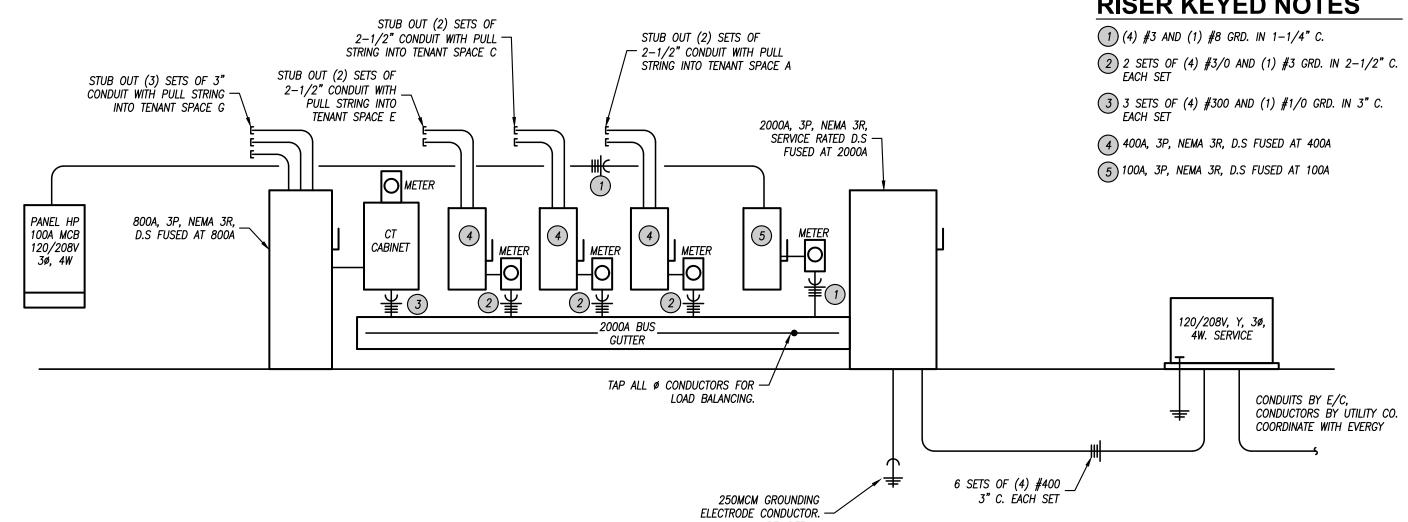
2

# **TYPICAL PANELBOARD INSTALLATION DETAIL** NOT TO SCALE

		AKER:				: 120/240V IRE: <i>3PH/4W</i>		MOUNTING: <i>SURFACE</i> LOCATION: <i>EXTERIOR</i> MINIMUM AIC: <i>22K</i>
CIRCUIT DESCRIP	TION	CKT. P	BKR. AMP	CKT. NO.	CKT. NO.	CKT. AMP	BKR. P	CIRCUIT DESCRIPTION
IRRIGATION CONTROLLER		1	20	1	2	20	1	EXTERIOR LIGHTING
RECEPTACLES & LIGHTS		1	20	3	4	20	1	EGRESS LIGHTING
ROOFTOP RECEPTACLES		1	20	5	6	20	2	SITE LIGHTING
ROOFTOP RECEPTACLES		1	20	7	8			
FACP		1	20	9	10	20	2	SITE LIGHTING
EUH—1		1	20	11	12			
ELECTRIC UNIT HEATER (VERIFY)		2	30	13	14	20	1	SPARE
				15	16	20	1	SPARE
ELECTRIC UNIT HEATER (	(VERIFY)	2	30	17	18	20	1	SPARE
				19	20	20	1	SPARE
ELECTRIC UNIT HEATER (	(VERIFY)	2	30	21	22	20	1	SPARE
				23	24	20	1	SPARE
ELECTRIC UNIT HEATER (	(VERIFY)	2	30	25	26			SPACE
				27	28			SPACE
SPACE				29	30			SPACE

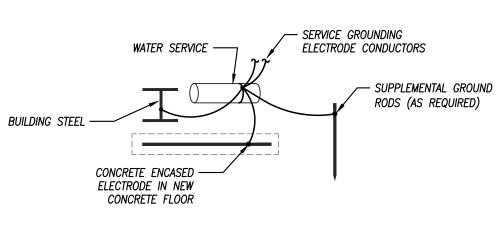
NEMA 3R RATED PANEL WITH LOCKABLE COVER

VERIFY BREAKER SIZES FOR ELECTRIC UNIT HEATERS WITH OWNER



# **ELECTRICAL RISER DIAGRAM** NO SCALE

RE: DETAIL.

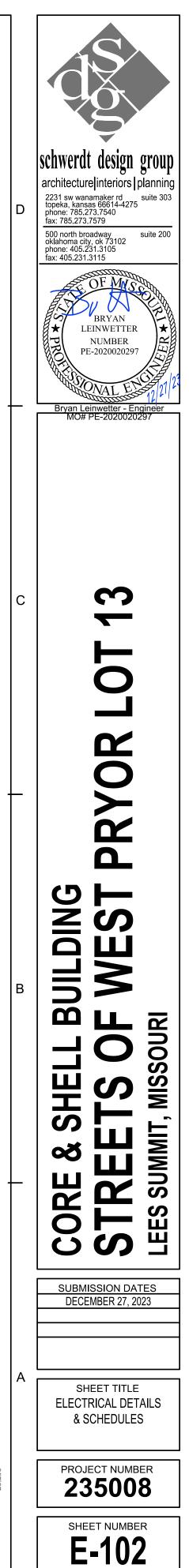


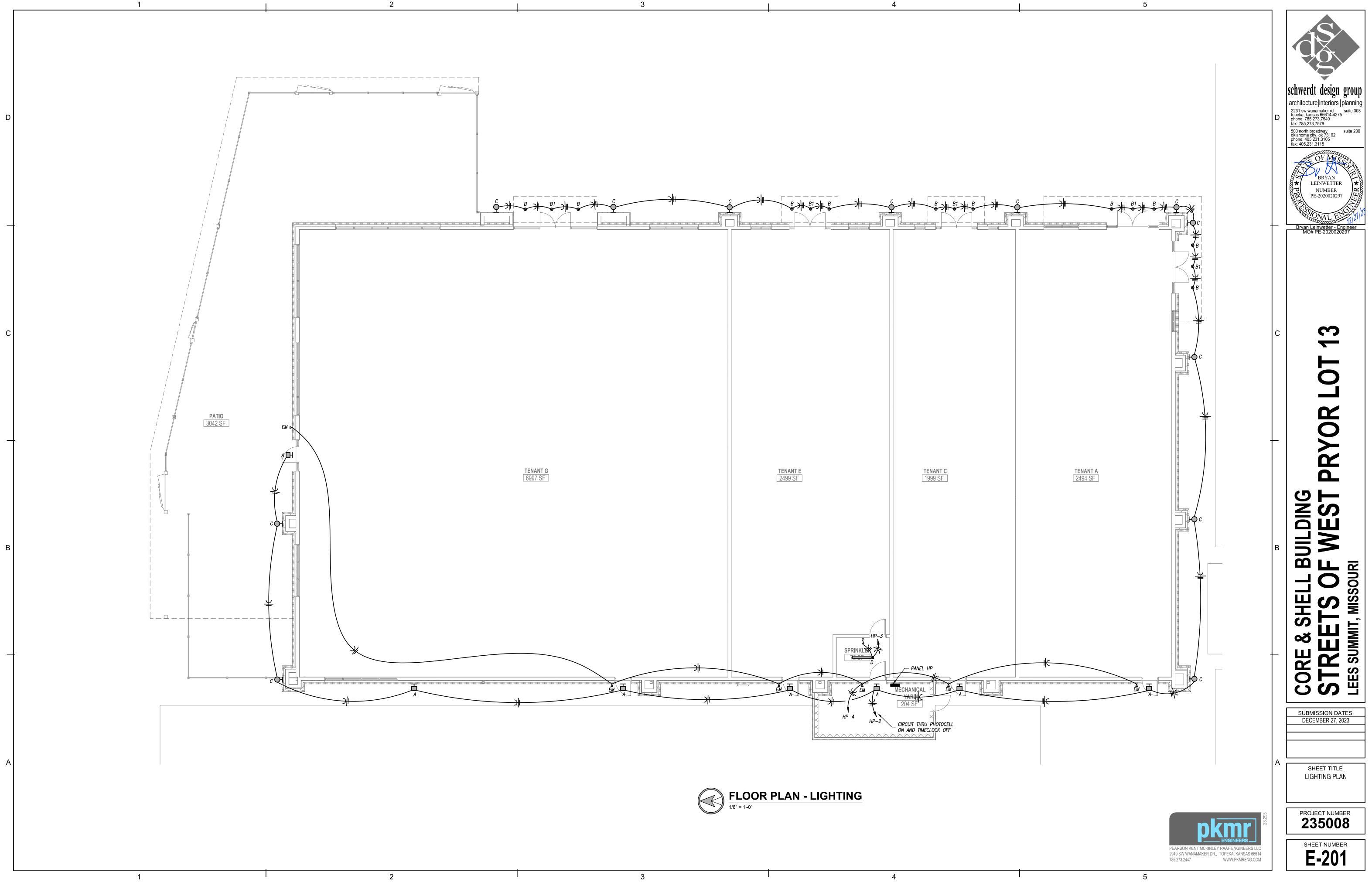
# **GROUNDING ELECTRODE SYSTEM**

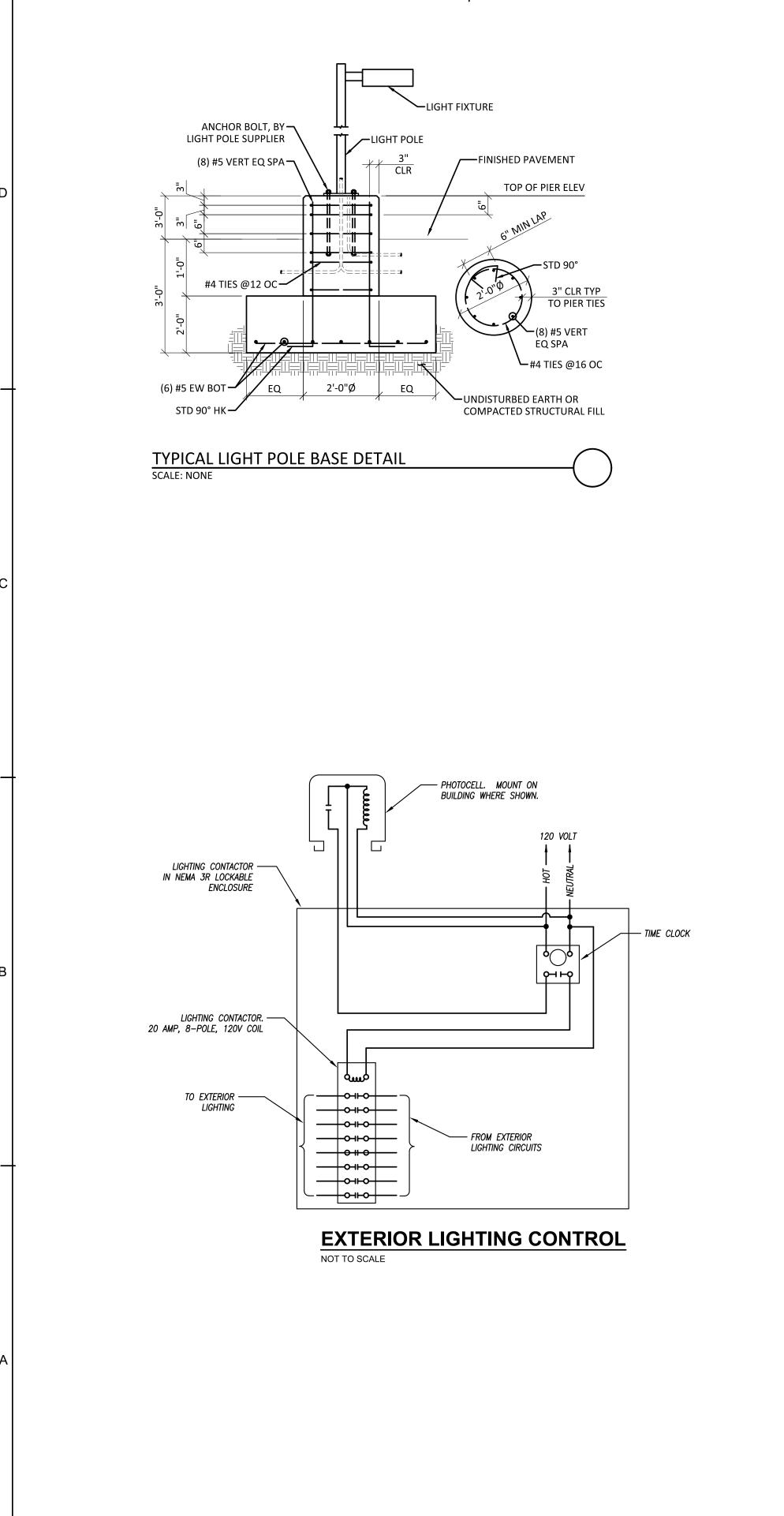
N.T.S

ELECTRICAL	
<b>RISER KEYED</b>	NOTES









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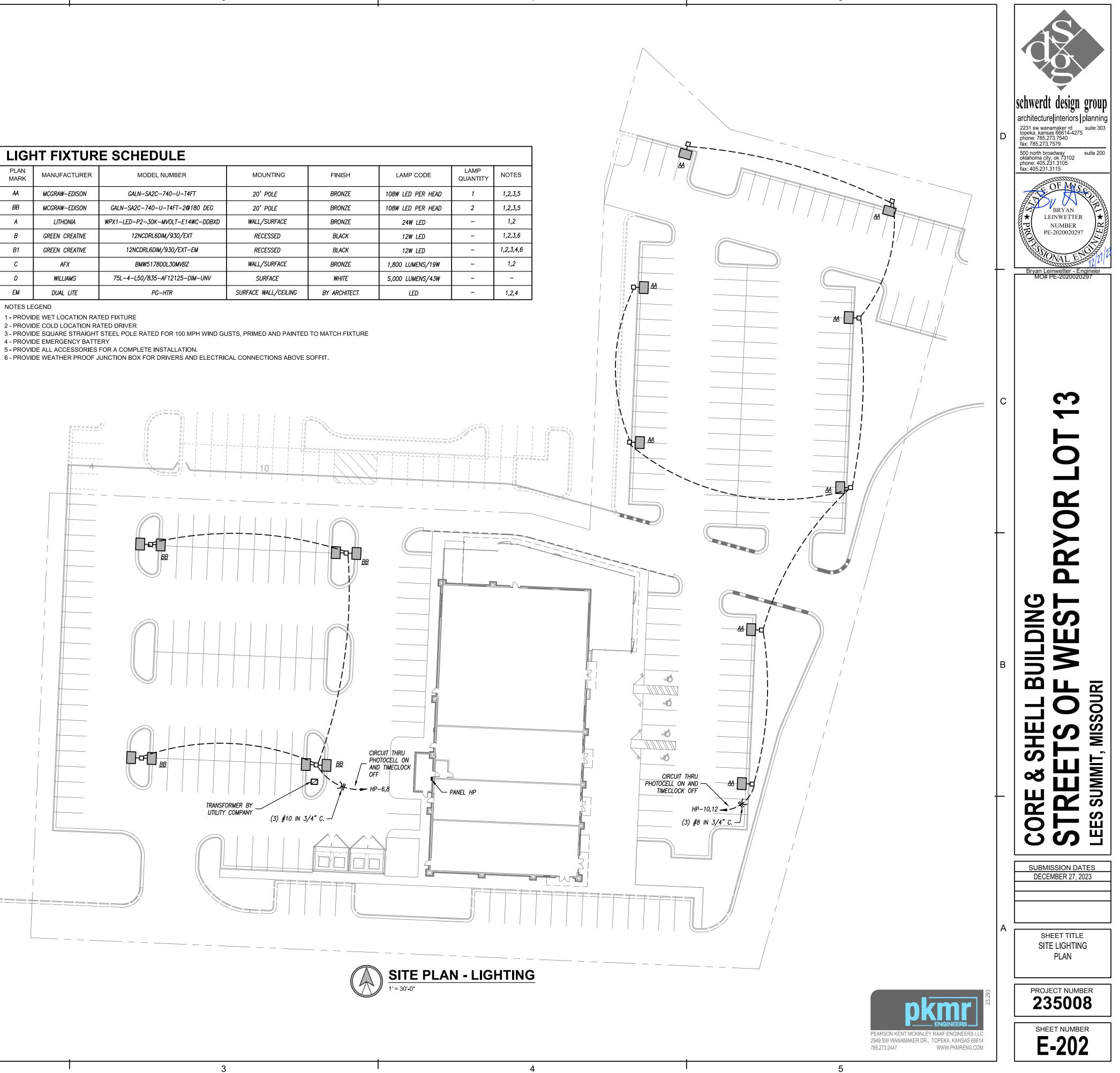
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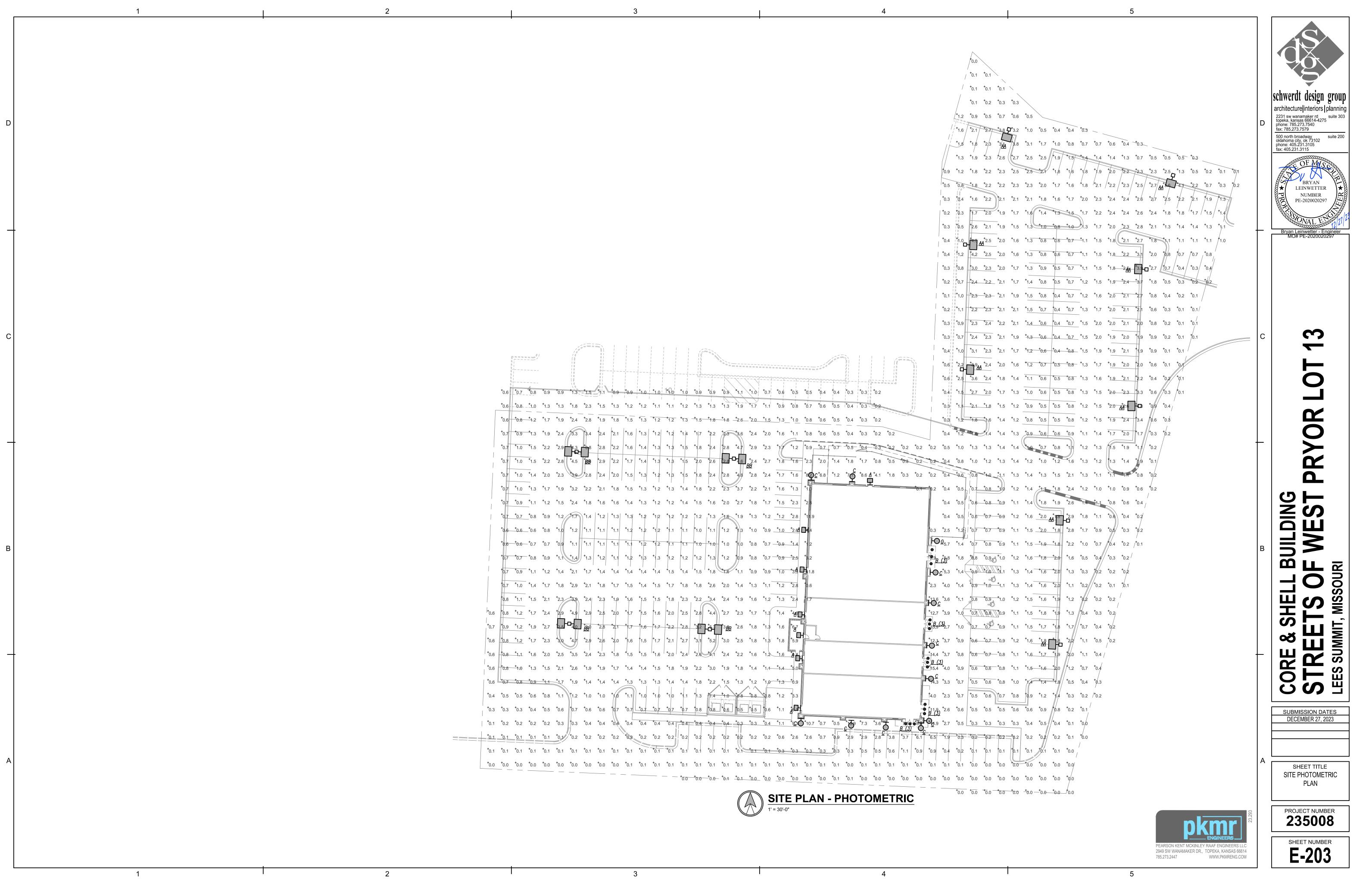
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MANUFACTURER	MODEL NUMBER	MOUNTING	FINISH	LAMP CODE	LAMP QUANTITY	NOTES
MCGRAW-EDISON	GALN-SA2C-740-U-T4FT	20' POLE	BRONZE	108W LED PER HEAD	1	1,2,3,5
MCGRAW-EDISON	GALN-SA2C-740-U-T4FT-2@180 DEG	20' POLE	BRONZE	108W LED PER HEAD	2	1,2,3,5
LITHONIA	WPX1-LED-P2-30K-MVOLT-E14WC-DDBXD	WALL/SURFACE	BRONZE	24W LED	-	1,2
GREEN CREATIVE	12NCDRL6DIM/930/EXT	RECESSED	BLACK	12W LED	_	1,2,3,6
GREEN CREATIVE	12NCDRL6DIM/930/EXT-EM	RECESSED	BLACK	12W LED	-	1,2,3,4,6
AFX	BMW517800L30MVBZ	WALL/SURFACE	BRONZE	1,800 LUMENS/19W	-	1,2
WILLIAMS	75L-4-L50/835-AF12125-DIM-UNV	SURFACE	WHITE	5,000 LUMENS/43W	-	-
DUAL LITE	PG-HTR	SURFACE WALL/CEILING	BY ARCHITECT	LED	_	1,2,4



5



	3	4	5	
		$\begin{array}{c} +1.5 & +1.8 & +2.3 & +3.4 \\ +1.3 & +1.9 & +2.3 & +2.6 \\ 0.9 & +1.2 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.5 & +1.8 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.2 \\ +0.3 & 0.4 & +1.6 & +2.2 & +2.1 \\ +0.4 & +1.0 & +2.3 & +2.1 \\ +0.4 & +1.0 & +2.3 & +2.1 \\ +0.4 & +1.0 & +3.1 & +3.1 & +3.1 \\ +0.4 & +1.0 & +3.1 & +3.1 & +3.1 \\ +0.4 & +1.0 & +3.1 & $	+0.3	c
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		$\begin{array}{c} +2.3 & +1.2 & +0.9 & +0.7 & +0.7 & +0.5 & +0.4 & +0.3 & +0.2 & +0.2 & +0.2 & +0.2 & +0.2 & +0.1 & +1.3 & +1.3 & +1.4 \\ +2.7 & +1.8 & +1.6 & +2.3 & +2.0 & +1.4 & +1.8 & +1.7 & +0.8 & +0.5 & +0.9 & +0.2 & +0.4 & +0.8 & +1.0 & +1.2 & +1.3 \end{array}$		
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	+0.8       +0.9       +1.1       +1.7       +1.9       +1.4       +1.4       +1.3       +1.3       +1.3       +1.4       +1.4       +1.8       +2.2       +1.5       +1.3       +1.2         +0.5       +0.6       +0.8       +1.1       +1.2       +1.0       +1.0       +1.0       +1.0       +1.0       +1.1       +1.3       +1.4       +1.3       +1.4       +1.3       +1.4       +1.3       +1.4       +1.8       +2.2       +1.5       +1.3       +1.2         +0.5       +0.6       +0.8       +1.1       +1.0       +1.0       +1.0       +1.0       +1.1       +1.3       +1.4       +1.8       +2.2       +1.5       +1.3       +1.2         +0.5       +0.6       +0.8       +1.1       +1.0       +1.0       +1.0       +1.0       +1.0       +1.1       +1.3       +1.4       +1.4       +1.8       +1.4       +1.8       +1.2       +1.3       +1.4       +1.4       +1.8       +1.2       +1.3       +1.2       +1.0       +1.0       +1.0       +1.0       +1.0       +1.1       +1.3       +1.4       +1.8       +1.4       +1.8       +1.2       +1.8       +1.8       +1.2       +1.8       +1.8 <t< th=""><th></th><th><math display="block">\begin{array}{c} +1.0 &amp; +1.4 &amp; +1.4 &amp; +0.5 &amp; +0.4 &amp; +0.3 \\ +0.8 &amp; +0.9 &amp; +1.2 &amp; +1.4 &amp; +0.3 &amp; +0.2 &amp; /^{+}0.2 \end{array}</math></th><th></th></t<>		$\begin{array}{c} +1.0 & +1.4 & +1.4 & +0.5 & +0.4 & +0.3 \\ +0.8 & +0.9 & +1.2 & +1.4 & +0.3 & +0.2 & /^{+}0.2 \end{array}$	
1	*0.3 *0.4 *0.5 *0.6 *0.7 *0.6 *0.6 *0.7 *0.7 *0.7 *0.7 *0.7 *0.7 *0.8 *0.8 *0.6 *0.5 *0.5			SUBMISSION DATES DECEMBER 27, 2023
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	+0.1       +0.1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	+0.1 $+0.1$ $+0.1$ $+0.1$ $+0.0$	
		_ <u>*0.0</u> <u>*0.0</u> <u>*0.0</u> <u>*0.0</u> <u>*0.0</u> <u>*0.1</u> <u>*0.1</u> <u>*0.1</u> <u>*0.0</u>		SHEET TITLE SITE PHOTOMETRIC PLAN
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			PEARSON KENT MCKINLEY RAAF ENGINEERS LLC 2949 SW WANAMAKER DR., TOPEKA, KANSAS 66614 755 273 2447	SHEET NUMBER
	2	1	785.273.2447 WWW.PKMRENG.COM	