3. FOR TRANSFER DUCT DETAIL SEE DETAIL 3 SHEET M4.23. ALL TRANSFER DUCTS SHALL BE INTERNALLY LINED.

4. ALL FLOOR DRAINS, FUNNEL DRAINS, AND FLOOR RECEPTORS SHALL HAVE TRAP PRIMERS, SEE DETAIL 1 SHEET M3.21, UNO.

5. DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 23 31 00 & THE DETAILS ON SHEETS M4.22 & M4.23.

6. FOR EXTERIOR CLEANOUTS, SEE DETAIL 2 SHEET M3.21.

7. CONTRACTOR SHALL CAREFULLY COORDINATE WORK W/ ALL OTHER TRADES, ESPECIALLY IN CEILING SPACES WHERE SPACE IS TIGHT. SHEET METAL CONTRACTOR SHALL HAVE PRIORITY OVER OTHER MECHANICAL TRADES IN CEILING SPACE WHERE CONFLICTS OCCUR.

8. PROVIDE ALL OFFSETS/ELBOWS AS REQ'D TO ALLOW ROUTING AROUND STRUCTURE, ELECTRICAL, & OTHER INTERFERENCES.

9. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 8 FEET, AND MAY ONLY BE USED WHERE SPECIFICALLY SHOWN ON THE PLANS.

10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE & SELECT FINAL LOCATIONS OF ALL AIR INLETS/OUTLETS. SHIFT AIR INLETS/ OUTLETS FROM LOCATIONS SHOWN AS REQ'D TO AVOID CONFLICTS W/ STRUCTURE, LIGHTS, & OTHER ITEMS. SUCH SHIFTS SHALL MAINTAIN SYMMETRY OF AIR TERMINALS & SHALL HAVE PRIOR APPROVAL OF ARCHITECT/ENGINEER.

11. VARIOUS CEILING AIR INLET/OUTLET CONN'S REQUIRE SIDE INLET PLENUM, SEE DETAIL 1 SHEET M4.23. PROVIDE WHERE REQ'D DUE TO SPACE LIMITATIONS TO PREVENT KINKS IN FLEX. DUCT AND ALLOW PROPER CONN.

12. FOR HVAC EQUIP. SUPPORTS, SEE DETAIL 3 SHEET M4.21.

13. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCTS AND SPLITS IN MAIN DUCTS AND WHERE REQ'D BY BALANCERS; ONLY SOME OF THE REQ'D DAMPERS ARE SHOWN ON THE PLANS. HANG 2' LONG ORANGE SURVEY TAPE OFF ALL ABOVE CEILING DAMPERS HANDLES.

14. UNSIZED DUCTS SHALL MATCH THE SIZE OF THE LARGEST ADJACENT DUCT THAT IS SIZED. WHERE THE ADJACENT DUCT SIZE IS NOT SHOWN, PROVIDE THE FOLLOWING SIZED DUCTS (OR EQUIVALENT RECTANGULAR).

CFM	DUCTS TO AIR INLETS/OUTLETS	OTHER DUCT
0 - 100		6"Ø 6"Ø
101 - 150	8"Ø	8"Ø
151 - 250	10"Ø	8"Ø
251 - 400	12"Ø	10"Ø
401 - 500	14"Ø	12"Ø
501 - 700	16"Ø	12"Ø
701 - 900	18"Ø	14"Ø
901 - 1200	20"Ø	16"Ø
1201 - 1500	----	18"Ø
1501 - 2000	----	20"Ø
2001 - 2400	----	22"Ø
>2401	SIZE BASED ON 500 FPM	SIZE BASED ON 0.1"/100' P.D.

15. PROVIDE PRIMARY CONDENSATE DRAINS FOR ALL AHU COOLING COILS IN ACCORDANCE WITH IMC REQUIREMENTS & AS SHOWN ON PLANS.

16. VERIFY LOCATIONS OF ITEMS INSTALLED IN CEILINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO BEGINNING WORK. NOTIFY ARCHITECT OF DISCREPANCIES.

17. MECHANICAL EQUIPMENT 1/2 HP AND LESS SHALL HAVE ANY REQUIRED STARTER/CONTROL RELAY PROVIDED BY DIVISION 25 (EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE).

18. UNSIZED PLUMBING PIPING SHALL MATCH THE SIZE OF THE LARGEST ADJACENT CONNECTING PIPE SIZE SHOWN, WHERE THE ADJACENT PIPE IS NOT SHOWN (OR NOT CLEAR), THE PIPE SIZE SHALL BE BASED ON THE GPM FLOWING IN THE PIPE (USE TOTAL OF COILS SERVED FOR HYDRONIC SYSTEM, USE FIXTURE UNITS AND CORRESPONDING GPM PER THE UPC FOR DOMESTIC WATER SYSTEMS, USE WASTE FIXTURE UNITS & UPC TABLES FOR WASTE/VENT SYSTEM), AND A VELOCITY NO GREATER THAN 4 FEET PER SECOND. USE UPC CURVES FOR GPM/VELOCITY FOR APPROPRIATE PIPING MATERIAL INVOLVED.

19. CONTRACTOR IS RESPONSIBLE TO SELECT AND PROVIDE ALL SEISMIC ANCHORING DEVICES FOR ALL MECHANICAL EQUIPMENT, ALL PIPING AND ALL DUCTWORK. CONTRACTOR SHALL SUBMIT DETAILS AND PLANS TO CITY'S BUILDING INSPECTOR FOR REVIEW AND COMMENT PRIOR TO INSTALLATION.

20. PROVIDE DUCT ACCESS DOORS AT ALL MOTORIZED DAMPERS & BDD'S.

	COLD WATER (CW)		
	HOT WATER (HW)		
	HOT WATER CIRCULATING (HWC)		
GI	WASTE TO GREASE INTERCEPTOR		
RO	REVERSE OSMOSIS LINE		
C	CONDENSATE LINE		
RG	REFRIGERANT GAS (RG)		
RL	REFRIGERANT LIQUID (RL)		
RAINL	RAINLEADER		
ORL	OVERFLOW RAINLEADER		
G	NATURAL GAS		
A	COMPRESSED AIR		
IA	INSTRUMENT AIR (IA)		
S	STEAM		
RO	REVERSE OSMOSIS		
MV	MIXING VALVE		
	ISOLATION VALVE		
	GLOBE VALVE		
	COMBINATION SHUT-OFF & BALANCING VALVE		
	CHECK VALVE		
	UNION		
	RELIEF VALVE OR SAFETY VALVE		
	AUTOMATIC AIR VENT		
	STRAINER WITH BLOW-OFF VALVE		
	CONCENTRIC REDUCER		
	HOSE BIBB		
P.D.I. 'A'	WATER HAMMER ARRESTOR (P.D.I. SIZE AS SHOWN)		
	PRESSURE GAUGE		
	THERMOMETER		
20/12	DUCT (FIRST FIGURE, SIDE SHOWN)		
20/12L 20/12L*	LINED DUCT (DIM. FOR NET FREE AREA)	EOL= END OF LINING	* = 2" THICK LINING
R (D)	RISE (R) OR DROP (D) ARROW IN DIRECTION OF FLOW		
	DUCT SECTION (SUPPLY)		
	DUCT SECTION (EXHAUST OR RETURN)		
⌀	ROUND DUCT		
	VOLUME DAMPER (MANUAL)		
M	MOTORIZED DAMPER		
	FLEXIBLE CONNECTION		
	COMBINATION FIRE/SMOKE DAMPER		
	FLEXIBLE DUCT		
	ELBOW WITH TURNING VANES		
SIZE SYMBOL CFM	CEILING OUTLET	(WHERE 2 CFM'S SHOWN,	1st = HIGH SPEED CFM 2nd = LOW SPEED CFM)
SIZE SYMBOL CFM	CEILING INLET	(WHERE 2 CFM'S SHOWN,	1st = HIGH SPEED CFM 2nd = LOW SPEED CFM)
SIZE SYMBOL CFM	WALL OUTLET (OR INLET)		
LSD- 1"- 2 - 4' CFM	LINEAR SLOT DIFFUSER: FIRST NO. = SLOT WIDTH; SECOND NO. = NO. OF SLOTS; THIRD NO. = LENGTH (FT)		
LSR- 1"- 2 - 4' CFM	LINEAR SLOT RETURN: FIRST NO. = SLOT WIDTH; SECOND NO. = NO. OF SLOTS; THIRD NO. = LENGTH (FT)		
T T T G A	THERMOSTAT	G= WITH GUARD A= AVERAGED WITH OTHER	
S	SWITCH		
BP	TIME CLOCK BYPASS		
IT	INTERVAL TIMER		
C	CO2 SENSOR		
2 / M3.1	DETAIL IDENTIFICATION NUMBER SHEET ON WHICH DETAIL IS SHOWN		
A / M3.1	SECTION IDENTIFICATION LETTER SHEET ON WHICH SECTION IS SHOWN		

NOTE: SEE SYMBOL LIST & SCHEDULES FOR EXPLANATION OF ADDITIONAL SYMBOLS & ITEM CALLOUTS.

ARCH	
AUTO	AUTOMATIC
B.O.D.	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT/HOUR
BLDG	BUILDING
CAP	CAPACITY
CLG	CEILING
CO	CLEANOUT
COP	COEFFICIENT OF PERFORMANCE
COMP	COMPRESSOR
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUE, CONTINUATION
CFM	CUBIC FEET PER MINUTE
CS	CENTRAL SERVICES
CW	COLD WATER
DEG F, F	DEGREE FAHRENHEIT
DIA Ø	DIAMETER
DN	DOWN
DWG	DRAWING
DB	DRY BULB
DL	DOOR LOUVER
EA	EACH
EFF	EFFICIENCY
ELEC	ELECTRICAL, ELECTRIC
EER	ENERGY EFFICIENCY RATIO
EAT	ENTERING AIR TEMPERATURE
EOL	END OF LINING
EWB	ENTERING WET BULB
EDB	ENTERING DRY BULB
EXH	EXHAUST
EXIST	EXISTING
ESP	EXTERNAL STATIC PRESSURE
F	FIRE
FPM	FEET PER MINUTE
FFE	FINISHED FLOOR ELEVATION
FLEX	FLEXIBLE
FL	FLOOR
FCO	FLOOR CLEAN OUT
FLA	FULL LOAD AMPS
GAL	GALLON
GALV.	GALVANIZED
GI	GREASE INTERCEPTOR
HP	HORSE POWER
HW	HOT WATER
HWC	HOT WATER CIRCULATION
IN	INCH
IA	INSTRUMENT AIR (3)
I.E.	INVERT ELEVATION
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LDB	LEAVING DRY BULB
LWT	LEAVING WATER TEMPERATURE
LWB	LEAVING WET BULB
MAX	MAXIMUM
MFR	MANUFACTURER
MBH	THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM
MUA	MAKE UP AIR
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
NO.	NUMBER
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OA	OUTSIDE AIR
PH	PHASE
P.D.I.	PLUMBING AND DRAINAGE INST.
PD	PRESSURE DROP
R	RETURN
RLA	RATED LOAD AMPS
REF	REFERENCE
REQ'D	REQUIRED
RA	RETURN AIR
RAINL	RAINLEADER
RM	ROOM
RO	REVERSE OSMOSIS (3)
RPM	REVOLUTIONS PER MINUTE
S	SUPPLY
SA	SUPPLY AIR
SCO	SURFACE CLEANOUT
S.O.	SCREENED OPENING
SS	STAINLESS STEEL
TEMP	TEMPERATURE
TD	TRANSFER DUCT
TG	TRANSFER GRILLE
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
V	VOLTS, VOLTAGE, VENT
WCO	WALL CLEAN OUT
W	WASTE
WA	WATT
WB	WET BULB
W/	WITH
ZD	ZONE DAMPER

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MECHANICAL LEGEND AND NOTES

M0.01

C403.2.1.

2. EQUIPMENT AND SYSTEM SIZING, C403.2.2: OUTPUT CAPACITIES OF HEATING AND COOLING EQUIPMENT AND SYSTEMS ARE NO GREATER THAN THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE CALCULATED LOADS.
3. HVAC EQUIPMENT PERFORMANCE, C403.2.3/C403.2.13.1: EQUIPMENT SCHEDULES ARE INCLUDED WITH THESE PLANS.
4. ELECTRIC MOTOR EFFICIENCY, C405.8: ALL ELECTRIC MOTORS SHALL MEET THE MINIMUM EFFICIENCY OF TABLES C405.8(1). FRACTIONAL HP FAN MOTORS 1/12HP OR GREATER UP TO 1HP SHALL BE ECM TYPE OR SHALL HAVE A MINIMUM EFFICIENCY OF 70% OR GREATER.
5. FAN POWER LIMITATION, C403.2.11.1: FOR ALL HVAC SYSTEMS WITH TOTAL FAN HP > 5HP, MOTOR HP OR BHP SHALL COMPLY WITH FAN POWER LIMITATIONS PER EQUATIONS IN TABLE C403.2.11.1(1).
6. MOTOR NAMEPLATE HP, C403.2.11.2: FOR EACH FAN, THE MOTOR SHALL BE NO LARGER THAN THE FIRST AVAILABLE MOTOR SIZE GREATER THAN THE BHP.
7. FAN EFFICIENCY, C403.2.11.3: FANS AND FAN SYSTEMS GREATER THAN 5HP SHALL HAVE A FAN EFFICIENCY GRADE (FEG) OF 67 OR HIGHER PER AMCA 205 EXCEPT STAND ALONE FANS SHALL HAVE AN FEG OF 71 OR BETTER.
8. FAN VARIABLE FLOW CAPACITY, C403.2.13: FOR FAN MOTORS 7.5 HP AND GREATER VARIABLE FLOWS SHALL BE PROVIDED WITH A VFD.
9. PACKAGED ELECTRIC EQUIPMENT, C403.2.3.3: ALL PACKAGED ELECTRIC HEATING AND COOLING EQUIPMENT WITH TOTAL COOLING CAPACITY GREATER THAN 6,000 BTU/H SHALL BE A HEAT PUMP CONTROLLED BY OCCUPANCY DEVICE OR TIME SCHEDULE.
10. KITCHEN EXHAUST HOODS, C403.2.7.1: SEE PLANS FOR TYPE, DUTY AND EXHAUST RATES.
11. OUTDOOR AIR, EXHAUST & RELIEF DAMPERS, C403.2.4.3: PROVIDE ALL OUTSIDE AIR, EXHAUST AIR, AND RELIEF AIR OPENINGS WITH CLASS 1 (MAX LEAKAGE OF 4 CFM/SF AT 1.0" W.C.) MOTORIZED DAMPERS.
12. RETURN AIR DAMPERS, C403.2.4.3: PROVIDE RETURN AIR OPENINGS WITH CLASS 1 MOTORIZED DAMPER WHERE USED FOR AIRSIDE ECONOMIZER. WHERE INSTALLED IN UNITARY PACKAGED EQUIPMENT, PROVIDE DAMPERS WITH LOWEST LEAKAGE RATE AVAILABLE FROM THE EQUIPMENT MANUFACTURER.

ADDITIONAL EFFICIENCY OPTIONS

13. HVAC SYSTEM SELECTION, C406.2.1/C403.2.3: THE PERCENTAGE OF HEATING AND COOLING EQUIPMENT THAT DO NOT HAVE A CORRESPONDING WSEC EFFICIENCY IS LESS THAN 10%.
14. MINIMUM EQUIPMENT EFFICIENCY, C406.2.2/C406.2.3: ALL EQUIPMENT LISTED IN THE WSEC EQUIPMENT EFFICIENCY TABLES SHALL EXCEED THAT EFFICIENCY BY AT LEAST15%.
15. MINIMUM FAN EFFICIENCY, C403.2.3/C403.2.11.3: STAND-ALONE FAN EFFICIENCY SHALL HAVE A FEG OF 71 OR GREATER FOR FANS WITH MOTORS OVER 1 HP; FANS SHALL BE SELECTED SO THE FAN ENERGY AT DESIGN CONDITIONS IS WITHIN 10% OF EITHER THE MAXIMUM TOTAL EFFICIENCY OR THE STATIC EFFICIENCY OF THE FAN.

HVAC SYSTEM CONTROLS

16. THERMOSTATIC CONTROLS, C403.2.4.1: WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROL TO PREVENT ADJACENT ZONES FROM OPERATING IN CONFLICTING MODES. WHERE A NON-PERIMETER ZONE IS ADJACENT TO A PERIMETER ZONE, PROVIDE CONTROLS TO ONLY ALLOW COOLING IN THE NON-PERIMETER ZONE WHEN IT IS 5 DEGREES HIGHER THAN THE PERIMETER ZONE.
17. HEAT PUMP SUPPLEMENTAL HEAT, C403.2.4.1.1: HEAT PUMPS SHALL USE COMPRESSION AS FIRST STAGE OF HEATING AND SUPPLEMENTAL HEATING AS SECOND STAGE CONTROLLED SO AS TO PREVENT OPERATION ABOVE 40°F.
18. DEADBAND, C403.2.4.1.2: THERMOSTATIC CONTROLS SHALL BE CONFIGURED WITH 5°F MINIMUM DEADBAND FOR SYSTEMS THAT CONTROL BOTH HEATING AND COOLING.
19. SETPOINT OVERLAP RESTRICTION, C402.2.4.1.3: WHERE SEPARATE HEATING AND COOLING SYSTEMS WITH SEPARATE THERMOSTATIC CONTROL DEVICES SERVE A ZONE, PROVIDE A LIMIT SWITCH, MECHANICAL STOP, OR DDC CONTROL TO PREVENT SIMULTANEOUS HEATING AND COOLING.
20. AUTOMATIC SETBACK AND SHUTDOWN, C403.2.4.2/C403.2.4.2.1/C403.2.4.2.2: HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES, AND SHALL HAVE MANUAL OVERRIDE CONFIGURED TO OPERATE THE SYSTEM FOR 2 HOURS.
21. AUTOMATIC START, C403.2.4.2.3: AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM, AND BE CAPABLE OF AUTOMATICALLY ADJUSTING DAILY START TIME IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.
22. OUTDOOR AIR DAMPERS, C403.2.4.3: OUTSIDE AIR INTAKE DAMPERS SHALL AUTOMATICALLY CLOSE WHEN SYSTEM OR SPACES SERVED ARE NOT IN USE OR DURING WARM-UP AND SET BACK.
23. VENTILATION, C403.2.6/C403.2.11.4: MECHANICAL VENTILATION AIR SYSTEMS SHALL BE CONFIGURED TO PROVIDE NOT MORE THAN 150%, BUT AT LEAST THE MINIMUM REQUIRED VOLUME OF OUTDOOR AIR TO EACH ZONE PER IMC. SEE MECHANICAL EQUIPMENT SCHEDULES FOR MINIMUM OUTSIDE AIR VALUES.
24. DEMAND CONTROLLED VENTILATION, C403.2.6.2: FOR SPACES > 500 SF WITH AN OCCUPANT LOAD GREATER THAN 25 PEOPLE PER 1000 SF OR GREATER, PROVIDE OCCUPANCY-BASED OSA CONTROL TO REDUCE OUTSIDE AIR DAMPER POSITION WHEN SPACE IS UNOCCUPIED.
25. KITCHEN EXHAUST HOOD, C403.2.7.1: REPLACEMENT AIR, TRANSFER AIR, AND SUPPLY AIR HAVE BEEN BALANCED TO MEET HOOD EXHAUST FLOW RATES. REPLACEMENT AIR INTRODUCED AT THE HOOD SHALL NOT BE GREATER THAN 10% OF THE HOOD EXHAUST RATE. WHERE TOTAL HOOD EXHAUST EXCEEDS 2,000 CFM, HOOD SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 710 AND MAXIMUM EXHAUST RATES SHALL BE LIMITED TO WSEC TABLE C403.2.7.1.
26. FAN VARIABLE FLOW CAPACITY, C403.2.13: FOR FAN MOTORS 7.5 HP AND GREATER VARIABLE FLOWS SHALL BE PROVIDED WITH A VFD.
27. DX AHU VARIABLE COOLING CONTROL, C403.3.1:DX COOLING UNITS WITH CAPACITY OF 65 MBH OR MORE SHALL BE PROVIDED WITH INTEGRATED ECONOMIZER COOLING AND WITH MODULATING MECHANICAL COOLING CAPACITY USING EITHER MULTIPLE COMPRESSORS OR A VARIABLE SPEED COMPRESSOR.
28. FAN AIRFLOW CONTROL, C403.2.11.5: FOR DX COOLING UNITS WITH COOLING CAPACITY OF 65 MBH OR GREATER, CONTROLS TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD : EXCEPTION 2 (AIR VOLUMES ARE BASED ON REQUIRED VENTILATION/EXHAUST RATES.
29. DDC SYSTEM CAPABILITY, C403.2.4.12: DDC SHALL BE CAPABLE OF CONTROLLING, MONITORING, TRENDING, AND GRAPHICALLY DISPLAYING PER WSEC C403.2.4.12.

DUCTING SYSTEMS

30. DUCT CONSTRUCTION, C403.2.8.1: DUCTWORK SHALL BE CONSTRUCTED AND SEALED PER IMC.
31. DUCT PRESSURE CLASS, C403.2.8.3: ALL DUCTWORK SHOWN IS LOW PRESSURE DUCT, OPERATING AT STATIC PRESSURE LESS THAN OR EQUAL TO 3 INCHES WATER GAUGE (W.G.).
32. DUCT INSULATION, C403.2.8.1: MINIMUM DUCT INSULATION PER WSEC IS AS FOLLOWS:

SERVICE	INSULATION LEVEL
SUPPLY & RETURN DUCTS IN UNCONDITIONED SPACES	R-6
SUPPLY DUCTS WITHIN CONDITIONED SPACE WHERE SUPPLY AIR IS < 55 DEG F. OR > 105 DEG F.	R-3.3
EXPOSED DUCTWORK WITHIN A ZONE THAT SERVES THAT ZONE	NO INSULATION REQUIRED

PIPING SYSTEMS

33. PIPING INSULATION, C403.2.9: MINIMUM PIPE INSULATION PER WSEC IS AS FOLLOWS:

FLUID OPERATING TEMPERATURE	INSULATION THICKNESS (NOMINAL PIPE SIZE) <1	1 TO <1-1/2	1-1/2 TO < 4	4 TO < 8	OVER 8
>350	4.5	5.0	5.0	5.0	5.0
251-350	3.0	4.0	4.5	4.5	4.5
201-250	2.5	2.5	2.5	3.0	3.0
141-200	1.5	1.5	2.0	2.0	2.0
105-140	1.0	1.0	1.5	1.5	1.5
40-60	0.5	0.5	1.0	1.0	1.0
<40	0.5	1.0	1.0	1.0	1.5

35. AIR ECONOMIZER IS NOT REQUIRED: EXCEPTION 7.

SYSTEMS REQUIRING ENERGY RECOVERY

36. ENERGY RECOVERY VENTILATION/EXHAUST, C403.5.1: SYSTEMS WITH DESIGN OUTSIDE AIR GREATER THAN 5,000 CFM AND SYSTEMS WITH OUTSIDE AIR PERCENTAGE EXCEEDING THE VALUES OF WSEC TABLE C403.5.1(1) OR (2) SHALL BE PROVIDED WITH AN ENERGY RECOVERY SYSTEM. SEE EQUIPMENT SCHEDULES FOR TYPE AND EFFECTIVENESS.

DEDICATED OUTDOOR AIR SYSTEMS (DOAS)

37. DEDICATED OUTDOOR AIR SYSTEMS, C403.6/C403.6.3:FOR OFFICE, RETAIL, EDUCATION, LIBRARIES AND FIRE STATIONS, OUTDOOR AIR SHALL BE PROVIDED TO EACH OCCUPIED SPACE BY A DEDICATED OUTDOOR AIR SYSTEM (DOAS).
38. ENERGY RECOVERY VENTILATION WITH DOAS, C403.6.1: ALL DOAS UNITS SHALL BE PROVIDED WITH EXHAUST HEAT RECOVERY WITH RATED EFFECTIVENESS TO INCREASE OSA ENTHALPY BY 50% OR MORE BASED ON THE DELTA BETWEEN THE RETURN AIR AND THE OUTSIDE AIR ENTHALPIES AT DESIGN CONDITIONS.
39. HEATING/COOLING SYSTEM CONTROLS WITH DOAS, C403.6.2: EQUIPMENT THAT PROVIDES ZONE LEVEL HEATING AND COOLING CALL BE CONFIGURED WITH FANS AND/OR PUMPS THAT CYCLE OFF AND PRIMARY COOLING AIR SHALL SHUT OFF WHEN THERE IS NO CALL FOR HEATING OR COOLING IN THE ZONES THEY SERVE.

COMMISSIONING

40. SCOPE OF MECHANICAL SYSTEMS COMMISSIONING, C408.2: ALL MECHANICAL SYSTEMS, EQUIPMENT AND CONTROLS ARE REQUIRED TO BE COMMISSIONED. FOR BUILDINGS WITH COOLING CAPACITY > 240 MBH OR HEATING OUTPUT > 300 MBH ALL SYSTEMS ARE TO BE COMMISSIONED REGARDLESS OF INDIVIDUAL CAPACITY.
41. COMMISSIONING REQUIREMENTS IN CONSTRUCTION DOCUMENTS, C403.2.10/C408.1/C103.6: COMMISSIONING PLAN SHALL BE DEVELOPED BY A COMMISSIONING PROFESSIONAL AND CONSIST OF A NARRATIVE DESCRIPTION OF ACTIVITIES, ROLES & RESPONSIBILITIES OF THE COMMISSIONING TEAM, SCHEDULE OF ACTIVITIES INCLUDING TAB, FUNCTIONAL PERFORMANCE TESTING AND VERIFICATION OF PROJECT CLOSE OUT DOCUMENTATION PER C103.6, AND SUBMIT COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION. A PRELIMINARY COMMISSIONING REPORT AND/OR COMMISSIONING COMPLIANCE CHECKLIST SHALL BE AVAILABLE FOR AHJ REVIEW PRIOR TO THE FINAL MECHANICAL INSPECTION.
42. AIR SYSTEM BALANCING, C408.2.2: HVAC AIR SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE SPECIFICATIONS AND THESE WSEC NOTES. SEE SPECIFICATIONS FOR FLOW RATE TOLERANCES.
43. AIR SYSTEM BALANCING DEVICES, C408.2.2.1: PROVIDE ALL SUPPLY AIR OUTLETS AND TERMINAL DEVICES WITH MEANS OF BALANCING AIRFLOW. BALANCE TO FIRST MINIMIZE THROTTLING LOSSES, THEN ADJUST TO MEET DESIGN AIR FLOWS.
44. FUNCTIONAL PERFORMANCE TESTING CRITERIA, C408.2.3: FUNCTIONAL PERFORMANCE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH WSEC C408.2.3.

PROJECT CLOSE OUT DOCUMENTATION

45. DOCUMENTATION SUBMITTAL REQUIREMENTS, C103.6: SUBMIT ALL CLOSEOUT DOCUMENTATION INCLUDING AS-BUILTS AND O&M'S TO OWNER WITHIN 180 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.

SERVICE WATER HEATING CHECKLIST

1. SWH (SERVICE WATER HEATING) EQUIPMENT TYPE & EFFICIENCY, C404.2: EQUIPMENT SCHEDULES ARE INCLUDED WITH THESE PLANS.
2. INSULATION UNDER ELECTRIC WATER HEATER, C404.5: ELECTRIC WATER HEATERS IN UNCONDITIONED SPACES OR ON CONCRETE FLOORS SHALL BE PROVIDED WITH INCOMPRESSIBLE R-10 INSULATED PAD.

PIPING SYSTEMS

3. INSULATION OF PIPING, C404.6: PROVIDE INSULATION FROM WATER HEATER TO FINAL FIXTURE, AND ON PIPING THAT IS HEAT TRACED. MINIMUM PIPE INSULATION PER WSEC IS AS FOLLOWS:

FLUID OPERATING TEMPERATURE	INSULATION THICKNESS (NOMINAL PIPE SIZE) <1	1 TO <1-1/2	1-1/2 TO < 4	4 TO < 8	OVER 8
141-200	1.5	1.5	2.0	2.0	2.0
105-140	1.0	1.0	1.5	1.5	1.5
40-60	0.5	0.5	1.0	1.0	1.0
<40	0.5	1.0	1.0	1.0	1.5

4. EFFICIENT SWH SUPPLY PIPING, C404.3: ALL PIPING CONNECTING TO SERVICE HOT WATER SOURCE, SHALL COMPLY WITH MAXIMUM ALLOWABLE PIPE LENGTH METHOD. MAXIMUM ALLOWABLE LENGTHS ARE AS FOLLOWS:

PIPE SIZE (1INCH)	NOMINAL MAXIMUM LENGTH (FEET) AT PUBLIC LAVATORY	AT OTHER FIXTURES
1/2	2	43
3/4	1	21
1	0.5	13
1-1/4	0.5	8
1-1/2	0.5	6
2 OR LARGER	0.5	4

5. HEATED WATER CIRCULATING SYSTEM, C404.7.1/C404.8: CIRCULATING HOT WATER PUMPS SHALL TURN OFF AUTOMATICALLY WHEN THERE IS NO DEMAND OR DESIRED WATER TEMPERATURE IN RETURN LOOP HAS BEEN MET. CIRCULATING HOT WATER PUMPS SHALL BE EQUIPPED WITH CONTROLS TO TURN OFF DURING PERIODS OF NON-USE.

COMMISSIONING

6. SCOPE OF SWH EQUIPMENT SYSTEMS COMMISSIONING, C408.4: FOR BUILDINGS WHERE THE LARGEST SERVICE WATER HEATING SYSTEM CAPACITY IS 200 MBH OR GREATER, AND FOR ALL BUILDINGS WITH POOLS, ALL SWH EQUIPMENT AND CONTROLS ARE REQUIRED TO BE COMMISSIONED.
7. COMMISSIONING REQUIREMENTS IN CONSTRUCTION DOCUMENTS, C404.13/C408.1/C103.6: COMMISSIONING PLAN SHALL BE DEVELOPED BY A COMMISSIONING PROFESSIONAL AND CONSIST OF A NARRATIVE DESCRIPTION OF ACTIVITIES, ROLES & RESPONSIBILITIES OF THE COMMISSIONING TEAM, SCHEDULE OF ACTIVITIES INCLUDING TAB, FUNCTIONAL PERFORMANCE TESTING AND VERIFICATION OF PROJECT CLOSE OUT DOCUMENTATION PER C103.6, AND SUBMIT COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION. A PRELIMINARY COMMISSIONING REPORT AND/OR COMMISSIONING COMPLIANCE CHECKLIST SHALL BE AVAILABLE FOR AHJ REVIEW PRIOR TO THE FINAL MECHANICAL INSPECTION.
8. FUNCTIONAL PERFORMANCE TESTING CRITERIA, C408.4.1: FUNCTIONAL PERFORMANCE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH WSEC C408.4.1.

PROJECT CLOSE OUT DOCUMENTATION

9. DOCUMENTATION SUBMITTAL REQUIREMENTS, C103.6: SUBMIT ALL CLOSEOUT DOCUMENTATION INCLUDING AS-BUILTS AND O&M'S TO OWNER WITHIN 180 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.

CONFORMED SET

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PATIENT SUPPORT CENTER
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DSHS NO	16-410G (2-1)
NAC NO	121-16004
DRAWN	TP
CHECKED	TR
DATE	03/16/2018

MECHANICAL NOTES

M0.02

									◯					
FC-CS-2	MITSUBISHI PLFY-P12	CEILING CASSETTE	CS STORAGE B30	HP-CS	12,000	13,500	350	-	WASHABLE	1	208/1	60	
FC-CS-3	MITSUBISHI PLFY-P08	CEILING CASSETTE	STERILE STORES B29	HP-CS	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-CS-4	MITSUBISHI PLFY-P12	CEILING CASSETTE	PREP ASSEMBLY B26	HP-CS	12,000	13,500	350	-	WASHABLE	1	208/1	60	
FC-CS-5	MITSUBISHI PLFY-P12	CEILING CASSETTE	DECONTAM B18	HP-CS	12,000	13,500	350	-	WASHABLE	1	208/1	60	
FC-CS-6	MITSUBISHI PLFY-P08	CEILING CASSETTE	BIO-MED B16	HP-CS	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-CS-7	MITSUBISHI PLFY-P08	CEILING CASSETTE	CS ADMIN B10	HP-CS	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-CS-8	MITSUBISHI PLFY-P08	CEILING CASSETTE	HCSS OFFICE B11	HP-CS	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-CS-9	MITSUBISHI PLFY-P08	CEILING CASSETTE	HCS LEAD OFFICE B12	HP-CS	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-CS-10	MITSUBISHI PLFY-P08	CEILING CASSETTE	MEETING/BREAK B13	HP-CS	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-1	MITSUBISHI PLFY-P08	CEILING CASSETTE	WH WKST 142	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-2	MITSUBISHI PLFY-P08	CEILING CASSETTE	WH SUPERVISOR 143	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-3	MITSUBISHI PLFY-P08	CEILING CASSETTE	WH LEAD 144	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-4	MITSUBISHI PLFY-P08	CEILING CASSETTE	D/W SUPERVISOR 145	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-5	MITSUBISHI PLFY-P08	CEILING CASSETTE	D/W WKST 146	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-6	MITSUBISHI PLFY-P08	CEILING CASSETTE	DRY STORE 124	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-7	MITSUBISHI PLFY-P08	CEILING CASSETTE	DRY STORE 124	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-8	MITSUBISHI PLFY-P08	CEILING CASSETTE	WOMEN'S LOCKER 125	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-9	MITSUBISHI PLFY-P08	CEILING CASSETTE	MEN'S LOCKER 128	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-10	MITSUBISHI PLFY-P08	CEILING CASSETTE	DIETARY ENTRY 110	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-11	MITSUBISHI PLFY-P08	CEILING CASSETTE	OFFICE 111 WEST	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-12	MITSUBISHI PLFY-P08	CEILING CASSETTE	DIETARY OFFICE 111 EAST	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-20	MITSUBISHI PLFY-P12	CEILING CASSETTE	DIETARY ADMIN 210	HP-K	12,000	13,500	350	-	WASHABLE	1	208/1	60	
FC-K-21	MITSUBISHI PLFY-P08	CEILING CASSETTE	CONF RM 213	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-22	MITSUBISHI PLFY-P08	CEILING CASSETTE	D/S MANAGER 211	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-23	MITSUBISHI PLFY-P08	CEILING CASSETTE	FOOD MANAGER 212	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-24	MITSUBISHI PLFY-P08	CEILING CASSETTE	COMPUTER PROGRAMMER 214	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-25	MITSUBISHI PEFY-P15	DUCTED CONCEALED	BREAK ROOM 204	HP-K	15,000	17,000	400	0.4"	2" PTA, MERV 13, MIN 1.0 SF	1	208/1	60	
FC-K-26	MITSUBISHI PLFY-P08	CEILING CASSETTE	STAFF KIT 205	HP-K	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K-27	MITSUBISHI PLFY-P12	CEILING CASSETTE	MEETING 206	HP-K	12,000	13,500	530	-	WASHABLE	1	208/1	60	
FC-K4-1	MITSUBISHI PLFY-P12	CEILING CASSETTE (1)	TRAY ASSEMBLY 121	HP-K4	12,000	13,500	350	-	WASHABLE	1	208/1	60	
FC-K4-2	MITSUBISHI PLFY-P12	CEILING CASSETTE (1)	TRAY ASSEMBLY 121	HP-K4	12,000	13,500	350	-	WASHABLE	1	208/1	60	
FC-K2-3	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	RETHERM DOCKING 122	HP-K2	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K2-4	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	RETHERM DOCKING 122	HP-K2	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K2-5	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	RETHERM DOCKING 122	HP-K2	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K2-6	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	RETHERM DOCKING 122	HP-K2	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K2-7	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	RETHERM DOCKING 122	HP-K2	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K2-8	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	RETHERM DOCKING 122	HP-K2	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K3-9	MITSUBISHI PLFY-P08	CEILING CASSETTE	CART STAGING 118	HP-K3	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-K3-10	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	SANITATION 114	HP-K3	36,000	40,000	989	-	WASHABLE	2	208/1	60	
FC-K3-11	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	SANITATION 114	HP-K3	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K3-12	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	SANITATION 114	HP-K3	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K4-13	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	PRODUCTION 118	HP-K4	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K4-14	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	PRODUCTION 118	HP-K4	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K4-15	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	PRODUCTION 118	HP-K4	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K4-16	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	PRODUCTION 118	HP-K4	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K4-17	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	PRODUCTION 118	HP-K4	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K4-18	MITSUBISHI PLFY-P36	CEILING CASSETTE (1)	PRODUCTION 118	HP-K4	36,000	40,000	989	-	WASHABLE	2	208/1	70	
FC-K3-19	MITSUBISHI PLFY-P12	CEILING CASSETTE (1)	SNACK PREP 112	HP-K3	12,000	13,500	350	0.4"	WASHABLE	1	208/1	60	
FC-K4-20	MITSUBISHI PVFY-P48	AIR HANDLER	WAREHOUSE	HP-K4	48,000	54,000	1400	0.4"	2" PTA MIN 4 SF	6	208/1	200	LOCK-OUT COOLING ABILITY; HEATING ONLY
FC-K4-21	MITSUBISHI PVFY-P48	AIR HANDLER	WAREHOUSE	HP-K4	48,000	54,000	1400	0.4"	2" PTA MIN 4 SF	6	208/1	200	LOCK-OUT COOLING ABILITY; HEATING ONLY
FC-K4-22	MITSUBISHI PVFY-P48	AIR HANDLER	WAREHOUSE	HP-K4	48,000	54,000	1400	0.4"	2" PTA MIN 4 SF	6	208/1	200	LOCK-OUT COOLING ABILITY; HEATING ONLY

CONTINUED ON SEE SHEET M0.04.

(1) 33x33 CEILING CASSETTE; ALL ACCESS SHALL BE FROM BELOW.

(2) PROVIDE EVERY INDOOR UNIT WITH ONE SPARE FILTER.

CONFORMED SET

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DSHS NO	16-410G (2-1)
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MECHANICAL SCHEDULES

M0.03

									◯				
FC-K3-31	MITSUBISHI PCFY-P24	CEILING MOUNTED	CORRIDOR 201 CENTRAL	HP-K3	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-K2-32	MITSUBISHI PCFY-P15	CEILING MOUNTED	CORRIDOR 201 EAST	HP-K2	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-K2-33	MITSUBISHI PCFY-P24	CEILING MOUNTED	LOUNGE 200 NORTH	HP-K2	24,000	27,000	530	-	WASHABLE	1	208/1	80	(1)
FC-K2-34	MITSUBISHI PEFY-P24	DUCTED CONCEALED	LOUNGE 200 SOUTH	HP-K2	24,000	27,000	650	0.4"	2" PTA, MERV 13, MIN 1.5 SF	1	208/1	60	
FC-K3-35	MITSUBISHI PCFY-P24	CEILING MOUNTED	CORRIDOR 102 WEST	HP-K3	24,000	27,000	530	-	WASHABLE	1	208/1	80	
FC-K3-36	MITSUBISHI PCFY-P15	CEILING MOUNTED	CORRIDOR 102 CENTRAL	HP-K3	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-K3-37	MITSUBISHI PCFY-P15	CEILING MOUNTED	CORRIDOR 102 EAST	HP-K3	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-K3-38	MITSUBISHI PCFY-P24	CEILING MOUNTED	ENTRY 101 NORTH	HP-K3	24,000	27,000	530	-	WASHABLE	1	208/1	80	
FC-K3-39	MITSUBISHI PEFY-P24	DUCTED CONCEALED	ENTRY 101 SOUTH	HP-K3	24,000	27,000	650	0.4"	2" PTA, MERV 13, MIN 1.5 SF	1	208/1	60	
FC-K2-40	MITSUBISHI PCFY-P15	CEILING MOUNTED	BASEMENT HALL B01 WEST	HP-K2	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-K2-41	MITSUBISHI PCFY-P15	CEILING MOUNTED	BASEMENT HALL B01 CENTRAL	HP-K2	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-K2-42	MITSUBISHI PCFY-P15	CEILING MOUNTED	BASEMENT HALL B01 EAST	HP-K2	15,000	17,000	424	-	WASHABLE	1	208/1	60	
FC-P-1	MITSUBISHI PLFY-P08	CEILING CASSETTE	PHARMACY DIRECTOR 245	HP-P	8,000	9,000	530	-	WASHABLE	1	208/1	60	
FC-P-2	MITSUBISHI PLFY-P08	CEILING CASSETTE	WORK 243	HP-P	8,000	9,000	530	-	WASHABLE	1	208/1	60	
FC-P-3	MITSUBISHI PLFY-P08	CEILING CASSETTE	PHARMACY ENTRY 220	HP-P	8,000	9,000	530	-	WASHABLE	1	208/1	60	
FC-P-4	MITSUBISHI PLFY-P08	CEILING CASSETTE	STAFF BREAK 241	HP-P	8,000	9,000	530	-	WASHABLE	1	208/1	60	
FC-P-5	MITSUBISHI PLFY-P08	CEILING CASSETTE	TECH SUPV 240	HP-P	8,000	9,000	530	-	WASHABLE	1	208/1	60	
FC-P-6	MITSUBISHI PLFY-P15	CEILING CASSETTE	PHARMACIST 227	HP-P	15,000	17,000	530	-	WASHABLE	1	208/1	60	
FC-P-7	MITSUBISHI PLFY-P08	CEILING CASSETTE	ASSOC DIR 239	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-8	MITSUBISHI PLFY-P08	CEILING CASSETTE	CONTROL SUBSTANCE 238	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-10	MITSUBISHI PLFY-P08	CEILING CASSETTE	UNIT DOSING 222	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-11	MITSUBISHI PLFY-P08	CEILING CASSETTE	PYXIS ADMIN 237	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-12	MITSUBISHI PLFY-P08	CEILING CASSETTE	PYXIS PREP 236	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-13	MITSUBISHI PLFY-P08	CEILING CASSETTE	TECH WORK 223, OUTPT DISP 224	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-14	MITSUBISHI PLFY-P08	CEILING CASSETTE	REPACKAGING 235	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-15	MITSUBISHI PEFY-P15	DUCTED CONCEALED	NON-HAZD 234, ANTE 233, HAZD 232	HP-P	15,000	17,000	450	0.6"	2" PTA, MERV13, MIN 1.0 SF	1	208/1	120	FAN SHALL RUN CONTINUOUSLY TO MAINTAIN PRESSURE DIFFERENTIALS
FC-P-16	MITSUBISHI PLFY-P08	CEILING CASSETTE	PHARM IT/BILLING 225	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-17	MITSUBISHI PLFY-P08	CEILING CASSETTE	RECEIVING 229	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	
FC-P-18	MITSUBISHI PLFY-P08	CEILING CASSETTE	BULK SUPPLY 230	HP-P	8,000	9,000	320	-	WASHABLE	1	208/1	60	

(1) 33x33 CEILING CASSETTE; ALL EQUIPMENT ACCESS SHALL BE FROM BELOW.

(2) PROVIDE ONE SPARE WASHABLE FILTER FOR EACH UNIT.

FAN SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	AREA SERVED	CFM	ESP	MAX RPM	MIN WHEEL DIA	ELECTRICAL		DRIVE	CONTROL	MAX WEIGHT LBS	REMARKS
								HP	VOLTS / PH				
EF-B4	GREENHECK SQ-120	IN-LINE	MECH ROOM B03	500	0.5	1140	-	1/6	115/1	DIRECT	(T)	115	
EF-B3	GREENHECK SP	CEILING EXHAUST	E.S. B04	100	0.38	940	-	10W	115/1	DIRECT	TIME SCHEDULE	20	
EF-B1	GREENHECK SQ-120	IN-LINE	ELEC RM B07	500	0.5	1140	-	1/6	115/1	DIRECT	(T)	115	
EF-B2	GREENHECK SQ-120	IN-LINE	EQUIP RM B08	500	0.5	1140	-	1/6	115/1	DIRECT	(T)	115	
EF-K1	GREENHECK CUBE 360 HP-50	KITCHEN UPBLAST	PRODUCTION 113 TYPE I HOOD	9800	1.75	755	-	5	460/3	BELT	AUTOMATED HOOD CONTROL	500	BALANCE FOR TOTAL SHOWN ON FS DWGS; W/ VFD BY DIV 25
EF-K2	GREENHECK CUBE 360 HP-50	KITCHEN UPBLAST	PRODUCTION 113 TYPE I HOOD	8500	1.75	755	-	5	460/3	BELT	AUTOMATED HOOD CONTROL	500	BALANCE FOR TOTAL SHOWN ON FS DWGS; W/ VFD BY DIV 25
EF-K3	GREENHECK CUE 101	KITCHEN UPBLAST	PRODUCTION 113 TYPE I OVEN	900	1.0	1725	-	1/4	115/1	DIRECT	IL W/ OVEN	75	
EF-K4	GREENHECK CUBE 101 HP	ROOFTOP UPBLAST	SANITATION 114, DISHWASHER HOOD	375	1.0	1800	-	1/4	115/1	BELT	(S)	75	
EF-K5	GREENHECK CUBE 101 HP	ROOFTOP UPBLAST	SANITATION 114, DISHWASHER HOOD	600	1.0	2150	-	1/3	115/1	BELT	(S)	75	
EF-P1	GREENHECK LDP-95	ROOF MOUNTED	HAZD BUFFER 232	500	0.5	1550	-	1/8	115/1	DIRECT	TIME SCHEDULE	80	W/ 115/1 INLET VFD BY DIV 25
EF-P3	GREENHECK LBP-95	ROOF MOUNTED	TELECOM 209	500	0.5	1550	-	1/8	115/1	DIRECT	(T)	80	
EF-W1	GREENHECK LBP-95	ROOF MOUNTED	TELECOM 105	500	0.5	1550	-	1/8	115/1	DIRECT	(T)	80	
FFU-P1	ENVIRCO SERIES MAC 10	FAN FILTER UNIT	HAZD BUFFER 232	400		-	-	122W	115/1	DIRECT	TIME SCHEDULE	50	
PF-1	BIG ASS FAN ISIS	HVLS PADDLE FAN	WAREHOUSE	-	-	120	96"	3.9 FLA	115/1	DIRECT	LOCAL & EMCS	100	
PF-2	BIG ASS FAN ISIS	HVLS PADDLE FAN	WAREHOUSE	-	-	120	96"	3.9 FLA	115/1	DIRECT	LOCAL & EMCS	100	

NOTES:

1. PROVIDE ALL ROOFTOP FANS W/ ROOF CURBS.
3. PROVIDE ALL FANS CONFIGURED TO MEET ENERGY CODE (I.E. PROVIDE WITH PROPER MOTOR EFFICIENCY OR WITH EC MOTOR). SCHEDULED FAN HP/WATTS IS PRELIMINARY; FINAL EQUIPMENT AND MOTOR SIZE SHALL BE REVISED TO MEET ENERGY CODE REQUIREMENTS.

PROVIDE ALL DIRECT DRIVE FANS WITH ECM MOTOR WITH 0-10 VDC INPUT OR SPEED CONTROLLER. FANS NOTED TO BE OF 2-SPEED OPERATION THAT ARE NOT AVAILABLE (OR FOR USE) WITH ECM MOTORS SHALL BE FURNISHED WITH VFD'S."

(1) PROVIDE ECM MOTOR (OR VFD) TO ALLOW FOR 2-SPEED OPERATION (HIGH AND LOW SPEED 0-10 VDC INPUTS TO MOTOR PROVIDED BY DIVISION 25)."

CONFORMED SET

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MECHANICAL SCHEDULES

M0.04

WH-2	AO SMITH DVE-140	ELECTRIC TANK TYPE	KITCHEN	105 KW	140	478	50	140	127	460/3	
WH-3	AO SMITH DVE-140	ELECTRIC TANK TYPE	NON-KITCHEN	30 KW	140	176	50	120	36	460/3	
				3							

NOTE: SHALL BE ASME LABELED.

PUMP SCHEDULE

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	SERVICE	GPM	HEAD FT. H20	ELECTRICAL		REMARKS
						MIN. HP	VOLTS/PH	
CP-1	BELL & GOSSETT SERIES PL	DOMESTIC CIRCULATOR	KITCHEN DOMESTIC HW	5	10	1/6	115/1	ALL BRONZE
CP-2	BELL & GOSSETT SERIES PL	DOMESTIC CIRCULATOR	NON-KITCHEN DOMESTIC HW	9	15	1/6	115/1	ALL BRONZE

MISCELLANEOUS EQUIPMENT SCHEDULE

SYMBOL	ITEM DESCRIPTION	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	AREA SERVED	EQUIPMENT CAPACITY	ELECTRICAL		REMARKS
					POWER	VOLTS / PH	
EH-1	ELECTRIC RADIANT HEATER	MARKEL SERIES CH-2	RECV CLERK 155	2 KW	2000 W	208/1	
EH-2	ELECTRIC UNIT HEATER	MARKEL SERIES UH	RECEIVING 157	7 KW, 575 CFM	9 AMPS	460/3	
EH-3	ELECTRIC UNIT HEATER	MARKEL SERIES UH	RECEIVING 157	7 KW, 575 CFM	9 AMPS	460/3	
EH-4	ELECTRIC UNIT HEATER	MARKEL SERIES UH	MECH ROOM B03	3.3 KW, 400 CFM	4 AMPS	460/3	
EH-5	ELECTRIC RADIANT CEILING PANEL	MARKEL SERIES B25	STAFF SHOWER B25	2X2, 375 W	375	120/1	
EH-6	ELECTRIC RADIANT CEILING PANEL	MARKEL SERIES CP	STAFF SHOWER B22	2X2, 375 W	375	120/1	
ACOMP-1	AIR COMPRESSOR	QUINCY QOF	CENTRAL SERVICES	12 CFM @ 30 PSIG, 70 GAL TANK	5 HP	208/3 1	OIL-FREE, INSTRUMENT AIR
ACOMP-2	AIR COMPRESSOR	QUINCY QOF	KITCHEN & CENTRAL SERVICES	3 CFM @ 100 PSIG, 70 GAL TANK	5 HP 1	208/3 1	OIL-FREE
AD-1	AIR DRYER	GREAT LAKES GRF	ACOMP-1	12CFM	2.8 MCA	115	
AD-2	AIR DRYER	GREAT LAKES GRF	ACOMP-2 3	12CFM	2.8 MCA	116	
FFU-P1	FAN FILTER UNIT	ENVIRCO MODEL MAC101Q LAF	HAZD-BUFFER 232	380 CFM	132 WATTS	115/1	2x2 NOMINAL SIZE, 2.3 SF FILTER AREA. W/ ROOMSIDE REPLACEMENT OPTION 2

VRF BRANCH CONTROLLERS

SYMBOL	BASIS OF DESIGN MANUFACTURER AND SERIES NO.	TYPE	SYSTEM SERVED	MINIMUM NO. OF PORTS	ELECTRICAL		REMARKS
					MCA	VOLTS/PH	
BC-K	MITSUBISHI CMB-DID16	MAIN	HP-K	16	1.65	208/1	
BC-P	MITSUBISHI CMB-P1016	MAIN	HP-P	16	1.65	208/1	
BC-CS	MITSUBISHI CMB-DID16	MAIN	HP-CS	16	1.65	208/1	
BC-K2	MITSUBISHI CMB-P1016	MAIN	HP-K2	16	1.65	208/1	
BC-K3	MITSUBISHI CMB-P1016	MAIN	HP-K3	16	1.65	208/1	
BC-K4	MITSUBISHI CMB-P1016	SUB CONTROLLER	HP-P	16	1.65	208/1	
SBC-K	MITSUBISHI CMB-P108	SUB CONTROLLER	HP-K	8	0.64	208/1	
SBC-P	MITSUBISHI CMB-P104	SUB CONTROLLER	HP-P	4	0.32	208/1	

NOTES: PROVIDE ISOLATION VALVE ON EACH PORT.

P-1B	WATER CLOSET	4"	2"	1"	-	FLOOR MOUNT, LIGATURE RESISTANT ADA ACCESSIBLE
P-3A	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNT ADA ACCESSIBLE
P-3B	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNT LIGATURE RESISTANT; ADA ACCESSIBLE
P-5A	SINK	2"	1-1/2"	1/2"	1/2"	S.S. SINGLE BOWL
P-5B	SINK	2"	1-1/2"	1/2"	1/2"	S.S. DOUBLE BOWL
P-5C	SINK	2"	1-1/2"	1/2"	1/2"	UNDERCOUNTER SINK
P-5D	SINK	2"	1-1/2"	1/2"	1/2"	SINK INTEGRAL TO COUNTER
P-5E	CLINICAL SINK	3"	2"	(1) 1" (1) 3/4"	(1) 3/4"	W/ FLUSH VALVE & W/ SPRAYER
P-6A	SERVICE SINK	3"	2"	1/2"	1/2"	FLOOR MOUNT
P-8A	DRINKING FOUNTAIN	2"	1-1/2"	1/2"	-	DUAL UNIT W/ BOTTLE FILLER; ADA ACCESSIBLE
P-9A	SHOWER	-	-	1/2"	1/2"	ADA ACCESSIBLE
P-10A	WALL HYDRANT	-	-	3/4"	-	FREEZE PROOF
P-10B	WALL HYDRANT	-	-	-	3/4"	INTERIOR
P-10C	WALL HYDRANT	-	-	3/4"	3/4"	DUAL TEMPERATURE FREEZE PROOF
P-11A	FLOOR DRAIN	2" *	1-1/2"	-	-	W/ TRAP PRIMER
P-11B	FUNNEL FLOOR DRAIN	2" *	1-1/2"	-	-	W/ TRAP PRIMER
P-11C	FLOOR RECEPTOR	4" *	2"	-	-	W/ TRAP PRIMER
P-11D	HUB DRAIN	3" *	2" *	-	-	W/ TRAP PRIMER
P-11E	FUNNEL DRAIN	2" *	1-1/2" *	-	-	W/ TRAP PRIMER
P-11S	FLOOR RECEPTOR	4" *	2" *	-	-	STAINLESS STEEL; W/ TRAP PRIMER
P-12A	CLOTHES WASHER FITTING	2"	1-1/2"	3/4"	3/4"	W/ ENVIRONMENTAL ENHANCEMENTS LINT LUV-R FILTER
P-12B	REFRIGERATOR FITTING	-	-	1/2"	-	
P-13A	COMBINATION EMERGENCY SHOWER/EYEWASH	-	-	1"	1"	W/ THERMOSTATIC MIXING VALVE; ADA COMPLIANT
P-13B	EMERGENCY EYEWASH	-	-	3/4"	3/4"	W/ THERMOSTATIC MIXING WALL MOUNTED
P-13C	EMERGENCY EYEWASH	-	-	3/4"	3/4"	COUNTER MOUNTED W/ THERMOSTATIC MIXING VALVE; ADA COMPLIANT

* UNO ON PLANS.

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16778
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DSHS NO	16-410G (2-1)
NAC NO	121-16004
DRAWN	TP
CHECKED	TR
DATE	03/16/2018

MECHANICAL SCHEDULES

M0.05

| | | |

FOUNDATION COMPONENTS SHOWN ON THIS DWG. ITEMS SHOWN ARE APPROXIMATE ONLY. OFFSET ITEMS AS NEEDED TO CLEAR FOOTINGS & OTHER UNDERGROUND ITEMS.

3. INVERT ELEVATIONS ARE BASED ON DEPTH BELOW FINISHED FLOOR ELEVATION AT POINT WASTE EXITS THE BUILDING. FINISHED FLOOR ELEVATION WITHIN THE BUILDING AND EXTERIOR GRADES VARY. SEE ARCH & CIVIL DWGS FOR RELATED INFORMATION TO DETERMINE RELATIVE PIPING DEPTH. COORDINATE PIPE INVERT ELEVATION WITH SITE CONTRACTOR PRIOR TO BEGINNING WORK.

4. FIXTURES SHOWN DASHED REPRESENT FIXTURES LOCATED ON THE FLOOR ABOVE. SEE PLUMBING FLOOR PLAN FOR EXACT TYPE AND LOCATION.

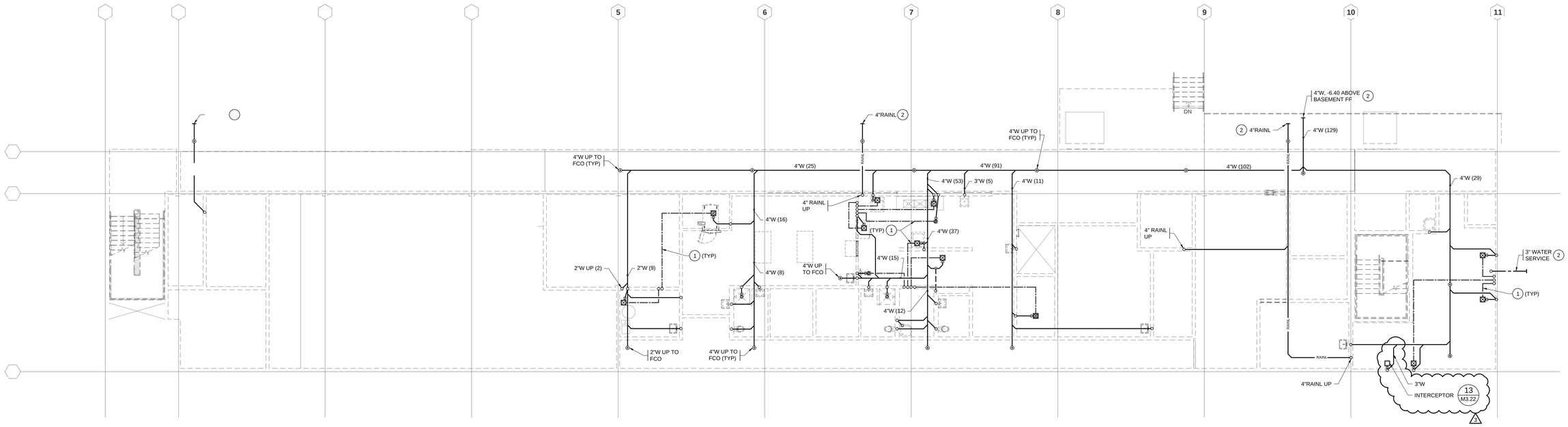
5. REVIEW ALL DRAWINGS AND SUBMITTALS AND VERIFY FIXTURE LOCATION AND ROUGH-IN REQUIREMENTS PRIOR TO BEGINNING WORK.

6. FOR PIPE SIZE TO INDIVIDUAL FIXTURES, SEE "PLUMBING FIXTURE SCHEDULE", SHEET M0.05.

7. PROVIDE WALL CLEANOUTS BELOW ALL SINKS AND LAVATORIES AND AS REQUIRED BY CODE.

PIPE SIZING LEGEND:

1-1/2" CW (35)
- WSFU'S (FOR HW & CW) DFU'S (FOR W & V)
- SERVICE
- PIPE SIZE





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FOUNDATION PLAN MECHANICAL

M2.11

2" P-11A (FLOOR DRAIN)	2	13	26
4" P-11A (FLOOR DRAIN)	8	3	24
4" P-11C (FLOOR RECEPTOR)	8	14	112
3" P-11D (TROUGH DRAIN)	6	8	48
TOTAL GI DFU'S			210

4. FROM FIXTURE(S) ON 2ND FLOOR.
5. 1-1/4" CW DN; PROVIDE ISOLATION VALVE IN VERTICAL PIPE SERVING TOILET & LAVATORY. PROVIDE ACCESS DOOR.
6. BALANCE HWC FOR 3 GPM.
7. COORDINATE FLOOR DRAIN/RECEPTOR LOCATION W/ CENTRAL SERVICES EQUIPMENT SUPPLIERS.

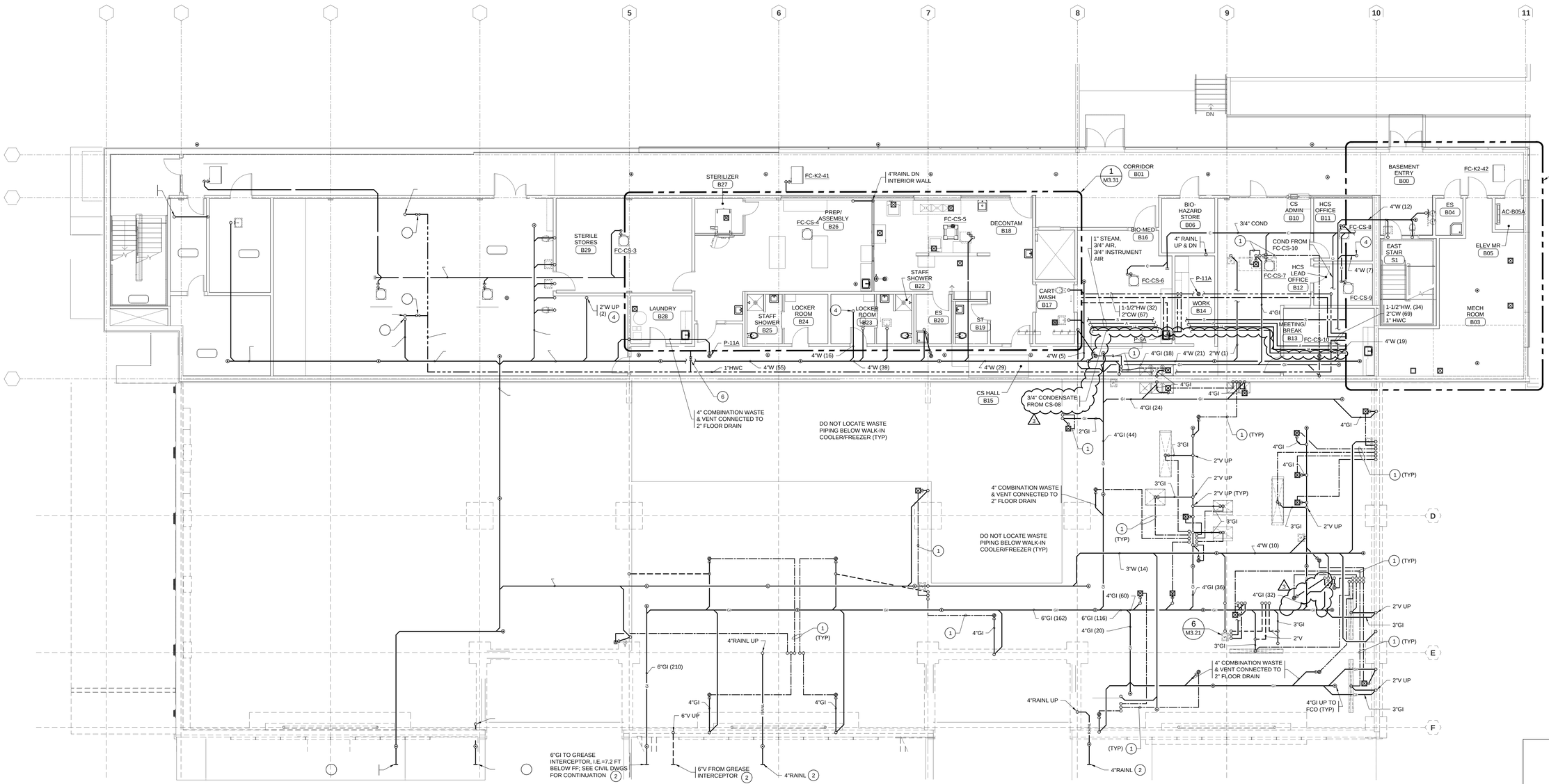
PIPE SIZING LEGEND:

1-1/2" CW (35)
- WSFU'S (FOR HW & CW)
- DFU'S (FOR W & V)
- SERVICE
- PIPE SIZE

3. PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES & AT BASE OF ALL WASTE PIPING FROM 2ND FLOOR.
4. ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ENSURE VALVE IS ACCESSIBLE.
5. OFFSET VTR'S AND PIPING AS REQ'D TO AVOID DUCTWORK & OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 12' FROM ANY OUTSIDE AIR OPENING.
6. PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES, WASHING MACHINE FITTINGS AND ALL OTHER FAST CLOSING VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C

7. PROVIDE CONDENSATE DRAIN FROM EACH FC UNIT PIPED TO NEARBY DRAINS OR MOP SINKS. ALL CONDENSATE LINES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE. WHERE EXPOSED, CONDENSATE PIPING SHALL BE COPPER.



0' 4' 8' 16'
Scale 1/8" = 1'0"

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BASEMENT FLOOR PLAN - PLUMBING

M3.11

2. FOR PIPING SIZES TO INDIVIDUAL PLUMBING ITEMS IN THE KITCHEN SEE FOOD SERVICE SERVICE PLANS AND SPECIFICATIONS.
3. THE DIVISION 22 CONTRACTOR SHALL INSTALL ALL FITTINGS, VALVES & CONTROLS, FURNISHED WITH THE FOOD SERVICE PLANS & SPECIFICATIONS.
4. SEE FOOD SERVICE PLANS FOR ALL ROUGH IN HEIGHTS, DIMENSIONS & CLEARANCE REQUIREMENTS. SEE FOOD SERVICE DRAWINGS.
5. (#)

SERVING TOILET & LAVATORY. PROVIDE ACCESS DOOR.

(6) BALANCE HWC FOR 3 GPM.

(7) COORDINATE FLOOR DRAIN/RECEPTOR LOCATION W/ CENTRAL SERVICES EQUIPMENT SUPPLIERS.

PIPE SIZING LEGEND:

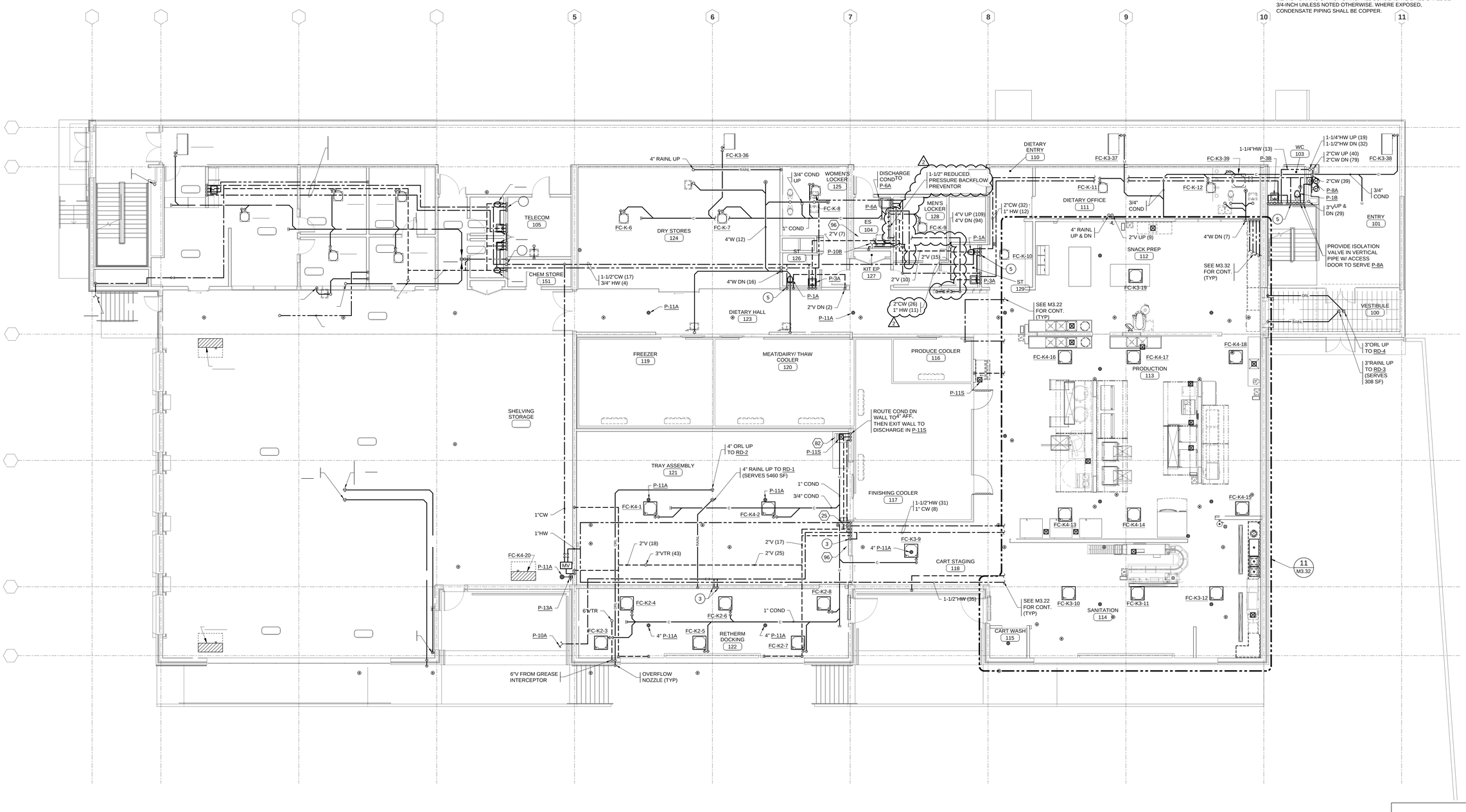
1-1/2" CW (35)
- WSFU'S (FOR HW & CW)
- DFU'S (FOR W & V)
- SERVICE
- PIPE SIZE

CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ENSURE VALVE IS ACCESSIBLE.

5. OFFSET VTR'S AND PIPING AS REQ'D TO AVOID DUCTWORK & OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 12" FROM ANY OUTSIDE AIR OPENING.
6. PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES, WASHING MACHINE FITTINGS AND ALL OTHER FAST CLOSING VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C

7. PROVIDE CONDENSATE DRAIN FROM EACH FC UNIT PIPED TO NEARBY DRAINS OR MOP SINKS. ALL CONDENSATE LINES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE. WHERE EXPOSED, CONDENSATE PIPING SHALL BE COPPER.



0' 4' 8' 16'
Scale 1/8" = 1'0"

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FIRST FLOOR PLAN PLUMBING

M3.12

3 1/2" CW DN TO TRAP PRIMER VALVE. SEE DETAIL 1, M3.21.

4 FROM FIXTURE(S) ON 2ND FLOOR.

5 1-1/4" CW DN; PROVIDE ISOLATION VALVE IN VERTICAL PIPE SERVING TOILET & LAVATORY. PROVIDE ACCESS DOOR.

6 BALANCE HWC FOR 3 GPM.

7 COORDINATE FLOOR DRAIN/RECEPTOR LOCATION W/ CENTRAL SERVICES EQUIPMENT SUPPLIERS.

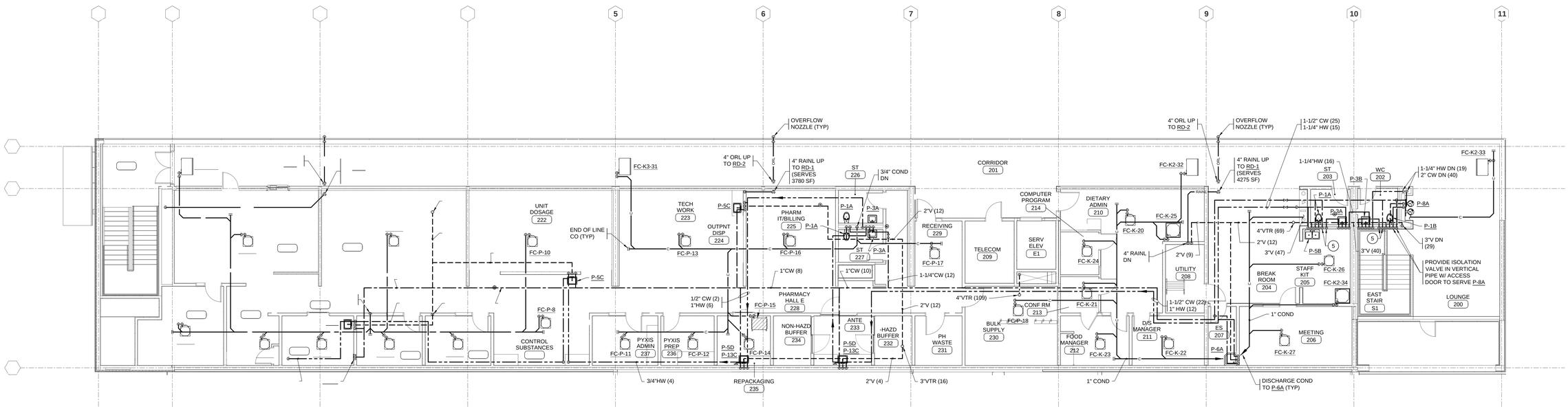
PIPE SIZING LEGEND:

1-1/2" CW (35)
- WSFU'S (FOR HW & CW) / DFU'S (FOR W & V)
- SERVICE
- PIPE SIZE

3. PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES & AT BASE OF ALL WASTE PIPING FROM 2ND FLOOR.
4. ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ENSURE VALVE IS ACCESSIBLE.
5. OFFSET VTR'S AND PIPING AS REQ'D TO AVOID DUCTWORK & OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 12' FROM ANY OUTSIDE AIR OPENING.
6. PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES, WASHING MACHINE FITTINGS AND ALL OTHER FAST CLOSING VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C

7. PROVIDE CONDENSATE DRAIN FROM EACH FC UNIT PIPED TO NEARBY DRAINS OR MOP SINKS. ALL CONDENSATE LINES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE. WHERE EXPOSED, CONDENSATE PIPING SHALL BE COPPER.



0' 2' 4' 8' 16'
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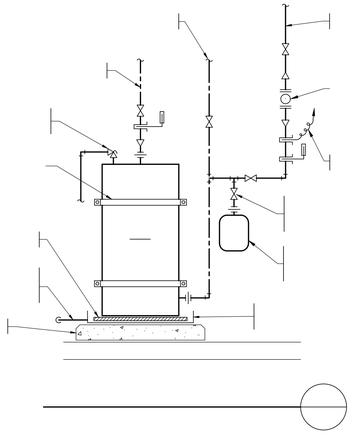
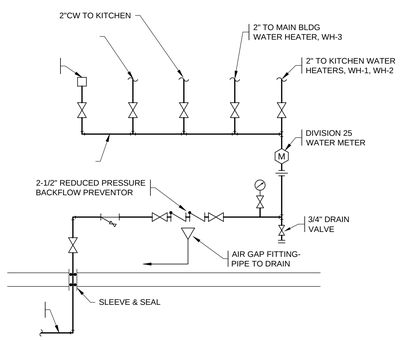
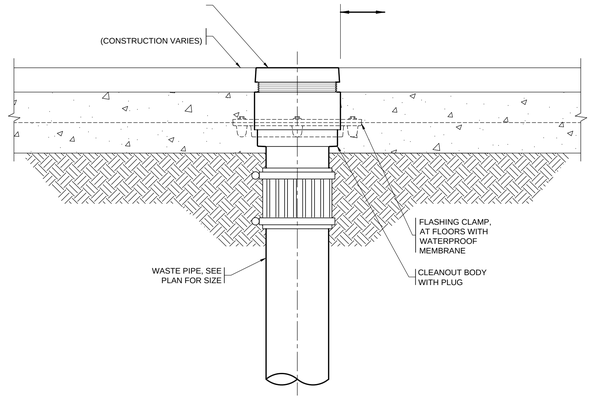
SECOND FLOOR PLAN - PLUMBING

M3.13



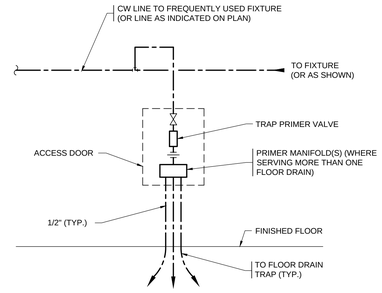


WATER HEADER DETAIL 3 / M3.21



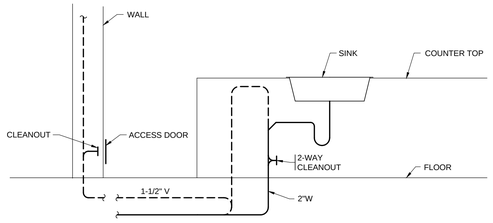
FLOOR CLEANOUT DETAIL 2 / M3.21

NTS



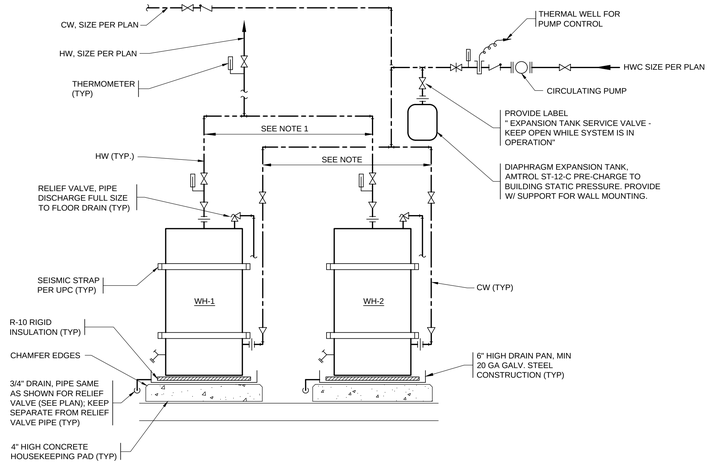
TRAP PRIMER DETAIL 1 / M3.21

NTS



ISLAND VENT DETAIL 6 / M3.21

NTS



NOTE: PIPE WATER HEATERS SO THAT NO. OF ELBOWS & MANIFOLD PIPE LENGTH TO EACH TANK ARE EQUAL.

DUAL WATER HEATER DETAIL 5 / M3.21

NTS

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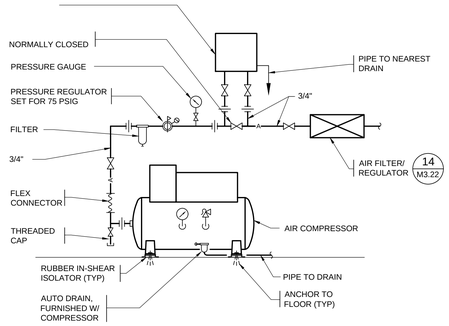
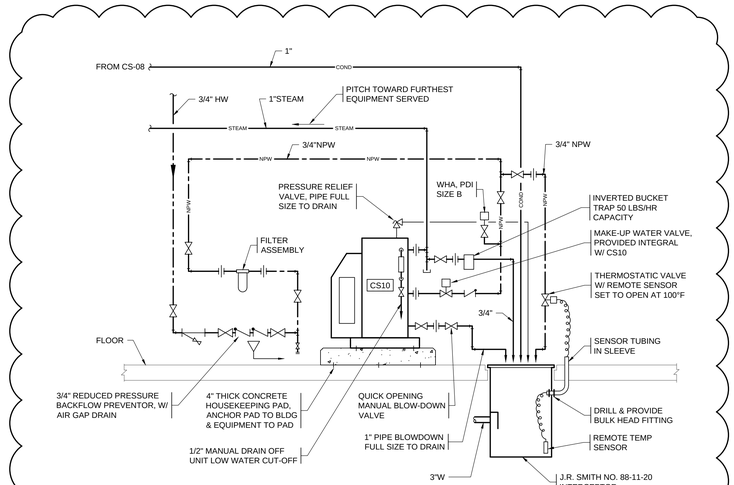
PLUMBING DETAILS

M3.21



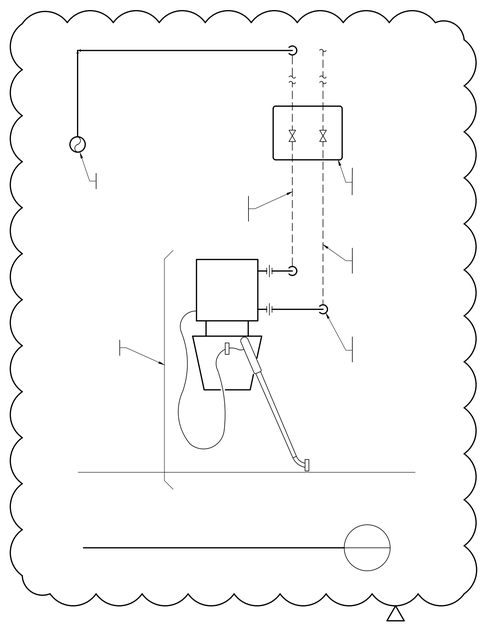
AIR COMPRESSOR DETAIL 12

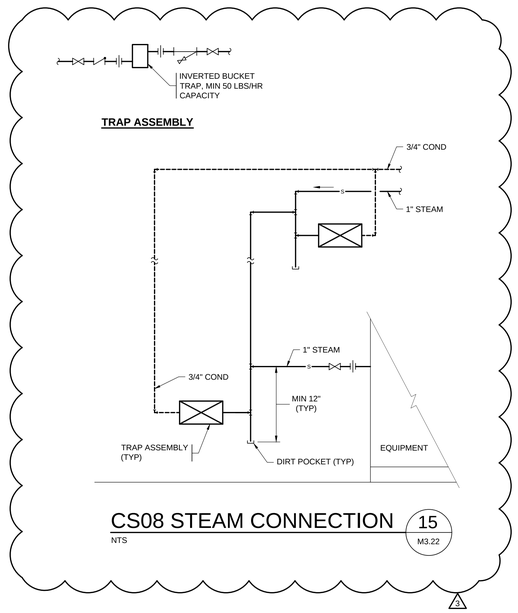
NTS M3.22



STEAM GENERATOR SCHEMATIC 13

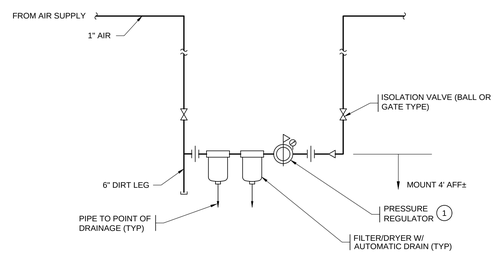
NTS M3.22





CS08 STEAM CONNECTION 15

NTS M3.22



1 ACOMP-1: SET FOR 30 PSI; ACOMP-2: SET FOR 85 PSI

AIR FILTER REGULATOR 14

NTS M3.22

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PLUMBING DETAILS

M3.22

Wester State Hospital – Patient Support Center

CITY MULTI

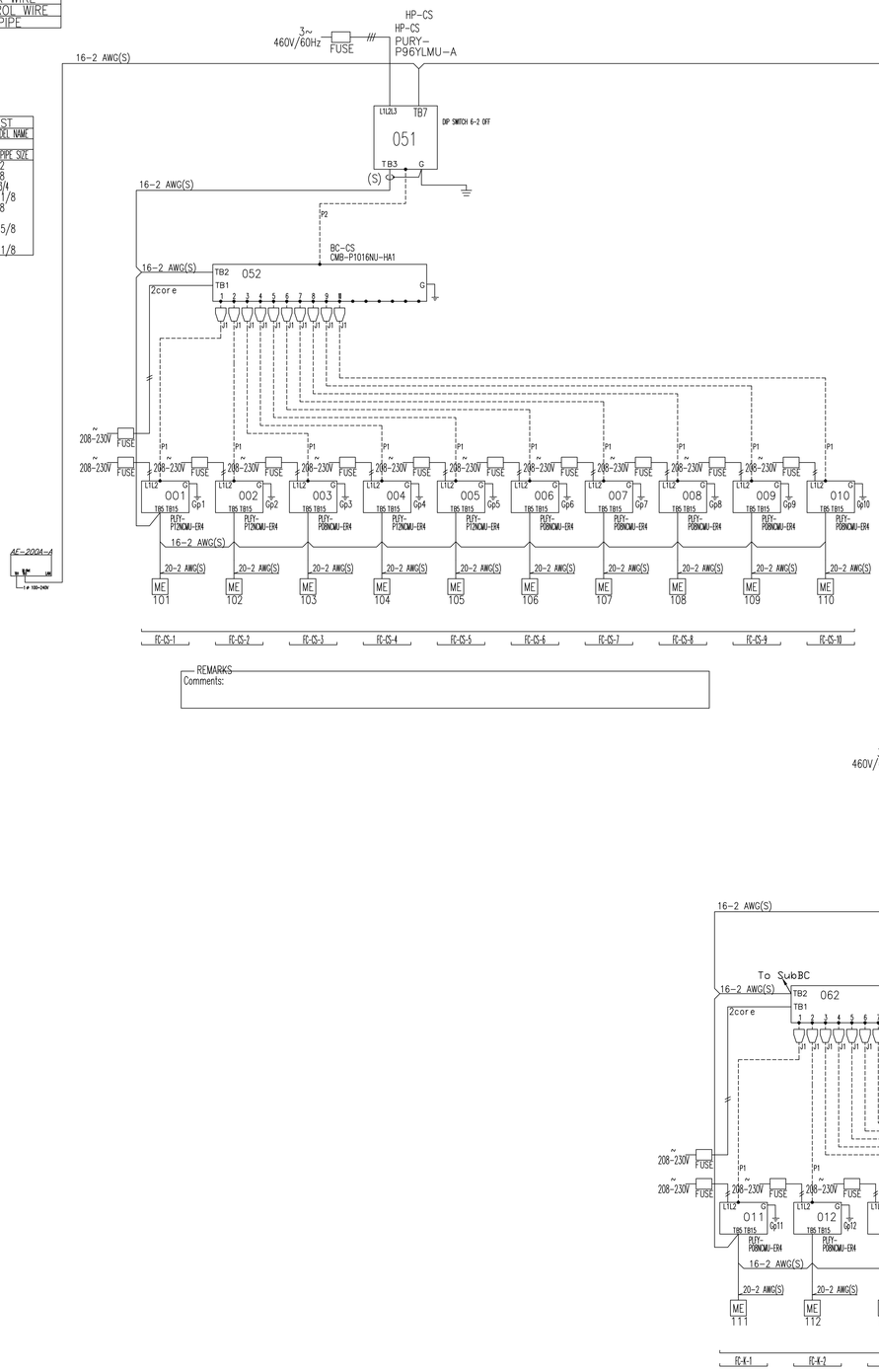
SYSTEM SCHEMATIC DWG.

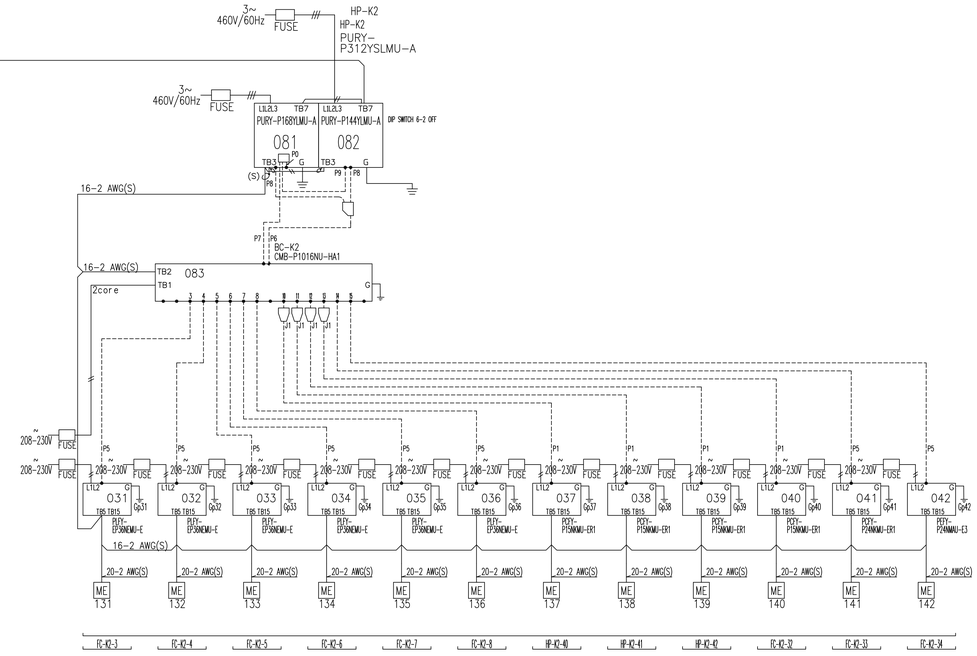
DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
—//—	POWER WIRE
———	CONTROL WIRE
- - - -	REF. PIPE

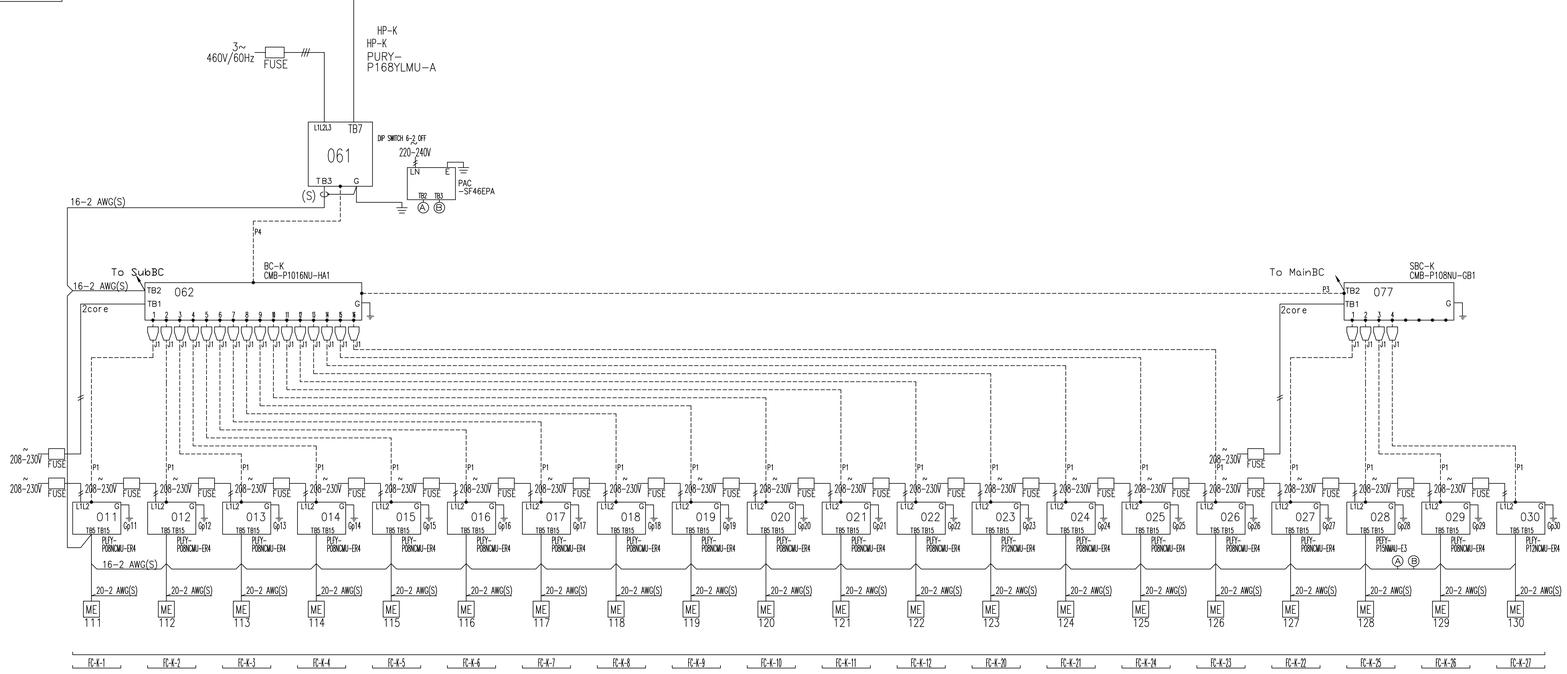
CONT.No | PAGE

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING LIST		
SYMBOL	BRANCH PIPE MODEL NAME	
J1	Reducer	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE	
P1	1/4	1/2
P2	3/4	7/8
P3	3/8	5/8 / 3/4
P4	7/8	1-1/8
P5	5/8	5/8
P6	1-1/8	/
P7		1-5/8
P8	7/8	/
P9		1-1/8







REMARKS
Comments:

MITSUBISHI VRF SYSTEM PIPING AND WIRING DIAGRAM - SYSTEM 1

1 / M3.23

NTS

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PLUMBING DETAILS

M3.23

Wester State Hospital – Patient Support Center

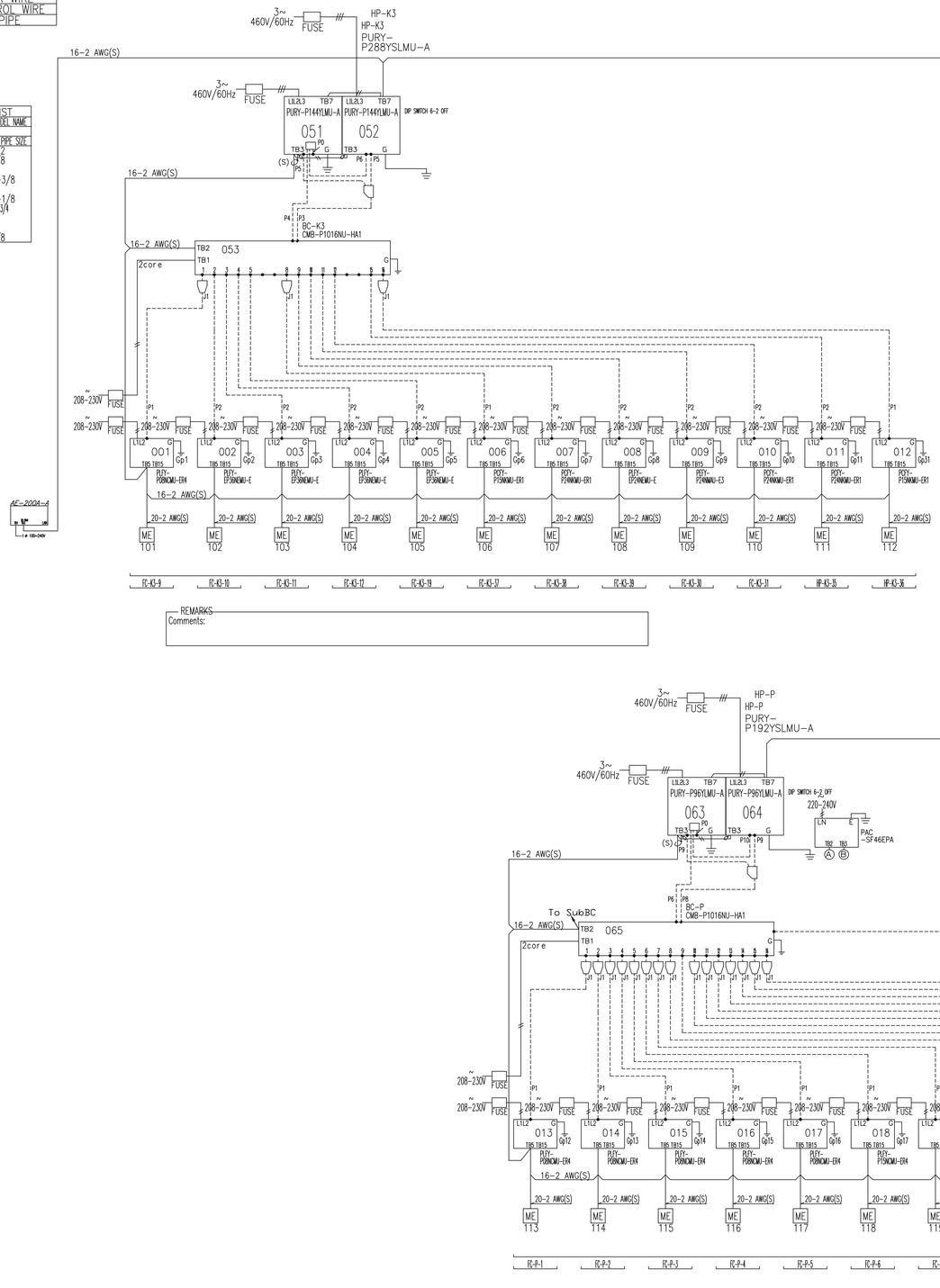
DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
—///	POWER WIRE
———	CONTROL WIRE
– – – –	REF. PIPE

CONT.No | PAGE

CITY MULTI
SYSTEM SCHEMATIC DWG.

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING LIST		
SYMBOL	BRANCH PIPE MODEL NAME	
JT	Reducer	
SYMBOL	LIQUID PIPE/GAS PIPE	PIPE SIZE
P1	1/4	/ 1/2
P2	3/8	/ 5/8
P3	1-1/8	/
P4		/ 1-3/8
P5	7/8	/
P6		/ 1-1/8
P7	3/8	/ 5/8 / 3/4
P8	7/8	/
P9	3/4	/
P10		/ 7/8



REMARKS
Comments:

MITSUBISHI VRF SYSTEM PIPING AND WIRING DIAGRAM - SYSTEM 2

NTS

2
M3.24

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PLUMBING DETAILS

M3.24

Wester State Hospital – Patient Support Center

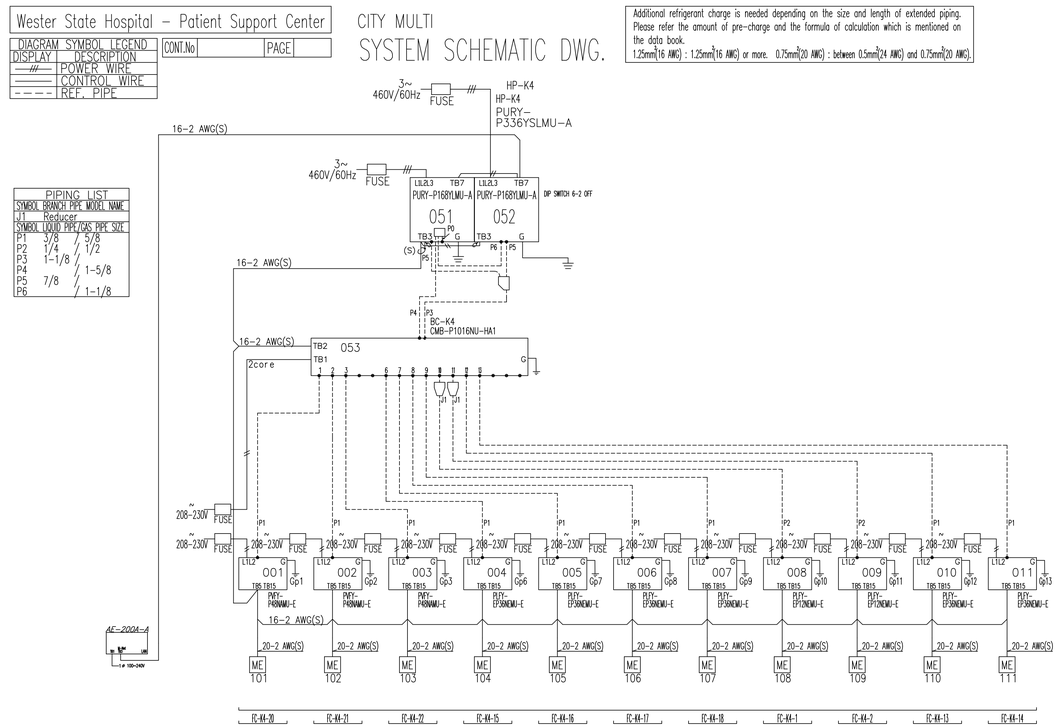
CITY MULTI

SYSTEM SCHEMATIC DWG.

DIAGRAM SYMBOL LEGEND		CONT.No		PAGE	
DISPLAY	DESCRIPTION				
—//—	POWER WIRE				
———	CONTROL WIRE				
- - - -	REF. PIPE				

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING LIST	
SYMBOL	BRANCH PIPE MODEL NAME
J1	Reducer
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	3/8 / 5/8
P2	1/4 / 1/2
P3	1-1/8 /
P4	/ 1-5/8
P5	7/8 /
P6	/ 1-1/8



REMARKS
Comments:

MITSUBISHI VRF SYSTEM PIPING AND WIRING DIAGRAM - SYSTEM 3

NTS

3
M3.25

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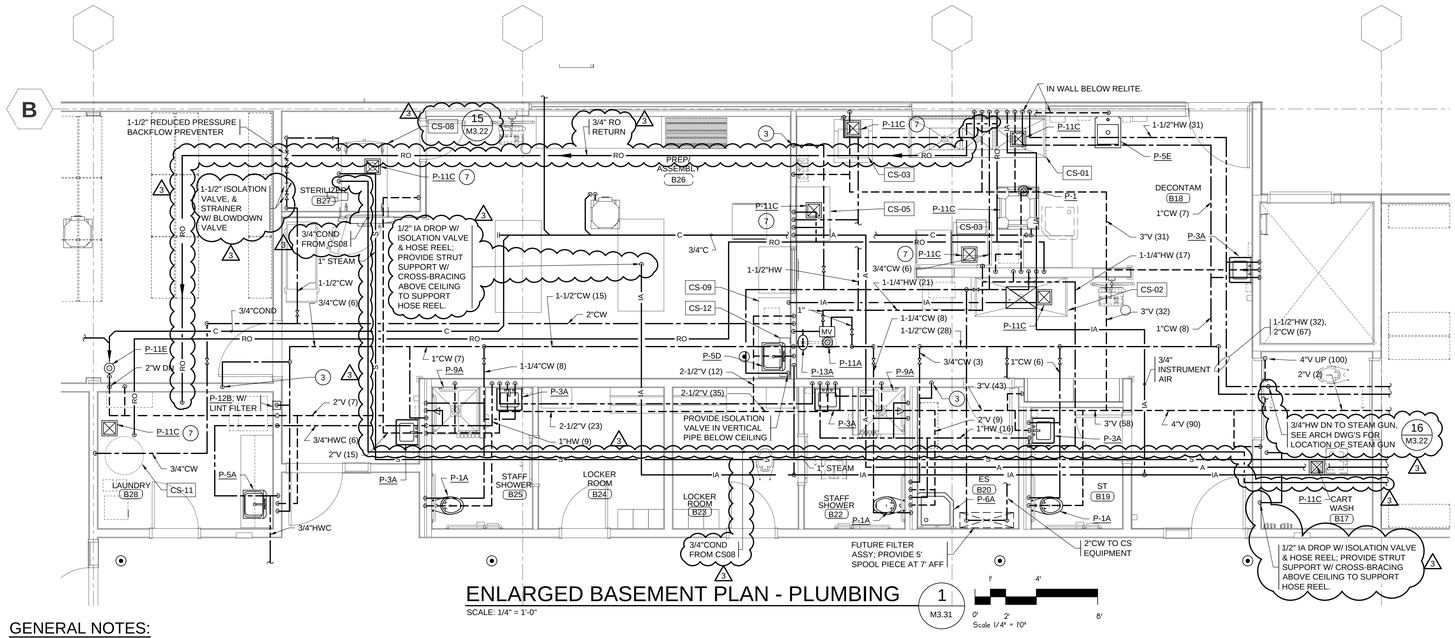
PLUMBING DETAILS

M3.25



ENLARGED BASEMENT PLAN - PLUMBING

1 / M3.31

SCALE: 1/4" = 1'-0"

GENERAL NOTES:

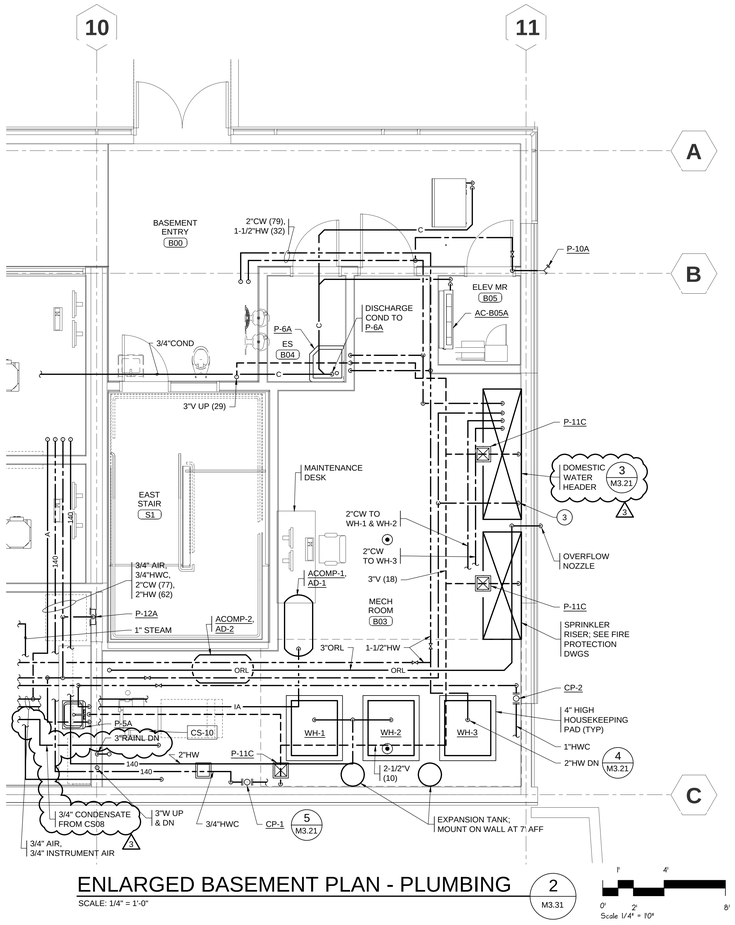
1. SEE GENERAL MECHANICAL NOTES, SHEET M0.01.
2. FOR PIPING SIZES TO INDIVIDUAL PLUMBING FIXTURES SEE "PLUMBING FIXTURE SCHEDULE", SHEET M0.05.
3. PROVIDE WALL CLEANOUT BENEATH FIXTURES FOR ALL SINKS AND LAVATORIES & AT BASE OF ALL WASTE PIPING FROM 2ND FLOOR.
4. ALL ISOLATION VALVES SHALL BE ACCESSIBLE. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ENSURE VALVE IS ACCESSIBLE.
5. OFFSET VTR'S AND PIPING AS REQ'D TO AVOID DUCTWORK & OTHER OBSTRUCTIONS. VTR'S SHALL BE A MINIMUM OF 12' FROM ANY OUTSIDE AIR OPENING.
6. PROVIDE WATER HAMMER ARRESTORS ON ALL COLD WATER LINES SERVING FIXTURES WITH FLUSH VALVES, WASHING MACHINE FITTINGS AND ALL OTHER FAST CLOSING VALVES. LOCATE UPSTREAM OF LAST FIXTURE ON LINE AT EACH FIXTURE GROUP. PROVIDE SHUT-OFF VALVE AND ACCESS DOOR. PDI SIZE SHALL BE AS FOLLOWS:

NO. OF FIXTURES W/ FLUSH VALVES	PDI SIZE
1-2	A
3-5	B
6 & MORE	C

7. PROVIDE CONDENSATE DRAIN FROM EACH FC UNIT PIPED TO NEARBY DRAINS OR MOP SINKS. ALL CONDENSATE LINES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE. WHERE EXPOSED, CONDENSATE PIPING SHALL BE COPPER.
8. CONNECT ALL CENTRAL SERVICES FIXTURES/EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS; PROVIDE ALL NECESSARY APPURTENANCES PER THE INSTALLATION INSTRUCTIONS.

CENTRAL SERVICE FIXTURE SCHEDULE

		CONNECTIONS
		(2) 1/2" HW (2) 1/2" CW (2) 1/2" RO WATER FROM CS-11 1/4" INSTRUMENT AIR 1-1/2" INDIRECT DRAIN (SCH 80 PVC) PROVIDE FLEX CONNECTION AT ALL PLUMBING CONNECTIONS; LENGTH TO ALLOW FULL VERTICAL TRAVEL OF SINK
		1/2" HW 1/2" CW 1/2" RO WATER FROM CS-11 1/4" INSTRUMENT AIR 1-1/2" INDIRECT DRAIN (SCH 80 PVC)
		1/2" HW 1-1/4" INDIRECT DRAIN PROVIDE WATER FILTER WITH ISOLATION VALVE AT HW CONNECTION.
		1/2" HW 1/2" CW 1/2" RO WATER FROM CS-11 1/8" AIR (REGULAR) 1-1/2" INDIRECT DRAIN (SCH 80 PVC) PROVIDE ISOLATION VALVE, WATER HAMMER ARRESTOR, SAMPLING DRAIN VALVE, & PRESSURE GAUGE AT HW & CW CONNECTIONS
		1" COLD WATER 2" INDIRECT DRAIN 1" STEAM
		1" PURE WATER FROM CS-12 2" DRAIN
		SEE DETAIL 13, M3.22
	DEIONIZATION (RO/DI) SYSTEM	3/4" CW 1-1/2" INDIRECT DRAIN
		3/4" CW 1-1/2" INDIRECT DRAIN



ENLARGED BASEMENT PLAN - PLUMBING

2 / M3.31

SCALE: 1/4" = 1'-0"

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ENLARGED PLUMBING PLANS

M3.31

										REMARKS
⬡										PROVIDE WITH MIXING VALVE
⬡										(1)
⬡										
⬡										
⬡										
⬡										
⬡										
⬡										
⬡										3" HUB DRAIN
⬡										
⬡										DO NOT CONNECT THRU WATER FILTRATION
⬡										
										CONNECT TO ⬡75
⬡										CONNET BOILER CONN THRU WATER FILTRATION
⬡										
⬡										
⬡										
⬡										
⬡										
⬡										TEE CW TO ICE MACHINE
⬡										TEE CW FROM ⬡89
⬡										TEE CW TO INLET OF ⬡88 (1)
⬡										(1)
⬡										
⬡										(3)
⬡										
⬡										3" HUB DRAIN
⬡										(1)
⬡										
⬡										1"CW TO PANEL; 1" CW FROM PANEL TO HOOD
⬡										1"CW TO PANEL; 1" CW FROM PANEL TO HOOD
⬡										1"CW TO PANEL; 1" CW FROM PANEL TO HOOD
⬡										
⬡										
⬡										

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⬡

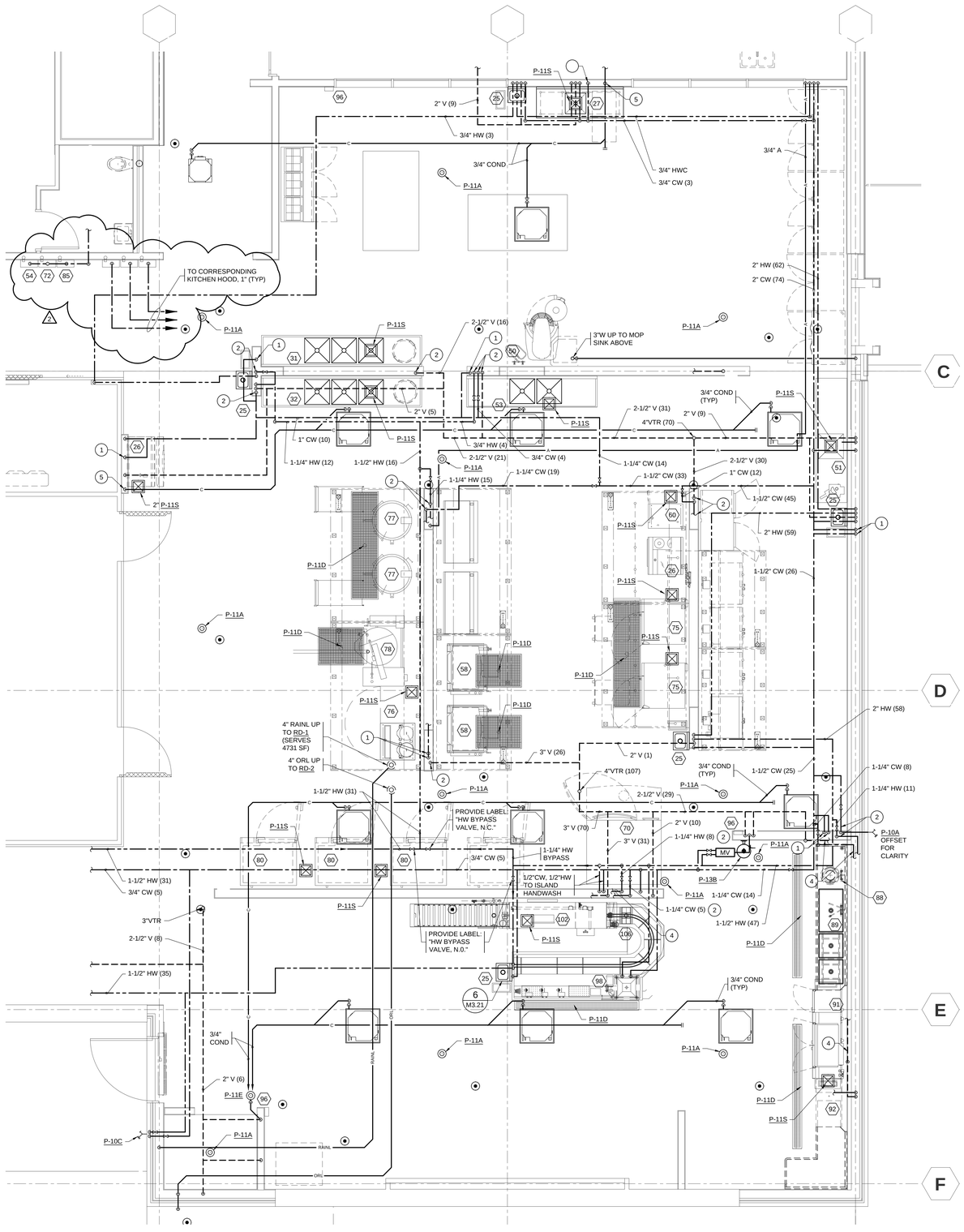
SEE FOOD SERVICE PLANS & SPECIFICATIONS FOR REQUIRED PLUMBING CONNECTIONS TO ITEMS IN THE KITCHEN. ALL ITEMS REQUIRING PLUMBING CONNECTIONS SHALL BE COMPLETELY CONNECTED BY THE DIVISION 22 CONTRACTOR. THIS INCLUDES PROVIDING ALL HW/CW/WASTE/VENT/MISC DRAIN PIPING, TRAPS, FITTINGS, STOPS (IN ALL WATER PIPING TO ITEMS), VALVES SOLENOID VALVES, GASKETS, UNIONS, VACUUM BREAKERS, BACKFLOW PREVENTORS, ESCUTCHEONS, WATER HAMMER ARRESTORS, ACCESS DOORS PIPE SHROUDS, AND ALL ACCESSORIES.

FOR PIPING SIZES TO INDIVIDUAL PLUMBING ITEMS IN THE KITCHEN SEE FOOD

THE DIVISION 22 CONTRACTOR SHALL INSTALL ALL FITTINGS, VALVES & CONTROLS, FURNISHED WITH THE FOOD SERVICE PLANS & SPECIFICATIONS.

SEE FOOD SERVICE PLANS FOR ALL ROUGH IN HEIGHTS, DIMENSIONS & DESIGNATES KITCHEN ITEMS. SEE FOOD SERVICE DRAWINGS.

⬡



KITCHEN ENLARGED PLAN - PLUMBING 11
NTS M3.32

△

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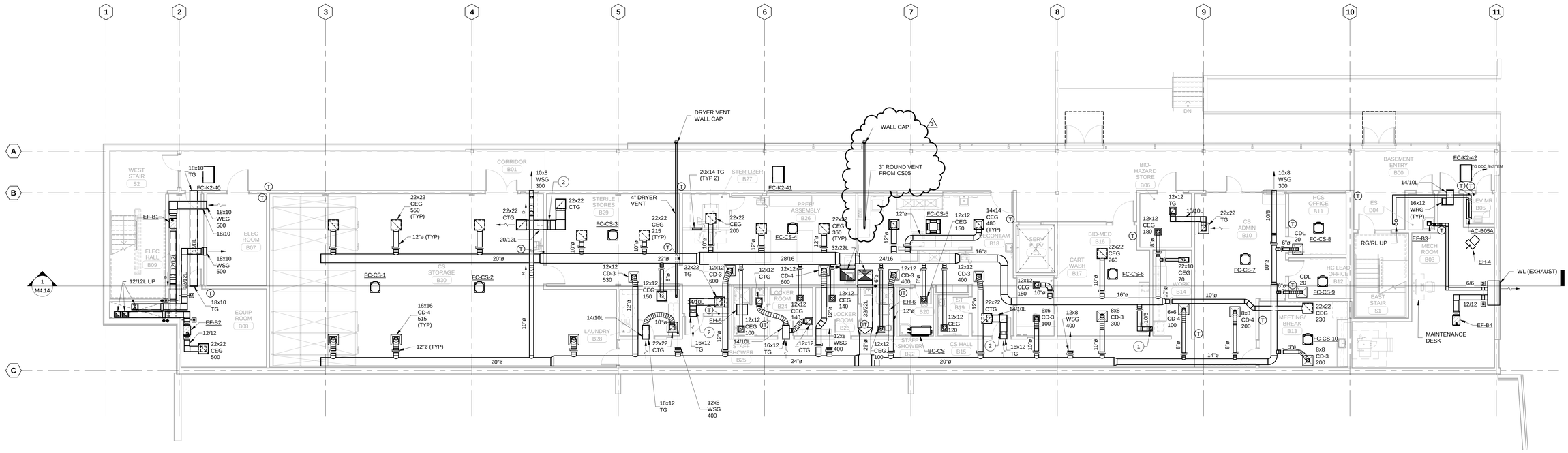
ENLARGED PLUMBING PLANS

M3.32



PROJECT N

1 BASEMENT FLOOR PLAN - HVAC

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

Scale 1/8" = 1'0"

GENERAL NOTES:

1. SEE GENERAL MECHANICAL NOTES, SHEET M0.01.
2. LOCATE MOTORIZED DAMPERS TO BE ACCESSIBLE (PROVIDE DUCT ACCESS DOORS).
3. SEE ARCH DWGS FOR ALL LOUVER DIMENSIONS & LOCATIONS.
4. DAMPERS & DUCT CONN'S AT LOUVERS SHALL MATCH FULL LOUVER SIZE (UNLESS NOTED OTHERWISE).
5. CFM'S SHOWN REPRESENT AIRFLOWS WITH SYSTEM IN "OCCUPIED" MODE.
6. RESTROOM EXHAUST & TRANSFER GRILLES SHALL BE INSTALLED TO BE INLINE W/ EACH OTHER.
7. VERIFY HEIGHTS OF ALL WALL INLETS/OUTLETS WITH ARCHITECT PRIOR TO WALL CONSTRUCTION.
8. ALL TRANSFER AIR DUCTWORK SHALL BE SOUND LINED.
9. PROVIDE TRANSITIONS TO MATCH CONNECTION SIZE TO ALL EQUIPMENT. TRANSITION SHALL BE LINED WHEN CONNECTING DUCT (OR PLENUM) IS LINED.
10. SEE M3.23, M3.24, AND M3.25 FOR REFRIGERANT PIPING AND CONTROL WIRING FOR VRF COMPONENTS.

KEYED NOTES:

1. 10/3-1/2 DUCT DN TO 10/6 WEG, 100 CFM. LOCATE GRILLE TO BE AT SAME ELEVATION AS TOP OF PRINTER.
2. BACKDRAFT DAMPER, COUNTERBALANCED TYPE.

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REVISIONS

3	ADD #3	02/16/18

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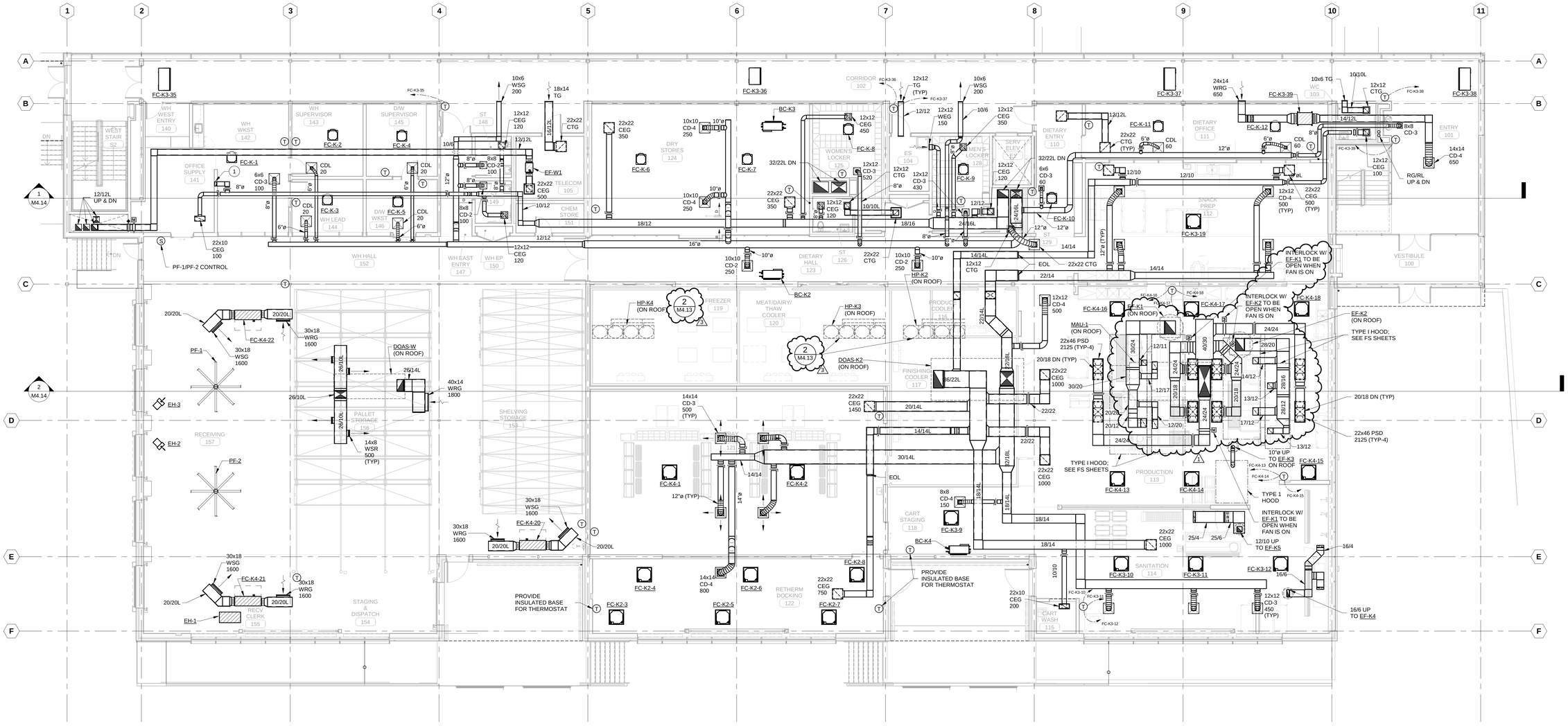
BASEMENT FLOOR PLAN - HVAC

M4.11



GENERAL NOTES:

1. SEE GENERAL MECHANICAL NOTES, SHEET M0.01.
2. LOCATE MOTORIZED DAMPERS TO BE ACCESSIBLE (PROVIDE DUCT ACCESS DOORS).
3. SEE ARCH DWGS FOR ALL LOUVER DIMENSIONS & LOCATIONS.
4. DAMPERS & DUCT CONN'S AT LOUVERS SHALL MATCH FULL LOUVER SIZE (UNLESS NOTED OTHERWISE).
5. CFM'S SHOWN REPRESENT AIRFLOWS WITH SYSTEM IN "OCCUPIED" MODE.
6. RESTROOM EXHAUST & TRANSFER GRILLES SHALL BE INSTALLED TO BE INLINE W/ EACH OTHER.
7. VERIFY HEIGHTS OF ALL WALL INLETS/OUTLETS WITH ARCHITECT PRIOR TO WALL CONSTRUCTION.
8. ALL TRANSFER AIR DUCTWORK SHALL BE SOUND LINED.
9. PROVIDE TRANSITIONS TO MATCH CONNECTION SIZE TO ALL EQUIPMENT. TRANSITION SHALL BE LINED WHEN CONNECTING DUCT (OR PLENUM) IS LINED.
10. SEE M3.23, M3.24, AND M3.25 FOR REFRIGERANT PIPING AND CONTROL WIRING FOR VRF COMPONENTS.
11. PROVIDE ALL DUCTED CONCEALED HP'S WITH CONDENSATE OVERFLOW SWITCH TO SHUT UNIT OFF UPON HIGH LEVELS OF CONDENSATE. (1)

KEYED NOTES:

1. 10/3-1/2 DUCT DN TO ~~10/6 WEG, 100 CFM.~~ LOCATE GRILLE TO BE AT SAME ELEVATION AS TOP OF PRINTER.
2. BACKDRAFT DAMPER, COUNTERBALANCED TYPE.

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REVISIONS
1 ADD #1 01/26/18
2 ADD #3 02/16/18

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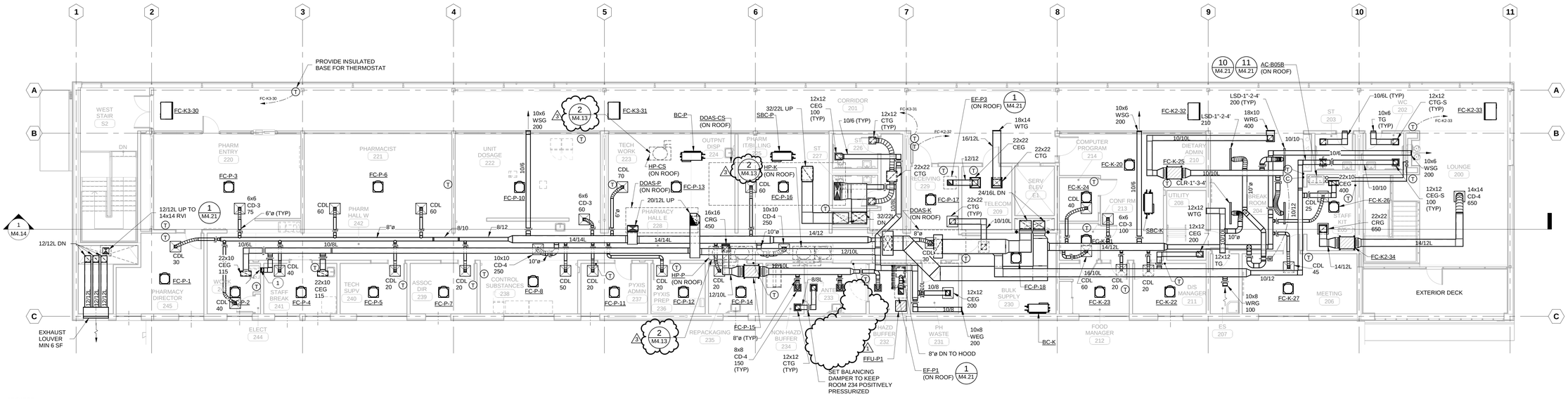
FIRST FLOOR PLAN - HVAC

M4.12

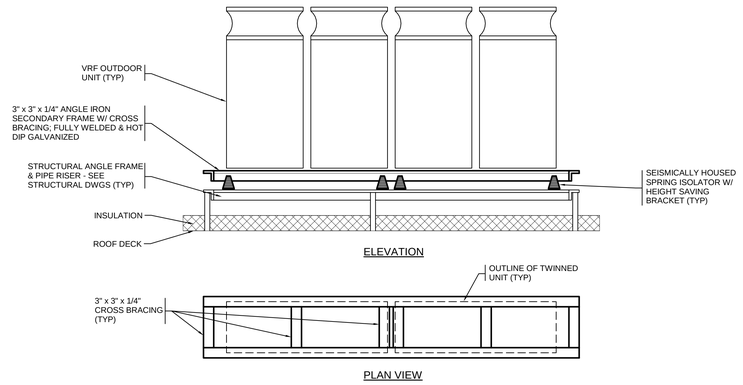


PROJECT N

1 SECOND FLOOR PLAN - HVAC

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

Scale 1/8" = 1'0"



NOTES:
1. INSTALL SPRING ISOLATORS BETWEEN SECONDARY FRAME AND STRUCTURAL FRAME. ANCHOR UNITS TO SECONDARY FRAME.
2. LOCATE CROSS BRACING SUCH THAT IT DOES NOT BLOCK WEEP HOLES ON UNITS.

VRF OUTDOOR UNIT MOUNTING DETAIL

2 / M4.13

NTS

GENERAL NOTES:

1. SEE GENERAL MECHANICAL NOTES, SHEET M0.01.
2. LOCATE MOTORIZED DAMPERS TO BE ACCESSIBLE (PROVIDE DUCT ACCESS DOORS).
3. SEE ARCH DWGS FOR ALL LOUVER DIMENSIONS & LOCATIONS.
4. DAMPERS & DUCT CONN'S AT LOUVERS SHALL MATCH FULL LOUVER SIZE (UNLESS NOTED OTHERWISE).
5. CFM'S SHOWN REPRESENT AIRFLOWS WITH SYSTEM IN "OCCUPIED" MODE.
6. RESTROOM EXHAUST & TRANSFER GRILLES SHALL BE INSTALLED TO BE INLINE W/ EACH OTHER.
7. VERIFY HEIGHTS OF ALL WALL INLETS/OUTLETS WITH ARCHITECT PRIOR TO WALL CONSTRUCTION.
8. ALL TRANSFER AIR DUCTWORK SHALL BE SOUND LINED.
9. PROVIDE TRANSITIONS TO MATCH CONNECTION SIZE TO ALL EQUIPMENT. TRANSITION SHALL BE LINED WHEN CONNECTING DUCT (OR PLENUM) IS LINED.
10. SEE M3.23, M3.24, AND M3.25 FOR REFRIGERANT PIPING AND CONTROL WIRING FOR VRF COMPONENTS.
11. PROVIDE ALL DUCTED CONCEALED HPS WITH CONDENSATE OVERFLOW SWITCH TO SHUT UNIT OFF UPON HIGH LEVELS OF CONDENSATE. (1)

KEYED NOTES:

1. 10/3-1/2 DUCT DN TO 10/6 WEG, 100 CFM. LOCATE GRILLE TO BE AT SAME ELEVATION AS TOP OF PRINTER.
2. BACKDRAFT DAMPER, COUNTERBALANCED TYPE.

REVISIONS
1 ADD #1 01/26/18
2 ADD #3 02/16/18

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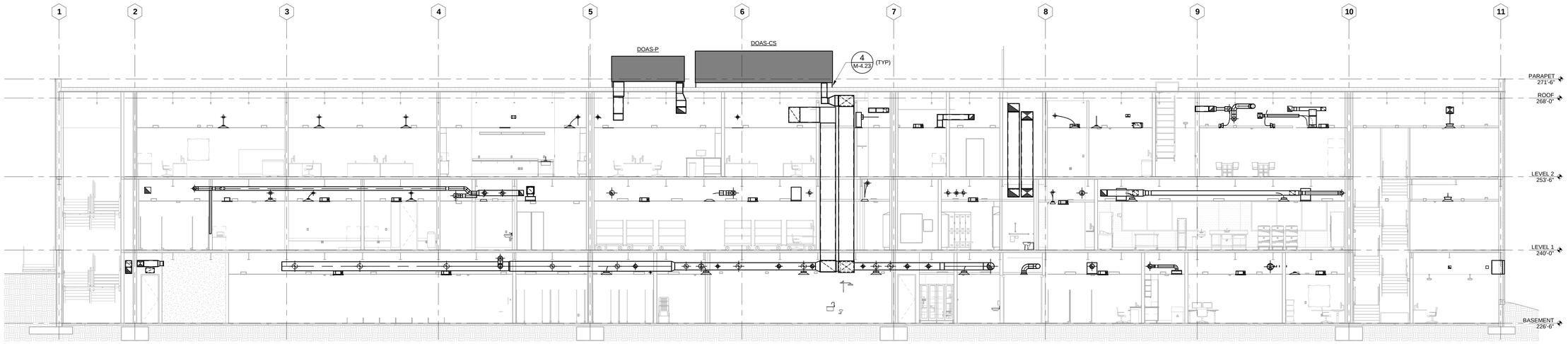
SECOND FLOOR PLAN - HVAC

M4.13



1 Section A
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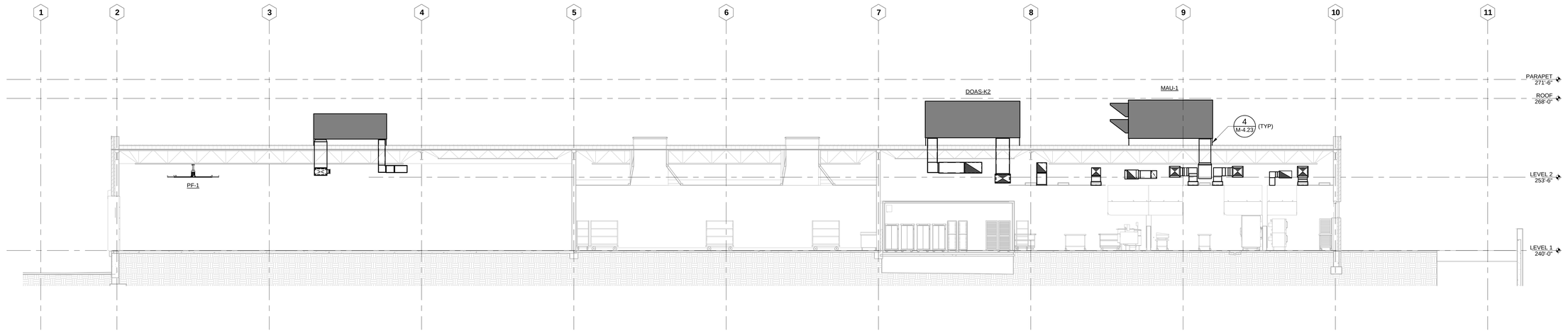

2 Section B
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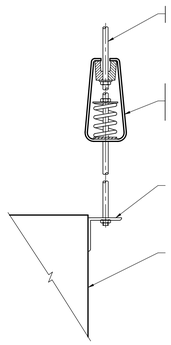
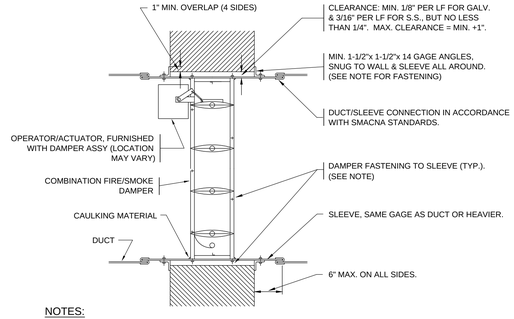
SECTIONS

M4.14

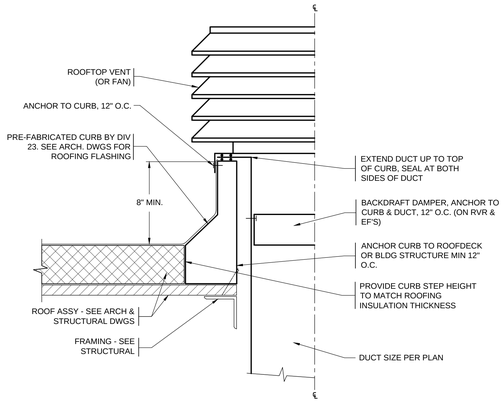




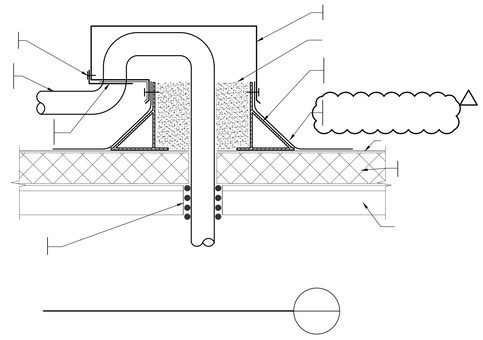
NOTES:

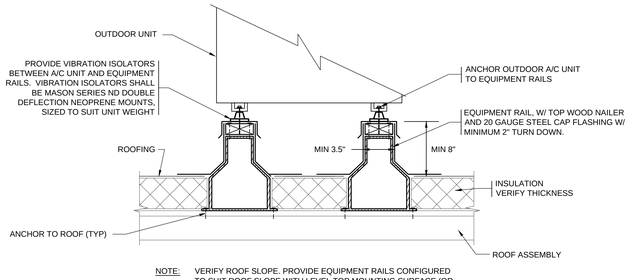
1. POWER TO ACTUATOR & CONTROL BY FIRE ALARM SYSTEM IS BY DIVISION 16 CONTRACTOR.
2. INSTALL DAMPERS TO COMPLY WITH U.L. & MFR STANDARDS. U.L. "APPROVED" INSTALLATION STANDARDS GOVERN IN LIEU OF THIS DETAIL WHERE DIFFERENCES OCCUR.
3. DAMPER FASTENING TO SLEEVE SHALL BE FASTENED WITH 1/4"-20 BOLTS, NO. 10 SCREWS, OR 1/2" LONG WELDS. FASTENING SHALL BE STAGGERED INTERMITTENTLY AND SPACED 8" O.C. FOR GALV. AND 6" O.C. FOR S.S. PROVIDE MIN. TWO CONNECTIONS EACH SIDE.
4. ANGLE FASTENING TO SLEEVE: SAME AS ABOVE.
5. MULTIPLE DAMPER ASSEMBLIES SHALL HAVE STEEL PLATE MULLION (MIN. 14 GA x 4-1/2"WIDE, SAME MATERIAL AS DAMPER) SANDWICHED BETWEEN ENDS OF DAMPERS WITH FRAMES WELDED TO MULLION WITH 1/2" LONG FILLET WELDS STAGGERED INTERMITTENTLY AND SPACED 8" O.C. FOR GALV. AND 6" O.C. FOR S.S.
6. PROVIDE ACCESS DOORS TO DAMPERS & ACTUATOR, LOCATE ACCESS DOOR IN MOST ACCESSIBLE DUCT.
7. DETAIL APPLIES TO HORIZONTAL FIRE DAMPERS ALSO (SUBJECT TO MFRS & UL REVISIONS).
8. DAMPER OPENING IN FRAMED CONSTRUCTION SHALL BE SHEETROCKED.
9. DAMPER CONFIGURARTION MAY VARY FROM THAT ILLUSTRATED; SEE SPECIFICATIONS & LOCAL CODES FOR COMPLETE FIRE/SMOKE DAMPER REQUIREMENTS.

COMBINATION FIRE/SMOKE DAMPER DETAIL 2
NTS — M4.21



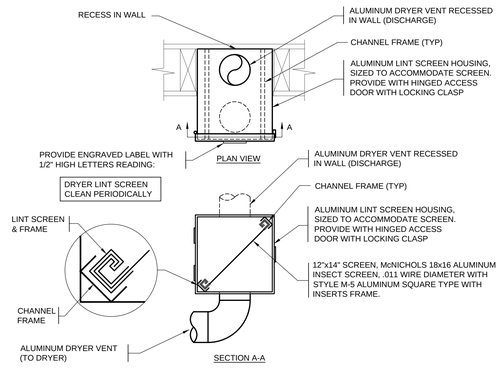
ROOF VENT & FAN MOUNTING 1
NTS — M4.21





NOTE: VERIFY ROOF SLOPE. PROVIDE EQUIPMENT RAILS CONFIGURED TO SUIT ROOF SLOPE WITH LEVEL TOP MOUNTING SURFACE (OR PROVIDE PRESSURE TREATED WOOD SLEEPERS AT BASE, CUT TO PROVIDE LEVEL SURFACE FOR RAIL).

SLEEPERS DETAIL 10
NTS — M4.21



NOTE: PROVIDE ONE EXTRA LINT SCREEN WITH FRAME. TURN OVER TO OWNER WITH OTHER SPARE TOOLS AND EXTRA PARTS.

LINT SCREEN 9
NTS — M4.21

△

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PATIENT SUPPORT CENTER
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NAC ARCHITECTURE
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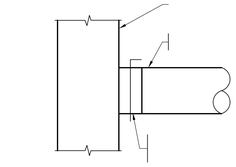
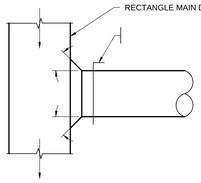
SEATTLE WA 98121
P:206.441.4522

DSHS NO	16-410G (2-1)
NAC NO	121-16004
DRAWN	TP
CHECKED	TR
DATE	03/16/2018

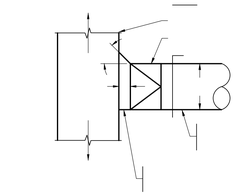
HVAC DETAILS

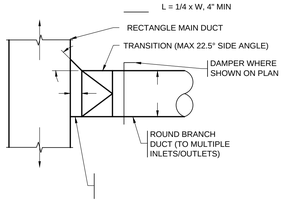
M4.21



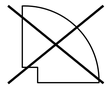


WHERE MAIN DUCT DOES NOT HAVE ADEQUATE HEIGHT TO ACCEPT ROUND DUCT, PROVIDE RECTANGULAR CONNECTION, WITH SAME FREE AREA AS

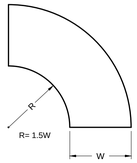




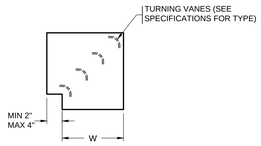
SERVING MULTIPLE INLETS/OUTLETS



NOT ALLOWED



RADIUS ELBOW

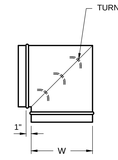


MITERED ELBOW

ELBOWS - RECTANGULAR

NTS

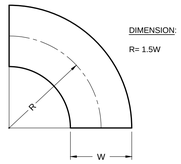
2 / M4.22



DIMENSION:

DIAMETER (INCH)	NUMBER OF VANES
3-9	2
10-14	3
15-19	4
20-60	5
OVER 60	12" MAX. SPACING

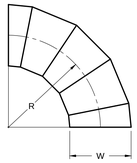
MITERED 90° ELBOW



DIMENSION:

R= 1.5W

DIE-STAMPED ELBOW



DIMENSION:

ANGLE	NUMBER OF GORES
0-35°	2
36-71°	3
72-90°	5

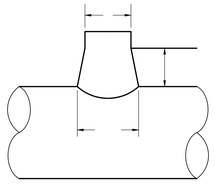
R=1.5W

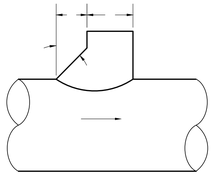
FABRICATED ELBOW

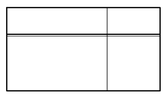
ELBOWS - ROUND

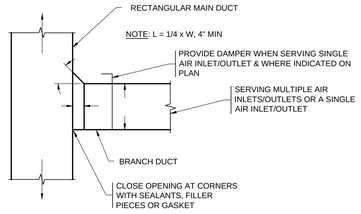
NTS

1 / M4.22



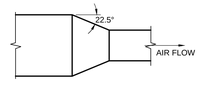




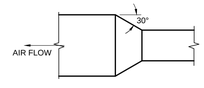


BRANCH DUCT CONNECTION

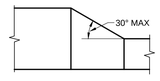
6 / M4.22



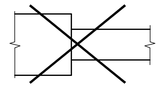
CONCENTRIC TRANSITION (DIVERGING)



CONCENTRIC TRANSITION (CONVERGING)



ECCENTRIC TRANSITION

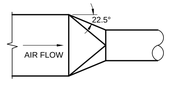


STRAIGHT TAP NOT ALLOWED

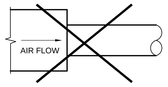
RECT-TO-RECT TRANSITIONS

NTS

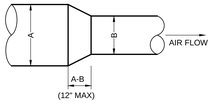
5 / M4.22



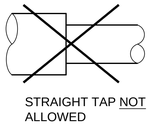
RECT - TO ROUND



STRAIGHT TAP NOT ALLOWED



ROUND - TO ROUND



STRAIGHT TAP NOT ALLOWED

ROUND TRANSITIONS

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4 / M4.22

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Job Number: 16-075

Western State Hospital

BUILDING 22, PATIENT SUPPORT

PATIENT SUPPORT CENTER

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NAC NO	121-16004
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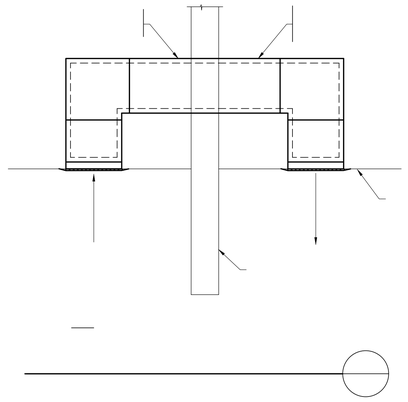
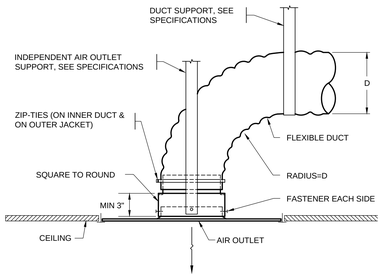
DATE	03/16/2018

HVAC DETAILS

M4.22





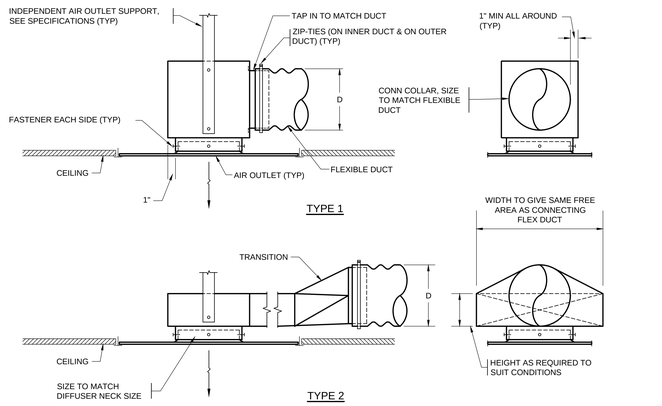
NOTES:

1. USE WHERE ADEQUATE SPACE IS AVAILABLE FOR FLEX DUCT RADIUS, AND WHERE FLEX DUCT IS SHOWN ON PLANS TO AIR OUTLET.
2. NOT ALLOWED AT TRANSFER DUCTS (USE LINED DUCT- NOT FLEX).
3. WHEN THERE IS INSUFFICIENT ROOM TO MAINTAIN FLEX DUCT RADIUS, SEE DETAIL TITLED "TIGHT CONDITION - FLEX DUCT AIR OUTLET CONNECTION."
4. NOT ALLOWED WHERE LINED "CANS" (OR LINED DUCTS) SHOWN (OR REQ'D) AT AIR OUTLETS.
5. CEILING TYPE & AIR OUTLET FRAME STYLE MAY VARY FROM THAT DEPICTED.
6. NOT ALL SUPPORTS SHOWN FOR CLARITY.
7. FOR "TIGHT" SEE "TIGHT CONDITION" DETAIL.

FLEX DUCT AIR OUTLET CONNECTION

2 M4.23

NTS



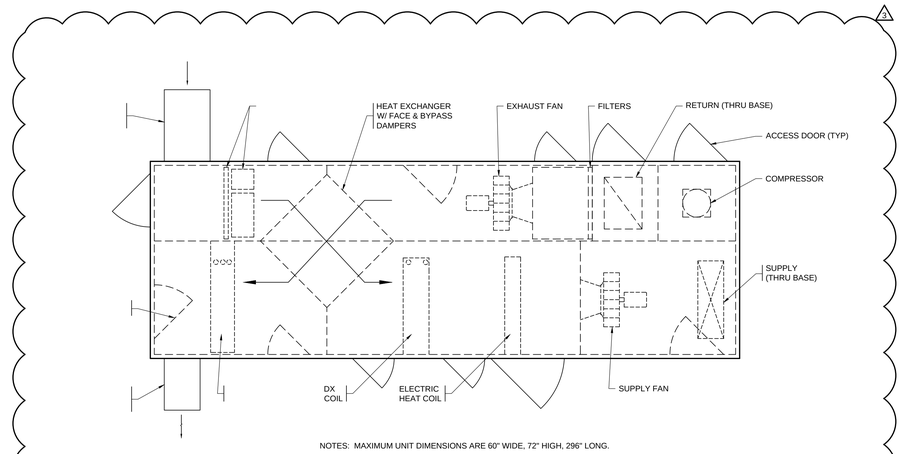
NOTES:

1. PROVIDE TYPE 1 UNLESS BUILDING CONDITIONS REQUIRE LOWER PROFILE - THEN USE TYPE 2.
2. CONSTRUCT PLENUM BOXES OF MIN. 26 GA. GALV. STEEL.
3. NOT ALLOWED AT TRANSFER DUCTS.
4. LINE PLENUM & DUCT TO AIR OUTLET WHERE SO NOTED ON PLANS OR IN SPECIFICATIONS.
5. CEILING TYPE & AIR OUTLET FRAME STYLE MAY VARY FROM THAT DEPICTED.
6. NOT ALL SUPPORTS ARE SHOWN FOR CLARITY.
7. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TIGHT CONDITION - FLEX DUCT AIR OUTLET CONNECTION

1 M4.23

NTS

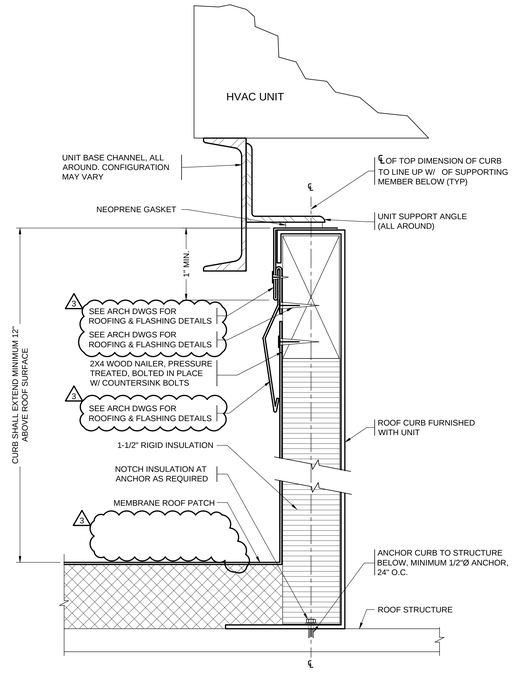


NOTES: MAXIMUM UNIT DIMENSIONS ARE 60" WIDE, 72" HIGH, 296" LONG.

DOAS-CS DETAIL

5 M4.23

NTS



ROOF CURB

4 M4.23

NTS

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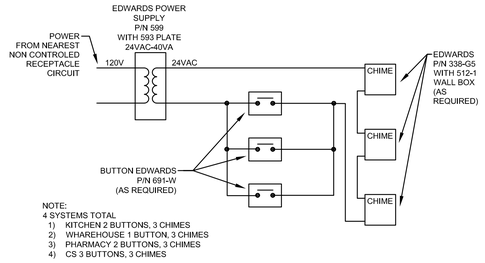
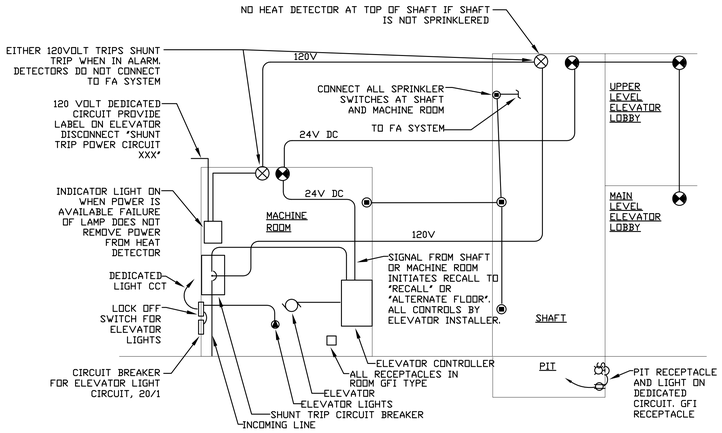
M4.23



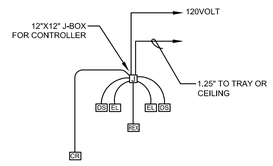
1/E1.00 DOOR BELL SYSTEM

EACH AREA TO HAVE SEPARATE SYSTEM
SCALE: NONE



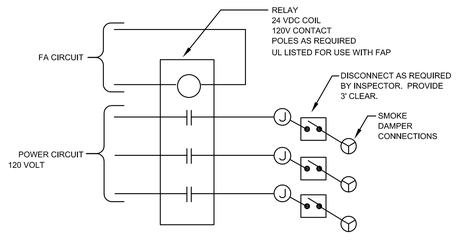
2/E1.00 ELEVATOR DETAIL

SCALE: NONE



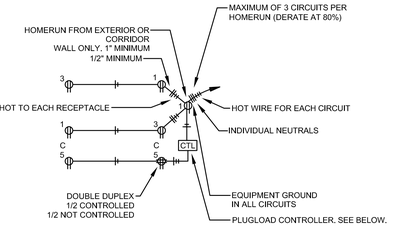
3/E1.00 ACCESS CONTROL DIAGRAM

SCALE: NONE



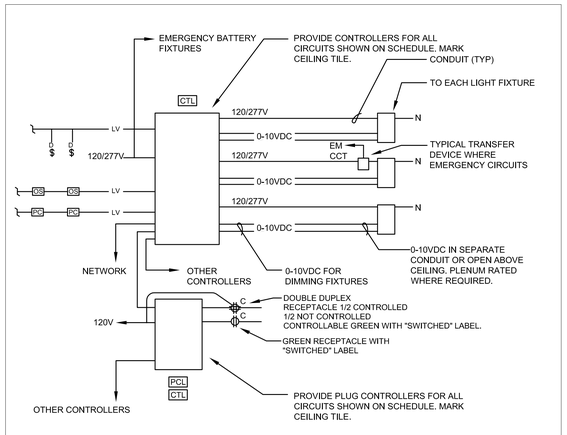
4/E1.00 SMOKE DAMPER RELAY DETAIL

SCALE: NONE



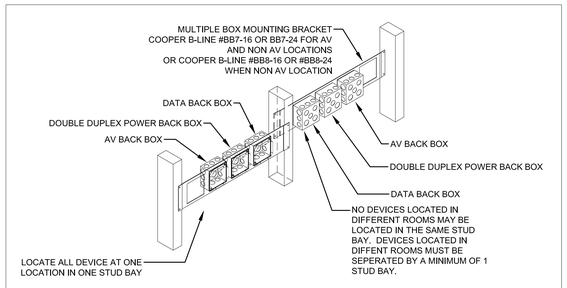
TYPICAL RECEPTACLE CIRCUITING DETAIL

SCALE: NONE



TYPICAL LIGHTING CONTROL DETAIL

SCALE: NONE



POWER, DATA AND AV ROUGH IN DETAIL

SCALE: NONE

LEGEND

- CONDUIT CONCEALED IN CEILING OR WALLS
- CONDUIT CONCEALED UNDERGROUND, UNDER FLOOR, OR IN WALL
- LIGHT FIXTURE
- WALL MOUNTED FIXTURE
- EMERGENCY BATTERY LIGHT, TYPE X-1, EXCEPT AS NOTED
- POLE LIGHT
- EXIT SIGN LIGHT FIXTURE TYPE X, EXCEPT AS NOTED
- DIGITAL SWITCH
- OS WALL SWITCH WITH INTEGRAL OCCUPANCY SENSOR
- OS OCCUPANCY SENSOR
- OSWM OCCUPANCY SENSOR WALL MOUNT
- PCL PHOTO CELL
- PCL PLUG LOAD CONTROLLER
- CTL LIGHTING CONTROLLER
- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE ABOVE COUNTER
- DOUBLE DUPLEX RECEPTACLE
- GFI DUPLEX RECEPTACLE GFI TYPE
- WP WEATHERPROOF DUPLEX RECEPTACLE (GFI TYPE)
- FLOOR BOX WITH ACTIVATIONS SHOWN
- SPECIAL RECEPTACLE AS NOTED
- D DRYER OUTLET NEMA 14-30R
- R RANGE OUTLET, NEMA 14-50R
- H HOOD OUTLET, CONNECT ALL LIGHTS
- MOTORIZED CONTROLLER
- MUSHROOM SWITCH
- PUSHBUTTON SWITCH
- EQUIPMENT CONNECTION
- TP TRAP PRIMER CONNECTION
- SD SMOKE DAMPER CONNECTION SEE 4/E1.00
- MOTOR CONNECTION
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- MANUAL MOTOR STARTER
- COMBINATION STARTER
- VFD VARIABLE FREQUENCY DRIVE
- JUNCTION BOX
- F FIRE ALARM PULL STATION
- FIRE ALARM SPEAKER WITH ADA STROBE
- FIRE ALARM ADA STROBE WALL MOUNTED
- FIRE ALARM ADA STROBE
- S SMOKE DETECTOR/SENSOR
- V VOLUME CONTROL
- AV AV1 AV2 AVM AVP AV SYSTEM OUTLETS
- DATA OUTLET (NUMBER = NUMBER OF RJ45 JACKS, NO NUMBER = 1) WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING
- V CCTV CAMERA DATA OUTLET (NUMBER = NUMBER OF RJ45 JACKS, NO NUMBER = 1) WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING
- S CEILING MOUNTED INTERCOM SPEAKER RECESSED INTO CEILING
- S WALL MOUNTED INTERCOM SPEAKER RECESSED INTO WALL
- CS DOOR BELL BUTTON
- ACCESS CONTROL REQUEST TO EXIT
- CR ACCESS CONTROL CARD READER
- DCR ACCESS CONTROL AND/OR SECURITY DOOR SWITCH
- MS SECURITY MOTION SENSOR
- GB SECURITY GLASS BREAK SENSOR
- DR DURRESS ALARM RECEIVER SINGLE GANG BOX WITH 1" CONDUIT TO NEAREST ACCESSIBLE CEILING MOUNT AT +54" AFF
- CCTV CAMERA
- SI SECURITY SIREN
- K SECURITY KEYPAD
- EL ELECTRIC LOCK
- EXIST DEVICE/FIXTURE AS INDICATED
- EXIST DEVICE/FIXTURE AS INDICATED TO BE REMOVED
- CIRCUIT BREAKER
- SWITCH
- FUSED SWITCH
- FUSE
- TRANSFORMER
- GROUNDING PER CODES
- BUS TAP
- 208V PANEL
- 480V PANEL
- T TRANSFORMER
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- WP WEATHERPROOF
- A/B DETAIL INDICATOR WITH SHEET WHERE DRAWN INDICATED
- 1 FLAG NOTE

REVISIONS

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LEGEND

E1.00

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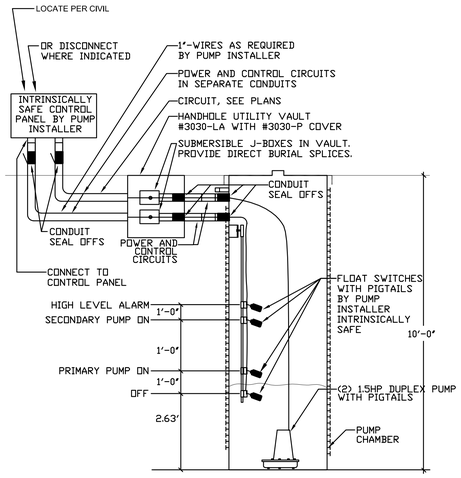

2 SEWER PUMP CONNECTION
E1.0 SCALE: NONE

1 SITE PLAN - ELECTRICAL
Scale: 1" = 30'-0"

REVISIONS
2 DELTA: ADD. 2

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SITE PLAN - ELECTRICAL

E1.01

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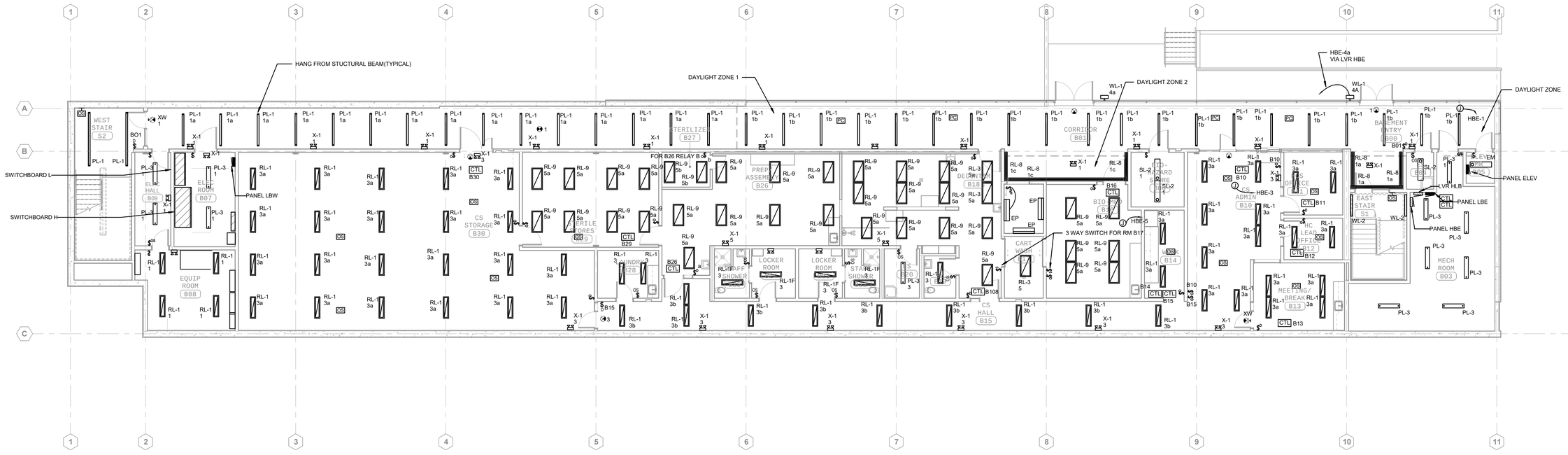

1 BASEMENT FLOOR PLAN - LIGHTING
Scale: 1/8" = 1'-0"

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BASEMENT FLOOR PLAN - LIGHTING

TRUE PROJECT

E2.11

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ILLUMINATED ALUMINUM LETTERING 101400
LOCATE DRIVER/TRANSFORMERS ON
CEILING. FOR EACH LETTER ROUTE 3/4" CONDUIT TO
DRIVER/TRANSFORMER CONCEALED IN WALL.
PROVIDE 3/4" CONDUIT CONCEALED IN WALL BETWEEN
EACH LETTER. PROVIDE ALL ELECTRICAL CONNECTIONS
AS REQUIRED BY MANUFACTURER. COORDINATE PRIOR TO
ROUGH IN. THERE ARE 2 LETTERS EACH LETTER HAS INTEGRAL
LED LIGHTS.

HANG FROM STUCTURAL BEAM(TYPICAL)

DAYLIGHT ZONE 2

DAYLIGHT ZONE 2

RL-6 FIXTURE IS 14'-5" LONG(2)7' FIXTURES

DAYLIGHT ZONE 1

HBE-4a VIA LVR HBE

DAY LIGHT ZONE 1

ENTIRE ROOM IS TOP LIGHT DAY LIGHT ZONE

DAYLIGTH ZONE 1

DAYLIGHT ZONE 2

TYPE X-1 LIGHT ABOVE EXIT SIGN

RL-6 FIXTURE IS 24'-10.5" LONG (4)6'-0" FIXTURES.

PANEL L1W

PANEL H1W

ENTIRE ROOM IS TOP LIGHT DAY LIGHT ZONE

TOP LIGHT DAYLIGHT ZONE

RL-6 FIXTURE IS 24'-10.5" LONG (4)6'-0" FIXTURES.

PANEL LK1

H2W-3,5

H2W-2

DAYLIGHT ZONE 1

DAYLIGHT ZONE 2

100 a,b,c,d,e

100 f,g

ENTRY 101 HAS HARD CEILING.
NO ELECTRICAL JUNCTION BOXES
ALLOWED ABOVE CEILING.
NO ACCESS PANELS ALLOWED

DAYLIGHT ZONE 2

STAIR HAS HARD CEILING.
NO ELECTRICAL JUNCTION BOXES
ALLOWED ABOVE CEILING.
NO ACCESS PANELS ALLOWED

HBE-4a VIA LVR HBE

100 h, g

VESTIBULE 100 HAS HARD CEILING.
NO ELECTRICAL JUNCTION BOXES
ALLOWED ABOVE CEILING.
NO ACCESS PANELS ALLOWED

DAYLIGHT ZONE 1

END FEED LIGHT FIXTURE

HBE-4a VIA LVR HBE

RL-6 FIXTURE IS 27'-2.125" LONG. (4)5' AND(1)6' SECTION CENTER 6' SECTION BETWEEN 5' SECTIONS.

DAYLIGHT ZONE 1

DAYLIGHT ZONE 2

DAYLIGHT ZONE 1

DAYLIGHT ZONE 2

DAYLIGHT ZONE 1



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

REVISIONS
2 DELTA: ADD. 2

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SECOND FLOOR PLAN - LIGHTING

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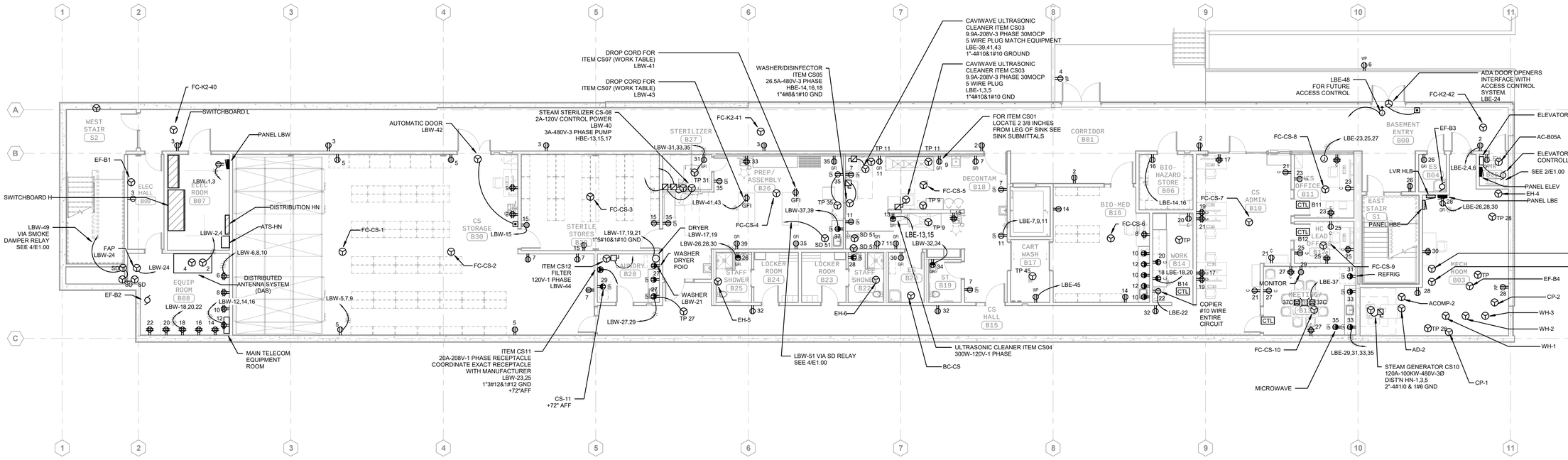

N

1 BASEMENT FLOOR PLAN - POWER

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

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BASEMENT FLOOR PLAN - POWER

E3.11

TRUE N PROJECT N

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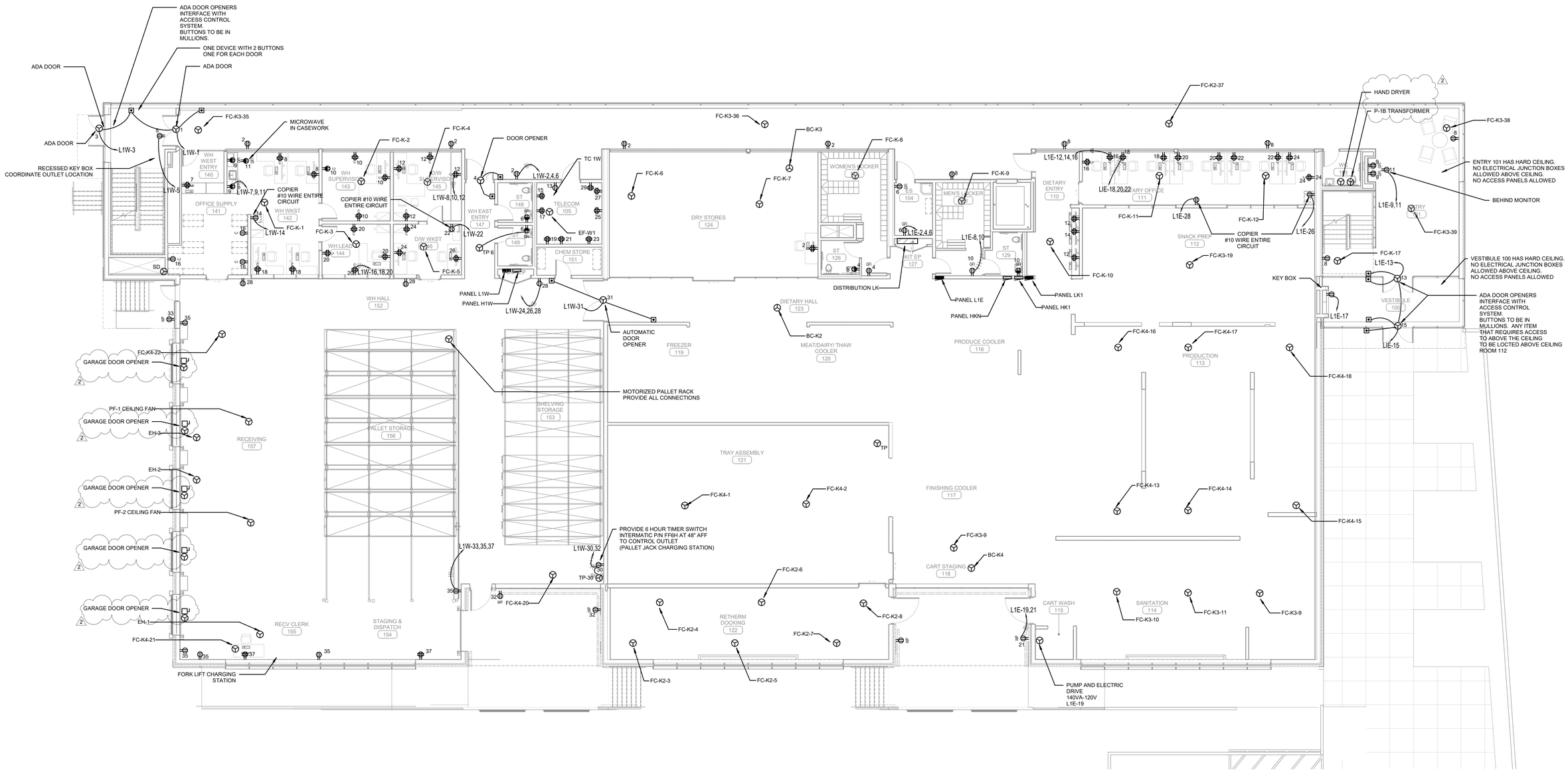

1 FIRST FLOOR PLAN - POWER
Scale: 1/8" = 1'-0"

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FIRST FLOOR PLAN - POWER

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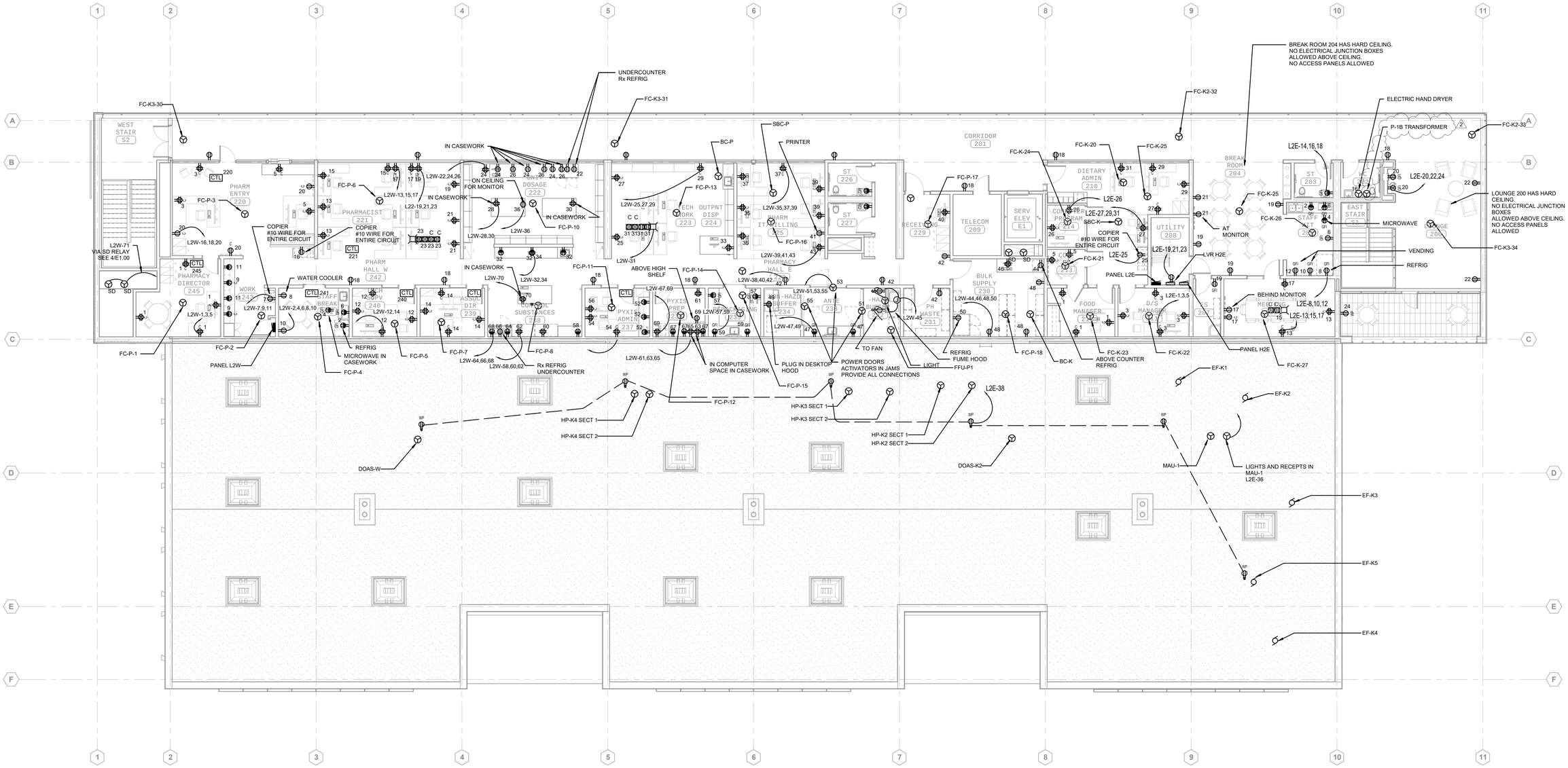

N 1 SECOND FLOOR PLAN - POWER

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

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SECOND FLOOR PLAN - POWER

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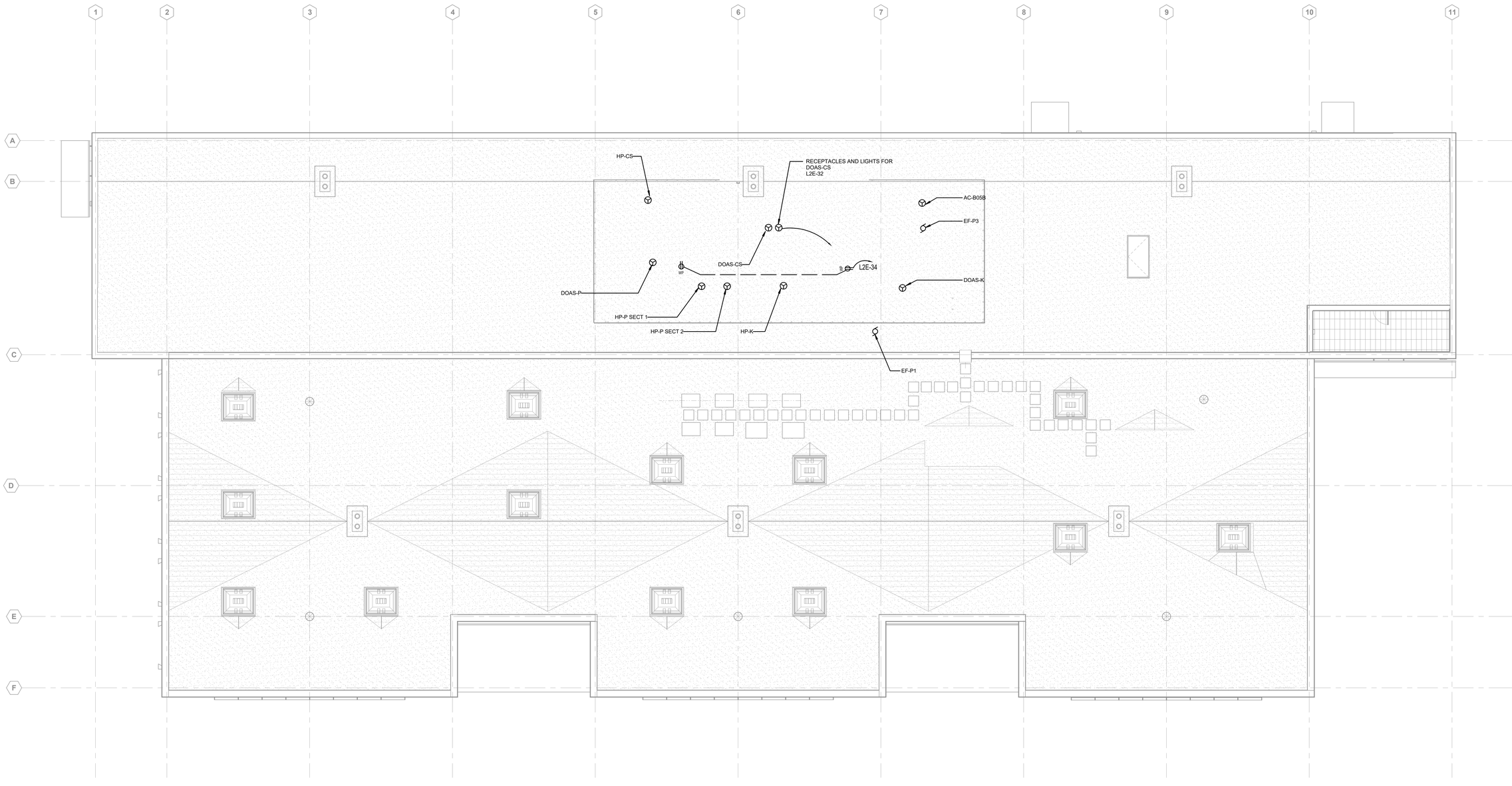

N

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

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ROOF PLAN - POWER

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REMOTE REFRIGERATION SYSTEM CONDENSING UNITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT ROOF TOP LOCATION.

INTERCONNECT TO EACH EVAPORATOR FOR THE FREEZER & MEAT/DAIRY COOLER, THE SINGLE EVAPORATOR FOR THE PRODUCE COOLER, 4 EACH EVAPORATOR FOR THE FINISHING COOLER. INTERCONNECT TO EACH ABOVE LISTED CONDENSING UNITS A THRU D. SEE NOTE 16 FOR ADDITIONAL COMMENTS

INTERCONNECT OVERRIDE SWITCH (M.A.R.V.E.L.) PANEL WITH EACH CANOPY HOOD, E56. SEE CANOPY HOOD SHEETS FS2.01 THRU FS2.06 FOR ADDITIONAL INFORMATION

DRY STORES 124

WOMEN'S LOCKER 125

ST 126

ES 104

KIT EP 127

MEN'S LOCKER 128

ST 129

DIETARY ENTRY 110

DIETARY OFFICE 111

SNACK PREP 112

FREEZER 119

MEAT/DAIRY & THAW COOLER

TRAY ASSEMBLY 121

RETHERM DOCKING 122

PRODUCTION 113

FINISHING COOLER 117

CART STAGING 118

SANITATION 114

CART WASH 115

PANEL LK1

PANEL LK2

PANEL LK3

PANEL LK4

PANEL LK5

CEILING DROP CORD

CEILING DROP CORDS- TYPICAL (2) LOCATIONS

CEILING DROP CORDS- TYPICAL (4) LOCATIONS

120V CEILING DROP CORDS- TYPICAL

120V FLOOR STUB + 6"

208V FLOOR STUB + 6"

SEE NOTE 11

SEE NOTE 15

1" TO PANEL LK3

1" TO PANEL LK4

ON CEILING

TO E67

TO E-67

TO E-67

NOTE:
RUN CABLE FROM EACH DATA PORT CONNECTION (18 LOCATION'S) AT EACH DOCKING STATION & CONNECT WITH KITCHEN OFFICE & BMS FOR 24/7 MONITORING. VERIFY ALL REQUIREMENTS

ELECTRICAL SYMBOL LEGEND

DCO (DUPLEX CONVENIENCE OUTLET)	
J-BOX (JUNCTION BOX)	J
SCO (120V OR 208V PER SCHEDULE	
THERMOSTAT	T
SOLENOID	S
MOTOR	M
SWITCH(S)	S
LIGHT	
FLOOR OR CEILING STUB (AS NOTED)	

1 FIRST FLOOR - FOOD SERVICE ELECTRICAL/REFRIGERATION PLAN
Scale: 1/4" = 1'-0"

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FIRST FLOOR FOOD SERVICE MECHANICAL/ DEPRESSION PLAN

E3.21

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ELECTRICAL NOTES

1. THIS DRAWING IS NOT TO BE USED FOR ESTABLISHING ROUGH-IN LOCATIONS. REFER TO DIMENSIONED DRAWINGS PREPARED BY THE KITCHEN EQUIPMENT CONTRACTOR.
2. UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE ALL ROUGH-INS AND FINAL CONNECTIONS IN CONFORMANCE WITH LOCAL CODES.
3. HOOD LIGHTS ARE FURNISHED UNDER KITCHEN EQUIPMENT, DIVISION 11. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL SWITCHES AND FURNISH AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING CONCEALED FROM SIGHT.
4. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING ACROSS CEILING AS REQUIRED BETWEEN HOODS AND HOOD FIRE CONTROL PANEL.
5. WALK-IN COLD STORAGE ROOMS, LIGHTS, AND CEILING MOUNT EVAPORATORS ARE FURNISHED AND INSTALLED UNDER KITCHEN EQUIPMENT, DIVISION 11. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING ABOVE CEILING CONCEALED FROM SIGHT.
6. ALL ELECTRICAL RECEPTACLES SHALL BE MOUNTED HORIZONTALLY ON FIXTURES AND WALLS.
7. ALL EVAPORATOR MOTOR CONNECTIONS SHALL BE MADE WITH CONDUIT TO A J-BOX. PLUG-IN TYPE CONNECTIONS WILL NOT BE ACCEPTED.
8. COLD STORAGE ROOM EVAPORATOR DRAIN LINES (INCLUDING HEAT TAPE FOR FREEZER DRAIN) ARE FURNISHED AND INSTALLED UNDER KITCHEN EQUIPMENT, DIVISION 11. TRAP AT OUTLET END.
9. REFRIGERATION, HIGH PRESSURE WASH SYSTEM, AND BEVERAGE LINES SHOWN ARE SCHEMATIC ONLY AND SHALL BE ADJUSTED TO FIT BUILDING CONDITIONS.
10. UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE ALL DISCONNECTS, INTERLOCKS, AND CONTRACTORS REQUIRED BY LOCAL CODES.
11. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL SHUNT TRIP CIRCUIT BREAKERS TO SHUT OFF POWER SUPPLY TO ALL ELECTRICAL COOKING EQUIPMENT DURING FIRE SYSTEM ACTIVATION.
12. UNDER WORK OF KITCHEN EQUIPMENT, DIVISION 11, FURNISH AND INSTALL STAINLESS STEEL OR CHROME PLATED ESCUTCHEON PLATES FOR ALL ELECTRICAL CONNECTIONS PENETRATING COUNTER TOPS FOR BELOW COUNTER PLUG-INS.
13. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING AS REQUIRED BETWEEN BOOSTER HEATER AND DISHWASHER.
14. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING BETWEEN WAREWASHER CONTROL PANEL AND EXHAUST FAN FOR AUTO FAN ON/OFF DURING EQUIPMENT OPERATION.
15. UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE POWER TO EXHAUST FAN ON ROOF AND INTERLOCK WITH MAKE-UP AIR SUPPLY UNIT PER PER MECHANICAL ENG. PLANS. PROVIDE WALL SWITCH WITH PILOT LIGHT @ 48" ABOVE FINISHED FLOOR.
16. REFRIGERATION BEACON SYSTEM CONTROLLER, FURNISHED BY DIVISION 11, SHALL MONITOR WALK-IN EVAPORATORS & CONDENSING UNITS. UNDER ELECTRICAL WORK OF DIVISION 26 PROVIDE POWER FROM EVAPORATOR COILS USING 24V 18 GA. LOW VOLTAGE WIRING.
17. UNDER ELECTRICAL WORK OF DIVISION 26 LOCATE MANUAL FIRE SUPPRESSION PULL STATION PER CODES. PROVIDE OCTAGON BOX AND RUN EMPTY CONDUIT TO FIRE SUPPRESSION CONTROL HEAD. MINIMUM 12" RADIUS BENDS IN ANY CHANGE OF DIRECTION. SET PULL STATION BOX @ +48" A.F.F. TO CENTER LINE.
18. RUN 1" DIA. CONDUIT FOR ISOLATED & DEDICATED CASH SYSTEM COMMUNICATION LINES. RUN UNDER SLAB TO PULL BOX, UP WALL, ACROSS CEILING, & CONNECT TO PULL BOX LOCATED @ MANAGERS STATION. VERIFY ALL SYSTEM REQUIREMENTS FOR OWNER SUPPLIED EQUIPMENT.

ELECTRICAL SCHEDULE

ITEM NO.	ENO.	VOLTS	Ø	DESCRIPTION	LOCN.	HEIGHT	SERVICE TO :	RATING	REMARKS
2	E1	208	3	J-BOX	ROOF	VERIFY	W.I. FREEZER CONDENSING UNIT	4-1/2 HP	SYSTEM A - BEACON SYSTEM
2	E2	208	3	J-BOX	ROOF	VERIFY	W.I. MEAT/DIARY COOLER CONDENSING UNIT	3-1/2 HP	SYSTEM B - BEACON SYSTEM
2	E3	208	3	J-BOX	ROOF	VERIFY	W.I. PRODUCE COOLER CONDENSING UNIT	1 1/2 HP	SYSTEM C - BEACON SYSTEM
2	E4	208	3	J-BOX	ROOF	VERIFY	W.I. FINISHING COOLER CONDENSING UNIT	3 HP	SYSTEM D - BEACON SYSTEM
2	E5	208	3	J-BOX	ROOF	VERIFY	BLAST CHILLER CONDENSING UNIT	87. 5 AMPS	SYSTEM E
2	E6	208	3	J-BOX	ROOF	VERIFY	BLAST CHILLER CONDENSING UNIT	87. 5 AMPS	SYSTEM F- CAP FOR FUTURE EQUIPMENT
---	E7	---	--	NOT USED	---	---	---	---	---
2	E8	208	1	J-BOX	CEILING	---	WALK-IN FREEZER EVAPORATOR	23. 5 AMPS	SYSTEM A - BEACON SYSTEM
1	E9	120	1	J-BOX	CEILING	---	(10) WALK-IN LIGHTS	800 W	80 W EACH
1	E10	120	1	J-BOX	CEILING	---	WALK-IN DOOR HEATER	500 W	---
1	E11	120	1	J-BOX	CEILING	---	WALK-IN DRAIN LINE HEATER	500 W	---
2	E12	120	1	J-BOX	CEILING	---	WALK-IN MEAT/DAIRY COOLER EVAPORATOR	2. 7 AMPS	SYSTEM B - BEACON SYSTEM
1	E13	208	1	J-BOX	CEILING	---	ELECTRIC SLIDING WALK-IN DOOR	3/4 HP	---
17	E14	120	1	DCO	FIXTURE	34"	PIZZA PREP REFRIGERATOR	6. 3 AMPS	NEMA 5-15P - VERIFY WITH EXISTING EQUIPMENT
2	E15	120	1	J-BOX	CEILING	---	WALK-IN PRODUCE COOLER EVAPORATOR	2. 7 AMPS	SYSTEM C - BEACON SYSTEM
11	E16	120	1	J-BOX	CEILING	---	(3) WALK-IN LIGHTS	240 W	80 W EACH
11	E17	120	1	J-BOX	CEILING	---	(10) WALK-IN LIGHTS	800 W	80 W EACH
2	E18	120	1	J-BOX	CEILING	---	WALK-IN FINISHING COOLER EVAPORATOR	5. 5 AMPS	SYSTEM D - BEACON SYSTEM
20	E19	120/208	1	SCO	WALL	36"	GLASS DOOR REFRIGERATOR & FREEZER	14. 4 AMPS	FURNISHED WITH NEMA 14-20P. VERIFY WITH EXISTING EQUIPMENT
21	E20	120/208	1	SCO	WALL	36"	REACH-IN DUAL TEMP REFRIG./FREEZER	14. 1 AMPS	FURNISHED WITH NEMA 14-20P. VERIFY WITH EXISTING EQUIPMENT
23	E21	120	1	DCO	WALL	36"	REACH-IN FREEZER	12 AMPS	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
---	E22	120	1	DCO	WALL	18"	CONVENIENCE	1440 W	DEDICATED CIRCUIT
26	E23	208	1	J-BOX	CEILING	---	CUBE ICE MACHINE WITH STORAGE BIN	9. 7 AMPS	VERIFY WITH EXISTING EQUIPMENT. RUN ELECTRICAL CONCEALED IN UTILITY CHASE
---	E24	120	1	DCO	WALL	45"	CONVENIENCE	1440 W	DEDICATED CIRCUIT
---	E25	120	1	DCO (DROP-CORD)	CEILING	---	CONVENIENCE	1440 W	DEDICATED CIRCUIT
20, 22	E26	120	1	DCO	WALL	36"	REACH-IN REFRIGERATOR & REFRIG./FREEZER	6. 3 AMPS	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
---	E27	120	1	DCO	FIXTURE	34"	CONVENIENCE	1440 W	DEDICATED CIRCUIT. EXTEND FROM WALL STUB
45	E28	120	1	DCO	WALL	18"	PREP TOP REFRIGERATOR	12 AMPS	FURNISHED WITH NEMA 5-15P
69	E29	120	1	DCO	WALL	45"	VEGETABLE CUTTER/SLICER	11. 5 AMPS	FURNISHED WITH NEMA 5-15P
41	E30	120	1	DCO (DROP-CORD)	CEILING	---	FOOD CUTTER	1 HP	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
40	E31	120	1	DCO	WALL	45"	MEAT CUTTER	1 1/2 HP	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
---	E32	---	--	NOT USED	---	---	---	---	---
---	E33	---	--	NOT USED	---	---	---	---	---
52	E34	120	1	DCO	WALL	45"	FOOD PROCESSOR	3 HP	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
37	E35	120	1	DCO	WALL	18"	SLICER	7 AMPS	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
49	E36	480	3	J-BOX	WALL	58"	80-QUART MIXER	6 AMPS	---
33	E37	120	1	DCO (DROP-CORD)	CEILING	---	FOOD PROCESSOR	3 HP	FURNISHED WITH NEMA 5-15P. VERIFY WITH EXISTING EQUIPMENT
---	E38	---	--	NOT USED	---	---	---	---	---
---	E39	---	--	NOT USED	---	---	---	---	---
72	E40	120	1	J-BOX	CEILING	---	(6) ROUND CANOPY HOOD LIGHTS	216 W	36W EACH. VERIFY EXACT LOCATION FOR CONNECTION
56	E41	480	3	J-BOX	WALL	36"	GRIDDLE	16. 2 KW	---
56	E42	480	3	J-BOX	WALL	36"	GRIDDLE	10. 8 KW	---
58	E43	480	3	J-BOX	WALL	13"	40-GALLON TILTING SKILLET	16 KW	---
61	E44	480	3	J-BOX	WALL	18"	DOUBLE-STACK CONVECTION OVEN	25 KW	---
60	E45	208	3	J-BOX	WALL	6"	DOUBLE STACK CONVECTION STEAMERS	91. 7 AMPS	TOTAL
59	E46	480	3	J-BOX	WALL	12"	FRENCH PLATE/FRY TOP RANGE	15. 8 KW	---
63	E47	120	1	DCO (DROP-CORD)	CEILING	---	BLENDER	3-3/4 HP	FURNISHED WITH NEMA 5-15P
64	E48	120	1	DCO	WALL	36"	REACH-IN REFRIGERATOR	8. 2 AMPS	FURNISHED WITH NEMA 5-15P
54, 72, 85	E49	120	1	J-BOX	WALL	60"	CANOPY HOOD (M.A.R.V.E.L.) CONTROL PANEL	15 AMPS	---
85	E50	120	1	J-BOX	CEILING	---	(7) ROUND CANOPY HOOD LIGHTS	252 W	36W EACH. VERIFY EXACT LOCATION FOR CONNECTION
70	E51	480	3	J-BOX	CEILING	---	ROLL-IN RACK OVEN (HEATING CIRCUIT)	64 AMPS	---
70	E52	120	1	J-BOX	CEILING	---	ROLL-IN RACK OVEN (CONTROL CIRCUIT)	15 AMPS	DEDICATED
70	E53	120	1	J-BOX	WALL	102"	FIRE PROTECTION SYSTEM (R. I. RACK OVEN)	1 KW	---
54, 72, 85	E54	120	1	J-BOX	WALL	102"	FIRE PROTECTION SYSTEM	1 KW	---
54	E55	120	1	J-BOX	CEILING	---	(8) ROUND CANOPY HOOD LIGHTS	288 W	36W EACH. VERIFY EXACT LOCATION FOR CONNECTION
54, 72, 85	E56	120	1	J-BOX	CEILING	---	CAPTURE JET FAN (M.A.R.V.E.L.) SYSTEM	15 AMPS	INTERCONNECT WITH E49
74	E57	480	3	J-BOX	WALL	18"	DOUBLE-STACK CONVECTION OVEN	25 KW	TOTAL CONNECTIONS. VERIFY REQUIREMENTS FOR EXISTING EQUIPMENT
75	E58	480	3	J-BOX	WALL	12"	ROLL-IN COMBI-OVEN STEAMER	66 KW	---
78	E59	480	3	J-BOX	WALL	18"	100-GALLON COOKER/MIXER KETTLE	54. 8 AMPS	---
78	E60	120	1	DCO (DROP-CORD)	CEILING	---	MID VOLUME PUMP FILL STATION	15 AMPS	VERIFY NEMA PLUG CONFIGURATION
80	E61	208	3	J-BOX	WALL	76"	ROLL-IN BLAST CHILLER	8 AMPS	CAP FOR FUTURE EQUIPMENT
80	E62	208	3	J-BOX	WALL	76"	ROLL-IN BLAST CHILLER	8 AMPS	---
82	E63	120	1	DCO	WALL	45"	SODA DISPENSER	1440 W	VERIFY REQUIREMENTS WITH VENDOR SUPPLIED EQUIPMENT
84	E64	120	1	SCO (DROP-CORD)	CEILING	---	COLD DISH-UP WELLS	9. 9 AMPS	FURNISHED WITH NEMA 5-15P
84	E65	120	1	DCO (DROP-CORD)	CEILING	---	CONVENIENCE	1440 W	DEDICATED CIRCUIT
86	E66	208	3	SCO	WALL	18"	TRAY CART DOCKING STATION	27. 6 AMPS	FURNISHED WITH NEMA L15-30P
96	E67	208	3	J-BOX	WALL	60"	HIGH PRESSURE WASH SYSTEM	9 AMPS	GFCI
96	E68	24V	1	J-BOX	WALL	54"	SATELLITE HIGH PRESSURE WASH PORT	---	POWER FROM E67 MASTER CONTROL PANEL-5CONDUCTOR WIRE (SHIELDED)
76	E69	480	3	J-BOX	WALL	9"	TWO 6-GALLON TILTING KETTLES W/STAND	26 AMPS	---
77	E70	480	3	J-BOX	WALL	18"	100-GALLON STATIONARY KETTLES	39. 2 KW	HIGH WATTAGE
102	E71	480	3	J-BOX	WALL	6"	WAREWASHER BOOSTER HEATER	27 KW	---
102	E72	480	3	J-BOX	WALL	65"	WAREWASHER (TANK HEAT & MOTORS)	45. 7 AMPS	---
102	E73	120	1	DCO	WALL	64"	WAREWASHER DETERGENT FEED	1440 W	DEDICATED CIRCUIT
102	E74	208	1	J-BOX	FIXTURE	60"	CONVEYOR CONTROL PANEL	3. 3 AMPS	EXTEND FROM FLOOR STUB
98	E75	208	3	J-BOX	FIXTURE	18"	APEX HEAVY-DUTY SCRAP ACCUMULATOR	3/4 HP	EXTEND FROM FLOOR STUB
91	E76	208	3	J-BOX	WALL	61"	BLOWER-DRYER	5 AMPS	---
91	E77	480	1	J-BOX	WALL	8"	BOOSTER HEATER	30 KW	---
91	E78	480	3	J-BOX	WALL	64"	POT & PAN WASHER	6-1/16 HP	25 FL AMPS
91	E79	120	1	DCO	WALL	64"	POT & PAN WASHER DETERGENT FEED	1440 W	DEDICATED CIRCUIT
88	E80	208	3	J-BOX	WALL	9"	DISPOSER	13 AMPS	---
104	E81	208	3	J-BOX	WALL	24"	DEHYDRATOR	12. 3 KW	CAP FOR FUTURE EQUIPMENT
107	E82	120	1	J-BOX	WALL	96"	AIR CURTAIN	3. 4 AMPS	INTERCONNECT TO DOOR MICRO-SWITCH
---	E83	---	--	NOT USED	---	---	---	---	---
---	E84	---	--	NOT USED	---	---	---	---	---
---	E85	---	--	NOT USED	---	---	---	---	---

REFER TO WSH-FS2.03 FOR E86 AND ON

SYMBOLS

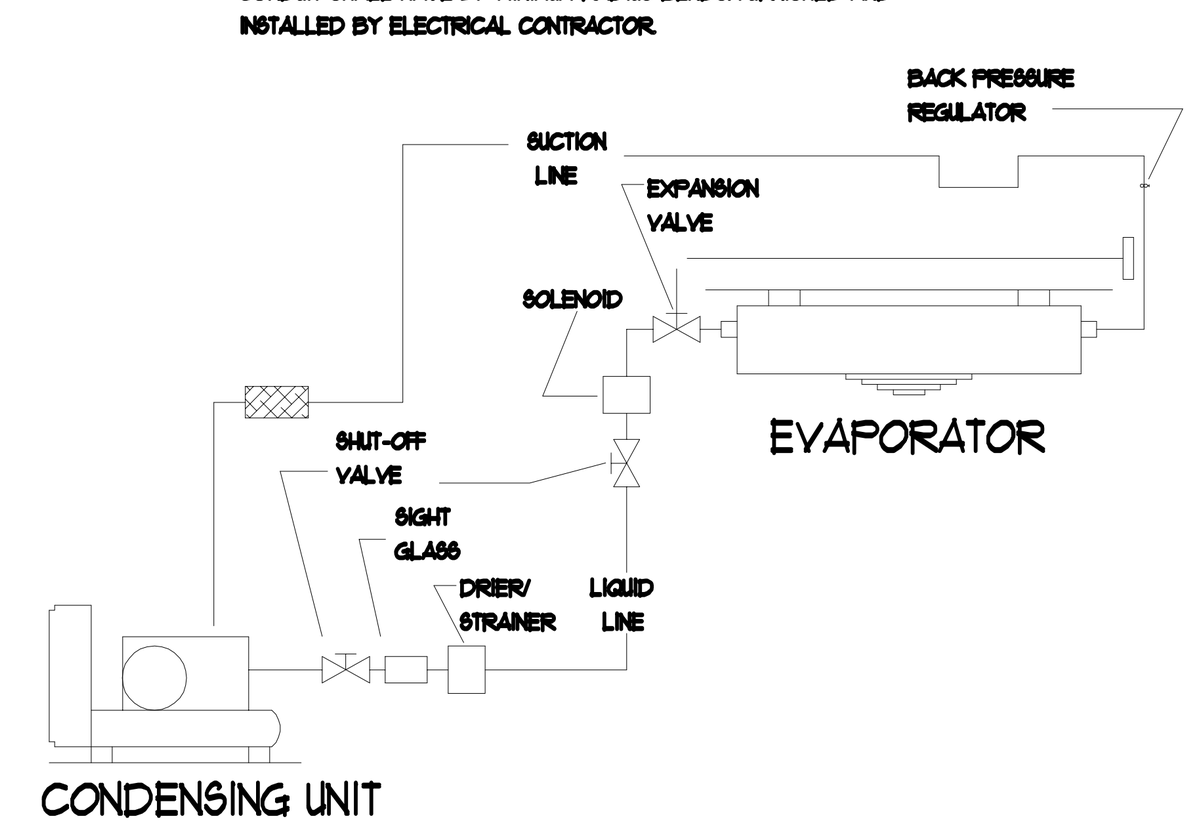
12" X 12" PULL BOX AT HEIGHT NOTED ON PLAN. MEASURED FROM FINISHED FLOOR NOT RAISED BASES. TO C OF PB. AND FLUSH WITH FIN. WALL. USE 2" O CONDUIT, DOWN, WITHIN WALL FROM ABOVE CEILING. ALL THE ABOVE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.

REFRIGERATION LINE CONNECTION AT EVAPORATOR BY KITCHEN EQUIPMENT CONTRACTOR.

REFRIGERATION SYSTEM BY KITCHEN EQUIPMENT CONTRACTOR.

INSULATED REFRIGERATION LINES. RUN FROM CONDENSING UNITS AND ABOVE FINISHED CEILING BY KITCHEN EQUIPMENT CONTRACTOR.

CONDUIT UNDER FLOOR SIZE AS NOTED ON PLAN FROM PB IN WALL. CONDUIT SHALL HAVE 24" MINIMUM RADIUS BENDS. FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.



REMOTE, NORMAL TEMP. REF'R. SCHEMATIC

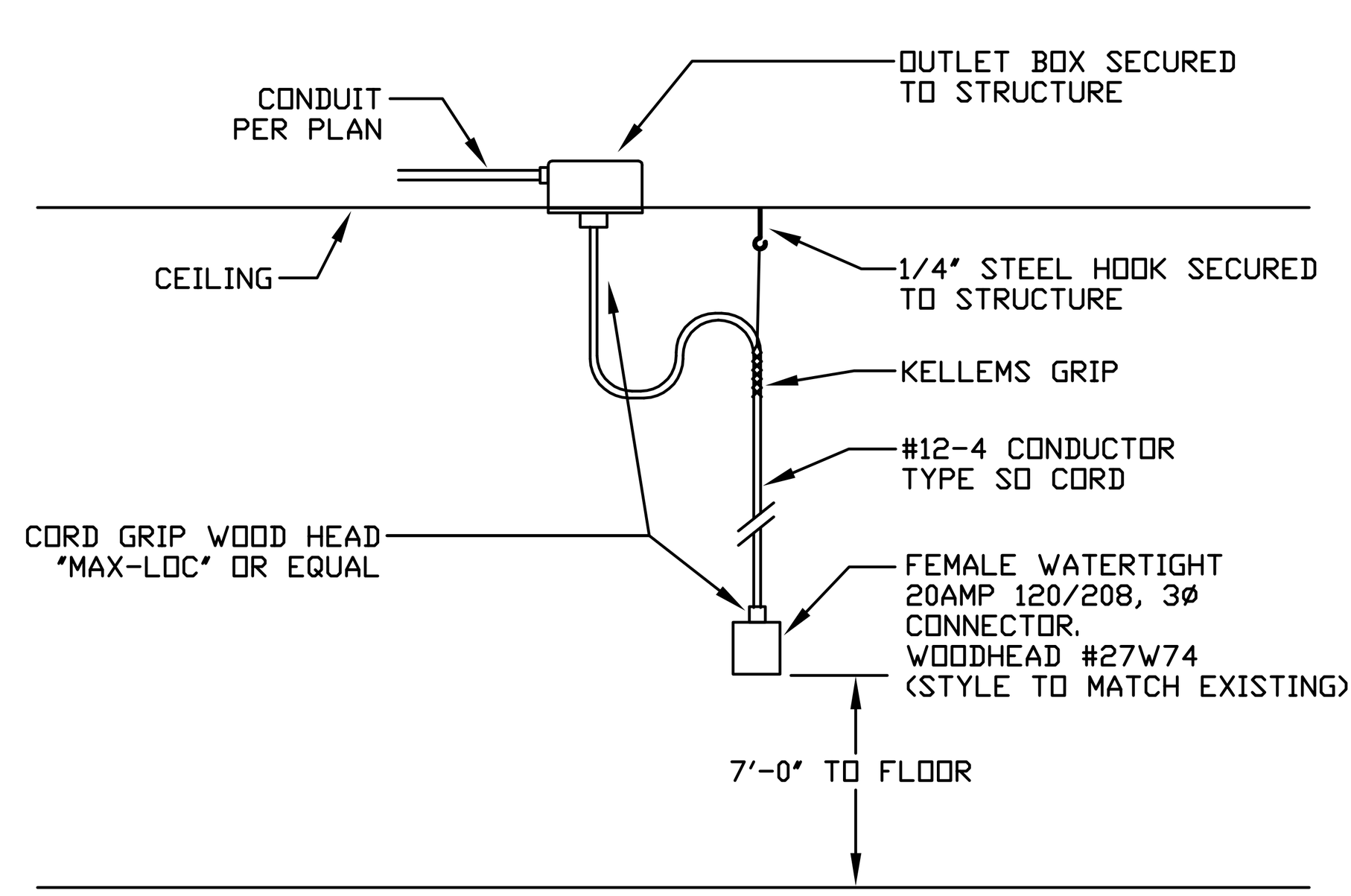
NO SCALE

INCLUDE CRANKCASE HEATERS FOR ALL SYSTEMS EXPOSED TO FREEZING WEATHER. | ADD OIL SEPARATORS TO LOW TEMPERATURE SYSTEMS | ALL SYSTEMS DESIGNED FOR +90 AMBIENT

FIRE PROTECTION LEGEND

FIRE PROTECTION SYSTEM MANUAL PULL (F)

NOTE:
LOCATE MANUAL FIRE SUPPRESSION PULL STATIONS PER CODES - DEVICES TO BE LOCATED A MINIMUM OF 10 FEET AND A MAXIMUM OF 20 FEET FROM THE KITCHEN EXHAUST SYSTEM IT SERVES. E.C. TO PROVIDE OCTAGON BOX AND RUN EMPTY CONDUIT TO FIRE SUPPRESSION CONTROL HEAD. MINIMUM 12" RADIUS BENDS IN ANY CHANGE OF DIRECTION. SET PULL STATION BOX @ +48" A.F.F. TO CENTERLINE. TYPICAL ALL LOCATIONS



2 DROP CORD DETAIL
Scale: NONE

TRAVIS FITZMAURICE & ASSOCIATES Electrical Engineers

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DATE 03/16/2018

FIRST FLOOR FOOD SERVICE ELECTRICAL SCHEDULE

E3.22

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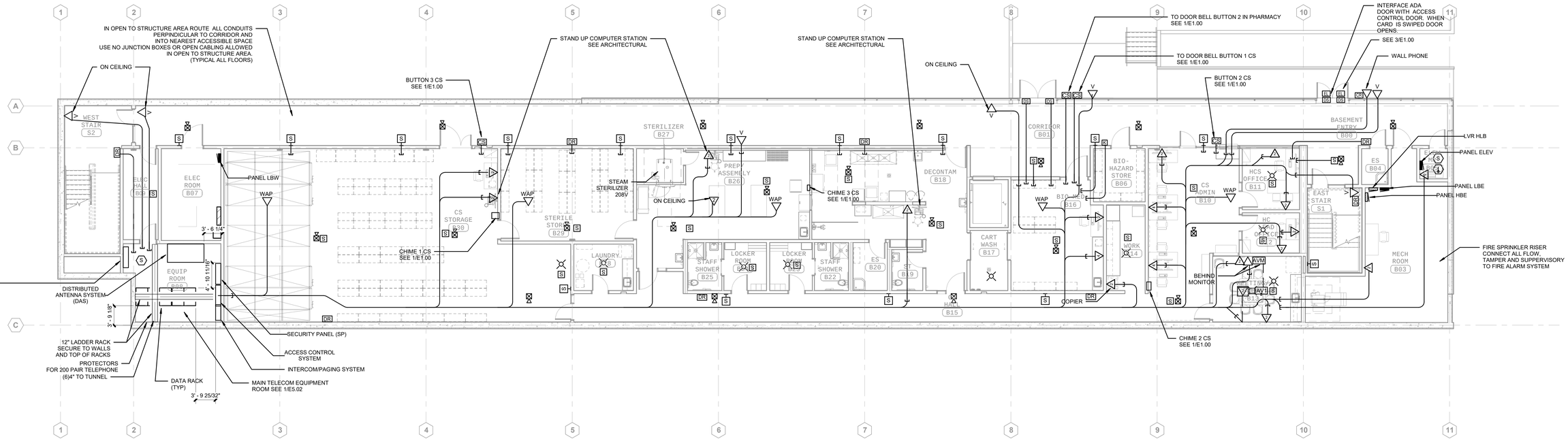

1 BASEMENT FLOOR PLAN - COMM/ESS
Scale: 1/8" = 1'-0"

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CHECKE	PR
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BASEMENT FLOOR PLAN - COMM/ESS

TRUE N PROJECT N

E4.11

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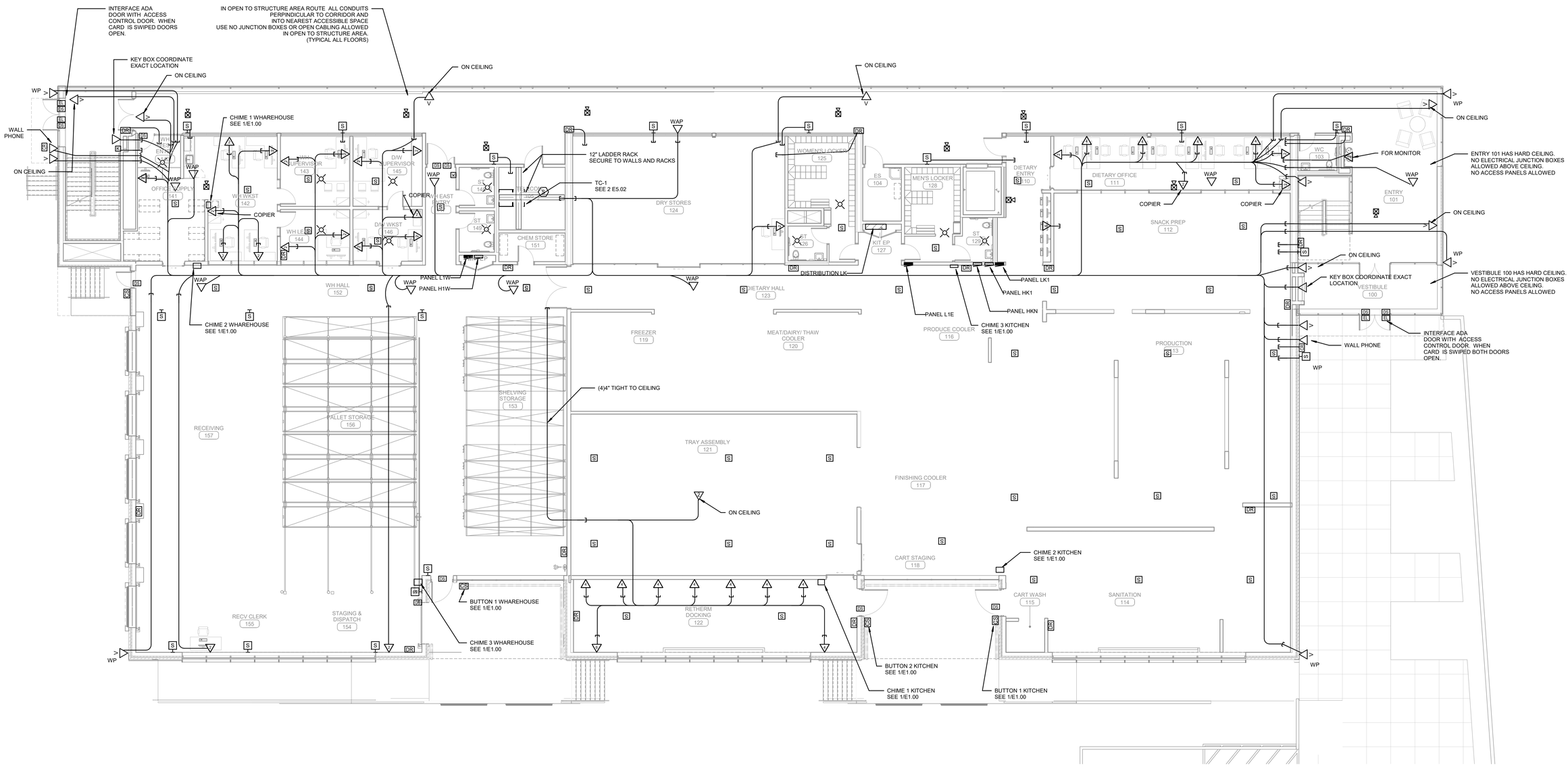

N

1 FIRST FLOOR PLAN - COMM/ESS

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

TRUE N PROJECT N

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FIRST FLOOR PLAN EAST - COMM/ESS

E4.12

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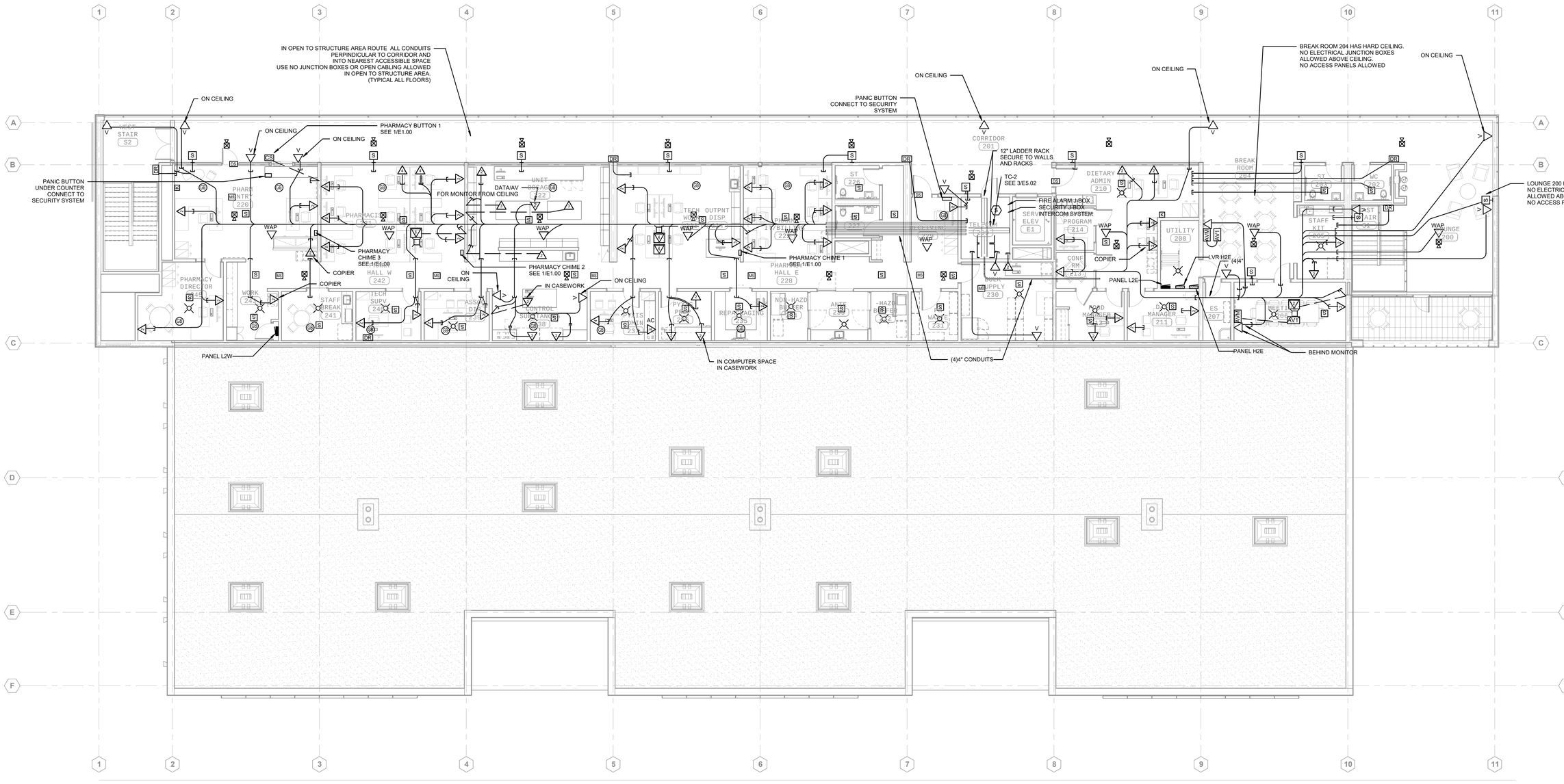

1 SECOND FLOOR PLAN - COMM/ESS
Scale: 1/8" = 1'-0"

TRUE N PROJECT N

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SECOND FLOOR PLAN - COMM/ESS

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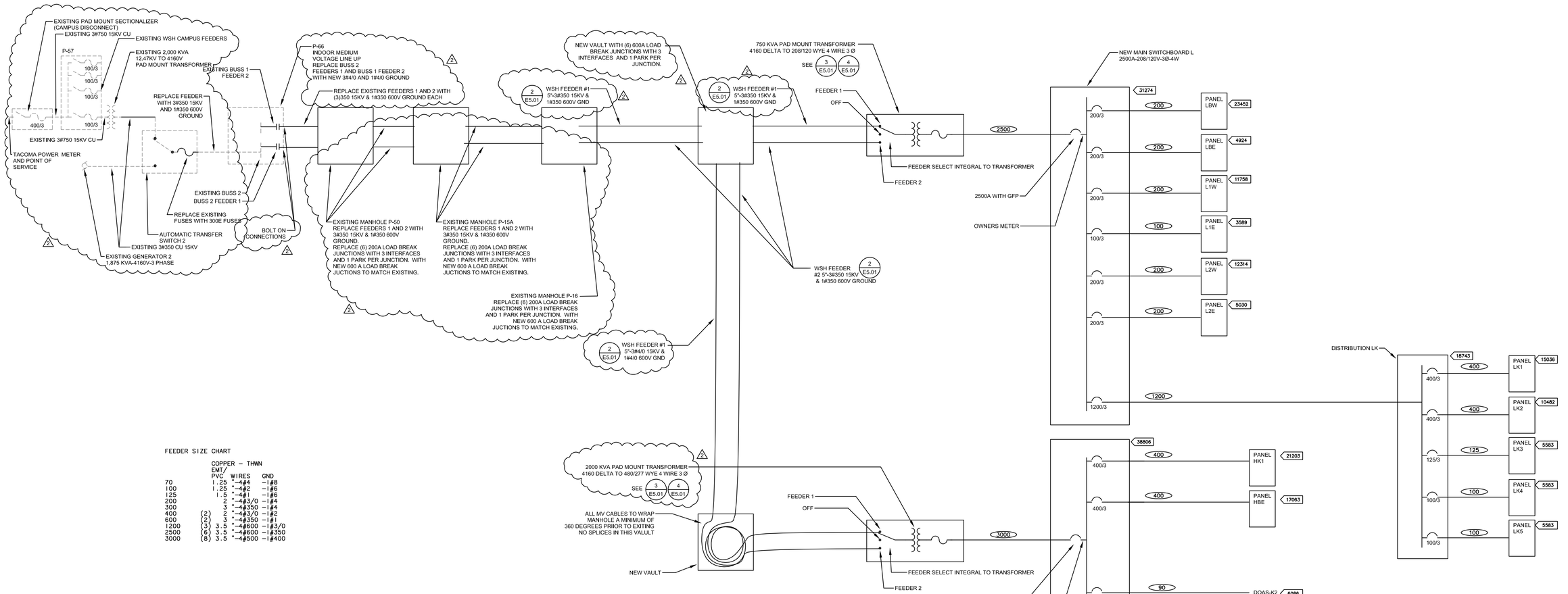
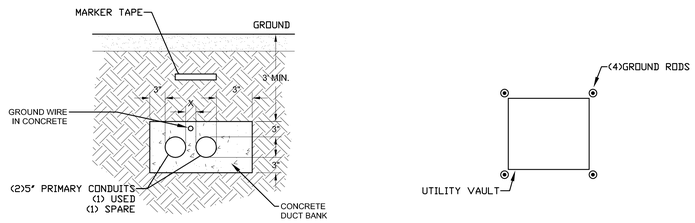


FEEDER SIZE CHART

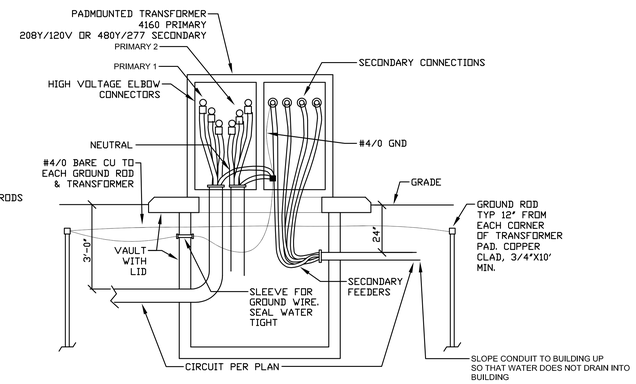
	COPPER - THWN EMT/ PVC	WIRES	GND
70	1.25 "	-4#4	-1#8
100	1.25 "	-4#2	-1#6
125	1.5 "	-4#1	-1#6
200	2 "	-4#3/0	-1#4
300	3 "	-4#350	-1#4
400	(2) 2 "	-4#3/0	-1#2
600	(2) 3 "	-4#350	-1#1
1200	(3) 3.5 "	-4#600	-1#3/0
2500	(6) 3.5 "	-4#600	-1#350
3000	(8) 3.5 "	-4#500	-1#400

1 ONE LINE DIAGRAM
Scale: NONE



2 MEDIUM VOLTAGE TRENCH DETAIL
Scale: NONE

3 TRANSFORMER VAULT DETAIL
Scale: NONE



4 PAD TRANSFOREMR DETAIL
Scale: NONE

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2 DELTA: ADD. 2

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POWER
ONE-LINE

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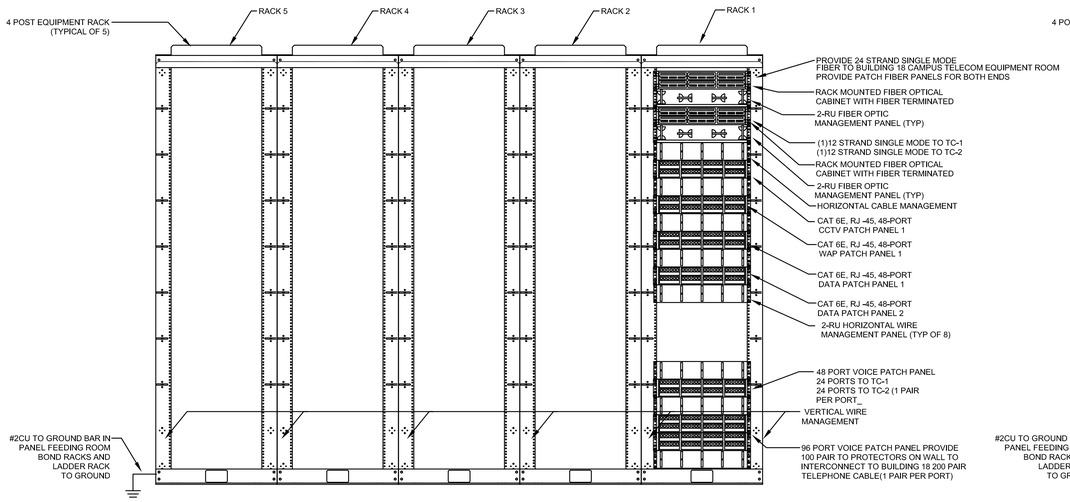
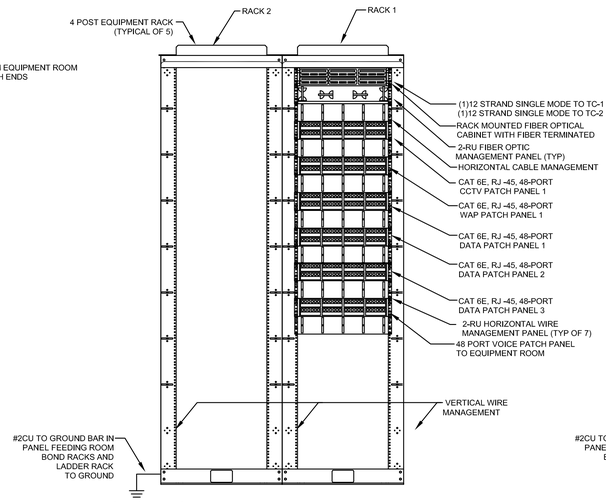


RACK REQUIRMENTS:
PROVIDE COMPLETE RACK ASSEMBLY, INCLUDING ANCHOR BOLTS, CLAMPS, RACKS AND MISC. INSTALLATION HARDWARE. CONTRACTOR SHALL EQUIP EACH RACK AS SHOWN, AND AS DESCRIBED IN THE SPECIFICATIONS. PROVIDE WIRE MANAGEMENT , PLUG STRIPS, PATCH PANELS, ETC., UNLESS NOTED OTHERWISE. GROUND EQUIPMENT TO NEAREST NEC RECOGNIZED GROUNDING ELECTRODE SUBSYSTEM WITH #2 AWG CU., STRANDED, GREEN GROUNDING CONDUCTOR. RACK THAT IS POSITIONED NEXT TO A WALL SHALL BE 6" OFF THE WALL TO THE SIDE OF THE RACK VERTICAL WIRE MANAGEMENT.

1 EQUIPMENT ROOM DATA RACKS
SCALE: NONE



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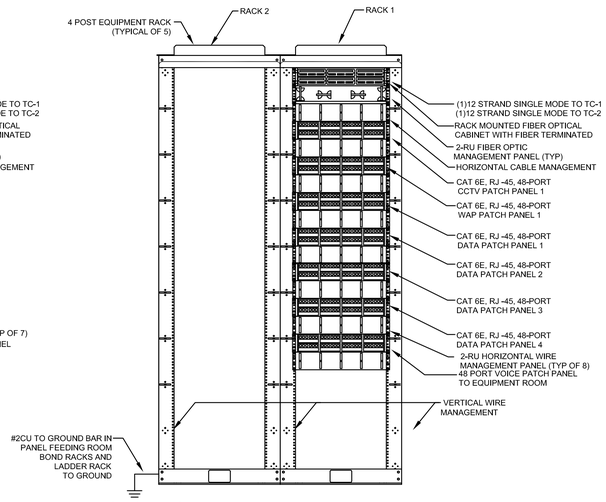
2 TC-1 DATA RACKS
SCALE: NONE



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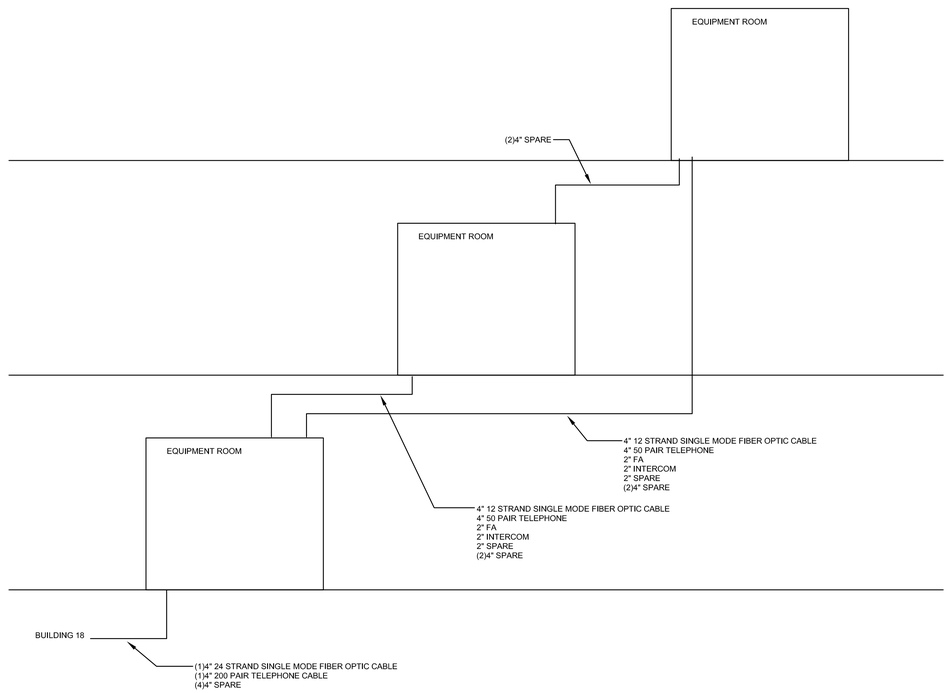
3 TC-3 DATA RACKS
SCALE: NONE



4 COMMUNICATIONS RISER DIAGRAM
SCALE: NONE

REVISIONS

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COMMUNICATIONS DETAILS

E5.02

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IGHTING CONTROL SCHEDULES

ONTROLLER	PANEL	CIRCUIT	INTERFACE	DEVICES	DESCRIPTION
AT PANEL HBE PROVIDE PANEL LVR HBE FOR HEAD END CONTROL AND INTERNET ACCESS TO LIGHTING SYSTEM.					
XTERIOR					
OLE LTS Z1	HBE	2a	ON/OFF	ASTRONOMICAL TIME CLOCK	EXTERIOR ZONE 1
OLE LTS Z2		2b	ON/OFF	ASTRONOMICAL TIME CLOCK	EXTERIOR ZONE 2
LDG LTS		4a	ON/OFF	ASTRONOMICAL TIME CLOCK	EXTERIOR ZONE 3

ONTROLLERS – ALL ROOMS GET 6 BUTTON SWITCH UNLESS NOTED
UTTON 1 ON/OFF, 2 DIM UP, 3 DIM DOWN(FRONT OF ROOM) BUTTON 4 ON/OFF, 5 DIM UP, 6 DIM DN
CUPANCY SENSORS TURN LIGHTS OFF AND DO NOT TURN LIGHTS ON (VACANCY SENSOR)
NLESS NOTED OTHERWISE
AYLIGHT DIMMING DIMS TO OFF

ONTROLLER	PANEL	CIRCUIT	INTERFACE	DEVICES	DESCRIPTION
301 CORRIDOR	HBE	1 a	0-10V DIM	SWITCH AND TIME CLOCK	GENERAL
	HBE	1 b	0-10V DIM	PHOTO CELL, SWITCH, TIME CLOCK	DAY LIGHT ZONE 1
	HBE	1 c	0-10V DIM	PHOTO CELL, SWITCH, TIME CLOCK	DAY LIGHT ZONE 2
(2)KEYED SWITCHES		1	a,b,c	ON/OFF	
310 ADMIN	HBE	3 a	0-10V DIM	SWITCH, OS	GENERAL
	LBE	17	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LBE	19	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LBE	21	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
(2)3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
311 OFICE	HBE	3 a	0-10V DIM	SWITCH, OS	GENERAL
	LBE	23	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
312 OFFICE	HBE	3 a	0-10V DIM	SWITCH, OS	GENERAL
	LBE	25	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
313 MEETING RM	HBE	3 a	0-10V DIM	SWITCH, OS	GENERAL
	LBE	27	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
314 WORK ROOM	HBE	3 a	0-10V DIM	SWITCH, OS	GENERAL
	LBE	18	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LBE	20	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
315 CS HALL	HBE	3 b	0-10V DIM	SWITCH AND TIME CLOCK	GENERAL
(2)3 BUTTON SWITCHES		1 b	ON/OFF		
		2 b	DIM UP		
		3 b	DIM DOWN		
316 BIOMED	HBE	5 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
(2)3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
318 DECONTAM	HBE	5 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
(2)3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
326 PREP/ASSEM	HBE	5 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	HBE	5 b	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
(2)3 BUTTON SWITCH		1 a	ON/OFF		
NE FOR a AND OTHER		2 a	DIM UP		
OR b		3 a	DIM DOWN		
329 STERLE STO	HBE	5 a	0-10V DIM	SWITCH AND OS OS TURNS LIGHTS ON AND OFF	GENERAL
(2)3 BUTTON SWITCHES		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
330 STORAGE	HBE	3 a	0-10V DIM	SWITCH AND OS OS TURNS LIGHTS ON AND OFF	GENERAL
(3)3 BUTTON SWITCHES		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
100 CORRIDOR	HIW	1 a	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1 PC1
	HIW	1 b	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 2 PC1
	HIW	1 c	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1 PC2
	HIW	1 d	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 2 PC2
	HIW	1 e	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1 PC3
	HIW	1 f	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 2 PC3
	HIW	1 g	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	HIW	1 h	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1 PC4
EYED SWITCH 100 h,g		h,g	ON/OFF		
3 BUTTON SWITCH f,g		1 f,g	ON/OFF		
		2 f,g	DIM UP		
		3 f,g	DIM DOWN		
(2) KEYED SWITCHES 100 a,b,c,d,e		a,b,c,d,	ON/OFF		
111 OFFICE	HIW	5 a	0-10V DIM	SWITCH, OS	GENERAL
	LIE	16	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LIE	18	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LIE	20	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LIE	22	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LIE	24	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
113 KITCHEN	HIW	3 a	0-10V DIM	SWITCH, TIME CLOCK, PC	TOP LT DAY LIGHT Z PC2
	HIW	3 b	0-10V DIM	SWITCH, TIME CLOCK	GENERAL KITCHEN
	HIW	3 c	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1 PC1
	HIW	3 d	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 2 PC1
	HIW	3 e	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1 PC2
	HIW	3 f	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 2 PC2
	HIW	3 g	0-10V DIM	SWITCH, TIME CLOCK	GENERAL HALL
(5) 3 BUTTON SWITCHES		1 a,b,c,d,e,f,g	ON/OFF		
		2 a,b,c,d,e,f,g	DIM UP		
		3 a,b,c,d,e,f,g	DIM DOWN		
121 TRAY ASSEM	HIW	2 a	0-10V DIM	SWITCH, TIME CLOCK	TOP LT DAY LIGHT ZONE
3 BUTTON SWITCH		1 a		ON/OFF	
		2 a		DIM UP	
		3 a		DIM DOWN	
122 RETHERM	HIW	2 b	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1
	HIW	2 c	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 2
3 BUTTON SWITCH		1 b,c		ON/OFF	
		2 b,c		DIM UP	
		3 b,c		DIM DOWN	
128 LOCKER RM	HIW	5 a	0-10V DIM	SWITCH, OS	GENERAL MENS
		5 b	0-10V DIM	SWITCH OS OS TURNS LIGHTS ON AND OFF	GENERAL WOMENS
3 BUTTON SWITCH		1 a		ON/OFF	
		2 a		DIM UP	
		3 a		DIM DOWN	
3 BUTTON SWITCH		1 b		ON/OFF	
		2 b		DIM UP	
		3 b		DIM DOWN	
141 OFFICE SUP	HIW	6 a	0-10V DIM	SWITCH, OS	GENERAL SUPPLY
	HIW	6 b	0-10V DIM	SWITCH, OS	GENERAL OFFICE
(3)6 BUTTON SWITCHES		1 a		ON/OFF	
		2 a		DIM UP	
		3 a		DIM DOWN	
		4 b		ON/OFF	
		5 b		DIM UP	
		6 b		DIM DOWN	
143 OFFICE	HIW	6 a	0-10V DIM	SWITCH, OS	GENERAL
	LIW	10	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
144 OFFICE	HIW	6 a	0-10V DIM	SWITCH, OS	GENERAL
	LIW	20	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
145 OFFICE	HIW	6 a	0-10V DIM	SWITCH, OS	GENERAL
	LIW	12	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
146 OFFICE	HIW	6 a	0-10V DIM	SWITCH, OS	GENERAL
	LIW	24	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	LIW	26	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
152 WAREHOUSE	HIW	4 a	0-10V DIM	SWITCH, OS, TIME CLOCK	GENERAL WHAREHOUSE
	HIW	4 b	0-10V DIM	SWITCH, TIME CLOCK, PC	TOP LIGHT ZONE PC 1
			ALL "b" FIXTURES HAVE INTEGRAL OCCUPANCY SENSOR THAT TURNS EACH FIXTURE ON AND OFF ALL "a" FIXTURES HAVE OCCUPANCY SENSOR ON LIGHTING CONTROL SYSTEM.		
(4) BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
		4 b	ON/OFF		
		5 b	DIM UP		
		6 b	DIM DOWN		
206 OFFICE	H2E	2 c	0-10V DIM	SWITCH, TIME CLOCK, PC	DAY LIGHT ZONE 1
	L2E	13	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2E	15	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2E	17	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 c	ON/OFF		
		2 c	DIM UP		
		3 c	DIM DOWN		
210 ADMIN	H2E	2 b	0-10V DIM	SWITCH, OS, TIME CLOCK	GENERAL
	L2E	27	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2E	29	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2E	31	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 b	ON/OFF		
		2 b	DIM UP		
		3 b	DIM DOWN		
211 OFFICE	H2E	2 a	0-10V DIM	SWITCH, OS, TIME CLOCK	GENERAL
	L2E	3	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
212 OFFICE	H2E	2 a	0-10V DIM	SWITCH, OS, TIME CLOCK	GENERAL
	L2E	1	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
213 CONF	H2E	2 a	0-10V DIM	SWITCH, OS, TIME CLOCK	GENERAL
	L2E	5	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
214 OFFICE	H2E	2 a	0-10V DIM	SWITCH, OS, TIME CLOCK	GENERAL
	L2E	26	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
220 ENTRY	H2E	5 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	L2E	3	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2E	5	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2E	20	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
221	H2E	5 b	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	L2W	13	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	15	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	17	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	19	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	21	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	23	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 b	ON/OFF		
		2 b	DIM UP		
		3 b	DIM DOWN		
222	H2E	5 c	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	H2E	5 d	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
3 BUTTON SWITCH FOR c		1 c	ON/OFF		
		2 c	DIM UP		
		3 c	DIM DOWN		
3 BUTTON SWITCH FOR d		1 c	ON/OFF		
		2 c	DIM UP		
		3 c	DIM DOWN		
223	H2E	5 e	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	L2W	25	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	27	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	29	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	31	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	33	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 e	ON/OFF		
		2 e	DIM UP		
		3 e	DIM DOWN		
225	H2E	5 f	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
	L2W	35	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	37	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	39	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	43	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 f	ON/OFF		
		2 f	DIM UP		
		3 f	DIM DOWN		
228 HALL	H2E	3 b	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
		3 c	0-10V DIM	SWITCH, TIME CLOCK, PCc	DAY LIGHT ZONE PCc
		3 d	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
232	H2E	3 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
233	H2E	3 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
234	H2E	3 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
235	H2E	3 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
236	H2E	3 a	0-10V DIM	SWITCH, TIME CLOCK	GENERAL
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
237	H2E	3 a	0-10V DIM	SWITCH, OS	GENERAL
	L2W	54	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
	L2W	56	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
239 OFFICE	H2E	3 a	0-10V DIM	SWITCH, OS	GENERAL
	L2W	14	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
240 OFFICE	H2E	3 a	0-10V DIM	SWITCH, OS	GENERAL
	L2W	12	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
241 BREAK	H2E	3 a	0-10V DIM	SWITCH, OS	GENERAL
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
243 WORK RM	H2E	3 a	0-10V DIM	SWITCH, OS, PC	DAY LIGHT ZONE 1
	L2W	9	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
245 OFFICE	H2E	3 a	0-10V DIM	SWITCH, OS, PC	DAY LIGHT ZONE 1
	L2W	1	ON/OFF	TIME CLOCK ON/OFF	RECEPTACLES
3 BUTTON SWITCH		1 a	ON/OFF		
		2 a	DIM UP		
		3 a	DIM DOWN		
SIGN ZONE	L2E	40	ON/OFF	ASTRINOMICAL TIME CLOCK	
		42	ON/OFF	ASTRINOMICAL TIME CLOCK	
		44	ON/OFF	ASTRINOMICAL TIME CLOCK	
	L1W	57	ON/OFF	ASTRINOMICAL TIME CLOCK	
		59	ON/OFF	ASTRINOMICAL TIME CLOCK	

LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	BALLAST/ DRIVER	MANUFACTURER	DESCRIPTION
P2	LED 4000K 140W		CREE ARE-EDG-5M-DA-08-525-40K-F-ML-MS	25 FOOT POLE LIGHT TYPE V LIGHTING DISTRIBUTION. WITH MOTION SENSOR ON FIXTURE TO CONTOL HI/LO 277 VOLT
P2D				SAME AS P2 EXCEPT TYPE 3MB DISTRIBUTION AND WITH BACK LIGHT CONTROL SHIELD
PL-1	LED 3500K 90CRI 379 LM/FT 3.6W/FT	LED 0-10 VDC DIM 3500K	FINELITE HP-4-D-X-S-9-35-F-277-FM	PENDANT MOUNTED LED DOWN LIGHT. LENGTH OF LIGHT PER PLAN MEASURE ALL FIXTURES ON PLANS PRIOR TO ORDERING. WITH FLUSH DOWNLIGHT DIFFUSER. PENDANT ON AIRCRAFT CABLE. OPEN STURCTURE, HARD LID, T-BAR MOUNTING COORDINATE HARDWARE WITH CEILING TYPES SHOWN IN RCP PROVIDE DIMMING DRIVER. 277 VOLT
PL-2	LED 78W 9000LM	LED 0-10 VDC DIM 3500K	LITHONIA IBH-900LM-SD-080-MD-MVOLT-0Z10-35K-80CRI LCPZU	PENDANT INDUSTRIAL LED HIGHBAY LIGHT WITH LENS. PROVIDE AISLE MOTION SENSOR WITH FIXTURES. CHAIN HUNG. MOTION SENSOR TO TURN LIGHTS DOWN TO 50% WHEN NO MOTION AND TURN LIGHTS ON WHEN MOTION IS SENSED. DAYLIGHT DIMMING CONTROLLED BY LIGHTING CONTROL SYSTEM. 277 VOLT
PL-3	LED 33W 3000LM 3500K		LITHONIA ZLIN-L48-3000LM-L/FST-MVOLT-35K-80CRI-WH-HC36-WGZ48	INDUSTRIAL STRIP WITH WIRE GUARD CHAIN HANG. LOCATE AROUND MECHANICAL/ELECTRICAL EQUIPMENT. 277 VOLT
RL-1	LED 3500K 3800 LM 41 W	LED 0-10 VDC DIM	TRULY GREEN SOLUTIONS 88-14-40-35-T-F-RM	RECESSED 1 X 4 LED LIGHT PANEL FIXTURE WITH INTEGRAL DRIVER AND EDGE LIT LENS. PROVIDE 0-10V DIMMING DRIVER 277 VOLT. LESS THAN 1.1 INCHES DEEP.
RL-1F				SAME AS RL-1 EXCEPT WITH FLANG KIT FOR MOUNTING INTO GYP CEILING.
RL-2	LED 45W 3500LM 3500K	LED 0-10VDC DIM	KENALL CSEDO24-45L35K-DV-5F-2H-SYM-FN-FLANG	RECESSED IP66, FN-NSF SEALED 2 FOOT BY 2 FOOT LED FIXTURE. RECESSED INTO GYP CEILING AND GRID CEILINGS.
RL-2T				SAME AS RL-2 EXCEPT FOR MOUNTING IN T-BAR CEILING.
RL-3	LED 45W 3500K 4388LM	LED 0-10VDC DIM	KENALL CSEDO24-45L35K-DV-5F-2H-SYM-FN-FLANG	RECESSED IP66, FN-NSF SEALED 2 FOOT BY 4 FOOT LED FIXTURE. RECESSED INTO GYP CEILING AND GRID CEILINGS.
RL-3T				SAME AS RL-3 EXCEPT FOR MOUNTING IN T-BAR CEILING.
RL-4	LED 5000LM 3500K 44W	LED 0-10VDC DIM	LITHONIA VRTL-F-L48-5000-1CW-AP125FL-MVOLT-35K-80CRI LED RECESSED	1X4 VANDAL RESISTANT RECESSED LIGHT FIXTURE. RECESSED IN GYP CEILING.X
RL-5				SAME AS PL-1 EXCEPT RECESSED AND FLUSHED INTO PLYWOOD CEILING.
RL-6	LED 300LM/FT 4000K 4.7W/FT	LED 0-10VDC DIM	PINNACLE EDGE EX3WET-N-940-S-U-OL1-1-B-EPF-	RECESSED 4 INCH WIDE LINEAR FIXTURE WITH WET LABEL. 277 VOLT.
RL-7	LED 3500K 1000 LM 18 W	LED 0-10VDC DIM	GOTHAM EVO35/10/4AR/WD/LSS-MVOLT	4 INCH RECESSED LED DOWNLIGHT WITH SPECULAR REFLECTOR. 277 VOLT
RL-7W				SAME AS RL-7 EXCEPT WALL WASH
RL-8	LED 317 LM/FT 3.6 W/FT 80CRU 3500K		FINELITE HP-WS-4W-4D-X-S-835-377V-SC-WB-SW-TP-	4 INCH PERIMETER SLOT FIXTURE WITH ILLUMINATED TELESCOPING CORNERS AND END JOINTS 277 VOLT
RL-9	LED 45W 3500K 4388LM	LED 0-10VDC DIM	KENALL CSEDO24-45L35K-DV-5F-2H-SYM-P442-	RECESSED IP66, P442 CERTIFIED, SEALED 2 FOOT BY 4 FOOT LED FIXTURE. RECESSED INTO GYP CEILING AND GRID CEILINGS.
SL-1				NOT USED
SL-2	LED 3500K 4000LM		TRULY GREEN SOLUTIONS 88-14-40-35-T-F-SM	SAME AS RL-1 EXCEPT SURFACE MOUNTED. LESS THAN 1.2 INCHES DEEP.
WL-1	LED 4000LM 50 W 4000K	LED	BEGA 33243-K4 LED/EMPK	WALL MOUNTED FIXTURE DIE CAST ALUMINUM HOUSING. UL WET LABEL, -20F DRIVER AND EMERGENCY BATTERY OPERATION. 277 VOLT. .
WL-2	LED 1148LM/FT 10W/FT 90CRI 2500K	LED 0-10VDC DIM	FINELITE HP-4-WM-ID-X-S-H-9-35-F-F-277-MB-SC	WALL MOUNTED LED UP/DOWN LIGHT. LENGTH OF LIGHT PER PLAN MEASURE ALL FIXTURES ON PLANS PRIOR TO ORDERING. WITH FLUSH DOWNLIGHT DIFFUSER AND FLUSH UP LIGHT DIFFUSER. PROVIDE DIMMING DRIVER. 277 VOLT
WL-3	LED 16W 789LM 6300K 71CRI 25 DEGREE BEAM	LED	LDPI DLAW016-LED-25-CP-42-120	TRUCK LOADING LIGHT WET LABEL. 42" ARM
X	LED		LITHONIA EXG LED EL M6	CEILING LED EXIT SIGN WITH BATTERIES, PROVIDE ALL MOUNTING ACCESSORIES REQUIRED. PROVIDE ARROWS AND FACES AS SHOWN ON DRAWINGS. PROVIDE UNIFORM LENS OVER LED. 277 VOLT
XW				SAME AS X EXCEPT WALL MOUNT.
X-1	LED (2) 1.5W	LITHONIA QUANTUM	ELM2-LED-SD-WHITE	EMERGENCY "BUG EYE" FIXTURE. LOW PROFILE THERMOPLASTIC HOUSING WITH (2) 1.5W LED LAMPS. MAINTENANCE FREE NiCAD BATTERY. SELF DIAGNOSTIC AND SELF-TESTING
EM,EP	LED (2) 1.5W	LED 0-10VDC	COLUMBIA LXEM-4-ML35-RA-U	ELEVATOR MACHINE ROOM/PIT FIXTURE WITH 120 VOLT, NEMA 4 LISTING REQUIRED, EMERGENCY BATTERY BALLAST.

ALL COLORS, FINISHES, ETC. ARE BY ARCHITECT. ALLOW FOR CUSTOM COLOR AND FINISH ON ALL FIXTURES.

REVISIONS
2 DELTA: ADD. 2

CONFORMED SET

TRAVIS & ASSOCIATES FITZMAURICE Electrical Engineers

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BUILDING 22, PATIENT SUPPORT CENTER
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2 LIGHT CONTROL & FIXTURE SCHEDULE

E6.00

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SYMBOL	MOTOR HP	HEAT KW	TOTAL KW	AMP	FLA	MCA	MOCP	VOLTAGE	PHASE	DISCONNECT STARTER	CIRCUIT	CONDUIT/WIRE	NOTES
FC-CS-1			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBW-11,13	1"-2#12&1#12 GND	
FC-CS-2			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBW-11,13	1"-2#12&1#12 GND	
FC-CS-3			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBW-11,13	1"-2#12&1#12 GND	
FC-CS-4			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBW-11,13	1"-2#12&1#12 GND	
FC-CS-5			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBW-11,13	1"-2#12&1#12 GND	
FC-CS-6			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-40,42	1"-2#12&1#12 GND	
FC-CS-7			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-40,42	1"-2#12&1#12 GND	
FC-CS-8			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-40,42	1"-2#12&1#12 GND	
FC-CS-9			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-40,42	1"-2#12&1#12 GND	
FC-CS-10			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-40,42	1"-2#12&1#12 GND	
FC-K-1			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-49,61	1"-2#12&1#12 GND	
FC-K-2			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-49,61	1"-2#12&1#12 GND	
FC-K-3			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-49,61	1"-2#12&1#12 GND	
FC-K-4			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-49,61	1"-2#12&1#12 GND	
FC-K-5			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-49,61	1"-2#12&1#12 GND	
FC-K-6			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-53,55	1"-2#12&1#12 GND	
FC-K-7			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-53,55	1"-2#12&1#12 GND	
FC-K-8			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-53,55	1"-2#12&1#12 GND	
FC-K-9			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-53,55	1"-2#12&1#12 GND	
FC-K-10			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-53,55	1"-2#12&1#12 GND	
FC-K-11			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-23,25	1"-2#12&1#12 GND	
FC-K-12			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-23,25	1"-2#12&1#12 GND	
FC-K-20			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-21			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-22			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-23			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-24			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-25			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-26			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K-27			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-28,30	1"-2#12&1#12 GND	
FC-K4-1			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-5,7	1"-2#12&1#12 GND	
FC-K4-2			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-5,7	1"-2#12&1#12 GND	
FC-K2-3			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-1,3	1"-2#12&1#12 GND	
FC-K2-4			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-1,3	1"-2#12&1#12 GND	
FC-K2-5			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-1,3	1"-2#12&1#12 GND	
FC-K2-6			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-1,3	1"-2#12&1#12 GND	
FC-K2-7			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-1,3	1"-2#12&1#12 GND	
FC-K2-8			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-1,3	1"-2#12&1#12 GND	
FC-K3-9			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-35,37	1"-2#12&1#12 GND	
FC-K3-10			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-35,37	1"-2#12&1#12 GND	
FC-K3-11			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-35,37	1"-2#12&1#12 GND	
FC-K3-12			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-35,37	1"-2#12&1#12 GND	
FC-K4-13			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-31,33	1"-2#12&1#12 GND	
FC-K4-14			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-31,33	1"-2#12&1#12 GND	
FC-K4-15			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-31,33	1"-2#12&1#12 GND	
FC-K4-16			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-27,29	1"-2#12&1#12 GND	
FC-K4-17			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-27,29	1"-2#12&1#12 GND	
FC-K4-18			0.4			2	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-27,29	1"-2#12&1#12 GND	
FC-K3-19			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-27,29	1"-2#12&1#12 GND	
FC-K4-20			1.2			6	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-54,56	1"-2#12&1#12 GND	
FC-K4-21			1.2			6	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-50,52	1"-2#12&1#12 GND	
FC-K4-22			1.2			6	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-50,52	1"-2#12&1#12 GND	
FC-K3-30			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-33,35	1"-2#12&1#12 GND	
FC-K3-31			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-33,35	1"-2#12&1#12 GND	
FC-K2-32			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-33,35	1"-2#12&1#12 GND	
FC-K2-33			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-33,35	1"-2#12&1#12 GND	
FC-K2-34			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-33,35	1"-2#12&1#12 GND	
FC-K3-35			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-45,47	1"-2#12&1#12 GND	
FC-K3-36			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1W-45,47	1"-2#12&1#12 GND	
FC-K3-37			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-19,21	1"-2#12&1#12 GND	
FC-K3-38			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-19,21	1"-2#12&1#12 GND	
FC-K3-39			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L1E-19,21	1"-2#12&1#12 GND	
FC-K2-40			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBW-36,38	1"-2#12&1#12 GND	
FC-K2-41			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-36,38	1"-2#12&1#12 GND	
FC-K2-42			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	LBE-36,38	1"-2#12&1#12 GND	
FC-P-1			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-2			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-3			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-4			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-5			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-6			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-7			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-8			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-10			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-37,39	1"-2#12&1#12 GND	
FC-P-11			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-12			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-13			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-14			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-15			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-16			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-17			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
FC-P-18			0.2			1	20	208	1	MOTOR RATED TOGLE SWITCH	L2E-41,43	1"-2#12&1#12 GND	
EF-B1	1/6HP		0.53	4.40			20	120	1	MANUAL MOTOR STARTER	LBW-51	1"-2#12&1#12 GND	
EF-B2	1/6HP		0.53	4.40			20	120	1	MANUAL MOTOR STARTER	LBW-53	1"-2#12&1#12 GND	
EF-B3	10W		0.01				20	120	1	MANUAL MOTOR STARTER	LBE-47	1"-2#12&1#12 GND	
EF-B4	1/6HP		0.53	4.40			20	120	1	MANUAL MOTOR STARTER	LEB-49	1"-2#12&1#12 GND	
EF-K1	5HP		6.32	7.60			20	480	1	COMBO MOTOR STARTER	H2E-31,33,35	1"-3#10 & 1#10 GND	
EF-K2	5HP		6.32	7.60			20	480	3	COMBO MOTOR STARTER	H2E-37,39,41	1"-3#10 & 1#10 GND	
EF-K3	1/4HP		0.00					120	1	MANUAL MOTOR STARTER	LK3-35	1"-2#12&1#12 GND	
EF-K4	1/4HP		0.00				20	120	1	MANUAL MOTOR STARTER	LK4-25	1"-2#12&1#12 GND	
EF-K5	1/3HP		0.00				20	120	1	MANUAL MOTOR STARTER	LK4-27	1"-2#12&1#12 GND	
EF-P1	1/8HP		0.00				20	120	1	MANUAL MOTOR STARTER	L2E-45	1"-2#12&1#12 GND	
EF-P3	1/8HP		0.00				20	120	1	MANUAL MOTOR STARTER	L2E-7	1"-2#12 & 1#12 GND	
EF-W1	1/8HP		0.00				20	120	1	MANUAL MOTOR STARTER	L1W-43	1"-2#12 & 1#12 GND	
FFU-P1			0.12				20	208	1	MANUAL MOTOR STARTER	L2W-45		
PF-1			0.00	3.90			20	120	1	MOTOR RATED TOGLE SWITCH	L1W-46	1"-2#12 & 1#12 GND	
PF-2			0.00	3.90			20	120	1	MOTOR RATED TOGLE SWITCH	L1W-48	1"-2#12 & 1#12 GND	
WH-1			105.6	127.0			175	480	3	DISCONNECT NON FUSED	SWBD H-2	SEE ONE-LINE DIAGRAM	
WH-2			105.6	127.0			175	480	3	DISCONNECT NON FUSED	SWBD H-3	SEE ONE-LINE DIAGRAM	
WH-3			29.9	36.0			50	480	3	DISCONNECT NON FUSED	HBE-20,22,24	1"-4#6&#10GND	
CP-1	1/6HP		0.5				20	120	1	MANUAL MOTOR STARTER	LBE-44	1"-2#12 & 1#12 GND	
CP-2	1/6HP		0.5				20	120	1	MANUAL MOTOR STARTER	LBE-46	1"-2#12 & 1#12 GND	
EH-1			2.0	9.6			20	208	1	DISCONNECT NON FUSED	L1W-39,41	1"-2#12 & 1#12 GND	
EH-2			7.0	8.4			20	480	3	DISCONNECT NON FUSED	H1W-13,15,17	1"-4#12 & 1#12 GND	
EH-3			7.0	8.4			20	480	3	DISCONNECT NON FUSED	H1W-19,21,23	1"-4#12 & 1#12 GND	
EH-4			3.3	4.0			20	480	3	DISCONNECT NON FUSED	HBE-7,9,11	1"-4#12 & 1#12 GND	
EH-5			0.4	3.1			20	120	1	DISCONNECT NON FUSED	LBW-45	1"-2#12&1#12 GND	
EH-6			0.4	3.1			20	120	1	DISCONNECT NON FUSED	LBW-47	1"-2#12&1#12 GND	
ACOMP-1	5HP		11.0	2.3			40	208	3	COMBO MOTOR STARTER	LBE-69,71,73	1"-2#8&1#10 GND	
ACOMP-1	2HP		11.0	2.3			40	208	3	COMBO MOTOR STARTER	LBE-75,77,79	1"-2#8&1#10 GND	
AD-1						2.8	20	120	1	FUSED DISCONNECT	LBE-55	1"-2#12&1#12 GND	
AD-2						2.8	20	120	1	FUSED DISCONNECT	LBE-57	1"-2#12&1#12 GND	
BC-K						1.65	20	208	1	FUSED DISCONNECT	L2E-47	1"-2#12&1#12 GND	
BC-P						1.65	20	208	1	FUSED DISCONNECT	L2E-47	1"-2#12&1#12 GND	
BC-CS						1.65	20	208	1	FUSED DISCONNECT	LBE-51	1"-2#12&1#12 GND	
BC-K2						1.65	20	208	1	FUSED DISCONNECT	L1E-30	1"-2#12&1#12 GND	
BC-K3						1.65	20	208	1	FUSED DISCONNECT	L1E-34	1"-2#12&1#12 GND	
BC-K4						1.65	20	208	1	FUSED DISCONNECT	L1E-32	1"-2#12&1#12 GND	
SBC-K						0.64	20	208	1	FUSED DISCONNECT	L2W-51	1"-2#12&1#12 GND	
SBC-P						0.32	20	208	1	FUSED DISCONNECT	L2W-53	1"-2#12&1#12 GND	
DOAS-CS	(2)5	20	62.9		75.7	82	90 FUSE	480	3	FUSED DISCONNECT	SWBD H-9	2"-4#2 & 1#8 GND	PROVIDE 120V CIRCUIT FOR LIGHTS AND RECEPT
DOAS-K	(2)4	32	45.7		55.0	69.3	70 FUSE	480	3	FUSED DISCONNECT	SWBD H-10	1.25"-4#4 & 1#8 GND	
DOAS-K2	10&7.5		97.1		116.8	146	150 FUSE	480	3	FUSED DISCONNECT	SWBD H-8	2"-4#1/0&1#6 GND	
DOAS-P	(2)2.5	10	17.6		21.2	26.6	30 FUSE	480	3	FUSED DISCONNECT	H2E-14,16,18	1"-4#10&1#10 GND	
DOAS-W	(2)2.5	10	17.6		21.2	26.6	30 FUSE	480	3	FUSED DISCONNECT	H2E-20,22,24	1"-4#10&1#10 GND	
HP-CS			10.0		12.0	15	25	480	3	FUSED DISCONNECT	H2E-13,15,17	1"-4#10&1#10 GND	
HP-K			20.6		24.8	31	50	480	3	FUSED DISCONNECT	H2E-8,10,12	1"-4#6&1#10 GND	
HP-K2 SEC 1			20.6		24.8	31	50	480	3	FUSED DISCONNECT	HBE-43,45,47	1"-4#6&1#10 GND	
HP-K2 SEC 2			16.0		19.2	24	35	480	3	FUSED DISCONNECT	HBE-49,51,53	1"-4#6&1#10 GND	
HP-K3 SEC 1			16.0		19.2	24	35	480	3	FUSED DISCONNECT	H2E-26,28,30	1"-4#8 & 1#10 GND	
HP-K3 SEC 2			16.0		19.2	24	35	480	3	FUSED DISCONNECT	H2E-32,34,36	1"-4#8 & 1#10 GND	
HP-K4 SEC 1			20.6		24.8	31	50	480	3	FUSED DISCONNECT	H2E-55,57,59	1"-4#6&1#10 GND	
HP-K4 SEC 2			20.6		24.8	31	50	480	3	FUSED DISCONNECT	H2E-61,63,65	1"-4#6&1#10 GND	
HP-P SEC 1			10.0		12.0	15	25	480	3	FUSED DISCONNECT	H2E-19,21,23	1"-4#10&1#10 GND	
HP-P SEC 2			10.0		12.0	15	25	480	3	FUSED DISCONNECT	H2E-25,27,29	1"-4#10&1#10 GND	
AC-B005			4.2		20.0	25	30	208	1	FUSED DISCONNECT	L2E-9,11	1"-2#10&1#12 GROUND	INDOOR UNIT FED FROM OUTDOOR UNIT
MAU-1	(4)5	210	235.3		277.0	286	300	480	3	FUSED DISCONNECT	SWBD H -15	SEE ONE LINE DIAGRAM	PROVIDE 120V CIRCUIT FOR LIGHTS AND RECEPT

REVISIONS

2 DELTA: ADD. 2

CONFORMED SET

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DATE 03/16/2018

2 MECHANICAL SCHEDULE

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ALTERNATIVE LOAD CALCULATION FOR CAMPUS MEDIUM VOLTAGE PRIMARY METERED SERVICE
EXISTING PEAK DEMAND FOR I YEAR PER TACOMA POWER 1,807 KVA
ADD 25% PER NEC 220-35 452 KVA
TOTAL EXISTING LOAD 2,259 KVA
EXISTING AMPS AT 12470 VOLTS 105 AMPS
EXISTING WESTERN STATE HOSPITAL PRIMARY SERVICE SIZE IS 400A AT 12470 VOLTS

FEEDER 1 30 METER READING PEAK AT 4160 V 15 KVA
ADD 25% PER NEC 220-35 4 KVA
TOTAL EXISTING LOAD FEEDER 1 19 KVA

FEEDER 1 ADDED LOAD THIS PROJECT 1,703 KVA
FEEDER 1 NEW AND EXISTING LOAD TOTAL 1,722 KVA
FEEDER 1 NEW AND EXISTING CURRENT 239 AMPS
GENERATOR 1 RATED FOR 1,875 KVA

SWITCHBOARD H — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION MAIN ELEC RM — AMPS 3000
MOUNTING SURFACE — MAIN CIRCUIT BREAKER WITH GFP
AIC 50,000 — GROUND BUS
FED FROM PAD XFMR — SERVICE ENTRANCE RATED
PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	600/3	DIST'N HN	413.7
2	400/3	PANEL HBE	281.0
3	100/3	PANEL HIW	18.2
4	400/3	PANEL H2E	214.3
5	800/3	PANEL HKI	359.8
6	150/3	DOAS-K2	97.1
7	90/3	DOAS-CS	62.9
8	70/3	DOAS-K	45.7
9	300/3	MAU-1	235.3
10	30/3*	ELEVATOR	15.0
11	225/3	SPACE ONLY	0.0
12	225/3	SPACE ONLY	0.0
13	225/3	SPACE ONLY	0.0
14	30/3	TVSS	0.0

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	25.46	125%	31.82	38.28
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	240.30	100%	240.30	289.04
LARGEST MOTOR	35.60	125%	44.50	53.53
OTHER MOTORS	373.35	100%	373.35	449.07
MISCELLANEOUS	394.77	100%	394.77	474.83
KITCH. APPLIANCES	673.50	65%	437.78	526.56
	1742.98		1522.52	1831.31

*CONFIRM ELEVATOR BREAKER WITH ELEVATOR MANUFACTURER PRIOR TO ORDERING SWITCHBOARD

SWITCHBOARD L — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION MAIN ELEC RM — AMPS 2500
MOUNTING SURFACE — MAIN CIRCUIT BREAKER
AIC 40,000 — GROUND BUS
FED FROM PAD XFMR — SERVICE ENTRANCE RATED
PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	200/3	PANEL LBW	44.16
2	200/3	PANEL LBE	40.89
3	200/3	PANEL LIW	35.14
4	100/3	PANEL LIE	19.82
5	200/3	PANEL L2W	40.40
6	200/3	PANEL L2E	30.78
7	1200/3	DIST'N LK	480.1
8	225/3	SPACE ONLY	0.00
9	225/3	SPACE ONLY	0.00
10	225/3	SPACE ONLY	0.00
11	225/3	SPACE ONLY	0.00
12	400/3	SPACE ONLY	0.00
13	30/3	TVSS	0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	5.04	125%	6.30	17.48
RECEPTS FIRST 10KVA	10.00	100%	10.00	27.76
RECEPTS REST	90.44	50%	45.22	125.52
HEATING	2.00	100%	2.00	5.55
LARGEST MOTOR	2.29	125%	2.86	7.95
OTHER MOTORS	44.13	100%	44.13	122.49
MISCELLANEOUS	71.22	100%	71.22	197.70
KITCH. APPLIANCES	466.17	65%	303.01	841.07
	691.29		484.74	1345.52

DISTRIBUTION HN — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 600
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 40,000 — GROUND BUS
FED FROM SWBD

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	150/3	STEAM GENERATOR	100.00	2	400/3	PANEL HKN	313.70
3				4			
5				6			
7	200/3	SPACE ONLY	0.00	8	200/3	SPACE ONLY	0.00
9			0.00	10			0.00
11			0.00	12			0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.00	100%	0.00	0.00
MISCELLANEOUS	100.00	100%	100.00	120.28
KITCH. APPLIANCES	313.70	65%	203.91	245.26
	413.70		303.91	365.54

DISTRIBUTION LK — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION MAIN ELEC ROOM — AMPS 1200
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 20,000 — GROUND BUS
FED FROM SWBD

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	400/3	PANEL LK1	124.46	2	400/3	PANEL LK2	167.41
3				4			
5				6			
7	100/3	PANEL LK3	32.21	8	125/3*	CONV STEAM(E45)	33.00
9				10			
11				12			
13	100/3	PANEL LK4	9.26	14	125/3*	CONV STEAM(E45)	32.60
15				16			
17				18			
19	100/3	PANEL LK5	5.58	20	100/3	COND UNIT(E5)	25.20
21				22			
23				24			
25	100/3	COND UNIT(E5)	25.20	26	125/3	SPACE ONLY	0.00
27				28			
29				30			
31	100/3	COND UNIT(E5)	25.20	32	125/3	SPACE ONLY	0.00
33				34			0.00
35				36			0.00
37	100/3	SPARE	0.00	38	125/3	SPACE ONLY	0.00
39			0.00	40			0.00
41			0.00	42			0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	4.07	125%	5.09	14.11
RECEPTACLES	12.42	100%	12.42	34.47
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	2.10	100%	2.10	5.83
MISCELLANEOUS	5.00	100%	5.00	13.88
KITCH. APPLIANCES	456.52	65%	296.74	823.66
	480.11		321.35	891.96

*SHUNT TRIP BREAKER CONNECT TO HOOD SUPPRESSION SYSTEM.

PANEL HKN — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION KITCHEN — AMPS 400
MOUNTING FLUSH — MAIN CICUIT BREAKER
AIC 20,000 — GROUND BUS
FED FROM DIST'N HN

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	80/3*	ROLL N OVEN (E51)	53.18	2	60/3*	KETTLE(E70)	39.20
3				4			
5				6			
7	80/3*	COMBI OVEN(E58)	66.00	8	45/3	BSTER HTR (E77)	30
9				10			
11				12			
13	60/3*	MIXER(E59)	39.00	14	60/3	POT/PAN WASH(E7	39.50
15				16			
17				18			
19	40/3*	DBL STK OVN(E57)	25.00	20	20/3*	BLOWER(E76)	5.62
21				22			
23				24			
25	30/3*	GRIDDLE(E41)	16.2	26	60/3	SPACE ONLY	0.00
27				28			0.00
29				30			0.00
31	60/3	SPACE ONLY	0.00	32	60/3	SPACE ONLY	0.00
33			0.00	34			0.00
35			0.00	36			0.00
37	60/3	SPACE ONLY	0.00	38	60/3	SPACE ONLY	0.00
39			0.00	40			0.00
41			0.00	42			0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.00	100%	0.00	0.00
MISCELLANEOUS	0.00	100%	0.00	0.00
KITCH. APPLIANCES	313.70	65%	203.91	245.26
	313.70		203.91	245.26

*SHUNT TRIP BREAKER CONNECT TO HOOD SUPPRESSION SYSTEM.

PANEL HKI — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 400
MOUNTING SURFACE — MAIN CIRCUIT BREAKER WITH SHUNT TRIP
AIC 22,000 — GROUND BUS
FED FROM SWBD

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	60/3*	WAREWASHER(E72)	38	2	60/3*	KETTLE(E70)	39.2
3				4			
5				6			
7	40/3	BOOSTER HTR(E71)	27	8	40/3*	DBL STACK OVEN	25.00
9				10			
11				12			
13	80/3*	COMBI OVEN(E58)	66.00	14	40/3*	DBL STACK OVEN(	25.00
15				16			
17				18			
19	25/3*	FRENCH PLATE(E46)	15.80	20	20/3	MIXER(E36)	5.00
21				22			
23				24			
25	40/3*	KETTLE(E69)	24.00	26	40/3*	CONV OVEN(E44)	25.00
27				28			
29				30			
31	25/3*	SKILLET(E43)	16	32	20/3*	GRIDDLE(E42)	10.80
33				34			
35				36			
37	25/3*	SKILLET(E43)	16.00	38	30/3*	GRIDDLE(E41)	16.20
39				40			
41				42			
43	20/1	SPACE ONLY	0.00	44	20/3*	GRIDDLE(E42)	10.80
45	20/1	SPACE ONLY	0.00	46			
47	20/1	SPACE ONLY	0.00	48			
49	20/1	SPACE ONLY	0.00	50	20/1	SPACE ONLY	0.00
51	20/1	SPACE ONLY	0.00	52	20/1	SPACE ONLY	0.00
53	20/1	SPACE ONLY	0.00	54	20/1	SPACE ONLY	0.00
55	20/1	SPACE ONLY	0.00	56	20/1	SPACE ONLY	0.00
57	20/1	SPACE ONLY	0.00	58	20/1	SPACE ONLY	0.00
59	20/1	SPACE ONLY	0.00	60	20/1	SPACE ONLY	0.00
61	20/1	SPACE ONLY	0.00	62	20/1	SPACE ONLY	0.00
63	20/1	SPACE ONLY	0.00	64	20/1	SPACE ONLY	0.00
65	20/1	SPACE ONLY	0.00	66	20/1	SPACE ONLY	0.00
67	20/1	SPACE ONLY	0.00	68	20/1	SPACE ONLY	0.00
69	20/1	SPACE ONLY	0.00	70	20/1	SPACE ONLY	0.00
71	20/1	SPACE ONLY	0.00	72	20/1	SPACE ONLY	0.00
73	20/1	SPACE ONLY	0.00	74	20/1	SPACE ONLY	0.00
75	20/1	SPACE ONLY	0.00	76	20/1	SPACE ONLY	0.00
77	20/1	SPACE ONLY	0.00	78	20/1	SPACE ONLY	0.00
79	20/1	SPACE ONLY	0.00	80	20/1	SPACE ONLY	0.00
81	20/1	SPACE ONLY	0.00	82	20/1	SPACE ONLY	0.00
83	20/1	SPACE ONLY	0.00	84	20/1	SPACE ONLY	0.00

*SHUNT TRIP BREAKER CONNECT TO HOOD SUPPRESSION SYSTEM.
CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.00	100%	0.00	0.00
MISCELLANEOUS	0.00	100%	0.00	0.00
KITCH. APPLIANCES	359.80	65%	233.87	281.30
	359.80		233.87	281.30

PANEL HBE — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION MAIN ELEC RM — AMPS 400
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 22,000 — GROUND BUS
FED FROM SWBD

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	LIGHTS	1.58	2	20/1	LIGHTS EXTERIOR	1.96
3	20/1	LIGHTS	2.37	4	20/1	LTS BLDG EXT	0.50
5	20/1	LIGHTS	1.76	6	20/1	SPARE	0.00
7	20/3	EH-4	3.30	8	20/1	SPARE	0.00
9				10	20/1	SPARE	0.00
11				12	20/1	SPARE	0.00
13	20/3	STERILIZER	2.50	14	40/3	DISINFECTOR CS5	22.00
15				16			
17				18			
19	175/3	WH-1	105.00	20	50/3	WH-3	30.00
21				22			
23				24			
25	175/3	WH-2	105.00	26	20/3	SEWER LIFT	5.00
27				28			
29				30			
31	20/1	SPACE ONLY	0.00	32	20/1	SPACE ONLY	0.00
33	20/1	SPACE ONLY	0.00	34	20/1	SPACE ONLY	0.00
35	20/1	SPACE ONLY	0.00	36	20/1	SPACE ONLY	0.00
37	20/1	SPACE ONLY	0.00	38	20/1	SPACE ONLY	0.00
39	20/1	SPACE ONLY	0.00	40	20/1	SPACE ONLY	0.00
41	20/1	SPACE ONLY	0.00	42	20/1	SPACE ONLY	0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	8.16	125%	10.20	12.27
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	3.30	100%	3.30	3.97
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	5.00	100%	5.00	6.01
MISCELLANEOUS	264.50	100%	264.50	318.14
KITCH. APPLIANCES	0.00	100%	0.00	0.00
	280.96		283.00	340.40

PANEL HIW — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION MAIN ELEC RM — AMPS 100
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 14,000 — GROUND BUS
FED FROM SWBD

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	LIGHTS	1.78	2	20/1	LIGHTS	1.71
3	20/1	LIGHTS	3.38	4	20/1	LIGHTS	2.63
5	20/1	LIGHTS	1.72	6	20/1	SPARE	0.00
7	20/1	SPARE	0.00	8	20/1	SPARE	0.00
9	20/1	SPARE	0.00	10	20/1	SPARE	0.00
11	20/1	SPARE	0.00	12	20/1	SPARE	0.00
13	20/3	EH-2	7.00	14	20/1	SPACE ONLY	0.00
15			0.00	16	20/1	SPACE ONLY	0.00
17			0.00	18	20/1	SPACE ONLY	0.00
19	20/3	EH-3	0.00	20	20/1	SPACE ONLY	0.00
21			0.00	22	20/1	SPACE ONLY	0.00
23			0.00	24	20/1	SPACE ONLY	0.00
25	20/1	SPACE ONLY	0.00	26	20/1	SPACE ONLY	0.00
27	20/1	SPACE ONLY	0.00	28	20/1	SPACE ONLY	0.00
29	20/1	SPACE ONLY	0.00	30	20/1	SPACE ONLY	0.00
31	20/1	SPACE ONLY	0.00	32	20/1	SPACE ONLY	0.00
33	20/1	SPACE ONLY	0.00	34	20/1	SPACE ONLY	0.00
35	20/1	SPACE ONLY	0.00	36	20/1	SPACE ONLY	0.00
37	20/1	SPACE ONLY	0.00	38	20/1	SPACE ONLY	0.00
39	20/1	SPACE ONLY	0.00	40	20/1	SPACE ONLY	0.00
41	20/1	SPACE ONLY	0.00	42	20/1	SPACE ONLY	0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	11.22	125%	14.02	16.86
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	7.00	100%	7.00	8.42
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.00	100%	0.00	0.00
MISCELLANEOUS	0.00	100%	0.00	0.00
KITCH. APPLIANCES	0.00	100%	0.00	0.00
	18.22		21.02	25.28

PANEL H2E — VOLTS 480 /277 — 3 PHASE, 4 WIRE, WYE
LOCATION UTIL 208 — AMPS 400
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 22,000 — GROUND BUS
FED FROM SWBD

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	LIGHTS	2.32	2	20/1	LIGHTS	1.10
3	20/1	LIGHTS	1.18	4	20/1	SPARE	0.00
5	20/1	LIGHTS	1.48	6	20/1	SPARE	0.00
7	20/1	SPARE	0.00	8	50/3	HP-K	20.60
9	20/1	SPARE	0.00	10			
11	20/1	SPARE	0.00	12			
13	25/3	HP-CS	10.00	14	30/3	DOAS-W	17.60
15				16			
17				18			
19	25/3	HP-P SECT 1	10.00	20	30/3	DOAS-P	17.60
21				22			
23				24			
25	25/3	HP-P SECT 2	10.00	26	40/3	HP-K3 SECT 1	16.00
27				28			
29				30			
31	20/3	EF-K1	6.32	32	40/3	HP-K3 SECT 2	16.00
33				34			
35				36			
37	20/3	EF-K2	6.32	38	20/1	SPACE ONLY	0.00
39				40	20/1	SPACE ONLY	0.00
41				42	20/1	SPACE ONLY	0.00
43	50/3	HP-K2 SEC 1	20.60	44	20/1	SPACE ONLY	0.00
45				46	20/1	SPACE ONLY	0.00
47				48	20/1	SPACE ONLY	0.00
49	35/3	HP-K2 SEC 2	16.00	50	20/1	SPACE ONLY	0.00
51				52	20/1	SPACE ONLY	0.00
53				54	20/1	SPACE ONLY	0.00
55	50/3	HP-K4 SEC 1	20.60	56	20/1	SPACE ONLY	0.00
57				58	20/1	SPACE ONLY	0.00
59				60	20/1	SPACE ONLY	0.00
61	50/3	HP-K4 SEC 2	20.60	62	20/1	SPACE ONLY	0.00
63				64	20/1	SPACE ONLY	0.00
65				66	20/1	SPACE ONLY	0.00
67	20/1	SPACE ONLY	0.00	68	20/1	SPACE ONLY	0.00
69	20/1	SPACE ONLY	0.00	70	20/1	SPACE ONLY	0.00
71	20/1	SPACE ONLY	0.00	72	20/1	SPACE ONLY	0.00
73	20/1	SPACE ONLY	0.00	74	20/1	SPACE ONLY	0.00
75	20/1	SPACE ONLY	0.00	76	20/1	SPACE ONLY	0.00
77	20/1	SPACE ONLY	0.00	78	20/1	SPACE ONLY	0.00
79	20/1	SPACE ONLY	0.00	80	20/1	SPACE ONLY	0.00
81	20/1	SPACE ONLY	0.00	82	20/1	SPACE ONLY	0.00
83	20/1	SPACE ONLY	0.00	84	20/1	SPACE ONLY	0.00

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	6.08	125%	7.60	9.14
RECEPTACLES	0.00	100%	0.00	0.00
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	20.60	125%	25.75	30.97
OTHER MOTORS	187.64	100%	187.64	225.70
MISCELLANEOUS	0.00	100%	0.00	0.00
KITCH. APPLIANCES	0.00	100%	0.00	0.00
	214.32		220.99	265.81

PANEL LK1 — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION KITCHEN — AMPS 400
MOUNTING FLUSH — MAIN LUGS ONLY
AIC 20,000 — GROUND BUS
FED FROM DIST LK

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	SLICER	0.50	2	20/3	ICE MACH(E23)	3.49
3	20/1	REFRIG	1.44	4			
5	20/1	REFRIG	0.76	6			
7	20/1	RECEPTS	0.18	8	20/1	RECEPTS	0.18
9	20/1	RECEPTS	0.18	10	20/1	RECEPTS	0.18
11	20/1	RECEPTS	0.18	12	20/1	RECEPTS	0.18
13	20/1	RECEPTS	0.18	14	20/1	SLICER	0.84
15	20/1	RECEPTS	0.18	16	20/1	RECEPTS	0.18
17	20/1	RECEPTS	0.18	18	20/1	RECEPTS	0.18
19	20/1	RECEPTS	0.18	20	20/1	SLICER	0.84
21	20/1	RECEPTS	0.18	22	20/1	RECEPTS	0.18
23	20/1	FREEZER(21)	1.42	24	20/1	MARVEL CONTROL	0.50
25	20/1	FREEZER(E20)	1.68	26	20/1	FIRE PANEL HD	0.50
27	20/1	FREEZER(E19)	1.42	28	20/1	RECEPTS	0.18
29	20/1	REFRIG(E26)	1.42	30	20/1	RECEPTS	0.18
31	20/3	PRESS WASHER	2.00	32	20/1	RECEPTS	0.18
33				34	20/1	LIGHTS	0.80
35				36	20/2	DOOR	1.20
37	30/2	EVAPORATOR	4.80	38			0.00
39				40	20/1	EVAPORATOR	0.36
41	30/2	EVAPORATOR	4.80	42	20/1	EVAPORATOR	0.36
43			0.00	44	20/2	DOOR	1.20
45	20/1	LIGHTS	0.80	46			0.00
47	20/2	DOOR	1.20	48	20/1	LIGHTS	0.24
49				50	20/1	COND	0.36
51	20/1	HEATER	0.50	52	20/2	DOOR	1.20
53	20/1	HEATER	1.00	54			0.00
55	45/3	CONDENSING	13.68	56	20/1	LIGHTS	0.80
57				58	20/2	DOOR	1.20
59				60			0.00
61	45/3	CONDENSING	13.68	62	20/2	DOOR	1.20
63				64			0.00
65				66	20/1	TRAP PRIMER	0.50
67	45/3	CONDENSING	13.68	68	20/1	SPACE ONLY	0.00
69				70	20/1	SPACE ONLY	0.00
71				72	20/1	SPACE ONLY	0.00
73	20/3	CONDENSING	13.68	74	20/1	SPACE ONLY	0.00
75				76	20/1	SPACE ONLY	0.00
77				78	20/1	SPACE ONLY	0.00
79	45/3	CONDENSING	13.68	80	45/3	CONDENSING	13.68
81				82			
83				84			

CONNECTED LOAD — DEMAND FACTOR — DEMAND LOAD

	KVA		KVA	AMPS
LIGHTS	3.00	125%	3.75	10.41
RECEPTACLES	3.06	100%	3.06	8.49
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.00	100%	0.00	0.00
MISCELLANEOUS	1.50	100%	1.50	4.16
KITCH. APPLIANCES	116.90	65%	75.98	210.91
	124.46		84.29	233.97

PANEL LK2 — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION KITCHEN — AMPS 400
MOUNTING FLUSH — MAIN LUGS ONLY
AIC 20,000 — GROUND BUS
FED FROM DIST LK

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	RECEPTS	0.18	2	20/1	AIR CURTAIN	0.41
3	20/1	RECEPTS	0.18	4	20/1	TRAP PRIMER	0.50
5	20/1	RECEPTS	0.18	6	20/1	SPACE ONLY	0.00
7	20/1	RECEPTS	0.18	8	20/1	SPACE ONLY	0.00
9	20/1	RECEPTS	0.18	10	20/1	SPACE ONLY	0.00
11	20/1	SPARE	0.00	12	20/1	SPACE ONLY	0.00
13	20/1	SPARE	0.00	14	20/1	SPACE ONLY	0.00
15	20/1	SPARE	0.00	16	20/1	SPACE ONLY	0.00
17	20/1	SPACE ONLY	0.00	18	20/1	SPACE ONLY	0.00
19	20/1	SPACE ONLY	0.00	20	20/1	SPACE ONLY	0.00
21	20/1	SPACE ONLY	0.00	22	20/1	SPACE ONLY	0.00
23	20/1	SPACE ONLY	0.00	24	20/1	SPACE ONLY	0.00
25	20/1	SPACE ONLY	0.00	26	20/1	SPACE ONLY	0.00
27	20/1	SPACE ONLY	0.00	28	20/1	SPACE ONLY	0.00
29	20/1	SPACE ONLY	0.00	30	20/1	SPACE ONLY	0.00
31	30/3	TRAY DOCKING(E66)	9.20	32	30/3	TRAY DOCKING(E6	9.20
33				34			
35				36			
37	30/3	TRAY DOCKING(E66)	9.20	38	30/3	TRAY DOCKING(E6	9.20
39				40			
41				42			
43

PANEL LK3 — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 125
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 10,000 — GROUND BUS
FED FROM DIST'N LK — PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	FIRE PROTECTION	0.50	2	20/1	HOOD LTS	0.22
3	20/1	DROP CORD	0.36	4	20/1	HOOD LTS	0.25
5	20/1	DROP CORD	0.36	6	20/1	MARVEL	1.80
7	20/1	DROP CORD	0.36	8	20/1	SLICER	0.84
9	20/1	DROP CORD	0.36	10	20/1	RECEPT	0.18
11	20/1	MARVEL	1.80	12	20/1	FOOD PROC	1.00
13	20/1	MARVEL	1.80	14	20/1	MARVEL	1.80
15	20/1	MARVEL	1.80	16	20/1	MARVEL	1.80
17	20/1	MARVEL	1.80	18	20/1	RECEPTS	0.18
19	20/1	MARVEL	1.80	20	20/1	RECEPTS	0.18
21	20/1	HOOD LTS	0.30	22	20/3	SPARE	0.00
23	20/1	HOOD LTS	0.30	24	|	|	
25	20/1	DROP CORD	0.36	26	|	|	
27	20/1	DROP CORD	0.36	28	20/3	BLAST CHLLR(E62	2.88
29	20/1	DROP CORD	0.36	30	|	|	
31	20/1	FIRE PROT(E53)	1.00	32	|	|	
33	20/1	CTRL (E52)	0.50	34	20/3	BLAST CHLLR(E62	2.88
35	20/1	EF-K3	0.70	36	|	|	
37	20/1	SPARE	0.00	38	|	|	
39	20/1	SPARE	0.00	40	20/3	BLAST CHLLR(E62	2.88
41	20/1	SPARE	0.00	42	|	|	
43	20/1	SPARE	0.00	44	|	|	
45	20/1	SPARE	0.00	46	20/1	TRAP PRIMER	0.50
47	20/1	SPARE	0.00	48	20/1	SPACE ONLY	0.00
49	20/1	SPARE	0.00	50	20/1	SPACE ONLY	0.00
51	20/1	SPACE ONLY	0.00	52	20/1	SPACE ONLY	0.00
53	20/1	SPACE ONLY	0.00	54	20/1	SPACE ONLY	0.00
55	20/1	SPACE ONLY	0.00	56	20/1	SPACE ONLY	0.00
57	20/1	SPACE ONLY	0.00	58	20/1	SPACE ONLY	0.00
59	20/1	SPACE ONLY	0.00	60	20/1	SPACE ONLY	0.00
61	20/1	SPACE ONLY	0.00	62	20/1	SPACE ONLY	0.00
63	20/1	SPACE ONLY	0.00	64	20/1	SPACE ONLY	0.00
65	20/1	SPACE ONLY	0.00	66	20/1	SPACE ONLY	0.00
67	20/1	SPACE ONLY	0.00	68	20/1	SPACE ONLY	0.00
69	20/1	SPACE ONLY	0.00	70	20/1	SPACE ONLY	0.00
71	20/1	SPACE ONLY	0.00	72	20/1	SPACE ONLY	0.00
73	20/1	SPACE ONLY	0.00	74	20/1	SPACE ONLY	0.00
75	20/1	SPACE ONLY	0.00	76	20/1	SPACE ONLY	0.00
77	20/1	SPACE ONLY	0.00	78	20/1	SPACE ONLY	0.00
79	20/1	SPACE ONLY	0.00	80	30/3	SURGE PROTECTOR	0.00
81	20/1	SPACE ONLY	0.00	82	|	|	
83	20/1	SPACE ONLY	0.00	84	|	|	

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	1.07	125%	1.34	3.71
RECEPTACLES	3.06	100%	3.06	8.49
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.70	100%	0.70	1.94
MISCELLANEOUS	1.00	100%	1.00	2.78
KITCH. APPLIANCES	26.38	65%	17.15	47.60
	32.21		23.24	64.51

PANEL LK4 — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 200
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 10,000 — GROUND BUS
FED FROM

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	RECEPTS	0.18	2	20/1	RECEPTS	0.18
3	20/1	RECEPTS	0.18	4	20/3	DISPOSER	3.74
5	20/3	SPARE	0.00	6	|	|	
7	|	|	0.00	8	|	|	
9	|	|	0.00	10	20/1	RECEPTS	0.18
11	20/1	RECEPTS	0.18	12	20/1	AIR CURT(E82)	0.41
13	20/2	CONTROL(E74)	0.69	14	20/1	RECEPTS	0.18
15	|	|	0.00	16	20/1	RECEPTS	0.18
17	20/3	SCRAP ACCUM(E75)	1.26	18	20/1	SPARE	0.00
19	|	|	0.00	20	20/1	SPARE	0.00
21	|	|	0.00	22	20/1	SPARE	0.00
23	20/1	TRAP PRIMMER	0.50	24	20/1	SPACE ONLY	0.00
25	20/1	KE-K4	0.70	26	20/1	SPACE ONLY	0.00
27	20/1	EF-K5	0.70	28	20/1	SPACE ONLY	0.00
29	20/1	SPARE	0.00	30	20/1	SPACE ONLY	0.00
31	20/1	SPARE	0.00	32	20/1	SPACE ONLY	0.00
33	20/1	SPARE	0.00	34	20/1	SPACE ONLY	0.00
35	20/1	SPARE	0.00	36	20/1	SPACE ONLY	0.00
37	20/1	SPARE	0.00	38	20/1	SPACE ONLY	0.00
39	20/1	SPARE	0.00	40	20/1	SPACE ONLY	0.00
41	20/1	SPARE	0.00	42	20/1	SPACE ONLY	0.00

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	4.14	100%	4.14	11.49
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	0.00	100%	0.00	0.00
MISCELLANEOUS	0.00	100%	0.00	0.00
KITCH. APPLIANCES	1.44	65%	0.94	2.60
	5.58		5.08	14.09

PANEL LK5 — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION KITCHEN — AMPS 100
MOUNTING FLUSH — MAIN LUGS ONLY
AIC 10,000 — GROUND BUS
FED FROM DIST LK

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	RECEPTS	0.18	2	20/1	RECEPTS	0.18
3	20/1	RECEPTS	0.18	4	20/1	RECEPTS	0.18
5	20/1	RECEPTS	0.18	6	20/1	RECEPTS	0.18
7	20/1	RECEPTS	0.18	8	20/1	RECEPTS	0.18
9	20/1	SODA	1.44	10	20/1	RECEPTS	0.18
11	20/1	REC DROP CORD	0.18	12	20/1	RECEPTS	0.18
13	20/1	REC DROP CORD	0.18	14	20/1	RECEPTS	0.18
15	20/1	REC DROP CORD	0.18	16	20/1	RECEPTS	0.18
17	20/1	REC DROP CORD	0.18	18	20/1	RECEPTS	0.18
19	20/1	REC DROP CORD	0.18	20	20/1	RECEPTS	0.18
21	20/1	REC DROP CORD	0.18	22	20/1	RECEPTS	0.18
23	20/1	REC DROP CORD	0.18	24	20/1	SPARE	0.00
25	20/1	REC DROP CORD	0.18	26	20/1	SPARE	0.00
27	20/1	SPARE	0.00	28	20/1	SPARE	0.00
29	20/1	SPARE	0.00	30	20/1	SPARE	0.00
31	20/1	SPARE	0.00	32	20/1	SPARE	0.00
33	20/1	SPACE ONLY	0.00	34	20/1	SPACE ONLY	0.00
35	20/1	SPACE ONLY	0.00	36	20/1	SPACE ONLY	0.00
37	20/1	SPACE ONLY	0.00	38	20/1	SPACE ONLY	0.00
39	20/1	SPACE ONLY	0.00	40	20/1	SPACE ONLY	0.00
41	20/1	SPACE ONLY	0.00	42	20/1	SPACE ONLY	0.00

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	1.26	100%	1.26	3.50
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	1.40	100%	1.40	3.89
MISCELLANEOUS	1.59	100%	1.59	4.42
KITCH. APPLIANCES	5.00	100%	5.00	13.89
	9.26		9.26	25.70

PANEL LBE — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION BASEMENT EAST — AMPS 200
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 10,000 — GROUND BUS
FED FROM SWBD L — PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	30/3	CAVIWARE US CS3	3.60	2	20/1	RECEPTS	0.72
3	|	|		4	20/1	RECEPTS	0.18
5	|	|		6	20/1	RECEPTS	0.18
7	20/1	RECEPTS	0.90	8	20/1	RECEPTS	0.36
9	20/1	RECEPTS	0.18	10	20/1	RECEPTS	0.54
11	20/1	RECEPTS	0.72	12	20/1	RECEPTS	0.36
13	20/1	US CLEANER	0.30	14	20/1	RECEPTS	0.36
15	20/1	RECEPTS	0.36	16	20/1	RECEPTS	0.18
17	20/1	RECEPTS	0.72	18	20/1	RECEPTS	0.18
19	20/1	RECEPTS	0.72	20	20/1	RECEPTS	0.36
21	20/1	RECEPTS	0.90	22	20/1	COPIER	1.00
23	20/1	RECEPTS	1.08	24	20/1	ADA DOOR	0.50
25	20/1	RECEPTS	1.08	26	20/1	RECEPTS	0.36
27	20/1	RECEPTS	0.72	28	20/1	RECEPTS	0.54
29	20/1	TV	0.50	30	20/1	RECEPTS	0.36
31	20/1	FRIDGE	0.75	32	20/1	SPARE	0.00
33	20/1	RECEPTS	0.36	34	20/1	SPARE	0.00
35	20/1	MICROWAVE	1.20	36	20/2	FC-K2-42	0.42
37	20/1	RECEPTS	0.36	38	|	|	0.00
39	30/3	CAVIWARE US CS3	3.60	40	20/2	FC-CS-6,7,8,	1.04
41	|	|	0.00	42	|	9,10	0.00
43	|	|	0.00	44	20/1	CP-1	0.53
45	20/1	RECEPT	0.18	46	20/1	CP-2	0.53
47	20/1	EF-B3	0.10	48	20/1	FUTUE ACCESS	0.50
49	20/1	EF-B4	0.53	50	40/2	EV CHARGING	7.20
51	20/1	BC-CS	0.20	52	|	|	
53	20/1	LIFT REC	0.18	54	20/1	SPARE	0.00
55	20/1	AD-1	0.34	56	20/1	SPARE	0.00
57	20/1	AD-2	0.34	58	20/1	SPARE	0.00
59	20/1	SPARE	0.00	60	20/1	SPACE ONLY	0.00
61	20/1	SPARE	0.00	62	20/1	SPACE ONLY	0.00
63	20/1	SPARE	0.00	64	20/1	SPACE ONLY	0.00
65	20/1	SPARE	0.00	66	20/1	SPACE ONLY	0.00
67	20/1	SPARE	0.00	68	20/1	SPACE ONLY	0.00
69	40/3	ACOMP-1	6.02	70	20/1	SPACE ONLY	0.00
71	|	|	0.00	72	20/1	SPACE ONLY	0.00
73	|	|	0.00	74	20/1	SPACE ONLY	0.00
75	40/3	ACOMP-2	0.00	76	20/1	SPACE ONLY	0.00
77	|	|	0.00	78	20/1	SPACE ONLY	0.00
79	|	|	0.00	80	30/3	SURGE PROTECTOR	0.00
81	20/1	SPACE ONLY	0.00	82	|	|	
83	20/1	SPACE ONLY	0.00	84	|	|	

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	7.74	100%	13.14	36.47
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	2.29	125%	2.86	7.95
OTHER MOTORS	5.63	100%	5.63	15.64
MISCELLANEOUS	17.87	100%	17.87	49.61
KITCH. APPLIANCES	1.95	100%	1.95	5.41
	40.89		41.46	115.08

PANEL LBW — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION BASEMENT — AMPS 200
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 24,000 — GROUND BUS
FED FROM SWBD L — PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	RECEPTS	0.18	2	20/1	DAS	1.00
3	20/1	RECEPTS	0.90	4	20/1	DAS	1.00
5	20/1	RECEPTS	0.72	6	20/1	RECEPTS	0.36
7	20/1	RECEPTS	0.54	8	20/1	RECEPTS	0.36
9	20/1	RECEPTS	0.72	10	20/1	RECEPTS	0.36
11	20/2	FC-CS-1,2,3,4,5	1.04	12	20/1	RECEPTS	0.36
13	|	|		14	20/1	RECEPTS	0.36
15	20/1	RECEPTS	0.54	16	20/1	RECEPTS	0.36
17	30/2	DRYER	5.00	18	20/1	RECEPTS	0.36
19	|	|		20	20/1	RECEPTS	0.36
21	20/1	WASHER	0.75	22	20/1	RECEPTS	0.36
23	20/2	CS 11	2.00	24	20/1	FAP	1.00
25	|	|		26	20/1	RECEPTS	0.18
27	20/1	RECEPTS	0.36	28	20/1	RECEPTS	0.18
29	20/1	CS-11	0.50	30	20/1	RECEPTS	0.18
31	20/1	RECEPTS	0.18	32	20/1	RECEPTS	0.36
33	20/1	RECEPTS	0.36	34	20/1	RECEPTS	0.18
35	20/1	RECEPTS	0.54	36	20/2	FC-K3-40	0.21
37	20/1	RECEPTS	0.18	38	|	|	
39	20/1	RECEPTS	0.36	40	20/1	CONTROL	0.20
41	20/1	RECEPTS	0.18	42	20/1	ADA	0.50
43	20/1	RECEPTS	0.18	44	20/1	CS-12	0.50
45	20/1	EH-5	0.40	46	40/2	EV CHARGING	7.20
47	20/1	EH-6	0.40	48	|	|	
49	20/1	SMOKE DAMPERS	0.50	50	40/2	EV CHARGING	7.20
51	20/1	SMOKE DAMPERS	0.50	52	|	|	
53	20/1	EF-B1	0.50	54	20/1	RECEPTS	1.00
55	20/1	EF-B2	0.50	56	20/1	RECEPTS	1.00
57	20/1	SPARE	0.00	58	20/1	RECEPTS	1.00
59	20/1	SPARE	0.00	60	20/1	SPARE	0.00
61	20/1	SPACE ONLY	0.00	62	20/1	SPACE ONLY	0.00
63	20/1	SPACE ONLY	0.00	64	20/1	SPACE ONLY	0.00
65	20/1	SPACE ONLY	0.00	66	20/1	SPACE ONLY	0.00
67	20/1	SPACE ONLY	0.00	68	20/1	SPACE ONLY	0.00
69	20/1	SPACE ONLY	0.00	70	20/1	SPACE ONLY	0.00
71	20/1	SPACE ONLY	0.00	72	20/1	SPACE ONLY	0.00
73	20/1	SPACE ONLY	0.00	74	20/1	SPACE ONLY	0.00
75	20/1	SPACE ONLY	0.00	76	20/1	SPACE ONLY	0.00
77	20/1	SPACE ONLY	0.00	78	20/1	SPACE ONLY	0.00
79	20/1	SPACE ONLY	0.00	80	30/3	SURGE PROTECTOR	0.00
81	20/1	SPACE ONLY	0.00	82	|	|	
83	20/1	SPACE ONLY	0.00	84	|	|	

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	10.26	100%	10.26	28.48
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	3.05	100%	3.05	8.46
MISCELLANEOUS	30.85	100%	30.85	85.63
KITCH. APPLIANCES	0.00	100%	0.00	0.00
	44.16		44.16	122.57

PANEL LIE — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 100
MOUNTING FLUSH — MAIN LUGS ONLY
AIC 10,000 — GROUND BUS
FED FROM SWBD L — PROVIDE FLUSH IN WALL SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/2	FC-K2-3,4,5,6,7,8	2.50	2	20/1	RECEPTS	0.36
3	|	|	0.00	4	20/1	RECEPTS	0.36
5	20/2	FC-K4-1,2	0.42	6	20/1	RECEPTS	0.36
7	|	|	0.00	8	20/1	RECEPTS	0.90
9	20/1	RECEPTS	0.36	10	20/1	RECEPTS	0.36
11	20/1	TV	0.50	12	20/1	RECEPTS	0.72
13	20/1	AUTO DOOR	0.50	14	20/1	RECEPTS	0.72
15	20/1	AUTO DOOR	0.50	16	20/1	RECEPTS	0.72
17	20/1	KEY BOX	0.50	18	20/1	RECEPTS	0.72
19	20/2	FC-K3-37,38,39	0.62	20	20/1	RECEPTS	0.72
21	|	|	0.00	22	20/1	RECEPTS	0.72
23	20/2	FC-K11,12	0.42	24	20/1	RECEPTS	0.72
25	|	|	0.00	26	20/1	COPIER	1.00
27	20/2	FC-K4-16,17,18	1.46	28	20/1	COPIER	1.00
29	|	FC-K3-19	0.00	30	20/1	BC-K2	0.20
31	20/2	FC-K4-13,14,15	1.25	32	20/1	BC-K4	0.20
33	|	|	0.00	34	20/1	BC-K3	0.20
35	20/2	FC-K3-9,1-,11,12	0.83	36	20/1	SPARE	0.00
37	|	|	0.00	38	20/1	SPARE	0.00
39	20/1	SPARE	0.00	40	20/1	SPARE	0.00
41	20/1	SPACE ONLY	0.00	42	20/1	SPARE	0.00
43	20/1	SPACE ONLY	0.00	44	20/1	SPACE ONLY	0.00
45	20/1	SPACE ONLY	0.00	46	20/1	SPACE ONLY	0.00
47	20/1	SPACE ONLY	0.00	48	20/1	SPACE ONLY	0.00
49	20/1	SPACE ONLY	0.00	50	20/1	SPACE ONLY	0.00
51	20/1	SPACE ONLY	0.00	52	20/1	SPACE ONLY	0.00
53	20/1	SPACE ONLY	0.00	54	20/1	SPACE ONLY	0.00
55	20/1	SPACE ONLY	0.00	56	20/1	SPACE ONLY	0.00
57	20/1	SPACE ONLY	0.00	58	20/1	SPACE ONLY	0.00
59	20/1	SPACE ONLY	0.00	60	20/1	SPACE ONLY	0.00
61	20/1	SPACE ONLY	0.00	62	20/1	SPACE ONLY	0.00
63	20/1	SPACE ONLY	0.00	64	20/1	SPACE ONLY	0.00
65	20/1	SPACE ONLY	0.00	66	20/1	SPACE ONLY	0.00
67	20/1	SPACE ONLY	0.00	68	20/1	SPACE ONLY	0.00
69	20/1	SPACE ONLY	0.00	70	20/1	SPACE ONLY	0.00
71	20/1	SPACE ONLY	0.00	72	20/1	SPACE ONLY	0.00
73	20/1	SPACE ONLY	0.00	74	20/1	SPACE ONLY	0.00
75	20/1	SPACE ONLY	0.00	76	20/1	SPACE ONLY	0.00
77	20/1	SPACE ONLY	0.00	78	20/1	SPACE ONLY	0.00
79	20/1	SPACE ONLY	0.00	80	30/3	SURGE PROTECTOR	0.00
81	20/1	SPACE ONLY	0.00	82	|	|	
83	20/1	SPACE ONLY	0.00	84	|	|	

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	19.82	100%	19.82	55.02
HEATING	0.00	100%	0.00	0.00
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	8.08	100%	8.08	22.43
MISCELLANEOUS	4.00	100%	4.00	11.10
KITCH. APPLIANCES	0.00	100%	0.00	0.00

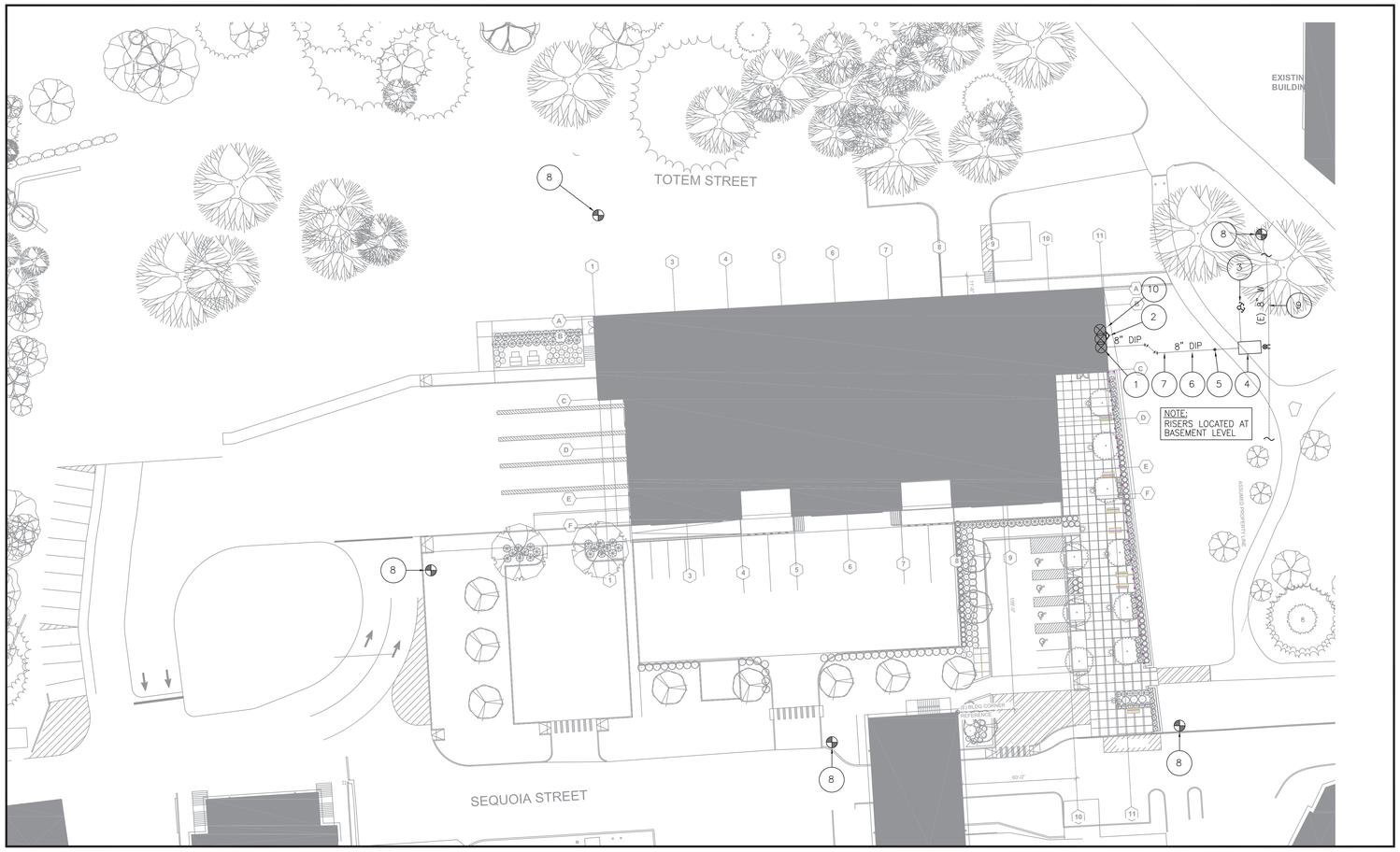
PANEL LIW — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 200
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 14,000 — GROUND BUS
FED FROM SWBD L — PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	AUTO DOOR	0.50	2	20/1	RECEPTS	0.90
3	20/1	AUTO DOOR	0.50	4	20/1	AUTO DOOR	0.50
5	20/1	LOCK BOX	0.50	6	20/1	RECEPTS	0.36
7	20/1	RECEPTS	0.36	8	20/1	RECEPTS	0.72
9	20/1	RECEPTS	0.36	10	20/1	RECEPTS	1.44
11	20/1	MICROWAVE	1.00	12	20/1	RECEPTS	1.44
13	20/1	RECEPTS	0.36	14	20/1	COPIER	1.00
15	20/1	RECEPTS	0.36	16	20/1	RECEPTS	0.54
17	20/1	RECEPTS	0.36	18	20/1	RECEPTS	0.72
19	20/1	RECEPTS	0.36	20	20/1	RECEPTS	0.72
21	20/1	RECEPTS	0.36	22	20/1	COPIER	1.00
23	20/1	RECEPTS	0.36	24	20/1	RECEPTS	0.72
25	20/1	RECEPTS	0.36	26	20/1	RECEPTS	0.36
27	20/1	RECEPTS	0.36	28	20/1	RECEPTS	0.54
29	20/1	RECEPTS	0.36	30	20/1	CHARGER	1.00
31	20/1	AUTO DOOR	0.50	32	20/1	RECEPTS	0.36
33	20/1	RECEPTS	0.36	34	20/2	FC-K2-22	1.25
35	20/1	RECEPTS	0.72	36	|	|	0.00
37	20/1	RECEPTS	0.72	38	20/2	FC-K2-21	1.25
39	20/2	EH-1	2.00	40	|	|	0.00
41	|	|	0.00	42	20/2	FC-K2-20	1.25
43	20/1	EF-W1	0.35	44	|	|	0.00
45	20/2	FC-K2-35,36	0.42	46	20/1	PF-1	0.50
47	|	|	0.00	48	20/1	PF-2	0.50
49	20/2	FC-K-1,2,3,4,5	1.04	50	20/2	FC-K4-21,22	2.50
51	|	|	0.00	52	|	|	
53	20/2	FC-K6,7,8,9,10	1.04	54	20/2	FC-K4-20	1.25
55	|	|	0.00	56	|	|	
57	20/1	SIGN LIGHTS	0.00	58	20/1	SPARE	0.00
59	20/1	SIGN LIGHTS	0.00	60	20/1	SPARE	0.00
61	20/1	GARAGE DOOR	0.00	62	20/1	SPACE ONLY	0.00
63	20/1	GARAGE DOOR	0.00	64	20/1	SPACE ONLY	0.00
65	20/1	GARAGE DOOR	0.00	66	20/1	SPACE ONLY	0.00
67	20/1	GARAGE DOOR	0.00	68	20/1	SPACE ONLY	0.00
69	20/1	GARAGE DOOR	0.00	70	20/1	SPACE ONLY	0.00
71	20/1	SPARE	0.00	72	20/1	SPACE ONLY	0.00
73	20/1	SPARE	0.00	74	20/1	SPACE ONLY	0.00
75	20/1	SPARE	0.00	76	20/1	SPACE ONLY	0.00
77	20/1	SPARE	0.00	78	20/1	SPACE ONLY	0.00
79	20/1	SPARE	0.00	80	30/3	SURGE PROTECTOR	0.00
81	20/1	SPARE	0.00	82	|	|	
83	20/1	SPARE	0.00	84	|	|	

CONNECTED LOAD	KVA	DEMAND FACTOR	DEMAND LOAD KVA	AMPS
LIGHTS	0.00	125%	0.00	0.00
RECEPTACLES	15.30	100%	15.30	42.47
HEATING	2.00	100%	2.00	5.55
LARGEST MOTOR	0.00	125%	0.00	0.00
OTHER MOTORS	11.34	100%	11.34	31.47
MISCELLANEOUS	5.50	100%	5.50	15.27
KITCH. APPLIANCES	1.00	100%	1.00	2.78
	35.14		35.14	97.53

PANEL L2E — VOLTS 208 /120 — 3 PHASE, 4 WIRE, WYE
LOCATION — AMPS 200
MOUNTING SURFACE — MAIN LUGS ONLY
AIC 10,000 — GROUND BUS
FED FROM SWBD L — PROVIDE SURGE PROTECTOR

CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA	CCT NO.	CCT BRKR	DESCRIPTION	LOAD KVA
1	20/1	RECEPTS	1.26	2	20/1	RECEPTS	0.18
3	20/1	RECEPTS	1.44	4	20/1	MICROWAVE	1.00
5	20/1	RECEPTS	0.72	6	20/1	RECEPTS	0.36
7	20/1	EF-P3	0.35	8	20/1	REFRIDGE	0.75
9	20/2	AC-B05B	5.20	10	20/1	GFI VENDING	1.00
11	|	|



1 FIRELINE REFERENCE PLAN

SCALE: 1" = 40'-0"

SITE PLAN NOTE:

ALL UNDERGROUND WATER/FIRELINE PIPING IS FOR REFERENCE ONLY. REFER TO CIVIL UTILITIES PLANS FOR ADDITIONAL INFORMATION.

KEYNOTES:

1. FIRE RISERS (REFER TO FP4.0 FOR DETAIL)
2. HORN/STROBE (WIRED BY ELEC. CONTR.)
3. 6" x 2½" x 2½" FIRE DEPT. CONN (NST) w/ 6" CHECK VALVE & ½" AUTO. BALL DRIP VALVE
4. DDCVA IN VAULT.
5. POST INDICATOR VALVE
6. ON-SITE WATER MAIN
7. 36" MINIMUM BURY (DEPTH PER NFPA #13.)
8. FIRE HYDRANT
9. EXISTING 8" WATER MAIN
10. SYSTEM(S) MAIN DRAIN (REFER TO FLOOR PLANS & RISER DETAIL FOR FURTHER INFORMATION.

NRG FIRE CONSULTING

Fire Flow Report

Test Hydrant Information

Location		Date	Time
WSH		12.12.16	11am
(Sketch of Hydrants Located on Back)		Person Conducting Test	
		Sean Pisoni - NRG	

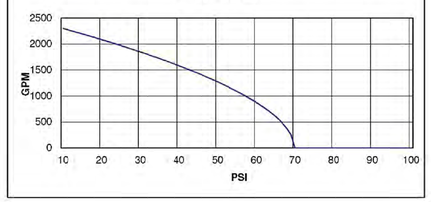
Legend	
Q_f	Flow in GPM
C_d	Friction loss Coefficient
D	diameter of opening in inches
P_p	Pressure on Pitot in psi
Q_t	Fire flow in GPM at 20psi
P_s	Static Pressure in psi
P_r	Residual Pressure in psi

Fire Flow @ 20psi	Fire Flow @ 10psi
2,083	2,299

Static Pressure	Residual Pressure
70	55

Hyd #	Port #	D	C_d	P_p	Q_t
1	1	2.5	0.9	42	1087
	2	2.5	0.9		0
2	1	2.5	0.9		0
	2	2.5	0.9		0
3	1	2.5	0.9		0
	2	2.5	0.9		0
				Total GPMs flowed in test:	1087

Total Fire Flow



12/12/2016

GENERAL NOTES

1. SPRINKLER PLANS ARE SCHEMATIC AND SHALL NOT BE MEANT TO CONVEY OR ALLOW DISCREPANCY BETWEEN THE WORK ILLUSTRATED HEREIN AND ALL APPLICABLE CODES, PLANS, AND ORDINANCES. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO VERIFY ACTUAL CONDITIONS OF CONSTRUCTION AND TO MAINTAIN CONFORMANCE TO THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO BID.
2. ALL INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NFPA 13, THE AUTHORITIES HAVING JURISDICTION, THE OWNER'S INSURANCE CARRIER AND DESIGN STANDARDS. THE TRUSS MANUFACTURER AND STRUCTURAL ENGINEER, AND THE OWNERS REVIEWING CONSULTANT.
3. ALL MATERIALS USED SHALL BE UL LISTED AND APPROVED.
4. SYSTEMS SHALL BE MONITORED BY AN OFF SITE CENTRAL STATION.
5. INSTALLATION AND FABRICATION SHALL NOT COMMENCE UNTIL PLANS AND CALCULATIONS ARE APPROVED BY ALL AUTHORITIES MENTIONED ABOVE.
6. AT VARIOUS STAGES, AND/OR UPON COMPLETION, THE SYSTEMS MUST BE TESTED IN THE PRESENCE OF THE ENFORCING AGENCY.
7. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED WITH AN APPROVED MATERIAL AS PRESCRIBED BY THE AHJ.
8. ALL HANGER TYPES, SIZES, AND METHODS OF ATTACHMENT MUST MEET REQUIREMENTS OF REVIEWING AUTHORITIES MENTIONED ABOVE.
9. SEE FIRE SPRINKLER SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION.
10. SPRINKLER CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, SPRINKLER CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND SPRINKLER CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OR WORK ON THIS PROJECT.
11. CAUTION: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE SUBMITTED IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS. ALL CUT LENGTHS, HANGER TYPES, HANGER LENGTHS, PIPE ROUTING, PIPE ELEVATIONS, AND EXACT HEAD LOCATIONS SHOWN MUST BE FIELD VERIFIED BY THE SPRINKLER CONTRACTOR.
12. THE ENGINEER OF DESIGN SHALL NOT BE RESPONSIBLE FOR THE SPRINKER CONTRACTORS' FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NOR SHALL HE BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK OR THE CONSTRUCTION PROCEDURES FOLLOWED BY THE CONTRACTOR, OR SUBCONTRACTORS, OR THEIR RESPECTIVE EMPLOYEES OR BY ANY OTHER PERSON AT THE JOB SITE OTHER THAN THAT OF THE ENGINEERING FIRM'S EMPLOYEES.
13. OVERHEAD SPRINKLER MAINS THAT ARE SHOWN ON THESE DRAWINGS HAVE BEEN COORDINATED WITH STRUCTURAL AND HVAC ENGINEERS, AND CANNOT BE MOVED FROM THEIR SHOWN LOCATION. THE SPRINKLER CONTRACTOR IS RESPONSIBLE TO PROVIDE FINAL MAIN LOCATION DRAWINGS TO TELGIAN FOR FINAL NRG FIRE APPROVAL. ANY LOCATION CHANGES WILL BE DETERMINED AT THAT TIME. FINAL SPRINKLER CONTRACTOR DRAWINGS MUST BE SUBMITTED TO TELGIAN FOR REVIEW AND APPROVAL, PRIOR TO SUBMITTAL TO THE AHJ.
14. OVERHEAD BRANCH-LINE PIPING SHALL BE INSTALLED INSIDE TRUSSES. PIPING MUST BE COORDINATED AROUND FRAMING MEMBERS, AND PROPERLY INSTALLED; MAIN PIPING SHALL BE TIGHT TO BOTTOM CHORD OF BEAMS OR INSTALLED WITHIN TRUSSES IF POSSIBLE.
15. FIRE SPRINKLER SHOP DRAWINGS, WITH DETAILS SHOWING HANGERS, FASTENERS, AND ATTACHMENT METHODS AND SIZES, SHALL BE SUBMITTED TO THE TRUSS MANUFACTURER AND STRUCTURAL ENGINEER FOR APPROVAL. A LETTER OF APPROVAL SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO FINAL ACCEPTANCE BY OWNER. THE DETAILS SHALL INCLUDE ALL HANGERS AND EARTHQUAKE BRACING ATTACHMENTS.
16. IT IS THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THE BID SPECIFICATION DOCUMENTS, AND TO BRING ANY POTENTIAL CONFLICTS TO THE ATTENTION OF THE ARCHITECT PRIOR TO BID.
17. SPRINKLER CONTRACTOR TO ALLOW FOR ADDITIONAL SPRINKLERS AROUND MECHANICAL UNITS, ROOF OPENINGS, OR OTHER OBSTRUCTIONS AT BID TIME. COORDINATE PIPING WITH ALL OTHER TRADES. REVIEW ALL DRAWINGS.
18. ALL PERMITS ARE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR.
19. SCH-10/SCH-40 PIPING HAS BEEN USED IN HYDRAULIC CALCULATIONS; ALL PIPING SHALL BE BLACK STEEL, PREPARED FOR PAINTING. RUSTED, DENTED, OR OTHERWISE DAMAGED PIPING WILL NOT BE ACCEPTABLE. PIPING INSTALLED SHALL HAVE A CRR FACTOR OF 1.0 OR GREATER AND WILL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO PROVIDE AND ENSURE THIS OWNER REQUIREMENT.
20. FLUSH CONNECTIONS SHALL BE PROVIDED PER NFPA 13.
21. ALL DEFLECTOR DISTANCE REQUIREMENTS OF NFPA 13 MUST BE COMPLIED WITH.
22. CRIMP TYPE INSTALLATIONS ARE NOT ACCEPTABLE.
23. THE SPRINKLER CONTRACTOR SHALL COORDINATE ALL SITE INFORMATION WITH ARCHITECT AND CIVIL ENGINEER.
24. THE SPRINKLER CONTRACTOR SHALL PROVIDE SEISMIC BRACING CALCULATIONS PER THE ADOPTED BUILDING CODE. SEISMIC BRACING IS DEEMED REQUIRED PER THE BUILDING CODE. SEISMIC BRACING LOCATIONS SHALL FOLLOW THE REQUIREMENTS OF NFPA AT A MINIMUM. THE SPRINKLER CONTRACTOR MUST TAKE INTO ACCOUNT THE LIMITATIONS OF THE STRUCTURAL ELEMENTS PRIOR TO SIZING AND/OR LOCATING SEISMIC ASSEMBLIES ON THEIR PLANS. STRUCTURAL REQUIREMENTS MAY BE MORE STRINGENT THAN THAT REQUIRED BY NFPA. FAILURE OF THE SPRINKLER CONTRACTOR TO ACCOUNT FOR THE LIMITATIONS OF THE STRUCTURE AS IT RELATED TO CODE AND IN PROPER SIZING OF THE SEISMIC BRACING DOES NOT CONSTITUTE A COST ASSOCIATED TO THE OWNER. THE SPRINKLER CONTRACTOR SHALL BURDEN THIS AND ANY ASSOCIATED COST IN ORDER TO BE CODE AND OWNER COMPLIANT, NO EXCEPTIONS.
25. SPRINKLER CONTRACTOR TO PROVIDE AND PLACE IN RISER AREA COLOR CODED SPRINKLER ZONE MAP FOR PROJECT PRIOR TO TURNOVER TO OWNER.
26. ALL DRY SYSTEM DRUM DRIPS SHALL BE INSTALLED IN INTERIOR CLIMATE CONTROLLED SPACES TO PREVENT PIPING FROM FREEZING.

CONSTRUCTION NOTES:

THESE DRAWINGS ARE FOR COORDINATION AND BIDDING USE ONLY. THEY ARE NOT FOR SUBMITTAL, FABRICATION OR INSTALLATION PURPOSES. SPRINKLER CONTRACTOR TO PROVIDE COMPLETE DRAWINGS WITH HYDRAULIC CALCULATIONS TO LOCAL AHJ AND OWNERS CONSULTANT FOR REVIEW. SUBMITTAL DRAWINGS TO BE UNDER SEAL BY AN ENGINEER LICENSED TO PRACTICE LOCALLY.

INSTALLING CONTRACTOR SHALL VERIFY THE OWNERS CERTIFICATE AND APPLICATION OF DESIGN DENSITY.

THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR HYDRAULIC CALCULATIONS PER OWNER REQUIREMENTS, REGARDLESS IF THE AHJ DOES NOT REQUIRE. NO EXCEPTIONS.

SPRINKLER CONTRACTOR TO VERIFY THE APPLICATION OF SPRINKLER TYPES WITH CONSTRUCTION ELEMENTS & OBSTRUCTIONS TO DISCHARGE SUCH AS LIGHTING, MECHANICAL, ETC.

SPRINKLER CONTRACTOR IS RESPONSIBLE TO SIZE SYSTEM PIPING PER HYDRAULIC CALCULATIONS. NO EXCEPTIONS.

SPRINKLER CONTRACTOR IS RESPONSIBLE FOR SEISMIC DESIGN, CALCULATIONS AND INSTALLATION. NO EXCEPTIONS.

FLOW TEST SUMMARY

STATIC PSI	70
RESIDUAL PSI	55
PITOT PSI	42
ORIFICE DIAMETER	2.5"
COEFFICIENT OF DISCHARGE	.9
GPM	1087
DATE:	DEC. 12TH, 2016 @ 11:00AM
LOCATION:	ON SITE - SEQUOIA ST., DIRECTLY ADJACENT TO SITE
CONDUCTED BY:	NRG FIRE CONSULTING

NOTE: INSTALLING CONTRACTOR TO IMPLEMENT A THE GREATER OF A 10% SAFETY FACTOR OR THOSE REQUIRED BY THE LOCAL A.H.J.

FIRE PROTECTION SYMBOLS & ABBREVIATIONS

	FIRE HYDRANT
	FIRE SPRINKLER RISER
	CODE APPROVED PIPE SLEEVE WITH CAULKING COMMENSURATE WITH CONSTRUCTION
	2-WAY EARTHQUAKE SWAY BRACE
	4-WAY EARTHQUAKE SWAY BRACE
	BRANCH LINE RESTRAINT
	RISER CLAMP ATTACHED TO WALL
	GROOVED FLEXIBLE COUPLING
	BRANCH LINE RISER NIPPLE ON MAIN
	PRESSURE GAUGE (0-300 PSI)
	SPARE SPRINKLER CABINET W/ STOCK OF SPRINKLERS AND WRENCHES PER NFPA-13
Elev Plan	ELECTRIC ALARM BELL - WIRING BY ELECT./ALARM CONTRACTOR - VERIFY REQUIRED VOLTAGE
	4-WAY SIAMESE FIRE DEPARTMENT CONNECTION
	SPRINKLER PIPE
	PIPE HANGER ON PIPE IT SUPPORTS
	2½" FIRE HOSE VALVE w/ CAP & CHAIN
F.D.C.	FIRE DEPARTMENT CONNECTION
R.A.	HYDRAULICALLY MOST REMOTE AREA OF SPRINKLER OPERATION
B.F.P.	BACKFLOW ASSEMBLY

SHEET INDEX

FP1.00	FIRE SPRINKLER COVER SHEET/FIRELINE REFERENCE PLAN
FP2.00	FIRE SPRINKLER PLAN BASEMENT & SECOND LEVEL
FP2.01	FIRE SPRINKLER PLAN FIRST LEVEL
FP3.00	FIRE SPRINKLER DETAILS
FP4.00	FIRE SPRINKLER DETAILS/BRACING

BIDDING NOTE

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APPLICABLE BUILDING CODES

INTERNATIONAL BUILDING CODE:	2015 EDITION
N.F.P.A. 13	2013 EDITION

SYSTEM(S) DESIGN CRITERIA

RECIEVING & STORAGE AREA:
.39 GPM/2,000 SQ. FT., 100 SQUARE FOOT MAX SPACING, 100 GPM INSIDE HOSE PROVISION AND 400 OUTSIDE HOSE PROVISION, PER 2013 NFPA 13, SECTION/TABLE 16.2.1.3.3.2 WITH FIGURE 16.2.1.3.2(D) CURVE C TO PROTECT A CLASS I-IV COMMODITY ON MULTIPLE ROW RACKS (NO SOLID SHELVES), WITH RACK DEPTH OVER 16-FT. OR ASLES NARROWER THAN 8-FT, 14-FT HIGH NON-ENCAPSULATED STORAGE WITH 200 DEGREE SPRINKLERS. GROUP "A" PLASTIC COMMODITIES ARE LIMITED TO A STORAGE HEIGHT OF 5-FT.

MECH/COOLERS/FREEZERS/MISC. STORAGE/PRODUCTION ASSEMBLY/SANITIATION/DOCKS:
,20/1,500, 130 SQUARE FEET MAX SPACING, 100 GPM INSIDE HOSE PROVISION & 150 GPM OUTSIDE HOSE PROVISION. ORDINARY HAZARD GROUP II PER NFPA 13. (NOTE: DRY SYSTEM KITCHEN DOCK AREA IS LIMITED TO ±375 SQUARE FEET. AN INCREASE IN AREA IS NOT REQUIRED).

SNACK PREP/DECONTAMINATION/PREP, ASSEMBLY/ DECONTAMINATION:
.15/1,500, 130 SQUARE FEET MAX SPACING, 100 GPM INSIDE HOSE PROVISION & 150 GPM OUTSIDE HOSE PROVISION. ORDINARY HAZARD GROUP II PER NFPA 13.

ENTRY/LOUNGE/OFFICE/RESTROOMS/LOCKERS/CORRIDORS:
.10/1,500, 225 SQUARE FEET MAX SPACING, 100 GPM HOSE PROVISION. LIGHT HAZARD PER NFPA 13.

NOTE: CONTRACTOR SHALL ENSURE HYDRAULICALLY MOST DEMANDING CALCULATIONS PER EACH SYSTEM AS THE HYDRAULICALLY MOST DEMANDING AREA MAY NOT BE THE PHYSICALLY MOST REMOTE. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 13, 2013 EDITION SECTIONS 23.4.4.1.1.4 AND 23.4.4.1.1.5 PER OWNER REQUIREMENTS REGARDLESS OF ADOPTED REFERENCED NFPA 13 EDITION.

REVISIONS

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BUILDING 22, PATIENT SUPPORT CENTER

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9601 STELLACOOM BLVD SW, LAKEWOOD, WASHINGTON 98498-7213

5790 REGISTERED ARCHITECT
STEVEN M. SHIVER
STATE OF WASHINGTON

NAC ARCHITECTURE
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SEATTLE WA 98121
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DSHS NO	16-410G (2-1)
NAC NO	121-16004
DRAWN	TW/GM
CHECKED	GM
DATE	3/16/2018

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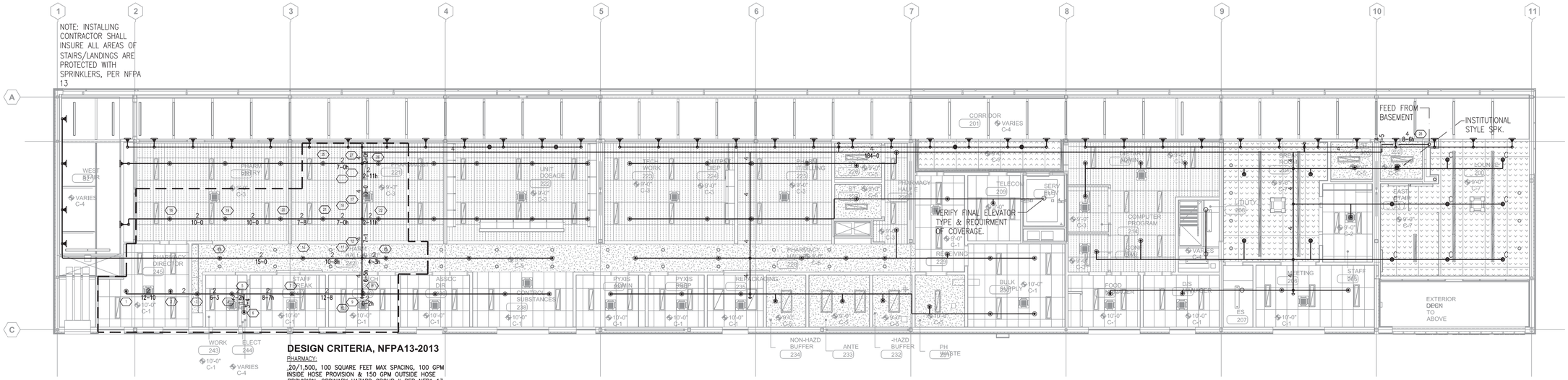
FIRE SPRINKLER COVER / FIRELINE REFERENCE PLAN

FP1.00



DESIGN CRITERIA, NFPA13-2013

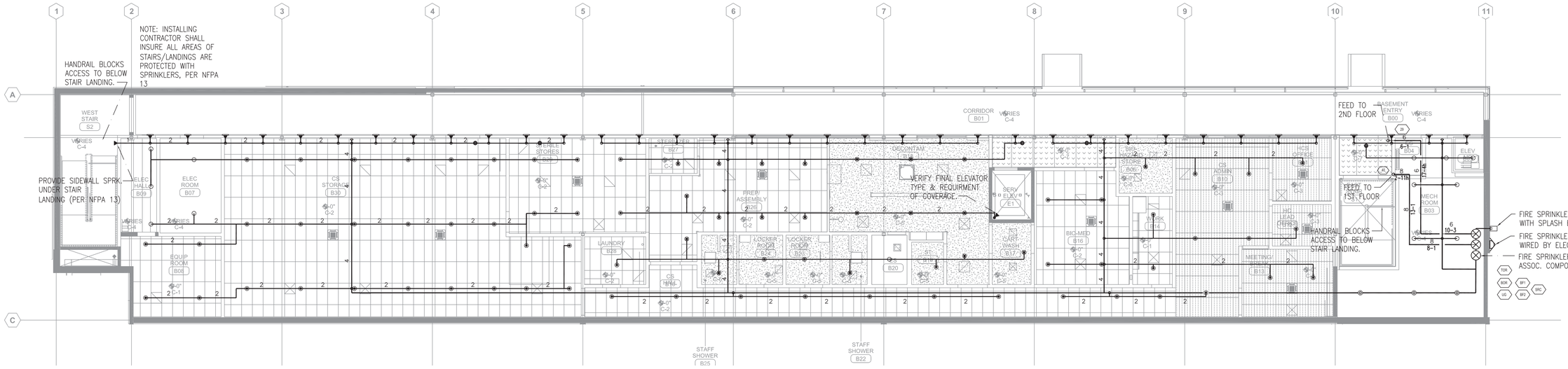
PHARMACY:

.20/1,500, 100 SQUARE FEET MAX SPACING, 100 GPM INSIDE HOSE PROVISION & 150 GPM OUTSIDE HOSE PROVISION. ORDINARY HAZARD GROUP II PER NFPA 13.

REMOTE HYDRAULIC AREA FOR REFERENCE ONLY

2 FIRE SPRINKLER PLAN SECOND LEVEL

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



1 FIRE SPRINKLER PLAN BASEMENT LEVEL

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

DESIGN CRITERIA, NFPA13-2013

RECIEVING & STORAGE AREA:

.39 GPM/2,000 SQ. FT., 100 SQUARE FOOT MAX SPACING, 100 GPM INSIDE HOSE PROVISION AND 400 OUTSIDE HOSE PROVISION. PER 2013 NFPA 13, SECTION/TABLE 16.2.1.3.3.2 WITH FIGURE 16.2.1.3.2(D) CURVE C TO PROTECT A CLASS I–IV COMMODITY ON MULTIPLE ROW RACKS (NO SOLID SHELVES), WITH RACK DEPTH OVER 16–FT. OR AISLES NARROWER THAN 8–FT, 14–FT HIGH NON–ENCAPSULATED STORAGE WITH 200 DEGREE SPRINKLERS. GROUP "A" PLASTIC COMMODITIES ARE LIMITED TO A STORAGE HEIGHT OF 5–FT.

PHARMACY MECH/COOLERS/FREEZERS/MISC. STORAGE/PRODUCTION ASSEMBLY/SANITIATION/DOCKS:

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NOTE: CONTRACTOR SHALL ENSURE HYDRAULICALLY MOST DEMANDING CALCULATIONS PER EACH SYSTEM AS THE HYDRAULICALLY MOST DEMANDING AREA MAY NOT BE THE PHYSICALLY MOST REMOTE. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 13, 2013 EDITION SECTIONS 23.4.4.1.1.4 AND 23.4.4.1.1.5 PER OWNER REQUIREMENTS REGARDLESS OF ADOPTED REFERENCED NFPA 13 EDITION.

SPRINKLER SCHEDULE

	DESCRIPTION	SPECIFICATIONS MANUF.	MODEL	FINISH	TEMP	K FACTOR	ESCUTCHEON STYLE	REMARKS	QTY.
○	UPRIGHT	VIKING	VK300	BRNZ	155°	5.6	NA		TBD
◎	UPRIGHT	VIKING	VK300	BRNZ	155°	5.6	NA	ON SPRIG	TBD
◉	RECESSED PENDENT	VIKING	VK302	CHRM	155°	5.6	REC.		TBD
◉	RECESSED PENDENT	VIKING	VK302	WHT POLY	155°	5.6	WHT POLY		TBD
⊗	UPRIGHT	VIKING	VK536	BRNZ	286°	11.2	NA		TBD
●	CONCEALED PENDENT	VIKING	VK462	CHRM	155°	5.6	CONCEALED	"REFERENCE ARCHITECTURAL PLANS"	TBD
●*	CONCEALED PENDENT	VIKING	VK462	*CUSTOM	155°	5.6	CONCEALED	"REFERENCE ARCHITECTURAL PLANS"	TBD
◀	SIDEWALL	VIKING	VK104	BRNZ	155°	5.6	NA		TBD
◀	CONCEALED SIDEWALL	VIKING	VK481	CHRM	165°	5.6	CONCEALED	"REFERENCE ARCHITECTURAL PLANS"	TBD
EC ◀	SIDEWALL	TYCO	TY5339	BRNZ	155°	11.2	STANDARD		TBD
◆	DRY PENDENT	VIKING	VK482	WHT POLY	205°	5.6	WHT POLY		TBD
⊛	INSTITUTIONAL PENDENT	TYCO	TY3281	WHITE	155°	5.6	INSTITUTIONAL		TBD
								TOTAL THIS SHEET	TBD

* COORDINATE CUSTOM SPRINKLER FINISHES WITH ARCHITECT.

BIDDING NOTE

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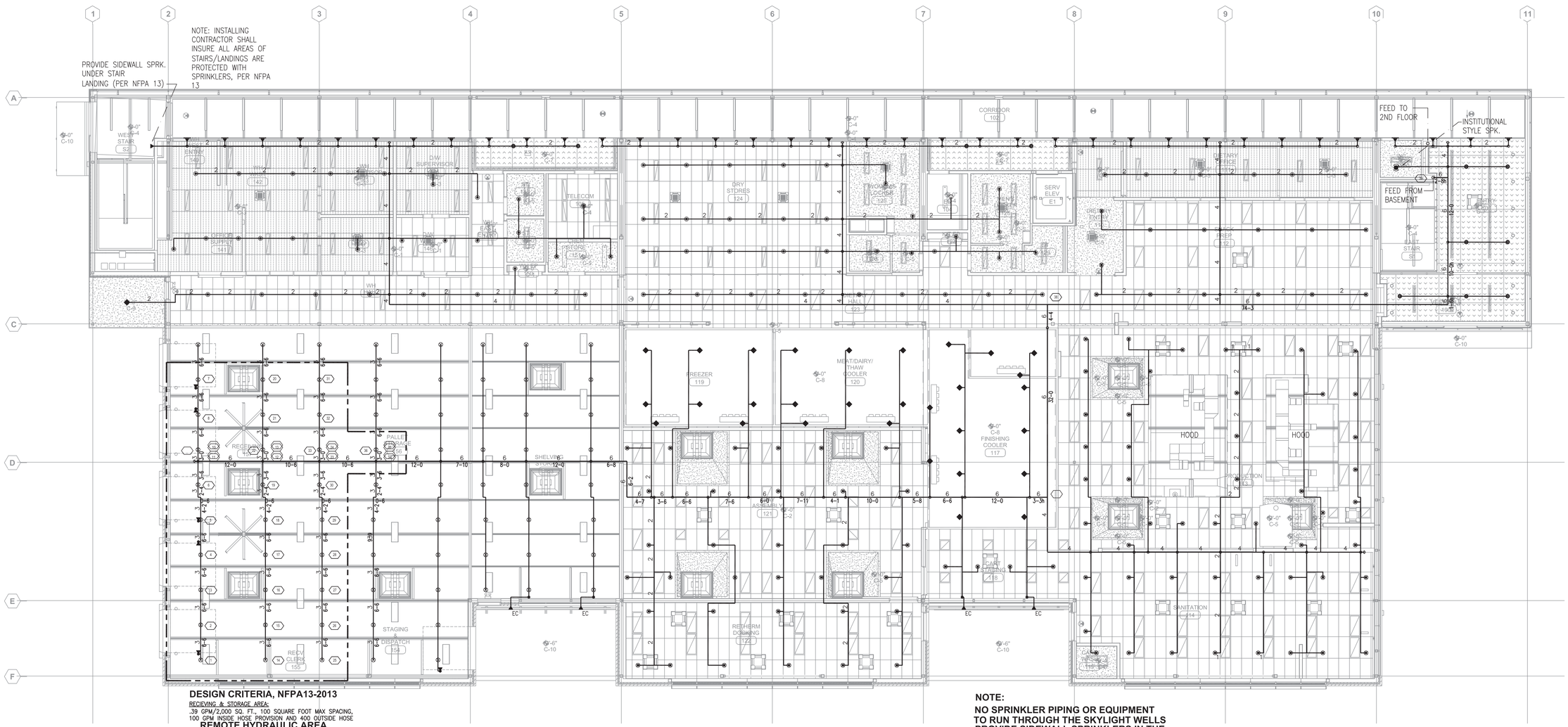
DSHS NO	16-410G (2-1)
NAC NO	121-16004
DRAWN	TW/GM
CHECKED	GM
DATE	3/16/2018

FIRE SPRINKLER BASEMENT & SECOND LEVEL PLAN

FP2.00


PROVIDE SIDEWALL SPRK. UNDER STAIR LANDING (PER NFPA 13)
NOTE: INSTALLING CONTRACTOR SHALL INSURE ALL AREAS OF STAIRS/LANDINGS ARE PROTECTED WITH SPRINKLERS, PER NFPA 13
FEED TO 2ND FLOOR
INSTITUTIONAL STYLE SPK.
FEED FROM BASEMENT
CORRIDOR 102
DRY STORES 124
FREEZER 119
MEAT/DAIRY/ THAW COOLER 120
FINISHING COOLER 117
HOOD
HOOD
PRODUCTION 113
SANITATION 114
DIETARY OFFICE 112
DIETARY ENTRY 111
SERV ELEV E1
MEN'S LOCKER 108
WOMEN'S LOCKER 125
MEN'S HALL 123
PALLET STORAGE 156
SHELVING STOR. 157
STAGING 153
DISPATCH 154
RECV. CLERK 155
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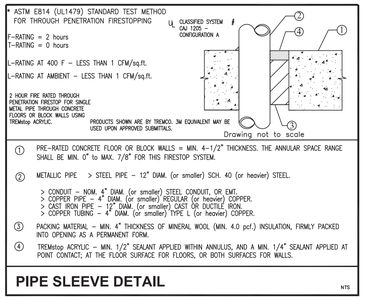

PIPE SLEEVE DETAIL

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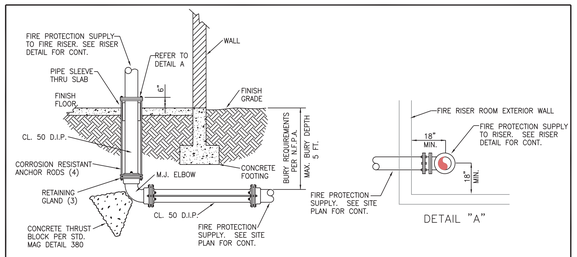


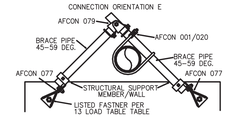
UNDERGROUND STUB UP DETAIL

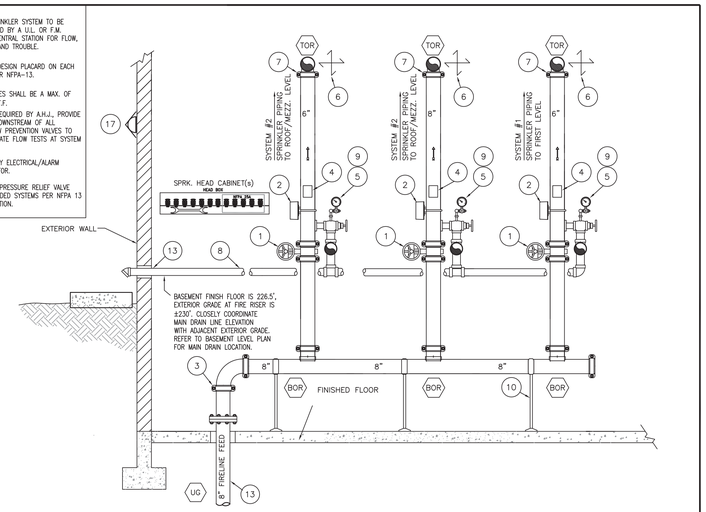
KEY	QTY	DESCRIPTION
①	1	GROOVED CONTROL VALVE w/ TAMPER SWITCH
②	1*	FLOW SWITCH
③	TYP.	FLEXIBLE COUPLING
④	1	HYDRAULIC CALCULATION PLATE
⑤	6	300 PSI GAUGE(s)
⑥	3	4-WAY BRACING SECURED TO STRUCTURE
⑦	TYP.	GROOVED ELBOW
⑧	1	2" MAIN DRAIN WITH SPLASH BLOCK
⑨	1	2" MAIN DRAIN ANGLE VALVE w/ PRESSURE RELIEF VALVE
⑩	1	PIPE STAND (SECURED TO CONCRETE FLOOR)
⑪	3	2½" HOSE VALVE CONNECTIONS FOR FULL FORWARD TEST
⑫	1	CONCRETE SPLASH BLOCK
⑬	1	REFER TO PENETRATION DETAILS.
⑭	1	FIRE DEPT. CONNECTION SUPPLY
⑮	1	SPARE SPRINKLER BOX PROVIDE WRENCH FOR EACH TYPE AND OPERATIONS AND MAINTENANCE MANUAL. CURRENT EDITION
⑯	1	BACKFLOW PREVENTION ASSEMBLY
⑰	1	ELECTRIC FIRE BELL

NOTES
1. FIRE SPRINKLER SYSTEM TO BE MONITORED BY A U.L. OR F.M. LISTED CENTRAL STATION FOR FLOW, TAMPER AND TROUBLE.
2. INSTALL DESIGN PLACARD ON EACH RISER PER NFPA-13.
3. ALL VALVES SHALL BE A MAX. OF 7'-0" A.F.F.
4. WHERE REQUIRED BY A.H.J., PROVIDE MEANS DOWNSTREAM OF ALL BACKFLOW PREVENTION VALVES TO ACCOMODATE FLOW TESTS AT SYSTEM DEMAND.

*WIRED BY ELECTRICAL/ALARM CONTRACTOR.

PROVIDE PRESSURE RELIEF VALVE FOR GRIDDED SYSTEMS PER NFPA 13 2010 EDITION.





FIRE RISER DETAIL

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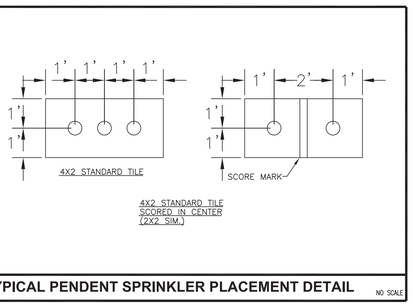
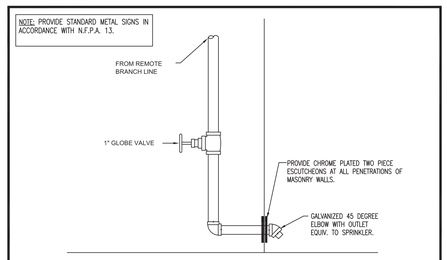


TYPICAL PENDENT SPRINKLER PLACEMENT DETAIL

NO SCALE



INSP. TEST DETAIL

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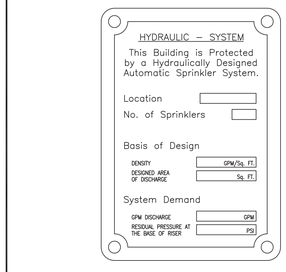
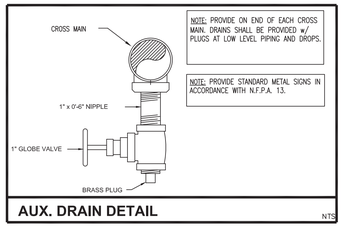


SAMPLE HYDRAULIC DESIGN PLACARD

NTS



AUX. DRAIN DETAIL

NTS

TABLE 4-5.2.2.1 MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN.)

NOMINAL PIPE SIZE (IN)	3/4	1	11/4	11/2	2	21/2	4	6	8
STEEL PIPE	N/A	12–0	12–0	15–0	15–0	15–0	15–0	15–0	15–0
THREADED LIGHTWALL	N/A	12–0	12–0	12–0	12–0	12–0	N/A	N/A	N/A
COPPER TUBE	8–0	8–0	10–0	10–0	12–0	12–0	15–0	15–0	15–0
CPVC	5–6	6–0	6–6	7–0	8–0	9–0	N/A	N/A	N/A

FIGURE A-4-5.2.3 DISTANCE FROM SPRINKLER TO HANGER

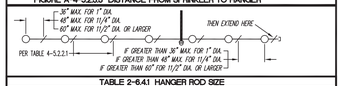
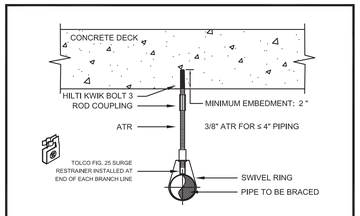


TABLE 2-6.4.1 HANGER ROD SIZE

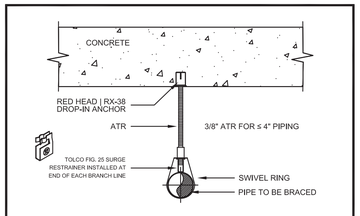
PIPE SIZE	DIAMETER OF ROD	PIPE SIZE	DIAMETER OF ROD
4" AND LESS	3/8"	6" AND 8"	1/2"



HANGER - CONCRETE
(FOR 4" PIPE AND SMALLER)

HANGER DETAIL

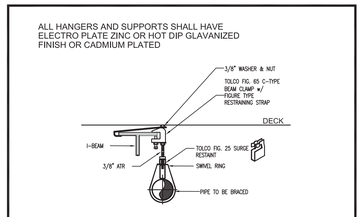
NTS



HANGER - CONCRETE
(FOR 4" PIPE AND SMALLER)

HANGER DETAIL

NTS



HANGER - BEAM / JOIST
(FOR 4" PIPE AND SMALLER)

HANGER DETAIL

NTS

BIDDING NOTE

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DATE	3/16/2018

FIRE SPRINKLER DETAILS

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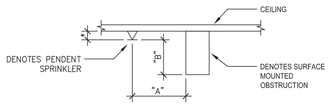


FIGURE A

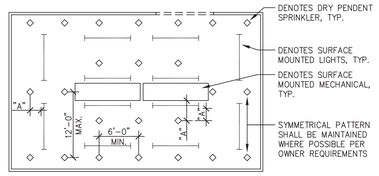
* SEE DETAILS FOR OWNER REQUIRED DEFLECTOR DISTANCE BELOW CEILING, TYP.

TABLE A

DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTIONS "A"	MAX. ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION "B"
LESS THAN 1'-0"	(ZERO) 0"
1'-0" TO LESS THAN 1'-6"	2.5"
1'-6" TO LESS THAN 2'-0"	3.5"
2'-0" TO LESS THAN 2'-6"	5.5"
2'-6" TO LESS THAN 3'-0"	7.5"
3'-0" TO LESS THAN 3'-6"	9.5"
3'-6" TO LESS THAN 4'-0"	12"
4'-0" TO LESS THAN 4'-6"	14"
4'-6" TO LESS THAN 5'-0"	16.5"
5'-0" AND GREATER	18"

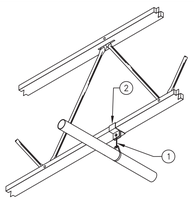
NOTES:

- MAXIMUM SPRINKLER COVERAGE OF 100 SQ.-FT, INCLUDING SPACING WITH REGARDS TO OBSTRUCTIONS FOR HIGH RACK FREEZERS/COOLERS,
- MAXIMUM SPACING OF 12-FT BETWEEN SPRINKLERS, INCLUDING SPACING WITH REGARDS TO OBSTRUCTIONS FOR HIGH RACK FREEZERS/COOLERS.
- MINIMUM OF 6-FT BETWEEN SPRINKLERS, UNLESS SPRINKLERS ARE OBSTRUCTED, SEE POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION DISCHARGE (SSU/SSP), TYP.
- SPACING OF SPRINKLERS SHALL BE TO EDGE OF SURFACE MOUNTED FIXTURES PER NFPA 13, SEE POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION DISCHARGE (SSU/SSP), TYP.
- ACTUAL AREA, ROOM SIZE AND SPRINKLER LOCATIONS MAY VARY, IT IS THE SPRINKLER CONTRACTORS RESPONSIBILITY TO VERIFY AND COORDINATE ACTUAL SURFACE MOUNTED EQUIPMENT LOCATIONS AND SIZES WITH GC AND OTHER TRADES IN REGARDS TO SPRINKLER LOCATIONS PRIOR TO FABRICATION OR INSTALLATION.
- FINAL LOCATION OF SPRINKLERS WITH REGARDS TO OBSTRUCTIONS WILL BE VERIFIED AT A FUTURE PROJECT SITE VISIT BY THE OWNER OR THEIR REPRESENTATIVE PRIOR TO PROJECT OPENING.
- THE USE OF EXTENDED ESCUTCHEONS FOR DRY PENDENT SPRINKLERS OR FOR SPRINKLERS LOCATED IN PREP AREAS IS PROHIBITED FROM USE PER THE OWNER, NO EXCEPTIONS. CONTRACTOR TO REVIEW ALL PLANS AND FAMILIARIZE THEMSELVES WITH OWNER'S CRITERIA, INCLUDING DRY PENDENT NOTES AND DETAILS.
- CONTRACTOR IS RESPONSIBLE FOR CORRECT SPRINKLER LOCATIONS, PIPE SIZES, ETC AS ACTUAL SITE CONDITIONS MAY VARY FROM DETAILS INDICATED WITHIN THE CONTRACT BID DOCUMENTS.

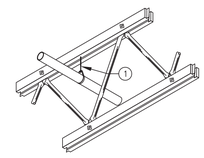


FREEZER/COOLER EXAMPLE

SPRINKLER SPACING CRITERIA WITH SURFACE MOUNTED OBSTRUCTIONS

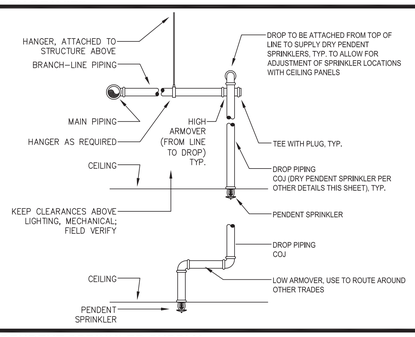


1. 3/8" DIAMETER EYE ROD OR L-ROD.
2. BEAM CLAMP (EQUIVALENT TO TOLCO INCORPORATED FIGURE 130). CERTIFICATION OF COMPLIANCE TO NFPA 13 TO BE PROVIDED BY MANUFACTURER UPON REQUEST.
3. 2" PIPE SIZE AT MAXIMUM HANGER SPACING AS REFERENCED IN NFPA 13.



1. 3/8" MAXIMUM DIAMETER COACH SCREW ROD.
   - THE THREAD SHALL PENETRATE AT LEAST 1-1/2" INTO CHORD; DO NOT MAKE PILOT HOLE LONGER THAN 2-1/2".
   - MAY BE ATTACHED TO TOP OR BOTTOM CHORD.
   - RODS SHALL BE CENTERED IN CHORDS ±1/2" TOLERANCE ON TRUSSES, ±1/4" ON DOUBLE-CHORD TRUSSES.
   - IF INSTALLING THROUGH A GYPSUM BOARD CEILING, INCREASE THE FASTENER LENGTH BY THE GYPSUM BOARD THICKNESS.
2. 2" PIPE SIZE AT MAXIMUM HANGER SPACING AS REFERENCED IN NFPA 13.

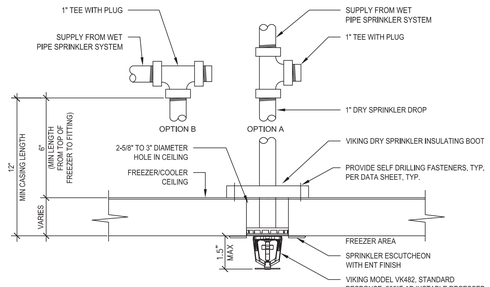
TYPICAL HANGER DETAILS



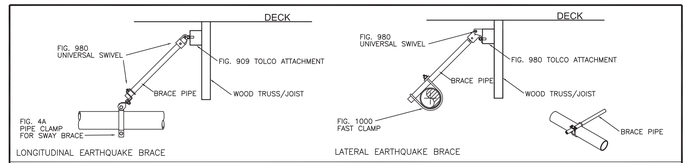
TYPICAL DRY PENDENT SPRINKLER SUPPLY

INSTALLATION PROCEDURE

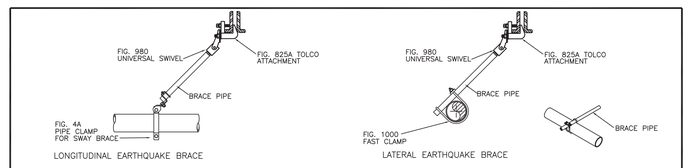
1. CORE DRILL HOLE IN THE FREEZER/COOLER INSULATED CEILING PANEL FROM BELOW. LOCATE HOLE AND REQUIRED SPRINKLER PROTECTION IN ACCORDANCE WITH NFPA 13 OBSTRUCTION CRITERIA (SSP TYPE SPRINKLERS). MAINTAIN 6" CLEARANCE FROM COOLER SEAMS.
2. INSTALL DRY PENDENT SPRINKLER PER MANUFACTURERS INSTALLATION REQUIREMENTS. INSERT BOOT PRIOR TO MAKE-UP WITH PIPING.
3. COMPLETELY SEAL INTERFACE BETWEEN BOOT FLANGE AND TOP OF FREEZER/COOLER PANEL WITH ADHESIVE PROVIDED WITH BOOT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
4. APPLY STRAP TIES AND/OR SELF DRILLING FASTENERS ON BOOT AROUND DRY SPRINKLER BARREL PER MANUFACTURERS INSTRUCTIONS.



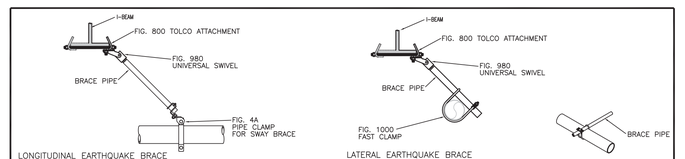
HIGH STOCK APPLICATION FREEZER/COOLER DRY PENDENT SPRINKLER



EARTHQUAKE BRACE ATTACHEMENT DETAILS (WOOD)



EARTHQUAKE BRACE ATTACHEMENT DETAILS (STEEL BAR JOIST)



EARTHQUAKE BRACE ATTACHEMENT DETAILS (STEEL BEAM)

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FIRE SPRINKLER DETAILS / BRACING

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