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fax: 785.273.7579

500 north broadway oklahoma city, ok 73102 phone: 405.231.3105
fax: 405.231.3115

MICHAEL K HAMPTON
#MO# A-2008027042

SCHWERDT DESIGN GROUP IN

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SHELL BUILDIN T. TS OF WES T. JACKSON COUNTY, M

SUBMISSION DATES
PROGRESS PRINT ONLY

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COVER SHEET

**230117** 

G-001

# FINAL DEVELOPMENT PLANS LOT 5 STREETS OF WEST PRYOR

913-347-4310 Nathan.michael@evergy.com Gas Service Katie Darnell

Katie.darnell@spireenergy.com

UTILITIES

Evergy

**Electric Service** 

Nathan Michael

816-969-2247

Water/Sanitary Sewer Water Utilities Department 1200 SE Hamblen Road Lee's Summit, Mo 64081 Jeff Thorn 816-969-1900

**Communication Service** AT&T Carrie Cilke 816-703-4386 cc3527@att.com

jeff.thorn@cityofls.net

Time Warner Cable Steve Baxter 913-643-1928 steve.baxter@charter.com

Comcast Ryan Alkire 816-795-2218 rvan.alkire@cable.comcast.com

Google Fiber **Becky Davis** 913-725-8745 rebeccadavis@google.com



# **UTILITY STATEMENT:**

THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

SAFETY NOTICE TO CONTRACTOR

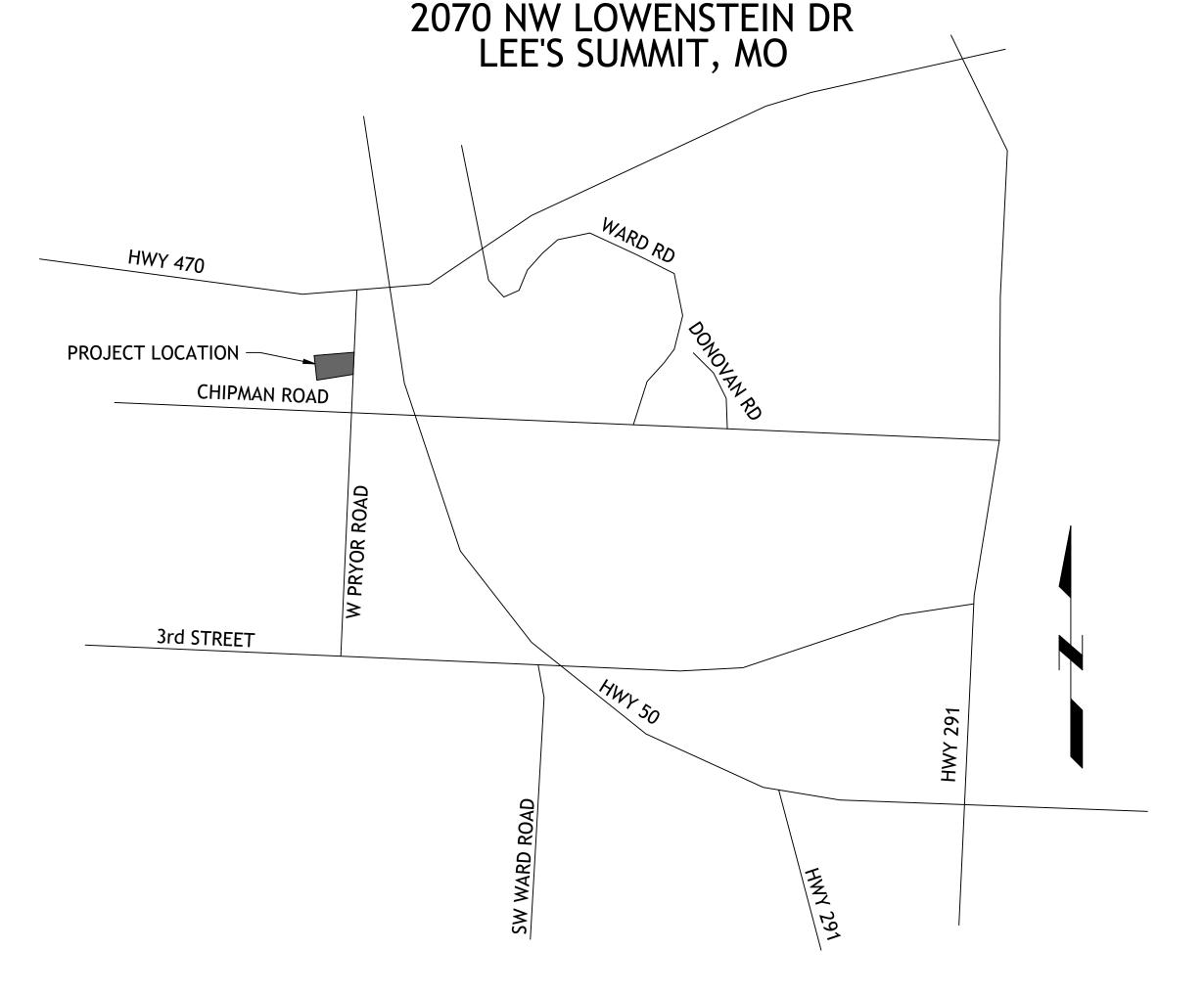
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICE, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

## WARRANTY/DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENEDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER SM ENGINEERING NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE SM ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

## CAUTION- NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.



**LOCATION MAP** 

LEGAL DESCRIPTION:

**BENCHMARKS:** 

DRIVE ENTRANCE

ELEVATION 985.05

ELEVATION 971.06

FLOODPLAIN NOTE:

LEE'S SUMMIT, MO, JACKSON COUNTY MISSOURI

SOUTH CURB OF LOWENSTEIN DRIVE AT 90° BEND IN ROAD

GRAPHICAL PLOT OF THE FLOOD INSURANCE RATE MAP.

PER ALTA SURVEY LOT 5 STREET OF WEST PRYOR

#1 CHISELED "SQUARE" ON TOP OF CURB POINT OF INTERSECTION OF WEST PARK PARKING LOT AT EAST

#2 CHISELED "SQUARE" ON NORTHWEST CORNER AREA INLET, 25' EAST OF CURB LINE AND ON-LINE WITH

SUBJECT PROPERTY IS SHOWN TO BE LOCATED IN "OTHER AREAS ZONE X" ON THE FLOOD INSURANCE RATE MAP FOR JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS. COMMUNITY PANEL NO.

29095C0416G, REVISED JANUARY 20, 2017. "OTHER AREAS ZONE X" IS DEFINED AS "AREAS DETERMINED

TO BE OUTSIDE THE 0.2% ANNUL CHANCE FLOODPLAIN". LOCATION DETERMINED BY A SCALED

THERE ARE NO GAS/OIL WELLS ON SITE

**INDEX OF SHEETS** 

C-2 EXISTING CONDITIONS

C-3 DEMOLITION PLAN

C-1 COVER SHEET

C-5 UTILITY PLAN

C-7 ADA RAMPS

C-10 DETAILS

C-11 DETAILS C-12 DETAILS

C-6 GRADING PLAN

C-8 EROSION CONTROL

C-13 LANDSCAPE PLAN

C-9 EROSION CONTROL DETAILS

C-4 SITE PLAN

**DEVELOPER** SWP III, LLC C/O DRAKE DEVELOPMENT, LLC 7200 W 132nd ST, SUITE 150 OVERLAND PARK, KS 66213 913-662-2630

# **ENGINEER**

SM ENGINEERING SAM MALINOWSKY 5507 HIGH MEADOW CIRCLE MANHATTAN KANSAS, 66503 SMCIVILENGR@GMAIL.COM 785.341.9747

# **SURVEYOR**

ENGINEERING SOLUTIONS, LLC 50 SE 30TH STREET LEE'S SUMMIT, MO 64082 P:(816) 623-9888



SAMUEL D. MALINOWSKY PROFESSIONAL ENGINEEER

**SM** Engineering

Manhattan Kansas, 66503 smcivilengr@gmail.com

785.341.9747

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Revisions

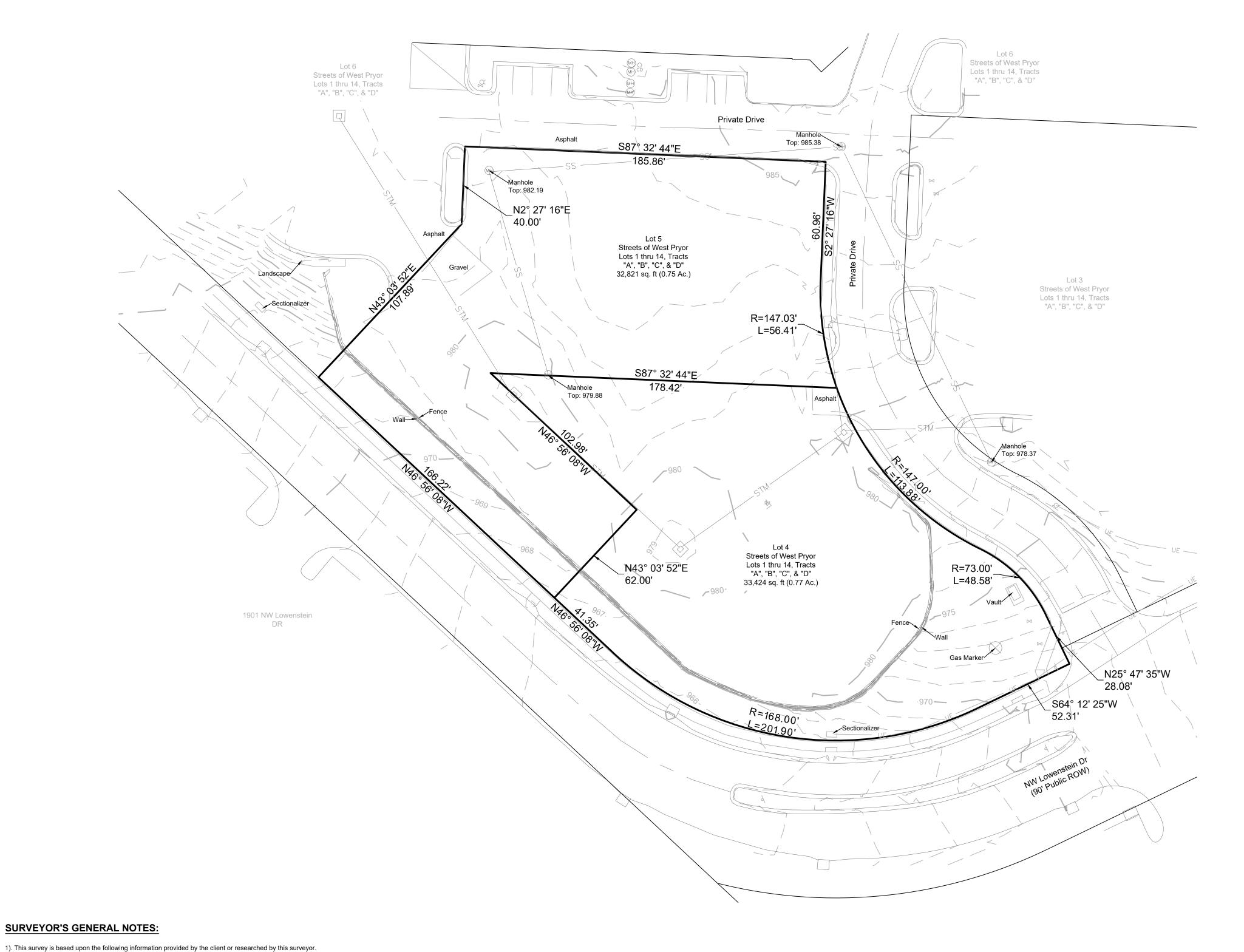
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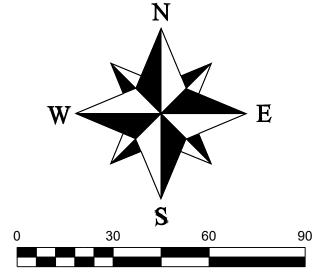
Site Improvement PLan

permit 3 MAY 2023

# Topgraphic Survey Streets of West Pryor Lots 4 & 5

Section 35, Township 48, Range 32 Lee's Summit, Jackson County, Missouri





**LEGEND** These standard symbols will be found in the drawing. Set 1/2" Rebar & Cap Found Survey Monument (As Noted)

#### PROPERTY DESCRIPTION

All of Lots 4 and 5 of Streets of West Pryor Lots 1 thru 14, Tracts "A", "B", "C", & "D"

DIVISION OF GEOLOGICAL SURVEY AND RESOURCE ASSESSMENT AND THAT THE RESULTS OF SAID SURVEY ARE

MATTHEW J. SCHLICHT, MOPLS 2012000102 ENGINEERING SOLUTIONS, LLC., MO CORP LS 2005008319-D

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT I HAVE MADE A SURVEY OF THE PREMISES DESCRIBED HEREIN WHICH MEETS OR EXCEEDS THE CURRENT "MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS" AS JOINTLY ESTABLISHED BY THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS, AND LANDSCAPE ARCHITECTS AND THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, REPRESENTED ON THIS PLAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF.

6). Subsurface and environmental conditions were not surveyed or examined or considered as a part of this survey. No evidence or statement is made concerning the existence or underground or overhead conditions, containers or facilities that may affect the use or development of this property. No attempt has been made to obtain or show data concerning existence, size, depth, conditions, capacity or location of any utility existing on the site, whether private, municipal or public owned.

2). This survey meets or exceeds the accuracy standards of a (SUBURBAN) Property Boundary Survey as defined by the Missouri Standards for

4). Bearings shown hereon are based upon bearings described in the Final Plat of Streets of West Pryor Lots 1 thru 14, Tracts "A", "B", "C", & "D",

5). This company assumes no responsibility in the location of existing utilities within the subject premises. This is an above-ground survey. The

underground utilities, if shown, are based on information provided by the various utility companies and these locations should be considered approximate.

7) This property is located outside the 100 year flood plain, zone "x" as shown on the Firm panel 29095C0416G, dated January 20, 2017.

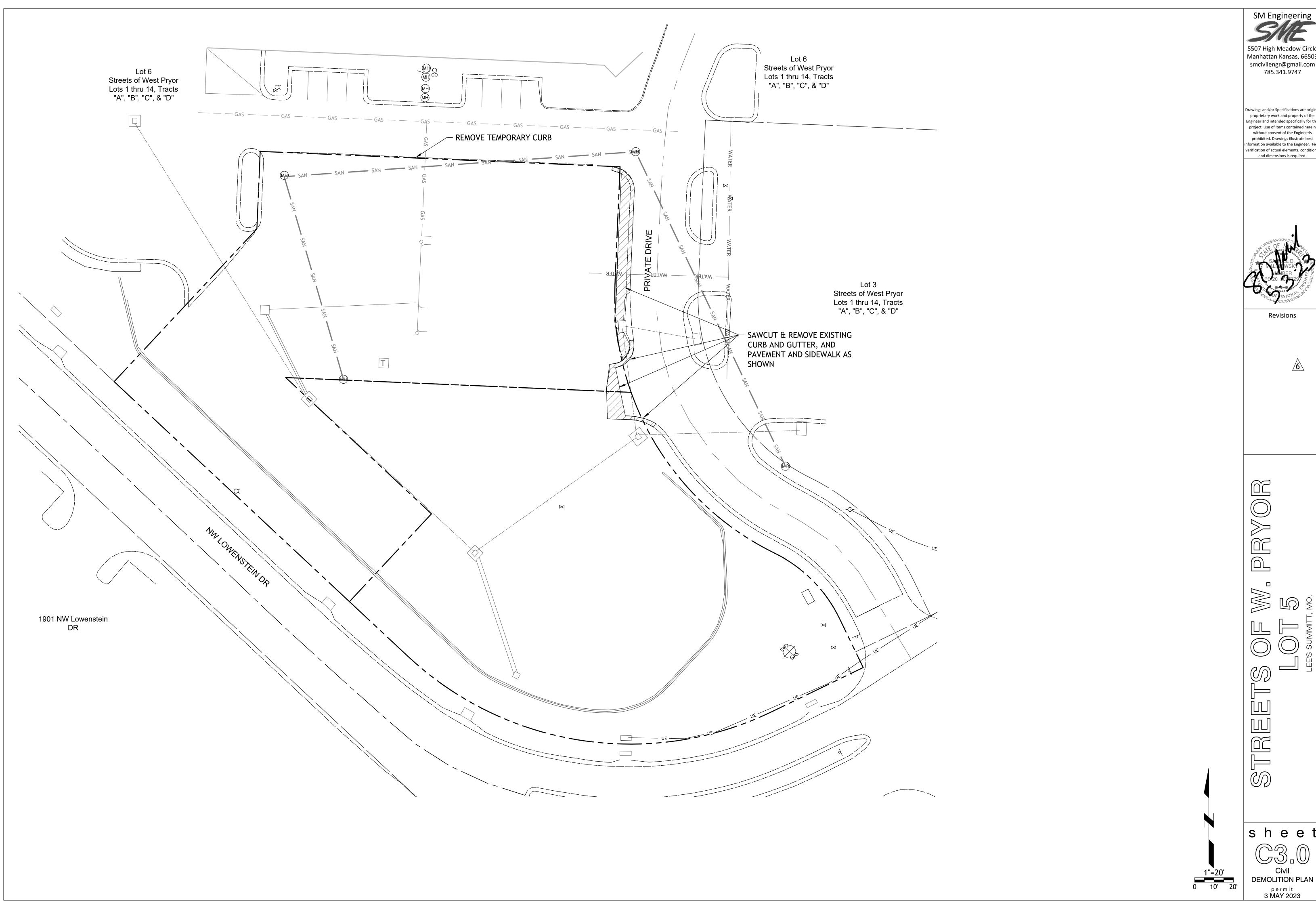
(A). Final Plat of Streets of West Pryor Lots 1 thru 14, Tracts "A", "B", "C", & "D", Recorded as Document No. 2019E0032538-2.

Property Boundary Surveys.

3). No Title report was furnished by the client.

Recorded as Document No. 2019E0032538-2.

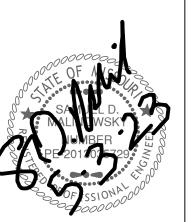
There may be additional underground utilities not shown on this drawing.

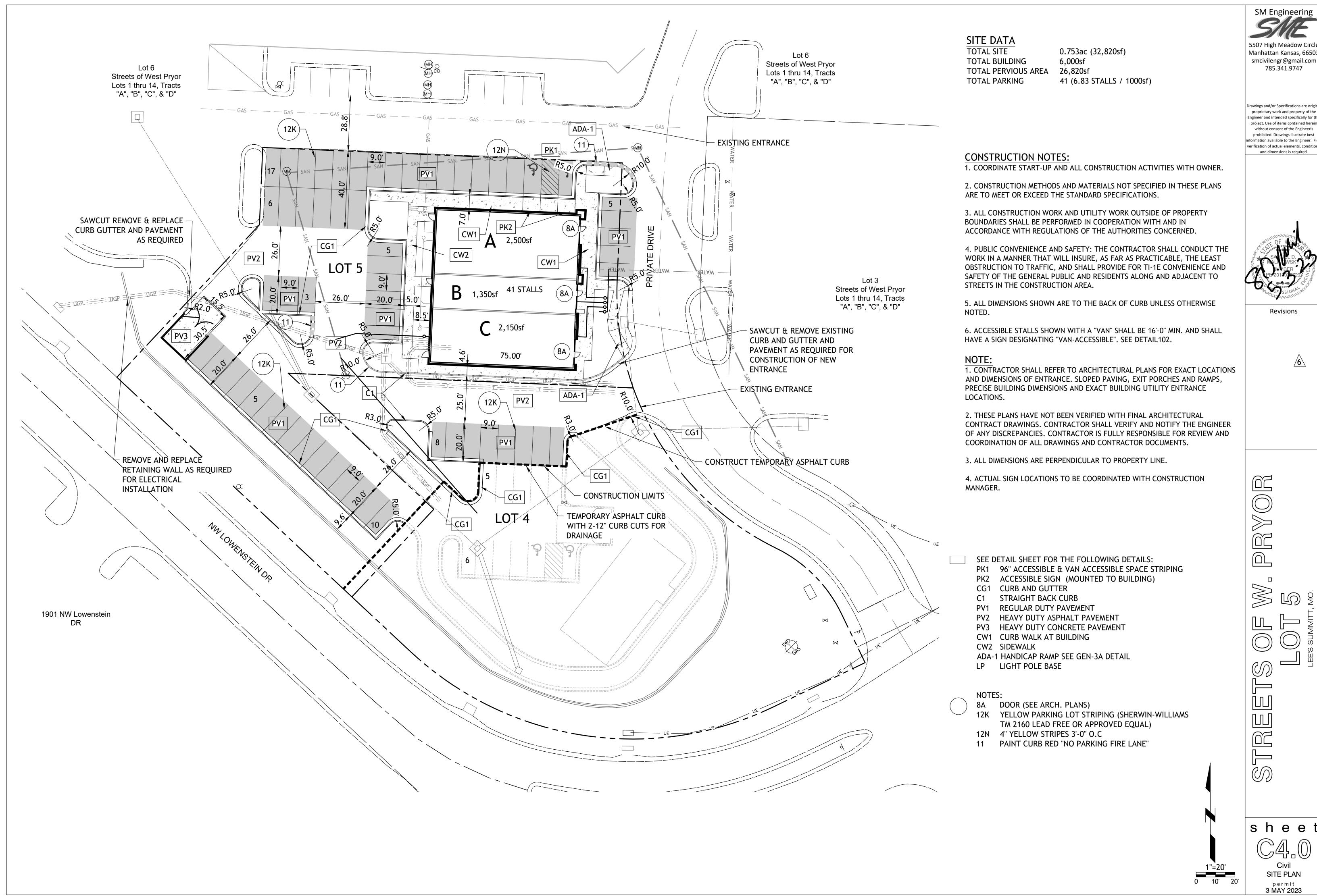


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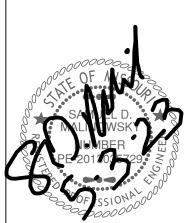
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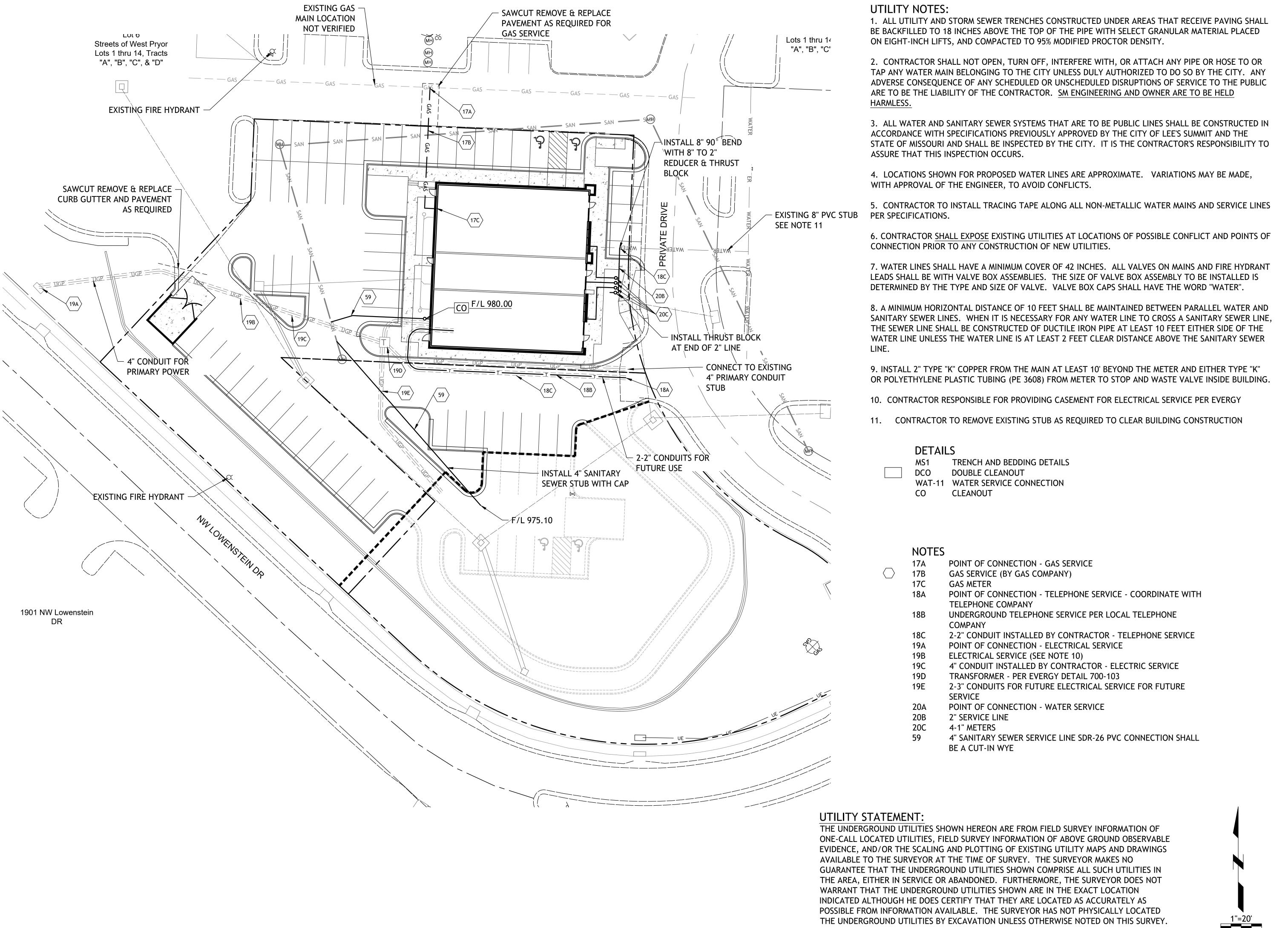




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proprietary work and property of the prohibited. Drawings illustrate best ification of actual elements, conditions,



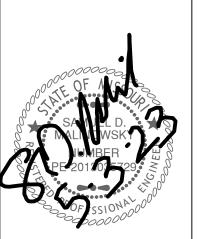


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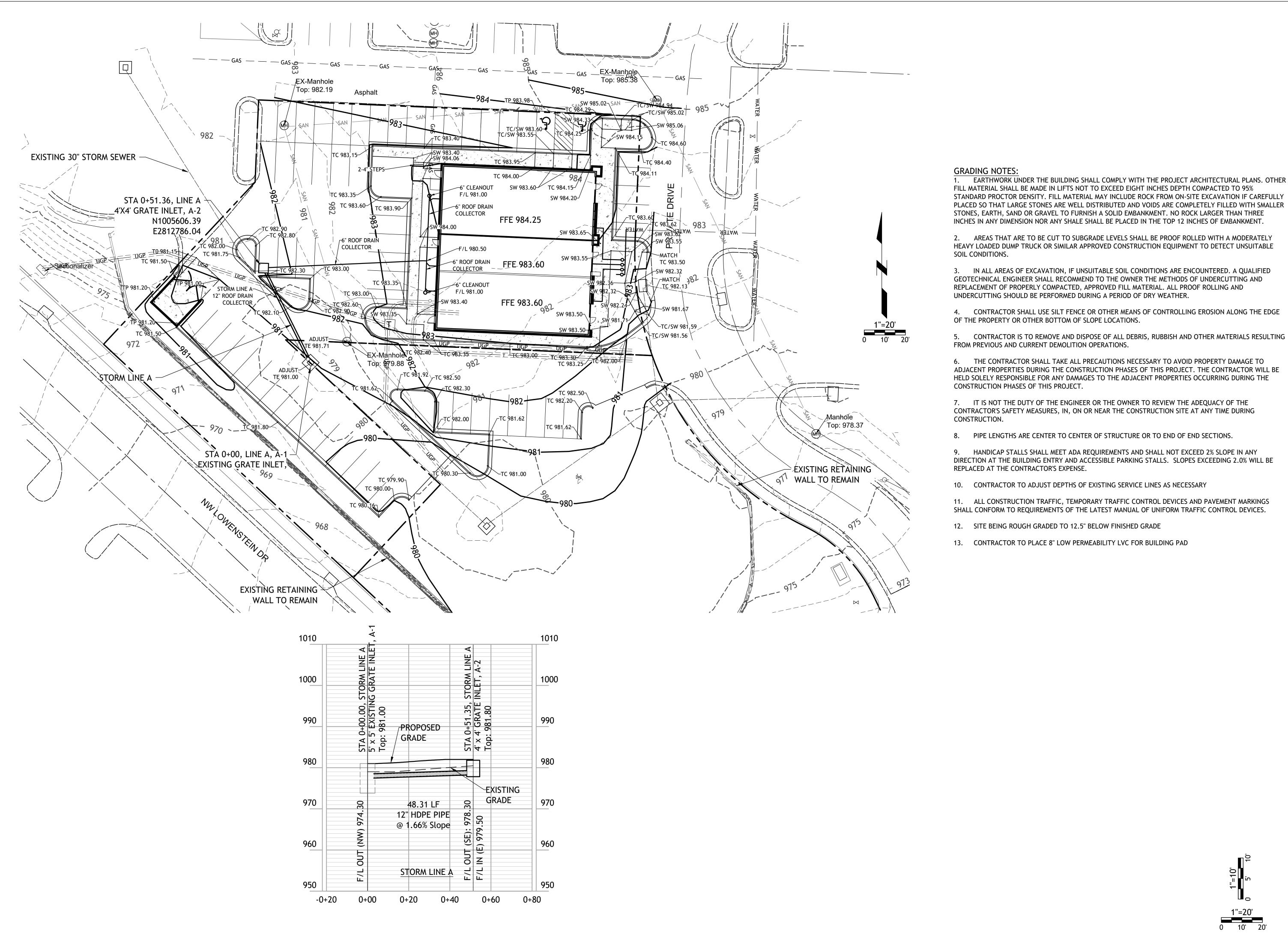


Revisions

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Civil UTILITY

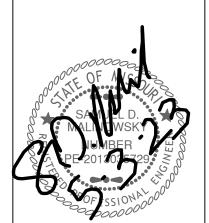
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8. PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTIONS.

HANDICAP STALLS SHALL MEET ADA REQUIREMENTS AND SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION AT THE BUILDING ENTRY AND ACCESSIBLE PARKING STALLS. SLOPES EXCEEDING 2.0% WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

10. CONTRACTOR TO ADJUST DEPTHS OF EXISTING SERVICE LINES AS NECESSARY

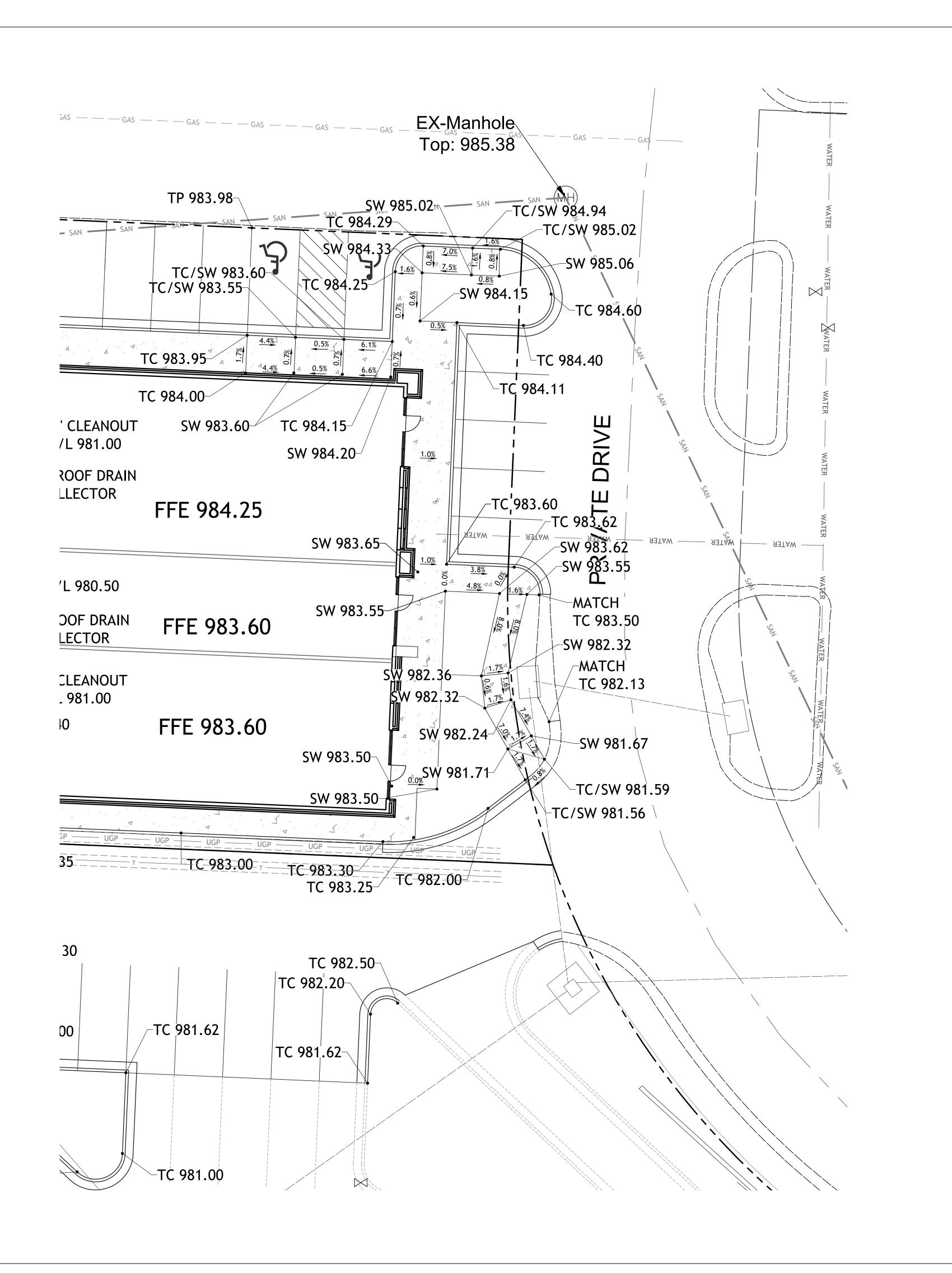
11. ALL CONSTRUCTION TRAFFIC, TEMPORARY TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO REQUIREMENTS OF THE LATEST MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

12. SITE BEING ROUGH GRADED TO 12.5" BELOW FINISHED GRADE

13. CONTRACTOR TO PLACE 8" LOW PERMEABILITY LVC FOR BUILDING PAD

1"=20' 0 10' 20'

shee GRADING permit 3 MAY 2023

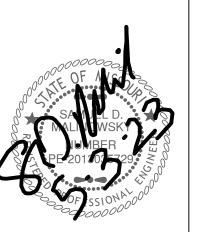


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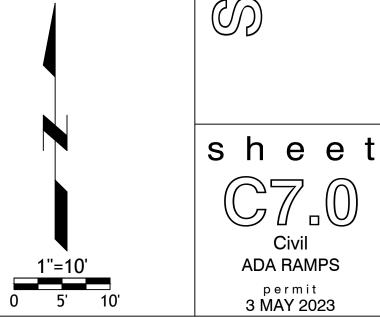
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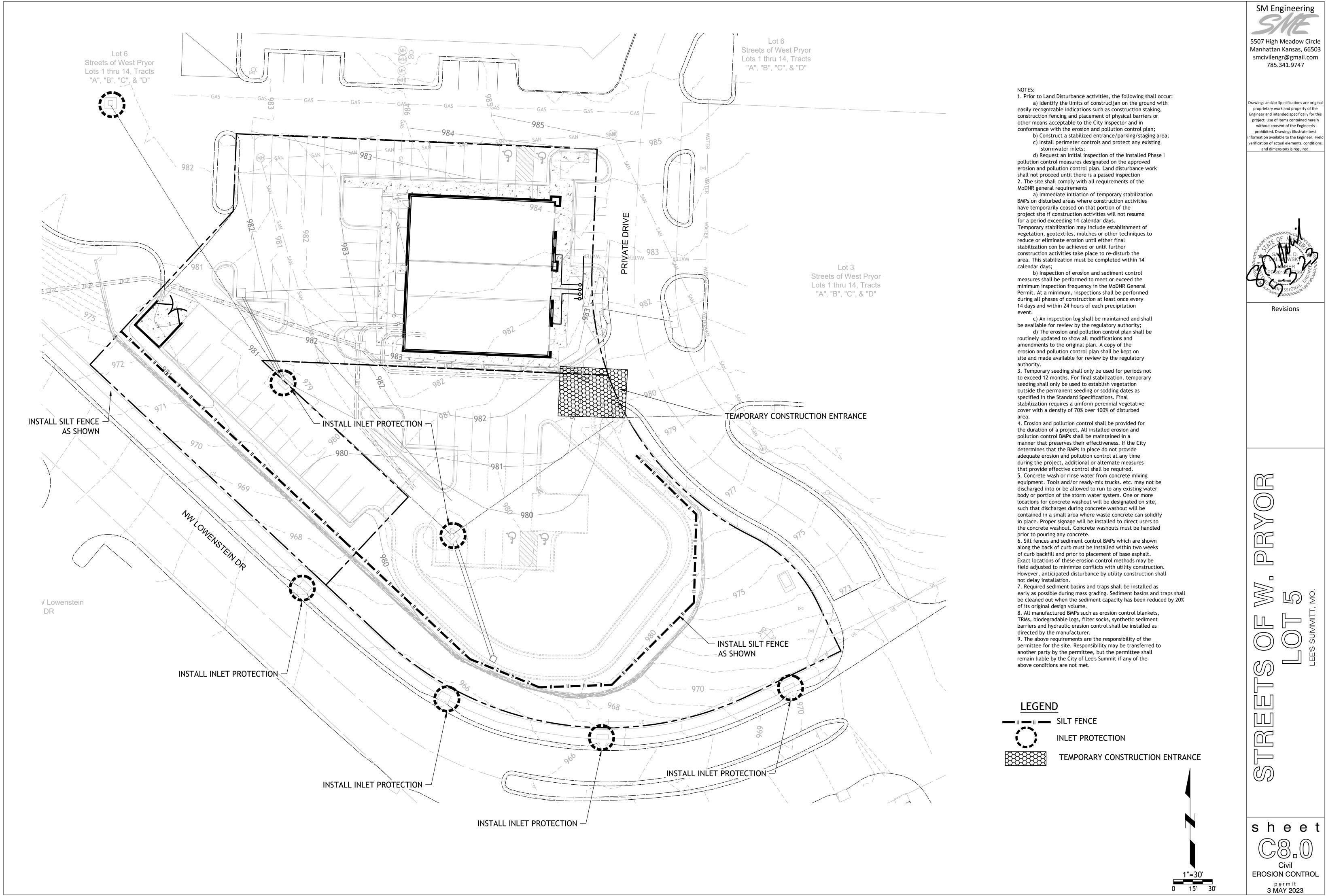
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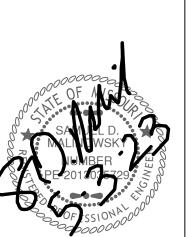
STREFTS OF W. PRYOR Lee's SUMMIT, MO.

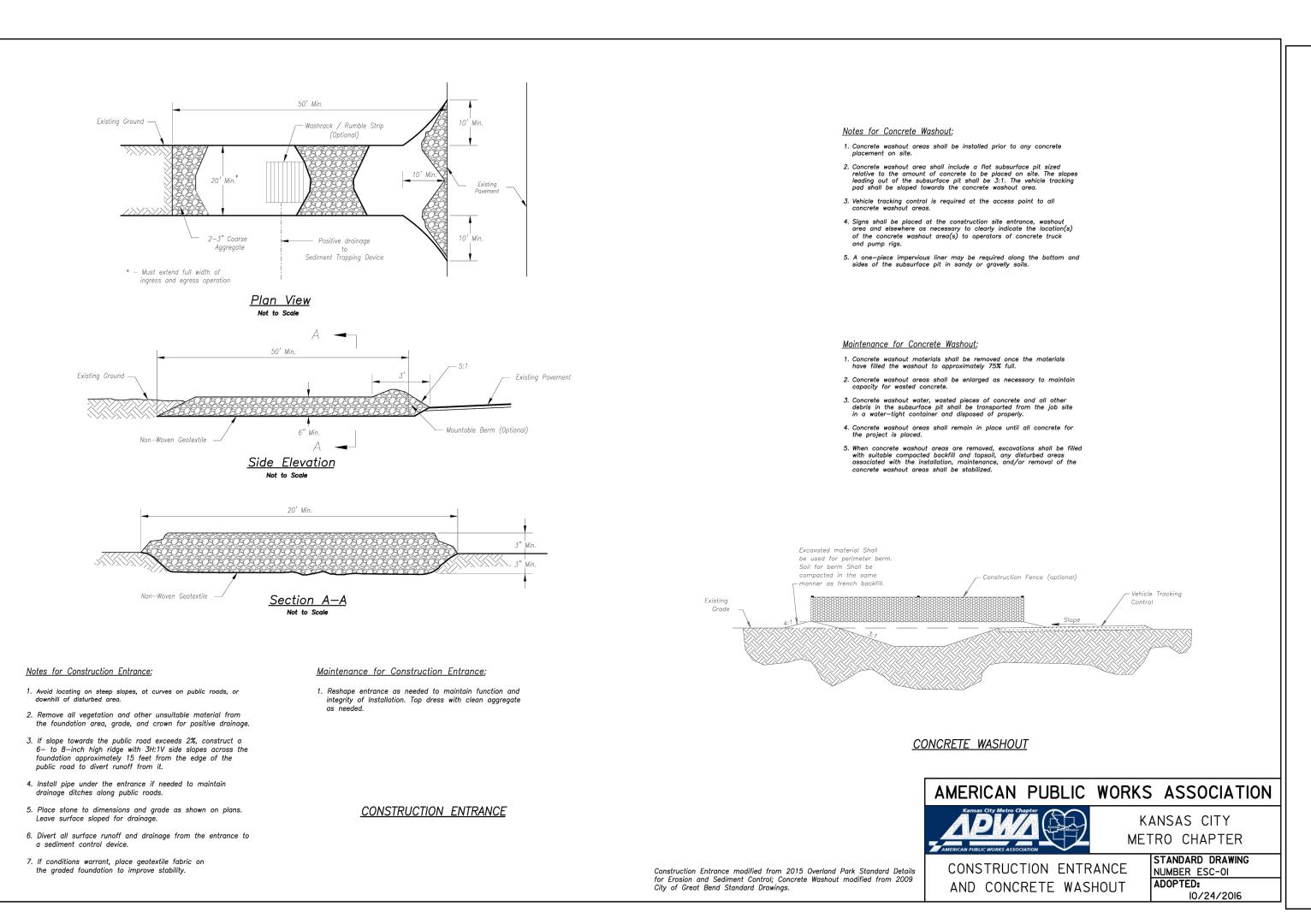


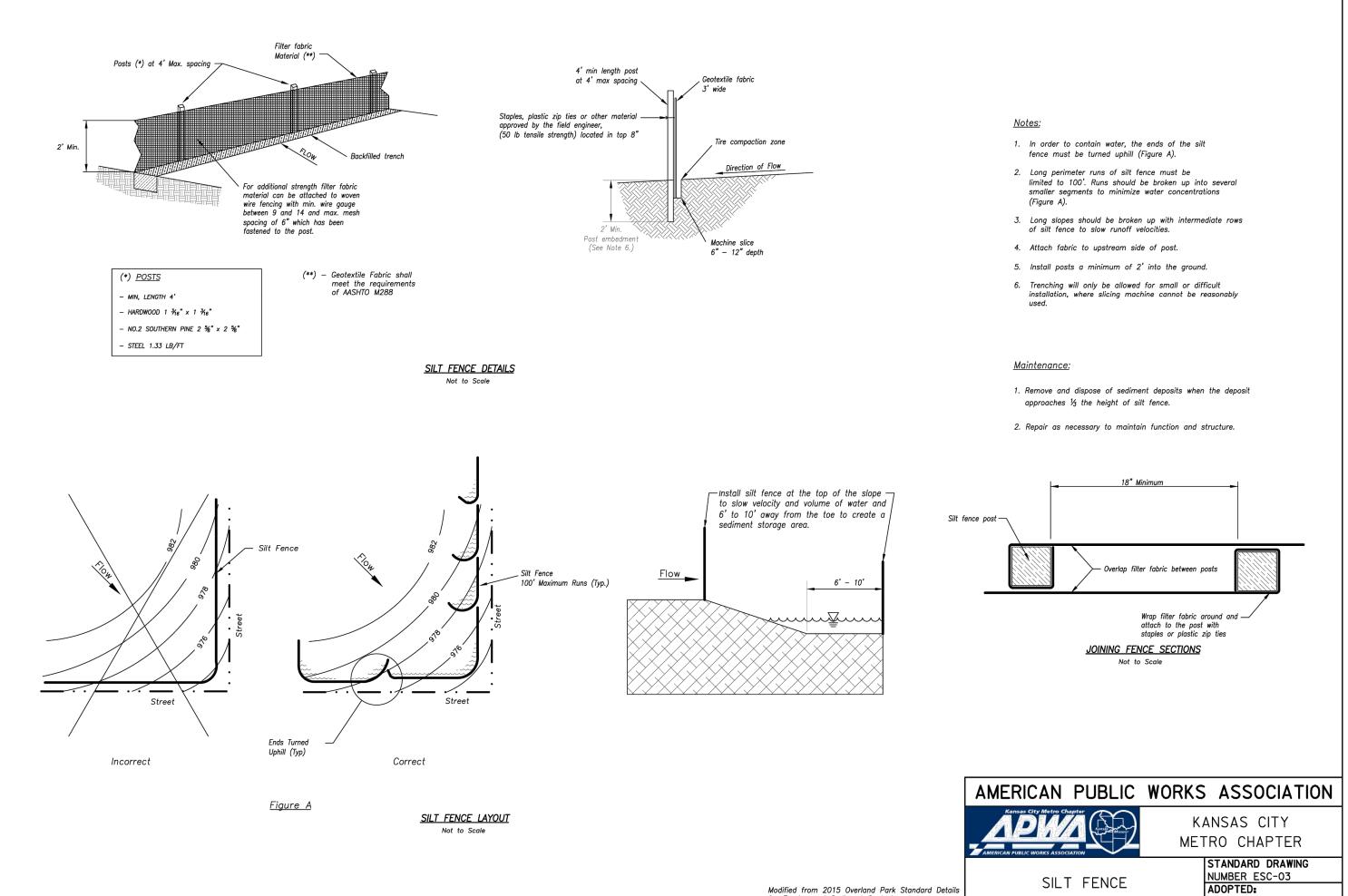


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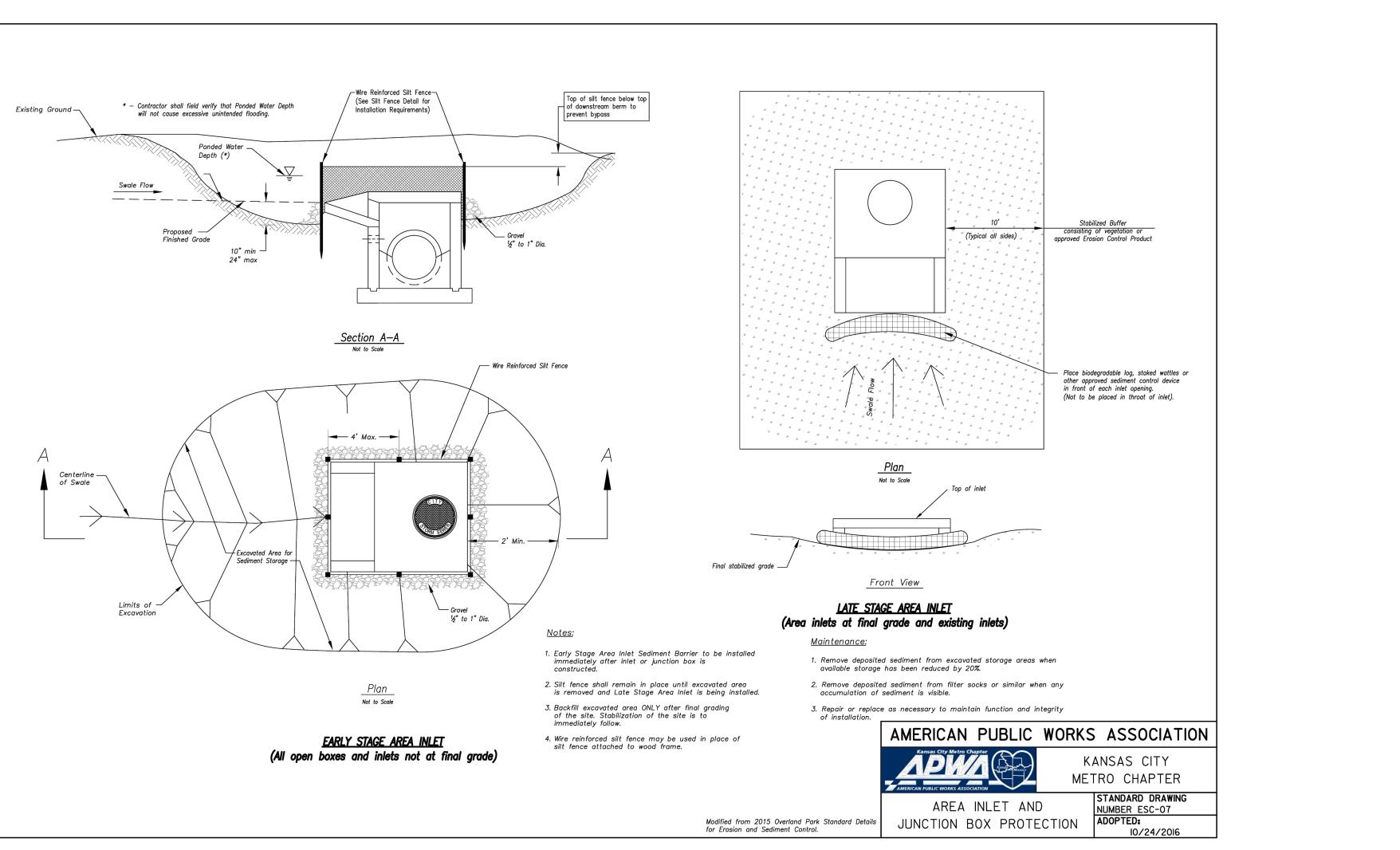
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for Erosion and Sediment Control.

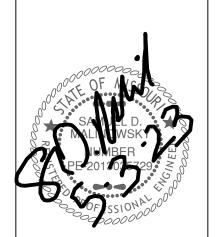


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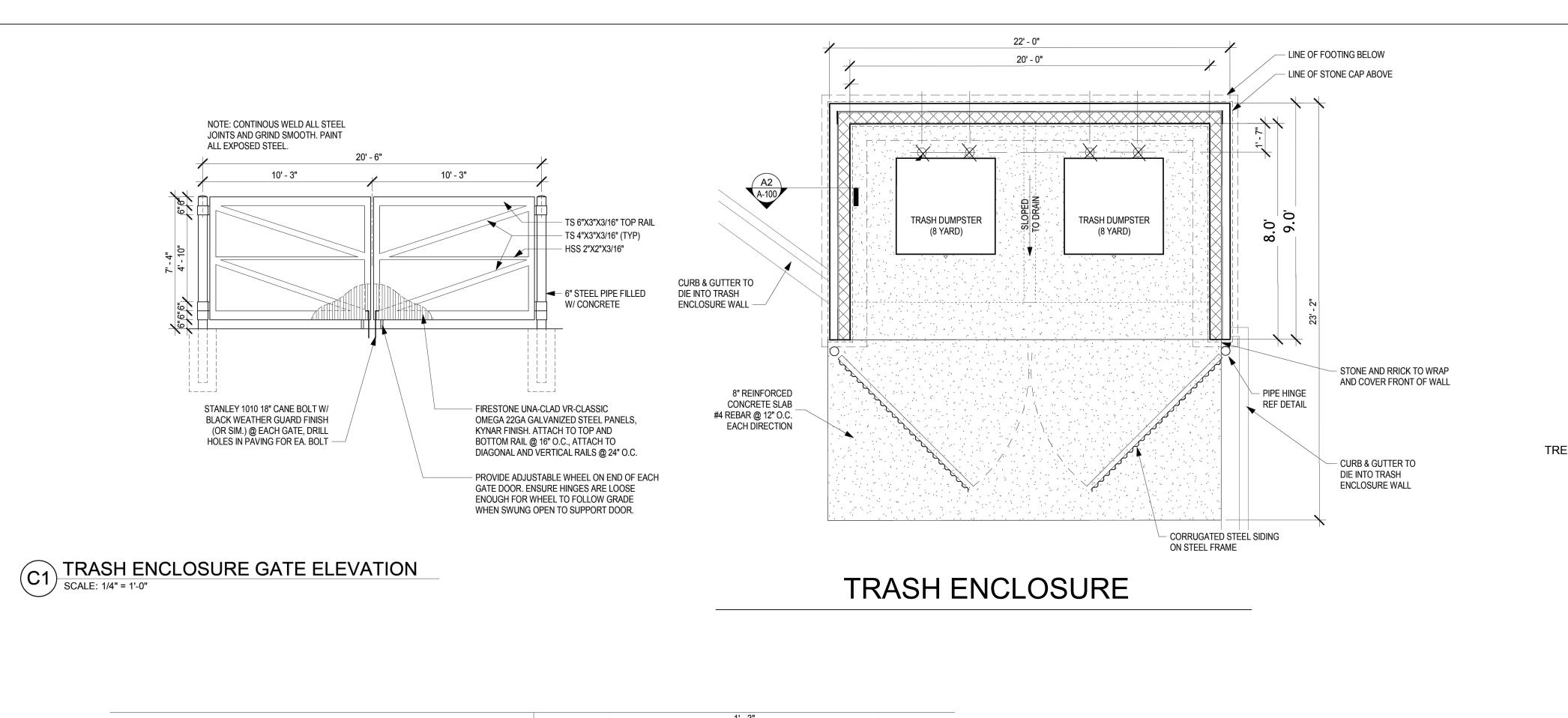
STREETS OF W. PRYOR LEES SUMMIT, MO.

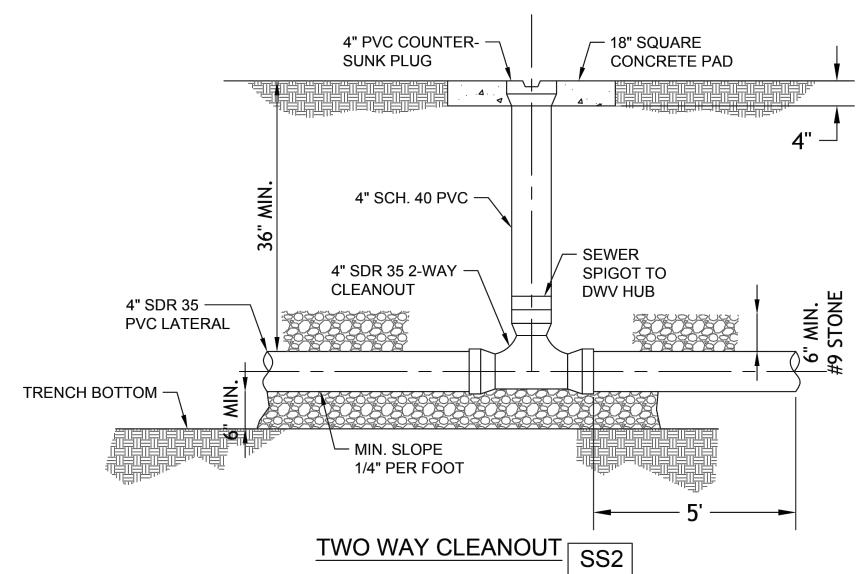
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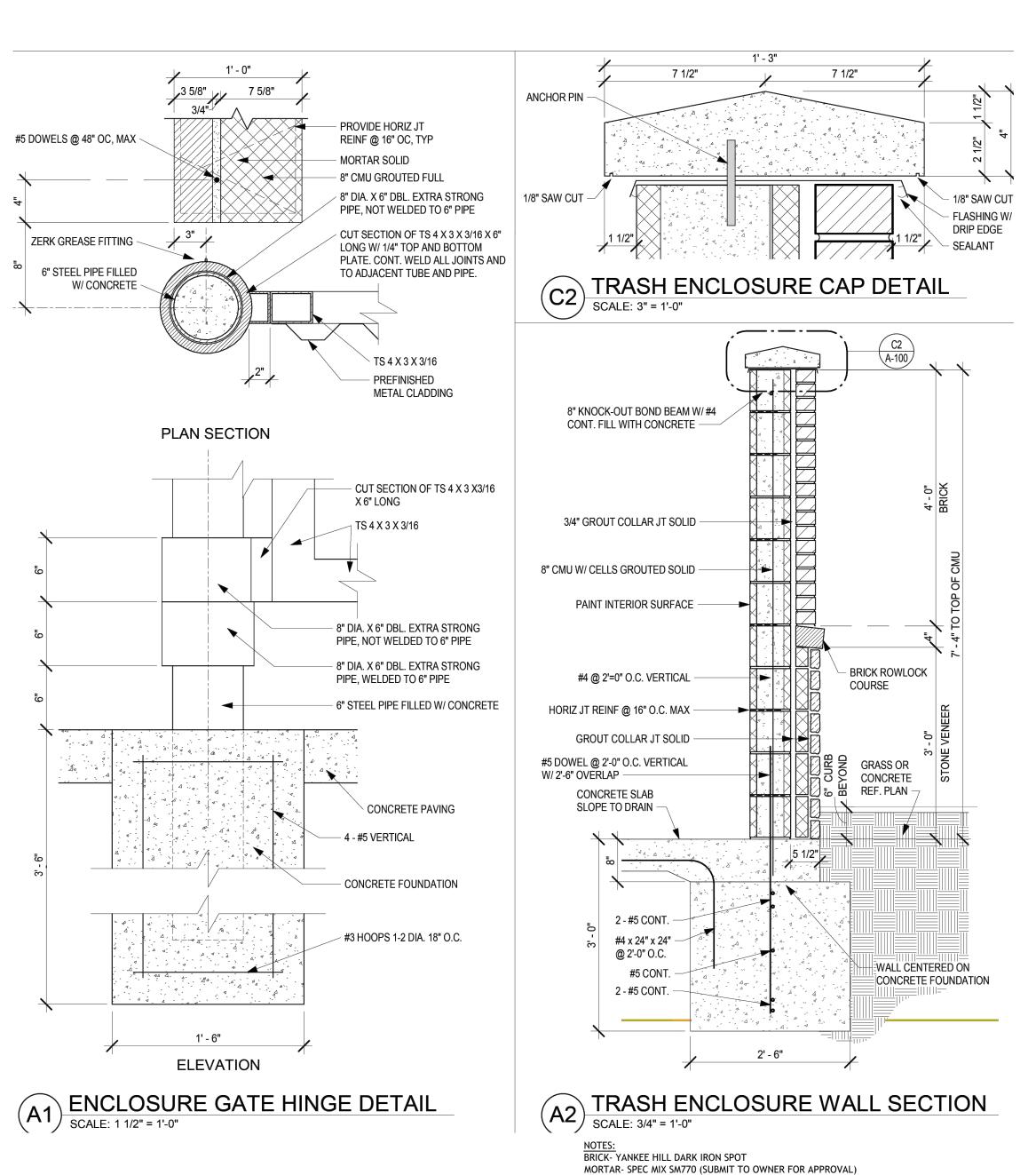
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Civil EROSION DETAILS

3 MAY 2023







STONE- GLEN GEARY GLENN RIDGE BLACK/GRANITE

**DETAILS** 

permit 3 MAY 2023

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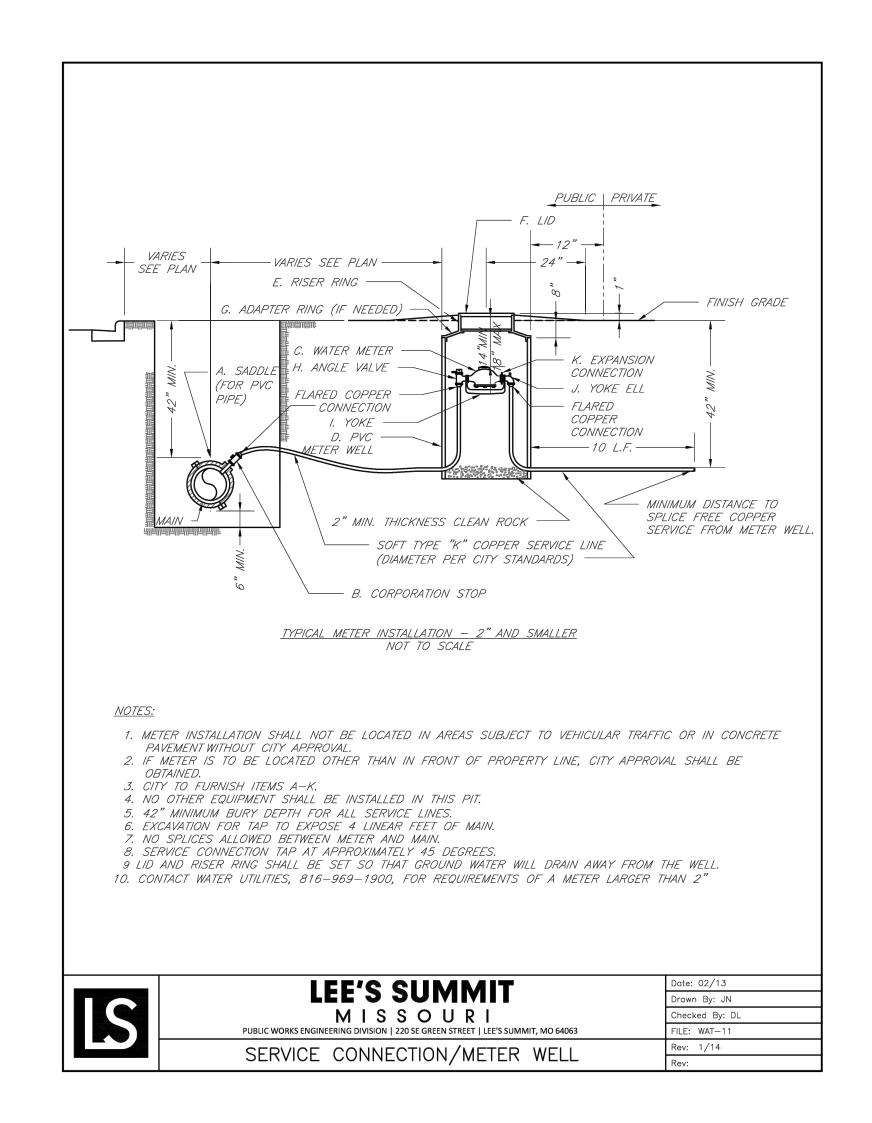
project. Use of items contained herein

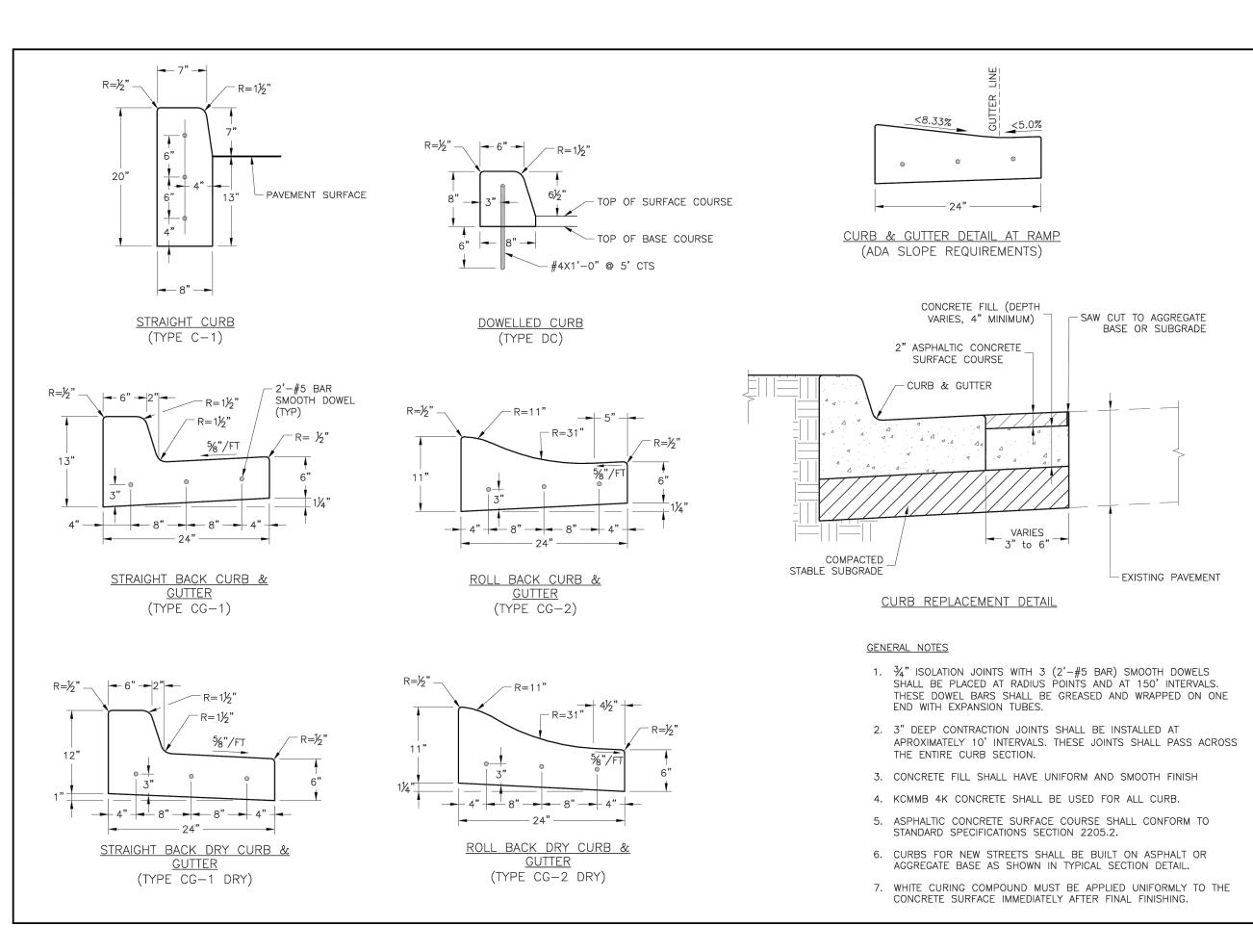
without consent of the Engineeris prohibited. Drawings illustrate best ormation available to the Engineer. Field

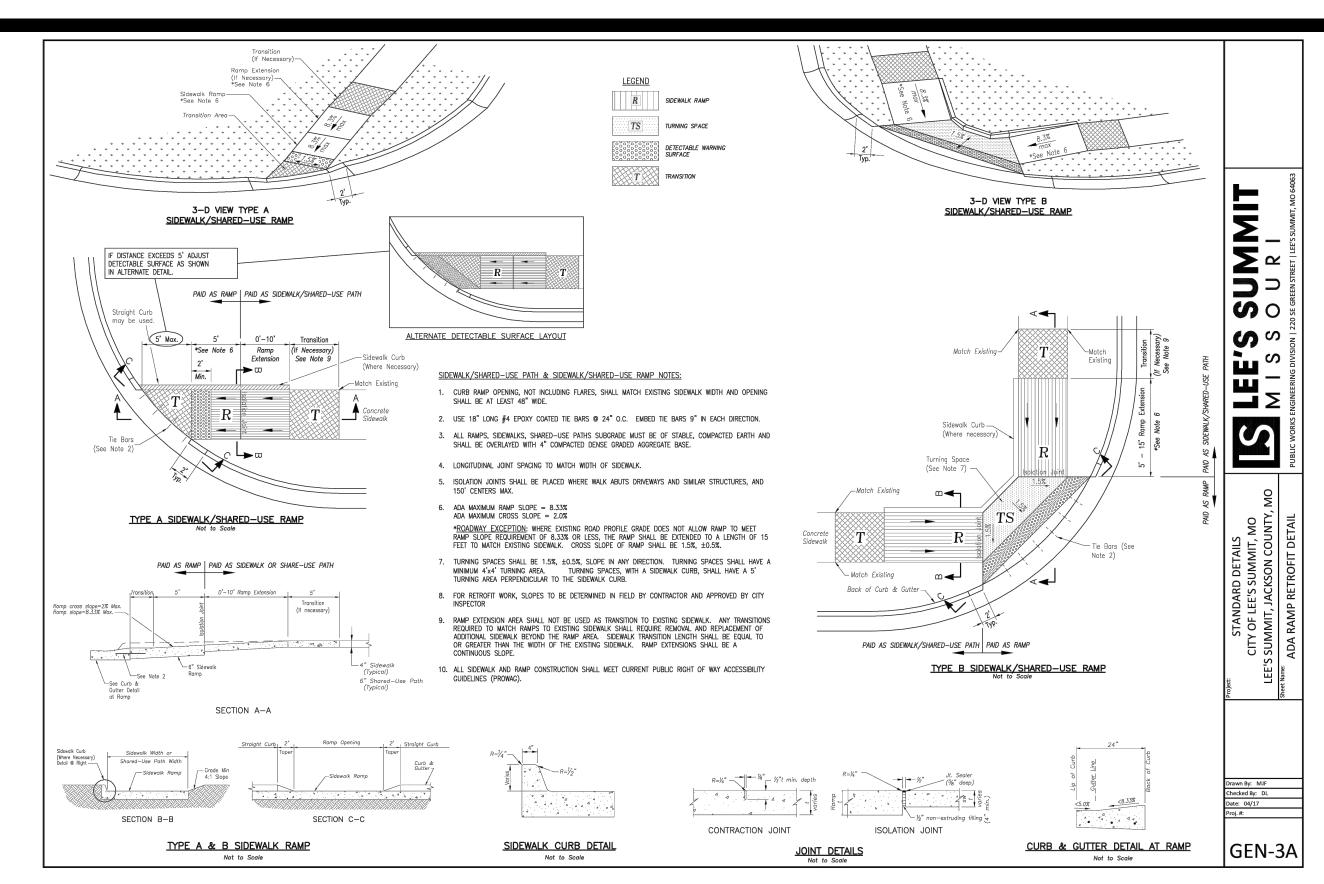
verification of actual elements, conditions,

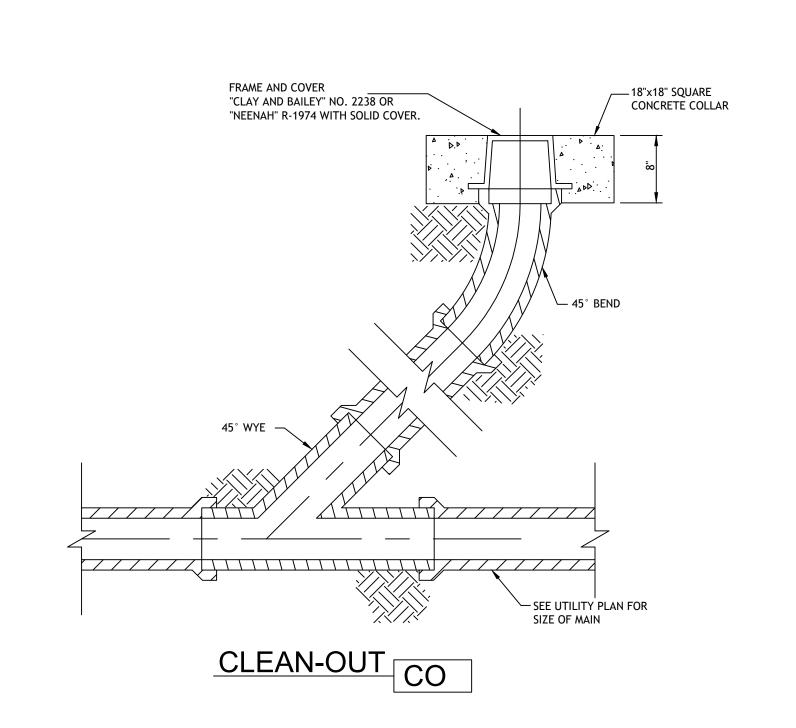
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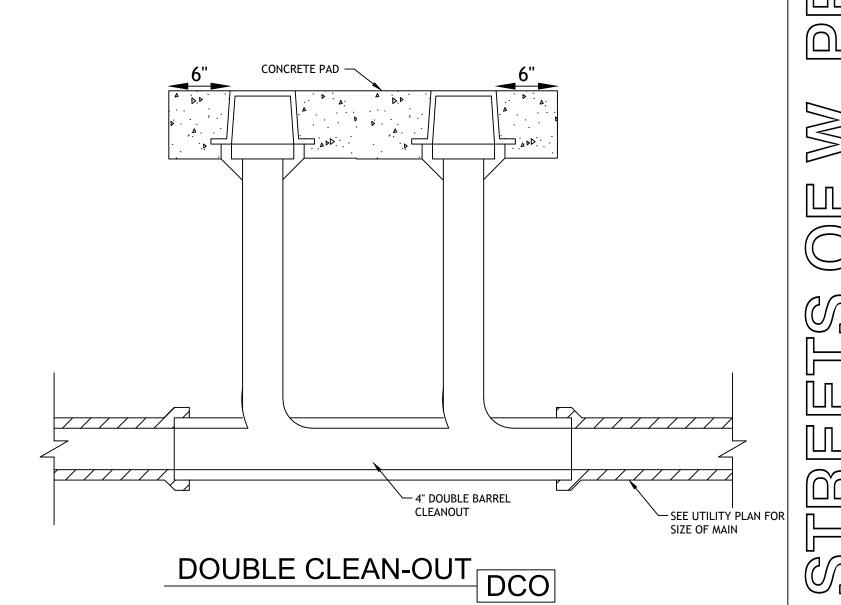
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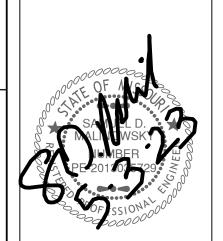


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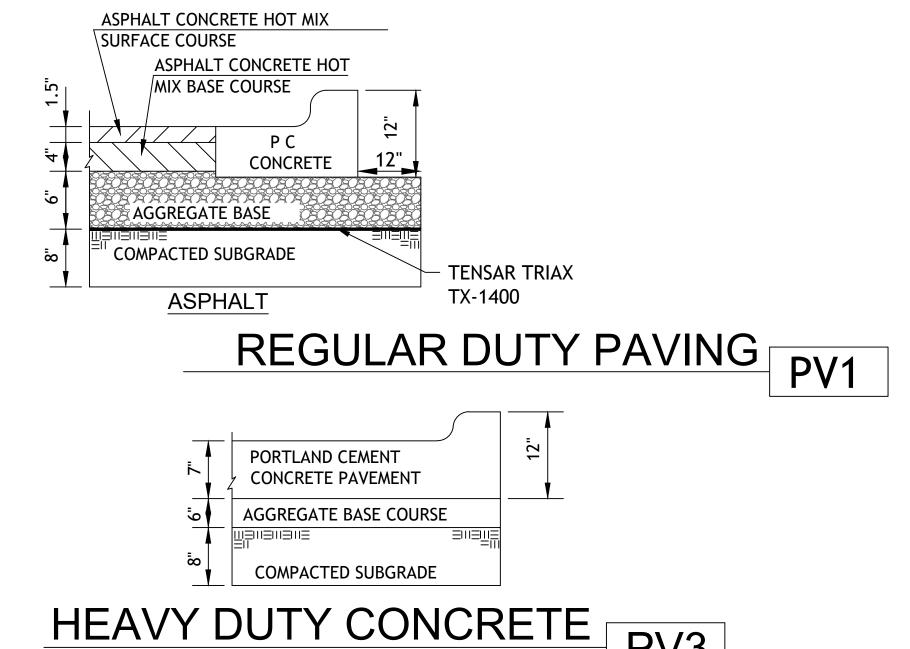
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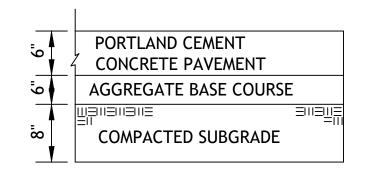
DETAILS permit 3 MAY 2023



1. FLEXIBLE PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

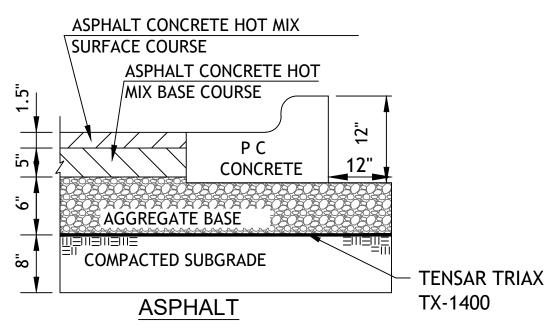
ASPHALT SURFACE COURSE - APWA TYPE 3-01 ASPHALT BASE COURSE - APWA TYPE 2-01 AGGREGATE BASE MoDOT TYPE 5 OR EQUIVALENT

2. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH 6% ENTRAINED AIR  $\pm 2\%$  AND SHALL MEET OR EXCEED THE SPECIFICATIONS SET FORTH IN THE LATEST EDITION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.



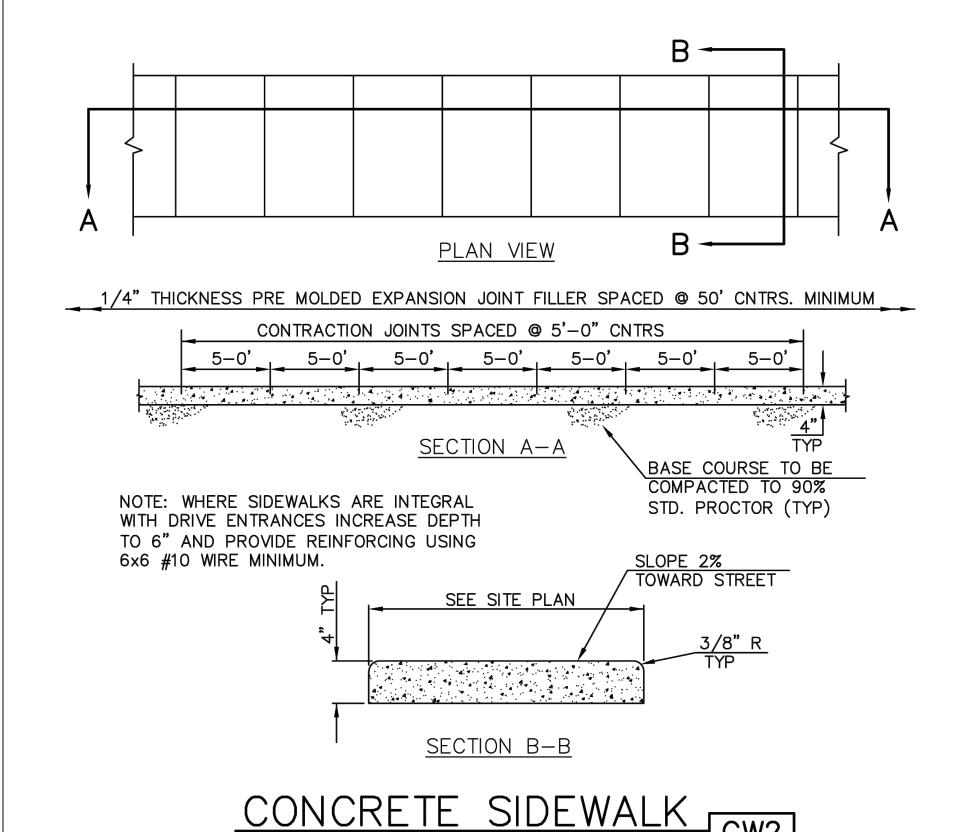


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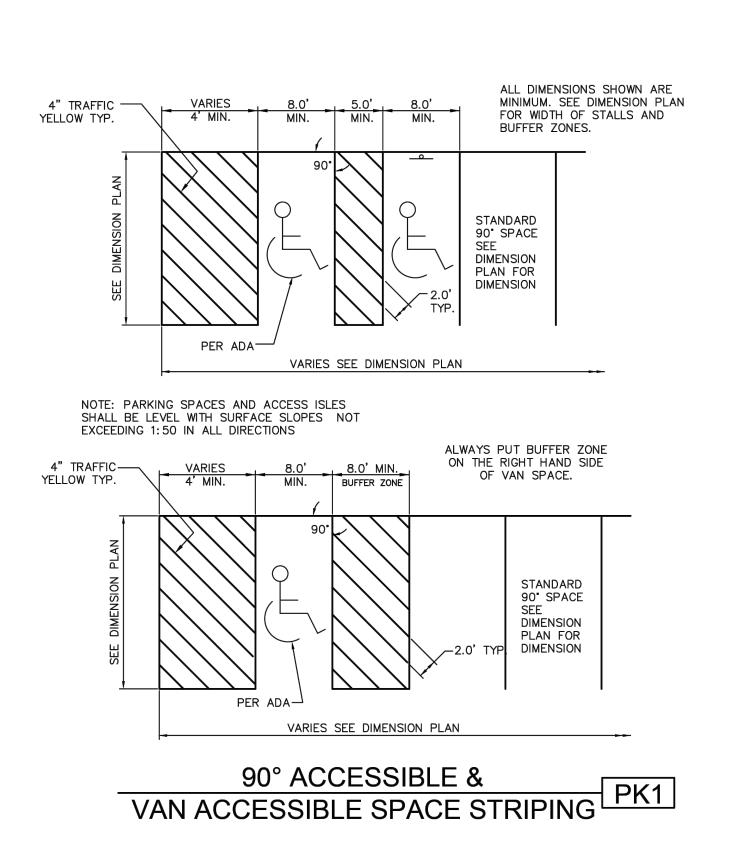


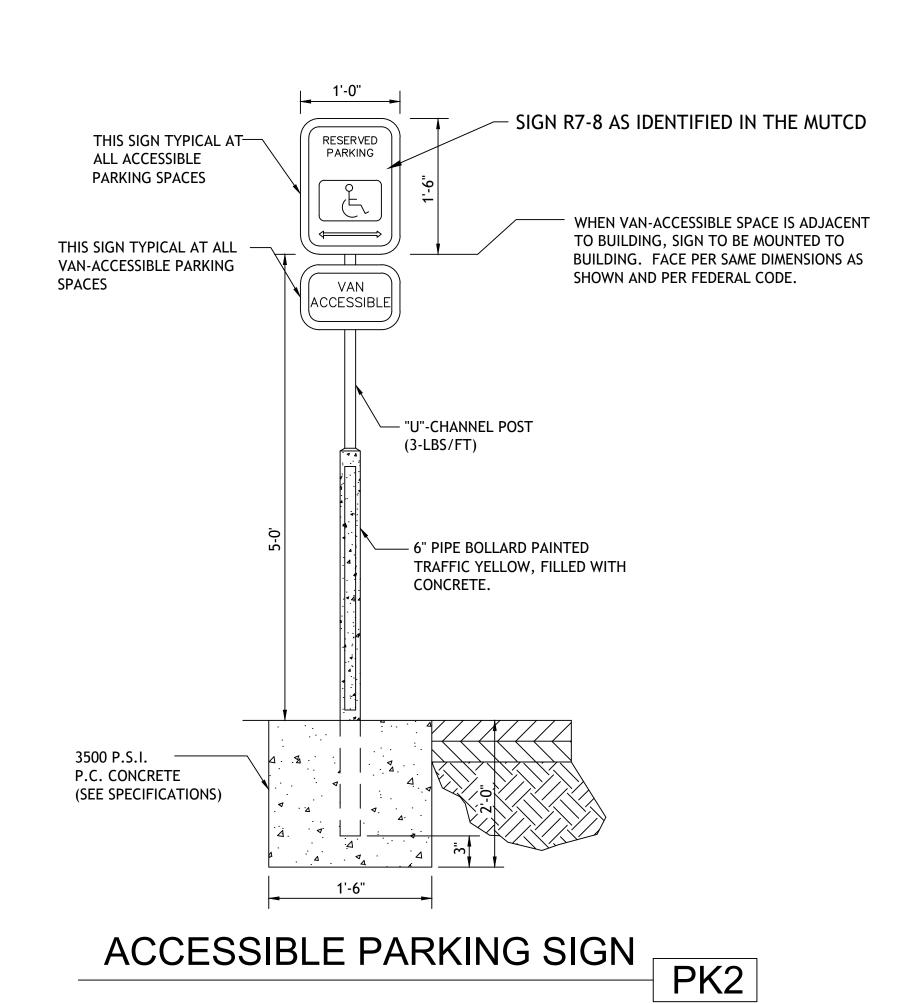
HEAVY DUTY ASPHALT PAVING

PV2



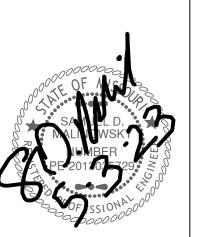
NOTE: CONCRETE SHALL BE CLASS A WITH f'c = 3000 PSI.





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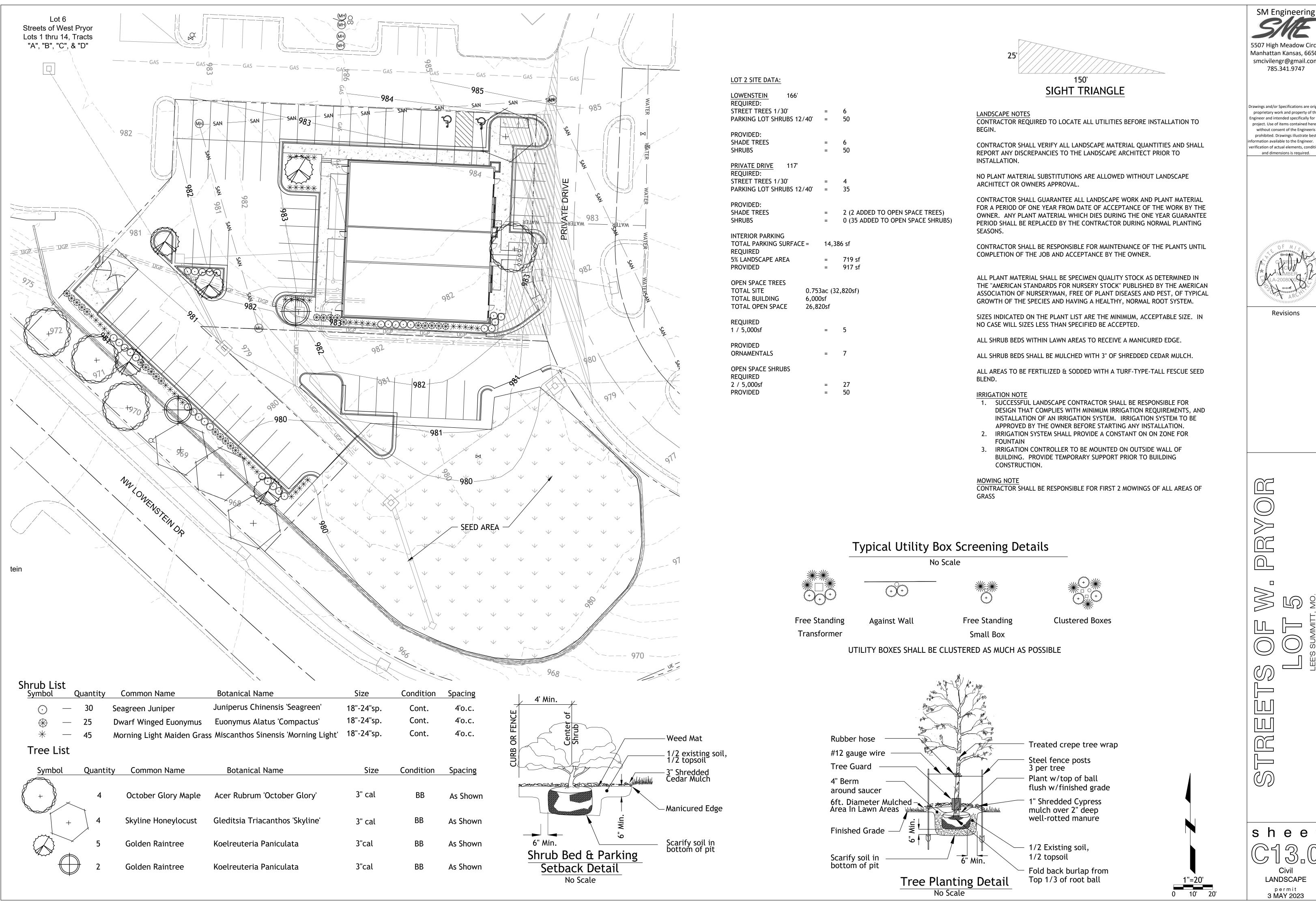


Revisions

STREETS OF W. PRYOR LOTES 5

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Civil
DETAILS
permit
3 MAY 2023



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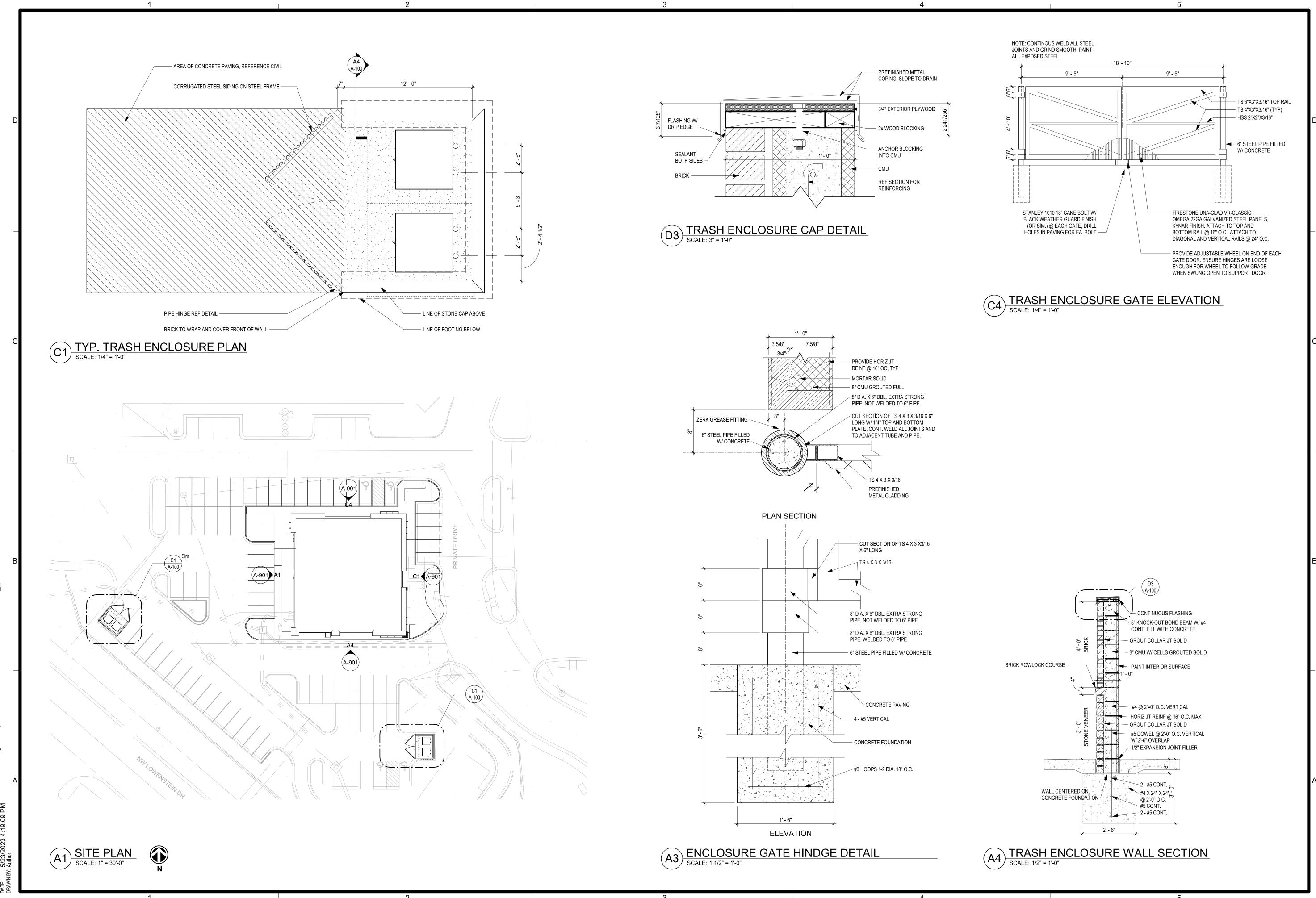


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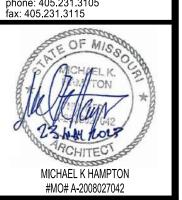
LANDSCAPE

permit 3 MAY 2023





architecture | interiors | planning 2231 sw wanamaker rd suite 303 topeka, kansas 66614-4275 phone: 785.273.7540 fax: 785.273.7579 500 north broadway oklahoma city, ok 73102 phone: 405.231.3105 fax: 405.231.3115 suite 200



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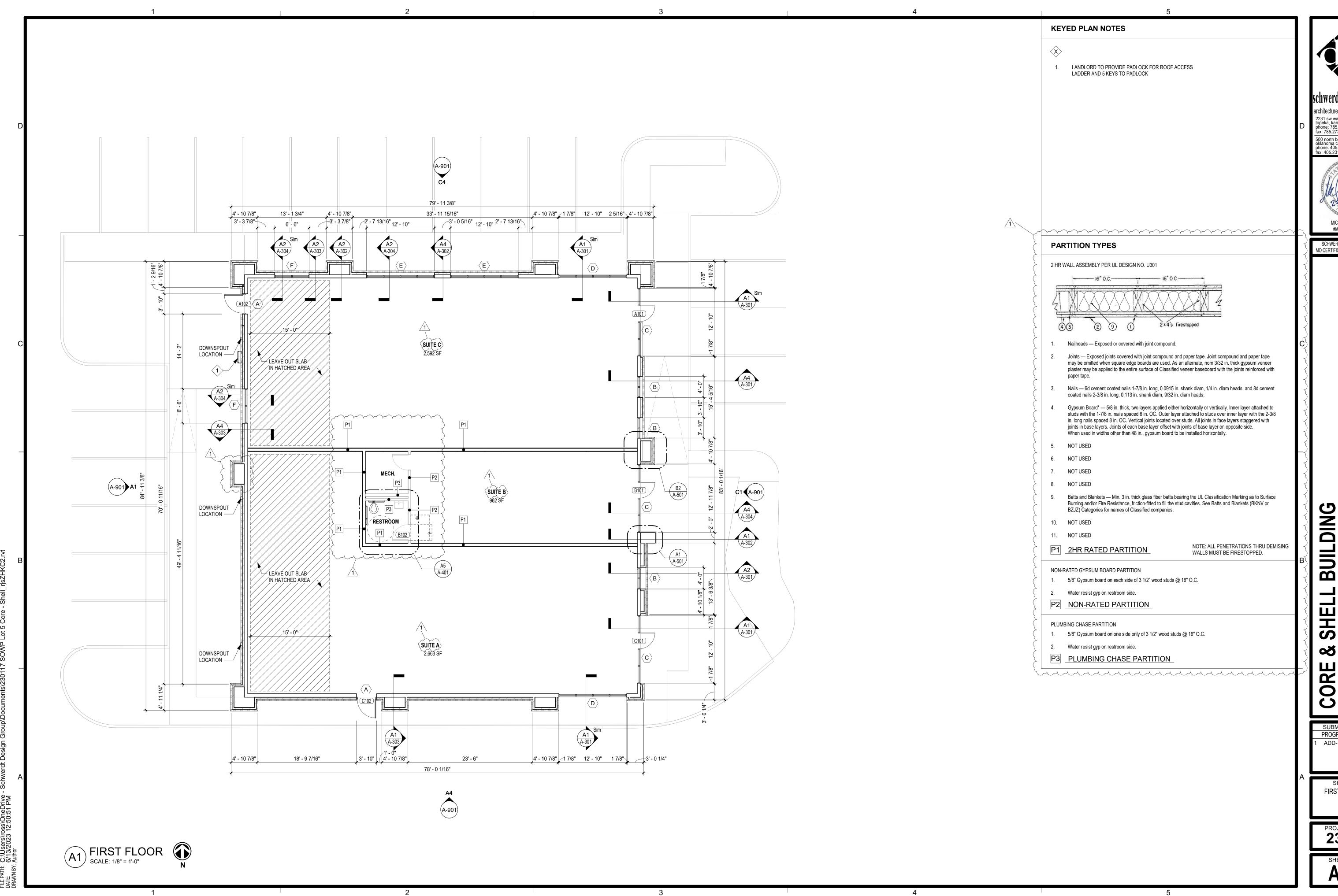
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SITE PLAN

230117



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500 north broadway oklahoma city, ok 73102 phone: 405.231.3105 fax: 405.231.3115



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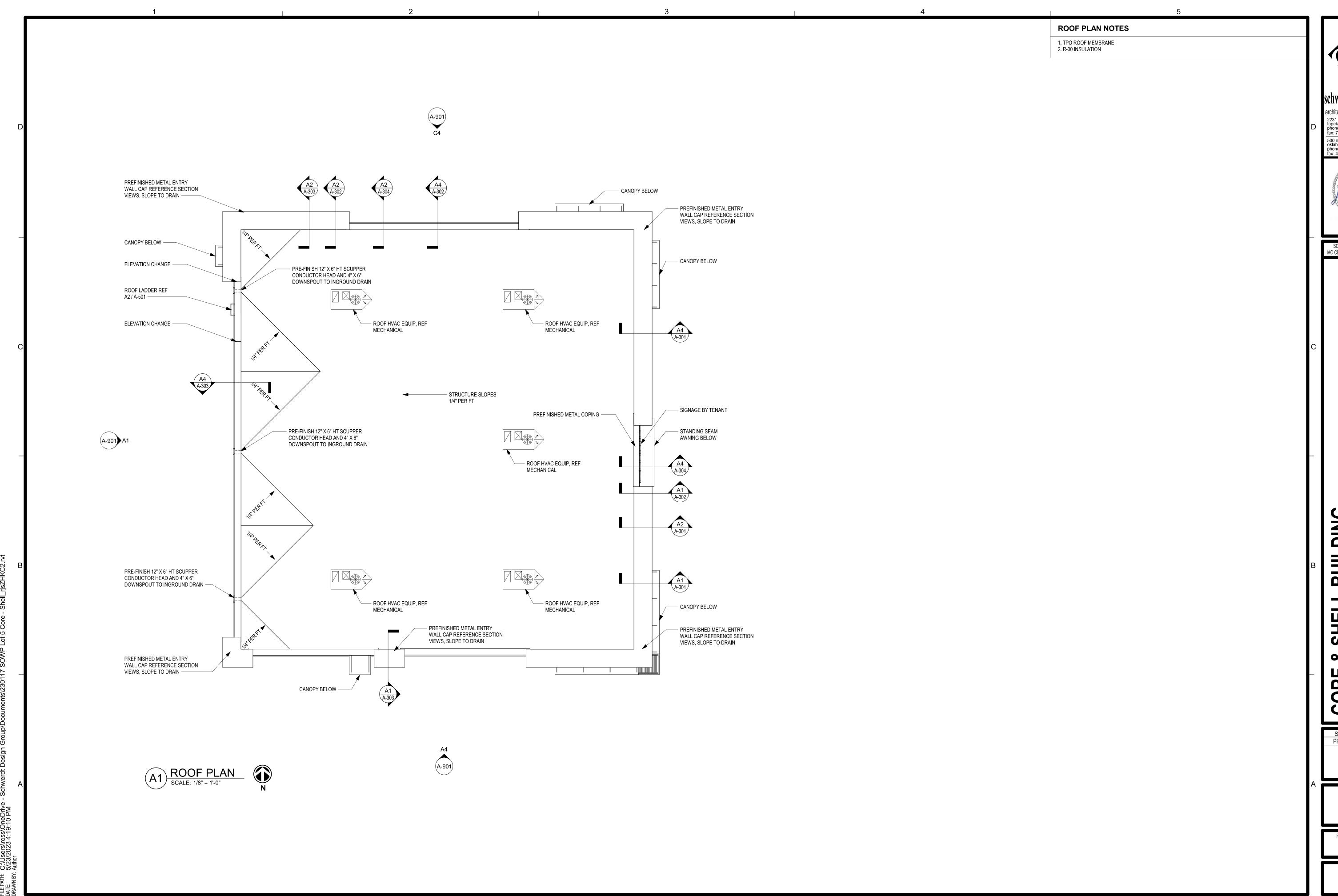
PRY ACKSC BUILDING
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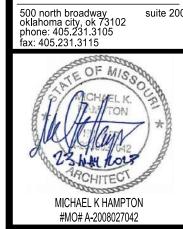
FIRST FLOOR PLAN

230117

A-101



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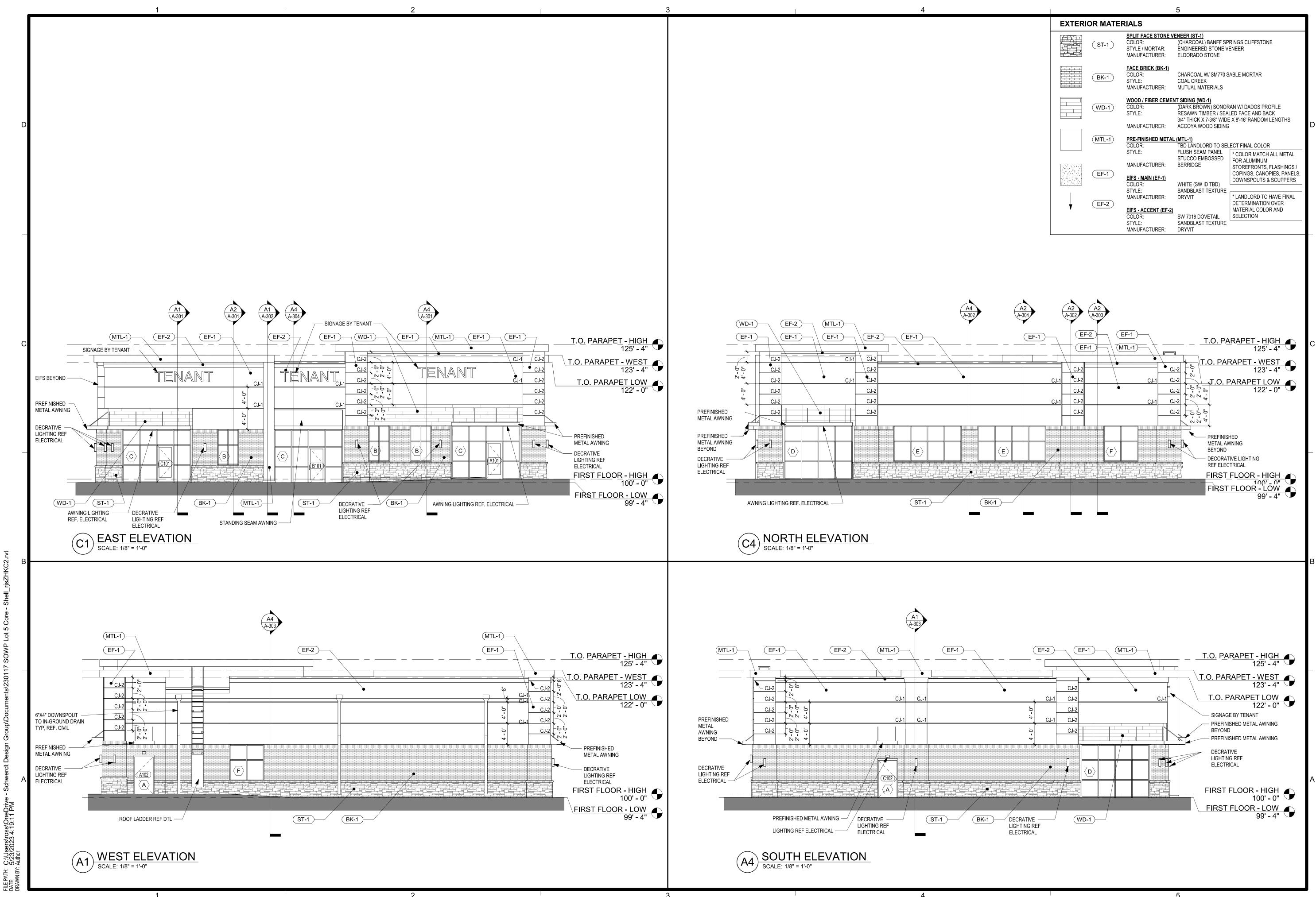
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LL BUILDING OF WEST

SUBMISSION DATES PROGRESS PRINT ONLY

**ROOF PLAN** 

PROJECT NUMBER **230117** 



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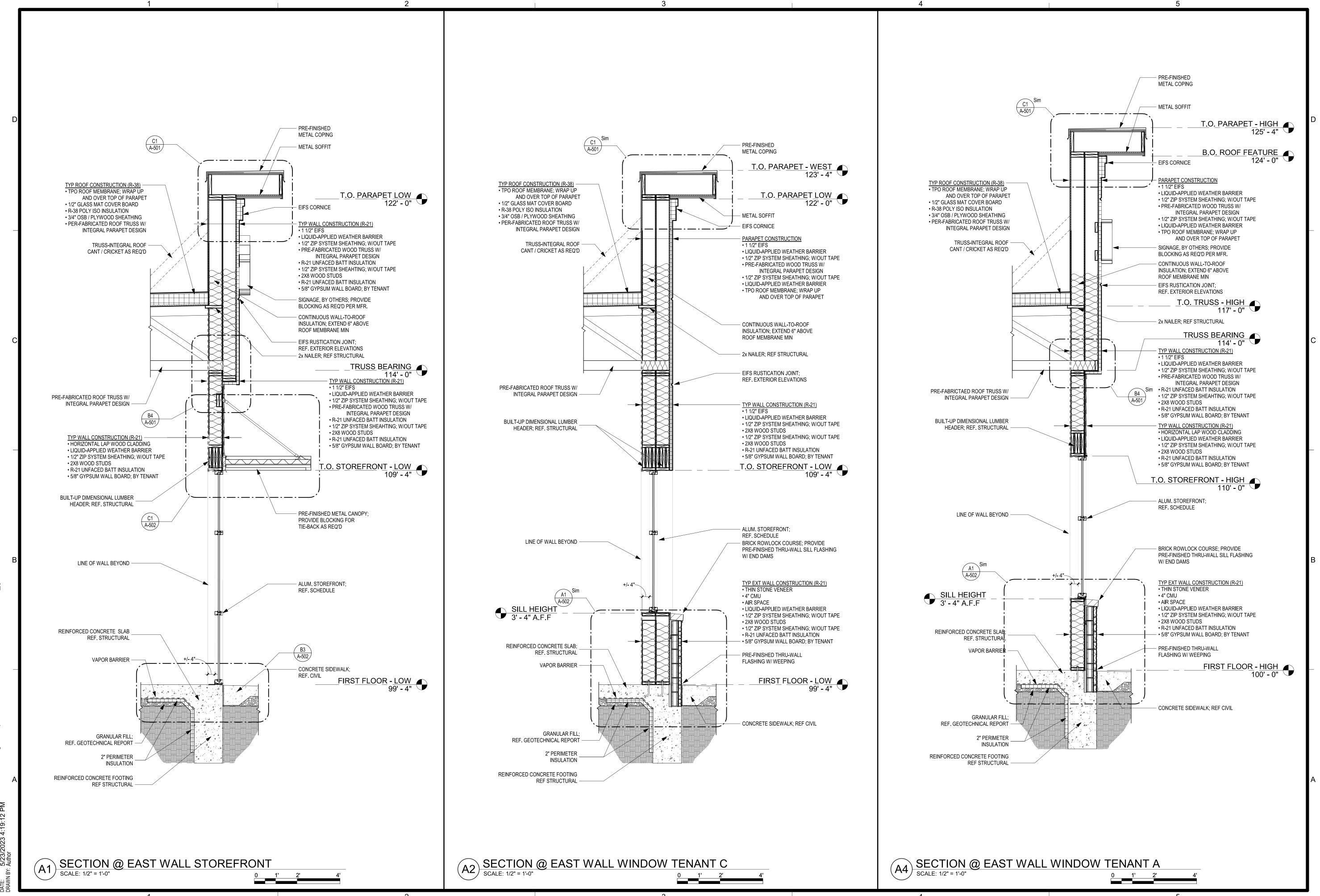
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- PRY SSOURI 640 LL BUILDING OF WEST , MIS OUNTY **ACKSON** SHEI ETS CORE & S STREE LEES SUMMIT,

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SHEET TITLE **EXTERIOR ELEVATIONS** 

230117



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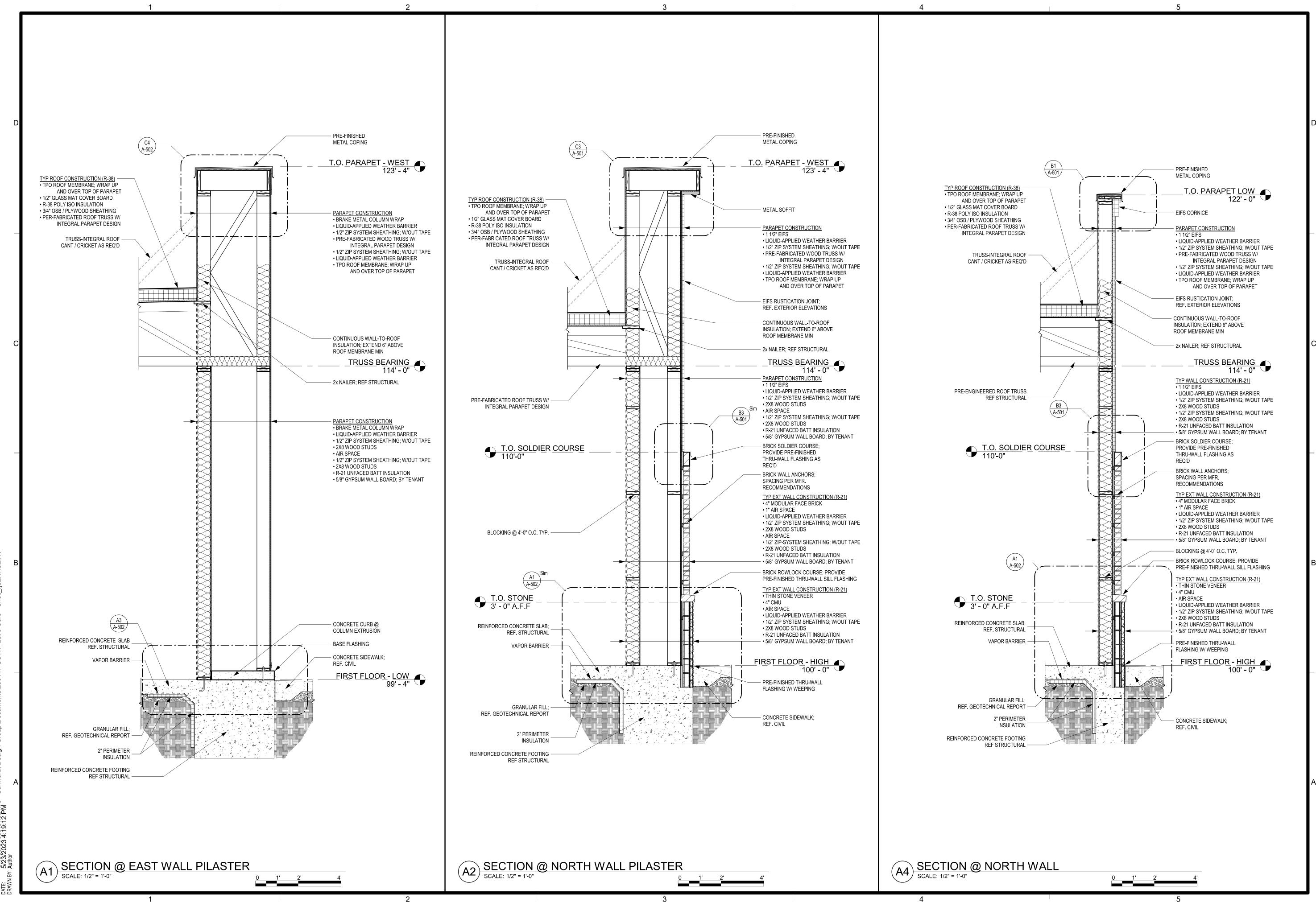
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WALL SECTIONS

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architecture interiors plannir 2231 sw wanamaker rd suite 30 topeka, kansas 66614-4275 phone: 785.273.7540 fax: 785.273.7579 500 north broadway oklahoma city, ok 73102 phone: 405.231.3105

fax: 405.231.3115 23 WH ROW MICHAEL K HAMPTON #MO# A-2008027042

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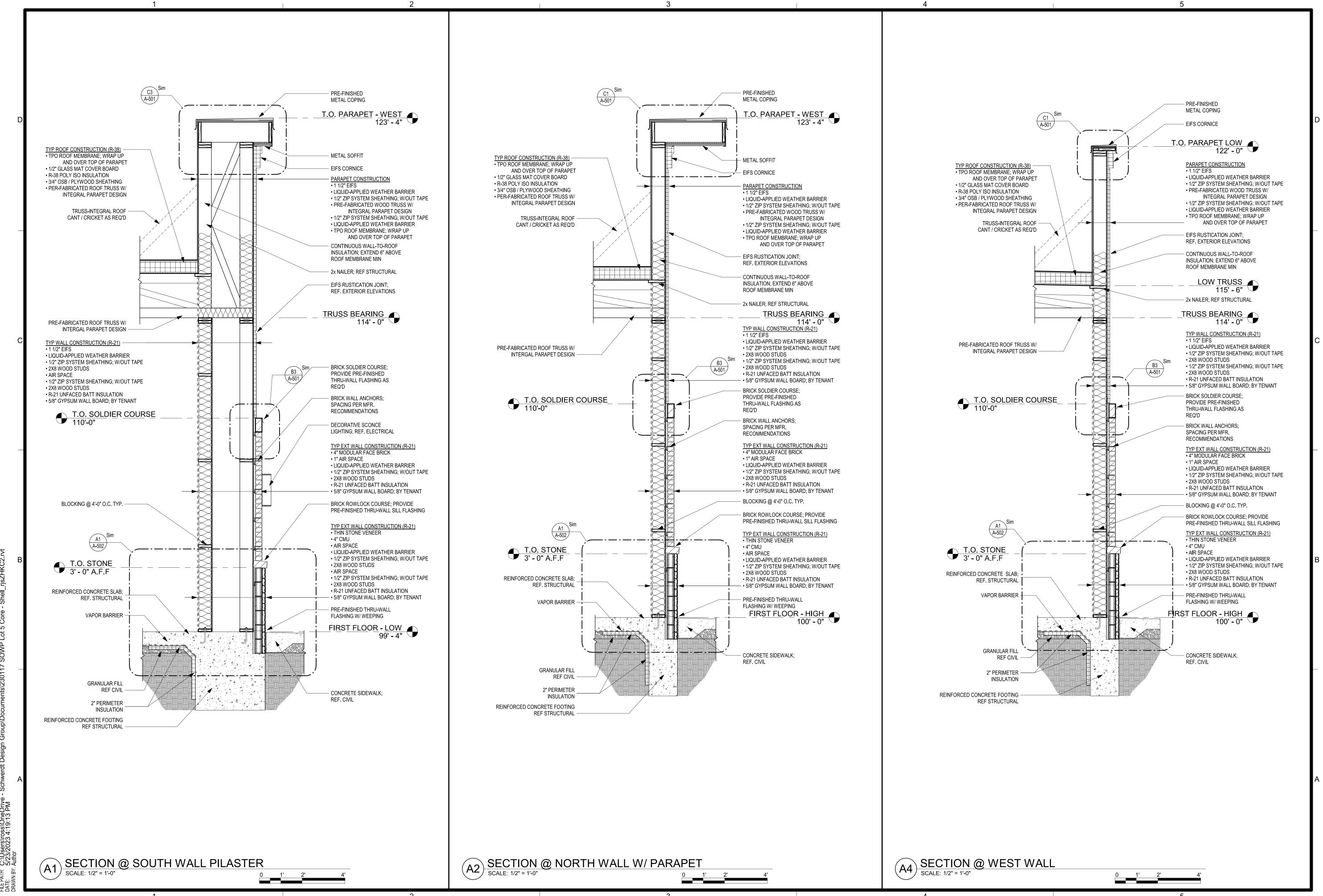
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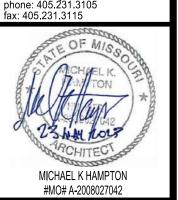
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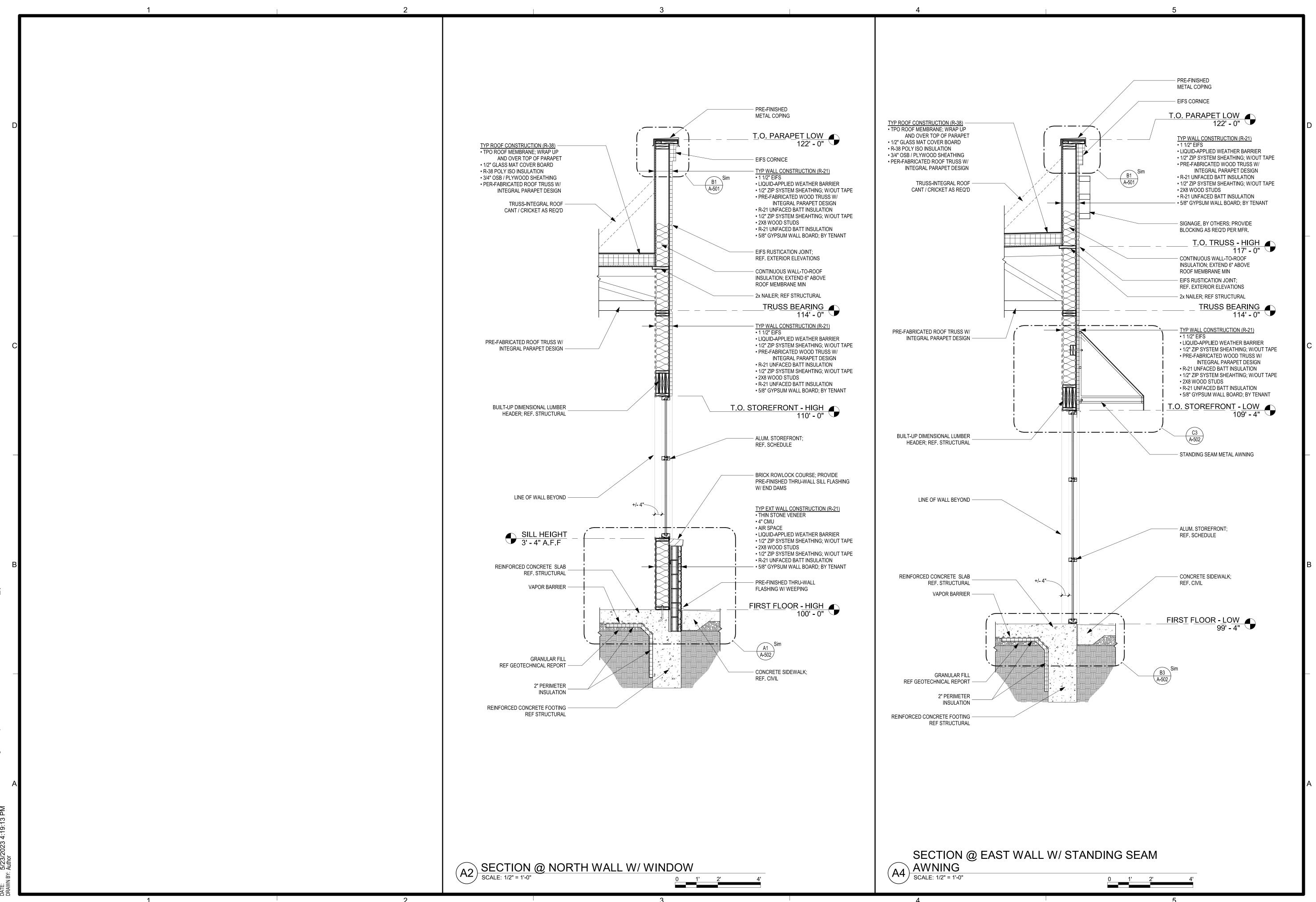
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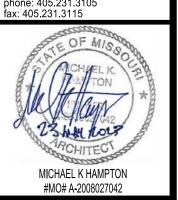
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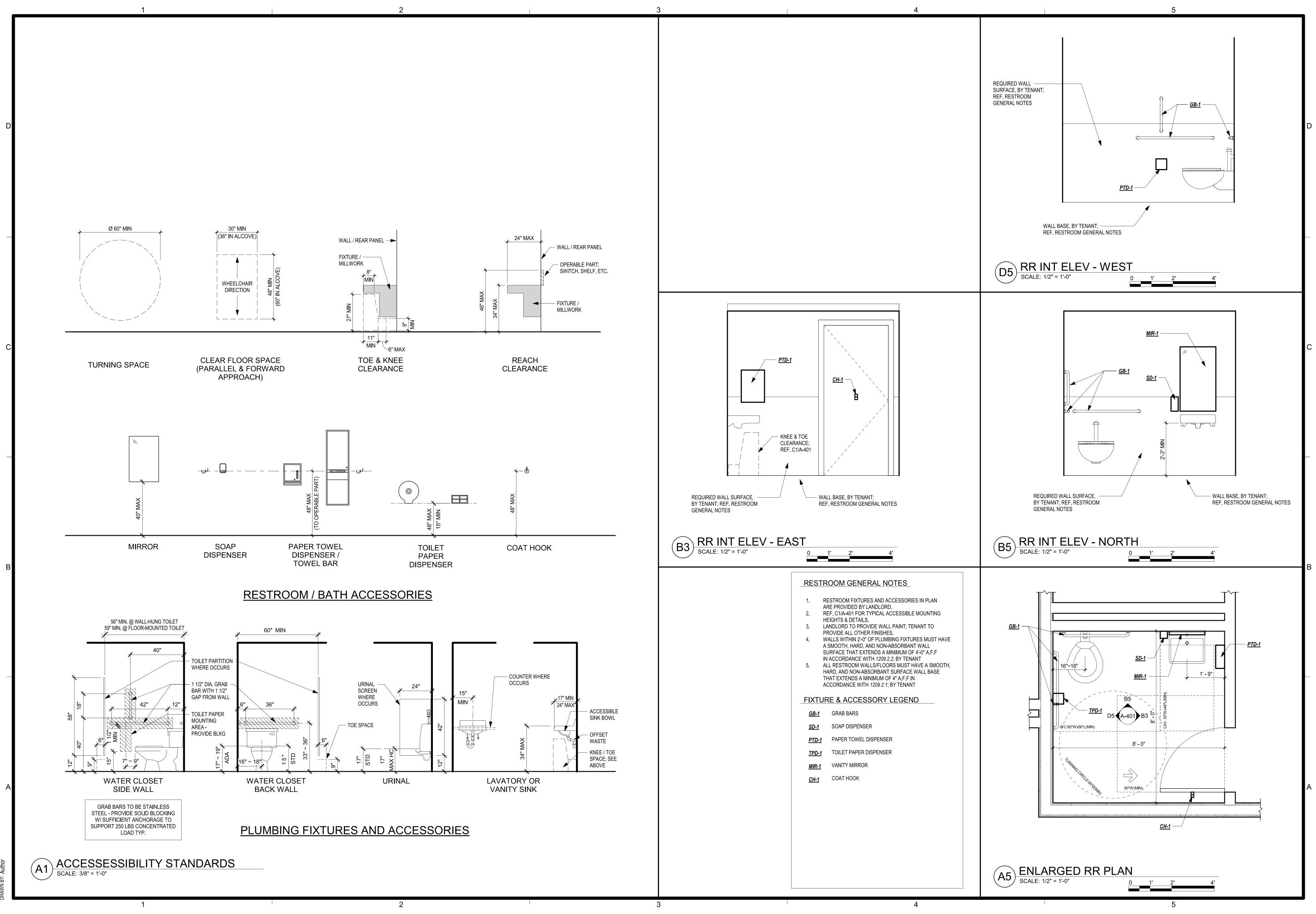
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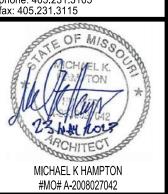
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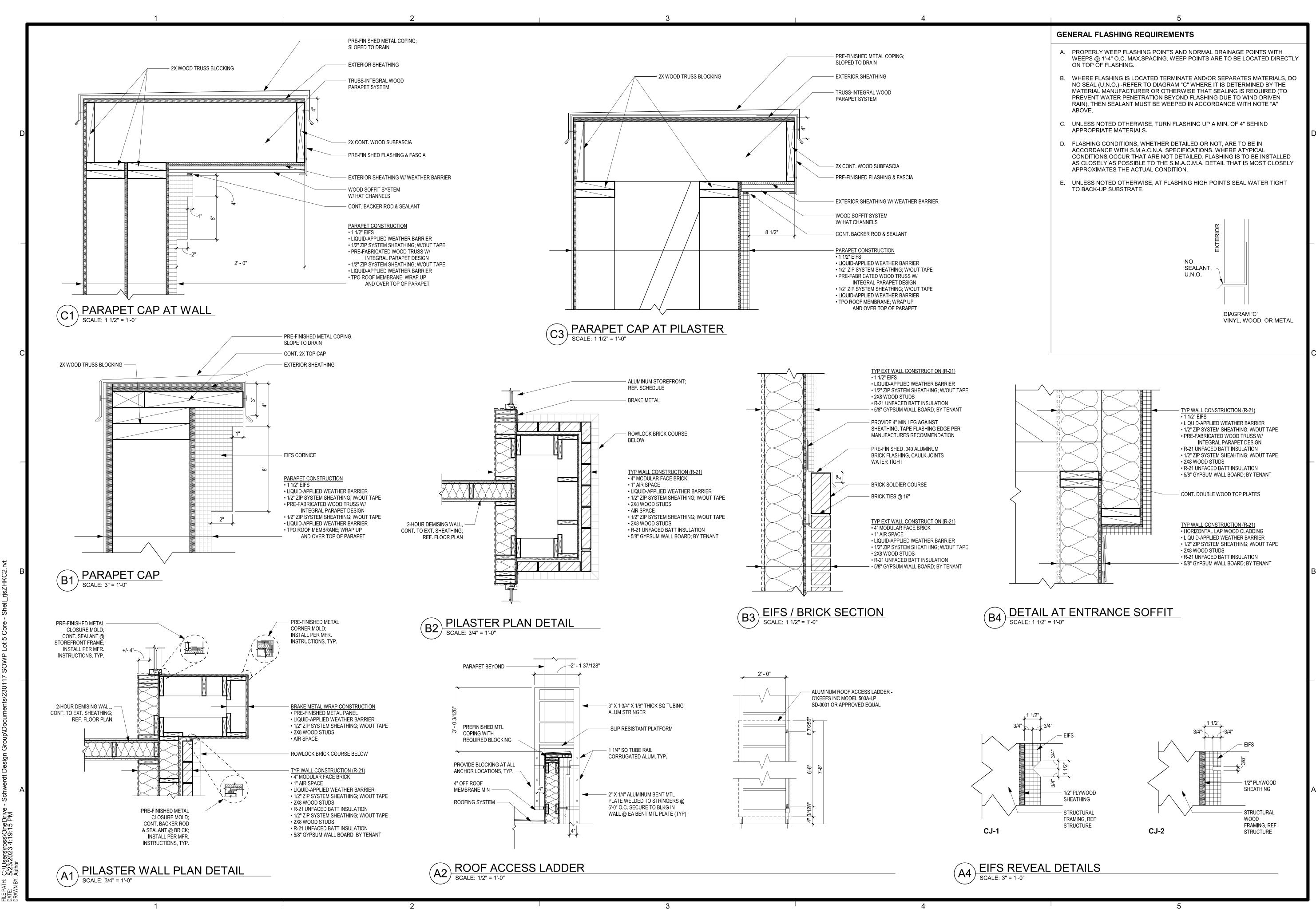
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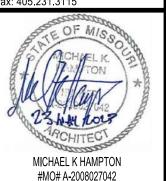
**ENLARGED RESTROOM** PLAN

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BUILDING
F WEST PRYOR LOT 5

CORE & SHELL BUILDING
STREETS OF WEST PF
LEES SUMMIT, JACKSON COUNTY, MISSOUR

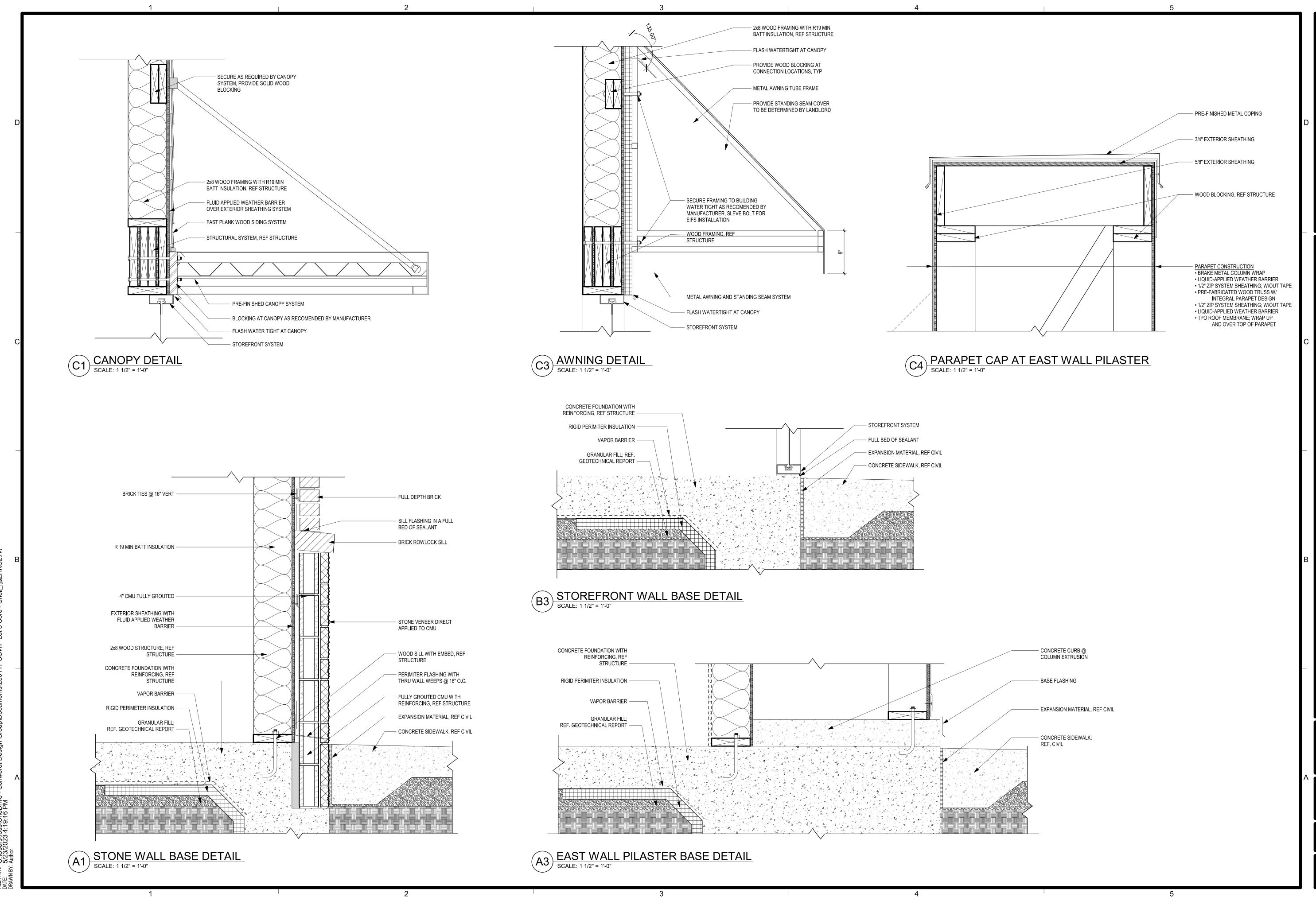
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BUILDING DETAILS

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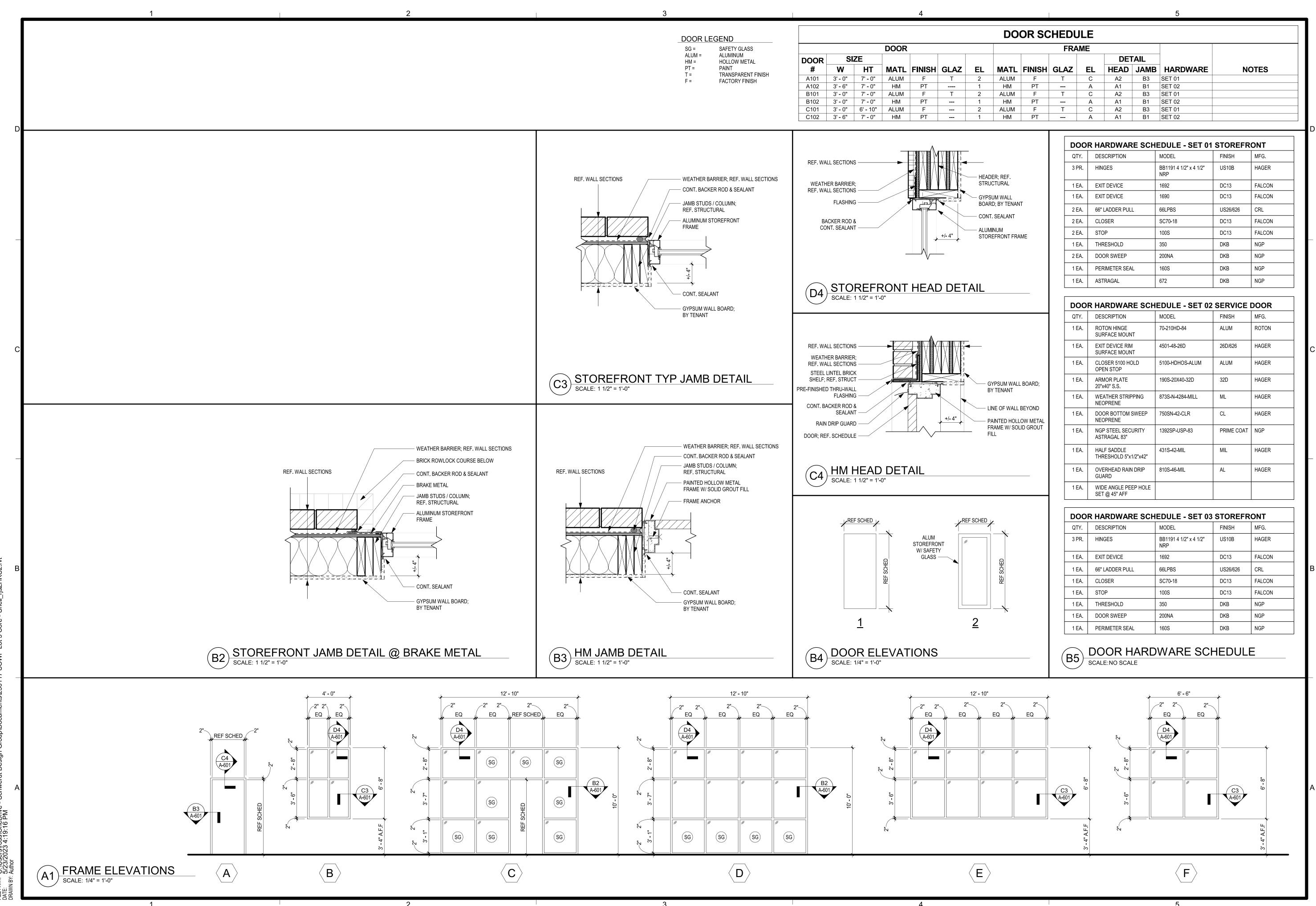
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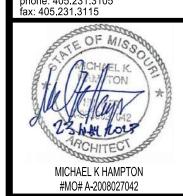
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DOOR / FRAME SCHEDULE & DETAILS

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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.

LIVE LOADS: ROOF: 20 PSF

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

THERMAL FACTOR, Ct: 1.0 WIND LOAD: BASIC WIND SPEED: 115 MPH EXPOSURE CATEGORY: C WIND IMPORTANCE FACTOR, Iw: 1.0 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: 0.1274 S1: 0.0612 SPECTRAL RESPONSE COEFFICIENTS:

Sds: 0.102 Sd1: 0.069 SITE CLASS: C 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: 0.0157 & 0.0291 RESPONSE MODIFICATION FACTOR, R: 6.5 & 3.5 ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

FOUNDATION AND EARTHWORK NOTES:

REFER TO THE GEOTECHNICAL EXPLORATION AND FOUNDATION RECOMMENDATIONS: WEST PRYOR VILLAGE, LEE'S SUMMIT, MISSOURI / COOK, FLATT, & STROBEL ENGINEERS PA, KASNAS CITY, KANSAS (CFS NO 19-5125) / JUNE 15, 2018

THE FOUNDATION BEARING MATERIAL SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED.

AT STEPPED FOOTINGS, THE LOWER FOOTING SHALL BE PLACED FIRST.

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 FOOTINGS. FOUNDATIONS SHALL BEAR DIRECTLY ON A 24-INCH THICK, GEOGRID REINFORCED AGGREGATE PAD (GRAP) DESIGNED AND CONSTRUCTED AS OUTLINED IN 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 BELOW FLOOR SLABS SHALL BE BACKFILLED AND COMPACTED AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

REFER TO GEOTECHNICAL REPORT FOR COMPACTION REQUIREMENTS.

MAINTAIN ALL EXCAVATIONS FREE OF WATER.

**CONCRETE NOTES**:

CONCRETE SHALL HAVE THE FOLLOWING UNLESS OTHERWISE SPECIFIED (SELECT PROPORTIONS FOR CONCRETE IN ACCORDANCE WITH ACI 318):

	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

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

5-20% RETAINED ON 3/4", 1/2", 3/8", NO. 4, NO. 8, NO. 16, NO. 30 AND NO. 50 SIEVES; LESS THAN 5% PASSING NO. 50 SIEVE.

MATERIALS AND ADMIXTURES SHALL NOT CONTAIN CALCIUM CHLORIDE.

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

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.

**MASONRY NOTES:** 

CONSTRUCT MASONRY IN ACCORDANCE WITH THE IBC. MASONRY REQUIRES LEVEL 1 QUALITY ASSURANCE (RE: SPECS). ALL MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND USING THE LOW-LIFT METHOD OF GROUTING. REFER ARCHITECTURAL PLAN FOR ALL BLOCK COURSING.

MASONRY DESIGN IS BASED ON A MINIMUM COMPRESSIVE STRENGTH (F'm) OF ASSEMBLY OF 1,500 PSI.

MASONRY UNITS SHALL MEET THE REQUIREMENTS OF ASTM C-90, GRADE N, WITH A NET AREA COMPRESSIVE STRENGTH OF 1,900 PSI.

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. GROUT SHALL BE PREPARED IN ACCORDANCE WITH ASTM C-476, WITH A MINIMUM

COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.

REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.

LAP SPLICE BAR REINFORCEMENT FOR MASONRY PER LAP SCHEDULE AND JOINT REINFORCEMENT A MINIMUM OF 6 INCHES.

CONCRETE MASONRY UNITS BELOW GRADE SHALL BE SOLID GROUTED.

CELLS WITH REINFORCING SHALL BE SOLID GROUTED AND VIBRATED.

STRUCTURAL STEEL NOTES:

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE

WIDE FLANGE SHAPES (W, WT): ASTM A992 (Fy=50 KSI) OTHER ROLLED SHAPES (M, S, HP, C, L): ASTM A36 (Fy=36 KSI) STEEL PIPE: ASTM A53, GRADE B (Fy=35 KSI) SQUARE AND RECTANGULAR TUBE: ASTM A500, GRADE B (Fy=46 KSI) ANCHOR BOLTS: ASTM F1554, GRADE 36 HEADED ANCHOR STUDS: ASTM A108, GRADES 1010 TO 1020 PLATES AND BARS: ASTM A36 (Fy=36 KSI)

SHEAR CONNECTORS AND HEADED WELDED STUDS OF TYPE AND SIZE NOTED SHALL

STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH GOOD STANDARD PRACTICE AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

PROPER FIT IN THE FIELD OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH GOOD STANDARD PRACTICE AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE FABRICATOR SHALL BE RESPONSIBLE FOR THE DESIGN AND PERFORMANCE OF ALL CONNECTIONS NOT FULLY DESIGNED OR DETAILED ON THE CONTRACT DOCUMENTS.

ANCHOR BOLTS SHALL BE ASTM F1554, A36 UNO. ANCHOR BOLTS SHALL BE SET WITH TEMPLATES WITH THE APPROPRIATE BOLT PROJECTION, 4" MINIMUM UNO. PROVIDE DOUBLE NUTS AND DOUBLE WASHERS FOR STEEL COLUMN ANCHOR BOLTS TO ALLOW FOR ADJUSTMENT IN BASE PLATE ELEVATION.

NON-SHRINK GROUT UNDER BASE PLATES SHALL BE NON-METALLIC WITH A MINIMUM 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" $\emptyset$ , 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 **WOOD NOTES**:

GENERAL STRUCTURAL WOOD FRAMING SHALL MEET THE MINIMUM STRESS REQUIREMENTS FOR DOUGLAS-FIR #2 AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY.

ROOF SHEATHING SHALL BE 5/8" (19/32" MIN) PLYWOOD WITH A SPAN RATING OF AT LEAST 32/16. PANELS SHALL BE NAILED WITH 10d NAILS AT 6" O.C. AT PANEL EDGES 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 APPROVED TESTING AGENCY.

ALL WOOD-TO-WOOD CONNECTIONS SHALL MEET THE MINIMUM NAILING REQUIREMENTS OF THE BUILDING CODE.

PROVIDE SIMPSON CONNECTION HARDWARE AS SHOWN ON THE DRAWINGS. SUBSTITUTIONS MUST BE APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO USE. INSTALL CONNECTION HARDWARE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

WALL SHEATHING SHALL BE 1/2" OSB ON THE EXTERIOR FACE OF ALL EXTERIOR WALLS. PANELS SHALL BE NAILED WITH 10d GALVANIZED NAILS AT 4" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. ALL PANEL EDGES SHALL BE BLOCKED.

INSTALL ALL ROOF PLYWOOD SHEATHING WITH THE LONG DIMENSION OF THE PANEL PERPENDICULAR TO THE SUPPORTS WITH A MINIMUM OF TWO SPANS FOR EACH PANEL. STAGGER ALL END JOINTS. PROVIDE 1/8" SPACE AT PANEL JOINTS FOR EXPANSION PER APA.

PREFABRICATED WOOD TRUSS NOTES:

CHORD AND 10 PSF ON THE BOTTOM CHORD.

SPECIAL INSPECTIONS OF THE FABRICATION PROCESS OF PRE-FABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE IBC.

TRUSSES SHALL BE CONFIGURED TO FOLLOW FINAL ROOF LINES, UNLESS NOTED

TRUSSES SHALL BE DESIGNED FOR ALL LOAD COMBINATIONS REQUIRED BY THE BUILDING CODE. IN NO CASE SHALL THE DEAD LOAD BE LESS THAN 15 PSF ON THE TOP

TRUSS MANUFACTURER SHALL SUPPLY ALL TRUSS CONNECTIONS USING PREFABRICATED STEEL CONNECTORS AS REQUIRED.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY AND PERMANENT BRACING IN ADDITION TO ANY BRACING INDICATED ON THE PLANS.

ALL TEMPORARY AND PERMANENT BRACING FOR INDIVIDUAL TRUSS MEMBERS SHALL BE DESIGNED BY AND STAMPED BY A PROFESSIONAL ENGINEER PROVIDED BY CONTRACTOR AND/OR TRUSS MANUFACTURER. APPLIED ROOF SHEATHING AND OTHER ROOFING MATERIALS SHALL NOT BE ASSUMED TO PROVIDE SUFFICIENT BRACING FOR TRUSS CHORDS.

SHOP FABRICATED WOOD TRUSSES SHALL MEET DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES BY THE TRUSS PLATE INSTITUTE. PROVIDE PERMANENT AND TEMPORARY BRACING ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

COORDINATE ALL TRUSS DETAILS WITH ARCHITECTURAL PLANS.

SPLICE & DEVELOPMENT LENGTHS FOR REINFORCEMENT (UNLESS NOTED OTHERWISE ON THE DRAWINGS) fy = 60,000 psi f'c = 3,000 psi

	LENGTH OF LA	APPED SPLICES	LENGTH O	F END ANC	HORAGE FOR			l
BAR	FOR REINFO	ORCEMENT	DEVELOPM	ENT OF REI	NFORCEMENT	ноок	BAR	l
SIZE	(INC	HES)		(INCHES)		LENGTH	SIZE	
	TOP BARS*	OTHERS	TOP BARS*	OTHERS	<b>HOOKED BARS</b>			l
3	28	22	22	17	9	6	3	
4	38	29	29	22	11	8	4	
5	47	36	36	28	14	10	5	
6	56	43	43	33	17	12	6	
7	81	63	63	48	20	14	7	
8	93	72	72	55	22	16	8	
9	105	81	81	62	25	20	9	
10	118	91	91	70	28	22	10	
11	131	101	101	78	31	24	11	
14			121	93	38	31	14	
18			161	124	50	41	18	ı

\*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.

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.

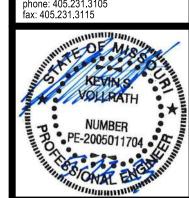
THE DEVELOPMENT LENGTH FOR HOOKED BARS, SIZE 11 AND SMALLER, PLACED WITH SIDE COVER GREATER THAN OR EQUAL TO 2 1/2" AND COVER ON THE BAR EXTENSION BEYOND THE HOOD (90° HOOK ONLY) GREATER THAN OR EQUAL TO 2", MAY BE MULTIPLIED BY 0.7.

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 D	PRAWINGS)
LOCATION	MINIMUM COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER: #6 AND LARGER #5 AND SMALLER	2" 1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:	1 1/2
SLABS, WALLS, AND JOISTS: #14 AND LARGER #11 AND SMALLER	1 1/2" 3/4"
BEAMS AND COLUMNS	1 1/2"

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2023-05-23

**GENERAL NOTES** 

CERTUS =

STRUCTURAL ENGINEER

900 S. Kansas Avenue; Suite 400

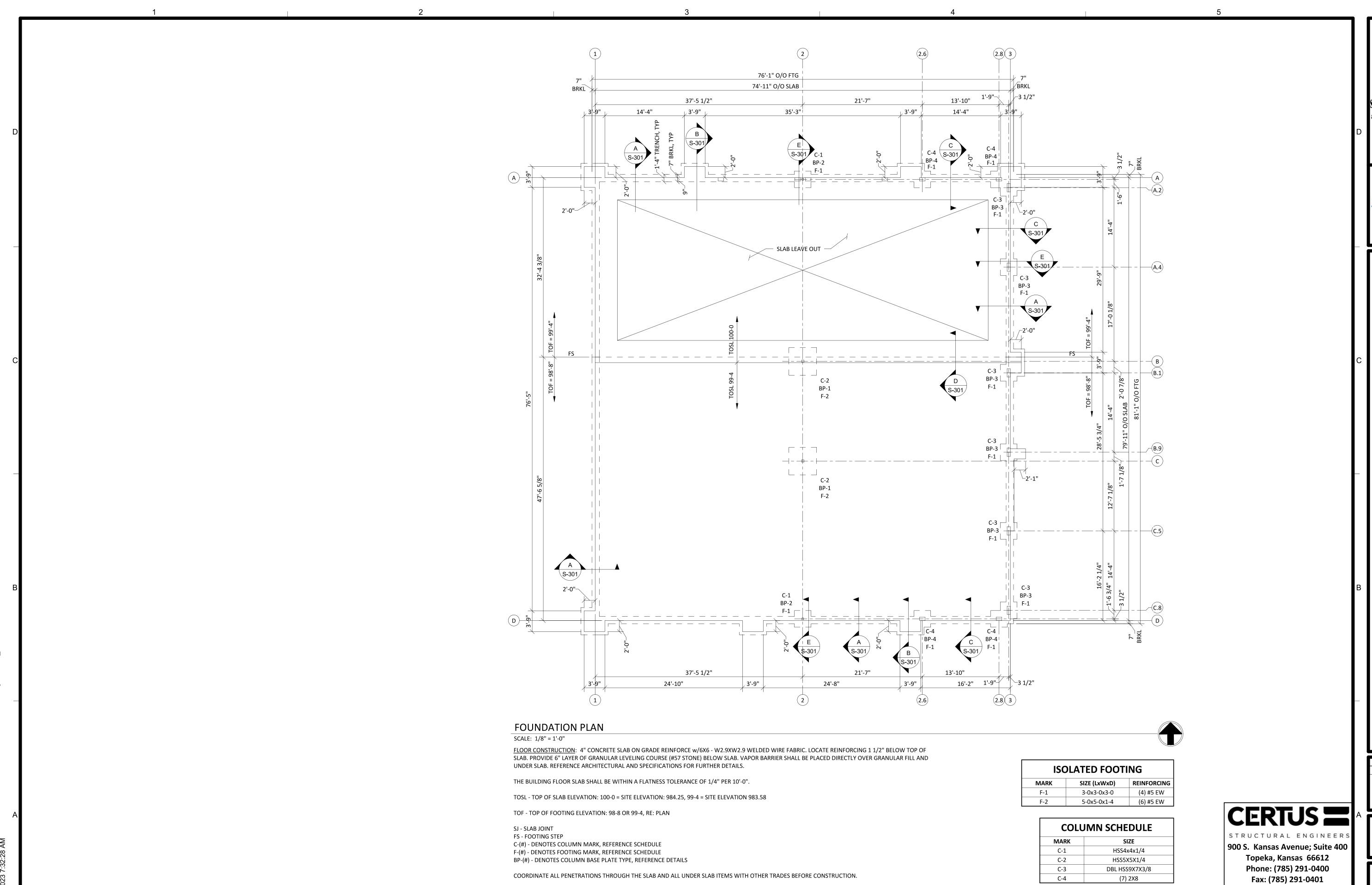
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Fax: (785) 291-0401 Proj #:01190008.120 **Certificate Of Authorization** 

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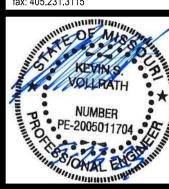
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230117



VERIFY ALL DIMENSIONS SHOWN WITH ARCHITECTURAL AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION. INFORM ENGINEER OF ALL DISCREPANCIES.

500 north broadway oklahoma city, ok 73102 phone: 405.231.3105 fax: 405.231.3115



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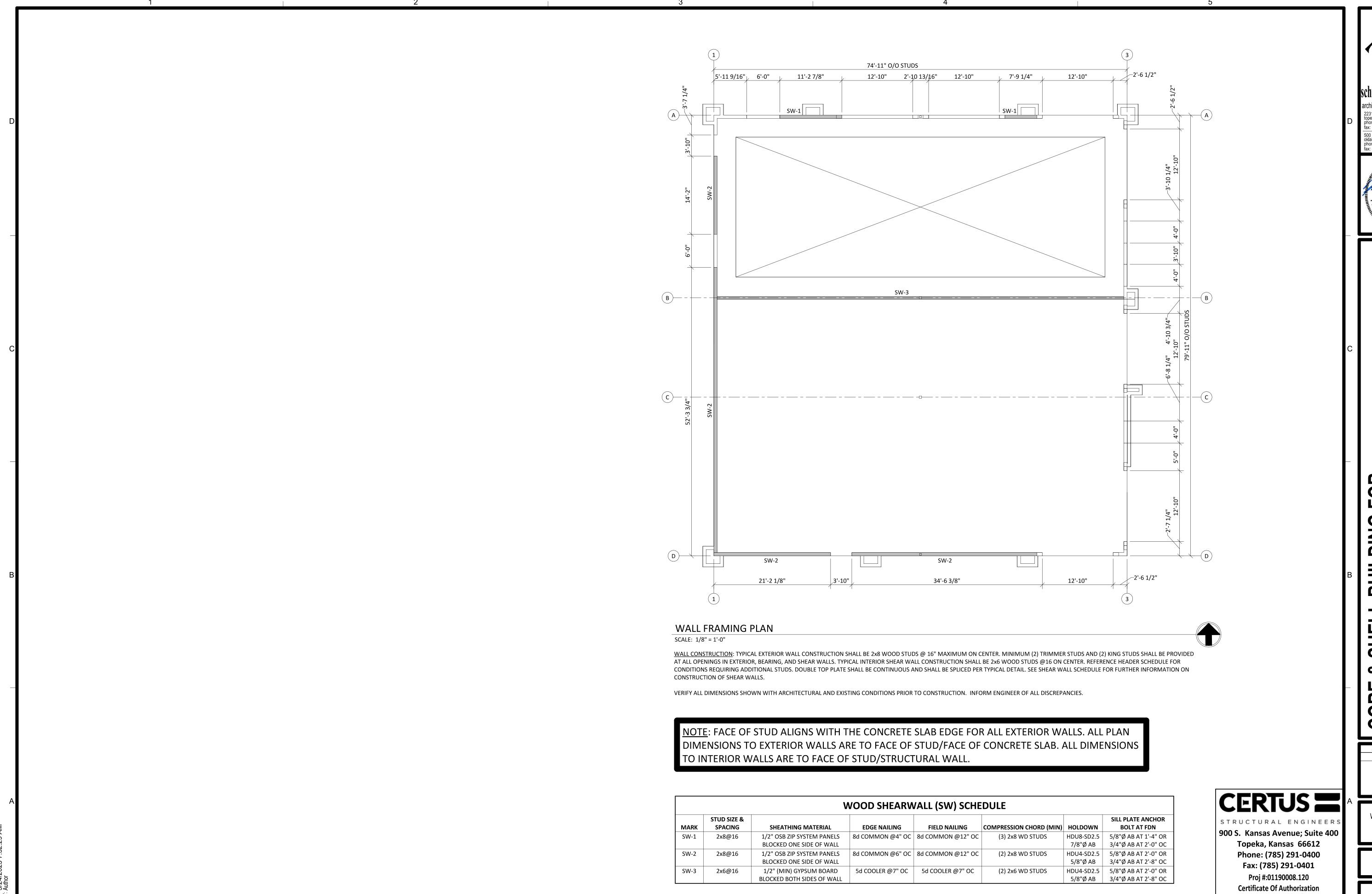
FOUNDATION PLAN

230117

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schwerdt design ground architecture interiors plan 2231 sw wanamaker rd topeka, kansas 66614-4275 phone: 785.273.7540 fax: 785.273.7579





LOT 5

HELL BUILDING FOR TS OF WEST PRYC

JBMISSION DATES 2023-05-23

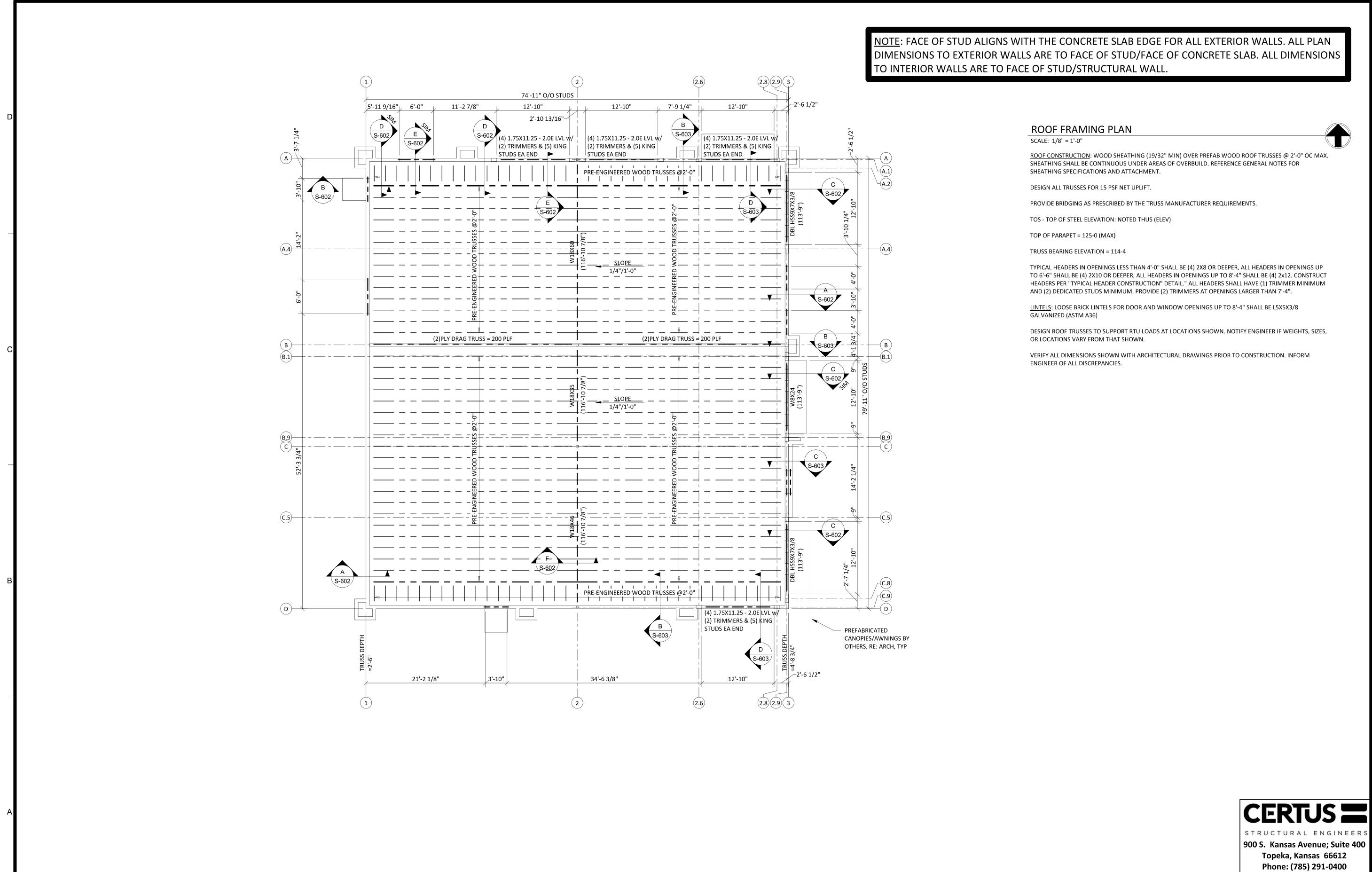
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SHEET TITLE WALL FRAMING PLAN

PROJECT NUMBER **230117** 

SHEET NUMBER
S-102

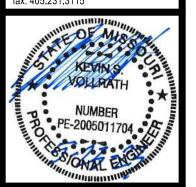
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# HELL BUILDING FOR -S OF WEST PRYOR LOT

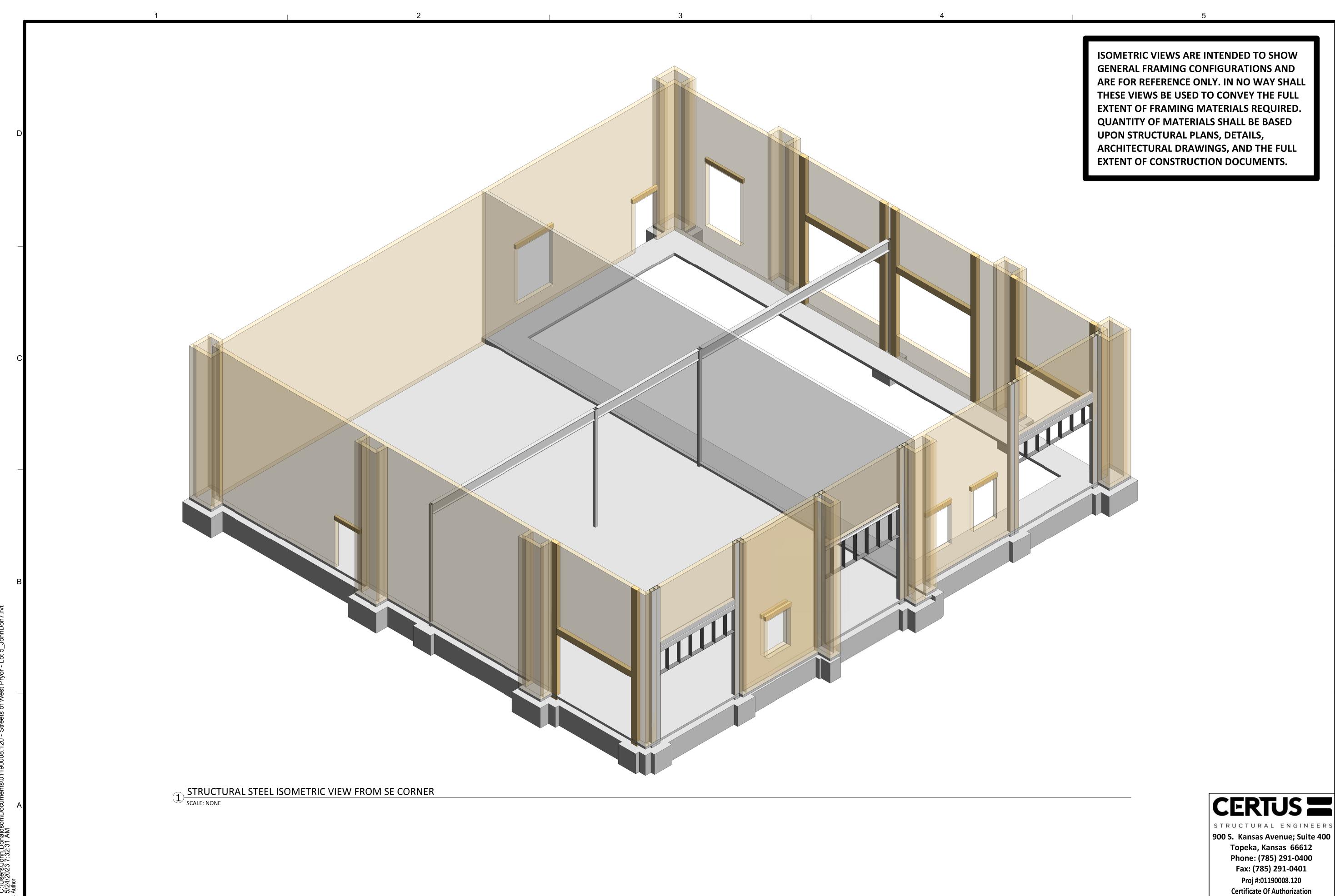
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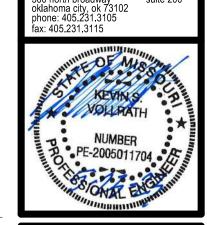
SHEET TITLE ROOF FRAMING PLAN

PROJECT NUMBER **230117** 

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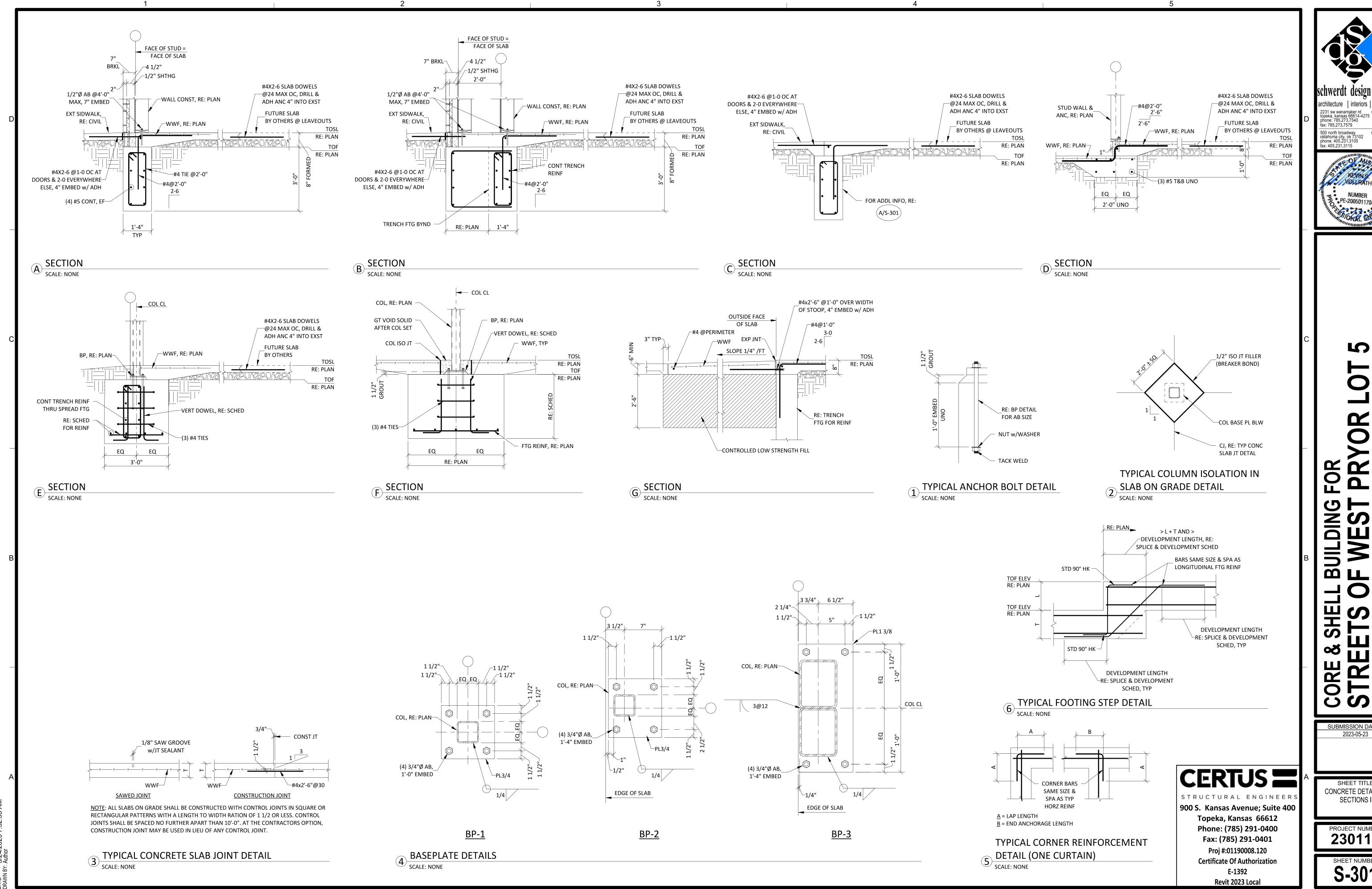
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SHEET TITLE FRAMING ISOMETRIC

PROJECT NUMBER **230117** 

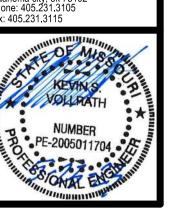
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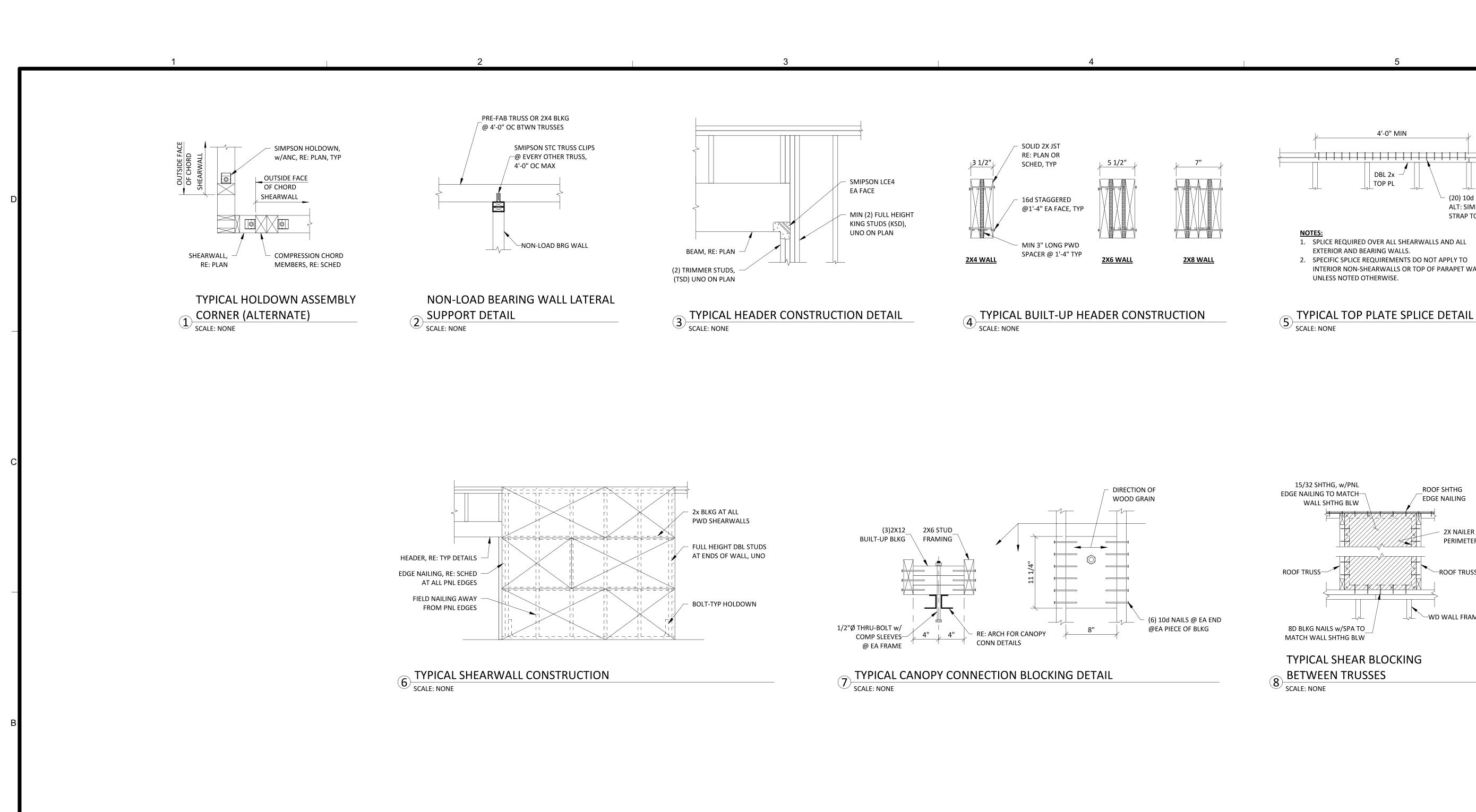


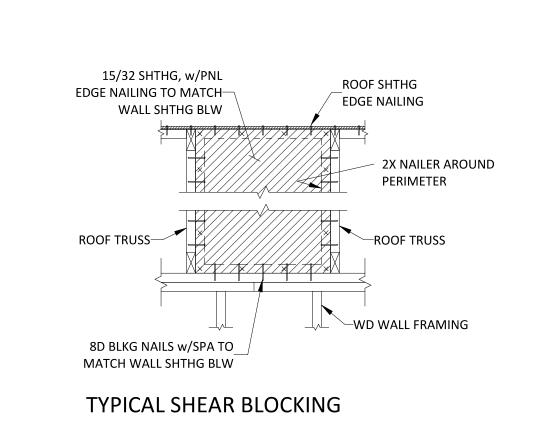
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2023-05-23

CONCRETE DETAILS & SECTIONS I

230117





4'-0" MIN

DBL 2x —

INTERIOR NON-SHEARWALLS OR TOP OF PARAPET WALLS

(20) 10d

ALT: SIMPSON ST6236

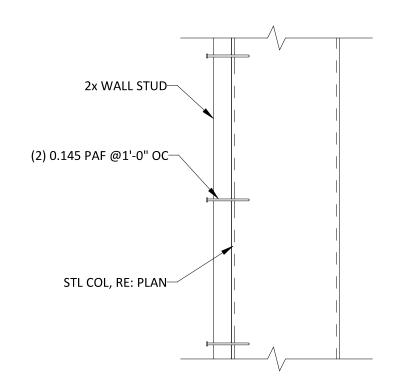
STRAP TO SIDE

TOP PL

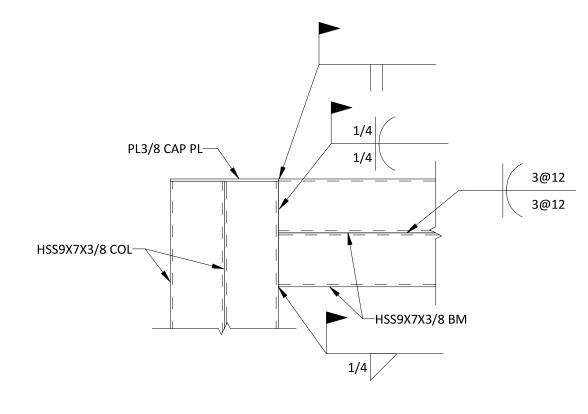
EXTERIOR AND BEARING WALLS.

UNLESS NOTED OTHERWISE.

BETWEEN TRUSSES

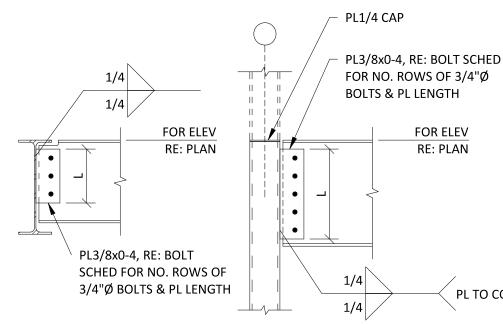


TYPICAL SHEARWALL TERMINATION AT STEEL COLUMN DETAIL SCALE: NONE



TYPICAL TUBE COLUMN TO BEAM CONNECTION

SCALE: NONE



**BOLT SCHEDULE** 

CONNECTION | LENGTH | (#) ROWS

W12, W14 9"

W24, W27 1'-9"

W30, W33 2'-6" NOTE: BOLTS SHALL BE 3/4"Ø

A325 AT 3" CENTERS, UNLESS

NOTED OTHERWISE

W16

BEAM SIZE (L) OF BOLTS

1'-0"

1'-3"

1'-6"

TYPICAL BM TO BM CONN TYPICAL BM TO COL CONN

TYPICAL STEEL CONNECTIONS DETAIL (SHEAR TABS)

SCALE: NONE

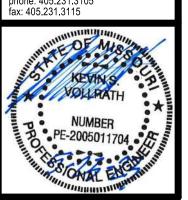
STRUCTURAL ENGINEER

900 S. Kansas Avenue; Suite 400 Topeka, Kansas 66612

Phone: (785) 291-0400 Fax: (785) 291-0401 Proj #:01190008.120 **Certificate Of Authorization** E-1392 Revit 2023 Local

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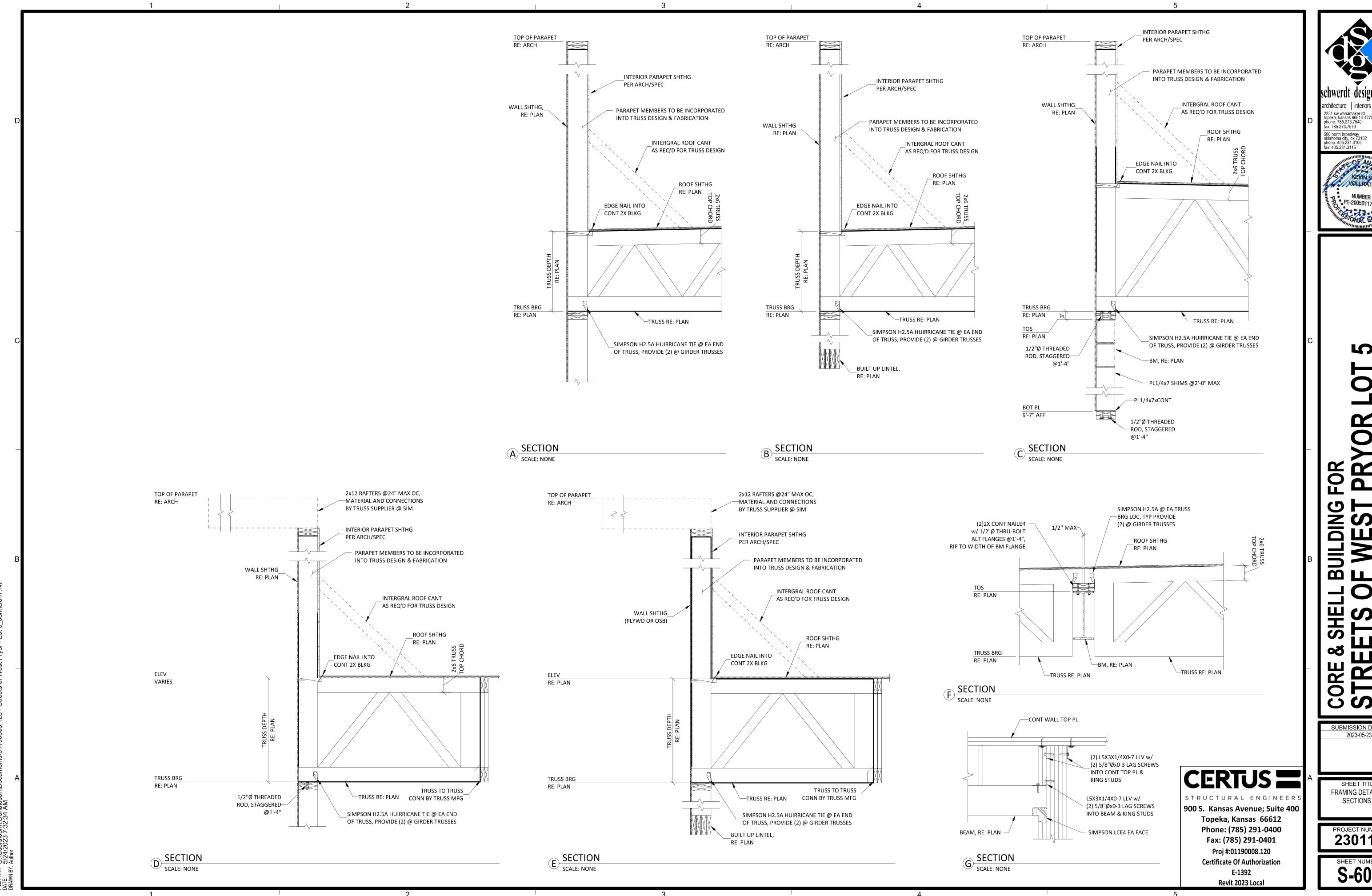
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FRAMING DETAILS & SECTIONS I

230117



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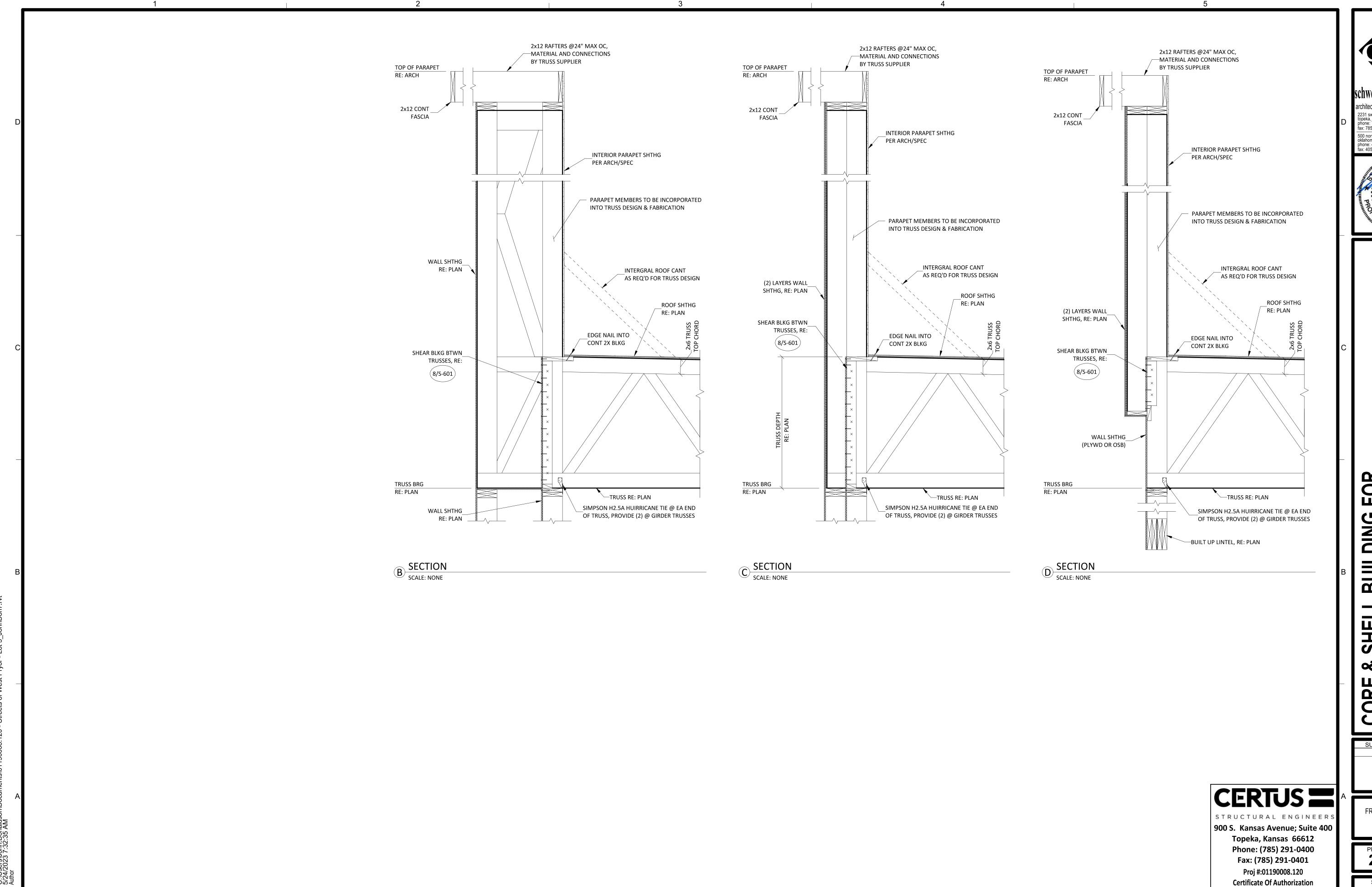
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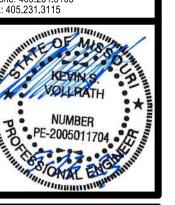
2023-05-23

FRAMING DETAILS & SECTIONS II

230117



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5 OR OR FOR SHELL BUILDING I TS OF WEST F, MISSOURI

SUBMISSION DATES 2023-05-23

SHEET TITLE FRAMING DETAILS & SECTIONS III

PROJECT NUMBER **230117** 

SHEET NUMBER S-603

E-1392 Revit 2023 Local

## 15000 - MECHANICAL SPECIFICATIONS

#### <u>SECTION 15000 - MECHANICAL REQUIREMENTS</u> GENERAL REQUIREMENTS

- ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING, MECHANICAL & PLUMBING CODES, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL
- OTHER APPLICABLE CODES. FURNISH & INSTALL ALL LABOR & MATERIALS REQUIRED FOR COMPLETE, FUNCTIONING, MECHANICAL & PLUMBING SYSTEMS W/ ALL ASSOCIATED EQUIPMENT & APPARATUS AS SHOWN ON PLANS. "PROVIDE" MEANS TO FURNISH & INSTALL.
- OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL MAKE ARRANGEMENTS FOR MODIFICATIONS TO WATER, GAS & SEWER CONNECTIONS TO VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO SUBSEQUENT
- ALLOWANCE WILL BE MADE IN CONTRACT FOR ANY ERROR OR NEGLIGENCE ON CONTRACTOR'S PART. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS. EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED &
- INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS. WARRANT TO OWNER QUALITY OF MATERIAL, EQUIPMENT, WORKMANSHIP & OPERATION
- OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM & AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER. ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM F 84.

ROOF PENETRATIONS — MADE BY AUTHORIZED ROOFING CONTRACTOR WHEN REQUIRED.

#### <u>SECTION 15100 - PLUMBING</u>

- WATER PIPING ALL WATER PIPING SHALL BE 95-5 TIN-ANTIMONY JOINED TYPE L COPPER. INSULATE W/ FIBERGLASS W/ ASJ & PVC COVERS. THINCKNESS IN ACCORDANCE W/ ASHRAE 90.1.
- WASTE & VENT PIPING CI BELL & SPIGOT OR HUBLESS CI W/ NEOPRENE GASKET FITTINGS W/ STAINLESS STEEL BANDS. SCHED 40 PVC W/ SOLVENT WELDS MAY BE USED WHERE ALLOWED BY LOCAL CODE. PVC NOT ALLOWED IN PLENUMS.
- ROOF/STORM DRAIN PIPING CI BELL & SPIGOT OR HUBLESS CI W/ NEOPRENE GASKET FITTINGS W/ STAINLESS STEEL BANDS. SCHED 40 PVC W/ SOLVENT WELDS MAY BE USED WHERE ALLOWED BY LOCAL CODE. PVC NOT ALLOWED IN PLENUMS. INSULATE W/ MIN 1/2" FIBERGLASS PIPE WRAP W/ ASJ JACKET.
- GAS PIPING PROVIDE SCHED 40 CONT. WELD CARBON STEEL W/ CORRESPONDING FITTINGS PROVIDE THREADED FITTINGS PROVIDE IRON BODY-BRASS PLUG GAS STOPS PAINT ALL EXPOSED GAS PIPING ON THE EXTERIOR OF THE BUILDING INCLUDING ON

#### . VALVES

- BALL VALVES 2" & UNDER BRONZE FULL PORT W/ TEFLOW SEATS, BRONZE BALL & INSULATED HANDLE
- BALANCING VALVES ARMSTRONG MODEL CBV I OR CBV II, 125 PSI-WP AT 250 DEGREES F., METER CONNECTIONS W/ BUILT-IN CHECK VALVES SCREWED OR FLANGED FNDS PROVIDE POLYLIRETHANE INSULATION COVER CHECK VALVES - 2" 7 SMALLER SCREWED OR SOLDER BRONZE CHECK VALVE, 200
- PSI-WOG/125 PSI-WSP, TEFLON OR BRONZE DISC & SEAT RING. 2-1/2" & LARGER FLANGED, ASTM 126 IRON BODY, BRONZE TRIMMED, 200 PSI-WOG/125 PSI-WSP. BUTTERFLY VALVES - 3" & LARGER LEVER ASTM A126 CI DRILLED & TAPPED FULL LUG BODY. 200 PSI-WOG, EXTENDED NECK, BRONZE DISC, STAINLESS STEEL STEM,
- FIFID-REPLACEABLE FPDM SLEEVE & STEM SEALS. EQUIVALENT VALVE MANUFACTURERS: MILWAUKEE, STOCKHAM, POWELL, RED-WHITE. CRANE, APPOLO, MUELLER, MUESSCO, WATTS, HAYS, ROCKWELL-NORDSTROM.

#### FIXTURES - SEE SCHEDULES

- FIXTURES: AMERICAN STANDARD, KOHLER, CRANE, ZURN, TOTO STAINLESS STEEL FIXTURES: ELKAY, JUST, MOEN COMMERCIAL
- FITTINGS & SUPPORTS: JOSAM, SMITH, WADE, ZURN, OR JONESPEC SEATS: CHURCH. OLSONITE. BEMIS OR BENEKE
- DRINKING FOUNTAINS: HALSEY TAYLOR, ELKAY, OASIS, OR HAWS. TRIM BY DELTA, ELJER, KOHLER, AMERICAN STANDARD, CRANE, SLOAN.
- FLUSHVALVES: SLOAN, ZURN, TOTO DRAINS BY WADE, ZURN, WOODFORD, SMITH, JOSAM.
- ROOF DRAINS CAST IRON ROOF DRAIN W/ FLANGE, CI MUSHROOM DOME. 2" DAM
- FOR OVERFLOW DRAINS WALL HYDRANTS JOSAM SERIES 71000 W/ CONNECTIONS FOR 3/4" PIPE & HOSE. NON-FREEZING W/ KEY, VACUUM BREAKER, LOCKING COVER. EQUIVALENT BY J.R. SMITH, WADE, WOODFORD OR ZURN.

EQUIPMENT - SEE SCHEDULES

#### WATER HEATER - STATE, RHEEM, NATIONAL, A.O. SMITH. PORCELAINIZED GLASSLINED TANK. COLD WATER INLET DROP TUBE. MAGNESIUM ANODE RODS. U.L. SEAL, 160 PS

- FACTORY TEMPERATURE & PRESSURE RELIEF VALVE. N.S.F. CONSTRUCTION. 3 YR SUBMERSIBLE SUMP PUMPS - SIMPLEX/DUPLEX SUBMERSIBLE PUMP SYSTEM AS SCHED/SHOWN. PUMP CASING ONE PIECE CAST IRON W/ SUPPORT LEGS, CI SUCTION STRAINER. VERTICAL MOTOR, NEMA-6, NOT LESS THAN HP SCHED & 1750 RPM.
- AUTO-RESET THERMAL /OVERLOAD PROTECTION. RECIRCULATION PUMPS - HORIZONTAL, OIL-LUBRICATED, ALL BRONZE. NON-OVERLOADING MOTOR.

- A. PROVIDE UNIONS OR FLANGED JOINTS IN EACH PIPE LINE PRECEDING CONNECTIONS TO EQUIPMENT TO ALLOW REMOVAL FOR REPAIR OR REPLACEMENT, PROVIDE ALL SCREWED & CONTROL VALVES W/ UNIONS ADJACENT TO EACH CONNECTION. PROVIDE SCREWED END VALVES W/ UNION ADJACENT TO VALVE UNLESS VALVE CAN BE OTHERWISE EASILY REMOVED FROM LINE
- AFTER PIPING IS IN PLACE TEST LINES TO ENSURE NO LEAKS. ALL PIPING & EQUIPMENT SHALL BE SUPPORTED PROPERLY FROM STRUCTURE. ESCUTCHEONS - PROVIDE NICKEL-BRASS OR CHROME PLATED ON ALL EXPOSED PIPES WHEN PASSING THRU WALL OR CEILING OF FINISHED ROOMS.
- VERIFY FLOOR MATERIALS USED FROM ARCHITECTURAL PLANS & PROVIDE PROPER CLEANOUT TOPS, WHERE THEY OCCUR IN CARPET, QUARRY TILE, VINYL TILE OR CERAMIC TILE.

PROVIDE WATER HAMMER ARRESTORS FOR ALL PLUMBING BANKS W/ FIXTURES

UTILIZING FLUSH VALVES IN ANY CAPACITY. LOCATE ARRESTER BETWEEN LAST TWO

#### <u>SECTION 15300 - HVAC</u>

FIXTURES SERVED ON BRANCH LINE.

GENERAL A. PROVIDE COMPLETE HVAC SYSTEM AS SHOWN ON DRAWINGS INCLUDING ALL NECESSARY EQUIPMENT, DUCTWORK, DIFFUSERS, GRILLES, & FILTERS. PROVIDE OPERATING & MAINTENANCE INSTRUCTIONS ON ALL EQUIPMENT.

#### JURISDICTION.

A. HVAC DUCTWORK SHALL BE GALV SHEET METAL OF GAUGES & JOINT TYPES SPECIFIED IN SMACNA MANUAL. PROVIDE TURNING VANES IN ELBOWS.

ALL HVAC WORK SHALL BE DONE IN STRICT ACCORDANCE W/ ALL REQUIREMENTS OF

LOCAL BUILDING CODE, ASHRAE, NEC, NFPA, & ALL OTHER APPLICABLE CODES HAVING

- VOLUME DAMPERS SHALL BE MANUAL LOCKING BLADE TYPE. ALL DUCTWORK MUST BE SUPPORTED PROPERLY FROM STRUCTURE.
- WRAP ALL SUPPLY & OUTSIDE AIR HVAC DUCTWORK W/ CERTAINTEED 1-1/2" THICK INSULATION W/ VAPOR BARRIER IN CONCEALED LOCATIONS. ALSO LINE FIRST 10' OF SUPPLY DUCTWORK FOR SOUND ATTENUATION ( IN ADDITION TO WRAP) LINE ALL RETURN AIR DUCTS & TRANSFER BOOTS W/ 1/2" LINER.

- A. ROOFTOP UNITS AS SCHEDULED. EQUIVALENTS BY TRANE, CARRIER, YORK, LENNOX, AAON. DAIKIN. MIN 14" ROOF CURB. PROVIDE SLOPED CURB AS REQUIRED FOR LEVEL UNIT INSTALLATION. ECONOMIZER W/ BAROMETRIC RELIEF. FIXED DRY BULB
- CONTROL. 2" MERV 7 FILTERS. LOUVERED HAIL GUARDS. 30 DEG LOW AMBIENT. EXHAUST FANS - EQUIVALENT BY COOK, PENN, ACME, GREENHECK, JENNAIRE, TWIN CITY. PROVIDE W/ SPEED CONTROLS FOR ALL FANS LESS THAN 1/3HP TO BE FURNISHED TO E/C FOR MOUNTING AT FAN. PROVIDE W/ 14" MIN. CURB.
- PROVIDE PROGRAMMABLE THERMOSTATS W/ STAGES OF HEATING AND COOLING AS REQUIRED BY STAGES OF HEATING AND COOLING ON SPECIFIED EQUIPMENT. SEVEN (7 DAY PROGRAMMING CAPABILITY W/ 2 OCC/UNOCC PERIODS/DAY. AUTO HEAT/COOL CHANGE OVER. LOCKING SETPOINTS TO PREVENT TAMPERING. PROVIDE W/ AL INTERFACES TO OTHER EQUIPMENT AS REQUIRED. THERMOSTATS BY HONEYWELL, JOHNSON CONTROLS, WHITE-ROGERS, TRANE, CARRIER, AAON, LENNOX, DAIKIN, OR APPROVED FQUAL.

- B. COORDINATE W/ E/C TO PROVIDE ALL WIRING BETWEEN EQUIPMENT, DAMPERS, THERMOSTATS & ALL OTHER REQUIRED CONTROLS & DEVICES. PROVIDE ANY REQUIRED INTERFACES TO FIRE ALARM OR SIMILAR SYSTEMS.
- PROVIDE GROUND-MOUNTED UNITS ON 4", REINFORCED CONCRETE BASE, 4" LARGER THAN UNIT ON EACH SIDE ROOF-MOUNTED 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 SPECIFICATIONS

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

#### GENERAL REQUIREMENTS

- A. ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING CODE. NATIONAL ELECTRICAL CODE, NFPA, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL OTHER APPLICABLE CODES.
- B. ALL MATERIALS & EQUIPMENT SHALL BE NEW & SHALL BEAR U.L. LABEL WHERE APPLICABLE. PROVIDE WATERPROOF EQUIPMENT ENCLOSURES WHERE REQUIRED. C. OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL MAKE ARRANGEMENTS FOR MODIFICATIONS TO ELECTRICAL CONNECTIONS TO BUILDING
- D. CONTRACTOR SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED TO HAVE COMPLETE FUNCTIONING ELECTRICAL LIGHTING & POWER SYSTEMS TOGETHER W/ ALL ASSOCIATED
- EQUIPMENT & APPARATUS AS SHOWN ON PLANS E. WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE PROVIDED AS THOUGH FULLY SHOWN & SPECIFIED. CONTRACTOR SHALL VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO
- SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION FOR ANY ERROR OR NEGLIGENCE ON CONTRACTOR'S PART. G. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS. EQUIPMENT. APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED &
- INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS. H. WARRANT TO OWNER QUALITY OF MATERIALS, EQUIPMENT, WORKMANSHIP & OPERATION OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM & AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER.

I. ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE

#### FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM E 84. SECTION 16100 - CONDUIT & CONDUCTORS

- A. FOLLOW CIRCUITING SHOWN ON PLANS. USE NO CONDUIT SMALLER THAN 1/2" & NO CONDUCTORS SMALLER THAN #12 GA. UNLESS NOTED OTHERWISE. B. WIRE SHALL BE IN NON-FLEXIBLE METALLIC CONDUIT (EMT, IMC OR RMC) FOR ALL
- CIRCUITS AND FEEDERS GREATER THAN 30A, LIGHT SWITCH RISERS, KITCHEN CIRCUITS C. MC CABLE ACCEPTABLE FOR BRANCH CONVENIENCE CIRCUITS AND LIGHTING CIRCUITS. DO NOT DAISY CHAIN LIGHT FIXTURES. PROVIDE MC LUMINARY CABLE WITH BUILT-IN
- TWISTED JACKETED PAIR FOR LIGHTING CIRCUITS FOR LIGHTING CONTROLS. PROVIDE HEALTH CARE RATED MC FOR MEDICAL TREATMENT AREAS WHEN NOT IN CONDUIT. D. CONDUIT INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC HEAVY WALL PLASTIC CONDUIT MEETING NEMA STANDARDS & UL LISTED FOR UNDERGROUND & EXPOSED
- USE. PROVIDE GRS RADIUS BENDS & RISERS AS CONDUITS RISE ABOVE GRADE OR ABOVE FLOOR SLAB. T. PROVIDE INTERLOCKING SPACERS FOR MULT RUNS OF UG CONDUITS IN SAME TRENCH. F. LIGHTING & RECEPTACLE CIRCUIT CONDUCTORS SHALL BE COPPER THWN/THHN 600 VOLT. 75 DEG C. COLOR CODED AS DESCRIBED UNDER APPLICABLE CODES. NO ROMEX, PLASTIC FLEX TUBING ETC PERMITTED. LIGHT FIXTURE WIRE INSULATION

SHALL HAVE TEMP RATING NOT LESS THAN INDIVIDUAL FIXTURE MANUF RECOMMENDED

- G. CIRCUITS W/ NO. 8 OR LARGER CONDUCTORS, MOTOR CIRCUITS, POWER & FEEDER CIRCUITS & BUILDING SERVICE FEEDERS SHALL BE COPPER THWN/THHN 600 VOLT,
- H. ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUPPORTED FROM STRUCTURE. PIPE SLEEVES, HANGERS & SUPPORTS SHALL BE FURNISHED & SET & CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER & PERMANENT LOCATIONS.

# <u>SECTION 16200 — GROUNDING</u>

- A. SUPPLEMENT GROUNDED NEUTRAL OF SECONDARY DISTRIBUTION SYSTEM W/ EQUIPMENT GROUNDING SYSTEM, INSTALLED SO THAT METALLIC STRUCTURE'S, FNCLOSURES, RACEWAYS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES. PORTABLE EQUIPMENT & OTHER CONDUCTIVE ITEMS OPERATE CONTINUOUSLY AT GROUND POTENTIAL & PROVIDE LOW IMPEDANCE PATH FOR GROUND FAULT
- B. SYSTEM SHALL COMPLY W/ NATIONAL ELECTRICAL CODE, DRAWINGS & AS SPECIFIED. C. PROVIDE EQUIPMENT GROUND BUS IN BASE OF LOW VOLTAGE. SWITCHGEAR BRAZED OR OTHERWISE ADECUATELY CONNECTED BY AN APPROVED METHOD TO GROUND RODS. D. PROVIDE IN CONDUIT GREEN INSULATED COPPER GROUND CONDUCTOR TO MAIN METALLIC WATER SERVICE ENTRANCE & CONNECT BY MEANS OF ADEQUATE GROUND
- E. EQUIPMENT GROUNDING CONDUCTORS FOR BRANCH CIRCUIT HOME RUNS SHOWN ON DRAWINGS SHALL INDICATE AN INDIVIDUAL & SEPARATE GROUND CONDUCTOR FOR THAT BRANCH CIRCUIT WHICH SHALL BE TERMINATED AT BRANCH CIRCUIT PANELBOARD. SWITCHBOARD. OR OTHER DISTRIBUTION EQUIPMENT.
- 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 & POWER SHALL CONSIST OF PHASE & NEUTRAL CONDUCTORS & GREEN GROUND CONDUCTOR INSTALLED IN COMMON CONDUIT WHICH SHALL SERVE AS GROUNDING CONDUCTOR.

#### G. GROUNDING CONDUCTORS SHALL BE AS SHOWN ON PLANS OR IF NOT SPECIFICALLY SHOWN SHALL BE NO SMALLER THAN THAT REQUIRED BY NEC.

SECTION 16300 - ELECTRICAL EQUIPMENT A. JUNCTION BOXES & OUTLET BOXES SHALL BE GALVANIZED KNOCKOUT TYPF. 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.

- 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 LOCATION. PANELS 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.
- <u> SECTION 16350 ELECTRICAL IDENTIFICATION</u> 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 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.

#### SECTION 16400 - WIRING DEVICES

- 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 REO'D PER CODE. B. PROVIDE GFIC RATED DEVICES WHERE INDICATED AND ANYWHERE REQUIRED PER THE
- C. PROVIDE AFCI PROTECTION ON ALL CIRCUITS REQUIRED PER THE NEC. D. PROVIDE TAMPER RESISTANT RECEPTACLES ON ALL RECEPTACLES IN PUBLIC AREAS,
- AREAS ACCESSIBLE TO CHILDREN, AND WHERE OTHERWISE REQUIRED TO BE TAMPER RESISTANT PER THE NEC. E. LIGHT SWITCHES - SPEC GRADE 20 AMP TOGGLE SWITCHES W/ SS WALL PLATES.
- F. WALL MOTION SWITCHES SPEC GRADE, PIR, OVERRIDE. G. CEILING MOTION SWITCHES - SPEC GRADE, DUAL TECHNOLOGY, MODEL AS REQ'D BY ROOM CONFIGURATION, ALL NECESSARY POWER PACKS AND RELAYS.
- H. WALL MOTION SWITCHES (BATHROOM) DUAL RELAY, SPEC GRADE, PIR, 2ND RELAY FOR OPERATION OF EXHAUST FAN DELAY. I. COLOR OF DEVICES AS DIRECTED BY ARCHITECT.
- J. EQUIVALENT DEVICES BY LEVITON, BRYANT, HUBBEL, WATTSTOPPER, LITHONIA, SENSOR

A. ALL OUTLETS, SHALL BE MOUNTED W/ BOTTOM AT 18" AFF & SWITCHES W/ BOTTOM 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 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. B. REFER TO LIGHTING FIXTURE SCHEDULE PLANS FOR FIXTURE TYPES. C. EQUIVALENT LUMINAIRES BY CREE, COOPER, HUBBELL, INFINITY, LITHONIA, WILLIAMS,

## **ABBREVIATIONS**

DCW DOMESTIC COLD WATER

DHW DOMESTIC HOT WATER

E/C ELECTRICAL CONTRACTOR

EM EMERGENCY FIXTURE/DEVICE

EXHAUST AIR

DIA DIAMETER

ELEV ELEVATION

DN DOWN

DRINKING FOUNTAIN

DIRECT DIGITAL CONTROLS

DHWR DOMESTIC HOT WATER RETURN

COLUMBIA, EXITRONICS, LITEALARM, EXIDE, MULE, DUALLITE

A/E	ARCHITECT / ENGINEER	EWT	ENTERING WATER TEMPERATURE	PSI	POUNDS PER SQUARE INCH
ÁFF	ABOVE FINISHED FLOOR	EΧ	EXISTING ITEM	PVC	POLYVINYLCHLORIDE
AFG	ABOVE FINISHED GRADE	FFA	FROM FLOOR ABOVE	RA	RETURN AIR
AG	ABOVE GRADE	FFB	FROM FLOOR BELOW	RE/REF	REFER / REFERENCE
AHJ	AUTHORITY HAVING JURISDICTION	FFC0	FINISHED FLOOR CLEAN OUT	RF	RELIEF FAN
ARCH	ARCHITECT	FGC0	FLUSH GRADE CLEAN OUT	RL	RELOCATED ITEM
BFP	BACKFLOW PREVENTER	FL	FLOW LINE	RPZ	REDUCED PRESSURE ZONE
BG	BELOW GRADE	FLR	FLOOR	RR	RESTROOM
BLDG	BUILDING	FPM	FEET PER MINUTE	SA	SUPPLY AIR
BMS	BUILDING MANAGEMENT SYSTEM	<i>FWC0</i>	FLUSH WALL CLEAN OUT	SPD	SURGE PROTECTIVE DEVICE
С	CONDUIT	G	GROUND / GANG	TA	TRANSFER AIR
CD	CANDELA	G/C	GENERAL CONTRACTOR	TFA	TO FLOOR ABOVE
CD	COLD DECK	GFCI	GROUND FAULT CIRCUIT INTERUPTER	TFB	TO FLOOR BELOW
CLG	COOLING	GPM	GALLONS PER MINUTE	ΤP	TAMPERPROOF
СМ	COORDINATE MOUNTING HEIGHT	HD	HOT DECK	TYP	TYPICAL
CO	CLEAN OUT	HTG	HEATING	UNO	UNLESS NOTED OTHERWISE
CTE	CONNECT TO EXISTING	IG	ISOLATED GROUND	VTR	VENT THROUGH ROOF
DCVA	DOUBLE CHECK VALVE ASSEMBLY	JB	JUNCTION BOX	WP	<i>WEATHERPROOF</i>

LED LIGHT EMITTING DIODE

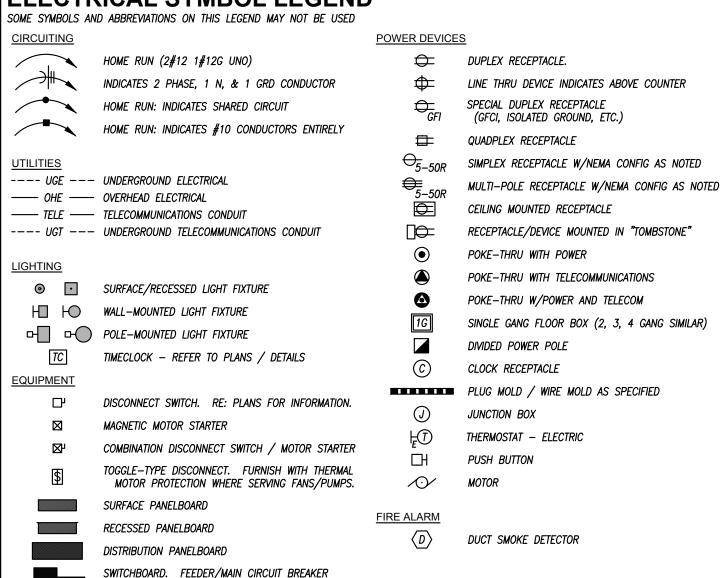
NFA NET FREE AREA

ORD OVERFLOW ROOF DRAIN

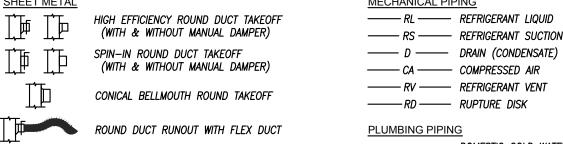
P/C PLUMBING CONTRACTOR

OA OUTSIDE AIR

# **ELECTRICAL SYMBOL LEGEND**







DUCTWORK ELBOW (WITH & WITHOUT TURNING VANES) RETURN GRILLE OR EXHAUST REGISTER SUPPLY AIR FLOW INDICATOR RETURN AND EXHAUST AIR FLOW INDICATOR Ð THERMOSTAT

TEMPERATURE SENSOR

SECTION AND DISTRIBUTION SECTION.

INDICATES CONNECT TO EXISTING

INDICATES ELEVATION

#### HUMIDISTAT CONTROL WIRING

GENERAL SYMBOLS

GENERAL SYME	<u>BOLS</u>
lacktriangle	INDICATES CONNECT TO
$\oplus$	INDICATES ELEVATION
PLUMBING FIXT	URES/EQUIPMENT
<b>⊸</b> । НВ	HOSE BIBB
E11494	WALL LIVERANT

<del>-⊏</del>IWH WALL HYDRANI ——p ⊚ CLEAN OUT

EXISTING

PLUMBING FIXTURE AND CALLOUT

----- CA ----- COMPRESSED AIR ------ RV ------ REFRIGERANT VENT ----- DOMESTIC COLD WATER

----- DOMESTIC HOT WATER ---- RECIRCULATING DOMESTIC HOT WATER ------ SAN ----- WASTE ABOVE GRADE OR FLOOR — — SAN — — WASTE BELOW GRADE OR FLOOR

------ ST ----- STORM ABOVE GRADE OR FLOOR — — ST — — STORM BELOW GRADE OR FLOOR — — ST/O — — STORM OVERFLOW BELOW GRADE OR FLOOR

----- V ----- PLUMBING VENT — W — WATER SERVICE — G — GAS (NATURAL)

PIPING SYMBOLS -SHUTOFF VALVE SHUTOFF VALVE IN RISER —፟፟፟፟፟፟

\*\*\* BALANCING VALVE **⊸**⋈— PLUG VALVE AUTO FLOW CONTROL VALVE

PIPING ELBOW UP PIPING ELBOW DOWN PIPING TEE PIPING ELBOW PIPING TEE UP PIPING TEE DOWN INCREASER / REDUCER —⊨ ----

> <del>----</del>] **─** STRAINER <del>- |>|</del> CHECK VALVE INLINE STRAINER TEST PLUG

PIPING SPECIALTIES HI LOW
PRESSURE REDUCING VALVE ORE SUBMISSION DATES MAY 23, 2023 JUNE 12, 2023-REV 1

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SHEET TITLE MECHANICAL AND ELECTRICAL **SPECIFICATIONS** 

PROJECT NUMBER 230117

**ME-101** 

2949 SW WANAMAKER DR., TOPEKA, KANSAS 66614 785.273.2447

WP WEATHERPROOF

LWT LEAVING WATER TEMPERATURE M/C MECHANICAL CONTRACTOR MCB MAIN CIRCUIT BREAKER MECH MECHANICAL MLO MAIN LUGS ONLY

**● ■** <u>£0-1</u>

FS: FLOOR SINK RD: ROOF DRAIN

REDUCED PRESSURE BACKFLOW PREVENTER DOUBLE CHECK BACKFLOW PREVENTER ORD: OVERFLOW ROOF DRAIN

#### FIRE SEALING NOTES

AUTHORITIES HAVING JURISDICTION.

- 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 3. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM

INSTALLATIONS UNTIL EXAMINED BY NSPECTOR, IF REQUIRED BY

- 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 BY 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 ELECTRICAL NOTES**

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

#### **GENERAL PLUMBING NOTES**

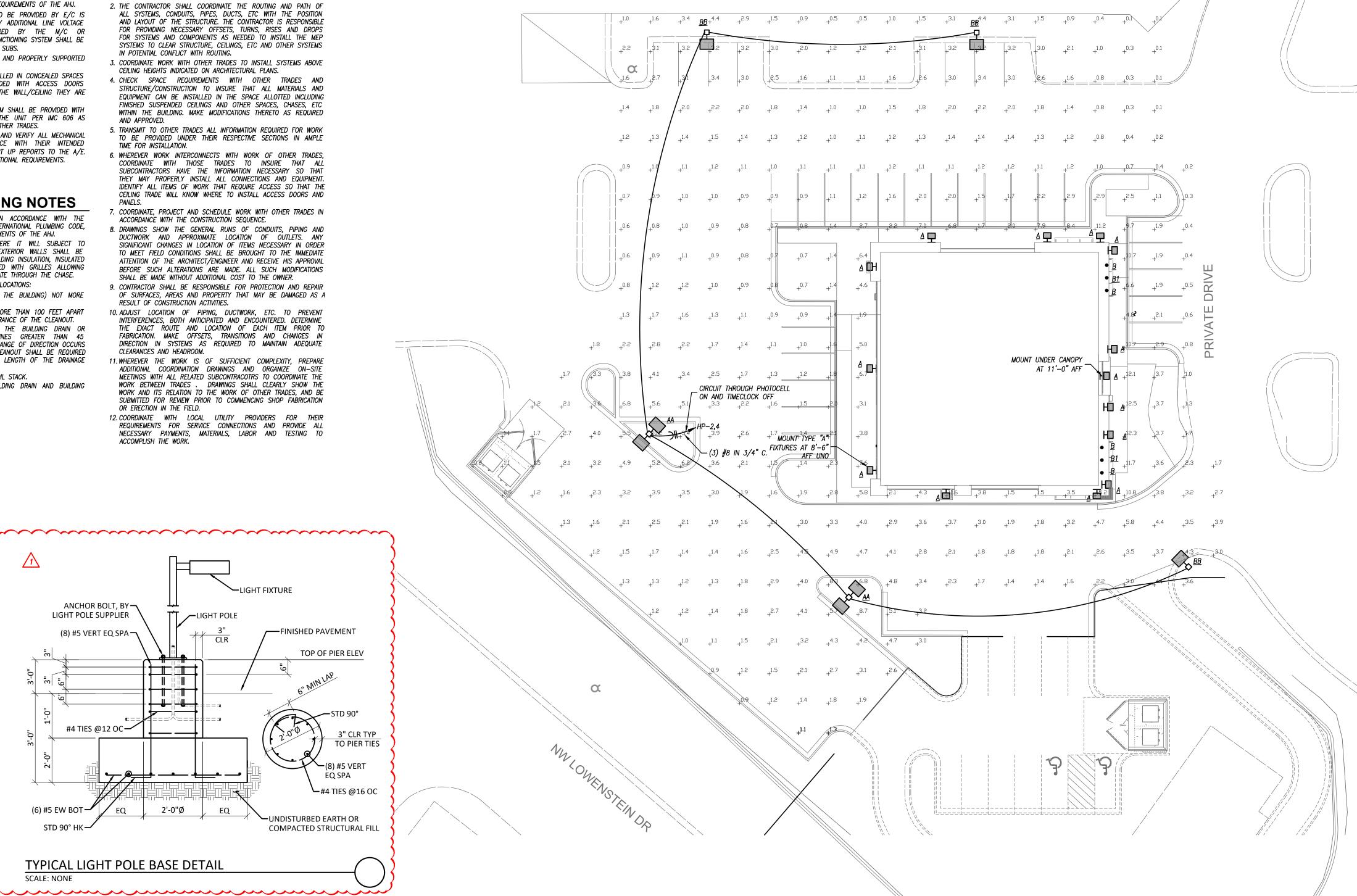
- 1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERISION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE
- INSTALLED ON THE 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 SFWFR.

## **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
- 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
- 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.

✓ LIGHT POLE

-LIGHT FIXTURE



SITE PLAN - LIGHTING
SCALE: 1" = 20'-0"

LIGH	LIGHT FIXTURE SCHEDULE											
PLAN MARK	MANUFACTURER	MODEL NUMBER	MOUNTING	FINISH	LAMP CODE	LAMP QUANTITY	NOTES					
AA	MCGRAW-EDISON	GALN-SA2C-740-U-T4FT-2@180 DEG	20' POLE	BRONZE	216 LED PER HEAD	2	1,2,3,5					
BB	MCGRAW-EDISON	GALN-SA2C-740-U-T4FT	20' POLE	BRONZE	216 LED PER HEAD	1	1,2,3,5					
Α	LITHONIA	WPX1-LED-P2-30K-MVOLT-E14WC-DDBXD	WALL/SURFACE	BRONZE	24W LED	-	1,2					
В	GREEN CREATIVE	12NCDRL6DIM/930/EXT	RECESSED	BLACK	12W LED	_	1,2,3,6					
B1	GREEN CREATIVE	12NCDRL6DIM/930/EXT-EM	RECESSED	BLACK	12W LED	_	1,2,3,4,6					
	<u> </u>		·	<u> </u>	<u> </u>	·						

2'-0"Ø

NOTES LEGEND

- 1 PROVIDE WET LOCATION RATED FIXTURE
- 2 PROVIDE COLD LOCATION RATED DRIVER
- 3 PROVIDE SQUARE STRAIGHT STEEL POLE RATED FOR 100 MPH WIND GUSTS, PRIMED AND PAINTED TO MATCH FIXTURE 4 - PROVIDE EMERGENCY BATTERY

ANCHOR BOLT, BY-LIGHT POLE SUPPLIER

(8) #5 VERT EQ SPA →

#4 TIES @12 OC-

TYPICAL LIGHT POLE BASE DETAIL

- 5 PROVIDE ALL ACCESSORIES FOR A COMPLETE INSTALLATION.
- 6 PROVIDE WEATHER PROOF JUNCTION BOX FOR DRIVERS AND ELECTRICAL CONNECTIONS ABOVE SOFFIT





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SUBMISSION DATES MAY 23, 2023 JUNE 12, 2023-REV 1

SHEET TITLE SITE PHOTOMETRIC

PLAN AND GENERAL NOTES

PROJECT NUMBER

230117

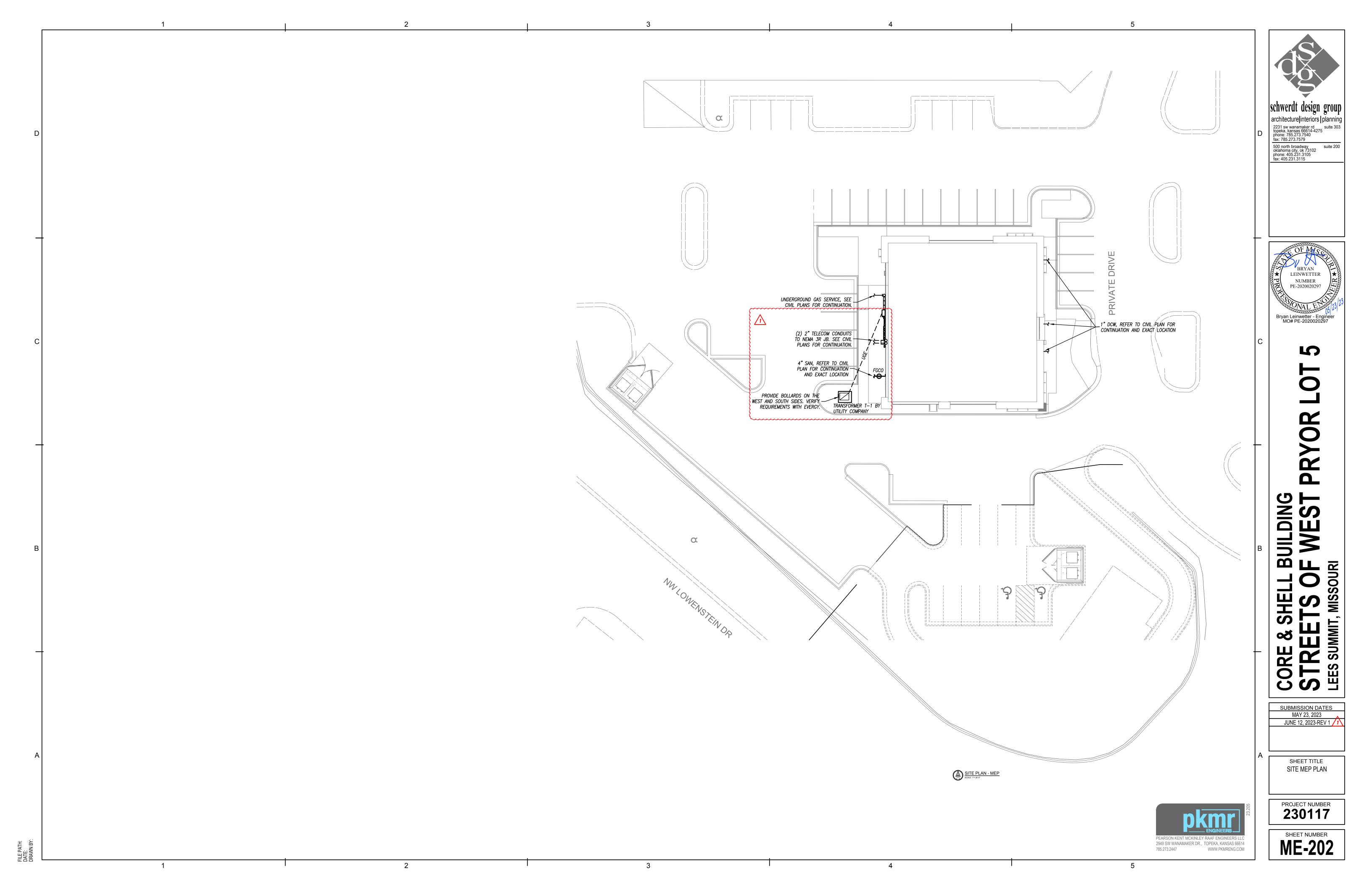
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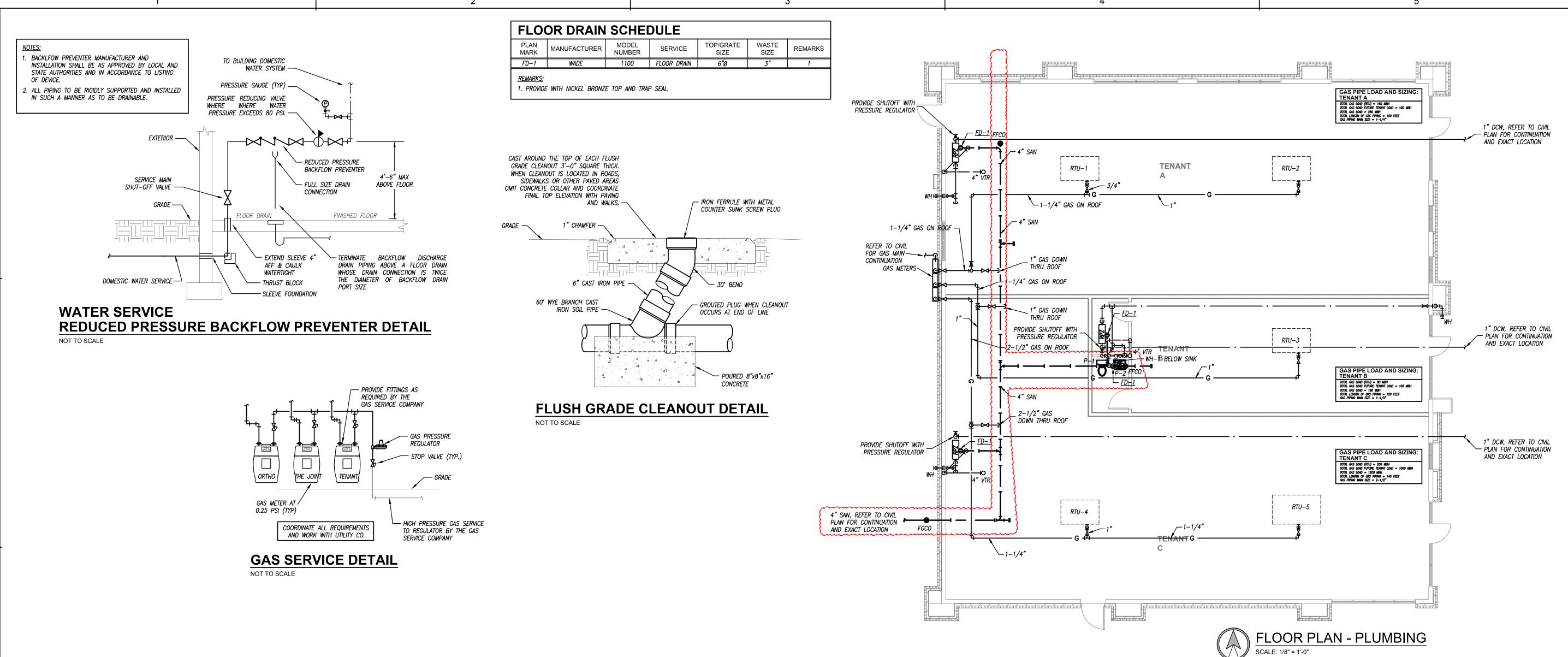
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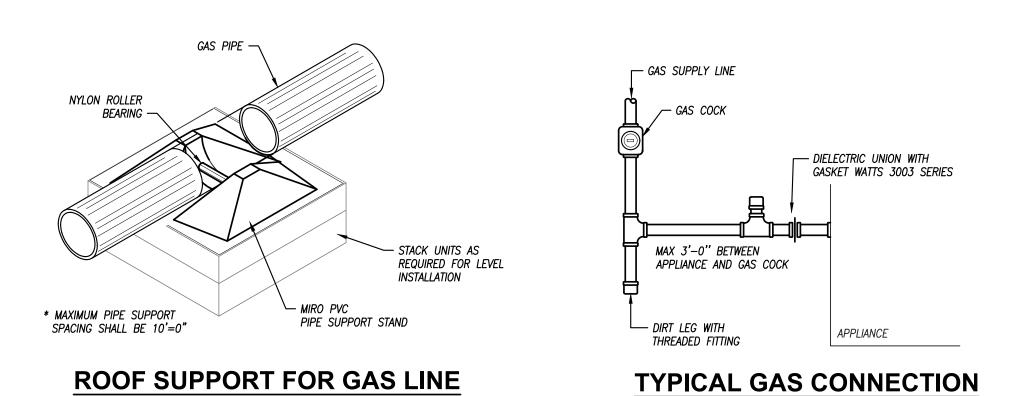
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WATER I	HEATER S	CHEDULE				
PLAN MARK	MANUFACTURER	MODEL NUMBER	GALLONS	CAPACITY	ELECTRICAL	NOTES
WATER HEATER-1	STIEBEL ELTRON	DHC 3-1	INSTANTANEOUS	3.0 KW	120V, 1PH, 30AMP	

NOT TO SCALE



PIPING					FIELD TEST PRESSURE/TIME	ALLOWABLE IN	INSULATION		
SYSTEM	SIZE	TYPE/SCHED	MATERIAL	ACCEPTABLE FITTINGS		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"	К	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			

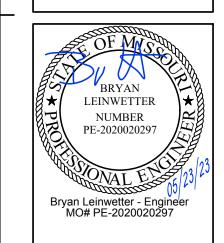
1. ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50. 2. ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.

3. REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.

PLAN	FIXTURE	FINTURE DESCRIPTION	FITTINGS		PIPE SIZES					
MARK	MODEL	FIXTURE DESCRIPTION	MODEL	FITTINGS DESCRIPTION	WASTE	VENT	DCW	DHW		
P-1	TOTO DRAKE CST744SL	ADA COMPLIANT WATER CLOSET: FLUSH TANK, WHITE ELONGATED BOWL, 1.6 GALLON SIPHON JET FLUSHING SYSTEM, 2-1/8" TRAP DIAMETER, WITH POLISHED CHROME FLUSH HANDLE MOUNTED ON WIDE SIDE OF RESTROOM STALL, WITH HANDLE STOP VALVE AND METAL FLEXIBLE WATER RISER	TOTO SC534	SEAT: WHITE, SOLID PLASTIC, OPEN FRONT, ELONGATED	4"	2"	1/2"			
P-2	AMERICAN STANDARD 0355.012	LAVATORY: WHITE WALL HUNG LAVATORY 20"x18" WITH 4" BACK FAUCET HOLES ON 4" CENTERS, WITH CONCEALED ARM CARRIER. PROVIDE HANDLE STOP VALVES AND FLEXIBLE METAL WATER RISERS.	AMERICAN STANDARD 2175.504	FAUCET: 4" CENTERSET, CHROME FINISH WITH 4" METAL LEVER HANDLE, 1/2" CONNECTIONS, 1.5 GPM MAX FLOWRATE. CHROME PLATED BRASS GRID DRAIN, TAILPIECE, AND P-TRAP INSULATE THE TAILPIECE, P-TRAP, AND WATER RISERS	2"	2"	1/2"	1/2"		



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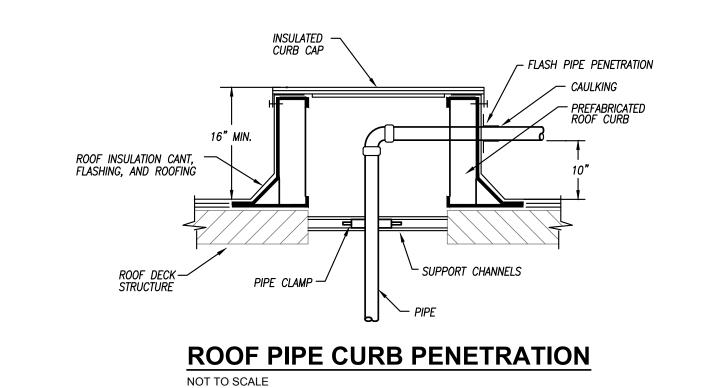
> SUBMISSION DATES MAY 23, 2023 JUNE 12, 2023-REV 1 /1

SHEET TITLE PLUMBING FLOOR PLAN

PROJECT NUMBER 230117

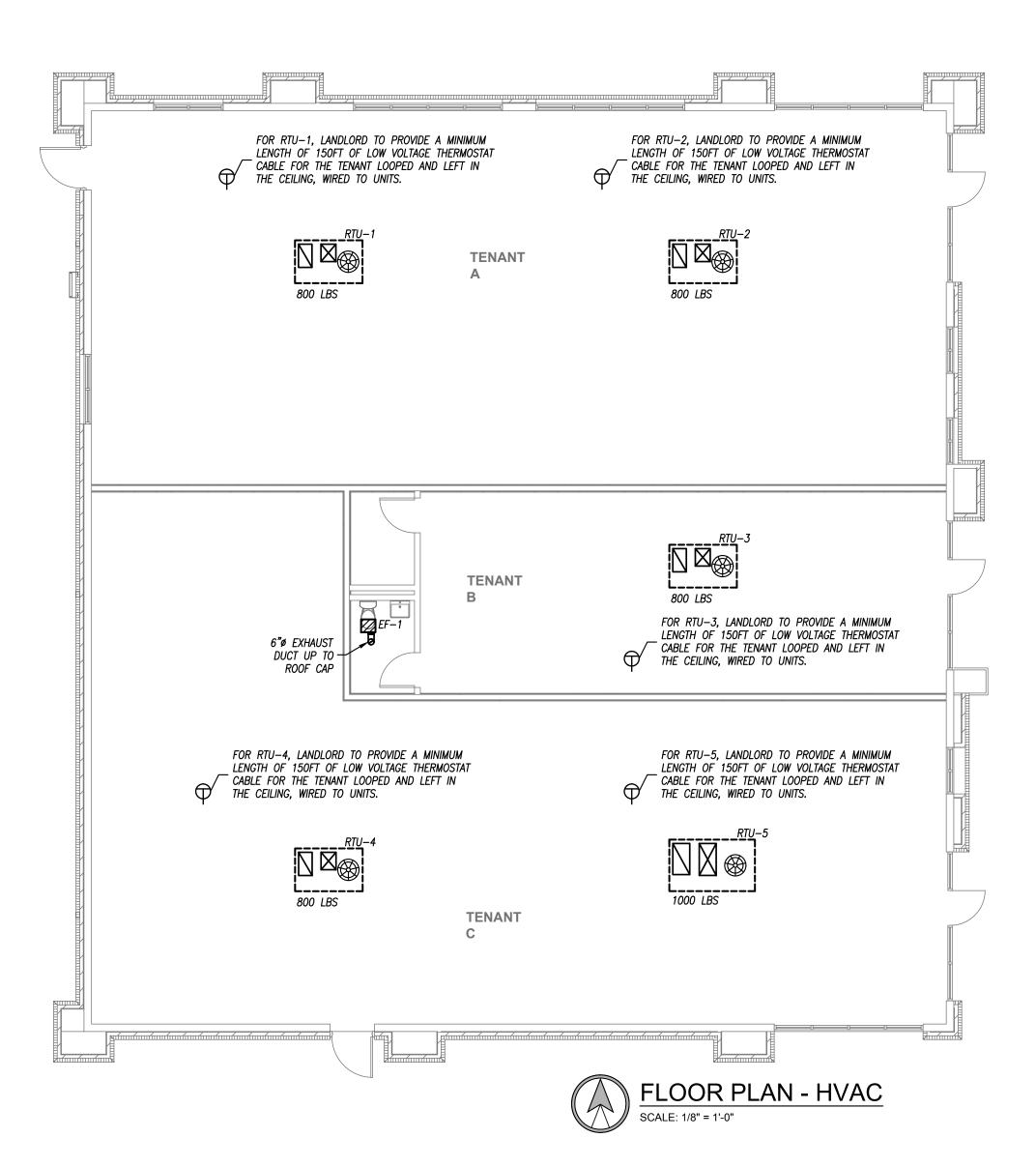
> SHEET NUMBER M-101

NOT TO SCALE



#### RETURN AIR SUPPLY AIR FROM RTU TO RTU — FLEXIBLE CONNECTION (TYPICAL) - INSULATED ROOF CURB (TYPICAL) — FLASH INTO ROOF ROOF INSULATION -AS REQUIRED (TYP.) DECK — - INSULATED ROOF CURB (TYPICAL) STRUCTUAL BRACING/FRAMING. ROOF STRUCTURE -RE: STRUCTURAL PLANS MAINTAIN CONTINUITY OF ROOF DECKING. — ALTERNATING LAYERS. (3) 5/8" SHEETROCK ONLY REMOVE/CUT DECK AT DUCT PENETRATIONS & (3) 1" RAW, RIGID FIBERGLASS BOARD INSULATION. CAULK ANNULAR SPACE (TYPICAL)

#### **ROOFTOP UNIT CURB DETAIL** NOT TO SCALE



RO	ROOF TOP UNIT SCHEDULE - THREE PHASE ELECTRIC WITH GAS HEAT															
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 048 E3	4 TON	R-410A	14 SEER	DOWN	(1) SCROLL	49,000 BTUH	1,600	0.7"	160	80 MBH	208 V., 3 PH, 35 AMP	800 LBS	MERV 13	1,2,3,4
RTU-2	TRANE	YSC 048 E3	4 TON	R-410A	14 SEER	DOWN	(1) SCROLL	49,000 BTUH	1,600	0.7"	160	80 MBH	208 V., 3 PH, 35 AMP	800 LBS	MERV 13	1,2,3,4
RTU-3	TRANE	YSC 048 E3	4 TON	R-410A	14 SEER	DOWN	(1) SCROLL	49,000 BTUH	1,600	0.7"	160	80 MBH	208 V., 3 PH, 35 AMP	800 LBS	MERV 13	1,2,3,4
RTU-4	TRANE	YSC 060 E3	5 TON	R-410A	14 SEER	DOWN	(1) SCROLL	60,100 BTUH	2,000	1.0"	200	80 MBH	208 V., 3 PH, 40 AMP	800 LBS	MERV 13	1,2,3,4
RTU-5	TRANE	YSC 072 E3	6 TON	R-410A	14.6 IEER	DOWN	(1) SCROLL	75,000 BTUH	2,400	1.1"	240	120 MBH	208 V., 3 PH, 50 AMP	1000 LBS	MERV 13	1,2,3,4

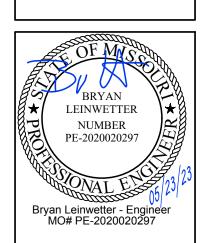
- 1. PROVIDE ROOF CURB, DISCONNECT SWITCH, HAIL GUARDS, AND ECONOMIZER
- 2. PROVIDE WALL MOUNTED 7-DAY PROGRAMMABLE THERMOSTAT
- 3. PROVIDE INTERNAL VIBRATION ISOLATION FOR THE RTU FAN AND COMPRESSORS

EXHA	XHAUST FAN SCHEDULE										
PLAN MARK	MANUFACTURER	MODEL NUMBER	MOUNTING	SERVICE	CFM	STATIC PRESSURE	ELECTRICAL	DRIVE	DISCONNECT	DAMPER	NOTES
EF-1	GREENHECK	SP-B90	CEILING	EXHAUST	<i>7</i> 5	1/4"	50 WATTS, 120V, 1 PHASE	DIRECT	YES	BACKDRAFT	1
IOTES:											

<sup>1.</sup> PROVIDE 12" ROOF CURB WITH CURB CAP MODEL RCC-7 WITH INTEGRAL BIRDSCREEN.



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5 R **5** – BUILDIN( F WES

> SUBMISSION DATES MAY 23, 2023 JUNE 12, 2023-REV 1

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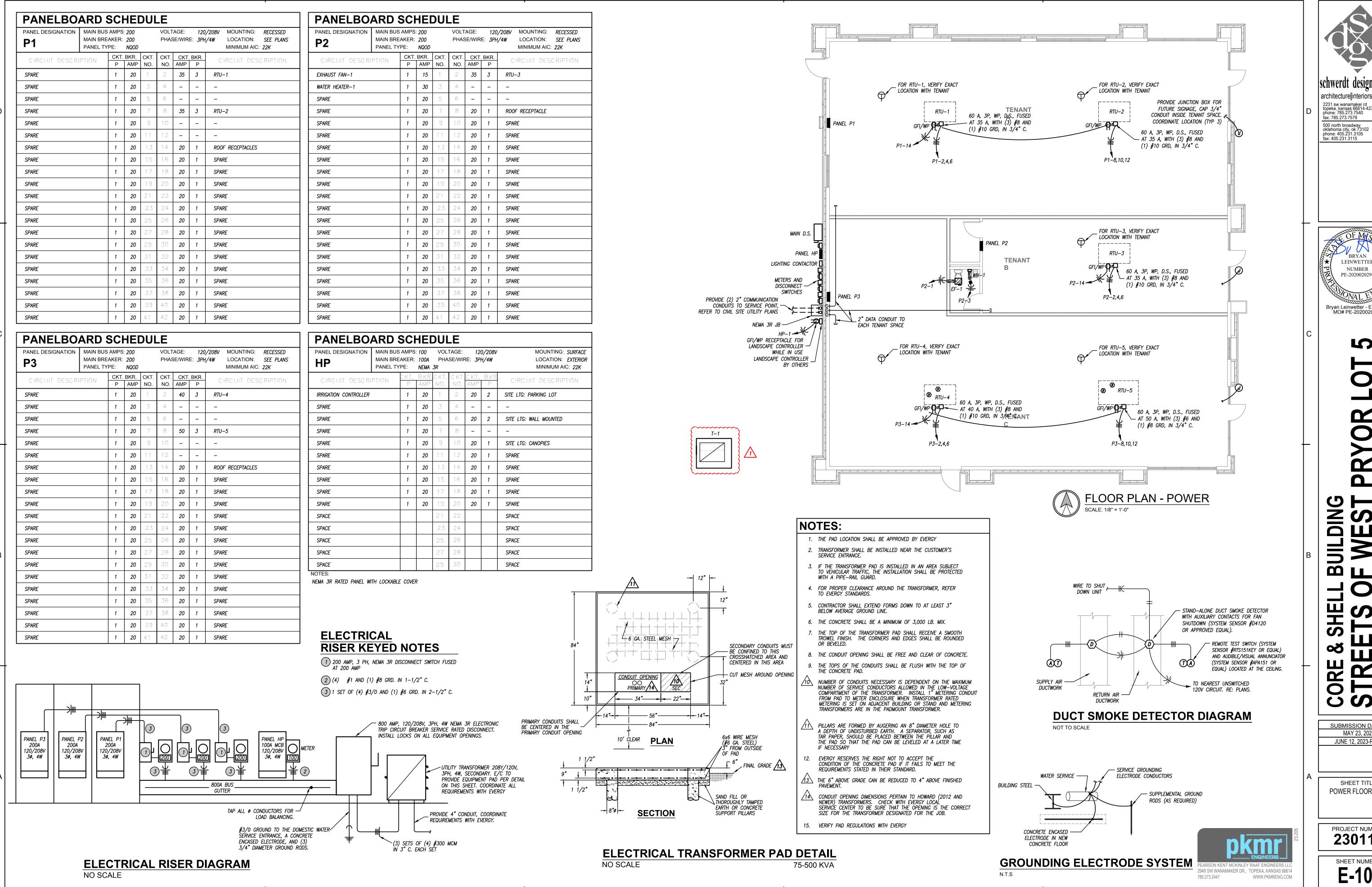
SHEET TITLE HVAC FLOOR PLAN

230117

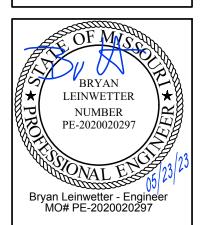
SHEET NUMBER M-201

ALL DUCTWORK DOWN FROM UNIT AND FIRST -10' OF HORIZONTAL RUN TO BE CONSTRUCTED

ONE PRESSURE CLASS HIGHER THAN SERVICE FOR SOUND AND RIGIDITY.



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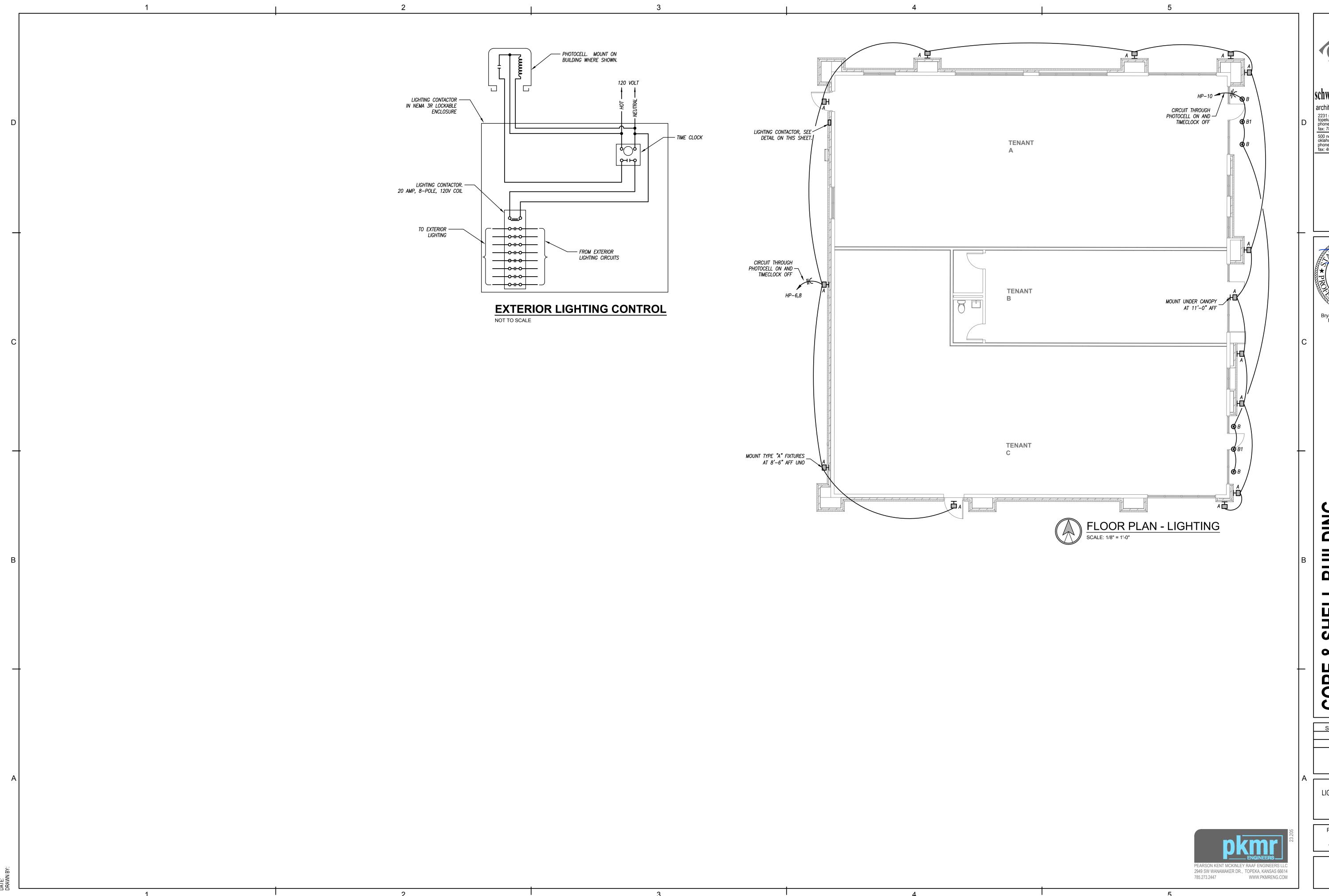
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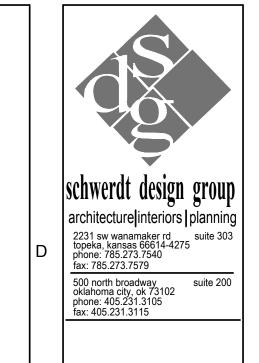
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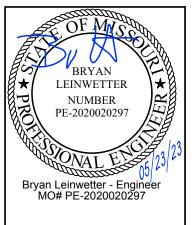
> SUBMISSION DATES MAY 23, 2023 JUNE 12, 2023-REV 1 / 1

SHEET TITLE POWER FLOOR PLAN

PROJECT NUMBER 230117







DING EST PRYOR LOT 5

CORE & SHELL BUILDING
STREETS OF WEST F
LEES SUMMIT, MISSOURI

SUBMISSION DATES MAY 23, 2023 JUNE 12, 2023-REV 1

SHEET TITLE LIGHTING FLOOR PLAN

PROJECT NUMBER **230117**