



N 2 Fire Protection Overall Continued Plan FP200 SCALE: 1/16" = 1'-0"

DESCRIPTIONS OF ALTERNATES AFFECTING PLUMBING AND FIRE PROTECTION ALT#10 - ALTERNATE BID TO PROVIDE WASH SYSTEM WASTE WATER EVAPORATOR.

ALT#11 - ALTERNATE TO PROVIDE WASH WATER RECLAIM TANKS, FILTER, AND PUMPING.

ALT#13 - INFORMATIONAL BID FOR WELL PUMP AND INSTALLATION OF WELL AND PIPING TO THE HIGHWAY BUILDING.

ALT#14 - INFORMATIONAL BID TO TEST AND REPAIR SEPTIC SYSTEM AS NEEDED TO SERVE BOTH THE MEDICAL EXAMINER AND HIGHWAY BUILDINGS. BID SHALL INCLUDE MATERIAL AND INSTALLATION FOR THE COMBINED DRAINAGE PIPING FOR THE MEDICAL EXAMINER AND HIGHWAY BUILDING INCLUDING SEPTIC TANK, PUMPING TANK AND FORCE MAIN TO SEPTIC FIELD. DRAINAGE PIPING AS DESCRIBED IS SHOWN ON P001 - PLUMBING SITE PLAN

ALT#15 - INFORMATIONAL BID TO PROVIDE MATERIALS AND INSTALLATION FOR FIRE PUMP, VERTICAL PIT, RESERVIOR TANK, PUMP PANEL AND FDC ON REMOTE FIRE BUILDING.

ALT#16 - INFORMATIONAL BID TO PROVIDE MATERIALS AND INSTALLAIONT FOR UNDERGROUDN FIRE MAIN SERVING THE MEDIACAL EXAMINER BUILDING AS SHOWN ON P001-PLUMBING SITE PLAN

ALT#22 - INFORMATIONAL BID FOR MATERIAL AND INSTALLATION OF PIPING TO THE MEDICAL EXAMINER BUILDING PROPERTY AS SHOWN ON P001-PLUMBING SITE PLAN.

ALT#23 - MATERIAL AND INSTALLATION OF PROCESS WASTE PIPING FROM 5'-0"BEYOND THE MEDICAL EXAMINERS BUILDING TO THE PROCESS WASTE HOLDING TANK. SEE P001 - PLUMBING SITE PLAN FOR LOCATION AND ROUTING

ALT#24 - MATERIAL AND INSTALLATION OF VEHICLE STORAGE WASTE PIPING FROM 5'-0"BEYOND THE MEDICAL EXAMINERS BUILDING TO THE VEHICLE STORAGE WASTE HOLDING TANK. SEE P001 -PLUMBING SITE PLAN FOR LOCATION AND ROUTING

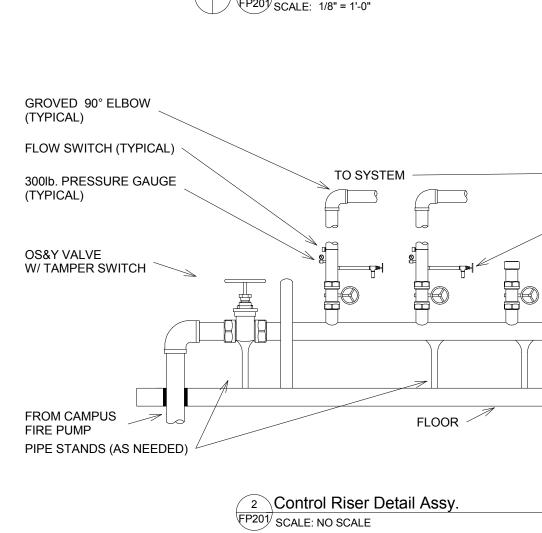
Sheet Number	Sheet Name							
FP200	Fire Protection Overall Plan							
FP201	Fire Protection Office and Details							
P-001	Plumbing Site Plan							
P-200	Plumbing Overall Underground Plan							
P-201	Plumbing Overall Above Ground Plan							
P-202 Plumbing Mezzanine and Fire Pump Plan								
P-203	Plumbing Office Plan							
P-204	Plumbing Plan and Schedules							
P-300	Plumbing Domestic Water Isometrics							
P-301	Plumbing Domestic Water Isometrics, Schedules, and Details							
P-302	Plumbing Waste and Vent Isometrics							
P-303	Plumbing Locker Room Waste and Vent Isometrics							
P-304	Plumbing Compressed Air Isometrics and Details							
P-305	Car Wash Supplemental Drawing							
P-306	Storm System Isometric							

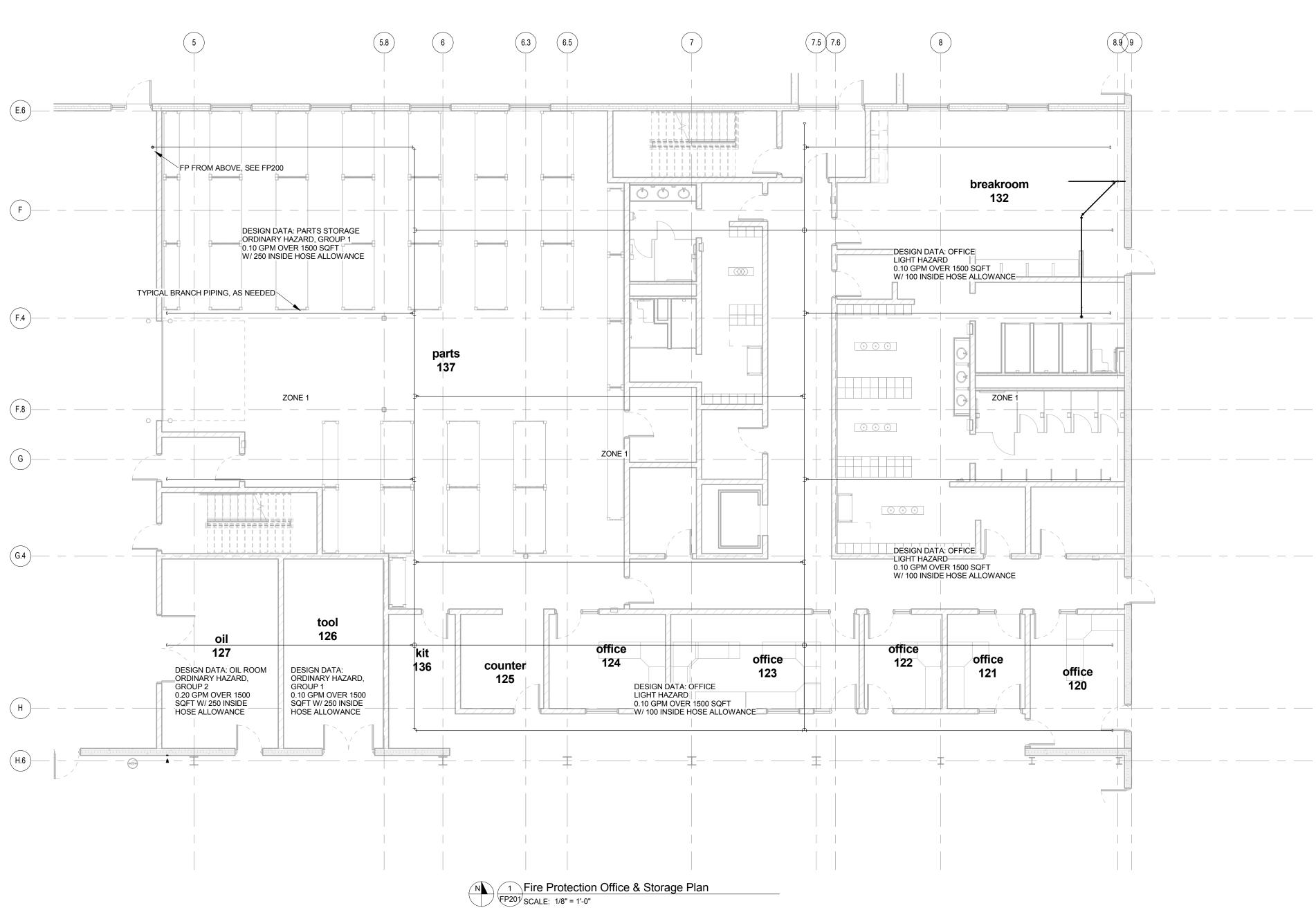




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(D)-







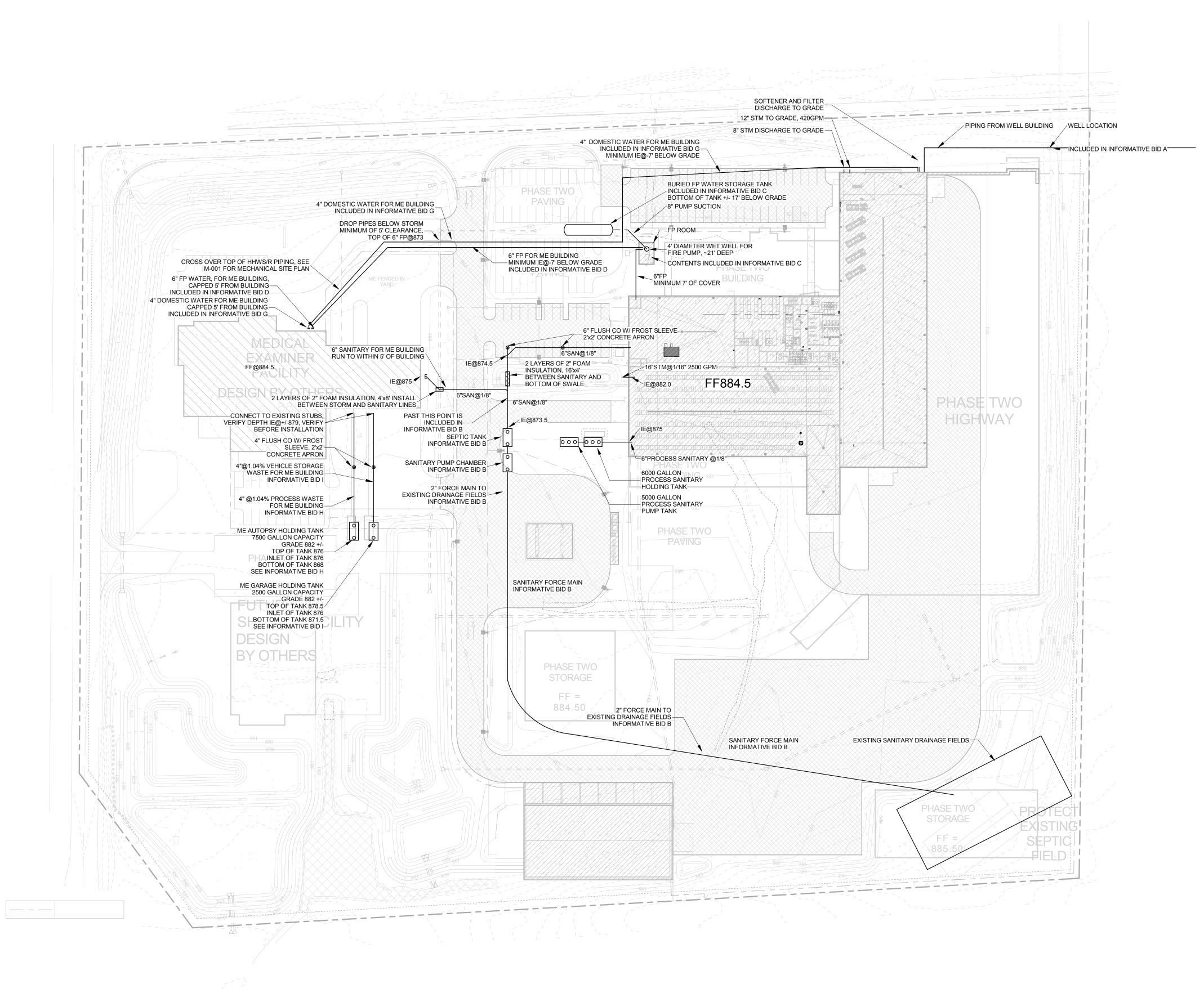
MAIN DRAIN LINE (TYPICAL)

CAPPED STUB FOR FUTURE ZONE (TYPICAL)

GROVE BUTTERFLY VALVE W/ TAMPER SWITCH (TYPICAL)

TYPICAL: 4" PIPE — BOLLARDS 4' ON CENTER TO PROTECT RISER





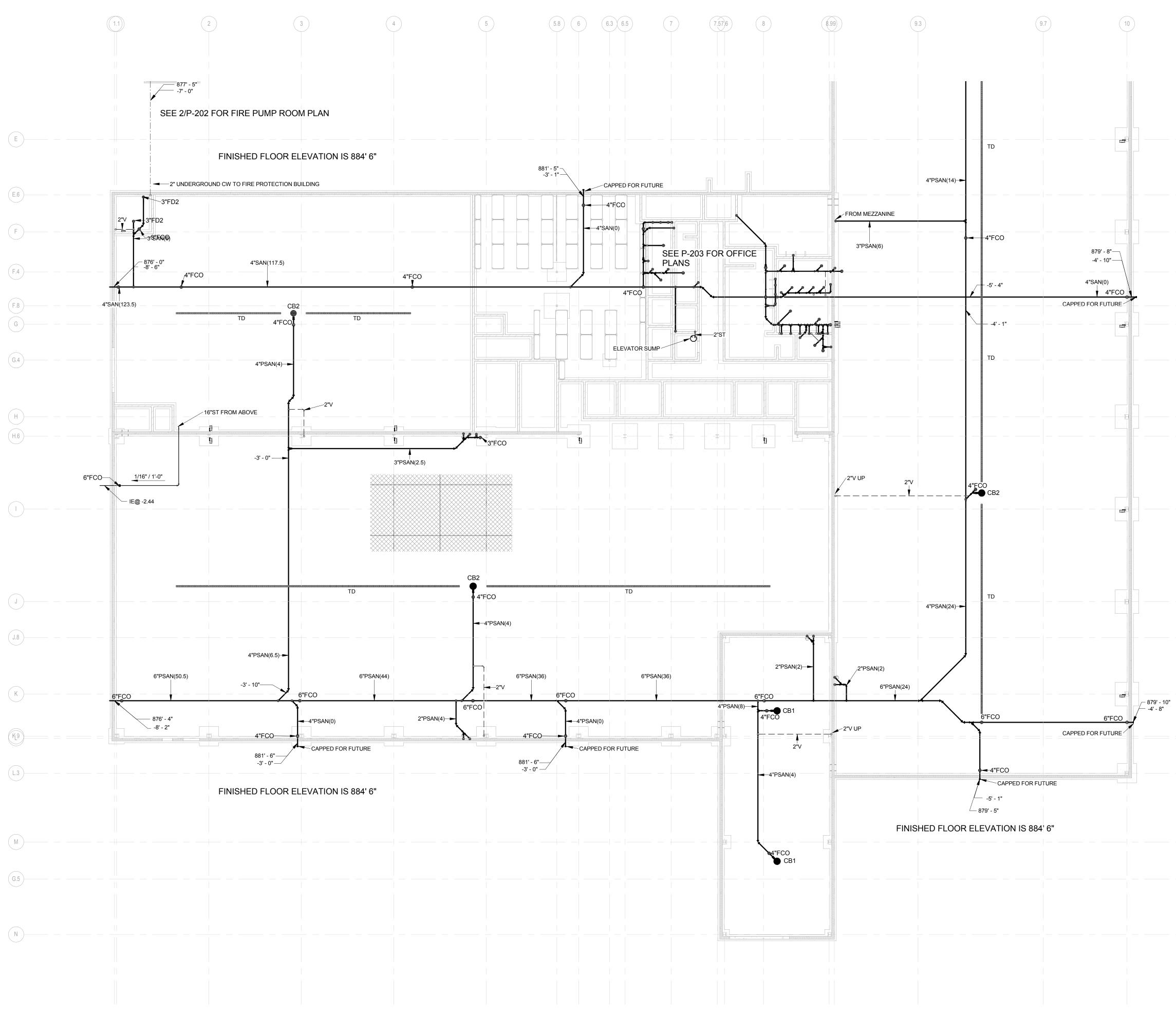
N 1 Plumbing Site Plan P-001 SCALE: 1" = 60'-0"

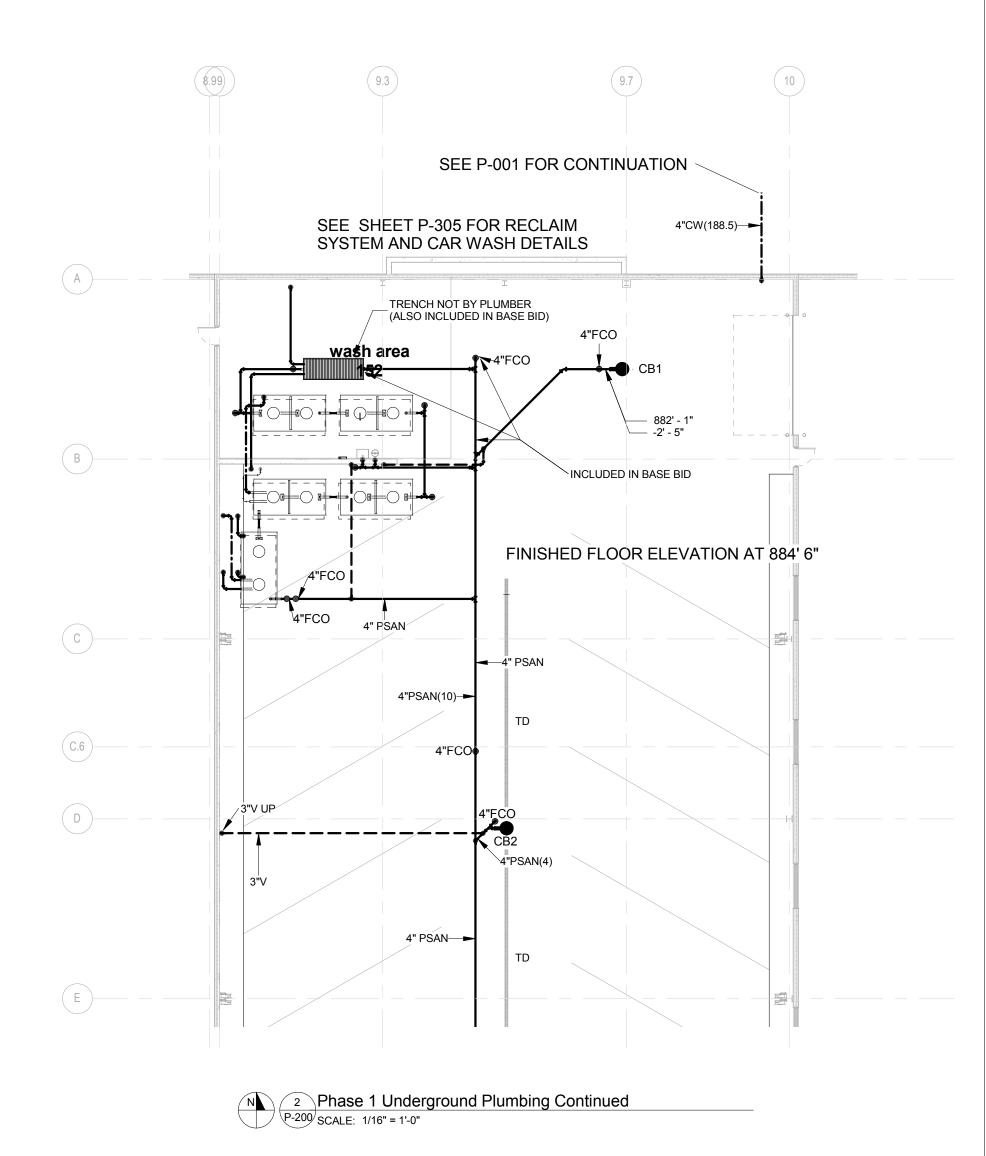
SCALE. 1 - 00-0

Sheet Number	Sheet Name							
FP200	Fire Protection Overall Plan							
FP201	Fire Protection Office and Details							
P-001	Plumbing Site Plan							
P-200	Plumbing Overall Underground Plan							
P-201	Plumbing Overall Above Ground Plan							
P-202	Plumbing Mezzanine and Fire Pump Plan							
P-203	Plumbing Office Plan							
P-204	Plumbing Plan and Schedules							
P-300	Plumbing Domestic Water Isometrics							
P-301	Plumbing Domestic Water Isometrics, Schedules, and Details							
P-302	Plumbing Waste and Vent Isometrics							
P-303	Plumbing Locker Room Waste and Vent Isometrics							
P-304	Plumbing Compressed Air Isometrics and Details							
P-305	Car Wash Supplemental Drawing							
P-306	Storm System Isometric							



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PLUMBING SYMBOLS AND ABBREVIATIONS

	COLD DOMESTIC WATER					
HW	HOT DOMESTIC SUPPLY					
HWC	HOT DOMESTIC RETURN					
CHW	COLD HARD WATER					
V	VENT					
NG	NATURAL GAS					
ə	RISER DOWN					
0	RISER UP					
x	P-TRAP					
Чбн	SHUTOFF VALVE					
	CHECK VALVE					
	BALANCING VALVE					
SAN	SANITARY PIPE					
ST	STORM PIPE					
RPZBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER					
CWW	CLEARWATER WASTE					
CWV	CLEARWATER VENT					
FCO	FLOOR CLEAN OUT					
WCO	WALL CLEAN OUT					
CWF	FILTERED COLD WATER					
M	WATER METER					
VTR	VENT THROUGH ROOF					
	CONNECTION TO EXISTING					
NPCW	NON-POTABLE COLD WATER					
NPHW	NON-POTABLE HOT WATER					
·						

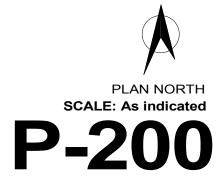
PIPE TAG NOMENCLATURE:

- 1 PIPE SIZE
- 2 MODIFIER (E.G. X-EXISTING, F-FILTERED, S-SOFT)

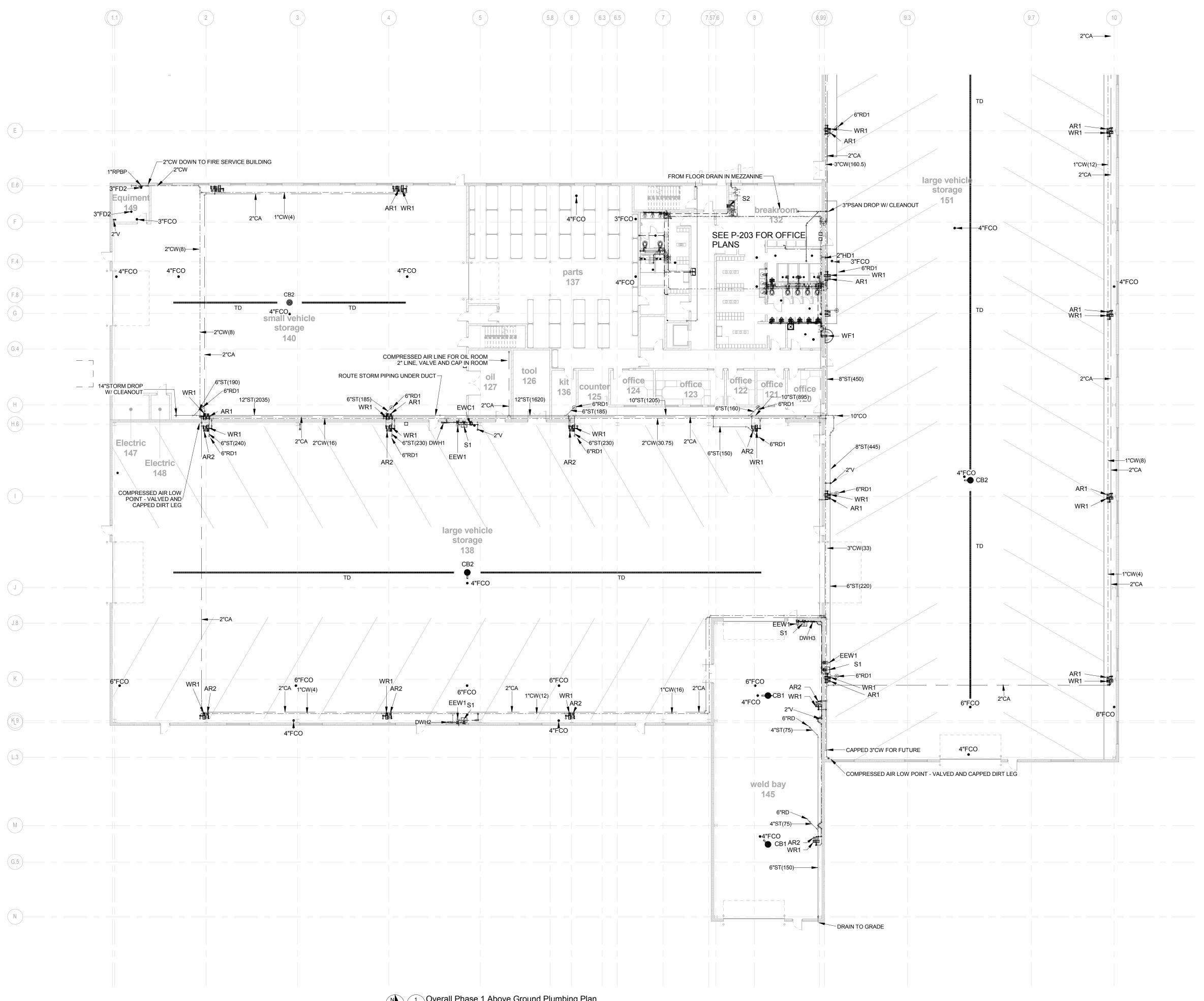
3 - SYSTEM TYPE (E.G. SAN - SANITARY, CW - COLD WATER, ETC.)

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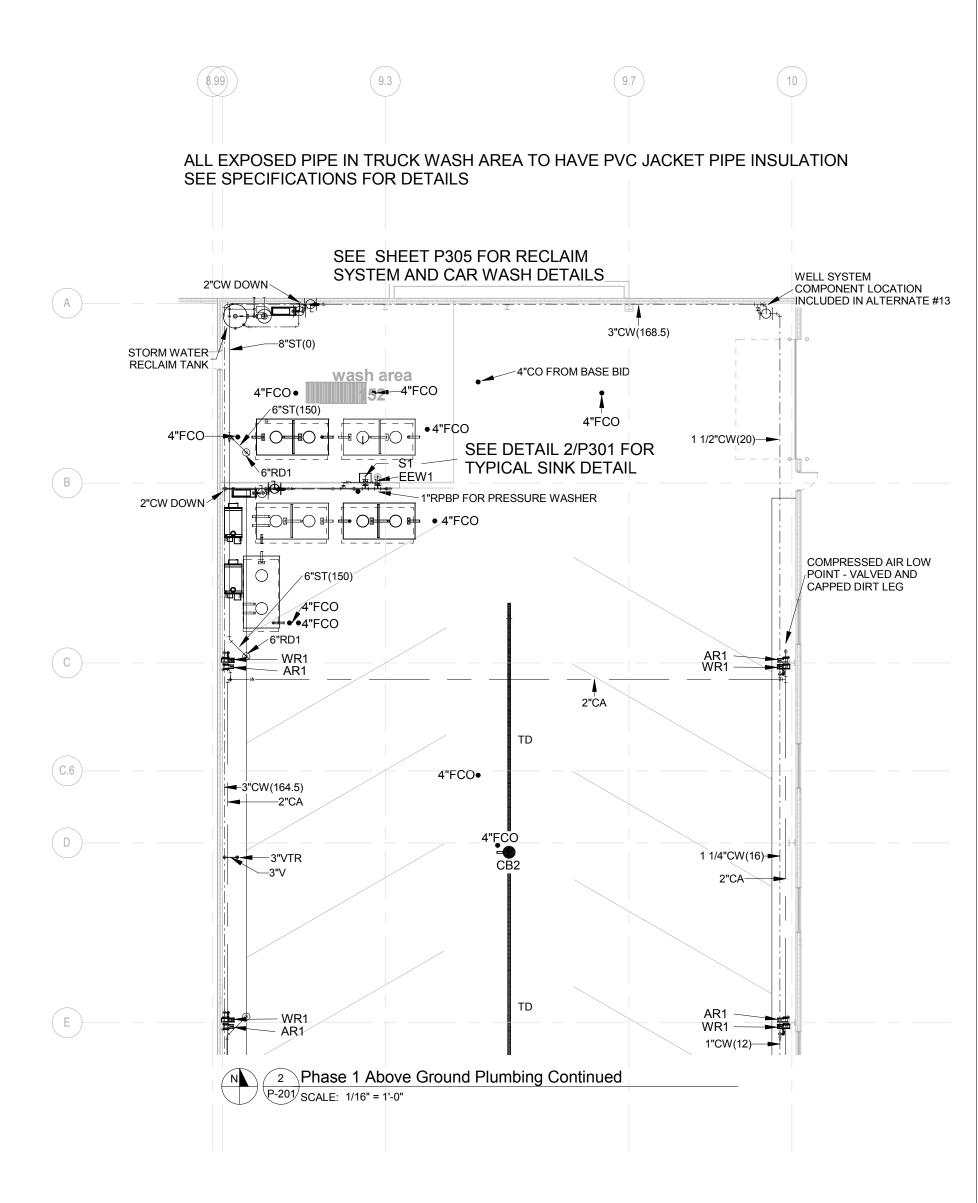
- 4 QUANTITY OF FLOW, SAN DFU (DRAINAGE FIXTURE UNITS) CW, HW WSFU (WATER SERVICE FIXTURE UNITS) STORM GPM (GALLONS PER MINUTE) GAS CFH (CUBIC FEET PER HOUR)



Plumbing Overall Underground Plan kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway

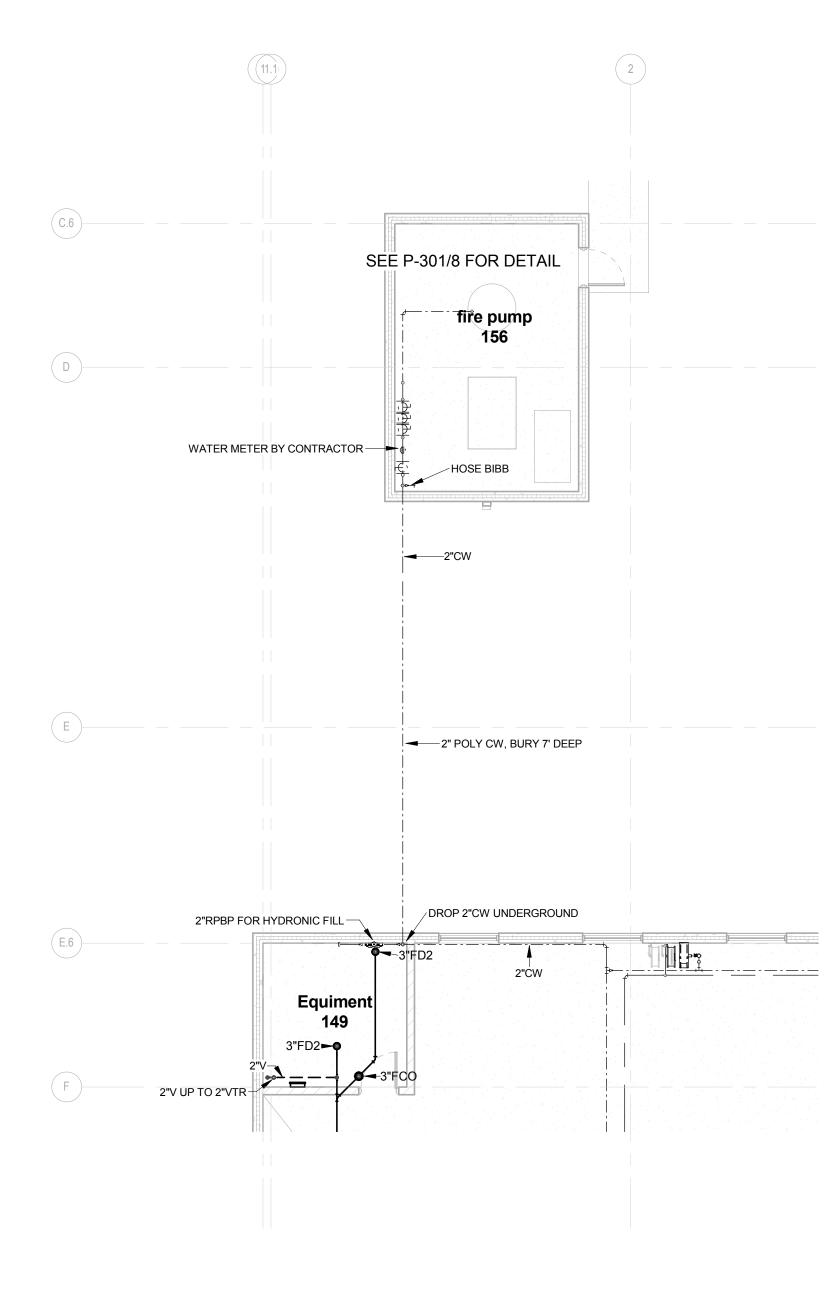


N 1 Overall Phase 1 Above Ground Plumbing Plan P-201 SCALE: 1/16" = 1'-0"

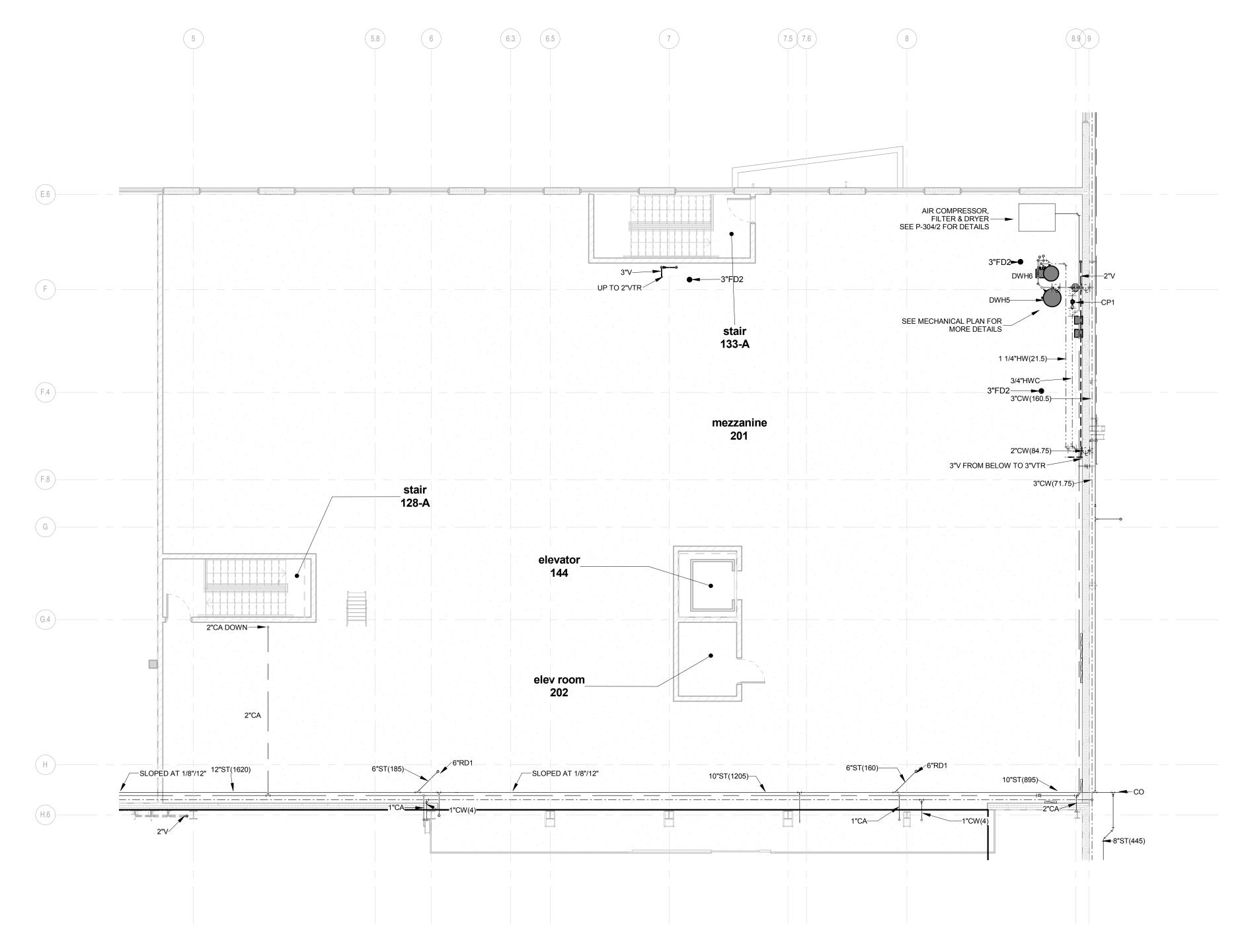




Plumbing Overall Above Ground Plan kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway 01/12/15



N 2 Fire Pump Room Plan P-202 SCALE: 1/8" = 1'-0"

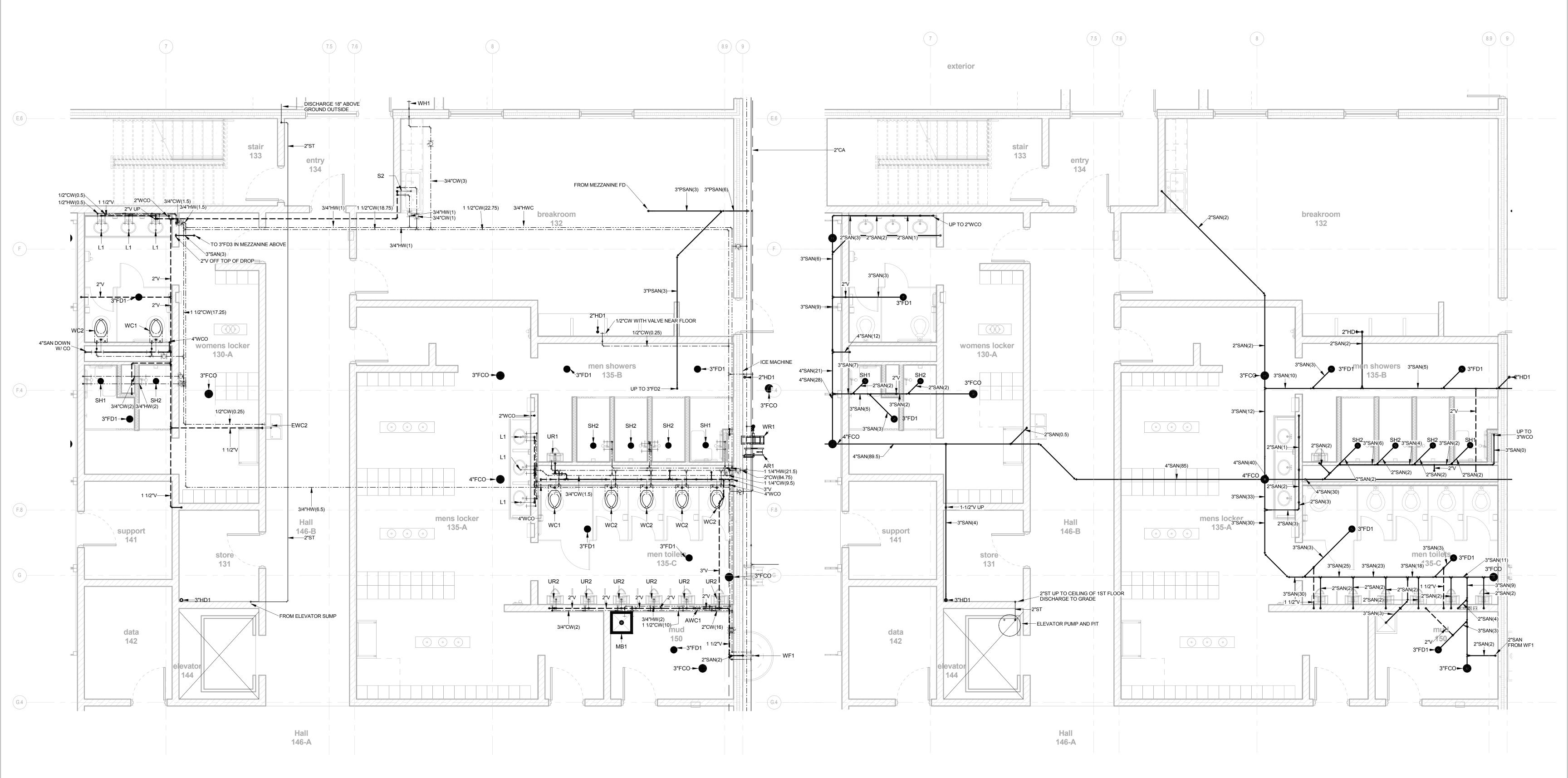


N 1 Plumbing Mezzanine Plan P-202 SCALE: 1/8" = 1'-0"



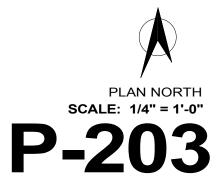
Plumbing Mezzanine and Fire Pump Plan kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway

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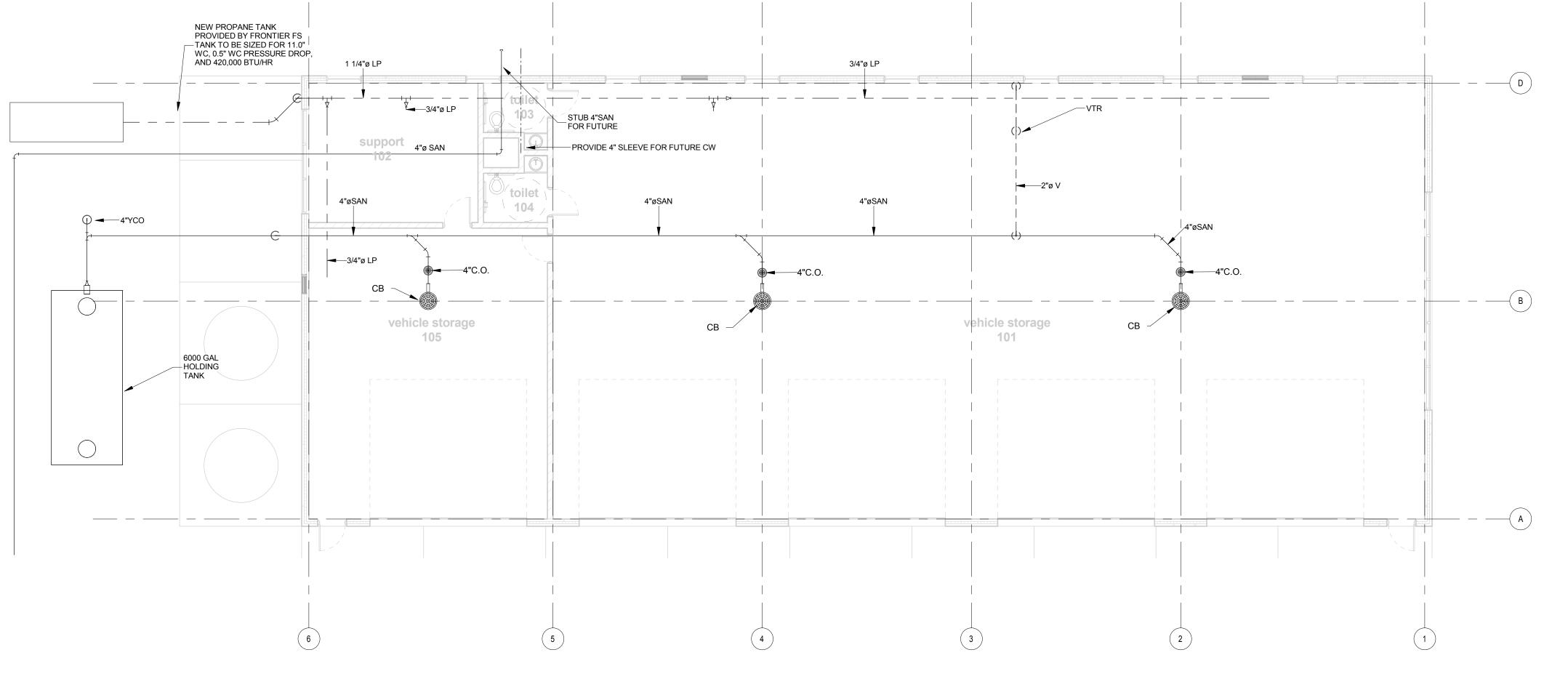


N 2 Phase 1 Office Above Ground Plumbing Plan P-203 SCALE: 1/4" = 1'-0"

N 1 Phase 1 Office Underground Plumbing Plan P-203 SCALE: 1/4" = 1'-0"



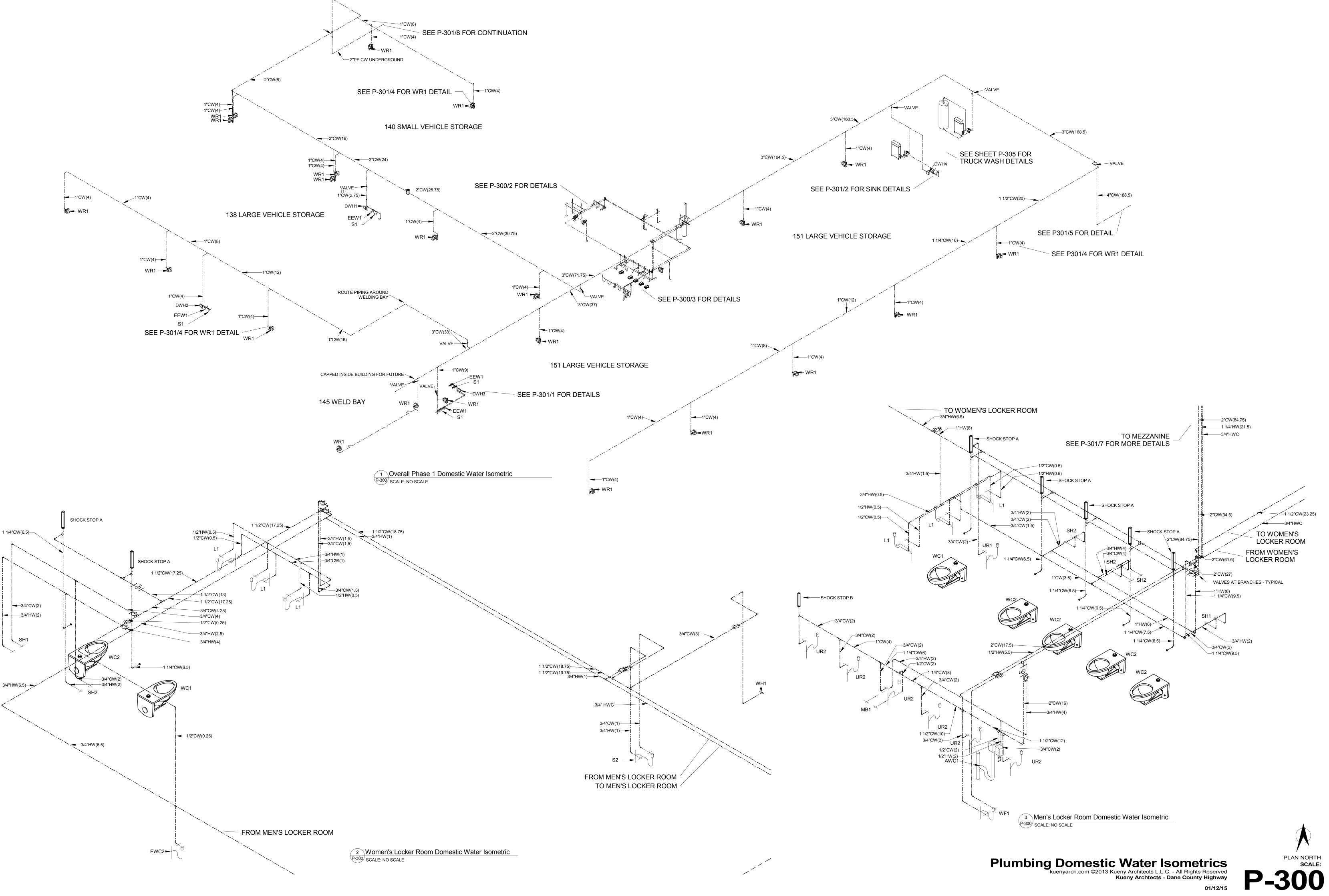
Plumbing Office Plan kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Archtects - Dane County Highway 01/12/15

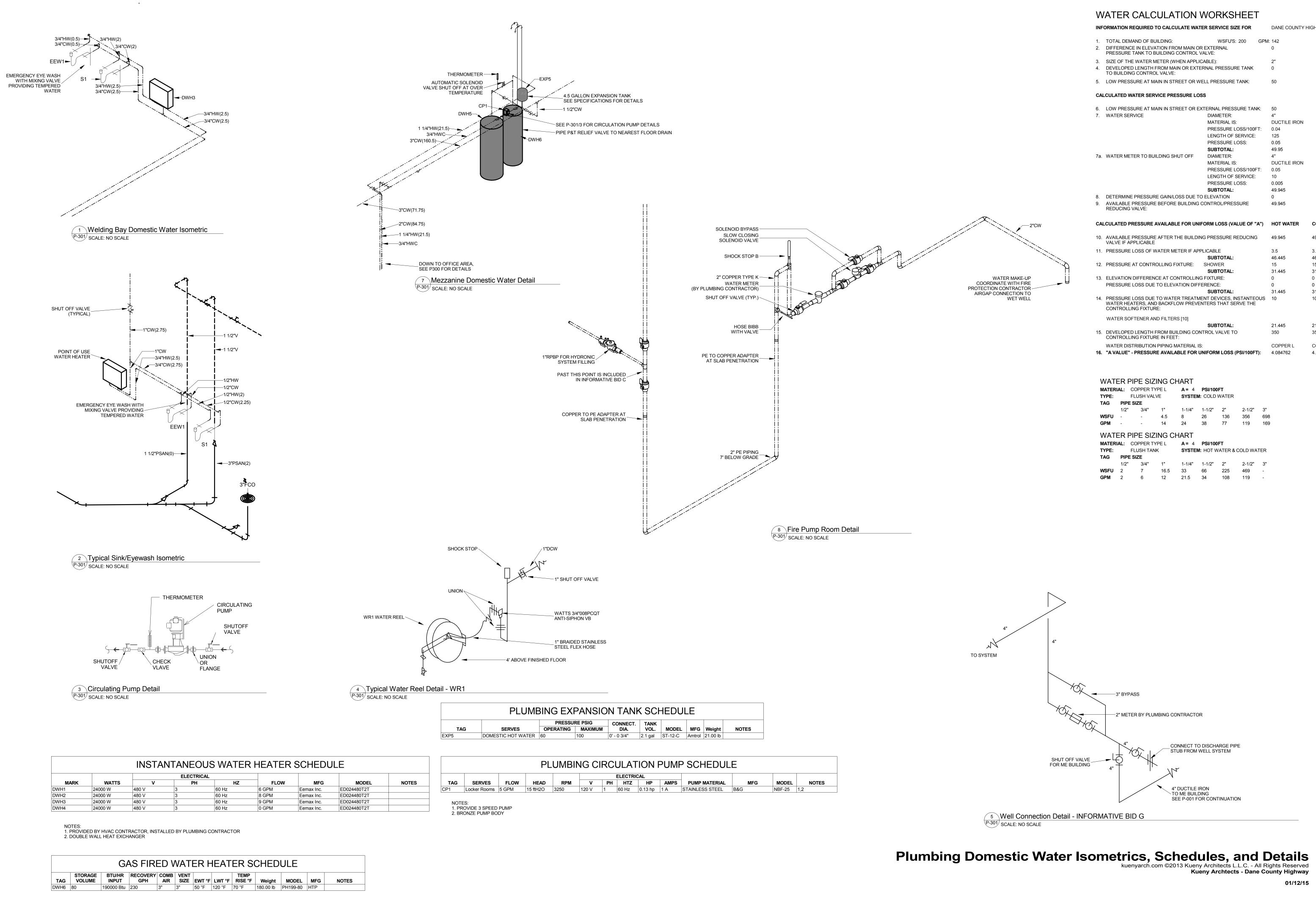


N Satellite Building Plumbing Plan - Alt #1 P-204 SCALE: 1/8" = 1'-0"



Plumbing Plans and Schedules kuenyarch.com ©2014 Kueny Architects L.L.C. - All Rights Reserved Dane County - Highway Facility Satellite Building US 151 and County Highway V 01/12/2015





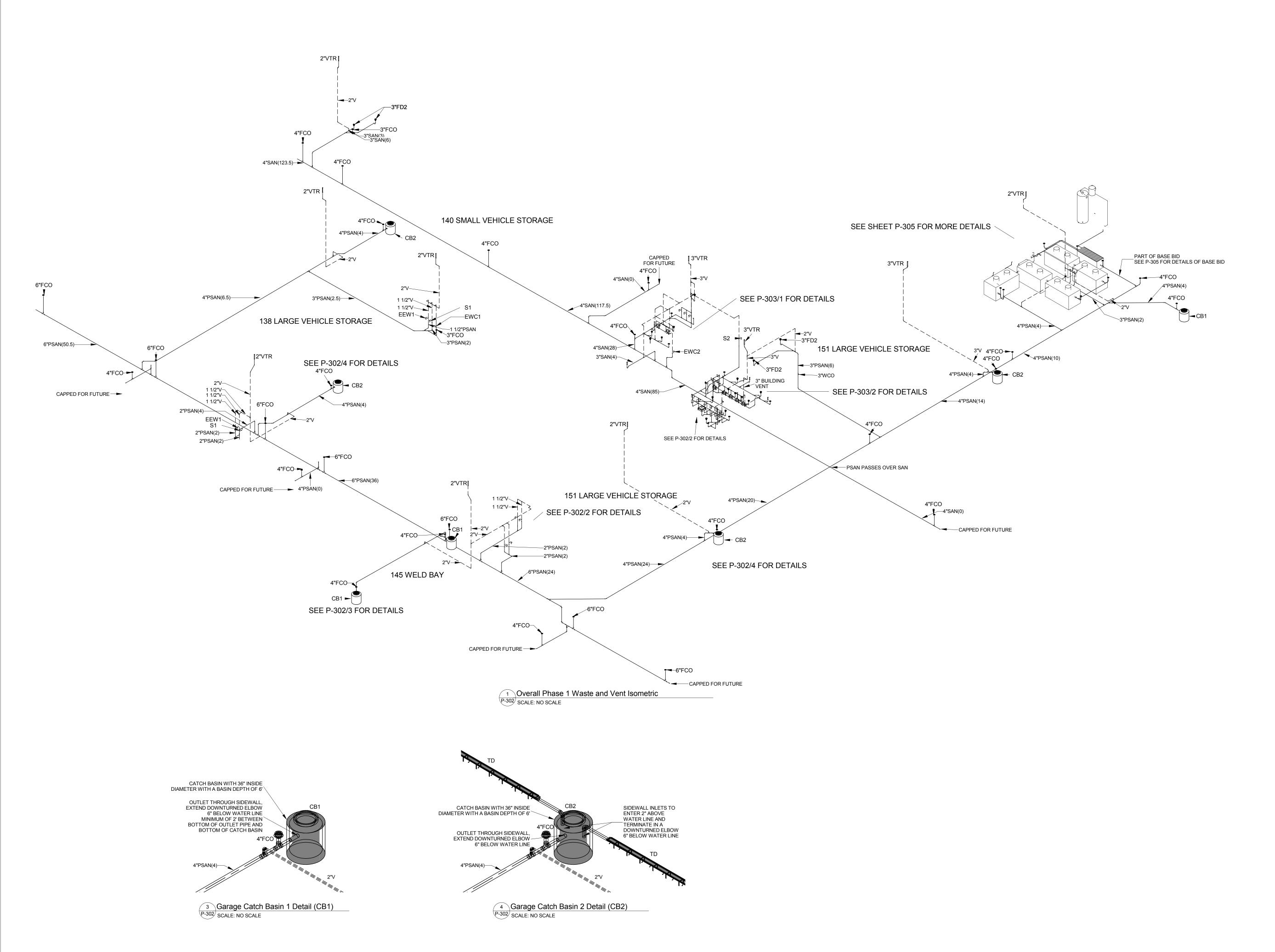
WATER CALCULATION W	NORKSHEET
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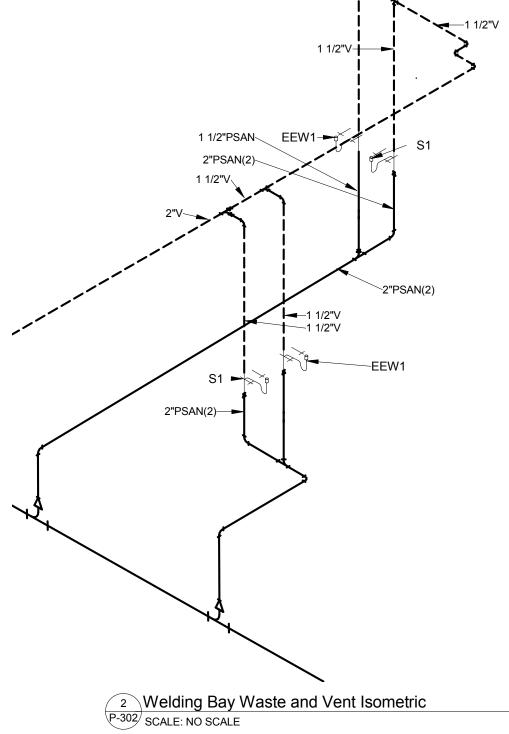
	ORMATION REQUIRED TO CALCULATE WAT	ER SERVICE SIZE FOR	DANE COUNTY H	IIGHWAY BLDG
1.	TOTAL DEMAND OF BUILDING:	WSFU'S: 200 GPM	l: 142	
2.	DIFFERENCE IN ELEVATION FROM MAIN OF PRESSURE TANK TO BUILDING CONTROL		0	
3.	SIZE OF THE WATER METER (WHEN APPLIC	CABLE):	2"	
4.	DEVELOPED LENGTH FROM MAIN OR EXTE TO BUILDING CONTROL VALVE:	ERNAL PRESSURE TANK	0	
5.	LOW PRESSURE AT MAIN IN STREET OR W	ELL PRESSURE TANK:	50	
CAI	CULATED WATER SERVICE PRESSURE LO	SS		
6.	LOW PRESSURE AT MAIN IN STREET OR EX	XTERNAL PRESSURE TANK:	50	
7.	WATER SERVICE	DIAMETER:	4"	
		MATERIAL IS:	DUCTILE IRON	
		PRESSURE LOSS/100FT:	0.04	
		LENGTH OF SERVICE:	125	
		PRESSURE LOSS:	0.05	
		SUBTOTAL:	49.95	
7a	WATER METER TO BUILDING SHUT OFF	DIAMETER:	4"	
		MATERIAL IS:	DUCTILE IRON	
		PRESSURE LOSS/100FT:	0.05	
		LENGTH OF SERVICE:	10	
		PRESSURE LOSS:	0.005	
		SUBTOTAL:	49.945	
8.	DETERMINE PRESSURE GAIN/LOSS DUE TO		0	
9.	AVAILABLE PRESSURE BEFORE BUILDING REDUCING VALVE:		49.945	
~ • •	CULATED PRESSURE AVAILABLE FOR UNI	FORM LOSS (VALUE OF "A")	HOT WATER	COLD WATER
CAI				
	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE	NG PRESSURE REDUCING	49.945	49.945
10.	AVAILABLE PRESSURE AFTER THE BUILDIN		49.945 3.5	49.945 3.5
10.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE			
10. 11.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE	PLICABLE	3.5	3.5
10. 11.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP	PLICABLE SUBTOTAL:	3.5 46.445	3.5 46.445
10. 11. 12.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP	PLICABLE SUBTOTAL: SHOWER SUBTOTAL:	3.5 46.445 15	3.5 46.445 15
10. 11. 12.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE:	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE:	3.5 46.445 15 31.445	3.5 46.445 15 31.445
10. 11. 12.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE: ELEVATION DIFFERENCE AT CONTROLLING	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE:	3.5 46.445 15 31.445 0	3.5 46.445 15 31.445 0
10. 11. 12. 13.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE: ELEVATION DIFFERENCE AT CONTROLLING	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE: ERENCE: SUBTOTAL: ENT DEVICES, INSTANTEOUS	3.5 46.445 15 31.445 0 0	3.5 46.445 15 31.445 0 0
10. 11. 12. 13.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE: ELEVATION DIFFERENCE AT CONTROLLING PRESSURE LOSS DUE TO ELEVATION DIFF PRESSURE LOSS DUE TO WATER TREATM WATER HEATERS, AND BACKFLOW PREVE	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE: ERENCE: SUBTOTAL: ENT DEVICES, INSTANTEOUS	3.5 46.445 15 31.445 0 0 31.445	3.5 46.445 15 31.445 0 0 31.445
10. 11. 12. 13.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE: ELEVATION DIFFERENCE AT CONTROLLING PRESSURE LOSS DUE TO ELEVATION DIFF PRESSURE LOSS DUE TO WATER TREATM WATER HEATERS, AND BACKFLOW PREVE CONTROLLING FIXTURE:	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE: ERENCE: SUBTOTAL: ENT DEVICES, INSTANTEOUS	3.5 46.445 15 31.445 0 0 31.445	3.5 46.445 15 31.445 0 0 31.445
10. 11. 12. 13. 14.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE: ELEVATION DIFFERENCE AT CONTROLLING PRESSURE LOSS DUE TO ELEVATION DIFF PRESSURE LOSS DUE TO WATER TREATM WATER HEATERS, AND BACKFLOW PREVE CONTROLLING FIXTURE:	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE: ERENCE: SUBTOTAL: ENT DEVICES, INSTANTEOUS NTERS THAT SERVE THE SUBTOTAL:	3.5 46.445 15 31.445 0 0 31.445 10	3.5 46.445 15 31.445 0 0 31.445 10
10. 11. 12. 13. 14.	AVAILABLE PRESSURE AFTER THE BUILDIN VALVE IF APPLICABLE PRESSURE LOSS OF WATER METER IF APP PRESSURE AT CONTROLLING FIXTURE: ELEVATION DIFFERENCE AT CONTROLLING PRESSURE LOSS DUE TO ELEVATION DIFF PRESSURE LOSS DUE TO WATER TREATM WATER HEATERS, AND BACKFLOW PREVE CONTROLLING FIXTURE: WATER SOFTENER AND FILTERS [10] DEVELOPED LENGTH FROM BUILDING COM	PLICABLE SUBTOTAL: SHOWER SUBTOTAL: G FIXTURE: ERENCE: SUBTOTAL: ENT DEVICES, INSTANTEOUS NTERS THAT SERVE THE SUBTOTAL: ITROL VALVE TO	3.5 46.445 15 31.445 0 0 31.445 10 21.445	3.5 46.445 15 31.445 0 0 31.445 10 21.445

MATERI TYPE: TAG		COPPER T FLUSH VAL E SIZE		A= 4 Systen	A = 4 PSI/100FT SYSTEM: COLD WATER										
IAC	1/2"		1"	1-1/4"	1-1/2"	2"	2-1/2"	3"							
WSFU	-	-	4.5	8	26	_ 136	356	698							
GPM	-	-	14	24	38	77	119	169							
	WATER PIPE SIZING CHART														
MATERI	AL:	COPPER T	YPE L	A = 4	PSI/100	FT									
TYPE:		FLUSH TAP	١K	SYSTEM	I: HOT W	ATER & (COLD WA	ΓER							
TAG	PIP	E SIZE													
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"							
WSFU	2	7	16.5	33	66	225	469	-							
GPM	2	6	12	21.5	34	108	119	-							



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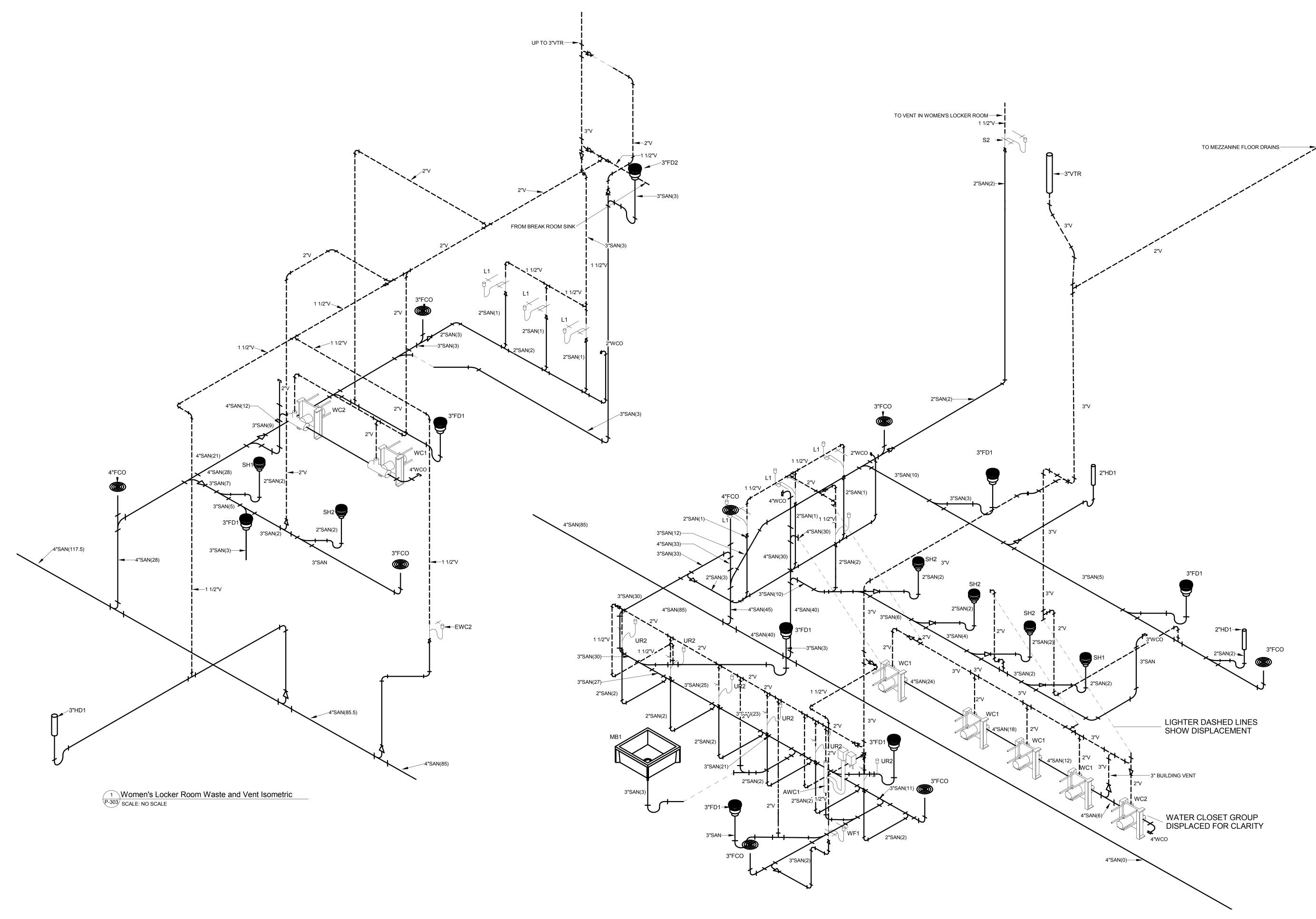






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Plumbing Waste and Vent Isometrics kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway

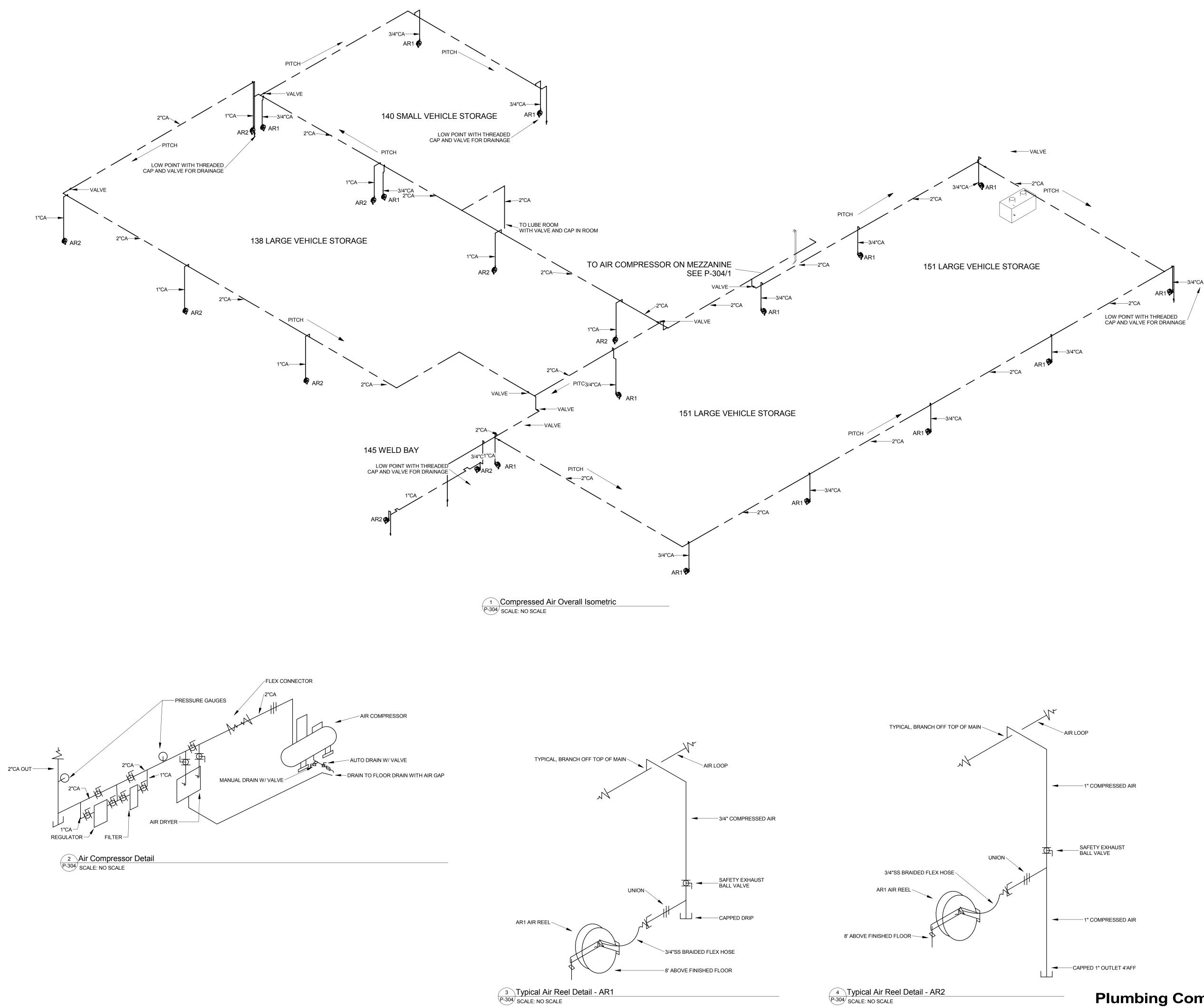


2 Men's Locker Room Sanitary Isometric P-303 SCALE: NO SCALE

Plumbing Locker Room Waste and Vent Isometrics kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway



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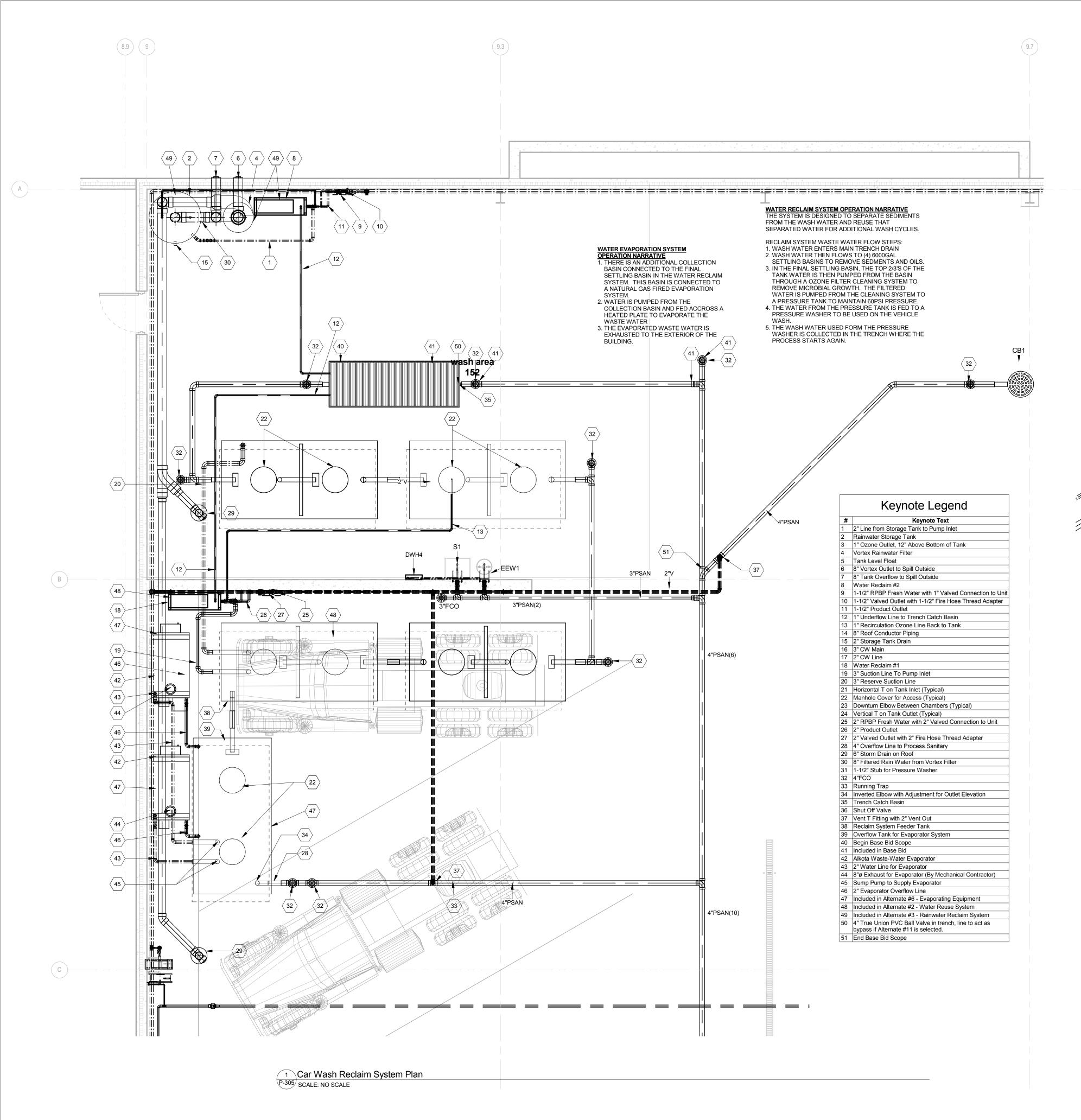


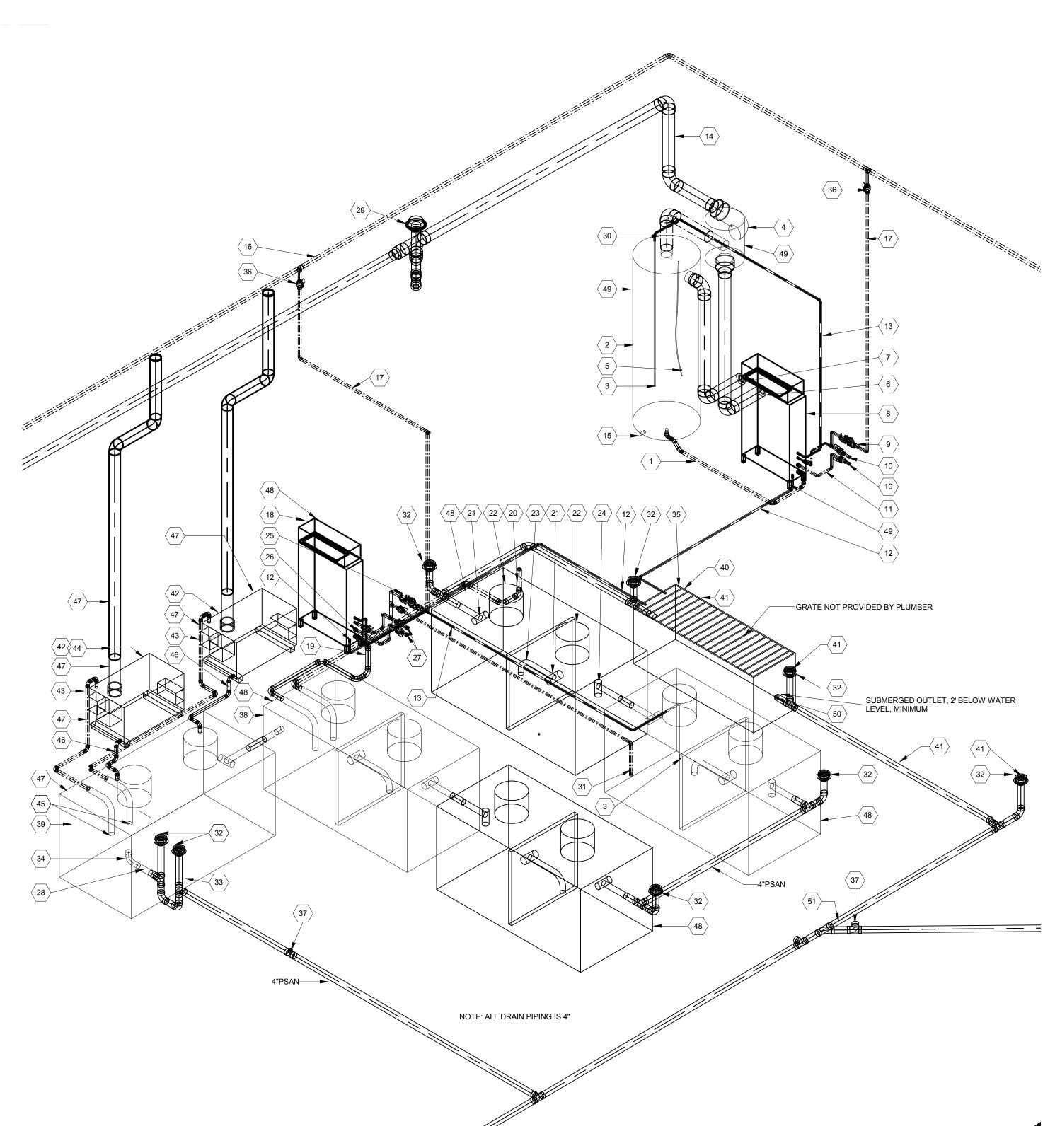
3 Typical Air Reel Detail - AR1 P-304 SCALE: NO SCALE

Plumbing Compressed Air Isometrics and Details kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway







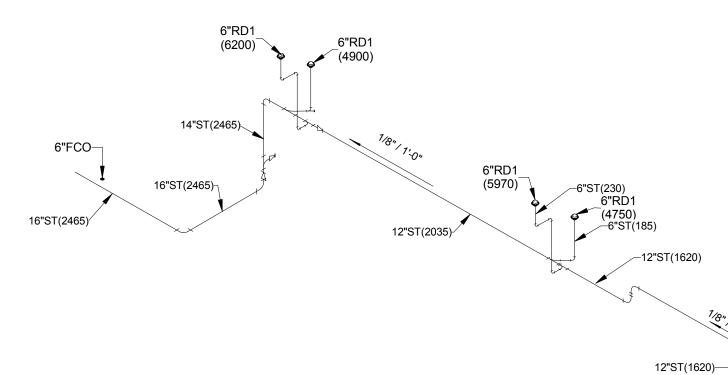


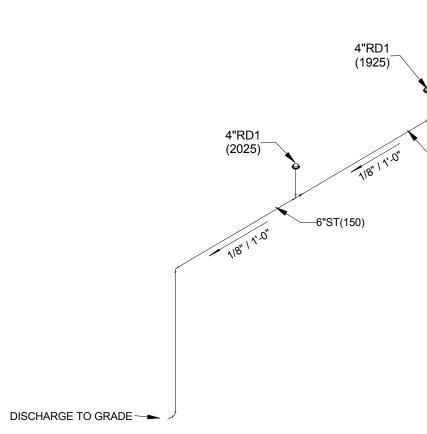
2 Car Wash Reclaim Water and Waste System Detail P-305 SCALE: NO SCALE

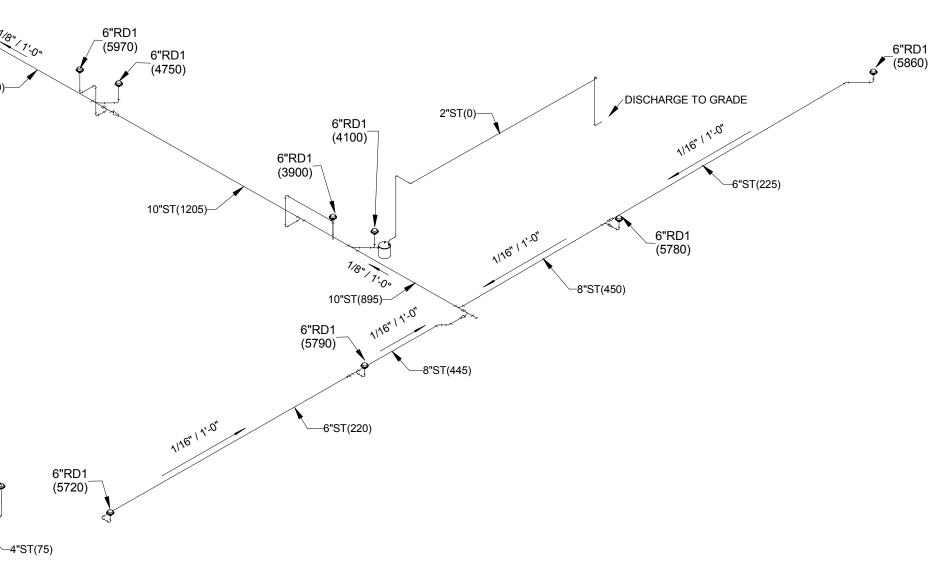


Car Wash Supplemental Drawing kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Archtects - Dane County Highway

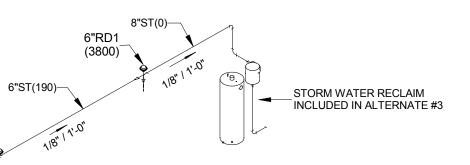
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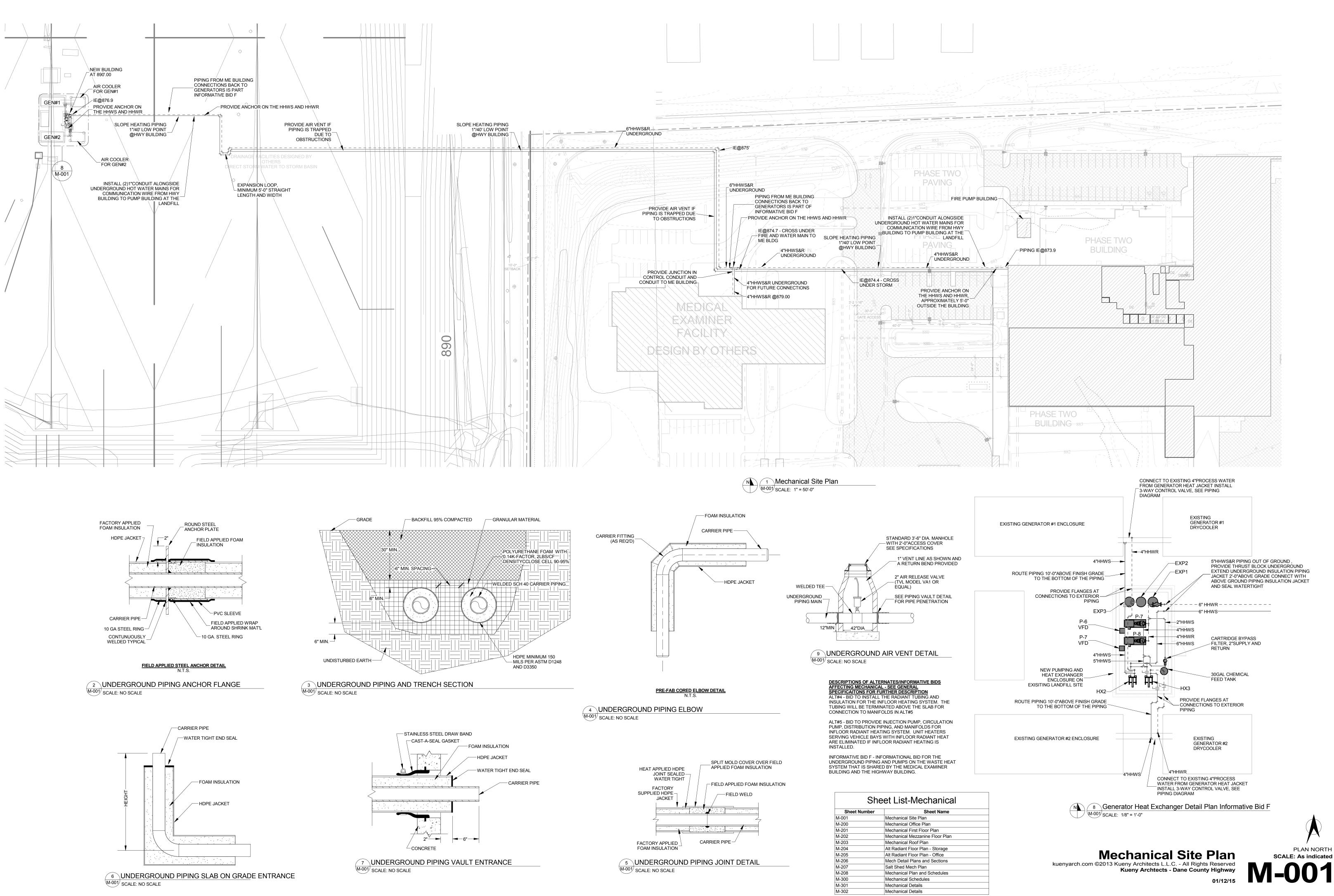


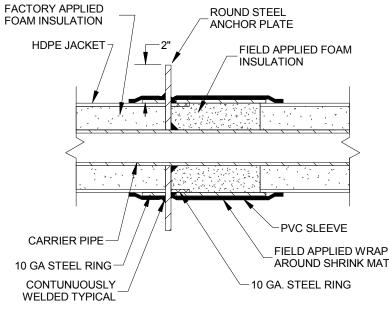
1 Storm Piping Isometric P-306 SCALE: NO SCALE

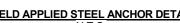




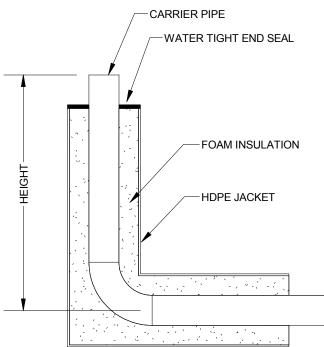
Storm System Isometric kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Architects - Dane County Highway 01/12/15

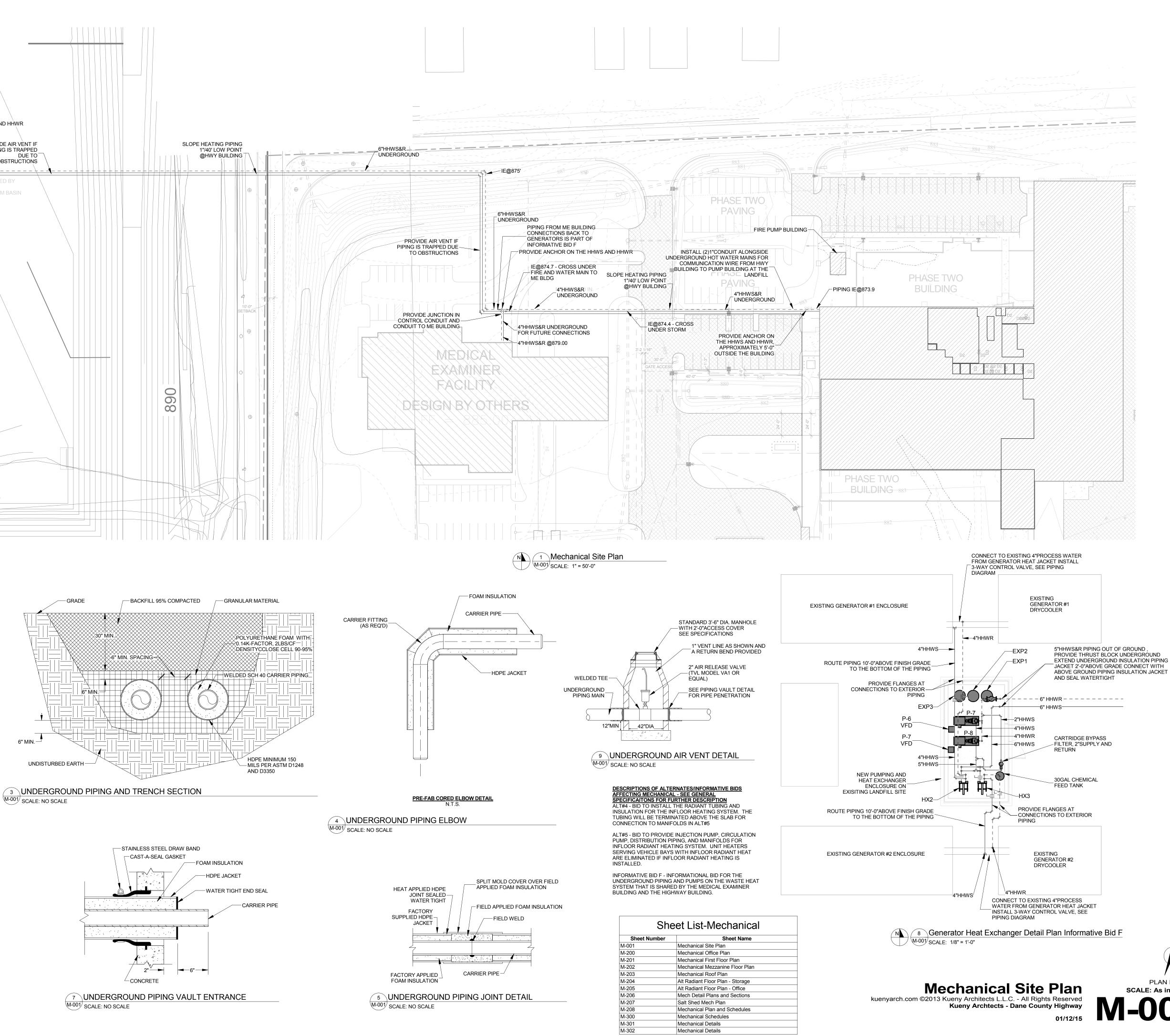


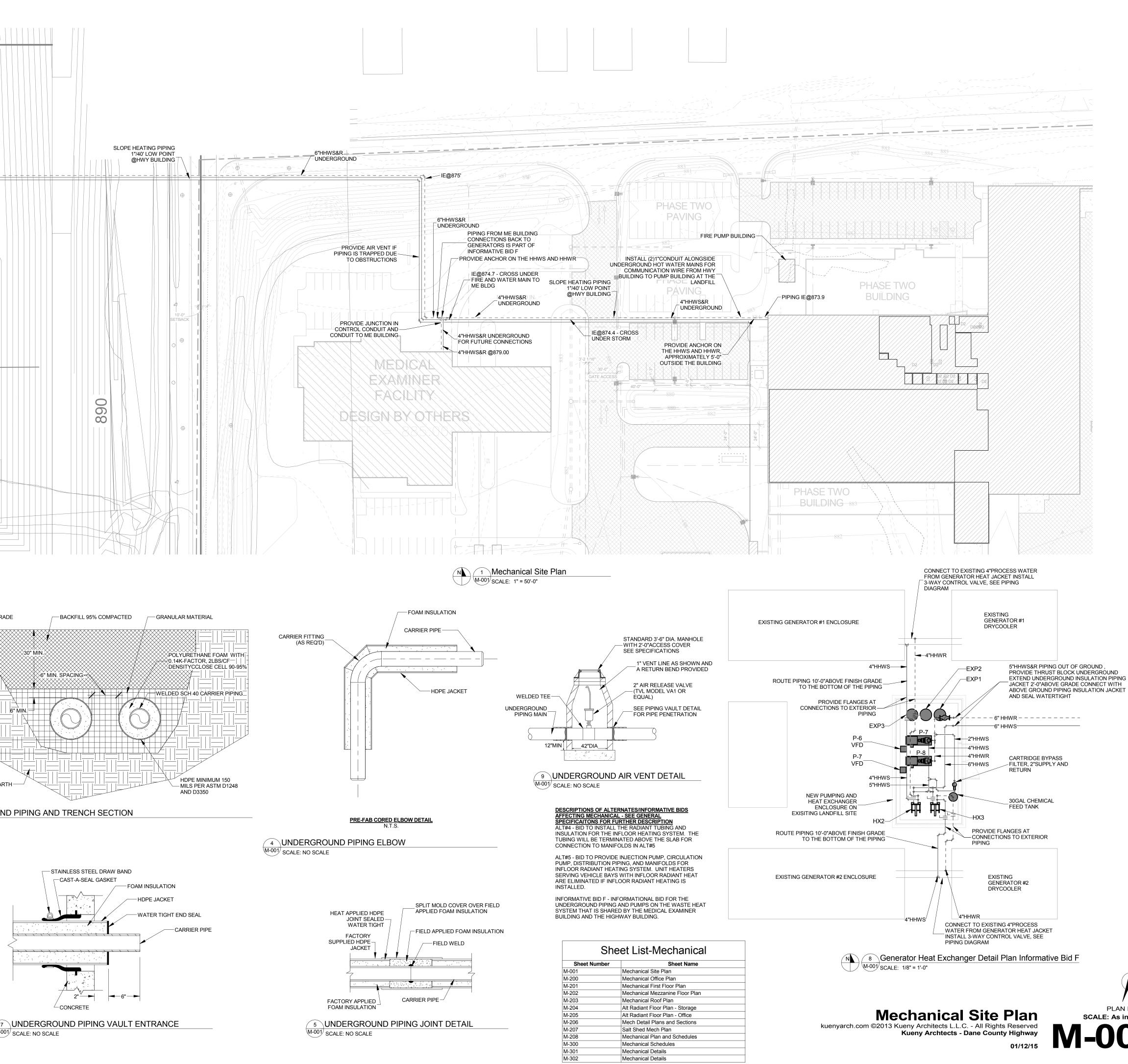






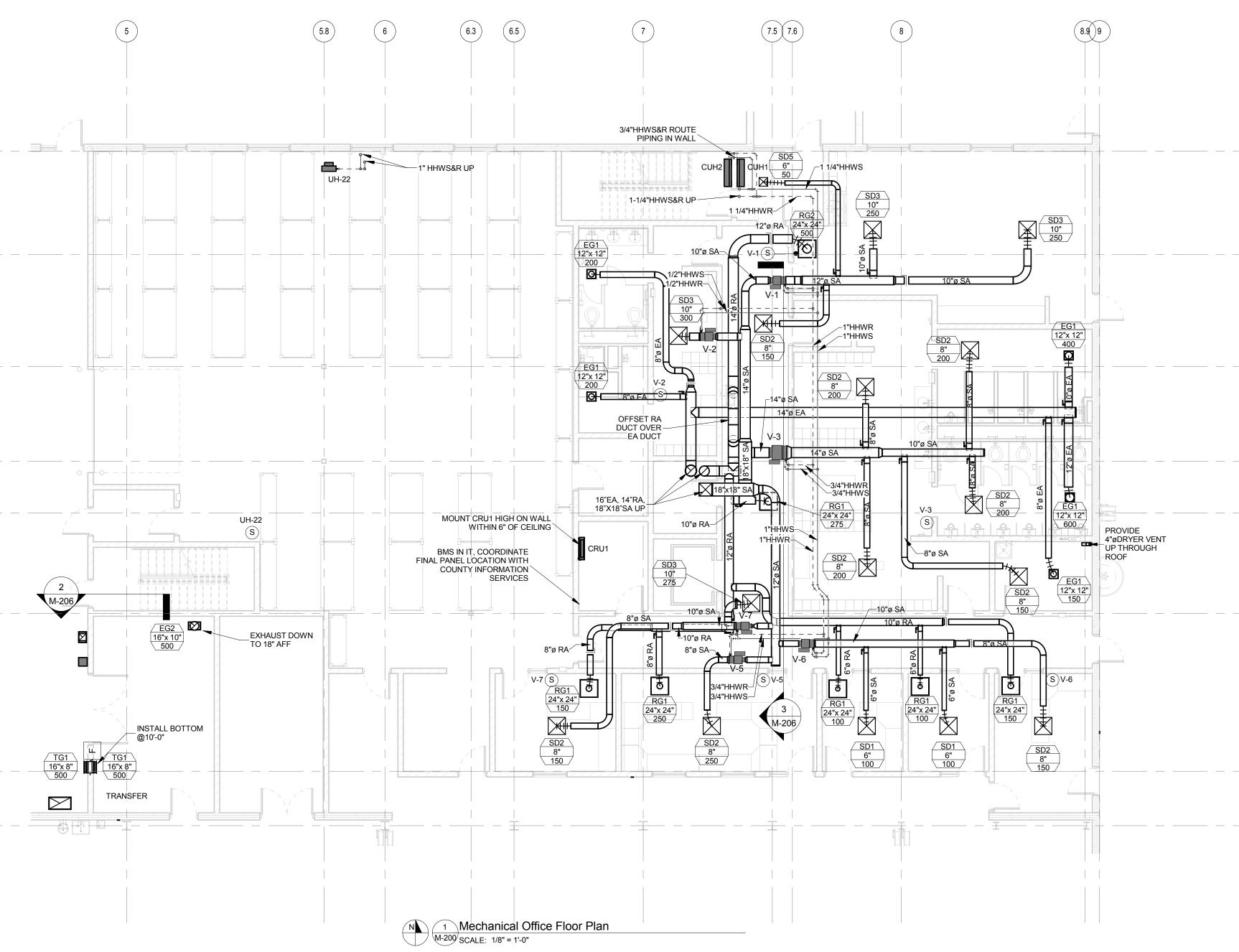






E.6 F (F.4)-(F.8) G G.4 H)-

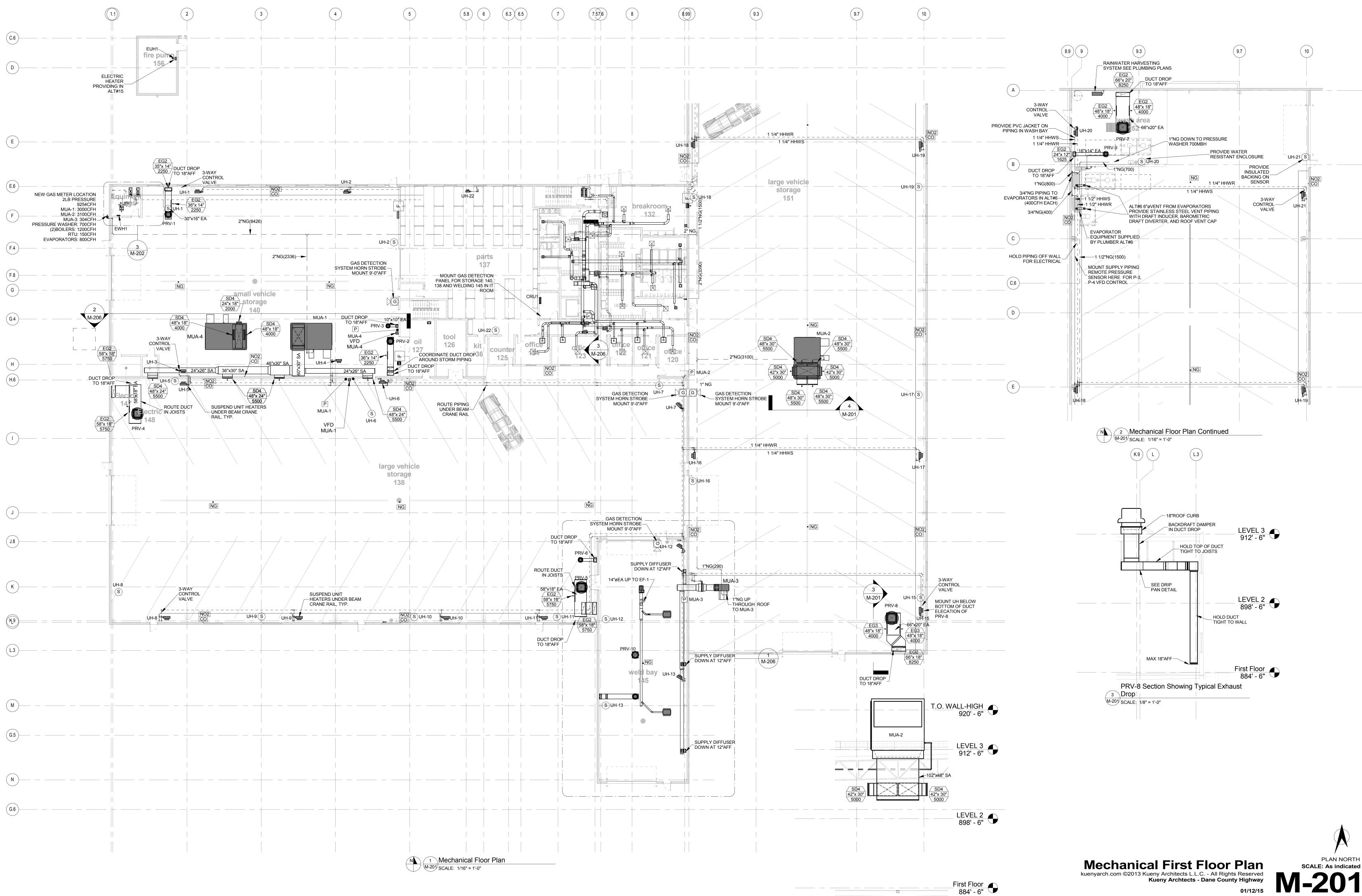
(H.6)



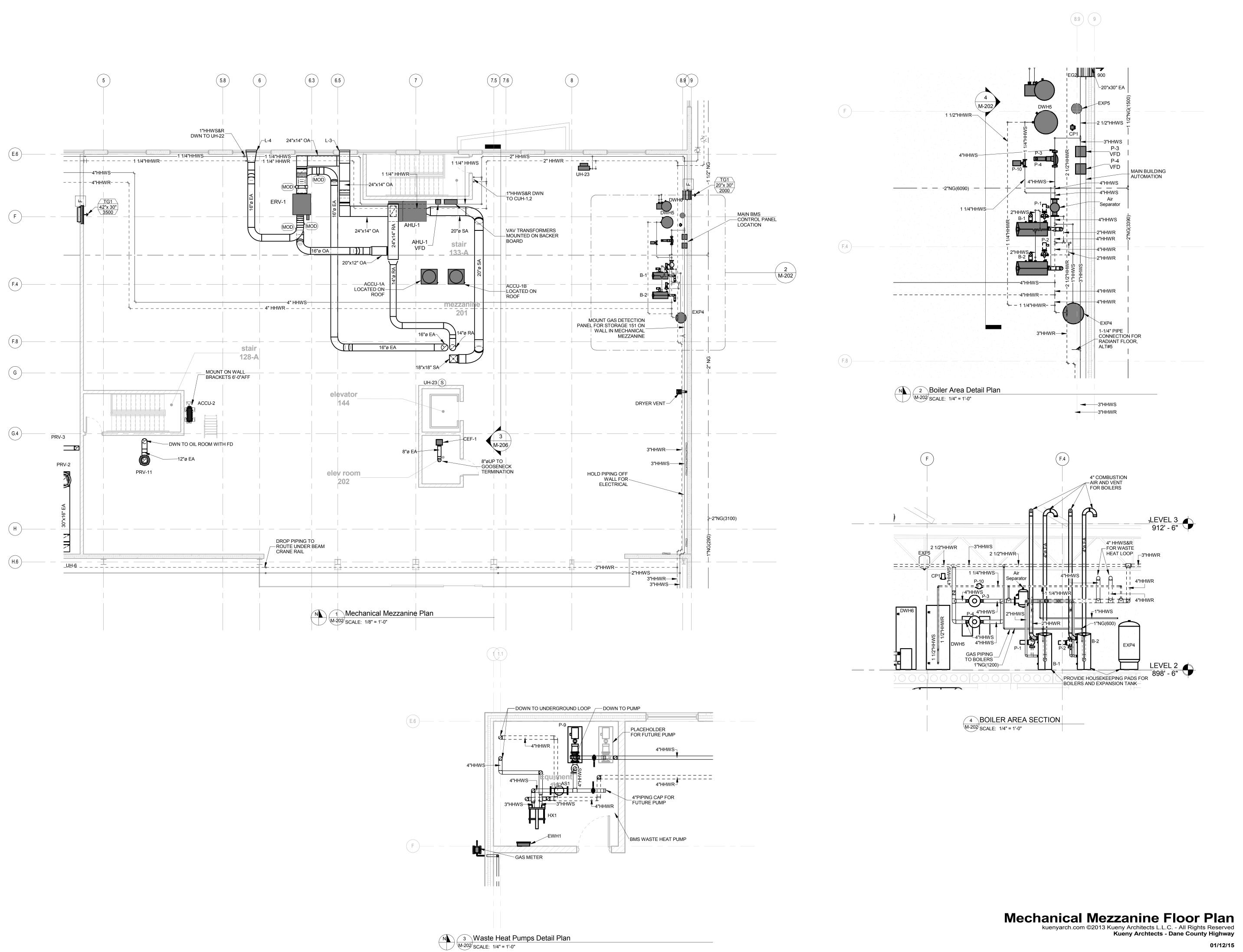
HVAC SYI	MBOLS AND ABBREVIATIONS							
12X10	12"WIDE X 10"DEEP DUCT							
12X10	12"ROUND DUCT							
	LINED DUCT							
	RECT ELBOW							
	RECT ELBOW WITH TURNING VANES							
	RECT ELBOW UP OR DOWN							
T	THERMOSTAT							
S	SENSOR							
CO	CO SENSOR							
NO2	NO2 SENSOR							
CO2	CO2 SENSOR							
NG	NATURAL GAS DETECTOR							
Р	CONTROL PANEL							
\$	WALL SWITCH							
SD	SMOKE DETECTOR							
TC	TIMECLOCK							
VD	VOLUME DAMPER							
	MOTORIZED DAMPER							
	SUPPLY							
	RETURN							
D D	ROUND ELBOW							
IJ	RECTANGULAR RADIUS ELBOW							
++++++	FLEX DUCT							
243	ROUND TAP							
12X10AL	12X10 ALUMINUN DUCT							
12X10SS	12X10 STAINLESS STEEL DUCT							
12X10BI	12X10 BLACK IRON DUCT							
•	CONNECTION TO EXISTING							
HHWS	HEATING HOT WATER SUPPLY							
HHWR	HEATING HOT WATER RETURN							
(FSD)	FIRE SMOKE DAMPER							
FD	FIRE DAMPER							
SD	SMOKE DAMPER							
RD	RADIATION DAMPER							
	REMOTE OPERATED VOLUME DAMPER							
MOD	MOTOR OPERATED DAMPER							
SA	SUPPLY AIR							
RA	RETURN AIR							
EA	EXHAUST AIR							
RE	RELIEF AIR							
OA	OUTSIDE AIR							
L								



Mechanical Office Plan kuenyarch.com ©2013 Kueny Architects L.L.C. - All Rights Reserved Kueny Archtects - Dane County Highway 01/12/15

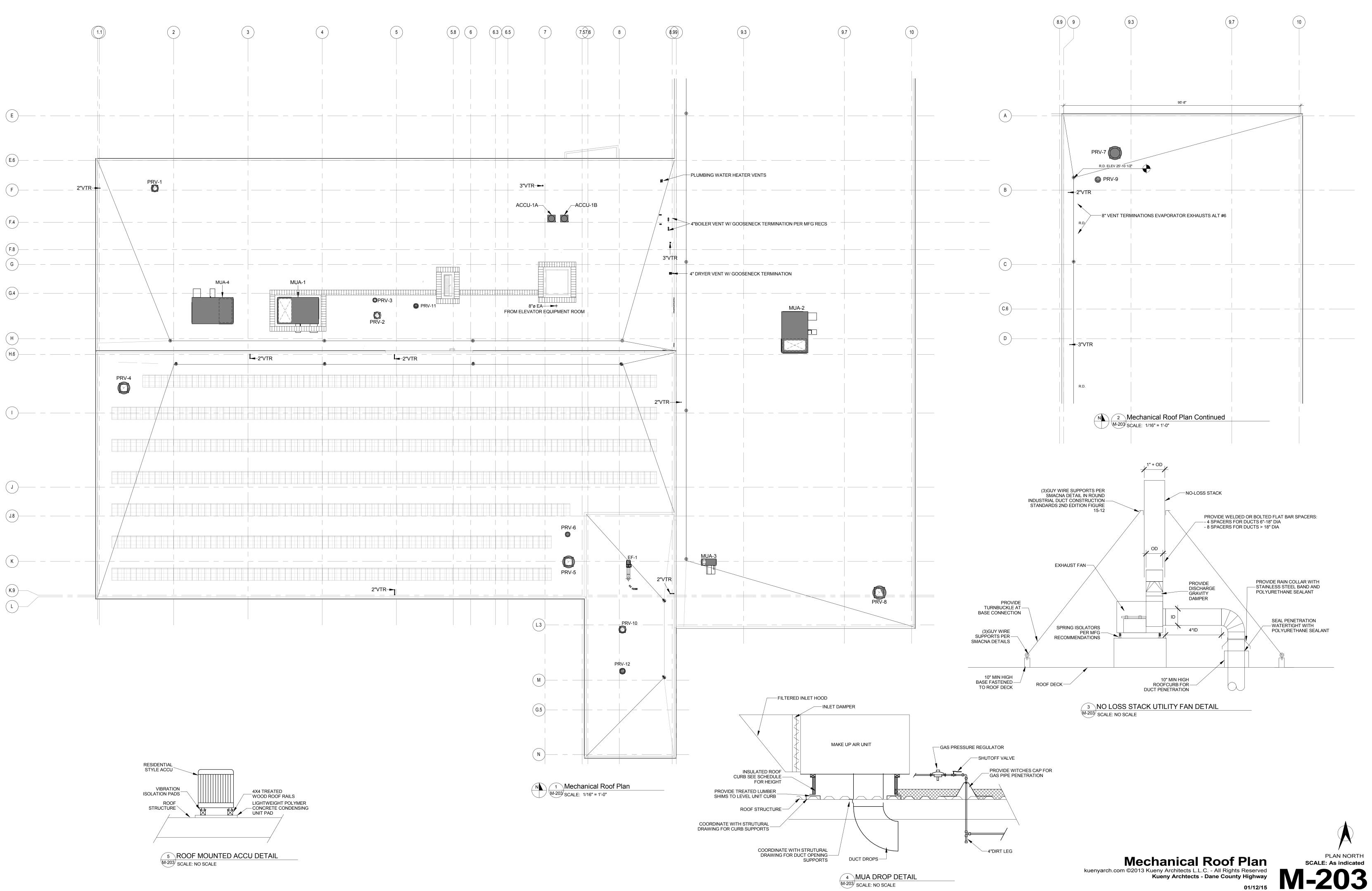


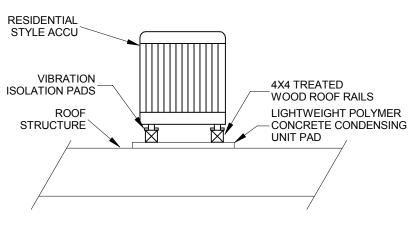
4 MUA-2 Plenum Section M-201 SCALE: 1/8" = 1'-0"





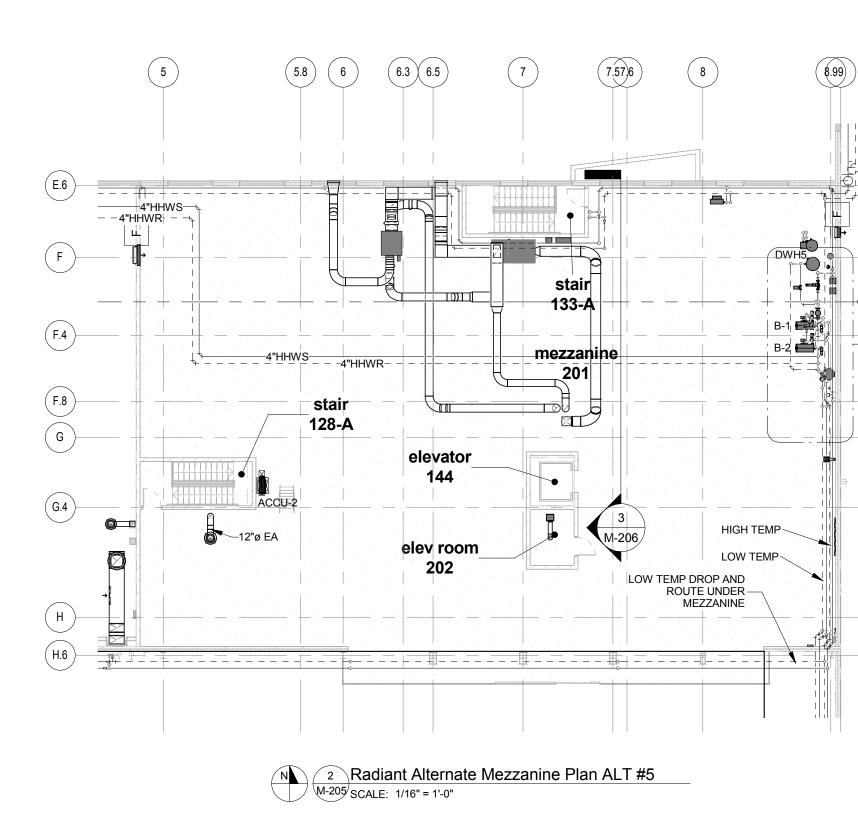
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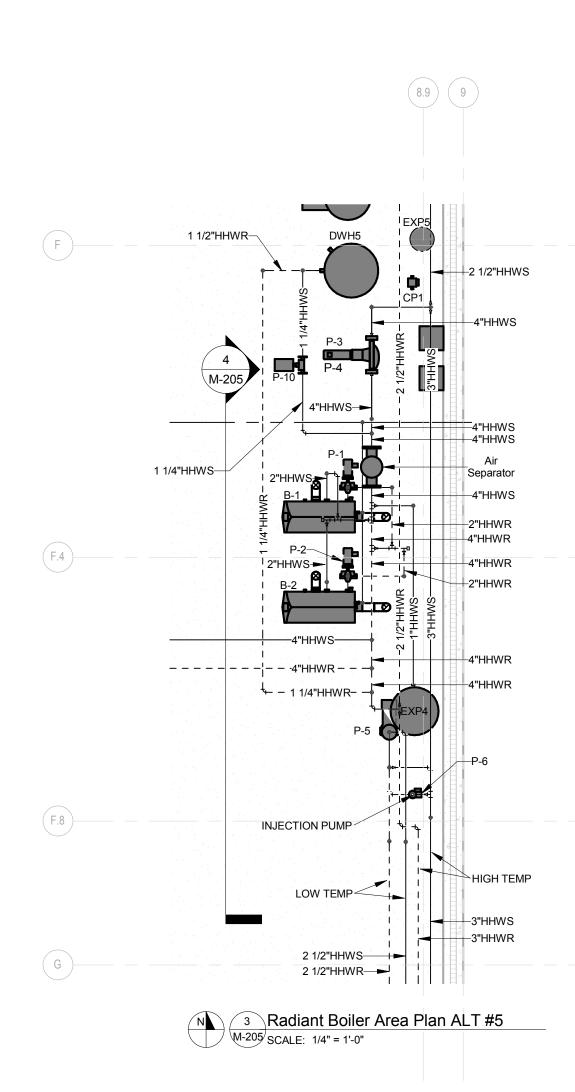


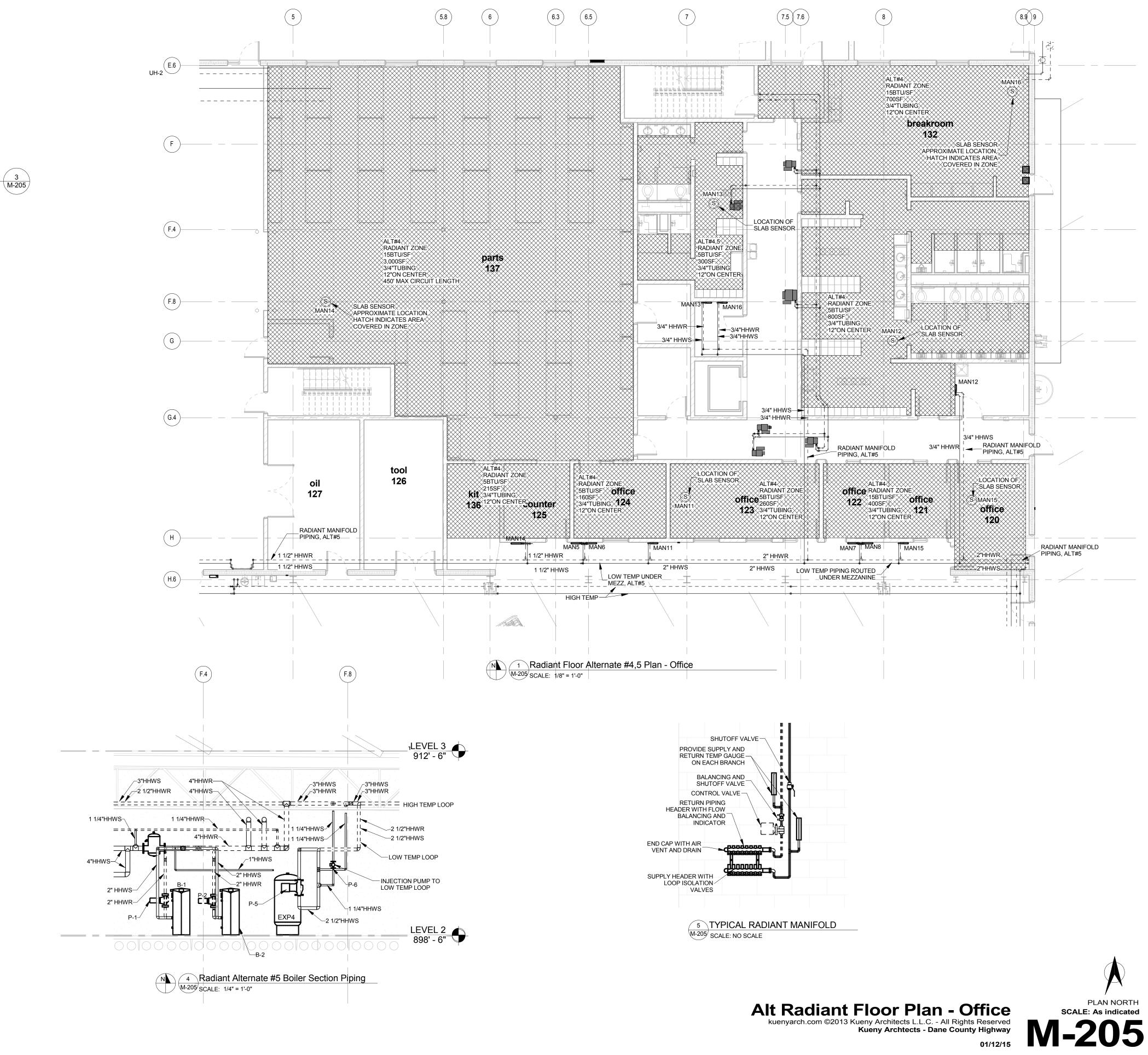


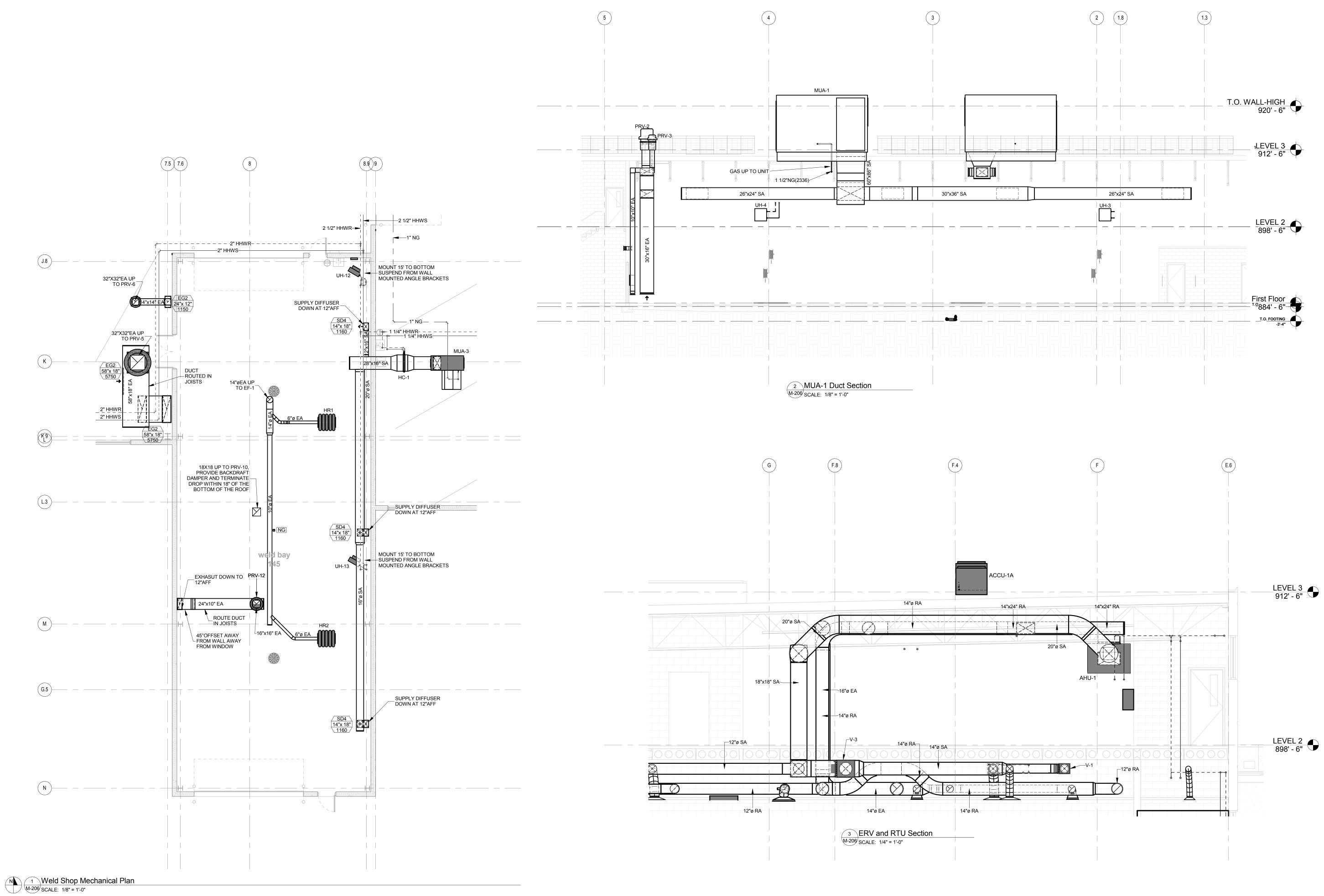
M-203 SCALE: NO SCALE





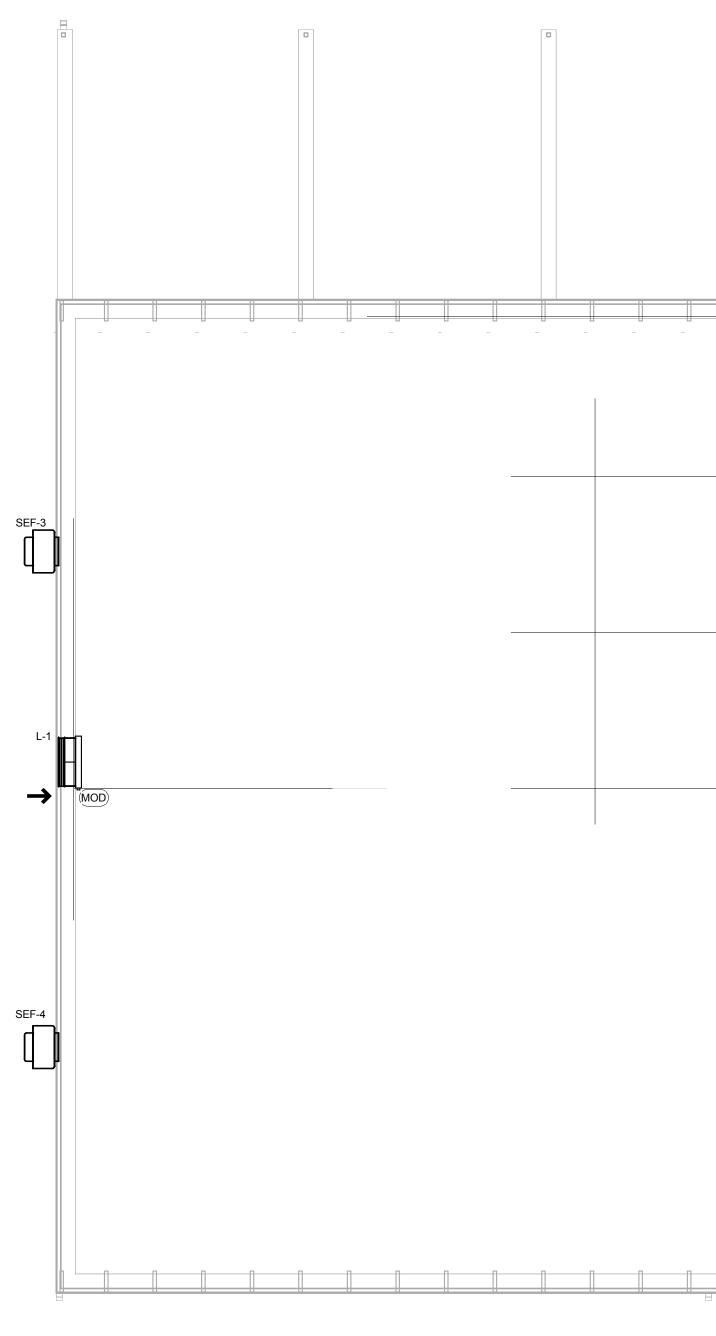


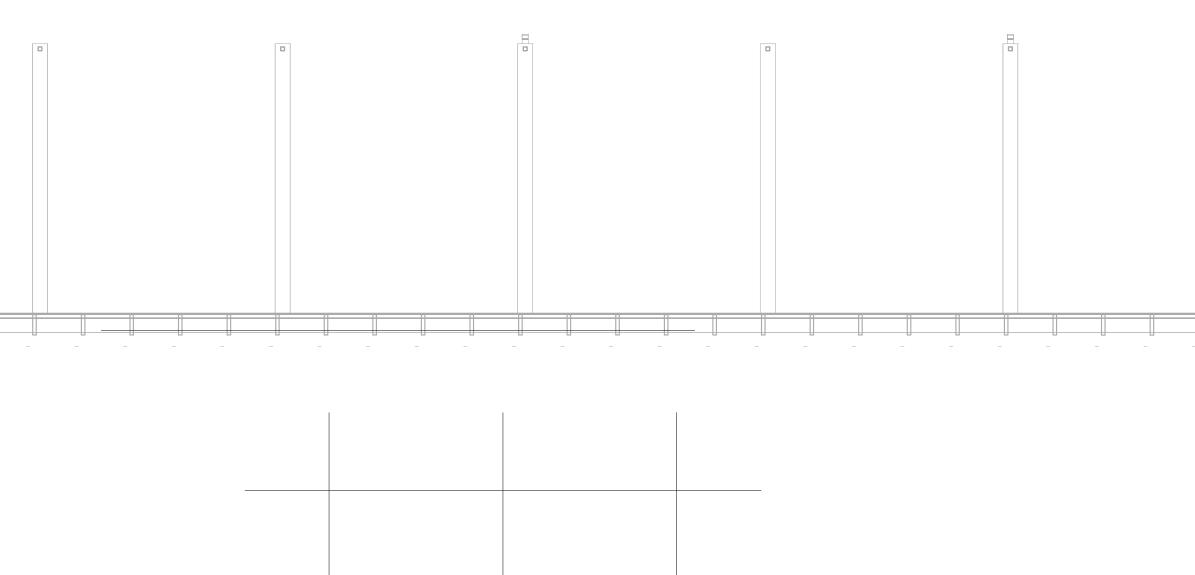




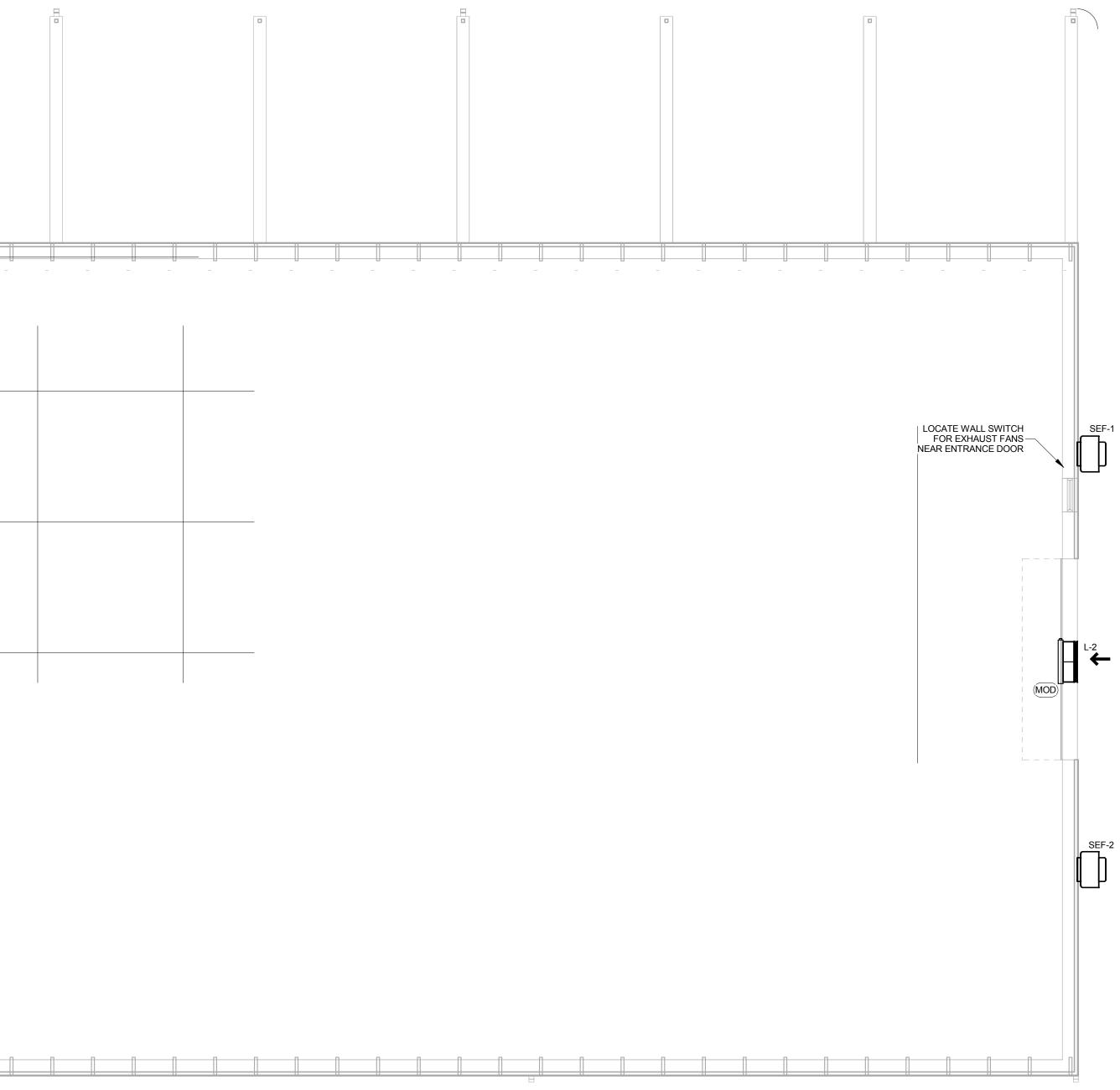


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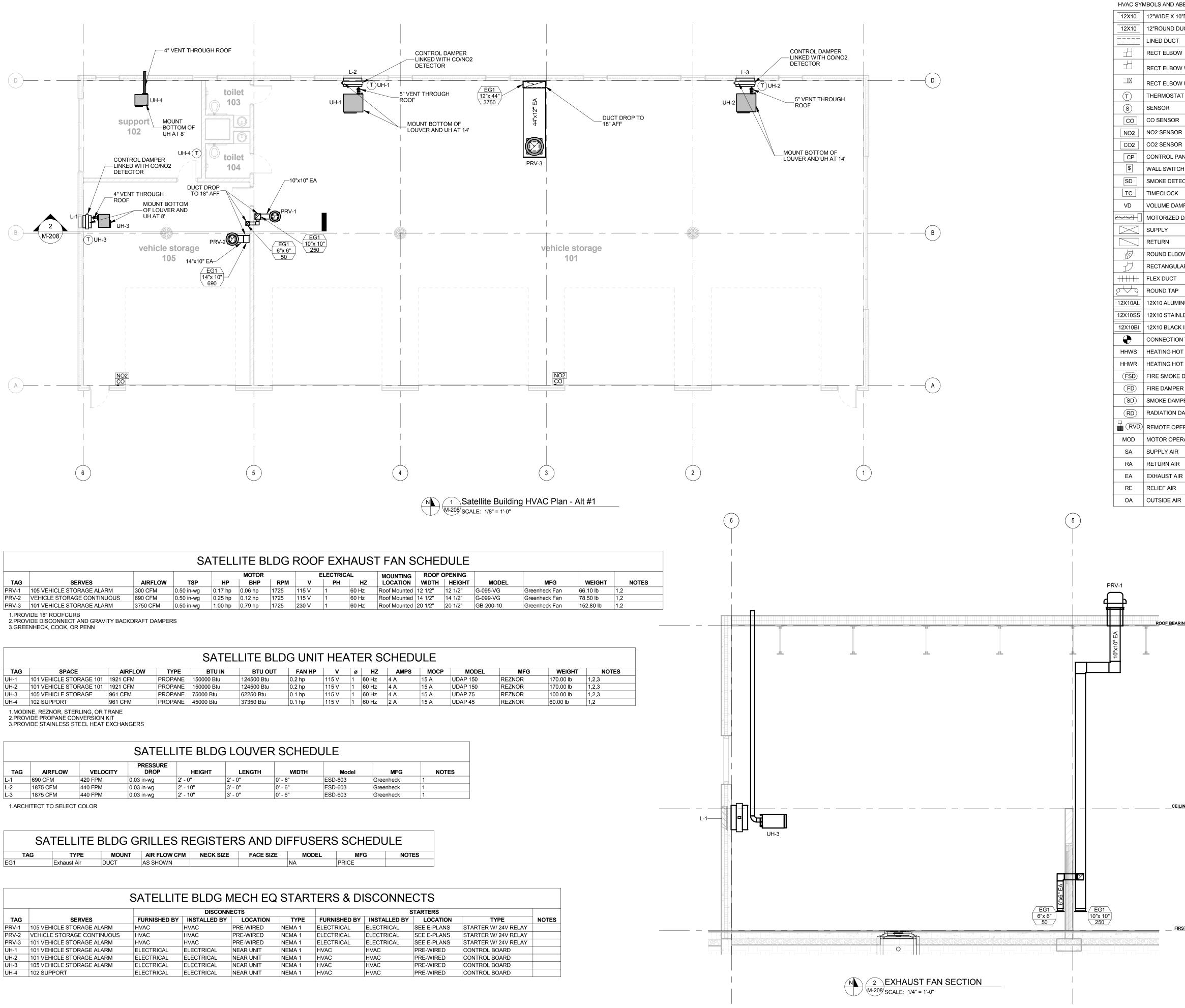


N 1 Mechanical Salt Shed Plan M-207 SCALE: 1/8" = 1'-0"









				MOTOR ELECTRICAL		MOUNTING	ROOF C	OPENING						
TAG	SERVES	AIRFLOW	TSP	HP	BHP	RPM	V	PH	HZ	LOCATION	WIDTH	HEIGHT	MODEL	
PRV-1	105 VEHICLE STORAGE ALARM	300 CFM	0.50 in-wg	0.17 hp	0.06 hp	1725	115 V	1	60 Hz	Roof Mounted	12 1/2"	12 1/2"	G-095-VG	Gree
PRV-2	VEHICLE STORAGE CONTINUOUS	690 CFM	0.50 in-wg	0.25 hp	0.12 hp	1725	115 V	1	60 Hz	Roof Mounted	14 1/2"	14 1/2"	G-099-VG	Gree
PRV-3	101 VEHICLE STORAGE ALARM	3750 CFM	0.50 in-wg	1.00 hp	0.79 hp	1725	230 V	1	60 Hz	Roof Mounted	20 1/2"	20 1/2"	GB-200-10	Gree

SATELLITE BLDG UNIT HEATER SCHEDULE													
TAG	SPACE	AIRFLOW	TYPE	BTU IN	BTU OUT	FAN HP	V	ø	HZ	AMPS	MOCP	MODEL	MFG
UH-1	101 VEHICLE STORAGE 101	1921 CFM	PROPANE	150000 Btu	124500 Btu	0.2 hp	115 V	1	60 Hz	4 A	15 A	UDAP 150	REZNOR
UH-2	101 VEHICLE STORAGE 101	1921 CFM	PROPANE	150000 Btu	124500 Btu	0.2 hp	115 V	1	60 Hz	4 A	15 A	UDAP 150	REZNOR
UH-3	105 VEHICLE STORAGE	961 CFM	PROPANE	75000 Btu	62250 Btu	0.1 hp	115 V	1	60 Hz	4 A	15 A	UDAP 75	REZNOR
UH-4	102 SUPPORT	961 CFM	PROPANE	45000 Btu	37350 Btu	0.1 hp	115 V	1	60 Hz	2 A	15 A	UDAP 45	REZNOR

	SATELLITE BLDG LOUVER SCHEDULE													
TAG AIRFLOW VELOCITY PRESSURE DROP LENGTH WIDTH Model MFG NOTES														
L-1	690 CFM	420 FPM	0.03 in-wg	2' - 0"	2' - 0"	0' - 6"	ESD-603	Greenheck	1					
L-2	1875 CFM	440 FPM	0.03 in-wg	2' - 10"	3' - 0"	0' - 6"	ESD-603	Greenheck	1					
L-3	1875 CFM	440 FPM	0.03 in-wg	2' - 10"	3' - 0"	0' - 6"	ESD-603	Greenheck	1					

SATELLITE BLDG GRILLES REGISTERS AND DIFFUSERS SCHEDULE													
TAG	TYPE	MOUNT	MOUNT AIR FLOW CFM NECK SIZE FACE SIZE MODEL MFG NOTES										
EG1	Exhaust Air	DUCT	AS SHOWN		NA		PRICE						

			DISCONNECTS				STARTERS				
TAG	SERVES	FURNISHED BY	INSTALLED BY	LOCATION	TYPE	FURNISHED BY	INSTALLED BY	LOCATION	TYPE		
PRV-1	105 VEHICLE STORAGE ALARM	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	SEE E-PLANS	STARTER W/ 24V RELAY		
PRV-2	VEHICLE STORAGE CONTINUOUS	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	SEE E-PLANS	STARTER W/ 24V RELAY		
PRV-3	101 VEHICLE STORAGE ALARM	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	SEE E-PLANS	STARTER W/ 24V RELAY		
UH-1	101 VEHICLE STORAGE ALARM	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD		
UH-2	101 VEHICLE STORAGE ALARM	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD		
UH-3	105 VEHICLE STORAGE ALARM	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD		
UH-4	102 SUPPORT	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD		

SATELLITE BLDG DUCT CONSTRUCTION SCHEDULE										
SYSTEM TYPE	SYSTEM LOCATION	MATERIAL	SMACNA PRESSURE CLASS	SMACNA SEAL CLASS	INSULATION TYPE	R-VALUE	INSULATION THICKNESS	NOTES		
EXHAUST AIR	ALL	GALVANIZED	2"	В	-	-	-			

HVAC SYMBOLS AND ABBREVIATIONS

1	MBOLS AND ABBREVIATIONS
	12"WIDE X 10"DEEP DUCT
	12"ROUND DUCT
	LINED DUCT
	RECT ELBOW
	RECT ELBOW WITH TURNING VANES
	RECT ELBOW UP OR DOWN
	THERMOSTAT
	SENSOR
	CO SENSOR
	NO2 SENSOR
	CO2 SENSOR
	CONTROL PANEL
	WALL SWITCH
	SMOKE DETECTOR
	TIMECLOCK
	VOLUME DAMPER
]	MOTORIZED DAMPER
	SUPPLY
	RETURN
	ROUND ELBOW
	RECTANGULAR RADIUS ELBOW
	FLEX DUCT
	ROUND TAP
	12X10 ALUMINUN DUCT
	12X10 STAINLESS STEEL DUCT
	12X10 BLACK IRON DUCT
	CONNECTION TO EXISTING
	HEATING HOT WATER SUPPLY
	HEATING HOT WATER RETURN
	FIRE SMOKE DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	RADIATION DAMPER
)	REMOTE OPERATED VOLUME DAMPER
	MOTOR OPERATED DAMPER
	SUPPLY AIR
	RETURN AIR

ROOF BEARING - HIGH

25'-0"

___CEILING - LOW 10'-0"

FIRST FLOOR

SATELLITE BLDG HVAC GENERAL NOTES

- 1. ALL DUCTWORK IS DIAGRAMMATIC AND COORDINATED TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY STRUCTURE AND LOCATION OF OTHER TRADED PRIOR TO FABRICATION.
- 2. LIMIT FLEX RUNS TO MAXIMUM OF 5'-0" AND ROUTE AS STRAIGHT AS POSSIBLE
- 3. INSTALL ALL EQUIPMENT PER LOCAL AND STATE CODES AND PER MANUFACTURERS RECOMMENDATIONS
- 4. SYSTEM SHALL BE BALANCED BY THE INSTALLING CONTRACTOR. BALANCE AIR FLOWS FOR GRILLES AND EQUIPMENT TO +/- 10% OF SCHEDULED AIRFLOWS. INCLUDE SYSTEM MANUFACTURER, MODEL, SERIAL, RPM, HORSEPOWER, VOLTAGE, AMPERAGE, ETC IN REPORTS. SUBMIT THE BALANCING REPORTS TO THE DESIGN PROFESSIONAL BEFORE A COMPLIANCE STATEMENT CAN BE SUBMITTED.
- 5. GAS PIPING SHALL BE SCHEDULE 40 BLACK IRON. PIPE 2" AND SMALLER SHALL HAVE THREADED PIPE CONNECTIONS AND FITTINGS. PIPE 2-1/2" AND LARGER SHALL HAVE WELDED CONNECTIONS AND FITTINGS. PROVIDE GAS REGULATORS AS NECESSARY.
- 6. OUTSIDE AIR INTAKES SHALL BE MINIMUM OF 10'-0" FROM ANY BUILDING EXHAUST, FLUES, PLUMBING VENTS AND LOT LINE.
- 7. LOW VOLTAGE WIRING SHALL BE BY HVAC CONTRACTOR
- 8. COORDINATE DIFFUSER LAYOUT WITH LIGHTING LAYOUT
- 9. CONTRACTORS NEED PRIOR APPROVAL FOR QUOTING ALTERNATIVE EQUIPMENT. ALTERNATIVE EQUIPMENT MAY REQUIRE OPTIONAL ACCESSORIES TO MATCH BASE BID EQUIPMENT. CONTRACTORS ARE RESPONSIBLE FOR FURNISHING ALL SUCH ITEMS.
- 10. ROOMS WITHOUT RETURN AIR GRILLES OR TRANSFER GRILLES, SHALL HAVE DOORS UNDER CUT 1" BY GENERAL CONTRACTOR FOR RETURN AIR.
- 11. DUCT SIZES LISTED ON PLANS ARE THE REQUIRED CLEAR INSIDE DIMENSION.
- 12. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF THE SYSTEM AND EQUIPMENT
- 13. THERMOSTAT LOCATIONS SHALL BE REVIEWED BY OWNER, TENANT & CONTRACTOR BEFORE INSTALLATION. CONTROLS SHALL BE LOCATED 48" ABOVE FINISHED FLOOR
- 14. UNITS SHALL BE SUSPENDED WITH NON-COMBUSTIBLE HANGERS

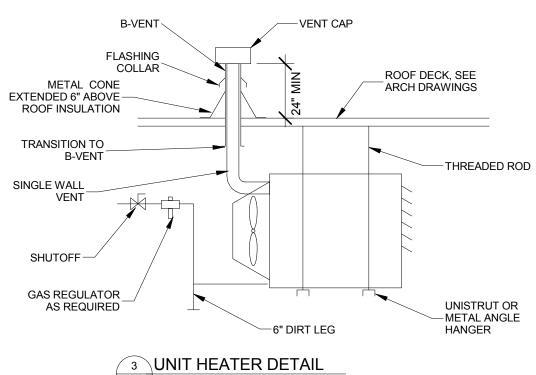
SATELLITE BLDG CONTROLS

- UH-1,2,3,4 PROVIDE A SEVEN DAY PROGRAMMABLE THERMOSTAT WITH OCCUPIED/UNOCCUPIED CYCLES. OCCUPIED - HEATING SHALL MAINTAIN OCCUPIED SETPOINT
- FAN SHALL CYCLE ON/OFF TO PROVIDE HEATING.
- FAN TO RUN CONTINUOUSLY

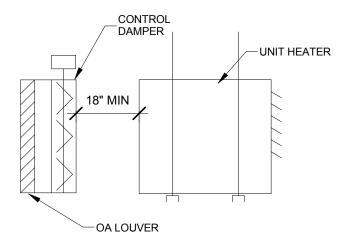
PRV-2,3

PRV-1

FAN OPERATED ON ALARM CONDITION OF CO/NO2 SENSOR. CONTROL DAMPERS ON LOUVER SHALL ALSO OPEN ON ALARM CONDITIONS



M-208 SCALE: NO SCALE

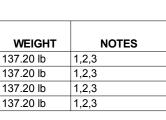


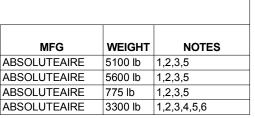
MAKE UP AIR LOUVER W/ UNIT HEATER 4 DETAIL M-208 SCALE: NO SCALE



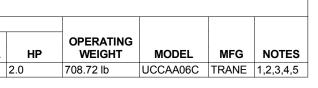
Mechanical Plan and Schedules kuenyarch.com ©2014 Kueny Architects L.L.C. - All Rights Reserved Dane County - Highway Facility Satellite Building US 151 and County Highway V 01/12/15

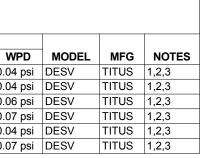
ROOF EXHAUST FAN SCHEDULE		HYDRONIC UNIT HEATERS
TAG SERVES AIRFLOW ESP HP BHP RPM V PH HZ MOUNTING LOCATION ROOF OPENING MODEL MFG WEIGHT NOTES	TAG SERVES	AIRFLOW BTU/hr OUT Air Delta WATER ELECTRICAL MFG MODEL WEIGHT NOTES
PRV-1 SMALL VEHICLE 140 4500 CFM 0.50 in-wg 1.50 hp 1.12 hp 1725 460 V 3 60 Hz Roof Mounted 20 1/2" GB-200-15 GREENHECK 160.01 b 1,2 PRV-2 SMALL VEHICLE 140 4500 CFM 0.50 in-wg 1.50 hp 1.12 hp 1725 460 V 3 60 Hz Roof Mounted 20 1/2" 20 1/2" GB-200-15 GREENHECK 160.00 lb 1,2 PRV-3 SMALL VEHICLE 140 450 CFM 0.50 in-wg 0.17 hp 0.09 hp 1725 115 V 1 60 Hz Roof Mounted 12 1/2" 21 1/2" GP-95-VG GREENHECK 66.10 lb 1,2	CUH1 VESTIBULE CUH2 STAIR UH-1 SMALL VEHICLE	275 CFM 0 -460 °F 1.0 GPM 0.00 ftH2O 180 °F 160 °F 120 V 1 60 Hz 1 A 0.010 hp RITLING RS-02 85.00 lb 1,3 275 CFM 0 -460 °F 1.0 GPM 0.00 ftH2O 180 °F 160 °F 120 V 1 60 Hz 1 A 0.010 hp RITLING RS-02 85.00 lb 1,3 140 1775 CFM 69400 36 °F 6.0 GPM 0.43 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2.A 0.125 hp RITLING RH-121 90.00 lb 1
PRV-3 SMALL VEHICLE 140 450 CFM 0.50 in-wg 0.17 hp 0.09 hp 1725 115 V 1 60 Hz Roof Mounted 12 1/2" G-095-VG GREENHECK 66.10 lb 1,2 PRV-4 LARGE VEHICLE 138 11500 CFM 0.50 in-wg 3.00 hp 2.66 hp 1725 460 V 3 60 Hz Roof Mounted 38 1/2" 38 1/2" GB-330-30 GREENHECK 298.30 lb 1,2 PRV-5 LARGE VEHICLE 138 11500 CFM 0.50 in-wg 3.00 hp 2.66 hp 1725 460 V 3 60 Hz Roof Mounted 38 1/2" 38 1/2" GB-330-30 GREENHECK 298.30 lb 1,2	UH-1 SMALL VEHICLE UH-2 SMALL VEHICLE UH-3 SMALL VEHICLE	140 1775 CFM 69400 36 °F 6.0 GPM 0.43 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2 A 0.125 hp RITLING RH-121 90.00 lb 1
PRV-6 LARGE VEHICLE 138 1150 CFM 0.50 in-wg 0.25 hp 0.21 hp 1725 115 V 1 60 Hz Roof Mounted 14 1/2" 14 1/2" GB-121-4 GREENHECK 88.90 lb 1,2 PRV-7 LARGE VEHICLE 122A 16250 CFM 0.50 in-wg 5.00 hp 3.70 hp 1725 460 V 3 60 Hz Roof Mounted 44 1/2" 44 1/2" GB-20-50 GREENHECK 423.90 lb 1,2	UH-4 SMALL VEHICLE UH-5 LARGE VEHICLE	
PRV-8 LARGE VEHICLE 122A 16250 CFM 0.50 in-wg 5.00 hp 3.70 hp 1725 460 V 3 60 Hz Roof Mounted 44 1/2" 44 1/2" GB-420-50 GREENHECK 423.90 lb 1,2 PRV-9 LARGE VEHICLE 122A 1625 CFM 0.50 in-wg 0.33 hp 0.32 hp 1725 115 V 1 60 Hz Roof Mounted 14 1/2" 14 1/2" GB-131-3 GREENHECK 423.90 lb 1,2	UH-6 LARGE VEHICLE UH-7 LARGE VEHICLE	138 2500 CFM 102600 38 °F 9.0 GPM 1.02 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2 A 0.250 hp RITLING RH-165 110.00 lb 1,2
PRV-10 WELD BAY 145 3500 CFM 0.25 in-wg 0.75 hp 0.51 hp 1725 460 V 3 60 Hz Roof Mounted 20 1/2" CUBE-200-7 GREENHECK 171.00 lb 1,2 PRV-11 OIL 500 CFM 0.50 in-wg 0.25 hp 0.08 hp 1725 115 V 1 60 Hz Roof Mounted 14 1/2" 14 1/2" G-099-VG GREENHECK 78.50 lb 1,2,3 PRV-12 WELD BAY 145 1750 CFM 0.50 in-wg 0.50 hp 0.38 hp 1725 115 V 1 60 Hz Roof Mounted 18 1/2" 18 1/2" CUBE-141-5 GREENHECK 126.10 lb 1,2	UH-8 LARGE VEHICLE UH-9 LARGE VEHICLE UH-10 LARGE VEHICLE	138 2500 CFM 102600 38 °F 9.0 GPM 1.02 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2 A 0.250 hp RITLING RH-165 110.00 lb 1,2
NOTES: 1. PROVIDE 18" INSULATED ROOFCURB ON FANS	UH-11 LARGE VEHICLE UH-12 WELDING 145	136 2500 CFM 102000 38 °F 9.0 GPM 1.02 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2 A 0.250 hp RTTLING RTTLING </td
2. PROVIDE DISCONNECT AND GRAVITY BACKDRAFT DAMPERS 3. PROVIDE EXPLOSION PROOF CONSTRUCTION WITH ALUMINUM RUB RING	UH-13 WELDING 145 UH-15 LARGE VEHICLE	
UTILITY EXHAUST FAN SCHEDULE	UH-16 LARGE VEHICLE UH-17 LARGE VEHICLE UH-18 LARGE VEHICLE	151 2900 CFM 120300 38 °F 10.0 GPM 1.37 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2 A 0.250 hp RITLING RH-193 115.00 lb 1
FAN MOTOR ELECTRICAL MOUNTING	UH-19 LARGE VEHICLE UH-20 LARGE VEHICLE	151 2900 CFM 120300 38 °F 10.0 GPM 1.37 ftH2O 180 °F 150 °F 115 V 1 60 Hz 2 A 0.250 hp RITLING RH-193 115.00 lb 1
TAG SERVES AIRFLOW ESP RPM HP BHP RPM V PH HZ LOCATION MODEL MFG WEIGHT NOTES EF-1 VEHICLE SOURCE 1200 CFM 3.25 in-wg 2433.2 1.50 hp 1.05 hp 1725 460 V 3 60 Hz ROOF 12-BISW-21-10-I-15 GREENHECK 244.00 lb 1,2,3	UH-21 LARGE VEHICLE UH-22 PARTS 137	730 CFM 26000 33 °F 3.0 GPM 0.09 ftH2O 180 °F 150 °F 120 V 1 60 Hz 1 A 0.067 hp RITLING RH-47 50.00 lb 1,2
NOTES: 1. PROVIDE DISCONNECT 2. PROVIDE BACKDRAFT DAMPER	UH-23 MEZZANINE 202 NOTES:	1550 CFM 62500 37 °F 5.0 GPM 0.35 ftH2O 180 °F 150 °F 120 V 1 60 Hz 1 A 0.100 hp RITTLING RH-108 90.00 lb 1
3. PROVIDE BASE ROOF RAILS, SPRING ISOLATORS, FLEXIBLE CANVAS CONNNECTIONS, NO LOSS STACK DISCHARGE, AND ROOFCURB FOR DUCT PENETRATION	2. REMOVED IN ALTE	QUASTAT AND CONTROL RNATE #18 SLOPED TOP CABINET UNIT HEATER
SIDEWALL CENTRIFUGAL EXHAUST FAN SCHEDULE		
TAG SERVES AIRLFOW TSP HP RPM V PH HZ HEIGHT MODEL MFG WEIGHT NOTES		NATURAL GAS BOILER SCHEDULE FLOW P.D. FT. HEATING BTU/Hr ELECTRICAL PRESS.
SEF-1 SALT SHED 4000 CFM 0.25 in-wg 0.50 hp 0.45 hp 1725 115 V 1 60 Hz 1'-6" 1'-6" CWB-240-5 GREENHECK 137.20 lb 1,2,3 SEF-2 SALT SHED 4000 CFM 0.25 in-wg 0.50 hp 0.45 hp 1725 115 V 1 60 Hz 1'-6" 1'-6" CWB-240-5 GREENHECK 137.20 lb 1,2,3 SEF-3 SALT SHED 4000 CFM 0.25 in-wg 0.50 hp 0.45 hp 1725 115 V 1 60 Hz 1'-6" 1'-6" CWB-240-5 GREENHECK 137.20 lb 1,2,3 SEF-4 SALT SHED 4000 CFM 0.25 in-wg 0.50 hp 0.45 hp 1725 115 V 1 60 Hz 1'-6" 1'-6" CWB-240-5 GREENHECK 137.20 lb 1,2,3 SEF-4 SALT SHED 4000 CFM 0.25 in-wg 0.50 hp 0.45 hp 1725 115 V 1 60 Hz 1'-6" 1'-6" CWB-240-5 GREENHECK 137.20 lb 1,2,3 SEF-4 SALT SHED 4000 CFM 0.25 in-wg 0.45 hp 1725 </td <td></td> <td>TAG SERVES GPM HEAD INPUT OUTPUT V PH HZ EWT LWT RELIEF MODEL MFG WEIGHT NOTES B-1 BUILDING 32 GPM 23 FT 500,000 470,000 120 V 1 60 Hz 150 °F 180 °F 50PSI TRINITY LX NTI 320 1,2,3</td>		TAG SERVES GPM HEAD INPUT OUTPUT V PH HZ EWT LWT RELIEF MODEL MFG WEIGHT NOTES B-1 BUILDING 32 GPM 23 FT 500,000 470,000 120 V 1 60 Hz 150 °F 180 °F 50PSI TRINITY LX NTI 320 1,2,3
		B-2 BUILDING 32 GPM 23 FT 500,000 470,000 120 V 1 60 Hz 150 °F 180 °F 50PSI TRINITY LX NTI 320 1,2,3 NOTES: 1 1 MOUNT ON HOUSEKEEPING PAD WITH MFG'S FLOOR RACK 500 KACK 1
NOTES: 1. PROVIDE SIDEWALL MOUNTING PLATE 2. PROVIDE DISCONNECT		2. PROVIDE SOLID WALL PVC OR CPVC VENTING AND COMBUSTION AIR 3. PROVIDE BACNet INTERFACE CARD TO INTERFACE WITH BAS
3. PROVIDE BACKDRAFT DAMPER	LOUVERS tag serves FPM PD "WG CFM Height WIDTH MODEL MFG NOTES	EXPANSION TANK SCHEDULE
CEILING EXHAUST FAN SCHEDULE	L-1 SALT BLDG 740 FPM 0.09 in-wg 8000 CFM 60" 48" ESD-603 GREENHECK 1,2,3,4 L-2 SALT BLDG 740 FPM 0.09 in-wg 8000 CFM 60" 48" ESD-603 GREENHECK 1,2,3,4	Image: Pressure psig PRESSURE psig Maximum CONNECT. DIA. VOLUME MODEL MFG WEIGHT NOTES
TAG SERVES AIR FLOW ESP RPM SONES V PH HZ MOTOR HP MODEL MFG WEIGHT NOTES	L-3 OFFICE OA 610 FPM 0.06 in-wg 2400 CFM 48" 24" ESD-603 GREENHECK 1 L-4 ERV EXHAUST 510 FPM 0.04 in-wg 1400 CFM 36" 24" ESD-603 GREENHECK 1	EXP1 WASTE HEAT LOOP 20 100 3/4" 112.0 gal CBX425-125 Taco 380.00 lb 1,2 EXP2 WASTE HEAT LOOP 20 100 3/4" 112.0 gal CBX425-125 Taco 380.00 lb 1,2
CEF-1 ELEVATOR EQUIPMENT 200 CFM 0.38 in-wg 971 3.2 115 V 1 60 Hz 0.111 hp SP-A250 GREENHECK 25.00 lb 1,2	NOTES: 1. PROVIDE STANDARD COLOR POWDER COAT FINISH SELECTED BY ARCHITECT	EXP3 WASTE HEAT LOOP 20 100 3/4" 112.0 gal CBX425-125 Taco 380.00 lb 1 EXP4 BLDG HEATING LOOP 15 50 3/4" 79.0 gal CBX300-125 Taco 300.00 lb 1,2
1. PROVIDE GOOSENECK TERMINATION ON ROOF 2. PROVIDE BACKDRAFT DAMPER AND SPEED CONTROLLER	 2. PROVIDE DAMPER AND ACTUATOR FOR INTERLOCK WITH EXHAUST FAN 3. INCLUDED IN ALTERNATE #5 4. PROVIDE 24V ACTUATOR AND INTERLOCK WITH OPERATION OF SEF-1&2 	NOTES: 1. PROVIDE 4" CONCRETE HOUSEKEEPING PAD
	5. PROVIDE 24V ACTUATOR AND INTERLOCK WITH OPERATION OF SEF-182	
MAKE UP AIR UNIT SCHEDULE	EXHAUST HOSE REEL SCHEDULE	INDIRECT WATER HEATER SCHEDULE HEATING SOURCE WATER DOMESTIC WATER
MARK SERVES AIRFLOW ESP TSP RPM BTU/Hr IN BTU/Hr OUT -10°F EAT V PH HZ MOTOR HP BRAKE HP MODEL MFG WEIGHT NOTES MUA-1 LARGE VEHICLE 140 22000 CFM 0.50 in-wg 1.83 in-wg 761 2,335,500 2,148,300 90 °F 480 3 60 15 hp 9.37 hp R340 ABSOLUTEAIRE 5100 lb 1,2,3,5	MARK FLOW AIR PRESSURE Manufacturer Model NOTES HR1 600 CFM 2.10 in-wg DSP MONOXIVENT 9000 1-5	TAG VOLUME FLOW PD LWT EWT CONNECTIONS EWT GPH CONNECTIONS MFG MODEL WEIGHT NOTES DWH5 119.0 gal 12 GPM 15.9 ftH2O 145 °F 180 °F 0' - 1 1/2" 50 °F 140 °F 210 0' - 1 1/2" HTP SSU-119DW 210.00 lb 1,2,3,4,5
MUA-2 LARGE VEHICLE 151 32500 CFM 0.25 in-wg 1.43 in-wg 740 3,100,000 2,821,000 70 °F 480 3 60 15 hp 12.70 hp R344 ABSOLUTEAIRE 5600 lb 1,23,5 MUA-3 WELDING 145 3500 CFM 0.50 in-wg 1.70 in-wg 1112 290,000 266,800 60 °F 480 3 60 3 hp 1.80 hp V212 ABSOLUTEAIRE 775 lb 1,23,5 MUA-4 SMALL VEHICLE 138 10000 CFM 0.25 in-wg 1.43 in-wg 1132 1,80,000 1,085,000 90 °F 480 3 60 5 hp 3.90 hp R327 ABSOLUTEAIRE 3300 lb 1,23,4,5,6	HR2 600 CFM 2.10 in-wg DSP MONOXIVENT 9000 1-5 NOTES:	NOTES: 1. HVAC CONTRACTOR TO INSTALL HEATER & PIPE SOURCE SIDE
NOTES: 1 PROVIDE 20" INSULATED ROOFCURB	1. PROVIDE ROCKER SWITCH FOR LOWERING HOSE FROM DRUM 2. 32"DRUM WIDTH 3. PROVIDE 36'-0" OF 4000 SERIES HOSE FOR EACH REEL	2. PLUMB CONTRACTOR TO PIPE DOMESTIC 3. PROVIDE HOUSEKEEPING PAD 4. PROVIDE P&T VALVE PIPED TO FLOOR DRAIN
2. PROVIDE 2"ALUMINUM V-BANK FILTER SECTION, FILTERED INTAKE HOOD 3. PROVIDE LOW LEAKAGE INLET DAMPER 4. PROVIDE VFD IN LOCATION SHOWN ON THE PLANS WITH BUILDING PRESSURE CONTROL	4. PROVIDE 6" 8000-VG TAILPIPE CLAMP FOR EACH REEL 5. PROVIDE 1 STACK CRANE 41000 AND LIFTING POLE	5. PROVIDE TANK MOUNTED AQUASTAT FOR PUMP CONTROL
5. PROVIDE CONTROL PANEL WITH DISCHARGE AIR TEMPERATURE SELECTOR 6. MINIMUM AIRFLOW TO BE 5000CFM		HEAT EXCHANGER SCHEDULE
HYDRONIC HEATING COILS		SOURCE TRANSFER
TAG SERVES AIRFLOW apd GPM Water Pressure Drop COIL DUCT DUCT EAT °F LAT °F EWT °F MFG Model NOTES	TAGSERVESTYPEMATERIALHX1WASTE HEAT LOOPPlate and FrameAISI 304HX2GENERATOR #1Plate and FrameAISI 304	GPM PD EWT LWT FLUID GPM PD EWT LWT FLUID MODEL MFG NOTES 190 GPM 3.03 psi 205 °F 165 °F 30%PROPYLENE GLYCOL 175 GPM 5.00 psi 160 °F 180 °F WATER PF050B Taco 1 250 GPM 4.25 psi 230 °F 207 °F 50%PROPYLENE GLYCOL 200 GPM 2.65 psi 178 °F 205 °F 30%PROPYLENE GYLCOL PF205B Taco 1
HC-1 MUA-3 3500 CFM 0.14 in-wg 19 GPM 0.81 ftH2O 2 27" 36" 285530.0 Btu/h 35 °F 113 °F 180 °F TRANE D5WB27	HX3 GENERATOR #2 Plate and Frame AISI 304 NOTES:	250 GPM 4.25 psi 230 °F 207 °F 50%PROPYLENE GLYCOL 200 GPM 2.65 psi 178 °F 205 °F 30%PROPYLENE GYLCOL PF205B Taco 1
	1. PROVIDE HOUSEKEEPING PAD	
AIR HANDLING UNIT SCHEDULE		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		
AHU-1 2400 CFM 150 CFM 1.50 in-wg 2.75 in-wg 79 °F 67 °F 57 °F 92320.0 Btu/h 64080.0 Btu/h DX coil - 14 FPI 6 460 V 3 60 Hz 3 A 15 A 4 A 2.0 708.72 lb UCCAA06C TRANE 1.2,3,4,5		PUMP SCHEDULE
NOTES: 1 PROVIDE VFD ON SUPPLY FAN 2. PROVIDE MIXING BOX WITH ECONOMIZER DAMPERS AND MERV 8 FILTERS		TAG SERVES FLOW PUMP HEAD (FT) RPM MOTOR HP V PH HZ MODEL MFG NOTES
3. PROVIDE RETURN AIR DUCT SMOKE DETECTOR 4. PROVIDE INTERTWINED DUAL CIRCUIT COOLING COIL 5. PROVIDE CANVAS DUCT CONNECTIONS ON SUPPLY, RETURN AND OUTSIDE AIR		P-1 B-1 32 GPM 18 1760 0.5 hp 120 V 1 60 Hz 1911 - 1.5x1.5 Taco P-2 B-2 32 GPM 18 1760 0.5 hp 120 V 1 60 Hz 1911 - 1.5x1.5 Taco P-3 MAIN LOOP 175 GPM 60 3500 5 hp 460 V 3 60 Hz 1935 - 2x2 Taco 4
VAV BOX WITH HOT WATER REHEAT SCHEDULE	ELECTRIC HEATER SCHEDULE	P-3 MAIN LOOP 175 GPM 60 3500 5 hp 460 V 3 60 Hz 1935 - 2x2 Taco 4 P-4 MAIN LOOP 175 GPM 60 3500 5 hp 460 V 3 60 Hz 1935 - 2x2 Taco 4 P-4 MAIN LOOP 175 GPM 60 3500 5 hp 460 V 3 60 Hz 1935 - 2x2 Taco 4 P-5 RADIANT FLOOR 60 GPM 40 1750 2.2 hp 230 V 1 60 Hz VR30 Taco 5.6
TAG SERVES INLET SIZE VEL APD MAX MIN HEATING DELTA T CAPACITY EWT EAT LAT FLOW WPD MODEL MFG NOTES	TAG SERVES DUTPUT V PH HZ A WATTS MODEL MFG NOTES EUH1 FIRE PUMP 156 17060 480 V 3 60 Hz 6.0 A 5000 W MUH QMARK 3,4,5	P-6 INJECTION PUMP 33 GPM 10 3450 0.17 hp 120 V 1 60 Hz 2460 Taco 5 P-7 WASTE HEAT LOOP 430 GPM 220 3500 50 hp 480 V 3 60 Hz 2509C - 3x2.5 Taco 1,2,3,4
V-1 BREAKROOM 132 8" (203mm) 1580 FPM 0.29 in-wg 550 CFM 180 CFM 250 CFM 31 °F 15360 Btu/h 180 °F 55 °F 112 °F 1.0 GPM 0.04 psi DESV TITUS 1,2,3 V-2 WOMENS LOCKER ROOM 8" (203mm) 860 FPM 0.10 in-wa 300 CFM 0 CFM 250 CFM 31 °F 15360 Btu/h 180 °F 55 °F 112 °F 1.0 GPM 0.04 psi DESV TITUS 1,2,3	EWH1 EQUIPMENT 149 16380 277 V 1 60 Hz 17.3 A 4800 W AWH QMARK 1,2	P-8 WASTE HEAT LOOP 430 GPM 220 3500 50 hp 480 V 3 60 Hz 2509C - 3x2.5 Taco 1,2,3,4 P-9 WASTE HEAT EXCHANGER 175 GPM 15 1160 1.5 hp 480 V 3 60 Hz 3007 - 4x3 Taco 1,2,3,4 P-10 INDIRECT WATER HEATER 12 GPM 20 3250 0.17 hp 120 V 1 60 Hz 0013 Taco 1.2
V-3 MENS LOCKER ROOM 14" (356mm) 890 FPM 0.11 in-wg 950 CFM 0 CFM 750 CFM 50 °F 40670 Btu/h 180 °F 55 °F 105 °F 2.0 GPM 0.06 psi DESV TITUS 1,2,3 V-5 OFFICE 123 6" (154mm) 1270 FPM 0.17 in-wg 250 CFM 75 CFM 100 CFM 33 °F 8250 Btu/h 180 °F 55 °F 131 °F 0.5 GPM 0.07 psi DESV TITUS 1,2,3 V-6 OFFICE 120,121, 122 8" (203mm) 1000 FPM 0.13 in-wg 350 CFM 125 CFM 200 CFM 28 °F 13890 Btu/h 180 °F 55 °F 119 °F 1.0 GPM 0.04 psi DESV TITUS 1,2,3	NOTES: 1. PROVIDE SURFACE MOUNT KIT 2. PROVIDE DISCONNECT AND INTEGRAL THERMOSTAT 3. PROVIDE IN ALT #15	NOTES: 1 PROVIDE INERTIA BASE
V-7 OFFICE 124 4" (102mm) 1720 FPM 0.03 in-wg 150 CFM 50 CFM 100 CFM 33 °F 8250 Btu/h 180 °F 55 °F 131 °F 0.5 GPM 0.07 psi DESV TITUS 1,2,3 NOTES:	 PROVIDE IN ALT #15 PROVIDE WALL MOUNT BRACKETS, MOUNT HEATER 10'-0"AFF PROVIDE 5-2 PROGRAMMABLE THERMOSTAT 	2. PROVIDE HOUSEKEEPING PAD 3. PROVIDED IN INFORMATION BID F 4. VFD RATED PUMP WITH SHAFT GROUNDING RING
1 PROVIDE LOW VOLTAGE TRANSFORMER FOR EACH ZONE DAMPER 2. PROVIDE DUCT TRANSITIONS TO ZONE DAMPERS AS REQUIRED 3. MINIMUM 2 ROW HEATING COIL	DUCT CONSTRUCTION SCHEDULE	5. PROVIDED IN ALT#5 6. ECM MOTOR PUMP WITH FLOW SENSING, INCLUDE BAS INPUTS FOR PUMP
	SMACNA SMACNA	HYDRONIC RADIANT MANIFOLDS
ENERGY RECOVERY VENTILATOR SCHEDULE	TYPE SYSTEM LOCATION PRESSURE CLASS INSULATION THICKNESS INSULATION TYPE MATERIAL NOTES Exhaust Air SHOP GENERAL EXHAUST 2" C None NONE GALVANIZED	TAG SERVES MANIFOLD FLOW INDIVIDUAL LOOP FLOW NO OF LOOPS MFG NOTES
	DDEL NOTES Exhaust Air TOILET EXAUST - ERV 2" C 2" R 5.6 FLEXIBLE FIBERGLASS GALVANIZED 1,3 DDEL NOTES Exhaust Air SOURCE CAPTURE EXHAUST 10" B NONE NONE GALVANIZED 2	MAN1 LARGE VEHICLE 138 8 GPM 0.95 GPM 8Loop Uponor, Inc. 1,2,4,5,6 MAN2 LARGE VEHICLE 138 8 GPM 0.95 GPM 8Loop Uponor, Inc. 1,2,4,5,6 MAN3 LARGE VEHICLE 138 6 GPM 0.95 GPM 6Loop Uponor, Inc. 1,2,4,5,6
ERV-1 AHU-1/EXHAUST 1350 CFM 0.5 79.2 71 47.2 38.4 90 77 -11 -13 0 CFM 70 0.5 54 68 1.5 1.5 208 V 3 11.9 15 414 RENEWAIRE HE2 NOTES: NOTES: Image: Note of the second sec	Exhaust Air CLOTHES DRYER 2" C NONE GALVANIZED Outside Air ALL 2" A 2" R 5.6 FLEXIBLE FIBERGLASS GALVANIZED	MAN4 LARGE VEHICLE 138 6 GPM 0.95 GPM 6Loop Uponor, Inc. 1,2,4,5,6 MAN5 LARGE VEHICLE 138 6 GPM 0.95 GPM 6Loop Uponor, Inc. 1,2,4,5,6
1 PROVIDE DISCONNECT 2. PROVIDE SEPARATE STARTERS FOR SUPPLY AND EXHAUST FANS 3. PROVIDE CONTROL DAMPERS ON DUCT CONNECTIONS AS SHOWN ON PLANS	Return AirALL2"B2" R 5.6FLEXIBLE FIBERGLASSGALVANIZED1,3Supply AirMAKE UP AIR UNITS2"ANONENONEGALVANIZED-Supply AirOFFICE2"A2" R 5.6FLEXIBLE FIBERGLASSGALVANIZED1,3	MAN6 LARGE VEHICLE 138 6 GPM 0.95 GPM 6Loop Uponor, Inc. 1,2,4,5,6 MAN7 LARGE VEHICLE 138 6 GPM 0.95 GPM 6Loop Uponor, Inc. 1,2,4,5,6 MAN8 LARGE VEHICLE 138 6 GPM 0.95 GPM 6Loop Uponor, Inc. 1,2,4,5,6
AIR COOLED CONDENSING UNIT SCHEDULE	NOTES:	MAN9 WELDING 145 7 GPM 1.10 GPM 6Loop Uponor, Inc. 1,2,4,5,6 MAN10 WELDING 145 4 GPM 1.00 GPM 4Loop Uponor, Inc. 1,2,4,5,6
TAG SERVES NOMINAL ELECTRICAL INFORMATION TAG SERVES V PH HZ MCA MODEL MFG WEIGHT NOTES	1. OWENS CORNING, KNAUF, JOHNS MANVILLE, OR 3M INSULATION 2. PROVIDE 24GAUGE FITTINGS ON SOURCE CAPTURE DUCT 3. INSULATE ALL EXPOSED DUCT ROUTED IN MEZZANINE	MAN11 OFFICE124, OFFICE 123 2 GPM 0.75 GPM 2Loop Uponor, Inc. 1,2,3,5,6 MAN12 MENS LOCKER ROOM 5 GPM 2.25 GPM 2Loop Uponor, Inc. 1,2,3,5,6
ACCU-1A AHU-1 4 460 V 3 60 Hz 8 A 15 A 4TTA3048D4 TRANE 225.00 lb 3 ACCU-1B AHU-1 460 V 3 60 Hz 8 A 15 A 4TTA3048D4 TRANE 225.00 lb 3 ACCU-1B AHU-1 460 V 3 60 Hz 8 A 15 A 4TTA3048D4 TRANE 225.00 lb 3		MAN13 WOMENS LOCKER ROOMS 2 GPM 0.75 GPM 2Loop Uponor, Inc. 1,2,3,5,6 MAN14 KIT134, PARTS 10 GPM 1.25 GPM 8Loop Uponor, Inc. 1,2,4,5,6 MAN15 OFFICE 120,121, 122 2 GPM 0.75 GPM 2Loop Uponor, Inc. 1,2,3,5,6
ACCU-2 CRU1 1 208 V 1 60 Hz 12 A 15 A GE12NA Mitsubishi Electric 77.00 lb 1,2 NOTES: 1 NOLINITION ANCLE REACKETS MOLINITED ON THE WALL 60 Hz 15 A GE12NA Mitsubishi Electric 77.00 lb 1,2	GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE	MAN15 OFFICE 120,121, 122 2 GPM 0.75 GPM 2Loop Uponor, Inc. 1,2,3,5,6 MAN16 BREAK ROOM 3 GPM 1.25 GPM 2Loop Uponor, Inc. 1,2,3,5,6 NOTES: VOTES: VOTES VOTE
1. MOUNT ON ANGLE BRACKETS MOUNTED ON THE WALL 2. CORRDINATE WITH E.C FOR POWER WIRING FROM ACCU-2 TO CRU-1 3. PROVIDE LIGHT WEIGHT CONCRETE PAD, 4"TREATED 4X4'S, AND NEOPRENE ISOLATION PADS FOR MOUNTING ON THE ROOF	TAGTYPEMODELMFGDESCRIPTIONNOTESEG1Exhaust Air530LAYINPRICE3/4" LOUVERED FACE SPACING1,2EG2Exhaust AirEXPANDED WIRE MESHDUCTNACONTRACTOR PROVIDED WIRE MESH OVER OPENING	NOTES. 1. 3/4"PEX TUBING CONNECTIONS 2. LIMIT CIRCUITS TO 450' MAXIMUM FOR 3/4"PEX 3. 2 CIRCUIT MANIFOLD WITH CONTROL VALVE ON EACH CIRCUIT LINKED TO SPACE SENSORS
SPLIT SYSTEM COOLING UNIT SCHEDULE	EG3 Exhaust Air 530 SURFACE PRICE 3/4" LOUVERED FACE SPACING 1 RG1 Return Air 530 LAYIN PRICE 3/4" LOUVERED FACE SPACING 1	4. 1 CONTROL VALVE ON MANIFOLD LINKED TO SPACE SENSOR 5. PROVIDE SLAB STAT TO SHUT OFF CONTROL VAVLE IF SLAB TEMP IS ABOVE 80°F
ELECTRICAL COOLING	RG2Return Air530-STEELLAYINPRICE3/4" LOUVERED FACE SPACING1,2SD1Supply AirSPDLAYINPRICE6" NECK PLAQUE LAYIN DIFFUSER, 24X24 FACE1SD2Supply AirSPDLAYINPRICE8" NECK PLAQUE LAYIN DIFFUSER, 24X24 FACE1	6. INCLUDED IN ALTERNATE #18
TAGSERVESUnit AirflowVPHHZWATTSMCACAPACITY(BTU/Hr)MFGModelWeightNOTESCRU1DATA ROOM364 CFM208 V160 Hz8 WPower From Outdoor12000Mitsubishi ElectricGE12NA20.00 lb1,2,3	SD2 Supply Air SPD LAYIN PRICE 8" NECK PLAQUE LAYIN DIFFUSER, 24X24 FACE 1 SD3 Supply Air SPD LAYIN PRICE 10"NECK PLAQUE LAYIN DIFFUSER, 24X24 FACE 1 SD4 Supply Air 520 DOUBLE DEFLECTION DUCT PRICE STEEL 3/4" BLADE SPACING 1	
NOTES: 1. PROVIDE WALL BRACKET FOR REMOTE CONTROL	SD4 SD5 Supply Air SPD SURFACE PRICE 6" NECK PLAQUE LAYIN DIFFUSER 1,3 TG1 EXPANDED WIRE MESH WALL NA CONTRACTOR PROVIDED WIRE MESH OVER OPENING	
2. PIPE CONDENSATE TO NEAREST DRAIN WITH 3/4"PVC DRAIN PIPING 3. MOUNT HIGH ON WALL COORDINATE FINAL LOCATION WITH OWNER'S IT REPRESENTATIVE	NOTES: 1. PROVIDE WHITE BAKED ENAMEL FINISH 2. NO SCREW HOLES IN LAVIN FRAME	Mechanical Schedules scale: 12" = 1 kuenyarch.com ©2013 Kueny Architects L.L.C All Rights Reserved A Kueny Architects - Dane County Highway A



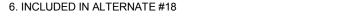








NOTES: 1. PROVIDE WHITE BAKED ENAMEL FINISH 2. NO SCREW HOLES IN LAYIN FRAME 3. PROVIDE PLASTER FRAME





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01/12/15

- Copied from spec section 23 09 93 Pump P-7,8(Buried piping side Waste Heat Exchanger) pumps shall run in a lead lag sequence. When either the highway building or future medical examiner building is calling for heat the lead pump shall be energized. The lead pump sequencing shall be variable based on the runtime of the pump. The lead pump shall be switched when the operating hours have reached 80hours(adjustable). The pump shall run at a minimum 30% motor speed when both heat exchanger control valves are at their minimum position. When either building heat exchanger waste loop control valve opens to 90% maximum open position that valve shall become the "calling" control valve. When the system has a "calling" control valve, the pump shall increase its speed. The pump speed shall increase at a rate of 5%/minute(adjustable) until the "calling" control valve starts to close or until the pump reaches 100%. When the "calling" control valve closes the pump speed shall decrease at the same rate as the valve position closure. If when the "calling" control valve is deceases the other building heat exchanger control valve reaches 90% that control valve will automatically become the "calling" control valve. Upon a loss of power

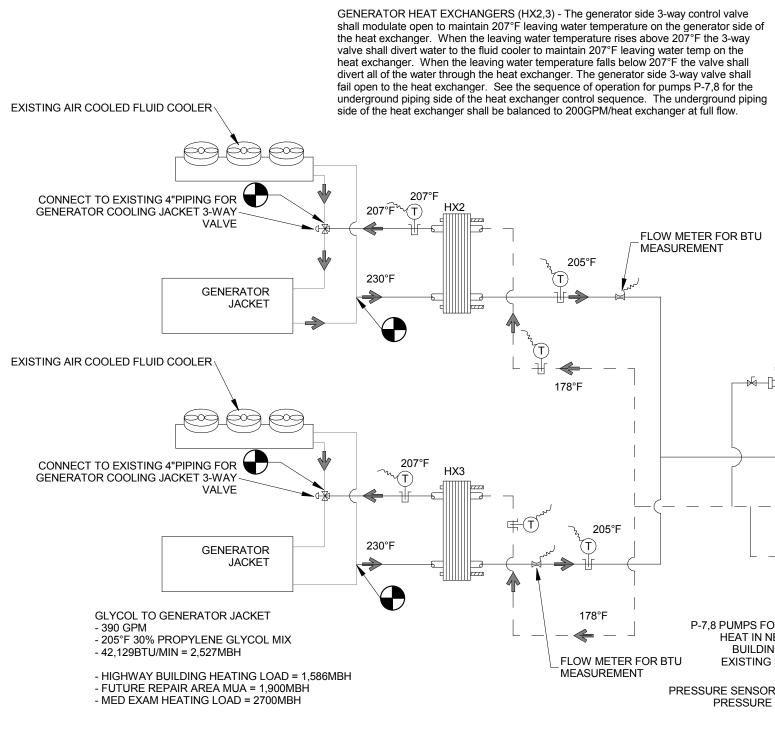
SEQUENCE OF OPERATIONS FOR GENERATOR JACKET(WASTE) HEAT RECOVERY

Pump P-9(Building Side Waste Heat Loop Pump) shall energize on a call for heating or domestic hot water from the building. The pump shall not energize until flow has been proven in both the waste heat system loop and the secondary building system loop. The pump shall have a variable speed drive. The pump shall increase speed to maintain the

the waste heat loop control valve shall fail open.

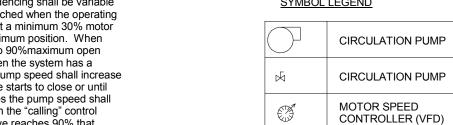
secondary loop setpoint. When pump P-9 has reached 100% the control system shall verify that the entering water temp from the underground waste loop to the heat exchanger HX1 is above 150°F. If the entering water temperature from HX1 is above 150°F and the secondary loop temp has not met setpoint for 10 minutes then the lead Boiler shall energize to maintain setpoint. If the entering water temperature from HX1 is below 150°F and the secondary loop temp has not met setpoint for 10 minutes then the lead Boiler shall energize to maintain the secondary loop setpoint and pump P-9 shall be commanded off and an alarm shall be sent to the BMS indicating the underground waste loop is not providing heat.

HEAT EXCHANGERS BUILDING WASTE HEAT EXCHANGER (HX1) - Provide a 2-way control valve on the underground loop piping to maintain a minimum 185°F leaving water temperature from the heat exchanger. The 2-way valve shall have a minimum position of 10% open to maintain flow from the waste heat loop. On a rise in retun water temperature the valve shall close. When the return water temperature drops below setpoint the valve shall open. The valve shall fail to full flow through the heat exchanger. See pump P-9 sequence of operation for building side of the heat exchanger control



MECH EQ STARTERS & DISCONNECTS

	1		DISCONN	FCTS		STARTERS			
TAG	SERVES	FURNISHED BY	INSTALLED BY	LOCATION	TYPE	FURNISHED BY	INSTALLED BY		ТҮРЕ
ACCU-2	CRU-1	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
B-1	BUILDING	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
B-1 B-2	BUILDING	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
CEF-1	ELEVATOR EQUIPMENT	HVAC	HVAC	PRE-WIRED	PLUG	HVAC		ELEV EQ RM	120V REVERSE T-STAT
CRU1	DATA ROOM	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
CUH1	VESTIBULE	ELECTRICAL	HVAC	PRE-WIRED	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
CUH2	STAIR	ELECTRICAL	HVAC	PRE-WIRED	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
EF-1	VEHICLE SOURCE	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	WELDING	WALL SWITCH
MUA-1	LARGE VEHICLE 140	HVAC	HVAC	PRE-WIRED	NEMA 3R	HVAC	HVAC	PRE-WIRED	VFD W/REMOTE PANEL
MUA-1 MUA-2	LARGE VEHICLE 151	HVAC	HVAC	PRE-WIRED	NEMA 3R	HVAC	HVAC	PRE-WIRED	STARTER W/REMOTE PANEL
MUA-3	WELDING 145	HVAC	HVAC	PRE-WIRED	NEMA 3R	HVAC	HVAC	PRE-WIRED	STARTER W/REMOTE PANEL
MUA-4	SMALL VEHICLE 138	HVAC	HVAC	PRE-WIRED	NEMA 3R	HVAC	HVAC	PRE-WIRED	STARTER W/REMOTE PANEL
P-1	B-1	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	ELECTRICAL	NEAR BOILERS	STARTER W/ 24VRELAY
P-2	B-2	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	ELECTRICAL	NEAR BOILERS	STARTER W/ 24VRELAY
P-2	MAIN LOOP	HVAC	ELECTRICAL	NEAR UNIT	FUSED	HVAC		NEAR BOILERS	VFD
P-4	MAIN LOOP	HVAC	ELECTRICAL	NEAR UNIT	FUSED	HVAC	ELECTRICAL	NEAR BOILERS	VFD
P-4	WASTE HEAT LOOP	HVAC	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	ELECTRICAL	NEAR UNIT	VFD
P-7	WASTE HEAT LOOP	HVAC	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	ELECTRICAL	NEAR UNIT	VFD
P-9	WASTE HEAT EXCHANGER	HVAC	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	ELECTRICAL	NEAR UNIT	VFD
P-10	INDIRECT WATER HEATER	ELECTRICAL		NEAR UNIT	NEMA 1	HVAC		NEAR UNIT	CONTACTOR W/24V RELAY
P-10 PRV-1	SMALL VEHICLE 140	HVAC	ELECTRICAL HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	SEE E-PLANS	STARTER W/ 24VRELAY
PRV-1 PRV-2	SMALL VEHICLE 140	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL		STARTER W/ 24VRELAT
PRV-2 PRV-4		HVAC		PRE-WIRED			ELECTRICAL	SEE E-PLANS	STARTER W/ 24VRELAT
	LARGE VEHICLE 138		HVAC	PRE-WIRED	NEMA 1	ELECTRICAL		SEE E-PLANS	
PRV-5	LARGE VEHICLE 138	HVAC HVAC	HVAC HVAC	PRE-WIRED	NEMA 1 NEMA 1	ELECTRICAL	ELECTRICAL	SEE E-PLANS	STARTER W/ 24VRELAY
PRV-7 PRV-8	LARGE VEHICLE 122A	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	SEE E-PLANS SEE E-PLANS	STARTER W/ 24VRELAY STARTER W/ 24VRELAY
	LARGE VEHICLE 122A					ELECTRICAL	ELECTRICAL		
PRV-9 PRV-10	LARGE VEHICLE 122A WELD BAY 145	HVAC HVAC	HVAC HVAC	PRE-WIRED PRE-WIRED	NEMA 1 NEMA 1	ELECTRICAL		SEE E-PLANS	STARTER W/ 24VRELAY
PRV-10 PRV-11	OIL	HVAC	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	WELD BAY 145	STARTER W/ 24VRELAY STARTER W/ 24VRELAY
						ELECTRICAL	ELECTRICAL	SEE E-PLANS	
PRV-12	WELD BAY 145 SMALL VEHICLE 140	HVAC ELECTRICAL	HVAC	PRE-WIRED	NEMA 1	ELECTRICAL	ELECTRICAL	WELD BAY 145	INTERLOCK WITH LIGHTS
UH-1 UH-2			ELECTRICAL	NEAR UNIT	NEMA 1 NEMA 1	HVAC HVAC	HVAC HVAC	PRE-WIRED PRE-WIRED	CONTROL BOARD
	SMALL VEHICLE 140	ELECTRICAL	ELECTRICAL						CONTROL BOARD
UH-3	SMALL VEHICLE 140	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-4	SMALL VEHICLE 140		ELECTRICAL		NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-5	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL		NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-6	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL		NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-7	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-8	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	-	PRE-WIRED	CONTROL BOARD
UH-9	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL		NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-10	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-11	LARGE VEHICLE 138	ELECTRICAL	ELECTRICAL		NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-12	WELDING 145	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-13	WELDING 145	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-15	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-16	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-17	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL		NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-18	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-19	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-20	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-21	LARGE VEHICLE 151	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-22	PARTS 137	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD
UH-23	MEZZANINE 202	ELECTRICAL	ELECTRICAL	NEAR UNIT	NEMA 1	HVAC	HVAC	PRE-WIRED	CONTROL BOARD



SYMBOL LEGEND

T)180°F

 $\overline{\mathbf{A}}$

-∺-

(DP)

CARTRIDGE

30GPM

-BYPASS FILTER,

AIR

SEP

EXP

TANK(S)

PRESSURE SENSOR

FLOW DIRECTION

TEMPERATURE SENSOR

3-WAY CONTROL VALVE

2-WAY CONTROL VALVE

PRESSURE REDUCING

VALVE

CHECK VALVE

FLOW METER

DIFFERENTIAL

PRESSURE SENSOR

30GAL

GRADUATED

FEED PUMP

FEED TANK WITH

ALT #20

CAPPED

200GPM

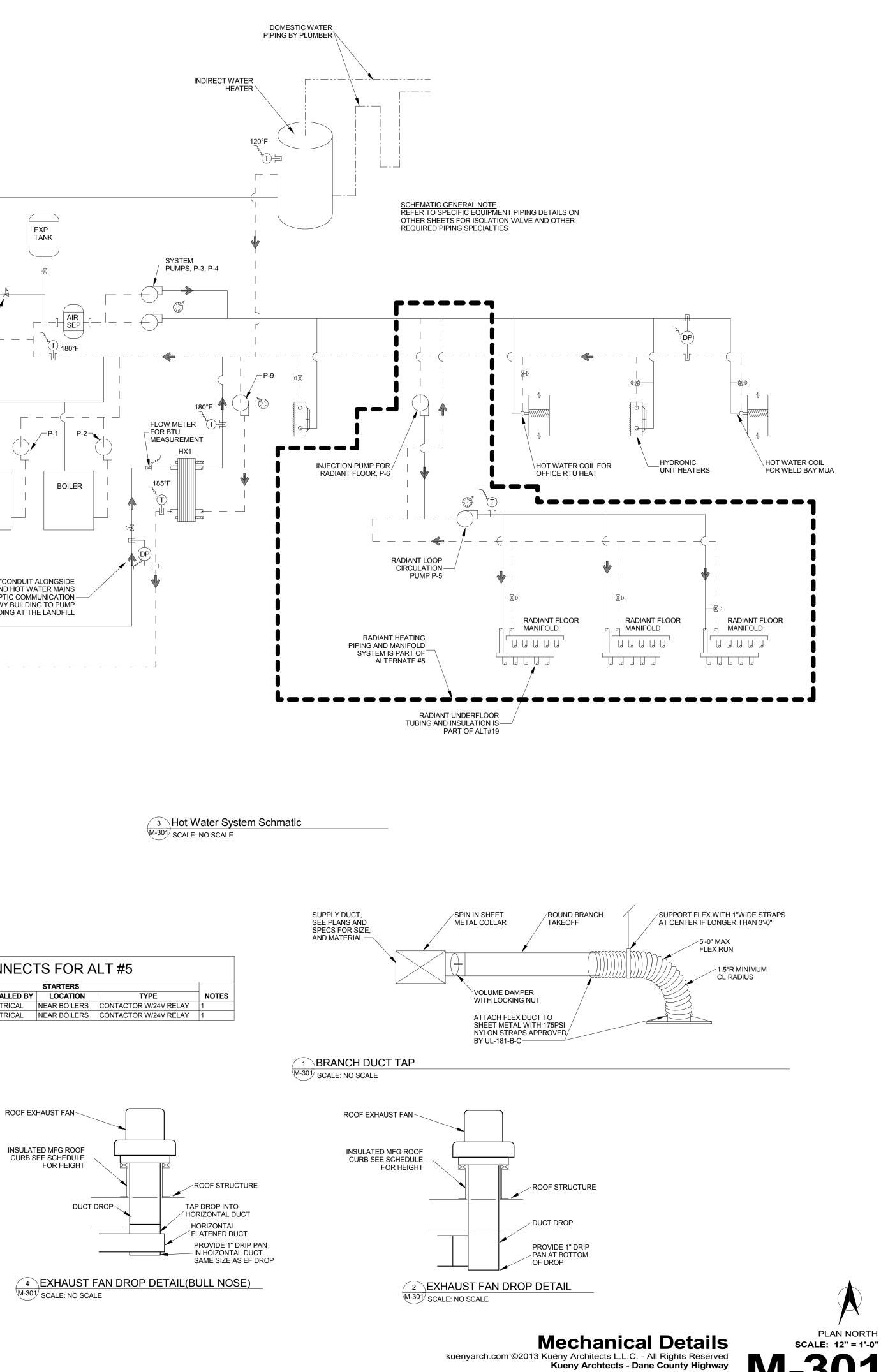
4"CONNECTIONS FOR ME BUILDING,

E-

EXP TANK SYSTEM _____PUMPS, P-3, P-4 INDIRECT WATER 5 KKNNKK HEATER PUMP, P-10 AIR SEP ₩ 180°F **1"MAKE UP WATER WITH** └─ _++| BACKFLOW PREVENTER BY PLUMBER, FINAL CONNECTION TO HEATING SYSTEM BY HVAC 180°F FLOW METER FOR BTU -P-' MEASUREMENT HX1 185°F BOILER BOILER 4"BYPASS AND 4"SYSTEM -DISCHARGE WITH FLANGE FOR FLUSHING SYSTEM INSTALL (2)1"CONDUIT ALONGSIDE UNDERGROUND HOT WATER MAINS FOR FIBEROPTIC COMMUNICATION -WIRE FROM HWY BUILDING TO PUMP BUILDING AT THE LANDFILL PIPING FROM CAPPED ME BUILDING CONNECTIONS TO _ _ _ _ _ _ _ _ _ - GENERATORS AND GENERATOR HEAT EXCHANGERS IS PART OF UNDERGROUND PIPING -CONNECTING NEW BUILDING TO

ADDITIONAL MECH EQ STARTERS & DISCONNECTS FOR ALT #5 STARTERS DISCONNECTS LOCATION TYPE FURNISHED BY INSTALLED BY LOCATION FURNISHED BY INSTALLED BY TAG SERVES ΓΥΡΕ ELECTRICAL NEAR UNIT ELECTRICAL NEAR BOILERS CONTACTOR W/24V RELAY NEMA 1 RADIANT FLOOR HVAC HVAC P-5 P-6 INJECTION PUMP ELECTRICAL ELECTRICAL NEAR UNIT NEMA 1 HVAC ELECTRICAL NEAR BOILERS CONTACTOR W/24V RELAY NOTES: 1. INCLUDED IN ALTERNATE #18

EXISTING GENERATOR BUILDING



01/12/1



P-7,8 PUMPS FOR WASTE

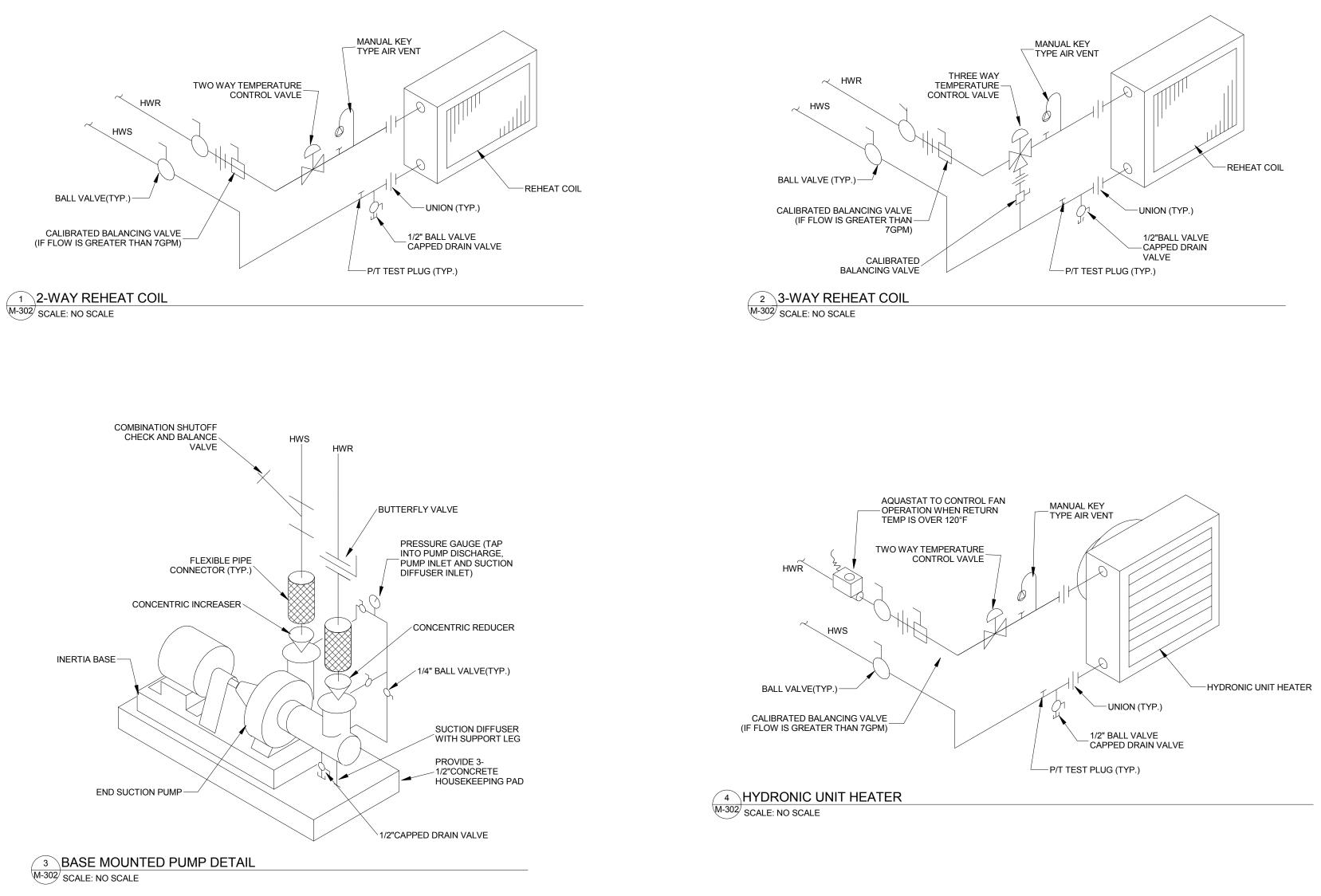
PRESSURE SENSOR FOR LOOP

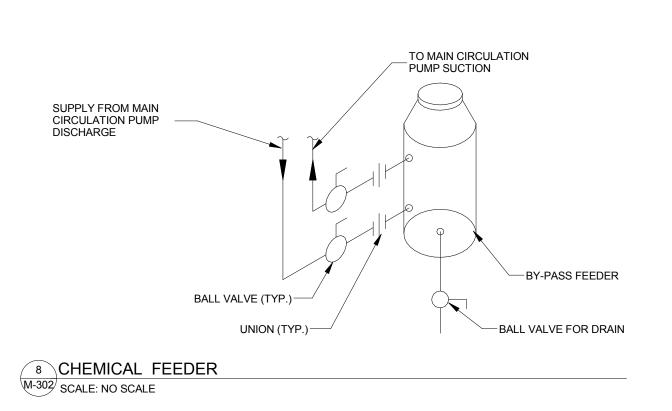
HEAT IN NEW PUMP

EXISTING LANDFILL

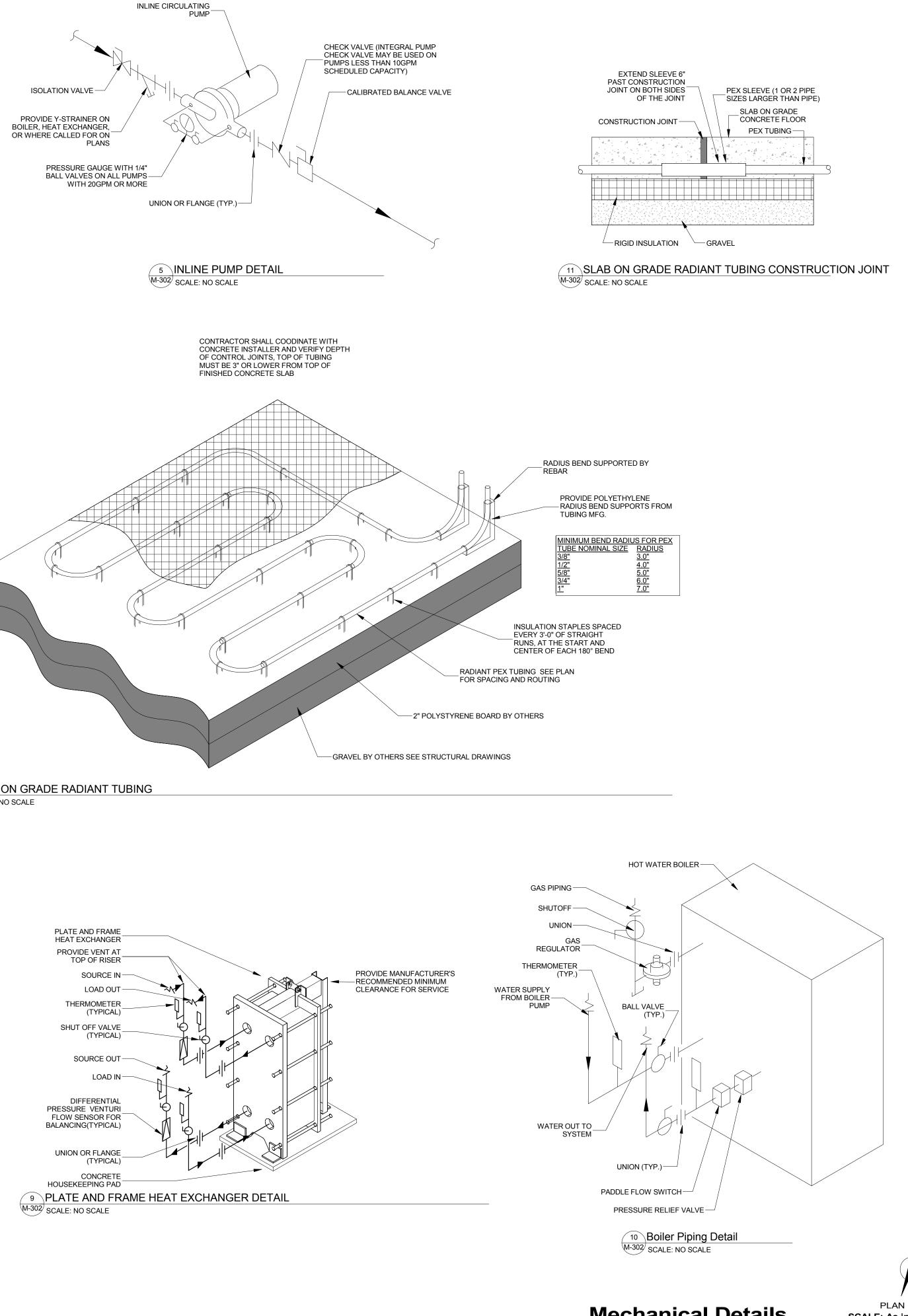
PRESSURE FILL ALERT

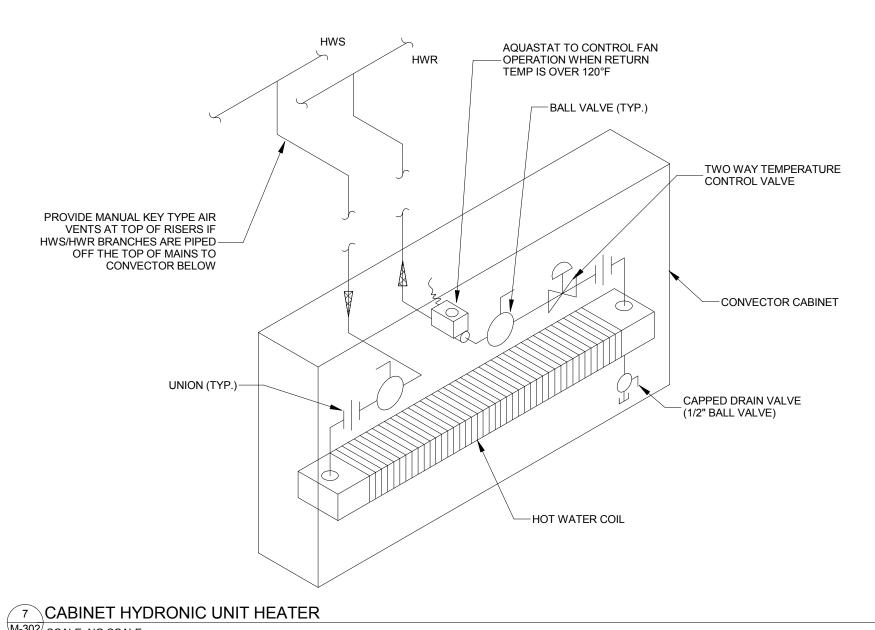
BUILDING AT THE

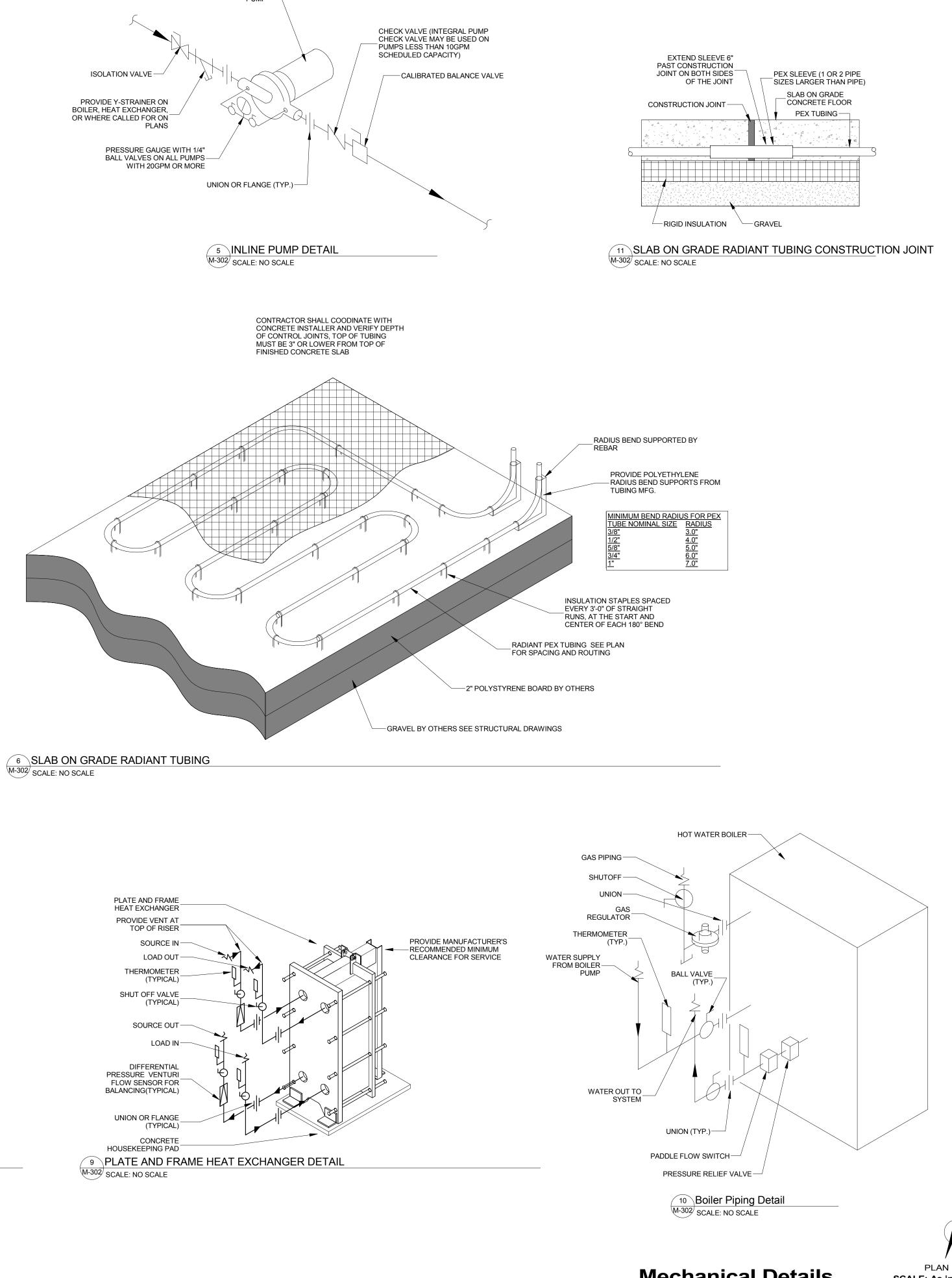


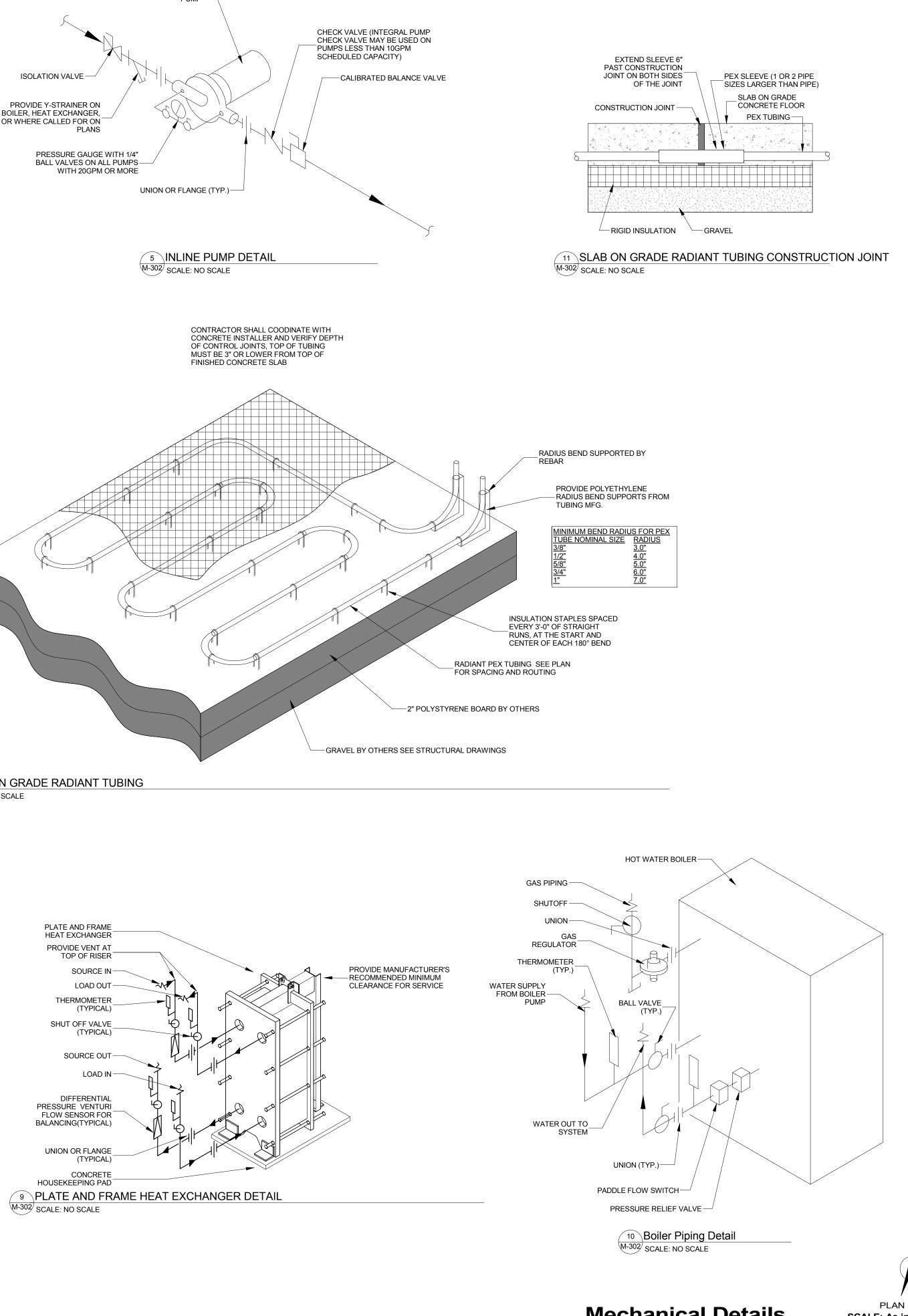


M-302 SCALE: NO SCALE





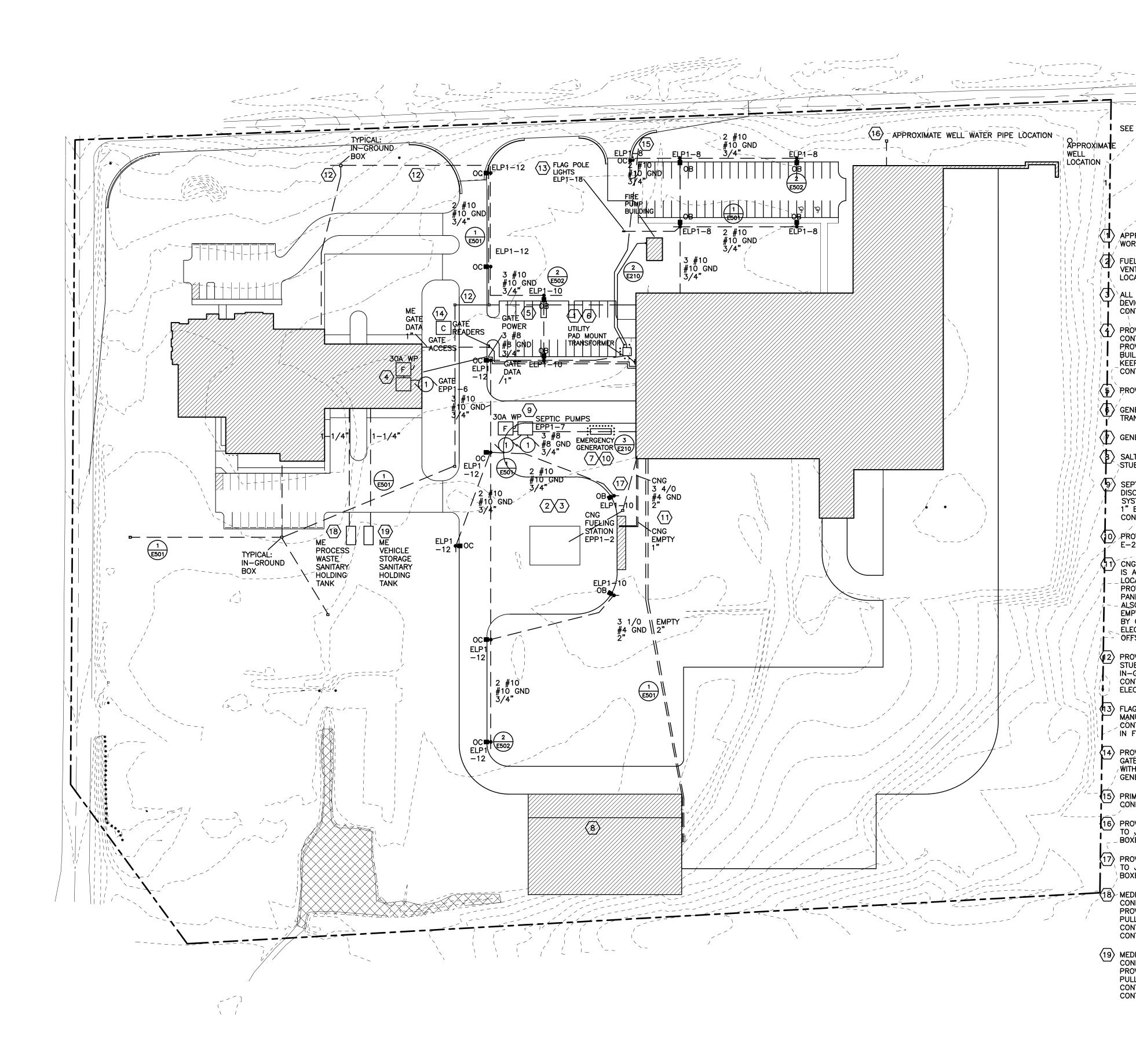






Mechanical Details

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GENERAL SHEET NOTES

SEE DRAWING NOTES AND BIDDING NOTES ON SHEET E-506 FOR BASE BID AND ALTERNATE BIDS.

SHEET NOTES

APPROXIMATE UTILITY PAD MOUNT TRANSFORMER LOCATION SHOWN. VERIFY LOCATION. COORDINATE ALL SERVICE

Image: Second stateFUEL ISLAND AREA: 20' AREA AROUND GAS PUMPS AND 5' AREA AROUND UNDERGROUND TANK FILL OPENING OR
VENT ARE CLASS 1, DIVISION 1 OR DIVISION 2 LOCATIONS. ELECTRICAL CONTRACTOR TO VERIFY CLASSIFIED
LOCATIONS AND KEEP CONDUITS AND EQUIPMENT AWAY FROM THESE AREAS.

XALL FUEL ISLAND EQUIPMENT (PUMPS, CANOPY LIGHTS, CARD READERS, SYSTEMS AND/OR ANY OTHER ASSOCIATED DEVICES) WIRING AND CONDUIT BY FUEL SYSTEMS CONTRACTOR UNDER ALTERNATE BID #2. ELECTRICAL CONTRACTOR TO PROVIDE FUEL ISLAND PANEL FI, TRANSFORMER AND FEEDER UNDER BASE BID.

PROVIDE DISCONNECT AND POWER CONNECTION TO GATE. PROVIDE POWER CONDUIT FROM BUILDING TO GATE CONTROL BOX. PROVIDE EMPTY 1" CONTROL CONDUIT FROM JOIST AREA IN BUILDING TO GATE CONTROL BOX. PROVIDE 3/4" CONTROL CONDUIT FROM GATE CONTROL BOX TO EACH CARD READER (ONE FOR HIGHWAY BUILDINGS, ONE FOR THE BUILDING). PROVIDE 1" CONTROL CIRCUIT FROM GATE CONTROL BOX TO ME BUILDING. KEEP CONTROL CONDUITS AT LEAST 2' FROM ANY POWER CONDUITS. OUTDOOR CARD READER STANDS BY GENERAL CONTRACTOR.

 $\langle \mathbf{5} \rangle$ PROVIDE 3 4" PVC CONDUITS WITH PULL STRING FROM DATA 142 TO IN-GROUND BOX.

GENERAL CONTRACTOR TO PROVIDE CONCRETE PAD AND BOLLARDS FOR ALLIANT ENERGY PAD MOUNT TRANSFORMER AS REQUIRED.

 $\langle \mathbf{r} \rangle$ general contractor to provide concrete pad and bollards for generator as required.

SALT STRUCTURE: PROVIDE POWER CONDUCTORS AND ALL SALT STRUCTURE ELECTRICAL AS SHOWN ON SHEET E-209. STUB EMPTY 2" CONDUIT UP TO 4' AFG APPROXIMATELY 3' NORTH OF PANEL SS ON SALT SHED AND CAP.

SEPTIC SYSTEM – INFORMATIONAL BID B: PROVIDE CIRCUIT BREAKER IN PANEL EPP1, FEEDER AND WP FUSED DISCONNECT AT SEPTIC SYSTEM CONTROL PANEL. PROVIDE CONDUIT AND CIRCUITS TO TWO 1 HP SEPTIC PUMPS. SEPTIC SYSTEM CONTROL PANEL AND PUMPS PROVIDED AND MOUNTED BY PLUMBING CONTRACTOR. VERIFY LOCATIONS. PROVIDE 1" EMPTY CONDUIT FROM SEPTIC PANEL TO UNDERGROUND TANK FOR FLOAT CONTROL WIRING BY PLUMBING CONTRACTOR.

PROVIDE CONDUITS, CIRCUITS AND CONTROL WIRING AS REQUIRED BY GENERATOR MANUFACTURER. SEE SHEET E-210, DETAIL 3 FOR AN EXPLODED VIEW OF THE GENERATOR AREA.

CNG AREA: AREA INSIDE DISPENSER ENCLOSURE IS A CLASS 1 DIVISION 1 LOCATION. 5' AREA AROUND DISPENSER IS A CLASS 1, DIVISION 2 LOCATION. KEEP 20' AWAY FROM TANKS. ELECTRICAL CONTRACTOR TO VERIFY CLASSIFIED - LOCATIONS AND KEEP OTHER CONDUITS AND EQUIPMENT AWAY FROM THESE AREAS. PROVIDE CIRCUIT BREAKER IN PANEL EPP1 AND FEEDER TO CNG PANEL. PROVIDE TERMINATION IN CNG ELECTRICAL PANEL.

 - ALSO PROVIDE EMPTY 1" TO CNG PANEL FROM BOTTOM OF JOIST AREA INSIDE BUILDING. PROVIDE PULL STRING IN EMPTY CONDUIT. VERIFY LOCATION WITH CNG CONTRACTOR. CNG ELECTRICAL PANEL PROVIDED WITH CNG EQUIPMENT BY CNG CONTRACTOR.

ELECTRICAL SHALL BE CLASS 1 DIVISION 1 (GALVANIZED RIGID STEEL CONDUIT, CLASS 1 DIV. 1 FITTINGS AND SEAL OFFS AS REQUIRED).

2) PROVIDE 3 4" PVC CONDUITS WITH PULL STRING AND IN-GROUND BOXES FOR SYSTEMS USE AS SHOWN. PROVIDE STUBS FROM IN-GROUND BOXES AS SHOWN. PROVIDE 12" WIDE, 12" DEEP CONCRETE PAD AROUND ALL IN-GROUND BOXES. IN-GROUND BOXES SUPPLIED BY SYSTEMS CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. MEDICAL EXAMINER CONTRACTOR TO STUB 4" CONDUITS 5' OUT FROM BUILDING. HIGHWAY FACILITY ELECTRICAL CONTRACTOR TO CONNECT TO STUBBED OUT 4" CONDUITS.

FLAG POLE PROVIDED WITH TWO UP LIGHTS MOUNTED TO POLE AND PREWIRED TO HAND HOLE BY FLAG POLE MANUFACTURER. ELECTRICAL CONTRACTOR TO PROVIDE CIRCUIT AND CONNECT TO PREWIRED LIGHTS. ELECTRICAL CONTRACTOR TO ALSO PROVIDE A GROUND ROD AND CONDUCTOR TO GROUND FLAG POLE. PROVIDE PVC CONDUIT IN FLAG POLE BASE FOR GROUND CONDUCTOR. VERIFY LOCATION.

PROVIDE 1" CONDUIT FROM GATE CONTROL BOX TO JOIST AREA IN MAIN BUILDING. PROVIDE 3/4" CONDUIT FROM GATÉ CONTROL BOX TO EACH CARD READER (DUAL HEIGHT CARD READERS). VERIFY LOCATION OF CARD READERS WITH SYSTEMS CONTRACTOR. CARD READER STAND BY SYSTEMS CONTRACTOR. CARD READER CONCRETE BASE BY GENERAL CONTRACTOR.

TIS PRIMARY UNDERGROUND ELECTRICAL LINE BY ALLIANT ENERGY. ELECTRICAL CONTRACTOR TO STUB 4" PRIMARY CONDUITS OUT FROM UTILITY TRANSFORMER PAD. ALL OTHER PRIMARY WORK BY ALLIANT ENERGY.

16 PROVIDE 1 4" PVC CONDUIT WITH PULL STRING AND IN-GROUND BOX FOR SYSTEMS USE AS SHOWN. STUB 4" UP TO JOIST AREA IN VEHICLE AREA 151. PROVIDE 12" WIDE, 12" DEEP CONCRETE PAD AROUND ALL IN-GROUND ____BOXES.

17) PROVIDE 1 4" PVC CONDUIT WITH PULL STRING AND IN-GROUND BOX FOR SYSTEMS USE AS SHOWN. STUB 4" UP TO JOIST AREA IN VEHICLE STORAGE 138. PROVIDE 12" WIDE, 12" DEEP CONCRETE PAD AROUND ALL IN-GROUND BOXES.

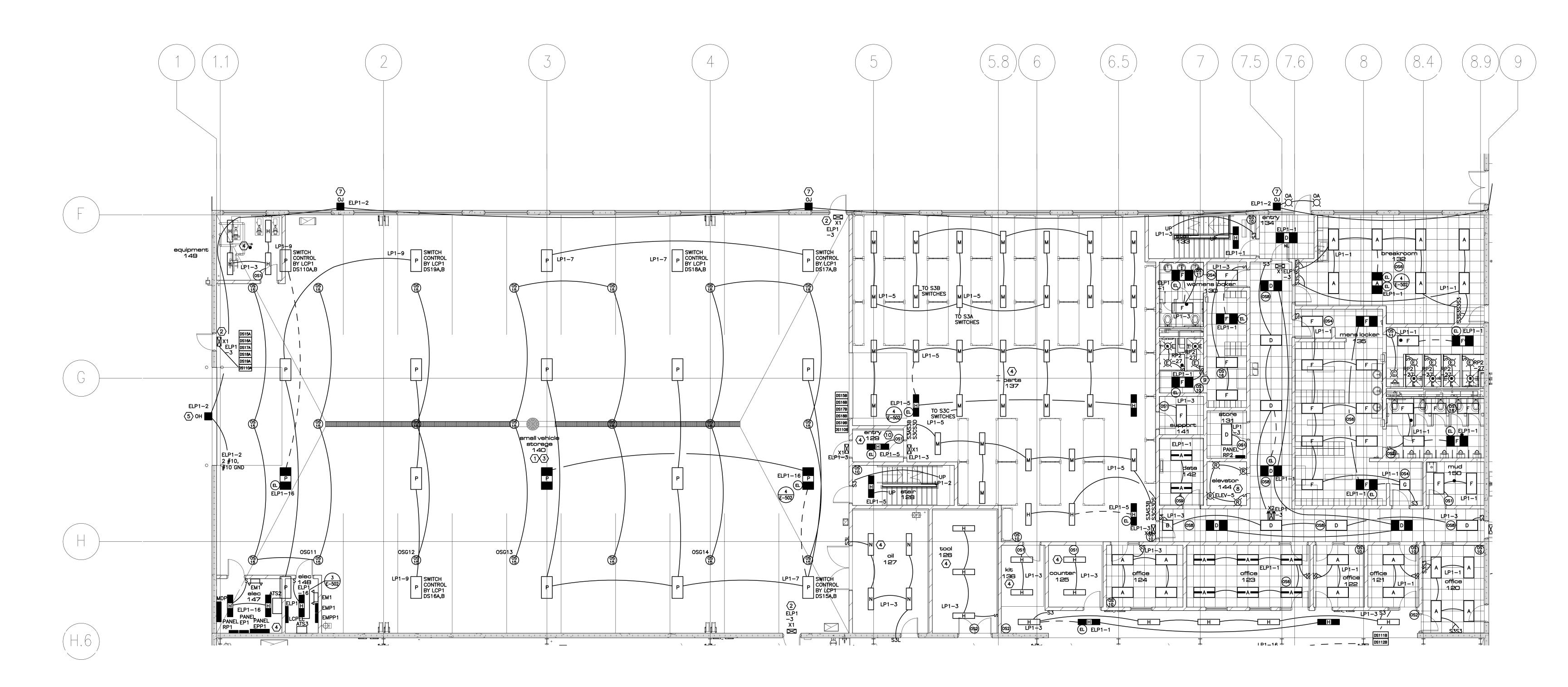
MEDICAL EXAMINER PROCESS WASTE SANITARY HOLDING TANK - INFORMATIONAL BID H: PROVIDE UP TO 1-1/4" CONDUIT FROM LEVEL CONTROLS INSIDE MEDICAL EXAMINER BUILDING TO SANITARY HOLDING TANK LEVEL SENSOR. PROVIDE PVC BOX IN TANK MANHOLE ACCESS PIT AND CONNECTION TO LEVEL CONTROL SENSOR AS REQUIRED. PULL LOW VOLTAGE CABLE AND TERMINATE AS REQUIRED. LOW VOLTAGE CABLE PROVIDED BY PLUMBING CONTRACTOR. RUN CONDUIT TO ONE SIDE OF SEWER LINE. VERIFY CONDUIT SIZE AND LOCATIONS WITH PLUMBING CONTRACTOR.

(19) MEDICAL EXAMINER VEHICLE STORAGE SANITARY HOLDING TANK – INFORMATIONAL BID I: PROVIDE UP TO 1–1/4" CONDUIT FROM LEVEL CONTROLS INSIDE MEDICAL EXAMINER BUILDING TO SANITARY HOLDING TANK LEVEL SENSOR. PROVIDE PVC BOX IN TANK MANHOLE ACCESS PIT AND CONNECTION TO LEVEL CONTROL SENSOR AS REQUIRED. PULL LOW VOLTAGE CABLE AND TERMINATE AS REQUIRED. LOW VOLTAGE CABLE PROVIDED BY PLUMBING CONTRACTOR. RUN CONDUIT TO ONE SIDE OF SEWER LINE. VERIFY CONDUIT SIZE AND LOCATIONS WITH PLUMBING CONTRACTOR.



Electrical Site Plan

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(1) CNG VEHICLES WILL BE STORED IN THE SMALL VEHICLE STORAGE 140. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2.

 $\langle 2 \rangle$ TYPICAL: MOUNT EXIT LIGHTS AT 10' AFF IN HIGH BAY AREAS.

HANG TYPE P LIGHTS IN SMALL VEHICLE STORAGE 140 APPROXIMATELY 2' BELOW JOISTS WITH AIRCRAFT CABLE OR CHAIN. HANG LIGHTS LEVEL AT THE SAME DISTANCE BELOW THE JOIST AND FOLLOW THE SLOPE OF THE JOISTS.

 $\langle 4 \rangle$ TYPICAL: CHAIN MOUNT TYPE H AND N LIGHTS 1' BELOW THE CEILING.

5 CENTER TYPE OH LIGHT 19' AFG.

6 NO NOTE.

 $\langle 7 \rangle$ center type oh light 18' afg.

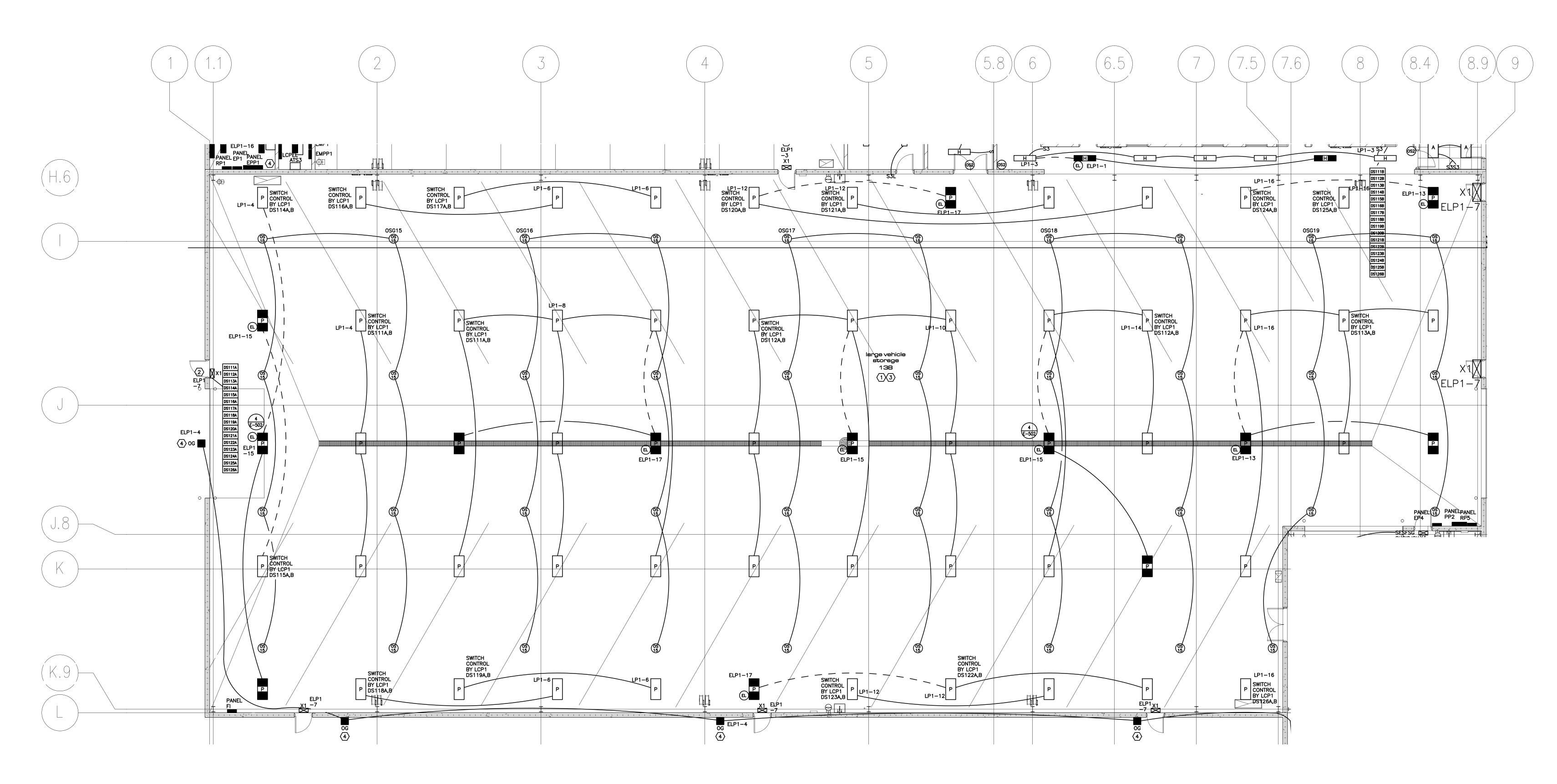
8 VERIFY ALL ELECTRICAL EQUIPMENT AND DEVICE LOCATIONS IN ELEVATOR SHAFT AND MACHINE ROOM WITH ELEVATOR CONTRACTOR.

9 WIRE SWITCH AND OCCUPANCY SENSOR ON CIRCUIT LP1-3. IF NORMAL POWER IS LOST, EMERGENCY LIGHTING UNIT TO TURN ON TYPE F LIGHT ON CIRCUIT ELP1-1. (10) WIRE OCCUPANCY SENSOR ON CIRCUIT LP1-5. IF NORMAL POWER IS LOST, EMERGENCY LIGHTING UNIT TO TURN ON TYPE H LIGHT ON CIRCUIT ELP1-5.



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January 12, 2015



- (4) CENTER TYPE OG LIGHT 26' AFG.
- 5 NO NOTE.

(1) CNG VEHICLES WILL BE STORED IN THE LARGE VEHICLE STORAGE 138. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2. THIS INCLUDES THE MEZZANINE AREA OPEN TO LARGE VEHICLE STORAGE 138. LARGE VEHICLE STORAGE 138 MAY BE A VEHICLE REPAIR IN THE FUTURE. UP TO A

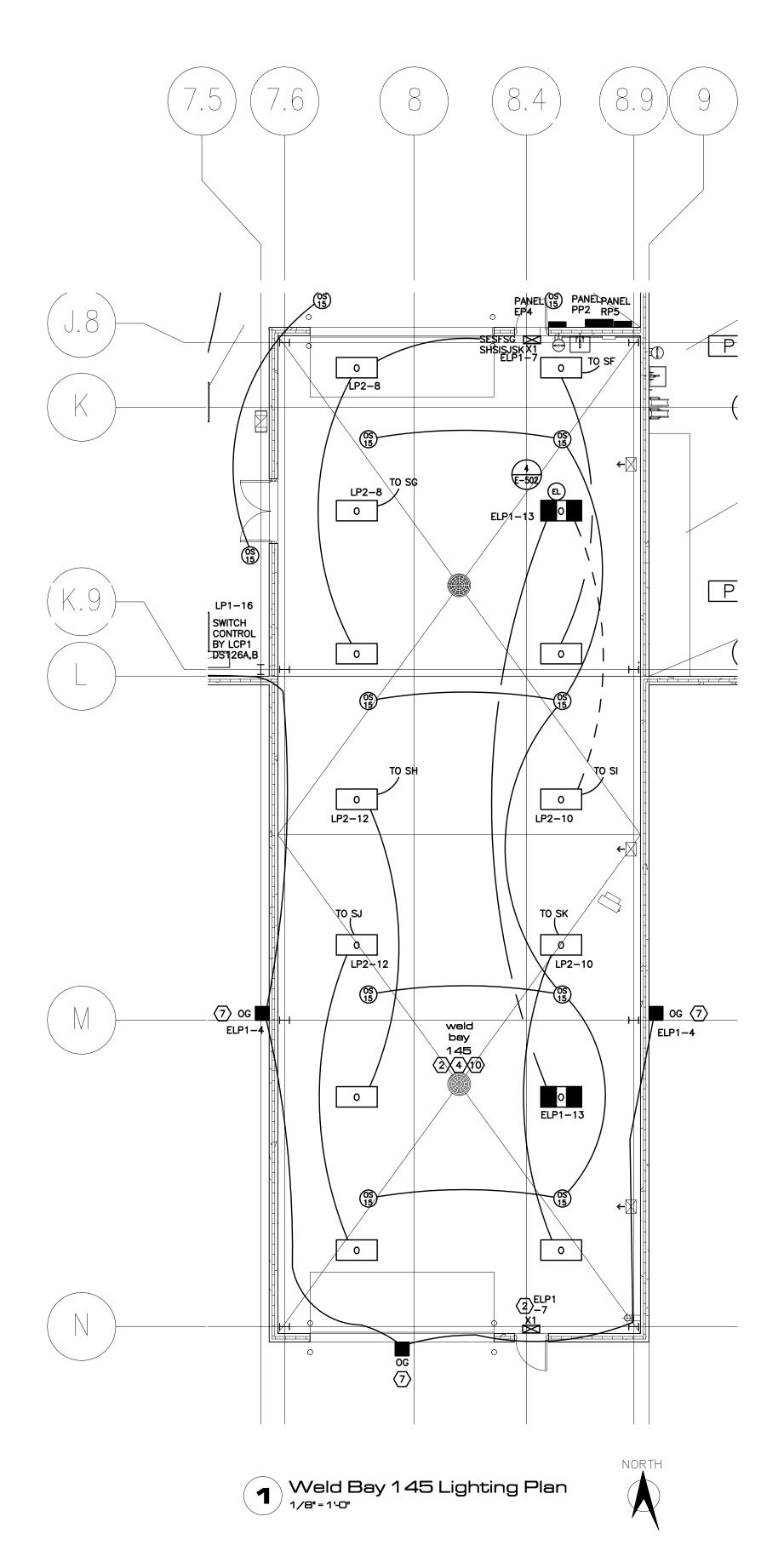
LEVEL OF 18" AFF, THE LARGE VEHICLE STORAGE 138 AREA IS CONSIDERED A FUTURE CLASS 1, DIVISION 2 LOCATION. PROVIDE EXPLOSION PROOF FITTINGS, SEAL OFFS AND RIGID CONDUIT AS REQUIRED BY CODE. SEALS ARE NOT REQUIRED ON CONDUITS THAT PASS UNBROKEN THRU THE CLASS 1 AREA PER NEC SECTION 511 IF THE CONDUIT EXTENDS MORE THAN 12" ABOVE THE CLASSIFIED AREA.

 $\langle 2 \rangle$ TYPICAL: MOUNT EXIT LIGHTS AT 10' AFF IN HIGH BAY AREAS.

3 PROVIDE UNISTRUT BETWEEN JOISTS AND MOUNT TYPE P LIGHTS BETWEEN JOISTS IN LARGE VEHICLE STORAGE 138. BOTTOM OF LIGHT FIXTURE TO BE EVEN OR SLIGHTLY ABOVE THE BOTTOM OF THE JOISTS FOR CRANE CLEARANCE.



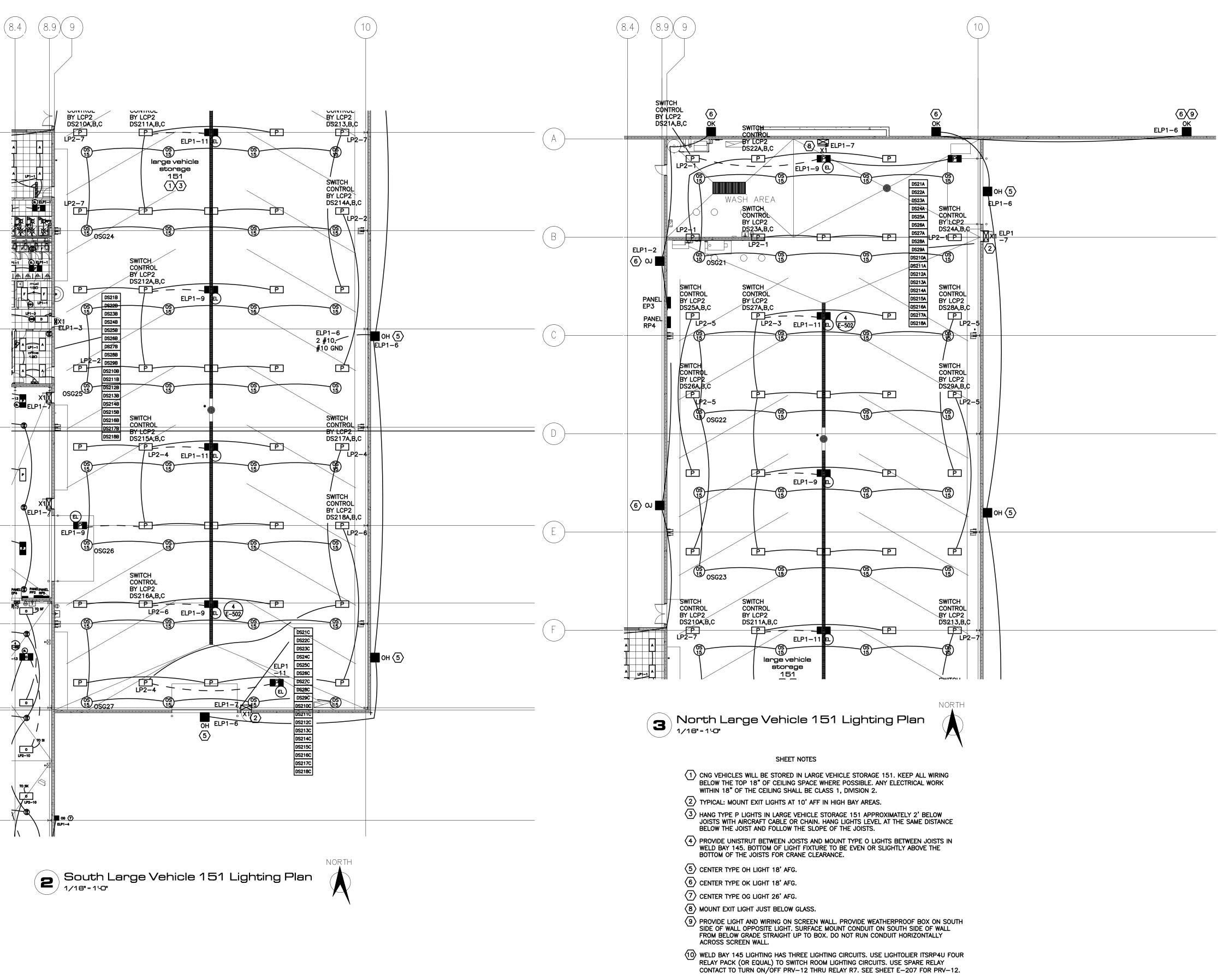
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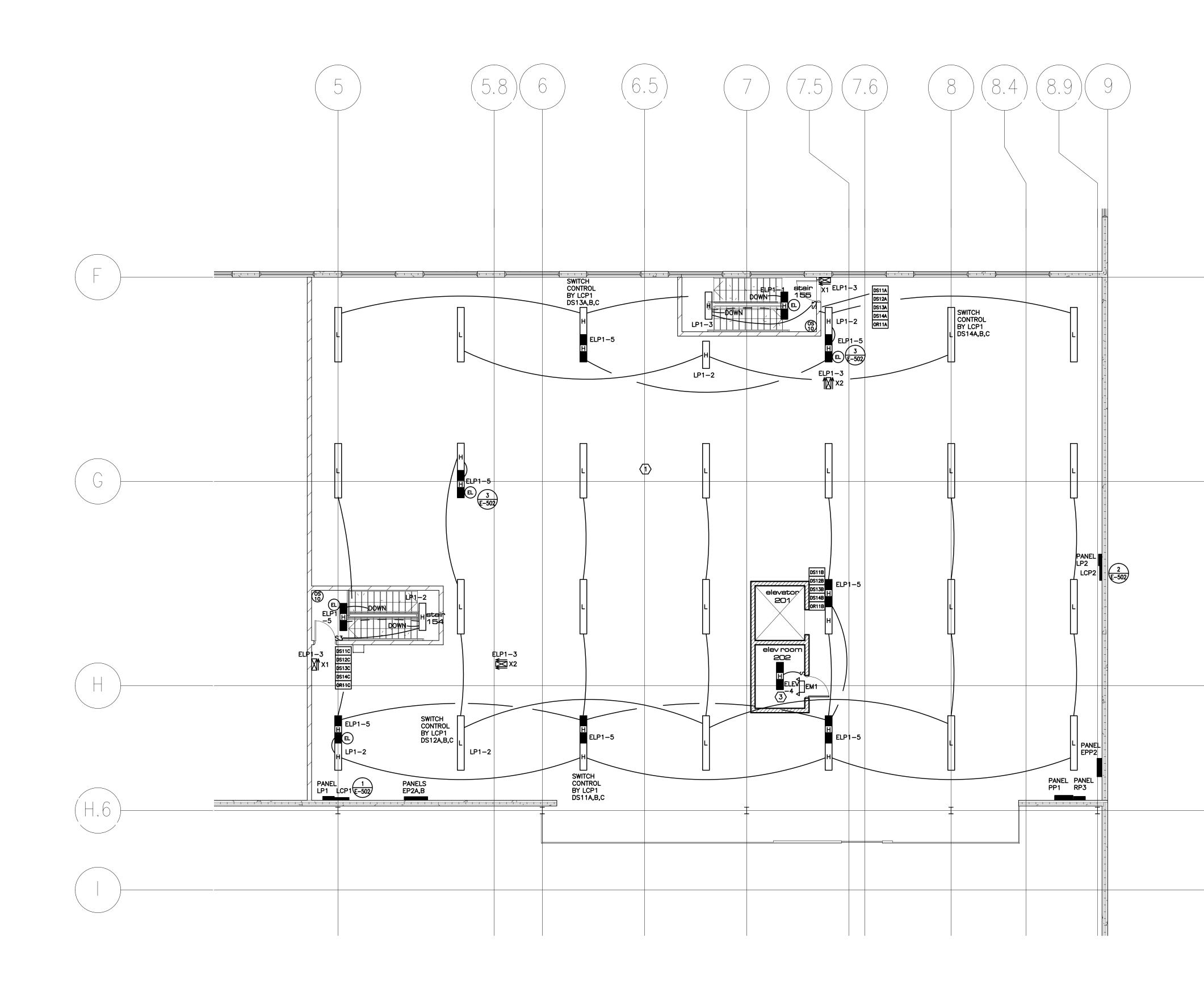






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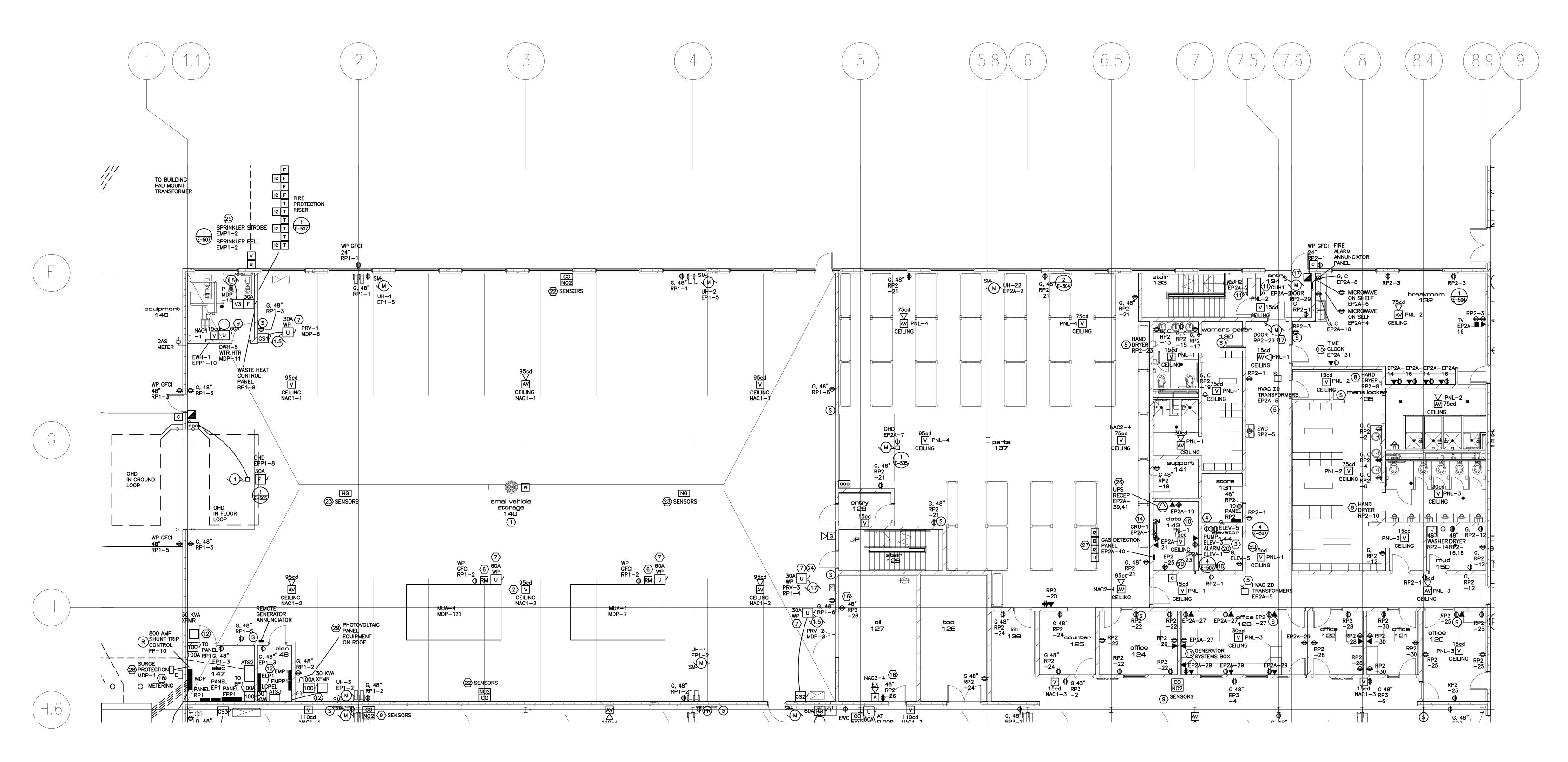
January 12, 2015



- (1) CNG VEHICLES WILL BE STORED IN THE LARGE VEHICLE STORAGE 138. THE MEZZANINE AREA IS OPEN TO LARGE VEHICLE STORAGE 138. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2.
- TYPICAL: MOUNT TYPE H AND L LIGHTS TO BOTTOM OF JOISTS.
 VERIFY ALL ELECTRICAL EQUIPMENT LOCATIONS IN ELEVATOR SHAFT AND MACHINE ROOM WITH ELEVATOR CONTRACTOR.



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- (1) CNG VEHICLES WILL BE STORED IN THE SMALL VEHICLE STORAGE 140. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2.
- $\langle 2 \rangle$ TYPICAL: CEILING MOUNT STROBE AND HORN/STROBES SHALL BE MOUNTED LOWER
- THAN LIGHTS OR OTHER OBSTRUCTIONS (MAINTAIN LINE OF SIGHT). $\langle 3 \rangle$ verify all electrical equipment and device locations in elevator shaft and
- MACHINE ROOM WITH ELEVATOR CONTRACTOR. 4 PROVIDE ONE DUPLEX CIRCUIT WITH TWO CIRCUITS FOR SUMP AND ALARM. GENERAL
- GFCI RECEPTACLE MUST BE WITHIN 3' OF NON-GCFI RECEPTACLES.
- 5 PROVIDE 120V POWER TO VAV BOX TRANSFORMERS AT LOCATIONS SHOWN. EACH VAV BOX REQUIRES A TRANSFORMER. EACH LOCATION HAS UP TO FOUR VAV BOXES. TRANSFORMERS PROVIDED BY HVAC CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR. LOW VOLTAGE SECONDARY WIRING BY HVAC CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE PRIMARY AND SECONDARY FUSING AS REQUIRED.
- (6) INTERLOCK MUA UNIT WITH FIRE ALARM. MUA UNIT TO SHUTDOWN IF FIRE ALARM SYSTEM IS IN ALARM.
- $\langle 7 \rangle$ disconnect provided on hvac equipment by hvac contractor.
- (8) PROVIDE EXCEL DRYER, INC. ENERGY EFFICIENT "XLERATOR" MODEL XL-W HAND DRYER WITH OPTIONAL RECESS KIT TO MEET ADA PROTRUSION REQUIREMENT OR EQUAL. FINISH SHALL BE WHITE. "XLERATOR" HAND DRYER HAS AN AUTOMATIC (SENSOR), PRODUCES 14,000 LFM OF AIR FLOW AT HANDS 4" BELOW AIR OUTLET, REQUIRES 1500 WATTS (12.5 AMPS, 120V), HAS A FIVE YEAR WARRANTY AND IS "GREENSPEC" LISTED, ANY "EQUAL" HANDRYER SHALL MEET OR EXCEED THE SPECIFIED UNIT. MOUNT HAND DRYER 37" AFF (BOTTOM OF RECESSED BOX 26-1/2" AFF).

- 9 PUMP P-9 MOTOR STARTER PROVIDED BY HVAC CONTRACTOR. ELECTRICAL CONTRACTOR TO INSTALL. ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT AND POWER WIRING. VERIFY BEST LOCATION. LOW VOLTAGE WIRING BY HVAC CONTRACTOR. (10) PROVIDE 3 4" PVC CONDUIT WITH PULL STRING FROM DATA 142 TO OUTDOOR
- IN-GROUND BOX PROVIDED BY OTHERS WEST OF BUILDING. SEE SHEET E-101 FOR IN-GROUND BOX LOCATION. VERIFY CONDUIT LOCATION IN DATA 142 WITH SYSTEMS CONTRACTOR. $\langle 11 \rangle$ PROVIDE A LIGHT SWITCH AS A DISCONNECT FOR CUH-1 AND CUH-2.
- (12) WALL MOUNT DISCONNECTS ABOVE ELECTRICAL ROOMS. MOUNT TRANSFORMERS NEAR BOTTOM OF JOISTS.
- $\langle \overline{3} \rangle$ provide systems box with 1" conduit to generator monitoring connection.
- $\langle 14 \rangle$ CRU-1 RECEIVES POWER THRU ACCU-1 ON ROOF.
- (15) VERIFY TIME CLOCK SYSTEMS BOX AND RECEPTACLE MOUNTING HEIGHT AND LOCATION WITH SYSTEMS CONTRACTOR.
- (16) PROVIDE CLASS 1, DIV 1 RECEPTACLES IN OIL ROOM. VERIFY LOCATION WITH FLUID SYSTEMS CONTRACTOR.
- 17 PROVIDE 120V POWER TO ADA DOOR OPERATORS. BATTERY OPERATED, WIRELESS DOOR PUSH BUTTONS INSTALLED BY DOOR CONTRACTOR.
- $\langle \overline{18} \rangle$ provide PAD mounted outdoor metering per alliant energy requirements. (19) NO NOTE.

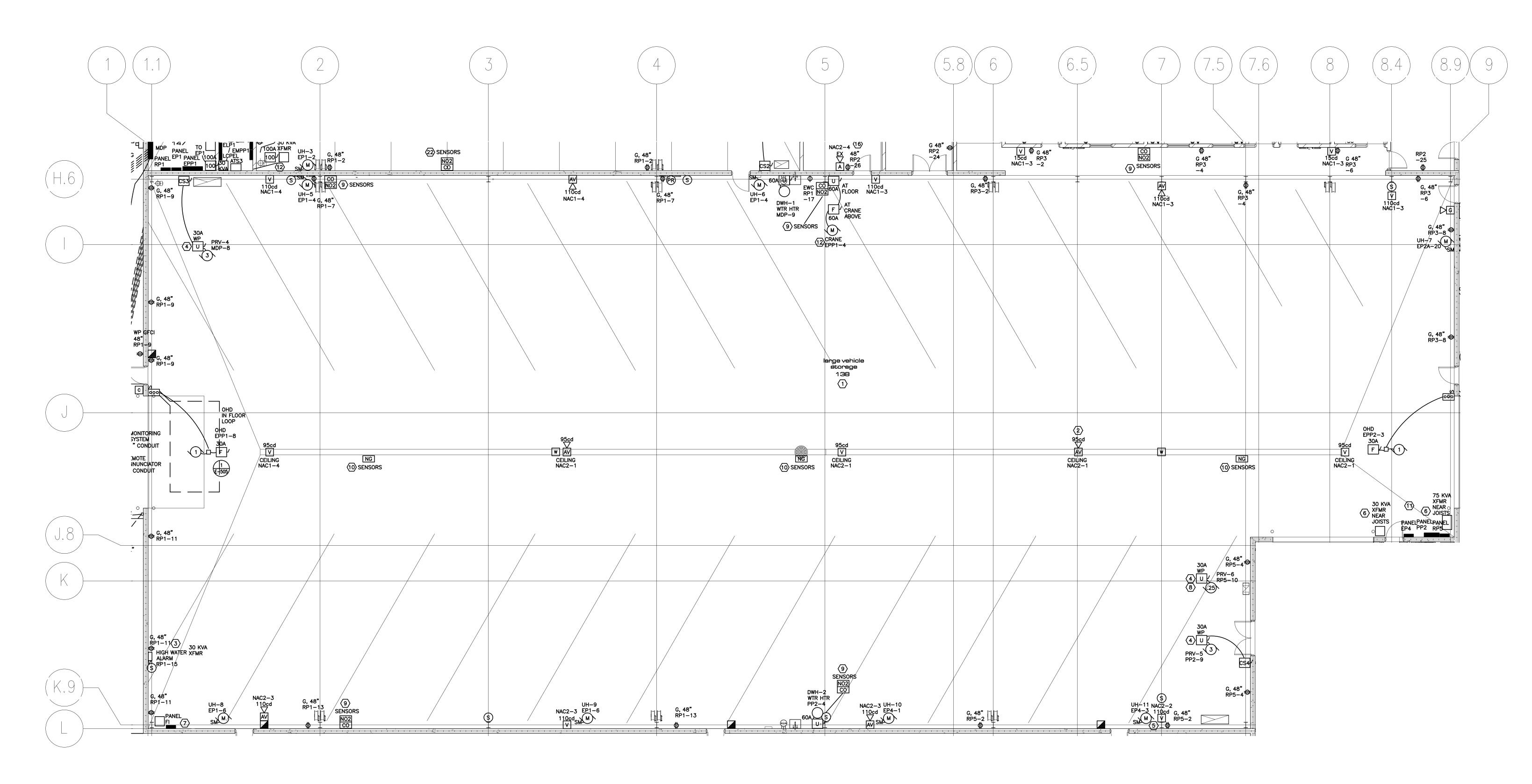
- (20) ELEVATOR: NO ELECTRICAL CONTRACTOR ALTERNATE BID. ELECTRICAL CONTRACTOR TO PROVIDE ALL ELECTRICAL AND FIRE ALARM FOR ELEVATOR PER DRAWINGS UNDER BASE
- 21 NO NOTE.
- (22) TYPICAL: CO NO2 SENSORS ARE LOW VOLTAGE THRU GAS DETECTION PANEL. LOW VOLTAGE WIRING BY GAS DETECTION CONTRACTOR. PROVIDE BOXES AND 1/2" EMT CONDUIT UP TO BOTTOM OF JOISTS. CO SENSOR LOCATED APPROXIMATELY 5' AFF. NO2 SENSOR LOCATED APPROXIMATELY 18" BELOW CEILING. VERIFY LOCATIONS.
- 23 NG SENSORS ARE LOW VOLTAGE THRU GAS DETECTION PANEL. LOW VOLTAGE WIRING BY GAS DETECTION CONTRACTOR. PROVIDE BOX WITH 1/2" BUSHING FOR NG SENSOR. $\langle 24 \rangle$ PRV-3 RUNS CONTINUOUSLY.
- 25 PROVIDE 120V WEATHERPROOF STROBE (AMSECO SLB120-75C) AND BACK BOX (AMSECO SBX-1). VERIFY LOCATION WITH FIRE DEPARTMENT.
- (26) PROVIDE A 30 AMP, L6-30R RECEPTACLE FOR UPS. VERIFY MOUNTING HEIGHT AND LOCATION WITH SYSTEMS CONTRACTOR.
- (27) FIRE ALARM SYSTEM TO MONITOR HIGH LEVEL CO, NO2, AND NG GAS DETECTION RELAY CONTACTS IN ROOMS 138, 140, AND 145 (SEVEN RELAY CONTACTS TOTAL). FIRE ALARM PANEL AND ANNUNCIATOR PANEL TO DISPLAY SMALL VEHICLE 140 HIGH CÓ LEVEL, SMALL VEHICLE 140 HIGH NO2 LEVEL, SMALL VEHICLE 140 HIGH NG LEVEL, LARGE VEHICLE 138 HIGH CO LEVEL, LARGE VEHICLE 138 HIGH NO2 LEVEL, LARGE VEHICLE 138 HIGH NG LEVEL, AND/OR WELD BAY 145 HIGH NG LEVEL.
- 28 PROVIDE EMERSON 570YC12ARCG1S SURGE PROTECTION DEVICE (125KA MODE/250KA PHASE, DISCONNECT SWITCH) OR EQUAL.

29 PHOTOVOLTAIC PANELS AND DISTRIBUTION SYSTEM - ALTERNATE BID #8: PROVIDE 225 AMP CIRCUIT BREAKER (MUST BE LISTED AS A BACK FED DEVICE) IN PANEL MDP. PROVIDE FEEDER TO SOLAR PANEL EQUIPMENT ON ROOF. PROVIDE THREE 4" CONDUIT SLEEVES THRU ROOF FOR SOLAR PANEL CONTROLS. VERIFY LOCATION WITH SOLAR CONTRACTOR.



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- (1) CNG VEHICLES WILL BE STORED IN THE LARGE VEHICLE STORAGE 138. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2. THIS INCLUDES THE MEZZANINE AREA OPEN TO LARGE VEHICLE STORAGE 138. LARGE VEHICLE STORAGE 138 MAY BE A VEHICLE REPAIR IN THE FUTURE. UP TO A LEVEL OF 18" AFF, THE LARGE VEHICLE STORAGE 138 AREA IS CONSIDERED A FUTURE CLASS 1, DIVISION 2 LOCATION. PROVIDE EXPLOSION PROOF FITTINGS, SEAL OFFS AND RIGID CONDUIT AS REQUIRED BY CODE. SEALS ARE NOT REQUIRED ON CONDUITS THAT PASS UNBROKEN THRU THE CLASS 1 AREA PER NEC SECTION 511 IF THE CONDUIT EXTENDS MORE THAN 12" ABOVE THE CLASSIFIED AREA.
- 2 TYPICAL: CEILING MOUNT STROBE AND HORN/STROBES SHALL BE MOUNTED LOWER THAN LIGHTS OR OTHER OBSTRUCTIONS (MAINTAIN LINE OF SIGHT).
- 3 PROVIDE CIRCUIT FOR PROCESS SANITARY TANK HIGH WATER ALARM. PROVIDE SWITCH OR HARDWIRE CONTROL PANEL AS REQUIRED. EXTEND CONDUIT AND CONTROL WIRING TO TANK FLOAT. MAKE CONNECTION TO FLOAT WIRING IN TANK MANHOLE AS REQUIRED. TANK IS 25' FROM BUILDING.
- $\langle 4 \rangle$ disconnect provided on hvac equipment by hvac contractor.
- 5 PROVIDE CONDUIT THRU ROOF FOR RADIO ANTENNA. RADIO ANTENNA WIRING BY SYSTEMS CONTRACTOR. VERIFY CONDUIT SIZE AND LOCATION. ROOFING CONTRACTOR TO PROVIDE BOOT OR POCKET AS REQUIRED.
- 6 MOUNT TRANSFORMER NEAR JOIST AREA AND BELOW TOP 18" OF CEILING SPACE.

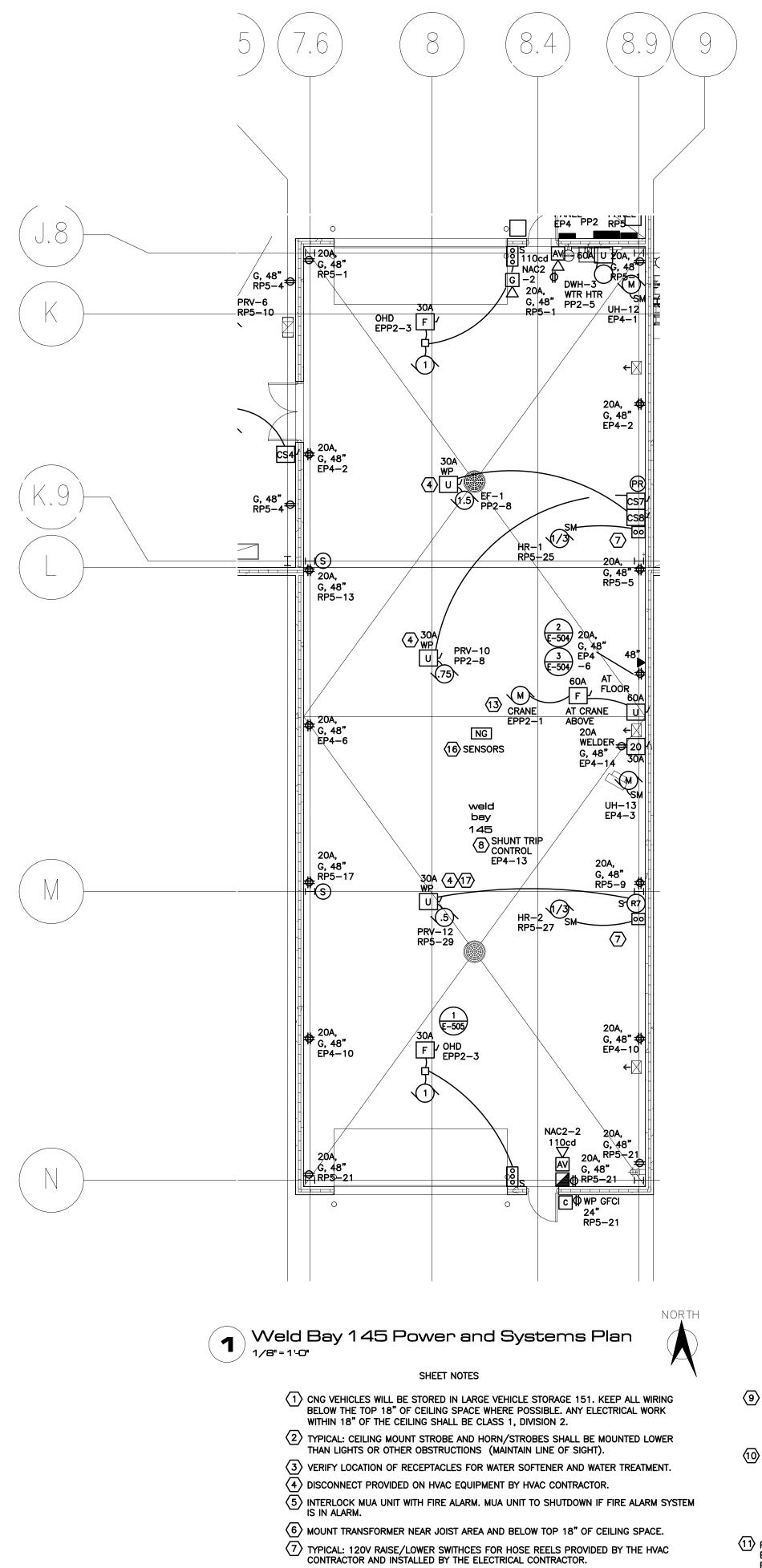
 $\langle 7 \rangle$ Building Electrical Contractor to provide Panel FI, transformer and feeder IN BASE BID. FUEL ISLAND CONTRACTOR TO PROVIDE ALL FUEL ISLAND EQUIPMENT AND RUN ALL CONDUIT AND CIRCUITS FROM PANEL FI AS REQUIRED UNDER ALTERNATE BID #2.

 $\langle 8 \rangle$ PRV-6 RUNS CONTINUOUSLY.

- (9) TYPICAL: CO NO2 SENSORS ARE LOW VOLTAGE THRU GAS DETECTION PANEL. LOW VOLTAGE WIRING BY GAS DETECTION CONTRACTOR. PROVIDE BOXES AND 1/2" EMT CONDUIT UP TO BOTTOM OF JOISTS. CO SENSOR LOCATED APPROXIMATELY 5' AFF. NO2 SENSOR LOCATED APPROXIMATELY 18" BELOW CEILING. VERIFY LOCATIONS.
- 10 NG SENSORS ARE LOW VOLTAGE THRU GAS DETECTION PANEL. LOW VOLTAGE WIRING BY GAS DETECTION CONTRACTOR. PROVIDE BOX WITH 1/2" BUSHING FOR NG SENSOR. MOUNT BOX TO SIDE OF JOIST SO BOX AND SENSOR ARE NO LOWER THAN BOTTOM OF JOISTS (TO CLEAR CRANE).
- (1) GENERAL CONTRACTOR TO PROVIDE GUARDS OR RAILS IN FRONT OF ELECTRICAL EQUIPMENT.
- 12 VEHICLE PARKING CRANE: ELECTRICAL CONTRACTOR TO PROVIDE FEEDER INCLUDING DISCONNECT AT CRANE IN BASE BID. PROVIDE FINAL CONNECTION FROM CRANE DISCONNECT TO CRANE UNDER ALTERNATE BID #7.







(8) INTERLOCK WELDER RECEPTACLE AND ALL OTHER WELD BAY 145 RECEPTACLE SHUNT TRIP CIRCUIT BREAKERS IN PANELS RP5 AND EP4 WITH CO/NO2/NG SENSORS IN WELD BAY. PROVIDE INTERFACE RELAYS AS REQUIRED.

(9) INFORMATIONAL BID A - WELL: PROVIDE CIRCUIT BREAKER IN PANEL EPP1 AND FEEDER TO WELL VARIABLE FREQUENCY DRIVE (VFD) WITH DISCONNECT. PROVIDE JB OR TROUGH AT WELL VFD WITH INSULATED CONNECTORS AND TAP FEEDER SIZE DOWN IF FEEDER CONDUCTORS ARE TOO LARGE FOR VFD LUGS. WELL VFD UNIT BY PLUMBING CONTRACTOR. WIRING FROM VFD UNIT TO WELL PUMP BY WELL CONTRACTOR.

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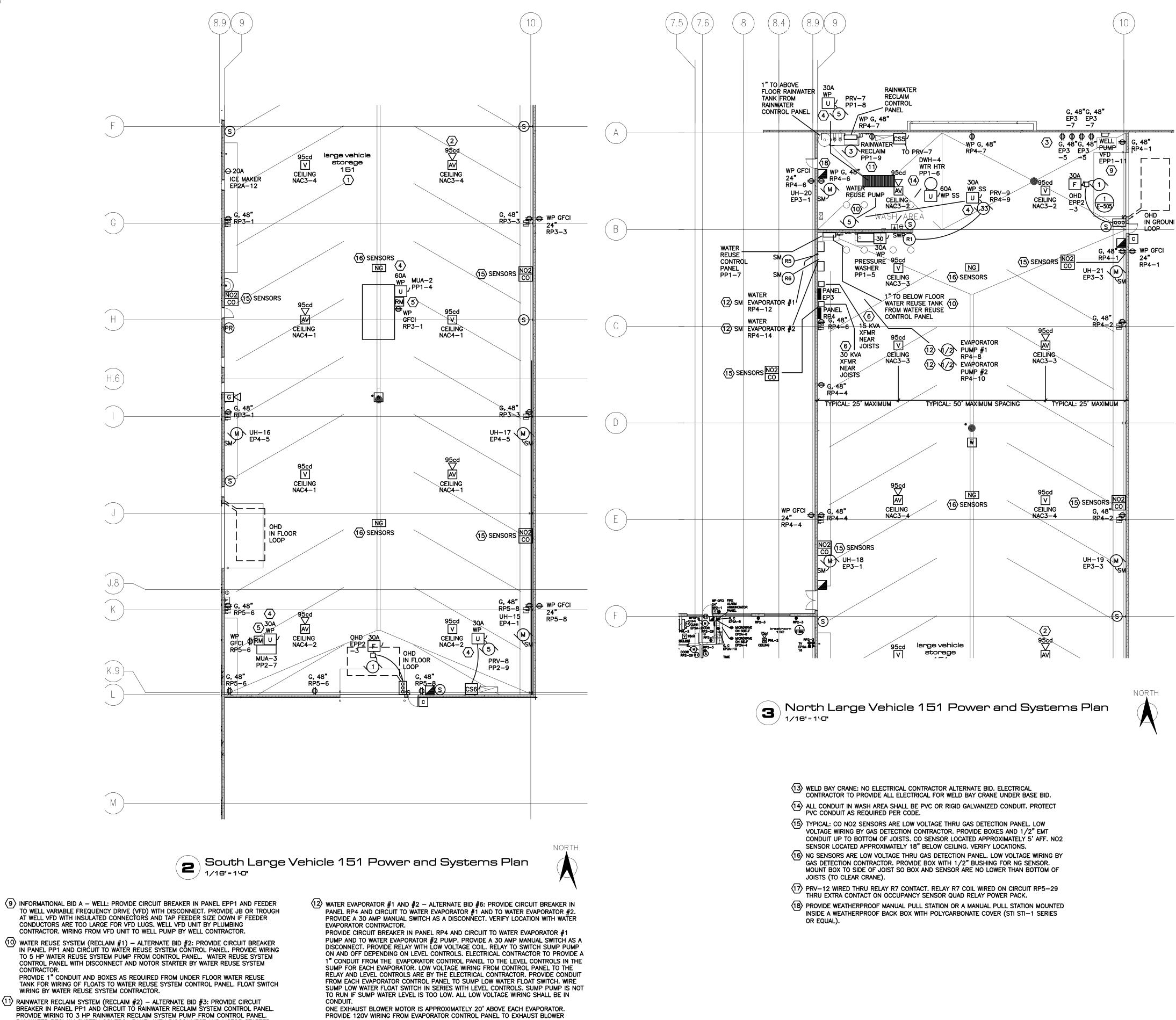
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- CONTROL PANEL WITH DISCONNECT AND MOTOR STARTER BY WATER REUSE SYSTEM CONTRACTOR.
- WIRING BY WATER REUSE SYSTEM CONTRACTOR. (1) RAINWATER RECLAIM SYSTEM (RECLAIM #2) – ALTERNATE BID #3: PROVIDE CIRCUIT BREAKER IN PANEL PP1 AND CIRCUIT TO RAINWATER RECLAIM SYSTEM CONTROL PANEL. PROVIDE WIRING TO 3 HP RAINWATER RECLAIM SYSTEM PUMP FROM CONTROL PANEL. RAINWATER RECLAIM SYSTEM CONTROL PANEL WITH DISCONNECT AND MOTOR STARTER BY RAINWATER RECLAIM SYSTEM CONTRACTOR. PROVIDE 1" CONDUIT AND BOXES AS REQUIRED FROM RAINWATER RECLAIM SYSTEM ABOVE GROUND TANK TO CONTROL PANEL FOR FLOAT SWITCH WIRING. FLOAT SWITCH WIRING BY RAINWATER RECLAIM SYSTEM CONTRACTOR.

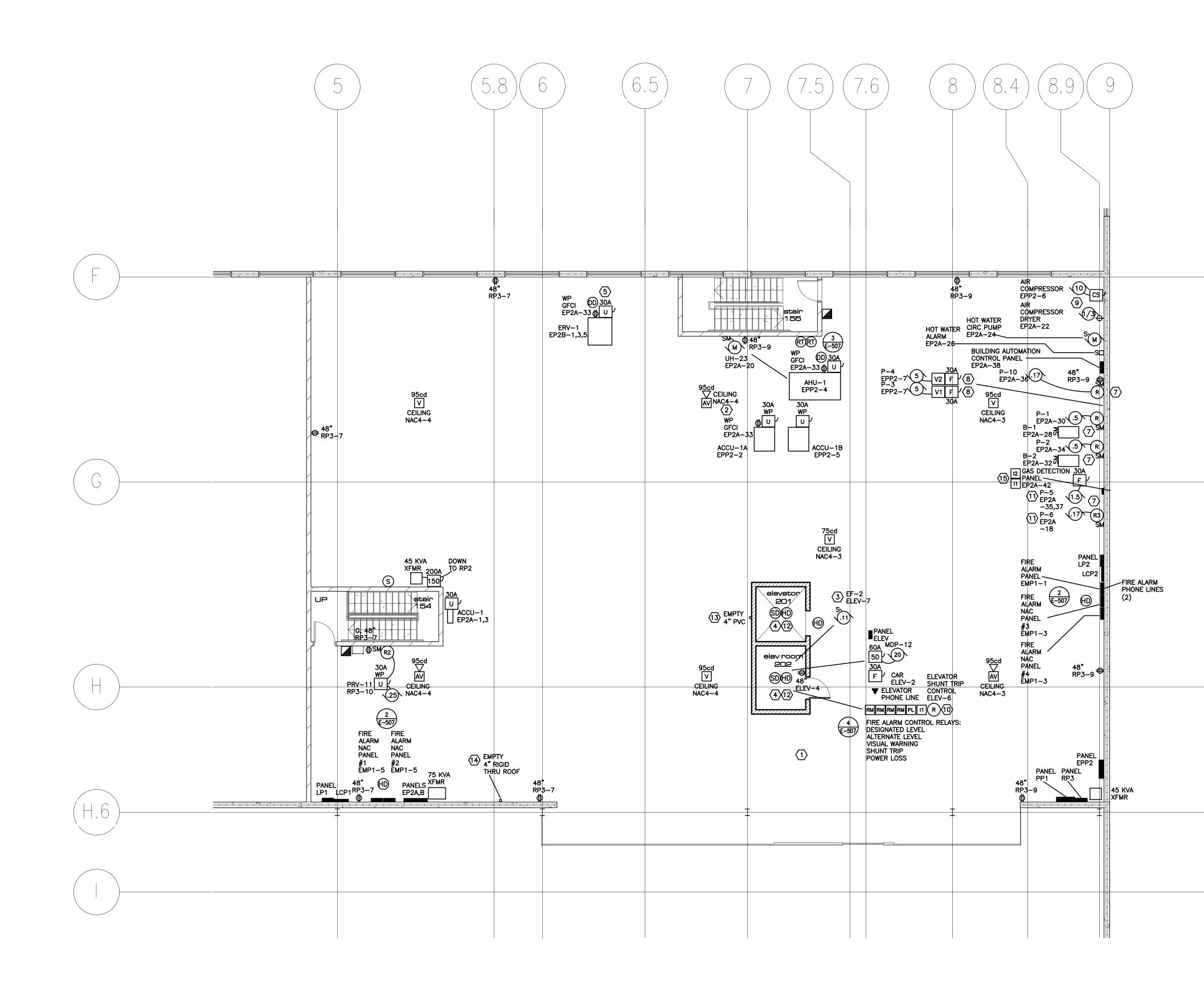


MOTOR AT EACH UNIT.

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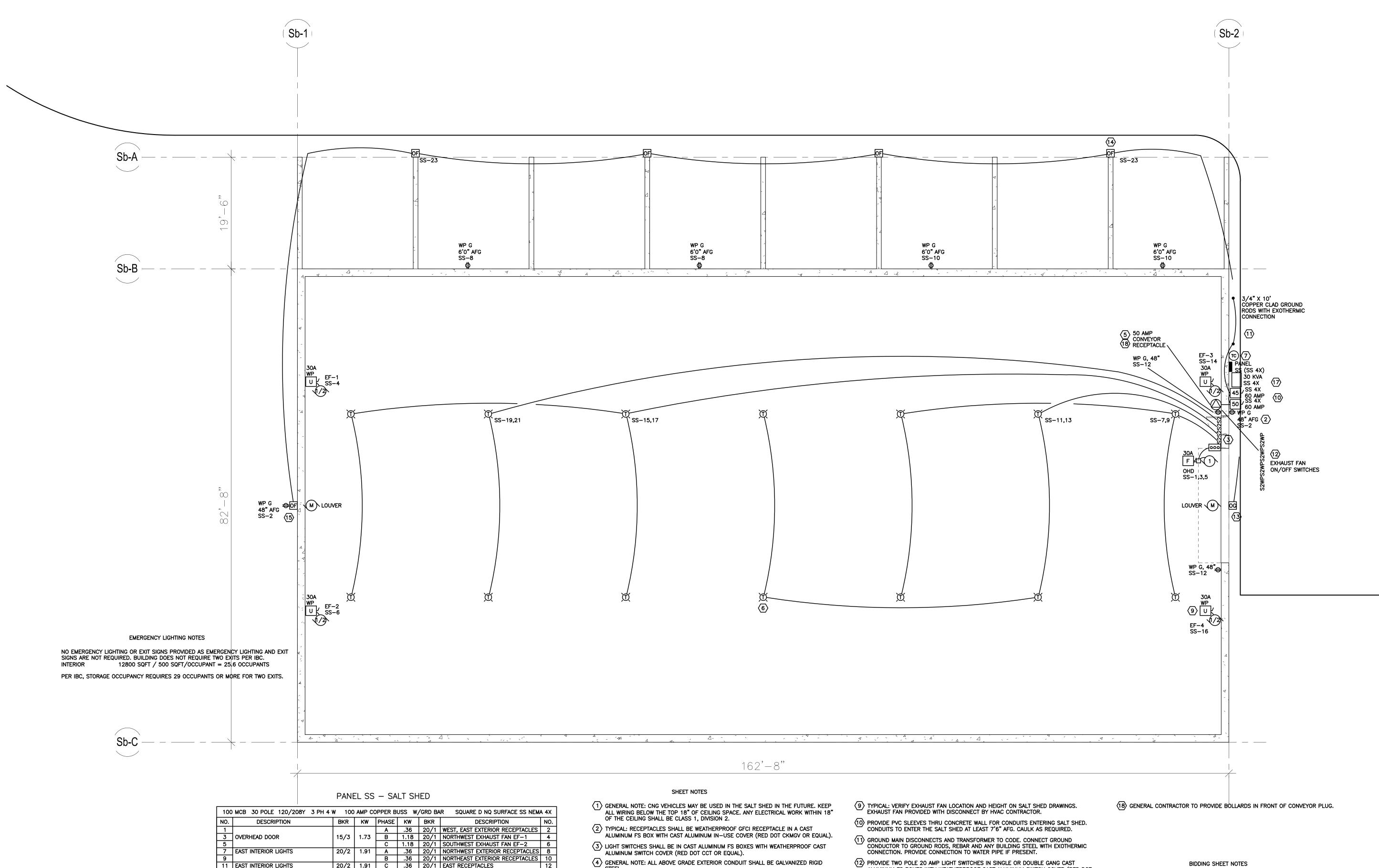


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- PROVIDE 4" RIGID GALVANIZED CONDUIT FROM 2'6" BELOW THE CEILING DECK TO 2' ABOVE THE ROOF FOR ANTENNA. VERIFY LOCATION.

- (15) FIRE ALARM SYSTEM TO MONITOR HIGH LEVEL CO, NO2, NG GAS DETECTION RELAY CONTACTS IN ROOM 151 (THREE RELAY CONTACTS TOTAL). FIRE ALARM PANEL AND ANNUNCIATOR PANEL TO DISPLAY LARGE VEHICLE 151 HIGH CO LEVEL, LARGE VEHICLE 151 HIGH NO2 LEVEL, AND/OR LARGE VEHICLE 151 HIGH NG LEVEL.
- (13) PROVIDE 4" PVC CONDUIT FROM BOTTOM OF JOISTS DOWN TO DATA ROOM. VERIFY LOCATION WITH SYSTEMS CONTRACTOR. PVC CONDUIT MUST BE BELOW TOP 18" OF CEILING SPACE ON THE MEZZANINE.
- EP1-6), UH-10 (CIRCUIT EP4-1), UH-11 (CIRCUIT EP4-3), UH-12 (CIRCUIT EP4-1), UH-13 (CIRCUIT EP4-3) AND UH-22 (CIRCUIT EP2A-2). (12) ELEVATOR: NO ELECTRICAL CONTRACTOR ALTERNATE BID. ELECTRICAL CONTRACTOR TO PROVIDE ALL ELECTRICAL AND FIRE ALARM FOR ELEVATOR PER DRAWINGS UNDER BASE BID.
- 138, WELD BAY 145 AND PARTS 137. PROVIDE CIRCUIT BREAKER AND FROM PANEL EP2 AND FUSE DISCONNECT FOR PUMP P-5. PUMP P-5 HAS AN ECM MOTOR WITH BUILT IN SPEED CONTROL. LOW VOLTAGE SPEED CONTROL BY HVAC CONTRACTOR. PROVIDE CIRCUIT BREAKER IN PANEL EP2 AND MANUAL SWITCH, RELAY AND CIRCUIT TO PUMP P-6. LOW VOLTAGE RELAY COIL WIRING BY HVAC CONTRACTOR. ALTERNATE #5 INCLUDES THE DEDUCT OF UNIT HEATERS UH-5 (CIRCUIT EP1-4), UH-6 (CIRCUIT EP1-4), UH-7 (CIRCUIT EP2A-20), UH-8 (CIRCUIT EP1-6), UH-9 (CIRCUIT
- 10 PROVIDE RELAY AS REQUIRED TO INTERFACE FIRE ALARM WITH ELEVATOR SHUNT TRIP CIRCUIT BREAKER. 11 RADIANT FLOORING PUMPS P-5 AND P-6 - ALTERNATE BID #5: ADD OR DEDUCT TO ADD PUMPS P-4 AND P-5 AND DEDUCT UNIT HEATERS IN LARGE VEHICLE STORAGE
- (9) AIR COMPRESSOR PROVIDED WITH COMBINATION STARTER OR DISCONNECT AND STARTER. ELECTRICAL CONTRACTOR TO PROVIDE POWER TO UNIT.
- 8 PUMP P-3 VFD (V1) AND P-4 VFD (V2) PROVIDED BY HVAC CONTRACTOR. ELECTRICAL CONTRACTOR TO INSTALL AND PROVIDE FUSED DISCONNECTS AND POWER WIRING. FUSE SIZE PER VFD MANUFACTURER. VERIFY BEST LOCATION. LOW VOLTAGE WIRING AND VFD PROGRAMMING BY HVAC CONTRACTOR.
- 7 PUMP RELAY PROVIDED BY HVAC CONTRACTOR. HVAC CONTRACTOR TO PROVIDE LOW VOLTAGE CONTROL WIRING. ELECTRICAL CONTRACTOR TO INSTALL AND PROVIDE POWER WIRING. ELECTRICAL CONTRACTOR TO PROVIDE MANUAL SWITCH AS A DISCONNECT. VERIFY BEST LOCATION FOR DISCONNECT.
- 6 PROVIDE 3/4" CONDUIT FROM BOTTOM OF JOIST AREA TO FIRE ALARM PANEL FOR PHONE LINES. PHONE LINES BY SYSTEMS CONTRACTOR.
- $\langle 5 \rangle$ disconnect provided on hvac equipment by hvac contractor.
- PROVIDED WITH SPEED SWITCH BY HVAC CONTRACTOR. WIRE 120V SPEED SWITCH AS REQUIRED. **4** VERIFY ALL ELECTRICAL EQUIPMENT LOCATIONS IN ELEVATOR SHAFT AND MACHINE ROOM WITH ELEVATOR CONTRACTOR.
- THAN LIGHTS OR OTHER OBSTRUCTIONS (MAINTAIN LINE OF SIGHT). (3) HVAC CONTRACTOR TO PROVIDE REVERSE ACTING LINE VOLTAGE THERMOSTAT FOR EF-2. ELECTRICAL CONTRACTOR TO INSTALL AND WIRE THERMOSTAT TO EF-2. EF-2
- 1 CNG VEHICLES WILL BE STORED IN THE LARGE VEHICLE STORAGE 138. THE MEZZANINE AREA IS OPEN TO LARGE VEHICLE STORAGE 138. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2. 2 TYPICAL: CEILING MOUNT STROBE AND HORN/STROBES SHALL BE MOUNTED LOWER
- SHEET NOTES



100	MCB 30 POLE 120/208Y 3 PH 4	W 100	AMP C	OPPER B	USS W,	/GRD BA	R SQUARE D NQ SURFACE SS NEM	4 4X
NO.	DESCRIPTION	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.
1				A	.36	20/1	WEST, EAST EXTERIOR RECEPTACLES	2
3	OVERHEAD DOOR	15/3	1.73	В	1.18	20/1	NORTHWEST EXHAUST FAN EF-1	4
5				С	1.18	20/1	SOUTHWEST EXHAUST FAN EF-2	6
7	EAST INTERIOR LIGHTS	20/2	1.91	Α	.36	20/1	NORTHWEST EXTERIOR RECEPTACLES	8
9				В	.36	20/1	NORTHEAST EXTERIOR RECEPTACLES	10
11	EAST INTERIOR LIGHTS	20/2	1.91	С	.36	20/1	EAST RECEPTACLES	12
13				Α	1.18	20/1	NORTHEAST EXHAUST FAN EF-3	14
15	WEST INTERIOR LIGHTS	20/2	1.91	В	1.18	20/1	SOUTHEAST EXHAUST FAN EF-4	16
17				С	I	20/1	SPARE	18
19	WEST INTERIOR LIGHTS	20/2	.96	Α	I	20/1	SPARE	20
21				В	-	15/1	SPARE	22
23	EXTERIOR LIGHTS, TIME CLOCK	20/1	.32	С	I	20/1	SPARE	24
25	SPARE	20/1	-	A	1	20/1	SPARE	26
27	SPARE	20/1	-	В	1	20/1	SPARE	28
29	SPARE	20/1	-	С	_	20/1	SPARE	30

MAIN CIRCUIT BREAKER 22 KAIR MINIMUM BRANCH CIRCUIT BREAKERS 10 KAIR MINIMUM

OF	n	OF		0	
1	1	14			
			r] - -	
	_2		2		
- WP G 6'0" AFG	L		WP G 6'0" AFG		4 WP G 6'0" AFG
6'0" AFG SS−8 ¢			6'0" AFG SS-8 0		6'0" AFG SS-10 Φ

- GENERAL NOTE: ALL ABOVE GRADE EXTERIOR CONDUIT SHALL BE GALVANIZED RIGID STEEL. PVC CONDUIT MAY BE USED BELOW GRADE PER LOCAL CODE. PVC CONDUIT MAY BE USED INSIDE THE SALT DOME WHERE IT IS NOT SUBJECT TO DAMAGE AND IS ALLOWED BY LOCAL CODE. PROVIDE PROTECTION OR USE GALVANIZED
- RIGID CONDUIT. 5 provide hubbell receptacle #CS8169, 50A, 480V, 3 PH, 4 W in FD box with
- HUBBELL #7770 COVER FOR CONVEYOR. $\langle 6 \rangle$ TYPICAL: MOUNT TYPE T LIGHTS FROM JOISTS. USE STAINLESS STEEL HARDWARE AND STAINLESS STEEL SAFETY CHAIN OR CABLE. PROVIDE WOOD BLOCKING AS REQUIRED.
- 7 PROVIDE INTERMATIC ET8015C, 7 DAY, 30 AMP SPST CONTACT, ASTRONOMICAL TIME CLOCK WITH BATTERY BACK UP. PROGRAM RELAY CONTACT FOR DUSK TO DAWN OPERATION OF SALT SHED EXTERIOR LIGHTING. MOUNT INSIDE A STAINLESS STEEL ENCLOSURE.
- (8) GENERAL NOTE: PANELS SHALL HAVE STAINLESS STEEL NEMA 4X ENCLOSURES OR BE MOUNTED INSIDE STAINLESS STEEL NEMA 4X ENCLOSURES.

- LOUVER DAMPER CONTROL.
- (13) MOUNT TYPE OH LIGHT APPROXIMATELY 30' AFG.

ALUMINUM FS BOXES WITH WEATHERPROOF CAST ALUMINUM SWITCH COVER (RED DOT CCT OR EQUAL) AS ON/OFF SWITCHES FOR EXHAUST FANS. HVAC CONTRACTOR TO WIRE LOW VOLTAGE THRU ONE SET OF CONTACTS TO TURN ON LOW VOLTAGE LOUVER DAMPERS (TURNING ON EF-1 AND/OR EF-2 SHALL TURN ON THE EAST DAMPER. TURNING ON EF-3 AND/OR EF-4 SHALL TURN ON THE WEST DAMPER). PROVIDE SEPARATE CONDUIT FROM BOXES UP TO BOX AT CEILING AREA FOR LOW VOLTAGE

(14) MOUNT NORTH TYPE OF LIGHTS CENTERED APPROXIMATELY 17' AFG.

(15) MOUNT WEST TYPE OF LIGHT APPROXIMATELY 17' AFG.

(16) GENERAL NOTE: ALL SALT SHED LIGHT SWITCHES AND RECEPTACLES SHALL BE 20 AMP INDUSTRIAL GRADE UNLESS NOTED OTHERWISE.

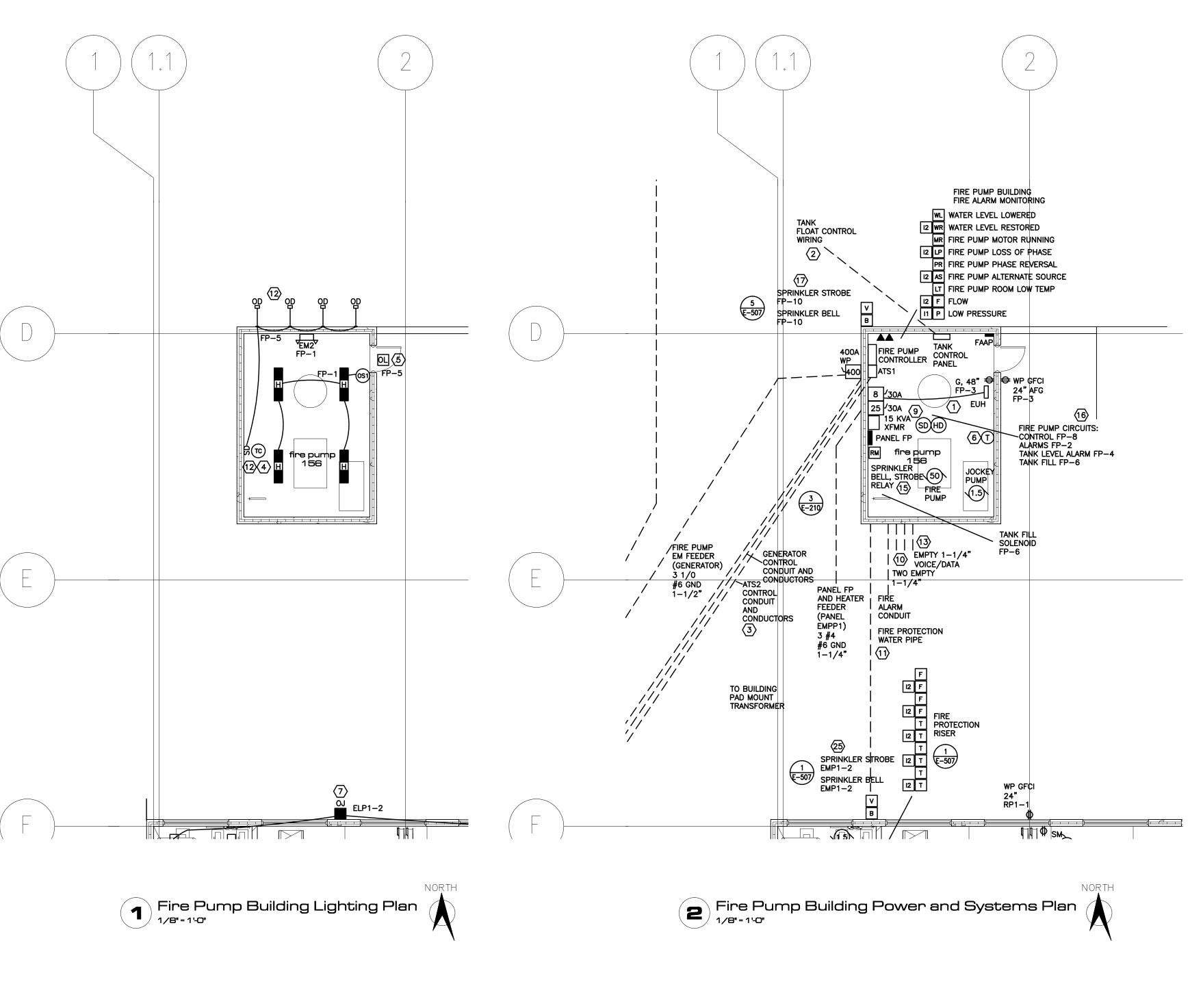
(17) GENERAL CONTRACTOR TO PROVIDE BOLLARDS OR GUARD RAIL IN FRONT OF ELECTRICAL EQUIPMENT. MAINTAIN 3' 6" WORKING SPACE CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT.

BIDDING SHEET NOTES

SALT STRUCTURE IS ALTERNATE BID #5. SEE NOTES ON SHEET E-101 AND E-505 FOR ELECTRICAL WORK DONE UNDER BASE BID AND ALTERNATE BID #5.



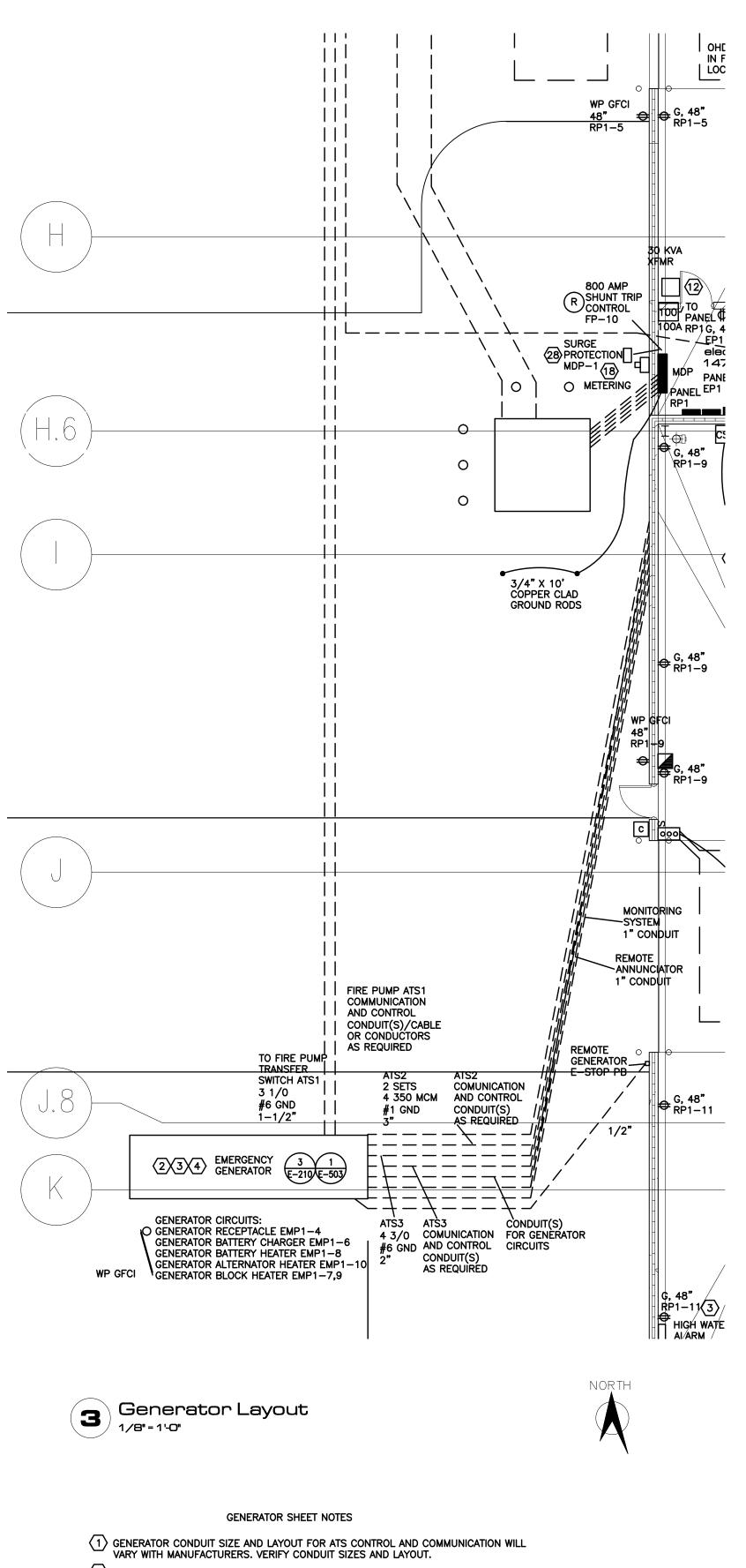
LEARANCE IN FRONT Salt Building Electrical Plan kuenyarch.com © 2015 Kueny Architects, L.L.C. - All Rights Reserved Dane County - Dane County Highway Facility 3562 County Highway AB, Cottage Grove, WI 53558 January 12, 2015



FIRE PUMP BUILDING SHEET NOTES

- 1 FIRE PUMP ROOM AND BUILDING SHALL BE WIRED TO ALL APPLICABLE CODES INCLUDING THE NATIONAL ELECTRICAL CODE ARTICLE 695 (FIRE PUMPS) AND NFPA 20 AND 110. $\langle 2 \rangle$ provide conduit and wiring from tank control panel to floats in tank. Verify
- TANK LOCATION ON PLUMBING PLANS. CONNECT WIRING TO TANK CONTROL PANEL PER TANK CONTROL DRAWING.
- 3 800 AMP OPTIONAL EMERGENCY POWER AUTOMATIC TRANSFER SWITCH ATS2 SHALL BE INTERLOCKED WITH FIRE PUMP AUTOMATIC TRANSFER SWITCH ATS1. AS FIRE PUMP ATS1 IS MOVING FROM NORMAL POWER TO ALTERNATE EMERGENCY POWER, ATS2 WILL MOVE TO A NEUTRAL POSITION TO REMOVE OPTIONAL EMERGENCY LOADS FROM THE EMERGENCY GENERATOR.
- 4 ASTRONOMICAL TIME CLOCK FOR EXTERIOR LIGHTING SHALL BE AN INTERMATIC ET8215C WITH TWO INDEPENDANT CONTACTS AND BATTERY BACK UP OR EQUAL. WIRE SIGN FLOOD LIGHTS THRU ONE CONTACT AND ENTRANCE LIGHT OVER DOOR ON ANOTHER CONTACT. PROGRAM SIGN FLOOD CONTACT FOR DUSK TO DAWN OR DUSK TO TIME OPERATION PER OWNER. PROGRAM ENTRANCE LIGHT FOR DUSK TO DAWN OPERATION.
- 5 CENTER TYPE OL LIGHT APPROXIMATELY 12' AFG.
- 6 PROVIDE A THERMOSTAT FOR FIRE ALARM LOW ROOM TEMPERATURE (TEMP ALERT MODEL TA-2HL OR EQUAL MOUNTED IN A HINGED COVER ENCLOSURE).
- (7) GENERAL NOTE: ALL FIRE ALARM AND CONTROL WIRING SHALL BE IN GALVANIZED RIGID CONDUIT.
- (8) GENERAL NOTE: GENERATOR POWER AND CONTROL WIRING SHALL BE INDEPENDENT OF ALL OTHER WIRING AND SHALL BE ENCASED IN 2" OF CONCRETE, BE PROTECTED BY A MINIMUM 2 HOUR RATED ASSEMBLY OR BE A LISTED ELECTRICAL CIRCUIT PROTECTIVE SYSTEM WITH A MINIMUM 2 HOUR RATING PER NEC.
- 9 PROVIDE A SEALED, WALL MOUNT 15 KVA TRANSFORMER WITH 2 5% FULL CAPACITY TAPS.
- PROVIDE TWO EMPTY 1-1/4" CONDUITS FROM BOTTOM OF JOIST IN FIRE PUMP BUILDING TO BOTTOM OF JOISTS INSIDE MAIN BUILDING AND CAP. PROVIDE PULL STRINGS.
- (1) GROUND WATER PIPE AT ENTRY TO BUILDING. JUMP GROUND AROUND ANY METER OR VALVE AT ENTRY TO BUILDING.

- (12) MOUNT TYPE OD SIGN FLOOD LIGHTS APPROXIMATELY 2' ABOVE TOP OF SIGN LETTERS. ADJUST ANGLE OF LIGHTS TO SIGN LETTERS FOR BEST COVERAGE. PROVIDE 0-10VDC LED DRIVER DIMMER CONTROL FOR SIGN FLOODS (LEVITON ILLUMATECH SERIES OR EQUAL).
- (13) PROVIDE AN EMPTY 1-1/4" CONDUIT FROM BOTTOM OF JOISTS IN FIRE PUMP BUILDING TO BOTTOM OF JOISTS INSIDE MAIN BUILDING FOR VOICE/DATA. PROVIDE PULL STRINGS.
- PROVIDE 3/4" CONDUIT TO BOTTOM OF JOISTS FROM FIRE PUMP CONTROL EQUIPMENT OR SYSTEMS BOXES AS REQUIRED . VERIFY SYSTEMS BOX LOCATIONS WITH FIRE PUMP CONTRACTOR.
- (15) PROVIDE 120V CIRCUIT TO FIRE PUMP BUILDING SPRINKLER BELL AND STROBE THRU SUPERVISED CONTROL RELAY. PROVIDE INTERFACE RELAY IF NEEDED.
- (16) PROVIDE CONTROL CIRCUITS AS REQUIRED. VERIFY LOCATIONS WITH FIRE PROTECTION CONTRACTOR.
- (17) PROVIDE 120V WEATHERPROOF STROBE (AMSECO SLB120-75C) AND BACK BOX (AMSECO SBX-1). VERIFY LOCATION WITH FIRE DEPARTMENT.
- (18) PROVIDE CT METERING PER ALLIANT ENERGY REQUIREMENTS.

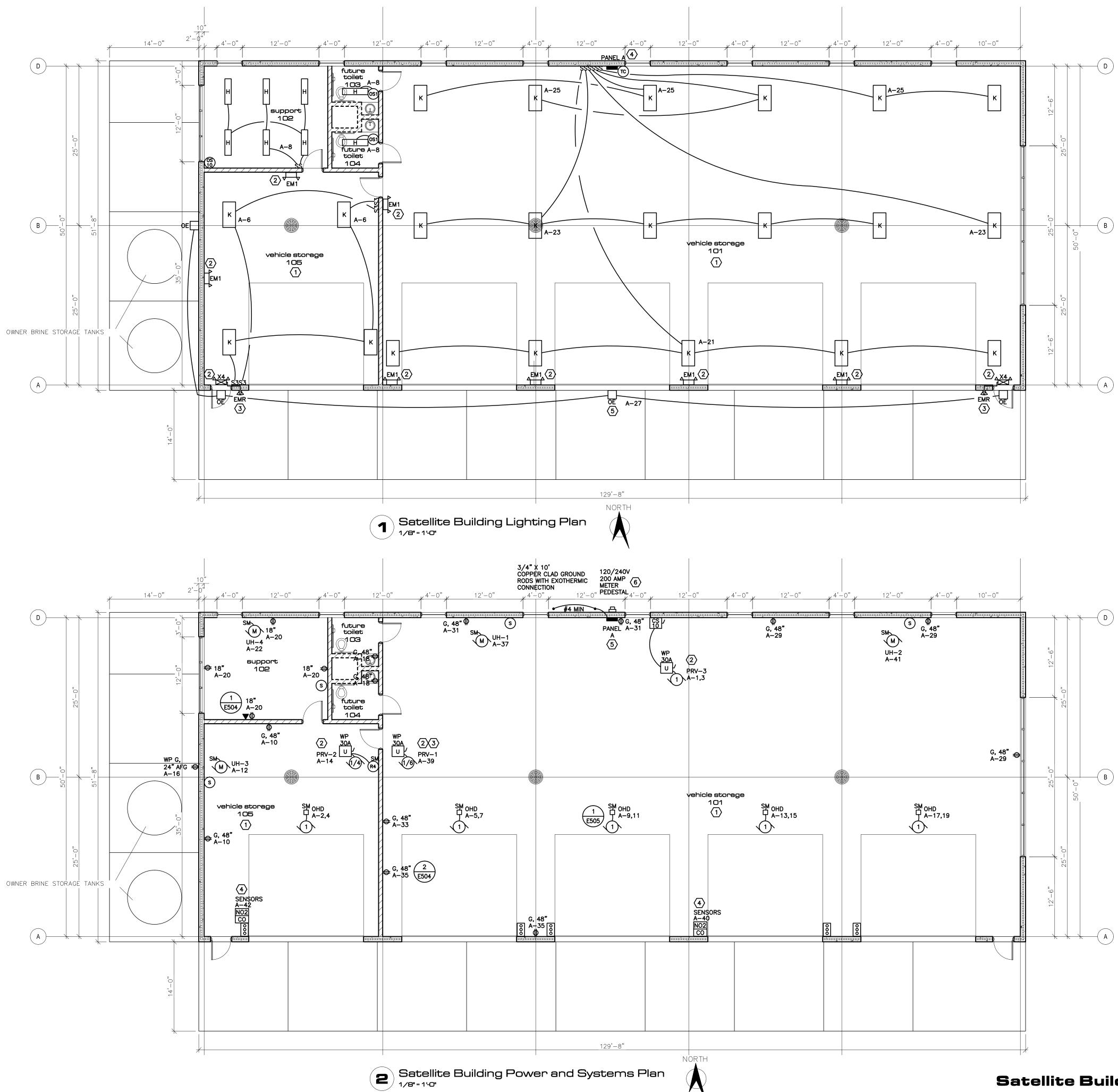


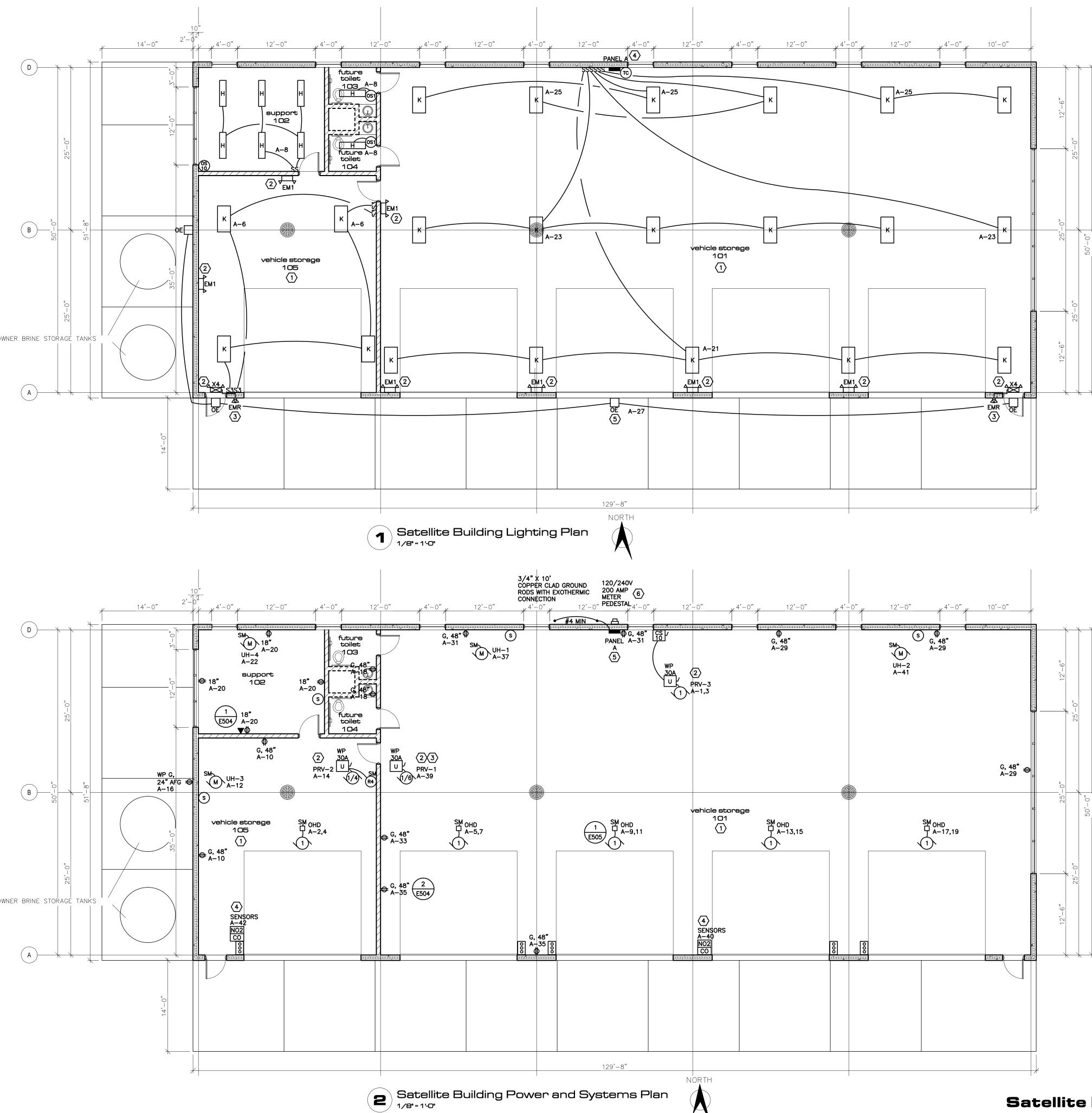
- 2 GENERATOR ENCLOSURE MUST BE 20' FROM UTILITY PAD MOUNT TRANSFORMER OR METERING.
- $\overline{3}$ informational bid E generator price: provide a price for the generator ONLY. PRICE DOES NOT INCLUDE LABOR OR OTHER GENERATOR EQUIPMENT (TRANSFER
- SWITCHES, ETC ...). $\langle 4 \rangle$ GENERAL CONTRACTOR TO PROVIDE BOLLARDS AROUND GENERATOR PER SHEET E-101.



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3562 County Highway AB, Cottage Grove, WI 53558 January 12, 2015





LIGHTING NOTES

- (1) CNG VEHICLES MAY BE STORED IN THE VEHICLE STORAGE AREAS IN THE FUTURE. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2.
- 2 MOUNT TYPE X4 AND EM1 EMERGENCY LIGHTS WITH CENTER OF EMERGENCY LIGHT 10' AFF.

(3) MOUNT TYPE EMR LIGHT FIXTURE 8'6" AFG.

(B)

В

—(A)

- $\langle 4 \rangle$ ASTRONOMICAL TIME CLOCK FOR EXTERIOR LIGHTING SHALL BE AN INTERMATIC ET8015C WITH BATTERY BACK UP OR EQUAL. SET ASTRONOMICAL CLOCK FOR DUSK TO DAWN OPERATION.
- 5 TYPICAL: CENTER TYPE OA LIGHTS APPROXIMATELY 21'11" AFG TO CENTER THE LIGHTS IN THE SPACE ABOVE THE OVERHEAD DOORS.
- (6) GENERAL NOTE: SET ROOM 102, 103 AND 104 OCCUPANCY SENSOR TIME DELAY TO 5 MINUTES.
- $\langle 7 \rangle$ general note: set room 101 and 105 light fixture occupancy sensor time delay to 10 minutes.

EMERGENCY LIGHTING NOTES

		XITS SIGNS PROVIDED. EME SPACE AND THE BUILDING AS	
REQUIRE TWO EXITS			
VEHICLE 101	5000 SQFT	500 SQFT/OCCUPANT	10 OCCUPANTS
SUPPORT 102	310 SQFT	100 SQFT/OCCUPANT	3.1 OCCUPANTS
VEHICLE 101	118 SQFT	500 SQFT/OCCUPANT	.236 OCCUPANTS
VEHICLE 101	913 SQFT	500 SQFT/OCCUPANT	1.826 OCCUPANTS
			15.162 OCCUPANTS

PER IBC, STORAGE OCCUPANCY REQUIRES 29 OCCUPANTS AND BUSINESS OCCUPANCY REQUIRES 49 OCCUPANTS OR MORE FOR TWO EXITS.

POWER AND SYSTEMS NOTES

- (1) CNG VEHICLES MAY BE STORED IN THE VEHICLE STORAGE AREAS IN THE FUTURE. KEEP ALL WIRING BELOW THE TOP 18" OF CEILING SPACE WHERE POSSIBLE. ANY ELECTRICAL
- WORK WITHIN 18" OF THE CEILING SHALL BE CLASS 1, DIVISION 2. $\langle 2 \rangle$ disconnect provided on equipment by hvac contractor.
- $\langle 3 \rangle$ PRV-1 RUNS CONTINUOUSLY.
- 4 TYPICAL: PROVIDE 120V POWER TO TRANSFORMERS, SWITCH AS DISCONNECT, CONDUIT AND BOXES AS REQUIRED AT ALL CO/NO2 LOCATIONS. LOW VOLTAGE TRANSFORMERS, CO SENSOR, NO2 SENSOR AND LOW VOLTAGE WIRING BY HVAC CONTRACTOR. CO SENSOR LOCATED APPROXIMATELY 5' AFF. NO2 SENSOR LOCATED APPROXIMATELY 18" BELOW CEILING. VERIFY ALL LOCATIONS.
- 5 PROVIDE #4 MINIMUM FROM PANEL A TO GROUND RODS, REBAR AND BUILDING STEEL WITH EXOTHERMIC CONNECTION TO CODE. NO METAL WATER PIPE IS RUN TO THE BUILDING.
- 6 COORDINATE ELECTRICAL SERVICE WITH ADAMS-COLUMBIA ELECTRIC COOPERATIVE. ADAMS-COLUMBIA ELECTRIC COOPERATIVE TO PROVIDE UNDERGROUND SERVICE LATERAL TO METER PEDESTAL.

GENERAL SHEET NOTES

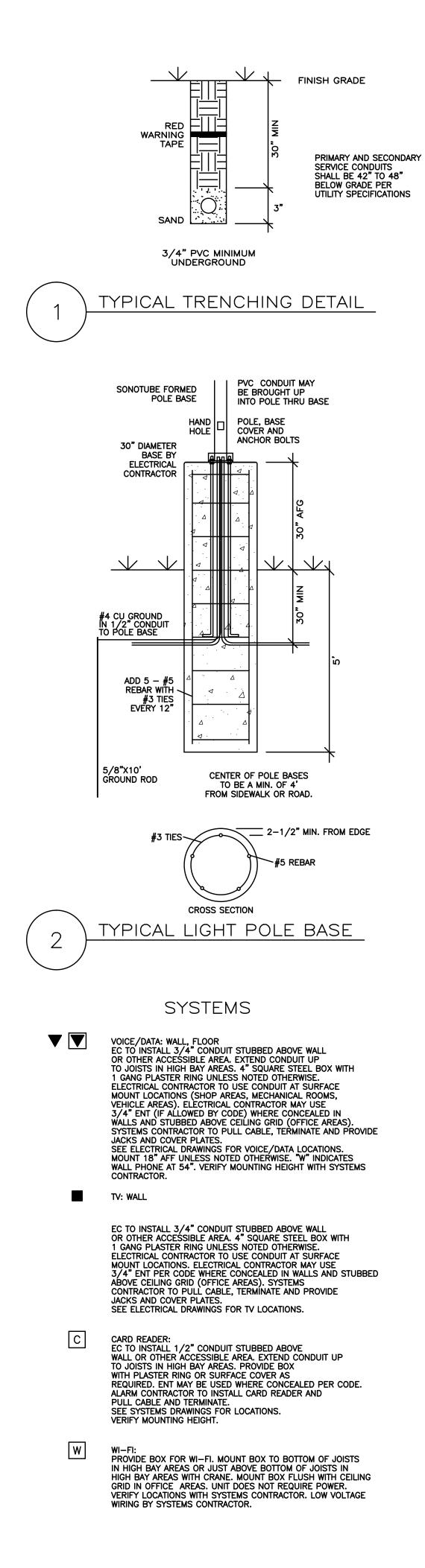
- 1. ALL SATELLITE BUILDING ELECTRICAL WORK AND MATERIALS ARE ALTERNATE BID #6.
- 2. SEE ARCHITECTURAL PLANS FOR SITE PLAN.

200	MCB 42 POLE 120/240V 1	PH 3 W	225	AMP CO	PPER BL	JSS N	N/GRD BAR SQUARE D NQ SURFA	CE
NO.	DESCRIPTION	BKR	ĸw	PHASE	KW	BKR	DESCRIPTION	NO.
1	N VEHICLE STORAGE 101 PRV-3	15/2	1.92	A	1.92	15/2	VEHICLE STORAGE 105 OHD	2
3		-		B				4
5	W VEHICLE STORAGE 101 OHD	15/2	1.92	A	.94	20/1	VEHICLE STORAGE 105 LIGHTS	6
7				B	.38	20/1	SUPPORT, STORAGE ROOM LIGHTS	8
9	W CENTER VEHICLE STORAGE 101	15/2	1.92	A	.36	20/1	VEHICLE STORAGE 105 RECEPTACLES	10
11	OHD			B	.48	15/1	VEHICLE STORAGE 105 UH-3	12
13	E CENTER VEHICLE STORAGE 101	15/2	1.92	A	.70	15/1	VEHICLE STORAGE 105 PRV-2	14
15	OHD			B	.18	20/1	WEST EXTERIOR RECEPTACLE	16
17	E VEHICLE STORAGE 101 OHD	15/2	1.92	A	.36	20/1	STORAGE 103, 104 RECEPTACLES	18
19				B	.72	20/1	SUPPORT 102 RECEPTACLES	20
21	S VEHICLE STORAGE 101 LIGHTS	20/1	1.20	A	.24	15/1	SUPPORT 102 UH-4	22
23	CENTER VEHICLE STORAGE 101 LTS	20/1	1.33	B	-	20/1	SPARE	24
25	N VEHICLE STORAGE 101 LIGHTS	20/1	1.31	A	-	20/1	SPARE	26
27	EXTERIOR LIGHTS, TIME CLOCK	20/1	.16	B	-	20/1	SPARE	28
29	NE, E VEHICLE STORAGE 101 RECEP	20/1	.54	A	-	20/1	SPARE	30
31	NW VEHICLE STORAGE 101 RECEP	20/1	.36	B	-	20/1	SPARE	32
33	W VEHICLE STORAGE 101 RECEP	20/1	.18	A	-	20/1	SPARE	34
35	SW VEHICLE STORAGE 101 RECEP	20/1	.36	В	-	20/1	SPARE	36
37	NW VEHICLE STORAGE 101 UH-1	15/1	.48	A	-	20/1	SPARE	38
39	W VEHICLE STORAGE 101 PRV-1	15/1	.53	В	.18	15/1	VEHICLE STORAGE 101 CO/NO2 SENSORS	40
41	NE VEHICLE STORAGE 101 UH-2	15/1	.48	A	.18	15/1	VEHICLE STORAGE 105 CO/NO2 SENSORS	42
	MAIN CIRCUIT BREAKER 22 KAIR MININ	AL IM						_

PANEL A

MAIN CIRCUIT BREAKER 22 KAIR MINIMUM BRANCH CIRCUIT BREAKERS 10 KAIR MINIMUM





S	SINGLE POLE SWITCH-TO
S2	TWO POLE SWITCH-TOP
S3	THREE WAY SWITCH-TOP
Sd	DIMMER SWITCH-TOP OF
SL	LIGHTED SWITCH - LIGHT
SL3	LIGHTED THREE WAY SWITTOP OF BOX 48" AFF
ST	COMMERCIAL 30 MINUTE INTERMATIC EI205 SERIES
SWT	COMMERCIAL 2 HOUR SP INTERMATIC FD2H SERIES
Ф	DUPLEX RECEPTACLE OFFICE NEMA 5-15R,18 ALL OTHER AREAS NEMA
С	COUNTER MOUNT 6" ABO
В	BELOW COUNTER
G	GFCI
WP G	WEATHERPROOF GFCI WIT CAST ALUMINUM IN-USE
ΤV	1' BELOW CEILING
Ф	FLOOR DUPLEX RECEPTA
Ф	208V, 1 PHASE RECEPTA 18" AFF OFFICE, TOP OF
#	TWO DUPLEX RECEPTACL TOP OF BOX 48" AFF-SH
۲	CORD DROP RECEPTACLI GRIP, STRAIN RELIEF, BO
۲	QUAD CORD DROP RECE GRIP, STRAIN RELIEF, BO
SM	MANUAL MOTOR SWITCH
\bigcirc	208V RECEPTACLE WITH DISCONNECT-HEIGHT AS
	480V RECEPTACLE WITH DISCONNECT-HEIGHT AS
EC	ELECTRICAL CONTRACTOR
MC	MECHANICAL CONTRACTO
GC	GENERAL CONTRACTOR
WP	WEATHER PROOF

- H-TOP OF BOX 48" AFF -TOP OF BOX 48" AFF
- -TOP OF BOX 48" AFF OP OF BOX 48" AFF
- LIGHT ON W/LOAD-TOP 48" AFF
- Y_SWITCH LIGHT ON W/LOAD
- INUTE ELECTRONIC TIMER SWITCH SERIES OR EQUAL UR SPRING WOUND TIMER SWITCH SERIES OR EQUAL
- 5R,18" AFF UNLESS NOTED OTHERWISE NEMA 5-20R, TOP OF BOX 48" AFF SHOP "ABOVE COUNTER BACKSPLASH

- CEPTACLE NEMA 5-15R
- CEPTACLE OP OF BOX 48" AFF SHOP
- PTACLES NEMA 5-20R FF-SHOP, VENDING
- PTACLE. PROVIDE SO CORD, EF, BOX AND RECEPTACLE.
- RECEPTACLE. PROVIDE SO CORD, EF, BOX AND RECEPTACLE. VITCH PADLOCKABLE IN THE

WITH FUSIBLE HT AS INDICATED

- WITH FUSIBLE GHT AS INDICATED
- RACTOR RACTOR
- CS1/ MOTOR COMBINATION STARTER, FUSIBLE HAND-OFF-AUTO SEL. SW., PILOT LIGHT, STARTER SIZE AS INDICATED. ELECTRONIC OVERLOADS. TOP OF HANDLE NO MORE THAN 54" AFF. U / 30 AMP UNFUSED DISCONNECT-TOP OF HANDLE 30 AMP NO MORE THAN 54" AFF. 50 / 60 AMP FUSED DISCONNECT WITH 50 AMP FUSES 60 AMP P POWER BOX D DATA BOX SC LOW VOLTAGE SPEED CONTROL SWITCH F / INTERLOCKED DISCONNECT/RECEPTACLE CP CONTROL PANEL (1/2) 1/2 HP MOTOR EWC ELECTRIC WATER COOLER VIF VERIFY IN FIELD EWH ELECTRIC WATER HEATER EBB ELECTRIC BASEBOARD HEATER RH RADIENT HEATERS UH UNIT HEATER FC FAN COIL MUA MAKE UP AIR UNIT P PUMP IG ISOLATED GROUND NL NIGHT LIGHT (LC) LIGHTING CONTACTOR
- (P) PHOTOCELL
- TC TIME CLOCK
- R RELAY

SYMBOLS

- PULL STATION-OPERATING HANDLE NOT MORE THAN 48" AFF AV HORN/STROBE-80" AFF A HORN-80" AFF IVI STROBE-80" AFF WATER FLOW SWITCH T TAMPER SWITCH (DD) DUCT SMOKE DETECTOR (RT) REMOTE TEST STATION (CO) CO DETECTOR в SPRINKLER BELL/STROBE INDIVIDUAL ADDRESSABLE MODULE Ι RM INDIVIDUAL ADDRESSABLE RELAY MODULE PL POWER LOSS RELAY MODULE но DOOR HOLD OPEN
- MR FIRE PUMP MOTOR RUNNING
- LP FIRE PUMP LOSS OF PHASE
- FIRE PUMP PHASE REVERSAL PR
- AS FIRE PUMP ALTERNATE SOURCE LT LOW TEMPERATURE
- WL WATER LEVEL LOWERED
- WR WATER LEVEL RESTORED
- Ρ LOW PRESSURE
- GAS DETECTION HORN/STROBE PROVIDE BOX AND 1/2" EMT UP TO S DIST AREA. MOUNT BOX AT 5' AFF.

SF	FAN SPEED CONTROL SWITCH TOP 48" AFF
S	PROVIDE BOX AND 1/2" CONDUIT TO A BOTTOM OF JOIST IN HIGH BAY AREAS CEILING GRID IN OFFICE AREAS. IN LOV AREAS, CONDUIT SHALL BE RUN FROM THERMOSTAT TO THE HVAC EQUIPMENT SENSOR AND LOW VOLTAGE WIRING BY CONTRACTOR.
PR	PROVIDE BOX AND 1/2" CONDUIT TO A BOTTOM OF JOIST IN HIGH BAY AREAS CEILING GRID IN OFFICE AREAS. IN LOW AREAS, CONDUIT SHALL BE RUN FROM PRESSURE SENSOR TO THE HVAC EQU PRESSURE SENSOR AND LOW VOLTAGE HVAC CONTRACTOR.
CP	PROVIDE BOX (IF NEEDED) AND 3/4" UP TO CEILING FOR MUA CONTROL PAI VOLTAGE WIRING BY HVAC CONTRACTO
EX	EXPLOSION PROOF
EL	EMERGENCY LIGHTING CONTROL UNIT WATTSTOPPER ELCU-200 OR EQUAL.

LIGHT FIXTURE SCHEDULE											
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTAGE LAMP	° NO.	LAMP	BALLAST	AMPS	WATTS	MOUNT	NOTES
_A2	2X4 HIGH PERFORMANCE T8 PARABOLIC-STEP DIM	LITHONIA	2ES8P-2-32-MVOLT-BSNP-L841HT8	120/277 2		F032T8/841XPS/4100K	SYLVANIA HIGH EFFICIENCY QUICKSTEP PROSTART PSN QHES T8 STEP DIMMING, .88 BF, <10% THD	.46/.20	55/54	GRID	1
	2X2 HIGH PERFORMANCE T8 PARABOLIC	LITHONIA	2ES8P-2-U31-MVOLT-BPLP-L841HT8	277 2			G SYLVANIA HIGH EFFICIENCY QUICKTRONIC PROSTART PSX T8 XPS, .71 BF, <10% THD	.17	46	GRID	
			DOM6-LED-900L-40K-277-D06	277		LED		09		GRID	2
2	2X4 HIGH PERFORMANCE T8 PARABOLIC		2ES8P-2-32-MVOLT-BPLP-L841HT8	277 2	2	F032T8/841XPS/4100K	SYLVANIA HIGH EFFICIENCY QUICKTRONIC PROSTART PSX T8 XPS, .71 BF, <10% THD	17		GRID	
	NET LOCATION LED DOWNLIGHT	LITHONIA	DOM6-LED-900L-40K-120-DL6T73	120		LED	LED DRIVER	.21	25	RECESSED	6
2	2X4 HIGH PERFORMANCE T8 ACRYLIC SPEC TROFFER		2SP8-G-2-32-A12125-MVOLT-BPLP-L841T8	277 2	2	F032T8/841XPS/4100K	SYLVANIA HIGH EFFICIENCY QUICKTRONIC PROSTART PSX T8 XPS, .71 BF, <10% THD	.17	46		
G 2	2X2 HIGH PERFORMANCE T8 ACRYLIC SPEC TROFFER	LITHONIA	2SP8-G-2-U31-A12125-MV0LT-BPLP-L841T8	277 2	2	FB032T8/841XPS/4100K, 1-5/8" LEC	g sylvania high efficiency quicktronic prostart PSX t8 XPS, .71 BF, <10% thd	.17	46	GRID	
	4' HIGH PERFORMANCE T8 INDUSTRIAL		L-2-32-MVOLT-BPLP-L841T8	120/277 - 2	2 1	F032T8/841XPS/4100K	SYLVANIA HIGH EFFICIENCY QUICKTRONIC PROSTART PSX T8 XPS, .71 BF, <10% THD	40/.17	47/46	SURFACE/CHAIN	
K 1	18 HIGH BAY FLUORESCENT WITH OCCUPANCY SENSOR	LITHONIA	IBZ-632L-WD-MVOLT-GEB10PSH-MSI360	120 6	3	F032T8/841XPS/4100K	2 THREE LAMP ELECTRONIC PRS < 10% THD, 1.15-1.2 BF	1.82	220	AIRCRAFT CABLE	4
[3' HIGH PERFORMANCE TANDEM T8 INDUSTRIAL		TL-2-32-MVOLT-BPLP-L841T8	277 - 4	∓ ⊤	F032T8/841XPS/4100K	SYLVANIA HIGH EFFICIENCY QUICKTRONIC PROSTART PSX T8 XPS, .71 BF, <10% THD	<u>1.82</u> 	92	SURFACE/CHAIN	
M 4	4' HIGH PERFORMANCE T8 INDUSTRIAL WITH OCCUPANCY SENSOR	LITHONIA	L-2-32-MVOLT-BPLP-L841T8-OCCUPANCY SENSOR	277 2	2	F032T8/841XPS/4100K	SYLVANIA HIGH EFFICIENCY QUICKTRONIC PROSTART PSX T8 XPS, .71 BF, <10% THD	.17	46	SURFACE/CHAIN	15
N [EXPLOSION PROOF INDUSTRIAL	PHEONIX	LFX-2-32-277-ELB	277 - 2	2	F032T8/4100K	STANDARD ELECTRONIC IS < 10% THD	.21	58	SURFACE	
0 1	15H0 HIGH BAY FLUORESCENT	LITHONIA	IBZ-654L-WD-MVOLT-GEB10PS90	277 6	3	F54T5H0/841/4100K	1 2 LAMP, 1 4 LAMP ELECTRONIC PROGRAMMED RAPID START, 1.0 BF	1.29	353	AIRCRAFT CABLE	
P 1	T8 HIGH BAY FLUORESCENT		IBZ-632L-WD-MVOLT-GEB10PSH	277 6	5 1	F032T8/841XPS/4100K	2 THREE LAMP ELECTRONIC PRS < 10% THD, 1.15–1.2 BF	80	220	AIRCRAFT CABLE	
R \	/APOR LIGHT	LITHONIA	VW42LM6	120 1	1	F42TRT/4100K	ELECTRONIC RAPID START HPF	.39	47	SURFACE	5
T	Salt shed hid		TX-400MP-A23-208-SCWA-CR-WL-STSS-SLR		1 1	400W PSMH		2.3	450	PENDANT	
EM1 E	EMERGENCY LIGHT	LITHONIA	ELM618	120/277 2	2	MR24 K0906, 6V, 9W KRYPTON		.167/.07	5.6	SURFACE	
EM2 E			IND618-PREM		2 1	K0906, 6V, 9W KRYPTON			19.6	SURFACE	19
EMR f	REMOTE EMERGENCY LIGHT	LITHONIA	ELA-AFNR-DB-FWD	6 2		6V, 6W XENON		2.0	12	SURFACE	7
X1 3	SINGLE FACE LED EXIT		LQM-S-W-3-R-120/277	277 1 1	1 1	L.E.D. PANEL			.69	SURFACE	
X2 [DOUBLE FACE LED EXIT	LITHONIA	LQM-S-W-3-R-120/277	277 1	1	L.E.D. PANEL		.06	.69	SURFACE	
X4	TO COMBINATION EMERGENCY LIGHT/LED EXIT		LHQM-S-W-3-R-HO	120 3	3 1	L.E.D. PANEL, 2 6V, 5.4W KRYPTON		.23	3.3	SURFACE	
OA [DOWNLIGHT	LITHONIA	DOM6-LED-600L-40K-DL6B4	277		4000K LED, 600 LUMENS	LED DRIVER	.06	15.6	RECESSED	13
OB S	SINGLE PARKING - TYPE III MEDIUM		DSX0-LED-40C-700-40K-T3M-277-SF-DDBXD	277		4000K LED, 9,076 LUMENS	700mA LED DRIVER	.42	91	25' POLE/BASE	3,7,10
00 5	SINGLE ROADWAY — TYPE II MEDIUM	LITHONIA	DSX0-LED-40C-700-40K-T2M-277-SF-DDBXD	277		4000K LED, 8,922 LUMENS	700mA LED DRIVER	.42	91	25' POLE/BASE	3,7,10
OD S	SIGN FLOOD	BEGA	7551LED-BRZ	120		4000K LED, 1,874 LUMENS	LED 0-10VDC DRIVER	.24	29.14	SURFACE	7,16
OE S	SECURITY	LITHONIA	DSXW1-LED-20C-700-40K-T3M-120-SF-HS-DDBXD	120		4000K LED, 4.431 LUMENS	700mA LED DRIVER	.44	47	SURFACE	3,7,8
			DSXW1-LED-20C-350-40K-T4M-120-SF-HS-DDBXD-BBW			4000K LED, 2,585 LUMENS			25	SURFACE	3,7,8,18
	SECURITY	LITHONIA	DSXW2-LED-30C-1000-40K-T4M-MV0LT-SF-HS-DDBXD	120/277		4000K LED, 8,611 LUMENS	1000mA LED DRIVER	1.01/.44	109	SURFACE	3,7,8,9
			DSXW2-LED-30C-530-40K-T3M-MV0LT-SF-HS-DDBXD	277 +		4000K LED, 5,298 LUMENS	530mA LED DRIVER		54	SURFACE	3,7,8,14
	SECURITY	LITHONIA	DSXW2-LED-20C-700-40K-T3M-MV0LT-SF-HS-DDBXD	277		4000K LED, 4,386 LUMENS	700mA LED DRIVER	.19	47	SURFACE	3,7,8
	SECURITY		DSXW2-LED-20C-700-40K-T2M-MV0LT-SF-HS-DDBXD-BB	• + +		4000K LED, 4,252 LUMENS	700mA LED DRIVER		47	SURFACE	3,7,8
	SECURITY	LITHONIA	DSXW1-LED-10C-350-40K-T3M-MV0LT-SF-HS-DDBXD	120/277		4000K LED, 1,222 LUMENS	350mA LED DRIVER	.13/.06	14	SURFACE	3,7,8,17

- SCHEDULE NOTES
- 1. DUAL SWITCHING REQUIRES STEP DIMMING OR MULTIPLE BALLASTS AS SPECIFIED.
- 2. WHITE OPEN DOWNLIGHT.
- 3. INCLUDE FUSE OPTION.
- 4. INCLUDE PREWIRED 360 DEGREE MOTION SENSOR.
- 5. INCLUDE GUARD AND HEAVY DUTY PRISMATIC LENS. 6. WHITE SPLAY, TEMPERED PRISMATIC LENS.
- 7. DARK BRONZE

CHAIN OR CABLE.

- 8. INCLUDES HOUSE SIDE SHIELD OR BACK LIGHT CONTROL.
- 9. 120V AT SALT SHED, 277V AT MAIN BUILDING.
- 10. INCLUDE LITHONIA SSA-25-4C-DM19AS-DDBXD, DARK
- BRONZE, .1196" THICK, 4" SQUARE STEEL POLE. 11. INCLUDE STAINLESS STEEL HARDWARE AND LENS RING, CORRISION RESISTANT FINISH, WET LOCATION LABEL, STAINLESS STEEL SAFETY
- 12. LEAD CALCIUM BATTERY.
- 13. BLACK BAFFLE, FLAT FRESNEL LENS.
- 14. UNIVERSAL VOLTAGE.
- 15. INCLUDE LEVITON OSFLA-ITW OCCUPANCY SENSOR WITH HIGH BAY, LOW BAY AND ISLE LENS AND OFFSET ADAPTER
- BRACKET OR EQUAL AND MOUNT ON FIXTURE. USE LOW
- BAY LENS. 16. FLAT BEAM LED FLOOD WITH 27-5/8" OUTRIGGER ARM AND
- MOUNTING CANOPY.
- 17. 120V AT FIRE PUMP BUILDING, 277V ON MAIN BUILDING. 18. INCLUDE BACK BOX.
- 19. HIGH TEMPERATURE NI-CAD BATTERY. LISTED FOR DAMP
- LOCATION, 32 TO 131 DEG F.

- TO ABOVE REAS OR ABOVE LOW BAY SHOP FROM THE MENT. THERMOSTAT IG BY HVAC
- TO ABOVE REAS OR ABOVE LOW BAY SHOP FROM THE EQUIPMENT. LTAGE WIRING BY

3/4" CONDUIT PANEL LOW ACTOR

- (0S1) WALL SWITCH INFARED OCCUPANCY SENSOR LEVITON ODS15-ID OR EQUAL.
- WALL MOUNT INFRARED, 115 DEGREE, 2500 SQ FT, (0S2) WALL MOUNT INFRARED, 115 DEGREE, 2500 SQ FT, OCCUPANCY SENSOR. LEVITON OSWWV-IOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.
- 053 DUAL RELAY WALL SWITCH MULTI-TECHNOLOGY OCCUPANCY SENSOR. LEVITON OSSMD-GD OR EQUAL.
- INFRARED CEILING MOUNT, 360 DEGREE, 450 SQ FT, OS4 INFRARED CEILING MOUNT, 360 DEGREE, 450 SQ FT, OCCUPANCY SENSOR. LEVITON OSCO4-IOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.
- INCLUDE LEVITON OSP20-ODO POWER PACK. MULTI-TECHNOLGY CEILING MOUNT, 180 DEGREE, 500 SQ FT. OCCUPANCY SENSOR. LEVITON OSC05-MOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.
- MULTI-TECHNOLGY CEILING MOUNT, 360 DEGREE, 2000 056 SQ FT, OCCUPANCY SENSOR. LEVITON OSC20-MOW OR EQUAL. INCLUDE LEVITON OSP20-ODO POWER PACK.
- ULTRASONIC CEILING MOUNT, 180 DEGREE, 500 SQ FT, 057 OCCUPANCY SENSOR. LEVITON OSCO5-UOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.
- INFRARED CEILING MOUNT, 360 DEGREE, 1500 SQ FT, OCCUPANCY SENSOR. LEVITON OSC15-IOW OR EQUAL. 058 INCLUDE LEVITON OSP20-0D0 POWER PACK.
- OS9 DUAL RELAY WALL SWITCH INFRARED OCCUPANCY SENSOR. LEVITON ODSOD-ID OR EQUAL. LEVITON ODSOD-ID OR EQUAL.
- WALL MOUNT MULTI-TECHNOLOGY, 115 DEGREE, 1200 SQ FT, OCCUPANCY SENSOR. LEVITON OSW12-MOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.
- (OS) WALL SWITCH MULTI-TECHNOLOGY OCCUPANCY SENSOR LEVITON OSSMT-GD OR EQUAL.
- $\begin{pmatrix} 0S \\ 12 \end{pmatrix}$ WALL SWITCH DUAL RELAY MULTI-TECHNOLGY OCCUPANCY SENSOR WITH 10 MINUTE DELAYED OFF ON SECOND RELAY FOR EXHAUST FAN. LEVITON OSSMD-FT OR EQUAL.
- ULTRASONIC CEILING MOUNT, 360 DEGREE, 2000 SQ FT, OCCUPANCY SENSOR. LEVITON OSC20-UOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.

- WALL MOUNT OUTDOOR INFRARED, 270 DEGREE, OCCUPANCY SENSOR. WATT STOPPER EW-205-24-W OR EQUAL. INCLUDE BZ-50 POWER PACK AS REQUIRED.
- LIGHTOLIER INTELLISIGHT ITSCSHB HIGH BAY CEILING OCCUPANCY SENSOR OR EQUAL. INCLUDE ITSRP1U SINGLE RELAY, ITSRP2U TWO RELAY OR ITSRP4U FOUR RELAY POWER PACK AS REQUIRED.
- MULTI-TECHNOLOGY CEILING MOUNT, 360 DEGREES, 1000 SQ FT, OCCUPANCY SENSOR. LEVITON OSC10-MOW OR EQUAL. INCLUDE LEVITON OSP20-ODO POWER PACK.
- OS LONG-RANGE INFRARED WALL-MOUNT, 110 DEGREES, 17 100 FOOT RANGE, OCCUPANCY SENSOR LEVITON 100 FOOT RANGE, OCCUPANCY SENSOR. LEVITON OSWLR-IOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.
- OS 18 ULTRASONIC CEILING MOUNT, 180 DEGREE, 1,000 SQ FT, OCCUPANCY SENSOR. LEVITON OSC10-UOW OR EQUAL. INCLUDE LEVITON OSP20-0D0 POWER PACK.

IN ROOMS WITH MULTIPLE OCCUPANCY SENSORS, THE SENSORS SHALL BE WIRED TO A COMMON POWER PACK OR POWER PACKS AS REQUIRED UNLESS SHOWN OR NOTED OTHERWISE. KEEP ULTRASONIC AND MULTI-TECHNOLOGY SENSORS AT LEAST 6' FROM HVAC DUCT OPENINGS. VERIFY OCCUPANCY SENSOR LOCATIONS WITH OWNER AND ARCHITECT FOR ANY FUTURE SHELVING OR OTHER ITEMS THAT MAY BLOCK THE SENSING RANGE. "OR EQUAL" MEANS SENSORS AND POWER PACKS WITH THE SAME SENSING RANGE, FUNCTIONS AND NUMBER OF SENSORS PER POWER PACK AS SPECIFIED ABOVE.

OCCUPANCY SENSOR TIME DELAY: SET ALL OFFICE, HALL, SMALL STORAGE AND PARTS OCCUPANCY SENSOR TIME DELAYS TO 5 MINUTES. SET ALL SMALL VEHICLE STORAGE, LARGE VEHICLE STORAGE AND WELD BAY OCCUPANCY SENSOR TIME DELAYS TO 10 MINUTES.

GENERAL NOTES

1. <u>UNLESS NOTED, EQUIVALENT FIXTURES</u> FROM THE FOLLOWING MANUFACTURERS WILL BE ACCEPTED: GENLYTE THOMAS (DAY-BRITE, CAPRI, OMEGA, EMCO, McPHILBEN), HUBBELL LIGHTING (COLUMBIA, PRESCOLITE, SPAULDING, DUBLE LIGHTING, USE AND COOPED HOUTTING (METALUX, IMA C DUAL LITE), RUUD, LSI AND COOPER LIGHTING (METALUX, HALO, LUMARK, SURE-LITES). EQUIVALENT LIGHT FIXTURES WILL BE EQUAL OR BETTER THAN THE SPECIFIED FIXTURE. ANY LIGHT FIXTURE THAT IS NOT EQUAL WILL BE REJECTED.

2. FIXTURES SHALL BE LABELED WITH LAMP TYPE BY MANUFACTURER.



Schedules, Details

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DS111B DS11A DS111A DS112B DS12A DS113A DS113B DS13A DS114A DS115B OR11A DS15A DS117B DS11B DS17A DS118B DS11B DS17A DS118B DS11B DS12B DS120B DS12B DS12B DS122B DS12B DS15B DS122B DS12C DS15B DS128B DS12C DS12A DS128B DS12C DS128A DS128B DS12C DS12BA DS128B DS12C DS12BA DS128B DS12C DS18B DS126A DS126A DS126A DS126B DS12C DS18B DS126A DS126A DS126A	FILE GIG9 GIG9	69 69 69 69 -69 69 69 69	(13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13) (13)	DSXY DIGITAL SWITCH ORXY OVERRIDE SWITCH X=LIGHTING CONTROL PANEL # Y=SWITCH # DIGITAL SWITCHES ARE MOMENTARY SWITCHES ARE MOMENTARY SWITCHES USED FOR MANUAL ON/OFF CONTROL. IN AREAS WITH OCCUPANCY SENSOR INPUTS TO THE LIGHTING CONTROL PANEL, THE OCCUPANCY SENSORS WILL SWITCH THE LIGHTS ON AND OFF AS LONG AS THE DIGITAL SWITCH HAS ENABLED THE RELAY OUTPUT. OVERRIDE SWITCHES ALLOW TWO HOURS OF ADDITIONAL LIGHT AFTER A PRESET TIME HAS EXPIRED (IN MEZZANINE AREAS WITHOUT OCCUPANCY SENSORS, IF THE LIGHTS ARE LEFT ON, THE LIGHTING CONTROL PANEL WILL
LP1-18	CONTROL PANEL 1			AUTOMATICALLY SHUT THE LIGHTS OFF ACCORDING TO THE PRESET
	CONTROL POWER	NE 1	- .	USAGE START AND STOP TIMES).
		NE 2	SOUTH MEZZANINE LIGHTS (DS11A, D	
		NE 3	SOUTH MEZZANINE LIGHTS (DS12A, E	
		NE 4	NORTH MEZZANINE LIGHTS (DS13A, [
		<u></u>	NORTH MEZZANINE LIGHTS (DS14A, E	
LP1-7	Z0	NE 5		SENSORS, EMERGENCY LIGHTING UNITS
			SOUTH SMALL VEHICLE STORAGE 140	
	Z0	NE 7	OCCUPANCY SENSOR GROUP 12, EM	
		NE 8	NORTHEAST SMALL VEHICLE STORAGE	
LP1-9	zo	NE 6	NORTHEAST SMALL VEHICLE STORAGE	
			OCCUPANCY SENSOR GROUP 11, EM	
	zo	NE 9	NORTHWEST SMALL VEHICLE STORAGI	
	zo	NE 10	NORTHWEST SMALL VEHICLE STORAGI	
LP1-4	zo	NE 11	WEST LARGE VEHICLE STORAGE 138	
	zo	NE 14		E 138 LIGHTS (DS114A,B; OSG15, OSG16)
	zo	NE 15		E 138 LIGHTS (DS115A,B; OSG15, OSG16)
			OCCUPANCY SENSOR GROUP 15, EM	
LP1-6	zo	NE 16		E 138 LIGHTS (DS116A,B; OSG15, OSG16)
	zo	NE 17		E 138 LIGHTS (DS117A,B; OSG15, OSG16)
	zo	NE 18	L SOUTHWEST LARGE VEHICLE STORAGI	E 138 LIGHTS (DS118A,B; OSG15, OSG16)
	zo	NE 19	L SOUTHWEST LARGE VEHICLE STORAGI	E 138 LIGHTS (DS119A,B; OSG15, OSG16)
LP1-8	zo	NE 11	WEST LARGE VEHICLE STORAGE 138	LIGHTS (DS111A,B; OSG15, OSG16)
			COCCUPANCY SENSOR GROUP 16, EM	ERGENCY LIGHTING UNITS
LP1-10	zo	NE 12	CENTER LARGE VEHICLE STORAGE 13	8 LIGHTS (DS112A,B; OSG17, OSG18)
LP1-12		NE 20		AGE 138 LIGHTS (DS120A,B; OSG17, OSG18)
	zo	NE 21	NORTH CENTER LARGE VEHICLE STOR	RAGE 138 LIGHTS (DS121A,B; OSG17, OSG18)
	zo	NE 22	SOUTH CENTER LARGE VEHICLE STOR	AGE 138 LIGHTS (DS122A,B; OSG17, OSG18)
	zo	NE 23	SOUTH CENTER LARGE VEHICLE STOR	AGE 138 LIGHTS (DS123A,B; OSG17, OSG18)
			OCCUPANCY SENSOR GROUP 17, EM	ERGENCY LIGHTING UNITS
LP1-14	zo	NE 12	EAST LARGE VEHICLE STORAGE 138 L	.IGHTS (DS112A,B; OSG17, OSG18)
			COCCUPANCY SENSOR GROUP 18, EM	ERGENCY LIGHTING UNITS
LP1-16	zo	NE 13	EAST LARGE VEHICLE STORAGE 138 L	lGHTS (DS113A,B; OSG19)
	zo	NE 24	 Northeast large vehicle storage	E 138 LIGHTS (DS124A,B; OSG19) LCP1:
	zo	NE 25	NORTHEAST LARGE VEHICLE STORAGE	138 LIGHTS (DS125A,B; OSG19)
		NE 26	SOUTHEAST LARGE VEHICLE STORAGE	138 LIGHTS (DS126A,B; OSG19)
			OCCUPANCY SENSOR GROUP 19, EM	ERGENCY LIGHTING UNITS
			RELAYS 29-48 - SPARE	

1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 1230 12	DS218DS21CDS228DS22CDS238DS23CDS240DS24CDS258DS25CDS286DS28CDS288DS28CDS288DS28CDS288DS28CDS288DS28CDS288DS28CDS288DS28CDS288DS28CMOMENTARY SWITCHES AREDS288DS28CMOMENTARY SWITCHES USED FORDS288DS28CMANUAL ON/OFF CONTROL.DS218DS211CIN AREAS WITH OCCUPANCYDS218DS212CCONTROL PANEL, THE OCCUPANCYDS218DS213CDS2148DS214CDS2180DS215CDIGITAL SWITCH THAS ENABLED THEDS2180DS216CDS2180DS216CDS2180DS218CDS2180DS218CDS2180DS218CDS2180DS218CDS2180DS218CDS2180DS218CDS2180DS218CDS2180DS218CDS2180DS218C		
PANEL 2		PANEL ELP1 LIGHTING CONTROL PANEL LCPEL	
LP2-9 CONTROL POWER		ELP1-14 CONTROL	
	NE 1 N LARGE VEHICLE 151 LIGHTS (DS21A,B,C; OSG21)	ELP1-2	
	DNE 2 N LARGE VEHICLE 151 LIGHTS (DS22A,B,C; OSG21)	ELP1-4	S, SW EXTERIOR SECURITY LIGHTS
	DNE 3 N LARGE VEHICLE 151 LIGHTS (DS23A,B,C; OSG21)	ELP1-6	
	DNE 4 N LARGE VEHICLE 151 LIGHTS (DS24A,B,C; OSG21)	ELP1-8	
	OCCUPANCY SENSOR GROUP 21	ELP1-10	WEST PARKING LOT, CNG FUEL AREA LIGHT POLES
	NE 7 N LARGE VEHICLE 151 LIGHTS (DS27A,B,C; OSG22, OSG23)	ELP1-12	West Drive, CNG AREA LIGHT POLES
	DNE 5 N LARGE VEHICLE 151 LIGHTS (DS25A,B,C; OSG22, OSG23)	ELP1-18	-FLAG FLOOD LIGHTS
	DNE 6 N LARGE VEHICLE 151 LIGHTS (DS26A,B,C; OSG22, OSG23)		SPARE
	DNE 8 N LARGE VEHICLE 151 LIGHTS (DS28A,B,C; OSG22, OSG23)		
	DNE 9 N LARGE VEHICLE 151 LIGHTS (DS29A,B,C; OSG22, OSG23)		LCPEL: LEVITON GREENMAX 8 REL STANDARD 20 AMP RELAY DISPLAY UNIT FOR EACH L AS REQUIRED FOR A COMP
	OCCUPANCY SENSOR GROUP 22, 23		
	DNE 10 WEST CENTER LARGE VEHICLE 151 LIGHTS (DS210A,B,C; OSG24, OSG25)		FACTORY TECHNICIAN TO F ACCOMMODATE BUILDING F
	DNE 11 CENTER LARGE VEHICLE 151 LIGHTS (DS211A,B,C; OSG24, OSG25)		EXTERIOR LIGHTING CIRCU CONTROL PANEL ASTRONO TIME OPERATION. VERIFY C
	DNE 13 EAST CENTER LARGE VEHICLE 151 LIGHTS (DS213A,B,C; OSG24, OSG25)		INCLUDE TWO 2 HOUR TRA FOR OWNER'S PERSONNEL
	OCCUPANCY SENSOR GROUP 24, 25		
	DNE 12 CENTER LARGE VEHICLE 151 LIGHTS (DS212A,B,C; OSG24, OSG25)	LIGHTING CONTROL	PANEL LCPEL
	DNE 14 EAST CENTER LARGE VEHICLE 151 LIGHTS (DS214A,B,C; OSG24, OSG25)		On/Off Control Device
	DNE 15 S LARGE VEHICLE 151 LIGHTS (DS215A,B,C; OSG26, OSG27)		RelayPowerpack
	DNE 17 SE LARGE VEHICLE 151 LIGHTS (DS217A,B,C; OSG26, OSG27)	Normal Line	Wall Switch Normal Lighting
	DNE 16 S LARGE VEHICLE 151 LIGHTS (DS216A,B,C; OSG26, OSG27)		
	DNE 18 SE LARGE VEHICLE 151 LIGHTS (DS218A,B,C; OSG26, OSG27)	Normal Neutral	
		"Sensi L	ng" "Switching" .ine Line
	OCCUPANCY SENSOR GROUP 26, 27		
	RELAYS 19–32 – SPARE		

LCP2: LEVITON GREENMAX 32 RELAY CONTROL PANEL ENCLOSURE WITH 32 STANDARD 20 AMP RELAYS, 16 INPUTS AND LED ANNUNCIATED DIGITAL SWITCHES OR EQUAL. INCLUDE HANDHELD DISPLAY UNIT FOR EACH LIGHTING CONTROL PANEL AND ALL ACCESSORIES AS REQUIRED FOR A COMPLETE WORKING SYSTEM.

OVERRIDE AND MOMENTARY SWITCHES SHALL BE LED ANNUNCIATED DIGITAL SWITCHES OR EQUAL. OVERRIDE SWITCHES TO ALLOW TWO ADDITIONAL HOURS OF LIGHT AFTER PRESET TIME.

ALL DIGITAL AND OVERRIDE SWITCHES SHALL BE LABELED OR ENGRAVED BY THE MANUFACTURER.

FACTORY TECHNICIAN TO PROGRAM LIGHT PANEL ON/OFF TIMES TO ACCOMMODATE BUILDING FUNCTIONS. COORDINATE WITH WITH OWNER.

VEHICLE STORAGE AREAS SHALL BE PROGRAMMED TO TURN LIGHTS ON AND WITH OCCUPANCY SENSOR INPUTS AND MOMENTARY DIGITAL SWITCHES. DIGITAL SWITCHES ARE USED TO ENABLE OR DISABLE LIGHTS. OCCUPANCY SENSORS TURN LIGHTS ON WHEN OCCUPANTS ARE SENSED AND THE DIGITAL SWITCHES HAVE ENABLED THE LIGHTS.

INCLUDE TWO 2 HOUR TRAINING SESSIONS BY FACTORY TRAINED TECHNICIAN FOR OWNER'S PERSONNEL TO COVER ALL LIGHTING CONTROL PANELS.

LIGHTING CONTROL PANEL LCP2

LEVITON GREENMAX 48 RELAY CONTROL PANEL ENCLOSURE WITH 48 STANDARD 20 AMP RELAYS, 16 INPUTS AND LED ANNUNCIATED DIGITAL SWITCHES OR EQUAL. INCLUDE HANDHELD DISPLAY UNIT FOR EACH LIGHTING CONTROL PANEL AND ALL ACCESSORIES AS REQUIRED FOR A COMPLETE WORKING SYSTEM.

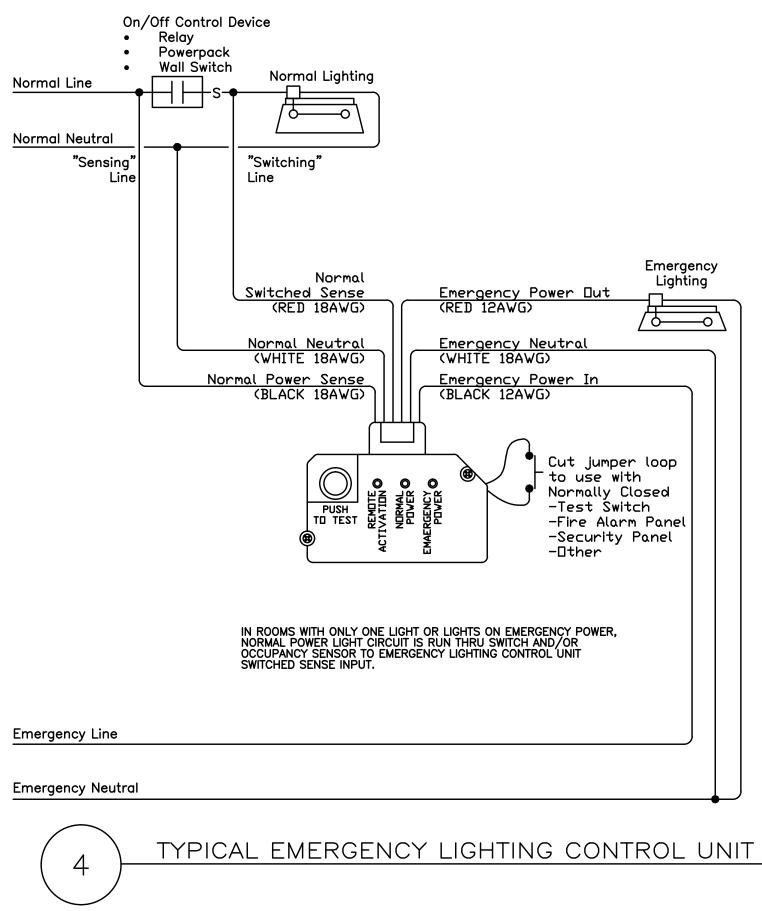
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OVERRIDE AND MOMENTARY SWITCHES SHALL BE LED ANNUNCIATED DIGITAL SWITCHES OR EQUAL. OVERRIDE SWITCHES TO ALLOW TWO ADDITIONAL HOURS OF LIGHT AFTER PRESET TIME. ALL DIGITAL AND OVERRIDE SWITCHES SHALL BE LABELED OR ENGRAVED BY THE MANUFACTURER.

FACTORY TECHNICIAN TO PROGRAM LIGHT PANEL ON/OFF TIMES TO ACCOMMODATE BUILDING FUNCTIONS. COORDINATE WITH WITH OWNER. VEHICLE STORAGE AREAS SHALL BE PROGRAMMED TO TURN LIGHTS ON AND OFF WITH OCCUPANCY SENSOR INPUTS AND MOMEMTARY DIGITAL SWITCHES. DIGITAL SWITCHES ARE USED TO ENABLE OR DISABLE LIGHTS. OCCUPANCY SENSORS TURN LIGHTS ON WHEN OCCUPANTS ARE SENSED AND THE DIGITAL SWITCHES HAVE ENABLED THE LIGHTS.

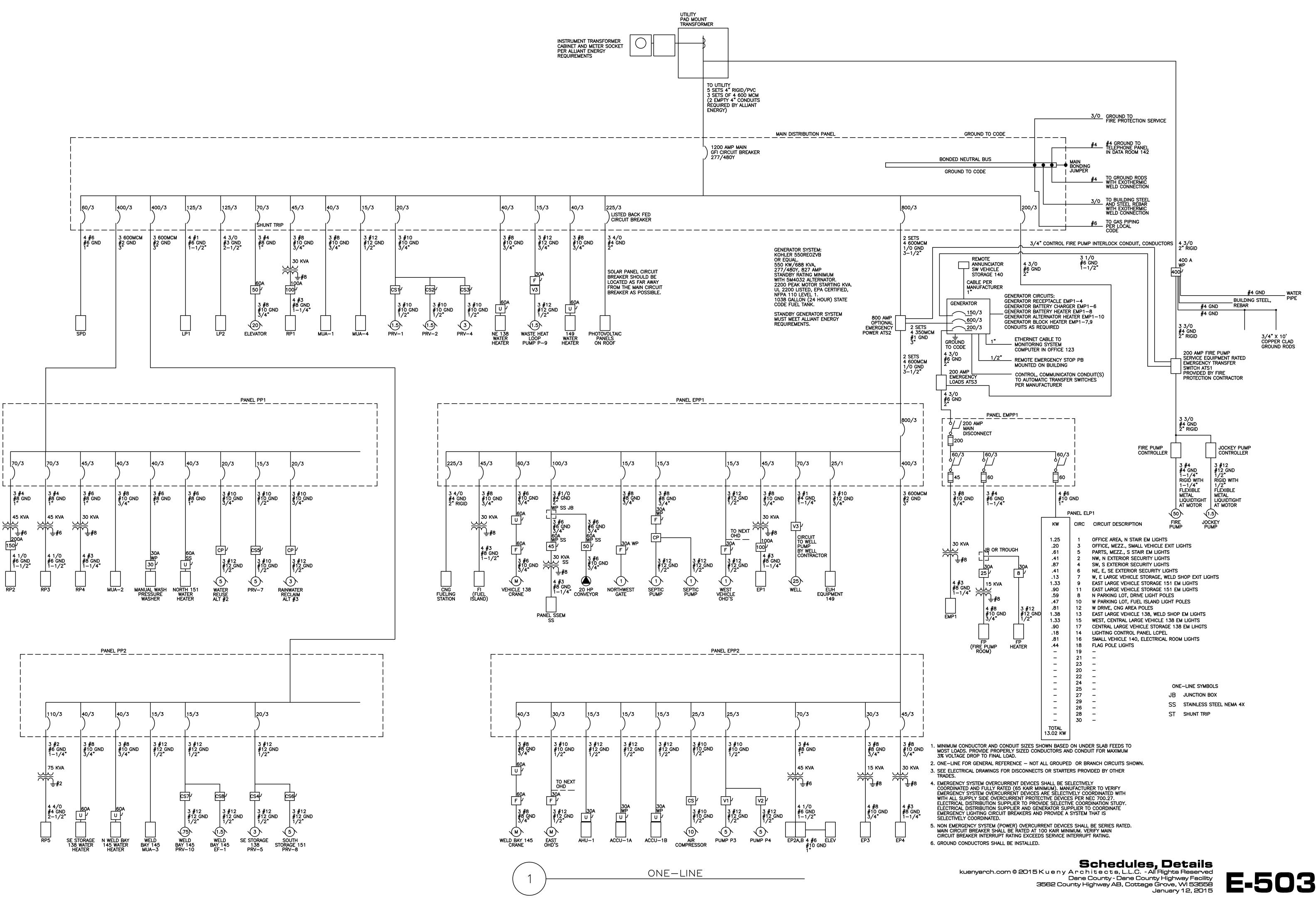
INCLUDE TWO 2 HOUR TRAINING SESSIONS BY FACTORY TRAINED TECHNICIAN FOR OWNER'S PERSONNEL TO COVER ALL LIGHTING CONTROL PANELS.

X 8 RELAY CONTROL PANEL ENCLOSURE WITH 8 RELAYS AND 8 INPUTS OR EQUAL. INCLUDE HANDHELD EACH LIGHTING CONTROL PANEL AND ALL ACCESSORIES A COMPLETE WORKING SYSTEM. AN TO PROGRAM LIGHT PANEL ON/OFF TIMES TO ILDING FUNCTIONS. COORDINATE WITH WITH OWNER. CIRCUITS SHALL BE CONTROLLED BY THE LIGHTING STRONOMICAL CLOCK FOR DUSK TO DAWN OR DUSK TO /ERIFY CONTROL TIMES WITH OWNER. OUR TRAINING SESSIONS BY FACTORY TRAINED TECHNICIAN SONNEL TO COVER ALL LIGHTING CONTROL PANELS.





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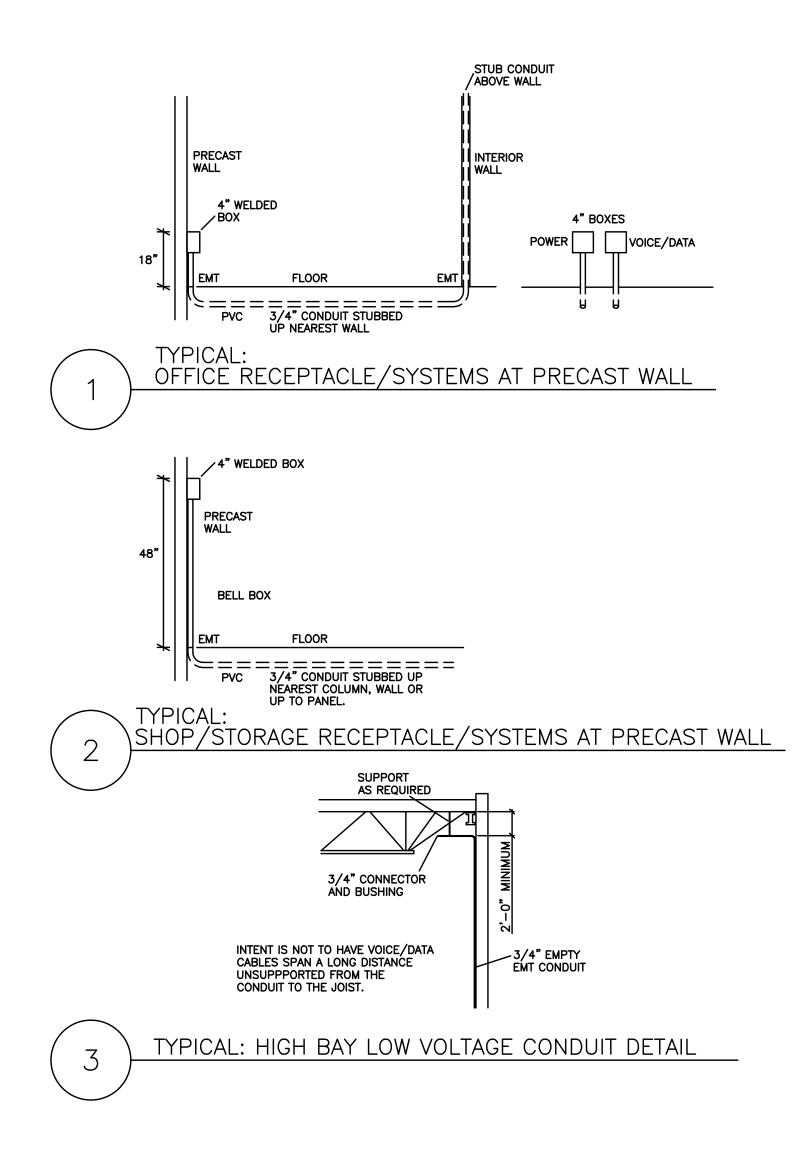


PANEL MDP

120	DOA MLO 108" SPACE 480V 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQUA	RE D HC	R–U I–I	LINE
MAI	N CIRCUIT BREAKER: 65 KAIC MINIMUM FEEDER CIRCUIT BREAKE	RS: 65 k	KAIC MIN	IMUM
NO.	DESCRIPTION	BKR	KW	SPACE
1	SURGE PROTECTION DEVICE (SPD)	60/3	-	4.5"
2	PANEL PP1	400/3	116.79	6.0"
3	PANEL PP2	400/3	74.40	6.0"
4	PANEL LP1	125/3	22.27	4.5"
5	PANEL LP2	125/3	17.75	4.5"
6	PANEL RP1 TRANSFORMER	45/3	6.89	4.5"
7	LARGE VEHICLE STORAGE 138 MUA-1	40/3	17.46	4.5"
8	SMALL VEHICLE STORAGE 140 PRV-1, 2, LARGE VEHICLE STORAGE 138 PRV-4	20/3	8.98	4.5"
9	NORTH LARGE VEHICLE STORAGE 138 INSTANT WATER HEATER	40/3	24.00	4.5"
10	WASTE HEAT EXCHANGER PUMP P-9	15/3	3.99	4.5"
11	PUMP ROOM 149 INSTANT WATER HEATER	40/3	24.00	4.5"
12	ELEVATOR	70/3	33.26	4.5"
13	SOLAR PANELS (CIRCUIT BREAKER MUST BE LISTED AS BACK FEED DEVICE) - ALTERNATE BID #8 ***	225/3	_	4.5"
14	EMERGENCY LOADS ATS3 - PANEL EMPP1	200/3	23.72	4.5"
15	OPTIONAL POWER ATS2 - PANEL EPP1	800/3	343.79	9.0"
16	SMALL VEHICLE STORAGE 140 MUA-4	15/3	6.32	4.5"
17	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
18	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
19	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
20	MAIN CIRCUIT BREAKER	1200/3	723.62	15.0"
	TOTAL CIRCUIT BREAKER MOUNTING SPACE AVAILABLE			108"
	TOTAL CIRCUIT BREAKER MOUNTING SPACE USED			94.5"
	TOTAL CIRCUIT BREAKER SPACE REMAINING			13.5 "
	TOTAL CONNECTED KW		723.62	
	PROVIDE LABEL ON PANEL: "EMERGENCY POWER 550KW, 480V, 3			

PROVIDE LABEL ON PANEL: "EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING"

*** SOLAR PANEL CIRCUIT BREAKER SHOULD BE LOCATED AS FAR AWAY FROM THE MAIN CIRCUIT BREAKER AS POSSIBLE.



40	DA MLO 63" SPACE 480V 3 PHASE 3 WIRE COPPER BUS W/GRD BUS SQ	UARE D H	ICM I-LI	NE
	CIRCUIT BREAK	ERS: 35 I	KAIC MIN	мим
NO.	DESCRIPTION	BKR	KW	SPACE
1	PANEL RP2 TRANSFORMER	70/3	27.06	4.5"
2	PANEL RP3 TRANSFORMER	70/3	5.02	4.5"
3	PANEL RP4 TRANSFORMER	45/3	9.16	4.5"
4	LARGE VEHICLE STORAGE 151 MUA-2	40/3	17.46	4.5"
5	NORTH LARGE VEHICLE STORAGE 151 PRESSURE WASHER	40/3	17.46	4.5"
6	NORTH LARGE VEHICLE STORAGE 151 INSTANT WATER HEATER	40/3	24.00	4.5"
7	NORTH LARGE VEHICLE STORAGE 151 WATER REUSE - ALTERNATE BID #2	20/3	6.32	4.5"
8	NORTH LARGE VEHICLE STORAGE 151 PRV-7	15/3	6.32	4.5"
9	NORTH LARGE VEHICLE STORAGE 151 RAINWATER RECLAIM - ALTERNATE BID #3	20/3	3.99	4.5"
10	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
11	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	1
12	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
13	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
14	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
	TOTAL SPACE AVAILABLE	-	-	63 "
	TOTAL SPACE USED	-	-	40.5"
	TOTAL SPACE REMAINING	-	-	22.5"

40	0A MLO 63" SPACE 480V 3 PHASE 3 WIRE COPPER BUS W/GRD BUS SQU	JARE D H		NE
	CIRCUIT BREAKE	RS: 35 k	KAIC MIN	МЛМ
NO.	DESCRIPTION	BKR	KW	SPACE
1	PANEL RP5 TRANSFORMER	110/3	8.28	4.5"
2	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
3	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
4	SE LARGE VEHICLE STORAGE 138 INSTANT WATER HEATER	40/3	24.00	4.5"
5	N WELD BAY 145 INSTANT WATER HEATER	40/3	24.00	4.5"
6	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
7	WELD BAY 145 MAU-3	15/3	3.99	4.5"
8	WELD BAY 145 PRV-10, SOURCE CAPTURE EF-1	15/3	3.82	4.5"
9	SOUTHEAST LARGE VEHICLE STORAGE 138 PRV-5, SOUTH LARGE VEHICLE STORAGE 151 PRV-8	20/3	10.31	4.5"
10	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
11	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
12	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
13	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
14	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	-
	TOTAL SPACE AVAILABLE	-	-	63"
	TOTAL SPACE USED	-	-	27"
	TOTAL SPACE REMAINING	_	-	36"

PANEL PP1 – OFFICE, EAST BUILDING AREAS

PANEL PP2 – WELD SHOP

PANEL EPP1 - OPTIONAL EMERGENCY POWER PANEL

	PANEL EPP1 – OPTIONAL EMERGENCY POWER PANEL			
80	0A MCB 72" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU	JARE D H	ICP I-LIN	NE
MAI	N CIRCUIT BREAKER: 65 KAIC MINIMUM FEEDER CIRCUIT BREAKE	RS: 65 k	KAIC MINI	мим
NO.	DESCRIPTION	BKR	KW	SPACE
1	PANEL EPP2	400/3	109.24	
2	CNG FUELING STATION	225/3	116.73	4.5"
3	FUEL ISLAND PANEL FI TRANSFORMER	45/3	15.00	4.5"
4	LARGE VEHICLE 138 CRANE	60/3	18.79	4.5"
5	SALT SHED	100/3	37.35	4.5"
6	NW GATE	15/3	1.75	4.5"
7	SEPTIC PUMPS	15/3	6.09	4.5"
8	WEST BUILDING OVERHEAD DOORS	15/3	3.49	4.5"
9	PANEL EP1 TRANSFORMER	45/3	2.28	4.5"
10	EQUIPMENT 149 EWH-1	25/1	4.80	1.5"
11	WELL	70/3	28.27	4.5"
12	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	_	_	4.5"
13	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	_	_	4.5"
14	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER		_	4.5 [°]
				4.5 [°]
15	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	
16	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	4.5"
17	SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	-	-	3.0"
	TOTAL SPACE AVAILABLE	-	-	72.0"
	TOTAL SPACE USED	-	-	48.0"
	TOTAL SPACE REMAINING	- 1	_	24.0"
	PROVIDE LABEL ON PANEL: "OPTIONAL STANDBY PANEL EPP1 FED BY PANEL MDP AND EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER	1		2
40	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL	JARE D H	I ICM I—LII	
	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL 0A MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE	RS: 35 k	KAIC MINI	NE MUM
NO.	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL 0A MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQL FEEDER CIRCUIT BREAKE DESCRIPTION	RS: 35 k BKR	KAIC MINI	NE MUM SPACE
NO. 1	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE	RS: 35 k BKR 40/3	KAIC MINI KW 11.72	NE MUM SPACE 4.5"
NO. 1 2	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A	RS: 35 H BKR 40/3 15/3	(AIC MINI KW 11.72 6.65	NE MUM SPACE 4.5"
NO. 1 2 3	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS	RS: 35 H BKR 40/3 15/3 30/3	(AIC MINI KW 11.72 6.65 8.73	NE MUM SPACE 4.5" 4.5"
NO. 1 2	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A	RS: 35 k BKR 40/3 15/3 30/3 15/3	(AIC MINI KW 11.72 6.65	NE MUM SPACE 4.5" 4.5" 4.5"
NO. 1 2 3	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS	RS: 35 H BKR 40/3 15/3 30/3	(AIC MINI KW 11.72 6.65 8.73	NE MUM SPACE 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU–1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU–1	RS: 35 k BKR 40/3 15/3 30/3 15/3	(AIC MINI KW 11.72 6.65 8.73 2.83	NE MUM SPACE 4.5" 4.5" 4.5"
NO. 1 2 3 4 5	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACCU-1B	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3	<pre>KAIC MINI KW 11.72 6.65 8.73 2.83 6.65</pre>	NE MUM SPACE 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACCU-1B AIR COMPRESSOR	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550kW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	RS: 35 H BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 -	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 -	VE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP2A,B TRANSFORMER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 - 70/3	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 - 37.82	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9 9 10	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 — OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP2A,B TRANSFORMER PANEL EP3 TRANSFORMER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 25/3 - 70/3 30/3	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 - 37.82 4.44	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9 10 11	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP24,B TRANSFORMER PANEL EP3 TRANSFORMER PANEL EP4 TRANSFORMER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 25/3 25/3 25/3 25/3 25/3 30/3 45/3	 KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 - 37.82 4.44 6.12 	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9 10 11 12	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE AHU-1 OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP3 TRANSFORMER PANEL EP4 TRANSFORMER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 25/3 25/3 25/3 25/3 25/3 2	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 - 37.82 4.44 6.12 -	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9 10 11 12 13	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL 0A ML0 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE ACU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP4 TRANSFORMER PANEL EP4 TRANSFORMER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 25/3 25/3 - 70/3 30/3 45/3 - -	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 12.64 - 37.82 4.44 6.12 - -	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9 10 11 12 13	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP2, B TRANSFORMER PANEL EP4 TRANSFORMER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 25/3 25/3 - 70/3 30/3 45/3 - -	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 12.64 - 37.82 4.44 6.12 - -	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"
NO. 1 2 3 4 5 6 7 8 9 10 11 12 13	EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS2. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING". PANEL EPP2 - OPTIONAL EMERGENCY POWER PANEL OA MLO 63" SPACE 277/480Y 3 PHASE 4 WIRE COPPER BUS W/GRD BUS SQU FEEDER CIRCUIT BREAKE DESCRIPTION WELD BAY 145 CRANE OFFICE ACCU-1A WELD BAY, EAST BUILDING OVERHEAD DOORS OFFICE ACCU-1B AIR COMPRESSOR BOILER PUMPS P-3, P-4 SPACE FOR 250 AMP FRAME CIRCUIT BREAKER PANEL EP2,B TRANSFORMER PANEL EP3 TRANSFORMER PANEL EP4 TRANSFORMER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER SPACE FOR 250 AMP FRAME CIRCUIT BREAKER	RS: 35 k BKR 40/3 15/3 30/3 15/3 15/3 25/3 25/3 25/3 25/3 - 70/3 30/3 45/3 - -	(AIC MINI KW 11.72 6.65 8.73 2.83 6.65 11.64 12.64 12.64 - 37.82 4.44 6.12 - -	NE MUM SPACE 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5" 4.5"

GENERAL PANEL NOTES

 PROVIDE HANDLE CLAMP ON CIRCUIT BREAKERS FOR ALL FIRE ALARM, EMERGENCY LIGHTING, SECURITY, PHONE AND CO/NO2 CIRCUITS.

2. ALL PANELS SHALL HAVE COPPER NEUTRAL AND GROUND BAR UNLESS NOTED OTHERWISE.

PANEL LP1 - OFFICE, SMALL VEHICLE, LARGE VEHICLE, MEZZANINE ARI	ΈA
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125	6 MLO	30 POLE	277/480Y	3 PH 4 W	125	AMP CO	PPER BL	JSS 1	N/GRD BAR SQUARE D NF SURFA	CE
								BRAN	CH CIRCUIT BREAKERS: 35 KAIC MINIM	UM
NO.		DESCRIPTIC	N	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.
1	OFFICE	120-122,ME	NS LOCKER, BREA	KLTS 20/1	1.61	A	2.21	20/1	MEZZANINE, W STAIR LIGHTS	2
3	NSTAIR,	VESTOFFICE AREA	,HALL,TOOL,OIL,PUM	P LT\$ 20/1	2.15	В	1.11	20/1	W LARGE VEHICLE STORAGE 138 LIGHTS	4
5	PARTS	137 LIGHTS		20/1	1.60	C	1.80	20/1	W LARGE VEHICLE STORAGE 138 LIGHTS	6
7	E SMAL	l vehicle stof	RAGE 140 LIGHTS	20/1	2.22	A	1.55	20/1	W LARGE VEHICLE STORAGE 138 LIGHTS	8
9	W SMAL	l vehicle stoi	RAGE 140 LIGHTS	20/1	1.55	В	1.80	20/1	CENTER LARGE VEHICLE STORAGE 138 LT	\$10
11	SPARE			20/1	-	C	1.80	20/1	CENTER LARGE VEHICLE STORAGE 138 LT	\$ 12
13	SPARE			20/1	-	A	.89	20/1	E LARGE VEHICLE STORAGE 138 LIGHTS	14
15	SPARE			20/1	-	В	1.80	20/1	E LARGE VEHICLE STORAGE 138 LIGHTS	16
17	SPARE			20/1	-	C	.18	15/1	LIGHTING CONTROL PANEL LCP1	18
19	SPARE			20/1	-	A	-	20/1	SPARE	20
21	SPARE			20/1	-	В	-	20/1	SPARE	22
23	SPARE			20/1	-	C	-	20/1	SPARE	24
25	SPARE			20/1	-	A	-	20/1	SPARE	26
27	SPARE			20/1	-	В	-	20/1	SPARE	28
29	SPARE			20/1	-	C	-	20/1	SPARE	30

PANEL LP2 – LARGE VEHICLE STORAGE, WELD BAY

125	5 MLO 30 POLE 277/480Y	3 PH 4 W	125	AMP CO	PPER BL	JSS \	N/GRD BAR SQUARE D NF SURFA	CE
						BRAN	CH CIRCUIT BREAKERS: 35 KAIC MINIM	IUM
NO.	DESCRIPTION	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.
1	N LARGE VEHICLE STORAGE 151 LIGHTS	20/1	1.77	A	1.99	20/1	C LARGE VEHICLE STORAGE 151 LIGHTS	2
3	N LARGE VEHICLE STORAGE 151 LIGHTS	20/1	2.22	В	1.99	20/1	S LARGE VEHICLE STORAGE 151 LIGHTS	4
5	N LARGE VEHICLE STORAGE 151 LIGHTS	20/1	1.77	С	1.55	20/1	S LARGE VEHICLE STORAGE 151 LIGHTS	6
7	C LARGE VEHICLE STORAGE 151 LIGHTS	20/1	1.99	A	1.79	20/1	N WELD BAY 145 LIGHTS	8
9	LIGHTING CONTROL PANEL 2	15/1	.18	В	1.07	20/1	SE WELD BAY 145 LIGHTS	10
11	SPARE	20/1	1	C	1.43	20/1	SW WELD BAY 145 LIGHTS	12
13	SPARE	20/1	1	A	-	20/1	SPARE	14
15	SPARE	20/1	1	В	-	20/1	SPARE	16
17	SPARE	20/1	1	С	1	20/1	SPARE	18
19	SPARE	20/1	1	A	-	20/1	SPARE	20
21	SPARE	20/1	1	В	-	20/1	SPARE	22
23	SPARE	20/1	1	C	-	20/1	SPARE	24
25	SPARE	20/1	I	A	-	20/1	SPARE	26
27	SPARE	20/1	1	В	-	20/1	SPARE	28
29	SPARE	20/1	1	C	-	20/1	SPARE	30

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PANEL RP1 – WEST LARGE VEHICLE 138, SMALL VEHICLE STORAGE 140

100	MCB 30 POLE 120/208Y 3	PH 4 W	100	AMP CO	PPER Bl	JSS N	N/GRD BAR SQUARE D NQ SURFA	٩CΕ
MAI	N CIRCUIT BREAKER: 22 KAIC MINIMUM					BRAN	CH CIRCUIT BREAKERS: 10 KAIC MINIM	UM
NO.	DESCRIPTION	BKR	KW	PHASE	ĸw	BKR	DESCRIPTION	NO.
1	N SMALL VEHICLE STOR. 140, EXT. RECEF	20/1	.54	A	.90	20/1	S SMALL VEHICLE 140, MUA RT RECEP	2
3	NW SMALL VEHICLE STOR.140, EXT.RECEF	20/1	.54	В	.53	20/1	SMALL VEHICLE 140 PRV-3	4
5	SW SMALL VEHICLE STOR.140, EXT.RECEP	20/1	.54	C	.36	20/1	E SMALL VEHICLE STORAGE 140 RECEP	6
7	NW LARGE VEHICLE STOR. 138 RECEF	20/1	.36	A	.36	20/1	WASTE HEAT CONTROL PANEL	8
9	NW LARGE VEHICLE STOR. 138 RECEF	20/1	.72	В	I	20/1	SPARE	10
11	SW LARGE VEHICLE STOR. 138 RECEP	20/1	.54	С	I	20/1	SPARE	12
13	SW LARGE VEHICLE STOR. 138 RECEP	20/1	.36	A	I	20/1	SPARE	14
15	TANK HIGH WATER ALARM	20/1	.60	В	I	20/1	SPARE	16
17	LARGE VEHICLE STORAGE 138 EWC	20/1G	.72	C	I	20/1	SPARE	18
19	SPARE	20/1	I	A	I	20/1	SPARE	20
21	SPARE	20/1	I	B	I	20/1	SPARE	22
23	SPARE	20/1	1	C	1	20/1	SPARE	24
25	SPARE	20/1	1	A	1	20/1	SPARE	26
27	SPARE	20/1	1	В	1	20/1	SPARE	28
29	SPARE	20/1	-	C	-	20/1	SPARE	30

PANEL RP2 - OFFICE, PARTS AREA

225	MLO 42 POLE 120/208Y 3	PH 4 W	225	AMP CO	PPER B	JSS V	V/GRD BAR SQUARE D NQ SURFA	CE
						BRAN	CH CIRCUIT BREAKERS: 10 KAIC MINIMU	UM
NO.	DESCRIPTION	BKR	KW	PHASE	ĸw	BKR	DESCRIPTION	NO.
1	ENTRY 134, HALL, EXT RECEP	20/1	1.08	A	1.00	20/1	MENS LOCKER N SINK RECEP	2
3	N,W,E BREAKROOM RECEP	20/1	.72	В	1.00	20/1	MENS LOCKER CENTER SINK RECEP	4
5	OFFICE HALL EWC	20/1G	.72	C	1.00	20/1	MENS LOCKER S SINK RECEP	6
7	SPARE	20/1	I	A	1.50	20/1G	N MEN'S LOCKER HAND DRYER	8
9	SPARE	20/1	I	В	1.50	20/1G	S MEN'S LOCKER HAND DRYER	10
11	SPARE	20/1	I	C	.72	20/1	GENERAL MENS LCKR, MUD RM RECEP	12
13	W WOMENS LOCKER COUNTER RECEP	20/1	1.00	A	1.18	20/1	MUD ROOM WASHER RECEP	14
15	CENTER WOMENS LOCKER COUNTER RECI	P20/1	1.00	В	4.16	30/2	MUD ROOM DRYER RECEP	16
17	E WOMENS LOCKER COUNTER RECEP	20/1	1.00	C				18
19	WOMENS LCKR, STORE131, SUP. 141 RECEP	20/1	.54	A	.54		S PARTS137, E PARTS OFFICE 124 RECEP	20
21	PARTS 137 GENERAL RECEPTACLES	20/1	1.08	В	.90	20/1	PARTS OFFICE 124 RECEP	22
23	WOMEN'S LOCKER HAND DRYER	20/1G	1.50	С	.72	20/1	TOOL, KIT, COUNTER RECEP	24
25	OFFICE 120 RECEPTACLES	20/1	.90	A	.36	20/1G	OIL ROOM RECEPTACLES	26
27	MEN, WOMEN'S SHOWER LIGHTS	20/1	.30	В	.72	20/1	OFFICE 122 RECEPTACLES	28
29	ENTRY ADA DOORS	20/1	1.20	C	.72	20/1	OFFICE 121 RECEPTACLES	30
31	SPARE	20/1	-	A	-	20/1	SPARE	32
33	SPARE	20/1	I	В	1	20/1	SPARE	34
35	SPARE	20/1	1	C	-	20/1	SPARE	36
37	SPARE	20/1	1	A	-	20/1	SPARE	38
39	SPARE	20/1	1	В	-	20/1	SPARE	40
41	SPARE	20/1	1	C	-	20/1	SPARE	42

PANEL RP3 - MEZZ., NE LARGE VEHICLE STORAGE 138, CENTRAL LARGE VEHICLE STORAGE 151

150	MCB 42 POLE 120/208Y 3	PH 4 W	225	AMP CO	PPER BL	JSS 1	W/GRD BAR SQUARE D NQ SURF.	ACE				
MAII	MAIN CIRCUIT BREAKER: 22 KAIC MINIMUM BRANCH CIRCUIT BREAKERS: 10 KAIC MINIMUM											
NO.	DESCRIPTION	BKR	ĸw	PHASE	ĸw	BKR	DESCRIPTION	NO.				
1	W LARGE VEHICLE 151, MUA-2 RECEP	20/1	.54	A	.36	20/1	NORTH CENTER VEHICLE 138 RECEP	2				
3	E LARGE VEHICLE 151, EXT RECEP	20/1	.54	В	.36	20/1	NE LARGE VEHICLE 138 RECEP	4				
5	SPARE	20/1	I	С	.36	20/1	NE LARGE VEHICLE 138 RECEP	6				
7	W MEZZANINE RECEPTACLES	20/1	.90	A	.36	20/1	NE LARGE VEHICLE 138 RECEP	8				
9	E MEZZANINE RECEPTACLES	20/1	.90	В	.70	15/1	OIL ROOM PRV-11	10				
11	SPARE	20/1	-	С	-	20/1	SPARE	12				
13	SPARE	20/1	-	Α	-	20/1	SPARE	14				
15	SPARE	20/1	_	В	-	20/1	SPARE	16				
17	SPARE	20/1	_	С	-	20/1	SPARE	18				
19	SPARE	20/1	_	A	-	20/1	SPARE	20				
21	SPARE	20/1	-	В	-	20/1	SPARE	22				
23	SPARE	20/1	-	С	-	20/1	SPARE	24				
25	SPARE	20/1	-	A	-	15/1	SPARE	26				
27	SPARE	20/1	_	В	-	20/1	SPARE	28				
29	SPARE	20/1	-	С	-	20/1	SPARE	30				
31	SPARE	20/1	-	A	-	20/1	SPARE	32				
33	SPARE	20/1	I	В	-	20/1	SPARE	34				
35	SPARE	20/1	1	С	-	20/1	SPARE	36				
37	SPARE	20/1	I	Α	1	20/1	SPARE	38				
39	SPARE	20/1	I	В	-	20/1	SPARE	40				
41	SPARE	20/1	I	С	-	20/1	SPARE	42				

100	мсв	30 POLE	120/208Y	3 PH 4 W	100	AMP CO	PPER BI	JSS	W/GRD BAR SQUARE D NQ SURFA	CE
MAI	N CIRCI	JIT BREAKER	: 22 KAIC MINII	MUM				BRAN	ICH CIRCUIT BREAKERS: 10 KAIC MINIM	UM
NO.		DESCRIPTIO	NC	BKR	KW	PHASE	КW	BKR	DESCRIPTION	NO.
1	NE VE	HICLE 151, E	XT RECEP	20/1	.54	Α	.36	20/1	NE VEHICLE 151 RECEPTACLES	2
3	SPARE			20/1	I	В	.54	20/1	NW VEHICLE 151, EXT RECEPTACLES	4
5	SPARE			20/1	I	С	.54	20/1	NW VEHICLE 151, EXT RECEPTACLES	6
7	N VEHI	CLE 151 RECE	PTACLES	20/1	.36	Α	1.18	20/1	EVAP. SUBMERSIBLE PUMP #1(ALT BID#6	8 (
9	N VEH	ICLE 151 PR	V-9	20/1	.86	В	1.18	20/1	EVAP. SUBMERSIBLE PUMP #2(ALT BID#6) 10
11	SPARE			20/1	I	С	1.80	20/1	WATER EVAPORATOR #1 (ALT BID #6)	12
13	SPARE	•		20/1	١	Α	1.80	20/1	WATER EVAPORATOR #2 (ALT BID #6)	14
15	SPARE			20/1	1	В	-	20/1	SPARE	16
17	SPARE			20/1	1	С	-	20/1	SPARE	18
19	SPARE			20/1	1	Α	-	20/1	SPARE	20
21	SPARE			20/1	I	В	1	20/1	SPARE	22
23	SPARE			20/1	-	С	-	20/1	SPARE	24
25	SPARE			20/1	1	Α	-	15/1	SPARE	26
27	SPARE			20/1	1	В	-	20/1	SPARE	28
29	SPARE			20/1	1	С	_	20/1	SPARE	30

PANEL RP4 – NORTH LARGE VEHICLE STORAGE 151

PANEL RP5 –	WELD BAY	145, LARGE	STORAGE	138,	151 AREA	
				,		

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225	MCB 42 POLE 120/208Y 3	5 PH 4 W	225	AMP CO	PPER B	USS V	W/GRD BAR SQUARE D NQ SURFA	CE			
MAII	MAIN CIRCUIT BREAKER: 22 KAIC MINIMUM BRANCH CIRCUIT BREAKERS: 10 KAIC MINIMUM										
NO.	DESCRIPTION	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.			
1	N WELD BAY 145 RECEPTACLES	20/1ST	.54	Α	.36	20/1	SE LARGE VEHICLE 138 RECEPTACLES	2			
3				В	.36	20/1	SE LARGE VEHICLE 138 RECEPTACLES	\$ 4			
5	NE WELD BAY 145 RECEPTACLES	20/1ST	.36	С	.72	20/1	SW LARGE VEHICLE 151, MUA-3 RECEP	6			
7				Α	.54	20/1	SE LARGE VEHICLE 151, EXT RECEP	8			
9	SE WELD BAY 145 RECEPTACLES	20/1ST	.36	В	.70	15/1	SE LARGE VEHICLE 138 PRV-6	10			
11				С	-	20/1	SPARE	12			
13	NW WELD BAY 145 RECEPTACLES	20/1ST	.36	Α	-	20/1	SPARE	14			
15				В	-	20/1	SPARE	16			
17	SW WELD BAY 145 RECEPTACLES	20/1ST	.36	С	-	20/1	SPARE	18			
19				Α	-	20/1	SPARE	20			
21	S WELD BAY 145, EXT. RECEP	20/1ST	.72	В	-	15/1	SPARE	22			
23				С	1	20/1	SPARE	24			
25	N WELD BAY 145 HOSE REEL HR-1	15/1	.86	Α	-	20/1	SPARE	26			
27	S WELD BAY 145 HOSE REEL HR-2	15/1	.86	В	-	20/1	SPARE	28			
29	WELD BAY 145 PRV-12	20/1	1.18	С	-	20/1	SPARE	30			
31	SPARE	20/1	-	Α	-	20/1	SPARE	32			
33	SPARE	20/1	-	В	_	20/1	SPARE	34			
35	SPARE	20/1	-	С	-	20/1	SPARE	36			
37	SPARE	20/1	_	Α	-	20/1	SPARE	38			
39	SPARE	20/1	-	В	1	20/1	SPARE	40			
41	SPARE	20/1	-	С	1	20/1	SPARE	42			
	ST = SHUNT TRIP										

100	MCB 30 POLE 120/208Y	3 PH 4 W	100	AMP CO	PPER BI	JSS I	N/GRD BAR SQUARE D NQ SURFA	CE				
MAII	MAIN CIRCUIT BREAKER: 22 KAIC MINIMUM BRANCH CIRCUIT BREAKERS: 10 KAIC MINIMUM											
NO.	DESCRIPTION	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.				
1	SPARE	20/1	-	A	.48	15/1	S SMALL VEHICLE 140 UH-3,UH-4	2				
3	ELECTRICAL ROOM RECEPTACLES	20/1	.36	В	.48	15/1	NW LARGE VEHICLE 138 UH-5,UH-6	4				
5	N SMALL VEHICLE 140 UH-1,UH-2	15/1	.48	C	.48	15/1	SW LARGE VEHICLE 138 UH-8,UH-9	6				
7	SPARE	20/1	-	A	-	20/1	SPARE	8				
9	SPARE	20/1	-	В	-	20/1	SPARE	10				
11	SPARE	20/1	-	C	-	20/1	SPARE	12				
13	SPARE	20/1	-	A	-	20/1	SPARE	14				
15	SPARE	20/1	-	В	-	20/1	SPARE	16				
17	SPARE	20/1	-	C	-	20/1	SPARE	18				
19	SPARE	20/1	-	A	-	20/1	SPARE	20				
21	SPARE	20/1	-	В	-	20/1	SPARE	22				
23	SPARE	20/1	-	C	-	20/1	SPARE	24				
25	SPARE	20/1	-	A	-	20/1	SPARE	26				
27	SPARE	20/1	-	В	-	20/1	SPARE	28				
29	SPARE	20/1	-	C	-	20/1	SPARE	30				

150	MCB 42 POLE 120/208Y 3	PH 4 W	225	AMP CO	PPER BL	JSS I	N/GRD BAR SQUARE D NQ SURFA	CE			
MAI	MAIN CIRCUIT BREAKER: 22 KAIC MINIMUM BRANCH CIRCUIT BREAKERS: 10 KAIC MINIMUM										
NO.	DESCRIPTION	BKR	ĸw	PHASE	KW	BKR	DESCRIPTION	NO.			
1	DATA ROOM 142 ACCU-1, CRU-1	15/2	2.50	A	.36	15/1	STAIRCUH-2,ENTRYCUH-1,PARTS UH-22	2			
3				В	1.00	20/1	NE BREAKROOM 132 MICROWAVE	4			
5	OFFICE HVAC ZONE DAMPER XFMRS	15/1	.72	C	1.00	20/1	NE BREAKROOM 132 MICROWAVE	6			
7	PARTS 137 OHD	20/1	1.18	A	.18	20/1	N BREAKROOM 132 COUNTER RECEP	8			
9	SPARE	20/1	-	В	.18	20/1	S BREAKROOM 132 COUNTER RECEP	10			
11	SPARE	20/1	_	C	1.82	20/1	VEHICLE STORAGE 151 ICE MAKER	12			
13				A	.36	20/1	BREAKROOM 132 COMPUTER RECEP	14			
15	PANEL ELEV	60/3	3.20	В	.54	20/1	BREAKROOM 132 COMPUTER, TV RECEP	16			
17				C	.53	15/1	RADIENT FLOOR PUMP P-6 (ALT #5)	18			
19	N DATA ROOM 142 RECEPTACLES	20/1	.36	A	.36	15/1	MEZZANINE UH-23,LARGE VEH. 138 UH-7	20			
21	W DATA ROOM 142 RECEPTACLES	20/1	.36	В	.86	15/1	AIR COMPRESSOR DRYER	22			
23	E DATA ROOM 142 RECEPTACLES	20/1	.36	С	.36	15/1	HOT WATER CIRC PUMP	24			
25	S DATA ROOM 142 RECEPTACLES	20/1	.36	A	.18	15/1	HOT WATER ALARM	26			
27	N, W OFFICE 123 RECEPTACLES	20/1	.72	В	1.18	20/1	BOILER B-1	28			
29	S, E OFFICE 123 RECEPTACLES	20/1	.72	C	1.18	20/1	BOILER PUMP P-1	30			
31	BREAKROOM TIME CLOCK	15/1	.18	A	1.18	20/1	BOILER B-2	32			
33	AHU-1,ERV-1,ACCU-1A ROOF TOP RECE	P 20/1	.54	В	1.18	20/1	BOILER PUMP P-2	34			
35	PUMP P-5	20/2	1.84	С	.53	15/1	INDIRECT WATER HEATER PUMP P-10				
37				A	.72	20/1	BUILDING AUTOMATION CONTROL PANEL	38			
39	UPS	30/2	4.99	В	.90	20/1	138,140,145 GAS DETECTION PANEL	40			
41				C	.90	20/1	151 GAS DETECTION PANEL	42			

INCLUDE FEED THRU LUGS

225	MLO	42 POLE	120/208Y	3 PH 4 W	225	AMP CO	PPER BI	JSS	W/GRD BAR	SQUARE D NQ SUR	FACE
								BRAN	ICH CIRCUIT BRE	EAKERS: 10 KAIC MIN	IMUM
NO.		DESCRIPTIC	N	BKR	КW	PHASE	KW	BKR	DE	ESCRIPTION	NO.
1						A	-	20/1	SPARE		2
3	ERV-1			15/3	4.29	В	-	20/1	SPARE		4
5						C	-	20/1	SPARE		6
7	SPARE			20/1	-	A	-	20/1	SPARE		8
9	SPARE			20/1	-	В	-	20/1	SPARE		10
11	SPARE			20/1	-	C	-	20/1	SPARE		12
13	SPACE			20/1	-	A	-	20/1	SPACE		14
15	SPACE			20/1	-	В	-	20/1	SPACE		16
17	SPACE			20/1	-	C	-	20/1	SPACE		18
19	SPACE			20/1	_	A	_	20/1	SPACE		20
21	SPACE			20/1	-	В	_	20/1	SPACE		22
23	SPACE			20/1	-	С	-	20/1	SPACE		24
25	SPACE			20/1	-	A	-	20/1	SPACE		26
27	SPACE			20/1	_	В	_	20/1	SPACE		28
29	SPACE			20/1	-	С	-	20/1	SPACE		30
31	SPACE			20/1	-	A	-	20/1	SPACE		32
33	SPACE			20/1	-	В	-	20/1	SPACE		34
35	SPACE			20/1	-	С	-	20/1	SPACE		36
37	SPACE			20/1	_	A	-	20/1	SPACE		38
39	SPACE			20/1	-	В	-	20/1	SPACE		40
41	SPACE			20/1	-	C	-	20/1	SPACE		42

100	MLO	30 POLE	120/208Y	3 PH 4 W	100	AMP CO	PPER B	JSS	W/GRD BAR SQUARE D NQ SU	IRFACE
MAII	N CIRCI	JIT BREAKER:	22 KAIC MININ	IUM				BRAN	Ch circuit breakers: 10 kaic mi	NIMUM
NO.		DESCRIPTIO	ON	BKR	ĸw	PHASE	КW	BKR	DESCRIPTION	NO.
1	NW LAF	RGE VEHICLE 1	51 UH-18, UH-	-20 15/1	.48	A				2
3	NE LAF	RGE VEHICLE 1	51 UH-19, UH-	·21 15/1	.48	B	4.44	60/3	MAIN CIRCUIT BREAKER	4
5	NE VEH	HICLE 151 WAT	ER TREATMENT F	RECEP 20/1	1.20	C				6
7			ER TREATMENT F		1.20	A	-	20/1	SPARE	8
9	N CENTE	R LARGE VEH.15	1 CO/NO2/NG SEN	SORS 15/1	.54	B	-	20/1	SPARE	10
11	N LARGE	: VEH.151 CO/NO	02/NG SENSORS	15/1	.54	C	-	20/1	SPARE	12
13	SPARE			20/1	_	A	-	20/1	SPARE	14
15	SPARE			20/1	-	B	-	20/1	SPARE	16
17	SPARE			20/1	-	С	-	20/1	SPARE	18
19	SPARE			20/1	-	A	-	20/1	SPARE	20
21	SPARE			20/1	-	B	-	20/1	SPARE	22
23	SPARE			20/1	-	С	-	20/1	SPARE	24
25	SPARE			20/1	-	A	-	20/1	SPARE	26
27	SPARE			20/1	-	B	-	20/1	SPARE	28
29	SPARE			20/1	-	С	-	20/1	SPARE	30

100	МСВ	30 POLE	120/208Y 3	PH 4 W	100	AMP CO	PPER B	USS V	V/GRD BAR SQUARE D NQ SURFA	CE
MAIN		T BREAKER:	22 KAIC MINIMUM					BRAN	CH CIRCUIT BREAKERS: 10 KAIC MINIMU	M
NO.		DESCRIPTIO	NC	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.
1	SELARGE	VEH138 UH10,	151UH15,NWELD UH12	15/1	.60	Α	.72	20/1ST	N WELD BAY 145 RECEPTACLES	2
3	SE LARC	Ge veh 138 u	JH11,SWELD UH13	15/1	.36	В				4
5	S CENTR	AL LARGE VEH	151 UH-16, UH-17	15/1	.48	С	.72	20/1ST	CENTER WELD BAY 145 RECEPTACLES	6
7	SPARE			20/1	-	Α				8
9	SPARE			20/1	-	В	.72	20/1ST	S WELD BAY 145 RECEPTACLES	10
11	SPARE			20/1	-	С				12
13	WELD BA	y recep Mg Si	Hunt Trip Cntrl	15/1	.36	Α	2.16	25/1ST	EAST WELD BAY WELDING RECEP	14
15	SPARE			20/1	I	В				16
17	SPARE			20/1	I	С	1	20/1	SPARE	18
19	SPARE			20/1	1	Α	1	20/1	SPARE	20
21	SPARE			20/1	۱	В	1	20/1	SPARE	22
23	SPARE			20/1	I	С	1	20/1	SPARE	24
25	SPARE			20/1	1	Α	1	20/1	SPARE	26
27	SPARE			20/1	1	В	-	20/1	SPARE	28
29	SPARE			20/1	1	С	-	20/1	SPARE	30
	ST = S	hunt trip								

PANEL EP1 – SMALL VEHICLE 140, WEST LARGE VEHICLE 138 AREA

PANEL EP2A – OFFICE, MEZZANINE AREA

PANEL EP2B – OFFICE, MEZZANINE AREA

PANEL EP3 – NORTH LARGE VEHICLE 151 AREA

PANEL EP4 - WELD BAY, SOUTH LARGE VEHICLE 138, 151 AREA

PANEL FI – FUEL ISLAND

100	MCB	30 POLE	120/208Y	3 PH 4 W	100	AMP CO	PPER B	USS	W/GRD BAR SQUARE D NQ	SURFACE
MAI	I CIRCU	IT BREAKER:	22 KAIC MINIM	IUM						
NO.		DESCRIPTIO	N	BKR	KW	PHASE	KW	BKR	DESCRIPTION	NO.
1	SPARE			_	-	A	-	- 1	SPARE	2
3	SPARE			-	-	B	-	-	SPARE	4
5	SPARE			-	-	C	-	-	SPARE	6
7	SPARE			-	-	A	-	-	SPARE	8
9	SPARE			-	-	B	-	-	SPARE	10
11	SPARE			-	1	C	-	-	SPARE	12
13	SPARE			-	1	A	-	-	SPARE	14
15	SPARE			-	-	B	-	-	SPARE	16
17	SPARE			-	-	C	-	-	SPARE	18
19	SPARE			-	-	A	-	-	SPARE	20
21	SPARE			-	-	B	-	-	SPARE	22
23	SPARE			-	-	C	-	-	SPARE	24
25	SPARE			-	-	A	-	-	SPARE	26
27	SPARE			-	-	B	-	-	SPARE	28
29	SPARE			-	_	C	-	-	SPARE	30

PANEL EMPP1 – EMERGENCY LOADS

C00	PER BUSSMANN QUICK SPEC COOF	RDINATI	ON PA	NEL QS	SCP OR E	EQUAL	27	7/480	Y 3 PH 4 W NEMA 1 SURF	ACE					
200	AMP MAIN FUSED DISC WITH 200A	FUSES	5	18 PO	LE 200 A	MP CO	PPER	BUSS	W/NEUTRAL AND GROUND	BAR					
BUS	SMANN CCPB BRANCH DISCONNEC	ts with	H INDIC	ATING	CUBE FL	JSES. A	AMP SI	ZE AND	POLES AS INDICATED BELOW.						
INCL	UDE 3 SPARE 45 AMP AND 3 SPAR	E 60 A	MP IN	DICATIN	IG CUBE	FUSES	6		PANELBOARD SCCR: 100	KA					
NO.	DESCRIPTION	ССРВ	FUSE	кw	PHASE	KW	FUSE	ССРВ	DESCRIPTION	NO.					
1			45		Α		60			2					
3	PANEL EMP1 TRANSFORMER	60/3	45	7.40	В	3.3	60	60/3	PANEL FP - FIRE PUMP BUILDING	4					
5			45		С		60			6					
7															
9	PANEL ELP1	60/3	60	13.02	B	-	-	-	SPACE	10					
11			60		С	-	-	-	SPACE	12					
13	SPACE	-	-	-	Α	-	-	-	SPACE	14					
15	SPACE	-	-	-	B	-	-	-	SPACE	16					
17	SPACE	-	-	-	С	-	-	-	SPACE	18					
	FUSES SHALL HAVE 200KAIR. SYSTEM SHALL BE SELECTIVELY COORDINATED. PROVIDE LABEL ON PANEL: "EMERGENCY PANEL EMPP1 FED BY PANEL MDP AND EMERGENCY STANDBY GENERATOR THRU OPTIONAL EMERGENCY AUTOMATIC TRANSFER SWITCH ATS3. EMERCENCY POWER FEORMY 480V 3. PHASE 4. WIRE DISSEL FUELED.														

PANEL EMP1 – EMERGENCY LOADS

SWITCH ATS3. EMERGENCY POWER 550KW, 480V, 3 PHASE, 4 WIRE DIESEL FUELED EMERGENCY GENERATOR LOCATED OUTSIDE ON SOUTHEAST SIDE OF BUILDING".

				•					-	
coc	PER BUSSMANN QUICK SPEC COOF	RDINATI	on Pai	NEL QS	SCP OR E			120/20	08Y 3 PH 4 W NEMA 1 SURF/	ACE
100	AMP MAIN FUSED DISCONNECT WIT	Н 100/	A FUSE	S 30) POLE	100 AI		PPER B	SUSS W/NEUTRAL AND GROUND B	BAR
BUS	SMANN CCPB BRANCH DISCONNEC	ts with	H INDIC	ATING	CUBE FL	JSES. /	amp siz	ze and	POLES AS INDICATED BELOW.	
INC	LUDE 4 SPARE 20 AMP AND 2 SPAR	RE 25 A	MP IN	DICATIN	IG CUBE	FUSES	5		PANELBOARD SCCR: 50	ОКА
NO.	DESCRIPTION	ССРВ	FUSE	KW	PHASE	KW	FUSE	CCPB	DESCRIPTION	NO.
1	FIRE ALARM PANEL	20/1	20	.48	A	.36	20	20/1	SPRINKLER BELL, STROBE	2
3	FIRE ALARM NAC PANEL #3, #4	20/1	20	.72	В	.18	20	20/1	GENERATOR RECEPTACLE	4
5	FIRE ALARM NAC PANEL #1, #2	20/1	20	.72	C	.72	20	20/1	GENERATOR BATTERY CHARGER	6
7	GENERATOR BLOCK HEATER	30/2	25	4.00	A	.12	20	20/1	GENERATOR BATTERY HEATER	8
9			25		В	.10	20	20/1	GENERATOR ALTERNATOR HTR	10
11	SPARE	20/1	20	-	C	-	20	20/1	SPARE	12
13	SPARE	20/1	20	-	A	-	20	20/1	SPARE	14
15	SPARE	20/1	20	_	В	-	20	20/1	SPARE	16
17	SPARE	20/1	20	_	С	-	20	20/1	SPARE	18
19	SPARE	20/1	20	_	A	-	20	20/1	SPARE	20
21	SPARE	20/1	20	-	B	-	20	20/1	SPARE	22
23	SPARE	20/1	20	-	С	-	20	20/1	SPARE	24
25	SPARE	20/1	20	-	A	-	20	20/1	SPARE	26
27	SPARE	20/1	20	-	В	-	20	20/1	SPARE	28
29	SPARE	20/1	20	-	C	-	20	20/1	SPARE	30
	FUSES SHALL HAVE 200 KAIR SYS	STEM S				COOP				

FUSES SHALL HAVE 200 KAIR. SYSTEM SHALL BE SELECTIVELY COORDINATED.

PANEL FP - FIRE PUMP BUILDING EMERGENCY LOADS

coo	PER BUSSMANN QUICK SPEC COOF	RDINATI	on Pai	NEL QS	SCP OR E	EQUAL		120/2	08Y 3 PH 4 W NEMA 1 SURFA	ACE
60 /	AMP MAIN FUSED DISCONNECT WITH	1 50 AN	IP FUS	ES 1	8 POLE	100 A	MP CO	PPER	BUSS W/NEUTRAL AND GROUND E	3AR
BUS	SMANN CCPB BRANCH DISCONNEC	ts with	H INDIC	ATING	CUBE FL	JSES. /	AMP SI	ZE AND) Poles as indicated below.	
INCL	UDE 6 SPARE 20 AMP INDICATING	CUBE F	USES						PANELBOARD SCCR: 50	KA
NO.	DESCRIPTION	ССРВ	FUSE	KW	PHASE	ĸw	FUSE	ССРВ	DESCRIPTION	NO.
1	FIRE PUMP ROOM LIGHTS	20/1	20	.23	A	.60	20	20/1	FIRE PUMP ALARM	2
3	FIRE PUMP ROOM RECEPTACLES	20/1	20	.36	В	.60	20	20/1	FIRE PUMP TANK LEVEL ALARM	4
5	FIRE PUMP HOUSE EXTERIOR LTS	20/1	20	.13	C	.60	20	20/1	FIRE PUMP TANK FILL	6
7	SPARE	20/1	20	-	A	.60	20	20/1	FIRE PUMP CONTROL	8
9	SPARE	20/1	20	-	В	.18	20	20/1	FIRE PUMP BUILDING BELL, STROBE	10
11	SPARE	20/1	20	-	C	-	20	20/1	SPARE	12
13	SPARE	20/1	20	-	A	-	20	20/1	SPARE	14
15	SPARE	20/1	20	-	В	-	20	20/1	SPARE	16
17	SPARE	20/1	20	-	C	-	20	20/1	SPARE	18

FUSES SHALL HAVE 200 KAIR. SYSTEM SHALL BE SELECTIVELY COORDINATED.

PANEL ELP1 – EMERGENCY LIGHTING LOADS

coo	PER BUSSMANN QUICK SPEC COOF	RDINATI	ON PA	NEL QS	SCP OR E	EQUAL	:	277/4	80Y 3 PH 4 W NEMA 1 SURFA	ACE
100	AMP MLO 30 POI	LE		100 AI	MP COPP	er Bu	SS		W/NEUTRAL AND GROUND E	BAR
BUS	SMANN CCPB BRANCH DISCONNEC	ts with	h indic	ATING	CUBE FL	JSES. /	AMP SI	ZE AND) Poles as indicated below.	
INCL	UDE 6 SPARE 20 AMP INDICATING	CUBE F	USES						PANELBOARD SCCR: 50)KA
NO.	DESCRIPTION	ССРВ	FUSE	КW	PHASE	κw	FUSE	ССРВ	DESCRIPTION	NO.
1	OFFICE AREA, N STAIR EM LIGHTS	20/1	20	1.25	A	.41	20	20/1	NW, N EXTERIOR SECURITY LIGHTS	2
3	OFF.,MEZZ,PARTS,SM.VEH EXIT LTS	20/1	20	.20	В	.87	20	20/1	SW, S EXTERIOR SECURITY LIGHTS	4
5	PARTS, MEZZ, S STAIR EM LTS	20/1	20	.61	C	.41	20	20/1	NE, E, SE EXTERIOR SECURITY LIGHTS	6
7	LARGEVEHICLE138,151,WELDSHOP EXIT LT	\$20/1	20	.13	A	.59	20	20/1	N PARKING LOT, DRIVE LIGHT POLES	8
9	EAST LARGE VEHICLE STORAGE 151 EM LTS	20/1	20	1.33	В	.47	20	20/1	W PARKING LOT, FUEL ISLAND LIGHT POLE	\$ 10
11	EAST LARGE VEHICLE STORAGE 151 EM LTS	20/1	20	.90	C	.81	20	20/1	W DRIVE LIGHT POLES	12
13	E LARGE VEHICLE 138, WELD SHOP EM LTS	20/1	20	1.38	A	.18	20	20/1	LIGHTING CONTROL PANEL LCPEL	14
15	W,CENTRAL LARGE VEHICLE 138 EM LTS	20/1	20	1.33	В	.81	20	20/1	SMALL VEHICLE 140, ELEC ROOM LIGHTS	16
17	CENTRAL LARGE VEHICLE 138 EM LTS	20/1	20	.90	C	.44	20	20/1	FLAG POLE LIGHTS	18
19	SPARE	20/1	20	-	A	-	20	20/1	SPARE	20
21	SPARE	20/1	20	-	В	-	20	20/1	SPARE	22
23	SPARE	20/1	20	-	C	1	20	20/1	SPARE	24
25	SPARE	20/1	20	-	A	-	20	20/1	SPARE	26
27	SPARE	20/1	20	-	В	-	20	20/1	SPARE	28
29	SPARE	20/1	20	-	C	-	20	20/1	SPARE	30

FUSES SHALL HAVE 200 KAIR MINIMUM. SYSTEM SHALL BE SELECTIVELY COORDINATED.

GENERAL NOTES

- 1. EMERGENCY LIGHTING CIRCUITS SHALL BE RUN IN SEPARATE CONDUIT FOR EMERGENCY LIGHTING ONLY. ALL EMERGENCY CIRCUITS WILL HAVE SEPARATE NEUTRAL CONDUCTORS.
- 2. VERIFY ALL EQUIPMENT, RECEPTACLE AND SWITCH LOCATIONS WITH OWNER.
- 3. ELECTRICAL CONTRACTOR TO PROVIDE A COMPLETE GENERATOR SYSTEM.
- 4. ALL DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE. ALL LIGHT SWITCHES SHALL BE 20 AMP. OFFICE COPIER RECEPTACLES OR OTHER LARGE OFFICE LOAD RECEPTACLES SHALL BE 20 AMP. ALL SHOP, VEHICLE STORAGE, MAINTENANCE, MEZZANINE AND EXTERIOR RECEPTACLES SHALL BE 20 AMP. GENERAL OFFICE RECEPTACLES SHALL BE 15 AMP.
- 5. CONDUIT WILL BE RECESSED IN FINISHED AREAS AND AT ALL OTHER AREAS WITH BLOCK WALLS. CONDUIT IN MECHANICAL ROOMS, WELD SHOP, MEZZANINE AND VEHICLE STORAGE AREAS SHALL BE SURFACE MOUNTED ON PRECAST WALLS AND RECESSED IN BLOCK WALLS. ALL CONDUIT SHALL BE RECESSED IN DRYWALL OR BLOCK WALLS. ELIMINATE SURFACE CONDUITS PASSING WINDOWS BY RUNNING AROUND GLASS OR BY RUNNING CONDUITS CLOSE TO COLUMNS. NO CONDUITS WILL BE RUN AT MEZZANINE ALONG THE MEZZANINE RAIL EDGE OR UP FROM THE MEZZANINE RAILING TO THE JOISTS. MC CABLE MAY BE USED ON LIGHTING ABOVE ACCESSIBLE CEILINGS OR AT BEAMS AND/OR JOISTS IN HIGH BAY AREAS. PREMANUFACTURED WIRING SYSTEMS MAY BE USED ON LIGHTING ABOVE ACCESSIBLE CEILINGS OR AT BEAMS AND/OR JOISTS IN HIGH BAY AREAS.
- 6. EWC RECEPTACLES SHALL BE LOCATED BEHIND HOUSING IN OFFICE AREA. CIRCUIT BREAKER TO BE GFCI. SHOP AREAS TO HAVE GFCI RECEPTACLE INSTALLED NEXT TO WATER COOLER.
- 7. ALL BOXES TO BE WELDED 4" SQUARE MINIMUM.
- 8. CONDUIT FOR SECURITY SYSTEM DOOR CONTACTS MAY BE 1/2".
- ALL CIRCUITS TO HAVE A MAXIMUM VOLTAGE DROP OF 3%. 120V CIRCUITS: 0-50FT, #12; 51-100FT, #10; 101-150, #8; 151FT AND UP, SIZE LESS THAN 3%. LIGHTING CIRCUITS ABOVE 200V: 0-100FT, #12; 101-200FT, #10; 201-300FT, #8; 300FT AND UP, SIZE LESS THAN 3%. POWER: SIZE LESS THAN 3%.
- 10. EC TO LABEL ALL RECEPTACLES AND DISCONNECTS WITH WITH LOAD DESCRIPTION AND CIRCUIT NUMBERS. LABEL FRONT OF RECEPTACLE COVER PLATE WITH CIRCUIT NUMBER. USE BROTHER OR KROY OR EQUAL SELF LAMINATING ADHESIVE LABELS. IN SHOP AREAS, USE BLACK LETTERS ON WHITE BACKGROUND. IN FINISHED AREAS, USE BLACK LETTERS ON CLEAR BACKGROUND. DO NOT LABEL BY HAND. ALL PANELS AND TRANSFORMERS SHALL HAVE LABELS. INLINE CIRCUIT NUMBER FOR THE FEED TO THE BANKL OR TRANSFORMER PANEL OR TRANSFORMER.
- 11. ALL CONDUCTORS SHALL BE COPPER (#12 MINIMUM).
- 12. SECURE ALL CHAIN, CABLE OR PENDANT HUNG LIGHTS NEAR HVAC DUCT OPENINGS AS REQUIRED TO PREVENT MOVEMENT.
- 13. RECEPTACLES ON EMERGENCY POWER SHALL BE RED IN COLOR.
- 14. MAINTAIN FIRE RATING AT ALL PENETRATIONS. CAULK CONDUITS AT ALL WALL AND ROOF PENETRATIONS.
- 15. ALL VEHICLE, WELD BAY AND MEZZANINE AREAS: KEEP ELECTRICAL WIRING BELOW THE TOP 18" OF CEILING SPACE AS MUCH AS POSSIBLE DUE TO CNG VEHICLES. CONNECTIONS TO ROOF TOP EQUIPMENT WILL BE MADE AS NORMAL.
- 16. OCCUPANCY SENSOR LOW VOLTAGE WIRING WILL MAY ONLY BE EXPOSED ON JOISTS IN HIGH BAY AREAS OR ABOVE CEILING GRIDS IN OFFICE AREAS. OCCUPANCY SENSOR LOW VOLTAGE WIRING RUNNING PERPENDICULAR TO JOISTS IN HIGH BAY AREAS SHALL BE IN CONDUIT. IN NON-HIGH BAY AREAS SUCH AS COUNTER 125, TOOL 126, KIT 136 AND PARTS 137, OCCUPANCY SENSOR LOW VOLTAGE WIRING SHALL BE INSTALLED INSIDE CONDUIT AND BOXES.
- 17. THE WORD "PROVIDE" ON THE DRAWINGS AND SPECIFICATIONS MEANS TO PROVIDE AND INSTALL UNLESS NOTED OTHERWISE.

18. ROOF CONDUIT PENETRATIONS SHALL BE DONE PER DETAIL 2 ON SHEET A-203.

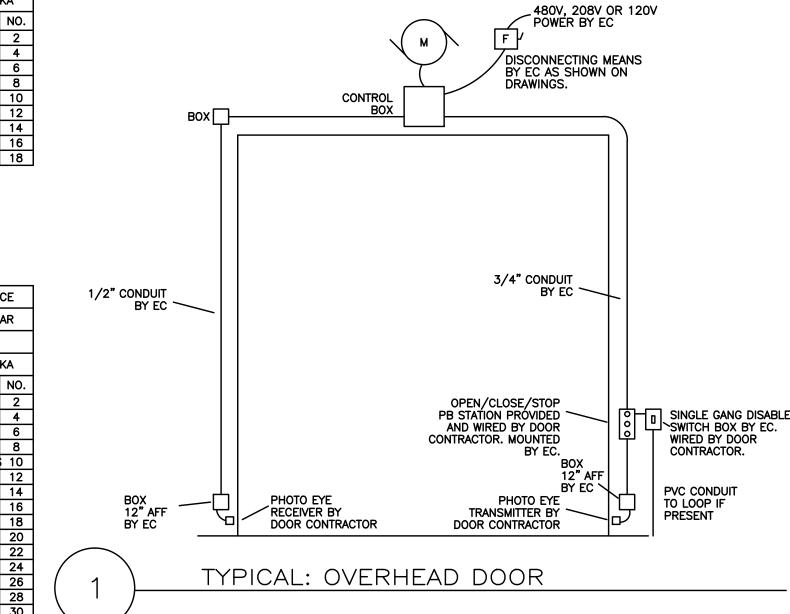
PANEL NOTES

- 1. PROVIDE HANDLE CLAMP ON CIRCUIT BREAKERS FOR ALL FIRE ALARM, EMERGENCY LIGHTING, SECURITY, PHONE, TIME CLOCK AND CO/NO2 CIRCUITS.
- 2. ALL PANELS SHALL HAVE COPPER NEUTRAL AND GROUND BAR UNLESS NOTED OTHERWISE.
- 3. PANEL SCHEDULE ABBREVIATIONS: G = GFCI
- ST = SHUNT TRIP
- 4. PROVIDE HANDLE TIES OR MULTIPOLE CIRCUIT BREAKERS FOR ALL MULTIWIRE BRANCH CIRCUITS AS REQUIRED BY CODE.

ELECTRICAL CONTRACTOR TO PROVIDE POWER TO OVERHEAD DOOR, BOXES (FOR PHOTO EYES) AND MOUNT PUSH BUTTON STATION. ELECTRICAL CONTRACTOR WILL ALSO PROVIDE CONDUIT FROM OVERHEAD DOOR CONTROL BOX TO PUSH BUTTON STATIONS AND BOXES. A SINGLE POLE LIGHT SWITCH IS ALSO REQUIRED TO DISABLE THE OVERHEAD DOOR. ELECTRICAL CONTRACTOR TO PROVIDE SWITCH AND LABEL "DISABLE OVERHEAD DOOR".

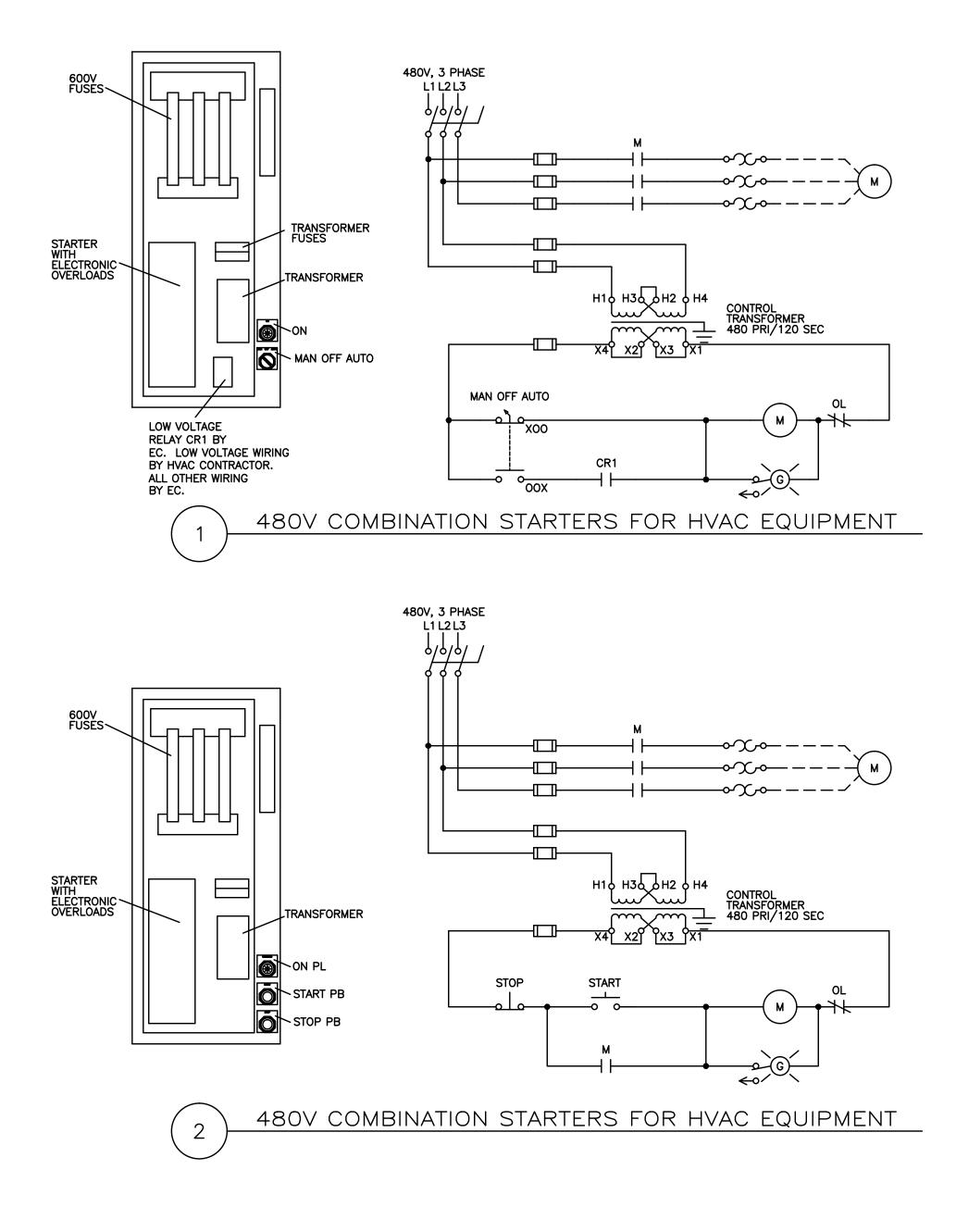
SOME DOORS REQUIRE A LOOP DETECTOR TO SENSE VEHICLES APPROACHING (SEE PLANS). PROVIDE A PVC CONDUIT FROM A BOX INSIDE THE BUILDING TO THE LOOP. VERIFY LOCATION WITH DOOR CONTRACTOR.

DOOR CONTRACTOR TO PROVIDE AND MOUNT MOTOR AND PHOTO EYES. DOOR CONTRACTOR TO PROVIDE PUSH BUTTON TO EC TO MOUNT. DOOR CONTRACTOR TO WIRE PHOTO EYES AND PUSH BUTTON STATION. DOOR CONTRACTOR TO WIRE DISABLE SWITCH. DOOR CONTRACTOR TO WIRE LOOP DETECTOR(S) IF PRESENT.



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PANEL ELEV – ELEVATOR															
100	100 MLO 18 POLE 120/208Y 3 PH 4 W 100 AMP COPPER BUSS W/GRD BAR SQUARE D NQ 14" SURFACE														
	BRANCH CIRCUIT BREAKERS: 10 KAIC MINIMUM														
NO.	IO. DESCRIPTION BKR KW PHASE KW BKR DESCRIPTION NO.														
1	ELEVATOR PIT SUMP PUMP ALARM 15/1 .18 A .18 20/1 ELEVATOR CAR ACCESSORIES 2														
3	ELEVATO	or pit si	JMP PUMP		20/1	1.18	В	.25	20/1	ELEVATOR MACHINE ROOM LTS, RECE	P4				
5	ELEVATO	r Pit Ri	ECEPTACLES, L	lghts	20/1	.55	С	.05	15/1	ELEVATOR SHUNT TRIP CONTROL	6				
7	ELEVATO	r ef			15/1	.26	A	-	-	SPARE	8				
9	SPARE				-	1	В	-	-	SPARE	10				
11	SPARE				-	1	C	1	-	SPARE	12				
13	SPARE				-	-	A	-	-	SPARE	14				
15	SPARE				-	-	В	-	-	SPARE	16				
17	SPARE				-	-	C	-	-	SPARE	18				

DEVICE	LOCATION	LOAD	TYPE	FUSE	CONTROL TRANSFORMER	CONTROL COIL	LOAD HP/KW	LOAD VOLTAGE	LOAD PHASE	POLES	LOW VOLTAGE CONTROL RELAY	NOTES (SEE BELOW)
CS1	NORTHWEST SMALL VEHICLE 140	PRV-1	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-4SP OR EQUAL	480/120	120	1.5 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7,9
CS2	SOUTHEAST SMALL VEHICLE 140	PRV-2	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-4SP SP OR EQUAL	480/120	120	1.5 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7,9
CS3	NORTHWEST VEHICLE PARKING 138	PRV-4	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-6SP OR EQUAL	480/120	120	3.0 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7,9
CS4	SOUTHEAST VEHICLE PARKING 138	PRV-5	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-6SP SP OR EQUAL	480/120	120	3.0 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7,9
CS5	NORTHWEST VEHICLE PARKING 151	PRV-7	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 1, FULL VOLTAGE, NON-REVERSING, NEMA 4X STAINLESS STEEL ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-10SP OR EQUAL	480/120	120	5.0HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7, 8,9
CS6	Southeast vehicle Parking 151	PRV-8	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 1, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-10SP OR EQUAL	480/120	120	5.0 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7,9
CS7	WELD BAY 145	PRV-10	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-2SP OR EQUAL	480/120	120	3/4 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,5,7,9
CS8	WELD BAY 145	EF-1	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPS-RK-4SP OR EQUAL	480/120	120	1.5 HP	480	3	3	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,4,7,9,10,11
CS10	SATELLITE BUILDING VEHICLE STORAGE 101	PRV-3	COMBINATION STARTER, FUSED DISCONNECT SWITCH TYPE, NEMA SIZE 0, FULL VOLTAGE, NON-REVERSING, NEMA 1 ENCLOSURE SQUARE D 8538 SERIES OR EQUAL.	BUSSMANN LPN-RK-10SP OR EQUAL	240/120	120	1 HP	240	1	2	SQUARE D KP12 DPDT RELAY AND SOCKET OR EQUAL	1,2,3,4,6,7,9
V1	MEZZANINE	P-3	VARIABLE FREQUENCY DRIVE WITH DISCONNECT PROVIDED BY HVAC CONTRACTOR.				3.0 HP	480	3			12
V2	MEZZANINE	P-4	VARIABLE FREQUENCY DRIVE WITH DISCONNECT PROVIDED BY HVAC CONTRACTOR.				3.0 HP	480	3			12
V3	EQUIPMENT 149	P-9	VARIABLE FREQUENCY DRIVE WITH DISCONNECT PROVIDED BY HVAC CONTRACTOR.				1.5 HP	480	3			12
R1	NORTHWEST VEHICLE PARKING 151	PRV-9	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–CO6* WITH 9991–UE1 ENCLOSURE (*=VOLTAGE).	NONE	NONE	LOW VOLTAGE	.33 HP	120	1	1	NONE	3
R2	OIL 127	PRV-11	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–CO6* WITH 9991–UE1 ENCLOSURE (*=VOLTAGE).	NONE	NONE	LOW VOLTAGE	.25 HP	120	1	1	NONE	3
R3	MEZZANINE	P-6	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–CO6* WITH 9991–UE1 ENCLOSURE (*=VOLTAGE).	NONE	NONE	LOW VOLTAGE	.03 HP	120	1	1	NONE	3
R4	SATELLITE BUILDING VEHICLE STORAGE 105	PRV-2	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–CO6* WITH 9991–UE1 ENCLOSURE (*=VOLTAGE).	NONE	NONE	LOW VOLTAGE	.25 HP	120	1	1	NONE	3
R5	LARGE VEHICLE STORAGE 151	EVAPORATOR PUMP #1	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–CO6* WITH 9991–UE1 ENCLOSURE (*=VOLTAGE).	NONE	NONE	LOW VOLTAGE	.5 HP	120	1	1	NONE	3
R6	LARGE VEHICLE STORAGE 151	EVAPORATOR PUMP #2	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–CO6* WITH 9991–UE1 ENCLOSURE (*=VOLTAGE).	NONE	NONE	LOW VOLTAGE	.5 HP	120	1	1	NONE	3
R7	WELD BAY 145	PRV-12	SPST POWER RELAY WITH ENCLOUSRE, 40AMP CONTACT, 2HP MAX. RATING, SQUARE D 8501–C06V02 WITH 9991–UE1 ENCLOSURE.	NONE	NONE	120	.5 HP	120	1	1	NONE	

OPTIONS AND NOTES:

GENERAL NOTES:

1. PRESS-TO-TEST PILOT LIGHT.

2. MAN/OFF/AUTO SELECTOR SWITCH.

3. LOW VOLTAGE RELAY COIL. VERIFY COIL VOLTAGE.

4. STARTERS TO HAVE ELECTRONIC OVERLOAD PROTECTION.

5. SEE SHEET E506, DETAIL 1.

8. STAINLESS STEEL ENCLOSURE. 9. IEC STYLE STARTERS WILL NOT BE ACCEPTED.

10. SEE SHEET E506, DETAIL 2.

VERIFY FUSE SIZE (125% OF FLA) WITH MOTOR NAMEPLATE DATA.

6. COMBINATION STARTER WIRED THE SAME AS SHEET E506, DETAIL 1 EXCEPT THE MOTOR IS SINGLE PHASE.

1. "OR EQUAL" MEANS EQUAL EQUIPMENT PROVIDED BY APPROVED MANUFACTURERS LISTED IN SPECIFICATIONS.

BIDDING NOTES

BASE BID: PROVIDE ALL ELECTRICAL WORK AND MATERIALS FOR WORK NOT IDENTIFIED AS AN ALTERNATE BID. SEE BELOW ALTERNATES FOR ADDITIONAL NOTES ON WORK IN BASE BID. ALTERNATE BIDS:

ALTERNATE BID #1 - SATELLITE FACILITY: PROVIDE ALL SATELLITE FACILITY ELECTRICAL PER DRAWING E-211.

ALTERNATE BID #2 - WATER REUSE SYSTEM: PROVIDE CIRCUIT BREAKER IN PANEL PP1 AND CIRCUIT TO WATER REUSE SYSTEM CONTROL PANEL. PROVIDE WIRING TO 5 HP WATER REUSE SYSTEM PUMP FROM CONTROL PANEL. WATER REUSE SYSTEM CONTROL PANEL WITH DISCONNECT AND MOTOR STARTER BY WATER REUSE SYSTEM CONTRACTOR.

PROVIDE 1" CONDUIT AND BOXES AS REQUIRED FROM UNDER FLOOR WATER REUSE TANK FOR WIRING OF FLOATS TO WATER REUSE SYSTEM CONTROL PANEL. FLOAT SWITCH WIRING BY WATER REUSE SYSTEM CONTRACTOR.

ALTERNATE BID #3 - RAINWATER RECLAIM SYSTEM: PROVIDE CIRCUIT BREAKER IN PANEL PP1 AND CIRCUIT TO RAINWATER RECLAIM SYSTEM CONTROL PANEL. PROVIDE WIRING TO 3 HP RAINWATER RECLAIM SYSTEM PUMP FROM CONTROL PANEL. RAINWATER RECLAIM SYSTEM CONTROL PANEL WITH DISCONNECT AND MOTOR STARTER BY RAINWATER RECLAIM SYSTEM CONTRACTOR. PROVIDE 1" CONDUIT AND BOXES AS REQUIRED FROM RAINWATER RECLAIM SYSTEM ABOVE GROUND TANK TO CONTROL PANEL FOR FLOAT SWITCH WIRING. FLOAT SWITCH WIRING BY RAINWATER RECLAIM SYSTEM CONTRACTOR.

ALTERNATE BID #4 - RADIANT FLOORING TUBING: NO ELECTRICAL CONTRACTOR ALTERNATE BID.

ALTERNATE BID #5- RADIANT FLOORING: ADD OR DEDUCT TO ADD PUMPS P-5 AND P-6 AND DEDUCT UNIT HEATERS IN LARGE VEHICLE STORAGE 138, WELD BAY 145 AND PARTS 137. PROVIDE CIRCUIT FROM PANEL EP2A AND FUSED DISCONNECT FOR PUMP P-5. PROVIDE CIRCUIT BREAKER IN PANEL EP2A AND MANUAL SWITCH, RELAY AND CIRCUIT TO PUMP P-6. LOW VOLTAGE RELAY

COIL WIRING BY HVAC CONTRACTOR. ALTERNATE #5 INCLUDES THE DEDUCT OF UNIT HEATERS UH-5 (CIRCUIT EP1-4), UH-6 (CIRCUIT EP1-4), UH-7 (CIRCUIT EP2-20), UH-8 (CIRCUIT EP1-6), UH-9 (CIRCUIT EP1-6), UH-10 (CIRCUIT EP4-1), UH-11 (CIRCUIT EP4-3), UH-12 (CIRCUIT EP4-1), UH-13 (CIRCUIT EP4-3) AND UH-22 (CIRCUIT EP2A-2).

ALTERNATE BID #6 - EVAPORATING EQUIPMENT: PROVIDE CIRCUIT BREAKER IN PANEL RP4 AND CIRCUIT TO WATER EVAPORATOR #1 AND TO WATER EVAPORATOR #2. PROVIDE A 30 AMP MANUAL SWITCH AS A DISCONNECT. VERIFY LOCATION WITH WATER EVAPORATOR CONTRACTOR.

PROVIDE CIRCUIT BREAKER IN PANEL RP4 AND CIRCUIT TO WATER EVAPORATOR #1 PUMP AND TO WATER EVAPORATOR #2 PUMP. PROVIDE A 30 AMP MANUAL SWITCH AS A DISCONNECT. PROVIDE RELAY WITH LOW VOLTAGE COIL. RELAY TO SWITCH SUMP PUMP ON AND OFF DEPENDING ON LEVEL CONTROLS. ELECTRICAL CONTRACTOR TO PROVIDE A 1" CONDUIT FROM THE EVAPORATOR CONTROL PANEL TO THE LEVEL CONTROLS IN THE SUMP FOR EACH EVAPORATOR. LOW VOLTAGE WIRING FROM CONTROL PANEL TO THE RELAY AND LEVEL CONTROLS ARE BY THE ELECTRICAL CONTRACTOR. PROVIDE CONDUIT FROM EACH EVAPORATOR CONTROL PANEL TO SUMP LOW WATER FLOAT SWITCH IN SERIES WITH LEVEL CONTROLS. SUMP PUMP IS NOT TO RUN IF SUMP WATER LEVEL IS TOO LOW. ALL LOW VOLTAGE WIRING SHALL BE IN CONDUIT. ONE EXHAUST BLOWER MOTOR IS APPROXIMATELY 20' ABOVE EACH EVAPORATOR. PROVIDE 120V WIRING FROM EVAPORATOR CONTROL PANEL TO EXHAUST BLOWER MOTOR AT EACH UNIT.

ALTERNATE BID #7 - VEHICLE PARKING CRANE: ELECTRICAL CONTRACTOR TO PROVIDE FEEDER INCLUDING DISCONNECT AT CRANE IN BASE BID. PROVIDE FINAL CONNECTION FROM CRANE DISCONNECT TO CRANE UNDER ALTERNATE BID #7.

ALTERNATE BID #8 - PHOTOVOLTAIC PANELS AND DISTRIBUTION SYSTEM: PROVIDE 225 AMP CIRCUIT BREAKER (MUST BE LISTED AS A BACK FED DEVICE) IN PANEL MDP. PROVIDE FEEDER TO SOLAR PANEL EQUIPMENT ON ROOF. PROVIDE THREE 4" CONDUIT SLEEVES THRU ROOF FOR SOLAR PANEL CONTROLS. VERIFY LOCATION WITH SOLAR CONTRACTOR.

ALTERNATE BID #9 - LED INTERIOR LIGHTING: PROVIDE ALTERNATE INTERIOR LED LIGHT FIXTURES INSTEAD OF BASE BID INTERIOR FLUORËSCENT LIGHT FIXTURES PER LIGHT FIXTURE SCHEDULE.

11. ON AND OFF PUSHBUTTONS.

12. VFD WITH DISCONNECT PROVIDED AND PROGRAMMED BY HVAC CONTRACTOR. INSTALLED BY ELECTRICAL CONTRACTOR.

INFORMATIONAL BIDS:

INFORMATIONAL BID A - WELL: PROVIDE CIRCUIT BREAKER IN PANEL EPP1 AND FEEDER TO WELL VARIABLE FREQUENCY DRIVE (VFD) WITH DISCONNECT. WELL VFD UNIT BY PLUMBING CONTRACTOR. WIRING FROM VFD UNIT TO WELL PUMP BY WELL CONTRACTOR.

INFORMATIONAL BID B - SEPTIC SYSTEM: PROVIDE CIRCUIT BREAKER IN PANEL EPP1, FEEDER AND WP FUSED DISCONNECT AT SEPTIC SYSTEM CONTROL PANEL. PROVIDE CIRCUITS TO TWO 1 HP SEPTIC PUMPS. PROVIDE 1" EMPTY CONDUIT FROM CONTROL PANEL TO UNDERGROUND TANK FOR LOW VOLTAGE LEVEL CONTROL. SEPTIC SYSTEM CONTROL PANEL AND PUMPS PROVIDED AND MOUNTED BY PLUMBING CONTRACTOR.

INFORMATIONAL BID C - FIRE PUMP, UNDERGROUND WATER TANK AND VERTICAL PUMP VAULT: NO ELECTRICAL CONTRACTOR INFORMATIONAL BID.

INFORMATIONAL BID D - 6" FIRE TO MEDICAL EXAMINER: NO ELECTRICAL CONTRACTOR INFORMATIONAL BID. INFORMATIONAL BID E - GENERATOR PRICE: PROVIDE A PRICE FOR THE GENERATOR ONLY. PRICE DOES NOT INCLUDE LABOR OR OTHER GENERATOR EQUIPMENT (TRANSFER SWITCHES, ETC...).

INFORMATIONAL BID F - HOT WATER PIPE FROM LANDFILL AND HEAT EXCHANGERS: ALL ELECTRICAL FOR NEW PUMPING AND HEAT EXCHANGER ENCLOSURE ON EXISTING LANDFILL SITE.

INFORMATIONAL BID G - 4" DI UNDERGROUND WATER MAIN FOR THE MEDICAL EXAMINER BUILDING: NO ELECTRICAL CONTRACTOR ALTERNATE.

NFORMATIONAL BID H - SANITARY HOLDING TANK FOR BUILDING PROCESS WASTE. PROVIDE UP TO 1-1/4" CONDUIT FROM LEVEL CONTROLS INSIDE MEDICAL EXAMINER BUILDING TO SANITARY HOLDING TANK LEVEL SENSOR. PROVIDE PVC BOX IN TANK MANHOLE ACCESS PIT AND CONNECTION TO LEVEL CONTROL SENSOR AS REQUIRED. PULL LOW VOLTAGE CABLE AND TERMINATE AS REQUIRED. LOW VOLTAGE CABLE PROVIDED BY PLUMBING CONTRACTOR. RUN CONDUIT TO ONE SIDE OF SEWER LINE. VERIFY CONDUIT SIZE AND LOCATIONS WITH PLUMBING CONTRACTOR.

INFORMATIONAL BID I – SANITARY HOLDING TANK FOR ME BUILDING INTERIOR VEHICLE STORAGE PROVIDE UP TO 1-1/4" CONDUIT FROM LEVEL CONTROLS INSIDE MEDICAL EXAMINER BUILDING TO SANITARY HOLDING TANK LEVEL SENSOR. PROVIDE PVC BOX IN TANK MANHOLE ACCESS PIT AND CONNECTION TO LEVEL CONTROL SENSOR AS REQUIRED. PULL LOW VOLTAGE CABLE AND TERMINATE AS REQUIRED. LOW VOLTAGE CABLE PROVIDED BY PLUMBING CONTRACTOR. RUN CONDUIT TO ONE SIDE OF SEWER LINE. VERIFY CONDUIT SIZE AND LOCATIONS WITH PLUMBING CONTRACTOR.

INFORMATIONAL BID J - ADD OR DEDUCT TO USE SQUARE D DISTRIBUTION EQUIPMENT: ELECTRICAL CONTRACTOR TO USE CUTLER-HAMMER, GE, SIEMENS OR SQUARE D DISTRIBUTION EQUIPMENT IN BASE BID PER PLANS AND SPECIFICATIONS.

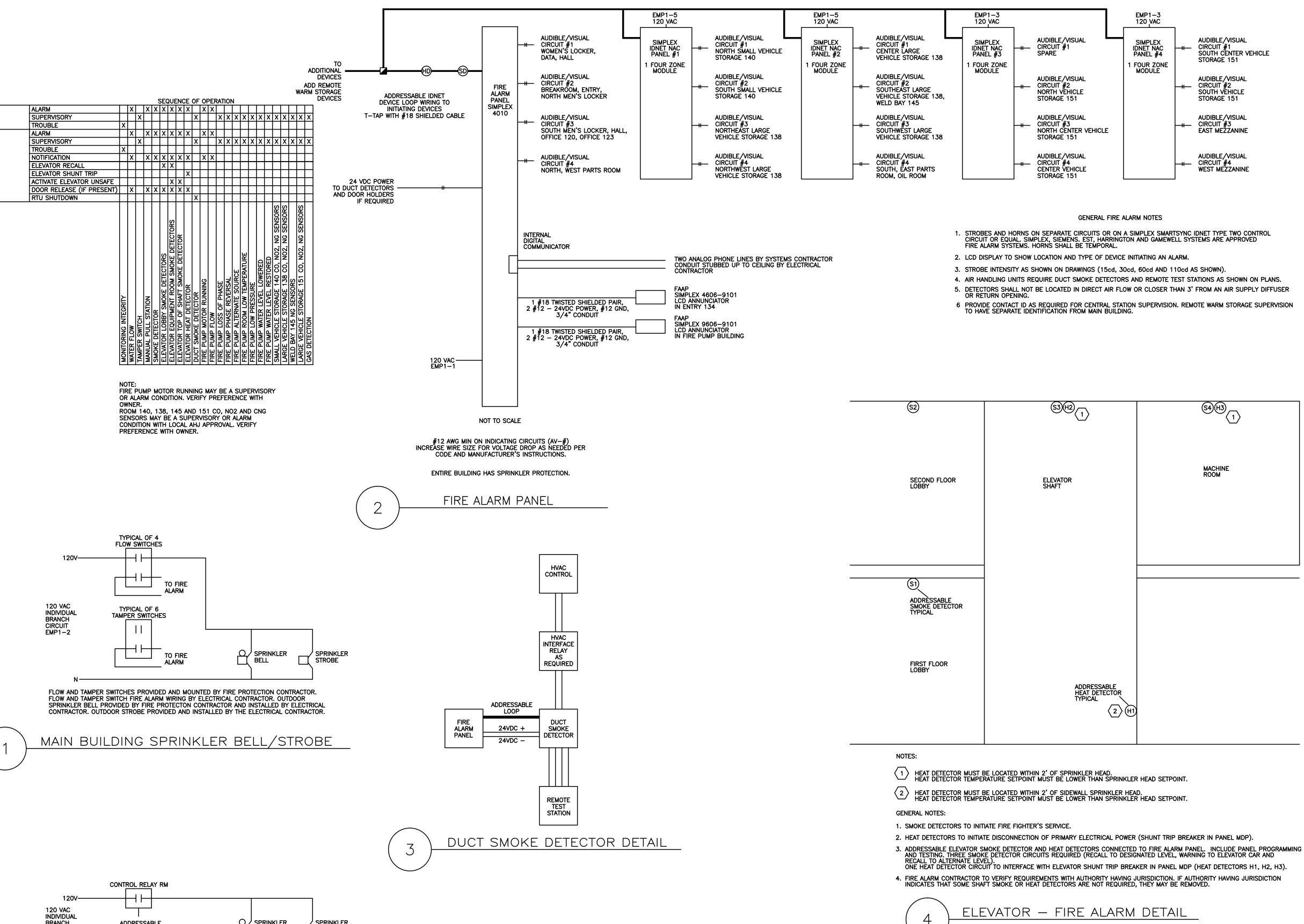
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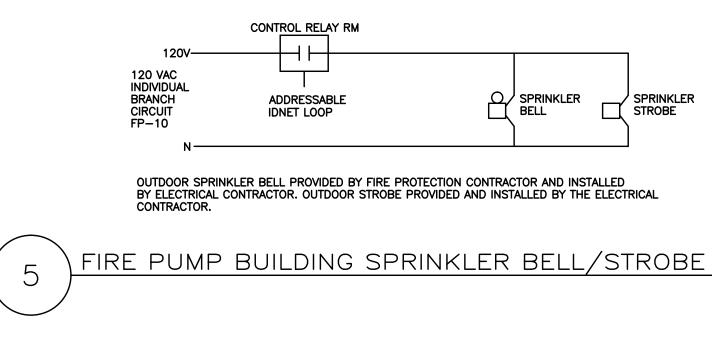
3562 County Highway AB, Cottage Grove, WI 53558

January 12, 2015

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		MONITORING INTEGRITY	WATER FLOW	TAMPER SWITCH	MANUAL PULL STATION	SMOKE DETECTOR	ELEVATOR LOBBY SMOKE DETECTORS	ELEVATOR EQUIPMENT ROOM SMOKE DETECTORS	ELEVATOR TOP OF SHAFT SMOKE DETECTOR	ELEVATOR HEAT DETECTOR	DUCT SMOKE DETECTOR	FIRE PUMP MOTOR RUNNING	FIRE PUMP FLOW	FIRE PUMP LOSS OF PHASE	FIRE PUMP PHASE REVERSAL	PUMP ALTERNATE SOURCE	PUMP ROOM LOW TEMPERATURE	FIRE PUMP LOW PRESSURE	FIRE PUMP WATER LEVEL LOWERED	FIRE PUMP WATER LEVEL RESTORED	STORAGE 140	ARGE VEHICLE STORAGE 138 CO, NO2, NG SENSORS		LARGE VEHICLE STORAGE 151 CO, NO2, NG SENSORS	



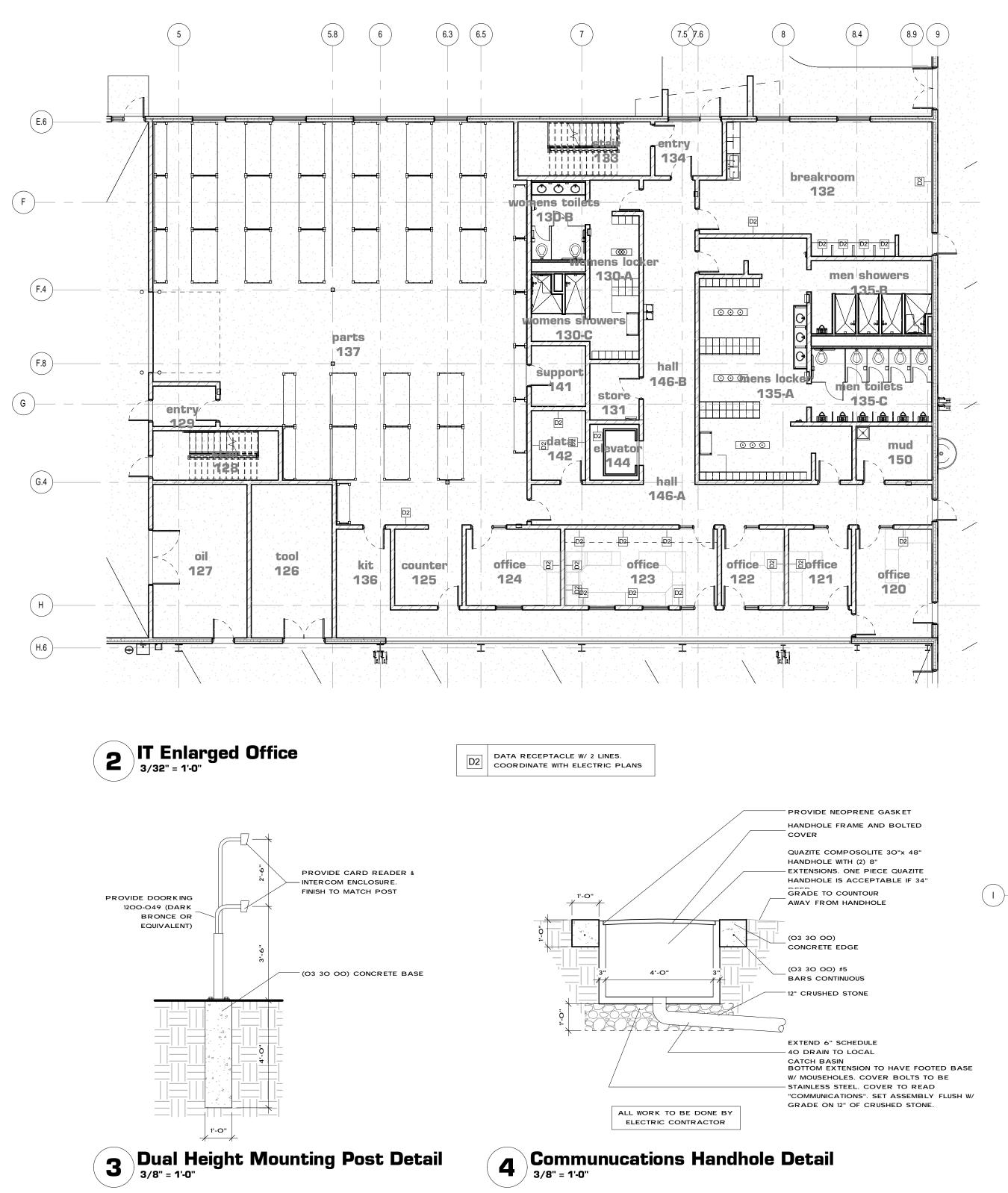


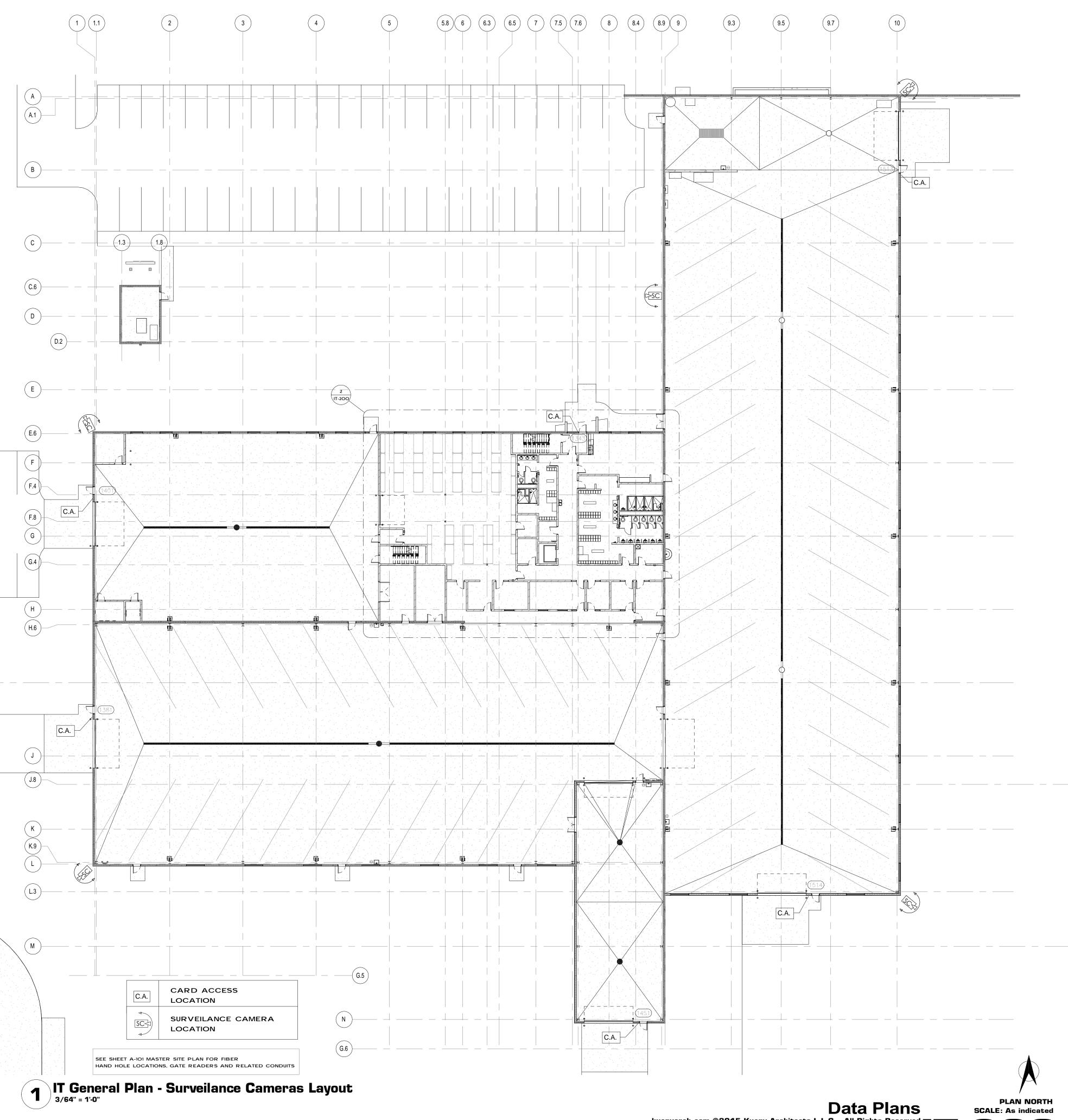
5. DETECTORS SHALL NOT BE LOCATED IN DIRECT AIR FLOW OR CLOSER THAN 3' FROM AN AIR SUPPLY DIFFUSER OR RETURN OPENING.

\$3H2 1	\$4H3 1	
ELEVATOR SHAFT	MACHINE ROOM	
		SECOND FLOOR
ADDRESSABLE HEAT DETECTOR TYPICAL 2 H1		
		- FIRST FLOOR

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