

**UTILITY NOTES:**

- 1 FOLLOW ALL NATIONAL, STATE AND LOCAL CODES FOR UTILITY INSTALLATION. EXISTING UTILITY LOCATIONS ARE REPRESENTATIVE IN NATURE ONLY. THIS SHEET IS INTENDED TO ILLUSTRATE NEW WORK ONLY. EXISTING WORK IS SHOWN IN LIGHT LINEWEIGHT.
- 2 MAINTAIN MINIMUM 10'-0" WORKING CLEARANCE FROM OVERHEAD POWER LINES TO ANY SIGNS OR STRUCTURES.
- 3 MAINTAIN MINIMUM SEPARATION BETWEEN SEWER AND WATER LINES OF 5'-0". MAINTAIN MINIMUM SEPARATION BETWEEN GAS AND ELECTRIC LINES OF 3'-0". MAINTAIN REQUIRED CLEARANCES BETWEEN ALL OTHER UTILITIES.
- 4 ELECTRICAL METER IS EXISTING.
- 5 INSTALL NEW ELECTRICAL SERVICE TO NEW CONCESSIONS #2 BLDG FROM EXISTING SWITCHBOARD "MSWB1". REFER TO SHEET EL-3 FOR WIRE SIZING.
- 6 CONTACT WITH CITY OF SAN ANGELO IS DAVID KNAPP, 325-657-4279.
- 7 PROVIDE SUBMITTAL FOR PULLBOXES FOR APPROVAL. PULLBOXES SHALL BE 36"x36"x36" DEEP WITH RATED COVER FOR TRAFFIC WHERE INSTALLED. PULLBOX SHALL BE PERFECTLY FLUSH WITH SURROUNDING GRADE.
- 8 ALL ELECTRICAL SECONDARY & FEEDERS TO BUILDINGS TO BE INSTALLED AT 36" DEEP MINIMUM.
- 9 APPLICABLE CODES:  
2015 INTERNATIONAL BUILDING CODE  
2008 NATIONAL ELECTRICAL CODE  
2009 INTERNATIONAL PLUMBING CODE  
2009 INTERNATIONAL MECHANICAL CODE  
2015 INTERNATIONAL FIRE CODE  
2009 INTERNATIONAL ENERGY CONSERVATION CODE  
CITY OF SAN ANGELO ORDINANCES
- 10 STUB OUT (4) SPARE 2" CONDUITS FROM EACH CONCESSION BUILDING ELECTRICAL ROOM TO BEYOND WALK PATH OR CONCRETE.
- 11 RUN ALL CONDUIT/LINES UNDERGROUND AS SHOWN ON PLANS. DO NOT CUT ACROSS FIELDS.
- 12 CONNECT NEW 4" BUILDING SEWER TO EXISTING MANHOLE. MANHOLE RIM IS 1806.46; MANHOLE INVERT ELEVATION IS 1799.28.
- 13 CONTACT JOE MANGREM WITH THE CITY OF SAN ANGELO, 325-657-4547, FOR CHARGES OR FEES FOR WATER MAIN TAPS & METER. PEAK DOMESTIC WATER DEMAND IS 49 GPM.

EXISTING WORK IS SHOWN IN LIGHT LINEWEIGHT. INFORMATION PROVIDED TO ASSIST WITH BIDDING AND EXECUTION OF PROJECT.

**SYMBOL LEGEND**

EMPTY CONDUIT(S)	-----
UNDERGROUND ELEC. SECONDARY	UES
TELEPHONE	T
BRANCH CIRCUITS TO FIXTURES	---
FIELD LIGHT POLE	⊕
WALK PATH FIXTURE	⊙ WP
STREET LIGHT	⊕ FA
PARKING LOT LIGHT (DOUBLE)	⊕ GB
PADMOUNT TRANSFORMER, SWITCHGEAR	⊕
ELECTRICAL DISCONNECT SWITCH	⊕
ELECTRICAL METER	⊕
POWER POLE (SIZE)	⊕
CIRCUIT RUN TO PANEL	⊕
CHAIN LINK FENCE	× × ×

**SITE UTILITY PLAN - COMPLEX #2**  
SCALE: 1" = 50'-0"



MEP PROJECT #1618  
**Power Systems**

P.O. Box 2863  
San Angelo, Texas 76902  
325-659-2235  
FIRM NO. P-0257

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**CITY OF SAN ANGELO**  
**RIO CONCHO SPORTS COMPLEX**  
San Angelo, Texas

**kinney . franke**  
ARCHITECTS AIA  
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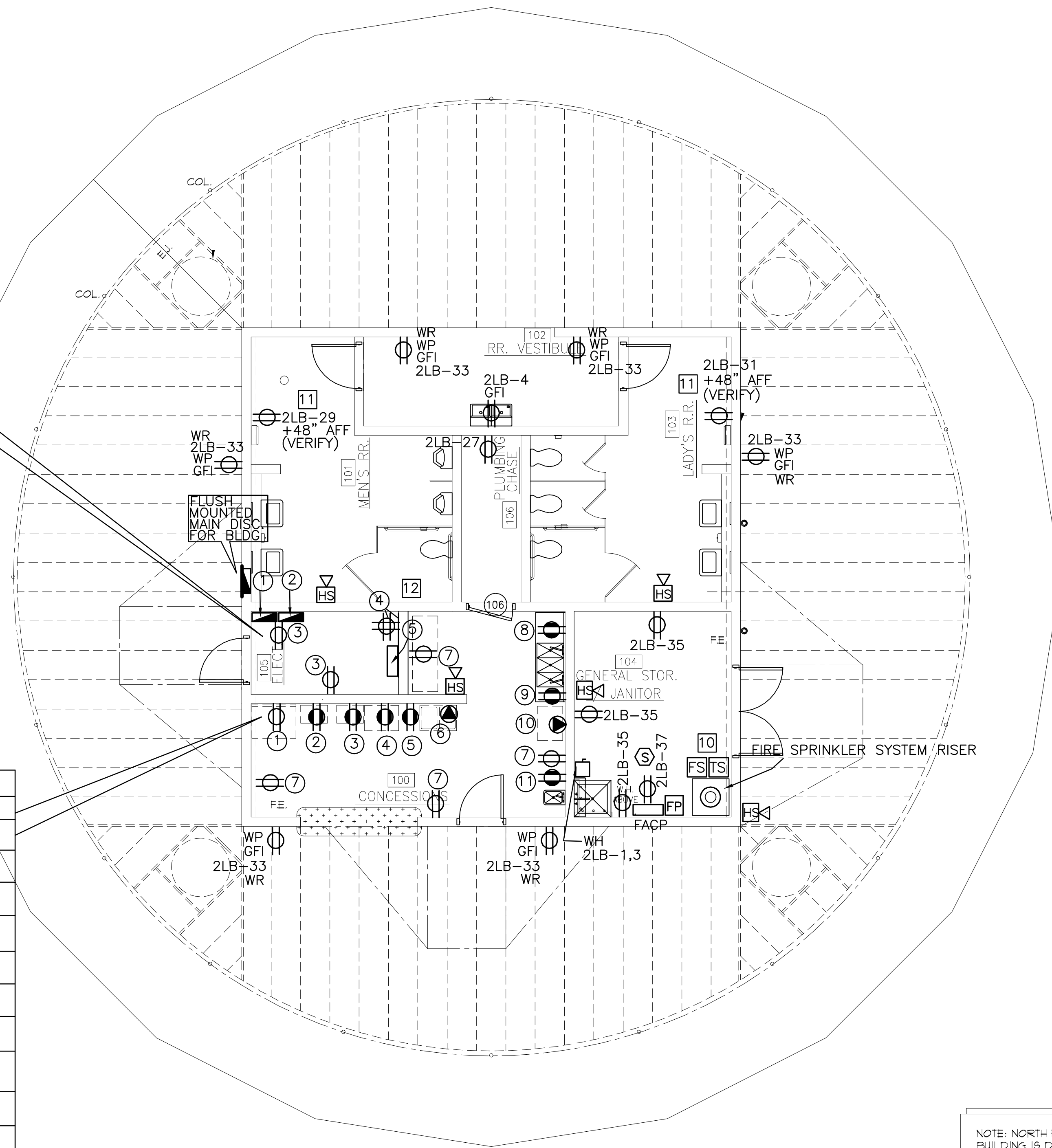
Project No. 250-02-0516  
Date AUGUST 30, 2016

Sheet Number  
**MPE-1**  
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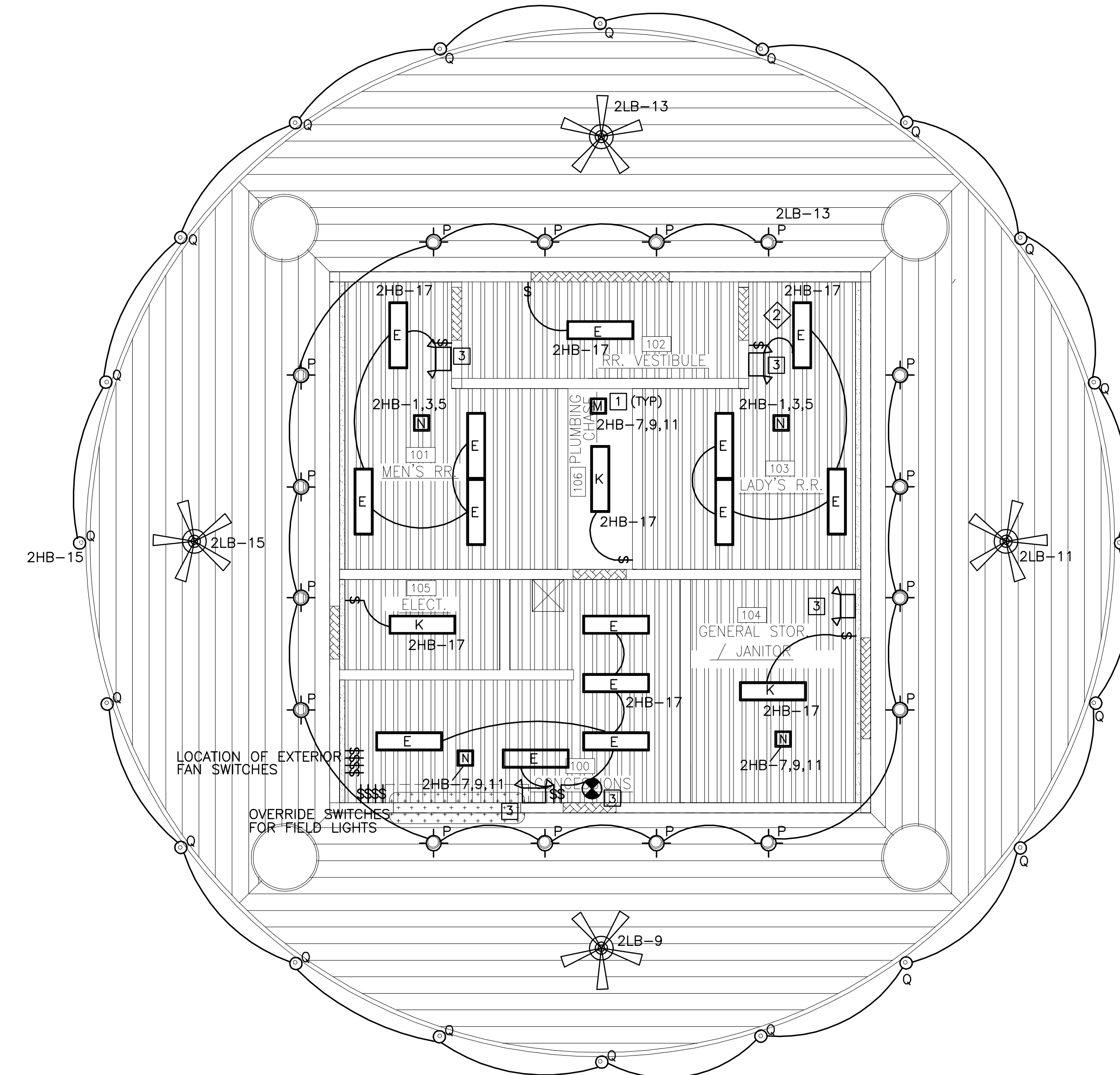
SYM	ITEM	CKT
1	PANEL "2HB"	
2	PANEL "2LB"	
3	ROOM 105 RECEIPTS	2LB-27
4	TELEPHONE BOARD	2LB-39
5	COMMUNICATOR	

SYM	ITEM	CKT
1	OWNERS REFRIG	GFI 2LB-41
2	SHELVING	GFI 2LB-20
3	MICROWAVE	GFI 2LB-24
4	POPCORN	GFI 2LB-26
5	COUNTER RECEIPTS	GFI 2LB-18
6	(FUTURE) GRIDDLE	2LB-40,42
7	ROOM 100 RECEIPTS	GFI 2LB-34
8	COUNTER RECEIPTS	GFI 2LB-36
9	COUNTER RECEIPTS	GFI 2LB-32
10	ICE MAKER	2LB-5,7
11	COUNTER RECEIPTS	GFI 2LB-30



**ELECTRICAL PLAN**

NOTE: NORTH FOR THIS BUILDING IS DOWN.



**LIGHTING PLAN**

**GENERAL ELECTRICAL NOTES:**

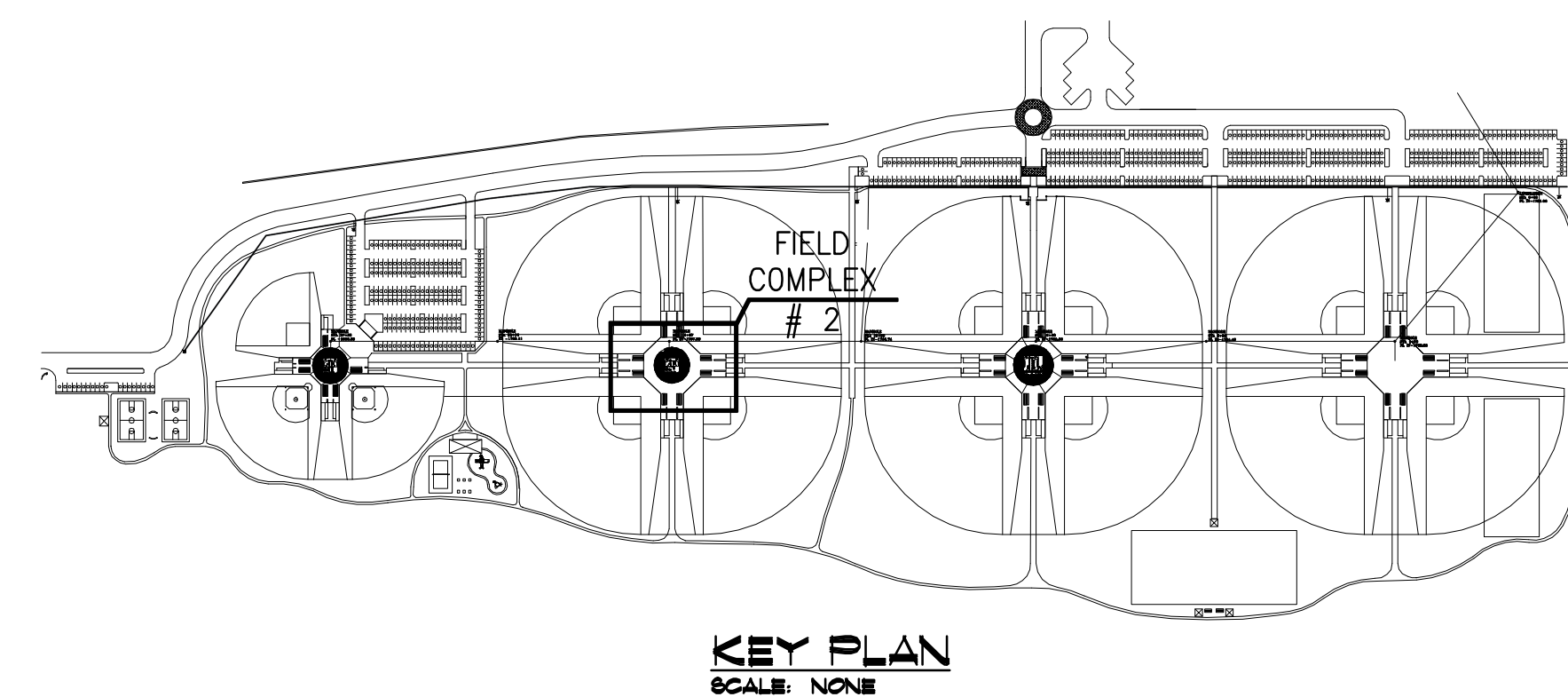
- REFER TO SHEET EL-3 FOR SERVICE ENTRANCE AND RISER DIAGRAMS AND PANEL SCHEDULES.
- VERIFY MOUNTING HEIGHT OF RECEPTACLES AND SWITCHES WITH OWNER. IN ALL CASES INSURE COMPLIANCE WITH ADA MOUNTING HEIGHT REQMTS OF 48" MAX FOR SWITCHES; 15" MIN FOR RECEPTACLES AND JACKS; 48" MAX FOR THERMOSTATS.
- PROVIDE STAINLESS STEEL COVERPLATES FOR ALL DEVICES.
- ALL EXTERIOR RECEPTACLES TO BE GFI, WEATHERPROOF.
- MAIN DISCONNECT SWITCHES ARE EXISTING. CONTRACTOR IS RESPONSIBLE FOR DITCHING & CONDUIT FOR ELECTRICAL SERVICE TO CONCESSIONS BUILDING #2. REFER TO SHEET MPE-1.
- PROVIDE WORKING CLEARANCE FOR ALL ELECTRICAL EQUIPMENT PER CODE.
- REFER TO SHEET MPE-1 FOR SITE NOTES AND DETAILS.
- PROVIDE DISCONNECTS PER NEC FOR ANY PERMANENTLY CONNECTED EQUIPMENT WHICH DOES NOT HAVE INTEGRAL DISCONNECTS.
- ALL CIRCUITS SHALL BE #12 THHN COPPER IN 3/4" CONDUIT MINIMUM UNLESS OTHERWISE NOTED.
- COMPLEX #2 IS TO BE SPRINKLERED. PROVIDE FLOW & TAMPER SWITCH AT FIRE SYSTEM AT FIRE SYSTEM RISER. INTERFACE TAMPER & FLOW SWITCHES WITH CONTROL PANEL EQUAL TO EST FS 1004. PROVIDE COMMUNICATOR & COORDINATE WITH OWNER TO PROVIDE TWO TELEPHONE LINES TO NOTIFY APPROVED MONITORING SERVICE. OWNER IS RESPONSIBLE TO FURNISH PHONE LINES. INSTALL SMOKE DETECTOR AT CEILING ABOVE FACP.
- PROVIDE SINGLE RECEPTACLE FOR HAND DRYERS OR HARDWIRE AS REQUIRED.
- REFER TO ROOF PLANS FOR LOCATION OF STEP DOWN TRANSFORMER.

**GENERAL LIGHTING NOTES:**

- LIGHT SWITCHES AND COVER PLATES TO BE STAINLESS STEEL.
- PROVIDE SWITCHING TO MEET THE REQUIREMENTS OF THE 2009 IECC.
- ALL FIXTURES SHALL BE 277 VOLT UNLESS OTHERWISE NOTED. SEE SHEET E-1 FOR RECOMMENDED MANUFACTURER AND CATALOG NUMBERS OF FIXTURES.
- ALL FLUORESCENT LIGHTING FIXTURES SHALL BE PROVIDED WITH T8 LAMPS WHERE POSSIBLE UNLESS TS NOTED OTHERWISE.
- CONTRACTOR SHALL CHECK AND VERIFY FIXTURE QUANTITY AND MAKE PROPER ADJUSTMENTS FOR ANY CHANGES IN PLANS DUE TO ADDITIONAL REQUIREMENTS.
- ALL LIGHTING TO BE INSTALLED AND OPERATED IN STRICT ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- WHENEVER APPLICABLE ALL INCANDESCENT FIXTURES SHALL BE PROVIDED WITH ENERGY EFFICIENT INCANDESCENT LAMPS.
- ALL CIRCUITS TO BE #12 THHN COPPER IN 3/4" CONDUIT MINIMUM UNLESS OTHERWISE NOTED.
- BALLASTS FOR FLUORESCENT FIXTURES SHALL BE ELECTRONIC TYPE. BALLASTS TO HAVE IN-LINE FUSE HOLDER AND FUSES. BALLASTS SHALL BE EQUIVALENT TO ADVANCE ELECTRONIC BALLASTS, 10% THD. USE 3500 DEG K LAMPS IN ALL FIXTURES FOR INSIDE BUILDING; 4100° K FOR ALL FIXTURES ON EXTERIOR.

**NOTES INDICATED BY "□":**

- HEATERS TO BE CONTROLLED WITH BUILT-IN THERMOSTATS, SET AT 40°.
- CROSS AIM FIXTURES TYPE "B" ON ROOF TO PROVIDE A MORE UNIFORM LIGHTING. TILT & AIM EACH FIXTURE TO OPPOSITE ROOF SURFACE.
- EXIT & EMERGENCY LIGHTS TO BE CONNECTED TO CKT 2LB-2.
- PROVIDE CURB FOR STEPDOWN XFMR ON ROOF. ALL PENETRATIONS THRU ROOF TO BE MADE THROUGH CURB.



**KEY PLAN**  
SCALE: NONE



MEP PROJECT #1618

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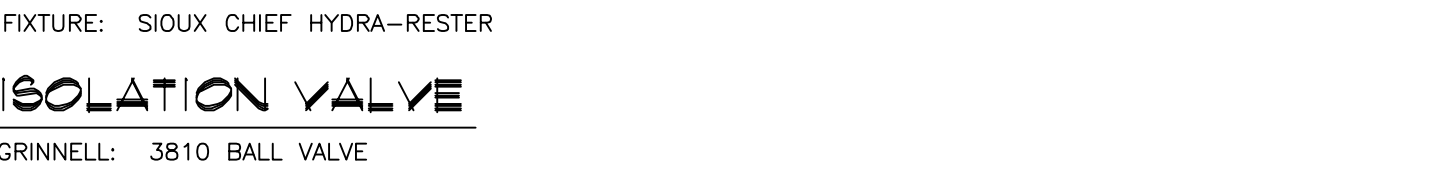
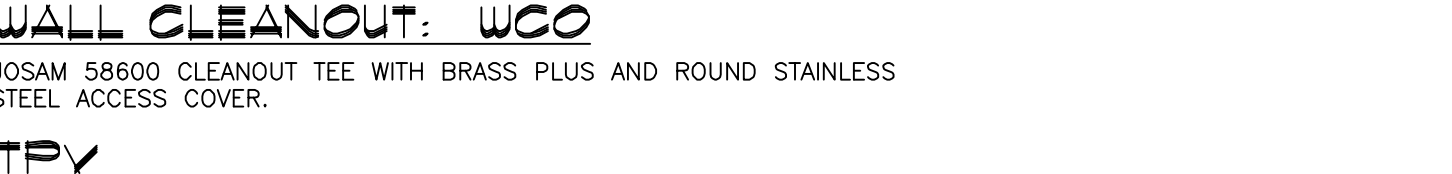
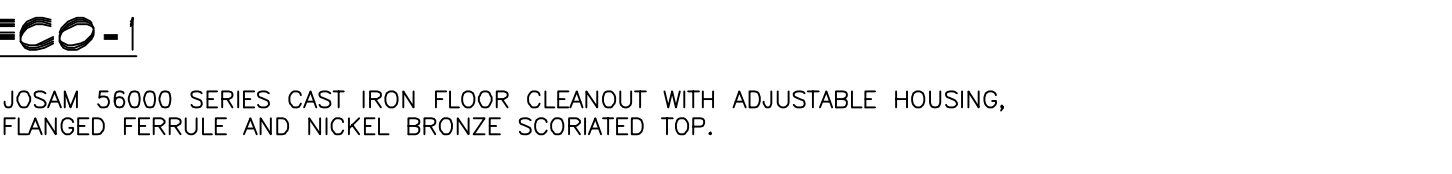
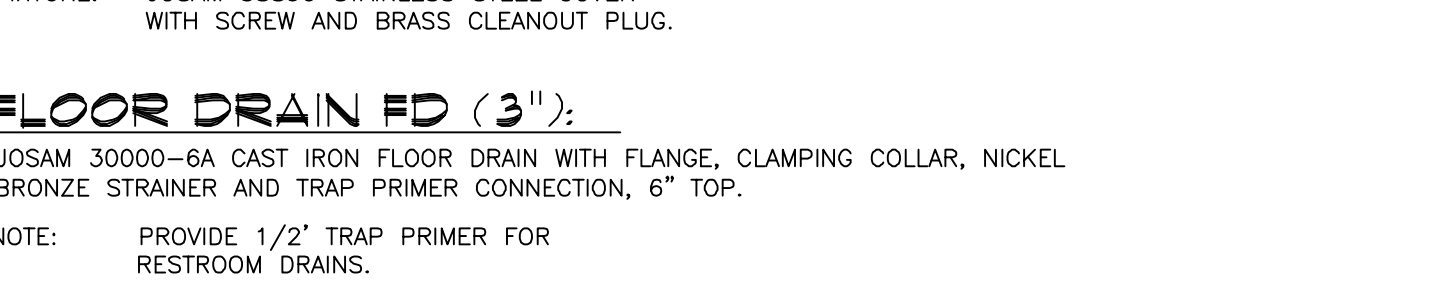
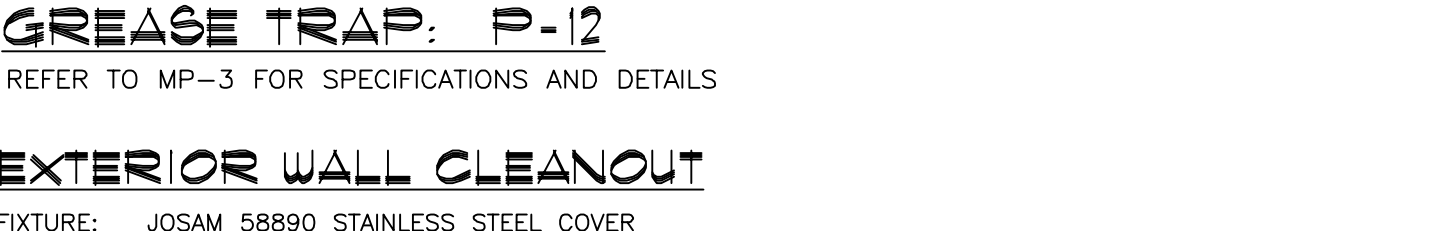
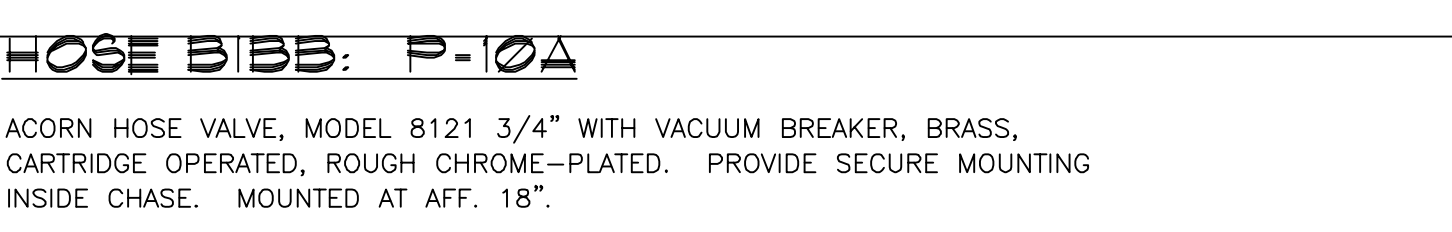
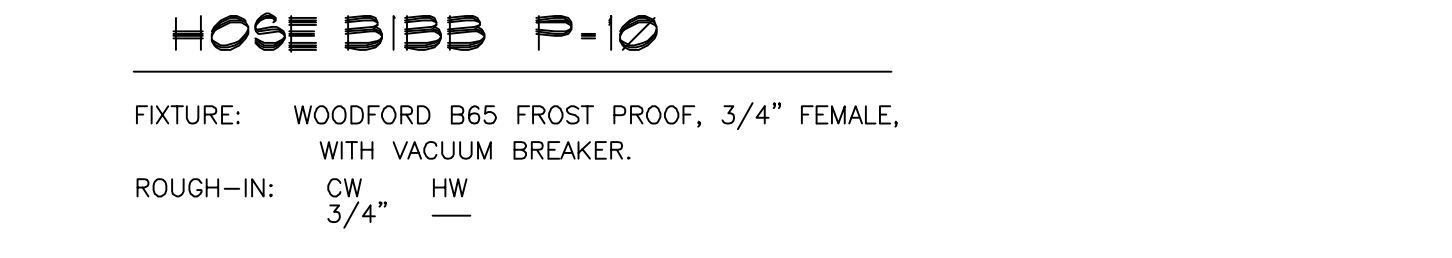
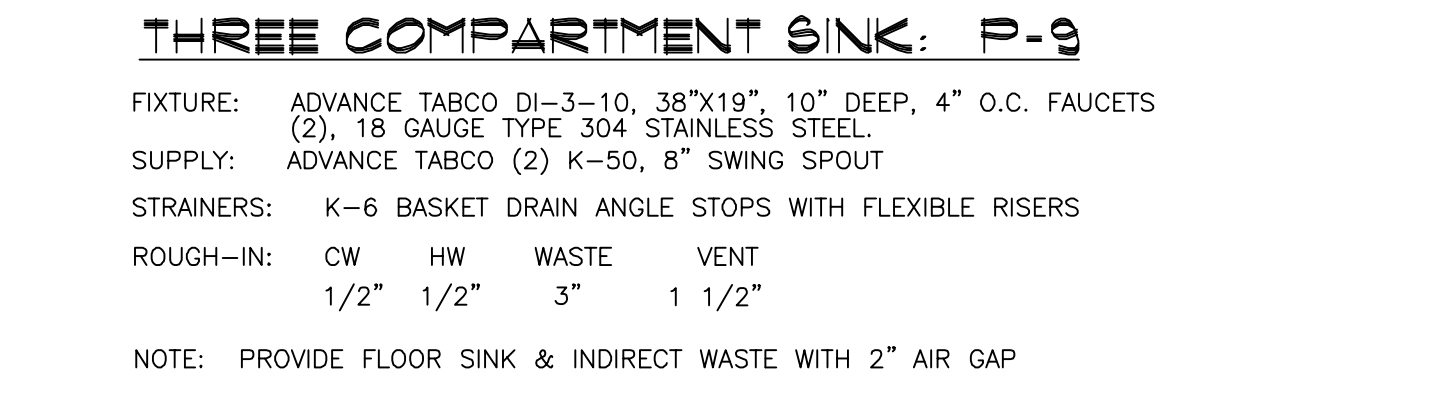
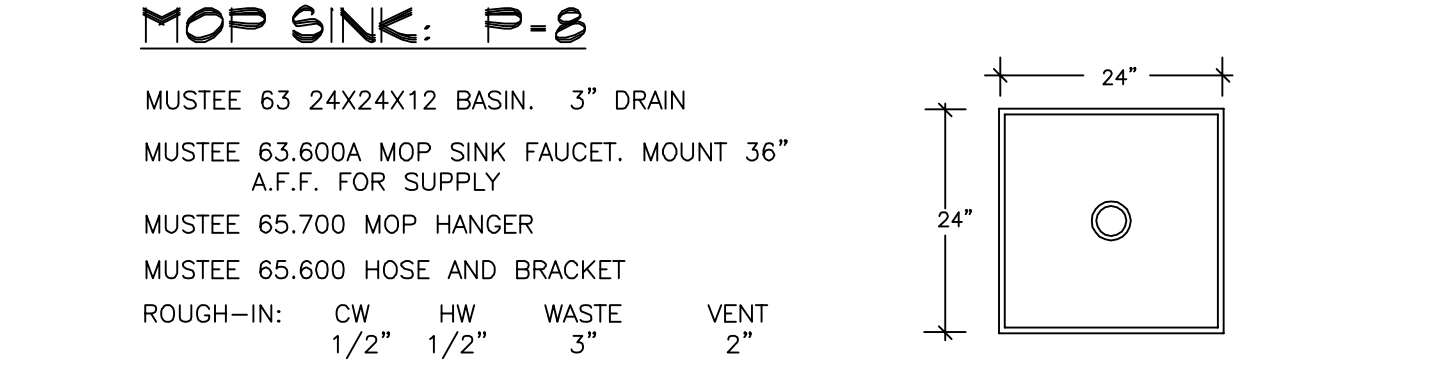
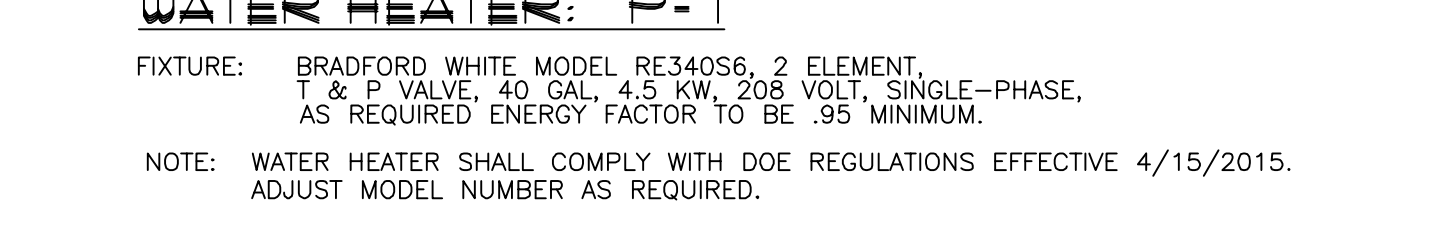
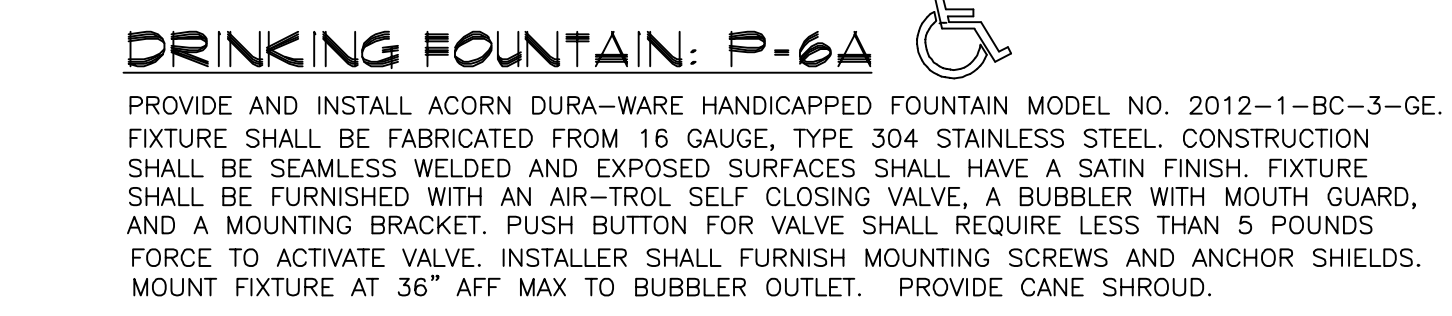
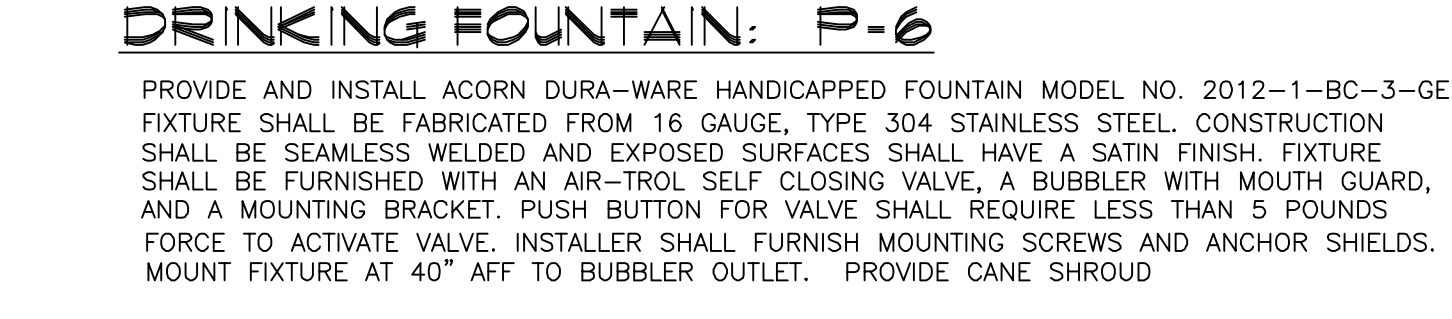
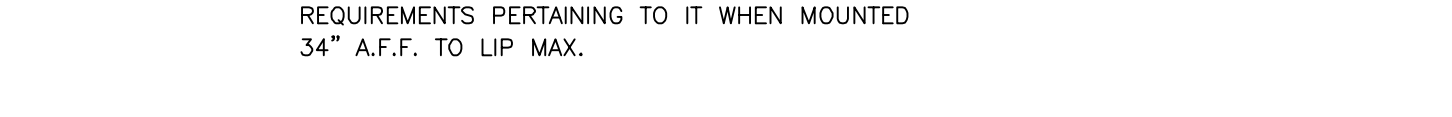
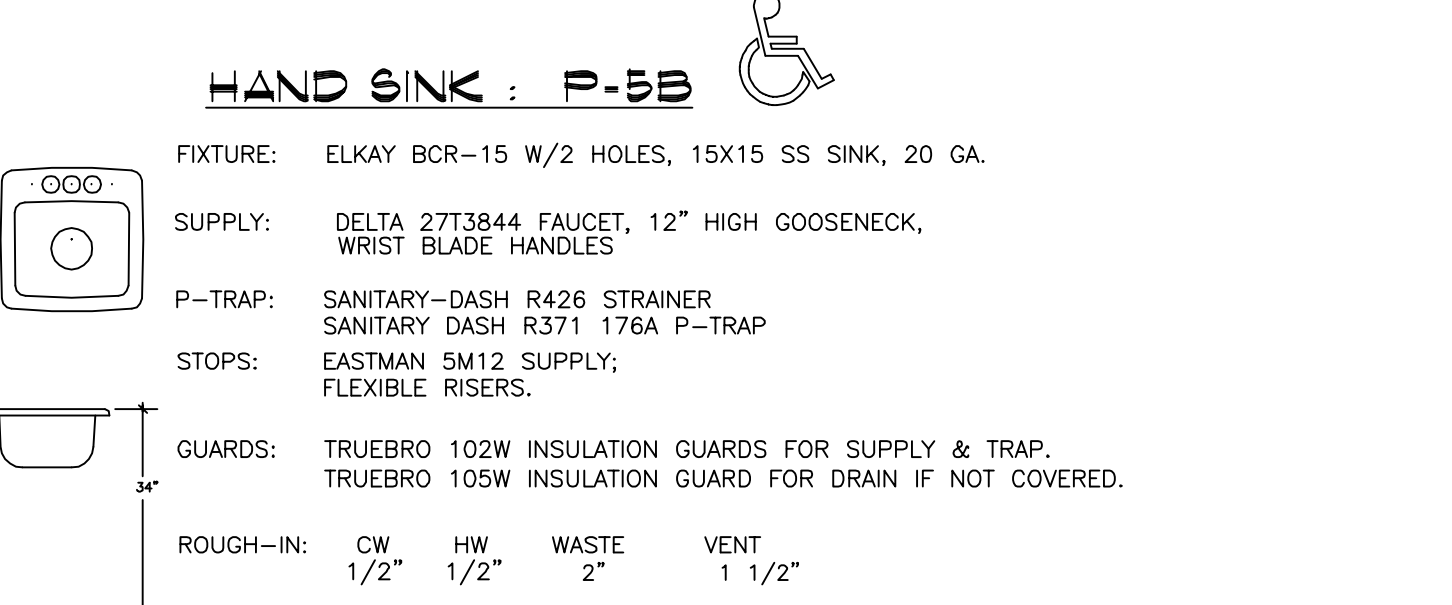
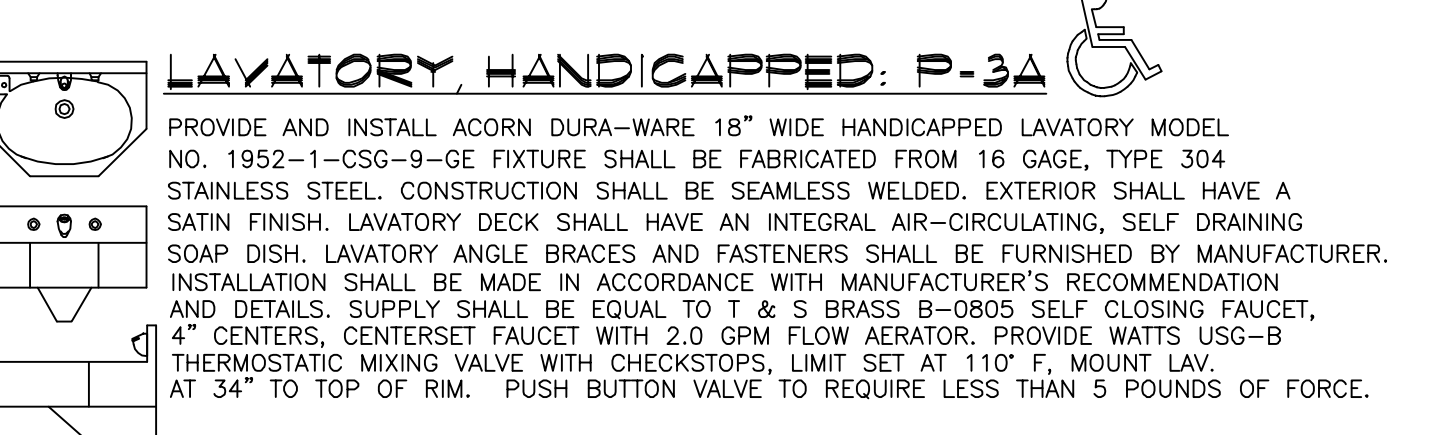
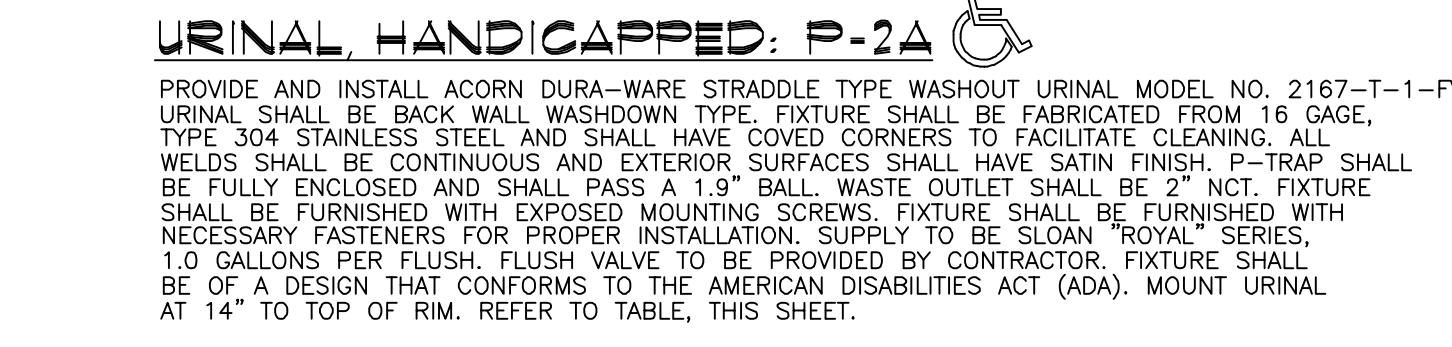
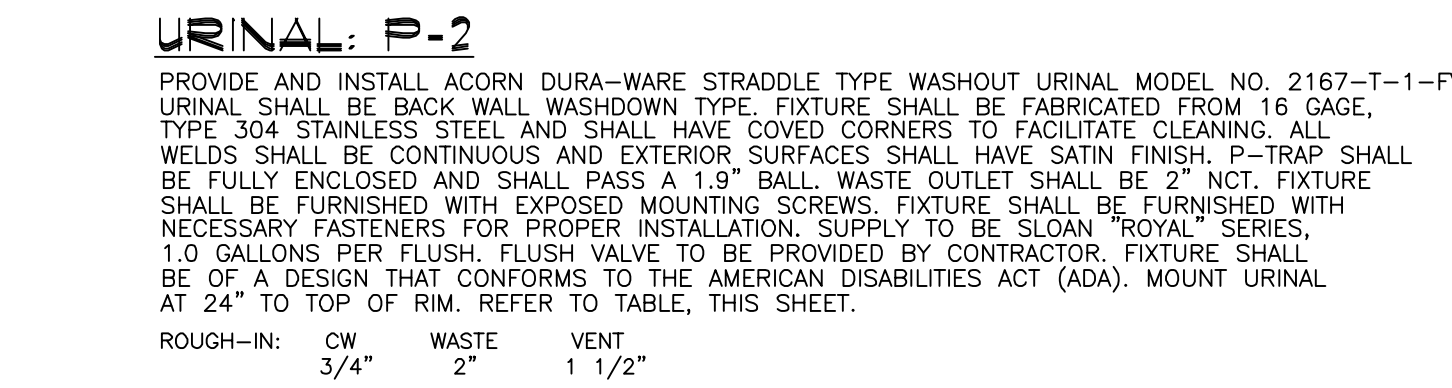
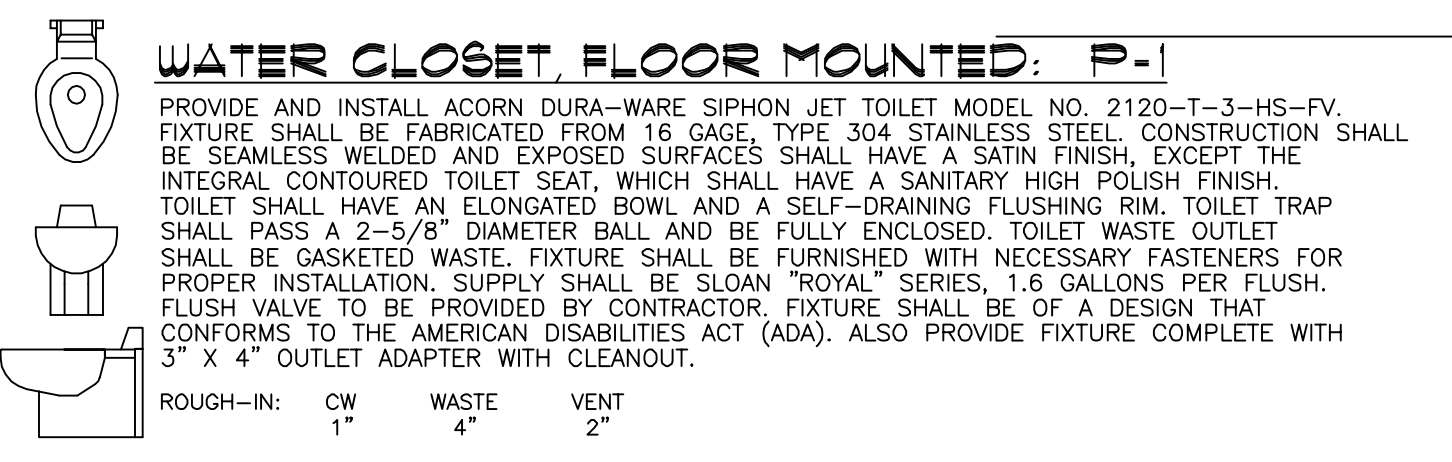
**CITY OF SAN ANGELO**  
**RIO CONCHO SPORTS COMPLEX**  
San Angelo, Texas

Project No. 250-02-0516

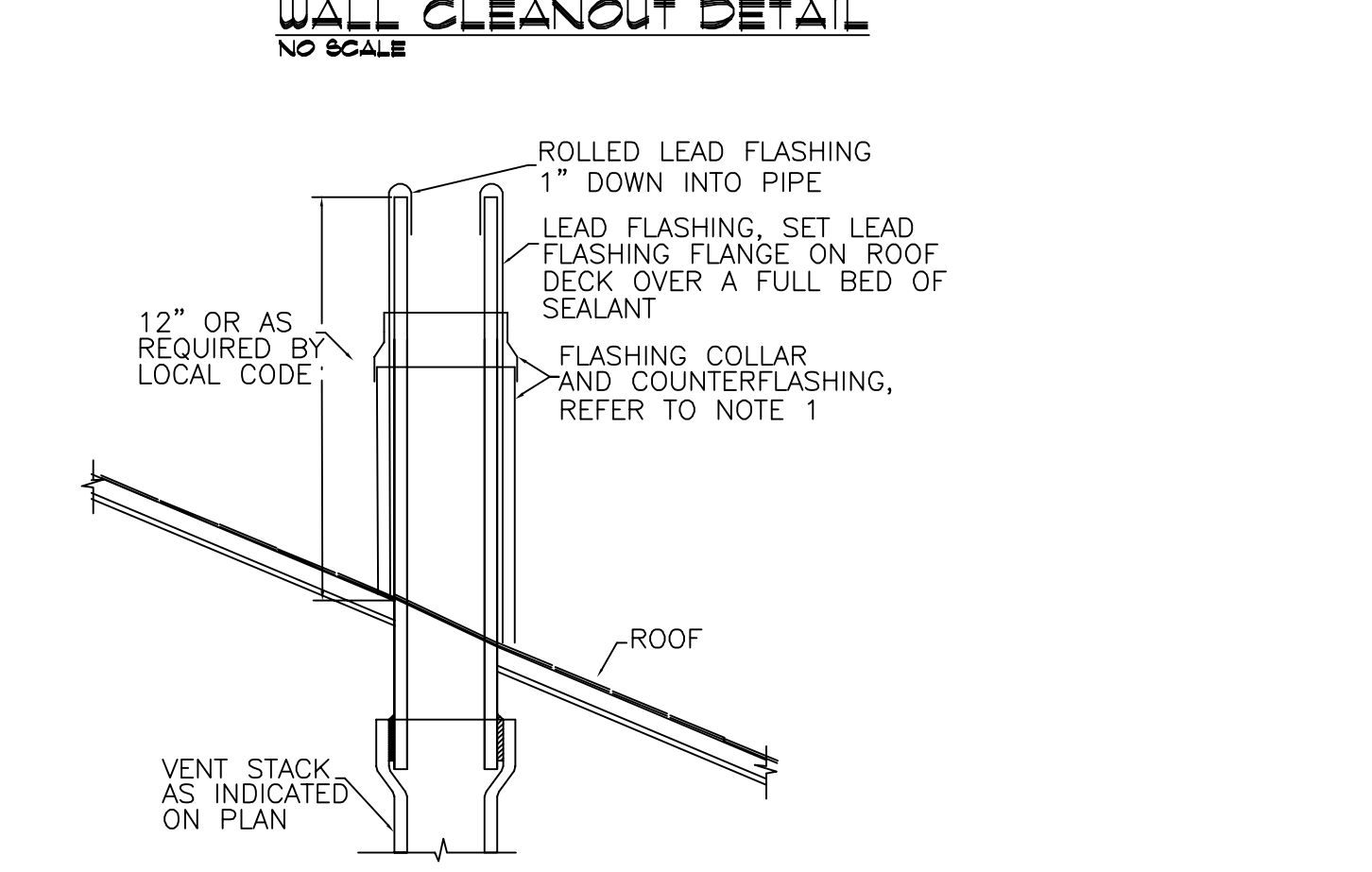
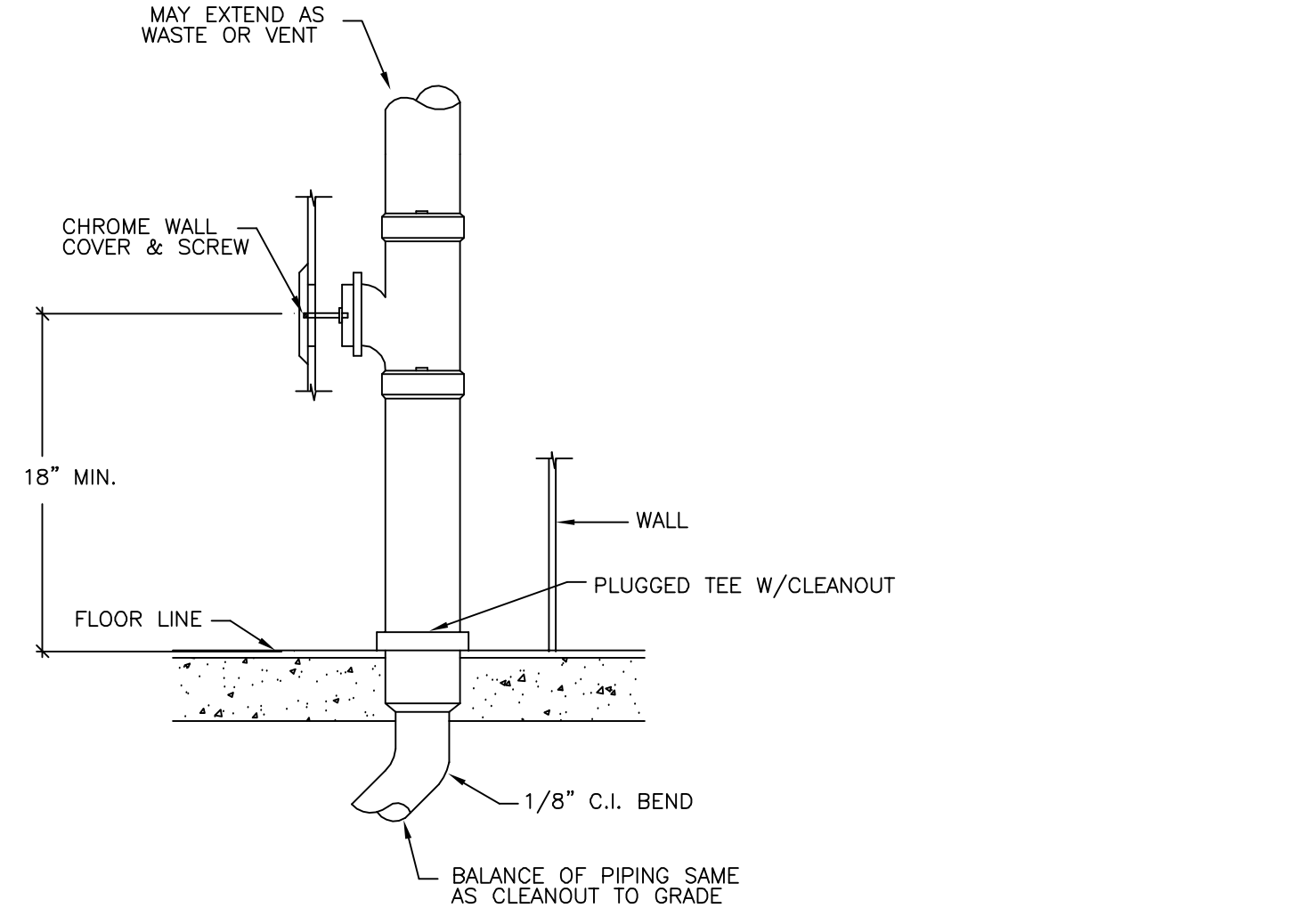
Date AUGUST 30, 2016

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**EL-2**  
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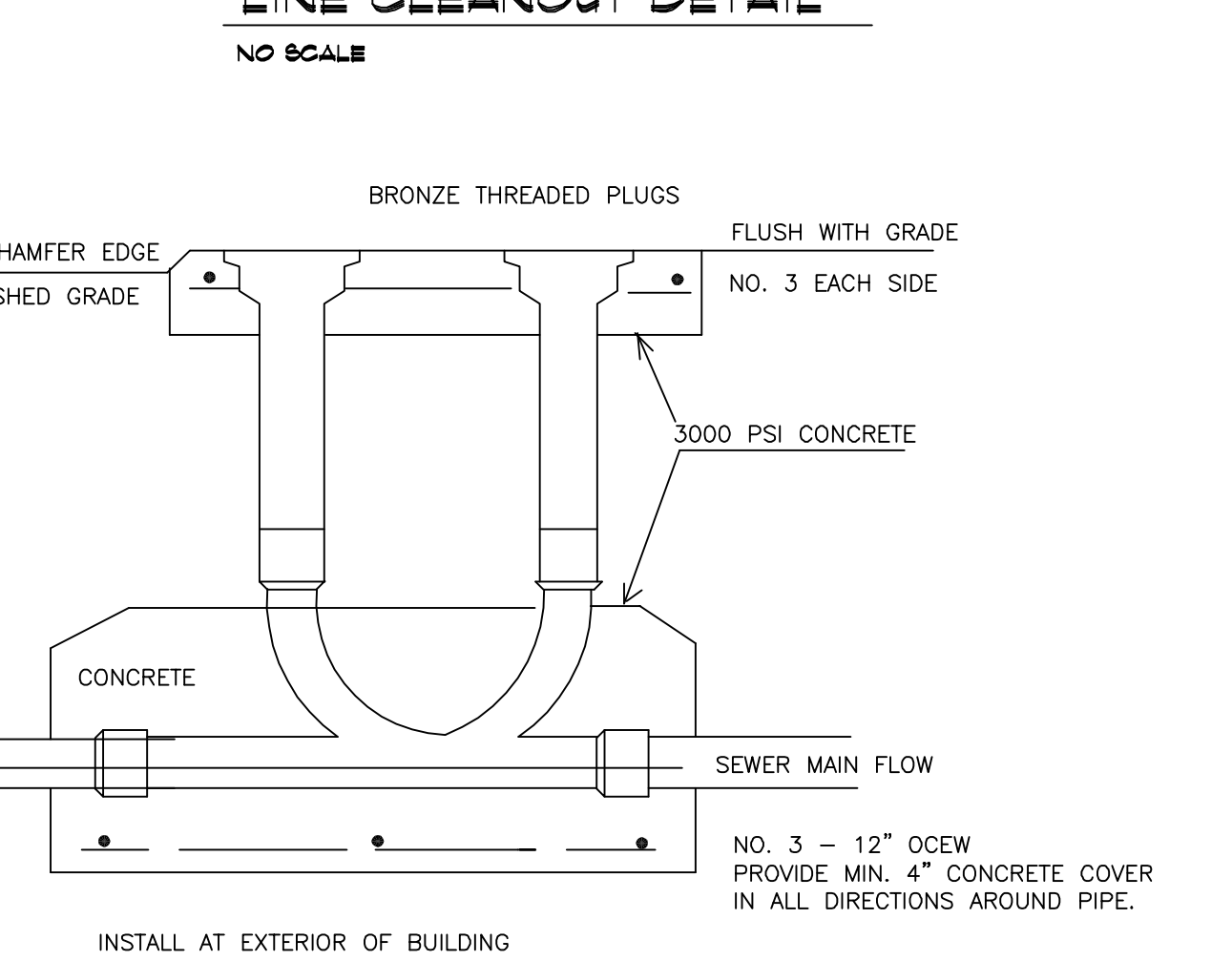
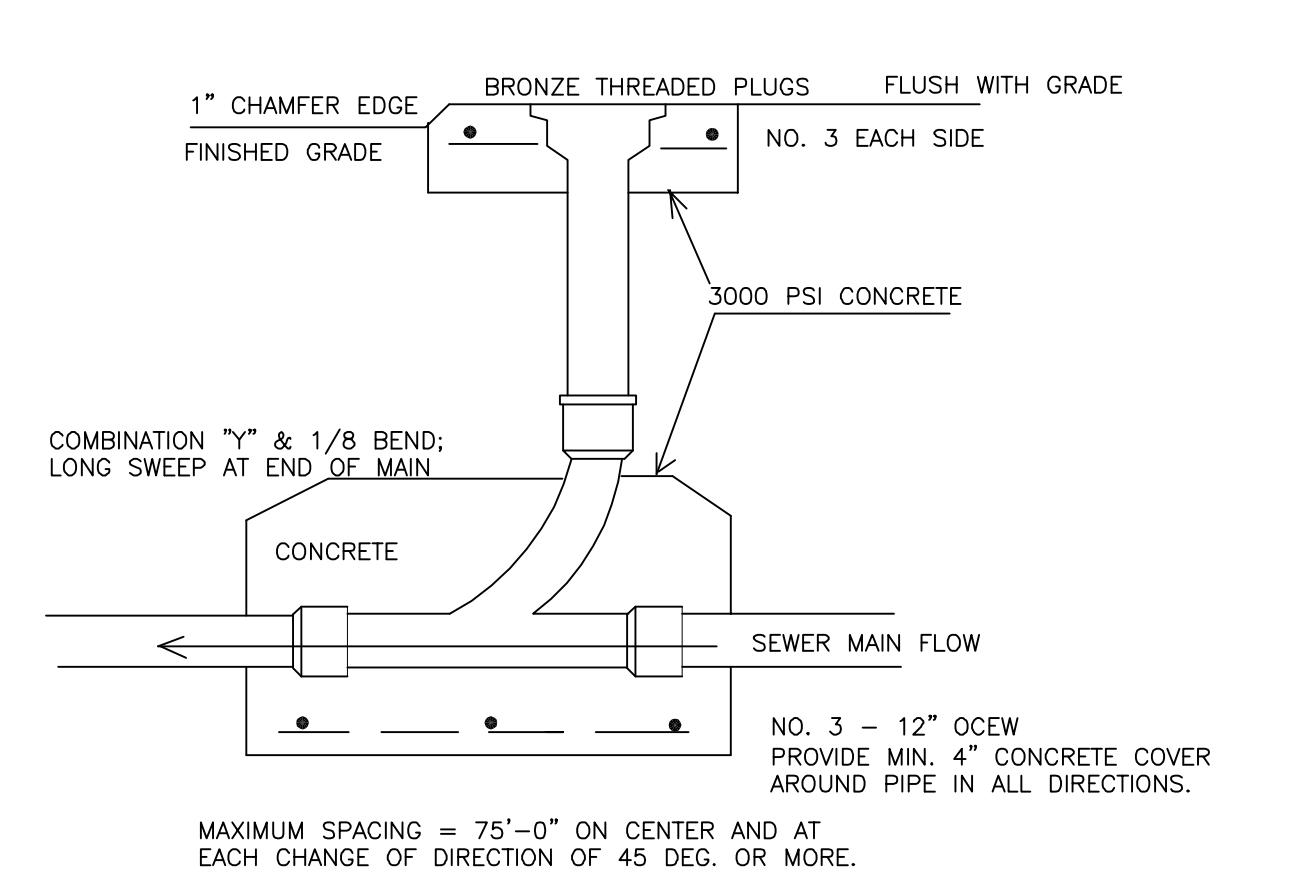
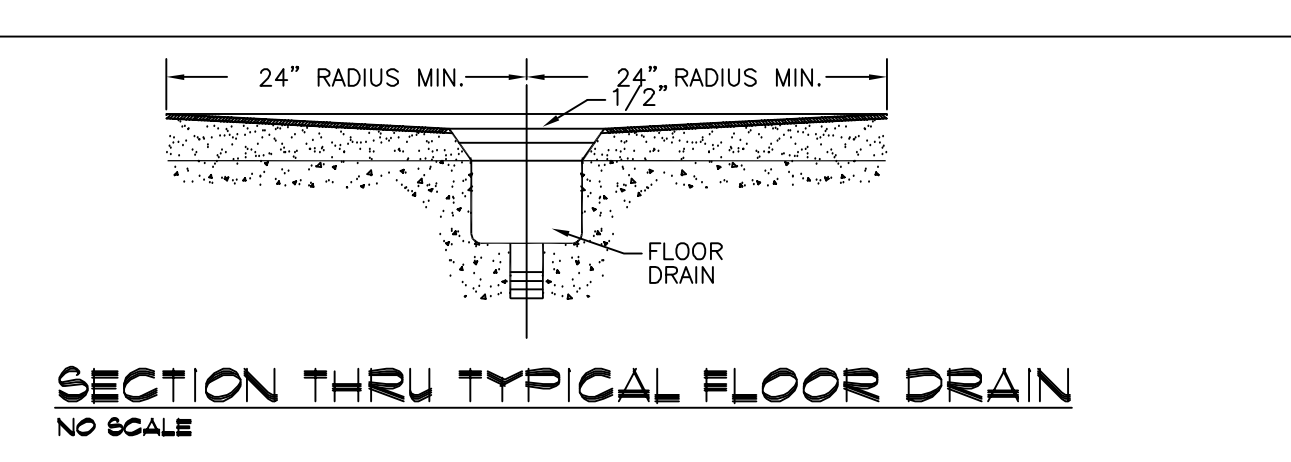


- ### GENERAL PLUMBING NOTES
- CONTRACTOR SHALL COMPLY WITH 2009 INTERNATIONAL PLUMBING CODE AND ALL APPLICABLE LOCAL CODES AND AMENDMENTS.
  - CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO MINIMIZE CONFLICTS.
  - CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OWNER PROVIDED EQUIPMENT.
  - PLUMBING CONTRACTOR IS RESPONSIBLE FOR CONDENSATE DRAINS FROM AIR HANDLING UNITS.
  - SLEEVE AND FIRE CAULK ALL PENETRATIONS OF RATED ASSEMBLIES.
  - SLEEVE ALL PENETRATIONS OF SLAB.
  - PROVIDE UNIONS AT WATER HEATERS. PROVIDE COUPLINGS TO ALL EQUIPMENT AS REQUIRED. PROVIDE PHYSICAL PROTECTION FOR METERS AND PIPING AROUND BUILDING.
  - MAINTAIN 5" CLEARANCE BETWEEN WASTE AND WATER LINES.
  - LOCATE WATER SHUT-OFF VALVE NEAR METER.
  - PLUMBING CONTRACTOR TO COORDINATE VENT STACKS WITH OUTSIDE AIR INTAKES OF EQUIPMENT AND MAINTAIN AT LEAST 10'-0" CLEARANCE OR AS PER LOCAL CODE REQUIREMENTS.
  - INSTALL GROUND CLEANOUTS FLUSH WITH GRADE. FURNISH WITH RECESSED COVERS SO AS TO NOT CREATE TRIPPING HAZARD.
  - PROVIDE TRAP PRIMERS ON ALL DRAINS SUBJECT TO EVAPORATION AND IN REST ROOMS AND UTILITY ROOMS.
  - CONTRACTOR IS RESPONSIBLE TO INSURE ALL PLUMBING SYSTEMS AND EQUIPMENT ARE OPERATIONAL AT COMPLETION OF PROJECT.
  - INSTALL DOUBLE CLEANOUTS AT EXTERIOR OF BUILDING AND AS REQUIRED BY LOCAL CODES. LOCATE ALL EXTERIOR CLEANOUTS AWAY FROM PEDESTRIAN TRAFFIC AREAS. INSTALL CLEANOUTS EVERY 60'
  - THE EQUIPMENT ROUGH-INS AS SHOWN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND PLACEMENT OF ROUGH-INS. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT INSTALLATION OF FIXTURES AND EQUIPMENT.
  - INSTALLATION AND FIXTURES TO COMPLY WITH REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT, ADA & TAS 9102.



**NOTE:**  
1. PLUMBING CONTRACTOR SHALL FURNISH A SUITABLE FLASHING AS RECOMMENDED BY THE ROOFING MANUFACTURER. FLASHING SHALL BE INSTALLED AND MADE WATERPROOF BY ROOFING CONTRACTOR IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS.

### TYPICAL VENT THRU ROOF DETAIL



- ### GENERAL HYAC NOTES
- ALL DUCT DIMENSIONS SHOWN ARE INSIDE FREE AREA DIMENSIONS.
  - ALL DUCTWORK SHALL BE INSTALLED CONCEALED AS HIGH AS POSSIBLE UNLESS OTHERWISE SHOWN.
  - AIR DEVICES ARE SHOWN IN APPROXIMATE LOCATION ONLY. REFER TO ARCHITECT AND/OR ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
  - PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL EQUIPMENT CONNECTION POINTS.
  - CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON DRAWINGS WITH ALL ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND PLUMBING DRAWINGS AND REPORT ANY DISCREPANCIES TO OWNER IMMEDIATELY.
  - FLEX DUCT TO BE CLASS I, R-6 INSULATION. MAX FLEX DUCT LENGTH IS 5 FEET.
  - HOUSEKEEPING PAD SIZE AND FLOOR DRAIN LOCATIONS SHALL BE COORDINATED WITH THE SIZE AND LOCATION OF THE EXACT EQUIPMENT BEING PROVIDED.
  - EQUIPMENT SHOWN ON THE FLOOR PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL ARRANGEMENT AND SPACE ALLOCATIONS. THE CONTRACTOR SHALL VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTION IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE INSTALLED.
  - DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ROUTING OF EQUIPMENT WITH ALL OTHER TRADES.
  - PROVIDE FULL SIZE P-TRAP FOR ALL CONDENSATE DRAINS. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL CONDENSATE DRAINS.
  - PROVIDE SCREEN FOR ALL FRESH AIR INTAKES.
  - UPON COMPLETION, PROVIDE COMPLETE TEST AND BALANCE OF ALL EQUIPMENT TO MEET OWNER'S REQUIREMENTS.
  - APPLICABLE CODES ARE 2009 INTERNATIONAL MECHANICAL CODE AND CITY OF SAN ANGELO ORDINANCES.

FAN SCHEDULE	
UNIT NUMBER	PRV #1-16, #2-16
AREA SERVED	COMPLEX #2
MANUFACTURER	GREENHECK
MODEL NUMBER	GB-081
CFM	450
SP (IN. WC)	.25
FAN HP	1/4
RPM	1200
ELECTRICAL SVC	120/1/60
DUCT SIZE	8" x 8"
ROOF OPENING	14.5" SQ.

- NOTES:**
- FANS TYPE PRV TO BE FURNISHED WITH ROOF CURB, GRAVITY DAMPER & BIRDSCREEN.
  - FANS MAY BE APPROVED EQUAL, PROVIDED ALL LOCAL, STATE AND FEDERAL CODES WHICH ARE APPLICABLE ARE MET. R/R EXHAUST FANS TO OPERATE CONTINUOUSLY.
  - VERIFY ROOF OPENING DIMENSIONS WITH FAN MANUFACTURER.
  - REFER TO SHEET MP-4 FOR SPECIFICATION OF PRV #3-16 FOR THE VENT HOOD.

### MECHANICAL/PLUMBING COVER SHEET

SCALE: NONE

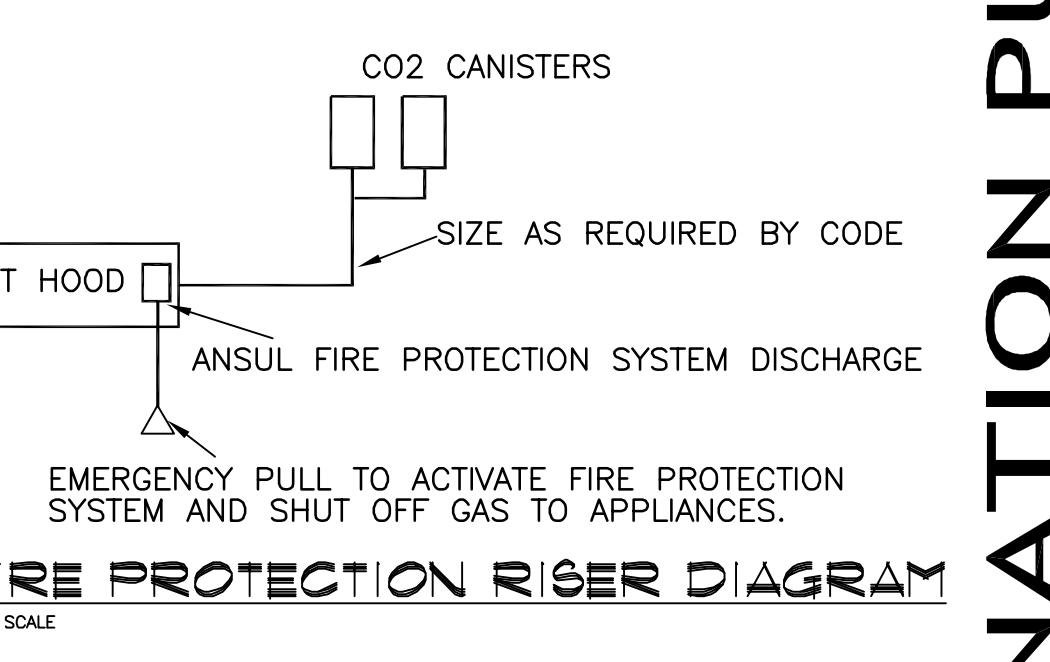
PLUMBING LEGEND	
SYMBOL	DESCRIPTION
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[Symbol]	GAUGE COCK
[Symbol]	A.S.M.E. TEMPERATURE & PRESSURE RELIEF VALVE
[Symbol]	PLUG VALVE
[Symbol]	CAP OR PLUG
[Symbol]	POINT OF CONNECTION, NEW TO EXISTING
[Symbol]	GAS COCK
[Symbol]	PRESSURE GAUGE
[Symbol]	THERMOMETER
[Symbol]	LOW, MEDIUM, HIGH PRESSURE GAS
[Symbol]	AUTOMATIC AIR VENT
[Symbol]	STRAINER WITH DRAIN VALVE
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[Symbol]	V
[Symbol]	HW-R
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[Symbol]	CW
[Symbol]	SS
[Symbol]	V
[Symbol]	LABORATORY, SINK
[Symbol]	ELECTRIC WATER COOLER, DRINKING FOUNTAIN
[Symbol]	URINAL
[Symbol]	WATER CLOSET
[Symbol]	EXIST. LAV OR SINK TO BE REMOVED
[Symbol]	EXIST. EWC TO BE REMOVED
[Symbol]	EXIST. URINAL TO BE REMOVED
[Symbol]	EXIST. WATER CLOSET TO BE REMOVED
[Symbol]	FLOOR DRAIN W/ TRAP AND GRATE
[Symbol]	EXIST. FLOOR DRAIN TO BE REMOVED
[Symbol]	FREEZE PROOF HOSE BIBB
[Symbol]	D.C.O. - DOUBLE CLEAN OUT
[Symbol]	C.O. - CLEAN OUT
[Symbol]	G.C.O. - GROUND CLEAN OUT
[Symbol]	WCO-WALL CLEAN OUT
[Symbol]	CONDENSATE DRAIN LINE WITH FLOW DIRECTION
[Symbol]	FLOW DIRECTION
[Symbol]	AIR LINE
[Symbol]	CUT-OFF VALVE
[Symbol]	STS
[Symbol]	90 ELL UP
[Symbol]	90 ELL DOWN
[Symbol]	TEE DROPPING DOWN
[Symbol]	TEE RISING UP

NOTE: NOT ALL SYMBOLS ARE USED

DIFFUSER SCHEDULE				
E-1	24 x 24	EXHAUST	WHITE	TITUS SOR
DG-1				EGGCRATE, ALUMINUM FLANGED PANEL
				DOOR GRILLE

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TDLR MOUNTING	
TABLE OF FIXTURE REQUIREMENTS	ADULT
DRINKING FOUNTAINS AND WATER COOLERS: FRONTAL APPROACH SPOUT HEIGHT (TO OUTLET) KNEE CLEARANCE SIDE APPROACH SPOUT HEIGHT (TO OUTLET)	36" MAX 27" MIN. 36" MAX
WATER CLOSETS: TOP OF SEAT GRAB BARS FLUSH CONTROLS	17"-19" 33"-36" 44" MAX
URINALS: TOP OF RIM FLUSH CONTROLS	17" MAX 44" MAX
LAVATORIES AND SINKS: TOP OF LAVATORY KNEE CLEARANCE	34" MAX 27" MIN.
MIRRORS: TOP OF REFLECTIVE SURFACE BOTTOM OF REFLECTIVE SURFACE	74" MIN. 40" MAX.
SHOWERS: TOP OF SEAT SHOWER CONTROLS TOP OF GRAB BARS	17"-19" 38" MIN-48" MAX 33"-36"
CONTROLS/OPERATING MECHANISMS: FRONT SIDE	15" MIN-48" MAX 9" MIN-54" MAX
TELEPHONE: HIGHEST OPERABLE PART, FRONT HIGHEST OPERABLE PART, SIDE	48" MAX 54" MAX



Revised

CIVIL ENGINEER  
SKG ENGINEERING

MECHANICAL ENGINEER  
POWER SYSTEMS

STRUCTURAL ENGINEER  
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kinney • frankie ARCHITECTS AIA

37b concho • san angelo, texas • 76903  
ph: 325.653.2900 • fax: 325.653.2910

**CITY OF SAN ANGELO**  
**RIO CONCHO SPORTS COMPLEX**  
 San Angelo, Texas

Project No. 250-02-0516  
 Date AUGUST 30, 2016  
 Sheet Number  
**MP-1**  
 2 OF 9

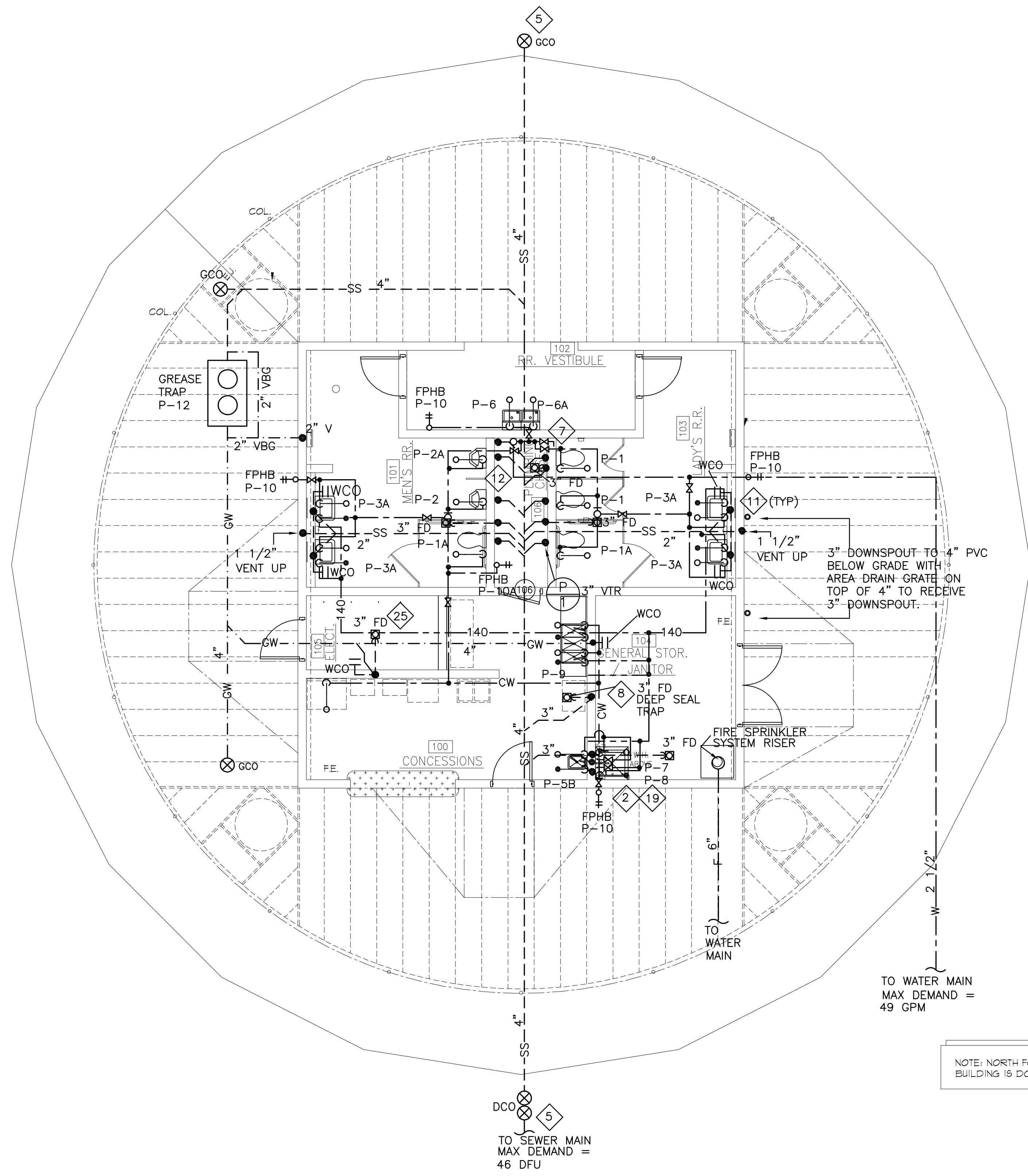
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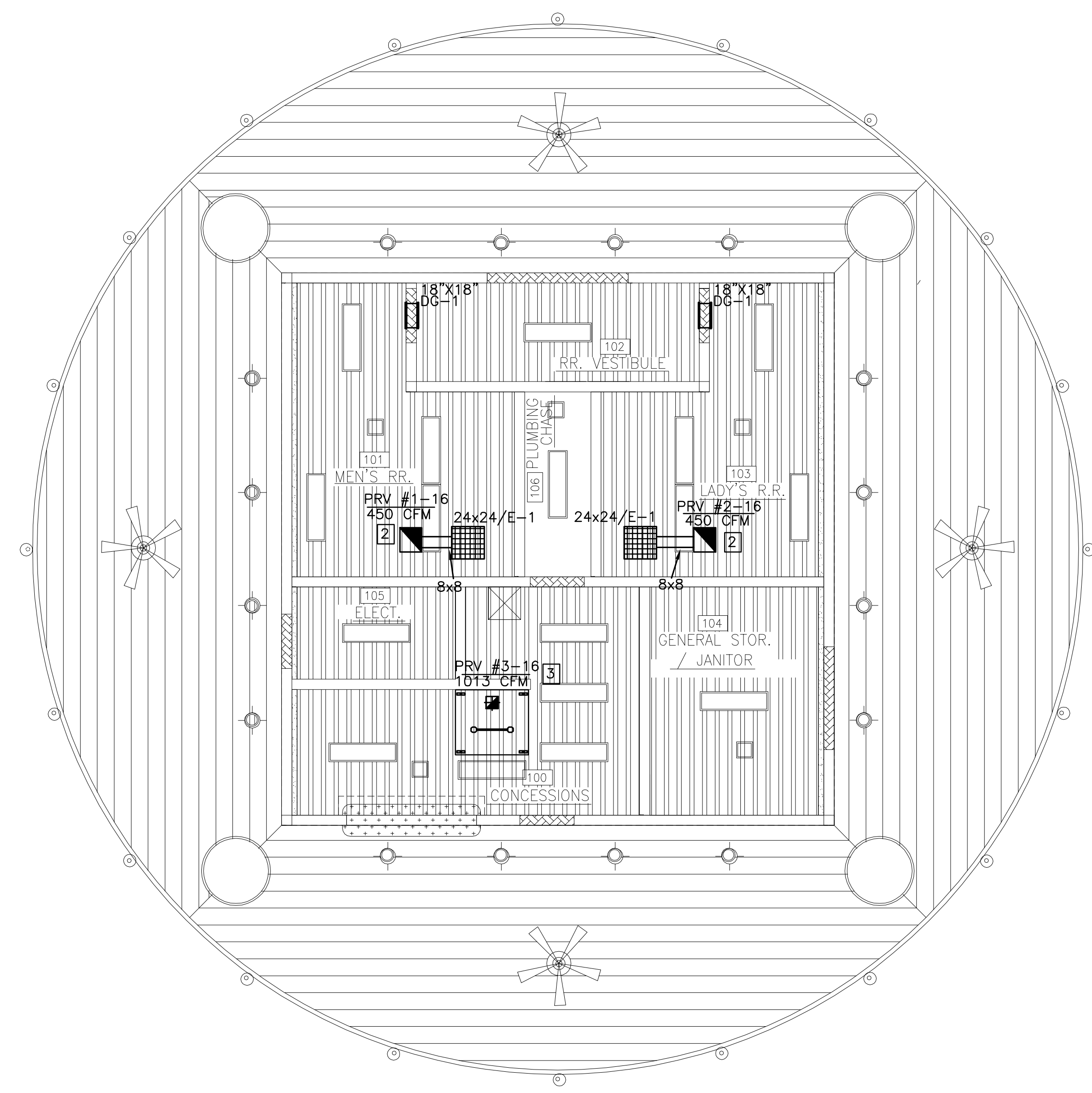
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CITY OF SAN ANGELO  
 RIO CONCHO SPORTS COMPLEX  
 San Angelo, Texas



**PLUMBING PLAN**



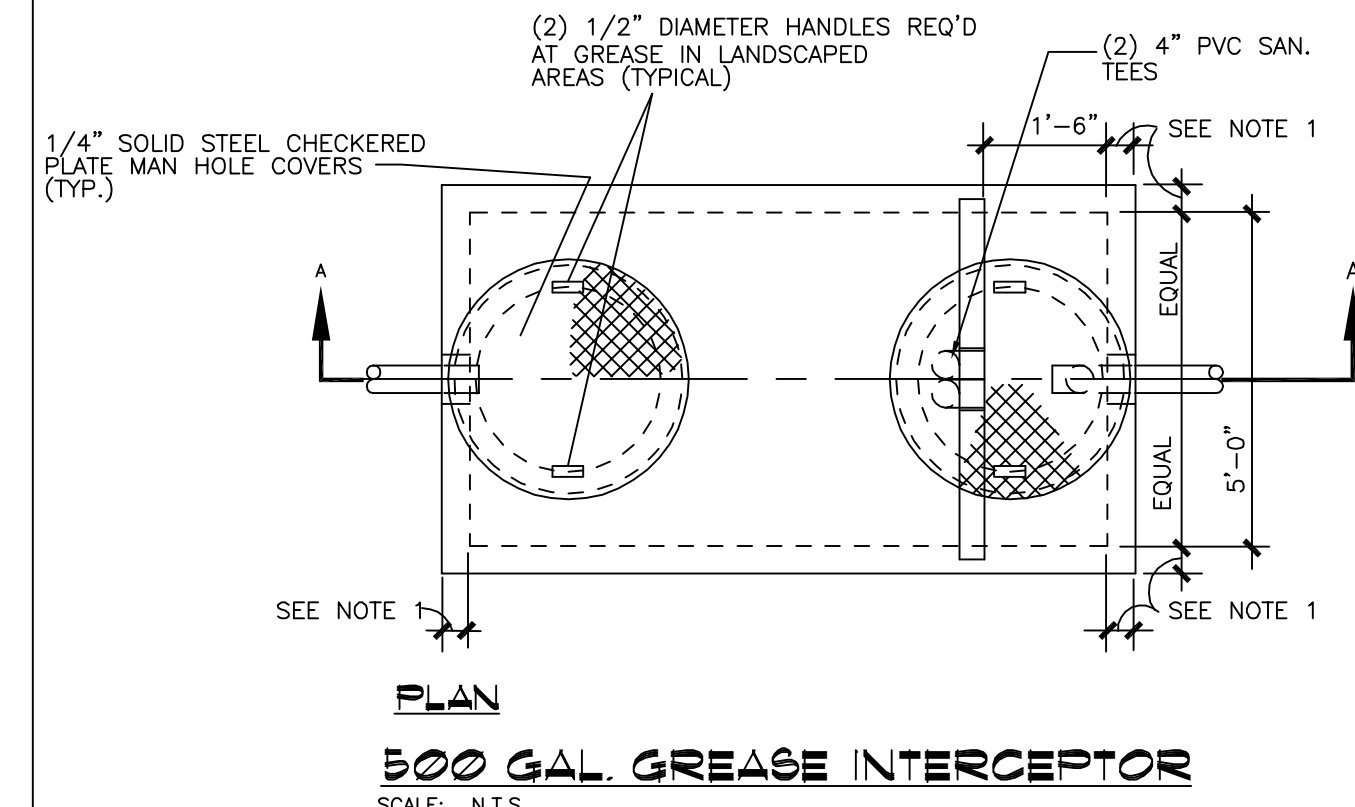
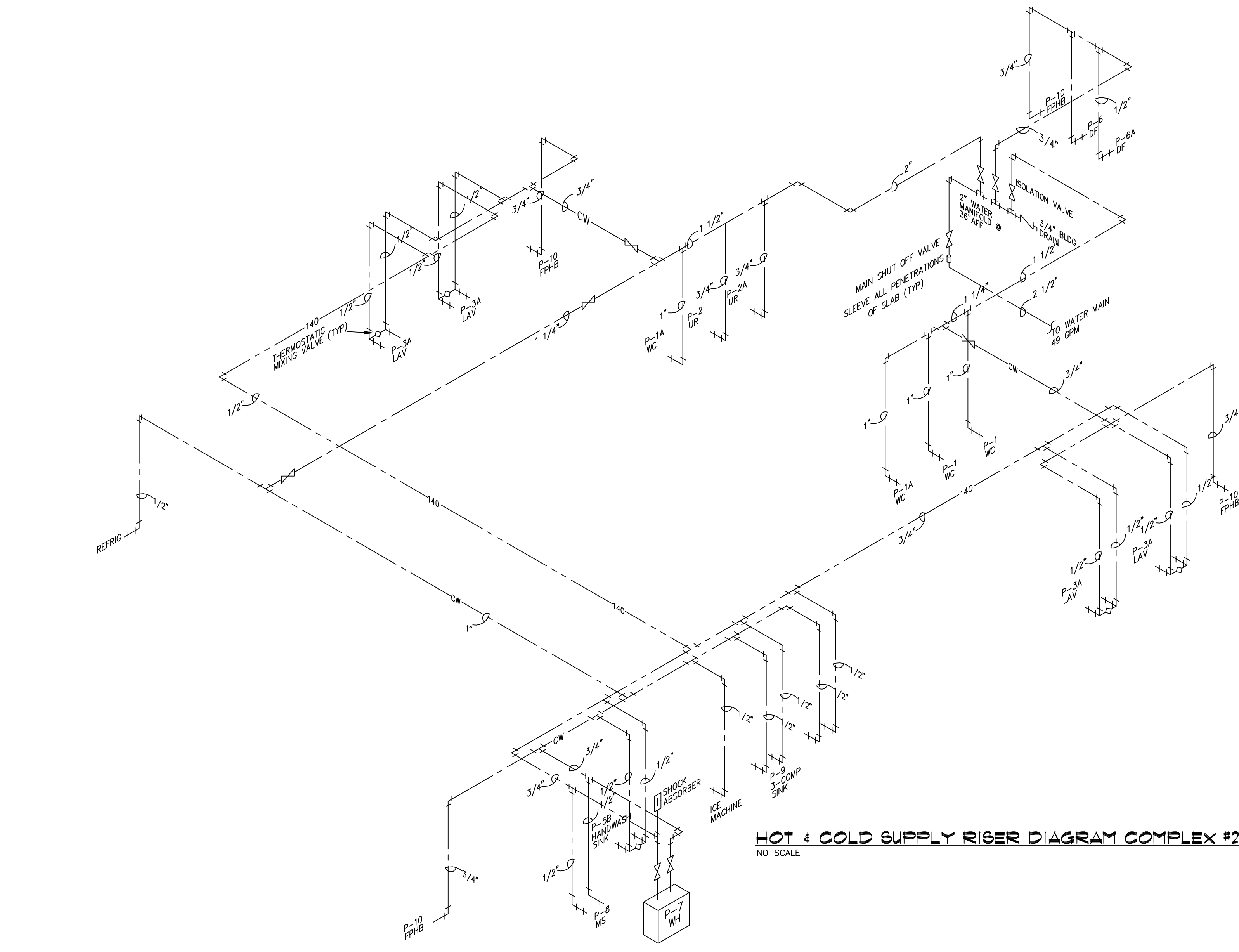
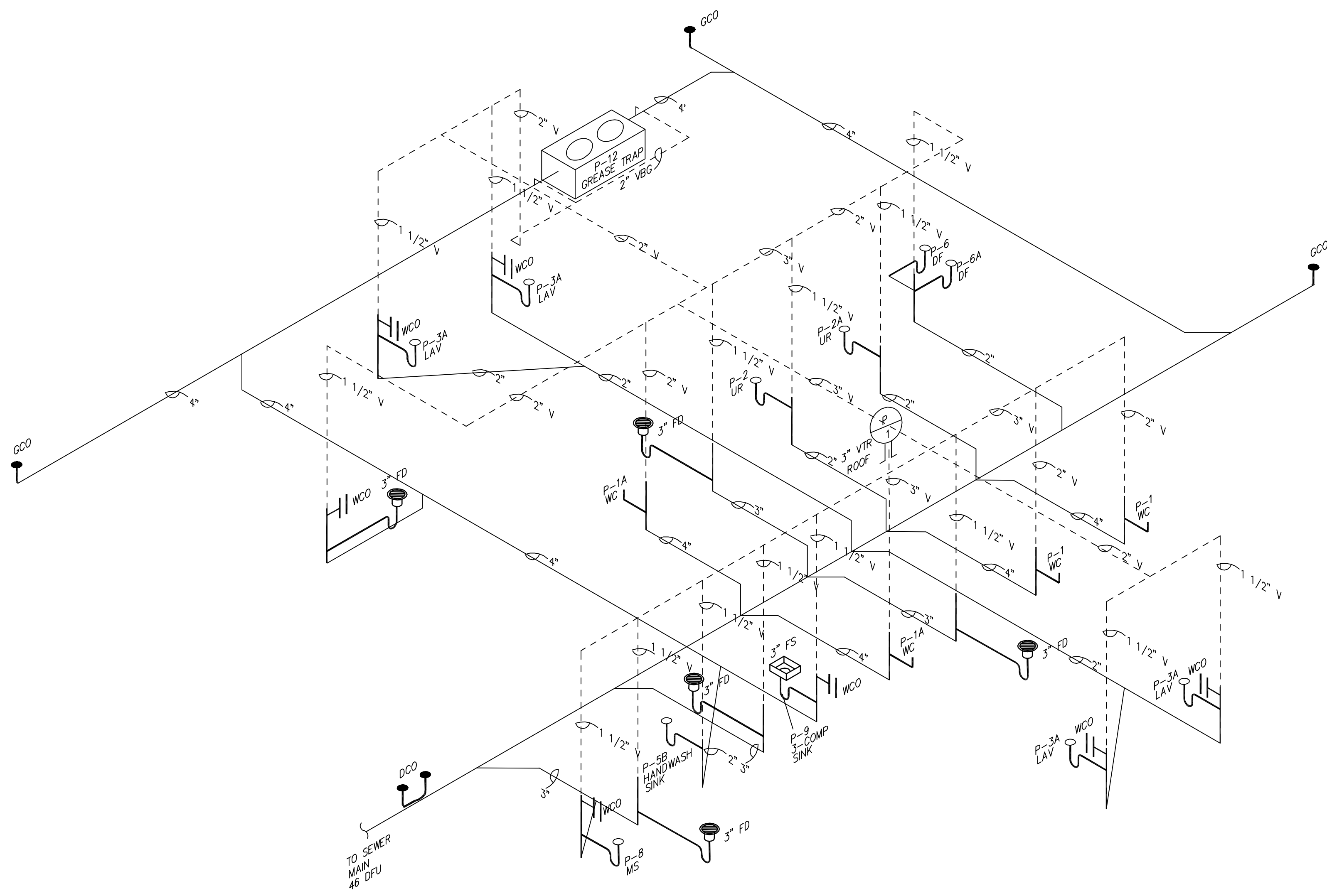
**MECHANICAL PLAN**

- PLUMBING NOTES INDICATED BY "◇":**
1. PROVIDE PHYSICAL PROTECTION FOR EQUIPMENT OUTSIDE BUILDING.
  2. SET WATER HEATER AT 140 DEG F. INSTALL ON FLOOR NEXT TO MOP SINK.
  3. CONTRACTOR IS RESPONSIBLE TO INSURE ALL PLUMBING SYSTEMS AND EQUIPMENT ARE OPERATIONAL AT COMPLETION OF PROJECT.
  4. DO NOT SCALE DRAWINGS. FIELD VERIFY FIXTURE AND UTILITY LINE LOCATIONS.
  5. LOCATE CLEANOUTS BEYOND PEDESTRIAN WALK WAYS.
  6. BACKFLOW PREVENTER REQUIRED ON HOSE BIBBS AND MOP SINKS.
  7. PROVIDE MEANS TO DRAIN ALL SUPPLY LINES ON PROJECT.
  8. FILL WITH VEGETABLE OIL.
  9. PROVIDE SUPPLY STOPS AT EACH FIXTURE RISER. ALL EXPOSED LINES TO BE CHROME PLATED.
  10. GENERAL CONTRACTOR AND PLUMBING CONTRACTOR SHALL VERIFY ALL REQUIREMENTS OF THIS PROJECT BEFORE BIDDING AND PROCEEDING WITH WORK.
  11. PROVIDE WATTS MODEL USG-B THERMOSTATIC MIXING VALVE AT ALL HANDWASHING FIXTURES. PROVIDE CHECKSTOPS, LIMIT SET AT 110° F.
  12. ALL WATER SERVICES TO HAVE PRESSURE REDUCING VALVE SET AT 80 PSI. IF CITY WATER PRESSURE EXCEEDS 80 PSI.
  13. REFER TO SHEET MP-1 FOR PLUMBING FIXTURE SPECIFICATIONS.
  14. INSULATE WATER LINES PER SPECS.
  15. INSTALL WATER HAMMER ARRESTORS PER ANSI A112.
  16. VERIFY WATER AND WASTE REQUIREMENTS WITH THE CITY OF SAN ANGELO. CONTACT JOE MANGREM AT 325-657-4547 FOR CHARGES AND FEES. THIS PROJECT WILL HAVE FEES FOR WATER AND SEWER SERVICES.
  17. WATER HEATER TO BE STATE WITH 6 YEAR WARRANTY.
- MECHANICAL NOTES INDICATED BY "□":**
18. CONTACT LOCAL UTILITIES FOR APPLICABLE FEES, PERMITS AND CHARGES FOR THIS PROJECT.
  19. INSTALL OATEY MODEL 34082 METAL DRAIN PAN UNDER WATER HEATER. ROUTE PRESSURE AND RELIEF VALVE DRAIN TO MOP SINK.
  20. SEAL ALL PENETRATIONS OF RATED WALLS ACCORDING TO CODE WITH APPROVED MATERIALS.
  21. PROVIDE CLEANOUTS EVERY 50' INSIDE BUILDINGS; EVERY 100' OUTSIDE.
  22. ALL FAUCETS TO BE SUPPLIED WITH BRASS STEMS.
  23. INCREASE VTR'S PER LOCAL CODES AND FROST REQUIREMENTS.

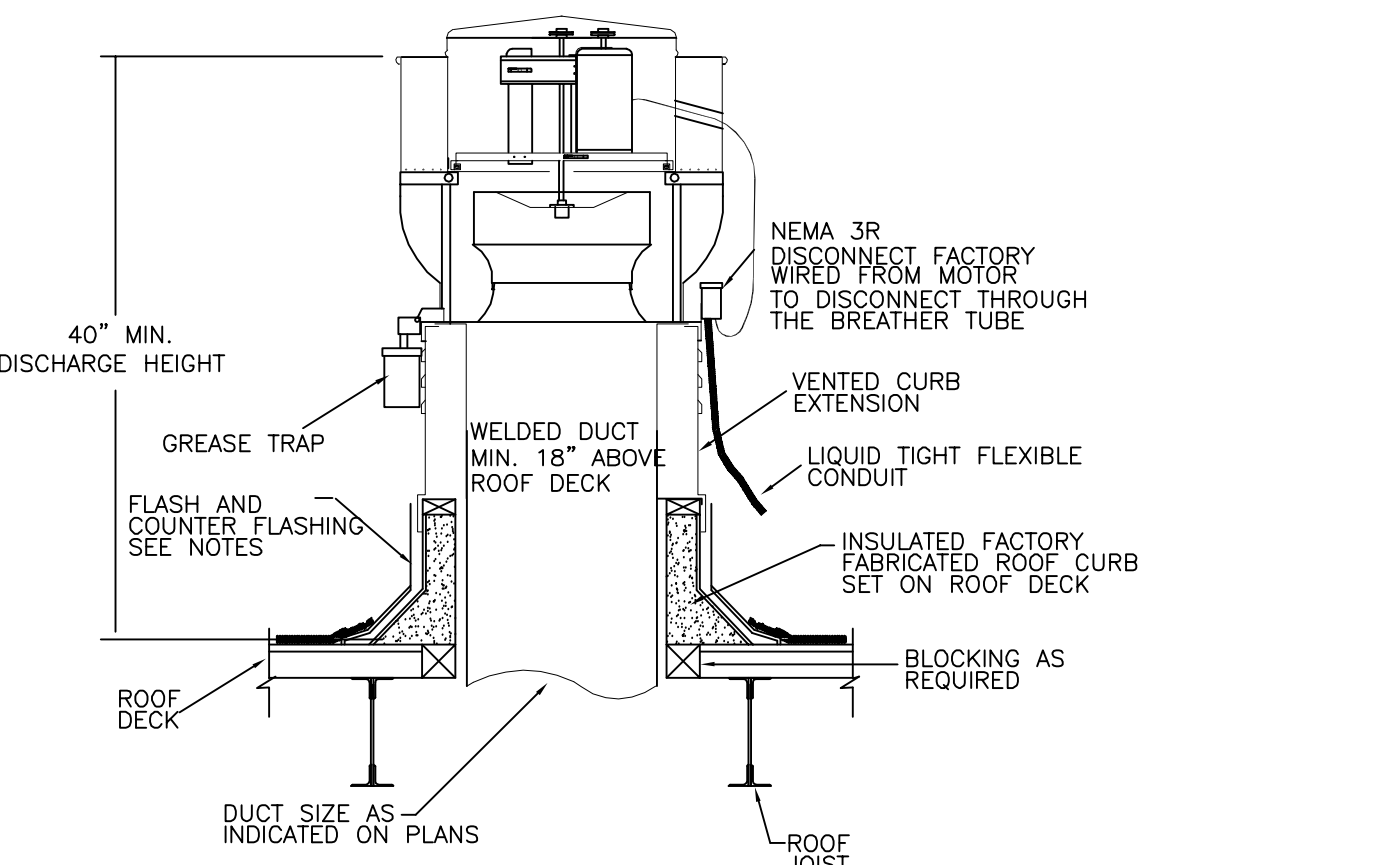
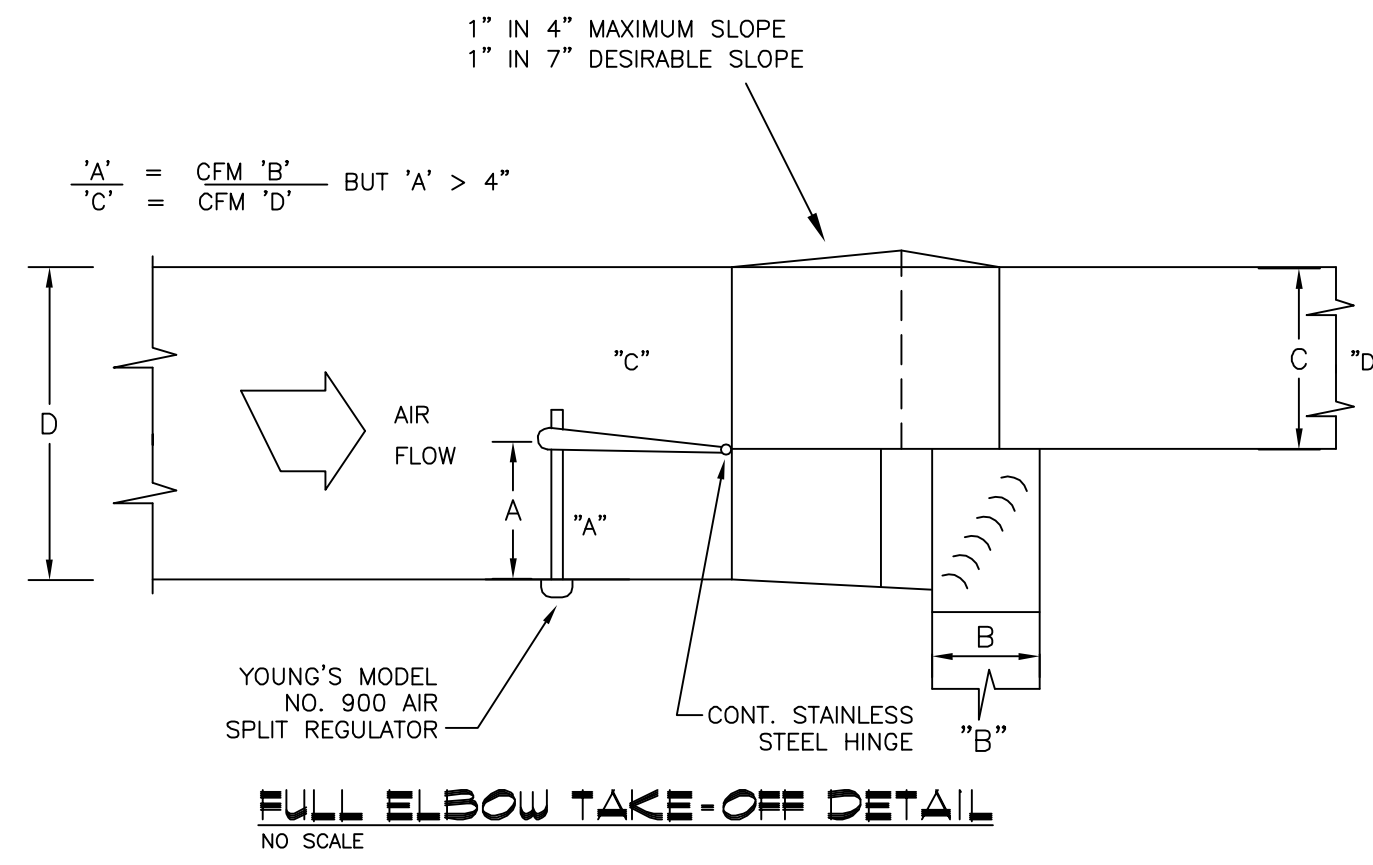
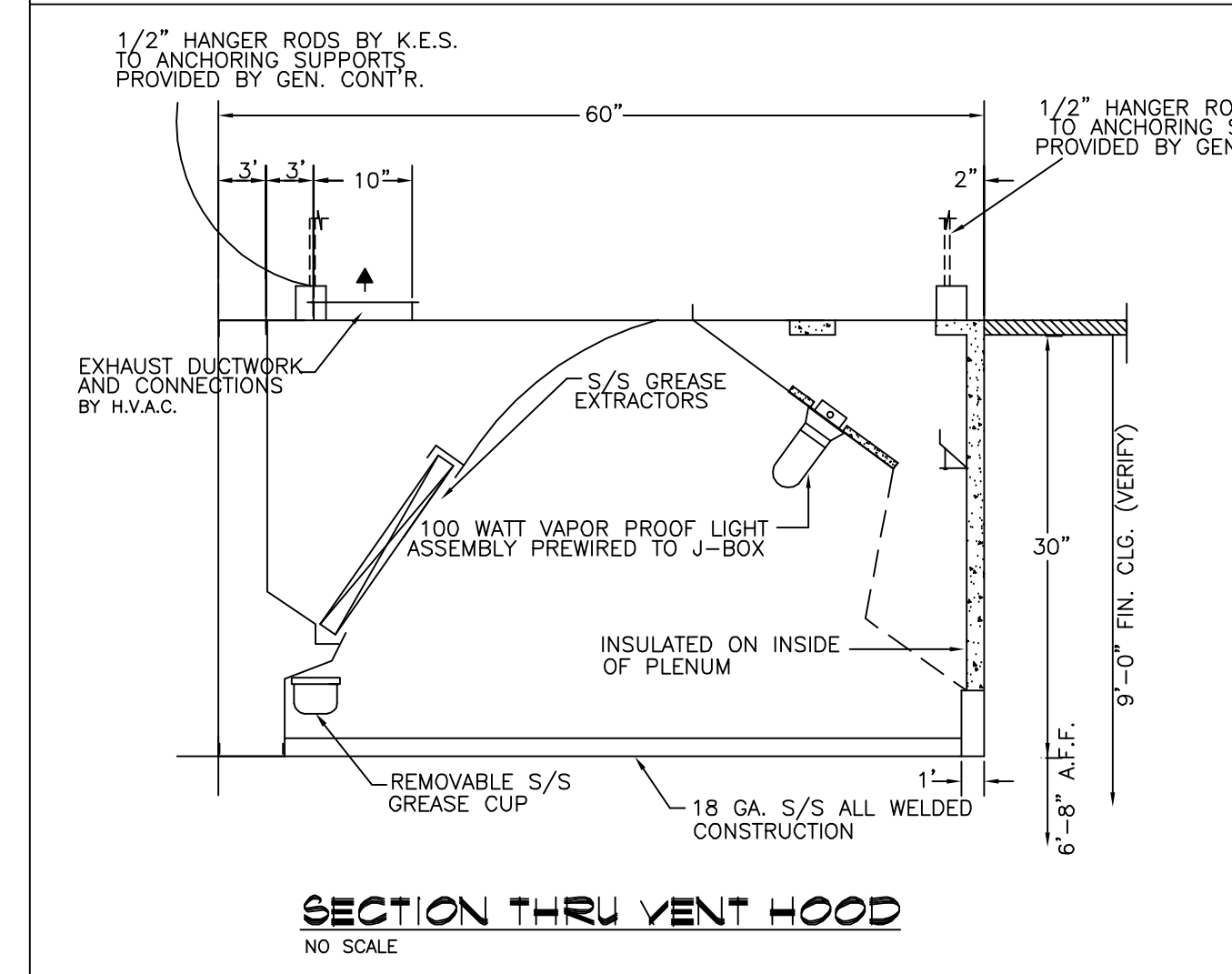
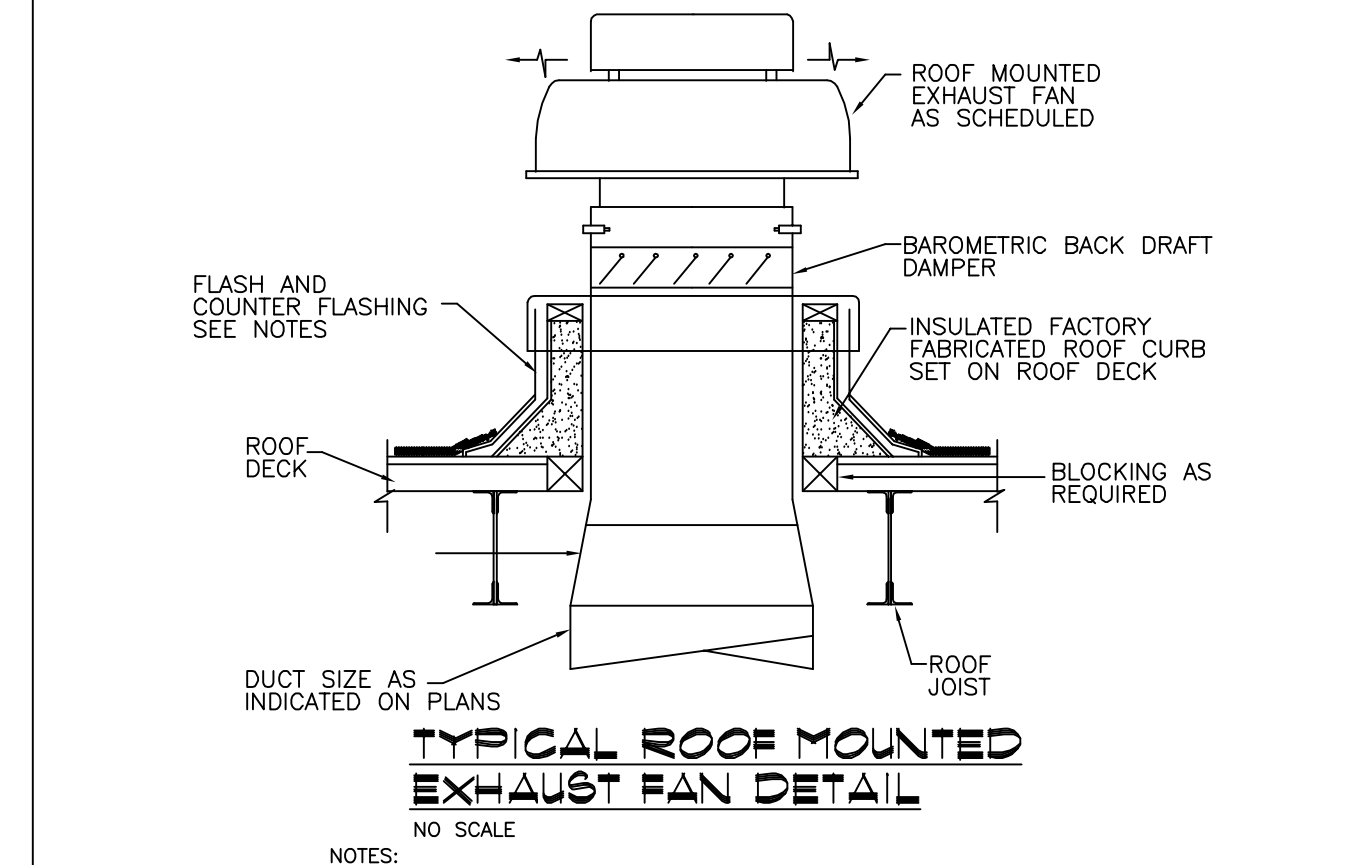
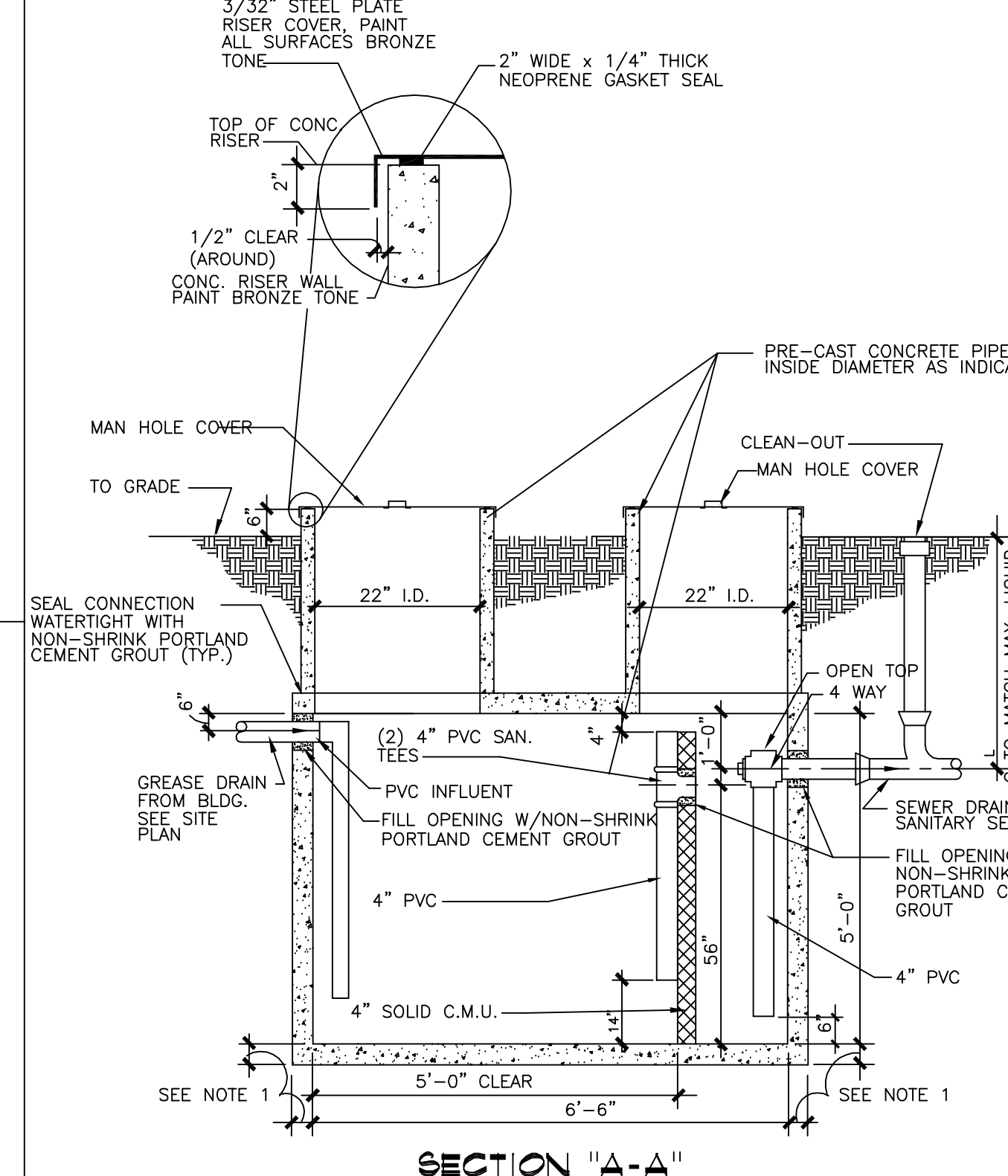
- MECHANICAL NOTES INDICATED BY "□":**
1. EXHAUST FANS ABOVE CEILING FOR BATHROOMS TO OPERATE CONTINUOUSLY. SWITCH WITH BREAKER. MEN'S RESTROOM EXHAUST BASED ON 2 CFM/SQ. OR 1 AIR CHANGE EVERY 5 MINUTES. WOMEN'S RESTROOM EXHAUST BASED ON 2 CFM/SQ. FT. OR 1 AIRCHANGE EVERY 5 MINUTES.
  2. 8"x8" EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN. PROVIDE OFFSET AND TRANSITION AS REQUIRED. BATH EXHAUST DUCTS & REGISTERS TO BE ALUMINUM.
  3. FURNISH VENT HOOD AND EXHAUST FAN PRV #3-16 UNDER ALTERNATE #1. REFER TO SHEET MP-4 FOR DETAILS. KITCHEN HOOD EXHAUST DUCT SHALL BE WELDED, BLACK IRON. MAINTAIN 18" CLEARANCE TO COMBUSTIBLES OR PROVIDE 1-HOUR RATED ENCLOSURE FOR DUCT.

MEP PROJECT #1618  
**Power Systems**  
 P.O. Box 2863  
 San Angelo, Texas 76902  
 325-659-2235  
 FIRM NO. P-0257  
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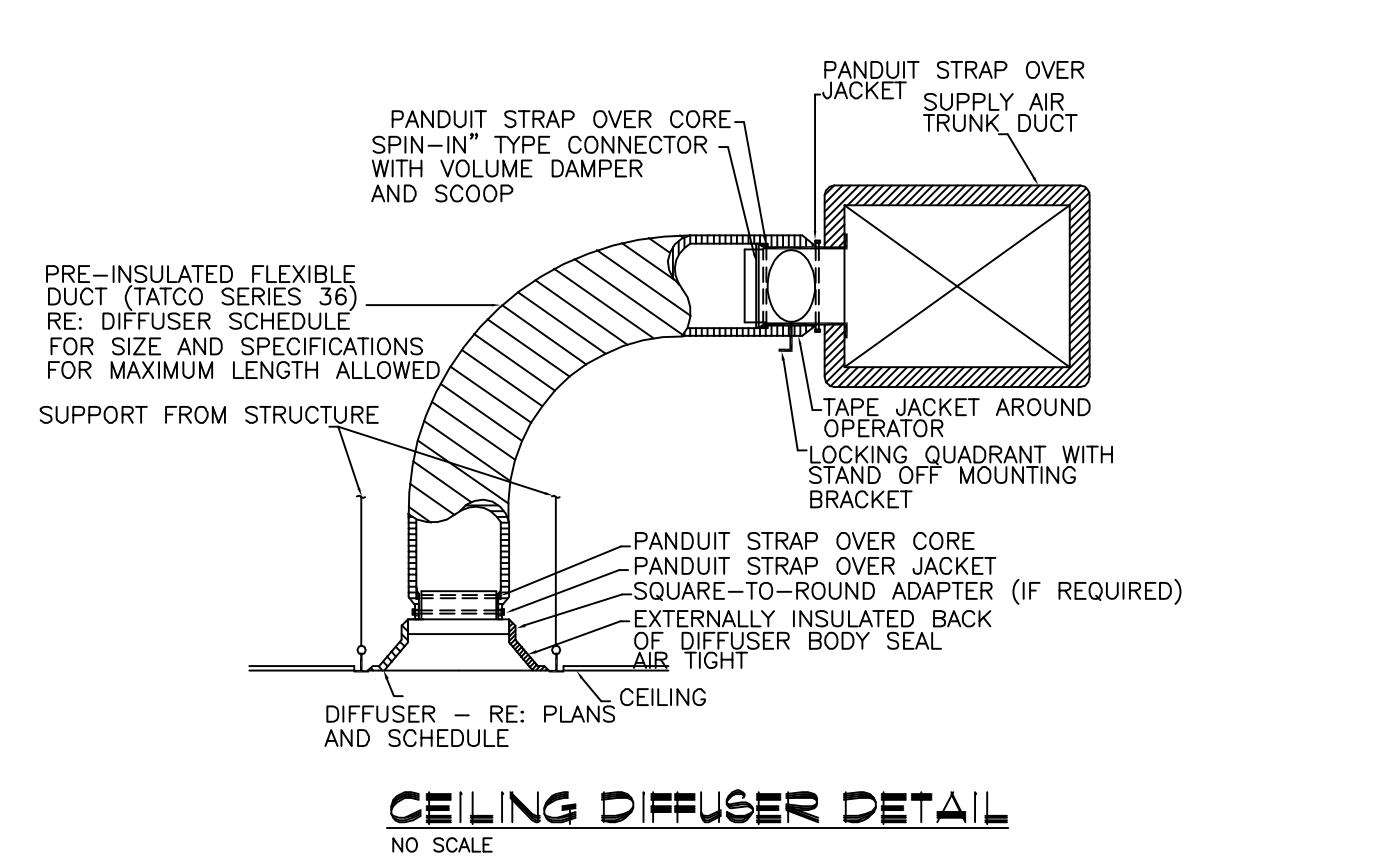
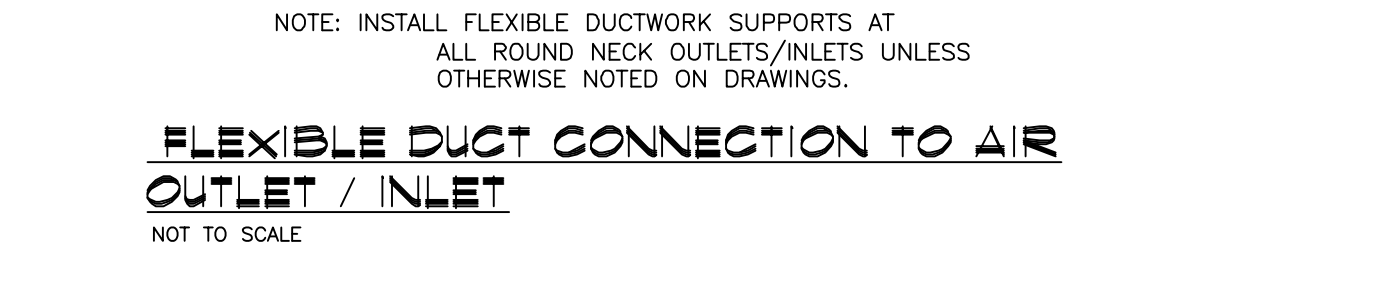
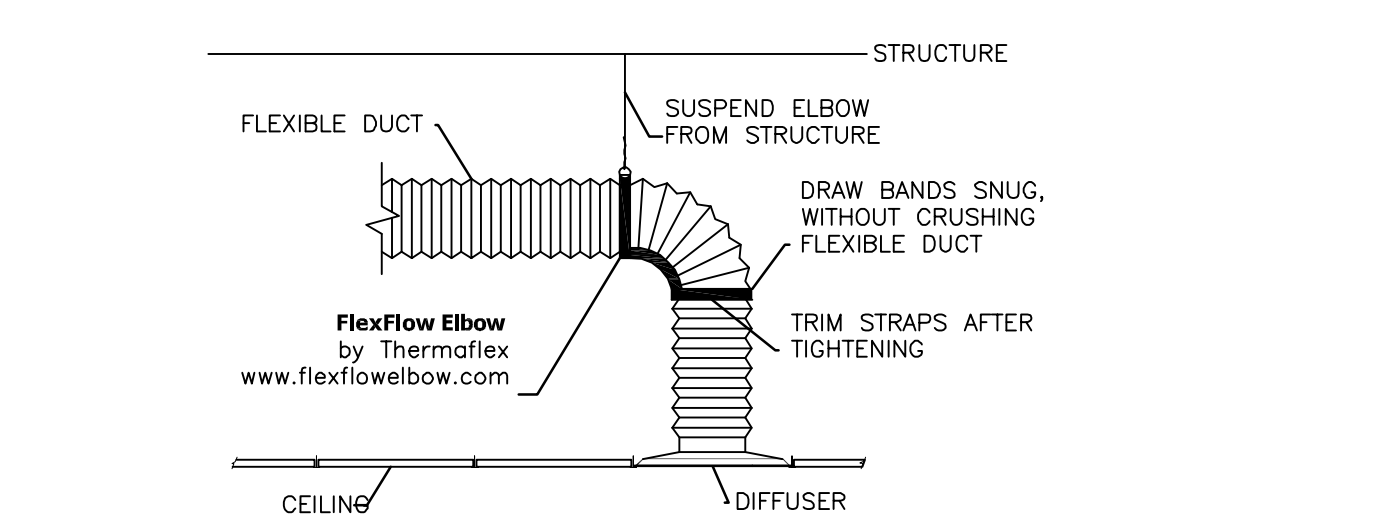
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- NOTES:**
- GREASE TRAP SHALL BE ENGINEER DESIGNED TO RESIST ALL LATERAL LOADS & TRAFFIC LOADS AS APPLICABLE.
  - IF PRE-FAB SEPTIC TANK IS USED, THEN TANK SHALL BE MODIFIED TO MEET ALL DETAILS & OPENINGS & NOTES.
  - SUBMIT GREASE TRAP SHOP DRAWINGS TO OWNER/FRANCHISEE FOR APPROVAL. SHOP DRAWINGS SHALL SHOW EXACT DIMENSIONS, WALL THICKNESSES, CONC. STRENGTH, ETC.
  - GREASE TRAP INSIDE DIMENSIONS ARE APPROXIMATE & ANY CHANGES IN LENGTH X WIDTH X DEPTH SHALL BE ADJUSTED IN PROPORTIONS SHOWN.
  - INSTALL 2" VENT ON INLET AND OUTLET. RUN TO BUILDING AS SHOWN ON RISER DIAGRAM.



- NOTES:**
- PROVIDE FLASHING SUITABLE FOR BUILT-UP ROOFING.
  - MIN. AIR VELOCITY IS 1500 FPM. MAX. AIR VELOCITY IS 2500 FPM.
  - INSTALLATION MUST INCLUDE MEANS FOR INSPECTING, CLEANING AND SERVICING THE FAN.
  - NO DAMPERS TO BE INSTALLED IN THE SYSTEM.
  - CONSTRUCT 1-HOUR RATED WALL AROUND DUCT THROUGH ATTIC IF WITHIN 18" OF COMBUSTIBLE MATERIALS OR REQUIRED BY LOCAL CODES.



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San Angelo, Texas 76902  
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**ORDINANCES**  
NOTE: ALL TRANSVERSE AND LONGITUDINAL ENDS OF LINER TO BE COATED WITH ADHESIVE.  
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POWER SYSTEMS  
STRUCTURAL ENGINEER  
SKG ENGINEERING

**kinney . franke**  
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**CITY OF SAN ANGELO**  
**RIO CONCHO SPORTS COMPLEX**  
San Angelo, Texas

Project No. 250-02-0516  
Date AUGUST 30, 2016  
Sheet Number **MP-3**  
4 OF 9

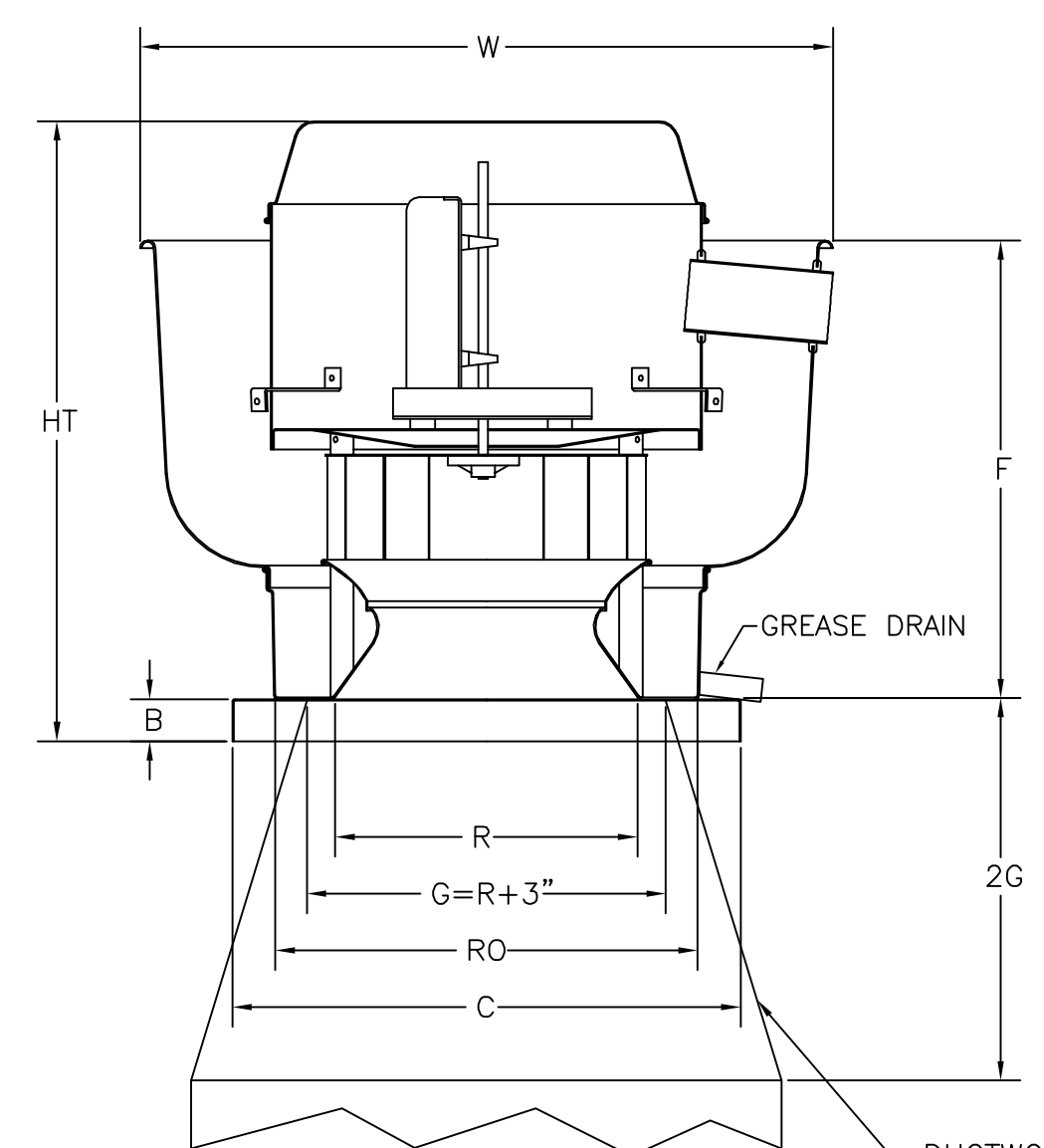
HOOD INFORMATION

HOOD NO.	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM RISER(S)					SUPPLY PLENUM RISER(S)					HOOD CONSTRUCTION	HOOD CONFIG.	
				TOTAL EXH. CFM	WIDTH	LENG.	DIA.	CFM	S.P.	TOTAL SUP. CFM	WIDTH	LENG.	DIA.		CFM	S.P.
1	4824 ND-2	4' 6.00" Nom. 4' 6.50" OD	450 Deg.	1013	9"	9"	1013	-0.362	0					18 GA SS Where Exposed		COMPLEX #2

HOOD INFORMATION

HOOD NO.	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD WEIGHT
	TYPE	QTY.	HEIGHT	LENGTH	QTY.	TYPE	WIRE GUARD	LOCATION	TYPE	SIZE	ELECTRICAL MODEL #	QUANTITY		
1	ALUM. BAFFLE WITH HANDLES AND HOOK	2	16"	16"	2	Incandescent Light	NO							258 LBS.

NCAFA SERIES UPBLAST EXHAUST FANS (UL762)



- FEATURES:**
- ROOF MOUNTED FANS RESTAURANT MODEL - UL762
  - AMCA SOUND AND AIR CERTIFIED
  - WIRING FROM MOTOR TO DISCONNECT SWITCH
  - WEATHERPROOF DISCONNECT
  - HIGH HEAT OPERATION 300°F (149°C)
  - GREASE CLASSIFICATION TESTING
- NORMAL TEMPERATURE TEST**  
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.
- ABNORMAL FLARE-UP TEST**  
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

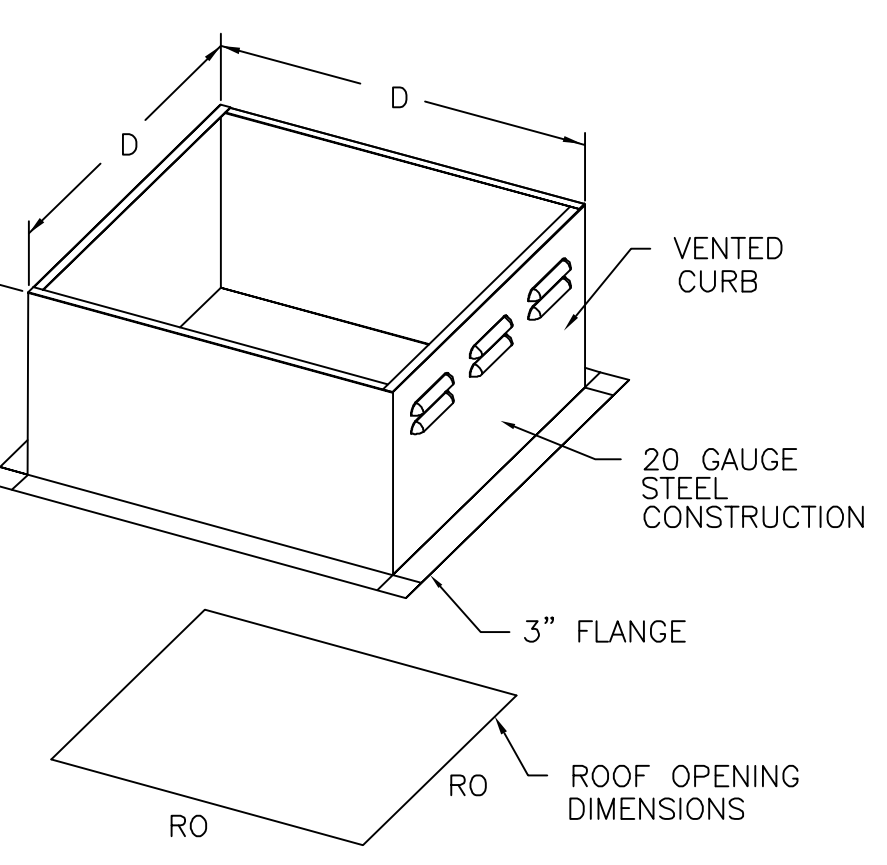
- OPTIONS:**
- GREASE BOX
  - HINGED FAN
  - PITCHED CURB
  - INSULATED CURB

NCAFA BELT DRIVE CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

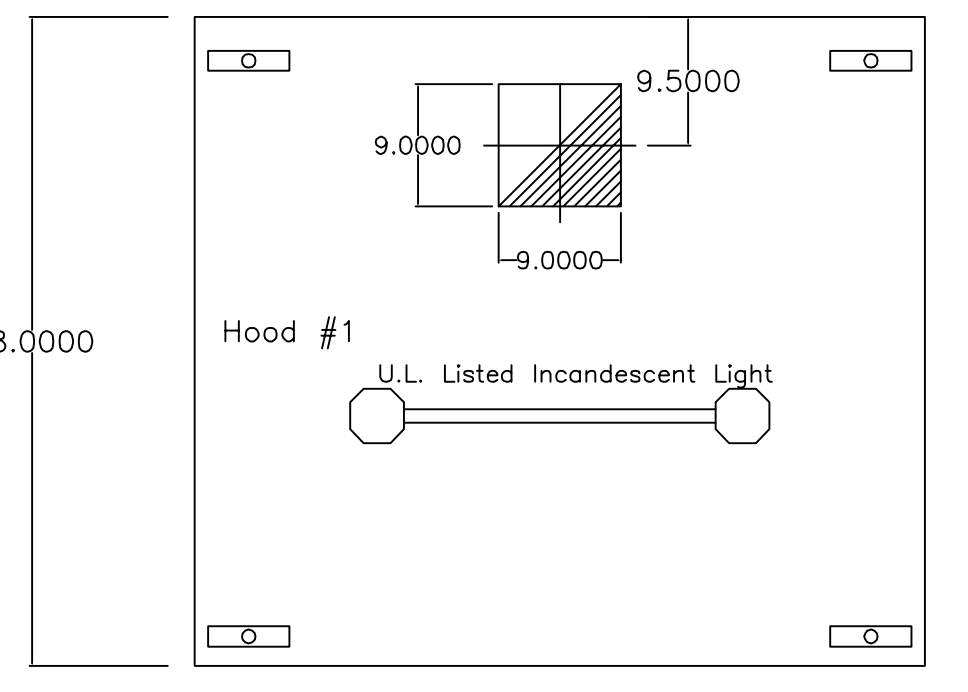
FAN MODEL	HT	W	B	C	F	R	RO	WEIGHT LB
NCA08FA	25 1/4	27 1/4	2	21	18 1/2	12 1/8	16	105
NCA10FA	27 1/4	30 1/4	2	21	21 1/2	13 1/4	16	120
NCA14FA	30 1/2	33 3/4	2	24 3/4	23	14 7/8	20	140
NCA16FA	33 3/4	39 3/8	2	28	23 1/2	16 1/2	24	190
NCA18FA	33 3/8	38 7/8	2	28	29 1/2	18	24	195
NCA24FA	37 1/2	43 3/8	2	33	30 5/8	23 7/8	28	270
NCA30FA	40	52 3/4	2	40	33 1/2	24	36	410
NCA36B	49 1/2	66	2	44 1/2	47 1/2	30 3/4	36	470

CURB DIMENSIONAL DATA

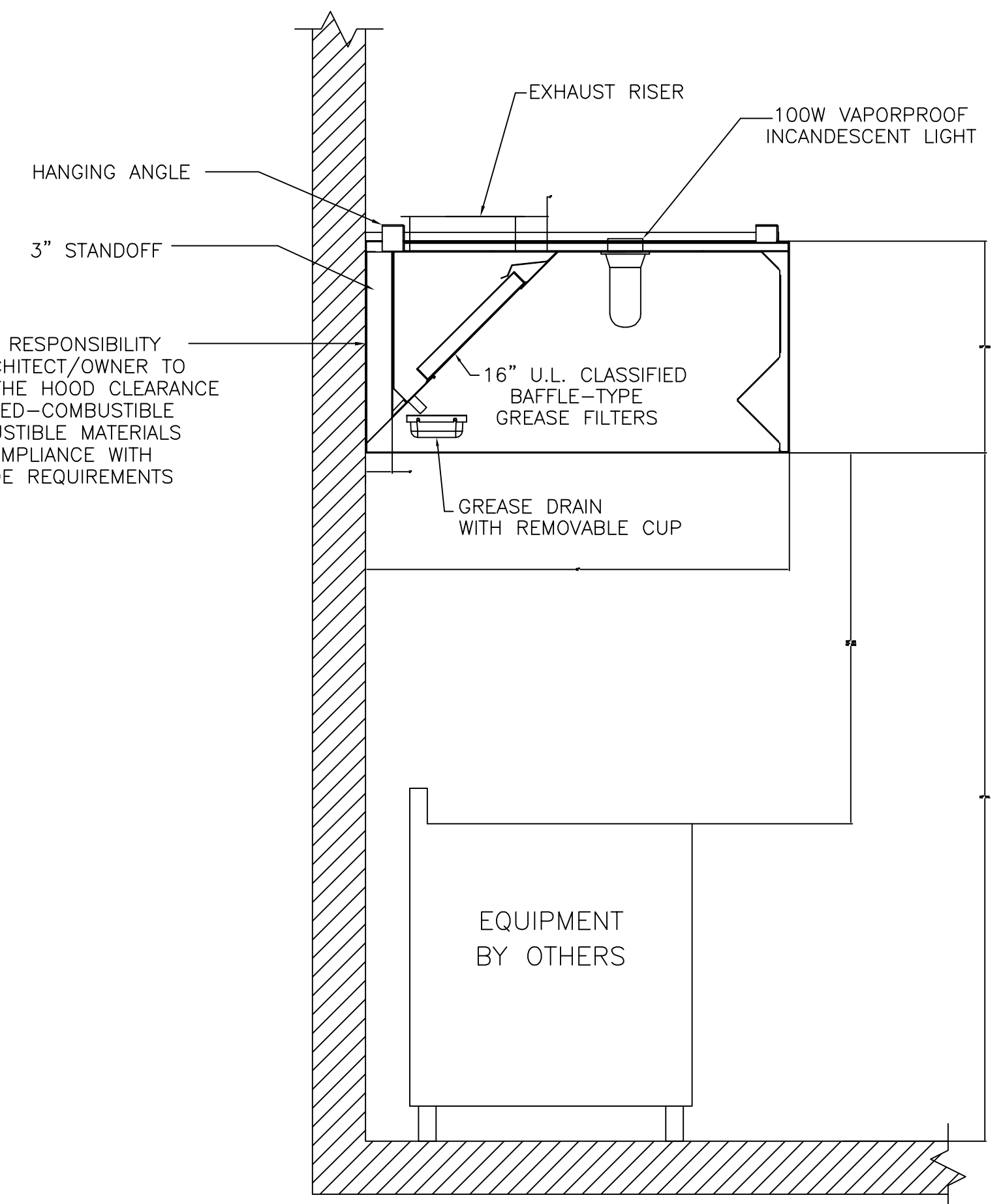
FAN MODEL	D	E
NCA08FA	19 1/2	22
NCA10FA	19 1/2	20
NCA14FA	23	20
NCA16FA	26 1/2	20
NCA18FA	26 1/2	20
NCA24FA	31 1/2	20
NCA30FA	38 1/2	20
NCA36B	43	20



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.  
 SPECIFY PITCH:  
 EXAMPLE: 7/12 PITCH = 30° SLOPE

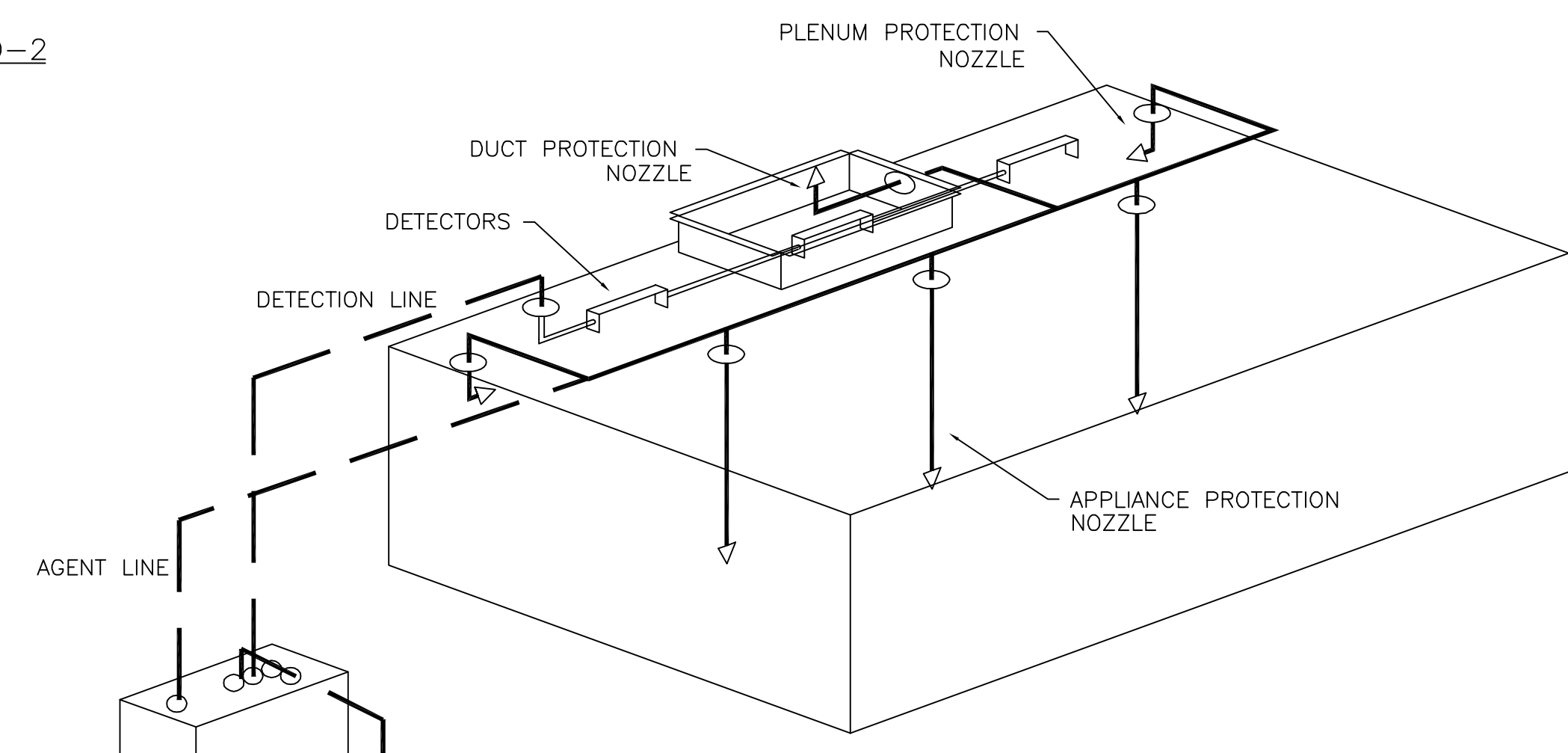


PLAN VIEW - 4' 6.00" LONG 4824ND-2



SECTION VIEW - MODEL 4224-ND-2

IT IS THE RESPONSIBILITY OF THE ARCHITECT/OWNER TO ENSURE THAT THE HOOD CLEARANCE FROM LIMITED-COMBUSTIBLE AND COMBUSTIBLE MATERIALS IS IN COMPLIANCE WITH LOCAL CODE REQUIREMENTS



SAMPLE OF A CAPTIVE AIRE PROVIDED FIRE SUPPRESSION SYSTEM WITH REMOTE MOUNTED AUTOMAN

FOR QUESTIONS, CALL THE SOUTH TEXAS REGIONAL OFFICE  
 6100 BANDERA ROAD #404 "F" SAN ANTONIO, TX. 78238  
 PHONE: (210) 647-7244, (800) 948-1577  
 FAX: (210) 647-1166



JOB	SAN ANGELO NEW SPORTS COMPLEX		
LOCATION			
DATE	02/21/2007	JOB #	0
DWG #	SANANGELONNEWS	DRAWN BY	
REV.	1.00	SCALE	8.5" x 11"

FAN INFORMATION - PRV #3-16

FAN UNIT NO.	FAN UNIT MODEL #	EXHAUST FAN								SUPPLY FAN										
		MODEL	TAG	CFM	S.P.	RPM	H.P.	Ø	VOLT	FLA	BLOWER	HOUSING	TAG	CFM	S.P.	RPM	H.P.	Ø	VOLT	FLA
1	NCA10FA	NCA10FA		1013	-0.500"	967	0.333	1	115	7.0										

FAN OPTIONS

FAN NO.	OPTION (Qty. - Descr.)
1	1 -Grease Box

CURB ASSEMBLIES

NO.	ON FAN	ITEM	SIZE
1	# 1	Curb	19.500"W x 19.500"L x 20.000"H Vented Hinged

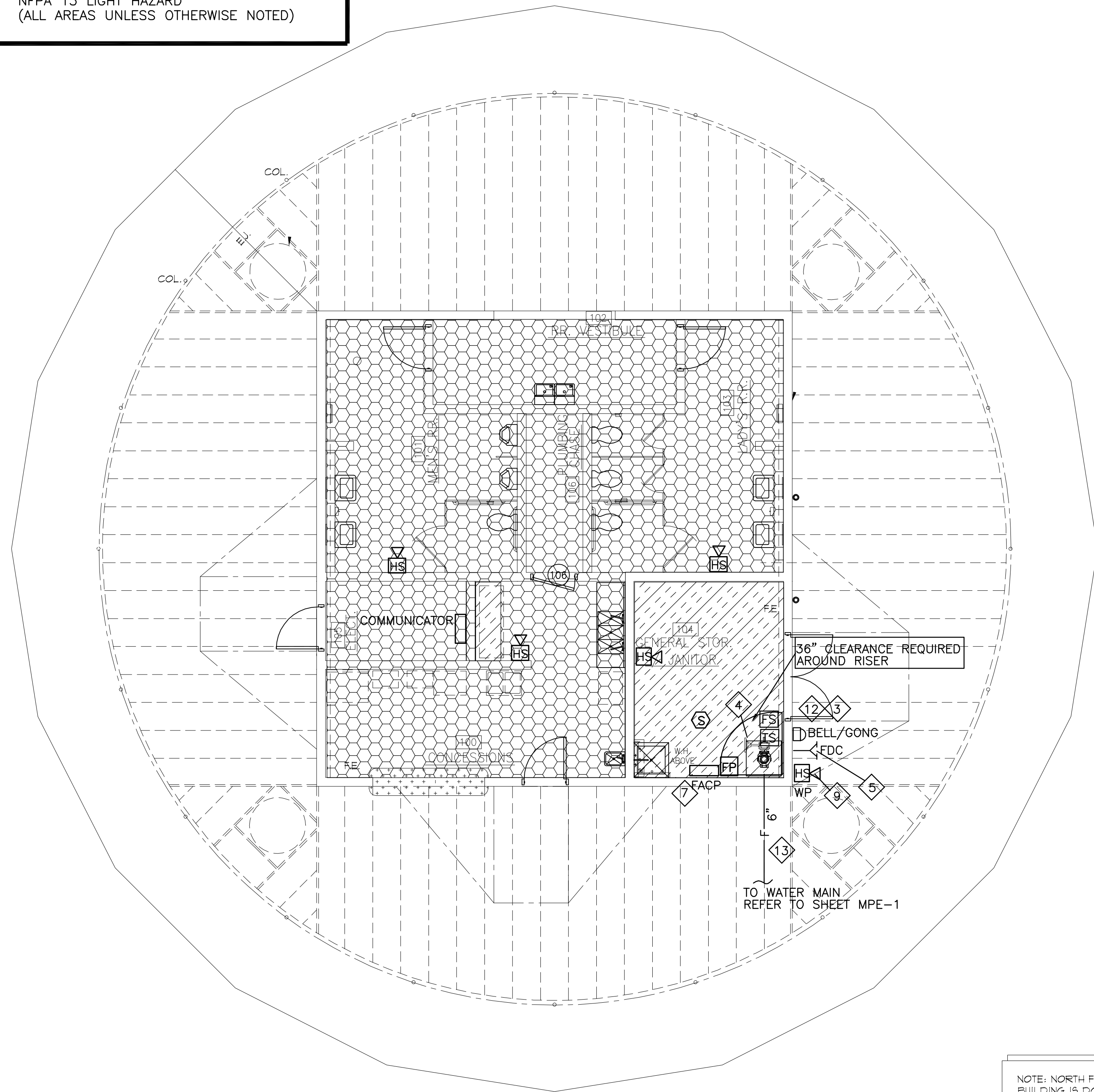


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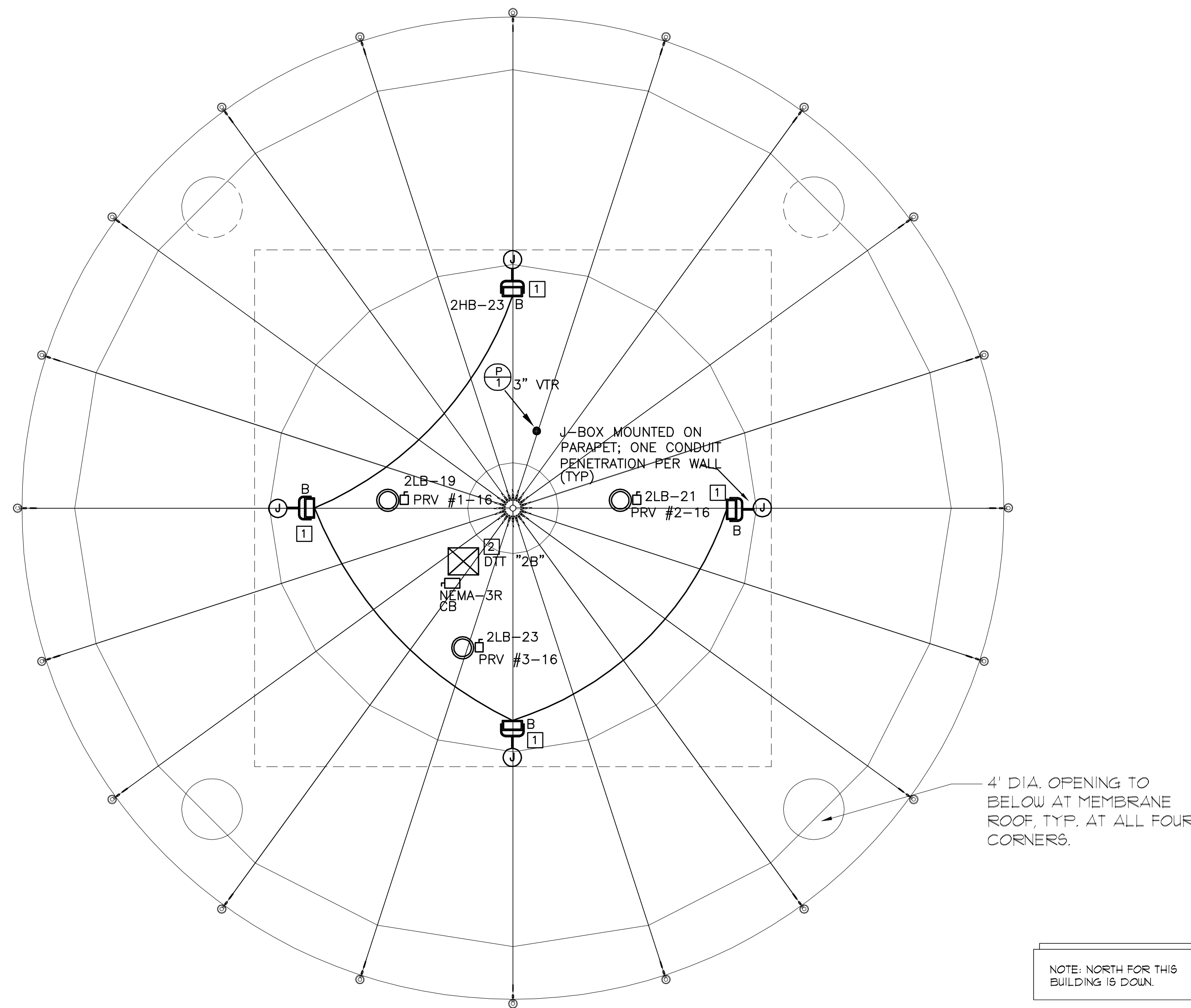


FIRE PROTECTION LEGEND	
	NFPA ORDINARY HAZARD GROUP 1
	NFPA 13 LIGHT HAZARD (ALL AREAS UNLESS OTHERWISE NOTED)



**FIRE PROTECTION PLAN**

NOTE: NORTH FOR THIS BUILDING IS DOWN.



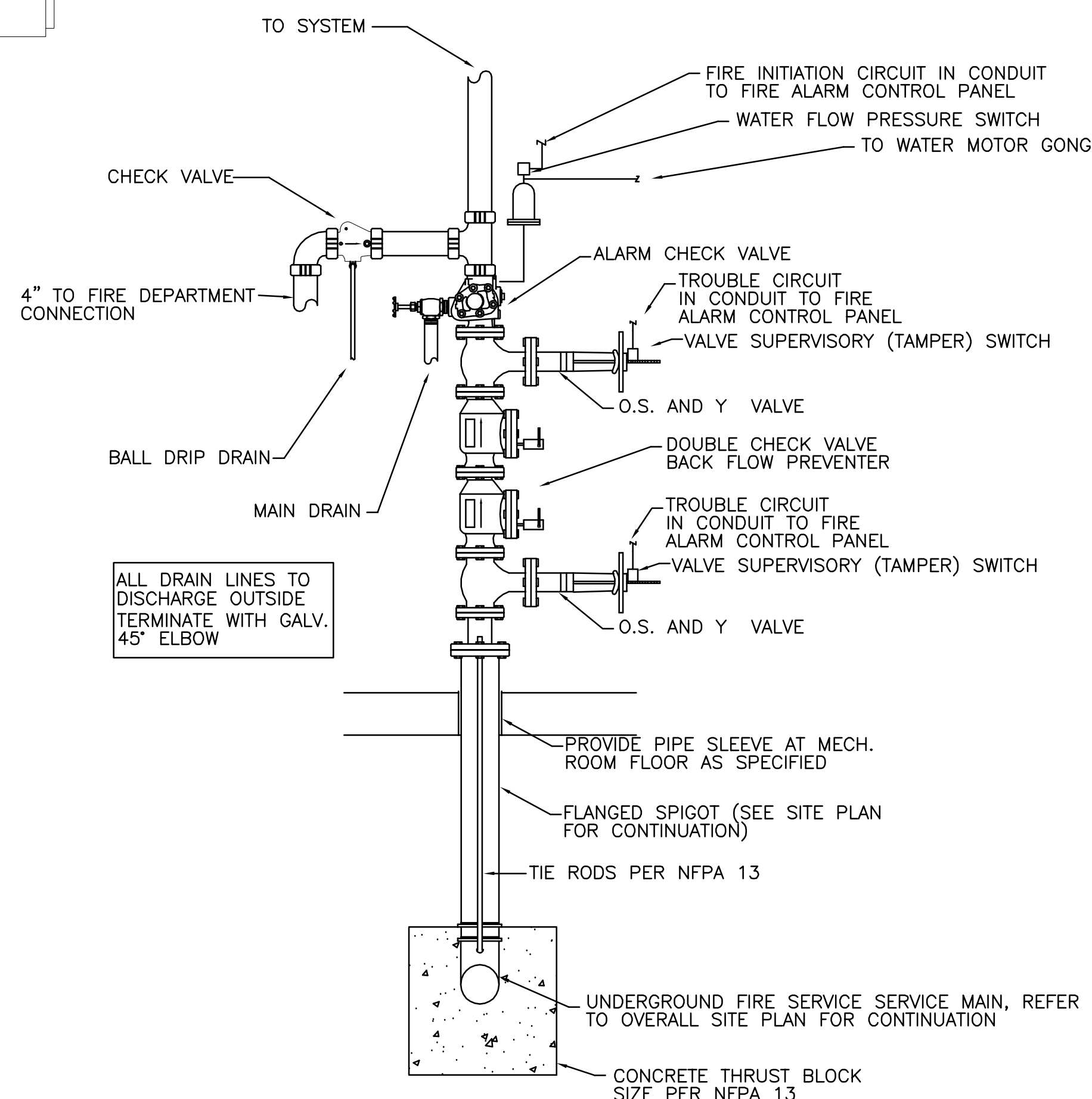
**ROOF PLAN**

NOTE: NORTH FOR THIS BUILDING IS DOWN.

- NOTES:**
- PIPE SIZES SHOWN FOR REFERENCE BASED ON PRELIMINARY CALCULATIONS ONLY. ENTIRE HATCHED AREAS ON PLAN SHALL BE HYDRAULICALLY CALCULATED AS FOLLOWS: FOR LIGHT HAZARD OCCUPANCIES, PROVIDE MINIMUM DENSITY OF 0.1 GPM PER S.F. FOR ORDINARY HAZARD GROUP 2, PROVIDE MINIMUM DENSITY OF 0.2 GPM PER S.F. ENTIRE SPRINKLER INSTALLATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF NFPA 13. SYSTEM SHALL ALSO INCLUDE 100 GPM FOR OUTSIDE HOSE STREAM.
  - COORDINATE SPRINKLER PIPING AND SPRINKLER HEADS WITH ARCHITECTURAL, STRUCTURAL, HVAC, PLUMBING AND ELECTRICAL WORK.
  - PROVIDE DRAIN VALVE AND MAIN DRAIN FOR SYSTEM IN STORAGE ROOM. TERMINATE DISCHARGE LINE OUTDOORS.
  - WET PIPE FIRE SPRINKLER RISER: REFER TO DETAIL, THIS SHEET.
  - LOCATION OF FIRE DEPARTMENT CONNECTION.
  - REFER TO THIS SHEET FOR THRUST BLOCK DETAILS.
  - SMOKE DETECTOR TO BE INSTALLED ABOVE FACP. INSTALL FACP ADJACENT TO RISER.
  - CONTRACTOR IS RESPONSIBLE TO REFER TO ALL DRAWINGS, INCLUDING ARCHITECTURAL, STRUCTURAL & MEP TO DETERMINE COMPLETE SCOPE OF WORK.
  - EXTERIOR WEATHERPROOF HORN TO BE FURNISHED & INSTALLED BY FIRE ALARM CONTRACTOR. TIE TO FACP.
  - BUILDING IS LIGHT HAZARD DESIGN UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY NFPA 13. CONTRACTOR IS RESPONSIBLE TO PROVIDE CORRECT DENSITY AND COVERAGE TO MEET CODE AND THE REQUIREMENTS OF THE AHJ. SPRINKLER THE ATTIC.
  - FLOW TEST INFORMATION IS NOT AVAILABLE.
  - INSTALL WATER MOTOR GONG AT 9'-0" AFF ON EXTERIOR WALL ABOVE FDC. WATER MOTOR GONG SHALL BE PROVIDED BY FIRE SPRINKLER CONTRACTOR AND IS REQUIRED FOR THE PROJECT.
  - INSTALL 6" C900 PVC FIRE LINE COMPLETE WITH CITY CONNECTION IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS. THIS WORK TO BE DONE BY LICENSED CONTRACTOR FOR FIRE SPRINKLER INSTALLATION. PROVIDE TEST CERTIFICATES PER NFPA 13.

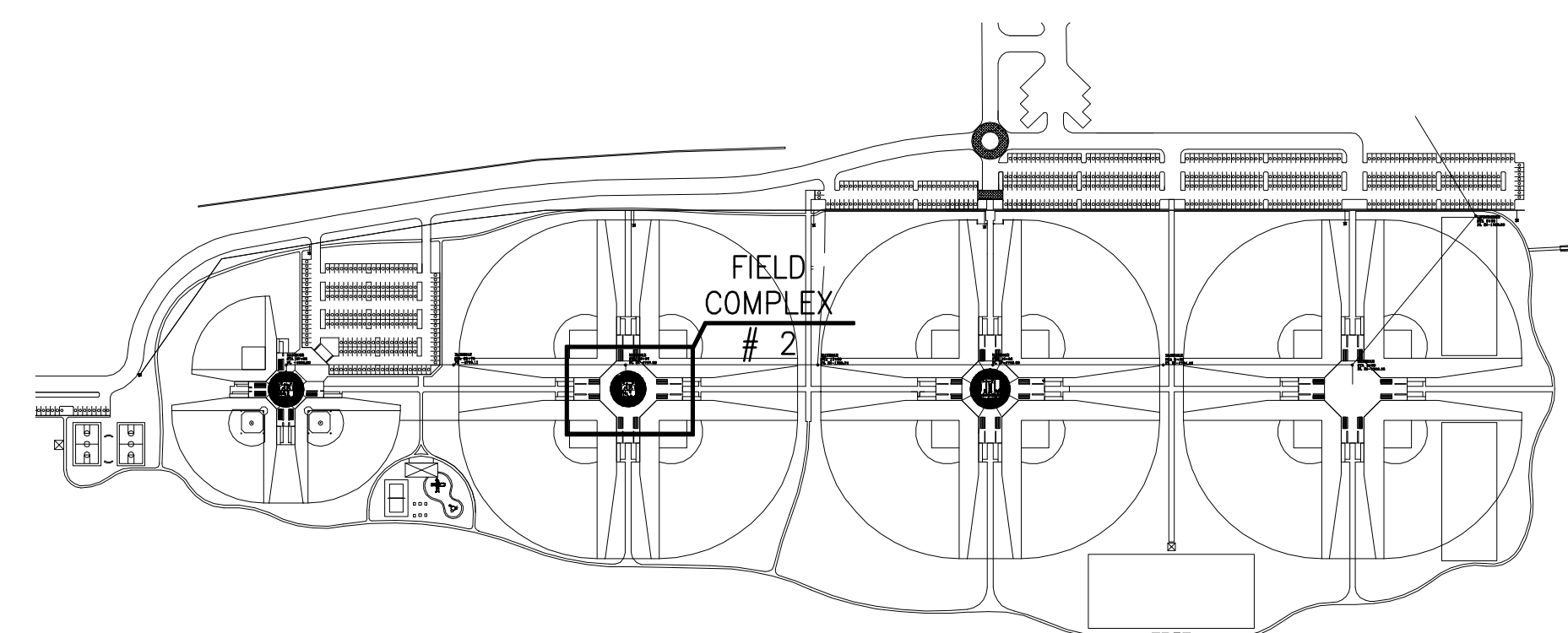
MINIMUM THRUST BLOCK AREA		
PIPE SIZE	WATER PIPE	
	TEE DEAD END 45° AND 90° BEND	22.5° BEND
4"	3 SQ.FT.	3 SQ.FT.
6"	4 SQ.FT.	3 SQ.FT.
8"	6 SQ.FT.	3 SQ.FT.
10"	9 SQ.FT.	5 SQ.FT.
12"	12 SQ.FT.	7 SQ.FT.
16"	23 SQ.FT.	12 SQ.FT.
18"	29 SQ.FT.	15 SQ.FT.

**Underground Notes:**  
 All material to be UL/FM approved for fire service.  
 All underground to comply with N.F.P.A. #24.  
 Concrete thrust block to be provided at all changes in pipe direction.  
 Minimum bury depth to be 36" to top of pipe.  
 New underground pipe to be tested at 200psi for 2hrs.  
 All underground fittings to be mechanical joint, UNO.



**FIRE SPRINKLER SYSTEM RISER DETAIL - NFPA 13**  
 NO SCALE

- NOTES INDICATED BY "□":**
- CROSS AIM FIXTURES TYPE "B" TO PROVIDE A MORE UNIFORM LIGHTING. TILT & AIM EACH EACH FIXTURE TO OPPOSITE ROOF SURFACE.
  - PROVIDE CURB FOR STEPDOWN XFMR ON ROOF. ALL PENETRATIONS THRU ROOF TO BE MADE THROUGH CURB.
  - PROVIDE SECURE BLOCKING FOR FAN MOUNTING.



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**ROOF/FIRE PROTECTION PLAN - COMPLEX #2**  
 SCALE: 3/16" = 1'-0"

Revised \_\_\_\_\_

CIVIL ENGINEER  
 SKG ENGINEERING  
 POWER SYSTEMS  
 MECHANICAL ENGINEER  
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 SKG ENGINEERING

**kinney . franko** ARCHITECTS AIA  
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