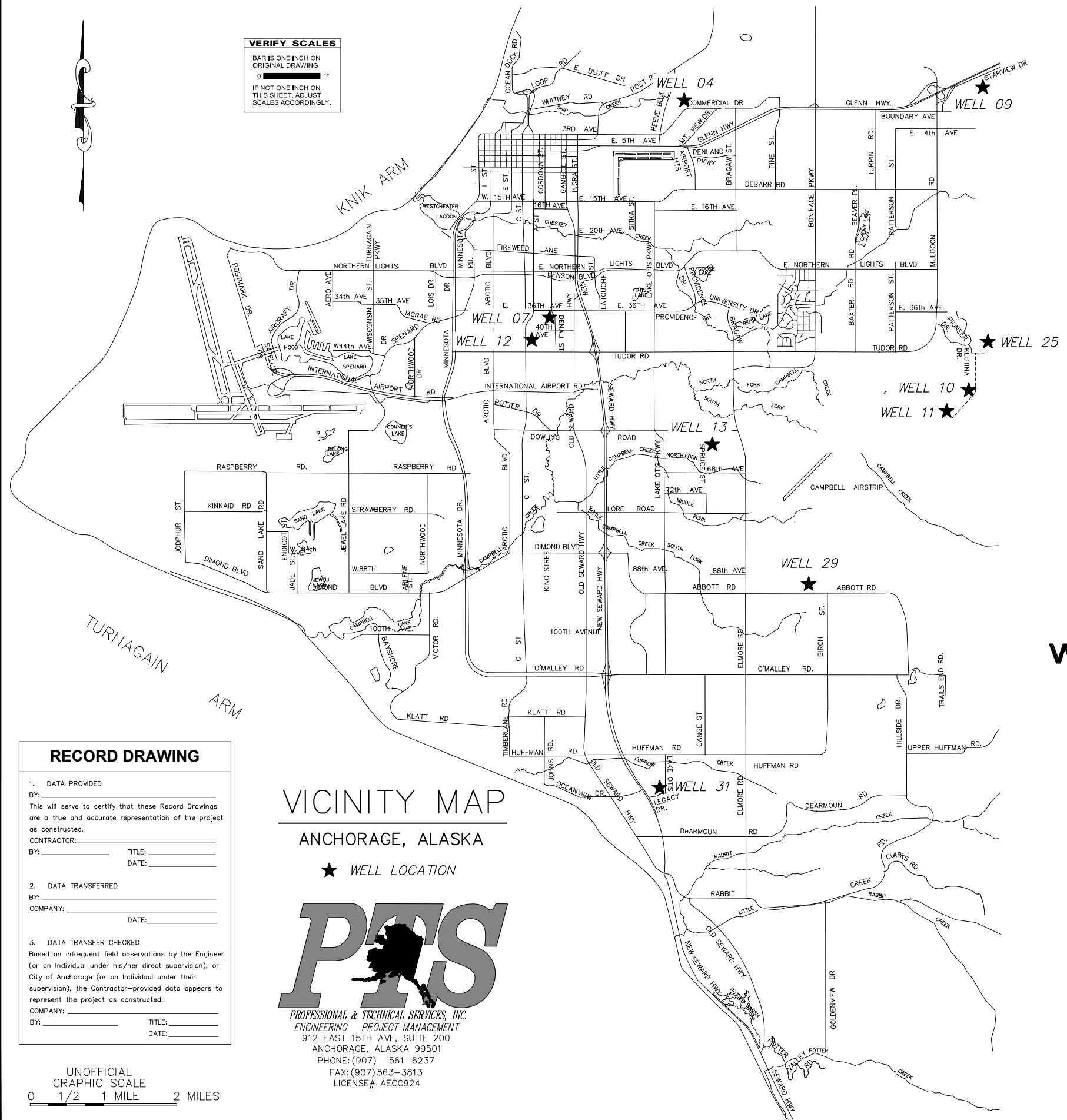


**VERIFY SCALES**  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



# MUNICIPALITY OF ANCHORAGE WATER AND WASTEWATER UTILITY

## ANCHORAGE WELL HOUSE CHLORINE ANALYZER IMPROVEMENTS

### AWWU PROJECT ID. NO. WW00011(WTR) APRIL 2021

**RECORD DRAWING**

1. DATA PROVIDED  
BY: \_\_\_\_\_  
This will serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.  
CONTRACTOR: \_\_\_\_\_  
BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

2. DATA TRANSFERRED  
BY: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
DATE: \_\_\_\_\_

3. DATA TRANSFER CHECKED  
Based on infrequent field observations by the Engineer (or an individual under his/her direct supervision), or City of Anchorage (or an individual under their supervision), the Contractor-provided data appears to represent the project as constructed.  
COMPANY: \_\_\_\_\_  
BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

**VICINITY MAP**  
ANCHORAGE, ALASKA  
★ WELL LOCATION

**P&T**  
PROFESSIONAL & TECHNICAL SERVICES, INC.  
ENGINEERING PROJECT MANAGEMENT  
912 EAST 15TH AVE, SUITE 200  
ANCHORAGE, ALASKA 99501  
PHONE: (907) 561-6237  
FAX: (907) 563-3813  
LICENSE# AECC924

UNOFFICIAL GRAPHIC SCALE  
0 1/2 1 MILE 2 MILES

SHEET INDEX

Table with 2 columns: SHEET, SUBJECT. Lists sheets 4-1 through 10-17 with their respective subjects like 'WELL 4 DEMOLITION PLAN AND SECTIONS'.

SHEET INDEX

Table with 2 columns: SHEET, SUBJECT. Lists sheets 11-1 through 31-7 with their respective subjects like 'WELL 11 DEMOLITION PLAN AND SECTION'.

WATER NOTES:

- 1. AWWU, AFD AND EXISTING CUSTOMERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF WATER SERVICE INTERRUPTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY WATER SERVICE TO THE EXISTING CUSTOMERS IF THE OUTAGE EXCEEDS 6-HOURS OR IF DEEMED NECESSARY BY THE ENGINEER.

GENERAL NOTES:

- 1. ALL CONSTRUCTION SHALL BE INSTALLED AS SPECIFIED IN THE MOST CURRENT EDITION OF THE MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS FOR STREETS-DRAINAGE-UTILITIES-PARKS (MASS), THE AWWU DESIGN AND CONSTRUCTION PRACTICES MANUAL, AND THE SPECIAL PROVISIONS.

ABBREVIATIONS

Table listing abbreviations and their meanings, such as AC - ASBESTOS CEMENT, A.C. - ASPHALT CONCRETE, AD - ALGEBRAIC DIFFERENCE.

LEGEND - PLAN

Table showing symbols for existing and proposed features with descriptions, including PROPERTY LINE, EASEMENT, CENTERLINE, CLEARING LIMITS, etc.

LEGEND - PROFILE

Table showing symbols for existing and proposed profile features with descriptions, including CENTERLINE GRADE, LEFT PROPERTY LINE GRADE, etc.

CALL BEFORE YOU DIG! Alaska Digline, Inc. Statewide 811. Includes contact info for AFSC/ASIG, Chevron, Alaska Railroad, Military Fuel Lines, and State Storm Drains.



2021/03/26 8:05 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\Draw Active\WW00011WTR\_GENERAL.dwg

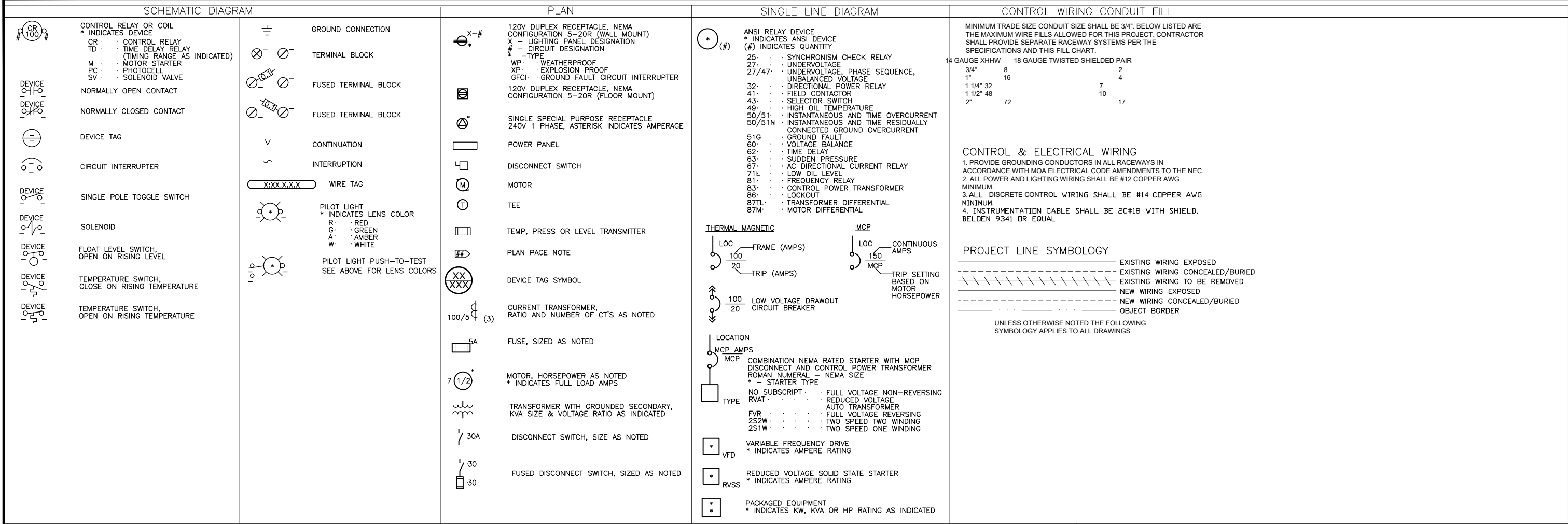
VERIFY SCALE table with columns for DATA, DRAWN BY, CHECKED BY, DATE, and DESCRIPTION. Includes a graphical scale bar.

RECORD DRAWING table with columns for DATA PROVIDED BY, DATA TRANSFERRED BY, and DATE. Includes a note about filling out original drawings.

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MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY. ANCHORAGE WELL HOUSE CHLORINE ANALYZER IMPROVEMENTS. NOTES SHEET INDEX AND LEGEND. Includes project ID, date, grid, and sheet number.



ABBREVIATIONS

GENERAL SPECIFICATIONS

A AMPERE, AUTOMATIC	F FREQUENCY, FUSE, FIXED	LOS STOP LOCKOUT PUSHBUTTON	PT POTENTIAL TRANSFORMER	TWSP TWISTED SHIELDED PAIR
AC ALTERNATING CURRENT	FDR FEEDER	LP LIGHTING PANEL	PWR POWER	UPS UNINTERRUPTIBLE POWER SUPPLY
AF CIRCUIT BREAKER FRAME SIZE	FLA FULL LOAD AMPS	LRA LOCKED ROTOR AMPS	R REMOTE	V VOLTAGE, VOLTS
AS ADJUSTABLE SPEED	FLUOR FLUORESCENT	LS LEVEL SWITCH	RECP RECEPTACLE	VA VOLT AMPERE
AT AMPERE TRIP	GEN GENERATOR	LTC LIGHTING	RGS RIGID GALVANIZED STEEL	VAR VOLT AMPERE REACTIVE
ATS AUTOMATIC TRANSFER SWITCH	GFCI GROUND FAULT CIRCUIT INTERRUPTER	LTS LIGHTS	RTU REMOTE TERMINAL UNIT	VFD VARIABLE FREQUENCY DRIVE
AUTO AUTOMATIC	GND GROUND	M MOTOR CONTACTOR COIL	RVSS REDUCED VOLTAGE SOLID STATE	VM VOLTMETER
AWG AMERICAN WIRE GAUGE	GRC GALVANIZED RIGID CONDUIT	mA MILLIAMPERE	SEL SW SELECTOR SWITCH	VP VAPOR PROOF
BATT BATTERY	H HAND	MCP MOTOR CIRCUIT PROTECTOR	SEQ SEQUENCE	W WATTS, WIRE
BC BARE COPPER	HD HEAT DETECTOR	MOV MOTOR OPERATED VALVE	SHLD SHIELDED	WM WATT METER
BKR BREAKER	HH HAND HOLE	MS MANUAL MOTOR STARTER	SIG SIGNAL	WP WEATHERPROOF
C CONDUIT, CLOSED	HOA HAND-OFF-AUTOMATIC	MTS MANUAL TRANSFER SWITCH	SP SPARE	XFMR TRANSFORMER
CAP CAPACITOR	HS HAND SWITCH	NEUT NEUTRAL	SPDT SINGLE POLE DOUBLE THROW	XMTR TRANSMITTER
CB CIRCUIT BREAKER	HZ HERTZ	NP NAMEPLATE	SSM SOLID STATE METER	XP EXPLOSION PROOF
CKT CIRCUIT	IMC INTERMEDIATE METALLIC CONDUIT	O OPEN, OFF	SSMP SOLID STATE MOTOR PROTECTOR	
COM COMMON	INCAND INCANDESCENT	OL OVERLOAD	SP HTR SPACE HEATER	
CP CONTROL PANEL	IND INDICATION	PA PUBLIC ADDRESS	SPST SINGLE POLE SINGLE THROW	
CPT CONTROL POWER TRANSFORMER	INST INSTANTANEOUS	PB PUSHBUTTON, PULLBOX	STR STARTER	
CR CONTROL RELAY, CARD READER	I/O INPUT/OUTPUT	PC PHOTOCELL	SW SWITCH	
CT CURRENT TRANSFORMER	JB JUNCTION BOX	PCM PROCESS CONTROL MODULE	SWB SWITCHBOARD	
DISC DISCONNECT	KA THOUSAND AMPERES	PF POWER FACTOR	SWGR SWITCHGEAR	
DISTR DISTRIBUTION	KAIC THOUSAND AMP INTERRUPTING CURRENT	PH PHASE		
DPDT DOUBLE POLE DOUBLE THROW	KCMIL THOUSAND CIRCULAR MILS	PL PILOT LIGHT		
DPST DOUBLE POLE SINGLE THROW	KVA KILOVOLT AMPERE	PNLBD PANELBOARD		
E EMERGENCY	L LOCAL	PP POWER PANELBOARD		
EMT ELECTRICAL METALLIC TUBING	LCP LOCAL CONTROL PANEL	POS POSITION		
ENCL ENCLOSURE	LCS LOCAL CONTROL STATION	POT POTENTIOMETER		
ETM ELAPSED TIME METER	LFMC LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT	PRI PRIMARY		
	LOC LOCAL			
	LOR LOCAL-OFF-REMOTE			

- ALL WIRING SHALL BE PERFORMED BY ALASKA JOURNEYMAN ELECTRICIANS IN ACCORDANCE WITH NEC AND MOA AMENDMENTS.
- ALL WIRING SHALL BE IN METALLIC CONDUIT UNLESS OTHERWISE NOTED.
- UPON COMPLETION OF THE WORK, MARK UP AND SUBMIT TO PROJECT MANAGER A SET OF RECORD DRAWINGS INDICATING CHANGES AND ADDING DETAIL DESCRIBING ACTUAL INSTALLATION.
- CONDUIT ENTRIES TO CONTROL PANELS SHALL BE AT BOTTOM OF ENCLOSURES.
- NO SPLICING OF CONDUCTORS IS PERMITTED. PULL NEW INSTRUMENTATION AND CONTROL CONDUCTORS FROM SCADA PANELS TO RELOCATED EQUIPMENT AS REQUIRED.
- UNISTRUT IN CONTACT WITH FLOOR OR ANALYZER ASSEMBLY SHALL BE FIBERGLASS WITH APPROPRIATE CLAMPS AND FASTENERS.

D:\pat\Documents\Snowdwellier\AWWU\2019 SCADA Term Contract\C12 Project Drawings\G3.dwg

2020/06/30 3:41 PM By: Pat

DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY	---	---	---	TELEPHONE	---
PROFILE	---	---	---	ELECTRIC	---
SANITARY SEWER	---	---	---	CABLE TV	---
STORM SEWER	---	---	---	TRAFFIC SIGNAL	---
	---	---	---	DESIGN	---
	---	---	---	QUANTITIES	---
	---	---	---	MUN. FINAL CHECK	---
	---	---	---		---

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_

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CONTRACTOR: \_\_\_\_\_

BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_

COMPANY: \_\_\_\_\_

DATE: \_\_\_\_\_

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DATA TRANSFER CHECKED BY: \_\_\_\_\_

COMPANY: \_\_\_\_\_

BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

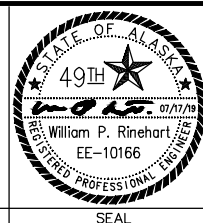
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Snowdwellier Industrial, LLC

901 E. Fireweed Lane  
Anchorage, AK 99508  
(907) 227-5039  
www.rinezone.com/snowdwellier

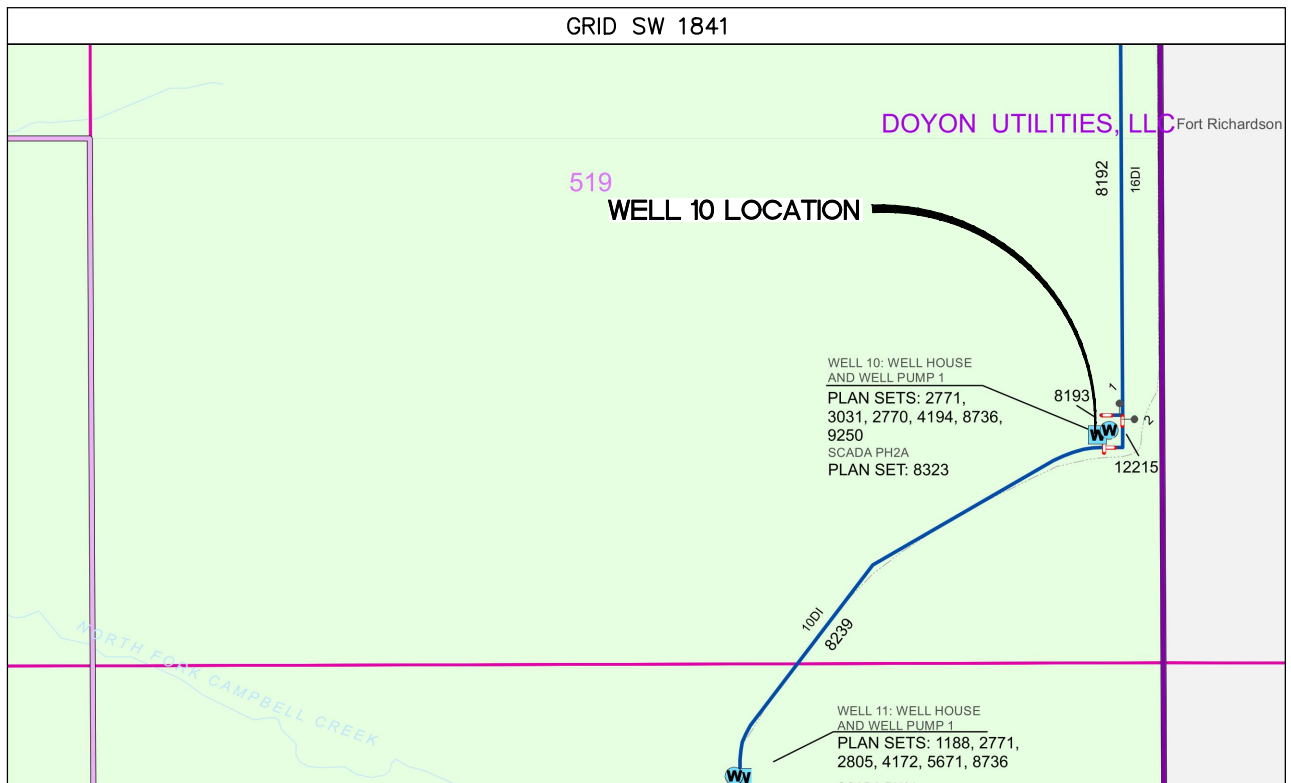
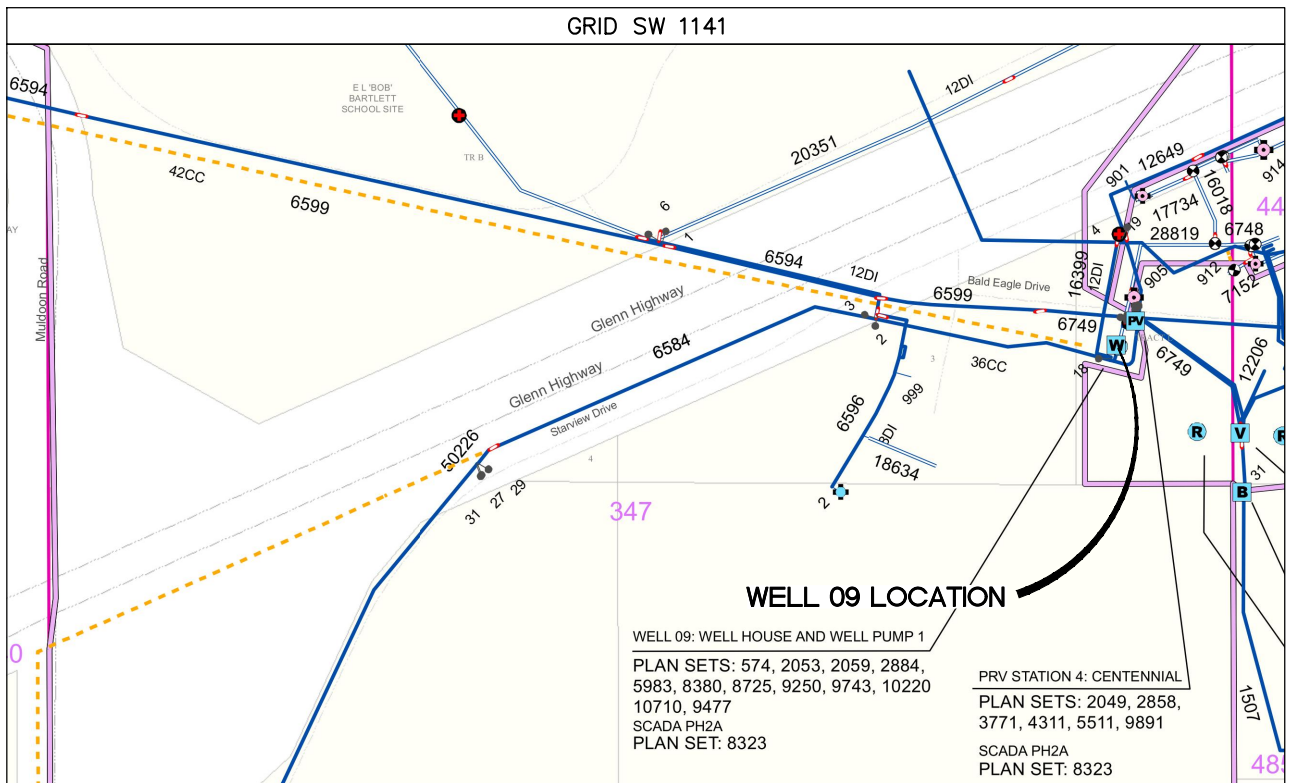
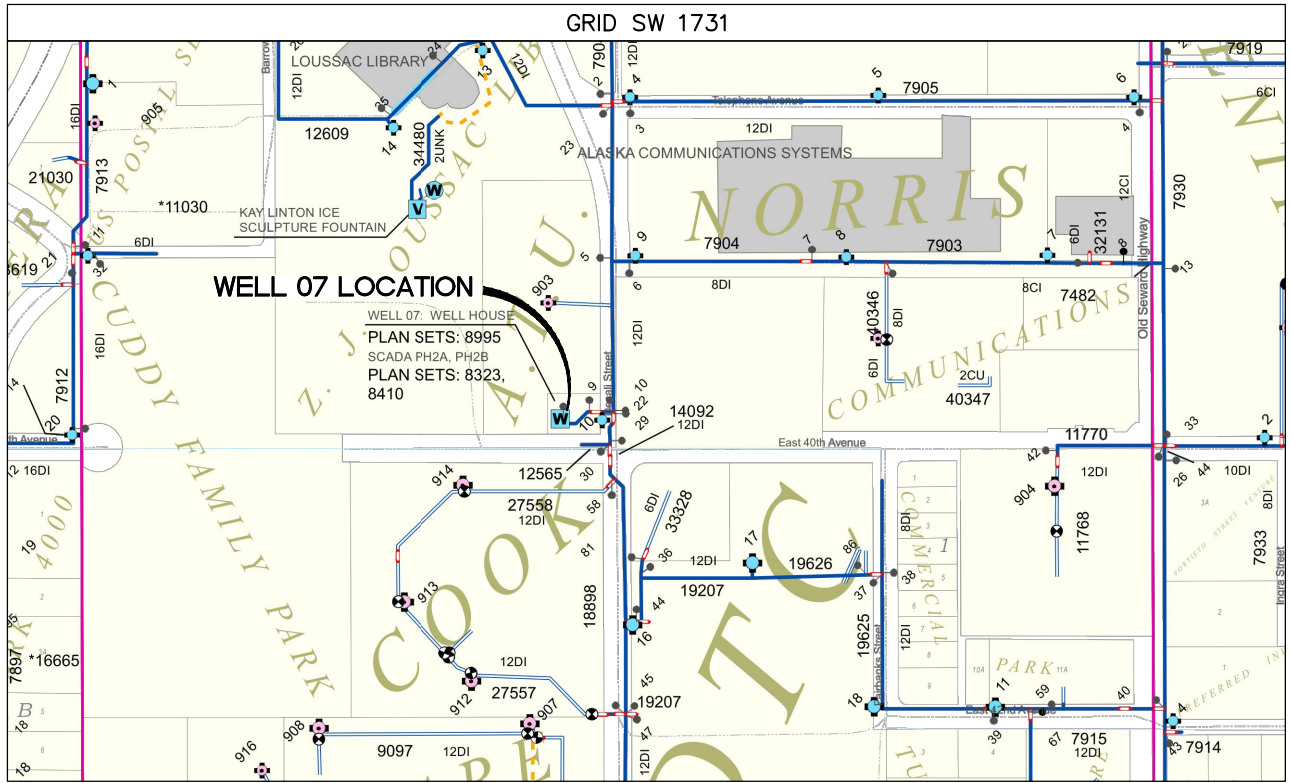
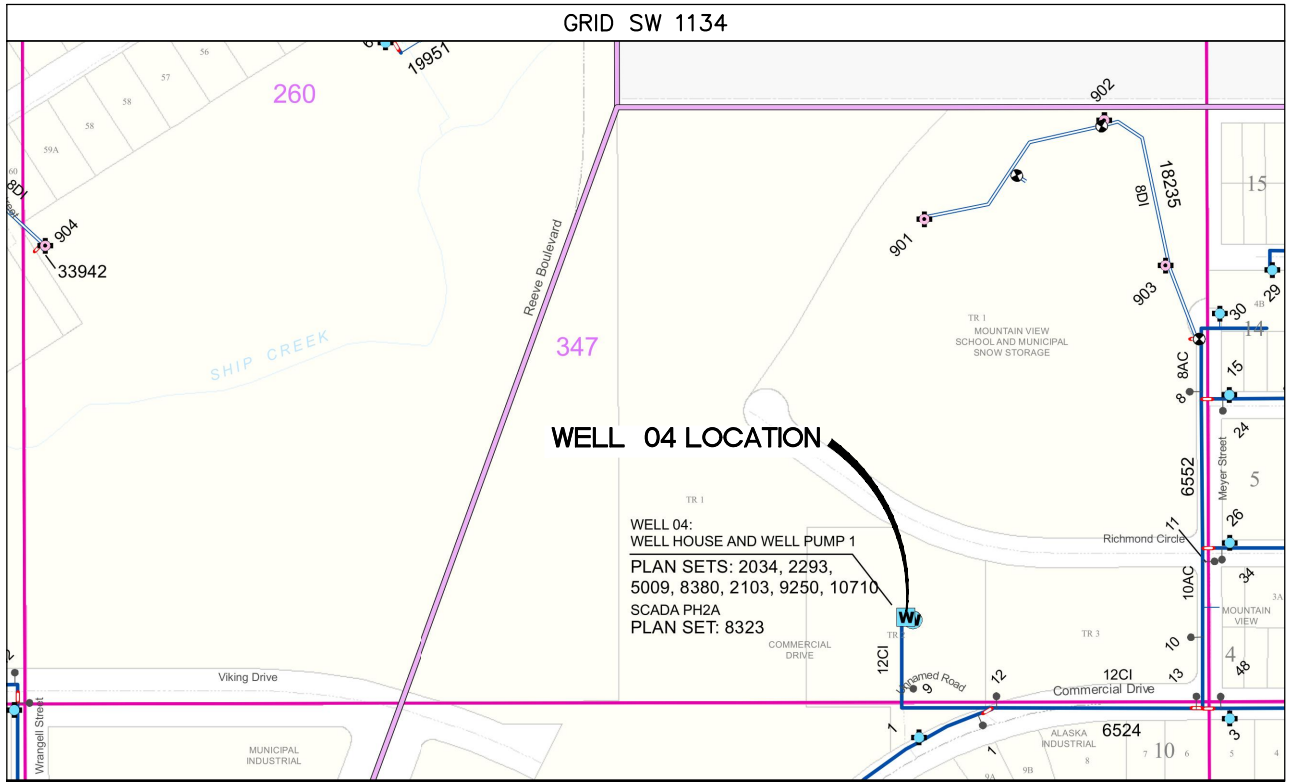


MUNICIPALITY OF ANCHORAGE  
WATER & WASTEWATER UTILITY

ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS

I&C LEGEND

HORIZ SCALE: N/A DATE: 07/2019 GRID: N/A SHEET G3 of G11  
VERT SCALE: N/A PROJ. ID: WWO0011(WTR)



Z:\WW-17\Task 4 CA-01\dwg Active\WW00011WTR\_GENERAL.dwg 2021/03/26 8:05 AM By: Kevin Garcia

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

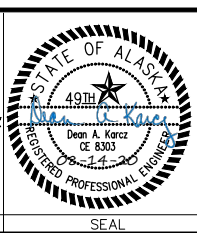
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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

**REUSE OF DOCUMENTS**

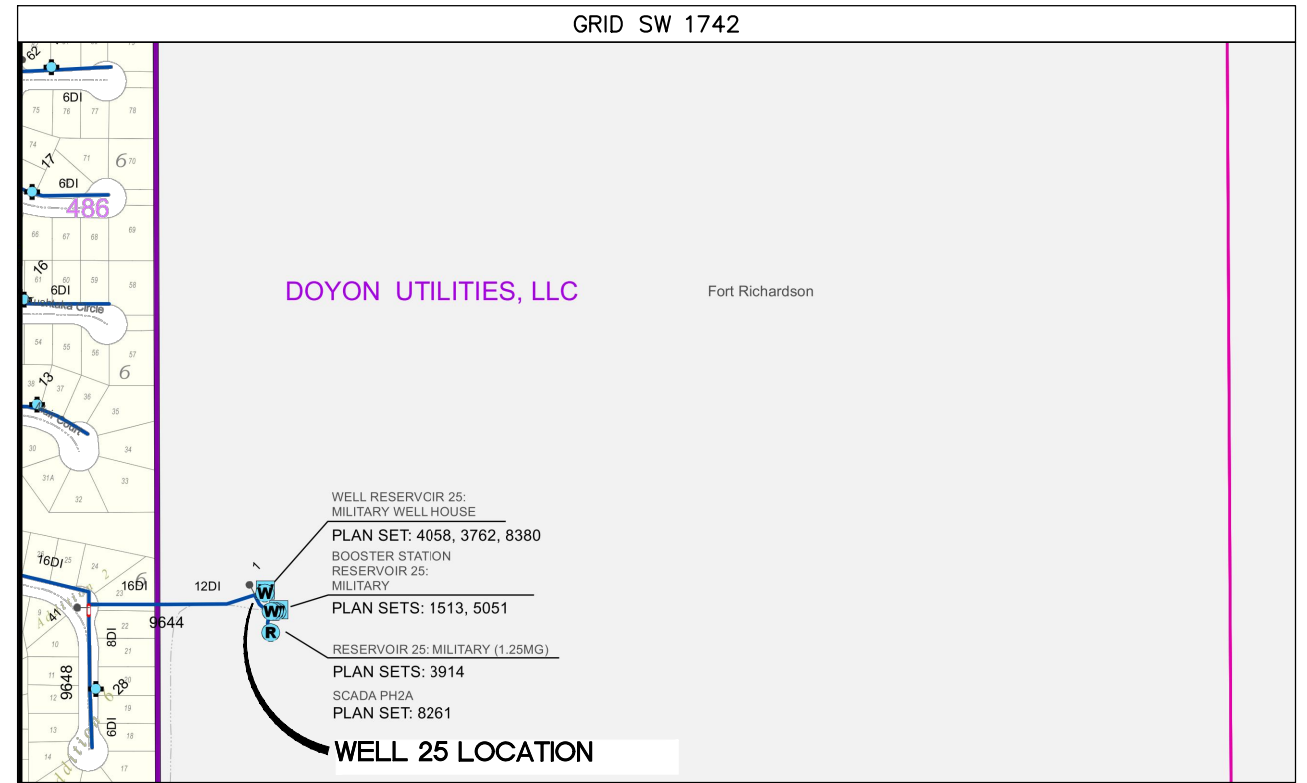
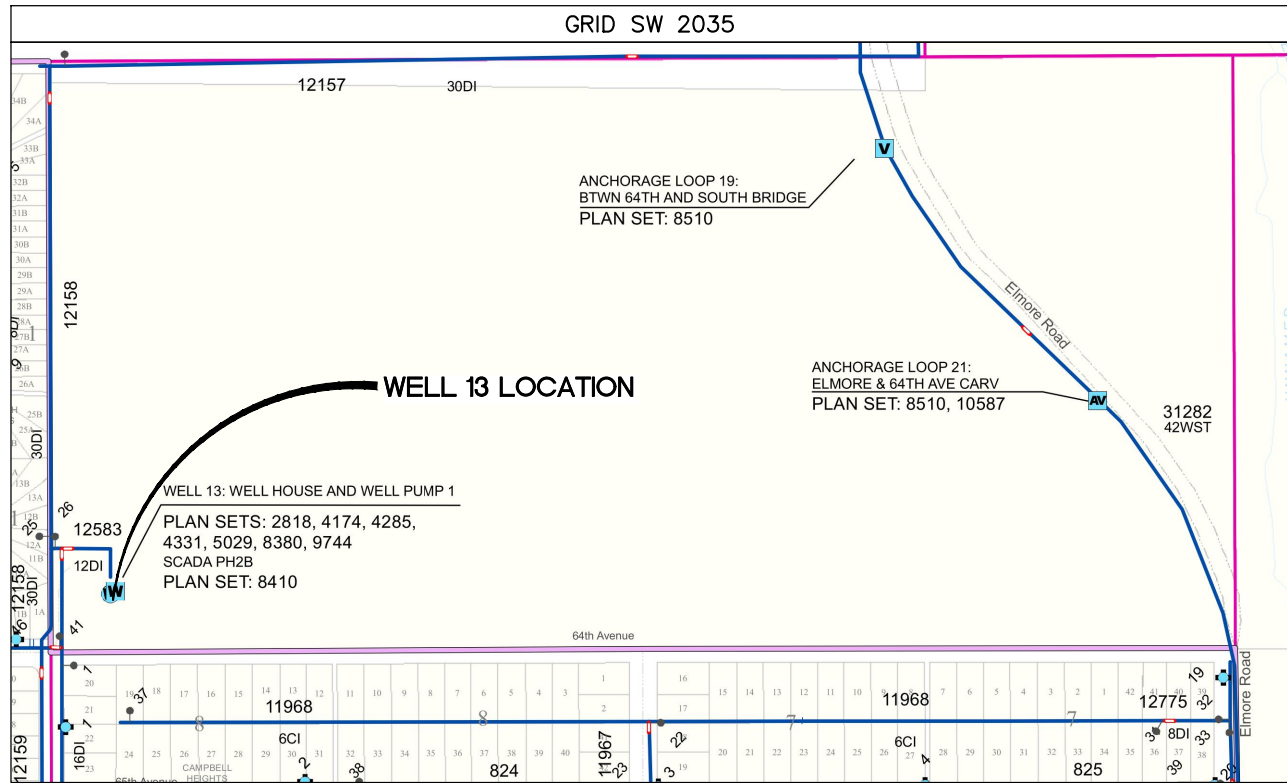
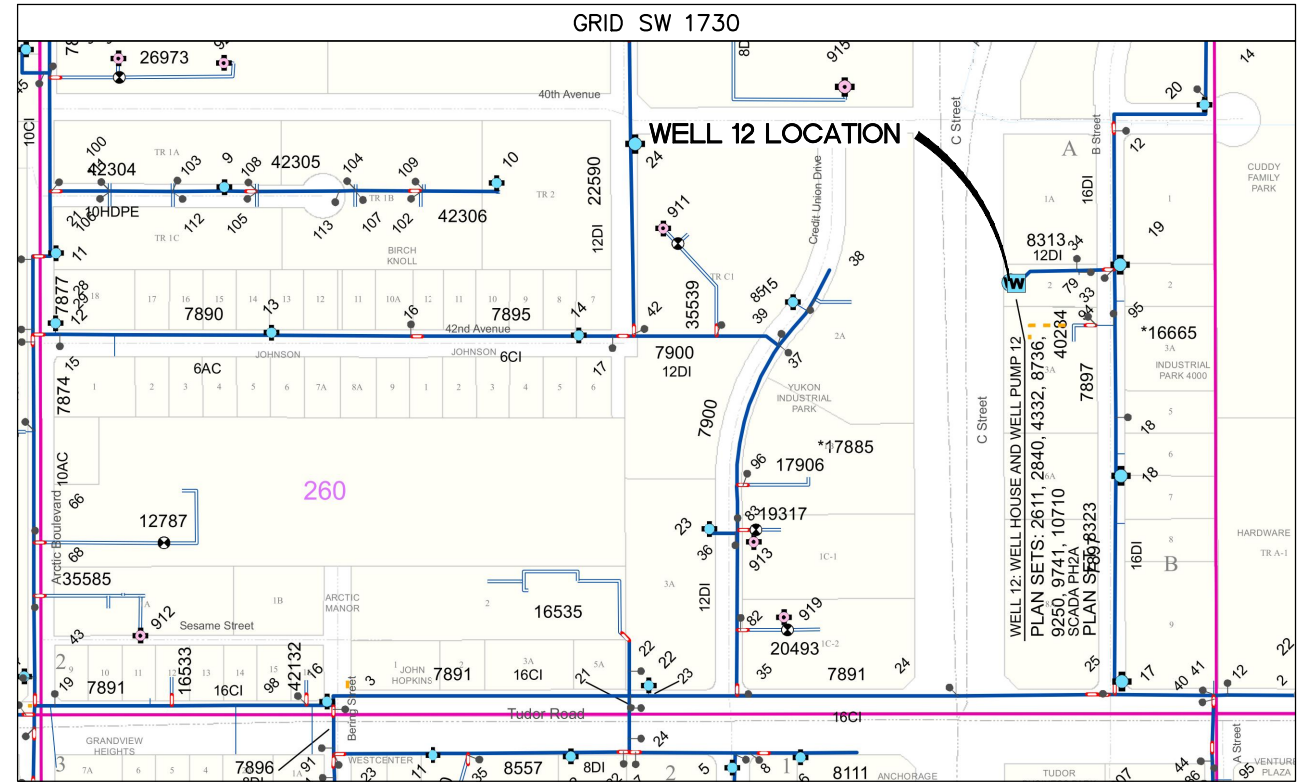
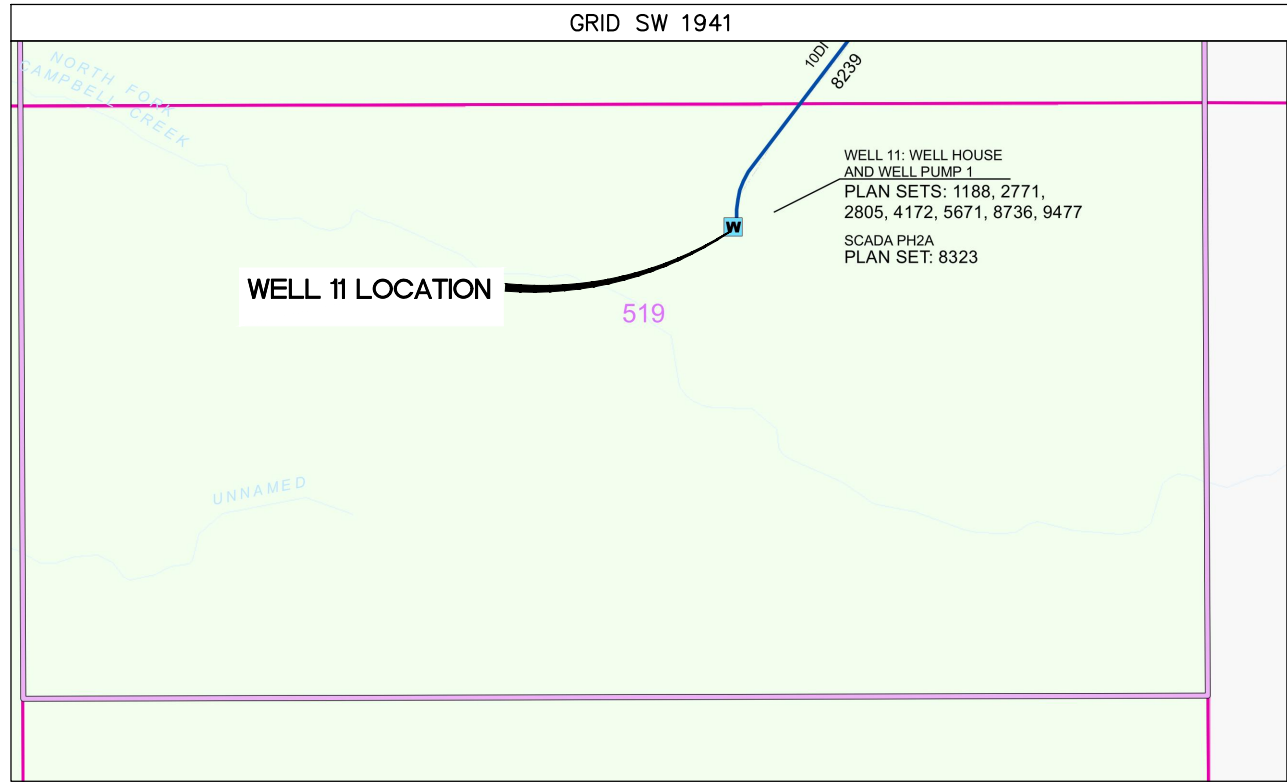
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MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 WATER KEY MAPS**

HORIZ SCALE: NTS DATE: 04/2021 GRID: N/A  
 VERT SCALE: NTS  
 PROJ. ID: WW00011(WTR) SHEET G4 of G12



2021/03/26 8:05 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\W00011WTR\_GENERAL.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN CHECK				
							REVISIONS

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

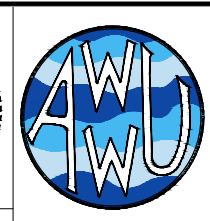
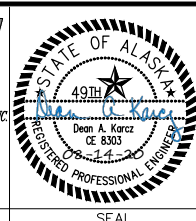
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
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 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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**REUSE OF DOCUMENTS**

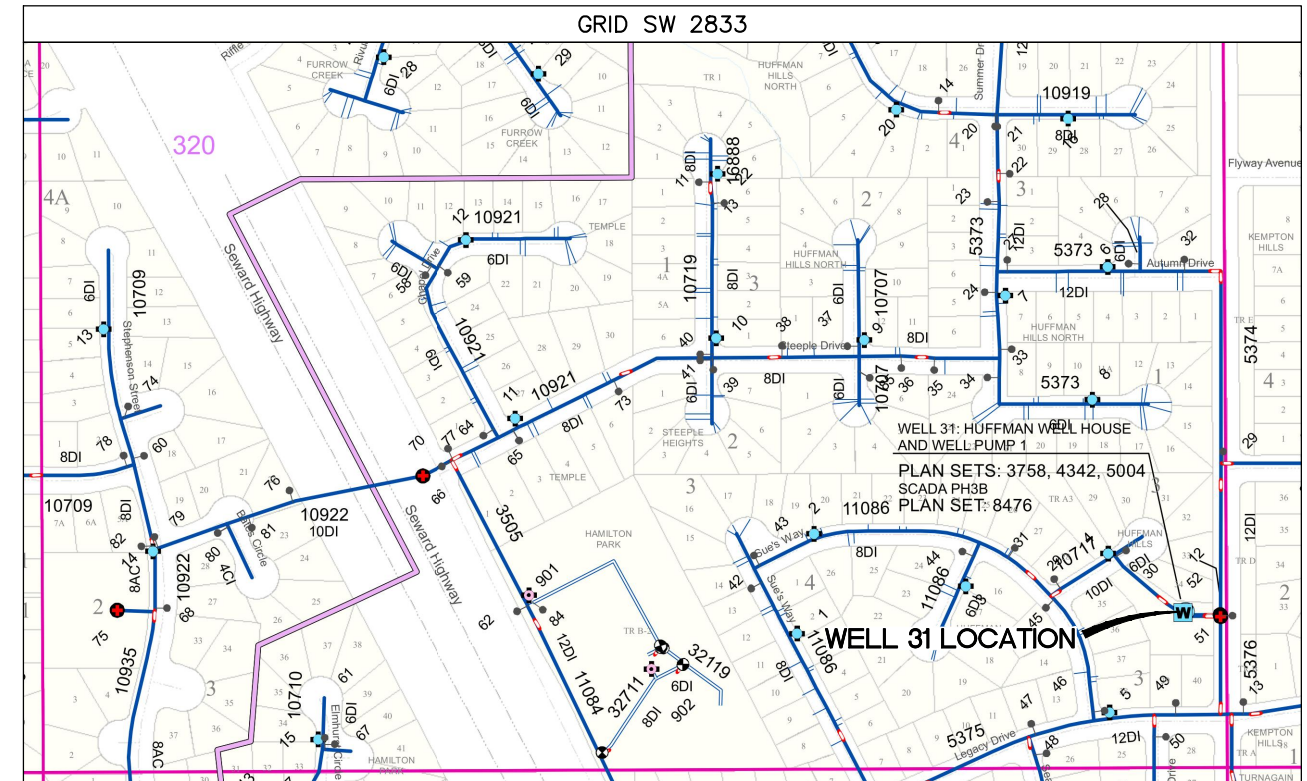
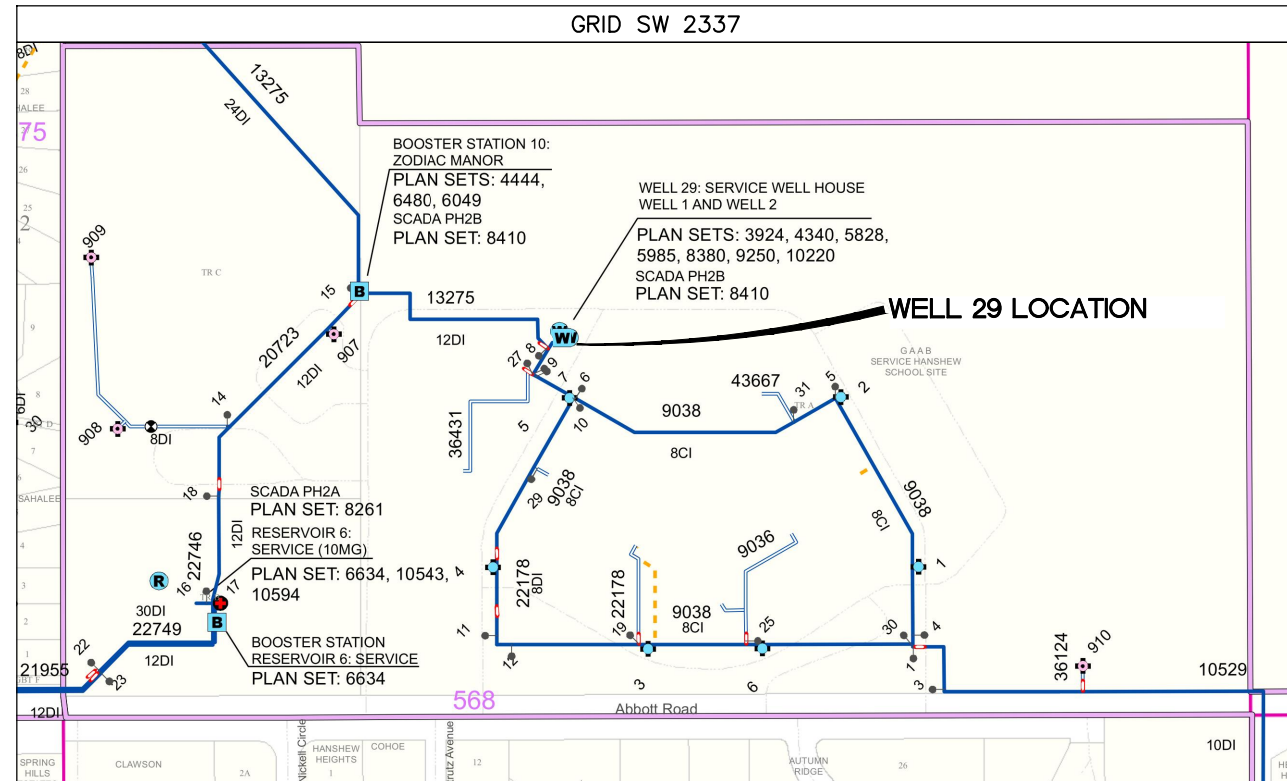
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MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 WATER KEY MAPS**

HORIZ SCALE: NTS    DATE: 04/2021    GRID: N/A  
 VERT SCALE: NTS    PROJ. ID: W00011(WTR)    SHEET G5 of G12



2021/03/26 8:05 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\WW00011WTR\_GENERAL.dwg

**VERIFY SCALE** THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY	KMG	DAK	TELEPHONE						
PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN	KMG	DAK				
			QUANTITIES	KMG	DAK				
			MUN. FINAL CHECK						
			PLAN CHECK						
			REVISIONS						

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

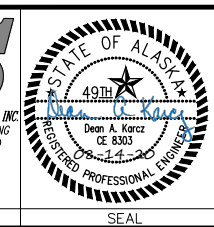
1. DATA PROVIDED BY: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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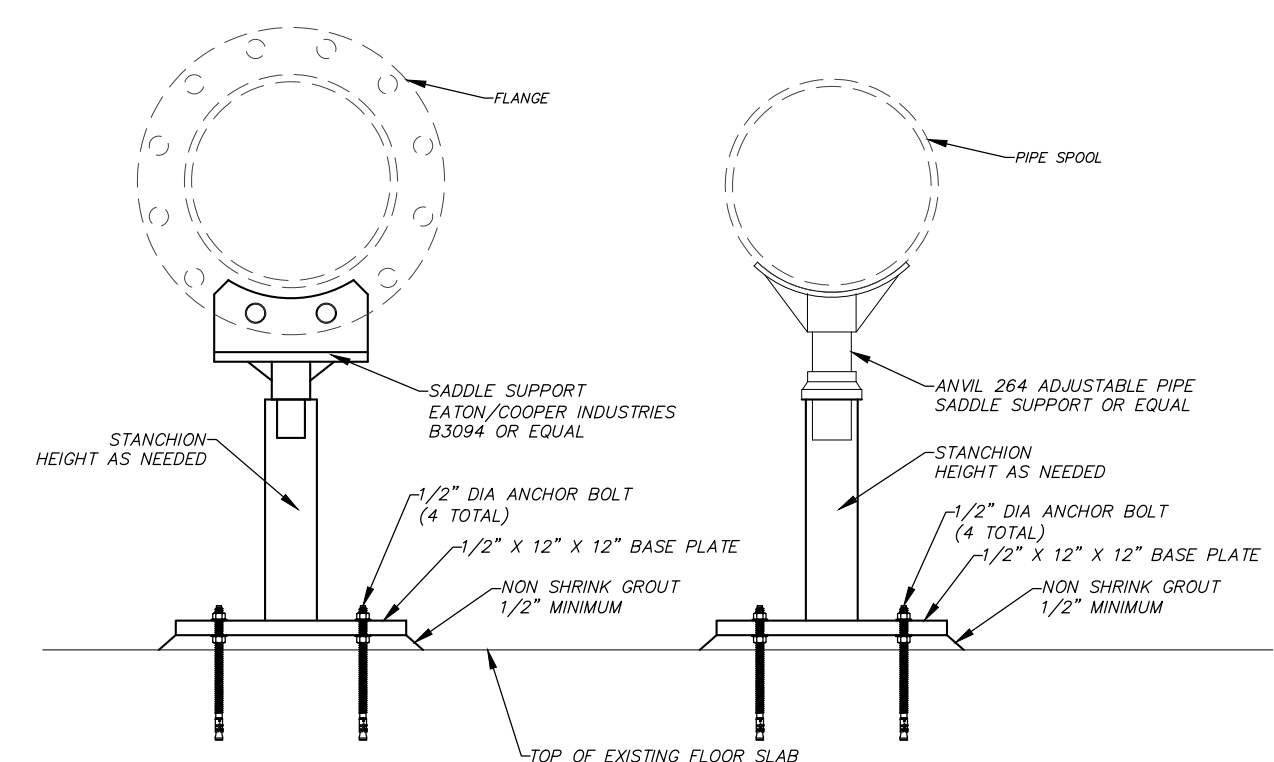
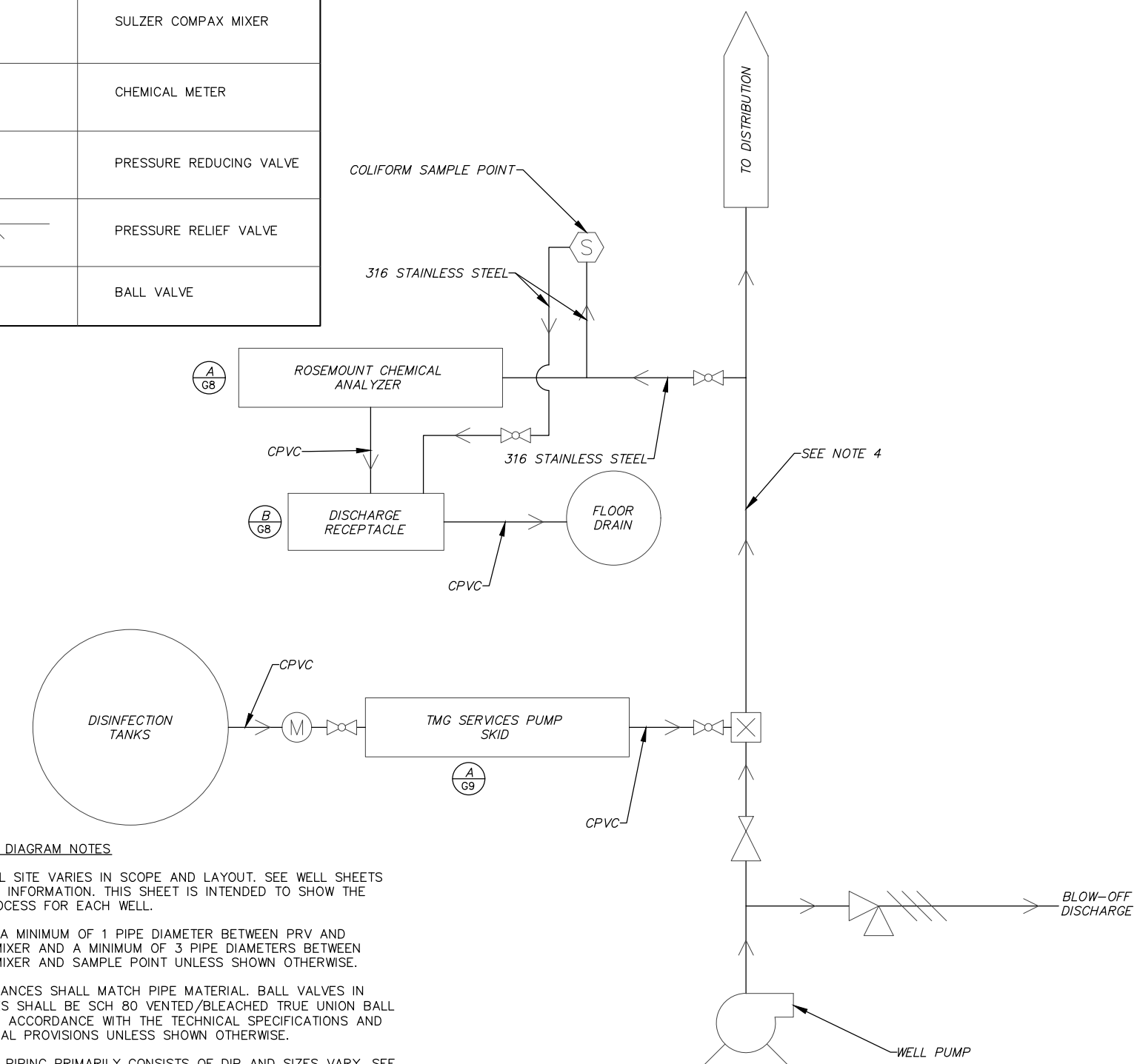
MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 WATER KEY MAPS**

HORIZ SCALE: NTS DATE: 04/2021 GRID: N/A  
 VERT SCALE: NTS  
 PROJ. ID: WW00011(WTR)

SHEET G6 of G12

PROCESS FLOW DIAGRAM LEGEND	
	SAMPLE POINT
	SULZER COMPAX MIXER
	CHEMICAL METER
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE



(A) PIPE SUPPORT DETAIL  
NOT TO SCALE

- PROCESS FLOW DIAGRAM NOTES**
1. EACH WELL SITE VARIES IN SCOPE AND LAYOUT. SEE WELL SHEETS FOR MORE INFORMATION. THIS SHEET IS INTENDED TO SHOW THE BASIC PROCESS FOR EACH WELL.
  2. MAINTAIN A MINIMUM OF 1 PIPE DIAMETER BETWEEN PRV AND COMPAX MIXER AND A MINIMUM OF 3 PIPE DIAMETERS BETWEEN COMPAX MIXER AND SAMPLE POINT UNLESS SHOWN OTHERWISE.
  3. APPURTENANCES SHALL MATCH PIPE MATERIAL. BALL VALVES IN CPVC LINES SHALL BE SCH 80 VENTED/BLEACHED TRUE UNION BALL VALVES IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE SPECIAL PROVISIONS UNLESS SHOWN OTHERWISE.
  4. MAIN LINE PIPING PRIMARILY CONSISTS OF DIP AND SIZES VARY. SEE TABLES FOR EACH WELL FOR PIPING REQUIREMENTS.
  5. THESE DRAWING ARE SCHEMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL REQUIRED PARTS/MATEIRALS FOR A COMPLETE OPERABLE FINAL PRODUCT.

2021/03/26 8:05 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\WW00011WTR\_GENERAL.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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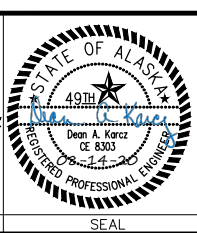
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 WATER & WASTEWATER UTILITY

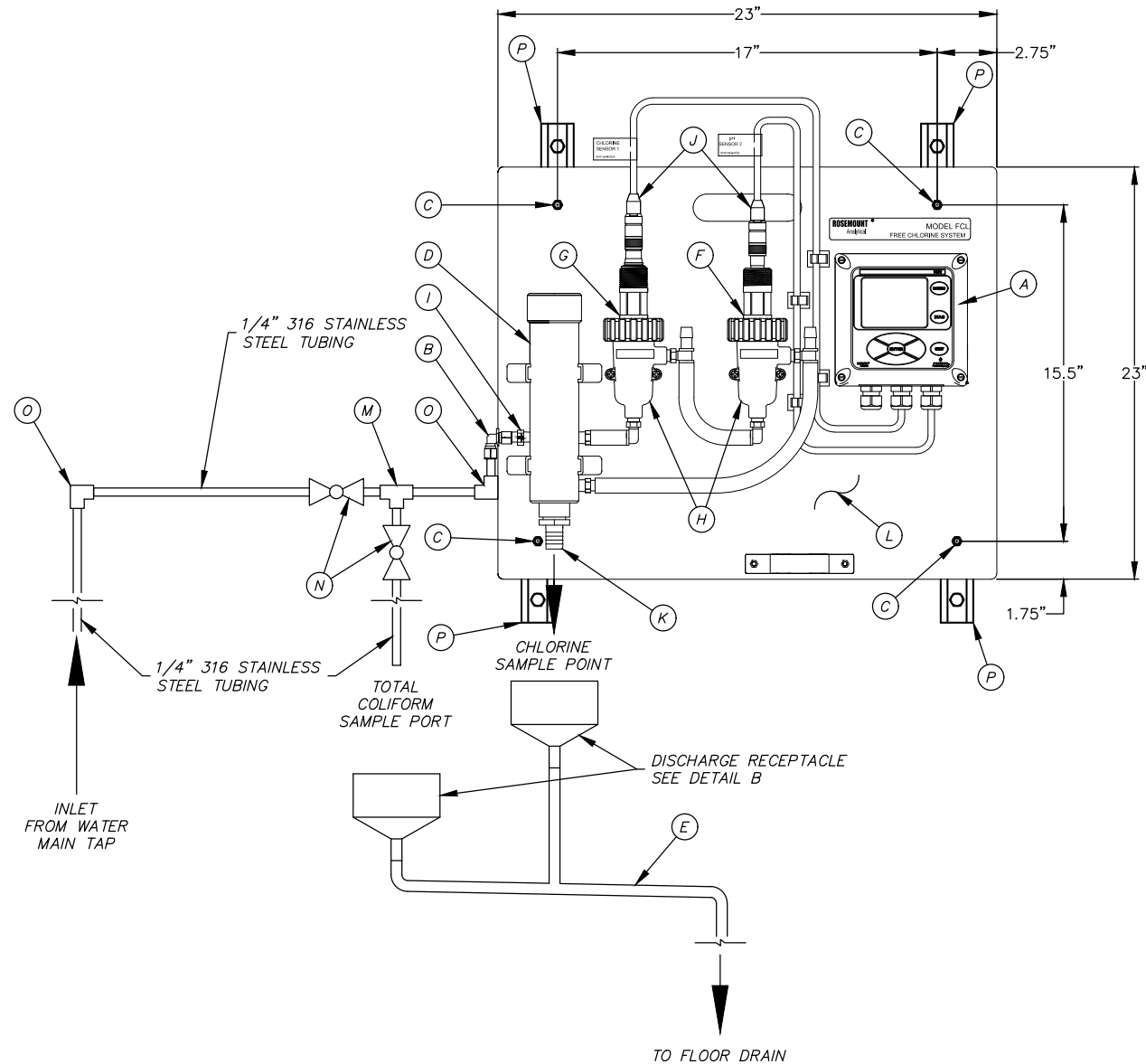
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**TYPICAL PROCESS FLOW DIAGRAM  
 AND PIPE SUPPORT DETAIL**

HORIZ SCALE: NTS	DATE: 04/2021	GRID: N/A
VERT SCALE: NTS		

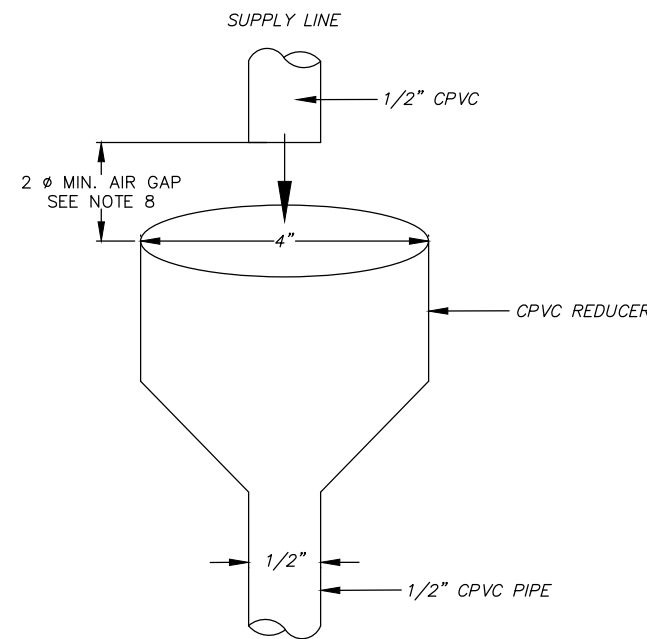
PROJ. ID: WW00011(WTR) SHEET G7 of G12

ROSEMOUNT ANALYTICAL FCL-02-241 FREE CHLORINE WITH CONTINUOUS pH CORRECTION			
CALLOUT	DESCRIPTION	SIZE (IN)	MATERIAL
(A)	TRANSMITTER - 56-03-24-32-HT	-	-
(B)	1/4 IN OD COMPRESSION FITTING	1/4	-
(C)	1/4 IN STAINLESS STEEL BOLT MOUNTED TO UNI-STRUT THROUGH 1/4 IN Ø HOLE (TYP)	1/4	STAINLESS STEEL
(D)	FLOW CONTROLLER	-	-
(E)	DRAIN PIPE. SLOPE TO DRAIN	1/2	CPVC
(F)	pH SENSOR	-	-
(G)	FREE CHLORINE SENSOR	-	-
(H)	SENSOR HOUSING	-	-
(I)	CHECK VALVE	-	-
(J)	VARIOPOLQUICK DISCONNECT FITTING	-	-
(K)	DRAIN	3/4	-
(L)	BACK PLATE	1/2	POLYPROPYLENE
(M)	TEE	1/4	316 STAINLESS STEEL
(N)	BALL VALVE	1/4	316 STAINLESS STEEL
(O)	90° BEND	1/4	316 STAINLESS STEEL
(P)	UNI-STRUT	1-1/8	VINYL GLASS



(A) ROSEMOUNT CHEMICAL ANALYZER SKID - FRONT VIEW

NOT TO SCALE



(B) DISCHARGE RECEPTACLE

NOT TO SCALE

**DETAIL NOTES**

1. CHLORINE RESIDUAL ANALYZER AND PUMP SKID TO BE MOUNTED TO THE WALL USING VINYL GLASS UNI-STRUT AND STAINLESS STEEL HARDWARE. CONTRACTOR SHALL SEAL ALL DRILLED HOLES AND CUTS TO UNI-STRUT WITH CLEAR URETHANE SEALER.
2. DISCHARGE RECEPTACLE SHALL BE CONSTRUCTED OF CPVC MATERIAL AND DISCHARGE TO THE EXISTING FLOOR DRAIN.
3. DISCHARGE RECEPTACLE SHALL BE LOCATED A MINIMUM OF 3' AWAY FROM EXISTING ELECTRICAL EQUIPMENT. IF THE DISCHARGE RECEPTACLE CANNOT BE LOCATED A MINIMUM OF 3' FROM EXISTING ELECTRICAL EQUIPMENT THEN THE CONTRACTOR SHALL RELOCATE THE EQUIPMENT AS DIRECTED BY THE ENGINEER IN THE FIELD. RELOCATING ELECTRICAL EQUIPMENT SHALL BE CONSIDERED INCIDENTAL TO 60.09 FURNISH AND INSTALL CHEMICAL ANALYZER.
4. CHEMICAL ANALYZER SHALL BE INSTALLED AND INITIAL SETUP PERFORMED BY ROSEMOUNT REPRESENTATIVE IN ACCORDANCE WITH 60.09 FURNISH AND INSTALL CHEMICAL ANALYZER.
5. SEE SPECIFIC WELL SHEETS FOR PIPING DISTANCES.
6. INSTALL CHEMICAL ANALYZER BETWEEN 4.5 AND 5.5 FEET FROM FINISHED FLOOR TO CENTER OF DISPLAY SCREEN ON THE CONTROLLER.
7. CONTRACTOR TO FURNISH AND INSTALL A PLACARD THAT STATES "SAMPLE SITE" NEAR THE COLIFORM SAMPLE AREA. CONFIRM FINAL LOCATION WITH ENGINEER IN THE FIELD PRIOR TO INSTALLATION. ALL WORK RELATED TO FURNISHING AND INSTALLING SAMPLE PLACARD IS INCIDENTAL TO FURNISH AND INSTALL CHEMICAL ANALYZER (WELL #) AND NO SEPARATE PAYMENT WILL BE MADE.
8. AIR GAP FOR ROSEMOUNT OUTLET IS TO HAVE A MINIMUM OF 2 SUPPLY LINE PIPE DIAMETERS. THE GAP FOR THE COLIFORM SAMPLE PORT SHALL HAVE A GAP OF NOT LESS THAN 12".
9. PROVIDE CHLORINE RESIDUAL ANALYZER AS A COMPLETED ASSEMBLY.

2021/03/26 8:05 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\WW00011WTR\_GENERAL.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

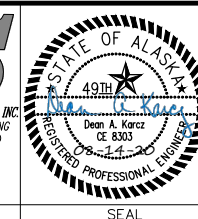
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
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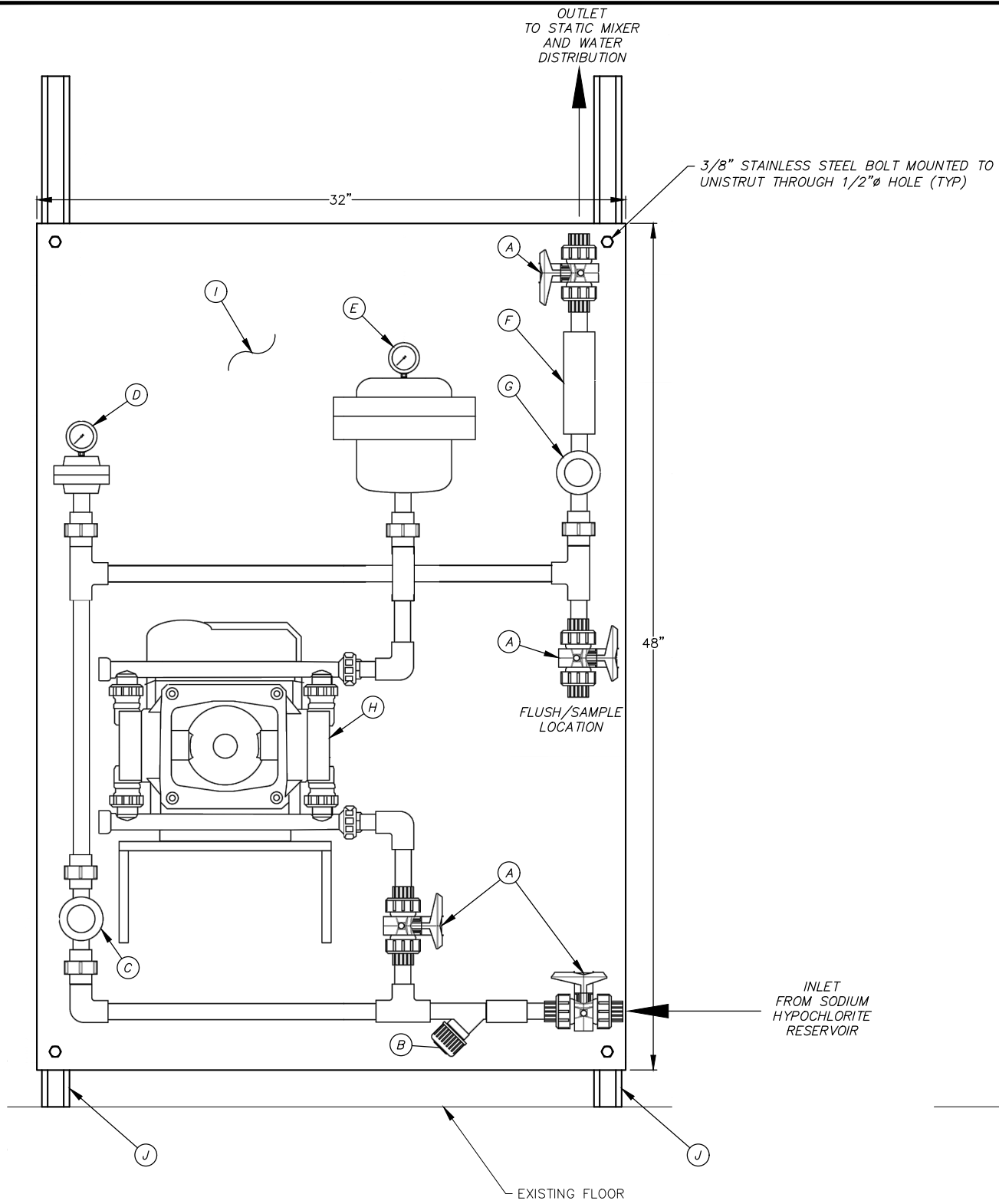
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**CHLORINE ANALYZER TYPICAL DETAIL**

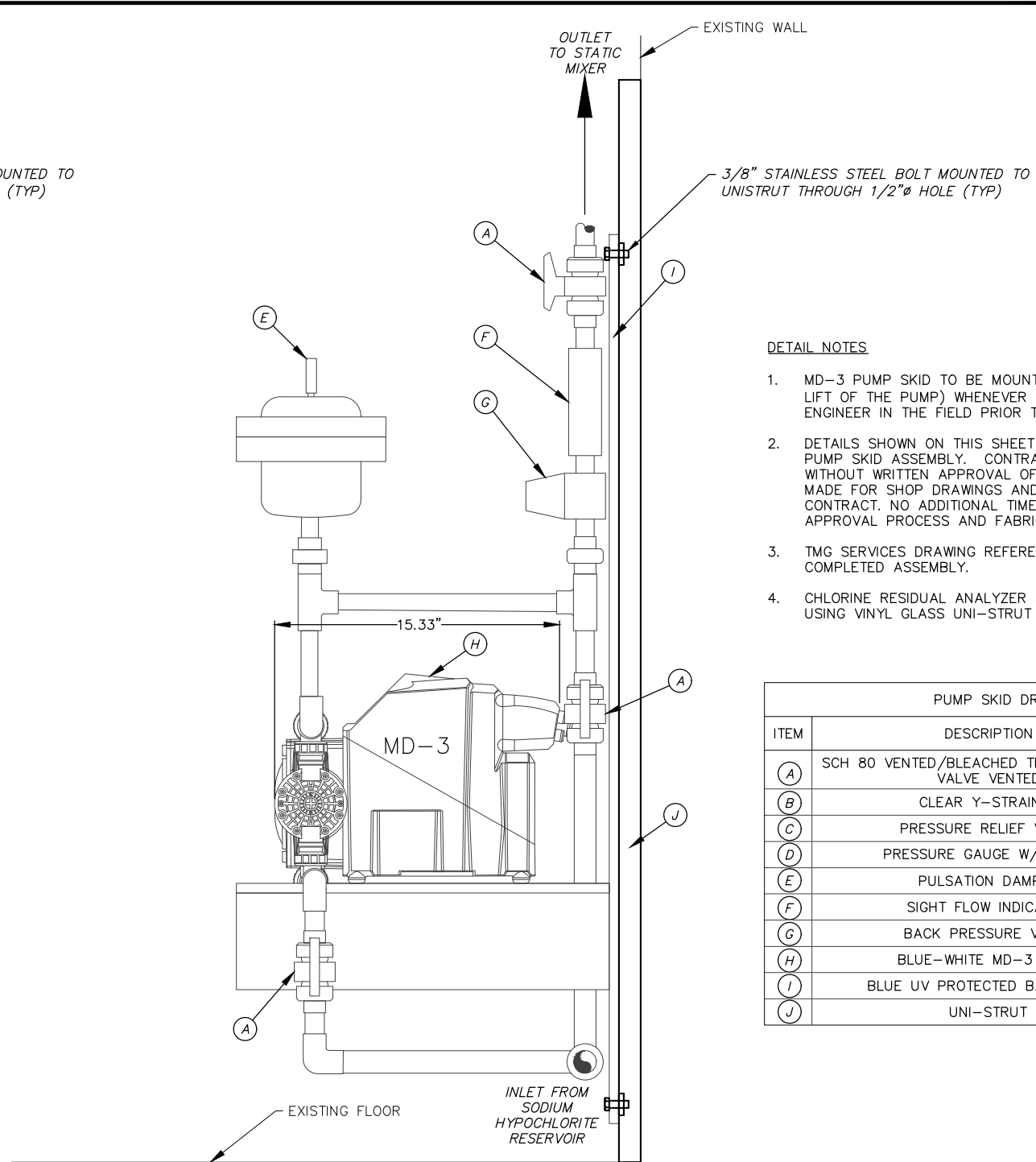
HORIZ SCALE: NTS DATE: 04/2021 GRID: N/A SHEET G8 of G12  
 VERT SCALE: NTS PROJ. ID.: WW00011(WTR)





**A** TMG SKID WITH MD-3 PUMP - FRONT VIEW

NOT TO SCALE



**B** TMG SKID WITH MD-3 PUMP - SIDE VIEW

NOT TO SCALE

**DETAIL NOTES**

- MD-3 PUMP SKID TO BE MOUNTED CLOSE TO THE FLOOR (TO MINIMIZE SUCTION LIFT OF THE PUMP) WHENEVER POSSIBLE. VERIFY INSTALLATION LOCATION WITH ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
- DETAILS SHOWN ON THIS SHEET ARE THE BEST REPRESENTATION OF TMG SERVICES PUMP SKID ASSEMBLY. CONTRACTOR SHALL NOT INSTALL ANY PUMP SKIDS WITHOUT WRITTEN APPROVAL OF SHOP DRAWINGS. NO SEPARATE PAYMENT WILL BE MADE FOR SHOP DRAWINGS AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. NO ADDITIONAL TIME WILL BE GRANTED TO THE CONTRACTOR FOR APPROVAL PROCESS AND FABRICATION TIME UPON APPROVAL.
- TMG SERVICES DRAWING REFERENCE IS, TMG-345. PROVIDE PUMP SKID AS A COMPLETED ASSEMBLY.
- CHLORINE RESIDUAL ANALYZER AND PUMP SKID TO BE MOUNTED TO THE WALL USING VINYL GLASS UNI-STRUT AND STAINLESS STEEL HARDWARE.

PUMP SKID DRAWING NUMBER TMG-345			
ITEM	DESCRIPTION	SIZE (IN)	MATERIAL
<b>A</b>	SCH 80 VENTED/BLEACHED TRUE UNION BALL VALVE VENTED	1/2	CPVC
<b>B</b>	CLEAR Y-STRAINER	1/2	CPVC
<b>C</b>	PRESSURE RELIEF VALVE	1/2	CPVC
<b>D</b>	PRESSURE GAUGE W/ GUARD	-	-
<b>E</b>	PULSATION DAMPER	-	-
<b>F</b>	SIGHT FLOW INDICATOR	1/2	CAST ACRYLIC
<b>G</b>	BACK PRESSURE VALVE	1/2	CPVC
<b>H</b>	BLUE-WHITE MD-3 PUMP	-	-
<b>J</b>	BLUE UV PROTECTED BACKBOARD	1/2	POLYPROPYLENE
<b>J</b>	UNI-STRUT	1-1/8	VINYL GLASS

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DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN				
			CHECK				
			REVISIONS				

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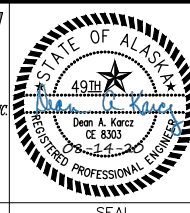
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 PUMP SKID TYPICAL DETAIL**

HORIZ SCALE: NTS DATE: 04/2021 GRID: N/A SHEET G9 of G12  
 VERT SCALE: NTS  
 PROJ. ID: WW00011(WTR)

TABLE 1-1 – PRESSURE REDUCING VALVE BODIES

NOMENCLATURE	MANUFACTURER	MANUFACTURER NOMENCLATURE	MANUF. CATALOG NO.	VALVE SIZE (IN)	PATTERN	CLASS	END DETAIL	OPTIONS	MATERIALS	REMARKS	QUANTITY	WELL(S)
PRESSURE REDUCING VALVE	CLA-VAL	HYTROL VALVE	100-46	6	GLOBE	150	FLANGED	DURA-KLEEN STEM (KD)	316 STAINLESS STEEL BODY AND TRIM	CONTRACTOR FURNISHED AND INSTALLED	1	31
PRESSURE REDUCING VALVE	CLA-VAL	HYTROL VALVE	100-46	10	GLOBE	150	FLANGED	DURA-KLEEN STEM (KD)	316 STAINLESS STEEL BODY AND TRIM	CONTRACTOR FURNISHED AND INSTALLED	5	4 9 10 11 13
PRESSURE REDUCING VALVE	CLA-VAL	POWERTROL VALVE	100-02	6	ANGLE	150	FLANGED	EPOXY COATING (KC), DURA-KLEEN STEM (KD)	DUCTILE IRON BODY, 316 STAINLESS STEEL TRIM	CONTRACTOR FURNISHED AND INSTALLED	3	4 10 11
PRESSURE REDUCING VALVE	CLA-VAL	POWERTROL VALVE	100-02	6	GLOBE	150	FLANGED	EPOXY COATING (KC), DURA-KLEEN STEM (KD)	DUCTILE IRON BODY, 316 STAINLESS STEEL TRIM	CONTRACTOR FURNISHED AND INSTALLED	1	13
PRESSURE REDUCING VALVE	CLA-VAL	HYTROL VALVE	100-46	8	GLOBE	150	FLANGED	DURA-KLEEN STEM (KD)	316 STAINLESS STEEL BODY AND TRIM	CONTRACTOR FURNISHED AND INSTALLED	1	29

- NOTES:
- ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.03 FURNISH AND INSTALL VALVE BODIES AND ANCILLARY EQUIPMENT.
  - ALL PARTS AND MATERIAL SHALL BE THE MANUFACTURER IDENTIFIED OR APPROVED EQUAL.
  - THIS TABLE IS FOR THE PRV BODIES ONLY SEE TABLES 1-3, AND 1-4 FOR TRIM EQUIPMENT.
  - INSTALL PRV VALVE BODIES IN THE LOCATION PROVIDED IN THESE DRAWINGS.

TABLE 1-2 – PRESSURE REDUCING VALVE REBUILD KITS

NOMENCLATURE	MANUFACTURER	MANUF. CATALOG NO.	VALVE SIZE (IN)	OPTIONS	MATERIALS	REMARKS	QUANTITY	WELL(S)
PRESSURE REDUCING VALVE (REBUILD KIT)	CLA-VAL	100-01	10	REBUILD KIT ONLY	RUBBER	CONTRACTOR FURNISHED, OWNER INSTALLED	1	12
PRESSURE REDUCING VALVE (REBUILD KIT)	CLA-VAL	100-01	12	REBUILD KIT ONLY	RUBBER	CONTRACTOR FURNISHED, OWNER INSTALLED	1	7
PRESSURE REDUCING VALVE (REBUILD KIT)	CLA-VAL	100-02	3	REBUILD KIT ONLY	RUBBER	CONTRACTOR FURNISHED, OWNER INSTALLED	1	31
PRESSURE REDUCING VALVE (REBUILD KIT)	CLA-VAL	100-02	6	REBUILD KIT ONLY	RUBBER	CONTRACTOR FURNISHED, OWNER INSTALLED	2	7 29

- NOTES:
- ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.03 FURNISH AND INSTALL VALVE BODIES AND ANCILLARY EQUIPMENT.
  - ALL PARTS AND MATERIAL SHALL BE THE MANUFACTURER IDENTIFIED OR APPROVED EQUAL.
  - CONTRACTOR IS TO FURNISH NEW 316 STAINLESS STEEL HARDWARE TO REPLACE ANY HARDWARE THAT HAS TO BE REMOVED IN COMPLETE REBUILD.

TABLE 1-3 – PRESSURE REDUCING VALVE TRIM AND ANCILLARY EQUIPMENT (HYTROL)

NOMENCLATURE	MANUFACTURER	MANUF. CATALOG NO.	VALVE SIZE (IN)	MATERIALS	ADJUSTMENT RANGE (PSI)	REMARKS	QUANTITY
ISOLATION (BALL VALVE)	BRADFORD	SSBV38	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	7
STRAINER WITH SENSOR PORT	SINGER	J0097A	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1
FLOW CHECK VALVE	CLA-VAL	1764201J	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	2
RESTRICTION FITTING	CLA-VAL	X58C9787003E	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1
FLOW CONTROL (OPENING AND CLOSING)	CLA-VAL	97015-02J	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	2
X105 VALVE POSITION INDICATION AND LIMIT SWITCH	CLA-VAL	27487J		316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1
MANUAL PRESSURE CONTROL VALVE CRD	CLA-VAL	7194509B		316 STAINLESS STEEL	20-105	CONTRACTOR FURNISHED, OWNER INSTALLED	1
NORMALLY OPEN 2-WAY SOLENOID	ASCO	L82106G030	1/2	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1

- NOTES:
- ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.03 FURNISH AND INSTALL VALVE BODIES AND ANCILLARY EQUIPMENT.
  - ALL PARTS AND MATERIAL SHALL BE THE MANUFACTURER IDENTIFIED OR APPROVED EQUAL.

TABLE 1-4 – PRESSURE REDUCING VALVE TRIM AND ANCILLARY EQUIPMENT (POWERTROL)

NOMENCLATURE	MANUFACTURER	MANUF. CATALOG NO.	VALVE SIZE (IN)	MATERIALS	ADJUSTMENT RANGE (PSI)	REMARKS	QUANTITY
ISOLATION (BALL VALVE)	BRADFORD	SSBV38	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	6
FLOW CHECK VALVE	CLA-VAL	1764201J	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1
FLOW CONTROL (OPENING AND CLOSING)	CLA-VAL	97015-02J	3/8	316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	2
X105 VALVE POSITION INDICATION AND LIMIT SWITCH	CLA-VAL	27487J		316 STAINLESS STEEL	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1
MANUAL PRESSURE SUREGE CONTROL VALVE CRL	CLA-VAL	20840406F		316 STAINLESS STEEL	20-200	CONTRACTOR FURNISHED, OWNER INSTALLED	1
4-WAY SOLENOID VALVE	ASCO	-	1/2	BRASS	-	CONTRACTOR FURNISHED, OWNER INSTALLED	1

- NOTES:
- ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.03 FURNISH AND INSTALL VALVE BODIES AND ANCILLARY EQUIPMENT.
  - ALL PARTS AND MATERIAL SHALL BE THE MANUFACTURER IDENTIFIED OR APPROVED EQUAL.

TABLE 1-5 – GATE VALVES

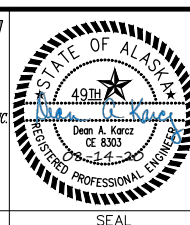
NOMENCLATURE	VALVE SIZE (IN)	MATERIALS	REMARKS	QUANTITY	WELL(S)
GATE VALVE	12	DUCTILE IRON BODY	RESILIENT-SEATED, 316 STAINLESS STEEL HARDWARE	1	13
GATE VALVE	10	DUCTILE IRON BODY	RESILIENT-SEATED, 316 STAINLESS STEEL HARDWARE	1	29

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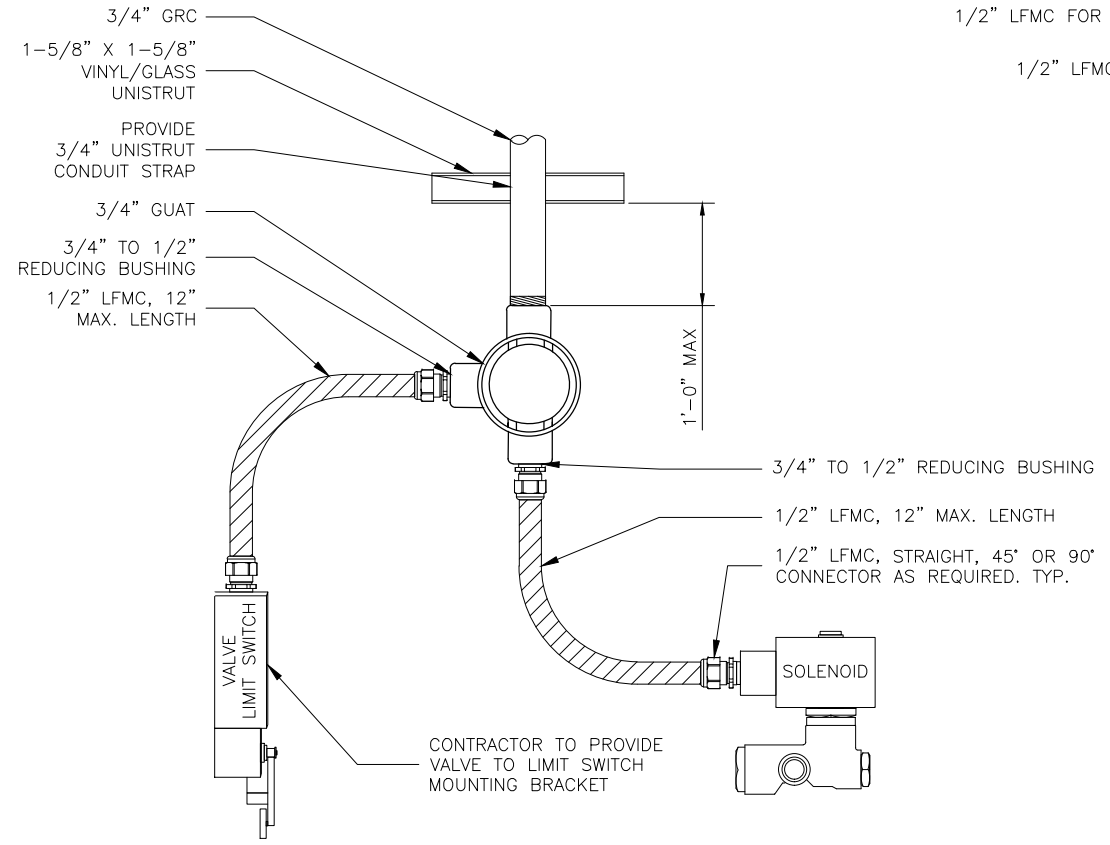
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TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN CHECK				
			REVISIONS				

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COMPANY: _____	BY: _____ TITLE: _____
DATE: _____	DATE: _____

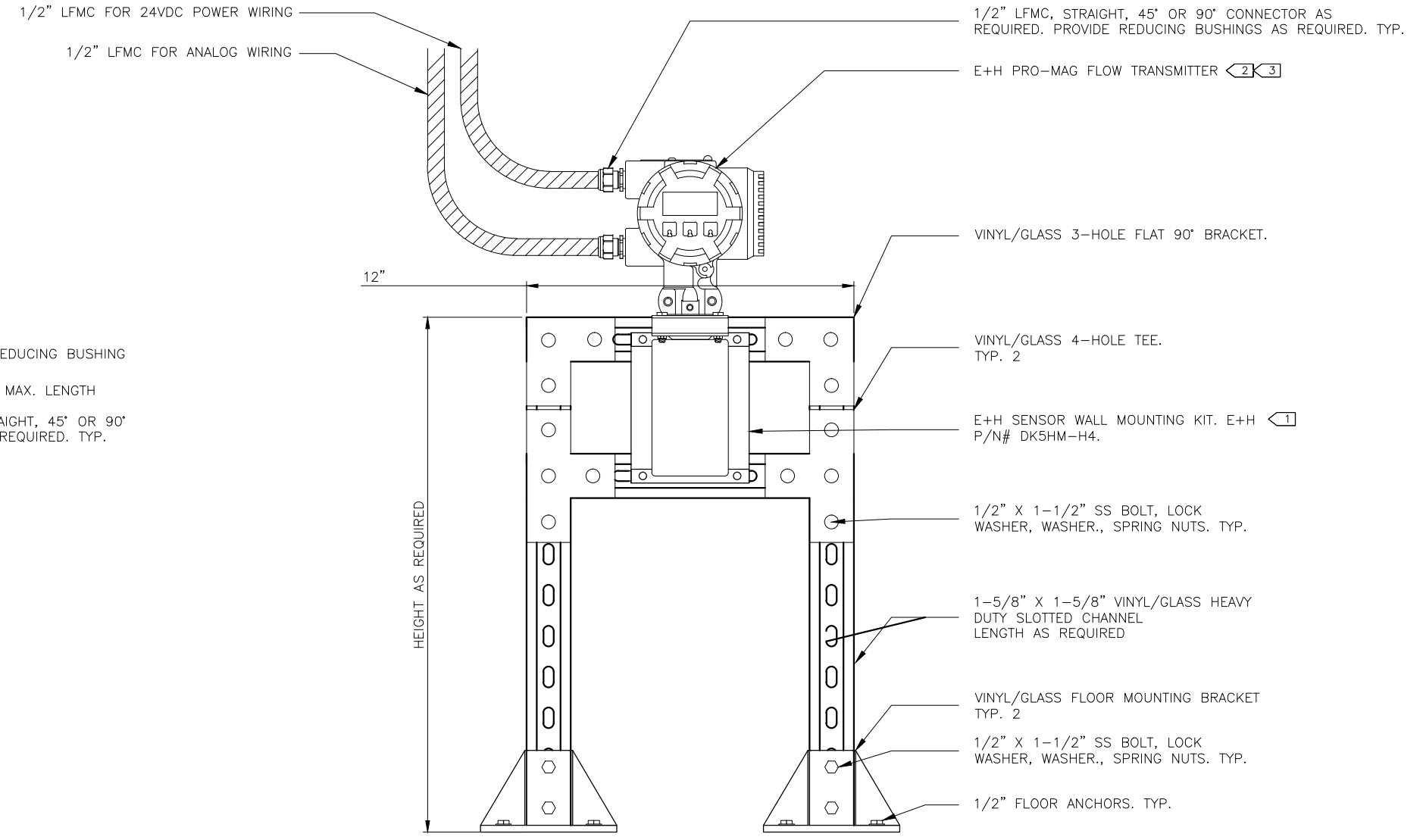
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ANCHORAGE WELL HOUSE CHLORINE ANALYZER IMPROVEMENTS PRV EQUIPMENT TABLES			
HORIZ SCALE: NTS	DATE: 04/2021	GRID: N/A	SHEET G10 of G12
PROJ. ID.: WW00011(WTR)			



1 CONDUIT DETAIL FOR VALVE CONTROLS TYPICAL



2 FLOWMETER FLOOR MOUNTING DETAIL TYP

- NOTES:
- 1 CONTRACTOR TO VERIFY METER SIZE AND BRACKET PART NUMBER PRIOR TO PURCHASE.
  - 2 EXISTING FLOWMETER TO BE RE-USED
  - 3 FLOWMETER SHALL NOT BE INSTALLED UNDER HYPOCHLORITE PIPING.

2019/07/20 5:31 PM By: Mario M. Contrehab, CIMENTARIUS (P0012)\_2019\_AWWU CL2 Project (01) Drawings (00) Electrical (00) ACAD (00) Working Drawings (00) General (G11).dwg

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TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
			PLAN CHECK				REVISIONS

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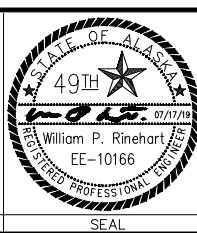
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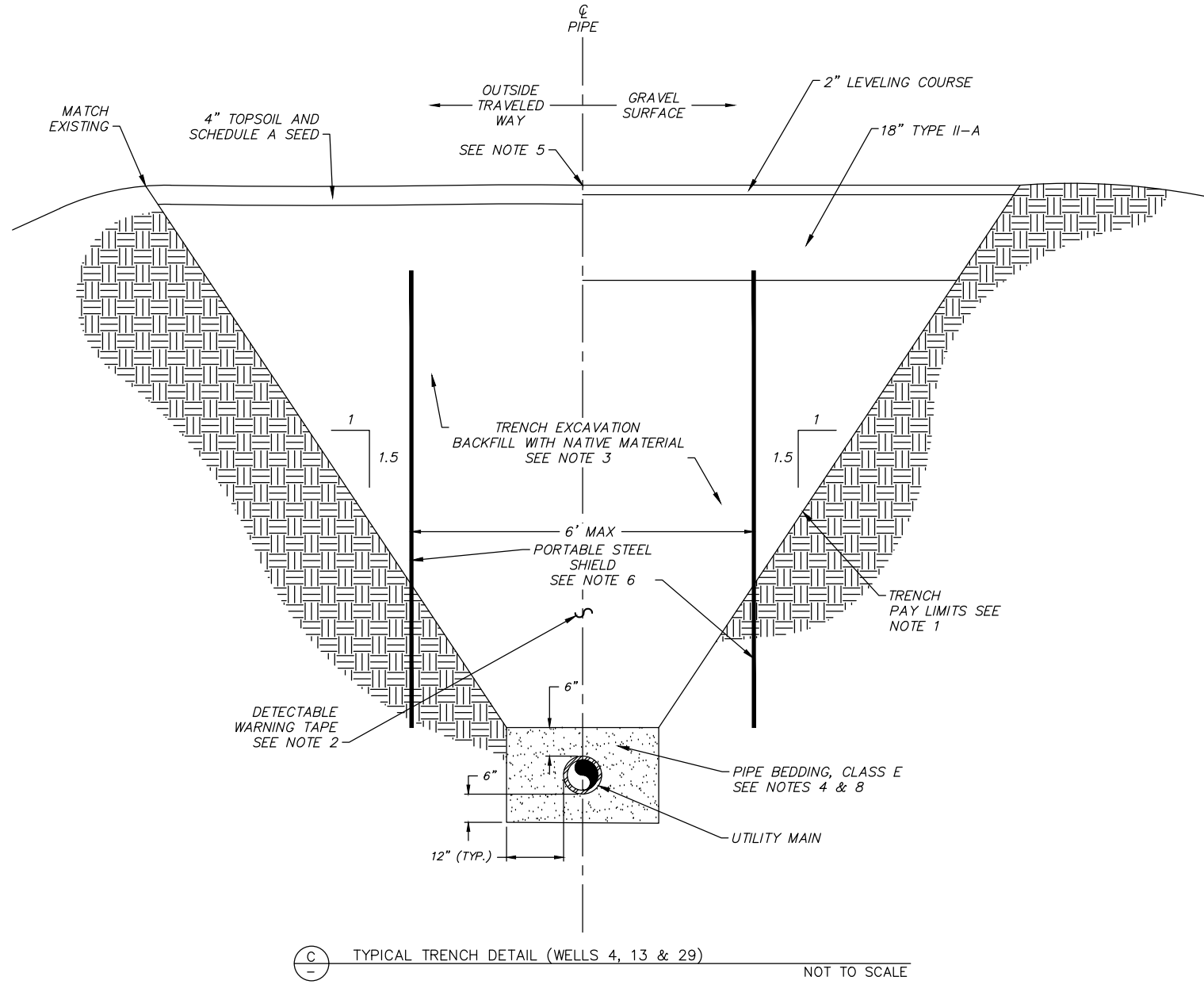
Snowdweller Industrial, LLC  
 901 E. Fireweed Lane  
 Anchorage, AK 99508  
 (907) 227-5039  
 www.rinezone.com/snowdweller



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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 I&C DETAILS**

HORIZ SCALE: N/A DATE: 07/2019 GRID: N/A  
 VERT SCALE: N/A PROJ. ID: WW0011(WTR) SHEET G11 of G11



**TRENCH NOTES:**

1. THE INDICATED 1H:1.5V SIDE SLOPES IN THE TRENCH SECTION ARE FOR CONTRACTUAL PAY LIMIT DETERMINATION ONLY. REGARDLESS OF PAY LIMITS SHOWN, THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. SAFETY STANDARDS BASED ON SOIL CHARACTERISTICS AND MASS SECTION 10.06, ARTICLE 6.8-SAFETY.
2. DETECTABLE WARNING TAPE SHALL BE LOCATED AT LEAST 24" AND NO MORE THAN 36" ABOVE THE CROWN OF THE PIPE.
3. TRENCH BACKFILL SHALL BE NATIVE MATERIAL CONFORMING TO TYPE III SPECIFICATIONS OR IMPORTED TYPE II CLASSIFIED FILL & BACKFILL AS DETERMINED BY THE ENGINEER IN THE FIELD. ALL FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% OF ITS MAXIMUM DENSITY.
4. COMPACTION SHALL BE TO 95% OF MAXIMUM DENSITY FOR ALL BEDDING MATERIAL.
5. CONTRACTOR SHALL RESTORE ALL LANDSCAPING AND SURFACE IMPROVEMENTS TO ORIGINAL CONDITION IN KIND WITH NEW MATERIALS. GRASS REPLACEMENT AREAS SHALL BE 4" OF TOPSOIL AND SCHEDULE A SEED. WORK IS INCIDENTAL TO SECTION 60.02 AND/OR SECTION 60.03. GRADE AREA AROUND AIR GAP AT WELL 4 TO DRAIN TO THE NORTHWEST. SEE SHEET 13-3 FOR WELL 13 SURFACING AND SHEET 29-3 FOR WELL 29 SURFACING.
6. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE, AND OSHA REGULATIONS AND REQUIREMENTS. WORK IS INCIDENTAL TO SECTION 60.02, 60.03, AND THE CONTRACT.
7. CONTRACTOR SHALL PROTECT IN PLACE THE SURFACE MATERIAL OF THE ADJACENT PARKING AREAS. ALL DISTURBED PARKING AREAS SHALL BE RE-SURFACED WITH 4" OF RAP AT WELL 4. ALL WORK RELATED TO RE-SURFACING PARKING AREAS IS INCIDENTAL TO SECTION 60.02 OF MASS.
8. MATERIAL MEETING THE SPECIFICATION FOR CLASS E AGGREGATE AS SPECIFIED IN MASS SECTION 40.05 MAY BE SUBSTITUTED FOR CLASS E BEDDING. THE USE OF CLASS E AGGREGATE IS INCIDENTAL TO SECTION 60.02 AND NO SEPARATE PAYMENT WILL BE MADE.

(C) TYPICAL TRENCH DETAIL (WELLS 4, 13 & 29) NOT TO SCALE

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PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
PLAN		CHECK		REVISIONS			

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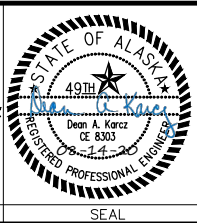
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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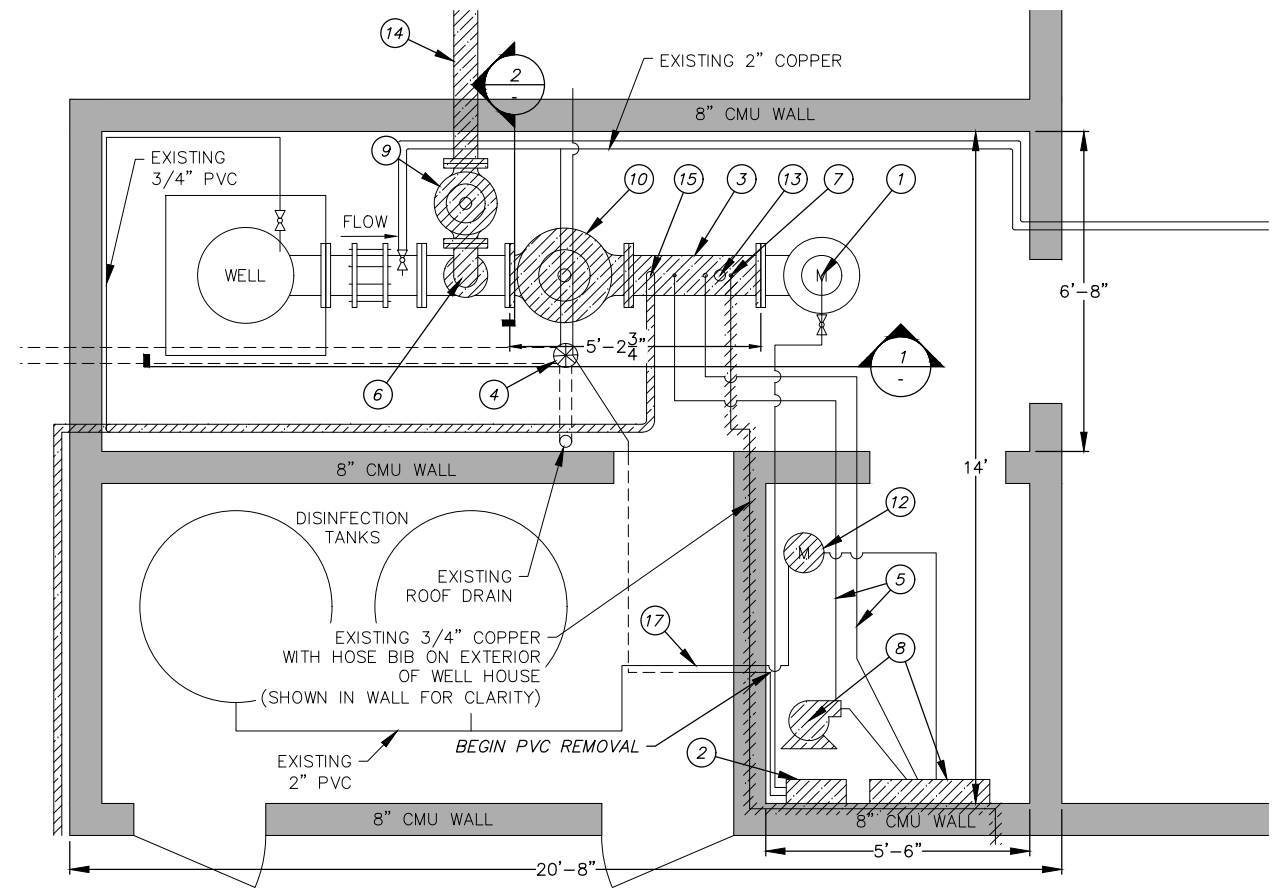


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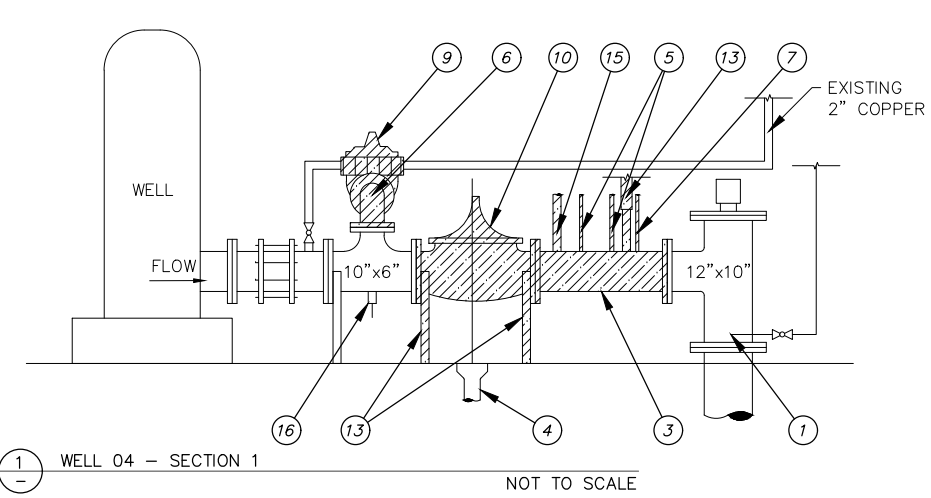
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**TYPICAL TRENCH DETAIL**

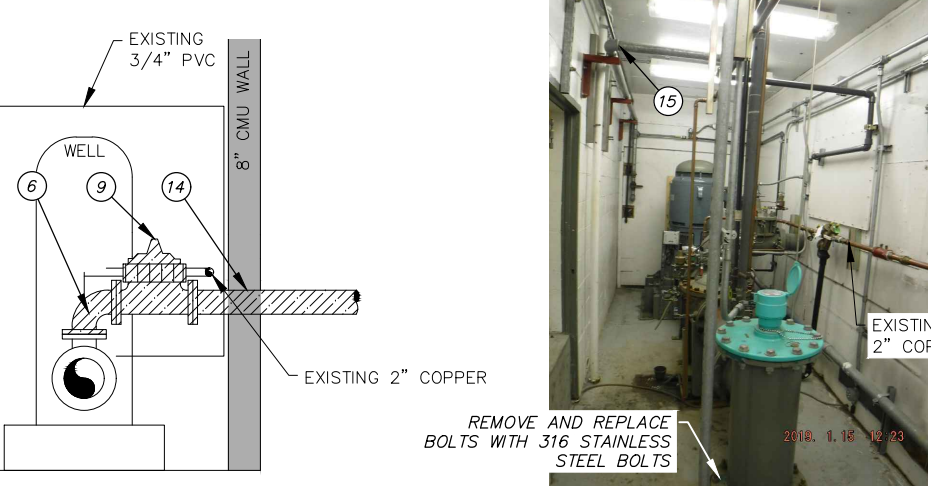
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 VERT SCALE: NTS | PROJ. ID.: WW00011(WTR)



**(A) WELL 04 FLOOR PLAN**  
NOT TO SCALE



**(1) WELL 04 - SECTION 1**  
NOT TO SCALE



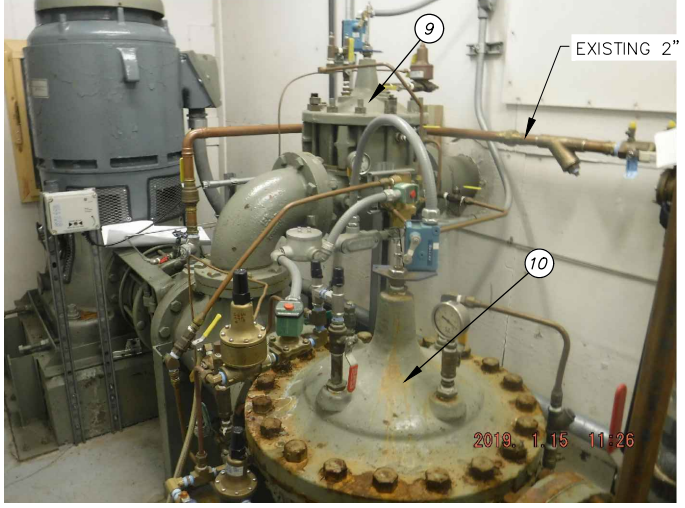
**(2) WELL 04 - SECTION 2**  
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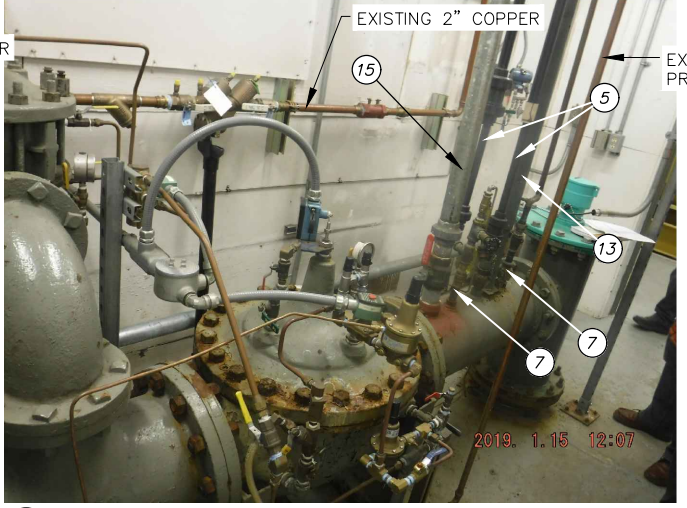
**(B) WELL ROOM**  
NOT TO SCALE

- DEMOLITION CALLOUTS**
- (1) EXISTING COLIFORM SAMPLE TAP TO REMAIN AND BE REUSED
  - (2) REMOVE AND DISPOSE OF EXISTING CHEMICAL ANALYZER
  - (3) REMOVE EXISTING ±33" SPOOL OF 10" DIP
  - (4) EXISTING 4" FLOOR DRAIN TO REMAIN. PROTECT IN PLACE
  - (5) REMOVE AND DISPOSE OF EXISTING PVC PIPE, FITTINGS AND SUPPORTS
  - (6) REMOVE 6" DIP 90° BEND
  - (7) REMOVE AND DISPOSE OF EXISTING 3/4" COPPER LINE
  - (8) REMOVE AND DISPOSE OF EXISTING PUMP AND SKID AND ASSOCIATED MOUNTING BRACKETS
  - (9) REMOVE 6" PRV - GLOBE PATTERN
  - (10) REMOVE 10" PRV - GLOBE PATTERN
  - (11) REMOVE 110V RECEPTACLE, SUPPORTS AND CONDUIT FOR POWER TO 90° BEND. SEE DETAIL F
  - (12) REMOVE AND SALVAGE FLOW METER. REMOVE SUPPORTS AND TUBING AS NECESSARY. FLOW METER TO BE REINSTALLED
  - (13) REMOVE AND DISPOSE OF PIPE SUPPORT
  - (14) REMOVE DIP PIPE. REPAIR HOLE IN CMU WALL AND PAINT. SEE NOTE 5
  - (15) REMOVE 2" GALVANIZED PIPE AND FITTINGS
  - (16) REMOVE AND DISPOSE OF 1-1/2" TAP AND FITTINGS
  - (17) HYPOCHLORITE SUPPLY LINE REMAINS

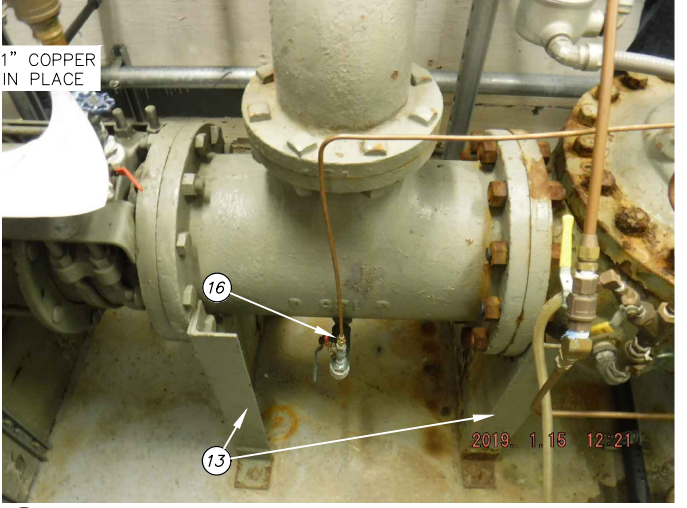
- DEMOLITION NOTES**
1. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS TO BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
  2. REMOVE ALL MOUNTING BRACKETS AND HARDWARE FOR DEMOLISHED EQUIPMENT.
  3. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
  4. SEE SHEETS 4-6 - 4-11 FOR ELECTRICAL/SCADA DEMOLITION.
  5. WALL TO BE REPAIRED WITH SIMILAR MATERIALS. PAINT TO MATCH.



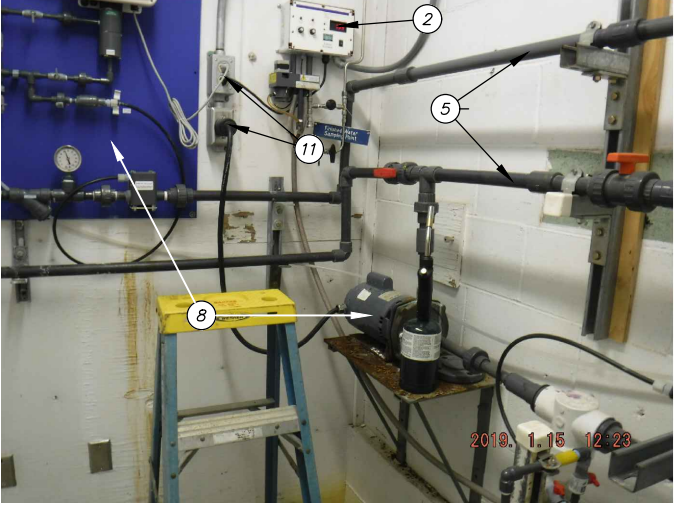
**(C) EXISTING PRVs**  
NOT TO SCALE



**(D) EXISTING SPOOL TAPS**  
NOT TO SCALE



**(E) EXISTING DISCHARGE TEE BETWEEN WELL AND 10" PRV**  
NOT TO SCALE



**(F) EXISTING PUMP SKID AND CHEMICAL ANALYZER**  
NOT TO SCALE

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PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN	KMG	DAK				
			QUANTITIES	KMG	DAK				
			MUN. FINAL CHECK						
			PLAN						
			CHECK						
			REVISIONS						

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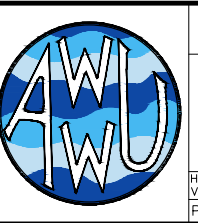
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 COMPANY: \_\_\_\_\_  
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 PHONE: (907) 561-6237  
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 LICENSE # AEC0924

STATE OF ALASKA  
 49TH  
 DEW A. KORCZ  
 CE 8303  
 REGISTERED PROFESSIONAL ENGINEER

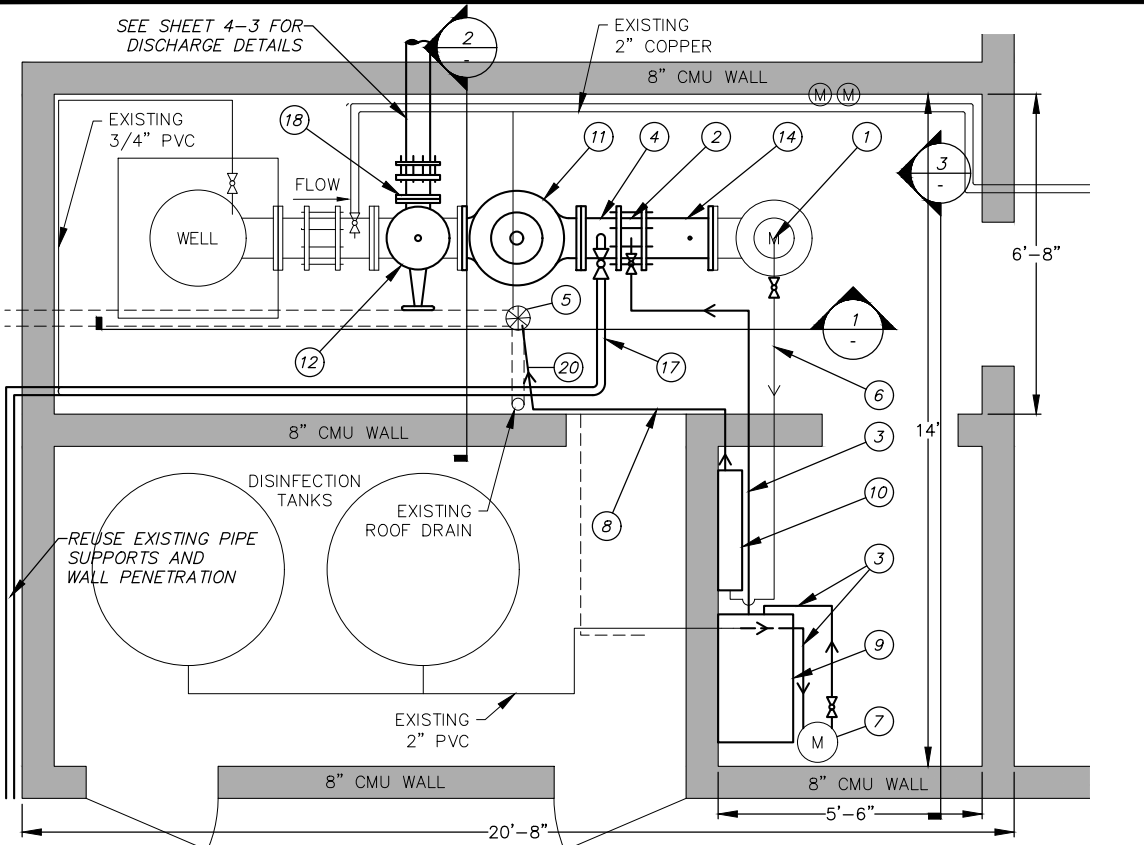


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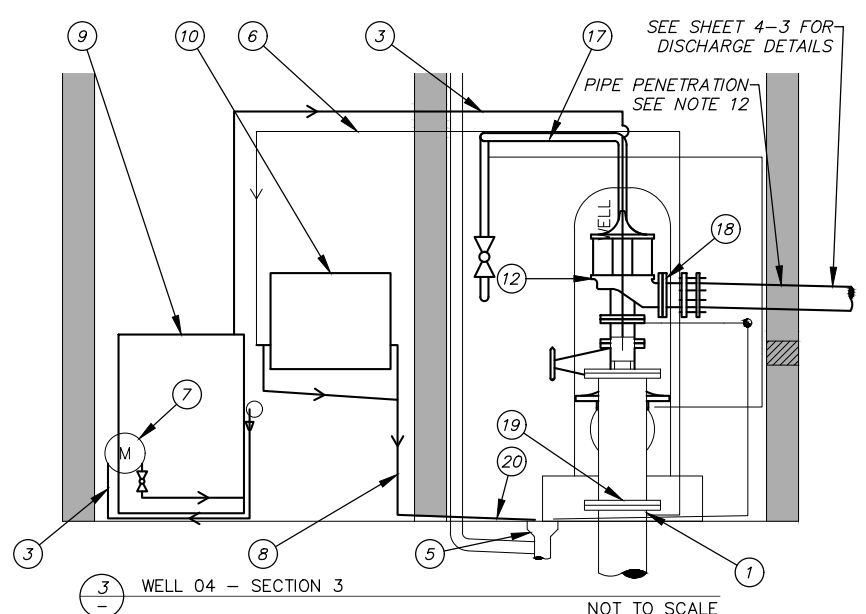
**WELL 04  
 DEMOLITION PLAN AND SECTIONS**

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 VERT SCALE: NTS  
 PROJ. ID: W00011(WTR) SHEET 4-1 of 4-11



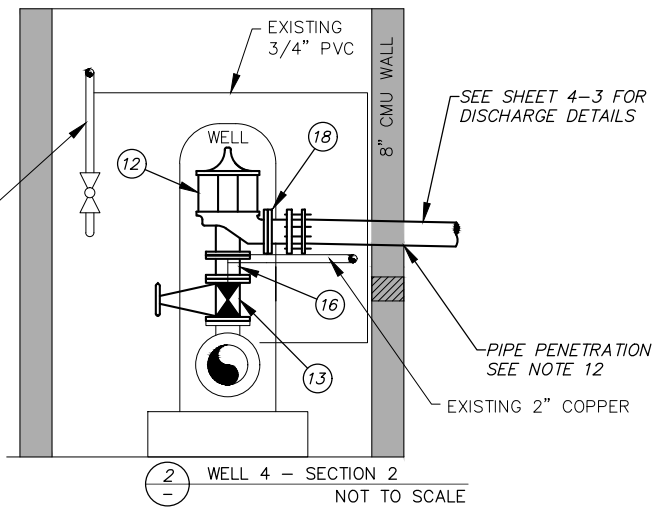
WELL 04 PLAN VIEW

NOT TO SCALE



WELL 04 - SECTION 3

NOT TO SCALE



WELL 04 - SECTION 2

NOT TO SCALE

TABLE 4-1 NOTES:

1. ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE

**CONSTRUCTION CALLOUTS**

1. EXISTING COLIFORM SAMPLE PORT TAP TO BE REUSED. FURNISH AND INSTALL NEW 1/4" 316 STAINLESS STEEL BALL VALVE
2. FURNISH AND INSTALL NEW 10" STATIC MIXER. SEE TABLE 4-1
3. FURNISH AND INSTALL NEW 2"x1/2" REDUCER AND 1/2" CPVC PIPE AS NEEDED TO CONNECT MIXER AND PUMP SKID AND DISINFECTION TANKS
4. FURNISH AND INSTALL NEW ±10" SPOOL OF 10" DIP. SEE TABLE 4-1
5. EXISTING FLOOR DRAIN
6. REUSE EXISTING STAINLESS STEEL TUBING FROM COLIFORM SAMPLE PORT TAP TO CHEMICAL ANALYZER. SEE NOTE 9
7. RELOCATE EXISTING FLOW METER TO SOUTH WALL
8. FURNISH AND INSTALL 1/2" CPVC FROM CHEMICAL ANALYZER TO EXISTING FLOOR DRAIN. SLOPE TO DRAIN
9. FURNISH AND INSTALL NEW PUMP SKID. SEE SHEET G9
10. FURNISH AND INSTALL NEW CHEMICAL RESIDUAL ANALYZER. SEE SHEET G8
11. FURNISH AND INSTALL NEW 10" PRV - GLOBE STYLE. SEE SHEET G10 FOR DETAILS. SEE NOTE 6
12. FURNISH AND INSTALL NEW 6" PRV - ANGLE STYLE. SEE SHEET G10 FOR DETAILS. SEE NOTE 6
13. FURNISH AND INSTALL 6" GATE VALVE. SEE TABLE 4-1 FOR DETAILS
14. FURNISH AND INSTALL ±18" SPOOL OF 10" FLANGED DIP. SEE TABLE 4-1 FOR DETAILS. SEE SHEETS 4-6 - 4-11 FOR PRESSURE TRANSDUCER
15. FURNISH AND INSTALL 316 STAINLESS STEEL BALL VALVE (CONTRACTOR TO VERIFY SIZE)
16. FURNISH AND INSTALL 6" SPOOL OF 6" DIP. SEE TABLE 4-1 FOR DETAILS
17. FURNISH AND INSTALL 2" 316 STAINLESS STEEL PIPE, 316 STAINLESS STEEL BALL VALVE, 316 STAINLESS STEEL MALE CAMLOCK ADAPTOR
18. FURNISH AND INSTALL 6" ROMAC RFCA TO PROVIDE DEFLECTION FOR BLOW-OFF PIPING. ROMAC RFCA SHALL BE NSF 61 WITH STAINLESS STEEL FASTENERS
19. FURNISH AND INSTALL NEW 316 STAINLESS STEEL BOLTS FOR DISTRIBUTION TEE
20. FURNISH AND INSTALL 2' PIPE PROTECTOR IAW 60.09. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING. VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION

**CONSTRUCTION NOTES**

1. SEE TABLE 4-1 FOR A DETAILED LIST OF EQUIPMENT.
2. NEW CPVC PIPE SHALL BE SCHEDULE 80 1/2" DIAMETER.
3. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
4. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
5. CONTRACTOR IS TO APPLY PROTECTIVE COATING TO ALL DIP FROM WELL HEAD TO DISTRIBUTION TEE. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
6. CONTRACTOR TO INSTALL PRV BODIES ONLY. THE OWNER SHALL INSTALL THE TRIM, ACCESSORIES, AND REBUILD KITS AFTER THE BODIES HAVE BEEN INSTALLED.
7. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
8. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH, CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
9. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4-FT WITHOUT SUPPORT.
10. CONTRACTOR SHALL INSTALL A DRAIN CATCH BENEATH THE CHLORINE RESIDUAL ANALYZER. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE CATCH TO EXISTING DRAINAGE FUNNEL.
11. FURNISH AND INSTALL PIPE (WELL NO. 4) LUMP SUMP UNIT CONSISTS OF ALL PIPING INSIDE BUILDING AND THE EXTERIOR PIPE BETWEEN THE BUILDING AND THE AIR GAP; INCLUDING BUT NOT LIMITED TO NEW PVC FOR THE COOLING UNIT, 6" CIP REMOVAL, AND ANY ASSOCIATED PIPE SUPPORTS REQUIRED.
12. PIPE PENETRATION SHALL BE SEALED USING LINK-SEAL MODEL S61 WITH 316 STAINLESS STEEL BOLTS OR APPROVED EQUAL. INSTALL LINK-SEAL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

TABLE 4-1 SECTION 60.02 MECHANICAL EQUIPMENT LIST: PIPE

NOMENCLATURE	MATERIAL TYPE	SIZE	LENGTH	END DETAIL	REMARKS	QTY
SPOOL	DI	10	±10	FLANGED	EPOXY COATED	1
SPOOL	DI	10	±18	FLANGED	EPOXY COATED	1
SPOOL	DI	6	±198	FLANGED	EPOXY COATED	1
SPOOL	DI	6	±40	FLANGED	EPOXY COATED	1
SPOOL	DI	6	±6	FLANGED	EPOXY COATED	1
90° BEND	DI	6	-	FLANGED	EPOXY COATED	1
STATIC MIXER	PTFE	10	-	PLAIN	SULZER COMPAX OR APPROVED EQUAL SULZER QUOTE 9062448-0 ITEM 4.1	1
BALL VALVE	SS	1/4	-	-	316 STAINLESS STEEL BODY AND BALL	2
BALL VALVE	CPVC	1/2	-	-	SCH 80 VENTED/BLEACHED TRUE UNION	2
GATE VALVE	DI	6	-	FLANGED	MUELLER A-2361 RESILIENT WEDGE	1
BALL VALVE	SS	2	-	-	316 STAINLESS STEEL BODY AND BALL	1

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PROFILE			ELECTRIC						
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STORM SEWER			TRAFFIC SIGNAL						
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			PLAN CHECK						

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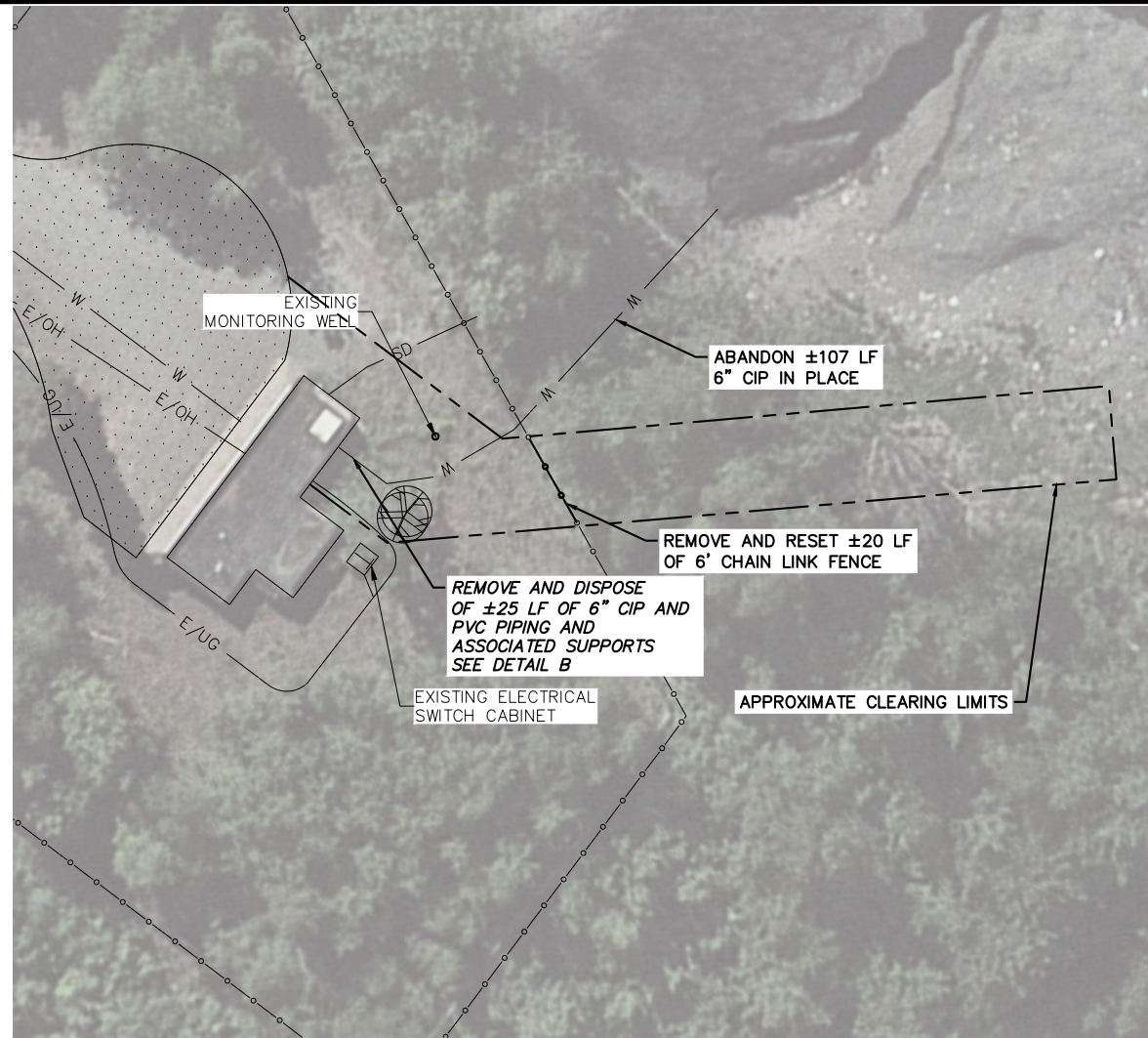
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**ANCHORAGE WELL HOUSE CHLORINE ANALYZER IMPROVEMENTS**

**WELL 04 CONSTRUCTION PLAN AND SECTIONS**

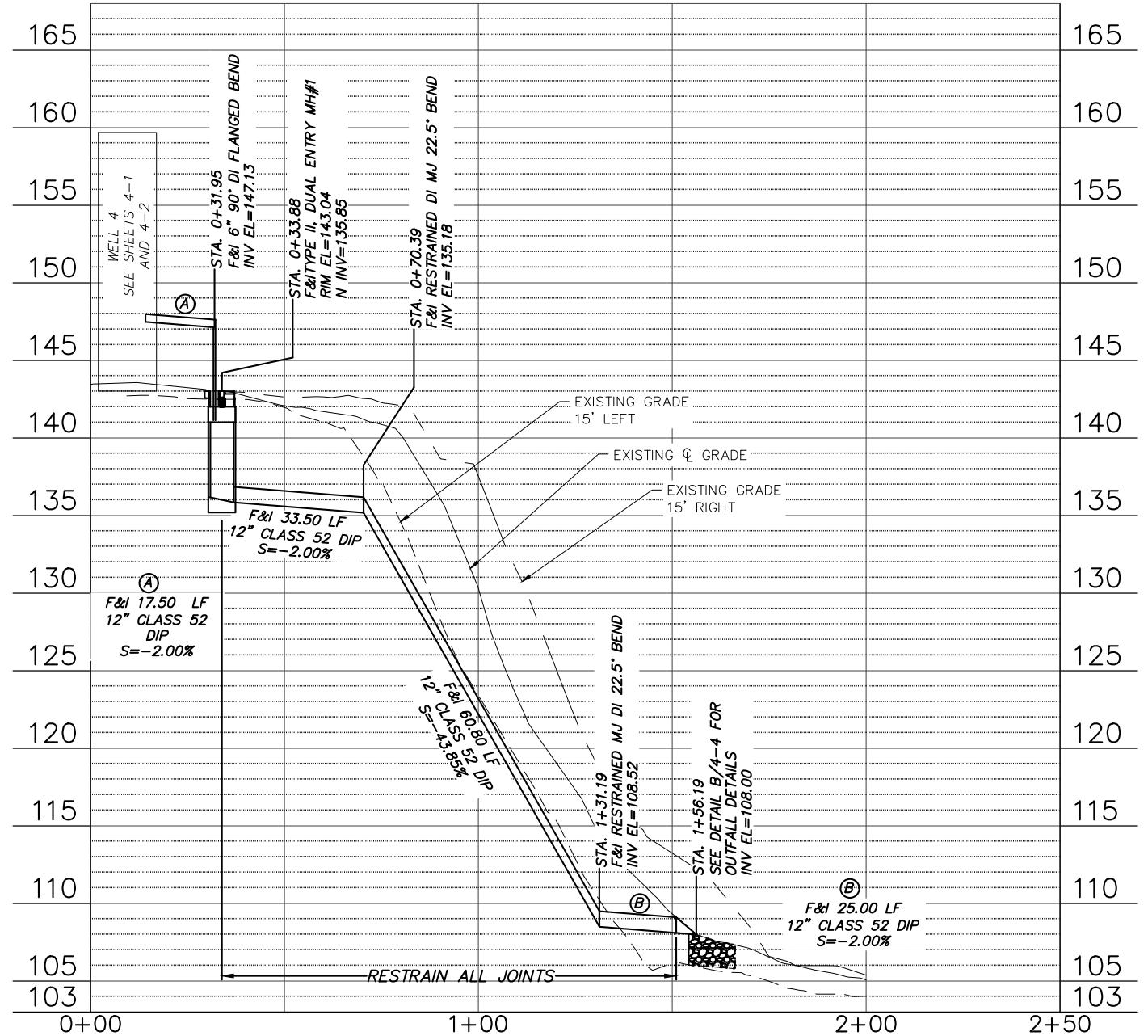
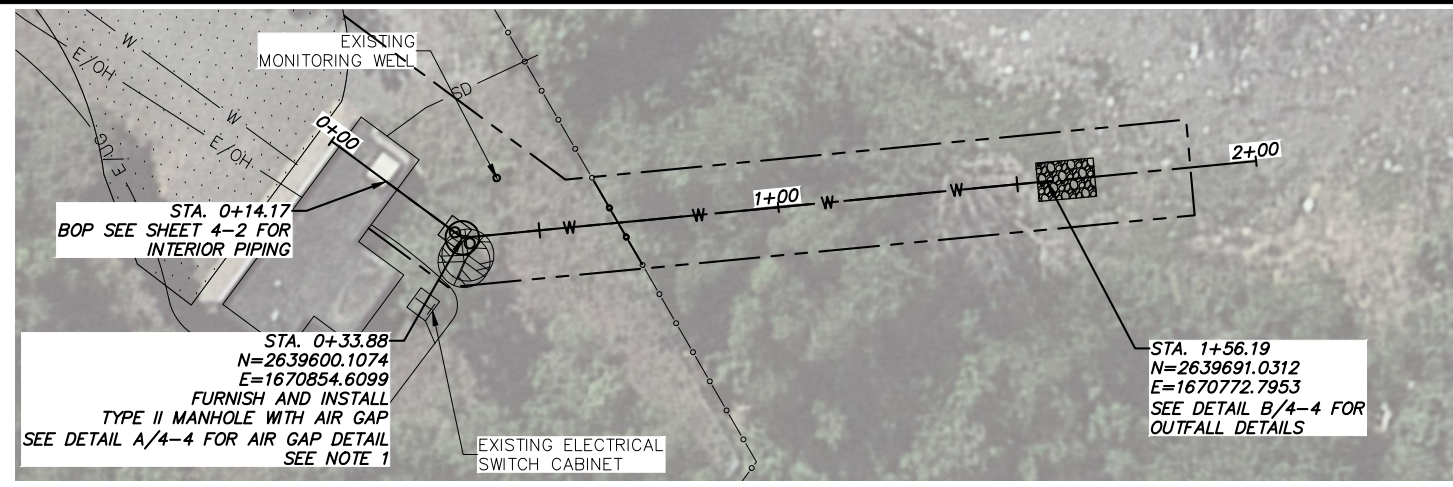
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 VERT SCALE: NTS PROJ. ID: WWO0011(WTR)

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(A) WELL 04 EXTERIOR PIPING DEMOLITION

NOT TO SCALE



(B) EXISTING DISCHARGE CIP

NOT TO SCALE

**CONSTRUCTION NOTES**

1. CONTRACTOR TO CONDUCT A PRE-CONSTRUCTION SURVEY TO CONFIRM ELEVATIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO CONDUCT A POST-CONSTRUCTION SURVEY FOR THE RECORD DRAWINGS. SURVEYS ARE INCIDENTAL TO WORK ITEM 60.02 FURNISH AND INSTALL (12" DI) PIPE
2. INSTALL MH#1 IN ACCORDANCE WITH SECTION 55 OF MASS AND THE SPECIAL PROVISIONS. REFERENCE LOCATION FOR TYPE II MH IS BASED ON CENTER OF STRUCTURE.
3. AREA AROUND AIR GAP IS TO BE GRADED TO DRAIN TO THE NORTHWEST.
4. ALL DISTURBED AREAS TO HAVE 4" OF TOPSOIL AND SCHEDULE A SEED.
5. BURIED PIPE TO BE INSTALLED IN ACCORDANCE WITH MASS 60.02 FURNISH AND INSTALL PIPE.
6. 12" DIP BETWEEN CENTER OF TYPE II MANHOLE AND END OF FLARED END SECTION IS TO BE PAID FOR UNDER MASS 60.02 "FURNISH AND INSTALL PIPE". THIS SECTION OF PIPE DOES NOT REQUIRE DISINFECTION OR FLUSHING AS IT IS BLOW-OFF DISCHARGE AND NOT POTABLE.
7. ALL MECHANICAL JOINTS WILL BE RESTRAINED WITH MEG-A-LUG FITTINGS (OR EQUAL). ALL JOINTS WILL BE RESTRAINED USING FIELD LOK 350 GASKETS OR APPROVED EQUAL.

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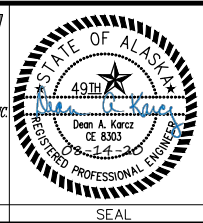
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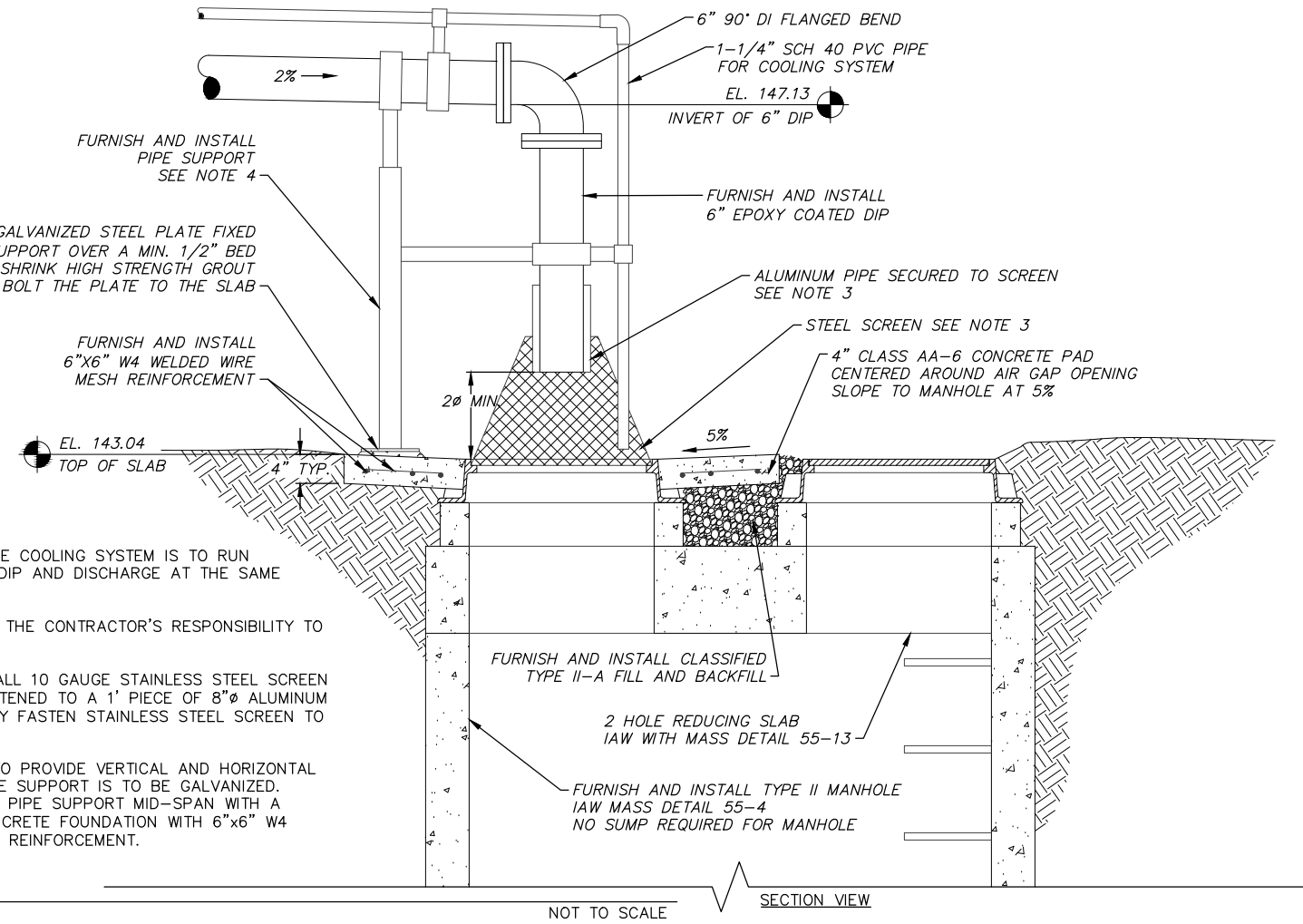
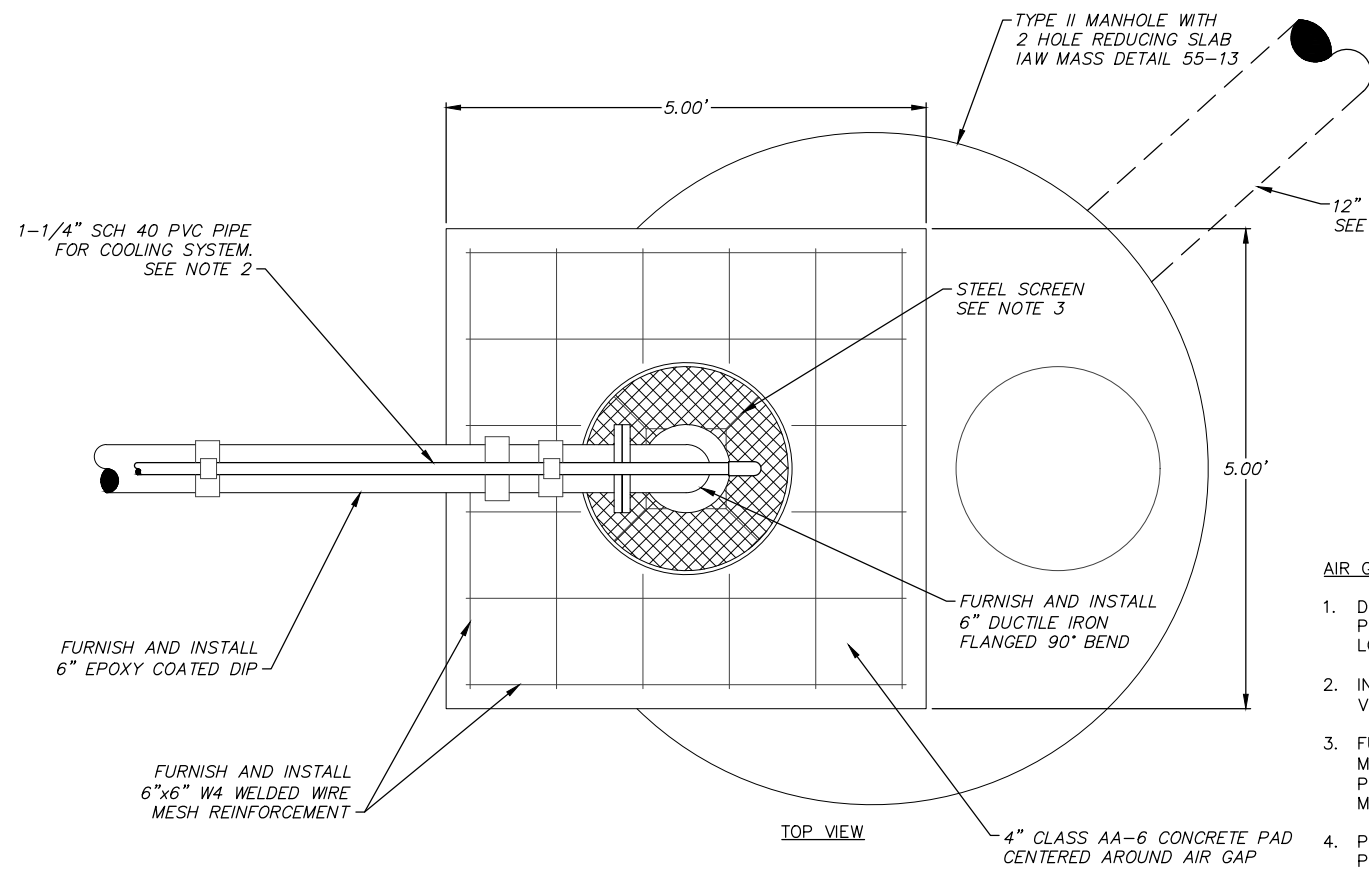


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**WELL 04  
 DISCHARGE DEMO AND CONSTRUCTION**

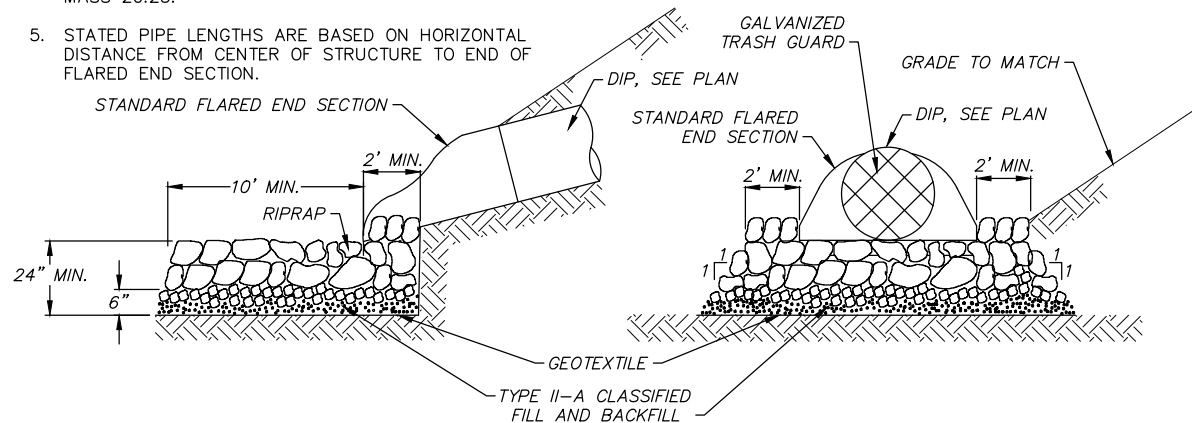
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 VERT SCALE: 1"=5'  
 DATE: 04/2021  
 GRID: SW1134  
 SHEET 4-3 of 4-11  
 PROJ. ID.: WV00011(WTR)



- AIR GAP NOTES:**
1. DRAIN LINE FOR THE COOLING SYSTEM IS TO RUN PARALLEL TO THE DIP AND DISCHARGE AT THE SAME LOCATION.
  2. INFORMATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PIPE SIZES.
  3. FURNISH AND INSTALL 10 GAUGE STAINLESS STEEL SCREEN MECHANICALLY FASTENED TO A 1' PIECE OF 8"Ø ALUMINUM PIPE. MECHANICALLY FASTEN STAINLESS STEEL SCREEN TO MANHOLE FRAME.
  4. PIPE SUPPORT IS TO PROVIDE VERTICAL AND HORIZONTAL PIPE SUPPORT. PIPE SUPPORT IS TO BE GALVANIZED. PROVIDE THE SAME PIPE SUPPORT MID-SPAN WITH A 2'x2'x4" AA-6 CONCRETE FOUNDATION WITH 6"x6" W4 WELDED WIRE MESH REINFORCEMENT.

**OUTFALL NOTES:**

1. RIPRAP SHALL BE CLASS I.
2. COURSE RIPRAP ROCKS TO BE PLACES ON TOP. PLACE FINER RIPRAP ROCKS UNDER COURSE RIPRAP ROCKS.
3. OUTLET LOCATION SHOWN IN PLANS IS GIVEN TO THE END OF THE FLARED END SECTION.
4. GEOTEXTILE SHALL BE CLASS TYPE C IN ACCORDANCE WITH MASS 20.25.
5. STATED PIPE LENGTHS ARE BASED ON HORIZONTAL DISTANCE FROM CENTER OF STRUCTURE TO END OF FLARED END SECTION.



**A** AIR GAP DETAIL

**B** RIP RAP OUTFALL DETAIL

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PLAN CHECK				REVISIONS			

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

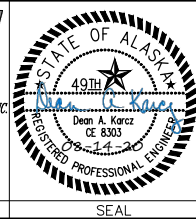
1. DATA PROVIDED BY: \_\_\_\_\_  
 This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.  
 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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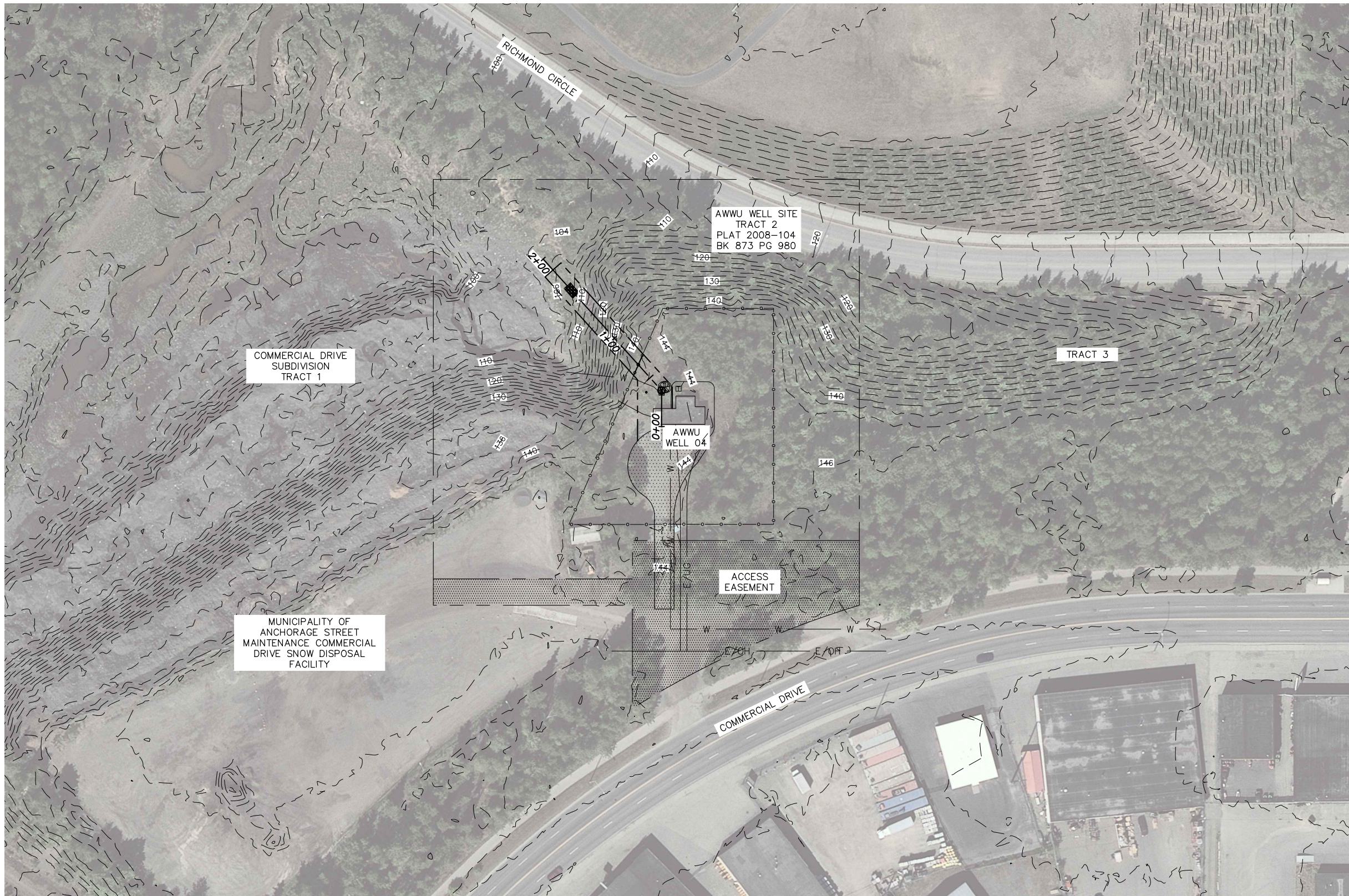
MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 04  
 DETAILS**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW1134  
 VERT SCALE: NTS PROJ. ID.: WV00011(WTR) SHEET 4-4 of 11





2021/03/26 8:06 AM By: Kevin Garcia Z:\WM-17\_(Task 4 CA-01)\dwg Active\W00011WTR\_WELL-4\_DISCHARGE.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE	KMG	DAK	ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN CHECK				
							REVISIONS

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

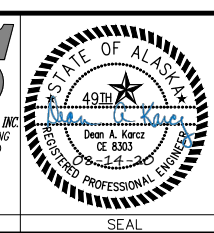
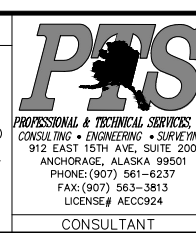
1. DATA PROVIDED BY: \_\_\_\_\_  
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 DATE: \_\_\_\_\_

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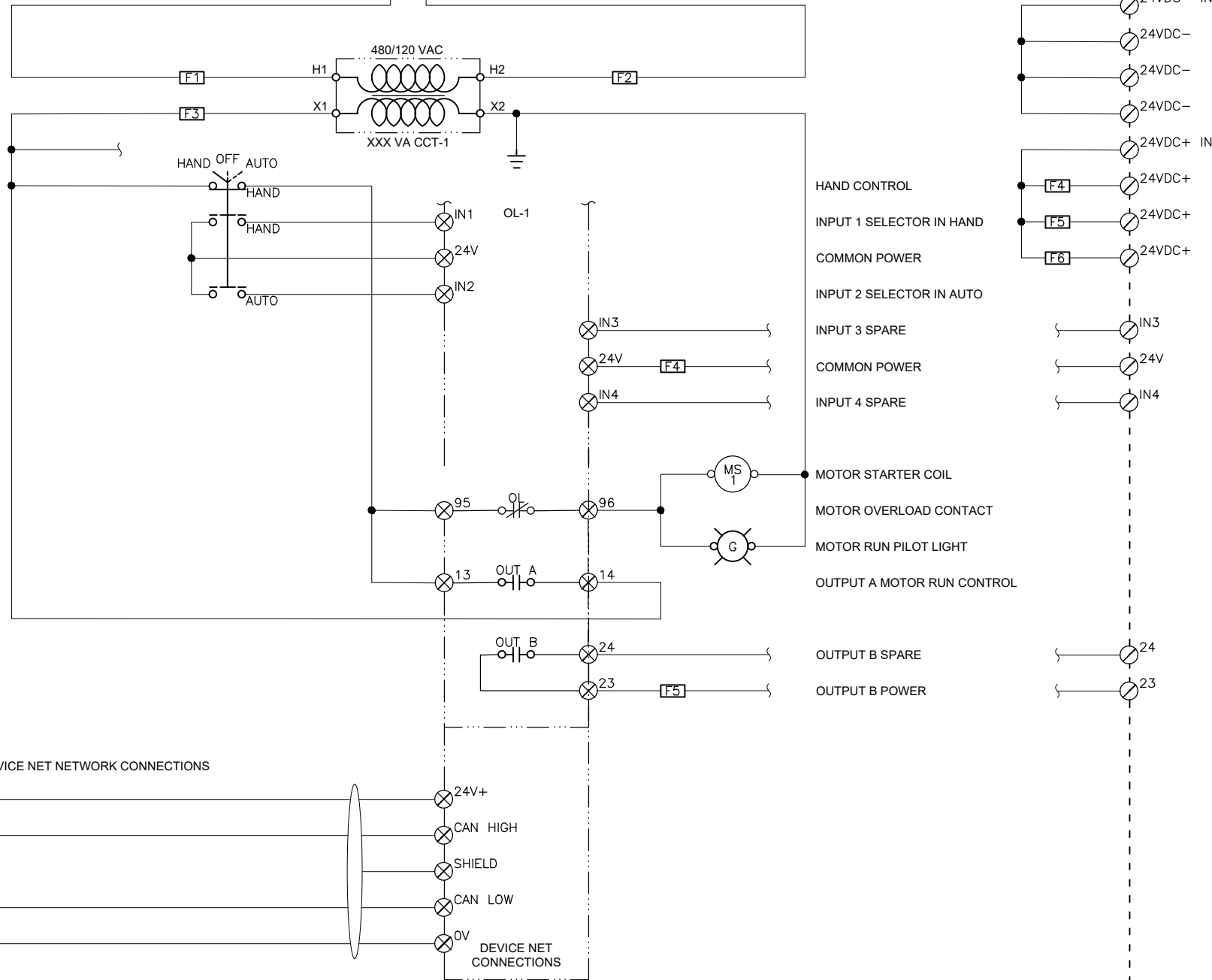
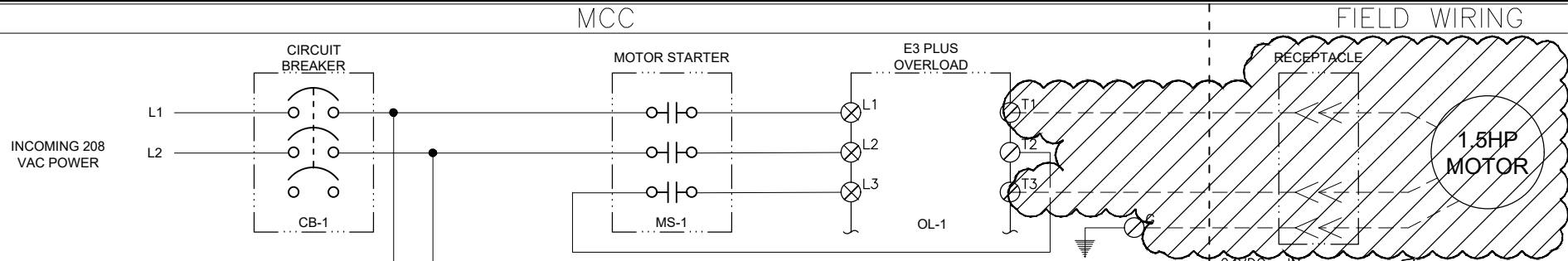


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

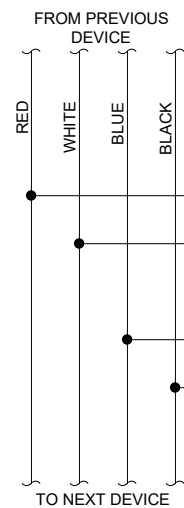
**WELL 04  
 SITE PLAN**

HORIZ SCALE: 1"=50' DATE: 04/2021 GRID: SW1134  
 VERT SCALE: N/A PROJ. ID.: W00011(WTR) SHEET 4-5 of 4-11



**NOTES:**

- 1 DEMOLISH HYPOCHLORITE PUMP AND MOTOR. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
- 2 DEMOLISH PUMP CONDUCTORS BACK TO MCC BUCKET AND RE-LABEL BUCKET AS SPARE. DEMOLISH RECEPTACLE AND RACEWAY BACK TO 120VAC RECEPTACLE AND PLUG UNUSED OPENING.



THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW004 IL-08

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
TOPOGRAPHY	---	---	---	---	---
PROFILE	---	---	---	---	---
SANITARY SEWER	---	---	---	---	---
STORM SEWER	---	---	---	---	---
PLAN	CHECK	---	---	---	---

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

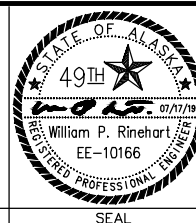
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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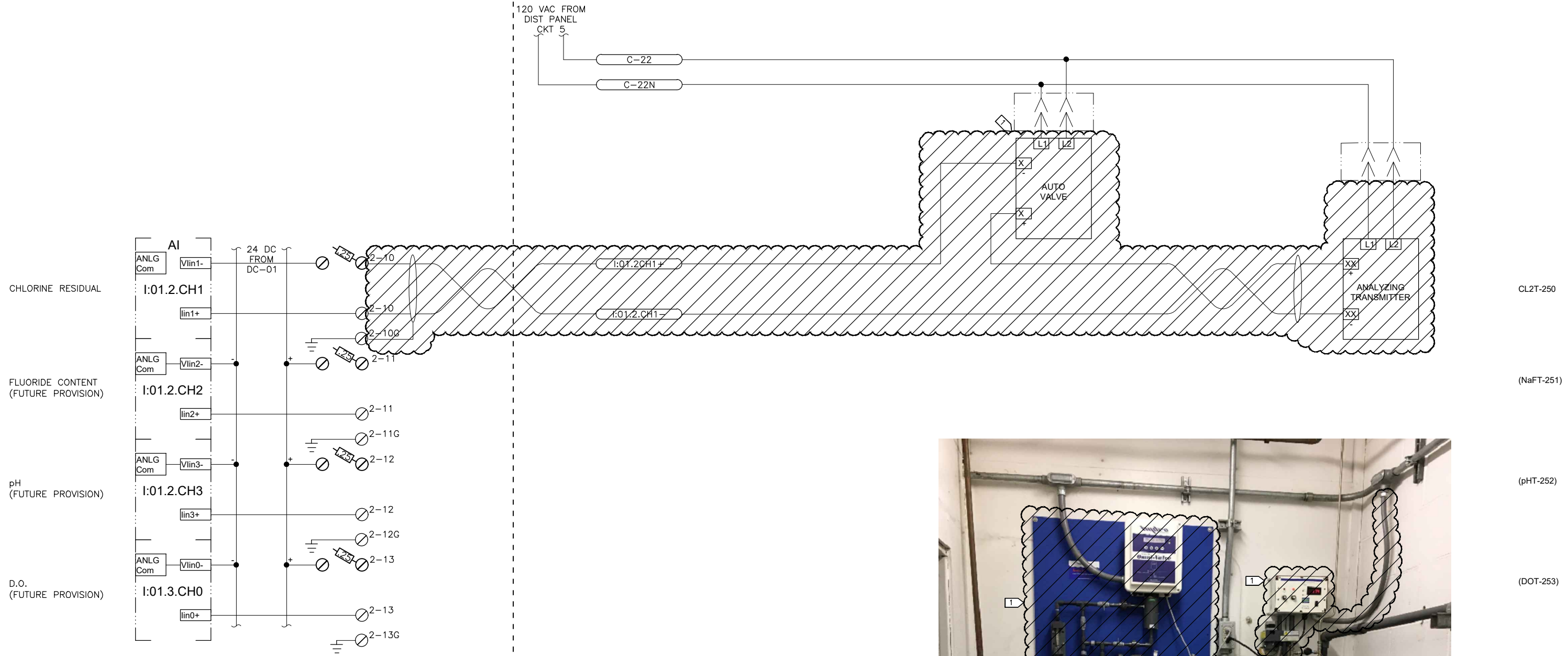
**Snowdweller Industrial, LLC**  
 901 E. Fireweed Lane  
 Anchorage, AK 99508  
 (907) 227-5039  
 www.firezone.com/snowdweller



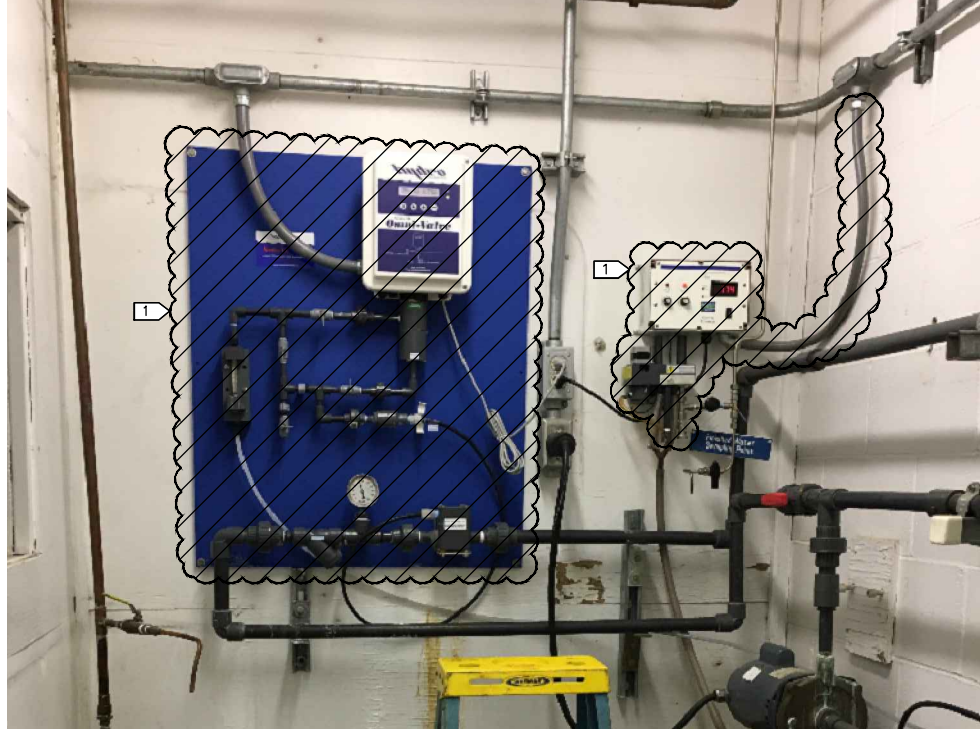
MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP DEMOLITION  
 WELL 04**

HORIZ SCALE: N/A  
 VERT SCALE: N/A  
 DATE: 07/2019  
 GRID: SW134  
 SHEET 4-6  
 PROJ. ID: WWO0011(WTR)  
 4-11



**NOTES:**  
 1 DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, AND AUTO VALVE BACKBOARD ASSEMBLY.



THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW004 IL-14

D:\pat\Documents\Snowdwell\AWWU\_2019\_ScADA\_Term\_Contract\C12\_Project\_Drawings\4-7\_Hypo\_System\_Demo.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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 DATE: \_\_\_\_\_

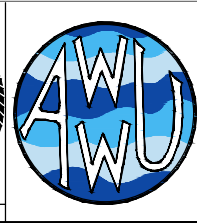
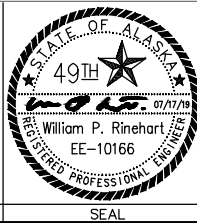
2. DATA TRANSFERRED BY: \_\_\_\_\_  
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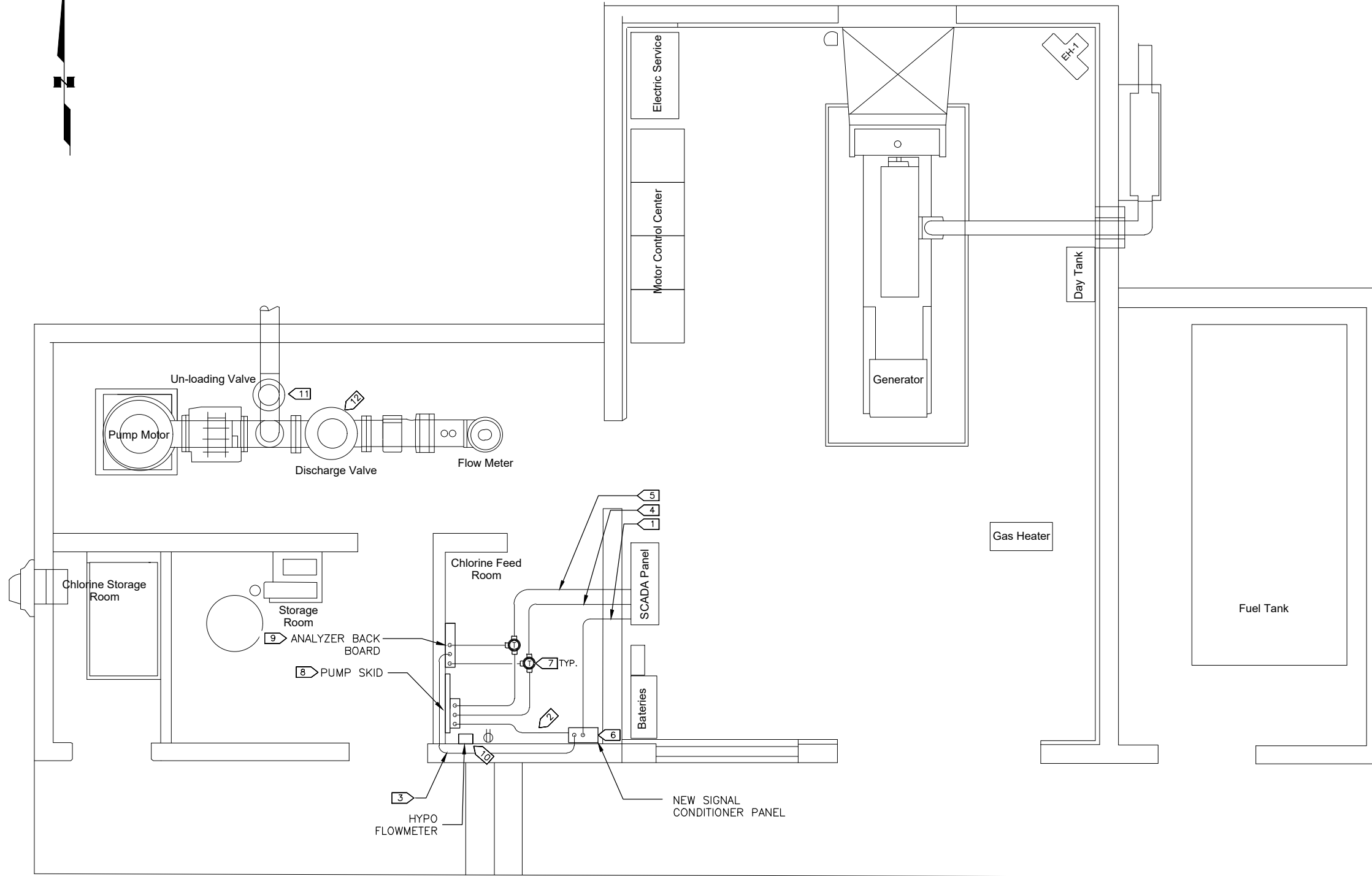
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 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 04**

HORIZ SCALE: N/A  
 VERT SCALE: N/A  
 DATE: 07/2019  
 GRID: SW1134  
 SHEET 4-7 of 4-11  
 PROJ. ID.: WW00011(WTR)

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\4-8 Conduit Diagram.dwg

AWWU PLAN SET NO. 11018



- NOTES:**
- 1 PROVIDE (2) EA. 2/C #18 TWSH IN 3/4" GRC FROM SCADA PANEL TO NEW SIGNAL CONDITIONER PANEL.
  - 2 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM NEW SIGNAL CONDITIONER PANEL TO CHLORINE ANALYZER.
  - 3 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM NEW SIGNAL CONDITIONER PANEL TO PUMP SKID.
  - 4 PROVIDE 8/C #16 CONTROL CONDUCTORS W/GND IN 3/4" FROM SCADA PANEL TO CHLORINE ANALYZER AND PUMP.
  - 5 PROVIDE 2 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO CHLORINE ANALYZER & PUMP.
  - 6 SEE SHEET 4-10 FOR SIGNAL CONDITIONER PANEL DETAILS.
  - 7 PROVIDE GUA TYPE CONDULET FITTINGS AS REQUIRED FOR COMPLETE RACE WAY SYSTEM.
  - 8 SEE NOTE 1 ON SHEET 4-9.
  - 9 SEE NOTE 1 ON SHEET 4-8.
  - 10 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET SHOWN ON DETAIL 2 OF SHEET G11. RELOCATE CONDUITS AND WIRING TO NEW LOCATION.
  - 11 REWORK CONDUIT AND WIRING AT UNLOADING VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.
  - 12 RE-WORK CONDUIT AND WIRING AT DISCHARGE VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.

**1 WELL 4 ELECTRICAL PLAN**

2020/06/30 3:26 PM By: Pat

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

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 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

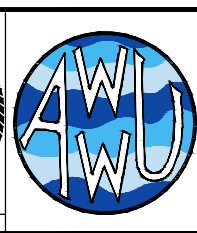
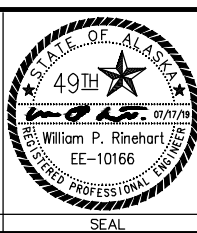
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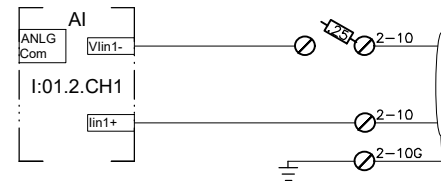
MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

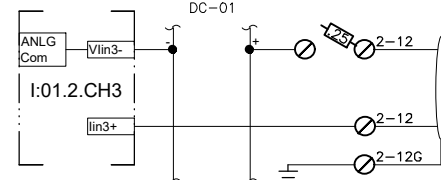
**CONDUIT DIAGRAM (NEW WORK)  
 WELL 04**

HORIZ SCALE: N/A DATE: 07/2019 GRID: SW1134 SHEET 4-8 of 4-11  
 VERT SCALE: N/A PROJ. ID.: WWO0011(WTR)

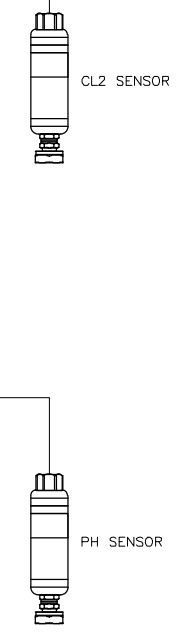
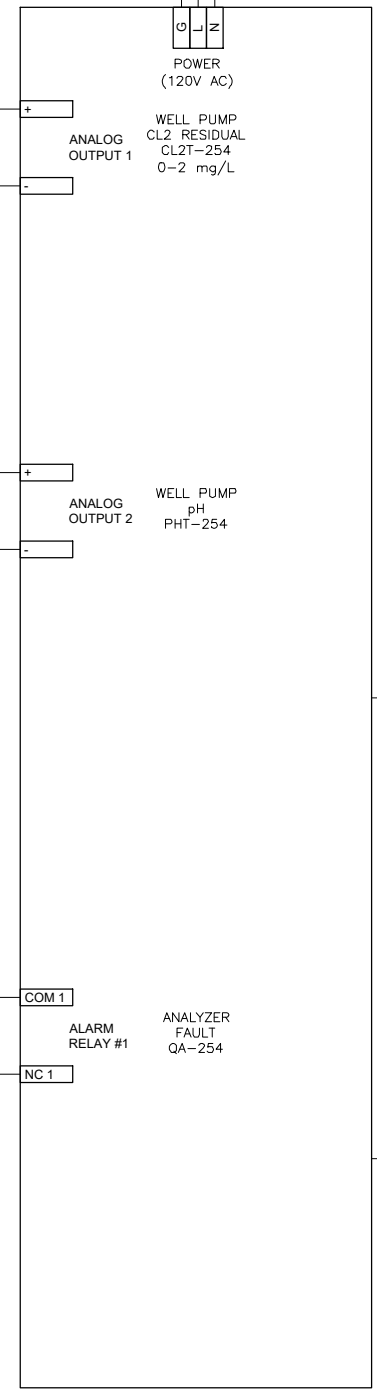
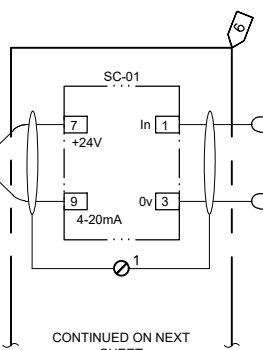
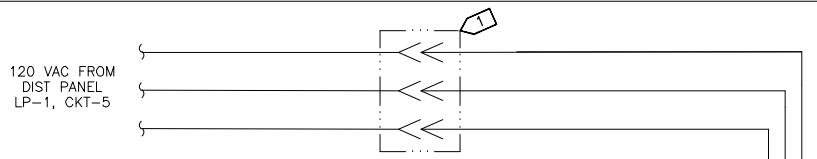
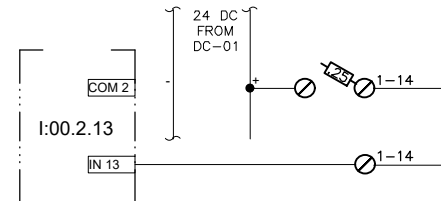
WELL PUMP CL2 RESIDUAL



WELL PUMP pH



ANALYZER FAULT



- NOTES:**
- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
  - 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
  - 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SIGNAL CONDITIONER TO PLC.
  - 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
  - 5 PROVIDE NEW 2/C #18 TWSH IN GRC FROM PUMP TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
  - 6 PROVIDE NEW SIGNAL CONDITIONER PANEL AS SHOWN ON SHT. 4-10.
  - 7 PROVIDE 2/C #18 TWSH IN GRC FROM ANALYZER TO SIGNAL CONDITIONER.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\4-9 C12 Analyzer.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY			TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL DESIGN		
			QUANTITIES		
			MUN. FINAL CHECK		
PLAN CHECK			REVISIONS		

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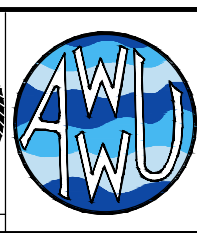
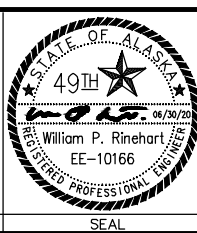
2. DATA TRANSFERRED BY: \_\_\_\_\_  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CL2 RESIDUAL ANALYZER  
 WELL 04**

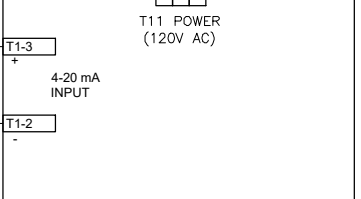
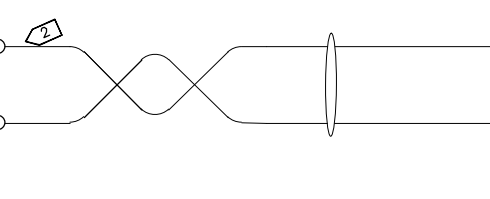
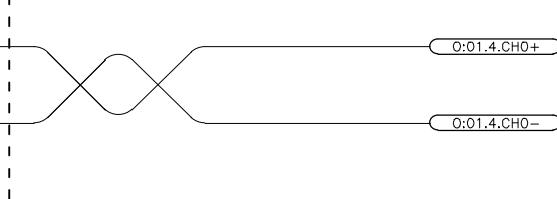
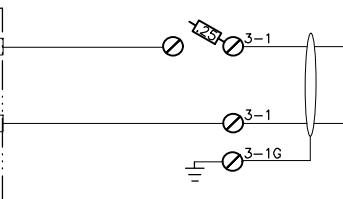
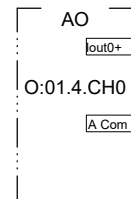
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 VERT SCALE: N/A  
 DATE: 06/2020  
 GRID: SW1134  
 PROJ. ID.: WWO0011(WTR)

4-9  
 of 4-11

EXISTING SCADA PANEL

FIELD WIRING

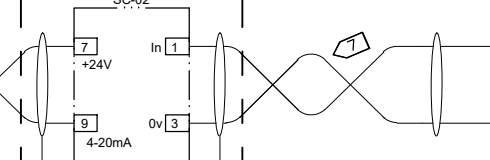
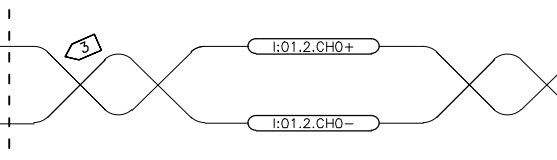
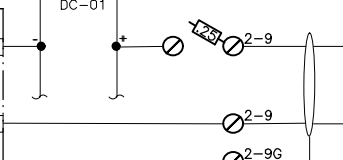
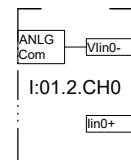
DOSING PUMP SPEED COMMAND



HYPOCHLORITE DOSING PUMP SPEED COMMAND SC-254 0-100%

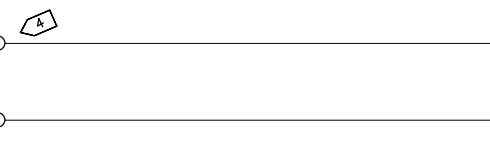
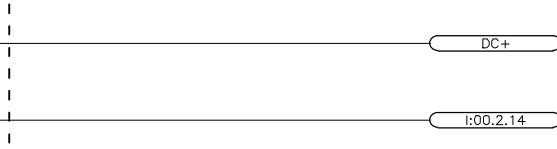
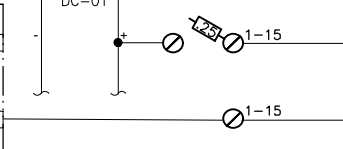
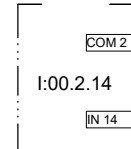
- NOTES:
- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
  - 2 PROVIDE 2/C #18 TWSH IN GRC TO FROM PLC ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LFMC AT PUMP.
  - 3 PROVIDE 2/C #18 TWSH SIGNAL FROM SIGNAL CONDITIONER TO SCADA PLC ANALOG INPUT.
  - 4 PROVIDE 2/C #16 IN GRC FROM PUMP TO PLC DISCRETE INPUT.
  - 5 PROVIDE 2/C #16 IN GRC FROM SCADA PLC RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.
  - 6 PROVIDE SIGNAL CONDITIONER PANEL AS SHOWN ON SHT. 4-10
  - 7 PROVIDE 2/C #18 TWSH IN GRC FROM DOSING PUMP TO SIGNAL CONDITIONER PANEL.

DOSING PUMP SPEED FEEDBACK



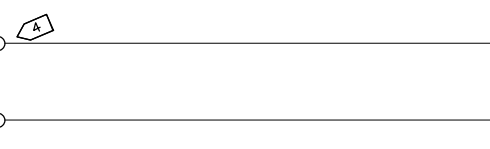
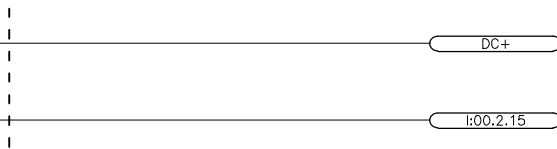
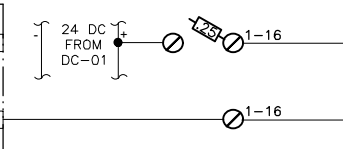
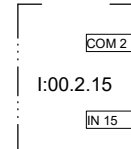
HYPOCHLORITE DOSING PUMP SPEED FEEDBACK SI-254 0-100%

DOSING PUMP RUNNING



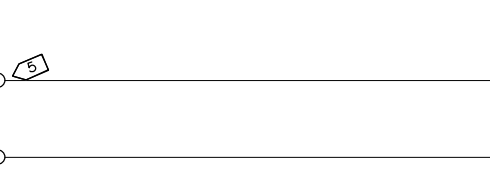
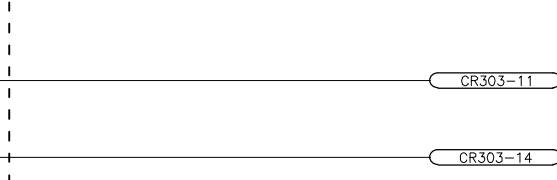
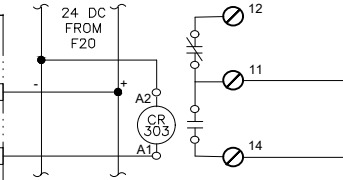
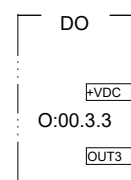
DOSING PUMP RUNNING YL-254

DOSING PUMP FAULT



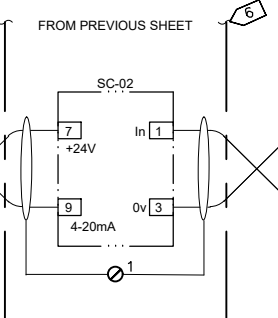
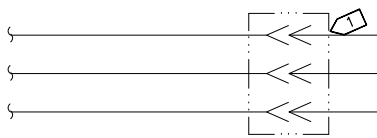
DOSING PUMP FAULT YA-254

DOSING PUMP RUN COMMAND



DOSING RUN COMMAND RC-254

120 VAC FROM DIST PANEL LP-1, CKT-5



BLUE-WHITE MD-3 DOSING PUMP

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\4-10 Dosing Pump.dwg

AWWU PLAN SET NO. 11018

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY			TELEPHONE						
PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN						
			QUANTITIES						
			MUN. FINAL CHECK						
PLAN CHECK									

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

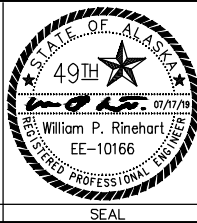
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 (907) 227-5039  
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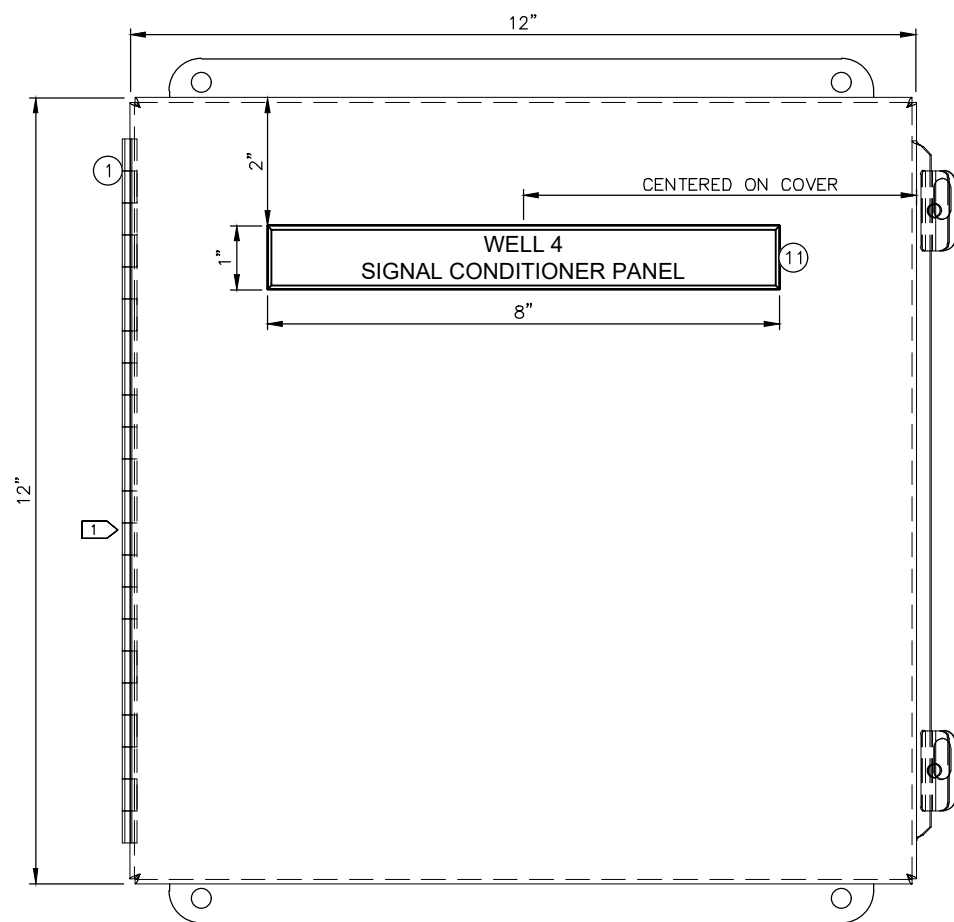
MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE DOSING PUMP  
 WELL 04**

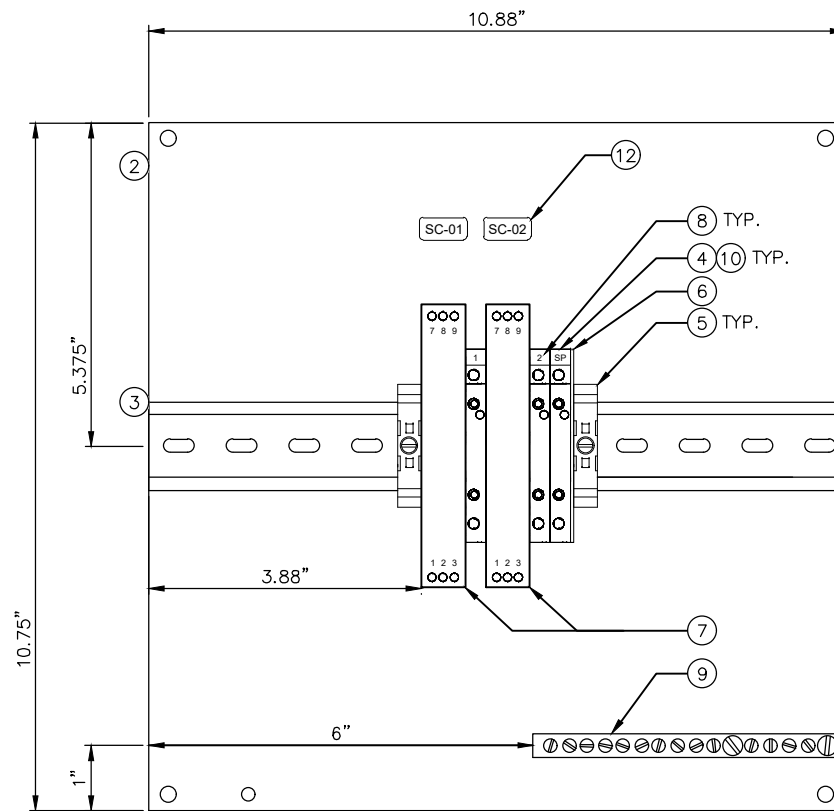
HORZ SCALE: N/A DATE: 07/2019 GRID: SW1134 SHEET 4-10  
 VERT SCALE: N/A PROJ. ID.: WWO0011(WTR) 4-11

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\4-11 Signal Conditioner.dwg

AWWU PLAN SET NO. 11018



**1** SIGNAL CONDITIONER PANEL - EXTERIOR LAYOUT  
NTS



**2** SIGNAL CONDITIONER PANEL - INTERIOR LAYOUT  
NTS

**NOTES:**

1 PROVIDE NRTL LISTED ASSEMBLY FOR NON-HAZARDOUS LOCATION IN ACCORDANCE WITH UL508A AND PROJECT SPECIFICATION 40 95 13.

**BILL OF MATERIAL**

ITEM #	QTY.	U.O.M.	MANUFACTURER	DESCRIPTION	CATALOG NUMBER
1	1	EA.	HOFFMAN	ENCLOSURE, STAINLESS STEEL, NEMA 4X	A1212CHNFSS
2	1	EA.	HOFFMAN	BACK PANEL, PAINTED STEEL	A12P12G
3	2	FT.	ALLEN-BRADLEY	DIN RAIL, 35MM	199-DR1
4	3	EA.	ALLEN-BRADLEY	TERMINAL BLOCK, FEED THROUGH	1492-J3
5	2	EA.	ALLEN-BRADLEY	END ANCHORS	1492-EAJ35
6	1	EA.	ALLEN-BRADLEY	END BARRIER FOR 1492-J3 TERMINAL	1492-EBJ3
7	2	EA.	ALLEN-BRADLEY	PASSIVE CONVERTER SIGNAL CONDITIONER, OUTPUT LOOP POWERED	931S-C1A2D-0P
8	1	EA.	ALLEN-BRADLEY	MARKER CARD, "1-20" HORIZONTAL PRINT	1492-M5x5 H 1-20
9	1	EA.	SQUARE D	GROUNDING BAR	PK9GTA
10	3	EA.	BUSSMAN	FAST ACTING FUSE, 2 AMP, 5 X 20 mm, GLASS TUBE FUSE	GMA-2-R
11	1	EA.	FABRICATOR	LABEL, 1" X 8" PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND, 1ST LINE - "WELL XX" 2ND LINE - "SIGNAL CONDITIONER PANEL"	N/A
12	2	EA.	FABRICATOR	BRADY TYPE LABELS, "SC-01" & "SC-02"	N/A

2020/06/30 3:40 PM By: Pat

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0  1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN CHECK				REVISIONS			

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.

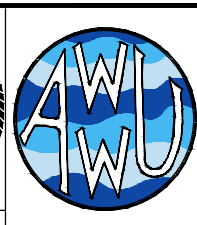
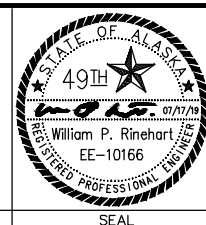
DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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**Snowdwell Industrial, LLC**

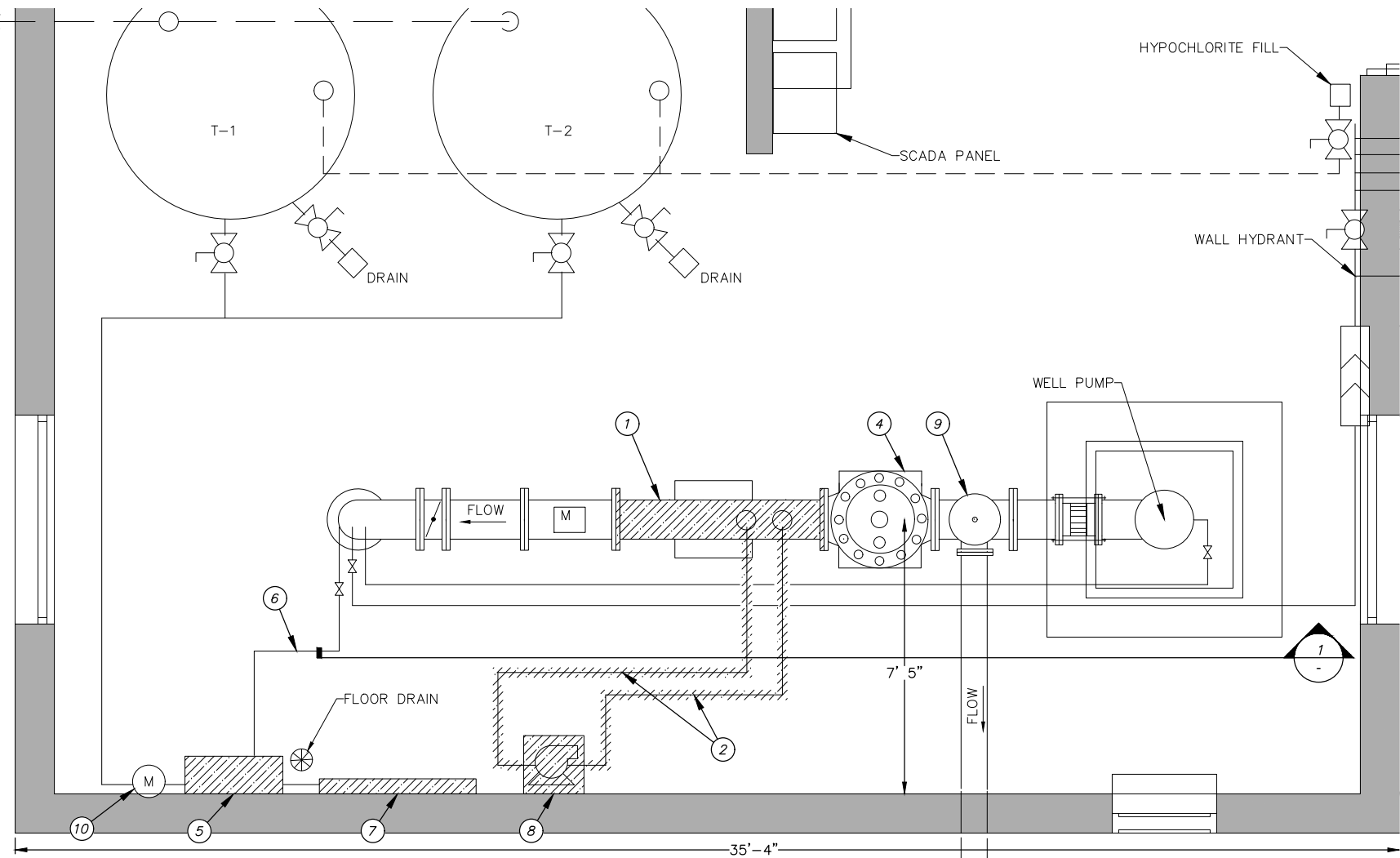
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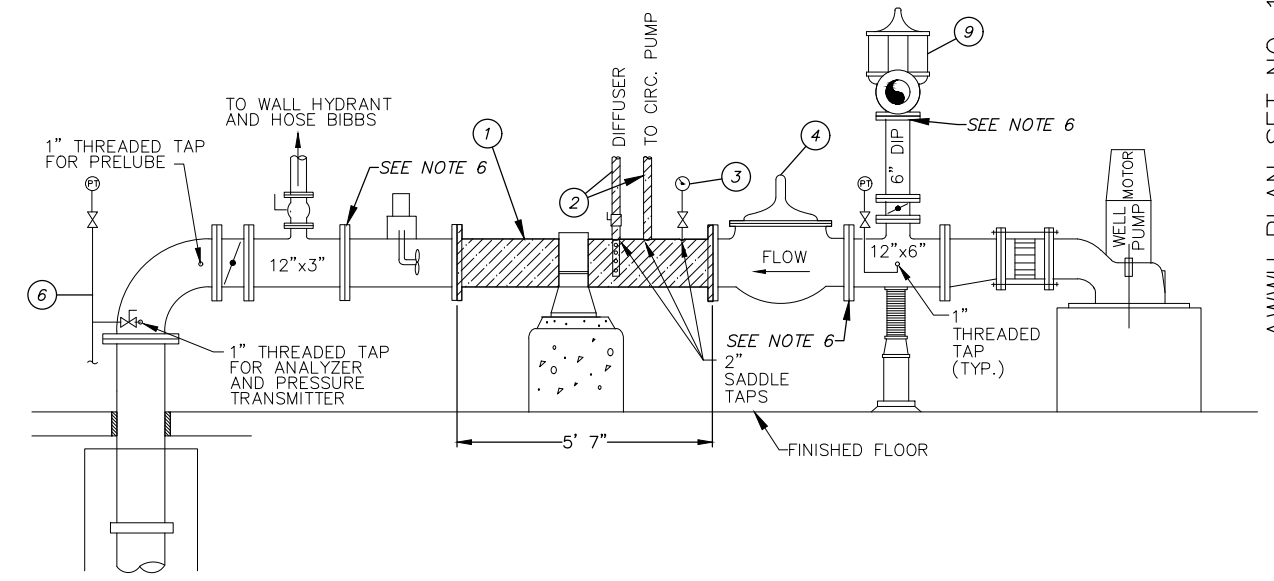
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SIGNAL CONDITIONER PANEL  
 WELL 04**

HORIZ SCALE: N/A  
 VERT SCALE: N/A  
 DATE: 07/2019  
 GRID: SW1134  
 SHEET 4-11 of 4-11  
 PROJ. ID.: WWO0011(WTR)



(A) WELL 7 PLAN VIEW

NOT TO SCALE

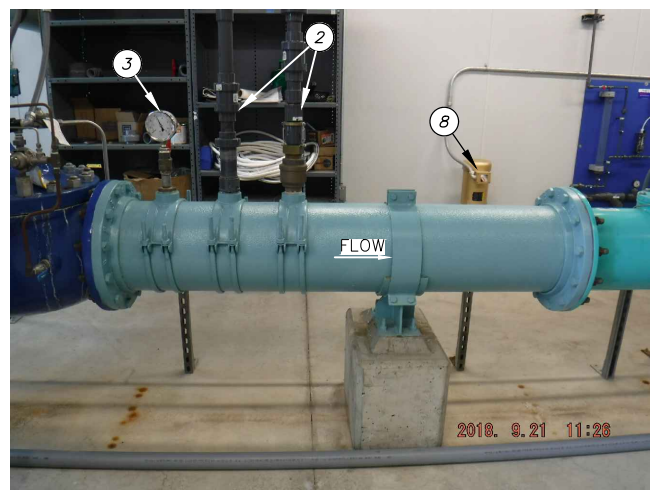


(1) WELL 7 - SECTION VIEW

NOT TO SCALE

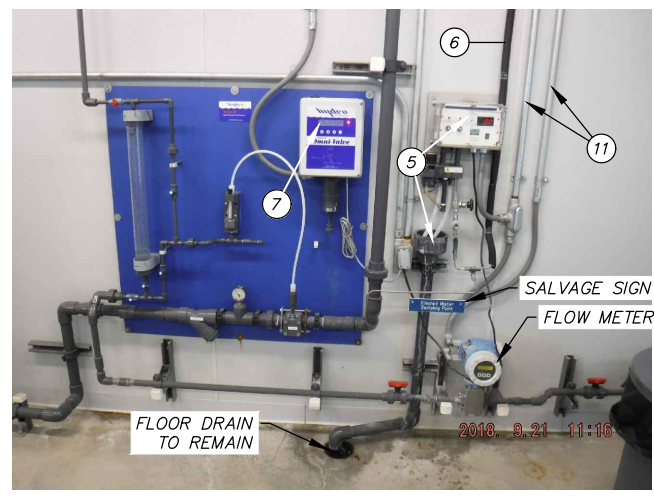
DEMOLITION CALLOUTS

- (1) REMOVE AND DISPOSE OF 12" DIP SPOOL. 12" PIPE SUPPORT TO REMAIN AND BE REUSED
- (2) REMOVE AND DISPOSE OF 1-1/2" SCH 80 PVC PIPE FROM 12" DIP TO FLOW METER. SEE DETAILS B AND D
- (3) REMOVE 2" PRESSURE GAUGE. SEE DETAIL B
- (4) 12" PRV AND HARNESSING TO BE PROTECTED IN PLACE
- (5) REMOVE AND DISPOSE OF EXISTING CHLORINE ANALYZER AND APPURTENANCES. SEE DETAIL C
- (6) EXISTING 1/4" STAINLESS STEEL PIPING TO REMAIN
- (7) REMOVE EXISTING SKID, CONDUIT, MOUNTING BRACKETS, AND ELEC. SEE NOTE 2
- (8) REMOVE EXISTING HYPOCHLORITE CIRCULATION PUMP INCLUDING ELECTRICAL SUPPLY AND PLATFORM. SEE NOTE 2
- (9) 6" PRV AND HARNESSING TO BE PROTECTED IN PLACE
- (10) EXISTING FLOW METER TO REMAIN. SEE SHEET 7-3, ITEM 5
- (11) EXISTING ELECTRIC AND SCADA TO REMAIN. SEE SHEETS 7-3 TO 7-7 AND DETAIL C



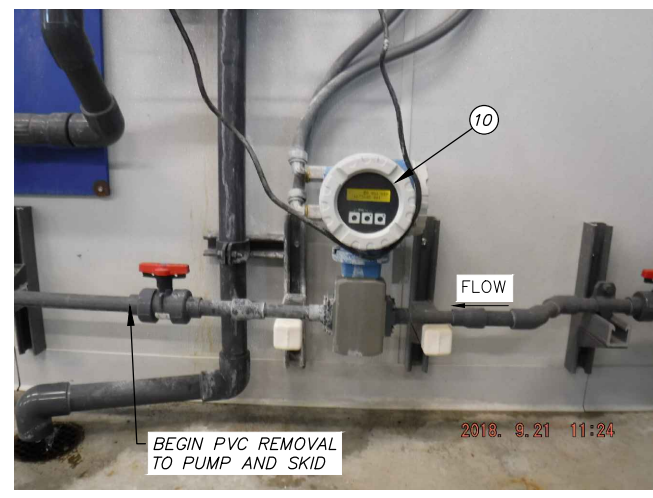
(B) MECHANICAL DEMOLITION

NOT TO SCALE



(C) EXISTING WATER TREATMENT DEMOLITION

NOT TO SCALE



(D) EXISTING FLOW METER DEMOLITION

NOT TO SCALE

DEMOLITION NOTES

1. CONTRACTOR SHALL MEASURE AND VERIFY LENGTH OF THE EXISTING SPOOL TO BE REMOVED PRIOR TO DISASSEMBLY.
2. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS TO BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
3. EXISTING UNI-STRUT AND OTHER HARDWARE TO BE REMOVED IN SUCH A MANNER TO PREVENT DAMAGE AND SALVAGED FOR REUSE IF REQUESTED BY THE OWNER.
4. EXISTING ELECTRICAL CONDUIT AND WIRING TO BE REMOVED FOR RELOCATION AS NEEDED TO ACCOMMODATE PROPOSED EQUIPMENT. SEE SHEETS 7-3 - 7-7 FOR PROPOSED ELECTRICAL.
5. EXISTING SCADA TO BE REMOVED AND REPLACED WHERE ASSOCIATED EQUIPMENT IS BEING REMOVED. SEE SHEETS 7-3 - 7-7 FOR PROPOSED SCADA.
6. EXISTING BOLTS AND ASSOCIATED HARDWARE SHALL BE REPLACED WITH 316 STAINLESS STEEL WHERE IDENTIFIED AND ON ANY PIECE OF EQUIPMENT REMOVED DURING CONSTRUCTION.

2021/03/26 8:06 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\W00011WTR\_WELL-7.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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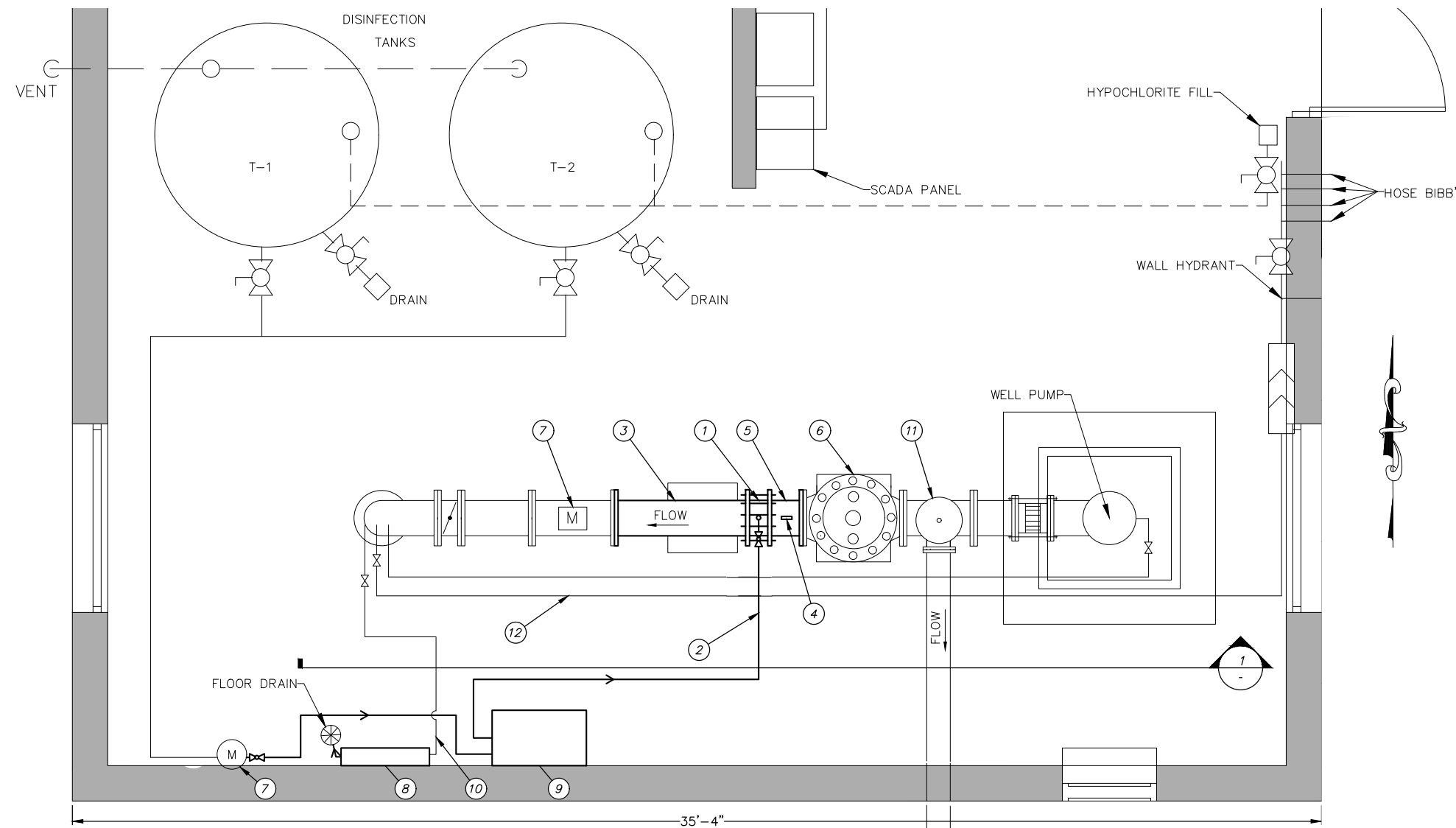
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

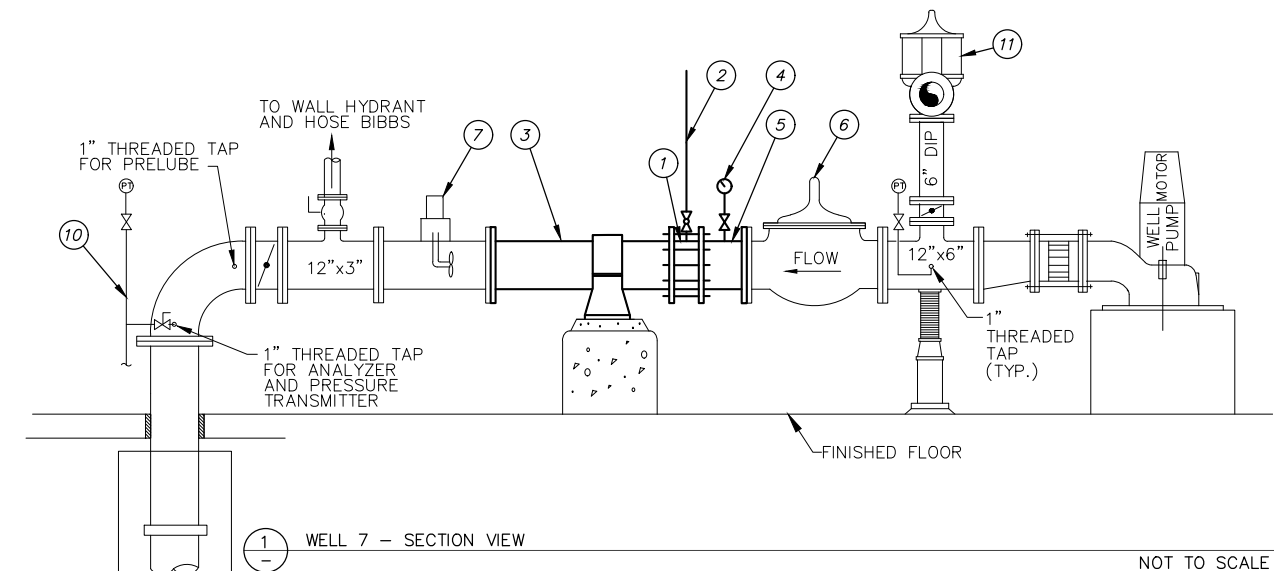
**WELL 7  
 DEMOLITION PLAN AND SECTION**

HORZ SCALE: NTS DATE: 04/2021 GRID: SW1731 SHEET 7-1 of 7-7  
 VERT SCALE: NTS PROJ. ID: W00011(WTR)





WELL 7 PLAN VIEW NOT TO SCALE



WELL 7 - SECTION VIEW NOT TO SCALE

**CONSTRUCTION CALLOUTS**

- 1 FURNISH AND INSTALL STATIC MIXER. SEE TABLE 7-1 FOR DETAILS
- 2 FURNISH AND INSTALL 1/2" DIA CPVC PIPE FROM STATIC MIXER RING TO PUMP SKID. SEE NOTE 6
- 3 FURNISH AND INSTALL NEW ±46" SPOOL OF 12" FLANGED DIP. EXISTING PIPE SUPPORT TO BE REUSED. NEW BOLTS AND HARDWARE SHALL BE 316 STAINLESS STEEL. SEE TABLE 7-1 FOR DETAILS
- 4 FURNISH AND INSTALL NEW PRESSURE GAUGE WITH NEW 316 STAINLESS STEEL FITTINGS AND BALL VALVE. CONTRACTOR TO VERIFY SIZE. SEE TABLE 7-1
- 5 FURNISH AND INSTALL NEW ±12" SPOOL OF 12" FLANGED DIP. SEE TABLE 7-1 FOR DETAILS
- 6 FURNISH 12" PRV REBUILD KIT. SEE SHEET G10 FOR DETAILS
- 7 EXISTING FLOW METER TO REMAIN. PROTECT IN PLACE
- 8 FURNISH AND INSTALL NEW CHEMICAL ANALYZER. INSTALL DISCHARGE A MINIMUM OF 2' AWAY FROM ELECTRICAL. SEE SHEET G8
- 9 FURNISH AND INSTALL NEW PUMP SKID. SEE SHEET G9
- 10 CONNECT TO EXISTING STAINLESS STEEL PIPING. FURNISH AND INSTALL 1/4" 316 STAINLESS STEEL TUBING TO CHEMICAL ANALYZER. FURNISH AND INSTALL REQUISITE FITTINGS FOR CONNECTING TO EXISTING TUBING
- 11 FURNISH 6" PRV REBUILD KIT. SEE SHEET G10 FOR DETAILS
- 12 EXISTING COPPER TO REMAIN. PROTECT IN PLACE

**CONSTRUCTION NOTES**

1. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
2. EXISTING PRV'S SHALL BE LEFT IN-PLACE AND MADE AVAILABLE FOR REBUILD BY THE OWNER WITH CONTRACTOR FURNISHED MATERIAL AS IDENTIFIED ON THE SCHEDULE OF EQUIPMENT IN TABLE 7-1 AND TABLE 1-2 SHEET G10. NO ADDITIONAL TIME WILL BE PROVIDED FOR COORDINATION WITH THE OWNER.
3. SEE SHEETS 7-3 - 7-7 FOR PROPOSED ELECTRICAL WORK.
4. SEE SHEETS 7-3 - 7-7 FOR PROPOSED SCADA WORK
5. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4-FT WITHOUT SUPPORT.
6. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH, CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
7. ADJUST EXISTING ELECTRICAL TO ACCOUNT FOR NEW CHEMICAL TREATMENT CONTROLS AND EQUIPMENT AS DIRECTED BY THE ENGINEER AND AS SHOWN ON SHEETS 7-3 - 7-7 FOR PROPOSED SCADA WORK.
8. SEE TABLE 7-1 FOR A DETAILED LIST OF EQUIPMENT.
9. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
10. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
11. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
12. FLOW METER WILL NOT BE INSTALLED UNDER HYPOCHLORITE PIPING OR EQUIPMENT.

TABLE 7-1 SECTION 60.02 MECHANICAL EQUIPMENT LIST: PIPE

NOMENCLATURE	MATERIAL TYPE	SIZE (IN)	LENGTH (IN)	END DETAIL	REMARKS	QUANTITY
SPOOL	DI	12	±46	FLANGED	EPOXY COATED	1
SPOOL	DI	12	±12	FLANGED	EPOXY COATED. PROVIDE TAP FOR PRESSURE GAUGE	1
PRESSURE GAUGE	X141	2 1/2	-	-	CLA-VAL PART NO. 20534311J PRESSURE RANGE 0-160 (PSI)	1
STATIC MIXER	PTFE	12	-	PLAIN	SULZER COMPAX OR EQUAL SULZER QUOTE 9062448-0 ITEM 4.2	1
BALL VALVE	SS	1/4	-	-	316 STAINLESS STEEL BODY AND BALL	1
BALL VALVE	CPVC	1/2	-	-	SCH 80 VENTED/BLEACHED TRUE UNION	2
BALL VALVE	SS	-	-	-	316 STAINLESS STEEL BODY AND BALL CONTRACTOR TO VERIFY SIZE	1

**TABLE 7-1 NOTES:**

ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE (WELL NO. 07)

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	KMG	DAK	TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL		
			DESIGN	KMG	DAK
			QUANTITIES	KMG	DAK
			MUN. FINAL CHECK		
			PLAN		
			CHECK		
			REVISIONS		

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

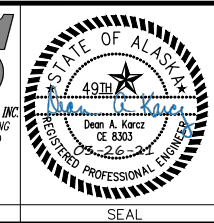
1. DATA PROVIDED BY: \_\_\_\_\_  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 07  
 CONSTRUCTION PLAN AND SECTION**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW1731  
 VERT SCALE: NTS SHEET 7-2 of 7-7  
 PROJ. ID.: WW00011(WTR)

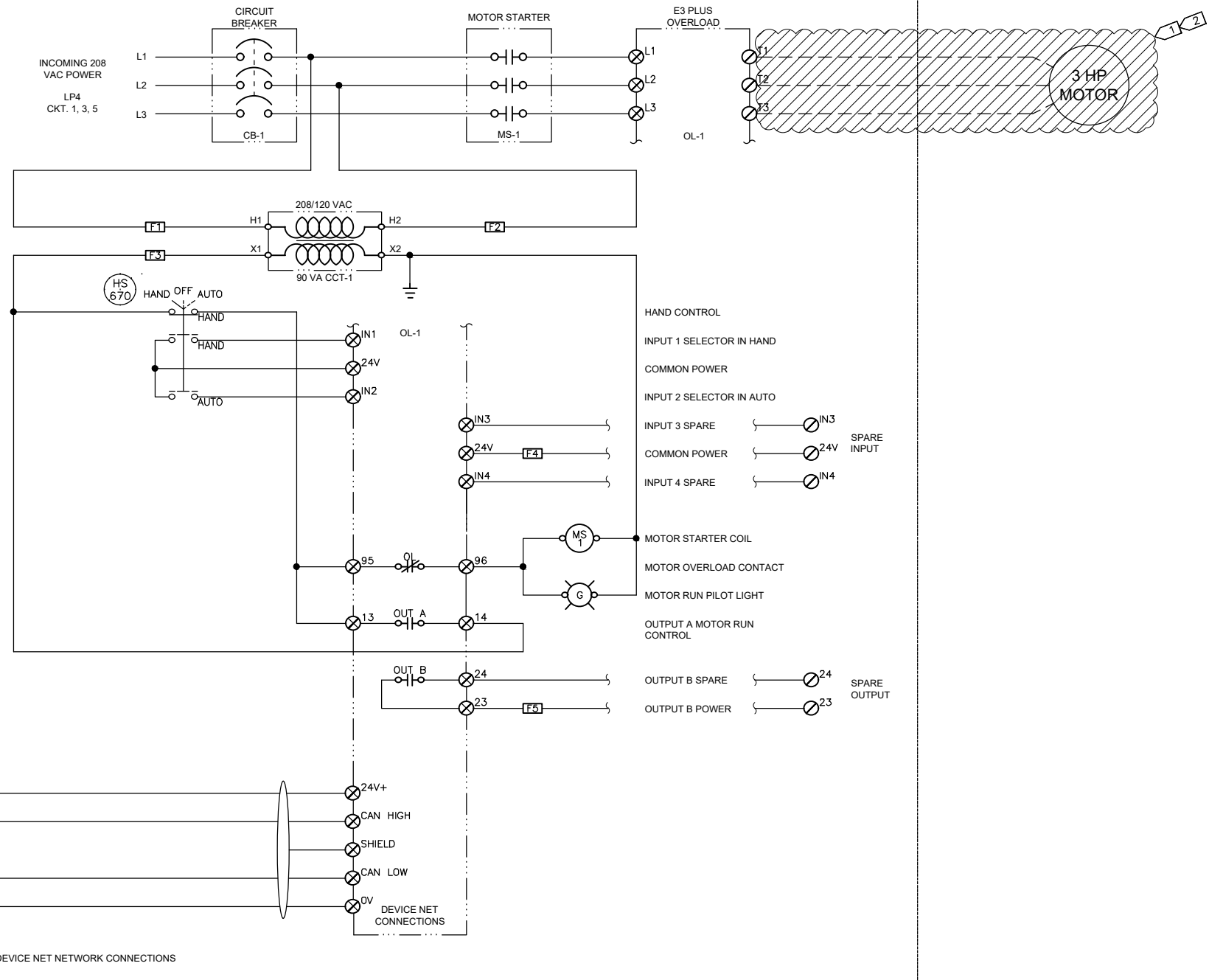
2021/03/26 8:06 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\WW00011WTR\_WELL-7.dwg

MCC

FIELD WIRING

NOTES:

- 1 DEMOLISH CIRCULATION PUMP AND MOTOR. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
- 2 DEMOLISH CIRCULATION PUMP CONDUCTORS BACK TO MCC BUCKET AND RE-LABEL BUCKET AS SPARE. DEMOLISH RACEWAY BACK TO RECEPTACLE ON SOUTH WALL AND PLUG UNUSED OPENING.
- 3 DEMOLISH AUTO-VALVE BACKBOARD ASSEMBLY. SEE MECHANICAL FOR FURTHER INFORMATION.
- 4 DEMOLISH CHLORINE RESIDUAL ANALYZER.
- 5 REMOVE FLOWMETER AND REINSTALL AS SHOWN ON SHEET G-11 DETAIL 2. FLOWMETER SHALL NOT BE INSTALLED UNDER HYPOCHLORITE EQUIPMENT.



THIS SHEET SUPERCEDES PLAN SET 8995, DRAWING DSW007 IL-08

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\7-3 Hypo Pump Demod.dwg

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DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---		
	---	---	DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN CHECK				REVISIONS			

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

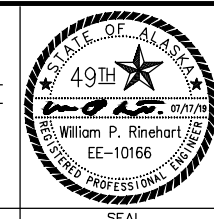
3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
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 COMPANY: \_\_\_\_\_  
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**Snowdwell Industrial, LLC**

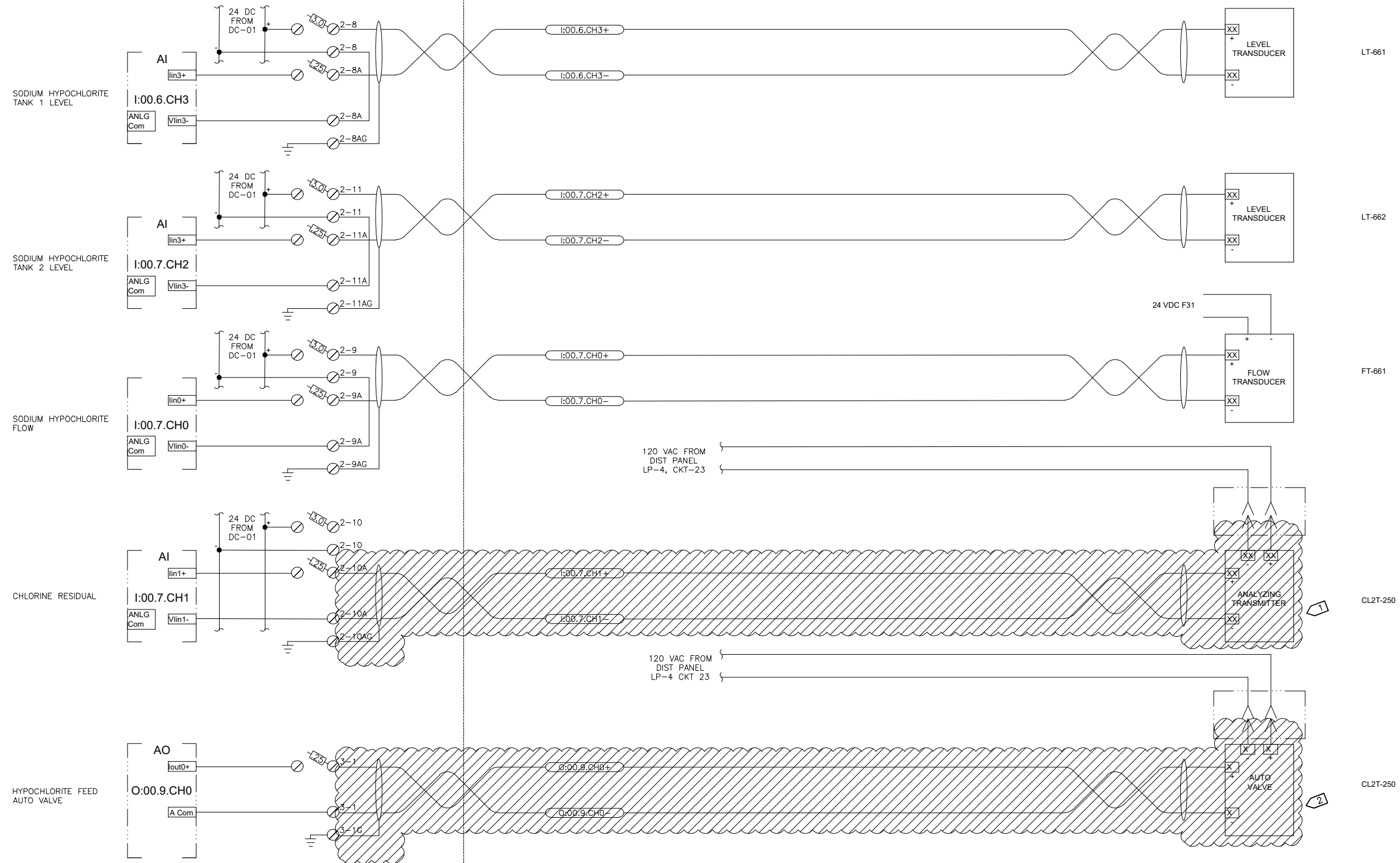
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP P-2 DEMOLITION  
 WELL 07**

HORIZ SCALE: N/A  
 VERT SCALE: N/A  
 DATE: 07/2019  
 GRID: SW1731  
 SHEET 7-3 of 7-7  
 PROJ. ID: WWO0011(WTR)



NOTES:

- DEMOLISH CHLORINE RESIDUAL ANALYZER/TRANSMITTER. SEE DWG. SHT.7-6 FOR NEW WIRING. DEMOLISH RACEWAY BACK TO CONDULET TEE FITTING AND PLUG UNUSED OPENING. REMOVE OUT OF SERVICE TWSH CABLE.
- DEMOLISH AUTO VALVE BACKBOARD ASSEMBLY. SEE DWG. SHT.7-5 FOR NEW WIRING. DEMOLISH RACEWAY BACK TO CONDULET TEE FITTING AND PLUG UNUSED OPENING. REMOVE OUT OF SERVICE TWSH CABLE.

THIS SHEET SUPERCEDES PLAN SET 8995, DRAWING DSW007 IL-09

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\7-4 Hypo System Demo.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---
	---	---	DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
PLAN CHECK			REVISIONS		

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

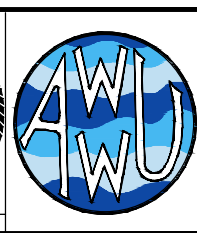
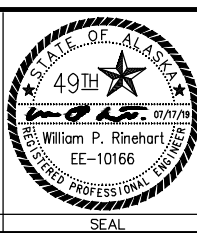
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ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
**HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 07**

HORZ SCALE: N/A  
 VERT SCALE: N/A  
 PROJ. ID.: WWC0011(WTR)

DATE: 07/2019  
 GRID: SW1731

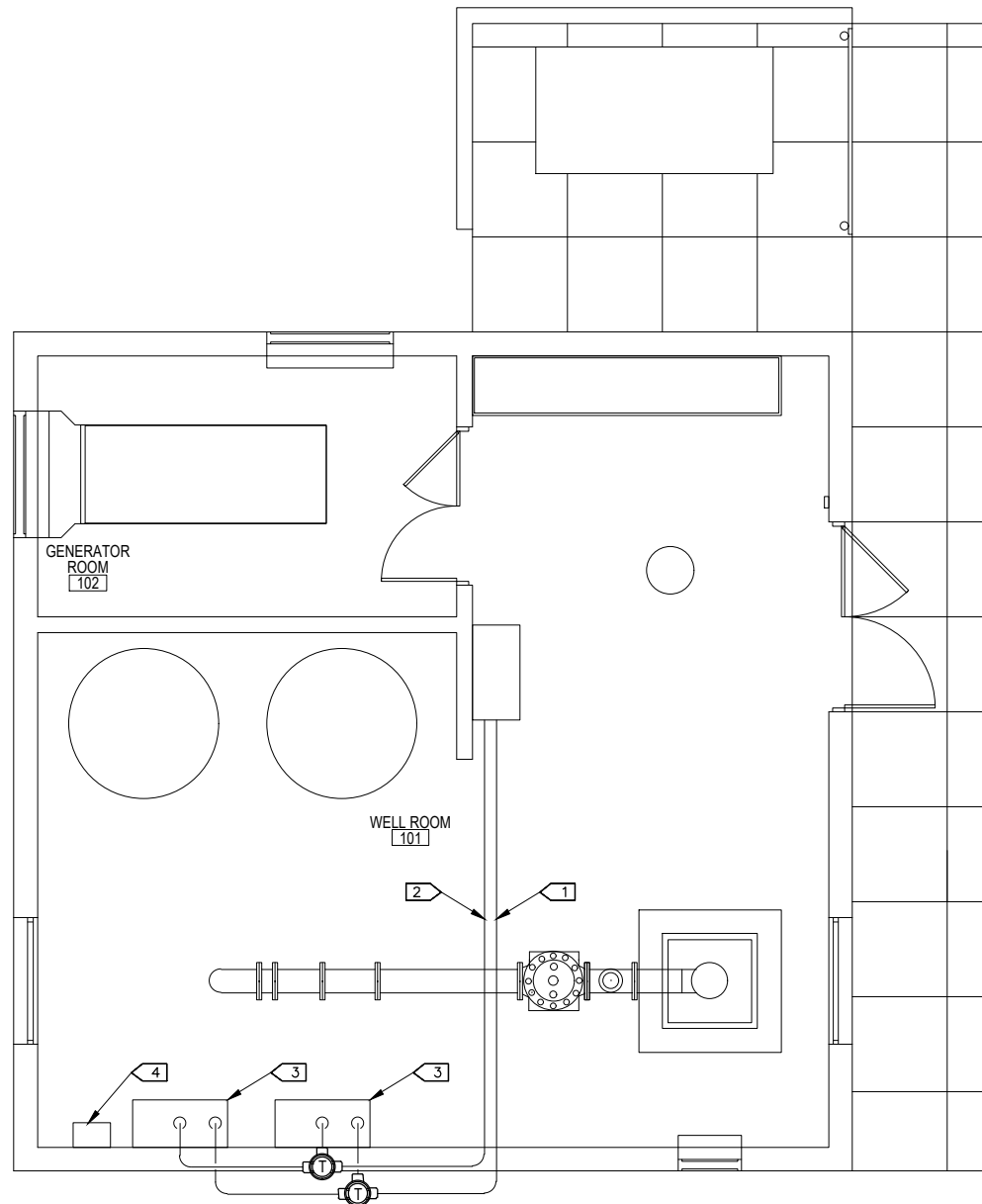
CONSULTANT SEAL SHEET 7-4 of 7-7

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\7-5 Conduit Diagram.dwg

2020/06/30 3:45 PM By: Pat



- NOTES:**
- 1 PROVIDE 8/C #16 CONTROL CONDUCTORS IN 3/4" GRC FROM SCADA PANEL TO NEW ANALYZER AND PUMP.
  - 2 PROVIDE 3 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO NEW EQUIPMENT.
  - 3 TRANSITION TO LFMC AT EQUIPMENT.
  - 4 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET SHOWN ON DETAIL 2 OF SHEET G11.



1 WELL 7 ELECTRICAL PLAN

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	PLAN	CHECK			REVISIONS

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

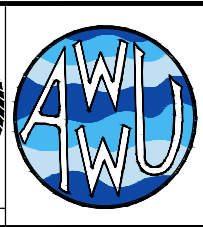
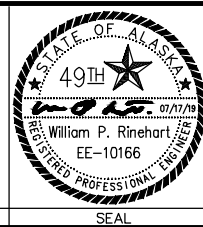
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**CONDUIT DIAGRAM (NEW WORK)  
 WELL 07**

HORIZ SCALE: N/A	DATE: 07/2019	GRID: SW1731	SHEET 7-5
VERT SCALE: N/A			7-7

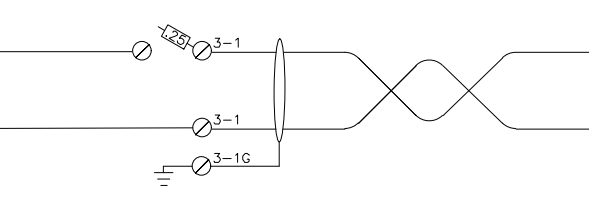
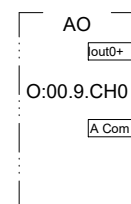
PROJ. ID.: WWO0011(WTR)



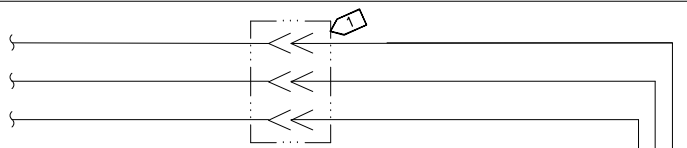
EXISTING SCADA PANEL

FIELD WIRING

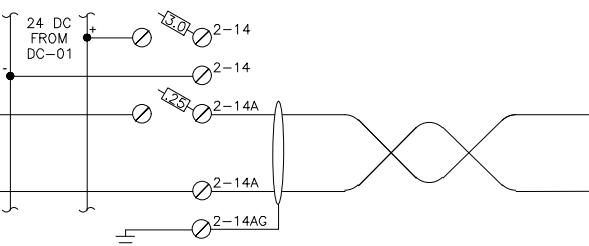
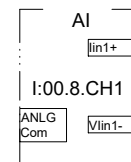
DOSING PUMP SPEED COMMAND



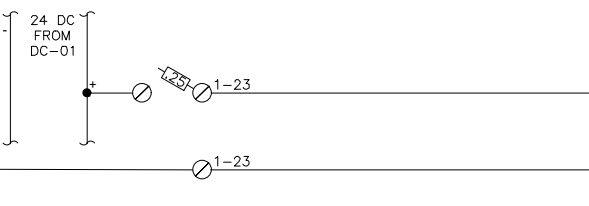
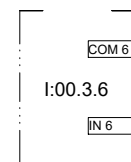
120 VAC FROM DIST PANEL LP-4, CKT-23



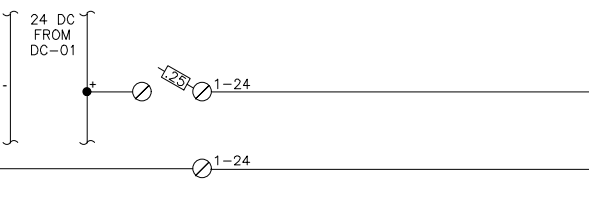
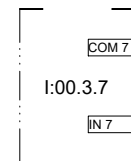
DOSING PUMP SPEED FEEDBACK



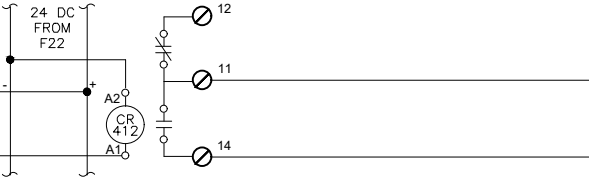
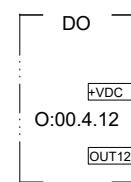
DOSING PUMP RUNNING



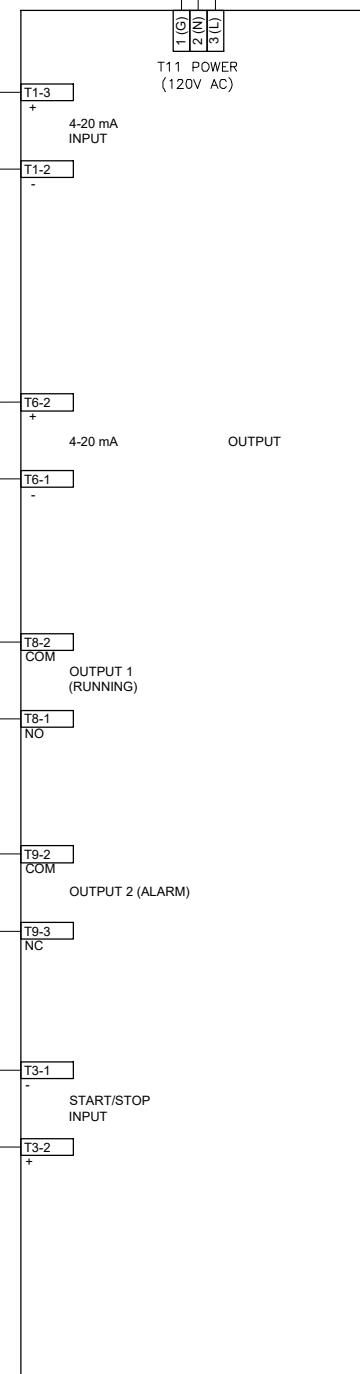
DOSING PUMP FAULT



DOSING PUMP RUN COMMAND



T11 POWER (120V AC)



HYPOCHLORITE DOSING PUMP SPEED COMMAND SC-254 0-100%

HYPOCHLORITE DOSING PUMP SPEED FEEDBACK SI-254 0-100%

DOSING PUMP RUNNING YL-254

DOSING PUMP FAULT YA-254

DOSING RUN COMMAND RC-254

BLUE-WHITE MD-3 DOSING PUMP

NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE 2/C #18 TWSH IN GRC TO FROM PLC ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LFMC AT PUMP.
- 3 PROVIDE 2/C #18 TWSH SIGNAL FROM DOSING PUMP SPEED FEEDBACK OUTPUT TO SCADA PLC ANALOG INPUT.
- 4 PROVIDE 2/C #16 IN GRC FROM PUMP TO PLC DISCRETE INPUT.
- 5 PROVIDE 2/C #16 IN GRC FROM SCADA PLC RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\7-7 Dosing Pump.dwg

2020/06/30 3:47 PM By: Pat

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PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---		
	---	---	DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
	---	---		---	---		

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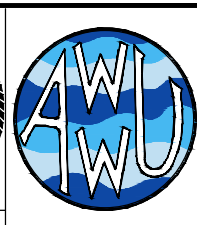
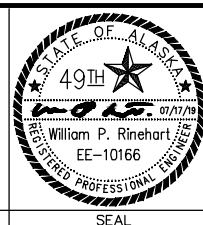
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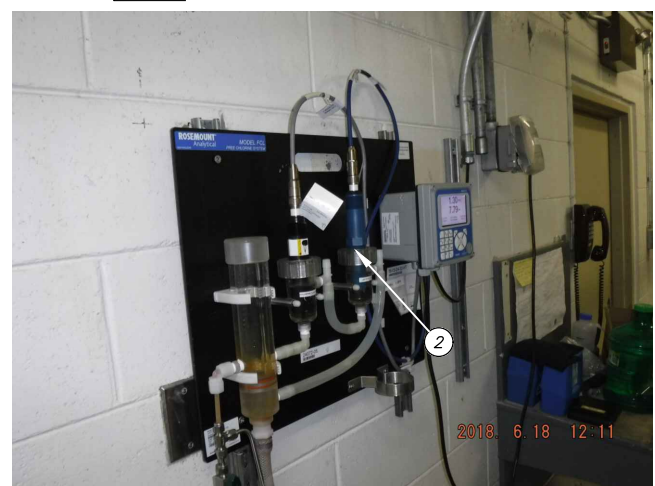
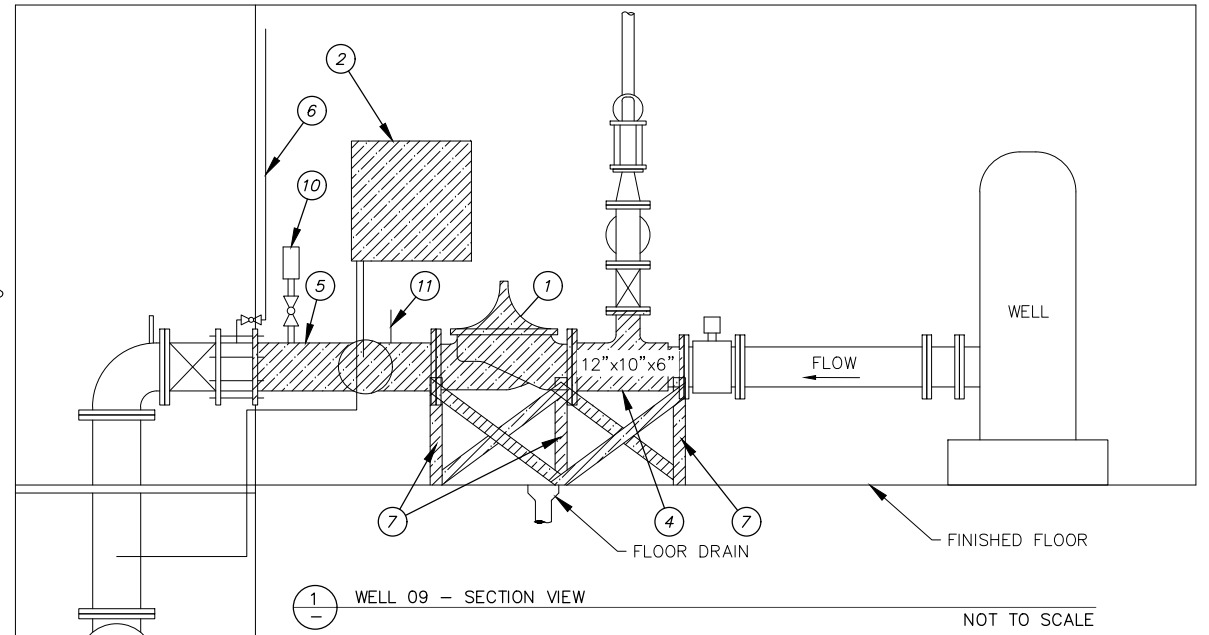
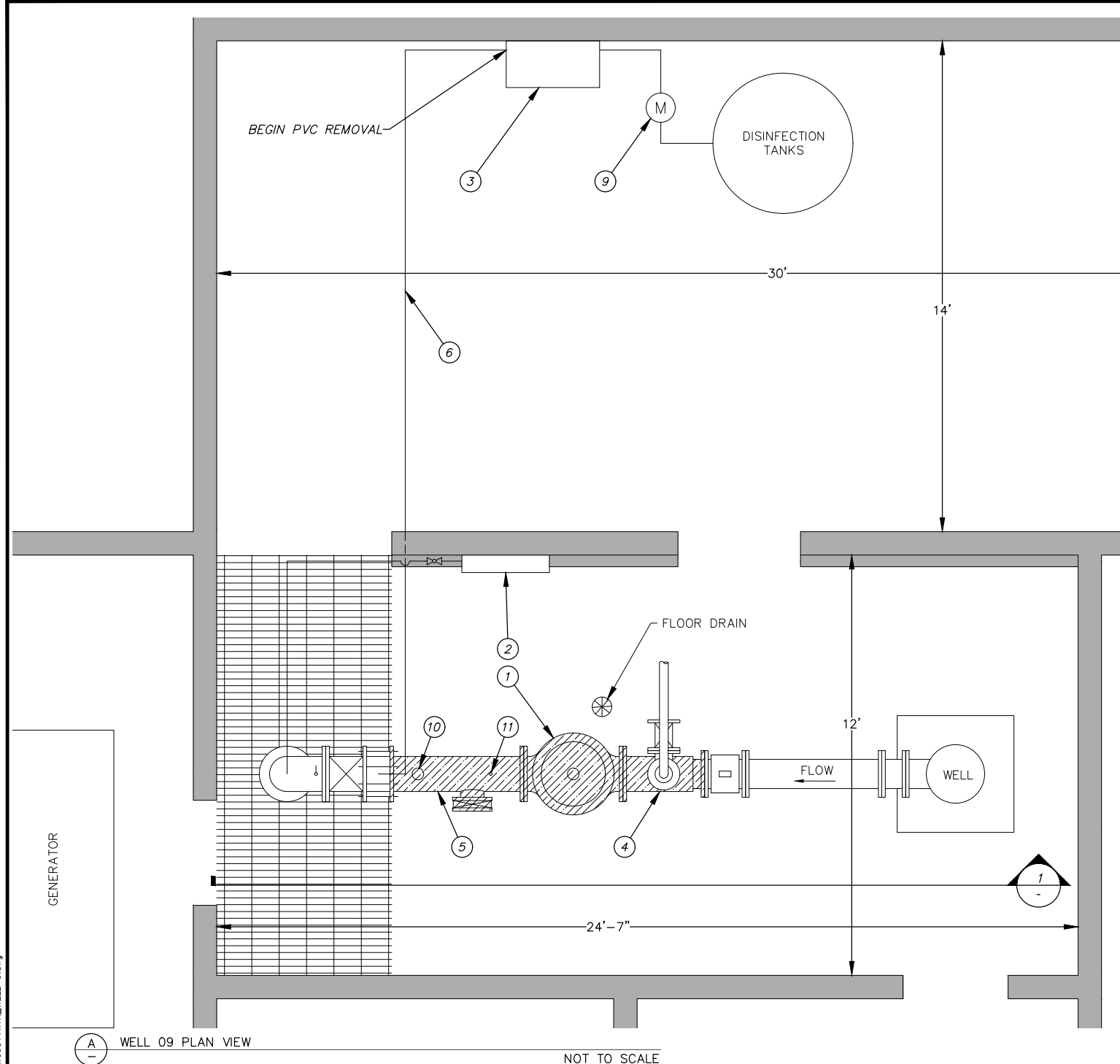
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ANCHORAGE WELL HOUSE CHLORINE ANALYZER IMPROVEMENTS

**HYPOCHLORITE DOSING PUMP WELL 07**

HORZ SCALE: N/A DATE: 07/2019 GRID: SW1731 SHEET 7-7 of 7-7  
VERT SCALE: N/A PROJ. ID: WWO0011(WTR)

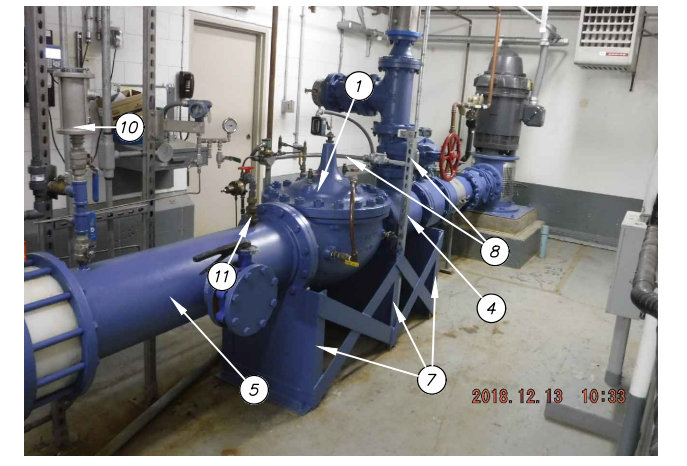
AWWU PLAN SET NO. 11018



(B) EXISTING CHEMICAL ANALYZER NOT TO SCALE



(C) EXISTING PUMP SKID & CHEMICAL FLOW METER NOT TO SCALE



(D) EXISTING 10\"/>

- DEMOLITION CALLOUTS**
- (1) REMOVE EXISTING 12" PRV - GLOBE STYLE. SEE NOTE 1
  - (2) REMOVE EXISTING CHLORINE ANALYZER, SKID, AND MOUNTING BRACKETS
  - (3) REMOVE EXISTING MC-3 PUMP. SEE SHEET 25-1 FOR DETAILS
  - (4) REMOVE 12"x10"x6" TEE
  - (5) REMOVE ±46" SPOOL OF 12" DIP. SEE NOTE 1
  - (6) REMOVE AND DISPOSE OF EXISTING PVC PIPE FROM PUMP SKID TO STATIC MIXER
  - (7) REMOVE AND DISPOSE OF PIPE SUPPORTS
  - (8) REMOVE UNI-STRUT AND ELECTRICAL/SCADA CONDUIT AS REQUIRED
  - (9) FLOW METER TO REMAIN. PROTECT IN PLACE
  - (10) REMOVE AND REINSTALL 2" AIR RELEASE AND VACUUM BREAK VALVE (VENT-0-MAT RBXb 2521)
  - (11) REMOVE PIPING AND APPURTENANCES

- DEMOLITION NOTES**
1. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS THE BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
  2. NEW UNI-STRUT THAT IS ATTACHED TO THE FLOOR OR A COMPONENT OF THE CHLORINE ANALYZER SHALL BE VINYL GLASS, ALL OTHER UNI-STRUT SHALL BE HOT DIPPED GALVANIZED.

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN				
			CHECK				

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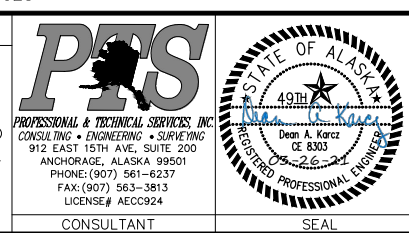
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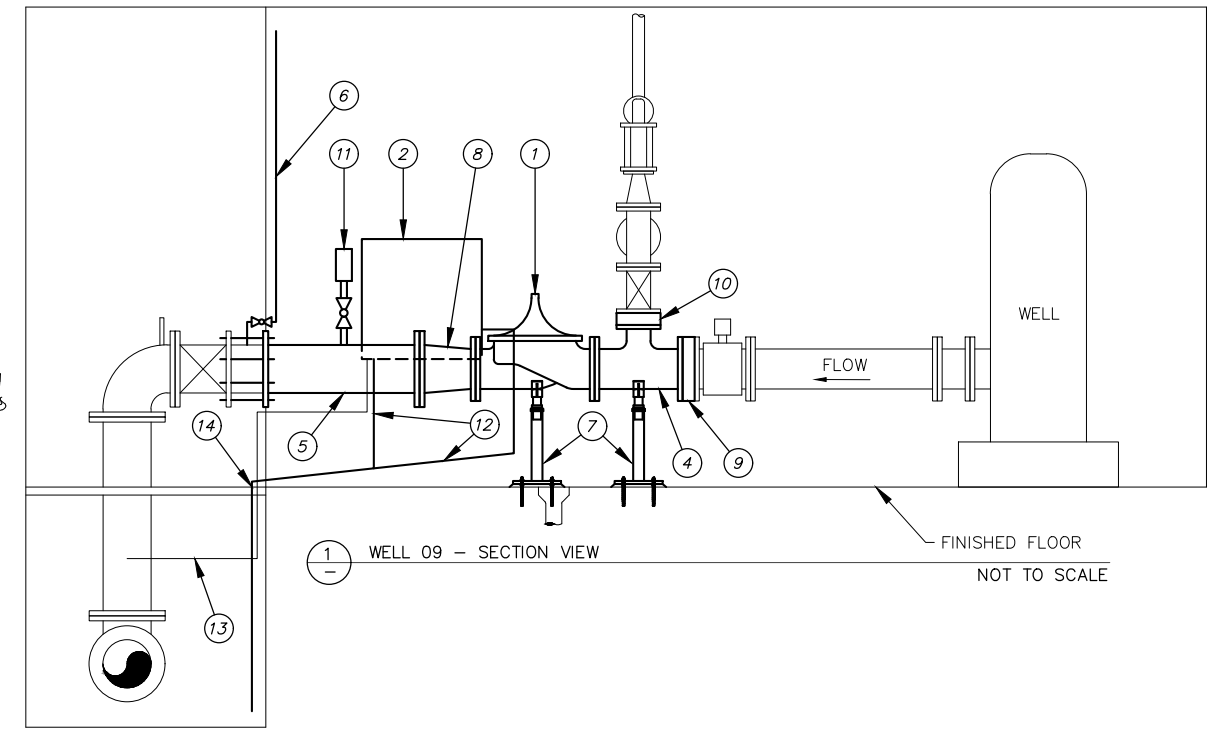
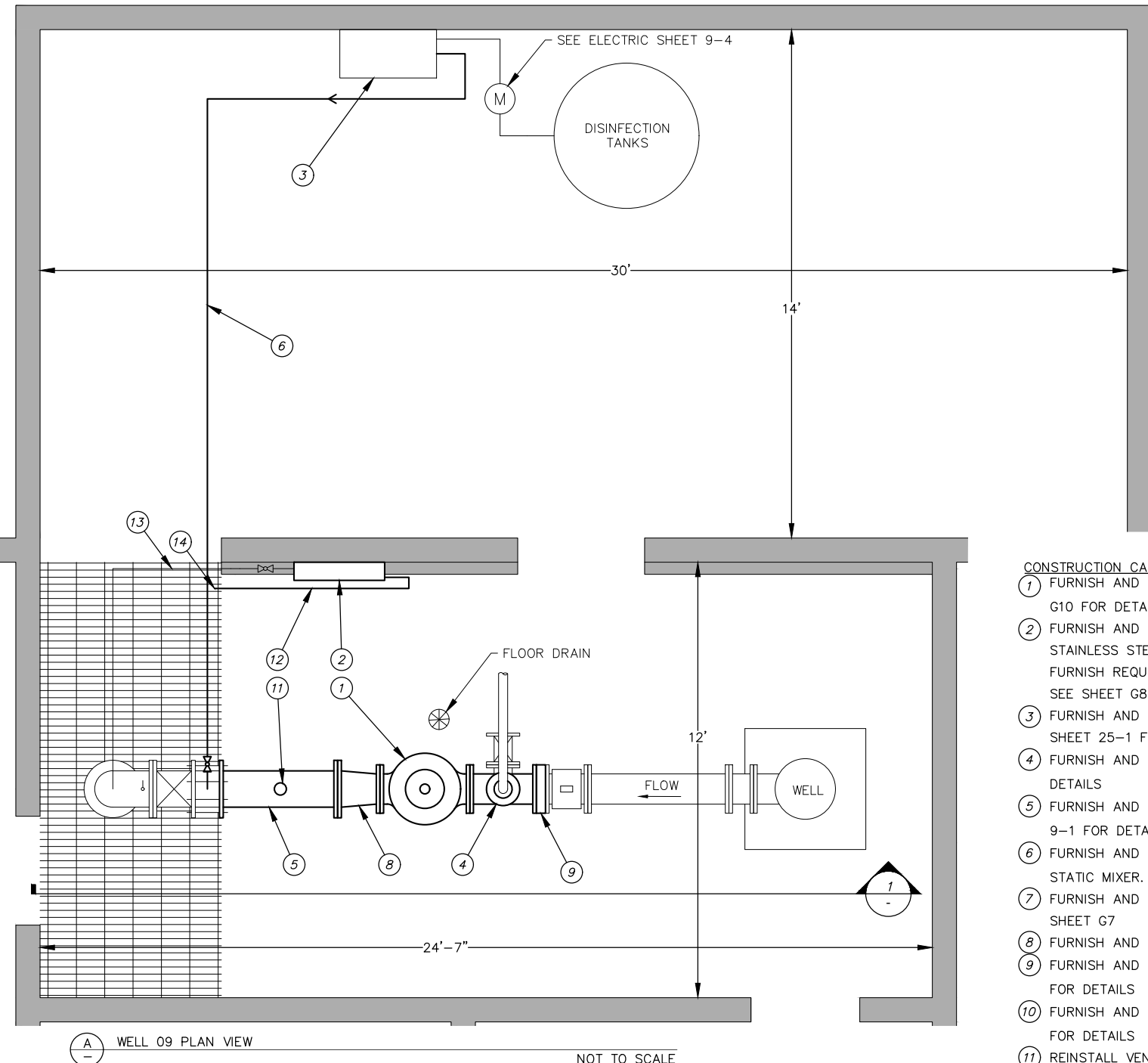
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 09  
 DEMOLITION PLAN AND SECTION**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW1141 SHEET 9-1  
 VERT SCALE: NTS PROJ. ID: WW00011(WTR) 9-7

2021/03/26 8:06 AM By: Kevin Garcia Z:\WV-17\Task 4 CA-01\dwg Active\WV00011WTR\_WELL-9.dwg



- CONSTRUCTION CALLOUTS**
- ① FURNISH AND INSTALL 10" PRV - GLOBE STYLE. SEE SHEET G10 FOR DETAILS
  - ② FURNISH AND INSTALL CHEMICAL ANALYZER. REUSE EXISTING STAINLESS STEEL TUBING. CONTRACTOR TO VERIFY SIZE AND FURNISH REQUISITE FITTINGS TO CONNECT TO NEW ANALYZER. SEE SHEET G8
  - ③ FURNISH AND INSTALL MD-3 PUMP ON EXISTING SKID. SEE SHEET 25-1 FOR DETAILS
  - ④ FURNISH AND INSTALL 10"x10"x6" TEE. SEE TABLE 9-1 FOR DETAILS
  - ⑤ FURNISH AND INSTALL ±39" SPOOL OF 12" DIP. SEE TABLE 9-1 FOR DETAILS
  - ⑥ FURNISH AND INSTALL 1/2" CPVC PIPE FROM MD-3 PUMP TO STATIC MIXER. SEE SHEET G9 FOR DETAILS
  - ⑦ FURNISH AND INSTALL NEW PIPE SUPPORTS. SEE DETAIL A SHEET G7
  - ⑧ FURNISH AND INSTALL REDUCER. SEE TABLE 9-1 FOR DETAILS
  - ⑨ FURNISH AND INSTALL 3"x10" SLIP ON FLANGE. SEE TABLE 9-1 FOR DETAILS
  - ⑩ FURNISH AND INSTALL 3"x6" SLIP ON FLANGE. SEE TABLE 9-1 FOR DETAILS
  - ⑪ REINSTALL VENT-0-MAT AS CLOSE TO ORIGINAL LOCATION AS POSSIBLE AND RECONNECT THE DISCHARGE PIPING, FURNISH AND INSTALL NEW 316 STAINLESS STEEL BALL VALVE. SEE TABLE 9-1
  - ⑫ 1/2" CPVC DISCHARGE
  - ⑬ COLIFORM SAMPLING TAP AND 1/4" STAINLESS STEEL LINES TO REMAIN
  - ⑭ MODIFY GRATE FOR CLEARANCE OF CPVC DRAIN LINE

- CONSTRUCTION NOTES**
1. SEE TABLE 9-1 FOR A DETAILED LIST OF EQUIPMENT.
  2. NEW CPVC PIPE SHALL BE SCHEDULE 80 1/2" DIAMETER.
  3. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
  4. NEW UNI-STRUT THAT IS ATTACHED TO THE FLOOR OR A COMPONENT OF THE CHLORINE ANALYZER SHALL BE VINYL GLASS, EXISTING METAL UNI-STRUT TO BE REPLACED WHEN IN PROXIMITY TO POSSIBLE CORROSION.
  5. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
  6. CONTRACTOR TO INSTALL PRV BODIES ONLY. THE OWNER SHALL INSTALL THE TRIM, ACCESSORIES, AND REBUILD KITS AFTER THE BODIES HAVE BEEN INSTALLED.
  7. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
  8. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH, CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
  9. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4-FT WITHOUT SUPPORT.
  10. CONTRACTOR SHALL INSTALL A DRAIN CATCH BENEATH THE CHLORINE RESIDUAL ANALYZER. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE CATCH TO EXISTING DRAINAGE FUNNEL.

TABLE 9-1 SECTION 60.02 FURNISH AND INSTALL PIPE

NOMENCLATURE	MATERIAL TYPE	SIZE (IN)	LENGTH (IN)	END DETAIL	REMARKS	QUANTITY
TEE	DI	10x10x6	-	FLANGED	EPOXY COATED	1
SLIP ON FLANGE	DI	10ø	3	-	EPOXY COATED	1
SLIP ON FLANGE	DI	6ø	3	-	EPOXY COATED	1
REDUCER	DI	10x12	-	FLANGED	EPOXY COATED	1
SPOOL	DI	12	±39	FLANGED	EPOXY COATED	1
BALL VALVE	CPVC	1/2	-	-	BLEACHED VENTED TRUE UNION	1
BALL VALVE	SS	2	-	-	316 STAINLESS STEEL BODY AND BALL	1

TABLE 9-1 NOTES:

1. ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE (WELL 9)

2021/03/26 8:06 AM By: Kevin Garcia Z:\WV-17\_(Task 4 CA-01)\dwg Active\WV00011\WTR\_WELL-9.dwg

**VERIFY SCALE** THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY	KMG	DAK		TELEPHONE	
PROFILE				ELECTRIC	
SANITARY SEWER				CABLE TV	
STORM SEWER				TRAFFIC SIGNAL	
				DESIGN	KMG DAK
				QUANTITIES	KMG DAK
				MUN. FINAL CHECK	
				PLAN CHECK	

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

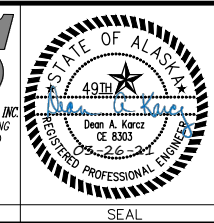
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 This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.  
 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 09  
 CONSTRUCTION PLAN AND SECTION**

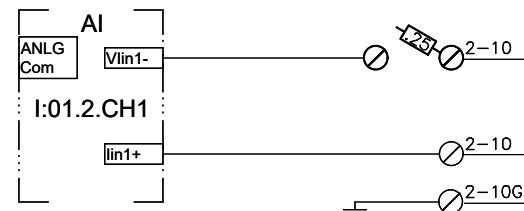
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 VERT SCALE: NTS PROJ. ID: WV00011(WTR) 9-7



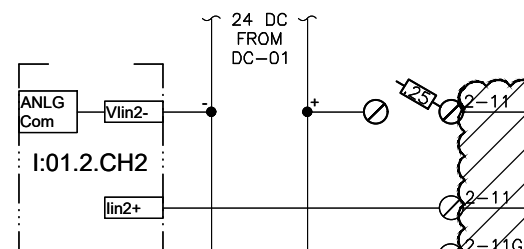
SCADA PANEL

FIELD WIRING

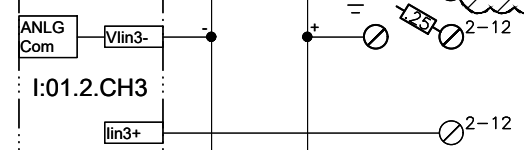
CHLORINE RESIDUAL



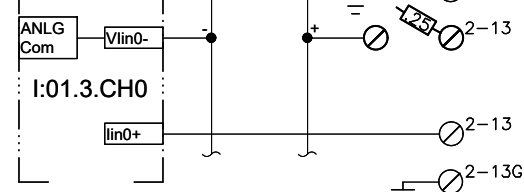
HYPO PUMP SPEED INDICATION



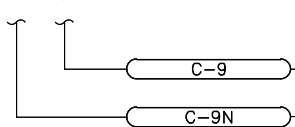
pH



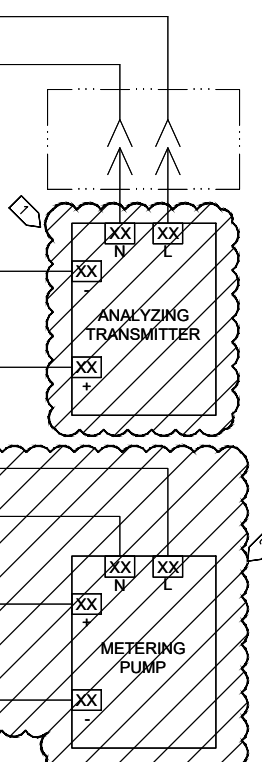
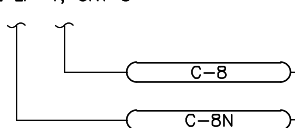
D.O. (FUTURE PROVISION)



120 VAC FROM PANEL LP-1, CKT 9



120 VAC FROM PANEL LP-1, CKT 8

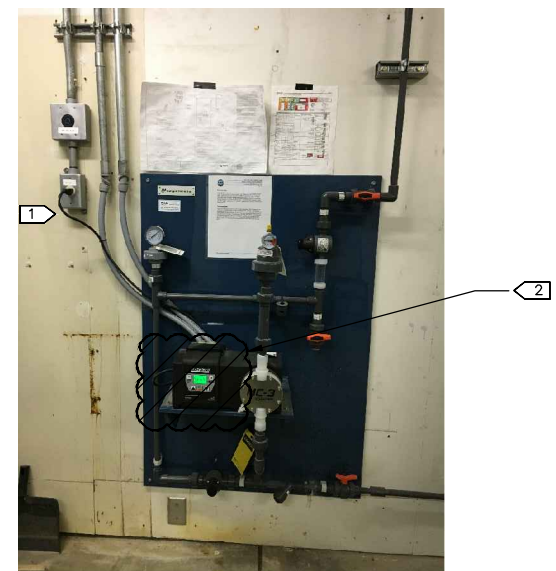


CL2T-250

SI-664

(pHT-252)

(DOT-253)



NOTES:

- 1 DEMOLISH RESIDUAL ANALYZER ASSEMBLY AND RETURN TO AWWU. INSTALL NEW ANALYZER BACKBOARD. SEE SHEETS 9-4 AND 9-5 FOR NEW RACEWAY & WIRING CONFIGURATION.
- 2 DISCONNECT ELECTRICAL AND REMOVE PUMP. SEE SHEETS 9-4 AND 9-6 FOR NEW RACEWAY AND WIRING CONFIGURATION. SAVE EQUIPMENT AND RETURN TO AWWU.

THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW009 IL-16

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\9-3 Hypo System Demo.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

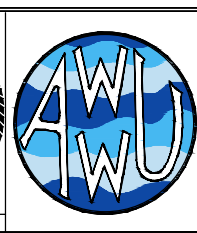
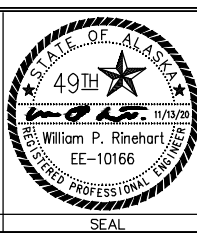
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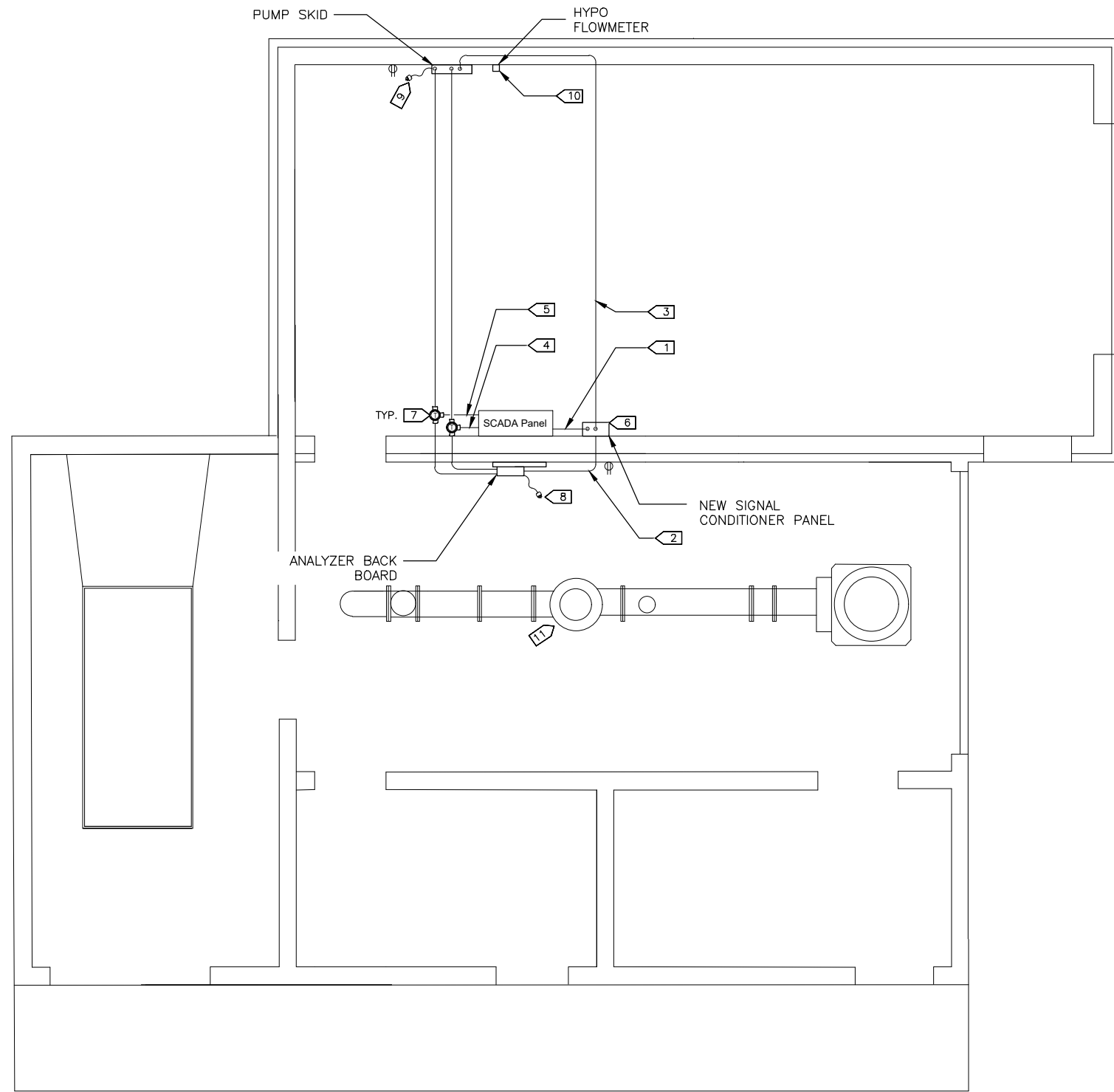
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 09**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 11/2020  
 GRID: SW1141  
 SHEET 9-3 of 9-7  
 PROJ. ID.: WW00011(WTR)



- NOTES:**
- 1 PROVIDE (2) EA. 2/C #18 TWSH IN 3/4" GRC FROM SCADA PANEL TO NEW SIGNAL CONDITIONER PANEL.
  - 2 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM NEW SIGNAL CONDITIONER PANEL TO CHLORINE ANALYZER.
  - 3 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM NEW SIGNAL CONDITIONER PANEL TO PUMP SKID.
  - 4 PROVIDE 8/C #16 CONTROL CONDUCTORS W/GND IN 3/4" FROM SCADA PANEL TO CHLORINE ANALYZER AND PUMP.
  - 5 PROVIDE 2 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO CHLORINE ANALYZER & PUMP.
  - 6 SEE SHEET 9-7 FOR SIGNAL CONDITIONER PANEL DETAILS.
  - 7 PROVIDE GUA TYPE CONDULET FITTINGS AS REQUIRED FOR COMPLETE RACE WAY SYSTEM.
  - 8 SEE NOTE 1 ON SHEET 9-6.
  - 9 SEE NOTE 1 ON SHEET 9-5.
  - 10 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET AS SHOWN ON DETAIL 2 OF SHEET G11.
  - 11 RE-WORK CONDUIT AND WIRING AT PRV TO ACCOMMODATE PIPING CHANGES. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.

1 WELL 9 ELECTRICAL PLAN

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\9-4 Conduit Diagram.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN		CHECK				REVISIONS	

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 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

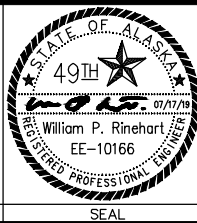
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 COMPANY: \_\_\_\_\_  
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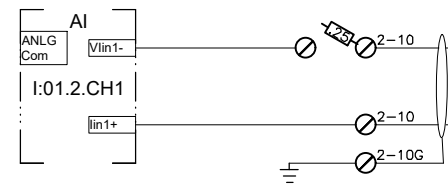
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CONDUIT DIAGRAM (NEW WORK)  
 WELL 09**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1141  
 SHEET 9-4 of 9-7  
 PROJ. ID.: WW00011(WTR)

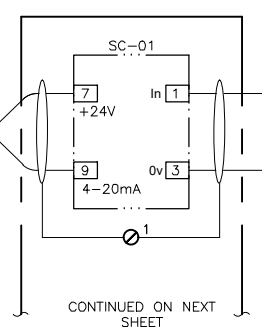
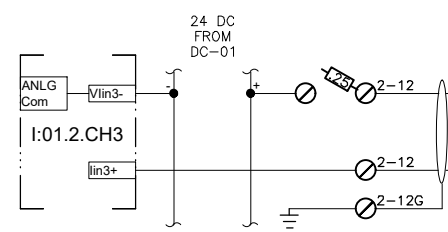
EXISTING SCADA PANEL

FIELD WIRING

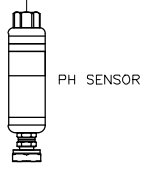
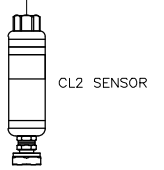
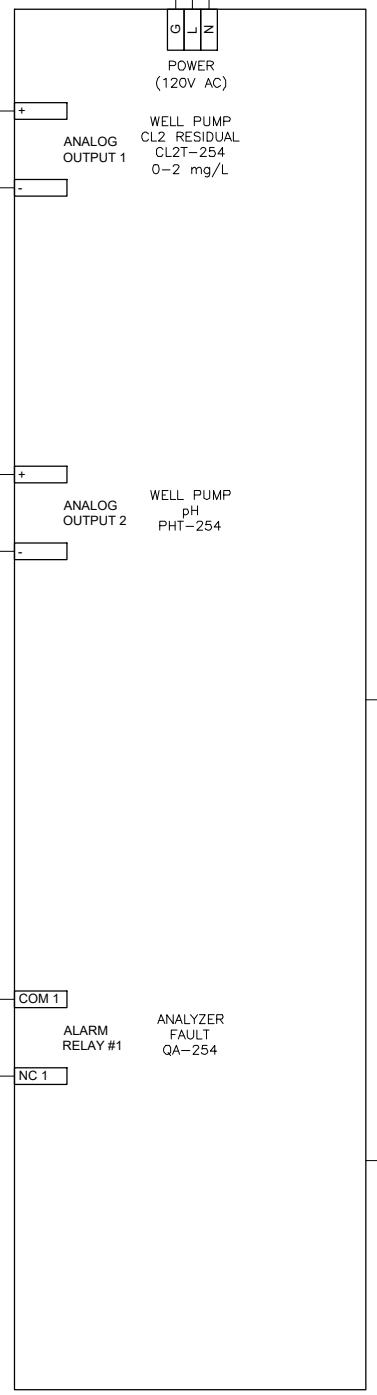
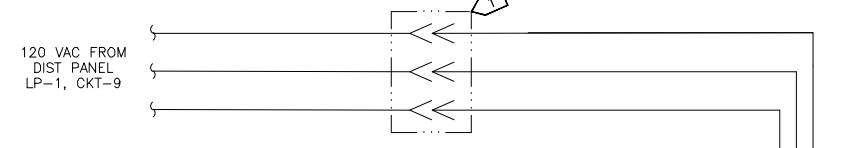
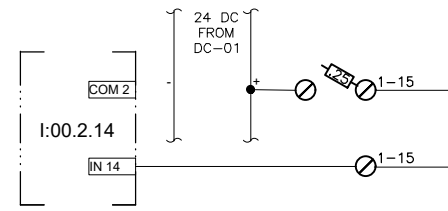
WELL PUMP CL2 RESIDUAL



WELL PUMP pH



ANALYZER FAULT



ROSEMOUNT FCL CL2 ANALYZER

- NOTES:**
- 1) PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
  - 2) PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
  - 3) PROVIDE NEW 2/C #18 TWSH IN GRC FROM SCADA PANEL ANALOG CHANNELS TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
  - 4) PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.

D:\pat\Documents\Snowdwell\AWWU\_2019\_ScADA\_Term\_Contract\C12\_Project\Drawings\9-5\_C12\_Analyzer.dwg

**VERIFY SCALE**

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DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY				TELEPHONE	
PROFILE				ELECTRIC	
SANITARY SEWER				CABLE TV	
STORM SEWER				TRAFFIC SIGNAL	
				DESIGN	
				QUANTITIES	
				MUN. FINAL CHECK	
				PLAN CHECK	

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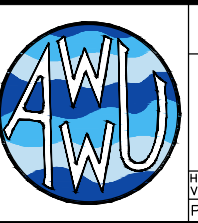
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**Snowdwell Industrial, LLC**

CONSULTANT

STATE OF ALASKA  
 49TH  
 William P. Rinehart  
 EE-10166  
 REGISTERED PROFESSIONAL ENGINEER

SEAL



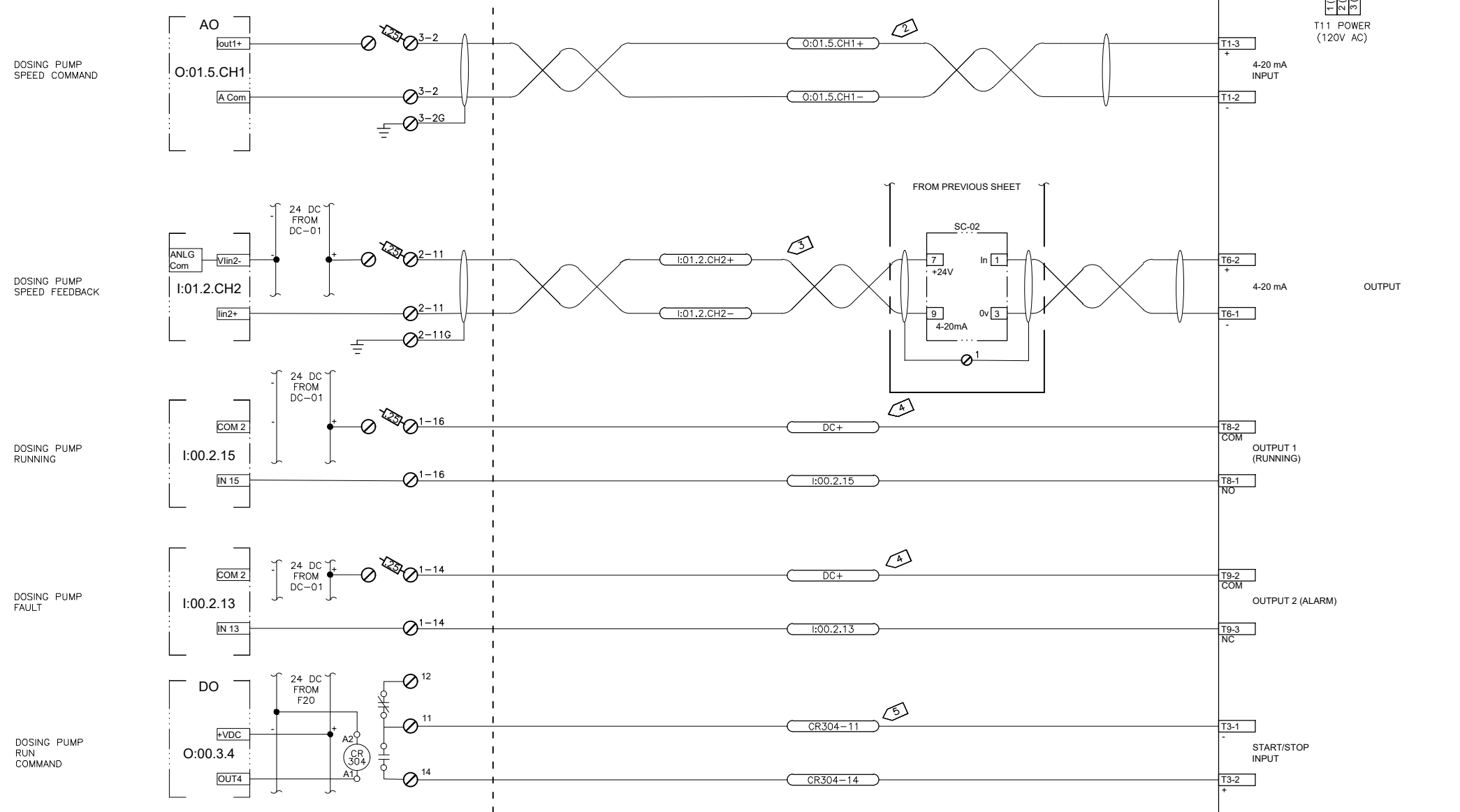
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CL2 RESIDUAL ANALYZER  
 WELL 09**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 06/2020  
 GRID: SW1141  
 SHEET 9-5 of 9-7  
 PROJ. ID.: WW00011(WTR)

EXISTING SCADA PANEL

FIELD WIRING



HYPOCHLORITE DOSING PUMP SPEED COMMAND SC-664 0-100%

HYPOCHLORITE DOSING PUMP SPEED FEEDBACK SI-254 0-100%

DOSING PUMP RUNNING YL-254

DOSING PUMP FAULT YA-254

DOSING RUN COMMAND RC-254

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE 2/C #18 TWSH IN GRC FROM PLC ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LFMC AT PUMP.
- 3 PROVIDE 2/C #18 TWSH SIGNAL FROM DOSING PUMP SPEED FEEDBACK OUTPUT TO SCADA PLC ANALOG INPUT.
- 4 PROVIDE 2/C #16 IN GRC FROM PUMP TO PLC DISCRETE INPUT.
- 5 PROVIDE 2/C #16 IN GRC FROM SCADA PLC RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.

BLUE-WHITE MD-3 DOSING PUMP

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\9-6 Dosing Pump.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
TOPOGRAPHY	---	---	---	---	---
PROFILE	---	---	---	---	---
SANITARY SEWER	---	---	---	---	---
STORM SEWER	---	---	---	---	---
PLAN	---	---	---	---	---
CHECK	---	---	---	---	---

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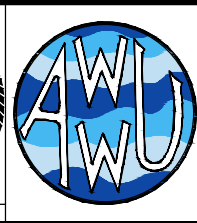
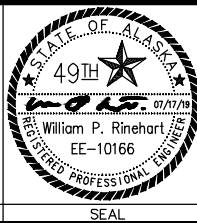
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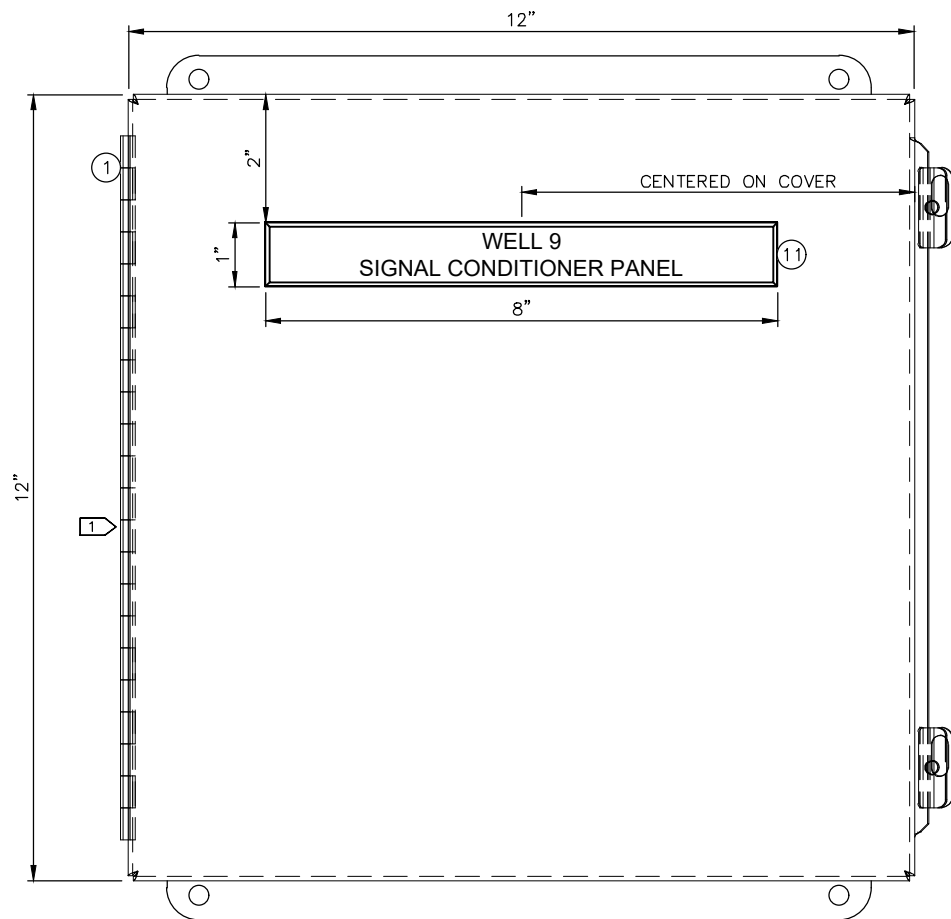
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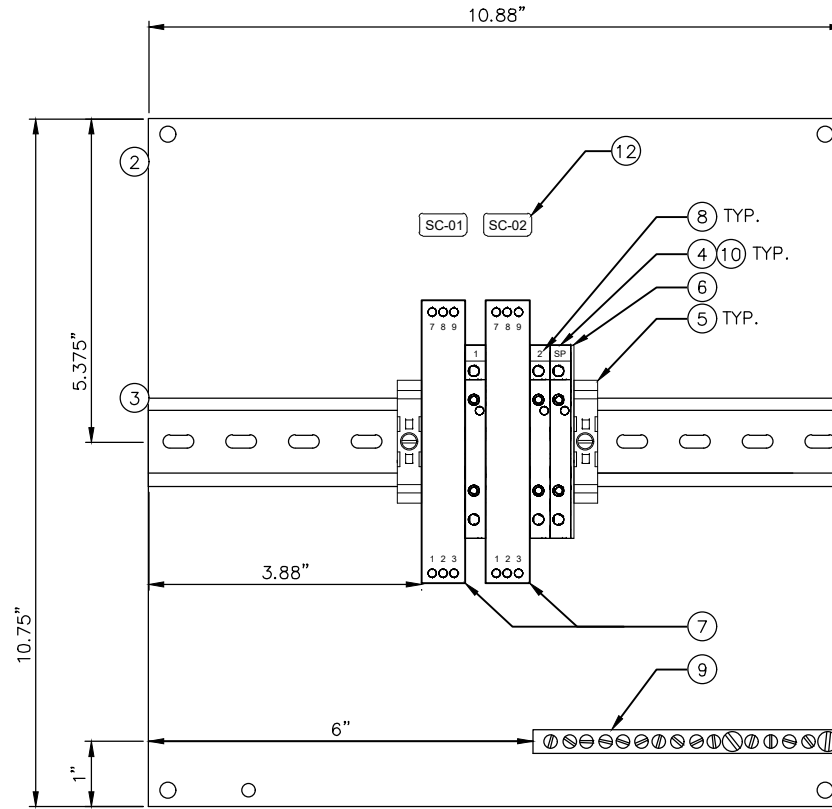
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ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
**HYPOCHLORITE DOSING PUMP WELL 09**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1141  
 SHEET 9-6 of 9-7  
 PROJ. ID.: WW00011(WTR)



**1** SIGNAL CONDITIONER PANEL - EXTERIOR LAYOUT  
NTS



**2** SIGNAL CONDITIONER PANEL - INTERIOR LAYOUT  
NTS

**NOTES:**  
1 PROVIDE NRTL LISTED ASSEMBLY FOR NON-HAZARDOUS LOCATION IN ACCORDANCE WITH UL508A AND PROJECT SPECIFICATION SECTION 40 95 13.

**BILL OF MATERIAL**

ITEM #	QTY.	U.O.M.	MANUFACTURER	DESCRIPTION	CATALOG NUMBER
1	1	EA.	HOFFMAN	ENCLOSURE, STAINLESS STEEL, NEMA 4X	A1212CHNFSS
2	1	EA.	HOFFMAN	BACK PANEL, PAINTED STEEL	A12P12G
3	2	FT.	ALLEN-BRADLEY	DIN RAIL, 35MM	199-DR1
4	3	EA.	ALLEN-BRADLEY	TERMINAL BLOCK, FEED THROUGH	1492-J3
5	2	EA.	ALLEN-BRADLEY	END ANCHORS	1492-EAJ35
6	1	EA.	ALLEN-BRADLEY	END BARRIER FOR 1492-J3 TERMINAL	1492-EBJ3
7	2	EA.	ALLEN-BRADLEY	PASSIVE CONVERTER SIGNAL CONDITIONER, OUTPUT LOOP POWERED	931S-C1A2D-OP
8	1	EA.	ALLEN-BRADLEY	MARKER CARD, "1-20" HORIZONTAL PRINT	1492-M5x5 H 1-20
9	1	EA.	SQUARE D	GROUNDING BAR	PK9GTA
10	3	EA.	BUSSMAN	FAST ACTING FUSE, 2 AMP, 5 X 20 mm, GLASS TUBE FUSE	GMA-2-R
11	1	EA.	FABRICATOR	LABEL, 1" X 8" PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND, 1ST LINE - "WELL XX" 2ND LINE - "SIGNAL CONDITIONER PANEL"	N/A
12	2	EA.	FABRICATOR	BRADY TYPE LABELS, "SC-01" & "SC-02"	N/A

D:\pat\Documents\Snowdwellers\AWWU\2019\_SCADA\_Term\_Contract\C12\_Project\_Drawings\9-7\_Signal\_Conditioner.dwg

**VERIFY SCALE**

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DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY					
PROFILE					
SANITARY SEWER					
STORM SEWER					

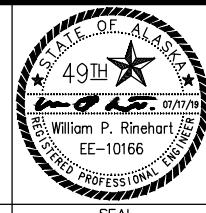
**RECORD DRAWING**

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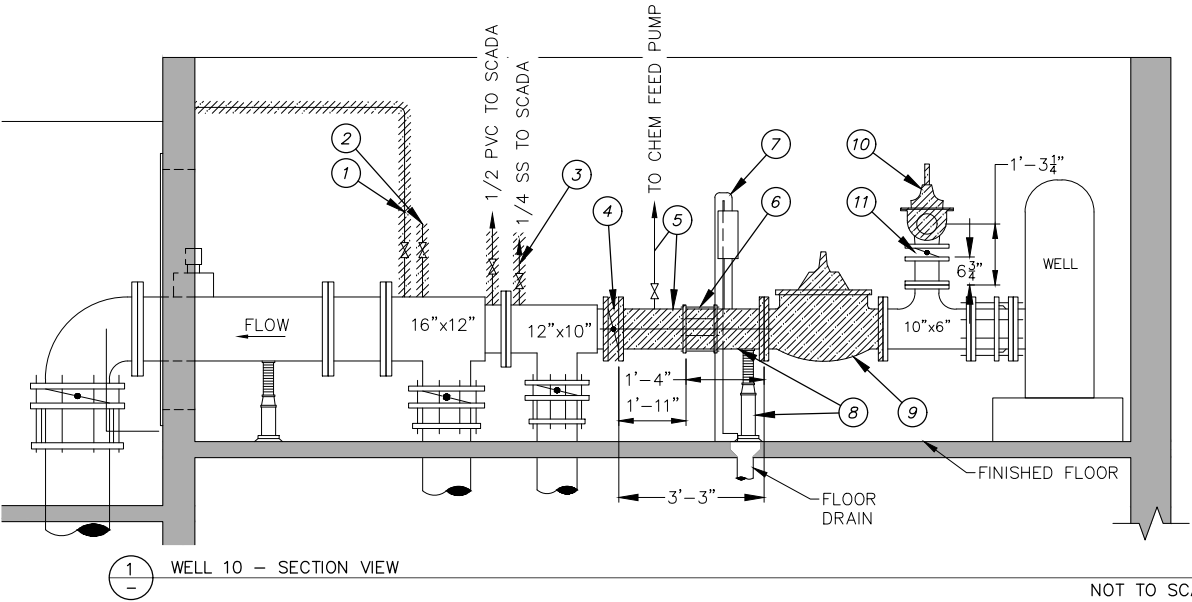
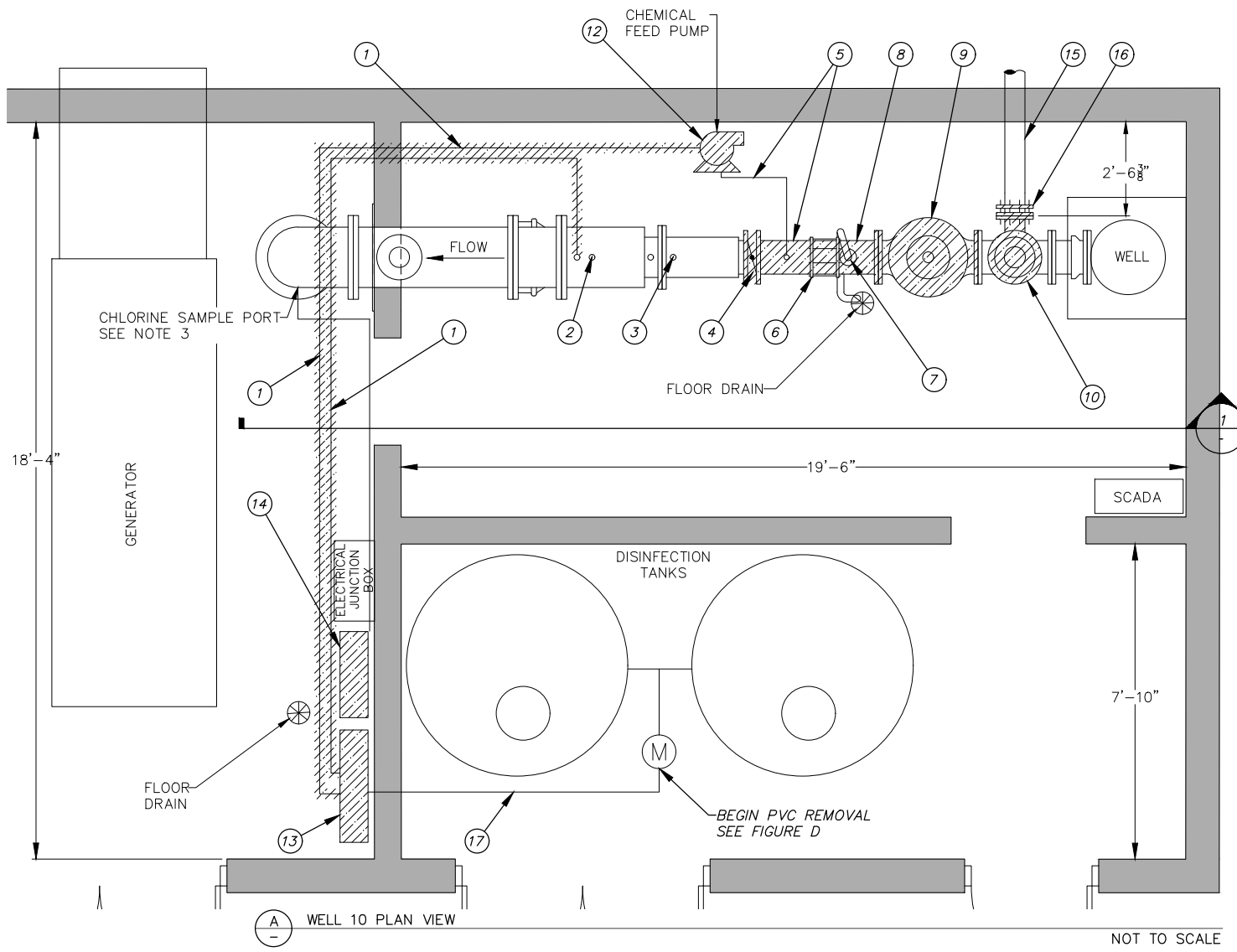
**Snowdwellers Industrial, LLC**  
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 Anchorage, AK 99508  
 (907) 227-5039  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SIGNAL CONDITIONER PANEL  
 WELL 09**

HORZ SCALE: NTS	DATE: 07/2019	GRID: SW1134	SHEET 9-7
VERT SCALE: NTS			9-7
PROJ. ID.: WWO0011(WTR)			9-7

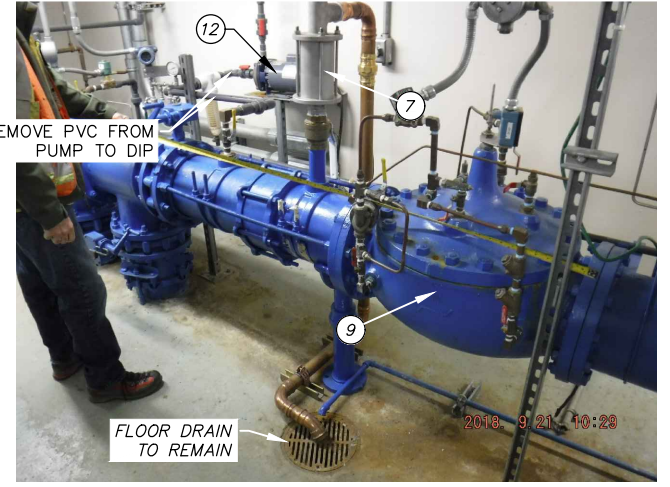


- DEMOLITION CALLOUTS**
- 1 REMOVE 1-1/2" SCH 80 PVC PIPE AND FITTINGS
  - 2 REMOVE 1-1/2" SCH. 80 PVC PIPE, BALL VALVE, AND PLUG
  - 3 REMOVE BALL VALVE, AND 1/4" TUBING
  - 4 REMOVE 10" BUTTERFLY VALVE. SEE NOTE 1
  - 5 REMOVE 10" DIP SPOOL AND PVC TUBING FROM MAIN TO PUMP
  - 6 REMOVE 10" COUPLING
  - 7 REMOVE AND REINSTALL 2" AIR RELEASE AND VACUUM BREAK VALVE (VENT-O-MAT RBXd 2521)
  - 8 REMOVE 10" DIP AND PIPE SUPPORT
  - 9 REMOVE 10" PRV - GLOBE PATTERN. SEE NOTE 1
  - 10 REMOVE AND SALVAGE 6" PRV - ANGLE PATTERN. SEE NOTE 8
  - 11 REMOVE 6" BUTTERFLY VALVE AND SAVE FOR REUSE
  - 12 REMOVE CHEMICAL FEED PUMP, SUPPORT EQUIPMENT. AWWU TO SALVAGE EQUIPMENT. SEE SHEETS 10-3 - 10-17 FOR ELECTRICAL DEMOLITION
  - 13 REMOVE SKID AND CONDUIT
  - 14 REMOVE EXISTING CHLORINE ANALYZER WITH ALL ASSOCIATED HARDWARE AND APPURTENANCES
  - 15 6" DIP TO REMAIN IN PLACE
  - 16 REMOVE MjxFL ADAPTOR AND RETAINER CLAMP WITH TIE RODS
  - 17 REMOVE 1-1/2" SCH 80 PVC FROM AUTO-VALVE TO EXISTING FLOW METER

- DEMOLITION NOTES**
1. CONTRACTOR SHALL MEASURE AND VERIFY LENGTH BETWEEN THE BUTTERFLY VALVE (4) AND 10" PRV (9) AND AMOUNT OF DEFLECTION BETWEEN THE SAME ITEMS PRIOR TO DISASSEMBLY.
  2. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS TO BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
  3. EXISTING CHLORINE SAMPLING PORT LOCATION AND STAINLESS STEEL TUBING TO BE REUSED. EXISTING 1" TAP AND FLEXIBLE TUBING TO BE REPLACED WITH ALL 316 STAINLESS STEEL MATERIAL.
  4. EXISTING UNI-STRUT AND OTHER HARDWARE TO BE REMOVED IN SUCH A MANNER TO PREVENT DAMAGE AND SALVAGED FOR REUSE IF REQUESTED BY THE OWNER.
  5. EXISTING ELECTRICAL CONDUIT AND WIRING TO BE REMOVED FOR RELOCATION AS NEEDED TO ACCOMMODATE PROPOSED EQUIPMENT. SEE SHEETS 10-3 - 10-17 FOR PROPOSED ELECTRICAL.
  6. EXISTING SCADA TO BE REMOVED AND REPLACED WHERE ASSOCIATED EQUIPMENT IS BEING REMOVED. SEE SHEETS 10-3 - 10-17 FOR PROPOSED SCADA.
  7. EXISTING BOLTS AND ASSOCIATED HARDWARE SHALL BE REPLACED WITH 316 STAINLESS STEEL WHERE IDENTIFIED AND ON ANY PIECE OF EQUIPMENT REMOVED DURING CONSTRUCTION.
  8. CONTRACTOR SHALL USE CARE WHILE REMOVING 6" POWERROLS ANGLE VALVES DUE TO DANGER. COMPONENTS ARE UNDER PRESSURE AND CAN CAUSE INJURY IF MISHANDLED.



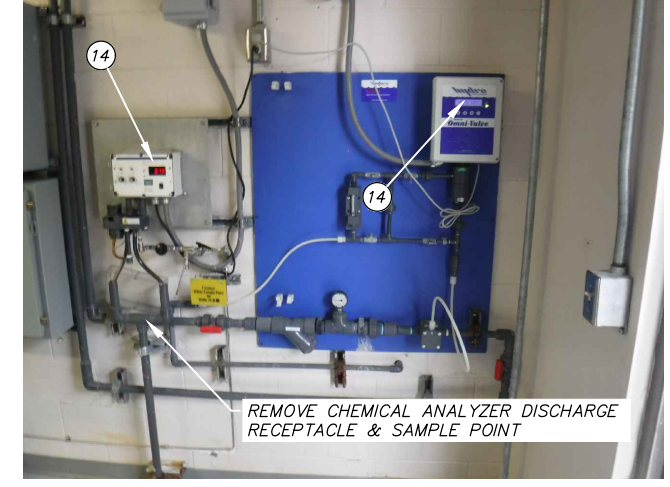
(B) 6" PRV - ANGLE PATTERN NOT TO SCALE



(C) 10" PRV - GLOBE PATTERN AND 10" DIP SPOOL NOT TO SCALE



(D) CHLORINE ROOM FLOW METER NOT TO SCALE



(E) CHEMICAL ANALYZER AND AUTO-VALVE CONTROL PANEL & SKID NOT TO SCALE

2021/03/26 8:06 AM By: Kevin Garcia Z:\WV-17\Task 4 CA-01\dwg Active\WV00011WTR\_WELL-10.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	KMG	DAK	TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL		
			DESIGN	KMG	DAK
			QUANTITIES	KMG	DAK
			MUN. FINAL CHECK		
			PLAN CHECK		

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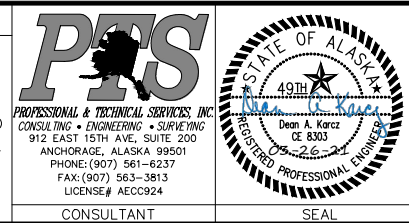
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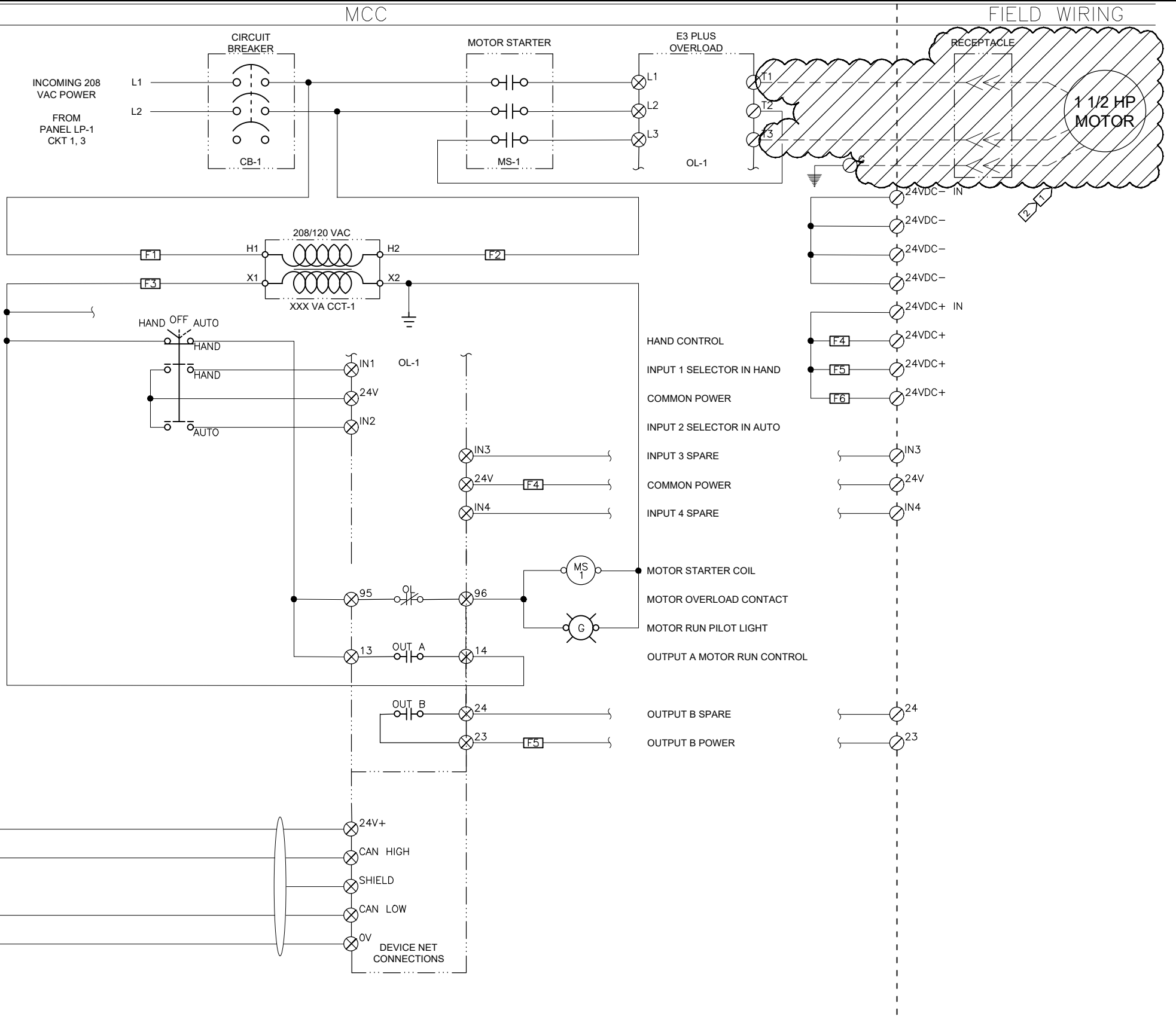


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 WELL 10  
 DEMOLITION PLAN AND SECTION**

HORZ SCALE: NTS DATE: 04/2021 GRID: SW1841 SHEET 10-1  
 VERT SCALE: NTS PROJ. ID: WV00011(WTR) 10-17





**NOTES:**

- 1 DEMOLISH HYPOCHLORITE PUMP AND MOTOR. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
- 2 DEMOLISH PUMP CONDUCTORS BACK TO MCC BUCKET AND RE-LABEL BUCKET AS SPARE. DEMOLISH RECEPTACLE AND RACEWAY BACK TO CONDULET TEE FITTING AND PLUG UNUSED OPENING.

THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW010 IL-07

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\10-3 Hypo Pump Demo.dwg

AWWU PLAN SET NO. 11018

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TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
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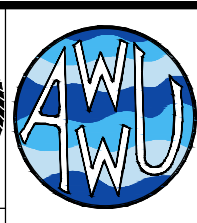
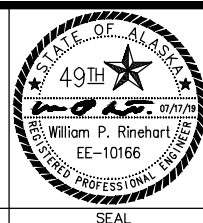
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 COMPANY: \_\_\_\_\_  
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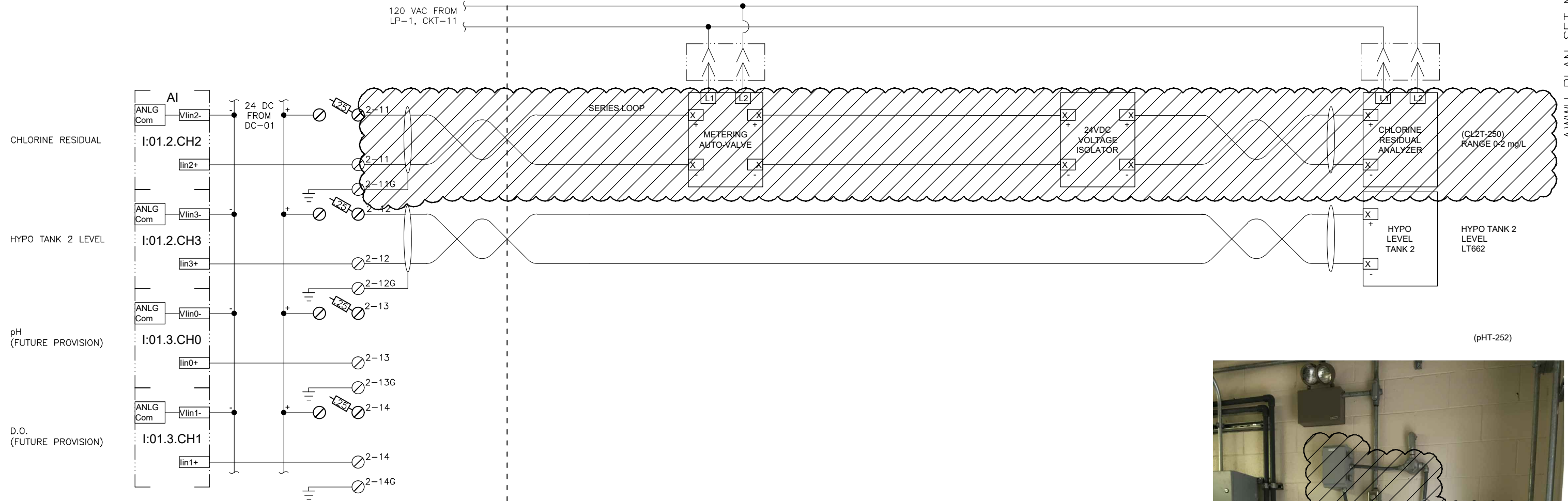


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP DEMOLITION  
 WELL 10**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-3 of 10-17  
 PROJ. ID.: WW00011(WTR)





NOTES:  
DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, VOLTAGE ISOLATOR AND AUTO VALVE BACKBOARD ASSEMBLY.



THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW010 IL-12

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\10-4 Hypo System Demo.dwg

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DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
TOPOGRAPHY	---	---	---	---	---
PROFILE	---	---	---	---	---
SANITARY SEWER	---	---	---	---	---
STORM SEWER	---	---	---	---	---
PLAN	CHECK	---	---	---	---
---	---	---	---	---	REVISIONS

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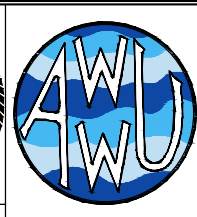
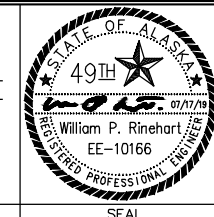
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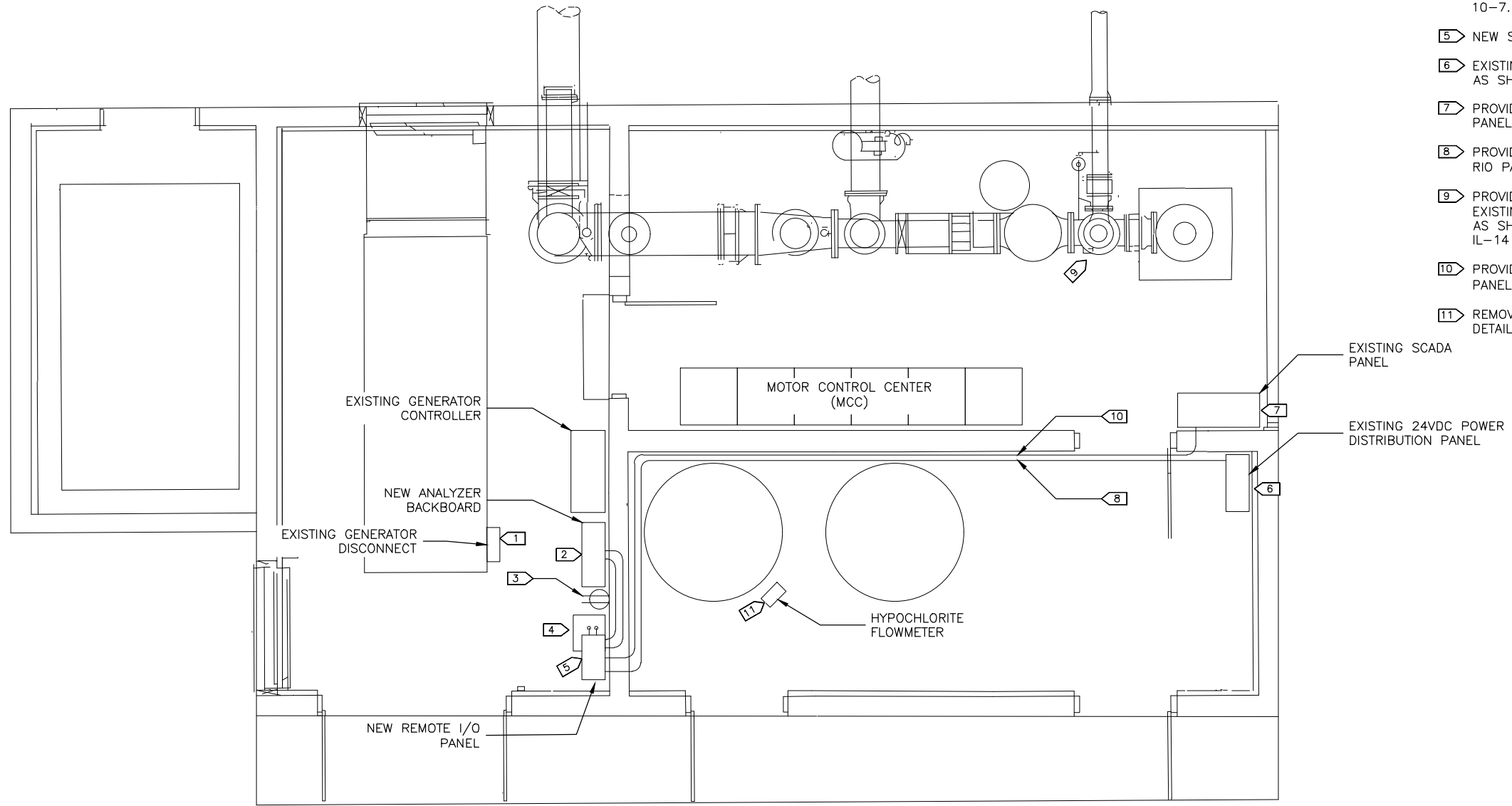
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ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
HYPOCHLORITE SYSTEM DEMOLITION  
WELL 10

HORIZ SCALE: NTS  
VERT SCALE: NTS  
DATE: 07/2019  
GRID: SW1941  
SHEET 10-4 of 10-17  
PROJ. ID.: WW00011(WTR)



- 1 EXISTING GENERATOR DISCONNECT. MAINTAIN 36" CLEARANCE.
- 2 NEW ANALYZER BACKBOARD. SEE MECHANICAL FOR DETAILS. PROVIDE ANALOG AND DISCRETE RACEWAYS AND CONDUCTORS SHOWN ON SHEET 10-6.
- 3 EXISTING RECEPTACLE TO REMAIN.
- 4 NEW PUMP SKID. SEE MECHANICAL FOR DETAILS. PROVIDE ANALOG AND DISCRETE RACEWAYS AND CONDUCTORS AS SHOWN ON SHEET 10-7.
- 5 NEW SCADA REMOTE I/O PANEL.
- 6 EXISTING 24VDC POWER DISTRIBUTION PANEL. REPLACE WITH NEW UNIT AS SHOWN ON SHT. 10-16 & SHT. 10-17.
- 7 PROVIDE GROUNDING CONDUCTOR IN EXISTING RACEWAY FROM SCADA PANEL TO DC POWER DISTRIBUTION PANEL.
- 8 PROVIDE 2/C #14 IN 3/4" GRC, DC POWER CIRCUIT, FOR NEW SCADA RIO PANEL FROM DC POWER DISTRIBUTION PANEL.
- 9 PROVIDE 2/C #14 TO NEW BLOW-OFF VALVE SOLENOID. UTILIZE EXISTING HOME RUN RACEWAY & RE-CONFIGURE RACEWAYS AT VALVE AS SHOWN IN DETAIL 1 ON SHT. G11. SEE PLAN SET 8323, DRAWING IL-14 FOR BLOW-OFF VALVE SOLENOID WIRING.
- 10 PROVIDE (2)EA. CAT 6 CABLE IN 3/4" GRC FROM EXISTING SCADA PANEL TO NEW SCADA REMOTE I/O PANEL.
- 11 REMOVE AND REINSTALL FLOWMETER AS SHOWN ON SHEET 11, DETAIL 2.

1 WELL 10 ELECTRICAL PLAN

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\10-5 Conduit Diagram.dwg

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PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
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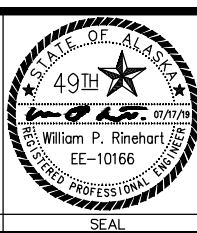
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ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS

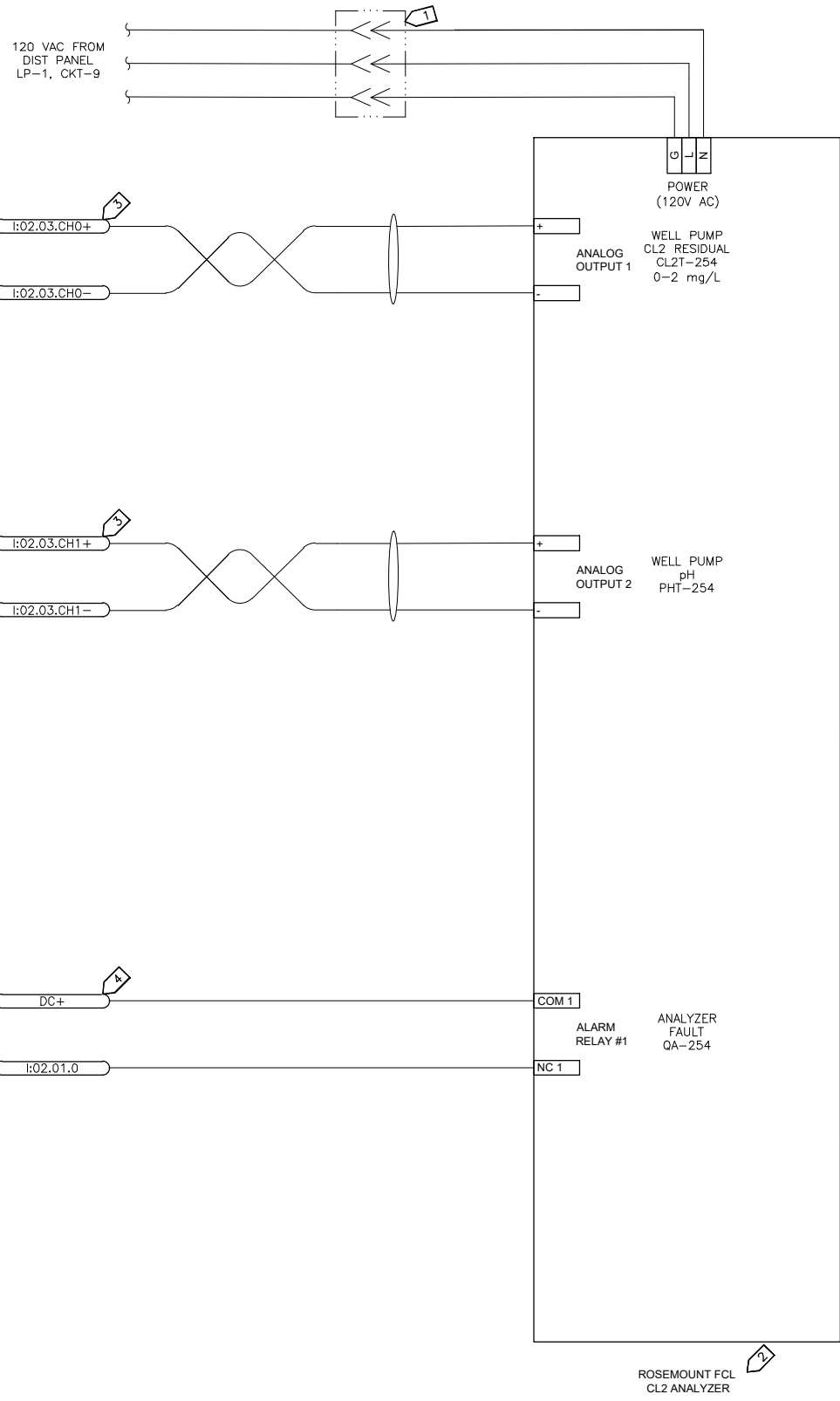
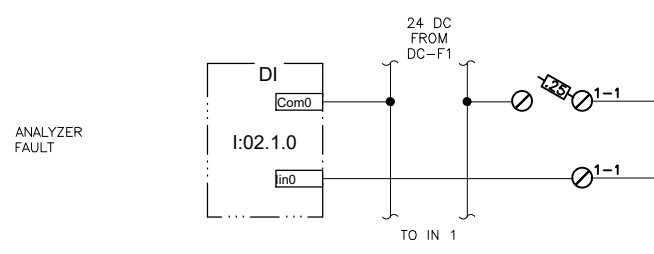
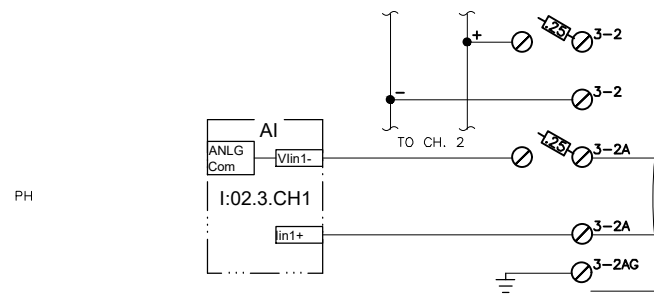
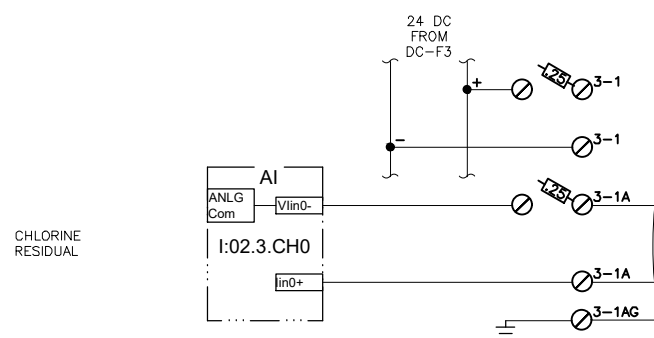
**CONDUIT DIAGRAM (NEW WORK)  
 WELL 10**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-5 of 10-17  
 PROJ. ID.: WW00011(WTR)

NEW REMOTE I/O PANEL

FIELD WIRING

AWWU PLAN SET NO. 11018



NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
- 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SCADA PANEL ANALOG CHANNELS TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
- 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\10-6 Cl2 Analyzer.dwg

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DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY			TELEPHONE						
PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN						
			QUANTITIES						
			MUN. FINAL CHECK						
PLAN		CHECK		REVISIONS					

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STATE OF ALASKA  
 49TH  
 William P. Rinehart  
 EE-10166  
 REGISTERED PROFESSIONAL ENGINEER

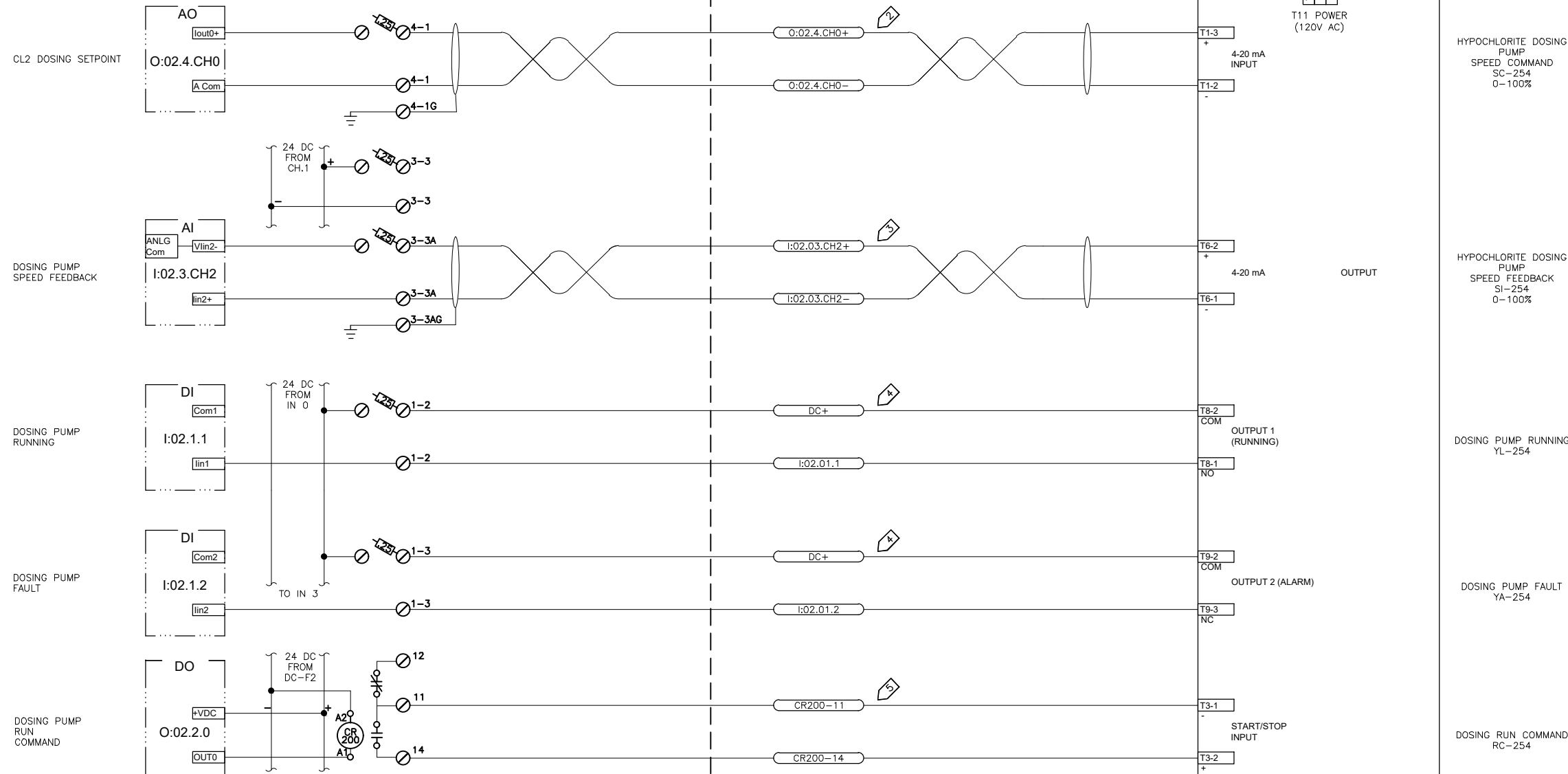
CONSULTANT

SEAL

MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
**CL2 RESIDUAL ANALYZER  
 WELL 10**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 06/2020  
 GRID: SW1941  
 SHEET 10-6 of 10-17  
 PROJ. ID.: WW00011(WTR)



NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE 2/C #18 TWSH IN GRC TO FROM NEW REMOTE I/O PANEL ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LPMC AT PUMP.
- 3 PROVIDE 2/C #18 TWSH SIGNAL FROM DOSING PUMP SPEED FEEDBACK OUTPUT TO NEW REMOTE I/O PANEL ANALOG INPUT.
- 4 PROVIDE 2/C #16 IN GRC FROM PUMP TO NEW REMOTE I/O PANEL DISCRETE INPUT.
- 5 PROVIDE 2/C #16 IN GRC FROM NEW REMOTE I/O PANEL RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\10-7 Dosing Pump.dwg

2020/06/30 4:33 PM By: Pat

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STORM SEWER	---	---	TRAFFIC SIGNAL	---	---
	---	---	DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
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CONTRACTOR:	_____	COMPANY:	_____
BY:	_____ TITLE: _____	BY:	_____ TITLE: _____
DATE:	_____	DATE:	_____
2. DATA TRANSFERRED BY:	_____		
COMPANY:	_____		
DATE:	_____		

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**Snowdwell Industrial, LLC**

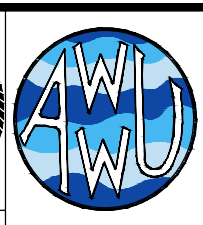
901 E. Fireweed Lane  
Anchorage, AK 99508  
(907) 227-5039  
www.rinezone.com/snowdwell

CONSULTANT

STATE OF ALASKA  
49TH  
William P. Rinehart  
EE-10166  
07/17/19

REGISTERED PROFESSIONAL ENGINEER

SEAL



MUNICIPALITY OF ANCHORAGE  
WATER & WASTEWATER UTILITY

ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
HYPOCHLORITE DOSING PUMP  
WELL 10

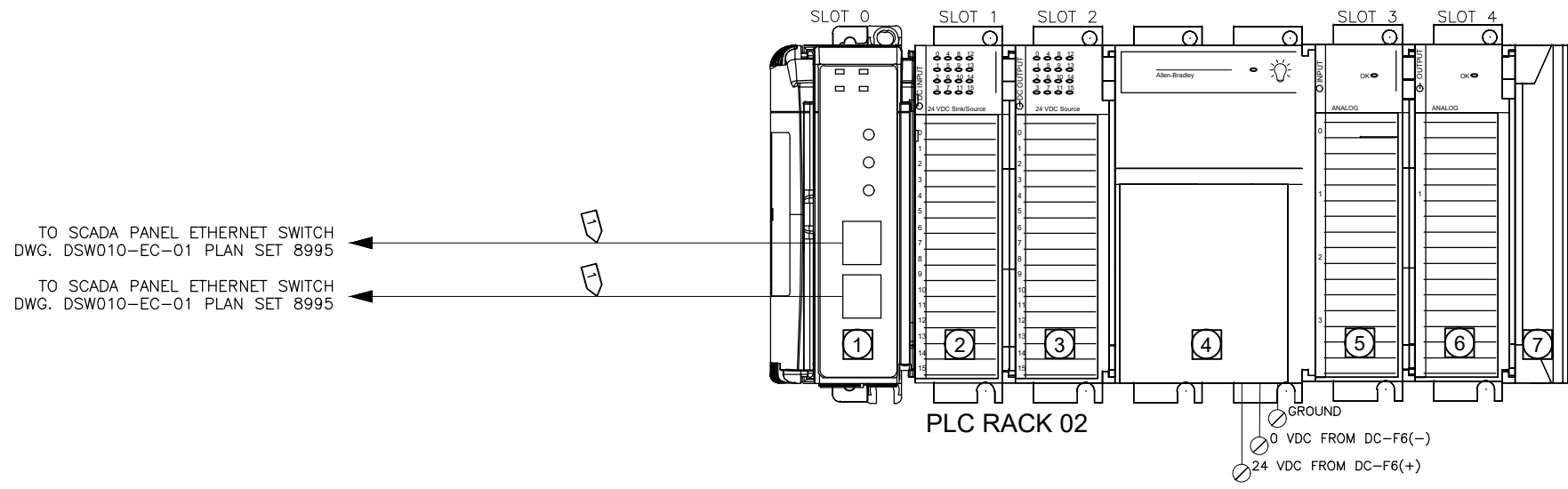
HORZ SCALE: NTS  
VERT SCALE: NTS

DATE: 07/2019  
GRID: SW1941

PROJ. ID.: WW00011(WTR)

SHEET 10-7 of 10-17

REF	PART NO	MFR	MODULE USE / TYPE
①	1769-AENTR	AB	ETHERNET/IP COMMUNICATIONS ADAPTER
②	1769-IQ16	AB	16 POINT DISCRETE INPUT MODULE
③	1769-OB16	AB	16 POINT DISCRETE OUTPUT MODULE
④	1769-PB4	AB	24 VDC POWER SUPPLY
⑤	1769-IF4	AB	4 POINT ANALOG INPUT MODULE
⑥	1769-OF2	AB	2 POINT ANALOG OUTPUT MODULE
⑦	1769-CRR1	AB	RIGHT TO RIGHT BUS EXPANSION



TO SCADA PANEL ETHERNET SWITCH  
DWG. DSW010-EC-01 PLAN SET 8995

TO SCADA PANEL ETHERNET SWITCH  
DWG. DSW010-EC-01 PLAN SET 8995

NOTES:

① CAT 6 CABLE IN 3/4" GRC FROM NEW REMOTE I/O PANEL TO EXISTING SCADA PANEL

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\10-8 Remote IO Rack View.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
PLAN CHECK			REVISIONS		

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

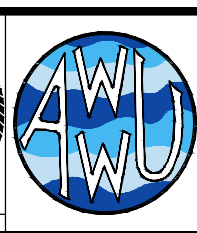
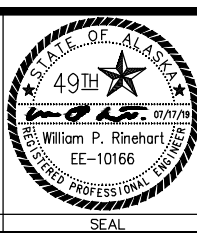
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 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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WATER & WASTEWATER UTILITY

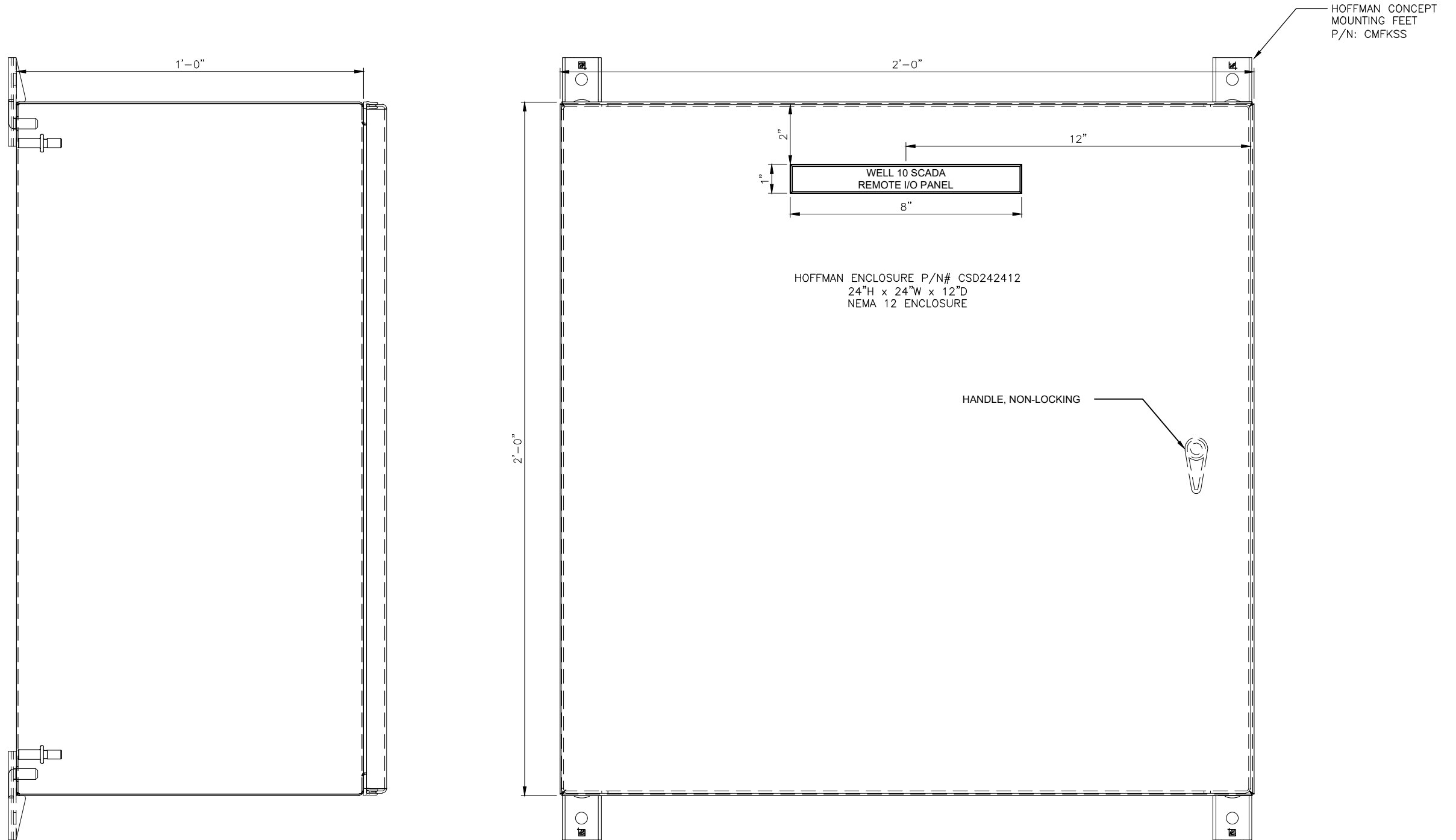
**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS**

**REMOTE I/O PANEL RACK VIEW  
WELL 10**

HORIZ SCALE: NTS  
VERT SCALE: NTS  
DATE: 07/2019  
GRID: SW1941  
SHEET 10-8 of 10-17  
PROJ. ID.: WW00011(WTR)

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\10-9 Remote IO Panel Enclosure.dwg

AWWU PLAN SET NO. 11018



**VERIFY SCALE** THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	
TOPOGRAPHY			TELEPHONE							
PROFILE			ELECTRIC							
SANITARY SEWER			CABLE TV							
STORM SEWER			TRAFFIC SIGNAL							
			DESIGN							
			QUANTITIES							
			MUN. FINAL CHECK							
PLAN		CHECK							REVISIONS	

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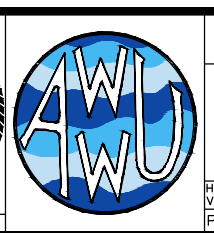
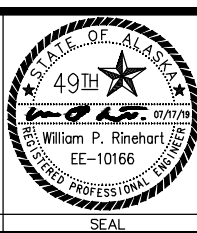
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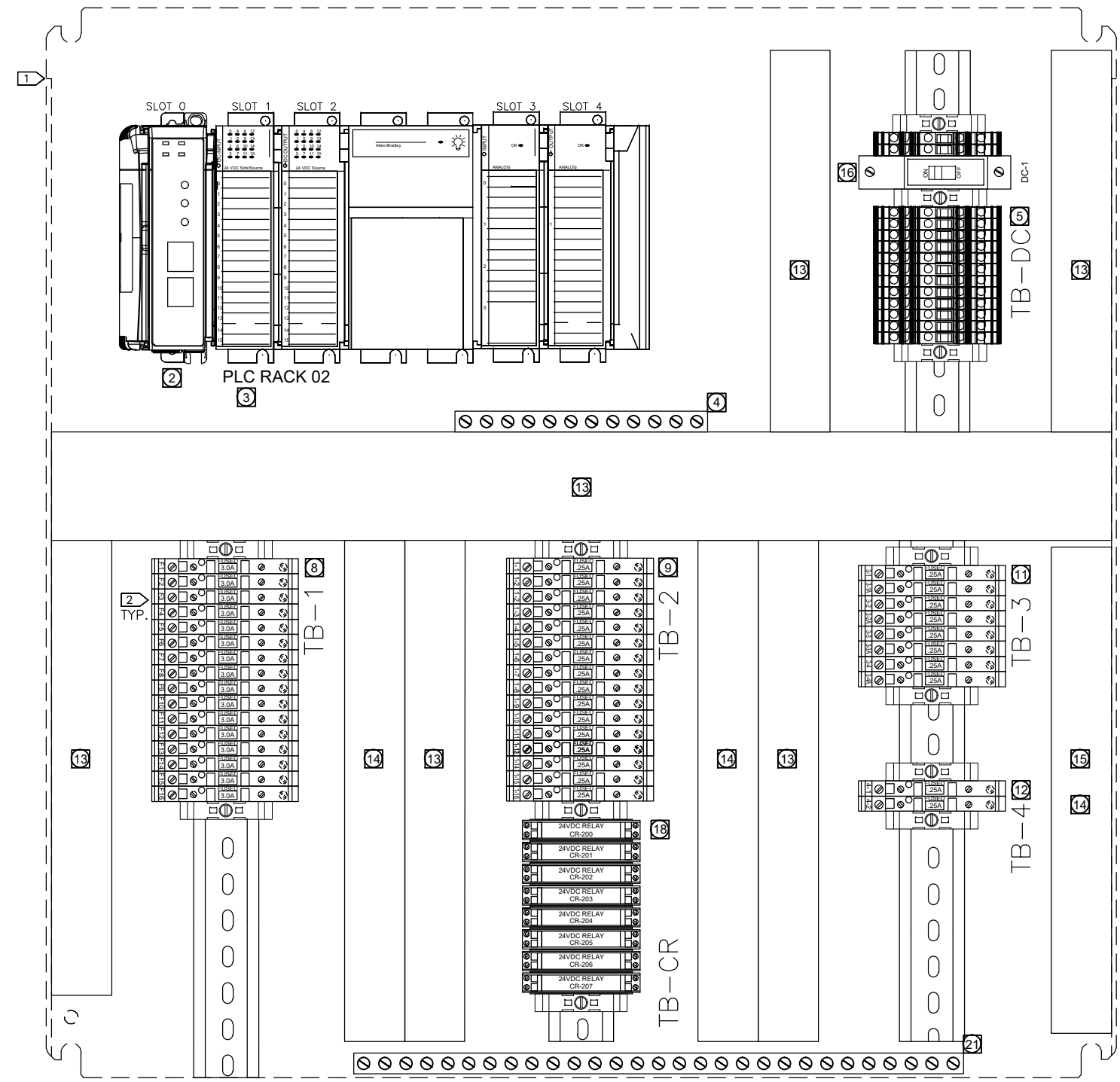


MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 REMOTE I/O PANEL ENCLOSURE  
 WELL 10**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-9 of 10-17  
 PROJ. ID.: WW00011(WTR)

- 1 HOFFMAN CP2424 BACK PANEL
- 2 ETHERNET COMMUNICATIONS ADAPTOR.
- 3 RACK 02 PLC HARDWARE, INSTALL PER MANUFACTURER'S REQUIREMENTS. SEE SHT. 10-8 FOR ADDITIONAL DETAILS.
- 4 PLC GROUND BUS. PROVIDE PLC COMPONENT GROUNDING PER MANUFACTURER'S REQUIREMENTS.
- 5 TB-DC (12) FUSED & FEED THROUGH TERMINAL BLOCKS
- 6 NOT USED
- 7 NOT USED
- 8 TB-1, (16), FUSED & FEED THROUGH TERMINAL BLOCKS.
- 9 TB-2, DISCRETE INPUTS (16), FUSED & FEED THROUGH TERMINAL BLOCKS.
- 10 NOT USED
- 11 TB-3, (4) FUSED & FEED THROUGH TERMINAL BLOCKS AND (4) FUSED AND FEED THROUGH GROUNDING TERMINAL BLOCKS.
- 12 TB-4, (2) FUSED & FEED THROUGH GROUNDING TERMINAL BLOCKS.
- 13 PANEL WIRING RACEWAY, PROVIDE WIRE TRAYS AND COVERS FOR PANEL AND FIELD WIRING. DO NOT FILL ABOVE 40% CROSS SECTIONAL AREA, ALLOWING FOR 20% SPARE WIRING.
- 14 FIELD WIRING RACEWAY, PROVIDE WIRE TRAYS AND COVERS FOR PANEL AND FIELD WIRING. DO NOT FILL ABOVE 40% CROSS SECTIONAL AREA, ALLOWING FOR 20% SPARE WIRING.
- 15 BUNDLE ANALOG WIRING SEPARATELY FROM OTHER WIRING.
- 16 24 VDC MAIN BREAKER. UL489 10A CIRCUIT BREAKER
- 17 NOT USED
- 18 TB-CR, (8) FORM C, 24VDC RELAY, A-B 700-HK36A24-3-4 WITH 700-HN121 BASE.
- 19 NOT USED
- 20 NOT USED
- 21 GROUND BAR FOR CONDUIT GROUND WIRE CONNECTIONS.



**NOTES:**

- 1 PROVIDE NRTL LISTED INDUSTRIAL CONTROL PANEL IN ACCORDANCE WITH UL 508A AND PROJECT SPECIFICATION SECTION 40 95 13.
- 2 ALL DIN RAIL MOUNTED COMPONENTS TO BE PROVIDED WITH END PLATES, END ANCHORS AND TERMINAL STRIP MARKERS.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\10-10 Remote IO Panel Backpanel.dwg

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0  1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN CHECK				REVISIONS			

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

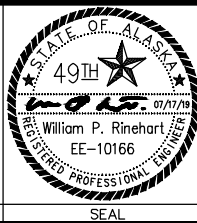
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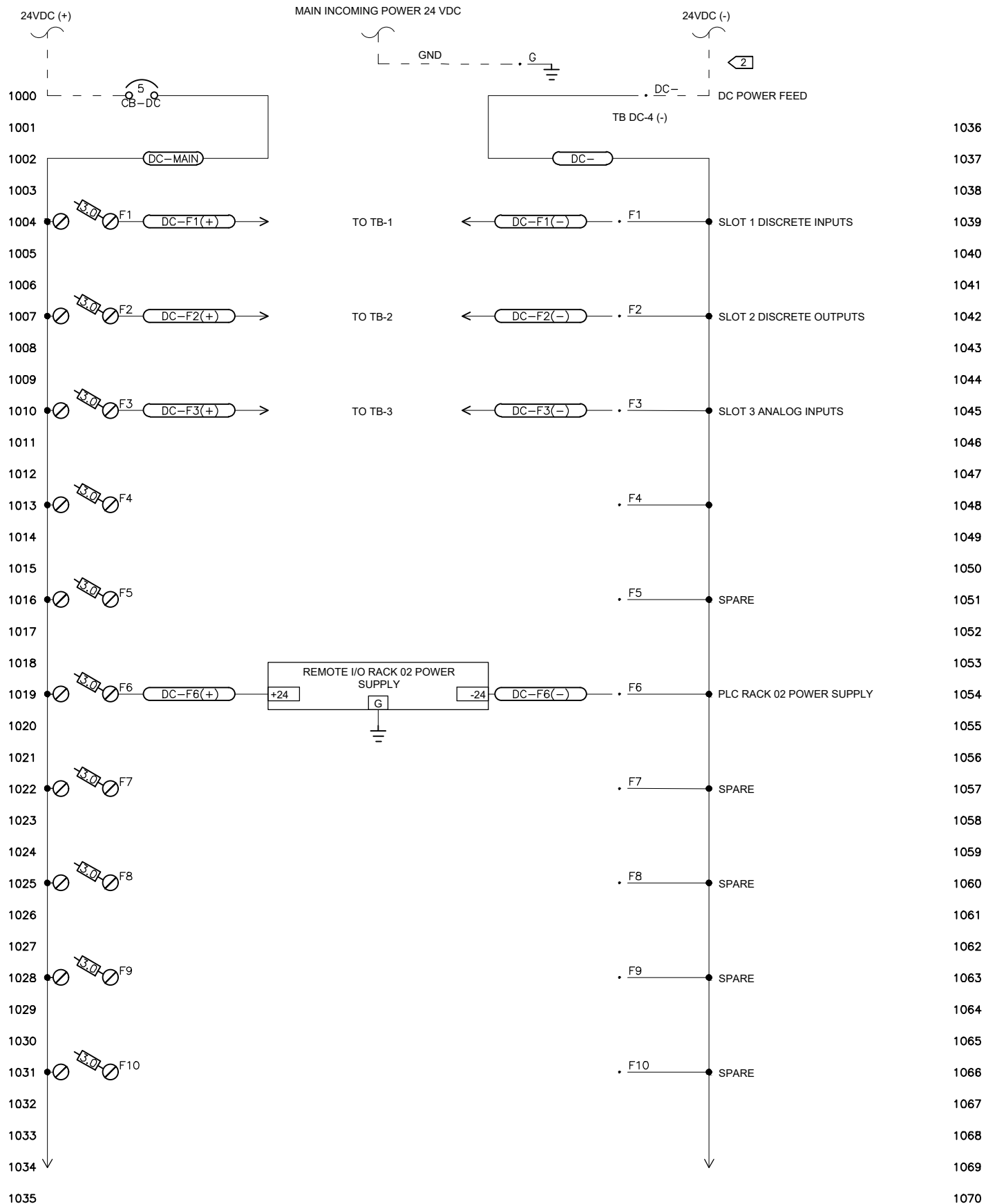


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 WATER & WASTEWATER UTILITY**

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 REMOTE I/O PANEL BACKPANEL  
 WELL 10**

HORIZ SCALE: NTS	DATE: 07/2019	GRID: SW1941	SHEET 10-10 of 10-17
VERT SCALE: NTS	PROJ. ID.: WW00011(WTR)		

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\10-11 Remote I/O Panel Power Distribution.dwg



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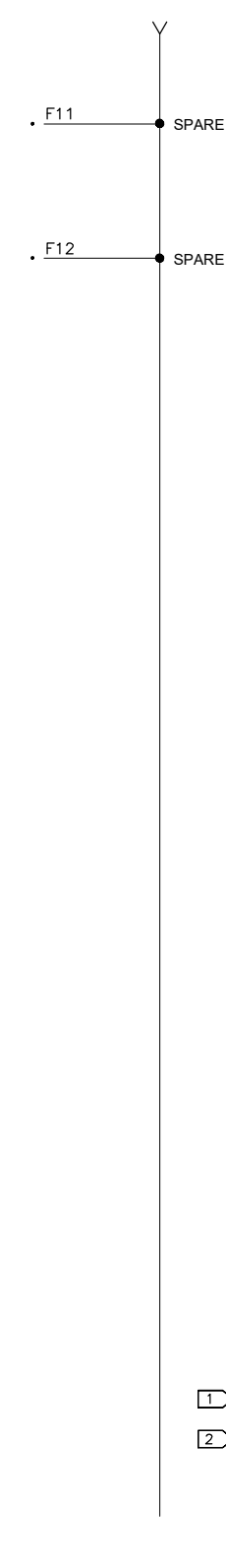
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**NOTES:**

1 ALL TERMINALS THIS SHEET TB-DC UNLESS NOTED.

2 PROVIDE 3/4" GRC WITH 2/C #16 + GND FROM DC POWER DISTRIBUTION PANEL TO NEW SCADA REMOTE I/O PANEL.

AWWU PLAN SET NO. 11018

**VERIFY SCALE** THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY			TELEPHONE						
PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN						
			QUANTITIES						
			MUN. FINAL CHECK						

PLAN CHECK REVISIONS

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 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

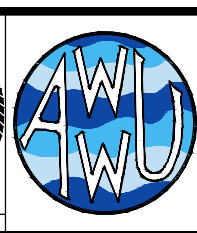
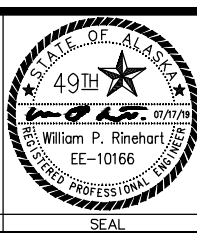
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

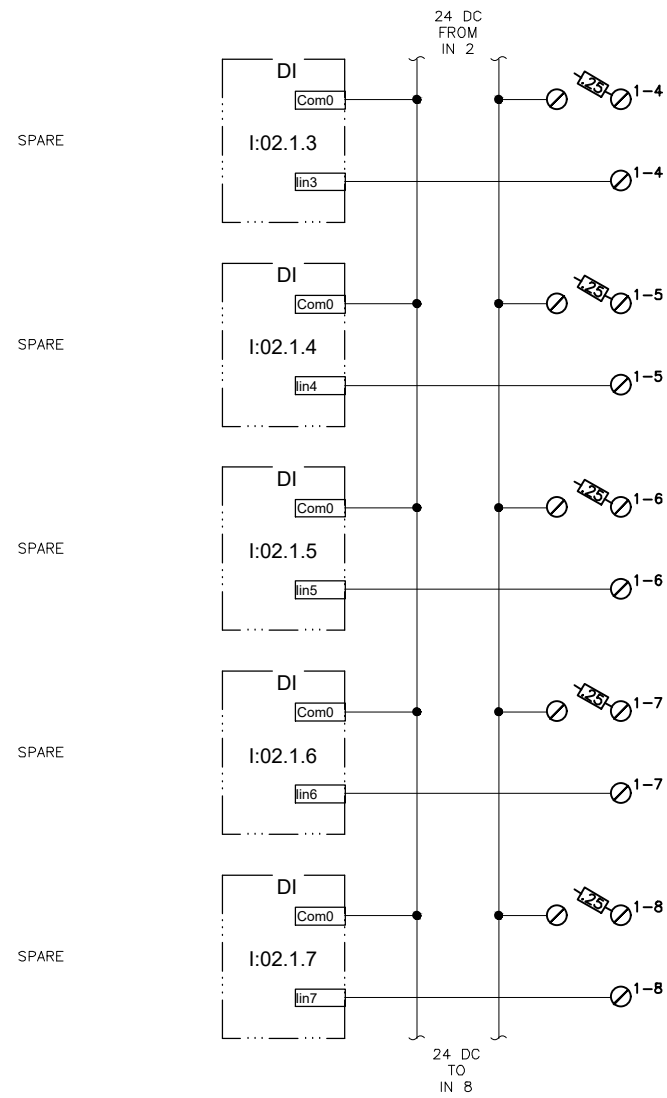
**REMOTE I/O PANEL POWER DISTRIBUTION  
 WELL 10**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-11 of 10-17  
 PROJ. ID.: WW00011(WTR)



NEW REMOTE I/O PANEL

FIELD WIRING



D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\10-12 Spare Discrete Input Layout

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

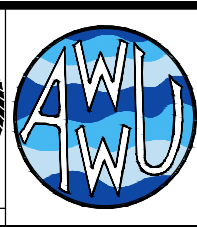
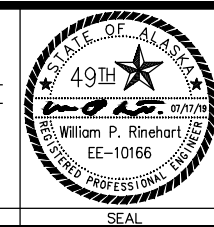
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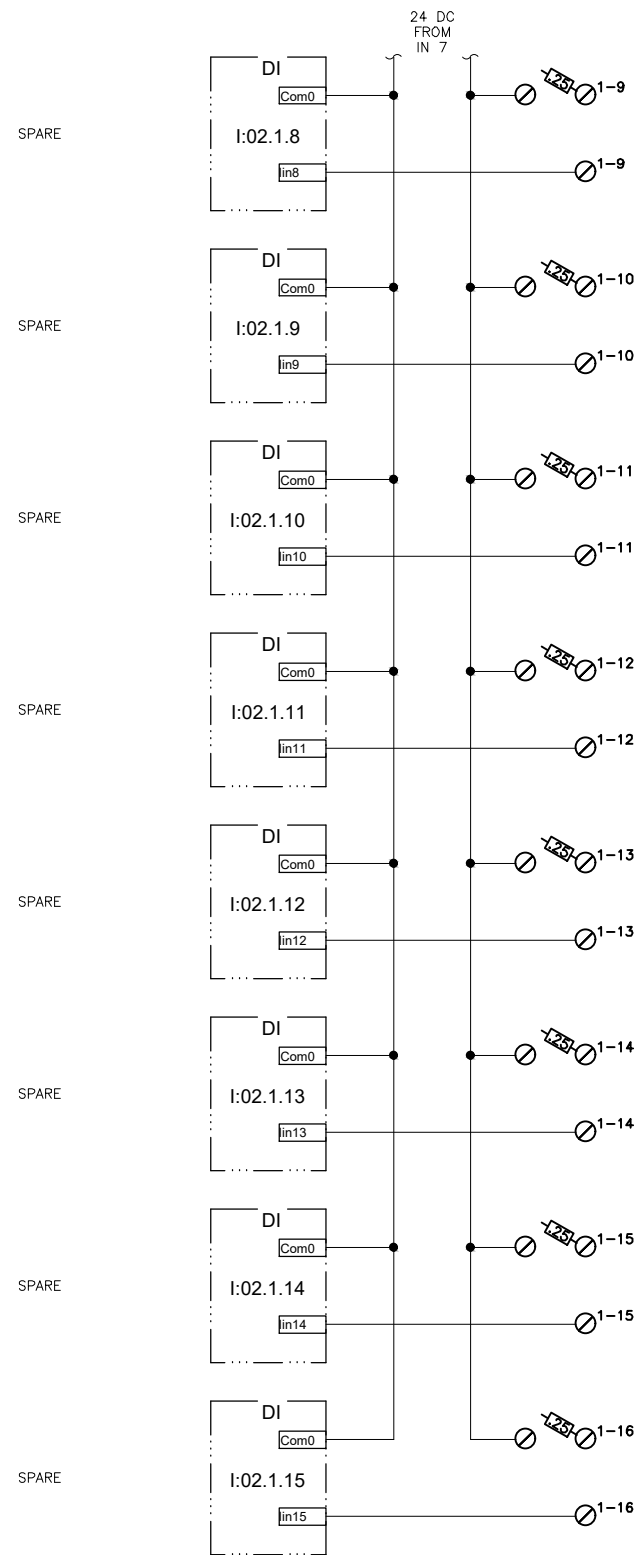
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE DISCRETE INPUT - I  
 WELL 10**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-12 of 10-17  
 PROJ. ID.: WW00011(WTR)

2020/06/30 4:35 PM By: Pat

NEW REMOTE I/O PANEL

FIELD WIRING



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2020/06/30 4:36 PM By: Pat

VERIFY SCALE									
THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.			0  1"			IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.			
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PROFILE	---	---	ELECTRIC	---	---				
SANITARY SEWER	---	---	CABLE TV	---	---				
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---				
	---	---	QUANTITIES	---	---				
	---	---	MUN. FINAL CHECK	---	---				
PLAN CHECK					REVISIONS				

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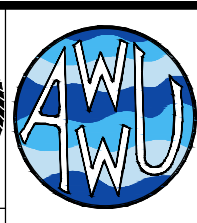
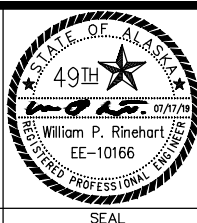
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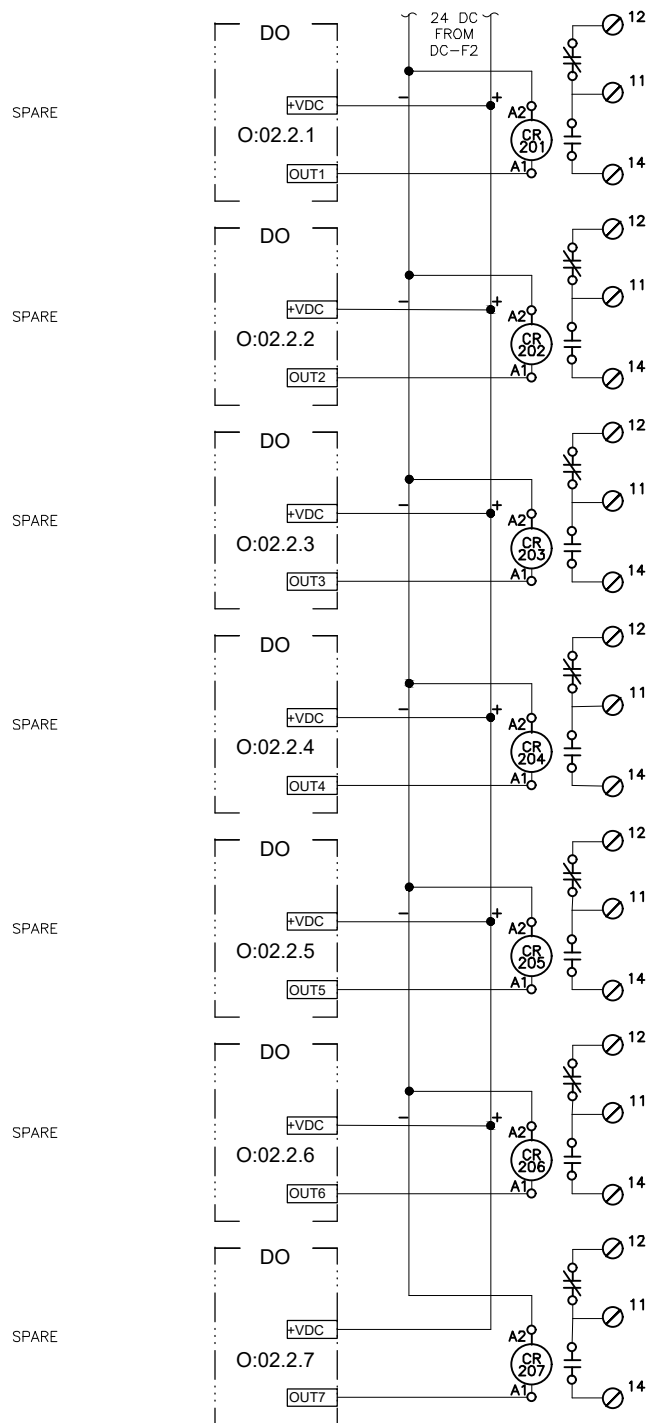
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE DISCRETE INPUT - II  
 WELL 10**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-13 of 10-17  
 PROJ. ID.: WW00011(WTR)

NEW REMOTE I/O PANEL

FIELD WIRING



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AWWU PLAN SET NO. 11018

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
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PLAN CHECK				REVISIONS			

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

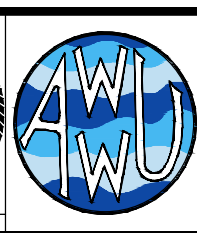
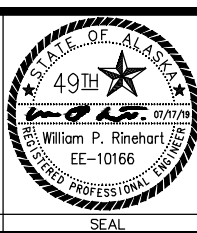
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 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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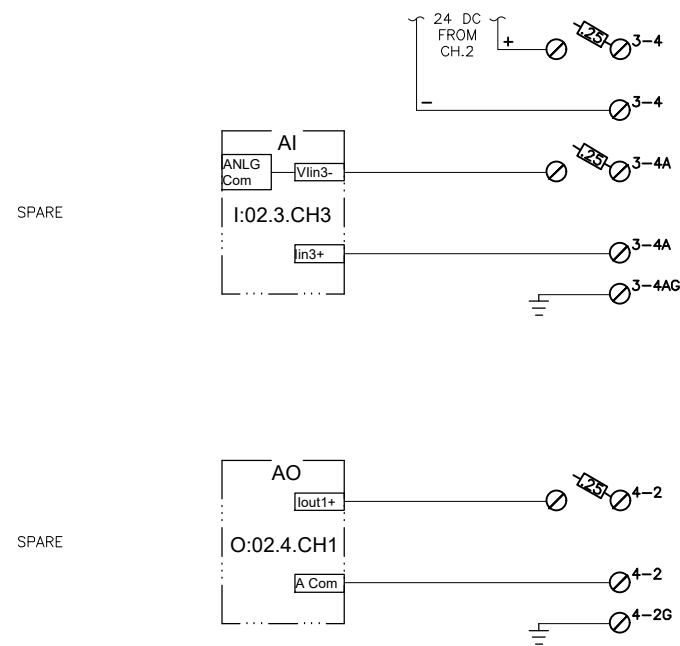
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE DISCRETE OUTPUT  
 WELL 10**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 PROJ. ID.: WW00011(WTR)

CONSULTANT SEAL SHEET 10-14 of 10-17

NEW REMOTE I/O PANEL

FIELD WIRING



D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\10-15 Spare Analog.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	----	----	TELEPHONE	----	----		
PROFILE	----	----	ELECTRIC	----	----		
SANITARY SEWER	----	----	CABLE TV	----	----		
STORM SEWER	----	----	TRAFFIC SIGNAL	----	----		
	----	----	DESIGN	----	----		
	----	----	QUANTITIES	----	----		
	----	----	MUN. FINAL CHECK	----	----		
PLAN CHECK				REVISIONS			

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2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

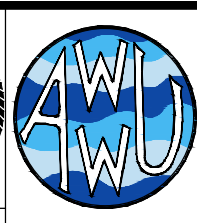
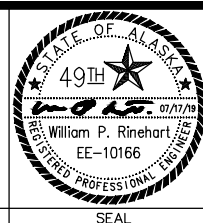
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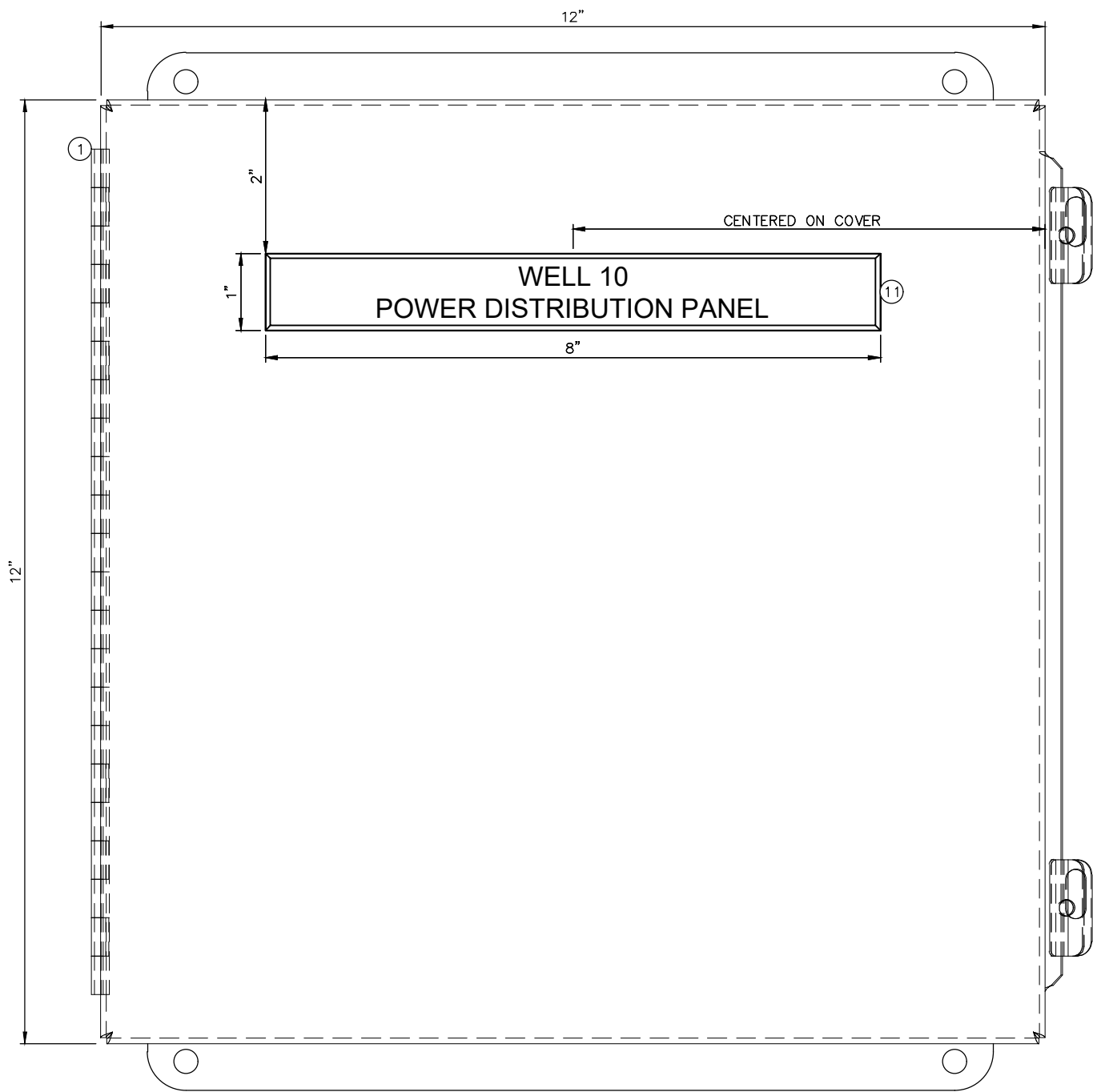
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE ANALOG  
 WELL 10**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 10-15 of 10-17  
 PROJ. ID.: WW00011(WTR)

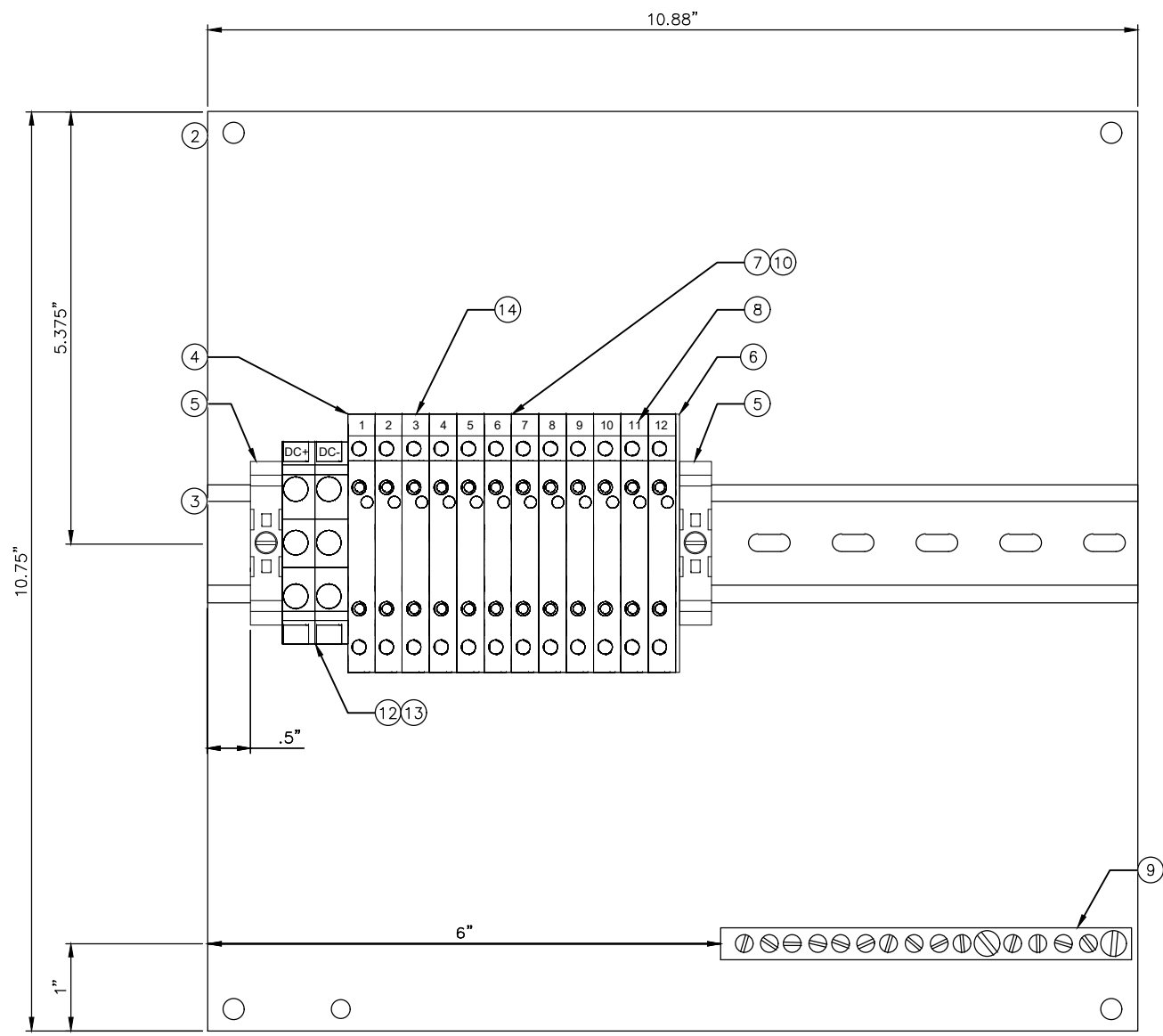
2020/06/30 4:37 PM By: Pat

NOTES:

1. SEE SHT. 10-17 FOR BILL OF MATERIAL



1 POWER DISTRIBUTION PANEL - EXTERIOR LAYOUT  
NTS



2 POWER DISTRIBUTION PANEL - INTERIOR LAYOUT  
NTS

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\10-16 DC Power Dist. Panel.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

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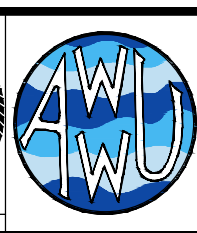
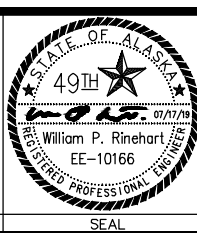
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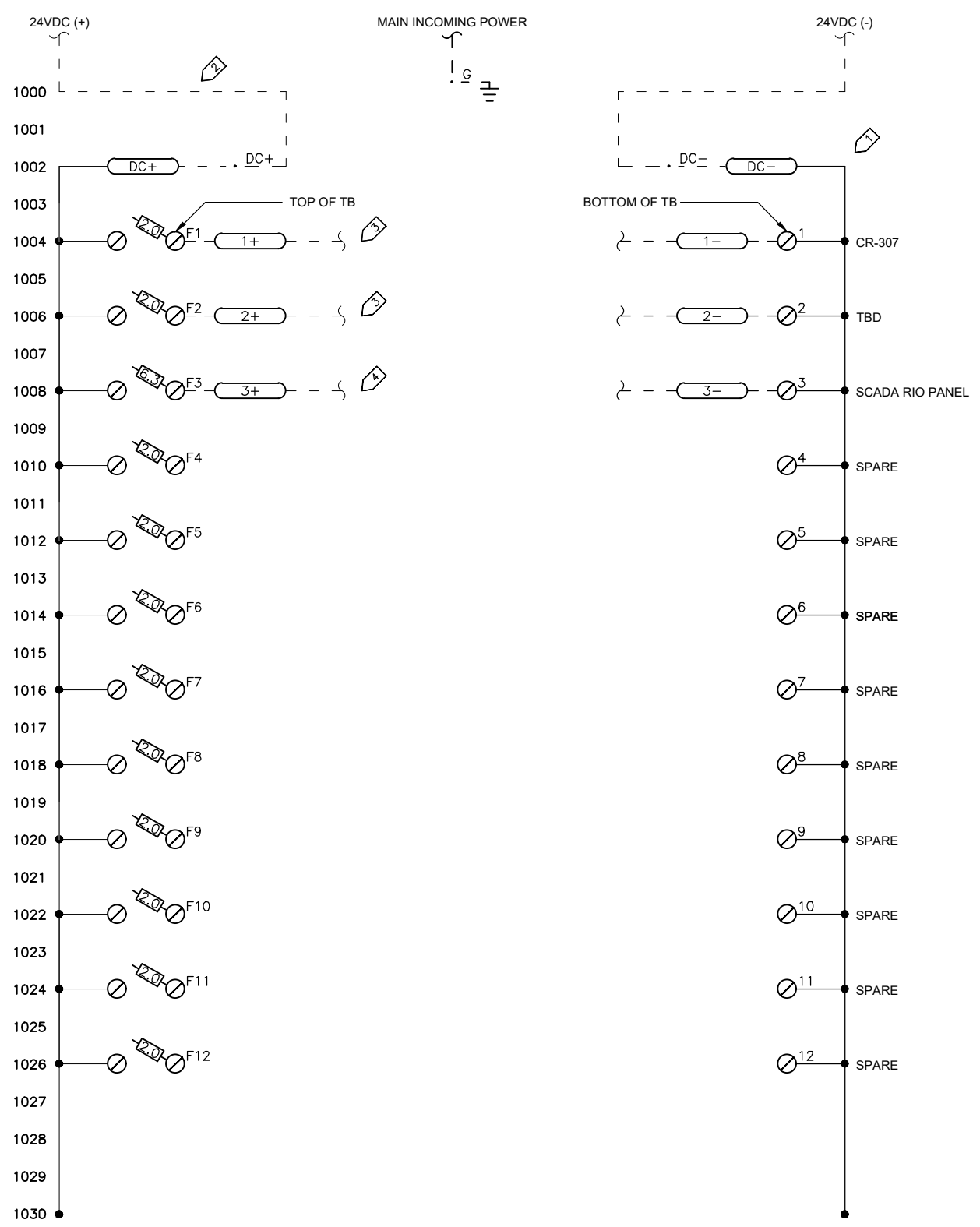
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ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
DC POWER DISTRIBUTION PANEL  
WELL 10

HORZ SCALE: NTS  
VERT SCALE: NTS  
DATE: 07/2019  
GRID: SW1941  
PROJ. ID.: WW00011(WTR)

CONSULTANT  
SEAL

SHEET 10-16 of 10-17



BILL OF MATERIAL					
ITEM #	QTY.	U.O. M.	MANUFACTURER	DESCRIPTION	CATALOG NUMBER
1	1	EA.	HOFFMAN	ENCLOSURE, STAINLESS STEEL, NEMA 4X	A1212CHNFSS
2	1	EA.	HOFFMAN	BACK PANEL, PAINTED STEEL	A12P12G
3	2	FT.	ALLEN-BRADLEY	DIN RAIL, 35MM	199-DR1
4	12	EA.	ALLEN-BRADLEY	TERMINAL BLOCK, FEED THROUGH	1492-J3
5	2	EA.	ALLEN-BRADLEY	END ANCHORS	1492-EAJ35
6	1	EA.	ALLEN-BRADLEY	END BARRIER FOR 1492-JD3 TERMINAL	1492-EBJD3FB
7	4	EA.	ALLEN-BRADLEY	4 POLE JUMPER	1492-SJ88-4
8	1	EA.	ALLEN-BRADLEY	MARKER CARD, "1-20" HORIZONTAL PRINT	1492-M5x5 H 1-20
9	1	EA.	SQUARE D	GROUNDING BAR	PK9GTA
10	12	EA.	BUSSMAN	FAST ACTING FUSE, 2 AMP, 5 X 20 mm, GLASS TUBE FUSE	GMA-2-R
11	1	EA.	FABRICATOR	LABEL, 1" X 8" PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND, 1ST LINE - "WELL XX" 2ND LINE - "POWER DISTRIBUTION PANEL"	N/A
12	2	EA.	ALLEN-BRADLEY	FEED THROUGH TERMINAL BLOCK	1492-J4
13	1	EA.	ALLEN-BRADLEY	END BARRIER FOR J4 TERMINAL BLOCK	1492-EBJ3

**NOTES:**

- 1 PROVIDE NRTL LISTED INDUSTRIAL CONTROL PANEL ASSEMBLY IN ACCORDANCE WITH UL508A & SPECIFICATION SECTION 40 95 13.
- 2 EXISTING POWER FEED. RE-INSTALL.
- 3 EXISTING FIELD CIRCUIT. RE-INSTALL.
- 4 PROVIDE 2/C#16 w/GND IN GRC TO NEW SCADA REMOTE I/O PANEL.

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TOPOGRAPHY			TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL DESIGN		
			QUANTITIES		
			MUN. FINAL CHECK		

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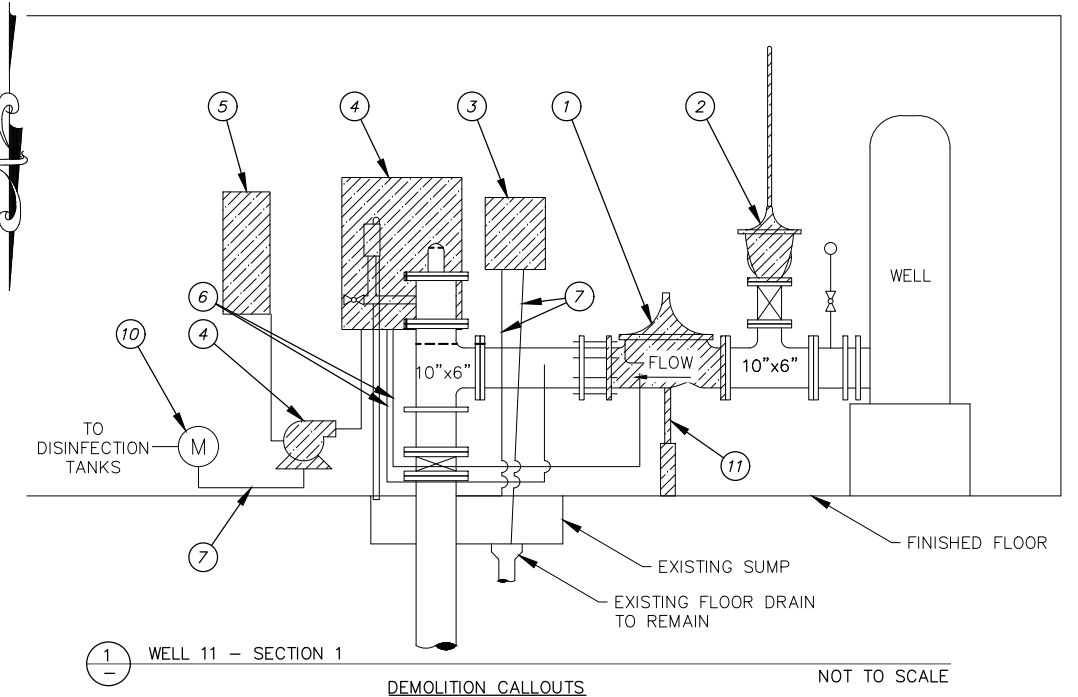
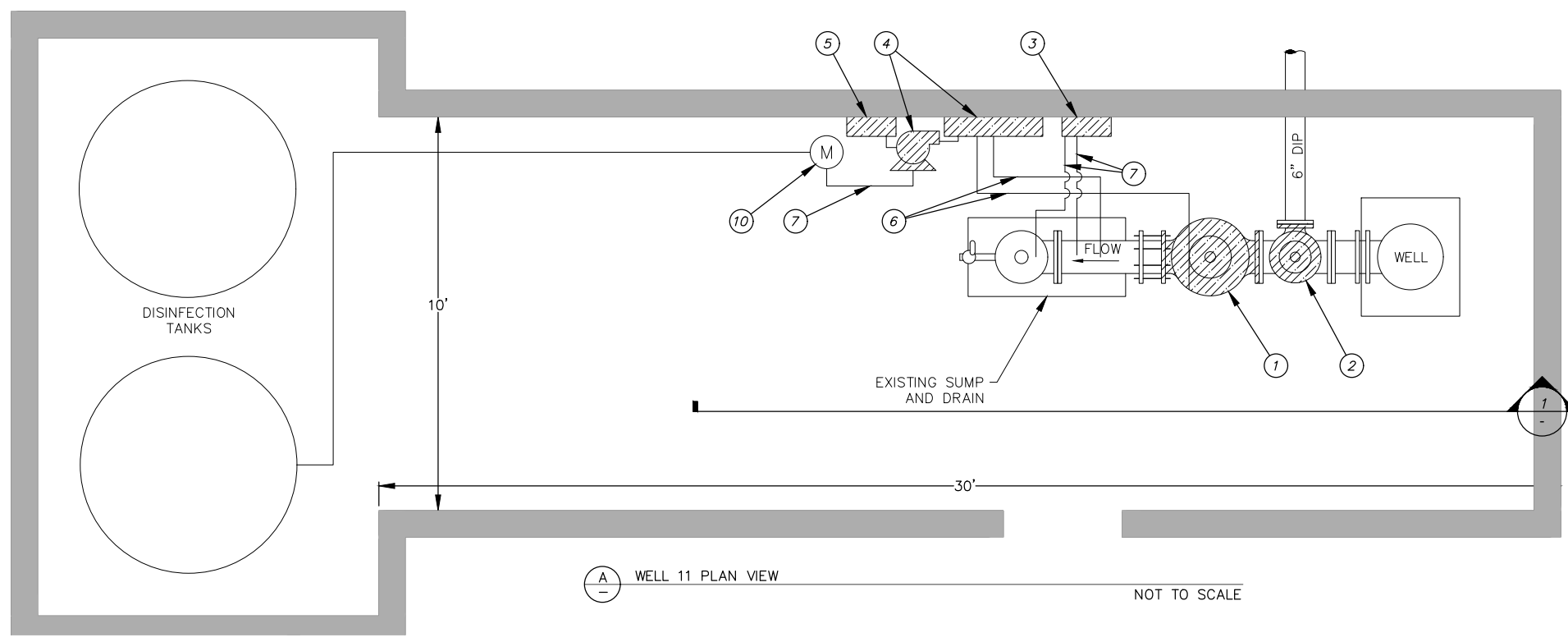
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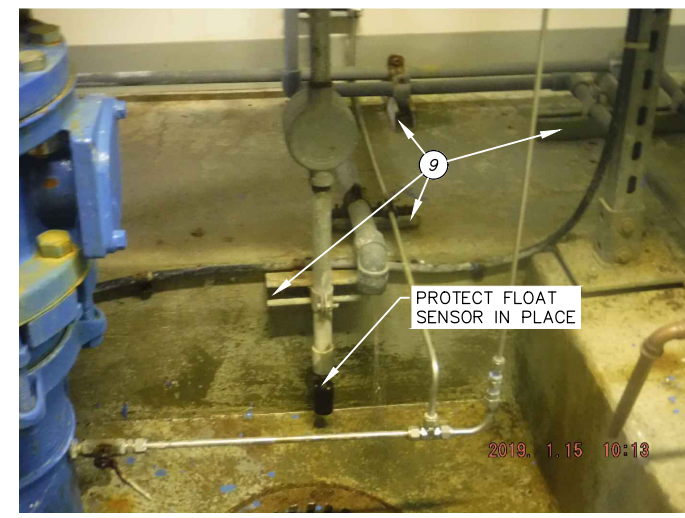
**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
DC POWER DISTRIBUTION SCHEMATIC  
WELL 10**

HORZ SCALE: NTS	DATE: 07/2019	GRID: SW1941	SHEET 10-17 of 10-17
VERT SCALE: NTS	PROJ. ID.: WW00011(WTR)		

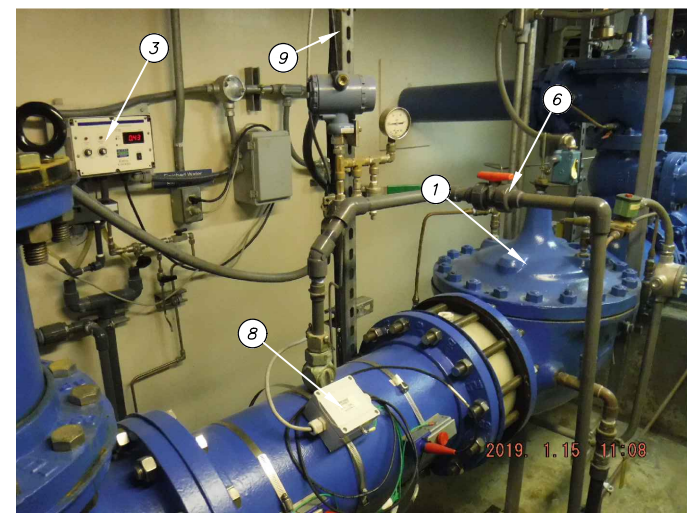


- DEMOLITION CALLOUTS**
- 1 REMOVE EXISTING 10" PRV - GLOBE STYLE
  - 2 REMOVE EXISTING 6" PRV - ANGLE STYLE. SEE NOTE 3
  - 3 REMOVE EXISTING CHLORINE ANALYZER, CONDUIT, AND APPURTENANCES
  - 4 REMOVE EXISTING PUMP SKID, CONDUIT, AND APPURTENANCES
  - 5 REMOVE PUMP SHUT OFF ELECTRICAL PANEL AND CONDUIT TO SUPPLY PANEL
  - 6 REMOVE PVC PIPING AND ASSOCIATED APPURTENANCES
  - 7 REMOVE TUBING AND ASSOCIATED APPURTENANCES
  - 8 REMOVE TEMPORARY FLOW METER AND ASSOCIATED EQUIPMENT AND PLUG HOLE IN SPOOL. SEE DETAIL C
  - 9 REMOVE AND REPLACE WITH VINYL GLASS UNI-STRUT
  - 10 MOVE EXISTING FLOW METER ±36" TOWARD DISINFECTION TANKS TO MAKE ROOM FOR PROPOSED PUMP SKID AND CHEMICAL ANALYZER. COORDINATE WITH OWNER
  - 11 REMOVE PIPE SUPPORT

- DEMOLITION NOTES**
1. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS THE BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
  2. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
  3. CONTRACTOR SHALL USE CARE WHILE REMOVING 6" POWERROLS ANGLE VALVES DUE TO DANGER. COMPONENTS ARE UNDER PRESSURE AND CAN CAUSE INJURY IF MISHANDLED.



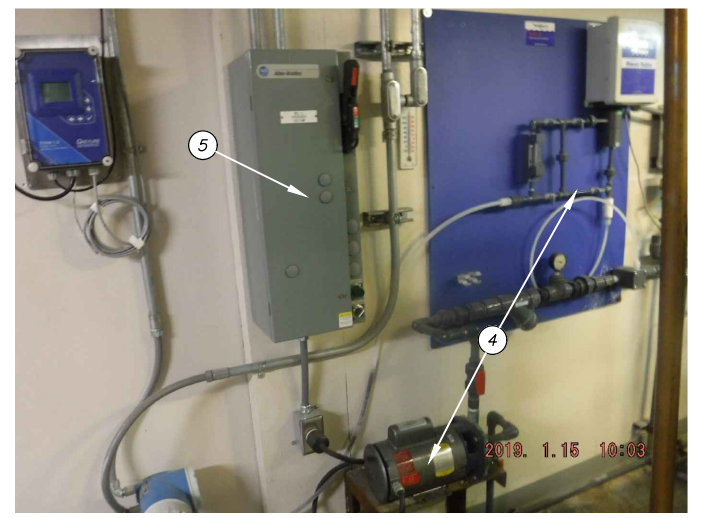
(B) EXISTING FLOAT SENSOR  
NOT TO SCALE



(C) EXISTING TEMPORARY FLOW SENSOR  
NOT TO SCALE



(D) EXISTING 6" BLOW OFF  
NOT TO SCALE



(E) EXISTING PUMP, SKID ELECTRICAL SHUT OFF PANEL  
NOT TO SCALE

2021/03/26 8:06 AM By: Kevin Garcia Z:\WV-17\Task 4 CA-01\dwg Active\WV00011WTR\_WELL-11.dwg

**VERIFY SCALE** THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY	KMG	DAK	TELEPHONE						
PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN	KMG	DAK				
			QUANTITIES	KMG	DAK				
			MUN. FINAL CHECK						
PLAN	CHECK							REVISIONS	

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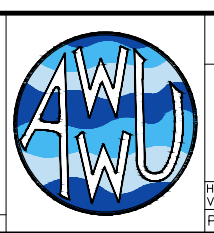
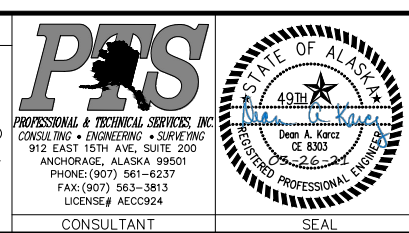
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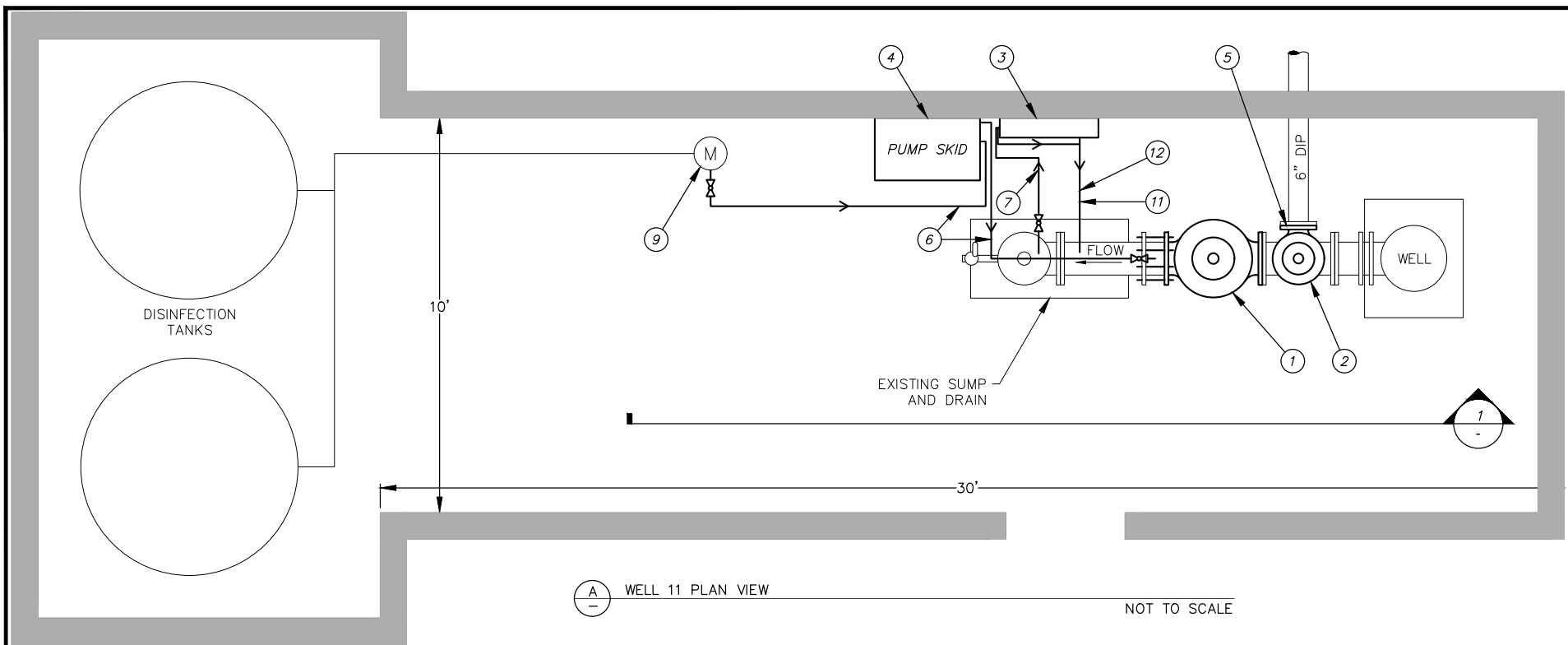


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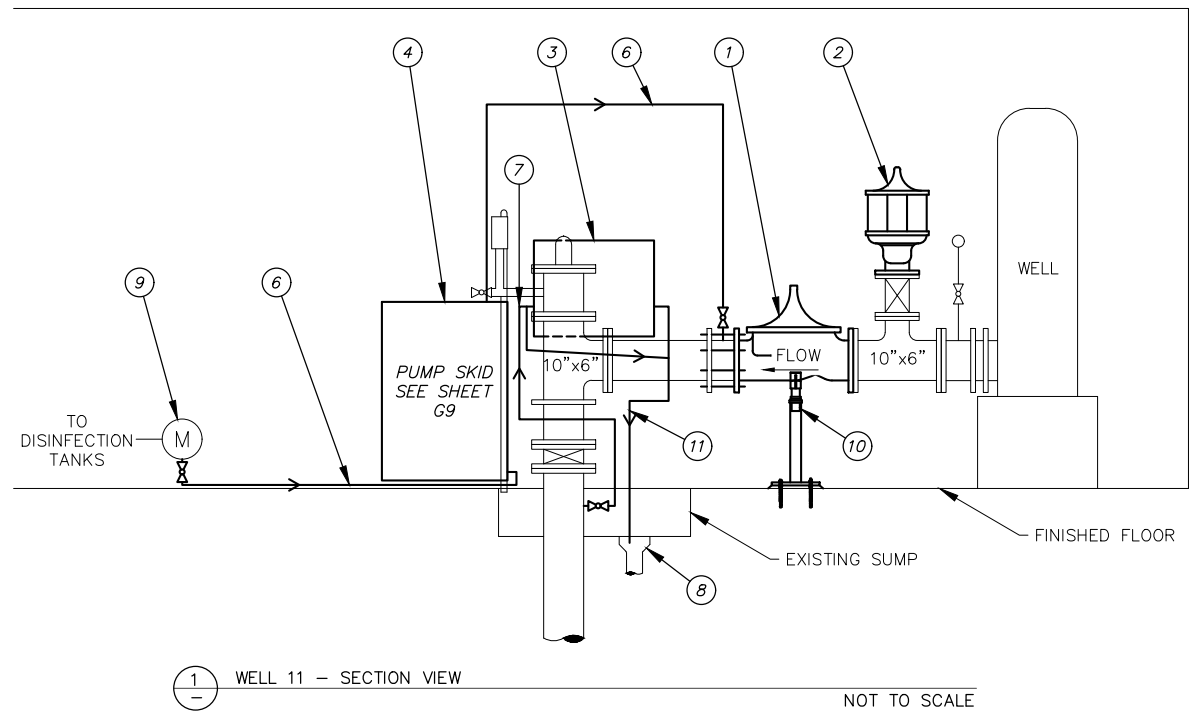
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 11  
 DEMOLITION PLAN AND SECTION**

HORZ SCALE: NTS DATE: 04/2021 GRID: SW1941 SHEET 11-1  
 VERT SCALE: NTS PROJ. ID.: WV00011(WTR) SHEET 11-18



WELL 11 PLAN VIEW  
NOT TO SCALE



WELL 11 - SECTION VIEW  
NOT TO SCALE

**CONSTRUCTION CALLOUTS**

- ① FURNISH AND INSTALL NEW 10" PRV - GLOBE STYLE. SEE SHEET G10 FOR DETAILS
- ② FURNISH AND INSTALL NEW 6" PRV - ANGLE STYLE. SEE SHEET G10 FOR DETAILS
- ③ FURNISH AND INSTALL CHEMICAL ANALYZER. SEE SHEET G8
- ④ FURNISH AND INSTALL PUMP SKID. SEE SHEET G9
- ⑤ REUSE EXISTING MJxFL ADAPTOR FOR DISCHARGE PIPING. MODIFY EXISTING 6" DIP AS NECESSARY
- ⑥ FURNISH AND INSTALL 1/2" CPVC PIPING AND ASSOCIATED APPURTENANCES BETWEEN SKID AND EXISTING STATIC MIXER AND BETWEEN PUMP SKID AND FLOW METER. STATIC MIXER IS TAPPED AND PLUGGED. REMOVE PLUG AND MAKE CONNECTION
- ⑦ FURNISH AND INSTALL 1/4" 316 STAINLESS STEEL TUBING AND ASSOCIATED APPURTENANCES FOR CHEMICAL ANALYZER FEED AND COLIFORM SAMPLE PORT. ROUTE PIPE TO FIT WITH DISCHARGE PIPE UNDER PIPE PROTECTOR
- ⑧ EXISTING FLOOR DRAIN TO REMAIN
- ⑨ MOVE EXISTING FLOW METER ±36" TOWARD DISINFECTION TANKS TO MAKE ROOM FOR PROPOSED PUMP SKID AND CHLORINE ANALYZER. ADJUST EXISTING ELECTRIC AS NEEDED
- ⑩ FURNISH AND INSTALL PIPE SUPPORT. SEE DETAIL A, SHEET G7
- ⑪ FURNISH AND INSTALL 1/2" CPVC DISCHARGE LINE TO SUMP. ROUTE PIPE WITH 1/4" 316 STAINLESS STEEL CHEMICAL FEED LINE TO FIT UNDER PIPE PROTECTOR
- ⑫ FURNISH AND INSTALL 2' PIPE PROTECTOR IAW 60.09. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING. VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION

**CONSTRUCTION NOTES**

1. SEE TABLE 11-1 FOR A DETAILED LIST OF EQUIPMENT.
2. NEW CPVC PIPE SHALL BE SCHEDULE 80 1/2" DIAMETER.
3. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
4. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
5. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
6. CONTRACTOR TO INSTALL PRV BODIES ONLY. THE OWNER SHALL INSTALL THE TRIM, ACCESSORIES, AND REBUILD KITS AFTER THE BODIES HAVE BEEN INSTALLED.
7. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
8. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH, CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
9. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4-FT WITHOUT SUPPORT.
10. CONTRACTOR SHALL INSTALL A DRAIN CATCH BENEATH THE CHLORINE RESIDUAL ANALYZER. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE CATCH TO EXISTING DRAINAGE FUNNEL.

NOMENCLATURE	MATERIAL TYPE	SIZE (IN)	LENGTH (IN)	END DETAIL	REMARKS	QUANTITY
BALL VALVE	SS	1/4	-	-	316 STAINLESS STEEL BODY AND BALL	1
BALL VALVE	CPVC	1/2	-	-	SCH 80 VENTED/BLEACHED TRUE UNION	2

**TABLE 11-1 NOTES:**

1. ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE (WELL 11)

2021/03/26 8:06 AM By: Kevin Garcia Z:\WV-17\Task 4 CA-01\dwg Active\WV00011WTR\_WELL-11.dwg

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PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN				
			CHECK				
			REVISIONS				

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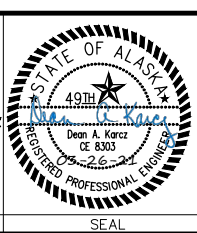
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 11  
 CONSTRUCTION PLAN AND SECTION**

HORZ SCALE: NTS DATE: 04/2021 GRID: SW1941  
 VERT SCALE: NTS PROJ. ID: WV00011(WTR) SHEET 11-2 of 11-18

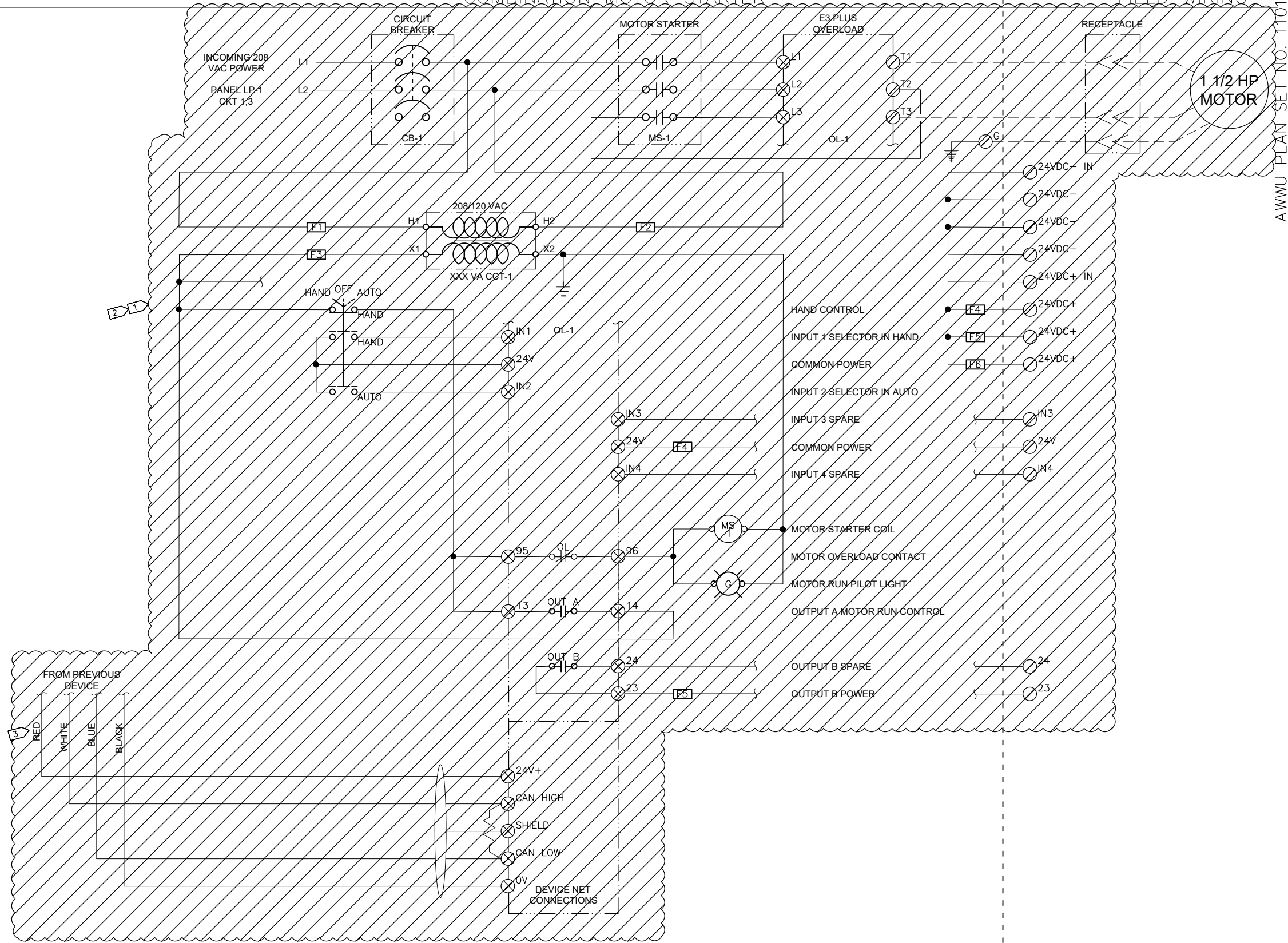


D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\11-3 Hypo Pump Demo.dwg



COMBINATION MOTOR STARTER

FIELD WIRING



1 1/2 HP MOTOR

AWWU PLAN SET NO. 11018

NOTES:

- 1 DEMOLISH HYPOCHLORITE PUMP, MOTOR AND COMBINATION STARTER. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
- 2 DEMOLISH PUMP CIRCUIT BACK TO LOAD CENTER AND RE-LABEL BUCKET AS SPARE. DEMOLISH RECEPTACLE AND RACEWAY BACK TO CONDULET TEE FITTING AND PLUG UNUSED OPENING.
- 3 DEMOLISH DEVICENET CABLE AND ASSOCIATED RACEWAY BACK TO PREVIOUS DEVICE. RELOCATE DEVICENET TERMINATION RESISTOR TO FIELD TERMINALS OF PREVIOUS DEVICE.

THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW011 IL-04

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
TOPOGRAPHY	---	TELEPHONE	---		
PROFILE	---	ELECTRIC	---		
SANITARY SEWER	---	CABLE TV	---		
STORM SEWER	---	TRAFFIC SIGNAL	---		
		DESIGN	---		
		QUANTITIES	---		
		MUN. FINAL CHECK	---		
PLAN CHECK		REVISIONS			

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_  
 This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.  
 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

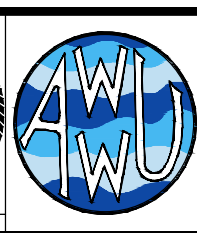
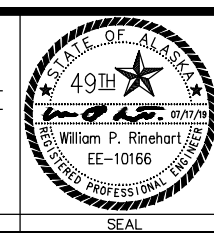
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
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 DATE: \_\_\_\_\_

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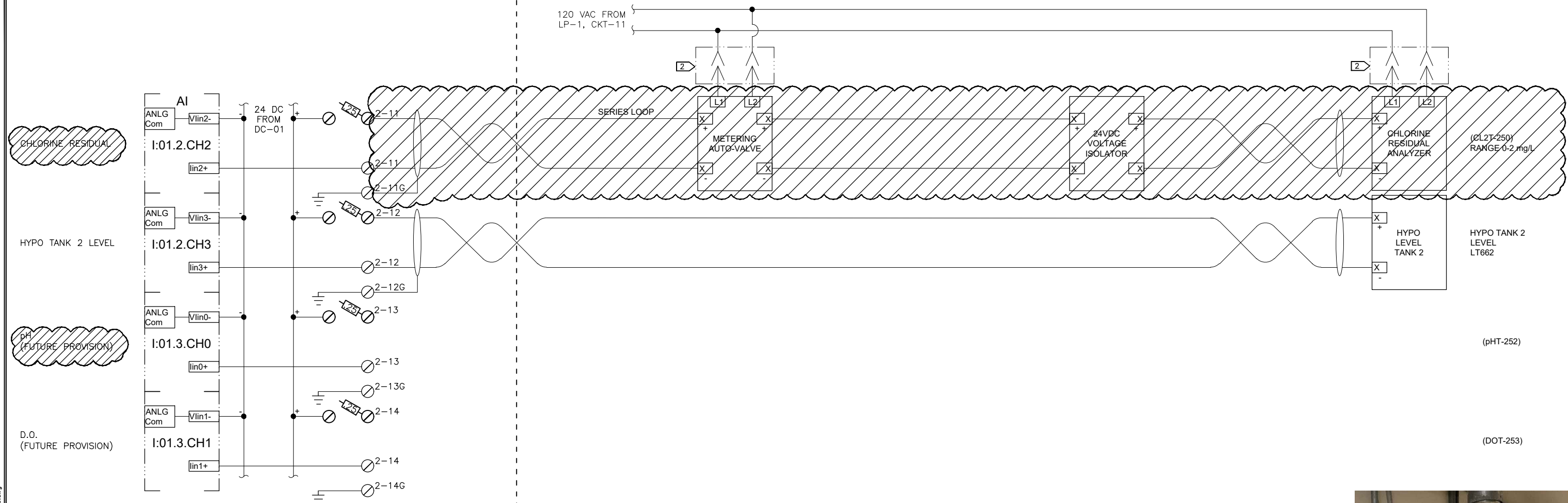
Snowdwell Industrial, LLC  
 901 E. Fireweed Lane  
 Anchorage, AK 99508  
 (907) 227-5039  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP DEMOLITION  
 WELL 11**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-3 of 11-18  
 PROJ. ID.: WW00011(WTR)



NOTES:

- 1 DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, VOLTAGE ISOLATOR AND AUTO VALVE BACKBOARD ASSEMBLIES.
- 2 RELOCATE 120VAC RECEPTACLE TO NEW PUMP AND ANALYZER LOCATION. EXTEND RACEWAY TO NEW LOCATION AND PULL NEW HOMERUN CONDUCTORS.

THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW011 IL-10



D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\1-4 Hypo System Demo.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

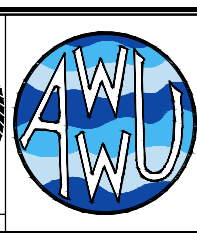
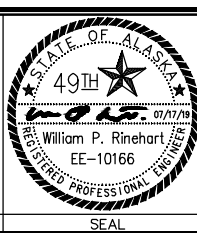
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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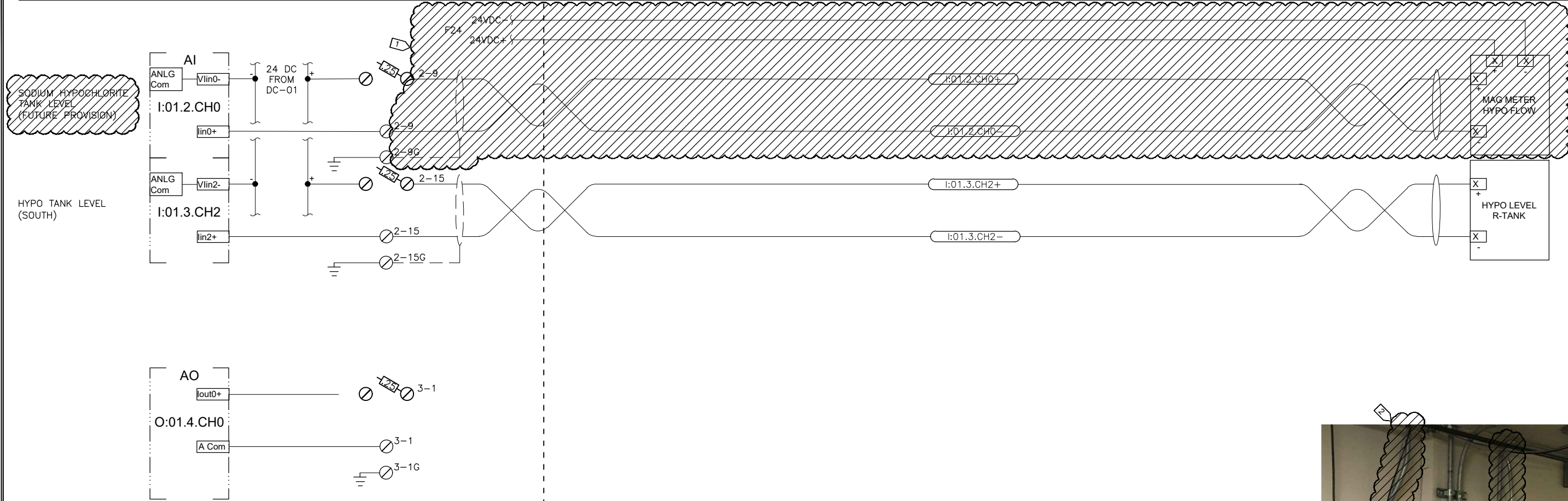
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 11**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 PROJ. ID.: WW00011(WTR)

SHEET 11-4 of 11-18

SCADA PANEL

FIELD WIRING



NOTES:

- 1 DEMOLISH FLOWMETER AND RE-INSTALL AT NEW LOCATION AS SHOWN ON SHT. 11-6 AND DETAIL 2 ON SHT. G11.
- 2 DEMOLISH TEMPORARY ULTRASONIC FLOWMETER, PROBES AND ASSOCIATED WIRING.

THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW011 IL-08

D:\pat\Documents\Snowdwellers\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\11-5 Hypo Flowmeter Demol.dwg

AWWU PLAN SET NO. 11018



VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				
PLAN		CHECK				REVISIONS	

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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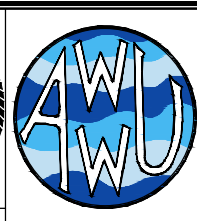
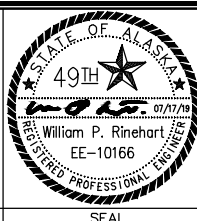
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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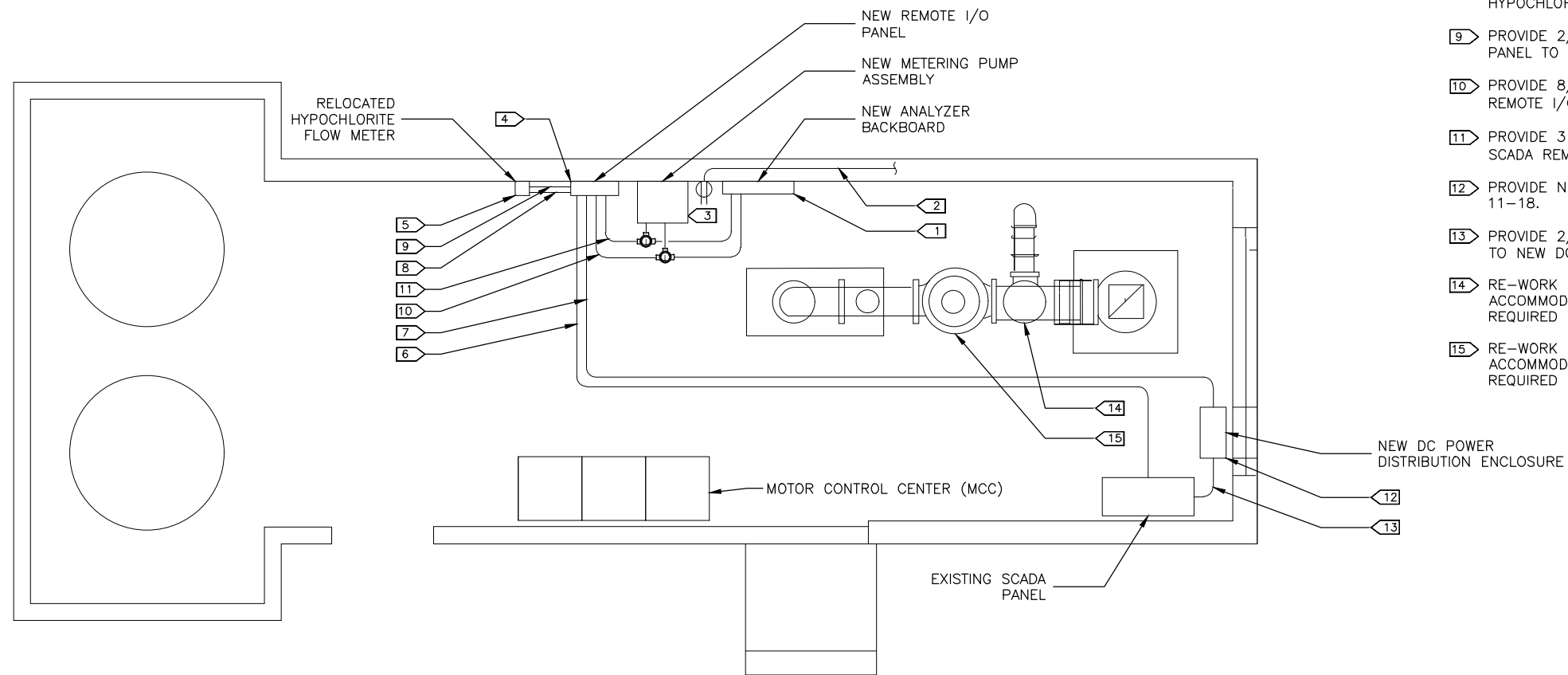
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**HYPOCHLORITE FLOWMETER DEMOLITION  
 WELL 11**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 PROJ. ID.: WW00011(WTR)

CONSULTANT  
 SEAL  
 SHEET 11-5 of 11-18



- 1 NEW ANALYZER BACKBOARD ASSEMBLY.
- 2 RELOCATE 120VAC RECEPTACLE TO SUPPORT NEW ANALYZER AND PUMP.
- 3 NEW METERING PUMP ASSEMBLY.
- 4 INSTALL NEW SCADA REMOTE I/O PANEL.
- 5 RELOCATED HYPOCHLORITE FLOW METER. INSTALL PER DETAIL 2 ON SHEET G11.
- 6 PROVIDE (2)EA. CAT 6 CABLE IN 3/4" GRC FROM SCADA ETHERNET SWITCH TO SCADA REMOTE I/O PANEL.
- 7 PROVIDE 2/C #14 IN 3/4" GRC FROM NEW DC POWER PANEL TO SCADA REMOTE I/O PANEL.
- 8 2/C#14 W/GND FROM SCADA REMOTE I/O PANEL TO RELOCATED HYPOCHLORITE FLOW METER.
- 9 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM SCADA REMOTE I/O PANEL TO RELOCATED HYPOCHLORITE FLOW METER.
- 10 PROVIDE 8/C #16 CONTROL CONDUCTORS IN 3/4" GRC FROM SCADA REMOTE I/O PANEL TO NEW ANALYZER AND PUMP.
- 11 PROVIDE 3 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA REMOTE I/O PANEL TO NEW PUMP AND ANALYZER.
- 12 PROVIDE NEW DC POWER PANEL AS SHOWN ON SHT. 11-17 & SHT. 11-18.
- 13 PROVIDE 2/C #14 W/GND IN GRC FROM BATTERY CHARGER OUTPUT TO NEW DC POWER PANEL.
- 14 RE-WORK CONDUIT AND WIRING AT UNLOADING VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.
- 15 RE-WORK CONDUIT AND WIRING AT DISCHARGE VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.

1 WELL 11 ELECTRICAL PLAN

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\11-6 Conduit Diagram.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.		BY
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV
TOPOGRAPHY	---	---	TELEPHONE	---	---	
PROFILE	---	---	ELECTRIC	---	---	
SANITARY SEWER	---	---	CABLE TV	---	---	
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---	
	---	---	QUANTITIES	---	---	
	---	---	MUN. FINAL CHECK	---	---	
PLAN		CHECK		REVISIONS		

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
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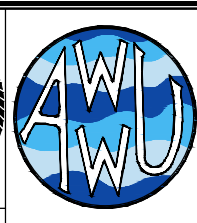
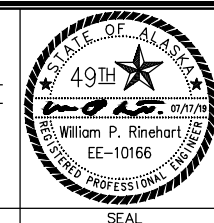
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CONSULTANT



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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

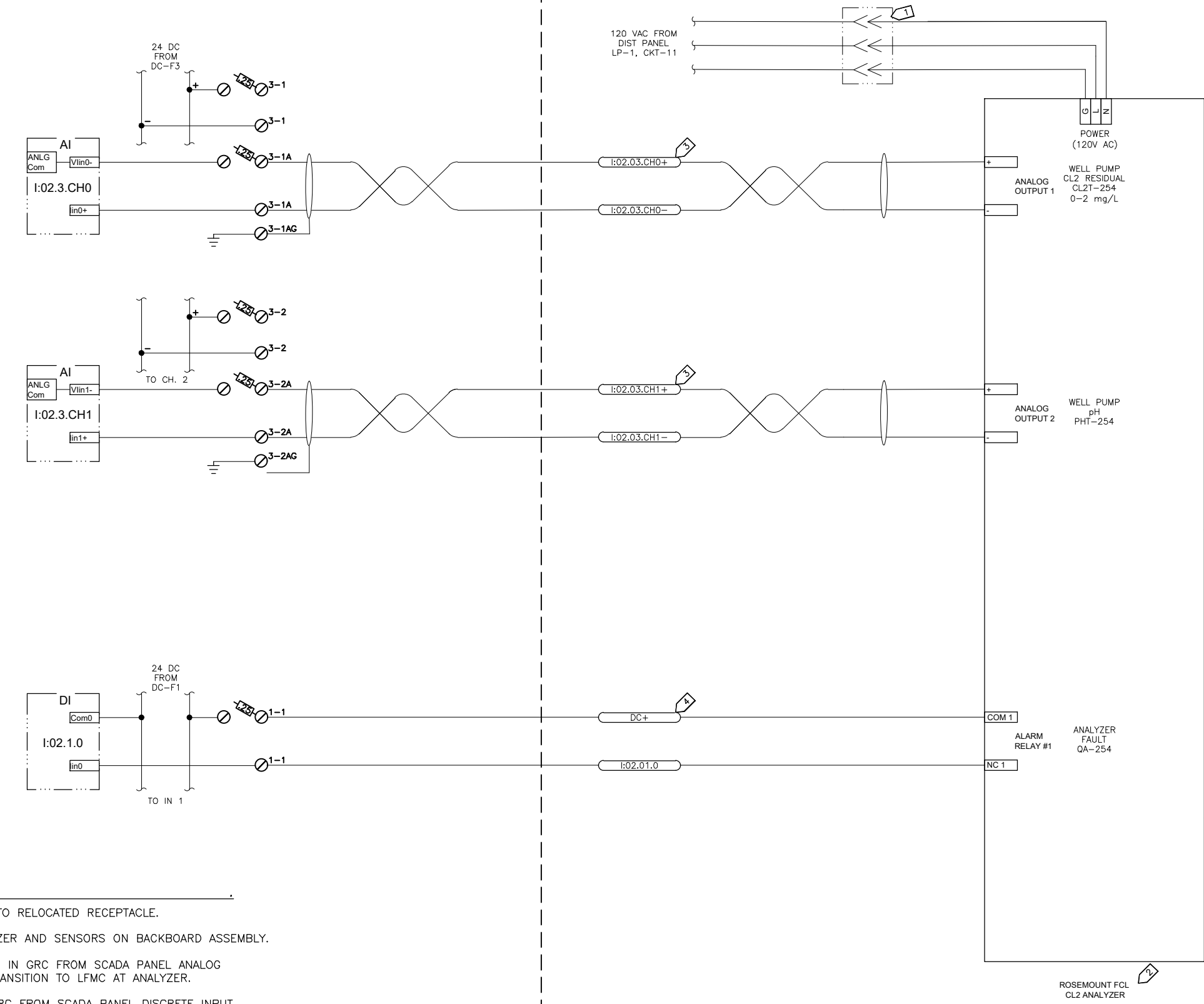
**CONDUIT DIAGRAM (NEW WORK)  
 WELL 11**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-6 of 11-18  
 PROJ. ID.: WW00011(WTR)

CHLORINE RESIDUAL

PH

ANALYZER FAULT



**NOTES:**

- 1 PROVIDE CORD CONNECTION TO RELOCATED RECEPTACLE.
- 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
- 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SCADA PANEL ANALOG CHANNELS TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
- 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\CL2 Project\Drawings\11-7 CL2 Residual Analyzer.dwg

AWWU PLAN SET NO. 11018

**VERIFY SCALE**  
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TOPOGRAPHY	---	---	TELEPHONE	---	---				
PROFILE	---	---	ELECTRIC	---	---				
SANITARY SEWER	---	---	CABLE TV	---	---				
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---				
	---	---	DESIGN	---	---				
	---	---	QUANTITIES	---	---				
	---	---	MUN. FINAL CHECK	---	---				

PLAN CHECK REVISIONS

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

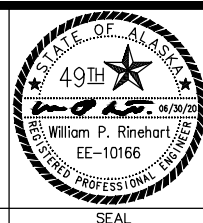
1. DATA PROVIDED BY: _____ This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed. CONTRACTOR: _____ BY: _____ TITLE: _____ DATE: _____	3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed. DATA TRANSFER CHECKED BY: _____ COMPANY: _____ BY: _____ TITLE: _____ DATE: _____
2. DATA TRANSFERRED BY: _____ COMPANY: _____ DATE: _____	

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**Snowdwell Industrial, LLC**

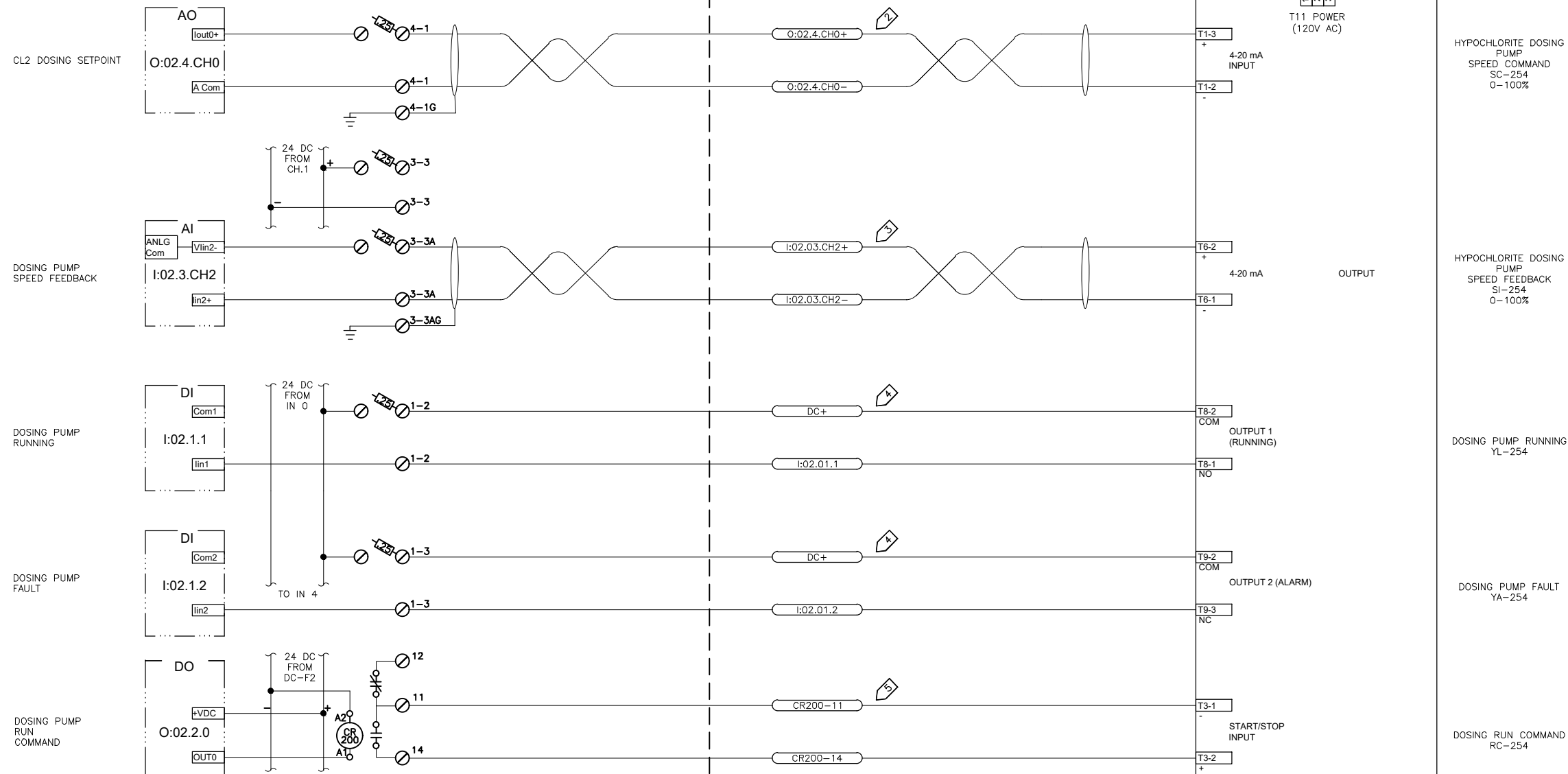
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**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
CL2 RESIDUAL ANALYZER  
WELL 11**

HORIZ SCALE: NTS	DATE: 06/2020	GRID: SW1941	SHEET 11-7
VERT SCALE: NTS			of 11-18
PROJ. ID.: WW00011(WTR)			



NOTES:

- 1) PROVIDE CORD CONNECTION TO RELOCATED RECEPTACLE.
- 2) PROVIDE 2/C #18 TWSH IN GRC TO FROM NEW REMOTE I/O PANEL ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LFMC AT PUMP.
- 3) PROVIDE 2/C #18 TWSH SIGNAL FROM DOSING PUMP SPEED FEEDBACK OUTPUT TO NEW REMOTE I/O PANEL ANALOG INPUT.
- 4) PROVIDE 2/C #16 IN GRC FROM PUMP TO NEW REMOTE I/O PANEL DISCRETE INPUT.
- 5) PROVIDE 2/C #16 IN GRC FROM NEW REMOTE I/O PANEL RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.

D:\pat\Documents\Snowdwell\AWWU\_2019\_SODA Term Contract\C12 Project\Drawings\1-8 Hypo Dosing Pump.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY	---	TELEPHONE	---		
PROFILE	---	ELECTRIC	---		
SANITARY SEWER	---	CABLE TV	---		
STORM SEWER	---	TRAFFIC SIGNAL	---		
	---	DESIGN	---		
	---	QUANTITIES	---		
	---	MUN. FINAL CHECK	---		
PLAN CHECK		REVISIONS			

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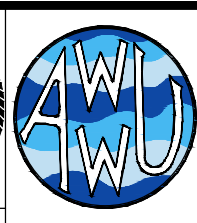
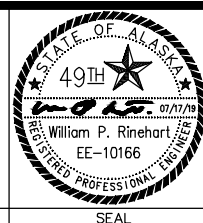
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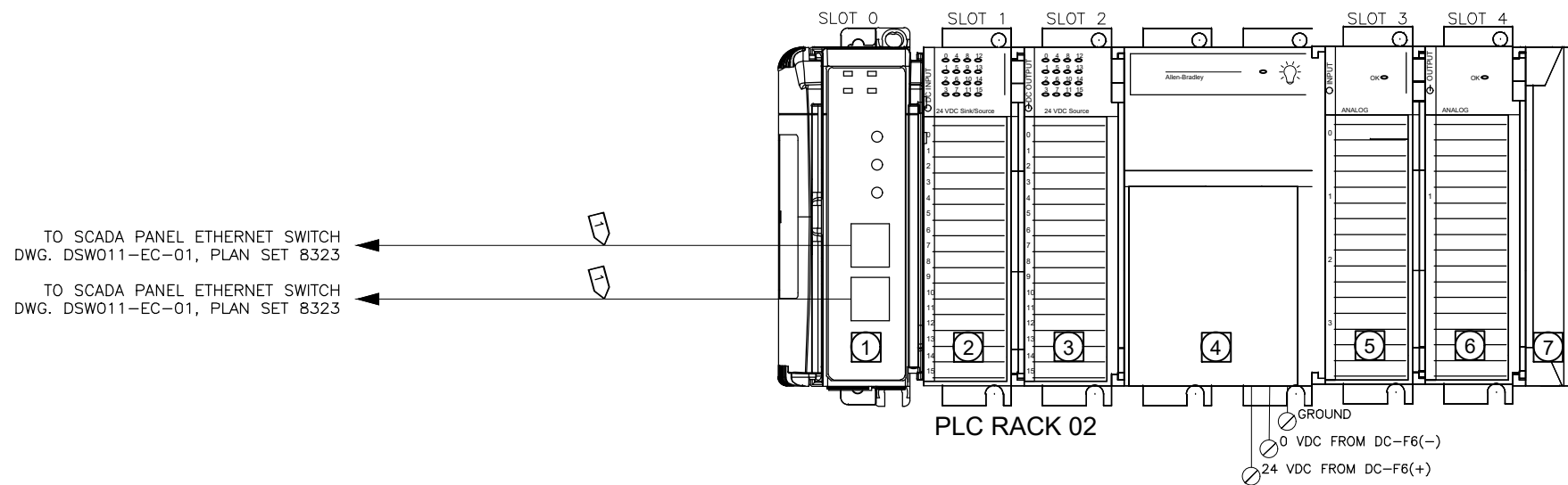


MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE DOSING PUMP  
 WELL 11**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-8 of 11-18  
 PROJ. ID.: WW00011(WTR)

REF	PART NO	MFR	MODULE USE / TYPE
1	1769-AENTR	AB	ETHERNET/IP COMMUNICATIONS ADAPTER
2	1769-IQ16	AB	16 POINT DISCRETE INPUT MODULE
3	1769-OB16	AB	16 POINT DISCRETE OUTPUT MODULE
4	1769-PB4	AB	24 VDC POWER SUPPLY
5	1769-IF4	AB	4 POINT ANALOG INPUT MODULE
6	1769-OF2	AB	2 POINT ANALOG OUTPUT MODULE
7	1769-CRR1	AB	RIGHT TO RIGHT BUS EXPANSION



NOTES:  
 1 CAT 6 CABLE IN 3/4" GRC FROM NEW REMOTE I/O PANEL TO EXISTING SCADA PANEL

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\1-9 Remote IO Rack View.dwg

2020/06/30 4:52 PM By: Pat

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN CHECK				REVISIONS			

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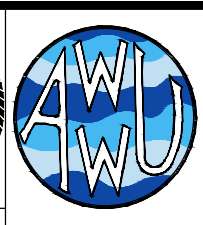
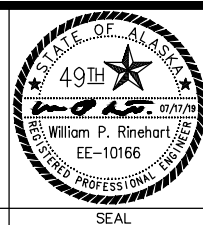
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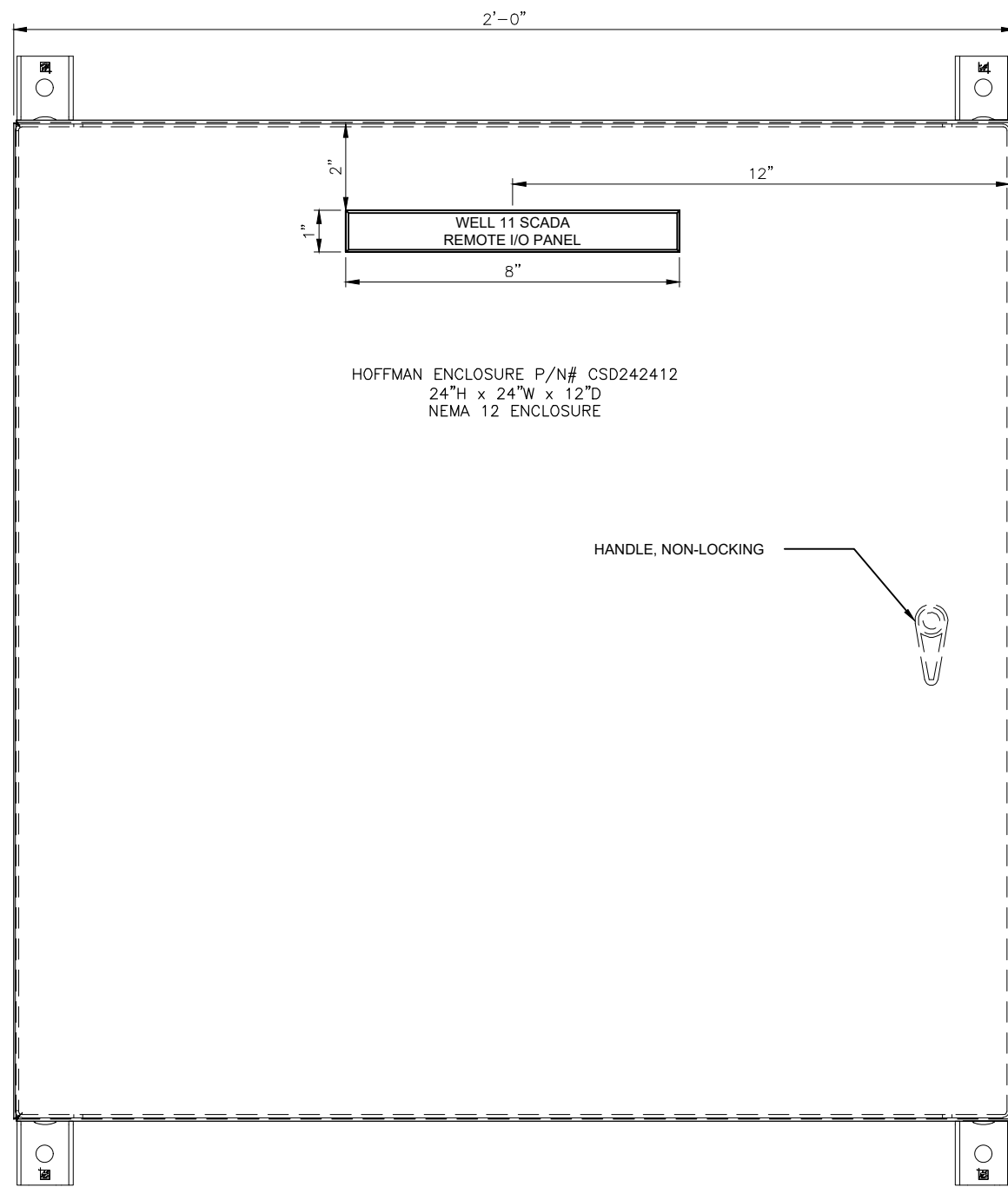
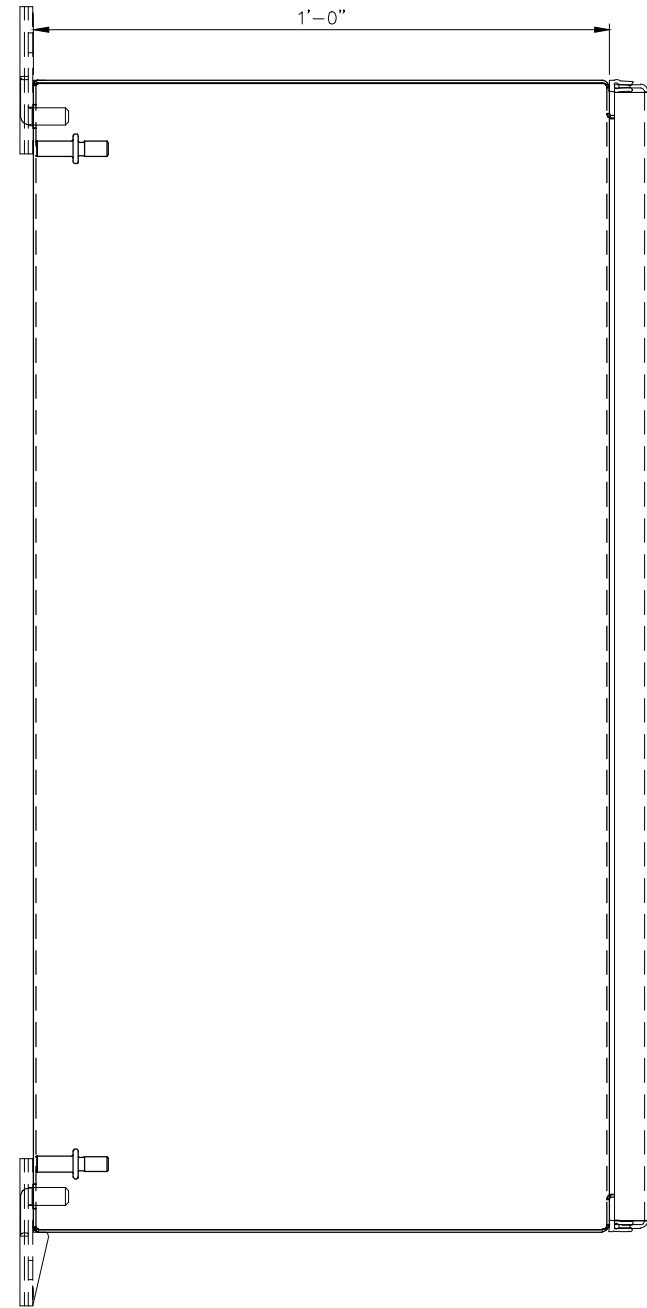


MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**REMOTE I/O PANEL RACK VIEW  
 WELL 11**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-9 of 11-18  
 PROJ. ID.: WW00011(WTR)



HOFFMAN CONCEPT  
MOUNTING FEET  
P/N: CMFKSS

HOFFMAN ENCLOSURE P/N# CSD242412  
24"H x 24"W x 12"D  
NEMA 12 ENCLOSURE

HANDLE, NON-LOCKING

2020/06/30 4:52 PM By: Pat

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	----	----	TELEPHONE	----	----		
PROFILE	----	----	ELECTRIC	----	----		
SANITARY SEWER	----	----	CABLE TV	----	----		
STORM SEWER	----	----	TRAFFIC SIGNAL DESIGN	----	----		
	----	----	QUANTITIES	----	----		
	----	----	MUN. FINAL CHECK	----	----		
PLAN CHECK				REVISIONS			

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BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

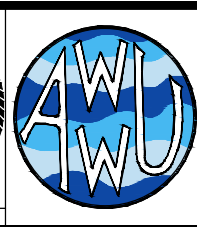
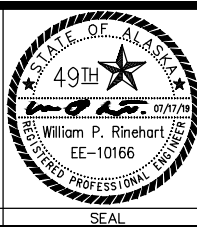
2. DATA TRANSFERRED BY: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
DATE: \_\_\_\_\_

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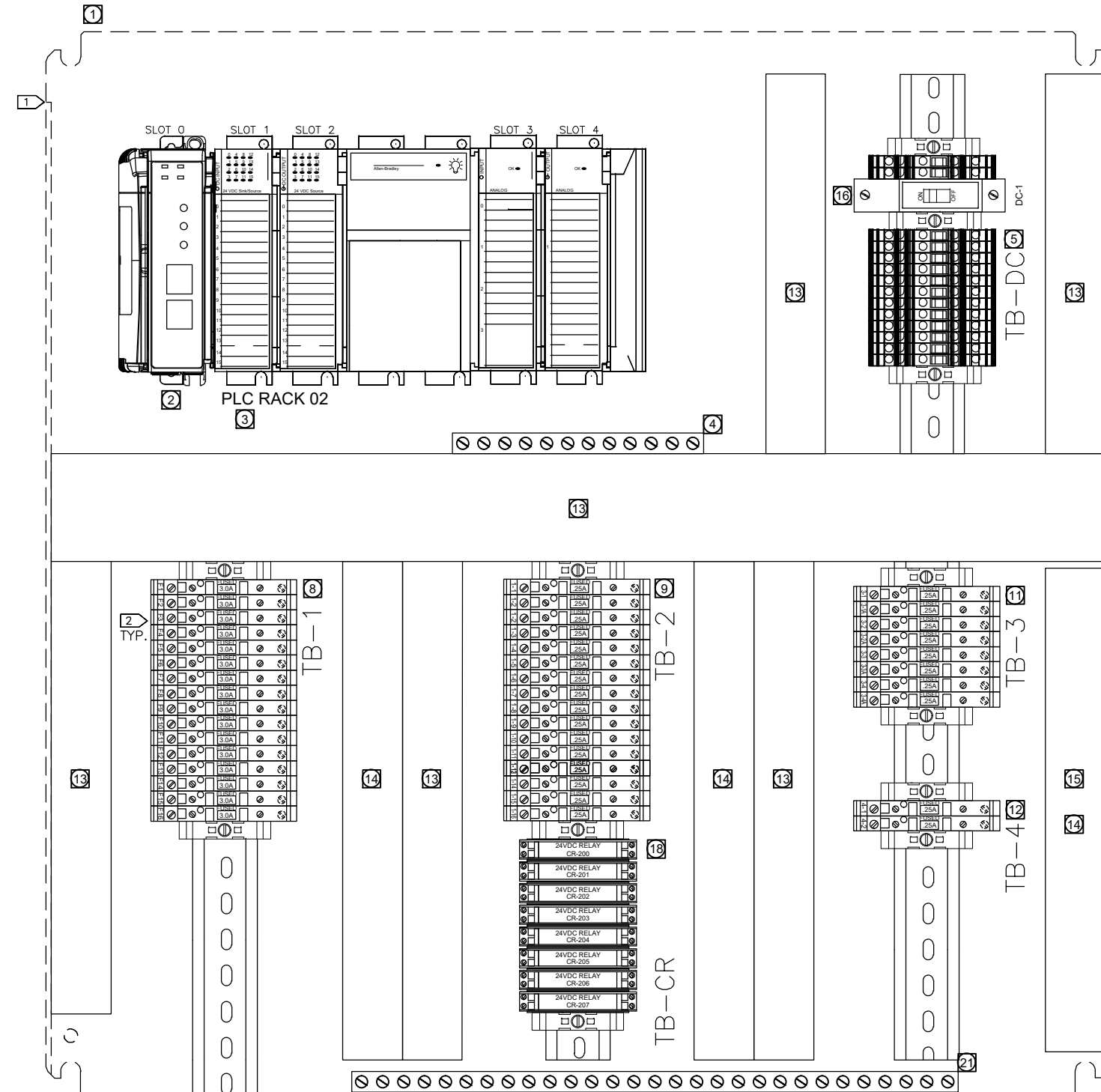
MUNICIPALITY OF ANCHORAGE  
WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS**

**REMOTE I/O PANEL ENCLOSURE  
WELL 11**

HORZ SCALE: NTS	DATE: 07/2019	GRID: SW1941	SHEET 11-10
VERT SCALE: NTS			of 11-18
PROJ. ID.: WW00011(WTR)			





- 1 HOFFMAN CP2424 BACK PANEL
- 2 ETHERNET COMMUNICATIONS ADAPTOR.
- 3 RACK 02 PLC HARDWARE, INSTALL PER MANUFACTURER'S REQUIREMENTS. SEE SHT. 11-9 FOR ADDITIONAL DETAILS.
- 4 PLC GROUND BUS. PROVIDE PLC COMPONENT GROUNDING PER MANUFACTURER'S REQUIREMENTS.
- 5 TB-DC (12) FUSED & FEED THROUGH TERMINAL BLOCKS
- 6 NOT USED
- 7 NOT USED
- 8 TB-1, (16), FUSED & FEED THROUGH TERMINAL BLOCKS.
- 9 TB-2, DISCRETE INPUTS (16), FUSED & FEED THROUGH TERMINAL BLOCKS.
- 10 NOT USED
- 11 TB-3, (4) FUSED & FEED THROUGH TERMINAL BLOCKS AND (4) FUSED AND FEED THROUGH GROUNDING TERMINAL BLOCKS.
- 12 TB-4, (2) FUSED & FEED THROUGH GROUNDING TERMINAL BLOCKS.
- 13 PANEL WIRING RACEWAY, PROVIDE WIRE TRAYS AND COVERS FOR PANEL AND FIELD WIRING. DO NOT FILL ABOVE 40% CROSS SECTIONAL AREA, ALLOWING FOR 20% SPARE WIRING.
- 14 FIELD WIRING RACEWAY, PROVIDE WIRE TRAYS AND COVERS FOR PANEL AND FIELD WIRING. DO NOT FILL ABOVE 40% CROSS SECTIONAL AREA, ALLOWING FOR 20% SPARE WIRING.
- 15 BUNDLE ANALOG WIRING SEPARATELY FROM OTHER WIRING.
- 16 24 VDC MAIN BREAKER. UL489 10A CIRCUIT BREAKER
- 17 NOT USED
- 18 TB-CR, (8) FORM C, 24VDC RELAY, A-B 700-HK36A24-3-4 WITH 700-HN121 BASE.
- 19 NOT USED
- 20 NOT USED
- 21 GROUND BAR FOR CONDUIT GROUND WIRE CONNECTIONS.

- NOTES:**
- 1 PROVIDE NRTL LISTED INDUSTRIAL CONTROL PANEL IN ACCORDANCE WITH UL 508A AND SPECIFICATION SECTION 40 95 13.
  - 2 ALL DIN RAIL MOUNTED COMPONENTS TO BE PROVIDED WITH END PLATES, END ANCHORS AND TERMINAL STRIP MARKERS.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\11-11 Remote IO Panel Backpanel.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

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 DATE: \_\_\_\_\_

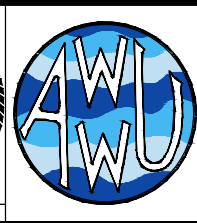
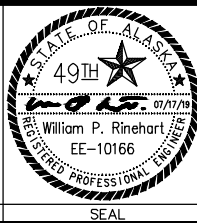
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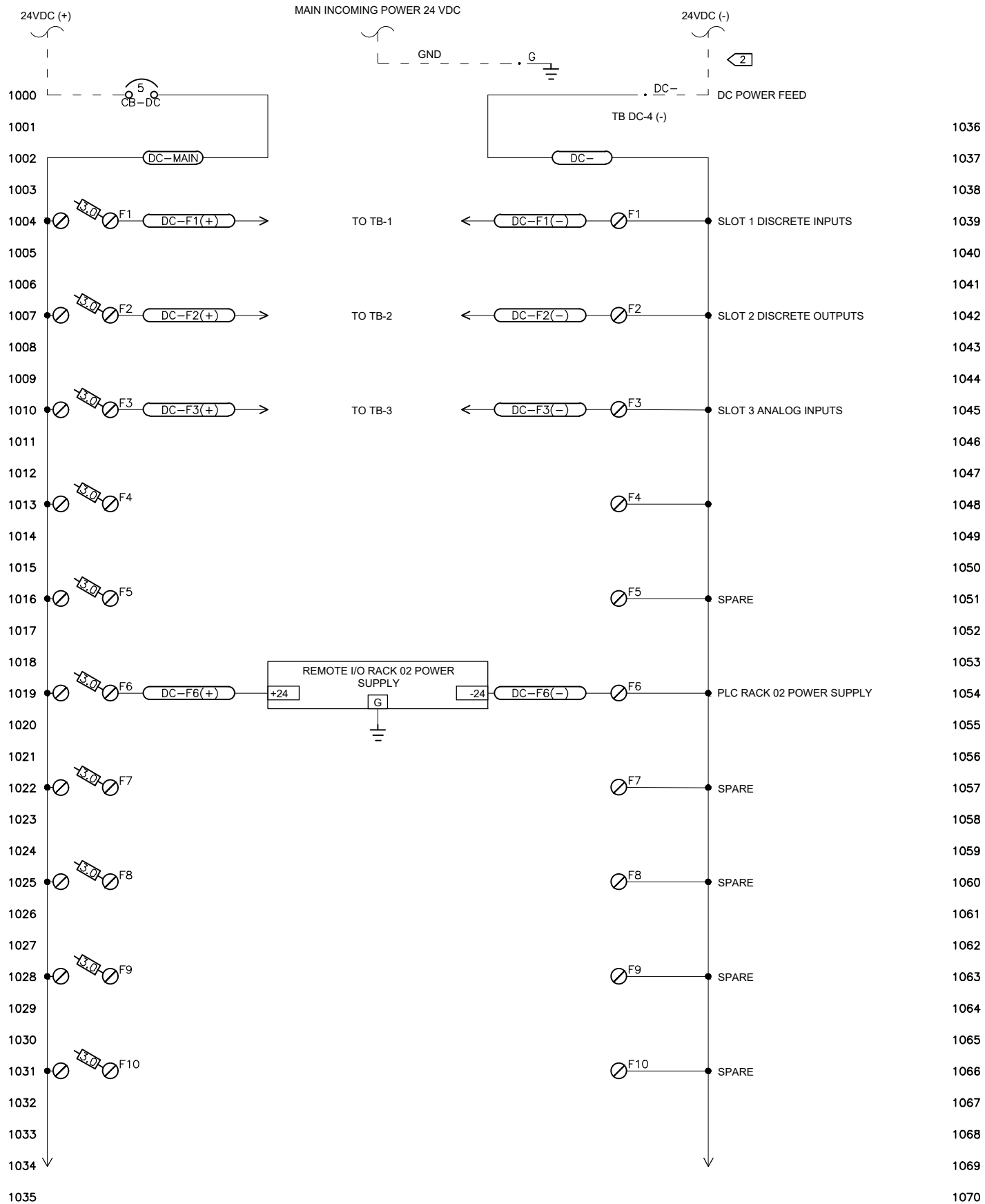


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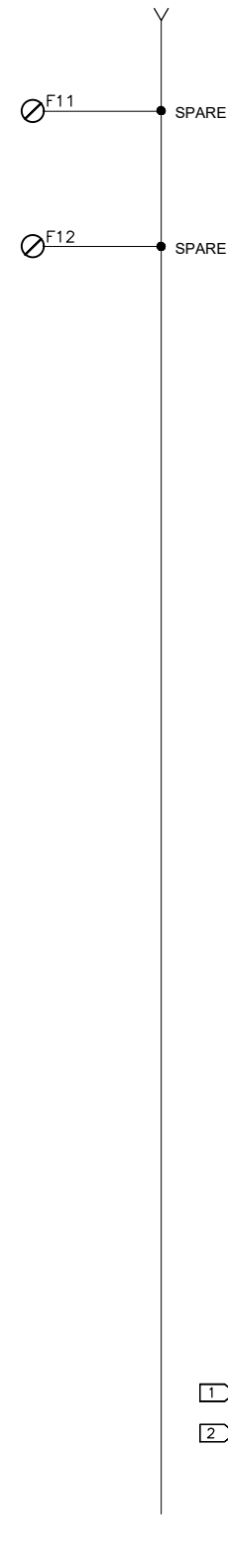
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 REMOTE I/O PANEL BACKPANEL  
 WELL 11**

HORZ SCALE: NTS	DATE: 07/2019	GRID: SW1941	SHEET 11-11
VERT SCALE: NTS			of 11-18
PROJ. ID.: WW00011(WTR)			

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\1-12 Remote I/O Panel Power Distribution.dwg



1036 Y  
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- NOTES:**
- 1 ALL TERMINALS THIS SHEET TB-DC UNLESS NOTED.
  - 2 PROVIDE 3/4" GRC W/ 2C#16 + GND FROM NEW DC POWER DISTRIBUTION PANEL TO NEW SCADA REMOTE I/O PANEL

AWWU PLAN SET NO. 11018

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PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---
	---	---	DESIGN	---	---
	---	---	QUANTITIES	---	---
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 DATE: \_\_\_\_\_

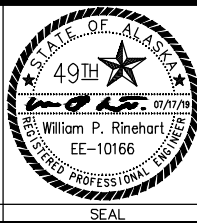
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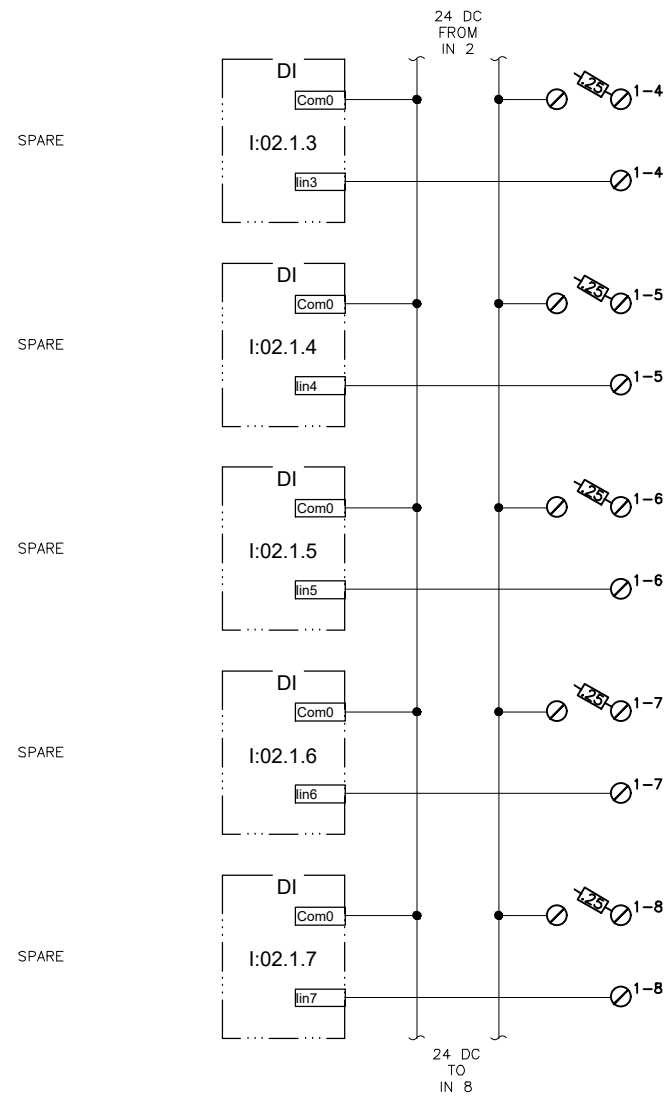
**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS**

**REMOTE I/O PANEL POWER DISTRIBUTION WELL 11**

HORIZ SCALE: NTS	DATE: 07/2019	GRID: SW1941	SHEET 11-12 of 11-18
VERT SCALE: NTS	PROJ. ID.: WW00011(WTR)		

NEW REMOTE I/O PANEL

FIELD WIRING



D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\1-13 Spare Discrete Input Layout

AWWU PLAN SET NO. 11018

2020/06/30 4:53 PM By: Pat

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PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---		
	---	---	DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN CHECK				REVISIONS			

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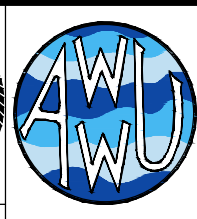
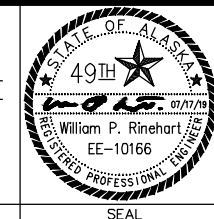
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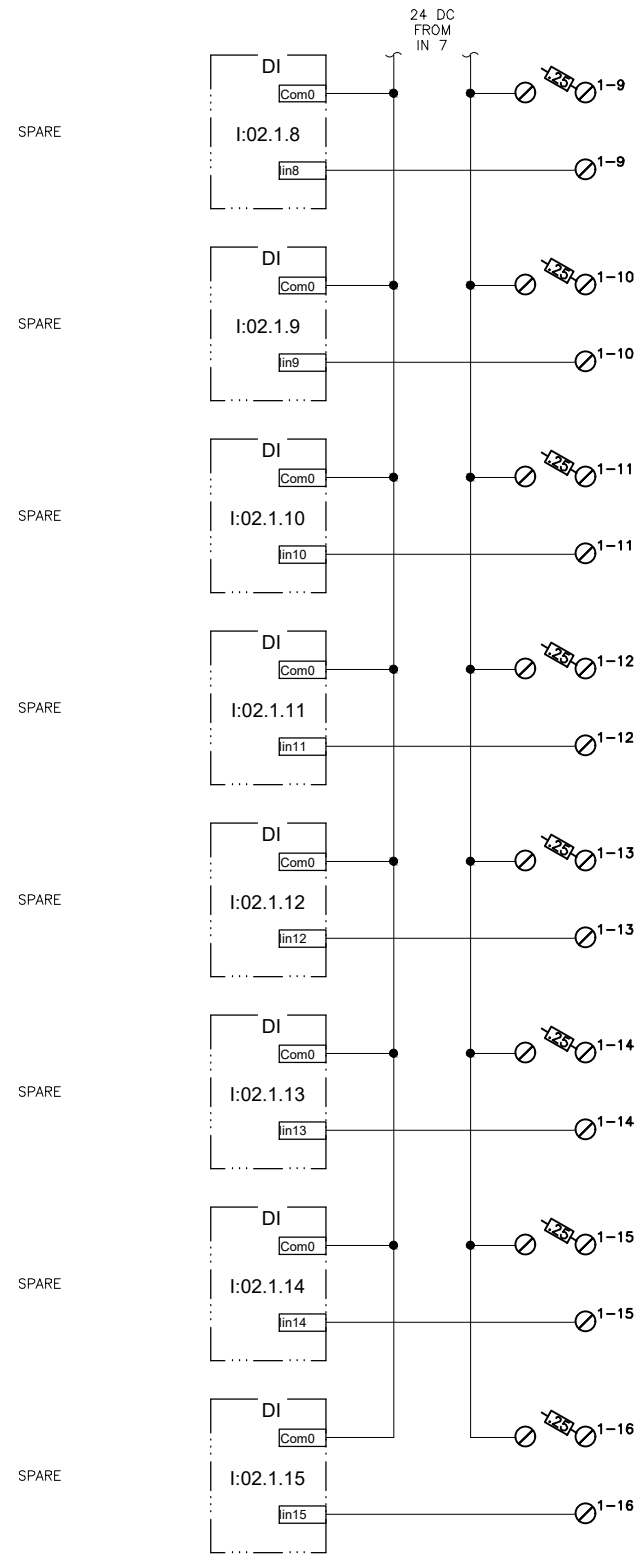
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE DISCRETE INPUT - I  
 WELL 11**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-13 of 11-18  
 PROJ. ID.: WW00011(WTR)

NEW REMOTE I/O PANEL

FIELD WIRING



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AWWU PLAN SET NO. 11018

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TOPOGRAPHY	---	---	TELEPHONE	---	---				
PROFILE	---	---	ELECTRIC	---	---				
SANITARY SEWER	---	---	CABLE TV	---	---				
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---				
	---	---	DESIGN	---	---				
	---	---	QUANTITIES	---	---				
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								REVISIONS	

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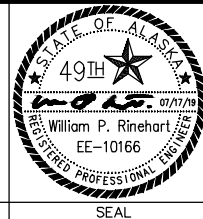
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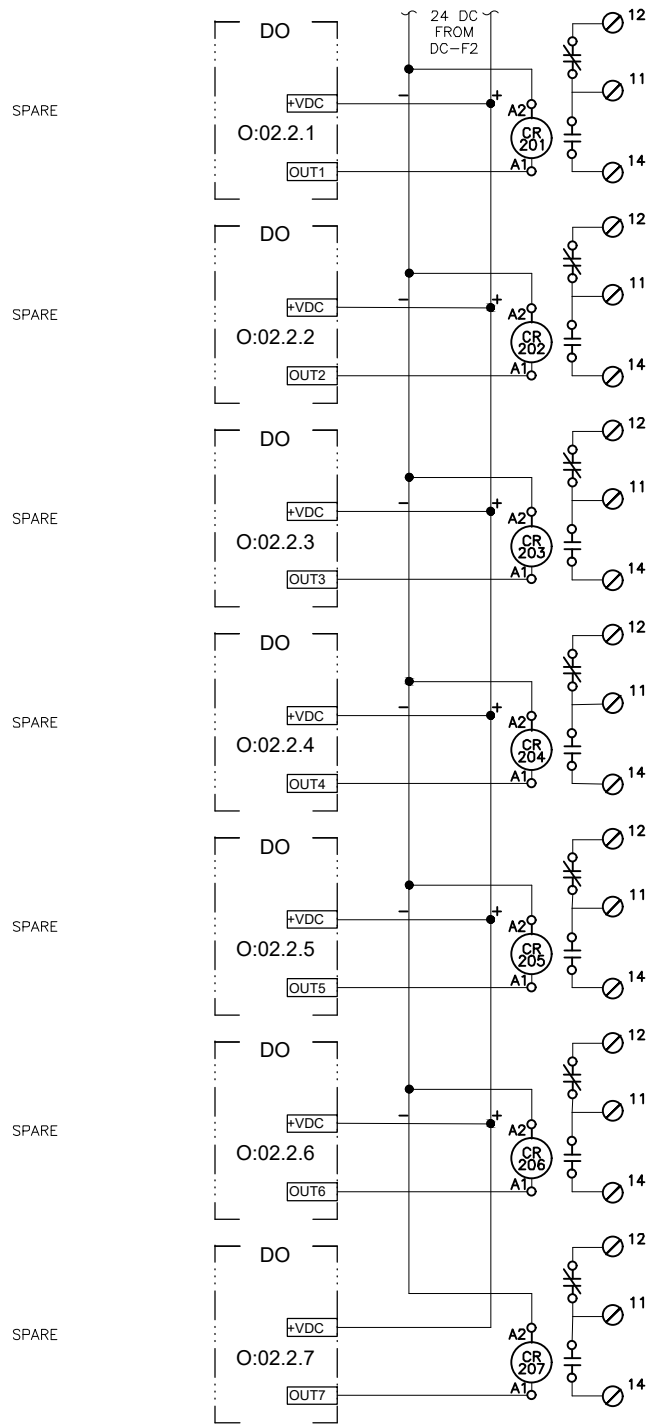


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE DISCRETE INPUT - II  
 WELL 11**

HORZ SCALE: NTS DATE: 07/2019 GRID: SW1941 SHEET 11-14 of 11-18  
 VERT SCALE: NTS PROJ. ID.: WW00011(WTR)

2020/06/30 4:53 PM By: Pat



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AWWU PLAN SET NO. 11018

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SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---		
	---	---	DESIGN	---	---		
	---	---	QUANTITIES	---	---		
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PLAN CHECK				REVISIONS			

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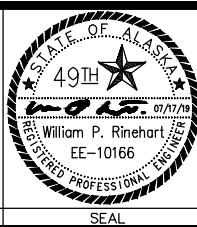
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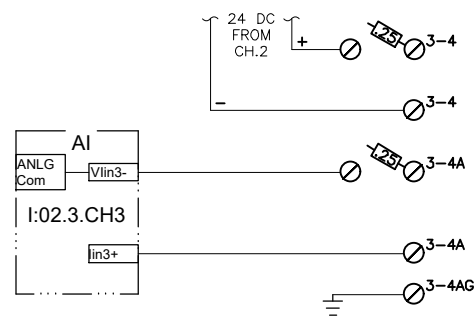
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE DISCRETE OUTPUT  
 WELL 11**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-15 of 11-18  
 PROJ. ID.: WW00011(WTR)

NEW REMOTE I/O PANEL

FIELD WIRING

SPARE



SPARE



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AWWU PLAN SET NO. 11018

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STORM SEWER	----	----	TRAFFIC SIGNAL	----	----				
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	----	----	QUANTITIES	----	----				
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PLAN CHECK					REVISIONS				

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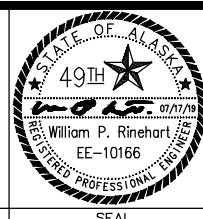
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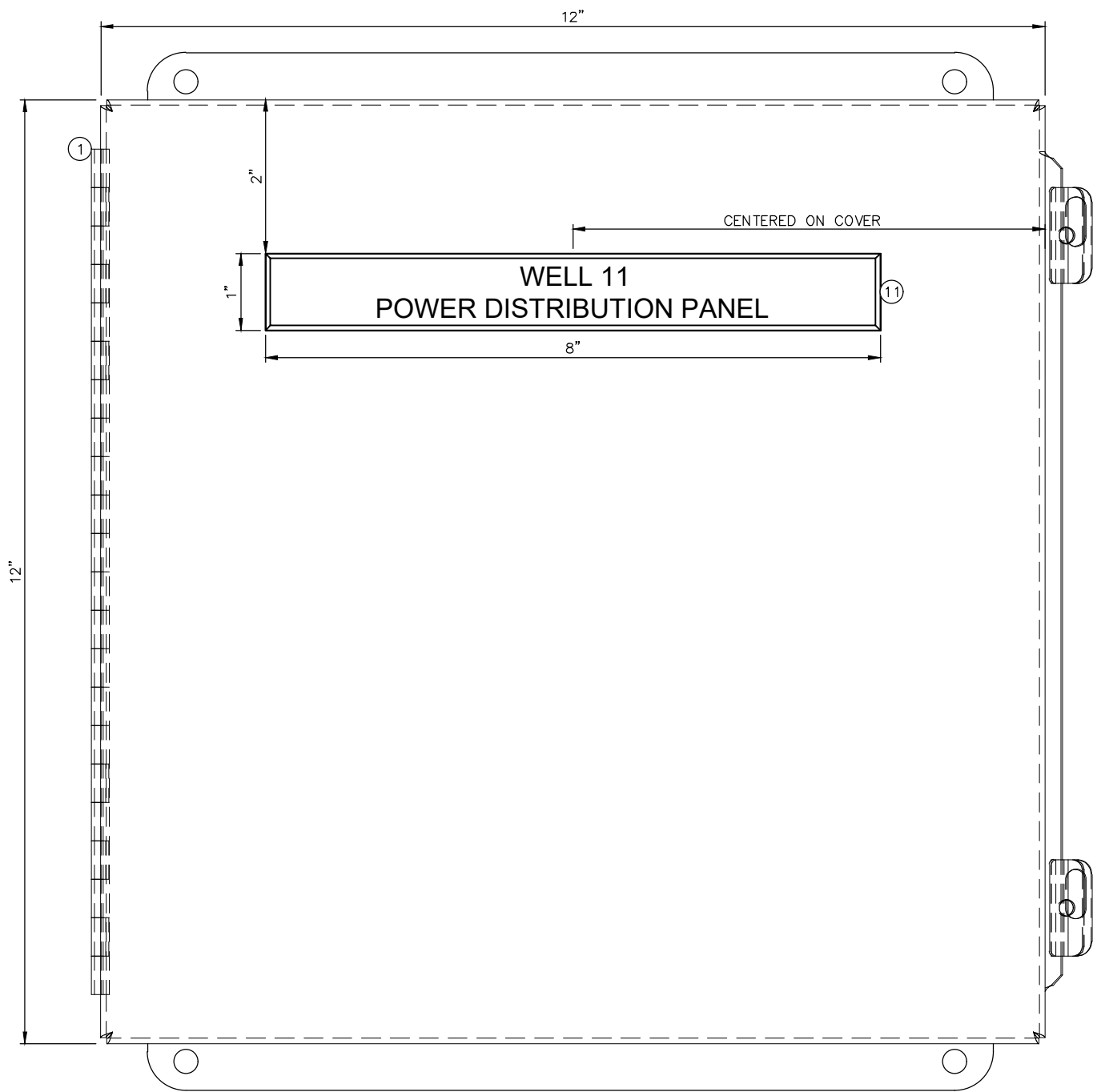
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SPARE ANALOG  
 WELL 11**

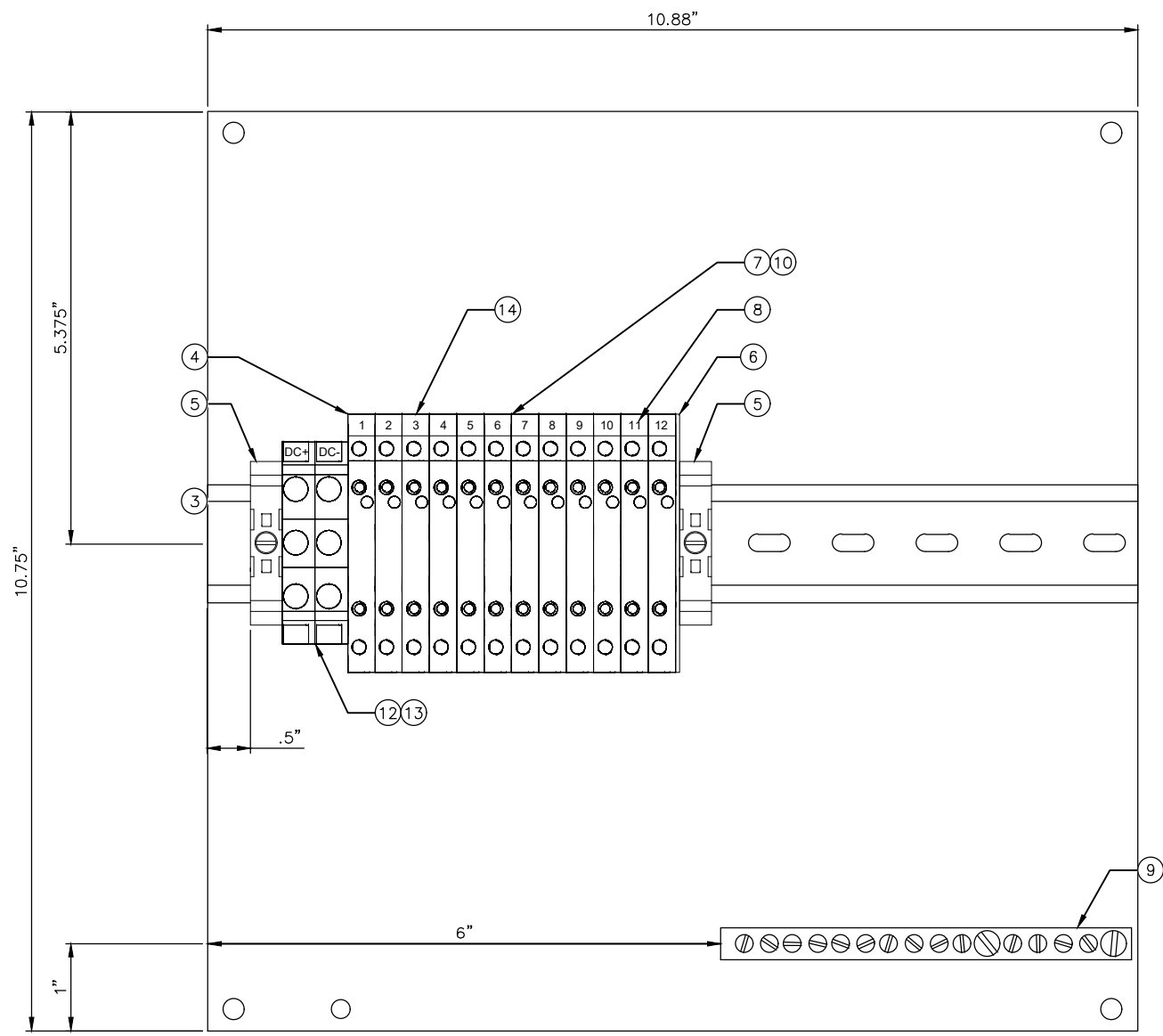
HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-16 of 11-18  
 PROJ. ID.: WW00011(WTR)

NOTES:

- SEE SHT. 11-18 FOR BILL OF MATERIAL



1 POWER DISTRIBUTION PANEL - EXTERIOR LAYOUT  
NTS



2 POWER DISTRIBUTION PANEL - INTERIOR LAYOUT  
NTS

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\11-17 DC Power Dist. Panel.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
DATE: \_\_\_\_\_

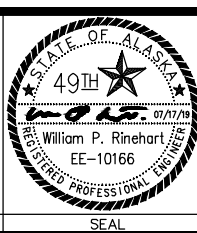
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COMPANY: \_\_\_\_\_  
BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

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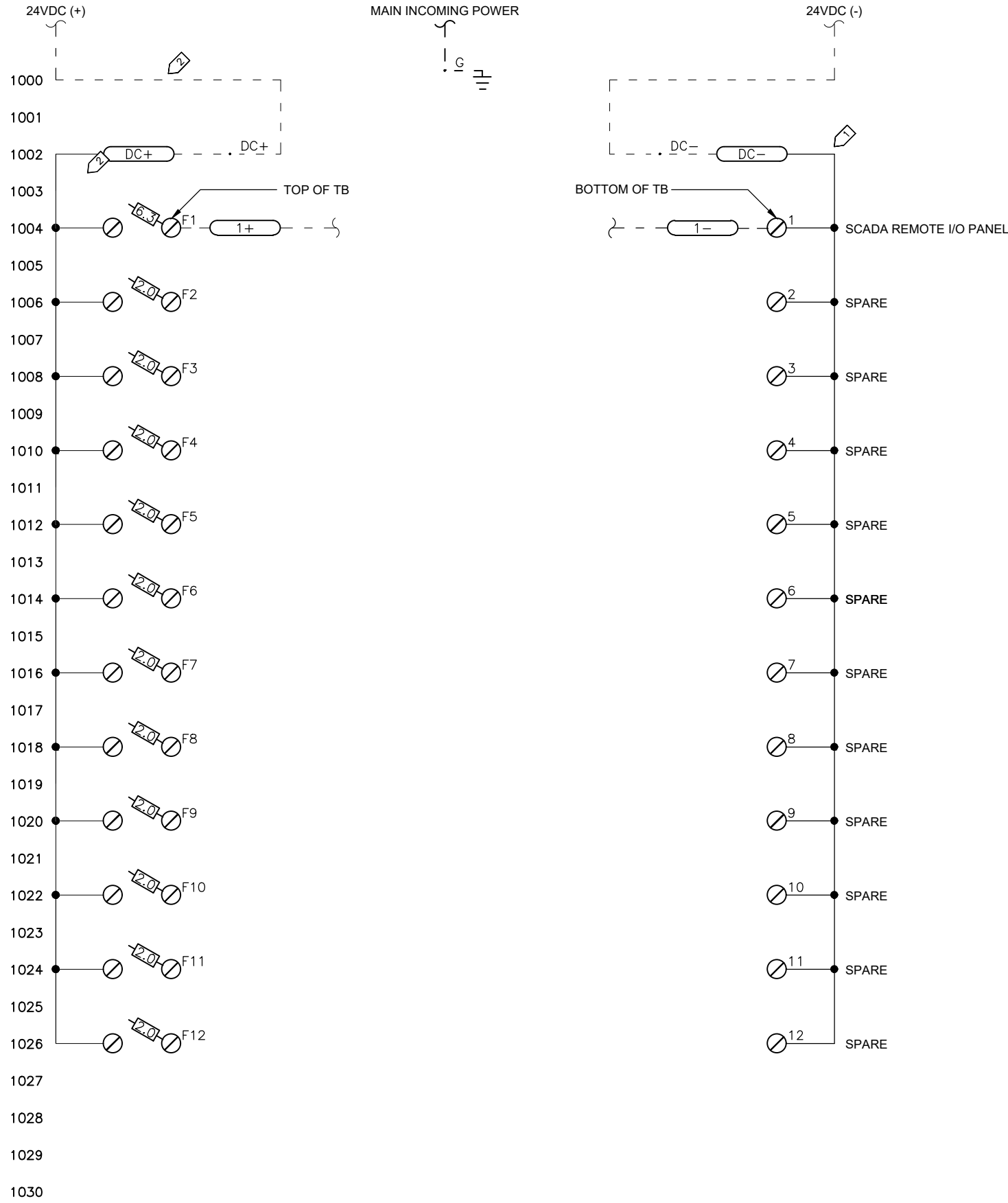


MUNICIPALITY OF ANCHORAGE  
WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
DC POWER DISTRIBUTION PANEL  
WELL 11**

HORIZ SCALE: NTS  
VERT SCALE: NTS  
DATE: 07/2019  
GRID: SW1941  
SHEET 11-17 of 11-18  
PROJ. ID.: WW00011(WTR)

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\1-18 Power Dist. Panel Schematic.dwg



BILL OF MATERIAL					
ITEM #	QTY.	U.O. M.	MANUFACTURER	DESCRIPTION	CATALOG NUMBER
1	1	EA.	HOFFMAN	ENCLOSURE, STAINLESS STEEL, NEMA 4X	A1212CHNFSS
2	1	EA.	HOFFMAN	BACK PANEL, PAINTED STEEL	A12P12G
3	2	FT.	ALLEN-BRADLEY	DIN RAIL, 35MM	199-DR1
4	12	EA.	ALLEN-BRADLEY	TERMINAL BLOCK, FEED THROUGH	1492-J3
5	2	EA.	ALLEN-BRADLEY	END ANCHORS	1492-EAJ35
6	1	EA.	ALLEN-BRADLEY	END BARRIER FOR 1492-JD3 TERMINAL	1492-EBJD3FB
7	4	EA.	ALLEN-BRADLEY	4 POLE JUMPER	1492-SJ88-4
8	1	EA.	ALLEN-BRADLEY	MARKER CARD, "1-20" HORIZONTAL PRINT	1492-M5x5 H 1-20
9	1	EA.	SQUARE D	GROUNDING BAR	PK9GTA
10	12	EA.	BUSSMAN	FAST ACTING FUSE, 2 AMP, 5 X 20 mm, GLASS TUBE FUSE	GMA-2-R
11	1	EA.	FABRICATOR	LABEL, 1" X 8" PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND, 1ST LINE - "WELL XX" 2ND LINE - "POWER DISTRIBUTION PANEL"	N/A
12	2	EA.	ALLEN-BRADLEY	FEED THROUGH TERMINAL BLOCK	1492-J4
13	1	EA.	ALLEN-BRADLEY	END BARRIER FOR J4 TERMINAL BLOCK	1492-EBJ3

- NOTES:**
- 1 PROVIDE NRTL LISTED INDUSTRIAL CONTROL PANEL ASSEMBLY IN ACCORDANCE WITH UL508A & SPECIFICATION SECTION 40 95 13.
  - 2 PROVIDE 2/C#16 w/GND IN GRC TO NEW SCADA REMOTE I/O PANEL.

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
TOPOGRAPHY	---	TELEPHONE	---		
PROFILE	---	ELECTRIC	---		
SANITARY SEWER	---	CABLE TV	---		
STORM SEWER	---	TRAFFIC SIGNAL	---		
	---	DESIGN	---		
	---	QUANTITIES	---		
	---	MUN. FINAL CHECK	---		
PLAN CHECK		REVISIONS			

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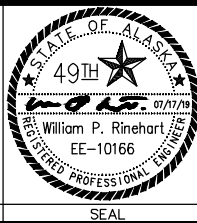
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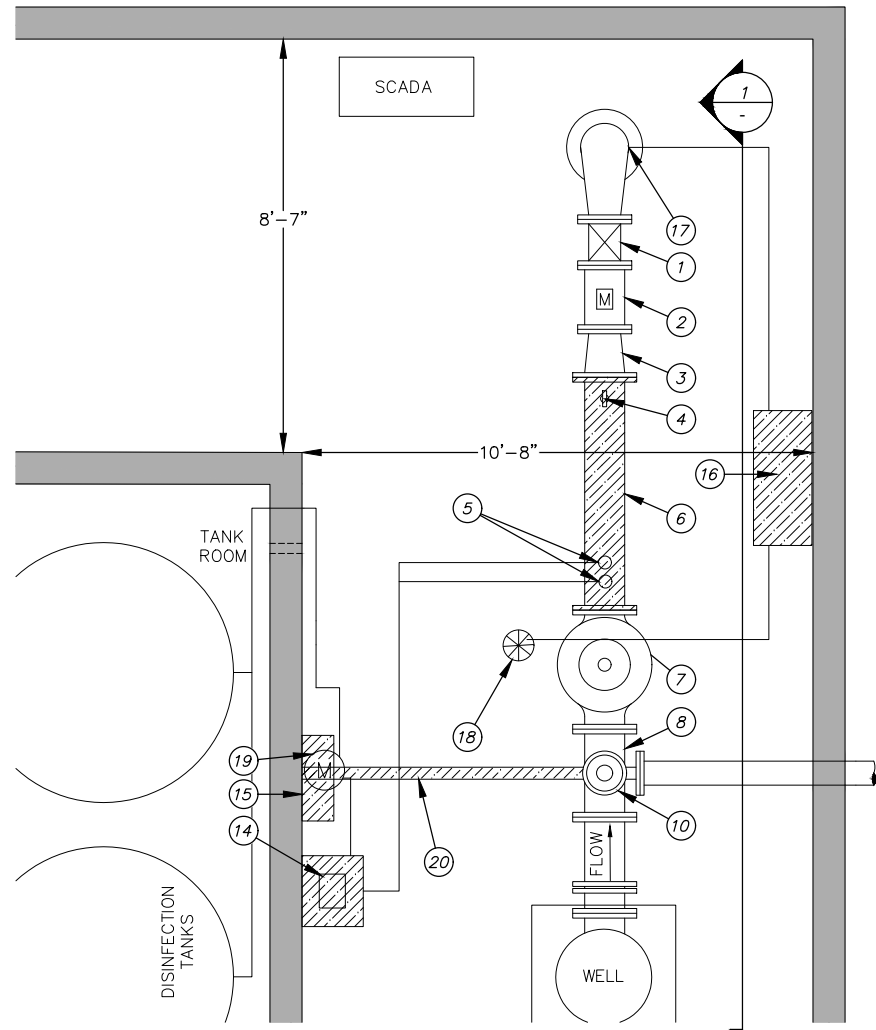


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 DC POWER DISTRIBUTION SCHEMATIC  
 WELL 11**

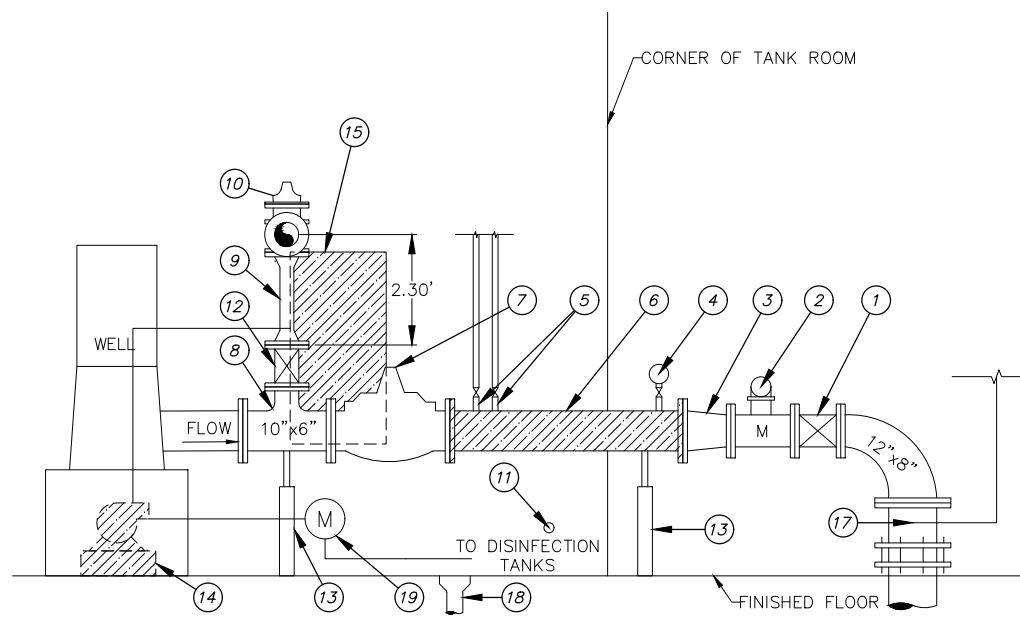
HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1941  
 SHEET 11-18 of 11-18  
 PROJ. ID.: WW00011(WTR)





(A) WELL 12 PLAN VIEW

NOT TO SCALE



(1) WELL 12 - SECTION VIEW

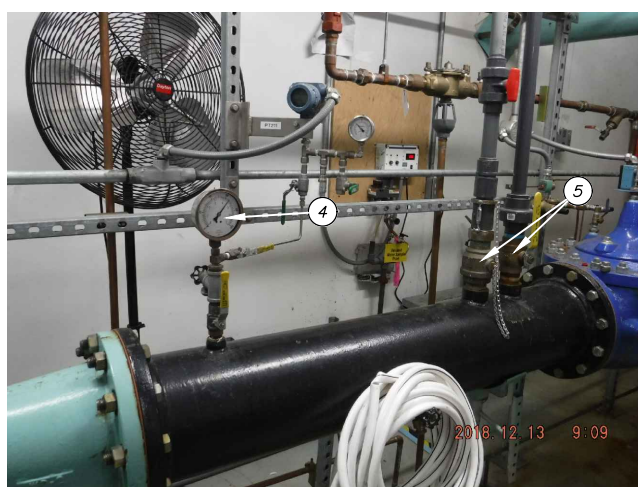
NOT TO SCALE

DEMOLITION CALLOUTS

- (1) EXISTING 8" GATE VALVE TO REMAIN
- (2) EXISTING 8" FLOW METER TO REMAIN
- (3) EXISTING 8"x10" REDUCER TO REMAIN. SEE NOTE 1
- (4) REMOVE EXISTING 2" PRESSURE GAUGE
- (5) REMOVE 2 EACH 1-1/2" SCH 80 PVC PIPE, SUPPORTS AND APPURTANENCES FROM 10" DIP TO PUMP AND AUTO-VALVE
- (6) REMOVE EXISTING ±58" SPOOL OF 10" DIP
- (7) EXISTING 10" PRV TO REMAIN, PROTECT IN PLACE. SEE NOTE 1
- (8) EXISTING 10"x6" TEE TO REMAIN
- (9) EXISTING 6"x3" REDUCING SPOOL TO REMAIN
- (10) EXISTING 3" PRV (THREADED) TO REMAIN
- (11) EXISTING 2" WALL PENETRATION FOR PROPOSED HYPOCHLORITE FEED
- (12) EXISTING 6" GATE VALVE TO REMAIN
- (13) EXISTING PIPE SUPPORT TO REMAIN
- (14) REMOVE EXISTING PUMP, DEMOLISH CONCRETE PUMP SUPPORT BLOCK AND ASSOCIATED CONDUIT. SEE NOTE 2
- (15) REMOVE EXISTING SKID AND ASSOCIATED ELECTRICAL CONDUIT AS NECESSARY
- (16) REMOVE EXISTING CHLORINE ANALYZER AND ASSOCIATED ELECTRICAL CONDUIT AS NECESSARY. OUTLET TO REMAIN
- (17) REMOVE EXISTING COLIFORM SAMPLE PORT TAP
- (18) EXISTING FLOOR DRAIN TO REMAIN
- (19) REMOVE CHEMICAL METER AND PROTECT FOR REINSTALLATION
- (20) REMOVE AND DISPOSE OF OVERHEAD PIPE SUPPORT FOR 3" PRV

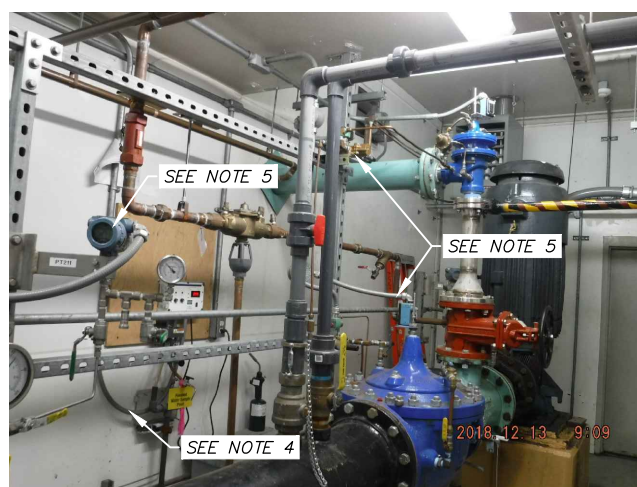
DEMOLITION NOTES

1. CONTRACTOR SHALL MEASURE AND VERIFY LENGTH BETWEEN THE 10"x8" REDUCER (3) AND 10" PRV (7) AND AMOUNT OF DEFLECTION BETWEEN THE SAME ITEMS PRIOR TO DISASSEMBLY.
2. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS THE BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
3. EXISTING UNI-STRUT AND OTHER HARDWARE TO BE REMOVED IN SUCH A MANNER TO PREVENT DAMAGE AND SALVAGED FOR REUSE IF REQUESTED BY THE OWNER.
4. EXISTING ELECTRICAL CONDUIT AND WIRING TO BE REMOVED FOR RELOCATION AS NEEDED TO ACCOMMODATE PROPOSED EQUIPMENT. SEE SHEETS 12-3 - 12-8 FOR PROPOSED ELECTRICAL.
5. EXISTING SCADA TO BE REMOVED AND REPLACED WHERE ASSOCIATED EQUIPMENT IS BEING REMOVED. SEE SHEETS 12-3 - 12-8 FOR SCADA.



(B) SPOOL DEMOLITION

NOT TO SCALE



(C) CHLORINE ANALYZER, 10 CONTROL PRV & 3" BLOW-OFF PRV

NOT TO SCALE



(D) AUTO-VALVE AND PUMP

NOT TO SCALE

2021/03/26 8:06 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\WW00011WTR\_WELL-12.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	KMG	DAK	TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL		
			DESIGN	KMG	DAK
			QUANTITIES	KMG	DAK
			MUN. FINAL CHECK		
			PLAN		
			CHECK		
			REVISIONS		

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

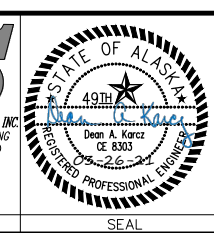
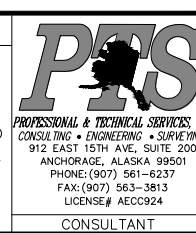
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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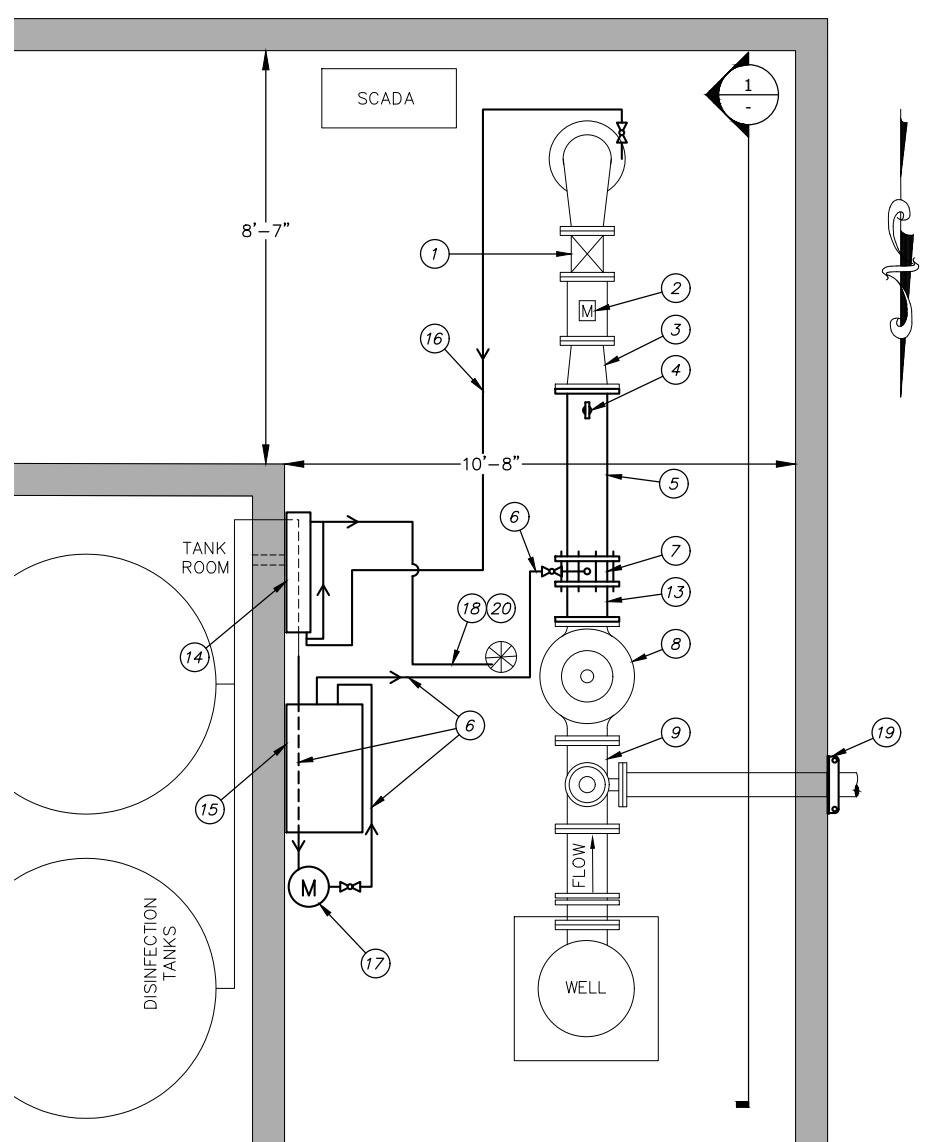


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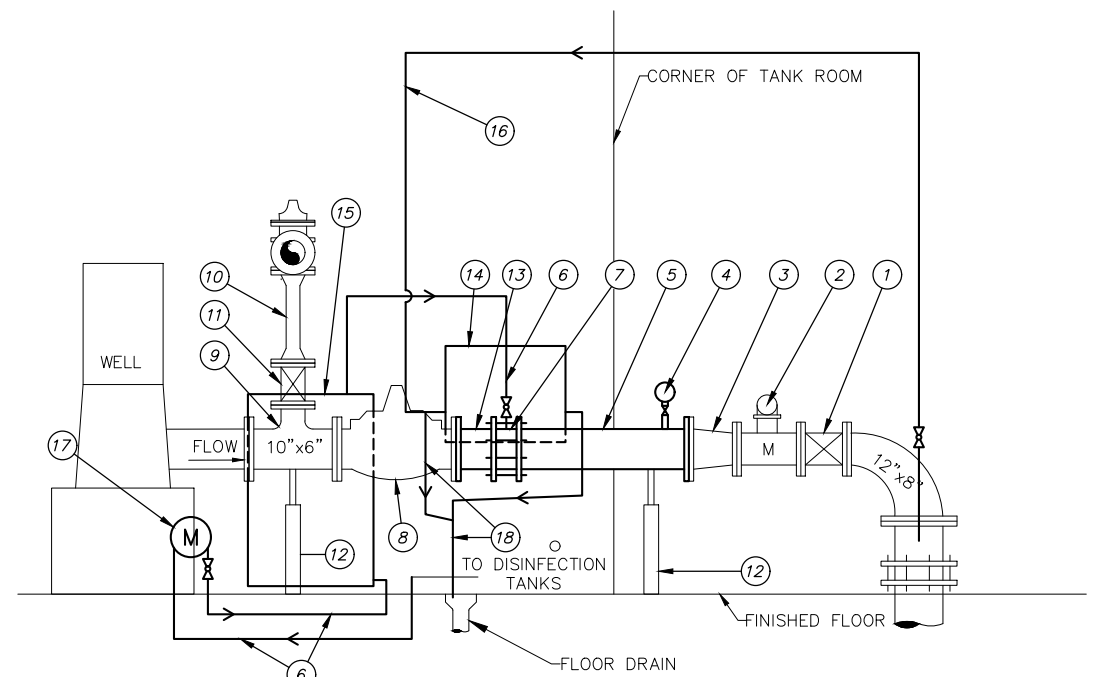
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 12  
 DEMOLITION PLAN AND SECTION**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW1730 SHEET 12-1  
 VERT SCALE: NTS PROJ. ID: WW00011(WTR) 12-8



WELL 12 PLAN VIEW  
NOT TO SCALE



WELL 12 - SECTION VIEW  
NOT TO SCALE

**CONSTRUCTION CALLOUTS**

- 1 EXISTING 8" GATE VALVE TO REMAIN
- 2 EXISTING 8" FLOW METER TO REMAIN
- 3 EXISTING 8" X 10" REDUCER TO REMAIN
- 4 FURNISH AND INSTALL NEW 2" 316 STAINLESS STEEL PRESSURE GAUGE. SEE TABLE 12-1 FOR DETAILS
- 5 FURNISH AND INSTALL ±43" SPOOL OF NEW 10" FLANGED DIP. SEE TABLE 12-1 FOR DETAILS
- 6 FURNISH AND INSTALL NEW 1/2" DIA. CPVC AND FITTINGS
- 7 FURNISH AND INSTALL NEW 10" STATIC MIXER. SEE TABLE 12-1 FOR DETAILS
- 8 EXISTING 10" PRV TO BE REBUILT BY AWWU IN PLACE. FURNISH 10" PRV REBUILD KIT. SEE SHEET G10 FOR DETAILS. SEE NOTE 10
- 9 EXISTING 10" X 6" TEE TO REMAIN
- 10 EXISTING 6" X 3" REDUCING SPOOL TO REMAIN
- 11 EXISTING 6" GATE VALVE TO REMAIN
- 12 EXISTING PIPE SUPPORTS TO BE REMAIN. NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL
- 13 FURNISH AND INSTALL ±10" SPOOL OF NEW 10" FLANGED DIP. SEE TABLE 12-1 FOR DETAILS
- 14 FURNISH AND INSTALL NEW CHEMICAL ANALYZER. SEE SHEET G8
- 15 FURNISH AND INSTALL NEW PUMP SKID. SEE SHEET G9
- 16 FURNISH AND INSTALL 1/4" 316 STAINLESS STEEL TUBING TO CHLORINE ANALYZER
- 17 REINSTALL EXISTING METER
- 18 FURNISH AND INSTALL 1/2" CPVC DISCHARGE FROM CHEMICAL ANALYZER TO EXISTING FLOOR DRAIN
- 19 FURNISH AND INSTALL WALL ANCHOR IAW MANUFACTURER'S RECOMMENDATIONS. SEE TABLE 12-1
- 20 FURNISH AND INSTALL 3' PIPE PROTECTOR IAW 60.09. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING. VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION

**CONSTRUCTION NOTES**

1. SEE TABLE 12-1 FOR A DETAILED LIST OF EQUIPMENT.
2. NEW CPVC PIPE SHALL BE SCHEDULE 80 1/2" DIAMETER. UTILIZE EXISTING WALL PENETRATIONS FOR NEW 1/2" DIA SCH 80 CPVC PIPE AS NECESSARY.
3. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
4. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
5. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
6. CONTRACTOR TO INSTALL PRV BODIES ONLY. THE OWNER SHALL INSTALL THE TRIM, ACCESSORIES, AND REBUILD KITS AFTER THE BODIES HAVE BEEN INSTALLED.
7. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
8. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH, CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
9. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4-FT WITHOUT SUPPORT.
10. EXISTING PRV'S SHALL BE LEFT IN-PLACE AND MADE AVAILABLE FOR REFURBISHMENT BY THE OWNER WITH CONTRACTOR FURNISHED MATERIAL AS IDENTIFIED IN TABLE 12-1 AND TABLE 1-2, SHEET G10. NO ADDITIONAL TIME WILL BE PROVIDED FOR COORDINATION WITH THE OWNER.
11. FLOW METER OR OTHER ELECTRICAL EQUIPMENT WILL NOT BE INSTALLED UNDER HYPOCHLORITE PIPING OR EQUIPMENT.

NOMENCLATURE	MATERIAL TYPE	SIZE (IN)	LENGTH (IN)	END DETAIL	REMARKS	QUANTITY
SPOOL	DI	10	±43	FLANGED	EPOXY COATED	1
SPOOL	DI	10	±10	FLANGED	EPOXY COATED	1
BALL VALVE	SS	1/4	-	THREADED	316 STAINLESS STEEL BODY AND BALL	2
STATIC MIXER	PTFE	10	-	PLAIN	SULZER COMPAX OR APPROVED EQUAL SULZER QUOTE 9062448-0 ITEM 4.4	1
BALL VALVE	CPVC	1/2	-	VARIES	SCH 80 VENTED/BLEACHED TRUE UNION	2
PRESSURE GAUGE	X141	2-1/2	-	-	CLA-VAL PART NO. 20534311J PRESSURE RANGE 0-160 (PSI)	1
TEE	SS	1/4	-	-	316 STAINLESS STEEL	1
WALL ANCHOR	DI	6	-	-	METRAFLEX RAC0600 WITH STAINLESS STEEL TEETH OR APPROVED EQUAL	1

- TABLE 12-1 NOTES:**
1. ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE (WELL HOUSE 12)

2021/03/26 8:06 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\W00011WTR\_WELL-12.dwg

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PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN CHECK				
			REVISIONS				

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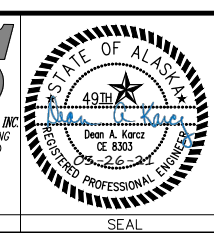
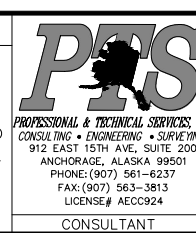
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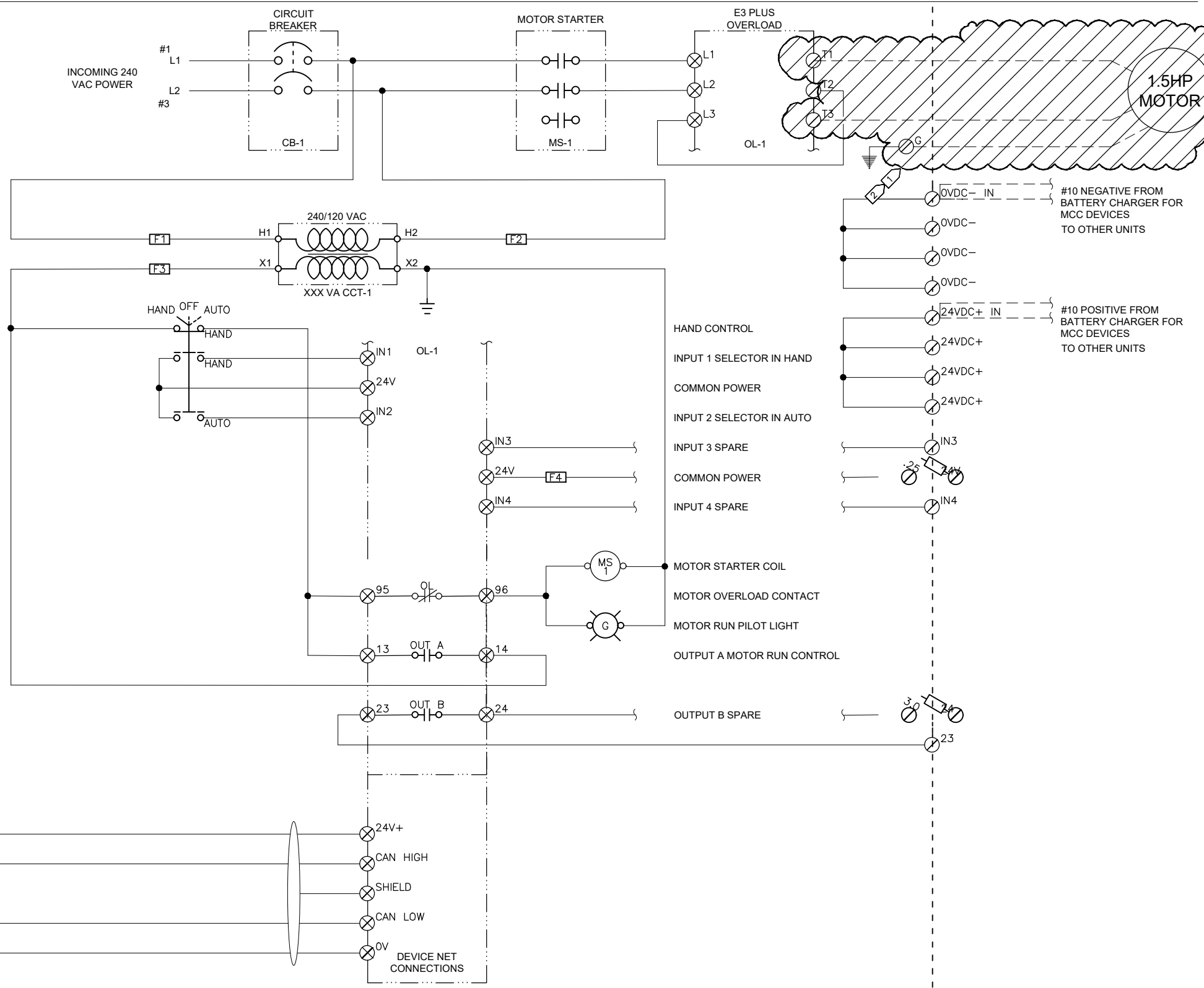


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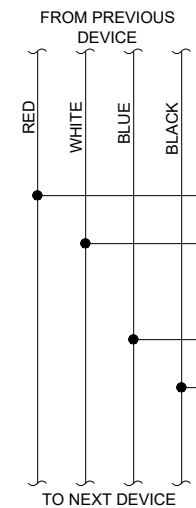
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 12  
 CONSTRUCTION PLAN AND SECTION**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 04/2021  
 GRID: SW1730  
 SHEET 12-2  
 PROJ. ID: W00011(WTR)  
 12-8



- NOTES:**
- 1 DEMOLISH HYPOCHLORITE PUMP AND MOTOR. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
  - 2 DEMOLISH PUMP CONDUCTORS BACK TO MCC BUCKET AND RE-LABEL BUCKET AS SPARE. DEMOLISH RECEPTACLE AND RACEWAY BACK TO 120VAC RECEPTACLE AND PLUG UNUSED OPENING.



THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW012 IL-08

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\12-3 Hypo Pump Demo.dwg 2020/06/30 5:03 PM By: Pat

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STORM SEWER	---	TRAFFIC SIGNAL	---		
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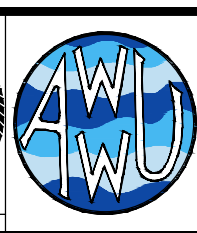
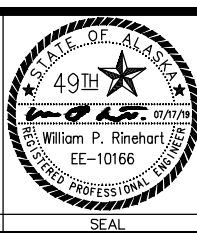
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 DATE: \_\_\_\_\_

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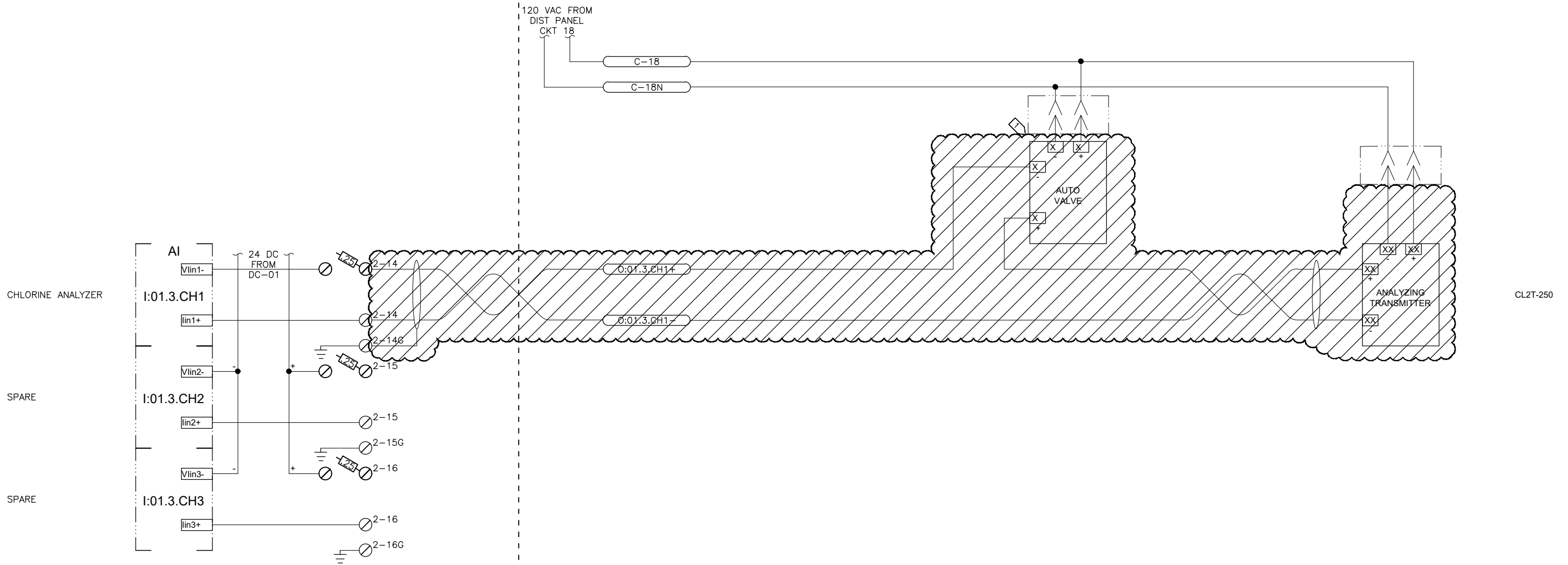
901 E. Fireweed Lane  
 Anchorage, AK 99508  
 (907) 227-5039  
 www.firezone.com/snowdwell



MUNICIPALITY OF ANCHORAGE  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP DEMOLITION  
 WELL 12**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1730  
 SHEET 12-3 of 12-8  
 PROJ. ID.: WW00011(WTR)



CL2T-250

- NOTES:**
- 1 DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, AND AUTO VALVE BACKBOARD ASSEMBLY. SAVE EQUIPMENT AND RETURN TO AWWU.

THIS DRAWING SUPERSEDES PLAN SET 8323, DRAWING DSW012 IL-16

D:\pat\Documents\Snowdwellers\AWWU\2019 SCADA Term Contract\C12 Project Drawings\12-4 Hypo System Demo.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				
PLAN CHECK		REVISIONS					

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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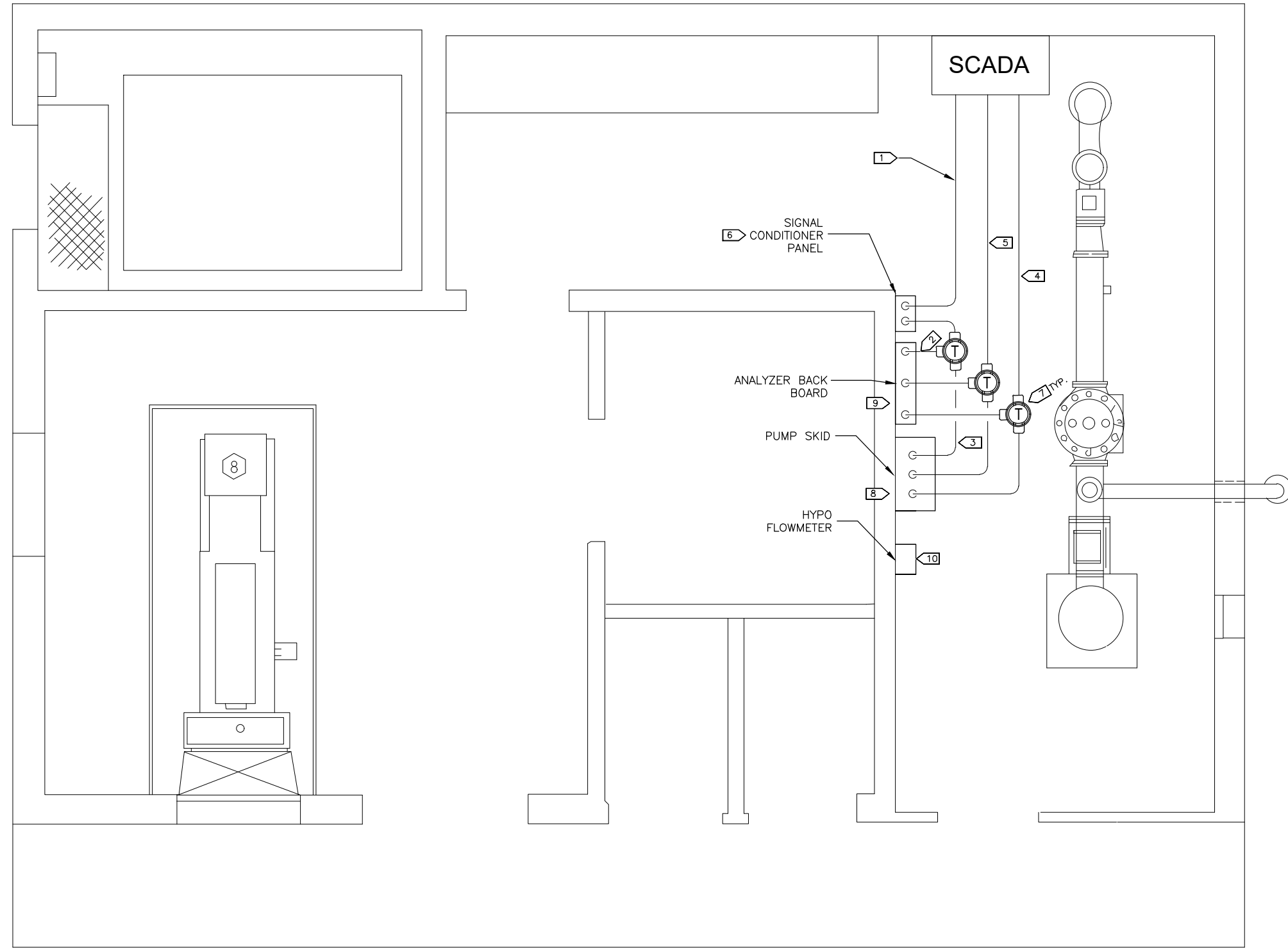
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 12**

HORIZ SCALE: NTS	DATE: 11/2020	GRID: SW1730	SHEET 12-4
VERT SCALE: NTS			of 12-8
PROJ. ID.: WW00011(WTR)			

2020/11/13 7:19 PM By: Pat

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\12-5 Conduit Diagram.dwg

AWWU PLAN SET NO. 11018



- NOTES:**
- 1 PROVIDE (2) EA. 2/C #18 TWSH IN 3/4" GRC FROM SCADA PANEL TO NEW SIGNAL CONDITIONER PANEL.
  - 2 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM NEW SIGNAL CONDITIONER PANEL TO CHLORINE ANALYZER.
  - 3 PROVIDE 2/C #18 TWSH IN 3/4" GRC FROM NEW SIGNAL CONDITIONER PANEL TO PUMP SKID.
  - 4 PROVIDE 8/C #16 CONTROL CONDUCTORS W/GND IN 3/4" FROM SCADA PANEL TO CHLORINE ANALYZER AND PUMP.
  - 5 PROVIDE 2 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO CHLORINE ANALYZER & PUMP.
  - 6 SEE SHEET 12-8 FOR SIGNAL CONDITIONER PANEL DETAILS.
  - 7 PROVIDE GUA TYPE CONDULET FITTINGS AS REQUIRED FOR COMPLETE RACE WAY SYSTEM.
  - 8 SEE NOTE 1 ON SHEET 12-7.
  - 9 SEE NOTE 1 ON SHEET 12-6.
  - 10 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET SHOWN ON DETAIL 2 OF SHEET G11.

**1 WELL 12 ELECTRICAL PLAN**

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	BY	DATE	BY	DATE	BY	DATE	BY
TOPOGRAPHY	---	TELEPHONE	---				
PROFILE	---	ELECTRIC	---				
SANITARY SEWER	---	CABLE TV	---				
STORM SEWER	---	TRAFFIC SIGNAL DESIGN	---				
	---	QUANTITIES	---				
	---	MUN. FINAL CHECK	---				
PLAN		CHECK		REVISIONS			

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

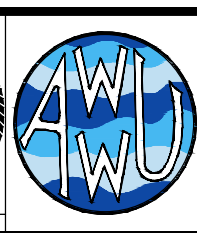
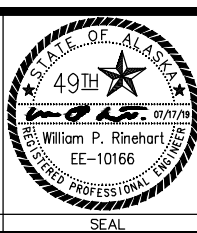
3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CONDUIT DIAGRAM (NEW WORK)  
 WELL 12**

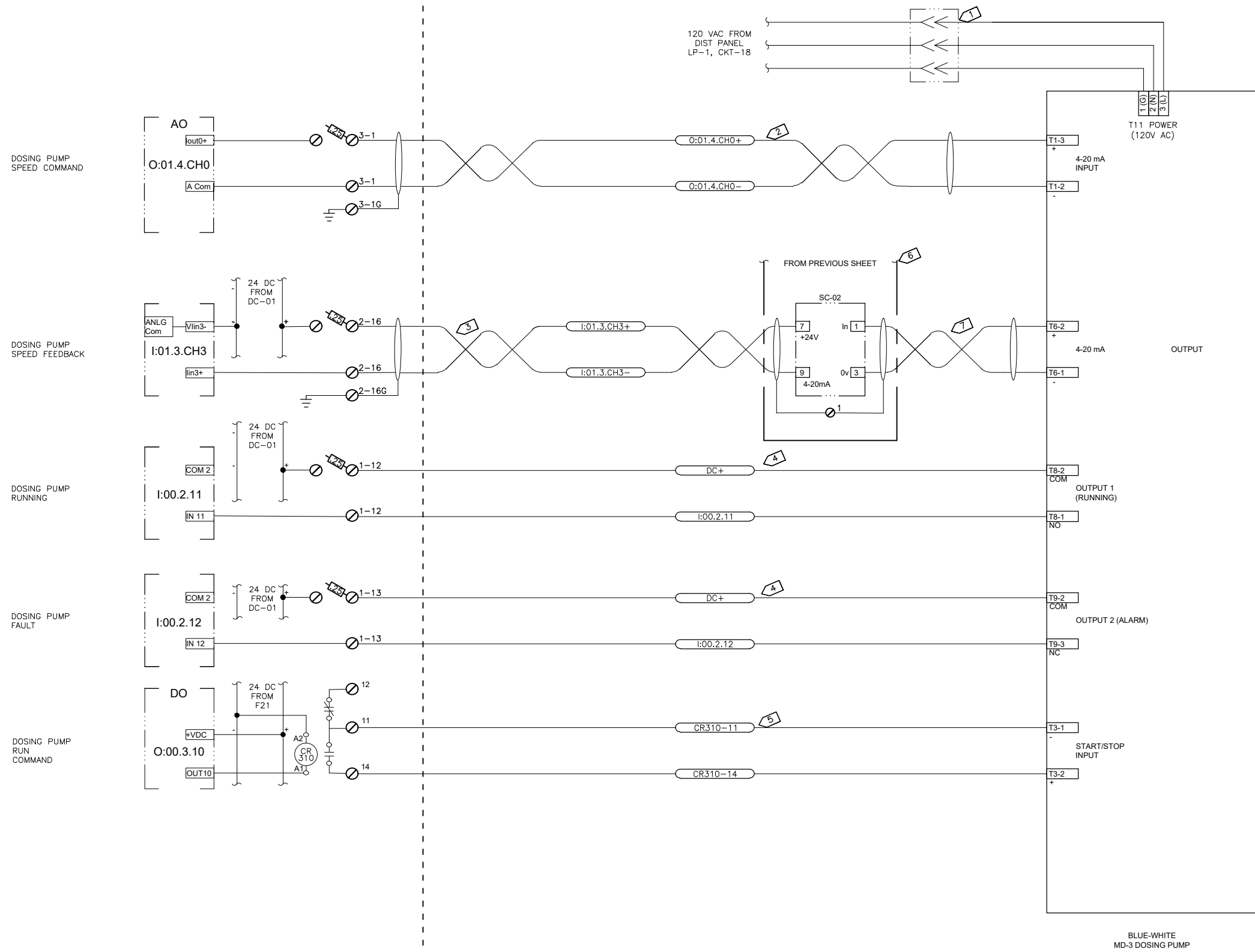
HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1730  
 SHEET 12-5 of 12-8  
 PROJ. ID.: WW00011(WTR)

2020/06/30 5:06 PM By: Pat



EXISTING SCADA PANEL

FIELD WIRING



HYPOCHLORITE DOSING PUMP SPEED COMMAND SC-254 0-100%

HYPOCHLORITE DOSING PUMP SPEED FEEDBACK SI-254 0-100%

DOSING PUMP RUNNING YL-254

DOSING PUMP FAULT YA-254

DOSING RUN COMMAND RC-254

- NOTES:**
- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
  - 2 PROVIDE 2/C #18 TWSH IN GRC TO FROM PLC ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LFMC AT PUMP.
  - 3 PROVIDE 2/C #18 TWSH SIGNAL FROM SIGNAL CONDITIONER TO SCADA PLC ANALOG INPUT.
  - 4 PROVIDE 2/C #16 IN GRC FROM PUMP TO PLC DISCRETE INPUT.
  - 5 PROVIDE 2/C #16 IN GRC FROM SCADA PLC RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.
  - 6 PROVIDE SIGNAL CONDITIONER PANEL AS SHOWN ON SHT. 4-10
  - 7 PROVIDE 2/C #18 TWSH IN GRC FROM DOSING PUMP TO SIGNAL CONDITIONER PANEL.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\12-7 Dosing Pump.dwg

AWWU PLAN SET NO. 11018

**VERIFY SCALE** THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
TOPOGRAPHY			TELEPHONE						
PROFILE			ELECTRIC						
SANITARY SEWER			CABLE TV						
STORM SEWER			TRAFFIC SIGNAL						
			DESIGN						
			QUANTITIES						
			MUN. FINAL CHECK						
PLAN		CHECK						REVISIONS	

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

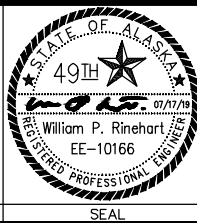
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 COMPANY: \_\_\_\_\_  
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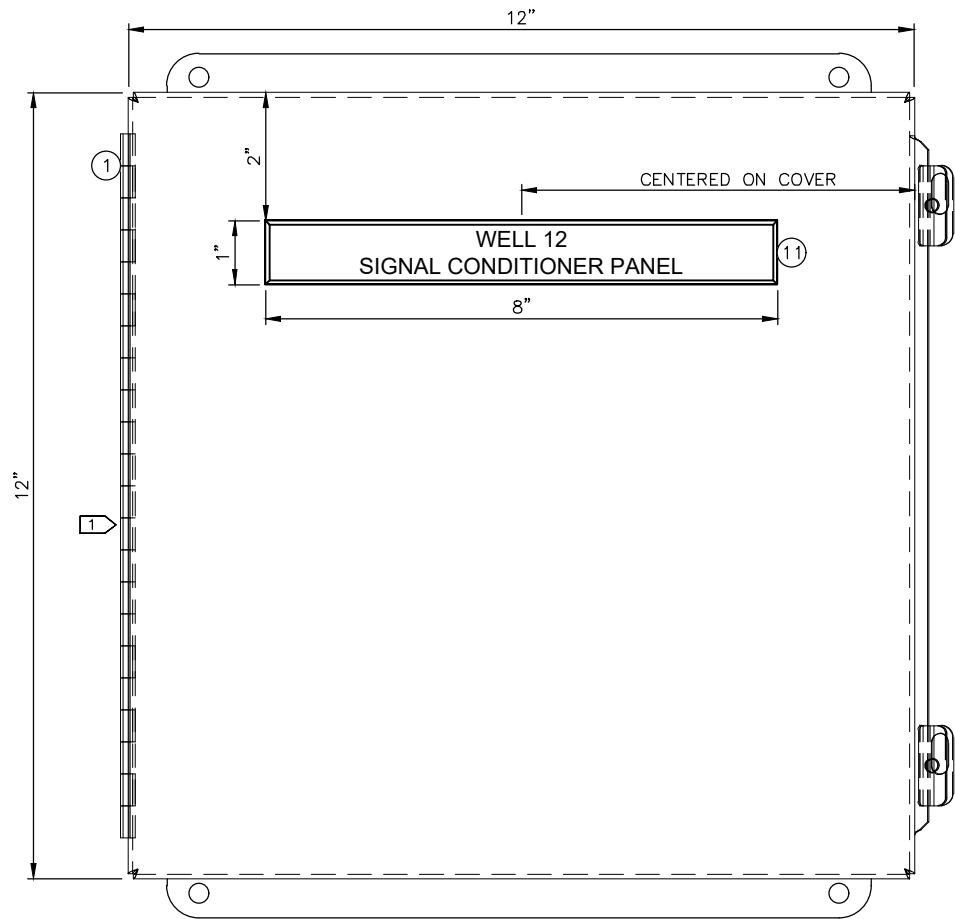


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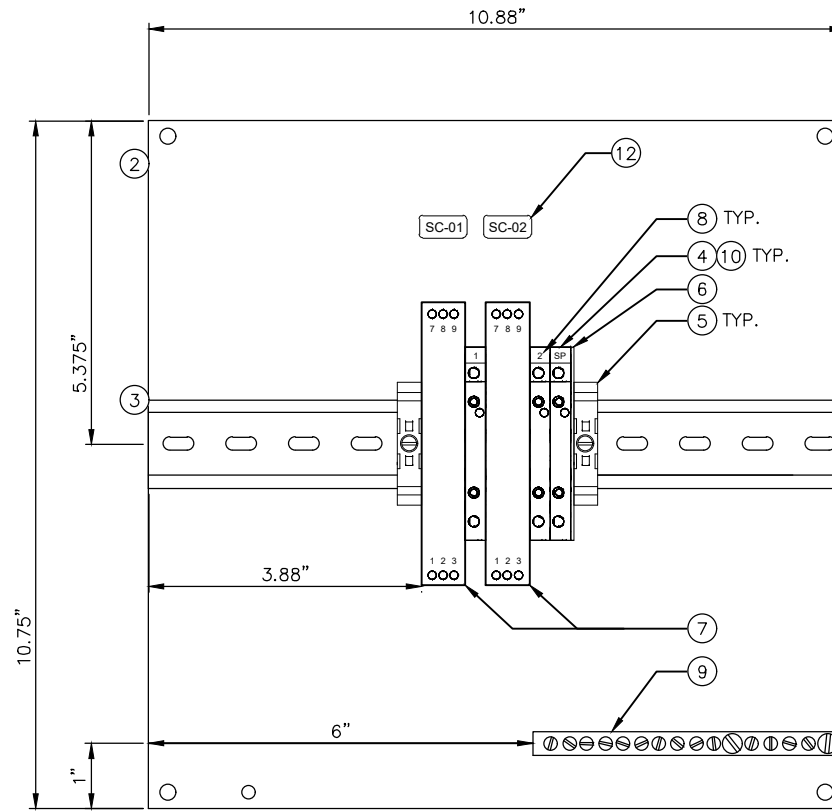
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE DOSING PUMP  
 WELL 12**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW1734  
 PROJ. ID.: WW00011(WTR)

CONSULTANT SEAL SHEET 12-7 of 12-8



**1** SIGNAL CONDITIONER PANEL - EXTERIOR LAYOUT  
NTS



**2** SIGNAL CONDITIONER PANEL - INTERIOR LAYOUT  
NTS

**NOTES:**  
 1 PROVIDE NRTL LISTED ASSEMBLY FOR NON-HAZARDOUS LOCATION IN ACCORDANCE WITH UL508A AND PROJECT SPECIFICATION 40 95 13.

**BILL OF MATERIAL**

ITEM #	QTY.	U.O.M.	MANUFACTURER	DESCRIPTION	CATALOG NUMBER
1	1	EA.	HOFFMAN	ENCLOSURE, STAINLESS STEEL, NEMA 4X	A1212CHNFSS
2	1	EA.	HOFFMAN	BACK PANEL, PAINTED STEEL	A12P12G
3	2	FT.	ALLEN-BRADLEY	DIN RAIL, 35MM	199-DR1
4	3	EA.	ALLEN-BRADLEY	TERMINAL BLOCK, FEED THROUGH	1492-J3
5	2	EA.	ALLEN-BRADLEY	END ANCHORS	1492-EAJ35
6	1	EA.	ALLEN-BRADLEY	END BARRIER FOR 1492-J3 TERMINAL	1492-EBJ3
7	2	EA.	ALLEN-BRADLEY	PASSIVE CONVERTER SIGNAL CONDITIONER, OUTPUT LOOP POWERED	931S-C1A2D-OP
8	1	EA.	ALLEN-BRADLEY	MARKER CARD, "1-20" HORIZONTAL PRINT	1492-M5x5 H 1-20
9	1	EA.	SQUARE D	GROUNDING BAR	PK9GTA
10	3	EA.	BUSSMAN	FAST ACTING FUSE, 2 AMP, 5 X 20 mm, GLASS TUBE FUSE	GMA-2-R
11	1	EA.	FABRICATOR	LABEL, 1" X 8" PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND, 1ST LINE - "WELL XX" 2ND LINE - "SIGNAL CONDITIONER PANEL"	N/A
12	2	EA.	FABRICATOR	BRADY TYPE LABELS, "SC-01" & "SC-02"	N/A

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\12-8 Signal Conditioner.dwg

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0  1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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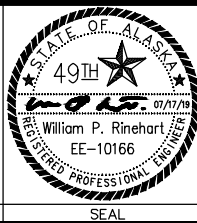
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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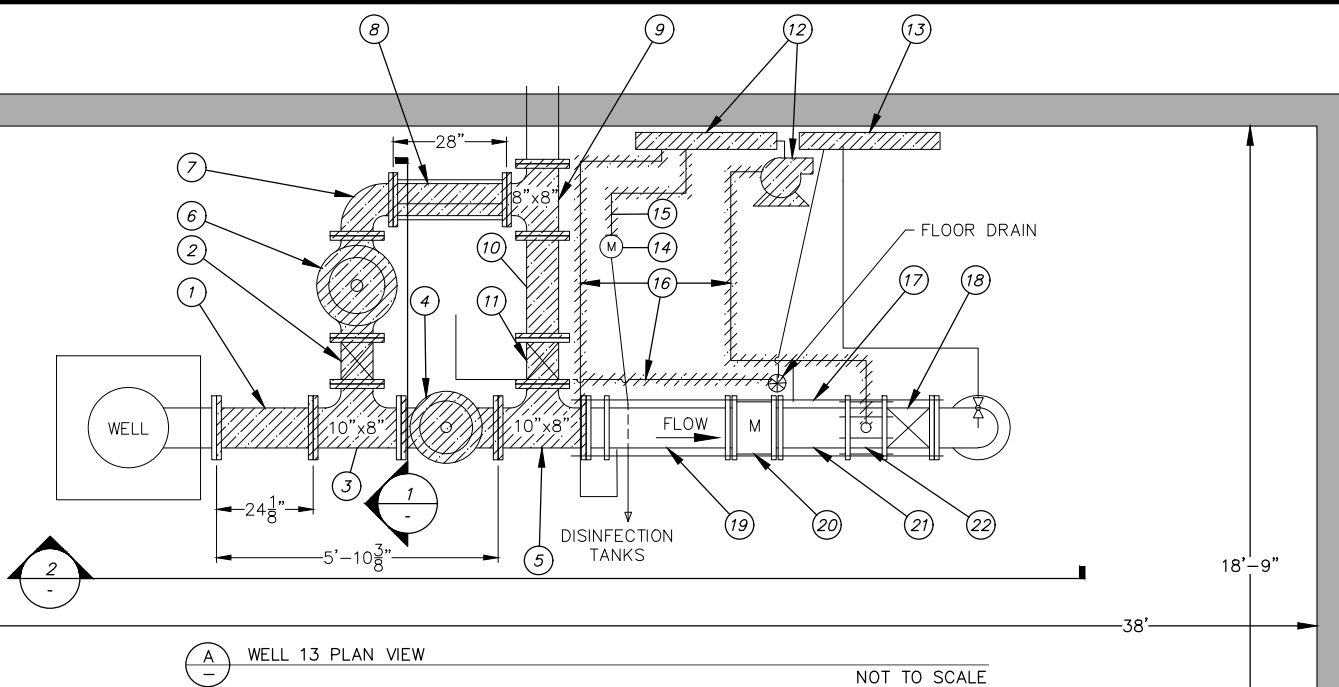


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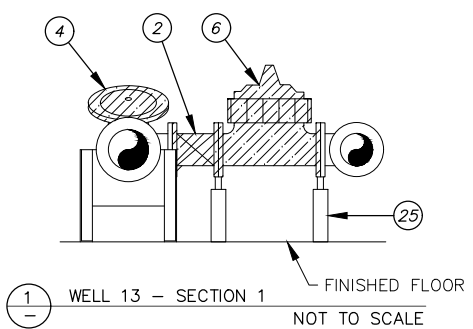
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SIGNAL CONDITIONER PANEL  
 WELL 12**

HORIZ SCALE: NTS	DATE: 07/2019	GRID: SW1730	SHEET 12-8
VERT SCALE: NTS			of 12-8
PROJ. ID.: WW00011(WTR)			

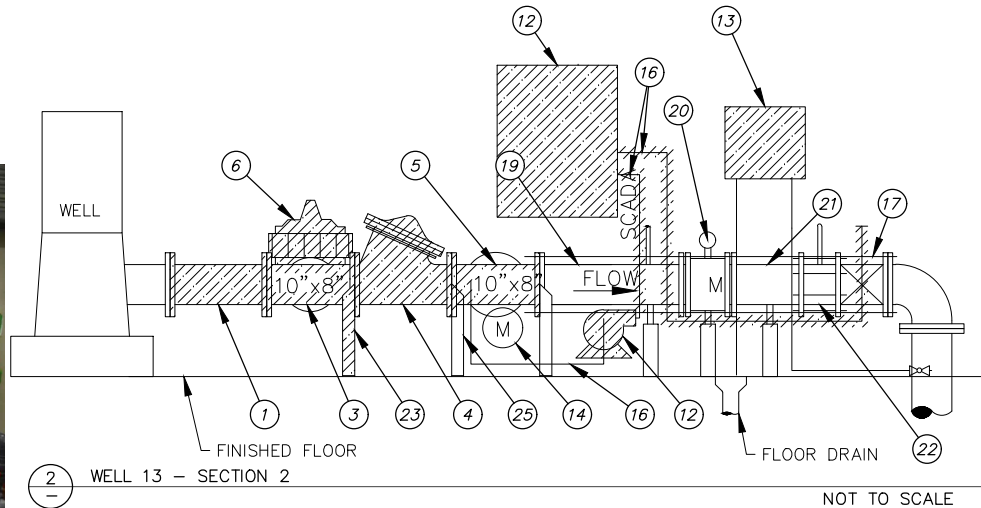




(A) WELL 13 PLAN VIEW NOT TO SCALE



(1) WELL 13 - SECTION 1 NOT TO SCALE



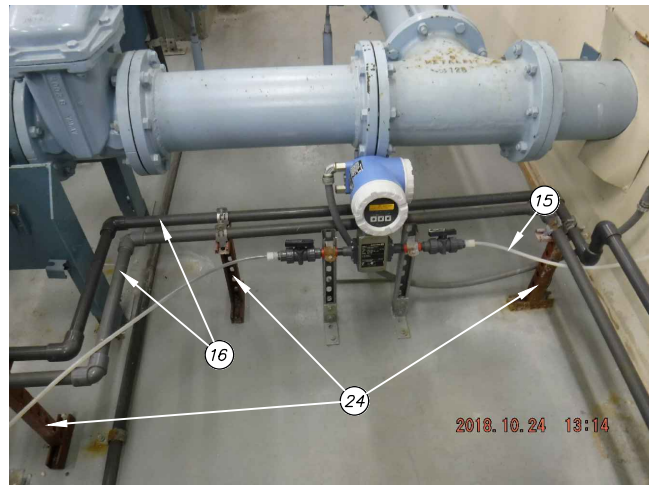
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**DEMOLITION CALLOUTS**

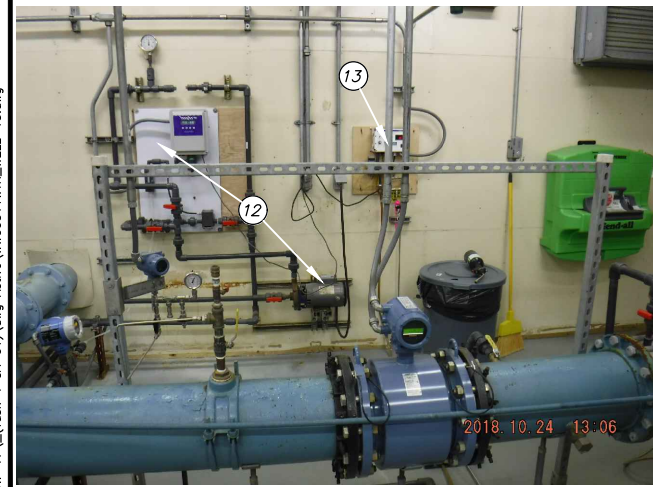
- (1) REMOVE EXISTING 24" SPOOL OF 10" FLANGED DIP
- (2) REMOVE EXISTING 8" GATE VALVE
- (3) REMOVE EXISTING 10"x10"x8" TEE
- (4) REMOVE EXISTING 10" PRV - GLOBE STYLE
- (5) REMOVE EXISTING 10"x10"x8" TEE
- (6) REMOVE EXISTING 8" PRV - GLOBE STYLE
- (7) REMOVE EXISTING 90° FITTING OF 10" FLANGED DIP
- (8) REMOVE EXISTING 28" SPOOL OF 8" FLANGED DIP AND RESTRAINTS
- (9) REMOVE EXISTING 8"x8"x8" TEE
- (10) REMOVE EXISTING SPOOL OF 8" FLANGED DIP
- (11) REMOVE EXISTING 8" GATE VALVE
- (12) REMOVE EXISTING PUMP AND SKID
- (13) REMOVE EXISTING CHEMICAL ANALYZER, SKID, PIPING AND SUPPORTS
- (14) EXISTING CHEMICAL FLOW METER TO REMAIN. PROTECT IN PLACE
- (15) 3/8" TUBING TO BE REMOVED FROM DOWNSTREAM SIDE OF FLOW METER TO CHEMICAL ANALYZER
- (16) 1" PVC TUBING TO BE REMOVED AND PLUGGED AT ALL DUCTILE IRON PENETRATIONS. EXISTING BALL VALVE AND TAP IN STATIC MIXER TO REMAIN
- (17) 5/8" THRUST TIE TO REMAIN (TYP.)
- (18) EXISTING 10" GATE VALVE TO REMAIN
- (19) EXISTING SPOOL OF 10" DIP TO REMAIN
- (20) EXISTING 10" METER TO REMAIN
- (21) EXISTING SPOOL OF 10" DIP TO REMAIN
- (22) EXISTING 10" STATIC MIXER TO REMAIN. REMOVE AND REPLACE GALVANIZED BOLTS
- (23) REMOVE PIPE SUPPORT
- (24) REMOVE UNI-STRUT. SEE DETAIL E
- (25) EXISTING PIPE SUPPORT SHALL BE REMOVED AND REINSTALLED

**DEMOLITION NOTES**

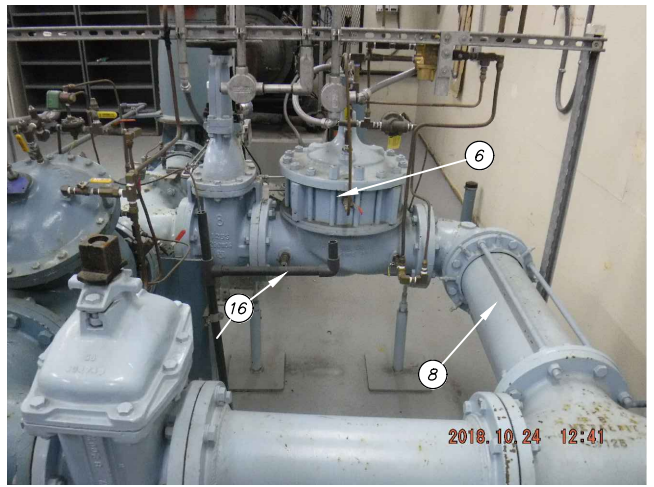
- 1. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS TO BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
- 2. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.



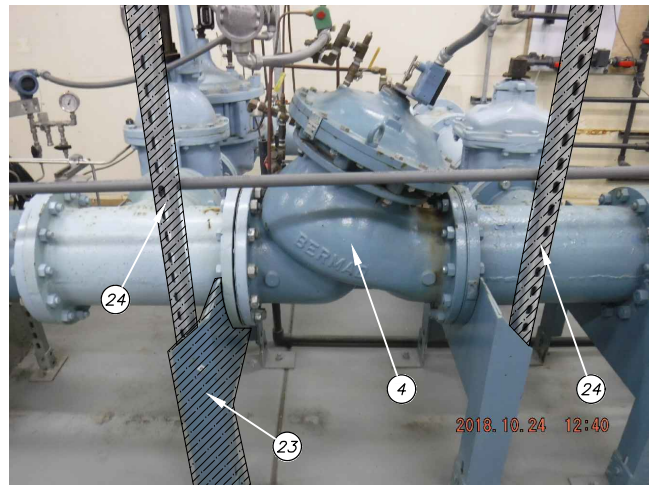
(C) EXISTING CHEMICAL FLOW METER NOT TO SCALE



(B) EXISTING CHEMICAL ANALYZER, PUMP & SKID NOT TO SCALE



(D) EXISTING 8" PRV - GLOBE STYLE NOT TO SCALE



(E) EXISTING 10" PRV - GLOBE STYLE NOT TO SCALE

2021/03/29 1:02 PM By: Kevin Garcia Z:\W1-17\_(Task 4 CA-01).dwg Active\W00011WTR\_WELL-13.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---
	---	---	DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

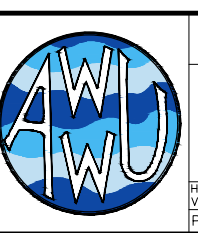
1. DATA PROVIDED BY:  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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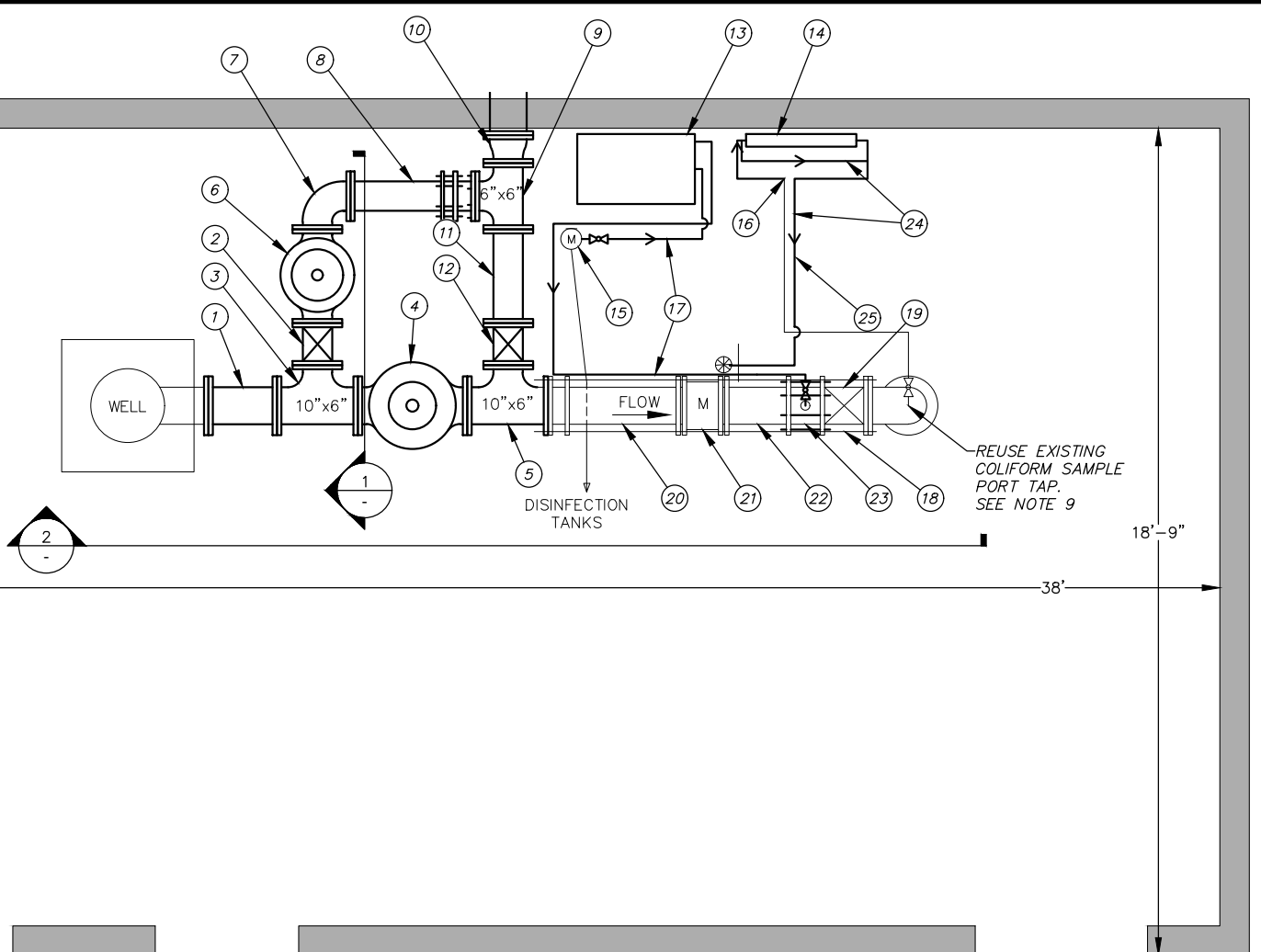


MUNICIPALITY OF ANCHORAGE  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 13  
 DEMOLITION PLAN AND SECTIONS**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW2035 SHEET 13-1  
 VERT SCALE: NTS PROJ. ID: W00011(WTR) SHEET 13-8



(A) WELL 13 PLAN VIEW

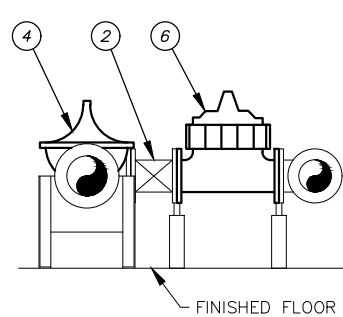
NOT TO SCALE

**CONSTRUCTION CALLOUTS**

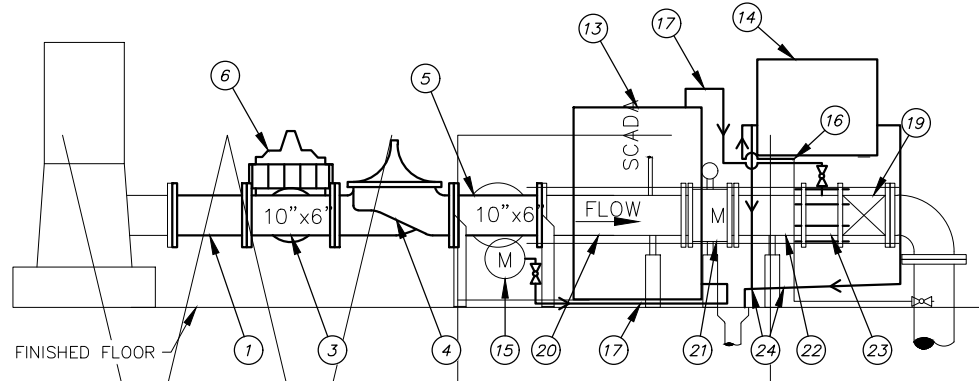
- (1) FURNISH AND INSTALL ±18" SPOOL OF 10" DIP. USE ROMAC RFCA FOR DEFLECTION. SEE TABLE 13-1 FOR DETAILS
- (2) FURNISH AND INSTALL NEW 6" GATE VALVE
- (3) FURNISH AND INSTALL NEW 10"x10"x6" TEE
- (4) FURNISH AND INSTALL NEW 10" PRV - GLOBE STYLE. SEE SHEET G10 FOR DETAILS
- (5) FURNISH AND INSTALL NEW 10"x10"x6" TEE
- (6) FURNISH AND INSTALL NEW 6" PRV - GLOBE STYLE. SEE SHEET G10 FOR DETAILS
- (7) FURNISH AND INSTALL NEW 90° FITTING
- (8) FURNISH AND INSTALL ±34" SPOOL OF 6" DIP. USE ROMAC RFCA FOR DEFLECTION. SEE TABLE 13-1 FOR DETAILS
- (9) FURNISH AND INSTALL NEW 6"x6"x6" TEE
- (10) FURNISH AND INSTALL NEW 6"x8" REDUCER
- (11) FURNISH AND INSTALL ±25" SPOOL OF 6" DIP
- (12) FURNISH AND INSTALL NEW 6" GATE VALVE
- (13) FURNISH AND INSTALL NEW PUMP SKID. SEE SHEET G9
- (14) FURNISH AND INSTALL NEW CHEMICAL ANALYZER. SEE SHEET G8
- (15) EXISTING CHEMICAL FLOW METER TO REMAIN
- (16) CONNECT TO EXISTING STAINLESS STEEL TUBING WITH NEW 1/4" 316 STAINLESS STEEL TUBING. SEE NOTE 9
- (17) FURNISH AND INSTALL NEW 1/2" CPVC PIPING
- (18) EXISTING 5/8" THRUST TIE TO REMAIN
- (19) EXISTING 10" GATE VALVE TO REMAIN
- (20) EXISTING SPOOL OF 10" DIP TO REMAIN
- (21) EXISTING 10" FLOW METER TO REMAIN
- (22) EXISTING SPOOL OF 10" DIP TO REMAIN
- (23) EXISTING 10" STATIC MIXER TO REMAIN. REMOVE AND REPLACE GALVANIZED BOLTS. SEE NOTE 3
- (24) FURNISH AND INSTALL 1/2" CPVC TO EXISTING FLOOR DRAIN
- (25) FURNISH AND INSTALL 4' PIPE PROTECTOR IAW 60.09. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING. VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION

**CONSTRUCTION NOTES**

1. SEE TABLE 13-1 FOR A DETAILED LIST OF EQUIPMENT.
2. NEW CPVC PIPE SHALL BE SCHEDULE 80 1/2" DIAMETER.
3. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
4. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
5. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
6. CONTRACTOR TO INSTALL PRV BODIES ONLY. THE OWNER SHALL INSTALL THE TRIM, ACCESSORIES, AND REBUILD KITS AFTER THE BODIES HAVE BEEN INSTALLED.
7. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
8. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH, CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
9. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4'-FT WITHOUT SUPPORT.
10. ALL NEW UNI-STRUT SHALL BE INSTALLED IN SUCH A MANNER THAT SCADA, SAMPLING PORTS OR EQUIPMENT IS READILY ACCESSIBLE



(1) WELL 13 - SECTION 1  
NOT TO SCALE



(2) WELL 13 - SECTION 2  
NOT TO SCALE

TABLE 13-1 SECTION 60.02 FURNISH AND INSTALL PIPE

NOMENCLATURE	MATERIAL TYPE	SIZE (IN)	LENGTH (IN)	END DETAIL	REMARKS	QUANTITY
SPOOL	DI	6	±34	FLANGED	EPOXY COATED	1
SPOOL	DI	6	±25	FLANGED	EPOXY COATED	
BALL VALVE	CPVC	1/2	-	VARIES	SCH 80 VENTED/BLEACHED TRUE UNION	2
BALL VALVE	SS	1/4	-	THREADED	316 STAINLESS STEEL BODY AND BALL	1
RFCA	DI	6	-	-	ROMAC RFCA OR APPROVED EQUAL 316 STAINLESS STEEL BOLTS, NSF 61	1

**TABLE 13-1 NOTES:**

1. ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE

2021/03/29 1:06 PM By: Kevin Garcia Z:\W\17\Task 4 CA-01\dwg Active\W00011\WTR\_WELL-13.dwg

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN				
			CHECK				
			REVISIONS				

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
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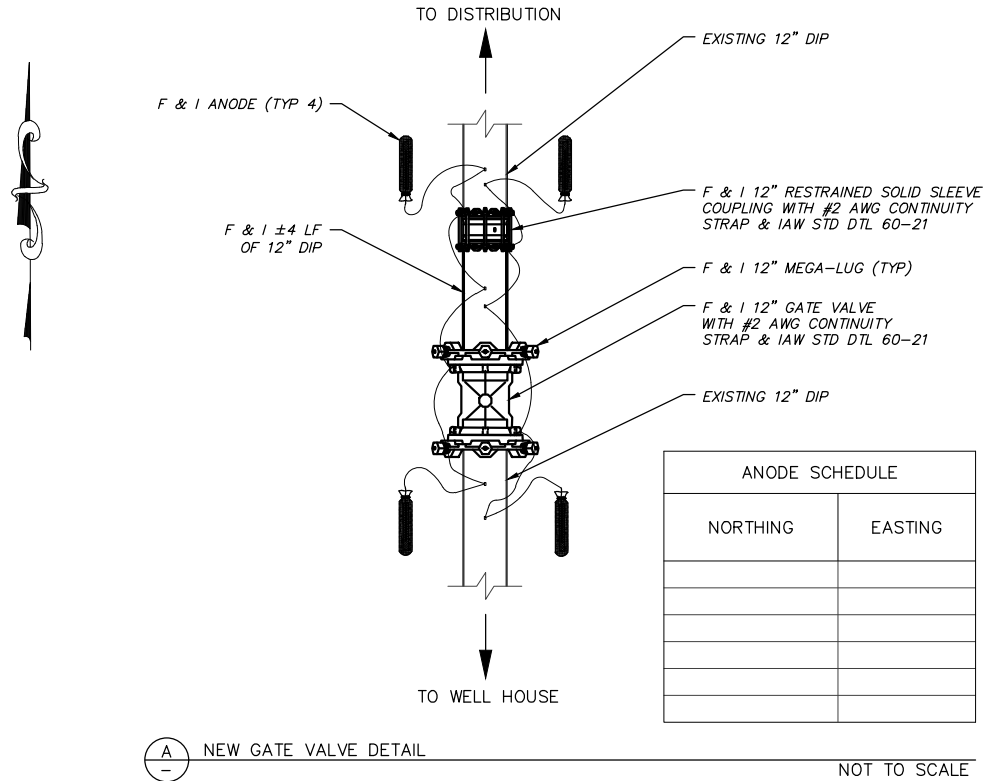
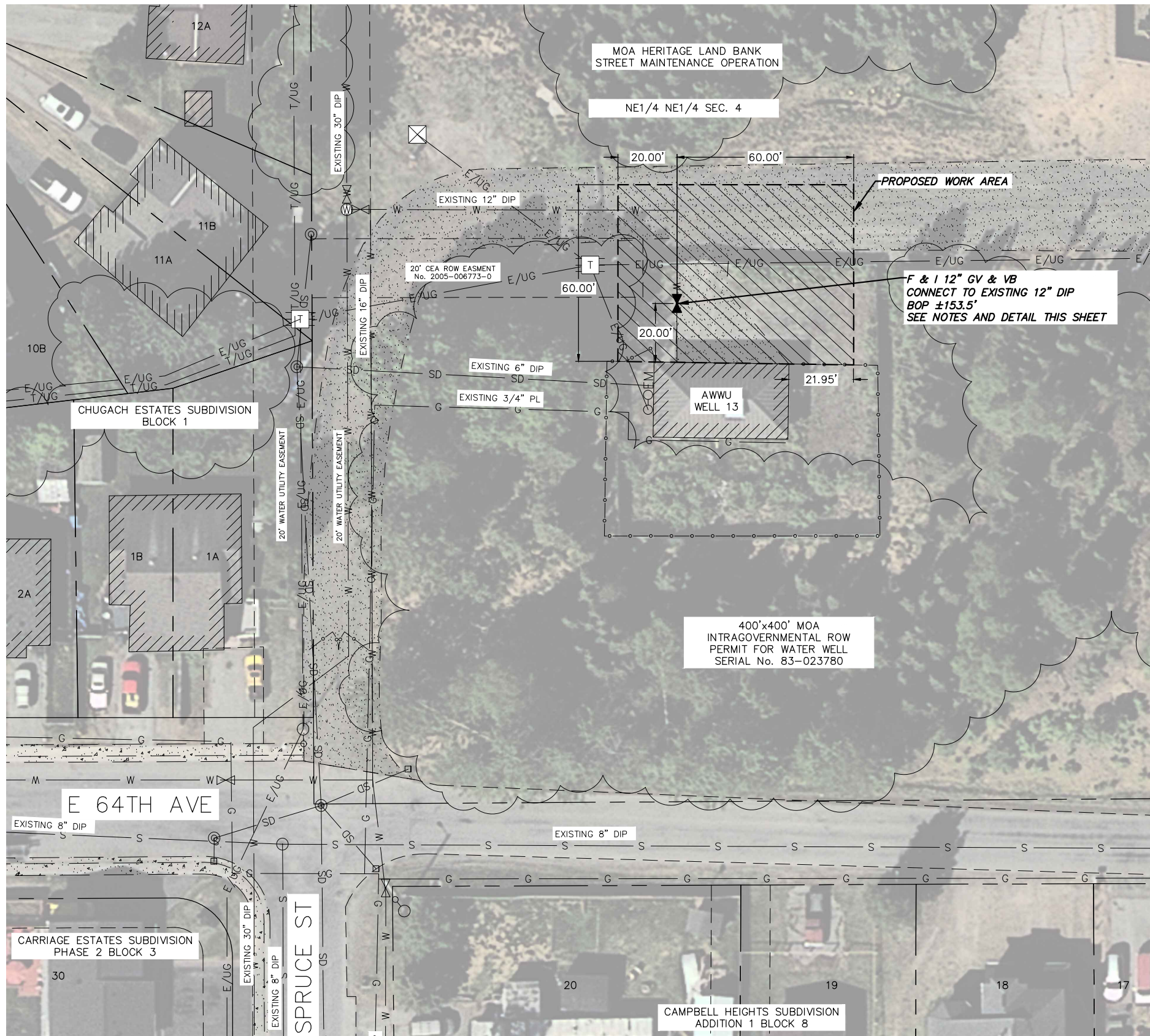


MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 13  
 CONSTRUCTION PLAN AND SECTIONS**

HORIZ SCALE: NTS	DATE: 04/2021	GRID: SW2035	SHEET 13-2
VERT SCALE: NTS			13-8
PROJ. ID: W00011(WTR)			



ANODE SCHEDULE	
NORTHING	EASTING

VALVE AS-BUILT TABLE		
NORTHING	EASTING	TOP OF NUT EL.

CONSTRUCTION NOTES

- CONTRACTOR SHALL PREPARE TYPE 1 SWPPP. TYPE 1 SWPPP IS INCIDENTAL TO THE CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OWNER FOR ACCESS TO WELL SITE. WELL HOUSE ACCESS IS SHARED USE AND WILL NEED TO REMAIN OPEN FOR THROUGH TRAFFIC.
- CONTRACTOR TO F&I A 12 GV & VB 20' NORTH OF BUILDING. REMOVE NECESSARY 12 DIP TO ACCOMMODATE VALVE INSTALLATION. USE MEGALUG MECHANICAL JOINT RESTRAINT OR APPROVED EQUAL FOR VALVE AND NEW DIP REPLACEMENT.
- FURNISH AND INSTALL ANODES AS SHOWN IN DETAIL A AND IN ACCORDANCE WITH STD DTL 60-04 AND 60-20. NO EXOTHERMIC WELD CONNECTIONS WILL BE ALLOWED ON THE VALVE. CONTRACTOR SHALL USE AN 1/8" THICK 316 STAINLESS STEEL FLAT BAR CONNECTOR PLATE WITH A WIRE RING CONNECTOR IN ACCORDANCE WITH STD DTL 60-21.
- THE VALVE BOX SHALL BE BROUGHT TO WITHIN 3" OF FINISHED GRADE IN ACCORDANCE WITH STD DTL 60-08. CONTRACTOR SHALL PLACE A VALVE BOX MARKER ON THE BUILDING WITH DISTANCE TO VALVE AS DIRECTED BY THE ENGINEER. MARKER IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE.
- CONTRACTOR SHALL BACKFILL EXCAVATION WITH NATIVE MATERIAL AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL REESTABLISH ACCESS ROAD WITH 2" OF LEVELING COURSE. LEVELING COURSE SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. SEE SHEET G12 FOR TYPICAL TRENCH DETAIL.
- CONTRACTOR SHALL MINIMIZE EXCAVATION BY USE OF SHORING. USE OF SHORING IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE.
- CONTRACTOR SHALL PROTECT EXISTING FENCING AND ASSOCIATED GATES IN PLACE.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO PERFORM TEST SHUTDOWN PRIOR TO THE BEGINNING OF CONSTRUCTION.
- LOCATIONS OF UTILITIES ARE BASED ON AVAILABLE RECORD DRAWING INFORMATION. CONTRACTOR IS RESPONSIBLE TO VERIFY DEPTH AND LOCATION OF EXISTING WATER MAIN AND BURIED UTILITIES.

2021/04/12 9:27 AM By: Kevin Garcia Z:\NW-17\_(Task 4 CA-01)\dwg Active\W00011WTR\_WELL-13.dwg

DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION	BY
TOPOGRAPHY	KMG	DAK				
PROFILE						
SANITARY SEWER						
STORM SEWER						
PLAN						
CHECK						

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

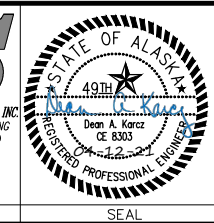
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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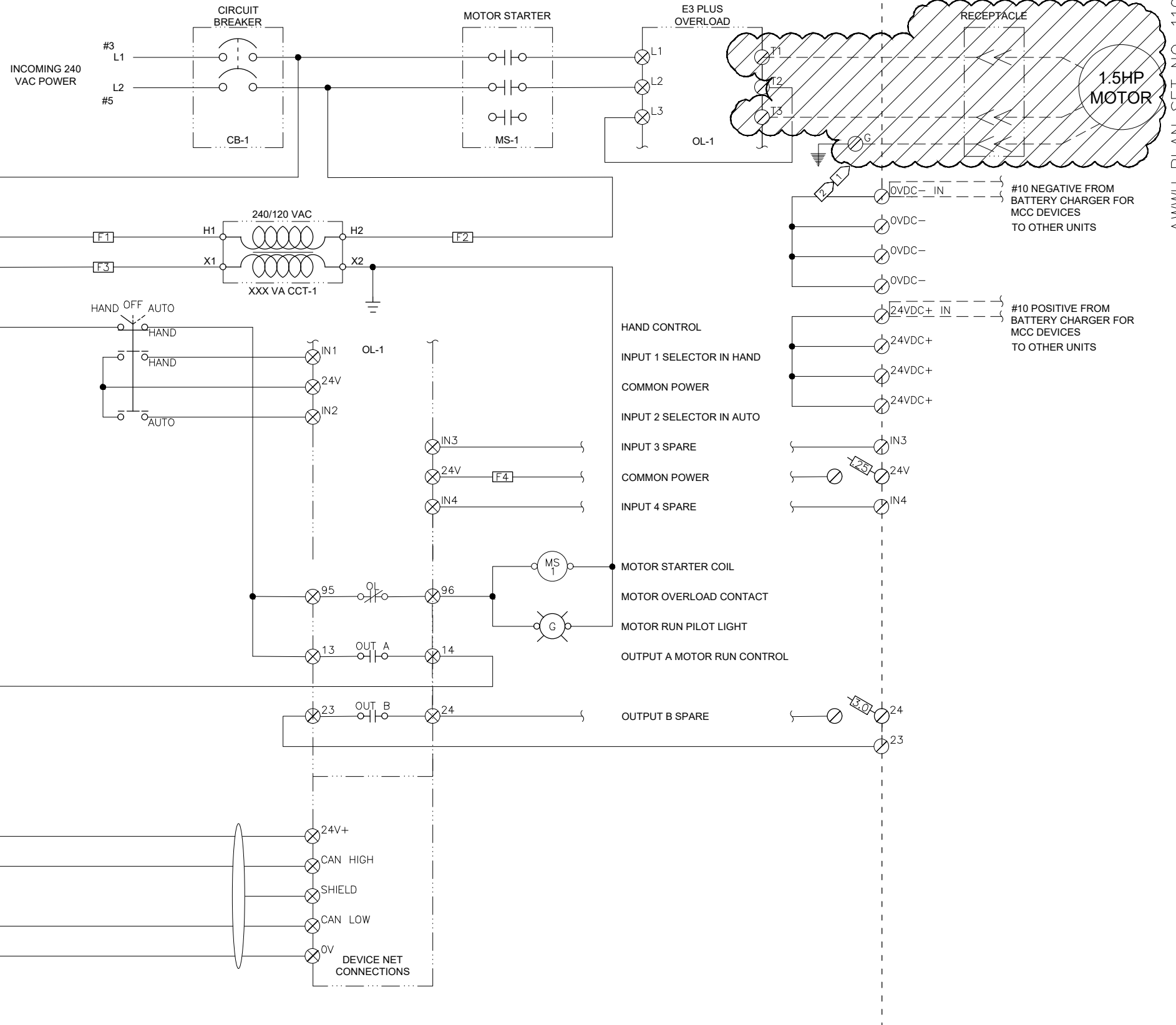


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

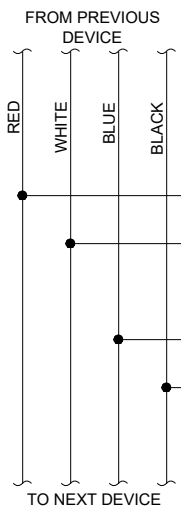
**WELL 13  
 WELL HOUSE SITE PLAN**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW2035 SHEET 13-3  
 VERT SCALE: NTS PROJ. ID: W00011(WTR) SHEET 13-8



AWWU PLAN SET NO. 11018

- NOTES:**
- 1 DEMOLISH HYPOCHLORITE PUMP AND MOTOR. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
  - 2 DEMOLISH PUMP CONDUCTORS BACK TO MCC BUCKET AND RE-LABEL BUCKET AS SPARE. DEMOLISH RECEPTACLE AND RACEWAY BUCKET TO 120VAC RECEPTACLE AND PLUG UNUSED OPENING.



THIS DRAWING SUPERSEDES PLAN SET 8410, DRAWING DSW013 IL-10

D:\pat\Documents\Snowdwell\AWWU\_2019\_Scada Term Contract\C12 Project\Drawings\_022321\13-4 Hypo Pump Demo.dwg 2021/02/23 6:43 PM By: Pat

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: \_\_\_\_\_  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

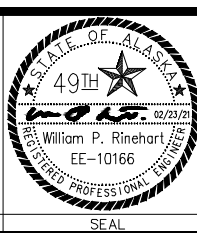
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP DEMOLITION  
 WELL 13**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 02/2021  
 GRID: SW2035  
 SHEET 13-4 of 13-8  
 PROJ. ID.: WW00011(WTR)

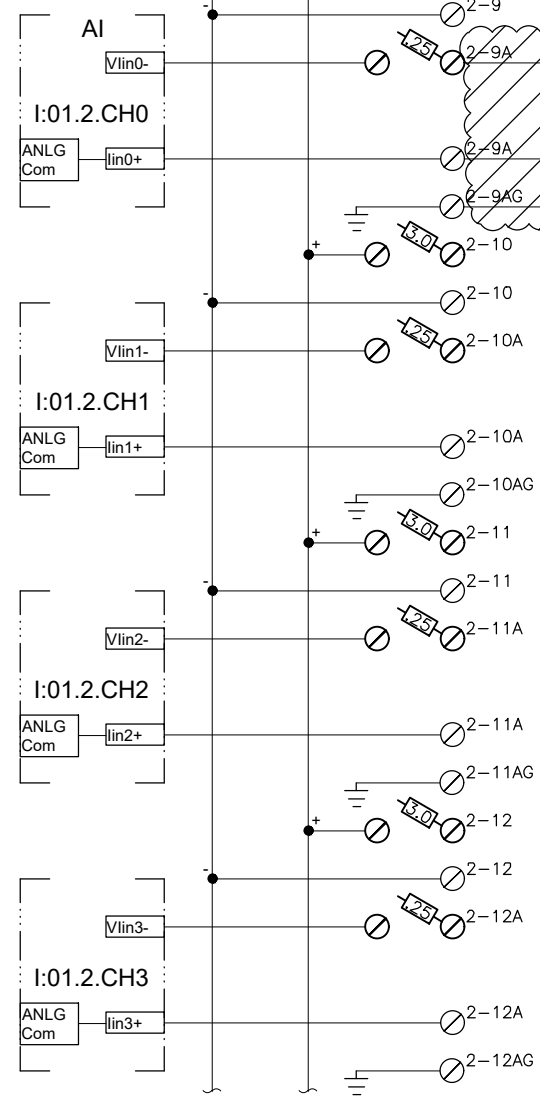
120 VAC FROM  
DIST PANEL

#17N #17

C-17

C-17N

24 DC FROM  
DC-01



I:01.2.CH0+

I:01.2.CH0-

AUTO VALVE

ANALYZING TRANSMITTER

CL2T-250

(NaFT-251)

(pHT-252)

(DOT-253)

- NOTES:**
- 1 DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, AND AUTO VALVE BACKBOARD ASSEMBLY.

THIS DRAWING SUPERSEDES PLAN SET 8410, DRAWING DSW013 IL-09

DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY					
PROFILE					
SANITARY SEWER					
STORM SEWER					
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CHECK					

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DATE: \_\_\_\_\_

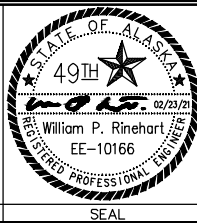
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COMPANY: \_\_\_\_\_  
DATE: \_\_\_\_\_

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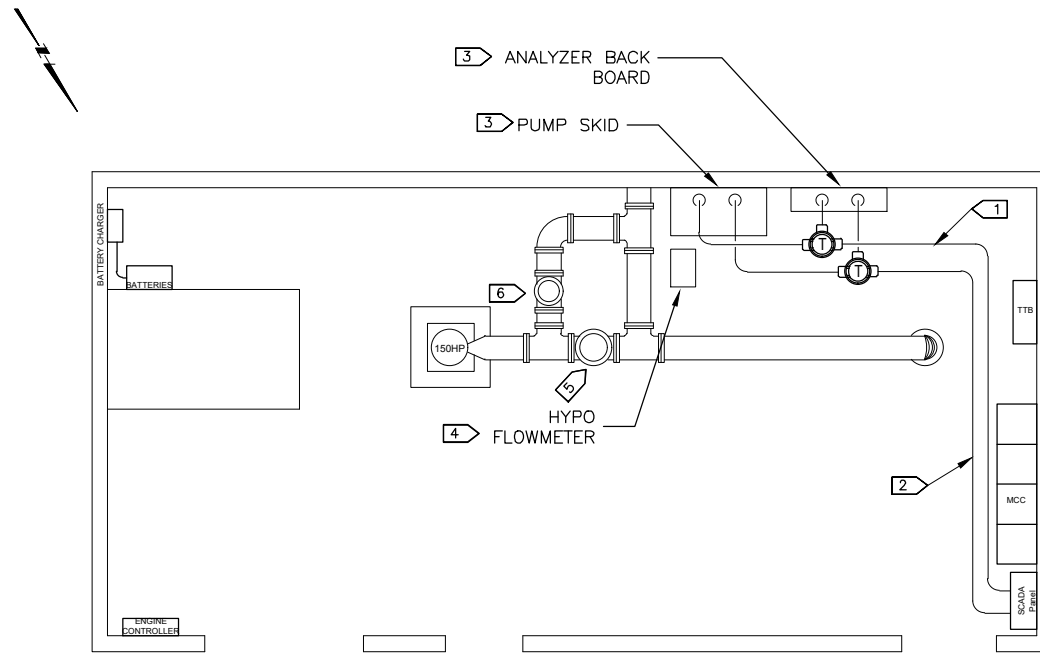


MUNICIPALITY OF ANCHORAGE  
WATER & WASTEWATER UTILITY

ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS  
**HYPOCHLORITE SYSTEM DEMOLITION  
WELL 13**

HORIZ SCALE: NTS  
VERT SCALE: NTS  
DATE: 02/2021  
GRID: SW2035  
SHEET 13-5 of 13-8  
PROJ. ID.: WW00011(WTR)

D:\pat\Documents\Snowdweller\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\_022321\13-5 Hypo System Demol.dwg



- NOTES:**
- 1 PROVIDE 8/C #16 CONTROL CONDUCTORS IN 3/4" GRC FROM SCADA PANEL TO NEW ANALYZER AND PUMP.
  - 2 PROVIDE 3 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO NEW EQUIPMENT.
  - 3 TRANSITION TO LFMC AT EQUIPMENT.
  - 4 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET SHOWN ON DETAIL 2 OF SHEET G11.
  - 5 RE-WORK CONDUIT AND WIRING AT DISCHARGE VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.
  - 6 RE-WORK CONDUIT AND WIRING AT UNLOADING VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.

1 WELL 13 ELECTRICAL PLAN

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\_022321\13-6 Conduit Diagram.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	PLAN	CHECK			REVISIONS

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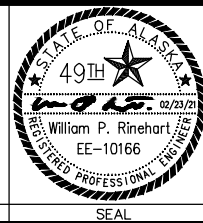
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CONSULTANT



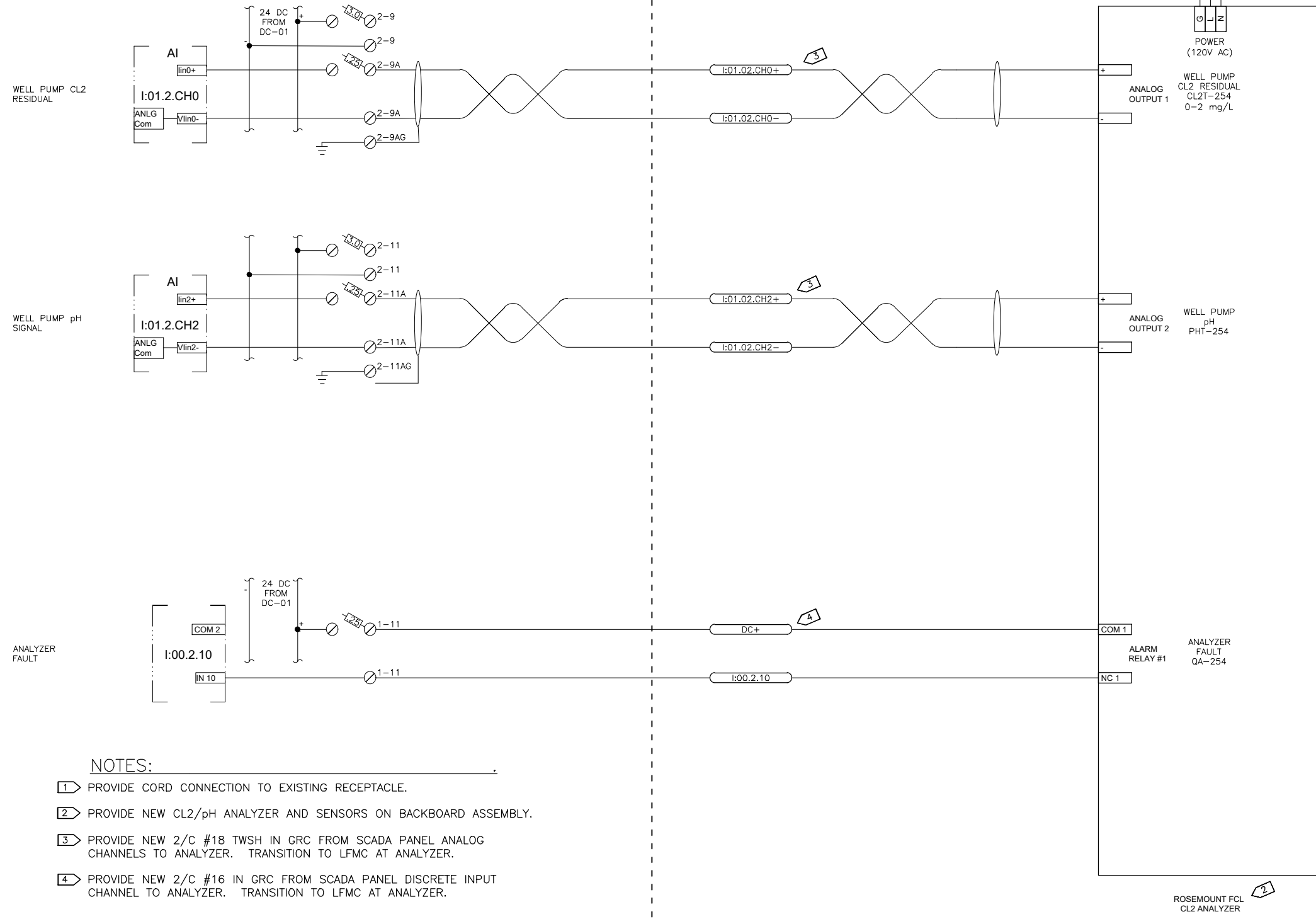
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CONDUIT DIAGRAM (NEW WORK)  
 WELL 13**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 02/2021  
 GRID: SW2035  
 SHEET 13-6 of 13-8  
 PROJ. ID.: WW00011(WTR)

EXISTING SCADA PANEL

FIELD WIRING



NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
- 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SCADA PANEL ANALOG CHANNELS TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
- 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.

D:\pat\Documents\Snowdwellier\AWWU\2019 SCADA Term Contract\CI2 Project\Drawings\_022321\13-7 CI2 Analyzer.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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TOPOGRAPHY					
PROFILE					
SANITARY SEWER					
STORM SEWER					
REVISIONS					

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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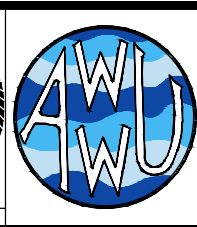
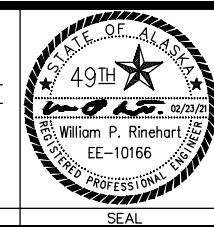
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 COMPANY: \_\_\_\_\_  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CL2 RESIDUAL ANALYZER  
 WELL 13**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 02/2021  
 GRID: SW2035  
 PROJ. ID.: WW00011(WTR)

SHEET 13-7 of 13-8





**DEMOLITION NOTES**

- EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS TO BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
- ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
- REMOVE EXISTING APPURTENANCES/FITTINGS WITHIN THE PIPE REMOVAL AREA INCLUDING BUT NOT LIMITED TO; Y-STRAINER, TEES, ELBOWS, AND BALL VALVES.
- EXISTING PUMP SKID IS LOCATED ON THE WEST WALL.

**DEMOLITION CALLOUTS**

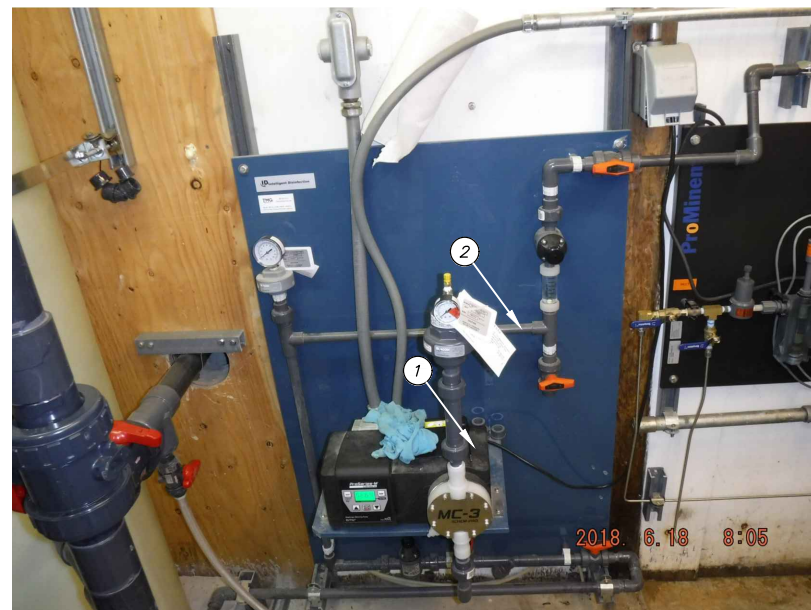
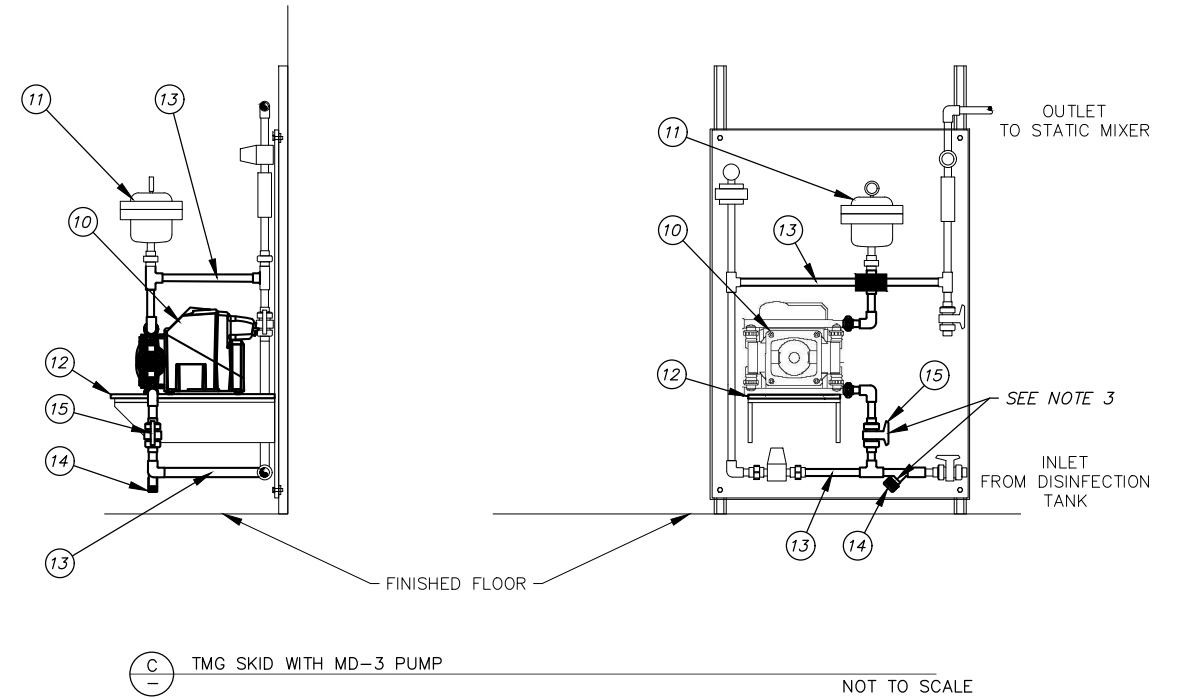
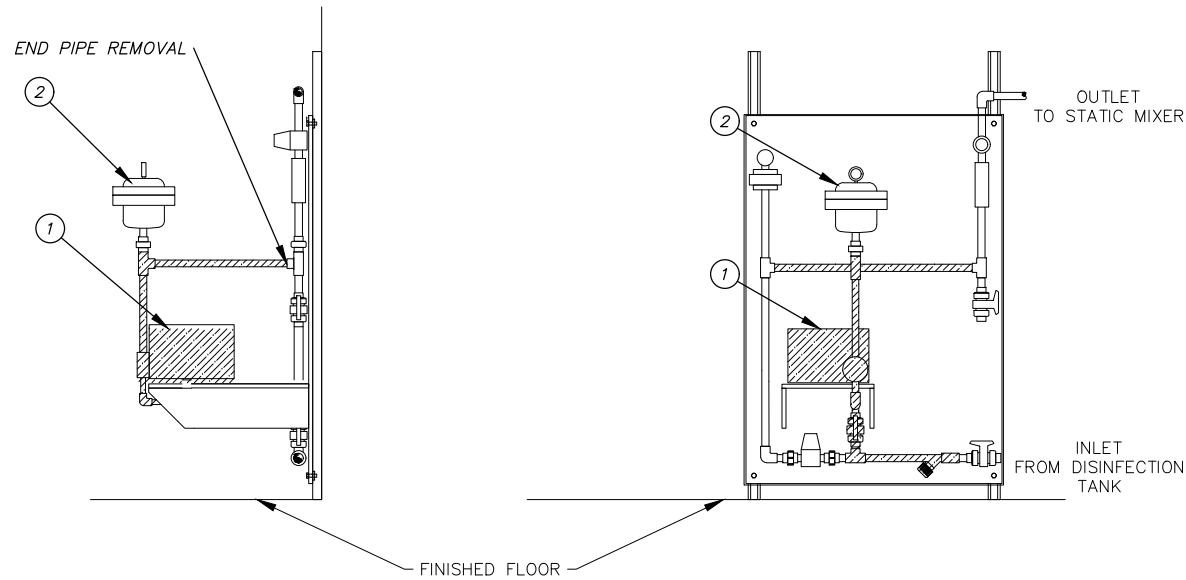
- REMOVE EXISTING MC-3 PUMP
- REMOVE AND SALVAGE EXISTING PULSATION DAMPER
- REMOVE EXISTING PROMINENT CHEMICAL ANALYZER ASSEMBLIES
- REMOVE EXISTING PROMINENT CHEMICAL SENSORS ASSEMBLIES

**CONSTRUCTION NOTES**

- CONTRACTOR SHALL RETOFIT EXISTING SKID AS NECESSARY TO INSTALL MD-3 PUMP.
- NEW PIPE AND FITTINGS SHALL BE CPVC. NEW PIPE SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE.
- INSTALL NEW BALL VALVES, Y-STRAINER, AND OTHER APPURTENANCES AS NECESSARY FOR MD-3 PUMP INSTALLATION. APPURTENANCES SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE.
- EXISTING PUMP SKID AND ANALYZER ARE LOCATED ON THE WEST WALL.
- CONTRACTOR TO VERIFY SIZES.

**CONSTRUCTION CALLOUTS**

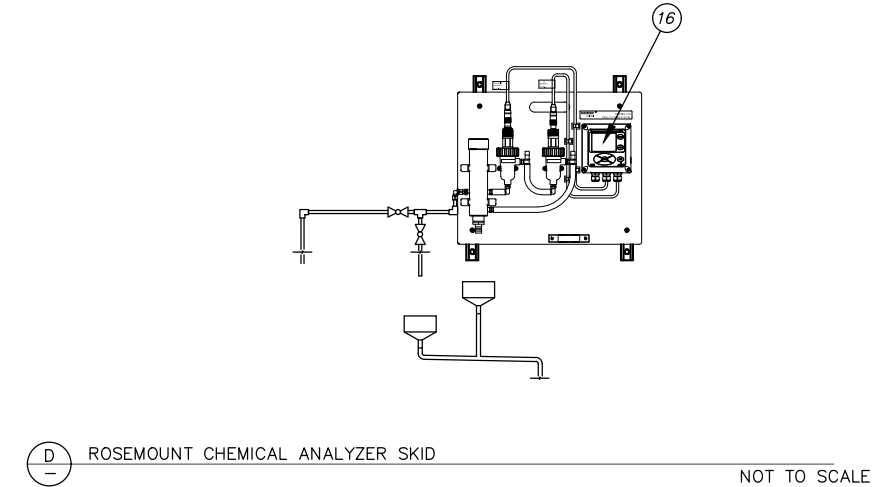
- FURNISH AND INSTALL MD-3 PUMP
- REINSTALL PULSATION DAMPER
- INSTALL 1/2" POLYPROPYLENE SHEET
- INSTALL 1/2" SCH 80 CPVC PIPE AND FITTINGS
- Y-STRAINER. SEE SHEET G9
- VALVE. SEE SHEET G9
- FURNISH AND INSTALL NEW CHEMICAL ANALYZER. SEE SHEET G8



**A** EXISTING MC-3 PUMP NOT TO SCALE



**B** EXISTING PROMINENT CHEMICAL ANALYZER NOT TO SCALE



2021/03/26 8:06 AM By: Kevin Garcia Z:\WW-17\Task 4 CA-01\dwg Active\W00011WTR\_WELL-25.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

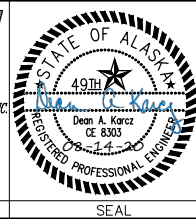
1. DATA PROVIDED BY: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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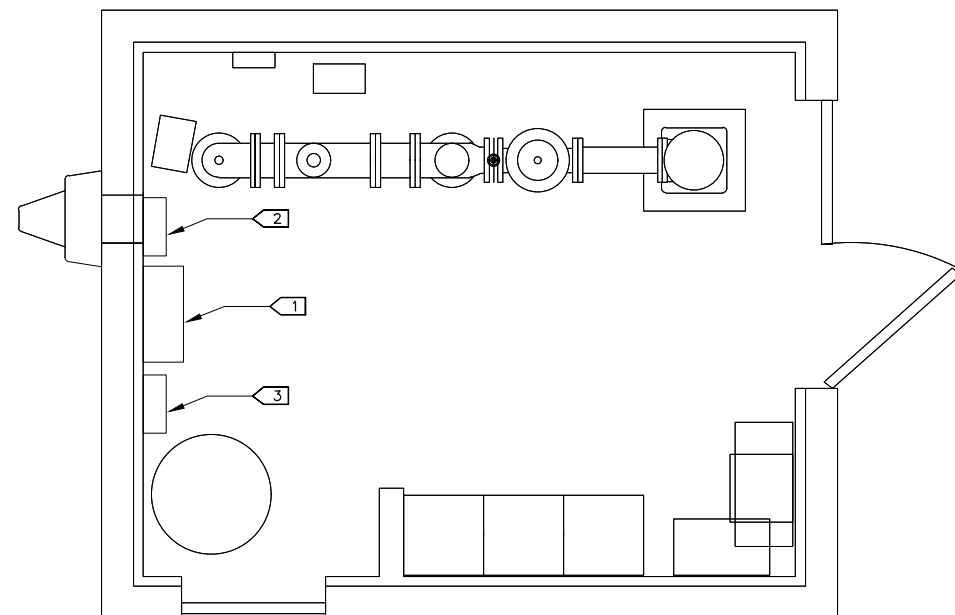


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 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 25  
 DEMOLITION AND CONSTRUCTION PLAN**

HORIZ SCALE: NTS    DATE: 04/2021    GRID: SW1742    SHEET 25-1  
 VERT SCALE: NTS    PROJ. ID: W00011(WTR)    25-4



- NOTES:**
- 1 INSTALL NEW PUMP ON EXISTING BACKBOARD.
  - 2 DEMOLISH EXISTING ANALYZER BACKBOARD AND RETURN TO AWWU. INSTALL NEW ANALYZER BACKBOARD AS SHOWN ON DRAWING 25-3.
  - 3 INSTALL SIGNAL CONDITIONER PANEL, SEE SHEET 25-4 FOR ASSEMBLY DETAILS.

**1 WELL 25 ELECTRICAL PLAN**

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.			
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
PLAN CHECK				REVISIONS			

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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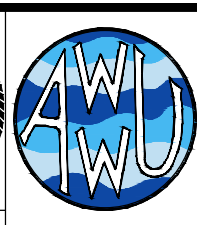
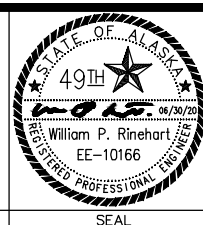
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 www.rinezone.com/snowdwell

CONSULTANT

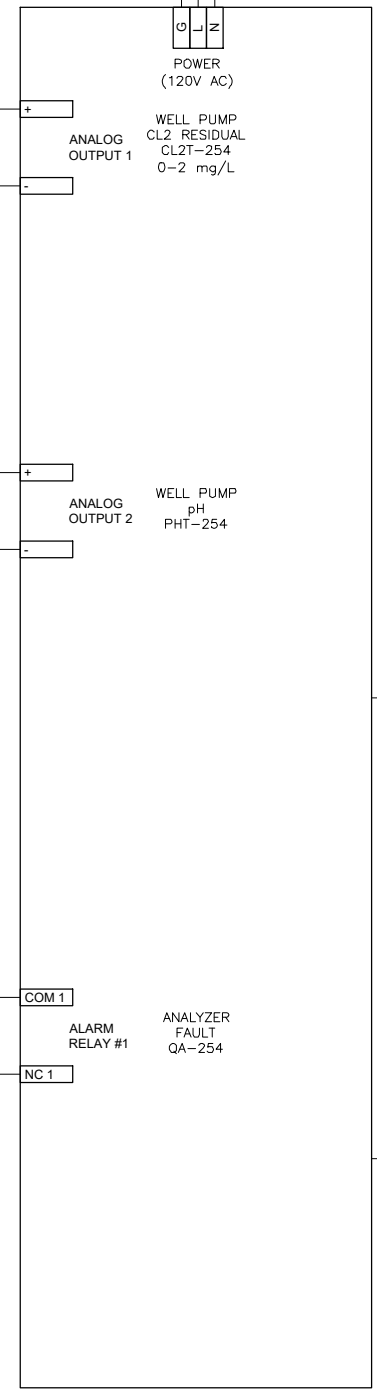
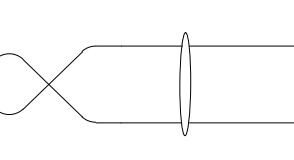
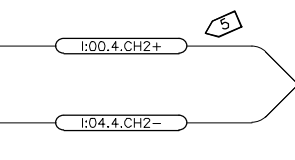
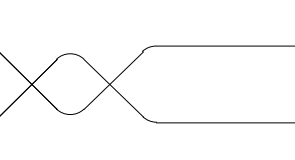
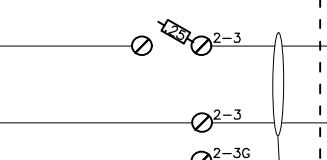
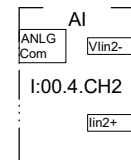


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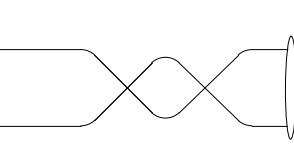
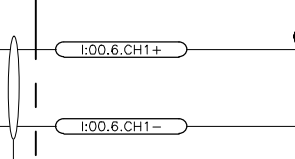
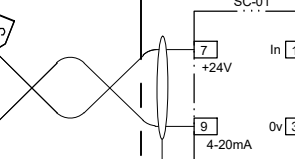
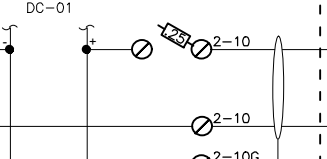
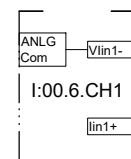
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CONDUIT DIAGRAM (NEW WORK)  
 WELL 25**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 06/2020  
 GRID: SW1742  
 SHEET 25-2 of 25-4  
 PROJ. ID.: WW00011(WTR)

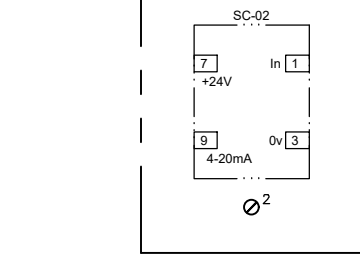
WELL PUMP CL2 RESIDUAL



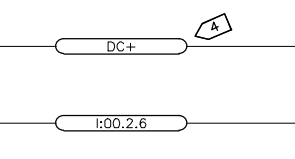
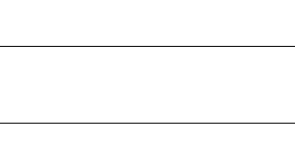
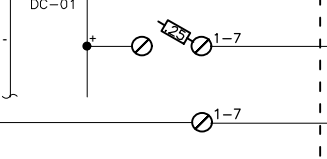
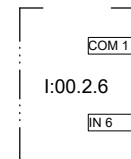
WELL PUMP pH



SPARE



ANALYZER FAULT



NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
- 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SIGNAL CONDITIONER TO PLC.
- 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
- 5 PROVIDE 2/C #18 TWSH IN GRC FROM ANALYZER TO PLC.
- 6 PROVIDE NEW SIGNAL CONDITIONER PANEL AS SHOWN ON SHT. 25-4.
- 7 PROVIDE 2/C #18 TWSH IN GRC FROM ANALYZER TO SIGNAL CONDITIONER.

CL2 SENSOR

pH SENSOR

ROSEMOUNT FCL CL2 ANALYZER

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\CL2 Project\Drawings\25-3 CL2 Analyzer.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				
PLAN CHECK		REVISIONS					

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 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

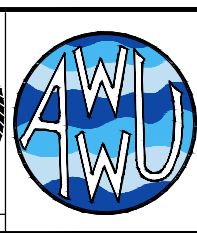
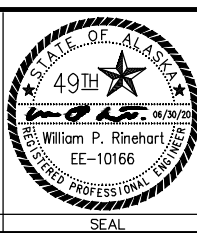
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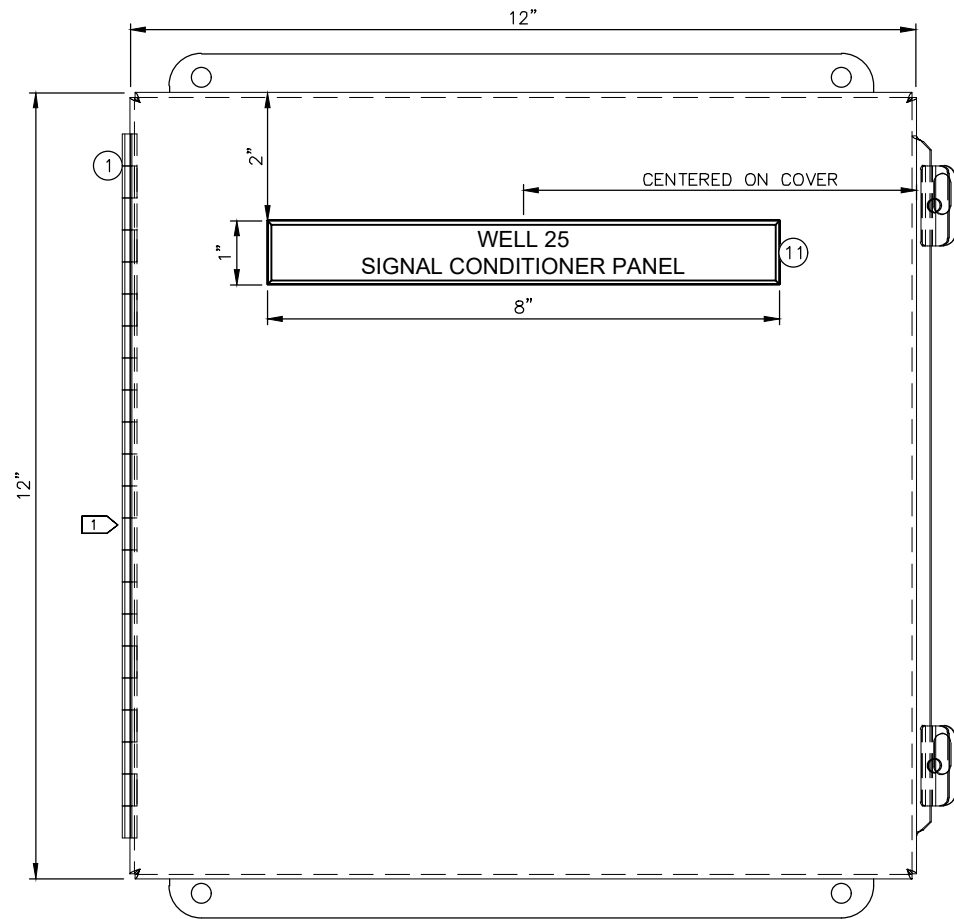
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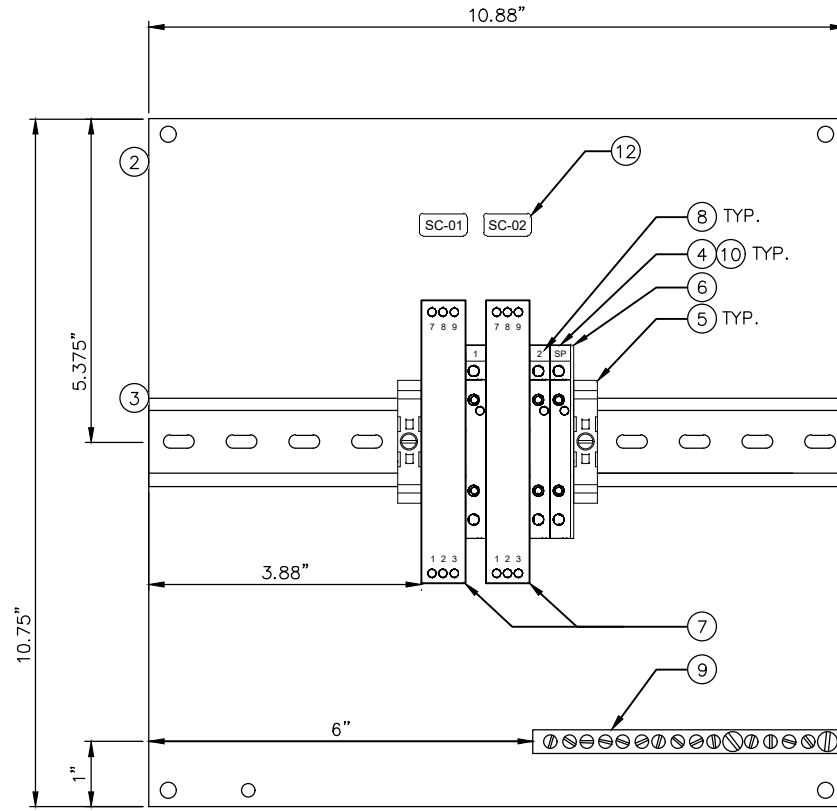
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ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
**CL2 RESIDUAL ANALYZER  
 WELL 25**

HORZ SCALE: N/A  
 VERT SCALE: N/A  
 DATE: 06/2020  
 GRID: SW1742  
 SHEET 25-3 of 25-4  
 PROJ. ID: WWO0011(WTR)



**1** SIGNAL CONDITIONER PANEL - EXTERIOR LAYOUT  
NTS



**2** SIGNAL CONDITIONER PANEL - INTERIOR LAYOUT  
NTS

**NOTES:**  
 1 PROVIDE NRTL LISTED ASSEMBLY FOR NON-HAZARDOUS LOCATION IN ACCORDANCE WITH UL508A AND PROJECT SPECIFICATION 40 95 13.

**BILL OF MATERIAL**

ITEM #	QTY.	U.O.M.	MANUFACTURER	DESCRIPTION	CATALOG NUMBER
1	1	EA.	HOFFMAN	ENCLOSURE, STAINLESS STEEL, NEMA 4X	A1212CHNFSS
2	1	EA.	HOFFMAN	BACK PANEL, PAINTED STEEL	A12P12G
3	2	FT.	ALLEN-BRADLEY	DIN RAIL, 35MM	199-DR1
4	3	EA.	ALLEN-BRADLEY	TERMINAL BLOCK, FEED THROUGH	1492-J3
5	2	EA.	ALLEN-BRADLEY	END ANCHORS	1492-EAJ35
6	1	EA.	ALLEN-BRADLEY	END BARRIER FOR 1492-J3 TERMINAL	1492-EBJ3
7	2	EA.	ALLEN-BRADLEY	PASSIVE CONVERTER SIGNAL CONDITIONER, OUTPUT LOOP POWERED	931S-C1A2D-0P
8	1	EA.	ALLEN-BRADLEY	MARKER CARD, "1-20" HORIZONTAL PRINT	1492-M5x5 H 1-20
9	1	EA.	SQUARE D	GROUNDING BAR	PK9GTA
10	3	EA.	BUSSMAN	FAST ACTING FUSE, 2 AMP, 5 X 20 mm, GLASS TUBE FUSE	GMA-2-R
11	1	EA.	FABRICATOR	LABEL, 1" X 8" PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND, 1ST LINE - "WELL XX" 2ND LINE - "SIGNAL CONDITIONER PANEL"	N/A
12	2	EA.	FABRICATOR	BRADY TYPE LABELS, "SC-01" & "SC-02"	N/A

D:\pat\Documents\Snowdwellers\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\25-4 Signal Conditioner.dwg

<b>VERIFY SCALE</b>		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0  1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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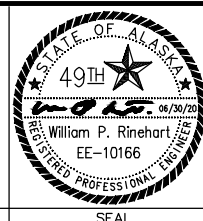
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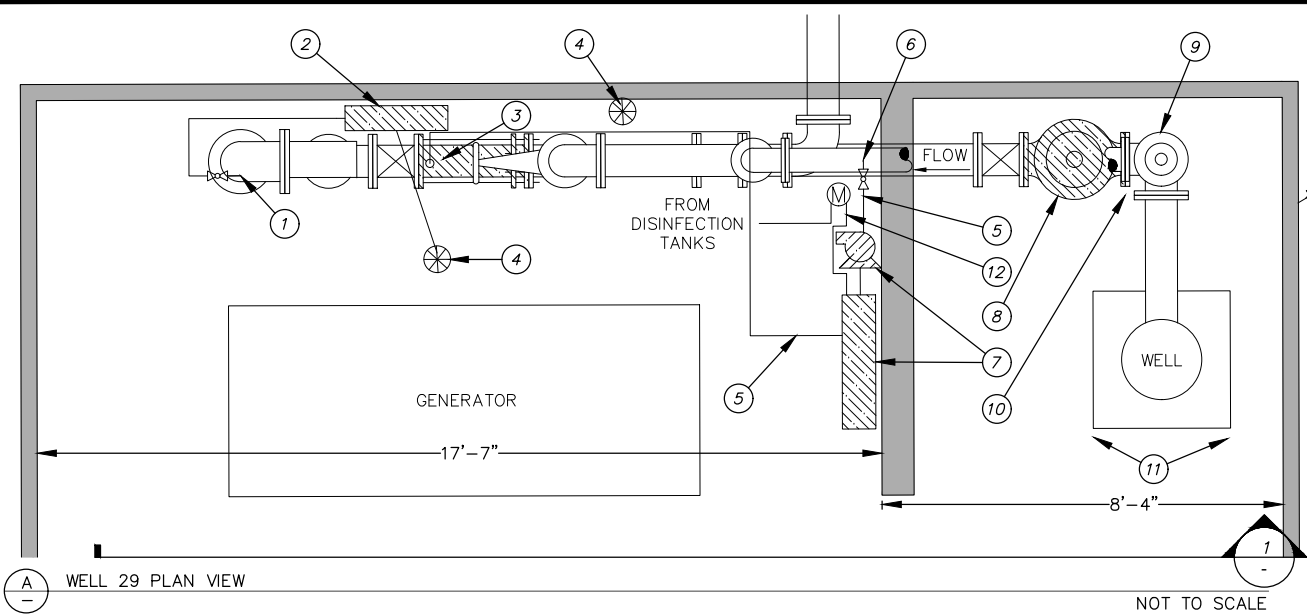
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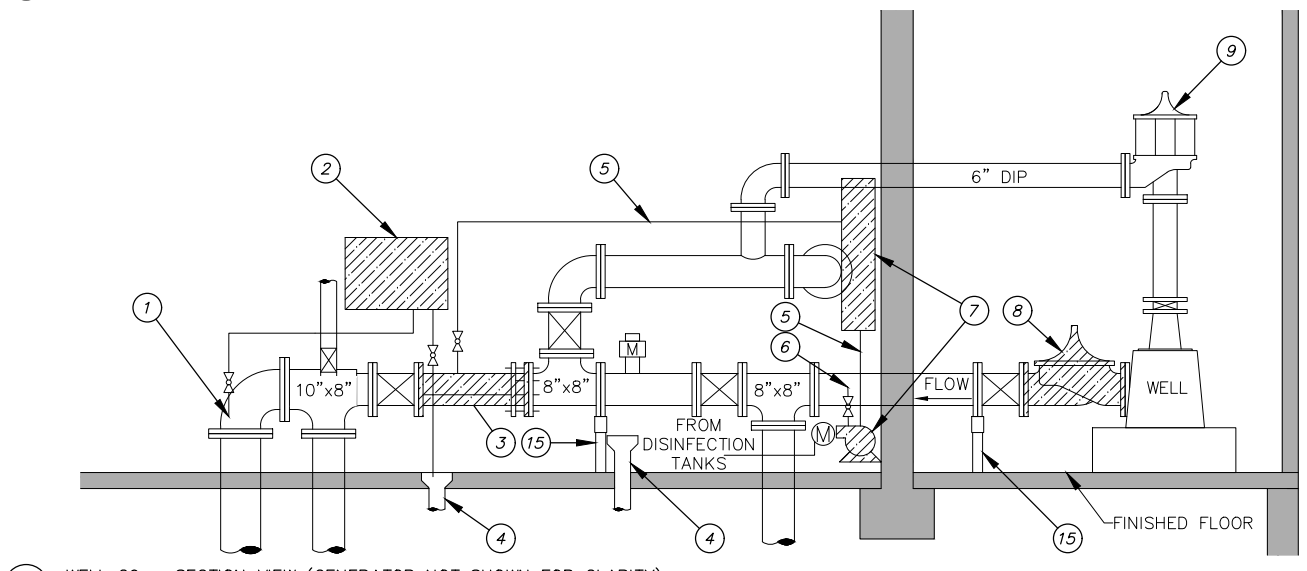
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 SIGNAL CONDITIONER PANEL  
 WELL 25**

HORIZ SCALE: N/A DATE: 06/2020 GRID: SW1724 SHEET 25-4  
 VERT SCALE: N/A PROJ. ID.: WWO0011(WTR) 25-4



(A) WELL 29 PLAN VIEW

NOT TO SCALE



(1) WELL 29 - SECTION VIEW (GENERATOR NOT SHOWN FOR CLARITY)

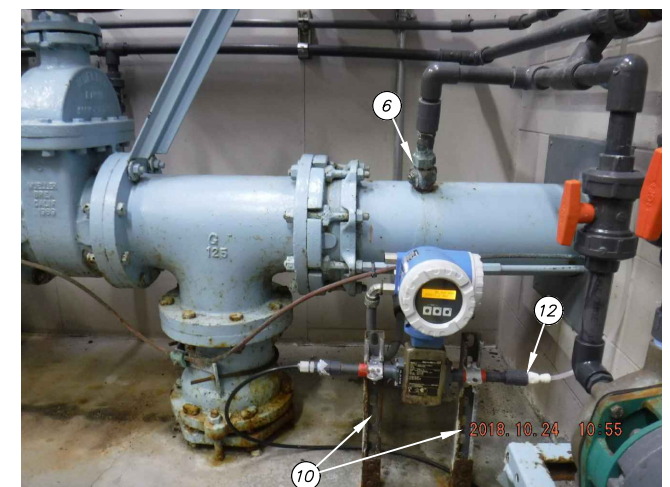
NOT TO SCALE

**DEMOLITION CALLOUTS**

- (1) EXISTING COLIFORM SAMPLE TAP PORT TO REMAIN AND BE REUSED
- (2) REMOVE AND DISPOSE OF EXISTING CHEMICAL ANALYZER, MOUNTING HARDWARE AND APPURTENANCES
- (3) REMOVE EXISTING 28" SPOOL OF 8" DIP. SEE NOTE 3
- (4) EXISTING 4" FLOOR DRAIN TO REMAIN
- (5) REMOVE AND DISPOSE OF EXISTING PVC PIPE FOR AUTO-VALVE AND PUMP
- (6) REMOVE AND DISPOSE OF EXISTING 1" TAP WITH BALL VALVE
- (7) REMOVE AND DISPOSE OF EXISTING PUMP AND SKID AND ASSOCIATED MOUNTING BRACKETS. EXISTING FLOW METER TO REMAIN
- (8) REMOVE 8" PRV - GLOBE PATTERN. SEE NOTE 1
- (9) EXISTING 6" PRV - ANGLE PATTERN TO REMAIN
- (10) REMOVE AND DISPOSE OF UNI-STRUT AND ELECTRICAL CONDUIT AS APPLICABLE. SEE DETAIL F AND B
- (11) EXISTING SUPPORT FOR SCADA SHALL BE RELOCATED TO THE NORTHEAST WALL. SEE DETAIL F
- (12) REMOVE TUBING TO OUTLET OF FLOW METER. SEE DETAIL B
- (13) REMOVE CONDUIT FOR SCADA TO JUNCTION BOX. SEE DETAIL D
- (14) REMOVE 110V RECEPTACLE AND CONDUIT FOR POWER TO JUNCTION BOX. SEE DETAIL D
- (15) EXISTING PIPE SUPPORT TO BE REUSED

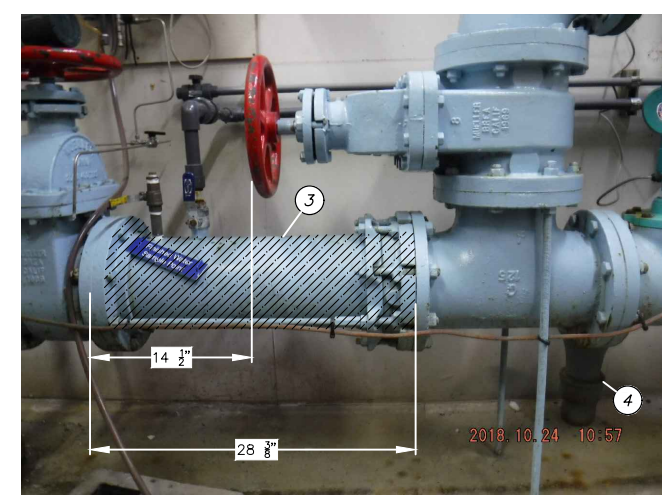
**DEMOLITION NOTES**

- 1. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS TO BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
- 2. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
- 3. CONTRACTOR TO MEASURE VERTICAL DEFLECTION FOR THE PIPE THAT IS REMOVED.



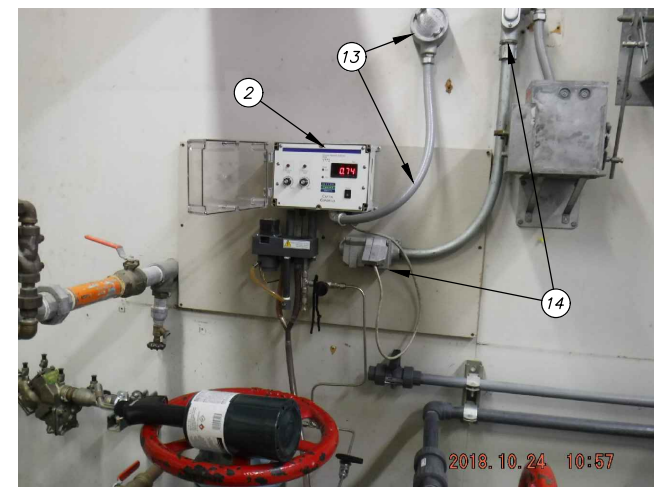
(B) EXISTING FLOW METER

NOT TO SCALE



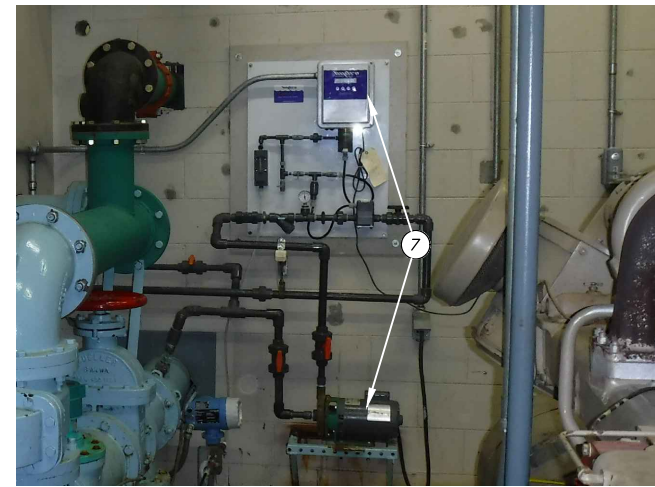
(C) EXISTING PUMP AND FEED SYSTEM

NOT TO SCALE



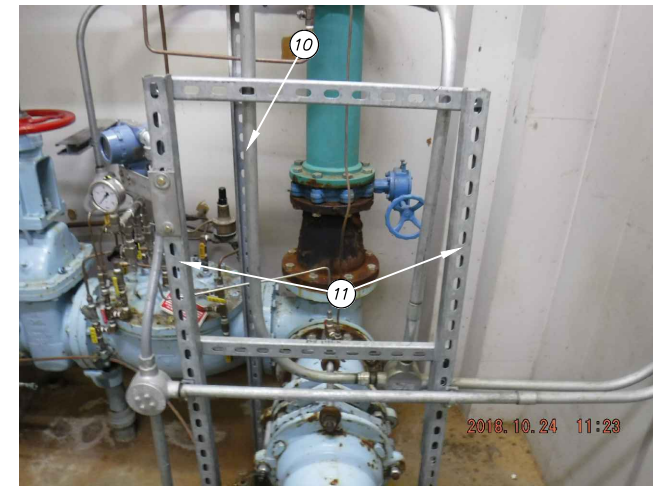
(D) EXISTING CHEMICAL ANALYZER

NOT TO SCALE



(E) EXISTING PUMP AND SKID

NOT TO SCALE



(F) EXISTING 8" PRV

NOT TO SCALE



(G) EXISTING 6" BLOW-OFF PRV

NOT TO SCALE

2021/03/26 8:06 AM By: Kevin Garcia Z:\NW-17\Task 4 CA-01\dwg Active\W00011WTR\_WELL-29.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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PROFILE			ELECTRIC		
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			DESIGN	KMG	DAK
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			PLAN		
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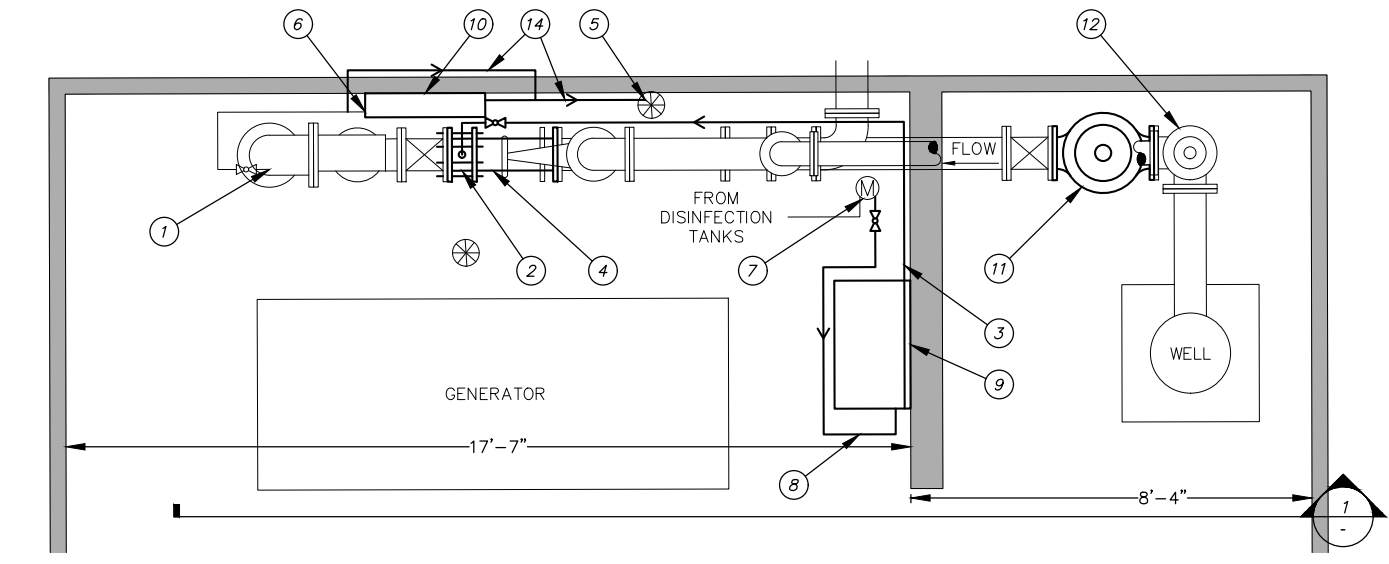


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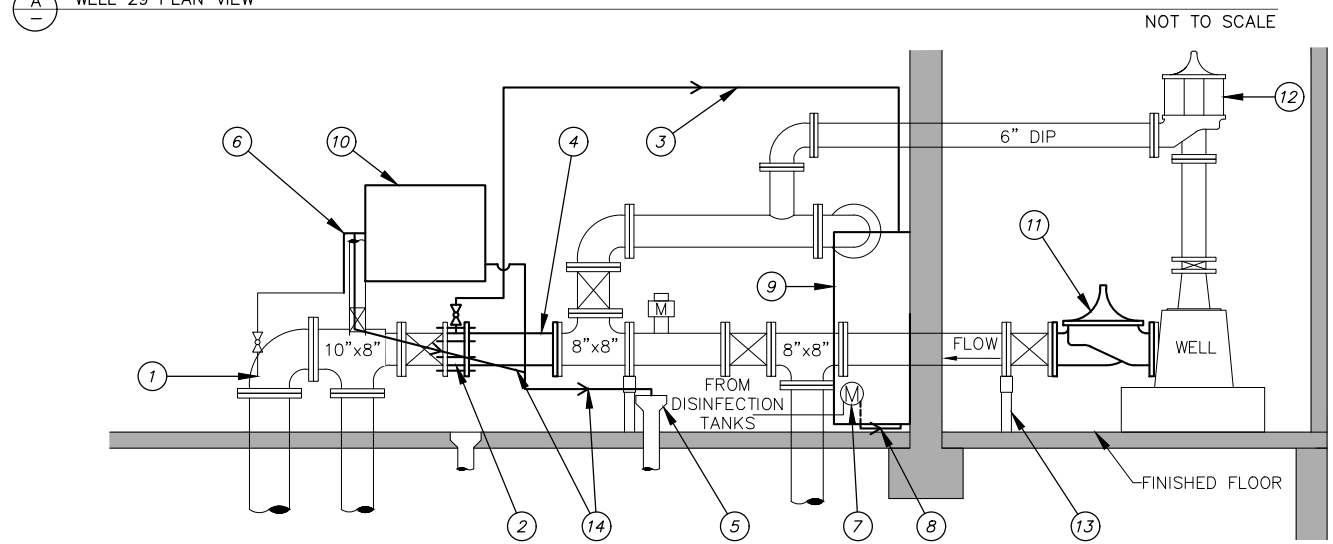
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 29  
 DEMOLITION PLAN AND SECTION**

HORIZ SCALE: NTS DATE: 04/2021 GRID: SW2337 SHEET 29-1  
 VERT SCALE: NTS PROJ. ID: W00011(WTR) SHEET 29-8



WELL 29 PLAN VIEW



WELL 29 - SECTION VIEW (GENERATOR NOT SHOWN FOR CLARITY)

**CONSTRUCTION CALLOUTS**

- 1 EXISTING COLIFORM SAMPLE PORT TAP AND TUBING TO BE REUSED
- 2 FURNISH AND INSTALL NEW 8" STATIC MIXER. SEE TABLE 29-1 FOR DETAILS
- 3 FURNISH AND INSTALL NEW 1/2" CPVC PIPE FROM PUMP SKID TO MIXER
- 4 FURNISH AND INSTALL NEW ±23" SPOOL OF 8" FLANGED DIP. SEE NOTE 11 AND TABLE 29-1
- 5 EXISTING FLOOR DRAIN TO BE REUSED FOR DRAIN WATER FROM ANALYZER
- 6 REUSE AS MUCH EXISTING TUBING AS POSSIBLE AND INSTALL 1/4" 316 STAINLESS STEEL TUBING AS REQUIRED TO CONNECT CHEMICAL ANALYZER
- 7 EXISTING FLOW METER TO REMAIN. FURNISH AND INSTALL NEW SUPPORTS SEE NOTE 4
- 8 FURNISH AND INSTALL NEW 1/2" CPVC PIPE FROM FLOW METER TO PUMP SKID
- 9 FURNISH AND INSTALL NEW PUMP SKID. SEE SHEET G9
- 10 FURNISH AND INSTALL NEW CHEMICAL ANALYZER. SEE SHEET G8
- 11 FURNISH AND INSTALL NEW 8" PRV - GLOBE STYLE. SEE SHEET G10 FOR DETAILS
- 12 EXISTING 6" PRV - ANGLE STYLE TO BE REBUILT BY OWNER. FURNISH 6" REBUILD KIT. SEE TABLE 1-2, SHEET G10 FOR DETAILS
- 13 REUSE EXISTING PIPE SUPPORT
- 14 FURNISH AND INSTALL 1/2" CPVC FROM CHEMICAL ANALYZER TO FLOOR DRAIN

**CONSTRUCTION NOTES**

1. SEE TABLE 29-1 FOR A DETAILED LIST OF EQUIPMENT.
2. NEW CPVC PIPE SHALL BE SCHEDULE 80 1/2" DIAMETER.
3. ALL NEW BOLTS AND OTHER HARDWARE SHALL BE 316 STAINLESS STEEL. EXISTING BOLTS AND ASSOCIATED HARDWARE ARE NOT TO BE REUSED IF THEY ARE NOT 316 STAINLESS STEEL.
4. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.
5. APPLY PROTECTIVE COATING TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
6. CONTRACTOR TO INSTALL PRV BODIES ONLY. THE OWNER SHALL INSTALL THE TRIM, ACCESSORIES, AND REBUILD KITS AFTER THE BODIES HAVE BEEN INSTALLED. SEE SHEET G10 FOR DETAILS.
7. DIMENSIONS SHOWN ARE APPROXIMATE AND TO BE USED FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS PRIOR TO FABRICATING PIPE AND ORDERING APPURTENANCES.
8. LINES FOR PROPOSED CPVC AND 316 STAINLESS STEEL TUBING ARE SHOWN SCHEMATICALLY FOR CLARITY. CONTRACTOR IS TO ROUTE LINES OVERHEAD WITH A MINIMUM OF 7' CLEARANCE FROM FLOOR TO PIPE WHEN CROSSING A WALKING PATH. CONTRACTOR SHALL VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE PIPE RAMP TO PROTECT PIPE CROSSING WALKWAYS AND PREVENT TRIPPING IAW 60.09.
9. ADDITIONAL SUPPORT WILL BE REQUIRED FOR ANY EXISTING STAINLESS STEEL TUBING THAT EXCEEDS 4-FT WITHOUT SUPPORT.
10. CONTRACTOR SHALL INSTALL A DRAIN CATCH BENEATH THE CHLORINE RESIDUAL ANALYZER. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE CATCH TO EXISTING DRAINAGE FUNNEL.
11. IF THE DIP SPOOL CANNOT BE INSTALLED DUE TO VERTICAL DEFLECTION THE CONTRACTOR SHALL USE A ROMAC RFCA WITH 316 STAINLESS STEEL BOLTS AND NSF 61 OR APPROVED EQUAL.
12. EXISTING 6" PRV SHALL BE LEFT IN-PLACE AND MADE AVAILABLE FOR REFURBISHMENT BY THE OWNER WITH THE CONTRACTOR FURNISHED MATERIAL AS IDENTIFIED IN TABLE 29-1 AND TABLE 1-2, SHEET G10. NO ADDITIONAL TIME WILL BE PROVIDED FOR COORDINATION WITH THE OWNER.

NOMENCLATURE	MATERIAL TYPE	SIZE	LENGTH	END DETAIL	REMARKS	QTY
SPOOL	DI	8	±23	FLANGED	EPOXY COATED	1
STATIC MIXER	PTFE	8	-	PLAIN	SULZER COMPAX OR APPROVED EQUAL SULZER QUOTE 9062448-0 ITEM 4.5	1
BALL VALVE	CPVC	1/2	-	-	SCH 80 VENTED/BLEACHED TRUE UNION BALL VALVE	2
BALL VALVE	SS	1/4	-	-	316 STAINLESS BODY AND BALL	1

**TABLE 29-1 NOTES:**

1. ALL PARTS LISTED SHALL BE INCIDENTAL TO 60.02 FURNISH AND INSTALL PIPE.
2. CPVC BALL VALVE ENDS WILL VARY ACCORDING TO LOCATION. CONTRACTOR SHALL DETERMINE ENDS IN THE FIELD.

2021/03/26 8:06 AM By: Kevin Garcia Z:\W\17\Task 4 CA-01\dwg Active\W00011\WTR\_WELL-29.dwg

DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
TOPOGRAPHY	KMG	DAK		TELEPHONE	
PROFILE				ELECTRIC	
SANITARY SEWER				CABLE TV	
STORM SEWER				TRAFFIC SIGNAL	
				DESIGN	
				QUANTITIES	
				MUN. FINAL CHECK	
				PLAN	
				CHECK	

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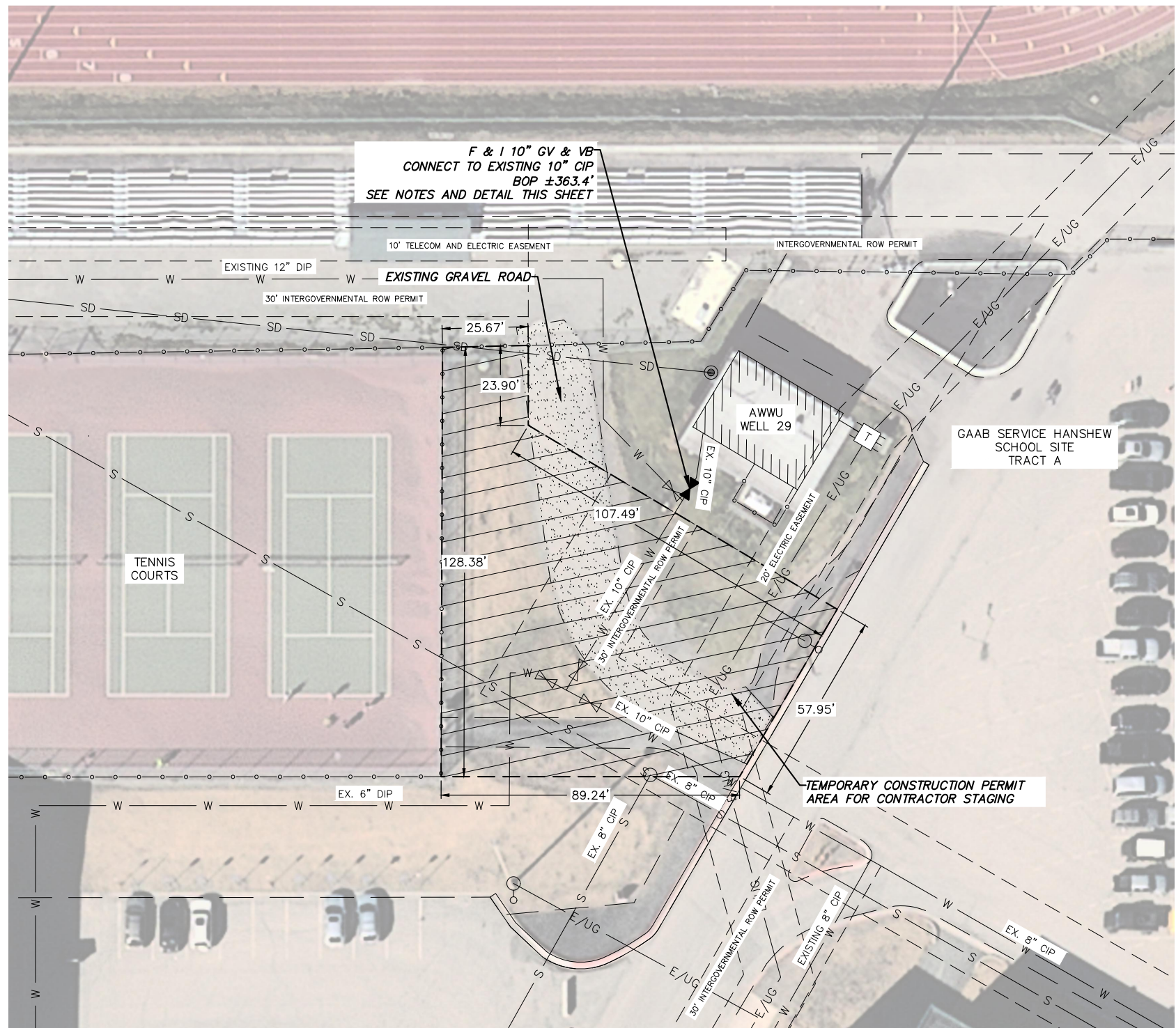


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS**

**WELL 29  
 CONSTRUCTION PLAN AND SECTION**

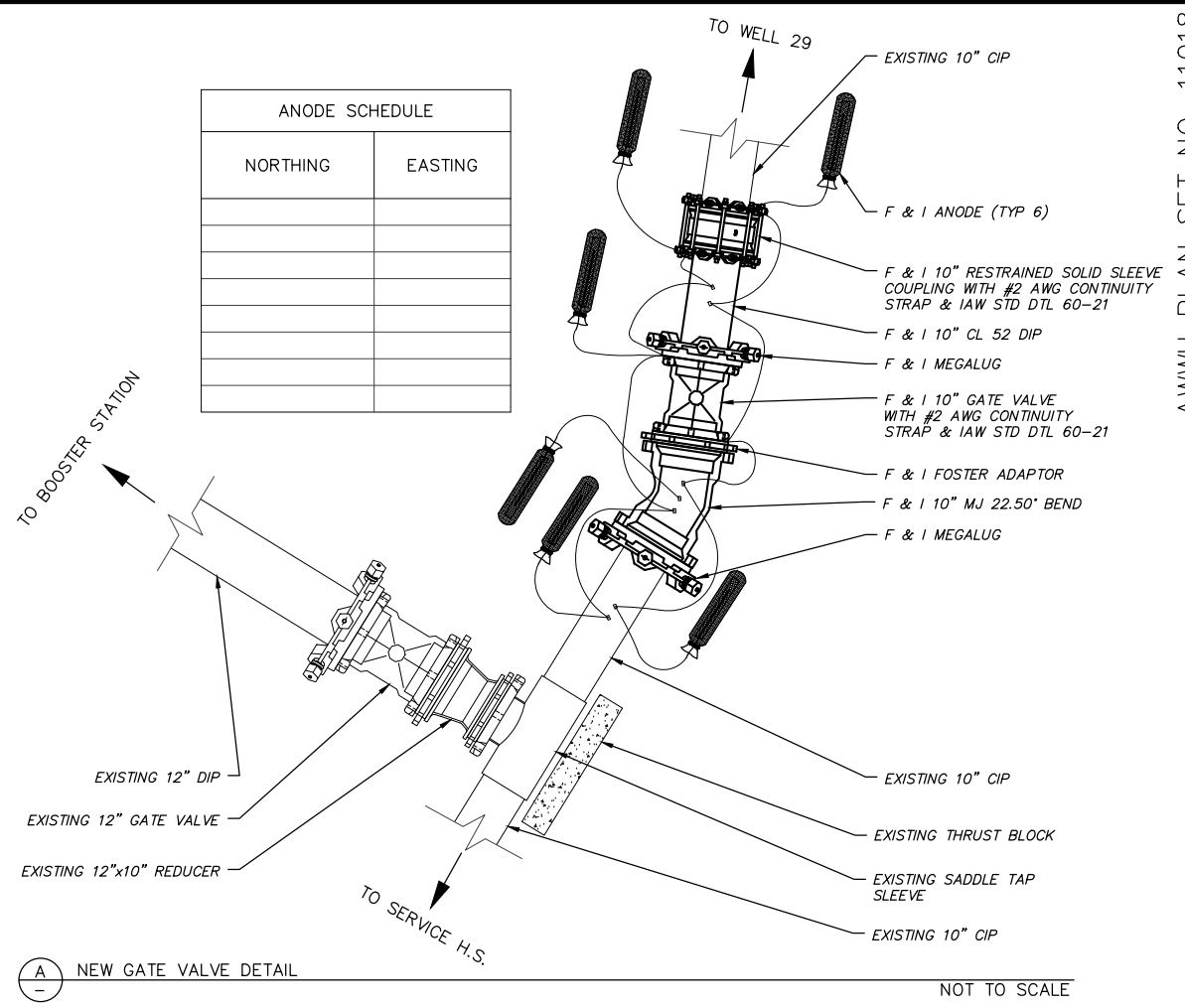
HORIZ SCALE: NTS	DATE: 04/2021	GRID: SW2337	SHEET 29-2
VERT SCALE: NTS			01 29-8
PROJ. ID: W00011(WTR)			



F & I 10" GV & VB  
CONNECT TO EXISTING 10" CIP  
BOP ±363.4'  
SEE NOTES AND DETAIL THIS SHEET

TEMPORARY CONSTRUCTION PERMIT  
AREA FOR CONTRACTOR STAGING

ANODE SCHEDULE	
NORTHING	EASTING



(A) NEW GATE VALVE DETAIL

NOT TO SCALE

CONSTRUCTION NOTES

- CONTRACTOR SHALL PREPARE TYPE 1 SWPPP. TYPE 1 SWPPP IS INCIDENTAL TO THE CONTRACT.
- CONTRACTOR TO F&I A 10" GV & VB. REMOVE NECESSARY 10" CIP AND EXISTING 22.50" BEND TO ACCOMMODATE VALVE INSTALLATION. USE MEGALUG MECHANICAL JOINT RESTRAINT OR APPROVED EQUAL FOR VALVE AND NEW DIP REPLACEMENT.
- ALL JOINTS MUST BE RESTRAINED.
- FURNISH AND INSTALL ANODES AND BONDING AS SHOWN IN DETAIL A AND IN ACCORDANCE WITH STD DTLs 60-04 AND 60-20. NO EXOTHERMIC WELD CONNECTIONS WILL BE ALLOWED ON THE VALVE. CONTRACTOR SHALL USE AN 1/8" THICK 316 STAINLESS STEEL FLAT BAR CONNECTOR PLATE WITH A WIRE RING CONNECTOR IN ACCORDANCE WITH STD DTL 60-21.
- THE VALVE BOX SHALL BE BROUGHT TO FINISHED GRADE IN ACCORDANCE STD DTL 60-08. CONTRACTOR SHALL PLACE A VALVE BOX MARKER ON THE BUILDING WITH DISTANCE TO VALVE AS DIRECTED BY THE ENGINEER. MARKER IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE.
- CONTRACTOR SHALL BACKFILL EXCAVATION WITH NATIVE MATERIAL AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL RESTORE SITE TO PRE-CONSTRUCTION CONDITIONS. RESTORATION IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. RESTORE GRAVEL DRIVEWAYS WITH 2" OF LEVELING COURSE AND GRASSY AREAS WITH 4" OF TOPSOIL AND SCHEDULE A SEED. SEE G12 FOR TYPICAL TRENCH DETAIL.
- CONTRACTOR SHALL MINIMIZE EXCAVATION BY USE OF SHORING. USE OF SHORING IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. SEE G12 FOR TYPICAL TRENCH DETAIL.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO PERFORM TEST SHUTDOWN PRIOR TO THE BEGINNING OF CONSTRUCTION.
- LOCATIONS OF UTILITIES ARE BASED ON AVAILABLE RECORD DRAWING INFORMATION. CONTRACTOR IS RESPONSIBLE TO VERIFY DEPTH AND LOCATION OF EXISTING WATER MAIN AND BURIED UTILITIES.
- CONTRACTOR SHALL LIMIT DISTURBANCE AND STAGING TO TEMPORARY CONSTRUCTION PERMIT AREAS AND INTERGOVERNMENTAL ROW PERMIT AREAS.
- PRIOR TO SCHEDULING WORK ON WELL 29, THE CONTRACTOR SHALL COORDINATE WITH THE ANCHORAGE SCHOOL DISTRICT REPRESENTATIVE DANA MENENDEZ (907) 348-5206.

VALVE AS-BUILT TABLE		
NORTHING	EASTING	TOP OF NUT EL.

2021/03/26 8:06 AM By: Kevin Garcia Z:\WV-17\Task 4 CA-01\dwg Active\WV00011WTR\_WELL-29.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	KMG	DAK	TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN	KMG	DAK		
			QUANTITIES	KMG	DAK		
			MUN. FINAL CHECK				
			PLAN				
			CHECK				
			REVISIONS				

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COMPANY: \_\_\_\_\_  
DATE: \_\_\_\_\_

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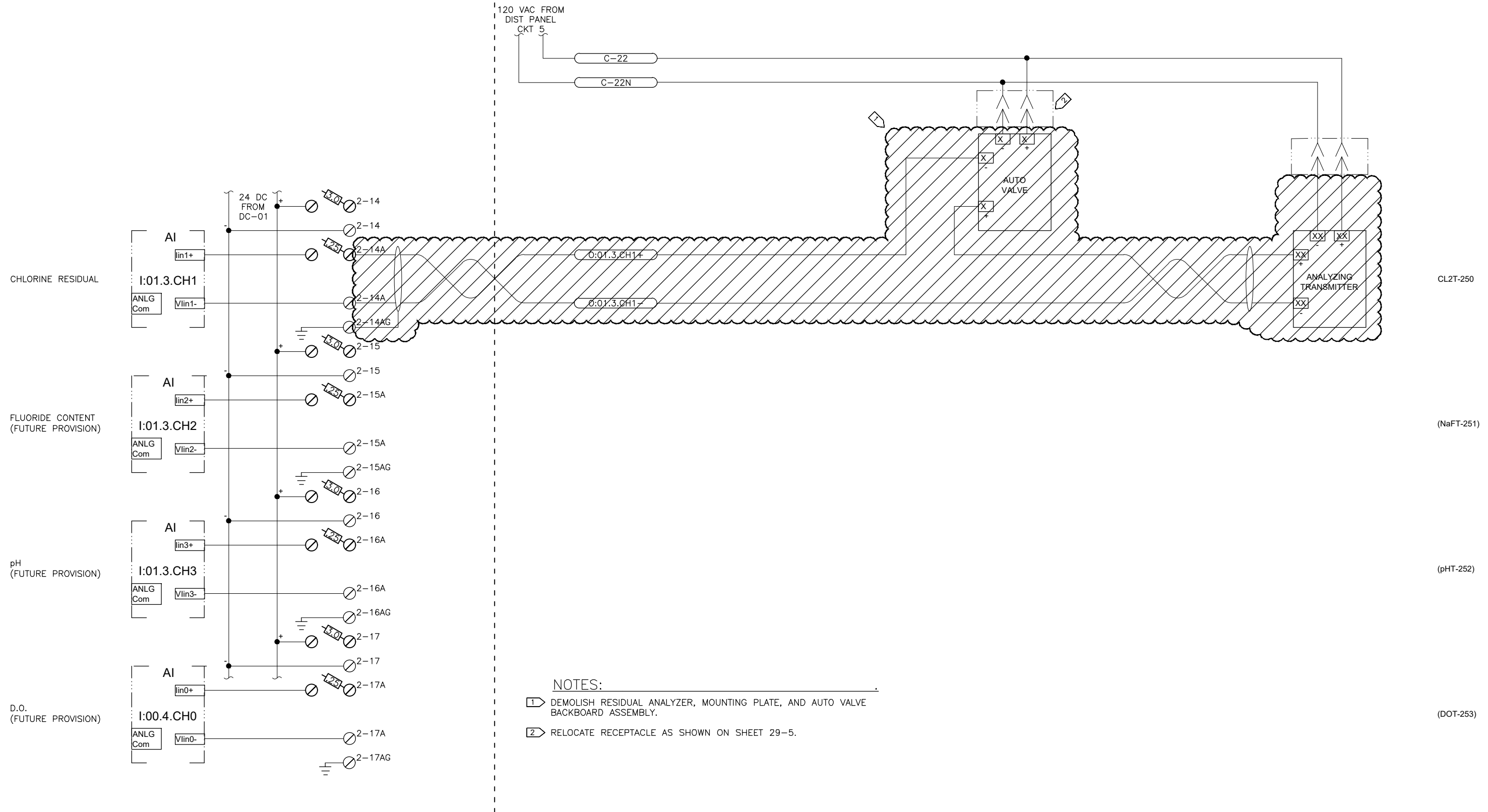
**ANCHORAGE WELL HOUSE  
CHLORINE ANALYZER IMPROVEMENTS**

**WELL 29  
WELL HOUSE SITE PLAN**

HORIZ SCALE: NTS	DATE: 04/2021	GRID: SW2337	SHEET 29-3
VERT SCALE: NTS			29-8
PROJ. ID.: WV00011(WTR)			







- NOTES:**
- 1 DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, AND AUTO VALVE BACKBOARD ASSEMBLY.
  - 2 RELOCATE RECEPTACLE AS SHOWN ON SHEET 29-5.

THIS DRAWING SUPERSEDES PLAN SET 8410, DRAWING DSW029 IL-18

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\_022321\29-5 Hypo System Demol.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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PROFILE	---	---	---	---	---
SANITARY SEWER	---	---	---	---	---
STORM SEWER	---	---	---	---	---
PLAN	---	---	---	---	---
CHECK	---	---	---	---	---

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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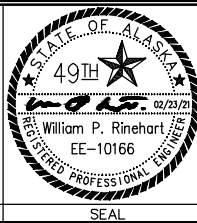
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MUNICIPALITY OF ANCHORAGE  
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 29**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 02/2021  
 GRID: SW2337  
 SHEET 29-5 of 29-8  
 PROJ. ID.: WW00011(WTR)

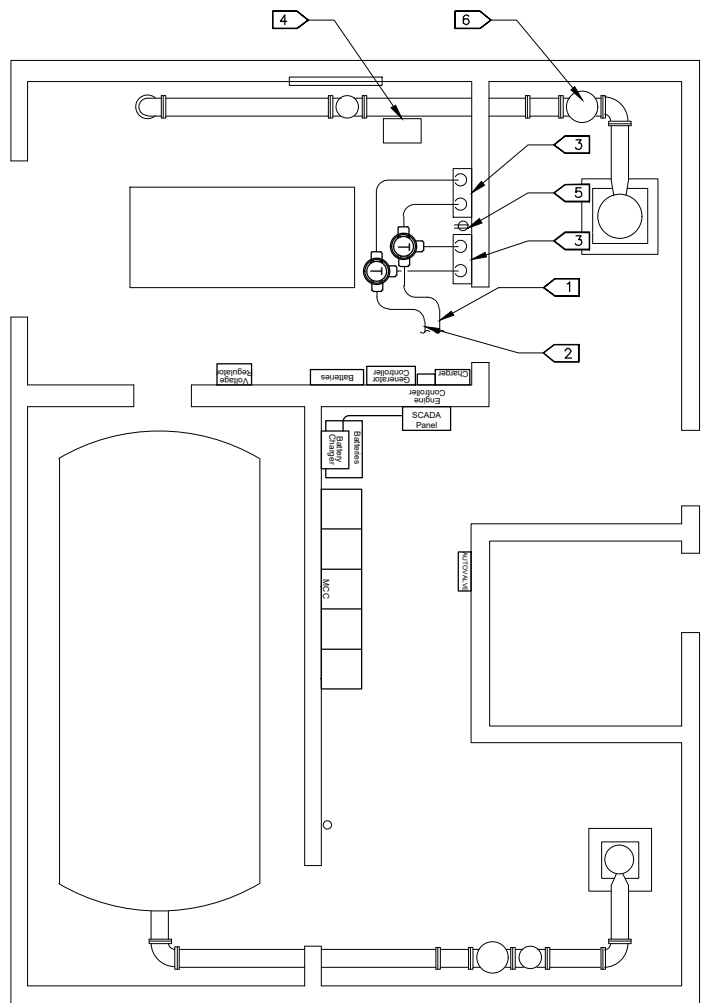
D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\_022321\29-6 Conduit Diagram.dwg

2021/02/23 6:17 PM By: Pat

AWWU PLAN SET NO. 11018



- NOTES:**
- 1 PROVIDE 8/C #16 CONTROL CONDUCTORS IN 3/4" GRC FROM SCADA PANEL TO NEW ANALYZER AND PUMP.
  - 2 PROVIDE 3 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO NEW EQUIPMENT.
  - 3 TRANSITION TO LFMC AT EQUIPMENT.
  - 4 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET SHOWN ON DETAIL 2 OF SHEET G11.
  - 5 RELOCATE 120 VAC RECEPTACLE TO ACCOMMODATE NEW PUMP SKID.
  - 6 RE-WORK CONDUIT AND WIRING AT DISCHARGE VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR NEW SOLENOID AND LIMIT SWITCH.



**1 WELL 29 ELECTRICAL PLAN**

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY	---	---	TELEPHONE	---	---		
PROFILE	---	---	ELECTRIC	---	---		
SANITARY SEWER	---	---	CABLE TV	---	---		
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---		
	---	---	DESIGN	---	---		
	---	---	QUANTITIES	---	---		
	---	---	MUN. FINAL CHECK	---	---		
			PLAN				
			CHECK				
							REVISIONS

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
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 DATE: \_\_\_\_\_

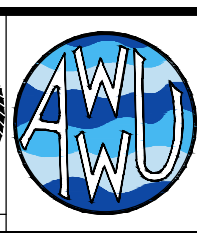
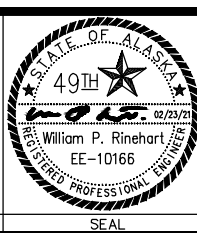
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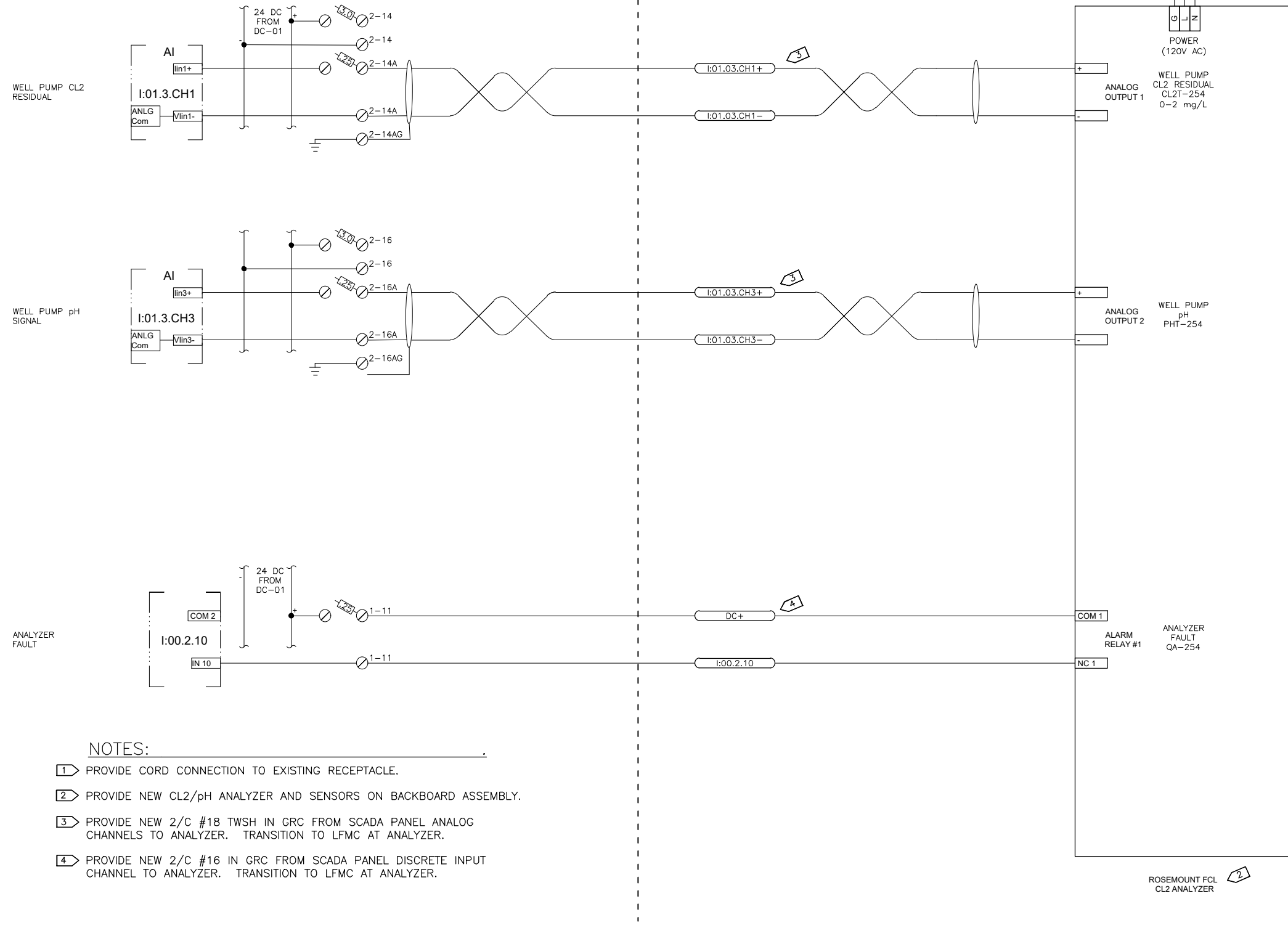
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CONDUIT DIAGRAM (NEW WORK)  
 WELL 29**

HORZ SCALE: NTS	DATE: 02/2021	GRID: SW2337	SHEET 29-6
VERT SCALE: NTS			of 29-8
PROJ. ID.: WW00011(WTR)			

EXISTING SCADA PANEL

FIELD WIRING



NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
- 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SCADA PANEL ANALOG CHANNELS TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
- 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.

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DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION	BY
TOPOGRAPHY						
PROFILE						
SANITARY SEWER						
STORM SEWER						
PLAN						
CHECK						

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

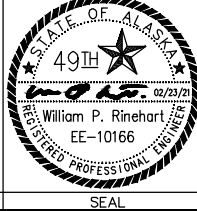
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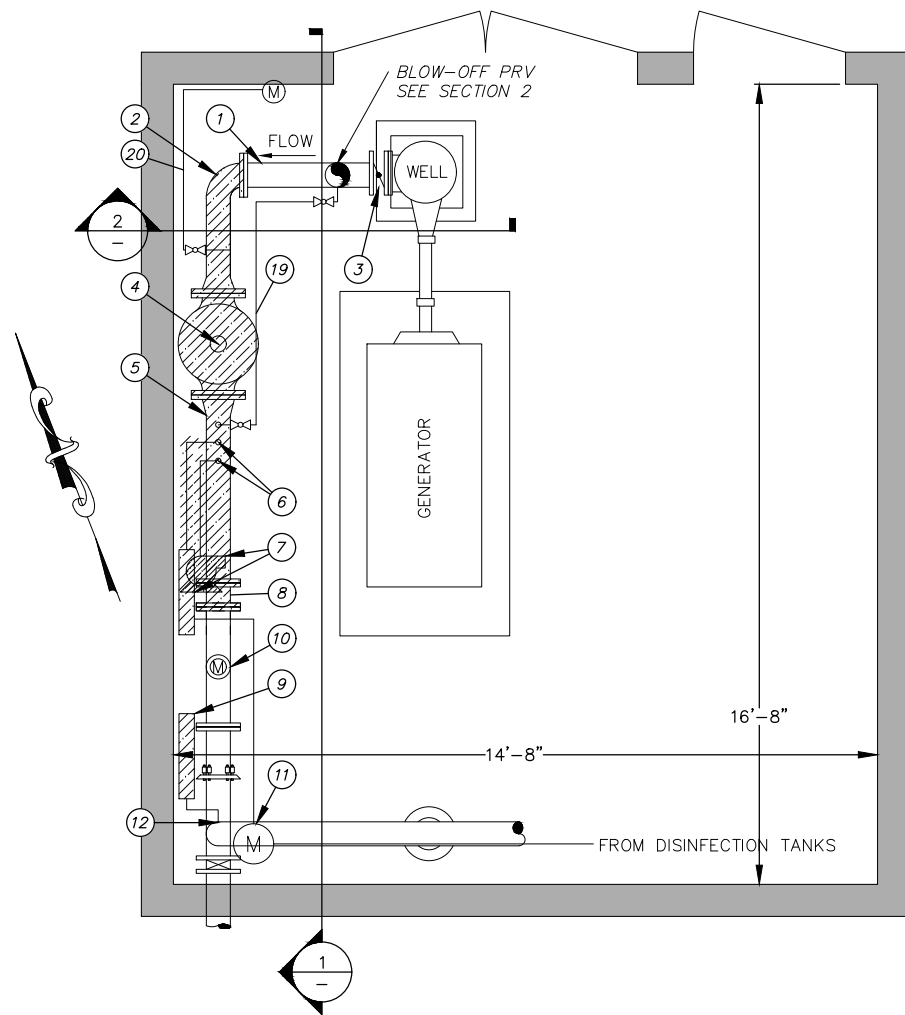


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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CL2 RESIDUAL ANALYZER  
 WELL 29**

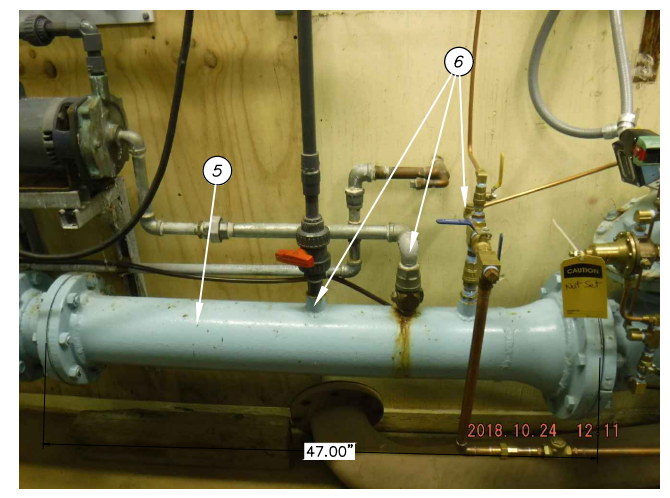
HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 02/2021  
 GRID: SW2337  
 SHEET 29-7 of 29-8  
 PROJ. ID.: WW00011(WTR)





- DEMOLITION CALLOUTS**
- 1 EXISTING 6" OFFSET DI TEE TO REMAIN
  - 2 REMOVE EXISTING 6" DI 90° BEND
  - 3 EXISTING 6" BUTTERFLY VALVE TO REMAIN
  - 4 REMOVE EXISTING 8" PRV - GLOBE STYLE. SEE NOTE 1
  - 5 REMOVE EXISTING 6" DI SPOOL
  - 6 REMOVE EXISTING 1" PVC PIPE & TAP(S)
  - 7 REMOVE EXISTING CIRCULATION PUMP AND SKID
  - 8 REMOVE AND SALVAGE EXISTING 10" SPOOL OF 6" DIP
  - 9 REMOVE EXISTING CHEMICAL ANALYZER AND DRAIN LINE
  - 10 EXISTING 6" FLOW METER TO REMAIN
  - 11 EXISTING FLOW METER TO REMAIN. PROTECT IN PLACE
  - 12 REMOVE 3/8" STAINLESS STEEL TUBING FOR COLIFORM SAMPLE PORT TAP
  - 13 EXISTING 3" DIP TO REMAIN
  - 14 EXISTING 3" PRV - ANGLE STYLE TO BE REBUILT BY OWNER SEE SHEET G9
  - 15 EXISTING SPACERS TO REMAIN
  - 16 EXISTING REDUCER TO REMAIN
  - 17 EXISTING BUTTERFLY VALVE TO REMAIN
  - 18 REMOVE AND REPLACE PIPE SUPPORT
  - 19 REMOVE AND REINSTALL EXISTING 1" COPPER LINE AND BALL VALVES
  - 20 EXISTING 1/4" STAINLESS STEEL TUBING AND BALL VALVE TO BE REUSED

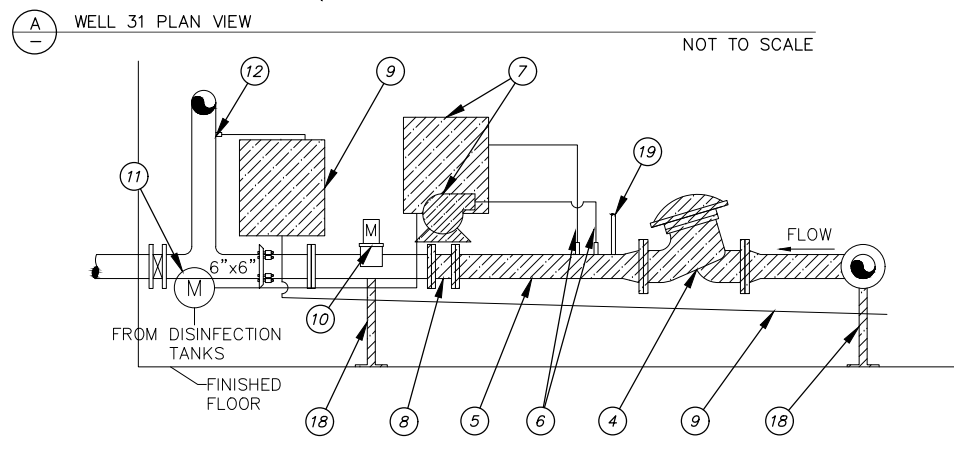
- DEMOLITION NOTES**
1. EXISTING EQUIPMENT IDENTIFIED FOR REMOVAL SHALL BE MADE AVAILABLE TO THE OWNER FOR SALVAGE BEFORE DISPOSAL. ALL ITEMS THE BE REMOVED WITH CARE TO PREVENT DAMAGE WHERE POSSIBLE.
  2. ALL NEW UNI-STRUT SHALL BE VINYL GLASS.



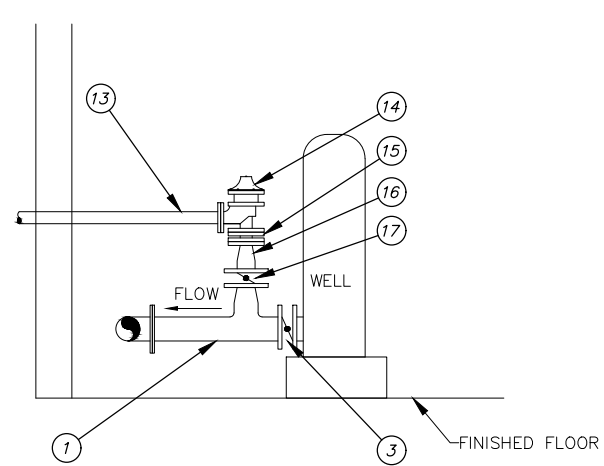
**B** EXISTING CHEMICAL ANALYZER NOT TO SCALE



**C** EXISTING CHEMICAL ANALYZER AND PUMP NOT TO SCALE



**1** WELL 31 - SECTION VIEW NOT TO SCALE



**2** WELL 13 BLOW-OFF PRV - SECTION VIEW NOT TO SCALE



**D** EXISTING 3" PRV - ANGLE STYLE NOT TO SCALE



**E** EXISTING 8" PRV - GLOBE STYLE NOT TO SCALE

2021/03/26 8:06 AM By: Kevin Garcia Z:\WM-17\Task 4 CA-01\dwg Active\W00011WTR\_WELL-31.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	KMG	DAK	TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL		
			DESIGN	KMG	DAK
			QUANTITIES	KMG	DAK
			MUN. FINAL CHECK		
			PLAN		
			CHECK		
			REVISIONS		

**RECORD DRAWING** Note: To be filled out on original drawings upon project completion.

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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

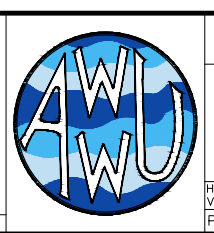
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 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 912 EAST 15TH AVE. SUITE 200  
 ANCHORAGE, ALASKA 99501  
 PHONE: (907) 561-6237  
 FAX: (907) 563-3813  
 LICENSE # AEC0924

STATE OF ALASKA  
 49TH  
 DONALD A. KORTZ  
 CE 8303  
 REGISTERED PROFESSIONAL ENGINEER

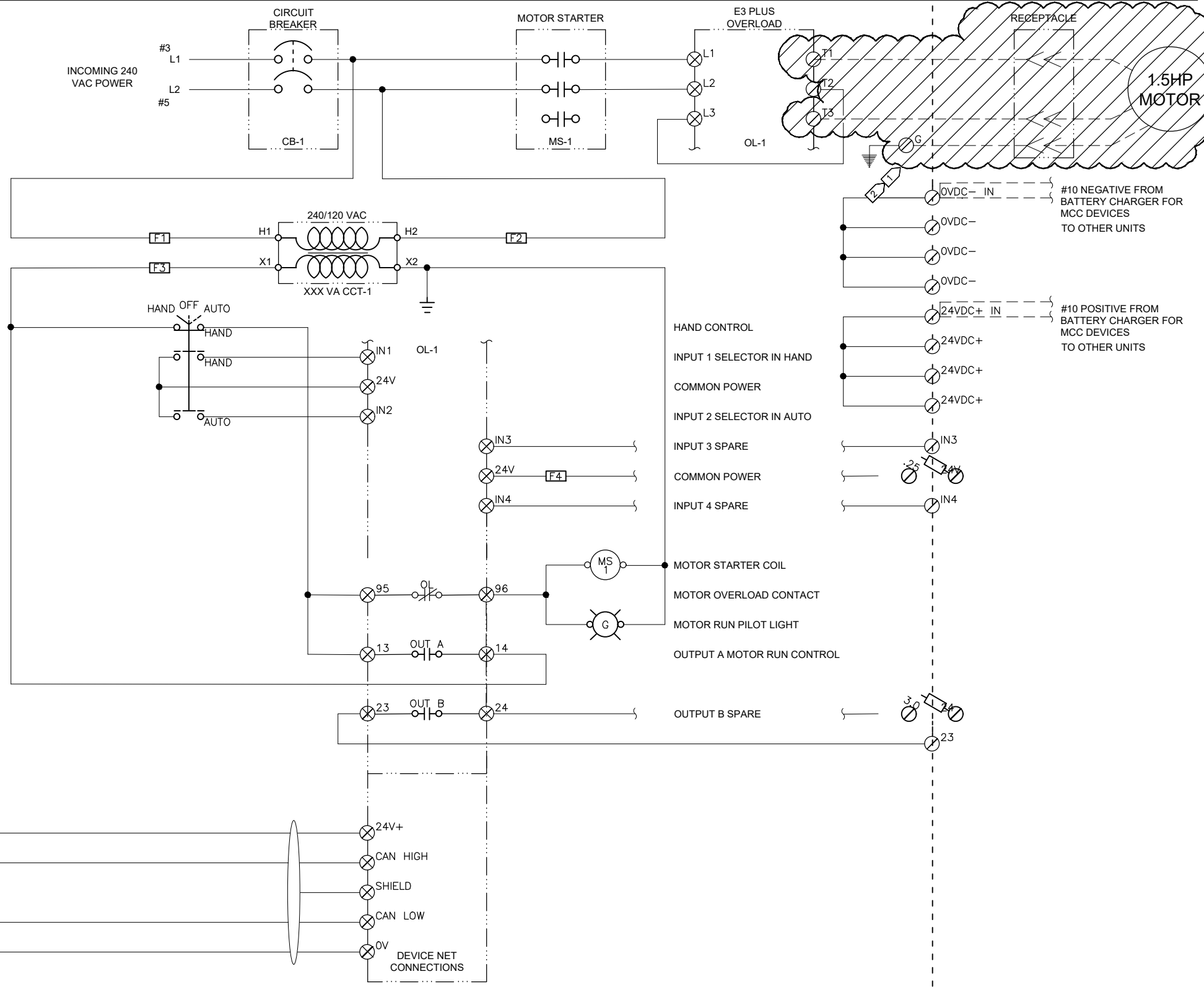
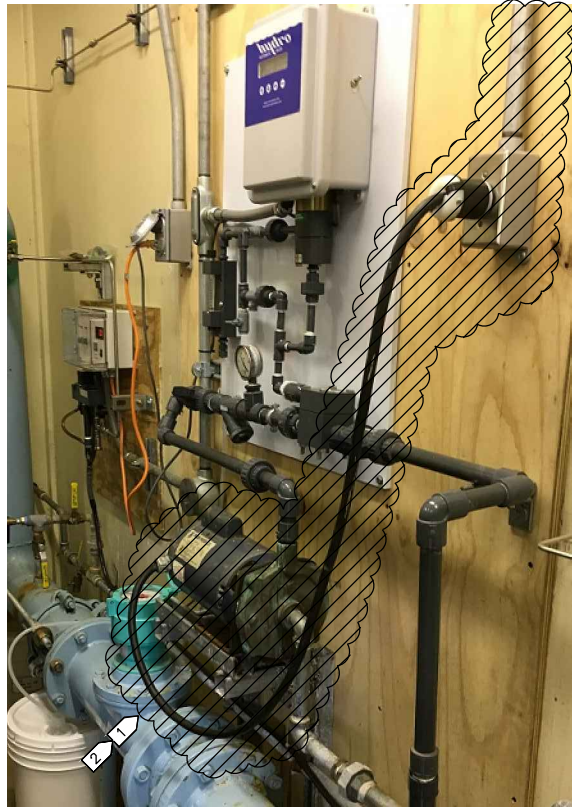


MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 ADDITIVE ALTERNATE 1  
 WELL 31  
 DEMOLITION PLAN AND SECTIONS**

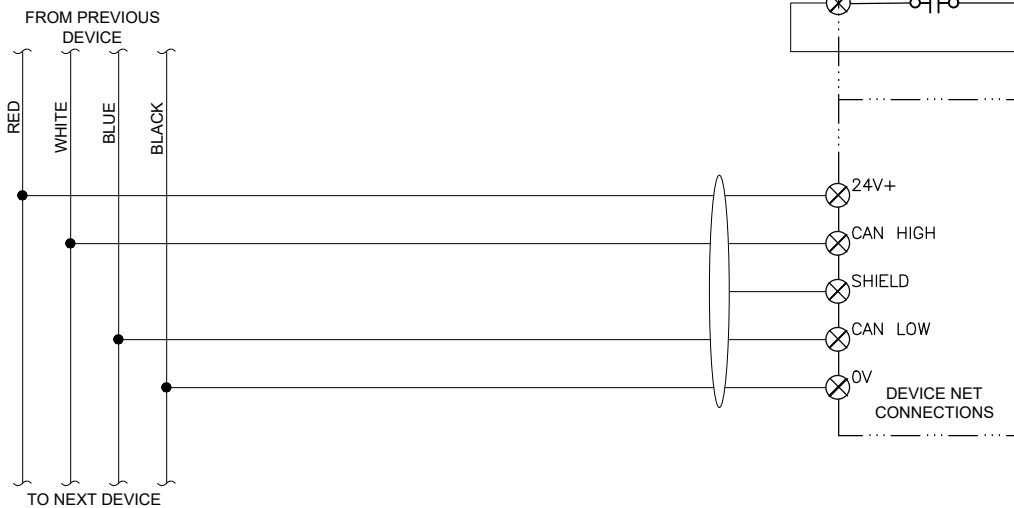
HORIZ SCALE: NTS DATE: 04/2021 GRID: SW2833 SHEET 31-1  
 VERT SCALE: NTS PROJ. ID: W00011(WTR) SHEET 31-7





AWWU PLAN SET NO. 11018

- NOTES:**
- 1 DEMOLISH HYPOCHLORITE PUMP AND MOTOR. RETURN EQUIPMENT TO AWWU O&M FOR RE-USE.
  - 2 DEMOLISH PUMP CONDUCTORS BACK TO MCC BUCKET AND RE-LABEL BUCKET AS SPARE. DEMOLISH RECEPTACLE AND RACEWAY BUCKET TO 120VAC RECEPTACLE AND PLUG UNUSED OPENING.



THIS DRAWING SUPERSEDES PLAN SET 8476, DRAWING DSW031 IL-10

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\31-3 Hypo Pump Demo.dwg 2020/06/30 5:37 PM By: Pat

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

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 DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

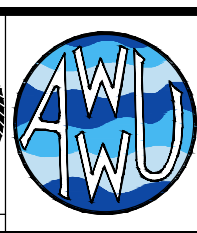
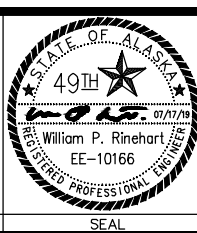
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 WATER & WASTEWATER UTILITY

**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 HYPOCHLORITE PUMP DEMOLITION  
 WELL 31**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW2833  
 SHEET 31-3  
 01  
 31-7

SCADA PANEL

FIELD WIRING

AWWU PLAN SET NO. 11018

120 VAC FROM  
DIST PANEL

#17N #17

C-17

C-17N

AUTO  
VALVE

ANALYZING  
TRANSMITTER

CHLORINE RESIDUAL

CL2T-250

FLUORIDE CONTENT  
(FUTURE PROVISION)

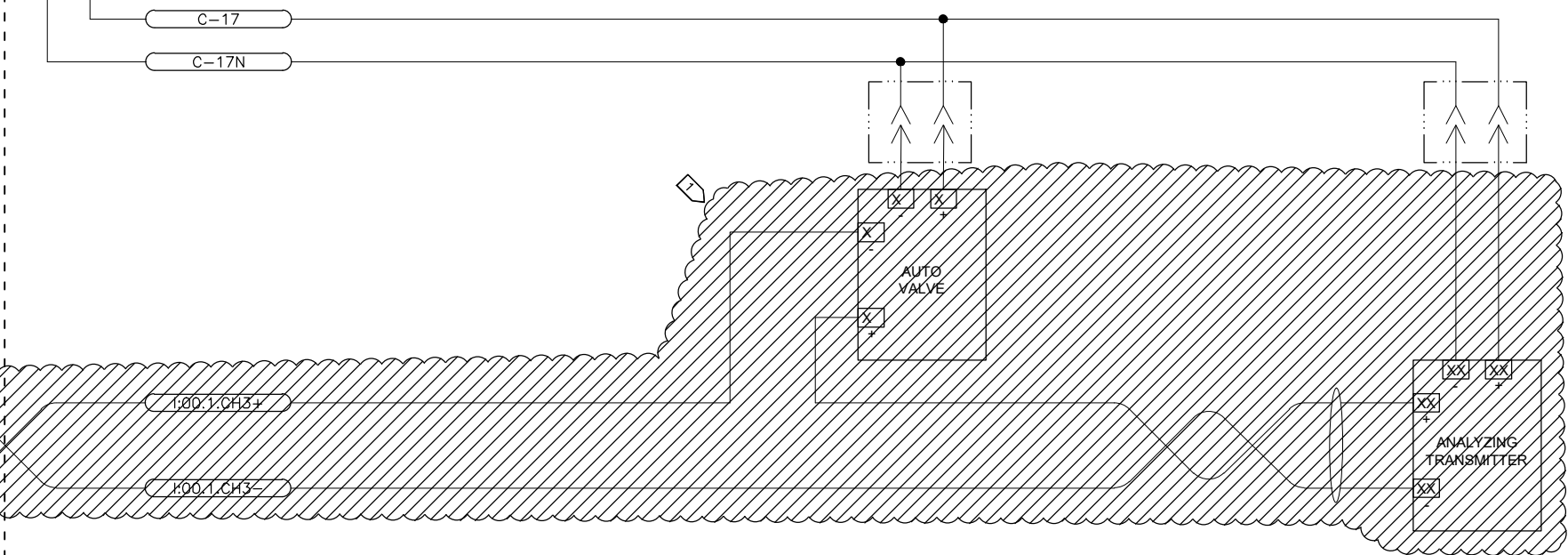
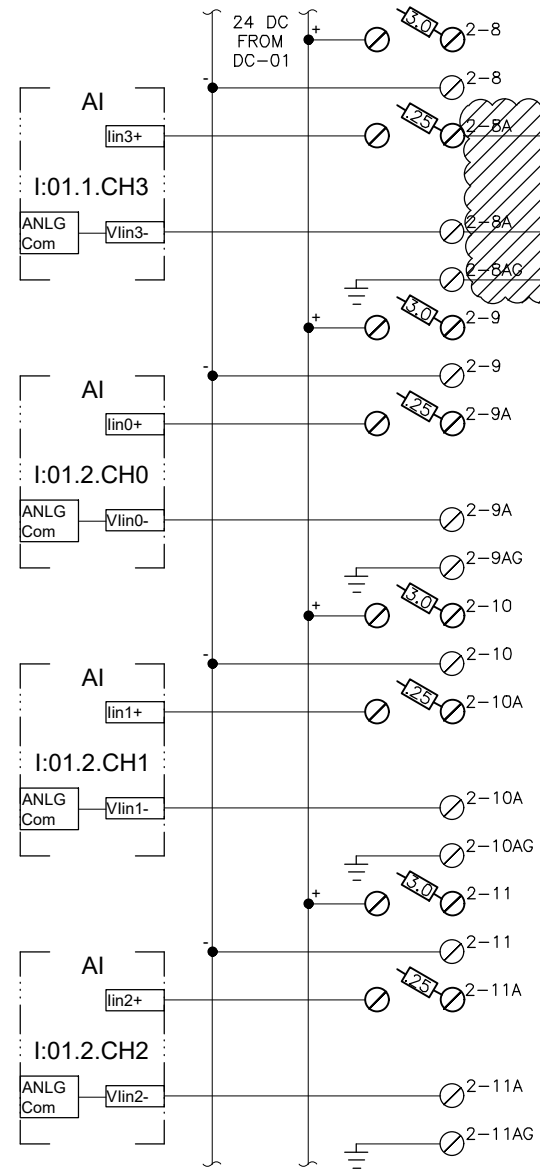
(NaFT-251)

pH  
(FUTURE PROVISION)

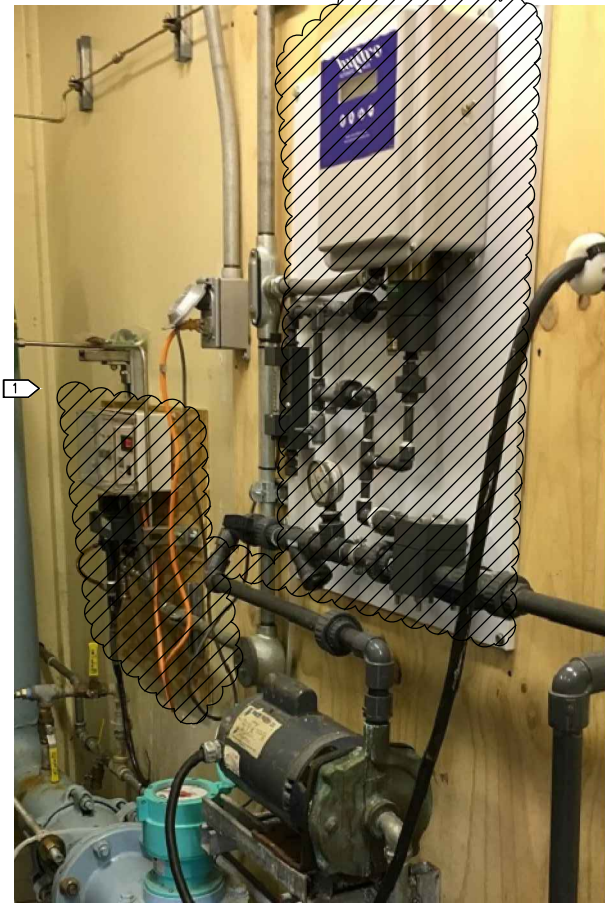
(pHT-252)

D.O.  
(FUTURE PROVISION)

(DOT-253)



**NOTES:**  
 1 DEMOLISH RESIDUAL ANALYZER, MOUNTING PLATE, AND AUTO VALVE BACKBOARD ASSEMBLY.



THIS DRAWING SUPERSEDES PLAN SET 8476, DRAWING DSW031 IL-09

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\31-4 Hypo System Demol.dwg 2020/06/30 5:38 PM By: Pat

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
TOPOGRAPHY			TELEPHONE				
PROFILE			ELECTRIC				
SANITARY SEWER			CABLE TV				
STORM SEWER			TRAFFIC SIGNAL				
			DESIGN				
			QUANTITIES				
			MUN. FINAL CHECK				

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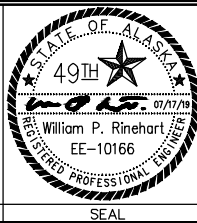
2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
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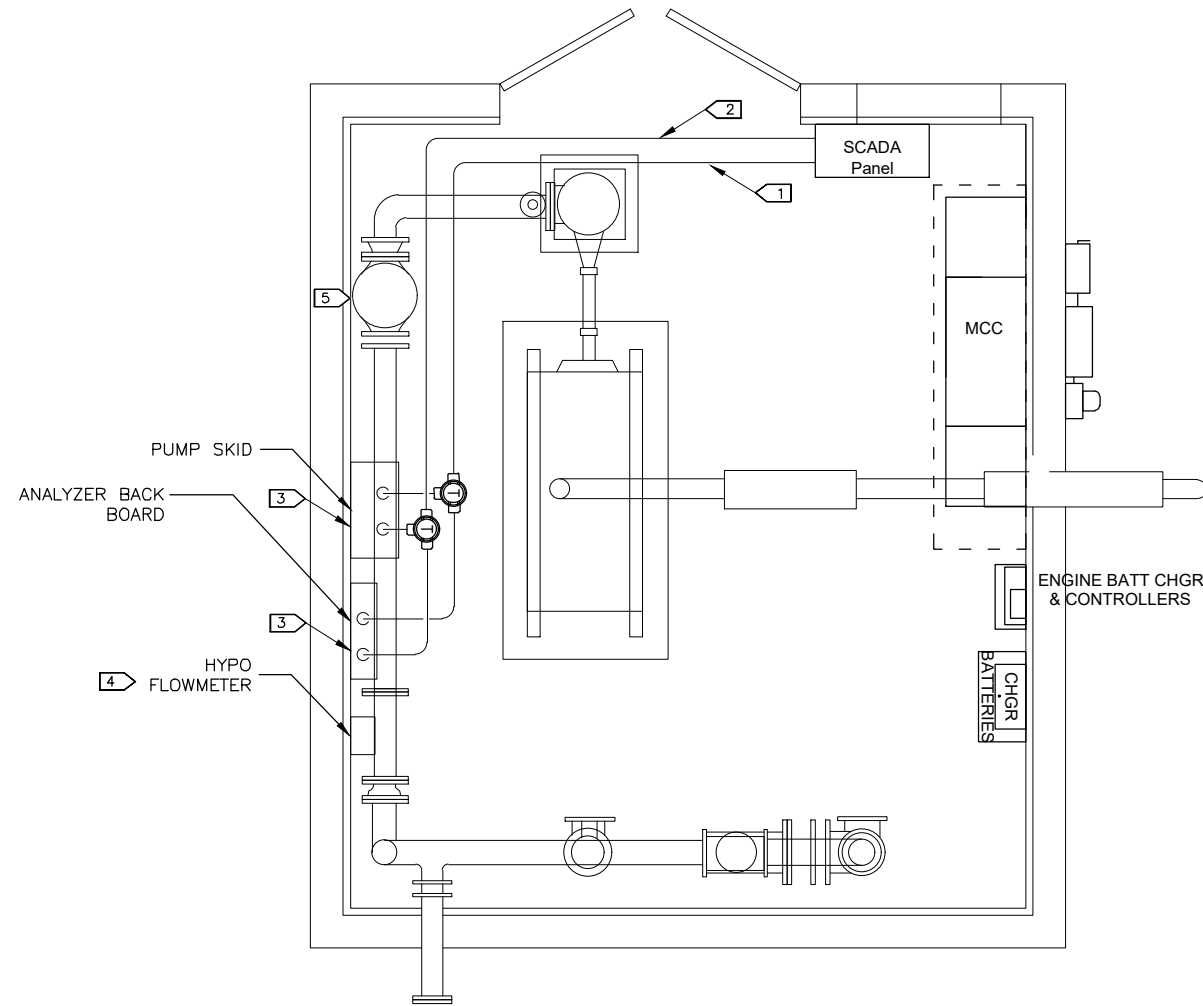
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 WATER & WASTEWATER UTILITY

ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
**HYPOCHLORITE SYSTEM DEMOLITION  
 WELL 31**

HORIZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW2833  
 PROJ. ID.: WW00011(WTR)

SHEET 31-4  
 OF 31-7





- NOTES:**
- 1 PROVIDE 8/C #16 CONTROL CONDUCTORS IN 3/4" GRC FROM SCADA PANEL TO NEW ANALYZER AND PUMP.
  - 2 PROVIDE 3 PR. #18 TWSH INSTRUMENTATION CABLES IN 1" GRC FROM SCADA PANEL TO NEW EQUIPMENT.
  - 3 TRANSITION TO LFMC AT EQUIPMENT.
  - 4 RE-INSTALL FLOWMETER USING MANUFACTURER'S BRACKET SHOWN ON DETAIL 2 OF SHEET G11.
  - 5 RE-WORK CONDUIT AND WIRING AT DISCHARGE VALVE TO ACCOMMODATE NEW VALVE ASSEMBLY. PULL NEW CONDUCTORS AS REQUIRED FOR SOLENOID AND LIMIT SWITCH.

1 WELL 31 ELECTRICAL PLAN

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project Drawings\31-5 Conduit Diagram.dwg

2020/06/30 5:38 PM By: Pat

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DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY	---	---	TELEPHONE	---	---
PROFILE	---	---	ELECTRIC	---	---
SANITARY SEWER	---	---	CABLE TV	---	---
STORM SEWER	---	---	TRAFFIC SIGNAL	---	---
	---	---	DESIGN	---	---
	---	---	QUANTITIES	---	---
	---	---	MUN. FINAL CHECK	---	---
	---	---		---	---

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 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

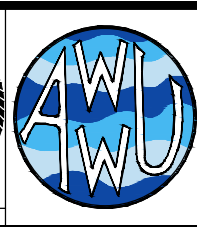
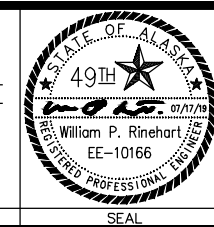
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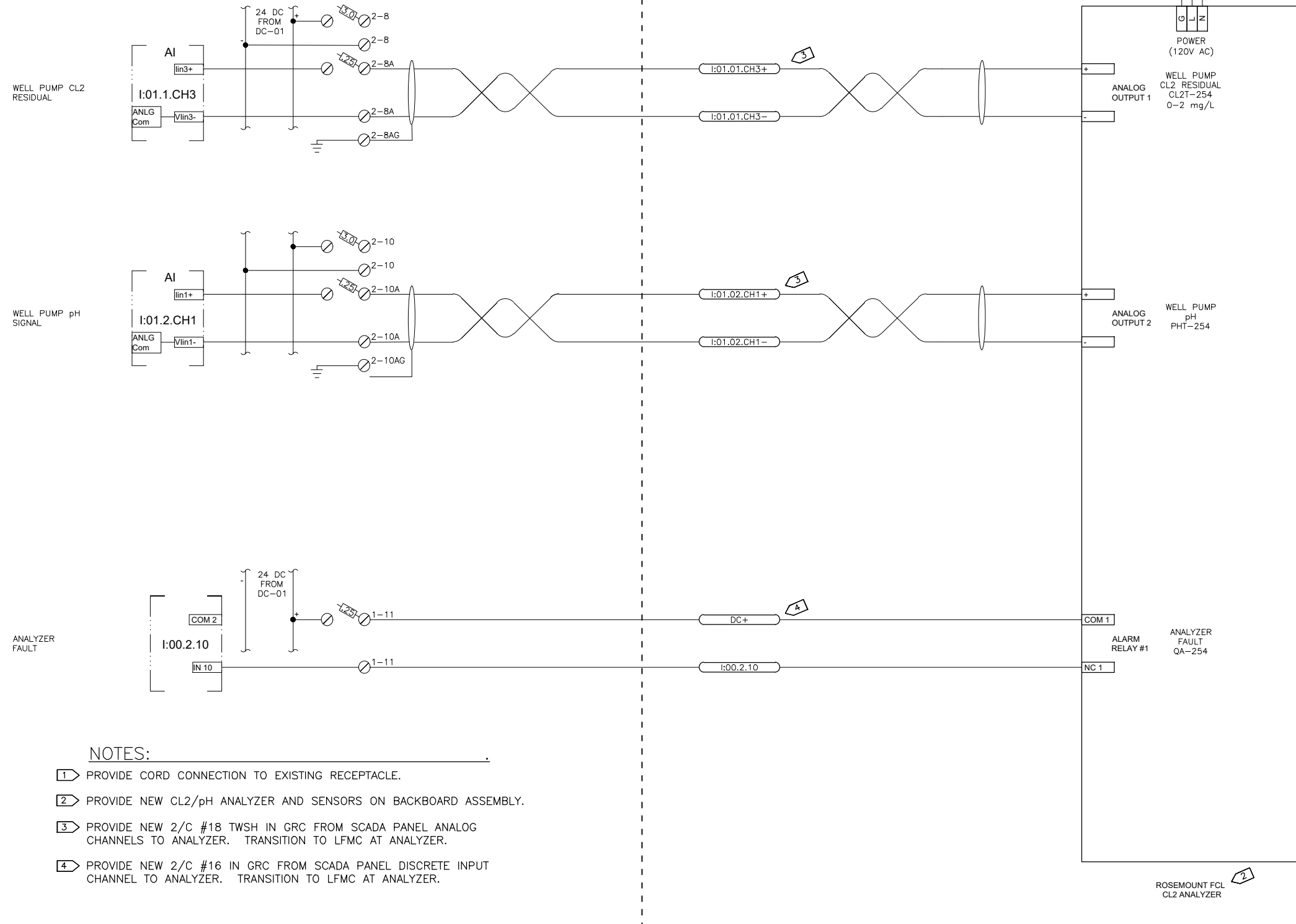
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**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CONDUIT DIAGRAM (NEW WORK)  
 WELL 31**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 07/2019  
 GRID: SW2833  
 SHEET 31-5  
 PROJ. ID.: WW00011(WTR)  
 31-7

EXISTING SCADA PANEL

FIELD WIRING



NOTES:

- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
- 2 PROVIDE NEW CL2/pH ANALYZER AND SENSORS ON BACKBOARD ASSEMBLY.
- 3 PROVIDE NEW 2/C #18 TWSH IN GRC FROM SCADA PANEL ANALOG CHANNELS TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.
- 4 PROVIDE NEW 2/C #16 IN GRC FROM SCADA PANEL DISCRETE INPUT CHANNEL TO ANALYZER. TRANSITION TO LFMC AT ANALYZER.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\CL2 Project\Drawings\31-6 CL2 Analyzer.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
TOPOGRAPHY			TELEPHONE		
PROFILE			ELECTRIC		
SANITARY SEWER			CABLE TV		
STORM SEWER			TRAFFIC SIGNAL		
			DESIGN		
			QUANTITIES		
			MUN. FINAL CHECK		

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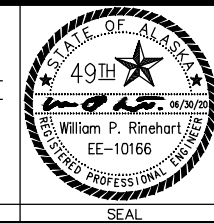
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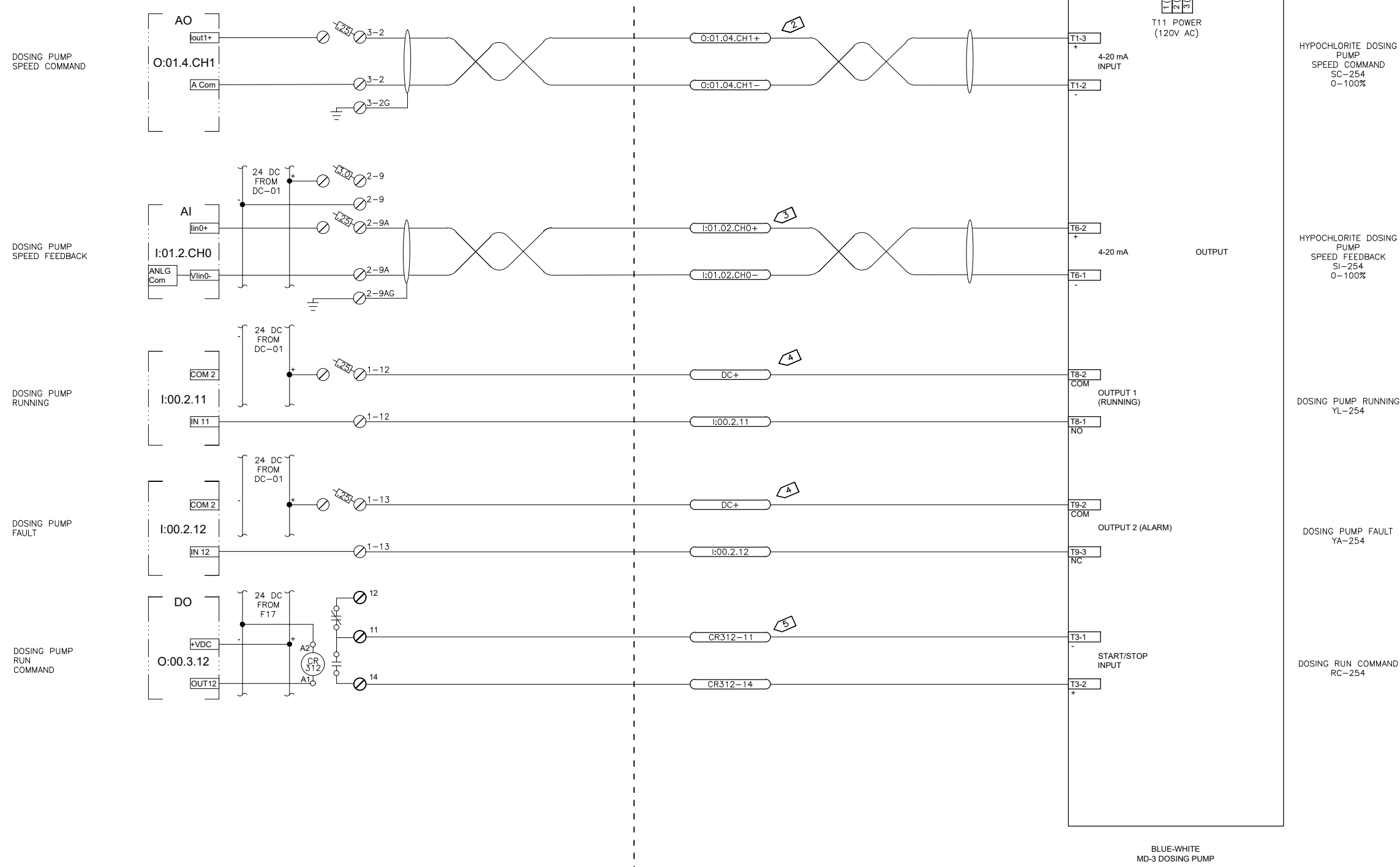
**ANCHORAGE WELL HOUSE  
 CHLORINE ANALYZER IMPROVEMENTS  
 CL2 RESIDUAL ANALYZER  
 WELL 31**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
 DATE: 06/2020  
 GRID: SW2833  
 PROJ. ID.: WW00011(WTR)

SHEET 31-6 of 31-7

EXISTING SCADA PANEL

FIELD WIRING



- NOTES:**
- 1 PROVIDE CORD CONNECTION TO EXISTING RECEPTACLE.
  - 2 PROVIDE 2/C #18 TWSH IN GRC TO FROM PLC ANALOG OUTPUT TO DOSING PUMP. TRANSITION TO LFMC AT PUMP.
  - 3 PROVIDE 2/C #18 TWSH SIGNAL FROM DOSING PUMP SPEED FEEDBACK OUTPUT TO SCADA PLC ANALOG INPUT.
  - 4 PROVIDE 2/C #16 IN GRC FROM PUMP TO PLC DISCRETE INPUT.
  - 5 PROVIDE 2/C #16 IN GRC FROM SCADA PLC RUN RELAY TO DOSING PUMP REMOTE START/STOP INPUT.

D:\pat\Documents\Snowdwell\AWWU\2019 SCADA Term Contract\C12 Project\Drawings\31-7 Dosing Pump.dwg

AWWU PLAN SET NO. 11018

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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TOPOGRAPHY			TELEPHONE		
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PLAN CHECK			REVISIONS		

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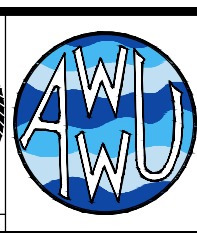
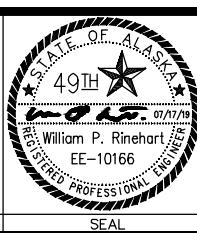
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 HYPOCHLORITE DOSING PUMP  
 WELL 31**

HORZ SCALE: NTS  
 VERT SCALE: NTS  
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SHEET 31-7  
 01  
 31-7