GENERAL

- EXISTI HANICAL TO BE REMOVED
- EXISTING MECHANICAL TO RE
- NEW MECHANICAL WORK
- MATCHLINE OR PROPERTY LINE
- ENLARGED PLAN BOUNDARY
- 1 M1.01 — DETAIL/PLAN IDENTIFIER
- 1 M1.01 — SECTION IDENTIFIER
- 1 M1.01 — ELEVATION IDENTIFIER
- REVISION DEFINITION AREA, AREA ENCIRCLED CONTAINS CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE
- 1 — REVISION CALLOUT
- 1 — FLAG NOTE CALLOUT
- 1 — DEMOLITION NOTE TAG
- 1 — EQUIPMENT TAG
- AHU-1 — MECHANICAL EQUIPMENT TAG
- AHU — MECHANICAL EQUIPMENT TAG
- NORTH ARROW
- 1 — LOCATION WHERE PICTURE WAS TAKEN AND DIRECTION
- INVERT ELEVATION OR POC
- XX-1 — PLUMBING FIXTURE TAG ("XX" INDICATES TYPE)

ELECTRICAL PROVISIONS FOR MECHANICAL WORK

- LOCATION OF STARTER, DISCONNECT & CONTROLS
- VFD — VARIABLE FREQUENCY DRIVE
- HT HT — HEAT TRACE BETWEEN SYMBOLS OR END OF RUN

ACCESS, EXCAVATION, AND BACKFILLING

- ACCESS DOOR (SPECIFIED OR AS SHOWN ON DWGS)
- MECHANICAL ACCESS (SPECIFIED OR AS SHOWN ON DWGS)

PIPING

- 1"HWS — PIPE SIZE AND SYSTEM TYPE
- 1"HWS
- PIPE ELBOW UP OR PIPE TEE UP AND DOWN
- PIPE ELBOW DOWN
- PIPE TEE UP
- PIPE TEE DOWN
- PIPE RISE
- PIPE CAP
- PIPE PLUG
- FLOW DIRECTION
- PIPE BREAK
- PIPE CONNECTION

VALVES

- VALVE: GATE, BALL, BUTTERFLY (REFER TO SPECIFICATIONS)
- GLOBE VALVE
- SOLENOID VALVE
- CHECK VALVE
- BALANCING VALVE
- PRESSURE REDUCING VALVE
- REDUCED PRESSURE BACKFLOW ASSEMBLY
- PRESSURE RELIEF VALVE
- TEMPERATURE AND PRESSURE SAFETY RELIEF VALVE
- SAFETY RELIEF VALVE

PIPING SPECIALTIES

- UNION
- FLANGE
- FLEX CONN
- THERMAL/SEISMIC FLEXIBLE LOOP
- EJ — THERMAL EXPANSION JOINT
- STRAINER
- STRAINER WITH BLOW OFF VALVE
- PIPE ANCHOR
- ALIGNMENT GUIDE
- T/P — TEMPERATURE/PRESSURE TEST PORT
- THERMOMETER
- PRESSURE GAGE

PUMPS

- CENTRIFUGAL PUMP
- INLINE PUMP
- CIRCULATING PUMP
- BASE MOUNTED PUMP

STORM DRAINAGE PIPING SYSTEM

- ROOF D
- OVERFLOW ROOF DRAIN
- X"RL — RAIN LE
- X"ORL — OVERFLOW RAIN LEADER

SOIL AND WASTE WATER PIPING SYSTEM

- SANITARY SEWER/WASTE UNDERGROUND
- SANITARY SEWER/WASTE ABOVE GROUND
- X"IW — INDIRE
- X"GW — GREASE WASTE ABOVE GROUND
- X"GW — GREASE WASTE UNDERGROUND
- VENT PIPING
- X"VTR — VENT THRU (INCLUDE SIZE)
- X"AW — ACID WASTE ABOVE GROUND
- X"AW — ACID WASTE UNDERGROUND
- X"AV — ACID VEN
- X"CWV — COM VENT ABOVE GROUND
- X"CWV — COM VENT UNDERGROUND
- FLOOR DRAIN/FUNNEL FLOOR DRAIN
- FLOOR SINK
- HUB DRAIN
- TRENCH DRAIN
- CO — CLEANOUT
- WCO — CLEANOUT - FREE STANDING WALL MOUNTED
- FCO — CLEANOUT - FLUSH WITH FLOOR

DOMESTIC WATER PIPING SYSTEM

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER CIRCU
- X"140 — DOMESTIC HOT WATER (TEMP. XXX")
- X"140 — DOMESTIC HOT WATER CIRCULATION (TEMP. XXX")
- X"T — TEMPERED WATER
- X"TWC — TEMPERED WATER CIRCULATING
- X"TP — TRAP PRIMER WATER
- WATER METER
- BASKET STRAINER
- HOSE BIBB/WALL HYDRANT
- TRAP PRIMER BOX

FIRE PROTECTION SYSTEM

- X"F — FIRE SPRINKLER
- X"FM — FIRE MAIN
- X"FD — DRY SPRINKLER
- RECESSED SPRINKLER HEAD
- SEMI-RECESSED SPRINKLER HEAD
- UPRIGHT SPRINKLER HEAD
- DOUBLE DETECTOR CHECK VALVE/DOUBLE CHECK VALVE ASSEMBLY

HYDRONIC PIPING SYSTEM

- X"C — CONDENSATE DRAIN
- X"HWS — HEATING WATER SUPPLY
- X"HWR — HEATING WATER RETURN
- X"CWS — CONDENSER WATER SUPPLY
- X"CWR — CONDENSER WATER RETURN
- X"CHS — CHILLED WATER SUPPLY
- X"CHR — CHILLED WATER RETURN
- X"GS — GLYCOL SOLUTION SUPPLY
- X"GR — GLYCOL SOLUTION RETURN
- X"RHS — RADIANT HEATING SUPPLY
- X"RHR — RADIANT HEATING RETURN
- AUTOMATIC AIR VENT/MANUAL AIR VENT
- BALANCING/MEASURING VALVE
- AUTOMATIC FLOW CONTROL VALVE

NATURAL GAS PIPING SYSTEM

- X"G — LOW PRESSURE NATURAL GAS PIPING
- X"MPG — MEDIUM PRESSURE NATURAL GAS PIPING
- X"LPG — LIQUID PETROLEUM GAS PIPING
- GAS COCK
- PRESSURE REGULATOR
- PRESSURE REGULATOR WITH VENT
- SEISMIC GAS SHUT-OFF
- GAS PRESSURE REDUCING VALVE WITH VENT

COMPRESSED AIR PIPING SYSTEM

- X"A — COMPRESSED AIR
- COMPRESSED AIR DROP
- COMPRESSED AIR PRESSURE REGULATOR

FUEL OIL PIPING SYSTEM

- X"FOS — FUEL OIL SUPPLY
- X"FOR — FUEL OIL RETURN
- X"FOV — FUEL OIL VENT

SPECIALTY PIPING SYSTEM

- X"NPCW — NON-POTABLE COLD WATER
- X"NPHW — NON-POTABLE HOT WATER
- X"NPHWC — NON-POTABLE HOT WATER CIRCULATION
- X"IRR — IRRIGATION
- X"FTD — FOOTING DRAIN
- X"PLD — PLANTER DRAIN
- X"FW — FILTERED WATER
- X"SW — SOFT WATER
- X"PW — PUMPED WASTE
- X"PD — PUMPED DRAIN
- X"OW — OIL WATER WASTE
- X"PCHS — PROCESS CHILLED WATER SUPPLY
- X"PCHR — PROCESS CHILLED WATER RETURN

SHEET LIST

PB001	PLUMBING LEGEND AND DRAWING INDEX
PB002	PLUMBING GENERAL NOTES AND ABBREVIATIONS
PB003	PLUMBING SCHEDULES
PB101	PLUMBING FOUNDATION PLAN - SOUTH
PB102	PLUMBING FOUNDATION PLAN - NORTH
PB201	MAIN FLOOR PLUMBING PLAN - SOUTH
PB202	MAIN FLOOR PLUMBING PLAN - NORTH
PB501	PLUMBING ROOF PLAN - SOUTH
PB502	PLUMBING ROOF PLAN - NORTH
PB601	PLUMBING ENLARGED PLAN AND SECTION - SOUTH
PB602	PLUMBING ENLARGED PLAN AND SECTION - NORTH
PB603	PLUMBING ENLARGED PLAN AND SECTIONS
PB701	PLUMBING RISER DIAGRAMS - DOMESTIC
PB702	PLUMBING RISER DIAGRAMS - SANITARY
PB801	PLUMBING DETAILS
PB802	PLUMBING DETAILS
PB803	PLUMBING ACCESS PANEL LOCATIONS - SOUTH
PB804	PLUMBING ACCESS PANEL LOCATIONS - NORTH

NOT ALL SYMBOLS MAY APPEAR ON THE DRAWINGS

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PLUMBING LEGEND AND DRAWING INDEX

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	o23-087

BID SET

PB001

DRAWING NO.

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UNOFFICIAL COPY Official bid documents, plan holder's list, and addenda (if applicable) are available on BXWA.com

ABBREVIATIONS

ø	DIAMETER, PHASE
A	AIR, AMPS
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AC	AIR CONDITIONER
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADA	AMERICANS WITH DISABILITIES ACT
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
AFS	AIRFLOW MEASURING STATION
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AG	ABOVE GROUND
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ACOUSTIC LINED (DUCT)
AMB	AMBIENT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECT
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS, INC.
ASSY	ASSEMBLY
ATM	ATMOSPHERE
AV	ACID RESISTANT VENT
AW	ACID RESISTANT WASTE
B	BOILER
BC	BLOWER COIL
BDD	BACK DRAFT DAMPER
BF	BELOW FLOOR
BHP	BRAKE HORSE POWER
BLW	BELOW
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOT	BOTTOM
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BALL VALVE
C	CONDENSATE PIPING
C. TK	COMPRESSION TANK
CA	AIR COMPRESSOR
CAP	CAPACITY
CBV	CIRCUIT SETTING BALANCING VALVE
CC	COOLING COIL
CD	CEILING DIFFUSER, CONDENSATE DRAIN
CFG	CEILING FIRE DAMPER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CH	CABINET HEATER, CHILLER
CHP	CHILLED WATER PUMP
CHR	CHILLED WATER RETURN, CHILLER
CHS	CHILLED WATER SUPPLY
CKV	CHECK VALVE
CLG	CEILING, COOLING
CO	CLEANOUT, CO SENSOR
CO2	CO2 SENSOR
COMB	COMBUSTION, COMBINATION
COND	CONDENSER, CONDENSATE
CONN	CONNECTOR
CONT	CONTINUE, CONTROL
COP	COEFFICIENT OF PERFORMANCE
COTG	CLEANOUT TO GRADE
CR	CONDENSATE RECEIVER, CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CT	COOLING TOWER
CTF	COOLING TOWER FILTER
CU	CONDENSING UNIT, CUBIC
CV	CONSTANT VOLUME
Cv	FLOW COEFFICIENT
CW	COLD WATER PIPING
CWR	CONDENSING WATER RETURN
CWS	CONDENSING WATER SUPPLY
D	DRAIN
DB	DRY BULB (TEMPERATURE)
dB	DECIBEL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCV	DOUBLE DETECTOR CHECK VALVE
DEG	DEGREE
DFU	DRAINAGE FIXTURE UNIT
DH	DUCT HEATER
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DISC	LOCATION OF STARTER, DISCONNECT AND CONTROLS
DISCH	DISCHARGE
DN	DOWN
DPV	DIFFERENTIAL PRESSURE VALVE
DV	DRAIN VALVE
DWB	DOMESTIC WATER BOOSTER
DWGS	DRAWINGS
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE, ENGINE GENERATOR
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
EMCS	EMERGENCY MANAGEMENT AND CONTROL SYSTEM
EQUIV	EQUIVALENT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVAP	EVAPORATOR, EVAPORATIVE
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMP
EXH	EXHAUST
EXT	EXTERIOR, EXTERNAL
F	FAHRENHEIT, FIRE MAIN PIPING
F/S	FIRE/SMOKE DAMPER
FC	FLUID COOLER
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FIRE DAMPER, FLOOR DRAIN, DRY SPRINKLER ROUTING
FDC	FIRE DEPARTMENT CONNECTION
FF	FOULING FACTOR, FLAT FILTER, FINISHED FLOOR
FFD	FUNNEL FLOOR DRAIN
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FLTR	FILTER
FMS	FLOW MEASUREMENT STATION (HVAC, PLUMBING)
FOR	FUEL OIL RETURN PIPING
FOS	FUEL OIL SUPPLY PIPING
FOT	FUEL OIL TANK
FP	FIRE PUMP, FLOATING POINT CONTROL
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FPVC	APPROVED PVC FIRE SPRINKLER ROUTING
FS	FLOOR SINK
FT	FEET, FIN TUBE
FTD	FOOTING DRAIN
FTG	FOOTING DRAIN
FTU	FIN TUBE UNIT
FV	FACE VELOCITY
FW	FILTERED WATER PIPING
G	GAS
GA	GAGE
GAHU	GAS AIR HANDLING UNIT
GAL	GALLONS
GALV	GALVANIZED
GC	GAS COCK, GENERAL CONTRACTOR
GFU	GAS FIRED UNIT
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPRV	GAS PRESSURE REGULATING VALVE
GRD	GRILLES, REGISTERS, AND DIFFUSERS
GV	GATE VALVE, GLOBVE VALVE
GW	GREASE WASTE PIPING
GWB	GYPSUM WALLBOARD
H	HUMIDISTAT, HEIGHT
HB	HOSE BIBB
HC	HEATING COIL
HD	HEAD, HUB DRAIN
HGL	REFRIGERANT HOT GAS LINE
HORIZ	HORIZONTAL
HP	HORSEPOWER, HEAT PUMP
HPC	HIGH PRESSURE CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM
HRU	HEAT RECOVERY UNIT
HST	STORAGE TANK
HTG	HEATING
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HW	HOT WATER PIPING
HWC	HOT WATER CIRCULATING PIPING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
IAQ	INDOOR AIR QUALITY
ID	INDIRECT DRAIN
IE	INVERT ELEVATION
IN.	INCH
IN. WG	INCHES WATER COLUMN
IRR	IRRIGATION PIPING
IW	INDIRECT WASTE PIPING
kW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	LINEAR BAR
LBS	POUND
LD	LINEAR DIFFUSER
LL	REFRIGERANT LIQUID LINE
LPC	LOW PRESSURE CONDENSATE RETURN
LPG	LIQUID PETROLEUM GAS PIPING
LPS	LOW PRESSURE STEAM
LR	LINEAR RETURN
LRA	LOCKED ROTOR AMPS
LVR	LOUVER
LWCD	LOW WATER CUT-OFF
LWR	LOW WALL RETURN
LWS	LOW WALL SUPPLY
LWT	LEAVING WATER TEMPERATURE
MA	MEDICAL AIR
MAC	MEDICAL AIR COMPRESSOR
MAT	MIXED AIR TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MERV	MINIMUM EFFICIENCY REPORTING VALVE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOD	MOTOR OPERATED DAMPER
MPC	MEDIUM PRESSURE CONDENSATE RETURN
MPG	MEDIUM PRESSURE GAS
MPS	MEDIUM PRESSURE STEAM
MV	MEDICAL VACUUM
NA	NOT APPLICABLE
NC	NORMALLY CLOSED, NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NITROUS OXIDE
NO.	NUMBER
NP	NON POTABLE
NPC	NON POTABLE COLD WATER PIPING
NPH	NON POTABLE HOT WATER PIPING
NTS	NOT TO SCALE
O2	OXYGEN
OA	OUTDOOR AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIMENSION OR DIAMETER
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAIN LEADER
OSA	OUTDOOR SUPPLY AIR
OSD	OVERFLOW STORM DRAIN
OV	OUTLET VELOCITY
P	PUMP, PRESSURE, PLUMBING FIXTURE
PD	PRESSURE DROP, PUMPED DRAIN
PH	PHASE
PIV	POST INDICATOR VALVE
PLD	PLANTER DRAIN
POC	POINT OF CONNECTION
PR	CONDENSATE PUMP RETURN
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH GAGE
QTY	QUANTITY
RA	RETURN AIR, RELIEF AIR
RD	ROOF DRAIN
REF	REFERENCE, RETURN/EXHAUST FAN
REG	REGISTER
RF	RELIEF FAN
RG	RETURN GRILLE
RH	ROOF HOOD
RI&C	ROUGH IN AND CONNECT
RL	RAIN LEADER
RLA	RATED LOAD AMPS
RO	ROUGH IN AND CONNECT
RPBA	REDUCED PRESSURE BACKFLOW ASSEMBLY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
RV	SAFETY RELIEF VALVE
S	SENSOR
S. TK	STORAGE TANK
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SCFM	STANDARD CUBIC FEET PER MINUTE
SD	STORM DRAIN PIPING
SENS	SENSIBLE
SF	SUPPLY FAN, SQUARE FOOT
SG	SUPPLY GRILLE, SIGHT GLASS WITH MOISTURE INDICATOR
SHC	STEAM HEATING COIL
SIM	SIMILAR
SL	REFRIGERANT SUCTION LINE
SO	SCREENED OPENING
SOV	SHUTOFF VALVE
SP	STATIC PRESSURE
SPKR	SPRINKLER
SPS	STATIC PRESSURE STATION
SS	STAINLESS STEEL, SANITARY SEWER
ST	SOUND TRAP
STM	STEAM
SW	SOFT WATER PIPING
T	TEMPERED WATER PIPING
TBV	TOWER BYPASS VALVE
TCV	TEMPERATURE CONTROL VALVE
TD	TRENCH DRAIN, TEMPERATURE DIFFERENCE
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TOD	TOP OF DUCT
TOF	TOP OF PIPE
TOP	TOP OF STEEL
TOS	TOP OF FOOTING
TRAP	STEAM TRAP
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TU	TERMINAL UNIT
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VENT PIPING, VOLT
VA	VALVE
VAV	VARIABLE AIR VOLUME
VCD	VOLUME CONTROL DEVICE
VD	VOLUME DAMPER
VEL	VELOCITY
VENT	VENTILATION, VENTILATOR
VFD	VARIABLE FREQUENCY DRIVE
VOLT	VOLTAGE
VTR	VENT THRU ROOF
W	WASTE, WATT, WIDE, WATER
W/	WITH
WB	WET BULB (TEMPERATURE)
WC	WATER CLOSET, WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAGE
WH	WATER HEATER, WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WM	WATER METER
WSEC	WASHINGTON STATE ENERGY CODE
WSFU	WATER SUPPLY FIXTURE UNIT
WT	WEIGHT

GENERAL NOTES - PLUMBING

1. COORDINATE PLUMBING WORK WITH THAT OF OTHER TRADES (ELECTRICAL, MECHANICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE). REFER TO ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND/OR INSTALLATION OF ALL WORK.
2. COORDINATE PLUMBING, SYSTEMS ROUTING PRIOR TO INSTALLATION. DURING LAYOUT COORDINATION, DUCTWORK TAKES PRECEDENCE OVER PLUMBING, INCLUDING FIRE PROTECTION SYSTEMS.
3. UNLESS OTHERWISE SPECIFIED, THE GENERAL CONTRACTOR (GC) SHALL BE RESPONSIBLE FOR PAINTING, CUTTING, AND PATCHING OF EXISTING FLOORS, WALLS, AND PARTITIONS IN THE EXISTING BUILDING.
4. REFER TO STRUCTURAL DRAWINGS FOR ALLOWABLE METHODS/LOADS FOR HANGING PIPING FROM STRUCTURAL MEMBERS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE KEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT, AND ENVIRONMENTAL CONDITIONS.

PLUMBING EQUIPMENT INSTALLATION NOTES

1. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF PLUMBING WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

PIPING NOTES

1. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.
2. PRESSURE/TEMPERATURE TEST PORTS: PROVIDE AT SUPPLY AND RETURN PIPING CONNECTIONS TO EQUIPMENT.
3. PROVIDE AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR ADJACENT TO UNDERGROUND NONMETALLIC (PLASTIC) PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE PIPING. THE TRACER WIRE SHALL NOT BE LESS THAN NO. 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR BURIAL.
4. PROVIDE 12" LONG, ½" WIDE FLUORESCENT ORANGE TAPE AT CONCEALED VALVE LOCATIONS.

PLUMBING NOTES

1. WATER HAMMER ARRESTORS: PROVIDE AT THE END OF HOT AND COLD WATER LINES SERVING TWO OR MORE FIXTURES. SIZE IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE (PDI) REQUIREMENTS.
2. REDUCED PRESSURE BACKFLOW PREVENTERS (RPBP): PROVIDE INDIRECT DRAIN PIPING FROM RPBP TO NEAREST DRAIN. INSTALL FUNNEL AT RPBP IF REQUIRED.
3. ACCESS PANELS: PROVIDE IN NON ACCESSIBLE CEILINGS AND WALLS FOR VALVES, WATER HAMMER ARRESTERS, CLEANOUTS, AND OTHER ITEMS THAT REQUIRE ACCESS TO PROPERLY MAINTAIN OR SERVICE THE BUILDING. REFER TO SPECIFICATIONS.
4. CLEANOUTS: PROVIDE AT THE BASE OF SANITARY DRAINAGE, PROCESS WASTE, AND RAINLEADER CONDUCTORS.

ENERGY CODE NOTES

1. MOTORS: COMPLY WITH MINIMUM FULL LOAD EFFICIENCIES LISTED IN ENERGY CODE ENFORCED BY AHJ.
2. PIPING INSULATION: COMPLY WITH THICKNESSES AND TYPES LISTED IN ENERGY CODE ENFORCED BY AHJ UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED.
3. RECORD DRAWINGS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
4. OPERATION AND MAINTENANCE MANUALS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
5. SYSTEM BALANCING: BALANCE PLUMBING SYSTEMS PER ENERGY CODE ENFORCED BY THE LOCAL AHJ AND SUBMIT A WRITTEN REPORT TO THE BUILDING OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL TESTING, ADJUSTING, AND BALANCING (TAB) REQUIREMENTS.
6. PLUMBING SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS: TEST SYSTEMS TO ENSURE THAT BUILDING SYSTEMS HAVE BEEN DESIGNED, INSTALLED, AND FUNCTION PROPERLY, EFFICIENTLY, AND CAN BE MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IN ORDER TO SATISFY THE BUILDING OWNER'S DESIGN INTENT AND OPERATIONAL REQUIREMENTS PER ENERGY CODE ENFORCED BY THE LOCAL AHJ. REFER TO SPECIFICATIONS FOR ADDITIONAL COMMISSIONING REQUIREMENTS
7. THIS BUILDING AND ITS ENERGY SYSTEMS HAVE BEEN DESIGNED TO COMPLY WITH ENERGY CODE ENFORCED BY THE LOCAL AHJ. CONTRACTOR IS RESPONSIBLE FOR CORRECT INSTALLATION OF ENERGY CONSERVATION MEASURES.

NON-STRUCTURAL PLUMBING COMPONENT NOTES

1. THE COMPONENT IMPORTANCE FACTOR (Ip) FOR ALL NON-STRUCTURAL COMPONENTS SHALL BE:

   Ip = 1.5

2. THE FOLLOWING ITEMS ARE TAKEN DIRECTLY FROM THE 2018 INTERNATIONAL BUILDING CODE AND FROM THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7. THE CONTRACTOR SHALL REFER TO THE ABOVE FOR ADDITIONAL INFORMATION, EXCEPTIONS, AND FURTHER DESCRIPTIONS. THE CONTRACTOR SHALL ADHERE TO REQUIREMENTS AND AS SUCH, SHALL BE INCLUDED WITHIN BID. ALSO REFER TO SPECIFICATION SECTION 230550.
3. 2018 IBC, 1613.1, SCOPE: PLUMBING COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A.
4. 2018 IBC, 1704.4, CONTRACTOR RESPONSIBILITY: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS AND SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE THE FOLLOWING:
   - A. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS;
   - B. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL;
   - C. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS;
   - D. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.
5. DIVISION 22 RESPONSIBILITIES:
   - A. HANGERS AND SEISMIC BRACING FOR PLUMBING SYSTEMS SHALL BE DESIGNED AND SPECIFIED BY DIVISION 22. DIVISION 22 SHALL REFER TO THE PLUMBING DRAWINGS FOR LOCATIONS OF EQUIPMENT AND HUNG PLUMBING SYSTEMS AS STRUCTURAL DRAWINGS DO NOT SHOW THE LOCATIONS OF PLUMBING EQUIPMENT, PIPING, AND OTHER COMPONENTS.
   - B. DIVISION 22 SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG PIPING AND OTHER PLUMBING SYSTEMS (INCLUDING COMBINED MULTIPLE PIPE RUNS) WITH THE GENERAL CONTRACTOR AND THE STEEL AND WOOD JOIST MANUFACTURERS IN ADDITION TO OTHER TRADES THAT MAY BE IMPACTED.

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5/6/24

PLUMBING GENERAL NOTES AND ABBREVIATIONS

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE 05.06.24 JOB NO. a23-087

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DOMESTIC WATER PRESSURE BOOSTER ASSEMBLY SCHEDULE

MARK	LOCATION	SYSTEM SERVED	MANUFACTURER / MODEL NO.	CAPACITY				PUMPS			MOTOR			VFD	ELECTRICAL			PHYSICAL		CONNECTIONS		MOUNTING / SUPPORT	NOTES	MARK
				FLOW (GPM)	INLET (PSIG)	DISCH (PSIG)	BOOST (PSIG)	TYPE	FLOW (QTY-GPM)	HEAD (FT)	RPM	HP (QTY-HP)	V/Ø	(Y/N)	V/Ø	MCA	MOCP	LxWxH (INxINxIN)	WEIGHT (LBS)	DIA (IN)	TYPE			
DWBP-B-01	MECHANICAL ROOM - MAINTENANCE	DOMESTIC WTR	GRUNDFOS / HYDRO MPC-E-2CRE 10-4	90	7	62	55	VERTICAL MULTI-STAGE CENTRIFUGAL	(2) 45	127.0	3599	(2) 3	460/3	Y	460/3	10.8	15	24x38x32	-	2.5	NPT	FLOOR	1, 2	DWBP-B-01

NOTES:

1. CONTROL PANEL SHALL BE PROVIDED WITH A VISIBLE NAMPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH THE UL REQUIREMENTS. REFER TO THE ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH PUMP CONTROL PANEL AND REMOTE MOUNTED HYDROPNEUMATIC TANK IN ACCORDANCE WITH SPECIFICATIONS.

DOMESTIC WATER EXPANSION TANK SCHEDULE

MARK	LOCATION	SYSTEM SERVED	MANUFACTURER / MODEL NO.	TYPE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	SYSTEM CONN (IN)	PRE-CHARGE PRESSURE (PSIG)	PHYSICAL		SIZING CRITERIA					MOUNTING / SUPPORT	NOTES	MARK
									SIZE (DIAxL)	WEIGHT (LBS)	SYS VOL (GAL)	MAX TEMP (DEG F)	MIN TEMP (DEG F)	MAX PRESS (PSI)	MIN PRESS (PSI)			
ET-B-01	MECHANICAL ROOM - OPERATIONS	DOMESTIC CW - BOOSTER SYSTEM	GRUNDFOS / GFXA-200	BLADDER	53	-	1.50	50	24x43	210	-	-	-	-	-	FLOOR	1, 2	ET-B-01

NOTES:

1. PROVIDE FACTORY PRE-CHARGED TANKS AND ADJUST IN THE FIELD TO ACTUAL SYSTEM PRESSURE PLUS 2 PSI.
*. PROVIDE WITH SEISMIC BRACING.

C404.3 EFFICIENT HEATED WATER SUPPLY PIPING

HEATED WATER SUPPLY PIPING SHALL BE IN ACCORDANCE WITH THE MAXIMUM ALLOWABLE PIPE LENGTH METHOD (SECTION C404.3.1) OR THE MAXIMUM ALLOWABLE PIPE VOLUME METHOD (SECTION C404.3.2). THE FLOW RATE THROUGH 1/4-INCH PIPING SHALL BE NO GREATER THAN 0.5 GPM. THE FLOW RATE THROUGH 5/16-INCH PIPING SHALL BE NO GREATER THAN 1 GPM. THE FLOW RATE THROUGH 3/8-INCH PIPING SHALL BE NO GREATER THAN 1.5 GPM. WATER HEATERS, CIRCULATING WATER SYSTEMS, AND HEAT TRACE TEMPERATURE MAINTENANCE SYSTEMS SHALL BE CONSIDERED SOURCES OF HEATED WATER.

NOMINAL PIPE SIZE (IN)	VOLUME (LIQUID OUNCES PER LINEAR FOOT) (NOTE 1)	MAXIMUM PIPING LENGTH (FEET) (NOTE 2)	
		PUBLIC LAVATORY FAUCETS	OTHER FIXTURES AND APPLIANCES
1/4	0.33	6	50
5/16	0.5	4	50
3/8	0.75	3	50
1/2	1.5	2	43
5/8	2	1	32
3/4	3	0.5	21
7/8	4	0.5	16
1	5	0.5	13
1 1/4	8	0.5	8
1 1/2	11	0.5	6
2 OR LARGER	18	0.5	4

NOTES:

1. SECTION C404.3.2: THE MAXIMUM VOLUME OF WATER, AS MEASURED FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE, SHALL BE AS FOLLOWS: 2 OUNCES FOR PUBLIC LAVATORY FAUCET AND 0.5 GALLONS FOR OTHER PLUMBING FIXTURES OR PLUMBING APPLIANCES.

2. SECTION C404.3.1: THE MAXIMUM ALLOWABLE PIPING LENGTH, AS MEASURED FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE. WHERE PIPING CONTAINS MORE T HAN ONE SIZE OF PIPE, THE LARGEST SIZE OF PIPE WITHIN THE PIPING SHALL BE USED FOR DETERMINING THE MAXIMUM ALLOWABLE LENGTH.

ELECTRIC INSTANTANEOUS WATER HEATER SCHEDULE

MARK	LOCATION	SYSTEM SERVED	MANUFACTURER / MODEL NO.	TYPE	FLOW RATE (GPM)	TEMP RISE (F)	MIN FLOW (GPM)	MAX FLOW (GPM)	ELECTRICAL				PHYSICAL			MOUNTING / SUPPORT	NOTES	MARK
									V/Ø	MCA	MOCP	KW	LxWxH (INxINxIN)	WEIGHT (LBS)	PIPE SIZE (IN)			
EIWH-B-01	RESTROOMS SOUTH	DOMESTIC HW	HUBBELL TX (11)	TANKLESS	1	50	0.2	8	460/3	27.0	30	18	20x4x17	21	1.0	WALL	1	EIWH-B-01
EIWH-B-02	LAUNDRY SINK SOUTH	DOMESTIC HW	HUBBELL TX (14)	TANKLESS	1.5	50	0.2	8	460/3	27.0	30	18	20x4x17	21	1.0	WALL	1	EIWH-B-02
EIWH-B-03	LAUNDRY SINK SOUTH	DOMESTIC HW	HUBBELL TX (14)	TANKLESS	1.5	50	0.2	8	460/3	27.0	30	18	20x4x17	21	1.0	WALL	1	EIWH-B-03
EIWH-B-04	RESTROOMS NORTH	DOMESTIC HW	HUBBELL TX (11)	TANKLESS	1	50	0.2	8	460/3	27.0	30	18	20x4x17	21	1.0	WALL	1	EIWH-B-04
EIWH-B-05	WASHER NORTH	DOMESTIC HW	HUBBELL TX (14)	TANKLESS	1.5	50	0.2	8	460/3	27.0	30	18	20x4x17	21	1.0	WALL	1	EIWH-B-05
EIWH-B-06	SINK/EMERGENCY EYEWASH	DOMESTIC HW	HUBBELL TX (27)	TANKLESS	1.8	50	0.5	40	460/3	54.2	55	36	21x5x25	38	1.0	WALL	1	EIWH-B-06
EIWH-B-07	SHOWER NORTH	DOMESTIC HW	HUBBELL TX (11)	TANKLESS	1	50	0.2	8	460/3	27.0	30	18	20x4x17	21	1.0	WALL	1	EIWH-B-07

NOTES:
1. SET AT 120°F. FOR ELECTRIC INSTANTANEOUS WATER HEATERS SERVING EMERGENCY FIXTURES ENSURE THAT THE TEMPERATURE OF THE WATER PRODUCED IS TEPID, AND COMPLIES WITH ISEA 358.1, ASSE 1071 AND UPC 416.1.

AIR COMPRESSOR SCHEDULE

MARK	LOCATION	AREA SERVED	MANUFACTURER / MODEL NO.	TYPE	AIRFLOW RATE (SCFM)	AIR PRESS (PSIG)	MOTOR			ELECTRICAL			RECEIVER		PHYSICAL		MOUNTING / SUPPORT	NOTES	MARK
							RPM	HP	CONTROL	V/Ø	MCA	MOCP	GAL	ORIENTATION	LxWxH (INxINxIN)	WEIGHT (LBS)			
AC-B-01	MECHANICAL ROOM	MAINTENANCE NORTH	QUINCY QT-15 MAX	RECIP-DUPLEX	51	175	1750	15	LVD DUAL CONTROL	460/3	21.0	25	200	HORIZONTAL	71x30x55	1000	FLOOR	1, 2	AC-B-01
AC-B-02	RESTROOM SOUTH	MAINTENANCE SOUTH	QUINCY QT-5 PRO+	RECIP-SIMPLEX	17.2	175	1750	5	START/STOP	460/3	6.6	15	80	HORIZONTAL	67x30x49	700	FLOOR	1, 2	AC-B-02

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH OPTIONAL ELECTRIC DRAIN.

AIR DRYER SCHEDULE

MARK	LOCATION	SYSTEM SERVED	MANUFACTURER / MODEL NO.	TYPE	REFRIGERANT	AIRFLOW RATE (SCFM)	INLET AIR PRESSURE (PSIG)	INLET AIR TEMP. MAX (DEG F)	INLET AIR TEMP. MIN (DEG F)	DEWPOINT TEMP (DEG F)	PRESSURE DROP (PSIG)	ELECTRICAL		PHYSICAL		MOUNTING / SUPPORT	NOTES	MARK
												V/Ø	KW	LxWxH (INxINxIN)	WEIGHT (LBS)			
AD-B-01	MECHANICAL ROOM	AC-B-01	QUINCY / QPNC-64	REFRIGERATED	R-513A	64	102	131	41	39	2.9	120/1	0.38	19x14x18	75	STRUT	1,2	AD-B-01
AD-B-02	RESTROOM SOUTH	AC-B-02	QUINCY / QPNC-21	REFRIGERATED	R-513A	21	102	131	41	39	2.2	120/1	0.16	19x14x18	57	STRUT	1,2	AD-B-02

NOTES:
1. EQUIPMENT SHALL BE PROVIDED WITH A VISIBLE NAMEPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. ELECTRICAL CONNECTION REQUIRES A 120V/1PH RECEPTACLE.

PLUMBING FIXTURE AND DRAIN ROUGH-IN SCHEDULE

MARK	FIXTURE TYPE	WASTE (IN)	VENT (IN)	CW (IN)	HW (IN)	TW (IN)	NPCW (IN)	NOTES	MARK
WC-1	WATER CLOSET-ADA	4"	2"	1-1/4"	-	-	-	NOTE 2	WC-1
UR-1	URINAL	2"	1-1/2"	1"	-	-	-	NOTE 2	UR-1
L-1	LAV - WALL HUNG - ADA	1-1/2"	1-1/2"	1/2"	1/2"	-	-	NOTE 2	L-1
SH-1	SHOWER - ADA	2"	1-1/2"	-	-	-	-		SH-1
TS-1	SINK - TRIPLE BOWL	1-1/2"	1-1/2"	1/2"	1/2"	-	-	NOTE 2	TS-1
EMEW-1	EYEWASH	2"	1-1/2"	3/4"	3/4"	1"	-	NOTE 5,7	EMEW-1
MS-1	SERVICE (MOP) SINK	3"	1-1/2"	3/4"	3/4"	-	-		MS-1
SS-1	SERVICE SINK	2"	1-1/2"	3/4"	3/4"	-	-		SS-1
WB-1	WASHING MACHINE WASHER BOX	2"	1-1/2"	3/4"	3/4"	-	-		WB-1
EWC-1	ELECTRIC WATER COOLER	1-1/2"	1-1/2"	1/2"	-	-	-	NOTE 9	EWC-1
WH-1	FREEZE PROOF WALL HYDRANT	-	-	3/4"	-	-	-		WH-1
FD-1	FLOOR DRAIN	NOTE 6	NOTE 6	1/2"	-	-	-	NOTE 4	FD-1
FFD-1	FUNNEL FLOOR DRAIN	NOTE 6	NOTE 6	1/2"	-	-	-	NOTE 4	FFD-1
FS-1	FLOOR SINK	NOTE 6	NOTE 6	1/2"	-	-	-	NOTE 4	FS-1
TP-1	TRAP PRIMER	-	-	1/2"	-	-	NOTE 4	NOTE 3	TP-1
TD-1	TRENCH DRAIN (FOR REFERENCE)	4"	2"	1/2"	-	-	-	NOTE 4, 8	TD-1
TD-2	TRENCH DRAIN (FOR REFERENCE)	4"	2"	1/2"	-	-	-	NOTE 4, 8	TD-2

NOTES:
A. PIPE SIZES LISTED MAY BE DIFFERENT THAN THE ACTUAL FIXTURE CONNECTION. PROVIDE BRANCH PIPE OF LISTED SIZE AND ALL PIPE FITTINGS AND OFFSETS REQUIRED FOR COMPLETE INSTALLATION.
B. PROVIDE FINAL CONNECTIONS TO ALL FIXTURES.
C. PROVIDE WALL CLEANOUTS FOR ALL SINKS, WATER CLOSETS, AND URINALS.

NOTES:
1. SIZE AS NOTED ON DRAWINGS.
2. ADA COMPLIANT WHERE INDICATED ON THE ARCHITECTURAL DRAWINGS. MOUNTING HEIGHT AS INDICATED ON ARCHITECTURAL DRAWINGS.
3. PROVIDE TRAP PRIMER ASSEMBLY WITH NUMBER OF PORTS REQUIRED TO SERVE ADJACENT DRAINS. PROVIDE 120V/1□ ELECTRICAL CONNECTION. PROVIDE WITH SHUTOFF VALVE.
4. CW OR NPCW CONNECTION VIA TRAP PRIMER. VENT 1/2 SIZE OF WASTE OR 1-1/2" WHICHEVER IS LARGER.
5. SUPPLY HOT AND COLD WATER TO THERMOSTATIC MIXING VALVE AND EXTEND TEMPERED WATER FROM MIXING VALVE TO FIXTURE.
6. SIZE AS NOTED ON DRAWINGS. WHERE APPLICABLE, VENT SIZE SHALL BE AS NOTED ON THE DRAWING, HALF SIZE OF WASTE OR 1-1/2", WHICHEVER IS LARGER.
7. ENSURE ALL EMERGENCY EQUIPMENT IS COMPLIANT WITH ISEA Z358.1. PROVIDE A DEDICATED ASSE 1071 MIXING VALVE FOR EACH PIECE OF EMERGENCY EQUIPMENT. ENSURE THAT ALL EMERGENCY EQUIPMENT IS COMPLIANT WITH UPC 416.1.
8. TRENCH DRAIN IS PROVIDED UNDER ARCHITECTURAL SCOPE, FIXTURE IS NOTED FOR REFERENCE ONLY. PLUMBING SCOPE IS PIPING ONLY.
9. PROVIDE POWER CONNECTION. PROVIDE 120V/1□ ELECTRICAL CONNECTION.

PIPING SYSTEMS INSULATION SCHEDULE

TYPE OF PIPE	INSTALLATION LOCATION	INSULATION TYPE	PIPE SIZE (INCHES)	INSULATION THICKNESS (INCHES)	NOTES
COLD PLUMBING PIPING	INSIDE BUILDING ENVELOPE	FIBERGLASS	ALL SIZES	1" THICK	-
HOT PLUMBING PIPING	INSIDE BUILDING ENVELOPE	FIBERGLASS	1-1/4 INCH AND SMALLER	1" THICK	-
			1-1/2 INCH AND LARGER	1-1/2" THICK	-

NOTES:
1. NONE.

ENERGY CODE NOTES:

1	MOTORS: COMPLY WITH MINIMUM FULL LOAD EFFICIENCIES LISTED IN THE ENERGY CODE ENFORCED BY AHJ.
2	PIPING AN INSULATION: COMPLY WITH THICKNESS AND TYPES LISTED IN THE ENERGY CODE ENFORCED BY AHJ UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED.
3	RECORD DRAWINGS: SUBMIT TO THE BUILDING OWNER PER THE ENERGY CODE ENFORCED BY AHJ.
4	OPERATION AND MAINTENANCE MANUALS: SUBMIT TO THE BUILDING OWNER PER THE ENERGY CODE ENFORCED BY AHJ.
5	SYSTEM BALANCING: BALANCE PLUMBING SYSTEMS PER THE ENERGY CODE ENFORCED BY AHJ AND SUBMIT WRITTEN REPORT TO THE BUILDING OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL TESTING, ADJUSTING, AND BALANCING (TAB) REQUIREMENTS.
6	PLUMBING SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS: TEST SYSTEMS TO ENSURE THAT BUILDING SYSTEMS HAVE BEEN DESIGNED, INSTALLED, AND FUNCTION PROPERLY, EFFICIENTLY, AND CAN BE MAINTAINED IN ACCORDANCE WITH CONTRACT DOCUMENTS IN ORDER TO SATISFY THE BUILDING OWNER'S DESIGN INTENT AND OPERATIONAL REQUIREMENTS PER THE ENERGY CODE ENFORCED BY AHJ. REFER TO SPECIFICATIONS FOR ADDITIONAL COMMISSIONING REQUIREMENTS.
7	ENERGY METERING: COMPLY WITH ENERGY SOURCE AND END-USE METERING REQUIREMENTS LISTED IN THE ENERGY CODE ENFORCED BY AHJ.
8	THIS BUILDING AND ITS ENERGY SYSTEMS HAVE BEEN DESIGNED TO COMPLY WITH THE ENERGY CODE ENFORCED BY AHJ. CONTRACTOR IS RESPONSIBLE FOR CORRECT INSTALLATION OF ENERGY CONSERVATION MEASURES.

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PLUMBING SCHEDULES

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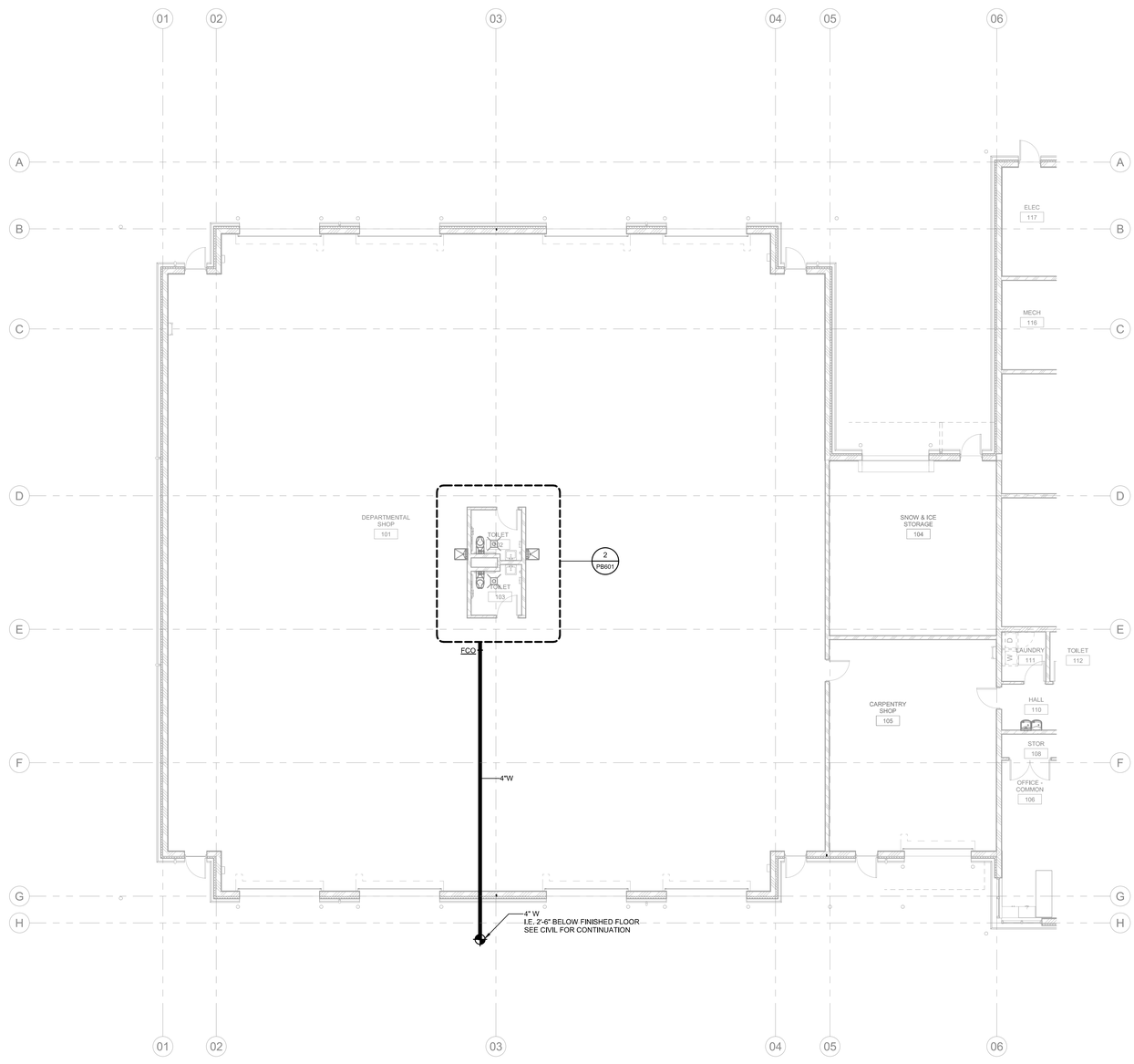
SHEET NOTES

1. REFER TO PB800 SERIES SHEETS FOR STANDARD DETAILS NOT REFERENCED ON PLANS, COMPLY WITH ALL REQUIREMENTS IN DETAILS.
2. SLOPE ALL WASTE AND VENT PIPING A MINIMUM OF 1/4 INCH PER FOOT UNLESS OTHERWISE NOTED.
3. PLUMBING FIXTURES AND FLOOR PLAN ABOVE ARE SHOWN ON FOUNDATION PLAN FOR REFERENCE.
4. INVERT ELEVATIONS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE FINAL INVERT ELEVATIONS IN THE FIELD WITH CIVIL CONTRACTOR.
5. ALL FLOOR DRAINS, FLOOR SINKS, AND AIR GAP DRAIN TRAPS SHALL BE SERVED FROM THE CLOSEST TRAP PRIMER.

FLAG NOTES

1 TBD.



PLUMBING FOUNDATION PLAN - SOUTH

100 1/8" = 1'-0"

NORTH

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

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PLUMBING FOUNDATION PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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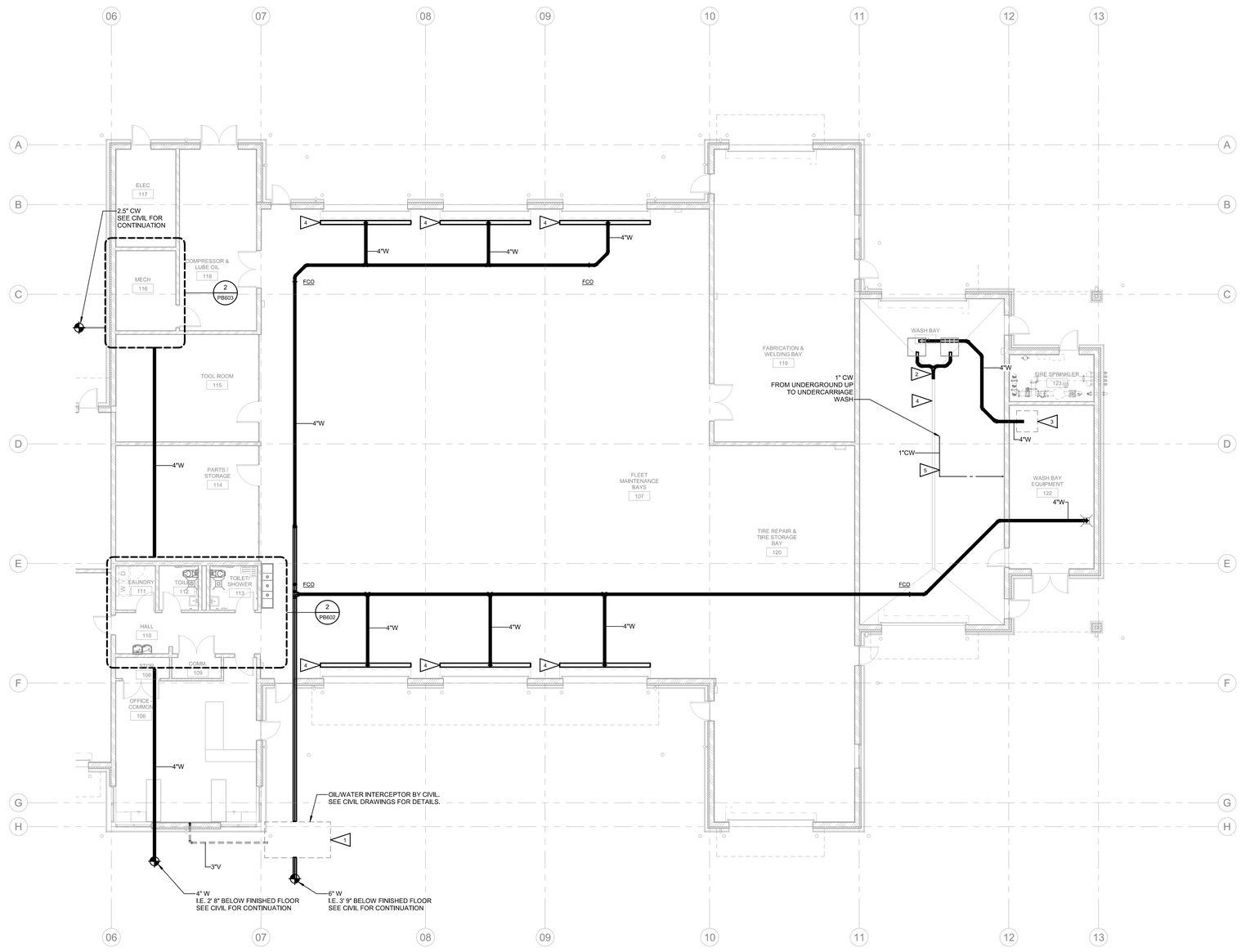
4. INVERT ELEVATIONS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE FINAL INVERT ELEVATIONS IN THE FIELD WITH CIVIL CONTRACTOR.
5. ALL FLOOR DRAINS, FLOOR SINKS, AND AIR GAP DRAIN TRAPS SHALL BE SERVED FROM THE CLOSEST TRAP PRIMER.

FLAG NOTES

1. OIL WATER INTERCEPTOR WILL FUNCTION AS A COMMON TRAP FOR THE GARAGE DRAINAGE SYSTEM. OIL WATER INTERCEPTOR TO BE VENTED PER MANUFACTURUERS INSTRUCTIONS. PROVIDE ELECTRIC TRAP PRIMER CONNECTION TO OIL WATER INTERCEPTOR. OIL/WATER SEPERATOR TO BE SPECIFIED BY CIVIL. SEE CIVIL DRAWINGS FOR EXACT LOCATION, DIMENSIONS AND SPECIFICATIONS.
2. VEHICLE WASH TRENCH DRAIN IS ONE CONTINUOUS TRENCH WITH 1/8" SLOPE. CONNECT TO BASINS WITH 4" PIPE. ENSURE THAT PIPE IS SLOPED TO BASIN AND IS CENTERED IN THE END OF THE TRENCH DRAIN.
3. WASH BAY SUMP PROVIDED WITH WASH BAY EQUIPMENT SEE IP-04 FOR EQUIPMENT BREAKDOWN. PROVIDE 4 INCH PIPING BETWEEN CATCH BASIN IN THE WASH BAY TO THE SUMP. PIPING SHALL SLOPE AT A MINIMUM OF 1/8 INCH PER FOOT. COORDINATE PIPING ENTRANCE CONNECTION AND ELEVATION.
4. TRENCH DRAIN IS PROVIDED UNDER THE ARCHITECTURAL SCOPE. PLUMBING SCOPE IS PIPING ONLY.
5. UNDERGROUND COLD WATER LINE TO UNDER CARRIAGE WASH TO BE IN PVC CONDUIT LINE.



V108 PLUMBING FOUNDATION PLAN - NORTH
1/8" = 1'-0"

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

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PLUMBING FOUNDATION PLAN - NORTH

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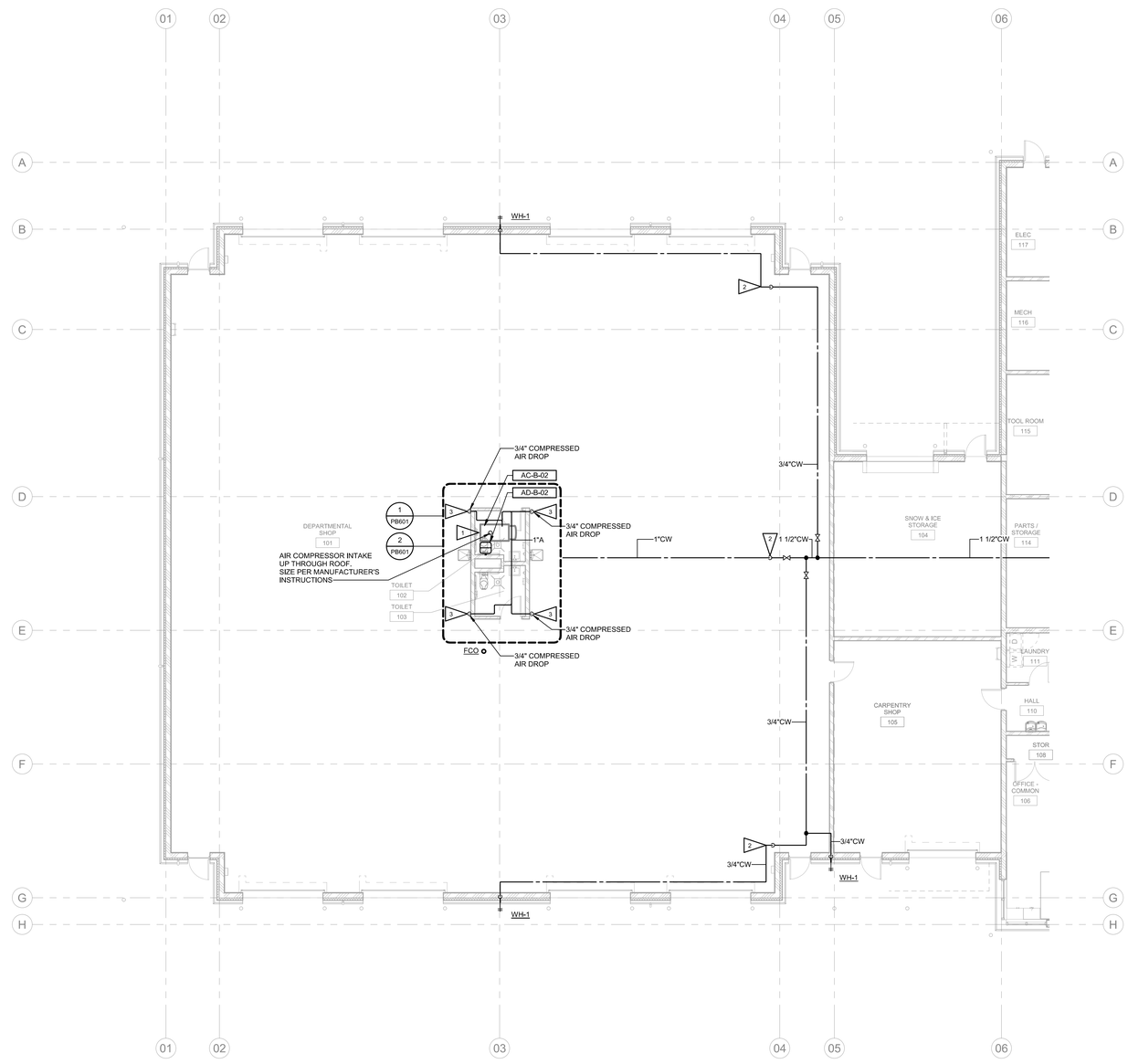
SHEET NOTES

1. REFER TO PB800 SERIES SHEETS FOR STANDARD DETAILS NOT REFERENCED ON PLANS, COMPLY WITH ALL REQUIREMENTS IN DETAILS.
2. SLOPE ALL WASTE PIPING A MINIMUM OF 1/4 INCH PER FOOT UNLESS OTHERWISE NOTED.
3. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW GENERAL ARRANGEMENT AND CONFIGURATION OF PIPING AND LOCATION OF VALVES. ADJUST LOCATIONS OF PIPING TO ENSURE THAT ISOLATION VALVES ARE ACCESSIBLE. PROVIDE ISOLATION VALVES FOR ALL WALL HYDRANTS, TOILET ROOMS, AND FIXTURES WITHOUT STOPS.
4. SEE PLUMBING FIXTURE AND DRAIN ROUGH-IN SCHEDULE FOR FIXTURE SERVICE CONNECTION SIZES.
5. PROVIDE WALL CLEANOUT BELOW EACH LAVATORY AND SINK. PROVIDE WALL CLEANOUTS FOR WATER CLOSETS AND INSTALL MINIMUM 6 INCHES ABOVE FLOOD RIM OF FIXTURES ADJACENT TO WCO.
6. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS FOR PLUMBING FIXTURES MOUNTING HEIGHTS.
7. ALL FLOOR DRAINS, FLOOR SINKS, AND AIR GAP DRAIN TRAPS SHALL BE SERVED FROM CLOSEST TRAP PRIMER.
8. PROVIDE STAINLESS STEEL LOCKING ACCESS DOOR FOR ALL TRAP PRIMERS, WATER HAMMER ARRESTORS, VALVES, ETC. LOCATED IN OCCUPIED AREAS. COORDINATE FINAL LOCATION WITH A/E. REFER TO INTERIOR ELEVATIONS ON ARCHITECTURAL PLANS.

FLAG NOTES

1. AIR COMPRESSOR LOCATED ABOVE RESTROOM. AIR COMPRESSOR PIPING RUN ABOVE RESTROOM LID.
2. PIPING UP/DN. PIPING SHALL RUN PIPING TIGHT TO STRUCTURE.
3. PROVIDE ISOLATION VALVE, FILTER/REGULATOR/LUBRICATOR, AND QUICK DISCONNECT FOR EACH AIR DROP.



MAIN FLOOR PLUMBING PLAN - SOUTH
1/8" = 1'-0"

NORTH

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

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MAIN FLOOR PLUMBING PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

PB201

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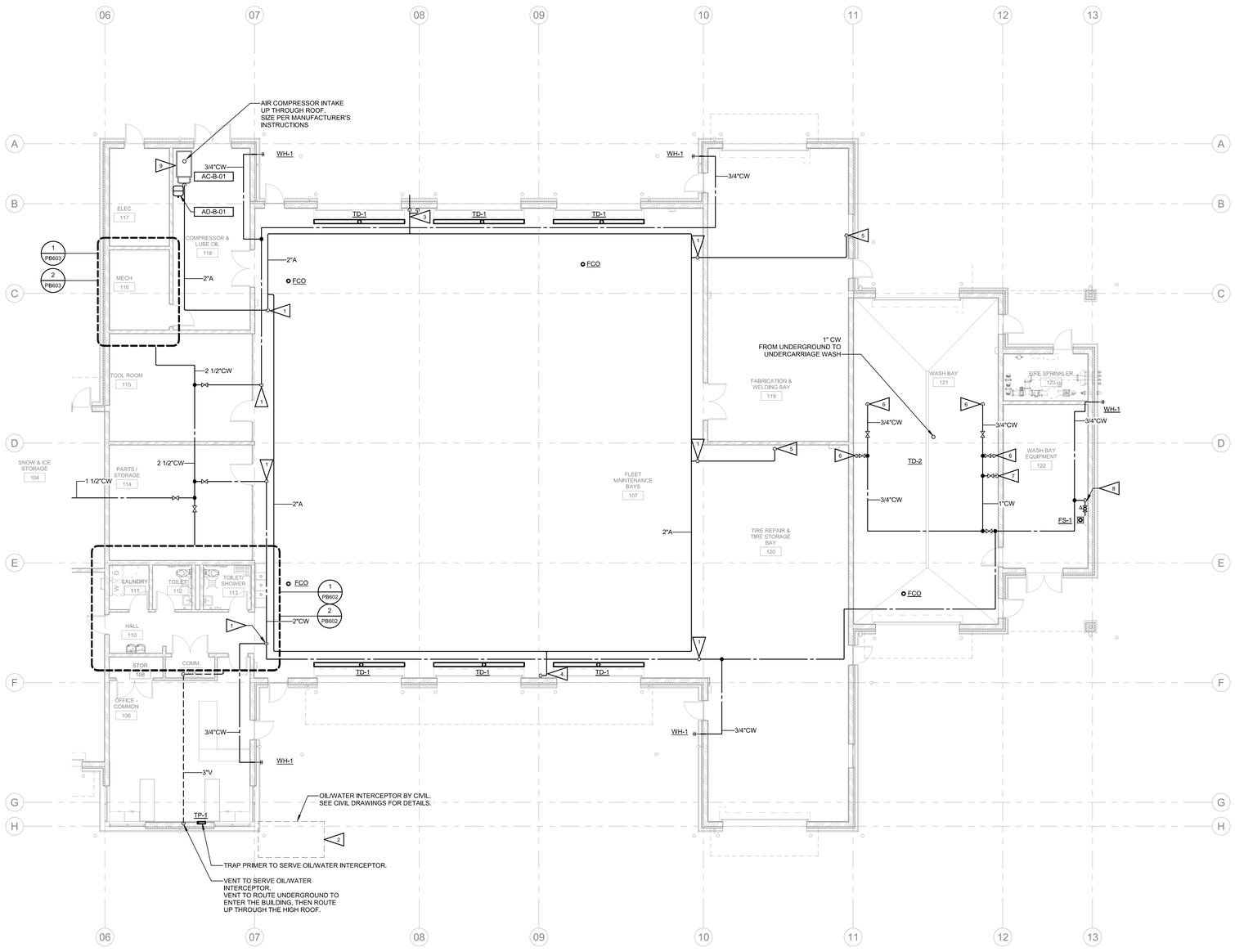

SHEET NOTES

1. REFER TO PB800 SERIES SHEETS FOR STANDARD DETAILS NOT REFERENCED ON PLANS, COMPLY WITH ALL REQUIREMENTS IN DETAILS.
2. SLOPE ALL WASTE PIPING A MINIMUM OF 1/4 INCH PER FOOT UNLESS OTHERWISE NOTED.
3. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW GENERAL ARRANGEMENT AND CONFIGURATION OF PIPING AND LOCATION OF VALVES. ADJUST LOCATIONS OF PIPING TO ENSURE THAT ISOLATION VALVES ARE ACCESSIBLE. PROVIDE ISOLATION VALVES FOR ALL WALL HYDRANTS, TOILET ROOMS, AND FIXTURES WITHOUT STOPS.
4. SEE PLUMBING FIXTURE AND DRAIN ROUGH-IN SCHEDULE FOR FIXTURE SERVICE CONNECTION SIZES.
5. PROVIDE WALL CLEANOUT BELOW EACH LAVATORY AND SINK. PROVIDE WALL CLEANOUTS FOR WATER CLOSETS AND INSTALL MINIMUM 6 INCHES ABOVE FLOOD RIM OF FIXTURES ADJACENT TO WCO.
6. DO NOT ROUTE ANY PIPING OVER ELECTRICAL ROOMS UNLESS PIPING IS SERVING EQUIPMENT IN THE ROOM.
7. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS FOR PLUMBING FIXTURES MOUNTING HEIGHTS.
8. ALL FLOOR DRAINS, FLOOR SINKS, AND AIR GAP DRAIN TRAPS SHALL BE SERVED FROM CLOSEST TRAP PRIMER.
9. PROVIDE STAINLESS STEEL LOCKING ACCESS DOOR FOR ALL TRAP PRIMERS, WATER HAMMER ARRESTORS, VALVES, ETC. LOCATED IN OCCUPIED AREAS. COORDINATE FINAL LOCATION WITH A/E. REFER TO INTERIOR ELEVATIONS ON ARCHITECTURAL PLANS.

FLAG NOTES

1. PIPING UP/DN. PIPING SHALL RUN PIPING TIGHT TO STRUCTURE.
2. OIL WATER INTERCEPTOR WILL FUNCTION AS A COMMON TRAP FOR THE GARAGE DRAINAGE SYSTEM. OIL WATER INTERCEPTOR TO BE VENTED PER MANUFACTURUERS INSTRUCTIONS. PROVIDE ELECTRIC TRAP PRIMER CONNECTION TO OIL WATER INTERCEPTOR.
3. COMPRESSED AIR DROPS. (1) 3/4" DROP ON THE BUILDING EXTERIOR WITH VALVE, FILTER/REGULATOR/LUBRICATOR ON THE BUILDING INTERIOR AND QUICK DISCONNECT ON THE EXTERIOR, (1) 1" DROP ON THE BUILDING INTERIOR WITH VALVE, FILTER/REGULATOR AND QUICK DISCONNECT AND (1) 3/4" DROP ON THE BUILDING INTERIOR WITH VALVE, FILTER/REGULATOR AND HOSE REEL CONNECTION.
4. COMPRESSED AIR DROPS. (1) 1" DROP ON THE BUILDING INTERIOR WITH VALVE, FILTER/REGULATOR/LUBRICATOR AND QUICK DISCONNECT AND (1) 3/4" DROP ON THE BUILDING INTERIOR WITH VALVE, FILTER/REGULATOR AND HOSE REEL CONNECTION.
5. 3/4" COMPRESSED AIR DROP TO VALVE, FILTER/REGULATOR AND HOSE REEL.
6. 3/4" CW DROPS TO HOSE BIBBS FOR VEHICLE WASH.
7. 1" CW DROP TO UNDERGROUND. FEEDS UNDER CARRIAGE VEHICLE WASH.
8. 1" CW DROP FOR VEHICLE WASH EQUIPMENT. PROVIDE RPBP ON LINE.
9. SEE STRUCTURAL FOR HOUSE KEEPING PAD FOR ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO PUMPS, COMPRESSORS, TANKS AND ALL GROUND MOUNTED EQUIPMENT. PROVIDE 4" HIGH HOUSEKEEPING PAD WITH 6" CLEARANCE AROUND ALL SIDES OF EQUIPMENT BOTTOM.

MAIN FLOOR PLUMBING PLAN - NORTH

1/8" = 1'-0"

NORTH

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

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MAIN FLOOR PLUMBING PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	q23-087

BID SET

PB202

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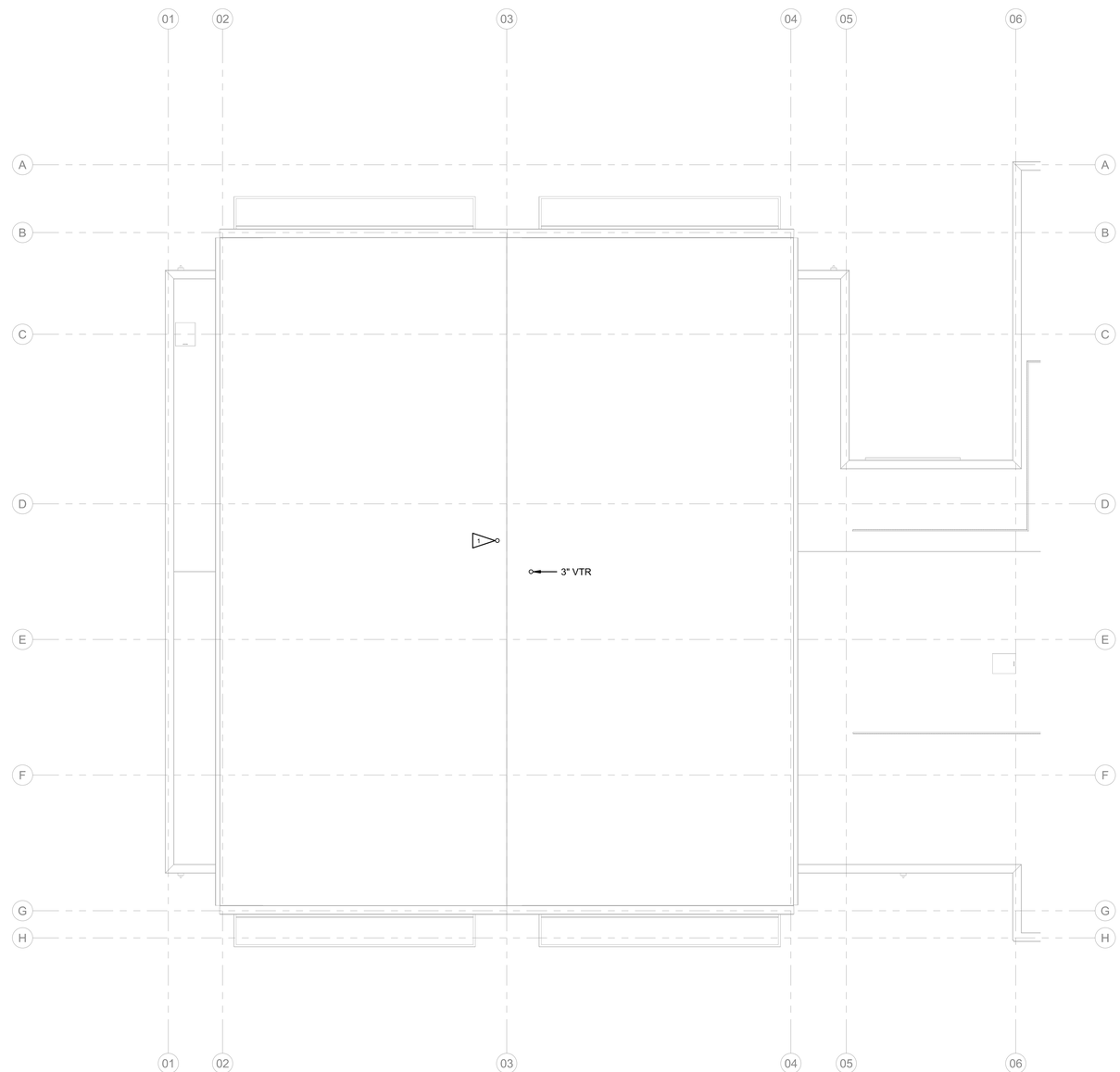
SHEET NOTES

1. REFER TO PB800 SERIES SHEETS FOR STANDARD DETAILS NOT REFERENCED ON PLANS, COMPLY WITH ALL REQUIREMENTS IN DETAILS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ROOFING DETAILS.
3. MAINTAIN A MINIMUM 10 FEET BETWEEN SANITARY VENTS AND ALL OUTSIDE AIR INTAKES.

FLAG NOTES

1 AIR COMPRESSOR INTAKE. TERMINATE WITH VENT CAP. SIZE INTAKE PER MANUFACTURERS INSTRUCTIONS. REFERENCE DETAIL 7/PB802.



PLUMBING ROOF PLAN - SOUTH

1/8" = 1'-0"

NORTH

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

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PLUMBING ROOF PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

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05.06.24	a23-087

BID SET

PB501

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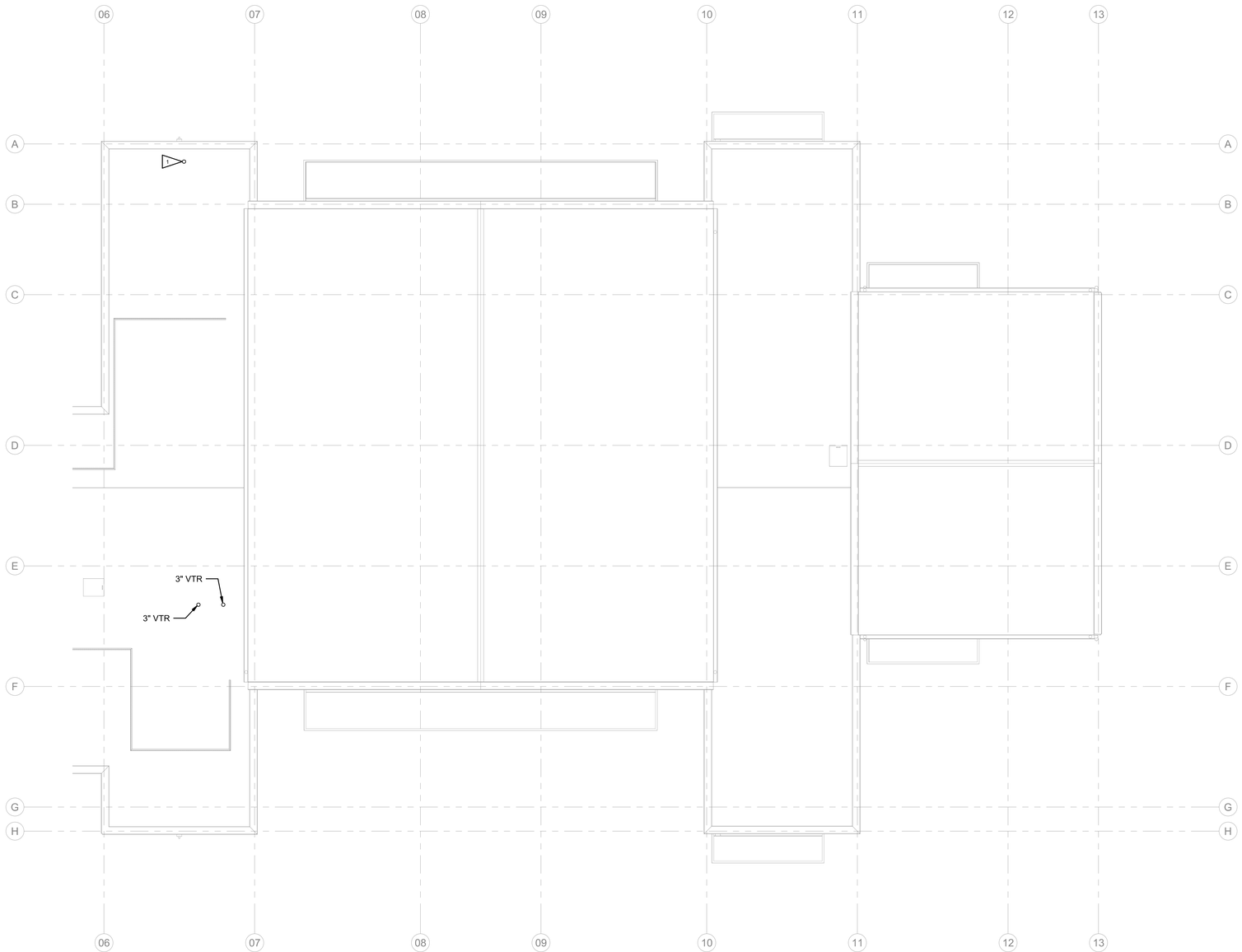
SHEET NOTES

1. REFER TO PB800 SERIES SHEETS FOR STANDARD DETAILS NOT REFERENCED ON PLANS. COMPLY WITH ALL REQUIREMENTS IN DETAILS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ROOFING DETAILS.
3. MAINTAIN A MINIMUM 10 FEET BETWEEN SANITARY VENTS AND ALL OUTSIDE AIR INTAKES.

FLAG NOTES

1 AIR COMPRESSOR INTAKE. TERMINATE WITH VENT CAP. SIZE INTAKE PER MANUFACTURERS INSTRUCTIONS. REFERENCE DETAIL 7/PB802.



PLUMBING ROOF PLAN - NORTH
1/8" = 1'-0"

NORTH
0' 2' 4' 8'
SCALE: 1/8" = 1'-0"

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PLUMBING ROOF PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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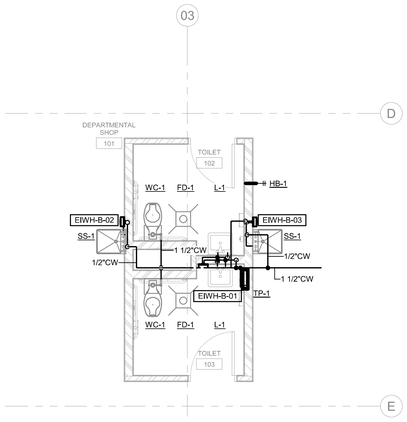
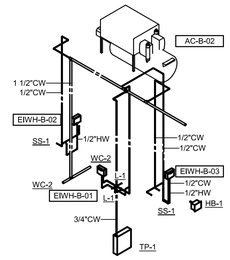
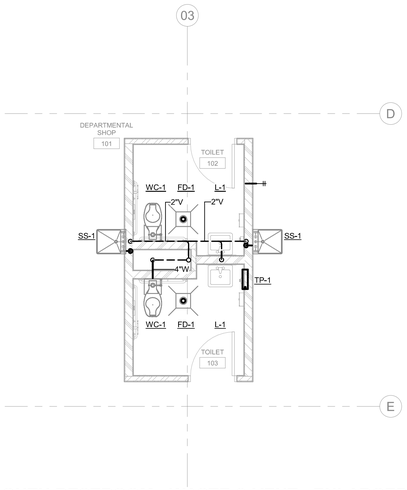


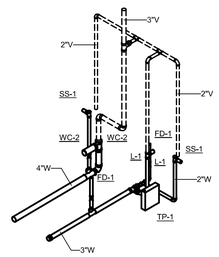
1 PB601 **SOUTH RESTROOM - DOMESTIC WATER - ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



3 PB601 **SOUTH RESTROOM - DOMESTIC WATER - ISOMETRIC**
SCALE:



2 PB601 **SOUTH RESTROOM - WASTE & VENT - ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



4 PB601 **SOUTH RESTROOM - SANITARY & VENT - ISOMETRIC**
SCALE:

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PLUMBING ENLARGED PLAN AND SECTION - SOUTH

CITY OF FEDERAL WAY
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FEDERAL WAY, WASHINGTON

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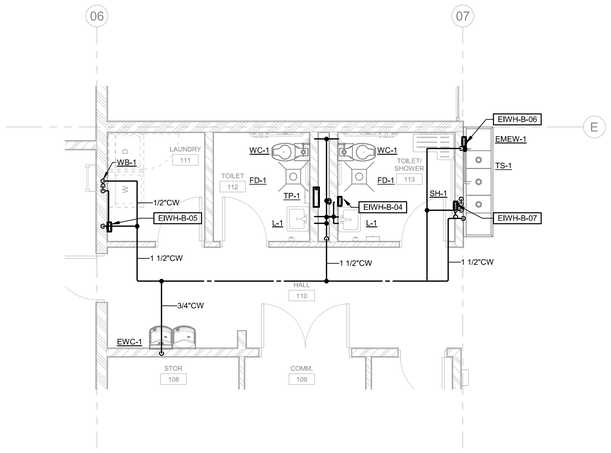
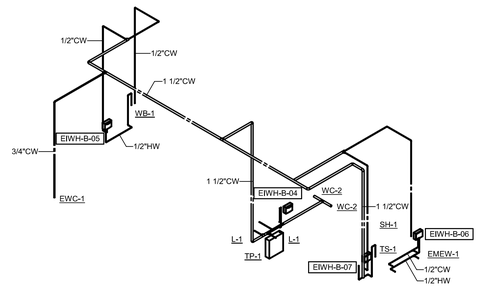
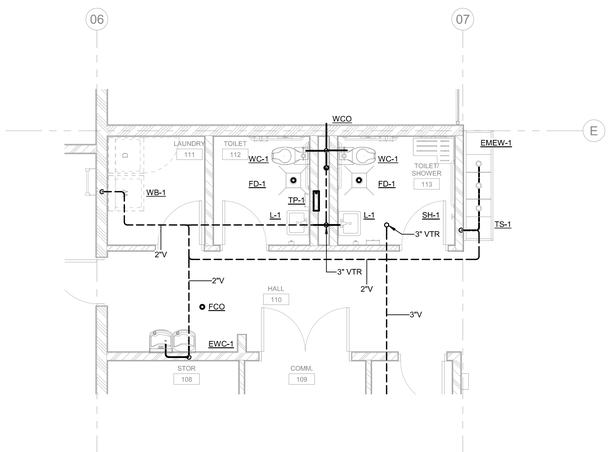


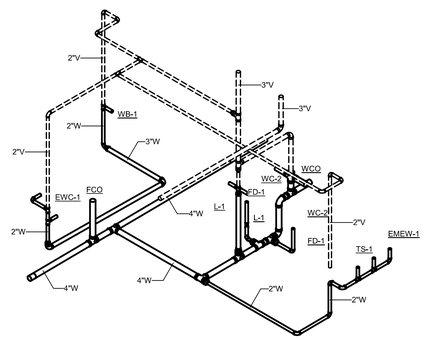
1 PB602 **NORTH RESTROOM - DOMESTIC WATER - ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



3 PB602 **NORTH RESTROOM - DOMESTIC WATER - ISOMETRIC**
SCALE:



2 PB602 **NORTH RESTROOM - WASTE & VENT - ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



4 PB602 **NORTH RESTROOM - WASTE & VENT - ISOMETRIC**
SCALE:

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PLUMBING ENLARGED PLAN AND SECTION - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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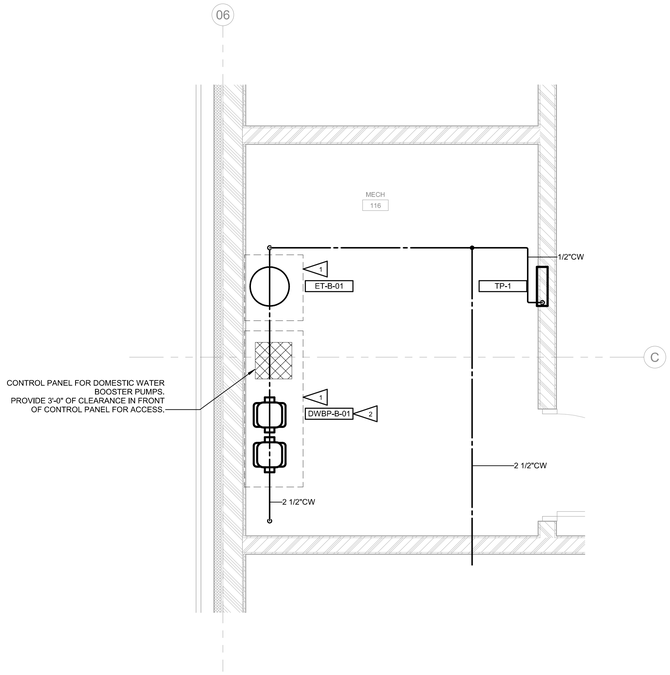
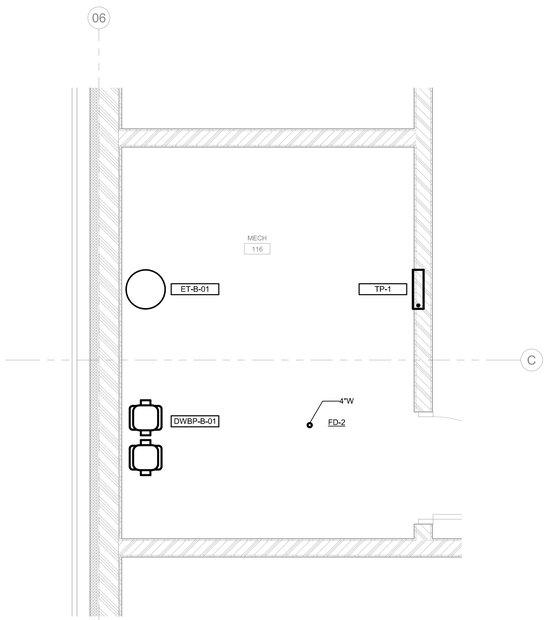


1 PB603 **MECHANICAL ROOM - DOMESTIC WATER - ENLARGED PLAN**
SCALE: 1/2" = 1'-0"



2 PB603 **MECHANICAL ROOM - WASTE & VENT - ENLARGED PLAN**
SCALE: 1/2" = 1'-0"

FLAG NOTES

1. SEE STRUCTURAL FOR HOUSE KEEPING PAD FOR ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO PUMPS, COMPRESSORS, TANKS AND ALL GROUND MOUNTED EQUIPMENT. PROVIDE 4" HIGH HOUSEKEEPING PAD WITH 6" CLEARANCE AROUND ALL SIDES OF EQUIPMENT BOTTOM.
2. DOMESTIC WATER ENTRANCE SHOWN. SEE DETAIL 10/PB801 FOR FULL PIPING LAYOUT AND REQUIREMENTS.

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PLUMBING ENLARGED PLAN AND SECTIONS

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FEDERAL WAY, WASHINGTON

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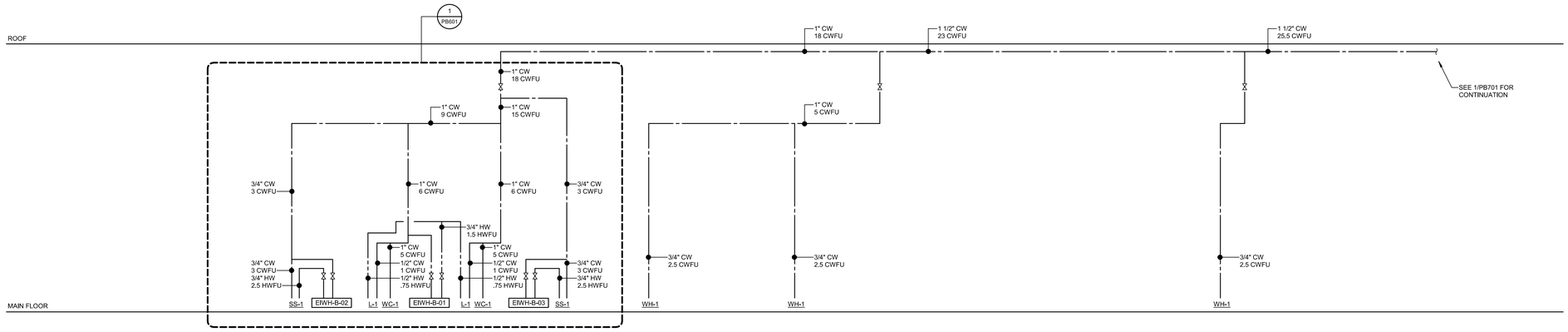
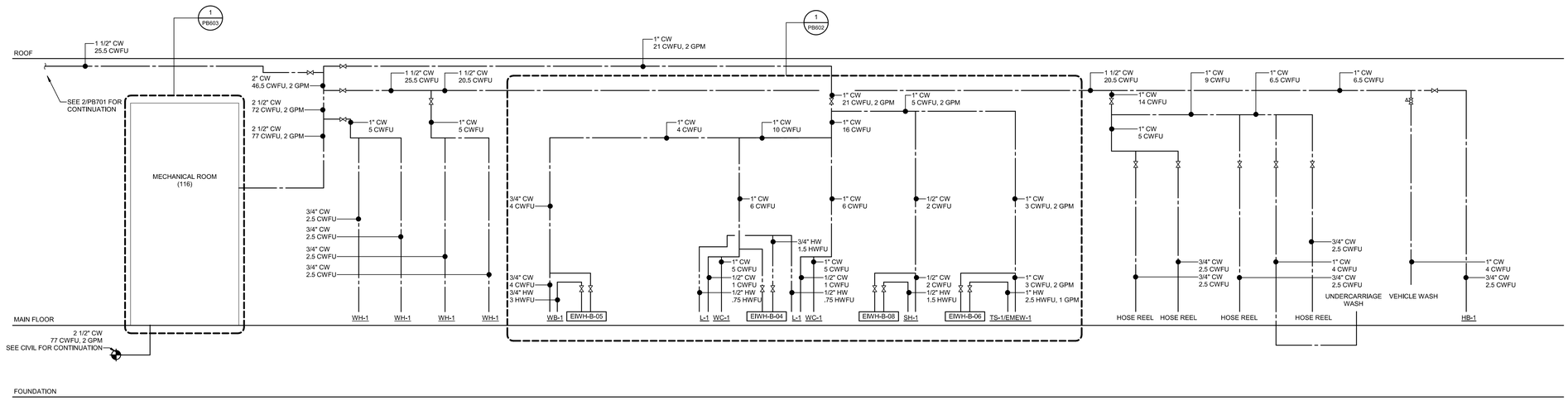


1 PB701 **PLUMBING FLAT RISER - DOMESTIC - SOUTH**



2 PB701 **PLUMBING FLAT RISER - DOMESTIC - NORTH**

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PLUMBING RISER DIAGRAMS - DOMESTIC

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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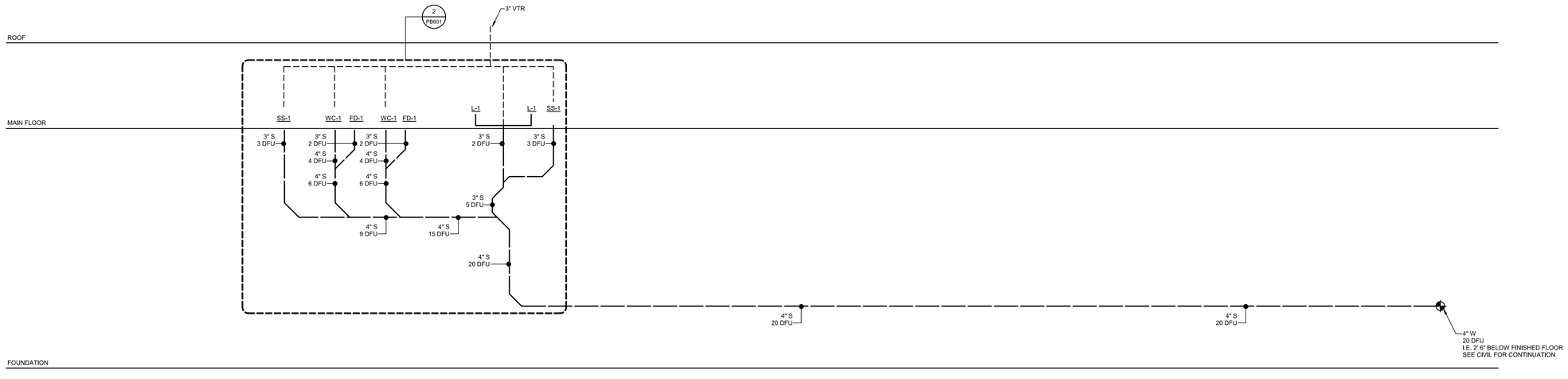
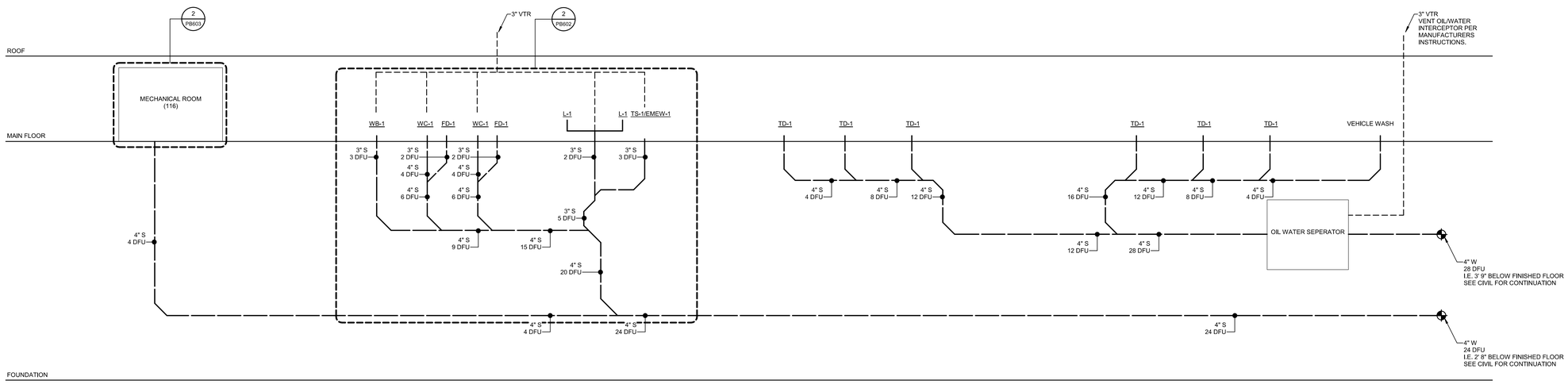


1 PB702 **PLUMBING FLAT RISER - SANITARY - SOUTH**



2 PB702 **PLUMBING FLAT RISER - SANITARY - NORTH**

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PLUMBING RISER DIAGRAMS - SANITARY

CITY OF FEDERAL WAY
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FEDERAL WAY, WASHINGTON

REVISION	DATE

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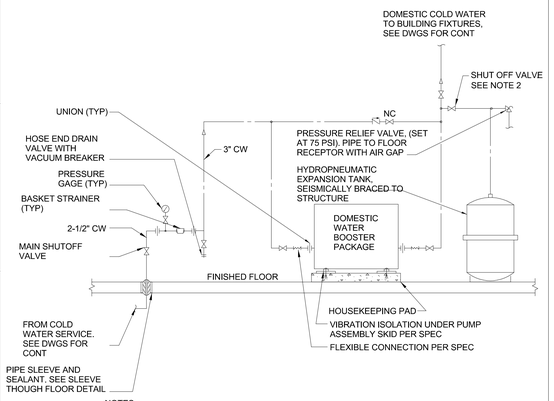
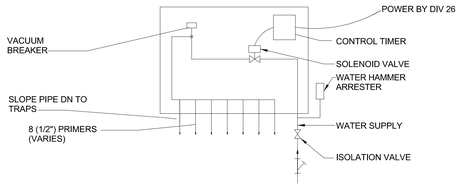


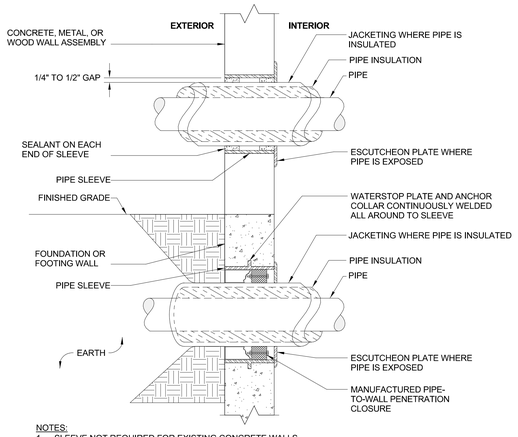
NOTES:
1. SUPPORT PIPE AS SPECIFIED AND PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. SET SHUTOFF VALVE IN OPEN POSITION AND REMOVE HANDLE.

10 PB801 DIAGRAM - COLD WATER SERVICE HEADER
SCALE: NONE



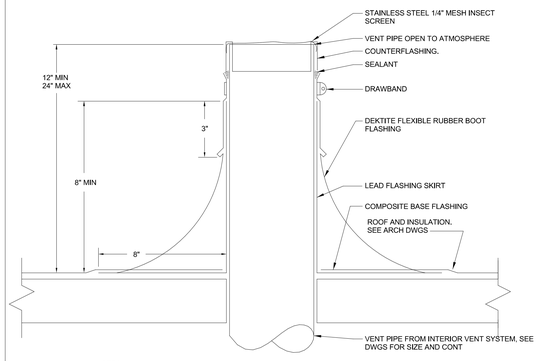
NOTE:
1. PROVIDE LOCKING ACCESS PANEL TO CONCEAL ALL COMPONENTS SHOWN AT OCCUPIED SPACE LOCATIONS.

7 PB801 DETAIL - TRAP PRIMER PANEL
SCALE: NONE



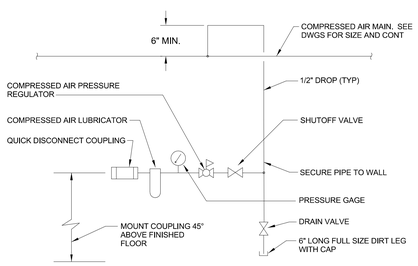
NOTES:
1. SLEEVE NOT REQUIRED FOR EXISTING CONCRETE WALLS.

4 PB801 DETAIL - PIPE THROUGH EXTERIOR AND FOUNDATION WALLS
SCALE: NONE

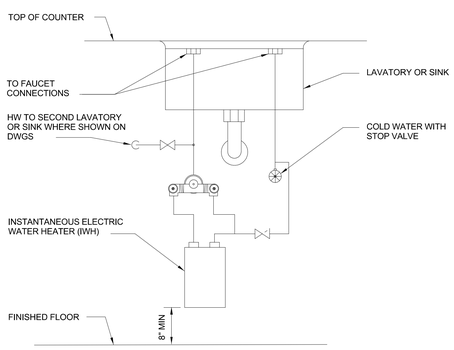


NOTES:
1. PROVIDE DEKTITE FLASHING FOR METAL ROOFS. DETAIL SHOWS LEAD FLASHING FOR COMPOSITE MEMBRANE ROOFS.
2. DETAIL SHOWS PLUMBING VENT THROUGH ROOF PENETRATION. DETAIL ALSO APPLIES TO NATURAL GAS PIPING, LIQUEFIED PETROLEUM PIPING, AND SIMILAR PIPING THROUGH ROOF PENETRATIONS.

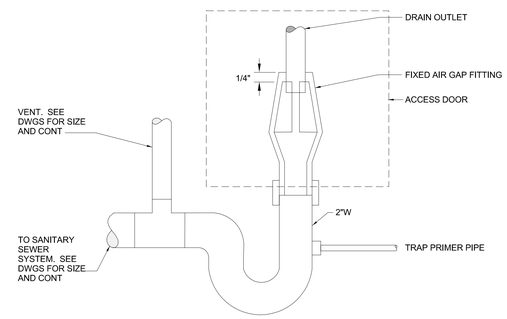
1 PB801 DETAIL - PLUMBING VENT THROUGH ROOF PENETRATION
SCALE: NONE



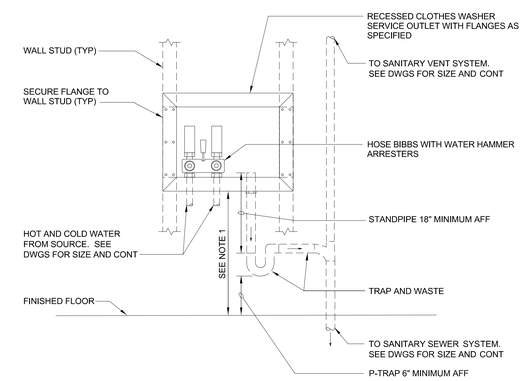
11 PB801 DIAGRAM - COMPRESSED AIR OUTLET
SCALE: NONE



8 PB801 DETAIL- INSTANTANEOUS ELECTRIC WATER HEATER
SCALE: NONE

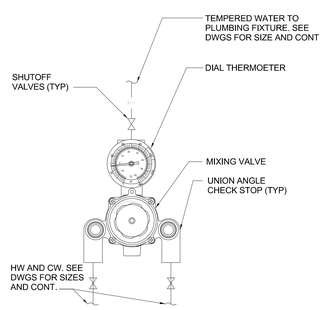


5 PB801 DETAIL - AIR GAP DRAIN
SCALE: NONE



NOTES:
1. INSTALL BOTTOM OF BOX 42" AFF OR 6" ABOVE TOP OF CLOTHES WASHER, WHICHEVER HEIGHT IS GREATER.
2. THIS IS A GENERIC DETAIL AND MAY NOT SHOW FEATURES SPECIFIED IN SECTION 224000 AND SUBSEQUENTLY INCLUDED AS AN APPROVED SUBMITTAL.

2 PB801 DETAIL - CLOTHES WASHER SERVICE OUTLET
SCALE: NONE



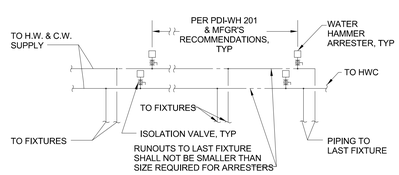
SERVES EMERGENCY EYE WASHERS

12 PB801 DETAIL - EMERGENCY FIXTURES THERMOSTATIC MIXING VALVES
SCALE: NONE

WATER HAMMER ARRESTOR SIZING SCHEDULE

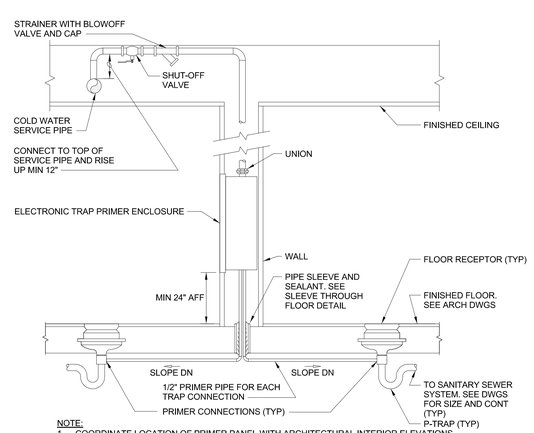
MARK	SYSTEM SERVED	MANUFACTURER / MODEL NO.	FIXTURE UNIT MIN	FIXTURE UNIT MAX	SIZE DIA (IN)	DETAIL / DIAGRAM REFERENCE	NOTES	MARK
A-1	DOMESTIC WTR	J.R. SMITH / HYDROTROL 5005	0	11	3/4	3/M9.02	1	A-1
A-2	DOMESTIC WTR	J.R. SMITH / HYDROTROL 5010	12	32	1	3/M9.02	1	A-2
A-3	DOMESTIC WTR	J.R. SMITH / HYDROTROL 5020	33	60	1	3/M9.02	1	A-3
A-4	DOMESTIC WTR	J.R. SMITH / HYDROTROL 5030	61	113	1	3/M9.02	1	A-4
A-5	DOMESTIC WTR	J.R. SMITH / HYDROTROL 5040	114	154	1	3/M9.02	1	A-5

NOTES:
1. INSTALL IN ACCORDANCE WITH PLUMBING DRAINAGE INSTITUTE STANDARD P.D.I. WH-201 OR ASSE 1010 RECOMMENDATIONS.



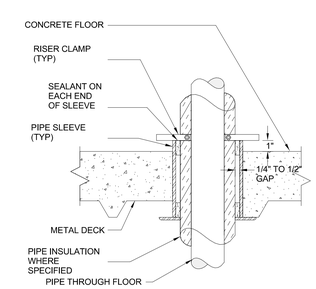
NOTES:
1. USE TABLE 6-5 UNIFORM PLUMBING CODE FOR DETERMINING SUPPLY FIXTURE UNITS WHEN SIZING WATER HAMMER ARRESTORS.

9 PB801 WATER HAMMER ARRESTOR
SCALE: NONE



NOTE:
1. COORDINATE LOCATION OF PRIMER PANEL WITH ARCHITECTURAL INTERIOR ELEVATIONS.

6 PB801 DETAIL - ELECTRONIC TYPE TRAP PRIMER
SCALE: NONE



NOTES:
1. EXTEND INSULATION CONTINUOUS THROUGH SLEEVE FOR COLD PIPES.

3 PB801 DETAIL - PIPE SLEEVE THROUGH CONCRETE FLOOR
SCALE: NONE

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PLUMBING DETAILS

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

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PB801

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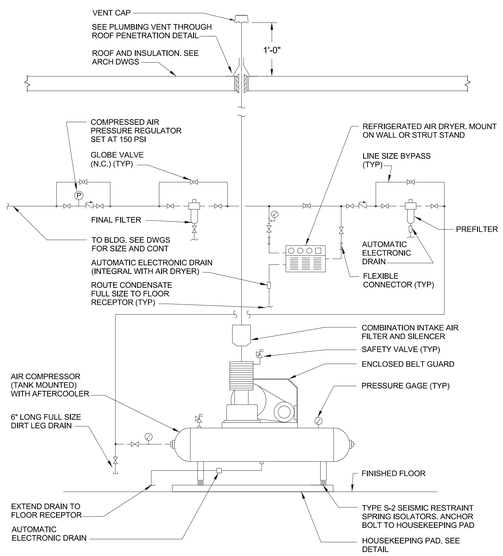
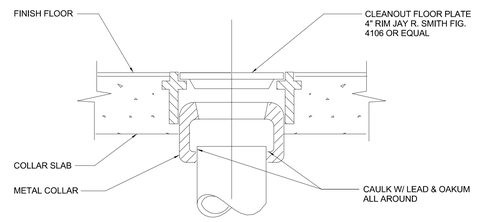
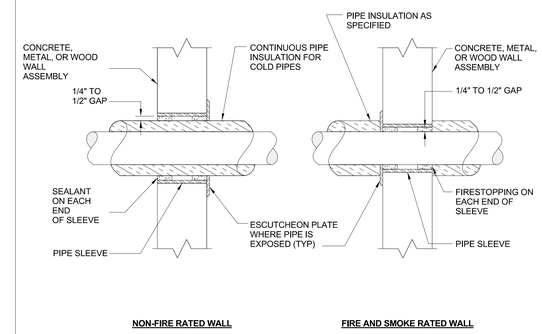


7 PB802 **DIAGRAM - AIR COMPRESSOR AND AIR DRYER PIPING**
SCALE: NONE

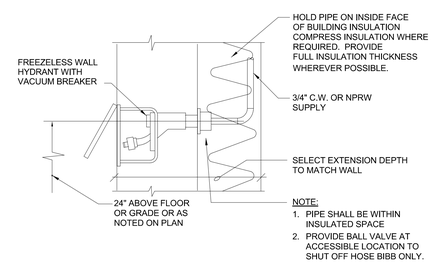


4 PB802 **DETAIL - INTERIOR CLEANOUT**
SCALE: NONE



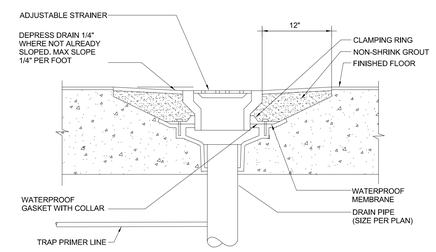
NOTES:
1. SLEEVE NOT REQUIRED FOR EXISTING CONCRETE WALLS.

1 PB802 **DETAIL - PIPE THROUGH INTERIOR WALL**
SCALE: NONE

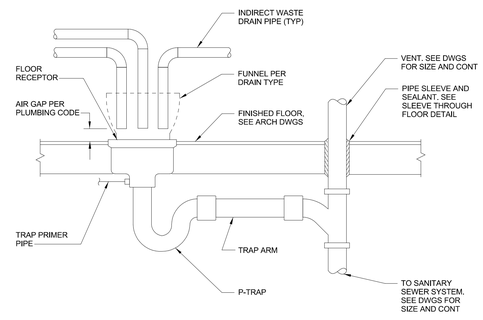


NOTE:
1. PIPE SHALL BE WITHIN INSULATED SPACE
2. PROVIDE BALL VALVE AT ACCESSIBLE LOCATION TO SHUT OFF HOSE BIBB ONLY.

5 PB802 **DETAIL - FREEZE RESISTANT WALL HYDRANT**
SCALE: NONE

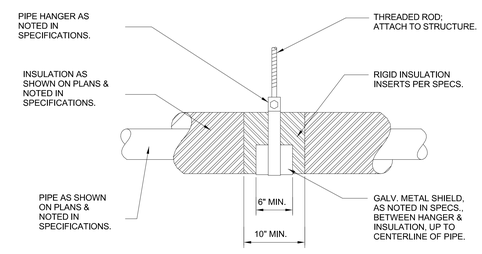


2 PB802 **DETAIL - FLOOR DRAIN IN CONCRETE FLOOR**
SCALE: NONE



NOTES:
1. TERMINATE INDIRECT PIPES ABOVE FUNNEL WITH AIR GAP IF FUNNEL IS INSTALLED.

6 PB802 **DETAIL - INDIRECT WASTE DRAIN**
SCALE: NONE



3 PB802 **DETAIL - INSULATED PIPE HANGER**
SCALE: NONE

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PLUMBING DETAILS

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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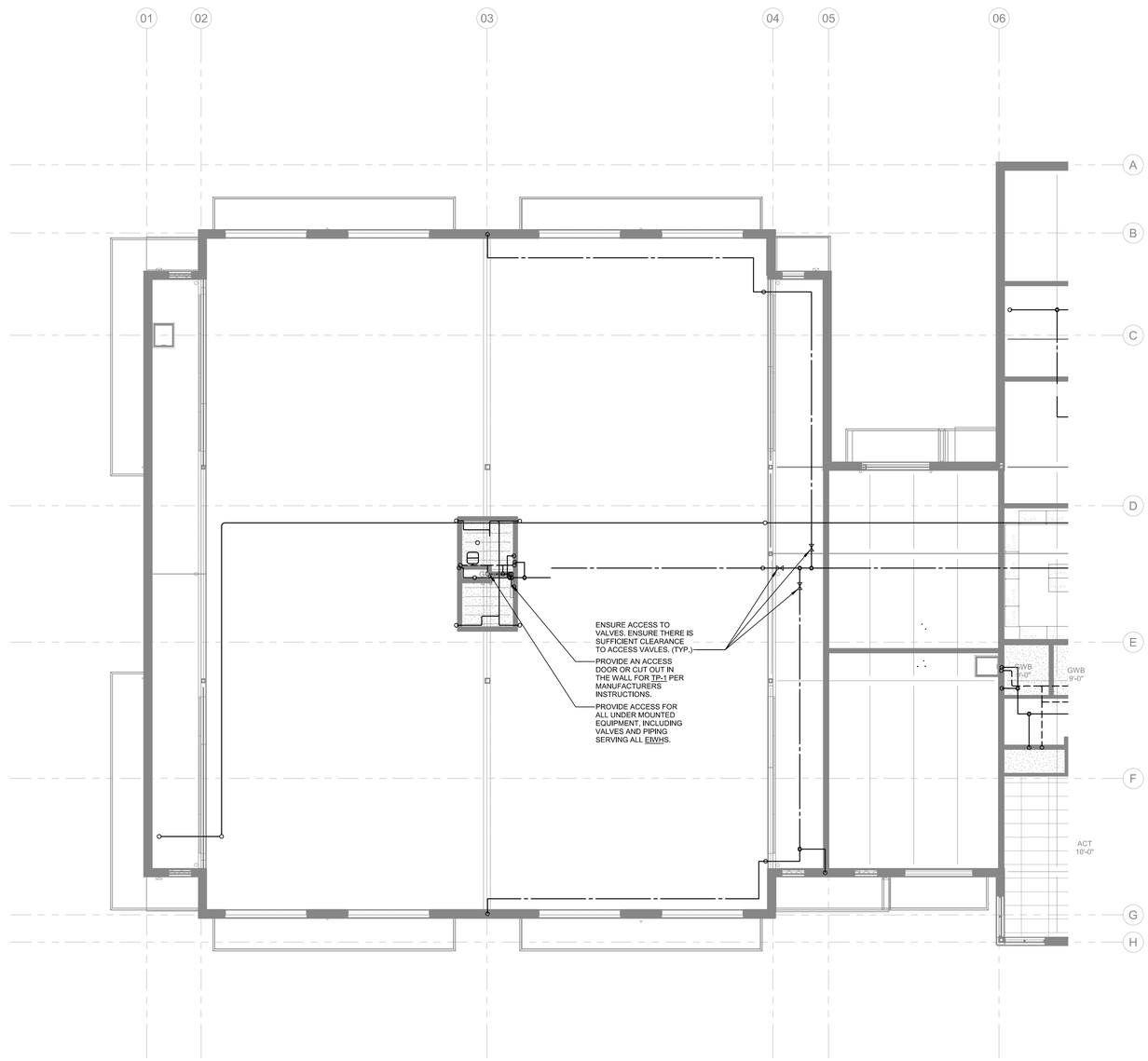

PLUMBING ACCESS LOCATIONS - SOUTH

1/8" = 1'-0"

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PLUMBING ACCESS PANEL LOCATIONS - SOUTH

CITY OF FEDERAL WAY
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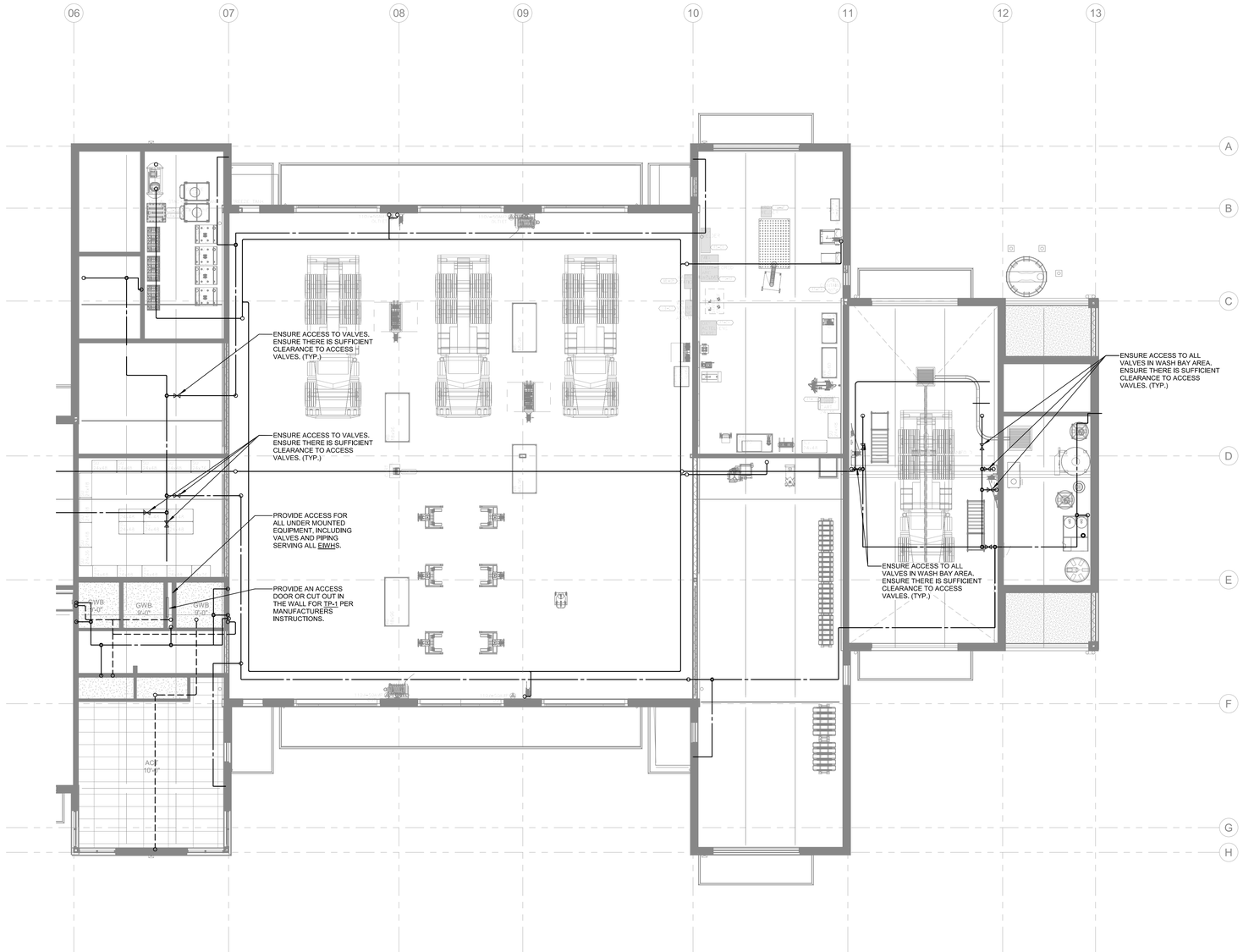

PLUMBING ACCESS LOCATIONS - NORTH

1/8" = 1'-0"

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PLUMBING ACCESS PANEL LOCATIONS - NORTH

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A B C D E F G H J K

GENERAL

- EXISTING ELECTRICAL TO BE REMOVED
- EXISTING ELECTRICAL TO REMAIN
- NEW ELECTRICAL WORK
- MATCHLINE OR PROPERTY LINE
- ENLARGED PLAN BOUNDARY
- 1 / E1.01 DETAIL/PLAN IDENTIFIER
- 1 / E1.01 SECTION IDENTIFIER
- 1 / E1.01 ELEVATION IDENTIFIER
- REVISION DEFINITION AREA, AREA ENCIRCLED CONTAINS CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE
- 1 REVISION CALLOUT
- 1 FLAG NOTE CALLOUT
- 1 DEMOLITION NOTE TAG
- 1 EQUIPMENT TAG
- AHU-01 MECHANICAL EQUIPMENT TAG
- NORTH ARROW
- 1 LOCATION WHERE PICTURE WAS TAKEN AND DIRECTION

LIGHTING

- A / LA1-12 a DEVICE SUBSCRIPTS
  - (LIGHT FIXTURE TYPE)
  - (SWITCH LEG)
  - (CIRCUIT NUMBER)
- LIGHTING FIXTURES (REFER TO LIGHTING FIXTURES SCHEDULE FOR ADDITIONAL INFORMATION)
- STRIP LIGHTING FIXTURE
- WALL-MOUNTED LIGHTING FIXTURE
- EMERGENCY LIGHTING FIXTURES (REFER TO LIGHTING FIXTURES SCHEDULE FOR ADDITIONAL INFORMATION)
- POLE-MOUNTED LIGHTING FIXTURE, QUANTITY OF HEADS AS INDICATED
- DOUBLE HEAD, POLE-MOUNTED, LIGHTING FIXTURE
- LIGHTING TRACK WITH FIXTURES
- SELF-CONTAINED BATTERY-POWERED EMERGENCY LIGHTING FIXTURE
- EXIT SIGN, UNIVERSAL MOUNTING (SHADED AREA INDICATES DIRECTION ARROWS)
- EXIT SIGN, WALL-MOUNTED (SHADED AREA INDICATES DIRECTION ARROWS)

LIGHTING CONTROL

- $wX nLIGHT AIR WIRELESS CONTROL LIGHT SWITCH; SUBSCRIPT X INDICATES TYPE:
  BLANK - ON/OFF SWITCH
  D - DIMMER SWITCH
  Da,b - 2-POLE DIMMER SWITCH
- wX nLIGHT AIR WIRELESS LOAD CONTROLLER; X INDICATES TYPE:
  S - SWITCHING PACK
  D - DIMMING PACK
  P - PLUG CONTROLLER
  E - UL924 EMERGENCY PACK
- M X OCCUPANCY SENSOR, CEILING-MOUNTED WHERE INDICATED, SUBSCRIPT INDICATES CONTROL ZONE
- P X PHOTOSENSOR/OCCUPANCY SENSOR, SUBSCRIPT INDICATES CONTROL ZONE
- 1 / X-X LIGHTING CONTROL TAG
- 10 FC LIGHT LEVEL SET POINT TAG

POWER

- SWITCHBOARD/SWITCHGEAR
- PANELBOARD, FLUSH-MOUNTED
- PANELBOARD, SURFACE-MOUNTED
- (FRONT) TRANSFORMER
- MOTOR CONNECTION
- DISCONNECT SWITCH, NON-FUSED
- DISCONNECT SWITCH, FUSED
- B ENCLOSED CIRCUIT BREAKER
- VFD VARIABLE FREQUENCEY DRIVE
- $M MANUAL MOTOR STARTER WITH THERMAL OVERLOADS
- COMBINATION STARTER/DISCONNECT
- MAGNETIC STARTER
- EQUIPMENT CONNECTION. CONFIRM CONNECTION WITH EQUIPMENT MANUFACTURER
- F/S FIRE/SMOKE DAMPER
- PUSHBUTTON CONTROLLER (SINGLE OR MULTIPLE BUTTONS)
- EMERGENCY POWER OFF PUSHBUTTON / DOOR OPERATOR

RECEPTACLES

- P1A-22 / +42" GF DEVICE SUBSCRIPTS
  - (CIRCUIT NUMBER)
  - (CR,D,EM,GB,GF,IG,SB,TP,USB,WP OR OTHER SUBSCRIPT)
  - (NON-STANDARD MOUNTING HEIGHT OR AC)
- SPECIAL RECEPTACLE
- DUPLEX RECEPTACLE
- FOURPLEX RECEPTACLE
- SPLIT WIRE RECEPTACLE
- SIMPLEX RECEPTACLE
- CORD DROP RECEPTACLE
- RETRACTABLE CORD REEL RECEPTACLE

RACEWAY AND BOXES

- JUNCTION BOX
- F FURNITURE WALL FEED OUTLET BOX
- PB XX PULL BOX (WHERE INDICATED, SUBSCRIPT INDICATES PULL BOX NUMBER)
- HH HANDHOLE (WHERE INDICATED, SUBSCRIPT INDICATES HANDHOLE NUMBER)
- XX VAULT (WHERE INDICATED, SUBSCRIPT INDICATES VAULT TYPE)
- A FLOORBOX (WHERE INDICATED, SUBSCRIPT INDICATES FLOOR BOX TYPE)
- A POKE-THRU (WHERE INDICATED, SUBSCRIPT INDICATES FLOOR POKE-THRU TYPE)
- POWER POLE, FLOOR TO CEILING
- SURFACE METAL RACEWAY
- RACEWAY CONCEALED IN-WALL OR IN-CEILING (EXPOSED IN UNFINISHED AREAS)
- RACEWAY RUN BELOW FLOOR OR BELOW GRADE
- FLEXIBLE RACEWAY
- RACEWAY (CIRCLE DENOTES VERTICAL TRANSITION)
- RACEWAY CONTINUATION
- RACEWAY STUB WITH BUSHINGS
- RACEWAY SLEEVE WITH BUSHINGS
- FIRE STOPPING SLEEVE
- CABLE TRAY, 12"W x 4"H OVERHEAD, UNLESS OTHERWISE NOTED
- CABLE TRAY, OVERHEAD LADDER TYPE
- HOMERUN TO PANEL (INDICATES PANEL DESIGNATION AND CIRCUIT NUMBER)
- # NUMBER OF CONDUCTORS
  - (GAUGE OF WIRE OTHER THAN AWG#12)
  - (GROUND CONDUCTOR)
  - (PHASE CONDUCTORS)
  - (NEUTRAL CONDUCTOR)

ONE-LINE DIAGRAM

- EQUIPMENT ENCLOSURE
- BUS
- WIRE
- TERMINAL / LUG
- CONNECTION
- DELTA
- WYE
- POWER TRANSFORMER
- CURRENT TRANSFORMER
- TRANSFER SWITCH
- CIRCUIT BREAKER, FIXED
- CIRCUIT BREAKER, DRAWOUT
- DISCONNECT SWITCH
- FUSED SWITCH
- FUSE
- FUSED CUTOUTS
- GF CIRCUIT BREAKER WITH GROUND FAULT PROTECTION
- ST CIRCUIT BREAKER WITH SHUNT TRIP OPERATOR
- K CIRCUIT BREAKER WITH KIRK KEY
- GF FUSED SWITCH WITH GROUND FAULT PROTECTION
- MOTOR CONNECTION
- G GENERATOR
- M METERING DEVICE
  - (M = METER)
  - (WH = WATT HOUR METER)
  - (A = AMMETER)
  - (V = VOLTMETER)
- ST SHUNT TRIP
- GF GROUND FAULT PROTECTION
- EPM ELECTRONIC POWER METER
- SPD SURGE PROTECTIVE DEVICE
- GROUND
- 12,241 AVAILABLE FAULT CURRENT (SYMMETRICAL) TAG
- 225 FEEDER TAG
- PAD-MOUNTED TRANSFORMER
- 480V / 208Y 120V TRANSFORMER
- PANELBOARD - MAIN LUGS ONLY
- PANELBOARD - MAIN CIRCUIT BREAKER

GROUNDING

- G GROUNDING CONDUCTOR
- GROUNDING ROD
- GROUNDING BUSBAR
- EQUIPMENT GROUNDING CONNECTION
- GROUNDING STRAP

FIRE ALARM SYSTEM

- WP / +42" DEVICE SUBSCRIPTS (TYPICAL ALL SYSTEMS)
  - WP, WG OR OTHER SUBSCRIPT)
  - (NON-STANDARD MOUNTING HEIGHT)
- FACP FIRE ALARM CONTROL PANEL
- FAAP FIRE ALARM ANNUNCIATOR PANEL
- NAC NOTIFICATION APPLIANCE CIRCUIT
- AUDIBLE/VISUAL COMBINATION, WALL-MOUNTED
- AUDIBLE/VISUAL COMBINATION, CEILING-MOUNTED
- VISUAL ONLY, WALL-MOUNTED
- VISUAL ONLY, CEILING-MOUNTED
- BEAM SMOKE DETECTOR - TRANSMITTER
- BEAM SMOKE DETECTOR - RECEIVER
- MANUAL PULL STATION
- SMOKE DETECTOR
- COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- F/S FIRE/SMOKE DAMPER
- HEAT DETECTOR
- MAGNETIC DOOR HOLD OPEN DEVICE
- FLOW SWITCH
- TAMPER SWITCH
- PRESSURE SWITCH
- RELAY
- DUCT SMOKE DETECTOR
- 10" EXTERIOR BELL - WEATHERPROOF
- KNOX BOX

INTERCOM/CLOCK SYSTEM

- INTERCOM AND CLOCK, WALL-MOUNTED
- DIGITAL CLOCK, WALL-MOUNTED
- CLOCK, WALL-MOUNTED (WHERE APPLICABLE WIRE GUARD)
- SPEAKER, CEILING-MOUNTED (WHERE APPLICABLE IP SPEAKER W/TELECOM DEVICE)
- SPEAKER, WALL-MOUNTED (WHERE APPLICABLE IP SPEAKER W/TELECOM DEVICE)
- SPEAKER EXTERIOR RATED, WALL-MOUNTED (WHERE APPLICABLE IP SPEAKER W/TELECOM DEVICE)
- EXTERIOR BELL, WALL-MOUNTED
- $CS CALL OR PANIC SWITCH, WALL-MOUNTED
- $V VOLUME CONTROL, WALL-MOUNTED
- $DB DOORBELL, WALL-MOUNTED

CLASSROOM AUDIO VISUAL SYSTEM

- AV X AUDIO VISUAL INPUT PLATE, WALL-MOUNTED
  - (1 = HDMI, VGA W/AUDIO)
  - (2 = HDMI, VGA W/AUDIO & USB)
- CP CONTROL PANEL, WALL-MOUNTED
- A AUDIO PLATE/AMPLIFIER, WALL-MOUNTED
- AL ASSISTIVE LISTENING OUTPUT, WALL-MOUNTED
- S SPEAKER (1x2 OR 2x2), IN-CEILING
- S SPEAKER, CEILING-MOUNTED
- S IR SPEAKER, WALL-MOUNTED (WHERE APPLICABLE SPEAKER W/ INTEGRATED IR SENSOR)
- VIDEO PROJECTOR, WALL-MOUNTED
- VP AV EQUIPMENT ENCLOSURE, WALL-MOUNTED
- AV AV EQUIPMENT ENCLOSURE, CEILING-MOUNTED
- AE AUDIO ENCHANCEMENT, WALL-MOUNTED
- AE AUDIO ENCHANCEMENT, CEILING-MOUNTED
- IR INFRARED SENSOR, WALL-MOUNTED
- IR INFRARED SENSOR, CEILING-MOUNTED
- DIGITAL 4-PAIR F/UTP DEVICE, WALL-MOUNTED (X=REPRESENTS THE # OF TELECOMMUNICATIONS MODULES)
- DIGITAL 4-PAIR F/UTP DEVICE, ABOVE CEILING (X=REPRESENTS THE # OF TELECOMMUNICATIONS MODULES)

PERFORMANCE AUDIO VISUAL SYSTEM

- AV X AUDIO VISUAL INPUT PLATE, WALL-MOUNTED
  - (5 = DUAL HDMI & AUDIO)
  - (6 = HDMI,VGA & AUDIO)
- A AUDIO 3.5MM INPUT, WALL-MOUNTED
- AX AUX AUDIO L/R XLR INPUT, WALL-MOUNTED
- MA MIC, AUX, AUDIO INPUT, WALL-MOUNTED
- SP X SOUND INTERFACE PLATE, WALL-MOUNTED (X = DENOTES CONFIGURATION TYPE)
- TP X TOUCH PANEL CONTROLLER, WALL-MOUNTED (X = DENOTES SCREEN SIZE)
- RV REMOTE VOLUME CONTROLLER, WALL-MOUNTED
- M DUAL MICROPHONE INPUT, WALL-MOUNTED
- M HANGING MICROPHONE, CEILING-MOUNTED
- S SPEAKER, CEILING-MOUNTED
- SL X LOUDSPEAKER, WALL-MOUNTED
  - (1 = 12", 2-WAY LOUDSPEAKER)
  - (2 = 15", 2-WAY LOUDSPEAKER)
  - (3 = 15", 3-WAY LOUDSPEAKER)
- SW SUBWOOFER, WALL-MOUNTED
- SA SPEAKER LINE ARRAY, WALL-MOUNTED
- MS MONITOR SPEAKER OUTPUT, WALL-MOUNTED
- AL ASSISTED LISTENING OUTLET, WALL-MOUNTED
- WM WIRELESS MIC ANTENNA, CEILING-MOUNTED
- RS RS-232 CONTROL, EQUIPMENT CONNECTION
- RL RELAY CONTROL, EQUIPMENT CONNECTION
- VP VIDEO PROJECTOR, CEILING-MOUNTED
- VP VIDEO PROJECTOR, WALL-MOUNTED
- VP VIDEO PROJECTOR WITH SCISSOR LIFT
- FPD FLAT PANEL DISPLAY, WALL-MOUNTED
- DS DIGITAL SIGNAGE MONITOR, WALL-MOUNTED
- WBX RECESSED WALL BOX, WALL-MOUNTED (X = DENOTES TYPE)
- BX X AV EQUIPMENT BOX, TABLE-MOUNTED (X = DENOTES TYPE)
- PB AV AV RACK JUNCTION BOX, WALL-MOUNTED

AUDIO VISUAL ONE-LINE

- DIGITAL AUDIO VIDEO SIGNAL
- ANALOG AUDIO SIGNAL
- CONTROL SIGNAL/POWER
- LINE INTERSECTION MARK
- PARALLEL AUDIO CONNECTION
- A 1 ON PAGE DESTINATION
- Device ID / 8P8C / HDMI VGA AUDIO INPUT/OUTPUT PLATE
  - (DEVICE ID)
  - (CONNECTOR TYPES)
- TITLE 1 / TITLE 2 / 1 2 3 4 EQUIPMENT BLOCK
  - (EQUIPMENT TYPE & MODEL NO.)
  - (INPUT/OUTPUTS)
- SIGNAL FLOW
- EQUIPMENT CONNECTION, PRE-TERM
- EQUIPMENT CONNECTION, FIELD TERM
- ANTENNA CONNECTION

SECURITY VIDEO SYSTEM

- C Y SECURITY VIDEO CAMERA MOUNTING TYPES
  - (P = PENDANT MOUNTED)
  - (R = ROOF PARAPET MOUNTED)
  - (W = WALL-MOUNTED W/BRACKET)
- C # VIDEO SECURITY CAMERA ID (WHERE APPLICABLE REPRESENTS THE CAMERA # OR TYPE)
- C CAMERA, CEILING-MOUNTED
- C CAMERA, WALL-MOUNTED
- C X CAMERA, WALL-MOUNTED W/BRACKET
  - (180 = 180 DEGREE VIEW CAMERA)
  - (360 = 360 DEGREE VIEW CAMERA)
- C 360 DEGREE CAMERA, CEILING-MOUNTED
- SM SECURITY MONITOR, WALL-MOUNTED

TELECOMMUNICATIONS SYSTEM

- Y TELECOMMUNICATIONS DEVICE
  - (X = REPRESENTS THE # OF TELECOMMUNICATIONS MODULES)
  - (W = TELECOMMUNICATIONS WALL PHONE MTD AT +48" AFF)
  - (B = BLANK COVER PLATE)
  - (F = MODULAR FURNITURE DEVICE)
  - (AC = ABOVE COUNTER DEVICE)
  - (S = SURFACE MOUNT)
  - (WAP = WALL-MOUNTED WIRELESS ACCESS POINT DATA DEVICE)
- WAP ABOVE CEILING TELECOMMUNICATIONS DEVICE
  - (X = REPRESENTS THE # OF TELECOMMUNICATIONS MODULES)
  - (WAP = WIRELESS ACCESS DEVICE)
  - (SV = SECURITY VIDEO CAMERA)
- FIRE RESISTANT 3/4" PLYWOOD BACKBOARD
- TWO-POST EQUIPMENT RACK
- 3.65" DOUBLE-SIDED VERTICAL MANAGEMENT
- 6" DOUBLE-SIDED VERTICAL MANAGEMENT
- 12" DOUBLE-SIDED VERTICAL MANAGEMENT
- FLOOR MOUNTED SERVER ENCLOSURE
- WALL-MOUNTED ENCLOSURE
- 110 BLOCK WITH LEGS
- 66 BLOCK

ACCESS CONTROL SYSTEM

- ACP ACCESS CONTROL PANEL
- S CR CREDENTIAL/CARD READER
  - (CR = CARD READER, WALL-MOUNTED)
  - (CR/P = CARD READER W/PIN, WALL-MOUNTED)
  - (CR/M = CARD READER, MULLION-MOUNTED)
- S DOOR POSITION SWITCH
- DE DOOR ENTRY STATION, WALL-MOUNTED
- MS DOOR MASTER STATION, DESK TOP
- S XX SECURITY BUTTONS/SWITCH, WALL-MOUNTED
  - (AO = AUTO OPERATOR)
  - (DR = DOOR RELEASE)
  - (LD = LOCKDOWN)
  - (KS = KEYED SWITCH)
  - (PB = PANIC/DURESS)
- XX SECURITY BUTTONS, UNDER-DESK-MOUNTED
  - (DR = DOOR RELEASE)
  - (LD = LOCKDOWN)
  - (PB = PANIC/DURESS)
- R REQUEST TO EXIT DETECTOR, WALL-MOUNTED
- R REQUEST TO EXIT DETECTOR, CEILING-MOUNTED
- R REQUEST TO EXIT, INTEGRAL MICRO SWITCH
- R REQUEST TO EXIT BUTTON, WALL-MOUNTED
- S HORN, WALL-MOUNTED
- S STROBE, WALL-MOUNTED
- S STROBE/HORN, CEILING-MOUNTED
- PS X DOOR HARDWARE POWER SUPPLY (DIV 08) (X = QUANTITY OF DOORS)
- EL DOOR HARDWARE POWER SUPPLY (DIV 08)
  - (EL = ELECTRIFIED LOCKSET/EXIT DEVICE)
  - (ES = ELECTRIFIED STRIKE)
  - (ML = ELECTRIFIED MAGNETIC LOCK)
  - (MH = ELECTRIFIED MAGNETIC HOLD OPEN)

INTRUSION DETECTION SYSTEM

- IDP INTRUSION DETECTION PANEL
- S K KEYPAD, WALL-MOUNTED
- S PIR MOTION DETECTOR, WALL-MOUNTED
- S 360 DEGREE PIR/MOTION DETECTOR, CEILING-MOUNTED
- P PHOTO-BEAM DETECTOR, WALL-MOUNTED
- S DOOR POSITION SWITCH
- T TEMPERATURE PROBE
- G GLASS BREAK DETECTOR, CEILING-MOUNTED
- A AUDIO SENSOR, WALL-MOUNTED

RESCUE ASSISTANCE SYSTEM

- BS RESCUE ASSISTANCE BASE STATION, WALL-MOUNTED
- RPS RESCUE ASSISTANCE POWER SUPPLY, WALL-MOUNTED
- RA CS RESCUE ASSISTANCE CALL STATION, WALL-MOUNTED

EMERGENCY RESPONDERS RADIO SYSTEM

- ERR EMERGENCY RESPONDERS RADIO CABINET
- ERAP EMERGENCY RESPONDERS ANNUNCIATOR PANEL

NOT ALL SYMBOLS MAY APPEAR ON THE DRAWINGS

DRAWING INDEX

EB001	ELECTRICAL LEGEND AND DRAWING INDEX
EB002	ELECTRICAL ABBREVIATIONS
EB003	ELECTRICAL SCHEDULES
EB004	ELECTRICAL SCHEDULES
EB101	MAIN FLOOR LIGHTING CONTROL ZONE PLAN - SOUTH
EB102	MAIN FLOOR LIGHTING CONTROL ZONE PLAN - NORTH
EB201	MAIN FLOOR LIGHTING PLAN - SOUTH
EB202	MAIN FLOOR LIGHTING PLAN - NORTH
EB301	MAIN FLOOR POWER PLAN - SOUTH
EB302	MAIN FLOOR POWER PLAN - NORTH
EB401	MAIN FLOOR MECHANICAL POWER PLAN - SOUTH
EB402	MAIN FLOOR MECHANICAL POWER PLAN - NORTH
EB501	ELECTRICAL ROOF PLAN - SOUTH
EB502	ELECTRICAL ROOF PLAN - NORTH
EB601	ELECTRICAL ENLARGED PLANS
EB701	MAIN FLOOR FIRE ALARM PLAN - SOUTH
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EB801	ELECTRICAL DETAILS
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EB901	ELECTRICAL ONE-LINE DIAGRAM
EB902	PANEL SCHEDULES
EB903	PANEL SCHEDULES

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5/6/2024

ELECTRICAL LEGEND AND DRAWING INDEX

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

DRAWING NO.
EB001

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A B C D E F G H J K

GENERAL NOTES

1. PERFORM WORK IN ACCORDANCE WITH APPLICABLE NATIONAL AND STATE CODES AS AMENDED LOCALLY AND ENFORCED BY THE AHJ.
2. OBTAIN AND PAY FOR PERMITS REQUIRED FOR INSTALLATION OF WORK. ARRANGE AND SCHEDULE REQUIRED INSPECTIONS.
3. COORDINATE WITH UTILITY COMPANIES FURNISHING SERVICES TO PROJECT. INSTALLATION OF UTILITY SERVICES SHALL BE IN ACCORDANCE WITH UTILITY REQUIREMENTS. VERIFY APPLICABLE INSTALLATION STANDARDS AND REQUIREMENTS. PROVIDE AND SUBMIT ELECTRICAL DRAWINGS TO UTILITY FOR APPROVAL PRIOR TO ROUGH-IN AND PRIOR TO ORDERING EQUIPMENT.
4. DEVICE LOCATIONS ARE APPROXIMATE. COORDINATE DEVICE LOCATIONS AND ELEVATIONS WITH APPROPRIATE DOCUMENTS INCLUDING CASEWORK SHOP DRAWINGS AND ARCHITECT'S INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
5. COORDINATE ELECTRICAL WORK WITH THAT OF OTHER TRADES. REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND INSTALLATION OF WORK.
6. COORDINATE LOCATION OF LIGHT FIXTURES AND CEILING-MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS.
7. PROVIDE RATED ENCLOSURES AROUND ALL LIGHT FIXTURES PENETRATING RATED CEILINGS. COORDINATE WITH ARCHITECTURAL.
8. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF EXPANSION/SEISMIC JOINTS. PROVIDE RACEWAY EXPANSION/SEISMIC JOINTS FOR RACEWAYS CROSSING BUILDING EXPANSION/SEISMIC JOINTS.
9. DEMOLISH EXISTING SYSTEMS AS INDICATED ON PLANS OR AS REQUIRED FOR INSTALLATION OF NEW WORK. MATERIAL SHALL BE REMOVED FROM SITE AND LEGALLY DISPOSED OF OFF SITE UNLESS OTHERWISE DIRECTED. RETURN ITEMS TO OWNER IN EXISTING CONDITION WHEN DIRECTED BY OWNER.
10. COMPLETION OF WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE PROJECT SCHEDULE. SCHEDULE INSTALLATION WITH OTHER TRADES TO ENSURE PROJECT MILESTONES ARE MET.
11. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE COMPONENTS REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS INCLUDING RACEWAYS, CONDUCTORS, BOXES, SUPPORTS AND SIMILAR ITEMS.
12. BRANCH CIRCUIT HOMERUNS ARE SHOWN TO INDICATE CIRCUIT PROPERTIES AND CONFIGURATION. SINGLE-CIRCUIT HOMERUNS SERVED FROM THE SAME PANELBOARD MAY BE COMBINED IN ACCORDANCE WITH THE DIVISION 26 SPECIFICATIONS, UNLESS INDICATED OTHERWISE. EXTEND AND CONNECT BRANCH CIRCUIT RACEWAY AND WIRING FROM HOMERUN TO DEVICES AND EQUIPMENT WITH CIRCUIT NUMBERS INDICATED. CONDUCTOR QUANTITIES AND SIZES ARE INDICATED AT HOMERUNS ONLY. SHOW ACTUAL RACEWAY ROUTING AND CIRCUITING ON RECORD DRAWINGS. MINIMUM CONDUCTOR SIZE #12 AWG.
13. LIGHT FIXTURES MOUNTED IN CONTINUOUS ROWS SHALL BE THROUGH-WIRED VIA FIXTURE INTERNAL WIREWAYS. CIRCUITS AS INDICATED ON DRAWINGS. FIXTURES NOT LISTED FOR THROUGH WIRING SHALL BE WIRED VIA SEPARATE RACEWAY AND WIRING SYSTEM EXTERNAL TO THE FIXTURES. PROVIDE RACEWAYS, WIRING AND CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.

ABBREVIATIONS

A	AMPERE
AC	AIR CONDITIONING; ALTERNATING CURRENT, ABOVE COUNTER
AF	AMP FUSE; AMP FRAME
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
AHJ	AUTHORITIES HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AS	AMP SWITCH
AT	AMP TRIP
ATM	ASYNCHRONOUS TRANSFER MODE
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BATT	BATTERIES
BIL	BASIC IMPULSE INSULATION LEVEL
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT; DEGREES CELCIUS
CAB	CABINET
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CLG	CEILING
CM	CEILING-MOUNTED
CO	CONDUIT ONLY
COW	COMPUTER ON WHEELS
CR	CONTROLLED RECEPTACLE
CT	CURRENT TRANSFORMER
CU	COPPER
D	DEDICATED
DDC	DIRECT DIGITAL CONTROL
DEMARC	DEMARCATION POINT
DISC	DISCONNECT
DIST	DISTRIBUTION
DSL	DIGITAL SUBSCRIBER LINE
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EXHAUST FAN
EIA	ELECTRONIC INDUSTRIES ASSOCIATION
ELEV	ELEVATION
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPM	ELECTRONIC POWER METER
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EVCS	ELECTRIC VEHICLE CHARGING STATION
EWC	ELECTRIC WATER COOLER
F	FUSES; DEGREES FAHRENHEIT
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OWNER
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOIO	FURNISHED BY OWNER INSTALLED BY OWNER
FSD	FIRE SMOKE DAMPER
G	GROUND
GB	GROUND FAULT CIRCUIT INTERRUPTER BREAKER
GF	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HC	HORIZONTAL CROSS CONNECT
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HTR	HEATER
Hz	HERTZ
IBC	INTERNATIONAL BUILDING CODE
IC	INTERMEDIATE CROSS CONNECT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IG	ISOLATED GROUND
IMC	INTERMEDIATE METALLIC CONDUIT
ISDN	INTEGRATED SERVICES DIGITAL NETWORK
J	JUNCTION
K	KIRK KEY
KCMIL	THOUSAND CIRCULAR MILS
kVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
LAN	LOCAL AREA NETWORK
LCP	LIGHTING CONTROL PANEL
LEC	LOCAL EXCHANGE CARRIER
LT	LIGHT
LTG	LIGHTING
M	METER
MAN	METROPOLITAN AREA NETWORK
MAX	MAXIMUM
MC	MAIN CROSS CONNECT; METAL CLAD (CABLE)
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MM	MULTIMODE
MPOE	MAIN POINT OF ENTRY
MPOP	MAIN POINT OF PRESENCE
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
(N)	NEW
N	NEUTRAL
NAC	NOTIFICATION APPLIANCE CIRCUIT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
OFC	OPTICAL FIBER CABLE
OHL	OVERHEAD LINE
OL	OVERLOAD
OS	OCCUPANCY SENSOR
OSP	OUTSIDE PLANT
P	POLE
PBX	PRIVATE BRANCH EXCHANGE
PF	POWER FACTOR
PH	PHASE
PIR	PASSIVE INFRARED
PIV	POST INDICATING VALVE
PNL	PANEL
PP	PATCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RCP	REFLECTED CEILING PLAN
REC	RECEPTACLE
REF	REFER TO
REV	REVISION
RM	ROOM
RTRC	REINFORCED THERMOSETTING RESIN CONDUIT
RU	RACK UNIT
SHT	SHEET
SLC	SIGNALING LINE CIRCUIT
SM	SINGLEMODE
SMFC	SURFACE-MOUNTED OPTICAL FIBER CABINET
SMR	SURFACE METAL RACEWAY
SONET	SYNCHRONOUS OPTICAL NETWORK
SP	SERVICE PROVIDER
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATIONS
SPST	SINGLE POLE SINGLE THROW
ST	SHUNT TRIP
STP	SHIELDED TWISTED PAIR
SVGA	SUPER VIDEO GRAPHICS ARRAY
SW	SWITCH
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TEL	TELEPHONE
TELCO	TELEPHONE COMPANY
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TP	TAMPERPROOF
TR	TELECOMMUNICATIONS ROOM
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
UTP	UNSHIELDED TWISTED PAIR
UV	UNIT VENTILATOR
V	VOLTS
VA	VOLT AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WASTE, WATT, WIDE, WATER
W/	WITH
W/O	WITHOUT
WA	WORKSTATION AREA
WAN	WIDE AREA NETWORK
WG	WIRE GUARD
WH	WATT HOUR METER
WP	WEATHERPROOF
XFMR	TRANSFORMER
Y	WYE
Z	IMPEDANCE

NON-STRUCTURAL ELECTRICAL COMPONENT NOTES

1. THE FOLLOWING ITEMS ARE TAKEN DIRECTLY FROM THE 2018 INTERNATIONAL BUILDING CODE AND FROM THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7. THE CONTRACTOR SHALL REFER TO THE ABOVE FOR ADDITIONAL INFORMATION, EXCEPTIONS, AND FURTHER DESCRIPTIONS. THE CONTRACTOR SHALL ADHERE TO REQUIREMENTS AND AS SUCH, SHALL BE INCLUDED WITHIN BID. ALSO REFER TO SPECIFICATIONS.
2. 2018 IBC, 1613.1, SCOPE: ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND NON-STRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A.
3. ASCE 7 CONTRACTOR RESPONSIBILITY: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN AND SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE AUTHORITY HAVING JURISDICTION AND TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE THE FOLLOWING:
   - A. ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN;
   - B. ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE AUTHORITY HAVING JURISDICTION;
   - C. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS; AND
   - D. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.
4. DIVISION 26 RESPONSIBILITIES:
   - A. HANGERS AND SEISMIC BRACING FOR ELECTRICAL SYSTEMS SHALL BE DESIGNED AND SPECIFIED BY DIVISION 26. DIVISION 26 SHALL REFER TO THE ELECTRICAL DRAWINGS FOR LOCATIONS OF EQUIPMENT AND ELECTRICAL SYSTEMS AS STRUCTURAL DRAWINGS DO NOT SHOW THE LOCATIONS OF ELECTRICAL EQUIPMENT, RACEWAYS, AND OTHER COMPONENTS.
   - B. DIVISION 26 SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG RACEWAYS AND OTHER ELECTRICAL SYSTEMS (INCLUDING COMBINED MULTIPLE RACEWAY RUNS) WITH THE GENERAL CONTRACTOR AND THE STEEL AND WOOD JOIST MANUFACTURERS IN ADDITION TO OTHER TRADES THAT MAY BE IMPACTED.

ENERGY CODE NOTES

1. RECORD DRAWINGS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
2. OPERATION AND MAINTENANCE MANUALS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
3. THIS BUILDING AND ITS ENERGY SYSTEMS HAVE BEEN DESIGNED TO COMPLY WITH ENERGY CODE ENFORCED BY THE LOCAL AHJ. CONTRACTOR IS RESPONSIBLE FOR CORRECT INSTALLATION OF ENERGY CONSERVATION MEASURES.
4. LIGHTING CONTROL SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS: TEST SYSTEMS TO ENSURE THAT BUILDING SYSTEMS HAVE BEEN INSTALLED AND FUNCTION PROPERLY AND EFFICIENTLY, AND CAN BE MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND OPERATIONAL REQUIREMENTS PER ENERGY CODE ENFORCED BY THE AHJ. REFER TO SPECIFICATIONS FOR ADDITIONAL COMMISSIONING REQUIREMENTS.

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5/6/2024

ELECTRICAL ABBREVIATIONS

CITY OF FEDERAL WAY FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE 05.06.24 — JOB NO. a23-087

BID SET

EB002

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LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	TYPE	INPUT VOLTS	INPUT WATTS	REMARKS
L3G	2'x2' LED TROFFER FOR RECESSED MOUNTING IN GWB CEILING	METALUX	22CZ2-29-HE-UNV-L835-CD-1 DF-Z2-W-U DRYWALL FRAME KIT	LED 3500K 2900 LM	UNV	21	
L5-4	4' LINEAR LED STRIP, FROSTED ACRYLIC LENSE 0-10V DIMMING DRIVER	LITHONIA	ZL1D-L48-3000LM-FST-MVOLT-35K-80CRI-WH ACCESSORIES: ZACVH M100	LED 3500K 3000 LM	UNV	30	1
L5-8	8' LINEAR LED STRIP, FROSTED ACRYLIC LENSE 0-10V DIMMING DRIVER	LITHONIA	TZL1D-L96-6000LM-FST-MVOLT-35K-80CRI-WH ACCESSORIES: ZACVH M100	LED 3500K 6000 LM	UNV	60	1
L6	6" ROUND RECESSED DOWNLIGHT	ACUITY INDY	ENGINE: L6-08LM-35K-MVOLT-G4-80CRI-GZ1 REFLECTOR: HM-WH	LED 3500K 800 LM	UNV	8	
L11	LED SUSPENDED RECTANGULAR HIGH BAY, WET RATED	ACUITY LITHONIA	XIB-L24-12000LM-AFMD-MVOLT-GZ10-35K-80CRI-NLTAIR2 RIO	LED 3500K 12000 LM	UNV	78	
L12	LED SUSPENDED RECTANGULAR HIGH BAY, WET RATED	ACUITY LITHONIA	XIB-L24-15000LM-AFMD-MVOLT-GZ10-35K-80CRI-NLTAIR2 RIO	LED 3500K 15000 LM	UNV	97	
L13	2'x4' LED TROFFER	METALUX	24CZ2-40-S-UNV-L835-CD1-U	LED 3500K 4000 LM	UNV	30	
S2	WALL MOUNTED LED, CAST ALUMINUM HOUSING, CLEAR ACRYLIC LENS AND TEMPERED GLASS SECONDARY LENS, TYPE 4 DISTRIBUTION, VAPOR TIGHT, WET RATED, INTEGRAL OCCUPANCY SENSOR (UP TO 9' HEIGHT), NX WIRELESS ENABLED	KIM LIGHTING	WDS-D-24L-30-4K8-4F-UNV-PSS-8F	LED 4000K 3000 LM	UNV	30	-
S3	WALL MOUNTED LED, CAST ALUMINUM HOUSING, CLEAR ACRYLIC LENS AND TEMPERED GLASS SECONDARY LENS, TYPE 4 DISTRIBUTION, VAPOR TIGHT, WET RATED, INTEGRAL OCCUPANCY SENSOR (9'-20' HEIGHT), NX WIRELESS ENABLED	KIM LIGHTING	WDM-D-48L-65-4K8-4F-UNV-PSS-20F	LED 4000K 8000 LM	UNV	65	-
X	EXIT SIGN, LED, CAST ALUMINUM HOUSING, AC ONLY GREEN LETTERS, WHITE HOUSING AND FACE SINGLE/DOUBLE FACE	DUAL LITE	SE-S/D-G-W	LED	UNV	2.1	

GENERAL NOTES:

A. COORDINATE FINISH COLOR WITH ARCHITECT FOR ALL FIXTURES.
B. MANUFACTURERS LABELS SHALL NOT BE VISIBLE FROM THE FLOOR FOR ALL LIGHT FIXTURES.

REMARKS:

1. COORDINATE CEILING HARDWARE TYPE WITH ARCHITECT
2. VERIFY MOUNTING HEIGHT WITH ARCHITECT AND COORDINATE CORRESPONDING SUSPENDED MOUNTING HARDWARE LENGTH WITH FIXTURE MANUFACTURER
3. EXIT SIGNS. PROVIDE ALL DIRECTIONAL ARROWS, DOUBLE FACEPLATES, OR BLANK FACEPLATES AS REQUIRED TO CLEARLY IDENTIFY PATH OF EGRESS.

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ROBERT DALE HARGIS
STATE OF WASHINGTON
55736
REGISTERED PROFESSIONAL ENGINEER

5/6/2024

ELECTRICAL SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

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FLEET & SHOPS EQUIPMENT SCHEDULE

UNIT NUMBER	UNIT DESCRIPTION	FLA	VOLT	PHASE	MOCP	CONNECTION TYPE	BRANCH CIRCUIT (COPPER) DESCRIPTION	DISCONNECT SWITCH SIZE	DISCONNECT SWITCH FUSE	NOTES	UNIT NUMBER
WASH BAY EQUIPMENT (UTILITY) ROOM											
UR-01a	WATER MANAGEMENT PUMPING SYSTEM	16	208	1	20	HARDWIRED	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	1	UR-01a
UR-01b	AUTOMATIC FILTRATION SYSTEM	5	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	-	UR-01b
UR-03	ELECTRIC HOT WATER PRESSURE WASHER	59	480	3	75	HARDWIRED	1-1/2"C, 3#2, 1#2 N, 16 GND	100	-	1	UR-03
UR-05a	UNIVERSAL CLARIFIFER WITH COAG	9	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	-	UR-05a
UR-05b	UNIVERSAL CLARIFIFER WITH COAG	3	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	-	UR-05b
UR-05c	UNIVERSAL CLARIFIFER WITH COAG	9	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	-	UR-05c
UR-05d	UNIVERSAL CLARIFIFER WITH COAG	3	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	-	UR-05d
UR-05e	UNIVERSAL CLARIFIFER WITH COAG	10	UR	1	20	HARDWIRED	3/4"C,1#12, 1#12 N, 1#12 GND	30	-	1	UR-05e
WASH BAY EQUIPMENT											
WB-05	UNDERCARRIAGE MANIFOLD WASH SYSTEM	25	208	3	35	HARDWIRED	1"C, 3#8, 1#8 N, 1#10 GND	60	-	1	WB-05
TIRE REPAIR/TIRE STORAGE											
TR-02	TIRE CHANGER	16	208	1	20	NEMA L6-20R	3/4"C, 2#10, 1#10 N, 1#10 GND	-	-	-	TR-02
TR-03	TIRE WHEEL BALANCER	10	208	1	20	NEMA L6-20R	3/4"C, 2#12, 1#12 GND	-	-	-	TR-03
FLEET MAINTENANCE BAY											
MB-01	EXHAUST REEL SET WITH FAN	1.1	480	3	15	HARDWIRED	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	1	MB-01
MB-03	MOBILE COLUMNS LIFT	16	208	1	20	NEMA 6-20R	3/4"C, 2#12, 1#12 GND	-	-	-	MB-03
MB-06	MOBILE COMPUTER CABINET	10	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	MB-06
MB-07a	5 TON BRIDGE CRAIN	52.9	480	3	70	HARDWIRED	1-1/2"C, 3#2, 1#2 N, 16 GND	100	-	1	MB-07a
MB-07b	5 TON BRIDGE CRAIN CONTROLS	5	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	30	-	1	MB-07b
P1	GENERAL POWER	40	120	1	50	NEMA 14-50R	1"C, 2#6, 1#6 N, 1#10 GND	-	-	-	P1
FABRICATION/WELDING BAY											
FS-01	MIG WELDER	68	208	1	90	HARDWIRED	1-1/2"C, 3#2, 1#2 N, 1#6 GND	100	-	1	FS-01
FS-02	MIG AND FLUX-CORED ARC WELDER	22.5	240	1	30	NEMA 14-50R	1"C, 3#10, 1#10 N, 1#10 GND	-	-	-	FS-02
FS-03	METAL BAND SAW	7.5	208/120	1	20	HARDWIRED	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	1	FS-03
FS-05	ARC WELDER	16	240	1	20	HARDWIRED	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	1	FS-05
FS-07	MOBILE WELD FUME EXTRACTOR	11.9	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	FS-07
FS-10	METAL CHOP SAW	15	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	FS-10
FS-13	PLASMA CUTTER	32	240/120	1	50	NEMA 6-50R	1"C, 3#6, 1#6 N, 1#10 GND	-	-	-	FS-13
FS-15	MANUAL BATTERY CHARGER / ENGINE STARTER	12.5	120	1	20	NEMA 5-20R	3/4"C, 2#12, 1#12 N, 1#12 GND	-	-	-	FS-15
FS-17	DRILL PRESS	11	230/115	1	20	HARDWIRED	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	1	FS-17
FS-18	SHOP GRINDER	15	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	FS-18
FS-19	TIG WELDER	50	240	1	70	HARDWIRED	1-1/2"C, 3#2, 1#2 N, 16 GND	100	-	1	FS-19
LUBE OIL											
LR-01	AIR COMPRESSOR	43	208	3	60	HARDWIRED	1-1/4"C, 3#4, 1#8 GND	60	-	1	LR-01
LR-02a	ELECTRIC DRUM PUMP	13.2	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	LR-02a
LR-02b	ELECTRIC DRUM PUMP	13.2	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	LR-02b
LR-02c	ELECTRIC DRUM PUMP	13.2	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	LR-02c
LR-03	ELECTRIC DRUM PUMP	13.2	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	LR-03
LR-04a	ELECTRIC DRUM PUMP	13.2	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	LR-04a
LR-04b	ELECTRIC DRUM PUMP	13.2	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	LR-04b
CARPENTRY SHOP											
CS-01	TABLE SAW	18	208	1	30	NEMA L6-30R	3/4"C, 2#10, 1#10 GND	-	-	-	CS-01
CS-02	BANDSAW	9.5	208	1	15	NEMA 6-15	3/4"C, 2#12, 1#12 GND	-	-	-	CS-02
CS-03	MITER SAW	15	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	CS-03
CS-04	DISC SANDER	11	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	CS-04
CS-05	DRILL PRESS	13	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	CS-05
CS-06	SHOP VACUUM	11	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	CS-06
CS-07	DUST COLLECTOR	9	230	1	30	HARDWIRED	3/4"C, 2#10, 1#10 GND	30	-	1	CS-07
FUEL ISLAND											
FA-01	FUEL STORAGE TANK	24	208	1	30	HARDWIRED	3/4"C, 2#10, 1#10 GND	30	-	1	FA-01
FA-05	FUEL DISPENSING PUMP	24	208	3	30	HARDWIRED	3/4"C, 3#10, 1#10 GND	30	-	1	FA-05
FA-06	CARDLOCK SYSTEM	16	120	1	20	HARDWIRED	3/4"C, 1#12, 1#12 N, 1#12 GND	30	-	1	FA-06
FA-07b	DEF TRANSFER PUMP SYSTEM	16	120	1	20	NEMA 5-20R	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	FA-07b

NOTES:
1. PROVIDE LOCAL DISCONNECTING SWITCH SIZED AND RATED FOR ASSOCIATED EQUIPMENT.

MECHANICAL AND PLUMBING EQUIPMENT SCHEDULE

UNIT NUMBER	UNIT DESCRIPTION	KW	HP	FLA	VOLT	PHASE	MCA	MOCP	FEEDER (COPPER) DESCRIPTION	DISCONNECT SWITCH SIZE	DISCONNECT SWITCH FUSE	NOTES	UNIT NUMBER
HRU-B-01	HEAT RECOVERY UNIT	-	-	-	480	3	23.1	25	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	HRU-B-01
HRU-B-02	HEAT RECOVERY UNIT	-	-	-	480	3	33.9	35	3/4"C, 3#8, 1#8 N, 1#10 GND	60	-	2	HRU-B-02
RTHP-B-01	ROOFTOP HEAT PUMP	6	-	-	480	3	21.5	25	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	RTHP-B-01
VRHP-B-01	VRF HEAT PUMP	-	-	-	480	3	21.3	25	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	VRHP-B-01
VRHP-B-02	VRF HEAT PUMP (DUAL CONNECTIONS)	-	-	-	480	3	21.3	25	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	VRHP-B-02
		-	-	-	480	3	21.3	25	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	
EF-B-01	EXHAUST FAN	-	1/15	2	120	1	2.5	15	3/4"C, 3#12, 1#12 N, 1#12 GND	$	-	1	EF-B-01
EF-B-02	EXHAUST FAN	-	1/4	4	120	1	5	15	3/4"C, 3#12, 1#12 N, 1#12 GND	$	-	1	EF-B-02
EF-B-03	EXHAUST FAN	-	3/4	11	120	1	13.75	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EF-B-03
SF-B-01	EXHAUST FAN	-	1/6	3	120	1	3.75	15	3/4"C, 3#12, 1#12 N, 1#12 GND	$	-	1	SF-B-01
TU-B-01	VARIABLE AIR VOLUME UNIT	7	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-01
TU-B-02	VARIABLE AIR VOLUME UNIT	7	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-02
TU-B-03	VARIABLE AIR VOLUME UNIT	2.5	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-03
TU-B-04	VARIABLE AIR VOLUME UNIT	2.5	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-04
TU-B-05	VARIABLE AIR VOLUME UNIT	9	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-05
TU-B-06	VARIABLE AIR VOLUME UNIT	9	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-06
TU-B-07	VARIABLE AIR VOLUME UNIT	2.5	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-07
TU-B-08	VARIABLE AIR VOLUME UNIT	2.5	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-08
TU-B-09	VARIABLE AIR VOLUME UNIT	2.5	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-09
TU-B-10	VARIABLE AIR VOLUME UNIT	5	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-10
TU-B-11	VARIABLE AIR VOLUME UNIT	4	-	-	480	3	-	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	TU-B-11
EUH-B-01	ELECTRIC UNIT HEATER	3	-	-	480	3	-	20	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	EUH-B-01
EUH-B-02	ELECTRIC UNIT HEATER	3	-	-	480	3	-	20	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	EUH-B-02
EUH-B-03	ELECTRIC UNIT HEATER	3	-	-	480	3	-	20	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2,4	EUH-B-03
EDH-B-01	ELECTRIC DUCT HEATER	6	-	-	480	3	-	20	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	EDH-B-01
ACU-B-01	SPLIT SYTEM AIR CONDITIONER	-	-	-	208	1	1	15	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	2,3	ACU-B-01
HP-B-01	SPLIT SYTEM AIR CONDITIONER	-	-	-	208	1	12.3	15	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	2,3	HP-B-01
ACU-B-02	SPLIT SYTEM AIR CONDITIONER	-	-	-	208	1	1	20	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	2,3	ACU-B-02
HP-B-02	SPLIT SYTEM AIR CONDITIONER	-	-	-	208	1	19.8	20	3/4"C, 2#12, 1#12 N, 1#12 GND	30	-	2,3	HP-B-02
DWBP-B-01	DOMESTIC WATER - BOOSTER PUMP	18	(2)3	-	480	3	10.8	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	DWBP-B-01
EIWH-B-01	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-01
EIWH-B-02	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-02
EIWH-B-03	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-03
EIWH-B-04	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-04
EIWH-B-05	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-05
EIWH-B-06	ELECTRIC INSTANTANEOUS WATER HEATER	36	-	-	480	3	54.2	55	1"C, 3#6, 1#6 N, 1#10 GND	60	-	2	EIWH-B-06
EIWH-B-07	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-07
EIWH-B-08	ELECTRIC INSTANTANEOUS WATER HEATER	18	-	-	480	3	27	30	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	EIWH-B-08
AC-B-01	AIR COMPRESSOR	15	-	-	480	3	21	25	3/4"C, 3#10, 1#10 N, 1#10 GND	30	-	2	AC-B-01
AC-B-02	AIR COMPRESSOR	5	-	-	480	3	6.6	15	3/4"C, 3#12, 1#12 N, 1#12 GND	30	-	2	AC-B-02
AD-B-01	AIR DRYER	-	-	-	120	1	3	20	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	1	AC-B-01
AD-B-02	AIR DRYER	-	-	-	120	1	1.5	20	3/4"C, 1#12, 1#12 N, 1#12 GND	$	-	1	AC-B-02
TP-1	TRAP PRIMER	-	-	1	120	1	1	-	3/4"C, 1#12, 1#12 N, 1#12 GND	-	-	-	TP-1

NOTES:
1. PROVIDE MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERLOADS. PROVIDE NEMA 3R ENCLOSURE FOR EXTERIOR EQUIPMENT.
2. PROVIDE LOCAL DISCONNECTING SWITCH SIZED AND RATED FOR ASSOCIATED EQUIPMENT. PROVIDE NEMA 3R ENCLOSURE FOR EXTERIOR EQUIPMENT.
3. PROVIDE POWER CONNECTION TO AC UNIT FROM CONDENSING UNIT. PROVIDE CONDUIT AND CONDUCTORS REQUIRED FOR INSTALLATION. COORDINATE INTERCONNECTION WITH DIVISION 23.
4. PROVIDE NEMA 4X RATED DISCONNECT SWITCH SIZED AND RATED FOR ASSOCIATED EQUIPMENT.

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ELECTRICAL SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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LIGHTING CONTROL LEGEND

VACANCY SENSOR CONTROL (OFFICE, ELECTRICAL, MECHANICAL,COMM, STORAGE, LAUNDRY)

- PROVIDE WALL SWITCH FOR MANUAL-ON CONTROL
- LIGHTING SHALL TURN OFF MANUALLY BY WALL SWITCH OR AUTOMATICALLY BY VACANCY SENSOR WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE
- PROVIDE DIMMING FOR MULTI-LEVEL CONTROL IF REQUIRED BY CODE
- WHERE ADJACENT TO VERTICAL FENESTRATION, LIGHT FIXTURES WILL HAVE DAYLIGHTING OVERRIDE CONTROLS THAT AUTOMATICALLY RESPOND TO THE INCOMING DAYLIGHT.

OCCUPANCY SENSOR CONTROL (CORRIDORS, HALLWAYS, AND RESTROOMS)

- LIGHTING SHALL AUTOMATICALLY TURN ON UPON OCCUPANCY
- LIGHTING SHALL TURN OFF WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE
- PROVIDE WALL SWITCH FOR ON/OFF MANUAL CONTROL
- PROVIDE DIMMING FOR MULTI-LEVEL CONTROL IF REQUIRED BY CODE

MANUAL ONLY CONTROL (SHOPS)

- PROVIDE SWITCHING CONTROL RELAY FOR EACH SPACE OR ZONE
- PROVIDE MANUAL ON/OFF SWITCH FOR CONTROL OF LIGHTING.
- NO OCCUPANCY SENSOR OR TIME SWITCH IS SPECIFIED PER EXEMPTION FOR SPACE WHERE AUTOMATIC SWITHING OFF COULD ENDANGER SAFETY OF THE PERSONNEL.
- PROVIDE DIMMING FOR MULTI-LEVEL CONTROL IF REQUIRED BY CODE

PRIMARY SIDELIT ZONE

- PROVIDE WIRELESS DIMMING (DIM-TO-OFF) CONTROL RELAY FOR LIGHTING CONTROL WITHIN THE ZONE
- PROVIDE DAYLIGHT SENSOR(S) PER CODE. DAYLIGHT CONTROL TYPE = CLOSED LOOP, CONTINUOUS DIMMING. CONTROL SETPOINT SHALL BE MAXIMUM FIXTURE LUMEN OUTPUT. PROVIDE APPROPRIATE DEADBANDS TO PREVENT CYCLING.

SECONDARY SIDELIT ZONE

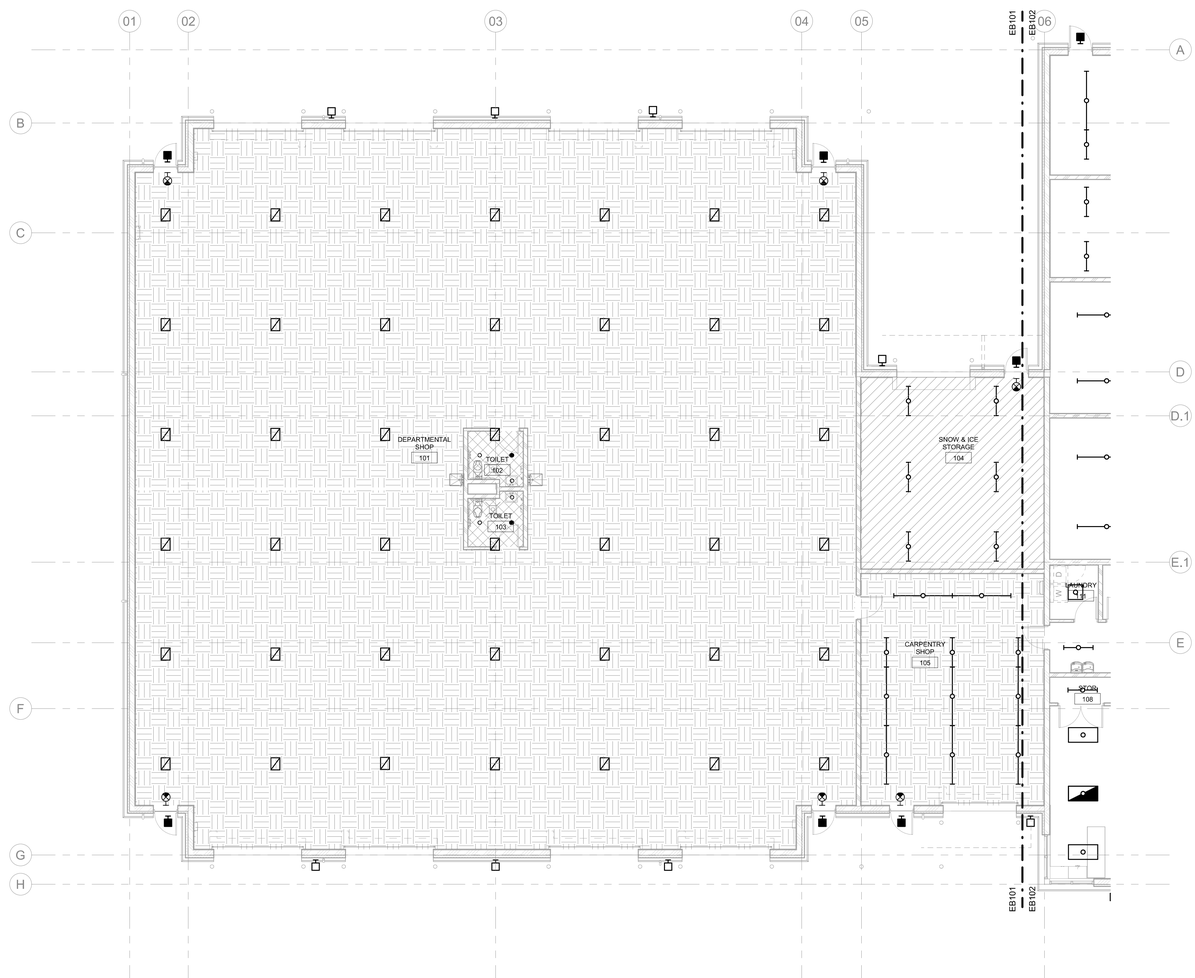
- PROVIDE WIRELESS DIMMING (DIM-TO-OFF) CONTROL RELAY FOR LIGHTING CONTROL WITHIN THE ZONE
- PROVIDE DAYLIGHT SENSOR(S) PER CODE. DAYLIGHT CONTROL TYPE = CLOSED LOOP, CONTINUOUS DIMMING. CONTROL SETPOINT SHALL BE MAXIMUM FIXTURE LUMEN OUTPUT. PROVIDE APPROPRIATE DEADBANDS TO PREVENT CYCLING.

EXTERIOR BUILDING LIGHTING

- PROVIDE WIRELESS CONTROL RELAY FOR LIGHTING ON/OFF CONTROL BASED ON ASTRONOMICAL TIMECLOCK
- EACH BUILDING MOUNT FIXTURE (S2, S3) IS EQUIPPED WITH INTEGRAL OCCUPANCY SENSOR FOR ON/OFF CONTROL BASED ON OCCUPANCY DURING NIGHT HOURS.
- EXTERIOR EMERGENCY LIGHTING IS CONTROLLED VIA ASTRONOMICAL TIME LOCK AND TIME-OF-NIGHT-SCHEDULE (ON AT DUSK-OFF AT 10PM-ON AT 4AM-OFF AT DAWN). UL924 EMERGENCY PACK WILL OVERRIDE LIGHTING CONTROLS IN EMERGENCY CONDITIONS AND TURN THE LIGHTS ON.

PROVIDE FACTORY STARTUP AND COMMISSIONING OF LIGHTING CONTROL SYSTEM. PROVIDE COMMISSIONING OF LIGHTING CONTROLS IN ACCORDANCE WITH AHJ AND CODE REQUIREMENTS.

DEMONSTRATE LIGHTING CONTROL ADJUSTMENTS AND SETTING TO OWNER. PROVIDE WRITTEN DIRECTION FOR CHANGING PROGRAMMING SETPOINTS.



MAIN FLOOR LIGHTING CONTROL ZONE PLAN - SOUTH
1/8" = 1'-0"

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

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5/6/2024

MAIN FLOOR LIGHTING CONTROL ZONE PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

DRAWING NO.
EB101

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LIGHTING CONTROL LEGEND

VACANCY SENSOR CONTROL (OFFICE, ELECTRICAL, MECHANICAL,COMM.,STORAGE, LAUNDRY)

- PROVIDE WALL SWITCH FOR MANUAL-ON CONTROL
- LIGHTING SHALL TURN OFF MANUALLY BY WALL SWITCH OR AUTOMATICALLY BY VACANCY SENSOR WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE
- PROVIDE DIMMING FOR MULTI-LEVEL CONTROL IF REQUIRED BY CODE
- WHERE ADJACENT TO VERTICAL FENESTRATION, LIGHT FIXTURES WILL HAVE DAYLIGHTING OVERRIDE CONTROLS THAT AUTOMATICALLY RESPOND TO THE INCOMING DAYLIGHT.

OCCUPANCY SENSOR CONTROL (CORRIDORS, HALLWAYS, AND RESTROOMS)

- LIGHTING SHALL AUTOMATICALLY TURN ON UPON OCCUPANCY
- LIGHTING SHALL TURN OFF WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE
- PROVIDE WALL SWITCH FOR ON/OFF MANUAL CONTROL
- PROVIDE DIMMING FOR MULTI-LEVEL CONTROL IF REQUIRED BY CODE

MANUAL ONLY CONTROL (SHOPS)

- PROVIDE SWITCHING CONTROL RELAY FOR EACH SPACE OR ZONE
- PROVIDE MANUAL ON/OFF SWITCH FOR CONTROL OF LIGHTING.
- NO OCCUPANCY SENSOR OR TIME SWITCH IS SPECIFIED PER EXEMPTION FOR SPACE WHERE AUTOMATIC SWITHING OFF COULD ENDANGER SAFETY OF THE PERSONNEL.
- PROVIDE DIMMING FOR MULTI-LEVEL CONTROL IF REQUIRED BY CODE

PRIMARY SIDELIT ZONE

- PROVIDE WIRELESS DIMMING (DIM-TO-OFF) CONTROL RELAY FOR LIGHTING CONTROL WITHIN THE ZONE
- PROVIDE DAYLIGHT SENSOR(S) PER CODE. DAYLIGHT CONTROL TYPE = CLOSED LOOP, CONTINUOUS DIMMING. CONTROL SETPOINT SHALL BE MAXIMUM FIXTURE LUMEN OUTPUT. PROVIDE APPROPRIATE DEADBANDS TO PREVENT CYCLING.

SECONDARY SIDELIT ZONE

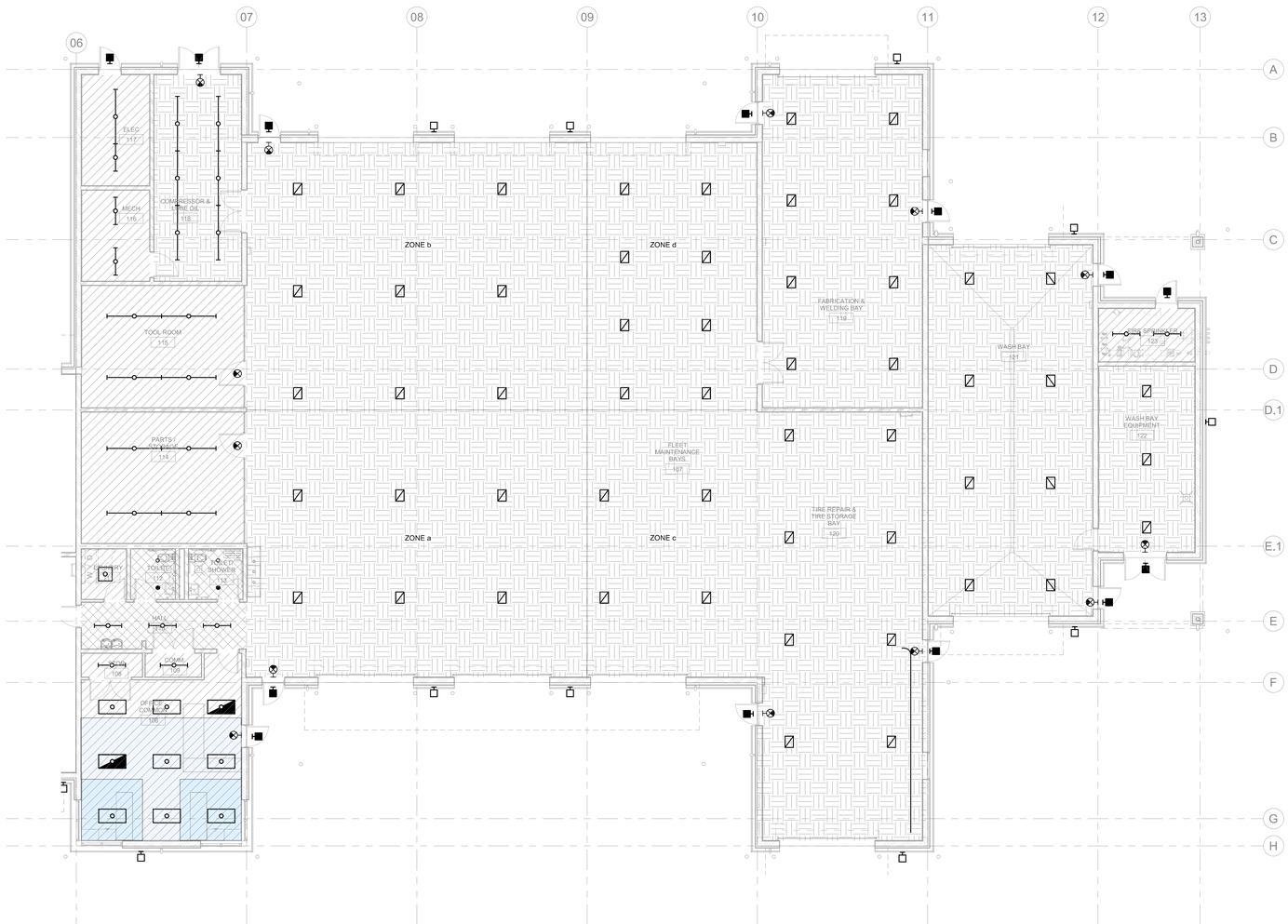
- PROVIDE WIRELESS DIMMING (DIM-TO-OFF) CONTROL RELAY FOR LIGHTING CONTROL WITHIN THE ZONE
- PROVIDE DAYLIGHT SENSOR(S) PER CODE. DAYLIGHT CONTROL TYPE = CLOSED LOOP, CONTINUOUS DIMMING. CONTROL SETPOINT SHALL BE MAXIMUM FIXTURE LUMEN OUTPUT. PROVIDE APPROPRIATE DEADBANDS TO PREVENT CYCLING.

EXTERIOR BUILDING LIGHTING

- PROVIDE WIRELESS CONTROL RELAY FOR LIGHTING ON/OFF CONTROL BASED ON ASTRONOMICAL TIMECLOCK
- EACH BUILDING MOUNT FIXTURE (S2, S3) IS EQUIPPED WITH INTEGRAL OCCUPANCY SENSOR FOR ON/OFF CONTROL BASED ON OCCUPANCY DURING NIGHT HOURS.
- EXTERIOR EMERGENCY LIGHTING IS CONTROLLED VIA ASTRONOMICAL TIME LOCK AND TIME-OF-NIGHT-SCHEDULE (ON AT DUSK-OFF AT 10PM-ON AT 4AM-OFF AT DAWN). UL924 EMERGENCY PACK WILL OVERRIDE LIGHTING CONTROLS IN EMERGENCY CONDITIONS AND TURN THE LIGHTS ON.

PROVIDE FACTORY STARTUP AND COMMISSIONING OF LIGHTING CONTROL SYSTEM. PROVIDE COMMISSIONING OF LIGHTING CONTROLS IN ACCORDANCE WITH AHJ AND CODE REQUIREMENTS.

DEMONSTRATE LIGHTING CONTROL ADJUSTMENTS AND SETTING TO OWNER. PROVIDE WRITTEN DIRECTION FOR CHANGING PROGRAMMING SETPOINTS.



MAIN FLOOR LIGHTING CONTROL ZONE PLAN - NORTH

1/8" = 1'-0"

NORTH

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

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5/6/2024

MAIN FLOOR LIGHTING CONTROL ZONE PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

DRAWING NO.

EB102

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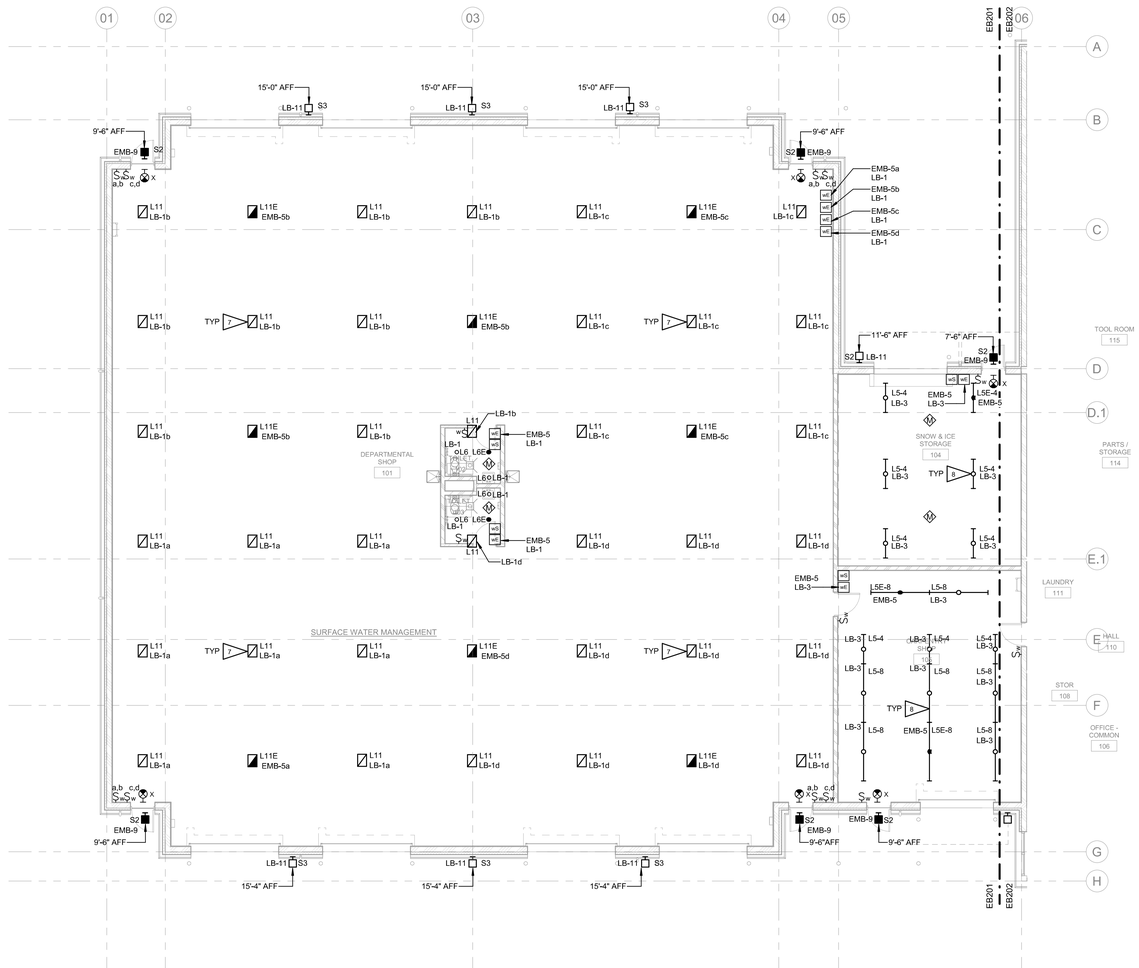
SHEET NOTES

1. CIRCUITS SHALL INCLUDE A DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.
2. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET EB003 FOR FIXTURE SPECIFICATIONS.
3. REFER TO LIGHTING CONTROL ZONE PLAN ON SHEETS EAB101 AND EB102 FOR CONTROL DESIGN AND DEFINITIONS.
4. CEILING MOUNTED OCCUPANCY SENSORS IN OTS AREAS SHALL BE INSTALLED AT THE SAME HEIGHT AS LIGHTING.
5. ALL DEVICES WITHIN ACT CEILING TO BE CENTERED WITHIN CEILING TILE.
6. EXIT SIGNS MOUNTED ABOVE DOORS SHALL BE CENTERED ON DOOR FRAME.
7. PROVIDE UNSWITCHED HOT CONDUCTOR TO EXIT SIGNS.
8. CONFIRM LOCATION OF ALL EXIT SIGNS WITH ARCHITECT. PROVIDE DIRECTIONAL ARROWS TO CORRESPOND WITH EGRESS PATHWAY.
9. LETTER "E" IN THE LIGHT FIXTURE TYPE (Lx"E") INDICATES THAT FIXTURE IS CONNECTED TO EMERGENCY CIRCUIT.
10. ALL FIXTURES CONNECTED TO EMERGENCY CIRCUIT SHALL BE CONTROLLED THROUGH UL924 RELAYS. REFER TO UL924 WIRING DIAGRAM DETAIL ON SHEET EB801, DETAIL #2.
11. PROVIDE ONE UL924 RELAY FOR EACH ZONE.
12. NORMAL 277V LIGHTING IS FED FROM PANEL LB. EMERGENCY 277V LIGHTING IS FED FROM PANEL EMB.

FLAG NOTES

1. PROGRAM DEVICE AS A COMBINATION PHOTOSENSOR/MOTION SENSOR
2. PROGRAM DEVICE AS A PHOTOSENSOR ONLY
3. MOUNT FIXTURE AT 29'-0" AFF TO BOTTOM OF FIXTURE
4. LIGHTING CONTROL PANEL. REFER TO LIGHTING CONTROL DIAGRAM DETAIL 1 ON SHEET EB801 FOR MORE INFORMATION AND REQUIREMENTS.
5. PROVIDE WIRELESS LIGHTING CONTROL RELAY FOR EACH EXTERIOR LIGHT CIRCUIT AS INDICATED. MOUNT RELAY NEAR PANELBOARDS, LABEL RELAYS, AND ROUTE CONTROLLED PORTION OF CIRCUIT TO LIGHT FIXTURE(S) VIA RELAY.
6. UL924 EMERGENCY RELAY PACK FOR EXTERIOR LIGHTING.
7. LIGHT FIXTURE L11 TO BE INSTALLED AT 17'-0"AFF TO BOTTOM OF FIXTURE U.N.O.
8. LIGHT FIXTURE L5-X TO BE INSTALLED AT 13'-0"AFF TO BOTTOM OF FIXTURE U.N.O.



MAIN FLOOR LIGHTING PLAN - SOUTH

1/8" = 1'-0"

NORTH

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

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HARGIS ENGINEERS

ROBERT DALE HARGIS, STATE OF WASHINGTON, 55736, REGISTERED PROFESSIONAL ENGINEER

5/6/2024

MAIN FLOOR LIGHTING PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	o23-087

BID SET

DRAWING NO.

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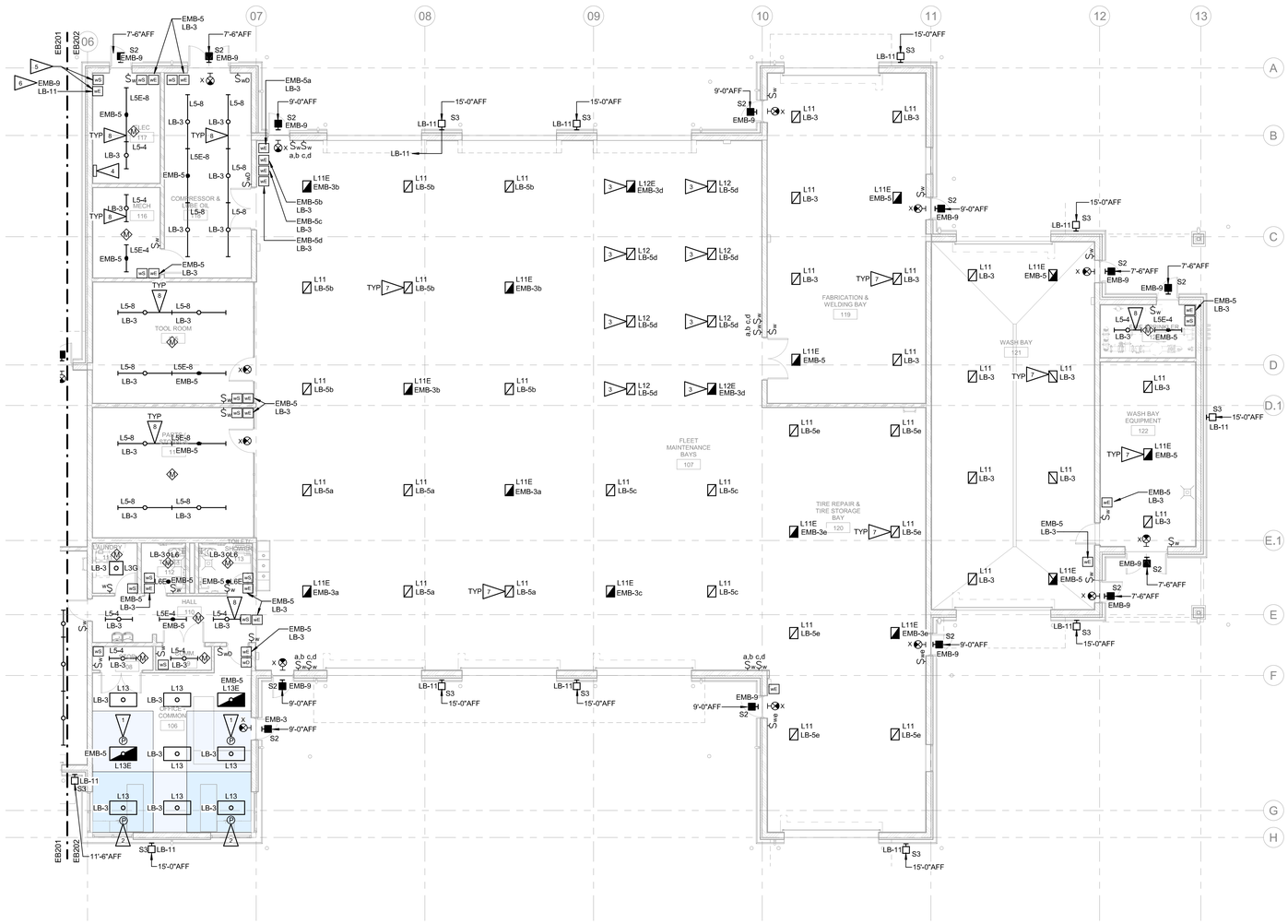
SHEET NOTES

1. CIRCUITS SHALL INCLUDE A DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.
2. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET EB003 FOR FIXTURE SPECIFICATIONS.
3. REFER TO LIGHTING CONTROL ZONE PLAN ON SHEETS EB101 AND EB102 FOR CONTROL DESIGN AND DEFINITIONS.
4. CEILING MOUNTED OCCUPANCY SENSORS IN OTS AREAS SHALL BE INSTALLED AT THE SAME HEIGHT AS LIGHTING.
5. ALL DEVICES WITHIN ACT CEILING TO BE CENTERED WITHIN CEILING TILE.
6. EXIT SIGNS MOUNTED ABOVE DOORS SHALL BE CENTERED ON DOOR FRAME.
7. PROVIDE UNSWITCHED HOT CONDUCTOR TO EXIT SIGNS.
8. CONFIRM LOCATION OF ALL EXIT SIGNS WITH ARCHITECT. PROVIDE DIRECTIONAL ARROWS TO CORRESPOND WITH EGRESS PATHWAY.
9. LETTER "E" IN THE LIGHT FIXTURE TYPE (L*E*) INDICATES THAT FIXTURE IS CONNECTED TO EMERGENCY CIRCUIT.
10. ALL FIXTURES CONNECTED TO EMERGENCY CIRCUIT SHALL BE CONTROLLED THROUGH UL924 RELAYS. REFER TO UL924 WIRING DIAGRAM DETAIL ON SHEET EB801, DETAIL #2.
11. PROVIDE ONE UL924 RELAY FOR EACH ZONE.
12. NORMAL 277V LIGHTING IS FED FROM PANEL LB. EMERGENCY 277V LIGHTING IS FED FROM PANEL EMB.

FLAG NOTES

1. PROGRAM DEVICE AS A COMBINATION PHOTOSENSOR/MOTION SENSOR
2. PROGRAM DEVICE AS A PHOTOSENSOR ONLY
3. MOUNT FIXTURE AT 29'-0" AFF TO BOTTOM OF FIXTURE
4. LIGHTING CONTROL PANEL. REFER TO LIGHTING CONTROL DIAGRAM DETAIL 1 ON SHEET EB801 FOR MORE INFORMATION AND REQUIREMENTS.
5. PROVIDE WIRELESS LIGHTING CONTROL RELAY FOR EACH EXTERIOR LIGHT CIRCUIT AS INDICATED. MOUNT RELAY NEAR PANELBOARDS, LABEL RELAYS, AND ROUTE CONTROLLED PORTION OF CIRCUIT TO LIGHT FIXTURE(S) VIA RELAY.
6. UL924 EMERGENCY RELAY PACK FOR EXTERIOR LIGHTING.
7. LIGHT FIXTURE TO BE INSTALLED AT 17'-0"AFF TO BOTTOM OF FIXTURE U.N.O.
8. LIGHT FIXTURE L5-X TO BE INSTALLED AT 12'-0"AFF TO BOTTOM OF FIXTURE U.N.O.



108 MAIN FLOOR LIGHTING PLAN - NORTH

1/8" = 1'-0"

NORTH

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

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REGISTERED PROFESSIONAL ENGINEER

5/6/2024

MAIN FLOOR LIGHTING PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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EB202

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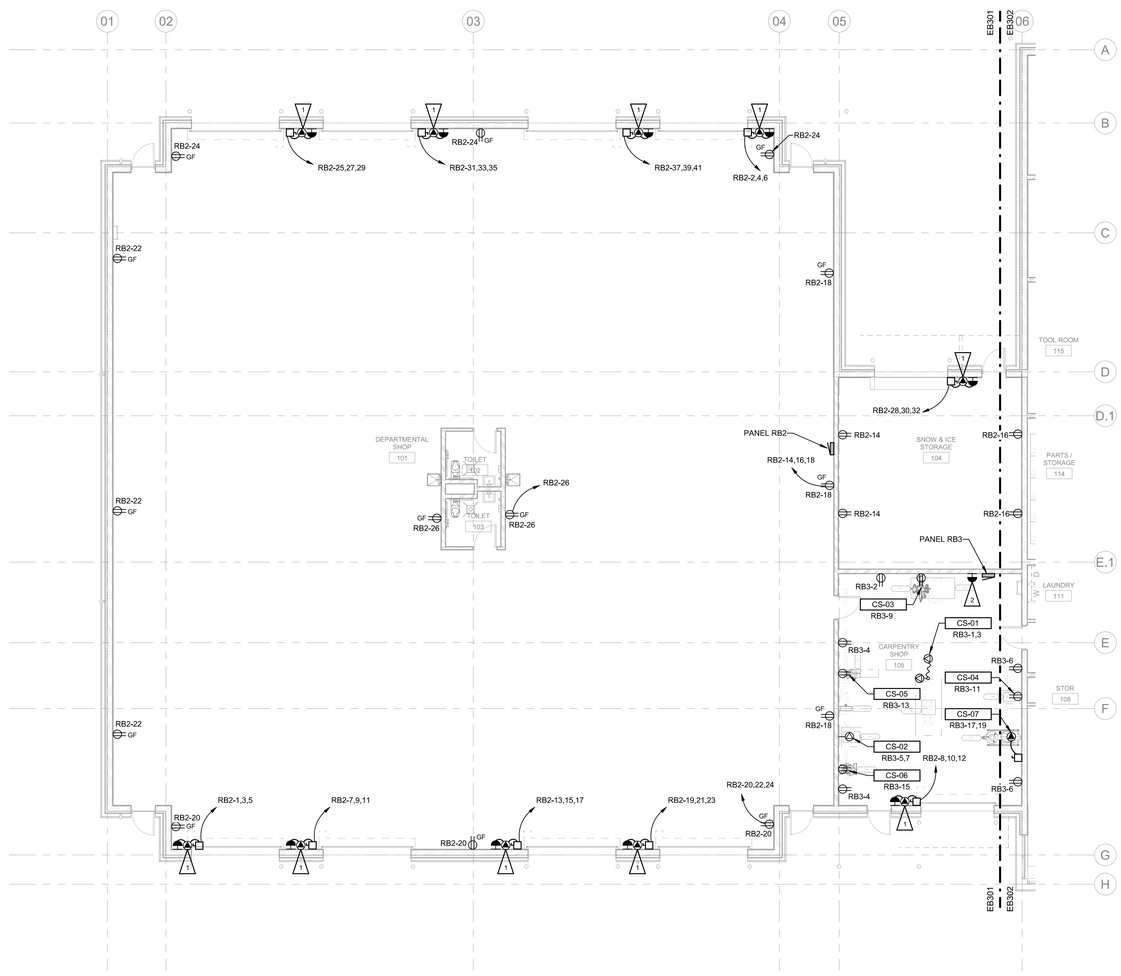
SHEET NOTES

1. COORDINATE ELECTRICAL WITH ALL OTHER CONTRACT DOCUMENTS AND FIELD CONDITIONS TO AVOID CONFLICTS.
2. CIRCUITS SHALL INCLUDE A DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.
3. COORDINATE WITH ARCHITECTURAL FOR EXACT LOCATION OF ALL WALL MOUNTED DEVICES. FINAL WALL DEVICE LOCATIONS SHALL BE REVIEWED AND ACCEPTED BY ARCHITECT PRIOR TO ROUGH-IN.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE.
5. REFER TO FLEET & SHOPS EQUIPMENT SCHEDULE ON SHEET EB004 FOR EQUIPMENT RACEWAY AND CONDUCTOR SIZES.

FLAG NOTES

1. PROVIDE POWER CONNECTION TO OVERHEAD DOOR CONTROLLER. MOUNT DOOR CONTROLLER. DOOR CONTROLLER FURNISHED BY OTHERS. MOUNT DISCONNECT ADJACENT TO DOOR CONTROLLER. PROVIDE INTERCONNECTIONS TO DOOR MOTORS, AND DOOR OPERATORS. PROVIDE CONDUIT AND CONDUCTORS FOR DOOR SYSTEM INTERCONNECTIONS. REFER TO MANUFACTURERS MANUAL FOR INSTALLATION REQUIREMENTS.
2. EMERGENCY POWER OFF SWITCH. SWITCH TO DISABLE PANEL 'RB3' VIA CONTACTOR. REFER TO DETAIL 5/EB802 FOR ADDITIONAL INFORMATION. LOCATE 100A/3P CONTACTOR ABOVE PANEL OR INTEGRAL TO PANELBOARD.



MAIN FLOOR POWER PLAN - SOUTH
1/8" = 1'-0"

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

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5/6/2024

MAIN FLOOR POWER PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

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05.06.24	o23-087

BID SET

EB301

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CONTROLLED RECEPTACLE LEGEND

RECEPTACLES DESIGNATED BY THE DRAWINGS SYMBOLS BELOW SHALL BE CONTROLLED RECEPTACLES IN ACCORDANCE WITH WASHINGTON STATE ENERGY CODE C405.10. FOR ALL CONTROLLED RECEPTACLES PROVIDE CONTROLLED RECEPACLE MARKINGS PER NEC 406.3(E)

= SPLIT CONTROLLED DUPLEX RECEPTACLE. REFER TO DETAIL 2/EB802.

= HALF CONTROLLED QUAD RECEPTACLE. REFER TO DETAIL 3/EB802.

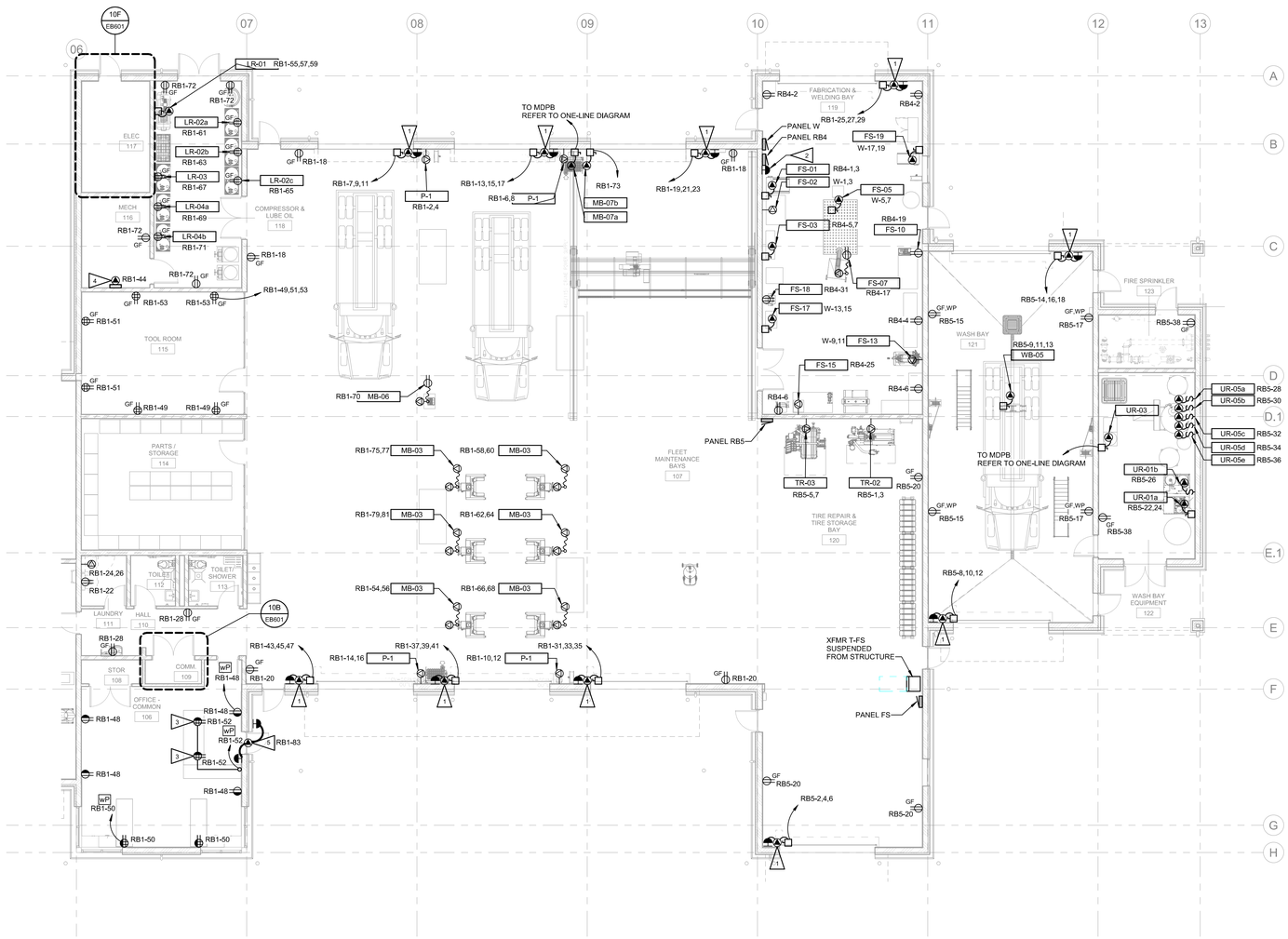
= FULL CONTROLLED QUAD RECEPTACLE. REFER TO DETAIL 4/EB802.

SHEET NOTES

1. COORDINATE ELECTRICAL WITH ALL OTHER CONTRACT DOCUMENTS AND FIELD CONDITIONS TO AVOID CONFLICTS.
2. CIRCUITS SHALL INCLUDE A DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.
3. COORDINATE WITH ARCHITECTURAL FOR EXACT LOCATION OF ALL WALL MOUNTED DEVICES. FINAL WALL DEVICE LOCATIONS SHALL BE REVIEWED AND ACCEPTED BY ARCHITECT PRIOR TO ROUGH-IN.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE.
5. REFER TO FLEET & SHOPS EQUIPMENT SCHEDULE ON SHEET EB604 FOR EQUIPMENT RACEWAY AND CONDUCTOR SIZES.

FLAG NOTES

1. PROVIDE POWER CONNECTION TO OVERHEAD DOOR CONTROLLER. MOUNT DOOR CONTROLLER. DOOR CONTROLLER FURNISHED BY OTHERS. MOUNT DISCONNECT ADJACENT TO DOOR CONTROLLER. PROVIDE INTERCONNECTIONS TO DOOR MOTORS, AND DOOR OPERATORS. PROVIDE CONDUIT AND CONDUCTORS FOR DOOR SYSTEM INTERCONNECTIONS. REFER TO MANUFACTURERS MANUAL FOR INSTALLATION REQUIREMENTS.
2. EMERGENCY POWER OFF SWITCH. SWITCH TO DISABLE PANEL 'RB4' VIA CONTACTOR. REFER TO DETAIL 5/EB802 FOR ADDITIONAL INFORMATION. LOCATE 100A/3P CONTACTOR ABOVE PANEL OR INTEGRAL TO PANELBOARD.
3. MOUNT OUTLETS WITHIN CASEWORK. COORDINATE INSTALLATION WITH CASEWORK VENDOR AND ARCHITECT.
4. PROVIDE CONNECTION TO BMS PANEL. COORDINATE EXACT LOCATION WITH DIVISION 23.
5. PROVIDE CONNECTION TO AUTOMATIC DOOR OPERATOR. PROVIDE INTERCONNECTIONS TO ADA PUSHBUTTONS. COORDINATE EXACT LOCATION WITH ADA PUSHBUTTONS WITH ARCHITECT PRIOR TO ROUGH-IN.



MAIN FLOOR POWER PLAN - NORTH

1/8" = 1'-0"

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NORTH

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

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5/6/2024

MAIN FLOOR POWER PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

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BID SET

EB302

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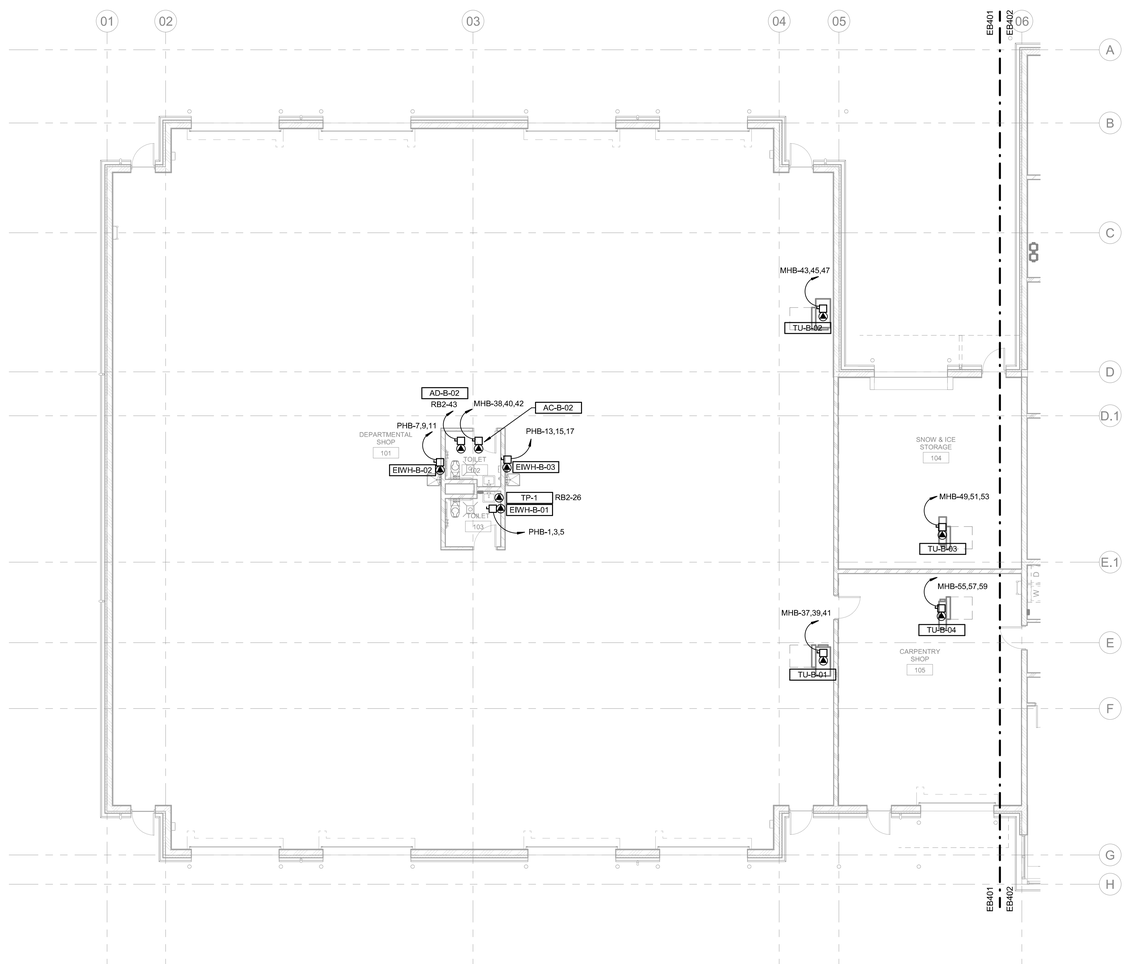
SHEET NOTES

1. COORDINATE ELECTRICAL WITH ALL OTHER PROJECT DISCIPLINE DOCUMENTS TO AVOID CONFLICTS.
2. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET EB004 FOR MECHANICAL RACEWAY,CONDUCTOR SIZES, AND CIRCUITING INFORMATION.
3. PROVIDE CLEARANCE PER NEC FOR ALL DISCONNECT SWITCHES. COORDINATE EXACT LOCATIONS WITH FINAL MECHANICAL EQUIPMENT. WALL MOUNT DISCONNECT SWITCHES AND/OR PROVIDE UNISTRUT MOUNTING FRAME AS REQUIRED. DO NOT MOUNT DISCONNECT SWITCHES DIRECTLY TO MECHANICAL EQUIPMENT. SUSPEND DISCONNECT SWITCHES FROM STRUCTURE AND LOCATE ADJACENT TO UNITS OUTSIDE OF EQUIPMENT CLEAR SPACE.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE. CONDUIT SERVING ROOF-MOUNTED EQUIPMENT SHALL BE ROUTED THROUGH ROOF CURB WITH OWNER APPROVED PIPE FLASHING AND SEALANT METHODS. CONDUITS SHALL NOT BE ROUTED HORIZONTALLY ON ROOF WITHOUT PRIOR APPROVAL FROM ENGINEER.

FLAG NOTES



100 MAIN FLOOR MECHANICAL POWER PLAN - SOUTH
1/8" = 1'-0"

NORTH
0' 2' 4' 8'
SCALE: 1/8" = 1'-0"

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5/6/2024

MAIN FLOOR MECHANICAL POWER PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

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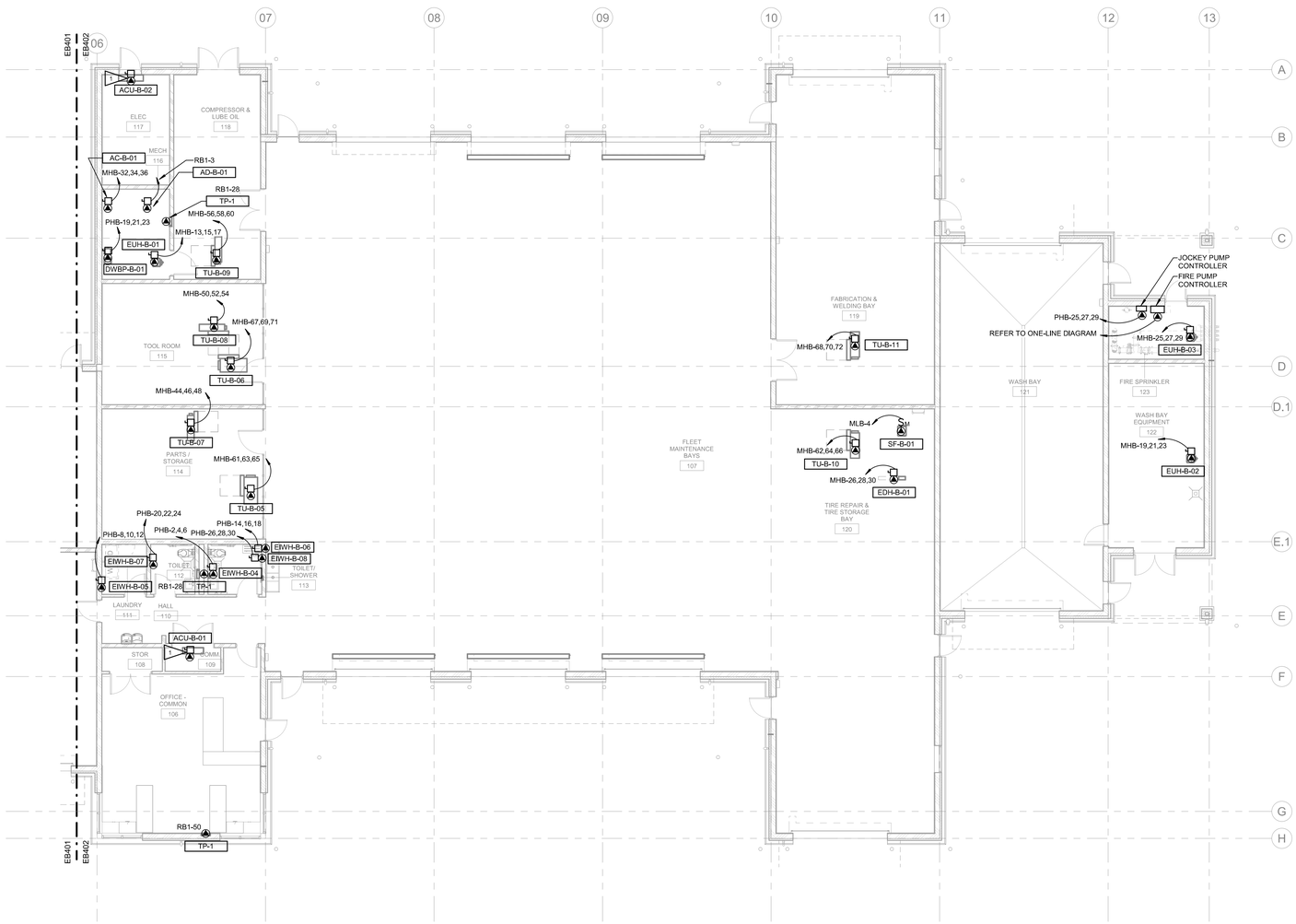
SHEET NOTES

1. COORDINATE ELECTRICAL WITH ALL OTHER PROJECT DISCIPLINE DOCUMENTS TO AVOID CONFLICTS.
2. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET EB004 FOR MECHANICAL RACEWAY,CONDUCTOR SIZES, AND CIRCUITING INFORMATION.
3. PROVIDE CLEARANCE PER NEC FOR ALL DISCONNECT SWITCHES. COORDINATE EXACT LOCATIONS WITH FINAL MECHANICAL EQUIPMENT. WALL MOUNT DISCONNECT SWITCHES AND/OR PROVIDE UNISTRUT MOUNTING FRAME AS REQUIRED. DO NOT MOUNT DISCONNECT SWITCHES DIRECTLY TO MECHANICAL EQUIPMENT. SUSPEND DISCONNECT SWITCHES FROM STRUCTURE AND LOCATE ADJACENT TO UNITS OUTSIDE OF EQUIPMENT CLEAR SPACE.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE. CONDUIT SERVING ROOF-MOUNTED EQUIPMENT SHALL BE ROUTED THROUGH ROOF CURB WITH OWNER APPROVED PIPE FLASHING AND SEALANT METHODS. CONDUITS SHALL NOT BE ROUTED HORIZONTALLY ON ROOF WITHOUT PRIOR APPROVAL FROM ENGINEER.

FLAG NOTES

1. INDOOR UNIT FED FROM EXTERIOR UNIT. PROVIDE CONDUIT AND CONDUCTORS REQUIRED FOR INSTALLATION.



108 MAIN FLOOR MECHANICAL POWER PLAN - NORTH
1/8" = 1'-0"

NORTH

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

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5/6/2024

MAIN FLOOR MECHANICAL POWER PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

EB402

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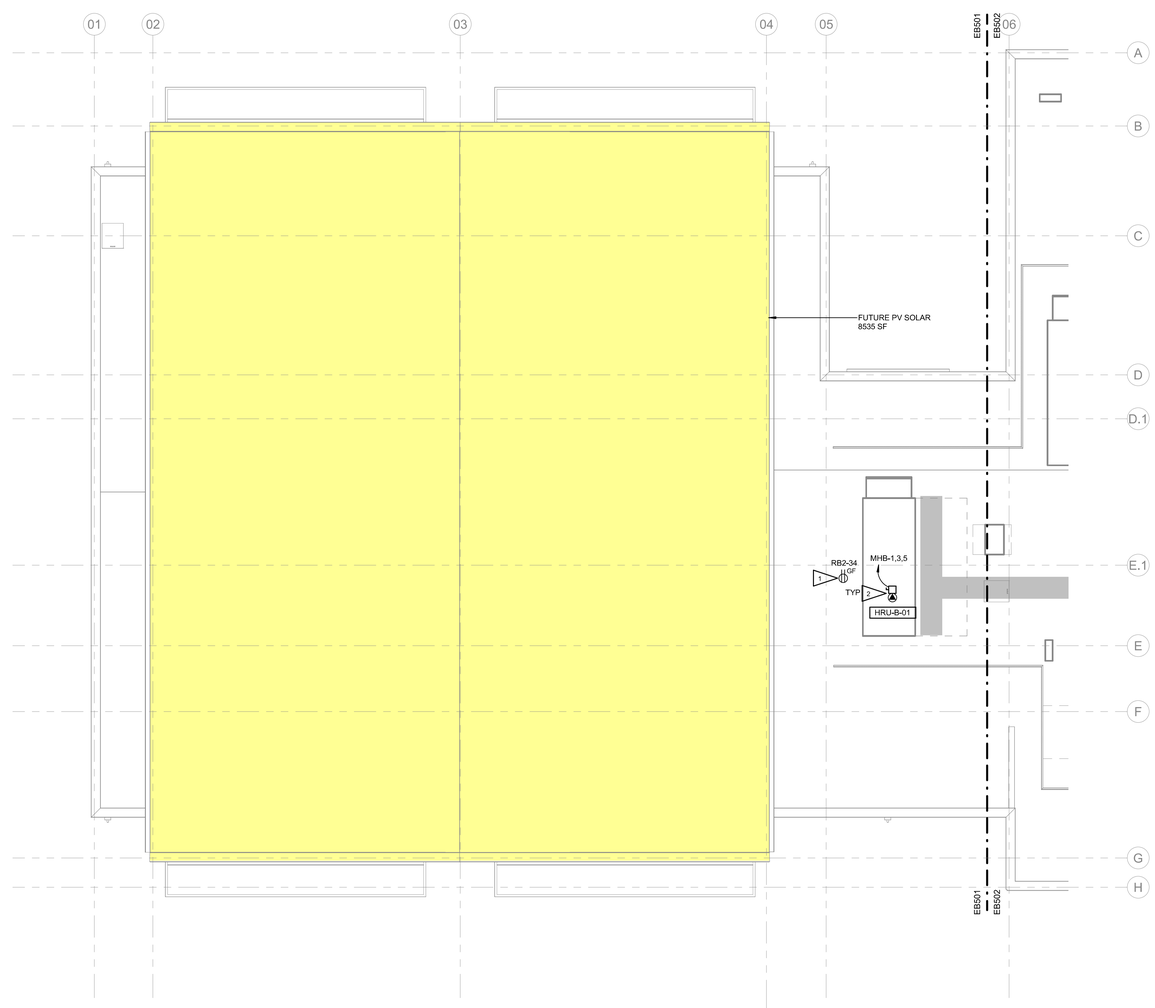
SHEET NOTES

1. COORDINATE ELECTRICAL WITH ALL OTHER PROJECT DISCIPLINE DOCUMENTS TO AVOID CONFLICTS.
2. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET EB004 FOR MECHANICAL RACEWAY,CONDUCTOR SIZES AND CIRCUITING INFORMATION.
3. PROVIDE CLEARANCE PER NEC FOR ALL DISCONNECT SWITCHES. COORDINATE EXACT LOCATIONS WITH FINAL MECHANICAL EQUIPMENT. WALL MOUNT DISCONNECT SWITCHES AND/OR PROVIDE UNISTRUT MOUNTING FRAME AS REQUIRED. DO NOT MOUNT DISCONNECT SWITCHES DIRECTLY TO MECHANICAL EQUIPMENT. SUSPEND DISCONNECT SWITCHES FROM STRUCTURE AND LOCATE ADJACENT TO UNITS OUTSIDE OF EQUIPMENT CLEAR SPACE.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE. CONDUIT SERVING ROOF-MOUNTED EQUIPMENT SHALL BE ROUTED THROUGH ROOF CURB WITH OWNER APPROVED PIPE FLASHING AND SEALANT METHODS. CONDUITS SHALL NOT BE ROUTED HORIZONTALLY ON ROOF WITHOUT PRIOR APPROVAL FROM ENGINEER.

FLAG NOTES

1. PROVIDE SURFACE MOUNT EXTERIOR GFCI RECEPTACLE IN LOCKABLE IN-USE COVER.
2. PROVIDE MOUNTING STRUCTURE PER DETAIL 1/EB802. MOUNT ALL GFCI RECEPTACLES AND EQUIPMENT DISCONNECT SWITCHES TO MOUNTING STRUCTURE. COORDINATE EXACT LOCATION OF MOUNTING STRUCTURE WITH TO AVOID MECHANICAL EQUIPMENT CLEARANCES AND ROOFTOP CIRCULATION PATHWAYS AND EQUIPMENT SCREENS. COORDINATE WITH DIVISION 23,AND ARCHITECTURAL PLANS.



100 ELECTRICAL ROOF PLAN - SOUTH

1/8" = 1'-0"

NORTH

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

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5/6/2024

ELECTRICAL ROOF PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

DRAWING NO.

EB501

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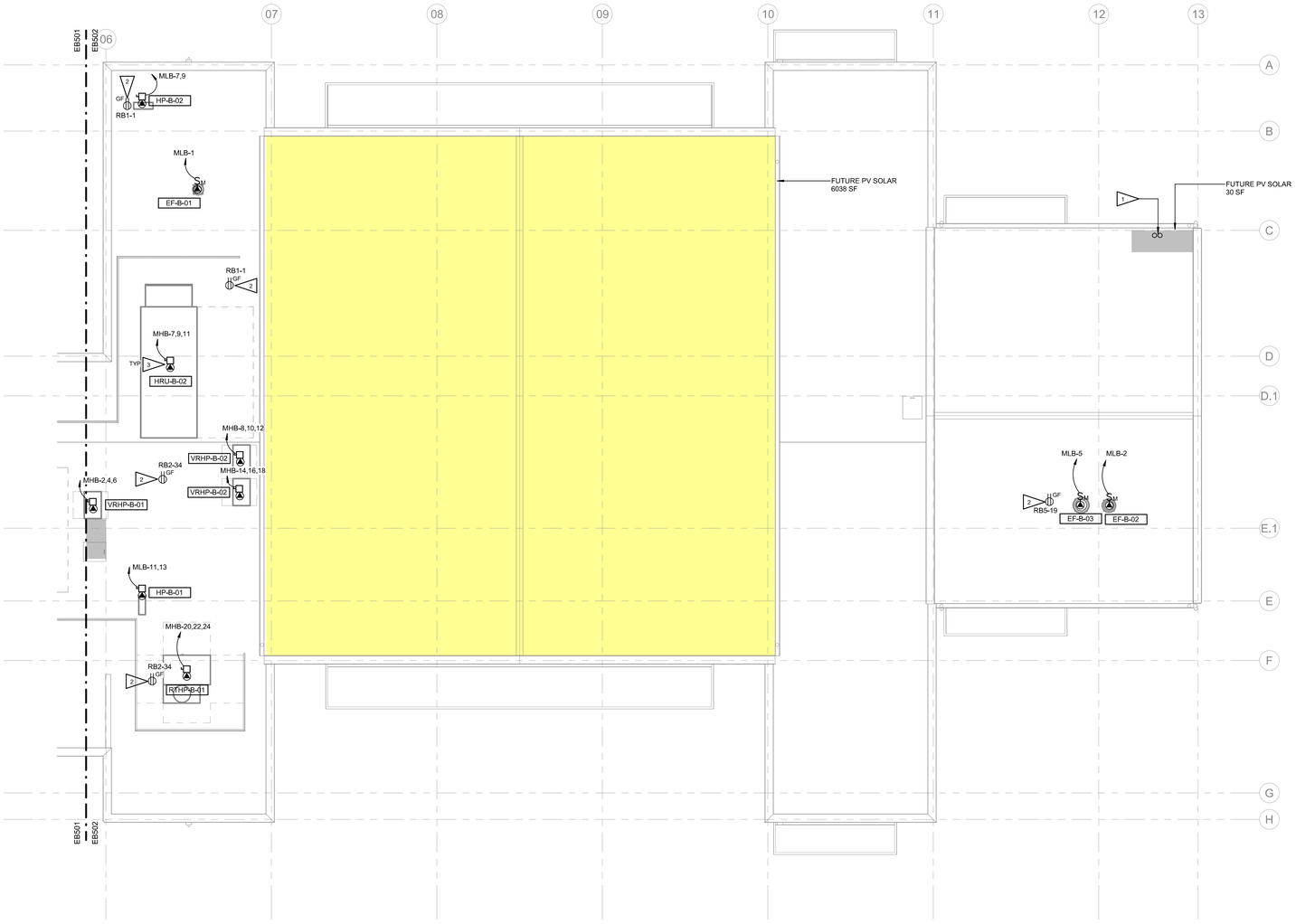
SHEET NOTES

1. COORDINATE ELECTRICAL WITH ALL OTHER PROJECT DISCIPLINE DOCUMENTS TO AVOID CONFLICTS.
2. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET EB004 FOR MECHANICAL RACEWAY,CONDUCTOR SIZES, AND CIRCUITING INFORMATION.
3. PROVIDE CLEARANCE PER NEC FOR ALL DISCONNECT SWITCHES. COORDINATE EXACT LOCATIONS WITH FINAL MECHANICAL EQUIPMENT. WALL MOUNT DISCONNECT SWITCHES AND/OR PROVIDE UNISTRUT MOUNTING FRAME AS REQUIRED. DO NOT MOUNT DISCONNECT SWITCHES DIRECTLY TO MECHANICAL EQUIPMENT. SUSPEND DISCONNECT SWITCHES FROM STRUCTURE AND LOCATE ADJACENT TO UNITS OUTSIDE OF EQUIPMENT CLEAR SPACE.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE. CONDUIT SERVING ROOF-MOUNTED EQUIPMENT SHALL BE ROUTED THROUGH ROOF CURB WITH OWNER APPROVED PIPE FLASHING AND SEALANT METHODS. CONDUITS SHALL NOT BE ROUTED HORIZONTALLY ON ROOF WITHOUT PRIOR APPROVAL FROM ENGINEER.

FLAG NOTES

1. PROVIDE (2) 4"C. TO MAIN SERVICE ENTRANCE EQUIPMENT.
2. PROVIDE SURFACE MOUNT EXTERIOR GFCI RECEPTACLE IN LOCKABLE IN-USE COVER.
3. PROVIDE MOUNTING STRUCTURE PER DETAIL 1/EB802. MOUNT ALL GFCI RECEPTACLES AND EQUIPMENT DISCONNECT SWITCHES TO MOUNTING STRUCTURE. COORDINATE EXACT LOCATION OF MOUNTING STRUCTURE WITH TO AVOID MECHANICAL EQUIPMENT CLEARANCES AND ROOFTOP CIRCULATION PATHWAYS AND EQUIPMENT SCREENS. COORDINATE WITH DIVISION 23,AND ARCHITECTURAL PLANS.



ELECTRICAL ROOF PLAN - NORTH
1/8" = 1'-0"

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

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ELECTRICAL ROOF PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

DRAWING NO.
EB502

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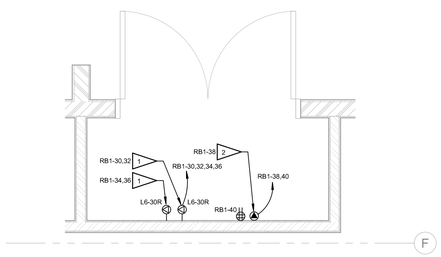
SHEET NOTES

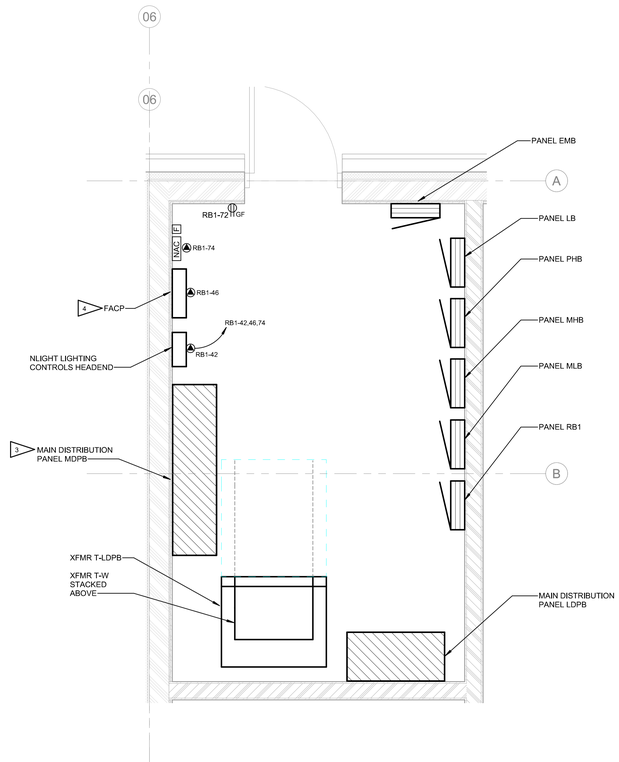
1. COORDINATE ELECTRICAL WITH ALL OTHER CONTRACT DOCUMENTS AND FIELD CONDITIONS TO AVOID CONFLICTS.
2. CIRCUITS SHALL INCLUDE A DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.
3. COORDINATE WITH ARCHITECTURAL FOR EXACT LOCATION OF ALL WALL MOUNTED DEVICES. FINAL WALL DEVICE LOCATIONS SHALL BE REVIEWED AND ACCEPTED BY ARCHITECT PRIOR TO ROUGH-IN.
4. ROUTE ALL HORIZONTAL CONDUITS WITHIN CEILING AREAS TIGHT TO STRUCTURE.
5. PROVIDE TELECOMMUNICATIONS AND SECURITY OUTLET ROUGH-IN, SLEEVES AND RACEWAYS PER TELECOM AND SECURITY DRAWINGS.

FLAG NOTES

1. MOUNT OUTLETS TO TELECOM RACK. COORDINATE INSTALLATION WITH DIVISON 27.
2. PROVIDE HARDWIRED CONNECTION TO SECURITY PANEL. COORDINATE EXACT LOCATION OF PANEL WITH DIVISION 27.
3. EQUIPMENT TO BE LESS THAN 6' WIDE.
4. PROVIDE CONNECTION TO FACP. COORDINATE EXACT LOCATION, MOUNTING HEIGHT, AND CONNECTION REQUIREMENTS WITH FIRE ALARM INSTALLER.



V101B ENLARGED PLAN - COMM ROOM
1/2" = 1'-0"



V101E ENLARGED PLAN - ELECTRICAL ROOM
1/2" = 1'-0"

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ELECTRICAL ENLARGED PLANS

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

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BID SET

DRAWING NO.
EB601

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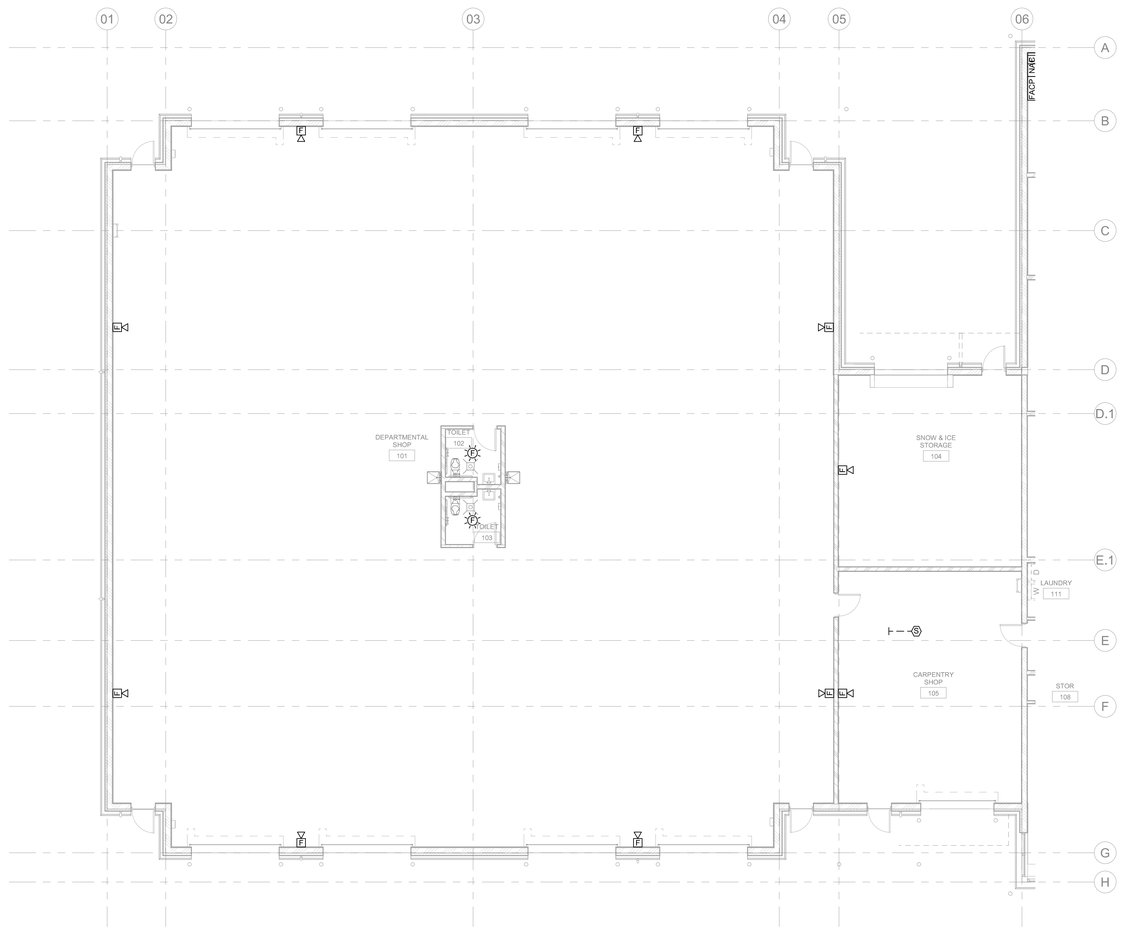
SHEET NOTES

1. PROVIDE FIRE ALARM SYSTEM INSTALLATION INCLUDING NOTIFICATION, DETECTION, AND CONTROL DEVICES IN ACCORDANCE WITH LOCAL CODES, FIRE MARSHAL REQUIREMENTS AND OWNER STANDARDS.
2. DRAWINGS SHOW NOTIFICATION DEVICES LOCATIONS FOR COORDINATION ONLY. CONTRACTOR SHALL PROVIDE COMPLETE NOTIFICATION, DETECTION AND CONTROL REQUIREMENTS PER CODE. PROVIDE ALL DEVICES AS REQUIRED BY CODE.
3. PROVIDE ALL FIRE ALARM SYSTEM PROGRAMMING. PROVIDE COMPLETE FIRE ALARM SYSTEM COMMISSIONING IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
4. PROVIDE ALL FIRE ALARM SYSTEM POWER SUPPLY BATTERY AND TERMINAL CABINETS AS REQUIRED TO SUPPORT WORK. PROVIDE 120VAC LINE VOLTAGE CIRCUITS AS NECESSARY. DRAWING SHOWS MINIMUM DEVICE REQUIREMENTS NOTIFICATION DEVICE LAYOUT. ADJUST LOCATIONS AND PROVIDE ADDITIONAL DEVICES AS REQUIRED TO COMPLY WITH FIRE CODE AUDIBLE/VISIBLE REQUIRMENTS.
5. NOTIFICATION DEVICES SHALL BE AUDIBLE/VISUAL DEVICES AS REQUIRED BY CODE/AHJ.
6. CENTER ALL CEILING MOUNTED DEVICES IN CEILING TILES WHERE APPLICABLE.
7. PROVIDE COMPLETE FIRE ALARM SHOP DRAWINGS AND SUBMIT TO THE OWNER, LANDLORD AND AJH. SHOP DRAWINGS SHALL BE CAD GENERATED AND INCLUDE DEVICE PLANS, WIRING DIAGRAMS, BATTERY SYSTEM CALCULATIONS, VOLTAGE DROP CALCULATIONS, SEQUENCE OF OPERATIONS AND ALL OTHER CODE REQUIRED DOCUMENTATION.
8. CEILING MOUNTED DEVICES IN AREAS WHICH ARE OPEN TO STRUCTURE SHALL BE INSTALLED VIA PENDANT MOUNT. BOTTOM OF DEVICE SHALL MATCH BOTTOM OF LIGHT FIXTURES.



MAIN FLOOR FIRE ALARM PLAN - SOUTH
1/8" = 1'-0"

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

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MAIN FLOOR FIRE ALARM PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

EB701

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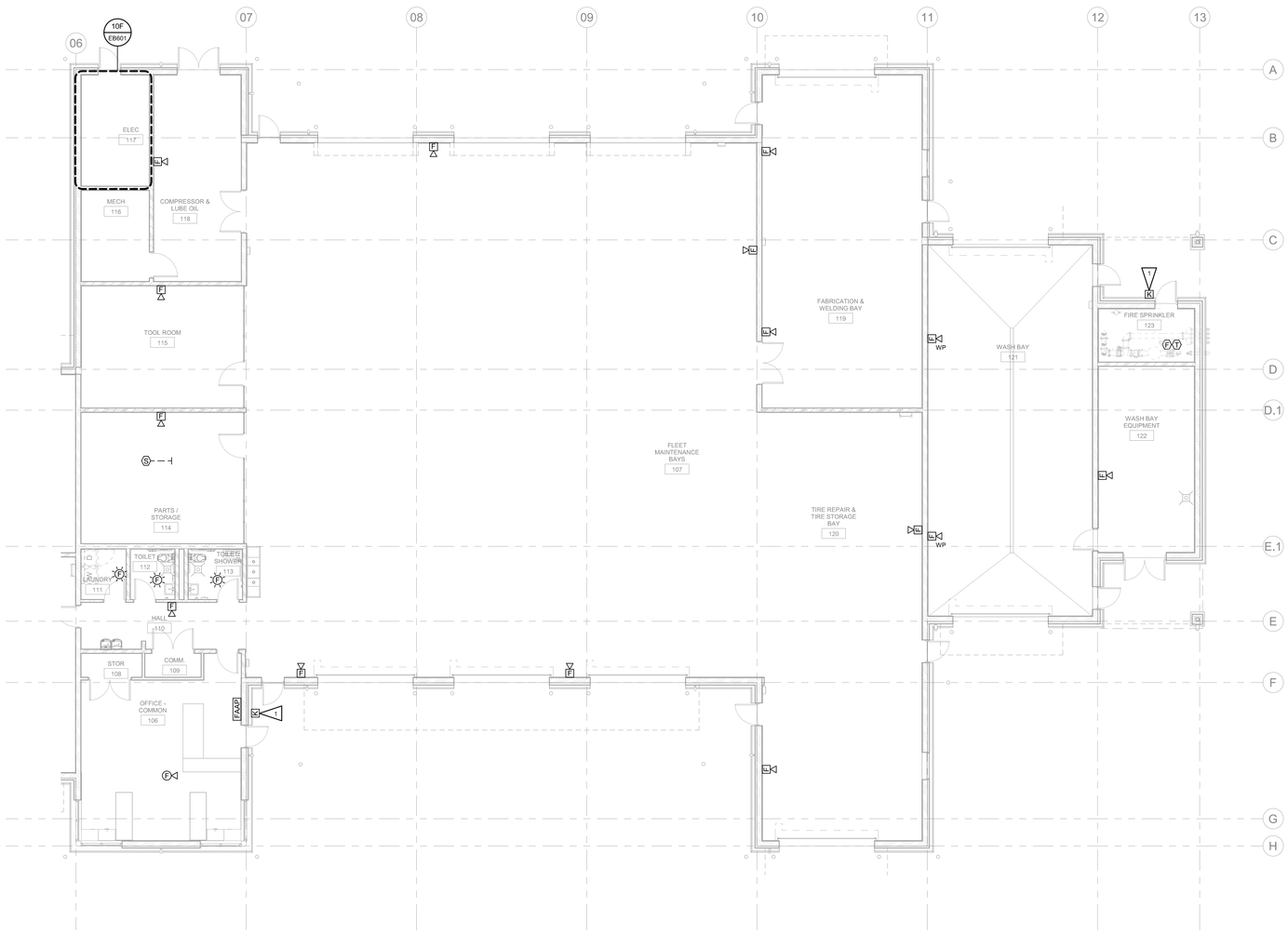

MAIN FLOOR FIRE ALARM PLAN - NORTH

1/8" = 1'-0"

SHEET NOTES

1. PROVIDE FIRE ALARM SYSTEM INSTALLATION INCLUDING NOTIFICATION, DETECTION, AND CONTROL DEVICES IN ACCORDANCE WITH LOCAL CODES, FIRE MARSHAL REQUIREMENTS AND OWNER STANDARDS.
2. DRAWINGS SHOW NOTIFICATION DEVICES LOCATIONS FOR COORDINATION ONLY. CONTRACTOR SHALL PROVIDE COMPLETE NOTIFICATION, DETECTION AND CONTROL REQUIREMENTS PER CODE. PROVIDE ALL DEVICES AS REQUIRED BY CODE.
3. PROVIDE ALL FIRE ALARM SYSTEM PROGRAMMING. PROVIDE COMPLETE FIRE ALARM SYSTEM COMMISSIONING IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
4. PROVIDE ALL FIRE ALARM SYSTEM POWER SUPPLY BATTERY AND TERMINAL CABINETS AS REQUIRED TO SUPPORT WORK. PROVIDE 120VAC LINE VOLTAGE CIRCUITS AS NECESSARY. DRAWING SHOWS MINIMUM DEVICE REQUIREMENTS NOTIFICATION DEVICE LAYOUT. ADJUST LOCATIONS AND PROVIDE ADDITIONAL DEVICES AS REQUIRED TO COMPLY WITH FIRE CODE AUDIBLE/VISIBLE REQUIRMENTS.
5. NOTIFICATION DEVICES SHALL BE AUDIBLE/VISUAL DEVICES AS REQUIRED BY CODE/AHJ.
6. CENTER ALL CEILING MOUNTED DEVICES IN CEILING TILES WHERE APPLICABLE.
7. PROVIDE COMPLETE FIRE ALARM SHOP DRAWINGS AND SUBMIT TO THE OWNER, LANDLORD AND AJH. SHOP DRAWINGS SHALL BE CAD GENERATED AND INCLUDE DEVICE PLANS, WIRING DIAGRAMS, BATTERY SYSTEM CALCULATIONS, VOLTAGE DROP CALCULATIONS, SEQUENCE OF OPERATIONS AND ALL OTHER CODE REQUIRED DOCUMENTATION.
8. CEILING MOUNTED DEVICES IN AREAS WHICH ARE OPEN TO STRUCTURE SHALL BE INSTALLED VIA PENDANT MOUNT. BOTTOM OF DEVICE SHALL MATCH BOTTOM OF LIGHT FIXTURES.

FLAG NOTES

1. PROVIDE KNOX BOX. CONFIRM WITH FIRE MARSHALL EXACT LOCATION.

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5/6/2024

MAIN FLOOR FIRE ALARM PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

EB702

DRAWING NO.

NORTH

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

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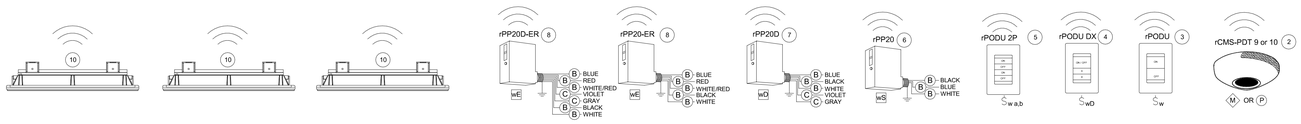
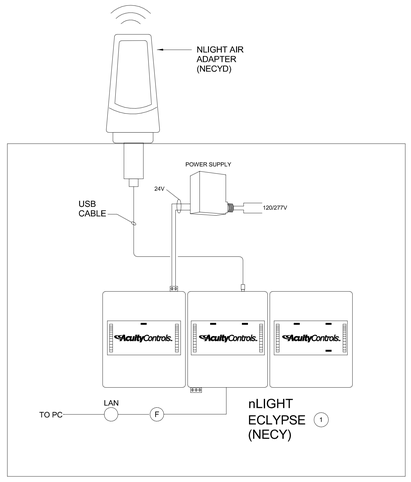




GENERAL NOTES

1. A COMPLETE nLIGHT SYSTEM CONTROL PACKAGE SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LINE VOLTAGE AND LOW VOLTAGE DIMMING WIRING FROM DIMMING CONTROL TO EACH LIGHT FIXTURE FOR DIMMING CONTROL SYSTEM. THIS SHALL INCLUDE ALL WIRING BETWEEN LIGHTING CONTROL COMPONENTS.
3. REFER TO LIGHTING PLANS EB201 AND EB202 AND POWER PLANS EB301 AND EB302 FOR QUANTITY AND LOCATIONS OF ALL DEVICES.
4. THESE DETAILS ILLUSTRATE THE GENERAL REQUIREMENTS FOR THE LIGHTING CONTROLS, AND MAY NOT SHOW ALL DEVICES, WIRING, AND EQUIPMENT NEEDED. COORDINATE WITH ACUITY nLIGHT CONTROLS FOR EXACT REQUIREMENTS FOR A COMPLETE SYSTEM.
5. LIGHTING CONTROLS PACKAGE FURNISHED BY EC SHALL INCLUDE ALL PROGRAMMING, STARTUP AND COMMISSIONING FOR A COMPLETE CODE COMPLIANT SYSTEM.
6. ALL ON/OFF SET POINTS AND DIMMING LEVELS SHALL MEET THE OWNER REQUIREMENTS. COORDINATE WITH OWNER.
7. FULLY DEMONSTRATE THE SYSTEM TO THE OWNER.
8. PROVIDE PERMANENT LABELS FOR THE INDIVIDUAL MASTER LIGHTING CONTROL SWITCH(ES) INDICATING AREA OF CONTROL. PROVIDE A LAMACOID ENGRAVED PLAQUE ABOVE THE SWITCH(ES) READING "SALES FLOOR LIGHTING MASTER CONTROL AND OVERRIDE SWITCH(ES)".

KEY NOTES

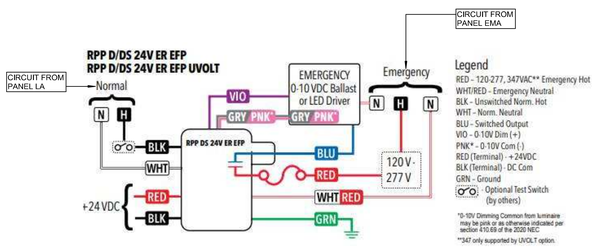
1. LIGHTING CONTROL HEADEND. PROVIDE IN NEMA 1 ENCLOSURE.
2. NLIGHT AIR WIRELESS DUAL TECHNOLOGY OCCUPANCY SENSOR AND DAYLIGHT SENSOR.
3. NLIGHT AIR WIRELESS LIGHTING CONTROL ON/OFF SWITCH.
4. NLIGHT AIR WIRELESS LIGHTING CONTROL ON/OFF / DIMMER SWITCH.
5. NLIGHT AIR WIRELESS LIGHTING CONTROL 2-POLE ON/OFF SWITCH.
6. NLIGHT AIR WIRELESS POWER/RELAY PACK FOR SWITCHING OF LIGHTING AND PLUG LOADS.
7. NLIGHT AIR WIRELESS POWER/RELAY DIMMING PACK FOR SWITCHING AND DIMMING CONTROL OF LIGHTING.
8. NLIGHT AIR WIRELESS UL924 EMERGENCY POWER/RELAY PACK FOR SWITCHING OF LIGHTING AND BY-PASSING CONTROLS IN EMERGENCY CONDITIONS (LOSS OF POWER).
9. NLIGHT AIR WIRELESS UL924 EMERGENCY POWER/RELAY DIMMING PACK FOR SWITCHING AND DIMMING CONTROL OF LIGHTING AND BY-PASSING CONTROLS IN EMERGENCY CONDITIONS (LOSS OF POWER).
10. NLIGHT AIR ENABLED LIGHT FIXTURE

WIRE LEGEND

- A — CAT 5-E (CLASS 2)
- B — LINE VOLTAGE
- C — 0-10 VDC
- D — LOW VOLTAGE (1A @ 40 VDC/VAC)
- E — 15-24 VDC POWER
- F — ETHERNET LAN (CLASS 2)

1 LIGHTING CONTROL DIAGRAM

1/8" = 1'-0"



UL924 Sequence of Operation:
When normal power sense leads have absence of voltage

- Relay is closed and 0-10V dimming is at high end trim level
- Device ignores wireless lighting control commands

2 UL924 WIRELESS EMERGENCY POWER PACK WIRING DIAGRAM

1/8" = 1'-0"

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5/6/2024

ELECTRICAL DETAILS

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
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BID SET

EB801

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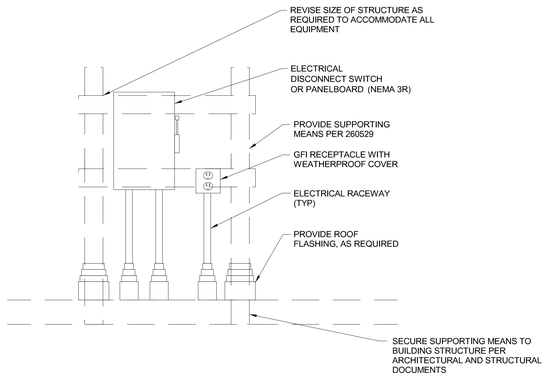
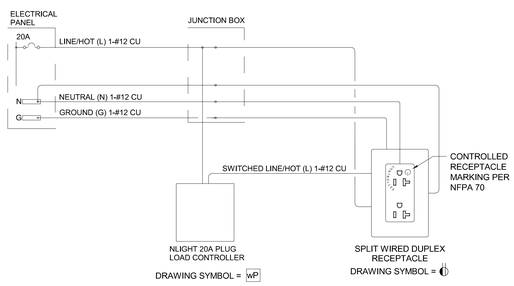


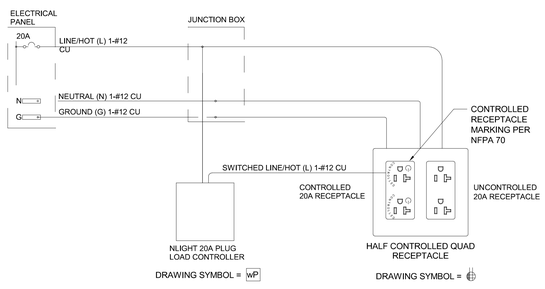
1 EB802 DETAIL - ROOFTOP MOUNTED EQUIPMENT



DETAIL NOTES

1. PROVIDE OCCUPANCY SENSOR OR TIMECLOCK CONTROL FOR RECEPTACLES WHERE REQUIRED TO MEET IN THE CONTROL SEQUENCE.
2. CONTROLLED RECEPTACLES PROVIDED WHERE INDICATED ON EA301 SERIES DRAWINGS.
3. PROVIDE LABELS AND MARKINGS PER SPECIFICATION 260553 ELECTRICAL IDENTIFICATION.

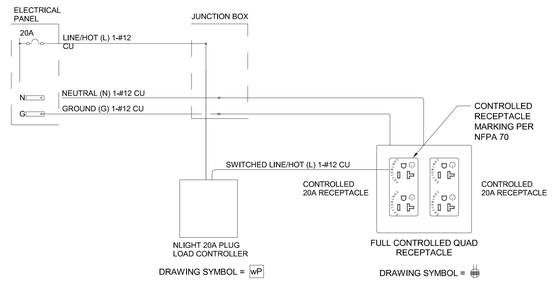
2 EB802 SPLIT CONTROLLED DUPLEX RECEPTACLE WIRING DETAIL



DETAIL NOTES

1. PROVIDE OCCUPANCY SENSOR OR TIMECLOCK CONTROL FOR RECEPTACLES WHERE REQUIRED TO MEET IN THE CONTROL SEQUENCE.
2. CONTROLLED RECEPTACLES PROVIDED WHERE INDICATED ON EA301 SERIES DRAWINGS.
3. PROVIDE LABELS AND MARKINGS PER SPECIFICATION 260553 ELECTRICAL IDENTIFICATION.

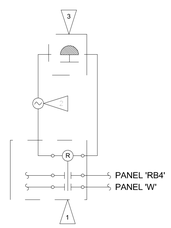
3 EB802 HALF CONTROLLED QUAD RECEPTACLE WIRING DETAIL



DETAIL NOTES

1. PROVIDE OCCUPANCY SENSOR OR TIMECLOCK CONTROL FOR RECEPTACLES WHERE REQUIRED TO MEET IN THE CONTROL SEQUENCE.
2. CONTROLLED RECEPTACLES PROVIDED WHERE INDICATED ON EA301 SERIES DRAWINGS.
3. PROVIDE LABELS AND MARKINGS PER SPECIFICATION 260553 ELECTRICAL IDENTIFICATION.

4 EB802 RECEPTACLE CONTROL - QUAD RECEPTACLE WIRING DETAIL



DETAIL NOTES:

1. PROVIDE CONTACTOR WITH ELECTRICALLY HELD RELAYS. PROVIDE SURFACE MOUNT ENCLOSURE MOUNTED ABOVE PANEL OR A CONTACTOR INTEGRAL TO PANELBOARD.
2. PROVIDE CONDUIT AND WIRING FROM CONTACTOR PANEL TO POWER PANEL AS INDICATED ON POWER FLOOR PLANS.
3. EMERGENCY POWER OFF SWITCH - PUSH OFF/TWIST ON LABELED "EMERGENCY POWER OFF."

5 EB802 EMERGENCY POWER OFF - CONTACTOR

ECB 'D-P1'
FED FROM: XFMR 'T-P1'
FEEDS: PANEL 'P1'

DISCONNECT TAG

AHU-01
MA-21,23,25

MECHANICAL DISCONNECT TAG

PANEL 'LA'
VOLTAGE: 480Y/277V
FED FROM: MAIN SWITCHBOARD

PANELBOARD TAG

XFMR 'T-P1'
PRIMARY VOLTAGE: 480V
SECONDARY VOLTAGE: 208Y/120V
FED FROM: PANEL 'LA'
FEEDS: PANEL 'P1', ROOM 100

TRANSFORMER TAG

* SEE SPECIFICATION SECTION 2 60553 FOR ADDITIONAL INFORMATION.

6 EB802 EQUIPMENT PHENOLIC TAG DETAIL

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AMERICAN INSTITUTE OF ARCHITECTS

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HARGIS ENGINEERS

ROBERT DALE STEVENS STATE OF WASHINGTON 55736 REGISTERED PROFESSIONAL ENGINEER

5/6/2024

ELECTRICAL DETAILS

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

EB802

DRAWING NO.

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PLOTTED: 5/7/2024 11:19:06 PM PROJECT: a23-087 - CITY OF FEDERAL WAY
FILE PATH: C:\Users\ChrisT\Documents\23140 Federal Way GMF Building B- Elec_christopher.teague.RZKWFD.rvt

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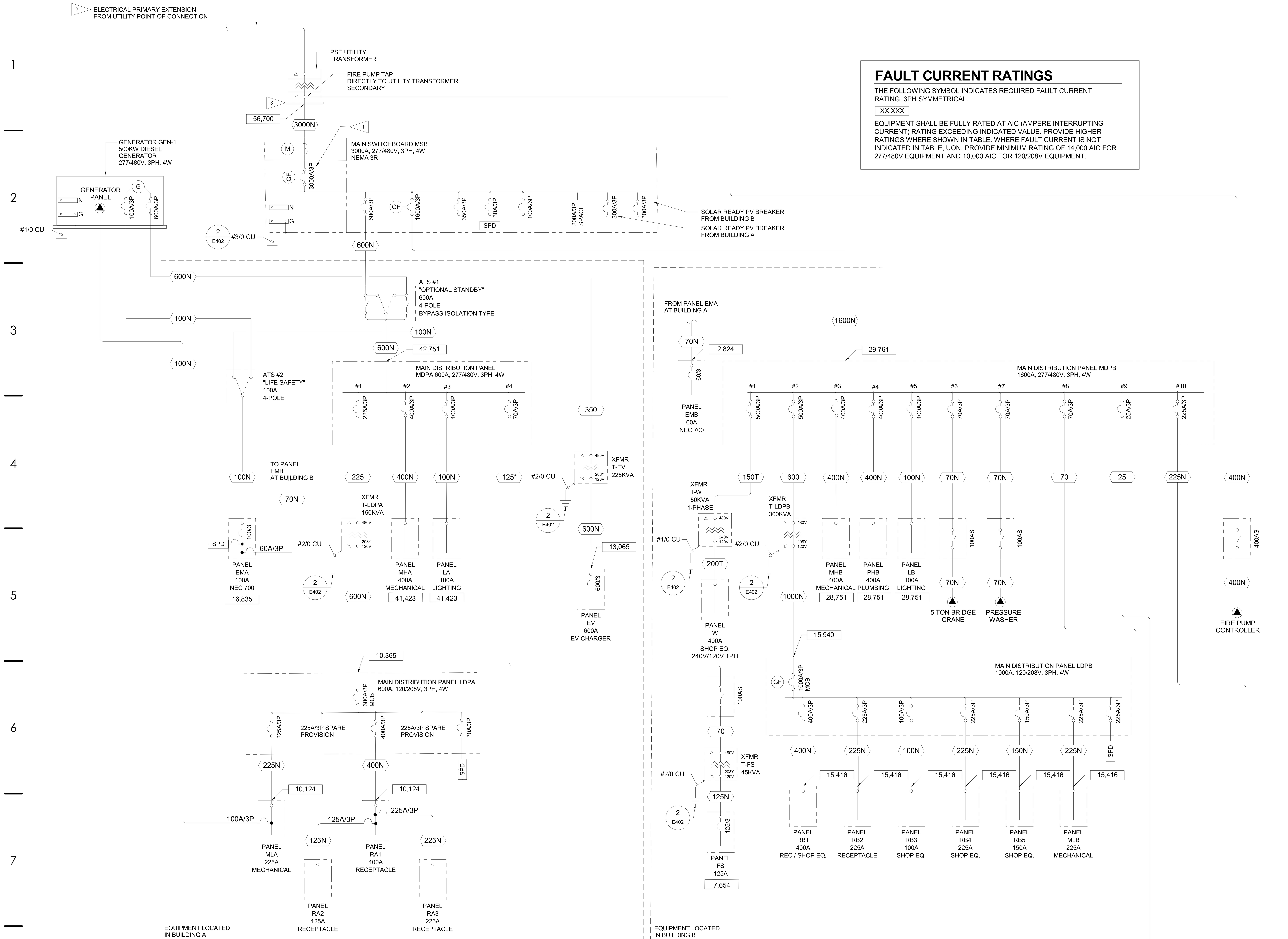
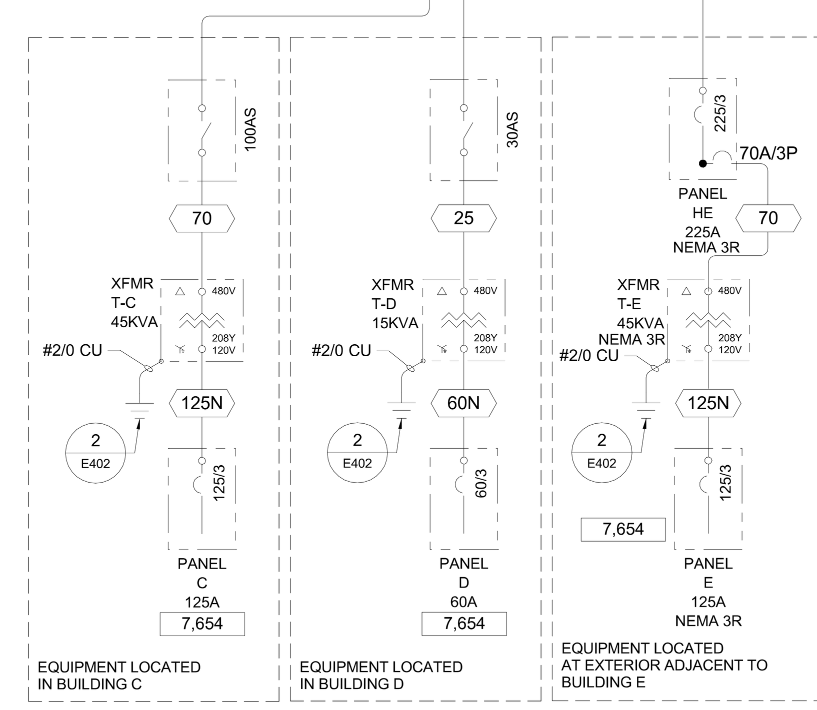


ELECTRICAL EQUIPMENT NOTE:

PRIOR TO INSTALLATION OF PANELBOARDS, LIGHTING CONTROLS, METERS, FEEDERS, BRANCH CIRCUITS, AND ASSOCIATED EQUIPMENT, ELECTRICAL SUB-CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE EQUIPMENT LAYOUT FOR APPROVAL. AT A MINIMUM, THE SHOP DRAWING SHALL SHOW A FLOOR PLAN THAT ACCURATELY SHOWS THE PROPOSED LOCATIONS OF ALL PANELBOARDS, METERS, CABINETS, AND ASSOCIATED EQUIPMENT. PROVIDE AN ELEVATION PLAN ACCURATELY SHOWING THE WALL LAYOUT OF THIS EQUIPMENT. SHOP DRAWINGS SHALL BE DIMENSIONED AND SCALED. ALL EQUIPMENT DIMENSIONS/SIZES SHALL BE BASED ON APPROVED SUBMITTAL INFORMATION, INCLUDING ALL EQUIPMENT THAT IS SUPPLIED BY OTHERS. THE LAYOUTS SHALL DEPICT A CODE COMPLIANT INSTALLATION THAT FITS THE AVAILABLE SPACE INDICATED ON THE PLANS, IN THE EVENT THERE ARE CONFLICTS THAT PROHIBIT THE EQUIPMENT FITTING WITHIN THE SPACE INDICATED ON THE PLANS, THE SUBMITTED LAYOUT SHALL CLEARLY SHOW ADJUSTMENTS THAT ARE NEEDED. IF INSTALLATION WORK OCCURS WITHOUT APPROVED SHOP DRAWINGS, THE ELECTRICAL SUB-CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR CORRECTIVE ACTION AND ALL COSTS NECESSARY FOR A COMPLETE AND COORDINATED INSTALLATION, FREE OF CONFLICTS WITH OTHER SYSTEMS AND TRADES.

ELECTRICAL SERVICE NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATIWITH LOCAL UTILITY COMPANY. PROVIDE NEW NEMA 3R RATED EUSERC SWITCHBOARD WITH METERING APPROVED BY THE LOCAL UTILITY COMPANY. PRIOR TO BID ELECTRICAL CONTRACTOR SHALL CONTACT THE UTILITY COMPANY AND VERIFY ALL REQUIREMENTS FOR A NEW ELECTRICAL SERVICE AND METERING. ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE SERVICE AND METERING (INCLUDING SERVICE LATERAL) IN COMPLIANCE WITH THE LOCAL UTILITY REQUIREMENTS. CONTRACTOR SHALL SUBMIT METERED SWITCHBOARD TO UTILITY FOR THEIR REQUIRED APPROVAL.
2. THE ELECTRICAL SUB-CONTRACTOR IS RESPONSIBLE FOR VERIFYING WITH THE UTILITY COMPANY THE AVAILABLE FAULT CURRENT AT THE SECONDARY OF THE UTILITY TRANSFORMER, DETERMINE THE SERVICE LATERAL SIZE/ROUTING/LENGTH, PROVIDE THE FAULT CALCULATIONS, AND PROVIDE AN ELECTRICAL SERVICE ENTRANCE, PANELBOARD(S), BREAKERS AND EQUIPMENT FULLY RATED FOR THE AVAILABLE FAULT CURRENT. THE ELECTRICAL CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING THE ARC-FLASH CALCULATION STUDY AND LABELING OF EQUIPMENT PER CODE AND THE AHJ REQUIREMENTS.
3. CONTRACTOR IS TO BRING UP ANY DISCREPANCIES AND ITEMS WHICH ARE NOT SPECIFICALLY CALLED FOR OR SHOWN, BUT ARE REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM, AND WHICH AFFECT HIS CONTRACT PRIOR TO ENTERING AND SIGNING THE CONTRACT. AFTER AWARDING THE CONTRACT, ALL SUCH ITEMS REQUIRED FOR A COMPLETE SYSTEM READY FOR THE OWNER'S BENEFICIAL USE SHALL BE FURNISHED AND INSTALLED INCLUDING ALL SUCH AFOREMENTIONED DISCREPANCY ITEMS AT NO ADDITIONAL COST TO THE OWNER.
4. ALL WORK SHALL CONFORM TO UL, NEC, NFPA, AND ALL OTHER CODES OF JURISDICTION WHICH ARE APPLICABLE TO THIS ELECTRICAL INSTALLATION.
5. PRIOR TO ORDERING ANY EQUIPMENT, CONTRACTOR SHALL OBTAIN APPROVAL FROM THE AHJ AND LOCAL ELEC UTILITY FOR THE ELEC SERVICE/METERING EQUIPMENT, LAYOUT, RATING AND LOCATION.



FAULT CURRENT RATINGS

THE FOLLOWING SYMBOL INDICATES REQUIRED FAULT CURRENT RATING, 3PH SYMMETRICAL.

XX,XXX

EQUIPMENT SHALL BE FULLY RATED AT AIC (AMPERE INTERRUPTING CURRENT) RATING EXCEEDING INDICATED VALUE. PROVIDE HIGHER RATINGS WHERE SHOWN IN TABLE. WHERE FAULT CURRENT IS NOT INDICATED IN TABLE, UON, PROVIDE MINIMUM RATING OF 14,000 AIC FOR 277/480V EQUIPMENT AND 10,000 AIC FOR 120/208V EQUIPMENT.

SHEET NOTES

1. ALL BUSSES SHALL BE 100% RATED.
2. TRANSFORMERS ARE 480 VOLT, 3 PHASE, 3 WIRE DELTA PRIMARY TO 208/120 VOLT WYE, 3 PHASE, 4 WIRE SECONDARY, UNLESS INDICATED OTHERWISE.
3. CONNECT ADDITIONAL SECTIONS OF MULTI-SECTION PANELS WITH CONDUCTORS SIZED THE SAME AS THE PANEL FEEDER CONDUCTORS.
4. PROVIDE ARC FLASH LABEL ON ALL NEW SWITCHBOARDS, PANEL BOARDS, DISCONNECT SWITCHES, ETC. PROVIDE SHORT CIRCUIT CALCULATIONS. REFER TO SPECIFICATIONS.
5. ALL ELECTRICAL EQUIPMENT SHORT CIRCUIT RATINGS SHALL EXCEED AVAILABLE FAULT CURRENTS. PROVIDE SHORT CIRCUIT CALCULATIONS TO DETERMINE AVAILABLE FAULT CURRENT BASED ON FIELD CONDITIONS.
6. COORDINATE FEEDER TAPS SUCH THAT LENGTH DOES NOT EXCEED 25' PER NEC REQUIREMENTS. EQUIPMENT GROUNDING CONDUCTORS OF TAPS SHALL BE SAME SIZE AS FEEDER EQUIPMENT GROUNDING CONDUCTOR OR SAME SIZE AS TAP PHASE CONDUCTOR, WHICHEVER IS SMALLER.

FLAG NOTES

1. PROVIDE 100% LOAD RATED SERVICE ENTRANCE CIRCUIT BREAKER.
2. PROVIDE TRENCHING AND BACKFILL FOR THE PRIMARY UTILITY EXTENSION IN ACCORDANCE WITH THE LOCAL UTILITY ELECTRIC SERVICE HANDBOOK.
3. PROVIDE EVACUATION FOR TRANSFORMER UTILITY VAULT INSTALLATION IN ACCORDANCE WITH LOCAL UTILITY ELECTRIC SERVICE HANDBOOK. PROVIDE ASSOCIATED VAULT GROUDNING, GUARD POSTS, AND ALL OTHER WORK NECESSARY TO COMPLY WITH THE UTILITY REQUIREMENTS.

FEEDER SCHEDULE

TAG	QUANTITY OF SETS	RACEWAY SIZE	CONDUCTORS PHASE	NEUTRAL	GND (NOTE2)
70	1	1-1/4"	3#4	-	1#8
70N	1	1-1/4"	3#4	1#4	1#8(#8)
100	1	1-1/2"	3#1	-	1#8
100N	1	1-1/2"	3#1	1#1	1#8(#6)
125	1	2"	3#1/0	-	1#6
125N	1	2"	3#1/0	1#1/0	1#6(#6)
125*	1	2"	3#1/0	-	1#4
150T	1	2"	2#1/0	-	1#4
150N	1	2"	3#1/0	1#1/0	1#6(#6)
175	1	2"	3#2/0	-	1#6
175N	1	2-1/2"	3#2/0	1#2/0	1#6(#4)
200T	1	2-1/2"	2#3/0	1#3/0	1#6
200	1	2-1/2"	3#3/0	-	1#6
200N	1	2-1/2"	3#3/0	1#3/0	1#6(#4)
225	1	2-1/2"	3#4/0	-	1#4
225N	1	2-1/2"	3#4/0	1#4/0	1#4(#2)
250	1	2-1/2"	3#250kcmil	-	1#4
250N	1	3"	3#250kcmil	1#250kcmil	1#4(#2)
350	1	3"	3#500kcmil	-	1#3
350N	1	3-1/2"	3#500kcmil	1#500kcmil	1#3
400	2	2-1/2"	3#3/0	-	1#2
400N	1	4"	3#600kcmil	1#600kcmil	1#2
450	2	2"	3#4/0	-	1#2
450N	2	2-1/2"	3#4/0	1#4/0	1#2
600	2	3"	3#350kcmil	-	1#1
600N	2	3"	3#350kcmil	1#350kcmil	1#1
800	2	4"	3#600kcmil	-	1#1/0
800N	2	4"	3#600kcmil	1#600kcmil	1#1/0
1000	3	4"	3#400kcmil	-	1#2/0
1000N	3	4"	3#400kcmil	1#400kcmil	1#2/0 (1#3/0)
1200	4	3"	3#350kcmil	-	1#3/0
1200N	4	3"	3#350kcmil	1#350kcmil	1#3/0
1600	4	4"	3#600kcmil	-	1#4/0
1600N	4	4"	3#600kcmil	1#600kcmil	1#4/0
3000	8	4"	3#500kcmil	-	1#400kcmil
3000N	8	4"	3#500kcmil	1#500kcmil	1#400kcmil

NOTES:
1. COPPER FEEDERS ARE BASED ON COPPER CONDUCTORS WITH THWN/THHN INSULATION. CONDUCTORS DERATING IS BASED ON TWHN/THHN CONUCTORS WITH 90 DEGREES C RATING
2. GROUND CONDUCTOR (BONDING JUMPR) SHALL BE INCREASED FOR FEEDERS FROM THE SOURCE OF A SEPARATELY DERIVED SYSTEM TO THE FIRST DISCONNECTING MEANS PER NEC 250.30(A). SIZE AS INDICATED IN PARENTHESES.

10B ELECTRICAL ONE-LINE DIAGRAM
1/8" = 1'-0"

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SHEET SHOWN FOR REFERENCE

PLOTTED: 5/7/2024 11:19:06 PM PROJECT: a23-087 - CITY OF FEDERAL WAY
FILE PATH: C:\Users\ChrisT\Documents\23140 Federal Way OMF Building B- Elec_christopher.teagueZKWFD.rvt

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HELIX DESIGN GROUP, INC

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HARGIS ENGINEERS

ROBERT DALE SMITH STATE OF WASHINGTON 35736 REGISTERED PROFESSIONAL ENGINEER
5/6/2024

ELECTRICAL ONE-LINE DIAGRAM

CITY OF FEDERAL WAY FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE 05.06.24
JOB NO. a23-087
BID SET

EB901

DRAWING NO.

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MAIN SWITCHBOARD 'MSB'

MAIN SWITCHBOARD SUMMARY : 03/11/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM:
MOUNTING: SURFACE

VOLTAGE: 480Y/277V 3Ø, 4-WIRE
MAINS: 3000A MAIN LUGS ONLY

LOAD CALCULATIONS

LOAD DESCRIPTION	CONNECTED LOAD		DEMAND FACTOR		CALCULATED LOAD
MISCELLANEOUS CONTINUOUS:	62400	X	125%	=	78000
EQUIPMENT & MISCELLANEOUS:	910831	X	100%	=	910831
LIGHTING:	35112	X	125%	=	43890
LARGEST MOTOR:	124293	X	125%	=	155366
MOTORS:	108450	X	100%	=	108450
RECEPTACLE:	10000	X	100%	=	10000
RECEPTACLES OVER 10kVA:	39780	X	50%	=	19890
COMPUTER:	11160	X	100%	=	11160
ELECTRIC HEATING:	8880	X	100%	=	8880
COOLING:	62399	X	100%	=	62399
KITCHEN (EQUIP = 6):	7580	X	65%	=	4927
LARGEST ARC WELDER:	14144	X	100%	=	14144

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 486,665 VA	1,757 A
PHASE B: 471,673 VA	1,703 A
PHASE C: 436,691 VA	1,577 A

TOTAL CONNECTED LOAD (VA): 1,395,029 VA
TOTAL CONNECTED AMPS: 1,679 A
TOTAL CALCULATED LOAD (VA): 1,427,937 VA
TOTAL CALCULATED AMPS: 1,718 A

NOTES:
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HARGIS ENGINEERS, INC.
1201 THIRD AVENUE, SUITE 600
SEATTLE, WA 98101
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DIST. PANEL 'MDPB'

DIST. PANEL SUMMARY : 05/07/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: MAIN SWITCHBOARD 'MSB'
MOUNTING: SURFACE

VOLTAGE: 480Y/277V 3Ø, 4-WIRE
MAINS: 1600A MAIN LUGS ONLY
NEUTRAL: 100% RATED

LOAD CALCULATIONS

LOAD DESCRIPTION	CONNECTED LOAD		DEMAND FACTOR		CALCULATED LOAD
MISCELLANEOUS CONTINUOUS:	-	X	125%	=	-
EQUIPMENT & MISCELLANEOUS:	590678	X	100%	=	590678
LIGHTING:	10562	X	125%	=	13203
LARGEST MOTOR:	15480	X	125%	=	19350
MOTORS:	75690	X	100%	=	75690
RECEPTACLE:	10000	X	100%	=	10000
RECEPTACLES OVER 10kVA:	5480	X	50%	=	2740
COOLING:	53493	X	100%	=	53493
LARGEST ARC WELDER:	14144	X	100%	=	14144

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 273,578 VA	988 A
PHASE B: 263,305 VA	951 A
PHASE C: 238,644 VA	862 A

TOTAL CONNECTED LOAD (VA): 775,527 VA
TOTAL CONNECTED AMPS: 933 A
TOTAL CALCULATED LOAD (VA): 779,298 VA
TOTAL CALCULATED AMPS: 938 A

NOTES:
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SEATTLE, WA 98101
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PANEL 'MHB'

PANEL SCHEDULE : 05/05/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'MDPB'
MOUNTING: SURFACE

VOLTAGE: 480Y/277V 3Ø, 4-WIRE — SECTION: 1 OF 1
MAINS: 400A MAIN LUGS ONLY
NEUTRAL: 100% RATED

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	BREAKER POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	BREAKER POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - HRU-B-01	1	25	3	6399	A	5900	25	3	2	EQUIP - VRHP-B-01	
	-	3	-	-	6399	B	5900	-	-	4	-	
	-	5	-	-	6399	C	5900	-	-	6	-	
	EQUIP - HRU-B-02	7	35	3	9391	A	5900	25	3	8	EQUIP - VRHP-B-02 (CONNECTION 1)	
	-	9	-	-	9391	B	5900	-	-	10	-	
	-	11	-	-	9391	C	5900	-	-	12	-	
	SPARE	13	20	3		A	5900	25	3	14	EQUIP - VRHP-B-02 (CONNECTION 2)	
	-	15	-	-		B	5900	-	-	16	-	
	-	17	-	-		C	5900	-	-	18	-	
	EQUIP - EUH-B-01	19	20	3	1000	A	5956	25	3	20	EQUIP - RTHP-B-01	
		21	-	-	1000	B	5956	-	-	22	-	
		23	-	-	1000	C	5956	-	-	24	-	
	EQUIP - EUH-B-02	25	20	3	1000	A	2000	20	3	26	EQUIP - EDH-B-01	
		27	-	-	1000	B	2000	-	-	28		
		29	-	-	1000	C	2000	-	-	30		
	EQUIP - EUH-B-03	31	20	3	1000	A	5820	25	3	32	EQUIP - AC-B-01	
		33	-	-	1000	B	5820	-	-	34		
		35	-	-	1000	C	5820	-	-	36		
	EQUIP - TU-B-01	37	15	3	2333	A	1829	15	3	38	EQUIP - AC-B-02	
	-	39	-	-	2333	B	1829	-	-	40		
	-	41	-	-	2333	C	1829	-	-	42		
	EQUIP - TU-B-02	43	15	3	2333	A	833	15	3	44	EQUIP - TU-B-07	
	-	45	-	-	2333	B	833	-	-	46	-	
	-	47	-	-	2333	C	833	-	-	48	-	
	EQUIP - TU-B-03	49	15	3	833	A	833	15	3	50	EQUIP - TU-B-08	
	-	51	-	-	833	B	833	-	-	52	-	
	-	53	-	-	833	C	833	-	-	54	-	
	EQUIP-TU-B-04	55	15	3	833	A	833	15	3	56	EQUIP - TU-B-09	
	-	57	-	-	833	B	833	-	-	58	-	
	-	59	-	-	833	C	833	-	-	60	-	
	EQUIP - TU-B-05	61	15	3	3000	A	1667	15	3	62	EQUIP - TU-B-10	
	-	63	-	-	3000	B	1667	-	-	64	-	
	-	65	-	-	3000	C	1667	-	-	66	-	
	EQUIP - TU-B-06	67	15	3	3000	A	1333	15	3	68	EQUIP - TU-B-11	
	-	69	-	-	3000	B	1333	-	-	70	-	
	-	71	-	-	3000	C	1333	-	-	72	-	
	SPARE	73	20	1		A		20	1	74	SPARE	
	SPARE	75	20	1		B		20	1	76	SPARE	
	SPARE	77	20	1		C		20	1	78	SPARE	
	SPARE	79	20	1		A		20	1	80	SPARE	
	SPARE	81	20	1		B		20	1	82	SPARE	
	SPARE	83	20	1		C		20	1	84	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS:	-	125%	-
EQUIPMENT & MISCELLANEOUS:	156285	100%	156285
LIGHTING:	-	125%	-
LARGEST MOTOR:	-	125%	-
MOTORS:	-	100%	-
RECEPTACLE:	-	100%	-
RECEPTACLES OVER 10kVA:	-	50%	-
COOLING:	53493	100%	53493
TOTALS:	209,778		209,778

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 69,926 VA	252 A
PHASE B: 69,926 VA	252 A
PHASE C: 69,926 VA	252 A

TOTAL CALCULATED LOAD: 209,778 VA
TOTAL CALCULATED AMPS: 252 A

NOTES: MECHANICAL PANEL
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PANEL 'PHB'

PANEL SCHEDULE : 03/11/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'MDPB'
MOUNTING: SURFACE

VOLTAGE: 480Y/277V 3Ø, 4-WIRE — SECTION: 1 OF 1
MAINS: 400A MAIN LUGS ONLY
NEUTRAL: 100% RATED

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	BREAKER POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	BREAKER POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - EIWH-B-01	1	30	3	6000	A	6000	30	3	2	EQUIP - EIWH-B-04	
	-	3	-	-	6000	B	6000	-	-	4	-	
	-	5	-	-	6000	C	6000	-	-	6	-	
	EQUIP - EIWH-B-02	7	30	3	6000	A	6000	30	3	8	EQUIP - EIWH-B-05	
	-	9	-	-	6000	B	6000	-	-	10	-	
	-	11	-	-	6000	C	6000	-	-	12	-	
	EQUIP - EIWH-03	13	30	3	6000	A	12000	55	3	14	EQUIP - EIWH-B-06	
	-	15	-	-	6000	B	12000	-	-	16	-	
	-	17	-	-	6000	C	12000	-	-	18	-	
	EQUIP - DWBP-B-01	19	15	3	2993	A	6000	30	3	20	EQUIP - EWH-B-07	
		21	-	-	2993	B	6000	-	-	22		
		23	-	-	2993	C	6000	-	-	24		
	EQUIP - JOCKEY PUMP - SPRINKLER ROOM	25	20	3	903	A	6000	30	3	26	EQUIP - EWH-B-08	
	-	27	-	-	903	B	6000	-	-	28		
	-	29	-	-	903	C	6000	-	-	30		
	SPARE	31	20	1		A		20	1	32	SPARE	
	SPARE	33	20	1		B		20	1	34	SPARE	
	SPARE	35	20	1		C		20	1	36	SPARE	
	SPARE	37	20	1		A		20	1	38	SPARE	
	SPARE	39	20	1		B		20	1	40	SPARE	
	SPARE	41	20	1		C		20	1	42	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS:	-	125%	-
EQUIPMENT & MISCELLANEOUS:	170979	100%	170979
LIGHTING:	-	125%	-
LARGEST MOTOR:	2709	125%	3386
MOTORS:	-	100%	-
RECEPTACLE:	-	100%	-
RECEPTACLES OVER 10kVA:	-	50%	-
TOTALS:	173,688		174,365

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 57,896 VA	209 A
PHASE B: 57,896 VA	209 A
PHASE C: 57,896 VA	209 A

TOTAL CALCULATED LOAD: 174,365 VA
TOTAL CALCULATED AMPS: 210 A

NOTES: PLUMBING PANEL
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HARGIS ENGINEERS, INC.
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PANEL 'LB'

PANEL SCHEDULE : 05/07/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'MDPB'
MOUNTING: SURFACE

VOLTAGE: 480Y/277V 3Ø, 4-WIRE — SECTION: 1 OF 1
MAINS: 100A MAIN LUGS ONLY
NEUTRAL: 100% RATED

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	BREAKER POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	BREAKER POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	LTG - DEPARTMENTAL SHOP	1	20	1	2676	A		20	1	2	SPARE	
	LTG - CENTER OF BLDG, WELD, WASH, SPRINK	3	20	1	2728	B		20	1	4	SPARE	
	LTG - FLEET MAINT BAY, TIRE BAY	5	20	1	2064	C		20	1	6	SPARE	
	SPARE	7	20	1		A		20	1	8	SPARE	
	SPARE	9	20	1		B		20	1	10	SPARE	
	EXTERIOR LTG - BUILDING B	11	20	1	1094	C		20	1	12	SPARE	
	SPARE	13	20	1		A		20	1	14	SPARE	
	SPARE	15	20	1		B		20	1	16	SPARE	
	SPARE	17	20	1		C		20	1	18	SPARE	
	SPARE	19	20	1		A		20	1	20	SPARE	
	SPARE	21	20	1		B		20	1	22	SPARE	
	SPARE	23	20	1		C		20	1	24	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS:	-	125%	-
EQUIPMENT & MISCELLANEOUS:	-	100%	-
LIGHTING:	8562	125%	10703
LARGEST MOTOR:	-	125%	-
MOTORS:	-	100%	-
RECEPTACLE:	-	100%	-
RECEPTACLES OVER 10kVA:	-	50%	-
TOTALS:	8,562		10,703

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 2,676 VA	10 A
PHASE B: 2,728 VA	10 A
PHASE C: 3,158 VA	11 A

TOTAL CALCULATED LOAD: 10,703 VA
TOTAL CALCULATED AMPS: 13 A

NOTES: LIGHTING PANEL
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DIST. PANEL 'LDPB'

DIST. PANEL SUMMARY : 03/10/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: TRANSFORMER 'T-LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE
MAINS: 1000A MAIN CIRCUIT BREAKER
NEUTRAL: 100% RATED

LOAD CALCULATIONS

LOAD DESCRIPTION	CONNECTED LOAD		DEMAND FACTOR		CALCULATED LOAD
MISCELLANEOUS CONTINUOUS:	-	X	125%	=	-
EQUIPMENT & MISCELLANEOUS:	137092	X	100%	=	137092
LIGHTING:	-	X	125%	=	-
LARGEST MOTOR:	15480	X	125%	=	19350
MOTORS:	54060	X	100%	=	54060
RECEPTACLE:	10000	X	100%	=	10000
RECEPTACLES OVER 10kVA:	2060	X	50%	=	1030
LARGEST ARC WELDER:	14144	X	100%	=	14144

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 87,116 VA	726 A
PHASE B: 77,840 VA	649 A
PHASE C: 67,880 VA	566 A

TOTAL CONNECTED LOAD (VA): 232,836 VA
TOTAL CONNECTED AMPS: 647 A
TOTAL CALCULATED LOAD (VA): 235,676 VA
TOTAL CALCULATED AMPS: 655 A

NOTES:
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PANEL 'RB1'

PANEL SCHEDULE : 05/07/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE — SECTION: 1 OF 1
MAINS: 400A MAIN LUGS ONLY
NEUTRAL: 100% RATED

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	BREAKER POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	BREAKER POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	REC - ROOFTOP GFCI RECEPTACLE	1	20	1	360	A	4160	50	2	2	EQUIP - P1 OUTLET - FLEET MAINT.	
	EQUIP - AD-B-01	3	20	1	360	B	4160	-	-	4	-	
	SPARE	5	20	1		C	4160	50	2	6	EQUIP - P1 OUTLET - FLEET MAINT.	
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	7	20	3	901	A	4160	-	-	8	-	
	-	9	-	-	901	B	4160	50	2	10	EQUIP - P1 OUTLET - FLEET MAINT.	
	-	11	-	-	901	C	4160	-	-	12	-	
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	13	20	3	901	A	4160	50	2	14	EQUIP - P1 OUTLET - FLEET MAINT.	
	-	15	-	-	901	B	4160	-	-	16	-	
	-	17	-	-	901	C	360	20	1	18	REC - FLEET MAINT.	
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	19	20	3	901	A	360	20	1	20	REC - FLEET MAINT.	
	-	21	-	-	901	B	1000	20	1	22	EQUIP - WASHER - LAUNDRY	
	-	23	-	-	901	C	1500	30	2	24	EQUIP - DRYER - LAUNDRY	1
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	25	20	3	901	A	1500	-	-	26	-	
	-	27	-	-	901	B	500	20	1	28	EQUIP - WATER COOLER / HALLWAY	
	-	29	-	-	901	C	1000	30	2	30	EQUIP - L6-30R POWER - COMM ROOM	
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	31	20	3	901	A	1000	-	-	32	-	
	-	33	-	-	901	B	1000	30	2	34	EQUIP - L6-30R POWER - COMM ROOM	
	-	35	-	-	901	C	1000	-	-	36	-	
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	37	20	3	901	A	700	20	1	38	EQUIP - SECURITY PANEL - COMM ROOM	
	-	39	-	-	901	B	700	20	1	40	EQUIP - TELEPHONE BACKBOARD - COMM ROO	
	-	41	-	-	901	C	700	20	1	42	EQUIP - NLIGHT LIGHTING CONTROLS - ELEC R	
	EQUIP - OVERHEAD DOOR - FLEET MAINT.	43	20	3	901	A	700	20	1	44	EQUIP - BMS PANEL - ELEC ROOM	
	-	45	-	-	901	B	700	20	1	46	EQUIP - FACP - ELEC ROOM	2
	-	47	-	-	901	C	720	20	1	48	REC - OFFICE	
	EQUIP - CHARGERS - TOOL ROOM	49	20	1	800	A	720	20	1	50	REC - OFFICE	
	EQUIP - CHARGERS - TOOL ROOM	51	20	1	800	B	720	20	1	52	REC - OFFICE	
	EQUIP - CHARGERS - TOOL ROOM	53	20	1	800	C	1664	20	2	54	EQUIP - MB-03 MOBILE COLUMN LIFT - FLEET M	
	EQUIP - LR-01 AIR COMPRESSOR - LUBE OIL	55	60	3	5160	A	1664	-	-	56	-	
	-	57	-	-	5160	B	1664	20	2	58	EQUIP - MB-03 MOBILE COLUMN LIFT - FLEET M	
	-	59	-	-	5160	C	1664	-	-	60	-	
	EQUIP - LR-02a ELECTRIC DRUM PUMP - LUBE (	61	20	1	1584	A	1664	20	2	62	EQUIP - MB-03 MOBILE COLUMN LIFT - FLEET M	
	EQUIP - LR-02b ELECTRIC DRUM PUMP - LUBE (	63	20	1	1584	B	1664	-	-	64	-	
	EQUIP - LR-02c ELECTRIC DRUM PUMP - LUBE (	65	20	1	1584	C	1664	20	2	66	EQUIP - MB-03 MOBILE COLUMN LIFT - FLEET M	
	EQUIP - LR-03 ELECTRIC DRUM PUMP - LUBE O	67	20	1	1584	A	1664	-	-	68	-	
	EQUIP - LR-04a ELECTRIC DRUM PUMP - LUBE (	69	20	1	1584	B	1000	20	1	70	EQUIP -MB-06 MOBILE COMPUTER - FLEET MT.	
	EQUIP - LR-04b ELECTRIC DRUM PUMP - LUBE (	71	20	1	1584	C	720	20	1	72	REC - LUBE OIL	
	EQUIP - MB07b CRANE POWER - FLEET MAINT.	73	20	1	1000	A	700	20	1	74	EQUIP - NAC PANEL - ELECTRICAL RM	
	EQUIP - MB-03 MOBILE COLUMN LIFT - FLEET M	75	20	2	1664	B		20	1	76	SPARE	
	-	77	-	-	1664	C		20	1	78	SPARE	
	EQUIP - MB-03 MOBILE COLUMN LIFT - FLEET M	79	20	2	1664	A	540	20	1	80	SITE RECEPTACLES	
	-	81	-	-	1664	B	540	20	1	82	SITE RECEPTACLES	
	EQUIP - ADA DOOR OPERATOR	83	20	1	800	C	540	20	1	84	SITE RECEPTACLES	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS:	-	125%	-
EQUIPMENT & MISCELLANEOUS:	81012	100%	81012
LIGHTING:	-	125%	-
LARGEST MOTOR:	15480	125%	19350
MOTORS:	18921	100%	18921
RECEPTACLE:	5580	100%	5580
RECEPTACLES OVER 10kVA:	-	50%	-
TOTALS:	120,993		124,863

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 42,151 VA	351 A
PHASE B: 41,091 VA	342 A
PHASE C: 37,751 VA	315 A

TOTAL CALCULATED LOAD: 124,863 VA
TOTAL CALCULATED AMPS: 347 A

NOTES: RECEPTACLE PANEL
1. PROVIDE GFCI BREAKER.
2. PROVIDE RED CIRCUIT BREAKER, AND LOCKABLE IN THE ON POSITION. IF REQUIRED LABEL IS 'FACP'.
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PANEL 'RB2'

PANEL SCHEDULE : 05/05/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE — SECTION: 1 OF 1
MAINS: 225A MAIN LUGS ONLY
NEUTRAL: 100% RATED

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	BREAKER POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	BREAKER POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	1	20	3	901	A	901	20	3	2	EQUIP - OVERHEAD DOOR - DEPT. SHOP	
	-	3	-	-	901	B	901	-	-	4	-	
	-	5	-	-	901	C	901	-	-	6	-	
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	7	20	3	901	A	901	20	3	8	EQUIP - OVERHEAD DOOR - CARPENTRY SHOP	
	-	9	-	-	901	B	901	-	-	10	-	
	-	11	-	-	901	C	901	-	-	12	-	
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	13	20	3	901	A	360	20	1	14	REC - SNOW & ICE STORAGE	
	-	15	-	-	901	B	360	20	1	16	REC - SNOW & ICE STORAGE	
	-	17	-	-	901	C	540	20	1	18	REC - DEPT. SHOP	
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	19	20	3	901	A	540	20	1	20	REC - DEPT. SHOP	
	-	21	-	-	901	B	540	20	1	22	REC - DEPT. SHOP	
	-	23	-	-	901	C	540	20	1	24	REC - DEPT. SHOP	
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	25	20	3	901	A	360	20	1	26	REC - DEPT. SHOP	
	-	27	-	-	901	B	901	20	3	28	EQUIP - OVERHEAD DOOR - SNOW & ICE STOR	
	-	29	-	-	901	C	901	-	-	30	-	
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	31	20	3	901	A	901	-	-	32	-	
	-	33	-	-	901	B	180	20	1	34	REC - ROOFTOP GFCI RECEPTACLE	
	-	35	-	-	901	C		20	1	36	SPARE	
	EQUIP - OVERHEAD DOOR - DEPT. SHOP	37	20	3	901	A		20	1	38	SPARE	
	-	39	-	-	901	B		20	1	40	SPARE	
	-	41	-	-	901	C		20	1	42	SPARE	
	EQUIP - AD-B-02	43	20	1	360	A		20	1	44	SPARE	
	SPARE	45	20	1		B		20	1	46	SPARE	
	SPARE	47	20	1		C		20	1	48	SPARE	
	SPARE	49	20	1		A		20	1	50	SPARE	
	SPARE	51	20	1		B		20	1	52	SPARE	
	SPARE	53	20	1		C		20	1	54	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS:	-	125%	-
EQUIPMENT & MISCELLANEOUS:	360	100%	360
LIGHTING:	-	125%	-
LARGEST MOTOR:	2703	125%	3379
MOTORS:	24327	100%	24327
RECEPTACLE:	3420	100%	3420
RECEPTACLES OVER 10kVA:	-	50%	-
TOTALS:	30,810		31,486

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 10,630 VA	89 A
PHASE B: 10,090 VA	84 A
PHASE C: 10,090 VA	84 A

TOTAL CALCULATED LOAD: 31,486 VA
TOTAL CALCULATED AMPS: 87 A

NOTES: RECEPTACLE PANEL
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PANEL 'RB3'

PANEL SCHEDULE : 03/10/2024 — PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE — SECTION: 1 OF 1
MAINS: 100A MAIN LUGS ONLY
NEUTRAL: 100% RATED

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	BREAKER POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	BREAKER POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - CS-01 TABLE SAW - CARPENTRY SHOP	1	30	2	1872	A	360	20	1	2	REC - CARPENTRY SHOP	
	-	3	-	-	1872	B	360	20	1	4	REC - CARPENTRY SHOP	
	EQUIP - CS-02 BANDSAW - CARPENTRY SHOP	5	15	2	988	C	360	20	1	6	REC - CARPENTRY SHOP	
	-	7	-	-	988	A		20	1	8	SPARE	
	EQUIP - CS-03 MITER SAW - CARPENTRY SHOP	9	20	1	1800	B		20	1	10	SPARE	
	EQUIP - CS-04 DISC SANDER - CARPENTRY SH	11	20	1	1320	C		20	1	12	SPARE	
	EQUIP - CS-05 DRILL PRESS - CARPENTRY SH	13	20	1	1560	A		20	1	14	SPARE	
	EQUIP - CS-06 SHOP VACUUM - CARPENTRY SH	15	20	1	1320	B		20	1	16	SPARE	
	EQUIP - CS-07 DUST COLLECTOR	17	30	2	936	C		20	1	18	SPARE	
	-	19	-	-	936	A		20	1	20	SPARE	
	SPARE	21	20	1		B		20	1	22	SPARE	
	SPARE	23	20	1		C		20	1	24	SPARE	
	SPARE	25	20	1		A		20	1	26	SPARE	
	SPARE	27	20	1		B		20	1	28	SPARE	
	SPARE	29	20	1		C		20	1	30	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS:	-	125%	-
EQUIPMENT & MISCELLANEOUS:	13592	100%	13592
LIGHTING:	-	125%	-
LARGEST MOTOR:	-	125%	-
MOTORS:	-	100%	-
RECEPTACLE:	1080	100%	1080
RECEPTACLES OVER 10kVA:	-	50%	-
TOTALS:	14,672		14,672

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 5,716 VA	48 A
PHASE B: 5,352 VA	45 A
PHASE C: 3,604 VA	30 A

TOTAL CALCULATED LOAD: 14,672 VA
TOTAL CALCULATED AMPS: 41 A

NOTES: CARPENTRY SHOP EQUIPMENT
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HARGIS ENGINEERS
ROBERT DALE SMITH — STATE OF WASHINGTON — 35736 — REGISTERED PROFESSIONAL ENGINEER
5/6/2024

PANEL SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

EB902

DRAWING NO.

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FILE PATH: C:\Users\ChrisT\Documents\23140 Federal Way OMF Building B- Elec_christopher.teagueZKWFD.rvt

UNOFFICIAL COPY Official bid documents, plan holder's list, and addenda (if applicable) are available on BXWA.com

PANEL SCHEDULE : 05/07/2024

PANEL 'RB4'

PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE
MAINS: 225A MAIN LUGS ONLY
NEUTRAL: 100% RATED

SECTION: 1 OF 1

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - FS-01 MIG WELDER - FABWELD	1	90	2	7072	A	360	20	1	2	REC - FABWELD	
	-	3	-	-	7072	B	180	20	1	4	REC - FABWELD	
	SPARE	5	20	1		C	360	20	1	6	REC - FABWELD	
	SPARE	7	20	1		A		20	1	8	SPARE	
	EQUIP - FS-03 METAL BAND SAW - FABWELD	9	20	2	780	B		20	1	10	SPARE	
	-	11	-	-	780	C		20	1	12	SPARE	
	SPARE	13	20	1		A		20	1	14	SPARE	
	SPARE	15	20	1		B		20	1	16	SPARE	
	EQUIP - FS-07 WELD FUME EXTRACT - FABWELD	17	20	1	1428	C		20	1	18	SPARE	
	EQUIP - FS-10 METAL CHOP SAW - FABWELD	19	20	1	1800	A		20	1	20	SPARE	
	SPARE	21	20	1		B		20	1	22	SPARE	
	SPARE	23	20	1		C		20	1	24	SPARE	
	EQUIP - FS-15 BATTERY CHARGER - FABWELD	25	20	1	1500	A		20	1	26	SPARE	
	EQUIP - FS-17 DRILL PRESS - FABWELD	27	20	2	1144	B		20	1	28	SPARE	
	-	29	-	-	1144	C		20	1	30	SPARE	
	EQUIP - FS-18 SHOP GRINDER - FABWELD	31	20	1	1800	A		20	1	32	SPARE	
	SPARE	33	20	1		B		20	1	34	SPARE	
	SPARE	35	20	1		C		20	1	36	SPARE	
	SPARE	37	20	1		A		20	1	38	SPARE	
	SPARE	39	20	1		B		20	1	40	SPARE	
	SPARE	41	20	1		C		20	1	42	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS		125%	-
EQUIPMENT & MISCELLANEOUS	10376	100%	10376
LIGHTING	-	125%	-
LARGEST MOTOR	-	125%	-
MOTORS	-	100%	-
RECEPTACLE	900	100%	900
RECEPTACLES OVER 10kVA		50%	-
LARGEST ARC WELDER	14144	100%	14144
TOTALS:	**25,420**		**25,420**

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 12,532 VA	104 A
PHASE B: 9,176 VA	76 A
PHASE C: 3,712 VA	31 A

TOTAL CALCULATED LOAD: 25,420 VA

TOTAL CALCULATED AMPS: 71 A

NOTES:
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HARGIS ENGINEERS, INC.
1201 THIRD AVENUE, SUITE 600
SEATTLE, WA 98101

PH. (206) 448-3376
FAX. (206) 448-4450

PANEL SCHEDULE : 05/05/2024

PANEL 'RB5'

PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE
MAINS: 150A MAIN LUGS ONLY
NEUTRAL: 100% RATED

SECTION: 1 OF 1

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - TR-02 TIRE CHANGER - FLEET MAINT.	1	20	2	1664	A	901	20	3	2	EQUIP - OVERHEAD DOOR - FLEET MAINT.	
	-	3	-	-	1664	B	901	-	-	4	-	
	EQUIP - TR-03 TIRE WHEEL BALANCER - FLEET	5	20	2	1040	C	901	-	-	6	-	
	-	7	-	-	1040	A	901	20	3	8	EQUIP - OVERHEAD DOOR - WASH BAY	
	EQUIP - WB-05 UNDERCARRIAGE SYSTEM - WA	9	35	3	3000	B	901	-	-	10	-	
	-	11	-	-	3000	C	901	-	-	12	-	
	-	13	-	-	3000	A	901	20	3	14	EQUIP - OVERHEAD DOOR - WASH BAY	
	REC - WASH BAY	15	20	1		B	901	-	-	16	-	
	REC - WASH BAY	17	20	1		C	901	-	-	18	-	
	REC - ROOFTOP GFCI RECEPTACLE	19	20	1	180	A	540	20	1	20	REC - FLEET MAINT.	
	SPARE	21	20	1		B	1664	20	2	22	EQUIP - UR-01a WTR PUMP - WASH BAY ROOM	
	SPARE	23	20	1		C	1664	-	-	24	-	
	SPARE	25	20	1		A	600	20	1	26	EQUIP - UR-01b FILT. SYS. - WASH BAY ROOM	
	SPARE	27	20	1		B	1080	20	1	28	EQUIP UR-05a CLARIFIER - WASH BAY ROOM	
	SPARE	29	20	1		C	360	20	1	30	EQUIP UR-05b CLARIFIER - WASH BAY ROOM	
	SPARE	31	20	1		A	1080	20	1	32	EQUIP UR-05c CLARIFIER - WASH BAY ROOM	
	SPARE	33	20	1		B	360	20	1	34	EQUIP UR-05d CLARIFIER - WASH BAY ROOM	
	SPARE	35	20	1		C	1200	20	1	36	EQUIP UR-05e CLARIFIER - WASH BAY ROOM	
	SPARE	37	20	1		A	360	20	1	38	REC- WASH BAY ROOM / FIRE PUMP	
	SPARE	39	20	1		B		20	1	40	SPARE	
	SPARE	41	20	1		C		20	1	42	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS	-	125%	-
EQUIPMENT & MISCELLANEOUS	22416	100%	22416
LIGHTING	-	125%	-
LARGEST MOTOR	2703	125%	3379
MOTORS	5406	100%	5406
RECEPTACLE	1080	100%	1080
RECEPTACLES OVER 10kVA	-	50%	-
TOTALS:	**31,605**		**32,281**

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 11,167 VA	93 A
PHASE B: 10,471 VA	87 A
PHASE C: 9,967 VA	83 A

TOTAL CALCULATED LOAD: 32,281 VA

TOTAL CALCULATED AMPS: 90 A

NOTES: SHOP EQUIPMENT
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PANEL SCHEDULE : 05/05/2024

PANEL 'MLB'

PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: DIST. PANEL 'LDPB'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE
MAINS: 225A MAIN LUGS ONLY
NEUTRAL: 100% RATED

SECTION: 1 OF 1

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - EF-B-01	1	20	1	240	A	1320	30	1	2	EQUIP - EF-B-03	
	SPARE	3	20	1		B	360	20	1	4	EQUIP - EF-B-01	
	EQUIP - EF-B-02	5	20	1	696	C		20	1	6	SPARE	
	EQUIP - HP-B-01/ACU-B-01	7	15	2	1300	A		20	1	8	SPARE	
	-	9	-	-	1300	B		20	1	10	SPARE	
	EQUIP - HP-B-02/ACU-B-02	11	20	2	2060	C		20	1	12	SPARE	
	-	13	-	-	2060	A		20	1	14	SPARE	
	SPARE	15	20	1		B		20	1	16	SPARE	
	SPARE	17	20	1		C		20	1	18	SPARE	
	SPARE	19	20	1		A		20	1	20	SPARE	
	SPARE	21	20	1		B		20	1	22	SPARE	
	SPARE	23	20	1		C		20	1	24	SPARE	
	SPARE	25	20	1		A		20	1	26	SPARE	
	SPARE	27	20	1		B		20	1	28	SPARE	
	SPARE	29	20	1		C		20	1	30	SPARE	
	SPARE	31	20	1		A		20	1	32	SPARE	
	SPARE	33	20	1		B		20	1	34	SPARE	
	SPARE	35	20	1		C		20	1	36	SPARE	
	SPARE	37	20	1		A		20	1	38	SPARE	
	SPARE	39	20	1		B		20	1	40	SPARE	
	SPARE	41	20	1		C		20	1	42	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS	-	125%	-
EQUIPMENT & MISCELLANEOUS	9336	100%	9336
LIGHTING	-	125%	-
LARGEST MOTOR	-	125%	-
MOTORS	-	100%	-
RECEPTACLE	-	100%	-
RECEPTACLES OVER 10kVA	-	50%	-
TOTALS:	**9,336**		**9,336**

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 4,920 VA	41 A
PHASE B: 1,660 VA	14 A
PHASE C: 2,756 VA	23 A

TOTAL CALCULATED LOAD: 9,336 VA

TOTAL CALCULATED AMPS: 26 A

NOTES: MECHANICAL PANEL
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PANEL SCHEDULE : 05/06/2024

PANEL 'EMB'

PROJECT: Federal Way O&M Facility

CLASSIFICATION: NEC 700
FED FROM: PANEL 'EMA'
MOUNTING: SURFACE

VOLTAGE: 480Y/277V 3Ø, 4-WIRE
MAINS: 60A MAIN LUGS ONLY
NEUTRAL: 100% RATED

SECTION: 1 OF 1

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EMERGENCY LTG - STRUCTURE C & D	1	20	1	270	A		20	1	2	SPARE	
	EMERGENCY LTG - FLEET MAINT. TIRE	3	20	1	818	B		20	1	4	SPARE	
	EMERGENCY LTG - DPT. SHOP, CENTER OF BL	5	20	1	1584	C		20	1	6	SPARE	
	SPARE	7	20	1		A		20	1	8	SPARE	
	EXTERIOR EMERGENCY LIGHTING - BUILDING	9	20	1	570	B		20	1	10	SPARE	
	SPARE	11	20	1		C		20	1	12	SPARE	
	SPARE	13	20	1		A		20	1	14	SPARE	
	SPACE	15	-	1		B		-	1	16	SPARE	
	SPACE	17	-	1		C		-	1	18	SPACE	
	SPACE	19	-	1		A		-	1	20	SPACE	
	SPACE	21	-	1		B		-	1	22	SPACE	
	SPACE	23	-	1		C		-	1	24	SPACE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS	-	125%	-
EQUIPMENT & MISCELLANEOUS	-	100%	-
LIGHTING	3242	125%	4053
LARGEST MOTOR	-	125%	-
MOTORS	-	100%	-
RECEPTACLE	-	100%	-
RECEPTACLES OVER 10kVA	-	50%	-
TOTALS:	**3,242**		**4,053**

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 270 VA	1 A
PHASE B: 1,388 VA	5 A
PHASE C: 1,584 VA	6 A

TOTAL CALCULATED LOAD: 4,053 VA

TOTAL CALCULATED AMPS: 5 A

NOTES:
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SEATTLE, WA 98101

PH. (206) 448-3376
FAX. (206) 448-4450

PANEL SCHEDULE : 05/07/2024

PANEL 'W'

PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: TRANSFORMER 'T-W'
MOUNTING: SURFACE

VOLTAGE: 240/120V 1Ø, 3-WIRE
MAINS: 200A MAIN CIRCUIT BREAKER
NEUTRAL: 100% RATED

SECTION: 1 OF 1

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - FS-02 MIG/FLUX ARC WELDER - FABWE	1	30	2	2340	A		20	1	2	SPARE	
	-	3	-	-	2340	B		20	1	4	SPARE	
	EQUIP - FS-05 ARC WELDER - FABWELD	5	20	2	1664	A		20	1	6	SPARE	
	-	7	-	-	1664	B		20	1	8	SPARE	
	EQUIP - FS-13 PLASMA CUTTER - FABWELD	9	50	2	3328	A		20	1	10	SPARE	
	-	11	-	-	3328	B		20	1	12	SPARE	
	EQUIP - FS-17 DRILL PRESS - FABWELD	13	20	2	1144	A		20	1	14	SPARE	
	-	15	-	-	1144	B		20	1	16	SPARE	
	EQUIP - FS-19 TIG WELDER - FABWELD	17	70	2	5200	A		20	1	18	SPARE	
	-	19	-	-	5200	B		20	1	20	SPARE	
	SPARE	21	20	1		A		20	1	22	SPARE	
	SPARE	23	20	1		B		20	1	24	SPARE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS	-	125%	-
EQUIPMENT & MISCELLANEOUS	27352	100%	27352
LIGHTING	-	125%	-
LARGEST MOTOR	-	125%	-
MOTORS	-	100%	-
RECEPTACLE	-	100%	-
RECEPTACLES OVER 10kVA	-	50%	-
TOTALS:	**27,352**		**27,352**

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 13,676 VA	114 A
PHASE B: 13,676 VA	114 A

TOTAL CALCULATED LOAD: 27,352 VA

TOTAL CALCULATED AMPS: 114 A

NOTES:
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SEATTLE, WA 98101

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PANEL SCHEDULE : 05/07/2024

PANEL 'FS'

PROJECT: Federal Way O&M Facility

CLASSIFICATION: NORMAL
FED FROM: TRANSFORMER 'T-FS'
MOUNTING: SURFACE

VOLTAGE: 208Y/120V 3Ø, 4-WIRE
MAINS: 125A MAIN CIRCUIT BREAKER
NEUTRAL: 100% RATED

SECTION: 1 OF 1

NOTE	ITEM DESCRIPTION	CKT NO.	BREAKER AMPS	POLE	LOAD (VA)	Ø	LOAD (VA)	BREAKER AMPS	POLE	CKT NO.	ITEM DESCRIPTION	NOTE
	EQUIP - FA-05 FUEL DISPENSING TANK	1	30	3	2880	A	1500	20	1	2	EQUIP - FA-06 CARDLOCK SYSTEM	
	-	3	-	-	2880	B	1920	20	1	4	REC - FA-07 DEF SYSTEM PUMP	
	-	5	-	-	2880	C	324	20	1	6	LTG - FUELING CENTER	
	EQUIP - FA-05 FUEL DISPENSING TANK	7	30	3	2880	A	216	20	1	8	LTG - WASTE TRANSFER	
	-	9	-	-	2880	B		20	1	10	SPARE	
	-	11	-	-	2880	C		20	1	12	SPARE	
	EQUIP - FA-01 FUEL STORAGE TANK	13	30	2	2496	A		20	1	14	SPARE	
	-	15	-	-	2496	B		20	1	16	SPARE	
	SPACE	17	-	1		C		-	1	18	SPACE	
	SPACE	19	-	1		A		-	1	20	SPACE	
	SPACE	21	-	1		B		-	1	22	SPACE	
	SPACE	23	-	1		C		-	1	24	SPACE	

LOAD CALCULATIONS

LOAD DESCRIPTION	CONN. (VA)	DEMAND FACTOR	CALC. (VA)
MISCELLANEOUS CONTINUOUS	-	125%	-
EQUIPMENT & MISCELLANEOUS	8412	100%	8412
LIGHTING	540	125%	675
LARGEST MOTOR	8640	125%	10800
MOTORS	8640	100%	8640
RECEPTACLE	-	100%	-
RECEPTACLES OVER 10kVA	-	50%	-
TOTALS:	**26,232**		**28,527**

LOAD SUMMARY

TOTAL CONNECTED LOAD	AMPS
PHASE A: 9,972 VA	83 A
PHASE B: 10,176 VA	85 A
PHASE C: 6,084 VA	51 A

TOTAL CALCULATED LOAD: 28,527 VA

TOTAL CALCULATED AMPS: 79 A

NOTES:
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UNOFFICIAL COPY Official bid documents, plan holder's list, and addenda (if applicable) are available on BXWA.com

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PROJECT: q23-087 - CITY OF FEDERAL WAY

Helix design group

AMERICAN INSTITUTE OF ARCHITECTS

HELIX DESIGN GROUP, INC

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HARGIS ENGINEERS

5/6/2024

PANEL SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	q23-087

BID SET

EB903

DRAWING NO.

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GENERAL

- EXISTING MECHANICAL TO BE REMOVED
- EXISTING MECHANICAL TO REMAIN
- NEW MECHANICAL WORK
- MATCHLINE OR PROPERTY LINE
- ENLARGED PLAN BOUNDARY
- 1 / M1.01 — DETAIL/PLAN IDENTIFIER
- 1 / M1.01 — SECTION IDENTIFIER
- 1 / M1.01 — ELEVATION IDENTIFIER
- REVISION DEFINITION AREA, AREA ENCIRCLED CONTAINS CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE
- 1 — REVISION CALLOUT
- 1 — FLAG NOTE CALLOUT
- 1 — DEMOLITION NOTE TAG
- 1 — EQUIPMENT TAG
- AHU-1 — MECHANICAL EQUIPMENT TAG
- 1 / AHU — MECHANICAL EQUIPMENT TAG
- NORTH ARROW
- 1 — LOCATION WHERE PICTURE WAS TAKEN AND DIRECTION
- INVERT ELEVATION OR POC
- XX-1 — PLUMBING FIXTURE TAG ("XX" INDICATES TYPE)

ELECTRICAL PROVISIONS FOR MECHANICAL WORK

- LOCATION OF STARTER, DISCONNECT & CONTROLS
- VFD — VARIABLE FREQUENCY DRIVE
- HT — HT — HEAT TRACE BETWEEN SYMBOLS OR END OF RUN

ACCESS, EXCAVATION, AND BACKFILLING

- ACCESS DOOR (SPECIFIED OR AS SHOWN ON DWGS)
- MECHANICAL ACCESS (SPECIFIED OR AS SHOWN ON DWGS)

PIPING

- 1"HWS / 1"HWS — PIPE SIZE AND SYSTEM TYPE
- PIPE ELBOW UP OR PIPE TEE UP AND DOWN
- PIPE ELBOW DOWN
- PIPE TEE UP
- PIPE TEE DOWN
- PIPE RISE
- PIPE CAP
- PIPE PLUG
- FLOW DIRECTION
- PIPE BREAK
- PIPE CONNECTION

VALVES

- VALVE: GATE, BALL, BUTTERFLY (REFER TO SPECIFICATIONS)
- GLOBE VALVE
- S — SOLENOID VALVE
- CHECK VALVE
- BALANCING VALVE
- PRESSURE REDUCING VALVE
- REDUCED PRESSURE BACKFLOW ASSEMBLY
- PRESSURE RELIEF VALVE
- TEMPERATURE AND PRESSURE SAFETY RELIEF VALVE
- SAFETY RELIEF VALVE

PIPING SPECIALTIES

- UNION
- FLANGE
- FLEX CONNECTOR
- THERMAL/SEISMIC FLEXIBLE LOOP
- EJ — THERMAL EXPANSION JOINT
- STRAINER
- STRAINER WITH BLOW OFF VALVE
- PIPE ANCHOR
- ALIGNMENT GUIDE
- T/P — TEMPERATURE/PRESSURE TEST PORT
- THERMOMETER
- PRESSURE GAGE

PUMPS

- CENTRIFUGAL PUMP
- INLINE PUMP
- CIRCULATING PUMP
- BASE MOUNTED PUMP

FIRE PROTECTION SYSTEM

- X"F — FIRE SPRINKLER
- X"FM — FIRE MAIN
- X"FD — DRY SPRINKLER
- RECESSED SPRINKLER HEAD
- SEMI-RECESSED SPRINKLER HEAD
- UPRIGHT SPRINKLER HEAD
- DOUBLE DETECTOR CHECK VALVE/DOUBLE CHECK VALVE ASSEMBLY

NOT ALL SYMBOLS MAY APPEAR ON THE DRAWINGS

GENERAL NOTES - MECHANICAL

1. COORDINATE MECHANICAL WORK WITH THAT OF OTHER TRADES (ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE). REFER TO ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND/OR INSTALLATION OF ALL WORK.
2. COORDINATE PLUMBING, HVAC, AND FIRE PROTECTION SYSTEMS ROUTING PRIOR TO INSTALLATION. DURING LAYOUT COORDINATION, DUCTWORK TAKES PRECEDENCE OVER PLUMBING, INCLUDING FIRE PROTECTION SYSTEMS.
3. UNLESS OTHERWISE SPECIFIED, THE GENERAL CONTRACTOR (GC) SHALL BE RESPONSIBLE FOR PAINTING, CUTTING, AND PATCHING OF EXISTING FLOORS, WALLS, AND PARTITIONS IN THE EXISTING BUILDING.
4. REFER TO STRUCTURAL DRAWINGS FOR ALLOWABLE METHODS/LOADS FOR HANGING PIPING/DUCTS FROM STRUCTURAL MEMBERS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE KEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT, AND ENVIRONMENTAL CONDITIONS.

MECHANICAL EQUIPMENT INSTALLATION NOTES

1. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

PIPING NOTES

1. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.
2. PROVIDE 12" LONG, ½" WIDE FLUORESCENT ORANGE TAPE AT CONCEALED VALVE LOCATIONS.

PLUMBING NOTES

1. ACCESS PANELS: PROVIDE IN NON ACCESSIBLE CEILINGS AND WALLS FOR VALVES, WATER HAMMER ARRESTERS, CLEANOUTS, AND OTHER ITEMS THAT REQUIRE ACCESS TO PROPERLY MAINTAIN OR SERVICE THE BUILDING. REFER TO SPECIFICATIONS.

ENERGY CODE NOTES

1. MOTORS: COMPLY WITH MINIMUM FULL LOAD EFFICIENCIES LISTED IN ENERGY CODE ENFORCED BY AHJ.
2. PIPING: COMPLY WITH THICKNESSES AND TYPES LISTED IN ENERGY CODE ENFORCED BY AHJ UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED.
3. RECORD DRAWINGS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
4. OPERATION AND MAINTENANCE MANUALS: SUBMIT TO THE BUILDING OWNER PER ENERGY CODE ENFORCED BY THE LOCAL AHJ.
5. SYSTEM BALANCING: BALANCE HVAC SYSTEMS PER ENERGY CODE ENFORCED BY THE LOCAL AHJ AND SUBMIT A WRITTEN REPORT TO THE BUILDING OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL TESTING, ADJUSTING, AND BALANCING (TAB) REQUIREMENTS.
6. MECHANICAL SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS: TEST SYSTEMS TO ENSURE THAT BUILDING SYSTEMS HAVE BEEN DESIGNED, INSTALLED, AND FUNCTION PROPERLY, EFFICIENTLY, AND CAN BE MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IN ORDER TO SATISFY THE BUILDING OWNER'S DESIGN INTENT AND OPERATIONAL REQUIREMENTS PER ENERGY CODE ENFORCED BY THE LOCAL AHJ. REFER TO SPECIFICATIONS FOR ADDITIONAL COMMISSIONING REQUIREMENTS
7. THIS BUILDING AND ITS ENERGY SYSTEMS HAVE BEEN DESIGNED TO COMPLY WITH ENERGY CODE ENFORCED BY THE LOCAL AHJ. CONTRACTOR IS RESPONSIBLE FOR CORRECT INSTALLATION OF ENERGY CONSERVATION MEASURES.

NON-STRUCTURAL MECHANICAL COMPONENT NOTES

1. THE COMPONENT IMPORTANCE FACTOR (Ip) FOR ALL NON-STRUCTURAL COMPONENTS SHALL BE:

   Ip = 1.5

2. THE FOLLOWING ITEMS ARE TAKEN DIRECTLY FROM THE 2018 INTERNATIONAL BUILDING CODE AND FROM THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7. THE CONTRACTOR SHALL REFER TO THE ABOVE FOR ADDITIONAL INFORMATION, EXCEPTIONS, AND FURTHER DESCRIPTIONS. THE CONTRACTOR SHALL ADHERE TO REQUIREMENTS AND AS SUCH, SHALL BE INCLUDED WITHIN BID. ALSO REFER TO SPECIFICATION SECTION 230550.
3. 2018 IBC, 1613.1, SCOPE: ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND NON-STRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A.
4. 2018 IBC, 1704.4, CONTRACTOR RESPONSIBILITY: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS AND SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE THE FOLLOWING:
   - A. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS;
   - B. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL;
   - C. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS;
   - D. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.
5. DIVISION 21, 22, 23 RESPONSIBILITIES:
   - A. HANGERS AND SEISMIC BRACING FOR MECHANICAL SYSTEMS SHALL BE DESIGNED AND SPECIFIED BY DIVISION 21, 22, 23. DIVISION 21, 22, 23 SHALL REFER TO THE MECHANICAL DRAWINGS FOR LOCATIONS OF EQUIPMENT AND HUNG MECHANICAL SYSTEMS AS STRUCTURAL DRAWINGS DO NOT SHOW THE LOCATIONS OF MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AND OTHER COMPONENTS.
   - B. DIVISION 21, 22, 23 SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG PIPING AND OTHER MECHANICAL SYSTEMS (INCLUDING COMBINED MULTIPLE PIPE RUNS) WITH THE GENERAL CONTRACTOR AND THE STEEL AND WOOD JOIST MANUFACTURERS IN ADDITION TO OTHER TRADES THAT MAY BE IMPACTED.

SHEET LIST

FB001	FIRE PROTECTION LEGEND, GENERAL NOTES, SCHEDULES, AND DRAWING INDEX
FB101	MAIN FLOOR FIRE PROTECTION PLAN - SOUTH
FB102	MAIN FLOOR FIRE PROTECTION PLAN - NORTH
FB201	MAIN FLOOR HAZARD LEVEL ZONING PLAN - SOUTH
FB202	MAIN FLOOR HAZARD LEVEL ZONING PLAN - NORTH
FB801	FIRE PROTECTION DETAILS AND DIAGRAMS

FIRE PUMP SCHEDULE

MARK	LOCATION	SYSTEM SERVED	MANUFACTURER / MODEL NO.	MAIN PUMP			MAIN MOTOR			JOCKEY PUMP			JOCKEY MOTOR			PHYSICAL		VFD (Y/N)	MOUNTING / SUPPORT	NOTES	MARK
				TYPE	FLOW (GPM)	HEAD (PSI)	RPM	HP	V/Ø	TYPE	FLOW (GPM)	HEAD (PSI)	RPM	HP	V/Ø	LxWxH (INxINxIN)	WEIGHT (LBS)				
FP-1	FIRE SPRINKLER 123	FIRE SPRINKLER	PENTAIR/AUROR MODEL 8-383-15 SERIES 911	VERTICAL INLINE	1000	100	1775	125	460/3	VERTICAL MULTI-STAGE	10	105	-	2	460/3	-	-	N	FLOOR	1, 2	FP-1

NOTES:
1. CONTROL PANEL SHALL BE PROVIDED WITH A VISIBLE NAMPLATE INDICATING THE SHORT CIRCUIT CURRENT RATING (SCCR) IN ACCORDANCE WITH THE UL REQUIREMENTS. REFER TO THE ELECTRICAL DRAWINGS FOR MINIMUM RATINGS.
2. PROVIDE WITH PRIMARY PUMP (FP-1), JOCKEY PUMP (JP-1), PRIMARY AND JOCKEY PUMP CONTROLLERS, TRANSFER SWITCH AND ACCESSORIES IN ACCORDANCE WITH THE SPECIFICATIONS.

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RONALD K. ELIASON — STATE OF WASHINGTON — 30811 REGISTERED PROFESSIONAL ENGINEER — 5/6/24

FIRE PROTECTION LEGEND, GENERAL NOTES, SCHEDULES, AND DRAWING INDEX

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	a23-087

BID SET

FB001

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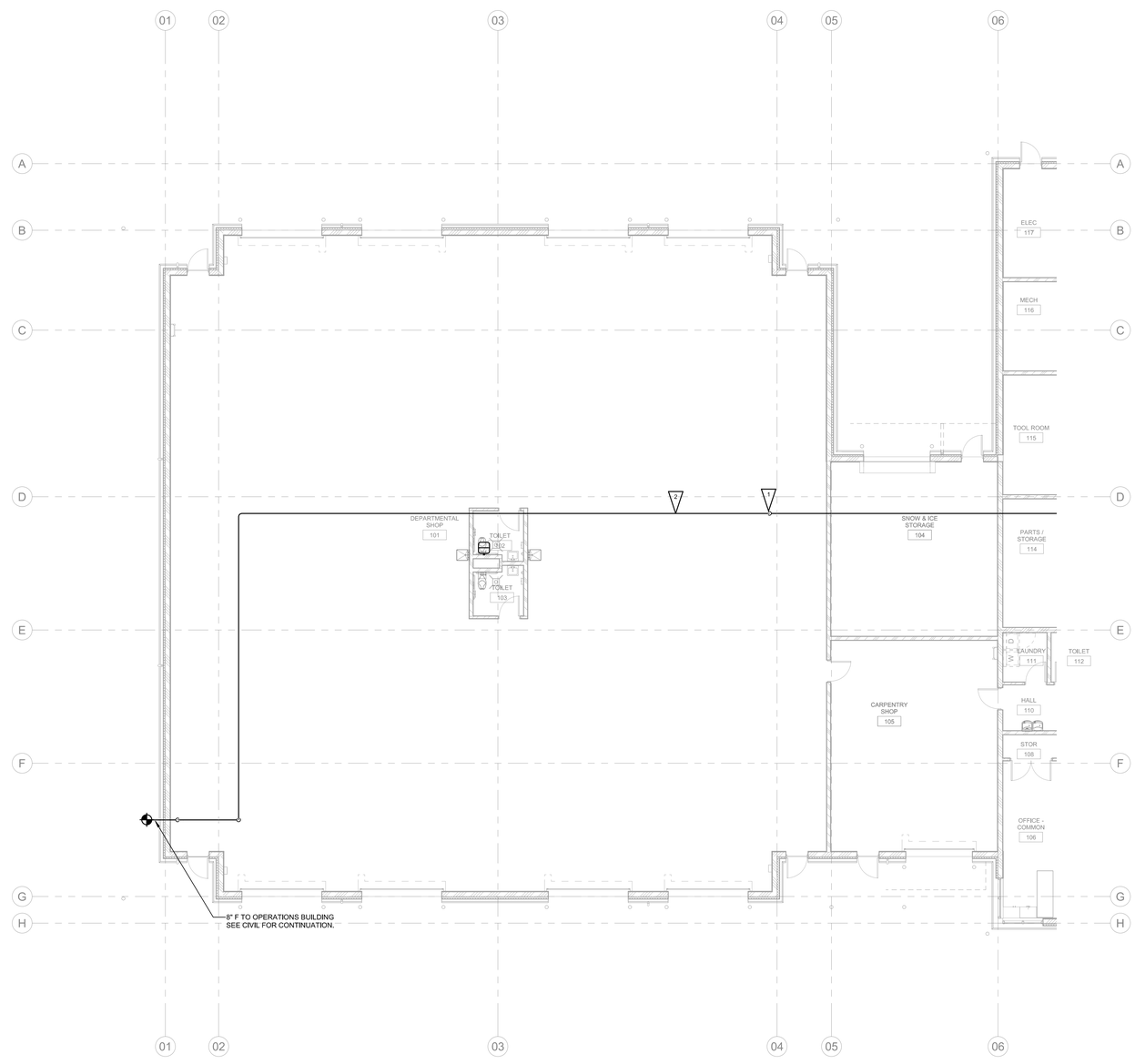
SHEET NOTES

1. PROVIDE SPRINKLER PROTECTION FOR ALL AREAS OF THE BUILDING MEETING NFPA 13 REQUIREMENTS.
2. SPRINKLER PROTECTION SYSTEM SHALL MEET AHJ REQUIREMENTS.
3. SPRINKLER CONTRACTOR SHALL SUBMIT COMPLETE DESIGN SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO SUBMITTING TO THE CITY OF FEDERAL WAY. VERIFY AND OBTAIN APPROVAL OF LOCATIONS OF SPRINKLER SYSTEM DRAIN LOCATIONS WITH THE ARCHITECT DURING PRODUCTION OF SHOP DRAWINGS AND PRIOR TO INSTALLATION.
4. FIRE SPRINKLER CONTRACTOR SHALL COORDINATE WITH ALL OTHER DISCIPLINES PRIOR TO INSTALLATION. HVAC WORK SHALL TAKE PRECEDENCE. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
5. ALL EXPOSED SPRINKLER PIPING SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
6. FIRE SPRINKLER SYSTEM IS PERFORMANCE SPECIFICATION. CONTRACTOR SHALL COORDINATE ROUTING WITH OTHER TRADES TO PROVIDE A FULLY COMPLIANT SYSTEM. REFERENCE SPECIFICATION SECTION 211000.
7. PROVIDE FLEXIBLE PIPE CONNECTIONS TO SPRINLER HEADS INSTALLED IN ALL CEILING TYPES.

FLAG NOTES

1 PIPING UP/DN. PIPING SHALL RUN PIPING TIGHT TO STRUCTURE.

2 RUN 8" F LINE FROM FIRE PUMP THROUGH MAINTANENCE BUILDING.



100 MAIN FLOOR FIRE PROTECTION PLAN - SOUTH
1/8" = 1'-0"

NORTH

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

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MAIN FLOOR FIRE PROTECTION PLAN - SOUTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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FB101

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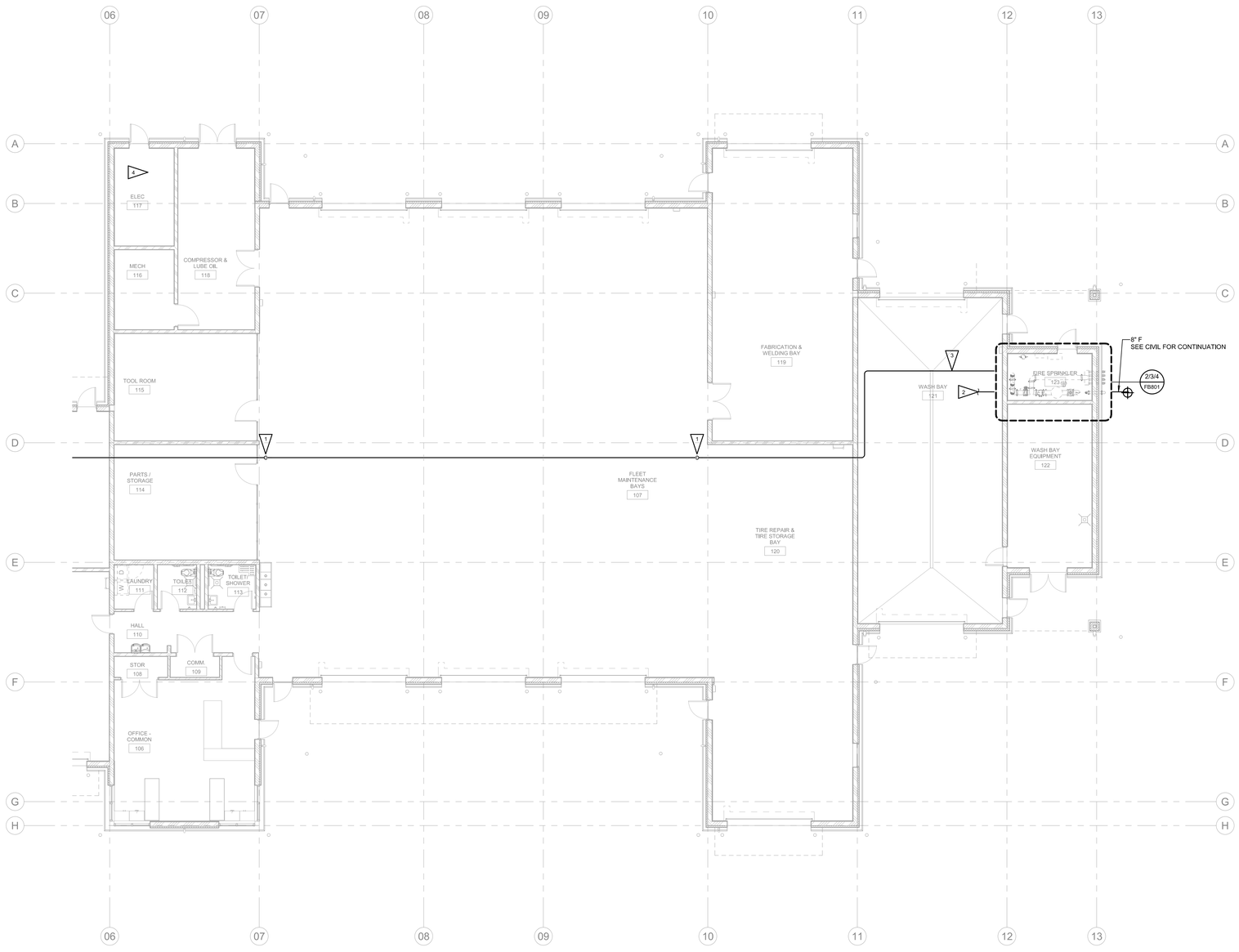
SHEET NOTES

1. PROVIDE SPRINKLER PROTECTION FOR ALL AREAS OF THE BUILDING MEETING NFPA 13 REQUIREMENTS.
2. SPRINKLER PROTECTION SYSTEM SHALL MEET AHJ REQUIREMENTS.
3. SPRINKLER CONTRACTOR SHALL SUBMIT COMPLETE DESIGN SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO SUBMITTING TO THE CITY OF FEDERAL WAY. VERIFY AND OBTAIN APPROVAL OF LOCATIONS OF SPRINKLER SYSTEM DRAIN LOCATIONS WITH THE ARCHITECT DURING PRODUCTION OF SHOP DRAWINGS AND PRIOR TO INSTALLATION.
4. FIRE SPRINKLER CONTRACTOR SHALL COORDINATE WITH ALL OTHER DISCIPLINES PRIOR TO INSTALLATION. HVAC WORK SHALL TAKE PRECEDENCE. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
5. ALL EXPOSED SPRINKLER PIPING SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
6. FIRE SPRINKLER SYSTEM IS PERFORMANCE SPECIFICATION. CONTRACTOR SHALL COORDINATE ROUTING WITH OTHER TRADES TO PROVIDE A FULLY COMPLIANT SYSTEM. REFERENCE SPECIFICATION SECTION 211000.
7. PROVIDE FLEXIBLE PIPE CONNECTIONS TO SPRINLER HEADS INSTALLED IN ALL CEILING TYPES.

FLAG NOTES

1. PIPING UP/DN. PIPING SHALL RUN PIPING TIGHT TO STRUCTURE.
2. FIRE SPRINKLER MAIN TO RISER ROOM.
3. RUN 8" F LINE FROM FIRE PUMP THROUGH MAINTANENCE BUILDING.
4. SPRINKLER CONTRACTOR SHALL COORDINATE COVERAGE WITH ELECTRICAL EQUIPMENT. DO NOT ROUTE SPRINKLER PIPING ABOVE ELECTRICAL EQUIPMENT.



MAIN FLOOR FIRE PROTECTION PLAN - NORTH

1/8" = 1'-0"

NORTH

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

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5/6/24

MAIN FLOOR FIRE PROTECTION PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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SHEET NOTES

1. SEE LEGEND FOR BUILDING HAZARD CLASSIFICATIONS.

FLAG NOTES

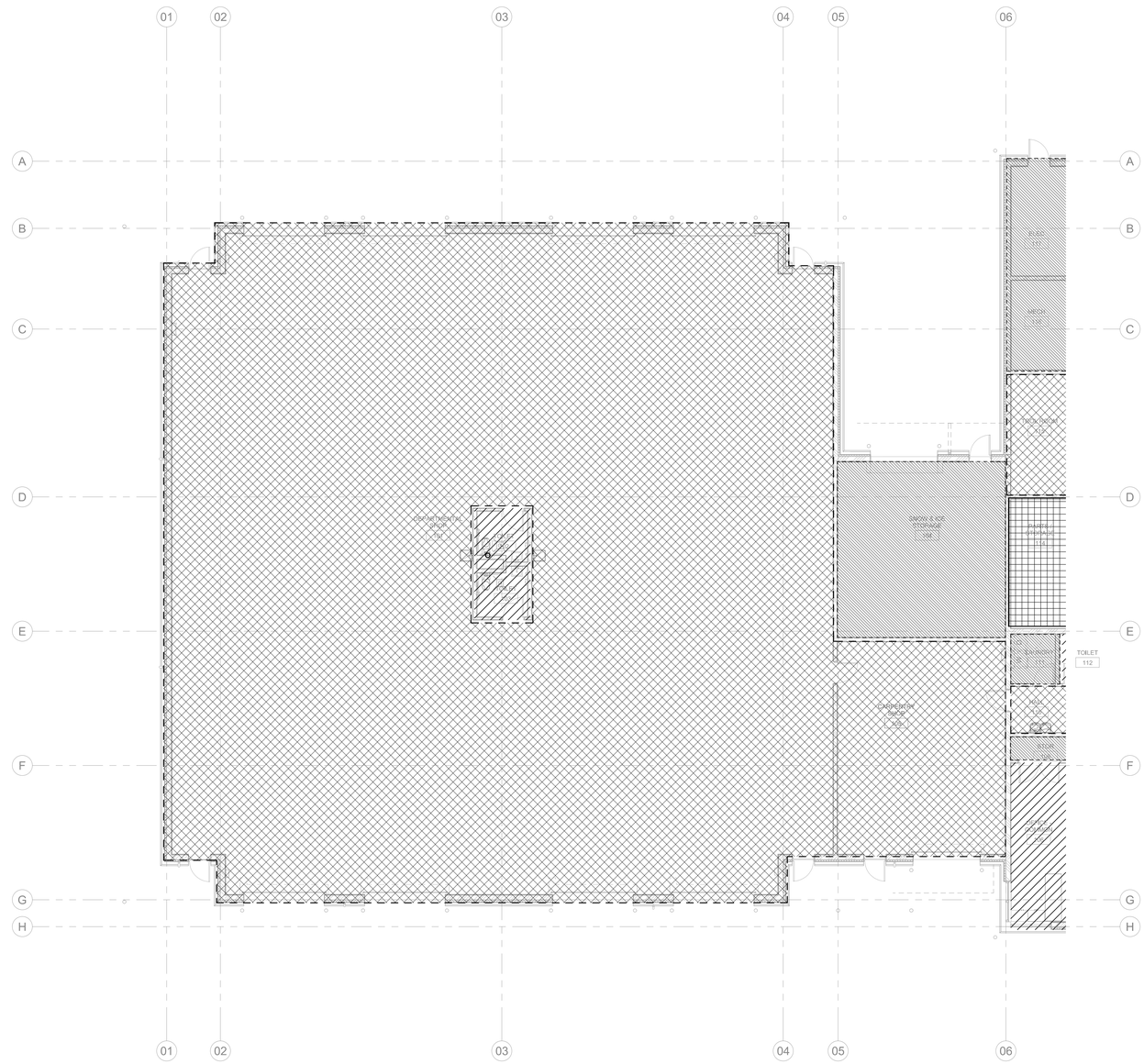
1 TBD.

LEGEND

LIGHT HAZARD

ORDINARY HAZARD 2

EXTRA HAZARD GROUP 1



MAIN FLOOR HAZARD LEVEL ZONING PLAN - SOUTH

1/8" = 1'-0"

NORTH

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

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MAIN FLOOR HAZARD LEVEL ZONING PLAN - SOUTH

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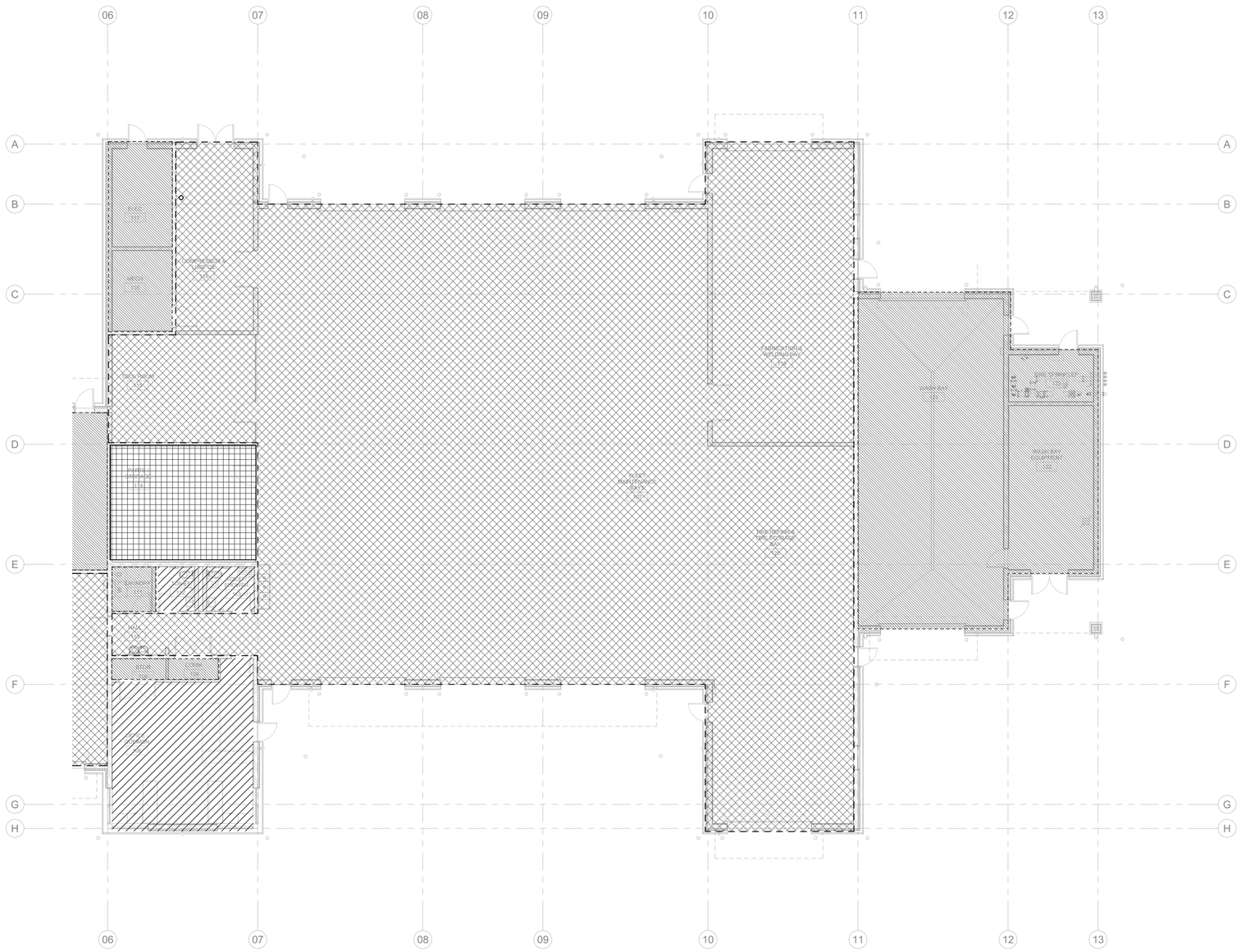

SHEET NOTES

1. SEE LEGEND FOR BUILDING HAZARD CLASSIFICATIONS.

FLAG NOTES

1 TBD.

LEGEND

LIGHT HAZARD

ORDINARY HAZARD 2

EXTRA HAZARD GROUP 1

60/2000
STORAGE DENSITY FOR CLASS 1-1V COMMODITIES AND GROUP A PLASTIC IN CARTONS

MAIN FLOOR HAZARD LEVEL ZONING PLAN - NORTH

V108 1/8" = 1'-0"

NORTH

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

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MAIN FLOOR HAZARD LEVEL ZONING PLAN - NORTH

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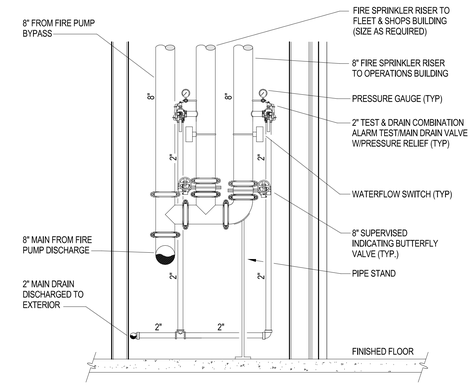
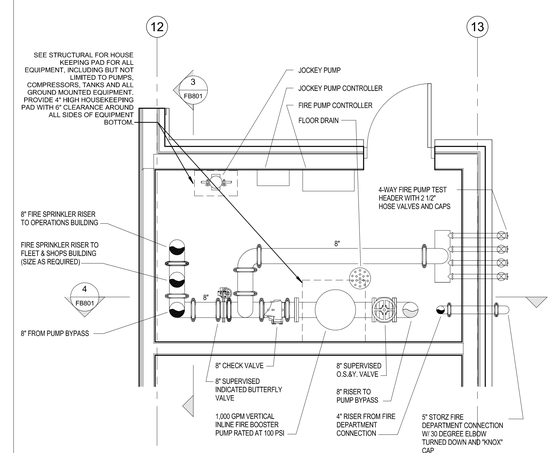
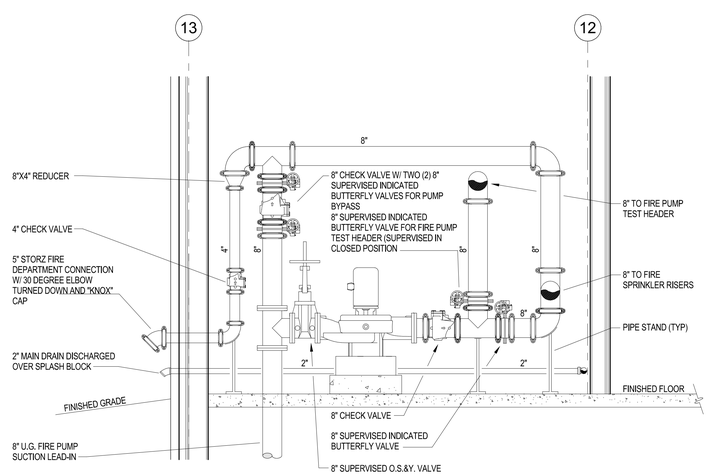


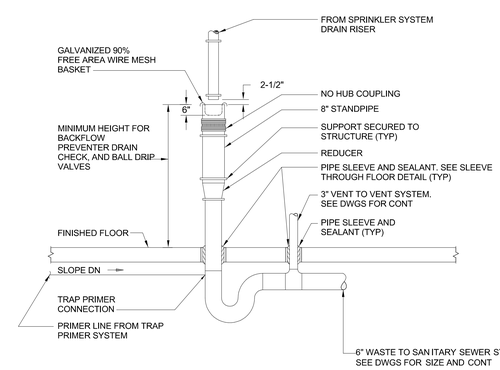
3 FB801 **DETAIL - FIRE SPRINKLER RISER**
SCALE: NONE



2 FB801 **DETAIL - FIRE PUMP ROOM PLAN**
SCALE: NONE



4 FA801 **DETAIL - FIRE DEPARTMENT CONNECTION**
SCALE: NONE



NOTES:
1. PROVIDE FIRESTOPPING FOR PIPE SLEEVES WHERE FLOOR IS FIRE RATED.

1 FB801 **DETAIL - SPRINKLER TEST/DRAIN RECEPTOR**
SCALE: NONE

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FIRE PROTECTION DETAILS AND DIAGRAMS

CITY OF FEDERAL WAY
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FEDERAL WAY, WASHINGTON

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GENERAL NOTES

1. PERFORM WORK IN ACCORDANCE WITH APPLICABLE NATIONAL AND STATE CODES AS AMENDED LOCALLY AND ENFORCED BY THE AHJ.
2. OBTAIN AND PAY FOR PERMITS REQUIRED FOR INSTALLATION OF WORK. ARRANGE AND SCHEDULE REQUIRED INSPECTIONS.
3. COORDINATE WITH UTILITY COMPANIES FURNISHING SERVICES TO PROJECT. INSTALLATION OF UTILITY SERVICES SHALL BE IN ACCORDANCE WITH UTILITY REQUIREMENTS. VERIFY APPLICABLE INSTALLATION STANDARDS AND REQUIREMENTS. PROVIDE AND SUBMIT ELECTRICAL DRAWINGS TO UTILITY FOR APPROVAL PRIOR TO ROUGH-IN AND PRIOR TO ORDERING EQUIPMENT.
4. DEVICE LOCATIONS ARE APPROXIMATE. COORDINATE DEVICE LOCATIONS AND ELEVATIONS WITH APPROPRIATE DOCUMENTS INCLUDING CASEWORK SHOP DRAWINGS AND ARCHITECT'S INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
5. COORDINATE TELECOM WORK WITH THAT OF OTHER TRADES. REFER TO ELECTRICAL, MECHANICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND INSTALLATION OF WORK.
6. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF EXPANSION/SEISMIC JOINTS. PROVIDE RACEWAY EXPANSION/SEISMIC JOINTS FOR RACEWAYS CROSSING BUILDING EXPANSION/SEISMIC JOINTS.
7. DEMOLISH EXISTING SYSTEMS AS INDICATED ON PLANS OR AS REQUIRED FOR INSTALLATION OF NEW WORK. MATERIAL SHALL BE REMOVED FROM SITE AND LEGALLY DISPOSED OF OFF SITE UNLESS OTHERWISE DIRECTED. RETURN ITEMS TO OWNER IN EXISTING CONDITION WHEN DIRECTED BY OWNER.
8. COMPLETION OF WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE PROJECT SCHEDULE. SCHEDULE INSTALLATION WITH OTHER TRADES TO ENSURE PROJECT MILESTONES ARE MET.
9. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE COMPONENTS REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS INCLUDING RACEWAYS, CONDUCTORS, BOXES, SUPPORTS AND SIMILAR ITEMS.
10. LOCATIONS OF RACEWAY, PATHWAY AND SIMILAR ITEMS ARE SHOWN SCHEMATICALLY. COORDINATE INSTALLATION, INCLUDING BUT NOT LIMITED TO CABLING, TELECOMMUNICATION PATHWAYS AND SPACES, AND EXACT LOCATION OF HORIZONTAL AND BACKBONE CABLING WITH LOCATIONS OF FIXED CASEWORK AND BUILDING CONDITIONS AFFECTING THE WORK OF THIS CONTRACT.
11. NEW CABLING INSTALLATIONS SHALL BE CONCEALED IN WALL, CEILINGS, AND BELOW RAISED FLOOR SPACES UNLESS OTHERWISE NOTED ON THE DRAWINGS. CABLING IN ACCESSIBLE CEILING SPACES SHALL BE INSTALLED AS OPEN CABLING NEAR STRUCTURES AND WALLS OR AS SPECIFICALLY NOTED ON DRAWINGS. SEE SPECIFICATIONS FOR SUPPORT REQUIREMENTS.
12. PROVIDE FIRESTOPPING SYSTEMS FOR CONDUIT AND RACEWAY SYSTEMS AT PENETRATIONS, SLEEVES AND SLOTS OF FIRE RATED CONSTRUCTION FOR HORIZONTAL AND INTRABUILDING PATHWAYS AND SPACES.
13. INTRABUILDING OPTICAL FIBER CABLING SHALL BE CLEARLY AND VISIBLY IDENTIFIED IN PULLBOXES, ENTRANCE POINTS, EACH RISER ROOM, AND 5'-0" BEFORE ENTERING A FREE STANDING RACK UTILIZING AN OPTICAL FIBER CABLE MARKER TAG SYSTEM.
14. MAINTAIN A MINIMUM SPACING OF 12" FROM ELECTRICAL FEEDERS AND BRANCH CIRCUIT WIRING AND 12" FROM AUXILIARY SYSTEM CABLING.
15. MINIMUM SPACING FROM ELECTRICAL APPARATUS SUCH AS MOTOR DRIVEN EQUIPMENT AND TRANSFORMERS SHALL BE 6'-0". SPACING REQUIREMENTS SHALL APPLY TO OPEN CABLING PATHWAYS WHERE EQUIPMENT IS LOCATED ON THE SAME FLOOR, FLOOR ABOVE, FLOOR BELOW, OR IN ROOMS ADJACENT TO SUCH EQUIPMENT AS THOUGH WALLS AND FLOORS DID NOT EXIST. EXCEPTION: BUILDING CONSTRUCTION THAT RESULTS IN CONTINUOUS METALLIC BARRIER BETWEEN ELECTRICAL APPARATUS AND CABLE PATHWAYS SHALL BE CONSIDERED AS SUITABLE SEPARATION.
16. PRIOR TO STARTING TELECOMMUNICATIONS INSTALLATION, CAREFULLY INSPECT INSTALLED WORK OF OTHER TRADES AND VERIFY THAT SUCH WORK IS COMPLETE TO THE POINT WHERE WORK MAY PROPERLY COMMENCE. NOTIFY THE ARCHITECT AND ENGINEER IN WRITING OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK.
17. DO NOT BEGIN TELECOMMUNICATIONS INSTALLATION UNTIL ALL UNSATISFACTORY CONDITIONS ARE RESOLVED. BEGINNING WORK CONSTITUTES ACCEPTANCE OF CONDITIONS AS SATISFACTORY.
18. ROUTE CATEGORY 6/6A CABLES TO THEIR ASSIGNED CROSS-CONNECT PER THE IDENTIFICATION LABEL AT EACH TELECOMMUNICATIONS WORKSTATION DEVICE. TERMINATE ALL CABLES ON 48-PORT PATCH PANELS ON RACKS UNLESS OTHERWISE NOTED.
19. THE TELECOM CONTRACTOR SHALL PROVIDE ALL CONDUIT, OUTLET BOXES, JUNCTION BOXES, RACEWAY SYSTEMS, ETC. FOR A COMPLETE AND OPERATIONAL PATHWAY SYSTEM FOR ALL TELECOMMUNICATIONS SYSTEMS PER THE SCOPE OF WORK INDICATED ON THE CONSTRUCTION DRAWINGS AND BID SPECIFICATIONS.
20. CABLE TRAY PATHWAYS ABOVE ACCESSIBLE CEILINGS SHALL BE PROVIDED BY THE TELECOM CONTRACTOR. CABLE TRAY PATHWAYS BELOW RAISED FLOOR SPACES SHALL BE PROVIDED BY THE TELECOMMUNICATIONS CONTRACTOR.

ABBREVIATIONS

A	AMPERE
AC	AIR CONDITIONING; ALTERNATING CURRENT, ABOVE COUNTER
AF	AMP FUSE; AMP FRAME
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
AHJ	AUTHORITIES HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AS	AMP SWITCH
AT	AMP TRIP
ATM	ASYNCHRONOUS TRANSFER MODE
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BATT	BATTERIES
BIL	BASIC IMPULSE INSULATION LEVEL
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT; DEGREES CELCIUS
CAB	CABINET
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CLG	CEILING
CM	CEILING-MOUNTED
CO	CONDUIT ONLY
COW	COMPUTER ON WHEELS
CR	CONTROLLED RECEPTACLE
CT	CURRENT TRANSFORMER
CU	COPPER
D	DEDICATED
DDC	DIRECT DIGITAL CONTROL
DEMARC	DEMARCATION POINT
DISC	DISCONNECT
DIST	DISTRIBUTION
DSL	DIGITAL SUBSCRIBER LINE
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EXHAUST FAN
EIA	ELECTRONIC INDUSTRIES ASSOCIATION
ELEV	ELEVATION
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPM	ELECTRONIC POWER METER
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EVCS	ELECTRIC VEHICLE CHARGING STATION
EWC	ELECTRIC WATER COOLER
F	FUSES; DEGREES FAHRENHEIT
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OWNER
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOIO	FURNISHED BY OWNER INSTALLED BY OWNER
FSD	FIRE SMOKE DAMPER
G	GROUND
GB	GROUND FAULT CIRCUIT INTERRUPTER BREAKER
GF	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HC	HORIZONTAL CROSS CONNECT
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HTR	HEATER
Hz	HERTZ
IBC	INTERNATIONAL BUILDING CODE
IC	INTERMEDIATE CROSS CONNECT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IG	ISOLATED GROUND
IMC	INTERMEDIATE METALLIC CONDUIT
ISDN	INTEGRATED SERVICES DIGITAL NETWORK
J	JUNCTION
K	KIRK KEY
KCMIL	THOUSAND CIRCULAR MILS
kVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
LAN	LOCAL AREA NETWORK
LCP	LIGHTING CONTROL PANEL
LEC	LOCAL EXCHANGE CARRIER
LT	LIGHT
LTG	LIGHTING
M	METER
MAN	METROPOLITAN AREA NETWORK
MAX	MAXIMUM
MC	MAIN CROSS CONNECT; METAL CLAD (CABLE)
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MM	MULTIMODE
MPOE	MAIN POINT OF ENTRY
MPOP	MAIN POINT OF PRESENCE
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
(N)	NEW
N	NEUTRAL
NAC	NOTIFICATION APPLIANCE CIRCUIT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
OFC	OPTICAL FIBER CABLE
OHL	OVERHEAD LINE
OL	OVERLOAD
OS	OCCUPANCY SENSOR
OSP	OUTSIDE PLANT
P	POLE
PBX	PRIVATE BRANCH EXCHANGE
PF	POWER FACTOR
PH	PHASE
PIR	PASSIVE INFRARED
PIV	POST INDICATING VALVE
PNL	PANEL
PP	PATCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RCP	REFLECTED CEILING PLAN
REC	RECEPTACLE
REF	REFER TO
REV	REVISION
RM	ROOM
RTRC	REINFORCED THERMOSETTING RESIN CONDUIT
RU	RACK UNIT
SHT	SHEET
SLC	SIGNALING LINE CIRCUIT
SM	SINGLEMODE
SMFC	SURFACE-MOUNTED OPTICAL FIBER CABINET
SMR	SURFACE METAL RACEWAY
SONET	SYNCHRONOUS OPTICAL NETWORK
SP	SERVICE PROVIDER
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATIONS
SPST	SINGLE POLE SINGLE THROW
ST	SHUNT TRIP
STP	SHIELDED TWISTED PAIR
SVGA	SUPER VIDEO GRAPHICS ARRAY
SW	SWITCH
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TEL	TELEPHONE
TELCO	TELEPHONE COMPANY
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TP	TAMPERPROOF
TR	TELECOMMUNICATIONS ROOM
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
UTP	UNSHIELDED TWISTED PAIR
UV	UNIT VENTILATOR
V	VOLTS
VA	VOLT AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WASTE, WATT, WIDE, WATER
W/	WITH
W/O	WITHOUT
WA	WORKSTATION AREA
WAN	WIDE AREA NETWORK
WG	WIRE GUARD
WH	WATT HOUR METER
WP	WEATHERPROOF
XFMR	TRANSFORMER
Y	WYE
Z	IMPEDANCE

GENERAL

- EXISTING TELECOM TO BE REMOVED
- EXISTING TELECOM TO REMAIN
- NEW TELECOM WORK
- MATCHLINE OR PROPERTY LINE
- ENLARGED PLAN BOUNDARY
- 1 / E1.01 — DETAIL/PLAN IDENTIFIER
- 1 / E1.01 — SECTION IDENTIFIER
- 1 / E1.01 — ELEVATION IDENTIFIER
- REVISION DEFINITION AREA, AREA ENCIRCLED CONTAINS CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE
- 1 — REVISION CALLOUT
- 1 — FLAG NOTE CALLOUT
- DEMOLITION NOTE TAG
- 1 — EQUIPMENT TAG
- AHU-01 — MECHANICAL EQUIPMENT TAG
- NORTH ARROW
- 1 — LOCATION WHERE PICTURE WAS TAKEN AND DIRECTION

GROUNDING

- G — GROUNDING CONDUCTOR
- GROUNDING ROD
- GROUNDING BUSBAR
- EQUIPMENT GROUNDING CONNECTION
- GROUNDING STRAP

RACEWAY AND BOXES

- J — JUNCTION BOX
- J F — FURNITURE WALL FEED OUTLET BOX
- PB XX — PULL BOX (WHERE INDICATED, SUBSCRIPT INDICATES PULL BOX NUMBER)
- HH — HANDHOLE (WHERE INDICATED, SUBSCRIPT INDICATES HANDHOLE NUMBER)
- XX — VAULT (WHERE INDICATED, SUBSCRIPT INDICATES VAULT TYPE)
- A — FLOORBOX (BOX TYPE)
- A — POKE-THRU (POKE-THRU TYPE)
- POWER POLE, FLOOR TO CEILING
- SURFACE METAL RACEWAY
- RACEWAY CONCEALED IN-WALL OR IN-CEILING (EXPOSED IN UNFINISHED AREAS)
- RACEWAY RUN BELOW FLOOR OR BELOW GRADE
- FLEXIBLE RACEWAY
- RACEWAY (CIRCLE DENOTES VERTICAL TRANSITION)
- RACEWAY CONTINUATION
- RACEWAY STUB WITH BUSHINGS
- RACEWAY SLEEVE WITH BUSHINGS
- FIRE STOPPING SLEEVE
- CABLE TRAY, 12"W x 4"H OVERHEAD, UNLESS OTHERWISE NOTED
- CABLE TRAY, OVERHEAD LADDER TYPE' INDICATES FLOOR
- HOMERUN TO PANEL (INDICATES PANEL DESIGNATION AND CIRCUIT NUMBER)
- # — (GAUGE OF WIRE OTHER THAN AWG#12); NUMBER OF CONDUCTORS; (GROUND CONDUCTOR); (PHASE CONDUCTORS); (NEUTRAL CONDUCTOR)

TELECOMMUNICATIONS SYSTEM

- TELECOMMUNICATIONS DEVICE
  (X = REPRESENTS THE # OF TELECOMMUNICATIONS MODULES)
  (W = TELECOMMUNICATIONS WALL PHONE MTD AT +48" AFF)
  (B = BLANK COVER PLATE)
- (C = CABLING FOR INTERCOM , INTERCOM BY OTHERS)
  (AC = ABOVE COUNTER DEVICE)
  (CAM = CABLING FOR SECURITY VIDEO CAMERA, CAMERA BY OTHERS)
  (WAP = WALL-MOUNTED WIRELESS ACCESS POINT DATA DEVICE)
- WAP — ABOVE CEILING TELECOMMUNICATIONS DEVICE
  (X = REPRESENTS THE # OF TELECOMMUNICATIONS MODULES)
  (WAP = WIRELESS ACCESS DEVICE)
  (CAM = SECURITY VIDEO CAMERA)
- FIRE RESISTANT 3/4" PLYWOOD BACKBOARD
- TWO-POST EQUIPMENT RACK
- 4" DOUBLE-SIDED VERTICAL CABLE MANAGEMENT
- WALL-MOUNTED ENCLOSURE
- WBX — RECESSED WALL BOX, WALL-MOUNTED
- C — COAX, WALL-MOUNTED
- AV — HDMI (ROUGH-IN ONLY)

ACCESS CONTROL SYSTEM

- ACP — ACCESS CONTROL PANEL
- S CR — CREDENTIAL/CARD READER
  (CR = CARD READER, WALL-MOUNTED)
  (CR/P = CARD READER W/PIN, WALL-MOUNTED)
  (CR/M = CARD READER, MULLION-MOUNTED)
- S — DOOR POSITION SWITCH
- S XX — SECURITY BUTTONS/SWITCH, WALL-MOUNTED
  (AO = AUTO OPERATOR)
  (DR = DOOR RELEASE)
  (LD = LOCKDOWN)
  (KS = KEYED SWITCH)
  (PB = PANIC/DURESS)
- XX — SECURITY BUTTONS, UNDER-DESK-MOUNTED
  (DR = DOOR RELEASE)
  (LD = LOCKDOWN)
  (PB = PANIC/DURESS)
- R — REQUEST TO EXIT, INTEGRAL MICRO SWITCH
- EL — DOOR HARDWARE POWER SUPPLY (DIV 08)
  (EL = ELECTRIFIED LOCKSET/EXIT DEVICE)
  (ES = ELECTRIFIED STRIKE)
  (ML = ELECTRIFIED MAGNETIC LOCK)
  (MH = ELECTRIFIED MAGNETIC HOLD OPEN)

NOT ALL SYMBOLS MAY APPEAR ON THE DRAWINGS

DRAWING INDEX

TB001	TELECOM LEGEND, GENERAL NOTES, ABBREVIATIONS, AND DRAWING INDEX
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TB601	MAIN FLOOR TELECOM PLAN - SOUTH
TB602	MAIN FLOOR TELECOM PLAN - NORTH
TB801	TELECOM DETAILS
TB802	TELECOM DETAILS
TB803	TELECOM DETAILS
TB804	TELECOM DETAILS
TB805	TELECOM DETAILS
TB806	SECURITY DETAILS
TB807	SECURITY DETAILS
TB901	SECURITY ONE-LINE DIAGRAM

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TELECOM LEGEND, GENERAL NOTES, ABBREVIATIONS, AND DRAWING INDEX

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

DATE	JOB NO.
05.06.24	q23-087

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TB001

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TELECOMMUNICATIONS ROUGH-IN SCHEDULE

SYMBOL	MOUNTING HEIGHT	DEVICE NAME	OUTLET BOX		CONDUIT			MUD RING	DETAIL	NOTES
			QTY	SIZE	QTY	SIZE	TERM LOCATION			
	STANDARD, UON	CATEGORY 6 DEVICE	1	4-11/16"	1	1"	ACCESSIBLE CLG / PB	SINGLE GANG	1,2/TB803	-
AC	ABOVE COUNTER	CATEGORY 6 DEVICE	1	4-11/16"	1	1"	ACCESSIBLE CLG / PB	SINGLE GANG	1,2/TB803	3
WAP	+144", UON	FLUSH CATEGORY 6 WAP DEVICE	1	4-11/16"	1	1"	ACCESSIBLE CLG / PB	SINGLE GANG	-	-
WAP	ABOVE CLG	CATEGORY 6 WAP DEVICE	1	4-11/16"	1	1"	ACCESSIBLE CLG / PB	SINGLE GANG	1/TB804	1

GENERAL NOTE:

1. MOUNTING HEIGHTS INDICATED ON THE SCHEDULE REFER TO CENTER OF BACK BOX.

NOTES:

1. PROVIDE ROUGH-IN (FLUSH) FOR HARD-LID AND (SURFACE MOUNT) IN OPEN TO STRUCTURE CEILINGS.
2. FLOOR BOX DEVICES LOCATED ON THE FIRST FLOOR SHALL ROUTE TO THE NEAREST TELECOM ROOM OR AS INDICATED ON THE FLOOR PLANS.
3. MOUNT DEVICE ABOVE COUNTER TO MATCH ELECTRICAL RECEPTACLES.
4. FLOOR BOXES ARE PROVIDED UNDER SECTION 260535, SEE SECTION 271100 FOR CONNECTIVITY.
5. PROVIDE RECESSED WALL BOX WITH (2) LOW-VOLTAGE BACK BOXES & (2) ELECTRICAL BACK BOXES.

INTERCOM ROUGH-IN SCHEDULE

SYMBOL	MOUNTING HEIGHT	DEVICE NAME	OUTLET BOX		CONDUIT			MUD RING	DETAIL	NOTES
			QTY	SIZE	QTY	SIZE	TERM LOCATION			
I	+120"	INTERCOM SPEAKER, EXTERIOR RATED	1	SPECIALTY BACK BOX	1	3/4"	ACCESSIBLE CLG	-	-	-

GENERAL NOTE:

1. MOUNTING HEIGHTS INDICATED ON THE SCHEDULE REFER TO CENTER OF BACK BOX.

IP SECURITY VIDEO ROUGH-IN SCHEDULE

SYMBOL	MOUNTING HEIGHT	DEVICE NAME	OUTLET BOX		CONDUIT			MUD RING	DETAIL	NOTES
			QTY	SIZE	QTY	SIZE	TERM LOCATION			
CAM	CEILING	CAMERA	1	4"S	1	3/4"	ACCESSIBLE CLG	DOUBLE GANG	2/TB805	1,3
CAM	+108", UON	INTERIOR CAMERA	1	4"S	1	3/4"	ACCESSIBLE CLG	DOUBLE GANG	4/TB805	1,3,4
CAM	+156", UON	EXTERIOR CAMERA	1	MASONRY	1	3/4"	ACCESSIBLE CLG	SINGLE GANG	1/TB805	1
CAM	+156", UON	CORNER MOUNT CAMERA	1	MASONRY	1	3/4"	ACCESSIBLE CLG	SINGLE GANG	3/TB805	1,5

GENERAL NOTE:

1. MOUNTING HEIGHTS INDICATED ON THE SCHEDULE REFER TO CENTER OF BACK BOX.

NOTES:

1. DEVICE REQUIRES NETWORK CONNECTION, PROVIDE CATEGORY 6 CABLING (CABLING BY 271100).
2. DEVICE REQUIRES NETWORK CONNECTION, PROVIDE OPTICAL FIBER CABLING (CABLING BY 271100).
3. COORDINATE BACK BOX AND MUD RING WITH IP SECURITY VIDEO CONTRACTOR PRIOR TO INSTALLATION.
4. SINGLE GANG MASONRY BACK BOXES ARE ACCEPTABLE FOR EXTERIOR CAMERA LOCATIONS.
5. PROVIDE STAINLESS STEEL FACEPLATE AND GASKET WITH 3/4" WEATHERTIGHT CONDUIT TO CAMERA HOUSING.

ACCESS CONTROL ROUGH-IN SCHEDULE

SYMBOL	MOUNTING HEIGHT	DEVICE NAME	OUTLET BOX		CONDUIT			MUD RING	DETAIL	NOTES
			QTY	SIZE	QTY	SIZE	TERM LOCATION			
S CR	+44"	CARD READER	1	4"S	1	3/4"	J-BOX ABOVE ACCESSIBLE CLG	SINGLE GANG	TB806	3
S CR/M	+44"	CARD READER, MULLION	-	-	1	3/4"	J-BOX ABOVE ACCESSIBLE CLG	-	TB806	-
S	TOP OF FRAME	DOOR POSITION SWITCH	-	SEE NOTE	1	3/4"	J-BOX ABOVE ACCESSIBLE CLG	-	TB806 & TB807	2,5
DR	UNDER DESK	DOOR RELEASE BUTTON	1	4"S	1	3/4"	ACCESSIBLE CLG	SINGLE GANG	-	4
PB	UNDER DESK	PANIC BUTTON	1	4"S	1	3/4"	ACCESSIBLE CLG	SINGLE GANG	-	4
R	-	INTEGRAL MICRO REX	-	-	-	-	-	-	TB806	2
EL	SEE NOTE	ELECTRIFIED LOCKSET/ EXIT DEVICE	VARIES	MASONRY	VARIES	3/4"	J-BOX ABOVE ACCESSIBLE CLG	SINGLE GANG	TB806	2,6

GENERAL NOTE:

1. MOUNTING HEIGHTS INDICATED ON THE SCHEDULE REFER TO CENTER OF BACK BOX.

NOTES:

1. DEVICE REQUIRES NETWORK CONNECTION, PROVIDE CATEGORY 6 CABLING (CABLING BY 271100).
2. COORDINATE REQUIREMENTS WITH SECURITY CONTRACTOR AND DOOR HARDWARE CONTRACTOR.
3. SINGLE GANG MASONRY BACK BOXES ARE ACCEPTABLE FOR EXTERIOR MOUNTED DEVICES.
4. PROVIDE FACEPLATE WITH COMPRESSION BOX CONNECTOR AND 1/4" ARMORD CABLING UNDER WORK SURFACE TO DEVICE.
5. WHERE DOOR FRAME IS FILLED, PROVIDE SINGLE GANG MASONRY BACK BOX AT TOP OF DOOR FRAME AT 4" ON CENTER FROM STRIKE SIDE OF DOOR.
6. PROVIDE SINGLE GANG MASONRY BACK BOX AT CENTER HINGE ON BOTH SIDES OR AT STRIKE.

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TELECOM AND SECURITY ROUGH-IN SCHEDULES

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

REVISION	DATE

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TB002

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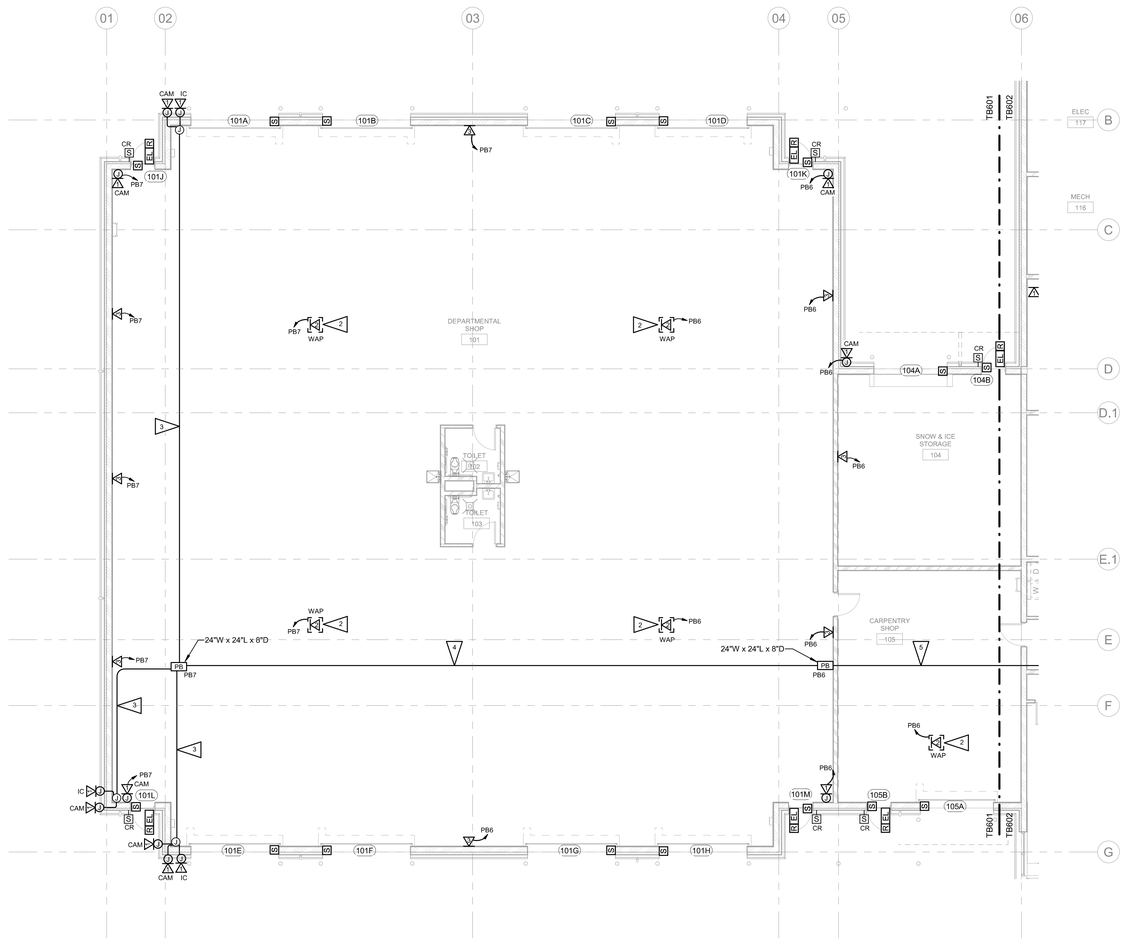
SHEET NOTES

1. SEE SHEET T002 FOR BACK BOX AND CONDUIT ROUGH-IN REQUIREMENTS.
2. SEE SHEETS T8XX FOR TELECOM AND SECURITY INSTALLATION DETAILS.
3. COORDINATE DEVICE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL ELEVATION DRAWINGS.
4. ABOVE ACCESSIBLE CEILING SPACES, J-HOOKS SHALL BE PROVIDED TO EACH DEVICE LOCATION. J-HOOKS SHALL BE SPACED 4'-0" APART AND BE SUPPORTED BY DEDICATED HANGER/ROD FROM STRUCTURE AND/OR WALLS. PROVIDE SEPARATE J-HOOK PATHWAY FOR EACH LOW-VOLTAGE SYSTEM.

FLAG NOTES

1. PROVIDE THE FOLLOWING CONDUITS/SLEEVES ABOVE THE CEILING, EXTEND TO ACCESSIBLE CEILING SPACE, UON:
   (1)2"C - TELECOMMUNICATIONS
   (1)1"C - ACCESS CONTROL
2. MOUNT WAP DEVICE BACK BOX ON BOTTOM OF STRUCTURE SUPPORT/BEAM.
3. PROVIDE THE FOLLOWING CONDUITS:
   (1)1"C - TELECOMMUNICATIONS
   (1)1"C - INTERCOM AND ACCESS CONTROL
4. PROVIDE THE FOLLOWING CONDUITS:
   (1)2"C - TELECOMMUNICATIONS
   (1)1"C - INTERCOM AND ACCESS CONTROL
5. PROVIDE THE FOLLOWING CONDUITS:
   (1)4"C - TELECOMMUNICATIONS
   (1)1"C - INTERCOM AND ACCESS CONTROL



MAIN FLOOR TELECOM PLAN - SOUTH

1/8" = 1'-0"

NORTH

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

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MAIN FLOOR TELECOM PLAN - SOUTH

CITY OF FEDERAL WAY
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FEDERAL WAY, WASHINGTON

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TB601

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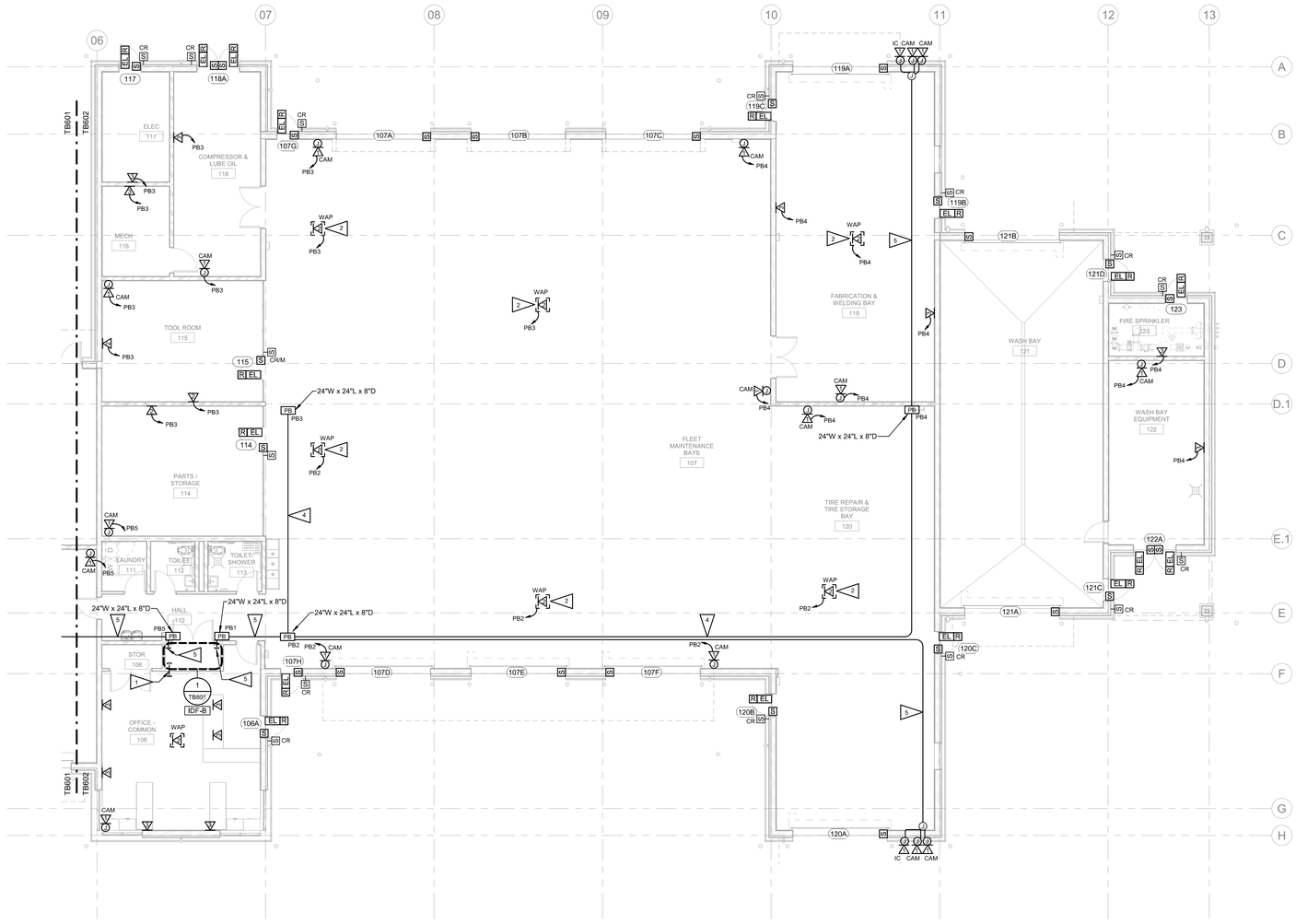
SHEET NOTES

1. SEE SHEET T002 FOR BACK BOX AND CONDUIT ROUGH-IN REQUIREMENTS.
2. SEE SHEETS T8XX FOR TELECOM AND SECURITY INSTALLATION DETAILS.
3. COORDINATE DEVICE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL ELEVATION DRAWINGS.
4. ABOVE ACCESSIBLE CEILING SPACES, J-HOOKS SHALL BE PROVIDED TO EACH DEVICE LOCATION. J-HOOKS SHALL BE SPACED 4'-0" APART AND BE SUPPORTED BY DEDICATED HANGER/ROD FROM STRUCTURE AND/OR WALLS. PROVIDE SEPARATE J-HOOK PATHWAY FOR EACH LOW-VOLTAGE SYSTEM.

FLAG NOTES

1. PROVIDE THE FOLLOWING CONDUITS/SLEEVES ABOVE THE CEILING, EXTEND TO ACCESSIBLE CEILING SPACE, UON:
   (1)2"C - TELECOMMUNICATIONS
   (1)1"C - ACCESS CONTROL
2. MOUNT WAP DEVICE BACK BOX ON BOTTOM OF STRUCTURE SUPPORT/BEAM.
3. PROVIDE THE FOLLOWING CONDUITS:
   (1)1"C - TELECOMMUNICATIONS
   (1)1"C - INTERCOM AND ACCESS CONTROL
4. PROVIDE THE FOLLOWING CONDUITS:
   (1)2"C - TELECOMMUNICATIONS
   (1)1"C - INTERCOM AND ACCESS CONTROL
5. PROVIDE THE FOLLOWING CONDUITS:
   (1)4"C - TELECOMMUNICATIONS
   (1)1"C - INTERCOM AND ACCESS CONTROL



MAIN FLOOR TELECOM PLAN - NORTH
1/8" = 1'-0"

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

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MAIN FLOOR TELECOM PLAN - NORTH

CITY OF FEDERAL WAY
FLEET & SHOPS

FEDERAL WAY, WASHINGTON

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TB602

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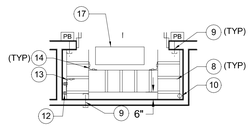
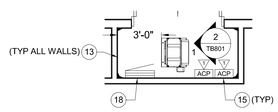


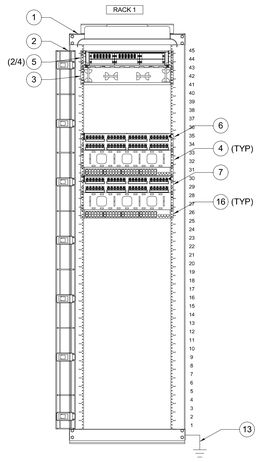
LADDER RACK PLAN



EQUIPMENT PLAN

1 TB801 ENLARGED IDF-B PLAN

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



2 TB801 DETAIL - MDF RACK ELEVATION

SCALE: NONE

RACK REQUIREMENTS

1. RACK ASSEMBLY SHALL INCLUDE BY NOT LIMITED TO ANCHOR BOLTS, CLAMPS, RACKS AND MISC. INSTALLATION HARDWARE. EQUIP EACH RACK AS SHOWN, AND AS DESCRIBED IN THE SPECIFICATIONS. PROVIDE CABLE MANAGEMENT PANELS, PATCH PANELS, ETC., UNLESS NOTED OTHERWISE.
2. GROUND EQUIPMENT TO NEAREST NEC RECOGNIZED GROUNDING ELECTRODE SUBSYSTEM WITH A DEDICATED #6 AWG COPPER, STRANDED, GREEN GROUNDING CONDUCTOR.
3. ASSEMBLE EQUIPMENT RACKS SO RACK UNIT 1 IS NEAREST TO THE FLOOR AND NUMBERS INCREASE VERTICALLY.

RACK COMPONENTS

1. 19"W x 7'-2"H TWO POST EQUIPMENT RACK
2. 4"W VERTICAL CABLE MANAGEMENT PANEL
3. 2-RU OPTICAL FIBER CABLE MANAGEMENT PANEL
4. 2-RU HORIZONTAL CABLE MANAGEMENT PANEL
5. 2-RU RMFC (X/Y), (X) DENOTES QUANTITY OF 6-LC DUPLEX SM MODULES, (Y) DENOTES QUANTITY OF BLANK PANELS
6. CATEGORY 6 48-PORT WAP PATCH PANEL
7. CATEGORY 6 48-PORT STATION PATCH PANEL
8. 18"W LADDER RACK, MOUNT AT +7'-2" AFF WITH RETAINAGE POSTS AND RADIUS DROPS AT CABLE EXIT/ ENTRY, SEE 3/T802
9. CONDUIT PATHWAY, PROVIDE CONDUIT WATERFALLS FOR EACH 4"C SLEEVE. SEE FLOOR PLAN FOR QUANTITY AND SIZES
10. OSP PATHWAY, SEE SITE PLAN FOR QUANTITY AND SIZES
11. 3/4" FIRE RETARDANT PLYWOOD BACKBOARD, MOUNT AT +6"AFF
12. 10" TMGB, MOUNT -12" BELOW LADDER RACK, SEE 2/T802
13. DEDICATED EQUIPMENT GROUND TO TMGB/T GB PER NEC, EIA/TIA STANDARDS WITH 2-HOLE GROUND LUG
14. BONDING STRAP #6 AWG WITH 2-HOLE GROUND LUG
15. ACCESS CONTROL SYSTEM PANEL AND POWER SUPPLY
16. ETHERNET NETWORK SWITCH, (OFOI)
17. SPACE ALLOCATED FOR AC UNIT, SEE MECHANICAL DRAWINGS
18. SPACE ALLOCATED FOR ELECTRICAL PANEL, SEE ELECTRICAL DRAWINGS

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FEDERAL WAY, WASHINGTON

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05.06.24	o23-087

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TB801

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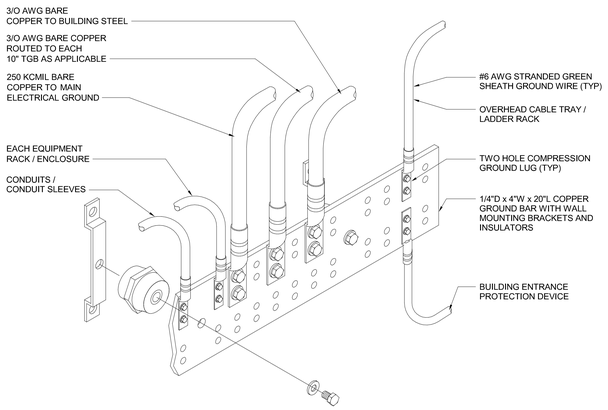
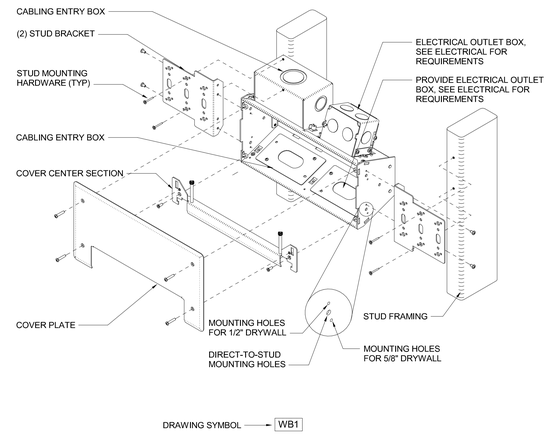


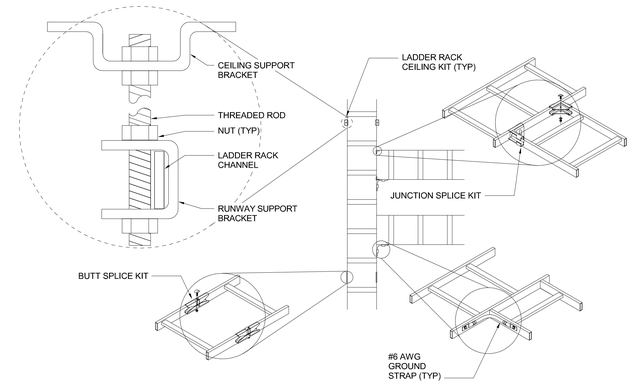
DETAIL - TELECOMMUNICATIONS GROUND BUSBAR ASSEMBLY - 20"

1 / TB802 SCALE: NONE



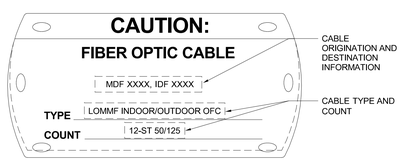
DETAIL - WALL BOX TYPE 1

6 / TB802 SCALE: NONE



DETAIL - LADDER RACK INSTALLATION

3 / TB802 SCALE: NONE

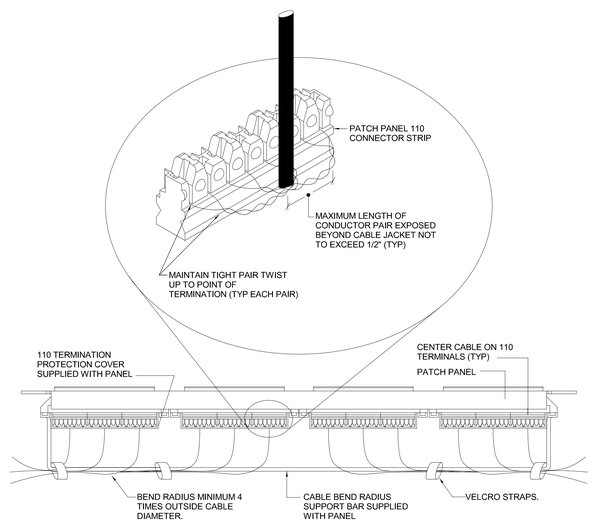


NOTES:

1. THE PART NUMBER AND TYPE ABOVE ARE EXAMPLES ONLY. PROVIDE THE CORRECT INFORMATION IN TAG PER SPECIFICATIONS OF INSTALLED TYPE. OTHER CABLE TYPES AND CONFIGURATIONS MAY VARY.
2. REFER TO TELECOMMUNICATIONS RISER DIAGRAM AND TERMINATION SCHEDULES FOR CABLE ORIGINATION AND DESTINATION LOCATIONS, CABLE TYPES, AND STRAND/PAIR COUNTS.

DETAIL - OPTICAL FIBER CABLE MARKER DETAIL

4 / TB802 SCALE: NONE



DETAIL - UNIVERSAL PATCH PANEL TERMINATION

5 / TB802 SCALE: NONE

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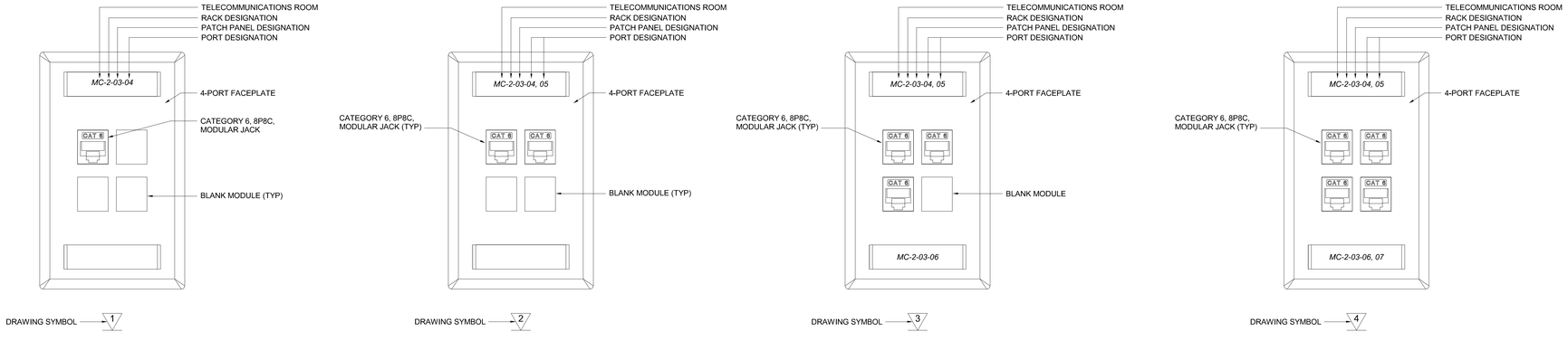
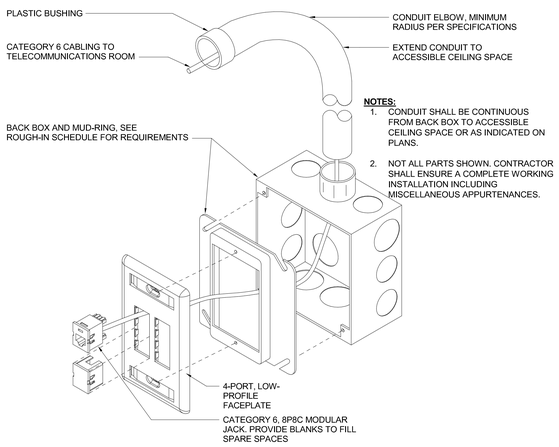


1 TB803 DETAIL - ORGANIZATION AND LABELING

SCALE: NONE



NOTES:

1. CONDUIT SHALL BE CONTINUOUS FROM BACK BOX TO ACCESSIBLE CEILING SPACE OR AS INDICATED ON PLANS.
2. NOT ALL PARTS SHOWN. CONTRACTOR SHALL ENSURE A COMPLETE WORKING INSTALLATION INCLUDING MISCELLANEOUS APPURTENANCES.

2 TB803 DETAIL - TELECOMMUNICATIONS DEVICE ROUGH-IN

SCALE: NONE

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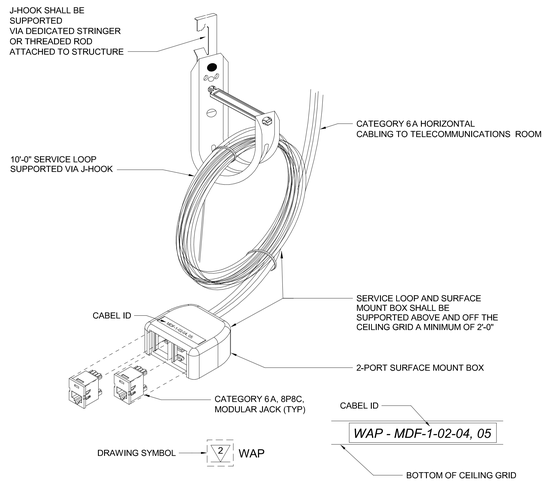
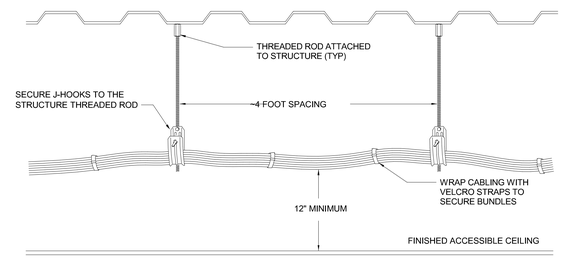


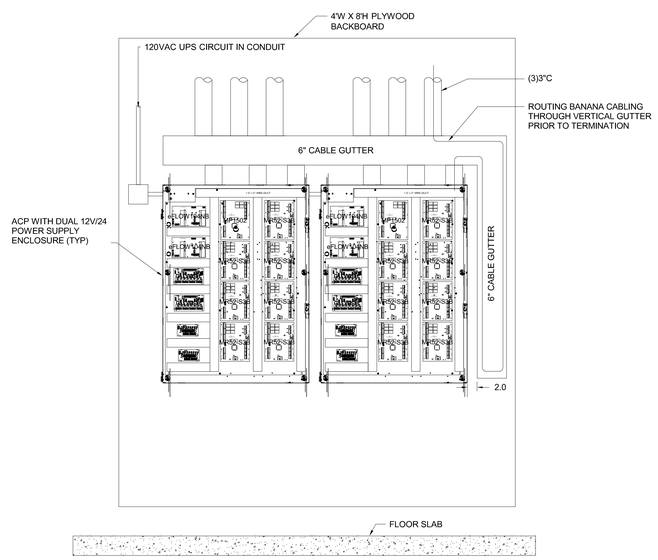
1 / TB804 DETAIL - ABOVE GRID WIRELESS ACCESS POINT INSTALLATION

SCALE: NONE



2 / TB804 DETAIL - OPEN CABLING INSTALLATION

SCALE: NONE



4 / TB804 DETAIL - ACCESS CONTROL PANEL - NEW PANEL INSTALLATION

SCALE: NONE

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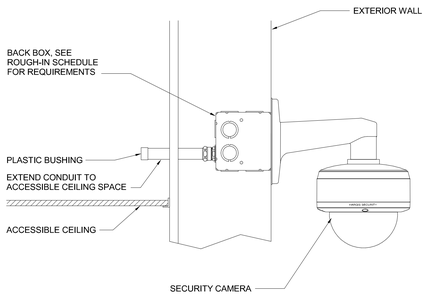
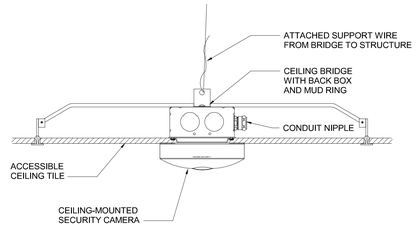


DRAWING SYMBOL — CAM 1 / J

1 / TB805 DETAIL - EXTERIOR WALL MOUNT CAMERA W/ BRACKET

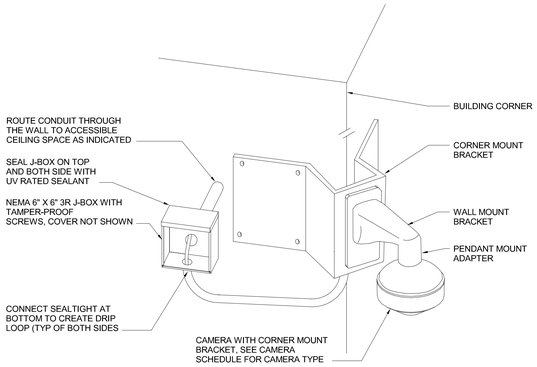
SCALE: NONE



DRAWING SYMBOL — CAM 1 / J

2 / TB805 DETAIL - INTERIOR CEILING MOUNT CAMERA

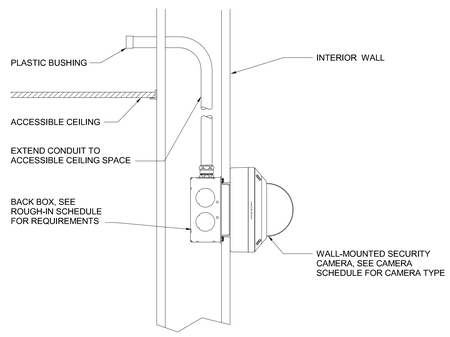
SCALE: NONE



DRAWING SYMBOL — CAM 1 / J

3 / TB805 DETAIL - EXTERIOR CORNER MOUNT CAMERA W/ BRACKET

SCALE: NONE



DRAWING SYMBOL — CAM 1 / J

4 / TB805 DETAIL - INTERIOR WALL MOUNT CAMERA

SCALE: NONE

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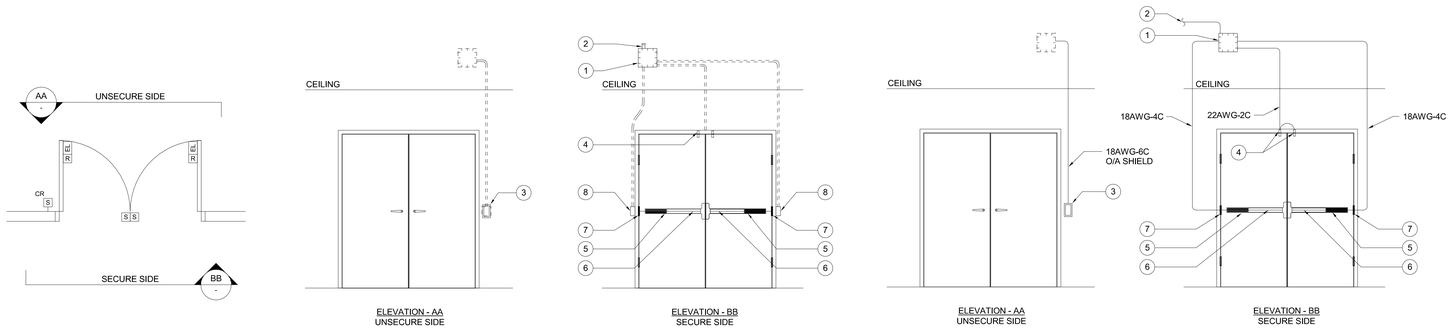
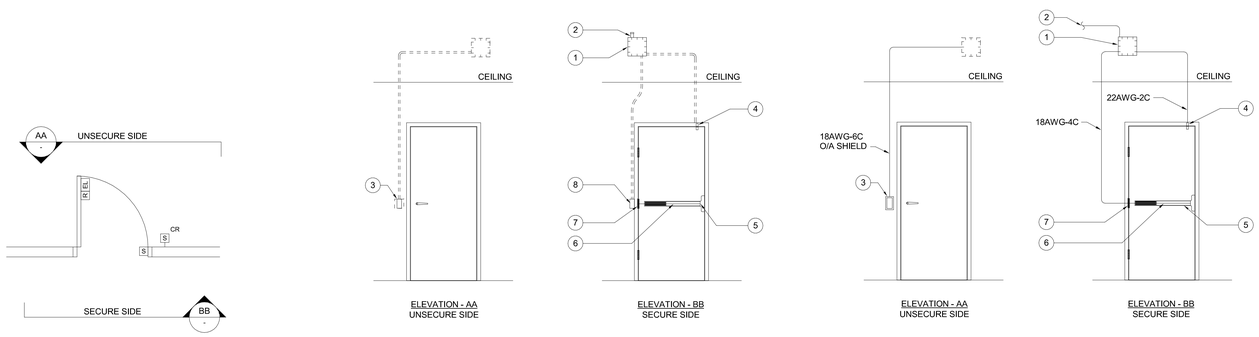


1 TB806 DETAIL - DOUBLE DOOR CARD-IN, EXIT DEVICE

SCALE: NONE



2 TB806 DETAIL - SINGLE DOOR CARD-IN, EXIT DEVICE

SCALE: NONE

GENERAL NOTES

1. WIRE GAUGES NOTED ARE MINIMUM GAUGE REQUIREMENTS. COORDINATE GAUGE REQUIREMENTS WITH MANUFACTURER BASED ON ACTUAL WIRE LENGTHS.
2. DETAIL SHOWN IS A TYPICAL ELEVATION, REFER TO FLOOR PLANS FOR EXACT DOOR ORIENTATION, DEVICE TYPES AND DEVICE PLACEMENTS RELATIVE TO DOOR POSITION AND SWING.
3. CONDUIT SHALL BE 3/4" EMT UNLESS NOTED OTHERWISE.
4. DIVISION 26 & 28 SHALL PROVIDE CONDUIT AND CABLING AS INDICATED.

COMPONENTS

1. 12" x 12" x 6" JUNCTION BOX (1 PER DOOR) SHALL BE MOUNTED +12" ABOVE ACCESSIBLE CEILING, WHERE NO CEILING EXIST MOUNT AT NEAREST ACCESSIBLE CEILING SPACE OR AS SHOWN ON THE FLOOR PLANS. PROVIDE (1)2" NIPPLE ON TOP OF BOX AND (1)1"C TO POWER SUPPLY/ CONTROL J-BOX WHERE APPLICABLE
2. CABLING SHALL ROUTE TO DESIGNATED ACCESS CONTROL PANEL
3. CARD (IN) READER SHALL BE MOUNTED ON UNSECURE SIDE OF DOOR
4. DOOR POSITION SWITCH SHALL BE RECESSED IN DOOR FRAME
5. ELECTRIFIED MORTISE LOCKSET/EXIT DEVICE, FURNISHED BY DIV 08
6. CABLING THROUGH DOOR FOR POWER AND INTEGRAL MICRO REX BUILT INTO DOOR HARDWARE
7. POWER TRANSFER HINGE / POWER TRANSFER DEVICE
8. MASONRY BACK BOX /MORTAR BOX SHALL BE MOUNTED TO ALLOW ACCESS TO WIRING FROM POWER TRANSFER HINGE/DEVICE
9. AUTO OPERATOR CONTROLLER, FURNISHED BY DIV 08
10. KEYED SWITCH, FURNISHED BY DIV 08
11. AUTO OPERATOR ACTUATOR, FURNISHED BY DIV 08
12. DOOR AUTO OPERATOR, FURNISHED BY DIV 08
13. DOOR HARDWARE POWER SUPPLY, FURNISHED BY DIV [08/28]
14. ELECTRIC STRIKE SURFACE/ FLUSH MOUNT
15. REQUEST TO EXIT DEVICE

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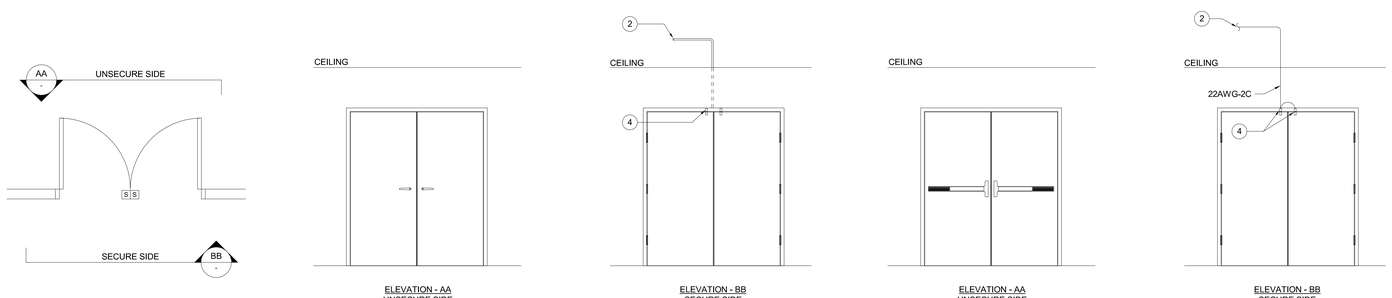
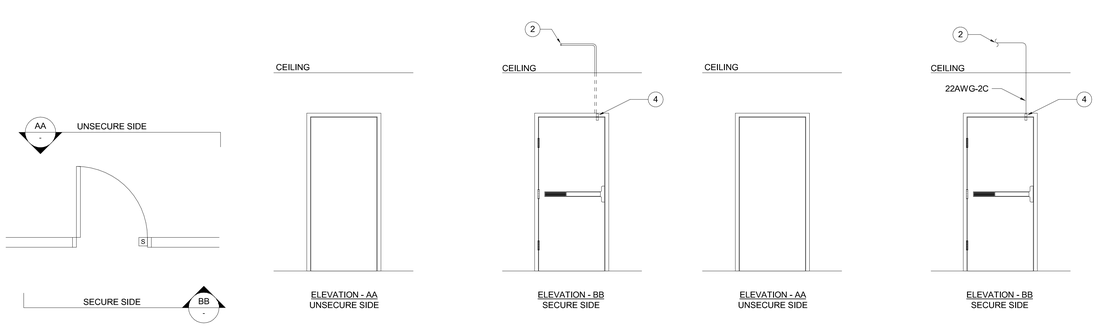


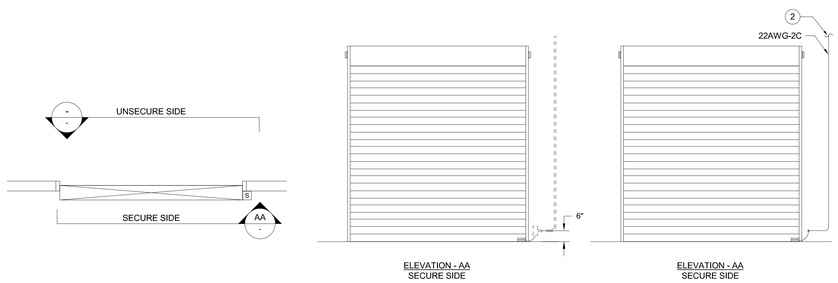
1 TB807 DETAIL - DOUBLE DOOR EXIT ONLY

SCALE: NONE



2 TB807 DETAIL - SINGLE DOOR EXIT ONLY

SCALE: NONE



3 TB807 DETAIL - ROLLED-UP DOOR

SCALE: NONE

GENERAL NOTES

1. WIRE GAUGES NOTED ARE MINIMUM GAUGE REQUIREMENTS. COORDINATE GAUGE REQUIREMENTS WITH MANUFACTURER BASED ON ACTUAL WIRE LENGTHS.
2. DETAIL SHOWN IS A TYPICAL ELEVATION, REFER TO FLOOR PLANS FOR EXACT DOOR ORIENTATION, DEVICE TYPES AND DEVICE PLACEMENTS RELATIVE TO DOOR POSITION AND SWING.
3. CONDUIT SHALL BE 3/4" EMT UNLESS NOTED OTHERWISE.
4. DIVISION 26 & 28 SHALL PROVIDE CONDUIT AND CABLING AS INDICATED.

COMPONENTS

1. 12" x 12" x 6" JUNCTION BOX (1 PER DOOR) SHALL BE MOUNTED +12" ABOVE ACCESSIBLE CEILING, WHERE NO CEILING EXIST MOUNT AT NEAREST ACCESSIBLE CEILING SPACE OR AS SHOWN ON THE FLOOR PLANS. PROVIDE (1)2" NIPPLE ON TOP OF BOX AND (1)1"C TO POWER SUPPLY/ CONTROL J-BOX WHERE APPLICABLE
2. CABLING SHALL ROUTE TO DESIGNATED ACCESS CONTROL PANEL
3. CARD (IN) READER SHALL BE MOUNTED ON UNSECURE SIDE OF DOOR
4. DOOR POSITION SWITCH SHALL BE RECESSED IN DOOR FRAME
5. ELECTRIFIED MORTISE LOCKSET/EXIT DEVICE, FURNISHED BY DIV 08
6. CABLING THROUGH DOOR FOR POWER AND INTEGRAL MICRO REX BUILT INTO DOOR HARDWARE
7. POWER TRANSFER HINGE / POWER TRANSFER DEVICE
8. MASONRY BACK BOX /MORTAR BOX SHALL BE MOUNTED TO ALLOW ACCESS TO WIRING FROM POWER TRANSFER HINGE/DEVICE
9. AUTO OPERATOR CONTROLLER, FURNISHED BY DIV 08
10. KEYED SWITCH, FURNISHED BY DIV 08
11. AUTO OPERATOR ACTUATOR, FURNISHED BY DIV 08
12. DOOR AUTO OPERATOR, FURNISHED BY DIV 08
13. DOOR HARDWARE POWER SUPPLY, FURNISHED BY DIV [08/28]
14. ELECTRIC STRIKE SURFACE/ FLUSH MOUNT
15. REQUEST TO EXIT DEVICE

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FEDERAL WAY, WASHINGTON

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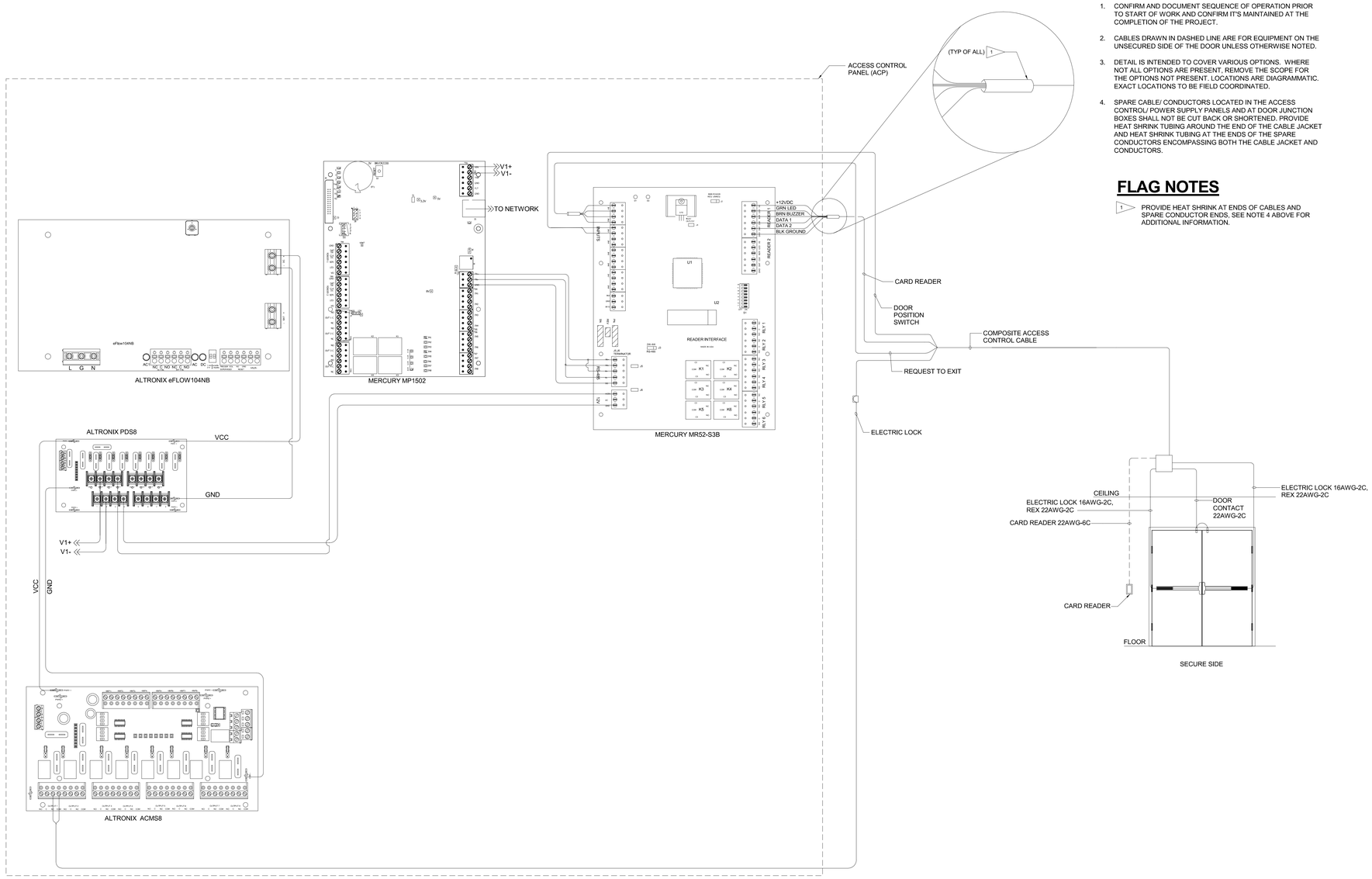

SHEET NOTES

1. CONFIRM AND DOCUMENT SEQUENCE OF OPERATION PRIOR TO START OF WORK AND CONFIRM IT'S MAINTAINED AT THE COMPLETION OF THE PROJECT.
2. CABLES DRAWN IN DASHED LINE ARE FOR EQUIPMENT ON THE UNSECURED SIDE OF THE DOOR UNLESS OTHERWISE NOTED.
3. DETAIL IS INTENDED TO COVER VARIOUS OPTIONS. WHERE NOT ALL OPTIONS ARE PRESENT, REMOVE THE SCOPE FOR THE OPTIONS NOT PRESENT. LOCATIONS ARE DIAGRAMMATIC. EXACT LOCATIONS TO BE FIELD COORDINATED.
4. SPARE CABLE/ CONDUCTORS LOCATED IN THE ACCESS CONTROL/ POWER SUPPLY PANELS AND AT DOOR JUNCTION BOXES SHALL NOT BE CUT BACK OR SHORTENED. PROVIDE HEAT SHRINK TUBING AROUND THE END OF THE CABLE JACKET AND HEAT SHRINK TUBING AT THE ENDS OF THE SPARE CONDUCTORS ENCOMPASSING BOTH THE CABLE JACKET AND CONDUCTORS.

FLAG NOTES

1 PROVIDE HEAT SHRINK AT ENDS OF CABLES AND SPARE CONDUCTOR ENDS, SEE NOTE 4 ABOVE FOR ADDITIONAL INFORMATION.

1 / TB901 DETAIL - WIRING DIAGRAM FOR DOORS WITH CARD READER

SCALE: NONE

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SECURITY ONE-LINE DIAGRAM

CITY OF FEDERAL WAY
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