

1 SITE PLAN  
SCALE: 1"=20'

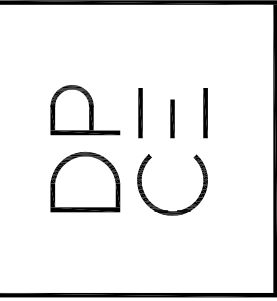
GENERAL SITE PLAN NOTES :

1. ALL UTILITY TIE-INS SHALL BE COORDINATED WITH THE CIVIL ENGINEERING PLANS AND SHALL BE COORDINATED FOR ENTRY INTO THE BUILDING AS REQUIRED.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO POURING FOUNDATIONS ANY LOCATIONS OR CONDUIT RUNS FOR AREA SECURITY MONITORS, DISTRESS CALL BUTTONS, MUSIC SPEAKERS, ETC.

SITE PLAN KEYED NOTES :

- ① POLE MOUNTED TRANSFORMER, AS PER LOCAL UTILITY COMPANY SPECIFICATIONS, WITH UNDERGROUND POWER TO BUILDING. REFER TO SHEET E3.1
- ② ELECTRICAL SERVICE ENTRANCE. REFER TO SHEET E3.1
- ③ 6" FIRE LINE TO SPRINKLER ROOM. COORDINATE WITH CIVIL PLANS.
- ④ 1" DOMESTIC WATER LINE. REFER TO CIVIL PLANS FOR CONTINUATION.
- ⑤ 4" WASTE LINE TO SEWER. REFER TO CIVIL PLANS FOR CONTINUATION.
- ⑥ 4" CONDENSATE WASTE LINE TO STORM. REFER TO CIVIL PLANS FOR CONTINUATION.
- ⑦ J-BOX & 30A/2P/120V/MFN-3R DISCONNECT SWITCH FOR BUILDING SIGN. FINAL CONNECTION BY ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATIONS WITH SIGN INSTALLER. RUN CIRCUIT THRU PHOTOCELL.
- ⑧ J-BOX & 30A/2P/120V/MFN-3R DISCONNECT SWITCH FOR MOTORIZED GATE. COORDINATE LOCATION W/ INSTALLER.
- ⑨ PROVIDE ONE (1) 1" CONDUIT FOR UNDERGROUND DATA & 120V POWER FOR ENTRY KEYPADS. COORDINATE LOCATION ON-SITE.
- ⑩ RUN ONE (1) EMPTY 2" CONDUIT W/ PULL STRING UNDERGROUND BETWEEN GATE OPERATOR AND BUILDING, AND ONE (1) 1" EMPTY CONDUIT W/ PULLSTRING BETWEEN GATE CONTROLLER AND ASSOCIATED KEYPAD(S).
- ⑪ RUN CIRCUIT SWITCHES THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.

1301 Solana Blvd.  
Bldg. 1 Suite 1420  
Westlake, TX 78262  
+1 817 410 2856  
WWW.DONPENN.COM



# LAKEWOOD STORAGE

NE PORT DRIVE  
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

DRAWN : DJP

REVISIONS:

## SITE PLAN

SHEET NO.

# MEP1





# LAKEWOOD STORAGE

NE PORT DRIVE  
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE: 12.16.2021

DRAWN: DJP

REVISIONS:

## OFFICE LIGHTING

SHEET NO.

# E 1.4

### LIGHTING CONTROL NOTES:

AUTOMATIC TIME SWITCH CONTROLS SHALL BE INSTALLED TO CONTROL LIGHTING IN ALL AREAS OF THE OFFICE AREA.

1. AUTOMATIC TIME SWITCHES SHALL HAVE A MINIMUM 7 DAY CLOCK, AND
2. BE CAPABLE OF BEING SET FOR 7 DIFFERENT DAY TYPES PER WEEK, AND
3. INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE, WHICH TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS AND THEN RESUMES NORMALLY SCHEDULED OPERATIONS.
4. AUTOMATIC TIME SWITCHES SHALL ALSO HAVE PROGRAM BACK-UP CAPABILITIES, WHICH PREVENT THE LOSS OF PROGRAM AND TIME SETTINGS FOR AT LEAST 10 HOURS, IF POWER IS INTERRUPTED.

INCLUDE AN OVERRIDE SWITCH THAT COMPLIES WITH THE FOLLOWING:

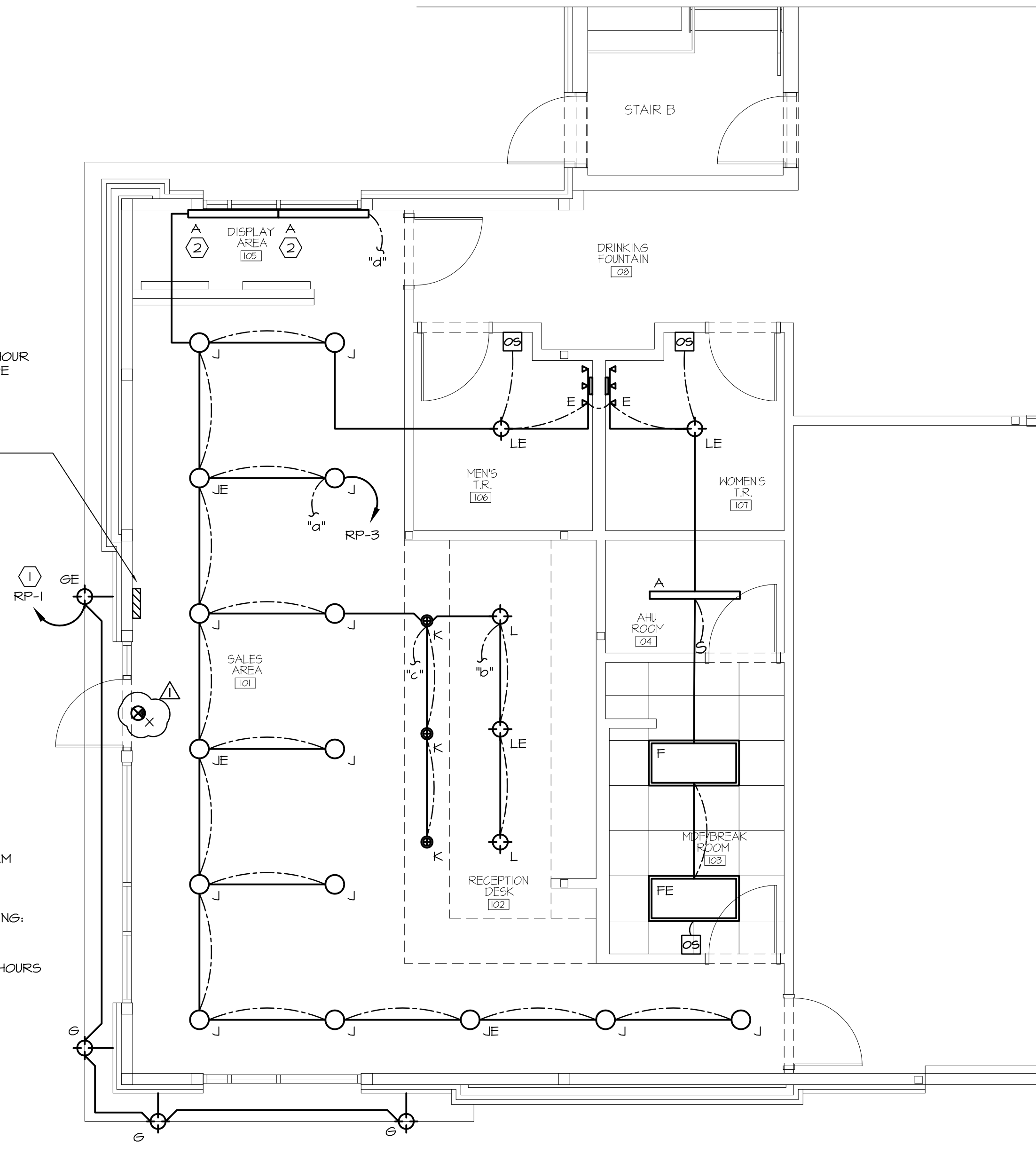
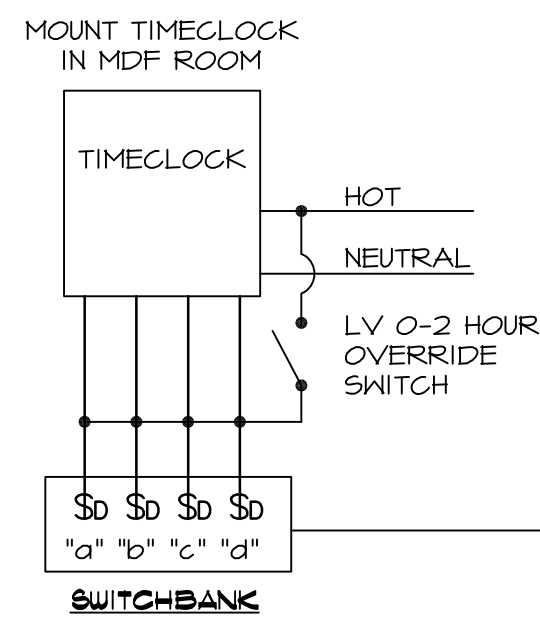
1. THE OVERRIDE SWITCH SHALL BE A MANUAL CONTROL.
2. THE OVERRIDE SWITCH, WHEN INITIATED, SHALL PERMIT THE CONTROLLED LIGHTING TO REMAIN ON FOR NOT MORE THAN 2 HOURS.

### GENERAL LIGHTING NOTES:

1. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

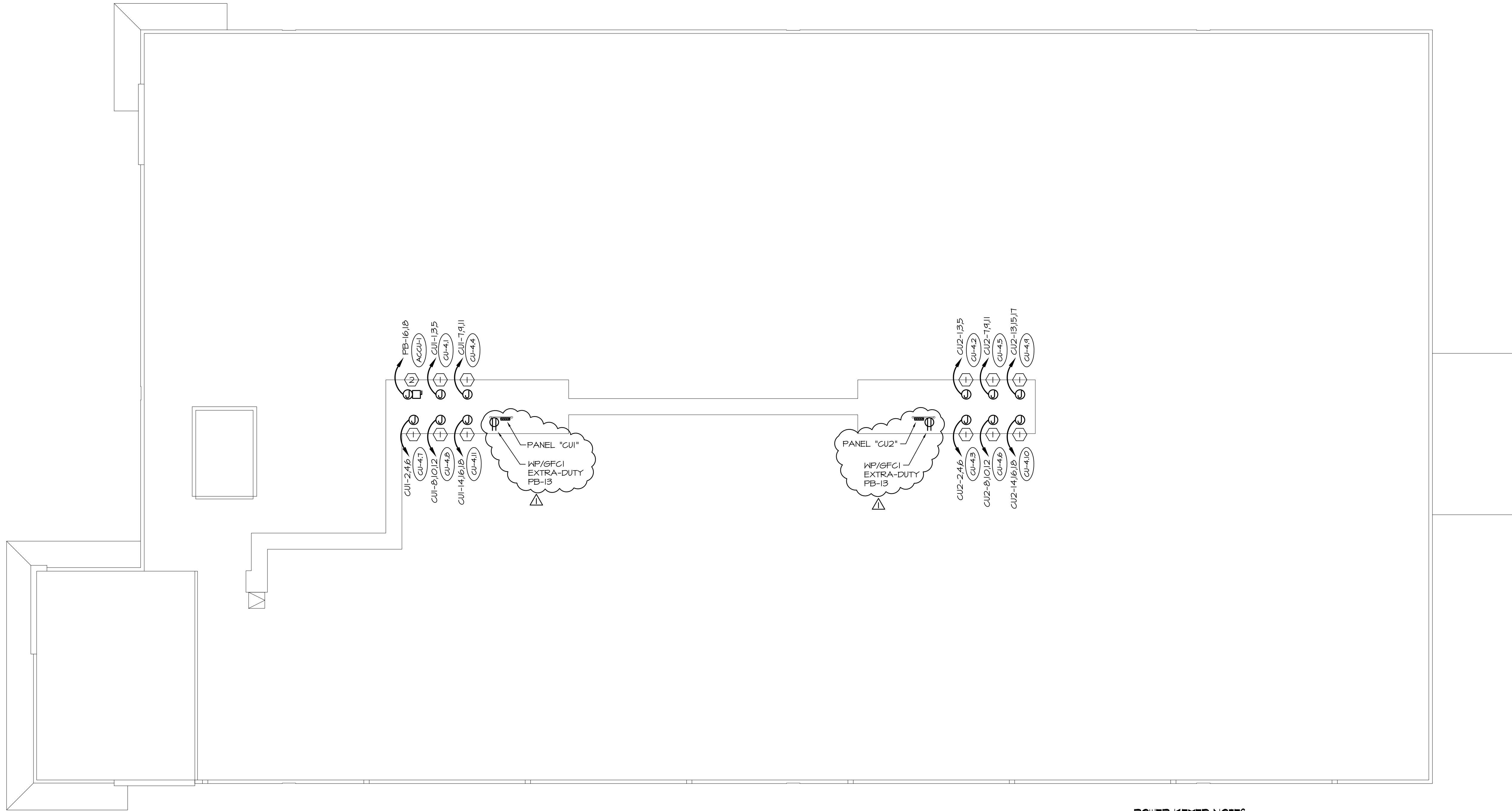
### KEYED LIGHTING NOTES:

- ① RUN CIRCUIT SWITCHES THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.
- ② LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURES ABOVE WINDOWS, BELOW CEILING. COORDINATE WITH ARCHITECTURAL PLANS.



OFFICE  
LIGHTING PLAN  
SCALE: 1/4"=1'-0"





1 ROOF - POWER PLAN  
SCALE: 3/32"=1'-0"

- POWER KEYED NOTES:**
- ① J-BOX FOR CONNECTION TO CONDENSING UNIT. DISCONNECT MEANS IN PANELBOARD WITHIN 50 FEET.
  - ② J-BOX # 30A/2P/208V/FUSED 25A/N-3R DISCONNECT SWITCH FOR CONDENSING UNIT.

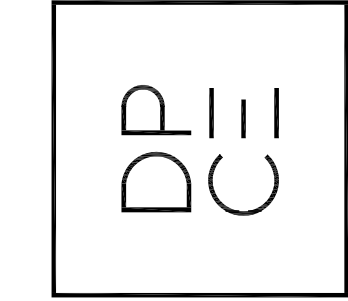
**LAKEWOOD  
STORAGE**  
NE PORT DRIVE  
LEE'S SUMMIT, MISSOURI 64064

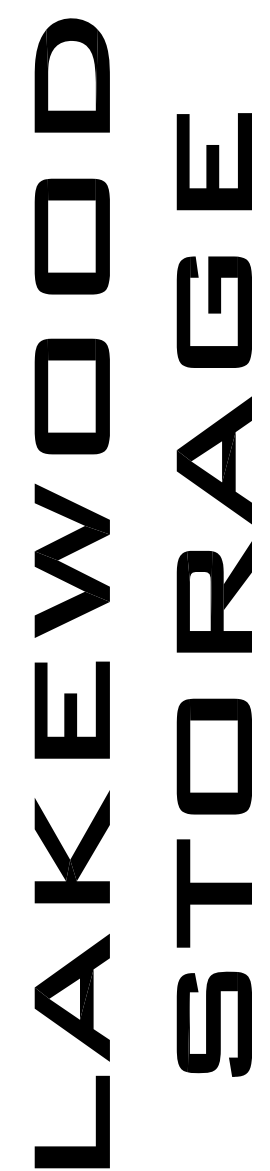
PROJECT NO. 2035  
DATE : 12.16.2021  
DRAWN : DJP  
REVISIONS:

**ROOF  
POWER**  
SHEET NO.

**E 2.5**

1301 Solana Blvd.  
Bldg. 1, Suite 1420  
Westlake, TX 76262  
+1 817 410 2856  
WWW.DONPENN.COM





PROJECT NO. 2035

DATE : 12.16.2021

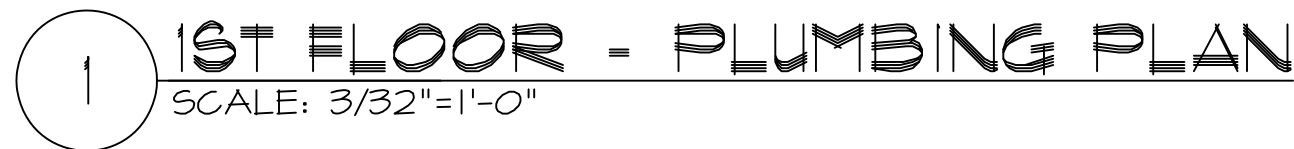
DRAWN : DJP

REVISIONS:

## 1ST FLOOR PLUMBING

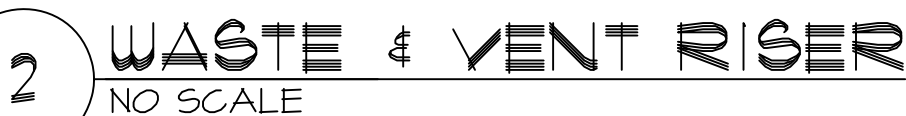
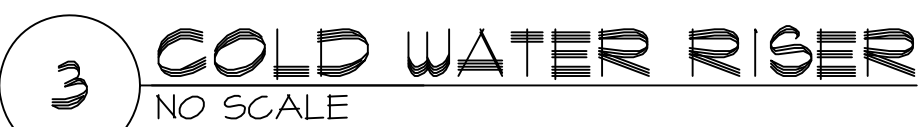
SHEET NO.

# P 1.1



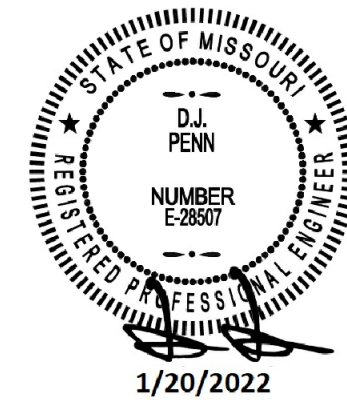
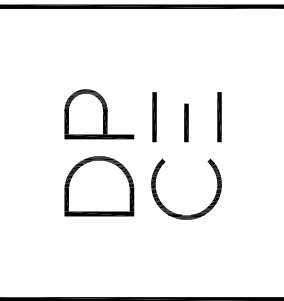
- PLUMBING KEYED NOTES:

- ① HUB DRAIN FOR CONDENSATE DRAIN LINES. MAINTAIN HIGH IN CORRIDOR. MAINTAIN AIR GAP.
- ② RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
- ③ RUN 3/4" CONDENSATE LINE FROM CONDENSATE PUMP TO HUB DRAIN. EQUAL TO DAYTON #3HGE6; 82 GPH @ 5' HEAD, 51 GPH @ 15' HEAD
- ④ SUMP PUMP FOR ELEVATOR SHAFT. RUN 2" DRAIN LINE TO 4" HUB DRAIN. REFER TO DETAIL 2/P2.1.
- ⑤ 3/4" C.W. LINE UP TO 2ND FLOOR.
- ⑥ XX" GAS LINE UP TO 2ND FLOOR.



1. CONTROLS FOR CIRCULATING HOT WATER SYSTEM  
PUMPS SHALL START THE PUMP BASED ON THE  
IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN  
OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY  
TURN OFF THE PUMP WHEN THE WATER IN THE  
CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE  
AND WHEN THERE IS NO DEMAND FOR HOT WATER.

- 1 PROVIDE & INSTALL 3/4" ANTI-SCALDING THERMOSTATIC MIXING VALVE ON HOT WATER LINE FEEDING PUBLIC RESTROOM LAVATORIES. SET TO 110° MAX. MUST CONFORM TO ASSE 1070.
- 2 RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.



# LAKEWOOD STORAGE

NE PORT DRIVE  
LEE'S SUMMIT, MISSOURI 64064

REVISIONS:

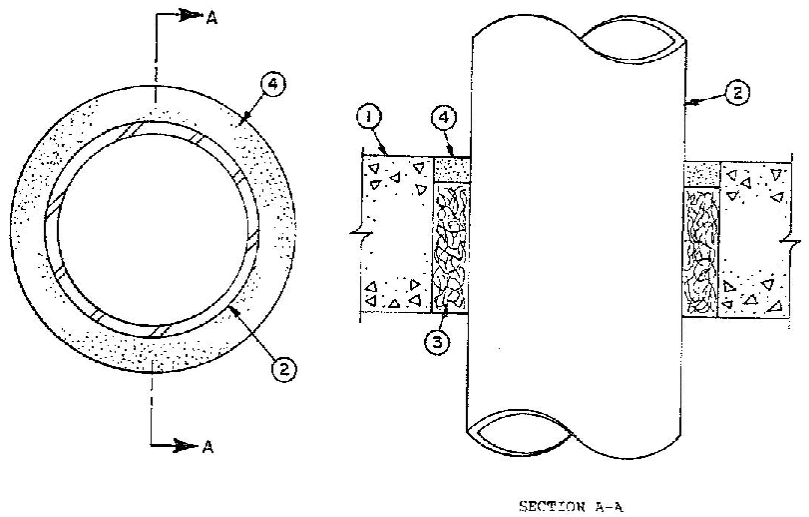
## OFFICE PLUMBING

SHEET NO.

## P 1.4



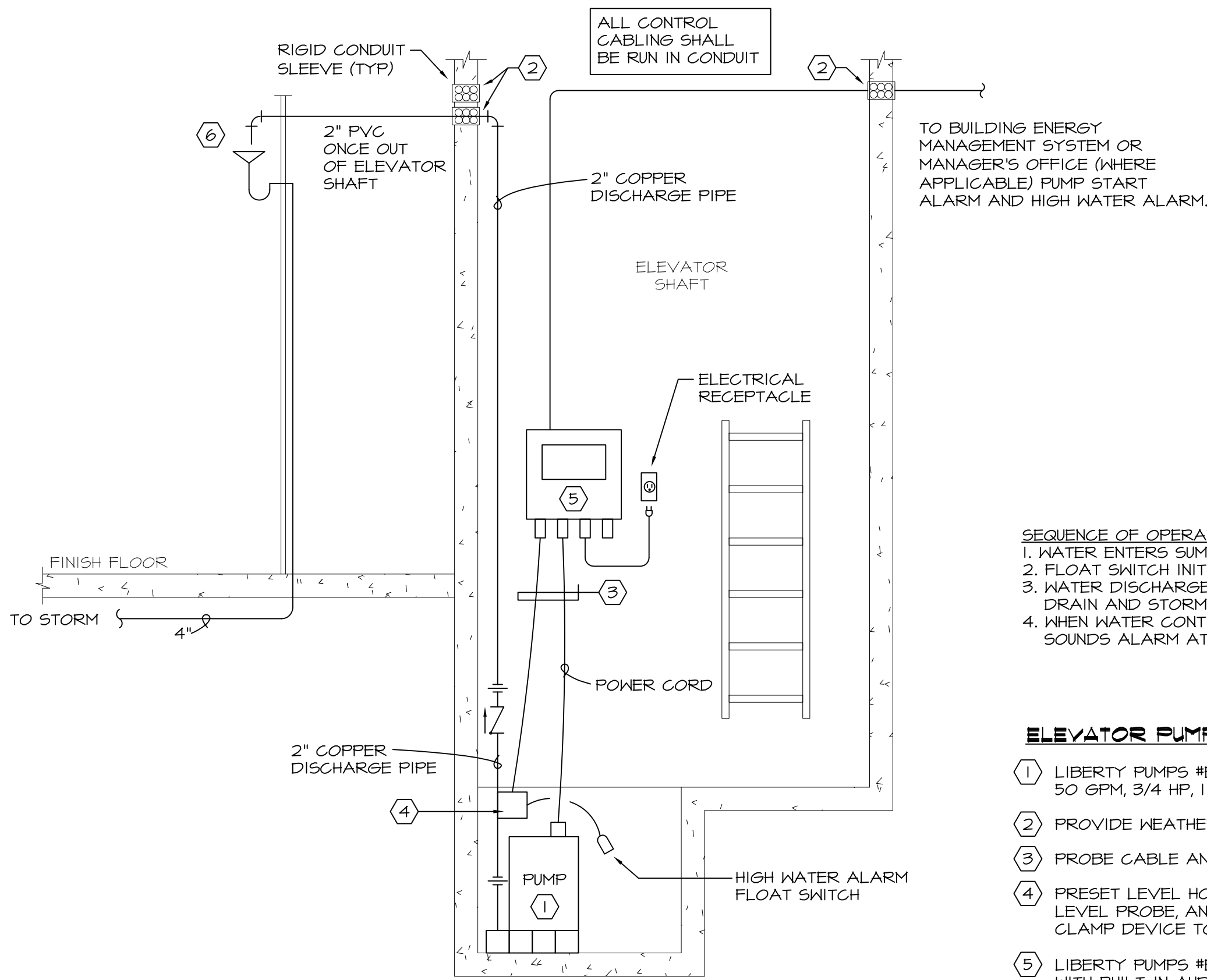
FIRE RESISTANCE DIRECTORY (BXRH)  
THROUGH-PENETRATION FIRESTOP SYSTEMS (XHEZ)—Continued  
System No. C-AJ-1014  
(Formerly System No. 133)  
F Rating—2 Hr  
T Rating—0 Hr  
L Rating At Ambient—Less Than 1 CFM/sq ft (See Item 4)  
L Rating At 400 F—Less Than 1 CFM/sq ft (See Item 4)



- Floor or Wall Assembly**—Min 3-1/4 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks\***. Max diam of circular opening is 6 in. See **Concrete Block (CAZT)** category in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants**—One metallic pipe or conduit to be centered within the firestop system. A non annular space of 3/4 in. is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:  
A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.  
B. **Conduit**—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
- Packing Material**—Min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as require to accommodate the required thickness of fill material. Min thickness of packing material in floors and walls to be 2-3/4 in. and 2-1/4 in., respectively.
- Fill, Void or Cavity Material\*—Sealant**—Min 1/2 in. thickness of fill material applied within annulus, flush with top surface of floor or with both surfaces of wall. As an alternate, the permanent forming material (Item 3) may be omitted if the fill material thickness is increased to a min 1-1/2 in.  
**Minnesota Mining & Mfg. Co.**—Types FB-2000, FB-2000+, FB-2003 (floors only). (Note: L Ratings apply only when FB-2000+ is used.)

\*Bearing the UL Classification Marking

### 3 UL FIRE PENETRATION DETAIL NOT TO SCALE



### 2 ELEVATOR SUMP PUMP SYSTEM DETAIL NOT TO SCALE

### SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING PLAN

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED, ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

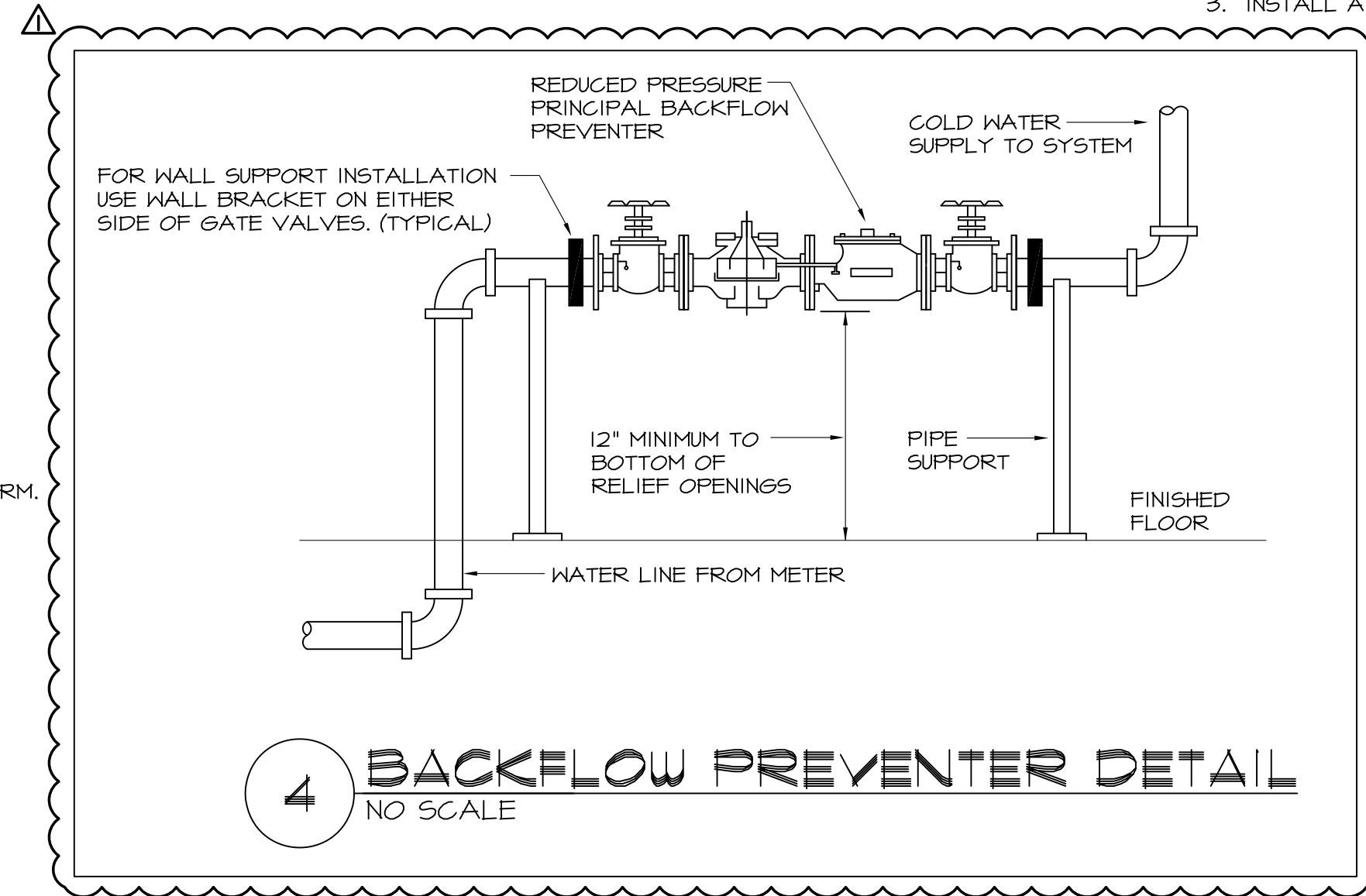
- ENSURE ALL WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.
- ENSURE SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

### PIPING MATERIAL SCHEDULE

TYPE	MATERIALS
WATER LINES	COPPER TYPE "L" OR CROSS-LINKED POLYETHYLENE (PEX) W/ 1" THICK ARMAFLEX OR EQUIVALENT INSULATION
WASTE LINE	ABS SCHEDULE 40 OR CAST IRON
VENT LINE	ABS SCHEDULE 40 OR COPPER PIPING
CONDENSATE	PVC SCHEDULE 40

### PIPING LEGEND

SYMBOL	TYPE
— — — — —	COLD WATER
— · — · —	HOT WATER
— — — — —	WASTE LINE
- - - - -	VENT LINE



- SEQUENCE OF OPERATION:
- WATER ENTERS SUMP.
  - FLOAT SWITCH INITIATES SUMP, PUMP, AND ALARM AT MANAGER'S OFFICE
  - WATER DISCHARGES THROUGH NORMALLY OPEN SOLENOID VALVE (A) TO HUB DRAIN AND STORM.
  - WHEN WATER CONTINUES TO RISE, HIGH WATER ALARM FLOAT SWITCH SOUNDS ALARM AT MANAGER'S OFFICE.

#### ELEVATOR PUMP KEYED NOTES:

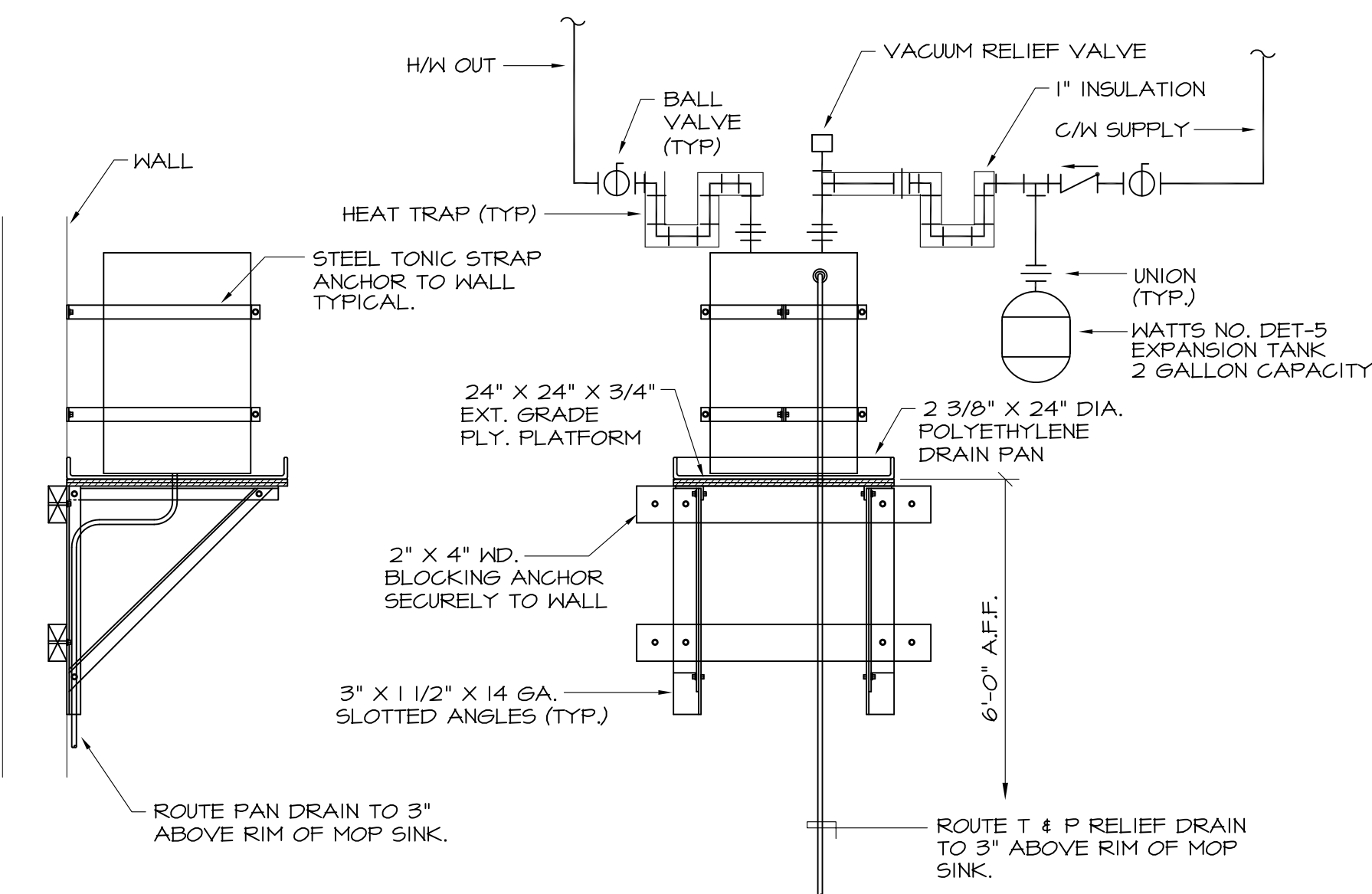
- LIBERTY PUMPS #ELV240, SUBMERSIBLE PUMP SYSTEM 50 GPM, 3/4 HP, 115VOLT, 2" DISCHARGE CONNECTION
- PROVIDE WEATHERPROOF SEAL EQUAL TO LINK-SEAL.
- PROBE CABLE AND POWER CABLE.
- PRESET LEVEL HOLDER WITH HIGH LIQUID ALARM FLOAT, HIGH LEVEL PROBE, AND PUMP "ON" & PUMP "OFF" PROBE. CLAMP DEVICE TO PUMP DISCHARGE PIPING.
- LIBERTY PUMPS #ELV-240 OILTECTOR SYSTEM, 115V/1Ø, CONTROL SYSTEM WITH BUILT-IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES RUN DUE TO HIGH LIQUID ALARM. PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACTOR FOR A REMOTE ALARM LOCATION.
- HUB DRAIN N CORRIDOR. MAINTAIN AIR GAP.

### PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	CW	HW	W	V	REMARKS
WC	WATER CLOSET (HANDICAP)	1/2"	-	4"	2"	a. KOHLER #K-250TI; ELONGAED WATER CLOSET; WHITE CHINA; 1.28 GAL. PER FLUSH. b. MCQUIRE #2166LK 1/2" ANGLE SUPPLIES. c. CHURCH #245C WHITE, OPEN FRONT SEAT.
LAV	LAVATORY (HANDICAP)	1/2"	1/2"	2"	1-1/2"	a. KOHLER #K-2030; WALL MOUNTED; WHITE CHINA; 20"x 18"; Ø" CENTERS b. CHICAGO FAUCET #404-VE2805-3ITABCP, 0.5 GPM; 4" WRIST BLADES c. CHROME PLATED GRID STRAINER. d. IT 6A, 1 1/2" P-TRAP. e. 1/2"x 3/8" STOPS & SUPPLIES; CHROME PLATED. f. WADE SERIES 520 CARRIER. g. TRUEBRO #102 P-TRAP AND SUPPLY PIPING INSULATION KIT.
FD	FLOOR DRAIN	1/2"	-	3"	2"	a. WADE # 1100STD 6" DIA. CAST IRON FLOOR DRAIN PROVIDE 1/2" TRAP PRIMER
FS	FLOOR SINK	1/2"	-	3"	2"	a. WADE # 8113-EF6; ØxØx6 CAST IRON FLOOR SINK W/ 6"Ø FUNNEL, ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP. PROVIDE 1/2" TRAP PRIMER.
DF	WATER COOLER	1/2"	-	2"	1-1/2"	a. ELKAY #EZ5TL8C; WALL MOUNT, BARRIER-FREE ACCESS, ADA COMPLIANT
MOP	MOP SINK	1/2"	1/2"	3"	1-1/2"	a. WILLIAMS #SBC-1800 "HILOW" 24"x24"x12" W/ STAINLESS STEEL CAP b. WILLIAMS #T-10-VB, SINK FITTING W/ VACUUM BREAKER, 3/4" HOSE TREADED OUTLET; PAIL HOOK W/ WALL SUPPORT c. PROVIDE STAINLESS STEEL BACK PANEL.
SK	BREAK SINK	1/2"	1/2"	2"	1-1/2"	a. ELKAY #LRADIT2055; SINGLE BOWL; 18 GAUGE; DROP-IN 14"x14" BOWL b. DELTA FAUCET #28716LF, LEVER HANDLES, 1.8 GPM; 5" SWING SPOUT. c. 3" PERFORATED GRID STRAINER; ELKAY #LK-B. d. 1/2"x3/8" STOPS AND SUPPLIES; CHROME PLATED. ELKAY #2165 LK.
HD	HUB DRAIN	-	-	3"	1-1/2"	a. PROVIDE 3" HUB DRAIN HIGH IN CORRIDOR.
HD4	HUB DRAIN	-	-	4"	2"	a. PROVIDE 4" HUB DRAIN HIGH IN CORRIDOR.
TD	TRENCH DRAIN	-	-	4"	2"	---
HB	HOSE BIBB	3/4"	-	-	-	a. ZURN #1300; ENCASED, ANTI-SIPHON W/ NON-FREEZE TYPE INTEGRAL BACKFLOW PREVENTER
CO	CLEANOUT	-	-	4"	-	a. WADE # 6000, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH TEE-KYE FITTINGS.
DCO	HEAVY-DUTY DOUBLE CLEANOUT SAMPLE PORT	-	-	4"	-	a. WADE # 6000Z, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH SINGLE RISER
TMV	THERMOSTATIC MIXING VALVE	3/4"	3/4"	-	-	a. SYMMONS "MAXLINE" #T-230-CK; LEAD FREE, TAMPER RESISTANT

#### NOTES

- ALL FIXTURES SHALL HAVE AN INDIVIDUAL SHUTOFF VALVE.
- ALL FIXTURES SHALL BE PROVIDED W/ A SHOKTROL.
- INSTALL A METER AND/ OR BACKFLOW PREVENTOR AS PER LOCAL CODE.



### 1 WATER HEATER-1 NO SCALE

WATER HEATER SCHEDULE					
MARK	RECOVERY GPH	STORAGE GALLONS	LINING	MAXIMUM INPUT BTUH	REMARKS
WH-1	10	60	20	GLASS 1.5 KW @ 120V/1Ø	STATE #PCE-20-10MSA

1301 Solana Blvd.  
Bldg. 1 Suite 1420  
Westlake, TX 76282  
+1 817 410 2856  
WWW.DONPENN.COM

DP  
ENR



LAKEWOOD  
STORAGE

NE PORT DRIVE  
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

DRAWN : DJP

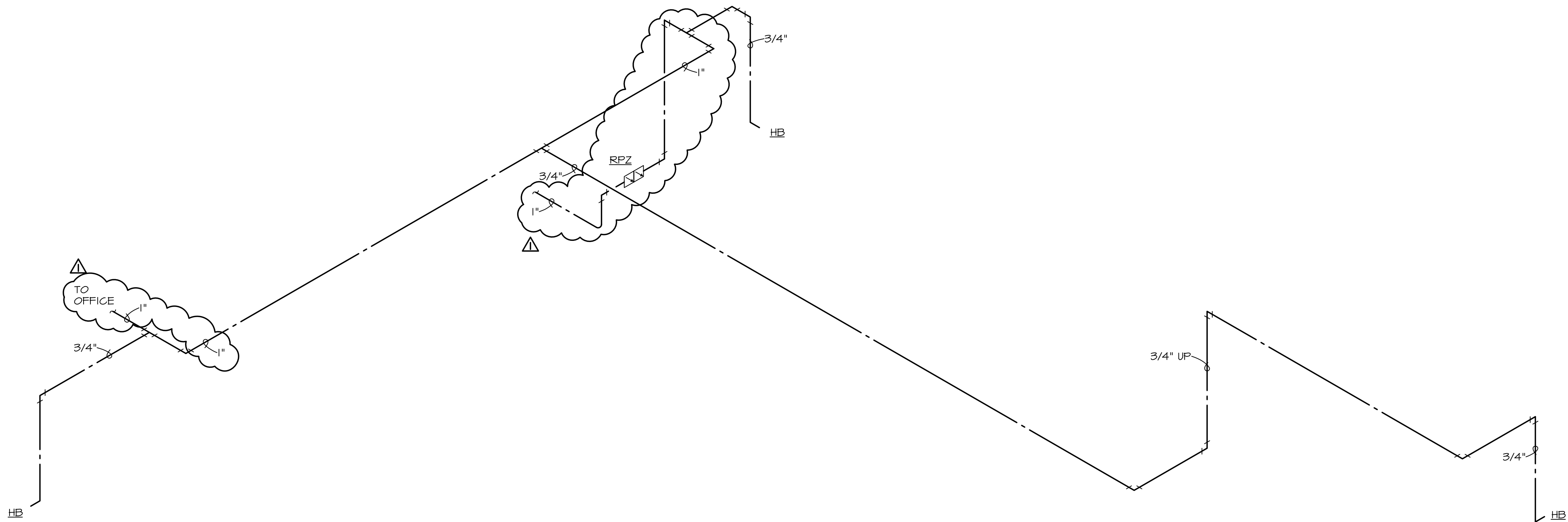
REVISIONS:

PLUMBING  
SCHEDULES

SHEET NO.

P2.1





1 COLD WATER RISER  
NO SCALE

WATER METER FIXTURE CALCULATIONS

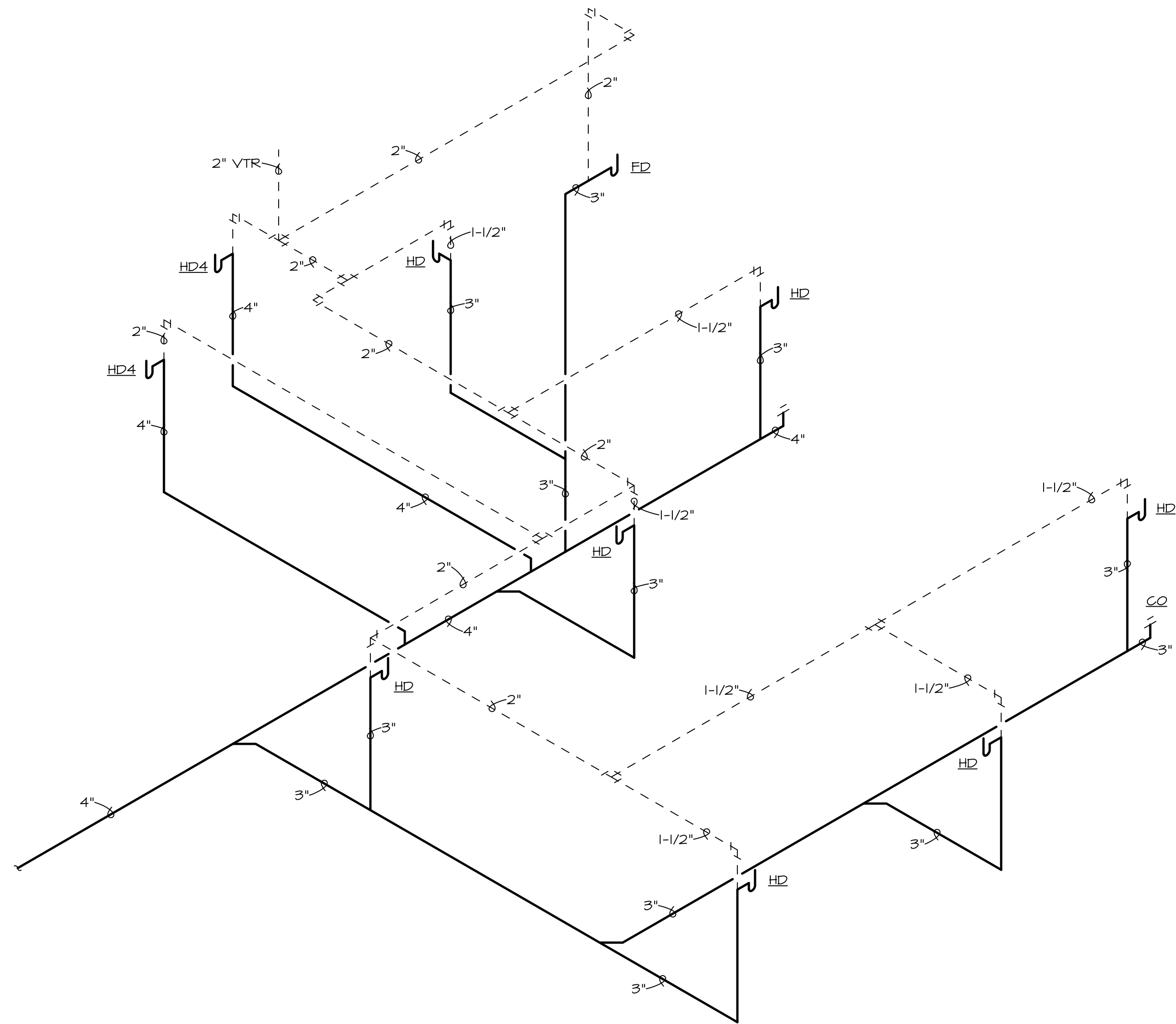
FIXTURE	F.U. FIXTURE	# OF FIXTURES	TOTAL F.U.
WATER CLOSET	5.0	2	10.0
LAVATORY	2.0	2	4.0
DRINKING FOUNTAIN	0.25	1	0.25
BREAK SINK	1.4	1	1.4
MOP SINK	3.0	1	3.0

TOTAL WATER FIXTURE UNITS = 18.65 F.U.  
BASED ON PREDOMINANTLY FLUSH TANKS  
THE WATER DEMAND ESTIMATE = 13.0 GPM  
WATER SIZE REQUIRED = 1"

DRAINAGE FIXTURE CALCULATIONS

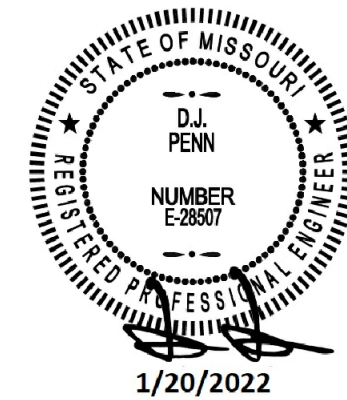
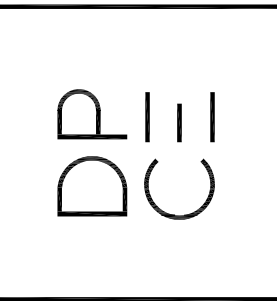
FIXTURE	F.U. FIXTURE	# OF FIXTURES	TOTAL F.U.
WATER CLOSET	4.0	2	8.0
LAVATORY	1.0	2	2.0
DRINKING FOUNTAIN	0.5	1	0.5
BREAK SINK	2.0	1	2.0
MOP SINK	3.0	1	3.0
FLOOR DRAIN	2.0	3	6.0
FLOOR SINK	2.0	1	2.0
HUB DRAIN	2.0	1	2.0

TOTAL WASTE FIXTURE UNITS = 41.5 F.U.  
RECOMMENDED PIPE SIZE REQUIRED @ 0.125/FT SLOPE = 4"



2 WASTE & VENT RISER  
NO SCALE

1301 Solana Blvd.  
Bldg. 1 Suite 1420  
Westlake, TX 76262  
+1 817 410 2856  
WWW.DONPENN.COM



LAKEWOOD  
STORAGE

NE PORT DRIVE  
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

DRAWN : DJP

REVISIONS:

PLUMBING  
RISERS

SHEET NO.

P2.2