

OFFICE BUILDING FOR THE POWELL'S VALLEY WATER DISTRICT CLAY CITY, KENTUCKY

SCHEDULE OF DRAWINGS

SITE SURVEY

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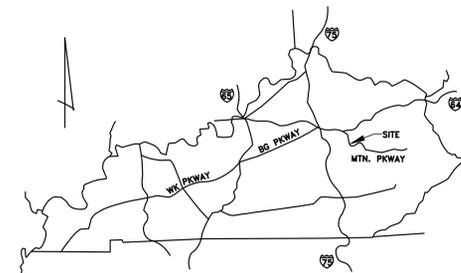
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nse Engineers
OF KENTUCKY, INC. Architects
Planners

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Phone: (859)223-5694
Fax: (859)223-2807

CODE DATA:
USE GROUP B (Business- Section 504 IBC)

Allowable Height and Area:
Height: 40 FT (Type 5B) Table 504.3,
Proposed- 22 FT
Allowable Number of Stories: 2 (Two) Table 504.4,
Proposed- 1 (One)
Allowable Area Factor: 9,000 SF (NS), Table 506.2,
Proposed- 2,606 SF
Construction Type: 5B (602.5 IBC)
Area Increase, Not Required

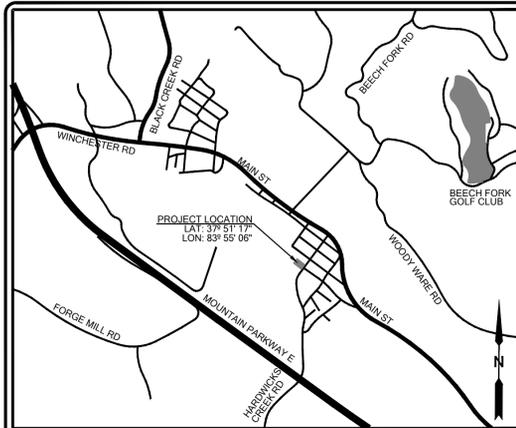
Table 1004.1.2 Minimum Floor Area Allowance Per Occupant
Business- 100 gross
2,606 SF / 100 = 27 Occupants

Table 1017.2- Exit Access Travel Distance: 200 FT

Section 1020 Corridors-
Exception-
4. A fire-resistance rating is not required for corridors
in an occupancy in Group B that is a space requiring
only a single means of egress complying with Section
1006.2.

DATE: March 9, 2026

SET NO.



VICINITY MAP
NOT TO SCALE

SURVEYORS CERTIFICATION

UNDERSIGNED CERTIFIES THAT PROPER FIELD PROCEDURES, INSTRUMENTATION, AND ADEQUATE SURVEY PERSONNEL WERE EMPLOYED IN ORDER TO ACHIEVE RESULTS COMPARABLE TO THOSE OUTLINED IN THE "MINIMUM ANGLES, DISTANCE, AND CLOSURE REQUIREMENTS WHICH CONTROL LAND BOUNDARIES"

FIELD WORK COMPLETED: SEPTEMBER 29, 2023
DATE OF PLAT: OCTOBER 26, 2023

STATE OF KENTUCKY
ROY D. PATRICK
3521
LICENSED PROFESSIONAL LAND SURVEYOR

SIGNATURE: [Signature] L.S. No. 3521 DATE 10-26-2023

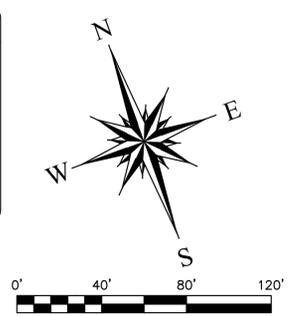
SURVEY CONTROL

MAG NAIL
RMJE #1
N: 3,839,934.12
E: 5,450,060.85
EL: 629.68

MAG NAIL
RMJE #2
N: 3,839,982.95
E: 5,449,970.56
EL: 629.81

ORIGIN OF BEARINGS, COORDINATES, & ELEVATIONS

THE STATE PLANE COORDINATES WERE DERIVED FROM A KENTUCKY CORS STATION MONUMENT LOCATED NEAR BEATTYVILLE, KENTUCKY WITH A NAD 83 KENTUCKY SINGLE ZONE STATE PLANE COORDINATE OF NORTH=3,730,972.04 FT AND EAST=5,511,782.37 FT. AND AN NAVD 88 VERTICAL DATUM ELEVATION OF 966.41 THE COORDINATES SHOWN HEREON ARE IN US SURVEY FEET.



SURVEYOR'S REPORT

- THIS PROPERTY IS SUBJECT TO ALL RIGHT-OF-WAY AND EASEMENTS OF RECORD OR OTHERWISE.
- THIS SURVEY WAS MADE BY THE METHOD OF GPS REALTIME KINEMATIC SURVEY WITH A PRECISION OF ±0.05 PPM. THIS IS AN URBAN SURVEY AND THE PRECISION AND ACCURACY MEET ALL THE SPECIFICATIONS OF THIS CLASS.
- NO TITLE OR ABSTRACT RESEARCH WAS PERFORMED BY THE UNDERSIGNED FOR THIS SURVEY.
- ONLY ACTS OF POSSESSION, IF ANY, THAT ARE VISIBLE FROM CASUAL INSPECTION OF THE PROPERTY ARE SHOWN HEREON.
- NO WARRANTY OR GUARANTEE IS IMPLIED AS TO THE EXISTENCE OF ACTS OF POSSESSION BY ADJOINERS TO THE LANDS SHOWN AND DESCRIBED HEREON.
- THE SUBJECT PROPERTY SHOWN HEREON IS PART OF THE POWELLS VALLEY WATER DISTRICT PROPERTY AS RECORDED IN THE POWELL COUNTY CLERKS OFFICE IN DEED BOOK 214 PAGE 158.
- THE ACCEPTANCE OF THE PLAT HEREON AND THE MONUMENTS USED AND SET DURING THE PERFORMANCE OF THE FIELD SURVEY HEREBY LIMIT THE TORT OR CONTRACT LIABILITY ARISING FROM ANY CAUSE OF ACTION HERETO TO AN AMOUNT NOT TO EXCEED THE FEE CHARGED.
- THIS PLAT OF SURVEY DEPICTS PROPERTY OF POWELLS VALLEY WATER DISTRICT, THEREFORE THE CUMULATIVE ACREAGE IS EQUIVALENT TO THE SUM OF THE MULTIPLE PARCELS; PARCELS ARE CONTIGUOUS WITH NO HIATUSES OR OVERLAPS.
- THE PROPERTY DOES LIE WITHIN THE 100 YEAR FLOOD BOUNDARY.
- THE PROPERTY DOES HAVE ACCESS TO PUBLIC RIGHT OF WAY THROUGH EXISTING ACCESS ROADS.

LEGAL DESCRIPTION

Description for a certain tract or parcel of land, lying and being in the Commonwealth of Kentucky, County of Powell, within the city limits of Clay City, Kentucky lying on the northwest side of 11th Street, KY RT 1057, and being more particularly described as follows:

Unless otherwise stated any monument referred to as a capped pin set is an 18" inch rebar 5/8" inch diameter with a plastic cap inscribed R.M. Johnson Engineering, PLS 3521 or Roy D. Patrick PLS 3521.

Beginning at a 1/2 rebar found (no cap), in the southwest boundary of the property herein described. Said point being a common corner to the parent tract which lies in Block 58 Lot #25 thru Lot #44 and Block 57, and has a KY State Plane Single Zone Coordinate value of North: 3,839,889.66 and East: 5,450,019.99; Thence following said Parent Tract for one (1) call as follows:

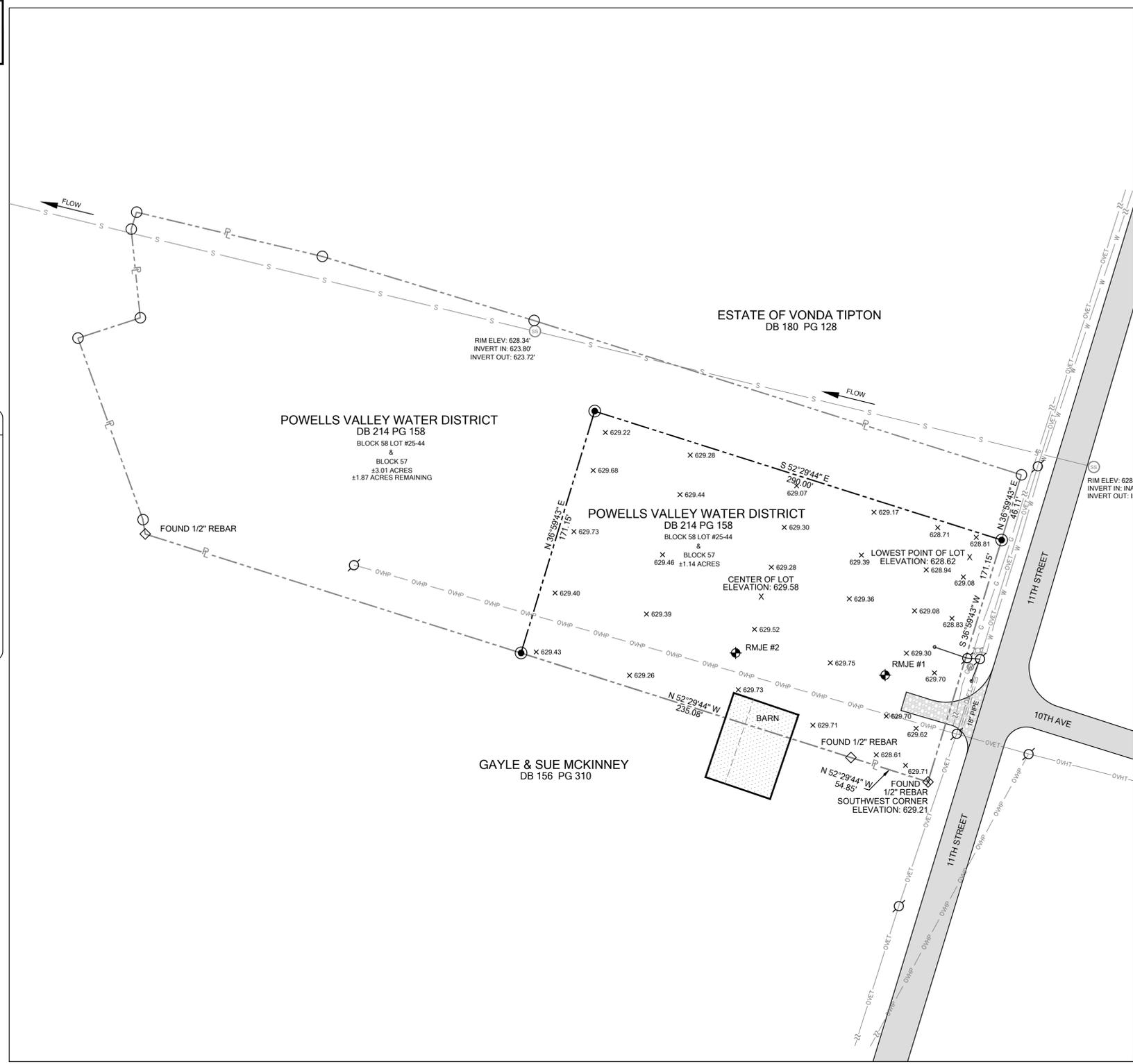
N 52°29'44" W a distance of 235.08' to a capped pin set; thence leaving said parent tract, severing same for four (4) calls as follows:

N 36°59'43" E a distance of 171.15' to a capped pin set;

S 52°29'44" E a distance of 290.00' to a capped pin set in the northern right of way of 11th Street / ST RT 1057, thence with the northern right of way of 11th Street / ST RT 1057;

S 36°59'43" W a distance of 171.15'; thence leaving the northern right of way of 11th Street;

N 52°29'44" W a distance of 54.85' to the point of beginning, containing 1.14 Acres (49,631 SF) more or less as per a survey by RM Johnson Engineering completed on September 29, 2023.



FEMA FLOOD HAZARD

BASED ON AN INSPECTION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S MAP NUMBERED 21197C0131D PANEL 131 OF 250 WITH AN EFFECTIVE DATE OF 2-17-2010, FOR CITY OF CLAY CITY, KENTUCKY, COMMUNITY NUMBER 210195, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) FOR THE COMMUNITY IN WHICH THE SUBJECT PROPERTY LIES. THE PROPERTY LIES IN ZONE "AE" WITH A BFE OF 629' AND IS WITHIN THE LIMITS OF THE 1% CHANCE OF ANNUAL FLOOD.

SYMBOL LEGEND

● 18" - 5/8" STEEL REBAR WITH SURVEYOR'S CAP (SET, RMJE, PLS 3521)	○ PROPERTY LINE POINT NOT SET THIS SURVEY
◆ PROPERTY LINE POINT FOUND THIS SURVEY (AS NOTED)	◆ RMJE SURVEY CONTROL POINT AS NOTED ON SURVEY
● PK NAIL WITH SURVEYOR'S CAP (SET, RMJE, PLS 3521)	○ TREE
■ UNDERGROUND POWER/COMMUNICATIONS BOX	○ POWER POLE
⊕ WATER METER	○ SANITARY SEWER MANHOLE
⊕ WATER VALVE	○ STORM SEWER DROP INLET
⊕ FIRE HYDRANT	⊕ SIGN
⊕ GAS METER	⊕ STORM SEWER MANHOLE
⊕ CURB CUT	⊕ UTILITY POLE WITH STREET LIGHT

— 12" CMP	— CULVERT
—	— PROPERTY BOUNDARY
—	— ADJOINING PROPERTY LINES
— W — W	— WATERLINE
— S — S	— SANITARY SEWER LINE
— X — X	— FENCE
—	— SETBACK LINES
— 12" CMP	— STORM SEWER WITH DROP INLET
— UGE	— UNDERGROUND POWERLINE
— UGT	— UNDERGROUND FIBER OPTIC
— ROW	— RIGHT OF WAY
— G — G	— GAS LINE
— OVHP	— OVERHEAD POWERLINE
— OVHT	— OVERHEAD TELEPHONE LINE
— OVET	— OVERHEAD POWER AND TELEPHONE

—	— ASPHALT
—	— GRAVEL
—	— CONCRETE

RMJE

CIVIL | GEOTECHNICAL | SURVEYING | MATERIAL TESTING

POWELLS VALLEY WATER DISTRICT

31 ADAMS RIDGE ROAD, P.O. BOX 550, CLAY CITY, KENTUCKY 40312

PLAT OF SURVEY

257 11TH STREET, CLAY CITY, KENTUCKY 40312

REVISIONS

NO.	DATE	DESCRIPTION

SCALE: AS SHOWN	DESIGNED BY: RDP	CHECKED BY: RMJ
JOB No.: 23-053	DATE: 10-26-2023	COPYRIGHT © 2023 R.M. JOHNSON ENGINEERING, INC.

BOUNDARY PLAT

GENERAL STRUCTURAL NOTES

A. NOTES TO CONTRACTOR

1. DRAWINGS REPRESENT THE DESIRED RESULT OF CONSTRUCTION. THE METHODS OF CONSTRUCTION AND THE RISKS INVOLVED DURING CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY AT ALL STAGES OF CONSTRUCTION.

2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS DURING CONSTRUCTION AND REPORT IMMEDIATE ANY DISCREPANCIES TO THE A/E.

3. ALL CONTRACTOR'S PROPOSED SUBSTITUTIONS SHALL BE APPROVED BY A/E PRIOR TO COMMENCING ANY PERTINENT WORK.

B. DESIGN CRITERIA

THIS STRUCTURE HAS BEEN DESIGNED ACCORDING TO THE KENTUCKY BUILDING CODE CURRENT ADDITION AND FOR THE SPECIFIC LOADS WHICH ARE LISTED BELOW:

1. ROOF LOADS
 - a) DEAD LOAD = 20 PSF
 - b) LIVE LOAD = 25 PSF
 - c) SNOW LOAD
 - d) PF = 10.5 PSF
 - e) $C_e = 1$
 - f) $I = 1$
 - g) $C_t = 1$

2. WIND LOAD
 - a) BASIC WIND SPEED (3 SEC. GUST) = 90 MPH
 - b) $I = 1$
 - c) WIND EXPOSURE CATEGORY - B

3. SEISMIC DESIGN DATA

- A) OCCUPANCY CATEGORY - II (SEISMIC IMPORTANCE FACTOR = 1)
- B) $S(S) = 0.240$; $S(D) = 0.086$
- C) SITE CLASS C
- D) $S(S) = 0.192$; $S(D) = 0.097$
- E) SEISMIC DESIGN CATEGORY - B
- F) BASIC SEISMIC-FORCE-RESISTING SYSTEM- LIGHT FRAMED WALLS SHEATHED WITH WOOD SHEAR PANELS
- G) DESIGN BASE SHEAR, $V = 3.55$ KIPS
- H) SEISMIC RESPONSE COEFFICIENT, $C_s = 0.030$
- I) RESPONSE MODIFICATION FACTOR, $R = 6.5$
- J) ANALYSIS PROCEDURE- ELFP

4. SOIL BEARING CAPACITY = 2500 PSF.

C. FOUNDATION, FILLING AND EXCAVATION NOTES

1. SEE GEOTECHNICAL REPORT DATED

D. CONCRETE NOTES

1. CONCRETE FOR FOOTINGS SHALL HAVE COMPRESSIVE STRENGTH OF $f'_c = 3500$ PSI. ALL OTHER CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF $f'_c = 4000$ PSI.

2. REINFORCING SHALL BE REFORMED STEEL RODS, $F_y = 60$ KSI AND MEETING ASTM A615. WELDED WIRE FABRIC SHALL MEET ASTM A185. SHOULD WELDING OF REINFORCING RODS BE REQUIRED, SUBSTITUTE ASTM A706 BARS FOR ASTM A615. ASTM A615 SHALL NOT BE WELDED.

3. SPLICES IN CONTINUOUS VERTICAL OR HORIZONTAL REINFORCING BARS SHALL BE 40 BAR DIAMETER LAP SPLICE UNLESS NOTED AND SHALL BE EITHER CONTINUOUS OR SPLICED WITH CORNER BARS AT CORNERS.

4. CLEARANCES BETWEEN REINFORCING AND CONCRETE SURFACES SHALL BE THE MINIMUM ALLOWED BY ACI 308, CURRENT EDITION, UNLESS NOTED OTHERWISE.

5. PROVIDE CONTROL JOINTS IN SLAB ON GRADE. THESE SHALL BE EITHER 1' DEEP SAWCUT. SAW CUT JOINTS SHALL BE CUT AS EARLY AS POSSIBLE WITHOUT DAMAGING SLAB. LAYOUT THE CONTRL. JOINTS IN APPROXIMATELY 20' GRIDS.

E. STRUCTURAL STEEL

1. ALL WIDE FLANGE STRUCTURAL STEEL SHALL MEET ASTM A992 (50 KSI). ALL OTHER STEEL SHALL MEET A36 UNLESS NOTED.

2. ANCHOR BOLTS SHALL MEET ASTM A307 OR ASTM A36.

3. ALL BOLTS FOR STEEL BEAM CONNECTIONS SHALL BE HIGH STRENGTH, A325 AND 3/4" DIAMETER, UNLESS NOTED.

4. ALL HEADED STUD ANCHORS SHALL BE MANUFACTURED BY 'NELSON STUD' OR APPROVED EQUIVALENT.

5. ALL WELDS SHALL BE MADE WITH E70XX RODS AND SHALL BE PERFORMED PER LATEST ASW CODE.

6. STEEL PIPE SHALL MEET ASTM A500, GRADE A, OR ASTM A53, TYPES E OR S, GRADE B.

7. STEEL TUBE SHALL MEET ASTM A500, EXCEPT A, GRADE B, $F_y = 46$ KSI.

F. WOOD

1. EXTERIOR WALL AND ROOF SHEATHING SHALL BE PER 'SHEATHING TYPE AND NAILING SCHEDULE.' NAILING OF EXTERIOR WALL AND ROOF SHEATHING SHALL BE PER 'SHEATHING TYPE AND NAILING SCHEDULE.'

2. WALL SHEATHING SHALL HAVE HORIZONTAL BLOCKING AT ALL HORIZONTAL JOINTS (IT IS RECOMMENDED TO PLACE SHEATHING VERTICALLY TO MINIMIZE THE NUMBER OF HORIZONTAL JOINTS IN THE SHEAR WALLS) WITH EDGE NAILING ALONG BOTH EDGES. THE HORIZONTAL WALL SHEATHING JOINT SHALL BE CENTERED OVER THE HORIZONTAL BLOCKING. SEE DETAIL. VERTICAL JOINTS SHALL BE CENTERED OVER A STUD WITH EDGE NAILING ALONG BOTH EDGES. NOTE THAT ALL EXTERIOR WALLS ARE CONSIDERED SHEAR WALLS. NAIL TO BOTH BOTTOM PLATE AND TOP WOOD PLATE USING REQUIRED EDGE NAILING.

3. EXTERIOR ROOF SHEATHING SHALL BE FASTENED TO EAVE BLOCKING USING REQUIRED EDGE NAILING. SEE DRAWINGS FOR REQUIRED BLOCKING AROUND THE BUILDING'S PERIMETER EAVES. ROOF DIAPHRAGM BLOCKING OF JOINTS IS NOT REQUIRED, EXCEPT WHERE BLOCKING IS SHOWN.

4. USE ONLY STAINLESS STEEL OR GALVANIZED NAILS OR SCREWS INTO PRESSURE TREATED LUMBER USING BORIC ACID. OTHER PRESSURE TREATED WOOD SHALL USE ONLY STAINLESS STEEL OR G185 GALVANIZED NAILS OR SCREWS.

5. USE SIMPSON HURRICANE ANCHORS AT ALL SUPPORTS OF ALL TRUSSES. AT EXTERIOR STUD WALLS, LOCATE HURRICANE ANCHORS PREFERABLY AT THE EXTERIOR FACE OF WALL, BUT THESE MAY BE PLACED IN ALTERNATING FASHION, WITH ONE ON INSIDE FACE, AND THE NEXT ON THE EXTERIOR FACE, AND SO ON.

6. LOAD BEARING STUD WALL TOP PLATES SHALL BE #2 SOUTHERN PINE. LOAD BEARING STUD WALLS SHALL BE #2 SOUTHERN PINE, OR EQUIVALENT. SEE DETAIL FOR EXTERIOR WALL DOUBLE WOOD TOP PLATE SPLICE DETAIL. THESE CONTINUOUS DOUBLE WOOD PLATES SHALL RUN THE FULL LENGTH OF THE EXTERIOR WALL, UNLESS NOTED ON THE DRAWING, AND SHALL NOT BE INTERRUPTED BY INTERIOR PERPENDICULAR WALLS.

8. DIMENSIONAL LUMBER FOR HEADERS, BEAMS, AND SIMILAR SHALL BE NO. 2 SOUTHERN PINE OR BETTER.

9. ALL NAILS SHALL BE 'COMMON' TYPE UNLESS NOTED. WHERE POWER NAILING IS USED, SEE THE TABLE FOR EQUIVALENT FASTENERS WHICH GIVES A SPACING FOR THE PARTICULAR FASTENER THAT IS EQUIVALENT TO THE COMMON NAIL SPACING FOR LATERAL LOADS.

STATEMENT OF SPECIAL INSPECTIONS

THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE: ERIC LOY ARCHITECT

THE SPECIAL INSPECTIONS ENCOMPASS THE FOLLOWING DISCIPLINES:

1. STRUCTURAL

THE SEISMIC-FORCE-RESISTING SYSTEM CONSISTS OF THE FOLLOWING: LIGHT FRAMED WALLS SHEATHED IN WOOD SHEAR PANELS.

IMPORTANT NOTES REGARDING SPECIAL INSPECTIONS:

1. THE SPECIAL INSPECTOR SHALL BE RETAINED BY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OR AS PER THE PROJECT MANUAL AND SPECIFICATIONS.

2. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF ALL INSPECTIONS AND FURNISH INSPECTION REPORTS TO THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND MARTIN FRIEDMAN, ARCHITECT. ALSO, HE SHALL SENT A FINAL LETTER OF SPECIAL INSPECTION TO MARTIN FRIEDMAN SUMMARIZING THE SPECIAL INSPECTIONS AND INDICATING THAT THEY HAVE BEEN PERFORMED PER THE REQUIREMENTS CALLED OUT IN THIS STATEMENT.

3. DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND THE BUILDING OFFICIAL.

4. A FINAL REPORT OF SPECIAL INSPECTIONS IS REQUIRED BY KBC TO BE SUBMITTED BY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE TO THE BUILDING OFFICIAL PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY.

THE FOLLOWING MATERIALS, SYSTEMS, COMPONENTS AND WORK ARE REQUIRED TO HAVE SPECIAL INSPECTION OR TESTING.

A. INSPECTION OF WOOD TRUSS FABRICATOR. SEE KBC 1702.2.1. SPECIAL INSPECTION OF FABRICATOR IS NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTIONS.

B. STEEL CONSTRUCTION. SEE KBC 1704.2 AND TABLE 1704.3. (REQUIRED ONLY AT PORCH FRAME)

1. INSPECTION OF WELDING STRUCTURAL STEEL

- a. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS - CONTINUOUS.
- b. SINGLE-PASS FILLET WELDS 5/16 INCH OR SMALLER - PERIODIC.

2. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS - PERIODIC. SEE BELOW.

- a. MEMBER LOCATIONS.
- b. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.

C. CONCRETE CONSTRUCTION. SEE KBC1704.4 AND TABLE 1704.4.

1. INSPECTION OF REINFORCING STEEL AND PLACEMENT - PERIODIC.
2. VERIFYING USE OF REQUIRED DESIGN MIX - PERIODIC.
3. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TEST, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE - CONTINUOUS.
4. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES - PERIODIC.

D. SOILS. SEE KBC 1704.7 AND TABLE 1704.7.

1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY - PERIODIC.
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL - PERIODIC.
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS - PERIODIC. NOTE THAT IF TOTAL DEPTH OF CONTROLLED FILL 12 INCHES OR LESS, SPECIAL INSPECTION NOT REQUIRED.
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS - CONTINUOUS.
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY - PERIODIC.

THE FOLLOWING ELEMENTS ARE REQUIRED TO HAVE SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE. SEE KBC 1707.

NOT REQUIRED (SEISMIC DESIGN CATEGORY B)

STRUCTURAL TESTING FOR SEISMIC RESISTANCE. TESTING AND VERIFICATION OF THE FOLLOWING MATERIALS AND ASSEMBLIES ARE REQUIRED. SEE KBC 1708.

NOT REQUIRED

SHEATHING TYPE AND NAILING SCHEDULE

LOCATION	SHEATHING	PANEL EDGE NAILING (E.N.) ²	PANEL FIELD NAILING (F.N.) ²	NAILING AT ROOF DIAPHRAGM BOUNDARIES ^{2,3}	2x4 BLOCKING AT PANEL EDGES
ROOF	5/8" 32/16 SPAN RATING	10d AT 6" O.C.	10d AT 12" O.C.	10d AT 6" O.C.	NO
EXTERIOR WALL	7/16" 24/0 SPAN RATING	8d AT SPACING PER SHEAR WALL SCHEDULE	8d AT 12" O.C.	NOT APPLICABLE	YES

NOTES:

1.) PANEL EDGES ARE ALONG THE PERIMETER OF AN INDIVIDUAL PHYSICAL SHEET. BLOCKED PANEL EDGES ARE THOSE EDGES RUNNING PERPENDICULAR TO THE MAIN SUPPORTING MEMBERS.

2.) POWER DRIVEN NAILS SHALL BE .148" DIAMETER AND A MINIMUM OF 2 1/4" LONG FOR 10d NAILS, AND 0.119" DIAMETER AND A MINIMUM OF 2" LONG FOR 8d NAILS.

3.) ROOF DIAPHRAGM BOUNDARIES ARE ALONG ALL EXTERIOR WALLS (OR BLOCKING ABOVE THOSE WALLS).

4.) ALONG DOUBLE STUDS AT HOLD DOWNS, NAIL WALL SHEATHING TO BOTH STUDS WITH 8d NAILS AT SPACING PER SHEAR WALL SCHEDULE.

5.) ALL NAILS ARE COMMON TYPE, U.N.O.

IMPORTANT NOTE ON FASTENERS IN PRESSURE TREATED WOOD:

--USE ONLY STAINLESS STEEL OR HOT DIPPED GALVANIZED WITH G185 COATING FOR CONTACT WITH NON-BORIC ACID P.T. WOOD. REGULAR GALVANIZED COATING MAY BE USED FOR BORIC ACID P.T. WOOD.

--JOIST/BEAM HANGERS MUST HAVE G185 GALVANIZED COATING.

WINDOW & DOOR HEADER TABLE

WALL CLEAR OPENING SIZE	HEADER	COMMENTS
4'-0" TO 6'-4" IN EXTERIOR WALLS	(3)- 2 X 10 WITH (2) LAYER OF 1/2" PLYWOOD	-
LESS THAN 4'-0"	(3)-2x10's WITH (2) LAYERS OF 1/2" PLYWOOD	-

NOTES:

1.) USE (1) 2x6 TRIMMER STUD DIRECTLY UNDER END OF HEADER AT BOTH ENDS AND (2) STUDS @ LVL.

2.) USE (2) 2x6 KING STUDS AGAINST TRIMMER STUD AT BOTH ENDS. SECURELY NAIL TRIMMER STUD TO KING STUDS.



POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
 CLAY CITY, KENTUCKY

DATE	REVISION	BY

DESIGN DOCUMENTS: The undersigned hereby certifies that he/she is a duly Licensed Professional Engineer in the State of Kentucky, and is duly qualified to prepare and seal the drawings herein. He/she is not responsible for any errors or omissions in the drawings or for any consequences that may result therefrom. He/she is not responsible for any consequences that may result therefrom. He/she is not responsible for any consequences that may result therefrom.

PROJECT NO.	4524-21
DESIGNED BY	ENL/BLL
DRAWN BY	ENL
CHECKED BY	
REVIEWED BY	
DATE	DECEMBER 2023
SCALE	AS NOTED

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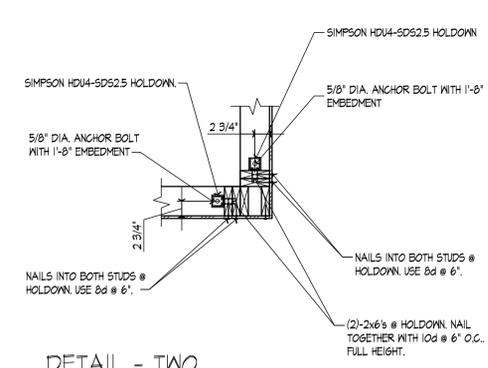
DRAWING NO.

S-1

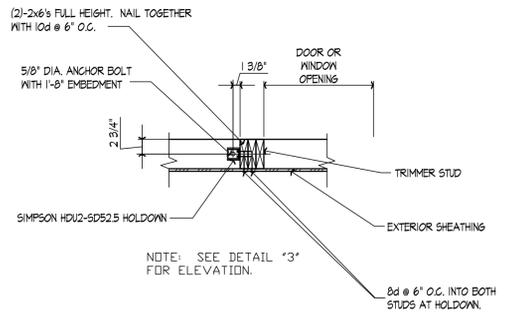
SHEET OF



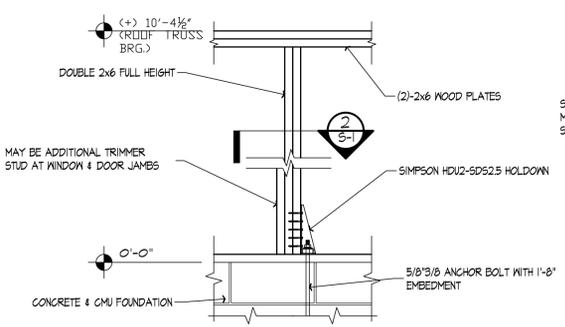
**POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY**



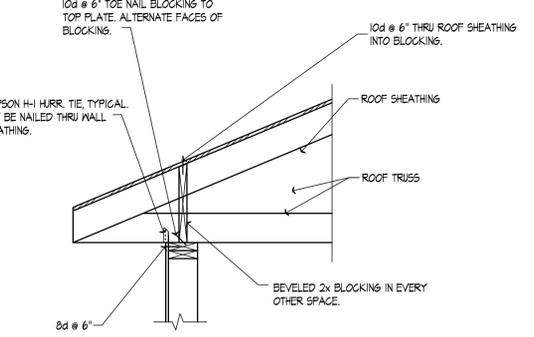
DETAIL - TWO HOLDOWNS AT CORNER
SCALE: 3/4"=1'-0"
①
S-2



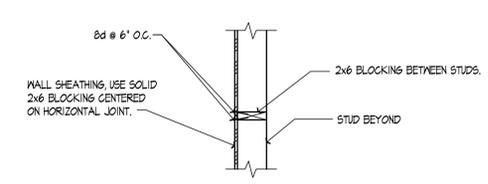
HOLDOWN NOT AT CORNER (SHOWN AT DOOR OR WINDOW JAMB)
SCALE: 3/4"=1'-0"
②
S-2



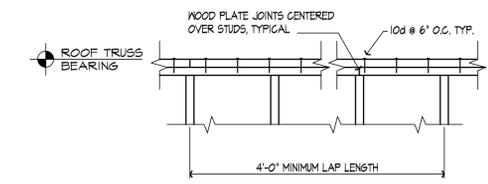
ELEVATION - TYPICAL HOLDOWN AT END OF SHEARWALL
SCALE: 3/4"=1'-0"
③
S-2



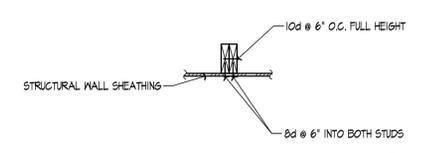
DETAIL
SCALE: 3/4"=1'-0"
④
S-2



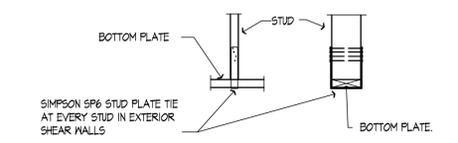
DETAIL - EXTERIOR WALL SHEATHING BLOCKING AT HORIZONTAL JOINTS
SCALE: 3/4"=1'-0"
⑤
S-2



TYP. DOUBLE WOOD PLATE SPIGE DETAIL AT EXTERIOR WALLS
SCALE: 3/4"=1'-0"
⑥
S-2



TYP. AT SHEATHING JOINT
SCALE: 3/4"=1'-0"
⑦
S-2



STUD PLATE TIE DETAIL @ SHEAR WALL
SCALE: 3/4"=1'-0"
⑧
S-2

DATE	REVISION	BY

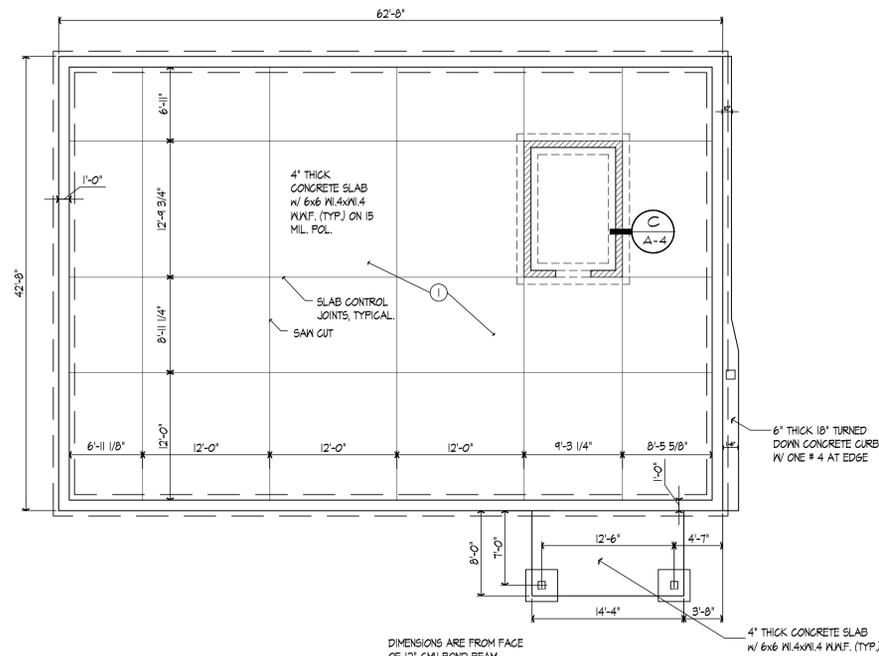
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PROJECT NO. 4524-21	DESIGNED BY ENL
	DRAWN BY ENL
	CHECKED BY
	REVIEWED BY
DATE: DECEMBER 2023	SCALE: AS NOTED

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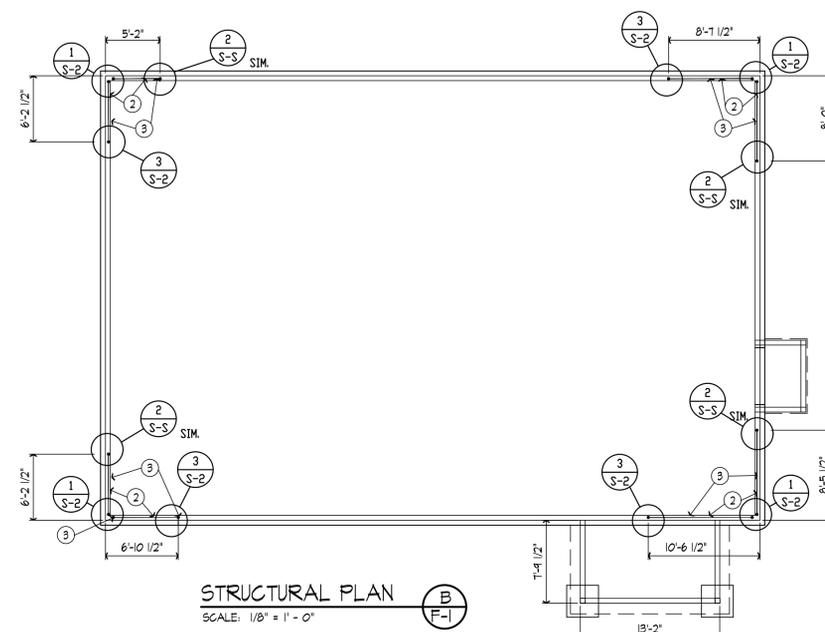
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FOUNDATION PLAN KEY NOTES:

- ▲ 4" THICK CONCRETE SLAB OVER 15 MIL POLY VAPOR BARRIER OVER 4" THICK CRUSHED STONE BASE REINFORCE SLAB WITH #6 W/ 6x6 #14x#14 (TYP.)
- ▲ 8" CMU TOP COURSE OF FOUNDATION WALL, NOT SHOWN, TYPICAL.
- ▲ CENTERLINE OF EXTERIOR SHEAR WALL (AND ANCHOR BOLTS) WITH SIMPSON HDU2-S0525 HOLD-DOWNS AT BOTH ENDS. LOCATION OF HOLD-DOWN ANCHOR BOLTS IS BASED UPON ROUGH WINDOW/DOOR OPENINGS (OR BUILDING CORNER IF AT CORNER) AND HOLD-DOWN USED. CONTRACTOR IS RESPONSIBLE FOR ACCURATE ANCHOR BOLT PLACEMENT. SEE DETAILS.

FOUNDATION PLAN (A)
SCALE: 1/8" = 1' - 0"



STRUCTURAL PLAN (B)
SCALE: 1/8" = 1' - 0"

FOUNDATION NOTES:

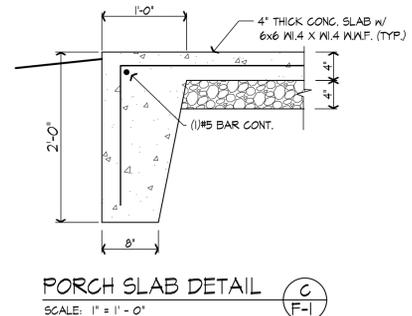
- SEE SPECIFICATIONS, SECTION 02200, AND GEO-TECHNICAL REPORT FOR EARTHWORK REQUIREMENTS
- ALL EXTERIOR AND INTERIOR WALL FOOTINGS OF THE SAME BUILDING SHALL BE SUPPORTED IN THE SAME TYPE OF MATERIAL, I.E. ROCK OR #5'S FROM ROCK.
- ALL INTERIOR WALL FOOTINGS SHALL BE EITHER THICKENED, REINFORCED SLABS OR TYPICAL CONCRETE BLOCK WALLS ON REINFORCED CONCRETE PROVIDED THEY ARE SUPPORTED IN THE SAME TYPE OF MATERIALS AS EXTERIOR WALL FOOTINGS, I.E. ROCK OR #5'S FROM ROCK.
- WHERE APPLICABLE, FOOTING STEPS SHALL NOT EXCEED A RATIO OF ONE VERTICAL UNIT TO TWO HORIZONTAL UNITS.
- WHERE APPLICABLE, INTERIOR WALL FOOTINGS SHALL STEP TO MEET ELEVATIONS OF EXTERIOR WALL FOOTINGS.

FOUNDATION EXCAVATION

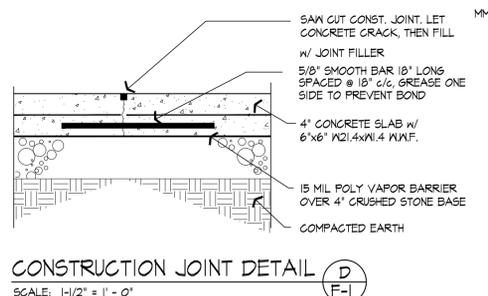
- SOILS EXPOSED IN THE BOTTOM OF ALL FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITION SUCH AS DISTURBANCE, RAIN, OR FREEZING. THIS IS ESPECIALLY IMPORTANT GIVEN THE CAPABILITY OF THE RESIDUAL SOILS TO ABSORB WATER AND AS A RESULT, LOSE A SUBSTANTIAL PERCENTAGE OF THEIR STRENGTH. SURFACE RUNOFF SHOULD BE DIRECTED AWAY FROM SUCH EXCAVATIONS AND NOT BE PERMITTED TO POND. OPTIMUM PROTECTION CAN BEST BE ACHIEVED IF ALL FOOTING CONCRETE IS POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL, THE FOOTING EXCAVATIONS PROPOSED STRUCTURE SHOULD BE SLOPED IN A MANNER THAT WILL PROVIDE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE.
- PLACE A MINIMUM OF FOUR INCHES OF CRUSHED STONE AGGREGATE UNDER ALL CONCRETE SLABS-ON-GRADE.

NOTE TO CONTRACTOR

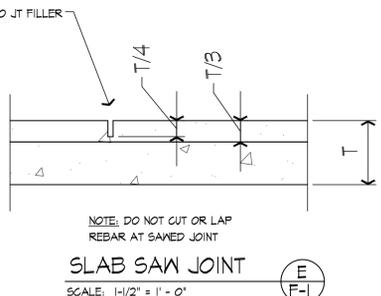
- THE CONTRACTOR IS TO COORDINATE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS AND BE CERTAIN ALL PIPES, SLEEVES, DUCTS, INSERTS AND HOLES ARE LOCATED AND IN PLACE BEFORE EACH CONCRETE POUR.
- THE CONTRACTOR SHALL CHECK AND APPROVE WITH REASONABLE PROMPTNESS, SHOP DRAWINGS, AND SCHEDULES FOR COORDINATION OF DETAILS, SIZES, TOLERANCES AND DIMENSIONS. THE CONTRACTOR SHALL STAMP OR SIGN THESE DRAWINGS AND SCHEDULES WITH HIS APPROVAL AND THEN SUBMIT THEM TO THE ARCHITECT FOR REVIEW.



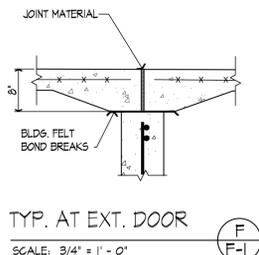
PORCH SLAB DETAIL (C)
SCALE: 1" = 1' - 0"



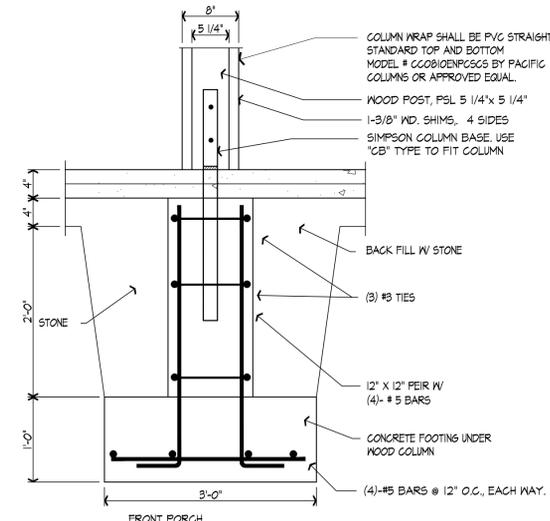
CONSTRUCTION JOINT DETAIL (D)
SCALE: 1-1/2" = 1' - 0"



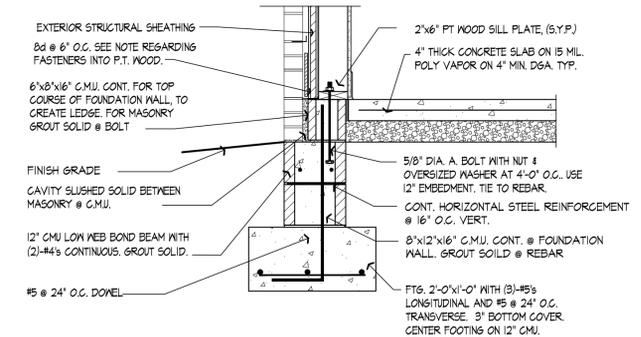
SLAB SAW JOINT (E)
SCALE: 1-1/2" = 1' - 0"



TYP. AT EXT. DOOR (F)
SCALE: 3/4" = 1' - 0"



WOOD POST CONNECTION @ FRONT (G)
SCALE: 1" = 1' - 0"



SECTION - TYPICAL EXTERIOR FOUNDATION WALL (H)
SCALE: 3/4" = 1' - 0"



**POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY**

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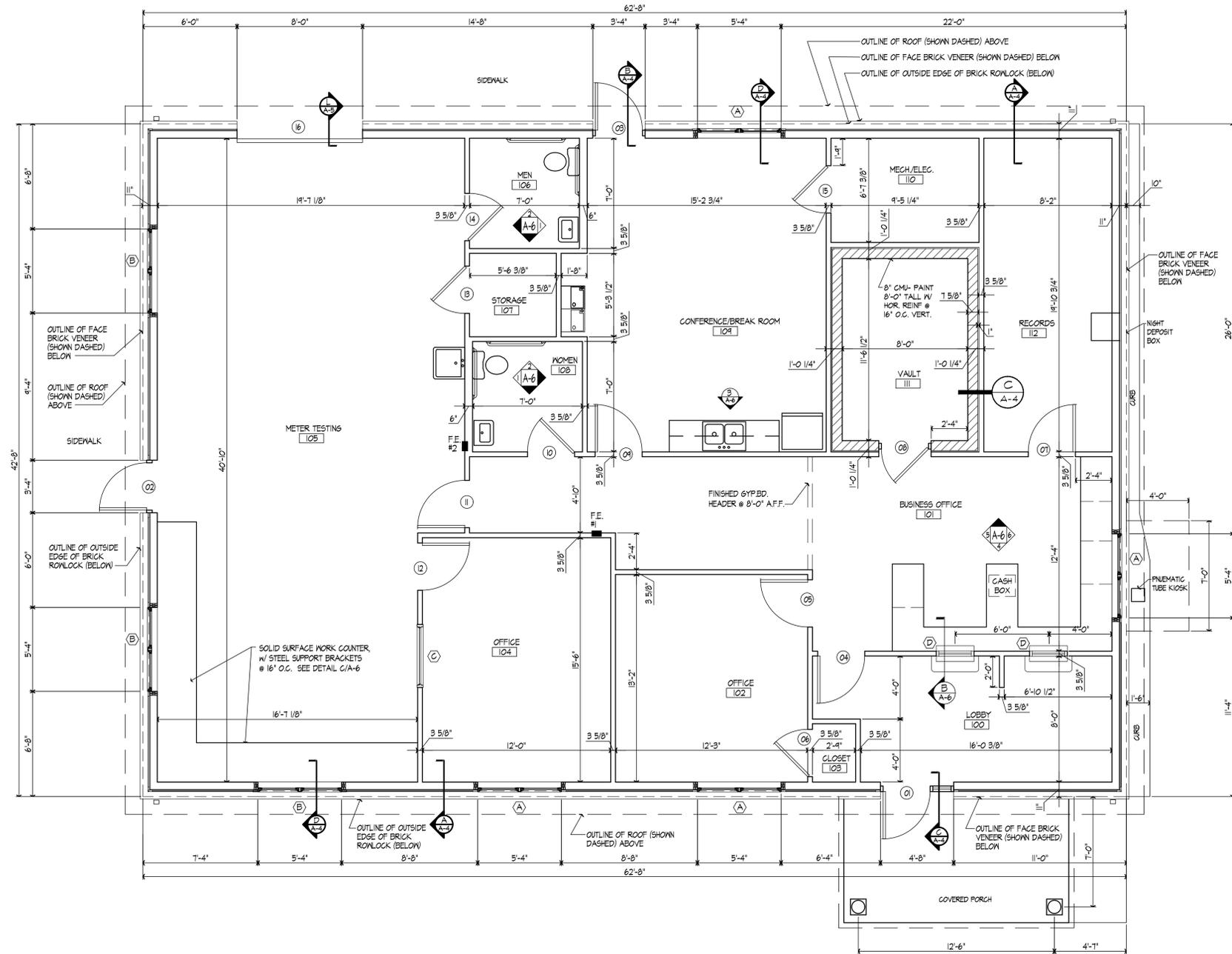
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REVIEWED BY ENL
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DRAWING NO.
F-1
SHEET OF



**POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING**
CLAY CITY, KENTUCKY



WALL TYPES

- ALL INTERIOR METAL STUDS WALLS SHALL BE 20 GA. C/W. STUDS, 1-3/8" FLANGE 3/8" RETURN @ 16" O.C., FULL HEIGHT TO MATCH EXTERIOR WOOD STUD WALLS W/ 5/8" F.C. GYP. BOARD CONTINUOUS TO BOTTOM OF TRUSSES. SEE FLOOR PLAN FOR SPECIFIC SIZE.
- ALL EXTERIOR WALLS SHALL BE 12x12x16" #2 MIN. WOOD STUDS, 16" o.c., WITH WOOD BLOCKING, SEE BUILDING SECTIONS
- 13 1/2" SOUND BATTS, CONTINUOUS TO TOP OF WALLS, TYPICAL. ALL WALLS SURROUNDING RESTROOMS
- *ALL TRUSSES TO RECEIVE (1) LAYERS 5/8" F.C. GYPSUM BOARD @ BOTTOM CHORD OF ROOF TRUSSES.
- — INDICATES FINISHED GYPSUM BOARD HEADER @ 8'-0" A.F.F.
- ● FE = FIRE EXTINGUISHER

COORDINATE ACTUAL PLACEMENT OF ATTIC ACCESS PANELS WITH OTHER MECH., ELEC. AND PLUMBING ITEMS.

CODE DATA:
USE GROUP B (Business - Section 304 IBC)

Allowable Height and Area:
Height: 40 FT (Type 5B) Table 504.3,
Proposed - 22 FT
Allowable Number of Stories: 2 (Two) Table 504.4,
Proposed - 1 (One)
Allowable Area Factor: 3,000 SF (N5), Table 506.2,
Proposed - 2,606 SF
Construction Type: 5B (602.5 IBC)
Area Increase, Not Required

Table 1004.1.2 Minimum Floor Area Allowance Per Occupant
Business - 100 gross
2,606 SF / 100 = 27 Occupants

Table 1012 - Exit Access Travel Distance: 200 FT

Section 1012 - Corridors -
Exception -
4. A fire-resistance rating is not required for corridors in an occupancy in Group B that is a space requiring only a single means of egress complying with Section 1006.2.

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

PROJECT NO.	DATE	REVISION	BY
4524-21			
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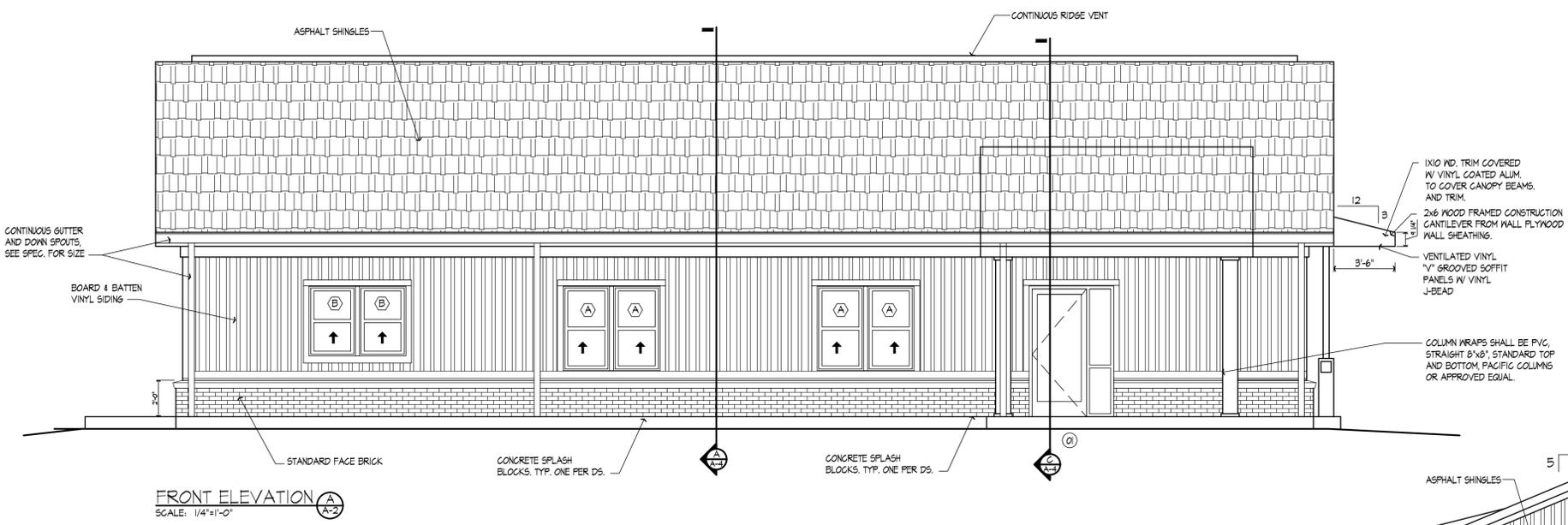
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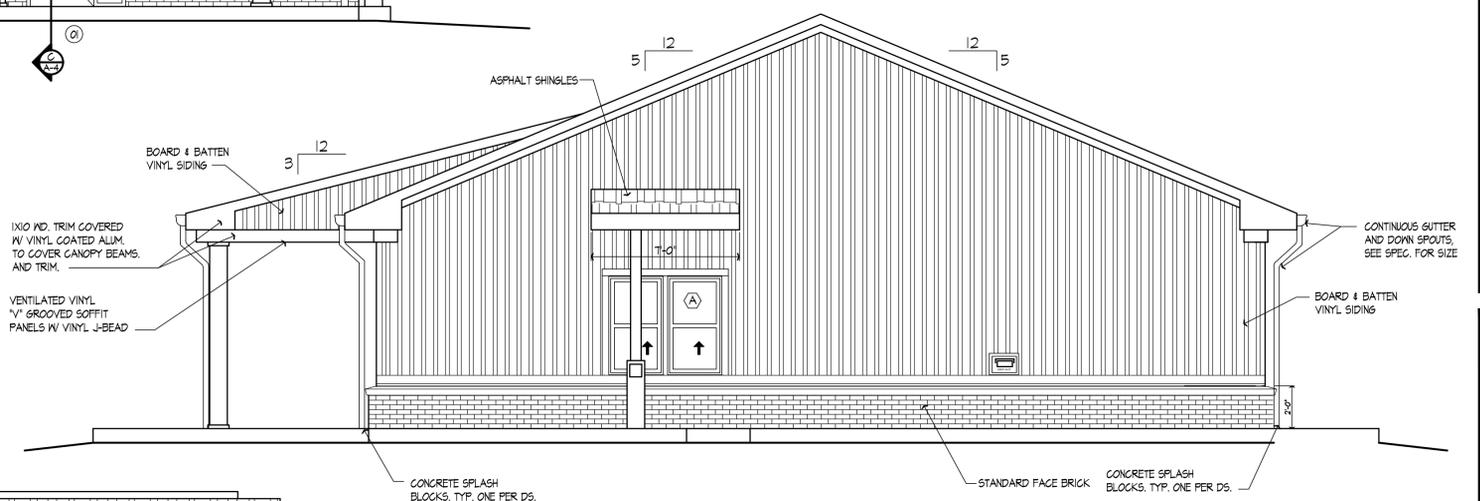


**POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING**
CLAY CITY, KENTUCKY

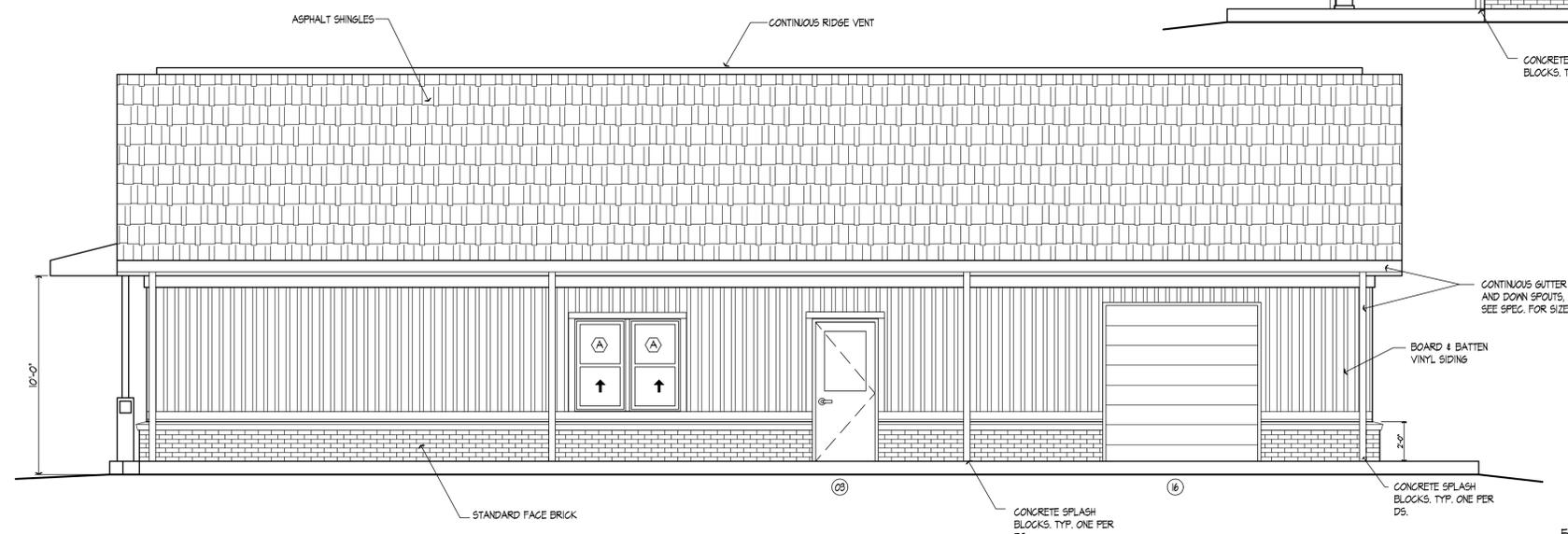
- EXTERIOR FINISHES:**
- ASPHALT SHINGLES CERTAINTED LANDMARK PRO "MAX DEF RED OAK" OR APPROVED EQUAL
 - SINGLE T" BOARD & BATTEN VINYL SIDING SHALL BE CERTAINTED, COLOR "GRANITE GRAY" OR APPROVED EQUAL
 - GUTTERS, DOWNSPOUTS, WINDOW AND CORNER AND ASSOCIATED TRIM SHALL BE CERTAINTED, COLOR "COLONIAL WHITE" OR APPROVED EQUAL
 - VINYL WINDOWS AND SOFFITS TO BE WHITE
 - HOLLOW METAL DOORS AND FRAMES PAINTED TO MATCH "WHITE" VINYL WINDOWS
 - BRICK - STANDARD SIZE FBX BRICK, BELDEN BRICK "MANCHESTER BLEND" w/ Flamingo BRIMXTM "OC OLD COLONIAL" MORTAR



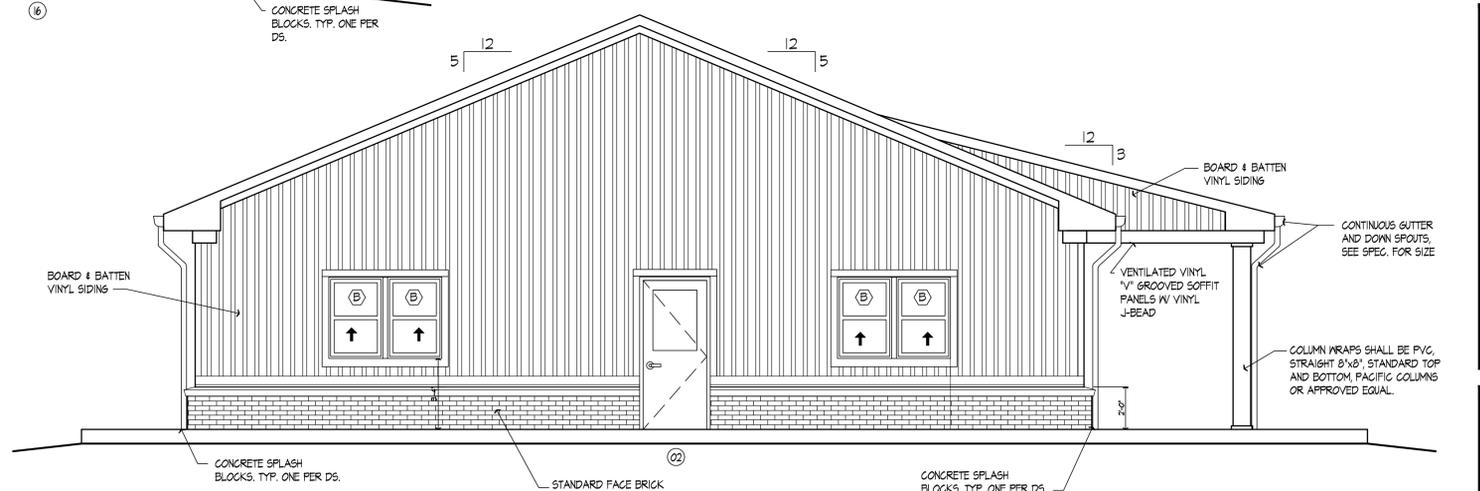
FRONT ELEVATION
SCALE: 1/4"=1'-0"
A-1



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



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



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

DATE	REVISION	BY

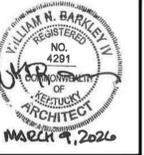
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CHECKED BY: ENL
REVIEWED BY: ENL
DATE: DECEMBER 2023
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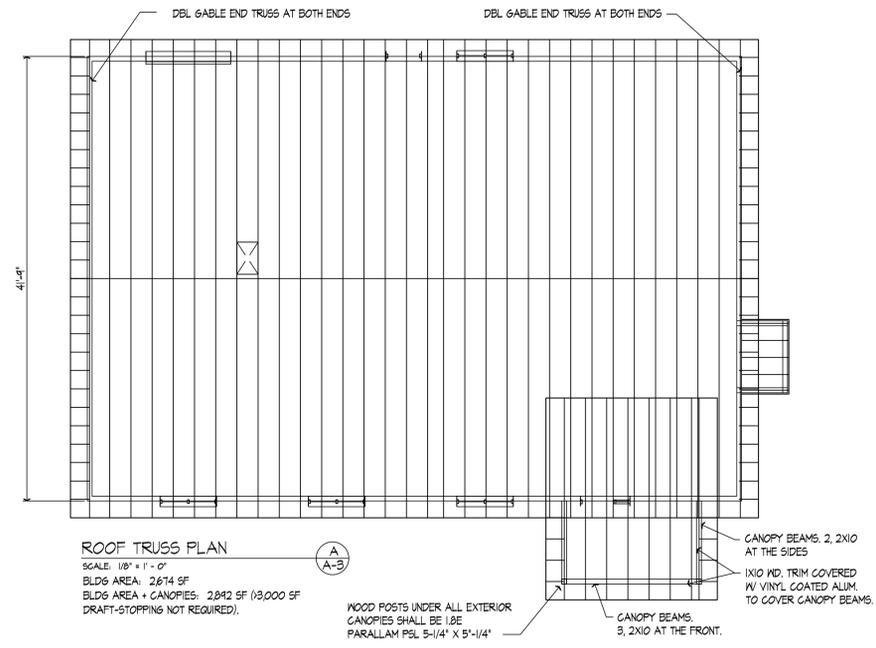
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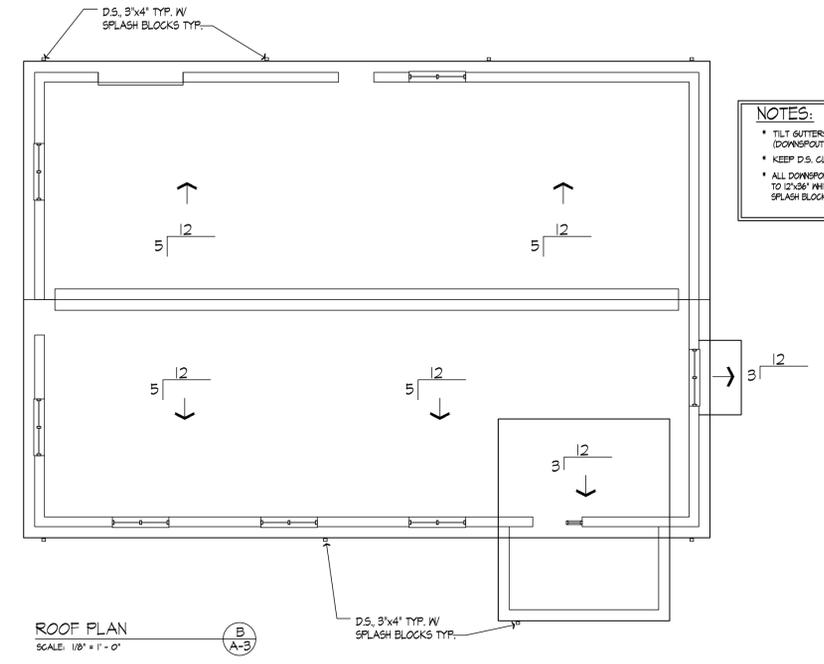


**POWELL'S VALLEY WATER DISTRICT
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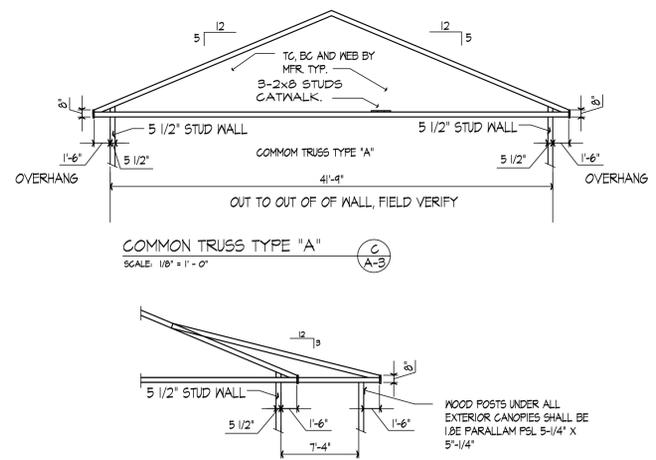
ROOF TRUSS PLAN
SCALE: 1/8" = 1' - 0"
BLDG AREA: 2,674 SF
BLDG AREA + CANOPIES: 2,842 SF (9,000 SF DRAFT-STOPPING NOT REQUIRED)

WOOD POSTS UNDER ALL EXTERIOR CANOPIES SHALL BE 1.8E PARALLAM PSL 5-1/4" X 5'-1/4"
CANOPY BEAMS, 3, 2X10 AT THE FRONT.
CANOPY BEAMS, 2, 2X10 AT THE SIDES
1X10 WD. TRIM COVERED W/ VINYL COATED ALUM. TO COVER CANOPY BEAMS.

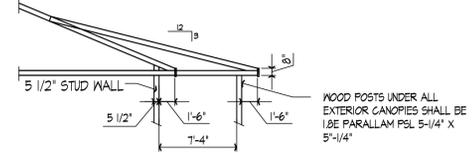


ROOF PLAN
SCALE: 1/8" = 1' - 0"

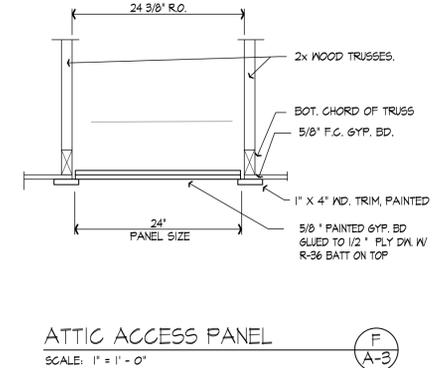
NOTES:
* TILT GUTTERS TOWARD D.S (DOWNSPOUTS).
* KEEP D.S. CLOSE TO BLDG.
* ALL DOWNSPOUTS TURNED OUT TO 12"x6" WHITE PRECAST CONCRETE SPLASH BLOCK AT FINISHED GRADE.



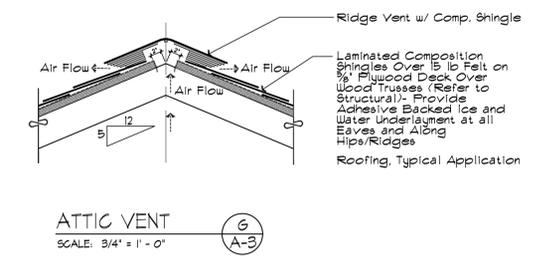
COMMON TRUSS TYPE "A"
SCALE: 1/8" = 1' - 0"



- TRUSS NOTES**
- PROVIDE CONTINUOUS 2"x4" CROSS BRACING AND/OR BRIDGING AT ALL 1/4 POINTS OF THE TRUSS SPAN FOR BOTH TOP AND BOTTOM CHORDS.
 - ALL WOOD TRUSS BRACINGS AND CONNECTIONS SHALL CONFORM TO TRUSS PLATE INSTITUTE'S BOOKLET (EWT-16).
 - THE ERECTION AND HANDLING OF WOOD TRUSSES SHALL FOLLOW THE TRUSS PLATE INSTITUTE'S REQUIREMENTS AND RECOMMENDATIONS IN BOOKLET (HET-80).
 - STEEL GUSSET PLATES SHALL BE PRESS-IN TYPE GUSSET COMPLYING WITH STANDARDS OF THE TRUSS PLATE INSTITUTE.
 - ROOF TRUSSES SHALL BE DESIGNED USING THE FOLLOWING LOADS:
TC Live 20.0 psf
TC Dead 15.0 psf
BC Live 0.0 psf
BC Dead 10.0 psf
WIND LOAD PER KBC TOTAL 45.0 psf
 - CONTRACTOR SHALL SUBMIT TRUSS SHOP DRAWINGS INCLUDING STRUCTURAL CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN KENTUCKY TO ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
 - CAMBER SHALL BE BUILT-IN TO COUNTERACT DEAD LOAD DEFLECTION FOR SPANS INDICATED.
 - INDICATED SIZES OF MEMBERS ARE MINIMUM AND SHALL BE INCREASED WHERE REQUIRED BY STRESSES. ALL MEMBERS SHALL LIE IN THE SAME PLANE WITH FULL BEARINGS AT ALL JOINTS. THERE SHALL BE NO SPLICES OF TRUSS MEMBERS AT CONNECTION POINTS.



ATTIC ACCESS PANEL
SCALE: 1" = 1' - 0"



ATTIC VENT
SCALE: 3/4" = 1' - 0"

REVISION	DATE	BY

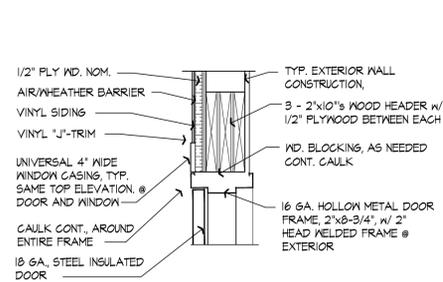
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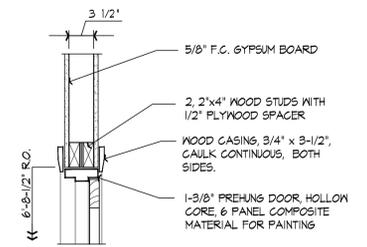
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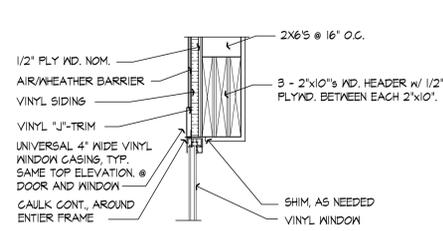
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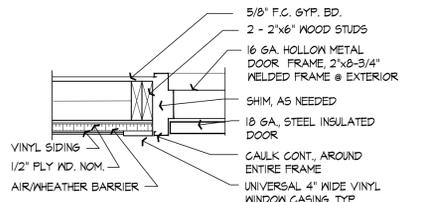
EXTERIOR DOOR HEAD
SCALE: 1" = 1'-0"



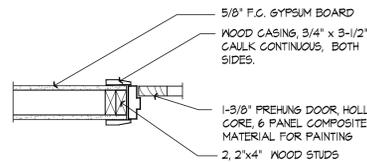
INTERIOR DOOR HEAD
SCALE: 1" = 1'-0"



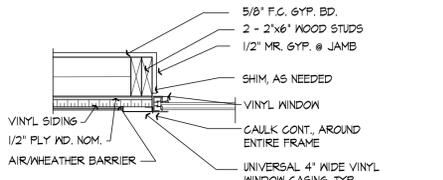
EXTERIOR WINDOW HEAD
SCALE: 1" = 1'-0"



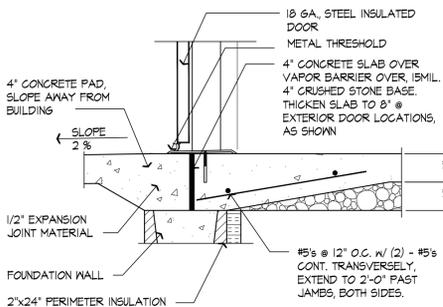
EXTERIOR DOOR JAMB
SCALE: 1" = 1'-0"



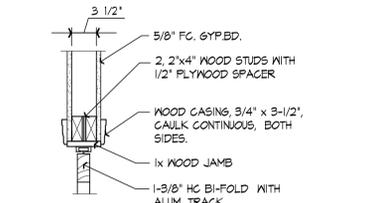
INTERIOR DOOR JAMB
SCALE: 1" = 1'-0"



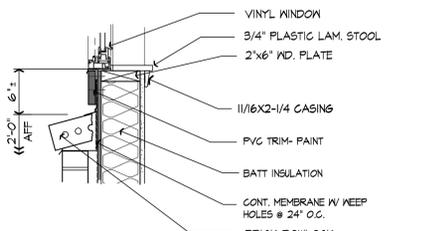
EXTERIOR WINDOW JAMB
SCALE: 1" = 1'-0"



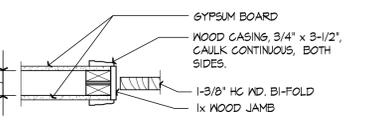
DOOR THRESHOLD
SCALE: 1" = 1'-0"



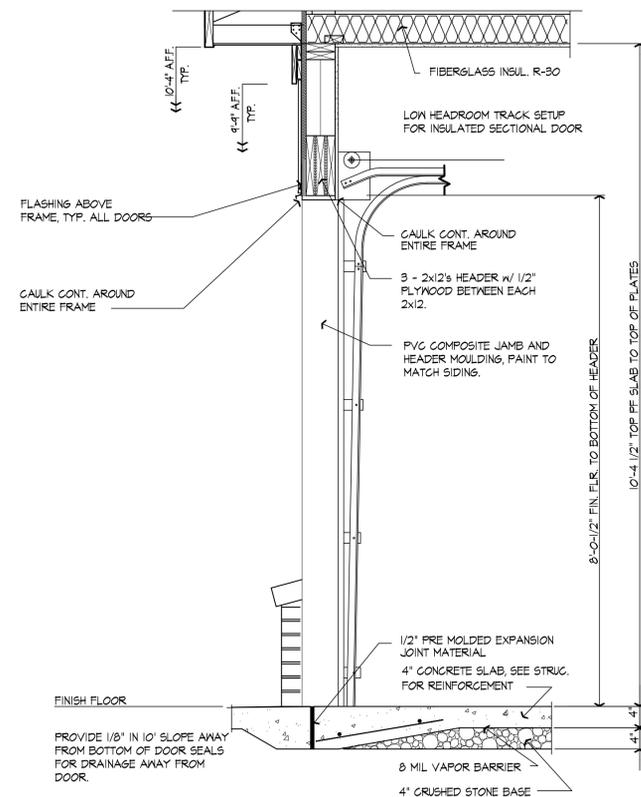
INT. BI-FOLD DOOR HEAD
SCALE: 1" = 1'-0"



EXTERIOR WINDOW SILL
SCALE: 1" = 1'-0"



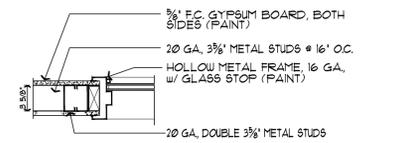
INT. BI-FOLD DOOR JAMB
SCALE: 1" = 1'-0"



WALL SECTION
SCALE: 3/4" = 1'-0"



INTERIOR OPENING HEAD
SCALE: 1" = 1'-0"

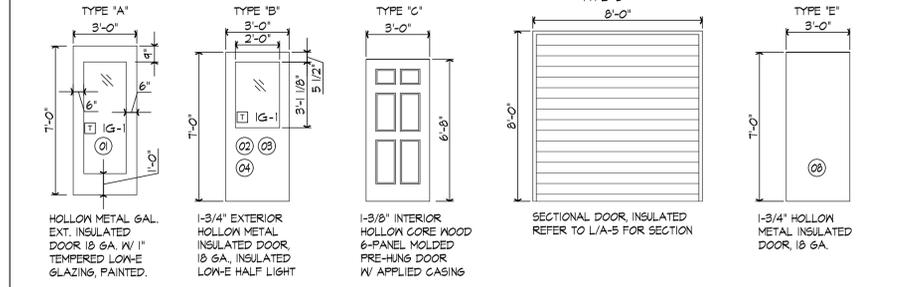


INTERIOR OPENING-JAMB
SCALE: 1" = 1'-0"

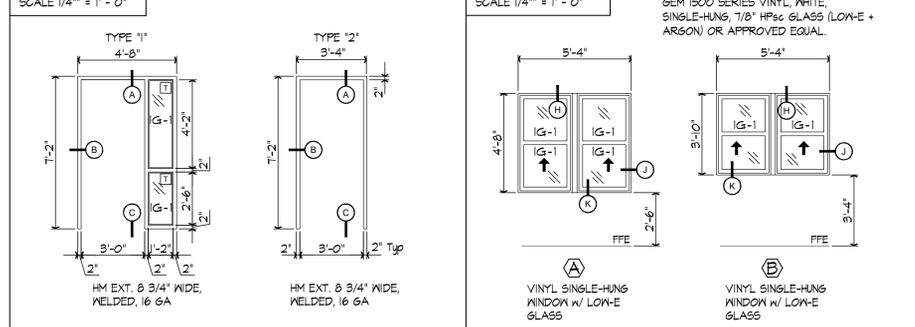
DOOR SCHEDULE										
NO.	TYPE	MATERIAL	WIDTH	HEIGHT	THICK.	FRAME			REMARKS	
						TYPE	HEAD	JAMB		
01	A	HM	3'-0"	7'-0"	1 3/4"	1	A	B	C	Exterior, Egress, Insulated
02	B	HM	3'-0"	7'-0"	1 3/4"	2	A	B	C	Exterior, Egress, Insulated
03	B	HM	3'-0"	7'-0"	1 3/4"	2	A	B	C	Exterior, Egress, Insulated
04	B	HM	3'-0"	7'-0"	1 3/4"	2	A (Sim)	B	C	Vestibule, Egress, Insulated
05	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Office
06	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Closet
07	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Storage
08	E	HM	3'-0"	7'-0"	1 3/4"	2	---	---	---	Secure Storage- Vault
09	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Conference/Break Room
10	D	HCWD	2'-6"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Restroom
11	D	HCWD	2'-6"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Corridor
12	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Office
13	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Storage
14	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Restroom
15	C	HCWD	3'-0"	6'-8"	1 3/8"	Pre-Hung Wd	D	E	---	Utility
16	D	---	8'-0"	8'-0"	---	Metal	L	J (Sim)	L/A-5	Upward Acting Insulated Sectional

SEE SPEC. SECTION 0810 FOR HARDWARE SETS

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



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



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

GLAZING SCHEDULE					
Type	Thick	Description	Color	Spec Section	Door Number
IG-1	1"	Insulating, Tempered	Clear	08800	01, 02, 03 and 04
IG-2	1"	Insulating	Clear	08800	Ext Windows A, B
FG-1	1/4"	Float Glass	Clear	08800	Window C

Schedule General Notes: Field verify Opening Sizes



**POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY**

DATE	REVISION	BY

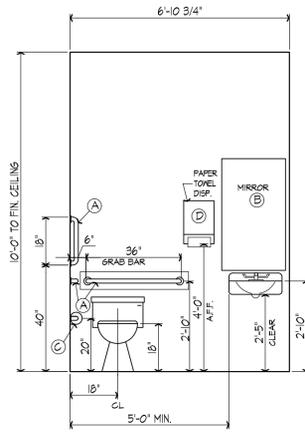
PROJECT NO. 9524-21
DESIGNED BY ENL
DRAWN BY ENL
CHECKED BY
REVIEWED BY
DATE: DECEMBER 2023
SCALE: AS NOTED

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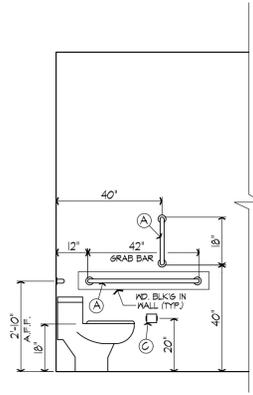
DRAWING NO.
A-5
SHEET OF

INTERIOR ELEVATIONS

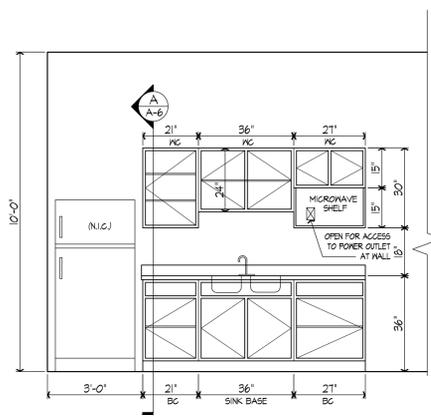
3/8" = 1'-0"



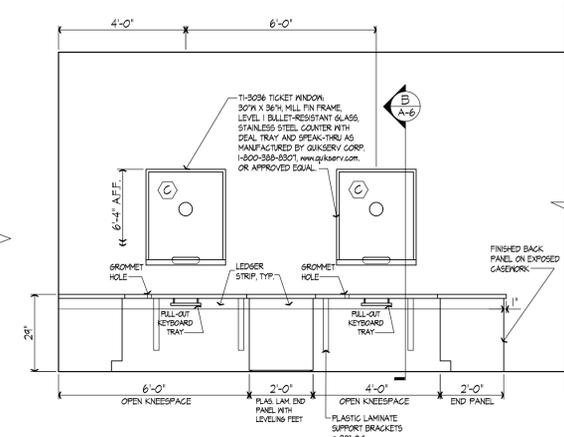
1 MEN (106)
WOMEN (108) - Opp. View



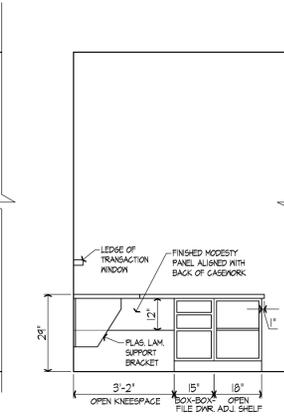
2 TYPICAL SIDE VIEW
(for ADA toilet & accessories)



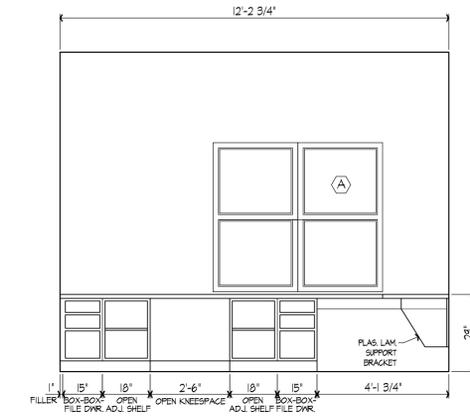
3 CONFERENCE/BREAK ROOM (109)
NOTE:
OWNER TO PROVIDE KITCHEN APPLIANCES
S.C. TO PROVIDE ALL NECESSARY PLUMBING, VENTING,
ELECTRICAL SERVICE AND CABINERY OPENINGS,
INCLUDING WATER HOOD-UP FOR ICE MAKERS.



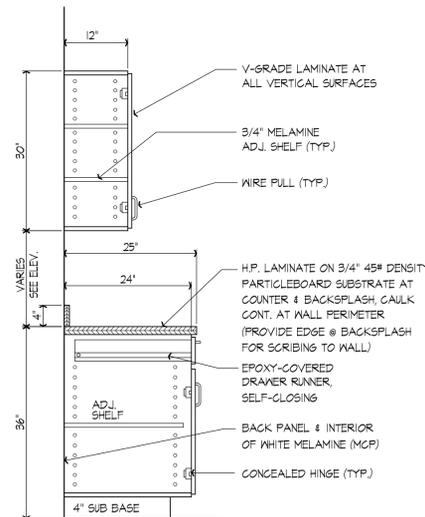
4 BUSINESS OFFICE (101)



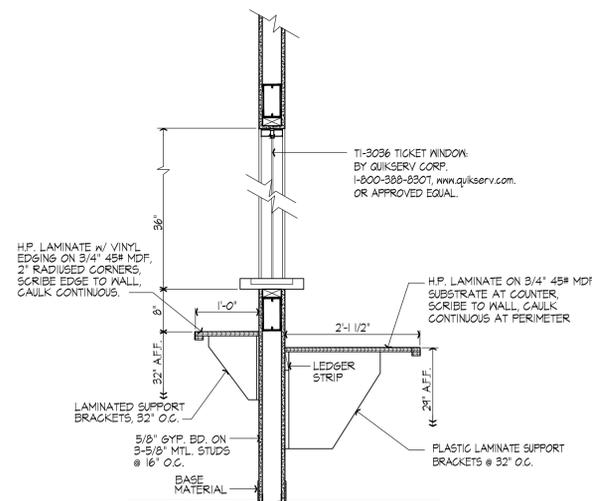
5 BUSINESS OFFICE (101)



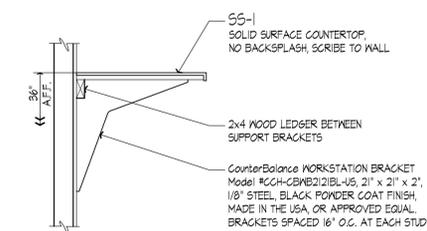
6 BUSINESS OFFICE (101)



TYP. LAMINATE
CABINETS
SCALE: 3/4"=1'-0" A
A-6



BUSINESS COUNTER
SCALE: 3/4"=1'-0" B
A-6



WORK COUNTER
SCALE: 3/4"=1'-0" C
A-6

FINISH SCHEDULE									
ROOM #	ROOM NAME	FLOOR	BASE	WALLS & TRIM	MISC.	CLG.	CLG. HT.		
			LUXURY VINYL PLANK SEALED CONCRETE	VINYL COVE BASE	LATEX EGGSHELL MALL PAINT	LATEX EGGSHELL MALL PAINT	COUNTERTOP CABINETS	GYPSUM BOARD, PAINTED	
100	LOBBY	LVT-1	B-1	P-3	L-3	P-5			10'-0"
101	BUSINESS OFFICE	LVT-1	B-1	P-2	L-3	L-2	P-5		10'-0"
102	OFFICE	LVT-1	B-1	P-2			P-5		10'-0"
103	CLOSET	LVT-1	B-1	P-2			P-5		10'-0"
104	OFFICE	LVT-1	B-1	P-2			P-5		10'-0"
105	METER TESTING		B-1	P-1			P-5		10'-0"
106	MEN		B-1	P-1			P-5		10'-0"
107	STORAGE		B-1	P-1			P-5		10'-0"
108	WOMEN	LVT-1	B-1	P-1			P-5		10'-0"
109	CONFERENCE/BREAK ROOM	LVT-1	B-1	P-3	L-1	L-2	P-5		10'-0"
110	MECHANICAL/ELECTRICAL		B-1	P-1			P-5		10'-0"
111	VAULT	LVT-1	B-1	P-1			P-5		9'-0"
112	RECORDS	LVT-1	B-1	P-1			P-5		10'-0"

FINISH SPECIFICATIONS		WALLS
FLOORS:	LVT-1: Polarsafe Commercial Luxury Vinyl Plank "North Ridge 120TV" color: Fish Cream 02150 6" x 48" planks, 3mm thickness, 20mil wearlayer	P-1: Sherwin-Williams SW7042 Shoji White P-2: Sherwin-Williams SW1173 Shiloh P-3: Sherwin-Williams SW6105 Escape Gray P-4: Sherwin-Williams SW1506 Loggia P-5: Sherwin-Williams Ceiling White
BASE:	B-1: Torquet Vinyl Wall Base 4" cove base, Color: 195 Macadamia, 0.080 gauge	CASEWORK: L-1: Wilsonart #4586K-07 Kalahari Topaz L-2: Wilsonart #11002K Fisher Oak L-3: Wilsonart #4490-3B Flux Linen 55-1: Wilsonart #
NOTES: A) All interior trim, doors and door frames to be painted with Finish P-4, interior Latex Semi-gloss. B) Plastic Laminate window stools to be Finish L-3.		



POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

DATE	REVISION	BY

PROJECT NO. 4524-21
DESIGNED BY: BILL/ENL
DRAWN BY: ENL
CHECKED BY: ENL
REVIEWED BY: ENL
DATE: DECEMBER 2023
SCALE: AS NOTED

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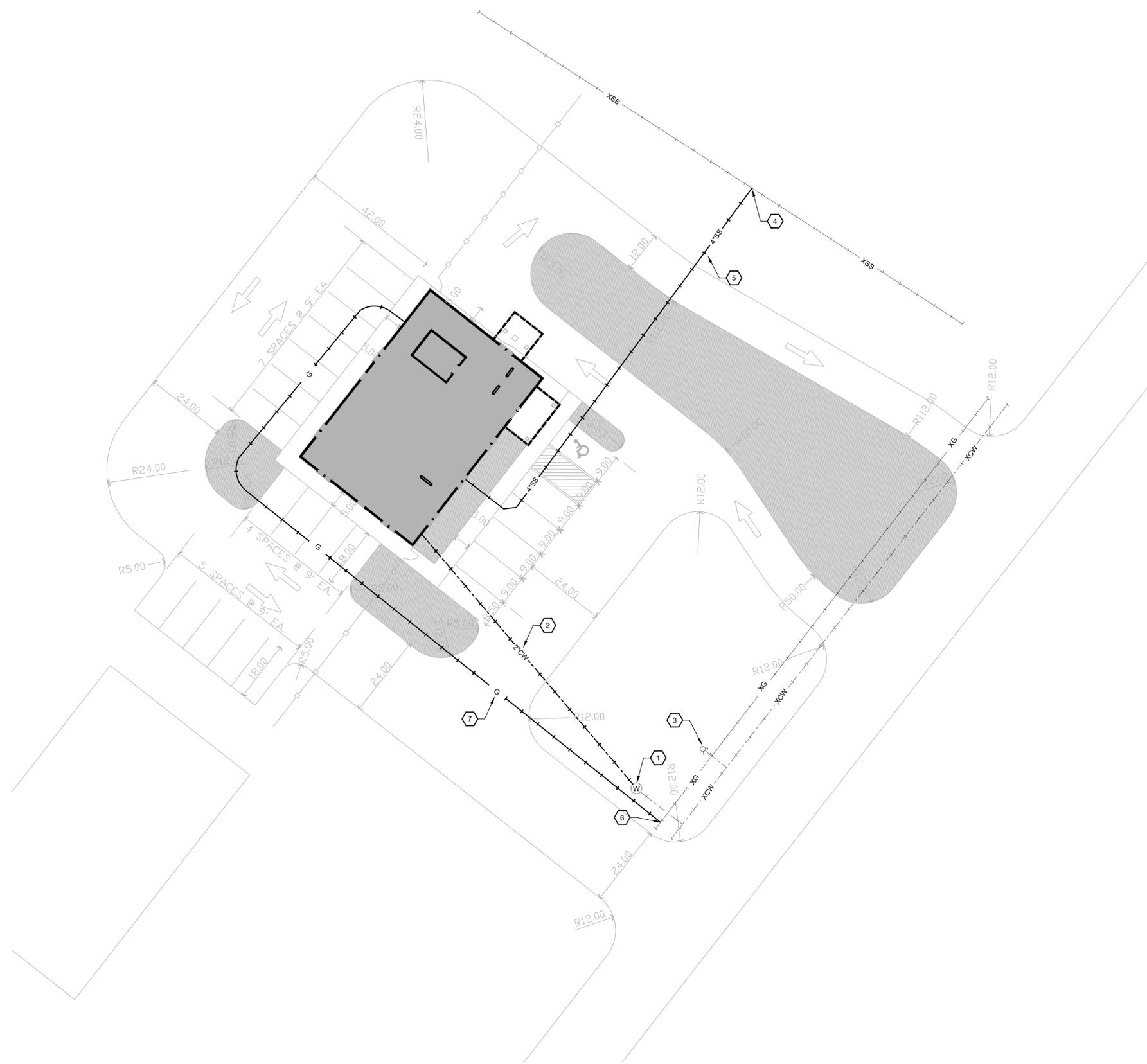
DRAWING NO.

A-6

SHEET OF



POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY



GENERAL NOTES

- REFER TO SHEET P0.

SHEET NOTES

- WATER METER BY UTILITY COMPANY, FIELD VERIFY EXACT LOCATION.
- PROVIDE 2" DOMESTIC WATER SERVICE FROM WATER METER TO BUILDING. WATER SERVICE TO BE BURIED MINIMUM 36" DEPTH. COORDINATE SERVICE ENTRANCE REQUIREMENTS WITH UTILITY COMPANY.
- EXISTING FIRE HYDRANT.
- NEW SANITARY SEWER SERVICE CONNECTION TO EXISTING UTILITY MAIN. COORDINATE SEWER SERVICE TAP WITH UTILITY COMPANY.
- PROVIDE 4" SANITARY SEWER FROM UTILITY TAP TO BUILDING.
- NEW GAS SERVICE CONNECTION TO EXISTING UTILITY MAIN. COORDINATE GAS SERVICE TAP WITH UTILITY COMPANY.
- PROVIDE HIGH PRESSURE NATURAL GAS SERVICE TO METER LOOP ON BACK SIDE OF BUILDING. COORDINATE SERVICE ENTRANCE REQUIREMENTS WITH UTILITY COMPANY.

UTILITY CONTACT INFORMATION	
CLAY CITY WATER & SEWER:	(606)-663-2224
GARY CARMICHAEL CHAD PATTON	
DELTA NATURAL GAS:	(606)-336-8127
JOHN DAVID CAUDILL	

1 SITE PLAN - PLUMBING
1/16" = 1'-0"

PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	REVIEWED BY	DATE	SCALE
9524-21	CE	CE	CE	CE	SEPTEMBER 2023	AS NOTED

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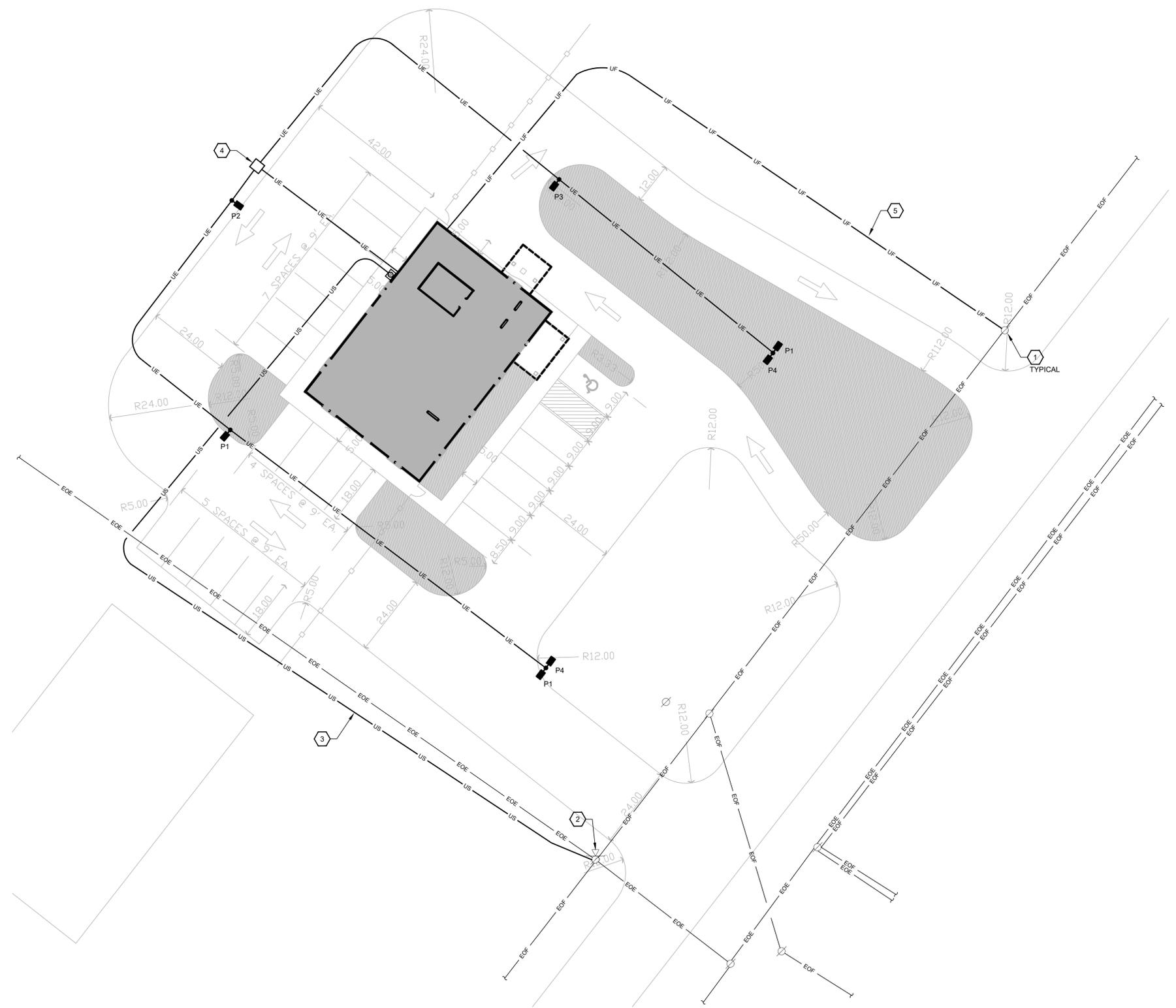
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DATE _____ BY _____
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POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY



GENERAL NOTES

1. REFER TO SHEET E0.
2. REFER TO POLE BASE DETAIL ON SHEET E5 FOR SITE LIGHTING SHOWN.
3. CONTRACTOR SHALL UPSIZE WIRE AS NECESSARY TO ENSURE MAXIMUM 3% VOLTAGE DROP ON EXTERIOR BRANCH CIRCUITS.

SHEET NOTES

1. EXISTING UTILITY POLE. TYPICAL.
2. POLE MOUNTED TRANSFORMER BY UTILITY COMPANY.
3. PROVIDE 3" CONDUIT WITH PULL STRING FROM UTILITY POLE TO METER BASE ON BUILDING FACADE. ALL WORK ASSOCIATED WITH ELECTRIC SERVICE ENTRANCE SHALL BE COORDINATED WITH POWER UTILITY COMPANY REQUIREMENTS.
4. PROVIDE FLUSH IN-GRADE QUAZITE PULL BOX ENCLOSURE FOR SITE LIGHTING CIRCUIT P-34. ENCLOSURE LID TO BE LABELED "ELECTRIC".
5. PROVIDE 2" CONDUIT WITH PULL STRING FROM UTILITY POLE TO MDF LOCATED INSIDE BUILDING. REFER TO SHEET E2 FOR ADDITIONAL INFORMATION. ALL WORK ASSOCIATED WITH TELECOMMUNICATION SERVICE ENTRANCE SHALL BE COORDINATED WITH OWNER PREFERRED TELECOM PROVIDER REQUIREMENTS.

1 SITE PLAN - ELECTRIC
1/16" = 1'-0"

UTILITY CONTACT INFORMATION	
CLARK ENERGY CO-OP: TAMMY MOBERLY	(606)-663-4330
TELECOM UTILITY (OWNER PREFERRED)	

PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	REVIEWED BY	DATE	SCALE	AS NOTED
9524-21	JE	JE	JE	JE	SEPTEMBER 2023		

DATE	REVISION	BY

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SU2

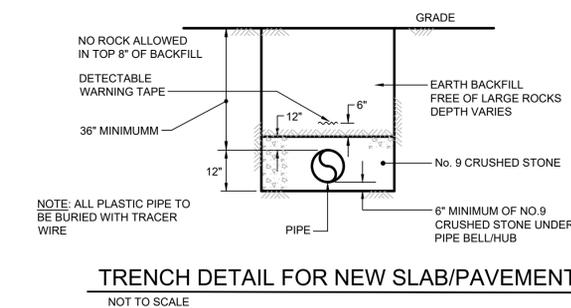
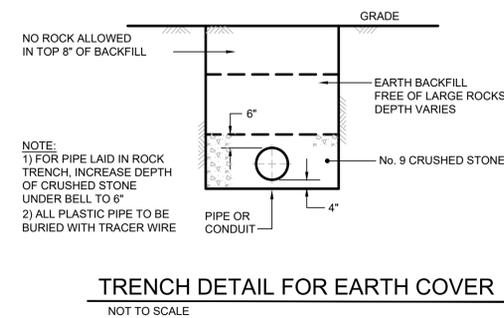
PLUMBING LEGEND

PLUMBING SYMBOLS	
SYMBOL	DESCRIPTION
	PIPE DOWN
	PIPE UP
	TEE DOWN
	TEE UP
	CONTINUATION
	CAP
	HAMMER ARRESTOR
	BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	ELECTRIC CONTROL VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	GATE VALVE
	PLUG VALVE
	REDUCER
	UNION
	VALVE IN VERTICAL
	PRESSURE GAUGE
	STRAINER
	FLOW INDICATOR
	CLEANOUT
	FLOOR CLEANOUT
	THERMOMETER
	FLOOR DRAIN
	P-TRAP
	FLOOR DRAIN GRATE
	SHEET NOTE
	EQUIPMENT TAG

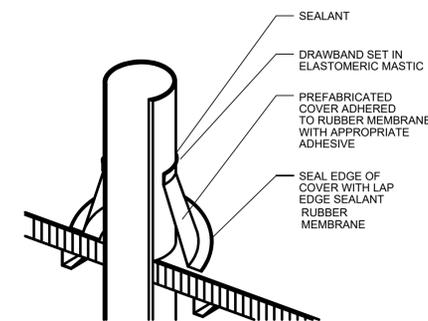
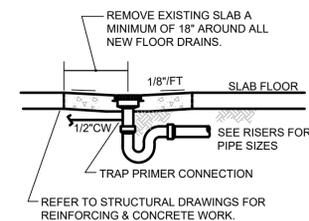
ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BTU	BRITISH THERMAL UNIT
CO	CLEANOUT
CW	COLD WATER
ECO	EXTERIOR CLEANOUT
ET	EXPANSION TANK
ETP	ELECTRONIC TRAP PRIMER
EWC	ELECTRIC WATER COOLER
EWB	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HA	HAMMER ARRESTOR
HB	HOSE BIBB
HW	HOT WATER
LAV	LAVATORY
MB	MOP BASIN
MBH	1,000 BTU
MS	MOP SINK
OR	OPEN RECEPTACLE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SINK
SS	SANITARY SEWER
TP	TRAP PRIMER
U	URINAL
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
WH	WALL HYDRANT

GENERAL NOTES - PLUMBING:

- CONSTRUCTION PHASING:** ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE GENERAL CONTRACTOR, OTHER TRADES, THE OWNER, RELATED UTILITY COMPANIES SHALL COINCIDE WITH CONSTRUCTION PHASING PER THE ARCHITECTURAL DOCUMENTS. CONTACT THE ARCHITECT/ENGINEER IN THE EVENT OF A CONFLICT.
- NEW UTILITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW UTILITY SERVICES AND COSTS UNDER THIS CONTRACT. COORDINATE AND SCHEDULE ALL RELATED WORK WITH THE UTILITY COMPANIES.
- MAINTAIN SITE UTILITIES:** THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SITE UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL WORK CONTINUOUSLY TO RESTORE ANY OUTAGE. SCHEDULED SHUT-DOWNS SHALL REQUIRE 48 HOUR PRIOR NOTIFICATION WITH OWNER. COORDINATE ALL RELATED WORK WITH THE OWNER AND THE UTILITY COMPANIES AS REQUIRED.
- VERIFY UTILITIES:** FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES WHERE REQUIRED FOR CONNECTIONS OF NEW WORK PRIOR TO CONSTRUCTION AND FABRICATION. DOCUMENT ON THE AS-BUILT DRAWINGS: THE TYPE, SIZE, MATERIAL, LOCATION AND INVERT ELEVATIONS OF ALL UTILITIES ENCOUNTERED. COORDINATE ALL RELATED WORK WITH ALL PARTIES INVOLVED. CONTACT THE ENGINEER IN THE EVENT OF A CONFLICT.
- CONTACT B.U.D.:** THE EXISTING UTILITIES, EQUIPMENT, AND PIPING SHOWN ON THESE DRAWINGS ARE FROM RECORD DRAWINGS AND VISUAL INSPECTION OF THE SITE. THE NUMBER, LOCATION, SIZE, AND TYPE OF UTILITIES SHOWN ARE APPROXIMATE, AND THERE MAY BE OTHER UTILITIES NOT SHOWN. THE CONTRACTOR SHALL CONTACT ALL AFFECTED UTILITY COMPANIES AND KENTUCKY B.U.D. PRIOR TO BEGINNING EXCAVATION.
- PERMITS, TESTING, AND INSPECTIONS:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, TESTING AND SCHEDULES INSPECTIONS.
- REMOVAL OF EXISTING UTILITIES:** REMOVE UNUSED/ABANDONED EQUIPMENT, PIPING, ETC. AS NECESSARY TO INSTALL THE NEW WORK. CAP THE ENDS OF ALL LINES AND ABANDON IN PLACE.
- PATCHING AND REPAIRING:** PATCH AND REPAIR ALL AREAS WHERE WALLS, SLABS, PAVEMENT, CURBS, VEGETATION AND MATERIALS HAVE BEEN CUT, REMOVED, DISTURBED AND OR MODIFIED. MATCH EXISTING MATERIALS, RATINGS, AND FINISHES.
- CUTTING EXISTING MATERIALS:** CUTTING OF EXISTING PAVEMENT, SLABS, CONCRETE MASONRY, WALLS, ETC. SHALL BE SAW-CUT OR CORE DRILLED. NO "HAMMER DRILLING" WILL BE ALLOWED.
- ROOFING PENETRATIONS:** ALL ROOF PENETRATIONS SHALL BE IN COMPLIANCE WITH THE ROOFING MANUFACTURER'S GUIDELINES, THE AMERICAN ROOFING COUNCIL, AND MAINTAIN ALL WARRANTIES.
- WALL PENETRATIONS:** SEAL ALL PIPING PENETRATIONS THROUGH EXTERIOR WALLS WITH SILICONE SEALANT AS REQUIRED TO MAKE WATER/WEATHER TIGHT.
- EXISTING WALL OPENINGS:** EXISTING OPENINGS IN WALLS THAT ARE NOT BEING RE-USED SHALL BE PATCHED/CLOSED BY THE GENERAL CONTRACTOR.
- NEW OPENINGS:** NEW OPENINGS FOR PLUMBING PENETRATIONS THROUGH FIRE/SMOKE RATED WALLS, ASSEMBLIES AND SLABS SHALL BE BY THE GENERAL CONTRACTOR. THE PLUMBING CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH THE GENERAL CONTRACTOR AND OTHER TRADES.
- FIRE AND SMOKE STOPPING:** ALL PLUMBING PENETRATIONS THROUGH FIRE/SMOKE RATED WALLS, ASSEMBLIES AND SLABS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE PLUMBING CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH THE GENERAL CONTRACTOR AND OTHER TRADES.
- INSULATION:** INSULATE ALL DOMESTIC HOT/COLD WATER, RECIRCULATION PIPING, AND ROOF LEADERS.
- HAMMER ARRESTOR:** ALL HAMMER ARRESTORS SHOWN ON FLOOR PLANS, BUT NOT ON RISERS OR VICE VERSA SHALL BE PROVIDED AND INSTALLED AS SHOWN ON BOTH.
- VALVES:** ALL VALVES SHOWN ON FLOOR PLANS, BUT NOT ON RISERS OR VICE VERSA, SHALL BE PROVIDED AND INSTALLED AS IF SHOWN ON BOTH.
- ELECTRICAL PANELS AND EQUIPMENT:** PLUMBING PIPING, SYSTEMS, AND EQUIPMENT SHALL BE INSTALLED TO MAINTAIN THE DEDICATED WORKING/ELECTRICAL SPACE ABOVE, BELOW, AND IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT PER THE REQUIREMENTS OF THE N.E.C. (NATIONAL ELECTRIC CODE).



PLUMBING LINETYPES	
SYMBOL	DESCRIPTION
	1" CW UNDER SLAB COLD WATER PIPING WITH SIZE
	1" CW COLD WATER PIPING WITH SIZE
	1" HW HOT WATER PIPING WITH SIZE
	1" SS UNDER SLAB SANITARY PIPING WITH SIZE
	1" SS SANITARY PIPING WITH SIZE
	1" V UNDER SLAB VENT PIPING WITH SIZE
	1" V VENT PIPING WITH SIZE
	1" G UNDER SLAB GAS PIPING WITH SIZE (SLEEVED)
	1" G GAS PIPING WITH SIZE



SHEET INDEX	
SHEET NUMBER	SHEET TITLE
P0	PLUMBING LEGEND & NOTES
P1	SANITARY SEWER PLAN
P2	DOMESTIC WATER & GAS PLAN
P3	PLUMBING RISERS
P6	PLUMBING SCHEDULES
P7	PLUMBING SPECIFICATIONS

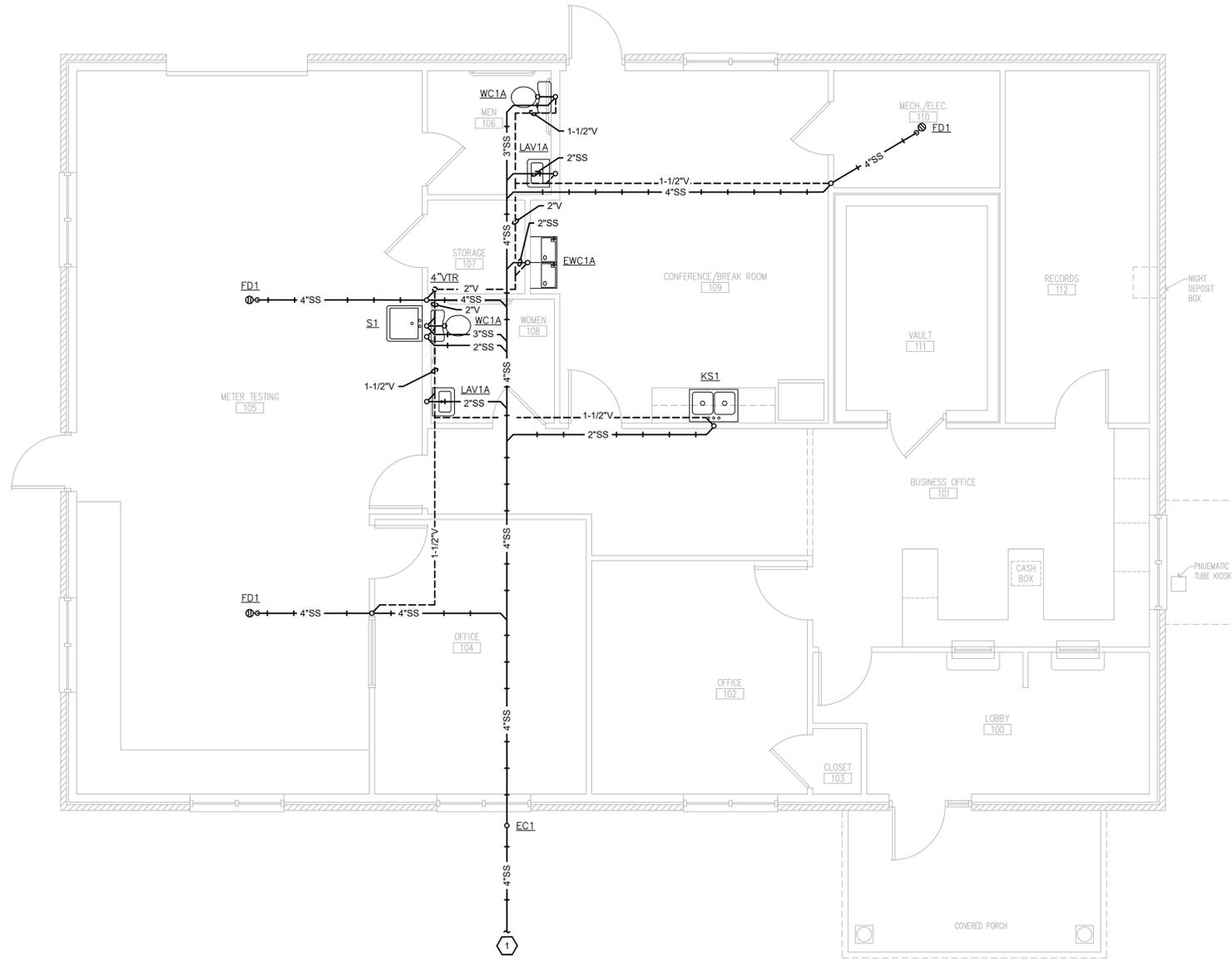
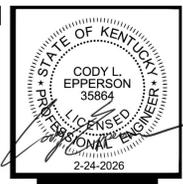
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112 W. UNIVERSITY DR.
SOMERSET, KY 42503
EPPERSONENG.COM
1-606-802-7885

POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

PROJECT NO. 9524-21	DESIGNED BY CE	DATE
	DRAWN BY CE	REVISION
	CHECKED BY CE	BY
	REVIEWED BY CE	DATE
	SCALE	AS NOTED

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P0



GENERAL NOTES

- REFER TO SHEET P0.
- REFER TO SANITARY SEWER RISER ON SHEET P3 AND PLUMBING FIXTURE SCHEDULE ON SHEET P6 FOR PIPE SIZES NOT SHOWN.

SHEET NOTES ○

- REFER TO SITE PLAN ON SHEET SU1 FOR CONTINUATION.

1 FLOOR PLAN - SANITARY SEWER
1/4" = 1'-0"

POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

PROJECT NO.	DATE	REVISION	BY
9524-21			
DESIGNED BY	CE		
DRAWN BY	CE		
CHECKED BY	CE		
REVIEWED BY	CE		
DATE	SEPTEMBER 2023		
SCALE	AS NOTED		

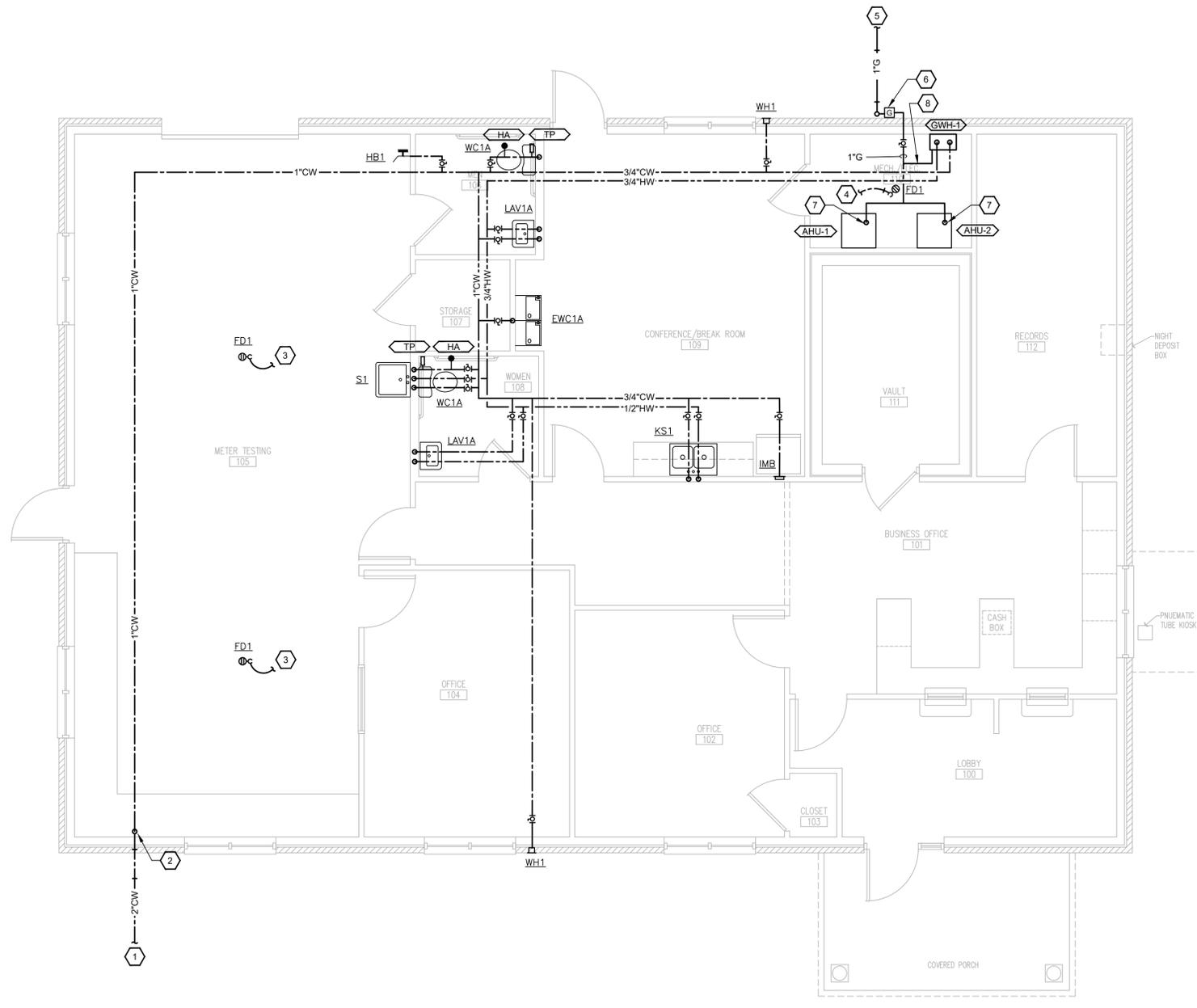
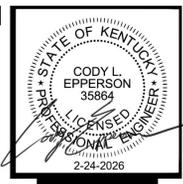
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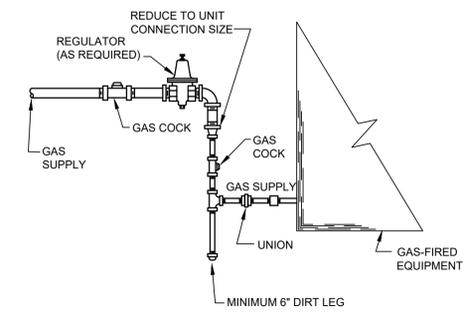
1 FLOOR PLAN - DOMESTIC WATER & GAS
 1/4" = 1'-0"

GENERAL NOTES

- REFER TO SHEET P0.
- REFER TO DOMESTIC WATER RISER ON SHEET P3 AND PLUMBING FIXTURE SCHEDULE ON SHEET P6 FOR PIPE SIZES NOT SHOWN.
- ALL HOT AND COLD WATER PIPING TO BE INSULATED WITH MINIMUM 1".
- REFER TO TYPICAL GAS CONNECTION DETAIL ON THIS SHEET.

SHEET NOTES

- PROVIDE 2" DOMESTIC WATER SERVICE TO BUILDING. REFER TO PLUMBING SITE PLAN ON SHEET SU1 FOR ADDITIONAL INFORMATION.
- STUB UP WATER SERVICE INSIDE BUILDING ENVELOPE AS APPROXIMATE LOCATION SHOWN WITH MAIN WATER SHUT OFF VALVE, PRV, ETC. CONTRACTOR SHALL ADJUST PRV TO LOWEST POSSIBLE SETTINGS TO CORRECTLY OPERATE FARTHEST FIXTURE(S) IN BUILDING.
- PROVIDE 1/2" CW FROM NEARBY TRAP PRIMER IN WOMENS RESTROOM TO FLOOR DRAIN.
- PROVIDE 1/2" CW FROM NEARBY TRAP PRIMER IN MENS RESTROOM TO FLOOR DRAIN.
- PROVIDE NATURAL GAS SERVICE TO BUILDING. REFER TO PLUMBING SITE PLAN ON SHEET SU1 FOR ADDITIONAL INFORMATION.
- PROVIDE GAS METER LOOP ON BUILDING PER UTILITY COMPANY REQUIREMENTS WITH ASSOCIATED LOCKING GAS COCKS, TEST PORTS AND PRESSURE REGULATOR. GAS LINE ENTERING BUILDING SHALL BE MINIMUM 1" WITH A PRESSURE OF 7"-11" W.C.
- PROVIDE GAS CONNECTION TO HVAC EQUIPMENT. REFER TO TYPICAL GAS CONNECTION DETAIL ON THIS SHEET. COORDINATE CONNECTION SIZE WITH HVAC EQUIPMENT INSTALLER.
- PROVIDE 3/4" GAS CONNECTION TO TANKLESS WATER HEATER. REFER TO TYPICAL GAS CONNECTION DETAIL ON THIS SHEET.



TYPICAL GAS-FIRED EQUIPMENT GAS PIPING CONNECTION DETAIL
 NOT TO SCALE

CONNECTED GAS LOAD SCHEDULE				
EQUIPMENT	LOCATION	INPUT (KBTU) / EACH	QTY	TOTAL (KBTU)
GWH-1	MECH ROOM	160	1	160
AHU-1	MECH ROOM	60	1	60
AHU-2	MECH ROOM	80	1	80
TOTAL CONNECTED LOAD:				300

REMARKS:
 1. COORDINATE LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.
 2. VERIFY MINIMUM AND MAXIMUM GAS PRESSURE FOR EACH PIECE OF EQUIPMENT TO ENSURE APPROPRIATE GAS PRESSURE IS DELIVERED TO EACH APPLIANCE

POWELL'S VALLEY WATER DISTRICT
 OFFICE BUILDING
 CLAY CITY, KENTUCKY

DATE	REVISION	BY

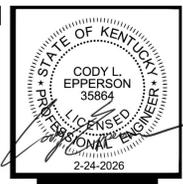
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	DRAWN BY CE	CE
	CHECKED BY CE	CE
	REVIEWED BY CE	CE
DATE SEPTEMBER 2023	SCALE AS NOTED	

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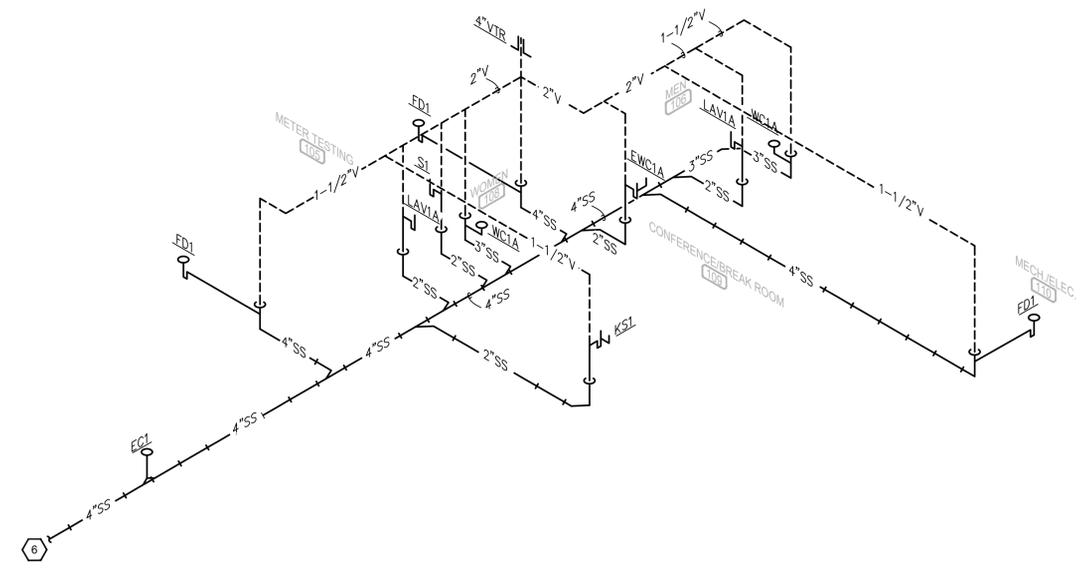


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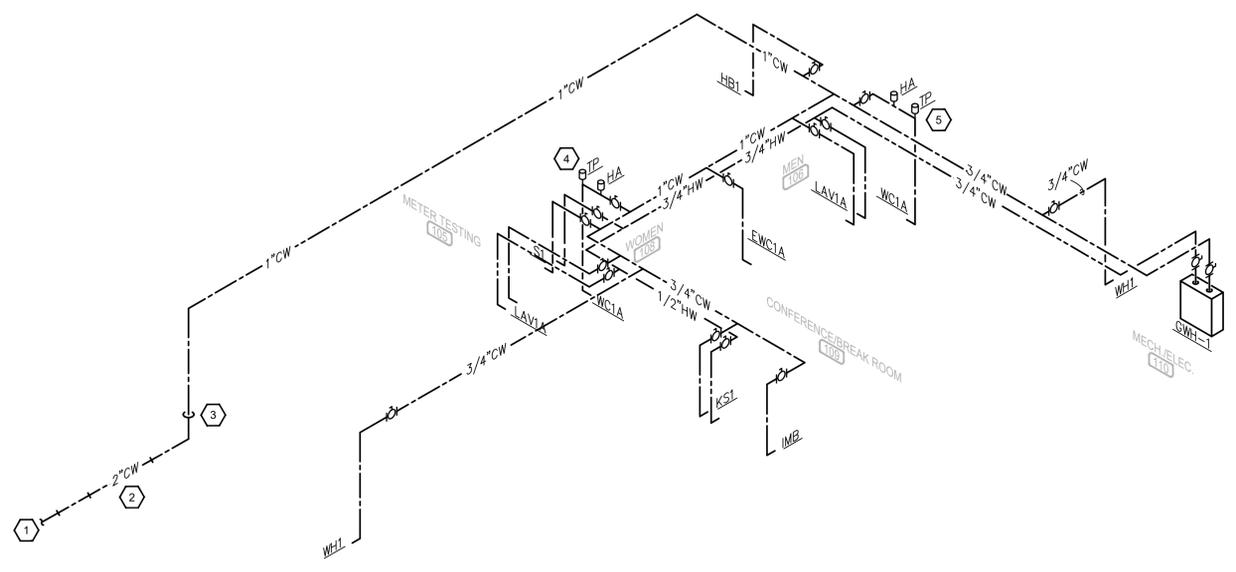
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POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY



PLUMBING RISER - SANITARY SEWER
NOT TO SCALE



PLUMBING RISER - DOMESTIC WATER
NOT TO SCALE

GENERAL NOTES

1. REFER TO SHEET P0.
2. REFER TO PLUMBING FIXTURE SCHEDULE ON SHEET P6 FOR ADDITIONAL INFORMATION.
3. ALL HOT AND COLD WATER PIPING TO BE INSULATED WITH MINIMUM 1".

SHEET NOTES

1. NEW WATER SERVICE. REFER TO PLUMBING SITE PLAN FOR ADDITIONAL INFORMATION.
2. PROVIDE 2" DOMESTIC WATER SERVICE. WATER SERVICE TO BE BURIED AT A MINIMUM 36" DEPTH.
3. STUB UP WATER SERVICE INSIDE BUILDING ENVELOPE AS APPROXIMATE LOCATION SHOWN WITH MAIN WATER SHUT OFF VALVE, PRV, ETC.. CONTRACTOR SHALL ADJUST PRV TO LOWEST POSSIBLE SETTINGS TO CORRECTLY OPERATE FARTHEST FIXTURE(S) IN BUILDING.
4. PROVIDE 1/2" CW FROM TWO PORT GRAVITY TRAP PRIMER (TP) TO TWO FLOOR DRAINS, BOTH TO BE LOCATED IN METER TESTING 105.
5. PROVIDE 1/2" CW FROM GRAVITY TRAP PRIMER (TP) TO ONE FLOOR DRAIN, LOCATED IN MECH/ELEC. 110.
6. SANITARY SEWER TO EXIT BUILDING AT THIS LOCATION, REFER TO PLUMBING SITE PLAN.

DATE	REVISION	BY

PROJECT NO. 9524-21	DESIGNED BY CE	DRAWN BY CE	CHECKED BY CE	REVIEWED BY CE	DATE SEPTEMBER 2023	SCALE AS NOTED
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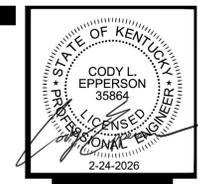
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P3



POWELL'S VALLEY WATER DISTRICT
 OFFICE BUILDING
 CLAY CITY, KENTUCKY

PLUMBING FIXTURE SCHEDULE											
MARK	MANUFACTURER	MODEL / TYPE	TRIM	CW	HW	TRAP	WASTE	VENT	MOUNTING TYPE / HEIGHT	REMARKS	OTHER ACCEPTABLE MANUFACTURERS
EC1	JOSAM	55000-Y HEAVY DUTY EXTERIOR CLEANOUT	COATED CAST IRON FINISH	-	-	-	4"	-	GROUND	COLOR/FINISH SHALL BE SELECTED BY ARCHITECT.	WADE, ZURN
EWC1A	ELKAY	LZSTL8WSSK BI-LEVEL ADA ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION	TRIM: CARRIER; LOOSE KEY OPERATED SUPPLY STOPS	1/2"	-	1-1/4"	1-1/4"	1-1/4"	WALL HUNG: REFER TO ARCHITECT DRAWINGS FOR MOUNTING HEIGHT	8 GPH OF CHILLED WATER; STAINLESS STEEL FINISH; FLEXIBLE SAFETY BUBBLER; FRONT AND SIDE BUBBLER PUSHBAR ACTIVATION; TOUCHLESS BOTTLER FILLER SENSOR ACTIVATION; LED FILTER STATUS	ACORN, OASIS
FD1	JOSAM	30004-7A FLOOR DRAIN	7" SATIN FINISH, BRONZE STRAINER	1/2"	-	4"	4"	1-1/2"	FLUSH IN FLOOR	1/2" TRAP PRIMER CONNECTION	ZURN, J.R. SMITH
HB1	WOODFORD	24P-3/4" HOSE BIB, EXPOSED	ROUGH BRASS, METAL HANDLE	3/4"	-	-	-	-	WALL HUNG: 24"	COORDINATE DEPTH WITH WALL CONSTRUCTION; VACUUM BREAKER	WATTS, ZURN
IMB	SIoux CHIEF	696-G1000	QUARTER TURN BALL VALVE	1/2"	-	-	-	-	BOTTOM 48" AFF		GUY GRAY, OATEY
KS1	AMERICAN STANDARD	22SB.6252283S.075 KITCHEN SINK	FAUCET: AMERICAN STANDARD 7074300.075, 605XTMV1070 1/2" THERMOSTATIC MIXING VALVE TRIM: CHROME PLATED GRID DRAIN, LOOSE KEY OPERATED SUPPLY STOPS	1/2"	1/2"	1-1/2"	1-1/2"	1-1/4"	COUNTER SET/DROP-IN	COORDINATE INSTALLATION WITH CASEWORK	SINK: ELKAY; FAUCET: DELTA
LAV1A	AMERICAN STANDARD	9024.004EC ADA LAVATORY WITH TOUCHLESS FAUCET	FAUCET: AMERICAN STANDARD 6055205.002, 605XTMV1070 1/2" THERMOSTATIC MIXING VALVE TRIM: CHROME PLATED GRID DRAIN, LOOSE KEY OPERATED SUPPLY STOPS, ADA COMPLIANT INSULATION	1/2"	1/2"	1-1/4"	1-1/4"	1-1/4"	WALL HUNG: RIM 34"	20" x 18" VITREOUS CHINA; FAUCER HOLES ON 4" CENTERS; BATTERY SENSOR FAUCET	LAV: KOHLER, ZURN; FAUCET: KOHLER SLOAN
S1	MUSTEE	19CFP UTILITY TUB SINK WITH SWIVEL FAUCET	FAUCET: SWIVEL FAUCET WITH 24" LONG PULL-OUT SPOUT AND LEVER HANDLES TRIM: GRID DRAIN, LOOSE KEY OPERATED SUPPLY STOPS	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"	FLOOR MOUNT	20" WIDE; WHITE FINISH	FIAT, PROFLO
WC1A	AMERICAN STANDARD	3043.001 ADA WATER CLOSET	FLUSH VALVE: AMERICAN STANDARD 6065.161.002 (LEFT HAND) SEAT: AMERICAN STANDARD 5901.100	1"	-	INTEGRAL	3"	1-1/2"	FLOOR SET: RIM 16-1/2"	ADA COMPLIANT, ELONGATED BOWL, TOP SPUD, 1.6G DC SENSOR FLUSH VALVE, HEAVY DUTY OPEN FRONT SEAT LESS COVER; PROVIDE REQUIRED GRAB BARS	WC: KOHLER, ZURN; FV: KOHLER SLOAN
WH1	MURDOCK	M-3509QT NON-FREEZE BOX WALL HYDRANT	VARIATIONS: -CL CYLINDER LOCK, -W WATER COVER	3/4"	-	-	-	-	18"AFG	WITH INTEGRAL VACUUM BREAKER, QUARTER TURN FULL THROW, COORDINATE DEPTH WITH WALL CONSTRUCTION	WATTS, ZURN

GAS WATER HEATER SCHEDULE											
MARK	MANUFACTURER	MODEL	LOCATION	TYPE	GPM (MIN/MAX)	NATURAL GAS BTUH INPUT	INLET PRESSURE (IN. W.C.)	ELECTRICAL			NOTES
								VOLTAGE	MCA	MOCP	
GWH-1	RINNAI	RU160i	INTERIOR	TANKLESS	0.4/9	160,000	3.5 - 10.5	120	4	20	ALL

NOTES:
 1. INTEGRAL TEMPERATURE CONTROLLER; CONTRACTOR SHALL VERIFY PARAMETERS ARE CORRECT
 2. CONDENSATE NEUTRALIZER; AFTER NEUTRALIZER, ROUTE CONDENSATE TO NEARBY FLOOR DRAIN
 3. PROVIDE AND INSTALL DRAIN DOWN KIT
 4. PROVIDE AND INSTALL CONCENTRIC VENT PER MANUFACTURER'S INSTRUCTIONS
 5. PROVIDE ALL NECESSARY VALVES (CHECK, ISOLATION, ETC.) AS REQUIRED.

WARRANTY: 5 YEAR PART

OTHER ACCEPTABLE MANUFACTURERS: AO SMITH, RHEEM

TRAP PRIMER SCHEDULE						
MARK	MANUFACTURER	MODEL	V / Ø / Hz	LOCATION	NUMBER OF PORTS	NOTES
TP	PRECISION PLUMBING PRODUCTS	PR-500	-	SEE PLANS	2	1

NOTES:
 1. INSTALL PER MANUFACTURER'S INSTRUCTION

OTHER ACCEPTABLE MANUFACTURERS: SIOUX CHIEF, ZURN

WATER HAMMER ARRESTOR SCHEDULE						
MARK	MANUFACTURER	MODEL	LOCATION	PIPE SIZE (IN)	FIXTURE UNITS	NOTES
HA	ZURN SHOKTROL	100	SEE PLANS	3/4"	1-11	ALL

NOTES:
 1. SIZING PER PLUMBING DRAINAGE INSTITUTE (PDI) STANDARD PDI-WH201, LATEST EDITION
 2. ASSE 1010 CERTIFIED
 3. LEAD FREE

OTHER ACCEPTABLE MANUFACTURERS: SIOUX CHIEF, JOSAM

DATE	REVISION	BY

PROJECT NO. 9524-21
 DESIGNED BY: CE
 DRAWN BY: CE
 CHECKED BY: CE
 REVIEWED BY: CE
 DATE: SEPTEMBER 2023
 SCALE: AS NOTED

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DRAWING NO.

P6

PLUMBING SPECIFICATIONS

GENERAL REQUIREMENTS

SCOPE:

FURNISH ALL LABOR, MATERIALS, EQUIPMENT, APPLIANCES AND NECESSARY INCIDENTALS FOR THE COMPLETE INSTALLATION OF ALL PLUMBING SHOWN ON THE DRAWINGS AND AS SPECIFIED.

A. WORK SPECIFIED IN THIS SECTION

- SANITARY DRAIN, WASTE AND VENT SYSTEMS.
- DOMESTIC HOT AND COLD WATER SYSTEMS.
- DOMESTIC WATER HEATERS.
- FURNISH AND SET ALL SLEEVED FOR PIPE PASSING THROUGH WALLS AND FLOORS.
- PIPE COVERING, INSULATION AND WRAPPING.
- EXCAVATION AND BACKFILL.
- ALL PLUMBING FIXTURES, WATER HEATERS, VALVES, AND OTHER MISCELLANEOUS ITEMS OR EQUIPMENT REQUIRED FOR A COMPLETE INSTALLATION.
- PROVIDE COLLARS AT FIRE RATED PENETRATIONS.

B. PROVISIONS FOR THIS SECTION APPLY TO ALL WORK SPECIFIED IN ALL SECTIONS UNDER DIVISION 22. ALL ITEMS INDICATED ON SITE, ARCHITECTURAL, MECHANICAL, OR PLUMBING DRAWINGS ARE TO BE PROVIDED COMPLETE FROM POINT OF CONNECTION TO FINISHED FIXTURE IN CONFORMANCE WITH ALL GOVERNING AUTHORITY REQUIREMENTS. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK IN VIOLATION OF GOVERNING CODES.

C. IN ADDITION, WORK IN DIVISION 22 IS GOVERNED BY THE PROVISIONS OF THE BIDDING REQUIREMENTS, CONTRACT FORMS, GENERAL CONDITIONS AND ALL SECTIONS UNDER DIVISION 1, GENERAL REQUIREMENTS.

- EXAMINATION OF PREMISES: VISIT THE SITE, VERIFY ALL MEASUREMENTS AND JOB CONDITIONS, AND PAY ALL COSTS NECESSARY TO PERFORM THE WORK. COORDINATE DIVISION OF FEE RESPONSIBILITIES WITH GENERAL CONTRACTOR.
 - THE PLUMBING CONTRACTOR/COMPANY SHALL BE LICENSED AND HOLD A CURRENT CONTRACTING LICENSE AS A PLUMBING CONTRACTOR THAT HAS BEEN VALID FOR A MINIMUM OF TWO YEARS IN THE STATE WHERE THE PROJECT IS LOCATED.
 - THE PLUMBING CONTRACTOR/COMPANY SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE INSTALLING COMMERCIAL PLUMBING SYSTEMS SIMILAR TO THOSE DESCRIBED IN THESE SPECIFICATIONS AND PROVIDE A LIST OF PREVIOUS PROJECTS, INCLUDING NAME OF PROJECT AND CONTACT PERSON NAMES AND PHONE NUMBERS.
 - THE PLUMBING CONTRACTOR/COMPANY SHALL BE ABLE TO BOND WORK HE IS BIDDING TO PERFORM AND SHALL PROVIDE WRITTEN STATEMENT FROM THE BONDING AGENCY PROPOSED TO BE USED FOR THIS PROJECT A SEPARATE DOCUMENT IN ADDITION TO THE PLUMBING BID SUBMITTED IF REQUIRED BY THE GENERAL CONTRACTOR. THE BONDING AGENCY SHALL BE ONE HAVING A BEST'S INSURANCE RATING OF A OR A+.
- D. CONTRACTOR IS RESPONSIBLE FOR RESULTS CAUSED BY DEVIATING FROM THE PLANS.

REGULATIONS, PERMITS, FEES, CHARGES, INSPECTIONS:

A. REGULATIONS: COMPLY WITH ALL APPLICABLE CODES, RULES AND REGULATIONS. ALL MATERIALS AND WORK MUST COMPLY WITH LOCAL CONSTRUCTION, MECHANICAL, PLUMBING, ELECTRICAL AND FIRE CODES. AS A MINIMUM, COMPLY WITH THE FOLLOWING: IMC, IPC, IECC, NEC, NFPA CODES AND ALL LOCAL STATE AND CITY CODES.

B. IN ADDITION TO THE REQUIREMENTS OF ALL GOVERNING CODES, ORDINANCES AND AGENCIES, CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES AND STANDARDS:

- 2018 KENTUCKY BUILDING CODE (BASED ON 2015 INTERNATIONAL BUILDING CODE)
- 2015 INTERNATIONAL BUILDING CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE OR 2010 ASHRAE 90.1 REFER TO ARCHITECTURAL COVER SHEET.
- KENTUCKY STATE PLUMBING LAW, REGULATIONS & CODES (815 KAR CHAPTER 20)
- KENTUCKY STATE BOILER REGULATION (KRS 236, 815 KAR 15)

C. CURRENT CODES ADOPTED BY THE RESPECTIVE JURISDICTION WILL SUPERSEDE THE LISTED CODES.

D. FEES AND PERMITS: PAY ALL CONNECTION, INSTALLATION, USE, DEVELOPMENT, ETC., FEES AND/OR CHARGES. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES. COORDINATE DIVISION OF FEE RESPONSIBILITIES WITH THE GENERAL CONTRACTOR.

E. INSPECTIONS: ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES. PRIOR TO FINAL APPROVAL, FURNISH THE ARCHITECT WITH CERTIFICATES OF INSPECTIONS AND APPROVALS BY THE LOCAL AUTHORITIES IN ACCORDANCE WITH DIVISION 1.

DRAWINGS AND SPECIFICATIONS:

- REFER TO DIVISION 1 FOR INFORMATION ON SUBMITTALS AND SHOP DRAWINGS.
- IF A CONFLICT EXISTS ON OR WITHIN THE DRAWINGS AND SPECIFICATIONS, ASSUME THE MOST EXPENSIVE FOR BIDDING PURPOSES, AND PROMPTLY NOTIFY THE ARCHITECT AND ENGINEER.

RECORD DRAWINGS: PROVIDE RECORD DRAWINGS FOR ALL WORK UNDER SECTIONS IN DIVISION 22. SEE DIVISION 1 FOR DETAILED REQUIREMENTS COVERING PREPARATION OF RECORD DRAWINGS.

WORK AND MATERIALS: UNLESS OTHERWISE SPECIFIED, ALL MATERIALS MUST BE NEW AND OF THE QUALITY SPECIFIED. THE WORKMANSHIP SHALL BE OF A QUALITY THAT IS ACCEPTABLE TO THE ARCHITECT AND IS EQUAL TO THE STANDARDS OF THE TRADES. CONTRACTOR MUST STAFF THE PROJECT WITH SUFFICIENT SKILLED WORKMEN, INCLUDING A FULLY QUALIFIED CONSTRUCTION SUPERINTENDENT, TO COMPLETE THE WORK IN THE TIME ALLOTTED. THE SUPERINTENDENT MUST BE QUALIFIED TO SUPERVISE ALL OF THE WORK IN HIS WORK CATEGORY.

APPROVAL OF MATERIALS AND EQUIPMENT: REFER TO DIVISION 1 FOR DESCRIPTION OF MATERIAL AND EQUIPMENT FOR PRIOR APPROVALS AND SUBSTITUTIONS. MUST BE RECEIVED BY ENGINEER 10 DAYS PRIOR TO DUE DATE/BID OPENING.

MAINTENANCE MANUAL:

- PRIOR TO COMPLETION OF THE PROJECT, COMPIL A COMPLETE EQUIPMENT AND MAINTENANCE MANUAL FOR ALL EQUIPMENT SUPPLIED UNDER SECTIONS OF DIVISION 22 AS DESCRIBED IN DIVISION 1.
- MANUALS SHALL BE BOUND IN A THREE-RING BINDER. A PRELIMINARY SUBMITTAL OF THE MANUAL SHALL BE MADE TO THE ARCHITECT 90 DAYS AFTER RECEIVING APPROVED SUBMITTALS. FINAL SUBMITTAL OF THE MANUAL SHALL BE MADE FOUR WEEKS PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.

EQUIPMENT PURCHASES: ARRANGE FOR PURCHASES AND DELIVERY OF ALL MATERIALS AND EQUIPMENT WITHIN 15 DAYS AFTER APPROVAL OF SUBMITTALS. COORDINATE WITH GENERAL CONTRACTOR.

COOPERATIVE WORK:

- CORRECT WITHOUT CHARGE ANY WORK REQUIRING ALTERATION DUE TO LACK OF PROPER SUPERVISION OR FAILURE TO MAKE PROPER PROVISIONS IN TIME. CORRECT WITHOUT CHARGE ANY DAMAGE TO ADJACENT WORK CAUSED BY THE ALTERATION. SEE DIVISION 1 FOR ADDITIONAL REQUIREMENTS.
- COOPERATIVE WORK INCLUDES:
 - GENERAL SUPERVISION AND RESPONSIBILITY FOR PROPER LOCATION, ROUGH-IN AND SIZE WORK RELATED TO DIVISION 22 BUT PROVIDED UNDER OTHER DIVISIONS OF THESE SPECIFICATIONS.
 - INSTALLATION OF SLEEVES, INSERTS AND ANCHOR BOLTS FOR WORK UNDER SECTIONS IN DIVISION 22.
 - ELECTRICAL WORK AS SPECIFIED HEREIN. REFER TO DIVISION 26 FOR REQUIREMENTS.
 - MECHANICAL WORK AS SPECIFIED HEREIN. REFER TO DIVISION 23 FOR REQUIREMENTS.

CONSTRUCTION FACILITIES:

- GENERAL: UNDER THIS DIVISION OF THE SPECIFICATIONS EXECUTE ALL WORK IN A MANNER TO PROVIDE A SAFE AND LAWFUL INGRESS AND EGRESS TO THE OWNER'S ESTABLISHMENT AND SUCH FACILITIES SHALL BE KEPT CLEAR OF MATERIAL OR EQUIPMENT AS DIRECTED BY THE ARCHITECT. REFER TO DIVISION 1 FOR ADDITIONAL REQUIREMENTS.
- FURNISH AND MAINTAIN FROM THE BEGINNING TO THE COMPLETION OF ALL WORK ALL LAWFUL AND NECESSARY GUARDS, RAILINGS, FENCES, CANOPIES, LIGHTS, AND WARNING SIGNS. TAKE ALL NECESSARY PRECAUTIONS REQUIRED BY CITY AND STATE LAWS TO AVOID INJURY OR DAMAGE TO ANY AND ALL PERSONS AND PROPERTY.

GUARANTEE: GUARANTEE ALL MATERIAL, EQUIPMENT, AND WORKMANSHIP FOR ALL SECTIONS UNDER DIVISION 22 IN WRITING TO BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE AS OUTLINED IN DIVISION 1. REPLACE WITHOUT CHARGE ANY MATERIAL OR EQUIPMENT PROVING DEFECTIVE DURING THIS PERIOD. THE GUARANTEE

SHALL INCLUDE PERFORMANCE OF THE EQUIPMENT UNDER ALL CONDITIONS OF LOAD, INSTALLING ANY ADDITIONAL ITEMS OF CONTROL AND/OR PROTECTIVE DEVICES AS REQUIRED.

ELECTRICAL WORK:

- ELECTRICAL WIRING, INCLUDING POWER WIRING AND CONTROL WIRING (EXCEPT AS OTHERWISE SPECIFIED UNDER AUTOMATIC TEMPERATURE CONTROLS), ALL RACEWAYS, WIRING, OUTLET AND JUNCTION BOXES, AND LABOR FOR INSTALLATION OF THE WIRING AND EQUIPMENT SHALL BE INCLUDED IN ELECTRICAL DIVISION 26 OF THE SPECIFICATIONS.

PRODUCT HANDLING:

- PROTECTION: TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE MATERIAL OF THIS SECTION BEFORE, DURING, AND AFTER INSTALLATION.
- REPLACEMENTS: IN THE EVENT OF DAMAGE, IMMEDIATELY REPAIR ALL DAMAGED AND DEFECTIVE WORK TO THE APPROVAL OF THE ENGINEER, AT NOT ADDITIONAL COST TO THE OWNER.

SUBMITTALS:

- MANUFACTURER'S LITERATURE: WITHIN 35 DAYS AFTER AWARD OF CONTRACT AND BEFORE ANY MATERIALS OF THIS SECTION ARE DELIVERED TO THE JOB SITE SUBMIT COMPLETE BROCHURES OF ALL MATERIALS AND EQUIPMENT, PER DIVISION 1 OF THE SPECIFICATIONS.
- OTHER SUBMITTALS:
 - SHOP DRAWINGS: HANGERS AND SUPPORTS, PIPING INSULATION, VALVES, PUMPS, WATER HEATER, AND ALL PLUMBING FIXTURES.
- SETS IN BOUND BOOKLET FORM OF WRITTEN OPERATING AND MAINTENANCE INSTRUCTIONS AND BROCHURES FOR EQUIPMENT SPECIFIED IN THIS SECTION. FULLY INSTRUCT OWNERS OPERATING PERSONNEL.
- RECORD DRAWINGS: KEEP AN ACCURATE DIMENSIONED RECORD OF AS-BUILT LOCATIONS AND ELEVATIONS, AS REFERRED TO APPROVED BASE DATUM, OF BURIED CONCEALED.
- OPERATION AND MAINTENANCE INSTRUCTIONS: DELIVER TO ARCHITECT, SHOW COMPLETE LINES, MANHOLES, CLEANOUTS, VALVES, PLUGGED TEES, CAPPED ENDS, AND OF WORK WHICH IS INSTALLED DIFFERENT FROM SHOWN IN THE PLANS.

MISCELLANEOUS:

- EXAMINATION OF THE SITE: EXERCISE CARE IN EXAMINING THE SITE AND COORDINATE ALL WORK INDICATED ON THE DRAWINGS WITH EXISTING CONDITIONS. REPORT TO ARCHITECT IN WRITING CONDITIONS THAT WILL PREVENT PROPER PROVISIONS OF THIS WORK. VERIFY DEPTH AND LOCATIONS OF ALL SERVICE LINES WITH SERVICING COMPANIES HAVING JURISDICTION BEFORE EXCAVATING. BY SUBMISSION OF THE BID, THE CONTRACTOR WARRANTS THAT HE HAS FAMILIARIZED HIMSELF WITH THE EXISTING CONDITIONS AND WILL PERFORM ALL WORK AS REQUIRED FOR HOOKUP AND AS REQUIRED BY THE CONTRACT DOCUMENTS AT NO ADDITIONAL COST.
- PERMITS AND FEES: ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS AND FEE REQUIRED BY ALL GOVERNING AGENCIES.
- SERVICE CONNECTIONS: MAKE ALL NECESSARY ARRANGEMENTS WITH APPLICABLE UTILITY COMPANY FOR CONNECTION TO SERVICE LINES. PAY ALL FEES ASSOCIATED WITH WORK INCLUDING METERS, HOOKUP CHARGE AND UTILITY ASSESSMENTS FEES.
- DRAWINGS: COORDINATE ALL SPACE REQUIREMENTS WITH OTHER TRADES, DRAWINGS INDICATE DESIRED LOCATION AND ARRANGEMENT OF PIPING, EQUIPMENT, AND OTHER ITEMS AND ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE.

PRODUCTS

GENERAL

- PIPE SLEEVES AND WRAPPING: PROVIDE POLISHED CHROMIUM PLATED AND BRASS SET SCREW FLANGES WHERE PLUMBING PIPING PASS THROUGH WALLS, FLOORS, CEILINGS, AND PARTITIONS IN FINISHED PORTIONS OF BUILDING INCLUDING FLANGES ON PIPES AT FIXTURES. ALL SLEEVES IN CONCRETE AND EXTERIOR WALLS SHALL BE 20 GA. GALVANIZED IRON ONE INCH O.D. LARGER THAN THE PIPE, CAULKED IF BELOW GRADE IN A MOISTURE PROOF MANNER. ALL PIPES PENETRATING THROUGH FIRE WALLS AND FLOORS SHALL BE PROPERLY SAFFED WITH DOW CORNING 3-6548 SILICONE RTV FOM OR EQUAL. INSTALL PER MANUFACTURER'S DIRECTIONS.

PIPE IDENTIFICATION:

- PIPING IDENTIFICATION PER ANSI AND OSHA STANDARDS: EACH INDIVIDUAL PIPELINE SHALL BE MARKED FOR QUICK AND EASY IDENTIFICATION AS TO CONTENTS AND CHARACTER OF MATERIAL CARRIED IN THE PIPES BY SET ON SNA OR STR MARKER.
 - MARKERS SHALL BE INSTALLED AND SPACED AT NOT MORE THAN 20 FOOT INTERVALS AND SO LOCATED THAT MARKERS SHALL BE VISIBLE WHERE PIPING IS EXPOSED.
- C. ONE MARKER SHALL BE INSTALLED AT EACH SIDE OF VALVES, SPECIAL FITTINGS AND AT BRANCH TAKE-OFFS. IN FURRED SPACES INSTALL ONE BAND 2 FEET ABOVE FLOOR AND 19 INCHES BELOW CEILING LINE.

D. MATERIALS: MATERIALS WHEN NOT OTHERWISE DEFINITELY SPECIFIED SHALL CONFORM TO THE APPLICABLE ASTM, ASME, AGA AND ASA STANDARDS.

E. ALL GAS FIRED EQUIPMENT SHALL INCLUDE A LABEL INDICATING THAT THE APPLIANCE HAS BEEN ADJUSTED, MODIFIED OR RE-CALIBRATED FOR THE ALTITUDE WHERE IN THE PROJECT IS TO BE LOCATED (GREEN STICKER). THE APPLIANCE SHALL ALSO INCLUDE A COMPLIANCE STATEMENT INDICATING THAT THE APPLIANCE HAS BEEN ADJUSTED, MODIFIED OR RE-CALIBRATED FOR THE PROPER OPERATION AT THE ALTITUDE OF THE PROJECT AND SHALL BE LISTED CAPABLE FOR SUE WITH NATURAL GAS OR PROPANE GAS IF PROPANE IS LISTED ON THE DRAWINGS.

PIPE AND FITTINGS SCHEDULE:

PIPE AND FITTINGS:

- NO PIPE OF FOREIGN MANUFACTURER WILL BE ACCEPTABLE ON PROJECTS REQUIRED TO MEET THE BUY AMERICA ACT.
- ALL PIPING, FITTINGS, FLANGES, ETC. SHALL BE FREE FROM DEFECTS AND SHALL COMPLY WITH THE APPROPRIATE ASTM SPECIFICATIONS.
- BLACK STEEL PIPE: ASTM A53 ERW GRADE B, STANDARD WEIGHT (SCHEDULE 40) OR EXTRA STRONG (SCHEDULE 80) AS SPECIFIED.
- COPPER TUBING: ASTM B88, TYPE L OR K AS SPECIFIED.
- PVC PIPE AND FITTINGS: ASTM D1785 CLASS 150 WITH ATSM D 2564 SOLVENT CEMENT JOINT UNLESS OTHERWISE SPECIFIED. SCHEDULE 40. PVC PLASTIC PIPE FITTINGS: ASTM F 628, SCHEDULE 40.
- PEX-AL-HDPE DISTRIBUTION SYSTEM: ASTM F 1986 TUBING AND METAL-INSERT TYPE WITH COPPER OR STAINLESS-STEEL CRIMP RING AND MATCHING PEX-AL-HDPE TUBE DIMENSIONS. MANIFOLD: MULTIPLE-OUTLET, PLASTIC OR CORROSION-RESISTANT-METAL ASSEMBLY COMPLYING WITH ASTM F 877; WITH PLASTIC OR CORROSION-RESISTANT-METAL VALVE FOR EACH OUTLET.
- PP PIPING AND FITTINGS: ASTM F 2389; CSA B137.11.
- ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC PIPE: ASTM D 2661, SCHEDULE 40, ASTM F 628 SCHEDULE 40. ABS PLASTIC PIPE FITTINGS: ASTM F 409, ACCESSIBLE AND REPLACEABLE, SOLVENT CEMENT AND THREADED TYPES, DRAIN PATTERN.
- CAST IRON SOIL PIPE AND FITTINGS: ASTM A74.
- WELDED BLACK STEEL FITTINGS: ASTM A234 GRADE B, 150-POUND FOR STANDARD WEIGHT PIPING, 300-POUND FOR EXTRA STRONG PIPING, OR OF WEIGHT OR SCHEDULE OF MATCHING PIPING.
- THREADED MALLEABLE IRON FITTINGS: ANSI B16.3, 150-POUND FOR STANDARD WEIGHT PIPING, 300-POUND FOR EXTRA STRONG PIPING, OR WEIGHT OR SCHEDULE OF MATCHING PIPING EITHER BLACK OR GALVANIZED TO MATCH PIPING.
- WELDED FLANGES: ASTM A181 GRADE B, 150-POUND FOR STANDARD WEIGHT, 300-POUND FOR EXTRA STRONG PIPING OR OF EQUAL WEIGHT OF CONNECTED EQUIPMENT.

- WROUGHT FITTINGS: WROUGHT COPPER, ANSI SPECIFICATION B16.22.
- BALL VALVES DOMESTIC WATER: BRONZE, FULLPORT, CLASS 150, THREADED. NIBCO T-585 OR EQUAL.
- PARTITION STOP VALVES: T&S B-0415, LOOSE KEY TYPE WITH WALL FLANGE.
- BALANCING COCKS 2 INCHES AND SMALLER SHALL BE ARMSTRONG, NIBCO, TACO OR WATTS.
- SOLDER: JOINTS IN COPPER PIPING ABOVE GRADE SHALL BE STAY SAFE 50 SOLDER OR 95-5 SOLDER SHALL BE SILFOS OR SILVERFLOW FOR ALL REFRIGERANT PIPING JOINTS.
- CONDENSATE DRAINS SHALL BE TYPE L HARD COPPER TUBING WITH WROUGHT-COPPER FITTINGS (CANT BE USED FOR CONDENSING GAS-FIRED APPLICATIONS) OR PVC PIPE AND FITTINGS WHERE ALLOWED. A P-TRAP SHALL BE PROVIDED AT DRAINS.
- DOMESTIC HOT WATER, HOT WATER RETURN, AND COLD WATER PIPING SHALL BE TYPE L OR K HARD TEMPERED COPPER PIPE WITH WROUGHT-COPPER FITTINGS USING 95-5 SOLDER. PEX TUBE PIPING MAY BE USED IN LIEU OF COPPER ON SIZES 2-INCHES AND SMALLER, WHERE PIPING IS EXPOSED OUTSIDE PARTITIONS. USE TYPE L OR K HARD COPPER TUBING AND WROUGHT COPPER FITTINGS.

ROOF FLASHING: SANITARY VENT FLASHING: SEMCO 1100-3 OR 1100-5, WITH ONE-PIECE LEAD FLASHING AND COUNTERFLASHING SLEEVE.

PIPE SLEEVE: AT CONCRETE WALLS FOR FLOORS, ADJUST-TO-CREATE, PARAMOUNT, HOLE-OUT SPERZEL CRETESLEEVE FLOOR SLEEVES SHALL EXTEND TO TOP OF CONCRETE CURBS FOR PIPING RISING THROUGH FLOORS. WALL SLEEVES SHALL BE FLUSH WITH FINISHED SURFACE, SLEEVES SHALL BE SIZED TO ALLOW ½" INCH CLEARANCE AROUND PIPE INSULATION. INSULATION AND COVERING SHALL BE CONTINUOUS THROUGH WALL AND FLOOR SLEEVES.

CLEANOUTS:

- FULL SIZE CLEANOUTS SHALL BE INSTALLED AT THE BASE OF EACH SOIL WASTE STACK. ALL OTHER CLEANOUTS SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND WHERE REQUIRED BY STATE, LOCAL, OR NATIONAL PLUMBING CODES.
- ALL CLEANOUTS SHALL BE INSTALLED IN LOCATIONS EASILY ACCESSIBLE FOR ROODING.

PIPE INSULATION:

- ALL DOMESTIC HOT WATER, HOT WATER RECIRCULATION AND COLD WATER PIPING SHALL BE COVERED WITH PIPE INSULATION. INSULATION THICKNESS SHALL BE ¾" INCH FOR COLD WATER AND 1 INCH FOR HOT WATER, ADD ADDITIONAL INSULATION AS NECESSARY TO PREVENT FREEZING.
- INSULATE ALL PIPING UNDER LAVATORIES ACCESSIBLE TO PHYSICALLY HANDICAPPED WITH HOT WATER SUPPLY AND "P" TRAP PREFABRICATED INSULATION, HANDI LAV GUARD.

PIPE HANGERS:

- HANGERS SHALL BE SUPPLIED WITH FACTORY INSTALLED ISOLATION AND DI-CHROMATE FINISH
- PIPE 2 INCHES AND SMALLER: GRINNEL F69, PIPE 2-1/2 INCH AND LARGER: GRINNEL F65. CONCRETE INSERTS: GRINNEL 281 AND 282. RISER CLAMPS FOR COPPER PIPING: GRINNEL 261P, PLASTIC COATED. RISER CLAMPS FOR OTHER PIPING: GRINNEL 261.
- HANGER RODS SHALL CONFORM TO THE FOLLOWING: PIPE SIZE 2 INCH AND SMALLER: 3/8 INCH RODS. PIPE SIZE 2-1/2 INCH AND 3 INCH: ½ INCH RODS. PIPE SIZE 3 INCH AND LARGER: 5/8 INCH RODS.

PLUMBING FIXTURES:

- FIXTURES SHALL BE THE WATER SAVING TYPE WITH MAXIMUM USAGE OF 1.6 GALLONS PER FLUSH FOR WATER CLOSETS, 2.5 GALLONS PER MINUTE FOR SHOWERS, 3.0 GALLONS PER MINUTE FOR SERVICE SINKS, 1.0 GALLON PER FLUSH FOR URINALS, 0.5 GALLONS PER MINUTE FOR PUBLIC LAVATORIES, 2.2 GALLONS PER MINUTE FOR PRIVATE LAVATORIES AND 2.2 GALLONS PER MINUTE FOR SINKS.
- ALL FIXTURES SHALL BE CAULKED TO THE FLOOR OR WALL WITH WATER RESISTANT WHITE BUTYL RUBBER CAULKING COMPOUND. TRIM FOR SHALL MATCH IN DESIGN. SUPPLY FAUCETS SHALL HAVE RENEWABLE SEATS AND BARRELS.

PLUMBING EQUIPMENT

VALVES:

MANUFACTURER: WATTS, MILWAUKEE, CRANE, KENNEDY, STOCKHAM, MISSON, GRINNELL, KEYSTONE, OR NIBCO

PIPE HANGERS & SUPPORTS:

MANUFACTURER: GRINNELL, ELCEN, KIN-LINE, UNI-STRUT, F&S, B-LINE, MICHIGAN, OR PIPING TECHNOLOGY & PRODUCTS

INSULATION:

MANUFACTURER: /CERTAINTEED, MANVILLE, PITTSBURGH, ARMSTRONG, LSP PRODUCTS, OR OWENS-CORNING

PLUMBING SUPPLY STOPS:

MANUFACTURER: EASTMAN, CRANE, KOHLER, WOLVERINE, MCGUIRE, BRASSCRAFT, EBC, ZURN

PRESSURE REDUCING VALVES:

MANUFACTURER: WATTS SERIES 223, ZURN OR WILKINS

P-TRAPS:

MANUFACTURER: AMERICAN STANDARD, KOHLER, MCGUIRE, BRASSCRAFT, DEARBORN, EBC

EXCUTION

SURFACE CONDITIONS:

- INSPECTIONS: ALL PLUMBING SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING AUTHORITIES. THE ORIGINAL DESIGN, AND REFERENCED STANDARDS.
- DISCREPANCIES:
 - IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER.
 - DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED. INTERFERENCES BETWEEN INSTALLED WORK OF VARIOUS TRADES DUE TO LACK OF COORDINATION SHALL BE RESOLVED BY THE ARCHITECT/ENGINEER WHOSE DECISION IS FINAL. RELOCATES OR OFFSET ANY WORK AS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES AT NO EXTRA COST TO THE OWNER WHEN SO DIRECTED BY THE ARCHITECT.

VERIFICATION OF DIMENSIONS:

- SCALED AND FIGURED DIMENSIONS ARE APPROXIMATE ONLY. BEFORE PROCEEDING WITH WORK, CAREFULLY CHECK AND VERIFY DIMENSIONS AT SITE, AND BE RESPONSIBLE FOR PROPERLY FITTING EQUIPMENT AND MATERIALS TOGETHER AND TO THE STRUCTURE IN SPACES PROVIDED.
- DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND MANY OFFSET, BENDS, SPECIAL FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED. CAREFULLY STUDY DRAWINGS AND PREMISES IN ORDER TO DETERMINE BEST METHODS, EXACT LOCATIONS, ROUTES, BUILDING OBSTRUCTIONS, AND INSTALL APPARATUS AND EQUIPMENT IN AVAILABLE LOCATIONS. INSTALL APPARATUS AND EQUIPMENT IN MANNER AND IN LOCATIONS TO AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAY CLEAR.

LOCATION AND SPACE REQUIREMENTS:

- CONTRACTOR SHALL FULLY INFORM HIMSELF REGARDING PECULIARITIES AND LIMITATION OF SPACES AVAILABLE FOR INSTALLATION OF WORK UNDER THIS DIVISION. DRAWINGS INDICATE DESIRED LOCATION AND ARRANGEMENT OF PIPING, EQUIPMENT AND OTHER ITEMS AND ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE. WORK SPECIFIED AND NOT CLEARLY DEFINED BY DRAWINGS SHALL BE INSTALLED AND ARRANGED IN A SATISFACTORY MANNER. IN ANY CASE AND AT ANY TIME A CHANGE IN LOCATION REQUIRED BY OBSTACLES OR THE INSTALLATION OF OTHER TRADES NOT SHOWN ON THE PLUMBING PLANS SHALL BE MADE BY CONTRACTOR WITHOUT ADDITIONAL CHARGE PROVIDED THE CHANGE IS ORDERED BEFORE WORK IS INSTALLED AN NO EXTRA MATERIALS ARE REQUIRED.
- VERIFY ALL SPACES, DIMENSIONS FOR ALL FIXTURES, EQUIPMENT, OR OWNER-FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED UNDER OTHER SECTIONS.
- OBTAIN ALL NECESSARY ROUGH IN DATA AND DIMENSIONS FOR ALL FIXTURES, EQUIPMENT, OR OWNER-FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED UNDER OTHER SECTIONS.
- MAINTAIN AMPLE HEADROOM CLEARANCES AND ACCESSIBILITY. MAINTAIN CEILING HEIGHTS.
- CONSTANTLY CHECK WORK OF OTHER TRADES TO PREVENT INTERFERENCE WITH THIS INSTALLATION.

CUTTING AND PATCHING: CUT WORK AND PATCH PER DIVISION 1 AS NECESSARY TO PROPERLY INSTALL NEW WORK AS THE WORK PROGRESSES. COORDINATE NECESSARY OPENINGS, HOLES, CHASES, ETC., IN THEIR CORRECT LOCATION. IF THE REQUIRED OPENINGS, HOLES AND CHASES ARE NOT IN THEIR CORRECT LOCATIONS, MAKE THE NECESSARY CORRECTIONS AT NO COST TO THE OWNER. AVOID EXCESSIVE CUTTING AND DO NOT CUT STRUCTURAL MEMBERS WITHOUT THE CONSENT OF THE ARCHITECT. PATCHING BY GENERAL CONTRACTOR AT MECHANICAL PLUMBING OR FIRE PROTECTION CONTRACTOR'S EXPENSE. INCLUDE AS A PART OF THE WORK UNDER THIS CONTRACT ALL STRUCTURAL FRAMING REQUIRED BY PENETRATIONS THROUGH THE ROOF AND NECESSARY STEEL TO SUPPORT DUCTS AND PIPES BETWEEN STRUCTURAL STEEL UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

CLOSING IN OF UNFINISHED WORK: COVER NO WORK UNTIL INSPECTED, TESTED, AND APPROVED. WHERE WORK IS COVERED BEFORE INSPECTION AND TESTING, UNCOVER IT, AND AFTER TESTED, INSPECTED, AND APPROVED, RESTORE ALL WORK TO ORIGINAL PROPER CONDITION.

EXCAVATION AND BACKFILL:

- PERFORM ALL NECESSARY EXCAVATION, SHORING AND BACKFILLING REQUIRED FOR THE PROPER LAYING OF ALL PIPES AND CONDUITS INSIDE THE BUILDING AND PREMISES, AND OUTSIDE AS MAY BE NECESSARY. CONFORM TO DIVISION 2 REQUIREMENTS. REMOVE AL EXCESS EXCAVATED MATERIAL FROM THE SITE OR DISPOSE OF ON SITE AS DIRECTED BY GENERAL CONTRACTOR.
- EXCAVATE ALL TRENCHES OPEN CUT, KEEP TRENCH BANKS AS NEARLY VERTICAL AS PRACTICABLE, AND SHEET AND BRACE TRENCHES WHERE REQUIRED FOR STABILITY AND SAFETY. EXCAVATE TRENCHES TRUE TO LINE AND MAKE BOTTOMS NOT LESS THAN 18" WIDE BUT NO WIDER THAN NECESSARY TO PROVIDE AMPLE WORK ROOM. GRADE TRENCH BOTTOMS ACCURATELY TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF PIPE ON UNDISTURBED SOIL ALONG ITS ENTIRE LENGTH.

C. PROVIDE BACKFILLING AND COMPACTION IN ACCORDANCE WITH REQUIREMENT OF DIVISION 2 AND UNDER DIRECTION OF THE ARCHITECT AND THE OWNER'S TESTING FIRM TO THE REQUIRED DENSITY. MAKE THE FIRST 2" OF FILL IN 6" LAYERS, EACH THOROUGHLY COMPACTED AS DIRECTED, AND FREE FROM ROCKS, LARGE CLODS OF EARTH, LEAVES, BRANCHES, AND DEBRIS. COMPACT THE REST OF THE BACKFILL TO PREVENT SETTLEMENT AS DIRECTED, USING IN THE BACKFILL NO ROCKS LARGER THAN 4" IN DIAMETER, AND USING NO ROCKS AT ALL IN THE TOP 12".

ACCESSIBILITY:

- INSTALL VALVES, DAMPERS, THERMOMETERS, GAUGES, TRAPS, CLEANOUTS, CONTROL DEVICES OR OTHER SPECIALITIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT CONVENIENTLY AND ACCESSIBLY THROUGHOUT THE FINISHED BUILDING. WHERE ANY OF THESE DEVICES ARE SHOWN ON THE CONTRACT DRAWINGS TO BE INSTALLED ABOVE ANY INACCESSIBLE CEILINGS, THE MECHANICAL CONTRACTOR SHALL FURNISH ACCESS DOORS OR PANELS AS REQUIRED.
- ALL ACCESS DOORS OR PANELS IN WALLS AND CEILINGS REQUIRED FOR ACCESS TO CONTROL DEVICES, TRAPS, VALVES AND SIMILAR DEVICES ARE TO BE FURNISHED AND INSTALLED AS PART OF THE WORK UNDER THIS SECTION. PROVIDE TYPE AS SPECIFIED UNDER DIVISION 8. ACCESS PANELS TO MATCH RATING AND FINISH OF ADJACENT SURROUNDINGS.
- PROVIDE DUCTS WHICH PIERCE A FIRE SEPARATION WITH FIRE DAMPERS OF SAME FIRE RATING AS THE SEPARATION.
- REFER TO DRAWINGS AND "FINISH SCHEDULE" FOR TYPE OF WALL AND CEILING IN EACH AREA AND FOR RATED CONSTRUCTION.
- COORDINATE WORK OF VARIOUS SECTIONS TO LOCATED VALVES, TRAPS, AND DAMPERS WITH OTHERS TO AVOID UNNECESSARY DUPLICATION OF ACCESS DOORS.

ROOF FLASHINGS: FLASH AND COUNTERFLASH ALL PIPING, CONDUITS AND DUCTWORK PENETRATING ROOFING MEMBRANE WITH FLASHING PER ROOFING MANUFACTURER'S RECOMMENDATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILING OF DUCT AND PIPE PENETRATIONS THROUGH ROOF.

EQUIPMENT ROUGH-IN:

- ROUGH IN ALL EQUIPMENT AND FIXTURES AS DESIGNATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE DRAWINGS INDICATE ONLY THE APPROXIMATE LOCATION OF ROUGH-INS. THE EXACT ROUGH-IN LOCATIONS MUST BE DETERMINED FROM LARGE-SCALE CERTIFIED DRAWINGS. THE CONTRACTOR SHALL OBTAIN ALL CERTIFIED ROUGH-IN INFORMATION BEFORE PROGRESSING WITH ANY WORK FOR ROUGH-IN FINAL CONNECTIONS.
- BE RESPONSIBLE FOR PROVIDING ALL OUTLETS AND SERVICES OF PROPER SIZE AT THE REQUIRED LOCATIONS.
- MINOR CHANGES IN THE CONTRACT DRAWINGS SHALL BE ANTICIPATED AND PROVIDED FOR UNDER THIS DIVISION OF THE SPECIFICATIONS.
- ROUGH-IN ONLY (UNLESS OTHERWISE DESIGNATED ON THE DRAWINGS) SHALL INCLUDE THE FOLLOWING:
 - PLUMBING: PROVIDE ALL SERVICES DESIGNATED AND REQUIRED, INCLUDING WASTE AND WATER. VALVE AND CAP STUB-OUTS FOR WATER AND GAS. CAP ALL WASTE AND VENT OUTLETS.

OWNER-FURNISHED AND OTHER EQUIPMENT:

- ROUGH-IN ONLY FOR ALL OWNER-FURNISHED EQUIPMENT (SEE DIVISION 1) AND ALL EQUIPMENT FURNISHED UNDER OTHER SECTIONS OF THE SPECIFICATIONS, EXCEPT AS OTHERWISE SPECIFIED AND/OR NOTED ON THE DRAWINGS.
- PROVIDE ALL SERVICES DESIGNATED, VALVE AND CAP ALL PIPING, CAP ALL WASTE PIPING AND LEAVE IN A CLEAN ORDERLY MANNER.
- ROUGH-IN REQUIREMENTS SHALL BE AS OUTLINED IN THE PRECEDING PARAGRAPH TITLED "EQUIPMENT ROUGH-IN".

EQUIPMENT FINAL CONNECTIONS:

- PROVIDE ALL PIPING FINAL CONNECTIONS FOR ALL EQUIPMENT UNDER DIVISION 22 AS REQUIRED HEREIN SPECIFIED AND INDICATED ON THE DRAWINGS.
- PLUMBING: PROVIDE FINAL PLUMBING CONNECTIONS COMPLETE WITH SHUTOFF VALVES, RISERS, TRAPS, VACUUM BREAKERS AND INDIRECT WASTES FOR ALL EQUIPMENT FURNISHED AND INSTALLED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, EXCEPT AS OTHERWISE DESIGNATED. INCLUDE UNDER THE PLUMBING SECTION OF THE SPECIFICATIONS ARE THE FINAL CONNECTIONS TO THE FOLLOWING:
 - MISCELLANEOUS EQUIPMENT SPECIFIED TO BE FURNISHED AND INSTALLED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.
 - COLD WATER MAKE-UP CONNECTIONS TO HYDRONIC EQUIPMENT,
 - KITCHEN EQUIPMENT, FURNISHED UNDER OTHER SECTIONS OF THE SPECIFICATIONS.

MACHINERY ACCESSORIES:

- APPLICATION: DO NOT INSTALL ANY EQUIPMENT IN AN APPLICATION NOT RECOMMENDED BY THE MANUFACTURER.
- INSTALLATION: ALIGN, LEVEL, AND ADJUST ALL EQUIPMENT FOR PROPER OPERATION. INSTALL SO CONNECTING AND DISCONNECTING OF PIPING AND ACCESSORIES CAN READILY BE DONE AND SO ALL PARTS ARE READILY ACCESSIBLE FOR INSPECTION, SERVICE, AND REPAIR. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

PIPE AND EQUIPMENT SUPPORTS:

- WHERE SUPPORTS, FOUNDATIONS, STANDS, SUSPENDED PLATFORMS FOR MACHINERY, TANKS, OR OTHER EQUIPMENT ARE INDICATED OR SPECIFIED, PERFORM THE FOLLOWING:
 - LOCATE SUPPORT MEMBERS TO AVOID EQUIPMENT STRAINS AND INTERFERENCE WITH PIPING CONNECTIONS, TUBE PULLING OR OTHER MAINTENANCE OPERATIONS.
 - WHERE SADDLES ARE REQUIRED, USE CAST IRON OR WELDED STEEL SADDLES WITH CURVATURE TO FIT THE TANK SHELL.
 - MOUNT POWER-DRIVEN EQUIPMENT ON COMMON BASE WITH DRIVER.
- CONCRETE INSERTS: FURNISH AND INSTALL ALL CONCRETE INSERTS REQUIRED FOR ALL MATERIAL AND EQUIPMENT SPECIFIED AND/OR SHOWN ON THE DRAWINGS FOR DIVISION 22.
- CONCRETE FOUNDATIONS: WORK UNDER THIS SECTION INCLUDES COORDINATION OF CONSTRUCTION OF ALL CONCRETE FOUNDATIONS INDICED OR REQUIRED FOR EQUIPMENT SPECIFIED HEREIN OR IN OTHER SECTIONS UNDER DIVISION 22. MATERIAL AND WORKMANSHIP SHALL BE DESCRIBED UNDER DIVISION 3.
- GROUT UNDER ALL EQUIPMENT AFTER LEVELING, FILLING COMPLETELY THE SPACE BETWEEN MACHINERY BED PLATE AND FOUNDATION SURFACE AS SPECIFIED IN DIVISION 3. FINISH EXPOSED SURFACE OF GROUT FOR A NEAT APPEARANCE.
- FLOOR STANDS: WHERE EQUIPMENT IS MOUNTED STANDARD OR ON LEGS, CONSTRUCT OF STRUCTURAL STEEL OR STEEL PIPE AND FITTINGS, CROSS-BRACE AND FASTEN WITH FLANGES OR PLATES BOLTED TO FLOOR.
- CEILING OR WALL SUPPORTS: USE SUSPENDED PLATFORM, STRAP HANGERS, BRACKET OR SHELF, WHICHEVER IS MOST SUITABLE FOR EQUIPMENT AND LOCATION. CONSTRUCT OF STRUCTURAL STEEL MEMBERS, STEEL PLATES, RODS OR PIPE AS REQUIRED. CROSS-BRACE AND FASTEN TO BUILDING STRUCTURE OR INSERTS IN AN APPROVED MANNER.
- STEEL WORK: NEATLY FABRICATE AND ERECT STEEL WORK WITH BURRS AND WELDING SPATTER GROUND OFF. PAINT AFTER FABRICATION WITH A RUST-INHIBITIVE PRIMER.

HANGER AND SUPPORTS:

- HOLD HORIZONTAL PIPE RUNS FIRMLY IN PLACE USING APPROVED STEEL AND IRON HANGERS, SUPPORTS, AND/OR PIPE REST UNLESS OTHERWISE INDICATED. SUSPEND HANGER RODS FROM CONCRETE INSERTS OR FROM APPROVED BRACKETS, CLAMPS OR CLIPS. HANG PIPES INDIVIDUALLY OR IN GROUPS IF SUPPORTING STRUCTURE IS ADEQUATE TO SUPPORT WEIGHT OF PIPING AND FLUID. EXCEPT FOR BURIED PIPING, HANG OR SUPPORT PIPE RUNS SO THAT THEY MAY EXPAND OR CONTRACT FREELY WITHOUT STRAIN TO PIPE OR EQUIPMENT.
 - HORIZONTAL STEEL PIPING: PROVIDE HANGERS OR SUPPORTS EVERY 10 FT. EXCEPT EVERY 8 FT. FOR PIPING 1-1/4 INCH AND SMALLER.
 - HORIZONTAL COPPER TUBING: FOR 2 INCH DIAMETER AND OVER, PROVIDE HANGERS EVERY 10 FEET, FOR 1-1/2 INCH DIAMETER AND SMALLER EVERY 6 FEET.
 - HORIZONTAL CAST-IRON NO-HUB PIPING: PROVIDE HANGERS OR SUPPORTS AT EACH SIDE OF NO-HUB FITTINGS. PROVIDE ANTI-SEPARATION BRACING AT EACH 90 DEGREE CHANGE IN DIRECTION.
 - HORIZONTAL CAST IRON HUB AND SPIGOT PIPING: PROVIDE HANGERS OR SUPPORTS AT EACH HUB.
 - VERTICAL PIPING: SUPPORT AT FLOOR WITH IRON PIPE CLAMPS.

TEST:

- PERFORM TEST TO ARCHITECT'S SATISFACTION. MAKE TEST IN PRESENCE OF OWNER'S REPRESENTATIVE AND AT THE TIME SUITABLE TO HIM IF REQUESTED. FURNISH NECESSARY LABOR AND EQUIPMENT AND BEAR COST FOR TESTING. COST OF REPLACING AND/OR REPAIRING

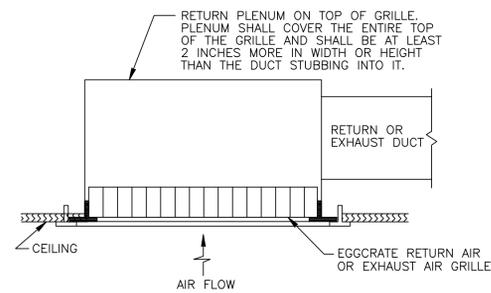
MECHANICAL LEGEND

HVAC	
SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER (4-WAY, 3-WAY, 2-WAY, 1-WAY)
	RETURN GRILLES
	EXHAUST GRILLES
	FLEXIBLE CONNECTION
	SUPPLY AIR DUCT (UP-, DOWN)
	RETURN AIR DUCT (UP-, DOWN)
	EXHAUST AIR DUCT (UP-, DOWN)
	ROUND DUCT DOWN
	ROUND DUCT UP
	DUCT TRANSITION
	DUCT CHANGE IN ELEVATION; R=RISE, D=DROP
	MANUAL VOLUME CONTROL BALANCE DAMPER
	MOTORIZED DAMPER
	ELBOW WITH TURNING VANES
	ELBOW ROUND
	INDICATES AIR FLOW DIRECTION
	SENSOR
	THERMOSTAT
	AIR DEVICE (X-1) / AIRFLOW (CFM)
	EQUIPMENT IDENTIFICATION
	INDICATED TAG OR SHEET NOTE

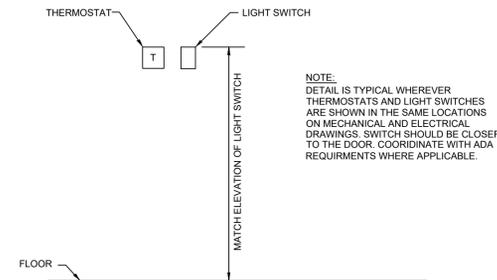
ABBREVIATIONS	
AHU-X	AIR HANDLING UNIT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
EF-X	EXHAUST FAN
EH-X	ELECTRIC HEATER
ESP	EXTERNAL STATIC PRESSURE
HP	HORSEPOWER
HP-X	HEAT PUMP UNIT
KW	KILOWATT
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
R-X	RETURN AIR DEVICE
S-X	SUPPLY AIR DEVICE

MECHANICAL NOTES

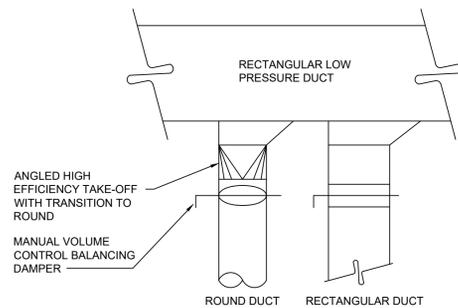
- REFER TO THE CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL MECHANICAL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR.
- ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF DUCTWORK, PIPING, EQUIPMENT, AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, VALVE, OR COMPONENT. CONTRACTOR TO PROVIDE ANY ADDITIONAL DUCT OR PIPING OFFSETS AND/OR FITTINGS, INCLUDING DIVIDED DUCTS AND FLATTENED DUCTS, REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE FIELD.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE ROUTING AND INSTALLATION OF MECHANICAL DUCTWORK, PIPING, AND EQUIPMENT WITH ALL OTHER DISCIPLINES AND TRADES INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, PLUMBING, AND ELECTRICAL.
- REFER TO THE ENTIRE SET OF CONSTRUCTION DOCUMENTS FOR DETAILS OF INSTALLATION REQUIREMENTS, FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR COMPLETE, OPERATIONAL, AND FULLY FUNCTIONAL MECHANICAL SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO, THE KENTUCKY BUILDING CODE, ASHRAE, IMC, IECC, SMACNA, AND NFPA.
- THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTS, DIFFUSERS, ETC. SHALL BE COORDINATED WITH ALL OTHER TRADES. CEILING MOUNTED LIGHTING AND ELECTRICAL DEVICES TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL EQUIPMENT. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING GRID AND LIGHTING LAYOUT FOR COORDINATION OF FINAL DIFFUSER LOCATIONS.
- CONTRACTOR SHALL VISIT THE JOB SITE, FIELD VERIFY FIT, COORDINATE WITH OTHER TRADES, AND BECOME FAMILIAR WITH ALL PROJECT CONDITIONS PRIOR TO FABRICATING DUCTWORK, INSTALLING EQUIPMENT, ETC. NO ALLOWANCES OR CHANGE ORDERS WILL BE ALLOWED FOR LACK THEREOF.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND COSTS FOR ALL PERMITS, TESTING, AND INSPECTIONS.
- THE ENTIRE MECHANICAL INSTALLATION SHALL BE AS REQUIRED TO MAINTAIN FIRE/SMOKE RATINGS AND/OR "UL" ASSEMBLY RATINGS AS REQUIRED BY THE CONTRACT DOCUMENTS AND AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. SEAL AROUND ALL PENETRATIONS THROUGH ALL FIRE/SMOKE SEPARATIONS AND/OR "UL" RATED ASSEMBLIES. COORDINATE ALL PENETRATIONS WITH THE CONSTRUCTION MANAGER AND/OR GENERAL CONTRACTOR. PROVIDE ADDITIONAL FIRE DAMPERS, SMOKE DETECTORS, AND SMOKE DAMPERS (INCLUDING OF WIRING) AS REQUIRED FOR A FULLY FUNCTIONAL AND CODE COMPLIANT SYSTEM.
- ALL DUCTWORK, PIPING, AND MECHANICAL EQUIPMENT SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE. NO OTHER TRADES, I.E. ELECTRICAL, CEILING, PLUMBING, ETC., SHALL BE SUSPENDED, HUNG, OR SUPPORTED FROM MECHANICAL DUCTWORK OR MECHANICAL PIPING.
- ALL EXTERIOR BUILDING PENETRATIONS MUST BE COORDINATED WITH THE ARCHITECT AND SHALL BE FLASHED AND SEALED WEATHER-TIGHT. ALL MATERIALS AND COLORS MUST BE PRE-APPROVED BY THE ARCHITECT. NEW OPENINGS AND/OR PENETRATIONS FOR MECHANICAL ITEMS SHALL BE CUT, SLEEVED, ETC. BY THE MECHANICAL CONTRACTOR.
- ROUTE DUCTWORK AS HIGH AS POSSIBLE TO FACILITATE ACCESS TO ABOVE CEILING SPACE. COORDINATE ROUTING WITH OTHER SERVICES AND TRADES. PROVIDE ADDITIONAL DUCTWORK, OFFSETS, ETC. TO ACCOMMODATE FIELD CONDITIONS AS REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM AT NO ADDITIONAL COST. ADDITIONAL OFFSETS REQUIRE APPROVAL FROM THE ENGINEER. ROUTE DUCTWORK BETWEEN JOISTS WHERE POSSIBLE.
- ALL AIR DEVICES LOCATED ABOVE GYPBOARD OR HARD CEILINGS SHALL HAVE ACCESSIBLE BALANCING DAMPERS.
- ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
- PROVIDE AND INSTALL DUCT ACCESS DOORS FOR INSPECTION OF ALL INSTALLED FIRE DAMPERS AS DIRECTED BY SMACNA HVAC CONSTRUCTION STANDARDS.
- MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0". ALL FLEXIBLE DUCT SHALL CONFORM TO THE REQUIREMENTS OF UL 181 FLEXIBLE AIR DUCTS. SUPPORT TO ELIMINATE SAGGING AND KINKING. INSULATED FLEXIBLE DUCTS SHALL MEET MINIMUM R-VALUES REQUIRED BY ENERGY CODE.
- ALL HVAC EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. UTILIZE FACTORY FILTERS DURING CONSTRUCTION.
- THE MECHANICAL CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE OWNERS REPRESENTATIVES WITH COMPLETE NEBB/AABC BALANCE REPORT. THE MECHANICAL CONTRACTOR SHALL PROVIDE AS MANY ADDITIONAL SITE VISITS BY THE LICENSED TAB CONTRACTOR AS REQUIRED BY THE ENGINEER FOR A COMPLETE AND FUNCTIONING AND APPROVED SYSTEM IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- ALL RECTANGULAR 90 DEG. AND 45 DEG. ELBOWS SHALL HAVE TURNING VANES.
- PROVIDE A MANUAL VOLUME DAMPER AT ALL BRANCH TAKE-OFFS ON SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK AT NO ADDITIONAL COST. PROVIDE A MAIN RETURN DAMPER UPSTREAM OF OUTSIDE AIR CONNECTIONS IN RETURN AIR PLENUM DESIGNS. COORDINATE ADDITIONAL MANUAL VOLUME DAMPER LOCATIONS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM WITH THE ENGINEER PRIOR TO ORDER, FABRICATION, OR INSTALLATION.
- ALL DUCT DIMENSIONS SHOWN ARE INTERIOR "CLEAR" DUCT DIMENSIONS.
- MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTDOOR AIR INTAKES AND EXHAUST, PLUMBING VENTS, ETC. AND/OR AS REQUIRED BY IMC, WHICHEVER IS MORE STRINGENT.
- ALL CONTROL WIRING AND CONDUIT SHALL COMPLY WITH NEC. ANY WIRING ROUTED IN EXPOSED/OPEN CEILING AREAS, ABOVE INACCESSIBLE CEILINGS, OR THROUGH WALLS SHALL BE INSTALLED IN CONDUIT.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND DRAWINGS FOR CONNECTIONS TO ALL HVAC EQUIPMENT.
- STRUCTURAL MEMBERS SHALL NOT BE CUT OR COMPROMISED IN ANY WAY.
- DO NOT BLOCK ACCESS TO HVAC OR ELECTRICAL EQUIPMENT. DO NOT INSTALL PIPING, DUCTWORK, OR EQUIPMENT OVER ELECTRICAL PANEL/SWITCHGEAR OR THE 42" CLEARANCE IN FRONT OF THESE ELECTRICAL ITEMS. COORDINATE ADDITIONAL REQUIREMENTS WITH NEC.
- MAINTAIN CLEARANCES AROUND ALL HVAC EQUIPMENT, DEVICES, CONTROLLERS, ETC. PER MANUFACTURER'S RECOMMENDATIONS.



1 CEILING RETURN DETAIL
NOT TO SCALE



2 THERMOSTAT MOUNTING DETAIL
NOT TO SCALE



3 LOW PRESSURE BRANCH TAKEOFF DETAIL
NOT TO SCALE

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POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

DATE	REVISION	BY

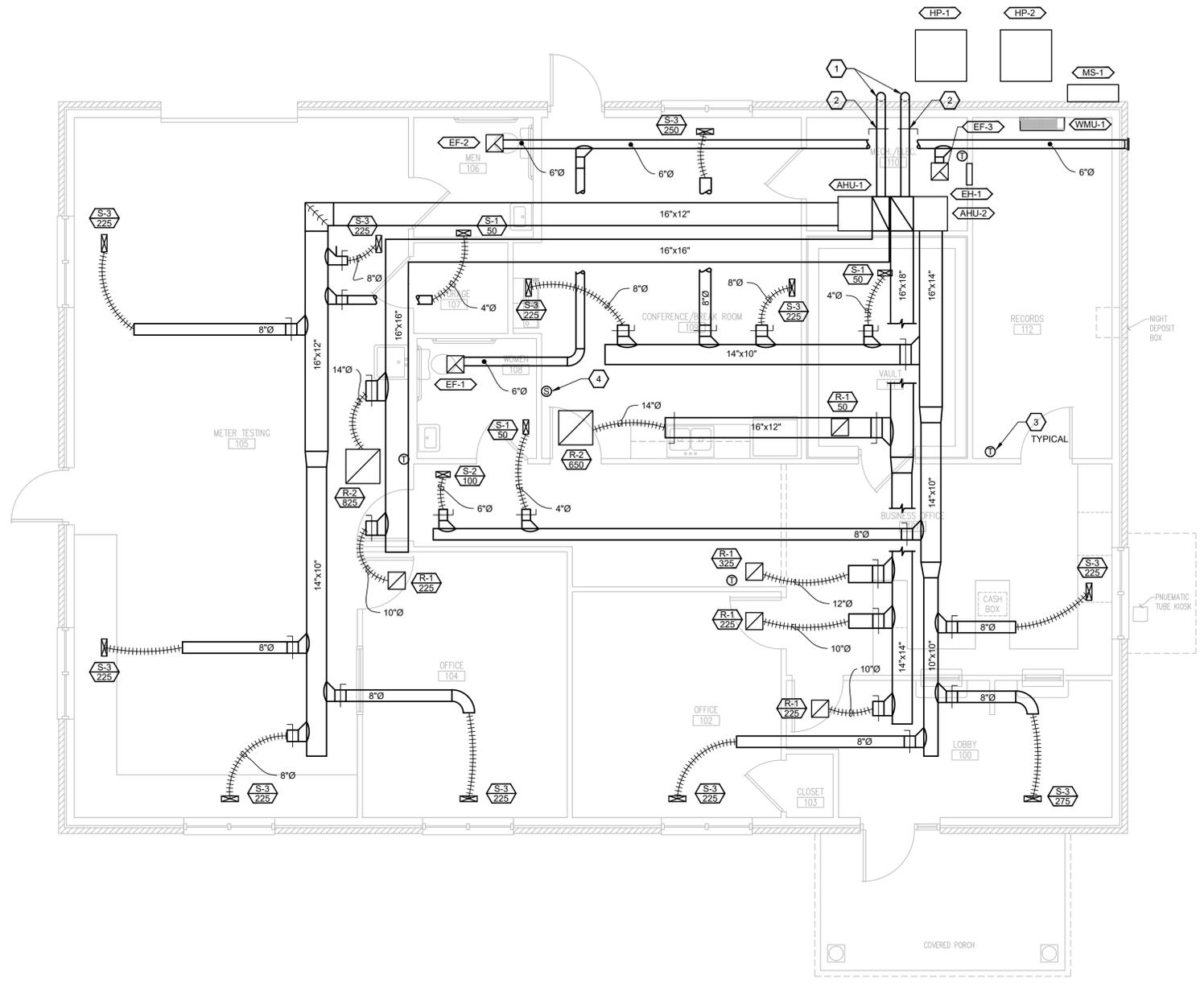
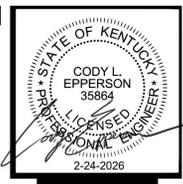
PROJECT NO. 9524-21
DESIGNED BY CE
DRAWN BY CE
CHECKED BY CE
REVIEWED BY CE
DATE SEPTEMBER 2023
SCALE AS NOTED

DESIGN DOCUMENTS:
The design professional warrants any and all responsibility and liability for problems which arise from failure to comply with applicable laws, regulations, specifications and the design intent they carry.
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SHEET INDEX	
SHEET NUMBER	SHEET TITLE
M0	HVAC LEGEND & NOTES
M1	HVAC PLAN
M6	HVAC SCHEDULES
M7	HVAC SPECIFICATIONS

DRAWING NO.
M0



GENERAL NOTES

- REFER TO SHEET M0.
- EXTERIOR HVAC EQUIPMENT SHOWN SHALL BE LOCATED BETWEEN BUILDING AND SIDEWALK.
- FURNACES TO BE VERTICAL UPFLOW TYPE, MOUNTED ON MINIMUM 18" TALL STANDS.
- PROVIDE FLEXIBLE DUCT CONNECTOR ON SUPPLY SIDE OF EACH DUCTED HVAC SYSTEM.
- ALL REFRIGERANT PIPING AND CONTROL WIRING TO BE CONCEALED FROM VIEW (I.E. ROUTED INSIDE EXTERIOR WALLS TO ABOVE CEILING).
- CONDENSATE PIPING ASSOCIATED WITH INDOOR HVAC EQUIPMENT SHALL ROUTE TO FLOOR DRAIN LOCATED IN MECHANICAL ROOM. REFER TO PLUMBING PLAN ON SHEET P1.
- PROVIDE HIGH EFFICIENCY TAKEOFFS (HETO's) FOR ALL SUPPLY BRANCH DUCTS.

SHEET NOTES

- PROVIDE 6" SOFFIT CAP WITH INSECT SCREEN, VERIFY COLOR TO MATCH BUILDING SOFFIT.
- PROVIDE 6" OUTSIDE AIR DUCT WITH MOTORIZED DAMPER LOCATED DIRECTLY INSIDE BUILDING ENVELOPE AS INDICATED. DAMPER SHALL BE POWERED FROM FURNACE. CONTRACTOR SHALL UPSIZE LOW VOLTAGE TRANSFORMER AS NECESSARY. DAMPER OPERATION SHALL BE INTERLOCKED WITH BLOWER MOTOR TO OPEN WHEN BLOWER IS ACTIVATED.
- PROVIDE AND INSTALL WALL MOUNTED THERMOSTAT 48" AFF. ROUTE CONTROL WIRING CONCEALED BACK TO UNIT.
- PROVIDE AND INSTALL WALL MOUNTED WIRED TEMPERATURE SENSOR 48" AFF. ROUTE CONTROL WIRING CONCEALED BACK TO THERMOSTAT FOR WEIGHTED TEMPERATURE AVERAGING OF AREAS SERVED.

1 FLOOR PLAN - HVAC
1/4" = 1'-0"

VENTILATION SCHEDULE				
UNIT	SUPPLY (CFM)	RETURN (CFM)	OUTSIDE AIR (CFM)	EXHAUST (CFM)
AHU-1	1175	1050	125	70
AHU-2	1625	1475	150	140
TOTAL	2800	2525	275	210

POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	REVIEWED BY	DATE	SCALE
9524-21	CE	CE	CE	CE	SEPTEMBER 2023	AS NOTED

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M1

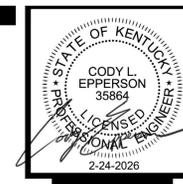
DUAL FUEL SPLIT SYSTEM SCHEDULE																	
MARK	MANUFACTURER	TYPE	MODEL	TONNAGE	COOLING		HEATING			EFFICIENCY				ELECTRICAL			NOTES
					COOLING STAGES	COOLING CAPACITY (MBH)	HEATING STAGES	HEATING CAPACITY (MBH)	AUXILIARY GAS HEAT (kBTU)	SEER2	EER2	HSPF2	AHRI #	V/Ø/Hz	MCA	MOCP	
OUTDOOR UNIT																	
HP-1	TRANE	HEAT PUMP	4TWR6036N1	3	2	36.6	2	34.4	-	16	12	7.5	208776488	240/1/60	20	35	1
HP-2	TRANE	HEAT PUMP	4TWR6048N1	4	2	45.5	2	49	-	16	11.7	7.5	208776758	240/1/60	28	45	1
INDOOR UNIT																	
AHU-1	TRANE	FURNACE/ COIL	S9X2B060U 4TXCB006DS3	*	-	*	2	*	60	*	*	*	*	120	9.5	20	2-7
AHU-2	TRANE	FURNACE/ COIL	S9X2B080U 4TXCB006DS3	*	-	*	2	*	80	*	*	*	*	120	9.5	20	2-7
NOTES: 1. PROVIDE WITH EQUIPMENT PAD AND PUMP UPS 2. MOUNT VERTICAL ON MINIMUM 18" TALL STAND 3. PROVIDE 1" FILTER RACK AT BOTTOM SIDE OF FURNACE; PROVIDE 1" DISPOSABLE MERV-8 FILTER 4. FURNACE SHALL UTILIZE CONCENTRIC VENT THROUGH ROOF PER MANUFACTURER'S INSTRUCTIONS; COORDINATE ROOF PENETRATION WITH ROOFING CONTRACTOR 5. PROVIDE WITH PROGRAMMABLE WIFI THERMOSTAT AND REMOTE SENSOR(S) AS INDICATED ON PLANS 6. FURNACE OPERATION SHALL HAVE 2 CONTROL STAGES; 96% AFUE 7. PROVIDE WIRED OUTSIDE AIR TEMPERATURE SENSOR FOR DUAL FUEL OPERATION WARRANTY: 1-YEAR PART, 5-YEAR COMPRESSOR * = SEE ASSOCIATED HEAT PUMP / FURNACE / COIL FOR PAIRED SPLIT SYSTEM RATING OTHER ACCEPTABLE MANUFACTURERS: DAIKIN, CARRIER																	

MINI-SPLIT SYSTEM SCHEDULE															
UNIT TAG	MFG	MODEL	TYPE	COOLING CAPACITY (BTU)	HEATING CAPACITY (BTU)	AIRFLOW (CFM)	SEER2	EER2	HSPF2	AHRI	ELECTRICAL			NOTES:	
											V/Ø/Hz	MCA	MOCP		
OUTDOOR															
MS-1	TRANE-MITSUBISHI	NTXSST15	SINGLE-ZONE HEAT PUMP	14,000	16,400	*	21	13	11	202373734	240/1/60	10	15	2,4,5	
INDOOR															
WMU-1	TRANE-MITSUBISHI	NTXWST15	WALL MOUNT	*	*	533	*	*	*	*	-	-	-	1,3	
NOTES: 1. PROVIDE WITH WIRED WALL MOUNTED THERMOSTAT 2. MOUNT ON WALL BRACKET 3. POWERED FROM OUTDOOR UNIT 4. HEATING CAPACITY SHOWN AT 17 DEGREE OUTDOOR TEMPERATURE 5. DC INVERTER DRIVEN COMPRESSOR WARRANTY: 1-YEAR PART, 1-YEAR LABOR, 5-YEAR COMPRESSOR * = SEE ASSOCIATED HEAT PUMP / AIR HANDLER FOR PAIRED SPLIT SYSTEM RATING OTHER ACCEPTABLE MANUFACTURERS: DAIKIN, SAMSUNG															

ELECTRIC HEATER SCHEDULE										
TAG	MANUFACTURER	MODEL	TYPE	CFM	BTUH	ELECTRICAL				NOTES:
						VOLTAGE	KW	FLA	MOCP	
EH-1	QMARK	CWH1101DSF	WALL MOUNTED	65	3413	120	1	8.4	20	ALL
NOTES: 1. INTEGRAL FACTORY INSTALLED THERMOSTAT AND DISCONNECT. SET THERMOSTAT TO 50°F. 2. WHITE POWDER COAT TRIM 3. 1" SEMI-RECESSED MOUNTING FRAME OTHER ACCEPTABLE MANUFACTURERS: MARKEL, REDDI										

EXHAUST FAN SCHEDULE													
MARK	MANUFACTURER	MODEL	TYPE	CFM	ESP (IN H2O)	SONES	DRIVE TYPE	MAX RPM	ELECTRICAL				NOTES
									V/Ø/Hz	HP	NAMEPLATE AMPS	MOCP	
EF-1,2	GREENHECK	SP-A70-QD	CEILING	70	0.125	<1	DIRECT	700	115/1/60	FRAC.	0.18	15	1-6
EF-3	GREENHECK	SP-A70-QD	CEILING	70	0.125	<1	DIRECT	700	115/1/60	FRAC.	0.18	15	1-5,7
NOTES: 1. PROVIDE WITH FACTORY MOUNTED UNIT DISCONNECT 2. PROVIDE WITH FACTORY MOUNTED SPEED CONTROL. ADJUST AS NECESSARY TO OBTAIN CFM INDICATED. 3. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER. 4. PROVIDE WITH EXTERIOR WALL CAP WITH INTEGRAL BIRD SCREEN (SEE DRAWINGS) 5. SUPPORT FROM THE STRUCTURE, INCLUDE HANGING VIBRATION ISOLATION MOUNTING KIT 6. INTERLOCK OPERATION WITH LIGHTING OCCUPANCY SENSOR. COORDINATE WITH ELECTRICAL CONTRACTOR. 7. PROVIDE COOLING ONLY THERMOSTAT IN SPACE FOR EXHAUST FAN CONTROL. SET THERMOSTAT TO 80°F. OTHER ACCEPTABLE MANUFACTURERS INCLUDE: COOK, PANASONIC													

HVAC INSULATION SCHEDULE			
TYPE	LOCATION	INSULATION R-VALUE	INSULATION MATERIAL
REFRIGERANT PIPING	INDOORS	3/4" THICK	ARMAFLEX
REFRIGERANT PIPING	OUTDOORS	3/4" THICK	ARMAFLEX (WITH UV PROTECTIVE COATING)
DUCTWORK	CONCEALED INDOORS	R-4.2	FOIL BACK FIBERGLASS WRAP
DUCTWORK	CONCEALED (ATTIC)	R-6.0	FOIL BACK FIBERGLASS WRAP
DUCTWORK	EXPOSED INDOORS	-	NONE
DUCTWORK	OUTDOORS	R-8	2" BOARD INSULATION W/ ALUMINUM METAL CLAD JACKETING
OUTSIDE AIR DUCTWORK	INDOORS	R-8	FOIL BACK FIBERGLASS WRAP
CONDENSATE PIPE	INDOORS	3/4" THICK	ARMAFLEX



POWELL'S VALLEY WATER DISTRICT
 OFFICE BUILDING
 CLAY CITY, KENTUCKY

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DRAWING NO.
M6

MECHANICAL SPECIFICATIONS

1. GENERAL REQUIREMENTS:

- 1.1. PROVISIONS OF THIS SECTION APPLY TO ALL WORK SPECIFIED IN ALL SECTIONS UNDER DIVISION 23.
- 1.2. IN ADDITION, WORK IN DIVISION 23 IS GOVERNED BY THE PROVISIONS OF THE BIDDING REQUIREMENTS, CONTRACT FORMS, GENERAL CONDITIONS, AND ALL SECTIONS UNDER DIVISION 1, GENERAL REQUIREMENTS.
- 1.3. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK EQUIPMENT, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
- 1.4. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH CURRENT INTERNATIONAL MECHANICAL CODE, ALL LOCAL CODES, AND ALL OTHER REGULATION GOVERNING THE SCOPE OF WORK IN THIS PROJECT.
- 1.5. UNLESS OTHERWISE SPECIFIED, ALL EQUIPMENT AND MATERIALS MUST BE NEW AND OF THE QUALITY SPECIFIED. THE WORKMANSHIP SHALL BE OF A QUALITY AND NEATNESS THAT IS ACCEPTABLE TO THE ARCHITECT, ENGINEER, AND OWNER, AND IS GREATER THAN OR EQUAL TO STANDARDS OF THE TRADES. WORK NOT INSTALLED IN THIS MANNER SHALL BE REPAIRED, REMOVED, REPLACED, OR OTHERWISE REMEDIATED AS DIRECTED BY THE ARCHITECT / ENGINEER AT THE CONTRACTOR'S EXPENSE.
- 1.6. THE MECHANICAL CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE WORK OF ALL OTHER TRADES, GENERAL TYPE CONSTRUCTION, AND THE RELATIONSHIP OF THE CONTRACTOR'S WORK TO OTHER SECTIONS AND TRADES.

2. EXAMINATION OF PREMISES:

- 2.1. MECHANICAL CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE THE CONDITIONS THAT MAY AFFECT THE WORK.
- 2.2. NO ALLOWANCE SHALL BE MADE DUE TO CONTRACTOR'S FAILURE TO MAKE SUCH EXAMINATION.
- 2.3. DO NOT SCALE DRAWINGS. FIELD VERIFY EXACT DIMENSIONS AND MEASUREMENTS

3. MECHANICAL CONTRACTOR

- 3.1. THE MECHANICAL CONTRACTOR/COMPANY SHALL BE LICENSED AND CERTIFIED IN THE STATE / LOCATION OF THE PROJECT FOR A MINIMUM OF TWO YEARS.
- 3.2. THE MECHANICAL CONTRACTOR/COMPANY SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE INSTALLING COMMERCIAL MECHANICAL SYSTEMS SIMILAR TO THOSE DESCRIBED IN THESE SPECIFICATIONS AND PROVIDE A LIST OF PREVIOUS COMPANY PROJECTS, INCLUDING NAME OF PROJECT AND CONTACT NAMES AND PHONE NUMBERS FOR REFERENCE.

4. PERMITS, INSPECTIONS, AND FEES

- 4.1. MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY ALL FEES ASSOCIATED WITH OBTAINING ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED TO COMPLETE THIS PROJECT.
- 4.2. PROVIDE COPIES OF PERMITS TO THE GENERAL CONTRACTOR
- 4.3. SUBMIT COPIES OF INSPECTION RESULTS TO THE ENGINEER AND INCLUDE COPIES OF PASSED INSPECTIONS IN THE OPERATION AND MAINTENANCE MANUALS SUBMITTED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT.

5. WARRANTY AND GUARANTEE

- 5.1. MECHANICAL CONTRACTOR SHALL WARRANTY AND GUARANTEE FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION ALL EQUIPMENT AND MATERIAL INSTALLED AND/OR FURNISHED BY THE MECHANICAL CONTRACTOR. DEFECTS WHICH APPEAR DURING THAT ONE YEAR PERIOD SHALL BE CORRECTED AT THE EXPENSE OF MECHANICAL CONTRACTOR.
- 5.2. EQUIPMENT STANDARD WARRANTIES SHALL BE: 5 YEAR COMPRESSOR WARRANTY AND 1 YEAR PARTS WARRANTY, UNLESS OTHERWISE SPECIFIED.

6. DRAWINGS AND SPECIFICATIONS

- 6.1. CONTRACTOR SHALL REVIEW THE COMPLETE SET OF DRAWINGS, AS WORK PERTAINING TO THE MECHANICAL CONTRACTOR AND THAT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR MAY BE SHOWN ON OTHER DRAWING SHEETS OR IN OTHER SPECIFICATION SECTIONS.
- 6.2. IF ANY DISCREPANCIES OCCUR BETWEEN THE ACCOMPANYING DRAWINGS AND THE ASSOCIATED SPECIFICATIONS ASSUME THE MOST EXPENSIVE FOR BIDDING PURPOSES AND REPORT SUCH DISCREPANCIES TO THE ARCHITECT / ENGINEER IN A TIMELY MANNER TO ALLOW A WORKABLE SOLUTION TO BE FOUND.
- 6.3. NO ALLOWANCE OR EXTRA PAYMENT SHALL BE GIVEN FOR RELOCATION OF PIPING, DUCTWORK, CONDUIT, AND EQUIPMENT NOT INSTALLED PER THESE SPECIFICATIONS AND INSTRUCTIONS OR INSTALLED IN A MANNER NOT CONFORMING TO THE MANUFACTURER'S REQUIREMENTS OR SUGGESTIONS.

7. SUBMITTALS AND SHOP DRAWINGS:

- 7.1. SUBMITTALS AND SHOP DRAWINGS SHALL BE SUBMITTED BY THE MECHANICAL CONTRACTOR WITHIN 15 DAYS AFTER AWARDED THE PROJECT FOR ENGINEER REVIEW.
- 7.2. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR ALL HVAC EQUIPMENT, FANS, CONTROLS, HANGERS, INSULATION, GRDS, DUCTWORK, AND OTHER STANDARD ITEMS AS REQUIRED TO COMPILER A COMPLETE SUBMITTAL ON THIS PROJECT.
- 7.3. ALL EQUIPMENT AND MATERIAL SUBMITTED SHALL BE AS SPECIFIED ON THE DRAWINGS OR EQUAL AS APPROVED BY THE ENGINEER.

8. OPERATION AND MAINTENANCE MANUALS

- 8.1. UPON COMPLETION OF THE PROJECT, SUBMIT PHYSICAL SETS IN BOUND BOOKLET FORM OF ALL WRITTEN OPERATING INSTRUCTIONS AND MAINTENANCE REQUIREMENTS FOR ALL HVAC EQUIPMENT AND MATERIAL USED AND/OR INSTALLED ON THE PROJECT.
 - 8.2. PROVIDE A LISTING OF ALL HVAC EQUIPMENT ON THE PROJECT WITH THE FOLLOWING INFORMATION: EQUIPMENT IDENTIFICATION NUMBER FROM DRAWINGS, AREA SERVED, MODEL NUMBER, SERIAL NUMBER, AND FILTER SIZES.
 - 8.3. INCLUDE AIR BALANCE REPORT IN O&M MANUALS, WHEN APPLICABLE.
 - 8.4. COPIES OF INSPECTION RESULTS SHALL BE SUBMITTED WITH O&M MANUALS
 - 8.5. INCLUDE A LETTER OF GUARANTEE STARTING AT THE DATE OF SUBSTANTIAL COMPLETION.
- ## 9. INSTALLATION OF HVAC EQUIPMENT, MATERIALS, AND SYSTEMS:
- 9.1. COORDINATE HVAC EQUIPMENT AND MATERIALS INSTALLATION WITH ALL OTHER BUILDING COMPONENTS.
 - 9.2. FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS.
 - 9.3. COORDINATE LOCATION AND REQUIREMENTS OF CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS IN TIME FOR PREPARATION FOR SUCH WORK TO OCCUR WITHOUT HINDERING OR DELAYING THE WORK OF OTHER TRADES.
 - 9.4. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES, SLEEVES, AND OPENINGS

THAT ARE TO BE INSTALLED IN POURED IN PLACE CONCRETE, WALL OPENINGS, ROOF OPENINGS, AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONTRACTED.

- 9.5. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL HVAC EQUIPMENT AND MATERIAL AS HIGH AS POSSIBLE.
- 9.6. INSTALL HVAC EQUIPMENT, PIPING, AND DUCTWORK IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE EQUIPMENT ACCESSORIES AS NECESSARY FOR PROPER OPERATION OR RECOMMENDED BY THE MANUFACTURER, EVEN IF SUCH ACCESSORIES ARE NOT SHOWN ON THE DRAWINGS OR MENTIONED IN THE SPECIFICATIONS.
- 9.7. MECHANICAL CONTRACTOR TO PROVIDE NO LESS THAN THE MANUFACTURER'S MINIMUM RECOMMENDED CLEARANCES ON ALL EQUIPMENT. ALL ISSUES PERTAINING TO CLEARANCES SHALL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION. INSTALLATION WITHOUT APPROVAL SHALL BE CORRECTED AT THE MECHANICAL CONTRACTOR'S EXPENSE.
- 9.8. MECHANICAL CONTRACTOR SHALL INSTALL NEOPRENE ISOLATION BLOCKS OR SPRING VIBRATION ISOLATORS AS APPROVED BY EQUIPMENT MANUFACTURER ON ALL HVAC EQUIPMENT TO MINIMIZE NOISE AND VIBRATIONS.

10. PROTECTION OF EQUIPMENT AND MATERIALS:

- 10.1. UNLESS SPECIFIED OR REQUESTED BY OWNER IN WRITING, PERMANENT HVAC SYSTEMS SHALL NOT BE OPERATED DURING CONSTRUCTION.
- 10.2. DURING CONSTRUCTION, ALL DUCTWORK AND PIPING SHALL BE CAPPED AND SEALED AT ALL TIMES AS TO PREVENT DIRT, DUST, AND DEBRIS FROM ENTERING DUCTWORK AND PIPING SYSTEM.

11. MECHANICAL PIPING:

- 11.1. REFRIGERANT PIPING
 - 11.1.1. DURING INSTALLATION OF REFRIGERANT PIPING, MECHANICAL CONTRACTOR SHALL FLOW NITROGEN THROUGH PIPING AT ALL TIMES WHEN BRAZING THE REFRIGERANT PIPING.
 - 11.1.2. REFRIGERANT PIPING SHALL BE LEAK TESTED WITH NITROGEN TO A PRESSURE OF NO LESS THAN 350 PSI OR AS DIRECTED BY THE EQUIPMENT MANUFACTURER, AND PERFORM A TRIPLE EVACUATION.
 - 11.1.3. REFRIGERANT PIPING SHALL BE INSULATED WITH A MINIMUM $\frac{3}{4}$ " THICK ARMAFLEX INSULATION.
 - 11.1.4. REFRIGERANT PIPING INSULATION INSTALLED OUTDOORS SHALL HAVE A UV PROTECTANT COATING.
 - 11.1.5. REFRIGERANT PIPING TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. ROUTE IN A LINEAR FASHION FOLLOWING BUILDING STRUCTURAL CONTOURS.
 - 11.1.6. INSTALL ESCUTCHEONS AROUND ALL REFRIGERANT PIPING WHEN VISIBLY PENETRATING A WALL, FLOOR, OR PARTITION.
- 11.2. CONDENSATE PIPING
 - 11.2.1. ALL CONDENSATE PIPING SHALL BE CONSTRUCTED OF SCHEDULED 40 PVC OR AS SPECIFIED OTHERWISE.
 - 11.2.2. CONDENSATE PIPING SHALL BE INSTALLED AS TO HAVE A SLOPE OF NO LESS THAN $\frac{1}{8}$ " PER FOOT.
 - 11.2.3. UNLESS SPECIFIED OTHERWISE, ALL CONDENSATE PIPING SHALL BE EXTERNALLY INSULATED WITH A MINIMUM 3/4" THICK ARMAFLEX INSULATION.
 - 11.2.4. MECHANICAL CONTRACTOR SHALL INSTALL CONDENSATE SAFETY DEVICES IN ALL CONDENSATE DRAINS OF HVAC EQUIPMENT AS TO REDUCE RISK OF DAMAGE FROM CLOGGED CONDENSATE DRAINS.
 - 11.2.5. CONDENSATE PIPING TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
 - 11.2.6. INSTALL ESCUTCHEONS AROUND ALL CONDENSATE PIPING WHEN VISIBLY PENETRATING A WALL, FLOOR, OR PARTITION.
 - 11.2.7. WHEN A CONDENSATE PUMP IS USED, INSTALL PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

12. IDENTIFICATION OF HVAC EQUIPMENT

- 12.1. ALL HVAC EQUIPMENT AND ASSOCIATED THERMOSTATS/SENSORS SHALL BE CLEARLY IDENTIFIED AND LABELED.
- 12.2. EQUIPMENT NAMEPLATES SHALL BE BLACK FACED FORMICA WITH WHITE ENGRAVED LETTERING. NAMEPLATE TEXT TO BE A MINIMUM OF $\frac{1}{2}$ " IN HEIGHT.
- 12.3. VALVE TAGS SHALL BE EMBOSSED BRASS OR ALUMINUM WITH A MINIMUM TEXT HEIGHT OF $\frac{1}{2}$ ".
- 12.4. VALVE TAGS SHALL IDENTIFY AREA SERVED AND NORMAL VALVE POSITION.
- 12.5. PIPING LABELS SHALL INCLUDE PIPE SIZE, ARROW INDICATING FLOW DIRECTION, AND REFRIGERANT CIRCUIT LOCATION. PIPING LABELS SHALL HAVE TEXT SIZE AND INSTALLED IN ACCORDANCE WITH ASME A13.1 FOR PIPING.
- 12.6. ALL DUCTWORK SHALL BE CLEARLY LABELED AND IDENTIFIED: SUPPLY, RETURN, EXHAUST, OUTSIDE AIR

13. MECHANICAL WIRING AND ELECTRICAL REQUIREMENTS

- 13.1. ALL TEMPERATURE CONTROL WIRING, INTERLOCK WIRING, AND EQUIPMENT CONTROL WIRING FOR HVAC EQUIPMENT SHALL BE INCLUDED BY THE MECHANICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
- 13.2. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING ALL EQUIPMENT HAVING ELECTRICAL REQUIREMENTS OF 120 VOLTS OR GREATER.
- 13.3. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT, WIRING, JUNCTION BOXES, AND DISCONNECTS ASSOCIATED WITH HVAC EQUIPMENT WITH ELECTRICAL REQUIREMENTS OF 120 VOLTS OR GREATER UNLESS PROVIDED AS AN INTEGRAL PART OF THE EQUIPMENT.
- 13.4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL THERMOSTAT JUNCTION BOX, AND STUB-UP CONDUIT ABOVE CEILING WITH PULL STRING FOR ALL THERMOSTATS AND WALL MOUNTED CONTROL DEVICES. MECHANICAL CONTRACTOR TO COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR.
- 13.5. MECHANICAL CONTRACTOR SHALL FURNISH, MOUNT, AND INSTALL ALL HVAC CONTROLS AS INDICATED ON PLANS UNLESS OTHERWISE NOTED.
- 13.6. ALL CONTROL WIRING INSTALLED IN AN EXPOSED LOCATION OR OUTDOORS SHALL BE INSTALLED IN NON-FLEXIBLE CONDUIT. CONDUIT TYPE PER NEC BASED ON LOCATION.
- 13.7. ALL LOW VOLTAGE CONTROL WIRING SHALL BE CONSTRUCTED PER MANUFACTURER'S

REQUIREMENTS OR RECOMMENDATIONS.

14. DUCTWORK

- 14.1. DUCTWORK CONSTRUCTION
 - 14.1.1. UNLESS OTHERWISE SPECIFIED, ALL DUCTWORK SHALL BE OF SHEET METAL CONSTRUCTION.
 - 14.1.2. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA SPECIFICATIONS.
 - 14.1.3. ALL DUCTWORK SIZES SHOWN ON DRAWINGS ARE INTERNAL DIMENSIONS AND DO NOT TAKE INTO ACCOUNT ANY INTERNAL LINERS OR INSULATION.
 - 14.1.4. ALL DUCT JOINTS ARE TO BE SEALED WITH A SUITABLE COMMERCIAL GRADE DUCT SEALER.
 - 14.1.5. ALL OUTSIDE AIR DUCTS SHALL BE INSTALLED WITH A MOTORIZED LOW-LEAK DAMPER THAT IS INTERLOCKED WITH UNIT FAN. DAMPER SHALL BE CLOSED AT ALL TIMES FAN IS NOT OPERATING.
- 14.2. DUCTWORK INSULATION
 - 14.2.1. ALL DUCTWORK INSULATION SHALL HAVE A COMPOSITE FIRE AND SMOKE RATING AS TESTED UNDER ASTM E-84, NFPA 255, AND UL 723 NOT EXCEEDING FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50.
 - 14.2.2. DUCTS INSTALLED IN AN UNCONDITIONED SPACE INTERNAL TO THE BUILDING ENVELOPE SHALL BE EXTERNALLY INSULATED WITH MINIMUM R-6.0 INSULATION VALUE.
 - 14.2.3. DUCTS INSTALLED WITHIN THE BUILDING ENVELOPE AND IN A CONCEALED SPACE, SHALL BE EXTERNALLY INSULATED WITH 1" INSULATION WITH A MINIMUM OF R-4.2 INSULATION VALUE.
 - 14.2.4. DUCTS INSTALLED IN OUTDOOR LOCATIONS SHALL BE EXTERNALLY INSULATED WITH 2" RIGID FOAM BOARD INSULATION WITH A MINIMUM INSULATION VALUE OF R-8.0 AND SHALL BE WRAPPED WITH A WEATHER RESISTANT ALUMINUM METAL CLAD JACKETING.
 - 14.2.5. UNLESS SPECIFIED OTHERWISE, DUCTS INSTALLED IN EXPOSED AREAS ARE NOT REQUIRED TO BE INSULATED.
 - 14.2.6. ALL OUTSIDE AIR DUCTWORK SHALL BE INSULATED WITH MINIMUM R-8.0 INSULATION VALUE.
 - 14.2.7. ALL RECTANGULAR DUCT INSULATION SHALL MEET MINIMUM R-VALUES REQUIRED BY THE IECC.
 - 14.2.8. ALL SHEET METAL DUCT SHALL BE EXTERNALLY INSULATED ONLY, NO INTERNAL/DUCT LINER INSULATION PERMITTED.
- 14.3. FLEXIBLE DUCTWORK
 - 14.3.1. FLEXIBLE DUCTWORK SHALL HAVE A COMPOSITE FIRE AND SMOKE RATING AS TESTED UNDER ASTM E-84, NFPA 255, AND UL 723 NOT EXCEEDING FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50.
 - 14.3.2. FLEXIBLE DUCTWORK SHALL BE INSTALLED IN LENGTHS NOT TO EXCEED 5 FEET UNLESS SPECIFIED OTHERWISE.
 - 14.3.3. FLEXIBLE DUCTWORK SHALL BE SUPPORTED PER MANUFACTURER'S INSTRUCTIONS NOT TO EXCEED EVERY 4 FEET TO ELIMINATE SAGGING.
 - 14.3.4. INSTALLED FLEXIBLE DUCTS SHALL MEET MINIMUM R-VALUES REQUIRED BY THE IECC.

15. HANGERS AND SUPPORTS

- 15.1. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" CHAPTER 5, "HANGERS AND SUPPORTS".
- 15.2. HANGER SPACING SHALL COMPLY WITH SMACNA'S SPECIFICATIONS
- 15.3. SUPPORT ALL HVAC EQUIPMENT, DUCTWORK, AND PIPING FROM BUILDING STRUCTURE.
- 15.4. ALL HANGERS EXPOSED TO VIEW SHALL BE CONSTRUCTED OF THREADED ROD AND ANGLE OR CHANNEL SUPPORTS.
- 15.5. HANG ITEMS FROM TOP MEMBER OF JOISTS OR PROVIDE ADDITIONAL STRUCTURE TO SPAN BETWEEN TOP MEMBERS IF NEEDED.
- 15.6. DO NOT USE METAL DECKING FOR SUSPENSION OF PIPING, DUCTWORK, OR EQUIPMENT.

16. FIRESTOPPING:

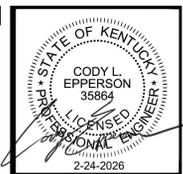
- 16.1. PROVIDE SEALS FOR ANY OPENING THROUGH WALLS, FLOORS, OR CEILINGS USED AS PASSAGE FOR MECHANICAL COMPONENTS SUCH AS PIPING OR DUCTWORK.
- 16.2. PROVIDE FIRE STOPPING SEALING TO MATCH OR EXCEED FIRE RESISTANT RATING OF PENETRATED WALLS, PARTITIONS, CEILINGS, OR FLOORS.
- 16.3. FIRE STOPPING SEALANT SHALL BE INSTALLED TO FILL OPENINGS AROUND MECHANICAL SERVICES PENETRATING FLOORS AND WALLS TO PROVIDE FIRE-STOPS WITH FIRE RESISTANT RATINGS INDICATED FOR FLOOR, WALL, CEILING, OR PARTITION ASSEMBLY IN WHICH PENETRATION OCCURS. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY THE MANUFACTURER AND THE TESTING AGENCY.

17. COORDINATION BETWEEN TRADES

- 17.1. EXAMINE ALL DRAWINGS AND SPECIFICATIONS PERTAINING TO THE PROJECT BEFORE SUBMITTING ANY PROPOSAL OR PERFORMING ANY WORK.
- 17.2. COOPERATE WITH ALL OTHER CONTRACTORS IN LOCATING PIPING, DUCTWORK, CONDUIT, OPENINGS, CHASES, AND EQUIPMENT IN ORDER TO AVOID CONFLICT WITH ANY OTHER CONTRACTOR'S WORK.
- 17.3. GIVE SPECIAL ATTENTION TO POINTS WHERE DUCTS OR PIPING MUST CROSS OTHER DUCTS OR PIPING, AND WHERE DUCTS, PIPING, AND CONDUIT MUST FUR INTO WALLS AND COLUMNS.
- 17.4. MAKE KNOWN TO OTHER TRADES THE INTENDED POSITIONING OF MATERIALS AND EQUIPMENT, AND INTENDED ORDER OF THE WORK.

18. TESTING AND BALANCING

- 18.1. UPON THE COMPLETION OF THE HVAC EQUIPMENT AND DUCTWORK, AIR BALANCE SHALL BE PERFORMED BY A NEBB/AABC CERTIFIED TESTING AND BALANCING AGENCY.
- 18.2. SYSTEM TO BE BALANCED TO THE SPECIFIED CFM VALUES ON DRAWINGS.
- 18.3. AABC TESTING AND BALANCING CONTRACTOR TO VERIFY ALL UNIT INFORMATION AND CORRECT CONTROL OPERATION.
- 18.4. SUBMIT COMPLETE TESTING AND BALANCE REPORT TO ENGINEER UPON COMPLETION. INCLUDE REPORT IN CLOSEOUT DOCUMENTS.



POWELL'S VALLEY WATER DISTRICT
 OFFICE BUILDING
 CLAY CITY, KENTUCKY

PROJECT NO. 9524-21	DESIGNED BY	CE	BY	
	DRAWN BY	CE	DATE	
	CHECKED BY	CE	REVISION	
	REVIEWED BY	CE	DATE	SEPTEMBER 2023
	SCALE	AS NOTED		

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DRAWING NO.

M7

ELECTRICAL LEGEND

LIGHTING	
SYMBOL	DESCRIPTION
	RECESSED LUMINAIRE
	WALL BRACKET STRIP LUMINAIRE
	INDUSTRIAL STRIP LUMINAIRE
	SURFACE OR PENDANT STRIP LUMINAIRE
	DOWNLIGHT LUMINAIRE
	SURFACE OR PENDANT MOUNTED LUMINAIRE
	WALL MOUNTED LUMINAIRE (NORMAL & EMERGENCY)
	EMERGENCY LUMINAIRE
	REMOTE HEAD EMERGENCY LUMINAIRE (SINGLE & TWIN)
	COMBINATION EXIT SIGN EMERGENCY LUMINAIRE (WALL & CEILING)
	EXIT SIGN - SINGLE FACE (WALL & CEILING)
	EXIT SIGN - DOUBLE FACE (WALL & CEILING)
	LIGHTING CONTROL TAG - 'X' INDICATES LIGHTING CONTROL RISER NUMBER ASSOCIATED WITH ROOM/AREA
	LIGHT SWITCH - 'X' INDICATES THE FOLLOWING TYPES: 3 - 3 WAY, 4 - 4 WAY, K - KEY OPERATED, D - DIMMER, OS - LINE VOLTAGE OCCUPANCY SENSOR, L - LOW VOLTAGE, M - MANUAL MOTOR STARTER W/ HANDLE GUARD KIT AND PADLOCK. SEE LIGHTING CONTROL RISER SHEETS FOR ADDITIONAL TYPES
	BATTERY PACK
	OCCUPANCY/VACANCY SENSOR (CEILING)
	LIGHTING CONTACTOR; MECHANICALLY-HELD AND POLES AS REQUIRED
	TIME CLOCK
	PHOTOCELL

POWER	
SYMBOL	DESCRIPTION
	TAMPER RESISTANT DUPLEX RECEPTACLE - 'X' INDICATES THE FOLLOWING: C - ABOVE COUNTER, CM - CEILING MOUNTED, E - EMERGENCY, G - GROUND FAULT CIRCUIT INTERRUPTER, GB - BLANK FACE GROUND FAULT CIRCUIT INTERRUPTER, IG - ISOLATED GROUND, P - PLUG LOAD CONTROL, S - CONTAINS INTEGRAL SURGE PROTECTION, WP - WEATHER PROOF, USB - CONTAINS USB PORT(S). (NOTE: 'X' NOTATION DESCRIPTIONS TYPICAL FOR ALL RECEPTACLE TYPES)
	TAMPER RESISTANT QUADRUPLX RECEPTACLE
	TAMPER RESISTANT SINGLE RECEPTACLE
	TAMPER RESISTANT SPECIAL PURPOSE RECEPTACLE
	TAMPER RESISTANT FLOOR MOUNTED OR RECESSED RECEPTACLE(S) AND COVERPLATE; SEE DRAWINGS FOR QUANTITY REQUIRED
	COMBINATION FLOOR BOX WITH QUANTITY OF TAMPER RESISTANT DUPLEX RECEPTACLES AND RJ45 DATA JACKS/UTP CABLES AS NOTED ON DRAWINGS.
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT WITH END CAP
	EQUIPMENT CONNECTION
	CIRCUIT CONTINUATION
	CIRCUIT HOMERUN TO ELECTRICAL DISTRIBUTION BOARD (SWITCHBOARD, PANELBOARD, ETC.). THE NUMBER OF TICK MARKS INDICATE QUANTITY OF PHASE AND NEUTRAL CONDUCTORS. LONG TICK MARKS REPRESENT PHASE (UNGROUND) CONDUCTORS. SHORT TICK MARKS REPRESENT NEUTRAL (GROUND) CONDUCTORS. A GROUNDING CONDUCTOR IS NOT SHOWN AS A TICK MARK HOWEVER SHALL BE INSTALLED WITH ALL CIRCUITS. TICK MARKS AND CONDUCTOR SIZES ARE ONLY SHOWN ON THE HOMERUN. INSTALL THE REQUIRED QUANTITY AND SIZE OF CONDUCTORS TO EACH DEVICE ON THE SAME CIRCUIT AS INDICATED ON THE DRAWINGS. IF CONDUCTOR SIZES NOT SHOWN ON HOMERUN, THE FOLLOWING IS REQUIRED: MINIMUM CONDUCTOR SIZE = #12 MINIMUM CONDUIT SIZE = 3/4 INCH CIRCUIT NOTATION EXAMPLE: 4#10 = (3) #10 PHASE CONDUCTORS AND (1) #10 NEUTRAL CONDUCTOR 1#10G = (1) #10 GROUNDING CONDUCTOR 3/4"C = CONDUIT SIZE P-1 = DISTRIBUTION BOARD "P" - STARTING POLE POSITION IN BOARD
	SURFACE MOUNTED PANELBOARD (DISTRIBUTION & BRANCH CIRCUIT); 'X' INDICATES IDENTIFICATION
	FLUSH MOUNTED PANELBOARD (BRANCH CIRCUIT); 'X' INDICATES IDENTIFICATION
	ELECTRICAL METER
	GROUND ROD
	EMERGENCY SHUT-OFF BUTTON
	JUNCTION BOX
	DISCONNECT SWITCH (SIZE/POLES/NEMA - INDICATED ON DRAWINGS)
	DISCONNECT SWITCH WITH ENCLOSED FUSE(S) OR CIRCUIT BREAKER (SIZE/POLES/FUSING/NEMA - INDICATED ON DRAWINGS)
	VARIABLE FREQUENCY DRIVE
	ELECTRIC MOTOR

SYSTEMS	
SYMBOL	DESCRIPTION
	VOICE/DATA OUTLET WITH QUANTITY OF RJ45 JACK(S) AND UTP CABLE(S) AS INDICATED - #V#D REPRESENTS THE NUMBER OF VOICE JACKS AND CABLES, #D REPRESENTS THE NUMBER OF DATA JACKS AND CABLES (NOTE: #V/#D NOTATION DESCRIBED ABOVE TYPICAL FOR ALL COMMUNICATION OUTLETS); C - ABOVE COUNTER, CG - CEILING MOUNTED
	DATA OUTLET FOR WIRELESS ACCESS POINT WITH TWO RJ45 DATA JACKS AND TWO UTP CABLES (WALL & CEILING)

ABBREVIATIONS	
1Ø	1-PHASE
+X'	INDICATES MOUNTING HEIGHT TO BOTTOM OF DEVICE
C	DEVICE TO BE INSTALLED 4 INCHES ABOVE COUNTER/TABLE BACKSPLASH TO BOTTOM OF DEVICE
SPD	SURGE PROTECTION DEVICE
W	DEVICE TO BE INSTALLED 42" ABOVE FLOOR TO BOTTOM OF DEVICE
WP	PROVIDE DEVICE WITH VERTICALLY MOUNTED WEATHERPROOF COVER. RECEPTACLES TO BE WEATHER-RESISTANT TYPE AND PROVIDED WITH A CAST ALUMINUM, EXTRA DUTY, WHILE-IN-USE COVER

ELECTRICAL DEVICE MOUNTING HEIGHTS	
COMMUNICATION / MULTIMEDIA OUTLETS	16 INCHES TO BOTTOM
INTERIOR RECEPTACLES	16 INCHES TO BOTTOM
EXTERIOR RECEPTACLES	24 INCHES TO BOTTOM
SWITCHES	48 INCHES TO TOP

NOTE: MOUNTING HEIGHTS UNLESS OTHERWISE NOTED ON DRAWINGS

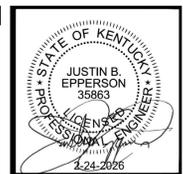
ELECTRICAL NOTES

GENERAL

- WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD, AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
- WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
- ALL MATERIALS USED IN THE INSTALLATION SHALL BE U.L. APPROVED AND NEW.
- DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOF, ETC.
- DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
- CONTRACTOR SHALL NOTIFY AND COOPERATE WITH OTHER TRADES SUCH THAT NO DUCTS, PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER, OR PASS THOROUGH ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
- NO WIRING SHALL RUN IN DUCT WORK.
- THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.
- USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
- THE CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND OTHER DRAWINGS PRIOR TO BID.
- CONTRACTOR SHALL REVIEW ALL ARCHITECT'S ELEVATIONS, SECTIONS AND FLOOR PLANS PRIOR TO ROUGH-IN OF ELECTRICAL JUNCTION BOXES.
- ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2-1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
- REFER TO ARCHITECTURAL CABINET CASEWORK ELEVATION DRAWINGS FOR CLARIFICATION ON MOUNTING AND PLACEMENT OF ALL RACEWAY, RECEPTACLES, AND SWITCHES.
- MANY DEVICE MOUNTING LOCATIONS ARE DEPENDENT ON MILLWORK LOCATIONS. COORDINATE ALL APPLICABLE LOCATIONS WITH MILLWORK INSTALLER PRIOR TO BEGINNING WORK.
- LIGHT SWITCHES INSTALLED ADJACENT TO EACH OTHER, SHALL BE GANGED TOGETHER WITH ONE PIECE COVER PLATE.
- CONSULT ARCHITECT'S REFLECTED CEILING PLANS FOR COORDINATION.
- CONTRACTOR SHALL MEET WITH THE CEILING AND MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING TYPES, AND ROUGH-IN REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT, PIPING, AND CEILING INSTALLATIONS.
- CONTRACTOR SHALL MEET WITH MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, AND REQUIREMENTS OF MECHANICAL EQUIPMENT CONNECTIONS PRIOR TO INSTALLATIONS.
- CONNECT ALL EMERGENCY LIGHT FIXTURES, NIGHT LIGHTS, EGRESS LIGHTS, AND EXIT SIGNS TO UNSWITCHED CONDUCTOR(S).
- THE CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
- FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL THE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.
- VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
- AT THE END OF THE JOB, PROVIDE BLANK COVER PLATES TO MATCH THE OTHER COVER PLATES FOR ALL JUNCTION BOXES WHERE DEVICES HAVE NOT YET BEEN INSTALLED.

LIGHTING

- THE CONTRACTOR SHALL INSTALL THE REQUIRED NUMBER OF CONDUCTORS BETWEEN SWITCHES, LIGHT FIXTURES AND ASSOCIATED DEVICES FOR A COMPLETE AND WORKING SYSTEM. PROVIDE SINGLE-LEVEL OR DUAL-LEVEL SWITCHING, THREE-WAY SWITCHING OR OTHER SWITCHING METHOD AS INDICATED ON THE DRAWINGS.
- INSTALL AN UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS, EMERGENCY LIGHTS AND ALL OTHER FIXTURES USED FOR EMERGENCY ILLUMINATION AND SUPPLIED WITH INTEGRAL OR EXTERNAL BATTERIES.



POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

DATE	REVISION	BY

PROJECT NO. 9524-21
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SCALE: AS NOTED

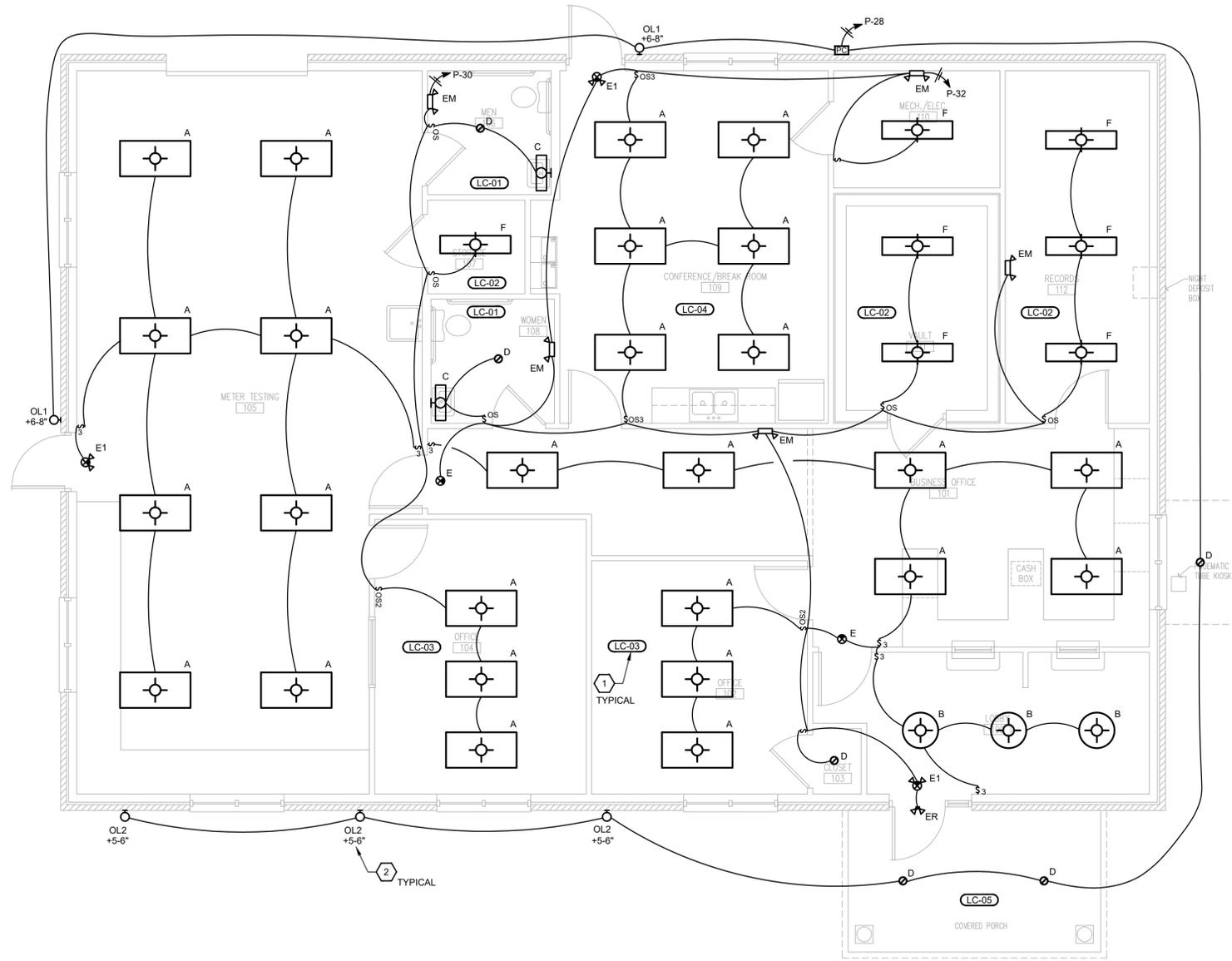
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SHEET INDEX	
SHEET NUMBER	SHEET TITLE
E0	ELECTRICAL LEGEND & NOTES
E1	LIGHTING PLAN
E2	POWER & SYSTEMS PLAN
E5	ELECTRICAL DETAILS
E6	ELECTRICAL SCHEDULES
E7	ELECTRICAL SPECIFICATIONS

DRAWING NO.
E0



GENERAL NOTES

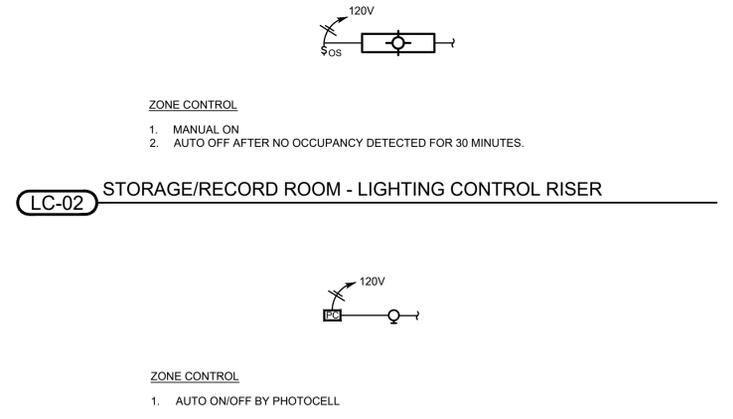
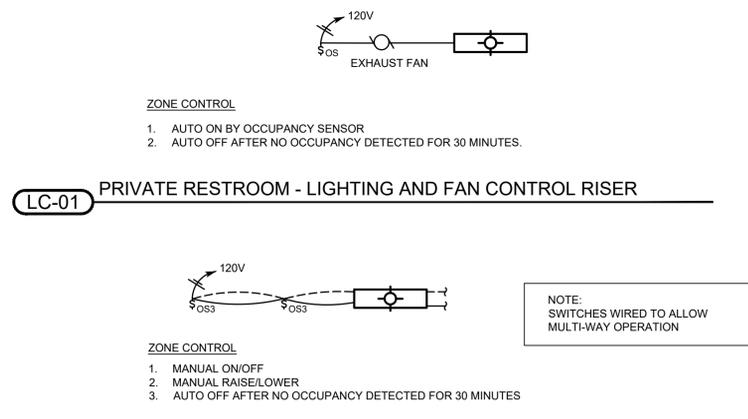
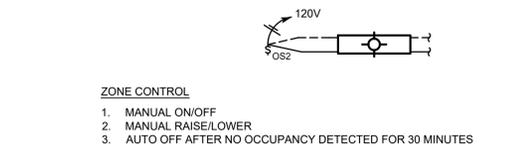
- REFER TO SHEET E0.
- ALL TYPE 'EM' EMERGENCY LIGHT FIXTURES TO BE MOUNTED 7'-6" ABOVE FINISHED FLOOR TO BOTTOM OF LIGHT FIXTURE.
- MAINTAIN RATINGS OF ALL WALLS AND CEILINGS PENETRATED.
- DIMMING CONDUCTORS NOT SHOWN ON FLOOR PLAN. REFER TO LIGHTING CONTROL RISERS ON THIS SHEET FOR ADDITIONAL INFORMATION.

SHEET NOTES

- INDICATES LIGHTING CONTROL RISER ASSOCIATED WITH AREA. SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION. TYPICAL.
- INDICATES MOUNTING HEIGHT ABOVE GRADE/FINISHED FLOOR TO BOTTOM OF LIGHT FIXTURE. TYPICAL.

1 FLOOR PLAN - LIGHTING
 1/4" = 1'-0"

LIGHT CONTROL RISER LEGEND	
SYMBOL	DESCRIPTION
OS	ON/OFF WITH INTEGRAL OCCUPANCY SENSOR (SENSOR SWITCH 'WSX PDT' OR EQUAL)
OS2	ON/OFF, RAISE/LOWER, WITH INTEGRAL OCCUPANCY SENSOR (SENSOR SWITCH 'WSXA PDT EZ D SA')
OS3	ON/OFF, RAISE/LOWER, WITH INTEGRAL OCCUPANCY SENSOR (SENSOR SWITCH 'WSXA MWO PDT EZ D SA')
---	2#18 DIMMING CONDUCTOR CABLE
PC	PHOTOCELL



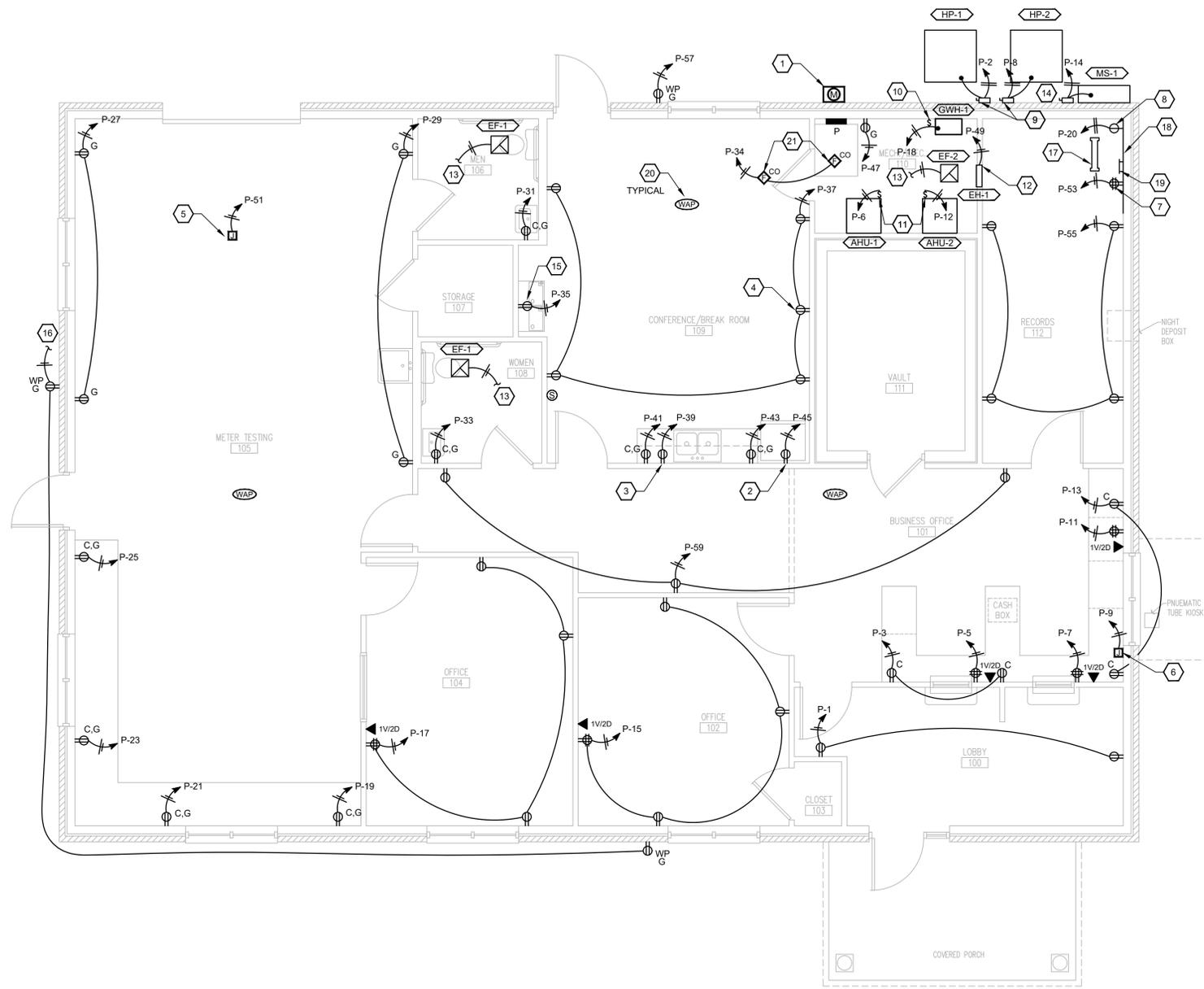
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1 FLOOR PLAN - POWER & SYSTEMS
1/4" = 1'-0"

GENERAL NOTES

- REFER TO SHEET E0.
- MAINTAIN RATINGS OF ALL WALLS AND CEILINGS PENETRATED.
- COORDINATE ALL ELECTRICAL CONNECTIONS TO MECHANICAL AND PLUMBING EQUIPMENT WITH EQUIPMENT INSTALLER.
- ALL DEVICES TO BE FLUSH MOUNTED UNLESS OTHERWISE NOTED; NO EXPOSED WIRING OR SURFACE RACEWAY PERMITTED.
- RECEPTACLE AND COMMUNICATION DEVICE LOCATIONS HAVE BEEN COORDINATED WITH ARCHITECTURAL FURNITURE LAYOUT. REFER TO ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.

SHEET NOTES

- PROVIDE SERVICE ENTRANCE METER BASE ENCLOSURE ON BUILDING FACADE. COORDINATE REQUIREMENTS WITH LOCAL POWER UTILITY COMPANY.
- PROVIDE DEDICATED CIRCUIT AND RECEPTACLE FOR REFRIGERATOR WITH GFCI PROTECTION AT THE CIRCUIT BREAKER. RECEPTACLE TO BE MOUNTED AT SAME HEIGHT AS NEARBY COUNTERTOP RECEPTACLES.
- PROVIDE DEDICATED CIRCUIT AND RECEPTACLE FOR MICROWAVE WITH GFCI PROTECTION AT THE CIRCUIT BREAKER. MICROWAVE TO BE LOCATED ON SHELF WITHIN UPPER CABINETS. COORDINATE EXACT RECEPTACLE LOCATION WITH CABINETS CONSTRUCTION PRIOR TO ROUGH-IN FOR COMPLETE CONCEALMENT.
- PROVIDE RECEPTACLE FOR OWNER-FURNISHED WALL MOUNTED TV. COORDINATE LOCATION AND HEIGHT WITH ASSOCIATED MOUNTING BRACKETS PRIOR TO ROUGH-IN FOR COMPLETE CONCEALMENT BEHIND DISPLAY. TYPICAL.
- PROVIDE DEDICATED CIRCUIT FOR OVERHEAD DOOR. COORDINATE WIRING REQUIREMENTS WITH INSTALLER.
- PROVIDE DEDICATED CIRCUIT FOR PNEUMATIC TUBE SYSTEM EQUIPMENT. COORDINATE WIRING REQUIREMENTS WITH SYSTEM INSTALLER.
- PROVIDE DEDICATED CIRCUIT AND QUADRUPLUX RECEPTACLE FOR MDF COMMUNICATION EQUIPMENT.
- PROVIDE DEDICATED CIRCUIT WITH 2#10, #10G, 3/4" AND RECEPTACLE FOR COMMUNICATION UPS EQUIPMENT; VERIFY REQUIRED RECEPTACLE CONFIGURATION.
- PROVIDE 60A/2P, 240V, NEMA-3R NON-FUSED DISCONNECT SWITCH AND LFMC CONNECTION TO OUTDOOR HVAC EQUIPMENT. COORDINATE EXACT DISCONNECT SWITCH LOCATION WITH HVAC INSTALLER.
- PROVIDE TOGGLE SWITCH AND CONNECTION TO WATER HEATER.
- PROVIDE TOGGLE SWITCH AND CONNECTION TO HVAC EQUIPMENT.
- PROVIDE CONNECTION TO ELECTRIC WALL HEATER SERVING MECHANICAL ROOM, DISCONNECT SWITCH FURNISHED INTEGRAL TO UNIT.
- PROVIDE CONNECTION TO EXHAUST FAN FROM ROOM LIGHTING CIRCUIT, DISCONNECT SWITCH FURNISHED WITH UNIT.
- PROVIDE 60A/2P, 240V, NEMA-3R NON-FUSED DISCONNECT SWITCH WITH INTEGRAL SURGE PROTECTION AND LFMC CONNECTION TO OUTDOOR HVAC EQUIPMENT. COORDINATE EXACT DISCONNECT SWITCH LOCATION WITH HVAC INSTALLER.
- PROVIDE DEDICATED CIRCUIT AND RECEPTACLE FOR ELECTRIC WATER COOLER WITH GFCI PROTECTION AT THE CIRCUIT BREAKER. COORDINATE LOCATION WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN FOR CONCEALMENT BEHIND EQUIPMENT.
- CONNECT TO EXTERIOR RECEPTACLE CIRCUIT P-57.
- PROVIDE TWO POST COMMUNICATION RACK.
- PROVIDE 4" FIRE RATED MOUNTING BACKBOARD FOR COMMUNICATION EQUIPMENT. BACKBOARD SHALL BE MOUNTED APPROXIMATELY 24" AFF.
- PROVIDE GROUND BAR WITH MINIMUM #6 INSULATED BONDING CONDUCTORS TO THE COMMUNICATION RACK(S) AND TELEPHONE/DATA/TV SERVICE ENTRANCE(S). CONTRACTOR SHALL INSTALL A MINIMUM #4 INSULATED GROUNDING CONDUCTOR IN CONDUIT FROM GROUND BAR TO THE ELECTRICAL SERVICE GROUNDING SYSTEM.
- PROVIDE ROUGH-IN FOR OWNER FURNISHED WIRELESS ACCESS POINT AT THIS LOCATION WITH 1-CAT6 NETWORK CONNECTION FROM COMMUNICATION RACK; CONTRACTOR TO PROVIDE APPROPRIATE CONNECTOR(S) WITH CONCEALED CONNECTION BEHIND DEVICE. TYPICAL.
- PROVIDE CEILING MOUNTED CARBON MONOXIDE DETECTOR WITH INTEGRAL BATTERY BACKUP.

POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

DATE	REVISION	BY

PROJECT NO. 9524-21	DESIGNED BY JE	SCALE AS NOTED
	DRAWN BY JE	
	CHECKED BY JE	
	REVIEWED BY JE	
	DATE SEPTEMBER 2023	

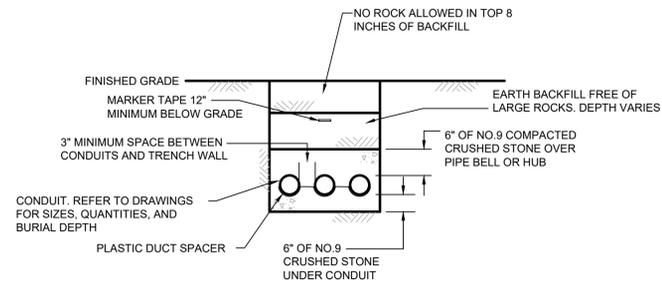
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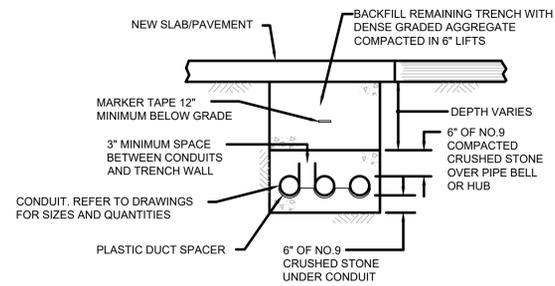
624 Wellington Way
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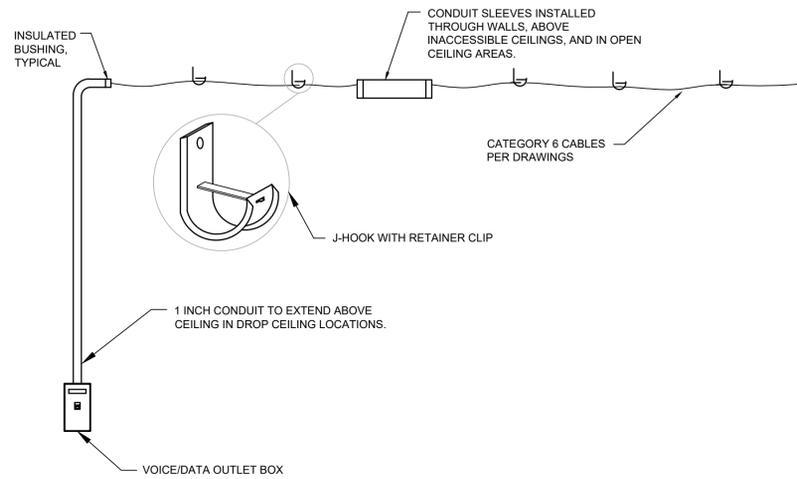
DRAWING NO.
E2



1 TRENCH DETAIL FOR EARTH COVER
NOT TO SCALE



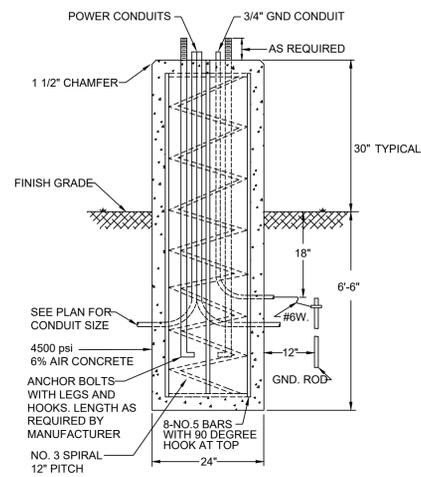
2 TRENCH DETAIL FOR NEW SLAB/PAVEMENT
NOT TO SCALE



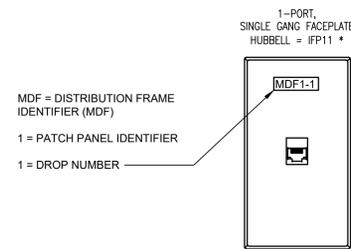
GENERAL NOTES:

- ALL VOICE AND DATA CABLING SHALL BE RUN ABOVE THE FINISHED FLOOR.
- ALL CABLING INCLUDING VOICE, DATA, SECURITY CAMERA, SPEAKER, HVAC CONTROLS, A/V, ETC. SHALL BE ROUTED IN THE MANNER SHOWN. NO CABLING SHALL BE ROUTED THROUGH TRUSSES OR SUPPORTED BY CEILING GRID WIRE TIES OR LIGHT FIXTURE WIRE TIES.
- PROVIDE A COMPLETE UNINTERRUPTED PATHWAY BETWEEN ALL HEADEND EQUIPMENT AND OUTLETS AS SHOWN IN THE DIAGRAM. CONDUIT SLEEVES SHALL BE SIZED TO NOT EXCEED 40% CAPACITY. ANY CABLES THAT PENETRATE A WALL SHALL BE INSTALLED IN A CONDUIT SLEEVE.
- CABLE STRAPS SHALL BE REUSABLE BLACK VELCRO CABLE WRAPS. NO ZIP TIES WILL BE PERMITTED.
- EQUIPMENT ORIENTATION (FROM TOP TO BOTTOM) SHALL BE: PATCH PANEL, SWITCH, PATCH PANEL, SWITCH, ETC.
- ALL LOW-VOLTAGE CABLING ROUTED THRU EXPOSED CEILING AREAS OR IN INACCESSIBLE AREAS ARE TO BE INSTALLED IN EMT CONDUIT. NO EXCEPTIONS.

4 TYPICAL CABLE DISTRIBUTION RISER DIAGRAM
NOT TO SCALE



3 TALL POLE BASE DETAIL
NOT TO SCALE



GENERAL NOTES:

- THIS LABEL INDICATES THAT THIS CABLE ORIGINATES FROM PATCH PANEL 1 IN THE MAIN DISTRIBUTION FRAME.
- QUANTITY OF CATEGORY 6 JACKS AND CABLES PER OUTLET AS INDICATED ON DRAWINGS.
- EACH PATCH PANEL SHALL BE LABELED IN ASCENDING ORDER STARTING AT THE TOP OF THE RACK.
- PATCH PANEL TERMINATIONS SHALL BE LABELED WITH THE SAME LABELING SCHEME.
- LABEL THE CABLE ONE INCH BEHIND THE CONNECTORS ON BOTH THE ROOM AND RACK SIDES. LABELS SHALL BE MACHINE GENERATED AND SELF LAMINATING. PATCH CORDS OVER 2 FEET IN LENGTH SHALL BE LABELED AT EACH END.
- ALL PATCH CABLES AND WORK STATION CABLES SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. WORK STATION CABLES SHALL BE MINIMUM 5' LONG.
- ALL PATCHING AND/OR CROSS CONNECTION SHALL BE PERFORMED BY THE CONTRACTOR.

5 VOICE/DATA OUTLET INSTALLATION DETAIL
NOT TO SCALE



POWELL'S VALLEY WATER DISTRICT
OFFICE BUILDING
CLAY CITY, KENTUCKY

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CHECKED BY	JE
REVIEWED BY	JE
DATE	SEPTEMBER 2023
SCALE	AS NOTED

DESIGN DOCUMENTS:
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POWELL'S VALLEY WATER DISTRICT
 OFFICE BUILDING
 CLAY CITY, KENTUCKY

FIXTURE TYPE	DESCRIPTION	MOUNTING	VOLTAGE	LAMPS						MANUFACTURER/MODEL NUMBER	NOTES
				TYPE	LUMENS	WATTS	DIMMING	CRI	COLOR TEMP		
A	2'x4' FLAT PANEL WITH SURFACE MOUNT KIT AND POLYCARBONATE FROSTED DIFFUSER	CEILING	MVOLT	LED	5200	45	0-10V	≥80	4000K	MAXLITE: MLFP-24-G4 LITHONIA EQUAL COOPER EQUAL	
B	22" DIAMETER DRUM WITH FABRIC LINEN DIFFUSER AND 12" ROD AND CANOPY	PENDANT	120	LED	2100	45	N/A	≥80	4000K	WESTGATE: LCOFF-22-MCT5-BR LITHONIA EQUAL COOPER EQUAL	1
C	2' VANITY LIGHT WITH POLYCARBONATE LENS	WALL	120	LED	1300	18	N/A	≥80	4000K	MAXLITE: WESTGATE LVG-24-MCT5-BN LITHONIA EQUAL COOPER EQUAL	2
D	6" LED WAFER DOWNLIGHT, ROUND FORM FACTOR, WET LOCATION LISTED	RECESSED	MVOLT	LED	1190	13	N/A	≥80	4000K	LITHONIA: WF6 LED 30K40K50K MW COOPER EQUAL MXLITE EQUAL	
E	EXIT SIGN, NICAD BATTERY BACKUP FOR 90 MINUTES, INTEGRAL TEST SWITCH, LED INDICATOR, REMOTE HEAD CAPACITY, RED LETTERS, WHITE HOUSING	CEILING	MVOLT	LED	N/A	4.3	N/A	N/A	N/A	LITHONIA: LHQM LED R HO R0 SURE-LITES EQUAL MAXLITE EQUAL	1,3
E1	EXIT SIGN WITH TWIN LED LAMPS, NICAD BATTERY BACKUP FOR 90 MINUTES, INTEGRAL TEST SWITCH, LED INDICATOR, REMOTE HEAD CAPACITY, WHITE HOUSING, RED LETTERS	CEILING	MVOLT	LED	N/A	4.3	N/A	N/A	N/A	LITHONIA: LHQM LED R HO SURE-LITES EQUAL MAXLITE EQUAL	1,3
EM	TWO-HEAD EMERGENCY EGRESS LIGHT WITH BATTERY BACKUP FOR 90 MINUTES, INTEGRAL TEST SWITCH, LED INDICATOR, AIMABLE OPTICS, WHITE HOUSING	WALL	MVOLT	LED	N/A	2.4	N/A	N/A	N/A	LITHONIA: ELM2L SURE-LITES EQUAL MAXLITE EQUAL	1
ER	TWIN REMOTE HEAD FOR EMERGENCY EGRESS, POWERED VIA ADJACENT EXIT SIGN FIXTURE TYPE 'E1', INTEGRAL TEST SWITCH, LED INDICATOR, WET LOCATION LISTED	WALL	N/A	LED	N/A	1.5/HEAD	N/A	N/A	N/A	LITHONIA: ELA T QWP L0309 SURE-LITES EQUAL MAXLITE EQUAL	1,3
F	LINEAR UTILITY WRAP FIXTURE WITH STEEL HOUSING AND SMOOTH DIFFUSER	CEILING	MVOLT	LED	6240	48	N/A	≥80	4000K	MAXLITE: LSU-4U-23W LITHONIA EQUAL COOPER EQUAL	
QL1	ARCHITECTURAL WALL PACK WITH INTEGRAL -20°C NI-CAD BATTERY AND SELF DIAGNOSTIC FUNCTION	WALL	MVOLT	LED	1275	15	N/A	≥70	5000K	MAXLITE: SECR12U-EM2 LITHONIA EQUAL COOPER EQUAL	1
QL2	9" WALL CYLINDER SCONCE WITH CAST ALUMINUM HOUSING AND UPLIGHT/DOWNLIGHT DISTRIBUTION, ADA COMPLIANT, WET LOCATION LISTED	WALL	MVOLT	LED	947	14	N/A	≥70	4000K	LITHONIA: OLLWU LED P1 40K DDB COOPER EQUAL MAXLITE EQUAL	1
P1	AREA/ROADWAY LIGHT FIXTURE WITH DIE CAST ALUMINUM HOUSING AND TYPE I SHORT DISTRIBUTION, WET LOCATION LISTED	POLE	MVOLT	LED	8104	51	N/A	≥70	4000K	LITHONIA: DSX1 LED P1 T1S MCGRAW-EDISON EQUAL MAXLITE EQUAL	1,4
P2	AREA/ROADWAY LIGHT FIXTURE WITH DIE CAST ALUMINUM HOUSING AND TYPE I SHORT DISTRIBUTION, WET LOCATION LISTED	POLE	MVOLT	LED	10418	68	N/A	≥70	4000K	LITHONIA: DSX1 LED P2 T1S MCGRAW-EDISON EQUAL MAXLITE EQUAL	1,4
P3	AREA/ROADWAY LIGHT FIXTURE WITH DIE CAST ALUMINUM HOUSING AND TYPE V MEDIUM DISTRIBUTION, WET LOCATION LISTED	POLE	MVOLT	LED	10195	68	N/A	≥70	4000K	LITHONIA: DSX1 LED P2 T5M MCGRAW-EDISON EQUAL MAXLITE EQUAL	1,4
P4	AREA/ROADWAY LIGHT FIXTURE WITH DIE CAST ALUMINUM HOUSING AND TYPE III MEDIUM DISTRIBUTION, WET LOCATION LISTED	POLE	MVOLT	LED	13763	102	N/A	≥70	4000K	LITHONIA: DSX1 LED P3 T3M MCGRAW-EDISON EQUAL MAXLITE EQUAL	1,4

GENERAL
 -OWNER PREFERRED LIGHT FIXTURES SHOWN AS BASIS OF DESIGN
 -ALL LIGHT FIXTURES TO MEET THE FOLLOWING CRITERIA UNLESS OTHERWISE NOTED: MINIMUM 5 YEAR WARRANTY; UL LISTED

NOTES
 1. ARCHITECT TO VERIFY COLOR/FINISH
 2. CENTER ABOVE VANITY MIRROR
 3. CENTER OVER DOOR
 4. PROVIDE WITH 25' ROUND ALUMINUM POLE. REFER TO TYPICAL POLE BASE DETAIL ON SHEET E5 FOR ADDITIONAL INFORMATION

PANEL 'P'													
BRANCH CIRCUIT PANELBOARD													
VOLTAGE		1 PHASE	POLES	MAIN AMPS		MAIN TYPE		A. I. RATING		MOUNTING			
120/240		3 WIRE	60	200		MCB		10,000		SURFACE			
POLE NO.	BREAKER TRIP	P	LOAD SERVED				LOAD SERVED				BREAKER TRIP	POLE NO.	
			KVA	A	B	KVA	KVA	A	B	KVA			
1	20	1	REC: 100 LOBBY	0.4	2.4		2.0	HP-1			30	2	2
3	20	1	REC: 101 OFFICE (COUNTER)	0.5		2.5	2.0						4
5	20	1	REC: 101 OPEN OFFICE	0.5	1.0		0.5	AHU-1			20	1	6
7	20	1	REC: 101 OPEN OFFICE	0.5		3.0	2.5	HP-2			40	2	8
9	20	1	101 PNEUMATIC SYSTEM	1.0	3.5		2.5						10
11	20	1	REC: 101 OPEN OFFICE	0.5		1.0	0.5	AHU-2			20	1	12
13	20	1	REC: 101 OFFICE (COUNTER)	0.5	1.5		1.0	MS-1/WMU-1			15	2	14
15	20	1	REC: 102 OFFICE	0.9		1.9	1.0						16
17	20	1	REC: 104 OFFICE	0.9	1.4		0.5	QWH-1			20	1	18
19	20	1	REC: 105 METER (COUNTER)	0.2		1.2	1.0	MDF: UPS			30	2	20
21	20	1	REC: 105 METER (COUNTER)	0.2	1.2		1.0						22
23	20	1	REC: 105 METER (COUNTER)	0.2		0.5	0.3	LTS: EXTERIOR (SITE)			20	2	24
25	20	1	REC: 105 METER (COUNTER)	0.2	0.5		0.3						26
27	20	1	REC: 105 METER TESTING	0.5		0.6	0.1	LTS: EXTERIOR (BLDG)			20	1	28
29	20	1	REC: 105 METER TESTING	0.5	1.3		0.8	LTS: INTERIOR			20	1	30
31	20	1	REC: 106 RR	0.2		1.3	1.1	LTS: INTERIOR			20	1	32
33	20	1	REC: 108 RR	0.2	0.3		0.1	CARBON MONOXIDE DETECT.			20	1	34
35	20G	1	REC: 109 EWC	0.5		0.5	0.0	SPARE			20	1	36
37	20	1	REC: 109 BREAK ROOM	0.9	0.9		0.0	SPARE			20	1	38
39	20G	1	REC: 109 MICROWAVE	1.2		1.2	0.0	SPARE			20	1	40
41	20	1	REC: 109 COUNTERTOP	0.2	0.2		0.0	SPACE					42
43	20	1	REC: 109 COUNTERTOP	0.2		0.2	0.0	SPACE					44
45	20G	1	REC: 109 REFRIGERATOR	1.0	1.0		0.0	SPACE					46
47	20	1	REC: 110 MECH ROOM	0.2		0.2	0.0	SPACE					48
49	20	1	110 EH-1	1.0	1.0		0.0	SPACE					50
51	20	1	105 OVERHEAD DOOR	1.0		1.0	0.0	SPACE					52
53	20	1	REC: 112 MDF	0.5	0.5		0.0	SPACE					54
55	20	1	REC: 112 RECORD ROOM	0.7		0.7	0.0	SPACE					56
57	20	1	REC: EXTERIOR	0.5	0.5		0.0	SPACE					58
59	20	1	REC: CORRIDOR	0.5		0.5	0.0	SPACE					60
PHASE TOTALS:				17.2		16.3		TOTAL:	33.46	KVA			

NOTES:
 1. PANEL TO BE SERVICE ENTRANCE RATED
 2. PANEL TO HAVE SURGE PROTECTION DEVICE

ABBREVIATIONS:
 G - GFCI BREAKER
 A - AFCI BREAKER
 L - LOCKOUT BREAKER
 S - SHUNT TRIP BREAKER
 C - COMBINATION GFCI/AFCI BREAKER
 MCB - MAIN CIRCUIT BREAKER
 MLO - MAIN LUG ONLY

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DRAWING NO.

E6

