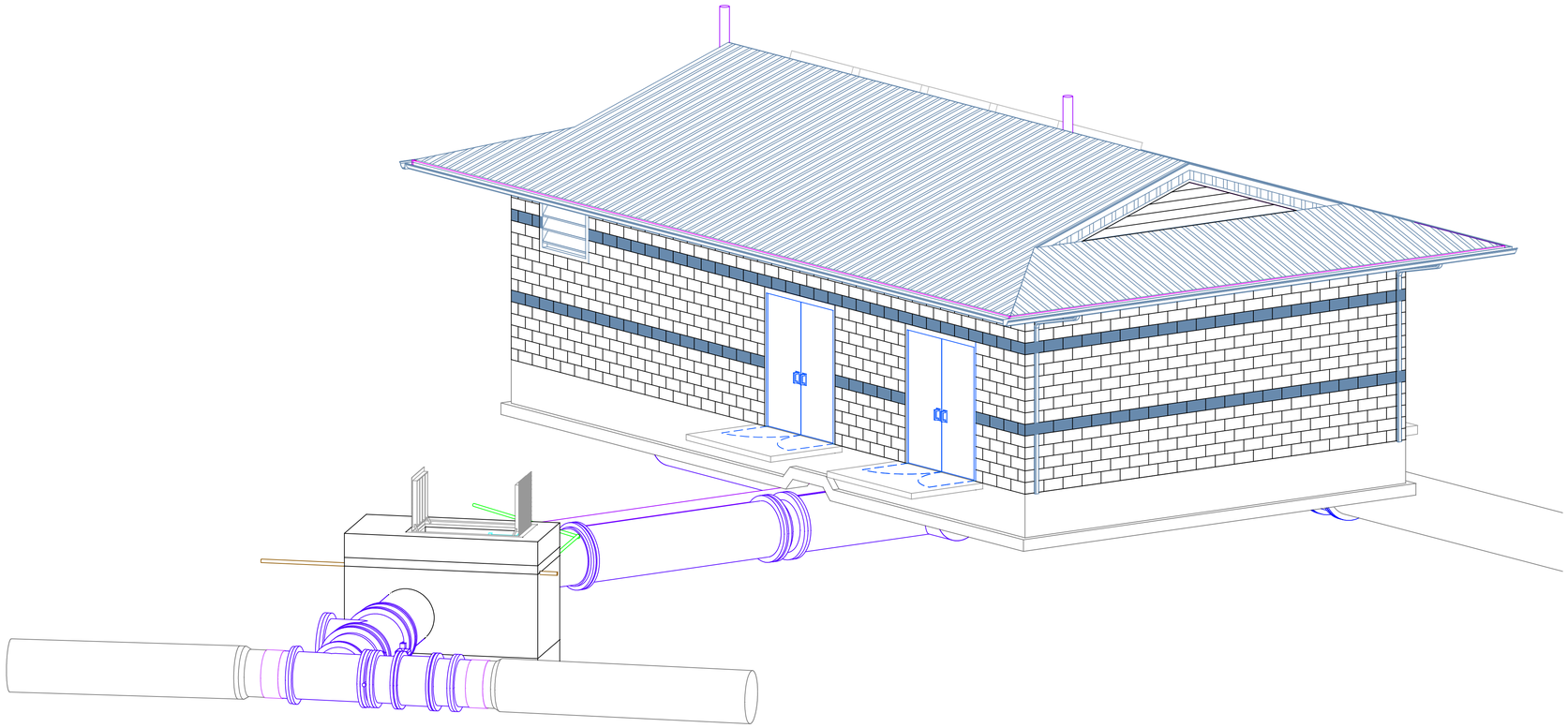
PUBLIC UTILITY DISTRICT NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

VOL II of II PROJECT NO. 3766
C.O. 5040



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CALL 48 HOURS BEFORE YOU DIG
ONE CALL 811

REPORT ALL SPILLS
DEPT. OF ECOLOGY 1-800-258-5990

RICHARD L. BALLARD — STATE OF WASHINGTON — 32878 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020
PRINCIPAL

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STRUCTURAL

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SIGNED: 07/17/2020
ELECTRICAL

Sep. 22, 2020
RWPS-D-COV.DWG

GENERAL CONSTRUCTION NOTES

CRITERIA

1. CONSTRUCTION OF IMPROVEMENTS SHALL BE IN ACCORDANCE WITH CURRENT AWWA SPECIFICATIONS.

2. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM WITH THESE PLANS (VOLUME II OF II) AND CONTRACT DOCUMENTS AND SPECIFICATIONS (VOLUME I OF II) AND BE IN ACCORDANCE WITH ALL PERMITTING CONDITIONS OF APPROVAL.

GENERAL CONSTRUCTION

1. SITE ACCESS
WTP ACCESS DRIVEWAY AND PARKING LOT IS LOCATED OFF OF MORFORD ROAD. TWO SECURITY GATE ENTRANCES ARE LOCATED IN FRONT OF THE WTP. THE OWNER WILL PROVIDE INSTRUCTIONS FOR GATE ACCESS WHEN CONSTRUCTION BEGINS.

2. APPROVED PLANS AND SPECIFICATIONS
A COPY OF THE APPROVED PLANS AND SPECIFICATIONS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

3. PRE-CONSTRUCTION CONFERENCE
A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, OWNER, AND ENGINEER FOLLOWED BY 24-HOUR ADVANCE NOTICE IS REQUIRED PRIOR TO STARTING CONSTRUCTION.

4. CONSTRUCTION SAFETY
THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE PUBLIC AND PREVENT NUISANCES WHILE PERFORMING CONSTRUCTION WORK ON THIS PROJECT.

5. DAILY CLEANUP
THE CONTRACTOR SHALL CLEANUP ALL AREAS AFFECTED BY CONSTRUCTION ACTIVITIES ON A DAILY BASIS TO THE SATISFACTION OF THE OWNER. THIS INCLUDES REMOVAL OF ALL DUST, MUD, ROCKS, ASPHALT DEBRIS, AND REFUSE FROM STREETS, SIDEWALKS, DRIVEWAYS, AND ANY OTHER AREAS AFFECTED BY THE CONSTRUCTION ACTIVITIES. FAILURE TO CLEANUP TO THE SATISFACTION OF THE OWNER WILL NECESSITATE A SHUTDOWN OF THE PROJECT UNTIL CLEANUP IS PROPERLY PERFORMED.

6. EXISTING FACILITIES
A. EXISTING INFRASTRUCTURE AND LOCATIONS SHOWN IN THESE PLANS ARE BASED ON EXISTING WTP CONSTRUCTION RECORD DRAWINGS AND FIELD MEASUREMENTS. CONTRACTOR IS RESPONSIBLE FOR PERFORMING THEIR OWN FIELD VERIFICATION AND MEASUREMENTS OF EXISTING INFRASTRUCTURE TO CONSTRUCT THE PROPOSED IMPROVEMENTS.
B. CONTRACTOR SHALL USE CAUTION DURING CONSTRUCTION TO PREVENT DAMAGE TO EXISTING INFRASTRUCTURE UNLESS NOTED TO BE REMOVED OR MODIFIED. EXISTING CONSTRUCTION RECORD DRAWINGS WILL BE AVAILABLE FOR THE CONTRACTOR TO REFER TO DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER IF CONFLICTS BETWEEN THE CONSTRUCTION RECORD DRAWINGS AND FIELD CONDITIONS ARE DISCOVERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING ANY EXISTING INFRASTRUCTURE DAMAGED DURING CONSTRUCTION THAT IS INTENDED TO BE UNDISTURBED.
C. IMPROVEMENT CONFLICTS: THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONFLICTS WITH THE PROPOSED IMPROVEMENTS AND EXISTING INFRASTRUCTURE.

7. PERMITS
PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS THAT HAVE NOT BEEN PROVIDED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ALL PERMITS.

8. DEMOLITION OF AND CONNECTION TO EXISTING EQUIPMENT OR PIPING
THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO PERFORMING DEMOLITION WORK ON EXISTING EQUIPMENT OR PIPING AND PRIOR TO CONNECTING PROPOSED PIPING TO EXISTING PIPING TO ENSURE VALVES ARE CLOSED TO PREVENT LEAKS OR SPILLS AND ACTIVE PROCESSES ARE NOT INTERRUPTED.

9. WATER OR POWER SHUTDOWNS
EXISTING PROCESSES FOR WATER AND POWER MAY NOT BE SHUT DOWN FOR ANY PERIOD WITHOUT PRIOR APPROVAL FROM THE OWNER. SEE GENERAL PHASING PLAN AND SPECIFICATIONS DIVISION 1 FOR REQUIREMENTS. THE CONTRACTOR SHALL NOT OPERATE EXISTING PROCESS OR POWER SYSTEM EQUIPMENT (VALVES, SWITCHES, ETC.).

SECTION AND DETAIL REFERENCES

THE FOLLOWING CONVENTIONS HAVE BEEN USED WITHIN THESE DRAWINGS TO REFER THE READER BETWEEN THE SECTION/DETAIL AND THE PLAN FROM WHICH IT IS REFERENCED.
REFERENCE BUBBLES

X / X000 — PLAN REFERENCE BUBBLE - REFERS READER BACK TO THE PLAN FROM WHICH THE DETAIL OR SECTION ORIGINATED.

X / X000 — DETAIL/SECTION REFERENCE BUBBLE - REFERS READER TO THE DRAWING ON WHICH THE DETAIL OR SECTION IS LOCATED.

WHERE, ID = SECTION/DETAIL REFERENCE NUMBER
= DRAWING NUMBER ON WHICH DETAIL ORIGINATED OR RESIDES.

SECTION/DETAIL REFERENCE NUMBER CONVENTIONS:
SECTIONS OR ELEVATIONS SHOULD HAVE A LETTER REFERENCE NUMBER (A THROUGH ZZ).

SURVEY NOTES

1) THIS TOPOGRAPHIC SURVEY WAS PERFORMED AND PREPARED IN ACCORDANCE WITH WAC 332-130-145

2) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION IN APRIL 2019.

3) EQUIPMENT USED: THEOMAT 00'01.5"
EDM: ± 2 PPM, ± 3 MM

4) HORIZONTAL DATUM: NAD 83/91 WASHINGTON STATE PLAN NORTH ZONE
- COORDINATES AND DISTANCES ARE GRID, WASHINGTON STATE PLAN, NORTH ZONE NAD81/91, (SUPERSEDED CONTROL) BASED ON G.P.S. STATIC TIES TO WASHINGTON DEPARTMENT OF TRANSPORTATION MONUMENTS

GP29009-11, N. 538,397.253, E. 1,299,999.913, ELEV.=45.876 FEET (NAVD88),
GP29009-24, N. 526,860.039, E. 1,293,033.739, ELEV.=22.234 (NAVD88),
GP29536-73, N. 525,429.209, E. 1,268,122.057, ELEV.=25.561 FEET (NAVD88)

5) VERTICAL DATUM: NAVD88
- SEE NOTE ABOVE

TEMPORARY BENCH MARK: PSE CONTROL ON-SITE, AS SHOWN

6) CONTOURS DEPICTED HERON MEET OR EXCEED NATIONAL MAPPING STANDARDS FOR 1-FOOT ACCURACY TOPOGRAPHIC SURVEYS AND HAVE BEEN COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SUVEY UTILIZING ELECTRONIC DATA COLLECTION.

7) CONDUCTIBLE UNDERGROUND UTILITY LOCATES SERVICES WERE PERFORMED AND PAINTED ON-SITE BY APPLIED PROFESSIONAL SERVICES AND SURVEYED BY PSE FIELD CREWS IN APRIL 2019. UTILITIES ARE KNOWN TO EXIST WITHIN THE LIMITS OF THIS SURVEY THAT WERE UNDETECTABLE. ADDITIONAL UTILITY VERIFICATION MAY BE WARRANTED IN AREAS CONSIDERED FOR CONSTRUCTION.

8) UTILITY LOCATION AREAS AND LEVEL OF LOCATE ACCURACY WERE DETERMINED BY SURVEYOR AND CLIENT PRIOR TO COMMENCEMENT OF FIELD WORK.

9) THIS MAP IS NOT INTENDED TO REPRESENT A FORMAL BOUNDARY SURVEY, NOR DOES IT REFLECT ELEMENTS THAT A BOUNDARY SURVEY MAY DISCLOSE. BOUNDARY RELATED ELEMENTS DEPICTED HERON ARE SHOWN PER AVAILABLE RECORD INFORMATION.

10) A CURRENT TITLE REPORT WAS NOT PROVIDED FOR THIS SURVEY. EASEMENTS AND/OR TITLE ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.

ABBREVIATIONS

CB	CATCH BASIN	PROP	PROPOSED
CONC	CONCRETE	PS	PUMP STATION
CL	CENTERLINE	PVC	POLYVINYL CHLORIDE
CPEP	CORRUGATED POLYETHYLENE	R	RIGHT
CSBC	CRUSHED SURFACING BASE COURSE	RT	RIGHT
CSTC	CRUSHED SURFACING TOP COURSE	ROW	RIGHT-OF-WAY
DIAM	DIAMETER	SPEC	SPECIFICATIONS
DI	DUCTILE IRON	SS	SANITARY SEWER
DWG	DRAWING	SSMH	SANITARY SEWER MANHOLE
E	EASTING	ST	STORM
ELEV	ELEVATION	STA	STATION LINE
EOP	EDGE OF PAVEMENT	STD	STANDARD
EX	EXISTING	SY	SQUARE YARDS
GV	GATE VALVE	TRJ	TRUE RESTRAINED JOINT (REFER TO SPECIFICATIONS DIVISION 15.22 FOR DEFINITION)
HMA	HOT MIXED ASPHALT	TYP	TYPICAL
L	LEFT	W	WATER
LT	LEFT		
LF	LINEAR FEET		
N	NORTHING		
PE	POLYETHYLENE		

SUBSURFACE UTILITY LEGEND

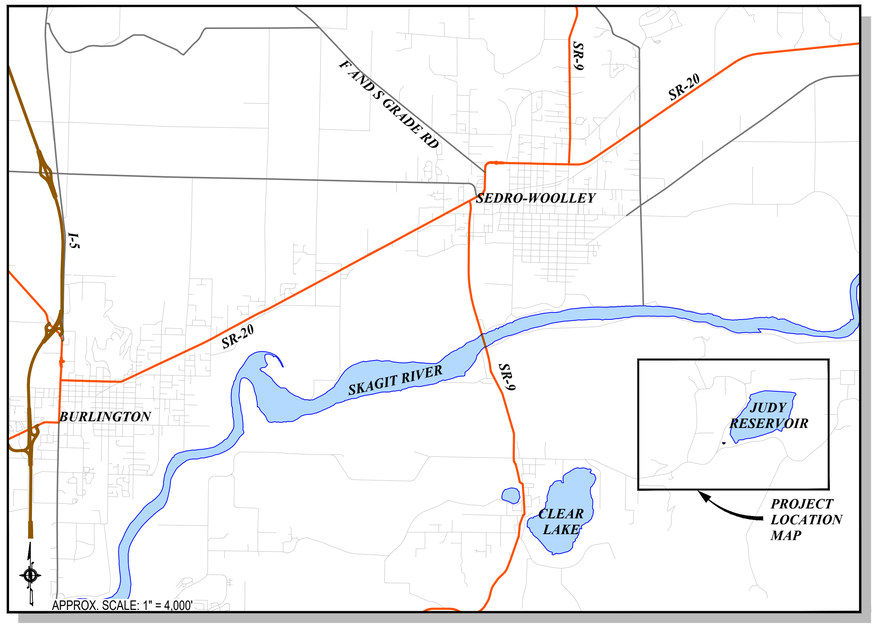
THE CLASSIFICATIONS FOR SUBSURFACE UTILITIES ARE OUTLINED AND EXPLAINED IN THE FOLLOWING LIST:

UTILITY QUALITY LEVEL A. — W — W — W — - INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

UTILITY QUALITY LEVEL B. — • • • W • • • • W • • • • W — - INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS

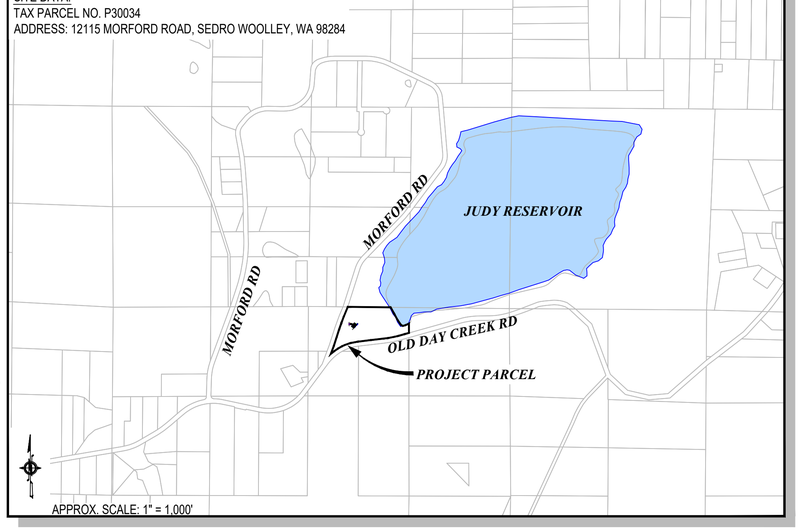
NOTE: THE USE OF THE LINE TYPES PROVIDED ABOVE WAS A PRIMARY METHOD FOR INDICATING THE ACCURACY OF THE UTILITIES SHOWN WITHIN THESE PLANS. WHEN THE SOURCE OF THE INFORMATION WAS UNKNOWN OR THE METHOD FOR LOCATING THE UTILITIES WAS UNAVAILABLE, QUALITY LEVEL WAS USED AS THE DEFAULT.

PROJECT VICINITY MAP



PROJECT LOCATION MAP

SITE DATA:
TAX PARCEL NO. P30034
ADDRESS: 12115 MORFORD ROAD, SEDRO WOOLLEY, WA 98284



RH2

RICHARD V. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

DANIEL W. BURNETT — STATE OF WASHINGTON — 38305 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
Skagit PUD — PUBLIC UTILITY DISTRICT

GENERAL NOTES AND INFO

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-COV.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: CMP
REVIEWED: DWB

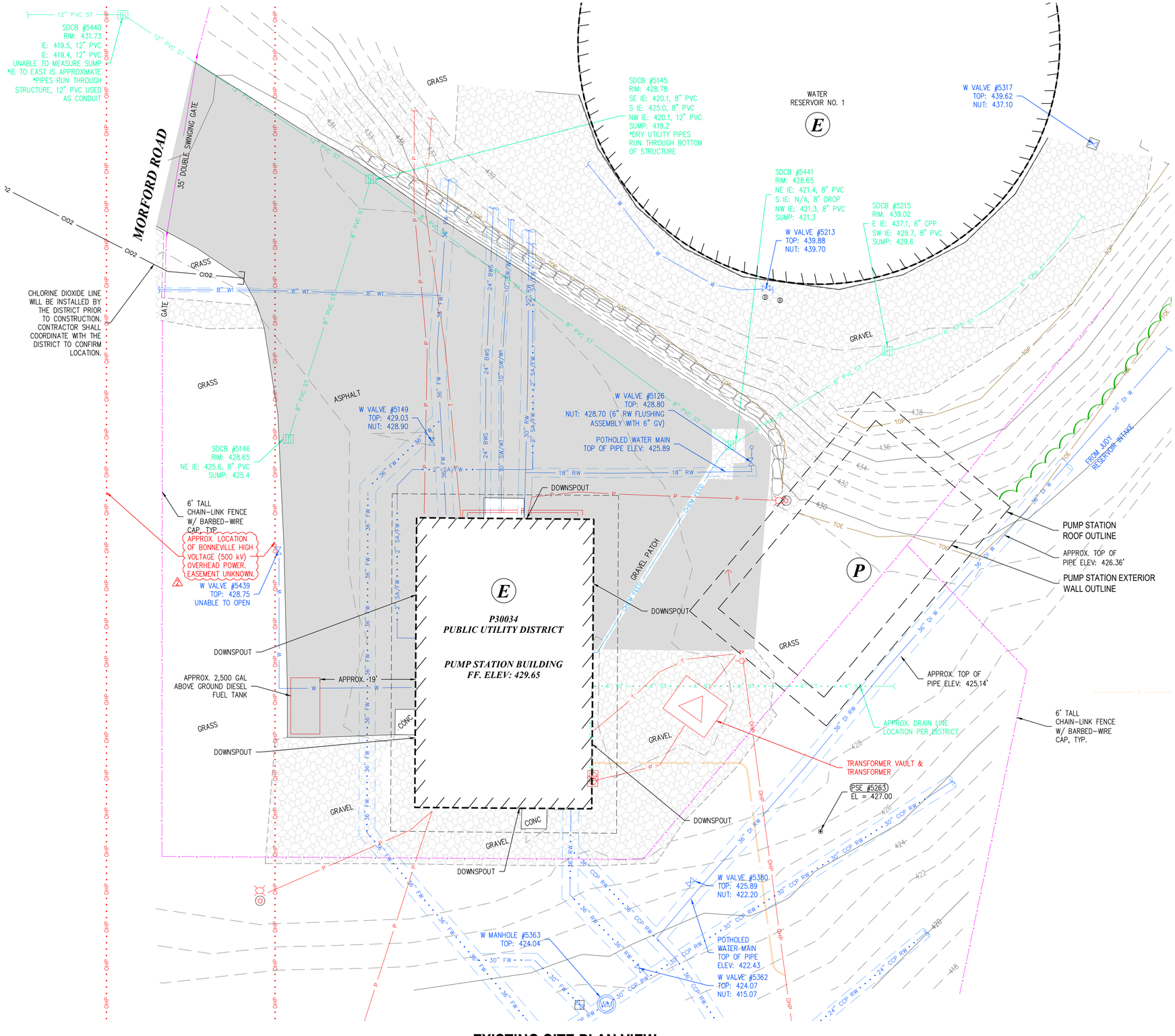
REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: G01
SHEET NO.: 1
37



EXISTING SITE PLAN VIEW

SCALE: 1"=10'

0 10 20

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

EXISTING SITE LEGEND

- SET HUB AND MAG
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER VALVE
- WATER MANHOLE
- WATER BLOWOFF
- WATER MAIN
- WATER MAIN FROM RECORD DRAWINGS
- WATER MAIN APPROX. OUTSIDE OF PIPE
- UTILITY POLE
- UTILITY POLE WITH STREET LIGHT
- GROUND GUY ANCHOR
- POWER METER
- TRANSFORMER
- OVERHEAD POWER
- OVERHEAD POWER FROM AERIAL RECORDS
- UNDERGROUND POWER
- UNDERGROUND TELECOMMUNICATION
- CHLORINE DIOXIDE LINE
- CATCH BASIN
- STORM PIPE
- DRAIN FROM DISTRICT RECORDS
- ROCKERY
- VEGETATION LIMITS
- CHAINLINK FENCE
- BUILDING EDGE
- TOE OF SLOPE
- TOP OF SLOPE
- GRAVEL
- ASPHALT

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

DANIEL W. BROWN — STATE OF WASHINGTON — 38306 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD — PUBLIC UTILITY DISTRICT

EXISTING SITE PLAN

ENGINEER: CMP	SAVE DATE: Sep 22, 2020
REVIEWED: DWB	PLOT DATE: Sep 22, 2020
CLIENT: SPUD	JOB NO.: 117.025
FILENAME: RWPS-D-CV01.DWG	

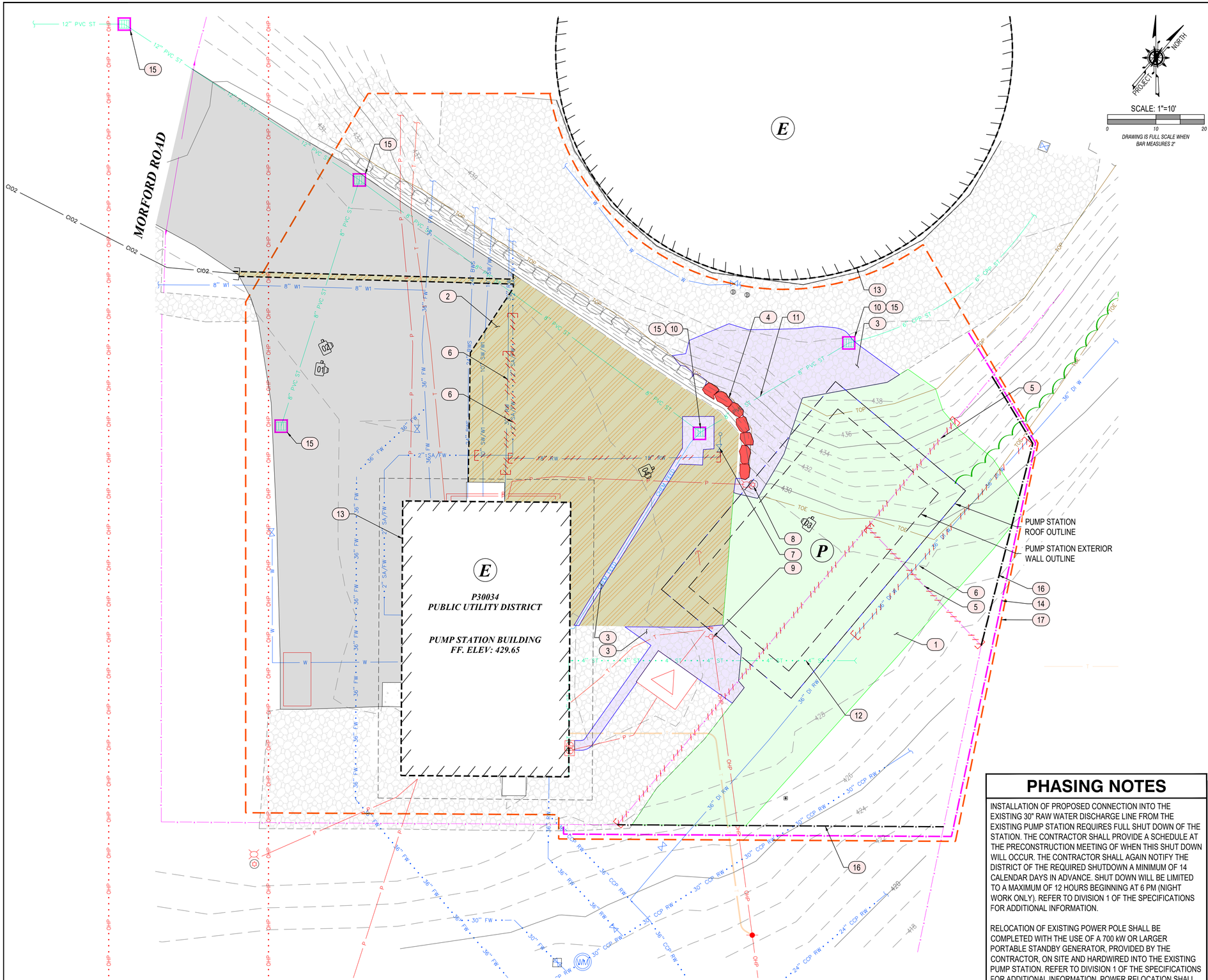
REVISIONS

NO.	DATE	DESCRIPTION	QC	BY
1	09/22/20	FINAL SPUD COMMENTS	DWB	REVIEW

P.N. 3766
C.O. 5040

DWG NO.: C01

SHEET NO.: 2 / 37



DEMOLITION AND TESC PLAN VIEW

DEMOLITION NOTES

1. CLEAR AND GRUB. EXCAVATE AREAS SHOWN AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
2. SAWCUT AND REMOVE EXISTING ASPHALT AND BASE TO DEPTHS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
3. REMOVE EXISTING GRAVEL AND EXCAVATE AS NECESSARY TO CONSTRUCT IMPROVEMENTS.
4. REMOVE PORTION OF EXISTING ROCKERY AS SHOWN ON THIS SHEET. CONTRACTOR IS RESPONSIBLE FOR SLOPE STABILIZATION THROUGHOUT CONSTRUCTION.
5. REMOVE EXISTING CHAIN LINK FENCE TO NEAREST POST IN ORDER TO CONSTRUCT PROPOSED FENCE SHOWN ON DWG NO. C05.
6. REMOVE EXISTING WATER MAIN TO THE LIMITS SHOWN. ADJUST LIMITS TO MAKE PROPOSED CONNECTIONS. COORDINATE SHUT DOWN AND TIE IN WITH THE OWNER.
7. REMOVE EXISTING WATER MAIN APPURTENANCES. RETURN ANY FITTINGS TO THE OWNER SHOPS.
8. RELOCATE LIGHT PER DWG NO. E03. REMOVE EXISTING FOUNDATION AND CONDUIT.
9. EXISTING POWER POLE AND GUY ANCHOR TO BE RELOCATED. CONTRACTOR SHALL COORDINATE WITH PUGET SOUND ENERGY (PSE) REGARDING LOCATION.
10. PROTECT EXISTING CB #5215 AND CB #5441 IN PLACE.
11. EXPOSE 8" PVC STORM PIPE AND ENCASE IN CDF UNDER NEW ROCKERY LOCATION. BUILD ROCKERY ABOVE AND AROUND THE EXISTING PIPE.
12. LOCATION OF EXISTING DRAIN LINE IS UNKNOWN. IF LOCATED DURING CONSTRUCTION NOTIFY THE OWNER PRIOR TO ANY CHANGES.
13. PROTECT EXISTING STRUCTURE IN PLACE.
14. PROVIDE SILT FENCE PER DETAIL ON DWG NO. C03. (100 / C03)
15. PROVIDE INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
16. TEMPORARY CHAIN LINK FENCE MINIMUM 6-FOOT HEIGHT WITH THREE STRAND BARBED WIRE ACROSS TOP.
17. CONSTRUCTION LIMITS. CONTRACTOR RESPONSIBLE FOR SITE SECURITY AT ALL TIMES THROUGHOUT CONSTRUCTION.

DEMOLITION LEGEND

- SAWCUT LINE
- ASPHALT REMOVAL
- GRAVEL REMOVAL
- VEGETATION REMOVAL AREA
- ROCKERY REMOVAL
- INLET PROTECTION
- SILT FENCE
- TEMPORARY CHAINLINK FENCE
- UTILITY REMOVAL LIMITS
- CONSTRUCTION LIMITS

PHASING NOTES

INSTALLATION OF PROPOSED CONNECTION INTO THE EXISTING 30" RAW WATER DISCHARGE LINE FROM THE EXISTING PUMP STATION REQUIRES FULL SHUT DOWN OF THE STATION. THE CONTRACTOR SHALL PROVIDE A SCHEDULE AT THE PRECONSTRUCTION MEETING OF WHEN THIS SHUT DOWN WILL OCCUR. THE CONTRACTOR SHALL AGAIN NOTIFY THE DISTRICT OF THE REQUIRED SHUTDOWN A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE. SHUT DOWN WILL BE LIMITED TO A MAXIMUM OF 12 HOURS BEGINNING AT 6 PM (NIGHT WORK ONLY). REFER TO DIVISION 1 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RELOCATION OF EXISTING POWER POLE SHALL BE COMPLETED WITH THE USE OF A 700 kW OR LARGER PORTABLE STANDBY GENERATOR, PROVIDED BY THE CONTRACTOR, ON SITE AND HARDWIRED INTO THE EXISTING PUMP STATION. REFER TO DIVISION 1 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION. POWER RELOCATION SHALL NOT OCCUR CONCURRENTLY WITH CONNECTION TO PROPOSED WATER MAIN.

GENERAL NOTES

- CONTRACTOR SHALL ALLOW ACCESS TO THE OWNER AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION.
- DO NOT BLOCK DOORS, GATES, STAIRWAYS AND OTHER ACCESS POINTS TO OWNER FACILITIES.
- SITE SECURITY AND PUBLIC SAFETY IS THE CONTRACTOR'S RESPONSIBILITY AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION ACTIVITIES TO WITHIN THE CONSTRUCTION LIMITS UNLESS OTHERWISE APPROVED BY THE DISTRICT. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS SHOWN UNTIL FINAL FENCE IS INSTALLED.
- LOCATION OF PORTA-POTTIES SHOULD BE A MINIMUM OF 25-FEET AWAY FROM DRAIN INLETS OR CRITICAL AREAS AND LOCATED WITHIN THE CONSTRUCTION LIMITS SHOWN ON THIS SHEET.
- ONSITE MATERIALS STOCKPILES, EQUIPMENT AND SUPPLY STAGING AREAS SHALL BE LIMITED TO THE CONSTRUCTION LIMITS AS SHOWN ON THIS SHEET.

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52878
REGISTERED
PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

DANIEL W. BROWN
STATE OF WASHINGTON
38306
REGISTERED
PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION
REPLACEMENT

DEMOLITION AND TESC PLAN

Skagit PUD
PUBLIC UTILITY DISTRICT

ENGINEER: CMP	JOB NO.: 117.025
REVIEWED: DWB	CLIENT: SPUD
SAVE DATE: Sep 22, 2020	FILENAME: RWPS-D-CIV02.DWG
PLOT DATE: Sep 22, 2020	

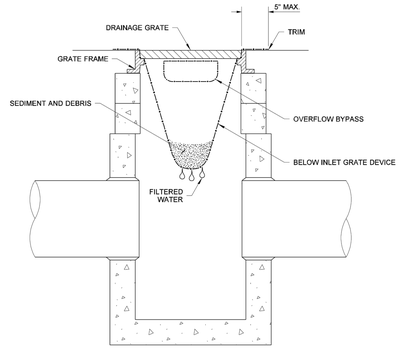
REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

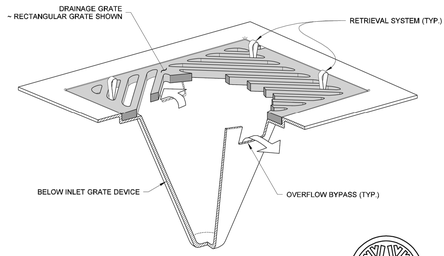
P.N. 3766
C.O. 5040

DWG NO.: C02
SHEET NO.: 3 / 37

DRAWN BY: LISA CYFORD



SECTION VIEW
NOT TO SCALE



ISOMETRIC VIEW

NOTES

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
MARK W. MAURER
CERTIFICATE NO. 000598

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCU-MENT BUT AN ELECTRONIC SUPLICATE. THE ORIGINAL SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPART-MENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

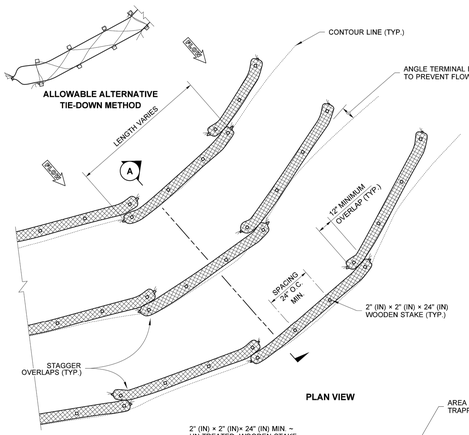
STORM DRAIN INLET PROTECTION

STANDARD PLAN I-40.20-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 09-20-07
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

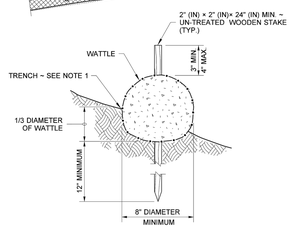
DRAWN BY: FERN LIDDELL



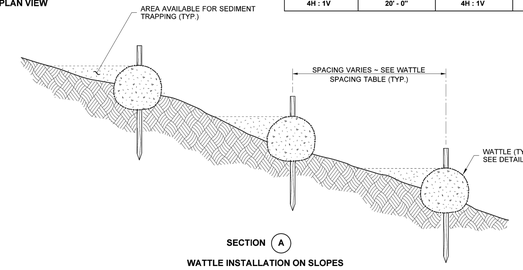
NOTES

1. Wattles shall be in accordance with **Standard Specification, Section 9-14.5(5).** Install Wattles along contours. Installation shall be in accordance with **Standard Specification, Section 8-01.3(10)**.
2. Securely knot each end of Wattle. Overlap adjacent Wattle ends 12" (in) behind one another and securely tie together.
3. Compact excavated soil and trenches to prevent undercutting. Additional staking may be necessary to prevent undercutting.
4. Install Wattle perpendicular to flow along contours.
5. Wattles shall be inspected regularly, and immediately after a rainfall produces runoff, to ensure they remain thoroughly entrenched and in contact with the soil.
6. Perform maintenance in accordance with **Standard Specification, Section 8-01.3(15).**
7. Refer to **Standard Specification, Section 8-01.3(16)** for removal.

WATTLE SPACING TABLE			
TEMPORARY		**PERMANENT**	
8" - 10" OR 10" - 12" DIAM.		**10" - 12" DIAM.**	
SLOPE	**MAX. SPACING**	**SLOPE**	**MAX. SPACING**
1H : 1V	5' - 0"	-	-
2H : 1V	10' - 0"	2H : 1V	5' - 0"
3H : 1V	15' - 0"	3H : 1V	10' - 0"
4H : 1V	20' - 0"	4H : 1V	15' - 0"



WATTLE DETAIL



WATTLE INSTALLATION ON SLOPES

STATE OF WASHINGTON
JULI DEE HARTWIG
NO. 1423 EXP. 06/12/2021
LANDSCAPE ARCHITECT
Hartwig, Juli
Jun 4 2019 8:05 AM

WATTLE INSTALLATION ON SLOPE

STANDARD PLAN I-30.30-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Bank, Steve
Jun 12 2019 7:41 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52875
REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

DANIEL W. BROWN
STATE OF WASHINGTON
38308
REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION
REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

DEMOLITION AND TESC DETAILS

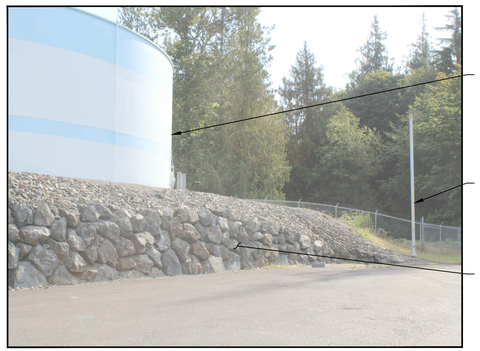
EXISTING UTILITY POLE TO BE RELOCATED. CONTRACTOR SHALL COORDINATE WITH PSE FOR RELOCATION. REFER TO DIVISION 1 OF THE SPECIFICATIONS REGARDING INFORMATION RELATED TO SHUT DOWN.

EXISTING PUMP STATION BUILDING AND APPURTENANCES TO BE PROTECTED IN PLACE

EXISTING CHAIN LINK FENCE TO BE RELOCATED PER DWG NO. C05

EXISTING ASPHALT TO BE REMOVED PER DWG NO. C02

101 **SITE PHOTO**



EXISTING RESERVOIR TO BE PROTECTED IN PLACE. CONTRACTOR SHALL USE SHORING AS NECESSARY DURING CONSTRUCTION.

EXISTING SITE LIGHT, POLE, FOUNDATION AND ASSOCIATED CONDUITS TO BE REMOVED AS SHOWN ON DWG NO. C02

EXISTING ROCKERY TO BE REMOVED TO LIMITS SHOWN ON DWG NO. C02

102 **SITE PHOTO**

EXISTING SITE LIGHT, POLE, FOUNDATION AND ASSOCIATED CONDUITS TO BE REMOVED AS SHOWN ON THE DEMOLITION PLAN.

PROTECT EXISTING CATCH BASIN IN PLACE ⚠

EXISTING WATER MAIN, VALVE AND STANDPIPE TO BE REMOVED AS SHOWN ON DWG NO. C02

103 **SITE PHOTO**

EXISTING UTILITY POLE TO AND GUY WIRE/ANCHOR TO BE RELOCATED.

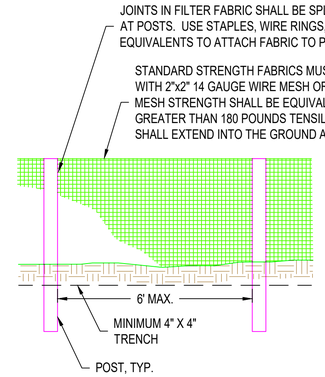
EXISTING TRANSFORMER AND VAULT. PROTECT VAULT IN PLACE. TRANSFORMER TO BE REPLACED BY PUGET SOUND ENERGY.

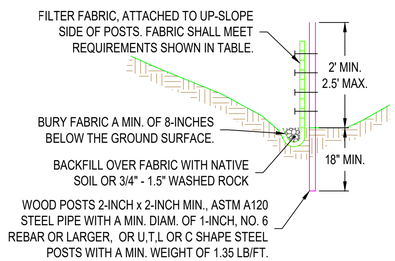
104 **SITE PHOTO**

SILT FENCE NOTES:

1. FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F TO 120°F.
2. FILTER FABRIC FENCES SHALL BE INSTALLED AS SHOWN PER PLAN. ADJUST AS NECESSARY TO FOLLOW CONTOUR WHENEVER POSSIBLE. THE ENDS OF THE FENCE SHALL BE TURNED UP INTO THE CONTOUR.
3. FILTER FABRIC SHALL BE SEWN TOGETHER AT THE POINT OF MANUFACTURE TO FORM FILTER FABRIC LENGTHS AS REQUIRED. ALTERNATIVELY TWO SECTIONS OF FENCE CAN BE OVERLAPPED, PROVIDE THAT THE CONTRACTOR CAN DEMONSTRATE, TO THE SATISFACTION OF THE ENGINEER, THAT THE OVERLAP IS LONG ENOUGH AND THAT THE ADJACENT FENCE SECTIONS ARE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THE FENCE OVERLAP.

FILTER FABRIC	
POLYMERIC MESH AOS (ASTM D4751)	0.60 MM MAXIMUM FOR FILM WOVENS (US #30 SIEVE). 0.30 MM MAXIMUM FOR ALL OTHER GEOTEXTILE TYPES (US #50 SIEVE). 0.15 MM MINIMUM FOR ALL FABRIC TYPES (US #100 SIEVE).
WATER PERMITTIVITY (ASTM D4491)	0.02 SEC^{-1} MINIMUM
GRAB TENSILE STRENGTH (ASTM D4632)	180 LBS. MINIMUM FOR EXTRA STRENGTH FABRIC. 100 LBS. MINIMUM FOR STANDARD STRENGTH FABRIC.
GRAB TENSILE ELONGATION (ASTM D4632)	30% MAXIMUM.
ULTRAVIOLET RESISTANCE (ASTM D4355)	70% MINIMUM.





100 C02 **SILT FENCE**
NOT TO SCALE

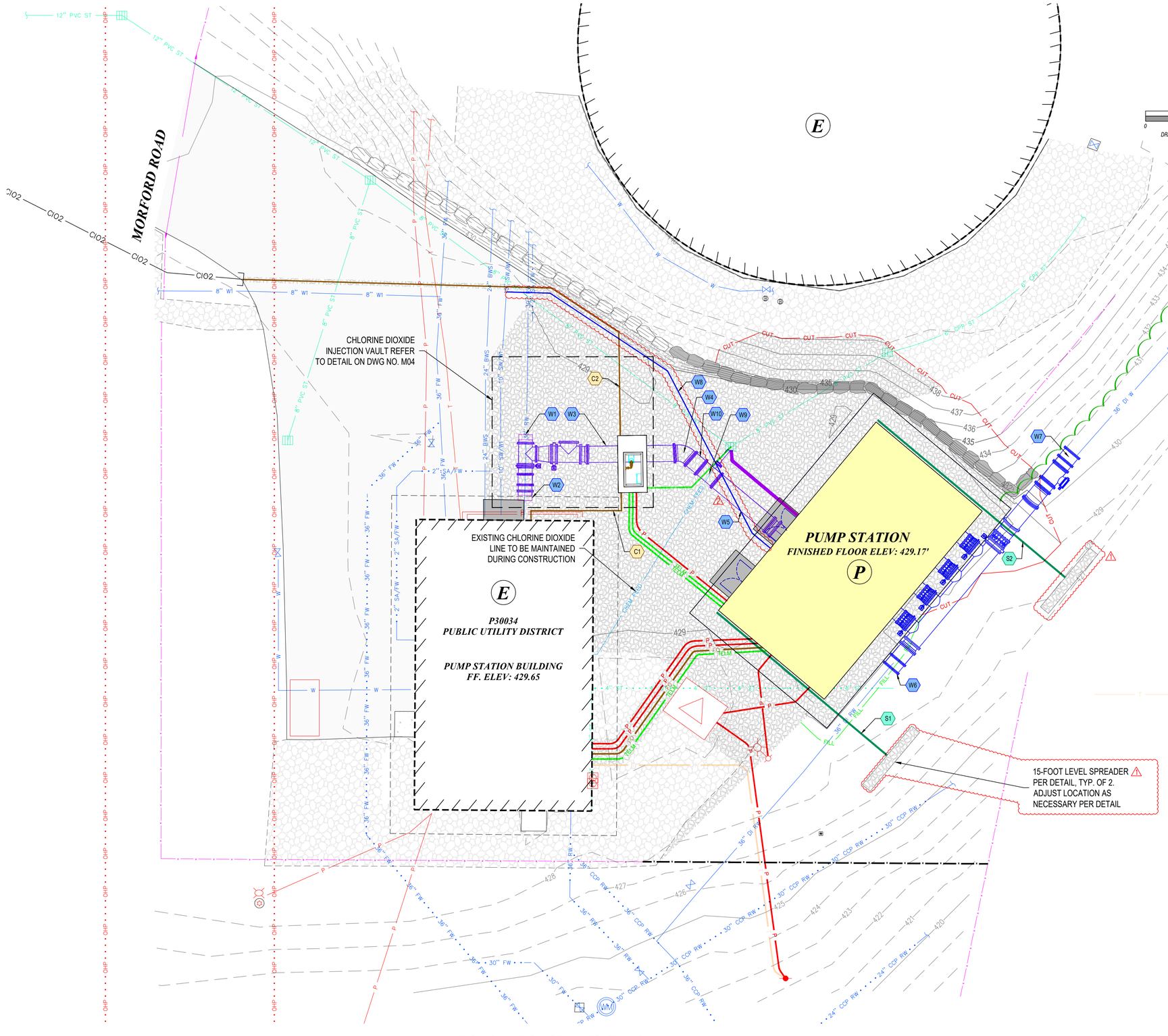
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	09/22/2020	FINAL SPUD COMMENTS	DWB
			QC
			REVIEW

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-CIV02.DWG
SAVE DATE: Sep 22, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: CMP
REVIEWED: DWB

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C03
SHEET NO.: 4 of 37

P.N. 3766
C.O. 5040



PROPOSED SITE UTILITY PLAN

SITE UTILITY NOTES

WATER

- W1 N:539342.55, E:1311033.39, PROVIDE: (1) - CONNECTION TO EXISTING
- W2 N:539330.16, E:1311033.28, PROVIDE: (1) - CONNECTION TO EXISTING
- W3 PROVIDE APPROX 20 LF of 36" DI PIPE (TRJ)
- W4 N:539339.00, E:1311064.31, PROVIDE: (1) - 36" DI 45° BEND (TRJxTRJ)
- W5 PROVIDE APPROX 16 LF of 36" DI PIPE (TRJ)
- W6 N:539296.78, E:1311104.70, PROVIDE: (1) - CONNECTION TO EXISTING WITH 36" DI SLEEVE (TRJxTRJ)
- W7 N:539338.19, E:1311139.50, PROVIDE: (1) - CONNECTION TO EXISTING WITH 36" DI SLEEVE (TRJxTRJ)
- W8 CONNECT WATER SERVICE TO 10" DI SW/W1 PIPE WITH CORPSTOP. PROVIDE APPROX 72 LF OF 1" COPPER PIPING AND FITTINGS AS NECESSARY TO CONNECT TO NEW PUMP STATION BUILDING. REFER TO DWG NO. M03 FOR CONTINUATION. ⚠
- W9 N:539334.86 E:1311069.24, PROVIDE: (1) - 36" x 6" DI TEE (TRJxFL) (1) - 6" GATE VALVE (FLxTRJ) (1) - 6" DI NIPPLE, LENGTH TO FIT. FITTINGS AND PIPE SHALL BE FULLY RESTRAINED
- W10 PROVIDE APPROX 16 LF of 36" DI PIPE (TRJ)

STORMWATER

- S1 PROVIDE APPROX 43 LF DOWNSPOUT ⚠ DRAIN PER DETAIL ON DWG NO C06.
- S2 PROVIDE APPROX 48 LF DOWNSPOUT ⚠ DRAIN PER DETAIL ON DWG NO C06.

MINOR UTILITIES

- C1 PROVIDE APPROX 20 LF of 2" SCH. 80 PVC PIPE. PROVIDE FITTINGS AS NECESSARY PROVIDE FULLY FUNCTIONAL CHLORINE DIOXIDE INJECTION SYSTEM AND TO CONNECT TO EXISTING. ROUTE PIPE THROUGH EXISTING BUILDING PIPE GALLEY. COORDINATE CONNECTION WITH DISTRICT REPRESENTATIVE.
- C2 PROVIDE APPROX 97 LF of 2" SCH. 80 PVC PIPE. PROVIDE FITTINGS AS NECESSARY PROVIDE FULLY FUNCTIONAL CHLORINE DIOXIDE INJECTION SYSTEM AND TO CONNECT TO EXISTING. COORDINATE CONNECTION WITH DISTRICT REPRESENTATIVE.

SITE UTILITY LEGEND

- 1170 MAJOR CONTOUR
- 1171 MINOR CONTOUR
- CUT CUT LIMITS
- FILL FILL LIMITS
- P ELECTRICAL CONDUIT
- FO FIBER OPTIC CONDUIT
- TELM TELEMETRY CONDUIT
- TRENCH DRAIN
- BUILDING DRAIN LINE
- CHLORINE INJECTION LINE
- ROCKERY
- BUILDING ROOF OUTLINE
- BUILDING
- CONCRETE
- CRUSHED SURFACING

GENERAL UTILITY NOTES

- PROVIDE JOINT BONDING FOR DISCHARGE PIPING PER DETAIL ON DWG NO. M06.
- DISCHARGE PIPING SHALL BE POLYWRAPPED IN ACCORDANCE WITH DIVISION 13 OF THE SPECIFICATIONS.

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

DANIEL W. BURWEN — STATE OF WASHINGTON — 38308 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
SITE UTILITY PLAN

Skagit PUD — PUBLIC UTILITY DISTRICT

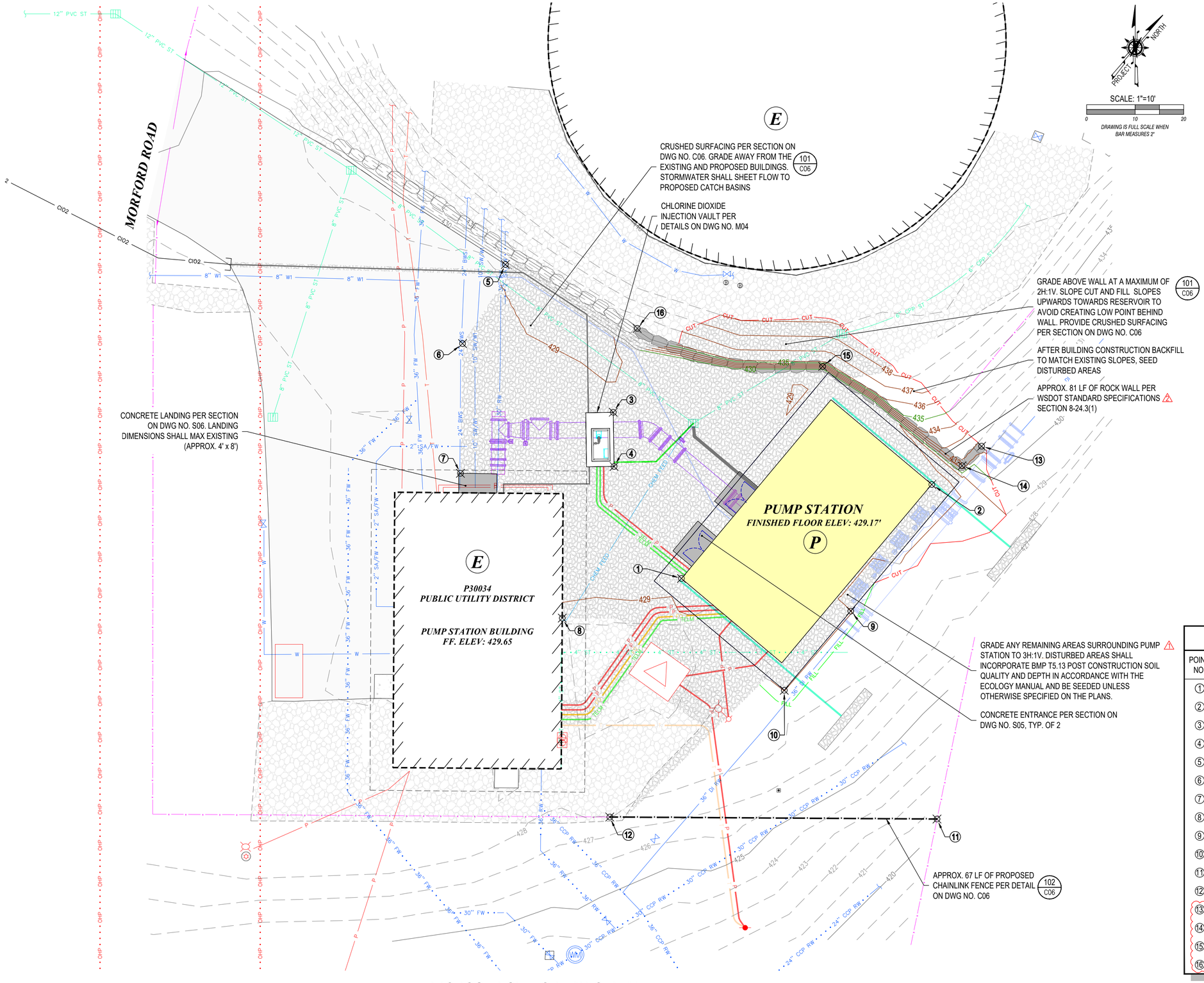
NO.	DATE	DESCRIPTION	BY
1	6/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	OMP
2	9/22/2020	FINAL SPUD COMMENTS	QC
			DWB
			REVIEW

REVISIONS

ENGINEER: OMP
REVIEWED: DWB
SAVE DATE: Sep 22, 2020
PLOT DATE: Sep 22, 2020
CLIENT: SPUD
FILENAME: RWPS-D-CIV03.DWG
JOB NO.: 117.025

P.N. 3766
C.O. 5040

DWG NO.: C04
SHEET NO.: 5 of 37



PROPOSED SITE GRADING PLAN

ROCKERY NOTES

ROCKERY SHALL BE CONSTRUCTED PER STANDARD SPECIFICATIONS 8.24.3(1). BASE ROCK - 3 MAN. ROCK ABOVE BASE ROCK - 2 MAN. BACKFILL SHALL BE CSBC COMPACTED TO FIRM AND UNYIELDING CONDITION. NO GEOTEXTILE REQUIRED. SUBGRADE SHALL BE REVIEWED AND APPROVED JUST PRIOR TO BASE ROCK PLACEMENT BY OWNER REPRESENTATIVE. PROTECT SUBGRADE FROM WEATHER DEGRADATION.

SITE GRADING LEGEND

- 1170 — MAJOR CONTOUR
- 1171 — MINOR CONTOUR
- CUT — CUT LIMITS
- FILL — FILL LIMITS
- P — ELECTRICAL CONDUIT
- FO — FIBER OPTIC CONDUIT
- TELM — TELEMETRY CONDUIT
- TRENCH DRAIN
- BUILDING DRAIN LINE
- CHLORINE INJECTION LINE
- ROCKERY
- BUILDING ROOF OUTLINE
- BUILDING
- CONCRETE
- CRUSHED SURFACING
- CHAINLINK FENCE

POINT TABLE

POINT NO.	ELEV.	NORTHING	EASTING	DESC.
1	SEE DWG NO. A01	539308.20	1311071.05	BUILDING CORNER
2	SEE DWG NO. A01	539327.55	1311122.62	BUILDING CORNER
3	SEE DWG NO. M04	539342.42	1311057.01	VAULT CORNER
4	SEE DWG NO. M04	539331.26	1311057.17	VAULT CORNER
5	MATCH EXISTING	539372.84	1311034.78	EDGE OF GRAVEL
6	MATCH EXISTING	539356.56	1311025.97	EDGE OF GRAVEL
7	MATCH EXISTING	539329.85	1311025.53	EDGE OF GRAVEL
8	MATCH EXISTING	539300.04	1311046.51	EDGE OF GRAVEL
9	429.05	539301.46	1311105.93	EDGE OF GRAVEL
10	429.04	539285.17	1311092.24	EDGE OF GRAVEL
11		539258.65	1311123.70	FENCE CORNER
12		539259.07	1311056.30	FENCE CORNER
13		539335.44	1311132.87	END OF ROCKERY
14		539331.40	1311128.85	ROCKERY DEFLECTION
15		539351.85	1311100.14	ROCKERY DEFLECTION
16		539359.70	1311061.95	END OF ROCKERY

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

DANIEL W. BROWN — STATE OF WASHINGTON — 38306 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
Skagit PUD — PUBLIC UTILITY DISTRICT

SITE GRADING PLAN

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-CIV04.DWG
SAVE DATE: Sep 22, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: CMP
REVIEWED: DWB

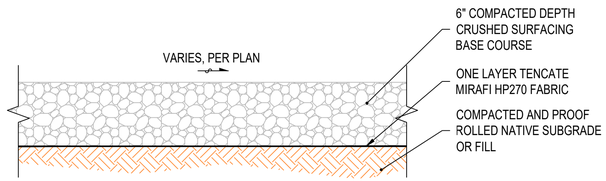
REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	6/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	CMP	DWB
2	9/22/2020	FINAL SPUD COMMENTS	CC	DWB

P.N. 3766
C.O. 5040

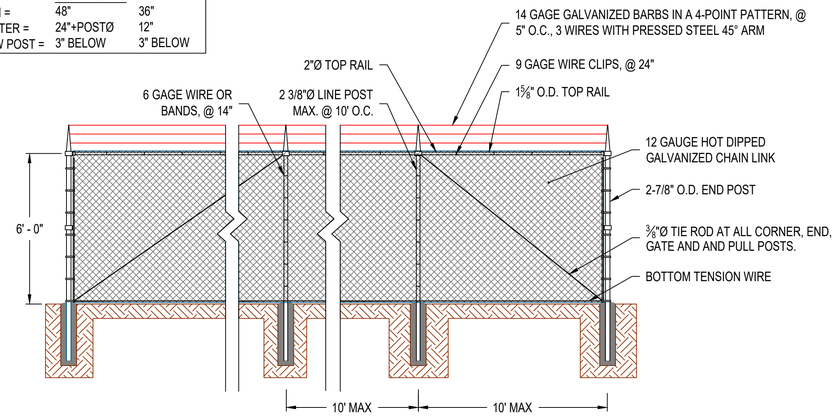
DWG NO.: C05
SHEET NO.: 6
37

POST HOLE CONCRETE:	GATE POSTS & END POSTS	LINE POSTS
MINIMUM DEPTH =	48"	36"
MINIMUM DIAMETER =	24"+POSTØ	12"
MINIMUM BELOW POST =	3" BELOW	3" BELOW



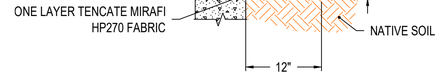
GRAVEL SECTION
NOT TO SCALE

101 / C05



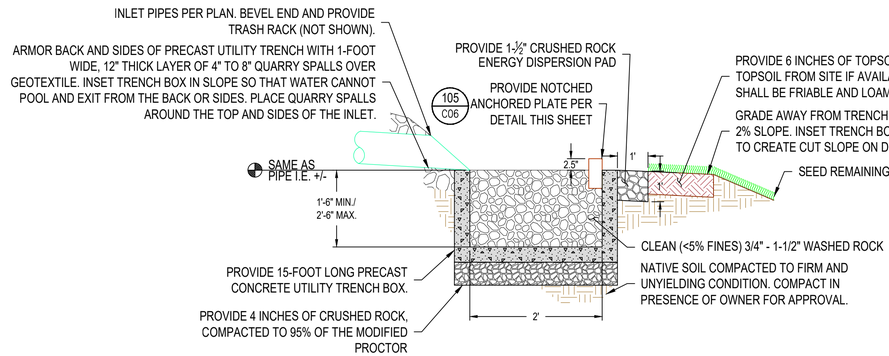
CHAINLINK FENCE DETAIL
NOT TO SCALE

102 / C05



DOWNSPOUT DRAIN DETAIL
NOT TO SCALE

103 / C05



FLOW DISPERSION TRENCH DETAIL
NOT TO SCALE

104 / C05

NOTE:
1. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF SITE.

NOTCHED ANCHORED PLATE DETAIL
NOT TO SCALE

105 / C06

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

DANIEL W. BROWN — STATE OF WASHINGTON — 38305 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

SITE DETAILS

Skagit PUD — PUBLIC UTILITY DISTRICT

ENGINEER: CMP	SAVE DATE: Jul 17, 2020	CLIENT: SPUD	JOB NO.: 117.025
REVIEWED: DWB	PLOT DATE: Sep 22, 2020	FILENAME: RWPS-D-DET.DWG	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	6/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	CMP	DWB

SCALE: SHOWN

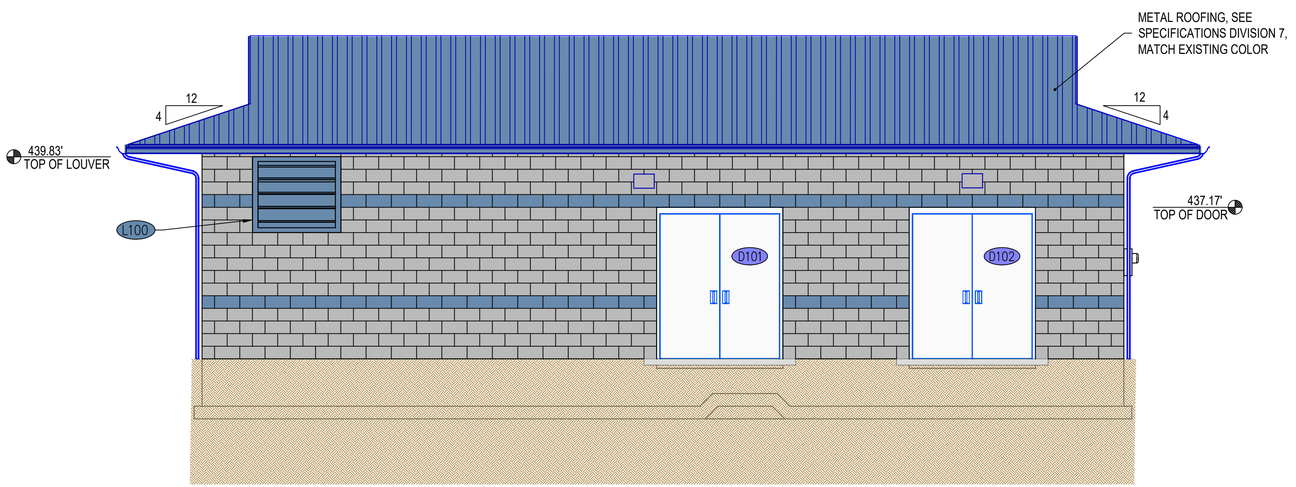
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

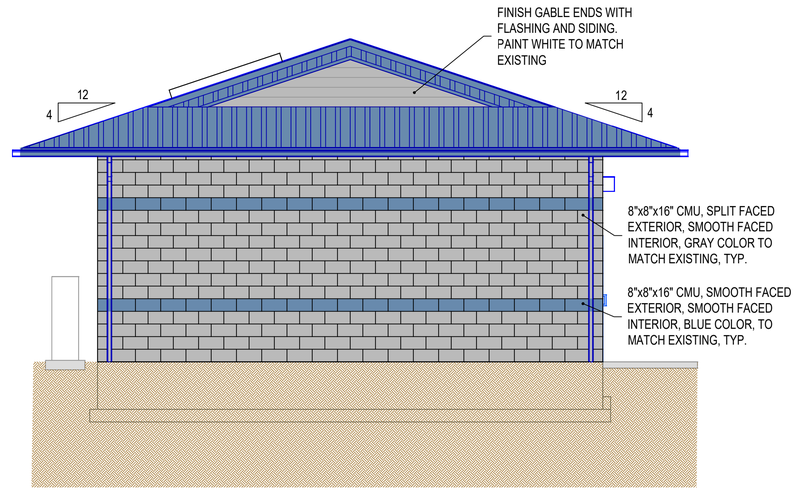
DWG NO.: C06

SHEET NO.: 7



WEST ELEVATION

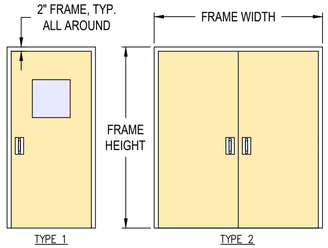
¼" = 1'-0"



NORTH ELEVATION

¼" = 1'-0"

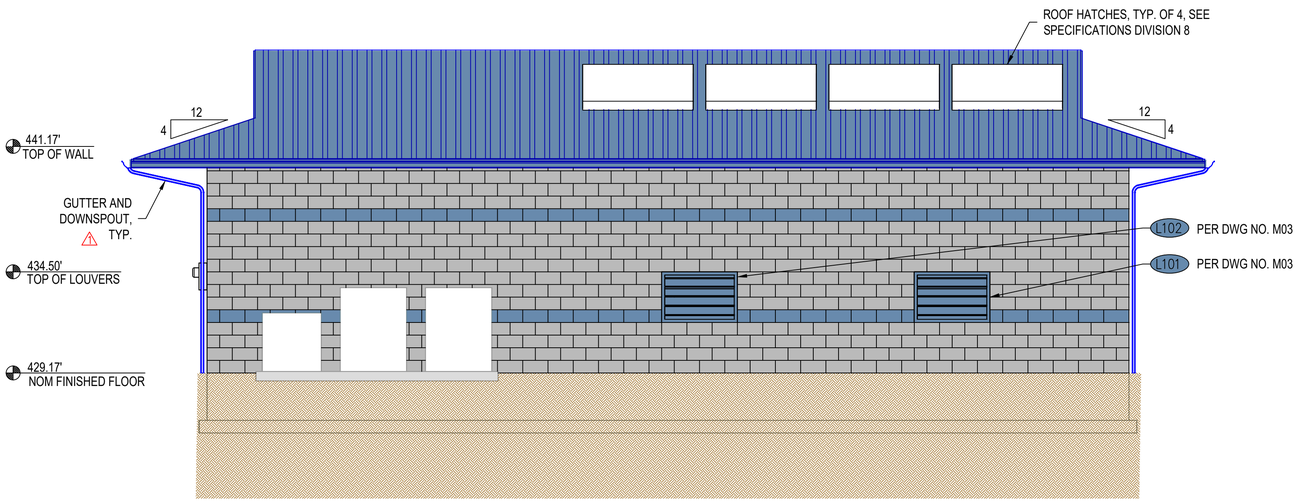
DOOR TYPES:



DOOR SCHEDULE

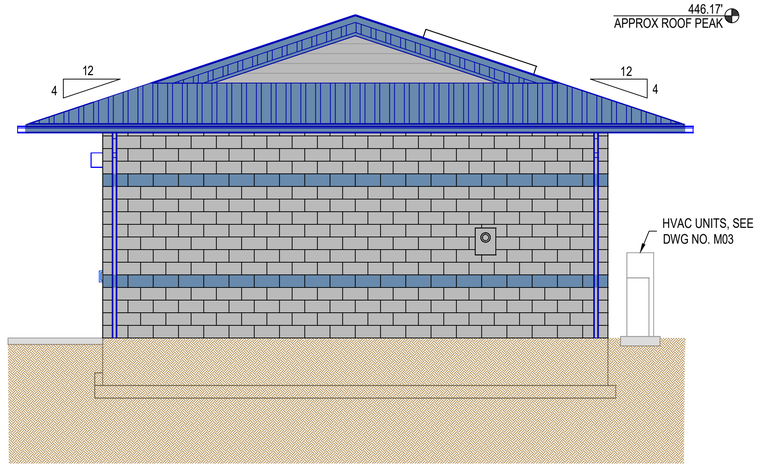
No.	LOCATION	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR MATERIAL	FRAME SIZE WIDTH	FRAME SIZE HEIGHT	FRAME MATERIAL	NOTES
D100	MECHANICAL ROOM	2	6'-4"	7'-10"	STEEL	6'-8"	8'-0"	STEEL	1
D101	ELECTRICAL ROOM	2	6'-4"	7'-10"	STEEL	6'-8"	8'-0"	STEEL	1
D102	ELECTRICAL ROOM	1	3'-0"	7'-10"	STEEL	3'-4"	8'-0"	STEEL	1

1. PROVIDE HARDWARE TO DOORS AS SPECIFIED IN DIVISION 8. PANIC BARS SHALL BE PROVIDED FOR EACH ACTIVE SIDE DOUBLE EXTERIOR DOOR
2. COAT DOOR PER SPECIFICATIONS DIVISION 9, MATCH COLOR OF EXISTING



EAST ELEVATION

¼" = 1'-0"



SOUTH ELEVATION

¼" = 1'-0"

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52875
REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

TON MARSHALL CONRAD
STATE OF WASHINGTON
44672
PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

EXTERIOR ELEVATIONS

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ARCH01.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: DND
REVIEWED: JMC

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	08/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	DND	DWB

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: A01

SHEET NO.: 8 / 37

SIDING ON NEW BUILDING SHALL MATCH EXISTING BUILDING

GUTTER ON NEW BUILDING SHALL MATCH EXISTING BUILDING

EAVE ON EXISTING BUILDING SHALL NOT BE INCLUDED IN THE NEW BUILDING, SEE DWG NO. S03 FOR DETAILS

FLASHING ON NEW BUILDING SHALL MATCH EXISTING BUILDING

SOFFIT COLOR FOR NEW BUILDING SHALL MATCH EXISTING AND METAL SOFFITS TO BE INCLUDED IN NEW BUILDING

EXISTING PUMP STATION EXTERIOR

NEW ROOF MATERIAL AND COLOR SHALL MATCH EXISTING, INCLUDING BUT NOT LIMITED TO RIB HEIGHT AND SPACING.

EXISTING PUMP STATION EXTERIOR

NOTE:
-ANY ARCHITECTURAL ITEMS NOT SPECIFICALLY IDENTIFIED IN THESE PLANS SHALL BE CONSTRUCTED TO MATCH THE EXISTING PUMP STATION

-BIDDERS WILL BE ALLOWED TO ACCESS THE SITE TO VERIFY EXISTING BUILDING MATERIALS TO ASSIST IN BID PREPARATION.

NEW BUILDING CMU COLOR TO MATCH EXISTING

EXISTING PUMP STATION EXTERIOR

FLASHING TYPE AND COLOR AROUND NEW ROOF HATCHES SHALL MATCH THE EXISTING BUILDING

TRIM AND FLASHING ON GABLE ENDS OF BUILDING SHALL MATCH EXISTING

FLASHING FOR BUILDING RIDGES SHALL MATCH EXISTING

EXISTING PUMP STATION EXTERIOR

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

DON MARSHALL CONNELL — STATE OF WASHINGTON — 44672 — AGRICULTURAL ENGINEER — PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD — PUBLIC UTILITY DISTRICT

EXISTING PUMP STATION GRAPHICS

ENGINEER: DND	SAVE DATE: Jul 17, 2020	CLIENT: SPUD	JOB NO.: 117.025	
REVIEWED: JMC	PLOT DATE: Sep 22, 2020	FILENAME: RWPS-D-ARCH01.DWG		

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	06/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	DND	DMB

SCALE: SHOWN

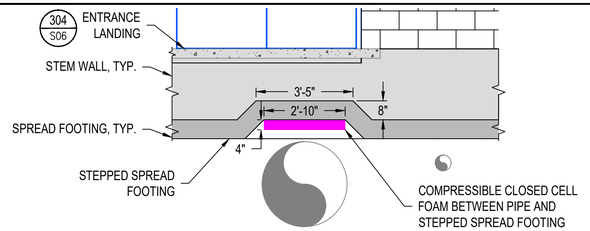
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

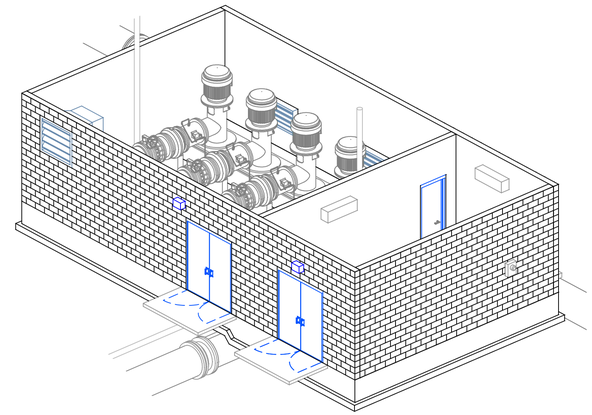
DWG NO.: A02

SHEET NO.: 9 / 37



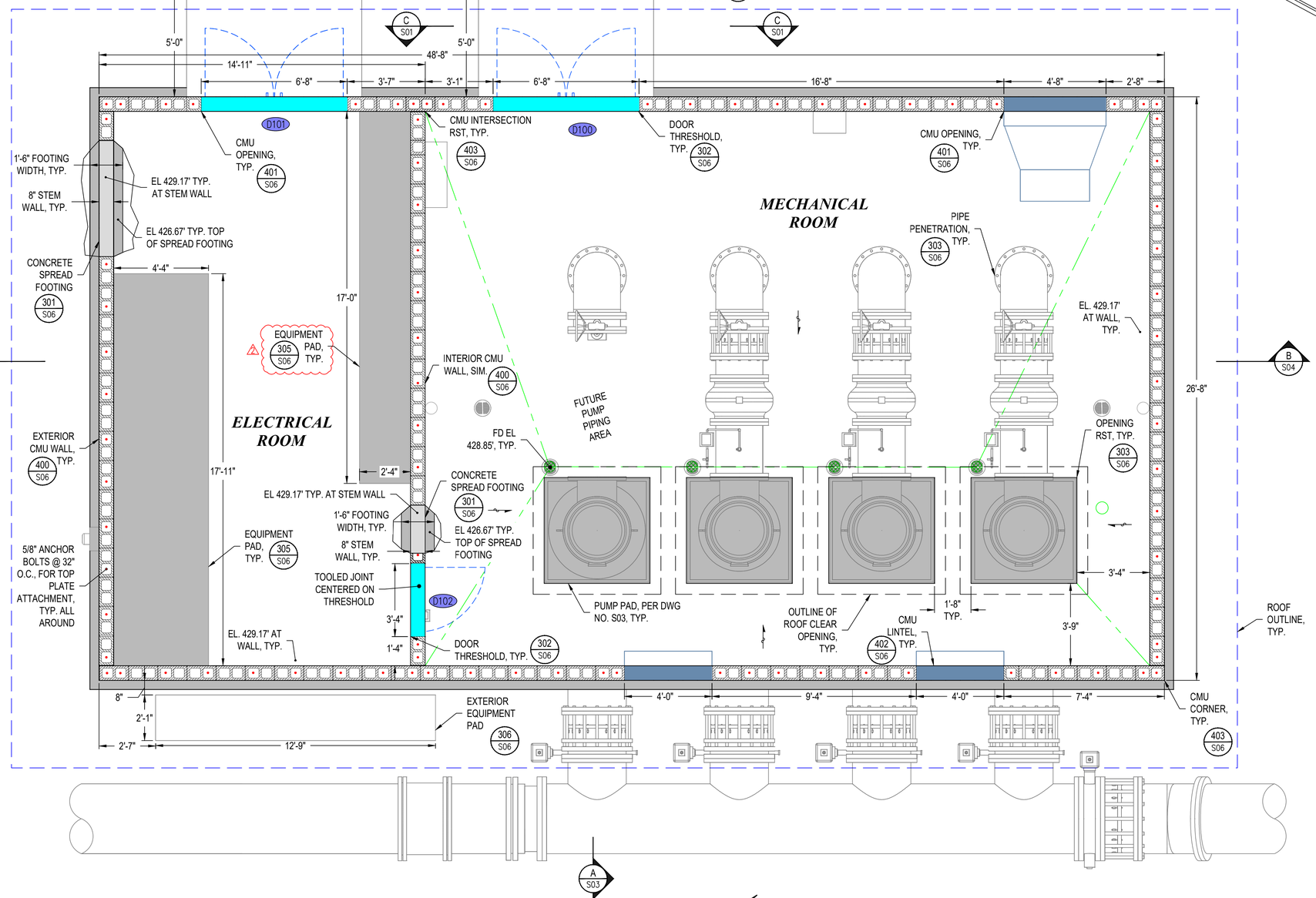
STEPPED FOOTING DETAIL (C S01)

3/8" = 1'-0"



OBLIQUE

NOT TO SCALE



FLOOR PLAN

3/8" = 1'-0"

PROJECT NORTH

NOTES:

1) SEE MECHANICAL, PLUMBING, AND ELECTRICAL PLANS FOR ADDITIONAL UNDER/IN SLAB PIPING AND CONDUIT.

2) SEE DWG NO. A01 FOR DOOR SCHEDULE.

3) SEE NOTES. (300 S05) FOR GENERAL STRUCTURAL

4) SEE MECHANICAL DRAWINGS FOR PIPE AND PENETRATION LOCATIONS.

COLOR LEGEND

- SPREAD FOOTING
- STEM WALL
- EQUIPMENT PAD
- LOUVER
- DOOR
- HATCH OPENING OUTLINE
- ROOF OUTLINE
- FLOOR RIDGE/VALLEY
- CMU BLOCK

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

TOM MARSHALL CONRAD — STATE OF WASHINGTON — 44672 — REGISTERED STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

FACILITY FLOOR PLAN

Skagit PUD — PUBLIC UTILITY DISTRICT

ENGINEER: DND	SAVE DATE: Sep 22, 2020	CLIENT: SPUD	JOB NO.: 117.025
REVIEWED: JMC	PLOT DATE: Sep 22, 2020	FILENAME: RWPS-D-STR01.DWG	

REVISIONS

NO.	DATE	DESCRIPTION	BY	QC	DWB	REVIEW
1	9/22/2020	FINAL SPUD COMMENTS				

SCALE: SHOWN

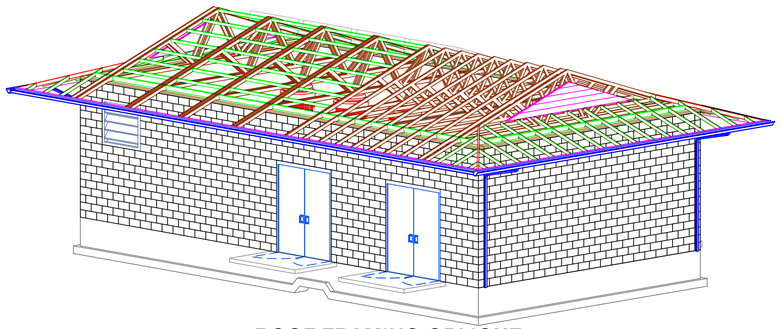
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S01

SHEET NO.: 10 37

P.N. 3766
C.O. 5040



ROOF FRAMING OBLIQUE

NOT TO SCALE

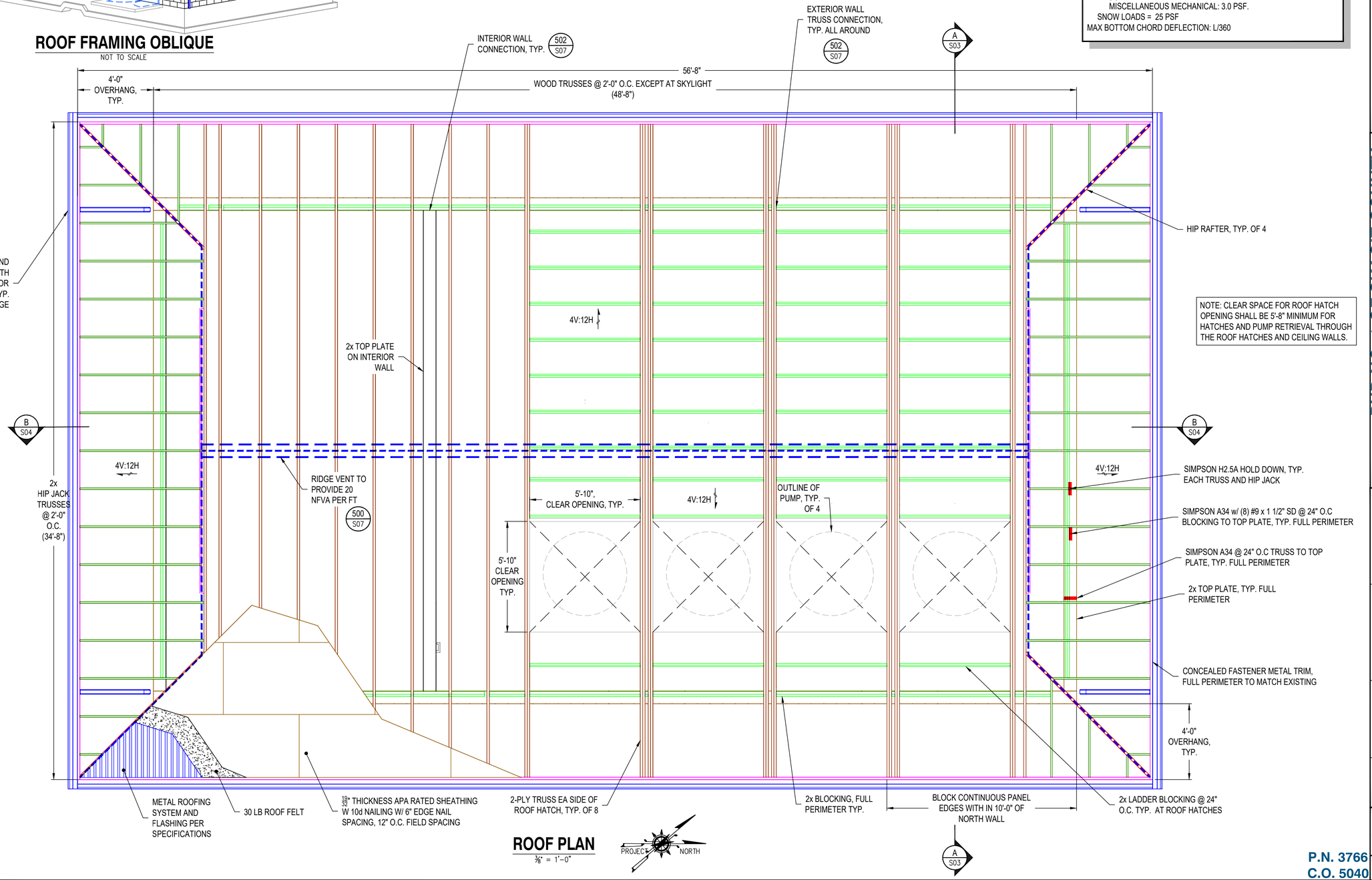
NOTE:

- ALL-FASTENERS INTO PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
- ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED.

TRUSS NOTES

PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES AND OTHER FRAMING SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH ANSI/TPI 1-1995 FOR THE SPANS AND CONDITIONS SHOWN ON THE DRAWINGS.

LOADING SHALL BE AS FOLLOWS:
ROOF DEAD LOAD:
TOTAL DEAD LOAD = 12 PSF, INCLUDES:
ROOFING: 1.5 PSF
SHEATHING: 2.0 PSF
TRUSSES: 2.0 PSF ASSUMED
INSULATION: 0.5 PSF
(1) LAYER OF 5/8 INCH GYPSUM WALLBOARD: 3.0 PSF
MISCELLANEOUS MECHANICAL: 3.0 PSF.
SNOW LOADS = 25 PSF
MAX BOTTOM CHORD DEFLECTION: L/360



NOTE: CLEAR SPACE FOR ROOF HATCH OPENING SHALL BE 5'-8" MINIMUM FOR HATCHES AND PUMP RETRIEVAL THROUGH THE ROOF HATCHES AND CEILING WALLS.

ROOF PLAN

3/8" = 1'-0"

PROJECT NORTH

P.N. 3766
C.O. 5040

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

JON MARSHALL CONRAD — STATE OF WASHINGTON — 44672 — AGRICULTURAL ENGINEER — PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
FACILITY ROOF PLAN

Skagit PUD — PUBLIC UTILITY DISTRICT

REVISIONS				
NO.	DATE	DESCRIPTION	BY	REVIEW
1	06/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	DNB	DWB

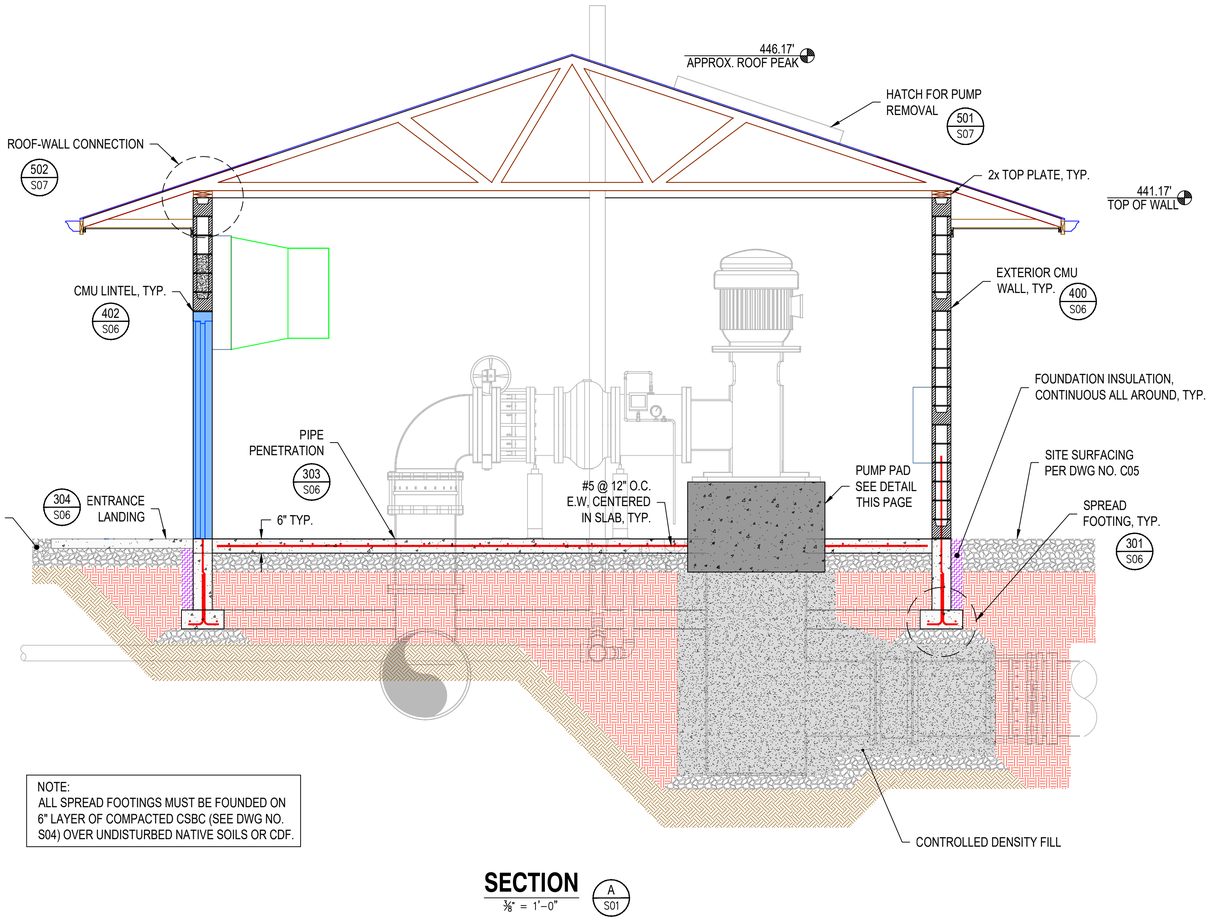
CLIENT: SPUD
FILENAME: RWPS-D-STR02.DWG
JOB NO.: 117.025
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: DND
REVIEWED: JMC

SCALE: SHOWN

0" 1" 2"

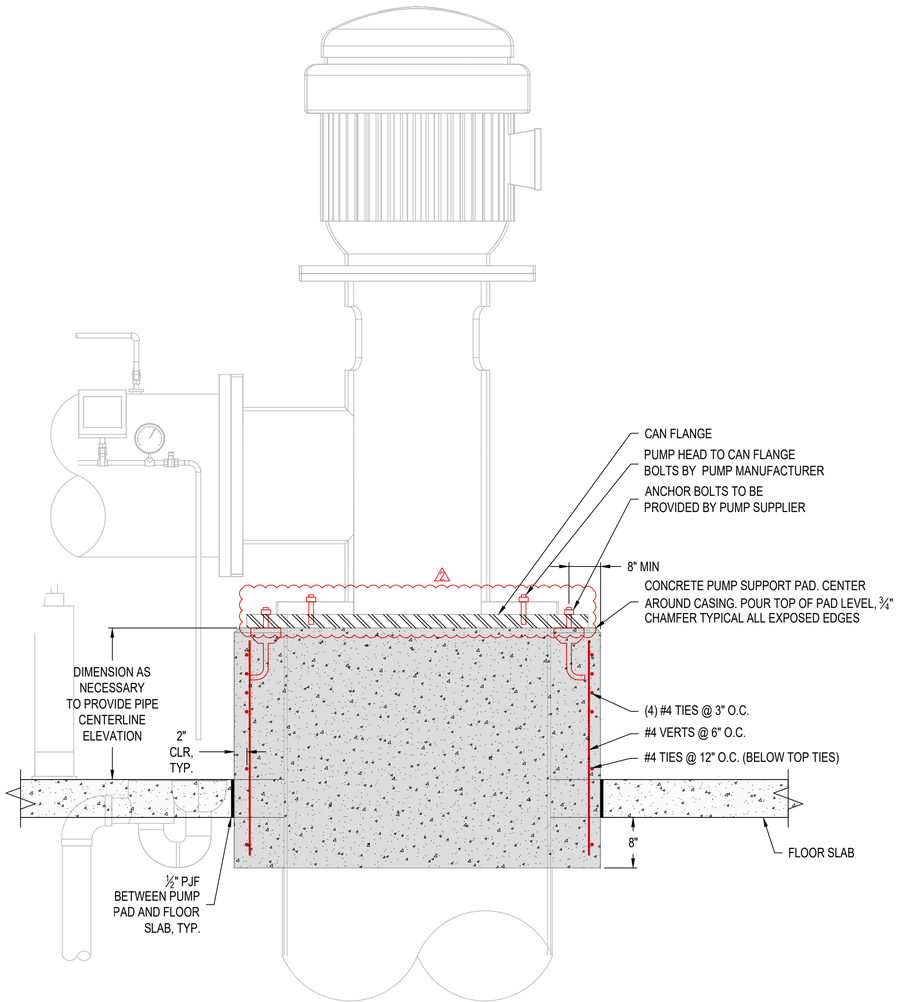
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S02
SHEET NO.: 11
37



NOTE:
ALL SPREAD FOOTINGS MUST BE FOUNDED ON 6" LAYER OF COMPACTED CSBC (SEE DWG NO. S04) OVER UNDISTURBED NATIVE SOILS OR CDF.

SECTION
A S01
⅜" = 1'–0"



PUMP PAD DETAIL SECTION
1" = 1'–0"

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52875
REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

JON MARSHALL CONNELL
STATE OF WASHINGTON
44672
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION
REPLACEMENT

STRUCTURAL SECTION I

Skagit PUD
PUBLIC UTILITY DISTRICT

NO.	DATE	DESCRIPTION
1	9/22/2020	FINAL SPUD COMMENTS

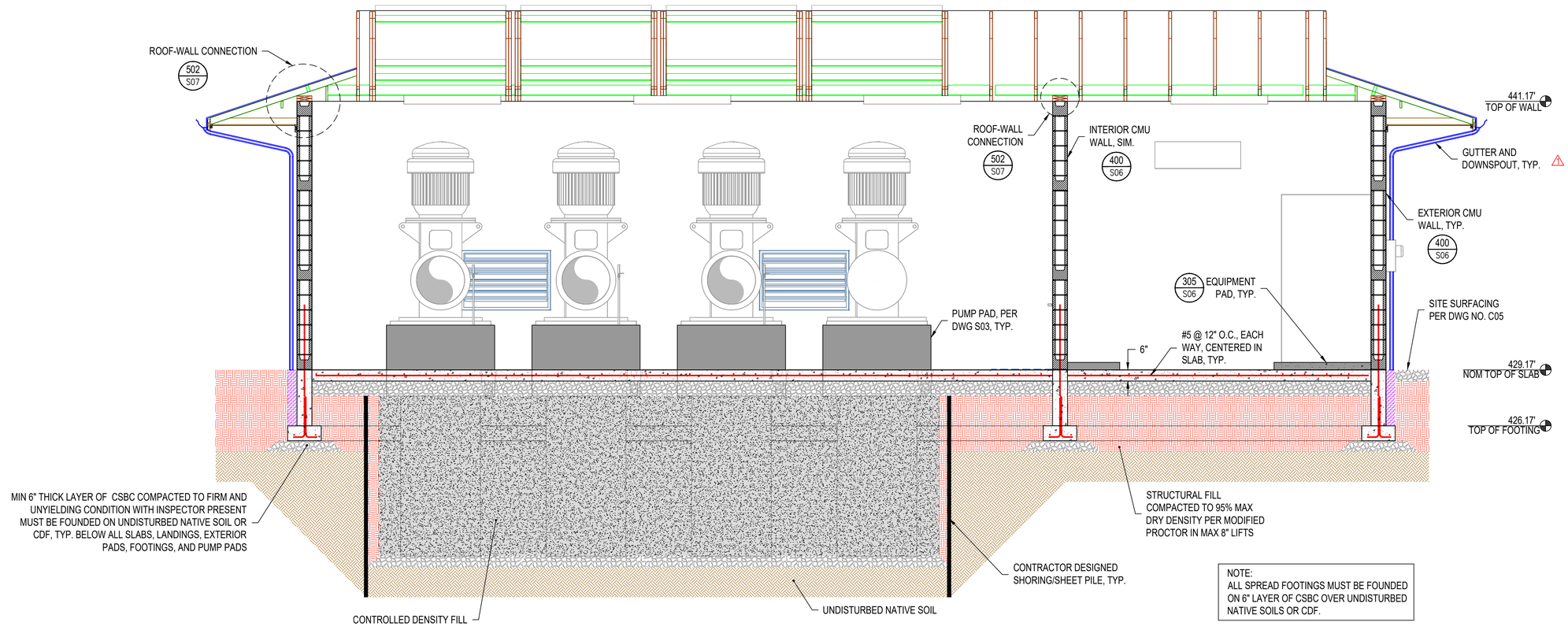
REVISIONS

DESIGNED: DWB
DRAWN: OC
REVIEWED: JMC
CHECKED: BY
SAVE DATE: Sep 22, 2020
PLOT DATE: Sep 22, 2020
FILENAME: RWPS-D-STR03.DWG
CLIENT: SPUD
JOB NO.: 117.025
REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: S03
SHEET NO.: 12
37



NOTE:
ALL SPREAD FOOTINGS MUST BE FOUNDED ON 6" LAYER OF CSBC OVER UNDISTURBED NATIVE SOILS OR CDF.

SECTION B / S01

3/8" = 1'-0"

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

JON MARSHALL CONNELL — STATE OF WASHINGTON — 44672 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD — PUBLIC UTILITY DISTRICT

STRUCTURAL SECTION II

ENGINEER: DND	SAVE DATE: Jul 17, 2020	CLIENT: SPUD	JOB NO.: 117.025
REVIEWED: JMC	PLOT DATE: Sep 22, 2020	FILENAME: RWPS-D-STR04.DWG	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	06/10/2020	REVISED TO CONFORM TO BUILDING PERMIT	DND	DMB

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: S04

SHEET NO.: 13 / 37

GENERAL STRUCTURAL NOTES (300)

GEOTECHNICAL PARAMETERS:

MINIMUM FROST DEPTH	12"
MAXIMUM NET BEARING	1,500 PSF STATIC
SITE SOIL CLASSIFICATION	D
GROUND WATER TABLE	AT GRADE
SOILS REPORT REFERENCE	SKAGIT COUNTY

SEISMIC DESIGN DATA:

SITE LOCATION	LAT 48.470329, LONG 122.190514,
SEISMIC DESIGN CATEGORY	D
RISK CATEGORY	IV ESSENTIAL FACILITY
SPECTRAL RESPONSE ACCELERATIONS	S_{DS} = 0.8g, S_{D1}= 0.464g, S1= 0.357g, Ss= 1.0g
SEISMIC IMPORTANCE FACTOR	Ie = 1.5
SITE CLASS:	D
RESPONSE MODIFICATION FACTORS	IMPULSIVE = 3, CONVECTIVE = 1.5
SEISMIC RESPONSE COEFFICIENT	0.2
RESPONSE MODIFICATION FACTOR	5
SEISMIC-FORCE RESTRAINING SYSTEM	SPECIAL REINFORCED CMU WALL
FOUNDATION TYPE	CONCRETE SPREAD FOOTING
ROOF TYPE	WOOD SHEATHING WITH METAL ROOFING
DESIGN BASE SHEAR	35,283 LBS
ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORCE

WIND DESIGN DATA:

BASIC WIND SPEED	110 MPH
EXPOSURE	C, ENCLOSED
RISK CATEGORY	IV
INTERNAL PRESSURE COEFFICIENT:	+/- 0.18
COMPONENTS AND CLADDING PRESSURE:	ZONE 2: 54.95 PSF ZONE 3: 74.89 PSF
WIND IMPORTANCE FACTOR	Iw = 1.00
ANALYSIS PROCEDURE USED	ENVELOPE

SNOW DESIGN DATA:

ROOF SNOW LOAD	25 PSF
SNOW EXPOSURE FACTOR Ce:	0.9
IMPORTANCE FACTOR, Is:	1.20
THERMAL FACTOR, Ct:	1.0
DRIFT SURCHARGE, Pd:	N/A
WIDTH OF DRIFTS, W:	N/A
UNIFORM UNBALANCED SNOW LOAD:	30 LBS

OTHER DESIGN VALUES USED:

OCCUPANCY CATEGORY	UTILITY
IBC CONSTRUCTION TYPE	V-B
BUILDING AREA	1965 SF
CONCRETE	4,000 PSI WITH 60,000 PSI REINFORCING
CMU	1,500 PSI WITH 60,000 PSI REINFORCING
STEEL	A36 FOR PLATES, A992 FOR OTHER
TIMBER	HEM FIR STUD GRADE OR BETTER AND PER TRUSS MANUFACTURER

LIVE LOADS:

ROOF	20 PSF

CRITERIA:

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, ASCE 7-16, AND IBC 2015.
2. ALL SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEERING LICENSED IN WASHINGTON STATE.

GENERAL:

LINES SHOWN ON DRAWINGS MAY BE ASSOCIATED WITH CAD MODELING AND MAY NOT REPRESENT REQUIRED OR ALLOWED JOINTS. SEE DETAILS FOR CLARIFICATION ON REQUIRED AND ALLOWED JOINTS.

ALL FASTENERS INSTALLED IN TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED.

SPECIAL INSPECTIONS, TESTS, AND OBSERVATIONS:

PROVIDE VERIFICATION OF APPROVED SHOP IF AN APPROVED SHOP IS USED.

SPECIAL INSPECTIONS AND TESTS SHALL INCLUDE THE FOLLOWING. REFER TO IBC SECTION 1704, 1705, 1707, 1708, AND 1709 FOR DETAILS.

1. SPECIAL INSPECTIONS BY THE GEOTECHNICAL ENGINEER INCLUDING:
   - 1.1. SITE EXCAVATION AND GRADING: PERIODIC
   - 1.2. PLACEMENT OF STRUCTURAL FILL AND SOIL COMPACTION: PERIODIC
   - 1.3. VERIFICATION OF SOIL-BEARING CAPACITY: PERIODIC
2. CONCRETE PLACEMENT AT CONCRETE CONSTRUCTION: CONTINUOUS, SEE ALSO SECTION 1705.3
3. REINFORCEMENT AT CONCRETE CONSTRUCTION: PERIODIC, SEE ALSO SECTION 1705.3.
4. MASONRY CONSTRUCTION, INCLUDING PLACEMENT OF MASONRY UNITS, MORTAR REINFORCEMENT AND STRUCTURAL CONNECTIONS: PERIODIC, SEE ALSO SECTION 1705.4.
5. GROUT PLACEMENT AT MASONRY CONSTRUCTION: CONTINUOUS, SEE ALSO SECTION 1704.5.3.
6. WOOD-FRAMED LATERAL-FORCE RESISTING SYSTEM: PERIODIC, SEE ALSO SECTION 1705.5
7. TESTING OF CONCRETE FOR SPECIFIED COMPRESSIVE STRENGTH (FC), AIR CONTENT AND SLUMP. SEE ALSO TABLE/SECTION 1704.4.
8. VERIFICATION OF SPECIFIED COMPRESSIVE STRENGTH (FM) OF MASONRY PRIOR TO CONSTRUCTION AND EVERY 5,000 SQUARE FEET DURING CONSTRUCTION. SEE ALSO TABLE 1708.1.4.
9. STRUCTURAL OBSERVATION BY A REGISTERED DESIGN PROFESSIONAL IN ACCORDANCE WITH SECTION 1709 AND 1704 SHALL BE PROVIDED.
10. SPECIAL INSPECTION OF EPOXY GROUTING / ANCHORAGE REQUIRED.
11. SPECIAL INSPECTION OF WELDING / BOLTING REQUIRED UNLESS PERFORMED AT AN APPROVED SHOP.

REINFORCED CONCRETE:

1. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH THE "REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE" - SEE THIS SHEET. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
2. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
3. CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
   - 3.1. FOOTINGS AND OTHER UNIFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
   - 3.2. FORMED SURFACES EXPOSED TO EARTH (WALLS BELOW GRADE), WATER OR WEATHER (#6 BARS OR LARGER) . . . . . 2"
   - 3.3. SLABS AND INTERIOR FACES . . . . . 2"

DEFERRED SUBMITTALS:

THE FOLLOWING ITEMS HAVE BEEN DEFERRED FOR SUBMITTAL TO THE CITY UNTIL AFTER ISSUANCE OF THE BUILDING PERMIT:

- MECHANICAL PIPING SUPPORTS AND LATERAL BRACING
- ANCHORAGE OF ELECTRICAL EQUIPMENT
-TRUSSES

ABBREVIATIONS:

AL - ALUMINUM
CHK - CHECKERED
CL - CENTERLINE
CLR - CLEAR
CSBC - CRUSHED SURFACING BASE COURSE
EA - EACH
EF - EACH FACE
FB - FLAT BAR
HORZ - HORIZONTAL
LLV - LONG LEG VERT
O.C. - ON CENTER
PL - PLATE
PJF - PREMOLDED JOINT FILLER
RB - ROUND BAR
RST - REINF. STEEL
SST - STAINLESS STEEL
T&B - TOP & BOTTOM
VERT - VERTICAL
UNO - UNLESS NOTED OTHERWISE
WWM - WELDED WIRE MESH

REINFORCEMENT SPLICE AND DEVELOPMENT SCHEDULE

BAR	Ld, MINIMUM STRAIGHT DEVELOPMENT LENGTHS: MINIMUM	TOP BARS	OTHERWISE	MINIMUM LAP SPLICE LENGTHS: CLASS A	CLASS B
#3	19"	25"	29"	Ld	1.3xLd
#4	24"	32"	36"	Ld	1.3xLd
#5	29"	38"	43"	Ld	1.3xLd
#6	42"	55"	63"	Ld	1.3xLd

"MINIMUM" IF:
MIN COVER OF ONE BAR Ø AND MIN SPACING OF TWO BAR DIAMETERS
MIN COVER ONE Ø, MIN SPACING OF ONE BAR Ø, AND TIES OR STIRRUPS
LESS THAN 12" OF FRESH CONCRETE BELOW HORIZONTAL BARS
"TOP BARS" IF:
MEETS CRITERIA FOR MIN EXCEPT 12" OR MORE FRESH CONC BELOW
"OTHERWISE" IF:
DOES NOT MEET REQUIREMENTS FOR MIN DEVELOPMENT LENGTH
"CLASS A" IF:
ONLY HALF OF BARS LAPPED AT ONE LOCATION AND
TWICE THE REINFORCING FOR TENSION IS PROVIDED
"CLASS B" IF:
LAP SPLICES DO NOT MEET CLASS A REQUIREMENTS

CMU ANCHORS FOR THE USE IN BOTH GROUTED AND UNGROUTED CMU CELLS SHALL BE EITHER HILTI HIT-HY 70 INJECTABLE MORTAR, SIMPSON STRONG-TIE SET-XP ANCHORING ADHESIVE, OR POWERS AC100+ GOLD ADHESIVE ANCHORS.

WHERE SIZE IS CALLED OUT ON THE DRAWINGS, PROVIDE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON THE FOLLOWING TABLES. PROVIDE MINIMUM EDGE DISTANCES AND SPACING AS SHOWN ON THE FOLLOWING TABLES UNLESS SPECIFICALLY DETAILED OTHERWISE.

INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

NOTIFY OWNER 48 HOURS IN ADVANCE OF INSTALLATION OF ALL ANCHORS.

WHERE SIZE IS NOT CALLED OUT, ANCHOR SHALL BE SELECTED BASED ON DESIGN LOADS. IF THE MINIMUM EDGE DISTANCE AND/OR MINIMUM SPACING CAN NOT BE ACHIEVED, REFER TO PRODUCT INFORMATION FOR REDUCTION IN ALLOWABLE LOADS.

FORCES ARE DETERMINED BY THE FOLLOWING FORMULA: (Ps / Pt) + (Vs / Vt) = 1

WHERE: Ps = APPLIED SERVICE TENSION LOAD
Pt = ALLOWABLE SERVICE TENSION LOAD
Vs = APPLIED SERVICE SHEAR LOAD
Vt = ALLOWABLE SERVICE SHEAR LOAD

THE ABOVE FORMULA IS FOR THE ALLOWABLE LOADS FOR ANCHORS SUBJECTED TO COMBINED TENSION AND SHEAR.

GROUTED CMU ANCHORS
HILTI HIT-HY 70, SIMPSON STRONG-TIE SET-XP & POWERS AC100+ GOLD

DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS): TENSION	SHEAR
3/8	12	3-3/8	(1) PER CELL	1,000	845
1/2	12	4-1/2	(1) PER CELL	1,000	1,470
5/8	12	5-5/8	(1) PER CELL	1,140	1,595
3/4	12	6-3/4	(1) PER CELL	1,200	1,625
#3	12	3-3/8	(1) PER CELL	1,000	850
#4	12	4-1/2	(1) PER CELL	1,000	1,355
#5	12	5-5/8	(1) PER CELL	1,140	1,355

UNGROUTED CMU ANCHORS
HILTI HIT-HY 70, SIMPSON STRONG-TIE SET-XP & POWERS AC100+ GOLD

DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS): TENSION	SHEAR
3/8	12	3	(1) PER CELL	280	265
1/2	12	3	(1) PER CELL	280	265
5/8	12	3	(1) PER CELL	280	265
3/4	12	3	(1) PER CELL	280	265
#3	12	3	(1) PER CELL	280	265
#4	12	3	(1) PER CELL	280	265
#5	12	3	(1) PER CELL	280	265

CMU ANCHOR (301)

CONCRETE ANCHORS SHALL BE EITHER HILTI HIT-RE 500-V3 INJECTABLE MORTAR, SIMPSON STRONG-TIE SET-XP ANCHORING ADHESIVE, OR POWERS PE1000+ ADHESIVE ANCHORS AS SPECIFIED. WHERE SIZE IS CALLED OUT ON THE DRAWINGS, PROVIDE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON THE FOLLOWING TABLES. PROVIDE MINIMUM EDGE DISTANCES AND SPACING AS SHOWN ON THE FOLLOWING TABLES UNLESS SPECIFICALLY DETAILED OTHERWISE. SPECIAL INSPECTION REQUIRED.

INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

NOTIFY OWNER 48 HOURS IN ADVANCE OF INSTALLATION OF ALL ANCHORS.

WHERE SIZE IS NOT CALLED OUT, ANCHOR SHALL BE SELECTED BASED ON DESIGN LOADS.IF THE MINIMUM EDGE DISTANCE AND/OR MINIMUM SPACING CAN NOT BE ACHIEVED, REFER TO PRODUCT INFORMATION FOR REDUCTION IN ALLOWABLE LOADS.

CONCRETE ANCHORS
HILTI HIT-RE 500-V3, SIMPSON STRONG-TIE SET-XP & POWERS PE1000+

DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS): TENSION	SHEAR
1/2	2-1/2	2-3/4	2-1/2	1,027	2,210
5/8	3-1/8	3-1/8	3-1/8	1,312	2,827
3/4	3-3/4	3-1/2	3-3/4	1,556	3,351
7/8	4-3/8	3-1/2	4-3/8	1,556	3,351
#4	2-1/2	4-1/2	2-1/2	1,520	3,618
#5	3-1/8	5-5/8	3-1/8	1,775	5,494
#6	3-3/4	6-3/4	3-3/4	2,225	7,570
#7	4-3/8	7-7/8	4-3/8	2,440	9,428
#8	5	9	5	4,520	11,507

CONCRETE ANCHOR (302)

STATEMENT OF SPECIAL INSPECTION

SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC 1704 SHALL BE PROVIDED BY THE OWNER FOR THE FOLLOWING ITEMS:

REQUIRED SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	INSPECTION: IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY: CONTINUOUS	PERIODIC
SOILS				
VERIFY FOOTING BEARING CAPACITY AND SUBGRADE PREPARATION FOR FILLS	1705.3 1705.6	COUNTY STANDARDS		X(a)
FILL MATERIAL VERIFICATION			X(a)	
FILL PLACEMENT AND COMPACTION			X(a)	
LIFT THICKNESS			X(a)	
CONCRETE				
REINFORCING STEEL	1704.4 1907.5	ACI 318 1.3.2.C ACI 318 7.5		X
ANCHORAGE TO CONCRETE	1704.4 1911.1 1912.1	ACI 318 1.3.2.C	X	
VERIFYING USE OF REQUIRED MIX DESIGN	1704.4 1904 1905	ACI 318 1.3.2.A ACI 318 Ch 4 ACI 318 5.2–5.4		X
CONCRETE PLACEMENT	1704.4 1905.9–10	ACI 318 1.3.2.D ACI 318 5.9–5.10	X	
CONCRETE CURING	1704.4 1905.11	ACI 318 1.3.2.D ACI 318 5.11–5.13		X(a)
VERIFICATION OF CONCRETE STRENGTH	1704.4	ACI 318 18.13.4.3		X(a)
VERIFICATION OF FORMWORK	1704.4 1906.1	ACI 318 6.1.1		X(a)
WOOD				
VERIFY DIAPHRAGM – SHEATHING MATERIAL GRADE	1705.5			X
CMU				
GROUT PLACEMENT	1705.4.1			X
REINFORCING STEEL	1705.4.1			X
CMU PLACEMENT	1705.4.1			X

(a) PERIODIC INSPECTION AS REQUIRED BY CODE OR THE PROJECT SPECIFICATIONS

TESTING:

MATERIALS TESTING IN ACCORDANCE WITH IBC 1704 SHALL BE PROVIDED FOR THE FOLLOWING ITEMS:

REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	INSPECTION: IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY: CONTINUOUS	PERIODIC
SOILS				
FILL IN PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1704.7	GEOTECHNICAL REPORT; IBC APX J107.5	X(a)	
MATERIAL VERIFICATION				X(a)
CONCRETE				
CONCRETE STRENGTH	1704.4 1905.6	ASTM C39	EACH 50 CY OF WALL PLACED EACH DAY	
CONCRETE SLUMP		ASTM C143		
CONCRETE AIR CONTENT		ASTM C231		
CONCRETE TEMPERATURE		ASTM C1064		

(a) PERIODIC TESTING AS REQUIRED BY CODE OR THE PROJECT SPECIFICATIONS

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

JON MARSHALL CONRAD — STATE OF WASHINGTON — 44672 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION
REPLACEMENT

Skagit PUD — PUBLIC UTILITY DISTRICT

STANDARD STRUCTURAL DETAILS I

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-STR05.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: DWD
REVIEWED: JMC

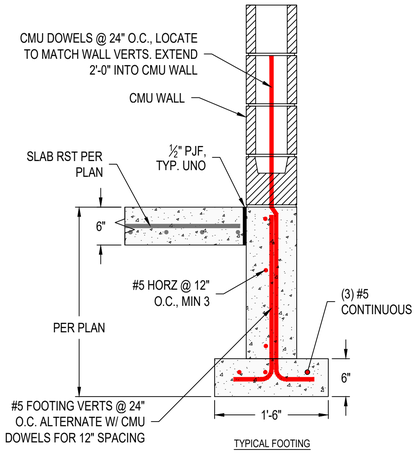
REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

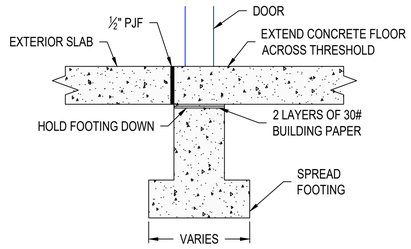
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

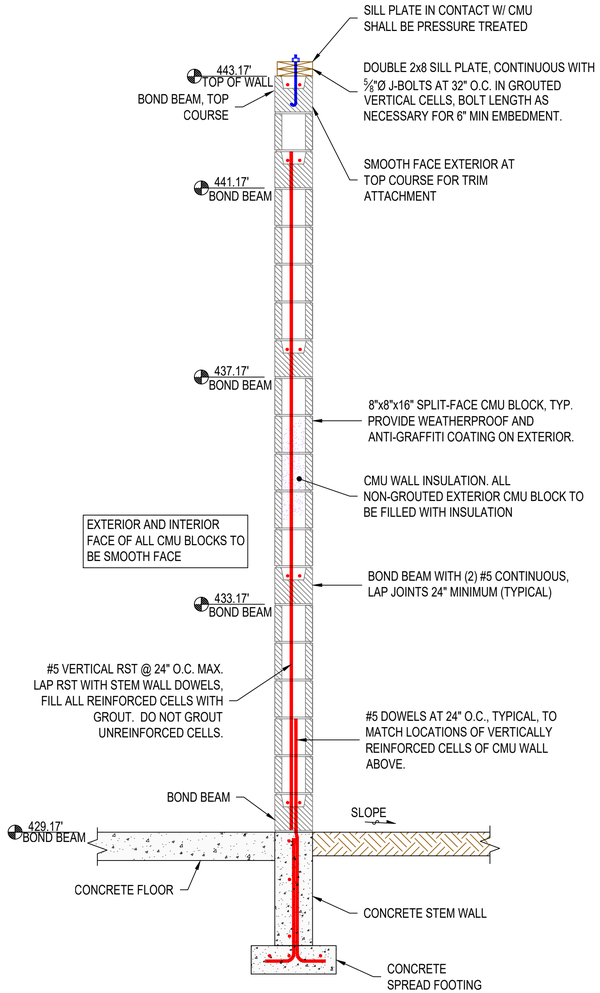
DWG NO.: S05
SHEET NO.: 14 37



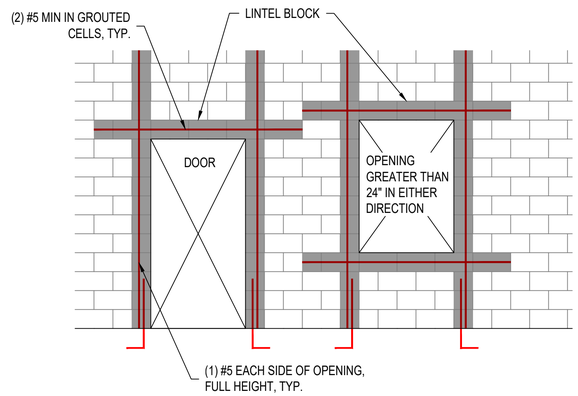
SPREAD FOOTING
NOT TO SCALE
301 TYP



DOOR THRESHOLD
1" = 1'-0"
302 TYP



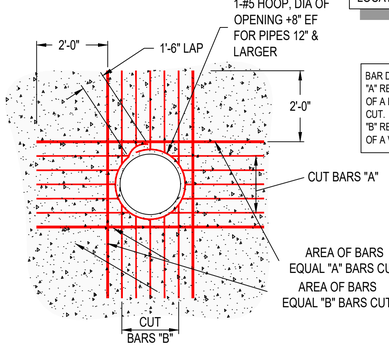
EXTERIOR CMU WALL
NOT TO SCALE
400 TYP.



TYPICAL CMU OPENING
NOT TO SCALE
401 TYP.

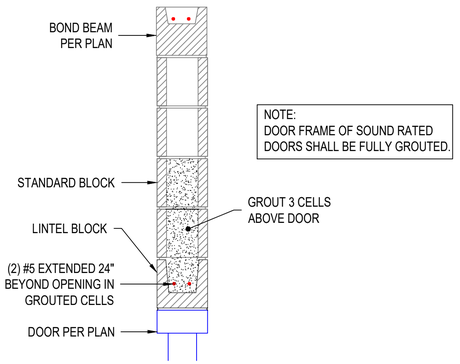
NOTE: NOT ALL PENETRATIONS ARE SHOWN ON STRUCTURAL PLANS.

NOTE: THIS DETAIL USED FOR SINGLE PENETRATIONS 4" IN DIAMETER AND LARGER, AND IN EQUIVALENT GROUPS OF SMALLER DIAMETER PENETRATIONS. REFER TO MECHANICAL PLANS FOR SIZE AND LOCATION OF PIPE PENETRATIONS.

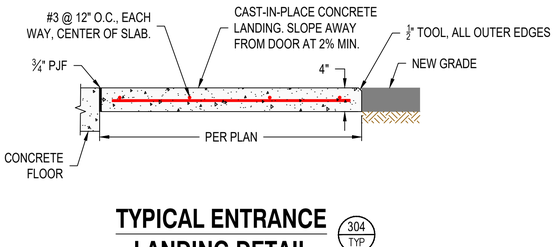


BAR DESIGNATION NOTES:
"A" REFERS TO CROSS-SECTIONAL AREA OF A HORIZONTAL BAR THAT HAS BEEN CUT.
"B" REFERS TO CROSS-SECTIONAL AREA OF A VERTICAL BAR THAT HAS BEEN CUT.

PENETRATION AND OPENING REINFORCEMENT
NOT TO SCALE
303 TYP

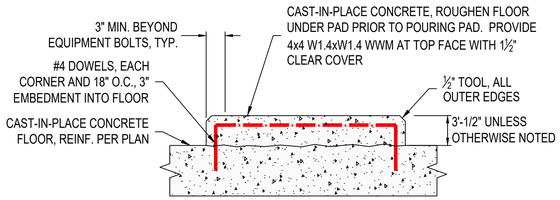


CMU LINTEL
1" = 1'-0"
402 TYP.

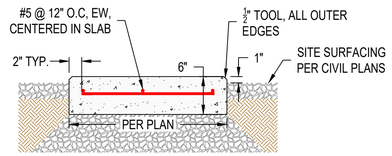


TYPICAL ENTRANCE LANDING DETAIL
NOT TO SCALE
304 TYP

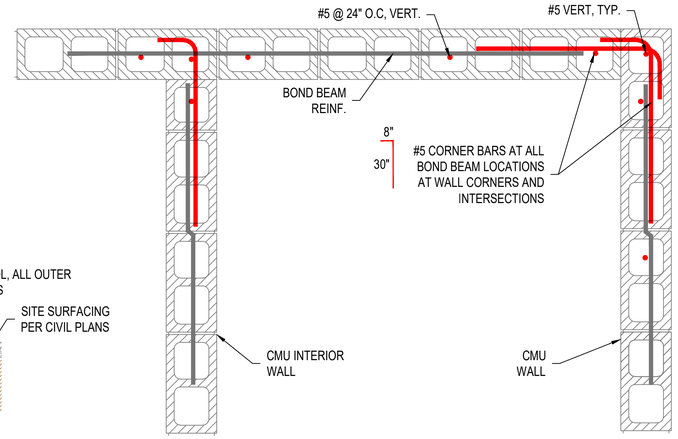
NOTE: SEE MECHANICAL DRAWINGS FOR EQUIPMENT LOCATION AND DIMENSIONS.



EQUIPMENT PAD
1" = 1'-0"
305 TYP



EXTERIOR EQUIPMENT PAD
1" = 1'-0"
306 TYP



CMU WALL INTERSECTION / CORNER
1" = 1'-0"
403 TYP.

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

TOM MARSHALL CONRAD — STATE OF WASHINGTON — 44672 — PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT

STANDARD STRUCTURAL DETAILS II

Skagit PUD — PUBLIC UTILITY DISTRICT

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-STR06.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: DWD
REVIEWED: JMC

REVISIONS

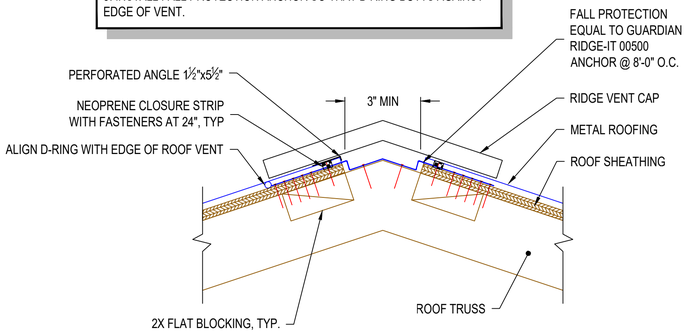
NO.	DESCRIPTION	DATE	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

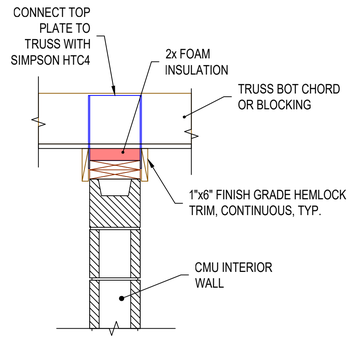
P.N. 3766
C.O. 5040

DWG NO.: S06
SHEET NO.: 15
37

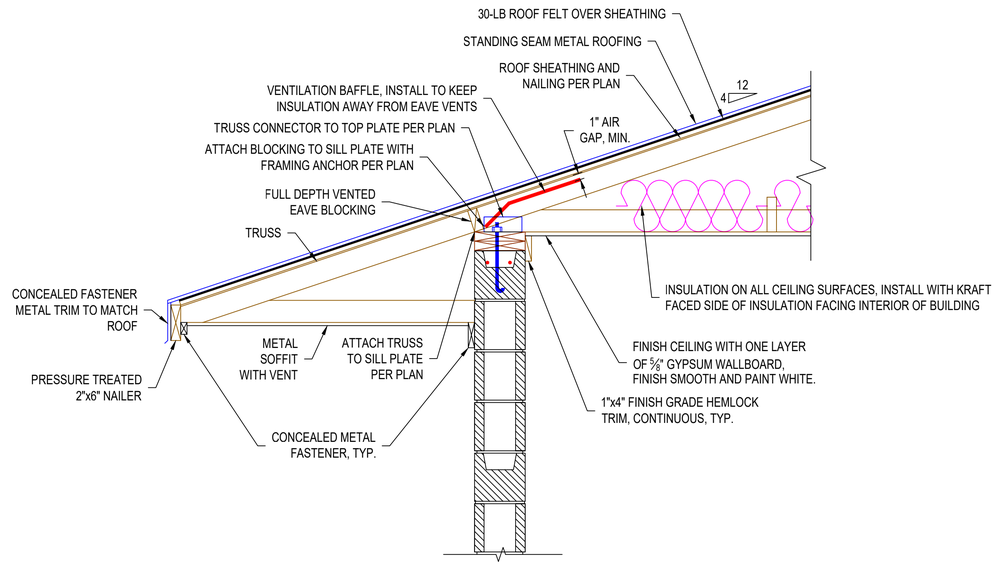
RIDGE VENT NOTES:
1. INSTALL FALL PROTECTION AT ROOF PEAK OVER METAL ROOFING AND FASTEN TO TRUSS WITH 16d NAILS PER MFR RECOMMENDATIONS PRIOR TO INSTALLATION OF RIDGE VENT.
2. PROVIDE END CAPS FOR RIDGE VENT PER MANUFACTURER'S SPECIFICATIONS.
3. INSTALL FALL PROTECTION ANCHOR SO THAT D RING BUTTS AGAINST EDGE OF VENT.



RIDGE VENT DETAIL
NOT TO SCALE
500 TYP.

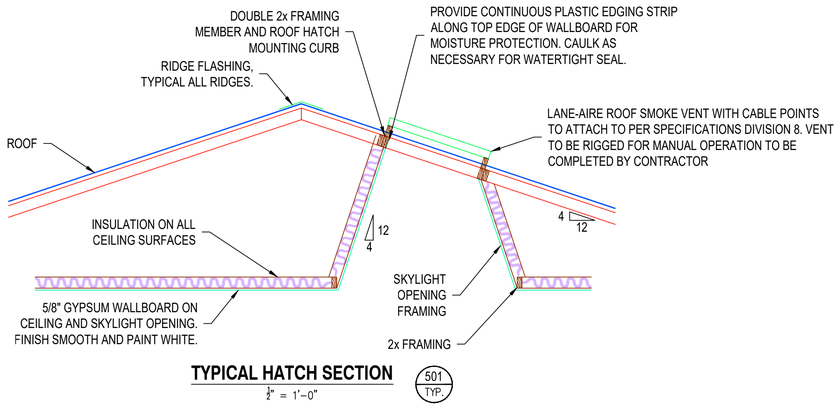


(INTERIOR WALL)



(EXTERIOR WALL)

CMU WALL/TRUSS CONNECTIONS
1" = 1'-0"
502 TYP.



TYPICAL HATCH SECTION
1" = 1'-0"
501 TYP.

RICHARD L. BALLARD, STATE OF WASHINGTON, 52875, REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

JON MARSHALL CONRAD, STATE OF WASHINGTON, 44672, REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
STANDARD STRUCTURAL DETAILS III

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-STR06.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: DMD
REVIEWED: JMC

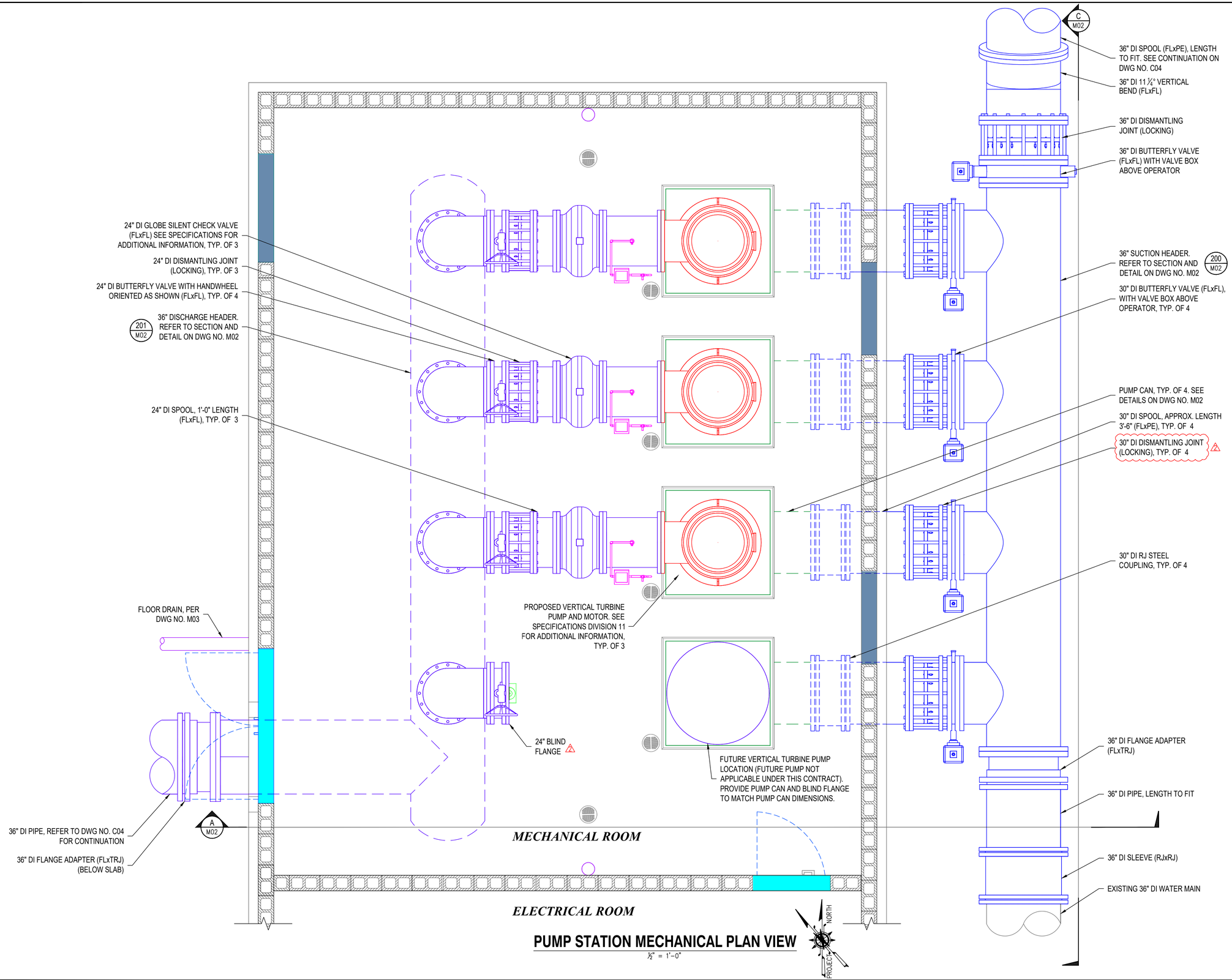
REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S07
SHEET NO.: 16 37

P.N. 3766
C.O. 5040



PUMP STATION MECHANICAL PLAN VIEW

½" = 1'-0"

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

DANIEL W. BURWELL — STATE OF WASHINGTON — 38306 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

MAJOR MECHANICAL PLAN

Skagit PUD — PUBLIC UTILITY DISTRICT

REVISIONS				
NO.	DATE	DESCRIPTION	BY	REVIEW
2	9/22/2020	FINAL SPUD COMMENTS	DWB	DWB

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-MEC01.DWG
SAVE DATE: Sep 22, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: CMP
REVIEWED: DWB
QC

SCALE: SHOWN

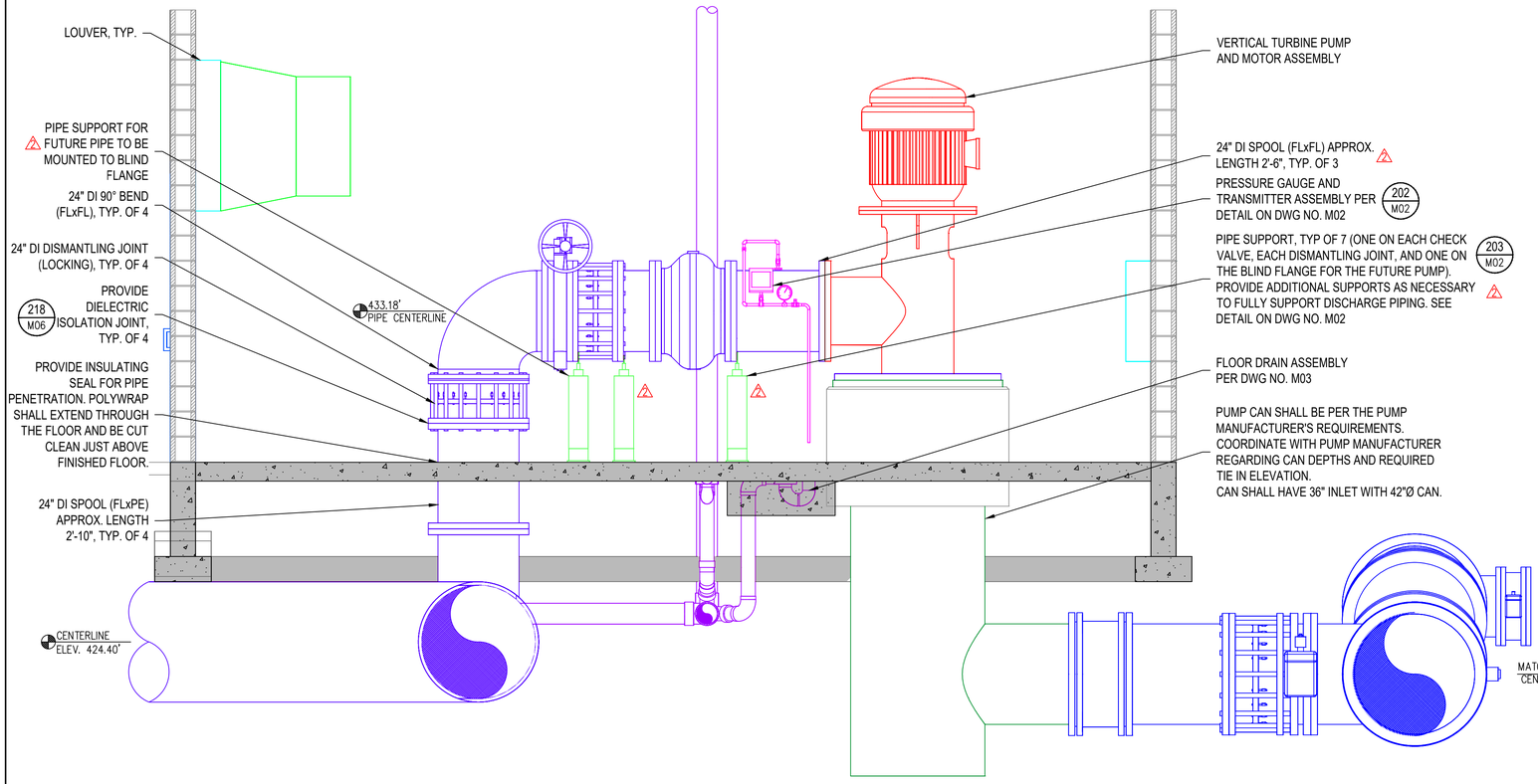
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

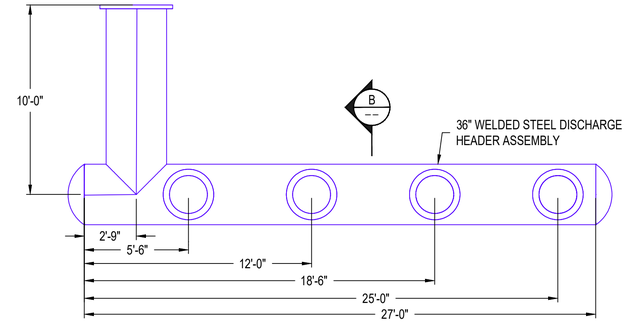
DWG NO.: M01

SHEET NO.: 17 / 37



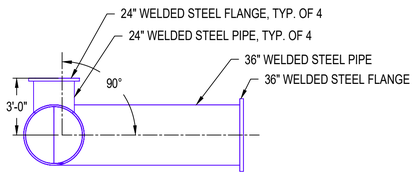
A M01 **MAJOR MECHANICAL SECTION**

½" = 1'–0"



PLAN VIEW

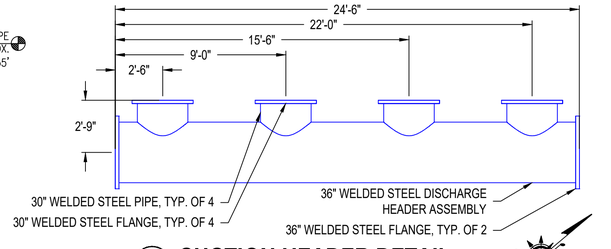
SUCTION AND DISCHARGE HEADER NOTES:
- BOLT PATTERNS FOR ALL STEEL FLANGES SHALL MATCH ADJACENT FITTINGS.
- REFER TO DIVISION 9 OF THE SPECIFICATIONS FOR COATING REQUIREMENTS.



B *SECTION VIEW*

201 M01 **DISCHARGE HEADER DETAIL**

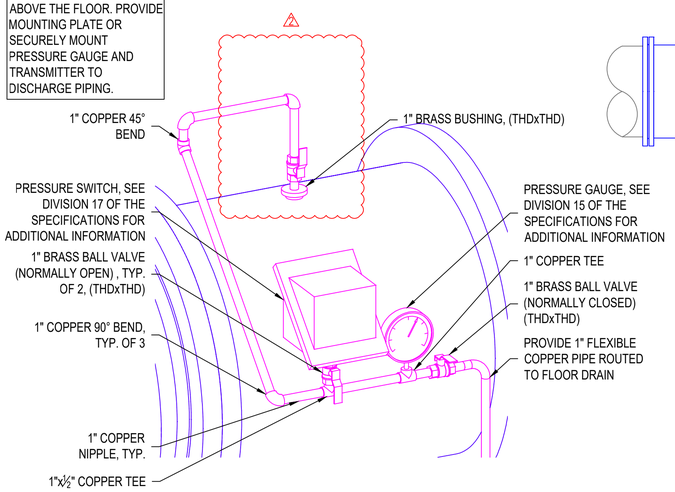
¼" = 1'–0"



200 M01 **SUCTION HEADER DETAIL**

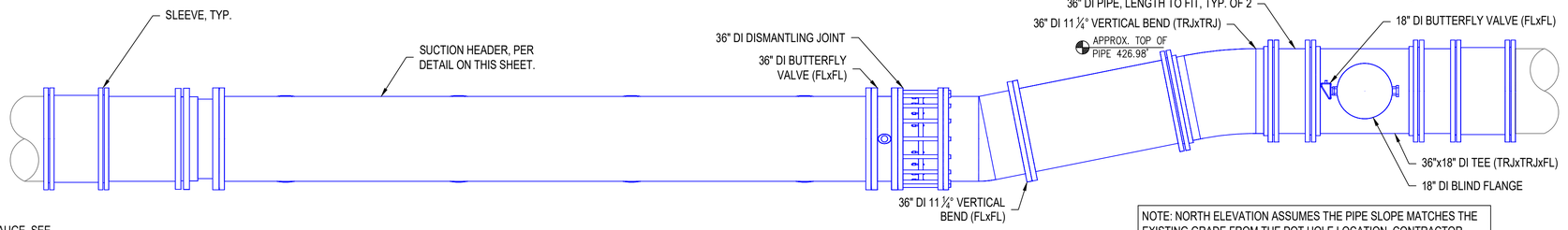
¼" = 1'–0"

NOTE: ADJUST PIPE LENGTHS AS NECESSARY SO PRESSURE GAUGE AND TRANSMITTER ASSEMBLY IS APPROXIMATELY 5.5-FEET ABOVE THE FLOOR. PROVIDE MOUNTING PLATE OR SECURELY MOUNT PRESSURE GAUGE AND TRANSMITTER TO DISCHARGE PIPING.



202 M02 **PRESSURE GAUGE AND TRANSMITTER ASSEMBLY**

NOT TO SCALE

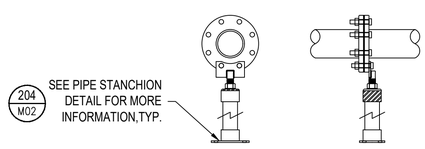


C M01 **SUCTION HEADER PROFILE**

⅜" = 1'–0"

NOTE: NORTH ELEVATION ASSUMES THE PIPE SLOPE MATCHES THE EXISTING GRADE FROM THE POT HOLE LOCATION. CONTRACTOR SHALL FIELD VERIFY PRIOR TO NOTIFYING DISTRICT OF CONNECTION.

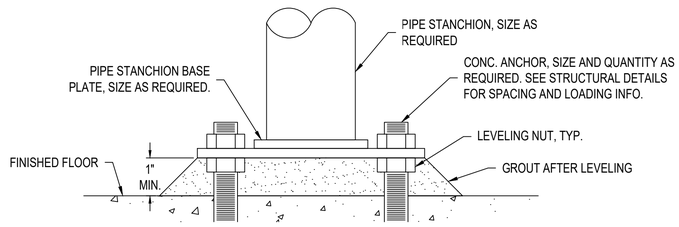
NOTES:
- CONTRACTOR SHALL PROVIDE SUPPORTS AS NEEDED TO SECURE PIPING SYSTEM IN NORMAL AND TEST OPERATING CONDITIONS.
- SADDLE AND SADDLE CLAMP SUPPORTS SHALL BE "STANDON" BRAND AS MANUFACTURED BY MATERIAL RESOURCES OR EQUAL.



TYPE A - FLANGE SUPPORT

203 M02 **STANDON PIPE SUPPORT**

NOT TO SCALE



204 M02 **PIPE STANCHION DETAIL**

NOT TO SCALE

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

DANIEL W. BRUNTON — STATE OF WASHINGTON — 38308 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD — PUBLIC UTILITY DISTRICT

MECHANICAL SECTIONS & DETAILS

REVISIONS				
NO.	DATE	DESCRIPTION	BY	REVIEW
1	9/22/2020	FINAL SPUD COMMENTS	OC	DWB

CLIENT: SPUD
FILENAME: RWPS-D-ME002.DWG
JOB NO.: 117.025
SAVE DATE: Sep 22, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: OMP
REVIEWED: DWB

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: M02

SHEET NO.: 18 / 37

HEAT PUMP AND AIR CONDITIONER SCHEDULE

NO.	ROOM	INDOOR UNIT MODEL	OUTDOOR UNIT MODEL	RATED COOLING CAPACITY (BTUH)	RATED HEATING CAPACITY (BTUH)	SEER	VOLTAGE/ PHASE	MANUFACTURER
HP-1	ELECTRICAL ROOM	PKA-A36KA7	PUZ-A36NKA7	36,000	22,400	18.8	230V/1	MITSUBISHI
HP-2	ELECTRICAL ROOM	PKA-A36KA7	PUZ-A36NKA7	36,000	22,400	18.8	230V/1	MITSUBISHI
HP-3	ELECTRICAL ROOM	PKA-A24KA7	PUZ-A24NHA7	24,000	15,700	21.4	230V/1	MITSUBISHI

HEAT PUMP AND AIR CONDITIONER NOTES:
1. ROUTE CONDENSATE TO OUTSIDE. CONTRACTOR SHALL PROVIDE CONDENSATE PUMP IF REQUIRED. TERMINATE CONDENSATE PIPE 6" ABOVE FINISHED GRADE IN A MANNER THAT ALLOWS THE WATER TO FLOW AWAY FROM THE BUILDING.
2. MOUNT INSIDE UNITS PER MANUFACTURER RECOMMENDATIONS.
3. RATED HEATING CAPACITY IS AT AN OUTSIDE TEMPERATURE OF 17°F.
4. PLACE OUTDOOR UNITS ON 12" HIGH OUTDOOR UNIT STAND, MOUNTED TO CONCRETE EQUIPMENT PAD.
5. REFER TO INSTALLATION MANUAL FOR MAXIMUM REFRIGERANT PIPE LENGTHS, NUMBER OF ALLOWED BENDS, AND REQUIRED REFRIGERANT CHARGE.
6. FIELD ROUTE REFRIGERANT PIPING BETWEEN INDOOR AND OUTDOOR UNITS. KEEP PIPING STRAIGHT AND PARALLEL WITH SURFACES. DO NOT ROUTE REFRIGERANT PIPING ABOVE ANY ELECTRICAL PANELS.
7. MOUNT BOTTOM OF INDOOR UNITS 9'-0" ABOVE FINISHED FLOOR.
8. OR EQUAL UNITS ALLOWED. UNIT EFFICIENCIES MUST BE 15% GREATER THAN THE MINIMUM EFFICIENCY LISTED IN THE 2015 WSEC.
9. PROVIDE MITSUBISHI ELECTRIC - MIFH1 WIRELESS RECEIVER FOR EACH UNIT. SEE ELECTRICAL SCHEDULE FOR ADDITIONAL INFORMATION.
10. STAGE THE UNITS BY THERMOSTAT SETTING. UNIT HP-1 TO BEGIN COOLING AT 80° F, UNIT HP-2 AND HP-3 TO BEGIN COOLING AT 85° F. ALL SETTINGS SHALL BE ADJUSTABLE.

PLUMBING NOTES:
1. THE WASTE AND WATER PIPING SYSTEM AS SHOWN ON THIS DRAWING IS DIAGRAMMATIC AND DOES NOT SHOW ALL DETAIL OR OFFSETS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECTLY LOCATE AND INSTALL THIS PLUMBING SYSTEM.
2. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE, LATEST EDITION, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. ALL WASTE PIPING TO BE SLOPED AT 1/4"/FT MIN. UNLESS OTHERWISE NOTED. ALL ELEVATIONS AND SLOPES TO BE FIELD VERIFIED BEFORE INSTALLATION.
4. ALL WASTE, DRAIN, AND VENT PIPING SHALL BE SCH. 80 PVC UNLESS OTHERWISE NOTED.
5. CLEARLY LABEL EVERY PIPE INSIDE ROOMS
6. PROVIDE PIPE SUPPORTS AND STRAPS AS NECESSARY TO SECURE PIPE TO NEAREST WALL / BEAM / CEILING.
7. PLUMBING PIPES SHALL BE ROUTED BELOW TRUSSES. NO TRUSS PENETRATION IS ALLOWED.

PROPOSED LEGEND/NOTES:
- PVC SEWER PIPE, UNLESS OTHERWISE NOTED
- 1 — 4" FLOOR DRAIN. ZURN Z730 FLOOR DRAIN WITH BACKWATER VALVE OR APPROVED EQUAL.
- 2 — CLEANOUT WITH ADJUSTABLE TOP. WADE MODEL W-8130 SERIES OR EQUAL.

POTABLE WATER PLUMBING NOTES:
1. ALL PLUMBING PIPES SHALL BE LABELED WITH FUNCTION AND FLOW DIRECTION. △2
2. ALL WATER PLUMBING SHALL BE COPPER. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS AND SUPPORTS. SPECIFICATIONS DIVISION 11 FOR DETAILS.

PROPOSED LEGEND/NOTES:
- COLD WATER (C.W.) PIPE
- 1 — ½" INTERIOR HOSE BIB
- 2 — ½" EXTERIOR HOSE BIB
- 3 — HOSE RACK AND HOSE
- 4 — WATTS 1" LF009 LEAD FREE REDUCED PRESSURE BACKFLOW PREVENTION DEVICE OR APPROVED EQUAL.
- 5 — BADGER 1" RECORDALL METER OR APPROVED EQUAL.

SEAL SAFE SYSTEM NOTES: △2
1. ALL PIPING SHALL BE COPPER UNLESS OTHERWISE NOTED.
2. PROVIDE PIPE SUPPORTS AND STRAPS AS NECESSARY TO SECURE PIPE TO NEAREST WALL / BEAM / CEILING.
3. PIPING SHALL BE ROUTED BELOW TRUSSES. NO TRUSS PENETRATION IS ALLOWED.

PROPOSED LEGEND/NOTES:
- COPPER SEAL SAFE LINE △2
- 1 — PRESSURE REDUCING VALVE SET TO 15 PSI
- 2 — PRESSURE FLOW MONITORING UNIT PER DETAIL 206/M05

VENTILATOR SCHEDULE

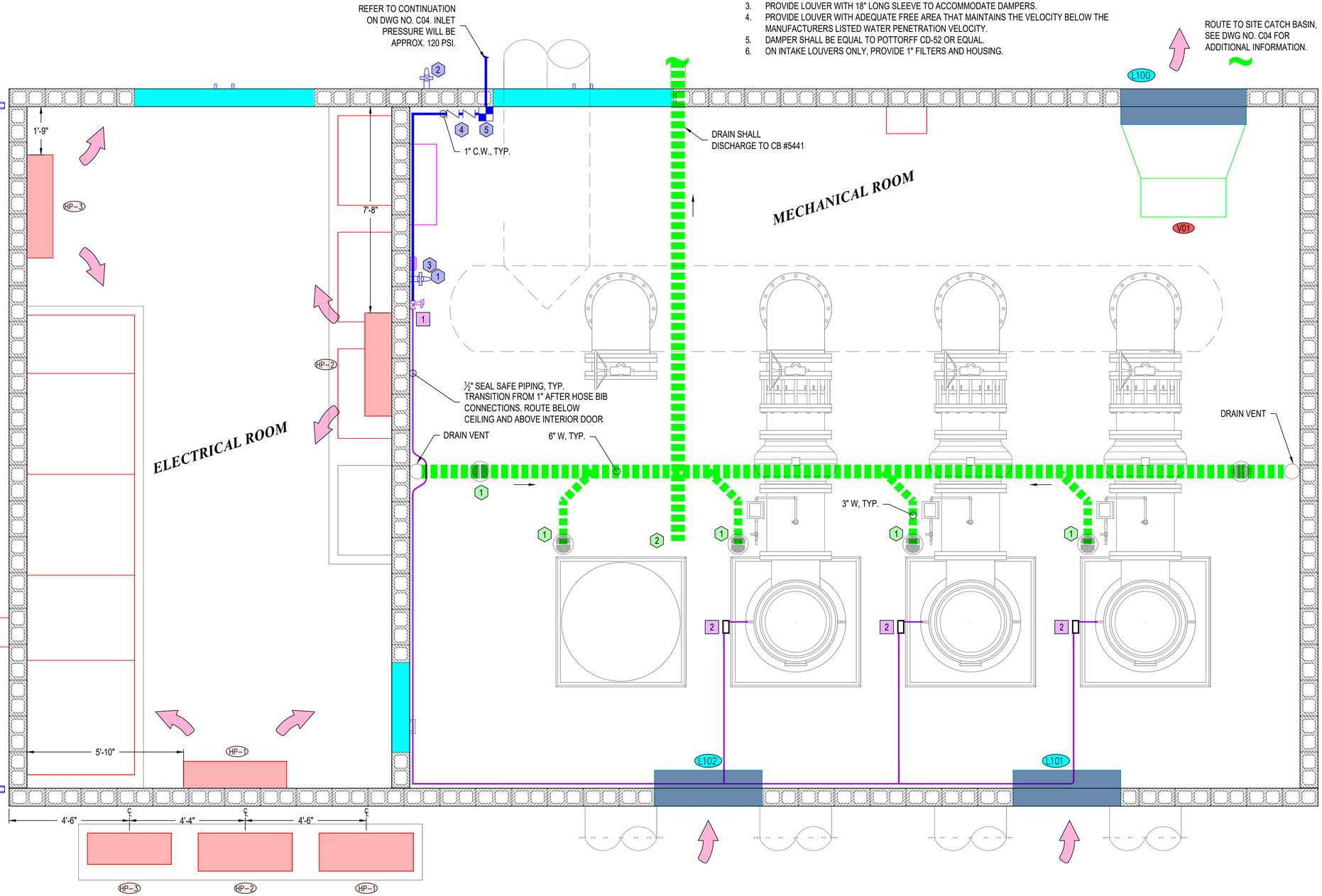
NO.	ROOM	FLOW	MANUFACTURER	MODEL	FLOW RATE	MOTOR HP	VOLTAGE/ PHASE
V01	MECHANICAL ROOM	EXHAUST	GREENHECK	SBE-3H30	7,500 CFM	1 1/2	460V/3

VENTILATOR NOTES:
1. PROVIDE MOTOR SIDE GUARD.
2. MOTOR SHALL BE ECM OR HAVE A RATED EFFICIENCY OF AT LEAST 70% PER WSEC-2015.
3. CONTRACTOR SHALL SECURE FAN TO CEILING AS RECOMMENDED BY THE MANUFACTURER.
4. VENTILATOR TO BE CONTROLLED BY WALL THERMOSTAT.
5. PROVIDE SHEET METAL SHROUD AS REQUIRED.

LOUVER SCHEDULE

NO.	ROOM	FLOW	MANUFACTURER	MODEL	FLOW RATE	SIZE	DAMPER
L100	MECHANICAL ROOM	EXHAUST	POTTORFF	EFD-445	7,500 CFM	56"x48"	MOTORIZED
L101	MECHANICAL ROOM	INTAKE	POTTORFF	EFD-445	3,750 CFM	48"x32"	MOTORIZED
L102	MECHANICAL ROOM	INTAKE	POTTORFF	EFD-445	3,750 CFM	48"x32"	MOTORIZED

LOUVER NOTES:
1. CHANNEL FRAME SHALL BE FLUOROPOLYMER COATED EXTRUDED ALUMINUM WITH FACE MOUNTED STAINLESS STEEL INSECT SCREEN ON THE INTERIOR OF THE LOUVER.
2. CONTRACTOR TO PROVIDE PROPER TRANSITION FROM FAN TO LOUVER AS SHOWN ON PLANS.
3. PROVIDE LOUVER WITH 18" LONG SLEEVE TO ACCOMMODATE DAMPERS.
4. PROVIDE LOUVER WITH ADEQUATE FREE AREA THAT MAINTAINS THE VELOCITY BELOW THE MANUFACTURERS LISTED WATER PENETRATION VELOCITY.
5. DAMPER SHALL BE EQUAL TO POTTORFF CD-52 OR EQUAL.
6. ON INTAKE LOUVERS ONLY, PROVIDE 1" FILTERS AND HOUSING.



HVAC AND MINOR MECHANICAL PLAN

½" = 1'-0"

PROJECT NORTH

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

DANIEL W. BROWN — STATE OF WASHINGTON — 38308 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
Skagit PUD — PUBLIC UTILITY DISTRICT

HVAC AND MINOR MECHANICAL PLAN

REVISIONS

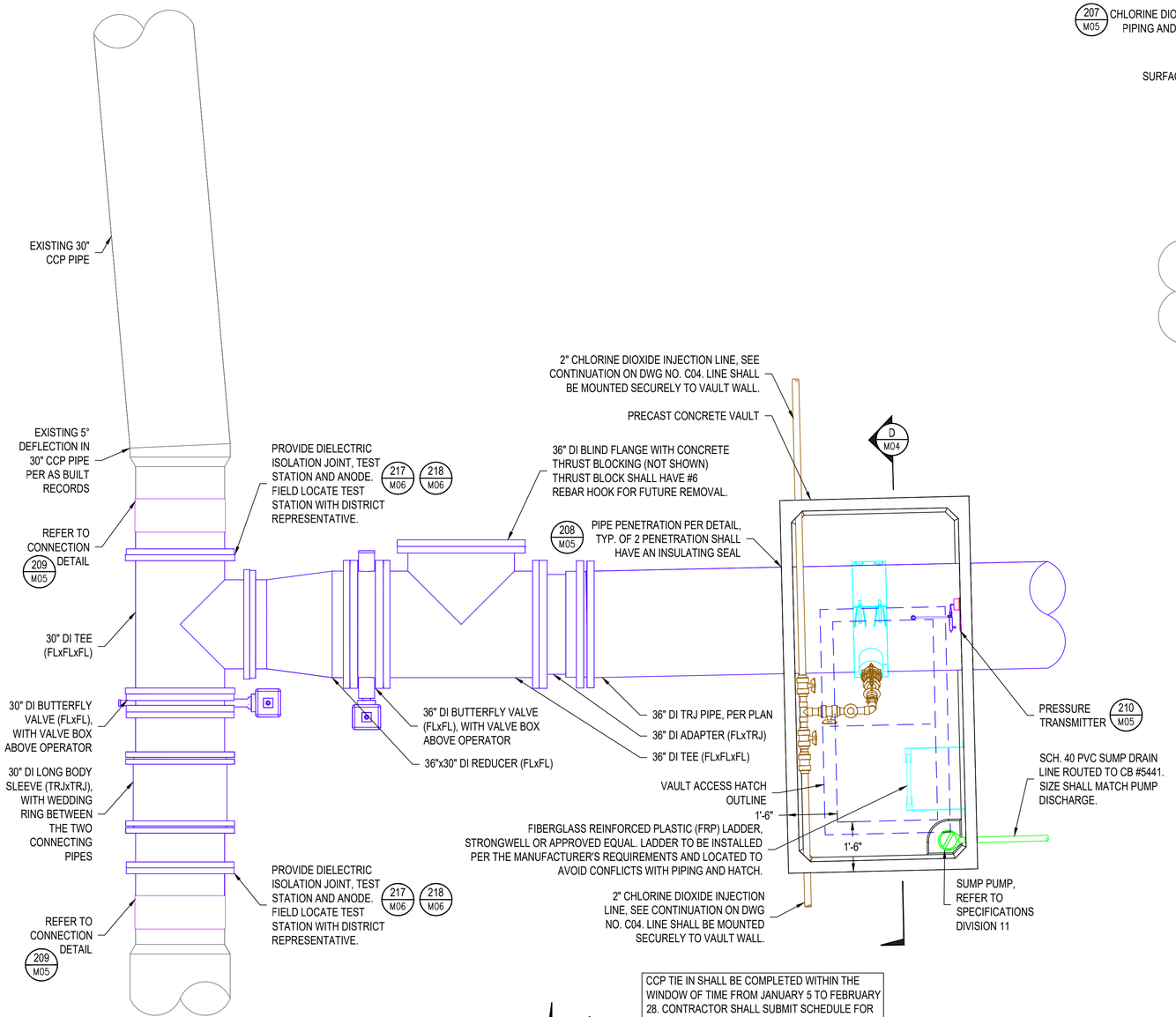
NO.	DESCRIPTION	DATE	BY
2	FINAL SPUD COMMENTS	9/22/2020	DMB

ENGINEER: DMP | REVIEWED: DMB | PLOT DATE: Sep 22, 2020 | SAVE DATE: Sep 22, 2020 | CLIENT: SPUD | FILENAME: RWPS-D-MEC03.DWG | JOB NO.: 117.025 | QC | DMB | REVIEW

SCALE: SHOWN
0' 1' 2'
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

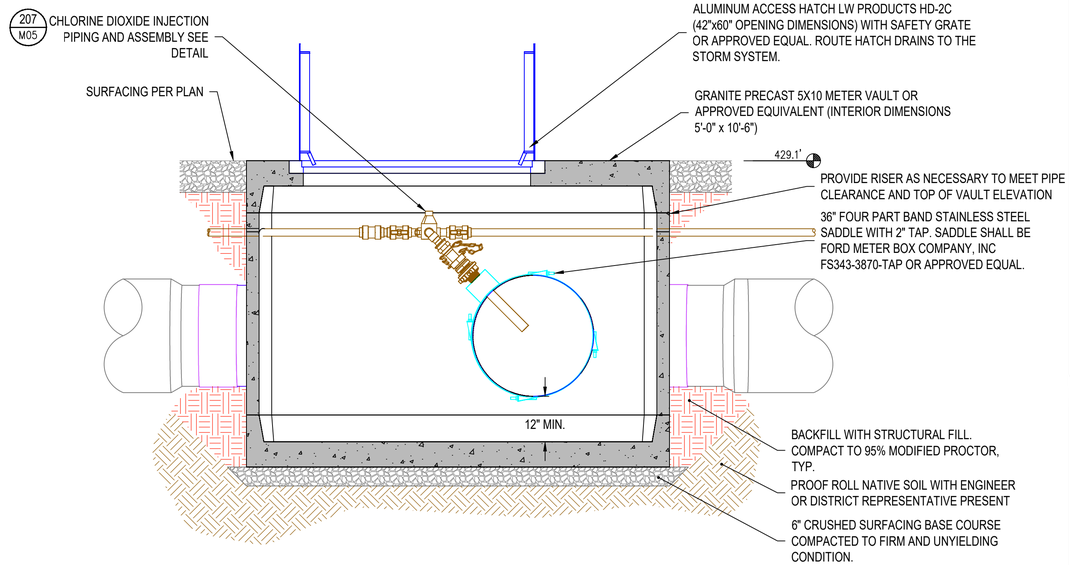
DWG NO.: M03 | SHEET NO.: 19 | 37



CHEMICAL DIOXIDE INJECTION VAULT AND YARD PIPING PLAN VIEW

½" = 1–0'

CCP TIE IN SHALL BE COMPLETED WITHIN THE WINDOW OF TIME FROM JANUARY 5 TO FEBRUARY 28. CONTRACTOR SHALL SUBMIT SCHEDULE FOR SHUTDOWN AT LEAST ONE MONTH IN ADVANCE WITH DISTRICT REVIEW AND APPROVAL. ACTUAL SHUTDOWN SHALL BE 24 HOURS OR LESS.



D M04 CHEMICAL DIOXIDE INJECTION VAULT SECTION VIEW

½" = 1–0'

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

DANIEL W. BURWEN — STATE OF WASHINGTON — 38305 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

CHLORINE DIOXIDE INJECTION VAULT PLAN & PROFILE

Skagit PUD — PUBLIC UTILITY DISTRICT

ENGINEER: CMP	JOB NO.: 117.025
REVIEWED: DWB	CLIENT: SPUD
SAVE DATE: Sep 8, 2020	FILENAME: RWPS-D-MEC04.DWG
PLOT DATE: Sep 22, 2020	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

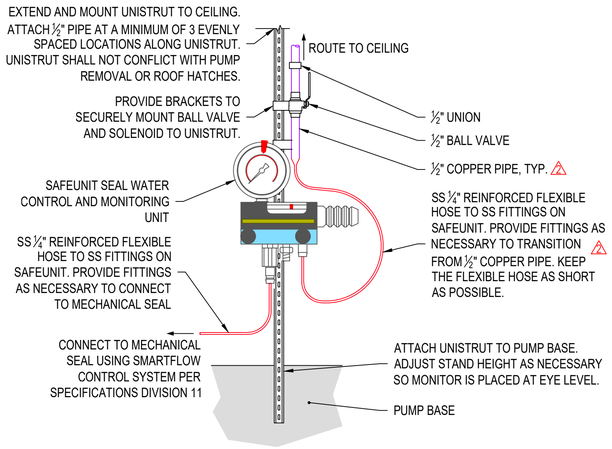
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: M04

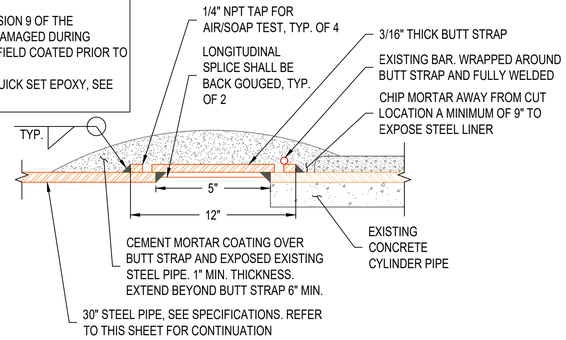
SHEET NO.: 20 37



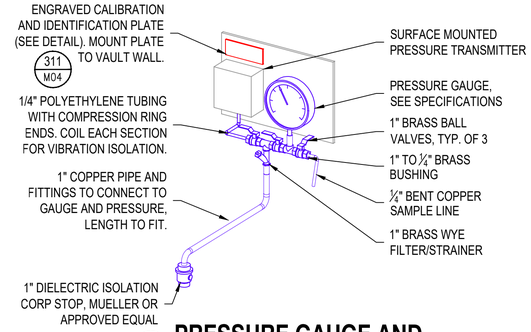
206 M03 **PRESSURE FLOW MONITORING DETAIL**

NOT TO SCALE

NOTES:
1. FOR FIELD WELDING OF INDIVIDUAL BUTT STRAPS PIECES TO EACH OTHER, SEE BUTT STRAP SPLICE.
2. UNLESS OTHERWISE NOTED, BUTT STRAP WIDTH SHALL CONFORM TO THE LIMITATIONS SHOWN FOR PIPE END SEPARATION AND STEEL OVERLAP REQUIREMENTS.
3. BUTT STRAP LENGTH SHALL MATCH EXPOSED STEEL PIPE CIRCUMFERENCE
4. STEEL PIPE SHALL BE COATED PER DIVISION 9 OF THE SPECIFICATIONS. ANY COATED AREAS DAMAGED DURING INSTALLATION AND WELDING SHALL BE FIELD COATED PRIOR TO BACKFILL.
5. COAT INTERIOR OF BUTT STRAP WITH QUICK SET EPOXY, SEE SPECIFICATIONS DIVISION 9. 1

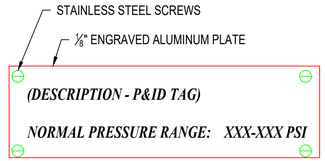


BUTT STRAP INSTALLATION DETAIL



210 M04 **PRESSURE GAUGE AND TRANSMITTER DETAIL**

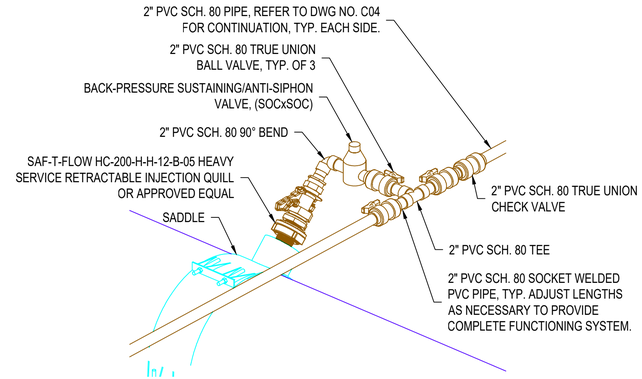
NOT TO SCALE



NOTE: SEE SPECIFICATIONS FOR DESCRIPTION, P&ID TAG, AND PRESSURE RANGE INFO.

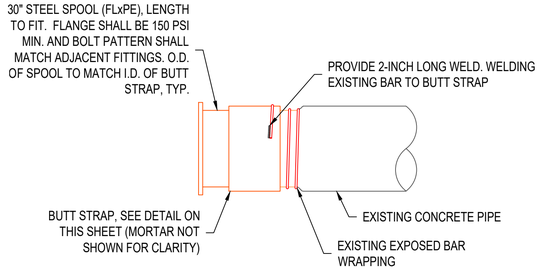
211 M04 **IDENTIFICATION AND CALIBRATION PLATE DETAIL**

NOT TO SCALE



207 M04 **CHLORINE DIOXIDE INJECTION PIPING OBLIQUE**

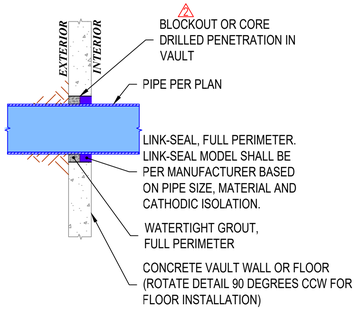
NOT TO SCALE



209 M04 ***FLANGED CONNECTION***

BUTT STRAP PIPE CONNECTION TO CONCRETE CYLINDER PIPE

NOT TO SCALE



208 M04 **PIPE PENETRATION DETAIL**

NOT TO SCALE

RH2

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DANIEL W. BURNHAM STATE OF WASHINGTON 38306 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

MECHANICAL DETAILS

Skagit PUD PUBLIC UTILITY DISTRICT

NO.	DATE	DESCRIPTION	BY	REVIEW
1	9/22/2020	FINAL SPUD COMMENTS	QC	DWB

REVISIONS

ENGINEER: CMP REVIEWED: DWB
SAVE DATE: Sep 22, 2020 PLOT DATE: Sep 22, 2020
CLIENT: SPUD FILENAME: RWPS-D-MEC03.DWG
JOB NO.: 117.025

SCALE: SHOWN

0" 1" 2"

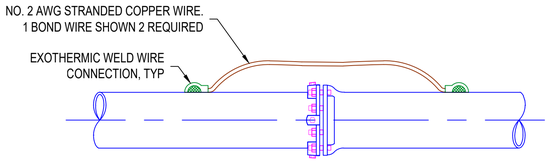
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: M05

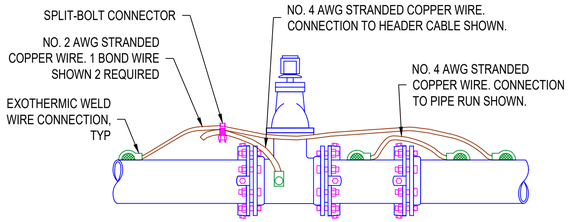
SHEET NO.: 21 37

NOTE:
1. MECHANICAL JOINT STYLE SHOWN, OTHER JOINTS SIMILAR.
2. A SPLIT-BOLT CONNECTOR MAY BE INCORPORATED INTO THE JOINT BOND.



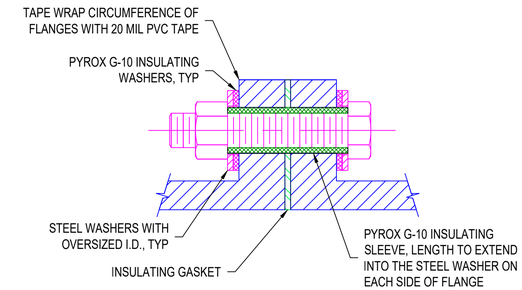
212 JOINT BOND UNCOATED & DIELECTRIC COATED PIPE
NOT TO SCALE

NOTES:
1. MECHANICAL JOINT STYLE SHOWN, OTHER JOINTS SIMILAR.
2. CONNECT FITTINGS AND VALVES TO HEADER CABLE OR PIPE RUN WITH (1) NO. 4 AWG STRANDED WIRE.
3. DO NOT BURN SEALS OR SEALING SURFACE.



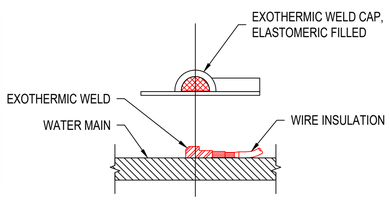
213 JOINT BOND FITTINGS & VALVES
NOT TO SCALE

NOTE:
1. HIGH STRENGTH BOLTS REQUIRE (2) ADDITIONAL HIGH STRENGTH WASHERS.



214 TYP. DIELECTRIC ISOLATION FLANGE JOINT DETAIL
NOT TO SCALE

NOTES:
1. APPLY WELD CAP DIRECTLY TO PIPE, NOT TO PIPE WRAP. USE PRIMER AS REQUIRED BY THE MANUFACTURER.
2. COMPLETELY ENCLOSE WIRE WITHIN WELD CAP.
3. REPAIR ANY DAMAGED COATING NOT COVERED BY WELD CAP.

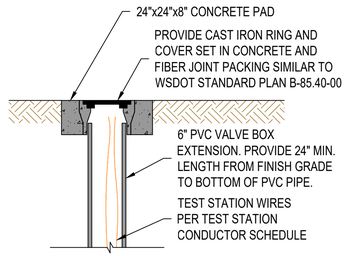


215 C06 EXOTHERMIC WELD DI & STEEL PIPE
NOT TO SCALE

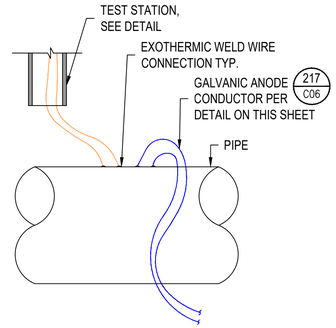
TEST STATION CONDUCTOR SCHEDULE

ITEM	WIRE COLOR	WIRE
DISCHARGE PIPE	ORANGE	8 AWG, STRANDED COPPER WIRE, USE-TYPE INSULATION

NOTES:
1. WIRE SHALL HAVE ENOUGH SLACK TO EXTEND A MIN. OF 2 FT ABOVE FINISHED GRADE AFTER FINAL SURFACING.
2. FOR AN ISOLATION JOINT RUN OF NEW WATER PIPE, WIRE ON THE UP STATION SIDE OF THE ISOLATION JOINT SHALL BE WHITE AND WIRE ON THE DOWN STATION SIDE OF THE ISOLATION JOINT SHALL BE BLACK.
3. COLOR CODE WIRES BY INSULATION COLOR, OR BY COLORED TAPE OR PAINT ON LAST 4 FT OF WIRE.



TEST STATION INSTALLATION



TEST STATION (TS/C)

TEST STATION DETAIL 216 TYP.
NOT TO SCALE

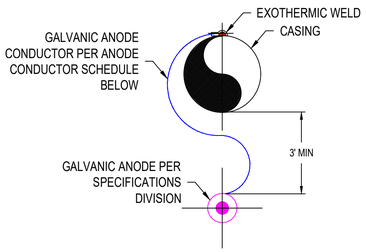
ANODE SCHEDULE

PIPE DIAMETER	NUMBER OF ANODES
GREATER THAN OR EQUAL TO 18"	4 (2 AT EACH END)

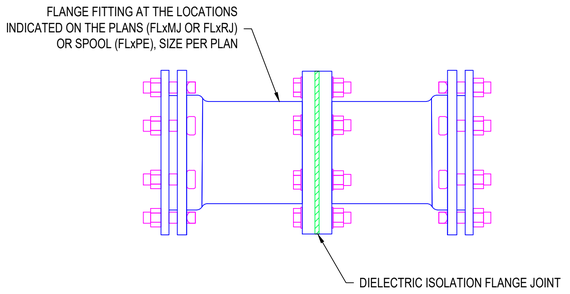
ANODE CONDUCTOR SCHEDULE

ITEM	WIRE COLOR	WIRE
GALVANIC ANODES	BLUE	12 AWG, SOLID COPPER WIRE, TW OR THHN INSULATION

NOTES:
1. LOCATE ANODES A MAX OF 3 FEET HORIZONTALLY FROM CENTERLINE OF PIPE.
2. PLACE GALVANIC ANODE IN CLEAN NATIVE BACKFILL AND COMPACT TO 12" ABOVE ANODE.
3. ANODES MAY BE PLACED UPRIGHT OR HORIZONTALLY, HORIZONTAL ORIENTATION SHOWN.
4. ANODE WIRE SHALL BE EXOTHERMIC WELDED DIRECTLY TO PIPE OR INCORPORATED INTO THE JOINT BOND WITH A SPLIT-BOLT CONNECTION.
5. RUNS OF PIPE SHALL HAVE AN ANODE INSTALLED AT EACH END.
6. ANODES TO BE SPACED A MINIMUM OF 5-FEET APART.
7. ANODES ALONG A RUN OF PIPE SHALL BE EVENLY DISTRIBUTED AND LOCATED ADJACENT TO A PIPE JOINT.
8. PLACE ANODES MINIMUM 5-FEET DISTANCE FROM ANY FOREIGN STRUCTURE.
9. A PIPE RUN IS FROM ISOLATION JOINT TO ISOLATION JOINT.



217 C06 GALVANIC ANODE INSTALLATION DETAILS
NOT TO SCALE



218 DIELECTRIC ISOLATION JOINT ASSEMBLY
NOT TO SCALE

RH2

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DANIEL W. BURNETT STATE OF WASHINGTON 38306 REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
Skagit PUD PUBLIC UTILITY DISTRICT

CATHODIC PROTECTION DETAILS

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-DET.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: OMP
REVIEWED: DWB

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: M06
SHEET NO.: 22 37

ONE-LINE DIAGRAM SYMBOLS

- CIRCUIT BREAKER
  - XXX/YY – CB SIZE & NO. OF POLES
  - ET – ELECTRONIC TRIP
  - TM – THERMAL MAGNETIC BREAKER
  - MCP – MOTOR CIRCUIT PROTECTOR
  - SE – SERVICE ENTRANCE
  - GFI – GROUND FAULT INTERRUPTER
- FUSE
- FUSED DISCONNECT SWITCH
- PLUG–IN CONNECTION
- RTM – RUN TIME METER
- OC – MOTOR OPERATION COUNTER
- SSRVS – SSRVS – SOLID STATE REDUCED VOLTAGE STARTER
- VARIABLE FREQUENCY DRIVE
- MOTOR STARTER
- MOTOR STARTER W/ OPERATOR DEVICES (A B / C D)
  - A – HAND–OFF–AUTO
  - B – OPERATIONAL COUNTER
  - C – RUN TIME METER
  - D – RUN LIGHT
  - E – FAIL LIGHT
  - F – EMERGENCY STOP
- K – KIRK KEY INTERLOCK
- POWER TRANSFORMER
- CONTROL POWER TRANSFORMER
- TRANSFORMER
- CURRENT TRANSFORMER
- VOLTAGE TRANSFORMER
- CONTACTOR
- CAPACITOR
- ENGINE GENERATOR
- GENERATOR CONNECTION RECEPTACLE
- S/N – SOLID NEUTRAL
- TB – TERMINAL BLOCK
- SURGE PROTECTION DEVICE
- SPD – SURGE PROTECTION DEVICE (ALTERNATIVE)

GROUNDING SYSTEM SYMBOLS

- GROUND
- METAL PIPE GROUND
- CONNECTION POINT, EXOTHERMIC WELD. CADWELD OR APPROVED EQUAL.
- GROUND ROD SIZED PER N.E.C. USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD.
- PIGTAIL, BARE COPPER, LENGTH AS REQUIRED, 8' MINIMUM.
- CONNECTION POINT, MECHANICAL, COMPRESSION TYPE.

ELECTRICAL SITE PLAN SYMBOLS

- UTILITY POLE AND GUY WIRE
- HH – MANHOLE OR HANDHOLE
- P – BURIED POWER VAULT OR MANHOLE
- T – TELEPHONE VAULT OR PEDESTAL
- F – FIBER OPTICS VAULT OR PEDESTAL
- LUMINAIRE
- PAD–MOUNT TRANSFORMER

PANELBOARDS, SWITCHES, AND EQUIPMENT

- SERVICE ENTRANCE, SWITCHGEAR, MOTOR CONTROL CENTER, OR PANELBOARD
- SURFACE MOUNTED PANELBOARD
- FLUSHED MOUNTED PANELBOARD
- NXX – FIELD CONTROL STATION WITH NEMA REQUIREMENTS.
  - N1 – NEMA 1
  - N3R – NEMA 3R
  - N4 – NEMA 4
  - N4SS – NEMA 4 STAINLESS STEEL
  - N4F – NEMA 4 FIBERGLASS
  - N6 – NEMA 6
  - N12 – NEMA 12 GASKETED
- EQUIPMENT MOUNTING STAND
- T – HEATER, WATTAGE NOTED
- EQUIPMENT CONNECTION
- M – SINGLE PHASE MOTOR. HORSEPOWER AS NOTED
- HP – THREE PHASE MOTOR. HORSEPOWER AS NOTED
- HP – SINGLE PHASE MOTOR. HORSEPOWER AS NOTED
- ELECTRICAL PLUG
- DISCONNECT SWITCH
- F – FUSED DISCONNECT SWITCH
- COMBINATION MOTOR STARTER AND DISCONNECT SWITCH

RECEPTACLES AND JUNCTION BOX SYMBOLS

- J – CEILING JUNCTION BOX
- J – WALL JUNCTION BOX
- J – FLOOR JUNCTION BOX
- DUPLEX WALL RECEPTACLE , 120V
  - WP = WEATHERPROOF
  - G = GROUNDED
  - IG = ISOLATED GROUND
  - GFI = GROUND FAULT INTERRUPTER
- DOUBLE DUPLEX
- SINGLE RECEPTACLE, 120V
- SINGLE RECEPTACLE, 208V
- DUPLEX FLOOR RECEPTACLE, 120V
- SPECIAL PURPOSE WALL RECEPTACLE, RATING AS NOTED
- CLOCK
- TV – TELEVISION
- TELEPHONE
- TELEPHONE/DATA WITH CABLE
- TELEPHONE/DATA WITHOUT CABLE

SWITCH OUTLETS

- S – STANDARD SWITCH, 120VAC, 20 AMP
- S3 – 3WAY – 3–WAY SWITCH, 120VAC, 20 AMP
- SHOA – HOA – 3–POSITION SWITCH, 120VAC, 20 AMP, LABEL SWITCH POSITION HAND–OFF–MOTION OR PHOTO

- SDEE – SINGLE–POLE
- S2 – DOUBLE–POLE
- S3 – THREE WAY
- S4 – FOUR WAY
- SD – DIMMER
- SOS – OCCUPANCY SENSOR
- SP – PILOT–LIGHTED
- SK – KEY–OPERATED
- SLV – LOW VOLTAGE
- SM – MASTER
- PUSHBUTTON

LIGHTING FIXTURES/DEVICES

- FLUORESCENT FIXTURE
- WALL/CEILING MOUNTED FIXTURE
- EMERGENCY LIGHT WITH SELF CONTAINED BATTERY
- SURFACE OR PENDANT MOUNTED FIXTURE
- RECESSED FIXTURE
- MD – MOTION DETECTOR
- PC – PHOTO CONTROL CELL

FIRE SYSTEM SYMBOLS

- H – HEAT DETECTOR
- S – SMOKE DETECTOR
- D – FIRE ALARM DISPATCH STROBE ALARM
- A – FIRE ALARM AUDIBLE/VISUAL ALARM
- F – FIRE ALARM MANUAL PULL STATION

ADDITIONAL SYMBOLS

- S – SOUND SYSTEM SPEAKER
- V – SOUND SYSTEM VOLUME CONTROL
- B – DOORBELL

VALVE SYMBOLS

- PILOT VALVE SOLENOID
- VALVE
- CHECK VALVE
- CONTROL VALVE

ABBREVIATIONS

SPDT – SINGLE POLE, DOUBLE THROW
SPST – SINGLE POLE, SINGLE THROW
DPST – DOUBLE POLE, SINGLE THROW
WP – WEATHER–PROOF
GFI – GROUND FAULT INTERRUPT
P – POWER
C – CONTROL
J – INSTRUMENTATION
PC – POWER & CONTROL
CJ – CONTROL & INSTRUMENTATION
CKT. – CIRCUIT
C.O. – CONDUIT ONLY
N.L. – NIGHT LIGHT
AL. – ALUMINUM
CU. – COPPER

HOA	HAND–OFF–AUTO SWITCH
RTM	RUN TIME METER
OC	OPERATION COUNTER
MRIL	MOTOR RUN INDICATION LIGHT
SFIL	SEAL FAIL INDICATION LIGHT
SFTR	SEAL FAIL TRIP RESET
OTIL	OVER TEMPERATURE INDICATION LIGHT
MOIL	MOTOR OVERLOAD INDICATION LIGHT

INDICATE TYPE BY LETTER

- V
- AH

INSTRUMENT METER

- A – AMMETER
- AH – AMPERE–HOUR
- PF – POWER FACTOR
- V – VOLTMETER
- VA – VOLT AMMETER
- VAR – VARMETER
- VARH – VARHOUR METER
- W – WATTMETER
- WH – WATTHOUR METER

RACEWAY LEGEND

SITE PLAN LEGEND

- P – PROPOSED POWER
- TEL – PROPOSED TELEPHONE
- TELM – PROPOSED INSTRUMENTATION
- FO – PROPOSED FIBER OPTICS

BUILDING OR FACILITY PLAN LEGEND

- 480 VOLT EXPOSED RACEWAY
- 480 VOLT WIRING CONCEALED, UNDERGROUND, EMBEDDED, OR CONCRETE ENCASED RACEWAY
- 120/208/240 VOLT EXPOSED RACEWAY
- 120/208/240V WIRING CONCEALED, UNDERGROUND, EMBEDDED, OR CONCRETE ENCASED RACEWAY
- CONTROL OR INSTRUMENTATION EXPOSED RACEWAY
- CONTROL OR INSTRUMENTATION, UNDERGROUND, EMBEDDED, OR CONCRETE ENCASED RACEWAY
- HOME RUN TO PANELBOARD OR AS INDICATED
- CONDUIT RUN, BROKEN AND CONTINUED SAME SHEET OR AS NOTED
- FLEXIBLE CONDUIT
- CONDUIT RUN. HATCH MARKS INDICATE NUMBER OF CONDUCTORS
- CALLOUT INDICATING CONDUIT SIZE, NUMBER AND SIZE OF WIRE. (½" GRC, 2–#12)
- CALLOUT INDICATING CONDUIT PER SCHEDULE (XXX)
- CONDUIT BENT UP OR TOWARD
- CONDUIT BENT DOWN OR AWAY
- CAPPED CONDUIT

ONE-LINE DIAGRAM INFORMATION

- EXISTING EQUIPMENT AND CONDUIT
- PROPOSED EQUIPMENT AND CONDUIT
- GROUNDING EQUIPMENT AND CONDUCTORS
- CONDUIT, WIRING OR EQUIPMENT TO BE REMOVED

LADDER LOGIC SYMBOL LEGEND

- INDICATOR LIGHT
  - A – AMBER G – GREEN
  - B – BLUE R – RED
  - C – CLEAR W – WHITE
- RELAY (XYZ 123)
  - TR – TIMED RELAY
  - CR – CONTROL RELAY
- LIMIT SWITCH, NORMALLY OPEN
- FLOAT SWITCH, NORMALLY OPEN
- LIMIT SWITCH, NORMALLY CLOSED
- FLOAT SWITCH, NORMALLY CLOSED
- TIME DELAY CONTACT, NORMALLY OPEN, TIME TO CLOSE
- PUSHBUTTON, NORMALLY CLOSED
- TIME DELAY CONTACT, NORMALLY CLOSED, TIME TO OPEN
- PUSHBUTTON, NORMALLY OPEN
- TIME DELAY CONTACT, NORMALLY OPEN, TIME TO OPEN
- THERMO SWITCH, NORMALLY OPEN
- TIME DELAY CONTACT, NORMALLY CLOSED, TIME TO CLOSE
- THERMO SWITCH, NORMALLY CLOSED
- RELAY CONTACT, NC / RELAY CONTACT, NO – RELAY CONTACT, INSTANTANEOUS CHANGE
- FLOWSWITCH, NORMALLY OPEN
- PRESSURE SWITCH, NORMALLY OPEN
- FLOWSWITCH, NORMALLY CLOSED
- PRESSURE SWITCH, NORMALLY CLOSED
- 2 POLE SWITCH

LADDER LOGIC LINETYPES

- COMPONENT INSTALLED INSIDE ENCLOSURE
- COMPONENT INSTALLED ON FRONT OF ENCLOSURE
- FIELD CONNECTED COMPONENT

- 3 POLE SWITCH

GENERAL NOTES

1. THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS PAGE WILL APPEAR IN THIS SET OF PLANS.

2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE INSTALLATION OF ALL EQUIPMENT SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR REQUIREMENTS.

3. NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS, LACK OF INFORMATION OR ANY OTHER REASON. NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN REVIEWED BY THE ENGINEER.

RH2

RICHARD L. BALLARD – STATE OF WASHINGTON – 52875 – REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

MARK W. BRAASCH – STATE OF WASHINGTON – 51635 – REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION
REPLACEMENT

Skagit PUD – PUBLIC UTILITY DISTRICT

ELECTRICAL LEGEND

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELEC01.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

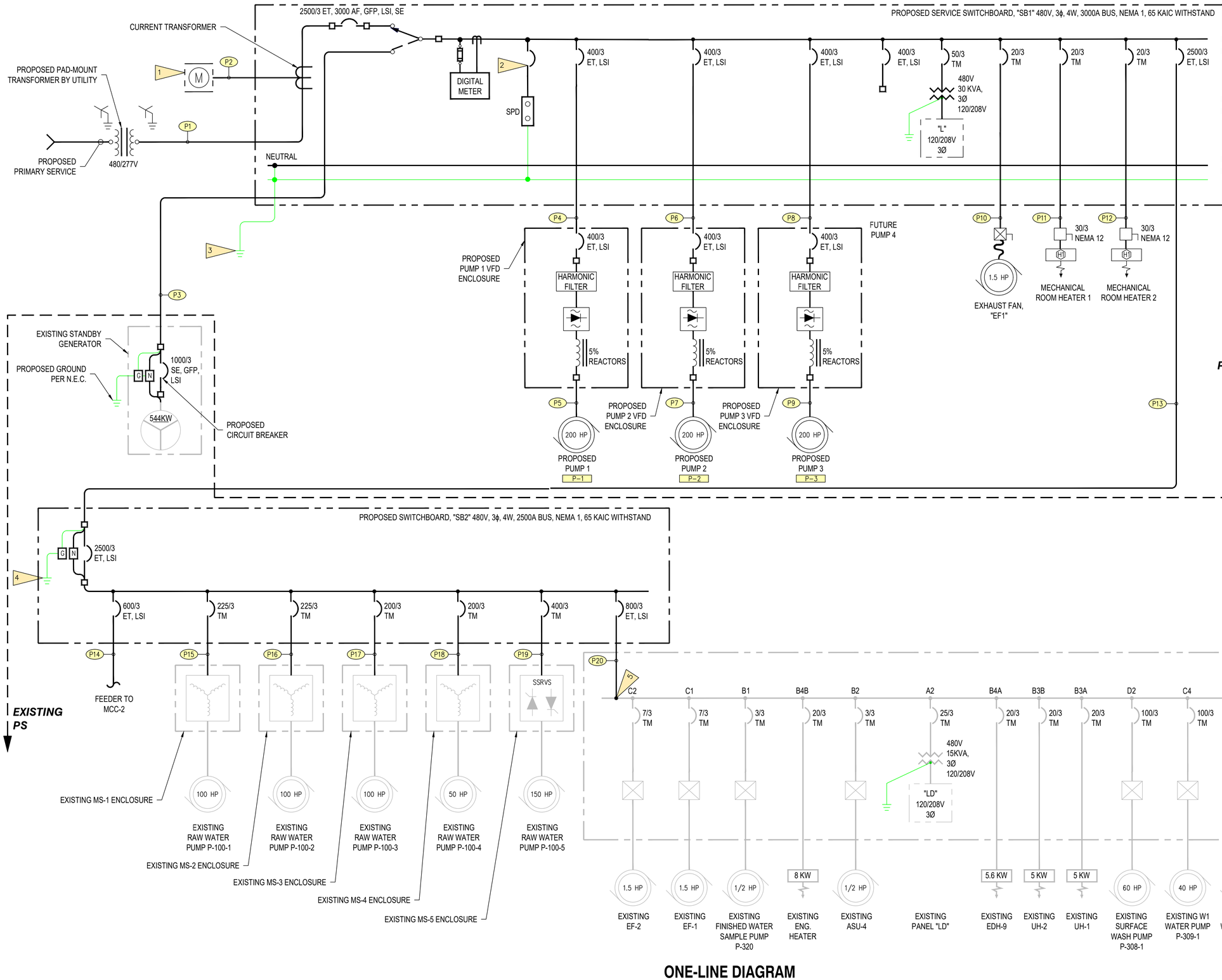
REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E01
SHEET NO.: 23 / 37



ELECTRICAL NOTES

1. PROPOSED MAIN REVENUE METERING. METER BY PUGET SOUND ENERGY. ENCLOSURE PROVIDED BY CONTRACTOR PER PUGET SOUND ENERGY REQUIREMENTS.
2. PROPOSED FUSING OR CIRCUIT BREAKER PER SURGE PROTECTION DEVICE MANUFACTURER'S RECOMMENDATION.
3. SEE GROUNDING DETAIL, DWG NO. E10.
4. CONNECT TO EXISTING GROUNDING SYSTEM.
5. PROVIDE AND INSTALL INCOMING LUG TERMINALS AS NECESSARY TO ACCOMMODATE PROPOSED CONDUCTORS.
6. SEE DWG NO. E11 FOR CONDUIT AND CONDUCTOR SCHEDULE.
7. SEE DWG NO. E11 FOR HEATER SCHEDULE.

ONE-LINE DIAGRAM

NOT TO SCALE

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

MARK W. BRAASCH — STATE OF WASHINGTON — 51635 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
ONE-LINE DIAGRAM

Skagit PUD — PUBLIC UTILITY DISTRICT

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELE002.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

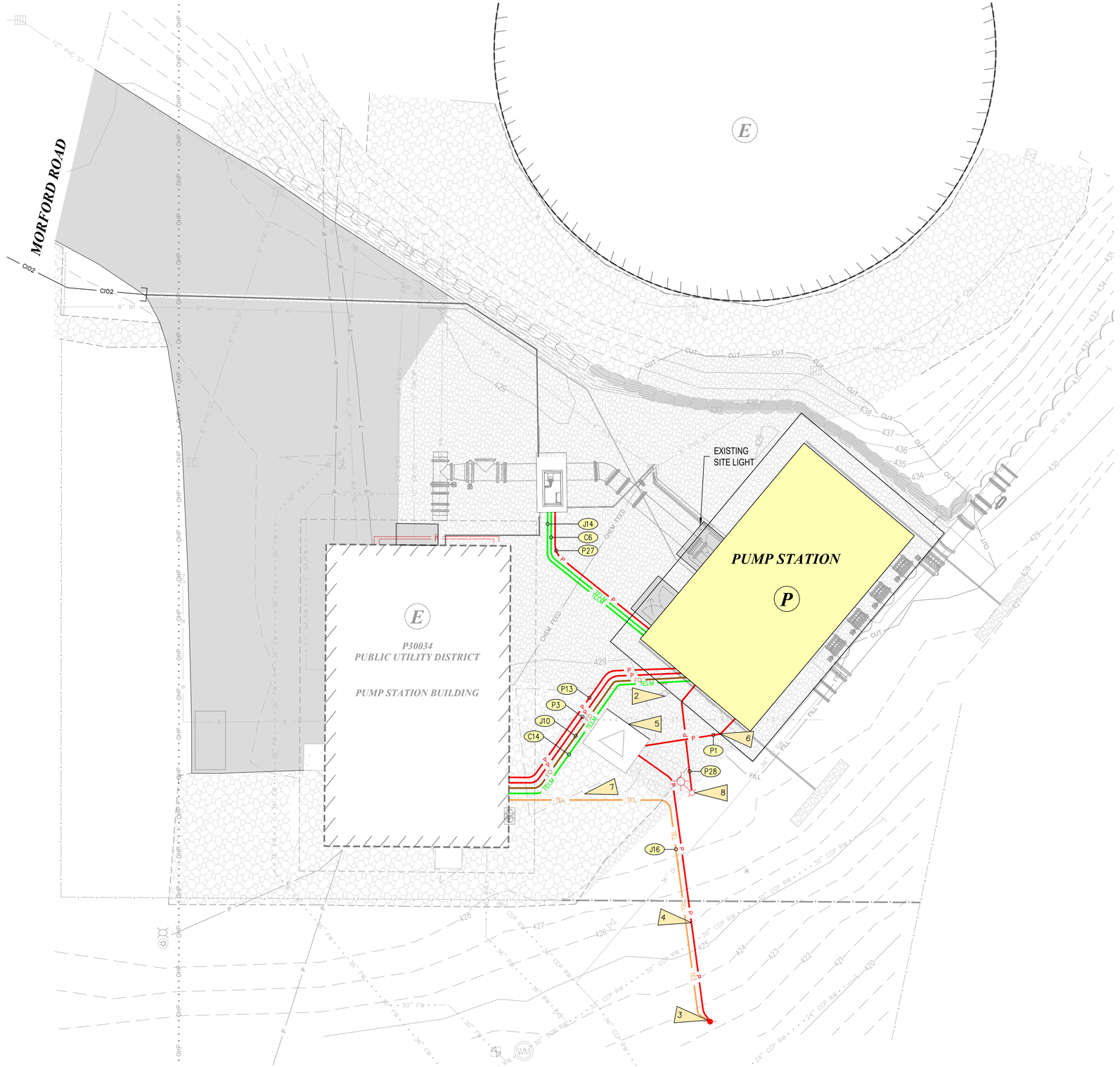
REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E02
SHEET NO.: 24 / 37

P.N. 3766
C.O. 5040



PROPOSED ELECTRICAL SITE PLAN

1" = 10'

ELECTRICAL NOTES

XX	1. SEE DWG NO. E11 FOR CONDUIT AND CONDUCTOR SCHEDULES.
2	2. EXISTING UTILITY POLE TO BE REMOVED BY PUGET SOUND ENERGY AT ONSET OF CONSTRUCTION.
3	3. PROPOSED UTILITY POLE BY PUGET SOUND ENERGY.
4	4. CONTRACTOR SHALL PROVIDE TRENCHING, BACKFILL AND RESTORATION PER PUGET SOUND ENERGY REQUIREMENTS. PUGET SOUND ENERGY SHALL PROVIDE PRIMARY RACEWAY AND CONDUCTORS.
5	5. EXISTING TRANSFORMER TO BE REMOVED AND REPLACED BY PUGET SOUND ENERGY. PUGET SOUND ENERGY TO REVISE EXISTING VAULT.
6	6. SECONDARY POWER SERVICE BY CONTRACTOR. PUGET SOUND ENERGY SHALL TERMINATE CONDUCTORS AT TRANSFORMER.
7	7. EXISTING UNDERGROUND POWER CONDUCTORS TO EXISTING PUMP STATION TO BE REMOVED BY CONTRACTOR ONCE SERVICE TO PROPOSED BUILDING IS ENERGIZED. EXISTING CONDUIT TO BE ABANDONED.
8	8. CONTRACTOR SHALL EXCAVATE AND RELOCATE THE EXISTING SITE LIGHT. CONTRACTOR SHALL PROVIDE A NEW CONCRETE FOOTING FOR THE LIGHT AND ATTACH THE LIGHT POLE AS REQUIRED TO ACCOMMODATE THE RELOCATION.

RH2

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SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

ELECTRICAL SITE PLAN

DESIGNED: KES	JOB NO.: 117.025
REVIEWED: MWB	CLIENT: SPUD
SAVE DATE: Jul 17, 2020	FILENAME: RWPS-D-ELEC03.DWG
PLOT DATE: Sep 22, 2020	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

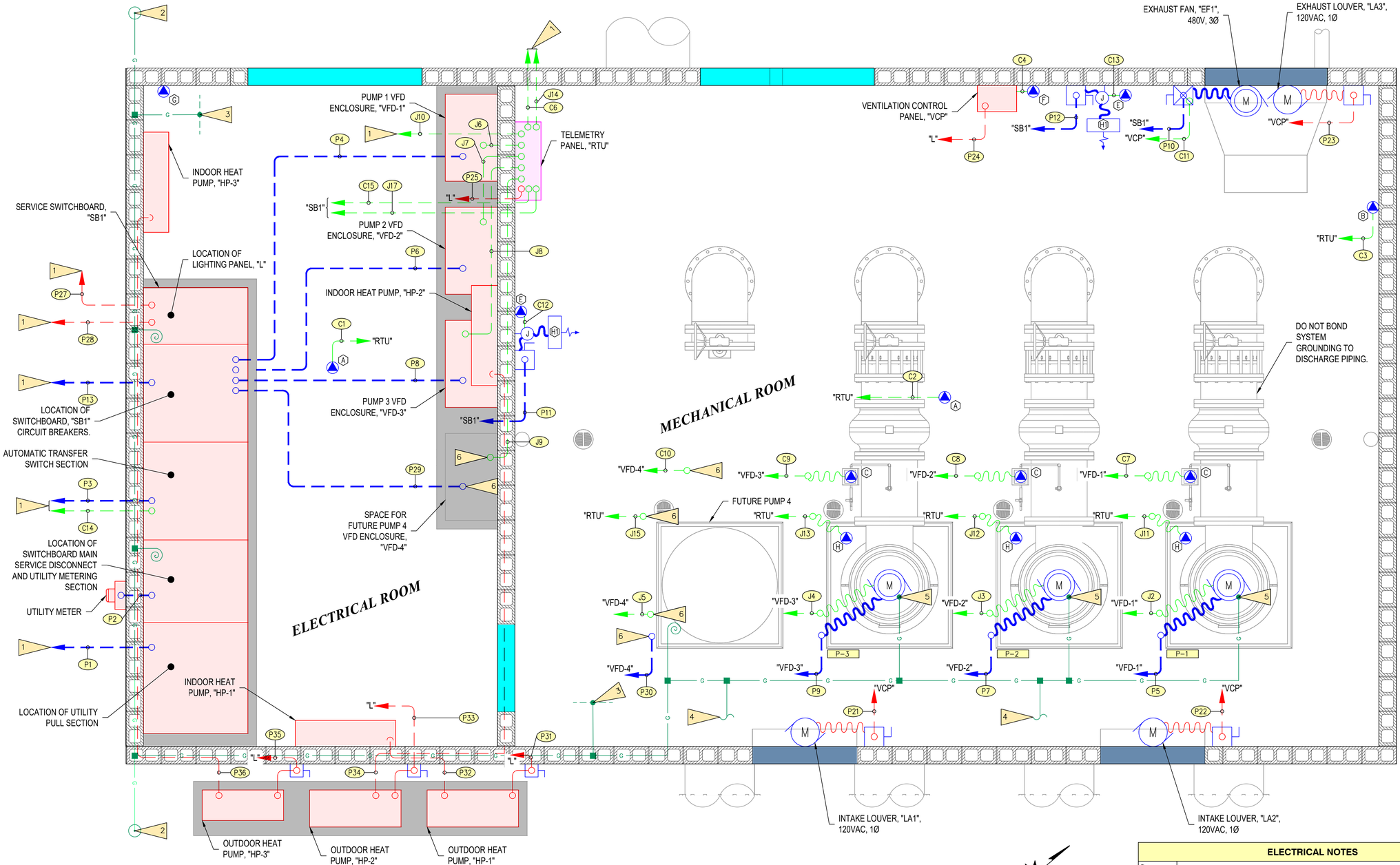
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E03

SHEET NO.: 25 / 37



PROPOSED PS - POWER DISTRIBUTION AND SIGNAL PLAN

½" = 1'–0"

PROJECT NORTH

NOTE: SECURITY SYSTEM DESIGN AND INSTRUMENTATION BY OTHERS.

ELECTRICAL NOTES

1. SEE DWG NO. E03 FOR CONTINUATION.
2. GROUND ROD PER N.E.C. (TYPICAL). USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD. SEE DWG NO. E10 FOR DETAIL. LOCATE GROUND RODS 2' MINIMUM FROM BUILDING FOUNDATION.
3. CONNECTION TO REINFORCEMENT GRID (TYPICAL OF 2 LOCATIONS). SEE DWG NO. E10 FOR ADDITIONAL DETAIL.
4. BOND GROUND SYSTEM TO SUCTION WATER PIPING (TYPICAL OF 2 LOCATIONS).
5. BOND GROUND SYSTEM TO MOTOR CASING.
6. STUB UP CONDUIT.
7. SEE DWG NO. E11 FOR CONDUIT AND CONDUCTOR SCHEDULE.
8. SEE DWG NO. E11 FOR ELECTRICAL EQUIPMENT SCHEDULE.
9. SEE DWG NO. E11 FOR HEATER SCHEDULE.

P.N. 3766
C.O. 5040

RH2

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER
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SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
NEW PS - POWER DISTRIBUTION AND SIGNAL PLAN

Skagit PUD — PUBLIC UTILITY DISTRICT

ENGINEER: OMP	JOB NO.: 117.025
REVIEWED: MWB	CLIENT: SPUD
SAVE DATE: Sep 18, 2020	FILENAME: RWPS-D-ELE04.DWG
PLOT DATE: Sep 22, 2020	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E04
SHEET NO.: 26 / 37

ELECTRICAL NOTES

1. SEE DWG NO. E03 FOR CONTINUATION.
2. PROVIDE GROUND CONDUCTOR AS NECESSARY TO CONNECT TO EXISTING GROUNDING SYSTEM.
3. GROUND ROD PER N.E.C (TYPICAL). USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD. LOCATE GROUND RODS 10' APART.
4. BOND TO GENERATOR ENCLOSURE.
XX. SEE DWG NO. E11 FOR CONDUIT AND CONDUCTOR SCHEDULE.

ELECTRICAL DEMOLITION NOTES

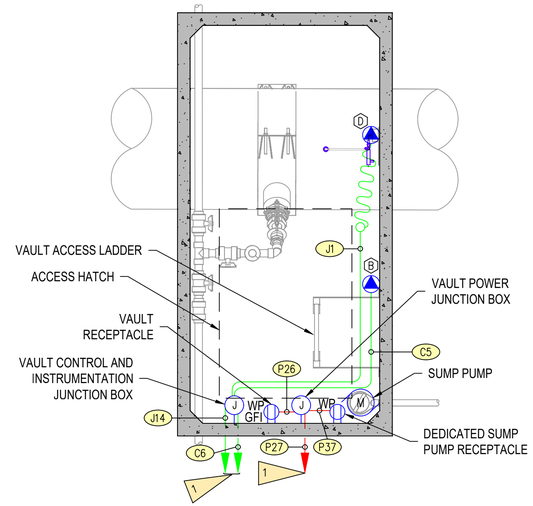
1. CONTRACTOR TO REMOVE AND DISPOSE OF THE EXISTING FEEDER CIRCUITS BETWEEN THE TRANSFORMER AND SWITCHBOARD, THE SWITCHBOARD AND MS-1, MS-2, MS-3, MS-4 AND MS-5.

2. CONTRACTOR TO REMOVE EXISTING UTILITY METERING WIRING AND DISPOSE OF METER CABINETS.

3. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING FEEDER CIRCUIT BETWEEN THE GENERATOR AND EXISTING SWITCHBOARD. CONTRACTOR SHALL INSTALL PROPOSED CIRCUITS AS SHOWN.

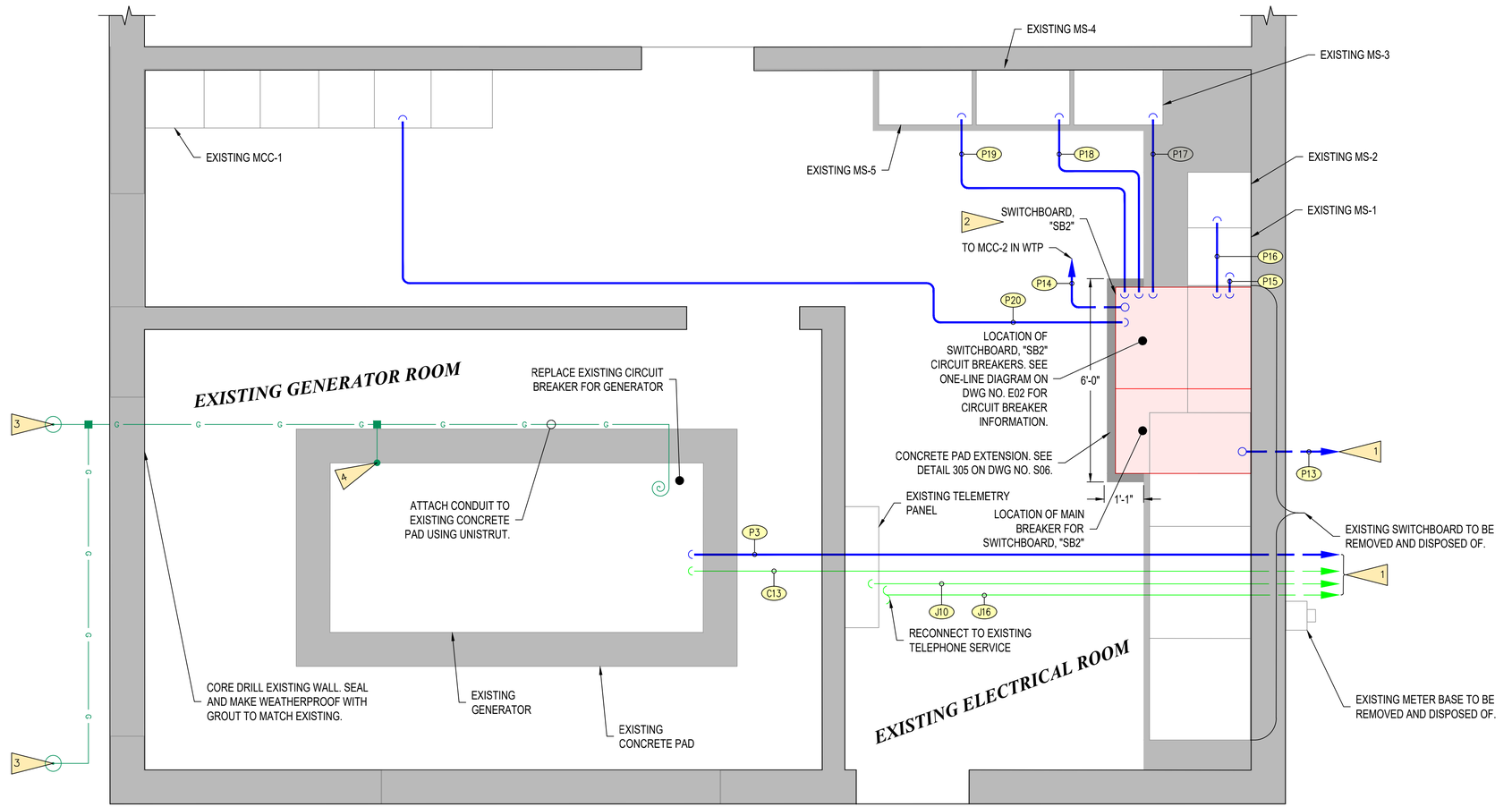
4. CONTRACTOR SHALL PATCH AND MAKE WEATHERPROOF ANY UNUSED PENETRATIONS IN THE EXISTING BUILDING WALLS.

5. PORTIONS OF THE EQUIPMENT PAD THAT NO LONGER CONTAIN ELECTRICAL EQUIPMENT ON THEM SHALL BE REMOVED FLUSH WITH THE SURROUNDING FLOOR.



CHEMICAL INJECTION VAULT ELECTRICAL VIEW

½" = 1'-0"



EXISTING PS - POWER DISTRIBUTION AND SIGNAL PLAN

½" = 1'-0"

RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

MARK W. BRAASCH — STATE OF WASHINGTON — 51635 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

EXISTING PS - POWER DISTRIBUTION AND SIGNAL PLAN

JOB NO.:	117.025
CLIENT:	SPUD
FILENAME:	RWPS-D-ELEC04.DWG
SAVE DATE:	Sep 18, 2020
PLOT DATE:	Sep 22, 2020
ENGINEER:	KES
REVIEWED:	MWB

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW

SCALE: SHOWN

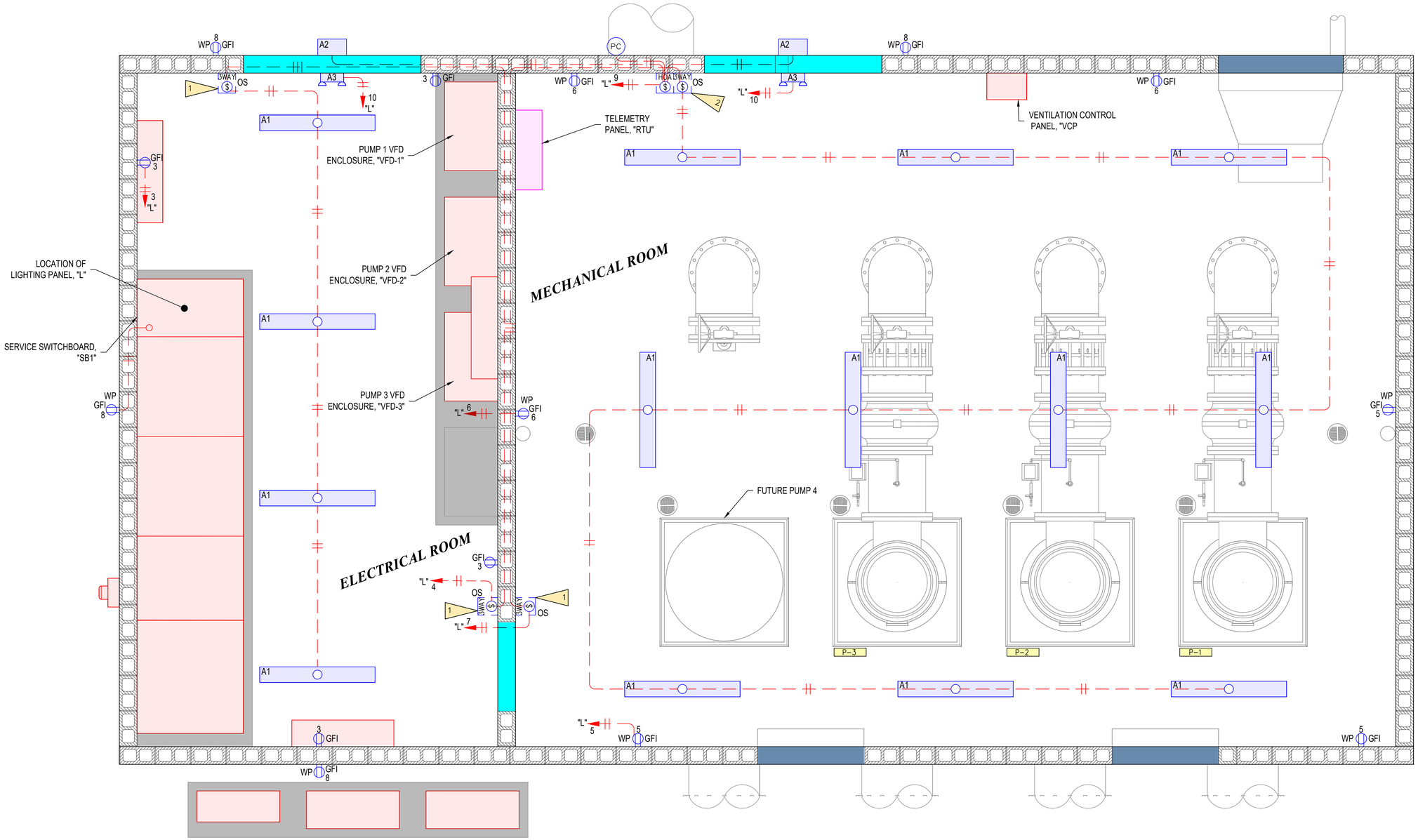
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E05

SHEET NO.: 27 / 37



PROPOSED PS - LIGHTING AND RECEPTACLE PLAN

½" = 1'-0"

ELECTRICAL NOTES

1. SINGLE GANG BOX AND SWITCH RECESSED IN WALL.
2. DOUBLE GANG BOX AND SWITCHES RECESSED IN WALL.
3. SEE DWG NO. E11 FOR LIGHTING FIXTURE SCHEDULE.
4. SEE DWG NO. E11 FOR ELECTRICAL EQUIPMENT SCHEDULE.

5 PROVIDE AND INSTALL LABELS FOR ALL LIGHT SWITCHES. LABELS SHALL INDICATE THE DEVICE CONTROLLED BY THE SWITCH.

6. LOCATE ALL LIGHT FIXTURES, SWITCHES, AND DEVICES IN LOCATION SHOWN ON THE PLANS USING ENGINEERING SCALE. ADJUST LOCATION AS NECESSARY TO AVOID INTERFERENCE WITH OTHER EQUIPMENT.

RH2

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SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT
NEW PS - LIGHTING AND RECEPTACLE PLAN

Skagit PUD — PUBLIC UTILITY DISTRICT

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELEC05.DWG
SAVE DATE: Sep 18, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

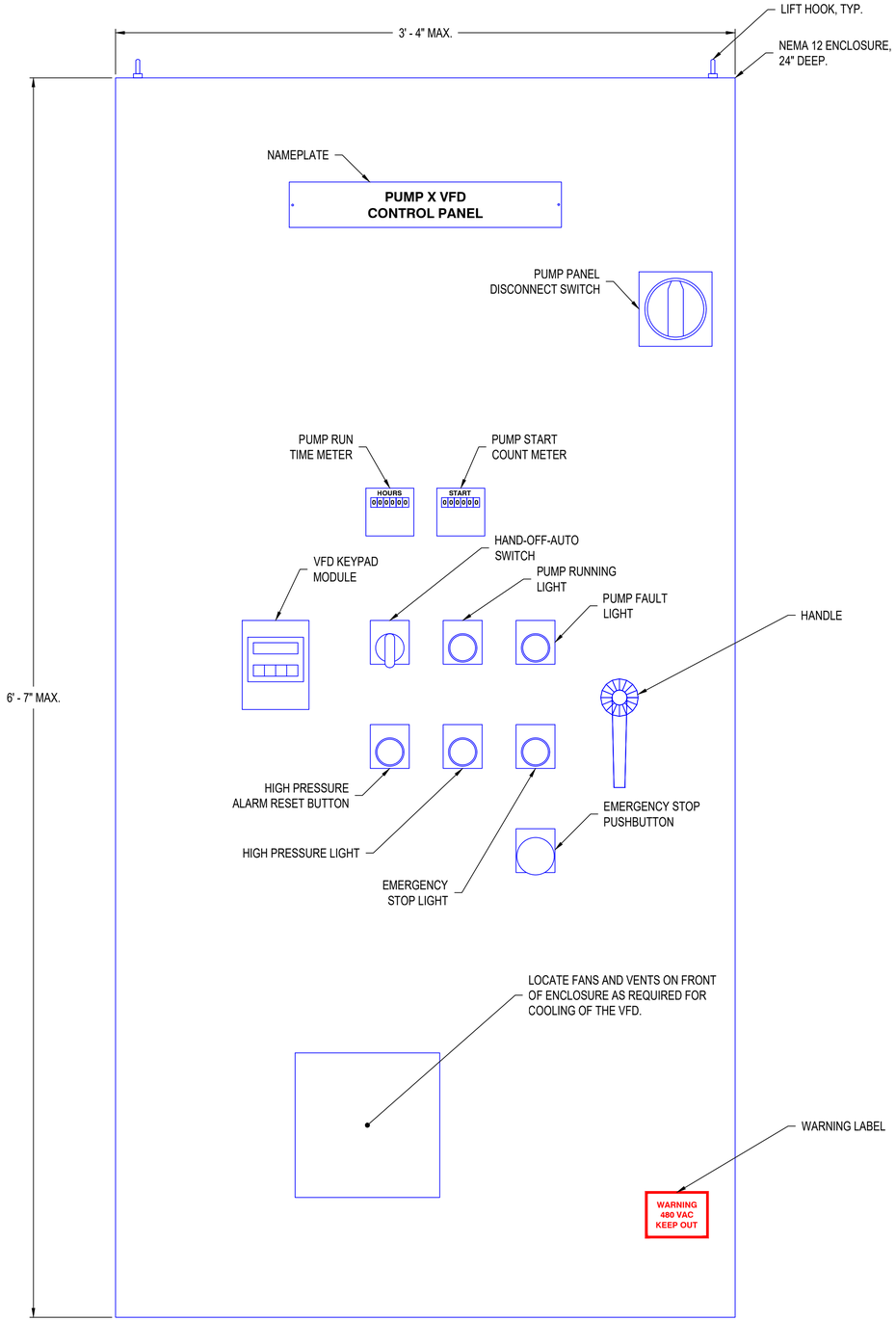
REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E06
SHEET NO.: 28 37



VFD CONTROL PANEL, TYP.

NOT TO SCALE

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52878
REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

MARK W. BRANSOM
STATE OF WASHINGTON
51635
REGISTERED PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

VFD PANEL LAYOUT

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELEC06.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E07
SHEET NO.: 29 37

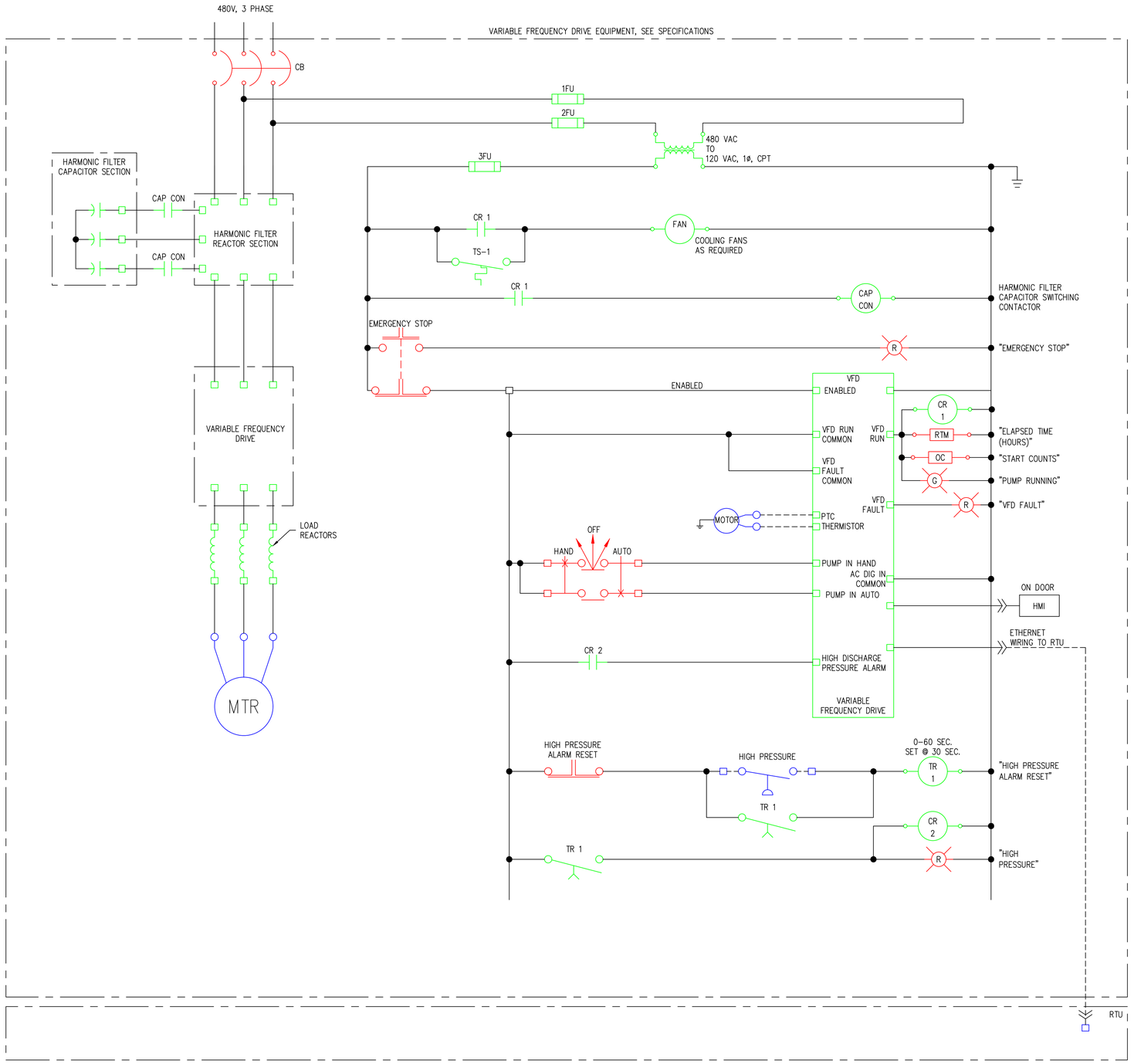


DIAGRAM 1: PUMP 1, PUMP 2, PUMP 3

NO SCALE

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52878
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

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STATE OF WASHINGTON
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REGISTERED
PROFESSIONAL ENGINEER

SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION
REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

CONTROL LOGIC DIAGRAMS I

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELEC07.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E08

SHEET NO.: 30 37

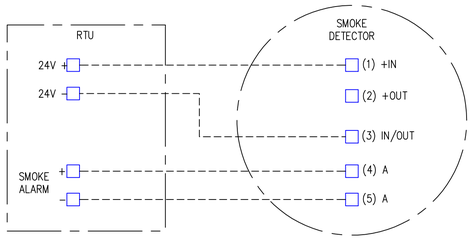

DIAGRAM 2: BUILDING SMOKE DETECTOR CIRCUIT

NO SCALE

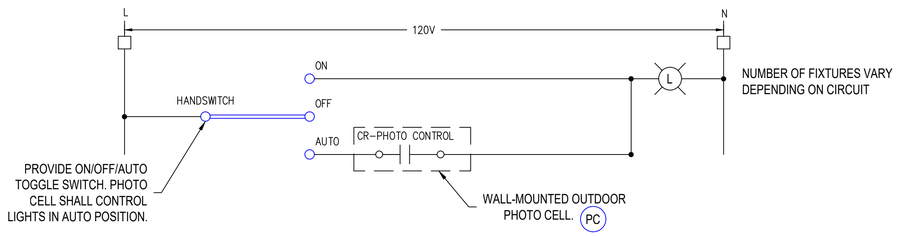

DIAGRAM 3: EXTERIOR BUILDING LIGHTING CIRCUIT DIAGRAM

NO SCALE

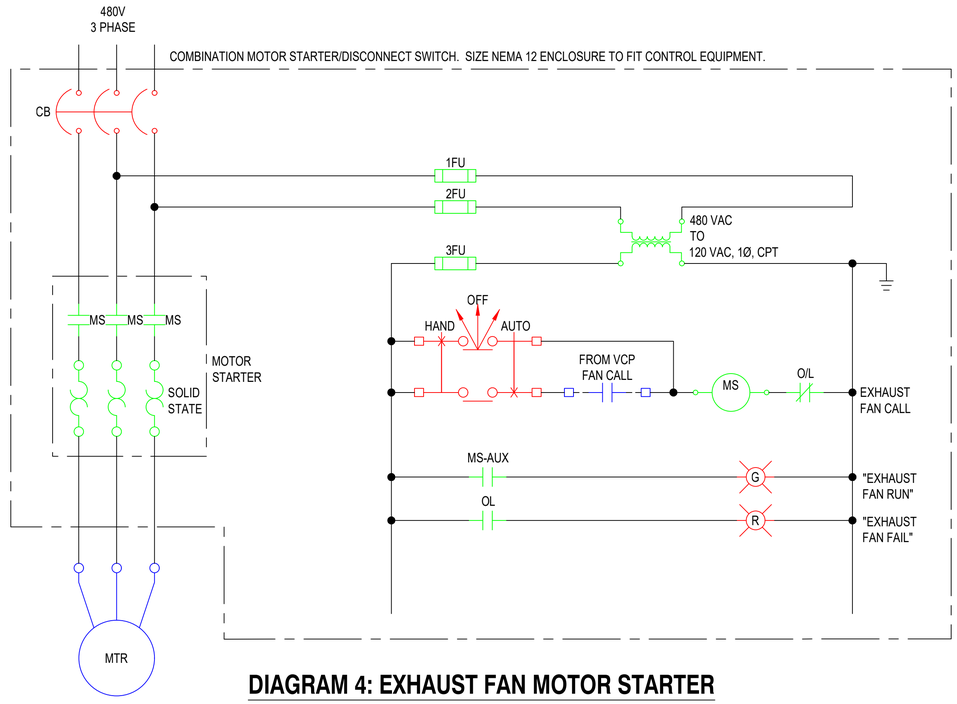

DIAGRAM 4: EXHAUST FAN MOTOR STARTER DISCONNECT

NO SCALE

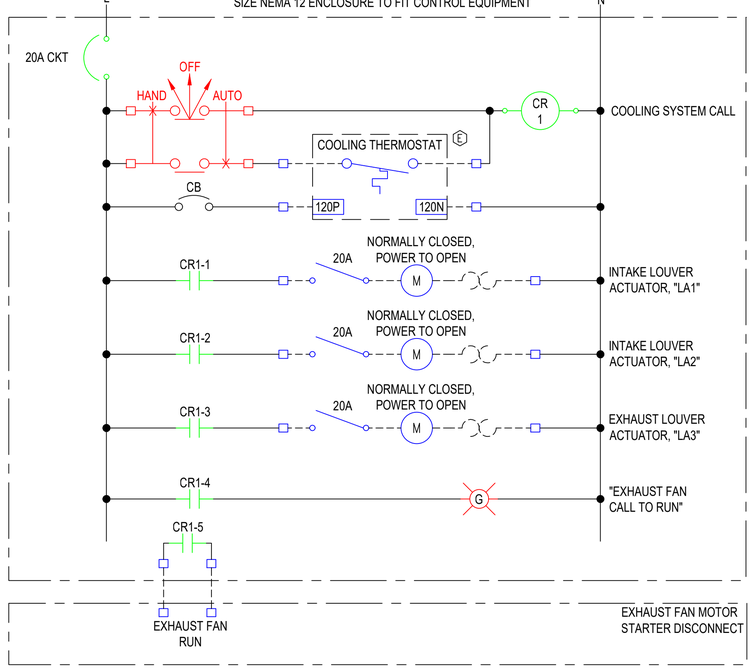

DIAGRAM 5: VENTILATION CONTROL PANEL, "VCP"

NO SCALE

RH2

RICHARD L. BALLARD
STATE OF WASHINGTON
52875
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SIGNED: 07/17/2020

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SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

CONTROL LOGIC DIAGRAMS II

Skagit PUD
PUBLIC UTILITY DISTRICT

JOB NO.: 117.025	
CLIENT: SPUD	
FILENAME: RWPS-D-ELEC07.DWG	
SAVE DATE: Jul 17, 2020	
PLOT DATE: Sep 22, 2020	
ENGINEER: KES	
REVIEWED: MWB	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

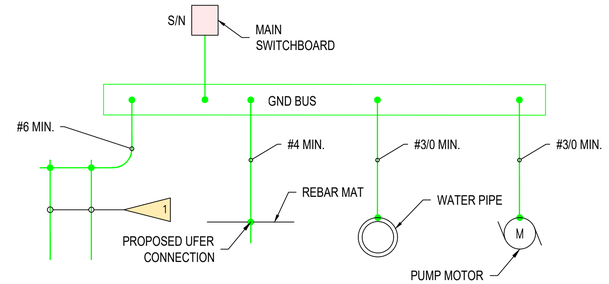
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E09

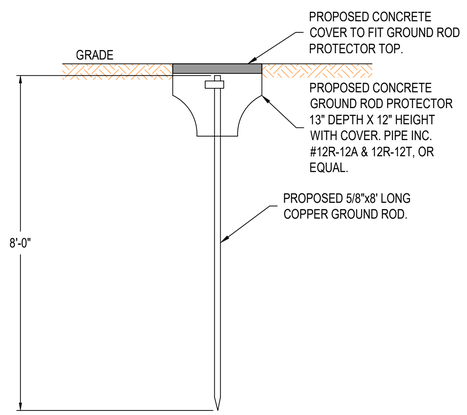
SHEET NO.: 31 / 37

P.N. 3766
C.O. 5040

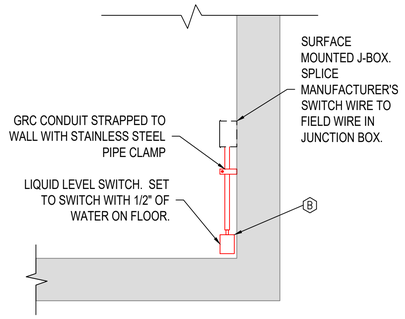


PROPOSED BPS GROUNDING
NO SCALE

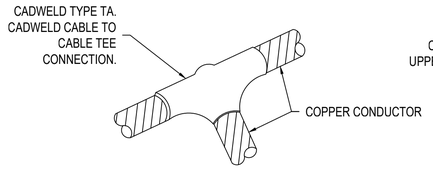
ELECTRICAL NOTES	
1	1. GROUND ROD PER N.E.C. (TYPICAL). SEE THIS SHEET FOR DETAIL.



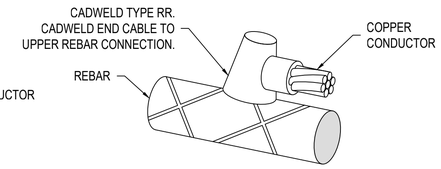
GROUND ROD DETAIL
NOT TO SCALE



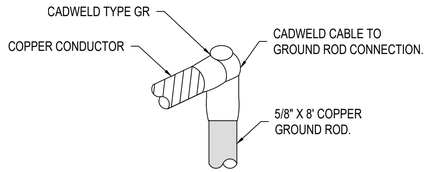
PS FLOOD SWITCH DETAIL
NOT TO SCALE



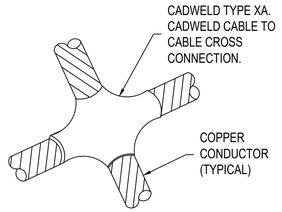
GROUND TEE DETAIL
NOT TO SCALE



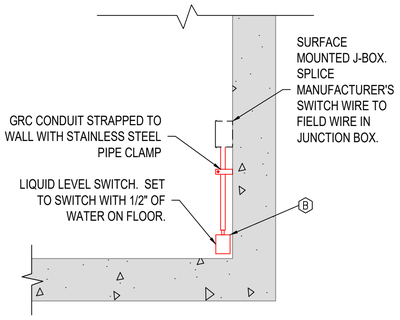
GROUND REBAR DETAIL
NOT TO SCALE



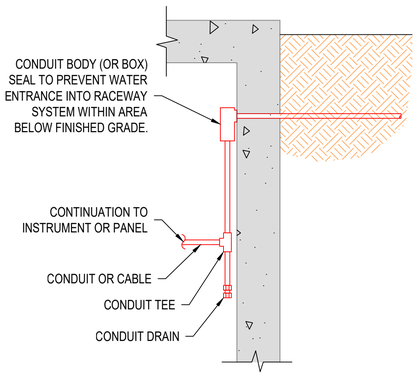
GROUND TEE DETAIL
NOT TO SCALE



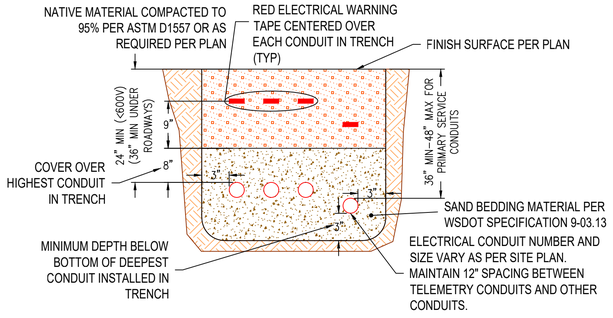
GROUND CROSS DETAIL
NOT TO SCALE



VAULT FLOOD SWITCH DETAIL
NOT TO SCALE

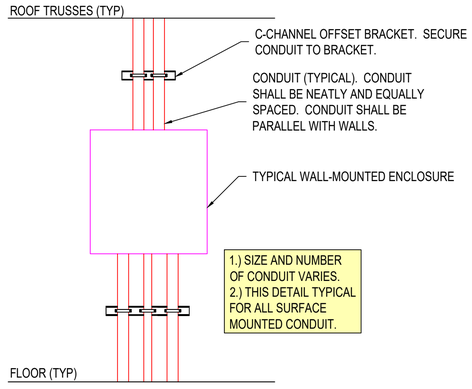


CONDUIT SEAL/DRAIN INSTALLATION
NOT TO SCALE



NOTE: BURY DEPTH OF CONDUIT AND HORIZONTAL SPACING SHALL BE CONFIRMED WITH SERVING UTILITY BEFORE CONSTRUCTION.

TYPICAL ELECTRICAL TRENCH DETAIL
NOT TO SCALE



SURFACE MOUNTED CONDUIT DETAIL
NOT TO SCALE

RICHARD L. BALLARD
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SIGNED: 07/17/2020

MARK W. BRAASCH
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SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT

ELECTRICAL DETAILS

Skagit PUD — PUBLIC UTILITY DISTRICT

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELEC08.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E10
SHEET NO.: 32
37

POWER CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
P1	UTILITY TRANSFORMER	SERVICE SWITCHBOARD, "SB1"	(8) – 3"	(3) – #500 MCM, (1) #500 MCM N	PARALLEL CONDUCTORS
P2	CURRENT TRANSFORMER	UTILITY METER	1 1/4"	(13) – #14	
P3	SERVICE SWITCHBOARD, "SB1"	EXISTING STANDBY GENERATOR	(3) – 3"	(3) – #400 MCM, (1) – #400 MCM N, (1) – #2/0 GRD	PARALLEL CONDUCTORS
P4	SERVICE SWITCHBOARD, "SB1"	PUMP 1 VFD ENCLOSURE, "VFD–1"	(2) –2"	(3) – #3/0, (1) – #3 GRD	PARALLEL CONDUCTORS
P5	PUMP 1 VFD ENCLOSURE, "VFD–1"	PUMP 1, "P–1"	3"	(3) – #350 MCM, (1) – #3 GRD	
P6	SERVICE SWITCHBOARD, "SB1"	PUMP 2 VFD ENCLOSURE, "VFD–2"	(2) –2"	(3) – #3/0, (1) – #3 GRD	PARALLEL CONDUCTORS
P7	PUMP 2 VFD ENCLOSURE, "VFD–2"	PUMP 2, "P–2"	3"	(3) – #350 MCM, (1) – #3 GRD	
P8	SERVICE SWITCHBOARD, "SB1"	PUMP 3 VFD ENCLOSURE, "VFD–3"	(2) –2"	(3) – #3/0, (1) – #3 GRD	PARALLEL CONDUCTORS
P9	PUMP 3 VFD ENCLOSURE, "VFD–3"	PUMP 3, "P–3"	3"	(3) – #350 MCM, (1) – #3 GRD	
P10	SERVICE SWITCHBOARD, "SB1"	EXHAUST FAN, "EF1"	3/4"	(3) – #12, (1) – #12 GRD	
P11	SERVICE SWITCHBOARD, "SB1"	MECHANICAL ROOM HEATER 1	3/4"	(3) – #12, (1) – #12 GRD	
P12	SERVICE SWITCHBOARD, "SB1"	MECHANICAL ROOM HEATER 2	3/4"	(3) – #12, (1) – #12 GRD	
P13	SERVICE SWITCHBOARD, "SB1"	SERVICE SWITCHBOARD, "SB2"	(7) –3 1/2"	(3) – #500 MCM, (1) – #500 MCM N, (1) – #350 MCM GRD	PARALLEL CONDUCTORS
P14	SERVICE SWITCHBOARD, "SB2"	EXISTING MOTOR CONTROL CENTER, "MCC–2"			REUSE EXISTING CIRCUIT IF POSSIBLE
P15	SERVICE SWITCHBOARD, "SB2"	EXISTING MS–1 ENCLOSURE	2"	(3) – #4/0, (1) – #4 GRD	
P16	SERVICE SWITCHBOARD, "SB2"	EXISTING MS–2 ENCLOSURE	2"	(3) – #4/0, (1) – #4 GRD	
P17	SERVICE SWITCHBOARD, "SB2"	EXISTING MS–3 ENCLOSURE	2"	(3) – #4/0, (1) – #4 GRD	
P18	SERVICE SWITCHBOARD, "SB2"	EXISTING MS–4 ENCLOSURE	2"	(3) – #3/0, (1) – #6 GRD	
P19	SERVICE SWITCHBOARD, "SB2"	EXISTING MS–5 ENCLOSURE	(2) – 2"	(3) – #3/0, (1) – #3 GRD	PARALLEL CONDUCTORS
P20	SERVICE SWITCHBOARD, "SB2"	EXISTING MOTOR CONTROL CENTER, "MCC–1"	(3) – 3"	(3) – #300 MCM, (1) – #300 MCM N, (1) – #1/0 GRD	PARALLEL CONDUCTORS
P21	VENTILATION CONTROL PANEL, "VCP"	INTAKE LOUVER ACTUATOR, "LA1"	3/4"	(2) – #12, (1) – #12 GRD	
P22	VENTILATION CONTROL PANEL, "VCP"	INTAKE LOUVER ACTUATOR, "LA2"	3/4"	(2) – #12, (1) – #12 GRD	
P23	VENTILATION CONTROL PANEL, "VCP"	EXHAUST LOUVER ACTUATOR, "LA3"	3/4"	(2) – #12, (1) – #12 GRD	
P24	LIGHTING PANEL, "L"	VENTILATION CONTROL PANEL, "VCP"	3/4"	(2) – #12, (1) – #12 GRD	
P25	LIGHTING PANEL, "L"	TELEMETRY PANEL, "RTU"	3/4"	(2) – #12, (1) – #12 GRD	
P26	VAULT POWER JUNCTION BOX	CHEMICAL INJECTION VAULT RECEPTACLE	3/4"	(2) – #12, (1) – #12 GRD	
P27	LIGHTING PANEL, "L"	VAULT POWER JUNCTION BOX	1"	(4) – #12, (1) – #12 GRD	
P28	LIGHTING PANEL, "L"	EXISTING/RELOCATED SITE LIGHT	1"	(2) – #12, (1) – #12 GRD	
P29	SERVICE SWITCHBOARD, "SB1"	PUMP 4 VFD ENCLOSURE (FUTURE), "VFD–4"	(2) – 2"	(1) – NYLON PULL CORD	SPARE CONDUIT FOR FUTURE USE
P30	PUMP 4 VFD ENCLOSURE (FUTURE), "VFD–4"	PUMP 4 (FUTURE)	3"	(1) – NYLON PULL CORD	SPARE CONDUIT FOR FUTURE USE
P31	LIGHTING PANEL, "L"	OUTDOOR HEAT PUMP, "HP–1"	3/4"	(2) – #10, (1) – #10 GRD	
P32	OUTDOOR HEAT PUMP, "HP–1"	INDOOR HEAT PUMP, "HP–1"	3/4"	(3) – #12, (1) – #12 GRD	
P33	LIGHTING PANEL, "L"	OUTDOOR HEAT PUMP, "HP–2"	3/4"	(2) – #10, (1) – #10 GRD	
P34	OUTDOOR HEAT PUMP, "HP–2"	INDOOR HEAT PUMP, "HP–2"	3/4"	(3) – #12, (1) – #12 GRD	
P35	LIGHTING PANEL, "L"	OUTDOOR HEAT PUMP, "HP–3"	3/4"	(2) – #10, (1) – #10 GRD	
P36	OUTDOOR HEAT PUMP, "HP–3"	INDOOR HEAT PUMP, "HP–3"	3/4"	(3) – #12, (1) – #12 GRD	
P37	VAULT POWER JUNCTION BOX	CHEMICAL INJECTION VAULT SUMP PUMP DEDICATED RECEPTACLE	3/4"	(2) – #12, (1) – #12 GRD	

CONTROL CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
C1	TELEMETRY PANEL, "RTU"	ELECTRICAL ROOM SMOKE DETECTOR	3/4"	(4) – #14, (1) – #14 GRD	
C2	TELEMETRY PANEL, "RTU"	MECHANICAL ROOM SMOKE DETECTOR	3/4"	(4) – #14, (1) – #14 GRD	
C3	TELEMETRY PANEL, "RTU"	MECHANICAL ROOM FLOOD SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C4	COOLING THERMOSTAT	VENTILATION CONTROL PANEL, "VCP"	3/4"	(4) – #14, (1) – #14 GRD	
C5	VAULT CONTROL AND INSTRUMENTATION JUNCTION BOX	VAULT FLOOD SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C6	TELEMETRY PANEL, "RTU"	VAULT CONTROL AND INSTRUMENTATION JUNCTION BOX	1"	(2) – #14, (1) – #14 GRD	
C7	PUMP 1 VFD ENCLOSURE, "VFD–1"	PUMP 1 PRESSURE SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C8	PUMP 2 VFD ENCLOSURE, "VFD–2"	PUMP 2 PRESSURE SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C9	PUMP 3 VFD ENCLOSURE, "VFD–3"	PUMP 3 PRESSURE SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C10	PUMP 4 VFD ENCLOSURE (FUTURE), "VFD–4"	PUMP 4 PRESSURE SWITCH (FUTURE)	3/4"	(1) – NYLON PULL CORD	SPARE CONDUIT FOR FUTURE USE
C11	VENTILATION CONTROL PANEL, "VCP"	EXHAUST FAN MOTOR STARTER	3/4"	(2) – #14, (1) – #14 GRD	
C12	MECHANICAL ROOM HEATER 1	HEATING THERMOSTAT 1	3/4"	(2) – #14, (1) – #14 GRD	
C13	MECHANICAL ROOM HEATER 2	HEATING THERMOSTAT 2	3/4"	(2) – #14, (1) – #14 GRD	
C14	SERVICE SWITCHBOARD, "SB1"	EXISTING STANDBY GENERATOR	1"	(6) – #14, (1) – #14 GRD	
C15	SERVICE SWITCHBOARD, "SB1"	TELEMETRY PANEL, "RTU"	3/4"	(8) – #14, (1) – #14 GRD	

ELECTRICAL EQUIPMENT AND INSTRUMENTATION SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
A	SMOKE DETECTOR – PHOTOELECTRIC, 24 VDC POWERED WITH LOCAL AND AUDIBLE ALARM SIGNAL AND CONTACTS FOR REMOTE ANNUNCIATION THROUGH FOUR WIRE CONNECTION TO RTU.	SYSTEMS SENSOR	4WTAR–B OR EQUAL
B	FLOOD SWITCH – N.O. REED TYPE FLOAT SWITCH, 20 VA.	OMEGA	LVN–20 OR EQUAL
C	PRESSURE SWITCH	SEE SPECIFICATIONS	SEE SPECIFICATIONS
D	PRESSURE TRANSMITTER	SEE SPECIFICATIONS	SEE SPECIFICATIONS
E	WALL MOUNTED HEATING THERMOSTAT – 24V, SPST, RANGE: 40° – 90°F, SET AT 60°F, MOUNT 4 FEET ABOVE FINISHED FLOOR.	HONEYWELL	TH6110D1005/U OR EQUAL
F	WALL MOUNTED COOLING THERMOSTAT – SNAP ACTION, SPDT LINE VOLTAGE AIR SWITCH CONTROLLER. RANGE: –30° – 100°F, SET AT 75°F. MOUNT 4 FEET ABOVE FINISHED FLOOR.	HONEYWELL	T775A2009/U OR EQUAL
G	THERMOSTAT CONTROLLER	MITSUBISHI ELECTRIC	MRCH1
H	SEAL SAFE UNIT	SEE SPECIFICATIONS	SEE SPECIFICATIONS

HEATER SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
H1	ELECTRICAL HEATER WITH UNIVERSAL MOUNTING BRACKET – 5KW, 480V, THREE PHASE, WITH 24V CONTROL TRANSFORMER AND POWER CONTACTOR FOR THERMOSTAT CONNECTION. MOUNT BOTTOM OF HEATER 7'–0" ABOVE FLOOR.	QMARK	MUH0541

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER NAME	MANUFACTURER CATALOG NO.	LAMP QTY. *	LAMP CATALOG NO.	REMARKS
A1	LED LIGHT FIXTURE, 120 VAC, 4'–4" LONG, 45 WATT, 60,000 HOUR LED, HIGH EFFICIENCY DRIVER, HIGH–IMPACT ACRYLIC LENS, MOLDED FIBERGLASS HOUSING, CEILING MOUNTED, U.L. LISTED FOR WET LOCATIONS.	LITHONIA	FEM L48 6000LM IMAFL	1	INTEGRATED LED	
A2	LED OUTDOOR AREA LIGHT – (1)–27W 10C LED. 700mA, 5000K COLOR TEMPERATURE, 120VAC, MOUNT BOTTOM OF FIXTURE 1'–0" ABOVE DOOR, U.L. LISTED FOR WET LOCATIONS.	LITHONIA	DSXW1 LED 10C 700 50K T3M 120 DDBXD	1	INTEGRATED LED	
A3	DUAL HEAD EMERGENCY LIGHT – (2)–1.8W LED LAMPS, DUAL–VOLTAGE INPUT 120VAC/270VAC, 3 3/4" H, 14 5/8" W, THERMOPLASTIC HOUSING, INTEGRATED RECHARGEABLE BATTERY, MOUNT BOTTOM OF FIXTURE 1'–0" ABOVE DOOR, U.L. LISTED FOR DAMP LOCATIONS.	LITHONIA	EU2 LED M12	2	1.5 WATT DC	

* NUMBER OF LAMPS PER FIXTURE

PANEL SCHEDULE L

NO. L — LOCATION: ELECTRICAL ROOM — SERVING: ELECTRICAL ROOM LOADS

208/120 VOLTS 3φ 4 WIRE — 100 AMP MAIN

CIRCUIT DESCRIPTION	KVA	AMP		AMP	KVA	CIRCUIT DESCRIPTION
TELEMETRY PANEL, "RTU"	0.50	20	1 – 2	20	0.53	VENTILATION CONTROL PANEL, "VCP"
ELECTRICAL ROOM RECEPTACLES	0.72	20	3 – 4	20	0.18	ELECTRICAL ROOM LIGHTS
MECHANICAL ROOM RECEPTACLES 1	0.54	20	5 – 6	20	0.54	MECHANICAL ROOM RECEPTACLES 2
MECHANICAL ROOM LIGHTS	0.45	20	7 – 8	20	0.72	OUTDOOR RECEPTACLES
BUILDING EXTERIOR LIGHTS	0.06	20	9 – 10	20	0.01	EMERGENCY LIGHTS
HEAT PUMP, "HP–1"	4.99	30	11 – 12	30	4.99	HEAT PUMP, "HP–2"
	–	2P	13 – 14	20	2P	
HEAT PUMP, "HP–3"	4.16	25	15 – 16	20	0.18	VAULT RECEPTACLE
	–	2P	17 – 18	20	1.12	VAULT SUMP PUMP
EXISTING/RELOCATED OUTDOOR SITE LIGHT	0.17	20	19 – 20	20	–	SPARE
SPARE	–	20	21 – 22	20	–	SPARE
SPARE	–	20	23 – 24	20	–	SPARE
SPACE	–	–	25 – 26	–	–	SPACE
SPACE	–	–	27 – 28	–	–	SPACE
SPACE	–	–	29 – 30	–	–	SPACE

CONNECTION LOAD: 19.86 KVA 55.13 AMPS

DEMAND: LIGHTING & RECEPTACLE LOAD

DEMAND LOAD: 19.86 KVA 55.13 AMPS

INSTRUMENTATION CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
J1	VAULT CONTROL AND INSTRUMENTATION JUNCTION BOX	DISCHARGE PRESSURE TRANSMITTER	3/4"	(1) 2–CONDUCTOR SHIELDED CABLE	
J2	PUMP 1 VFD ENCLOSURE, "VFD–1"	PUMP 1	3/4"	(1) 2–CONDUCTOR SHIELDED CABLE	MOTOR THERMISTOR WIRING
J3	PUMP 2 VFD ENCLOSURE, "VFD–2"	PUMP 2	3/4"	(1) 2–CONDUCTOR SHIELDED CABLE	MOTOR THERMISTOR WIRING
J4	PUMP 3 VFD ENCLOSURE, "VFD–3"	PUMP 3	3/4"	(1) 2–CONDUCTOR SHIELDED CABLE	MOTOR THERMISTOR WIRING
J5	PUMP 4 VFD ENCLOSURE (FUTURE), "VFD–4"	PUMP 4 (FUTURE)	3/4"	(1) – NYLON PULL CORD	SPARE CONDUIT FOR FUTURE USE
J6	TELEMETRY PANEL, "RTU"	PUMP 1 VFD ENCLOSURE, "VFD–1"	3/4"	(1) – CAT 5E ETHERNET CABLE	ETHERNET CONNECTION TO VFD
J7	TELEMETRY PANEL, "RTU"	PUMP 2 VFD ENCLOSURE, "VFD–2"	3/4"	(1) – CAT 5E ETHERNET CABLE	ETHERNET CONNECTION TO VFD
J8	TELEMETRY PANEL, "RTU"	PUMP 3 VFD ENCLOSURE, "VFD–3"	3/4"	(1) – CAT 5E ETHERNET CABLE	ETHERNET CONNECTION TO VFD
J9	TELEMETRY PANEL, "RTU"	PUMP 4 VFD ENCLOSURE (FUTURE), "VFD–4"	3/4"	(1) – NYLON PULL CORD	SPARE CONDUIT FOR FUTURE USE
J10	TELEMETRY PANEL, "RTU"	EXISTING TELEMETRY PANEL	2"	(1) – FIBER OPTIC CABLE	EXISTING TELEMETRY PANEL IS IN EXISTING PS
J11	TELEMETRY PANEL, "RTU"	PUMP 1 SEAL SAFE UNIT	1"	(2) 2–CONDUCTOR SHIELDED CABLES, (2) – #14, (1) – #14 GRD	
J12	TELEMETRY PANEL, "RTU"	PUMP 2 SEAL SAFE UNIT	1"	(2) 2–CONDUCTOR SHIELDED CABLES, (2) – #14, (1) – #14 GRD	
J13	TELEMETRY PANEL, "RTU"	PUMP 3 SEAL SAFE UNIT	1"	(2) 2–CONDUCTOR SHIELDED CABLES, (2) – #14, (1) – #14 GRD	
J14	TELEMETRY PANEL, "RTU"	VAULT CONTROL AND INSTRUMENTATION JUNCTION BOX	1"	(1) 2–CONDUCTOR SHIELDED CABLE	
J15	TELEMETRY PANEL, "RTU"	PUMP 4 SEAL SAFE UNIT (FUTURE)	1"	(1) – NYLON PULL CORD	SPARE CONDUIT FOR FUTURE USE
J16	UTILITY POLE	TELEMETRY PANEL, "RTU"	4"	(1) – NYLON PULL CORD	
J17	SERVICE SWITCHBOARD, "SB1"	TELEMETRY PANEL, "RTU"	3/4"	(1) – CAT 5E ETHERNET CABLE	

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RH2

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SIGNED: 07/17/2020

PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD — PUBLIC UTILITY DISTRICT

ELECTRICAL SCHEDULES

JOB NO.: 117.025
CLIENT: SPUD
FILENAME: RWPS-D-ELEC09.DWG
SAVE DATE: Jul 17, 2020
PLOT DATE: Sep 22, 2020
ENGINEER: KES
REVIEWED: MWB

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW

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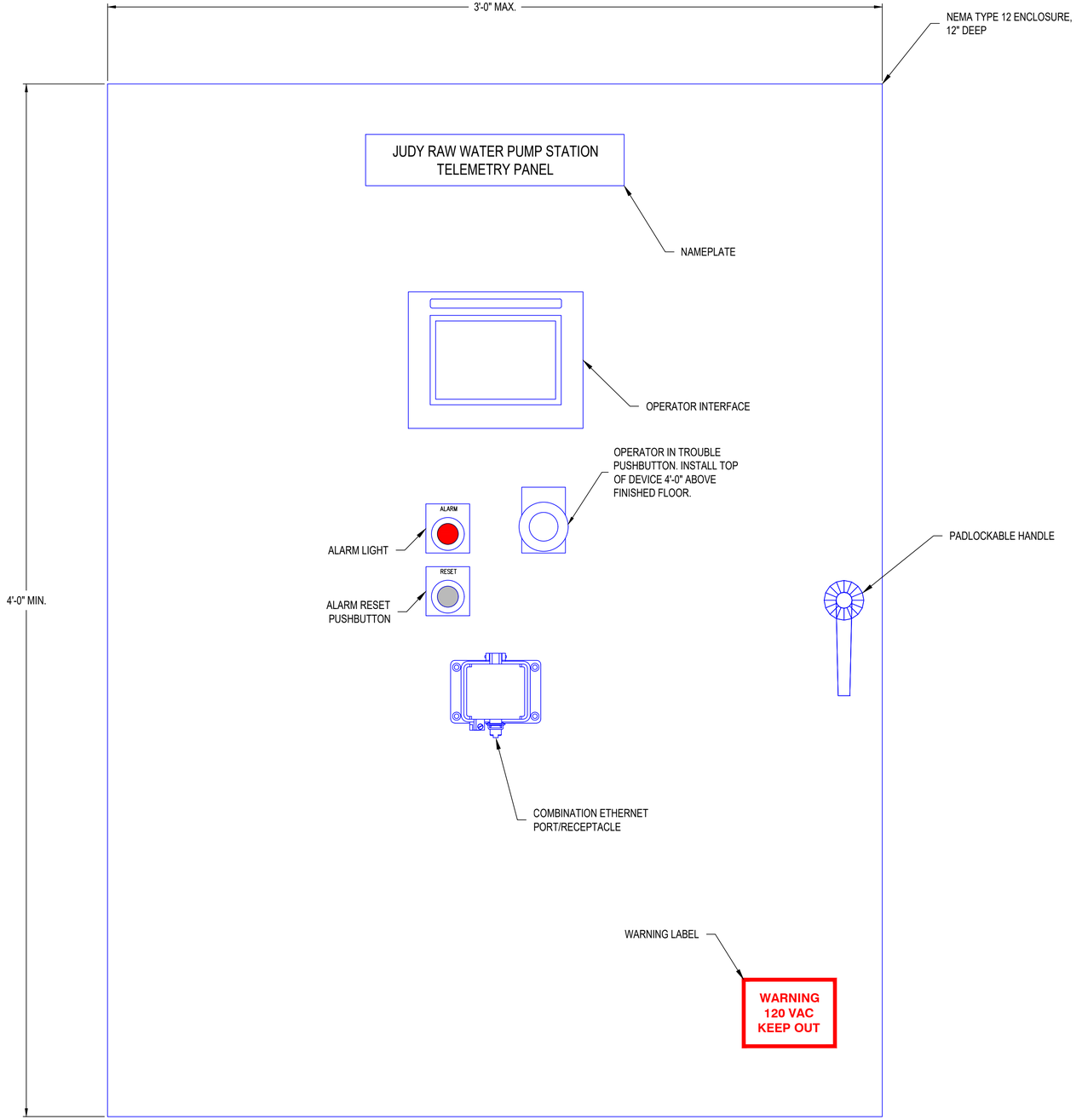
SHEET NO.: 33 / 37



RTU PANEL DOOR LAYOUT

NOT TO SCALE

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PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

RTU PANEL LAYOUT

Skagit PUD
PUBLIC UTILITY DISTRICT

ENGINEER: KES	SAVE DATE: Jul 17, 2020
REVIEWED: MWB	PLOT DATE: Sep 22, 2020
CLIENT: SPUD	JOB NO.: 117.025
FILENAME: RWPS-D-ELEC10.DWG	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

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P.N. 3766
C.O. 5040

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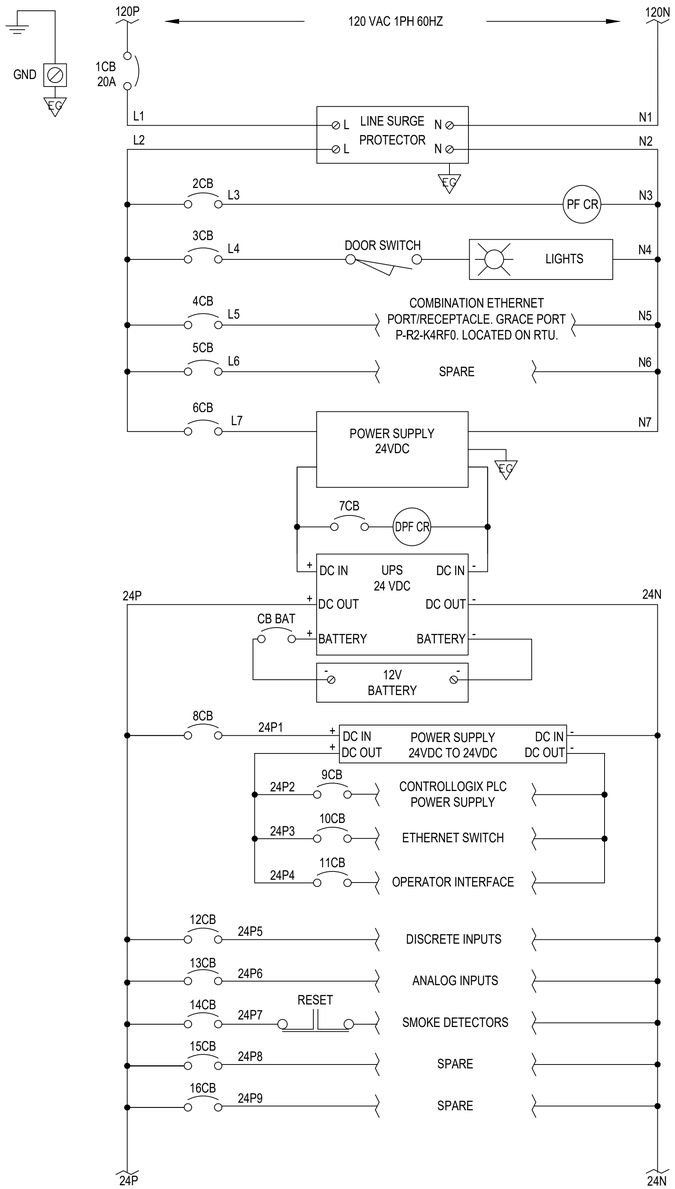

RTU POWER LAYOUT

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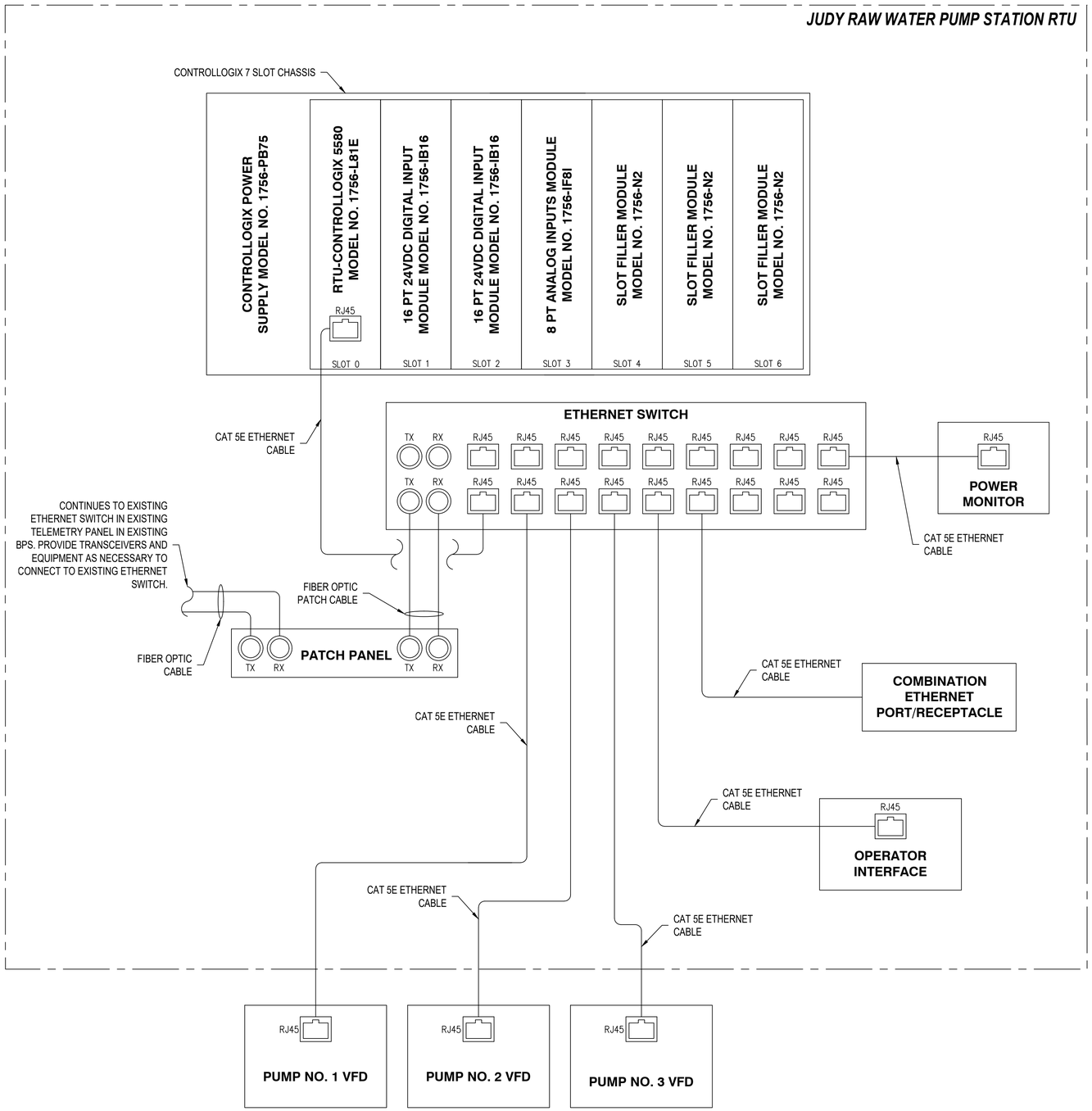

COMMUNICATIONS LAYOUT

NOT TO SCALE

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PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

RTU - POWER AND COMMUNICATIONS DIAGRAM

Skagit PUD — PUBLIC UTILITY DISTRICT

ENGINEER: KES	JOB NO.: 117.025
REVIEWED: MWB	CLIENT: SPUD
SAVE DATE: Aug 7, 2020	FILENAME: RWPS-D-ELEC11.DWG
PLOT DATE: Sep 22, 2020	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

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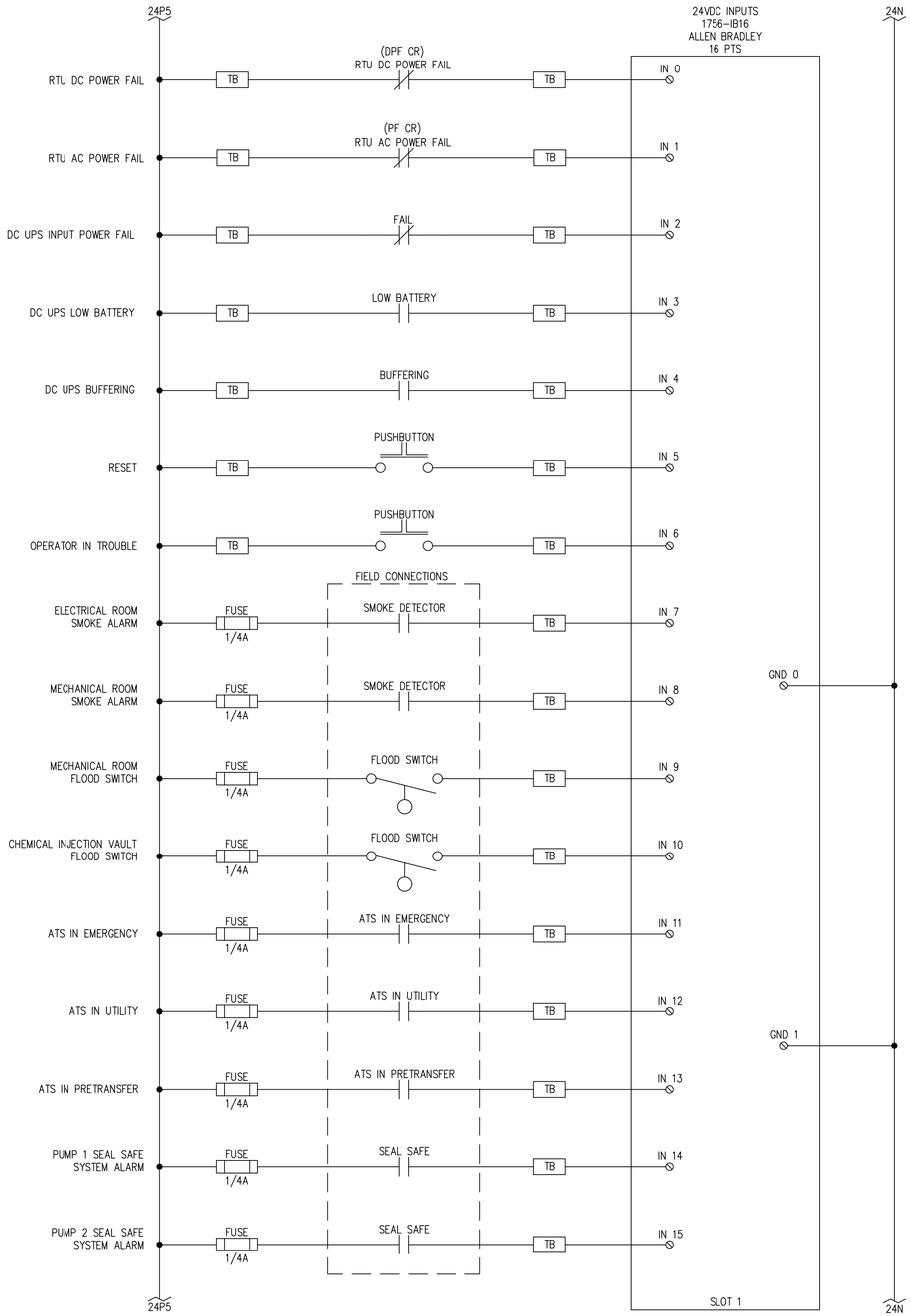
DWG NO.: E13

SHEET NO.: 35 / 37

P.N. 3766
C.O. 5040



DIGITAL INPUTS, SLOT 1

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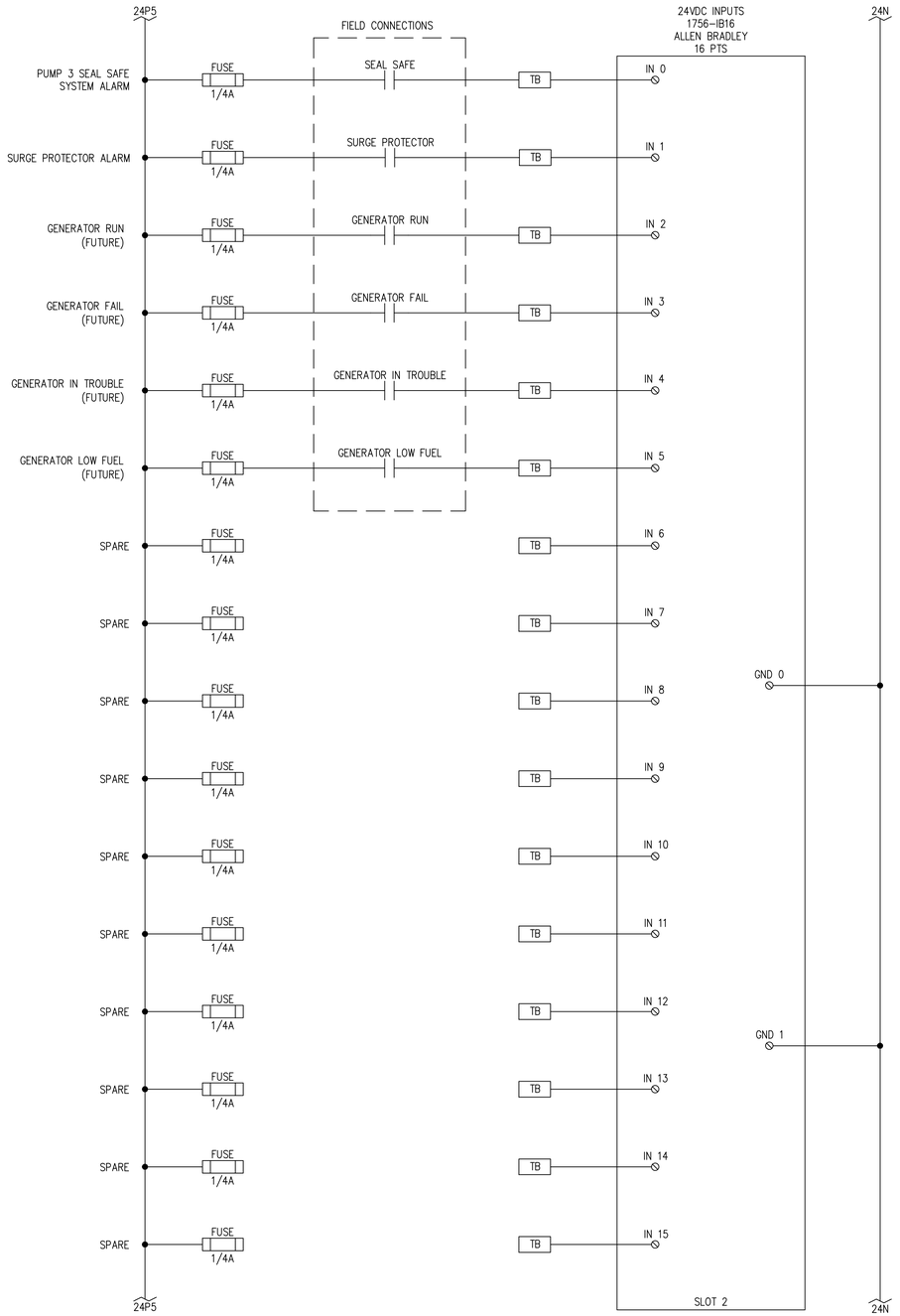

DIGITAL INPUTS, SLOT 2

NOT TO SCALE

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PUD NO. 1 OF SKAGIT COUNTY

JUDY RAW WATER PUMP STATION REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

RTU - INPUT AND OUTPUT WIRING 1

ENGINEER: KES	JOB NO.: 117.025
REVIEWED: CMR	CLIENT: SPUD
SAVE DATE: Aug 7, 2020	FILENAME: RWPS-D-ELEC11.DWG
PLOT DATE: Sep 22, 2020	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

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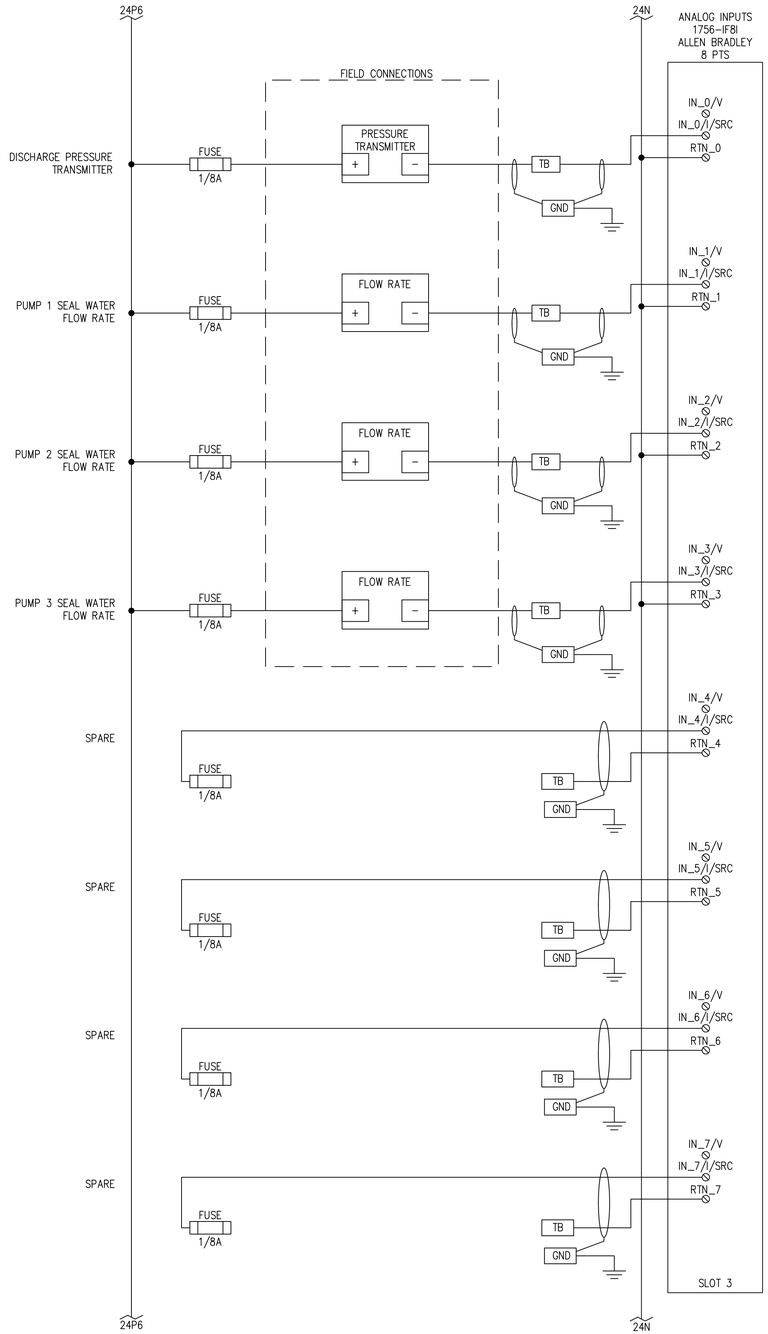
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E14

SHEET NO.: 36 37



ANALOG INPUTS, SLOT 3

NOT TO SCALE

RH2

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PUD NO. 1 OF SKAGIT COUNTY
JUDY RAW WATER PUMP STATION
REPLACEMENT

Skagit PUD
PUBLIC UTILITY DISTRICT

RTU - INPUT AND OUTPUT WIRING 2

ENGINEER: KES	SAVE DATE: Aug 7, 2020
REVIEWED: MWB	PLOT DATE: Sep 22, 2020
	CLIENT: SPUD
	FILENAME: RWPS-D-ELEC11.DWG
	JOB NO.: 117.025

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

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DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

P.N. 3766
C.O. 5040

DWG NO.: E15

SHEET NO.: 37 / 37