P1					P	ANEL	BOAF	RD				,	M.C.B. (8) AIC
	/ES: HOUSE											SU EQUIPMENT GROUN	RFACE ND BUS
LOCA	TION: GARAGE												
	DESCRIPTION	WIRE	BRKR	PL		A	1	В	PL	BRKR	WIRE	DESCRIPTION	
1	LIGHTING LIVING SPACE (6)	12	20 A	1	0.87	2.87			2	25 A	10	CU-1	$\frac{2}{2}$
3	LIGHTING BEDROOMS (6)	12	20 A	1			1.10	2.87					4
5	LIGHTING FANS BEDROOM (6)	12	20 A	1	0.99	1.50			1	15 A	12	GAS FURNACE (6)	6 {
7	RECEPTS KITCHEN (6)	12	20 A	1			0.54		1			SPACE	8 3
9	RECEPT KITCHEN COUNTER (6)	12	20 A	1	1.50				1			SPACE	ξ 10 ξ
11	RECEPT KITCHEN COUNTER (6)	12	20 A	1			1.50	0.10	1	20 A	12	GAS WATER HEATER (6)	12
13	REFRIGERATOR (6)	12	20 A	1	1.08	0.18			1	20 A	12	GAS RANGE (6)	14
15	DISHWASHER / DISPOSAL (6)	12	20 A	1			1.20	0.00	2	30 A	10	FUTURE ELC DRYER	16
17	RANGE HOOD OR MICROWAVE (6)	12	20 A	1	1.20	0.00							<u>}</u> 18 }
19	RECEPTS DINING ROOM (6)	12	20 A	1			0.72	1.20	1	20 A	12	GAS DRYER (6)	{ 20 }
21	RECEPTS LIVING ROOM (6)	12	20 A	1	0.72	1.50			1	20 A	12	WASHER (6)	22
23	RECEPTS LIVING ROOM (6)	12	20 A	1			0.72	1.20	1	20 A	12	GARAGE DOOR OPENER (6)	24
25	RECEPTS MASTER BDRM (6)	12	20 A	1	0.54	0.90			1	20 A	12	RECEPTS EXTERIOR (6)	26
27	RECEPTS MASTER BDRM (6)	12	20 A	1			0.72	0.36	1	20 A	12	RECEPTS GARAGE (6)	28
29	RECEPTS BATHROOM (6)	12	20 A	1	0.36	0.54			1	20 A	12	RECEPTS GARAGE (6)	30
31	RECEPTS BEDROOM 2 (6)	12	20 A	1			0.90	0.10	1	20 A	12	SMOKE DETECTORS (6)	32
33	RECEPTS BEDROOM 2 / 3 (6)	12	20 A	1	0.72	0.21			1	20 A	12	MASTER CLOSET (6)	34
35	RECEPTS BEDROOM 3 (6)	12	20 A	1			0.90	0.00	1	20 A		SPARE (6)	36
37	SPARE		20 A	1	0.00	0.00			1	20 A		SPARE (6)	38
39	SPARE		20 A	1			0.00		1			SPACE	40
41	SPARE		20 A	1	0.00				1			SPACE	42
		TOTAL	CONNE	CTED	15	5.66	14	.13	KVA				
		TOTAL	CONNE	CTED	13	0.53	117	7.71	AMF	PS		SEE RESIDENTIAL LOAD CALCS	

			LIGHTING FIX	TUI	RE S	СНІ	EDULE
TYPE	QTY	MANUFACTURER		VOLT	WATT	LAMP	DESCRIPTION
Α	12	ELITE	REL637-1200L-DIMTR-120-30K -90-WH	120V	16 VA	LED	6" RECESSED CAN LIGHT, DAMP LOCATION RATED, RT-CL-WH
В	1	GOLDEN	HOMESTEAD 4 LIGHT MINI CHANDELIER	120V	48 VA	LED	DECORATIVE DINING ROOM LIGHT, PROVIDE 100W EQV E26 3000K LED BULBS
С	1	TBD	TBD	120V	18 VA	LED	BAR PENDANT LIGHT
D	4	COMMERCIAL	9IN 120W EQU MUSHROOM FLUSH MOUNT	120V	32 VA	LED	9" DOME LIGHT
Е	2	VOGUE	WS-3127-3000K	120V	39 VA	LED	3' VANITY LIGHT
F	4	EELP	CGF7-19L-120V-30K	120V	480 VA	LED	CEILING FAN W/ LIGHT - VEIRIFY COLOR W/ ARCHITECTURAL
G	2	ELITE	4-OEC-LED-5000L-DIM10-40K- 85	120V	37 VA	LED	4' GARAGE LIGHT
Н	4	HAMPTON	WICKFORD 1-LIGHT WALL LANTERN	120V	16 VA	LED	WALL MOUNTED PORCH LIGHT, PROVIDE 100W EQV E26 4000K LED BULB
J	2	BROAN	679	120V	240 VA	LED	BATHROOM EXHAUST FAN W/ LIGHT - REF MECHANICAL

PANELBOARD NOTES (#):

- 1. TERMINATE GROUND ON ISOLATED GROUND BUS.
- PROVIDE LOCKING DEVICE (LOCK-OFF FOR MAINTENANCE).

PROVIDE GFCI BREAKER (PERSONNEL PROTECTION 5 mA).

- PROVIDE LOCKING DEVICE (LOCK-ON FOR CRITICAL LOAD).
- PROVIDE GFCI BREAKER (EQUIPMENT PROTECTION 30 mA).
- PROVIDE COMBINATION ARC FAULT CIRCUIT BREAKERS WHERE INDICATED PER NEC 210.12(A).
- CONDUCTOR SIZE HAS BEEN INCREADED TO ACCOUNT FOR VOLTAGE DROP.
- SIZE GROUNDING CONDUCTOR PROPORTIONALLY PER NEC.
- COORDINATE PANELBOARD AIC RATING WITH UTILITY.
- REFERENCE ONE-LINE DIAGRAM FOR WIRE SIZE/QUANTITY.

TYPICAL MOUNTING HEIGHTS

ALL HEIGHTS ARE FROM FINISHED FLOOR TO THE CENTERLINE OF THE DEVICE UNLESS NOTED OTHERWISE. DEVICES ABOVE A COUNTERTOP SHALL BE MOUNTED 4" ABOVE THE BACKSPLASH TO THE CENTERLINE.

> RECEPTACLES +18" TELEPHONE JACKS +48" DATA JACKS SWITCHES

}			
}	RESIDENTIAL LOAD CALC	UL	.ATION
ξ	PANELBOARD VOLTAGE	=	240 V
ţ	DWELLING UNIT AREA	=	1214 SQFT
{	GENERAL LIGHTING/POWER (3W/SQFT)	=	3642 VA
ζ	SMALL APPLIANCE CIRCUIT (2 CIRCUITS)	=	3000 VA
}	WASHER (ASSUMED)	=	1500 VA
}	DRYER (MINIMUM)	=	5000 VA
ζ	REFRIGERATOR (ASSUMED)	=	1080 VA
{	VENT HOOD / MICROWAVE (ASSUMED)	=	1200 VA
}	DISHWASHER / DISPOSAL (ASSUMED)	=	1200 VA
}	GAS RANGE (ASSUMED)	=	240 VA
ζ	GAS WATER HEATER (ASSUMED)	=	100 VA
}	SUBTOTAL	=	16962 VA
ξ	FIRST 10KVA AT 100%	=	10000 VA
}	REMAINDER AT 40%	=	2785 VA
ζ	CONDENSING UNIT / HEAT PUMP	=	5736 VA
}	GAS FURNACE (0%)	=	1500 VA
ξ	HVAC LOAD PER NEC 220.82(C)	=	5736 VA
}	TOTAL FEEDER LOAD PER NEC 220.85	=	18521 VA
ځ		=	77 A

- REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT. E02 MOUNT FIXTURE HORIZONTALLY AND CENTER ABOVE VANITY MIRROR.
- E03 | SEAL FIXTURE TO CEILING WITH WEATHERPROOF SILICONE PER MANUFACTURERS INSTRUCTION. PROVIDE SHOWER LENS AND
- TRIM FOR FIXTURE. E04 WHERE POSSIBLE, SWITCH INTEGRAL LIGHT AND FAN
- SEPERATELY. E05 DISCONNECT SWITCH SIZED PER MANUFACTURERS MOCP RATING (MAXIMUM OVER-CURRENT PROTECTION
- E06 PROVIDE CONNECTION OF THERMOSTAT TO FCU USING 18/7 THERMOSTAT WIRING. COORDINATE WITH MECHANICAL
- CONTRACTOR FOR FINAL LOCATION PRIOR TO ROUGH-IN. E07 LOCATION OF PUSHBUTTON CONTROLS FOR GARAGE DOOR OPENER.
- E08 DISHWASHER RECEPTACLE TO BE GFCI TYPE. GARBAGE DISPOSAL SWITCH FOR STANDARD RECEPTACLE SHALL BE INTALLED AFTER DISHWASHER RECEPTACLE TO ENSURE SWITCH
- OPERATION DOES NOT CONFLICT WITH GFCI FUNCTIONALITY. E09 RECEPTACLE FOR RANGE HOOD OR OVER THE RANGE MICROWAVE SHALL BE INTALLED IN CABINETRY OVER RANGE.

GENERAL NOTES:

NOT ALL SYMBOLS MAY APPLY TO ALL SHEETS.

REQUIREMENTS SHALL TAKE PRECEDENCE.

- PROVIDE ALL POWER CIRCUITS, WIRING, CONDUIT, OUTLETS, DISCONNECT SWITCHES, ETC., AND PROVIDE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT.
- PROVIDE A GROUNDING CONDUCTOR FOR ALL CIRCUITS IN ACCORDANCE WITH N.E.C. ARTICLE 250. VERIFY EXACT CONNECTIONS REQUIRED FOR ALL EQUIPMENT PRIOR TO ROUGH--IN.
- 4. THE USE OF EXTENSION CORDS OR POWER STRIPS AS PERMANENT WIRING TO EQUIPMENT, LIGHTING, FANS, ETC. IS PROHIBITED.
- ALL ELECTRICAL WIRING SHALL BE IN COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE. 5. ALL ELECTRICAL DEVICE AND COVER PLATE COLORS TO BE COORDINATED WITH ARCHTIECTURAL FINISH PLANS.
- ALL DEVICES LOCATED WITHIN CLOSE PROXIMITY TO ONE ANOTHER SHALL BE COVERED BY A SINGLE FACE PLATE WHENEVER
- 7. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITHT THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES. WHERE CONFLICTS ARISE, THE MOST STRINGENT
- BIDDERS SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS TO FULLY UNDERSTAND THE NATURE AND SCOPE OF THE WORK PRIOR TO SUBMITTING A BID. THE SUBMISSION OF A BID IS CONSIDERED EVIDENCE THAT SUCH EXAMINATION HAS BEEN PERFORMED AND THAT COMPLIANCE WITH ALL GOVERNING CODES/REQUIREMENTS IS INCLUDED IN BID. LATER CLAIMS FOR LABOR, EQUIPMENT, MATERIALS REQUIRED, OR FORESEEABLE DIFFICULTIES ENCOUNTERED SHALL NOT BE

GENERAL POWER NOTES:

- PROTECT ALL ADJACENT SURFACES DURING CONSTRUCTION. ANY SURFACES DAMAGED SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL SYSTEMS WITH OTHER TRADES. SEE MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.
- PROVIDE A IN-GROUND PULL BOX EVERY 200' FOR ALL UNDERGROUND CONDUIT RUNS.

ALLOWED. ALL PERMIT AND INSPECTION FEES SHALL BE INCLUDED IN BASE BID.

- WIRING DEVICES: DEVICE MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTER OF OUTLET BOX UNLESS NOTED OTHER WISE ON PLANS. COORDINATE THE STANDARD MOUNTING HEIGHTS WITH MASONRY. REFERENCE TYPICAL MOUNTING HEIGHT SCHEDULE FOR MOUNTING HEIGHTS.
- WIRING SHALL INCLUDE FINAL CONNECTIONS TO ALL EQUIPMENT IN CONFORMANCE WITH EQUIPMENT SUPPLIER WIRING DIAGRAMS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE PANELBOARD IDENTIFICATION SCHEDULES UPON COMPLETION.
- WHERE BRANCH CIRCUITS ARE GROUPED, SIZE CONDUITS AND DE-RATE CURRENT CARRYING CONDUCTORS PER NEC.
- PROVIDE APPROPRIATE HANDLE TIES FOR TWO SINGLE POLE CIRCUIT BREAKERS AS REQUIRED WHEN USING MULTI-WIRE BRANCH CIRCUITS PER NEC ARTICLE 210.4 PART (B).
- 9. PROVIDE BLANK FILLERS FOR ALL UNUSED SPACES IN PANELBOARDS WHERE FACTORY KNOCKOUTS HAVE BEEN REMOVED.
- 10. FEEDERS SHALL CONFORM TO NEC 215.2. BRANCH CIRCUITS AND VOLTAGE DROP REQUIREMENTS SHALL CONFORM TO NEC
- 11. ONLY FEEDER CIRCUITS SPECIFICALLY NOTED AS UNDERGROUND ON THE ONE-LINE DIAGRAM AND BRANCH CIRCUITS NOTED BY LEGEND SHALL BE INSTALLED UNDER SLAB. ALL OTHER FEEDER AND BRANCH CIRCUITS SHALL BE INSTALLED OVERHEAD WHERE POSSIBLE. ALL SITE CONDUITS SHALL BE INSTALL AT A MINIMUM OF 24" UNDER FINISHED GRADE.
- 12. HOME RUNS ARE SHOWN SEPARATELY TO PRESERVE DRAWING CLARITY. COMBINE HOME RUNS SERVING LIGHTING AND WIRING DEVICES AS ALLOWED BY THE NEC.
- 13. NO EXPOSED CONDUIT OR WIRING IN FINISHED SPACES SHALL BE ALLOWED WITHOUT WRITTEN PERMISSION FROM

GENERAL LIGHTING NOTES::

- PROVIDE ALL ACCESSORIES REQUIRED FOR FUNCTIONAL ELECTRICAL INSTALLATION AND SUPPORT.
- PROVIDE DRY WALL/PLASTER KIT FOR FIXTURES MOUNTED ON GYPBOARD PER CEILING PLAN.
- LIGHT FIXTURES SHALL BE SUPPORTED IN ACCORDANCE WITH NEC ARTICLE 300; SPECIFICALLY PARAGRAPH 300.11(A).
- COORDINATE EXACT FIXTURE LOCATIONS WITH STRUCTURE, DIFFUSERS, ETC.
- THE LOCATION OF DUCTS, PIPE AND EQUIPMENT AS SHOWN ON THE DRAWINGS IS DIAGRAMMATIC AND SCHEMATIC. IT IS THE RESPONSIBILITY OF OF THE CONTRACTOR TO COORDINATE WITH ALL OTHER TRADES BEFORE INSTALLATION. LIGHT FIXTURE
- LOCATIONS SUPERSEDE HVAC DUCTWORK, GRILLES AND DIFFUSERS. OFFSET TO AVOID STRUCTURE AND/OR ANY OTHER PIPING. REFER TO LIGHT FIXTURE SCHEDULE FOR ALL LIGHT FIXTURES THAT ARE IC RATED. ALL RECESSED FIXTURES SHALL ADHERE TO ARTICLE 410.116 OF THE NATIONAL ELECTRICAL CODE (NEC).
- 7. PROVIDE TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL LIGHT FIXTURES AND LIGHT CONTROLS.

FLFC	TRICAL LEGEND
	T ALL SYMBOLS MAY BE USED)
SYMBOL	DESCRIPTION
J	JUNCTION BOX
Φ	RECEPTACLE, 120V DUPLEX
\Diamond	RECEPTACLE, 120V GFI DUPLEX
Φ	RECEPTACLE, 240V SIMPLEX
#	RECEPTACLE, 120V QUADPLEX
	PANELBOARD
마	DISCONNECT SWITCH, NON-FUSED
Zh	DISCONNECT SWITCH, FUSED
\$	SWITCH, SINGLE POLE
\$3	SWITCH, 3-WAY
\$4	SWITCH, 4-WAY
\$ _D	SWITCH, DIMMER
	LIGHT FIXTURE, LINEAR
0	LIGHT FIXTURE, CEILING MOUNTED
ОН	LIGHT FIXTURE, WALL MOUNTED

	LIGHT FIXTURE, LINEAR
0	LIGHT FIXTURE, CEILING MOUNTED
\triangle	LIGHT FIXTURE, WALL MOUNTED
	CIRCUIT, CONCEALED IN WALLS OR CEILING
	CIRCUIT, CONCEALED IN SLAB

DATA AND COAXIAL CONNECTION UNDER SINGLE FACE PLATE

TELEPHONE

SMOKE / CARBON MONOXIDE DETECTOR

| AFF -- ABOVE FINISHED FLOOR WP -- WEATHER PROOF AFCI -- ARC FAULT CIRCUIT INTERUPTING GFCI -- GROUND FAULT CIRCUIT INTERRUPTING

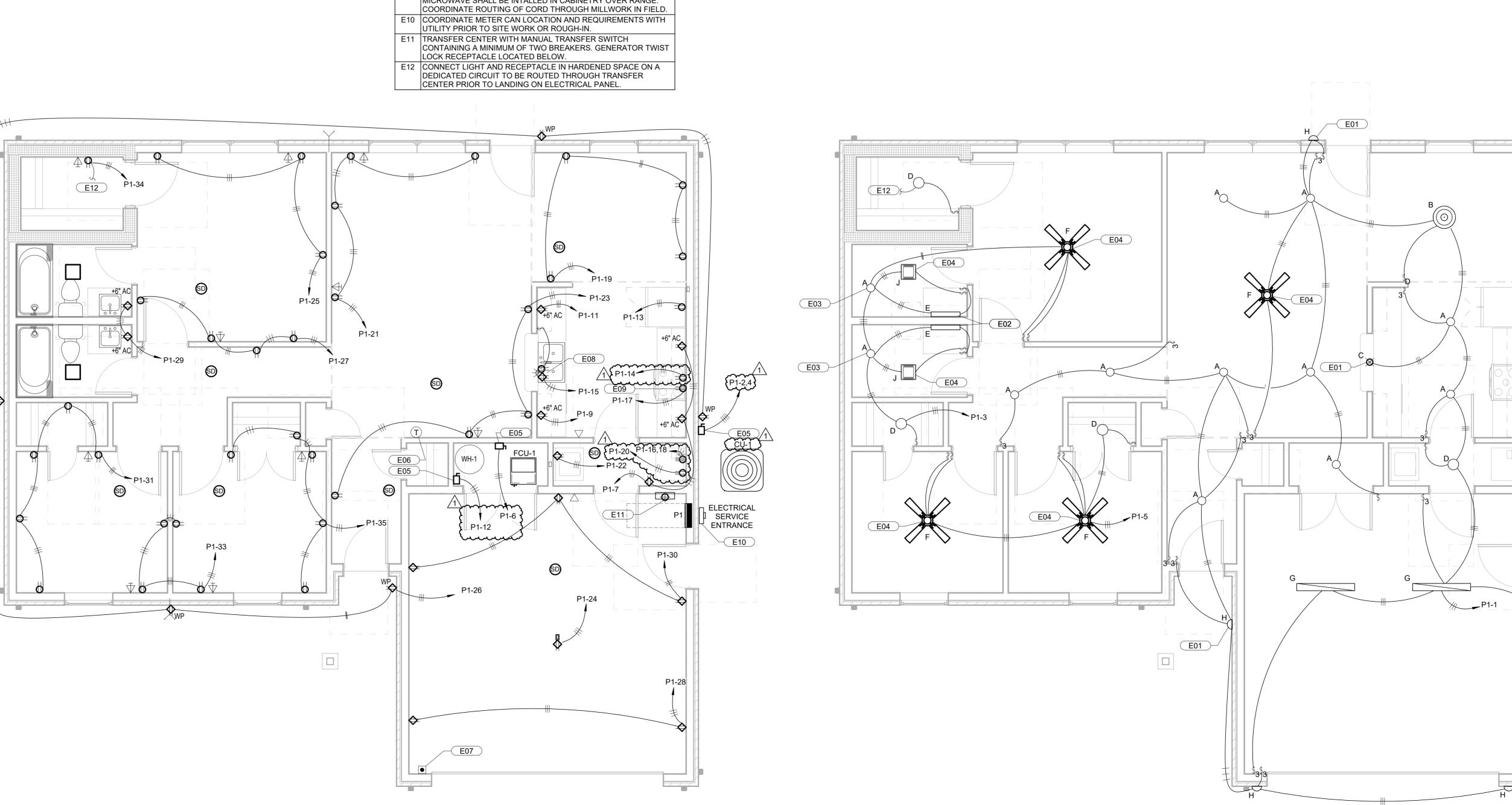
ABBREVIATIONS:

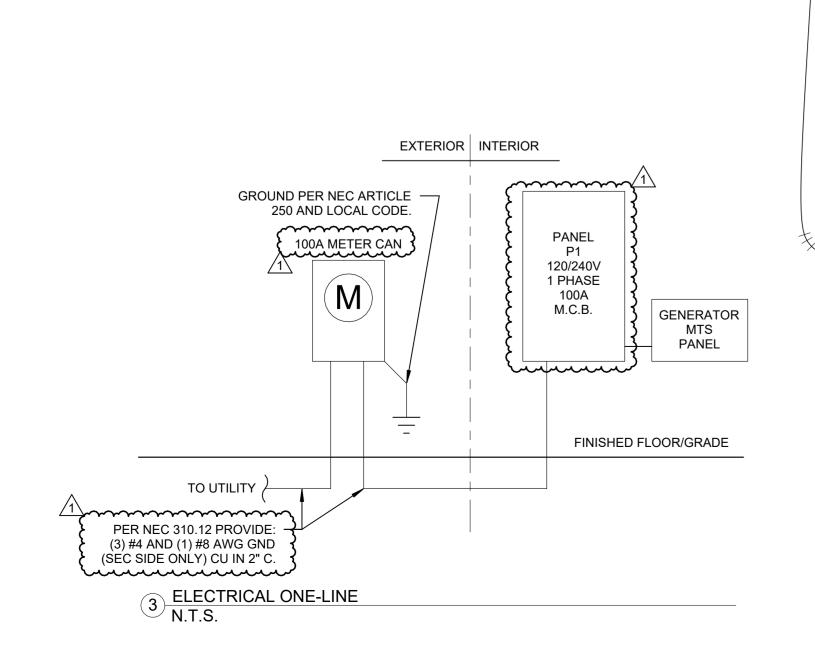
AC -- ABOVE COUNTER TR -- TAMPER RESISTANT CF -- CEILING FAN

UNO -- UNLESS OTHERWISE NOTED

EC -- ELECTRICAL CONTRACTOR EF -- EXHAUST FAN NTS -- NOT TO SCALE FCU -- FAN COIL UNIT (INDOOR) HP -- HEAT PUMP (OUTDOOR)

WH -- WATER HEATER





2 POWER PLAN 1/4" = 1'-0"

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

Native American Owned Firm



MPW ENGINEERING, LLC 110 W. 7TH STREET • SUITE 600

TULSA, OK 74119 (918) 582-4088 • FAX (918) 582-4087 OK COA #2940 • EXP 06/30/2022 BLUE RIVER PROJECT NUMBER:

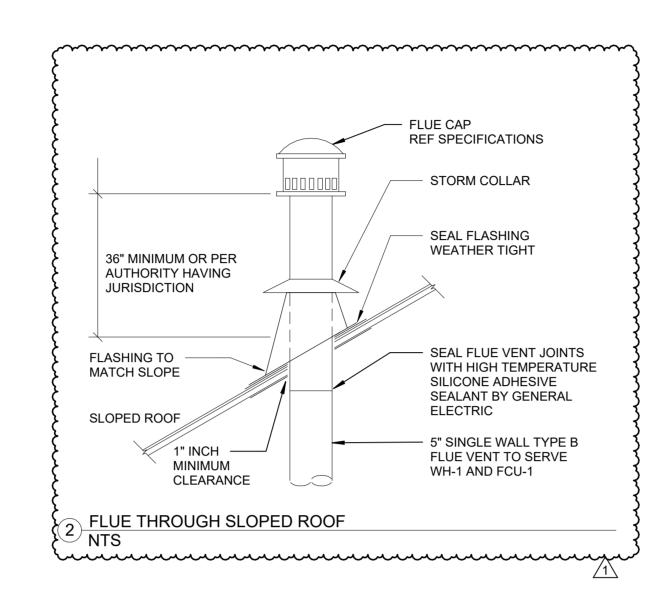
ISSUE DATE: 08/18/2022

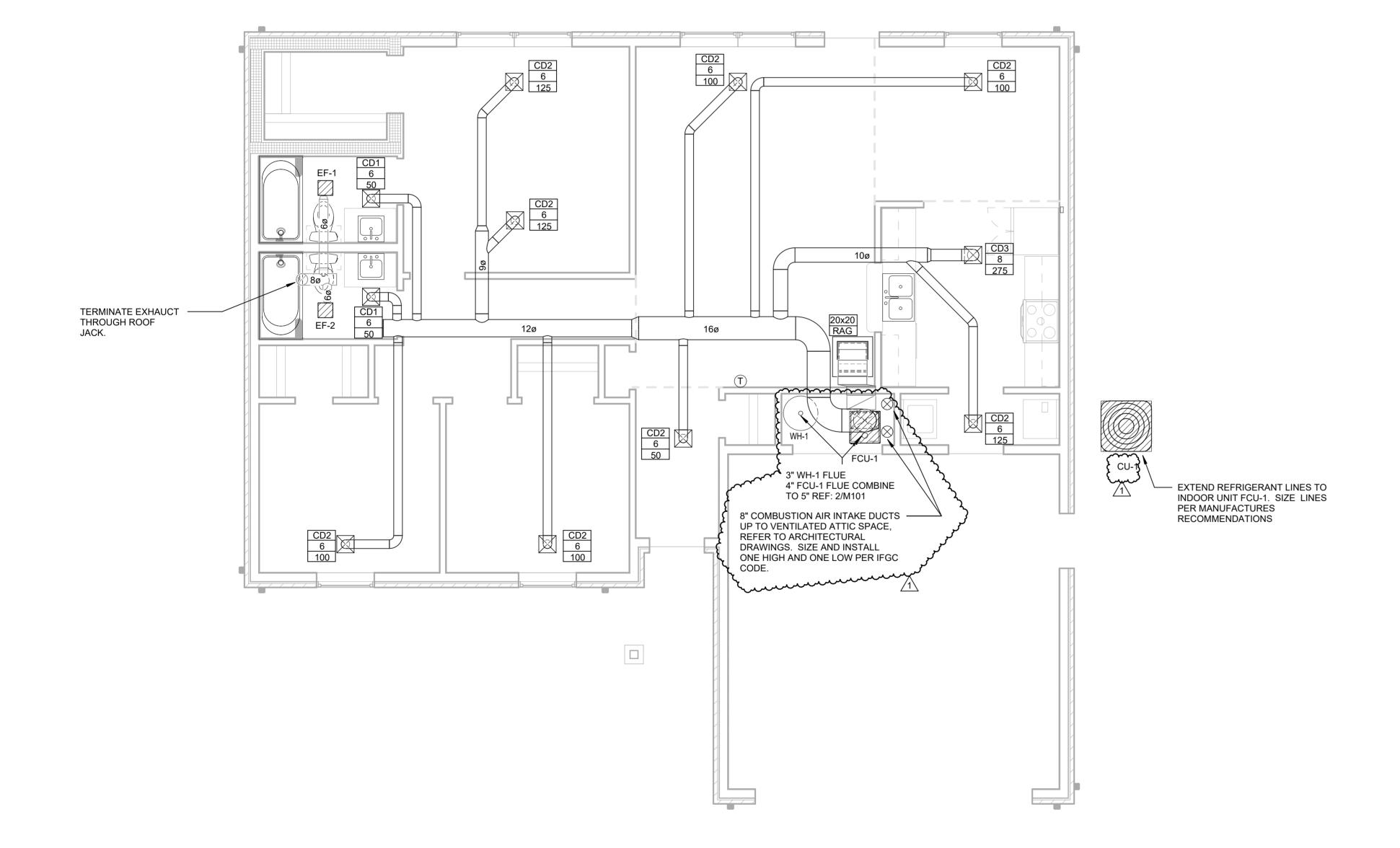
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CONSTRUCTION **DOCUMENTS**

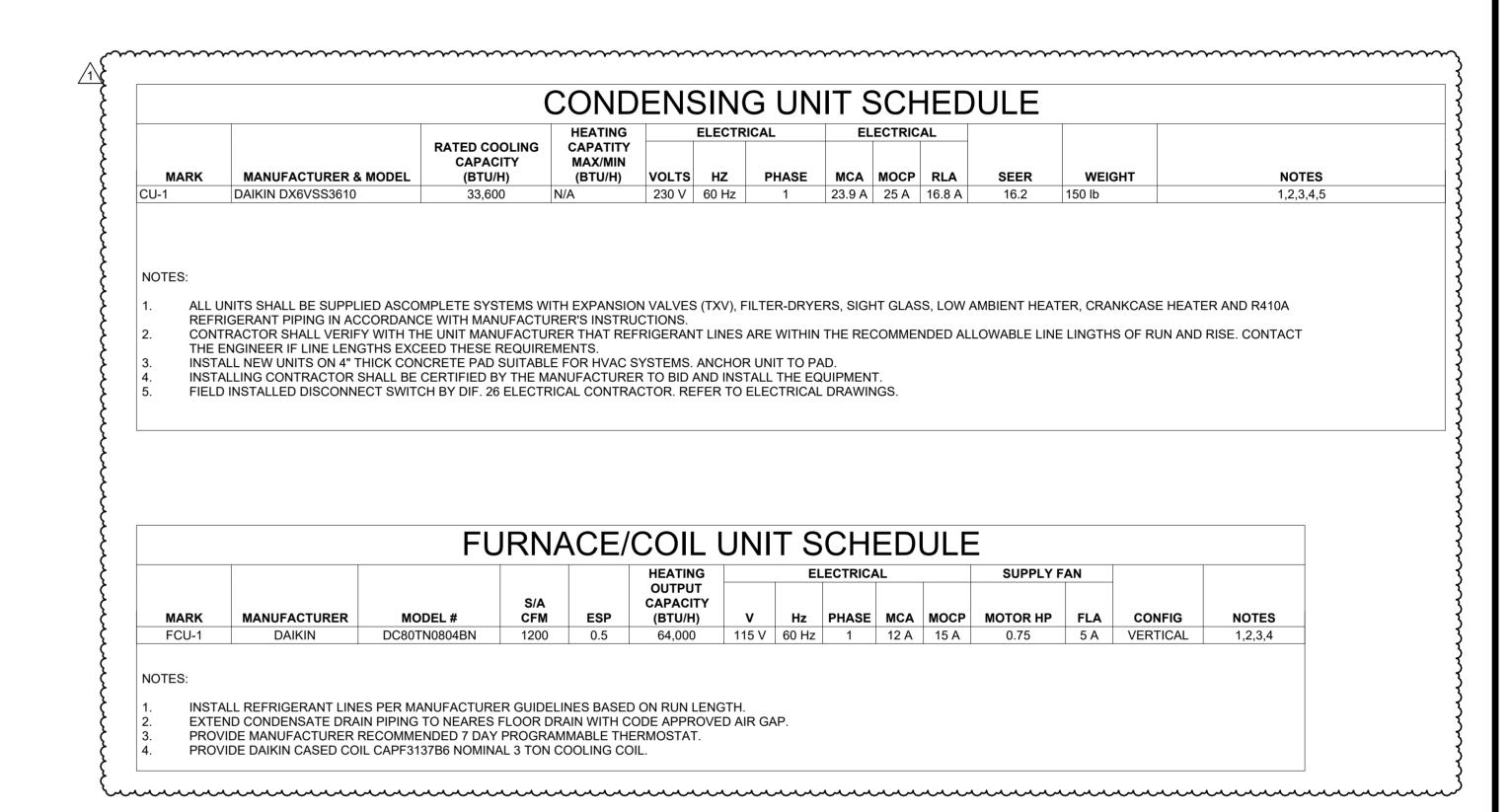
OTHER ISSUE DATES: NO. DESCRIPTION ASI #1

TYPE 1 **ELECTRICAL PLAN**





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



		E	XHAUST	FAN	SCHE	DULE						
								ELEC	CTRICAL	_		
MARK	MANUFACTURER & MODEL	LOCATION	MOUNTING	CFM	ESP	SONES	V	Р	Hz	WATTS	SPEEDS	REMARKS
EF-1	BROAN 679	BATHROOM	CEILING	70	0.1	3.5	120 V	1	60 Hz	240 W	1	A, B,C,E
EF-2	BROAN 679	BATHROOM	CEILING	70	0.1	3.5	120 V	1	60 Hz	240 W	1	A, B,C,E
171171			IONS.	DED \A#TH THE		0.514						
	HANICAL CONTRACTOR SHALL CO VIDE LABEL FOR EACH PIECE OF M	ORDINATE FAN OPERATION A	ND RELAYS REQUI									

MARK	MANUFACTURER & MODEL#	SERVICE	MATERIAL	FACE TYPE	MOUNTING LOCATION	FACE SIZE	NECKSIZE	NOISE CRITERIA (NC)	NUMBER OF SLOTS	SLOT INCHES	NOTES
CD1	TITUS TMS	SUPPLY AIR	ALUMINUM	ROUND NECK	SURFACE	12"X12"	6	25			1,3,4,6,7
CD2	TITUS TMS	SUPPLY AIR	STEEL	ROUND NECK	SURFACE	12"X12"	6	25			1,3,4,6,7
CD3	TITUS TMS	SUPPLY AIR	STEEL	ROUND NECK	SURFACE	12"X12"	8	25			1,3,4,6,7
RAG	TITUS 350RLF1	RETURN AIR	STEEL	SQUARE NECK	SURFACE	24X24	20	25			1,3,6,7,8

WHERE BACK PAN OF DIFFUSER IS EXPOSED TO NON-CONDITIONED ATTIC TYPE SPACES, PROVIDE FACTORY R-6 FOIL BACKED INSULATION TO MINIMIZE CONDENSATION. COORDINATE LOCATION OF GRILLES, REGISTERS AND DIFFUSERS WITH CEILING GRID, LIGHT LOCATIONS, STRUCTURAL MEMBERS AND ARCHITECTURAL FEATURES.

FINAL FINISH OF ALL AIR DEVICES SHALL BE VERIFIED WITH ARCHITECT'S FINISH AND PAINTING SCHEDULE. ACCEPTABLE ALTERNATE MANUFACTURERS: HART & COOLEY, TRUAIRE, ANEMOSTAT, AND METALAIRE. PROVIDE 1 INCH THICK 20X20 FILTER.

CONSTRUCTION
DOCUMENTS

OTHER ISSUE DATES:

NO. DESCRIPTION DATE

1 ASI #1 03/03/2023

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SHEET NAME:
TYPE 1 HVAC
PLAN AND
SCHEDULES

SHEET NUMBER:

ABBREVIATIONS K KW KILOWATT ABV ABOVE ACCU | AIR COOLED CONDENSING UNIT LAB LAT LAV LABORATORY ACETYLENE GAS LEAVING AIR TEMPERATURE AIR CONDITIONING UNIT LAVATORY ACCESS DOOR LINEAR DIFFUSER AIR FILTER LDB LF ABOVE FINISHED FLOOR LEAVING DRY BULB AFH AIR FILTER, HIGH EFFICIENCY LINEAR FEET LFD LAMINAR FLOW DIFFUSER AIR HANDLING UNIT AIR PRESSURE DROP LP LIQUID PROPANE AR ACID RESISTANT L/S LITERS PER SECOND LWB LWT ASSY | ASSEMBLY LEAVING WET BULB LEAVING WATER TEMPERATURE AUX AUXILIARY AV AUTOMATIC AIR VENT MAKE-UP AIR UNIT M MAU MAX MAXIMUM BACKDRAFT DAMPER B BDD MIXING BOX/MOP BASIN MB BRAKE HORSE POWER THOUSAND BTU/HR BACKFLOW PREVENTER MOTORIZED DAMPER BIRD SCREEN MECH MECHANICAL MIN MM MS MINUTE/MINIMUM CONDENSATE MILLIMETERS MOTOR STARTER CENTER LINE CEILING DIFFUSER CFM CUBIC FEET PER MINUTE N N NITROGEN CHILLER NORMALLY CLOSED CHDR | CHEMICAL DRAIN NATURAL GAS CHP CHILLED WATER PUMP CLG CEILING NIC NO NOX NTS NOT IN CONTRACT NUMBER CLEANOUT NITROGEN OXIDE CONC CONCRETE NOT TO SCALE CONN | CONNECTION CONT | CONTINUED/CONTINUATION/CONTINUOUS | OXYGEN COTG | CLEAN OUT TO GRADE **OUTSIDE AIR** CONDENSING UNIT/COPPER OAL OBD OC OUTSIDE AIR LOUVER CONSTANT VOLUME OPPOSED BLADE DAMPER **COLD WATER** ON CENTER **OVERFLOW SCUPPER** DIRECT DIGITAL CONTROL DOOR GRILLE OUTSIDE SCREW & YOKE DIAMETER P PD PRESSURE DROP DIMENSION DMPR DAMPER POC POINT OF CONNECTION PRESS PRESSURE DOWN PRV PSIG PVC PRESSURE REDUCING VALVE DIFFERENTIAL PRESSURE SWITCH DPS POUNDS PER SQUARE INCH DRAIN DUCT SMOKE DETECTOR POLYVINYL CHLORIDE DSW DISTILLED WATER R RA RETURN AIR DWG DRAWING RETURN AIR GRILLE E EAT ENTERING AIR TEMPERATURE RETURN AIR REGISTER EQUIPMENT DRAIN RAIN CONDUCTOR ENTERING DRY BULB RD REF **ROOF DRAIN** ENERGY EFFICIENCY RATIO REFERENCE EER EXHAUST FAN RETURN FAN | EFFICIENCY RAIN LEADER EXHAUST GRILLE RM ROOM ELEVATION RTN RETURN ELEC | ELECTRICAL ENTERING ER EXHAUST REGISTER SUPPLY AIR GRILLE SAN SAR SANITARY EWB | ENTERING WET BULB ELECTRIC WATER COOLER SUPPLY AIR REGISTER ENTERING WATER TEMPERATURE SMOKE DAMPER SD/FD COMB. SMOKE DAMPER\FIRE DAMP. EXH EXHAUST EWS EYE WASH/SHOWER STATION STATIC PRESSURE F FCO FLOOR CLEANOUT SQUARE FEET FD FIRE DAMPER/FLOOR DRAIN STAINLESS STEEL FUME HOOD TCU TEMP TERMINAL CONTROL UNIT FLEX | FLEXIBLE TEMPERATURE FOR FUEL OIL RETURN TRANSFER GRILLE FUEL OIL SUPPLY TRAP PRIMER TYP TYPICAL FINS PER INCH FPM FEET PER MINUTE UNDERCUT U UC FACE VELOCITY VARIABLE AIR VOLUME **VOLUME DAMPER** VD **GRAVITY INTAKE VENTILATOR** VEL VERT VFD VSD VTR VELOCITY GROUND GALLONS PER MINUTE VARIABLE FREQUENCY DRIVE GRAVITY RELIEF VENTILATOR VARIABLE SPEED DRIVE **VENT THRU ROOF** H HB HOSE BIBB HORIZ HORIZONTAL W W/ WITH HP HORSE POWER/HEAT PUMP WITHOUT HTG HEATING WCO WALL CLEANOUT HUMID HUMIDISTAT WATER COLUMN HWS HOT WATER SUPPLY WALL HYDRANT HWB HOT WATER BOILER WHA WATER HAMMER ARRESTORS HWP HOT WATER PUMP WR WATER RISER HWR HOT WATER RETURN WTR WATER ID INSIDE DIAMETER INCHES

DOMESTIC WATER GENERAL NOTES

1. CUTOFF VALVES AND STOPS SHALL BE PROVIDED WHERE SHOWN ON DRAWINGS AND AT FIXTURE CONNECTIONS.

2. TEST ALL WATER SYSTEM IN PRESENCE OF OWNER'S REPRESENTATIVE AT MIN. 100 PSIG FOR 8 HOURS. SANITARY, WASTES, AND VENTS SHALL BE TESTED WITH 10' HEAD OF WATER FOR 8 HOURS WITH LEVEL OF WATER REMAIN UNCHANGED.

3. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.

4. INSTALL ALL WATER PIPING SYSTEMS SO THAT THEY WILL NOT BE SUBJECT TO ANY UNDUE STRAINS OR STRESSES. PROVISIONS SHALL BE MADE FOR EXPANSION. CONTRACTION AND STRUCTURAL SETTLEMENT.

5. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOOR CEILING ASSEMBLY SHALL BE INSTALLED AND SEALED TO MAINTAIN FIRE RATING WITH U.L. LISTED ASSEMBLIES, MATERIALS AND SEALANTS.

6. BELOW GROUND PIPE SHALL BE INSTALLED NO LESS THAN 6" BELOW FROST LINE. REFER TO STRUCTURAL DETAILS FOR FOUNDATION PENETRATION.

7. DRAWING IS DIAGRAMMATIC IN NATURE AND IS NOT INTENDED TO BE SCALED FOR DIMENSIONS.

8. COORDINATE LOCATION OF PLUMBING WORK WITH

OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES. 9. ALL TESTING IS THE RESPONSIBILITY OF THE

CONTRACTOR, WITHOUT EXTRA COST FOR THE OWNER. 10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WATER FLOW AND PRESSURE TEST FOR EVALUATING INCOMING DOMESTIC AND FIRE PROTECTION SERVICE

11. WHERE STREET WATER MAIN PRESSURES FLUCTUATE, THE BUILDING WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED FOR MINIMUM PRESSURE AVAILABLE. WHEREVER WATER PRESSURE FROM THE STREET MAIN OR OTHER SOURCE OF SUPPLY IS LESS THAN 60 PSI, A WATER PRESSURE BOOSTER SYSTEM SHALL BE INSTALLED ON THE BUILDING WATER SUPPLY SYSTEM. WHERE WATER PRESSURE WITHIN A BUILDING EXCEEDS 80 PSI STATIC, AN APPROVED WATER-PRESSURE REDUCING VALVE WITH STRAINER CONFORMING TO ASSE 1003 SHALL BE INSTALLED TO REDUCE THE PRESSURES TO BELOW 80 PSI.

PIPE LINES

PRESSURES.

POTABLE COLD WATER POTABLE HOT WATER —— — — POTABLE HOT WATER RETURN __ __ VENT

PIPE TAGS

POTABLE COLD WATER POTABLE HOT WATER XX" HWR POTABLE HOT WATER RETURN XX" V COMPRESSED AIR SANITARY SEWER OIL\WASTE WATER NATURAL GAS

VENT THROUGH ROOF

SANITARY SEWER GENERAL NOTES

1. PROVIDE CLEANOUTS AT LOCATIONS AND WITH CLEARANCES AS REQUIRED BY THE CODE NOT EXCEEDING 50 FEET IN HORIZONTAL RUNS AT EACH CHANGE OF DIRECTION, VERTICAL OR HORIZONTAL, GREATER THAN 45°, AT THE BASE OF EACH WASTE OR VENT STACK 5 FEET AFF. PROVIDE WALL CLEANOUTS IN LIEU OF FLOOR CLEANOUTS WHEREVER POSSIBLE. ALL INTERIOR CLEANOUTS SHALL BE ACCESSIBLE FROM WALLS OR

2. THE FLOOR DRAIN IN TOILETS AND MECHANICAL ROOMS SHALL BE PROVIDED WITH BACKWATER VALVES.

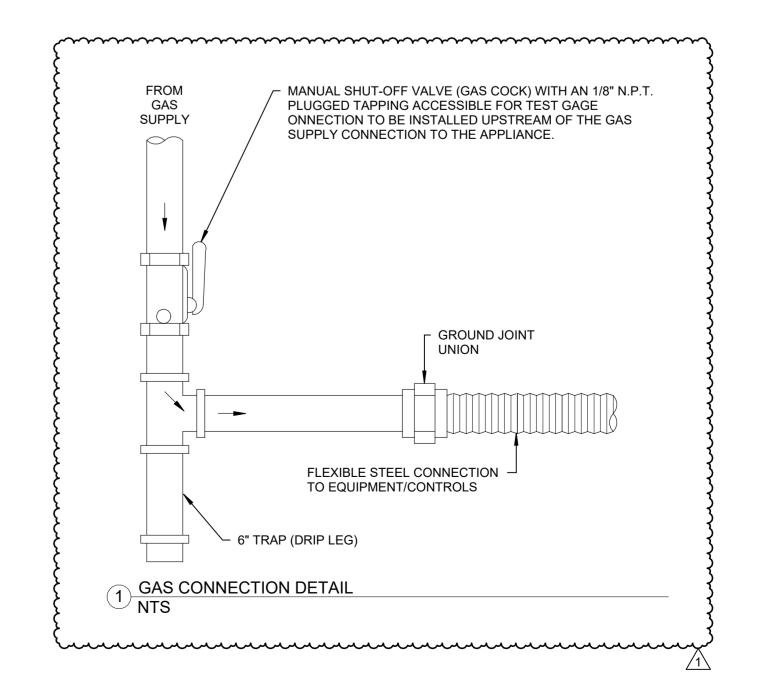
3. MAINTAIN MINIMUM OF 10 FEET CLEARANCE BETWEEN ANY VTR AND OUTSIDE AIR INTAKES. WHERE HORIZONTAL CLEARANCE CANNOT BE PROVIDED, EXTEND VENTS A MIN OF 24" ABOVE EACH OUTSIDE AIR INTAKE.

4. VTR'S ROOF PENETRATIONS, WATER PROOFING AND FLASHINGS SHALL BE PROVIDED BY ROOF CONTRACTOR.

5. ALL TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR. TEST ALL SEWER AND VENT SYSTEMS IN PRESENCE OF OWNER'S REPRESENTATIVE. 6. INVERT ELEVATION SHOWN BASED ON 100.0 FT. FF ELEVATION, REFER TO CIVIL DRAWINGS FOR ACTUAL

7. SEWER PIPE SHALL BE INSTALLED NO LESS THAN 6" BELOW THE FROST LINE.

THIS IS A STANDARD SYMBOLS & ABBREVIATIONS SHEET. THEREFORE, SOME SYMBOLS & ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.







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MPW ENGINEERING, LLC

110 W. 7TH STREET • SUITE 600

TULSA, OK 74119 (918) 582-4088 • FAX (918) 582-4087

OK COA #2940 • EXP 06/30/2022 BLUE RIVER PROJECT NUMBER: 20220104

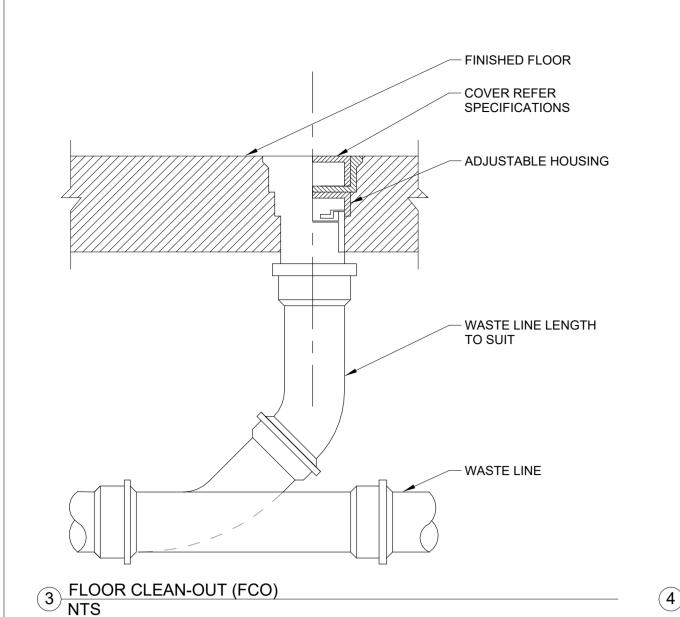
ISSUE DATE: 08/18/2022

CONSTRUCTION **DOCUMENTS**

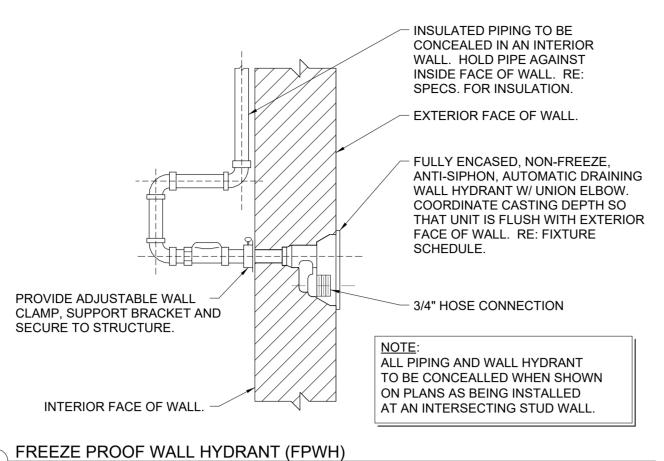
OTHER ISSUE DATES: NO. DESCRIPTION 1 ASI #1

> **PLUMBING NOTES AND DETAILS**

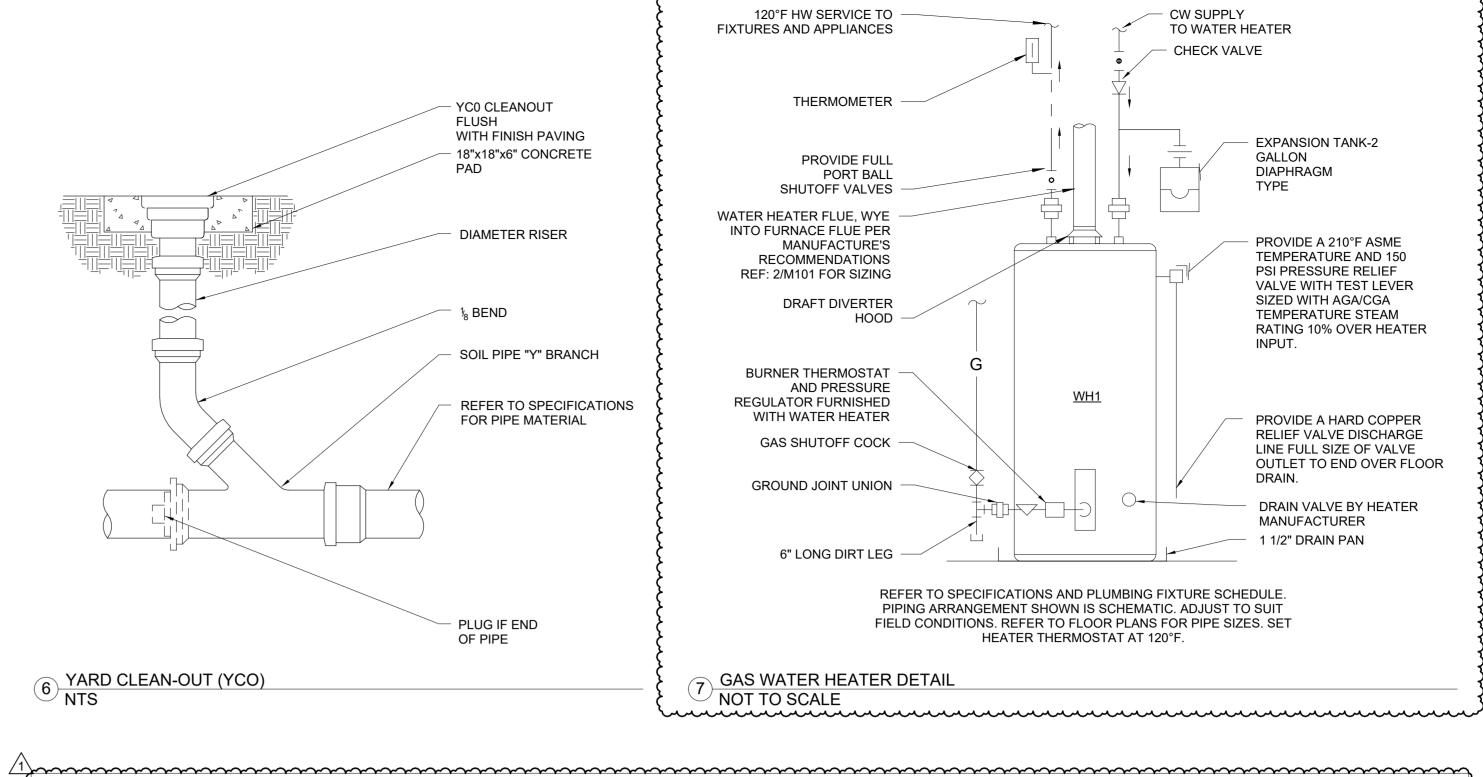
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NOTES:



SET FLOOR DRAIN ELEVATION DEPRESSED BELOW FINISH FLOOR SLAB ELEVATION TO PROVIDE PROPER FLOOR SLOPE DRAIN FOR 2 FT. DRAIN RADIUS, 1/4" DEPRESSION.	FLOOR DRAIN FINISHED FLOOR
"P" TRAP - SEE PLANS FOR SIZES	SEAL ALL AIR BARRIER PENETRATIONS PER SPECIFICATIONS PROVIDE TRAP PRIMER CONNECTION IF NOTED ON PLANS
FLOOR DRAIN DETAIL NO SCALE	



manamana	A R C H I T E C A Native American Owne
and the second s	SCOTT C. WEBB IN 18011

						PLUMBING FIXTURE SC	HEDULE	
			BR	ANCH SIZES (MIN)			
MARK	UNIT TYPE	WASTE	VENT	CW	HW	MANUFACTURER & MODEL	FAUCET/TRIM	DESCRIPTION
BT-1	SHOWER AND TUB VALVE	0"	0"	1/2"	1/2"	AMERICAN STANDARD RU102SS	T385.502 RELIANT 3 BATH/SHOWER TRIM KIT	FLASH ROUGH VALVE BODY
FD-1	FLOOR DRAIN	2"	1 1/2"			JAY R. SMITH 2005B		FLOOR DRAIN SQUARE
FPWH-1	WALL HYDRANT			1/2"		WOOFORD B67		FREEZELESS WALL HYDRANT
IMB-1	ICE MAKER BOX	0"	0"	1/2"	0"	SIOUX CHIEF 696-G1010MF		1/4" COMPRESSION OUTLET CONNECTION OUTLET BOX
KS-1	KITCHEN SINK	2"	1 1/2"	1/2"	1/2"	AMERICAN STANDARD 22DB.6332283C.075.50/5	AMERICAN STANDARD 4175.300.F15	COLONY 33 x 22 ADA DOUBLE BOWL STAINLESS STEEL KITCHEN SINK KIT
LAV-1	DROP IN	2"	1 1/2"	1/2"	1/2"	AMERICAN STANDARD 0476.028.020	AMERICAN STANDARD 7075.050	AQUALYN DROP IN SINK VITREOUS CHINA
WB-1	WASHER WALL BOX	2"	1 1/2"	1/2"	1/2"	SIOUX CHIEF696 series		DOUBLE HOSE BIBB OUTLET CONNECTION OUTLET BOX WITH DRAIN OUTLET BOX WITH DRAIN BOX
WC-1	TANK TYPE RIGHT FLUSH	3"	2"	3/4"		AMERICAN STANDARD 211AA.004		COMPLETE TOILET WITH TANK AND SEAT HYDRAPRO MODEL HPWPTSES
3" YCO	YARD CLEAN-OUT	3"				ZURN ZI449		CAST IRON FERRULE AND PLUG, DURA-COATED CAST IRON, DOUBLE-FLANGED HOUSING, AND EXTRA HEAVY DUTY SCORIATED CAS IRON COVER WITH LIFTING DEVICE, VANDAL-PROOF SCREWS.
4" YCO	YARD CLEAN-OUT	4"				ZURN ZI449		CAST IRON FERRULE AND PLUG, DURA-COATED CAST IRON, DOUBLE-FLANGED HOUSING, AND EXTRA HEAVY DUTY SCORIATED CAS IRON COVER WITH LIFTING DEVICE, VANDAL-PROOF SCREWS.

MARK	SERVICE	MANUFACTURER & MODEL	TANK VOLUME	МВН	RECOVERY GPH @ 90 RISE	VOLTAGE	FREQUENCY	PHASE	WEIGHT	NOTES
WH-1	HOT WATER	AM STD GSN50T1-3-6.	50.0 gal	40	38	120 V	60 Hz	1	185 lb	1,3,4,5
	WH-1 GAS WATER H	IEATER INSTALL PER MANUFACT		NS, PROVIDE ALL COD	DE REQUIRED SAFETY DEVI	CES.				
1. 2. 3.	WH-1 GAS WATER H PROVIDE CIRCULAT PROVIDE OVERFLO	IEATER INSTALL PER MANUFACT TON PUMP AS REQUIRED PER CO W PAN OATEY MODEL 34173. ON TANK, EACH SIZED PERMANU	ODE.		DE REQUIRED SAFETY DEVI	CES.				

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EXPANSION TANK-2

PROVIDE A 210°F ASME

TEMPERATURE AND 150

PSI PRESSURE RELIEF VALVE WITH TEST LEVER

SIZED WITH AGA/CGA

TEMPERATURE STEAM

RATING 10% OVER HEATER

PROVIDE A HARD COPPER RELIEF VALVE DISCHARGE

LINE FULL SIZE OF VALVE

DRAIN VALVE BY HEATER

MANUFACTURER

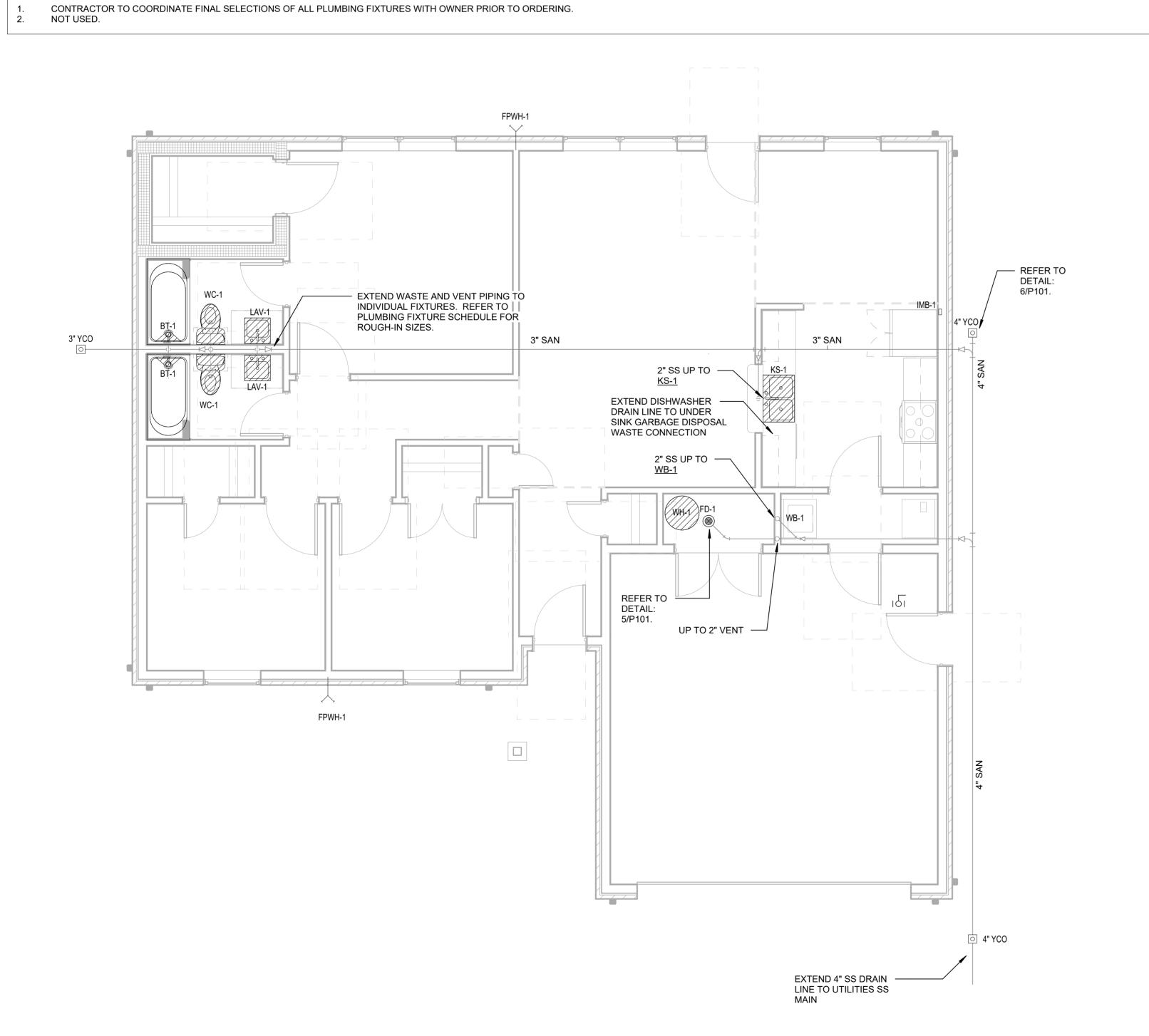
1 1/2" DRAIN PAN

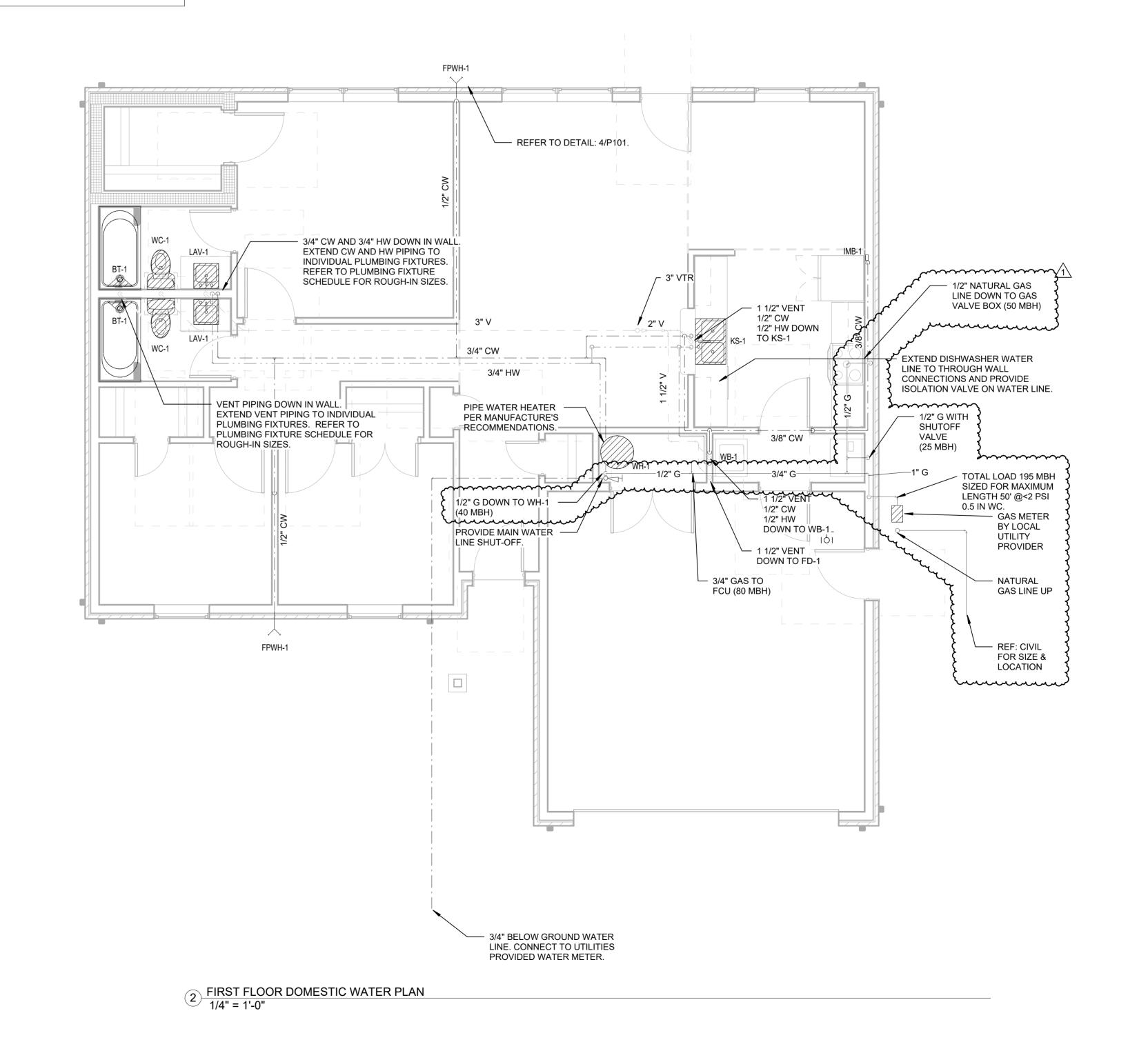
OUTLET TO END OVER FLOOR

GALLON

TYPE

DIAPHRAGM









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TYPE 1 PLUMBING **PLANS**