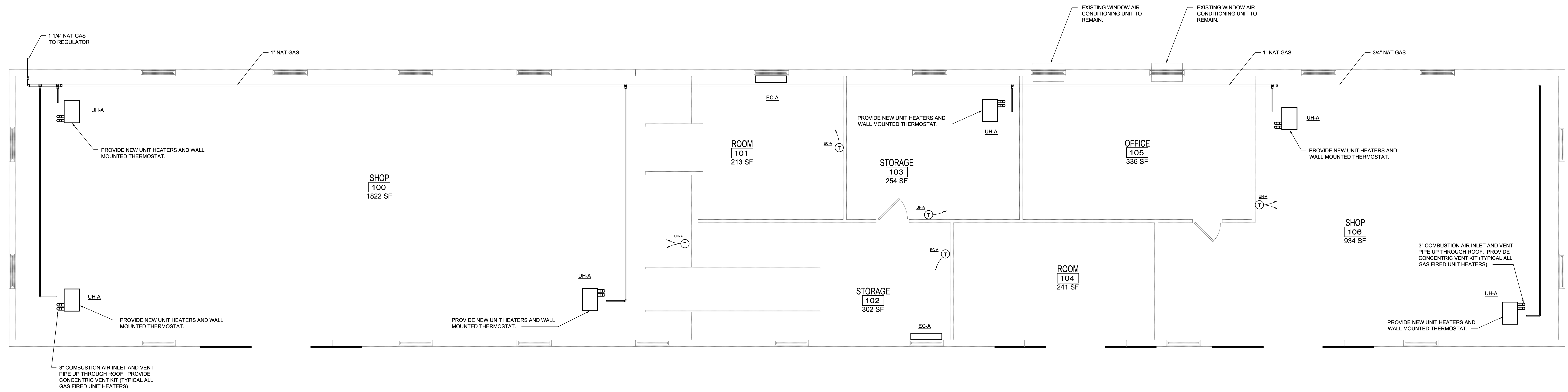


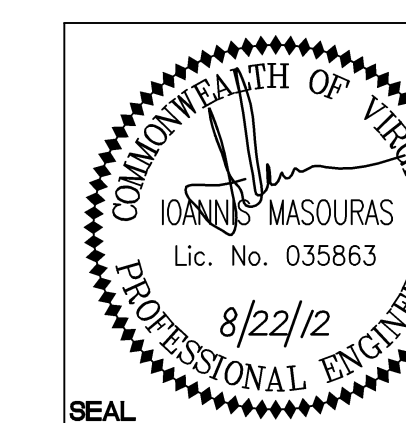
SYM.	PREP'D BY	DATE	APPROVED



BUILDING 1409 MECHANICAL NEW WORK PLAN
 1/4"=1'-0" 0" 2" 4" 8"

DISCLOSURE OF INFORMATION
 Contractor shall comply as follows:

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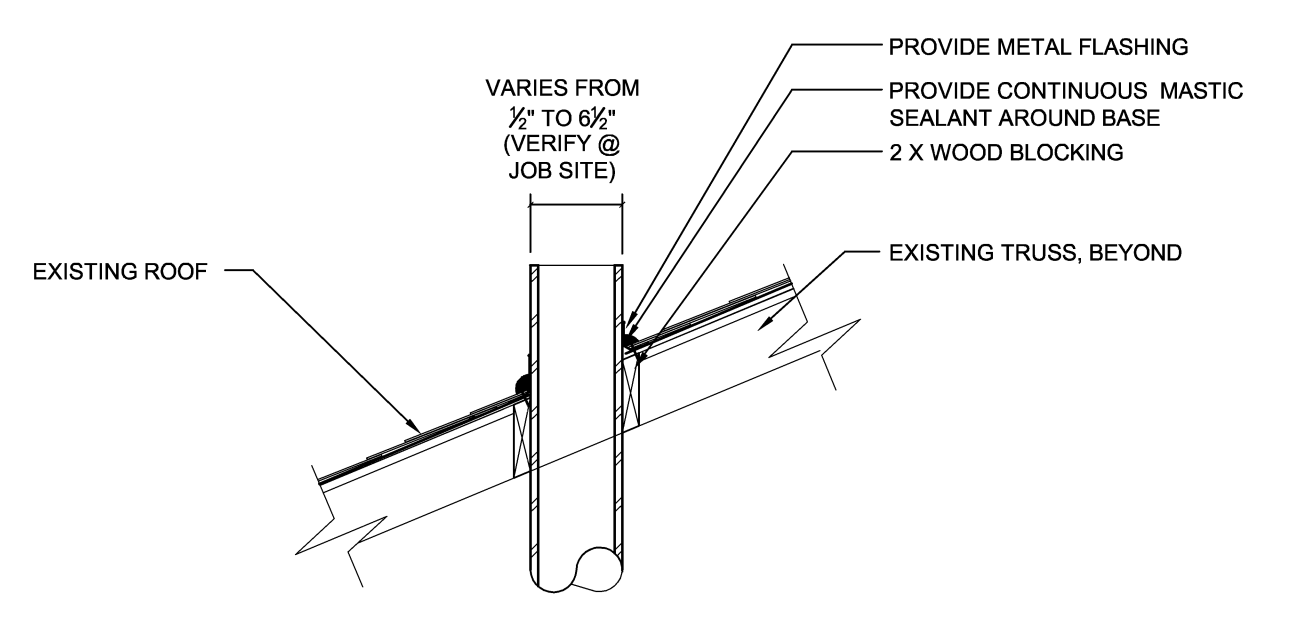


WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		M-117B PROJECT NO. CP12-0091	
DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVFAC DRAWING NO. 60011405	
DES. IM	DR. SWL	SIZE E	CODE IDENT NO. 80091
CHK. JHE	SUBMITTED BY:	APPROVED PWO OR OICC	DATE
DESIGN DR. APPROVED PWO OR OICC DATE		CONSTR CONTR NO.	N40085-12-B-0091
SATISFACTORY TO		SCALE: AS SHOWN	SPEC No. 05-12-0091
		SHEET 61 OF 84	

SYM.	PREP'D BY	DATE	APPROVED

GAS FIRED UNIT HEATER SCHEDULE	
DESIGNATION	UH-A
LOCATION	VARIOUS
FUEL	NATURAL GAS
AIRFLOW (CFM)	505
THROW	HORIZONTAL
INPUT (MBH)	30
MINIMUM INLET GAS PRESSURE (IN. WC.)	6
MAXIMUM INLET GAS PRESSURE (IN. WC.)	7
CAPACITY (MBH)	24
ENTERING AIR TEMPERATURE (DEG F)	60
LEAVING AIR TEMPERATURE (DEG F)	103
UNIT VOLTAGE	120
PHASE	1
FREQUENCY (HZ)	60
BASED ON	MODINE
MODEL	HDS 30
REMARKS	60
REMARKS LEGEND:	
1. PROVIDE INTEGRAL DISCONNECT.	

ELECTRIC CONVECTOR SCHEDULE		
DESIGNATION	EC-A	
LOCATION	VARIOUS	
CABINET STYLE	CABINET	
ELECTRIC COIL	MINIMUM CAPACITY (KW)	1.1
	ENTERING AIR TEMPERATURE (DEG F)	68
	UNIT TOTAL CURRENT (A)	3.6
ELECTRIC DATA	UNIT VOLTAGE (V)	208
	PHASE	1
	FREQUENCY (HZ)	60
BASED ON	CHROMALOX	
MODEL	CAF-12F211	
REMARKS	1 & 2	
REMARKS LEGEND:		
1. PROVIDE BUILT-IN SINGLE PHASE TAMPERPROOF THERMOSTAT		
2. PROVIDE BUILT-IN DISCONNECT		



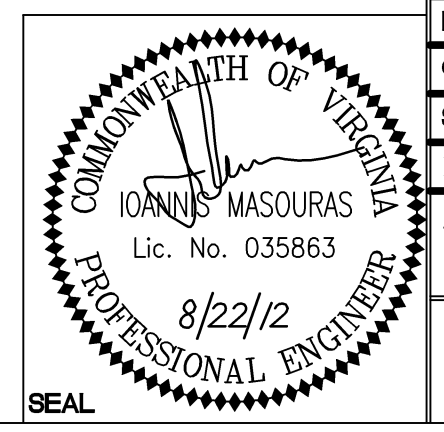
ROOF PENETRATION DETAIL
NOT TO SCALE

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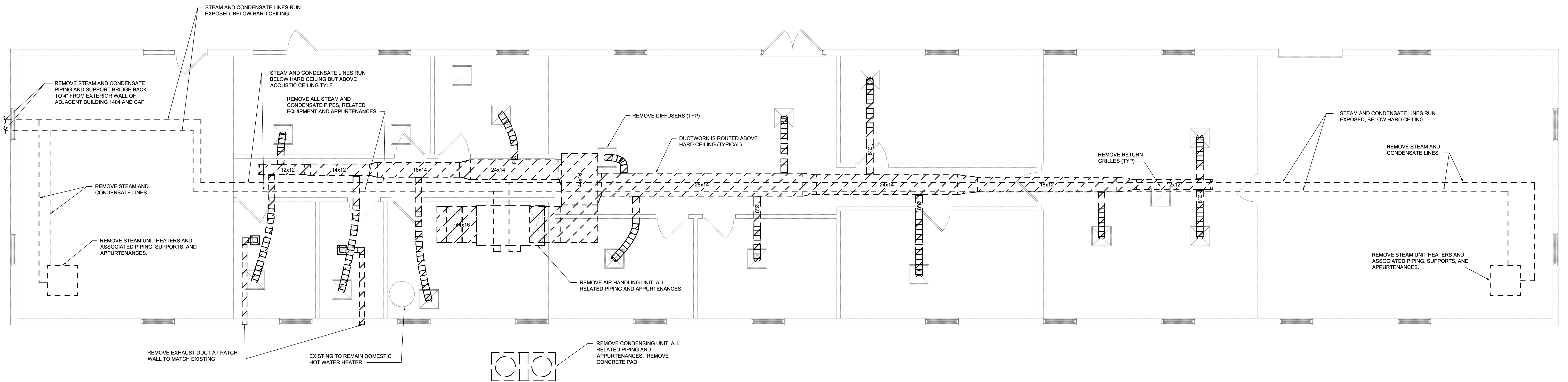
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WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.254.7242 wileywilson.com		M-117C PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES. IM	DR. SWL	HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1409 SCHEDULES, DETAILS & CONTROLS	
CHK. JHE	SUBMITTED BY:	NAVFAC DRAWING NO. 60011406	
DESIGN DR.	APPROVED PWO OR OICC	DATE	CONSTR CONTR NO. N40085-12-B-0091
SATISFACTORY TO	DATE	SCALE: AS SHOWN	SPEC No. 05-12-0091
		SHEET 62 OF 84	

SYM.	PREP'D BY	DATE	APPROVED

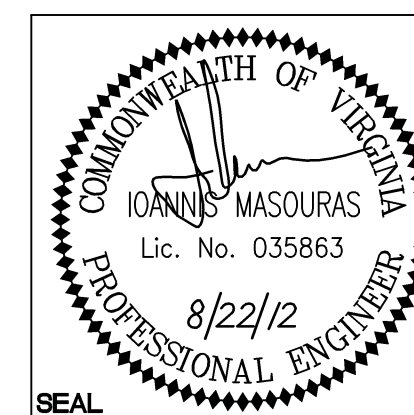
- DEMOLITION NOTES:
- DUCT LOCATIONS APPROXIMATE, CONTRACTOR TO VERIFY AS NECESSARY.
 - SEAL ALL BUILDING PENETRATIONS CREATED DURING DEMOLITION AND NOT RE-USED TO INCLUDE PLASTER CEILING PENETRATIONS.
 - REMOVE ALL EQUIPMENT, DUCTWORK, DIFFUSERS, GRILLES, HANGERS AND INSULATION AS SHOWN.



BUILDING 1410 MECHANICAL DEMOLITION PLAN
 1/4"=1'-0" 0' 2' 4' 8'

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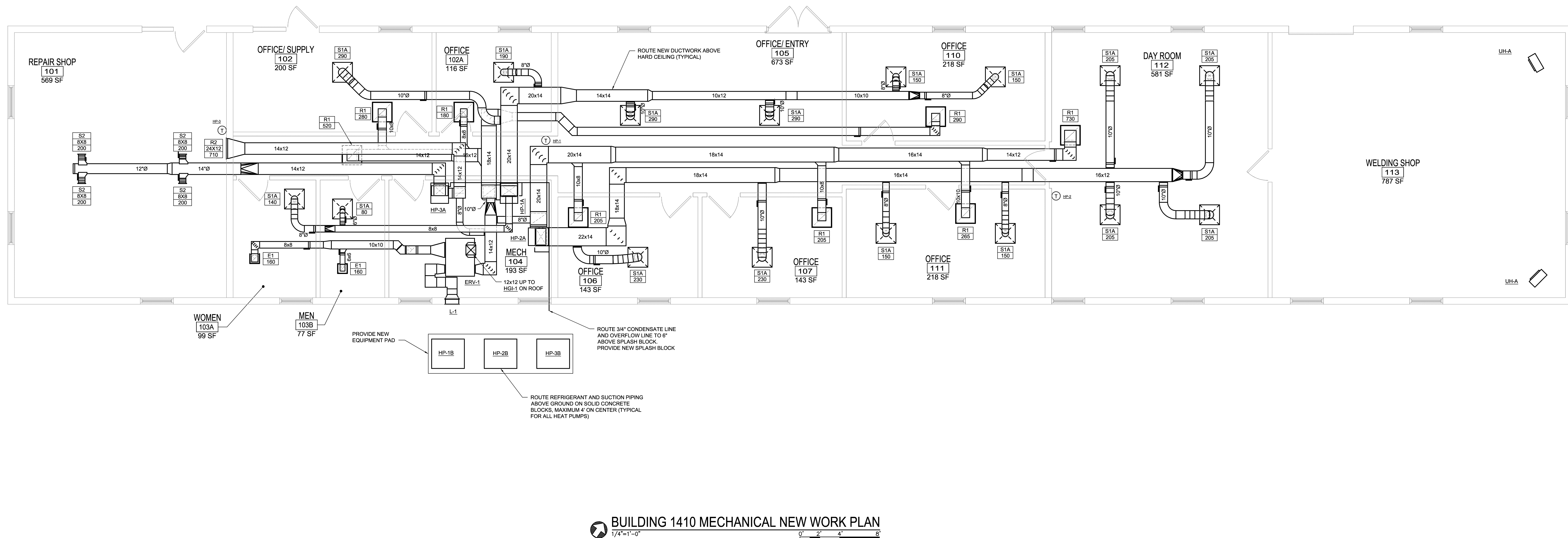


WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.254.7242 wileywilson.com		M-118A PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DESIGN DR. APPROVED PWO OR OICC SATISFACTORY TO		HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1410 MECHANICAL DEMOLITION PLAN	
DES. IM DR. SWL CHK. JHE SUBMITTED BY:	DATE DATE DATE	SIZE E	CODE IDENT NO. 80091 CONSTR CONTR NO. N40085-12-B-0091
NAVFAC DRAWING NO. 60011407		SHEET 63 OF 84	
SCALE: AS SHOWN		SPEC No. 05-12-0091	

GENERAL NOTES:

1. THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES. THESE PLANS ARE PARTIALLY DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS.
2. PROVIDE BALANCING DAMPER FOR EACH SUPPLY, RETURN AND EXHAUST BRANCH. BALANCE SYSTEM WITH INTERIOR DOORS OPEN. PROVIDE BALANCING DAMPER FOR EACH OUTSIDE AIR DUCT THAT CONNECTS TO THE RETURN OF EACH AIR HANDLER AND BALANCE TO AIR FLOWS INDICATED ON SCHEDULE.
3. MAXIMUM LENGTH OF ALLOWABLE FLEX DUCT IS 6'. DO NOT MAKE TURNS WITH FLEXIBLE DUCT. USE HARD ELBOWS.
4. PROVIDE 2" MERV 8 FILTER ASSEMBLY IN RETURN DUCT DOWNSTREAM OF THE OUTSIDE AIR CONNECTION.
5. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
6. MOUNT ERV-1 AS CLOSE TO MECHANICAL ROOM CEILING AS POSSIBLE. RELOCATE EXISTING LIGHT FIXTURES AS NECESSARY.

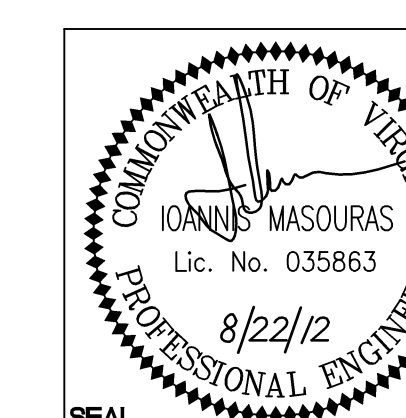
SYM.	PREP'D BY	DATE	APPROVED



BUILDING 1410 MECHANICAL NEW WORK PLAN
 1/4"=1'-0"

DISCLOSURE OF INFORMATION
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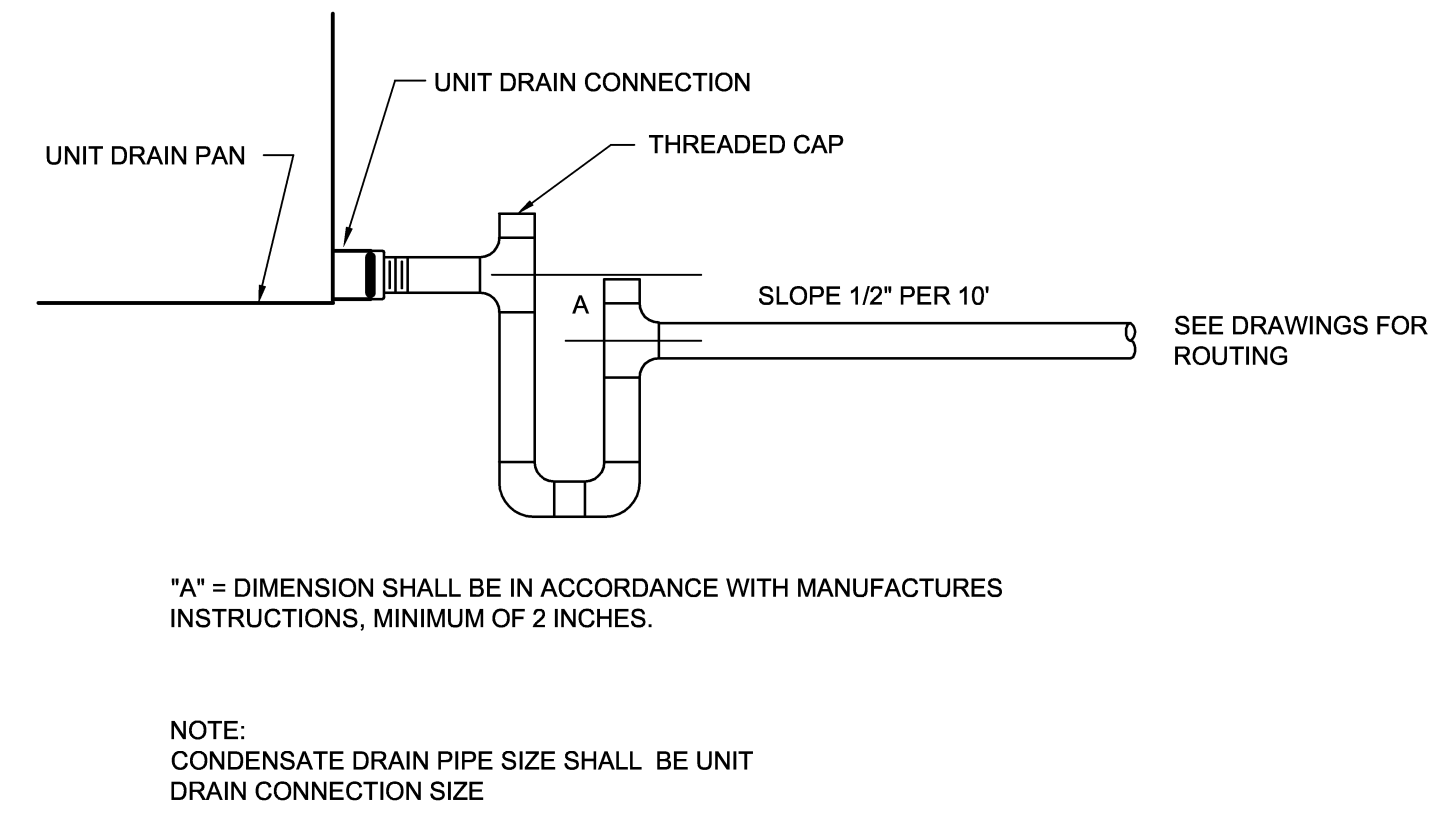
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DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES. IM	DR. SWL	HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1410 MECHANICAL NEW WORK PLAN	
CHK. JHE	SUBMITTED BY:	APPROVED PWO OR OICC	DATE
DESIGN DR.		SIZE	CODE IDENT NO.
APPROVED PWO OR OICC		E	80091
SATISFACTORY TO		CONSTR CONTR NO.	N40085-12-B-0091
DATE		SCALE: AS SHOWN	SPEC No. 05-12-0091
SEAL		SHEET 64 OF 84	

HEAT PUMP SCHEDULE					
INDOOR UNIT DESIGNATION	HP-1A	HP-2A	HP-3A		
OUTDOOR UNIT DESIGNATION	HP-1B	HP-2B	HP-3B		
LOCATION	VARIOUS	VARIOUS	VARIOUS		
MINIMUM COMBINED SEER RATING PER ARI	17.0	17.0	18.2		
MINIMUM COMBINED EER RATING PER ARI	12.2	12.2	13.2		
INDOOR UNIT	EVAPORATOR	TOTAL AIRFLOW (CFM)	1580	1580	800
		OUTSIDE AIRFLOW (CFM)	310	125	80
		EXTERNAL STATIC PRESSURE (IN-WC)	175	.6	.6
		TOTAL COOLING CAPACITY (MBH)	47.5	47.5	25.2
		HEAT PUMP HEATING CAPACITY AT 17° F (MBH)	29.2	29.2	14.4
	ELECTRICAL	ELECTRIC HEATING CAPACITY (KW)	5.0	5.0	5.0
		BLOWER MOTOR FLA (A)	9.1	9.1	4
		TOTAL MCA (A)	27	27	28
		VOLTAGE	208	208	208
		PHASE	1	1	1
FREQUENCY (Hz)	60	60	60		
BASED ON	LENNOX	LENNOX	LENNOX		
INDOOR UNIT MODEL	CBX32MV-048	CBX32MV-048	CBX32MV-024		
REFRIGERANT	R-410A	R-410A	R-410A		
OUTDOOR UNIT	ELECTRICAL	AMBIENT DESIGN TEMPERATURE (DEG F)	95	95	95
		MINIMUM CIRCUIT AMPACITY (A)	28.5	28.5	14.9
		MAXIMUM OVERCURRENT PROTECTION (A)	45	45	25
		MINIMUM HEATING COP AT 17° F	2.5	2.5	2.62
		MINIMUM HEATING COP AT 47° F	3.32	3.32	3.78
		MINIMUM HEAT PUMP HSPF	8.7	8.7	9
		VOLTAGE (V)	208	208	208
PHASE	1	1	1		
FREQUENCY (Hz)	60	60	60		
BASED ON	LENNOX	LENNOX	LENNOX		
OUTDOOR SYSTEM MODEL	XP21-048-230	XP21-048-230	XP21-024-230		
REMARKS	1, 2 & 3	1, 2 & 3	1, 2 & 3		

- REMARKS LEGEND
1. PROVIDE CONDENSING UNIT SHUTOFF MOISTURE SENSOR IN AUXILIARY PORT OF INDOOR UNIT DRAIN PAN.
 2. PROVIDE SIDE RETURN UNIT STAND.
 3. PROVIDE ECM MOTOR ON INDOOR UNIT.



**AC DRAIN FOR HEAT PUMP AIR HANDLER
NEGATIVE PRESSURE DRAIN PAN**
NO SCALE

ENERGY RECOVERY VENTILATOR SCHEDULE		ERV-1
DESIGNATION	TOTAL FAN AIRFLOW (CFM)	565
	EXTERNAL STATIC PRESSURE (IN. WG)	.5
SUPPLY FAN	TOTAL FAN AIRFLOW (CFM)	400
	EXTERNAL STATIC PRESSURE (IN. WG)	.5
EXHAUST FAN	OPERATING OUTSIDE AIRFLOW	565
	OPERATING EXHAUST AIRFLOW	400
ENTHALPY WHEEL	OUTDOOR EAT DBWB (COOLING)	95/79
	OUTDOOR EAT DBWB (HEATING)	20/16.6
	EXHAUST EAT DBWB (COOLING)	75/63
	EXHAUST EAT DBWB (HEATING)	70/53
	DELIVERED CONDITIONS DBWB (COOLING)	82.2/69.5
	DELIVERED CONDITIONS DBWB (HEATING)	48.8/41.1
FILTERS	SUPPLY (MERV)	8
	EXHAUST (MERV)	8
ELECTRICAL	MCA (A)	18.3
	MOCIP (A)	25
	VOLTS (V)	115
	PHASE	1
FREQUENCY (Hz)	60	
BASED ON		GREENHECK
MODEL		MINVENT-750
REMARKS		1

- REMARKS LEGEND
1. PROVIDE FACTORY MOUNTED CONTROLS FOR UNITS INCLUDING ALL REQUIRED MOTOR STARTERS.
 2. PROVIDE FACTORY REMOTE PANEL INCLUDING INDICATION FOR DIRTY FILTER, HAND-OFF-AUTO SWITCH, AND 7 DAY TIME CLOCK.

LOUVER SCHEDULE		L-1
DESIGNATION		L-1
USAGE		EXHAUST
LOCATION		MECH ROOM
DESCRIPTION		DRAINABLE HEAD
DEPTH (IN)		6
FRAME TYPE		CHANNEL
WIDTH (IN)		16
HEIGHT (IN)		16
AIRFLOW (CFM)		400
FREE AREA (SF)		.62
FREE AREA VELOCITY (FPM)		641
PRESSURE DROP (IN H2O)		.064
SELECTION BASE ON		GREENHECK
MODEL		ESD-603
REMARKS		--

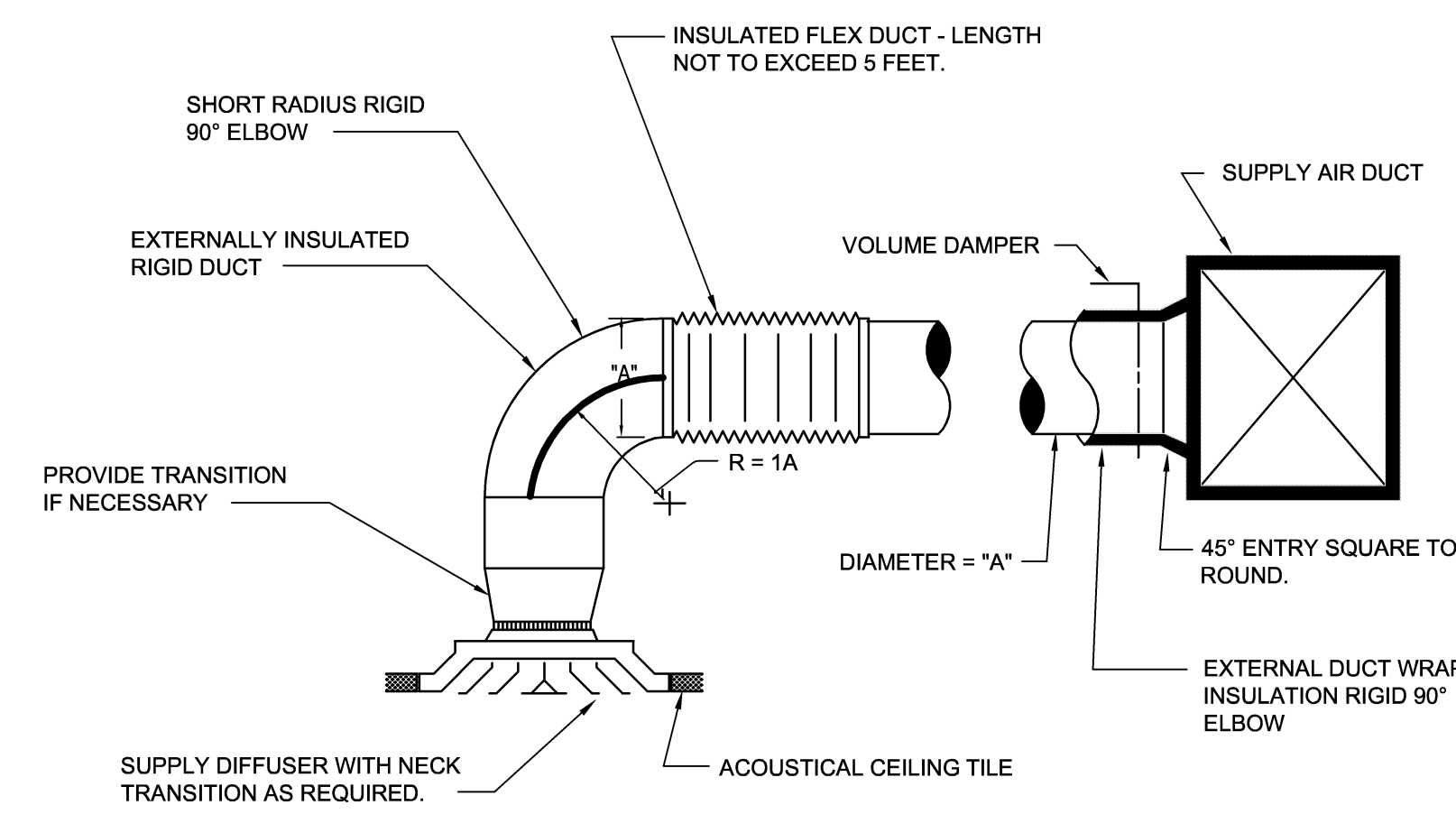
HOODED GRAVITY INTAKE SCHEDULE		HGI-1
DESIGNATION		HGI-1
USAGE		INTAKE
LOCATION		MECH ROOM
DESCRIPTION		DRAINABLE HEAD
AIRFLOW (CFM)		565
STATIC PRESSURE (IN H2O)		.042
THROAT AREA (SF)		1.12
THROAT VELOCITY (FPM)		504
THROAT DIAMETER (IN)		14.25
SELECTION BASE ON		GREENHECK
MODEL		GRSI-15
REMARKS		1

- REMARKS LEGEND
1. PROVIDE BIRD SCREEN.

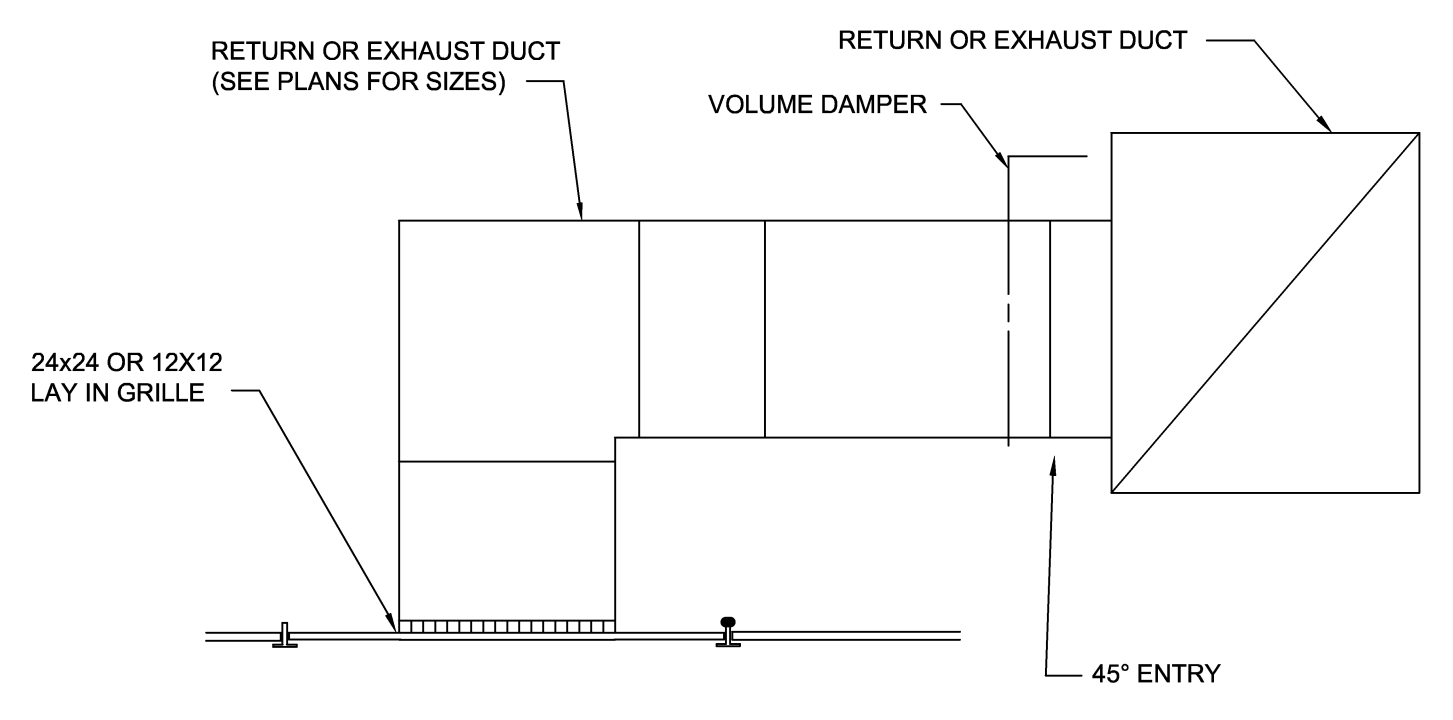
UNIT HEATER SCHEDULE		UH-A
DESIGNATION		UH-A
LOCATION		WELDING ROOM
AIRFLOW (CFM)		300
HEATING CAPACITY (KW)		3
ENTERING AIR TEMPERATURE (DEG F)		55
LEAVING AIR TEMPERATURE (DEG F)		87
MOTOR POWER (HP)		1/80
VOLTAGE (V)		208
PHASE		1
FREQUENCY (Hz)		60
BASED ON		INDEECO
MODEL		ULI
REMARKS		1 & 2

- REMARKS LEGEND
1. PROVIDE UNIT MOUNTED THERMOSTAT.
 2. PROVIDE INTEGRAL DISCONNECT.

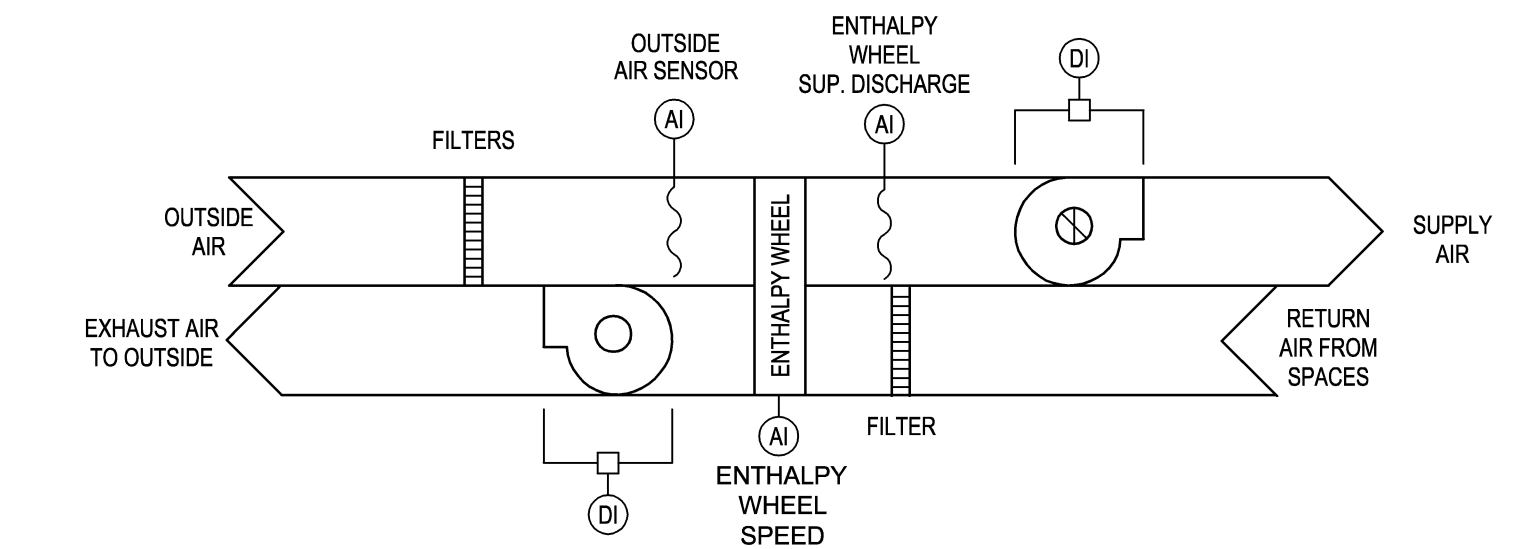
AIR TERMINAL DEVICE SCHEDULE					
DESIGNATION	S1	S2	R1	R2	E1
TYPE	SUPPLY	SUPPLY	RETURN	RETURN	EXHAUST
NECK SIZE	A=6"	SEE PLANS	24x24	SEE PLANS	12x12
	B=8"				
	C=10"				
	D=12"				
FRAME STYLE	LAY-IN	SURFACE MOUNT	LAY-IN	SURFACE MOUNT	LAY-IN
AIR PATTERN	4 WAY	DOUBLE DEFLECTION	--	FIXED BLADE	--
MAX NG RATING	20	20	20	20	20
MATERIAL	STEEL	STEEL	STEEL	STEEL	STEEL
FINISH	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL
BASED ON	PRICE	PRICE	PRICE	PRICE	PRICE
MODEL	SCD	700 SERIES	81 SERIES	500 SERIES	81 SERIES



**TYPICAL CEILING SUPPLY
DIFFUSER CONNECTION**
SCALE: NONE



CEILING RETURN/EXHAUST GRILLE
SCALE: NONE



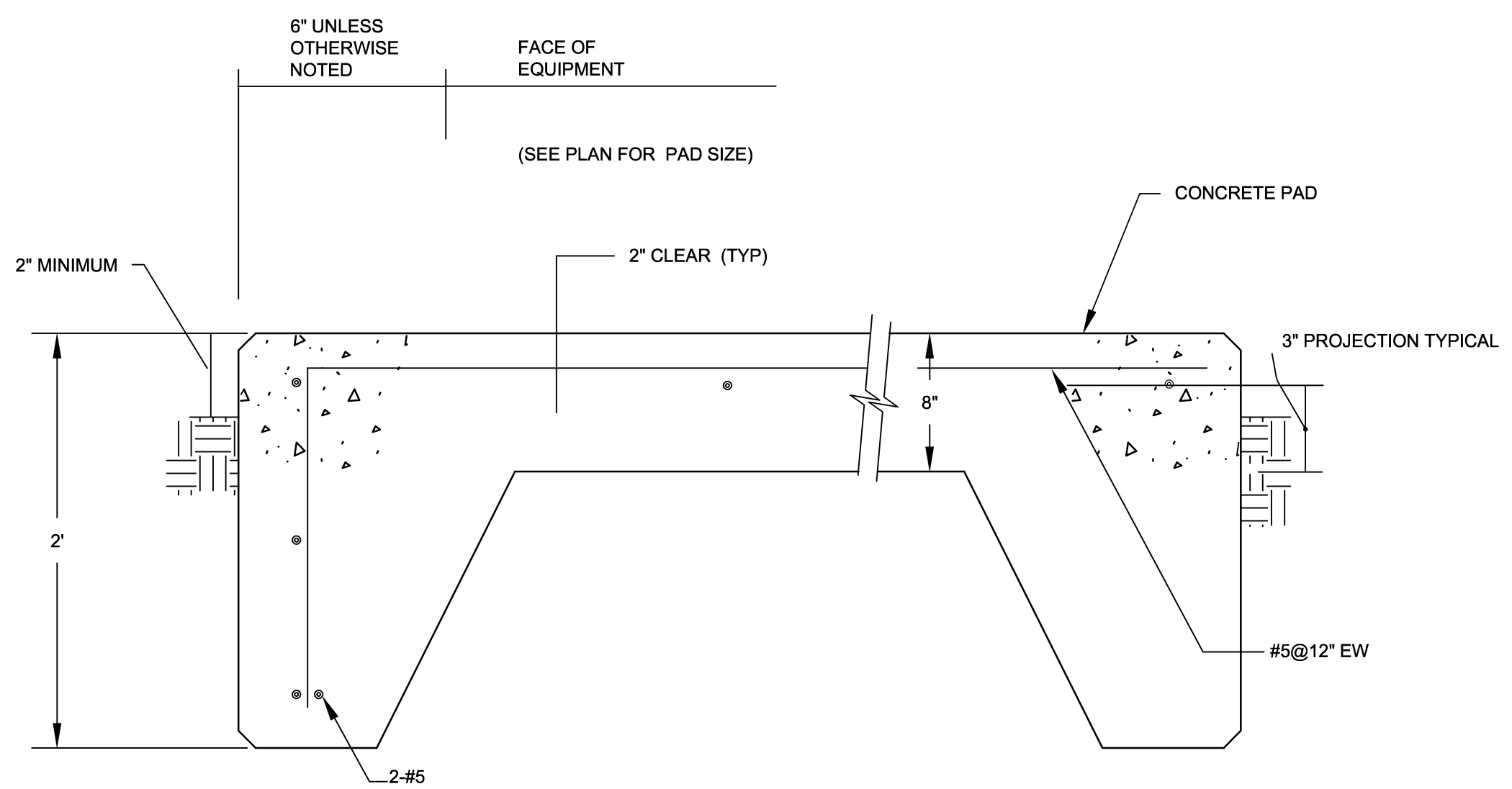
ENERGY RECOVERY VENTILATOR CONTROL DIAGRAM

SCALE: NONE

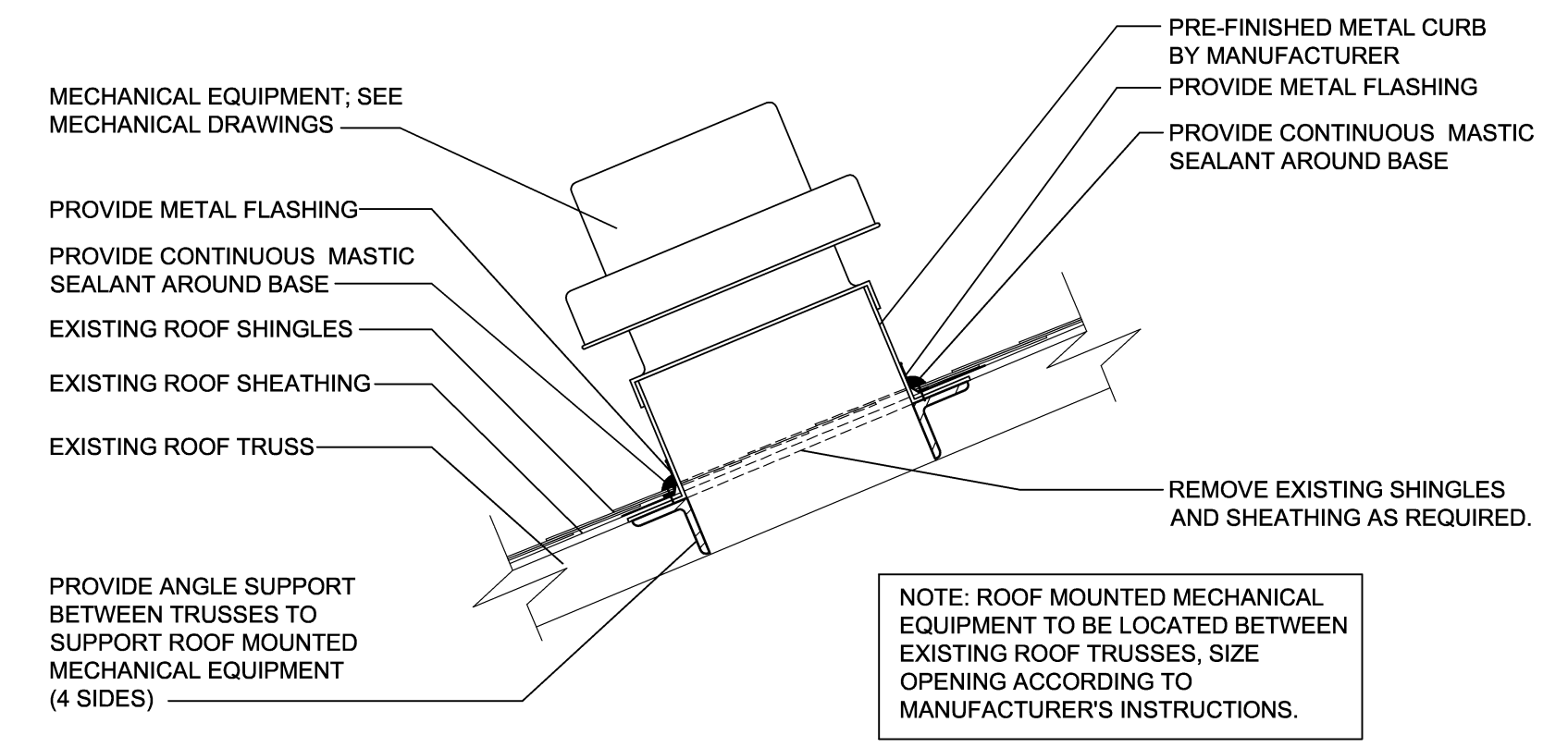
SEQUENCE OF OPERATION:

DURING THE OCCUPIED MODE, THE ENERGY RECOVERY VENTILATOR SHALL RUN CONTINUOUSLY. DURING UNOCCUPIED MODE, THE UNIT WILL BE DISABLED WHERE THE SUPPLY AND EXHAUST FANS ARE OFF AND THE WHEEL DOES NOT ROTATE.

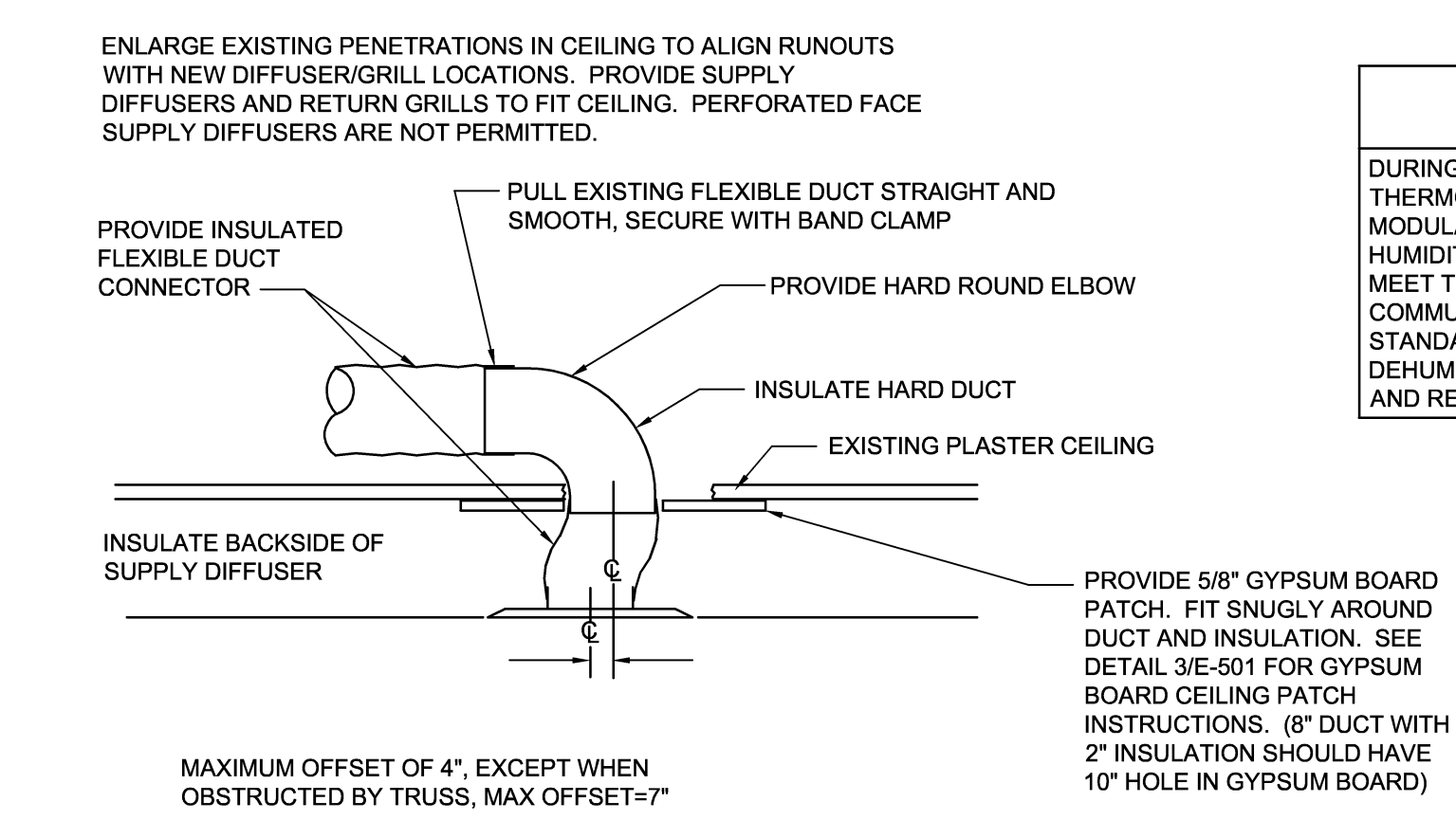
DURING OPERATION, DIFFERENTIAL PRESSURE SENSORS SHALL BE USED TO CONFIRM STATUS OF SUPPLY AND EXHAUST FANS. A TACHOMETER SHALL BE USED TO VERIFY WHEEL OPERATION. IF AT ANY TIME THE UNIT IS COMMANDED ON AND EITHER OF THESE THREE OPERATIONAL PIECES OF THE UNIT ARE NOT FUNCTIONING, THE ENTIRE UNIT SHALL BE SHUT DOWN AND AN ALARM SENT.



EXTERIOR EQUIPMENT PAD DETAIL
SCALE: NONE



ROOF PENETRATION DETAIL
SCALE: NONE



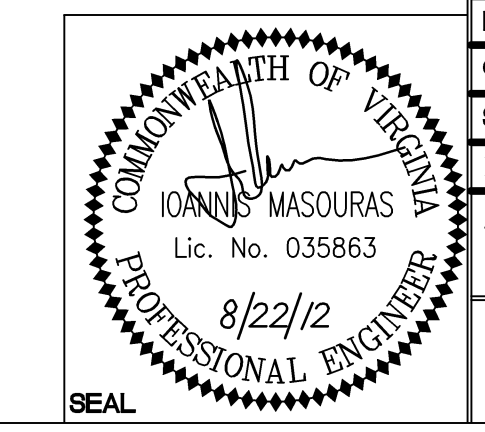
TYP. DUCT TAKE OFF DETAIL
SCALE: NONE

SPLIT SYSTEM HEAT PUMP SEQUENCE OF OPERATIONS

DURING THE OCCUPIED MODE, THE SPLIT SYSTEM AIR HANDLER FAN SHALL RUN CONTINUOUSLY TO SATISFY ROOM COMBINED THERMOSTAT AND HUMIDISTAT. THE SUPPLY AIR FAN ECM MOTOR SHALL REMAIN ON DURING OCCUPIED MODE AND THE SPEED SHALL MODULATE ACCORDING TO THE MANUFACTURER'S STANDARD SEQUENCE OF OPERATION TO CONTROL ROOM TEMPERATURE AND LIMIT HUMIDITY. IN THE HEATING MODE, THE THERMOSTAT SHALL NOT ENERGIZE THE AUXILIARY ELECTRIC HEAT IF THE HEAT PUMP MODE CAN MEET THE DEMAND, SUCH AS DURING WARM-UP FROM NIGHT SET BACK USING A SMART RECOVERY CAPABLE THERMOSTAT. FACTORY COMMUNICATING THERMOSTAT SHALL BE PROVIDED WITH 7 DAY PROGRAMMING TO ALLOW NIGHT/WEEKEND SET-BACK, COMMUNICATE ALL STANDARD MANUFACTURER'S ALARMS FROM THE UNITS TO THE THERMOSTAT, AND INDICATE DIRTY FILTER THERMOSTAT SHALL INCLUDE DEHUMIDIFICATION CONTROL TO INTEGRATE WITH HEAT PUMP CONTROLLER TO REDUCE FAN SPEED TO INCREASE LATENT PERFORMANCE AND REDUCE INDOOR AIR HUMIDITY.

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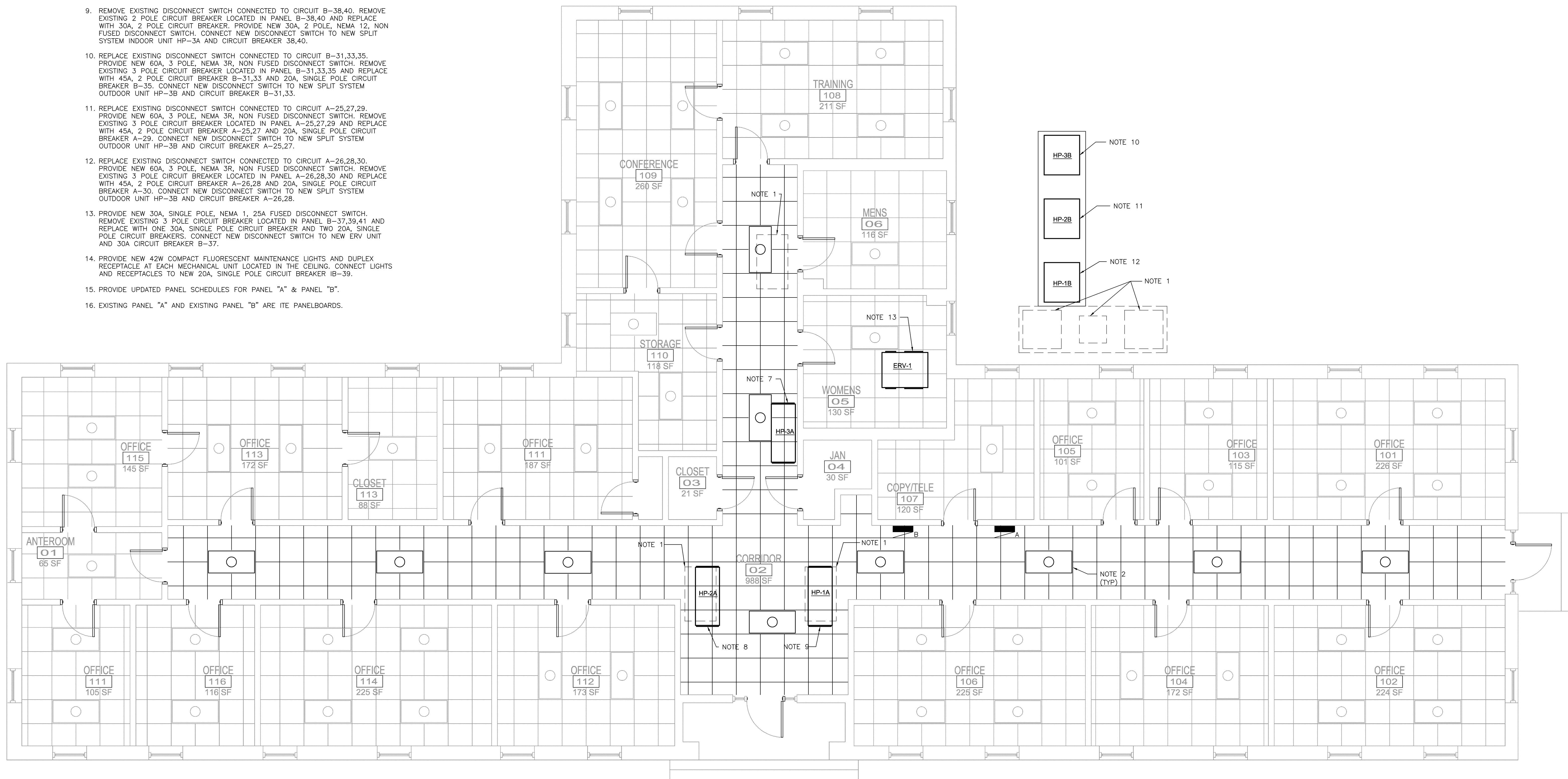


WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		M-118C PROJECT NO. CP12-0091 NAVAL FACILITIES ENGINEERING COMMAND	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1410 SCHEDULES, DETAILS & CONTROLS		NAVFAC DRAWING NO. 60011409 CONSTR CONTR NO. N40085-12-B-0091	
DES. IM	DR. SWL	CHK. JHE	SUBMITTED BY:
DESIGN DR.	APPROVED PWO OR OIOC	DATE	SIZE
SATISFACTORY TO	DATE	CODE IDENT NO.	80091
SCALE: AS SHOWN	SPEC No.	05-12-0091	SHEET 65 OF 84

SYM.	PREP'D BY	DATE	APPROVED

NOTES:

- REMOVE WIRE AND CONDUIT TO EXISTING DISCONNECT. EXISTING DISCONNECT SHALL BE REPLACED IN NEW WORK.
- REMOVE, WASH AND RE-LAMP EXISTING LIGHT FIXTURES IN CORRIDORS. LIGHT FIXTURES SHALL BE REINSTALLED UPON REPLACEMENT OF THE CEILING GRID.
- REMOVE EXISTING CONDUIT AND WIRE FEEDING EXISTING CONDENSATE PUMP TO THE PANEL.
- VERIFY CIRCUIT NUMBERS AND DE-ENERGIZE CIRCUITS PRIOR TO BEGINNING WORK.
- EXISTING EQUIPMENT SHALL REMAIN UNLESS NOTED OTHERWISE.
- PRESERVE AND PROTECT ALL COMMUNICATIONS CABLING, EQUIPMENT, AND JACK SET ASSEMBLIES. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES OR REPAIRS NEEDED TO THE COMMUNICATIONS. ALL REPAIRS SHALL BE DONE BY QUALIFIED COMMUNICATIONS SUB. CONTACT BASE TELEPHONE FOR ANY QUESTIONS (910) 451-9439 OR (910) 451-7480.
- REMOVE EXISTING DISCONNECT SWITCH CONNECTED TO CIRCUIT B-2,4. REMOVE EXISTING 2 POLE CIRCUIT BREAKER LOCATED IN PANEL B-2,4 AND REPLACE WITH 30A, 2 POLE CIRCUIT BREAKER. PROVIDE NEW 30A, 2 POLE, NEMA 12, NON FUSED DISCONNECT SWITCH. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM INDOOR UNIT HP-3A AND CIRCUIT BREAKER 2,4.
- REMOVE EXISTING DISCONNECT SWITCH CONNECTED TO CIRCUIT B-34,36. REMOVE EXISTING 2 POLE CIRCUIT BREAKER LOCATED IN PANEL B-34,36 AND REPLACE WITH 30A, 2 POLE CIRCUIT BREAKER. PROVIDE NEW 30A, 2 POLE, NEMA 12, NON FUSED DISCONNECT SWITCH. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM INDOOR UNIT HP-3A AND CIRCUIT BREAKER 34,36.
- REMOVE EXISTING DISCONNECT SWITCH CONNECTED TO CIRCUIT B-38,40. REMOVE EXISTING 2 POLE CIRCUIT BREAKER LOCATED IN PANEL B-38,40 AND REPLACE WITH 30A, 2 POLE CIRCUIT BREAKER. PROVIDE NEW 30A, 2 POLE, NEMA 12, NON FUSED DISCONNECT SWITCH. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM INDOOR UNIT HP-3A AND CIRCUIT BREAKER 38,40.
- REPLACE EXISTING DISCONNECT SWITCH CONNECTED TO CIRCUIT B-31,33,35. PROVIDE NEW 60A, 3 POLE, NEMA 3R, NON FUSED DISCONNECT SWITCH. REMOVE EXISTING 3 POLE CIRCUIT BREAKER LOCATED IN PANEL B-31,33,35 AND REPLACE WITH 45A, 2 POLE CIRCUIT BREAKER B-31,33 AND 20A, SINGLE POLE CIRCUIT BREAKER B-35. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM OUTDOOR UNIT HP-3B AND CIRCUIT BREAKER B-31,33.
- REPLACE EXISTING DISCONNECT SWITCH CONNECTED TO CIRCUIT A-25,27,29. PROVIDE NEW 60A, 3 POLE, NEMA 3R, NON FUSED DISCONNECT SWITCH. REMOVE EXISTING 3 POLE CIRCUIT BREAKER LOCATED IN PANEL A-25,27,29 AND REPLACE WITH 45A, 2 POLE CIRCUIT BREAKER A-25,27 AND 20A, SINGLE POLE CIRCUIT BREAKER A-29. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM OUTDOOR UNIT HP-3B AND CIRCUIT BREAKER A-25,27.
- REPLACE EXISTING DISCONNECT SWITCH CONNECTED TO CIRCUIT A-26,28,30. PROVIDE NEW 60A, 3 POLE, NEMA 3R, NON FUSED DISCONNECT SWITCH. REMOVE EXISTING 3 POLE CIRCUIT BREAKER LOCATED IN PANEL A-26,28,30 AND REPLACE WITH 45A, 2 POLE CIRCUIT BREAKER A-26,28 AND 20A, SINGLE POLE CIRCUIT BREAKER A-30. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM OUTDOOR UNIT HP-3B AND CIRCUIT BREAKER A-26,28.
- PROVIDE NEW 30A, SINGLE POLE, NEMA 1, 25A FUSED DISCONNECT SWITCH. REMOVE EXISTING 3 POLE CIRCUIT BREAKER LOCATED IN PANEL B-37,39,41 AND REPLACE WITH ONE 30A, SINGLE POLE CIRCUIT BREAKER AND TWO 20A, SINGLE POLE CIRCUIT BREAKERS. CONNECT NEW DISCONNECT SWITCH TO NEW ERV UNIT AND 30A CIRCUIT BREAKER B-37.
- PROVIDE NEW 42W COMPACT FLUORESCENT MAINTENANCE LIGHTS AND DUPLEX RECEPTACLE AT EACH MECHANICAL UNIT LOCATED IN THE CEILING. CONNECT LIGHTS AND RECEPTACLES TO NEW 20A, SINGLE POLE CIRCUIT BREAKER 1B-39.
- PROVIDE UPDATED PANEL SCHEDULES FOR PANEL "A" & PANEL "B".
- EXISTING PANEL "A" AND EXISTING PANEL "B" ARE ITC PANELBOARDS.

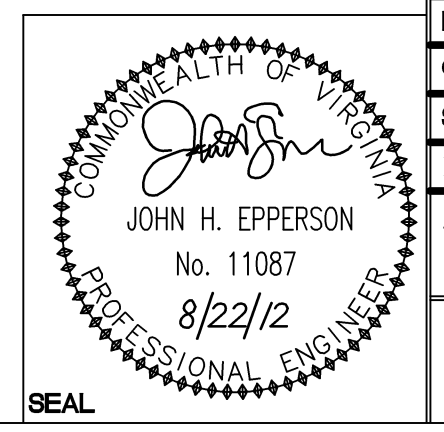


BUILDING 13 ELECTRICAL PLAN
1/4"=1'-0" 0' 2' 4' 8'

NOTE:
SEE SHEET E-501 FOR REFLECTED CEILING NOTES AND DETAILS

DISCLOSURE OF INFORMATION
Contractor shall comply as follows:

- The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless the Contracting Officer has given prior written approval; or
- the information is otherwise in the public domain before the date of release.
- Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.
- The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

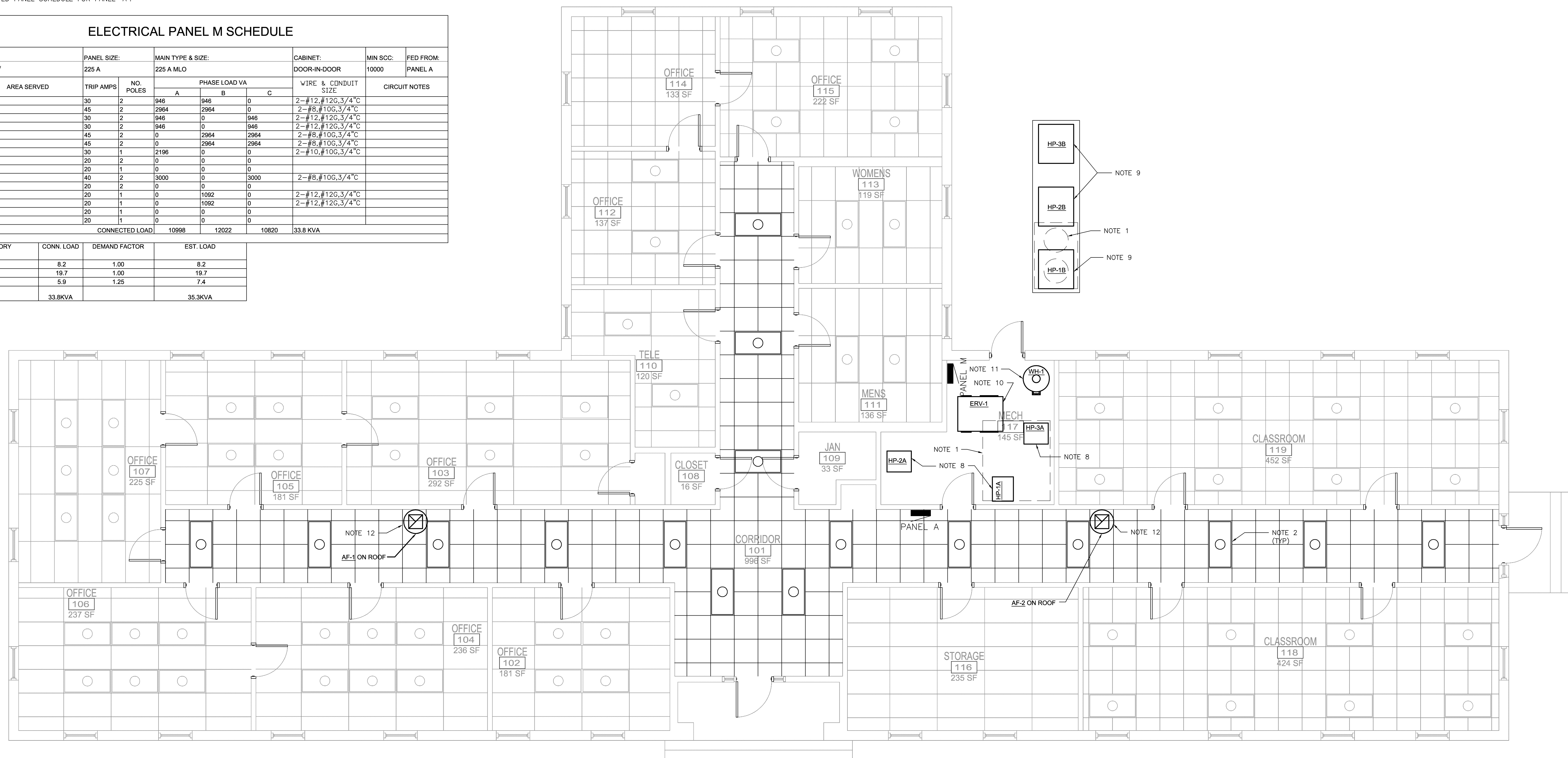


WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		E-101 PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES. BWY DR. BWY CHK. JHE		HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 13 ELECTRICAL PLAN	
SUBMITTED BY: DESIGN DR.		NAVFAC DRAWING NO. 60011410	
APPROVED PWO OR OICC DATE 8/2/12		SIZE CODE IDENT NO. E 80091	
SATISFACTORY TO DATE		CONSTR CONTR NO. N40085-12-B-0091	
SCALE: AS SHOWN		SPEC No. 05-12-0091 SHEET 66 OF 84	

NOTES:

- REMOVE EXISTING CONDUIT, DEVICES AND WIRE TO EXISTING PANEL "A".
- REMOVE, WASH AND RE-LAMP EXISTING LIGHT FIXTURES IN CORRIDORS. LIGHT FIXTURES SHALL BE REINSTALLED UPON REPLACEMENT OF THE CEILING GRID.
- REMOVE EXISTING CONDUIT, DEVICES AND WIRE FEEDING EXISTING CONDENSATE PUMP TO EXISTING PANEL "A" PANEL.
- VERIFY CIRCUIT NUMBERS AND DE-ENERGIZE CIRCUITS PRIOR TO BEGINNING WORK.
- EXISTING EQUIPMENT SHALL REMAIN UNLESS NOTED OTHERWISE.
- PRESERVE AND PROTECT ALL COMMUNICATIONS CABLING, EQUIPMENT, AND JACK SET ASSEMBLIES. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES OR REPAIRS NEEDED TO THE COMMUNICATIONS. ALL REPAIRS SHALL BE DONE BY QUALIFIED COMMUNICATIONS SUB. CONTACT BASE TELEPHONE FOR ANY QUESTIONS (910) 451-9439 OR (910) 451-7480.
- PROVIDE NEW 24 SPACE, 225A, MAIN LUG, 3 PHASE, 4 WIRE, SUB PANEL "M". FEED NEW PANEL "M" FROM EXISTING 200A CIRCUIT BREAKER IN PANEL "A" WITH 4-#3/0 AND 1-#6 GROUND IN 2" CONDUIT.
- CONNECT TO NEW 30A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- PROVIDE NEW 60A, 3 POLE, NEMA 3R, NON FUSED DISCONNECT SWITCH. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM OUTDOOR UNIT AND NEW 45A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- CONNECT TO NEW 30A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- CONNECT TO NEW 40A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- CONNECT TO NEW 20A, SINGLE POLE CIRCUIT BREAKER IN PANEL "M".
- PROVIDE UPDATED PANEL SCHEDULE FOR PANEL "A".

ELECTRICAL PANEL M SCHEDULE										
VOLTS/PHASE/WIRE: 120V/208y/3ø/4W		PANEL SIZE: 225 A		MAIN TYPE & SIZE: 225 A MLO			CABINET: DOOR-IN-DOOR	MIN SCC: 10000	FED FROM: PANEL A	
CIRCUIT NO.	AREA SERVED	TRIP AMPS	NO. POLES	PHASE LOAD VA			WIRE & CONDUIT SIZE	CIRCUIT NOTES		
				A	B	C				
1,3	HP-1A	30	2	946	946	0	2-#12, #12G, 3/4"C			
2,4	HP-1B	45	2	2964	2964	0	2-#8, #10G, 3/4"C			
5,7	HP-2A	30	2	946	0	946	2-#12, #12G, 3/4"C			
6,8	HP-3A	30	2	946	0	946	2-#12, #12G, 3/4"C			
9,11	HP-2B	45	2	0	2964	2964	2-#8, #10G, 3/4"C			
10,12	HP-3B	45	2	0	2964	2964	2-#8, #10G, 3/4"C			
13	ERV-1	30	1	2196	0	0	2-#10, #10G, 3/4"C			
14,16	SPACE	20	2	0	0	0				
15	SPACE	20	1	0	0	0				
17,19	WH-1	40	2	3000	0	3000	2-#8, #10G, 3/4"C			
18,20	SPACE	20	2	0	0	0				
21	AF-1	20	1	0	1092	0	2-#12, #12G, 3/4"C			
22	AF-2	20	1	0	1092	0	2-#12, #12G, 3/4"C			
23	SPACE	20	1	0	0	0				
24	SPACE	20	1	0	0	0				
CONNECTED LOAD				10998	12022	10820	33.8 KVA			
LOAD CATEGORY	CONN. LOAD	DEMAND FACTOR	EST. LOAD							
Equipment	8.2	1.00	8.2							
Motors	19.7	1.00	19.7							
Motors (Largest)	5.9	1.25	7.4							
TOTAL	33.8KVA		35.3KVA							

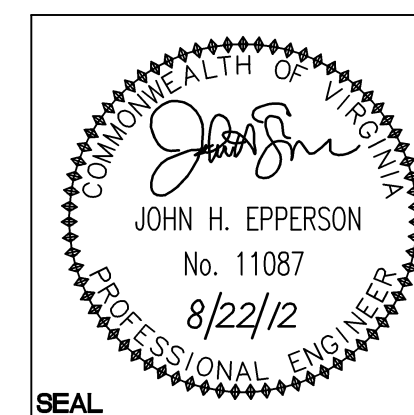


BUILDING 114 ELECTRICAL PLAN
1/4"=1'-0"

NOTE:
SEE SHEET E-501 FOR REFLECTED CEILING NOTES AND DETAILS

DISCLOSURE OF INFORMATION
Contractor shall comply as follows:

- The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless the Contracting Officer has given prior written approval; or
- The information is otherwise in the public domain before the date of release.
- Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.
- The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.



WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		E-102 PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES.	BWY	HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 114 ELECTRICAL PLAN	
DR.	BWY		
CHK.	JHE		
SUBMITTED BY:			
DESIGN DR.			
APPROVED PWO OR OIC	DATE	SIZE	CODE IDENT NO.
		E	80091
SATISFACTORY TO	DATE	CONSTR CONTR NO.	NAVFAEC DRAWING NO.
		N40085-12-B-0091	60011411
		SCALE: AS SHOWN	SPEC No. 05-12-0091
		SHEET 67 OF 84	

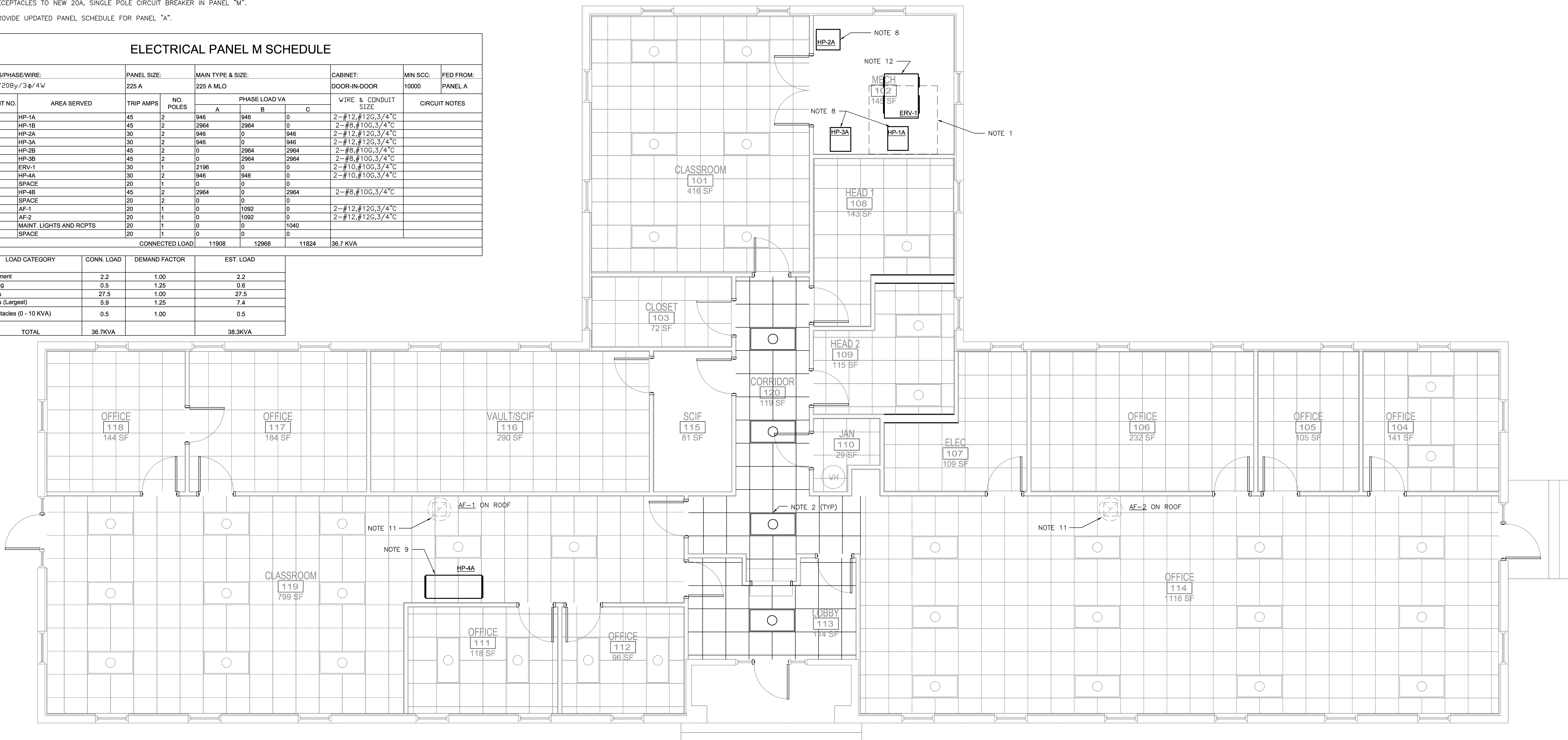
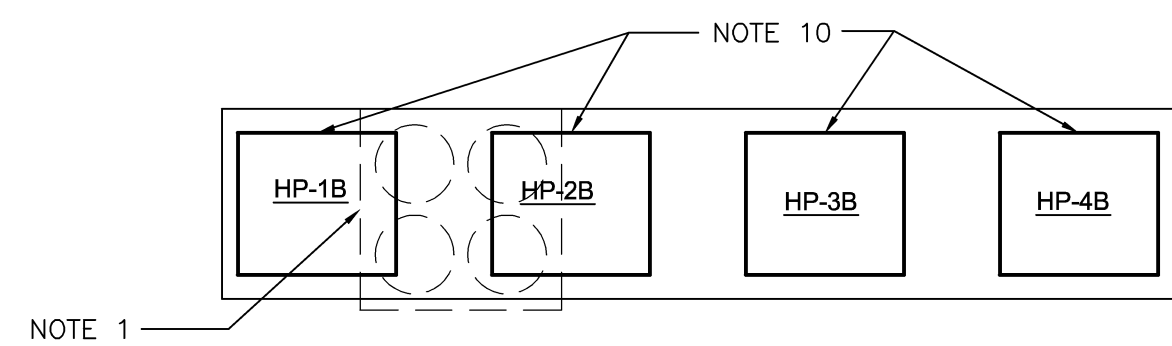
NOTES:

- REMOVE EXISTING CONDUIT, DEVICES AND WIRE TO EXISTING PANEL "A".
- REMOVE, WASH AND RE-LAMP EXISTING LIGHT FIXTURES IN CORRIDORS. LIGHT FIXTURES SHALL BE REINSTALLED UPON REPLACEMENT OF THE CEILING GRID.
- REMOVE EXISTING CONDUIT, DEVICES AND WIRE FEEDING EXISTING CONDENSATE PUMP TO EXISTING PANEL "A" PANEL.
- VERIFY CIRCUIT NUMBERS AND DE-ENERGIZE CIRCUITS PRIOR TO BEGINNING WORK.
- EXISTING EQUIPMENT SHALL REMAIN UNLESS NOTED OTHERWISE.
- PRESERVE AND PROTECT ALL COMMUNICATIONS CABLING, EQUIPMENT, AND JACK SET ASSEMBLIES. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES OR REPAIRS NEEDED TO THE COMMUNICATIONS. ALL REPAIRS SHALL BE DONE BY QUALIFIED COMMUNICATIONS SUB. CONTACT BASE TELEPHONE FOR ANY QUESTIONS (910) 451-9439 OR (910) 451-7480.
- PROVIDE NEW 24 SPACE, 225A, MAIN LUG, 3 PHASE, 4 WIRE, SUB PANEL "M". FEED NEW PANEL "M" FROM EXISTING 200A CIRCUIT BREAKER IN PANEL "A" WITH 4-#3/0 AND 1-#6 GROUND IN 2" CONDUIT.
- CONNECT TO NEW 30A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- PROVIDE NEW 30A, 3 POLE, NEMA 3R, NON FUSED DISCONNECT SWITCH. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM INDOOR UNIT AND NEW 30A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- PROVIDE NEW 60A, 3 POLE, NEMA 3R, NON FUSED DISCONNECT SWITCH. CONNECT NEW DISCONNECT SWITCH TO NEW SPLIT SYSTEM OUTDOOR UNIT AND NEW 40A, 2 POLE CIRCUIT BREAKER IN PANEL "M".
- CONNECT TO NEW 20A, SINGLE POLE CIRCUIT BREAKER IN PANEL "M"
- CONNECT TO NEW 30A, SINGLE POLE CIRCUIT BREAKER IN PANEL "M".
- PROVIDE NEW 42W COMPACT FLUORESCENT MAINTENANCE LIGHTS AND DUPLEX RECEPTACLE AT EACH MECHANICAL UNIT LOCATED IN THE CEILING. CONNECT LIGHTS AND RECEPTABLES TO NEW 20A, SINGLE POLE CIRCUIT BREAKER IN PANEL "M".
- PROVIDE UPDATED PANEL SCHEDULE FOR PANEL "A".

SYM.	PREP'D BY	DATE	APPROVED

ELECTRICAL PANEL M SCHEDULE										
VOLTS/PHASE/WIRE: 120V/208y/3ø/4W		PANEL SIZE: 225 A		MAIN TYPE & SIZE: 225 A MLO			CABINET: DOOR-IN-DOOR		MIN SCC: 10000	FED FROM: PANEL A
CIRCUIT NO.	AREA SERVED	TRIP AMPS	NO. POLES	PHASE LOAD VA			WIRE & CONDUIT SIZE	CIRCUIT NOTES		
				A	B	C				
1,3	HP-1A	45	2	946	946	0	2-#12, #126, 3/4" C			
2,4	HP-1B	45	2	2964	2964	0	2-#8, #106, 3/4" C			
5,7	HP-2A	30	2	946	0	946	2-#12, #126, 3/4" C			
6,8	HP-3A	30	2	946	0	946	2-#12, #126, 3/4" C			
9,11	HP-2B	45	2	0	2964	2964	2-#8, #106, 3/4" C			
10,12	HP-3B	45	2	0	2964	2964	2-#8, #106, 3/4" C			
13	ERV-1	30	1	2198	0	0	2-#10, #106, 3/4" C			
14,16	HP-4A	30	2	946	946	0	2-#10, #106, 3/4" C			
15	SPACE	20	1	0	0	0				
17,19	HP-4B	45	2	2964	0	2964	2-#8, #106, 3/4" C			
16,20	SPACE	20	2	0	0	0				
21	AF-1	20	1	0	1092	0	2-#12, #126, 3/4" C			
22	AF-2	20	1	0	1092	0	2-#12, #126, 3/4" C			
23	MAINT. LIGHTS AND RCPTS	20	1	0	0	1040				
24	SPACE	20	1	0	0	0				
CONNECTED LOAD				11908	12968	11824	36.7 KVA			

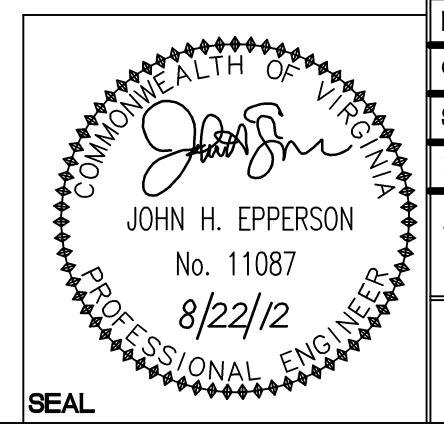
LOAD CATEGORY	CONN. LOAD	DEMAND FACTOR	EST. LOAD
Equipment	2.2	1.00	2.2
Lighting	0.5	1.25	0.6
Motors	27.5	1.00	27.5
Motors (Largest)	5.9	1.25	7.4
Receptacles (0 - 10 KVA)	0.5	1.00	0.5
TOTAL	36.7KVA		36.3KVA



BUILDING 127 ELECTRICAL PLAN
1/4"=1'-0"

NOTE:
SEE SHEET E-501 FOR REFLECTED CEILING NOTES AND DETAILS

DISCLOSURE OF INFORMATION
Contractor shall comply as follows:
(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless-
(1) The Contracting Officer has given prior written approval; or
(2) The information is otherwise in the public domain before the date of release.
(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.
(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.



WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.254.7252 wileywilson.com		E-103 PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 127 ELECTRICAL PLAN		NAVAL FACILITIES ENGINEERING COMMAND NAVFAC DRAWING NO. 60011412	
DES. BWY	DR. BWY	CHK. JHE	SUBMITTED BY:
DESIGN DR.	APPROVED PWO OR OIC	DATE	SIZE
			CODE IDENT NO.
			80091
SATISFACTORY TO	DATE	CONSTR CONTR NO.	SHEET 68 OF 84
		N40085-12-B-0091	
SCALE: AS SHOWN	SPEC No.	05-12-0091	