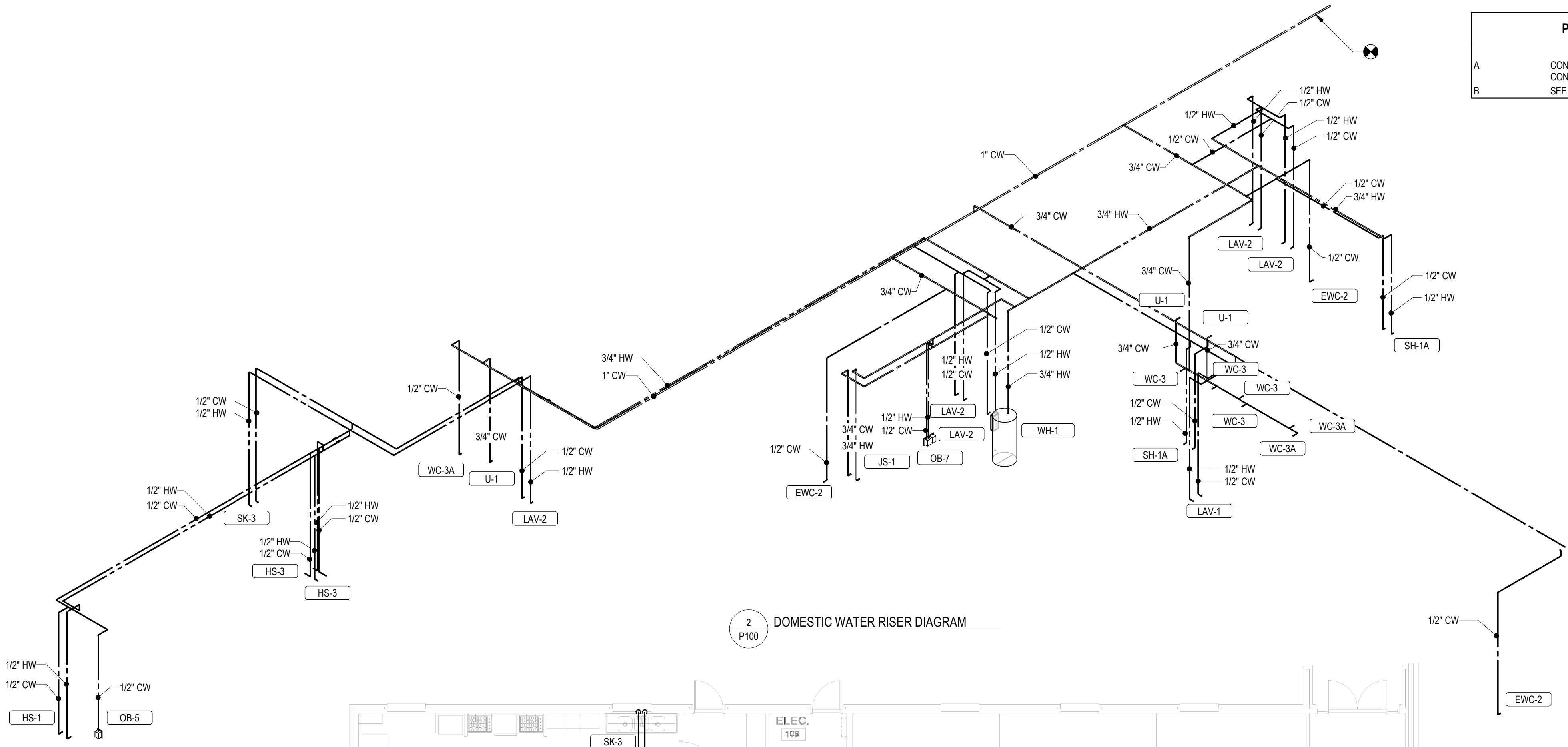


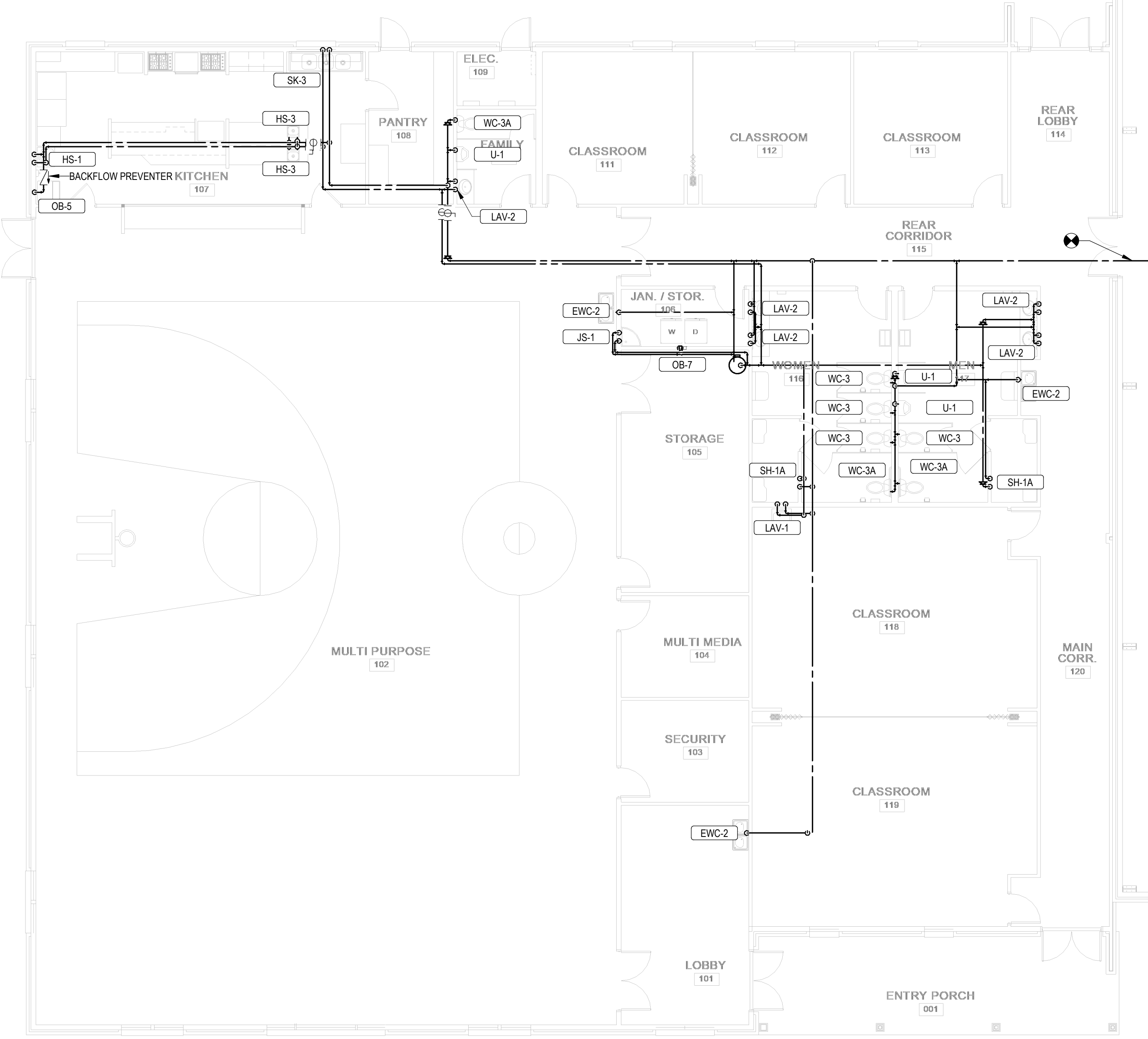


**PLUMBING SHEET SCHEDULE**

A CONTRACTOR TO LOCATE EXISTING WATER PIPING AND CONNECT NEW WATER PIPING INTO EXISTING WATER PIPING.  
 B SEE RISER DIAGRAMS FOR PIPE SIZING.



2 DOMESTIC WATER RISER DIAGRAM  
P100



1 LEVEL 1 PLUMBING PLAN  
1/8" = 1'-0"

**ARCHITECT**

**RON W. WEBB**  
 1659 W. HANRAHAN ROAD  
 AYDEN, NC. 28513  
 TEL: (252) 531-2711

**WEBB MT  
 PISGAH**

145 PROSPECT CHURCH RD  
 ERWIN, NC 28339

**PROJECT CONSULTANTS**



120 SOMMERVILLE PARK ROAD  
 RALEIGH, NC 27603  
 NC FIRM # C-3824



12/09/2024

For Construction  
 Not for Construction

Review Set  
 Bid Set

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**Revisions**

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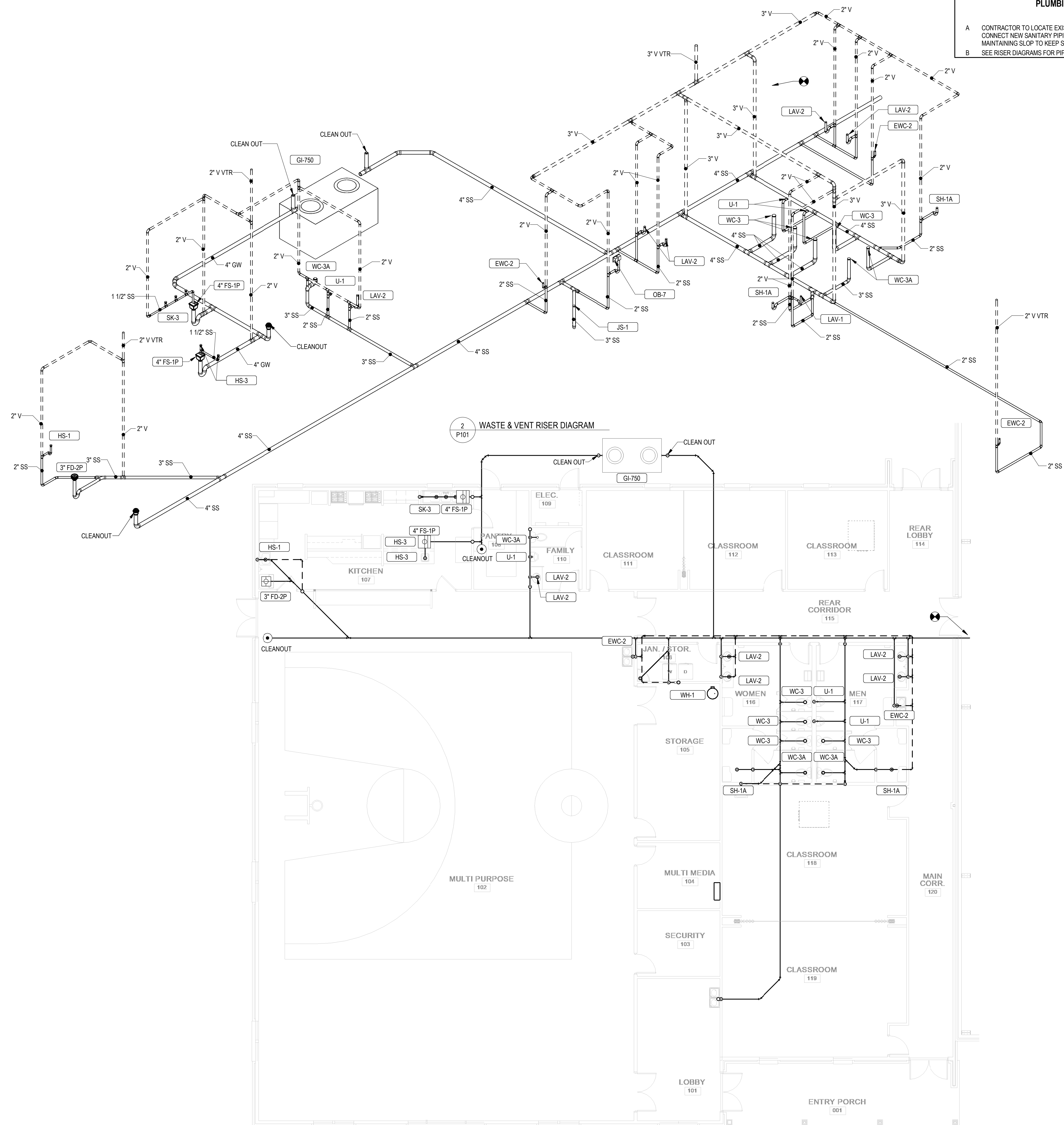
Drawing No.  
 PLUMBING DOMESTIC WATER PLAN

**P100**

of

**PLUMBING SHEET NOTES**

- A CONTRACTOR TO LOCATE EXISTING 4" SANITARY PIPING. CONTRACTOR SHALL CONNECT NEW SANITARY PIPING INTO EXISTING SANITARY PIPING WHILE MAINTAINING SLOPE TO KEEP SANITARY SYSTEM FULLY FUNCTIONAL.
- B SEE RISER DIAGRAMS FOR PIPE SIZING.



**1**  
P101 LEVEL 1 PLUMBING PLAN  
1/8" = 1'-0"

**ARCHITECT**

**RON W. WEBB**  
1659 W. HANRAHAN ROAD  
AYDEN, NC. 28513  
TEL: (252) 531-2711

**WEBB MT  
PISGAH**

145 PROSPECT CHURCH RD  
ERWIN, NC 28339

**PROJECT CONSULTANTS**



120 SOMMERVILLE PARK ROAD  
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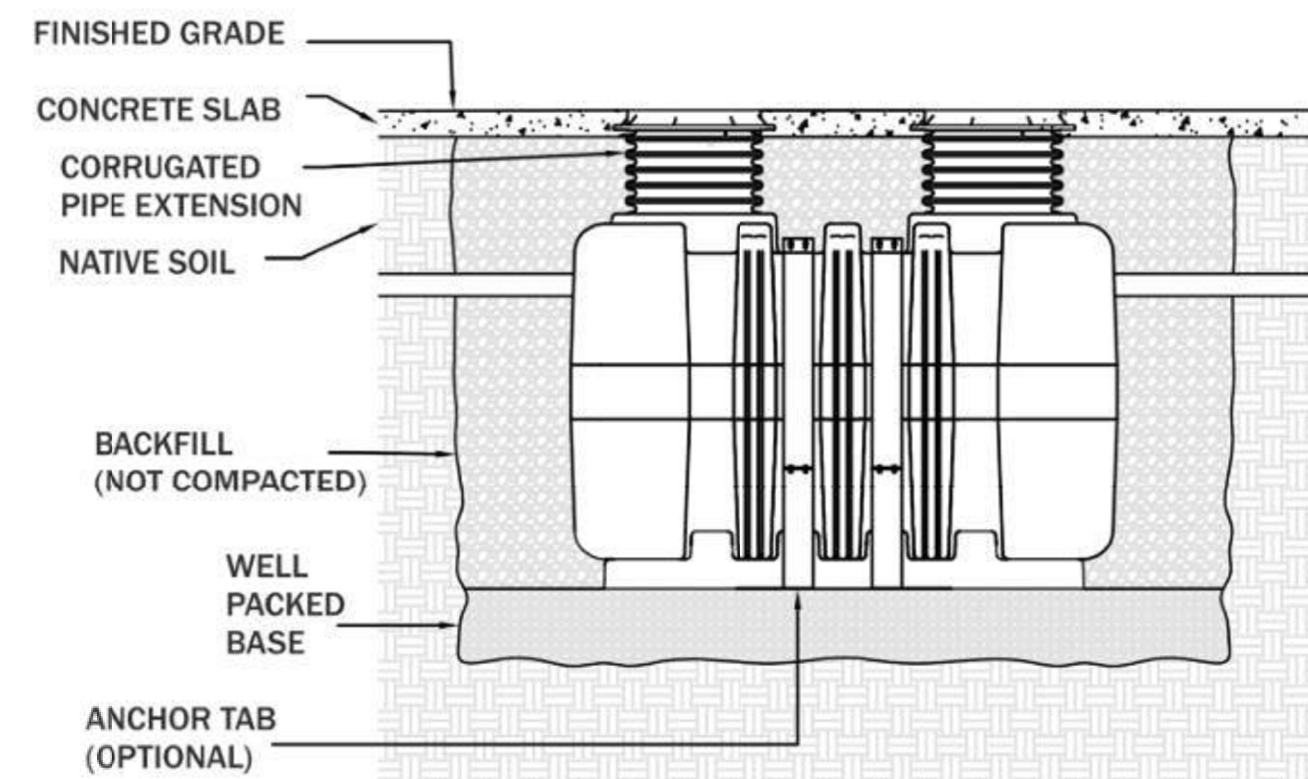
Mark	Date	Description

DOMESTIC FIXTURE SCHEDULE																						
ID	DESCRIPTION	MANUFACTURER	MODEL	QTY	MATERIAL DESCRIPTION	FINISH	TRIM			FLOW FIXTURE				FLUSH FIXTURE		WASTE ROUGH-IN PIPE SIZE	INDIRECT WASTE PIPE SIZE	VENT PIPE SIZE	COLD WATER ROUGH-IN PIPE SIZE	HOT WATER ROUGH-IN PIPE SIZE	SPECIFICATION	REMARKS
							MANUFACTURER	MODEL	TYPE	MOTION SENSOR CONTROL	WATER FLOW	TIMER DURATION (SEC)	CWT	HWT	MAX. MW							
EWC-2	WATER COOLER - DUAL HEIGHT	ELKAY	EZSL8WSSK	3	GALVANIZED STEEL	STAINLESS STEEL CABINET				No	0.1 GPM	15	40 °F	40 °F		2"		1 1/2"	1/2"		TWO LEVEL WALL HUNG WATER COOLER WITH BOTTLE FILLING STATION. THE UNIT SHALL BE COMPLETE WITH CABINET, MOUNTING FRAME, SELF CLOSING EASY TOUCH SIDE AND FRONT PUSHBAR CONTROLS, FLEXIGUARD SAFETY BUBBLER, REFRIGERATING SYSTEM, AIR COOLED, 120 VOLT, 60 CYCLE, SINGLE PHASE POWER CONNECTION, FULLY AUTOMATIC, COMPLETE AND READY TO OPERATE.	
HS-1	HAND SINK	ELKAY	EHS-18X	1	STAINLESS STEEL	STAINLESS STEEL	ELKAY	INCLUDED	MANUAL	No	0.5 GPM	0	40 °F	120 °F	105 °F	2"		1 1/2"	1/2"	1/2"	SINGLE COMPARTMENT, WALL HUNG, 18 GAUGE, WITH STRAINER AND FAUCET INCLUDED, P-TRAP, TAILPIECES, SUPPLIES AND STOPS. PROVIDE WITH HAWS MODEL NO. 7520 FAUCET MOUNTED EYEWASH AXON EYEPOD.	
HS-3	HAND SINK	ELKAY	D11515	2	STAINLESS STEEL	STAINLESS STEEL	ELKAY	LKD2488BH C	MANUAL	No	0.5 GPM	0	40 °F	120 °F	105 °F	2"		1 1/2"	1/2"	1/2"	DAYTON STAINLESS STEEL 15" X 15" X 3/16", SINGLE BOWL, DROP-IN BAR SINK. SINK IS MANUFACTURED FROM 23 GAUGE 300 SERIES STAINLESS STEEL WITH A SATIN FINISH, CENTER DRAIN PLACEMENT, AND BOTTOM ONLY PADS	
JS-1	JANITOR SINK	FIAT	MSB-2424	1	MOLDED STONE		CHICAGO FAUCET CO	897-CP	MANUAL	No	2.5 GPM	0	40 °F	120 °F	105 °F	3"		2"	3/4"	3/4"	SERVICE BASIN WITH CAP ON TWO SIDES, WITH CHROME PLATED 3" DRAIN AND CAST IRON TRAP. FAUCET SHALL INCLUDE PAIL HOOK AND ATMOSPHERIC VACUUM BREAKER SPOUT. FURNISH 5'-0" LENGTH OF 5-PLY GARDEN HOSE AND FITTINGS.	
LAV-1	LAVATORY - WALL HUNG	AMERICAN STANDARD	LUCERNE	1	WHITE VITREOUS CHINA	WHITE	CHICAGO FAUCET CO	116.976.AB.1	ELECTRONIC	Yes	0.5 GPM	12	40 °F	120 °F	105 °F	2"		1 1/2"	1/2"	1/2"	WALL HUNG LAVATORY WITH BACKSPLASH, FAUCET HOLES ON 4" CENTERS. DECK-MOUNTED FAUCET WITH SENSOR, WATER TURBINE POWER WITH VANDAL RESISTANT SPRAY, EXTERNAL ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE, GRID DRAIN, LOOSE KEY ANGLE STOPS AND SUPPLIES. INSULATE WATER AND WASTE WITH INSULATION KIT.	
LAV-2	LAVATORY - COUNTER	AMERICAN STANDARD	CADET	5	WHITE VITREOUS CHINA	WHITE	CHICAGO FAUCET CO	116.976.AB.1	ELECTRONIC	Yes	0.5 GPM	12	40 °F	120 °F	105 °F	2"		1 1/2"	1/2"	1/2"	COUNTERTOP LAVATORY, SELF-RIMMING, FAUCET HOLES ON 4" CENTERS. DECK-MOUNTED FAUCET SENSOR, WATER TURBINE POWER WITH VANDAL RESISTANT SPRAY, EXTERNAL ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE, GRID DRAIN, LOOSE KEY ANGLE STOPS AND SUPPLIES. INSULATE WATER AND WASTE WITH INSULATION KIT.	
OB-5	ICE MAKER OUTLET BOX	SIoux CHIEF	696-RG1010MF	1	ABS PLASTIC	WHITE				No	0.5 GPM	0	40 °F	120 °F	105 °F	2"			1/2"	FULLY RECESSED FIRE RATED ICE MAKER SUPPLY BOX WITH COVER. PROVIDE 1/4 TURN BALL VALVES AND WATER HAMMER ARRESTORS IN BOX.		
OB-7	WASHING MACHINE OUTLET BOX	SIoux CHIEF	696-RG2303WF	1	ABS PLASTIC	WHITE				No	0.5 GPM	0	40 °F	120 °F	105 °F	2"		2"	1/2"	1/2"	FULLY RECESSED FIRE RATED WASHING MACHINE SUPPLY BOX WITH COVER. PROVIDE 1/4 TURN BALL VALVES AND WATER HAMMER ARRESTORS IN BOX. PROVIDE A 2" TRAPPED STANDPIPE IN CONCEALED WALL SPACE.	
SH-1A	SHOWER STALL - ADA	BY OTHERS	BY OTHERS	2			SYMMONS	C-96-500-B30-V	MANUAL	No	1.0 GPM	300	40 °F	120 °F	105 °F	2"		1 1/2"	1/2"	1/2"	THE INDIVIDUAL SHOWER STALL IS SPECIFIED IN ANOTHER DIVISION. PROVIDE A SHOWER DRAIN AS SPECIFIED IN "SOIL, WASTE AND VENT PIPING SYSTEMS." SHOWER SYSTEM WITH ASSE 1016 COMPLIANT TYPE "1P" THERMOSTATIC/PRESSURE BALANCING COMBINATION VALVE WITH ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. CONCEALED 3-PORT DIVERTER VALVE WITH LEVER HANDLE WITH ARM AND FLANGE, INTEGRAL STOPS, AND IN-LINE VACUUM BREAKER. HAND SHOWER SYSTEM WITH STANDARD HAND SHOWER, 60" FLEXIBLE METAL HOSE, AND 48" SLIDE BAR FOR HAND SHOWER MOUNTING. PROVIDE MANUFACTURER'S FLOW RATE RESTRICTOR ON SHOWERHEAD.	
U-1	URINAL	AMERICAN STANDARD	WASHBROOK	3	WHITE VITREOUS CHINA	WHITE	SLOAN	8186	BATTERY	Yes			40 °F	40 °F	0.125 gal	0.125 gal	2"		1 1/2"	3/4"	WALL HUNG URINAL WITH WASHOUT ACTION, TOP SPUD, SIZE 18" WITH INTEGRAL EXTENDED SHIELDS SUPPORTED BY THROUGH GOING BOLTS AND C.P. NUTS. SOLAR POWERED SENSOR ACTIVATED FLUSHMETER.	
WC-3	WATER CLOSET - FLOOR - TANK TYPE	AMERICAN STANDARD	CADET	4	WHITE VITREOUS CHINA	WHITE	TANK TYPE			No			40 °F	40 °F	1.28 gal	1.28 gal	4"		2"	1/2"	ELONGATED FLOOR MOUNTED TANK TYPE WATER CLOSET, WITH CHURCH 295CT ELONGATED OPEN FRONT SEAT. PROVIDE A 1/4" BRASS BALL VALVE AT WALL CONNECTION.	
WC-3A	WATER CLOSET - FLOOR - PRESSURE ASSISTED TANK TYPE - ADA	AMERICAN STANDARD	CADET RIGHT HEIGHT	3	WHITE VITREOUS CHINA	WHITE	AMERICAN STANDARD	2467.016	MANUAL	No			40 °F	40 °F	1.6 gal	1.6 gal	3"		2"	1/2"	ELONGATED FLOOR MOUNTED PRESSURE ASSISTED TANK TYPE WATER CLOSET, WITH CHURCH 295CT ELONGATED OPEN FRONT SEAT. PROVIDE A 1/4" BRASS BALL VALVE AT WALL CONNECTION. INSTALL AT ADA COMPLIANT HEIGHT.	
Grand total: 27																						

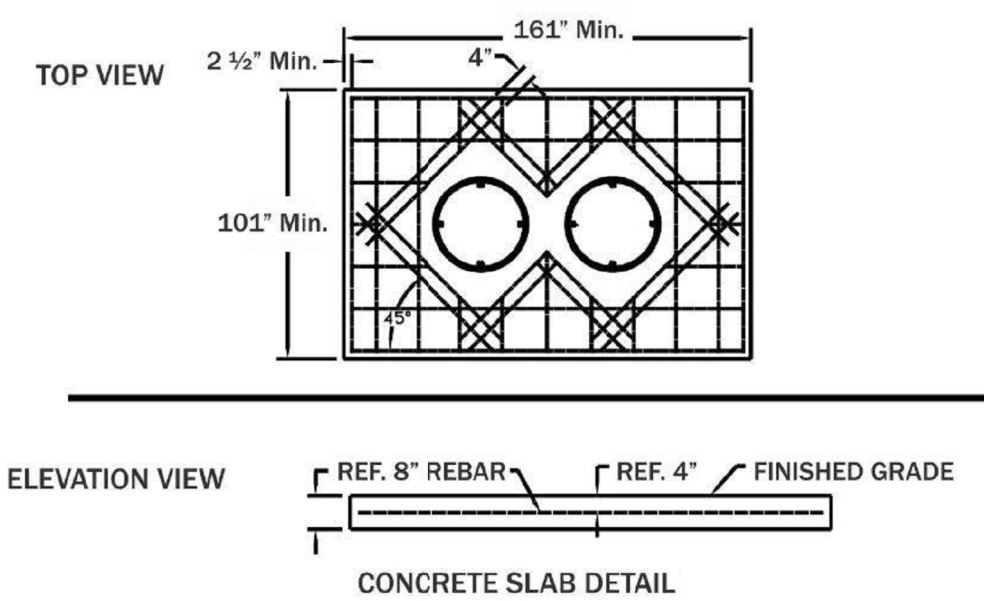
GREASE INTERCEPTOR SIZING PROCEDURE FOR KITCHEN FIXTURES					
FIXTURE TYPE	QUANTITY	PIPE DIAMETER	GPM/FIXTURE	RATING	GPM
Pot sink (3 comp)	1	1 1/2"	13	1.00	13
Meat & Vegetable prep sink	2	1 1/2"	13	0.10	2.6
Pre-rinse sink					0
Wok					0
Other					0
Dishwasher					8
Can wash / Mop sink					0
<b>Total</b>					<b>23.6</b>
Grease Interceptor Size = flow rate x 30 minutes =					<b>708</b>
Please round up to the next available size to determine the required grease interceptor.					

ELECTRIC WATER HEATER SCHEDULE																								
ID	LOCATION	NAME	NO.	MANUFACTURER	MODEL NO.	TYPE	ELECTRIC HEAT EXCHANGER				HEATING ELEMENT				UNIT WEIGHT	FLA	MCA	MOPP	VOLT	PH	REMARKS			
							HEATING CAP	DESIGN	FLOW	MIN	RECOVERY	VOL	MAX TEMP RISE	QTY								POWER	SCR	EF
WH-1	Space	235	AO SMITH	DEN-40	STORAGE	0.0 kW				0.0 gal/h	40.0 gal	80 °F	2	0.0 kW	Yes	0.9	Yes	447 lb	8.3 A	10.4 A	15.0 A	208 V	3	PROVIDE ASSE 1017 COMPLIANT MIXING VALVE; POWERS SERIES LFSH OR EQUAL

GREASE INTERCEPTOR SCHEDULE																						
ID	TYPE	MANUFACTURER	MODEL	QTY	TYPE	MATERIAL DESCRIPTION	COVER		CAPACITY		INSTALLATION		PIPE CONNECTIONS		DIMENSIONS			REMARKS				
							DESCRIPTION	DIA	LIQUID	SOLIDS	ARRANGEMENT	INLET DIA	OUTLET DIA	LENGTH	WIDTH	HEIGHT						
GI-750		MIFAB	SUPER-750	1	GRAVITY	HIGH DENSITY POLYETHYLENE	CAST IRON	2'-0"	250.0 GPM	750.0 gal	77.0 gal	ABOVE GRADE	4"	-3"	4"	9'-3"	5'-4"	4'-5 5/8"				
Grand total: 1																						



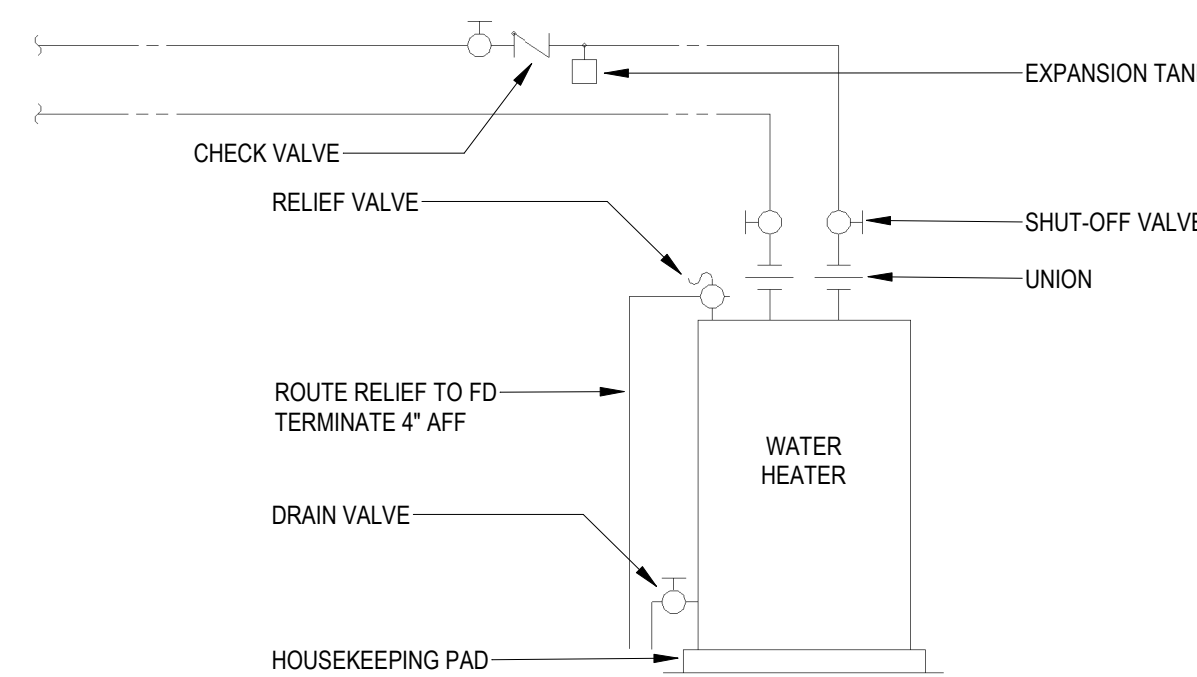
4 GREASE INTERCEPTOR DETAIL  
NOT TO SCALE



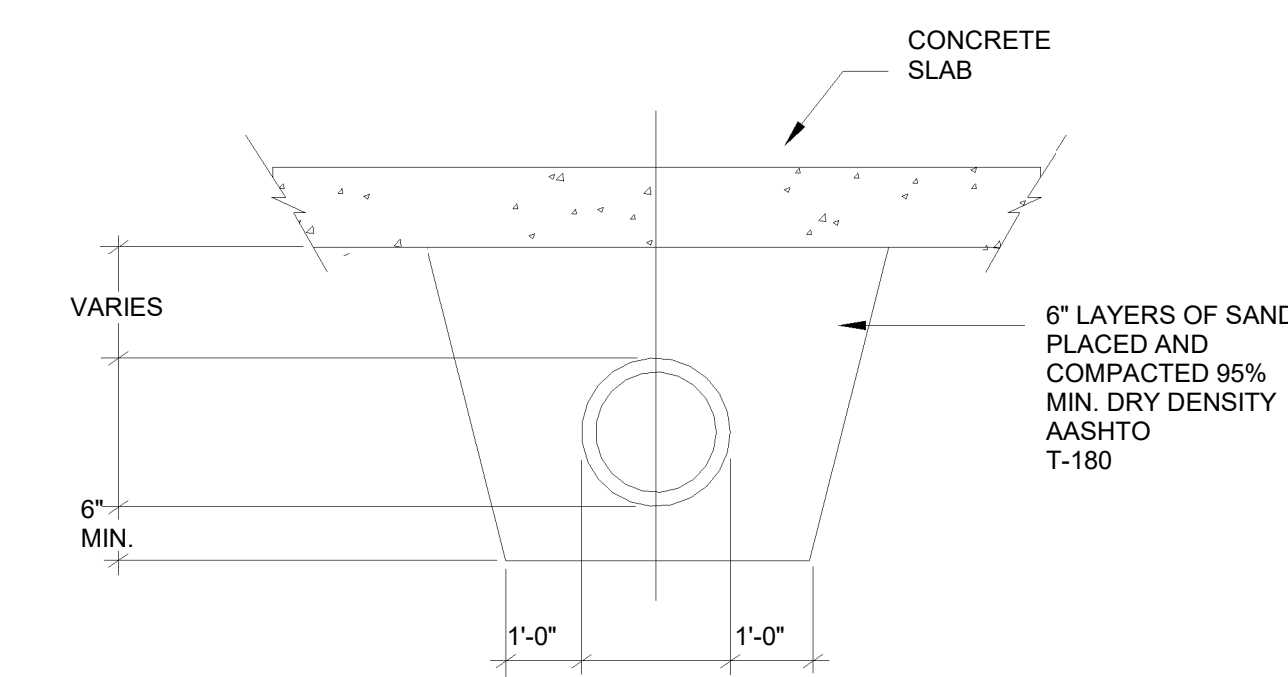
2 TYPICAL PIPE UNDER SLAB DETAIL  
NOT TO SCALE

WATER SUPPLY FIXTURE UNIT SUMMARY																
ID	FIXTURE DESCRIPTION	QTY	PIPE SIZE		DFU DEMAND		CW/FU DEMAND		HW/FU DEMAND		WSFU DEMAND					
			CW	HW	UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL				
EWC-2	WATER COOLER - DUAL HEIGHT	3	1/2"	1/2"	0.5	1.5	0.5	1.5	0	0	0.5	1.5				
HS-1	HAND SINK	1	1/2"	1/2"	2	2	1.125	1.125	1.125	1.125	1.5	1.5				
HS-3	HAND SINK	2	1/2"	1/2"	2	4	1.125	2.25	1.125	2.25	1.5	3				
JS-1	JANITOR SINK	1	3/4"	3/4"	3	3	2.25	2.25	2.25	2.25	3	3				
LAV-1	LAVATORY - WALL HUNG	1	1/2"	1/2"	1	1	0.75	0.75	0.75	0.75	1	1				
LAV-2	LAVATORY - COUNTER	5	1/2"	1/2"	1	5	0.75	3.75	0.75	3.75	1	5				
OB-5	ICE MAKER OUTLET BOX	1	1/2"	1/2"	0	0	0.5	0.5	0	0	0.5	0.5				
OB-7	WASHING MACHINE OUTLET BOX	1	1/2"	1/2"	3	3	3	3	3	3	4	4				
SH-1A	SHOWER STALL - ADA	2	1/2"	1/2"	2	4	1.5	3	1.5	3	2	4				
SK-3	3-COMPARTMENT SINK	1	1/2"	1/2"	4	4	1.5	1.5	1.5	1.5	2	2				
U-1	URINAL	3	3/4"	3/4"	2	6	4	12	0	0	4	12				
WC-3	WATER CLOSET - FLOOR - TANK TYPE	4	1/2"	1/2"	4	16	2.5	10	0	0	2.5	10				
WC-3A	WATER CLOSET - FLOOR - PRESSURE ASSISTED TANK TYPE - ADA	3	1/2"	1/2"	4	12	2.5	7.5	0	0	2.5	7.5				
Grand total: 28													61.5	49.125	17.625	55

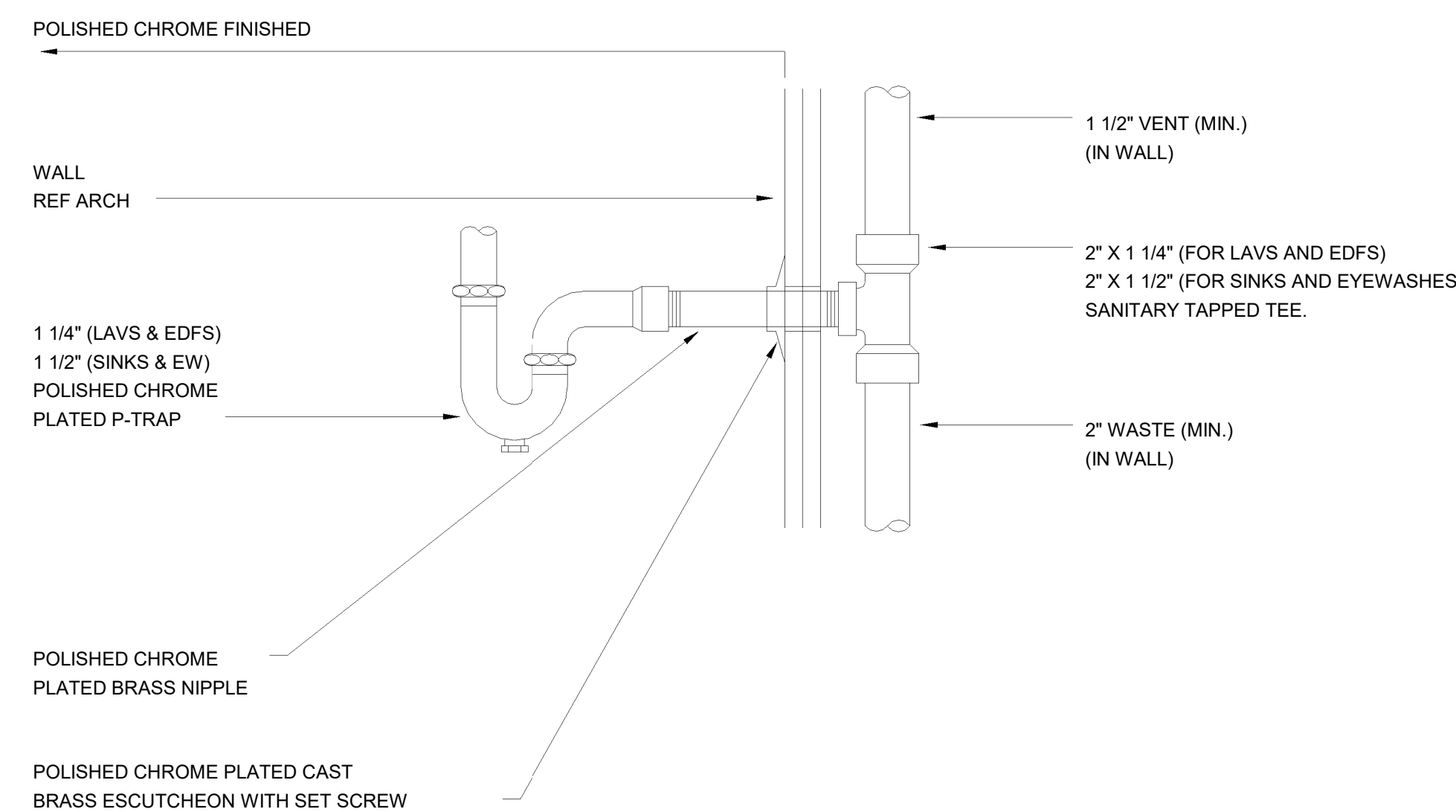
DRAINAGE FIXTURE UNIT SUMMARY							
ID	FIXTURE DESCRIPTION	QTY	WASTE SIZE		DFU DEMAND		
			UNIT	TOTAL	UNIT	TOTAL	
EWC-2	WATER COOLER - DUAL HEIGHT	3	1 1/4"	0.5	1.5		
FD-2	FLOOR DRAIN	1	3"	6	6		
FS-1	FLOOR SINK	2	4"	6	12		
HS-1	HAND SINK	1	2"	2	2		
HS-3	HAND SINK	2	2"	2	4		
JS-1	JANITOR SINK	1	3"	3	3		
LAV-1	LAVATORY - WALL HUNG	1	1 1/2"	1	1		
LAV-2	LAVATORY - COUNTER	5	2"	1	5		
OB-7	WASHING MACHINE OUTLET BOX	1	2"	3	3		
SH-1A	SHOWER STALL - ADA	2	2"	2	4		
SK-3	3-COMPARTMENT SINK	1	2"	4	4		
U-1	URINAL	3	2"	2	6		
WC-3	WATER CLOSET - FLOOR - TANK TYPE	4	4"	4	16		
WC-3A	WATER CLOSET - FLOOR - PRESSURE ASSISTED TANK TYPE - ADA	3	3"	4	12		
Grand total: 30							79.5



3 WATER HEATER PIPING DETAIL - SINGLE  
NOT TO SCALE



1 TYPICAL DRAIN PIPING DETAIL  
NOT TO SCALE



ARCHITECT

RON W. WEBB  
1659 W. HANRAHAN ROAD  
AYDEN, NC, 28513  
TEL: (252) 531-2711

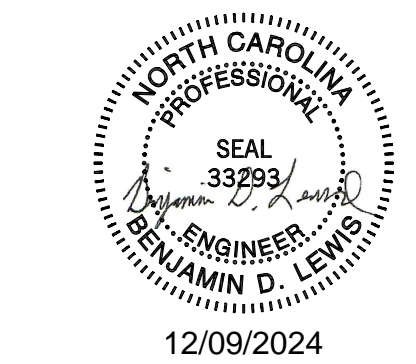
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PROJECT CONSULTANTS



120 SOMMERSVILLE PARK ROAD  
RALEIGH, NC 27603  
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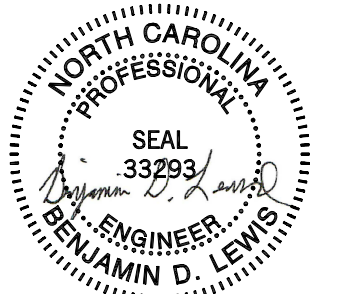
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Drawing No.  
PLUMBING DETAILS AND SCHEDULES

P200



12/09/2024

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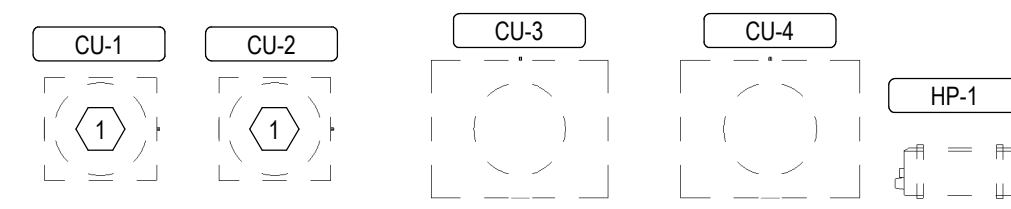
Drawing No.

HVAC TITLE SHEET

M000

of

GENERAL MECHANICAL SYMBOLS	HVAC SYMBOLS	PIPING SYMBOLS
<p>REVISION NUMBER - SHOWN ON PLANS</p> <p>POINT WHERE NEW CONNECTS TO EXISTING</p> <p>NUMBER OF DETAIL ON SHEET</p> <p>NUMBER OF SHEET WHERE DETAIL APPEARS</p> <p>KEYNOTE</p> <p>CONTINUATION SYMBOL</p> <p>ROOM NAME AND NUMBER</p> <p>ITEM TO BE DEMOLISHED</p> <p>AREA NOT IN CONTRACT</p> <p>PIPE SIZE TAG (DIAMETER)</p> <p>ABOVE GROUND PIPING</p> <p>PIPE SLOPE TAG</p> <p>BELOW GROUND PIPING</p> <p>PIPE INVERT ELEVATION TAG</p> <p>EXISTING PIPE TAG</p> <p>PIPING BEING DEMOLISHED</p>	<p>18"x12" SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)</p> <p>18"1/2" OVAL DUCT SIZE TAG (WIDTH / HEIGHT)</p> <p>18"Ø ROUND DUCT SIZE TAG (DIAMETER)</p> <p>(E) EXISTING DUCT TAG</p> <p>DUCT BEING DEMOLISHED</p> <p>18"x18" S/A SUPPLY AIR</p> <p>18"x18" S-O/A CONDITIONED OUTSIDE AIR</p> <p>18"x18" O/A OUTSIDE AIR</p> <p>18"x18" R/A RETURN AIR</p> <p>18"x18" S/A-FD SUPPLY AIR - FABRIC DUCT</p> <p>18"x18" E/A EXHAUST AIR</p> <p>18"x18" L/A RELIEF AIR</p> <p>18"x18" GE/A GREASE EXHAUST AIR</p> <p>18"x18" CE/A CONDENSATE EXHAUST AIR</p> <p>18"x18" SE/A SMOKE EXHAUST AIR</p> <p>8"Ø FLUE EXHAUST GAS FLUE</p> <p>8"Ø C/A COMBUSTION AIR</p> <p>DROP RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE</p> <p>DROP ROUND SUPPLY/OUTSIDE AIR DUCT RISE</p> <p>DROP RECTANGULAR RETURN/TRANSFER AIR DUCT RISE</p> <p>DROP ROUND RETURN/TRANSFER AIR DUCT RISE</p> <p>DROP RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE</p> <p>DROP ROUND EXHAUST/RELIEF AIR DUCT RISE</p> <p>GRILLES, REGISTERS &amp; DIFFUSERS TAG</p> <p>TYPE (SEE SCHEDULE)</p> <p>3-CONE DIFFUSER</p> <p>PERFORATED DIFFUSER WITH DEFLECTORS</p> <p>ROUND DIFFUSER WITH ADJUSTABLE PATTERNS</p> <p>LOUVERED DOUBLE DEFLECTION GRILLE</p> <p>LINEAR BAR GRILLE</p> <p>LINEAR DIFFUSER TAG</p> <p>TYPE (SEE SCHEDULE)</p> <p>LINEAR SLOT DIFFUSER</p> <p>MECHANICAL EQUIPMENT TAGS</p> <p>HEATING COIL</p> <p>FLOW</p> <p>BOTTOM OF EQUIPMENT ELEVATION</p> <p>EXISTING EQUIPMENT TO REMAIN</p> <p>EXISTING RELOCATED EQUIPMENT</p> <p>EQUIPMENT BY OTHERS (REFER TO OTHER DISCIPLINE FOR ADDITIONAL INFORMATION)</p> <p>DATA DEVICE TAGS</p> <p>EQUIPMENT ID</p> <p>TEMPERATURE SENSOR</p> <p>HUMIDITY SENSOR</p> <p>TEMPERATURE &amp; CO2 SENSOR</p> <p>TEMPERATURE &amp; HUMIDITY SENSOR</p> <p>THERMOSTAT</p> <p>HUMIDISTAT</p> <p>O2 DETECTOR</p> <p>PANEL NAME</p> <p>BMS CONTROL PANEL</p> <p>COMB. FIRE/SMOKE DAMPER</p> <p>FIRE DAMPER</p> <p>SMOKE DAMPER</p>	<p>CHWR CHILLED WATER RETURN</p> <p>CHWS CHILLED WATER SUPPLY</p> <p>CD CONDENSATE DRAINAGE</p> <p>CWR CONDENSER WATER RETURN</p> <p>CWS CONDENSER WATER SUPPLY</p> <p>GWR GEOTHERMAL WATER RETURN</p> <p>GWS GEOTHERMAL WATER SUPPLY</p> <p>HWR HEATING WATER RETURN</p> <p>HWS HEATING WATER SUPPLY</p> <p>G PROPANE GAS</p> <p>REF-L REFRIGERANT-LIQUID</p> <p>REF-S REFRIGERANT-SUCTION</p> <p>REF-HG REFRIGERANT-HOT GAS</p> <p>STM STEAM</p> <p>CDR CONDENSATE RETURN</p> <p>PIPE DROP</p> <p>PIPE RISE</p> <p>PIPE TEE</p> <p>PIPE ACCESSORY TAGS</p> <p>2" SHUTOFF BALL VALVE</p> <p>2" BALANCING VALVE</p> <p>2" BUTTERFLY VALVE</p> <p>2" CHECK VALVE</p> <p>(ALTERNATE CHECK VALVE SYMBOL)</p> <p>2" CIRC GLOBE VALVE</p> <p>2" GLOBE VALVE</p> <p>2" LOCKED LOCK SHIELD VALVE</p> <p>2" PRV PRESS REDUCING</p> <p>2" QUICK QUICK OPENING</p> <p>2" CHECK VALVE</p> <p>2" STRAINER</p> <p>1" GAS-ONTR. EMERG. GAS SHUTOFF</p> <p>1" PLUG PLUG VALVE</p> <p>1" GAS COCK GAS SHUTOFF COCK</p> <p>1" REG PRESS REGULATOR</p> <p>PLUG</p> <p>REDUCING 45 DEGREE TEE</p> <p>45 DEGREE TEE</p>
<p>ABBREVIATIONS</p> <p>Ø ROUND</p> <p>ABV ABOVE</p> <p>ACR AIR CONDITIONING</p> <p>AD AREA DRAIN</p> <p>ADD ADDENDUM</p> <p>AFF ABOVE FINISHED FLOOR</p> <p>AFUE ANNUAL FUEL UTILIZATION EFFICIENCY</p> <p>ALT ALTERNATE</p> <p>AP ACCESS PANEL</p> <p>ARCH ARCHITECT/ARCHITECTURAL</p> <p>BFF BELOW FINISHED FLOOR</p> <p>BLW BELOW</p> <p>BTU BRITISH THERMAL UNITS</p> <p>BTUH BRITISH THERMAL UNITS PER HOUR</p> <p>CAP CAPACITY</p> <p>CB CATCH BASIN</p> <p>CFM CUBIC FEET PER MINUTE</p> <p>CLG CEILING</p> <p>CO CLEAN OUT</p> <p>CW COLD WATER</p> <p>D DEGREE</p> <p>DB DRY BULB</p> <p>DIAMETER</p> <p>DN DOWN</p> <p>DW DISTILLED WATER</p> <p>EA EACH</p> <p>EAT ENTERING AIR TEMPERATURE</p> <p>ELEC ELECTRICAL</p> <p>EQUIP EQUIPMENT</p> <p>EWC ELECTRIC WATER COOLER</p> <p>EWT ENTERING WATER TEMPERATURE</p> <p>E/A EXHAUST AIR</p> <p>EXIST EXISTING</p> <p>F DEGREES FAHRENHEIT</p> <p>FO FLOOR CLEAN OUT</p> <p>FD FLOOR DRAIN</p> <p>FDC FIRE DEPARTMENT CONNECTION</p> <p>FL FLOOR</p> <p>FO FUEL OIL</p> <p>FOV FUEL OIL VENT</p> <p>FOR FUEL OIL RETURN</p> <p>FOS FUEL OIL SUPPLY</p> <p>FPM FEET PER MINUTE</p> <p>FS FLOOR SINK</p> <p>FT FOOT/FEET</p> <p>FTR FIN TUBE RADIATION</p> <p>GAL GALLON</p> <p>GF GAS-FIRED</p> <p>GC GENERAL CONTRACTOR</p> <p>GPM GALLONS PER MINUTE</p> <p>GW GREASE WASTE</p> <p>HS HOSE BIB</p> <p>HP HORSE POWER</p> <p>HTG HEATING</p> <p>HTR HEATER</p> <p>HW HOT WATER</p> <p>HYD HYDRANT</p> <p>ID INDIRECT</p> <p>IN INCH</p> <p>INV INVERT</p> <p>LB POUND</p> <p>LBHR POUNDS PER HOUR</p> <p>LAT LEAVING AIR TEMPERATURE</p> <p>LP LOW PRESSURE</p> <p>LPG LIQUEFIED PETROLEUM GAS</p> <p>LVT LOUVER</p> <p>LWT LEAVING WATER TEMPERATURE</p> <p>MA MIXED AIR</p> <p>MAX MAXIMUM</p> <p>MBH ONE THOUSAND BTU PER HOUR</p> <p>MCF ONE THOUSAND CUBIC FEET</p> <p>MD MOTORIZED DAMPER</p> <p>MECH MECHANICAL</p> <p>MFR MANUFACTURER</p> <p>MIN MINIMUM</p> <p>MISC MISCELLANEOUS</p> <p>MTR MOTOR</p> <p>MAK/UPAIR MAKE-UP/AIR</p> <p>NC NOISE CRITERIA</p> <p>NC NORMALLY CLOSED</p> <p>NIC NOT IN CONTRACT</p> <p>NO NUMBER</p> <p>NO NORMALLY OPEN</p> <p>NTS NOT TO SCALE</p> <p>O OXYGEN</p> <p>O/A OUTSIDE AIR</p> <p>ORD OVERFLOW ROOF DRAIN</p> <p>PD POST INDICATOR VALVE</p> <p>PV PLUMBING</p> <p>PRESS PRESSURE</p> <p>PRV PRESSURE REDUCING VALVE</p> <p>PSI POUNDS PER SQUARE INCH</p> <p>PSIG POUNDS PER SQUARE INCH GAUGE</p> <p>PWR POWER</p> <p>R DUCT RISER</p> <p>R/A RETURN AIR</p> <p>RCP RADIANT CEILING PANEL</p> <p>RD ROOF DRAIN</p> <p>REC RECESSED</p> <p>RED REDUCER</p> <p>RH RELATIVE HUMIDITY</p> <p>R/LA RELIEF AIR</p> <p>RM ROOM</p> <p>RPM REVOLUTIONS PER MINUTE</p> <p>RW RAIN WATER</p> <p>SF SQUARE FOOT</p> <p>S/A SUPPLY AIR</p> <p>SAN SANITARY</p> <p>SF SQUARE FOOT</p> <p>SD SMOKE DAMPER</p> <p>SM SURFACE MOUNT</p> <p>SP STANDPIPE</p> <p>SP STATIC PRESSURE</p> <p>STM STEAM</p> <p>T THERMOSTAT</p> <p>TD TEMPERATURE DROP</p> <p>TDR TRENCH DRAIN</p> <p>TEMP TEMPERATURE</p> <p>TYP TYPICAL</p> <p>UG UNDERGROUND</p> <p>VAC VACUUM</p> <p>V VENT</p> <p>V V VENTILATION</p> <p>VTR VENT THROUGH ROOF</p> <p>W WASTE</p> <p>WB WET BULB</p> <p>WC WALL CLEAN OUT</p> <p>WH WALL HYDRANT</p>	<p>AC AIR CONDITIONING UNIT</p> <p>ACCU AIR COOLING CONDENSING UNIT</p> <p>AHU AIR HANDLING UNIT</p> <p>AS AIR SEPARATOR</p> <p>B BOILER</p> <p>CAS CASSETTE DUCTLESS</p> <p>CH CHILLER</p> <p>CT COOLING TOWER</p> <p>CUH CABINET UNIT HEATER</p> <p>CHWP CHILLED WATER PUMP</p> <p>DBP DOMESTIC WATER BOOSTER PUMP</p> <p>DC DUCT MOUNTED COIL</p> <p>DCP DOMESTIC WATER CIRCULATING PUMP</p> <p>DOAS DEDICATED OUTDOOR AIR SYSTEM</p> <p>EF EXHAUST FAN</p> <p>EDC ELECTRIC DUCT COIL</p> <p>ET EXPANSION TANK</p> <p>EVP EVAPORATIVE COOLER COIL</p> <p>EWB ELECTRIC WATER HEATER</p> <p>FCU FAN COIL UNIT</p> <p>FP FIRE PUMP</p> <p>GI GREASE INTERCEPTOR</p> <p>GRV GRAVITY ROOF VENTILATOR</p> <p>HWU HEAT PUMP WALL UNIT</p> <p>HWP HEATING WATER PUMP</p> <p>HRR HEAT RECOVERY UNIT</p> <p>PRV POWER ROOF VENTILATOR</p> <p>RE RETURN/EXHAUST FAN</p> <p>RTU ROOFTOP UNIT</p> <p>SUMP PUMP</p> <p>SH UNIT HEATER</p> <p>WH WATER HEATER</p>	
<p>*NOTE*</p> <p>ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.</p>	<p>MECHANICAL NOTES</p> <p>A. MECHANICAL PLANS ARE INTENDED TO PROVIDE INFORMATION FOR INSTALLATION OF A COMPLETE OPERATING MECHANICAL SYSTEM. PROVIDE ALL ESSENTIAL LABOR, MATERIALS AND DEVICES REQUIRED TO PRODUCE A QUALITY END PRODUCT.</p> <p>B. CONTRACTOR SHALL REVIEW AND BECOME FAMILIAR WITH THE WORK OF ALL TRADES FOR PURPOSES OF COORDINATION AND ROUTING. CONTRACTOR SHALL PROVIDE REQUIRED PLANNING, COORDINATION AND SEQUENCING OF HVAC INSTALLATION WITH BUILDING COMPONENTS AND OTHER TRADES.</p> <p>C. ALL WORK SHALL COMPLY WITH LOCAL, STATE, AND NATIONAL CODES. WORKMANSHIP SHALL MEET OR EXCEED INDUSTRY STANDARDS.</p> <p>D. FABRICATE AND INSTALL DUCT PER SMACNA STANDARDS FOR 2-INCH WC WITH GALVANIZED METAL (26 GAUGE MINIMUM). ALL RADIUS ELBOWS AND TEES SHALL HAVE CENTERLINE RADIUS OF 1.5 X DUCT WIDTH. ALL SQUARE ELBOWS AND TEES SHALL HAVE TURNING VANES. PRIOR TO FABRICATION, MECHANICAL CONTRACTOR SHALL FIELD VERIFY STRUCTURAL OBSTRUCTIONS AND CEILING SPACE LIMITATIONS AND MAKE NECESSARY DUCT MODIFICATIONS INCLUDING CHANGING OF ASPECT RATIOS, ADDING OFFSETS, AND SHIFTING LOCATIONS. PROTECT DUCT BY STORING IN A CLEAN AND DRY ENVIRONMENT PRIOR TO INSTALLATION. COVER ENDS OF EXPOSED WORK AT THE END OF EVERY SHIFT.</p> <p>E. ALL DUCT JOINTS, SEAMS AND BRANCH TAKEOFFS SHALL BE SEALED AIR-TIGHT WITH DUCT SEALANT EQUAL TO HARDCAST IRON-GRIP OR FOIL-GRIP TAPE EQUAL TO HARDCAST AFG-1402.</p> <p>F. ROUND RUNOUTS SHALL HAVE SPIN-INS WITH DAMPERS, RECTANGULAR BRANCH DUCTS SHALL HAVE 45 DEGREE TAPS WITH AIR EXTRACTORS AND ALL TEES SHALL HAVE SPLITTER DAMPERS. PROVIDE ANY OTHER DEVICES REQUIRED TO BALANCE AIR SYSTEM.</p> <p>G. FLEX DUCT SHALL HAVE METALIZED VAPOR BARRIER WITH MIN. R-VALUE OF 5.0. BOTH ENDS SHALL BE SECURED WITH NYLON BANDS AND METALIZED DUCT TAPE PER MFG'S RECOMMENDATIONS AND IN ACCORDANCE WITH U.L. 181B.</p> <p>H. RIGID ROUND AND RECTANGULAR DUCT SHALL BE EXTERNALLY INSULATED WITH 2-INCH THICK 34 LB DENSITY FIBERGLASS BLANKET WITH FSK VAPOR BARRIER AND A MIN. R-VALUE OF 6.5. STAPLE AND SEAL ALL JOINTS WITH 4-INCH-WIDE METALIZED DUCT TAPE EQUAL TO SHURFLEX SF-683.</p> <p>I. COORDINATE THE EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH NEW AND EXISTING LIGHTING. PROVIDE DIFFUSERS AND REGISTERS WITH 4-WAY BLOW PATTERN UNLESS OTHERWISE NOTED. INSULATE AND SEAL ALL GRILLE AND DIFFUSER NECKS TO MAINTAIN VAPOR BARRIER AND ELIMINATE CONDENSATION.</p> <p>J. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE TRAPS FOR ALL AC UNITS SHALL BE SIZED AS RECOMMENDED BY UNIT MFG. CONDENSATE PIPING AND TRAPS SHALL BE SCHEDULE 40 PVC ROUTED TO EXTERIOR OR STORM DRAIN. INSULATE INTERIOR PIPING WITH 1/2-INCH-THICK UNICELLULAR INSULATION.</p> <p>K. REFRIGERANT PIPING SHALL BE TYPE ACR COPPER WITH SILVER SOLDERED JOINTS. INSTALL PER EQUIPMENT INSTALLATION INSTRUCTIONS. INSULATION SHALL BE 1-INCH-THICK MINIMUM.</p> <p>L. GAS PIPING SHALL BE A-53 SCHEDULE 40 BLACK STEEL WITH MALLEABLE FITTINGS. PIPING BELOW GRADE SHALL HAVE FRP COATING AND ABOVE GRADE SHALL BE PRIMED AND PAINTED. BOND ALL GAS PIPING ABOVE GRADE AND WITHIN BUILDING. PROVIDE MAGNETIC MARKER TAPE 12-INCHES ABOVE ALL BELOW GRADE PIPING.</p> <p>M. ALL PIPING SHALL BE SUPPORTED AND SECURED WITH SUITABLE HANGERS, STRAPS OR PIPE STANDS. SUPPORT WITH NO DROOPS OR SAGS. ALL HANGERS AND ATTACHMENTS SHALL BE PLATED, GALVANIZED OR PAINTED. PROVIDE ISOLATION ON PIPING OF DISSIMILAR MATERIALS.</p> <p>N. POWER WIRING, DISCONNECTS AND STARTERS NOT FURNISHED WITH HVAC EQUIPMENT AND FINAL CONNECTIONS SHALL BE BY THE E.C.</p> <p>O. CONTROL WIRING, RELAYS AND INTERLOCKING DEVICES SHALL BE PROVIDED BY THE M.C.</p> <p>P. UL LISTED DUCT SMOKE DETECTORS SHALL BE FURNISHED, INSTALLED AND TESTED BY THE M.C. THE E.C. SHALL PROVIDE 120V POWER TO EACH DUCT SMOKE DETECTOR WHERE REQUIRED. THE M.C. SHALL PROVIDE REMOTE ALARM/TEST STATIONS FOR EACH DUCT SMOKE DETECTOR.</p> <p>Q. TEMPERATURE CONTROLS FOR EACH HEATING-COOLING SYSTEM SHALL CONSIST OF AN ELECTRONIC PROGRAMMABLE HEATING-COOLING THERMOSTAT WITH HEAT-OFF-COOL-AUTO SYSTEM SWITCH AND AUTO-ON FAN SWITCH. MOUNT THERMOSTATS 48-INCHES ABOVE FINISHED FLOOR AND A MINIMUM 8" FROM ANY OTHER SWITCHING DEVICES.</p> <p>R. INSTALL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE AND REPAIR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS, AS WELL AS SPECIFIC INSTRUCTIONS ON PLANS. PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.</p> <p>S. PROVIDE FLEX CONNECTORS AT ALL DUCT TO EQUIPMENT CONNECTIONS NOT HAVING INTERNALLY ISOLATED FANS.</p> <p>T. CONTRACTOR SHALL BALANCE AIR SYSTEM TO QUANTITIES INDICATED ON PLANS AND PROVIDE TYPE WRITTEN REPORT WITH O AND M MANUALS.</p> <p>U. ALL EQUIPMENT AND SYSTEMS SHALL BE WASHED, MECHANICAL AREAS CLEANED AND PAINTED SURFACES TOUCHED UP TO MATCH FACTORY APPLIED FINISHES. ALL DUCT SYSTEMS AND AIR HANDLERS SHALL BE VACUUMED AND WIPED CLEAN ON THE INSIDE PRIOR TO TURNING THE PROJECT OVER TO THE OWNER. SYSTEMS THAT HAVE NOT BEEN ADEQUATELY PROTECTED DURING INSTALLATION WILL REQUIRE CLEANING AGAIN AT THE END OF THE PROJECT.</p> <p>V. CONTRACTOR SHALL INSTALL A NEW SET OF PLEATED FILTERS BEFORE TURNING BUILDING OVER TO OWNER.</p> <p>W. CONTRACTOR SHALL PROVIDE BUILDING OWNER WITH A COMPLETE OPERATING AND MAINTENANCE MANUAL INCLUDING EQUIPMENT BASIC DATA, CONTROL INFORMATION, ROUTINE MAINTENANCE ACTIONS AND SERVICE AGENCIES' NAME, PHONE NUMBER, AND ADDRESS.</p>	



- KEYNOTES**
- EXISTING PIECE OF EQUIPMENT. CONTRACTOR TO LOCATE CURRENT EXISTING LOCATION AND SAVE PIECE OF EQUIPMENT. STORE IN A SAFE AND CLEAN ENVIRONMENT. CONTRACTOR TO THEN LOCATE TO NEW LOCATIONS SHOWN ON PLAN AND CONNECT/ASSEMBLE ACCORDINGLY.
  - CONTRACTOR TO COORDINATE WITH OWNER ON FINAL LOCATION PLACEMENTS FOR OUTDOOR UNIT EQUIPMENT.
  - CONTRACTOR TO INSTALL MOTORIZED DAMPER ON OUTDOOR AIR INTAKE DUCT. COORDINATE WITH ELECTRICAL CONTRACTOR SUCH THAT THE DAMPER OPENS WHEN KITCHEN HOODS ARE TURNED ON, AND CLOSES WHEN HOODS ARE TURNED OFF. IT IS ASSUMED THAT THE KITCHEN HOODS INCLUDE A BACKDRAFT DAMPER OR BARRIERS.
  - ALL FABRIC DUCT SHALL HAVE OFFICE DISPERSION OUTLETS, SET AT ORIENTATIONS OF 4:30 AND 7:30.
  - RETURN DUCT SHALL MAINTAIN A DISTANCE OF AT LEAST 10' FROM ANY KITCHEN APPLIANCE AND RANGE HOODS.

**ARCHITECT**

**RON W. WEBB**  
 1659 W. HANRAHAN ROAD  
 AYDEN, NC. 28513  
 TEL: (252) 531-2711

**WEBB MT  
 PISGAH**

145 PROSPECT CHURCH RD  
 ERWIN, NC 28339

**PROJECT CONSULTANTS**



120 SOMMerville PARK ROAD  
 RALEIGH, NC 27603  
 NC FIRM # C-3824



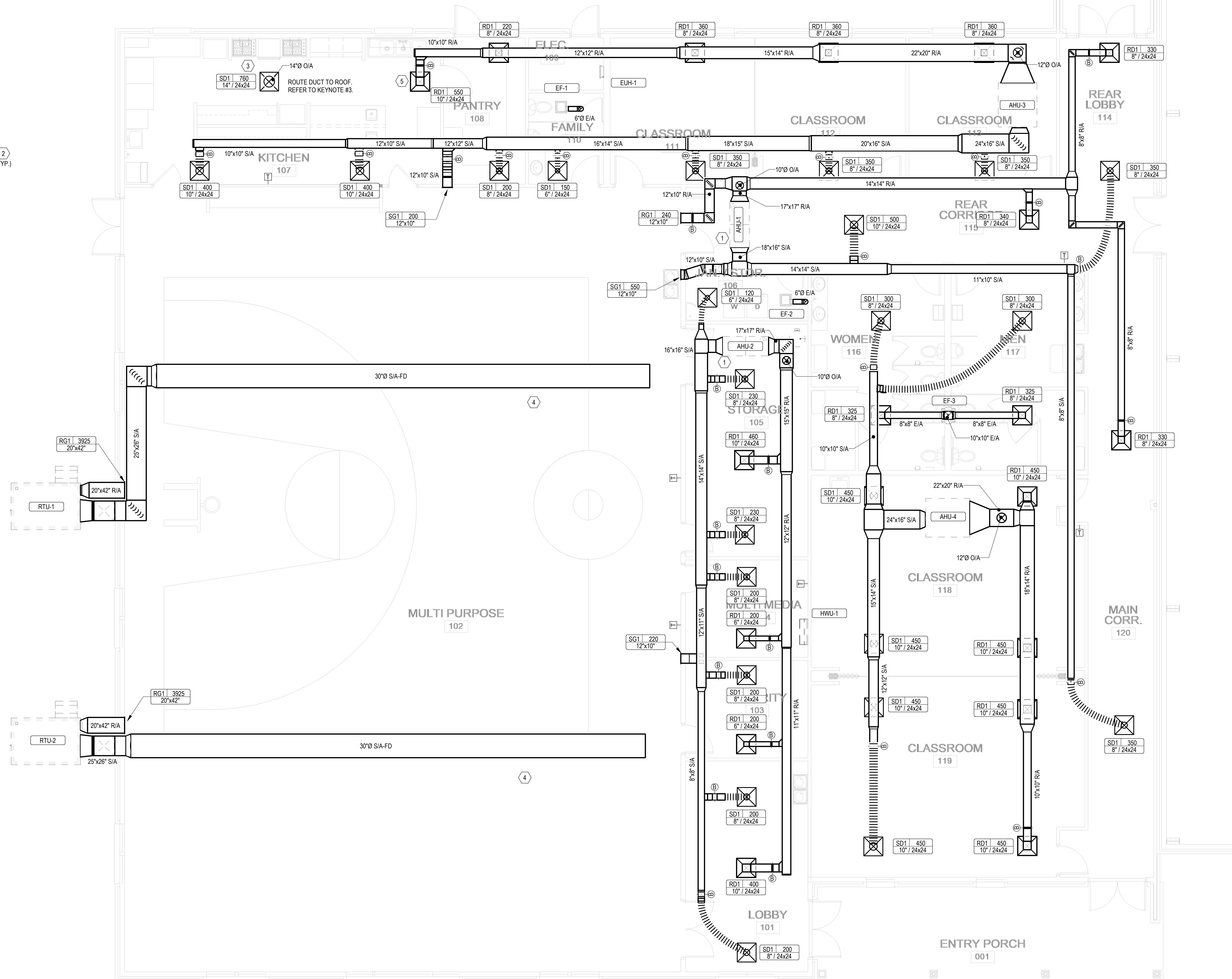
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Issue Date: Issue Date

Plot Date: 10/23/2023 4:27:12 PM

Revisions

Mark	Date	Description



1 LEVEL 1 HVAC PLAN  
 M101 3/16" = 1'-0"

Drawing No.  
 HVAC FLOOR PLAN

**M101**  
 of

**2018 NC MECHANICAL CODE - VENTILATION CALCULATIONS**

**ZONE 1**

ROOM NAME	OCCUPANCY CLASS	AREA (Az)	OCCUPANCY DENSITY (PEOPLE / 1000 FT^2)	OCCUPANCY (Pz)	OCCUPANCY BASED		AREA BASED		BREATHING ZONE OUTDOOR AIRFLOW (Vb = Rp*Pz + Ra*Az)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (Voz = Vbz / Ez)	EXHAUST RATE (CFM)
					CFM / PERSON (Rp)	CFM (Rp*Pz)	CFM / SF (Ra)	CFM (Ra*Az)				
MULTI PURPOSE	SPORTS (PLAY AREA)	4969	0	0	0	0	0.3	1490.7	1490.7	0.8	1864	0
REAR CORRIDOR	PUBLIC SPACES (CORRIDORS)	336	0	0	0	0	0.06	20.16	20.16	0.8	26	0
MAIN CORRIDOR	PUBLIC SPACES (CORRIDORS)	498	0	0	0	0	0.06	29.88	29.88	0.8	38	0
REAR LOBBY	PUBLIC SPACES (CORRIDORS)	158	0	0	0	0	0.06	9.48	9.48	0.8	12	0
<b>TOTALS -----&gt;</b>		<b>5961</b>		<b>0</b>							<b>1940</b>	<b>0</b>

OUTDOOR AIR INTAKE FLOW RATE:	1940
EXHAUST FLOW RATE PLUS 8% FOR PRESSURIZATION	0
<b>FINAL VENT. AIR REQUIREMENT (GREATER OF THE ABOVE):</b>	<b>1940</b>

BALANCE RTU-1 TO PROVIDE 870 CFM OF OUTSIDE AIR.  
 BALANCE RTU-2 TO PROVIDE 870 CFM OF OUTSIDE AIR.  
 BALANCE AHU-1 TO PROVIDE 360 CFM OF OUTSIDE AIR.

**2018 NC MECHANICAL CODE - VENTILATION CALCULATIONS**

**ZONE 2**

ROOM NAME	OCCUPANCY CLASS	AREA (Az)	OCCUPANCY DENSITY (PEOPLE / 1000 FT^2)	OCCUPANCY (Pz)	OCCUPANCY BASED		AREA BASED		BREATHING ZONE OUTDOOR AIRFLOW (Vb = Rp*Pz + Ra*Az)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (Voz = Vbz / Ez)	EXHAUST RATE (CFM)
					CFM / PERSON (Rp)	CFM (Rp*Pz)	CFM / SF (Ra)	CFM (Ra*Az)				
JANITOR/STORAGE	ASHRAE62.1-2019-1C	115	0	0	10	0	0	0	0	0.8	0	115
STORAGE	RETAIL STORES (STORAGE ROOMS)	208	0	0	0	0	0.06	12.48	12.48	0.8	16	0
MULTIMEDIA	EDUCATION (MEDIA CENTER)	134	25	4	10	40	0.12	16.08	56.08	0.8	71	0
SECURITY	CORRECTIONAL (GUARD STATIONS)	208	15	4	5	20	0.06	12.48	32.48	0.8	41	0
LOBBY	OFFICES (MAIN ENTRY LOBBY)	290	10	3	5	15	0.06	17.4	32.4	0.8	41	0
<b>TOTALS -----&gt;</b>		<b>955</b>		<b>11</b>							<b>169</b>	<b>115</b>

OUTDOOR AIR INTAKE FLOW RATE:	169
EXHAUST FLOW RATE PLUS 8% FOR PRESSURIZATION	124.2
<b>FINAL VENT. AIR REQUIREMENT (GREATER OF THE ABOVE):</b>	<b>169</b>

BALANCE AHU-2 TO PROVIDE 340 CFM OF OUTSIDE AIR

**2018 NC MECHANICAL CODE - VENTILATION...**

**ZONE 4**

ROOM NAME	OCCUPANCY CLASS	AREA (Az)	OCCUPANCY DENSITY (PEOPLE / 1000 FT^2)	OCCUPANCY (Pz)	OCCUPANCY BASED		AREA BASED		BREATHING ZONE OUTDOOR AIRFLOW (Vb = Rp*Pz + Ra*Az)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (Voz = Vbz / Ez)	EXHAUST RATE (CFM)
					CFM / PERSON...	CFM...	CFM / SF...	CFM...				
WOMEN'S BR	PUBLIC SPACES (TOILET...	305	0	0	0	0	0	0	0	0.8	200	
MEN'S BR	PUBLIC SPACES (TOILET...	292	0	0	0	0	0	0	0	0.8	200	
CLASSROOM	EDUCATION (CLASSROOM...	603	35	22	7.5	165	0	0	165	0.8	207	
CLASSROOM	EDUCATION (CLASSROOM...	603	35	22	7.5	165	0	0	165	0.8	207	
<b>TOTALS -----&gt;</b>		<b>1803</b>		<b>0</b>							<b>414</b>	<b>400</b>

OUTDOOR AIR INTAKE FLOW RATE:	414
EXHAUST FLOW RATE PLUS 8% FOR PRESSURIZATION	432
<b>FINAL VENT. AIR REQUIREMENT (GREATER OF THE ABOVE):</b>	<b>432</b>

BALANCE RTU-5 TO PROVIDE CFM OF OUTSIDE AIR

**2018 NC MECHANICAL CODE - VENTILATION...**

**ZONE 3**

ROOM NAME	OCCUPANCY CLASS	AREA (Az)	OCCUPANCY DENSITY (PEOPLE / 1000 FT^2)	OCCUPANCY (Pz)	OCCUPANCY BASED		AREA BASED		BREATHING ZONE OUTDOOR AIRFLOW (Vb = Rp*Pz + Ra*Az)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (Voz = Vbz / Ez)	EXHAUST RATE (CFM)
					CFM / PERSON...	CFM...	CFM / SF...	CFM...				
CLASSROOM	EDUCATION (CLASSROO...	243	35	9	7.5	67.5	0	0	67.5	0.8	85	0
CLASSROOM	EDUCATION (CLASSROO...	243	35	9	7.5	67.5	0	0	67.5	0.8	85	0
CLASSROOM	EDUCATION (CLASSROO...	238	35	9	7.5	67.5	0	0	67.5	0.8	85	0
FAMILY	EDUCATION (DAY CARE)	77	25	2	10	20	0.18	13.86	33.86	0.8	43	0
PANTRY	ASHRAE 62.1-2019...	135	2	1	5	5	0.06	8.1	13.1	0.8	17	0
KITCHEN	FOOD & BEVERAGE...	520	0	0	0	0	0	0	0	0.8	364	
<b>TOTALS -----&gt;</b>		<b>1456</b>		<b>30</b>							<b>315</b>	<b>364</b>

OUTDOOR AIR INTAKE FLOW RATE:	315
EXHAUST FLOW RATE PLUS 8% FOR PRESSURIZATION	393.12
<b>FINAL VENT. AIR REQUIREMENT (GREATER OF THE ABOVE):</b>	<b>394</b>

BALANCE RTU-6 TO PROVIDE CFM OF OUTSIDE AIR

**ARCHITECT**

**RON W. WEBB**  
 1659 W. HANRAHAN ROAD  
 AYDEN, NC. 28513  
 TEL: (252) 531-2711

**WEBB MT  
 PISGAH**

145 PROSPECT CHURCH RD  
 ERWIN, NC 28339

**PROJECT CONSULTANTS**



120 SOMMERSVILLE PARK ROAD  
 RALEIGH, NC 27603  
 NC FIRM # C-3824



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Drawing No.

HVAC SCHEDULES

**M301**

of









**RON W. WEBB**  
 1659 W. HANRAHAN ROAD  
 AYDEN, NC. 28513  
 TEL: (252) 531-2711

# WEBB MT PISGAH

145 PROSPECT CHURCH RD  
 ERWIN, NC 28339

PROJECT CONSULTANTS



120 SOMMERSVILLE PARK ROAD  
 RALEIGH, NC 27603  
 NC FIRM # C-3824



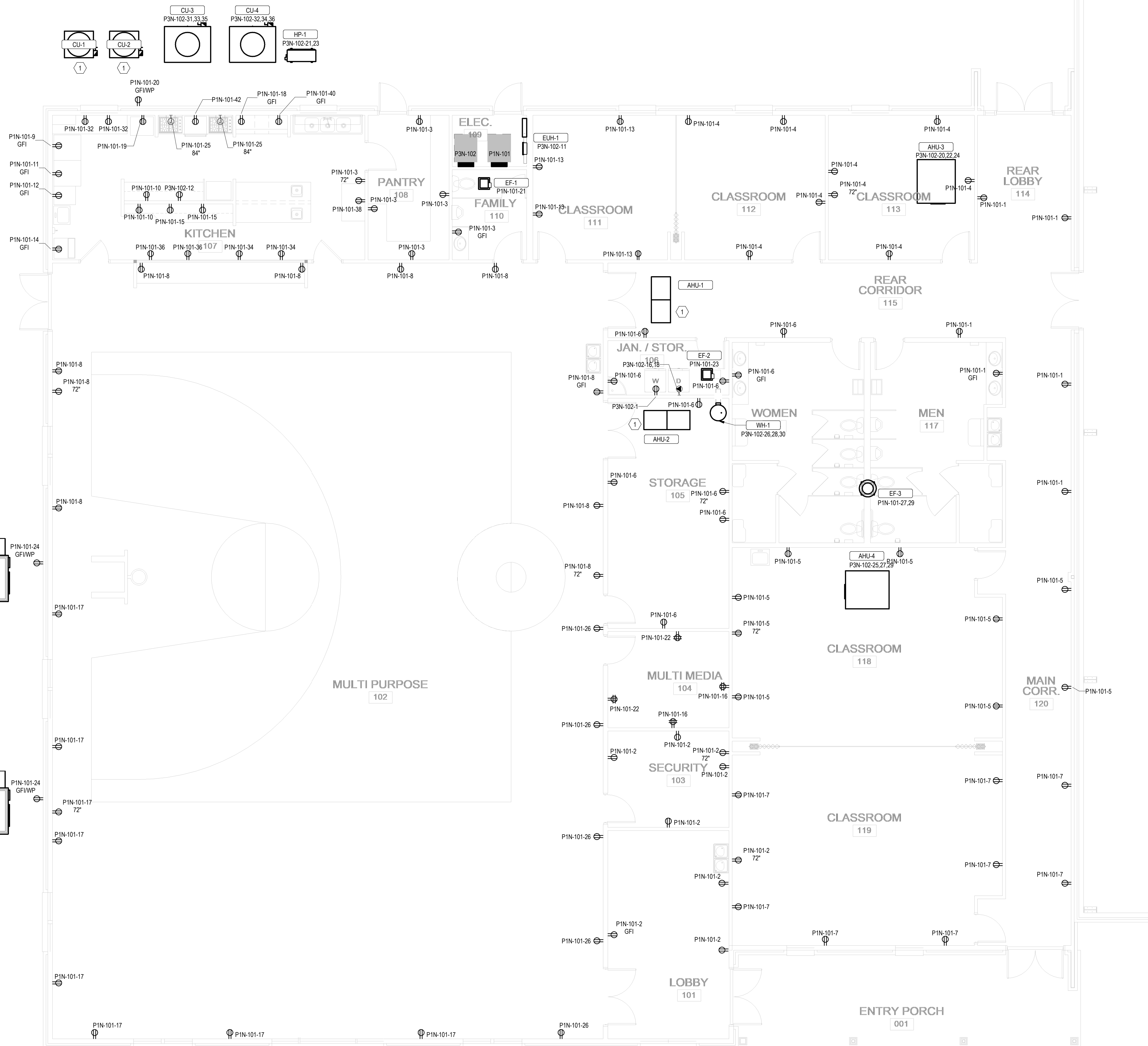
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**RON W. WEBB**  
 1659 W. HANRAHAN ROAD  
 AYDEN, NC. 28513  
 TEL: (252) 531-2711

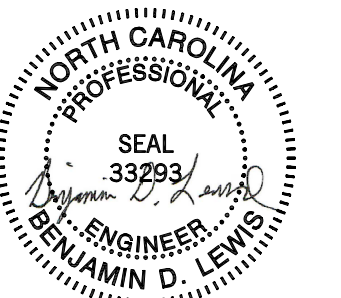
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145 PROSPECT CHURCH RD  
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 RALEIGH, NC 27603  
 NC FIRM # C-3824



12/09/2024

Branch Panel: P1N-101											
Location: Space 226				Volts: 120/208				A.I.C. Rating: 10,000 AMPS SYMMETRICAL			
Supply From: P3N-102				Phases: 1				Mains Type: MAIN CB			
Mounting: SURFACE				Wires: 3				Mains Rating: 225.0 A			
Enclosure: NEMA 1								MCB Rating: 225.0 A			
Notes:											
CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	RCPT	20.0 A	1	1080 VA	1620 VA			1	20.0 A	RCPT	2
3	RCPT	20.0 A	1			1080 VA	1620 VA	1	20.0 A	RCPT	4
5	RCPT	20.0 A	1	1620 VA	1800 VA			1	20.0 A	RCPT	6
7	RCPT	20.0 A	1			1440 VA	1800 VA	1	20.0 A	RCPT	8
9	REFRIGERATOR (GFI)	20.0 A	1	500 VA	360 VA			1	20.0 A	KITCHEN MISC RCPTS	10
11	REFRIGERATOR (GFI)	20.0 A	1			500 VA	500 VA	1	20.0 A	FREEZER (GFI)	12
13	RCPT	20.0 A	1	720 VA	200 VA			1	20.0 A	ICE MAKER (GFI)	14
15	KITCHEN MISC RCPTS	20.0 A	1			360 VA	360 VA	1	20.0 A	RCPT	16
17	RCPT	20.0 A	1	1440 VA	1500 VA			1	20.0 A	RCPT	18
19	FOOD WARMER	20.0 A	1			1200 VA	180 VA	1	20.0 A	RCPT	20
21	EF-1	20.0 A	1	24 VA	360 VA			1	20.0 A	RCPT	22
23	EF-2,3,4	20.0 A	1			24 VA	360 VA	1	20.0 A	RCPT	24
25	RANGE HOODS	20.0 A	1	472 VA	900 VA			1	20.0 A	RCPT	26
27	EF-3	20.0 A	2			156 VA					28
29				156 VA							30
31							360 VA	1	20.0 A	KITCHEN MISC RCPTS	32
33							360 VA	1	20.0 A	KITCHEN MISC RCPTS	34
35							360 VA	1	20.0 A	KITCHEN MISC RCPTS	36
37							180 VA	1	20.0 A	KITCHEN MISC RCPTS	38
39							1500 VA	1	20.0 A	RCPT Space 228	40
41	LITES Space 239	20.0 A	1	600 VA	180 VA			1	20.0 A	RCPT Space 228	42
<b>Total Load:</b>				14072 VA		11800 VA					
<b>Total Amps:</b>				132.4 A		113.5 A					

Legend:					
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	360 VA	100.00%	360 VA		
LITES	600 VA	125.00%	750 VA	<b>Total Conn. Load:</b> 25872 VA	
RCPT	24912 VA	70.07%	17456 VA	<b>Total Est. Demand:</b> 18566 VA	
				<b>Total Conn.:</b> 124.4 A	
				<b>Total Est. Demand:</b> 89.3 A	

Notes:  
AIC IS ASSUMED, EC TO VERIFY BEFORE PURCHASE AND INSTALL.

Branch Panel: P3N-102													
Location: Space 226				Volts: 208Y/120				A.I.C. Rating: 10,000 AMPS SYMMETRICAL					
Supply From:				Phases: 3				Mains Type: MAIN CB					
Mounting: SURFACE				Wires: 4				Mains Rating: 400.0 A					
Enclosure: NEMA 1								MCB Rating: 400.0 A					
Notes:													
CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	WASHER	20.0 A	1	180 VA	14072 VA					2	20.0 A	P1N-101	2
3								11800 VA					4
5	LITES	20.0 A	1					1103 VA	1156 VA	1	20.0 A	LITES	6
7													8
9													10
11	C Space 226	20.0 A	1					1500 VA	1500 VA	1	20.0 A	MICROWAVE	12
13													14
15								900 VA					16
17	LITES	20.0 A	1					1585 VA	900 VA	2	20.0 A	DRYER	18
19					555 VA								20
21	HP-1	20.0 A	2		1950 VA	555 VA				3	20.0 A	AHU-3	22
23								1950 VA	555 VA				24
25				555 VA	1000 VA								26
27	AHU-4	20.0 A	3			555 VA	1000 VA			3	20.0 A	WH-1	28
29								555 VA	1000 VA				30
31				2402 VA	2402 VA								32
33	CU-3	30.0 A	3		2402 VA	2402 VA	2402 VA	2402 VA		3	60.0 A	CU-4	34
35								2402 VA	2402 VA				36
37				10315 VA	10315 VA								38
39	RTU-1	125.0 A	3			10315 VA	10315 VA			3	125.0 A	RTU-2	40
41								10315 VA	10315 VA				42
<b>Total Load:</b>				41796 VA		42194 VA		37238 VA					
<b>Total Amps:</b>				354.1 A		357.5 A		310.3 A					

Legend:					
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	83891 VA	100.00%	83891 VA		
POWER	1800 VA	100.00%	1800 VA	<b>Total Conn. Load:</b> 121227 VA	
LITES	4444 VA	125.00%	5555 VA	<b>Total Est. Demand:</b> 114042 VA	
HEAT	4500 VA	100.00%	4500 VA	<b>Total Conn.:</b> 336.5 A	
RCPT	26592 VA	68.80%	18296 VA	<b>Total Est. Demand:</b> 316.5 A	

Notes:  
AIC IS ASSUMED, EC TO VERIFY BEFORE PURCHASE AND INSTALL.

LIGHTING FIXTURE SCHEDULE																
TYPE	CONSTRUCTION				LIGHT SOURCE					ELECTRICAL				PRODUCT		NOTE
	DESCRIPTION	LENS/LOUVER	MOUNTING	LAMP	LUMENS DOWN	LUMENS UP	CCT	CRI	PROJECTED LIFE	BALLAST/DRIVER	VOLT	WATTS	EMERGENCY COMPONENT	MFR	Model	
EW1	ELU INDOOR, TWO HEAD	--	SURFACE WALL	LED	1100 lm	0 lm	6500 K	80	--	--	120 V	3 W	BATTERY	LITHONIA	ELM6L UVOLT LTP	EC TO INSTALL EQUAL OR EQUIVALENT.
EW2	ELU SINGLE REMOTE HEAD	--	SURFACE WALL	LED	220 lm	0 lm	6500 K	80	--	--	120 V	11 W	REMOTE BATTERY	LITHONIA	ELMRE LP220L SGL	EC TO INSTALL EQUAL OR EQUIVALENT.
EW3	EXIT SIGN, EDGE-LIT, 1-SIDED	--	CEILING	LED	0 lm	0 lm	0 K	0	--	--	120 V	5 W	BATTERY	LITHONIA	EDGR 1 R EL	EC TO INSTALL EQUAL OR EQUIVALENT.
L1	2x4 RECESSED	CURVED RIBBED	LAY-IN	LED	4000 lm	0 lm	3500 K	82	60,000 HOURS	LED DRIVER, 0-10V DIMMING, 1%	120 V	32 W	--	LITHONIA	2BLT4 40L ADP EZ1 LP835	EC TO INSTALL EQUAL OR EQUIVALENT.
L2	2x4 SUSPENDED	CURVED RIBBED	CEILING SUSPENDED	LED	4000 lm	0 lm	3500 K	82	60,000 HOURS	LED DRIVER, 0-10V DIMMING, 1%	120 V	32 W	--	LITHONIA	2BLT4 40L ADP EZ1 LP835	EC TO INSTALL EQUAL OR EQUIVALENT.
L3	14" ROUND RECESSED	FROSTED ACRYLIC	RECESSED	LED	2040 lm	0 lm	3500 K	80	30,000 HOURS	LED DRIVER	120 V	30 W	--	LITHONIA	FMHLDL 14 208 35K	EC TO INSTALL EQUAL OR EQUIVALENT.

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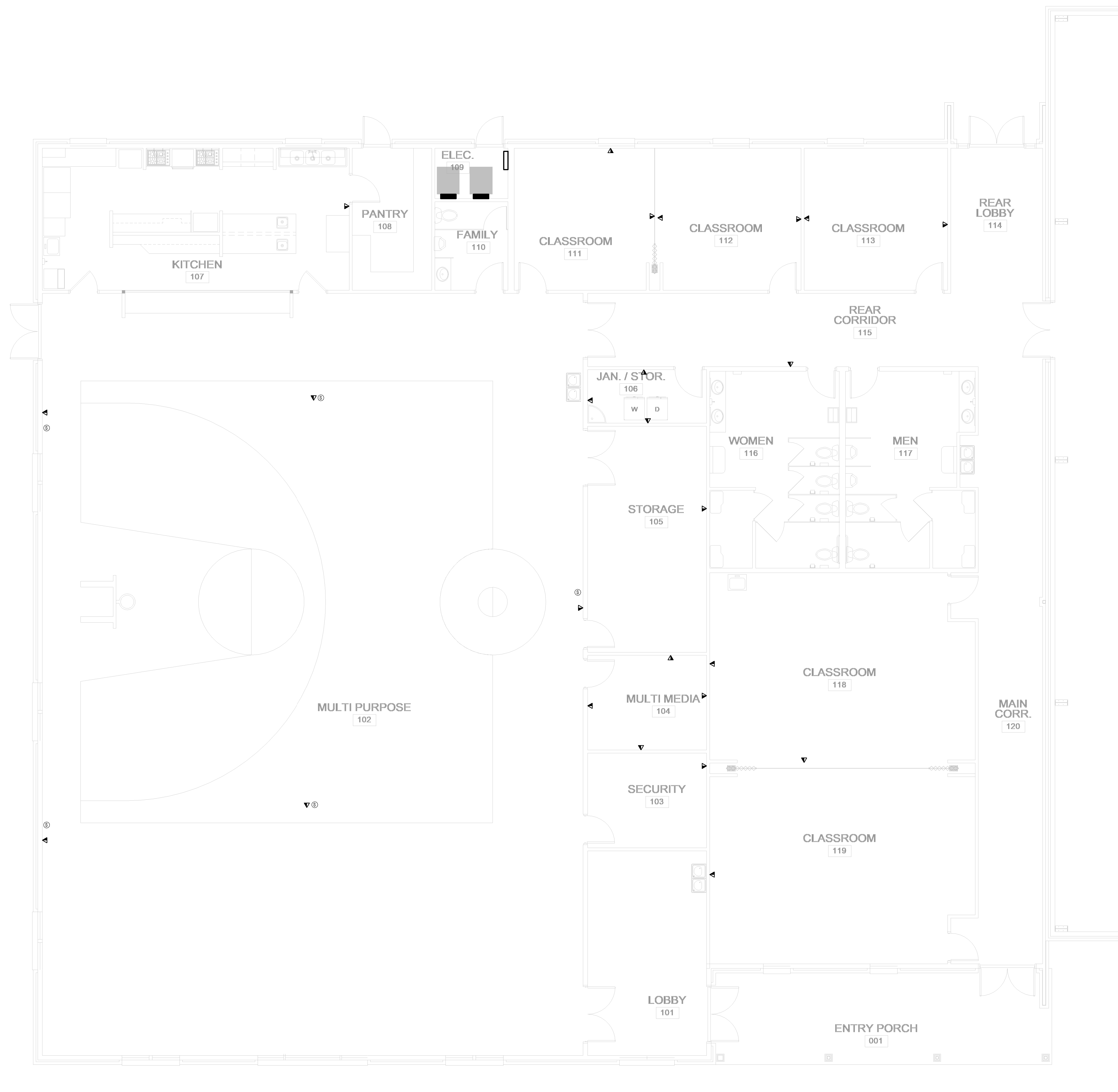
Revisions

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Drawing No. ELECTRICAL SCHEDULES

# E301





**ARCHITECT**

**RON W. WEBB**  
 1659 W. HANRAHAN ROAD  
 AYDEN, NC. 28513  
 TEL: (252) 531-2711

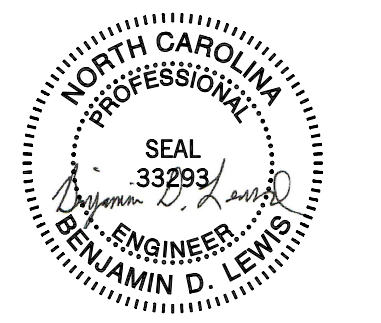
**WEBB MT  
 PISGAH**

145 PROSPECT CHURCH RD  
 ERWIN, NC 28339

**PROJECT CONSULTANTS**



120 SOMMERVILLE PARK ROAD  
 RALEIGH, NC 27603  
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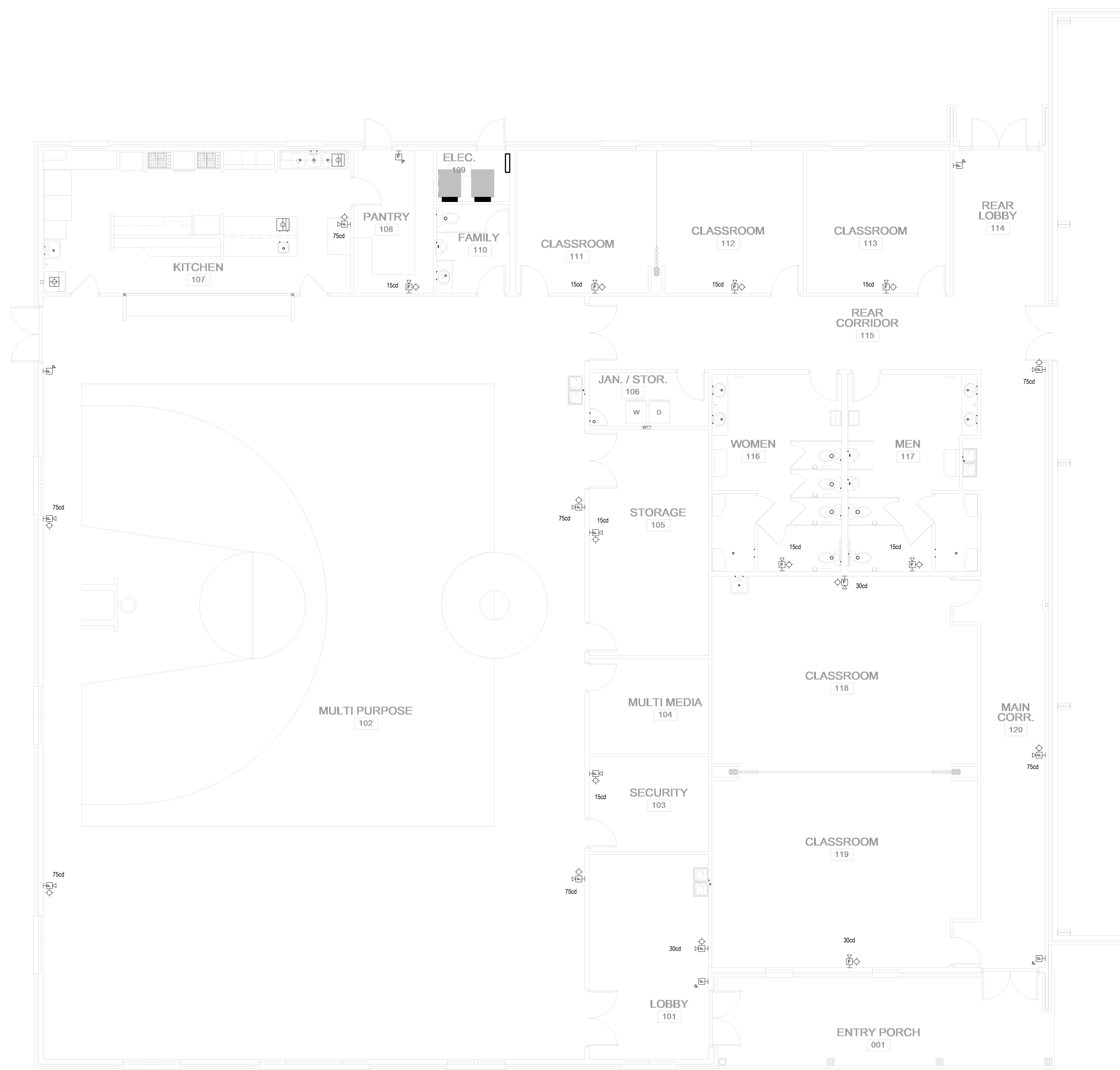
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ARCHITECT

RON W. WEBB  
1659 W. HANRAHAN ROAD  
AYDEN, NC. 28513  
TEL: (252) 531-2711

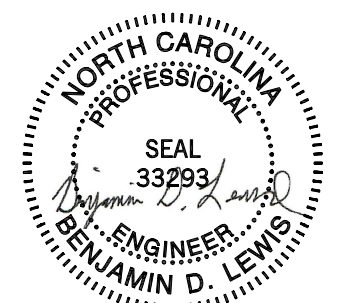
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PROJECT CONSULTANTS



120 SOMMERVILLE PARK ROAD  
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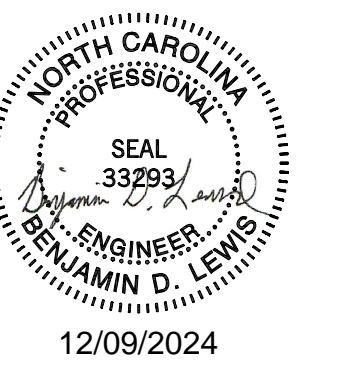
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FIRE ALARM PLAN Drawing No.

E601

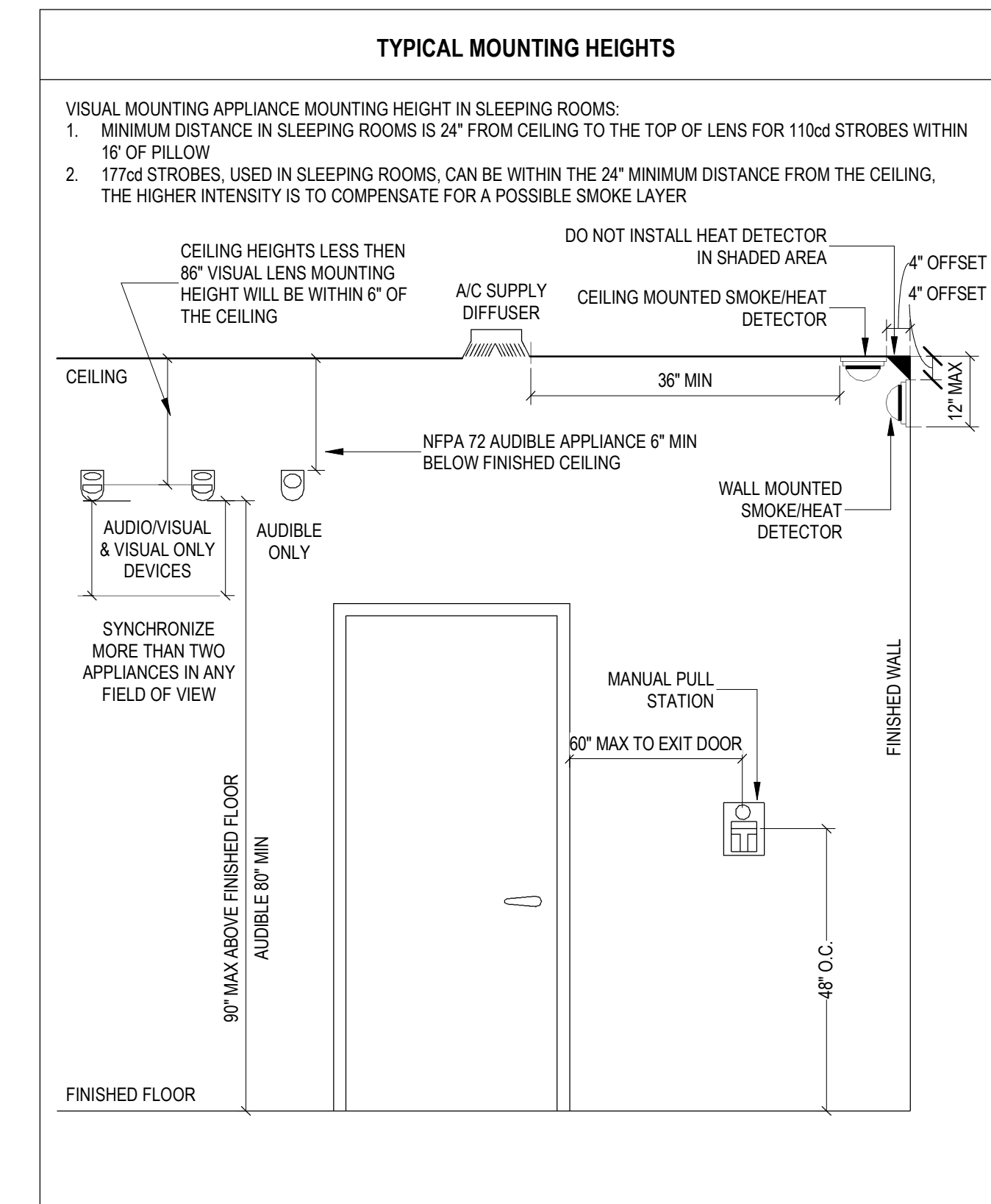
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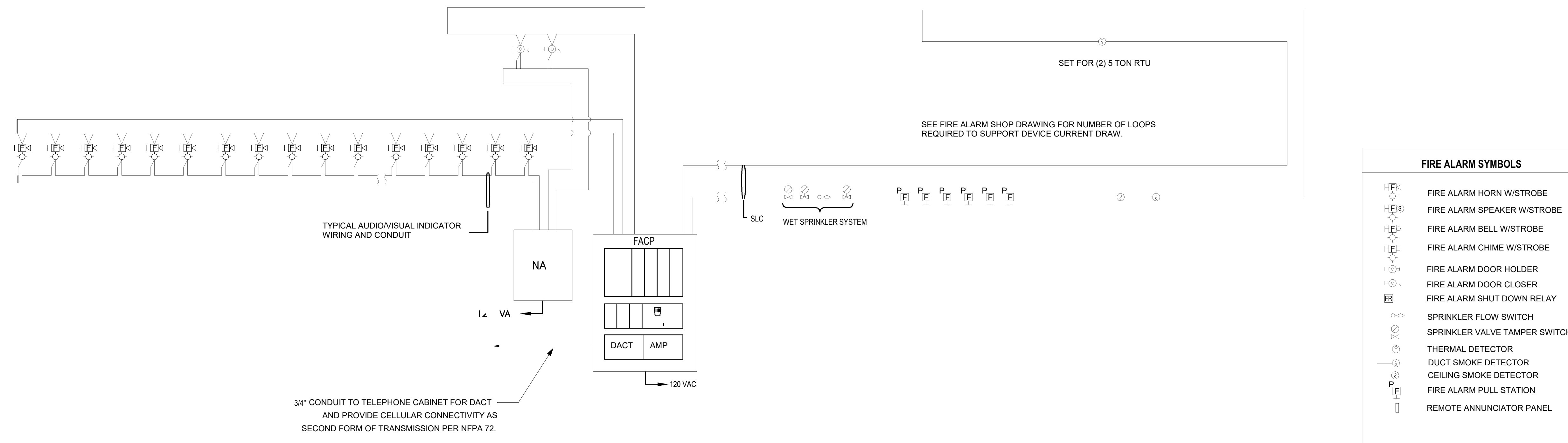
SYSTEM INPUTS	SYSTEM OUTPUTS																									
	FACP ANNUNCIATION												NOTIFICATION						REQUIRED FIRE SAFETY CONTROL							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1 FIRE ALARM SYSTEM AC POWER FAILURE																										
2 FIRE ALARM SYSTEM LOW BATTERY																										
3 OPEN CIRCUIT																										
4 GROUND FAULT																										
5 NOTIFICATION APPLIANCE CIRCUIT SHORT																										
6 BUILDING MANUAL PULL STATIONS																										
7 CORRIDOR SMOKE DETECTORS																										
8 AREA SMOKE DETECTORS																										
9 HVAC AIR DUCT SMOKE DETECTORS																										
10 SPRINKLER TAMPER SWITCH																										
11 SPRINKLER WATER FLOW IN BUILDING																										
12 SPRINKLER WATER FLOW IN ELEV EQUIP RM OR SHAFT																										
13																										
14																										

1 FIRE ALARM MATRIX  
E602 NOT TO SCALE



2 TYPICAL MOUNTING HEIGHTS  
E602 NOT TO SCALE

SEE FIRE ALARM SHOP DRAWING FOR NUMBER OF LOOPS REQUIRED TO SUPPORT HORN/STROBE CURRENT DRAW.



FIRE ALARM SYMBOLS	
	FIRE ALARM HORN W/STROBE
	FIRE ALARM SPEAKER W/STROBE
	FIRE ALARM BELL W/STROBE
	FIRE ALARM CHIME W/STROBE
	FIRE ALARM DOOR HOLDER
	FIRE ALARM DOOR CLOSER
	FIRE ALARM SHUT DOWN RELAY
	SPRINKLER FLOW SWITCH
	SPRINKLER VALVE TAMPER SWITCH
	THERMAL DETECTOR
	DUCT SMOKE DETECTOR
	CEILING SMOKE DETECTOR
	FIRE ALARM PULL STATION
	REMOTE ANNUNCIATOR PANEL

REFER TO FIRE ALARM SHOP DRAWINGS FOR MAKE/MODEL OF DEVICES.

3 FIRE ALARM RISER  
E602 NOT TO SCALE

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