WASHINGTON STATE PARKS & RECREATION COMMISSION

APPROVED FOR CONSTRUCTION

Jason Both 9/23/2024
REGION MANAGER *date*

Kyle Murphy 9/24/2024
CAPITAL PROGRAM MANAGER *date*

Area Manager: AUDRA SIMS

LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

VICINITY MAP

NORTH

LATITUDE: 46.286657 LONGITUDE: -118.073462

PROJECT LOCATION

NORTH

36149 US-12 DAYTON WA 99328
SECTION 4 T9N R38E
COLUMBIA COUNTY TAX PARCEL NUMBER 2-009-38-004-0000

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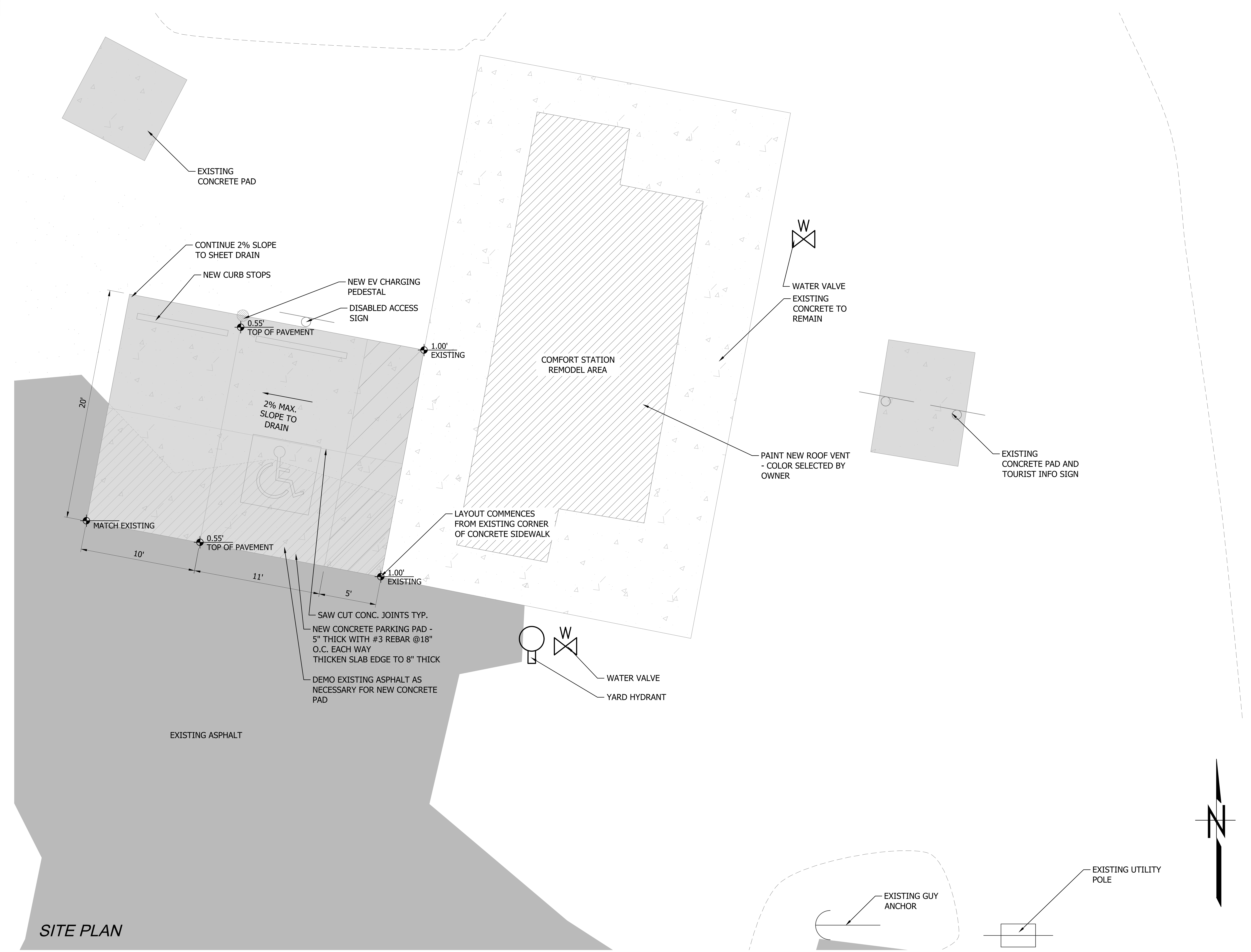
17	ELECTRICAL DEMO PLAN AND FLOOR PLAN

CAD#: PARKCODE-PROJECTCODE-YEAR PROJECT TITLE = PROJECT MANAGER TO PROVIDE



SITE PLAN

CAD NO. 23010

DATE	09/20/23
APP.	
INT.	
REVISIONS	
NO.	

ACTION	BY	DATE
DESIGNED	NW	04-26-23
DRAWN	IL	04-26-23
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CHECKED (HDQTS.)	XX	XX/XX/XX

REGISTERED ARCHITECT STATE OF WASHINGTON 09/20/23

PROJECT ARCHITECT

WASHINGTON STATE PARKS AND RECREATION COMMISSION

WASHINGTON STATE PARKS

LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

ARCHITECTURAL SITE PLAN

SHEET 2 OF 17

SCALE 0 1' 3' 5' 10'

PARKS FILE#

DEMOLITION KEY NOTES:

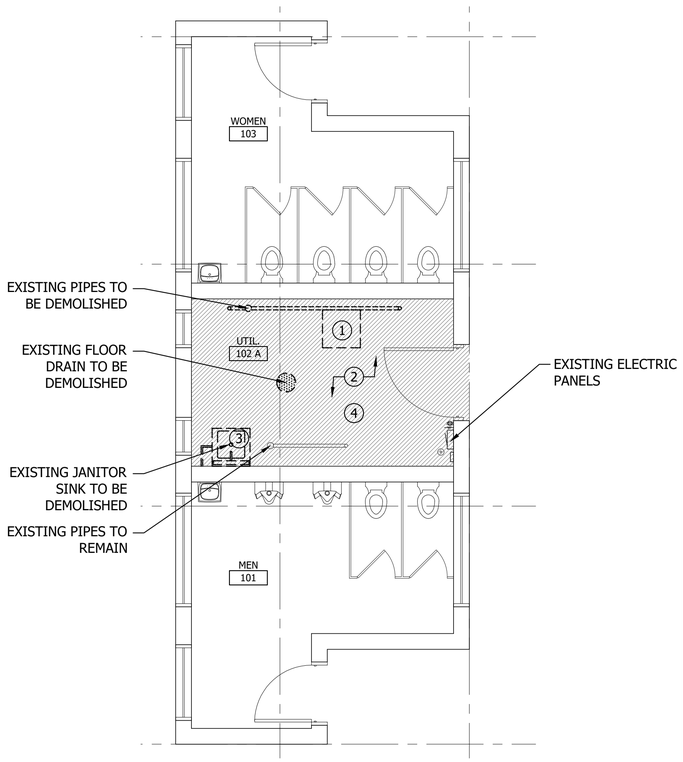
1. PROTECT ALL REMAINING EQUIPMENT DURING CONSTRUCTION.

DEMOLITION KEY NOTES:

1. DEMOLISH EXISTING FURNACE
2. DEMOLISH EXISTING SLAB
3. DEMOLISH EXISTING JANITOR SINK
4. DEMOLISH EXISTING CEILING AS REQUIRED FOR NEW ASSEMBLY IN NEW BATHROOM

LEGEND:

SLAB AREA TO BE DEMOLISHED



DEMO PLAN

FLOOR PLAN NOTES:

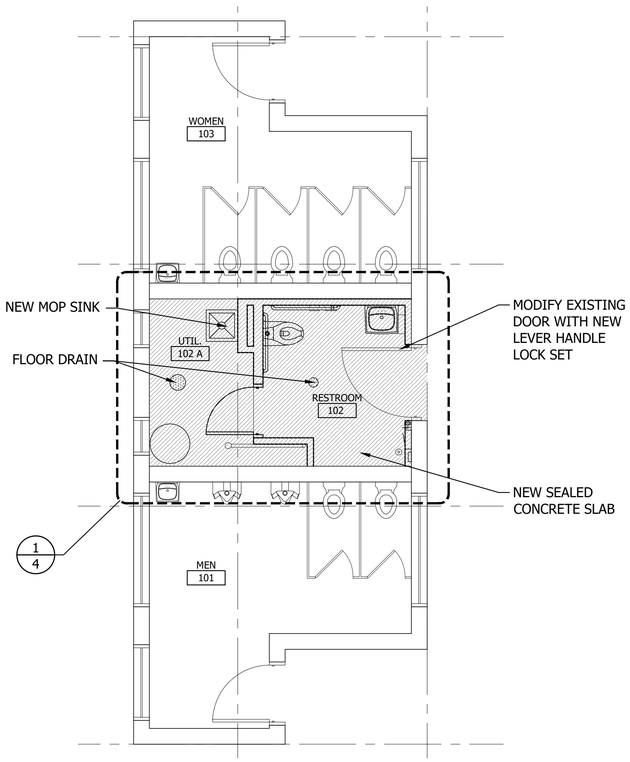
SEE SHEET 6 FOR WALL TYPES AND ASSEMBLY

LEGEND:

UTIL. 105 — ROOM TAG

2/4 — DETAIL

NEW SLAB AREA - PROVIDE CORRECT DRAINAGE FOR EACH ROOM



FLOOR PLAN

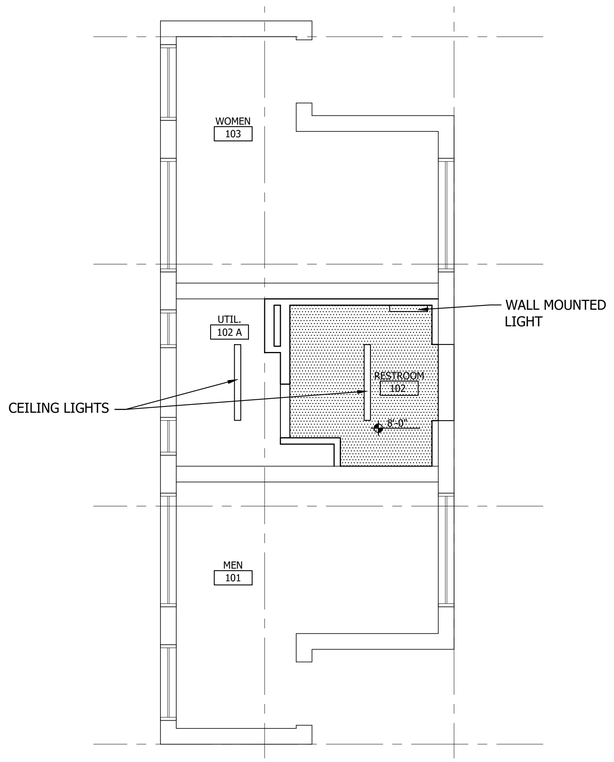
REFLECTED CEILING PLAN NOTES:

SEE SHEET 6 FOR CEILING ASSEMBLY

LEGEND:

GYPSUM BOARD CEILING

8'-0" — CEILING HEIGHT



REFLECTED CEILING PLAN

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LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

DEMO PLAN
FLOOR PLAN
REFLECTED CEILING PLAN

SHEET 3 OF 17

SCALE 1' 3' 0 2' 6'

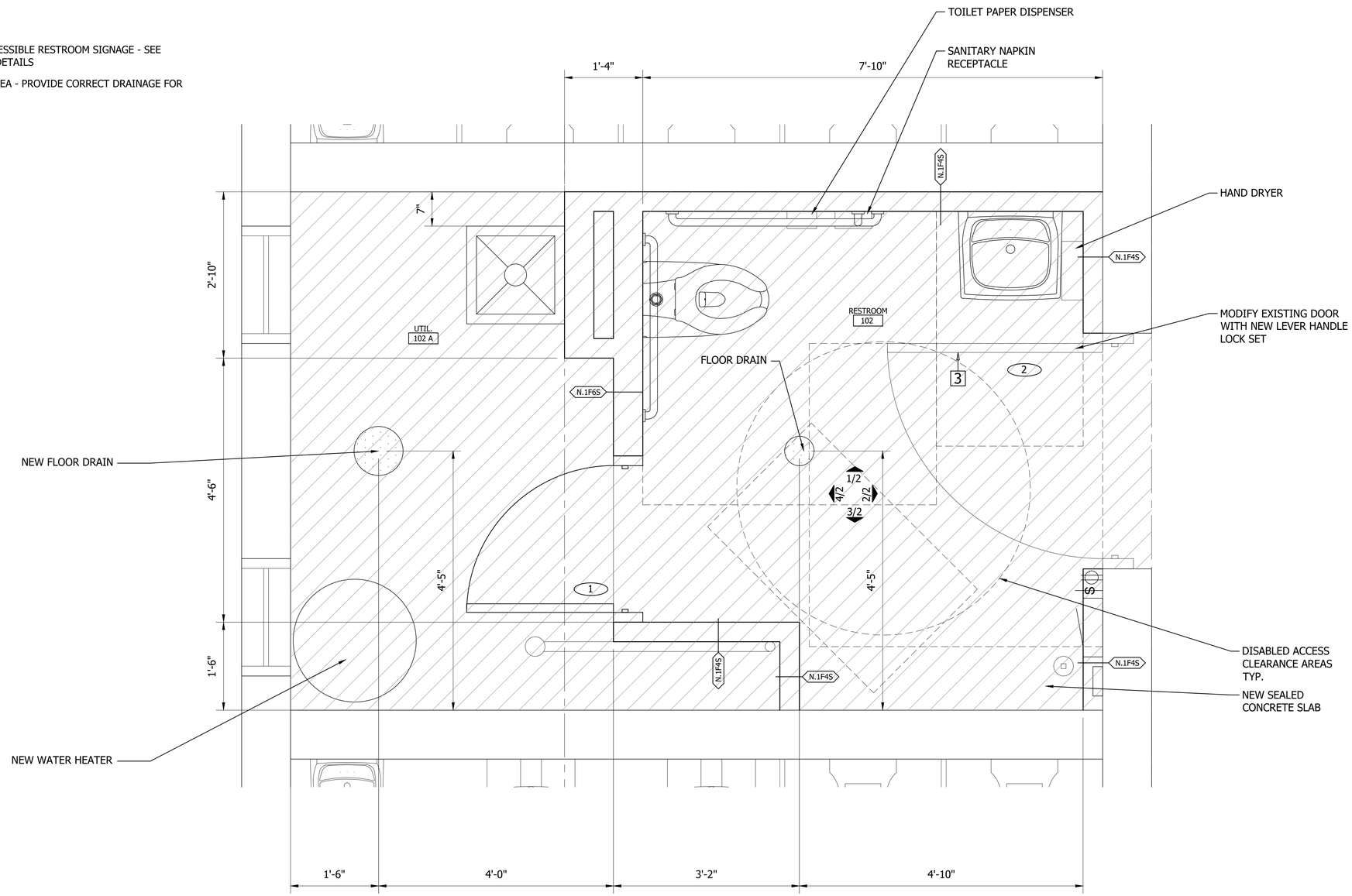
PARKS FILE#

ENLARGED PLAN NOTES:

SEE SHEET 6 FOR WALL TYPES AND ASSEMBLY

LEGEND:

- 1/2 INTERIOR ELEVATION
- 1 DOOR NUMBER
- 1.2F6T WALL TYPE
- UTIL. 105 ROOM TAG
- 3 DISABLE ACCESSIBLE RESTROOM SIGNAGE - SEE PAGE 6 FOR DETAILS
- NEW SLAB AREA - PROVIDE CORRECT DRAINAGE FOR EACH ROOM



ENLARGED FLOOR PLAN

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STATE OF WASHINGTON
09/20/23

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WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

ENLARGED FLOOR PLAN

SHEET 4 OF 17

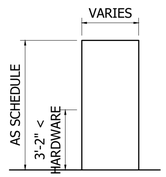
SCALE 1' 0 2'

PARKS FILE#

DOOR SCHEDULE

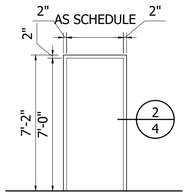
MARK	DOOR				FRAME			ASSEM.	HW
	SIZE	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	RATING	GROUP
01	2'6"X7'0"	F	HM	FF	01	HM	PT	-	02
02	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	01

DOOR TYPES



TYPE-F

DOOR FRAME TYPES



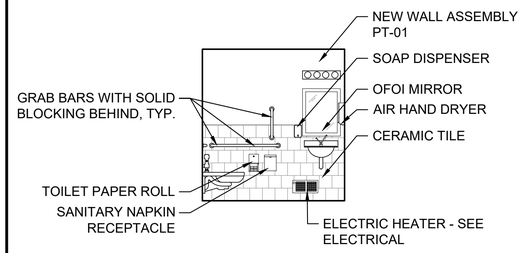
TYPE-01
HOLLOW METAL
INTERIOR
FRAMED WALL

FINISH SCHEDULE

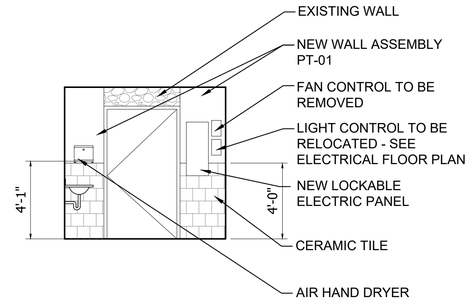
	FLOOR FINISH	BASE MATL	NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING	
			MATL	FINISH	MATL	FINISH	MATL	FINISH	MATL	FINISH	MATL	FINISH
102	CONC	CT	GB	PT/CT	GB	PT/CT	GB	PT/CT	GB	PT/CT	GB	PT
102A	CONC.	EXIST.	EXIST.	EXIST.	GB.	PT	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.

ABBREVIATION KEY

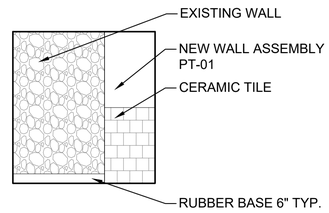
CT	CERAMIC TILE
CONC	SEALED CONCRETE
FF	FACTORY FINSIH
GB	GYPSUM BOARD
HM	HOLLOW METAL
PLAM	PLASTIC LAMINATE
PT	PAINT



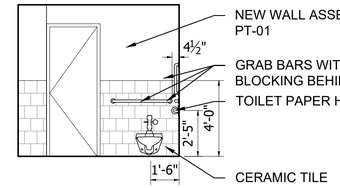
1/5 *INTERIOR ELEVATION*



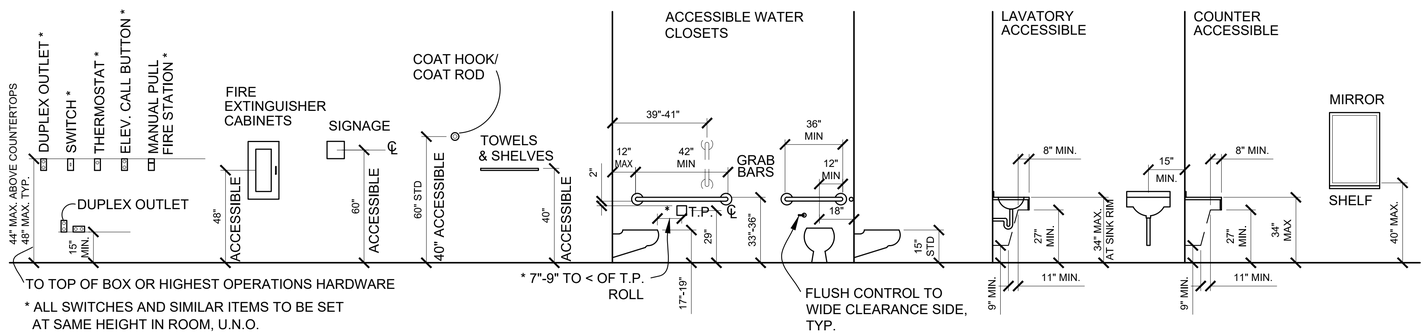
2/5 *INTERIOR ELEVATION*



3/5 *INTERIOR ELEVATION*



4/5 *INTERIOR ELEVATION*



DISABLE ACCESSIBLE MOUNTING HEIGHTS

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WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

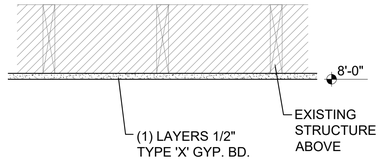
COMFORT STATION RENOVATION

INTERIOR ELEVATIONS
ROOM SCHEDULE
DISABLE ACCESSIBLE MOUNTING HEIGHTS

SHEET 5 OF 17

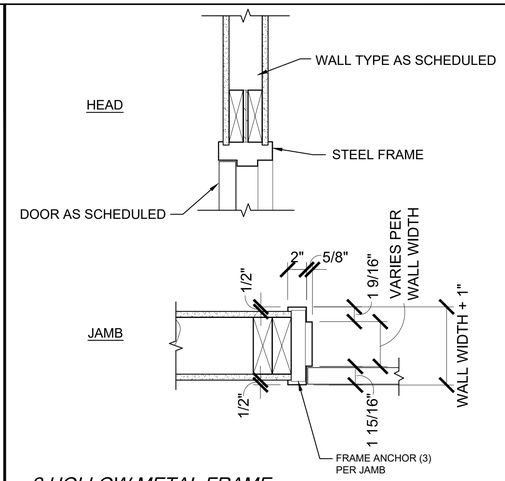
SCALE
1' 3'
0 2' 6'

PARKS FILE#



1 CEILING

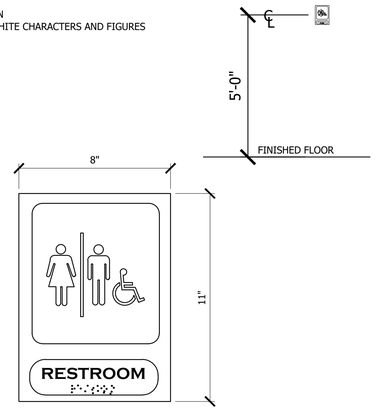
SCALE: 1 1/2" = 1'-0"



2 HOLLOW METAL FRAME

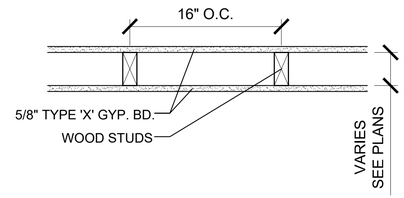
SCALE: 1 1/2" = 1'-0"

NOTE:
ACCESSIBLE RESTROOM SIGN
BLUE BACKGROUND WITH WHITE CHARACTERS AND FIGURES



3 DISABLED ACCESSIBLE SIGN

SCALE: 3" = 1'-0"

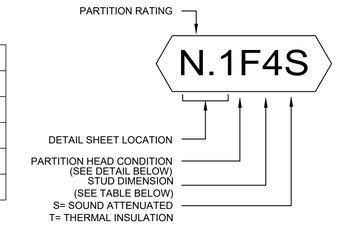


N.1 TYPICAL INTERIOR WALL ASSEMBLY

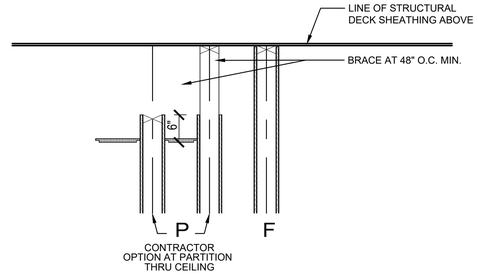
SCALE: 1 1/2" = 1'-0"

FIREBLOCKING CONSTRUCTION: (1BC SEC. 717)
FIREBLOCKING SHALL BE 2" NOM. LUMBER OR (2) LAYERS 1" NOM. LUMBER W/ BROKEN LAP JOINTS OR (1) LAYER OF 0.719 INCH WOOD STRUCTURAL PANELS OR (1) 0.75 INCH PARTICLEBOARD W/ JTS BACKED W/ 0.75 INCH PARTICLEBOARD. FIREBLOCKS MAY ALSO BE GWB, CEMENT BD., MINERAL FIBER, GLASS FIBER OR OTHER APPROVED MATERIALS SECURELY FASTENED IN PLACE. FIRESTOP WALLS HAVING PARALLEL OF STAGGERED STUDS (FOR SOUND TRANSMISSION CONTROL) W/ MINERAL FIBER, GLASS FIBER OR OTHER APPROVED NON-RIGID MATERIAL.

PARTITION RATING	
N	NON RATED
1	1 HOUR
2	2 HOUR
3	3 HOUR
4	4 HOUR



NOTE:
SOUND ATTENUATED CONDITION DEFINED BY "S" REQUIRES ACOUSTICAL INSULATION IN ALL WALL VOIDS & ACOUSTICAL SEALANT AT TOP/BOTTOM & EDGES OF WALL CONSTRUCTION AND PER GA-600-2006 FIRE RESIST. DESIGN MANUAL, SECTION III.



	STUD DIMENSION	CMU NOM. DIM.	ACOUSTIC INSUL	THERMAL INSUL
0	-		N.A.	N.A.
1	3/4" WOOD		1" UNO.	1" UNO.
2	1 1/2" WOOD		2 1/2" UNO.	2 1/2" UNO.
4	3 1/2" WOOD	4"	3.5" UNO	3 1/2" R11 UNO
6	5 1/2" WOOD	6"	5.5" UNO.	5 1/2" R21 UNO.
8	7 1/4" WOOD	8"	5.5" UNO.	5 1/2" R21 UNO.
10	9 1/4" WOOD	10"	5.5" UNO.	5 1/2" R21 UNO.
12	11 1/4" WOOD	12"	5.5" UNO.	5 1/2" R21 UNO.

PARTITION HEAD TYPES

SCALE: FULL SIZE

PARTITION ASSEMBLY HEAD TYPES

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PROJECT ARCHITECT

WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

DETAILS

SHEET 6 OF 17

SCALE
1' 3'
0 2' 6'

PARKS FILE#

EXHAUST FAN SCHEDULE

#	MFR	MODEL	TYPE	CFM	DRIVE	ESP (")	RPM	INLET SONES	WEIGHT (LBS)	MOTOR V/PH	MOTOR HP	NOTES
EF-1	COOK	100SQN15D	INLINE	550	DIRECT	0.5	1677	6.8	50	120/1	1/8	1

NOTES:

1. FEATURES, OPTIONS AND ACCESSORIES SHALL INCLUDES:
   - DISCONNECTS PROVIDED BY DIV 26.
   - EC MOTOR WITH MANUAL SPEED ADJUSTMENT DIAL ON MOTOR.
   - FACTORY MOUNTING BRACKET.
   - 120V MOTORIZED BACKDRAFT DAMPER

AIR OUTLETS SCHEDULE

#	MFR	MODEL	SERVICE	TYPE	MATERIAL	PATTERN	FINISH	BLADE SPC (")	BLADE POS	BLADE DEFL (°)	NOTES
1	PRICE	96	HEAVY DUTY RETURN	GRILLE	ALUMINUM	FIXED	ALUM.	3/4	ANGLED DOWN	45	1,2,3

NOTES:

1. PAINT THE INSIDE SURFACE OF THE DUCT CONNECTION FLAT BLACK, UNLESS OTHERWISE PROVIDED WITH DUCT LINER.
2. PROVIDE BALANCING DAMPER IN BRANCH DUCT SERVING AIR OUTLET AT TAKEOFF FROM TRUNK DUCT.
3. PROVIDE TRANSITION FROM AIR OUTLET NECK TO BRANCH DUCT AS REQUIRED.

ELECTRIC WALL HEATER SCHEDULE

#	MFR	MODEL	MOUNTING	CFM	ΔT (°F)	ELECTRICAL V/PH	ELECTRICAL WATTS	NOTES
EH-1	INDEECO	WRI	RECESSED WALL	40	60	240/1	750	1
EH-2	INDEECO	WRI	RECESSED WALL	40	60	240/1	750	1
EH-3	INDEECO	CLI	RECESSED CEILING	80	50	240/1	1250	1
EH-4	INDEECO	CLI	RECESSED CEILING	80	50	240/1	1250	1
EH-5	INDEECO	CLI	RECESSED CEILING	80	50	240/1	1250	1
EH-6	INDEECO	CLI	RECESSED CEILING	80	50	240/1	1250	1

NOTES:

1. FEATURES, OPTIONS AND ACCESSORIES SHALL INCLUDE:
   - INTEGRAL TAMPER-PROOF THERMOSTAT
   - PROVIDE WITH WALL BOX FOR RECESSED MOUNTING AND FACTORY DISCONNECT.
   - CONFIRM COLOR SELECTION WITH ARCHITECT

ROOF HOOD SCHEDULE

#	MFR	MODEL	SERVICE	SIZE (W"XH")	CFM	MAX S.P. (" WC)	NOTES
RH-1	GREENHECK	GRSR	EF-1 EXHAUST	10X10	550	0.10	1

NOTES:

1. FEATURES, OPTIONS AND ACCESSORIES SHALL INCLUDE:
   - ALUMINUM INSECT SCREEN.
   - PRE-FABRICATED ROOF CURB FOR PITCHED SHINGLES ROOF APPLICATION
   - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING LOCATION.

GENERAL NOTES

1. THE MECHANICAL SYSTEMS SHALL CONSIST OF ALL WORK SHOWN ON THE MECHANICAL DRAWINGS, DIAGRAMS AND AS DESCRIBED IN ASSOCIATED TECHNICAL SPECIFICATIONS.
2. REFER TO SPECIFICATIONS AND ALL OTHER DIVISION DOCUMENTS FOR ADDITIONAL REQUIREMENTS. COORDINATE WORK SHOWN ON THE DRAWINGS WITH THE SPECIFICATIONS. IN CASE OF DISCREPANCY BETWEEN SPECIFICATIONS AND DRAWINGS REFER TO THE GENERAL CONDITIONS AND NOTIFY THE A/E FOR DIRECTION.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES.
4. MODEL NUMBERS OF EQUIPMENT SHOWN ON THE SCHEDULES AND THROUGHOUT THE DRAWINGS AND SPECIFICATIONS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MFR/MODEL ALONE. REVIEW THE COMPLETE DESCRIPTION, LOCATION AND ARRANGEMENT ON THE DRAWINGS, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL, CONFIGURATION AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS OF DESIGN.
5. HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE 2018 WA STATE ENERGY CODE, THE PROJECT SPECIFICATIONS AND GENERALLY ACCEPTED ENGINEERING STANDARDS TO ENSURE AT A MINIMUM THAT AIR AND WATER FLOW RATES ARE MEASURED AND ADJUSTED TO DELIVER THE DESIGN RATES WITHIN SPECIFIED TOLERANCES.
6. THE MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL REQUIRED OFFSETS AND FITTINGS. PROVIDE ALL NECESSARY OFFSETS, TRANSITIONS AND FITTINGS REQUIRED FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS FOR COORDINATION PURPOSES TO AVOID CONFLICTS.
7. INSTALL ALL MECHANICAL WORK AS HIGH AS POSSIBLE, TIGHT TO STRUCTURE ABOVE, UNLESS NOTED OTHERWISE. IN GENERAL IT IS THE INTENT THAT ALL MECHANICAL SYSTEMS BE CONCEALED ABOVE CEILINGS OR INSIDE WALLS AND SHAFTS.
8. COORDINATE ALL EXPOSED MECHANICAL SYSTEMS, PIPING AND DUCTWORK SO THAT LOCATIONS AND ROUTING ARE INTEGRATED WITH THE OTHER BUILDING ELEMENTS (WALLS, ROOFS, JOISTS, LIGHTS, ETC.). GENERALLY RUN SYSTEMS PARALLEL OR PERPENDICULAR TO BUILDING ELEMENTS AND RUN IN A MANNER TO CONCEAL OR BLEND WITH BUILDING LINES.
9. PROVIDE NEC CODE MINIMUM HORIZONTAL AND VERTICAL WORKING CLEARANCES FOR ALL ELECTRICAL PANELS AND EQUIPMENT. OFFSET MECHANICAL WORK AS REQUIRED.
10. COORDINATE ALL MECHANICAL WORK WITH THAT OF OTHER TRADES TO ENSURE PROPER INTERFACE, ADEQUATE CLEARANCES, AND TO AVOID CONFLICTS. PROVIDE FIELD COORDINATION AND/OR DRAWINGS PRIOR TO FABRICATION AND/OR INSTALLATION. CONFLICTS AND INTERFERENCES THAT COULD HAVE BEEN AVOIDED BY PROPER PRE-PLANNING AND COORDINATION SHALL BE REMOVED AND CORRECTED AT NO COST TO THE OWNER.
11. FIELD LOCATE ALL ROOF, FLOOR AND WALL PENETRATIONS AND ADJUST TO AVOID CONFLICT WITH STRUCTURAL ELEMENTS, BEAMS, CROSS-BRACING, ARCHITECTURAL ELEMENTS. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING ALL SAW CUTTING AND DRILLING REQUIRED FOR MECHANICAL SYSTEM OPENINGS.
12. HANGERS, SUPPORTS AND ANCHORS FOR MECHANICAL SYSTEMS AND EQUIPMENT ARE NOT NECESSARILY DESIGNED OR SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORT MEMBERS, HANGERS, BRACKETS, HARDWARE, CLEVIS HANGERS, RODS, ETC. TO SECURELY HANG, BRACE AND SUPPORT MECHANICAL SYSTEMS, DUCTWORK, PIPING, EQUIPMENT AND OTHER DEVICES. ANCHOR SUPPORTS TO BUILDING STRUCTURE OR OTHER APPROPRIATE BUILDING ELEMENTS. SEE TYPICAL MECHANICAL DETAILS, ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION, LIMITATIONS AND DETAILS.
13. ROOF CURBS: ROOF CURBS SHALL BE MOUNTED PLUMB AND LEVEL ON PITCHED ROOFS. PROVIDE FACTORY CURBS WITH CORRECT SLOPE OR PROVIDE FIELD INSTALLED BLOCKING AND SHIMS BELOW CURB. ALL WOOD PRODUCTS SHALL BE PRESSURE TREATED LUMBER.
14. COORDINATE THE FURNISHING AND INSTALLATION OF ALL ELECTRICAL DISCONNECT SWITCHES, STARTERS, VFDS, ETC., IN ORDER TO ASSURE THAT ALL ENERGIZED MECHANICAL IS PROVIDED WITH THE REQUIRED CIRCUIT PROTECTION METHODS AND CONTROL DEVICES. WHERE DRAWINGS NOTES, SCHEDULES AND EQUIPMENT SPECIFICATIONS ARE SILENT OR UNCLEAR AS TO WHICH DIVISION (22-PLBG, 23-HVAC, OR 26-ELECTRICAL) IS TO PROVIDE THESE DEVICES, THE CONTRACTOR SHALL CONTACT THE ENGINEER, PRIOR TO BID, FOR DIRECTION.
15. VOLUME DAMPERS ARE NOT SHOWN FOR CLARITY. PROVIDE A DAMPER FOR EACH SUPPLY, RETURN AND EXHAUST OPENING AND IN BRANCHES WHERE THREE OR MORE OPENINGS ARE ASSOCIATED WITH THE BRANCH AND ELSEWHERE AS NOTED ON THE DRAWINGS OR SPECIFICATIONS.
16. PROVIDE CONCEALED DAMPER REGULATORS FOR ALL VOLUME DAMPERS OVER INACCESSIBLE CEILINGS AND SOFFITS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
17. PROVIDE DIFFUSER AND GRILLE FRAMES COMPATIBLE WITH ARCHITECTURAL CEILING TYPE. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPE.
18. ALL DUCTWORK SIZES SHOWN ARE OUTSIDE DIMENSIONS, UNLESS SPECIFICALLY NOTED ON PLANS. DUCT LINER HAS BEEN ACCOUNTED FOR ON LINED DUCT. ADDITIONAL CLEARANCE WILL NEED TO BE ACCOUNTED FOR FOR EXTERNALLY INSULATED DUCT.
19. TURNING VANES: ALL RECTANGULAR DUCT ELBOWS SHALL BE PROVIDED WITH TURNING VANES, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DUCTWORK DRAWING PLANS AND SECTIONS.
20. PROVIDE TRANSITIONS AS REQUIRED TO TO CONNECT DUCTWORK TO TERMINAL UNITS, FANS, AIR HANDLERS CONNECTIONS, ETC.
21. PROVIDE FLEXIBLE DUCT FITTINGS ON CONNECTIONS TO ALL ENERGIZED AIR MOVING EQUIPMENT (FANS, AIR HANDLERS, ETC.).

MECHANICAL ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	HW	HOT WATER
ABV	ABOVE	HX	HEAT EXCHANGER
AD	ACCESS DOOR	HZ	HERTZ
AFS	AIR FLOW SWITCH	ID	INSIDE DIAMETER
AFF	ABOVE FINISHED FLOOR	INV	INVERT
AG	ABOVE GROUND	I.E.	INVERT ELEVATION
AHU	AIR HANDLING UNIT	INSUL	INSULATION
AL	ACOUSTICALLY LINED	IND	INDIRECT
ALUM	ALUMINUM	KW	KILOWATT
APD	AIR PRESSURE DROP	KWH	KILOWATT HOUR
ARCH	ARCHITECT	LAT	LEAVING AIR TEMPERATURE
AVG	AVERAGE		
AWT	AVERAGE WATER TEMPERATURE	LBS	POUNDS
		LDB	LEAVING DRY BULB
BAS	BUILDING AUTOMATION SYSTEM	LF	LINEAR FOOT
		LWT	LEAVING WATER TEMPERATURE
BDD	BACKDRAFT DAMPER		
BFF	BELOW FINISHED FLOOR	LG	LONG OR LENGTH
BFP	BACKFLOW PREVENTER	L/P	LOW POINT
BG	BELOW GROUND	LWB	LEAVING WET BULB
BHP	BRAKE HORSEPOWER	LWG	LOW WALL GRILLE
BLDG	BUILDING	LWT	LEAVING WATER TEMPERATURE
BP	BYPASS		
BTU	BRITISH THERMAL UNIT	LVG	LEAVING
BTUH	BRITISH THERMAL UNITS PER HOUR	MCA	MINIMUM CIRCUIT AMPACITY
BOD	BOTTOM OF DUCT	MOCP	MAXIMUM OVERCURRENT PROTECTION
BOP	BOTTOM OF PIPE		
BSMT	BASEMENT	MBH	THOUSAND (1000) BTU PER HOUR
BV	BALANCING VALVE		
CA	COMBUSTION AIR	MCC	MOTOR CONTROL CENTER
CAP	CAPACITY	MFR	MANUFACTURER
CC	CENTER TO CENTER OR COOLING COIL	MS	MOTOR STARTER
		MTD	MOUNTED
CD	CEILING DIFFUSER	MTG	MOUNTING
CFM	CUBIC FEET PER MINUTE	NC	NORMALLY CLOSED
CG	CEILING GRILLE	NO	NORMALLY OPEN
CI	CAST IRON	MOD	MOTOR-OPERATED DAMPER
CLG	CEILING		
COG	CLEAN OUT TO GRADE	NIC	NOT IN CONTRACT
CO	CLEAN OUT	NPT	NATIONAL PIPE THREAD
COMB	COMBUSTION	NTS	NOT TO SCALE
COND	CONDENSATE OR CONDENSER	OA	OUTDOOR AIR
		OBD	OPPOSED BLADE DAMPER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONST	CONSTRUCTION	OSA	OUTSIDE AIR
COP	COEFFICIENT OF PERFORMANCE	OAT	OUTSIDE AIR TEMPERATURE
CU	COPPER	OF	OVERFLOW
CUH	CABINET UNIT HEATER	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
CW	COLD WATER		
CU	CONDENSING UNIT		
CR	CONDENSATE RETURN	PD	PRESSURE DROP
CL	CENTER LINE	PH	PHASE
D	DEEP OR DEPTH	PIAC	PRESSURE INDEPENDENT AIR CONTROLLER
DB	DRY BULB OR DECIBEL		
DBA	A-WEIGHTED DECIBELS	PG	PROPYLENE GLYCOL
DCV	DEMAND CONTROL VENTILATION	PLBG	PLUMBING
		POC	POINT OF CONNECTION
DDC	DIRECT DIGITAL CONTROLS	PRV	PRESSURE REDUCING VALVE
DEMO	DEMOLITION	PSI	POUNDS PER SQUARE INCH
DN	DOWN		
DIA,	DIAMETER Ø	PSIG	POUNDS PER SQUARE INCH GAUGE
DPS	DIFFERENTIAL PRESSURE SWITCH	PT	PRESSURE & TEMPERATURE
DP	DROP		
DPR	DAMPER	RA	RETURN AIR
DWG	DRAWING	RAG	RETURN AIR GRILLE
(E)	EXISTING	RAT	RETURN AIR TEMPERATURE
EA	EACH OR EXHAUST AIR		
EAT	ENTERING AIR TEMPERATURE	RD	ROOF DRAIN
		RET	RETURN
EDB	ENTERING DRY BULB	REV	REVISION
EER	ENERGY EFFICIENCY RATIO	RF	RETURN FAN
		RPM	REVOLUTIONS PER MINUTE
EF	EXHAUST FAN		
EFF	EFFICIENCY	RTU	ROOF TOP UNIT
EG	EXHAUST GRILLE	SA	SUPPLY AIR
ELEC	ELECTRIC OR ELECTRICAL	SAT	SUPPLY AIR TEMPERATURE
ELEV	ELEVATION		
EMCS	ENERGY MANAGEMENT AND CONTROL SYSTEM	SEER	SEASONAL ENERGY EFFICIENT RATIO
ENCL	ENCLOSURE	SENS	SENSIBLE
ESP	EXTERNAL STATIC PRESSURE	SD	SMOKE DETECTOR OR DAMPER
EST	ESTIMATE(D)	SF	SUPPLY FAN
EWB	ENTERING WET BULB	SFD	SMOKE-FIRE DAMPER
EWT	ENTERING WATER TEMPERATURE	SHT	SHEET
		SP	STATIC PRESSURE
EXH	EXHAUST	SQ	SQUARE
FA	FRESH AIR (OUTSIDE AIR)	SQ	FT SQUARE FOOT
FCO	FLOOR CLEAN OUT	SS	STAINLESS STEEL
FCU	FAN COIL UNIT	STD	STANDARD
FD	FIRE DAMPER OR FLOOR DRAIN	TA	TRANSFER AIR
		TEMP	TEMPERATURE
FDC	FIRE DEPARTMENT CONNECTION	TH	THICK OR THICKNESS
		TOD	TOP OF DUCT
FF	FINAL FILTER	TOP	TOP OF PIPE
FLA	FULL LOAD AMPS	TP	TRAP PRIMER
FLR	FLOOR	TYP	TYPICAL
FOB	FLAT ON BOTTOM	UF	UNDER FLOOR
FOT	FLAT ON TOP	UG	UNDERGROUND
FPM	FEET PER MINUTE	UH	UNIT HEATER
FPI	FINS PER INCH	UR	URINAL
FPS	FEET PER SECOND	US	UNDER SLAB
FP	FIRE PROTECTION	V	VENT OR VOLT
FS	FLOOR SINK	VAC	VACUUM
FT	FEET/FOOT OR FINNED TUBE	VAV	VARIABLE AIR VOLUME
		VEL	VELOCITY
FV	FACE VELOCITY	VFD	VARIABLE FREQUENCY DRIVE
G	GAS (NATURAL)		
GA	GAUGE OR GAGE	VTR	VENT THRU ROOF
GAL	GALLONS	VD	VOLUME DAMPER
GALV	GALVANIZED	WB	WET BULB
GPM	GALLONS PER MINUTE	WC	WATER CLOSET
GPH	GALLONS PER HOUR	WCO	WALL CLEAN OUT
H	HIGH OR HEIGHT	WH	WATER HEATER
HB	HOSE BIBB	WHA	WATER HAMMER ARRESTOR
HC	HEATING COIL		
HD	HEAD	WG	WATER GAUGE
HGBP	HOT GAS BYPASS	WPD	WATER PRESSURE DROP
HL	HIGH LIMIT	WT	WEIGHT
HP	HORSEPOWER		
HTG	HEATING		

HVAC SYMBOLS

- 12x8 — RECT. DUCT SIZE (INCHES) (FACING SIDE LISTED FIRST)
- 12Ø — CIRCULAR DUCT DIAMETER (INCHES)
- 24x18 F.O. — FLAT OVAL DUCT SIZE (INCHES)(FACING SIDE LISTED FIRST)
- ACOUSTICALLY LINED DUCT, 1" THICK UNLESS NOTED OTHERWISE, DUCT SIZE INCLUDES ALLOWANCE FOR LINER
- R — DUCT RISE IN DIRECTION OF ARROW
- D — DUCT DROP IN DIRECTION OF ARROW
- # — FIRE OR FIRE/SMOKE DAMPER (# INDICATES TYPE)
- TURNING VANES
- HIGH EFFICIENCY BRANCH TAP
- FLEXIBLE DUCT CONNECTOR
- VD — VOLUME CONTROL DAMPER (SEE GENERAL NOTES)
- M — MOTORIZED DAMPER & ACTUATOR
- SUPPLY/OSA DUCT TURNED UP
- SUPPLY/OSA DUCT TURNED DOWN
- RETURN AIR DUCT TURNED UP
- RETURN AIR DUCT TURNED DOWN
- EXHAUST/RELIEF DUCT TURNED UP
- EXHAUST/RELIEF DUCT TURNED DOWN
- FLEXIBLE DUCT
- SIDEWALL DIFFUSER/GRILLE
- LINEAR SLOT DIFFUSER
- AIR OUTLET (SUPPLY)
- AIR INLET (RETURN/RELIEF)
- AIR INLET (EXHAUST)
- LOUVER
- TA — THERMOSTAT OR TEMPERATURE SENSOR (SUBSCRIPT A=AVERAGING, G=PROTECTIVE GUARD, C=CO2 SENSOR)

GENERAL SYMBOLS

- 1 / M5.01 — SECTION IDENTIFYING NUMBER; CROSS-SECTION SYMBOL; SHEET WHERE SECTION IS SHOWN
- 1 / M6.01 — DETAIL IDENTIFYING NUMBER; DETAIL SYMBOL; SHEET WHERE DETAIL IS SHOWN
- POINT OF CONNECTION (POC) SYMBOL
- AHU-1 / AHU-1 — EQUIP. TYPE-NUMBER (SEE SCHEDULES); EQUIPMENT IDENTIFIER (OPTIONAL TAG STYLE)
- SIZE # CFM — DIFFUSER OR REGISTER/GRILLE TAG; CFM VALUE; DIFFUSER TYPE (SEE SCHEDULES); DIFFUSER SIZE
- 1 — REVISION CLOUD AND REVISION NUMBER

LINEWEIGHT LEGEND

- LIGHT LINES INDICATES EXISTING ITEMS TO REMAIN
- LIGHT DASHED LINES HIDDEN OR UNDERGROUND ITEMS
- BOLD LINES INDICATES NEW ITEMS
- BOLD DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED

NOTE:
LINEWEIGHTS ARE GENERAL GUIDES ONLY. REFER TO DRAWING NOTES AND WORK PHASES (DEMO OR NEW) FOR ADDITIONAL DISTINCTIONS.

CAD NO. 23010

	DATE
09/20/23	DATE
	APP.
	INT.
	REVISIONS
	NO.

ACTION	BY	DATE
DESIGNED	ASD	09-20-23
DRAWN	ASD	09-20-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

AARON S. DONNELLY — STATE OF WASHINGTON — 43373 — REGISTERED PROFESSIONAL ENGINEER

PROJECT ENGINEER

WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

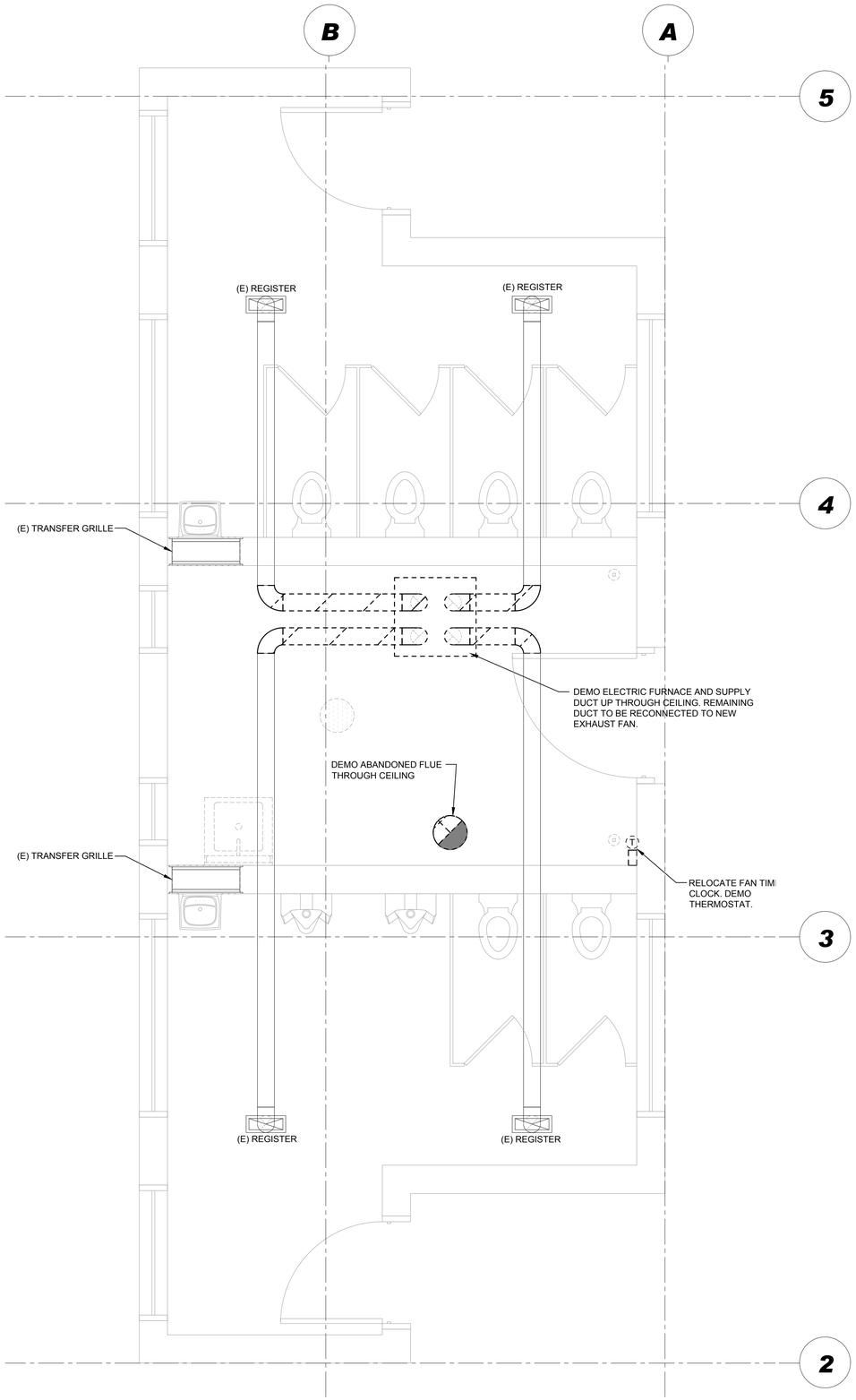
COMFORT STATION RENOVATION

MECHANICAL SCHEDULES, NOTES, LEGENDS, ABBREVIATIONS

SHEET 7 OF 17

SCALE

PARKS FILE#



MECHANICAL DEMO PLAN - HVAC

CAD NO. 23010

DATE	APP.	INT.	REVISIONS	NO.
09/20/23				

ACTION	BY	DATE
DESIGNED	ASD	09-20-23
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CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

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LEWIS & CLARK TRAIL STATE PARK

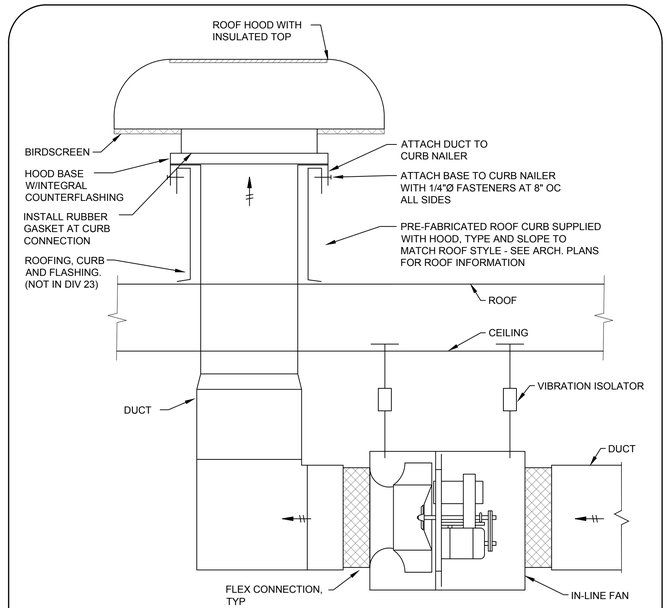
COMFORT STATION RENOVATION

MECHANICAL DEMO PLAN - HVAC

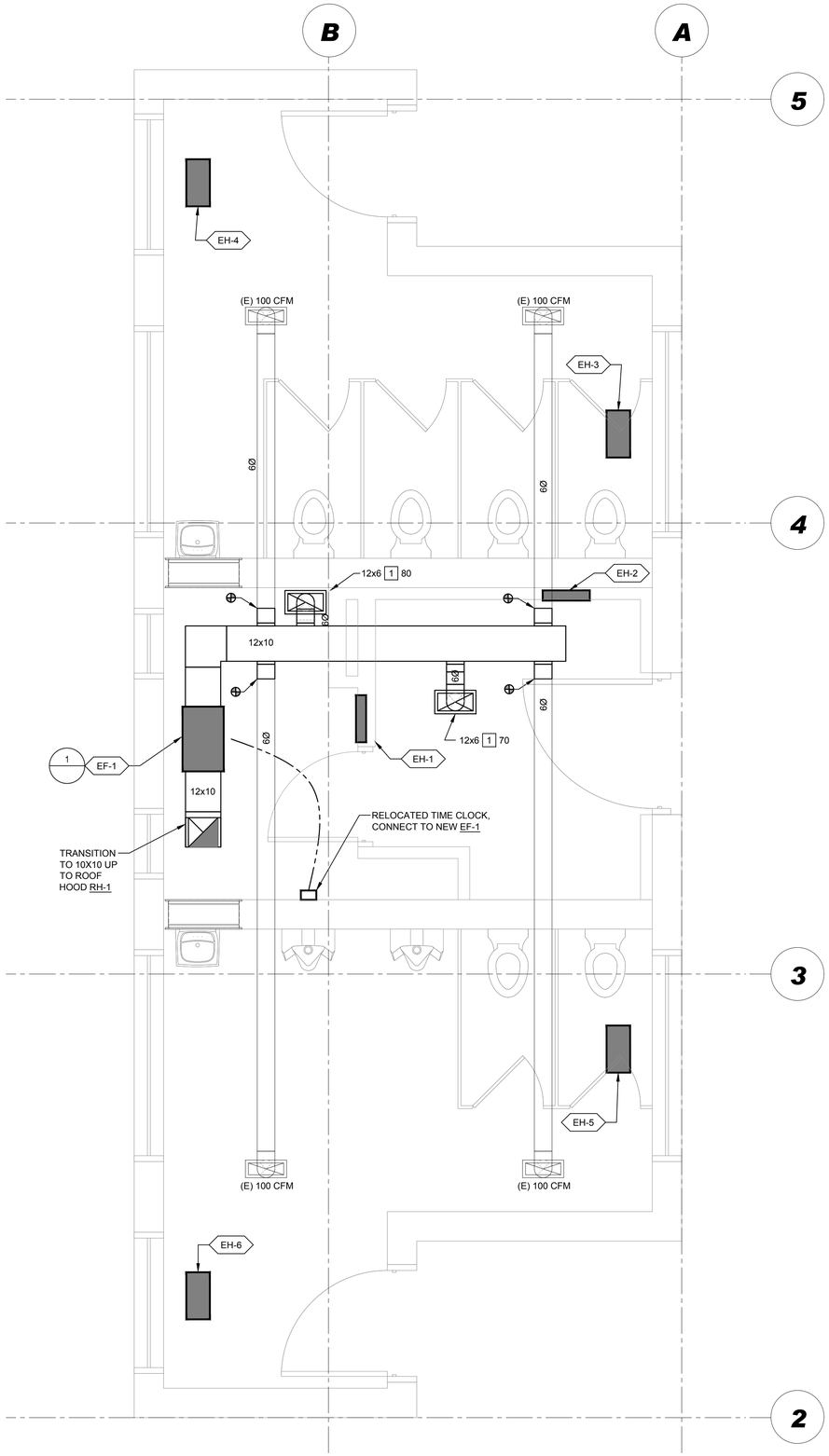
SHEET 8 OF 17

SCALE
6" 18"
0 1' 3'

PARKS FILE#



1 INLINE FAN AND ROOF HOOD DETAIL
Scale:NOT TO SCALE



2 MECHANICAL FLOOR PLAN - HVAC

CAD NO. 23010

DATE	APP.	INT.	REVISIONS	NO.
09/20/23				

ACTION	BY	DATE
DESIGNED	ASD	09-20-23
DRAWN	ASD	09-20-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

AARON S. DONNELLY STATE OF WASHINGTON 23373 REGISTERED PROFESSIONAL ENGINEER

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LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

MECHANICAL FLOOR PLAN - HVAC

SHEET 9 OF 17

SCALE 6" 18" 0 1' 3'

PARKS FILE#

PLUMBING FIXTURES

P#	FIXTURE	MFR	MODEL #	MOUNTING	MATERIAL	SIZE	MFR & MODEL# OF FAUCET & VALVE	DRAIN	CARRIER	TRAP	W	V	HW	CW	STOPS	NOTES
P1	SERVICE SINK	ACORN	TRH-24	FLOOR	TERRAZZO	24"x24"x12"	CHICAGO 897-CP	INTEGRAL	-	3" P-TRAP	3"	2"	3/4"	3/4"	-	3 4
P2	ADA WATER CLOSET	AMERICAN STANDARD	AFWALL 2257101.020	WALL	VITREOUS CHINA	ELONGATED BOWL	SLOAN ROYAL 111 1.6-TP	-	JAY R. SMITH 0200 SERIES	INTEGRAL	4"	2"	-	1"	INTEGRAL	2 3
P3	ADA LAVATORY	AMERICAN STANDARD	LUCERNE 0355.012	WALL	VITREOUS CHINA	20"x18"	CHICAGO 3502-E2805ABCP	ELKAY LKAD174	JAY R. SMITH 0700 SERIES	1¼"x17GA C.P.	1½"	1½"	1/2"	1/2"	BRASS CRAFT STCR1915A	1 2 3

NOTES:
1. PROVIDE WITH TRUEBRO TRAP & SUPPLIES WRAP KIT.
2. MOUNT PER ADA REQUIREMENTS.
3. CAULK FIXTURE AT FLOOR, COUNTERTOP AND/OR WALL SURFACE WITH CAULKING.
4. PROVIDE WITH HOSE, HOSE HANGER AND MOP HANGER.

FLOOR DRAIN SCHEDULE

FD-#	MFR	MODEL	TYPE	BODY		STRAINER/GRATE		VARIATION	NOTES
				STYLE	MATERIAL	STYLE	MATERIAL		
FD-1	JAY R. SMITH	2005-A-P-U-Y	FLOOR DRAIN	-	CAST IRON	VANDAL-PROOF ROUND	NICKEL BRONZED	TRAP PRIMER	1
FD-2	JAY R. SMITH	2142Y-P050	FLOOR DRAIN	-	CAST IRON	VANDAL-PROOF ROUND	CAST IRON	TRAP PRIMER	

NOTES:
1. PROVIDE WITH SUFFIX -C WHEN LOCATED IN MECHANICAL ROOMS AND SIMILAR SPACES.

WATER HEATER SCHEDULE

#	MFR	MODEL	GALLONS	KW INPUT	THERMAL EFFICIENCY	TEMPERATURES		RECOVERY (GPH)	ELECTRICAL	NOTES
						OUTLET (°F)	RISE (°F)			
WH-1	A.O. SMITH	DEL-15	19	1.5	99.86%	120	80	8	240V / 1PH	1
DET-1	AMTROL	ST-12	4.4	-	-	-	-	-	-	-

NOTES:
1. SINGLE ELEMENT / NON-SIMULTANEOUS OPERATION

WATER HAMMER ARRESTER SIZING CHART

SYMBOL	FIXTURE UNIT RATING	CONNECTION TO SUPPLY PIPE
WHA-1	1-11	3/4"
WHA-2	12-32	1"

GENERAL NOTES

1. THE PLUMBING SYSTEM SHALL CONSIST OF ALL WORK SHOWN ON DRAWINGS, DIAGRAMS AND AS DESCRIBED IN SPECIFICATIONS.
2. COORDINATE WITH SPECIFICATIONS. IN CASE OF DISCREPANCY BETWEEN SPECIFICATIONS AND DRAWINGS REFER TO THE GENERAL CONDITIONS AND NOTIFY THE A/E FOR DIRECTION.
3. INSTALL ALL PLUMBING WORK AS HIGH AS POSSIBLE, TIGHT TO STRUCTURE ABOVE. COORDINATE ALL EXPOSED PLUMBING SYSTEMS SO THAT LOCATIONS AND ROUTING ARE INTEGRATED WITH THE OTHER BUILDING ELEMENTS (WALLS, ROOFS, JOISTS, LIGHTS, ETC.). GENERALLY RUN SYSTEMS PARALLEL OR PERPENDICULAR TO BUILDING ELEMENTS AND RUN IN A MANNER TO CONCEAL OR BLEND WITH BUILDING LINES.
4. PROVIDE NEC CODE MINIMUM HORIZONTAL AND VERTICAL WORKING CLEARANCES FOR ALL ELECTRICAL PANELS AND EQUIPMENT. OFFSET PLUMBING WORK AS REQUIRED.
5. COORDINATE ALL PLUMBING WORK WITH THAT OF OTHER TRADES TO ENSURE PROPER INTERFACE, ADEQUATE CLEARANCES, AND TO AVOID CONFLICTS. PROVIDE FIELD COORDINATION AND/OR DRAWINGS PRIOR TO FABRICATION AND/OR INSTALLATION. CONFLICTS AND INTERFERENCES THAT COULD HAVE BEEN AVOIDED BY PROPER PRE-PLANNING AND COORDINATION SHALL BE REMOVED AND CORRECTED AT NO COST TO THE OWNER.
6. FIELD LOCATE ALL ROOF, FLOOR AND WALL PENETRATIONS AND ADJUST TO AVOID CONFLICT WITH STRUCTURAL ELEMENTS, BEAMS, CROSS-BRACING, ARCHITECTURAL ELEMENTS. DIV. 22 CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING ALL SAW CUTTING AND DRILLING REQUIRED FOR MECHANICAL SYSTEM OPENINGS.
7. ITEMS NOTED "TYPICAL" OR "TYP" ON ANY SHEET APPLY TO THAT PARTICULAR SHEET.
8. MODEL NUMBERS OF EQUIPMENT SHOWN ON THE SCHEDULES AND THROUGHOUT THE DRAWINGS AND SPECIFICATIONS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MFR/MODEL ALONE. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS OF DESIGN.
9. ALL INSULATED PIPING EXPOSED TO VIEW IN OCCUPIED SPACES SHALL BE PROVIDED WITH PVC JACKETING.
10. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS AND FLOOR SINKS, UNLESS NOTED OTHERWISE. TRAP PRIMER SOURCES SHALL BE EITHER FROM AUTOMATIC, ELECTRONIC TRAP PRIMER UNITS LOCATED IN THE VICINITY (FOR CLUSTERS OF MULTIPLE DRAINS), WATER CLOSET FLUSH VALVE TAPS, SINK TAIL PIECE BRANCHES, OR PRESSURE DROP OPERATED UNITS AS BEST FITS THE SITUATION. ALL FLOOR DRAINS AND FLOOR SINKS IN KITCHENS, MECHANICAL MEZZANINES, AND MECHANICAL ROOMS ARE REQUIRED TO BE INSTALLED WITH AUTOMATIC ELECTRONIC TRAP PRIMER UNITS.
11. PROVIDE AN ACCESS PANEL WHERE REQUIRED FOR ACCESS TO WATER HAMMER ARRESTORS. PROVIDE WATER HAMMER ARRESTORS AT THE FOLLOWING LOCATIONS:
    - HOT AND COLD WATER SERVING ALL RESTROOMS
    - AT ALL FLUSH VALVES AND OTHER QUICK ACTING VALVES
    - FIXTURES LOCATED AT THE END OF MAIN AND BRANCH PIPING RUNS
    - IN WATER SUPPLIES TO REMOTE SINKS
12. SMALL PIPING OR COMPONENTS: PIPING PLANS DO NOT NECESSARILY SHOW ALL SMALL PIPING OR COMPONENTS, INSTRUMENT TAPS OR DRAINS. PROVIDE ALL PIPING, VALVES, SPECIALTY ITEMS, INSTRUMENTATION, ETC. AS INDICATED ON THE PIPING FLOW DIAGRAMS, PIPING/EQUIPMENT DETAILS AND/OR CONTROL/INSTRUMENTATION DIAGRAMS.
13. THE MECHANICAL AND PLUMBING PLANS ARE DIAGRAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL REQUIRED OFFSETS AND FITTINGS. PROVIDE ALL NECESSARY OFFSETS, TRANSITIONS AND FITTINGS REQUIRED FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS FOR COORDINATION PURPOSES TO AVOID CONFLICTS.
14. COORDINATE ALL EXPOSED PLUMBING SYSTEMS SO LOCATIONS AND ROUTING ARE INTEGRATED WITH THE OTHER BUILDING ELEMENTS (WALLS, ROOFS, JOISTS, LIGHTS, ETC.). GENERALLY RUN SYSTEMS PARALLEL OR PERPENDICULAR TO BUILDING ELEMENTS AND RUN IN A MANNER TO CONCEAL OR BLEND WITH BUILDING LINES.
15. COORDINATE ALL WORK WITH THAT OF OTHER TRADES TO ENSURE PROPER INTERFACE, ADEQUATE CLEARANCES, AND TO AVOID CONFLICTS. PROVIDE FIELD COORDINATION AND/OR DRAWINGS PRIOR TO FABRICATION AND/OR INSTALLATION. CONFLICTS AND INTERFERENCES THAT COULD HAVE BEEN AVOIDED BY PROPER PRE-PLANNING AND COORDINATION SHALL BE REMOVED AND CORRECTED AT NO COST TO THE OWNER.
16. HANGERS, SUPPORTS AND ANCHORS FOR MECHANICAL AND PLUMBING SYSTEMS AND EQUIPMENT ARE NOT NECESSARILY DESIGNED OR SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORT MEMBERS, HANGERS, BRACKETS, HARDWARE, CLEVIS HANGERS, RODS, ETC. ANCHOR SUPPORTS TO BUILDING STRUCTURE OR OTHER APPROPRIATE BUILDING ELEMENTS.
17. COORDINATE THE FURNISHING AND INSTALLATION OF ALL ELECTRICAL DISCONNECT SWITCHES, STARTERS, VFDS, ETC., IN ORDER TO ASSURE THAT ALL ENERGIZED EQUIPMENT IS PROVIDED WITH THE REQUIRED CIRCUIT PROTECTION METHODS AND CONTROL DEVICES. WHERE DRAWINGS NOTES, SCHEDULES AND EQUIPMENT SPECIFICATIONS ARE SILENT OR UNCLEAR AS TO WHICH DIVISION (22-PLBG, 23-HVAC, OR 26-ELECTRICAL) IS TO PROVIDE THESE DEVICES, THE CONTRACTOR SHALL CONTACT THE ENGINEER, PRIOR TO BID.

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ABV	ABOVE
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AFS	AIR FLOW SWITCH
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GROUND
AHU	AIR HANDLING UNIT
AL	ACOUSTICALLY LINED
ALUM	ALUMINUM
APD	AIR PRESSURE DROP
ARCH	ARCHITECT
AVG	AVERAGE
AWT	AVERAGE WATER TEMPERATURE
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BG	BELOW GROUND
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BP	BYPASS
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
BV	BALANCING VALVE
C	CELSIUS
CA	COMBUSTION AIR
CAP	CAPACITY
CC	CENTER TO CENTER OR COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CI	CAST IRON
CLG	CEILING
COG	CLEAN OUT TO GRADE
CO	CLEAN OUT
COMB	COMBUSTION
COND	CONDENSATE OR CONDENSER
CONC	CONCRETE
CONST	CONSTRUCTION
COP	COEFFICIENT OF PERFORMANCE
CU	COPPER
CUH	CABINET UNIT HEATER
CW	COLD WATER
CU	CONDENSING UNIT
CR	CONDENSATE RETURN
CL	CENTER LINE
D	DEEP OR DEPTH
DB	DRY BULB OR DECIBEL
DBA	A-WEIGHTED DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DEMO	DEMOLITION
DN	DOWN
DIA, Ø	DIAMETER Ø
DPS	DIFFERENTIAL PRESSURE SWITCH
DP	DROP
DPR	DAMPER
DWG	DRAWING
(E)	EXISTING
EA	EACH OR EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EEF	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATION
EMCS	ENERGY MANAGEMENT AND CONTROL SYSTEM
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EST	ESTIMATE(D)
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FAHRENHEIT
FA	FRESH AIR (OUTSIDE AIR)
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FIRE DAMPER OR FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINAL FILTER
FLA	FULL LOAD AMPS
FLR	FLOOR
FLEX	FLEXIBLE
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FPI	FINS PER INCH
FPS	FEET PER SECOND
FP	FIRE PROTECTION
FS	FLOOR SINK
FT	FEET/FOOT OR FINNED TUBE
FV	FACE VELOCITY
G	GAS (NATURAL)
GA	GAUGE OR GAGE
GAL	GALLONS
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
GYP	GYPSUM WALL BOARD
H	HIGH OR HEIGHT
HB	HOSE BIBB
HD	HEAD
HGBP	HOT GAS BYPASS
HL	HIGH LIMIT
HP	HORSEPOWER OR HIGH POINT
HW	HOT WATER
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
INV	INVERT
I.E.	INVERT ELEVATION
INSUL	INSULATION
IND	INDIRECT
KW	KILOWATT
KWH	KILOWATT HOUR
L	LENGTH OR LOUVER
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LDB	LEAVING DRY BULB
LF	LINEAR FOOT
LWT	LEAVING WATER TEMPERATURE
LG	LONG OR LENGTH
L/P	LOW POINT
LWB	LEAVING WET BULB
LWG	LOW WALL GRILLE
LWT	LEAVING WATER TEMPERATURE
LVG	LEAVING
MCA	MINIMUM CIRCUIT AMPACITY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MBH	THOUSAND (1000) BTU PER HOUR
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MS	MOTOR STARTER
MTD	MOUNTED
MTG	MOUNTING
MAU	MAKE-UP AIR UNIT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
MOD	MOTOR-OPERATED DAMPER
NIC	NOT IN CONTRACT
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTDOOR AIR
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
OSA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OF	OVERFLOW
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
PD	PRESSURE DROP
PH	PHASE
PIAC	PRESSURE INDEPENDENT AIR CONTROLLER
PG	PROPYLENE GLYCOL
PLBG	PLUMBING
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PRESSURE & TEMPERATURE
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RAT	RETURN AIR TEMPERATURE
RD	ROOF DRAIN
RET	RETURN
REV	REVISION
RF	RETURN FAN
RPM	REVOLUTIONS PER MINUTE
RHW	RECIRCULATING HOT WATER
RTU	ROOF TOP UNIT
S	SINK
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SEER	SEASONAL ENERGY EFFICIENT RATIO
SENS	SENSIBLE
SD	SMOKE DETECTOR OR DAMPER
SF	SUPPLY FAN
SFD	SMOKE-FIRE DAMPER
SHT	SHEET
SP	STATIC PRESSURE
SQ	SQUARE
SQ	FT SQUARE FOOT
SS	STAINLESS STEEL
STD	STANDARD
TA	TRANSFER AIR
TEMP	TEMPERATURE
TH	THICK OR THICKNESS
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TP	TRAP PRIMER
TU	TERMINAL UNIT
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDERGROUND
UH	UNIT HEATER
UR	URINAL
US	UNDER SLAB
V	VENT OR VOLT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
VTR	VENT THRU ROOF
VD	VOLUME DAMPER
W	WIDE OR WIDTH
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WT	WEIGHT

PLUMBING SYMBOLS

- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- CONCENTRIC REDUCER/INCREASER
- ECCENTRIC REDUCER/INCREASER
- UNION
- RISE/DROP IN PIPE
- VENT THRU ROOF
- CAP
- CLEAN-OUT (WALL)
- CLEAN-OUT (FLUSH TO FLOOR OR GRADE)
- FLOOR DRAIN
- CIRCULATING PUMP
- VALVE (AS INDICATED OR SPECIFIED)
- CHECK VALVE
- PRESSURE & TEMPERATURE RELIEF VALVE
- PRESSURE REDUCING VALVE (POINTS TOWARDS LOW PRESSURE)
- GAS VALVE
- SOLENOID VALVE
- HOSE BIBB
- CIRCUIT SETTER
- VALVE BOX W/ VALVE (AS SPECIFIED)
- THERMOMETER
- PRESSURE GAGE

PLUMBING LEGEND

- COLD WATER
- HOT WATER
- HOT WATER RETURN
- VENT
- SAN — SANITARY DRAIN ABOVE FLOOR
- SAN — SANITARY DRAIN BELOW FLOOR
- ST — STORM DRAIN ABOVE FLOOR
- ST — STORM DRAIN BELOW FLOOR

GENERAL SYMBOLS

- 1 / M5.01 — SECTION IDENTIFYING NUMBER; CROSS-SECTION SYMBOL; SHEET WHERE SECTION IS SHOWN
- 1 / M6.01 — DETAIL IDENTIFYING NUMBER; DETAIL SYMBOL; SHEET WHERE DETAIL IS SHOWN
- POINT OF CONNECTION (POC) SYMBOL
- EQUIP. TYPE-NUMBER (SEE SCHEDULES)
- RCP-1 / RCP-1 — EQUIPMENT IDENTIFIER (OPTIONAL TAG STYLE)
- 1 — REVISION CLOUD AND REVISION NUMBER

LINEWEIGHT LEGEND

- LIGHT SOLID LINES INDICATES EXISTING ITEMS TO REMAIN
- LIGHT DASHED LINES GENERALLY INDICATE HIDDEN OR UNDERGROUND PIPING OR EQUIPMENT
- DARK LINE INDICATES NEW PIPING & EQUIPMENT
- DARK DASHED LINES INDICATE EXISTING PIPING & EQUIPMENT TO BE REMOVED (FLOOR PLANS & SECTIONS)
- DASHED LINES INDICATE EXISTING PIPING & EQUIPMENT TO BE REMOVED (DEMOLITION DETAILS & FLOW DIAGRAMS)

NOTE:
LINEWEIGHTS ARE GENERAL GUIDES ONLY. REFER TO DRAWING NOTES AND WORK PHASES (DEMO OR NEW) FOR ADDITIONAL DISTINCTIONS.

CAD NO. 23010

09/20/23 — DATE

APP.

INT.

REVISIONS

NO.

ACTION	BY	DATE
DESIGNED	ASD	09-20-23
DRAWN	ASD	09-20-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

AARON S. DONNELLY — STATE OF WASHINGTON — 43373 — REGISTERED PROFESSIONAL ENGINEER

PROJECT ENGINEER

WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

PLUMBING SCHEDULES, NOTES, LEGENDS, ABBREVIATIONS

SHEET 10 OF 17

SCALE

PARKS FILE#

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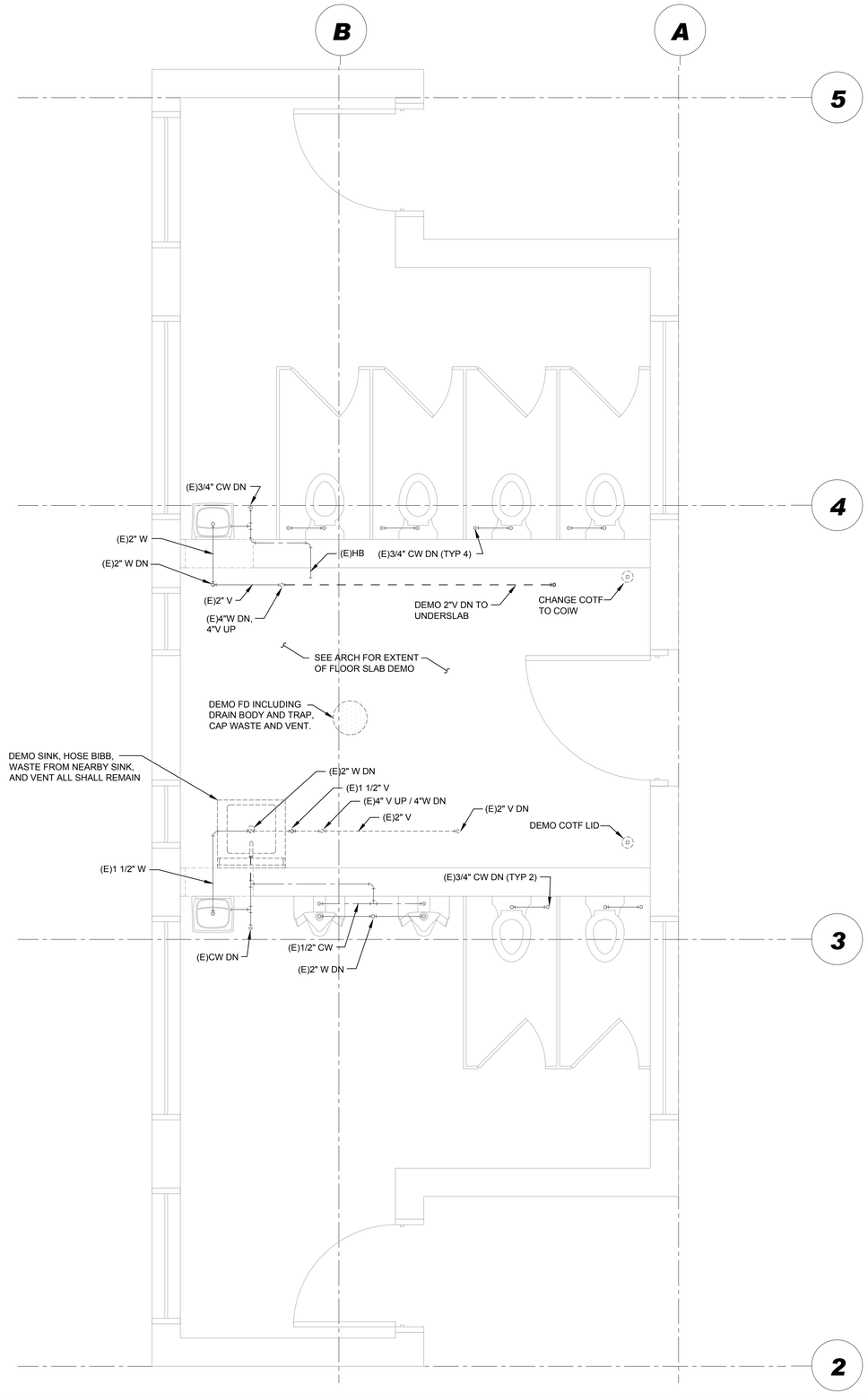

PLUMBING DEMO PLAN

CAD NO. 23010

	DATE
09/20/23	
	APP.
	INT.
	REVISIONS
	NO.

ACTION	BY	DATE
DESIGNED	ASD	09-20-23
DRAWN	ASD	09-20-23
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CHECKED (HDQTS.)	XX	XX/XX/XX

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LEWIS & CLARK TRAIL STATE PARK

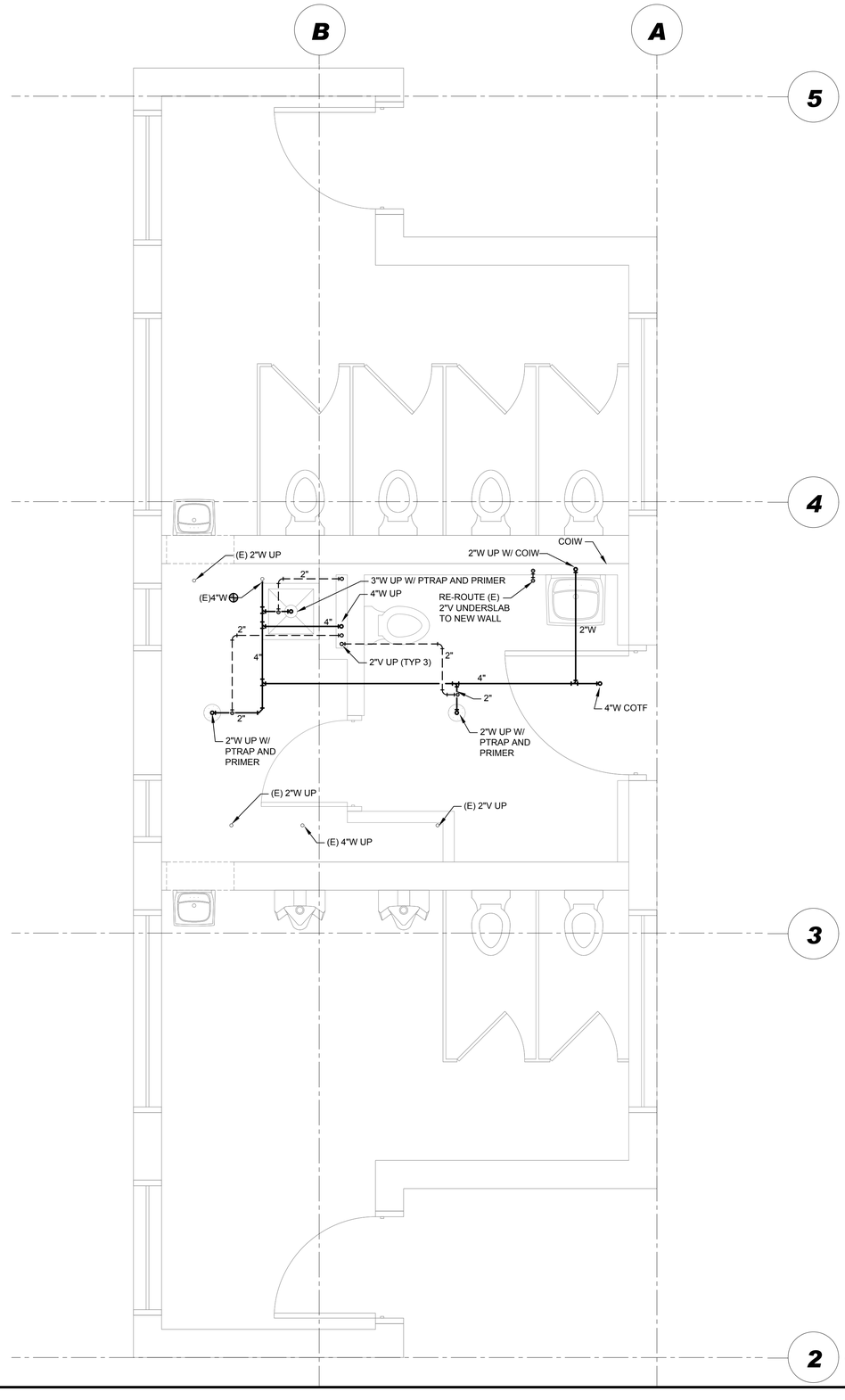
COMFORT STATION RENOVATION

PLUMBING DEMO PLAN

SHEET 11 OF 17

SCALE
6" 18"
0 1' 3'

PARKS FILE#



2 PLUMBING FOUNDATION PLAN

CAD NO. 23010

DATE	APP.	INT.	REVISIONS	NO.
09/20/23				

ACTION	BY	DATE
DESIGNED	ASD	09-20-23
DRAWN	ASD	09-20-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

AARON S. DONNELLY STATE OF WASHINGTON 43373 REGISTERED PROFESSIONAL ENGINEER

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LEWIS & CLARK TRAIL STATE PARK

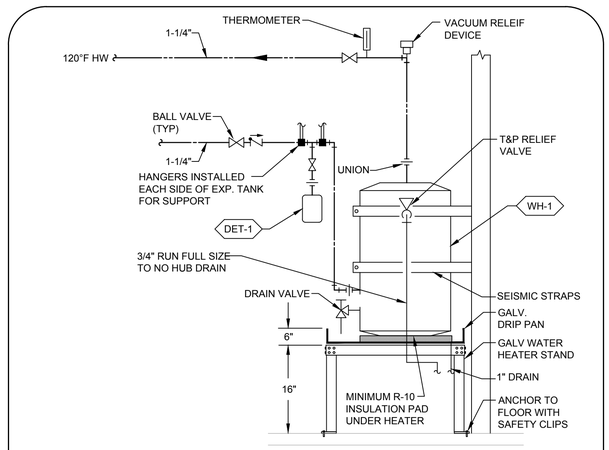
COMFORT STATION RENOVATION

PLUMBING FOUNDATION PLAN

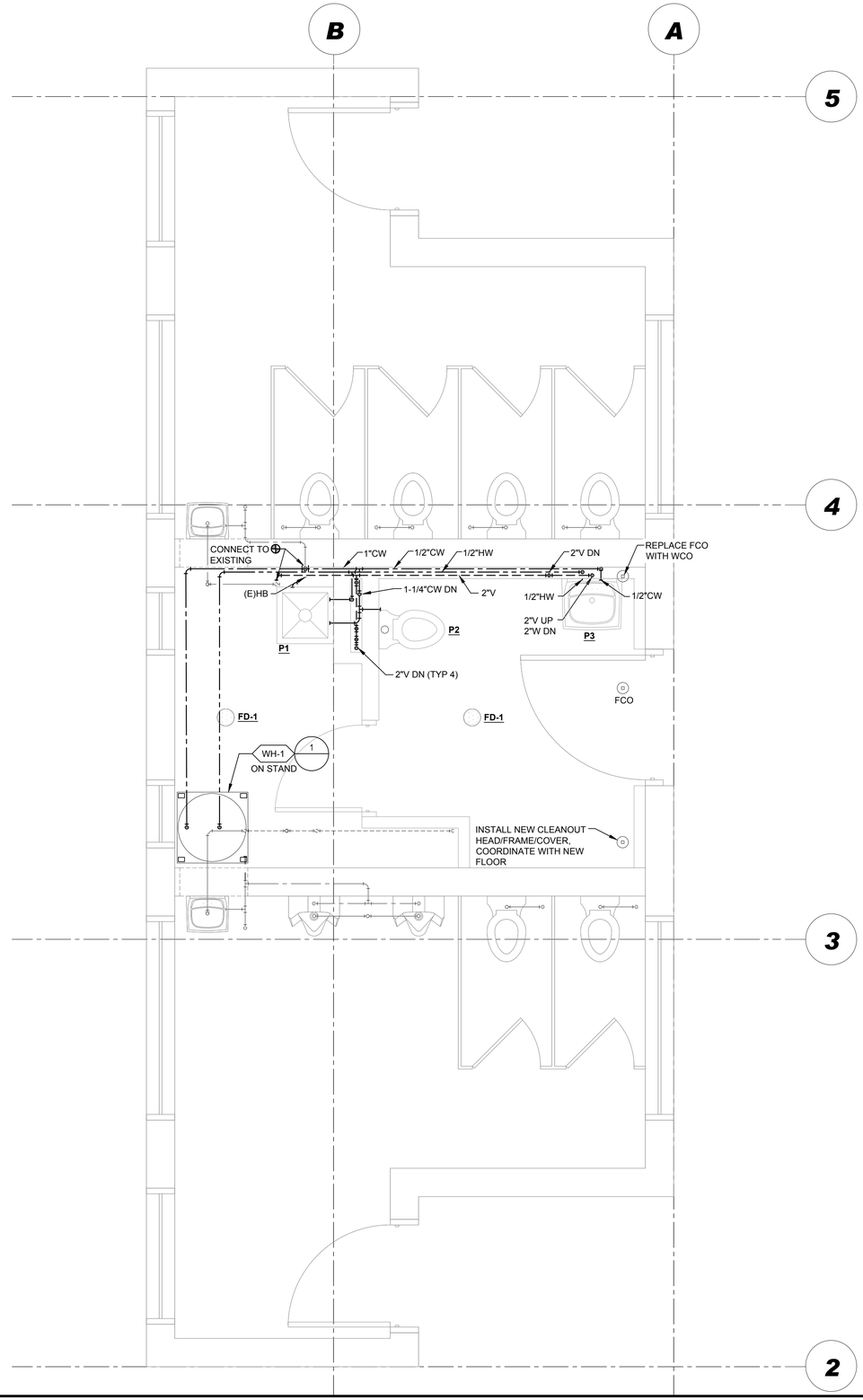
SHEET 12 OF 17

SCALE 6" 18" 0 1' 3'

PARKS FILE#



1 WATER HEATER DETAIL
Scale:NOT TO SCALE



PLUMBING FLOOR PLAN

CAD NO. 23010

DATE	APP.	INT.	REVISIONS	NO.
09/20/23				

ACTION	BY	DATE
DESIGNED	ASD	09-20-223
DRAWN	ASD	09-20-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

AARON S. DONNELLY STATE OF WASHINGTON 43573 REGISTERED PROFESSIONAL ENGINEER

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WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

PLUMBING FLOOR PLAN

SHEET 13 OF 17

SCALE 6" 18" 0 1' 3'

PARKS FILE#

ELECTRICAL LEGEND

(LEGEND IS GENERAL IN NATURE. NOT ALL OF THE SYMBOLS SHOWN ARE USED IN THIS PROJECT.)

GENERAL NOTES

(RE: ALL ELECTRICAL SHEETS)

1. ALL ELECTRICAL EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE, AND ALL OTHER STATE AND LOCAL CODES. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER IN WRITING IF PORTIONS OF THE DESIGN SET OR FIELD CONDITIONS DO NOT MEET REQUIRED CODES.
2. PROVIDE FIRESTOPPING FOR ALL FLOOR AND FIREWALL PENETRATIONS FROM ELECTRICAL DEVICE, RACEWAY, AND CABLE PENETRATIONS. SEE ARCHITECTURAL DRAWINGS FOR FIREWALL LOCATIONS.
3. ALL WIRING DEVICES SHALL BE OF THE SAME MANUFACTURER AND SHALL MATCH THROUGHOUT. COVER PLATES SHALL BE STAINLESS AND DEVICES SHALL BE WHITE.
4. DESIGN OF ELECTRICAL REQUIREMENTS IS BASED ON MECHANICAL EQUIPMENT SPECIFIED. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR IF EQUIPMENT PURCHASED IS DIFFERENT FROM THAT SPECIFIED STILL MEETS DESIGN INTENT, INCLUDING BUT NOT LIMITED TO OVER-CURRENT PROTECTION, LOCAL DISCONNECTING MEANS, AND WIRE SIZING.
5. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.
6. ALL RECESSED LIGHTING FIXTURES, SPEAKERS, RECEPTACLES, SWITCHES, ETC. MOUNTED IN THE FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL BY THIS CONTRACTOR.
7. ALL COMMUNICATION CONDUIT SHALL BE 3/4" UNO.
8. COLOR CODE WIRES AS FOLLOWS:

CONDUCTORS	120/208V	277/480V
PHASE A	BLACK	BROWN
PHASE B	RED	ORANGE
PHASE C	BLUE	YELLOW
NEUTRAL	WHITE	WHITE OR GRAY
GROUND	GREEN	GREEN

9. ALL SWITCHES TO BE 20 AMP, 277 VOLT, SPECIFICATION GRADE.
10. ALL WIRE SHALL BE STRANDED TYPE THHN/THWN, MINIMUM SIZE #12 UNLESS OTHERWISE INDICATED.
11. NUMBER NEXT TO DEVICE/EQUIPMENT INDICATES PANEL AND POLE POSITION TO WHICH DEVICE/EQUIPMENT SHALL BE CIRCUITED. CIRCUITS SHOWN ARE NEW UNLESS NOTED OTHERWISE (E.G. BY "(E)" OR "EXISTING"). CIRCUITS UNDER 100' SHALL BE 3/4"C, 2#12, 1#12G UNLESS NOTED OTHERWISE. CIRCUITS 100' OR LONGER SHALL BE 3/4"C, 2#12, 1#12G UNLESS NOTED OTHERWISE.
12. ALL HOME RUN JUNCTION BOXES SHALL BE A MINIMUM OF 4" SQUARE, 2-1/8" DEEP.
13. FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS DEPICTED FROM THE PLANS AND SPECIFICATIONS. COMPLETE AS NOTED OR IMPLIED, NOT LIMITED TO WHAT IS SHOWN.
14. ALL DRAWINGS ARE SCHEMATIC IN NATURE AND ALL APPURTENANCES NOT INDICATED TO MAKE A WORKING SYSTEM MUST BE INCLUDED IN THE CONTRACTOR'S BID.
15. IF THERE APPEAR TO BE ANY ITEMS IN CONFLICT WITH THE DRAWINGS, INCONSISTENCIES WITH DESIGN OR INTENT, OR NEED FOR CLARIFICATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLARIFY THESE ITEMS PRIOR TO BID IN WRITING WITH THE ENGINEER. IF THE CONTRACTOR FAILS TO CLARIFY ANY QUESTIONS OR INCONSISTENCY, HE ACCEPTS RESPONSIBILITY TO CORRECT AT HIS COST ANY SUCH ITEM TO MEET INTENT AS DEFINED BY THE ENGINEER.
16. ALL MOUNTING HEIGHTS OF EQUIPMENT SHALL MEET ADA REQUIREMENTS UNLESS OTHERWISE NOTED.
17. CONDUIT RUNS IN WALLS SHALL BE VERTICAL, MINIMUM SIZE 3/4".
20. COORDINATE ALL DEVICE/FIXTURE LOCATIONS AND SPECIFIC REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN.
21. ALL CONDUIT RUNS USING PVC CONDUIT SHALL USE RGD OR IMC FOR ANY BEND OVER 45 DEGREES AND ALL 90 DEGREE ELBOWS.
22. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM OF 1" CONDUIT THROUGHOUT UNDERGROUND SYSTEM UNLESS OTHERWISE INDICATED.
23. ALL CONDUIT PENETRATING SLAB IN EXPOSED LOCATIONS SHALL BE RIGID STEEL.
24. EACH TRADE SUBCONTRACTOR IS RESPONSIBLE FOR SUSPENDED SUPPORTS NOT SHOWN ON STRUCTURAL DRAWINGS. ALL SUBCONTRACTORS SHALL COORDINATE WITH EACH OTHER FOR ELEVATION PRIORITY PLACEMENT OF GRADED PIPES, LARGE DUCTWORK, EQUIPMENT, CONDUIT, FIRE PROTECTION, AND LIGHTING.
25. OVERCURRENT PROTECTION FOR HVAC EQUIPMENT SHALL BE PER THE MANUFACTURER'S NAMEPLATE, FUSE, OR HACR TYPE BREAKER.
26. LABEL ALL RECEPTACLE FACE PLATES WITH PANEL AND CIRCUIT NUMBER.

ABBREVIATIONS

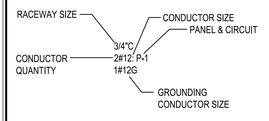
(E)	EXISTING
(R)	RELOCATED
(RE)	REPLACED
A	AMPERES
AC	ABOVE COUNTER
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AT	AMP TRIP
AWG	AMERICAN WIRE GAUGE
BMS	BUILDING MANAGEMENT SYSTEM
BW	BLANKET WARMER
C	CONDUIT
CB	CIRCUIT BREAKER
CC	CRASH CART
CKT	CIRCUIT
CL	CRITICAL LOAD
CM	CEILING MOUNTED
CO	CONDUIT ONLY, PROVIDE PULL-LINE
D	MECHANICAL DUCT-MOUNTED DEVICE
DC	DIRECT CURRENT
DET	DETAIL
E	EMERGENCY/CRITICAL CARE
EF	EXHAUST FAN
EL	EMERGENCY LIGHT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
F	FUSE
FACP	FIRE ALARM CONTROL PANEL
FVNR	FULL VOLTAGE NON-REVERSING
G/GND	GROUND
GFI	GROUND FAULT INTERRUPTION
GFP	GROUND FAULT PROTECTION
H	HEAT
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTO
HP	HOUSE PHONE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
I	IONIZATION
IC	INTERRUPTING CAPACITY
ID	IN-DUCT
IG	ISOLATED GROUND
J/JB	JUNCTION BOX
KW	KILOWATT
KWH	KILOWATT HOUR
M	MAGNETIC CONTACTOR COIL
MB	MAIN BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MS	MOTOR STARTER
MW	MICROWAVE
N	NEUTRAL
NC	NORMALLY CLOSED
NCL	NON CRITICAL LOAD
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OL	OVERLOAD
OS	OCCUPANCY SENSOR
P	PHOTO
PC	PHOTOCELL
PVC	POLYVINYL CHLORIDE
RCPT	RECEPTACLE
REF	REFRIGERATOR
SPST	SINGLE POLE SINGLE THROW
TC	TIME CLOCK
TDR	TIME DELAY RELAY
TJB	TERMINAL JUNCTION BOX
TSP	TWISTED SHIELDED PAIR
TTB	TELEPHONE TERMINAL BOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT AMPERE
WG	PROVIDE PROTECTIVE WIRE GUARD
WP	WEATHER PROOF/NEMA 3R
XFMR	TRANSFORMER

POWER

- DUPLEX NEMA 5-20A OUTLET. +18" AFF UNO.
- DUPLEX NEMA 5-20A OUTLET. MOUNT ABOVE COUNTER UNO.
- DUPLEX 20A OUTLET. +18" AFF UNO WITH GROUND FAULT INTERRUPTION PROTECTION.
- DUPLEX 20A OUTLET. MOUNTED ABOVE COUNTER UNO WITH GROUND FAULT INTERRUPTION PROTECTION
- DUPLEX NEMA 5-20A RECEPTACLE WITH INTEGRAL USB CHARGING. +18" AFF UNO.
- FOURPLEX 20A OUTLET. +18" AFF UNO.
- FOURPLEX 20A OUTLET. MOUNTED ABOVE COUNTER UNO.
- SPECIAL PURPOSE OUTLET. VERIFY SIZE AND TYPE WITH EQUIPMENT SUPPLIER.
- CONNECTION POINT TO EQUIPMENT SPECIFIED, FURNISHED, AND INSTALLED UNDER OTHER SECTIONS. ELECTRICAL CONTRACTOR TO SUPPLY RACEWAY AND CONDUCTORS AND MAKE FINAL CONNECTION TO EQUIPMENT UNDER THIS SECTION, UNO.
- (M) MOTOR CONNECTION. RE: MECHANICAL EQUIPMENT SCHEDULE
- MOTOR STARTER/CONTACTOR.
- COMBINATION STARTER AND DISCONNECT.
- X NON-FUSED DISCONNECT SWITCH. SIZE AS INDICATED, NEMA 1 UNO, 3 POLE UNO.
- F X FUSED DISCONNECT SWITCH. SIZE AS INDICATED, NEMA 1 UNO, 3 POLE UNO.

CIRCUITING SYMBOLS

- CONDUIT STUBBED, CAPPED, AND MARKED WITH PULL CORD.
- CONDUIT UP.
- CONDUIT DOWN.
- CIRCUIT CONCEALED IN CEILING OR WALL.
- CIRCUIT CONCEALED IN FLOOR OR UNDERGROUND.
- HOMERUN. PANEL AND CIRCUIT AS INDICATED.



CONTRACTOR SHALL ROUTE CIRCUIT HOMERUN FROM DEVICE NEAREST THE PANEL.

ONE LINE

- BRANCH PANEL ****** — BRANCH PANEL.
- A — CIRCUIT BREAKER. SIZE AND TYPE AS SPECIFIED.
- 30AF 30AT — CIRCUIT BREAKER. FRAME SIZE (AF) AND TRIP PLUG/RATING (AT), 3 POLE, UNO.
- M — METER AND BASE.
- GROUND.
- AVAILABLE FAULT CURRENT.

MISCELLANEOUS

- J — JUNCTION BOX.
- J — JUNCTION BOX, WALL MOUNTED.
- T — THERMOSTAT. +56" AFF UNO. UNIT CONTROLLED INDICATED.
- SURFACE MOUNTED PANELBOARD/ ENCLOSURE. SEE SCHEDULE FOR TYPE.
- FLUSH MOUNTED PANELBOARD/ENCLOSURE. SEE SCHEDULE FOR TYPE.
- XXX # — MECHANICAL EQUIPMENT SYMBOL (RE: MECHANICAL DRAWINGS FOR EXACT LOCATION OF UNITS).
- ### — INDICATES FIXTURE TYPE. REFER TO LUMINAIRE SCHEDULE.

LIGHTING

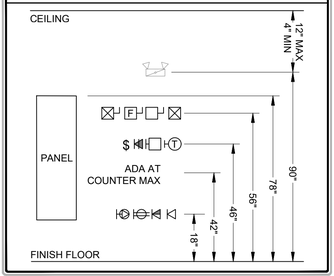
(SEE LUMINAIRE SCHEDULE FOR EXACT REQUIREMENTS)

- SINGLE FACE EXIT SIGN. CEILING MOUNTED.
- DOUBLE FACE EXIT SIGN. CEILING MOUNTED.
- SINGLE FACE EXIT SIGN. WALL MOUNTED.
- DOUBLE FACE EXIT SIGN. WALL MOUNTED.
- SINGLE FACE COMBO EXIT SIGN/ EMERGENCY LUMINAIRE. WALL MOUNTED.
- 2'x2' RECESSED LED LIGHT FIXTURE.
- 2'x4' RECESSED LED LIGHT FIXTURE.
- PENDANT LIGHT FIXTURE.
- EMERGENCY PENDANT LIGHT FIXTURE.
- RECESSED LIGHT FIXTURE.
- EMERGENCY EGRESS LIGHT. WALL MOUNTED.
- EMERGENCY EGRESS LIGHT. CEILING MOUNTED.

SWITCHES

$	SWITCH. TYPE AS INDICATED. +46"AFF, UNO.	
	2	DOUBLE POLE
	3	3-WAY
	4	4-WAY
	D	DIMMER. LUTRON DVSTV
	F	CEILING FAN CONTROLLER
	HP	HORSE POWER RATED
	K	KEYED
	LV	LOW VOLTAGE
	M	MOMENTARY CONTACT
	MM	MANUAL MOTOR STARTER
	OS	OCCUPANCY SENSOR
	P	PILOT LIGHT
	T	15 MINUTE TIMER
	TO	THERMAL OVERLOAD
	V	VOLUME CONTROL
	VS	VACANCY SENSOR
	a	SUPERSCRIPT INDICATES LIGHTS TO BE SWITCHED TOGETHER
$S	MULTI-LEVEL SWITCHING, TO MEET LIGHT REDUCTION LEVELS PER ENERGY CODE AS SHOWN. PROVIDE ADDITIONAL OR STEP-DIMMING BALLASTS WHERE REQUIRED.	
OS 1	INFRARED OCCUPANCY SENSOR SWITCH - CEILING MOUNTED.	

MOUNTING HEIGHT DETAIL



GENERAL SYMBOLS

- NEW
- EXISTING
- DEMO
- EXISTING ITEM TO BE REMOVED AND RELOCATED (R)

CAD NO. 23010

DATE	APP.	INT.	REVISIONS	NO.
09/20/23				

ACTION	BY	DATE
DESIGNED	BJ	08-18-23
DRAWN	BC	08-18-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

BENJAMIN M. JENNINGS — STATE OF WASHINGTON — 57465 — REGISTERED PROFESSIONAL ENGINEER

PROJECT ENGINEER

WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

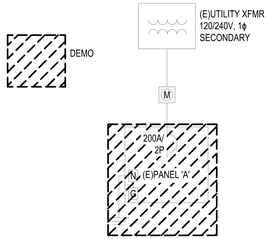
COMFORT STATION RENOVATION

ELECTRICAL LEGENDS & ABBREVIATIONS

SHEET 14 OF 17

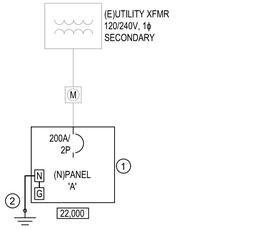
SCALE

PARKS FILE#



1 EXISTING SINGLE LINE

Scale: NOT TO SCALE



2 NEW SINGLE LINE

Scale: NOT TO SCALE

KEY NOTES

1. PANELBOARD TO BE REPLACED IN PLACE WITH NEW LOCKABLE PANELBOARD PER PANEL SCHEDULE ON THIS SHEET. CONNECT TO EXISTING-TO-REMAIN SERVICE CONDUCTORS AND BRANCH CIRCUITS.
2. EXISTING BUILDING GROUND TO BE REMOVED/RELOCATED OUT OF WALKING PATH. INTERCEPT AND EXTEND OUT OF WALKWAY. PROVIDE/ESTABLISH NEW BUILDING GROUND IF REQUIRED.

MSI ENGINEERS

PANEL: A (NEW)

VOLTAGE: 240/120V **PHASE:** 1 **WIRE:** 3 **MINIMUM AIC RATING:** SEE SINGLE LINE **200A MAIN BREAKER**
AMPERE RATING: 200A **ENCLOSURE RATING:** **NEMA 1** **SERVICE ENTRANCE RATED**

CKT NO	LOAD (VA)	LOAD SERVED	NOTE	LOAD TYPE	AMPS/ POLES		PHASE A	PHASE B	AMPS/ POLES		LOAD TYPE	NOTE	LOAD SERVED	LOAD (VA)	CKT NO
1	**1375**	**WALL HEATERS EWH-1,2,3**	**N**	**MC**	**20**	**2**	3775		40	2	MC	E	KITCHEN SHELTER	2400	2
3	**1375**	**WALL HEATERS EWH-1,2,3**	**N**	**MC**	*	*		3775	*	*	MC	E	KITCHEN SHELTER	2400	4
5	180	REC-RESTROOM	E	R	15	1	680		20	1	MC	E	WEST SHELTER	500	6
7	500	LIGHTS	E	L	15	1		1500	30	2	MC	E	INTERP. SHELTER	1000	8
9	180	REC-RESTROOM	E	R	20	1	1180		*	*	MC	E	INTERP. SHELTER	1000	10
11	750	MERCURY LIGHTS	E	L	15	1		988	20	1	MC	E	RESTROOM LIGHTS	238	12
13	500	EXISTING	E	MC	15	1	1000		20	1	MC	E	AREA LIGHTS	500	14
15		**SPARE**	**S**		20	1		750	**20**	**2**	**MC**	**N**	**WATER HEATER WH-1**	**750**	16
17	500	EXISTING	E	MC	20	1	1250		*	*	**MC**	**N**	**WATER HEATER WH-1**	750	18
19	1920	SEWAGE PUMP PANEL(1HP)	E	MT	30	2		6720	**50**	**2**	**MC**	**N**	**EV CHARGER**	**4800**	20
21	1920	SEWAGE PUMP PANEL(1HP)	E	MT	*	*	6720		*	*	**MC**	**N**	**EV CHARGER**	**4800**	22
23	**1250**	**WALL HEATERS EWH-5,6**	**N**	**MC**	**20**	**2**		6050	**50**	**2**	**MC**	**N**	**EV CHARGER**	**4800**	24
25	**1250**	**WALL HEATERS EWH-5,6**	**N**	**MC**	*	*	6050		*	*	**MC**	**N**	**EV CHARGER**	**4800**	26
27	**625**	**WALL HEATER EWH-4**	**N**	**MC**	**20**	**2**		973	**20**	**1**	**MT**	**N**	**UTILITY RM EXHAUST FAN EF-1**	**348**	28
29	**625**	**WALL HEATER EWH-4**	**N**	**MC**	*	*	1575		**20**	**1**	**MC**	**N,G**	**HAND DRYER**	**950**	30
31		SPARE			20	1		0	20	1			SPARE		32
33		SPARE			20	1	0		20	1			SPARE		34
35		SPARE			20	1		0	20	1			SPARE		36
37		SPARE			20	1	0		20	1			SPARE		38
39		SPACE						0					SPACE		40
41		SPACE					0						SPACE		42

CONNECTED LOADS:	Amps	VA
PHASE A:	185	22230
PHASE B:	173	20756
TOTAL:		42986

LOAD TYPES:

L = LIGHTING	
R = RECEPTACLES	
MC = MISC	
MT = MOTOR	
K = KITCHEN	
LARGEST MOTOR =	1824.0
# OF KITCHEN =	

NOTES:
E - EXISTING-TO-REMAIN CIRCUIT; RE-CONNECT AS SHOWN.
N - NEW CIRCUIT/LOAD.
S - CIRCUIT SPARED OUT
G - PROVIDE GFCI BREAKER

LOADING BY TYPE	DEMAND FACTOR	DEMAND	NEC CODE
L	125%	1563 VA	210-19
R	10kVA @ 100%, REM @ 50%	360 VA	220-44
MC	100%	37188 VA	220-60
MT	100% + LARGEST x 25%	4644 VA	220-50
K		0 VA	220-56
	TOTAL	43755	182

CAD NO. 23010

DATE	APP.	INT.	REVISIONS	NO.
09/20/23				

ACTION	BY	DATE
DESIGNED	BJ	08-18-23
DRAWN	BC	08-18-23
CHECKED (FIELD)	XX	XX/XX/XX
CHECKED (HDQTS.)	XX	XX/XX/XX

BENJAMIN M. JENNINGS — STATE OF WASHINGTON — 57465 — REGISTERED PROFESSIONAL ENGINEER

PROJECT ENGINEER

WASHINGTON STATE PARKS AND RECREATION COMMISSION

LEWIS & CLARK TRAIL STATE PARK

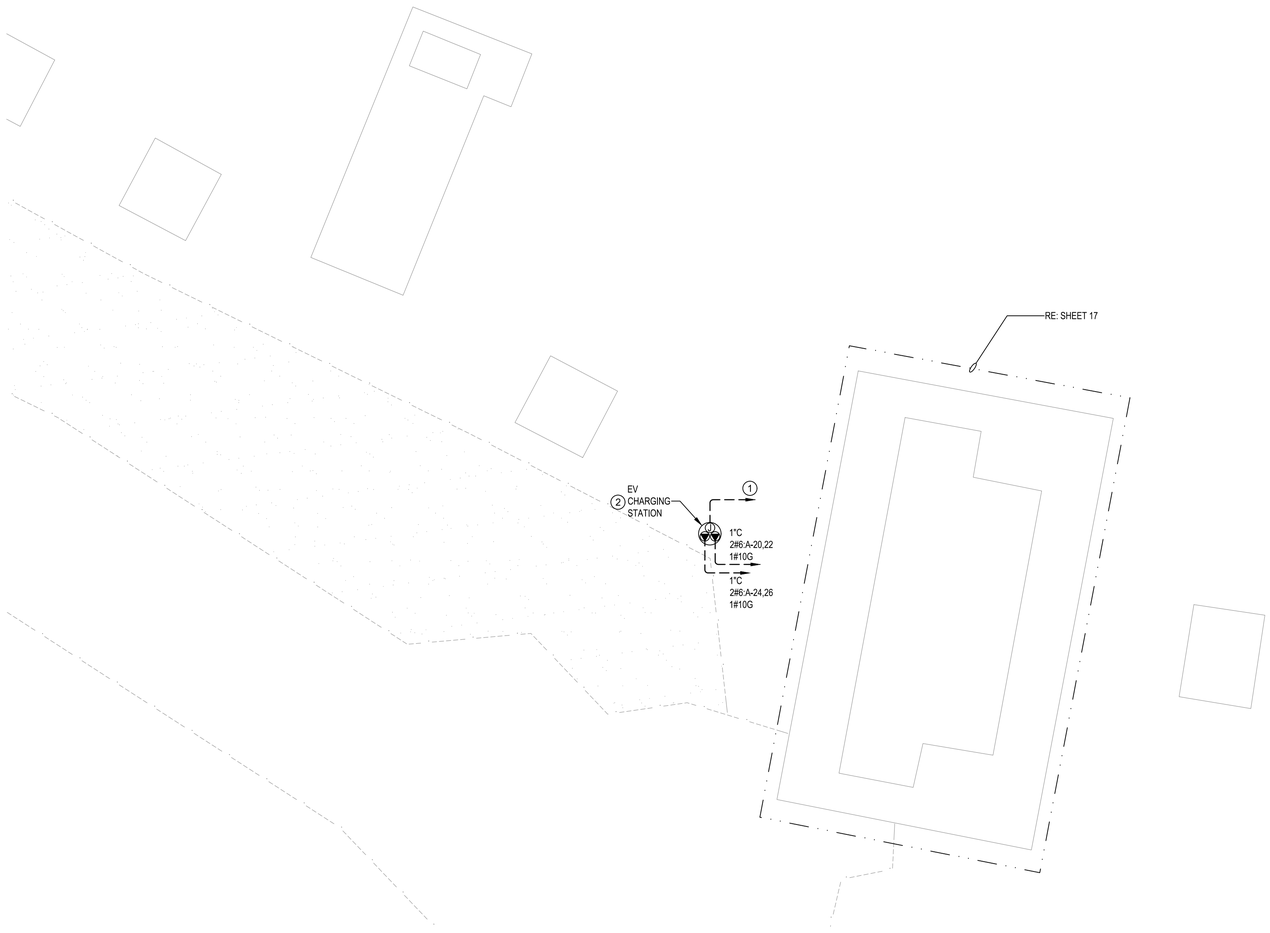
COMFORT STATION RENOVATION

ELECTRICAL SCHEDULES AND SINGLE LINE

SHEET 15 OF 17

SCALE

PARKS FILE#



SITE PLAN - ELECTRICAL

GENERAL NOTES

1. COORDINATE UNDERGROUND CONDUIT ROUTING WITH FIELD CONDITIONS AND WORK OF OTHER TRADES.

KEY NOTES (#)

1. PROVIDE 1"C STUBBED INTO NEW UTILITY ROOM FOR ETHERNET CONNECTION.
2. COORDINATE EXACT LOCATION WITH ARCHITECT.

CAD NO. 23010

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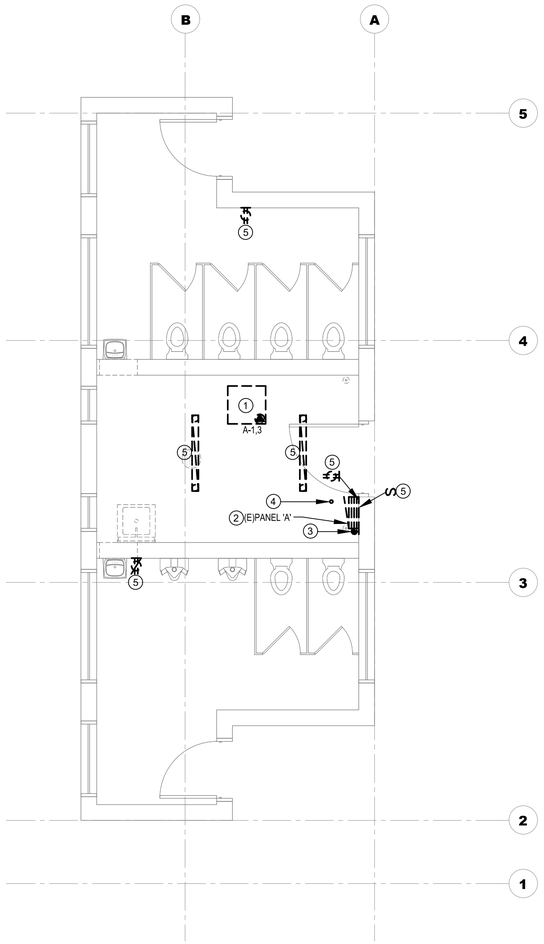
COMFORT STATION RENOVATION

ELECTRICAL SITE PLAN

SHEET 16 OF 17

SCALE 2' 6' 0 4' 12'

PARKS FILE#



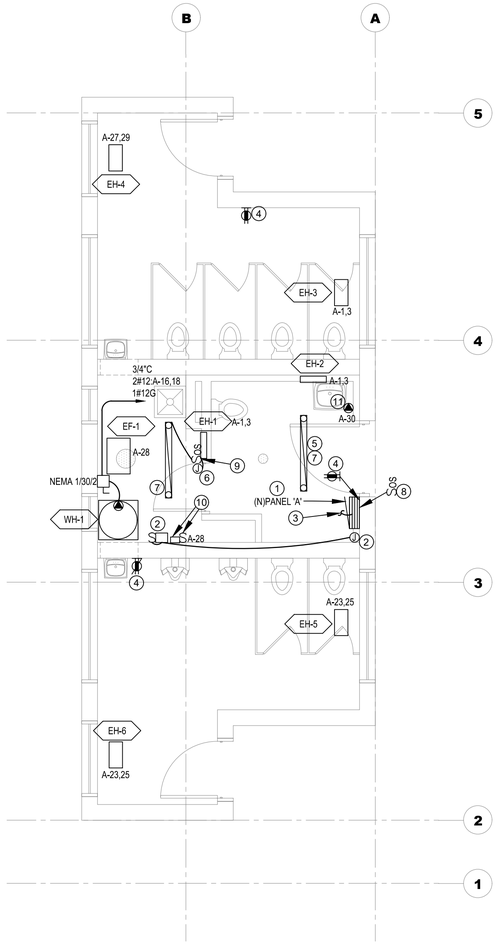
GENERAL NOTES

1. CONTRACTOR RESPONSIBLE FOR DISPOSAL OF ALL DISCONNECTED MATERIALS.

KEY NOTES (#)

1. EQUIPMENT TO BE DISCONNECTED AND REMOVED BY MECHANICAL CONTRACTOR; DISCONNECT AND REMOVE ALL ASSOCIATED CONDUIT, CONDUCTORS, CABLING, AND ELECTRICAL DISCONNECT DEVICES.
2. PANEL TO BE REPLACED IN PLACE. RETAIN AND PROTECT PANEL FEEDER AND ALL CIRCUITS UNAFFECTED BY DEMOLITION.
3. DISCONNECT AND REMOVE 220V PLUG NEXT TO PANEL. DISCONNECT AND REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS.
4. EXISTING GROUND ROD TO BE DISCONNECTED AND REMOVED.
5. DISCONNECT AND REMOVE EXISTING FIXTURE/DEVICE. RETAIN AND PROTECT CONDUIT AND CONDUCTORS.

DEMO PLAN - ELECTRICAL



GENERAL NOTES

1. WALL HEATERS ARE PROVIDED WITH FACTORY DISCONNECTS PER MECHANICAL DRAWINGS.

KEY NOTES (#)

1. PANEL REPLACED IN PLACE; SEE PAGE 2 OF 4 FOR NEW PANEL REQUIREMENTS.
2. LIGHTING TIME SWITCH AND ON/TIMER SWITCH TO BE RELOCATED TO LOCATION INDICATED. EXTEND CONDUIT/CONDUCTORS AND RECONNECT TO DOWNSTREAM LIGHT FIXTURES AS WELL PANEL BRANCH CIRCUIT BREAKER.
3. PROVIDE NEW UFER GROUND IN NEW CONCRETE SLAB. RE-CONNECT TO NEW PANELBOARD AND NEARBY STRUCTURES PER PREVIOUS GROUNDING CONFIGURATION.
4. REPLACE RECEPTACLE WITH GFCI RECEPTACLE. RE-CONNECT TO EXISTING CONDUIT/CONDUCTORS.
5. REPLACE LIGHT FIXTURE IN PLACE; CONNECT TO EXISTING-TO-REMAIN CONDUIT/CONDUCTORS.
6. INTERCEPT AND EXTEND CIRCUIT TO NEW FIXTURE SHOWN.
7. PROVIDE NEW LUMINAIRE: LITHONIA CSVT-L48-4000LM-MVOLT-40K-80CRI OR EQUIVALENT.
8. REPLACE SWITCH IN PLACE WITH NEW OCCUPANCY SENSOR SWITCH.
9. COORDINATE SWITCH MOUNTING HEIGHT/LOCATION WITH THAT OF NEW WALL HEATER.
10. RELOCATED FAN TIMER/SWITCH PER MECHANICAL DRAWINGS. CONNECT TO 'EF-1' VIA 3/4"C, 2#12 AWG CU, 1#12 CU GROUND.
11. COORDINATE EXACT HAND DRYER LOCATION WITH ARCHITECTURAL DRAWINGS.

FLOOR PLAN - ELECTRICAL

CAD NO. 23010

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CHECKED (HDQTS.)	XX	XX/XX/XX

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PROJECT ENGINEER

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LEWIS & CLARK TRAIL STATE PARK

COMFORT STATION RENOVATION

ELECTRICAL DEMO PLAN AND FLOOR PLAN

SHEET 17 OF 17

SCALE 1' 3' 0 2' 6'

PARKS FILE#