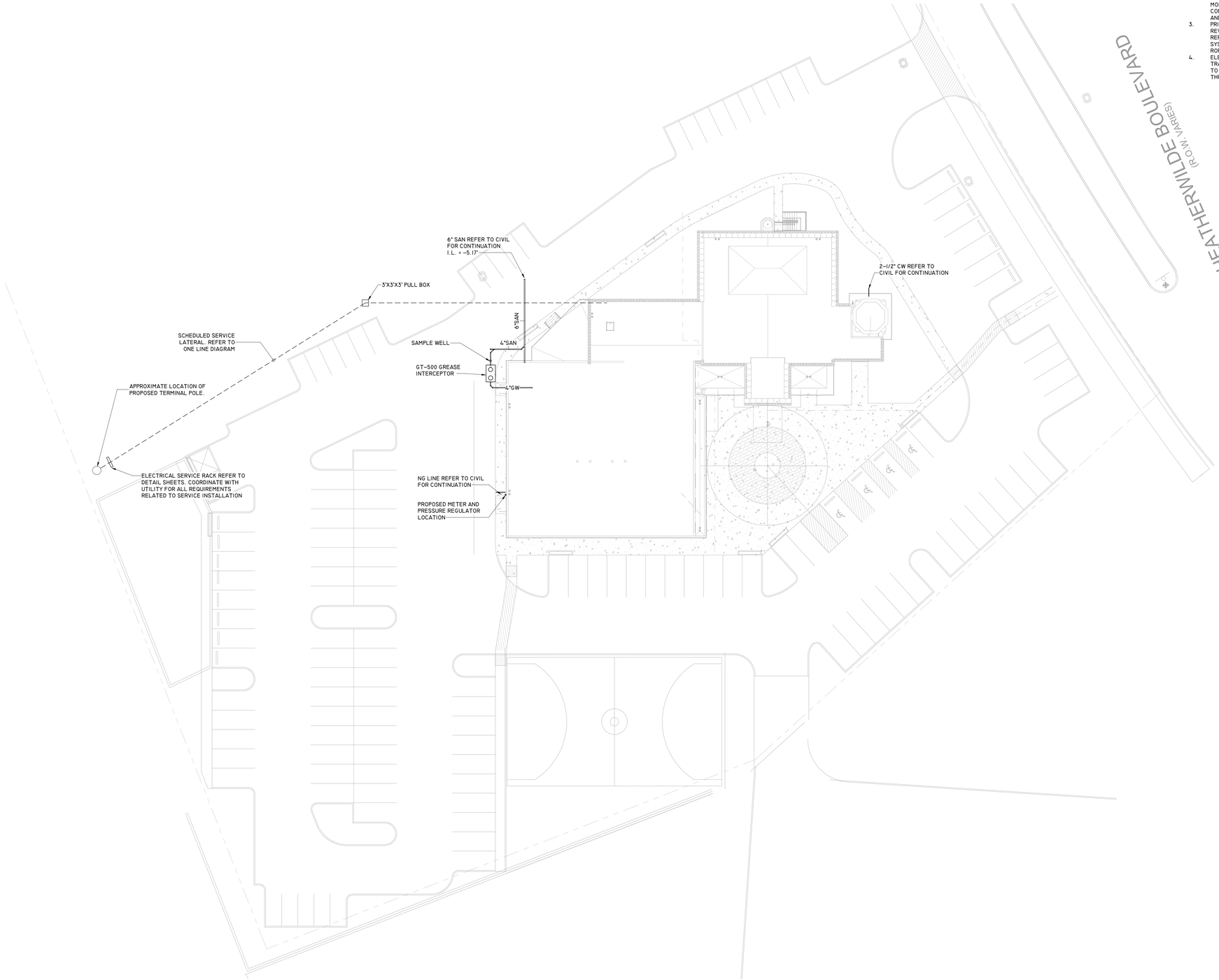
PROPOSED SITE PLAN NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ELECTRICAL SERVICE ENTRANCE FOR THE PROJECT. CONTRACTOR SHALL SUBMIT INFORMATION DEVELOPED BY ENGINEER IN FORM OF SITE PLAN, DRAWINGS, ONE LINE DIAGRAM, AND LOAD ANALYSIS TO THE POWER COMPANY REPRESENTATIVE FOR PROCESSING SERVICE REQUEST. LOCATION OF TRANSFORMER SHALL BE COORDINATED WITH POWER COMPANY AS SHOWN ON THE PLAN. CONTRACTOR IS ALSO RESPONSIBLE FOR FILING ALL REQUESTS AND APPLICATIONS FOR SERVICE TO THE POWER COMPANY. DETERMINATION OF LENGTH, QUANTITIES, PULL BOXES/MANHOLES AND STANDARD OF CONSTRUCTION FOR UNDERGROUND PRIMARY LINES (AS REQUIRED) AND TRANSFORMER PAD SHALL BE RESPONSIBILITIES OF THE CONTRACTOR. DETAILS FOR ELECTRICAL SERVICE TRANSFORMERS PAD AND UNDERGROUND PRIMARY CONDUIT SHOWN ON THESE DOCUMENTS SHALL BE APPROVED BY POWER COMPANY BEFORE ANY CONSTRUCTION BEGINS. CONTRACTOR SHALL EXPEDITE COORDINATION EFFORT FOR ANY CONTRACTUAL ARRANGEMENTS FOR EASEMENT RELATED TO PRIMARY OVERHEAD OR UNDERGROUND LINES IF REQUIRED BY POWER COMPANY. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE NEW SERVICE REQUEST.
2. UNDERGROUND CONDUIT ROUTING SHALL BE COORDINATED WITH EXISTING PAVEMENT AND UNDERGROUND UTILITIES. COORDINATE WITH CIVIL PLANS FOR MORE INFORMATION. PROVIDE PULL STRING FOR ALL UNDERGROUND EMPTY CONDUITS. REFER TO SPECIFICATIONS AND DETAILS FOR INSTALLATION METHODS AND MATERIALS.
3. PRIOR TO TRENCHING, UNDERGROUND CONDUIT ROUTING SHALL BE MARKED FOR REVIEW AND ROUTING PATH APPROVAL OBTAINED BY THE OWNER REPRESENTATIVE. COORDINATE WITH EXISTING IMPROVEMENTS, TREES, ROOT SYSTEMS, EXISTING PAVEMENT, AND UNDERGROUND UTILITITES. PROVIDE PULL ROPE FOR ALL UNDERGROUND EMPTY CONDUITS.
4. ELECTRICAL CONTRACTOR SHALL SEAL INSIDE AND OUT ALL CONDUITS WHICH TRAVEL BETWEEN CONDITIONED AND NON-CONDITIONED SPACES (OR OUTDOOR TO INDOOR) AFTER PULLING CONDUCTORS SO THAT MOISTURE CONDENSATION THROUGH THE CONDUITS IS MITIGATED.



1 MEP1.01 SITE PLAN
SCALE : 1" = 20'-0"

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04-17-2026

ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

SITE PLAN

SCALE: As indicated

DATE: 2026/04/17

PROJECT NUMBER: Project Number

SHEET NUMBER

MEP1.01

PIPING MATERIALS

1. **SANITARY WASTE AND VENT PIPING** (BELOW GRADE)
SCHEDULE 40 PVC, CONFORM TO ASTM D-1785 SOIL AND WASTE VENT PIPING. FITTINGS SHALL BE COMPATIBLE MATERIAL WITH SOLVENT CEMENT TYPE JOINTS.

2. **SANITARY WASTE AND VENT PIPING** (ABOVE SLAB ONLY)
PIPE: CAST IRON ASTM A 888 WITH HUBLESS COUPLING PER CISPI 310

JOINTS NO HUB, ASTM C 564 NEOPRENE GASKETS AND STANDARD STAINLESS STEEL CLAMP AND SOLID SHIELD ASSEMBLIES CONSTRUCTED OF TYPE 300 SERIES STAINLESS STEEL. CLAMP ASSEMBLIES SHALL CONFORM TO FM 1680 WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY.

FITTINGS: CAST IRON, ASTM A 888 DRAINAGE PATTERN.

3. **DOMESTIC WATER**
TYPE "L" COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 (TIN/ANTIMONY) SOLDER JOINTS.

4. **NATURAL GAS** (ABOVE GRADE)
SCHEDULE 40 BLACK STEEL WITH CLASS 150 BLACK MALLEABLE IRON WELDED FITTINGS. ROOF MOUNTED PIPING SHALL BE PAINTED WITH GALVANIC PAINT, PRIMED WITH ALKYD-BASE PRIMER AND 2 LAYERS YELLOW GALVANIC TOP COATS.

NOTE: SCREWED JOINTS WILL NOT BE PERMITTED.

A. ALL WELDING FITTINGS SHALL BE FACTORY-MADE AND SHALL BE FULL LINE SIZE, FOR EACH TEE, BRANCH, ELBOW ETC., WITH REDUCERS AFTER FITTINGS, IF REQUIRED.

5. **NATURAL GAS** (BELOW GRADE)
HDPE YELLOW GAS PIPE AND FITTINGS IN ACCORDANCE WITH ASTM D-2513, GRADES 2306, 3306, AND 3408 WITH FUSION JOINTS ONLY, EQUAL TO DRISCOPIPE 8100-DRII SERIES

6. FIRE PROTECTION SYSTEM:
SCHEDULE 40 BLACK STEEL PIPE WITH CLASS 150 BLACK MALLEABLE IRON SCREWED FITTINGS. PIPING 2 1/2" AND LARGER SHALL BE JOINED WITH VICTAULIC FITTINGS UTILIZING ROLL GROOVES. VICTAULIC REDUCING COUPLINGS "FIT" OR "PRESS FIT" SYSTEMS AND STRAP TYPE MECHANICAL TEES SHALL NOT BE USED.

PLUMBING LEGEND & ABBREVIATIONS

DISREGARD LEGEND ITEMS NOT INDICATED ON DRAWINGS

	NEW PLUMBING FIXTURE
SAN / S	SANITARY WASTE
STORM / ST	STORM DRAINAGE LINE
C.D.	CONDENSATE DRAIN LINE
GW	GREASE WASTE
AW	ACID WASTE
CHEM-W	CHEMICAL WASTE
V	VENT
FIRE	FIRE LINE
DIS	DEIONIZED WATER SUPPLY
DIR	DEIONIZED WATER RETURN
SW	SOFT WATER
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
TW	TEMPERED WATER PIPING
TWR	TEMPERED WATER RETURN PIPING
NPW(C)	NON POTABLE WATER (COLD)
NPW(H)	NON POTABLE WATER (HOT)
DI	DEIONIZED WATER
NG / G	NATURAL GAS
LA	NATURAL GAS
VAC	NATURAL GAS
N2	NATURAL GAS
FCO	FLOOR CLEAN OUT
ECO	EXTERIOR CLEANOUT
WCO	WALL CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
	RISER IDENTIFICATION
	ELBOW UP
	ELBOW DOWN
	CAP AND SEAL
	BALL VALVE
B.V.	BALANCING VALVE
	GAS VALVE
C.V.	CHECK VALVE
	SOLENOID VALVE
	FLOW SWITCH
TP	AUTOMATIC TRAP PRIMER
BFP	BACKFLOW PREVENTER
VTR	VENT THROUGH ROOF
F.F.L.	FINISHED FLOOR LEVEL
I.L.	INVERT LEVEL
A.R.F.	ABOVE FINISHED ROOF
(E)	EXISTING TO REMAIN
(OF)	OVERFLOW STORM DRAINAGE
(P)	PRIMARY STORM DRAINAGE
T.A.S	TEXAS ACCESSIBILITY STANDARDS

GENERAL NOTES

BOOK SPECIFICATION
SUPERCEDE ANY NOTES BELOW

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN. WHERE INTERFERENCE'S WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.

2. BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.

3. ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.

4. PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE. CONTRACTOR SHALL PROVIDE A COVER STATING WHAT SYSTEM IT IS SERVING. (CLEANOUT SANITARY, CLEANOUT GREASE WASTE, CLEANOUT ACID WASTE.)

5. INDIVIDUAL FIXTURE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. THIS CONTRACTOR SHALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.

6. FURNISH AND INSTALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE OF EQUIPMENT HAVING PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.

7. SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.

8. EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.

9. FIELD VERIFY EXISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.

10. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF FLOOR DRAINS AND FLOOR SINKS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTORS EXPENSE.

11. PROVIDE A KEYED ACCESS PANELS FOR ALL VALVES AND APPARATUSES THAT REQUIRE MAINTENANCE.

12. A WATER HAMMER ARRESTOR SHALL BE INSTALLED FOR ALL SINGLE AND MULTIPLE FIXTURE BRANCH LINES. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND CONFORM TO ASSE 1010. PROVIDE FOR HOT WATER AND COLD WATER LINES AND REFER TO WATER HAMMER ARRESTOR DETAIL FOR MORE INFORMATION AND SIZING.

13. INSULATE PIPING AS FOLLOWS:
DOMESTIC COLD WATER PIPING:
INSULATE AND VAPOR SEAL ALL COLD AND SOFTENED WATER PIPE WITH GLASS FIBER PIPE INSULATION. (EXCEPTION : ALL PIPING EXPOSED TO THE EXTERIOR SHALL BE PROVIDED WITH ALUMINUM).

DOMESTIC HOT WATER PIPING:
INSULATE ALL HOT WATER PIPE WITH GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED WHITE JACKET.

DRAINS:
INSULATE AND VAPOR SEAL ALL ABOVEGROUND P-TRAPS AND HORIZONTAL DRAIN PIPING RECEIVING CONDENSATE OR ICE MAKER DRAINAGE WITH 1/2" GLASS PER FIBER INSULATION.
INSULATE AND VAPOR SEAL ROOF DRAIN AND OVERFLOW ROOF DRAIN SUMP, PIPING AND FITTINGS FROM DRAIN TO VERTICAL LEADER WITH 1/2" GLASS FIBER INSULATION.
A.D.A. ACCESSIBLE LAVATORIES AND SINKS:
INSULATE ALL EXPOSED DRAIN PIPING AND WATER SUPPLY PIPING BENEATH A.D.A. COMPLIANT LAVATORIES & SINKS WITH FULLY MOLDED CLOSED CELL VINYL INSULATION KIT AS MANUFACTURED BY TRUEBRO, BROCAR OR MCGUIRE.

14. SUPPORT UNBURIED PIPE AS FOLLOWS:
HORIZONTAL PIPING:
HUBLESS CAST IRON SOIL PIPING SHALL BE SUPPORTED AT LEAST AT EVERY OTHER JOINT EXCEPT THAT WHEN THE DEVELOPED LENGTH BETWEEN SUPPORTS EXCEEDS FOUR FEET, THEY SHALL BE PROVIDED AT EACH JOINT. SUPPORTS SHALL ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED IMMEDIATELY ADJACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL MOVEMENT.

COPPER TUBING SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING 1-1/2" AND SMALLER AND NINE FOOT INTERVALS FOR PIPING 2" AND LARGER IN DIAMETER.

HANGERS FOR NON-INSULATED COPPER PIPING SHALL HAVE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS, NON-INSULATED COPPER PIPING HANGERS OR SUPPORTS SHALL BE PLASTIC-COATED.

STEEL PIPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR 1/2" PIPING, 8 FEET FOR 3/4" & 1" PIPING AND 10 FEET FOR 1-1/4" AND LARGER PIPING.

VERTICAL PIPING:
PROVIDE RISER CLAMP AT BASE AND AT EACH FLOOR LEVEL

15. MARKING AND IDENTIFICATION:
IDENTIFY EACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:
-AT EACH BRANCH TAKE-OFF FROM A MAIN
-ON EACH SIDE OF A WALL PENETRATION
-EVERY 20' OF STRAIGHT RUN OF PIPE
-AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF

DOMESTIC HOT WATER:
INDICATE DELIVERED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.
INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.

MEDIUM PRESSURE GAS PIPING:
MEDIUM PRESSURE GAS PIPING (14" WC TO 5 PSI) SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PSI NATURAL GAS." THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 30 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES.

16. SLEEVES.
FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE ABOVE GRADE FLOORS.
WALLS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE FIRE RATED WALLS.
WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.
INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.

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No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE
NOTES AND LEGEND

SCALE

DATE
2026/04/17

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Project Number

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P1.00

ELECTRIC WATER HEATER SCHEDULE

MARK	MFR	MODEL	VOLTS	Ø	ELEMENT(S) QTY	ELEMENT(S) kW	RECOVERY GPH @ 100°F RISE	TANK CAPACITY GALLONS	LOCATION
EWH-1	A.O. SMITH	DRE-52	480	3	2	4.5	36	50	ROOM #A128
EWH-2	A.O. SMITH	DRE-52	480	3	6	4.0	98	50	ROOM #A138
EWH-3	A.O. SMITH	DEL-40	480	3	3	6.0	74	40	ROOM #A243
EWH-4	A.O. SMITH	DEL-20	480	1	1	4.5	18	20	ROOM #A206
EWH-5	A.O. SMITH	DRE-120	480	3	9	4.5	166	119	ROOM #A138

NOTES:

1. OUTLET TEMPERATURE SHALL BE 140°F.
2. PROVIDE TMV-1 LEONARD MIXING VALVE MODEL 370. INLET SIZE 3/4" AND OUTLET SIZE 3/4". MIXING VALVE HOT WATER OUTLET TEMP SHALL BE SET TO (110°F) TO PREVENT BACTERIA GROWTH.
3. PROVIDE TMV-1 LEONARD MIXING VALVE MODEL 370. INLET SIZE 3/4" AND OUTLET SIZE 3/4". MIXING VALVE HOT WATER OUTLET TEMP SHALL BE SET TO (140°F) FOR EWH-5 TO SERVICE KITCHEN.
4. PROVIDE SIMULTANEOUS ELEMENT OPERATION.
5. PROVIDE EXPANSION TANK. SIZE TANK PER MANUFACTURER'S RECOMMENDATIONS.

HOT WATER CIRCULATING PUMP SCHEDULE

MARK	MFR.	MODEL NO.	TYPE	G.P.M.	HEAD	H.P.	VOLTAGE	MOTOR R.P.M.	LOCATION
HWCP-1	BELL & GOSSETT	PL-55	IN LINE BRONZE	15	40	2/5	120 / 1ø	3250	ROOM #A128
HWCP-2	BELL & GOSSETT	PL-55	IN LINE BRONZE	15	40	2/5	120 / 1ø	3250	ROOM #A139
HWCP-3	BELL & GOSSETT	PL-55	IN LINE BRONZE	15	40	2/5	120 / 1ø	3250	ROOM #A243

NOTES:

1. HOT WATER CIRCULATION PUMP SHALL BE PROVIDED WITH TIMER TO DE-ENERGIZE THE PUMP UNDER DURING UNOCCUPIED PERIODS PER THE CURRENT IECC.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	SIZE OF CONNECTION TRAP	SS	SV	CW	HW	REMARKS
EDF-1	ELECTRIC DRINKING FOUNTAIN (BI-LEVEL) (A.D.A.)	1 1/2"	2"	2"	1/2"	-	HAC8FSBL-WF-Q ADA HALSEY TAYLOR, WALL MOUNT WATER COLLER, BARRIER-FREE ACCESS BI-LEVEL, NO LEAD DRINKING FOUNTAIN, LIGHT TOUCH PUSHBAR ON FRONT, INSTALL COMPLETE WITH CUNO WATER FILTER. STAINLESS STEEL, VANDAL RESISTANT WATER COOLER. FOR MULTIPLE WATER COOLER INSTALLATION REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS AND LOCATION. BV02 MCGUIRE'S, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND 1IINCH CENTER TO END. FURNISHED WITH SLIP NUTS, 17 GAUGE SEAMLESS TUBULAR BRASS WALL BEND, AND STEEL SHALLOW FLANGE. MLP100 HALSEY TAYLOR, IN WALL CARRIER MOUNTING SYSTEM.
	CANE TOUCH APRON	-	-	-	-	-	42522 HALSEY TAYLOR, STAINLESS STEEL APRON. PROVIDE APRON ONLY FOR UNITS MOUNTED AT NON-ADA HEIGHT TO MEET A.D.A. REQUIREMENTS OF 24" A.F.F.
MS-1	MOP SINK (FLOOR MOUNTED)	3"	3"	2"	3/4"	3/4"	HL-1800 STERN WILLIAMS HILOW, 24"X24"X12" DRAIN SHALL CAST BRASS WITH STAINLESS STEEL STRAINER CAST INTEGRAL AND SHALL PROVIDE FOR CAULKED LEAD CONNECTION NOT LES THAN 1" DEEP TO A 3" PIPE. TERRAZZO RECEPTOR COMPOSED OF PEARL GREY MARBLE CHIPS AND WHITE PORTLAND CEMENT GROUND SMOOTH, GROUTED AND SEALED TO RESIST STAINS. STAINLESS STEEL CAP OF ONE PIECE 20 GA. 302 STAINLESS STEEL CAST INTEGRAL ON FROM DROP. 540-LD897SWXFABCP CHICAGO FAUCETS, 8" FIXED CENTERS, 6GPM, 897-SJKCP - 5 3/4" RIGID VACUUM BREAKER SPOUT WITH 3/4" MALE HOSE THREAD AND PAIL HOOK, 369-PR - 2 3/8" LEVER HANDLE, XT - QUATURN COMPRESSION OPERATING CARTRIDGE, WXF - STRAIGHT 2" INLET SUPPLY ARM WITH WALL FLANGE WITH 1/2" NPT FEMALE THREAD INLET, ATMOSPHERIC VACUUM BREAKER, NOT INTENDED FOR CONTINUOUS PRESSURE APPLICATIONS, CHROME PLATE FINISH. T-35 STERN WILLIAMS, HOSE AND WALL HOOK. HOSE 36" LONG, WITH 3/4" CHROME COUPLINGS. WALL BRACKET OF STAINLESS STEEL. T-40 STERN WILLIAMS, STAINLESS STEEL MOP HANGER OF STAINLESS STEEL WITH #4 FINISH. 24" LONG, WITH 3 RUBBER SPRING LOADED GRIPS. BP STERN WILLIAMS, SPLASH CATCHER PANELS OF 20 GA. TYPE 304 STAINLESS STEEL.
FD-1	FLOOR DRAIN	3"-4"	3"-4"	2"	-	-	2005-B-NB J.R. SMITH, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD 6" DIAMETER TYPE "A" NICKEL BRONZE STRAINER. INSTALL COMPLETE WITH PROSET TRAP GUARD, EXCEPT FOR SHOWER DRAIN.
ECO	EXTERIOR CLEANOUT	-	-	-	-	-	4250 J.R. SMITH, ALL EXTERIOR CLEANOUTS SHALL BE SET AT FINISHED GRADE IN 6 INCH THICK CONCRETE PAD FINISHED SMOOTH ON TOP, HOUSING SHALL BE COMPLETELY FREE OF PIPING SO NO LOADING IS TRANSMITTED TO THE PIPE.
FCO	FLOOR CLEANOUT	-	-	-	-	-	4040 J.R. SMITH, WITH SCREWED PLUG AND FLASHING RING AND COVER PLATE WITH SECURING SCREW. COVER PLATE SHALL BE FLUSH TO FINISH FLOOR, AND SUITABLE FOR FLOOR COVERING INSTALLED.
WCO	WALL CLEANOUT	-	4"	2"	1"	-	4435 J.R. SMITH, WITH SCREWED PLUG AND FLASHING RING AND COVER PLATE WITH SECURING SCREW. COVER PLATE SHALL BE FLUSH TO FINISH WALL. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR CASEWORK LOCATIONS, COVER PLATE SHALL THEN BE FLUSHED WITH CASE WORK'S FINISH BACK WALL.
FS-1	FLOOR SINK	4"-6"	4"-6"	2"	-	-	2415C-LSG J.R. SMITH, 1/2 TOP GRATE, INDIRECT WASTE FLOOR SINK, DUCO CAST IRON BODY, LOOSE GRATE WITH SEDIMENT BUCKET 12"X12"SQ. - 10" DEEP. FURNISH AND INSTALL WITH DEEP SEAL P-TRAP ASSEMBLY. INSTALL COMPLETE WITH PROSET TRAP GUARD.
RVB-1	REFRIGERATOR/ ICE MAKER VALVE BOX	-	-	-	1/2"	-	BIM875 - GUY GRAY - REFRIGERATOR/ ICE MAKER VALVE BOX, FURNISHED WITH 1/2" FIP INLET X 1/4" OD OUTLET COMPERSSION ANGLE VALVE. PROVIDE FILTER WHEN MAKING FINAL CONNECTION. (FURNISH AND INSTALL AT ALL REFRIGERATORS AND ICE MACHINES)
SH-2	SHOWER	-	-	-	3/4"	-	A5A01SGC00 "VICTORIA" ROCA, BI-NICKEL CHROME WALL-MOUNTED BATH-SHOWER MIXER WITH AUTOMATIC DIVERTER, HAND-SHOWER, 1.70 M FLEXIBLE HOSE AND SWIVEL WALL BRACKET. 5.28 GPM
SH-1	SHOWER	-	-	-	3/4"	-	FSI5037 "MARSEILLE" FONTANA, 9" ROUND BATHROOM WALL MOUNTED BRASS SHOWER SYSTEM FAUCET, ROTATABLE LIFTING HANDLE SINGLE HOLDER DUAL CONTROL
RD-1	ROOF DRAIN (PRIMARY)	-	-	-	-	-	1010-AD J.R. SMITH, DUCO CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP WITH CAST IRON DOME.
RD-2	ROOF DRAIN (OVERFLOW)	-	-	-	-	-	1080C-AD J.R. SMITH, DUCO CAST IRON BODY WITH WIDE FLANGE, COMBINED FLASHING CLAMP AND WATER DAM WITH CAST IRON DOME.
DN-1	DOWNSPOUT NOZZLE	-	-	-	-	-	1770 J.R. SMITH, DOWNSPOUT NOZZLE, CAST BRONZE NOZZLE AND FLANGE.
SK-1	SINGLE BOWL SINK (A.D.A)	1 1/2"	3"	2"	1/2"	1/2"	LRAD1716 ELKAY, SINGLE BOWL (16"L X 17"W X 6"D INSIDE BOWL), #18 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL, SELF RIMMING, 2 HOLE 4" CENTER. 895-317GN2BE4ABCP CHICAGO FAUCETS, 4" FIXED CENTERS, GN2BAB - 5-1/4" RIGID / SWING GOOSENECK SPOUT, E4AB - 2.0 GPM (7.6 L/MIN) SPRAY, 317-PR - 4" WRISTBLADE HANDLE, XTAB - QUATURN COMPRESSION OPERATING CARTRIDGE, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8" OR 1/2" FLEXIBLE RISER, CHROME PLATE FINISH, WEIGHT: 5.000LBS, PACKAGE DIMENSIONS: 11.50"L X 6.00"W X 5.00"H, ECAST® CONSTRUCTION WITH EQUAL TO OR LESS THAN 0.25% LEAD CONTENT BY WEIGHTED AVERAGE, THIS ITEM SHIPS 10 BUSINESS DAYS FROM ORDER ACKNOWLEDGEMENT. 151 MCGUIRE, HEAVY DUTY FORGED BRASS BASKET STRAINER WITH A POLISHED AND CHROME PLATED BRASS STRAINER BODY, 1-1/2" X 4" SEAMLESS BRASS TAILPIECE, CAST BRASS LOCK AND COUPLING NUTS. 1151WC MCGUIRE, 1 1/2" ADA COMPLIANT OFFSET STRAINER/DRAIN ASSEMBLY AND TAILPIECE, C8912 MCGUIRE, 1 1/2" CAST BODY P-TRAP AND CLEANOUT. INSULATE P-TRAP, TAILPIECE ASSEMBLY. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 270-RF-STSTL-REC LEONARD, POINT OF USE THERMOSTATIC VALVE MIXING VALVE, BRONZE BODY, LOCKED TEMPERATURE ADJUSTMENT CAP (VANDAL RESISTANT), COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE, STAINLESS STEEL SPRINGS, BUNA-N O'RINGS, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS. SET TEMPERATURE TO 105°F
SK-2	HAND SINK	1 1/2"	3"	2"	1/2"	1/2"	7-PS-68 ADVANCE TABCO, WALL MOUNTED HAND SINK, ONE PIECE DEEP DRAWN SINK BOWL (10"WX14"LX5"D), KEYHOLE WALL MOUNT BRACKET, STAINLESS STEEL BASKET DRAIN 1 1/2"IPS, 4"O.C. SPLASH MOUNTED GOOSENECK FAUCET, CHROME PLATED FURNISHED WITH AERATOR. 2165 MCGUIRE, ANGLE SUPPLY/WHEEL HANDLE. 8872 MCGUIRE, CAST BODY P-TRAP AND CLEANOUT. INSULATE P-TRAP, TAILPIECE ASSEMBLY, AND HOT AND COLD WATER ANGLE VALVES WITH BROCAR PRODUCTS, INC. TRAP WRAP. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
SK-3	3-COMPARTMENT SINK	3"	1 1/2"	2"	1/2"	1/2"	DI-3-1410 ADVANCE TABCO, THREE COMPARTMENT DROP-IN SINK 21"X50"X10", ONE PIECE SEAMLESS DEEP DRAWN SINK BOWL DESIGN. 18 GAUGE TYPE 304 SERIES STAINLESS STEEL. K-53 ADVANCE TABCO, 12" SWING SPOUT FAUCET, 4" O.C. 2165 MCGUIRE, 1/2" I.P.S. X 3/8" O.D. ANGLE STOP AND SUPPLY-WHEEL HANDLE. C8912 MCGUIRE, 1-1/4 CHROME PLATED "P" TRAP WITH CLEAN OUT
SK-4	2-COMPARTMENT SINK	3"	1 1/2"	2"	1/2"	1/2"	94-1-24-24R ADVANCE TABCO, 16"x20"x14" 1 COMPARTMENT WITH RIGHT DRAINBOARDS, STAINLESS STEEL OPEN FRAME BASE, 18" DRAINBOARDS. K-1 ADVANCE TABCO, 12" SWING SPOUT FAUCET, 8" CENTER. 2165 MCGUIRE, 1/2" I.P.S. X 3/8" O.D. ANGLE STOP AND SUPPLY-WHEEL HANDLE. C8912 MCGUIRE, 1-1/4 CHROME PLATED "P" TRAP WITH CLEAN OUT
SK-5	2-COMPARTMENT SINK	3"	1 1/2"	2"	1/2"	1/2"	FS-2-2424 ADVANCE TABCO , 24"x24"x14" 2 COMPARTMENT STAINLESS STEEL OPEN FRAME BASE. K-1 ADVANCE TABCO, 12" SWING SPOUT FAUCET, 8" CENTER. 2165 MCGUIRE, 1/2" I.P.S. X 3/8" O.D. ANGLE STOP AND SUPPLY-WHEEL HANDLE. C8912 MCGUIRE, 1-1/4 CHROME PLATED "P" TRAP WITH CLEAN OUT

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	SIZE OF CONNECTION TRAP	SS	SV	CW	HW	REMARKS
WC-1	WATER CLOSET (FLOOR MOUNTED) (A.D.A.)	-	4"	2"	1/2"	-	2467.100 AMERICAN STANDARD "CADET", VITREOUS CHINA, HIGH EFFICIENCY, ULTRA LOW CONSUMPTION 1.1GPF, ELONGATED BOWL, PRESSURE-ASSISTED SIPHON JET FLUSH ACTION. 9500CT CHURCH, EXTRA HEAVY WEIGHT AND INJECTION MOLDED OF SOLID PLASTIC, OPEN FRONT LESS COVER FOR ELONGATED BOWL AND FEATURE LARGE MOLDED-IN BUMPERS. CONCEALED CHECK HINGES TO FEATURE 300 SERIES STAINLESS STEEL POSTS THAT STOP SEAT II DEGREES BEYOND VERTICAL. USES 300 SERIES STAINLESS STEEL HARDWARE. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. WATER CLOSET SHALL BE 16-1/8" ABOVE FINISHED FLOOR LEVEL.
WC-2	WATER CLOSET (FLOOR MOUNTED)	-	4"	2"	1"	-	1086100004 "SQUAT TOILET" SANINDUSA PUBLIC SQUAT TOILET, SQUAT PAN, WITH 1-1/2 SPUD. 111-1.28-ES-S-TMO SLOAN "OPTIMA", 1" I.P.S. SCREWDRIVER BAK-CHEK® ANGLE STOP, FREE SPINNING VANDAL RESISTANT STOP CAP, HIGH BACK PRESSURE VACUUM BREAKER FLUSH CONNECTION WITH ONE-PIECE BOTTOM HEX COUPLING NUT, SPUD COUPLING AND FLANGE FOR 1 ½" TOP SPUD, EL-154 TRANSFORMER (120 VAC/24 VAC 50 VA). THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE CONCEALED LOW VOLTAGE WIRING BETWEEN THE MULTI USE TRANSFORMER FOR THE WATER CLOSETS, URINALS AND FACULTY LAVATORIES. LOCATE THE TRANSFORMERS ABOVE ACCESSIBLE CEILINGS OR PROVIDE ACCESS PANEL FOR HARD CEILINGS. UP TO 6 FIXTURE PER TRANSFORMER.
L-1	LAVATORY (UNDER COUNTER MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	1/2"	0495.221 AMERICAN STANDARD "OVALYN", UNDER COUNTER LAVATORY, VITREOUS CHINA, SINGLE HOLE CENTER MOUNTING. 420-E2805ABCP, 4" FIXED CENTERS, 4 5/8" CENTER TO CENTER RIGID CAST BRASS SPOUT, E2805AB - 0.5 GPM (1.9 L/MIN) VANDAL PROOF NON-AERATING SPRAY, 420-XAB - VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 1/2" NPSM SUPPLY INLETS FOR 3/8" OR 1/2" FLEXIBLE RISER, CHROME PLATE FINISH, WEIGHT: 4.950LBS HDI55WC MCGUIRE, WHEELCHAIR LAVATORY STRAINER. FURNISHED WITH HEAVY CAST BRASS GRID DRAIN STRAINER, ELBOW AND 1 1/4" 17GA SEAMLESS TUBULAR OFFSET TAILPIECE. PVD CHROME FINISH. ADA COMPLIANT. 8 3/4" X 5 1/8" OD. BV02 MCGUIRE'S, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND 1IINCH CENTER TO END. FURNISHED WITH SLIP NUTS, 17 GAUGE SEAMLESS TUBULAR BRASS WALL BEND, AND STEEL SHALLOW FLANGE. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-2	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	0611.004 AMERICAN STANDARD "CORNICE", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, 3 HOLES 4" CENTER. UTILIZE WALL HANGER INCLUDED. 7385.000 AMERICAN STANDARD "RELIANT 3", 4" FIXED CENTERS, E2805 - 0.5 GPM (1.9 L/MIN) VANDAL PROOF NON-AERATING SPRAY, 317-PR - 4" WRISTBLADE HANDLE. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-3	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	DSG-81000 SLOAN "DESIGNER SERIES", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. EFX-250 SLOAN "BASYS", SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-4	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	DSG-82000 SLOAN "DESIGNER SERIES", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. **EFX-250 SLOAN "BASYS"**, SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. QUANTITY TWO PER FIXTURE BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-5	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	DSG-83000 SLOAN "DESIGNER SERIES", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. **EFX-250 SLOAN "BASYS"**, SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. QUANTITY THREE PER FIXTURE BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-6	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	LVAD-1 BRADLEY "VERGE", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. **S53-3100 BRADLEY "VERGE"**, SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. QUANTITY THREE PER FIXTURE BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
WB-1	WASHING MACHINE DRAIN BOX	2"	2"	2"	1/2"	1/2"	B-200 GUY GRAY, WASHING MACHINE DRAIN BOX; FINISH: MINIMUM SPANGLE G90 HOT DIPPED GALVANIZED STEEL (UNPAINTED) VALVES: FURNISHED WITH DOMESTIC VALVES AND COMBINATION MIP OR SWEAT CONNECTION DRAIN: MALE THREAD FITTING AND LOCKNUT INCLUDED
WH-1	WALL HYDRANT (FREEZE PROOF)	-	-	-	3/4"	-	5519 J.R. SMITH, BRONZE QUARTER TURN NON-FREEZE AUTOMATIC DRAINING HYDRANT WITH STAINLESS STEEL FACE, HOSE CONNECTION, INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, "T" HANDLE KEY, WHEEL HANDLE AND STAINLESS STEEL BOX WITH FULL 180° COVER OPENING.
HB-1	HOSE BIB	-	-	-	3/4"	-	442-830440P CHICAGO FAUCETS, POLISHED CHROME PLATED SOLID BRASS BODY. 40" STAINLESS STEEL HOSE WITH PUSH BUTTON SELFCLOSING HAND SPRAY, SPRAY WALL HOOK. 2 3/8" LEVER HANDLE WITH EIGHT POINT TAPERED BROACH AND SECURED COLOR CODED WHITE INDEX. SLO-COMPRESSION RENEWABLE CARTRIDGE DESIGNED TO CLOSE WITH WATER PRESSURE WITH SQUARE TAPERED BROACH FEATURE TO HELP FACILITATE HANDLE REMOVAL. IN-LINE COMBINATION FLOW REGULATOR AND BACK FLOW PREVENTER. 1/2" NPT FEMALE INLET WITH LOOSE WALL FLANGE. MOUNTING HARDWARE INCLUDED. PROVIDE ANTI-SCALDING THERMOSTATIC MIXING VALVE. MIXING VALVE SHALL COMPLY WITH ASSE 1070.

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SHEET TITLE

FIXTURE SCHEDULES

SCALE

DATE 2026/04/17

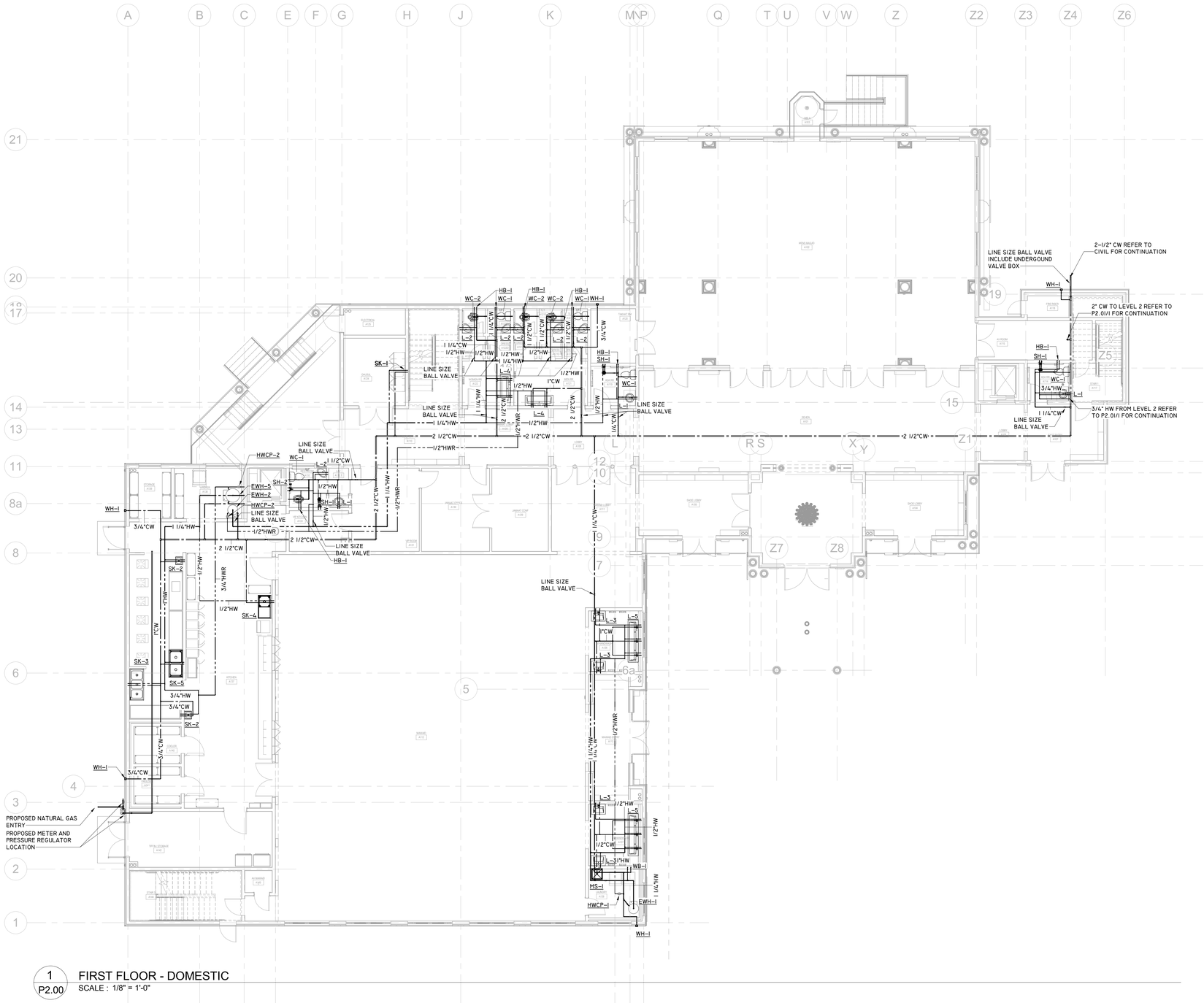
PROJECT NUMBER Project Number

SHEET NUMBER

P1.10

GENRAL NOTE

COORDINATE WITH ARCHITECTURAL PLAN FOR BIDET SPRAY.
PROVIDE WITH INTEGRAL TMV TYP. ALL



1 P2.00 FIRST FLOOR - DOMESTIC
SCALE : 1/8" = 1'-0"

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FIRST FLOOR - DOMESTIC

SCALE 1/8" = 1'-0"

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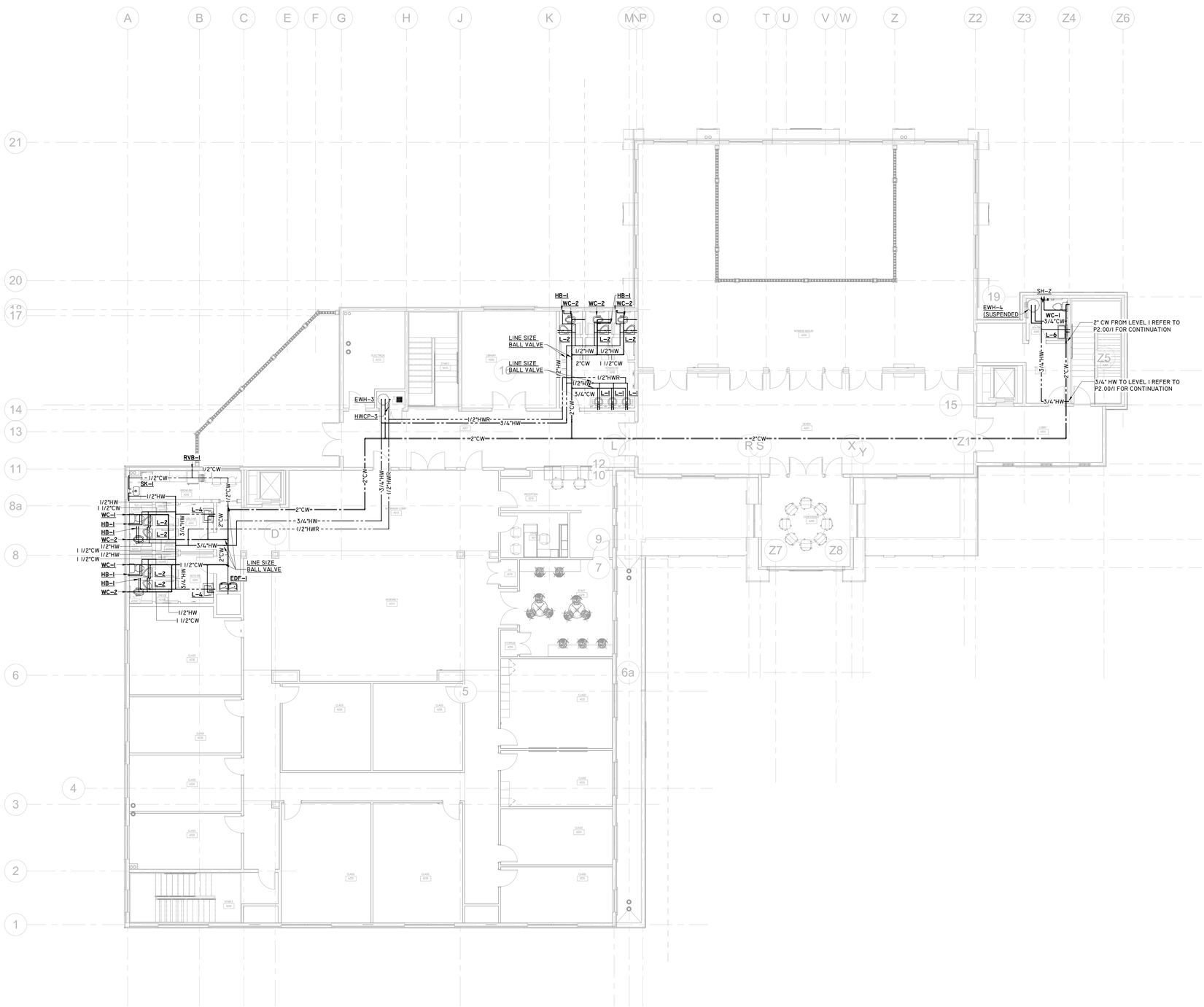
PROJECT NUMBER Project Number

SHEET NUMBER

P2.00

GENRAL NOTE

COORDINATE WITH ARCHITECTURAL PLAN FOR BIDET SPRAY.
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1 P2.01 SECOND FLOOR - DOMESTIC
SCALE : 1/8" = 1'-0"

PLAN NORTH

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SECOND FLOOR - DOMESTIC

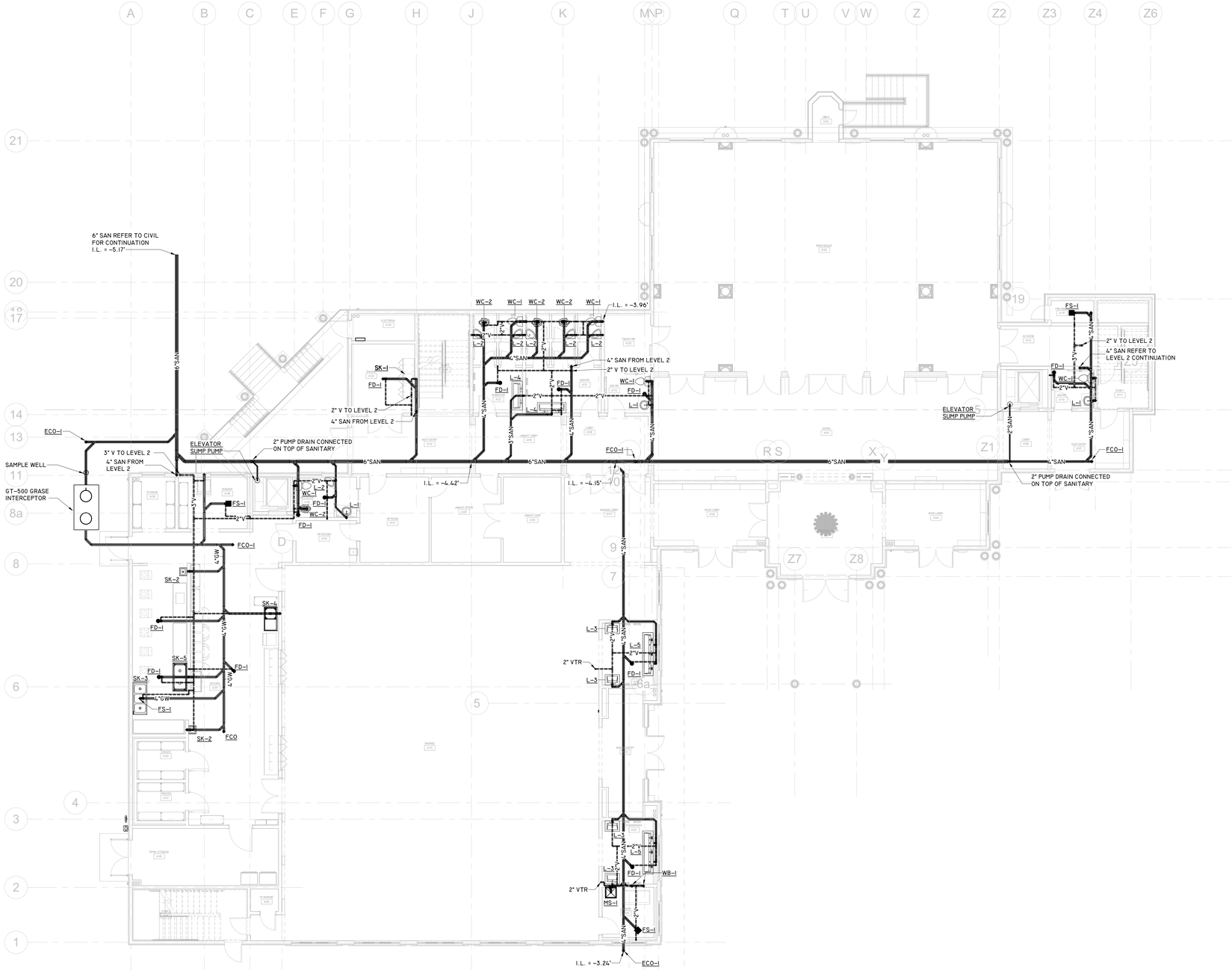
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PROJECT NUMBER Project Number

SHEET NUMBER

P2.01



1 P3.00 FIRST FLOOR - SANITARY
SCALE : 1/8" = 1'-0"

PLAN NORTH

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FIRST FLOOR - SANITARY

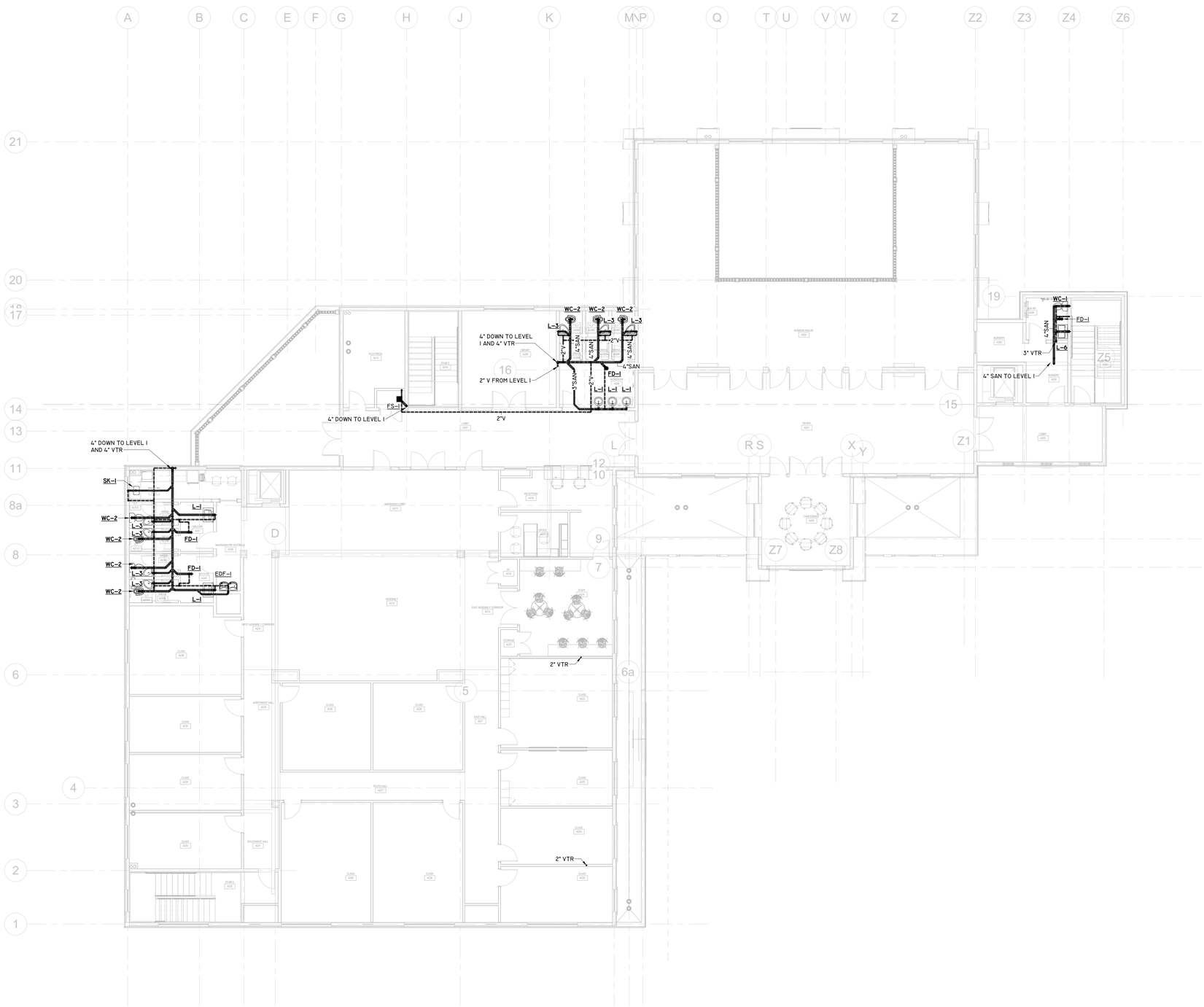
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DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

P3.00



1 P3.01 SECOND FLOOR - SANITARY
SCALE : 1/8" = 1'-0"

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SHEET TITLE

SECOND FLOOR - SANITARY

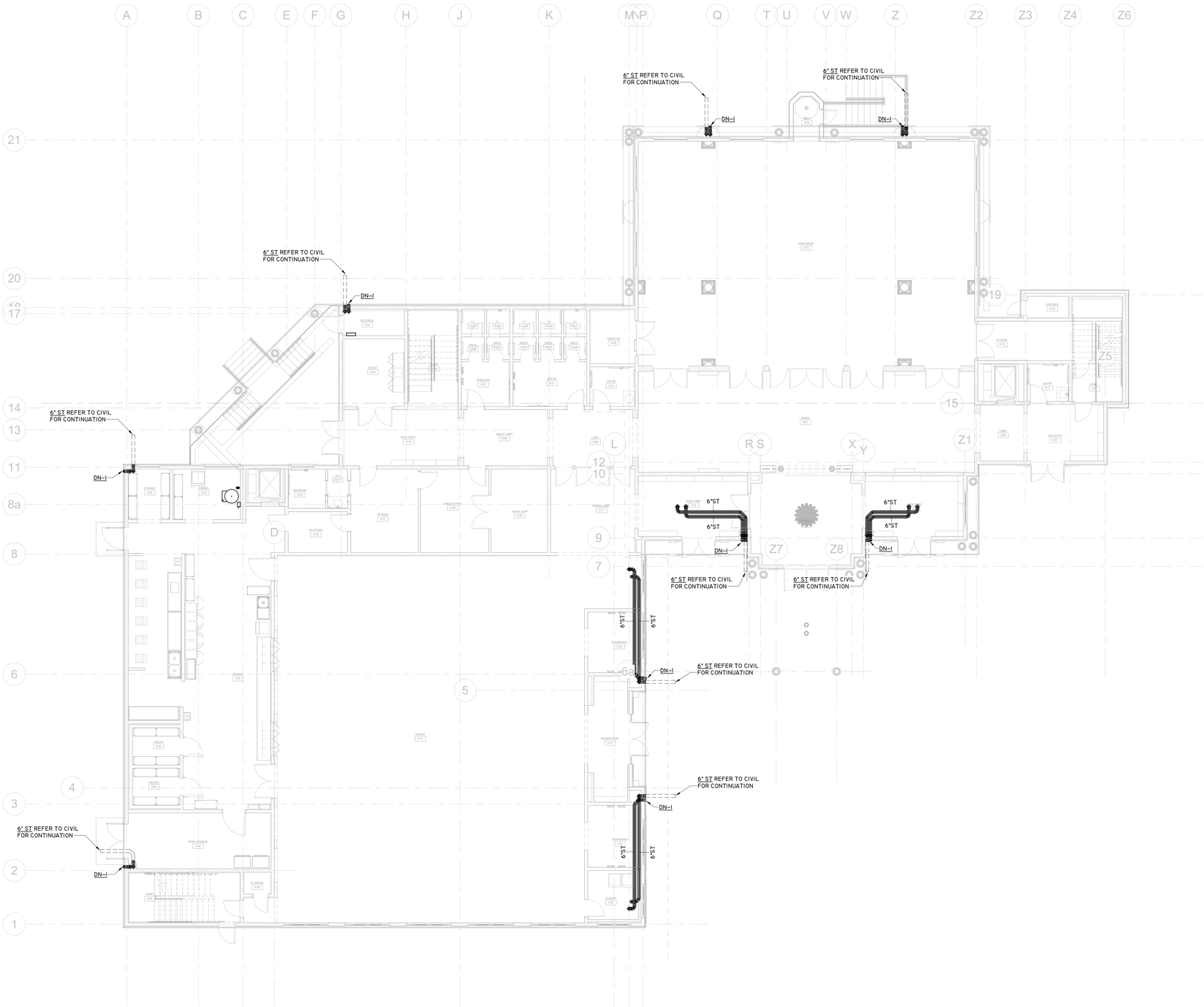
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PROJECT NUMBER Project Number

SHEET NUMBER

P3.01



1 P3.02 FIRST FLOOR - STORM DRAIN
SCALE : 1/8" = 1'-0"

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SHEET TITLE

FIRST FLOOR - STORM DRAIN

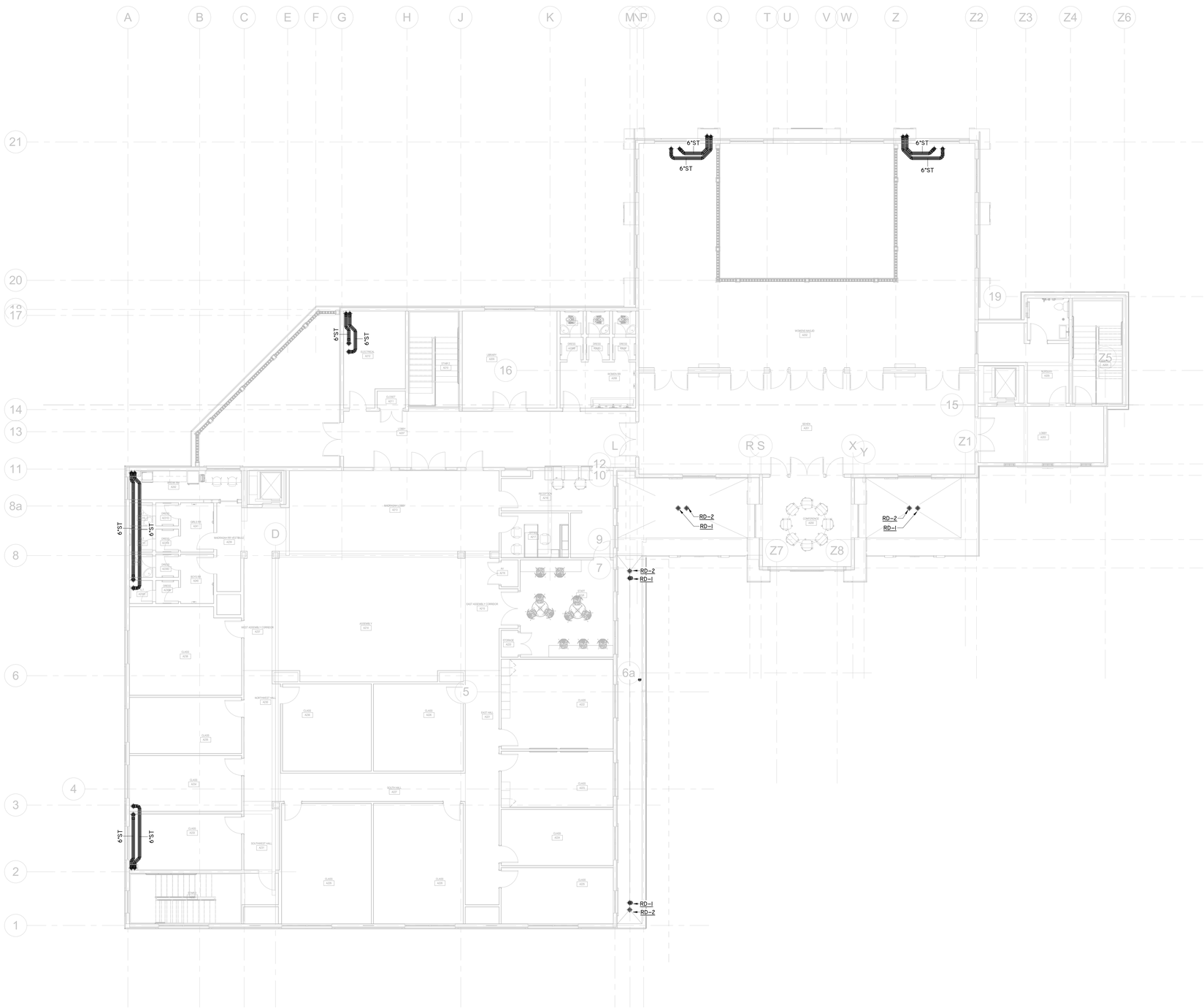
SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

P3.02



1 P3.03 SECOND FLOOR - STORM DRAIN
SCALE : 1/8" = 1'-0"

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PROFESSIONAL SEAL

STATE OF TEXAS
ANWAR HASSAN
84671
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04-17-2026

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SHEET TITLE

SECOND FLOOR - STORM DRAIN

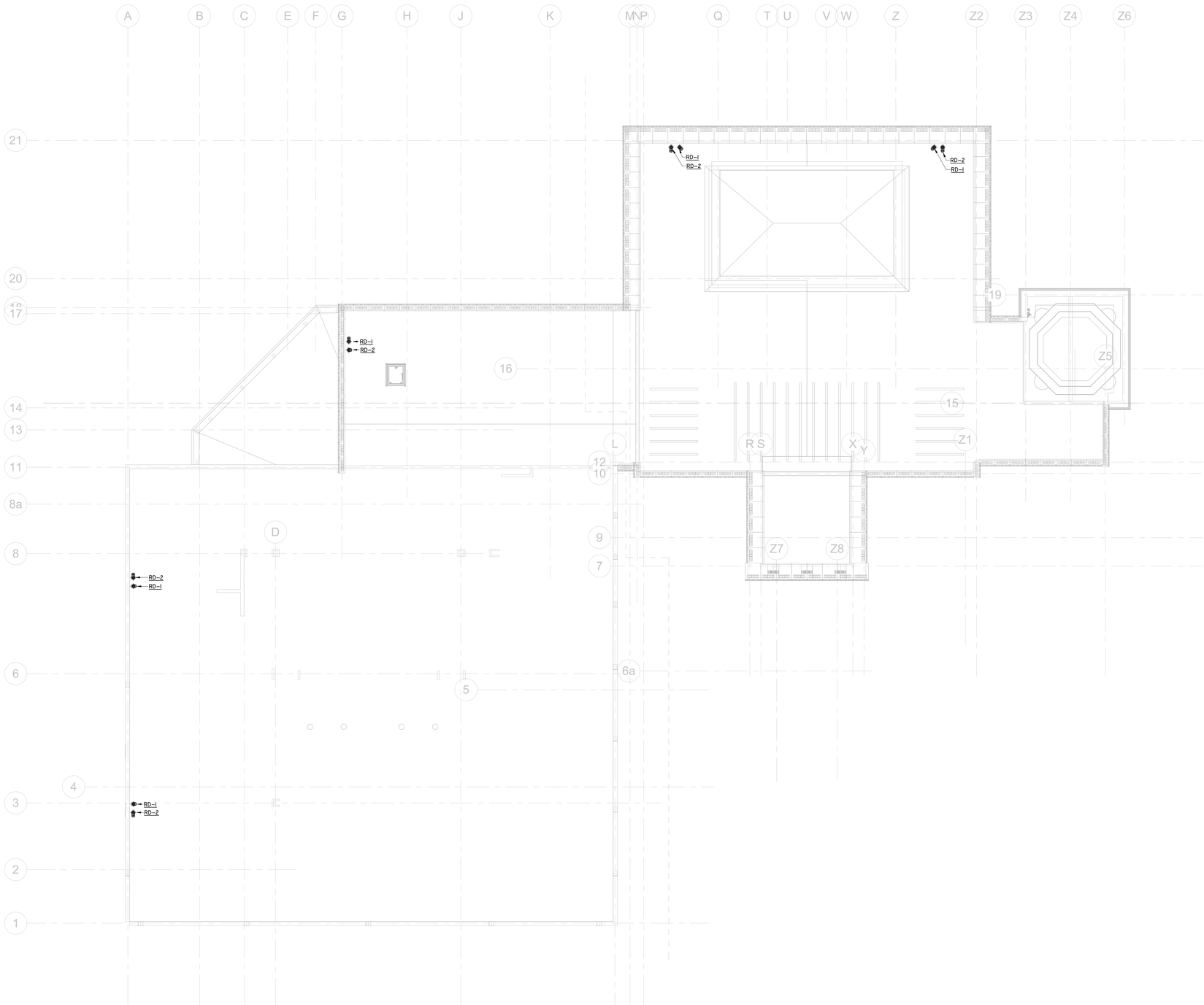
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DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

P3.03



1 P3.04 ROOF PLAN - STORM DRAIN
SCALE : 1/8" = 1'-0"

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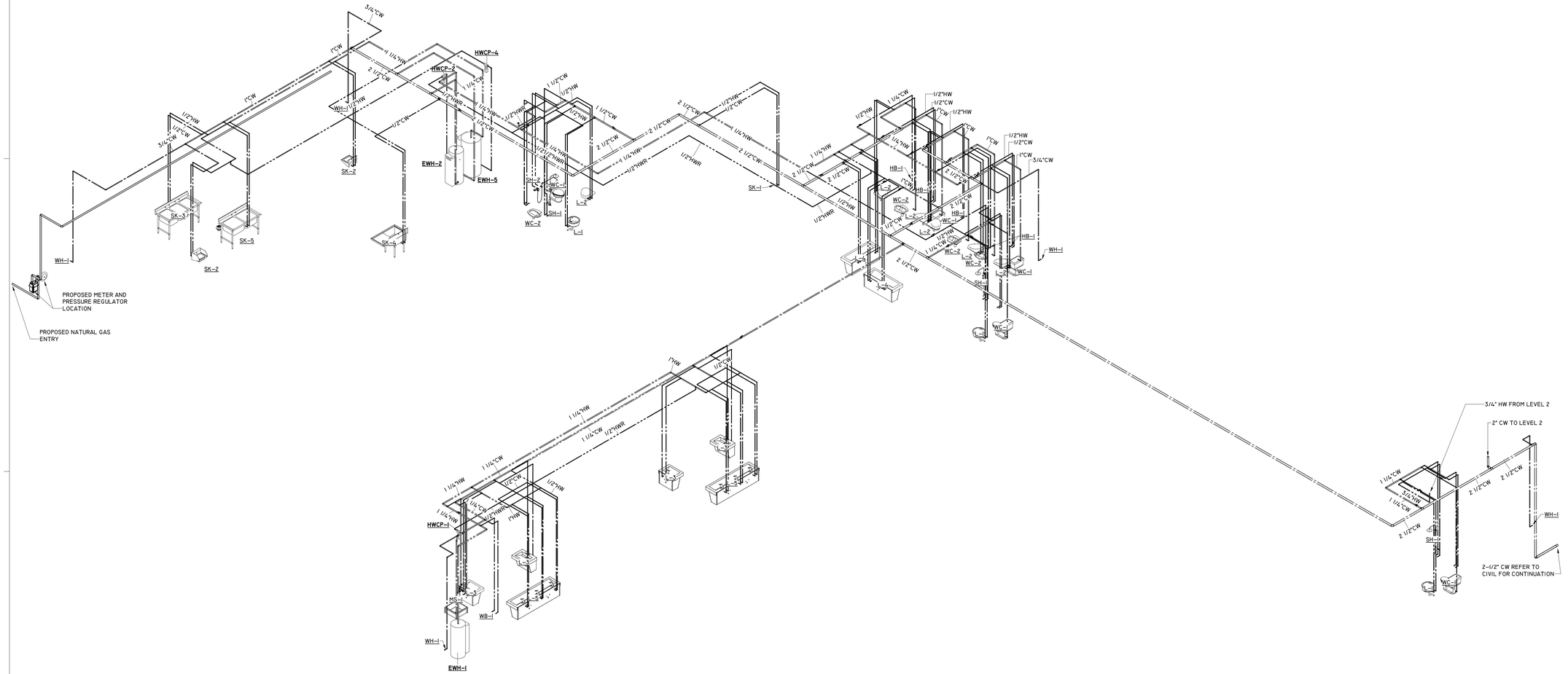
SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

P3.04



1 LEVEL 1 DOMESTIC RISER
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FIRST FLOOR - DOMESTIC RISER

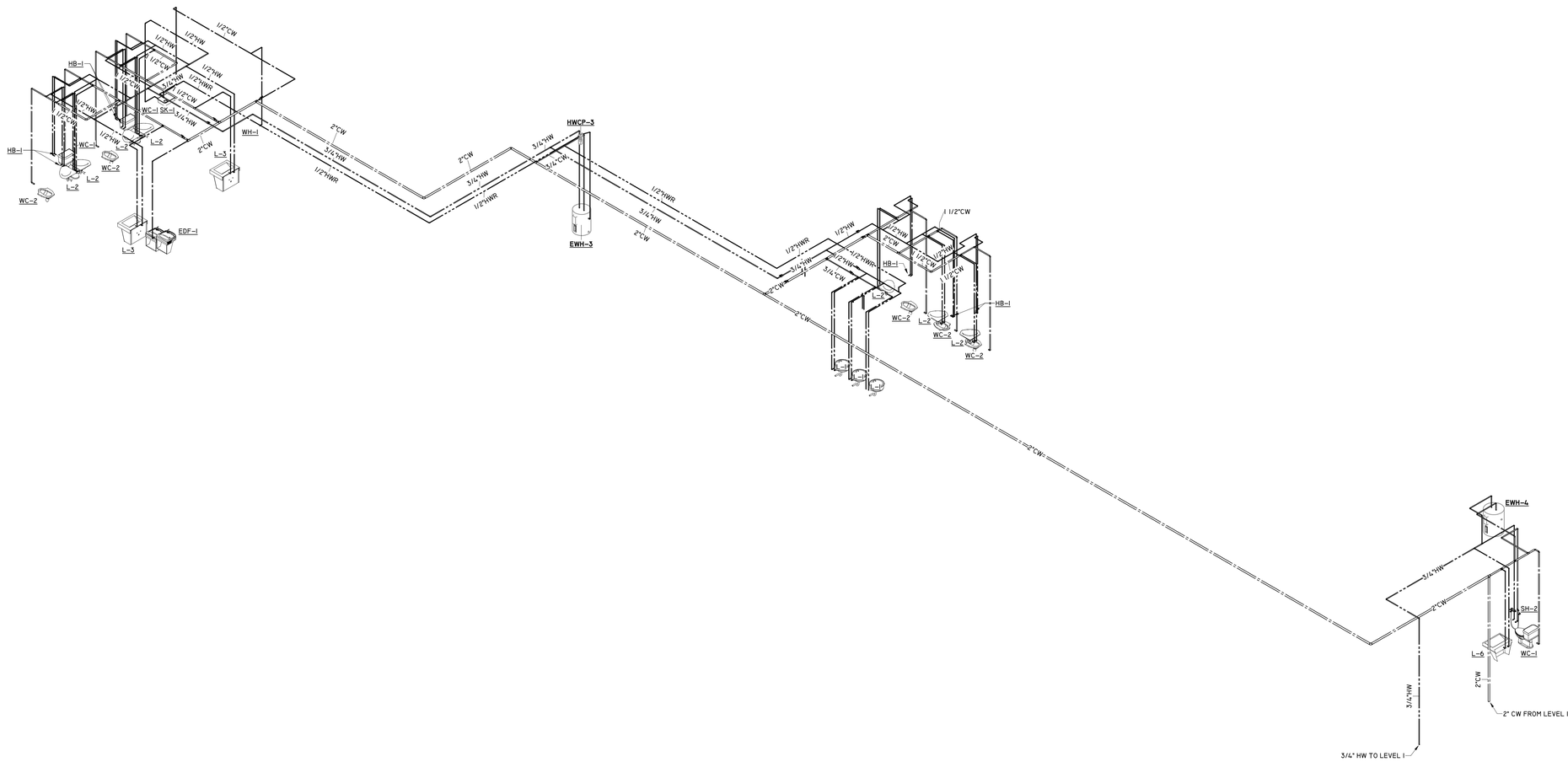
SCALE

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

P4.00



1 P4.01 LEVEL 2 DOMESTIC RISER

SCALE :

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SECOND FLOOR - DOMESTIC RISER

SCALE

DATE

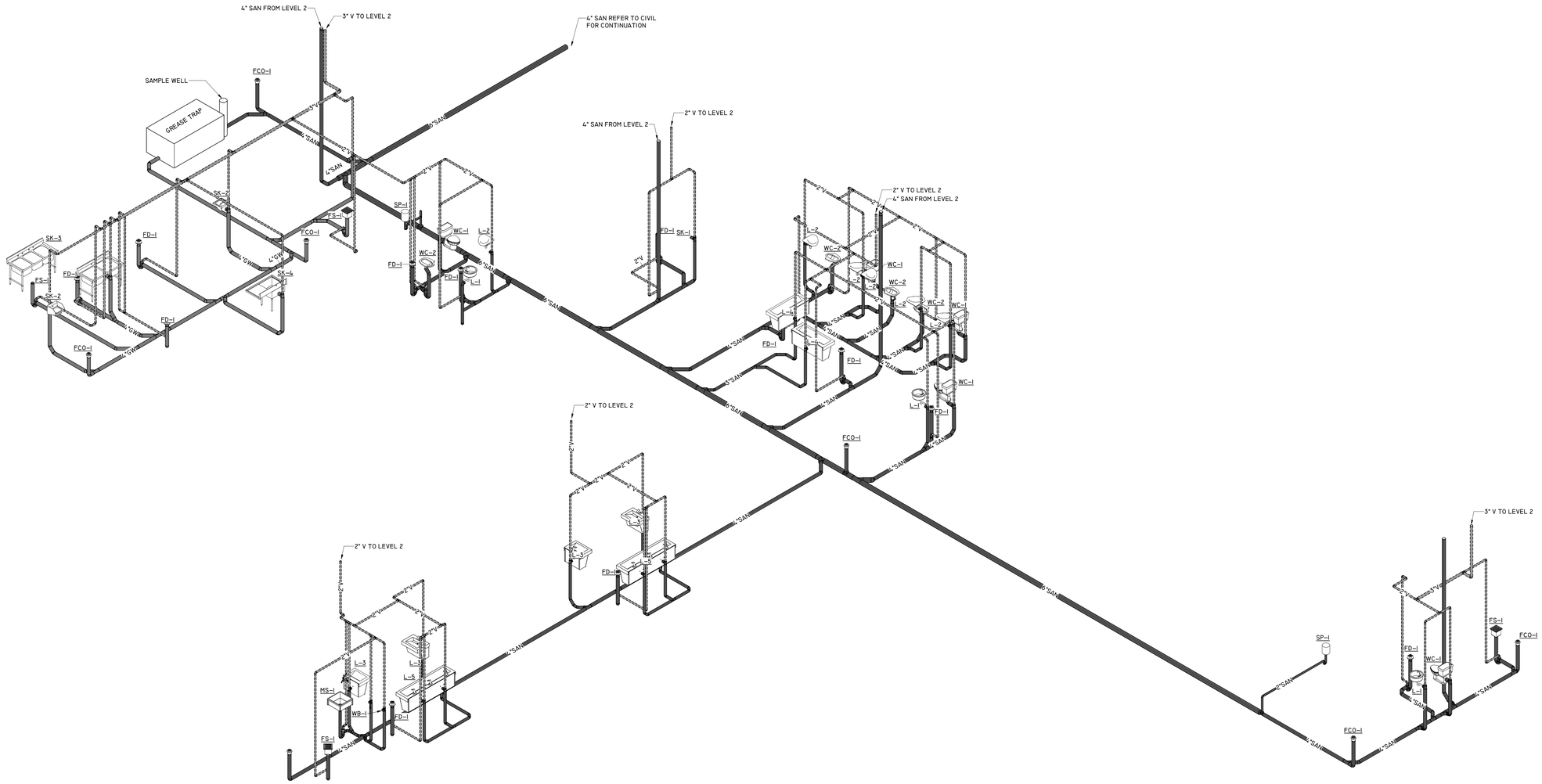
2026/04/17

PROJECT NUMBER

Project Number

SHEET NUMBER

P4.01



1 P4.02 LEVEL 1 SANITARY RISER

SCALE :

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DATE

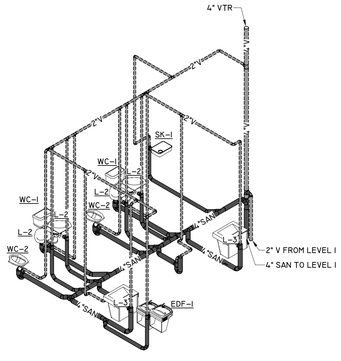
2026/04/17

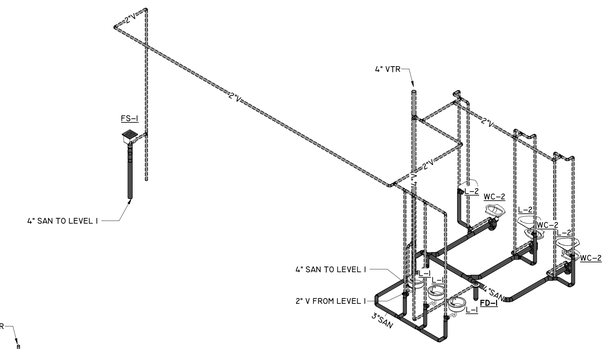
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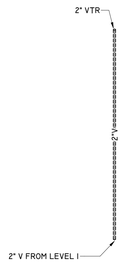
Project Number

SHEET NUMBER

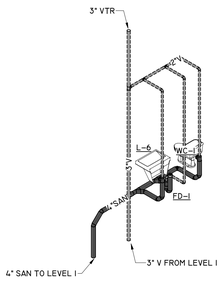
P4.02











1 P4.03 LEVEL 2 SANITARY RISER
SCALE :

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SECOND FLOOR - SANITARY RISER

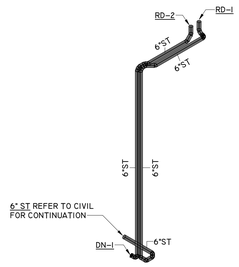
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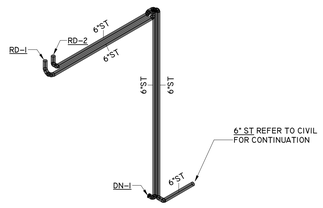
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2026/04/17

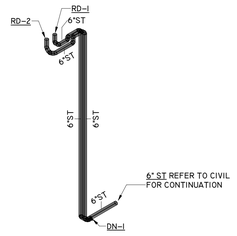
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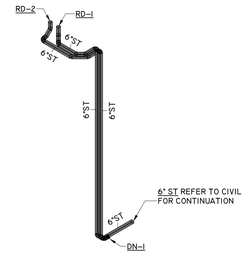
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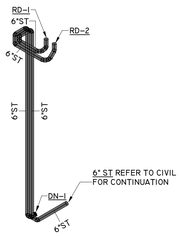
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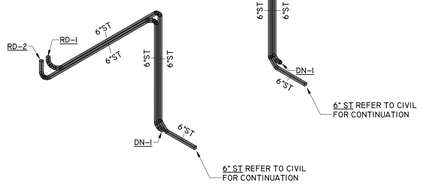


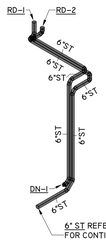


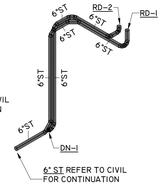












1
P4.04
STORM DRAIN RISER
SCALE :

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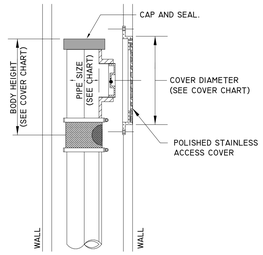
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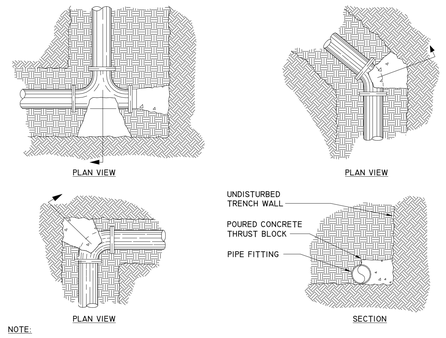
P4.04



MIFAB WALL CLEAN OUT

MODEL NUMBER	PIPE SIZE (NO HUB)	BODY HEIGHT	STAINLESS STEEL ACCESS COVER	MIN. WALL CAVITY SIZE
C1462-R6-3	2"	6.5"	6"	4 1/2"
C1463-R6-3	3"	8.125"	6"	6 1/2
C1466-R6-3	4"	9.75"	6"	8"
C1466-R9-3	6"	14"	9"	11 1/2"
C1468-R9-3	8"	17"	9"	15"

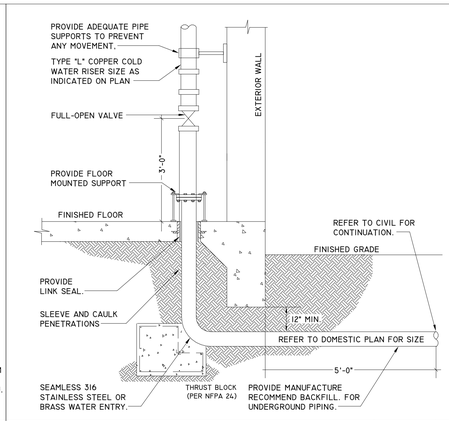
WALL CLEANOUT DETAIL | NOT TO SCALE | 12



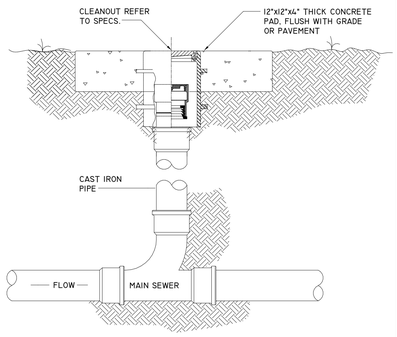
NOTE:

THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS AND AT POINTS SPECIFIED BY THE ENGINEER SHALL BE PORTLAND CEMENT CONCRETE, A MINIMUM OF 12" THICK PLACED BETWEEN SOLID GROUND AND FITTING. THRUST BLOCK SHALL BE ACCESSIBLE FOR REPAIRS. ALL BENDS OF 11 1/4° OR MORE, ALL TEES AND ALL PLUGS SHALL BE THRUST PROTECTED AS SHOWN. WHERE CONDITIONS PREVENT THE USE OF CONCRETE THRUST BLOCKS, TIED JOISTS OF A TYPE APPROVED BY THE ENGINEER MAY BE USED.

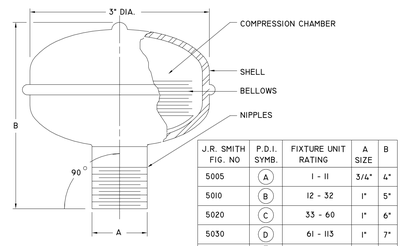
TYPICAL THRUST BLOCK DETAIL | NOT TO SCALE | 8



DOMESTIC WATER ENTRY DETAIL | NOT TO SCALE | 4



EXTERIOR CLEANOUT DETAIL | NOT TO SCALE | 11

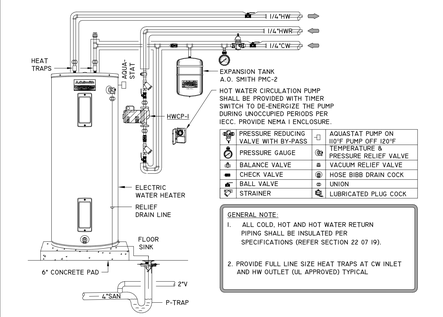


J.R. SMITH FIG. NO	P.D.I. SYMB.	FIXTURE UNIT RATING	A SIZE	B
5005	A	1 - 11	3/4"	4"
5010	B	12 - 32	1"	5"
5020	C	33 - 60	1"	6"
5030	D	61 - 113	1"	7"
5040	E	114 - 154	1"	8"
5050	F	155 - 330	1"	9"

NOTES:

1. ALWAYS INSTALL IN UPRIGHT POSITION
2. INSTALL AT AN ACCESSIBLE LOCATION. PROVIDE ACCESS PANEL WHERE REQUIRED.
3. COMPLY WITH THE LATEST UNIFORM PLUMBING CODE

WATER HAMMER ARRESTERS | NOT TO SCALE | 7

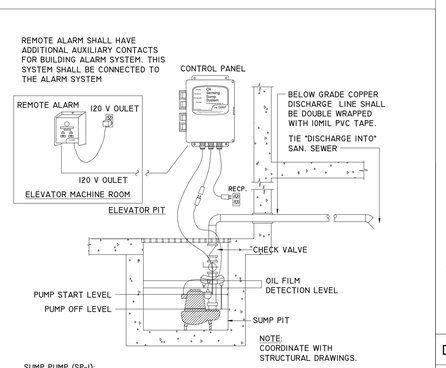


	PRESSURE REDUCING VALVE, WITH BY-PASS		AQUASTAT PUMP ON 105°F PUMP OFF 120°F
	PRESSURE GAUGE		TEMPERATURE & PRESSURE RELIEF VALVE
	BALANCE VALVE		VACUUM RELIEF VALVE
	CHECK VALVE		HOSE BIBB DRAIN COCK
	BALL VALVE		UNION
	STRAINER		LUBRICATED PLUG COCK

GENERAL NOTE:

1. ALL COLD, HOT AND HOT WATER RETURN PIPING SHALL BE INSULATED PER SPECIFICATIONS (REFER SECTION 22 07 19).
2. PROVIDE FULL LINE SIZE HEAT TRAPS AT CW INLET AND HW OUTLET (UL APPROVED) TYPICAL

ELECTRIC WATER HEATER DETAIL - (EWH-1) | NOT TO SCALE | 3



SUMP PUMP (SP-1):

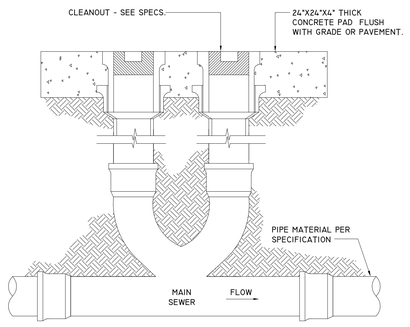
BELL & GOSSETT SERIES "2EC" MODEL "2EC07I8", EFFLUENT SUMP PUMP 50 GPM AT 30 HD, 3/4 HP, 208 VOLT, AND 1 PH WITH NEMA L6-20P CORD.

CONTROL PANEL, ALARM PANEL, AND FLOAT SWITCH/ SENSORS SHALL BE LITTLE GIANT PUMP MODEL OS3-1, 115V 60 HZ IHP MAX. CONTROL PANEL SHALL HAVE MULTIPLE INDICATOR LIGHTS: POWER, PUMP RUN, HIGH-WATER; HIGH OIL, PUMP OVERLOAD, FLOAT SWITCH/ SENSORS SHLL BE SINGLE-PIECE SENSOR FOR EASY INSTALLATION, SYSTEM SHALL BE ASME - A17.1 COMPLIANT, SYSTEM SHALL ALSO INCLUDES REMOTE ALARM, ALARM PANEL SHALL BE CONNECTED TO OIL SENSING SUMP SYSTEM'S REMOTE PANEL WHICH CONTAINS AUDIO/VISUAL ALARMING, BOTH THE MAIN PANEL AND REMOTE ALARM PANEL SHALL HAVE AUXILIARY CONTACTS FOR CONNECTION TO A BUILDINGS AUTOMATION SYSTEM OR SCADA SYSTEM.

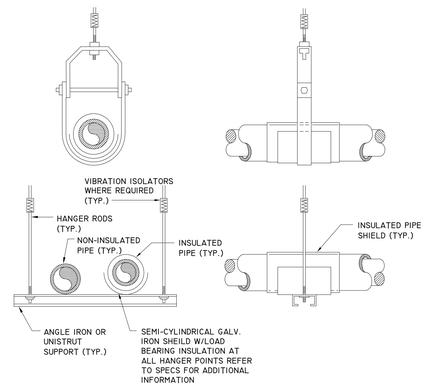
NOTES:

1. ALARM PANEL SHALL BE DIRECT WIRED.
2. LABEL SUMP PUMP DEDICATED RECEPTACLE "FOR SUMP PUMP ONLY".
3. LABEL ALARM PANEL RECEPTACLE "FOR ALARM PANEL ONLY".
4. NO PVC ALLOWED FOR PUMP DISCHARGE PIPING.
5. PROVIDE AND INSTALL A LOCAL VISUAL / AUDIBLE ALARM JUST OUTSIDE THE ELEVATOR IN ADDITION TO THE ALARM PANEL IN THE ELEV. WALL. COORDINATE WITH ARCHITECT FOR LOCATION.

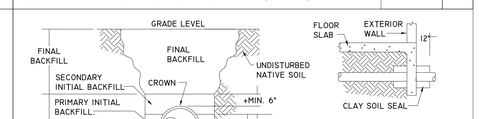
ELEVATOR PIT SUMP PUMP DETAIL (SP-1) | NOT TO SCALE | 13



DOUBLE EXTERIOR CLEANOUT | NOT TO SCALE | 10



PIPE HANGER DETAIL | NOT TO SCALE | 6



NOTE: CONTRACTOR SHALL COORDINATE WITH STRUCTURAL ENGINEER PRIOR TO PENETRATING OR MODIFICATION TO THE FOUNDATION.

UNDERGROUND INSTALLATION OF PLASTIC PIPE

PLASTIC PIPE SHOULD ALWAYS BE BURIED IN STRICT ACCORDANCE WITH THE ASTM STANDARD RELEVANT TO THE TYPE OF PLASTIC PIPING SYSTEM BEING INSTALLED. THOSE STANDARDS ARE:

ASTM D2321 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.

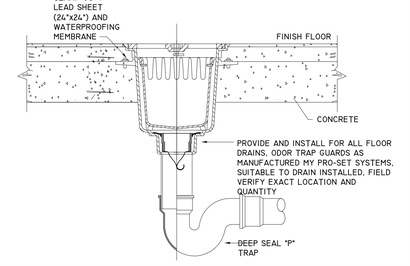
ASTM D2774 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING.

NOTE: IN ADDITION TO THESE STANDARDS, PIPE SHOULD ALWAYS BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENTS.

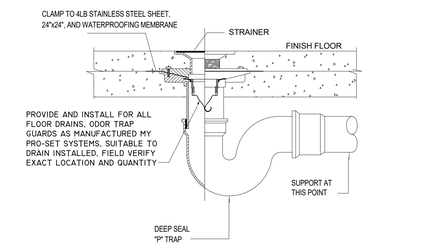
RECOMMENDATIONS FOR UNDERGROUND INSTALLATION OF PLASTIC DRAINAGE PIPE:

1. THE MINIMUM WIDTH OF THE TRENCH SHOULD BE THE PIPE OD (OUTSIDE DIAMETER) PLUS 16 INCHES THIS WILL ALLOW ADEQUATE ROOM FOR JOINING THE PIPE, SNAKING THE PIPE IN THE TRENCH TO ALLOW FOR EXPANSION AND CONTRACTION WHERE APPROPRIATE AND SPACE FOR BACKFILLING AND COMPACTION OF BACKFILL. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED TO COMPACT THE BACKFILL.
2. PROVIDE A MINIMUM OF 4 INCHES OF FIRM, STABLE AND UNIFORM BEDDING MATERIAL IN THE TRENCH BOTTOM. IF ROCK OR UNYIELDING MATERIAL IS ENCOUNTERED, A MINIMUM OF 6 INCHES OF BEDDING SHALL BE USED. BLOCKING SHOULD NOT BE USED TO CHANGE PIPE GRADE OR TO INTERMITTENTLY SUPPORT PIPE OVER LOW SECTIONS IN THE TRENCH.
3. THE PIPE SHOULD BE SURROUNDED WITH AN AGGREGATE MATERIAL WHICH CAN BE EASILY WORKED AROUND THE SIDES OF THE PIPE. BACKFILLING SHOULD BE PERFORMED IN LAYERS OF 6 INCHES WITH EACH LAYER BEING SUFFICIENTLY COMPACTED TO 85% TO 95% COMPACTION.
4. A MECHANICAL TAMPER IS RECOMMENDED FOR COMPACTING SAND AND GRAVEL. THESE MATERIALS CONTAIN FINE-GRAINS, SUCH AS SILT AND CLAY. IF A TAMPER IS NOT AVAILABLE, COMPACTING SHOULD BE DONE BY HAND.
5. THE TRENCH SHOULD BE COMPLETELY FILLED. THE BACKFILL SHOULD BE PLACED AND SPREAD IN UNIFORM LAYERS TO PREVENT ANY UNFILLED SPACES OR VOIDS. LARGE ROCKS, STONES, FROZEN CLODS, OR OTHER LARGE DEBRIS SHOULD BE REMOVED. STONE BACKFILL SHALL PASS THROUGH AN 1-1/2" SIEVE. ROCK SIZE SHOULD BE ABOUT ONE-TENTH OF THE PIPE OUTSIDE DIAMETER. HEAVY TAMPERS OR ROLLING EQUIPMENT SHOULD ONLY BE USED TO CONSOLIDATE THE FINAL BACKFILL.
6. TO PREVENT DAMAGE TO THE PIPE AND DISTURBANCE TO PIPE EMBEDMENT, A MINIMUM DEPTH OF BACKFILL ABOVE THE PIPE SHOULD BE MAINTAINED. PIPE SHOULD ALWAYS BE INSTALLED BELOW THE FROST LEVEL. TYPICALLY, IT IS NOT ADVISABLE TO ALLOW VEHICULAR TRAFFIC OR HEAVY CONSTRUCTION EQUIPMENT TO TRAVERSE THE PIPE TRENCH.

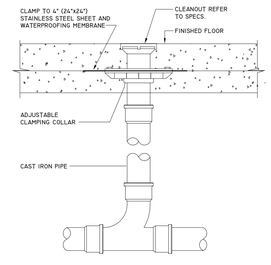
BACKFILL PIPING DETAIL | NOT TO SCALE | 2



FLOOR SINK WITH TRAP GUARD (FS-1) | NOT TO SCALE | 9



FLOOR DRAIN DETAIL WITH TRAP GUARD | NOT TO SCALE | 5



FLOOR CLEANOUT DETAIL (FCO-1) | NOT TO SCALE | 1

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04-17-2026

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REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

DETAILS

SCALE

DATE

2026/04/17

PROJECT NUMBER

Project Number

SHEET NUMBER

P5.00

MECHANICAL GENERAL NOTES

1. SEE ARCHITECTURAL PLANS FOR TYPE OF CEILING AND LOCATIONS OF WALL MOUNTED DEVICES.
2. DO NOT OPERATE AIR HANDLERS OR EXHAUST FANS UNTIL ALL INTERIOR CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
3. RECTANGULAR DUCT SIZES INDICATED ARE ACTUAL SHEET METAL DIMENSIONS IN INCHES ALL ROUND DUCT SIZES INDICATE NET FREE INSIDE DIAMETER AND DO NOT ACCOUNT FOR ANY INSULATION. ROUND DUCTS AND RECTANGULAR DUCTS ARE EXTERNALLY INSULATED PER SPECIFICATIONS. ALL DUCTWORK SHALL BE INSTALLED AND MANUFACTURED IN ACCORDANCE WITH LATEST SMACNA STANDARDS.
4. SCHEDULED MANUFACTURERS ARE BASIS OF DESIGN. PROVIDE BASIS OF DESIGN EQUIPMENT OR EQUAL.
5. MAJOR EQUIPMENT SHOWN ON THE PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL ARRANGEMENT AND SPACE ALLOCATION. VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTIONS IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE INSTALLED IN COORDINATION WITH ARCHITECTURAL SPACES.
6. PROVIDE ANCHOR BOLTS AND HANGERS FOR ALL EQUIPMENT. OTHER MISCELLANEOUS STEEL BRACING, SUPPORTS, AND REINFORCING STEEL REQUIRED TO SUPPORT EQUIPMENT SHALL BE FURNISHED AS PART OF THE SCOPE OF WORK OF DIVISION 23.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND AUTHORITIES HAVING JURISDICTION.
8. FLEX DUCTS ARE SAME SIZE AS DIFFUSER NECK.
9. SEAL MECHANICAL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH A UL LISTED FIRE STOP SYSTEM.
10. DO NOT RUN DUCT OR PIPE OVER ELECTRICAL PANELS COORDINATE LOCATION OF DUCTS AND EQUIPMENT IN MECHANICAL ROOMS WITH THE ELECTRICAL AND PLUMBING CONTRACTOR BEFORE ANY INSTALLATION.
11. ALL DUCT RUN-OUTS TO SUPPLY AND EXHAUST, DIFFUSERS AND REGISTERS, SHALL HAVE MANUAL BALANCING DAMPERS. PROVIDE YOUNG REGULATORS WITH REMOTE ADJUSTMENT WHERE ABOVE CEILING IS INACCESSIBLE.
12. SECURE ALL PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
13. ALL FLEXIBLE DUCT SHALL BE U.L. 181, CLASS 1 AIR DUCT BLACK LINER. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 10'-0". PROVIDE RIGID ROUND INSULATED AIR DUCT RUN-OUT AS REQUIRED. FLEXIBLE DUCT SHALL HAVE THE EQUIVALENT OF ONLY TWO 90 DEG. ELBOWS MAXIMUM. FLEX DUCTS ARE SAME SIZE AS DIFFUSER NECK..
14. THE AIR QUANTITIES SHOWN ON THE DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM TEMPERATURE WITHIN EACH ZONE, BUT THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED.
15. INSTALL SMOKE DETECTOR FURNISHED AND TERMINATED BY FIRE ALARM CONTRACTOR FOR ALL UNITS.
16. INSULATE SUPPLY AIR AND OUTSIDE AIR DUCTS LOCATED IN CONDITIONED SPACES WITH R-6 FSK DUCT WRAP OR 2" THICK UL181 LISTED FOIL FACED DUCT LINER. INCREASE INDICATED DUCT DIMENSIONS BY 2" WHEN USING DUCT LINER. INSULATE ALL DUCTS LOCATED IN UNCONDITIONED SPACES WITH R-6 FSK DUCT WRAP.
17. PROVIDED RECORD DRAWINGS OF THE ACTUAL INSTALLATION TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT. GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.
18. PROVIDE OPERATING AND MAINTENANCE MANUALS TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS, AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING: (A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. (B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. (C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY. (D) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS. (E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET-POINTS.
19. SUBMIT DUCTWORK AND PIPING SHOP DRAWINGS (COORDINATING WITH OTHER TRADES) PRIOR TO ROUGH-IN AND CONSTRUCTION.
20. DUCTWORK AND PLENUMS SHALL BE SEALED IN ACCORDANCE WITH THE MECHANICAL CODE AND SMACNA METHOD AND COMMERCIAL ENERGY CONSERVATION CODE. SEAL ALL LONGITUDINAL AND TRAVERSE JOINTS.
21. PROVIDE SYSTEM AIR BALANCING AND COMMISSIONING PERFORMED BY AN AABC OR NEBB CERTIFIED AGENCY. BALANCE HVAC SYSTEMS PER ASHRAE AND AGENCY STANDARDS. SUBMIT TAB REPORT FOR REVIEW. COMMISSION SYSTEMS PER IECC REQUIREMENTS. SUBMIT COMMISSIONING REPORT FOR REVIEW. CORRECT ALL TAB AND COMMISSIONING DEFICIENCIES PROMPTLY AND RETEST AS REQUIRED.

MECHANICAL SYMBOLS LEGEND

	SUPPLY AIR DUCT UP (PLAN)	(A) X CFM	DIFFUSER TYPE, CFM		CHECK VALVE, SWING GATE
	SUPPLY AIR DUCT DOWN (PLAN)		THERMOSTAT - MOUNT 48" AFF UNO		ANGLE PRESSURE RELIEF VALVE
	RETURN OR OUTSIDE AIR DUCT UP (PLAN)		HUMIDISTAT	PRV	PRESSURE REDUCING VALVE
	RETURN OR OUTSIDE AIR DUCT DOWN (PLAN)		FIRESTAT		LOCK SHIELD
	EXHAUST AIR DUCT UP (PLAN)		IONIZATION DETECTOR		QUICK OPENING/CLOSING VALVE
	EXHAUST AIR DUCT DOWN (PLAN)		SMOKE DETECTOR		PRESSURE REGULATOR
	RETURN AIR/TRANSFER AIR BOOT		PIPE UP		STRAINER W/BLOW DOWN VALVE
	CEILING SUPPLY AIR DEVICE		PIPE DOWN		THREE-WAY VALVE (ELECTRIC)
	SIDEWALL SUPPLY/EXHAUST REGISTER		CAP		TWO-WAY VALVE (ELECTRIC)
	CEILING RETURN REGISTER		90° ELBOW		FLEXIBLE CONNECTION
	CEILING EXHAUST REGISTER		45° ELBOW	EJ	EXPANSION JOINT
	RETURN AIR GRILLE WITH BOOT		45° ELBOW DOWN (OGEE)		THERMOMETER
	BRANCH DUCT TAP		TEE	TW	THERMOMETER WELL
	DUCT SPLIT WITH SPLITTER DAMPER		TEE UP		TEST PLUG
AD	ACCESS DOOR		TEE DOWN		PRESSURE GAUGE W/GAUGE COCK
	TRANSITION IN DUCT		TOP CONNECTION		MANUAL AIR VENT
	FLEXIBLE DUCT CONN. TO RECTANGULAR DUCT WITH SPIN-IN CONNECTOR		CROSS		AUTOMATIC AIR VENT
AP	ACCESS PANEL		UNION (SCREWED)	S	SOLENOID VALVE
	DUCT ELBOW WITH TURNING VANES		UNION (FLANGED)	FS	FLOW SWITCH
	DUCT ELBOW WITHOUT VANES	T	DUCT MOUNTED TEMPERATURE SENSOR	T	TEMPERATURE AND PRESSURE RELIEF VALVE
	FLEXIBLE CONNECTION, FLEXIBLE DUCT	P	DUCT MOUNTED PRESSURE SENSOR		STEAM TRAP
VD	VOLUME DAMPER	SD	DUCT MOUNTED SMOKE DETECTOR		STEAM MOISTURE SEPARATOR
	MOTORIZED VOLUME DAMPER		PIPE BREAK	EP	CONTROL, ELECTRIC-PNEUMATIC
	FIRE DAMPER		CONCENTRIC REDUCER	PE	CONTROL, PNEUMATIC-ELECTRIC
SD	SMOKE DAMPER		ECCENTRIC REDUCER		RED. PRESS PRINCIPAL BACKFLOW PREVENTER
	COMBINATION FIRE/SMOKE DAMPER		END SUCTION PUMP	CHWR	CHILLED WATER RETURN
AFS	AIR FLOW SWITCH	OR	BALL VALVE	CHWS	CHILLED WATER SUPPLY
APD	AIR PRESSURE DIFFERENTIAL SWITCH		BUTTERFLY VALVE	CWR	CONDENSER WATER RETURN
	RISE IN DUCT ELEVATION		ISOLATION VALVE	CWS	CONDENSER WATER SUPPLY
	DROP IN DUCT ELEVATION		GATE VALVE WITH QUICK DISCONNECT	HHWR	HOT WATER RETURN
SD DIM	SPLITTER DAMPER - DIMENSION AS NOTED ON DRAWING		TWO-WAY VALVE (PNEUMATIC)	HHWS	HOT WATER SUPPLY
BDD	BACK DRAFT DAMPER		THREE-WAY VALVE (PNEUMATIC)	CD	CONDENSATE DRAIN
UCD 1"	UNDERCUT DOOR 1"		BALANCING VALVE	HRS	HEAT RECOVERY SUPPLY
RE: 1/M-7	REFER TO DETAIL #1 ON DRAWING M-7	M	PNEUMATIC MOTOR	HRR	HEAT RECOVERY RETURN
				LPR	STEAM CONDENSATE

NOTE:
NOT ALL ITEMS NECESSARILY USED.

APPLICABLE CODES

- 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2021 INTERNATIONAL MECHANICAL CODE (IMC)
- 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CONDITIONS

	WINTER	SUMMER
OUTDOOR ENVIRONMENTAL DESIGN CRITERIA:	24° F	105° F DB / 74° F WB
INDOOR ENVIRONMENTAL DESIGN CRITERIA:	70° F	75° F DB / 50% RH

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No.	DESCRIPTION	DATE
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SHEET TITLE

SYMBOLS NOTES AND LEGEND

SCALE

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

M1.00

MECHANICAL SPECIFICATIONS

1.0 BASIC MECHANICAL REQUIREMENTS

1.1 STANDARDS:

A. COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND THE APPLICABLE REQUIREMENTS OF THE FOLLOWING NATIONALLY ACCEPTED CODES AND STANDARDS:
1. UNDERWRITERS' LABORATORIES, INC., UL.
2. AIR MOVING & CONDITIONING ASSOCIATION, AMCA.
3. AMERICAN STANDARDS ASSOCIATION, ASA.
4. AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITINING ENGINEERS, INC., ASHRAE.
5. AMERICAN SOCIETY OF MECHANICAL ENGINEERS, ASME.
6. AMERICAN SOCIETY OF PLUMBING ENGINEERS, ASPE.
7. AMERICAN SOCIETY OF TESTING MATERIALS, ASTM.
8. AMERICAN WATER WORKS ASSOCIATION, AWWA.
9. NATIONAL BUREAU OF STANDARDS, NBS.
10. NATIONAL FIRE PROTECTION ASSOCIATION, NFPA.
11. SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, SMACNA.

1.2 INSTALLATION:

A. GENERAL: SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:
1. COORDINATE MECHANICAL, PLUMBING AND FIRE PROTECTION SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
2. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
3. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION. TO ALLOW FOR MECHANICAL INSTALLATIONS.
4. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED IN PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
5. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING.
6. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
7. COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. PROVIDE REQUIRED CONNECTION FOR EACH SERVICE.
8. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH ARCHITECTURAL ACTION MARKINGS ON SUBMITTAL, INCLUDING COORDINATION DRAWINGS, TO GREATEST EXTENT POSSIBLE. CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS, RECOGNIZING THAT PORTIONS OF THE WORK ARE SHOWN ONLY IN DIAGRAMMATIC FORM. WHERE COORDINATION REQUIREMENTS CONFLICT WITH INDIVIDUAL SYSTEM REQUIREMENTS, RESOLVE CONFLICTS AND ROUTE PROPOSED SOLUTION TO THE ARCHITECT FOR REVIEW AND APPROVAL.
9. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES.
10. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION AND LABEL.
11. INSTALL ACCESS PANEL OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES. ACCESS PANELS AND DOORS ARE SPECIFIED.
12. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT GIVING RIGHT OF WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE

2.0 REFRIGERANT PIPING

A. REFRIGERANT PIPING: SHALL BE "REFRIGERANT GRADE" HARD DRAWN COPPER TUBING THAT HAS BEEN CLEANED AND CAPPED FOR REFRIGERATION SERVICE. FITTINGS SHALL BE THE WROUGHT COPPER TYPE AND SHALL BE ASSEMBLED WITH SILVER SOLDER JOINTS. THE ENDS OF ALL PIPE AND THE INSIDE OF ALL FITTINGS SHALL BE CAREFULLY CLEANED BEFORE JOINING. NO ACID SHALL BE USED IN CLEANING OR AS A FLUX IN SOLDERING JOINTS. BLEED NITROGEN THROUGH ALL PIPING WHILE SOLDERING. REFRIGERANT PIPING SHALL BE SIZED BY THE MANUFACTURER BASED ON THE ACTUAL LENGTH AND VERTICAL RISE REQUIREMENT AND INSTALLED TO CONFORM TO APPROVED RECOMMENDATION OF THE UNIT / COMPRESSOR MANUFACTURER. INSULATE REFRIGERANT PIPING WITH ELASTOMERIC FOAM INSULATION PER IECC THICKNESS BUT NOT LESS THAN 3/4" MINIMUM. PROVIDE 0.20" THICK ALUMINUM INSULATION JACKETING FOR EXTERIOR INSULATION. PROVIDE ASJ FOR VISIBLE EXPOSED INTERIOR REFRIGERANT PIPING.

3.0 DUCTWORK

A. SHEET METAL DUCTWORK
1. FURNISH AND INSTALL SHEET METAL DUCTWORK. SHEET METAL DUCTWORK HANGERS AND SUPPORTS, FIRE DAMPERS, FLASHING AND ALL NECESSARY ACCESSORIES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
2. SMACNA STANDARDS: COMPLY WITH SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), 1985 EDITION, RECOMMENDATIONS FOR FABRICATION, CONSTRUCTION, DETAILS AND INSTALLATION PROCEDURES, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
3. ASHRAE STANDARDS: COMPLY WITH AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE) RECOMMENDATIONS, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.

B. RECTANGULAR SHEET METAL DUCTWORK:
1. DUCTWORK MATERIALS: PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING, SEAM MARKS, ROLLER MARKS, OIL CANNING, STAINS, DISCOLORATION AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING.
2. GAUGES, RECTANGULAR DUCTWORK: FABRICATE STEEL DUCTWORK (GALVANIZED AND STAINLESS, IF ANY) FROM THE MINIMUM GAUGES FOR SIZES UP TO THE CORRESPONDING MAXIMUM LONG-SIDE DIMENSIONS AS INDICATED IN SMACNA DUCT MANUAL.
3. SEAL ALL LONGITUDINAL AND TRAVERSE JOINTS.

C. ROUND SHEET METAL DUCTWORK:
1. DUCT GAUGES, GIRTH REINFORCING, GIRTH JOINTS, LONGITUDINAL SEAMS, ETC. SHALL BE IN ACCORDANCE WITH THE SMACNA MANUAL. DRAW BAND JOINT CONNECTION WILL NOT BE ACCEPTABLE. ROUND DUCT OVER 52" IN DIAMETER SHALL BE MINIMUM 16 GAUGE GALVANIZED STEEL WITH WELDED JOINT CONSTRUCTION AND COMPANION FLANGE JOINTS. ROUND SHEET METAL SUPPLY AIR DUCTWORK SHALL BE FABRICATED USING SPIRAL SEAMS ONLY WITH BEADED SLEEVED JOINTS. ELBOWS SHALL BE STAMPED OR SEGMENTED AND TEES SHALL BE 45 DEGREES LATERAL TAPS WITH WELDED JOINTS. ADJUSTABLE FITTINGS ARE NOT PERMITTED.

D. FLEXIBLE CONNECTION:
1. FLEXIBLE CONNECTION SHALL BE PROVIDED IN DUCTWORK CONNECTED TO THE INLETS AND/OR OUTLETS OF ALL AIR HANDLING UNITS, FANS, ETC. FLEXIBLE CONNECTION MATERIALS SHALL BE VENT-FABRICS, INC., "METALEDGE VENTGLAS" OR APPROVED EQUAL. UNDERWRITERS' LABORATORIES AS NON-COMBUSTIBLE SHALL CLASSIFY THE MATERIAL FOR THE FABRIC AND FIRE RETARDANT FOR THE COATING. ENDS OF FABRIC MUST BE OVERLAPPED 2" AND GLUED WITH R-H PRODUCTS COMPANY, INC., NUMBER XL8 CONTACT GLUE. SEWING OR STAPLING WILL NOT BE PERMITTED. AT LEAST ONE-INCH SLACK SHALL BE ALLOWED IN ALL FLEXIBLE CONNECTION INSTALLATIONS TO ENSURE THAT NO VIBRATION IS TRANSMITTED.

E. FLEXIBLE DUCTWORK:
1. FLEXIBLE DUCT SHALL BE A FACTORY GLASS FIBER INSULATED ASSEMBLY WITH VAPOR BARRIER JACKET AND A MAXIMUM THERMAL CONDUCTANCE OF 0.23 BTU/HR PER SF PER OF FLEXIBLE DUCT SHALL BE CONSTRUCTED OF REINFORCED ALUMINUM FOIL FABRIC MECHANICALLY LOCKED INTO A SPIRAL ALUMINUM HELIX SUITABLE FOR A POSITIVE WORKING PRESSURE OF AT LEAST 6" W.G. IT SHALL REQUIRE NO MORE THAN TWO 900 ELBOWS AS INSTALLED. THE FLEXIBLE DUCT ASSEMBLY SHALL BE LISTED CLASS I BY THE UNDERWRITERS' LABORATORY AT A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED RATE OF NOT OVER 50 AND SHALL COMPLY WITH NFPA STANDARD 90A.
2. FLEXIBLE DUCT CLAMPS SHALL BE STAINLESS STEEL WITH SWIVEL ACTION SCREW. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET INCLUDING ALL BENDS.
3. IF IT COMPLIES WITH THESE SPECIFICATIONS, FLEXIBLE DUCT MANUFACTURED BY FLEXMASTER TYPE "5", GENFLEX OR THERMAFLEX OF EQUAL CONSTRUCTION WILL BE ACCEPTABLE.

F. MANUAL DAMPERS:
1. MANUAL DAMPERS SHALL HAVE A MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME WITH MOUNTING FLANGES AND AXLES SET IN OIL IMPREGNATED BRONZE BEARINGS. AXLES SHALL BE MINIMUM OF ½" IN DIAMETER AND SHALL BE INTERLOCKED WITH BLADES TO POSITIVELY ELIMINATE SLIPPAGE.
2. BLADES SHALL BE MINIMUM OF 16 GAUGE GALVANIZED STEEL. MANUAL DAMPERS SHALL HAVE A MINIMUM OF FOUR BREAKS RUNNING THE ENTIRE LENGTH OF THE DAMPER TO ASSURE RIGIDITY AND TIGHT CLOSE OFF. BLADES SHALL BE ON CENTERS NO GREATER THAN 9" AND NO BLADE SHALL EXCEED 48" IN LENGTH. ALL BLADES SHALL BE INTERCONNECTED TO ACT IN UNISON FOR OPPOSED BLADE OPERATION.
3. SINGLE BLADE DAMPERS SHALL BE USED FOR DUCTWORK LESS THAN 12 INCHES FOR THE LARGER DIMENSION.
4. ALL MANUAL DAMPERS OF 12-INCH DIAMETER OR LESS SHALL BE PROVIDED WITH LOCK-IN QUADRANT HANDLES: "AMERICAN/ELGEN" MODEL EDR-3XL SUITABLE FOR THE INSULATED DUCTWORK.

G. THERMAL INSULATION FOR DUCTWORK
1. INSULATION FOR SUPPLY AIR DUCTWORK AND OUTSIDE AIR DUCT SHALL BE AS FOLLOWS:
   a. CONCEALED ABOVE CEILING
   b. SHALL BE 2" FLEXIBLE FIBERGLASS WITH FSK VAPOR JACKET WITH MINIMUM R-VALUE PER IECC REQUIREMENTS.
2. INSULATION: ASTM C553: FLEXIBLE, NONCOMBUSTIBLE BLANKET.
   a. "K" VALUE: ASTM C518, 0.25 AT 75 DEGREES F
   b. MAXIMUM SERVICE TEMPERATURE: 250 DEGREES F.
   c. MAXIMUM MOISTURE ABSORPTION: 0.20 PERCENT BY VOLUME
   d. DENSITY: 2.0 LB./CU.FT.
   e. THICKNESS: 2".
3. VAPOR BARRIER JACKET A KRAFT PAPER REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM OR POLYMER FILM AS INDICATED.
   a. MOISTURE VAPOR TRANSMISSION: ASTM E96: 0.02 PERM.

H. PIPING AND DUCT SUPPORT
1. HANGERS AND SUPPORT COMPONENTS SHALL BE FACTORY FABRICATED OF MATERIALS, DESIGN, AND MANUFACTURER COMPLYING WITH MSS SP 58.
   a. COMPONENTS SHALL HAVE GALVANIZED COATINGS WHERE INSTALLED FOR PIPING AND EQUIPMENT THAT WILL NOT HAVE FIELD APPLIED FINISH.
   b. PIPE ATTACHMENTS SHALL HAVE NONMETALLIC COATING FOR ELECTROLYTIC PROTECTION WHERE ATTACHMENTS ARE IN DIRECT CONTACT WITH COPPER TUBING.
2. THERMAL HANGER SHIELD INSERTS: 100 PSI AVERAGE COMPRESSIVE STRENGTH, WATERPROOFED CALCIUM SILICATE, ENCASED WITH A SHEET METAL SHIELD. INSERT AND SHIELD SHALL COVER ENTIRE CIRCUMFERENCE OF THE PIPE AND SHALL BE OF LENGTH INDICATED BY MANUFACTURER FOR PIPE SIZE AND THICKNESS OF INSULATION.
3. STEEL PLATES, SHAPES, AND BARS: ASTM A 36.
4. PIPE ALIGNMENT GUIDES: FACTORY FABRICATED, OF CAST SEMI-STEEL OR HEAVY FABRICATED STEEL, CONSISTING OF BOLTED TWO SECTION OUTER CYLINDER AND BASE WITH TWO SECTION GUIDING SPIDER THAT BOLTS TIGHTLY TO PIPE. LENGTH OF GUIDES SHALL BE AS RECOMMENDED BY MANUFACTURER TO ALLOW INDICATED TRAVEL.
5. HANGERS FOR PIPE SIZES 1/2 TO 1 1/2 INCH MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
6. HANGERS FOR PIPE SIZES 2 TO 4 INCHES CARBON STEEL, ADJUSTABLE, CLEVIS.
7. HANGERS FOR PIPE SIZES 6 INCHES AND OVER: ADJUSTABLE STEEL YOKE, CAST IRON ROLL, DOUBLE HANGER.
8. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS; CAST IRON ROLL AND STAND FOR PIPE SIZES 6 INCHES AND OVER.
9. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES: CAST IRON HOOK.
10. WALL SUPPORT FOR PIPE SIZES 4 INCHES AND OVER: ADJUSTABLE STEEL YOKE AND CAST IRON ROLL.
11. VERTICAL SUPPORT: STEEL RISER CLAMP.
12. FLOOR SUPPORT FOR PIPE SIZES TO 4 INCHES: CAST IRON ADJUSTABLE PIPE SADDLE, LOCKNUT NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.
13. COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER PLATED.
14. SHIELD FOR INSULATED PIPING 2 INCHES AND SMALLER: 18 GAGE GALVANIZED STEEL SHIELD OVER INSULATION IN 180 DEGREE SEGMENTS, MINIMUM 12 INCHES LONG AT PIPE SUPPORT.
15. SHIELD FOR INSULATED PIPING 2 1/2 INCHES AND LARGER: PIPE COVERING PROTECTIVE SADDLES, 18 INCHES LONG, 16 GAUGE MINIMUM.
16. SHIELDS FOR VERTICAL COPPER PIPE RISERS: SHEET LEAD.
17. STEEL HANGER RODS: THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED.
18. INSERTS: MALLEABLE IRON CASE OF GALVANIZED STEEL SHELL AND EXPANDER PLUG FOR THREADED CONNECTION WITH LATERAL ADJUSTMENT, TOP SLOT FOR REINFORCING RODS, LUGS FOR ATTACHING TO FORMS; SIZE INSERTS TO SUIT THREADED HANGER RODS.
19. CAPS: STEEL, 20 GAGE MINIMUM, 16 GAGE AT FIRE RESISTANT ELEMENTS.
20. SLEEVES FOR PIPES THROUGH NON-FIRE RATED BEAMS, WALLS, FOOTINGS, AND POTENTIALLY WET FLOORS: FORM WITH STEEL PIPE.
21. SLEEVES FOR PIPES THROUGH FIRE RATED AND FIRE RESISTIVE FLOORS AND WALLS, AND FIREPROOFING: PREFABRICATED FIRE RATED SLEEVES INCLUDING SEALS, UL LISTED.
22. SLEEVES FOR ROUND DUCTWORK: FORM WITH GALVANIZED STEEL.
23. SLEEVES FOR RECTANGULAR DUCTWORK: FORM WITH GALVANIZED STEEL.
24. FIRE STOPPING INSULATION: GLASS FIBER TYPE, NON-COMBUSTIBLE.
25. CALK: ACRYLIC SEALANT.

4.0 TESTING, ADJUSTING AND BALANCING

A. PROVIDE SERVICES OF AN AABC OR NEBB CERTIFIED AGENCY TO PROVIDE TESTING, BALANCING, AND COMMISSIONING SERVICES. CONDUCT TESTING AND BALANCING IN ACCORDANCE WITH AGENCY STANDARDS. CONDUCT COMMISSIONING IN ACCORDANCE WITH IECC STANDARDS. SUBMIT TAB AND COMMISSIONING REPORTS TO ENGINEER FOR REVIEW. CORRECT DEFICIENCIES AND RETEST AT NO ADDITIONAL COST TO OWNER.

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STATE OF TEXAS
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64671
LICENSED
PROFESSIONAL ENGINEER

04-17-2026

ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

SPECIFICATIONS

SCALE

DATE

2026/04/17

PROJECT NUMBER

Project Number

SHEET NUMBER

M1.01

ELECTRIC HEATER SCHEDULE

MARK	EUH-1
DISCHARGE DIRECTION	HORIZONTAL
SERVES	RISER
MANUFACTURER	REZNOR
MODEL NUMBER	EUH-TSL
HEATER SIZE (kW)	2.0
AIRFLOW (CFM)	275
MOTOR RPM	1550 RPM
VOLTAGE	208/1/60
NOTES	ALL

NOTES:
1. PROVIDE FACTORY SUSPENSION KIT.
2. PROVIDE UNIT HEATERS WITH LOCAL THERMOSTAT.
3. PROVIDE 24V RELAY KIT WITH TRANSFORMER.
4. HEATER SHALL BE FAN FORCED TYPE.
5. PROVIDE WITH LOCAL DISCONNECT IN NEMA 1 ENCLOSURE.

DIFFUSER NECK-DUCT SIZE SCHEDULE

SUPPLY AIR (CFM)	DIFFUSER NECK AND BRANCH DUCT SIZE (DIA)
0 - 100	6"
101 - 200	8"
201 - 300	10"
301 - 400	12"
401 - 500	14"

PACKAGED DX ROOF TOP UNIT SCHEDULE

PLAN MARK	SERVICE	TYPE	SUPPLY FAN					COOLING COIL				AMBIENT TEMP (°F)	ELECTRIC HEATING COIL			ELECTRICAL DATA			MAKE & MODEL	WEIGHT (LBS)	REMARKS
			S/A FLOW (CFM)	O/A FLOW (CFM)	E.S.P. (IN. WG.)	FAN POWER (HP)	FAN TYPE	CAPACITY TOTAL (MBH)	CAPACITY SENSIBLE (MBH)	EAT DB/WB (°F)	LAT DB/WB (°F)		EAT DB (°F)	LAT DB (°F)	CAPACITY (KW)	VOLTAGE V/P/H	MCA	MOCP			
RTU-1	FIRST FLOOR MAIN PRAYER HALL 1ST UNIT	SZ-VAV	5,000	1,500	1.5	10.0	DIRECT	187.3	154.4	84.0/66.3	56.1/54.1	105	60.0	85	40	480/3/60	121	125	CAPTIVEAIRE	2625	1-14
RTU-2	FIRST FLOOR DINING 1ST UNIT	SZ-VAV	6,700	2,150	1.5	7.5	DIRECT	250.4	208.7	86.6/66.6	56.5/54.5	105	59.0	85	55	480/3/60	125	150	CAPTIVEAIRE	4752	1-14
RTU-3	FIRST FLOOR DINING 2ND UNIT	SZ-VAV	4,500	1,650	1.5	5.0	DIRECT	193.4	155.3	86.0/67.1	54.9/53.2	105	56.7	85	42	480/3/60	88	100	CAPTIVEAIRE	2545	1-14
RTU-4	SECOND FLOOR PRAYER HALL 1ST UNIT	SZ-VAV	5,500	1,650	1.5	10.0	DIRECT	191.4	162.9	84.0/66.3	57.2/55.1	105	60.0	85	43	480/3/60	88	100	CAPTIVEAIRE	2641	1-14
RTU-5	SECOND FLOOR EAST CLASSROOMS	SZ-VAV	3,300	1,075	1.5	5.0	DIRECT	116.7	99.8	84.8/66.6	57.4/55.2	105	58.7	85	27	480/3/60	64	70	CAPTIVEAIRE	2131	1-14
RTU-6	SECOND FLOOR CENTER CLASSROOMS	SZ-VAV	1,200	400	1.5	2.0	DIRECT	46.0	37.1	84.8/66.7	57.1/54.3	105	58.3	85	10	480/3/60	41	45	CAPTIVEAIRE	1372	1-14
RTU-7	SECOND FLOOR WEST CLASSES	SZ-VAV	2,750	830	1.5	3.4	DIRECT	95.6	82.0	84.1/66.3	57.1/55.1	105	59.9	85	22	480/3/60	59	60	CAPTIVEAIRE	1392	1-14
RTU-8	SECOND FLOOR ASSEMBLY	SZ-VAV	4,500	1,650	1.5	5.0	DIRECT	193.4	155.3	86.0/67.1	54.9/53.2	105	59.5	85	27	480/3/60	88	100	CAPTIVEAIRE	2545	1-14
RTU-9	FIRST FLOOR MAIN PRAYER HALL 2ND UNIT	SZ-VAV	5,500	1,850	1.5	5.0	DIRECT	199.9	169.7	85.1/66.8	57.2/55.1	105	58.2	85	47	480/3/60	80	80	CAPTIVEAIRE	4295	1-14
RTU-10	SECOND FLOOR PRAYER HALL 2ND UNIT	SZ-VAV	4,300	1,350	1.5	7.5	DIRECT	151.0	128.8	84.4/66.5	57.3/55.2	105	59.3	85	35	480/3/60	82	90	CAPTIVEAIRE	2526	1-14
RTU-11	KITCHEN	SZ-CV	4,200	500 TO 3,800	1.5	5.0	DIRECT	229.7	196.4	105.0/74.0	58.2/56.3	105	25.0	80	73	480/3/60	118	125	CAPTIVEAIRE	3126	ALL

NOTES:
1. PROVIDE UNIT WITH 14" INSULATED ROOF CURB.
2. DESIGN AND SECURE UNIT TO WITHSTAND 115 MPH WIND SPEED PER IBC REQUIREMENTS.
3. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTIONS AND LOCAL DISCONNECT SWITCH IN NEMA RATED ENCLOSURE.
4. PROVIDE UNIT WITH CONTROL VOLTAGE POWER SUPPLIES AND GFCI SERVICE RECEPTACLE.
5. PROVIDE UNIT WITH FACTORY DDC CONTROL SYSTEM WITH REMOTE PROGRAMMABLE TEMP/HUMIDITY THERMOSTAT.
6. PROVIDE HAIL GUARDS AND E-COAT CONDENSERS.
7. INTERLOCK COOLING AND HEATING TO PREVENT SIMULTANEOUS OPERATION.
8. PROVIDE UNIT WITH 2" MERV 13 AIR FILTERS.
9. PROVIDE UNIT WITH MANUFACTURER'S 5-YEAR WARRANTY.
10. PROVIDE O/A INTAKE WITH WEATHERPROOF INTAKE HOOD, BIRDSCREEN, AND LOW LEAKAGE MOTORIZED DAMPER.
11. PROVIDE FACTORY AUTHORIZED CONFIGURATION AND STARTUP SERVICES AS REQUIRED BY FACTORY WARRANTY.
12. PROVIDE UNIT WITH HOT GAS REHEAT HUMIDITY CONTROL.
13. COMPLY WITH IECC REQUIREMENTS.
14. PROVIDE UNIT WITH 2" DOUBLE WALL FOAM INJECTED CASING CONSTRUCTION WITH THERMAL BREAKS.
15. PROVIDE UNIT WITH 2-POSITION OA DAMPER CONTROL. INTERLOCK WITH KITCHEN HOOD EXHAUST FAN.

SPLIT DX UNIT WITH ELECTRIC HEAT SCHEDULE

MARK	AIRFLOW (CFM)	OUTSIDE AIR FLOW (CFM)	INDOOR UNIT										ELECTRIC HEATER				OUTDOOR UNIT					MANUFACTURER	NOTES
			CONFIGURATION	FAN		COOLING COIL					ELECTRICAL DATA						AMBIENT TEMP. (°F)	ELECTRICAL DATA					
				E.S.P. (IN. WG.)	MOTOR (HP)	MAX FACE VEL. (FPM)	TOT. CAPACITY (MBH)	SEN. CAPACITY (MBH)	EAT DB/WB (°F)	LAT DB/WB (°F)	MCA	MOCP	V/P/Hz	EAT (°F)	LAT (°F)	CAPACITY (KW)	V/P/Hz		MCA	MOCP	V/P/Hz		
FCU-1 / CU-1	1000	100	HORIZONTAL	1.0	1.0	450	22.5	21.0	78.0/63.9	59.0/56.4	10	15	460/3/60	65	85	5	460/3/60	105	7	15	460/3/60	TRANE	1-8

NOTES:
1. PROVIDE MERV-13 FILTER WITH THE UNIT.
2. PROVIDE CONDENSER WITH E-COAT.
3. PROVIDE UNIT EFFICIENCY IN COMPLIANCE WITH IECC 2015.
4. PROVIDE CONDENSING UNIT SUITABLE FOR LOW AMBIENT OPERATION.
5. PROVIDE UNIT WITH CONTROL VOLTAGE POWER SUPPLY AND 7-DAY PROGRAMMABLE THERMOSTAT.
6. PROVIDE UNIT WITH DRAIN PAN WITH WATER SENSING DEVICE.
7. PROVIDE HAIL-GUARD FOR CONDENSER COILS.

OUTSIDE AIR CALCULATION

Unit	Occ. Category	Room Name	Room Area (Sf)	Number Of People	Required Outdoor Air Per Person (CFM/Person)[Rp]	Required Outdoor Air Per Area (CFM/Sf)[Rz]	Distribution Effectiveness [Ez]	Uncorrected Breathing Air [Vbz]	System Effectiveness (Ev)	Corrected Outside Air [Voz](CFM)	Outside Air Required (CFM)	Outside Air Provided (CFM)
RTU-1	Lobbies/prefunction	Shoe Lobby A105	211	1	7.5	0.06	1	20	0.75	27	**1,712**	**1,725**
	Lobbies	Vestibule A100	271	2	5	0.06	1	26	0.75	35		
	Lobbies/prefunction	Shoe Lobby A104	190	1	7.5	0.06	1	19	0.75	25		
	Lobbies	Shoes A107	76	1	5	0.06	1	10	0.75	13		
	Places of religious worship	Mens Masjid A105	2,400	150	5	0.06	1	894	0.75	1,192		
	Multi-purpose assembly	Sehen A101	1,080	50	5	0.06	1	315	0.75	420		
RTU-2	Multi-purpose assembly	Mawaid Lobby A111	350	5	5	0.06	1	46	0.75	61	**1,112**	**1,125**
	Lobbies	Shoes A113	134	1	5	0.06	1	13	0.75	17		
	Cafeteria / fast food dining	Mawaid A112	1,940	50	7.5	0.18	1	724	0.75	966		
	Office space	Jamaat Office A129	148	1	5	0.06	1	14	0.75	19		
	Lobbies	Jamat Lobby A109	150	1	5	0.06	1	14	0.75	19		
	Lobbies	Lobby A108	142	1	5	0.06	1	14	0.75	18		
	Storage rooms	Takat Room A120	78	1	0	0.12	1	9	0.75	12		
RTU-3	Storage rooms	Storage A1139	67	0	0	0.12	1	8	0.75	11	**1,017**	**1025**
	Office space	VIP Room A131	77	2	5	0.06	1	15	0.75	19		
	Office space	Jamaat Office A130	178	1	5	0.06	1	16	0.75	21		
	Cafeteria / fast food dining	Mawaid A112	1,940	50	7.5	0.18	1	724	0.75	966		
RTU-4	Lobbies	Lobby A203	224	0	5	0.06	1	13	0.75	18	**1,081**	**1,100**
	Daycare (through age 4)	Nursery A207	130	1	10	0.18	1	33	0.75	45		
	Conference / meeting	Conference A200	256	8	5	0.06	1	55	0.75	74		
	Multi-purpose assembly	Sehen A201	1,080	25	5	0.06	1	190	0.75	253		
	Places of religious worship	Masjid A202	2,400	75	5	0.06	1	519	0.75	692		
RTU-5	Classrooms (age 9 plus)	Class A217	200	10	10	0.12	1	124	0.75	165	**661**	**675**
	Classrooms (age 9 plus)	Class A218	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A219	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A220	200	10	10	0.12	1	124	0.75	165		
RTU-6	Classrooms (age 9 plus)	Class A222	320	10	10	0.12	1	138	0.75	185	**690**	**700**
	Classrooms (age 9 plus)	Class A223	320	10	10	0.12	1	138	0.75	185		
	Classrooms (age 9 plus)	Class A234	224	10	10	0.12	1	127	0.75	169		
	Classrooms (age 9 plus)	Class A235	114	10	10	0.12	1	114	0.75	152		
RTU-7	Classrooms (age 9 plus)	Class A226	200	10	10	0.12	1	124	0.75	165	**677**	**700**
	Classrooms (age 9 plus)	Class A227	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A228	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A229	300	10	10	0.12	1	136	0.75	181		
RTU-8	Office space	Office A214	328	5	5	0.06	1	45	0.75	60	**963**	**975**
	Office space	Staff A216	320	14	5	0.06	1	89	0.75	119		
	Multi-purpose assembly	Assembly A212	2,571	50	5	0.06	1	404	0.75	539		
	Lobbies/prefunction	Lobby A208	405	0	7.5	0.06	1	24	0.75	32		
	Libraries	Library A210	291	25	5	0.12	1	160	0.75	213		
RTU-9	Office space	Office A214	328	5	5	0.06	1	45	0.75	60	**963**	**975**
	Office space	Staff A216	320	14	5	0.06	1	89	0.75	119		
	Multi-purpose assembly	Assembly A212	2,571	50	5	0.06	1	404	0.75	539		
	Lobbies/prefunction	Lobby A208	405	0	7.5	0.06	1	24	0.75	32		
	Libraries	Library A210	291	25	5	0.12	1	160	0.75	213		
RTU-10	Office space	Office A214	328	5	5	0.06	1	45	0.75	60	**963**	**975**
	Office space	Staff A216	320	14	5	0.06	1	89	0.75	119		
	Multi-purpose assembly	Assembly A212	2,571	50	5	0.06	1	404	0.75	539		
	Lobbies/prefunction	Lobby A208	405	0	7.5	0.06	1	24	0.75	32		
	Libraries	Library A210	291	25	5	0.12	1	160	0.75	213		
RTU-11	Cafeteria / fast food dining	Kitchen A137	1,820	4	7.5	0.18	1	358	0.75	477	**477**	**480**

NOTE:
OUTSIDE AIR CALCULATION BASED ON 2021 UNIFORM MECHANICAL CODE (2021 UMC).

AIR OUTLET SCHEDULE

MARK	MAKE	TYPE	MODEL	FACE SIZE	NECK SIZE	MATERIAL	FINISH	MOUNTING	REMARKS
A	TITUS	SUPPLY	OMNI-AA	24 x 24	SEE NECK SCHEDULE	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 5, 6
B	TITUS	RETURN	45F	24 x 24	SEE NECK SCHEDULE	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 6
C	TITUS	EXHAUST	50F	24 x 24	SEE NECK SCHEDULE	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 6
D	TITUS	SUPPLY/RETURN	N-I-DR	48 X 3	10" INLET	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 5, 6, 7
E	TITUS	SUPPLY	271	6 x 6	N/A	ALUMINUM	NOTE 4	SIDEWALL	2, 4, 5, 6

NOTES:
1. PROVIDE ROUND NECK ADAPTER FOR ALL SUPPLY, RETURN, AND EXHAUST AIR DIFFUSERS WHERE NECESSARY. PROVIDE DIFFUSERS WITH OPPOSED BLADE DAMPERS.
2. REFER TO PLANS FOR AIR FLOW RATE.
3. REFER TO DIFFUSER NECK-DUCT SIZE SCHEDULE FOR TAKE OFF BRANCH SIZES.
4. VERIFY/COORDINATE FINISH AND COLOR WITH ARCHITECT. PROVIDE DIFFUSERS TO MATCH WITH CEILING COLOR.
5. PROVIDE OBD FOR ALL SUPPLY AIR DIFFUSERS.
6. COORDINATE LAY-IN/GYPSUM BOARD CEILING TYPE WITH FINAL ARCHITECTURAL PLANS.
7. PROVIDE LINEAR SLOT DIFFUSERS WITH 10" PLENUM INLET, 18" DOWN-BLOW SLOT.

EXHAUST FAN SCHEDULE

FAN TAG	SERVING	AIR VOLUME CFM	LOCATION	FAN TYPE	DRIVE TYPE	ESP INCH WC	MOTOR			MANUFACTURER	NOTES
							POWER	V/P/Hz	RPM		
EF-1	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-2	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-3	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-4	RESTROOMS	375	CEILING	INLINE	DIRECT	1.0	1/10 HP	115//60	1350	GREENHECK	1-3
EF-5	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-6	RESTROOMS	300	ROOF	ROOF	DIRECT	1.0	1/10 HP	115//60	1050	GREENHECK	1-6
EF-7	RESTROOMS	225	ROOF	ROOF	DIRECT	1.0	1/10 HP	115//60	1550	GREENHECK	1-6
EF-8	KH-1	1,900	ROOF	ROOF	DIRECT	1.0	6/10 HP	115//60	1708	GREENHECK	ALL
EF-9	KH-2	1,900	ROOF	ROOF	DIRECT	1.0	6/10 HP	115//60	1708	GREENHECK	ALL
EF-10	GHUSL	250	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3

NOTES:
1. PROVIDE FAN WITH SINGLE POINT POWER CONNECTION & CONTROL TRANSFORMERS AS REQUIRED.
2. PROVIDE UNITS WITH ECM MOTORS, LOCAL SPEED CONTROL, CONTROL VOLTAGE POWER SUPPLY, AND NON FUSED DISCONNECT SWITCH.
3. PROVIDE BACK DRAFT DAMPERS FOR ALL FANS.
4. PROVIDE UNIT WITH 14" INSULATED ROOF CURB.
5. DESIGN SECURE CURBS AND FANS TO WITHSTAND 115 MPH WINDSPEED PER IBC REQUIREMENTS.
6. PROVIDE WITH MANUFACTURER'S 1-YEAR WARRANTY.
7. PROVIDE UL705 LISTED UPDRAFT GREASE LADEN EXHAUST FAN WITH INSULATED HINGE ROOF CURB AND REMOTE TOGGLE SWITCH.

DUCTLESS MINI SPLIT DX SYSTEM SCHEDULE

MARK	SERVING	NOMINAL CFM	EAT DB/WB	LAT DB/WB	TOTAL. CAP. BTU/HR	SENSIBLE. CAP. BTU/HR	FAN COIL MANUFACTURER	CONDENSING UNIT TAG	CONDENSING UNIT MANUFACTURER	CONDENSING UNIT			NOTES
										POWER	MCA	MOCP	
FCU-2	AV ROOM	450	75/62	55/54	12,000	9,600	MITSUBISHI	CU-2	MITSUBISHI	208//60	14	15	ALL
FCU-3	AV ROOM	450	75/62	55/54	12,000	9,600	MITSUBISHI	CU-3	MITSUBISHI	208//60	14	15	ALL

NOTES:
1. PROVIDE CONDENSATE PUMP WITH THE UNIT.
2. PROVIDE MATCHING CONDENSING UNIT AS INDICATED.
3. PROVIDE WASHABLE FILTER WITH THE UNIT.
4. UNIT EER MUST COMPLY WITH LATEST IECC REQUIREMENTS.
5. INDOOR UNIT SHALL RECEIVE ITS POWER FROM OUTDOOR UNIT.
6. PROVIDE UNIT WITH LOCAL DIGITAL THERMOSTAT.
7. DESIGN SECURE CONDENSING UNIT TO WITHSTAND 130 MPH WINDSPEED PER IBC REQUIREMENTS.

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REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE
SCHEDULE

SCALE

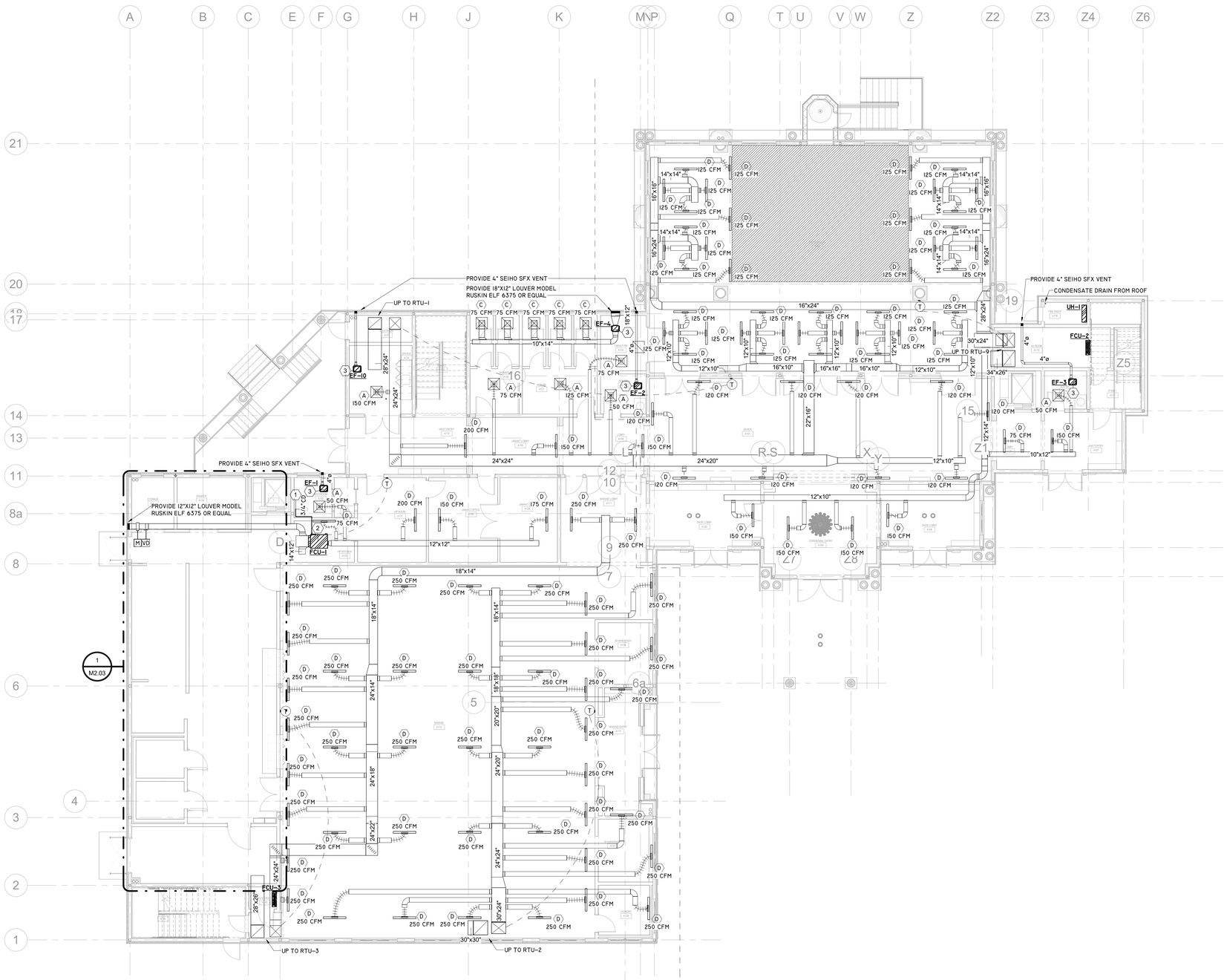
DATE
2026/04/17

PROJECT NUMBER
Project Number

SHEET NUMBER
M1.10

GENERAL NOTE:
I. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

KEYED NOTE LEGEND	
1	ROUTE CONDENSATE TO P-TRAP MODEL J.R. SMITH 9200 OR SIMILAR.
2	PROVIDE REFRIGERANT PIPING TO ROOF MOUNTED CONDENSING UNIT. (NOT SHOWN)
3	INTERLOCK EF WITH CORRESPONDING RESTROOM LIGHTS.



1 FIRST FLOOR - HVAC
Scale: 1/8" = 1'-0"

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PROJECT NAME

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PROFESSIONAL SEAL

STATE OF TEXAS
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	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

FIRST FLOOR - HVAC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

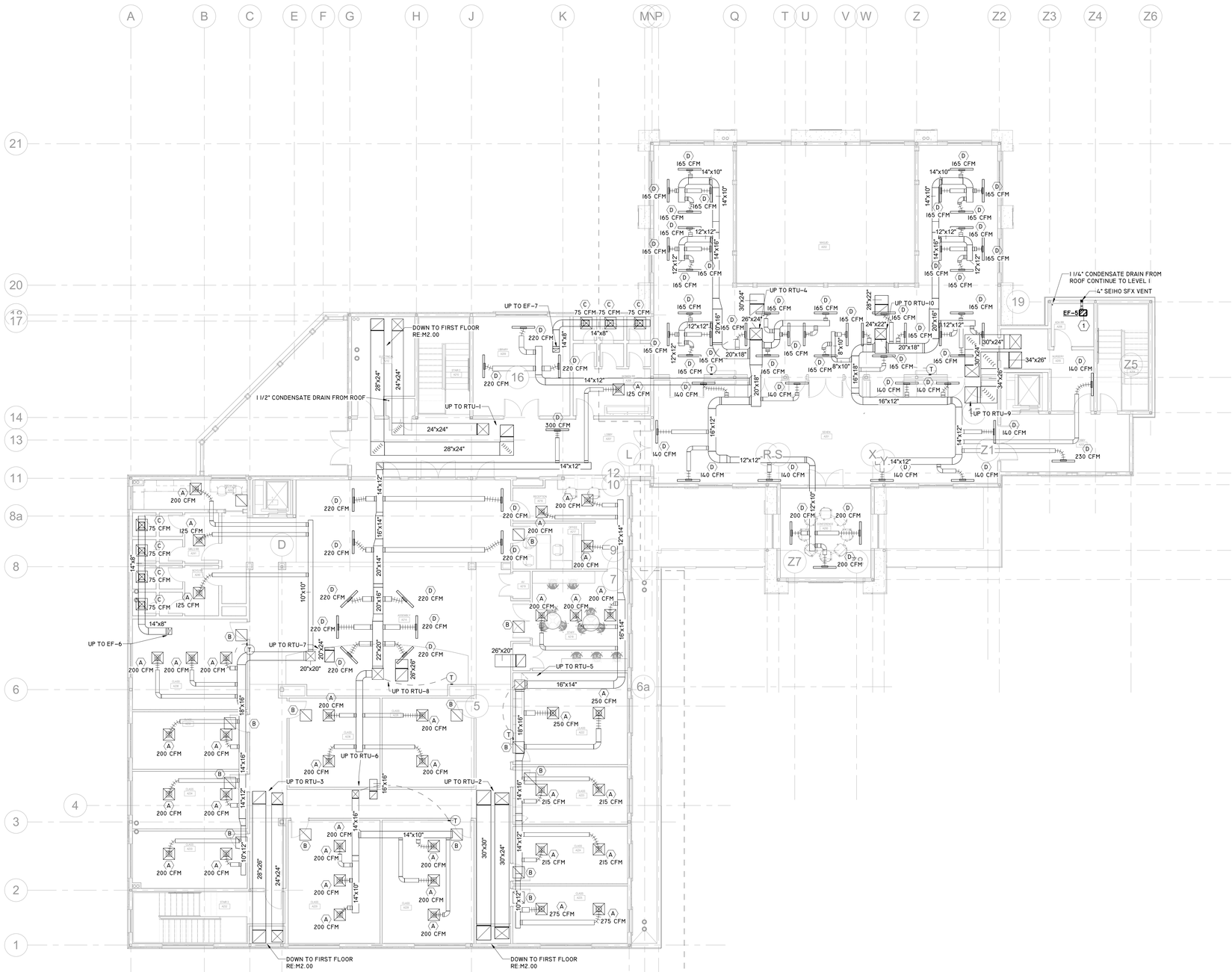
PROJECT NUMBER Project Number

SHEET NUMBER

M2.00

GENERAL NOTE:
I. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

KEYED NOTE LEGEND	
1	INTERLOCK EF WITH CORRESPONDING RESTROOM LIGHTS.



1 SECOND FLOOR - HVAC
Scale: 1/8" = 1'-0"

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SHEET TITLE

SECOND FLOOR - HVAC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

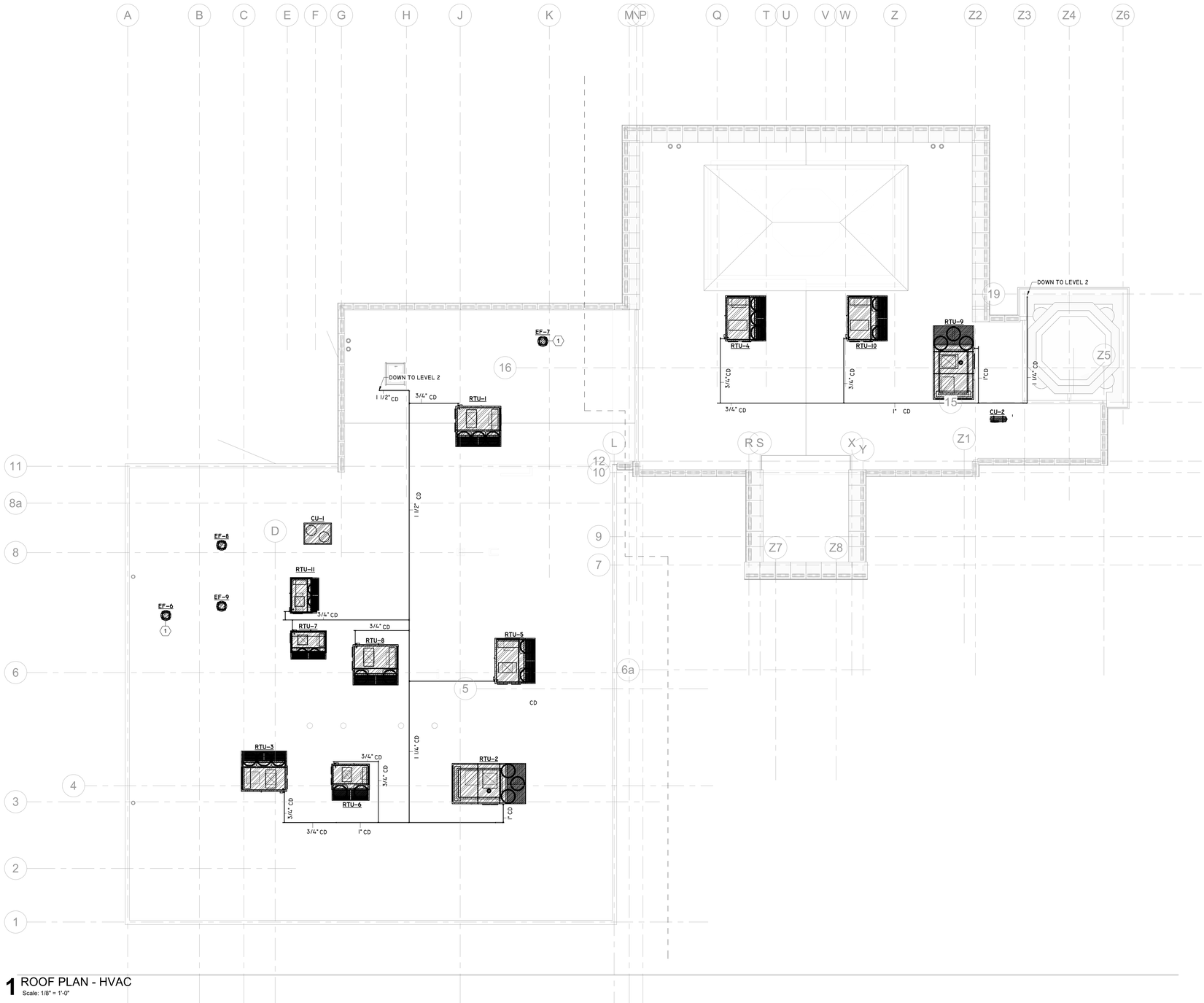
PROJECT NUMBER Project Number

SHEET NUMBER

M2.01

GENERAL NOTE:
I. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

KEYED NOTE LEGEND	
1	INTERLOCK EF WITH CORRESPONDING RESTROOM LIGHTS.



1 ROOF PLAN - HVAC
Scale: 1/8" = 1'-0"

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SHEET TITLE

ROOF PLAN - HVAC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

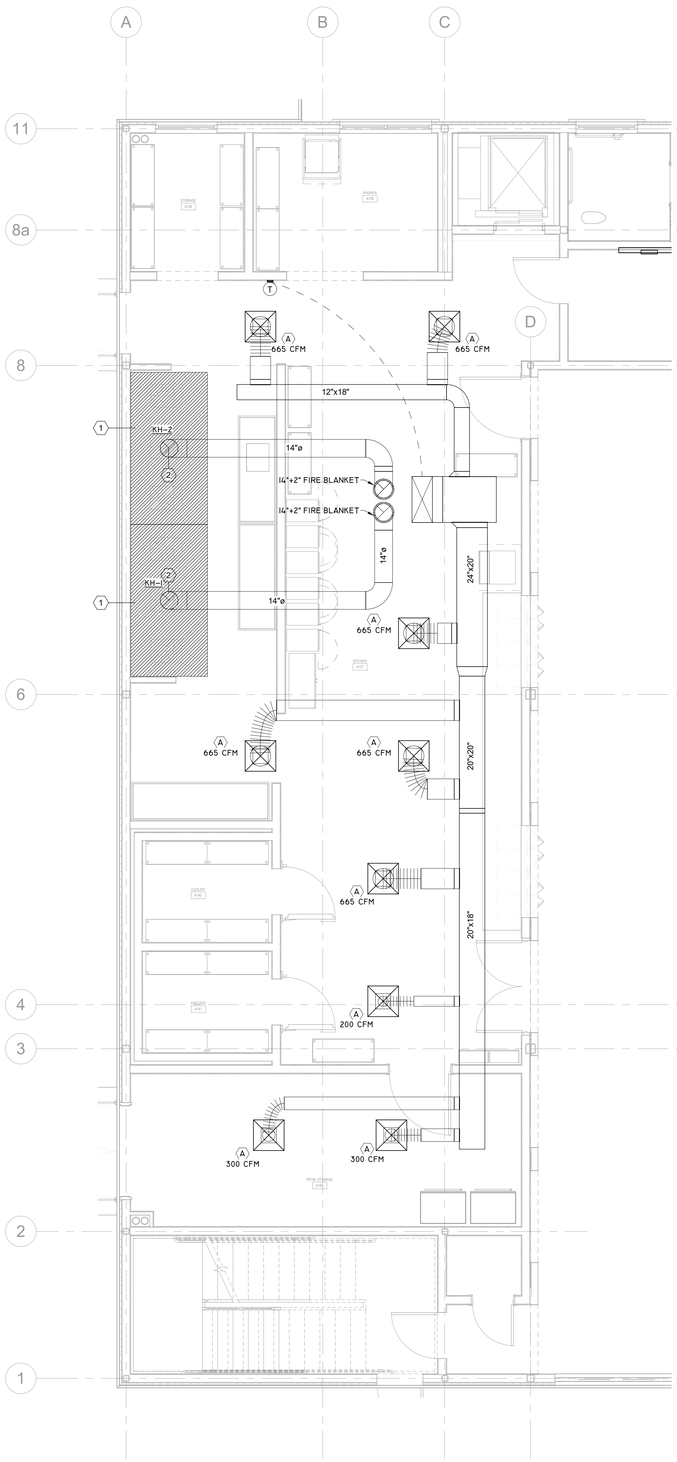
PROJECT NUMBER Project Number

SHEET NUMBER

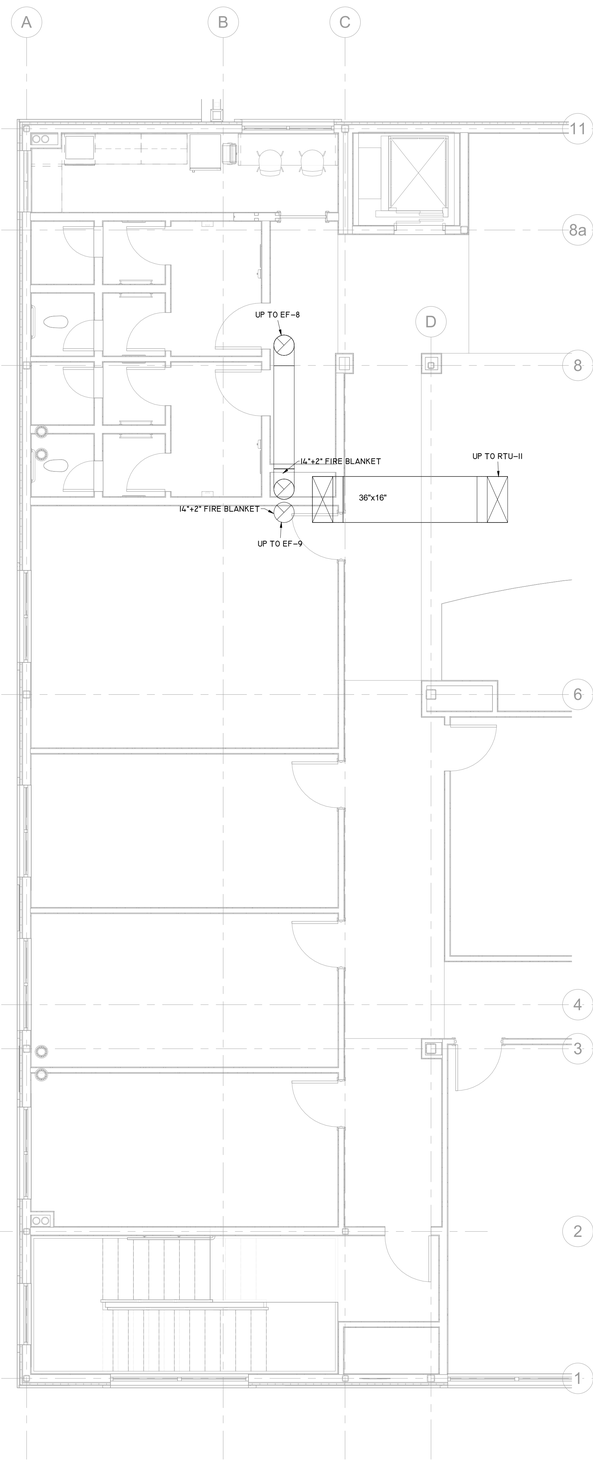
M2.02

GENERAL NOTE:
1. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

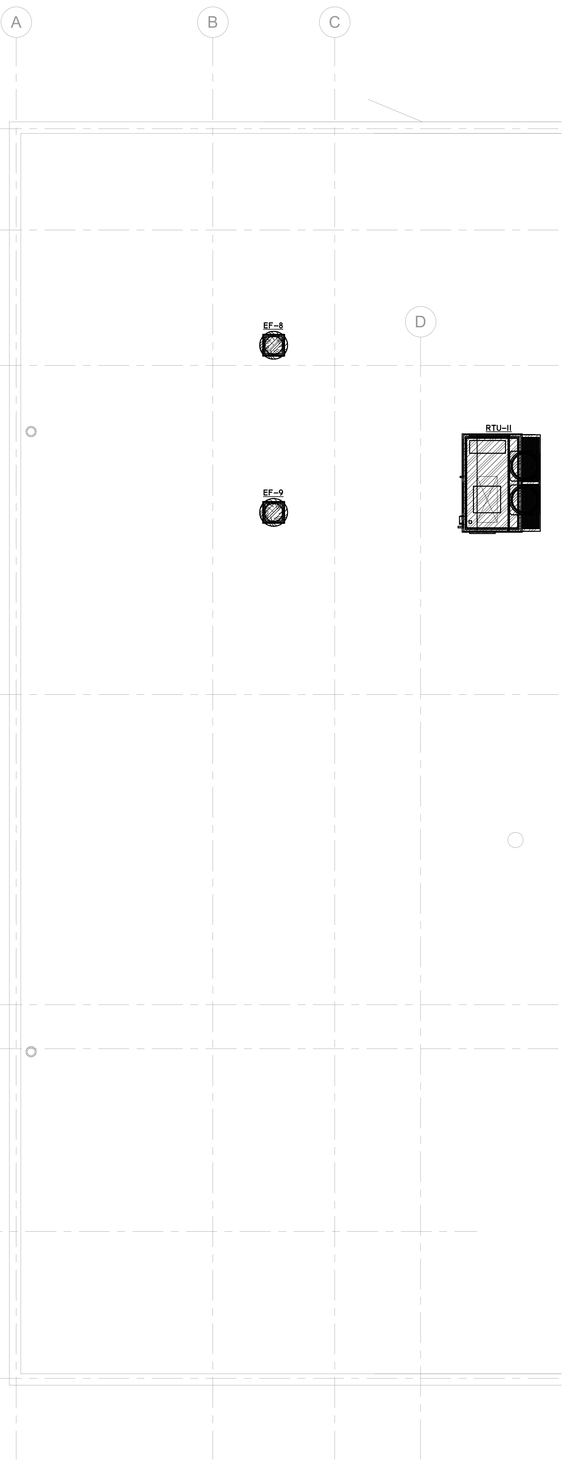
KEYED NOTE LEGEND	
1	INTERLOCK KITCHEN EXHAUST HOODS TO OPERATE IN TANDEM FROM A SINGLE TOGGLE SWITCH. INTERLOCK RTU-11 WITH KITCHEN HOODS TO ENGAGE RTU SUPPLY FAN AND OPEN OA DAMPER TO SCHEDULED MAX CFM WHEN EXHAUST HOODS ARE ON. CYCLE RTU AT SCHEDULED MINIMUM OA CFM WITH HEATING AND COOLING DEMANDS WHEN EXHAUST HOODS ARE OFF.
2	PROVIDE ASTM 167 TYPE 304L OR 316L CONTINUOUSLY WELDED GREASE LADEN EXHAUST DUCT PER NFPA 96 AND IMC REQUIREMENTS. PITCH HORIZONTAL DUCT RUNS AND PROVIDE ACCESS DOORS PER NFPA REQUIREMENTS. INSULATE WITH 2-HR RATED FIRE WRAP.



1 KITCHEN FIRST FLOOR - HVAC
Scale: 1/4" = 1'-0"



2 KITCHEN SECOND FLOOR - HVAC
Scale: 1/4" = 1'-0"



3 KITCHEN ROOF PLAN - HVAC
Scale: 1/4" = 1'-0"

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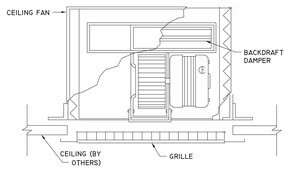
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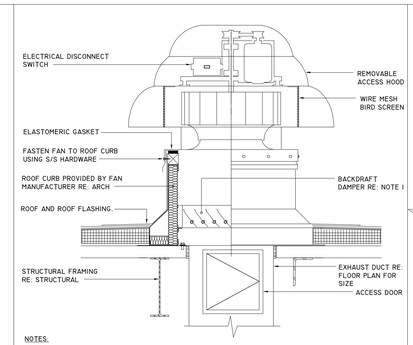
SHEET TITLE
KITCHEN PLAN - HVAC

SCALE 1/4" = 1'-0"
DATE 2026/04/17
PROJECT NUMBER Project Number
SHEET NUMBER
M2.03



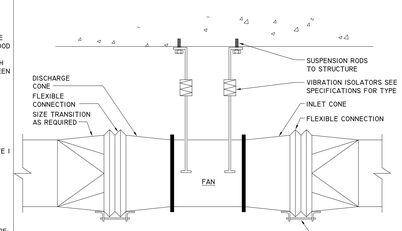
NOTE:
INTERLOCK TOILET FAN WITH LIGHT SWITCH.
PROVIDE WALL MOUNTED SWITCH FOR JANITOR'S CLOSET.
SUSPEND UNIT PER MFG RECOMMENDATIONS.

CEILING FAN DETAIL — NOT TO SCALE — 14

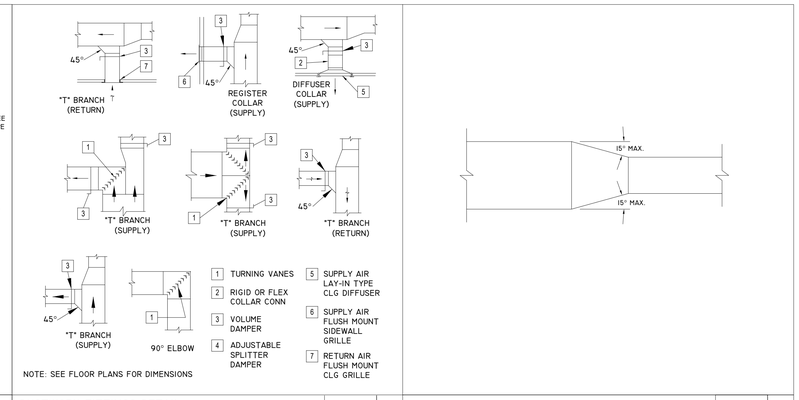


NOTES:
1. DAMPER FURNISHED BY FAN MANUFACTURER AND INSTALLED BY MECHANICAL TRADE.
2. SECURE CURB AND UNIT PER MANUFACTURER REQUIREMENTS IN COMPLIANCE WITH IBC REQUIREMENTS.
3. INTERLOCK EXHAUST FAN WITH FIRE ALARM SYSTEM TO SHUT DOWN ON ACTIVATION. COORDINATE WITH FIRE ALARM INSTALLATION.
4. PROVIDE ROOF CURB RATED FOR 115 MPH BASIC WIND SPEED IN ACCORDANCE WITH IBC REQUIRMENTS. SECURE FAN TO CURB PER MFG INSTALLATION INSTRUCTIONS.

ROOF EXHAUST FAN DETAIL — NOT TO SCALE — 11



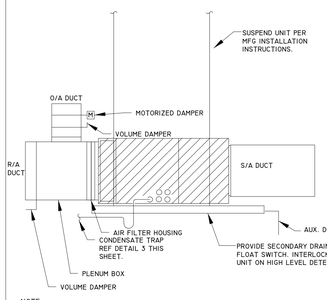
INLINE CENTRIFUGAL FAN DETAIL — NOT TO SCALE — 8



NOTE: SEE FLOOR PLANS FOR DIMENSIONS

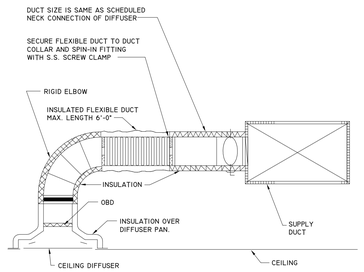
DUCTWORK FITTINGS DETAIL — NOT TO SCALE — 5

DUCT TRANSITION DETAIL — NOT TO SCALE — 3



NOTE:
PROVIDE 24 VAC NORMALLY CLOSED MOTORIZED DAMPER AND INTERLOCK TO OPEN WITH UNIT ENGAGEMENT.

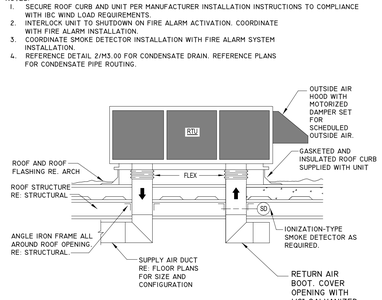
SUSPENDED FAN COIL UNIT DETAIL — NOT TO SCALE — 13



NOTE:

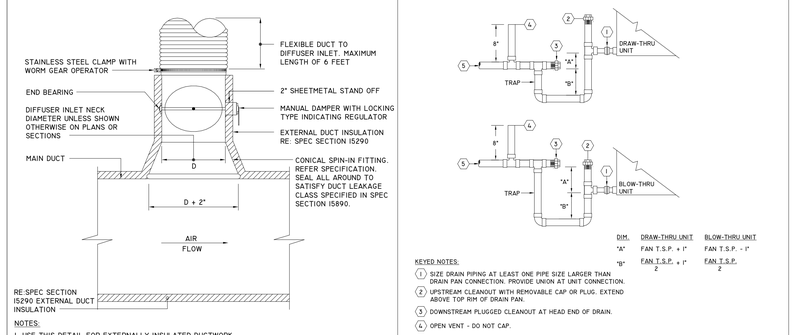
THE FLANGED BELLMOUTH FITTING MUST BE PROVIDED. WHERE HEIGHT OF DUCT SHOWN ON PLANS CAN ACCOMMODATE THE FITTING. ONLY WHERE THE DUCT HEIGHT DOES NOT ALLOW THE INSTALLATION OF BELLMOUTH FITTING, PROVIDE STRAIGHT FITTING. FLEX DUCT MAY BE LOCATED IN RISER OR HORIZONTAL RUN.

CEILING DIFFUSER CONNECTION DETAIL — NOT TO SCALE — 10



NOTES:
1. SECURE ROOF CURB AND UNIT PER MANUFACTURER INSTALLATION INSTRUCTIONS TO COMPLIANCE WITH IBC WIND LOAD REQUIREMENTS.
2. INTERLOCK UNIT TO SHUTDOWN ON FIRE ALARM ACTIVATION. COORDINATE WITH FIRE ALARM INSTALLATION.
3. COORDINATE SMOKE DETECTOR INSTALLATION WITH FIRE ALARM SYSTEM INSTALLATION.
4. REFERENCE DETAIL 2/M3.00 FOR CONDENSATE DRAIN. REFERENCE PLANS FOR CONDENSATE PIPE ROUTING.

ROOF TOP UNIT DETAIL — NOT TO SCALE — 7



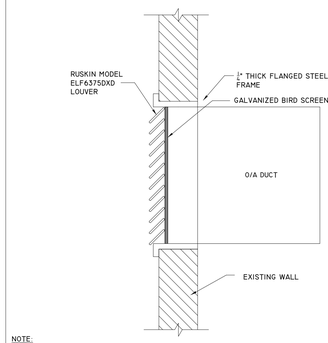
NOTES:
1. USE THIS DETAIL FOR EXTERNALLY INSULATED DUCTWORK.
2. EXTEND ROUND SHEETMETAL DUCTWORK AND ASSOCIATED DUCT INSULATION FROM MAIN DUCT, SO FLEXIBLE DUCT LENGTH DOES NOT EXCEED 5 FEET.

SPIN FITTING DETAIL — NOT TO SCALE — 4

DIM.	DRAW-THRU UNIT	BLOW-THRU UNIT
"A"	FAN T.S.P. + 1"	FAN T.S.P. - 1"
"B"	FAN T.S.P. + 1" / 2	FAN T.S.P. / 2

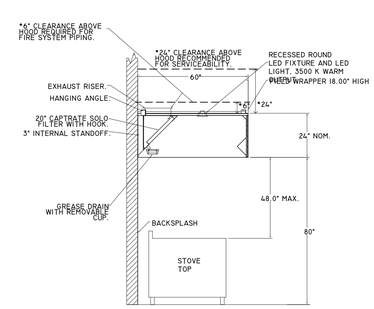
KEYED NOTES:
1. SIZE DRAIN PIPING AT LEAST ONE PIPE SIZE LARGER THAN DRAIN PAN CONNECTION. PROVIDE UNION AT UNIT CONNECTION.
2. UPSTREAM CLEANOUT WITH REMOVABLE CAP OR PLUG. EXTEND ABOVE TOP RIM OF DRAIN PAN.
3. DOWNSTREAM PLUGGED CLEANOUT AT HEAD END OF DRAIN.
4. OPEN VENT - DO NOT CAP.
5. ROUTE DISCHARGE TO INDIRECT DRAIN. PITCH DOWN AT 1/8" PER FOOT. PROVIDE CLEANOUTS AT CHANGES OF DIRECTION.

TYPICAL CONDENSATE DRAIN DETAIL — NOT TO SCALE — 2



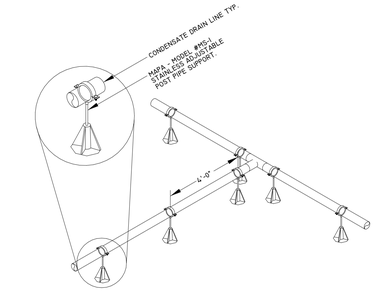
NOTE:
FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS.

LOUVER INSTALLATION DETAIL — NOT TO SCALE — 12

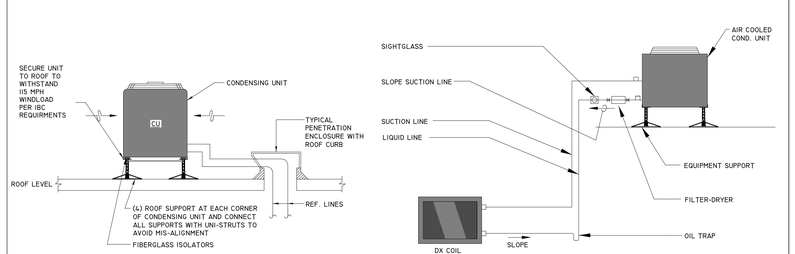


NOTE:
FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS.

KITCHEN HOOD DETAIL — NOT TO SCALE — 9



CONDENSATE DRAIN PIPE SUPPORT DETAIL — NOT TO SCALE — 6



ROOF MOUNTED CONDENSER DETAIL
SCALE: N.T.S.

REFRIGERANT PIPING DETAIL (A)
SCALE: N.T.S.

NOTE:
SIZE REFRIGERANT PIPING PER MANUFACTURER INSTALLATION INSTRUCTIONS. INSULATE WITH 3/4" THICK ELASTOMERIC FOAM INSULATION. PROVIDE 0.020" THICK ALUMINUM JACKETING OVER EXTERIOR INSULATION.

SPLIT SYSTEM INSTALLATION AND PIPING DETAIL — NOT TO SCALE — 1

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SHEET TITLE
DETAILS

SCALE

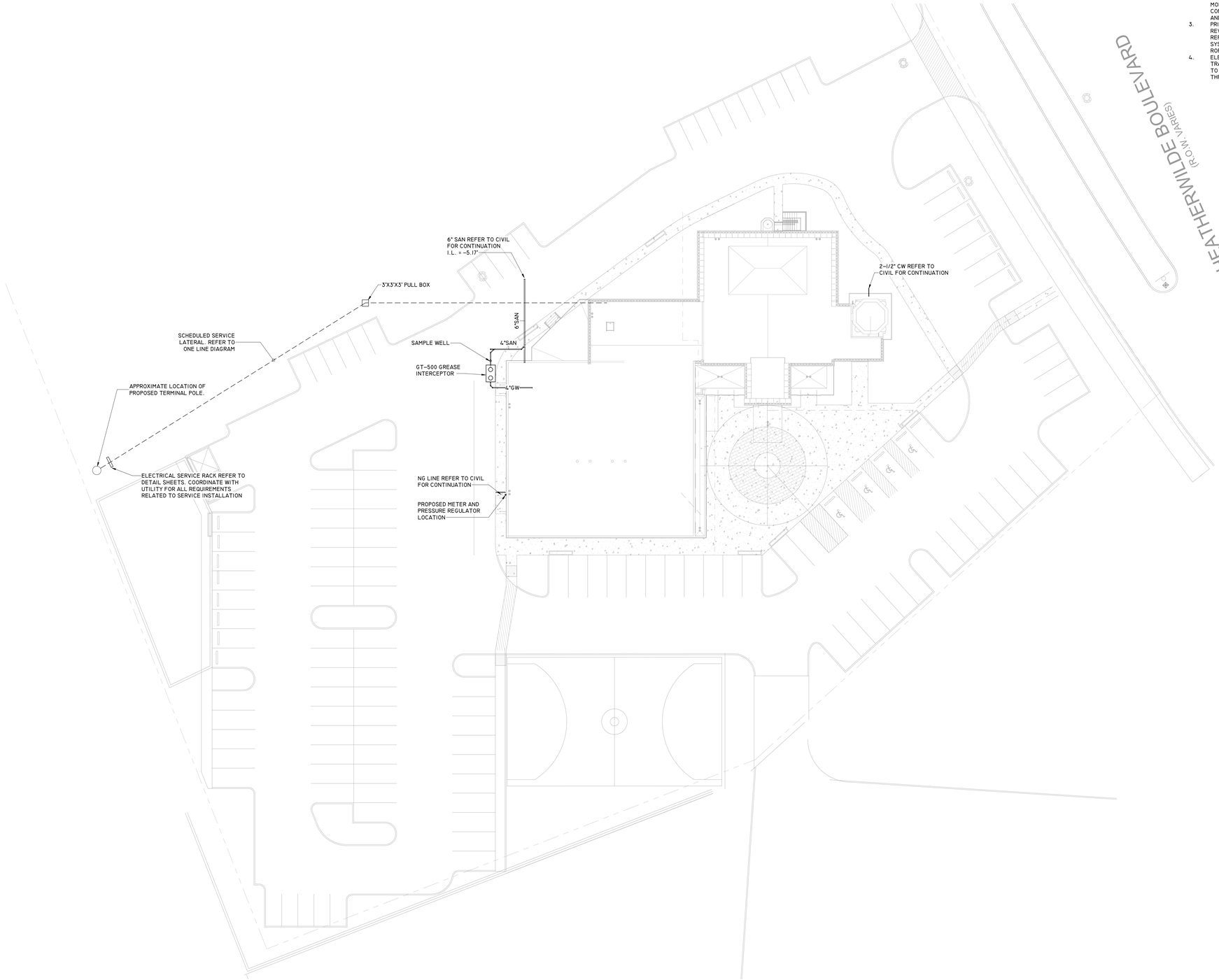
DATE
2026/04/17

PROJECT NUMBER
Project Number

SHEET NUMBER
M3.00

PROPOSED SITE PLAN NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ELECTRICAL SERVICE ENTRANCE FOR THE PROJECT. CONTRACTOR SHALL SUBMIT INFORMATION DEVELOPED BY ENGINEER IN FORM OF SITE PLAN, DRAWINGS, ONE LINE DIAGRAM, AND LOAD ANALYSIS TO THE POWER COMPANY REPRESENTATIVE FOR PROCESSING SERVICE REQUEST. LOCATION OF TRANSFORMER SHALL BE COORDINATED WITH POWER COMPANY AS SHOWN ON THE PLAN. CONTRACTOR IS ALSO RESPONSIBLE FOR FILING ALL REQUESTS AND APPLICATIONS FOR SERVICE TO THE POWER COMPANY. DETERMINATION OF LENGTH, QUANTITIES, PULL BOXES/MANHOLES AND STANDARD OF CONSTRUCTION FOR UNDERGROUND PRIMARY LINES (AS REQUIRED) AND TRANSFORMER PAD SHALL BE RESPONSIBILITIES OF THE CONTRACTOR. DETAILS FOR ELECTRICAL SERVICE TRANSFORMERS PAD AND UNDERGROUND PRIMARY CONDUIT SHOWN ON THESE DOCUMENTS SHALL BE APPROVED BY POWER COMPANY BEFORE ANY CONSTRUCTION BEGINS. CONTRACTOR SHALL EXPEDITE COORDINATION EFFORT FOR ANY CONTRACTUAL ARRANGEMENTS FOR EASEMENT RELATED TO PRIMARY OVERHEAD OR UNDERGROUND LINES IF REQUIRED BY POWER COMPANY. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE NEW SERVICE REQUEST.
2. UNDERGROUND CONDUIT ROUTING SHALL BE COORDINATED WITH EXISTING PAVEMENT AND UNDERGROUND UTILITIES. COORDINATE WITH CIVIL PLANS FOR MORE INFORMATION. PROVIDE PULL STRING FOR ALL UNDERGROUND EMPTY CONDUITS. REFER TO SPECIFICATIONS AND DETAILS FOR INSTALLATION METHODS AND MATERIALS.
3. PRIOR TO TRENCHING, UNDERGROUND CONDUIT ROUTING SHALL BE MARKED FOR REVIEW AND ROUTING PATH APPROVAL OBTAINED BY THE OWNER REPRESENTATIVE. COORDINATE WITH EXISTING IMPROVEMENTS, TREES, ROOT SYSTEMS, EXISTING PAVEMENT, AND UNDERGROUND UTILITITES. PROVIDE PULL ROPE FOR ALL UNDERGROUND EMPTY CONDUITS.
4. ELECTRICAL CONTRACTOR SHALL SEAL INSIDE AND OUT ALL CONDUITS WHICH TRAVEL BETWEEN CONDITIONED AND NON-CONDITIONED SPACES (OR OUTDOOR TO INDOOR) AFTER PULLING CONDUCTORS SO THAT MOISTURE CONDENSATION THROUGH THE CONDUITS IS MITIGATED.



1 MEP1.01 SITE PLAN
SCALE : 1" = 20'-0"

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SITE PLAN

SCALE: As indicated

DATE: 2026/04/17

PROJECT NUMBER: Project Number

SHEET NUMBER

MEP1.01

MECHANICAL GENERAL NOTES

1. SEE ARCHITECTURAL PLANS FOR TYPE OF CEILING AND LOCATIONS OF WALL MOUNTED DEVICES.
2. DO NOT OPERATE AIR HANDLERS OR EXHAUST FANS UNTIL ALL INTERIOR CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
3. RECTANGULAR DUCT SIZES INDICATED ARE ACTUAL SHEET METAL DIMENSIONS IN INCHES ALL ROUND DUCT SIZES INDICATE NET FREE INSIDE DIAMETER AND DO NOT ACCOUNT FOR ANY INSULATION. ROUND DUCTS AND RECTANGULAR DUCTS ARE EXTERNALLY INSULATED PER SPECIFICATIONS. ALL DUCTWORK SHALL BE INSTALLED AND MANUFACTURED IN ACCORDANCE WITH LATEST SMACNA STANDARDS.
4. SCHEDULED MANUFACTURERS ARE BASIS OF DESIGN. PROVIDE BASIS OF DESIGN EQUIPMENT OR EQUAL.
5. MAJOR EQUIPMENT SHOWN ON THE PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL ARRANGEMENT AND SPACE ALLOCATION. VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTIONS IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE INSTALLED IN COORDINATION WITH ARCHITECTURAL SPACES.
6. PROVIDE ANCHOR BOLTS AND HANGERS FOR ALL EQUIPMENT. OTHER MISCELLANEOUS STEEL BRACING, SUPPORTS, AND REINFORCING STEEL REQUIRED TO SUPPORT EQUIPMENT SHALL BE FURNISHED AS PART OF THE SCOPE OF WORK OF DIVISION 23.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND AUTHORITIES HAVING JURISDICTION.
8. FLEX DUCTS ARE SAME SIZE AS DIFFUSER NECK.
9. SEAL MECHANICAL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH A UL LISTED FIRE STOP SYSTEM.
10. DO NOT RUN DUCT OR PIPE OVER ELECTRICAL PANELS COORDINATE LOCATION OF DUCTS AND EQUIPMENT IN MECHANICAL ROOMS WITH THE ELECTRICAL AND PLUMBING CONTRACTOR BEFORE ANY INSTALLATION.
11. ALL DUCT RUN-OUTS TO SUPPLY AND EXHAUST, DIFFUSERS AND REGISTERS, SHALL HAVE MANUAL BALANCING DAMPERS. PROVIDE YOUNG REGULATORS WITH REMOTE ADJUSTMENT WHERE ABOVE CEILING IS INACCESSIBLE.
12. SECURE ALL PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
13. ALL FLEXIBLE DUCT SHALL BE U.L. 181, CLASS 1 AIR DUCT BLACK LINER. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 10'-0". PROVIDE RIGID ROUND INSULATED AIR DUCT RUN-OUT AS REQUIRED. FLEXIBLE DUCT SHALL HAVE THE EQUIVALENT OF ONLY TWO 90 DEG. ELBOWS MAXIMUM. FLEX DUCTS ARE SAME SIZE AS DIFFUSER NECK..
14. THE AIR QUANTITIES SHOWN ON THE DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM TEMPERATURE WITHIN EACH ZONE, BUT THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED.
15. INSTALL SMOKE DETECTOR FURNISHED AND TERMINATED BY FIRE ALARM CONTRACTOR FOR ALL UNITS.
16. INSULATE SUPPLY AIR AND OUTSIDE AIR DUCTS LOCATED IN CONDITIONED SPACES WITH R-6 FSK DUCT WRAP OR 2" THICK UL181 LISTED FOIL FACED DUCT LINER. INCREASE INDICATED DUCT DIMENSIONS BY 2" WHEN USING DUCT LINER. INSULATE ALL DUCTS LOCATED IN UNCONDITIONED SPACES WITH R-6 FSK DUCT WRAP.
17. PROVIDED RECORD DRAWINGS OF THE ACTUAL INSTALLATION TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT. GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.
18. PROVIDE OPERATING AND MAINTENANCE MANUALS TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS, AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING: (A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. (B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. (C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY. (D) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS. (E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET-POINTS.
19. SUBMIT DUCTWORK AND PIPING SHOP DRAWINGS (COORDINATING WITH OTHER TRADES) PRIOR TO ROUGH-IN AND CONSTRUCTION.
20. DUCTWORK AND PLENUMS SHALL BE SEALED IN ACCORDANCE WITH THE MECHANICAL CODE AND SMACNA METHOD AND COMMERCIAL ENERGY CONSERVATION CODE. SEAL ALL LONGITUDINAL AND TRAVERSE JOINTS.
21. PROVIDE SYSTEM AIR BALANCING AND COMMISSIONING PERFORMED BY AN AABC OR NEBB CERTIFIED AGENCY. BALANCE HVAC SYSTEMS PER ASHRAE AND AGENCY STANDARDS. SUBMIT TAB REPORT FOR REVIEW. COMMISSION SYSTEMS PER IECC REQUIREMENTS. SUBMIT COMMISSIONING REPORT FOR REVIEW. CORRECT ALL TAB AND COMMISSIONING DEFICIENCIES PROMPTLY AND RETEST AS REQUIRED.

MECHANICAL SYMBOLS LEGEND

	SUPPLY AIR DUCT UP (PLAN)	(A) X CFM	DIFFUSER TYPE, CFM		CHECK VALVE, SWING GATE
	SUPPLY AIR DUCT DOWN (PLAN)		THERMOSTAT - MOUNT 48" AFF UNO		ANGLE PRESSURE RELIEF VALVE
	RETURN OR OUTSIDE AIR DUCT UP (PLAN)		HUMIDISTAT	PRV	PRESSURE REDUCING VALVE
	RETURN OR OUTSIDE AIR DUCT DOWN (PLAN)		FIRESTAT		LOCK SHIELD
	EXHAUST AIR DUCT UP (PLAN)		IONIZATION DETECTOR		QUICK OPENING/CLOSING VALVE
	EXHAUST AIR DUCT DOWN (PLAN)		SMOKE DETECTOR		PRESSURE REGULATOR
	RETURN AIR/TRANSFER AIR BOOT		PIPE UP		STRAINER W/BLOW DOWN VALVE
	CEILING SUPPLY AIR DEVICE		PIPE DOWN		THREE-WAY VALVE (ELECTRIC)
	SIDEWALL SUPPLY/EXHAUST REGISTER		CAP		TWO-WAY VALVE (ELECTRIC)
	CEILING RETURN REGISTER		90° ELBOW		FLEXIBLE CONNECTION
	CEILING EXHAUST REGISTER		45° ELBOW	EJ	EXPANSION JOINT
	RETURN AIR GRILLE WITH BOOT		45° ELBOW DOWN (OGEE)		THERMOMETER
	BRANCH DUCT TAP		TEE	TW	THERMOMETER WELL
	DUCT SPLIT WITH SPLITTER DAMPER		TEE UP		TEST PLUG
AD	ACCESS DOOR		TEE DOWN		PRESSURE GAUGE W/GAUGE COCK
	TRANSITION IN DUCT		TOP CONNECTION		MANUAL AIR VENT
	FLEXIBLE DUCT CONN. TO RECTANGULAR DUCT WITH SPIN-IN CONNECTOR		CROSS		AUTOMATIC AIR VENT
AP	ACCESS PANEL		UNION (SCREWED)	S	SOLENOID VALVE
	DUCT ELBOW WITH TURNING VANES		UNION (FLANGED)	FS	FLOW SWITCH
	DUCT ELBOW WITHOUT VANES	T	DUCT MOUNTED TEMPERATURE SENSOR	T	TEMPERATURE AND PRESSURE RELIEF VALVE
	FLEXIBLE CONNECTION, FLEXIBLE DUCT	P	DUCT MOUNTED PRESSURE SENSOR		STEAM TRAP
VD	VOLUME DAMPER	SD	DUCT MOUNTED SMOKE DETECTOR		STEAM MOISTURE SEPARATOR
	MOTORIZED VOLUME DAMPER		PIPE BREAK	EP	CONTROL, ELECTRIC-PNEUMATIC
	FIRE DAMPER		CONCENTRIC REDUCER	PE	CONTROL, PNEUMATIC-ELECTRIC
SD	SMOKE DAMPER		ECCENTRIC REDUCER		RED. PRESS PRINCIPAL BACKFLOW PREVENTER
	COMBINATION FIRE/SMOKE DAMPER		END SUCTION PUMP	CHWR	CHILLED WATER RETURN
AFS	AIR FLOW SWITCH	OR	BALL VALVE	CHWS	CHILLED WATER SUPPLY
APD	AIR PRESSURE DIFFERENTIAL SWITCH		BUTTERFLY VALVE	CWR	CONDENSER WATER RETURN
	RISE IN DUCT ELEVATION		ISOLATION VALVE	CWS	CONDENSER WATER SUPPLY
	DROP IN DUCT ELEVATION		GATE VALVE WITH QUICK DISCONNECT	HHWR	HOT WATER RETURN
SD DIM	SPLITTER DAMPER - DIMENSION AS NOTED ON DRAWING		TWO-WAY VALVE (PNEUMATIC)	HHWS	HOT WATER SUPPLY
BDD	BACK DRAFT DAMPER		THREE-WAY VALVE (PNEUMATIC)	CD	CONDENSATE DRAIN
UCD 1"	UNDERCUT DOOR 1"		BALANCING VALVE	HRS	HEAT RECOVERY SUPPLY
RE: 1/M-7	REFER TO DETAIL #1 ON DRAWING M-7	M	PNEUMATIC MOTOR	HRR	HEAT RECOVERY RETURN
				LPR	STEAM CONDENSATE

NOTE:
NOT ALL ITEMS NECESSARILY USED.

APPLICABLE CODES

- 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2021 INTERNATIONAL MECHANICAL CODE (IMC)
- 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CONDITIONS

	WINTER	SUMMER
OUTDOOR ENVIRONMENTAL DESIGN CRITERIA:	24° F	105° F DB / 74° F WB
INDOOR ENVIRONMENTAL DESIGN CRITERIA:	70° F	75° F DB / 50% RH

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ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

SYMBOLS NOTES AND LEGEND

SCALE

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

M1.00

MECHANICAL SPECIFICATIONS

1.0 BASIC MECHANICAL REQUIREMENTS

1.1 STANDARDS:

A. COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND THE APPLICABLE REQUIREMENTS OF THE FOLLOWING NATIONALLY ACCEPTED CODES AND STANDARDS:
1. UNDERWRITERS' LABORATORIES, INC., UL.
2. AIR MOVING & CONDITIONING ASSOCIATION, AMCA.
3. AMERICAN STANDARDS ASSOCIATION, ASA.
4. AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITINING ENGINEERS, INC., ASHRAE.
5. AMERICAN SOCIETY OF MECHANICAL ENGINEERS, ASME.
6. AMERICAN SOCIETY OF PLUMBING ENGINEERS, ASPE.
7. AMERICAN SOCIETY OF TESTING MATERIALS, ASTM.
8. AMERICAN WATER WORKS ASSOCIATION, AWWA.
9. NATIONAL BUREAU OF STANDARDS, NBS.
10. NATIONAL FIRE PROTECTION ASSOCIATION, NFPA.
11. SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, SMACNA.

1.2 INSTALLATION:

A. GENERAL: SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:
1. COORDINATE MECHANICAL, PLUMBING AND FIRE PROTECTION SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
2. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
3. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION. TO ALLOW FOR MECHANICAL INSTALLATIONS.
4. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED IN PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
5. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING.
6. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
7. COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. PROVIDE REQUIRED CONNECTION FOR EACH SERVICE.
8. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH ARCHITECTURAL ACTION MARKINGS ON SUBMITTAL, INCLUDING COORDINATION DRAWINGS, TO GREATEST EXTENT POSSIBLE. CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS, RECOGNIZING THAT PORTIONS OF THE WORK ARE SHOWN ONLY IN DIAGRAMMATIC FORM. WHERE COORDINATION REQUIREMENTS CONFLICT WITH INDIVIDUAL SYSTEM REQUIREMENTS, RESOLVE CONFLICTS AND ROUTE PROPOSED SOLUTION TO THE ARCHITECT FOR REVIEW AND APPROVAL.
9. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES.
10. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION AND LABEL.
11. INSTALL ACCESS PANEL OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES. ACCESS PANELS AND DOORS ARE SPECIFIED.
12. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT GIVING RIGHT OF WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE

2.0 REFRIGERANT PIPING

A. REFRIGERANT PIPING: SHALL BE "REFRIGERANT GRADE" HARD DRAWN COPPER TUBING THAT HAS BEEN CLEANED AND CAPPED FOR REFRIGERATION SERVICE. FITTINGS SHALL BE THE WROUGHT COPPER TYPE AND SHALL BE ASSEMBLED WITH SILVER SOLDER JOINTS. THE ENDS OF ALL PIPE AND THE INSIDE OF ALL FITTINGS SHALL BE CAREFULLY CLEANED BEFORE JOINING. NO ACID SHALL BE USED IN CLEANING OR AS A FLUX IN SOLDERING JOINTS. BLEED NITROGEN THROUGH ALL PIPING WHILE SOLDERING. REFRIGERANT PIPING SHALL BE SIZED BY THE MANUFACTURER BASED ON THE ACTUAL LENGTH AND VERTICAL RISE REQUIREMENT AND INSTALLED TO CONFORM TO APPROVED RECOMMENDATION OF THE UNIT / COMPRESSOR MANUFACTURER. INSULATE REFRIGERANT PIPING WITH ELASTOMERIC FOAM INSULATION PER IECC THICKNESS BUT NOT LESS THAN 3/4" MINIMUM. PROVIDE 0.20" THICK ALUMINUM INSULATION JACKETING FOR EXTERIOR INSULATION. PROVIDE ASJ FOR VISIBLE EXPOSED INTERIOR REFRIGERANT PIPING.

3.0 DUCTWORK

A. SHEET METAL DUCTWORK
1. FURNISH AND INSTALL SHEET METAL DUCTWORK. SHEET METAL DUCTWORK HANGERS AND SUPPORTS, FIRE DAMPERS, FLASHING AND ALL NECESSARY ACCESSORIES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
2. SMACNA STANDARDS: COMPLY WITH SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), 1985 EDITION, RECOMMENDATIONS FOR FABRICATION, CONSTRUCTION, DETAILS AND INSTALLATION PROCEDURES, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
3. ASHRAE STANDARDS: COMPLY WITH AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE) RECOMMENDATIONS, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.

B. RECTANGULAR SHEET METAL DUCTWORK:
1. DUCTWORK MATERIALS: PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING, SEAM MARKS, ROLLER MARKS, OIL CANNING, STAINS, DISCOLORATION AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING.
2. GAUGES, RECTANGULAR DUCTWORK: FABRICATE STEEL DUCTWORK (GALVANIZED AND STAINLESS, IF ANY) FROM THE MINIMUM GAUGES FOR SIZES UP TO THE CORRESPONDING MAXIMUM LONG-SIDE DIMENSIONS AS INDICATED IN SMACNA DUCT MANUAL.
3. SEAL ALL LONGITUDINAL AND TRAVERSE JOINTS.

C. ROUND SHEET METAL DUCTWORK:
1. DUCT GAUGES, GIRTH REINFORCING, GIRTH JOINTS, LONGITUDINAL SEAMS, ETC. SHALL BE IN ACCORDANCE WITH THE SMACNA MANUAL. DRAW BAND JOINT CONNECTION WILL NOT BE ACCEPTABLE. ROUND DUCT OVER 52" IN DIAMETER SHALL BE MINIMUM 16 GAUGE GALVANIZED STEEL WITH WELDED JOINT CONSTRUCTION AND COMPANION FLANGE JOINTS. ROUND SHEET METAL SUPPLY AIR DUCTWORK SHALL BE FABRICATED USING SPIRAL SEAMS ONLY WITH BEADED SLEEVED JOINTS. ELBOWS SHALL BE STAMPED OR SEGMENTED AND TEES SHALL BE 45 DEGREES LATERAL TAPS WITH WELDED JOINTS. ADJUSTABLE FITTINGS ARE NOT PERMITTED.

D. FLEXIBLE CONNECTION:
1. FLEXIBLE CONNECTION SHALL BE PROVIDED IN DUCTWORK CONNECTED TO THE INLETS AND/OR OUTLETS OF ALL AIR HANDLING UNITS, FANS, ETC. FLEXIBLE CONNECTION MATERIALS SHALL BE VENT-FABRICS, INC., "METALEDGE VENTGLAS" OR APPROVED EQUAL. UNDERWRITERS' LABORATORIES AS NON-COMBUSTIBLE SHALL CLASSIFY THE MATERIAL FOR THE FABRIC AND FIRE RETARDANT FOR THE COATING. ENDS OF FABRIC MUST BE OVERLAPPED 2" AND GLUED WITH R-H PRODUCTS COMPANY, INC., NUMBER XL8 CONTACT GLUE. SEWING OR STAPLING WILL NOT BE PERMITTED. AT LEAST ONE-INCH SLACK SHALL BE ALLOWED IN ALL FLEXIBLE CONNECTION INSTALLATIONS TO ENSURE THAT NO VIBRATION IS TRANSMITTED.

E. FLEXIBLE DUCTWORK:
1. FLEXIBLE DUCT SHALL BE A FACTORY GLASS FIBER INSULATED ASSEMBLY WITH VAPOR BARRIER JACKET AND A MAXIMUM THERMAL CONDUCTANCE OF 0.23 BTU/HR PER SF PER OF FLEXIBLE DUCT SHALL BE CONSTRUCTED OF REINFORCED ALUMINUM FOIL FABRIC MECHANICALLY LOCKED INTO A SPIRAL ALUMINUM HELIX SUITABLE FOR A POSITIVE WORKING PRESSURE OF AT LEAST 6" W.G. IT SHALL REQUIRE NO MORE THAN TWO 900 ELBOWS AS INSTALLED. THE FLEXIBLE DUCT ASSEMBLY SHALL BE LISTED CLASS I BY THE UNDERWRITERS' LABORATORY AT A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED RATE OF NOT OVER 50 AND SHALL COMPLY WITH NFPA STANDARD 90A.
2. FLEXIBLE DUCT CLAMPS SHALL BE STAINLESS STEEL WITH SWIVEL ACTION SCREW. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET INCLUDING ALL BENDS.
3. IF IT COMPLIES WITH THESE SPECIFICATIONS, FLEXIBLE DUCT MANUFACTURED BY FLEXMASTER TYPE "5", GENFLEX OR THERMAFLEX OF EQUAL CONSTRUCTION WILL BE ACCEPTABLE.

F. MANUAL DAMPERS:
1. MANUAL DAMPERS SHALL HAVE A MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME WITH MOUNTING FLANGES AND AXLES SET IN OIL IMPREGNATED BRONZE BEARINGS. AXLES SHALL BE MINIMUM OF ½" IN DIAMETER AND SHALL BE INTERLOCKED WITH BLADES TO POSITIVELY ELIMINATE SLIPPAGE.
2. BLADES SHALL BE MINIMUM OF 16 GAUGE GALVANIZED STEEL. MANUAL DAMPERS SHALL HAVE A MINIMUM OF FOUR BREAKS RUNNING THE ENTIRE LENGTH OF THE DAMPER TO ASSURE RIGIDITY AND TIGHT CLOSE OFF. BLADES SHALL BE ON CENTERS NO GREATER THAN 9" AND NO BLADE SHALL EXCEED 48" IN LENGTH. ALL BLADES SHALL BE INTERCONNECTED TO ACT IN UNISON FOR OPPOSED BLADE OPERATION.
3. SINGLE BLADE DAMPERS SHALL BE USED FOR DUCTWORK LESS THAN 12 INCHES FOR THE LARGER DIMENSION.
4. ALL MANUAL DAMPERS OF 12-INCH DIAMETER OR LESS SHALL BE PROVIDED WITH LOCK-IN QUADRANT HANDLES: "AMERICAN/ELGEN" MODEL EDR-3XL SUITABLE FOR THE INSULATED DUCTWORK.

G. THERMAL INSULATION FOR DUCTWORK
1. INSULATION FOR SUPPLY AIR DUCTWORK AND OUTSIDE AIR DUCT SHALL BE AS FOLLOWS:
   a. CONCEALED ABOVE CEILING
   b. SHALL BE 2" FLEXIBLE FIBERGLASS WITH FSK VAPOR JACKET WITH MINIMUM R-VALUE PER IECC REQUIREMENTS.
2. INSULATION: ASTM C553: FLEXIBLE, NONCOMBUSTIBLE BLANKET.
   a. "K" VALUE: ASTM C518, 0.25 AT 75 DEGREES F
   b. MAXIMUM SERVICE TEMPERATURE: 250 DEGREES F.
   c. MAXIMUM MOISTURE ABSORPTION: 0.20 PERCENT BY VOLUME
   d. DENSITY: 2.0 LB./CU.FT.
   e. THICKNESS: 2".
3. VAPOR BARRIER JACKET A KRAFT PAPER REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM OR POLYMER FILM AS INDICATED.
   a. MOISTURE VAPOR TRANSMISSION: ASTM E96: 0.02 PERM.

H. PIPING AND DUCT SUPPORT
1. HANGERS AND SUPPORT COMPONENTS SHALL BE FACTORY FABRICATED OF MATERIALS, DESIGN, AND MANUFACTURER COMPLYING WITH MSS SP 58.
   a. COMPONENTS SHALL HAVE GALVANIZED COATINGS WHERE INSTALLED FOR PIPING AND EQUIPMENT THAT WILL NOT HAVE FIELD APPLIED FINISH.
   b. PIPE ATTACHMENTS SHALL HAVE NONMETALLIC COATING FOR ELECTROLYTIC PROTECTION WHERE ATTACHMENTS ARE IN DIRECT CONTACT WITH COPPER TUBING.
2. THERMAL HANGER SHIELD INSERTS: 100 PSI AVERAGE COMPRESSIVE STRENGTH, WATERPROOFED CALCIUM SILICATE, ENCASED WITH A SHEET METAL SHIELD. INSERT AND SHIELD SHALL COVER ENTIRE CIRCUMFERENCE OF THE PIPE AND SHALL BE OF LENGTH INDICATED BY MANUFACTURER FOR PIPE SIZE AND THICKNESS OF INSULATION.
3. STEEL PLATES, SHAPES, AND BARS: ASTM A 36.
4. PIPE ALIGNMENT GUIDES: FACTORY FABRICATED, OF CAST SEMI-STEEL OR HEAVY FABRICATED STEEL, CONSISTING OF BOLTED TWO SECTION OUTER CYLINDER AND BASE WITH TWO SECTION GUIDING SPIDER THAT BOLTS TIGHTLY TO PIPE. LENGTH OF GUIDES SHALL BE AS RECOMMENDED BY MANUFACTURER TO ALLOW INDICATED TRAVEL.
5. HANGERS FOR PIPE SIZES 1/2 TO 1 1/2 INCH MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
6. HANGERS FOR PIPE SIZES 2 TO 4 INCHES CARBON STEEL, ADJUSTABLE, CLEVIS.
7. HANGERS FOR PIPE SIZES 6 INCHES AND OVER: ADJUSTABLE STEEL YOKE, CAST IRON ROLL, DOUBLE HANGER.
8. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS; CAST IRON ROLL AND STAND FOR PIPE SIZES 6 INCHES AND OVER.
9. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES: CAST IRON HOOK.
10. WALL SUPPORT FOR PIPE SIZES 4 INCHES AND OVER: ADJUSTABLE STEEL YOKE AND CAST IRON ROLL.
11. VERTICAL SUPPORT: STEEL RISER CLAMP.
12. FLOOR SUPPORT FOR PIPE SIZES TO 4 INCHES: CAST IRON ADJUSTABLE PIPE SADDLE, LOCKNUT NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.
13. COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER PLATED.
14. SHIELD FOR INSULATED PIPING 2 INCHES AND SMALLER: 18 GAGE GALVANIZED STEEL SHIELD OVER INSULATION IN 180 DEGREE SEGMENTS, MINIMUM 12 INCHES LONG AT PIPE SUPPORT.
15. SHIELD FOR INSULATED PIPING 2 1/2 INCHES AND LARGER: PIPE COVERING PROTECTIVE SADDLES, 18 INCHES LONG, 16 GAUGE MINIMUM.
16. SHIELDS FOR VERTICAL COPPER PIPE RISERS: SHEET LEAD.
17. STEEL HANGER RODS: THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED.
18. INSERTS: MALLEABLE IRON CASE OF GALVANIZED STEEL SHELL AND EXPANDER PLUG FOR THREADED CONNECTION WITH LATERAL ADJUSTMENT, TOP SLOT FOR REINFORCING RODS, LUGS FOR ATTACHING TO FORMS; SIZE INSERTS TO SUIT THREADED HANGER RODS.
19. CAPS: STEEL, 20 GAGE MINIMUM, 16 GAGE AT FIRE RESISTANT ELEMENTS.
20. SLEEVES FOR PIPES THROUGH NON-FIRE RATED BEAMS, WALLS, FOOTINGS, AND POTENTIALLY WET FLOORS: FORM WITH STEEL PIPE.
21. SLEEVES FOR PIPES THROUGH FIRE RATED AND FIRE RESISTIVE FLOORS AND WALLS, AND FIREPROOFING: PREFABRICATED FIRE RATED SLEEVES INCLUDING SEALS, UL LISTED.
22. SLEEVES FOR ROUND DUCTWORK: FORM WITH GALVANIZED STEEL.
23. SLEEVES FOR RECTANGULAR DUCTWORK: FORM WITH GALVANIZED STEEL.
24. FIRE STOPPING INSULATION: GLASS FIBER TYPE, NON-COMBUSTIBLE.
25. CALK: ACRYLIC SEALANT.

4.0 TESTING, ADJUSTING AND BALANCING

A. PROVIDE SERVICES OF AN AABC OR NEBB CERTIFIED AGENCY TO PROVIDE TESTING, BALANCING, AND COMMISSIONING SERVICES. CONDUCT TESTING AND BALANCING IN ACCORDANCE WITH AGENCY STANDARDS. CONDUCT COMMISSIONING IN ACCORDANCE WITH IECC STANDARDS. SUBMIT TAB AND COMMISSIONING REPORTS TO ENGINEER FOR REVIEW. CORRECT DEFICIENCIES AND RETEST AT NO ADDITIONAL COST TO OWNER.

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ELECTRIC HEATER SCHEDULE

MARK	EUH-1
DISCHARGE DIRECTION	HORIZONTAL
SERVES	RISER
MANUFACTURER	REZNOR
MODEL NUMBER	EUH-TSL
HEATER SIZE (kW)	2.0
AIRFLOW (CFM)	275
MOTOR RPM	1550 RPM
VOLTAGE	208/1/60
NOTES	ALL

NOTES:
1. PROVIDE FACTORY SUSPENSION KIT.
2. PROVIDE UNIT HEATERS WITH LOCAL THERMOSTAT.
3. PROVIDE 24V RELAY KIT WITH TRANSFORMER.
4. HEATER SHALL BE FAN FORCED TYPE.
5. PROVIDE WITH LOCAL DISCONNECT IN NEMA 1 ENCLOSURE.

DIFFUSER NECK-DUCT SIZE SCHEDULE

SUPPLY AIR (CFM)	DIFFUSER NECK AND BRANCH DUCT SIZE (DIA)
0 - 100	6"
101 - 200	8"
201 - 300	10"
301 - 400	12"
401 - 500	14"

PACKAGED DX ROOF TOP UNIT SCHEDULE

PLAN MARK	SERVICE	TYPE	SUPPLY FAN					COOLING COIL				AMBIENT TEMP (°F)	ELECTRIC HEATING COIL			ELECTRICAL DATA			MAKE & MODEL	WEIGHT (LBS)	REMARKS
			S/A FLOW (CFM)	O/A FLOW (CFM)	E.S.P. (IN. WG.)	FAN POWER (HP)	FAN TYPE	CAPACITY TOTAL (MBH)	CAPACITY SENSIBLE (MBH)	EAT DB/WB (°F)	LAT DB/WB (°F)		EAT DB (°F)	LAT DB (°F)	CAPACITY (KW)	VOLTAGE V/P/H	MCA	MOCP			
RTU-1	FIRST FLOOR MAIN PRAYER HALL 1ST UNIT	SZ-VAV	5,000	1,500	1.5	10.0	DIRECT	187.3	154.4	84.0/66.3	56.1/54.1	105	60.0	85	40	480/3/60	121	125	CAPTIVEAIRE	2625	1-14
RTU-2	FIRST FLOOR DINING 1ST UNIT	SZ-VAV	6,700	2,150	1.5	7.5	DIRECT	250.4	208.7	86.6/66.6	56.5/54.5	105	59.0	85	55	480/3/60	125	150	CAPTIVEAIRE	4752	1-14
RTU-3	FIRST FLOOR DINING 2ND UNIT	SZ-VAV	4,500	1,650	1.5	5.0	DIRECT	193.4	155.3	86.0/67.1	54.9/53.2	105	56.7	85	42	480/3/60	88	100	CAPTIVEAIRE	2545	1-14
RTU-4	SECOND FLOOR PRAYER HALL 1ST UNIT	SZ-VAV	5,500	1,650	1.5	10.0	DIRECT	191.4	162.9	84.0/66.3	57.2/55.1	105	60.0	85	43	480/3/60	88	100	CAPTIVEAIRE	2641	1-14
RTU-5	SECOND FLOOR EAST CLASSROOMS	SZ-VAV	3,300	1,075	1.5	5.0	DIRECT	116.7	99.8	84.8/66.6	57.4/55.2	105	58.7	85	27	480/3/60	64	70	CAPTIVEAIRE	2131	1-14
RTU-6	SECOND FLOOR CENTER CLASSROOMS	SZ-VAV	1,200	400	1.5	2.0	DIRECT	46.0	37.1	84.8/66.7	57.1/54.3	105	58.3	85	10	480/3/60	41	45	CAPTIVEAIRE	1372	1-14
RTU-7	SECOND FLOOR WEST CLASSES	SZ-VAV	2,750	830	1.5	3.4	DIRECT	95.6	82.0	84.1/66.3	57.1/55.1	105	59.9	85	22	480/3/60	59	60	CAPTIVEAIRE	1392	1-14
RTU-8	SECOND FLOOR ASSEMBLY	SZ-VAV	4,500	1,650	1.5	5.0	DIRECT	193.4	155.3	86.0/67.1	54.9/53.2	105	59.5	85	27	480/3/60	88	100	CAPTIVEAIRE	2545	1-14
RTU-9	FIRST FLOOR MAIN PRAYER HALL 2ND UNIT	SZ-VAV	5,500	1,850	1.5	5.0	DIRECT	199.9	169.7	85.1/66.8	57.2/55.1	105	58.2	85	47	480/3/60	80	80	CAPTIVEAIRE	4295	1-14
RTU-10	SECOND FLOOR PRAYER HALL 2ND UNIT	SZ-VAV	4,300	1,350	1.5	7.5	DIRECT	151.0	128.8	84.4/66.5	57.3/55.2	105	59.3	85	35	480/3/60	82	90	CAPTIVEAIRE	2526	1-14
RTU-11	KITCHEN	SZ-CV	4,200	500 TO 3,800	1.5	5.0	DIRECT	229.7	196.4	105.0/74.0	58.2/56.3	105	25.0	80	73	480/3/60	118	125	CAPTIVEAIRE	3126	ALL

NOTES:
1. PROVIDE UNIT WITH 14" INSULATED ROOF CURB.
2. DESIGN AND SECURE UNIT TO WITHSTAND 115 MPH WIND SPEED PER IBC REQUIREMENTS.
3. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTIONS AND LOCAL DISCONNECT SWITCH IN NEMA RATED ENCLOSURE.
4. PROVIDE UNIT WITH CONTROL VOLTAGE POWER SUPPLIES AND GFCI SERVICE RECEPTACLE.
5. PROVIDE UNIT WITH FACTORY DDC CONTROL SYSTEM WITH REMOTE PROGRAMMABLE TEMP/HUMIDITY THERMOSTAT.
6. PROVIDE HAIL GUARDS AND E-COAT CONDENSERS.
7. INTERLOCK COOLING AND HEATING TO PREVENT SIMULTANEOUS OPERATION.
8. PROVIDE UNIT WITH 2" MERV 13 AIR FILTERS.
9. PROVIDE UNIT WITH MANUFACTURER'S 5-YEAR WARRANTY.
10. PROVIDE O/A INTAKE WITH WEATHERPROOF INTAKE HOOD, BIRDSCREEN, AND LOW LEAKAGE MOTORIZED DAMPER.
11. PROVIDE FACTORY AUTHORIZED CONFIGURATION AND STARTUP SERVICES AS REQUIRED BY FACTORY WARRANTY.
12. PROVIDE UNIT WITH HOT GAS REHEAT HUMIDITY CONTROL.
13. COMPLY WITH IECC REQUIREMENTS.
14. PROVIDE UNIT WITH 2" DOUBLE WALL FOAM INJECTED CASING CONSTRUCTION WITH THERMAL BREAKS.
15. PROVIDE UNIT WITH 2-POSITION OA DAMPER CONTROL. INTERLOCK WITH KITCHEN HOOD EXHAUST FAN.

SPLIT DX UNIT WITH ELECTRIC HEAT SCHEDULE

MARK	AIRFLOW (CFM)	OUTSIDE AIR FLOW (CFM)	INDOOR UNIT										ELECTRIC HEATER				OUTDOOR UNIT					MANUFACTURER	NOTES
			CONFIGURATION	FAN		COOLING COIL					ELECTRICAL DATA						AMBIENT TEMP. (°F)	ELECTRICAL DATA					
				E.S.P. (IN. WG.)	MOTOR (HP)	MAX FACE VEL. (FPM)	TOT. CAPACITY (MBH)	SEN. CAPACITY (MBH)	EAT DB/WB (°F)	LAT DB/WB (°F)	MCA	MOCP	V/P/Hz	EAT (°F)	LAT (°F)	CAPACITY (KW)	V/P/Hz		MCA	MOCP	V/P/Hz		
FCU-1 / CU-1	1000	100	HORIZONTAL	1.0	1.0	450	22.5	21.0	78.0/63.9	59.0/56.4	10	15	460/3/60	65	85	5	460/3/60	105	7	15	460/3/60	TRANE	1-8

NOTES:
1. PROVIDE MERV-13 FILTER WITH THE UNIT.
2. PROVIDE CONDENSER WITH E-COAT.
3. PROVIDE UNIT EFFICIENCY IN COMPLIANCE WITH IECC 2015.
4. PROVIDE CONDENSING UNIT SUITABLE FOR LOW AMBIENT OPERATION.
5. PROVIDE UNIT WITH CONTROL VOLTAGE POWER SUPPLY AND 7-DAY PROGRAMMABLE THERMOSTAT.
6. PROVIDE UNIT WITH DRAIN PAN WITH WATER SENSING DEVICE.
7. PROVIDE HAIL-GUARD FOR CONDENSER COILS.

OUTSIDE AIR CALCULATION

Unit	Occ. Category	Room Name	Room Area (Sf)	Number Of People	Required Outdoor Air Per Person (CFM/Person)[Rp]	Required Outdoor Air Per Area (CFM/Sf)[Rz]	Distribution Effectiveness [Ez]	Uncorrected Breathing Air [Vbz]	System Effectiveness (Ev)	Corrected Outside Air [Voz](CFM)	Outside Air Required (CFM)	Outside Air Provided (CFM)
RTU-1	Lobbies/prefunction	Shoe Lobby A105	211	1	7.5	0.06	1	20	0.75	27	**1,712**	**1,725**
	Lobbies	Vestibule A100	271	2	5	0.06	1	26	0.75	35		
	Lobbies/prefunction	Shoe Lobby A104	190	1	7.5	0.06	1	19	0.75	25		
	Lobbies	Shoes A107	76	1	5	0.06	1	10	0.75	13		
	Places of religious worship	Mens Masjid A105	2,400	150	5	0.06	1	894	0.75	1,192		
	Multi-purpose assembly	Sehen A101	1,080	50	5	0.06	1	315	0.75	420		
RTU-2	Multi-purpose assembly	Mawaid Lobby A111	350	5	5	0.06	1	46	0.75	61	**1,112**	**1,125**
	Lobbies	Shoes A113	134	1	5	0.06	1	13	0.75	17		
	Cafeteria / fast food dining	Mawaid A112	1,940	50	7.5	0.18	1	724	0.75	966		
	Office space	Jamaat Office A129	148	1	5	0.06	1	14	0.75	19		
	Lobbies	Jamat Lobby A109	150	1	5	0.06	1	14	0.75	19		
	Lobbies	Lobby A108	142	1	5	0.06	1	14	0.75	18		
	Storage rooms	Takat Room A120	78	1	0	0.12	1	9	0.75	12		
RTU-3	Storage rooms	Storage A1139	67	0	0	0.12	1	8	0.75	11	**1,017**	**1025**
	Office space	VIP Room A131	77	2	5	0.06	1	15	0.75	19		
	Office space	Jamaat Office A130	178	1	5	0.06	1	16	0.75	21		
	Cafeteria / fast food dining	Mawaid A112	1,940	50	7.5	0.18	1	724	0.75	966		
RTU-4	Lobbies	Lobby A203	224	0	5	0.06	1	13	0.75	18	**1,081**	**1,100**
	Daycare (through age 4)	Nursery A207	130	1	10	0.18	1	33	0.75	45		
	Conference / meeting	Conference A200	256	8	5	0.06	1	55	0.75	74		
	Multi-purpose assembly	Sehen A201	1,080	25	5	0.06	1	190	0.75	253		
	Places of religious worship	Masjid A202	2,400	75	5	0.06	1	519	0.75	692		
RTU-5	Classrooms (age 9 plus)	Class A217	200	10	10	0.12	1	124	0.75	165	**661**	**675**
	Classrooms (age 9 plus)	Class A218	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A219	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A220	200	10	10	0.12	1	124	0.75	165		
RTU-6	Classrooms (age 9 plus)	Class A222	320	10	10	0.12	1	138	0.75	185	**690**	**700**
	Classrooms (age 9 plus)	Class A223	320	10	10	0.12	1	138	0.75	185		
	Classrooms (age 9 plus)	Class A234	224	10	10	0.12	1	127	0.75	169		
	Classrooms (age 9 plus)	Class A235	114	10	10	0.12	1	114	0.75	152		
RTU-7	Classrooms (age 9 plus)	Class A226	200	10	10	0.12	1	124	0.75	165	**677**	**700**
	Classrooms (age 9 plus)	Class A227	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A228	200	10	10	0.12	1	124	0.75	165		
	Classrooms (age 9 plus)	Class A229	300	10	10	0.12	1	136	0.75	181		
RTU-8	Office space	Office A214	328	5	5	0.06	1	45	0.75	60	**963**	**975**
	Office space	Staff A216	320	14	5	0.06	1	89	0.75	119		
	Multi-purpose assembly	Assembly A212	2,571	50	5	0.06	1	404	0.75	539		
	Lobbies/prefunction	Lobby A208	405	0	7.5	0.06	1	24	0.75	32		
	Libraries	Library A210	291	25	5	0.12	1	160	0.75	213		
RTU-9	Office space	Office A214	328	5	5	0.06	1	45	0.75	60	**963**	**975**
	Office space	Staff A216	320	14	5	0.06	1	89	0.75	119		
	Multi-purpose assembly	Assembly A212	2,571	50	5	0.06	1	404	0.75	539		
	Lobbies/prefunction	Lobby A208	405	0	7.5	0.06	1	24	0.75	32		
	Libraries	Library A210	291	25	5	0.12	1	160	0.75	213		
RTU-10	Office space	Office A214	328	5	5	0.06	1	45	0.75	60	**963**	**975**
	Office space	Staff A216	320	14	5	0.06	1	89	0.75	119		
	Multi-purpose assembly	Assembly A212	2,571	50	5	0.06	1	404	0.75	539		
	Lobbies/prefunction	Lobby A208	405	0	7.5	0.06	1	24	0.75	32		
	Libraries	Library A210	291	25	5	0.12	1	160	0.75	213		
RTU-11	Cafeteria / fast food dining	Kitchen A137	1,820	4	7.5	0.18	1	358	0.75	477	**477**	**480**

NOTE:
OUTSIDE AIR CALCULATION BASED ON 2021 UNIFORM MECHANICAL CODE (2021 UMC).

AIR OUTLET SCHEDULE

MARK	MAKE	TYPE	MODEL	FACE SIZE	NECK SIZE	MATERIAL	FINISH	MOUNTING	REMARKS
A	TITUS	SUPPLY	OMNI-AA	24 x 24	SEE NECK SCHEDULE	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 5, 6
B	TITUS	RETURN	45F	24 x 24	SEE NECK SCHEDULE	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 6
C	TITUS	EXHAUST	50F	24 x 24	SEE NECK SCHEDULE	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 6
D	TITUS	SUPPLY/RETURN	N-I-DR	48 X 3	10" INLET	ALUMINUM	NOTE 4	CEILING	1, 2, 3, 4, 5, 6, 7
E	TITUS	SUPPLY	271	6 x 6	N/A	ALUMINUM	NOTE 4	SIDEWALL	2, 4, 5, 6

NOTES:
1. PROVIDE ROUND NECK ADAPTER FOR ALL SUPPLY, RETURN, AND EXHAUST AIR DIFFUSERS WHERE NECESSARY. PROVIDE DIFFUSERS WITH OPPOSED BLADE DAMPERS.
2. REFER TO PLANS FOR AIR FLOW RATE.
3. REFER TO DIFFUSER NECK-DUCT SIZE SCHEDULE FOR TAKE OFF BRANCH SIZES.
4. VERIFY/COORDINATE FINISH AND COLOR WITH ARCHITECT. PROVIDE DIFFUSERS TO MATCH WITH CEILING COLOR.
5. PROVIDE OBD FOR ALL SUPPLY AIR DIFFUSERS.
6. COORDINATE LAY-IN/GYPSUM BOARD CEILING TYPE WITH FINAL ARCHITECTURAL PLANS.
7. PROVIDE LINEAR SLOT DIFFUSERS WITH 10" PLENUM INLET, 18" DOWN-BLOW SLOT.

EXHAUST FAN SCHEDULE

FAN TAG	SERVING	AIR VOLUME CFM	LOCATION	FAN TYPE	DRIVE TYPE	ESP INCH WC	MOTOR			MANUFACTURER	NOTES
							POWER	V/P/Hz	RPM		
EF-1	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-2	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-3	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-4	RESTROOMS	375	CEILING	INLINE	DIRECT	1.0	1/10 HP	115//60	1350	GREENHECK	1-3
EF-5	RESTROOMS	75	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3
EF-6	RESTROOMS	300	ROOF	ROOF	DIRECT	1.0	1/10 HP	115//60	1050	GREENHECK	1-6
EF-7	RESTROOMS	225	ROOF	ROOF	DIRECT	1.0	1/10 HP	115//60	1550	GREENHECK	1-6
EF-8	KH-1	1,900	ROOF	ROOF	DIRECT	1.0	6/10 HP	115//60	1708	GREENHECK	ALL
EF-9	KH-2	1,900	ROOF	ROOF	DIRECT	1.0	6/10 HP	115//60	1708	GREENHECK	ALL
EF-10	GHUSL	250	CEILING	CEILING	DIRECT	0.5	1/10 HP	115//60	580	GREENHECK	1-3

NOTES:
1. PROVIDE FAN WITH SINGLE POINT POWER CONNECTION & CONTROL TRANSFORMERS AS REQUIRED.
2. PROVIDE UNITS WITH ECM MOTORS, LOCAL SPEED CONTROL, CONTROL VOLTAGE POWER SUPPLY, AND NON FUSED DISCONNECT SWITCH.
3. PROVIDE BACK DRAFT DAMPERS FOR ALL FANS.
4. PROVIDE UNIT WITH 14" INSULATED ROOF CURB.
5. DESIGN SECURE CURBS AND FANS TO WITHSTAND 115 MPH WINDSPEED PER IBC REQUIREMENTS.
6. PROVIDE WITH MANUFACTURER'S 1-YEAR WARRANTY.
7. PROVIDE UL705 LISTED UPDRAFT GREASE LADEN EXHAUST FAN WITH INSULATED HINGE ROOF CURB AND REMOTE TOGGLE SWITCH.

DUCTLESS MINI SPLIT DX SYSTEM SCHEDULE

MARK	SERVING	NOMINAL CFM	EAT DB/WB	LAT DB/WB	TOTAL. CAP. BTU/HR	SENSIBLE. CAP. BTU/HR	FAN COIL MANUFACTURER	CONDENSING UNIT TAG	CONDENSING UNIT MANUFACTURER	CONDENSING UNIT			NOTES
										POWER	MCA	MOCP	
FCU-2	AV ROOM	450	75/62	55/54	12,000	9,600	MITSUBISHI	CU-2	MITSUBISHI	208//60	14	15	ALL
FCU-3	AV ROOM	450	75/62	55/54	12,000	9,600	MITSUBISHI	CU-3	MITSUBISHI	208//60	14	15	ALL

NOTES:
1. PROVIDE CONDENSATE PUMP WITH THE UNIT.
2. PROVIDE MATCHING CONDENSING UNIT AS INDICATED.
3. PROVIDE WASHABLE FILTER WITH THE UNIT.
4. UNIT EER MUST COMPLY WITH LATEST IECC REQUIREMENTS.
5. INDOOR UNIT SHALL RECEIVE ITS POWER FROM OUTDOOR UNIT.
6. PROVIDE UNIT WITH LOCAL DIGITAL THERMOSTAT.
7. DESIGN SECURE CONDENSING UNIT TO WITHSTAND 130 MPH WINDSPEED PER IBC REQUIREMENTS.

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PROFESSIONAL SEAL

STATE OF TEXAS
ANWAR HASSAN
64671
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PROFESSIONAL ENGINEER
04-17-2026

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ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE
SCHEDULE

SCALE

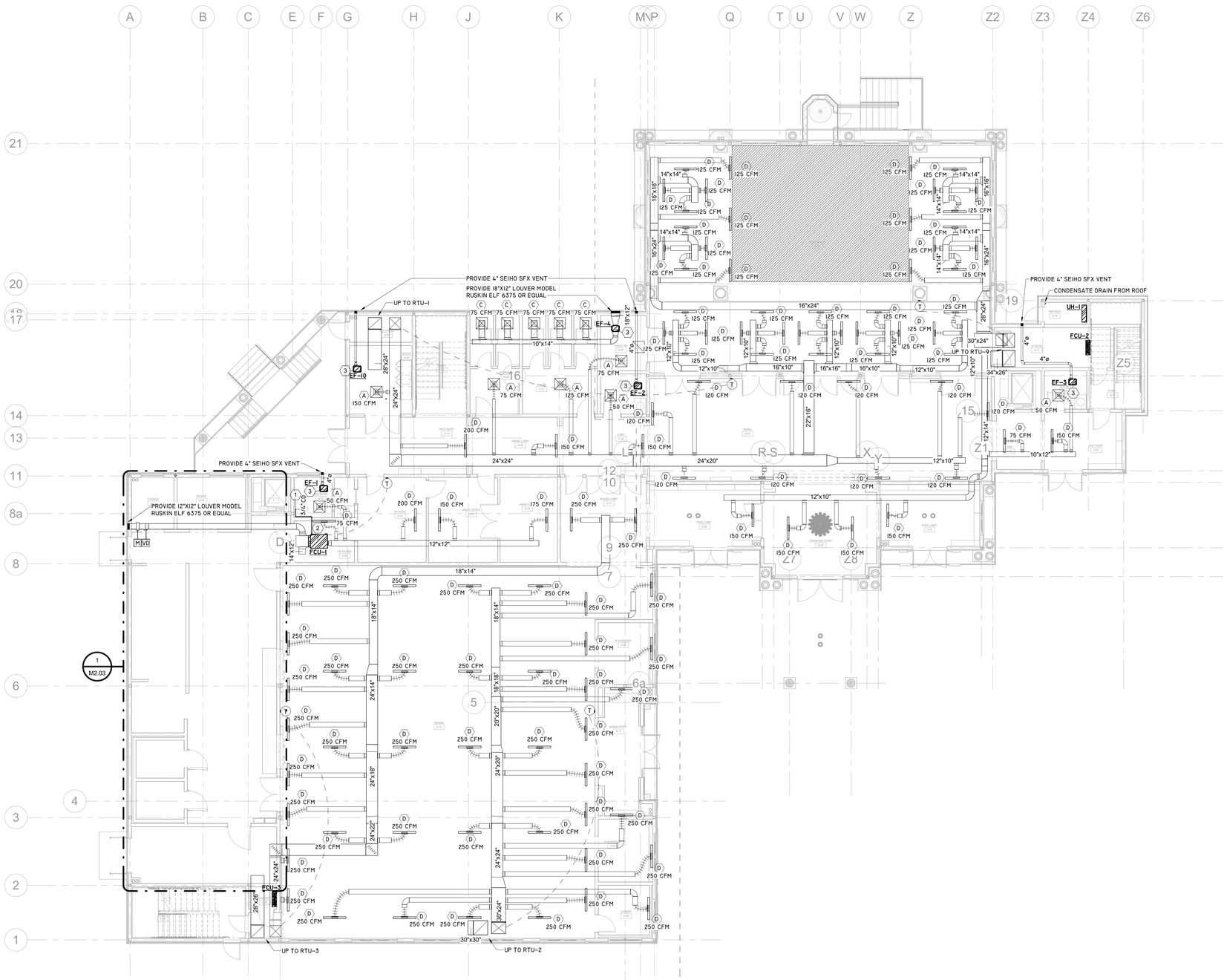
DATE
2026/04/17

PROJECT NUMBER
Project Number

SHEET NUMBER
M1.10

GENERAL NOTE:
I. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

KEYED NOTE LEGEND	
1	ROUTE CONDENSATE TO P-TRAP MODEL J.R. SMITH 9200 OR SIMILAR.
2	PROVIDE REFRIGERANT PIPING TO ROOF MOUNTED CONDENSING UNIT. (NOT SHOWN)
3	INTERLOCK EF WITH CORRESPONDING RESTROOM LIGHTS.



1 FIRST FLOOR - HVAC
Scale: 1/8" = 1'-0"

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FIRST FLOOR - HVAC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

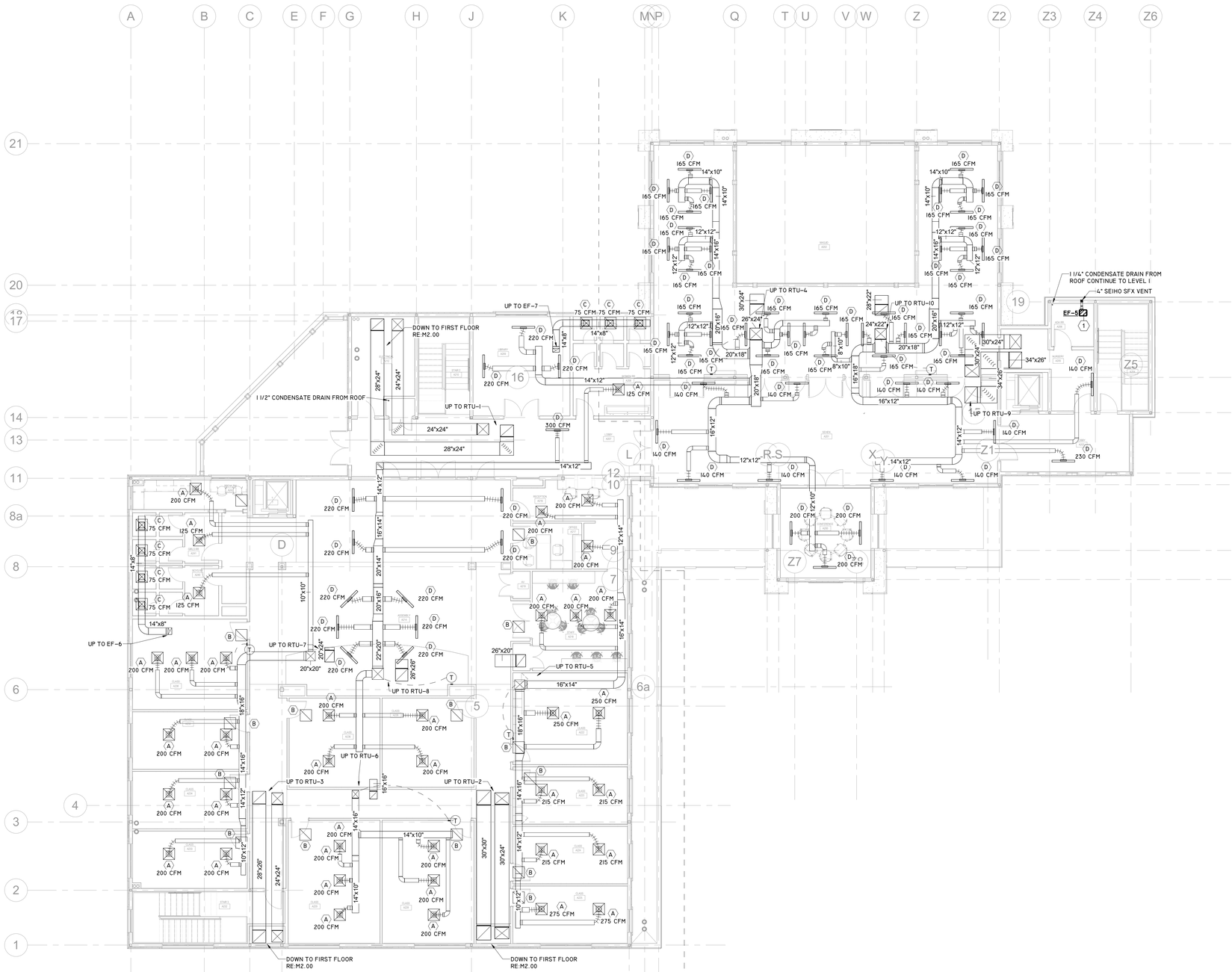
PROJECT NUMBER Project Number

SHEET NUMBER

M2.00

GENERAL NOTE:
I. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

KEYED NOTE LEGEND	
1	INTERLOCK EF WITH CORRESPONDING RESTROOM LIGHTS.



1 SECOND FLOOR - HVAC
Scale: 1/8" = 1'-0"

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No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

SECOND FLOOR - HVAC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

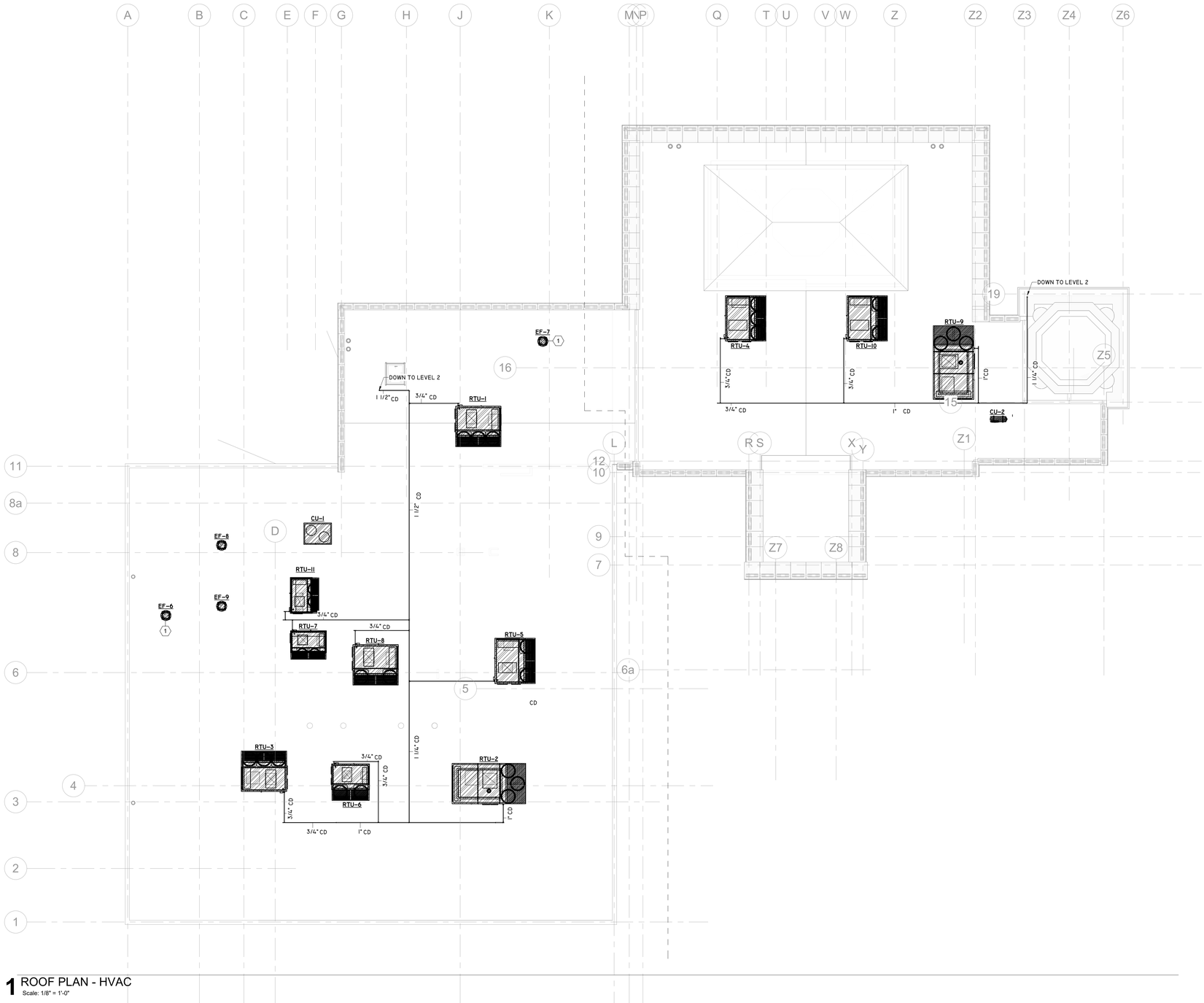
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SHEET NUMBER

M2.01

GENERAL NOTE:
I. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

KEYED NOTE LEGEND	
1	INTERLOCK EF WITH CORRESPONDING RESTROOM LIGHTS.



1 ROOF PLAN - HVAC
Scale: 1/8" = 1'-0"

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No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

ROOF PLAN - HVAC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

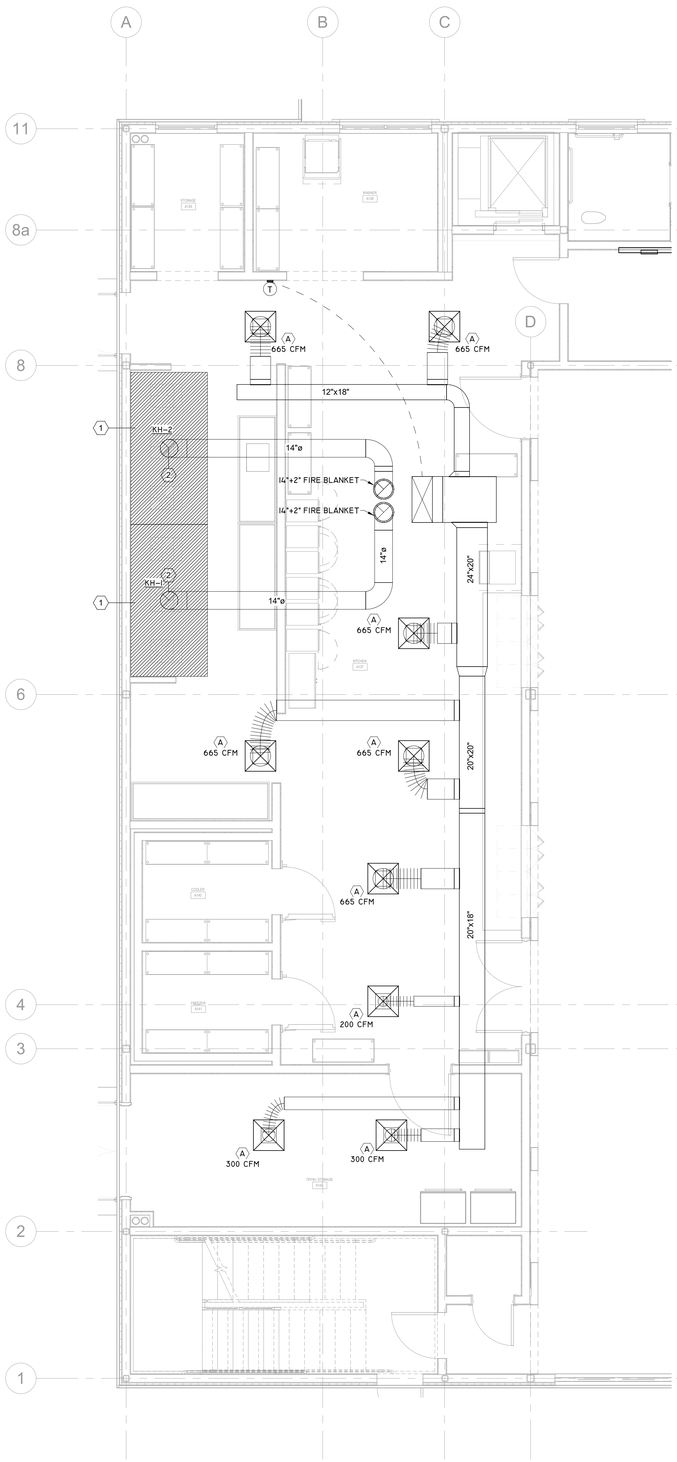
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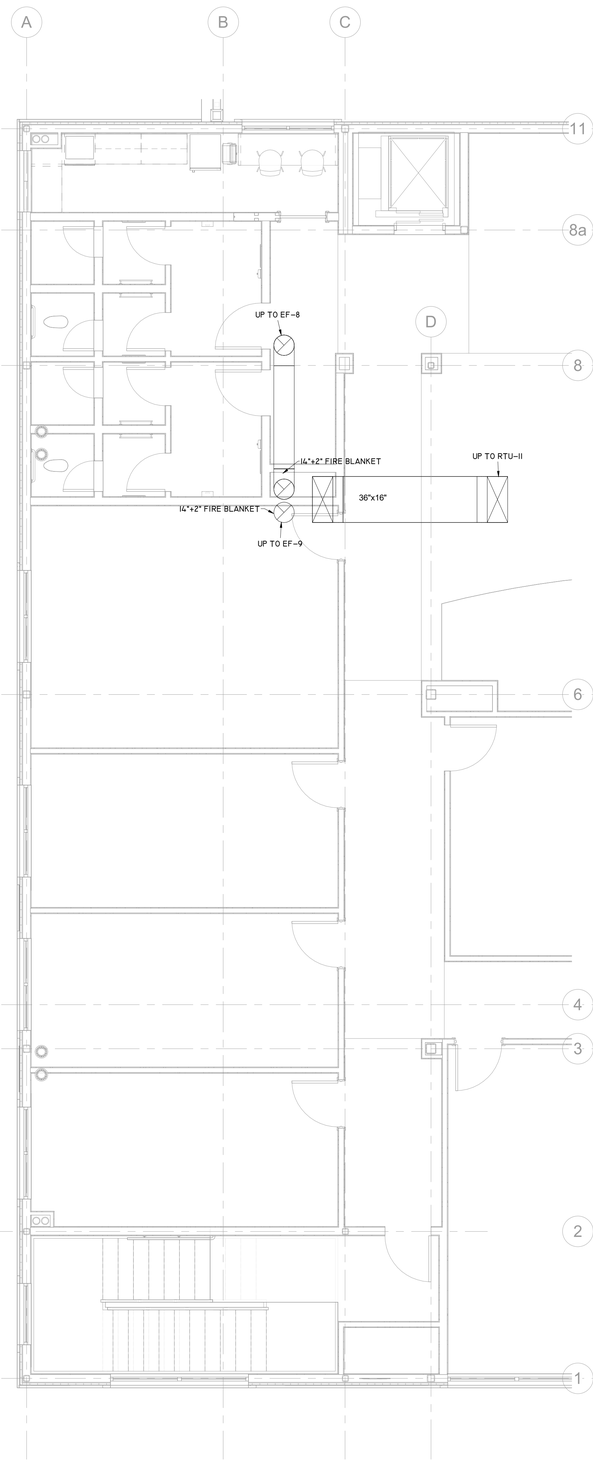
M2.02

GENERAL NOTE:
1. REFERENCE SHEET M3.00 FOR INSTALLATION DETAILS.

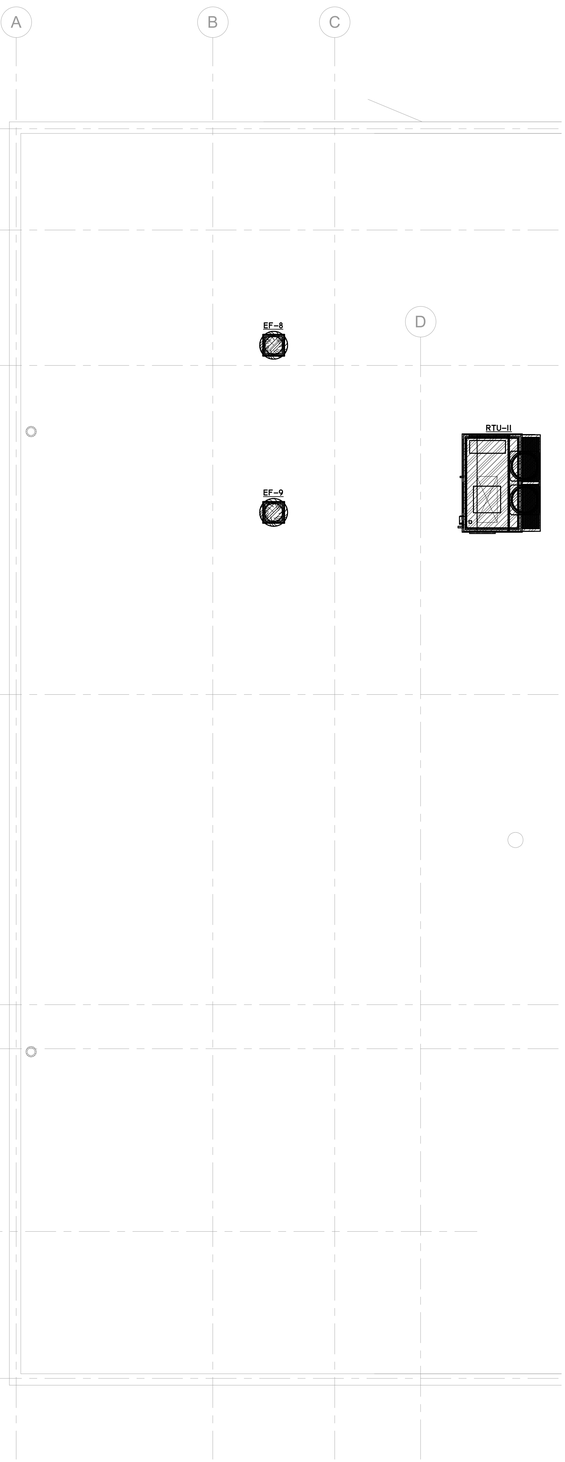
KEYED NOTE LEGEND	
1	INTERLOCK KITCHEN EXHAUST HOODS TO OPERATE IN TANDEM FROM A SINGLE TOGGLE SWITCH. INTERLOCK RTU-11 WITH KITCHEN HOODS TO ENGAGE RTU SUPPLY FAN AND OPEN OA DAMPER TO SCHEDULED MAX CFM WHEN EXHAUST HOODS ARE ON. CYCLE RTU AT SCHEDULED MINIMUM OA CFM WITH HEATING AND COOLING DEMANDS WHEN EXHAUST HOODS ARE OFF.
2	PROVIDE ASTM 167 TYPE 304L OR 316L CONTINUOUSLY WELDED GREASE LADEN EXHAUST DUCT PER NFPA 96 AND IMC REQUIREMENTS. PITCH HORIZONTAL DUCT RUNS AND PROVIDE ACCESS DOORS PER NFPA REQUIREMENTS. INSULATE WITH 2-HR RATED FIRE WRAP.



1 KITCHEN FIRST FLOOR - HVAC
Scale: 1/4" = 1'-0"



2 KITCHEN SECOND FLOOR - HVAC
Scale: 1/4" = 1'-0"



3 KITCHEN ROOF PLAN - HVAC
Scale: 1/4" = 1'-0"

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64671
LICENSED
PROFESSIONAL ENGINEER

04-17-2026

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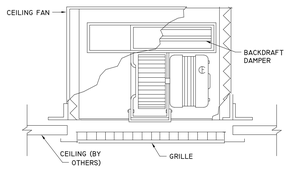
ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

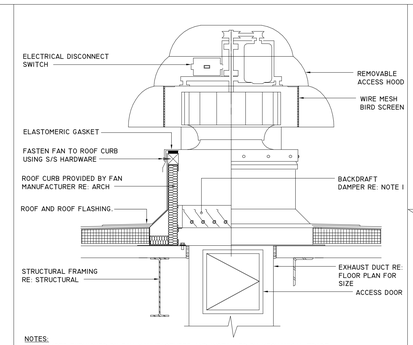
SHEET TITLE
KITCHEN PLAN - HVAC

SCALE 1/4" = 1'-0"
DATE 2026/04/17
PROJECT NUMBER Project Number
SHEET NUMBER
M2.03



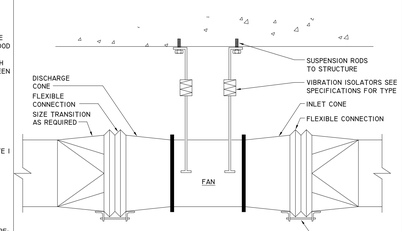
NOTE:
INTERLOCK TOILET FAN WITH LIGHT SWITCH.
PROVIDE WALL MOUNTED SWITCH FOR JANITOR'S CLOSET.
SUSPEND UNIT PER MFG RECOMMENDATIONS.

CEILING FAN DETAIL — NOT TO SCALE — 14

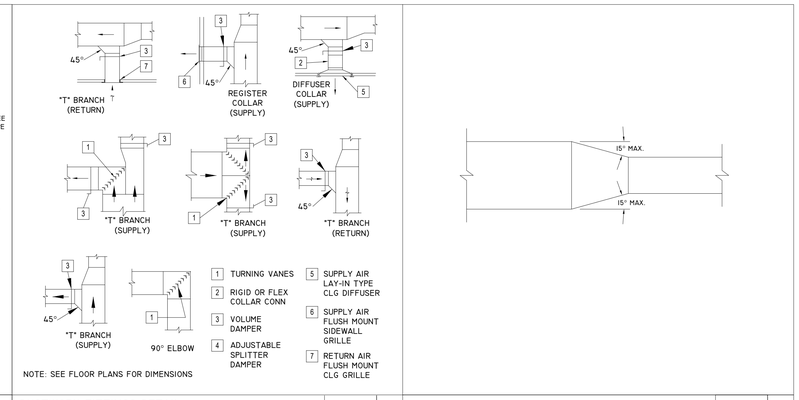


NOTES:
1. DAMPER FURNISHED BY FAN MANUFACTURER AND INSTALLED BY MECHANICAL TRADE.
2. SECURE CURB AND UNIT PER MANUFACTURER REQUIREMENTS IN COMPLIANCE WITH IBC REQUIREMENTS.
3. INTERLOCK EXHAUST FAN WITH FIRE ALARM SYSTEM TO SHUT DOWN ON ACTIVATION. COORDINATE WITH FIRE ALARM INSTALLATION.
4. PROVIDE ROOF CURB RATED FOR 115 MPH BASIC WIND SPEED IN ACCORDANCE WITH IBC REQUIRMENTS. SECURE FAN TO CURB PER MFG INSTALLATION INSTRUCTIONS.

ROOF EXHAUST FAN DETAIL — NOT TO SCALE — 11



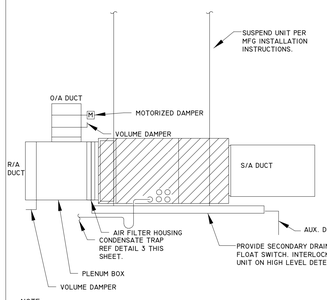
INLINE CENTRIFUGAL FAN DETAIL — NOT TO SCALE — 8



NOTE: SEE FLOOR PLANS FOR DIMENSIONS

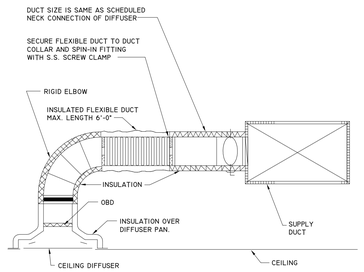
DUCTWORK FITTINGS DETAIL — NOT TO SCALE — 5

DUCT TRANSITION DETAIL — NOT TO SCALE — 3



NOTE:
PROVIDE 24 VAC NORMALLY CLOSED MOTORIZED DAMPER AND INTERLOCK TO OPEN WITH UNIT ENGAGEMENT.

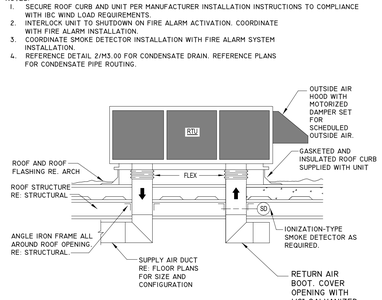
SUSPENDED FAN COIL UNIT DETAIL — NOT TO SCALE — 13



NOTE:

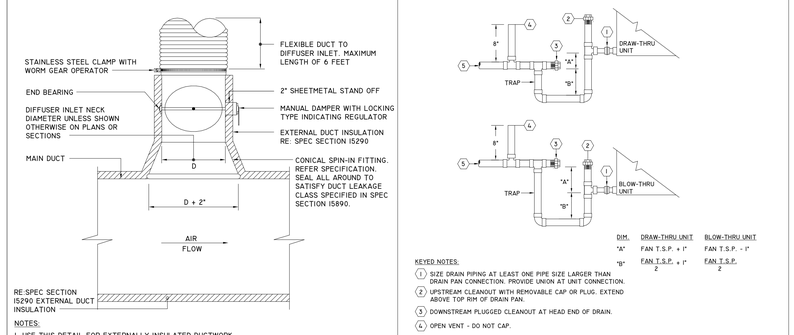
THE FLANGED BELLMOUTH FITTING MUST BE PROVIDED. WHERE HEIGHT OF DUCT SHOWN ON PLANS CAN ACCOMMODATE THE FITTING. ONLY WHERE THE DUCT HEIGHT DOES NOT ALLOW THE INSTALLATION OF BELLMOUTH FITTING, PROVIDE STRAIGHT FITTING. FLEX DUCT MAY BE LOCATED IN RISER OR HORIZONTAL RUN.

CEILING DIFFUSER CONNECTION DETAIL — NOT TO SCALE — 10



NOTES:
1. SECURE ROOF CURB AND UNIT PER MANUFACTURER INSTALLATION INSTRUCTIONS TO COMPLIANCE WITH IBC WIND LOAD REQUIREMENTS.
2. INTERLOCK UNIT TO SHUTDOWN ON FIRE ALARM ACTIVATION. COORDINATE WITH FIRE ALARM INSTALLATION.
3. COORDINATE SMOKE DETECTOR INSTALLATION WITH FIRE ALARM SYSTEM INSTALLATION.
4. REFERENCE DETAIL 2/M3.00 FOR CONDENSATE DRAIN. REFERENCE PLANS FOR CONDENSATE PIPE ROUTING.

ROOF TOP UNIT DETAIL — NOT TO SCALE — 7



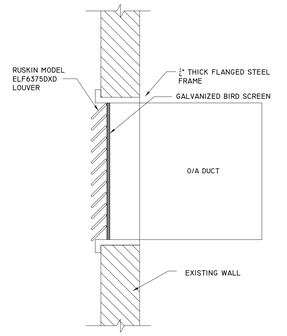
NOTES:
1. USE THIS DETAIL FOR EXTERNALLY INSULATED DUCTWORK.
2. EXTEND ROUND SHEETMETAL DUCTWORK AND ASSOCIATED DUCT INSULATION FROM MAIN DUCT, SO FLEXIBLE DUCT LENGTH DOES NOT EXCEED 5 FEET.

SPIN FITTING DETAIL — NOT TO SCALE — 4

DIM.	DRAW-THRU UNIT	BLOW-THRU UNIT
"A"	FAN T.S.P. + 1"	FAN T.S.P. - 1"
"B"	FAN T.S.P. + 1" / 2	FAN T.S.P. / 2

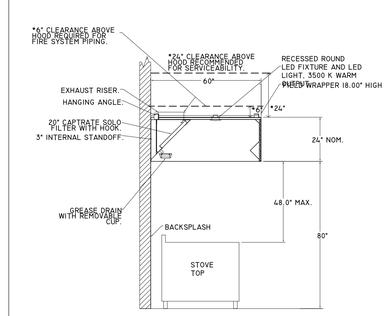
KEYED NOTES:
1. SIZE DRAIN PIPING AT LEAST ONE PIPE SIZE LARGER THAN DRAIN PAN CONNECTION. PROVIDE UNION AT UNIT CONNECTION.
2. UPSTREAM CLEANOUT WITH REMOVABLE CAP OR PLUG. EXTEND ABOVE TOP RIM OF DRAIN PAN.
3. DOWNSTREAM PLUGGED CLEANOUT AT HEAD END OF DRAIN.
4. OPEN VENT - DO NOT CAP.
5. ROUTE DISCHARGE TO INDIRECT DRAIN. PITCH DOWN AT 1/8" PER FOOT. PROVIDE CLEANOUTS AT CHANGES OF DIRECTION.

TYPICAL CONDENSATE DRAIN DETAIL — NOT TO SCALE — 2



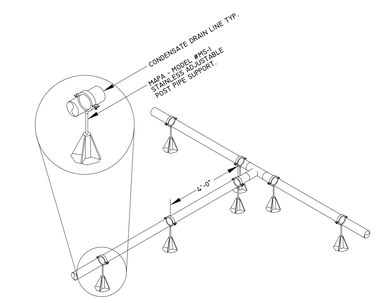
NOTE:
FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS.

LOUVER INSTALLATION DETAIL — NOT TO SCALE — 12

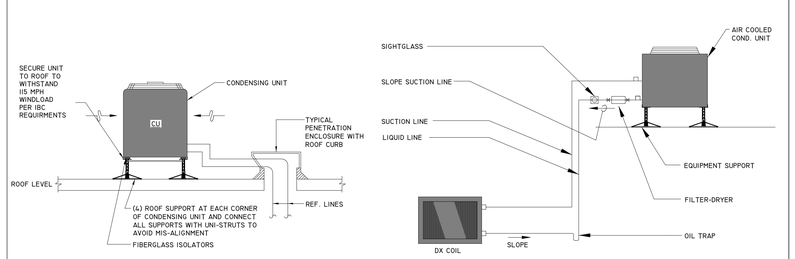


NOTE:
FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS.

KITCHEN HOOD DETAIL — NOT TO SCALE — 9



CONDENSATE DRAIN PIPE SUPPORT DETAIL — NOT TO SCALE — 6



ROOF MOUNTED CONDENSER DETAIL
SCALE: N.T.S.

REFRIGERANT PIPING DETAIL (A)
SCALE: N.T.S.

NOTE:
SIZE REFRIGERANT PIPING PER MANUFACTURER INSTALLATION INSTRUCTIONS. INSULATE WITH 3/4" THICK ELASTOMERIC FOAM INSULATION. PROVIDE 0.020" THICK ALUMINUM JACKETING OVER EXTERIOR INSULATION.

SPLIT SYSTEM INSTALLATION AND PIPING DETAIL — NOT TO SCALE — 1

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04-17-2026

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REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

DETAILS

SCALE

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

M3.00

ELECTRICAL SPECIFICATIONS

(BOOKS SPECIFICATIONS SUPERCEDE ANY NOTES BELOW)

1. SCOPE: THIS DIVISION SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED FOR COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM. PROJECT INCLUDES INSTALLATION OF NEW ELECTRICAL DISTRIBUTION SYSTEM, HVAC SYSTEM CONNECTIONS, NEW LIGHTING SYSTEM, NEW RECEPTACLES AND OUTLETS, FIRE ALARM AND NOTIFICATION SYSTEM, AND OTHER ELECTRICAL WORK AS INDICATED ON THE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS, CONDUCTORS FOR POWER, CONTROLS, AND LIGHTING, LIGHTING CONTACTOR AND CONTACT CLOSURES, AND ALL REQUIRED APPARATUS REQUIRED FOR FULL OPERATION OF THE ELECTRICAL SYSTEM.
2. SITE VISIT AND FAMILIARIZATION: CONTRACTORS PROPOSING TO UNDERTAKE WORK UNDER THIS DIVISION SHALL VISIT THE SITE OF THE WORK, AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT AFFECT THE WORK, OR COST THEREOF. CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS AS RELATED TO THE SITE CONDITIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
3. NOTICE: CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL SHALL CONVEY FULL AGREEMENT TO ALL ITEMS AND CONDITIONS SPECIFIED, INDICATED ON THE DRAWINGS, AND/OR REQUIRED BY NATURE OF THE SITE.
4. DISCREPANCIES: SHOULD CONTRACTOR FIND DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OR BE IN DOUBT AS TO THE INTENT THEREOF, HE SHALL IMMEDIATELY OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE SUBMITTING PROPOSAL FOR WORK IN THIS DIVISION.
5. DEMOLITION: ALL ELECTRICAL COMPONENTS OF THE EXISTING SYSTEM WHICH ARE NOT UTILIZED FOR NEW CONFIGURATION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. REFER TO DEMOLITION NOTES AND DRAWINGS FOR EXTENT OF WORK.
6. TIMELY PLACING OF MATERIALS AND EQUIPMENT: ALL ELECTRICAL APPARATUS SHALL BE INSTALLED AT THE PROPER TIME DURING PROGRESS OF CONSTRUCTION. COORDINATE WORK OPERATIONS WITH OTHER CRAFTS.
7. SPACE REQUIREMENTS: CONTRACTOR FOR WORK UNDER THIS DIVISION SHALL BE FULLY RESPONSIBLE FOR DETERMINING IN ADVANCE OF PURCHASE THAT EQUIPMENT AND MATERIALS PROPOSED FOR INSTALLATION SHALL FIT INTO THE CONFINES INDICATED.
8. MANUFACTURERS' LITERATURE: DELIVER ALL PRINTED TAGS, INSTRUCTIONS, CERTIFIED DRAWINGS, PARTS LISTED, CERTIFICATES, ETC., SUPPLIED WITH EQUIPMENT ITEMS, TO THE OWNER.
9. CODES, PERMITS, AND FEES: WORK UNDER THIS DIVISION SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH PERTINENT PROVISIONS OF CITY AND STATE BUILDING CODES.
   A. ALL WORK SHALL COMPLY WITH THE 2023 EDITION OF NATIONAL ELECTRIC CODE (NEC).
   B. OBTAIN ALL REQUIRED PERMITS. PAY ALL LEGAL FEES FOR PERMITS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.
   C. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
10. CUTTING AND PATCHING:
   A. CONTRACTOR FOR THIS DIVISION SHALL LAYOUT TO DIMENSION AND LOCATIONS, CUT AND PATCH ALL OPENINGS ON SURFACES TO BE FORMED, FRAMED, OR CUT.
   B. SHOULD CONTRACTOR FOR THIS DIVISION FAIL TO ADHERE WITH THIS REQUIREMENT, AS WORK PROGRESSES, ANY OPENINGS SHALL BE CUT AND PATCHED BY GENERAL CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR FOR THIS DIVISION.
11. PROTECTION OF APPARATUS: TAKE ALL PRECAUTIONS NECESSARY FOR PROPER PROTECTION OF NEW EQUIPMENT, APPARATUS, AND MATERIALS FROM DAMAGE. FAILURE TO DO SO WILL BE CAUSE FOR REJECTION OF ANY ITEM COMING UNDER QUESTION.
12. SHOP DRAWINGS: CONTRACTOR FOR THIS DIVISION SHALL SUBMIT SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS AND OTHER MATERIAL REQUESTED BY ARCHITECT/ENGINEER. SUBMIT PRODUCT DATA FOR SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, WIRES, CABLE, SUPPORTING DEVICES, IDENTIFICATION COMPONENTS, LIGHT FIXTURES, FIRE ALARM SYSTEM AND COMPONENTS, WIRING DEVICES, MULTI-OUTLET RACEWAYS, CABINETS, AND BOXES. SUBMIT SIX COPIES WITHIN THIRTY (30) DAYS AFTER CONTRACT AWARD, AND IN NOT MORE THAN TWO GROUPS OF SUBMITTALS. SUBMITTALS SHALL CONSIST OF LAYOUTS, WORKING DRAWINGS, CUTS, AND OPERATING AND PERFORMANCE DATA. ALLOW FOUR (4) WEEKS FOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS BY ENGINEER.
13. MATERIALS AND WORKMANSHIP: ALL MATERIALS AND EQUIPMENT SHALL BE NEW, OF BEST GRADE OF STANDARD MANUFACTURE, APPROVED BY UL, AND BE SO LABELED. FOR WIRE AND CABLE, MARKED AS REQUIRED BY ART. 310-2, NEC. INSTALLED BY SKILLED ELECTRICIAN, WORKING UNDER THE DIRECT SUPERVISION OF COMPETENT EXPERIENCED FOREMAN AND/OR SUPERINTENDENT. PRODUCTS SHALL BE INSTALLED IN A THOROUGHLY WORKMANLIKE MANNER, PRESENTING A NEAT, CLEAN-CUT APPEARANCE WHEN COMPLETED. ANY PART OR PARTS NOT MEETING THIS REQUIREMENT SHALL BE REPLACED OR REBUILT WITHOUT EXTRA EXPENSE TO OWNER.
14. PROTECTION OF EXISTING: PLENUM CABLE SHALL BE PROPERLY SECURED ABOVE CEILING PER APPLICABLE CODES.
15. WIRING METHODS: THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE LOCATIONS OF EQUIPMENT AND ARRANGEMENT OF CIRCUITS ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY ACTUAL MEASUREMENT AT THE SITE. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL RISES, DROPS, OFFSETS, ETC. NECESSARY TO AVOID CONFLICT WITH STRUCTURAL MEMBERS, AND SIMILAR ITEMS. WHEN INSTALLING ELECTRICAL CONDUITS. INSTALL EXPOSED CONDUIT AS SHOWN OR NOTED, PARALLEL TO HORIZONTAL AND VERTICAL LINES OF STRUCTURES. MAKE BENDS WITH 90 DEGREE TURN ONLY, OR WITH APPROVED FITTINGS.
16. CONDUIT: FURNISH A COMPLETE RACEWAY SYSTEM FOR BUT NOT LIMITED TO FEEDER, BRANCH CIRCUITS, CONTROL WIRING, AND AUXILIARY SYSTEM WIRING.
   A. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS FOR ALL MOTORIZED CONNECTIONS, WHERE EQUIPMENT IS SUBJECT TO MOVEMENT, OR LOCATED OUTDOOR.
   B. WHERE ENTERING PANELS, PULL BOXES, J-BOXES, OR OUTLET BOXES, SECURED IN PLACE WITH WITH LOCK-NUTS INSIDE AND OUTSIDE, AND INSULATED BUSHING INSIDE.
   C. BENDS AND OFFSETS MADE WITH APPROVED TOOLS ONLY. BENDS OR OFFSETS IN WHICH THE PIPE IS CRUSHED OR DEFORMED SHALL NOT BE INSTALLED.
   D. USE EMT FOR INTERIOR DRY LOCATIONS, PVC FOR UNDERGROUND INSTALLATION, AND RIGID GALVANIZED STEEL FOR EXPOSED LOCATIONS SUBJECT TO DAMAGE.
17. OUTLET AND JUNCTION BOXES: FURNISH AND INSTALL ALL JUNCTION BOXES REQUIRED TO FACILITATE INSTALLATION OF THE VARIOUS CONDUIT SYSTEMS. JUNCTION BOXES SHALL BE SUITABLE FOR ENVIRONMENT AND APPLICATION USED FOR.
18. WIRE AND CABLE: ALL WIRE AND CABLE SHALL:
   A. BE NEW AND OF SOFT DRAWN, ANNEALED, COPPER HAVING A CONDUCTIVITY OF NOT LESS THAN 98% OF THAT OF PURE COPPER. EACH WIRE CONTINUOUS WITHOUT WELD, SPLICE OR JOINT THROUGHOUT ITS LENGTH; UNIFORM IN CROSS SECTION AND FREE FROM FLAWS, SCALES, AND OTHER IMPERFECTIONS.
   B. UNLESS OTHERWISE SPECIFIED OR NOTED, WIRES SHALL BE #12 AWG (FOR PHASE, NEUTRAL, AND GROUND CONDUCTORS) TYPE THW, THWN, THHN, AS MANUFACTURED BY TRIANGLE, GENERAL ELECTRIC, OKONITE, OR ANACONDA.
   C. ALL WIRE #8 AND LARGER SHALL BE STRANDED.
   D. NOT BE DRAWN INTO A CONDUIT UNTIL ALL WORK WHICH MAY CAUSE INJURY TO INSULATION IS COMPLETE. WHERE TWO OR MORE CIRCUITS RUN TO A SINGLE OUTLET BOX, TAG EACH CIRCUIT AS A GUIDE.
   E. HAVE ALL STRANDED CONDUCTORS FURNISHED WITH COPPER CONNECTING LUGS, DRILLED, OR REAMED THE FULL DIAMETER OF THE BARE CONDUCTORS. MAINS AND FEEDERS SHALL BE RUN THEIR ENTIRE LENGTH IN CONTINUOUS PIECES WITHOUT JOINTS OR SPLICES.
19. IDENTIFICATION OF CONDUCTORS AND PANELBOARD ELEMENTS:
   A. EACH AND EVERY MAIN AND FEEDER CONDUCTOR SHALL BE IDENTIFIED AT EACH OUTLET POINT WHERE SUCH CONDUCTOR TERMINATES. FEEDER BUNDLES PASSING THROUGH A JUNCTION OR SUPPORT BOX SHALL ALSO BE IDENTIFIED WITHIN SUCH ENCLOSURE, BUT MAY BE IDENTIFIED IN SUCH LOCATIONS AS A GROUP.
   B. IDENTIFY BY USE OF PERMANENT TYPE BANDS, BRADY, OR T AND B. A DEFINITE NUMBER AND/OR LETTER CODE SHALL BE EMPLOYED AND BE UNIFORM THROUGHOUT EACH CONDUCTOR.
   C. IDENTIFY EACH SWITCH, INCLUDING MAIN DISCONNECT AND MOTOR STARTER WITH WHITE-ON-BLACK NAMEPLATE, EACH HAVING 1/4" HIGH LETTERS. NEATLY AND SECURELY ADHERE NAMEPLATES TO THE UNIT.
20. SWITCHES: FURNISH AND INSTALL ALL FUSIBLE AND NON-FUSIBLE SWITCHES AS REQUIRED BY CODES, WHETHER OR NOT SHOWN AND/OR NOTED. SWITCHES SHALL BE:
   A. HEAVY DUTY WITH NEMA-1 OR 3R ENCLOSURE, AS REQUIRED, AND BE PROVIDED WITH PAD-LOCKING FEATURE.
   B. PROVIDED AT EACH MOTOR THAT IS OUT OF SIGHT OF THE SWITCH OR PANEL FROM WHICH FED; AND BE NON-FUSIBLE DISCONNECT FOR SUCH USE.
   C. SWITCH MANUFACTURER SHALL BE GE, WESTINGHOUSE, OR SQUARE D.
   D. DISCONNECT SWITCHES INSTALLED OUTSIDE THE BUILDING SHALL BE IN NEMA-3 ENCLOSURES.
   E. FUSIBLE SWITCH-STARTER UNITS: EACH UNIT SHALL BE TOTALLY ENCLOSED AND EFFECTIVELY BARRIERED, MANUALLY OPERATED QUICK-MAKE, QUICK BREAK, HORSEPOWER RATED STARTER. PROVIDE CLASS R TYPE REJECTION FUSE CLIPS.
   F. IDENTIFY EACH DEVICE WITH NAMEPLATE SHOWING THE LOAD SERVED, MATCHING THE EXISTING NAMEPLATES.
21. WIRING DEVICES: FURNISH AND INSTALL ALL WIRING DEVICES AS INDICATED ON THE DRAWINGS. DEVICES SHALL IN ALL CASES BE SUITABLE FOR THE USE INTENDED AND SHALL HAVE VOLTAGE AND CURRENT RATINGS ADEQUATE FOR THE LOADS TO BE SERVED.
   A. MOUNTING: HEIGHTS OF ALL DEVICES ARE FROM FINISH FLOOR TO CENTERLINE OF DEVICE. DEVICES SHOWN ON THE DRAWINGS IN GROUPS OF TWO OR MORE SHALL BE LOCATED HORIZONTALLY IN SUCH A MANNER AS TO BE CLOSE AS POSSIBLE FROM THE CENTERLINE OF THE FIRST DEVICE TO THE CENTERLINE OF THE NEXT DEVICE UNLESS OTHERWISE NOTES.
   B. WALL SWITCHES: SHALL BE LEVITON DECORA TYPE, WHITE IN COLOR. USE CORRESPONDING DOUBLE POLE, THREE-WAY, FOUR-WAY, KEYED AND DIMMER SWITCHES WHERE NOTES. MOUNT AT 3'-10" A.F.F. AND WITHIN 6" OF ADJACENT DOOR JAMB, UNLESS OTHERWISE NOTED. USE "KEYED" SWITCHES IN LOCATIONS INDICATED.
   C. CONVENIENCE OUTLETS: SHALL BE GROUNDING TYPE, 20 AMP, 125 VOLT, LEVITON, WHITE COLOR. WEATHERPROOF DUPLEX 5-20 OUTLETS SHALL BE LEVITON 5342 WITH SIERRA NO. WPD-8 PLATE. MOUNT AT 18" A.F.F., UNLESS OTHERWISE NOTED. PROVIDE NEMA 5-20R DEVICES UNLESS OTHERWISE INDICATED. PROVIDE SPECIFICATION GRADE SPEC GRADE HEAVY DUTY STRAIGHT BLADE DEVICES UNLESS OTHERWISE NOTED. PROVIDE HOSPITAL GRADE DEVICES WHERE INDICATED, OR AS REQUIRED BY CODES.
   D. ACCEPTABLE ALTERNATE MANUFACTURERS: SHALL BE LSI, H.E. WILLIAMS, HUBBELL, P&S AND EQUIVALENT, PROVIDED THEIR DEVICES ARE OF THE SAME TYPE AND QUALITY AND THAT ONLY ONE MANUFACTURER SHALL BE USED THROUGHOUT THE WORK.
   E. PLATES: SHALL BE MATCHING TYPE FOR FINISHED AREAS AND GALVANIZED STEEL FOR AREAS WITH EXPOSED CONDUIT. PROVIDE STAINLESS STEEL PLATES FOR FLUSH MOUNTED DEVICES. PROVIDE CAST ALUMINUM WET LOCATION TYPE COVER PLATES WITH HINGED COVERS FOR DEVICES LOCATED OUTSIDE. GANG OUTLETS GROUPED TOGETHER UNDER A SINGLE WALL PLATE.
   F. INCANDESCENT DIMMERS: 120V SLIDE TO OFF, DECORA STYLE SIMILAR TO SWITCHES, WITH WATTAGE AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. POWER FAILURE MEMORY. RFI SUPPRESSION. WHERE SWITCHES ARE SHOWN NEXT TO DIMMERS, PROVIDE MULTI-GANG COVER PLATES. PROVIDE DIMMERS WITH IVORY FINISH, SAME AS SWITCHES UNLESS OTHERWISE DIRECTED.
   G. INSTALL WIRING DEVICES AND ACCESSORIES PLUMB AND LEVEL, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO FULFILL PROJECT REQUIREMENTS.
   H. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE VALUES FOR WIRING DEVICES.
   I. COORDINATE WITH OTHER WORK, INCLUDING PAINTING, ELECTRICAL BOXES AND WIRING INSTALLATIONS, AS NECESSARY TO INTERFACE INSTALLATION OF WIRING DEVICES WITH OTHER WORK.
   J. INSTALL WIRING DEVICES AFTER WIRING WORK IS COMPLETED. INSTALL ONLY IN ELECTRICAL BOXES THAT ARE CLEAN: FREE FROM EXCESS BUILDING MATERIALS, DIRT, AND DEBRIS. INSTALL WALL PLATES AFTER PAINTING WORK IS COMPLETED.
   K. NO RECEPTACLE OR SWITCH OUTLETS SHALL BE MOUNTED BACK TO BACK. A MINIMUM OF ONE (1) STUD MUST BE BETWEEN OUTLETS.
   L. INSTALL RECEPTACLES WITH GROUND PIN UP. INSTALL SWITCHES WITH THE "ON" POSITION UP.
   M. ALL EXTERIOR DEVICES TO BE WEATHER PROOF AND EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE.
   N. ALL 120-VOLT RECEPTACLES OUTLETS LOCATED WITHIN SIX FEET OF SINKS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTION PROTECTION. GROUND FAULT OUTLETS SHALL BE CONNECTED ON DEDICATED NEUTRAL WIRE SERVING ONLY THE INDIVIDUAL OUTLET WITH THE GROUND FAULT PROTECTION.
   O. USE JUMBO SIZE WALL PLATES FOR OUTLETS INSTALLED IN MASONRY WALLS.
   P. DO NOT SHARE NEUTRAL CONDUCTORS ON DIMMERS.
22. PANELBOARD: PANELBOARDS SHALL BE GE TYPE AL, AQ, OR AE OR APPROVED EQUAL. REFER TO CONSTRUCTION DOCUMENTS FOR THE TYPE AND NUMBER OF BRANCH CIRCUIT BREAKERS. ALL PANELBOARD BUSSING SHALL BE COPPER. PANELBOARDS SHALL BE IN OUTDOOR ENCLOSURE WHERE INSTALLED OUTDOOR. MINIMUM INTERRUPTING RATING FOR PANELS SHALL BE AS INDICATED ON DRAWINGS.
23. TRANSFORMERS: DRY TYPE, TWO-WINDING OF THE SIZE AND ELECTRICAL CHARACTERISTICS SHOWN AND SCHEDULED ON DRAWINGS. TRANSFORMERS SHALL BE EQUIPPED WITH 2 2-1/2% TAPS ABOVE AND BELOW RATING. TRANSFORMERS SHALL HAVE A BONDING JUMPER INSTALLED BETWEEN THE SECONDARY NEUTRAL TERMINAL AND METAL CASE, AND SHALL INCLUDE A GROUND TERMINAL OF PROPER SIZE TO RECEIVE GROUND CONDUCTOR. TRANSFORMERS SHALL BE RATED AT FULL LOAD IN A 40°C AMBIENT WITH 30°C ULTIMATE HOT SPOT TEMPERATURE RISE ALLOWANCE, WITH CLASS F INSULATION HAVING A UL 185°C RATING LIMITING SYSTEM TEMPERATURE TO 115°C ON UNITS SMALLER THAN 15 KVA AND CLASS H INSULATION HAVING UL 220°C RATING LIMIT SYSTEM TEMPERATURE TO 150°C ON 15 KVA AND LARGER UNITS. PROVIDE COPPER WINDINGS.
24. FUSES: FUSES IN MAIN, FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS (UNLESS OTHERWISE SPECIFIED), SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSSMAN TYPE FRN-R (250V), AND FRS-R (600V).
25. GROUNDING: ALL CONDUIT WORK, MOTOR, STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.
26. OTHER MATERIALS: FURNISH AND INSTALL ALL OTHER MATERIALS SUCH AS HARDWARE, TAPE, CLAMPS, CONNECTORS, FITTINGS, SUPPORTS, AND ALL OTHER APPURTENANCES REQUIRED TO COMPLETE THE WORK TO THE FULL INTENT OF THE CONTRACT. TERMINAL LUGS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
27. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPERATURE, CO2, AND HUMIDITY SENSOR STUB-UPS FOR THE MECHANICAL HVAC SYSTEM. REFER TO MECHANICAL PRINTS FOR SENSOR QUANTITY AND LOCATIONS.
28. ELECTRICAL CONTRACTOR WILL CONNECT ALL LOW VOLTAGE PLUMBING CONTRACTOR SUPPLIED TRANSFORMERS (FOR AUTOMATIC FLUSH) TO THE NEAREST 120V CIRCUIT (OR IF INDICATED ON PLANS WITH A CIRCUIT NUMBER). CONTRACTOR TO ASSUME ONE TRANSFORMER PER BATHROOM. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR LOW VOLTAGE WIRING TO THE FIXTURES.
29. SWITCHGEAR AND DISTRIBUTION PANELS: SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT, NEC 110.16.
30. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL GTO'S (GENERATOR TRANSFER DEVICES), LIGHTING CONTROL EQUIPMENT, LOW VOLTAGE TRANSFORMERS AND OTHER ELECTRICAL ITEMS WHICH ARE ABOVE CEILINGS. THESE DEVICES SIMILAR TO ELECTRICAL JUNCTION BOXES ARE NOT ALLOWED BY NEC TO BE ABOVE HARD CEILINGS. THE ARCHITECT/OWNER WILL NOT ALLOW THE INSTALLATION OF ACCESS PANELS IN THE CEILINGS. BE AWARE THAT EQUIPMENT IN THOSE AREAS OF HARD CEILINGS WILL HAVE TO BE REMOTELY LOCATED TO THE NEAREST ACOUSTICAL LAY-IN CEILING AREAS.
31. ELECTRICAL MATERIAL AND EQUIPMENT: NO ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE, THE LAWS OF THE STATE OF TEXAS AND ANY APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THE STATE STATUTES. THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL SHALL BE PLACED ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.
32. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONDUIT ROUTING TO ANY MECHANICAL ROOF TOP EQUIPMENT AND ROUTE THE CONDUIT THRU THE EQUIPMENT CURB SO THERE IS NOT A SEPARATE ROOF PENETRATION.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
PANEL-XX	HOME RUN TO INDICATED PANEL AND CIRCUIT NUMBER REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT INFORMATION, INCLUDING: BREAKER RATING, WIRE SIZE/QUANTITY, AND CONDUIT SIZE/TYPE
XX	ROUND LUMINAIRE RECESSED OR SUSPENDED FROM ABOVE OPEN = DOWN-LIGHT, HALF-SHADED = WALL-WASHER XX = TYPE ON LUMINAIRE SCHEDULE
XX	ROUND WALL-MOUNTED LUMINAIRE SUSPENDED FROM SIDE ARM XX = TYPE ON LUMINAIRE SCHEDULE
XX	24"X48" TROFFER LUMINAIRE RECESSED OR SUSPENDED FROM ABOVE XX = TYPE ON LUMINAIRE SCHEDULE
XX	EXTERIOR POLE-MOUNTED AREA LIGHT, NUMBER OF HEADS AND SEPARATION ANGLE AS INDICATED ON PLANS AND LUMINAIRE SCHEDULE XX = TYPE ON LUMINAIRE SCHEDULE
X1 X2	EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, 1 OR 2 FACE. UNIVERSAL MOUNT X1 OR X2 = TYPE ON LUMINAIRE SCHEDULE. ALL WITH NICKEL/CADMIUM 90 MINUTE BATTERY BACKUP WITH INTEGRAL TEST SWITCH AND CHARGE INDICATOR LED
XX	EMERGENCY EGRESS ONLY LUMINAIRE SURFACE MOUNTED FROM BACK XX = TYPE ON LUMINAIRE SCHEDULE
	NEMA 5-20R DUPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WP = WEATHER PROOF, GFI = GFCI PROTECTED, IG = ISOLATED GROUND PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER
	NEMA 5-20R QUADRAPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WP = WEATHER PROOF, GFI = GFCI PROTECTED, IG = ISOLATED GROUND PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER
	NEMA 5-20R GFCI PROTECTED RECEPTACLE WITH INTEGRAL TEST AND RESET SWITCH DUPLEX AND QUADRUPLEX AS INDICATED PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER
L6-30R	SIMPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WITH INDICATED CONFIGURATION (E.G. L6-30R = NEMA TWISTLOCK, 250 VAC, 30 A) PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER
	FLUSH FLOOR BOX WITH WIRING DEVICES AS INDICATED ON PLANS HUBBELL SYSTEM ONE ONLY
J	JUNCTION BOX
XX	LIGHT SWITCH RATED 120/277 VAC, MOUNTED 42" AFF (UON), SINGLE-POLE (UON) 2 = 2-POLE, 3 = 3-WAY, 4 = 4-WAY, D = DIMMER, M = MOTOR-RATED W/ OL, WP = WEATHER PROOF, R = RED COLOR, K = KEYED, VS = INTEGRAL VACANCY SENSOR, OS = INTEGRAL OCCUPANCY SENSOR
OS VS	CEILING OR WALL MOUNTED OCCUPANCY / VACANCY SENSOR LIGHTING CONTROL WITH PASSIVE INFRARED AND ULTRASOUND DUAL TECHNOLOGY, 20 A RATED
TV	TV OUTLET 1-GANG BACKBOX, +66" AFF (UON), SS-302 COVER I"C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR
W	WALL TELEPHONE OUTLET 1-GANG BACKBOX, +42" AFF (UON), SS-302 COVER I"C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR
	COMBINATION DATA/VOICE OUTLET 2-GANG BACKBOX, +18" AFF (UON), SS-302 COVER I"C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR
	MULTIOUTLET ASSEMBLY (PLUG MOLD) AS SPECIFIED ON PLANS WITH DEVICE TYPES AND QUANTITIES INDICATED ON PLANS
EPO	EMERGENCY POWER OFF, MUSHROOM HEAD, MAINTAINED CONTACT PUSH BUTTON
PC	PHOTOELECTRIC SENSOR AIMED NORTH
TC	TIME CLOCK, ASTRONOMIC/MULTI-POLE CONTACTOR
M	POWER COMPANY POWER METER
HA	LIGHTING CLASS PANEL HA = PANEL NAME CHARACTERISTICS AS INDICATED ON ONE LINE DIAGRAM AND PANEL SCHEDULE
DA	DISTRIBUTION CLASS PANEL DA = PANEL NAME CHARACTERISTICS AS INDICATED ON ONE LINE DIAGRAM
	CONDUIT TURNING UP CONDUIT TURNING DOWN
OH	WEATHER HEAD FOR CONNECTING OVER HEAD CONDUCTORS
	20" Cu CHATWORTH GROUNDING BUSBAR 40153-020 TMGB PATTERN, 4" W x 1/4" H, 20"L, INSULATED STANDOFFS, PRE-DRILLED & TAP AS REQUIRED FOR CONDUCTORS
CHA 24 COIL 277 VAC 30 AS 12 P NEMA-1 LC	LIGHTING CONTACTOR CHA = CONTACTOR NAME, COIL = COIL CONTROL VOLTAGE, VAC = VOLTAGE RATING, AS = CURRENT RATINGS, P = POLE COUNT, NEMA-# = ENCLOSURE TYPE
240 VAC 60 AF 60 AT 3 P NEMA-1 CB	CIRCUIT BREAKER, MOLDED-CASE, THERMO-MAGNETIC (UON) VAC = VOLTAGE RATING, AF = FRAME SIZE, AT = TRIP SETTING, P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)
240 VAC 60 AF 60 AF 3 P NEMA-1	DISCONNECT SWITCH VAC = VOLTAGE RATING, AS = SWITCH CURRENT RATING AF = FUSE SIZE/TYPE (E.G. DETD), NF = NON-FUSIBLE P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)
240 VAC 60 AF 40 AT #1 3 P NEMA-1 MCP MCA	COMBINATION CIRCUIT BREAKER, MOTOR CONTROLLER, AND THERMAL OVERLOAD VAC = VOLTAGE RATING, AF = FRAME SIZE, AT = TRIP SETTING, NEMA-# = MOTOR STARTER SIZE/TYPE (E.G. FVNR), HOA = SELECTOR SWITCH TYPE, P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)

SYMBOL	DESCRIPTION
TLA DRY-TYPE 480Δ : 208Y/120 VAC 45 kVA NEMA-2	TRANSFORMER = TLA TRANSFORMER NAME TYPE = TRANSFORMER TYPE (E.G. DRY-TYPE, HARMONIC-MITIGATING...), VAC = WINDING VOLTAGES (PRIMARY : SECONDARY), kVA = CONTINUOUS CAPACITY, TAPS = QUANTITY/DEVIATION OF TAPS, RISE = TEMP RISE, INSUL = INSULATION CLASS, WOUND = WINDING MATERIAL/CONFIGURATION. NEMA- = ENCLOSURE TYPE
VFD	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS, VFCI
HP	MOTOR, SINGLE OR THREE PHASE HP = HORSE POWER
	EQUIPMENT CONNECTION

ABBREVIATION DEFINITIONS

2SIW	TWO-SPEED, ONE-WINDING MOTOR
2S2W	TWO-SPEED, TWO-WINDING MOTOR
(A)	ABANDONED TO REMOVE
A	PHASE "A" IN THREE-PHASE SYSTEM
A	AMPERES
AF	AMPERE FUSE OR FRAME RATING
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
Ag	SILVER
Al	ALUMINUM
AT	AMPERE TRIP SETTING
Au	GOLD
B	PHASE "B" IN THREE-PHASE SYSTEM
BF	BALLAST FACTOR
BFC	BELOW FINISHED CEILING
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	PHASE "C" IN THREE-PHASE SYSTEM
C	CONDUIT
CB	CIRCUIT BREAKER
CH	CONSTANT HORSE POWER (2SIW MOTOR)
CKT	CIRCUIT
CS	COMBINATION STARTER (MOTOR STARTER / DISCONNECT)
CT	CONSTANT TORQUE (2SIW MOTOR)
CT	CURRENT TRANSFORMER
Cu	COPPER
(D)	EXISTING TO BE DEMOLISHED AND REMOVED
DETD	DUAL ELEMENT, TIME DELAY
DS	DISCONNECT SWITCH
(E)	EXISTING TO REMAIN
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METALLIC TUBING
EPM	ELECTRONIC POWER METER
EPR	ETHYLENE PROPYLENE RUBBER
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
Fe	IRON
FRP	FIBERGLASS REINFORCED POLYESTER
FVNR	FULL VOLTAGE NON-REVERSING
G	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HMT	HARMONIC-MITIGAT

FIRST RESPONDER COVERAGE NOTES

1. TYPICAL SYSTEM OPERATION IS CONTINUOUS OR AUTOMATIC.
2. PER IFC SIGNAL STRENGTH INTO AND OUT OF THE BUILDING TO HAVE A DELIVERED AUDIO QUALITY OF 95/95 @ 3.4 DAQ.
3. THE EQUIPMENT MUST BE APPROVED. THE SYSTEM DESIGN AND OPERATION MUST BE SPECIFICALLY DESIGNATED FOR USE AS AN IN-BUILDING EMERGENCY RADIO COMMUNICATION ENHANCEMENT SYSTEM BY THE MANUFACTURER.
4. THE SYSTEM MUST MEET SPECIFIC SURVIVABILITY REQUIREMENTS TO ENSURE IT WILL CONTINUE TO OPERATE DURING A FIRE.
5. THE SYSTEM MUST HAVE REDUNDANT PRIMARY POWER SOURCES AND STAND-BY OR BACKUP POWER TO OPERATE AT 100% CAPACITY FOR AT LEAST 12 HOURS.
6. THE SYSTEM MUST BE MONITORED THROUGH THE BUILDING FIRE ALARM SYSTEM FOR LOSS OF POWER; FAILURE OF THE BATTERY CHARGER; LOW-BATTERY CAPACITY INDICATION WHEN 70% OF THE 12-HOUR OPERATING CAPACITY HAS BEEN DEPLETED; MALFUNCTION OF THE DONOR ANTENNA AND ACTIVE RF-EMITTING DEVICE(S); AND FAILURE OF ANY CRITICAL SYSTEM COMPONENTS AND PROVIDE EITHER AN AUDIBLE WARNING OR TROUBLE SIGNAL.
7. THE SYSTEM PERFORMANCE AND RELIABILITY MUST BE TESTED ON INSTALLATION AND MAINTAINED OPERATIONAL AT ALL TIMES. AN ANNUAL INSPECTION IS ALSO REQUIRED.

GENERAL PANEL SCHEDULE NOTES

PANEL SCHEDULES DEPICT ALL LOADS FOR MULTI-SECTION PANELS:

1. PROVIDE MULTIPLE SECTIONS BETWEEN 42 AND 60 POLES TOTALING POLE QUANTITY INDICATED.
2. PROVIDE REQUIRED FEED-THRU LUGS.
3. PROVIDE INTERMEDIATE FEEDERS MATCHING LINE-SIDE FEEDER FOR FIRST SECTION.
4. ALL OPERABLE HANDLES AND CIRCUIT BREAKERS MUST BE LOCATED WITHIN NEC REQUIRED MOUNTING HEIGHTS AFTER PANEL IS FULLY INSTALLED.
5. ALL PANELBOARDS AND DISTRIBUTION PANELBOARDS SHALL HAVE A STABILITY HINGED FRONT COVER. THE PANEL BOX SHALL HAVE ENOUGH LIP TO HOLD THE WEIGHT OF THE FRONT HINGED COVER. BOLTED FRONT COVER IS NOT ALLOWED.
6. ALL WIRING SHALL BE INSTALLED NEAT, ORDERLY AND TIE-WRAP, LABEL THE PHASES AND NEUTRALS CIRCUITS, TYPE WRITTEN HARD PAPER DIRECTORY.
7. ALL GROUNDING WIRING SHALL BE INSTALLED ON A SINGLE GROUND BAR. NO DOUBLE LUGGING.
8. NEUTRALS SHALL BE INSTALLED ON SEPARATE NEUTRAL BAR AND NO OTHER WIRING INSTALLED. REMOVE THE MANUFACTURED GROUNDING SCREWS TO ISOLATE BOTH THE GROUNDING BAR AND NEUTRAL BAR.
9. EACH PANELBOARD SHALL HAVE A HARD STOCK DIRECTORY CARD. A TYPE WRITTEN DIRECTORY CARD IDENTIFYING THE LOAD SERVED BY EACH BRANCH CIRCUIT IN THE FRAME ON THE PANEL DOOR UNDER A CLEAR PLASTIC COVER. SPARES AND SPACES SHALL BE WRITTEN WITH ERASABLE PENCIL FOR FUTURE USE.
10. LABEL ALL CONDUITS, DEAD FRONT COVER, CONDUCTORS IN THE PANEL (PHASE AND NEUTRAL) WITH THE CIRCUIT NUMBERS OF THE LOAD SERVED.
11. ALL NEUTRAL AND GROUNDING CONDUCTORS MUST BE INSTALLED ON SEPARATE GROUND BARS.
12. ALL BRANCH CIRCUIT CONDUCTORS IN THE PANEL, NEUTRAL CONDUCTORS MUST IDENTIFY OR BE LABELED WITH THE CIRCUIT NUMBER OF THE LOAD SERVED.
13. INSTALL SURFACE-MOUNTED CABINETS AND PANELBOARDS WITH A MINIMUM OF FOUR ANCHORS AND MUST MAINTAIN A 1/4" CLEARANCE FROM THE WALL. USE A UNISTRUT AS MOUNTING STRUCTURE.
14. USE COPPER BUS BARS IN ALL PANELBOARDS.

GENERAL WIRING/LABEL NOTES:

I. PIGTAILING

- A. CIRCUITING TO ALL NON DEDICATED ELECTRICAL RECEPTACLES AND SWITCHES ARE REQUIRED TO UTILIZE PARALLEL CIRCUITING BY THE USE OF "PIG TAILS" TO EACH DEVICE SO THAT IF AN OUTLET IS REMOVED OR FAILS ELECTRICAL CONTINUITY THE CIRCUIT WILL NOT BE COMPROMISED.
- B. ALL ELECTRICAL WIRING MUST BE PROPERLY SPLICED BY TWISTING THE WIRES TOGETHER AND USE OF APPROVED AND LISTED COMPRESSION WIRE NUTS FOR ANY WIRING.
- C. DO NOT USE END TO END BUTT-SPLICING CONNECTORS FOR ANY WIRING.

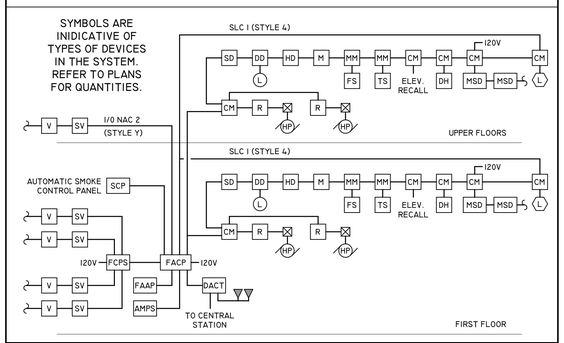
I. CIRCUIT LABELING

- A. ALL RECEPTACLE PLATES, LIGHT SWITCH PLATES AND OUTLET BOXES SHALL BE PERMANENTLY LABELED WITH PANEL AND CIRCUIT NUMBER ON OUTSIDE (OR INSIDE) OF COVER PLATE AND INSIDE OF OUTLET BOX.
- B. RECEPTACLES/SWITCHES: IDENTIFY PANEL BOARD AND CIRCUIT NUMBER FROM WHICH SERVED. USE HOT, STAMPED OR ENGRAVED MACHINE PRINTING WITH BLACK-FILLED LETTERING ON FACE OF PLATE, AND DURABLE WIRE MARKERS OF TAGS INSIDE OUTLET BOXES.
- C. CIRCUIT WIRING AND NEUTRALS INSIDE OF ALL PANELBOARDS ARE REQUIRED TO BE LABELED WITH WIRE TAGS SHOWING CIRUCIT NUMBERS.

FIRE ALARM SYMBOLS LEGEND

XX V P/C	FIRE ALARM VISUAL STROBE, TYP. +80" AFF TO TOP. XX = CANDELA LEVEL. P = PROTECTIVE COVER, C = CEILING MOUNT	FACP	FIRE ALARM CONTROL PANEL
XX AV P/C	FIRE ALARM AUDIO/VISUAL STROBE, TYP. +80" AFF TO TOP. XX = CANDELA LEVEL. P = PROTECTIVE COVER, C = CEILING MOUNT	FAAP	FIRE ALARM ANNUNCIATOR PANEL
XX SV P/C	FIRE ALARM SPEAKER/VISUAL STROBE, TYP. +80" AFF TO TOP. XX = CANDELA LEVEL. P = PROTECTIVE COVER, C = CEILING MOUNT	FCPS	REMOTE FIRE ALARM SYSTEM POWER SUPPLY
M P/PD	FIRE ALARM MANUAL PULLSTATION, TYP. +48" AFF PD = PEDESTAL MOUNT, P = PROTECTIVE COVER	DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
SD	FIRE ALARM SMOKE DETECTOR, PHOTOELECTRIC	MSD	FIRE ALARM SMOKE FIRE DAMPER BY DIV. 15 PROVIDE 120VAC CIRCUIT BY DIV. 16
SD S	FIRE ALARM SINGLE STATION SMOKE DETECTOR 120V WITH BATTERY	CM	FIRE ALARM CONTROL MODULE
HD	FIRE ALARM HEAT DETECTOR	MM	FIRE ALARM MONITOR MODULE
BD	FIRE ALARM BEAM DETECTOR	DH	FIRE ALARM DOOR HOLDER
CO	FIRE ALARM CARBON MONOXIDE DETECTOR	FS	FIRE ALARM SPRINKLER FLOW SWITCH
DD	FIRE ALARM DUCT SMOKE DECECTOR WITH REMOTE LED	TS	FIRE ALARM SPRINKLER VALVE TAMPER SWITCH
R	FIRE ALARM SHUTDOWN RELAY FOR HVAC EQUIPMENT	A	FIRE ALARM SPEAKER

FIRE ALARM TYPICAL SYSTEM DIAGRAM



FIRE ALARM DELEGATED DESIGN NOTE

THE BIDDING CONTRACTOR IS RESPONSIBLE FOR A COMPLETE FIRE ALARM SYSTEM DELEGATED-DESIGN. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL DEVICES REQUIRED TO MEET ALL APPLICABLE CODES, PROJECT SPECIFICATIONS REQUIREMENTS, AND THE AHJ REQUIREMENTS. THE CONTRACTOR IS REQUIRED TO COMPLY WITH PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA, INCLUDING SIGNED AND SEALED CALCULATIONS BY A QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR SHOP DRAWING PREPARATION. THE CONTRACTOR SHALL PRODUCE SHOP DRAWINGS, REQUIRED BATTERY POWER CALCULATIONS, INTERCONNECTION WIRING DIAGRAMS, POWER SUPPLY DESIGN AND REQUIREMENTS, ETC. THESE DOCUMENTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND/OR APPROVAL BY THE AHJ AND A/E TEAM AS REQUIRED. ALLOW FOR 10% ADDITIONAL DEVICES WITH ASSOCIATED CABLING RESULTING FROM DELEGATED DESIGN.

FIRE ALARM SEQUENCE OF OPERATION

A. DETECTION & ALARM

WHEN A FIRE ALARM CONDITION IS DETECTED BY ANY ALARM INITIATING DEVICE (SMOKE DETECTOR, DUCT DETECTOR, PULL STATION, OR SPRINKLER FLOW SWITCH), THE FOLLOWING FUNCTIONS WILL OCCUR:

1. THE FIRE ALARM CONTROL PANEL COMMON ALARM INDICATOR WILL FLASH AND THE AUDIBLE DEVICE WILL SOUND. ACKNOWLEDGING THE ALARM CONDITION WILL SILENCE THE AUDIBLE DEVICE AND CAUSE THE COMMON ALARM INDICATOR TO ILLUMINATE STEADILY.
2. THE DISPLAY WILL INDICATE ALL APPLICABLE INFORMATION ASSOCIATED WITH THE ALARM CONDITION INCLUDING ZONE, DEVICE TYPE, DEVICE LOCATION, AND TIME OF ALARM. LOCATION AND ZONING MESSAGES WILL BE CUSTOM FIELD-PROGRAMMED TO MATCH THE RESPECTIVE PREMISES. LOCAL ANNUNCIATOR LED'S ASSOCIATED WITH THE ALARM POINT WILL FLASH UNTIL PANEL IS SILENCED.
3. DISPLAY SYSTEM STATUS CHANGES ON ANY REMOTE ANNUNCIATOR(S) VIA AN ALPHANUMERIC MESSAGE ON THE DISPLAY.
4. ACTIVATE AN ALARM CONTACT CLOSURE TO ACTIVATE A DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) FOR SIGNALING TO A UL-APPROVED CENTRAL MONITORING STATION VIA TELEPHONE LINES FURNISHED BY OWNER.
5. ACTIVATE ALL AUDIO/VISUAL SIGNALS THROUGHOUT THE ENTIRE FACILITY.
6. ACTIVATE ALL VISUAL SIGNALS. VISUAL SIGNALS WILL BE HIGH INTENSITY STROBES (75 cd MINIMUM) TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) & TEXAS ACCESSIBILITY STANDARDS (TAS). ACTIVATE THROUGHOUT THE ENTIRE FACILITY. STROBES SHALL SHALL BE XENON TYPE AND WHITE OR CLEAR IN COLOR. THE MAX PULSE DURATION WILL BE 0.2 SECONDS WITH A MAXIMUM DUTY CYCLE OF 40%. THE FLASH RATE WILL BETWEEN 1-Hz AND 3-Hz.
7. DEACTIVATE ALL FANS RATED OVER 2,000 CFM.
8. ALARM VERIFICATION WILL BE FIELD-PROGRAMMABLE FOR EACH SMOKE DETECTOR. THE VERIFICATION SEQUENCE IS ACTIVATED AFTER A "CHECK" PROCEDURE AND THE PANEL WILL WAIT FOR A TIME THEN RESAMPLE THE DETECTOR FOR CONTINUED PRESENCE OF SMOKE. IF THE ALARM CONDITION CONTINUES OR A NON-VERIFIED DEVICE IS ACTUATED DURING THIS VERIFICATION PERIOD, THE PANEL WILL INITIATE ALL ALARM SEQUENCES. THIS ENTIRE SEQUENCE WILL OCCUR WITHIN 60 SEC. THE SYSTEM WILL LOG INTO MEMORY THE NUMBER OF VERIFICATION EVENTS.
9. CLOSE ALL SMOKE FIRE DAMPERS ASSOCIATED WITH THE HVAC UNIT(S).
10. ALL NON-SILENCEABLE AUXILIARY CONTROL FUNCTIONS (FANS, CENTRAL STATION INTERFACE, ELEVATOR RECALL INTERFACE, ETC) WILL REMAIN IN OPERATION, EVEN WHEN A/V DEVICES ARE SILENCED, UNTIL THE PANEL IS CLEARED AND RESET.
11. IF GAS WATER HEATERS OR BOILERS (DOMESTIC OR HYDRONIC) ARE PROVIDED FOR THE PROJECT PROVIDE A MANUAL RESET CARBON MONOXIDE (CO) DETECTOR ADJACENT TO THE WATER HEATER(S). INTERLOCK THE CO DETECTOR TO DISABLE THE WATER HEATER BURNERS UPON DETECTION OF 100 PPM OR HIGHER CO CONCENTRATION AND UPON LOSS OF POWER TO THE CO DETECTOR. SUBMIT PRODUCT DATA FOR CO DETECTOR AND CERTIFICATE OF CALIBRATION.

B. SYSTEM TROUBLE DETECTION

WHEN A TROUBLE CONDITION IS DETECTED BY THE FIRE ALARM CONTROL PANEL, THE FOLLOWING FUNCTIONS SHALL OCCUR:

1. THE FIRE ALARM CONTROL PANEL TROUBLE INDICATOR WILL FLASH AND THE INTERNAL AUDIBLE DEVICE WILL SOUND. ACKNOWLEDGMENT OF THE AUDIBLE DEVICE WILL SILENCE THE AUDIBLE DEVICE AND CAUSE ALL TROUBLE INDICATORS TO ILLUMINATE STEADY.
2. THE DISPLAY WILL DISPLAY ALL APPLICABLE INFORMATION ASSOCIATED WITH THE RESPECTIVE TROUBLE CONDITIONS. LOCAL ANNUNCIATOR LEDS ASSOCIATED WITH THE ALARM POINT WILL ILLUMINATE.
3. ACTIVATE A TROUBLE CONTACT CLOSURE TO ACTIVATE A DACT FOR SIGNALING TO A UL-APPROVED CENTRAL MONITORING STATION VIA PHONE LINES FURNISHED BY OWNER.
4. DISPLAY THE SYSTEM STATUS CHANGES ON THE REMOTE ANNUNCIATOR(S) VIA AN ALPHANUMERIC MESSAGE ON THAT DISPLAY.

C. SYSTEM SUPERVISORY ALARM DETECTION

WHEN A SUPERVISORY ALARM CONDITION IS DETECTED DUE TO A FIRE SPRINKLER VALVE BEING PLACED IN AN "OFF-NORMAL" POSITION, THE FOLLOWING FUNCTIONS WILL OCCUR:

1. THE FIRE ALARM CONTROL PANEL SUPERVISORY INDICATOR WILL FLASH AND THE INTERNAL AUDIBLE DEVICE WILL SOUND. ACKNOWLEDGMENT OF THE SUPERVISORY CONDITION WILL SILENCE THE AUDIBLE DEVICE.
2. THE DISPLAY WILL DISPLAY ALL APPLICABLE INFORMATION ASSOCIATED WITH THE RESPECTIVE SUPERVISORY CONDITION. LOCAL ANNUNCIATOR LED'S WILL ILLUMINATE FOR THE ALARM POINT.
3. DISPLAY THE SYSTEM STATUS CHANGE ON THE REMOTE ANNUNCIATOR(S) VIA AN ALPHANUMERIC MESSAGE ON THAT DISPLAY.
4. ACTIVATE A SUPERVISORY ALARM CONTACT CLOSURE TO ACTIVATE THE DACT FOR SIGNALING TO A UL-APPROVED CENTRAL MONITORING STATION VIA PHONE LINES FURNISHED BY OWNER.

D. FIRE ALARM PANEL

FIRE ALARM PANEL SHALL BE INTELLIGENT DIGITAL PROTOCOL ANALOG ADDRESSABLE FIRE ALARM SYSTEM. THIS SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO SYSTEM CABINET, POWER SUPPLY, BUILT SIGNALING LINE CIRCUIT (SLC), 80 CHARACTER LCD ANNUNCIATOR, SIX PROGRAMMABLE "FLEXPUT" CIRCUITS, BUILT IN DUAL LINE DIGITAL COMMUNICATOR ASSOCIATED PERIPHERAL DEVICES, BATTERIES, WIRING, CONDUIT AND OTHER RELEVANT COMPONENTS AND ACCESSORIES REQUIRED TO FURNISH A COMPLETE AND OPERATIONAL LIFE SAFETY SYSTEM. THE SYSTEM SHALL BE TESTED AFTER COMPLETION OF INSTALLATION IN ACCORDANCE WITH MANUFACTURE RECOMMENCED TESTING PROCEDURE AND GOVERNING LIFE SAFETY CODES. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL NUMBER	DESCRIPTION	MOUNTING	LAMP	WATTAGE	VOLTAGE	DIMMABLE	CONTROLS	NOTES
A	GOTHAM LIGHTING	IV04-D-15LM-35K-80CRI-MINI0-MVOLT-WL-P-AR-FINISH	4" DOWNLIGHT	RECESSED	LED	15 W	UNV	0-10V DIMMING		
AE	GOTHAM LIGHTING	IV04-D-15LM-35K-80CRI-MINI0-MVOLT-E10W-WL-P-AR-FINISH	4" DOWNLIGHT W/90-MINUTE BATTERY BACKUP	RECESSED	LED	15 W	UNV	0-10V DIMMING		
B	MASIERO	AQABA-G03-8/62/50	62CM CHANDELIER	SUSPENDED	LED	64 W	UNV	0-10V DIMMING		
C	MASIERO	AQABA-G03-15/88/62	88CM CHANDELIER	SUSPENDED	LED	127 W	UNV	0-10V DIMMING		
D	MASIERO	AQABA-G03-65/170/250	170 CM CHANDELIER	SUSPENDED	LED	526 W	UNV	0-10V DIMMING		
F	MASIERO	MSR624026	LED WALL SCONCE	WALL	LED	40 W	120 VAC	0-10V DIMMING		
F4	LITHONIA	FEM-L48-6000LM-LPACL-WD-MVOLT-GZ10-35K-80CRI-ANGBKT	4' BACK OF HOUSE STRIP	WALL	LED	38 W	UNV	0-10V DIMMING		
G	LITHONIA	WDGEILED-P2-40K-80CRI-VW-MVOLT-SRM-FINISH	LED WALL PACK	WALL	LED	15 W	UNV	NONE		
L	LITHONIA	CPX-2X4-4000LM-80-35K-SWL-MVOLT-MINI0-ZT	2'X4' BACK OF HOUSE	RECESSED	LED	37 W	UNV	0-10V DIMMING		
LE	LITHONIA	CPX-2X4-4000LM-80-35K-SWL-MVOLT-MINI0-ZT-E10WLCP	2'X4' BACK OF HOUSE W/ 90-MINUTE BATTERY BACKUP	RECESSED	LED	37 W	UNV	0-10V DIMMING		
M	LITHONIA	STAK-2X4-4000LM-80CRI-35K-COL-MVOLT-MINI0-ZT	2'X4' FLAT PANEL	RECESSED	LED	34 W	UNV	0-10V DIMMING		
ME	LITHONIA	STAK-2X4-4000LM-80CRI-35K-COL-MVOLT-MINI0-ZT-E10W	2'X4' FLAT PANEL W/ 90-MINUTE BATTERY BACKUP	RECESSED	LED	34 W	UNV	0-10V DIMMING		
N	LITHONIA	CLX-L48-3000LM-SEF-FDL-MVOLT-40K-80CRI-GZ10-277V-E10W-FINISH	4' LED STRIP W/90-MINUTE BATTERY BACKUP	SURFACE	LED	19 W	UNV	0-10V DIMMING		
Q2	MASIERO	AQABA-G03-15/88/62	88CM DIAMETER CHANDELIER	SUSPENDED	LED	127 W	120 VAC	0-10V DIMMING		
W	LITHONIA	WPX0-LED-AL0-SWW2-MVOLT-FINISH	LED WALL PACK	WALL	LED	13 W	UNV	NONE		
X	BARRON	S900U	LED EDGE LIT EXIT SIGN	WALL/CEILING						

LIGHTING NOTES:

1. PROVIDE EMERGENCY LIGHT FIXTURES WITH INTEGRAL BATTERY BACKUP, TEST SWITCH, AND GREEN-LED CHARGING INDICATOR FOR EMERGENCY EGRESS OPERATION. EMERGENCY EGRESS OPERATION IN LIGHT FIXTURES SHALL PROVIDE MINIMUM 1400 LUMENS FOR MINIMUM 90 MINUTES AND SHALL HAVE INTEGRAL TESTING AND CHARGING CIRCUIT, TEST SWITCH, AND INDICATOR LIGHT. REMOTE INDICATORS AND SWITCHES ARE NOT ACCEPTABLE.
2. PROVIDE LIGHT FIXTURES IN STAIRWELLS WITH INTEGRAL BATTERY BACKUP, TEST SWITCH, AND GREEN-LED CHARGING INDICATOR FOR EMERGENCY EGRESS OPERATION. THIS IS IN ADDITION TO THEM BEING CIRCUITED TO EMERGENCY LIGHTING PANEL IN AREA.
3. ALL LIGHT FIXTURES APPENDED WITH NL (NIGHT LIGHT) SHALL BE NON-SWITCHED AND CONNECTED TO EMERGENCY LIGHTING PANEL CIRCUIT IN AREA.
4. ALL LIGHT FIXTURES APPENDED WITH E (EMERGENCY) SHALL INCLUDE EMERGENCY BATTERY BACK-UP FIXTURE OPTION. IF FIXTURE DOES NOT HAVE BATTERY BACK-UP OPTION, PROVIDE LOCAL INDIVIDUAL INVERTER FOR THAT PARTICULAR FIXTURE.
5. PROVIDE ADDITIONAL NON-SWITCHED NORMAL POWER HOT CIRCUIT LEG TO FIXTURE FOR BATTERY CHARGING AND POWER-LOSS DETECTION FOR ALL EMERGENCY EGRESS OR EXIT SIGN FIXTURES AS PART OF BASE BID. WHERE A SPECIFIC NORMAL CIRCUIT IS NOT INDICATED, PROVIDE AN EXTENSION FROM THE NEAREST SAME-VOLTAGE AND TRIP-RATING NORMAL CIRCUIT IN THE AREA.
6. ALL OUTDOOR LIGHTING FIXTURES REQUIRE CORROSION-RESISTANT OPTION.
7. COORDINATE MOUNTING HEIGHT OF ALL FIXTURES WITH ARCHITECTURAL PLANS.
8. COORDINATE FINISH OF ALL FIXTURE WITH ARCHITECT PRIOR TO ORDERING.
9. COORDINATE WITH ARCHITECTURAL PLANS FOR GRID AND GYPSUM BOARD FLANGE AREAS PRIOR TO BIDDING OF LIGHT FIXTURES. PROVIDE CORRECT QUANTITY OF EACH VARIATION.
10. ALLOW FOR (5) ADDITIONAL EXIT SIGNS (TYPE 'X') FOR FIRE MARSHALL INSPECTION.

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PROFESSIONAL SEAL

STATE OF TEXAS
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97498
LICENSED
PROFESSIONAL ENGINEER

04-17-2026

ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

NOTES AND LEGEND

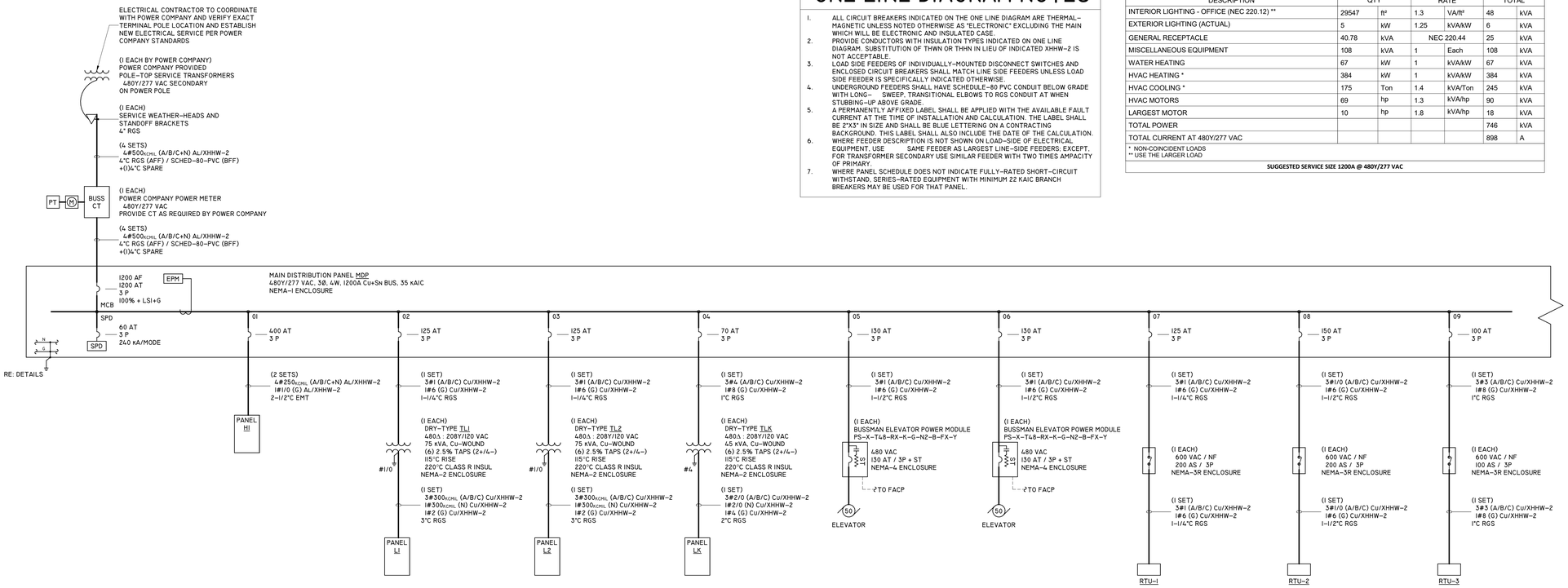
SCALE 12" = 1'-0"

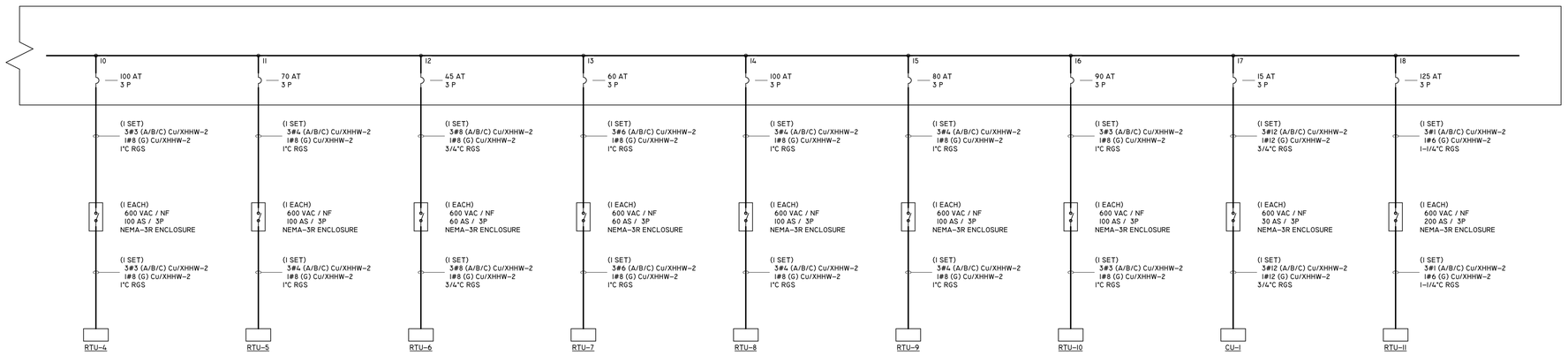
DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

E1.01





ONE LINE DIAGRAM NOTES

1. ALL CIRCUIT BREAKERS INDICATED ON THE ONE LINE DIAGRAM ARE THERMAL-MAGNETIC UNLESS NOTED OTHERWISE AS "ELECTRONIC" EXCLUDING THE MAIN WHICH WILL BE ELECTRONIC AND INSULATED CASE.
2. PROVIDE CONDUCTORS WITH INSULATION TYPES INDICATED ON ONE LINE DIAGRAM. SUBSTITUTION OF THWN OR THHN IN LIEU OF INDICATED XHHW-2 IS NOT ACCEPTABLE.
3. LOAD SIDE FEEDERS OF INDIVIDUALLY-MOUNTED DISCONNECT SWITCHES AND ENCLOSED CIRCUIT BREAKERS SHALL MATCH LINE SIDE FEEDERS UNLESS LOAD SIDE FEEDER IS SPECIFICALLY INDICATED OTHERWISE.
4. UNDERGROUND FEEDERS SHALL HAVE SCHEDULE-80 PVC CONDUIT BELOW GRADE WITH LONG- SWEEP. TRANSITIONAL ELBOWS TO RGS CONDUIT AT WHEN STUBBING-UP ABOVE GRADE.
5. A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF INSTALLATION AND CALCULATION. THE LABEL SHALL BE 2"X3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRACTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF THE CALCULATION.
6. WHERE FEEDER DESCRIPTION IS NOT SHOWN ON LOAD-SIDE OF ELECTRICAL EQUIPMENT, USE SAME FEEDER AS LARGEST LINE-SIDE FEEDERS; EXCEPT, FOR TRANSFORMER SECONDARY USE SIMILAR FEEDER WITH TWO TIMES AMPACITY OF PRIMARY.
7. WHERE PANEL SCHEDULE DOES NOT INDICATE FULLY-RATED SHORT-CIRCUIT WITHSTAND, SERIES-RATED EQUIPMENT WITH MINIMUM 22 KAIC BRANCH BREAKERS MAY BE USED FOR THAT PANEL.

ELECTRICAL LOAD ANALYSIS - AUSTIN MASJID

DESCRIPTION	QTY		RATE		TOTAL	
INTERIOR LIGHTING - OFFICE (NEC 220.12) **	29547	ft²	1.3	VA/ft²	48	kVA
EXTERIOR LIGHTING (ACTUAL)	5	kW	1.25	kVA/kW	6	kVA
GENERAL RECEPTACLE	40.78	kVA	NEC 220.44		25	kVA
MISCELLANEOUS EQUIPMENT	108	kVA	1	Each	108	kVA
WATER HEATING	67	kW	1	kVA/kW	67	kVA
HVAC HEATING *	384	kW	1	kVA/kW	384	kVA
HVAC COOLING *	175	Ton	1.4	kVA/Ton	245	kVA
HVAC MOTORS	69	hp	1.3	kVA/hp	90	kVA
LARGEST MOTOR	10	hp	1.8	kVA/hp	18	kVA
TOTAL POWER					746	kVA
TOTAL CURRENT AT 480Y/277 VAC					898	A

* NON-COINCIDENT LOADS
** USE THE LARGER LOAD

SUGGESTED SERVICE SIZE 1200A @ 480Y/277 VAC

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SHEET TITLE

ONE LINE DIAGRAM

SCALE 12" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

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E1.02

PANEL: L2

MTG: [ ] FLUSH [X] SURFACE [ ] STRUT | BUS: [X] 100% NEUTRAL [ ] SYS GND [ ] ISO GND | OPT: [ ] INT SPD [X] FTL [ ] FUSIBLE | ENCL: NEMA TYPE 1 STEEL | MAIN: 225 A CU/SN 225 A MCB | BUS 3 ø 4 WIRE, 22 KAIC, 208Y/120 VOLT

LOCATION: ELEC ROOM
FED FROM: TL2

IA CK...	IA CKT Feeder	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE	P	CKT NO	A		B		C		CKT NO	P	TRIP RATE	LOAD TYPE	LOAD DESCRIPTION	IA CKT Feeder	IA CK...
3/4"	1-#12, 1-#12, 1-#12	REFRIGERATOR - BREAK RM A242	Q	20	1	1	1.0	0.2					2	1	20	R	RECEPTACLE - BREAK RM A242	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - BREAK RM A242	R	20	1	3			0.2	1.5			4	1	20	R	MICROWAVE - BREAK RM A242	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - RM A240,A241	R	20	1	5					0.5	0.4	6	1	20	R	RECEPTACLE - CLASS A238	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE CLASS A238	R	20	1	7	0.5	0.4					8	1	20	R	RECEPTACLE - CLASS A235	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A235	R	20	1	9			0.5	0.4			10	1	20	R	RECEPTACLE - CLASS A234	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A234	R	20	1	11					0.5	0.4	12	1	20	R	RECEPTACLE - CLASS A233	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A233	R	20	1	13	0.5	0.7					14	1	20	R	RECEPTACLE - RM A230,A237	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A236	R	20	1	15			0.4	0.5			16	1	20	R	RECEPTACLE - CLASS A236	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A226	R	20	1	17					0.5	0.4	18	1	20	R	RECEPTACLE - CLASS A226	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - SOUTH HALL A227	R	20	1	19	0.7	0.4					20	1	20	R	RECEPTACLE - CLASS A229	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A229	R	20	1	21			0.5	0.4			22	1	20	R	RECEPTACLE - CLASS A228	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A228	R	20	1	23					0.5	0.4	24	1	20	R	RECEPTACLE - CLASS A225	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A225	R	20	1	25	0.5	0.4					26	1	20	R	RECEPTACLE - CLASS A224	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A224	R	20	1	27			0.5	0.4			28	1	20	R	RECEPTACLE - CLASS A223	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A223	R	20	1	29					0.4	0.4	30	1	20	R	RECEPTACLE - CLASS A222	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CLASS A222	R	20	1	31	0.5	0.5					32	1	20	R	RECEPTACLE - STAFF A218	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - STAFF A218	R...	20	1	33			0.6	0.5			34	1	20	R	RECEPTACLE - STAFF A218	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - AV A219	R	20	1	35					0.4	0.5	36	1	20	R	RECEPTACLE - OFFICE A217	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - RECEPTION A216	R	20	1	37	1.1	0.7					38	1	20	R	RECEPTACLE - MADRASAH LOBBY A213	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - ELECTRICAL A212	R	20	1	39			0.5	0.5			40	1	20	R	RECEPTACLE - LIBRARY A210	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - LIBRARY A210	R	20	1	41					0.4	0.7	42	1	20	R	RECEPTACLE - WOMEN RR A209	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - SEHEN A201	R	20	1	43	0.4	0.5					44	1	20	R	RECEPTACLE - CONFERENCE A200	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - CONFERENCE A200	R	20	1	45					0.5	0.4	46	1	20	R	RECEPTACLE - SEHEN A201	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - NURSERY A207	R	20	1	47					0.4	0.2	48	1	20	R	RECEPTACLE - ADA RR A206	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - MASJID A202	R	20	1	49	0.5	0.7					50	1	20	R	RECEPTACLE - MASJID A202	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - MASJID A202	R	20	1	51			0.5	0.5			52	1	20	M	EF-6 VIA MOTOR RATED SWITCH	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	EF-7 - ROOF	M	20	1	53					0.5	0.7	54	2	15	C; H	CU-2 VIA 30AS/NF/2P/NEMA-3R DS	2-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - ROOF	R	20	1	55	0.9	0.7					56						
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - EXTERIOR	R	20	1	57			0.7	0.9			58	1	20	M	HWCP-3 VIA MOTOR RATED SWITCH	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	EF-5 - ADA RR A206	M	20	1	59					0.5	0.5	60	1	20	M	EF-9 VIA MOTOR RATED SWITCH	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - ASSEMBLY A214	R	20	1	61	0.9	0.7					62	1	20	R	RECEPTACLE - ASSEMBLY A214	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - TLT A230C, E, A231C, E	R	20	1	63			0.7	0.7			64	1	20	R	RECEPTACLE - SEHEN A201	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	FOOT DRYER - WOMEN RR A209	Q	20	1	65					1.7	0.4	66	1	20	L	CHANDELIER - MENS MASJID A202	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	CHANDELIER - MENS MASJID A202	L	20	1	67	0.4	0.4					68	1	20	L	CHANDELIER - MENS MASJID A202	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	CHANDELIER - MENS MASJID A202	L	20	1	69			0.5	0.5			70	1	20	L	CHANDELIER - MENS MASJID A202	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	CHANDELIER - SEHEN A201	L	20	1	71					0.6	0.1	72	1	20	L	CHANDELIER - CONFERENCE A200	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	CHANDELIER - LIBRARY A210	L	20	1	73	0.1	0.1					74	1	20	L	CHANDELIER - STAIR 2	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	RECEPTACLE - ASSEMBLY A214	R	20	1	75			0.5	0.5			76	1	20	R	RECEPTACLE - MAWAID A112	1-#12, 1-#12, 1-#12	3/4"
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	77					0.0	0.0	78	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	79	0.0	0.0					80	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	81			0.0	0.0			82	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	83					0.0	0.0	84	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	85	0.0	0.0					86	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	87			0.0	0.0			88	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	89					0.0	0.0	90	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	91	0.0	0.0					92	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	93			0.0	0.0			94	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	95					0.0	0.0	96	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	97	0.0	0.0					98	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	99			0.0	0.0			100	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	101					0.0	0.0	102	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	103	0.0	0.0					104	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	105			0.0	0.0			106	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	107					0.0	0.0	108	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	109	0.0	0.0					110	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	111			0.0	0.0			112	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	113					0.0	0.0	114	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	115	0.0	0.0					116	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	117			0.0	0.0			118	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPARE	--	20	1	119					0.0	0.0	120	1	20	--	SPARE	1-#12, 1-#12, 1-#12	--
						Total Load:	15 kVA		15 kVA		12 kVA								
						Total Amps:	125 A		125 A		99 A								

LOAD ANALYSIS

LOAD TYPE		CONNECTED	FACTOR	DEMAND	TOTALS	
LIGHTING	L	3193 VA	125.00%	3991 VA		
RECEPTACLE	R	30440 VA	66.43%	20220 VA	**CONNECTED LOAD (kVA)**	41 kVA
EQUIPMENT	Q	2725 VA	100.00%	2725 VA	**DEMAND LOAD (kVA)**	32 kVA
COOLING	C	1400 VA	100.00%	1400 VA	**CONNECTED CURRENT (A)**	114 A
HEATING	H	0 VA	0.00%	0 VA	**DEMAND CURRENT (A)**	88 A
MOTOR	M	2000 VA	100.00%	2000 VA		
LARGEST MOTOR	G	0 VA	0.00%	0 VA		
KITCHEN	K	0 VA	0.00%	0 VA		
EXISTING	X	0 VA	0.00%	0 VA		

NOTES:
ALL WIRING FOR 20A/1P CKT. SHALL CONSIST OF 2#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED.
* PROVIDE A BREAKER WITH GFCI ** ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

PANEL: LK

MTG: [X] FLUSH [ ] SURFACE [ ] STRUT | BUS: [X] 100% NEUTRAL [ ] SYS GND [ ] ISO GND | OPT: [ ] INT SPD [ ] FTL [ ] FUSIBLE | ENCL: NEMA TYPE 1 STEEL | MAIN: 150 A CU/SN 150 A MCB | BUS 3 ø 4 WIRE, 22 KAIC, 208Y/120 VOLT

LOCATION: ELEC ROOM
FED FROM: TLK

WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE	P	CKT NO	A (kVA)		B (kVA)		C (kVA)		CKT NO	P	TRIP RATE	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C	GAS SOLENOID - KITCHEN A137	R	20	1	1	0.2	1.5					2	1	20	R	MICROWAVE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	3			0.2	0.2			4	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	5					0.2	0.2	6	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	7	0.2	0.2					8	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	9			0.2	0.2			10	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	11					0.2	0.2	12	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	13	0.2	0.2					14	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	15			0.2	1.0			16	1	20	Q	REFRIGERATOR - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - KITCHEN A137	R	20	1	17					0.2	0.2	18	1	20	R	RECEPTACLE - KITCHEN A137	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	DOOR HEATER/LIGHTS - COOLER A140	L; Q; R	20	1	19	0.0	0.0					20	1	20	Q; R	DOOR HEATER/LIGHTS - FREEZER A141	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - STORAGE A139	R	20	1	21			0.2	0.9			22	1	20	M	HWCP-1 VIA MOTOR RATED SWITCH	1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLE - WASHER A138	R	20	1	23					0.2	0.0	24	1	20	--	SPARE	--
--	SPARE	--	20	1	25	0.0	0.0					26	1	20	--	SPARE	--
--	SPARE	--	20	1	27			0.0	0.0			28	1	20	--	SPARE	--
--	SPARE	--	20	1	29					0.0	0.0	30	1	20	--	SPARE	--
--	SPARE	--	20	1	31	0.0	0.0					32	1	20	--	SPARE	--
--	SPARE	--	20	1	33			0.0	0.0			34	1	20	--	SPARE	--
--	SPACE	--	--	1	35					--	--	36	1	--	--	SPACE	--
--	SPACE	--	--	1	37	--	--					38	1	--	--	SPACE	--
--	SPACE	--	--	1	39			--	--			40	1	--	--	SPACE	--
--	SPACE	--	--	1	41					--	--	42	1	--	--	SPACE	--
					Total Load:	2 kVA		3 kVA		1 kVA							
					Total Amps:	21 A		26 A		11 A							

LOAD ANALYSIS

LOAD TYPE		CONNECTED	FACTOR	DEMAND	TOTALS	
LIGHTING	L	0 VA	0.00%	0 VA		
RECEPTACLE	R	4740 VA	100.00%	4740 VA	**CONNECTED LOAD (kVA)**	7 kVA
EQUIPMENT	Q	1000 VA	100.00%	1000 VA	**DEMAND LOAD (kVA)**	7 kVA
COOLING	C	0 VA	0.00%	0 VA	**CONNECTED CURRENT (A)**	18 A
HEATING	H	0 VA	0.00%	0 VA	**DEMAND CURRENT (A)**	19 A
MOTOR	M	0 VA	0.00%	0 VA		
LARGEST MOTOR	G	0 VA	0.00%	0 VA		
KITCHEN	K	0 VA	0.00%	0 VA		
EXISTING	X	0 VA	0.00%	0 VA		

NOTES:
ALL WIRING FOR 20A/1P CKT. SHALL CONSIST OF 2#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED.
* PROVIDE A BREAKER WITH GFCI ** ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

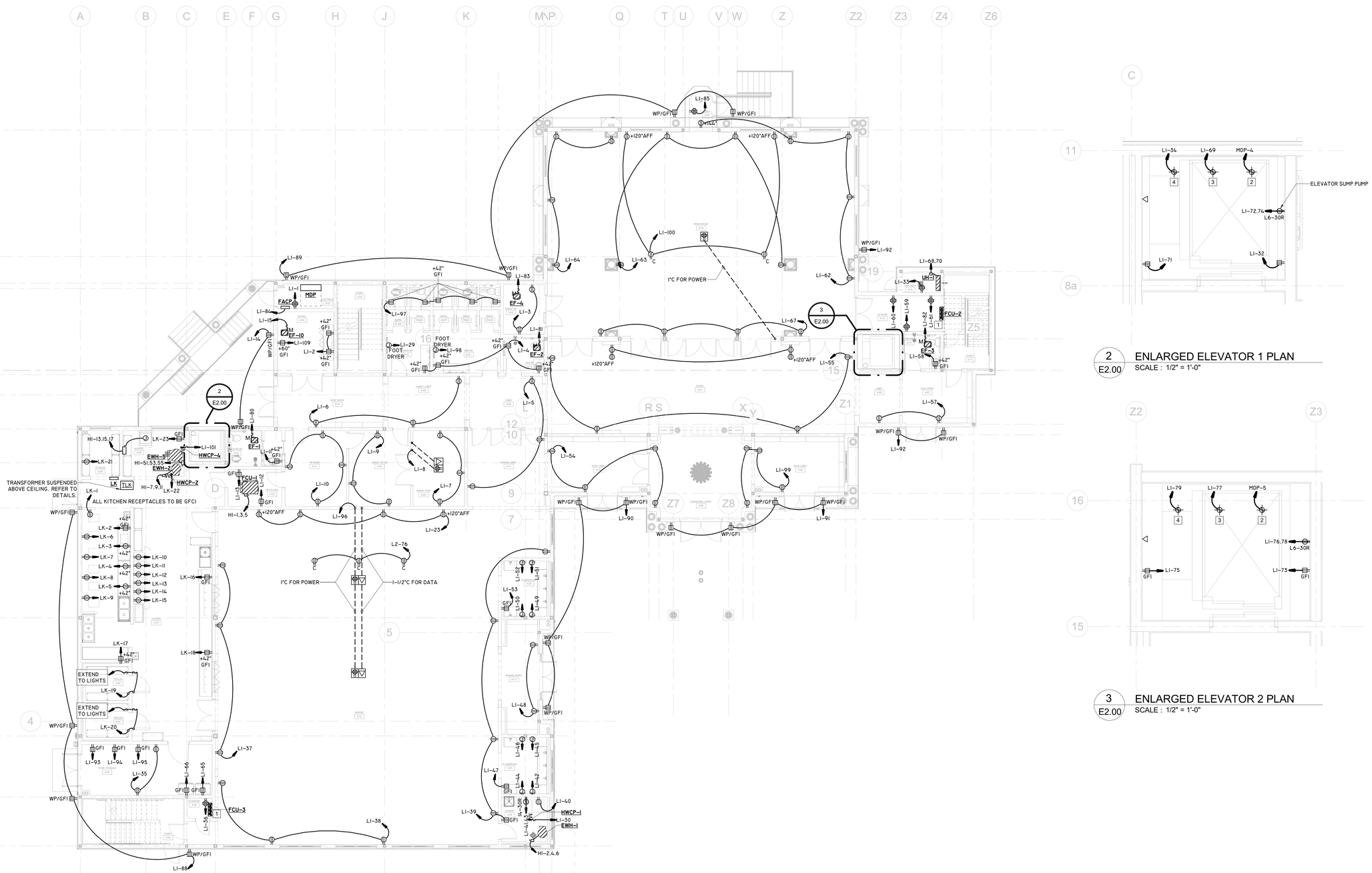
PANEL: H1

MTG: [ ] FLUSH [X] SURFACE [ ] STRUT | BUS: [X] 100% NEUTRAL [ ] SYS GND [ ] ISO GND | OPT: [X] INT SPD [X] FTL [ ] FUSIBLE | ENCL: NEMA TYPE 1 STEEL | MAIN: 400 A CU/SN 400 A MCB | BUS 3 ø 4 WIRE, 22 KAIC, 480Y/277 VOLT

LOCATION: ELEC ROOM
FED FROM: MDP

IA CK...	IA CKT Feeder	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE	P	CKT NO	A (kVA)		B (kVA)		C (kVA)		CKT NO	P	TRIP RATE	LOAD TYPE	LOAD DESCRIPTION	IA CKT Feeder	IA CK...
						1	2.3	3.0					2						
3/4"	3-#12, 1-#12	FCU-1 VIA 30AS/NF/3P/NEMA-1 DS	M; H; Q	15	3	3			2.3	3.0			4	3	20	Q	EWH-1 VIA 30AS/NF/3P/NEMA-1 DS	3-#12, 1-#12	3/4"
						5					2.3	3.0	6						
3/4"	3-#8, 1-#10	EWH-2 VIA 30AS/NF/3P/NEMA-1 DS	Q	40	3	7	8.0	6.0					8						
						9			8.0	6.0			10	3	30	Q	EWH-3 VIA 30AS/NF/3P/NEMA-1 DS	3-#10, 1-#10	3/4"
1 1/2"	3-#1, 1-#6	DISHWASHER VIA 200AS/NF/3P/NEMA-1 DS	Q	125	3	11					8.0	6.0	12						
						13	27.7	1.4					14	1	20	L	LIGHTING - RM A137, 138, 139, 142	1-#12, 1-#12, 1-#12	3/4"
						15			27.7	0.2			16	1	20	L	LIGHTING - MAWAID A112	1-#12, 1-#12, 1-#12	3/4"
						17					27.7	0.3	18	1	20	L	LIGHTING - MAWAID A112	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - MAWAID A112	L	20	1	19	0.3	0.3					20	1	20	L	LIGHTING - MAWAID A112	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - MAWAID A112	L	20	1	21			0.3	0.2			22	1	20	L	LIGHTING - MAWAID A112	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A108-111, A129-133	L	20	1	23					0.4	0.2	24	1	20	L	** LIGHTING - EXTERIOR	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A124, 125	L	20	1	25	0.1	0.4					26	1	20	L	LIGHTING - A119-A122E	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A100, 104, 105	L	20	1	27			0.4	0.1			28	1	20	L	** LIGHTING - EXTERIOR	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - SEHEN A101	L	20	1	29					0.3	0.5	30	1	20	L	LIGHTING - MENS MASJID A102	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A107, 114, 115, 118	L	20	1	31	0.2	0.1					32	1	20	L	** LIGHTING - EXTERIOR	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - CLASS A233, 234, 235, 238	L	20	1	33			0.5	0.1			34	1	20	L	LIGHTING - STAIR A232	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - CLASS A228, 229	L	20	1	35					0.3	0.3	36	1	20	L	LIGHTING - CLASS A226, 236	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - CLASS A222-225	L	20	1	37	0.5	0.2					38	1	20	L	LIGHTING - HALL A221, 227, 230, 231	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A216-220	L	20	1	39			0.4	0.5			40	1	20	L	LIGHTING - RM A213, 214, 215, 237, 239	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A230, 231, 240, 241, 242	L	20	1	41					0.2	0.1	42	1	20	L	** LIGHTING - EXTERIOR	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A208, 209, 210, 212	L	20	1	43	0.4	0.0					44	1	20	L	LIGHTING - A211	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - SEHEN A201	L	20	1	45			0.3	0.5			46	1	20	L	LIGHTING - MASJID A202	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - RM A203, 206, 207	L	20	1	47					0.2	0.1	48	1	20	L	LIGHTING - STAIR A204	1-#12, 1-#12, 1-#12	3/4"
3/4"	1-#12, 1-#12, 1-#12	LIGHTING - CONFERENCE ROOM A200	L	20	1	49	0.1	2.3					50						
1 1/2"	3-#4, 1-#8	EWH-5 VIA 60AS/NF/3P/NEMA-1 DS	Q	70	3	51			13.5	2.3			52	2	20	Q	EWH-4 VIA 30AS/NF/2P/NEMA-1 DS	2-#12, 1-#12	3/4"
						53					13.5	--	54	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
						55	13.5	--					56	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	57			--	--			58	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	59					--	--	60	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	61	--	--					62	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	63			--	--			64	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	65					--	--	66	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	67	--	--					68	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	69			--	--			70	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	71					--	--	72	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	73	--	--					74	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	75			--	--			76	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12	SPACE	--	--	1	77					--	--	78	1	--	--	SPACE	1-#12, 1-#12, 1-#12	--
--	1-#12, 1-#12, 1-#12

KEYED NOTE LEGEND	
1	INDOOR UNIT FED BY VFCI CABLE FROM OUTDOOR UNIT. PROVIDE 1" IMC FROM ASSOCIATED CONDENSING UNIT OUTSIDE TO THIS LOCATION WITH PULLSTRING FOR CABLE.
2	PROVIDE POWER FOR ELEVATOR. COORDINATE POWER INPUT LOCATION AND BUSSMAN ELEVATOR POWER MODULE LOCATION WITH ELEVATOR INSTALLER PRIOR TO ROUGH-IN.
3	PROVIDE POWER FOR ELEVATOR CAB LIGHTING. COORDINATE POWER INPUT LOCATION WITH ELEVATOR INSTALLER PRIOR TO ROUGH-IN. PROVIDE LOCAL 30AS/NF/IP/NEMA-1 LOCAL DS.
4	PROVIDE POWER FOR ELEVATOR CAB FANS. COORDINATE POWER INPUT LOCATION WITH ELEVATOR INSTALLER PRIOR TO ROUGH-IN. PROVIDE LOCAL 30AS/NF/IP/NEMA-1 LOCAL DS.



1 E2.00 FIRST FLOOR POWER PLAN
SCALE : 1/8" = 1'-0"

2 E2.00 ENLARGED ELEVATOR 1 PLAN
SCALE : 1/2" = 1'-0"

3 E2.00 ENLARGED ELEVATOR 2 PLAN
SCALE : 1/2" = 1'-0"

PLAN NORTH

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LICENSED PROFESSIONAL ENGINEER
04-17-2026

ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

FIRST FLOOR - POWER

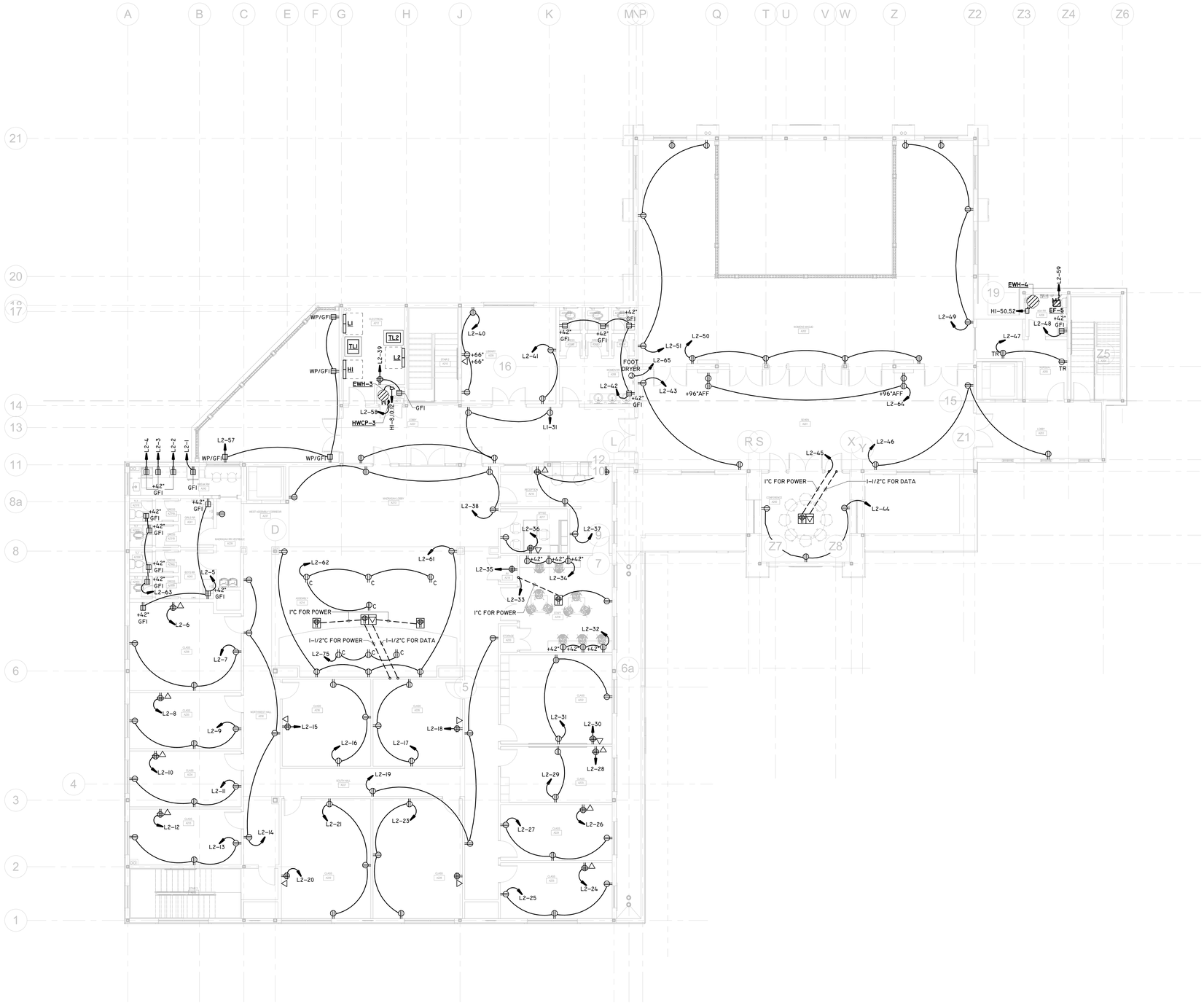
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DATE: 2026/04/17

PROJECT NUMBER: Project Number

SHEET NUMBER

E2.00



1 E2.01 SECOND FLOOR POWER PLAN

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

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04-17-2026

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REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

SECOND FLOOR POWER

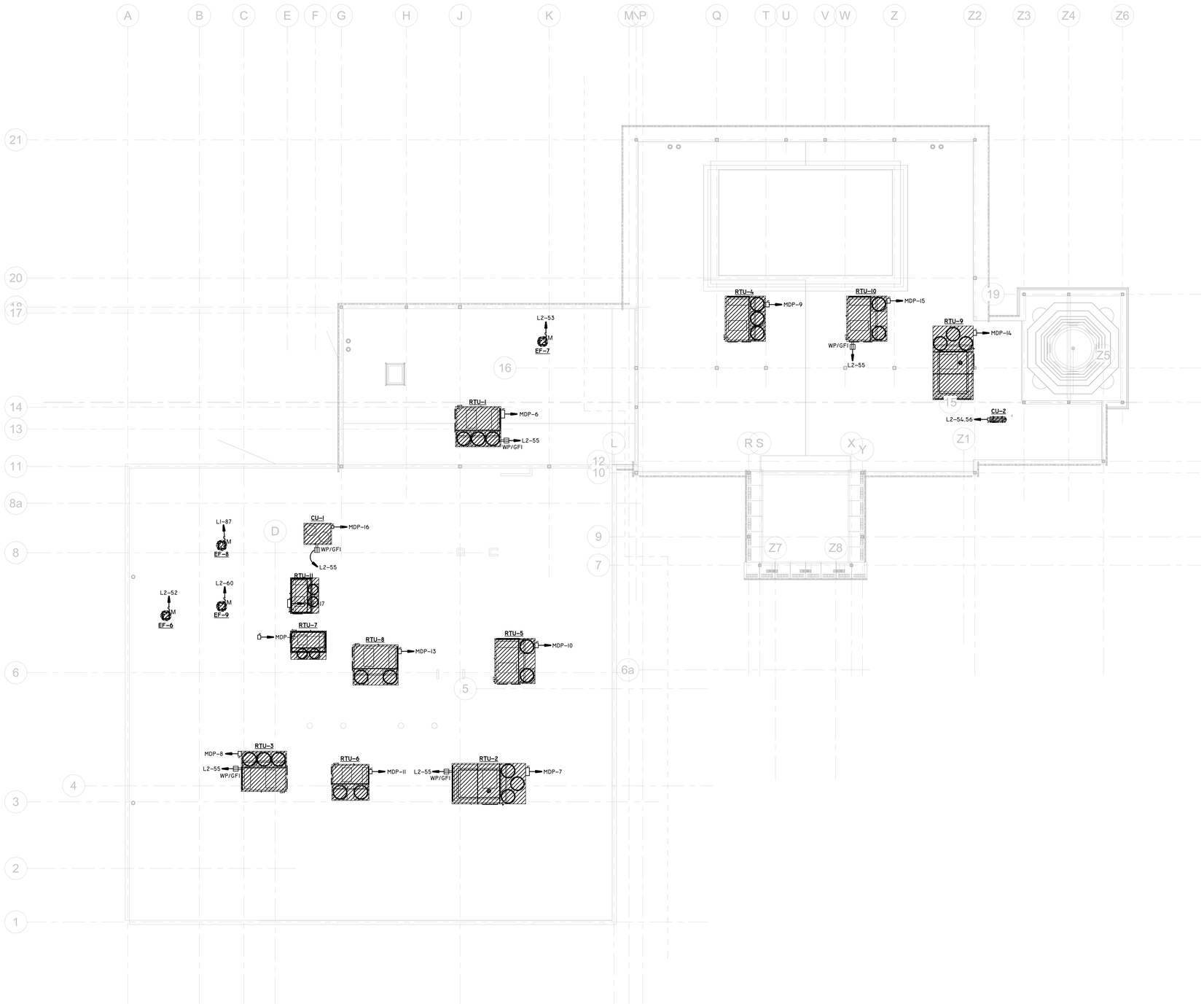
SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

E2.01



1 E2.02 ROOF POWER PLAN

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

PLAN NORTH

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04-17-2026

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REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

ROOF - POWER

SCALE 1/8" = 1'-0"

DATE 2026/04/17

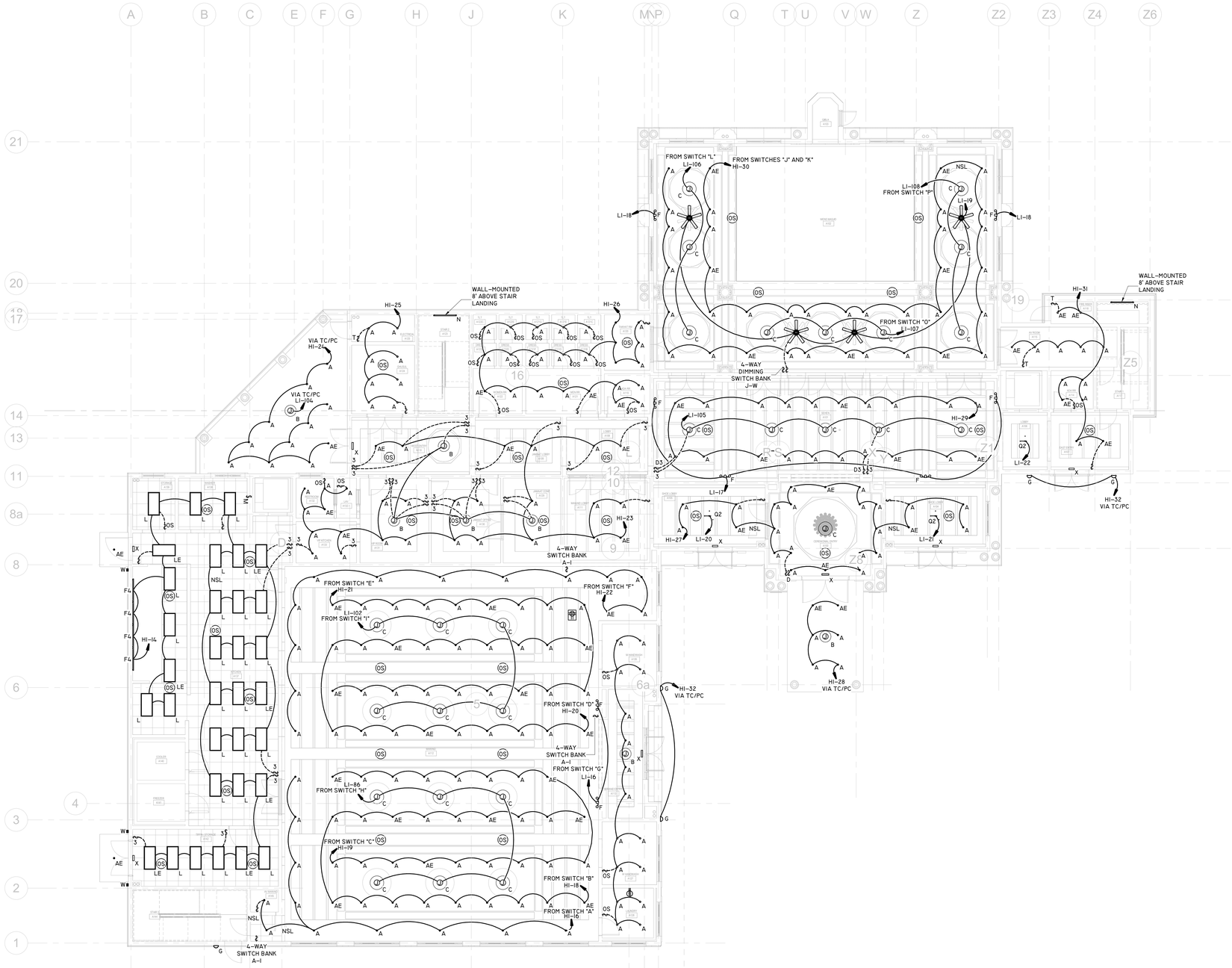
PROJECT NUMBER Project Number

SHEET NUMBER

E2.02

GENERAL NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR CHANDELIER FIXTURE SELECTION INFORMATION.



1 E3.00 FIRST FLOOR LIGHTING PLAN

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

PLAN NORTH

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PROFESSIONAL SEAL

STATE OF TEXAS
SEVAK KALANTARIANS
97498
LICENSED
PROFESSIONAL ENGINEER
04-17-2026

ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

FIRST FLOOR - LIGHTING

SCALE 1/8" = 1'-0"

DATE 04/17/2026

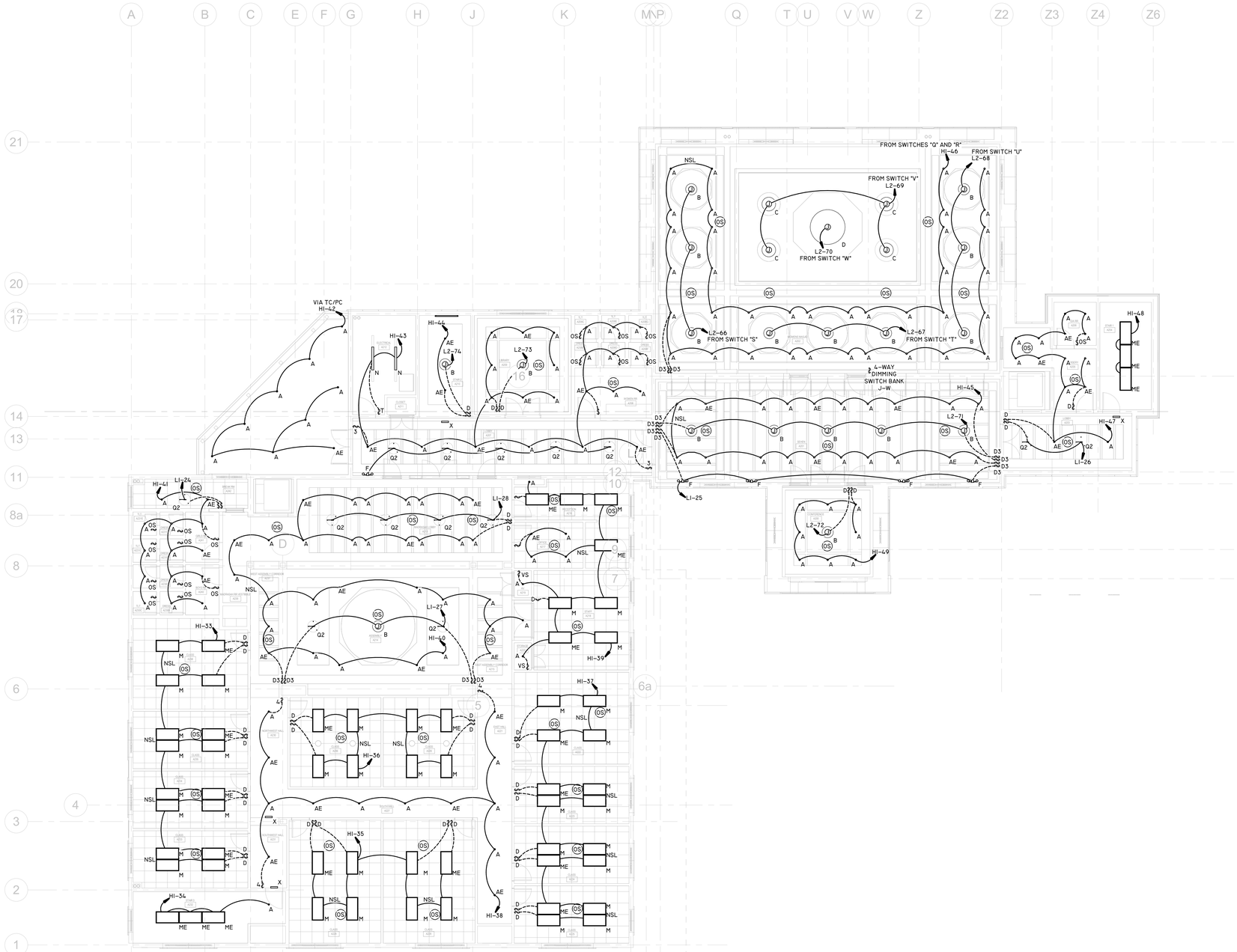
PROJECT NUMBER Project Number

SHEET NUMBER

E3.00

GENERAL NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR CHANDELIER FIXTURE SELECTION INFORMATION.



1 E3.01 SECOND FLOOR LIGHTING PLAN

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

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SECOND FLOOR - LIGHTING

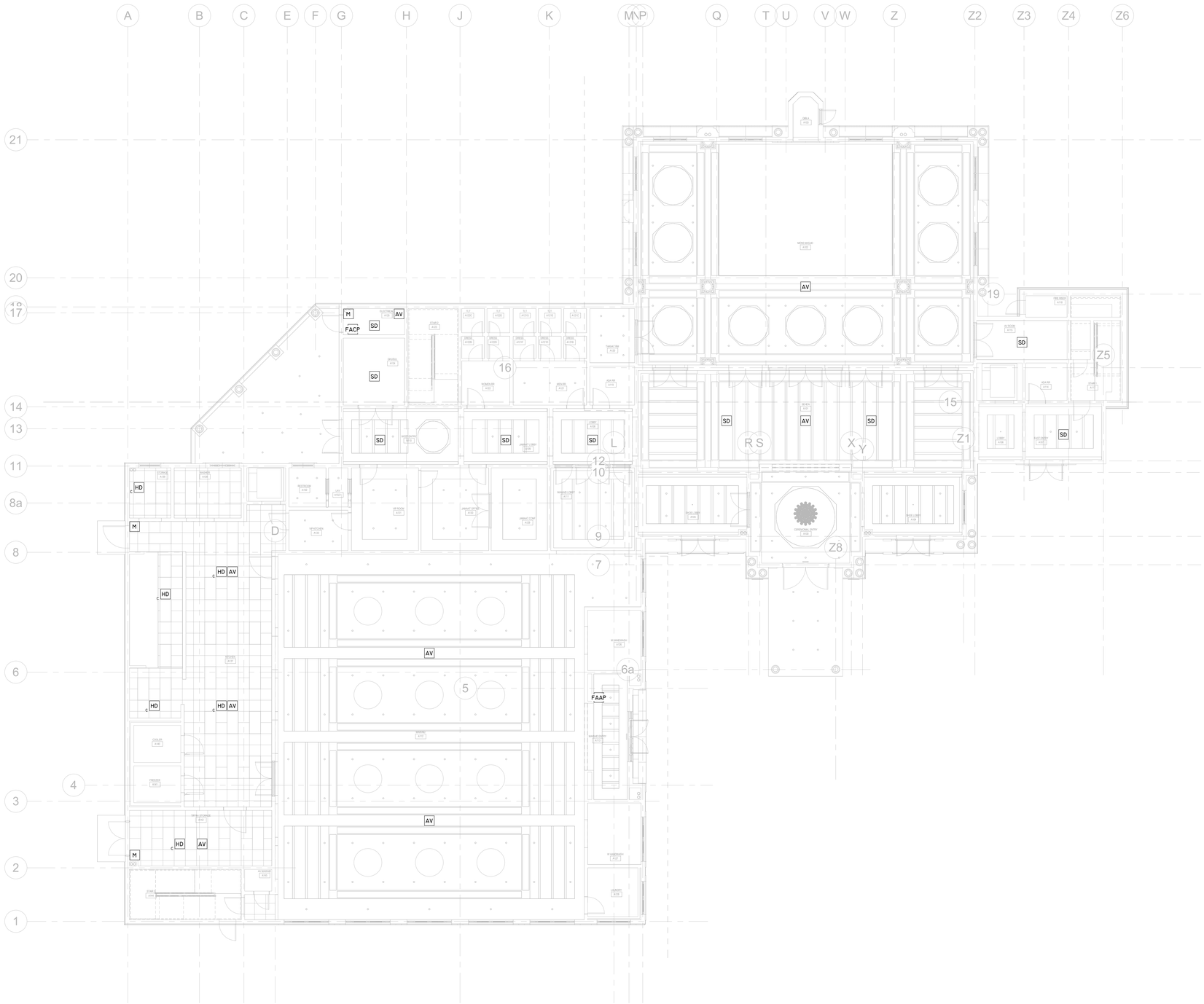
SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

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1 E4.00 FIRST FLOOR FIRE ALARM PLAN

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

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FIRST FLOOR - FIRE ALARM

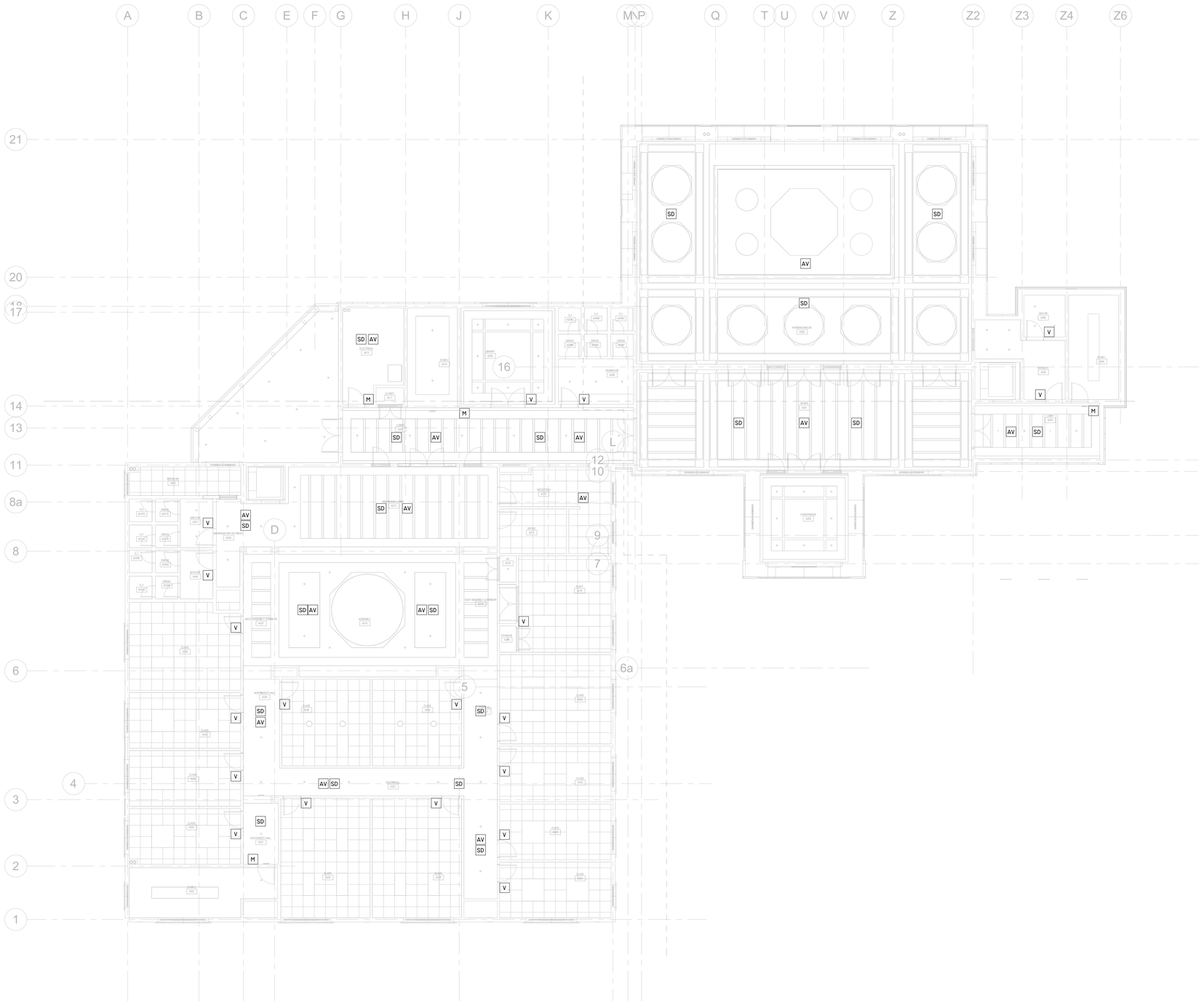
SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

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1 E4.01 SECOND FLOOR FIRE ALARM PLAN

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

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SECOND FLOOR - FIRE ALARM

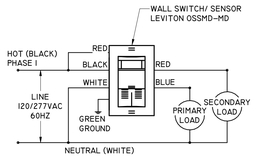
SCALE 1/8" = 1'-0"

DATE 2026/04/17

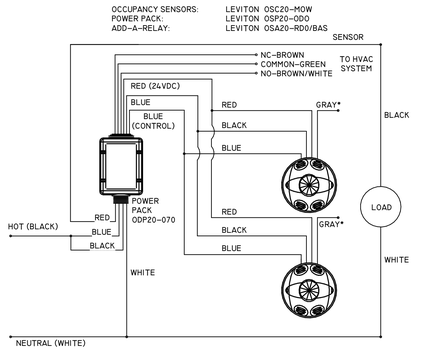
PROJECT NUMBER Project Number

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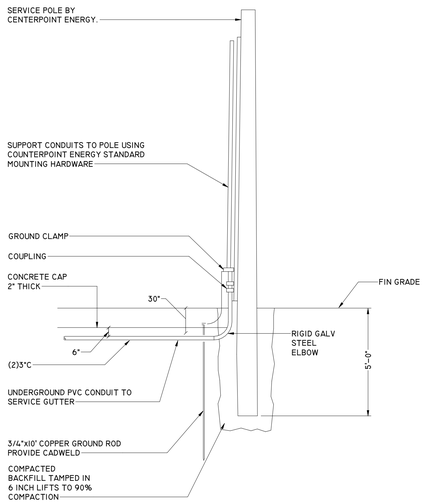
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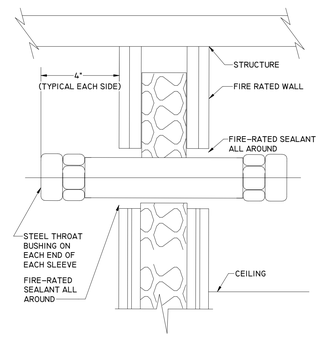
DETAIL - WALL OCCUPANCY/VACANCY SENSOR | NOT TO SCALE | 9



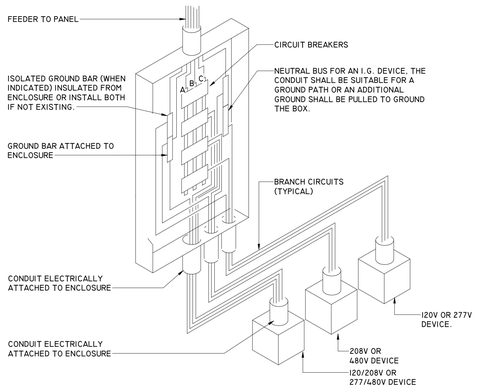
DETAIL - CEILING OCCUPANCY/VACANCY SENSOR | NOT TO SCALE | 8



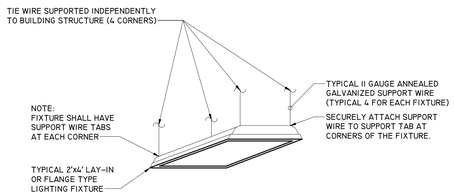
DETAIL - ELECTRICAL SERVICE INSTALLATION | NOT TO SCALE | 7



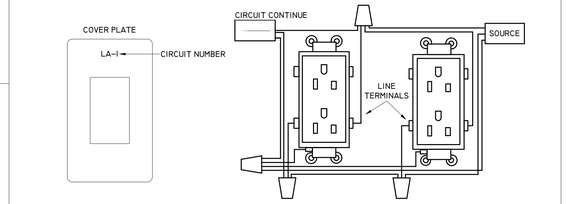
DETAIL - FIRE WALL PENETRATION | NOT TO SCALE | 6



DETAIL - PANEL GROUNDING | NOT TO SCALE | 5



DETAIL - FIXTURE SUPPORT | NOT TO SCALE | 4



NOTES:
1. LABEL ALL JUNCTION BOXES, CONDUITS, CONDUITS ABOVE AND BELOW PANELBOARD, PULL BOXES, DEVICE BOXES, AND COVER PLATES.

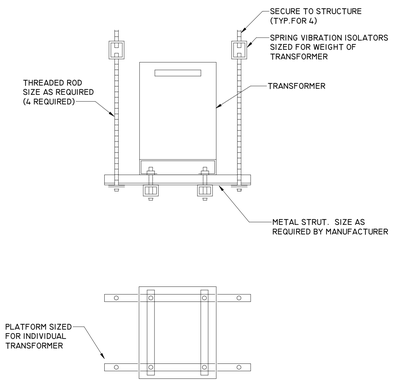
NOTES:
1. CIRCUITING TO ALL NON DEDICATED ELECTRICAL RECEPTACLES AND SWITCHES ARE REQUIRED TO UTILIZE PARALLEL CIRCUITING BY THE USE OF "PIG TAILS" TO EACH DEVICE SO THAT IF AN OUTLET IS REMOVED OR FAILS ELECTRICAL CONTINUITY OF THE CIRCUIT WILL NOT BE COMPROMISED.

2. ALL ELECTRICAL WIRING MUST BE PROPERLY SPLICED BY TWISTING THE WIRES TOGETHER AND USE OF APPROVED AND LISTED COMPRESSION WIRE NUTS FOR ANY WIRING.

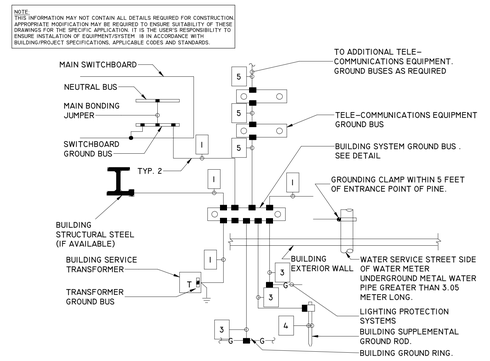
3. DO NOT USE END TO END BUTT-SPLICING CONNECTORS FOR ANY WIRING.

4. WRAP AROUND THE TERMINALS WITH ELECTRICAL TAPE.

DETAIL - PIGTAIL RECEPTACLE WIRING | NOT TO SCALE | 3



DETAIL - TRANSFORMER INSTALLATION (ABOVE CEILING) | NOT TO SCALE | 2



DETAIL - BUILDING GROUNDING ELECTRODE SYSTEM | NOT TO SCALE | 1

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SHEET TITLE

DETAILS

SCALE

DATE

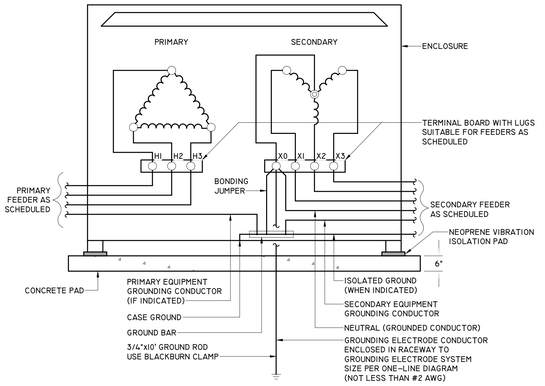
2026/04/17

PROJECT NUMBER

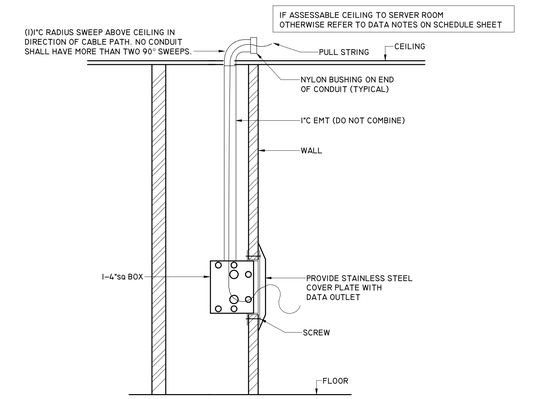
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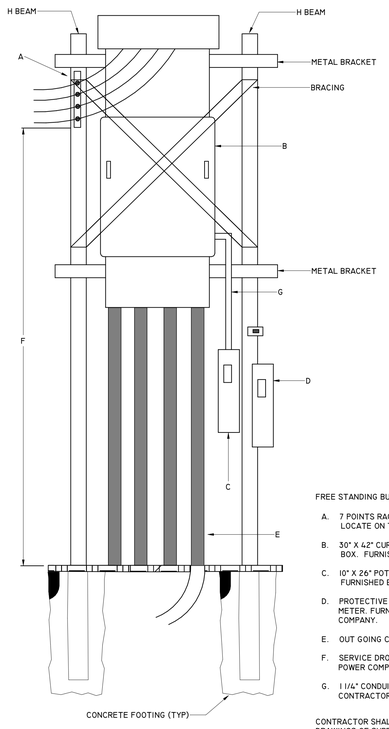
E5.00



DETAIL - TRANSFORMER GROUNDING | NOT TO SCALE | 3



DETAIL - DATA OUTLETS | NOT TO SCALE | 2



FREE STANDING BUS BAR WEATHERHEAD

A. 7 POINTS RACK INSTALLED BY CONTRACTOR, LOCATE ON THE SAME SIDE AS THE NEUTRAL.

B. 30" X 42" CURRENT TRANSFORMER METERING BOX. FURNISHED BY CONTRACTOR.

C. 10" X 26" POTENTIAL TRANSFORMER BOX FURNISHED BY CONTRACTOR.

D. PROTECTIVE METER BOX AND KVA DEMAND METER. FURNISHED AND INSTALLED BY POWER COMPANY.

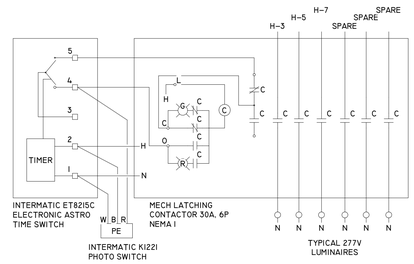
E. OUT GOING CONDUIT (AS REQUIRED).

F. SERVICE DROP CLEARANCE IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS.

G. 1 1/4" CONDUIT FURNISHED AND INSTALLED BY CONTRACTOR.

CONTRACTOR SHALL PROVIDE DETAILED SHOP DRAWINGS OF SUPPORTING STRUCTURE WITH ELEMENT SIZING AND FOOTING DETAILS.

DETAIL - ELECTRICAL SERVICE | NOT TO SCALE | 4



DETAIL - LIGHTING CONTACTOR | NOT TO SCALE | 1

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DETAILS

SCALE

DATE

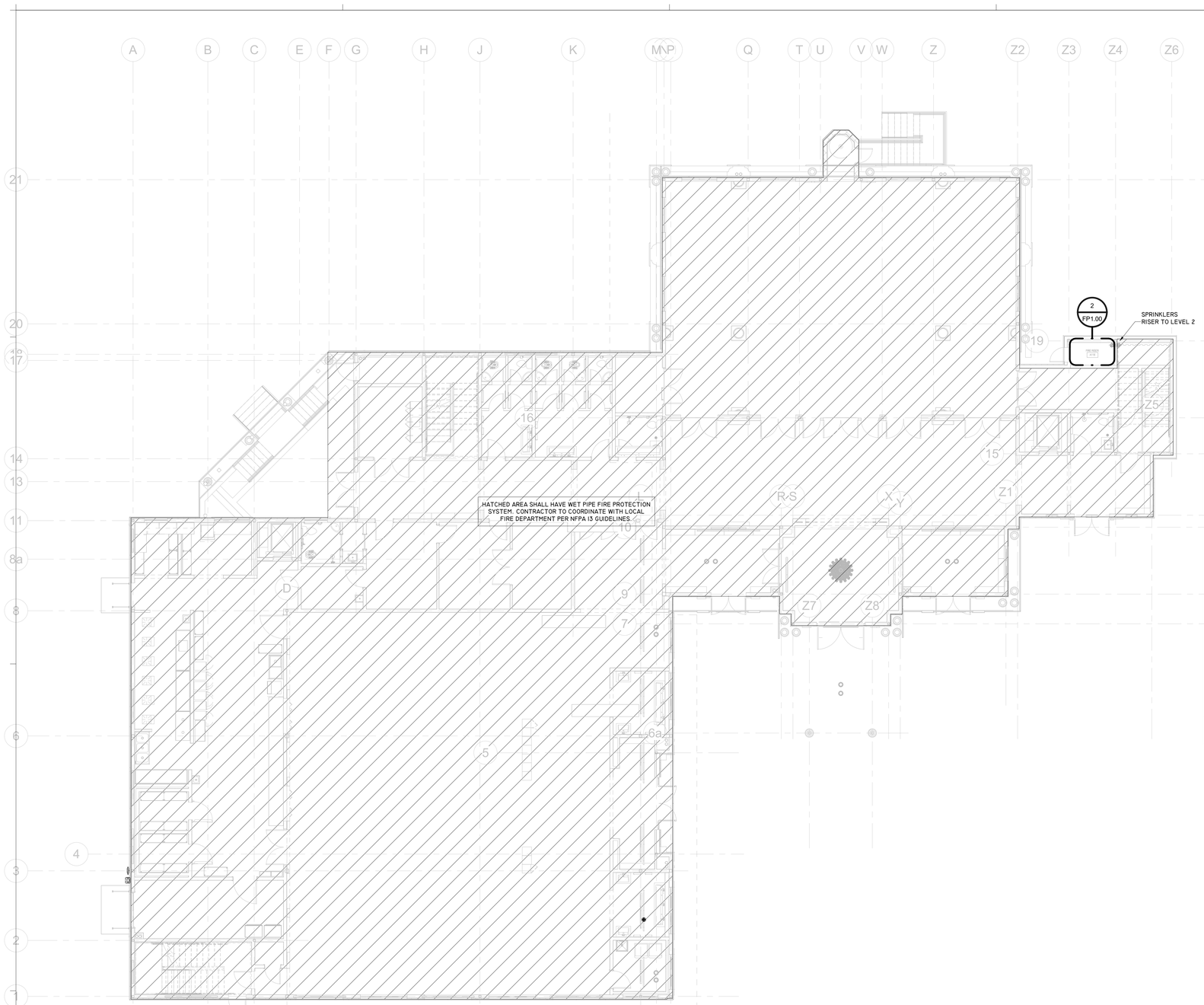
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PROJECT NUMBER

Project Number

SHEET NUMBER

E5.01



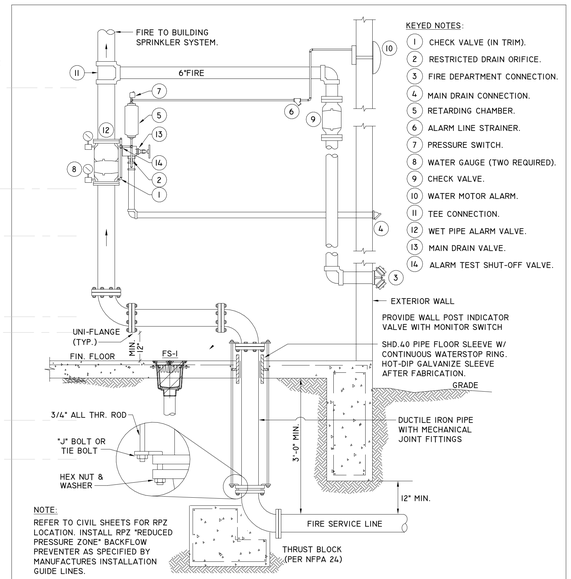
1 FP1.00 FIRST FLOOR - FIRE PROTECTION
SCALE : 1/8" = 1'-0"

FIRE PROTECTION NOTES

1. CONTRACTOR SHALL PROVIDE THE HYDRAULIC DESIGN BY A QUALIFIED FIRE PROTECTION ENGINEER IN STATE OF TEXAS. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE SPRINKLER SYSTEM FOR THE ENTIRE AREA, IN ACCORDANCE WITH NFPA 13, NFPA 13R AND CITY OF AUSTIN FIRE DEPARTMENT. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE WORK WITH ALL OTHER SERVICES INCLUDING, BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURE AND ARCHITECTURE SERVICES.
2. BEFORE INSTALLING ANY SPRINKLER ROWS AND HEADS, COORDINATE WITH OTHER SERVICES AND EQUIPMENT LOCATIONS.
3. MAIN ENTRY PIPING LINE INDICATED ON DRAWINGS IS SHOWN AS GENERAL GUIDE AND DOES NOT REPRESENT ACTUAL BID DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE SYSTEM DESIGN AND INSTALLATION OF ALL THE FACILITY.
4. SPRINKLER SYSTEM SHALL BE WET PIPE SYSTEM FOR INDOOR AREA CO-ORDINATED WITH FIRE AND DETECHTION SYSTEM FOR INTERLOCK. IN ACCORDANCE WITH CODE REQUIRED HAZARD PROTECTION.
5. ALL FIRE PROTECTION PIPING EXPOSED SHALL BE PAINTED RED.
6. PROVIDE SPRINKLER HEADS ON THE ATRIUM GLASS ON ALL FLOORS.

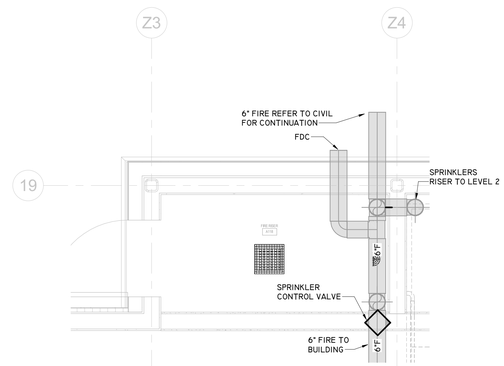
NOTE:

SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PREPARED BY A LICENSED SPRINKLER CONTRACTOR (TEXAS RME) SHALL BE SUBMITTED TO THE FIRE LOCAL MARSHALL AND OWNER'S INSURANCE CARRIER FOR REVIEW AND APPROVAL. NO WORK SHALL BEGIN UNTIL THE APPROVAL OF BOTH AUTHORITIES INDICATED ABOVE.



NOTE:
REFER TO CIVIL SHEETS FOR RPZ LOCATION. INSTALL RPZ "REDUCED PRESSURE ZONE" BACKFLOW PREVENTER AS SPECIFIED BY MANUFACTURES INSTALLATION GUIDE LINES.

FIRE ALARM CHECK VALVE DETAIL
FIRE SERVICE ENTRY DETAIL — NOT TO SCALE — 2



2 FP1.00 ENLARGED FIRE RISER ROOM
SCALE : 1/2" = 1'-0"

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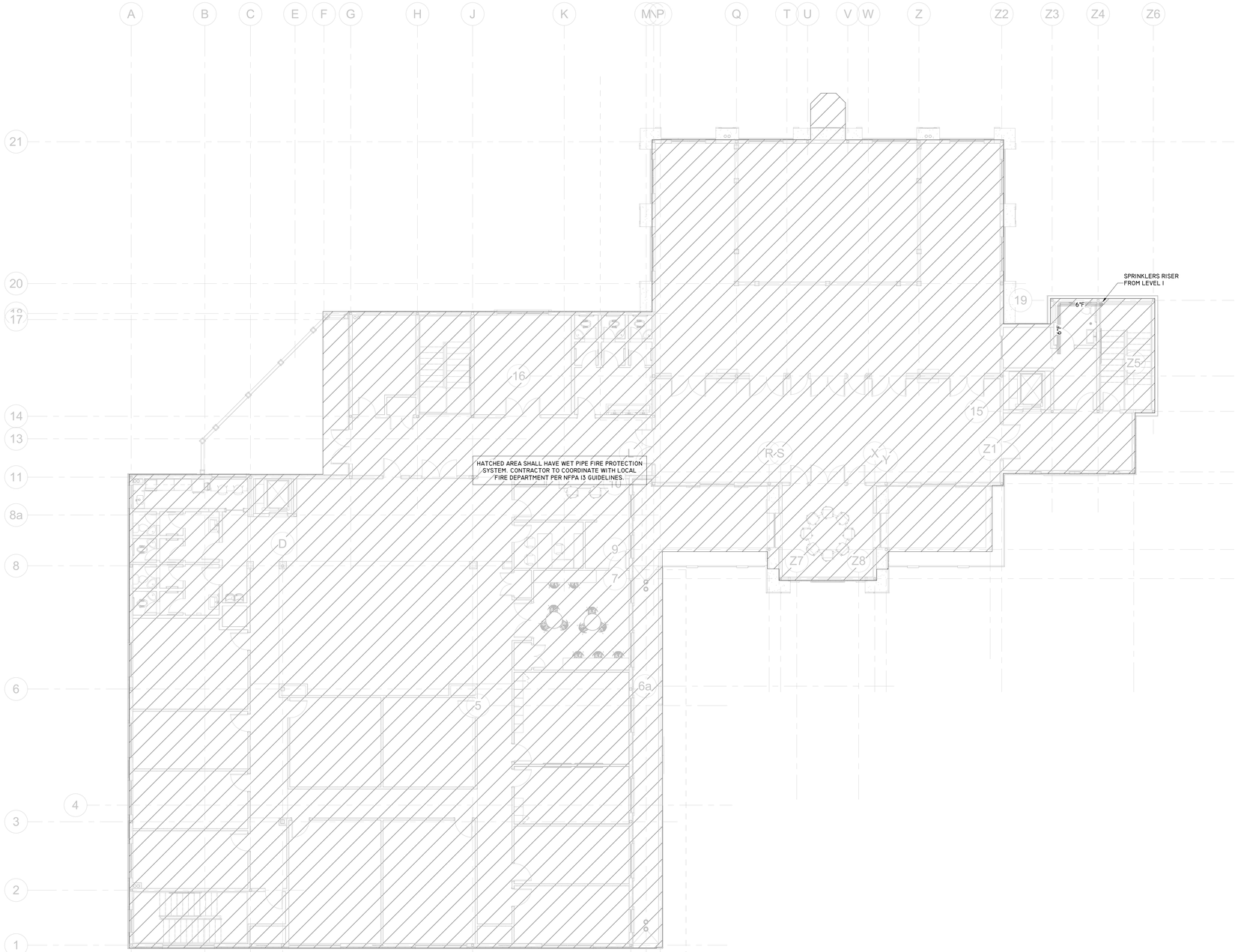
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	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

FIRST FLOOR FIRE PROTECTION

SCALE: As indicated
DATE: 2026/04/17
PROJECT NUMBER: Project Number
SHEET NUMBER: FP1.00



1 FP2.00 SECOND FLOOR - FIRE PROTECTION

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

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SHEET TITLE

SECOND FLOOR
FIRE PROTECTION

SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

FP2.00

PIPING MATERIALS

1. **SANITARY WASTE AND VENT PIPING** (BELOW GRADE)
SCHEDULE 40 PVC, CONFORM TO ASTM D-1785 SOIL AND WASTE VENT PIPING. FITTINGS SHALL BE COMPATIBLE MATERIAL WITH SOLVENT CEMENT TYPE JOINTS.

2. **SANITARY WASTE AND VENT PIPING** (ABOVE SLAB ONLY)
PIPE: CAST IRON ASTM A 888 WITH HUBLESS COUPLING PER CISPI 310

JOINTS NO HUB, ASTM C 564 NEOPRENE GASKETS AND STANDARD STAINLESS STEEL CLAMP AND SOLID SHIELD ASSEMBLIES CONSTRUCTED OF TYPE 300 SERIES STAINLESS STEEL. CLAMP ASSEMBLIES SHALL CONFORM TO FM 1680 WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY.

FITTINGS: CAST IRON, ASTM A 888 DRAINAGE PATTERN.

3. **DOMESTIC WATER**
TYPE "L" COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 (TIN/ANTIMONY) SOLDER JOINTS.

4. **NATURAL GAS** (ABOVE GRADE)
SCHEDULE 40 BLACK STEEL WITH CLASS 150 BLACK MALLEABLE IRON WELDED FITTINGS. ROOF MOUNTED PIPING SHALL BE PAINTED WITH GALVANIC PAINT, PRIMED WITH ALKYD-BASE PRIMER AND 2 LAYERS YELLOW GALVANIC TOP COATS.

NOTE: SCREWED JOINTS WILL NOT BE PERMITTED.

A. ALL WELDING FITTINGS SHALL BE FACTORY-MADE AND SHALL BE FULL LINE SIZE, FOR EACH TEE, BRANCH, ELBOW ETC., WITH REDUCERS AFTER FITTINGS, IF REQUIRED.

5. **NATURAL GAS** (BELOW GRADE)
HDPE YELLOW GAS PIPE AND FITTINGS IN ACCORDANCE WITH ASTM D-2513, GRADES 2306, 3306, AND 3408 WITH FUSION JOINTS ONLY, EQUAL TO DRISCOPIPE 8100-DRII SERIES

6. FIRE PROTECTION SYSTEM:
SCHEDULE 40 BLACK STEEL PIPE WITH CLASS 150 BLACK MALLEABLE IRON SCREWED FITTINGS. PIPING 2 1/2" AND LARGER SHALL BE JOINED WITH VICTAULIC FITTINGS UTILIZING ROLL GROOVES. VICTAULIC REDUCING COUPLINGS "FIT" OR "PRESS FIT" SYSTEMS AND STRAP TYPE MECHANICAL TEES SHALL NOT BE USED.

PLUMBING LEGEND & ABBREVIATIONS

DISREGARD LEGEND ITEMS NOT INDICATED ON DRAWINGS

	NEW PLUMBING FIXTURE
SAN / S	SANITARY WASTE
STORM / ST	STORM DRAINAGE LINE
C.D.	CONDENSATE DRAIN LINE
GW	GREASE WASTE
AW	ACID WASTE
CHEM-W	CHEMICAL WASTE
V	VENT
FIRE	FIRE LINE
DIS	DEIONIZED WATER SUPPLY
DIR	DEIONIZED WATER RETURN
SW	SOFT WATER
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
TW	TEMPERED WATER PIPING
TWR	TEMPERED WATER RETURN PIPING
NPW(C)	NON POTABLE WATER (COLD)
NPW(H)	NON POTABLE WATER (HOT)
DI	DEIONIZED WATER
NG / G	NATURAL GAS
LA	NATURAL GAS
VAC	NATURAL GAS
N2	NATURAL GAS
FCO	FLOOR CLEAN OUT
ECO	EXTERIOR CLEANOUT
WCO	WALL CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
	RISER IDENTIFICATION
	ELBOW UP
	ELBOW DOWN
	CAP AND SEAL
	BALL VALVE
B.V.	BALANCING VALVE
	GAS VALVE
C.V.	CHECK VALVE
	SOLENOID VALVE
	FLOW SWITCH
TP	AUTOMATIC TRAP PRIMER
BFP	BACKFLOW PREVENTER
VTR	VENT THROUGH ROOF
F.F.L.	FINISHED FLOOR LEVEL
I.L.	INVERT LEVEL
A.R.F.	ABOVE FINISHED ROOF
(E)	EXISTING TO REMAIN
(OF)	OVERFLOW STORM DRAINAGE
(P)	PRIMARY STORM DRAINAGE
T.A.S	TEXAS ACCESSIBILITY STANDARDS

GENERAL NOTES

BOOK SPECIFICATION
SUPERCEDE ANY NOTES BELOW

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN. WHERE INTERFERENCE'S WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.

2. BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.

3. ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.

4. PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE. CONTRACTOR SHALL PROVIDE A COVER STATING WHAT SYSTEM IT IS SERVING. (CLEANOUT SANITARY, CLEANOUT GREASE WASTE, CLEANOUT ACID WASTE.)

5. INDIVIDUAL FIXTURE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. THIS CONTRACTOR SHALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.

6. FURNISH AND INSTALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE OF EQUIPMENT HAVING PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.

7. SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.

8. EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.

9. FIELD VERIFY EXISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.

10. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF FLOOR DRAINS AND FLOOR SINKS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTORS EXPENSE.

11. PROVIDE A KEYED ACCESS PANELS FOR ALL VALVES AND APPARATUSES THAT REQUIRE MAINTENANCE.

12. A WATER HAMMER ARRESTOR SHALL BE INSTALLED FOR ALL SINGLE AND MULTIPLE FIXTURE BRANCH LINES. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND CONFORM TO ASSE 1010. PROVIDE FOR HOT WATER AND COLD WATER LINES AND REFER TO WATER HAMMER ARRESTOR DETAIL FOR MORE INFORMATION AND SIZING.

13. INSULATE PIPING AS FOLLOWS:
DOMESTIC COLD WATER PIPING:
INSULATE AND VAPOR SEAL ALL COLD AND SOFTENED WATER PIPE WITH GLASS FIBER PIPE INSULATION. (EXCEPTION : ALL PIPING EXPOSED TO THE EXTERIOR SHALL BE PROVIDED WITH ALUMINUM).

DOMESTIC HOT WATER PIPING:
INSULATE ALL HOT WATER PIPE WITH GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED WHITE JACKET.

DRAINS:
INSULATE AND VAPOR SEAL ALL ABOVEGROUND P-TRAPS AND HORIZONTAL DRAIN PIPING RECEIVING CONDENSATE OR ICE MAKER DRAINAGE WITH 1/2" GLASS PER FIBER INSULATION.
INSULATE AND VAPOR SEAL ROOF DRAIN AND OVERFLOW ROOF DRAIN SUMP, PIPING AND FITTINGS FROM DRAIN TO VERTICAL LEADER WITH 1/2" GLASS FIBER INSULATION.
A.D.A. ACCESSIBLE LAVATORIES AND SINKS:
INSULATE ALL EXPOSED DRAIN PIPING AND WATER SUPPLY PIPING BENEATH A.D.A. COMPLIANT LAVATORIES & SINKS WITH FULLY MOLDED CLOSED CELL VINYL INSULATION KIT AS MANUFACTURED BY TRUEBRO, BROCAR OR MCGUIRE.

14. SUPPORT UNBURIED PIPE AS FOLLOWS:
HORIZONTAL PIPING:
HUBLESS CAST IRON SOIL PIPING SHALL BE SUPPORTED AT LEAST AT EVERY OTHER JOINT EXCEPT THAT WHEN THE DEVELOPED LENGTH BETWEEN SUPPORTS EXCEEDS FOUR FEET, THEY SHALL BE PROVIDED AT EACH JOINT. SUPPORTS SHALL ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED IMMEDIATELY ADJACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL MOVEMENT.

COPPER TUBING SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING 1-1/2" AND SMALLER AND NINE FOOT INTERVALS FOR PIPING 2" AND LARGER IN DIAMETER.

HANGERS FOR NON-INSULATED COPPER PIPING SHALL HAVE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS, NON-INSULATED COPPER PIPING HANGERS OR SUPPORTS SHALL BE PLASTIC-COATED.

STEEL PIPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR 1/2" PIPING, 8 FEET FOR 3/4" & 1" PIPING AND 10 FEET FOR 1-1/4" AND LARGER PIPING.

VERTICAL PIPING:
PROVIDE RISER CLAMP AT BASE AND AT EACH FLOOR LEVEL

15. MARKING AND IDENTIFICATION:
IDENTIFY EACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:
-AT EACH BRANCH TAKE-OFF FROM A MAIN
-ON EACH SIDE OF A WALL PENETRATION
-EVERY 20' OF STRAIGHT RUN OF PIPE
-AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF

DOMESTIC HOT WATER:
INDICATE DELIVERED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.
INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.

MEDIUM PRESSURE GAS PIPING:
MEDIUM PRESSURE GAS PIPING (14" WC TO 5 PSI) SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PSI NATURAL GAS." THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 30 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES.

16. SLEEVES.
FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE ABOVE GRADE FLOORS.
WALLS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE FIRE RATED WALLS.
WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.
INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.

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ISSUED FOR

ISSUE FOR PERMIT

REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE
NOTES AND LEGEND

SCALE

DATE
2026/04/17

PROJECT NUMBER
Project Number

SHEET NUMBER
P1.00

ELECTRIC WATER HEATER SCHEDULE

MARK	MFR	MODEL	VOLTS	Ø	ELEMENT(S) QTY	ELEMENT(S) kW	RECOVERY GPH @ 100°F RISE	TANK CAPACITY GALLONS	LOCATION
EWH-1	A.O. SMITH	DRE-52	480	3	2	4.5	36	50	ROOM #A128
EWH-2	A.O. SMITH	DRE-52	480	3	6	4.0	98	50	ROOM #A138
EWH-3	A.O. SMITH	DEL-40	480	3	3	6.0	74	40	ROOM #A243
EWH-4	A.O. SMITH	DEL-20	480	1	1	4.5	18	20	ROOM #A206
EWH-5	A.O. SMITH	DRE-120	480	3	9	4.5	166	119	ROOM #A138

NOTES:

1. OUTLET TEMPERATURE SHALL BE 140°F.
2. PROVIDE TMV-1 LEONARD MIXING VALVE MODEL 370. INLET SIZE 3/4" AND OUTLET SIZE 3/4". MIXING VALVE HOT WATER OUTLET TEMP SHALL BE SET TO (110°F) TO PREVENT BACTERIA GROWTH.
3. PROVIDE TMV-1 LEONARD MIXING VALVE MODEL 370. INLET SIZE 3/4" AND OUTLET SIZE 3/4". MIXING VALVE HOT WATER OUTLET TEMP SHALL BE SET TO (140°F) FOR EWH-5 TO SERVICE KITCHEN.
4. PROVIDE SIMULTANEOUS ELEMENT OPERATION.
5. PROVIDE EXPANSION TANK. SIZE TANK PER MANUFACTURER'S RECOMMENDATIONS.

HOT WATER CIRCULATING PUMP SCHEDULE

MARK	MFR.	MODEL NO.	TYPE	G.P.M.	HEAD	H.P.	VOLTAGE	MOTOR R.P.M.	LOCATION
HWCP-1	BELL & GOSSETT	PL-55	IN LINE BRONZE	15	40	2/5	120 / 1ø	3250	ROOM #A128
HWCP-2	BELL & GOSSETT	PL-55	IN LINE BRONZE	15	40	2/5	120 / 1ø	3250	ROOM #A139
HWCP-3	BELL & GOSSETT	PL-55	IN LINE BRONZE	15	40	2/5	120 / 1ø	3250	ROOM #A243

NOTES:

1. HOT WATER CIRCULATION PUMP SHALL BE PROVIDED WITH TIMER TO DE-ENERGIZE THE PUMP UNDER DURING UNOCCUPIED PERIODS PER THE CURRENT IECC.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	SIZE OF CONNECTION TRAP	SS	SV	CW	HW	REMARKS
EDF-1	ELECTRIC DRINKING FOUNTAIN (BI-LEVEL) (A.D.A.)	1 1/2"	2"	2"	1/2"	-	HAC8FSBL-WF-Q ADA HALSEY TAYLOR, WALL MOUNT WATER COLLER, BARRIER-FREE ACCESS BI-LEVEL, NO LEAD DRINKING FOUNTAIN, LIGHT TOUCH PUSHBAR ON FRONT, INSTALL COMPLETE WITH CUNO WATER FILTER. STAINLESS STEEL, VANDAL RESISTANT WATER COOLER. FOR MULTIPLE WATER COOLER INSTALLATION REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS AND LOCATION. BV02 MCGUIRE'S, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND 1IINCH CENTER TO END. FURNISHED WITH SLIP NUTS, 17 GAUGE SEAMLESS TUBULAR BRASS WALL BEND, AND STEEL SHALLOW FLANGE. MLP100 HALSEY TAYLOR, IN WALL CARRIER MOUNTING SYSTEM.
	CANE TOUCH APRON	-	-	-	-	-	42522 HALSEY TAYLOR, STAINLESS STEEL APRON. PROVIDE APRON ONLY FOR UNITS MOUNTED AT NON-ADA HEIGHT TO MEET A.D.A. REQUIREMENTS OF 24" A.F.F.
MS-1	MOP SINK (FLOOR MOUNTED)	3"	3"	2"	3/4"	3/4"	HL-1800 STERN WILLIAMS HILOW, 24"X24"X12" DRAIN SHALL CAST BRASS WITH STAINLESS STEEL STRAINER CAST INTEGRAL AND SHALL PROVIDE FOR CAULKED LEAD CONNECTION NOT LES THAN 1" DEEP TO A 3" PIPE. TERRAZZO RECEPTOR COMPOSED OF PEARL GREY MARBLE CHIPS AND WHITE PORTLAND CEMENT GROUND SMOOTH, GROUTED AND SEALED TO RESIST STAINS. STAINLESS STEEL CAP OF ONE PIECE 20 GA. 302 STAINLESS STEEL CAST INTEGRAL ON FROM DROP. 540-LD897SWXFABCP CHICAGO FAUCETS, 8" FIXED CENTERS, 6GPM, 897-SJKCP - 5 3/4" RIGID VACUUM BREAKER SPOUT WITH 3/4" MALE HOSE THREAD AND PAIL HOOK, 369-PR - 2 3/8" LEVER HANDLE, XT - QUATURN COMPRESSION OPERATING CARTRIDGE, WXF - STRAIGHT 2" INLET SUPPLY ARM WITH WALL FLANGE WITH 1/2" NPT FEMALE THREAD INLET, ATMOSPHERIC VACUUM BREAKER, NOT INTENDED FOR CONTINUOUS PRESSURE APPLICATIONS, CHROME PLATE FINISH. T-35 STERN WILLIAMS, HOSE AND WALL HOOK. HOSE 36" LONG, WITH 3/4" CHROME COUPLINGS. WALL BRACKET OF STAINLESS STEEL. T-40 STERN WILLIAMS, STAINLESS STEEL MOP HANGER OF STAINLESS STEEL WITH #4 FINISH. 24" LONG, WITH 3 RUBBER SPRING LOADED GRIPS. BP STERN WILLIAMS, SPLASH CATCHER PANELS OF 20 GA. TYPE 304 STAINLESS STEEL.
FD-1	FLOOR DRAIN	3"-4"	3"-4"	2"	-	-	2005-B-NB J.R. SMITH, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD 6" DIAMETER TYPE "A" NICKEL BRONZE STRAINER. INSTALL COMPLETE WITH PROSET TRAP GUARD, EXCEPT FOR SHOWER DRAIN.
ECO	EXTERIOR CLEANOUT	-	-	-	-	-	4250 J.R. SMITH, ALL EXTERIOR CLEANOUTS SHALL BE SET AT FINISHED GRADE IN 6 INCH THICK CONCRETE PAD FINISHED SMOOTH ON TOP, HOUSING SHALL BE COMPLETELY FREE OF PIPING SO NO LOADING IS TRANSMITTED TO THE PIPE.
FCO	FLOOR CLEANOUT	-	-	-	-	-	4040 J.R. SMITH, WITH SCREWED PLUG AND FLASHING RING AND COVER PLATE WITH SECURING SCREW. COVER PLATE SHALL BE FLUSH TO FINISH FLOOR, AND SUITABLE FOR FLOOR COVERING INSTALLED.
WCO	WALL CLEANOUT	-	4"	2"	1"	-	4435 J.R. SMITH, WITH SCREWED PLUG AND FLASHING RING AND COVER PLATE WITH SECURING SCREW. COVER PLATE SHALL BE FLUSH TO FINISH WALL. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR CASEWORK LOCATIONS, COVER PLATE SHALL THEN BE FLUSHED WITH CASE WORK'S FINISH BACK WALL.
FS-1	FLOOR SINK	4"-6"	4"-6"	2"	-	-	2415C-LSG J.R. SMITH, 1/2 TOP GRATE, INDIRECT WASTE FLOOR SINK, DUCO CAST IRON BODY, LOOSE GRATE WITH SEDIMENT BUCKET 12"X12"SQ. - 10" DEEP. FURNISH AND INSTALL WITH DEEP SEAL P-TRAP ASSEMBLY. INSTALL COMPLETE WITH PROSET TRAP GUARD.
RVB-1	REFRIGERATOR/ ICE MAKER VALVE BOX	-	-	-	1/2"	-	BIM875 - GUY GRAY - REFRIGERATOR/ ICE MAKER VALVE BOX, FURNISHED WITH 1/2" FIP INLET X 1/4" OD OUTLET COMPERSSION ANGLE VALVE. PROVIDE FILTER WHEN MAKING FINAL CONNECTION. (FURNISH AND INSTALL AT ALL REFRIGERATORS AND ICE MACHINES)
SH-2	SHOWER	-	-	-	3/4"	-	A5A01SGC00 "VICTORIA" ROCA, BI-NICKEL CHROME WALL-MOUNTED BATH-SHOWER MIXER WITH AUTOMATIC DIVERTER, HAND-SHOWER, 1.70 M FLEXIBLE HOSE AND SWIVEL WALL BRACKET. 5.28 GPM
SH-1	SHOWER	-	-	-	3/4"	-	FSI5037 "MARSEILLE" FONTANA, 9" ROUND BATHROOM WALL MOUNTED BRASS SHOWER SYSTEM FAUCET, ROTATABLE LIFTING HANDLE SINGLE HOLDER DUAL CONTROL
RD-1	ROOF DRAIN (PRIMARY)	-	-	-	-	-	1010-AD J.R. SMITH, DUCO CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP WITH CAST IRON DOME.
RD-2	ROOF DRAIN (OVERFLOW)	-	-	-	-	-	1080C-AD J.R. SMITH, DUCO CAST IRON BODY WITH WIDE FLANGE, COMBINED FLASHING CLAMP AND WATER DAM WITH CAST IRON DOME.
DN-1	DOWNSPOUT NOZZLE	-	-	-	-	-	1770 J.R. SMITH, DOWNSPOUT NOZZLE, CAST BRONZE NOZZLE AND FLANGE.
SK-1	SINGLE BOWL SINK (A.D.A)	1 1/2"	3"	2"	1/2"	1/2"	LRAD1716 ELKAY, SINGLE BOWL (16"L X 17"W X 6"D INSIDE BOWL), #18 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL, SELF RIMMING, 2 HOLE 4" CENTER. 895-317GN2BE4ABCP CHICAGO FAUCETS, 4" FIXED CENTERS, GN2BAB - 5-1/4" RIGID / SWING GOOSENECK SPOUT, E4AB - 2.0 GPM (7.6 L/MIN) SPRAY, 317-PR - 4" WRISTBLADE HANDLE, XTAB - QUATURN COMPRESSION OPERATING CARTRIDGE, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8" OR 1/2" FLEXIBLE RISER, CHROME PLATE FINISH, WEIGHT: 5.000LBS, PACKAGE DIMENSIONS: 11.50"L X 6.00"W X 5.00"H, ECAST® CONSTRUCTION WITH EQUAL TO OR LESS THAN 0.25% LEAD CONTENT BY WEIGHTED AVERAGE, THIS ITEM SHIPS 10 BUSINESS DAYS FROM ORDER ACKNOWLEDGEMENT. 151 MCGUIRE, HEAVY DUTY FORGED BRASS BASKET STRAINER WITH A POLISHED AND CHROME PLATED BRASS STRAINER BODY, 1-1/2" X 4" SEAMLESS BRASS TAILPIECE, CAST BRASS LOCK AND COUPLING NUTS. 1151WC MCGUIRE, 1 1/2" ADA COMPLIANT OFFSET STRAINER/DRAIN ASSEMBLY AND TAILPIECE, C8912 MCGUIRE, 1 1/2" CAST BODY P-TRAP AND CLEANOUT. INSULATE P-TRAP, TAILPIECE ASSEMBLY. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 270-RF-STSTL-REC LEONARD, POINT OF USE THERMOSTATIC VALVE MIXING VALVE, BRONZE BODY, LOCKED TEMPERATURE ADJUSTMENT CAP (VANDAL RESISTANT), COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE, STAINLESS STEEL SPRINGS, BUNA-N O'RINGS, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS. SET TEMPERATURE TO 105°F
SK-2	HAND SINK	1 1/2"	3"	2"	1/2"	1/2"	7-PS-68 ADVANCE TABCO, WALL MOUNTED HAND SINK, ONE PIECE DEEP DRAWN SINK BOWL (10"WX14"LX5"D), KEYHOLE WALL MOUNT BRACKET, STAINLESS STEEL BASKET DRAIN 1 1/2"IPS, 4"O.C. SPLASH MOUNTED GOOSENECK FAUCET, CHROME PLATED FURNISHED WITH AERATOR. 2165 MCGUIRE, ANGLE SUPPLY/WHEEL HANDLE. 8872 MCGUIRE, CAST BODY P-TRAP AND CLEANOUT. INSULATE P-TRAP, TAILPIECE ASSEMBLY, AND HOT AND COLD WATER ANGLE VALVES WITH BROCAR PRODUCTS, INC. TRAP WRAP. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
SK-3	3-COMPARTMENT SINK	3"	1 1/2"	2"	1/2"	1/2"	DI-3-1410 ADVANCE TABCO, THREE COMPARTMENT DROP-IN SINK 21"X50"X10", ONE PIECE SEAMLESS DEEP DRAWN SINK BOWL DESIGN. 18 GAUGE TYPE 304 SERIES STAINLESS STEEL. K-53 ADVANCE TABCO, 12" SWING SPOUT FAUCET, 4" O.C. 2165 MCGUIRE, 1/2" I.P.S. X 3/8" O.D. ANGLE STOP AND SUPPLY-WHEEL HANDLE. C8912 MCGUIRE, 1-1/4 CHROME PLATED "P" TRAP WITH CLEAN OUT
SK-4	2-COMPARTMENT SINK	3"	1 1/2"	2"	1/2"	1/2"	94-1-24-24R ADVANCE TABCO, 16"x20"x14" 1 COMPARTMENT WITH RIGHT DRAINBOARDS, STAINLESS STEEL OPEN FRAME BASE, 18" DRAINBOARDS. K-1 ADVANCE TABCO, 12" SWING SPOUT FAUCET, 8" CENTER. 2165 MCGUIRE, 1/2" I.P.S. X 3/8" O.D. ANGLE STOP AND SUPPLY-WHEEL HANDLE. C8912 MCGUIRE, 1-1/4 CHROME PLATED "P" TRAP WITH CLEAN OUT
SK-5	2-COMPARTMENT SINK	3"	1 1/2"	2"	1/2"	1/2"	FS-2-2424 ADVANCE TABCO , 24"x24"x14" 2 COMPARTMENT STAINLESS STEEL OPEN FRAME BASE. K-1 ADVANCE TABCO, 12" SWING SPOUT FAUCET, 8" CENTER. 2165 MCGUIRE, 1/2" I.P.S. X 3/8" O.D. ANGLE STOP AND SUPPLY-WHEEL HANDLE. C8912 MCGUIRE, 1-1/4 CHROME PLATED "P" TRAP WITH CLEAN OUT

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	SIZE OF CONNECTION TRAP	SS	SV	CW	HW	REMARKS
WC-1	WATER CLOSET (FLOOR MOUNTED) (A.D.A.)	-	4"	2"	1/2"	-	2467.100 AMERICAN STANDARD "CADET", VITREOUS CHINA, HIGH EFFICIENCY, ULTRA LOW CONSUMPTION 1.1GPF, ELONGATED BOWL, PRESSURE-ASSISTED SIPHON JET FLUSH ACTION. 9500CT CHURCH, EXTRA HEAVY WEIGHT AND INJECTION MOLDED OF SOLID PLASTIC, OPEN FRONT LESS COVER FOR ELONGATED BOWL AND FEATURE LARGE MOLDED-IN BUMPERS. CONCEALED CHECK HINGES TO FEATURE 300 SERIES STAINLESS STEEL POSTS THAT STOP SEAT II DEGREES BEYOND VERTICAL. USES 300 SERIES STAINLESS STEEL HARDWARE. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. WATER CLOSET SHALL BE 16-1/8" ABOVE FINISHED FLOOR LEVEL.
WC-2	WATER CLOSET (FLOOR MOUNTED)	-	4"	2"	1"	-	1086100004 "SQUAT TOILET" SANINDUSA PUBLIC SQUAT TOILET, SQUAT PAN, WITH 1-1/2 SPUD. 111-1.28-ES-S-TMO SLOAN "OPTIMA", 1" I.P.S. SCREWDRIVER BAK-CHEK® ANGLE STOP, FREE SPINNING VANDAL RESISTANT STOP CAP, HIGH BACK PRESSURE VACUUM BREAKER FLUSH CONNECTION WITH ONE-PIECE BOTTOM HEX COUPLING NUT, SPUD COUPLING AND FLANGE FOR 1 ½" TOP SPUD, EL-154 TRANSFORMER (120 VAC/24 VAC 50 VA). THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE CONCEALED LOW VOLTAGE WIRING BETWEEN THE MULTI USE TRANSFORMER FOR THE WATER CLOSETS, URINALS AND FACULTY LAVATORIES. LOCATE THE TRANSFORMERS ABOVE ACCESSIBLE CEILINGS OR PROVIDE ACCESS PANEL FOR HARD CEILINGS. UP TO 6 FIXTURE PER TRANSFORMER.
L-1	LAVATORY (UNDER COUNTER MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	1/2"	0495.221 AMERICAN STANDARD "OVALYN", UNDER COUNTER LAVATORY, VITREOUS CHINA, SINGLE HOLE CENTER MOUNTING. 420-E2805ABCP, 4" FIXED CENTERS, 4 5/8" CENTER TO CENTER RIGID CAST BRASS SPOUT, E2805AB - 0.5 GPM (1.9 L/MIN) VANDAL PROOF NON-AERATING SPRAY, 420-XAB - VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 1/2" NPSM SUPPLY INLETS FOR 3/8" OR 1/2" FLEXIBLE RISER, CHROME PLATE FINISH, WEIGHT: 4.950LBS HDI55WC MCGUIRE, WHEELCHAIR LAVATORY STRAINER. FURNISHED WITH HEAVY CAST BRASS GRID DRAIN STRAINER, ELBOW AND 1 1/4" 17GA SEAMLESS TUBULAR OFFSET TAILPIECE. PVD CHROME FINISH. ADA COMPLIANT. 8 3/4" X 5 1/8" OD. BV02 MCGUIRE'S, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE. SUPPLY STOP VALVE SHALL BE CERTIFIED BY CSA OR OTHER RECOGNIZED TESTING AUTHORITY AND SHALL BEAR MANUFACTURER AND TESTING MARK. STOP TO BE CERTIFIED TO 200 PSI LINE PRESSURE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND 1IINCH CENTER TO END. FURNISHED WITH SLIP NUTS, 17 GAUGE SEAMLESS TUBULAR BRASS WALL BEND, AND STEEL SHALLOW FLANGE. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-2	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	0611.004 AMERICAN STANDARD "CORNICE", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, 3 HOLES 4" CENTER. UTILIZE WALL HANGER INCLUDED. 7385.000 AMERICAN STANDARD "RELIANT 3", 4" FIXED CENTERS, E2805 - 0.5 GPM (1.9 L/MIN) VANDAL PROOF NON-AERATING SPRAY, 317-PR - 4" WRISTBLADE HANDLE. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-3	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	DSG-81000 SLOAN "DESIGNER SERIES", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. EFX-250 SLOAN "BASYS", SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-4	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	DSG-82000 SLOAN "DESIGNER SERIES", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. **EFX-250 SLOAN "BASYS"**, SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. QUANTITY TWO PER FIXTURE BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-5	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	DSG-83000 SLOAN "DESIGNER SERIES", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. **EFX-250 SLOAN "BASYS"**, SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. QUANTITY THREE PER FIXTURE BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
L-6	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	LVAD-1 BRADLEY "VERGE", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SINGLE HOLE CENTER. UTILIZE WALL HANGER INCLUDED. **S53-3100 BRADLEY "VERGE"**, SELF-ADJUSTING SENSOR BASED, DC (CR-P2 LITHIUM BATTERY) POWERED. 0.35 GPM/1.3L/MIN PRESSURE COMPENSATING, VANDAL-RESISTANT MULTI-LAMINAR SPRAY. EASY TO SERVICE INTEGRATED STRAINER, LEAD-FREE AND SAFETY TIMER.WALL-MOUNT ELECTRONIC FAUCET WITH PROXIMITY OPERATION. QUANTITY THREE PER FIXTURE BV02 MCGUIRE, 1/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP. 149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. 8872 MCGUIRE, HEAVY CAST BRASS 1 1/4 X 1 1/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG. 102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT. LFUSG-B-SC WATTS THERMOSTATIC MIXING VALVE, MIXING VALVE WITH DOUBLE THROTTLING DESING, TEMPERATURE SHALL BE SET TO 110°.
WB-1	WASHING MACHINE DRAIN BOX	2"	2"	2"	1/2"	1/2"	B-200 GUY GRAY, WASHING MACHINE DRAIN BOX; FINISH: MINIMUM SPANGLE G90 HOT DIPPED GALVANIZED STEEL (UNPAINTED) VALVES: FURNISHED WITH DOMESTIC VALVES AND COMBINATION MIP OR SWEAT CONNECTION DRAIN: MALE THREAD FITTING AND LOCKNUT INCLUDED
WH-1	WALL HYDRANT (FREEZE PROOF)	-	-	-	3/4"	-	5519 J.R. SMITH, BRONZE QUARTER TURN NON-FREEZE AUTOMATIC DRAINING HYDRANT WITH STAINLESS STEEL FACE, HOSE CONNECTION, INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, "T" HANDLE KEY, WHEEL HANDLE AND STAINLESS STEEL BOX WITH FULL 180° COVER OPENING.
HB-1	HOSE BIB	-	-	-	3/4"	-	442-830440P CHICAGO FAUCETS, POLISHED CHROME PLATED SOLID BRASS BODY. 40" STAINLESS STEEL HOSE WITH PUSH BUTTON SELFCLOSING HAND SPRAY, SPRAY WALL HOOK. 2 3/8" LEVER HANDLE WITH EIGHT POINT TAPERED BROACH AND SECURED COLOR CODED WHITE INDEX. SLO-COMPRESSION RENEWABLE CARTRIDGE DESIGNED TO CLOSE WITH WATER PRESSURE WITH SQUARE TAPERED BROACH FEATURE TO HELP FACILITATE HANDLE REMOVAL. IN-LINE COMBINATION FLOW REGULATOR AND BACK FLOW PREVENTER. 1/2" NPT FEMALE INLET WITH LOOSE WALL FLANGE. MOUNTING HARDWARE INCLUDED. PROVIDE ANTI-SCALDING THERMOSTATIC MIXING VALVE. MIXING VALVE SHALL COMPLY WITH ASSE 1070.

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SHEET TITLE

FIXTURE SCHEDULES

SCALE

DATE 2026/04/17

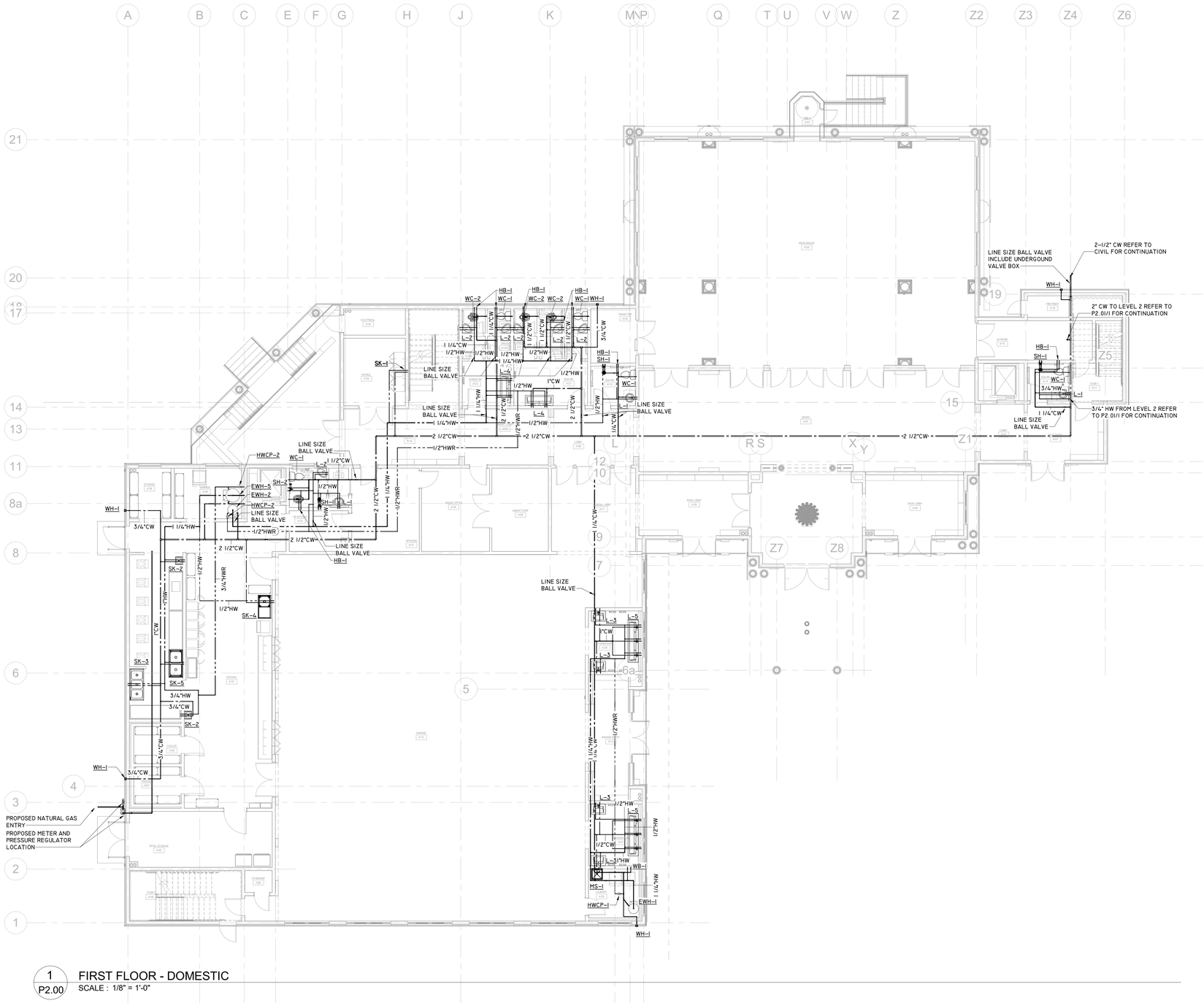
PROJECT NUMBER Project Number

SHEET NUMBER

P1.10

GENRAL NOTE

COORDINATE WITH ARCHITECTURAL PLAN FOR BIDET SPRAY.
PROVIDE WITH INTEGRAL TMV TYP. ALL



1 P2.00 FIRST FLOOR - DOMESTIC
SCALE : 1/8" = 1'-0"

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FIRST FLOOR - DOMESTIC

SCALE 1/8" = 1'-0"

DATE 2026/04/17

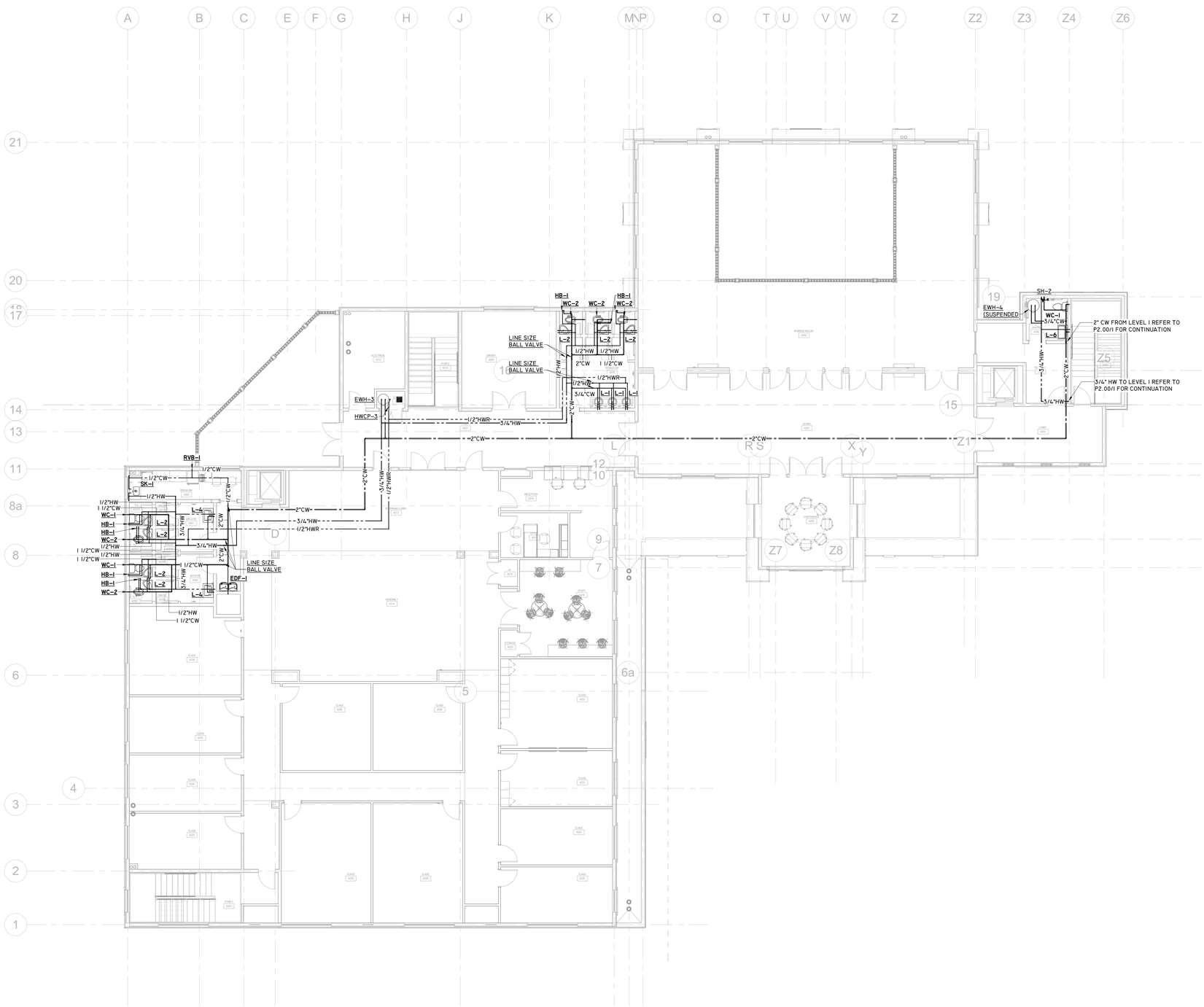
PROJECT NUMBER Project Number

SHEET NUMBER

P2.00

GENRAL NOTE

COORDINATE WITH ARCHITECTURAL PLAN FOR BIDET SPRAY.
PROVIDE WITH INTEGRAL TMV TYP. ALL



1 P2.01 SECOND FLOOR - DOMESTIC
SCALE : 1/8" = 1'-0"

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SECOND FLOOR - DOMESTIC

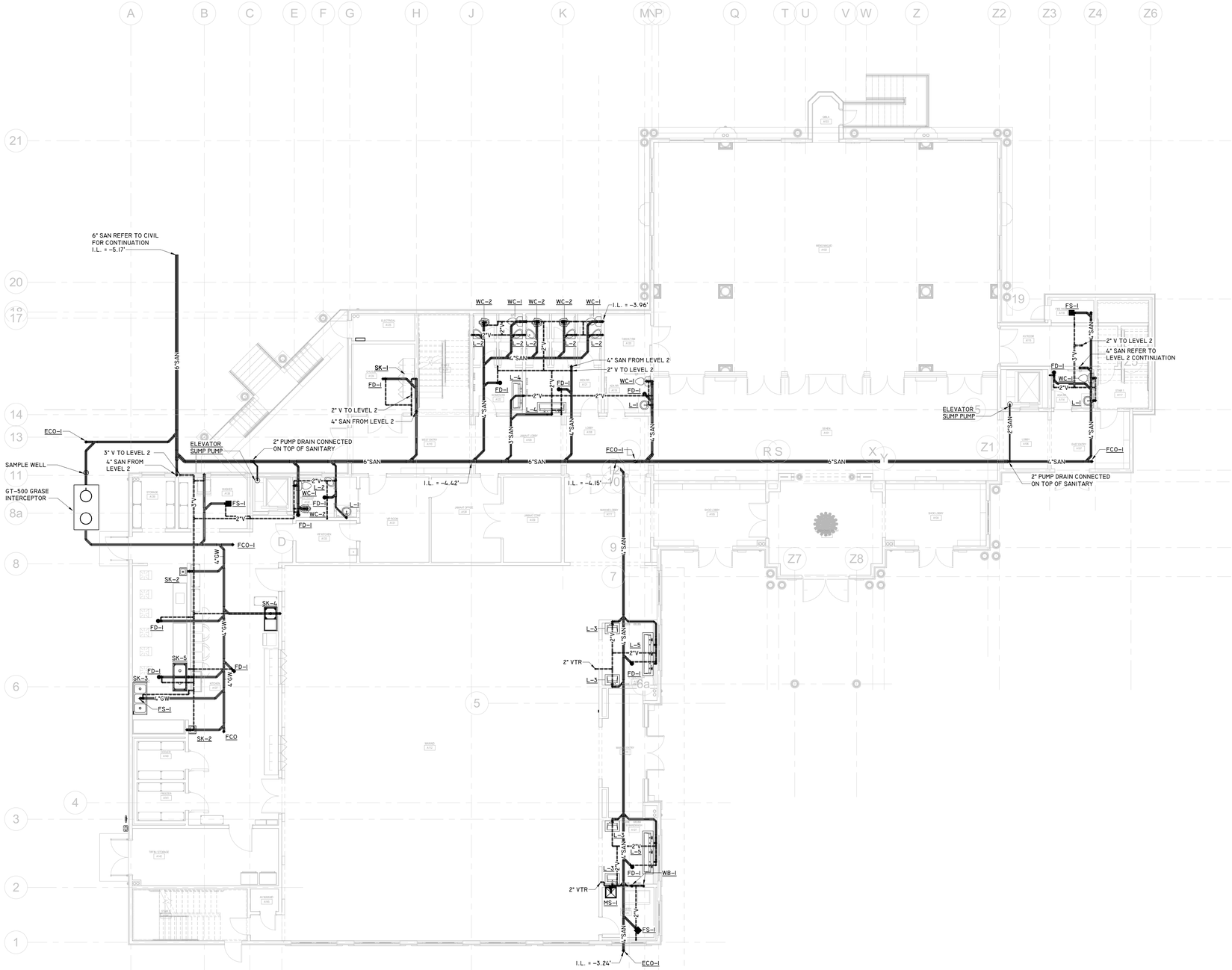
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P2.01



1 P3.00 FIRST FLOOR - SANITARY
SCALE : 1/8" = 1'-0"

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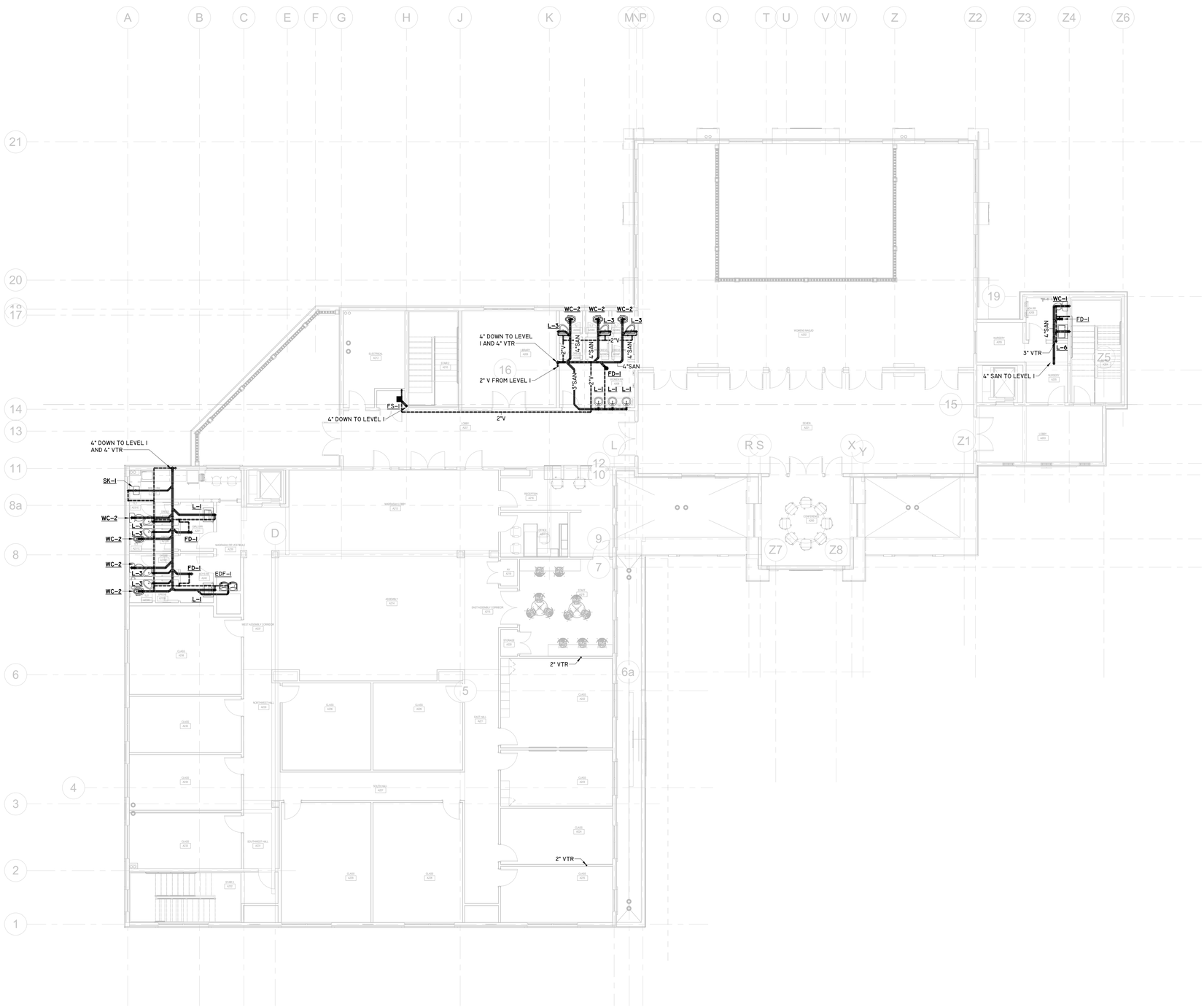
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1 P3.01 SECOND FLOOR - SANITARY
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SECOND FLOOR - SANITARY

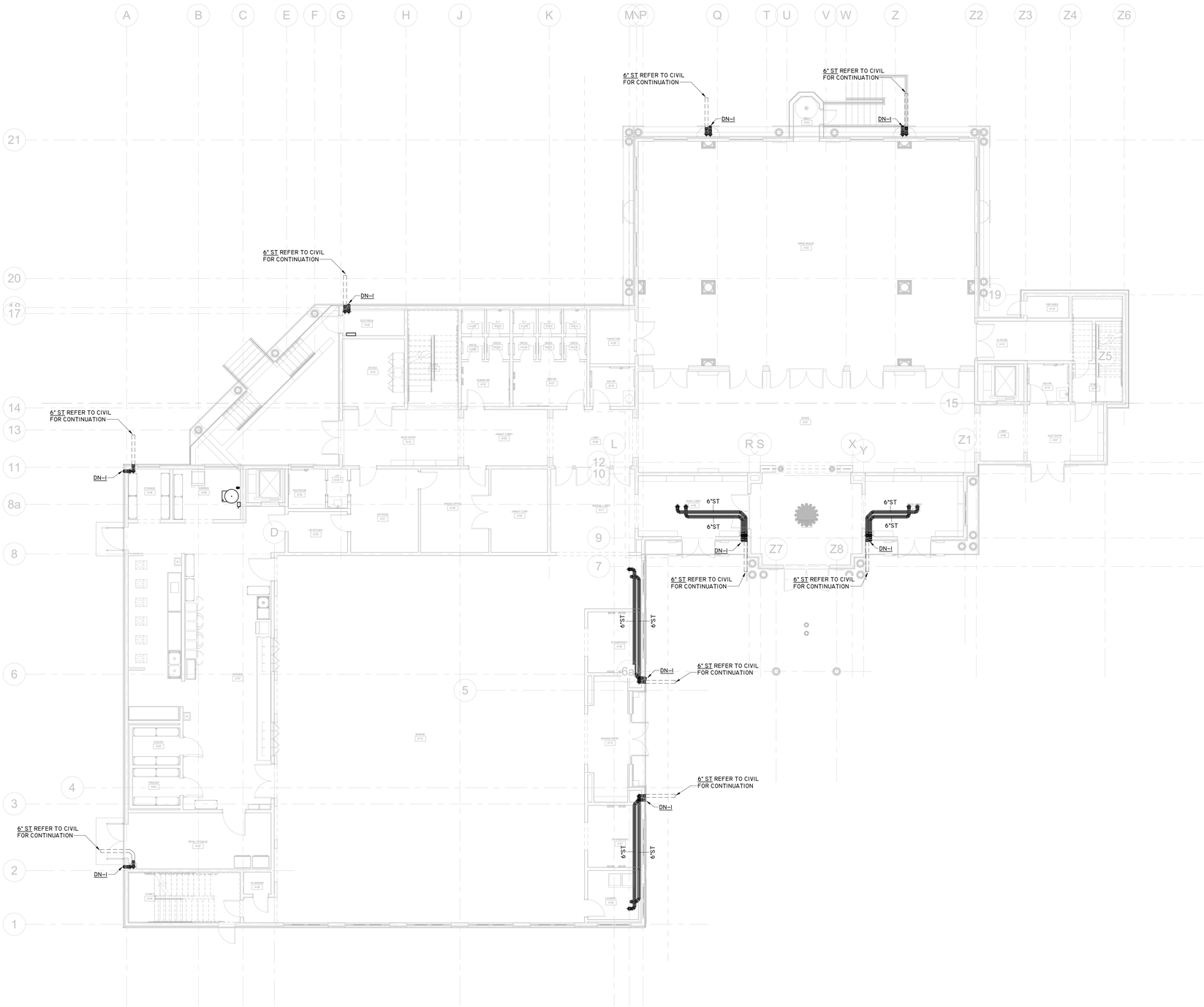
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1 P3.02 FIRST FLOOR - STORM DRAIN
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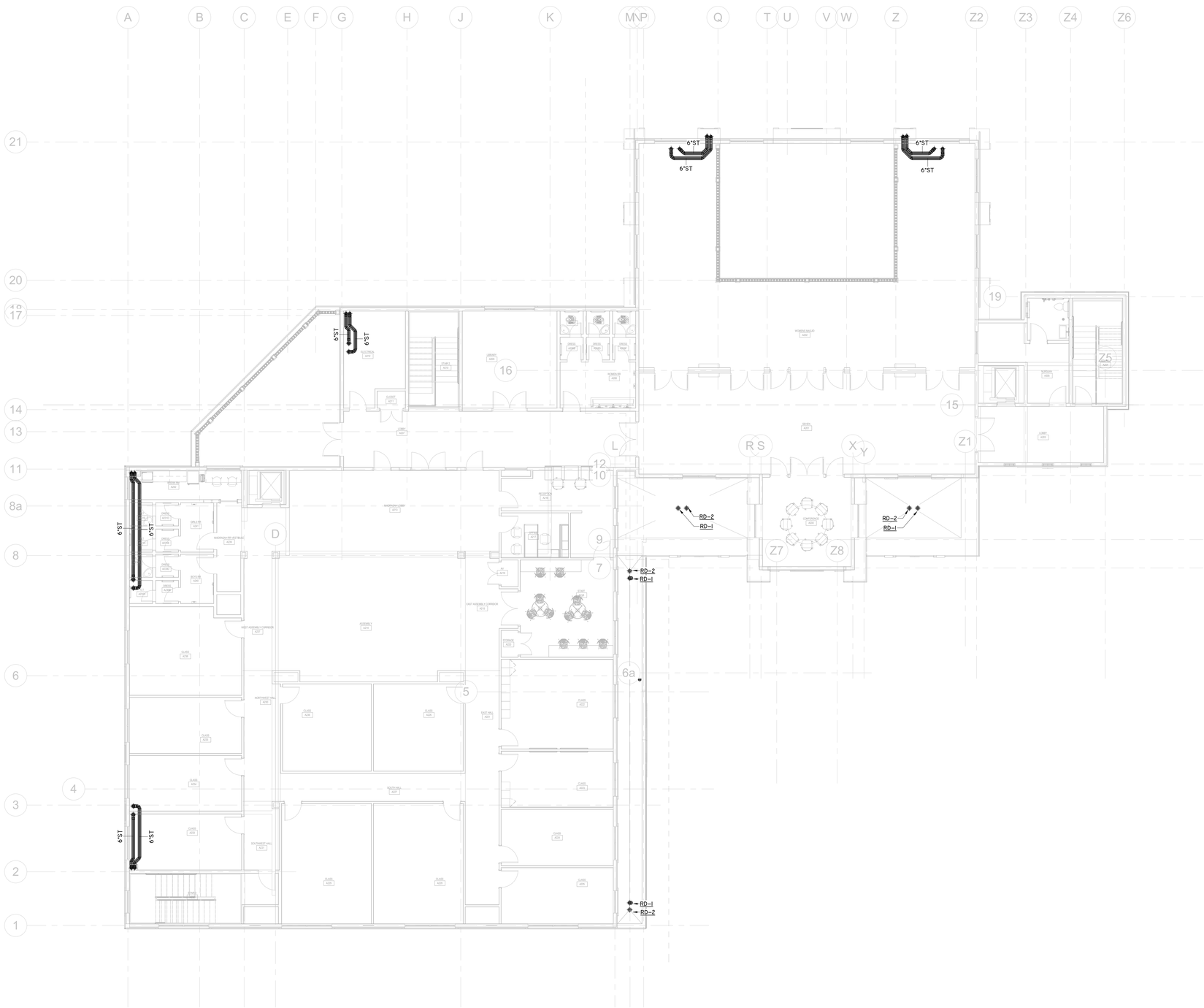
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1 P3.03 SECOND FLOOR - STORM DRAIN
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SECOND FLOOR - STORM DRAIN

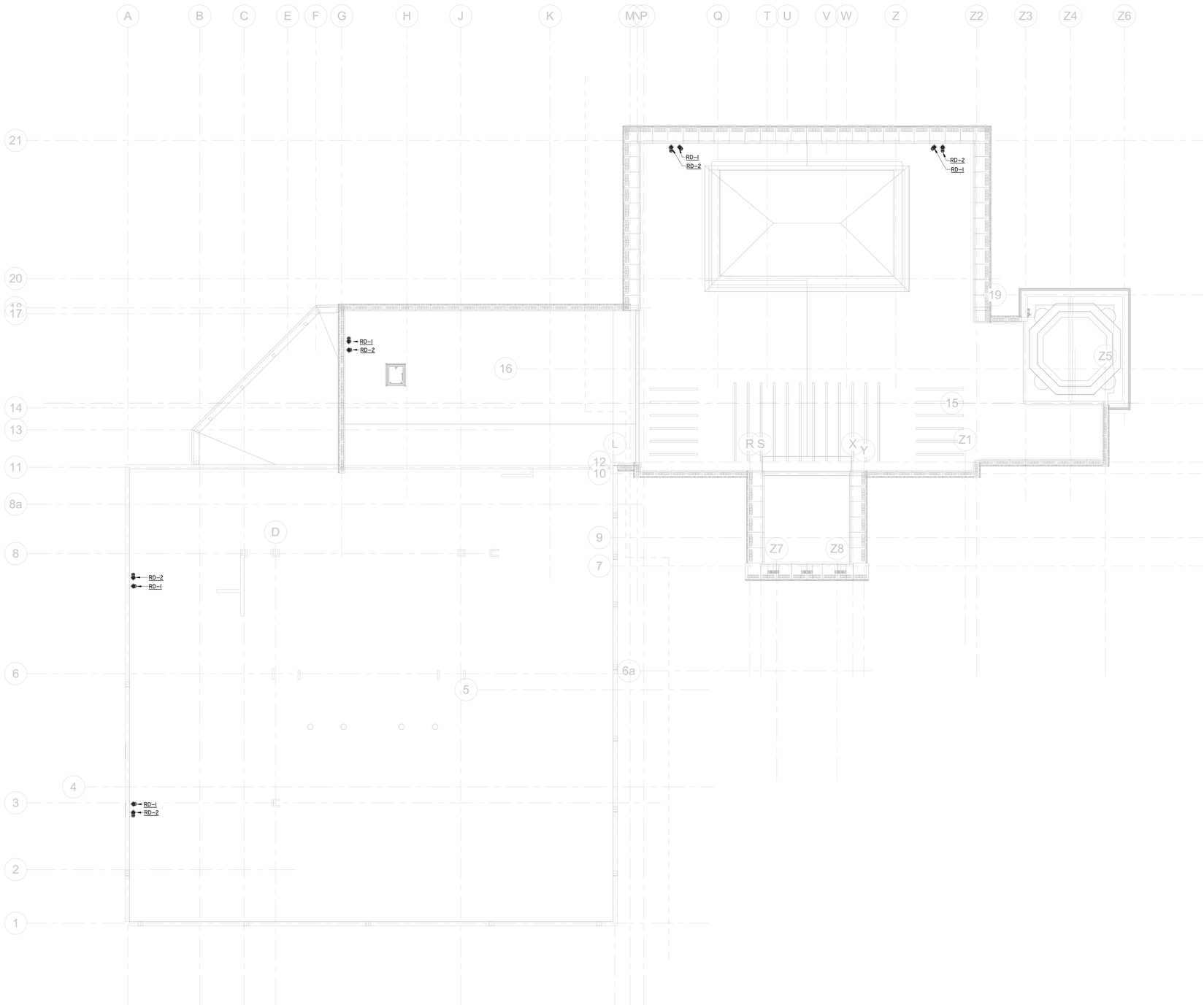
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1 P3.04 ROOF PLAN - STORM DRAIN
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ROOF PLAN - STORM DRAIN

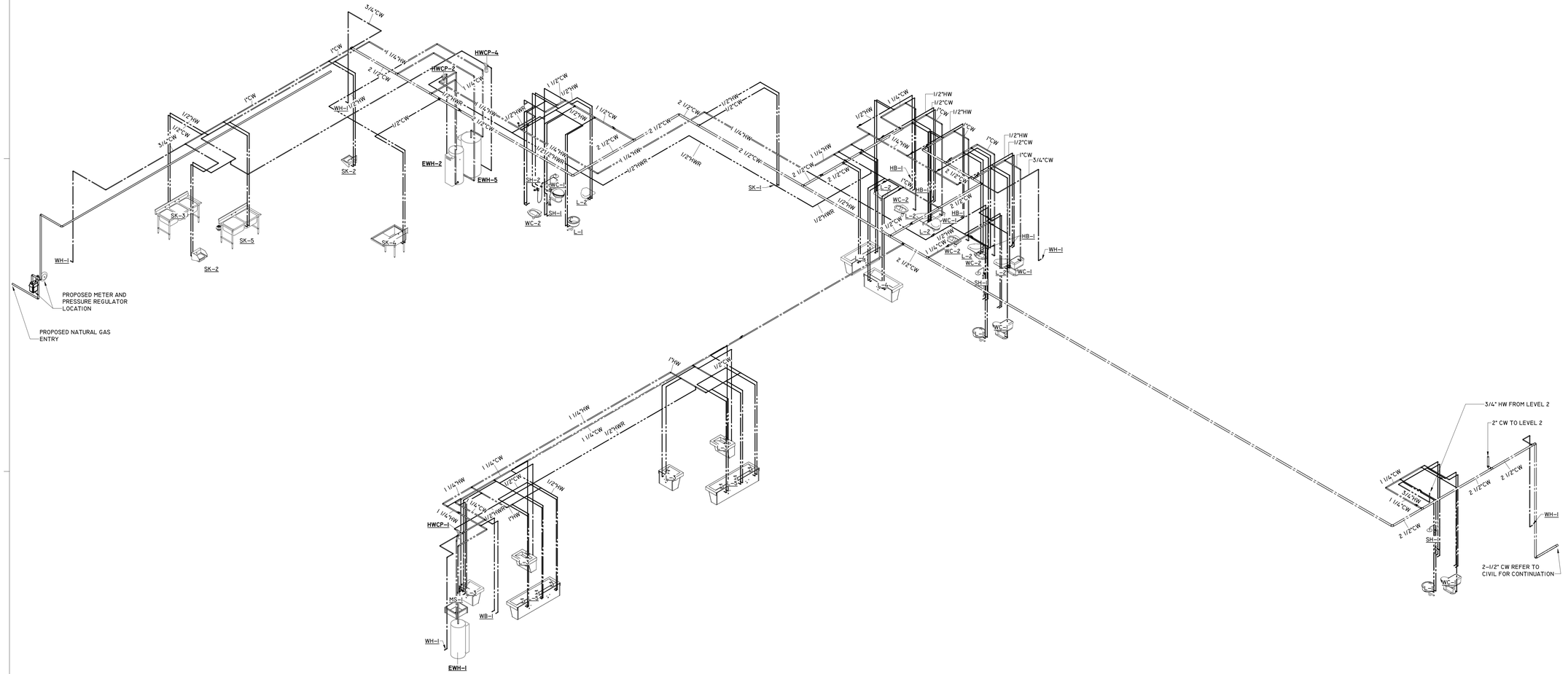
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1 LEVEL 1 DOMESTIC RISER
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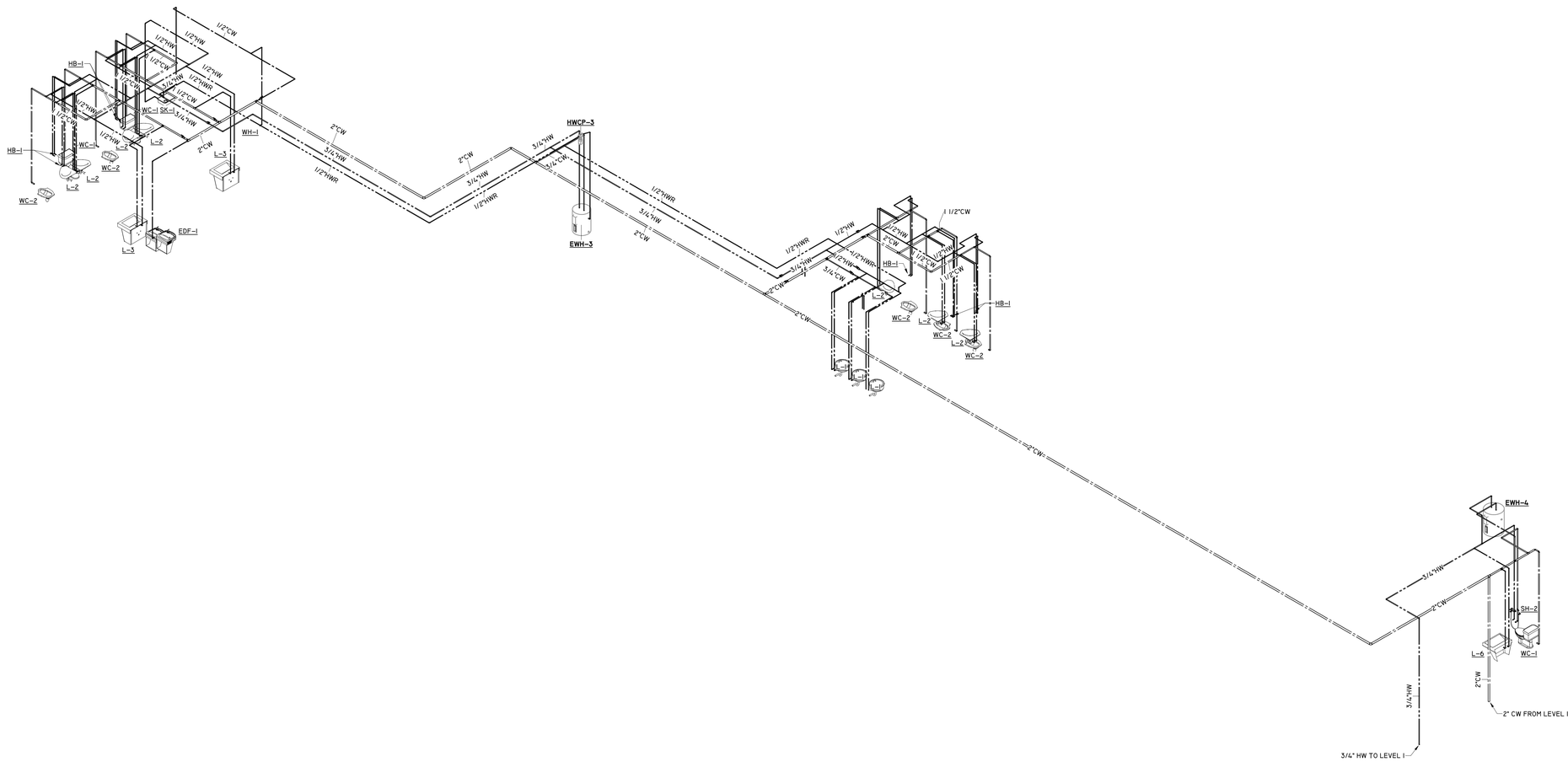
SCALE

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PROJECT NUMBER Project Number

SHEET NUMBER

P4.00



1 P4.01 LEVEL 2 DOMESTIC RISER

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SECOND FLOOR - DOMESTIC RISER

SCALE

DATE

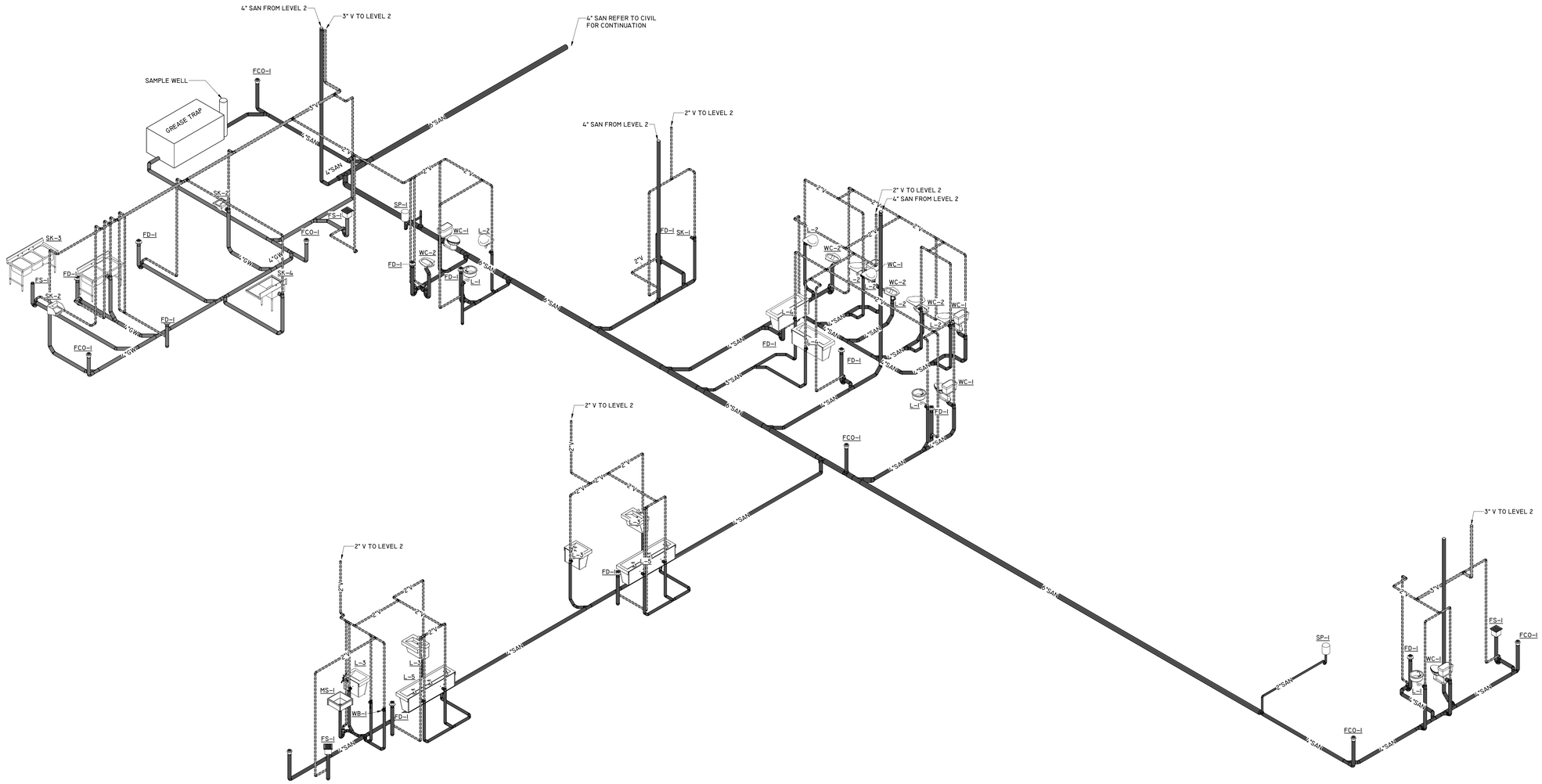
2026/04/17

PROJECT NUMBER

Project Number

SHEET NUMBER

P4.01



1 P4.02 LEVEL 1 SANITARY RISER

SCALE :

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PROFESSIONAL SEAL

STATE OF TEXAS
ANWAR HASSAN
64671
LICENSED
PROFESSIONAL ENGINEER

04-17-2026

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No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

FIRST FLOOR - SANITARY RISER

SCALE

DATE

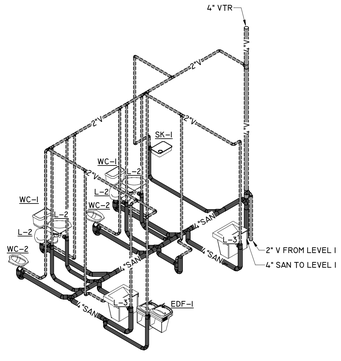
2026/04/17

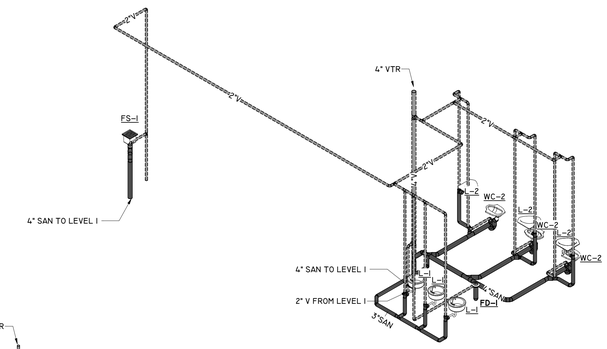
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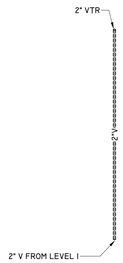
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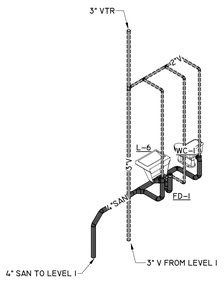
P4.02











1 P4.03 LEVEL 2 SANITARY RISER
SCALE :

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SECOND FLOOR - SANITARY RISER

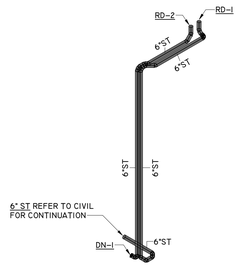
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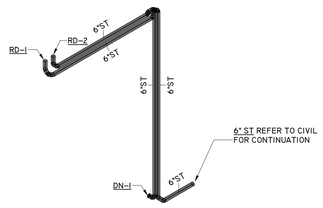
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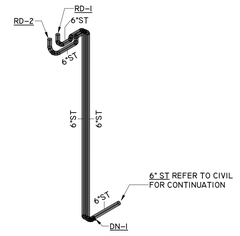
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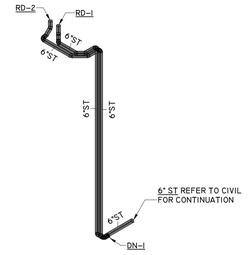
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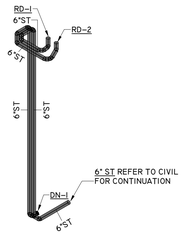
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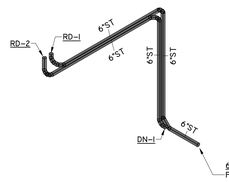


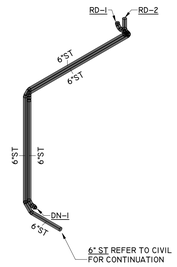


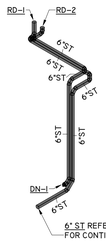


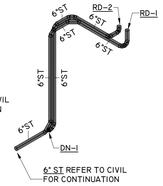












1
P4.04
STORM DRAIN RISER
SCALE :

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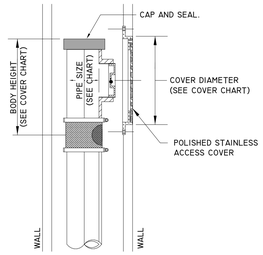
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STORM DRAIN RISER

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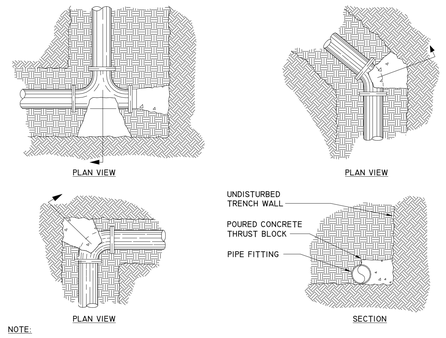
SHEET NUMBER
P4.04



MIFAB WALL CLEAN OUT

MODEL NUMBER	PIPE SIZE (NO HUB)	BODY HEIGHT	STAINLESS STEEL ACCESS COVER	MIN. WALL CAVITY SIZE
C1462-R6-3	2"	6.5"	6"	4 1/2"
C1463-R6-3	3"	8.125"	6"	6 1/2
C1466-R6-3	4"	9.75"	6"	8"
C1466-R9-3	6"	14"	9"	11 1/2"
C1468-R9-3	8"	17"	9"	15"

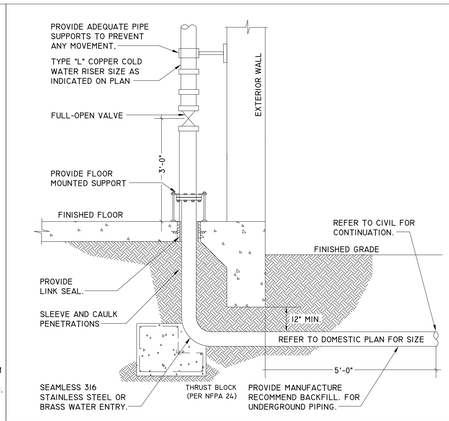
WALL CLEANOUT DETAIL | NOT TO SCALE | 12



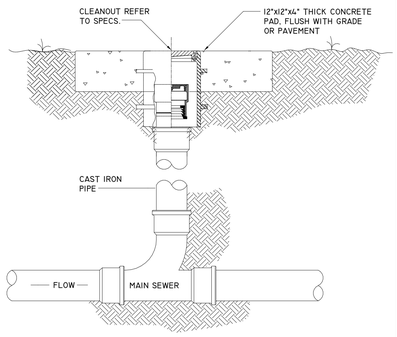
NOTE:

THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS AND AT POINTS SPECIFIED BY THE ENGINEER SHALL BE PORTLAND CEMENT CONCRETE, A MINIMUM OF 12" THICK PLACED BETWEEN SOLID GROUND AND FITTING. THRUST BLOCK SHALL BE ACCESSIBLE FOR REPAIRS. ALL BENDS OF 11 1/4° OR MORE, ALL TEES AND ALL PLUGS SHALL BE THRUST PROTECTED AS SHOWN. WHERE CONDITIONS PREVENT THE USE OF CONCRETE THRUST BLOCKS, TIED JOISTS OF A TYPE APPROVED BY THE ENGINEER MAY BE USED.

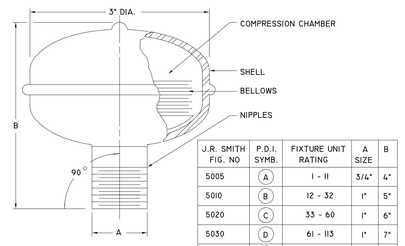
TYPICAL THRUST BLOCK DETAIL | NOT TO SCALE | 8



DOMESTIC WATER ENTRY DETAIL | NOT TO SCALE | 4



EXTERIOR CLEANOUT DETAIL | NOT TO SCALE | 11

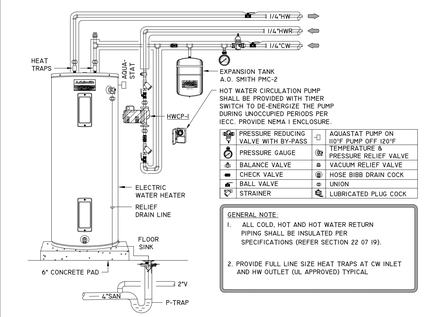


J.R. SMITH FIG. NO	P.D.I. SYMB.	FIXTURE UNIT RATING	A SIZE	B
5005	A	1 - 11	3/4"	4"
5010	B	12 - 32	1"	5"
5020	C	33 - 60	1"	6"
5030	D	61 - 113	1"	7"
5040	E	114 - 154	1"	8"
5050	F	155 - 330	1"	9"

NOTES:

1. ALWAYS INSTALL IN UPRIGHT POSITION
2. INSTALL AT AN ACCESSIBLE LOCATION. PROVIDE ACCESS PANEL WHERE REQUIRED.
3. COMPLY WITH THE LATEST UNIFORM PLUMBING CODE

WATER HAMMER ARRESTERS | NOT TO SCALE | 7

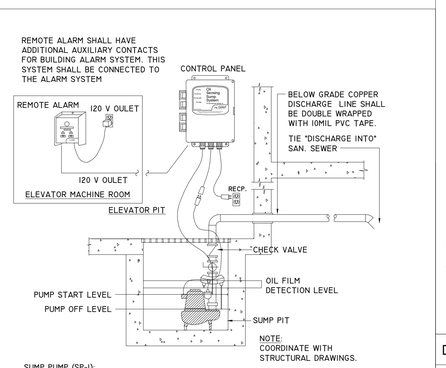


	PRESSURE REDUCING VALVE, WITH BY-PASS		AQUASTAT PUMP ON 105°F PUMP OFF 120°F
	PRESSURE GAUGE		TEMPERATURE & PRESSURE RELIEF VALVE
	BALANCE VALVE		VACUUM RELIEF VALVE
	CHECK VALVE		HOSE BIBB DRAIN COCK
	BALL VALVE		UNION
	STRAINER		LUBRICATED PLUG COCK

GENERAL NOTE:

1. ALL COLD, HOT AND HOT WATER RETURN PIPING SHALL BE INSULATED PER SPECIFICATIONS (REFER SECTION 22 07 19).
2. PROVIDE FULL LINE SIZE HEAT TRAPS AT CW INLET AND HW OUTLET (UL APPROVED) TYPICAL

ELECTRIC WATER HEATER DETAIL - (EWH-1) | NOT TO SCALE | 3



SUMP PUMP (SP-1):

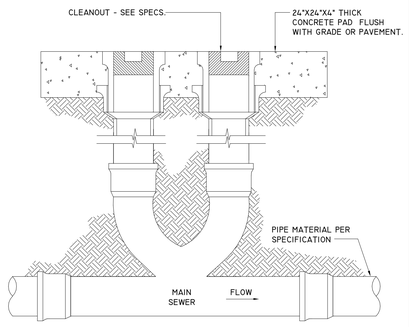
BELL & GOSSETT SERIES "2EC" MODEL "2EC07I8", EFFLUENT SUMP PUMP 50 GPM AT 30 HD, 3/4 HP, 208 VOLT, AND 1 PH WITH NEMA L6-20P CORD.

CONTROL PANEL, ALARM PANEL, AND FLOAT SWITCH/ SENSORS SHALL BE LITTLE GIANT PUMP MODEL OS3-1, 115V 60 HZ IHP MAX. CONTROL PANEL SHALL HAVE MULTIPLE INDICATOR LIGHTS: POWER, PUMP RUN, HIGH-WATER; HIGH OIL, PUMP OVERLOAD, FLOAT SWITCH/ SENSORS SHLL BE SINGLE-PIECE SENSOR FOR EASY INSTALLATION, SYSTEM SHALL BE ASME - A17.1 COMPLIANT, SYSTEM SHALL ALSO INCLUDES REMOTE ALARM, ALARM PANEL SHALL BE CONNECTED TO OIL SENSING SUMP SYSTEM'S REMOTE PANEL WHICH CONTAINS AUDIO/VISUAL ALARMING, BOTH THE MAIN PANEL AND REMOTE ALARM PANEL SHALL HAVE AUXILIARY CONTACTS FOR CONNECTION TO A BUILDINGS AUTOMATION SYSTEM OR SCADA SYSTEM.

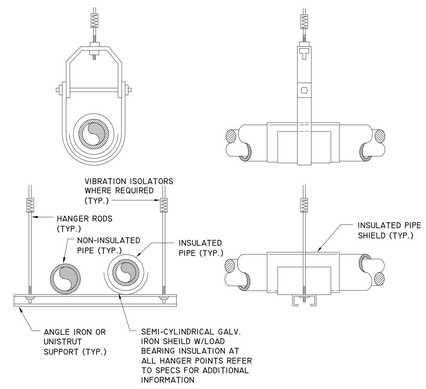
NOTES:

1. ALARM PANEL SHALL BE DIRECT WIRED.
2. LABEL SUMP PUMP DEDICATED RECEPTACLE "FOR SUMP PUMP ONLY".
3. LABEL ALARM PANEL RECEPTACLE "FOR ALARM PANEL ONLY".
4. NO PVC ALLOWED FOR PUMP DISCHARGE PIPING.
5. PROVIDE AND INSTALL A LOCAL VISUAL / AUDIBLE ALARM JUST OUTSIDE THE ELEVATOR IN ADDITION TO THE ALARM PANEL IN THE ELEV. WALL. COORDINATE WITH ARCHITECT FOR LOCATION.

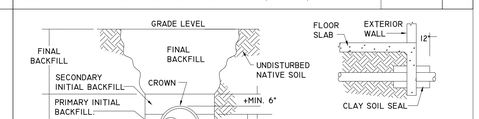
ELEVATOR PIT SUMP PUMP DETAIL (SP-1) | NOT TO SCALE | 13



DOUBLE EXTERIOR CLEANOUT | NOT TO SCALE | 10



PIPE HANGER DETAIL | NOT TO SCALE | 6



NOTE: CONTRACTOR SHALL COORDINATE WITH STRUCTURAL ENGINEER PRIOR TO PENETRATING OR MODIFICATION TO THE FOUNDATION.

UNDERGROUND INSTALLATION OF PLASTIC PIPE

PLASTIC PIPE SHOULD ALWAYS BE BURIED IN STRICT ACCORDANCE WITH THE ASTM STANDARD RELEVANT TO THE TYPE OF PLASTIC PIPING SYSTEM BEING INSTALLED. THOSE STANDARDS ARE:

ASTM D2321 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.

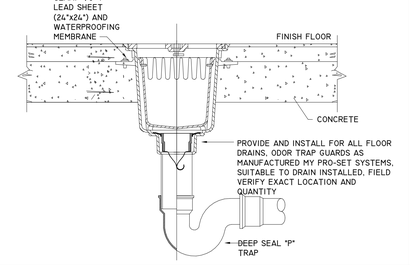
ASTM D2774 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING.

NOTE: IN ADDITION TO THESE STANDARDS, PIPE SHOULD ALWAYS BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENTS.

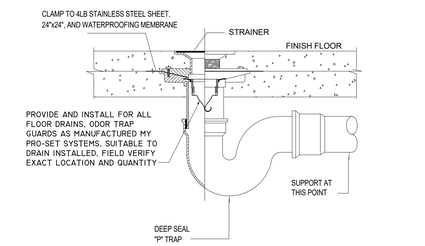
RECOMMENDATIONS FOR UNDERGROUND INSTALLATION OF PLASTIC DRAINAGE PIPE:

1. THE MINIMUM WIDTH OF THE TRENCH SHOULD BE THE PIPE OD (OUTSIDE DIAMETER) PLUS 16 INCHES THIS WILL ALLOW ADEQUATE ROOM FOR JOINING THE PIPE, SNAKING THE PIPE IN THE TRENCH TO ALLOW FOR EXPANSION AND CONTRACTION WHERE APPROPRIATE AND SPACE FOR BACKFILLING AND COMPACTION OF BACKFILL. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED TO COMPACT THE BACKFILL.
2. PROVIDE A MINIMUM OF 4 INCHES OF FIRM, STABLE AND UNIFORM BEDDING MATERIAL IN THE TRENCH BOTTOM. IF ROCK OR UNYIELDING MATERIAL IS ENCOUNTERED, A MINIMUM OF 6 INCHES OF BEDDING SHALL BE USED. BLOCKING SHOULD NOT BE USED TO CHANGE PIPE GRADE OR TO INTERMITTENTLY SUPPORT PIPE OVER LOW SECTIONS IN THE TRENCH.
3. THE PIPE SHOULD BE SURROUNDED WITH AN AGGREGATE MATERIAL WHICH CAN BE EASILY WORKED AROUND THE SIDES OF THE PIPE. BACKFILLING SHOULD BE PERFORMED IN LAYERS OF 6 INCHES WITH EACH LAYER BEING SUFFICIENTLY COMPACTED TO 85% TO 95% COMPACTION.
4. A MECHANICAL TAMPER IS RECOMMENDED FOR COMPACTING SAND AND GRAVEL. THESE MATERIALS CONTAIN FINE-GRAINS, SUCH AS SILT AND CLAY. IF A TAMPER IS NOT AVAILABLE, COMPACTING SHOULD BE DONE BY HAND.
5. THE TRENCH SHOULD BE COMPLETELY FILLED. THE BACKFILL SHOULD BE PLACED AND SPREAD IN UNIFORM LAYERS TO PREVENT ANY UNFILLED SPACES OR VOIDS. LARGE ROCKS, STONES, FROZEN CLODS, OR OTHER LARGE DEBRIS SHOULD BE REMOVED. STONE BACKFILL SHALL PASS THROUGH AN 1-1/2" SIEVE. ROCK SIZE SHOULD BE ABOUT ONE-TENTH OF THE PIPE OUTSIDE DIAMETER. HEAVY TAMPERS OR ROLLING EQUIPMENT SHOULD ONLY BE USED TO CONSOLIDATE THE FINAL BACKFILL.
6. TO PREVENT DAMAGE TO THE PIPE AND DISTURBANCE TO PIPE EMBEDMENT, A MINIMUM DEPTH OF BACKFILL ABOVE THE PIPE SHOULD BE MAINTAINED. PIPE SHOULD ALWAYS BE INSTALLED BELOW THE FROST LEVEL. TYPICALLY, IT IS NOT ADVISABLE TO ALLOW VEHICULAR TRAFFIC OR HEAVY CONSTRUCTION EQUIPMENT TO TRAVERSE THE PIPE TRENCH.

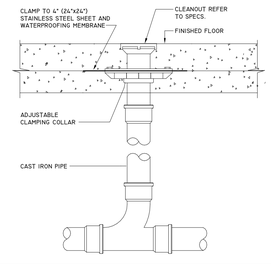
BACKFILL PIPING DETAIL | NOT TO SCALE | 2



FLOOR SINK WITH TRAP GUARD (FS-1) | NOT TO SCALE | 9



FLOOR DRAIN DETAIL WITH TRAP GUARD | NOT TO SCALE | 5



FLOOR CLEANOUT DETAIL (FCO-1) | NOT TO SCALE | 1

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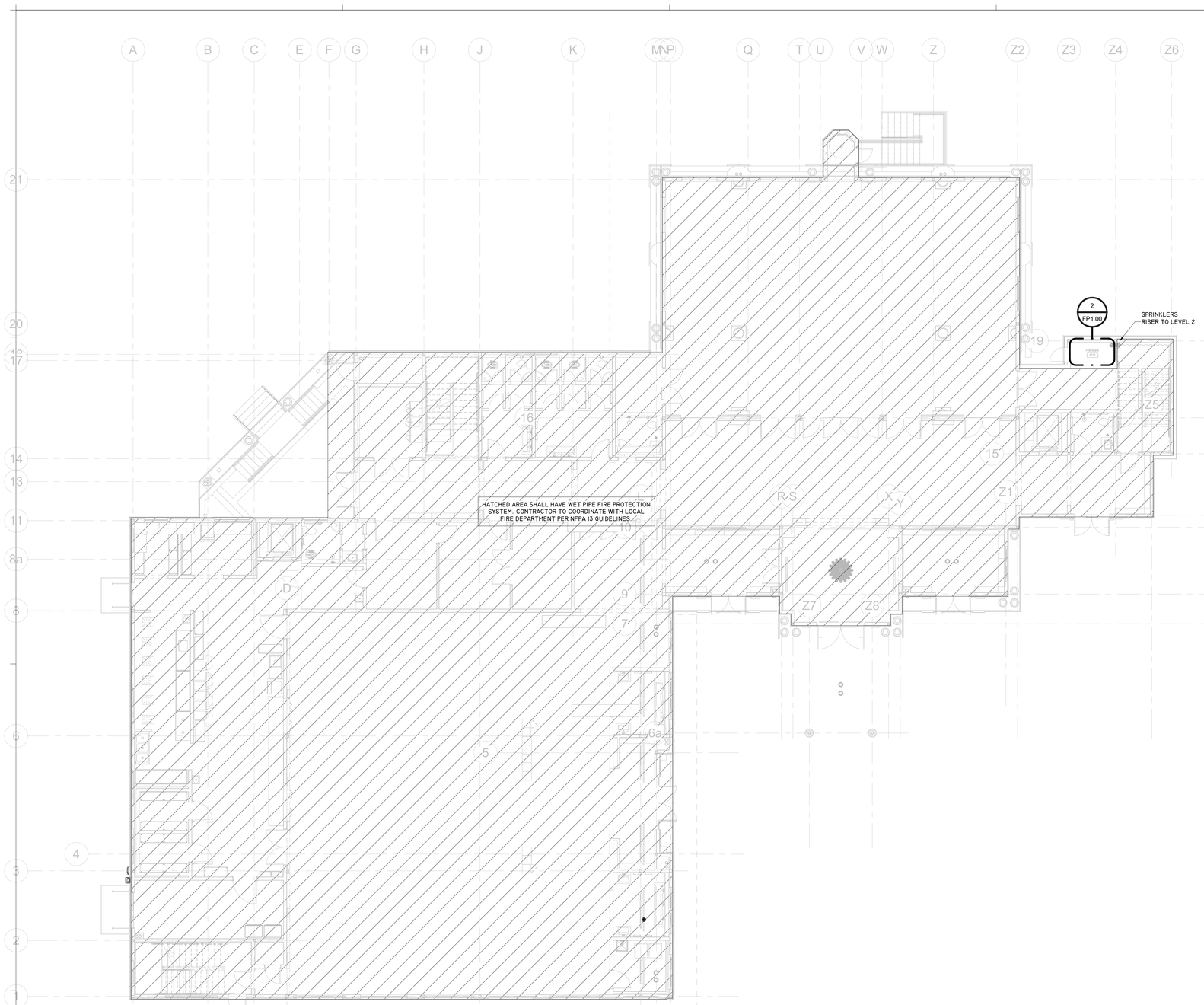
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P5.00



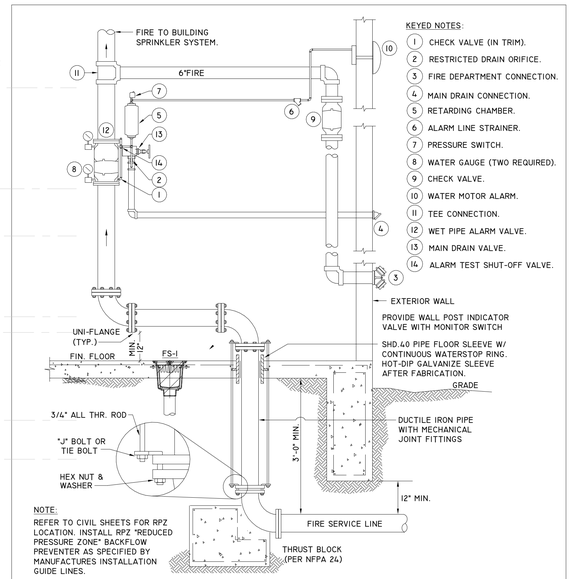
1 FP1.00 FIRST FLOOR - FIRE PROTECTION
SCALE : 1/8" = 1'-0"

FIRE PROTECTION NOTES

1. CONTRACTOR SHALL PROVIDE THE HYDRAULIC DESIGN BY A QUALIFIED FIRE PROTECTION ENGINEER IN STATE OF TEXAS. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE SPRINKLER SYSTEM FOR THE ENTIRE AREA, IN ACCORDANCE WITH NFPA 13, NFPA 13R AND CITY OF AUSTIN FIRE DEPARTMENT. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE WORK WITH ALL OTHER SERVICES INCLUDING, BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURE AND ARCHITECTURE SERVICES.
2. BEFORE INSTALLING ANY SPRINKLER ROWS AND HEADS, COORDINATE WITH OTHER SERVICES AND EQUIPMENT LOCATIONS.
3. MAIN ENTRY PIPING LINE INDICATED ON DRAWINGS IS SHOWN AS GENERAL GUIDE AND DOES NOT REPRESENT ACTUAL BID DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE SYSTEM DESIGN AND INSTALLATION OF ALL THE FACILITY.
4. SPRINKLER SYSTEM SHALL BE WET PIPE SYSTEM FOR INDOOR AREA CO-ORDINATED WITH FIRE AND DETECHTION SYSTEM FOR INTERLOCK. IN ACCORDANCE WITH CODE REQUIRED HAZARD PROTECTION.
5. ALL FIRE PROTECTION PIPING EXPOSED SHALL BE PAINTED RED.
6. PROVIDE SPRINKLER HEADS ON THE ATRIUM GLASS ON ALL FLOORS.

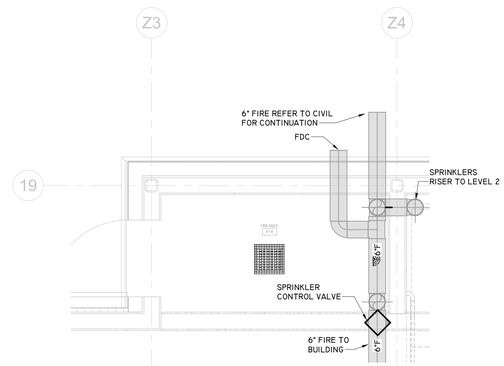
NOTE:

SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PREPARED BY A LICENSED SPRINKLER CONTRACTOR (TEXAS RME) SHALL BE SUBMITTED TO THE FIRE LOCAL MARSHALL AND OWNER'S INSURANCE CARRIER FOR REVIEW AND APPROVAL. NO WORK SHALL BEGIN UNTIL THE APPROVAL OF BOTH AUTHORITIES INDICATED ABOVE.



NOTE:
REFER TO CIVIL SHEETS FOR RPZ LOCATION. INSTALL RPZ "REDUCED PRESSURE ZONE" BACKFLOW PREVENTER AS SPECIFIED BY MANUFACTURES INSTALLATION GUIDE LINES.

FIRE ALARM CHECK VALVE DETAIL
FIRE SERVICE ENTRY DETAIL — NOT TO SCALE — 2



2 FP1.00 ENLARGED FIRE RISER ROOM
SCALE : 1/2" = 1'-0"

FSGROUP® ARCHITECTS
16575 Village Drive
Houston, Texas 77040
713 344 1752 Office
www.fsdesignbuild.com

PROJECT NAME

AUSTIN MASJID

800 N Heatherwilde Boulevard, Pflugerville, TX 78660

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PROFESSIONAL SEAL

STATE OF TEXAS
ANWAR HASSAN
64671
LICENSED
PROFESSIONAL ENGINEER
04-17-2026

ISSUED FOR

ISSUE FOR PERMIT

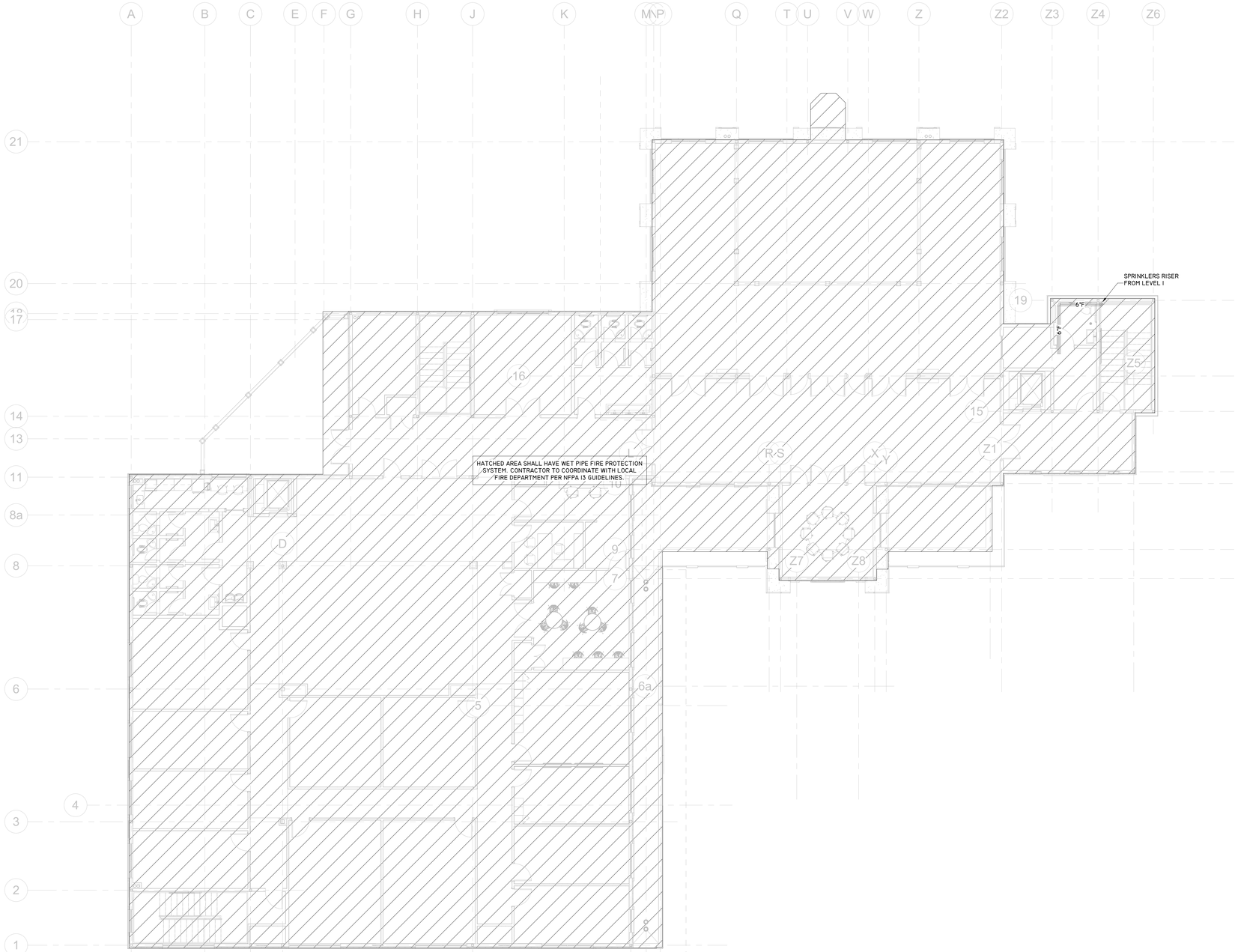
REVISIONS

No.	DESCRIPTION	DATE
	ISSUE FOR PERMIT	4-17-26

SHEET TITLE

FIRST FLOOR FIRE PROTECTION

SCALE: As indicated
DATE: 2026/04/17
PROJECT NUMBER: Project Number
SHEET NUMBER: FP1.00



1 FP2.00 SECOND FLOOR - FIRE PROTECTION

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

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SHEET TITLE

SECOND FLOOR
FIRE PROTECTION

SCALE 1/8" = 1'-0"

DATE 2026/04/17

PROJECT NUMBER Project Number

SHEET NUMBER

FP2.00