

VALLEY VIEW RCMP

WATER SYSTEM IMPROVEMENTS

BID SET

Project for:

**THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS**

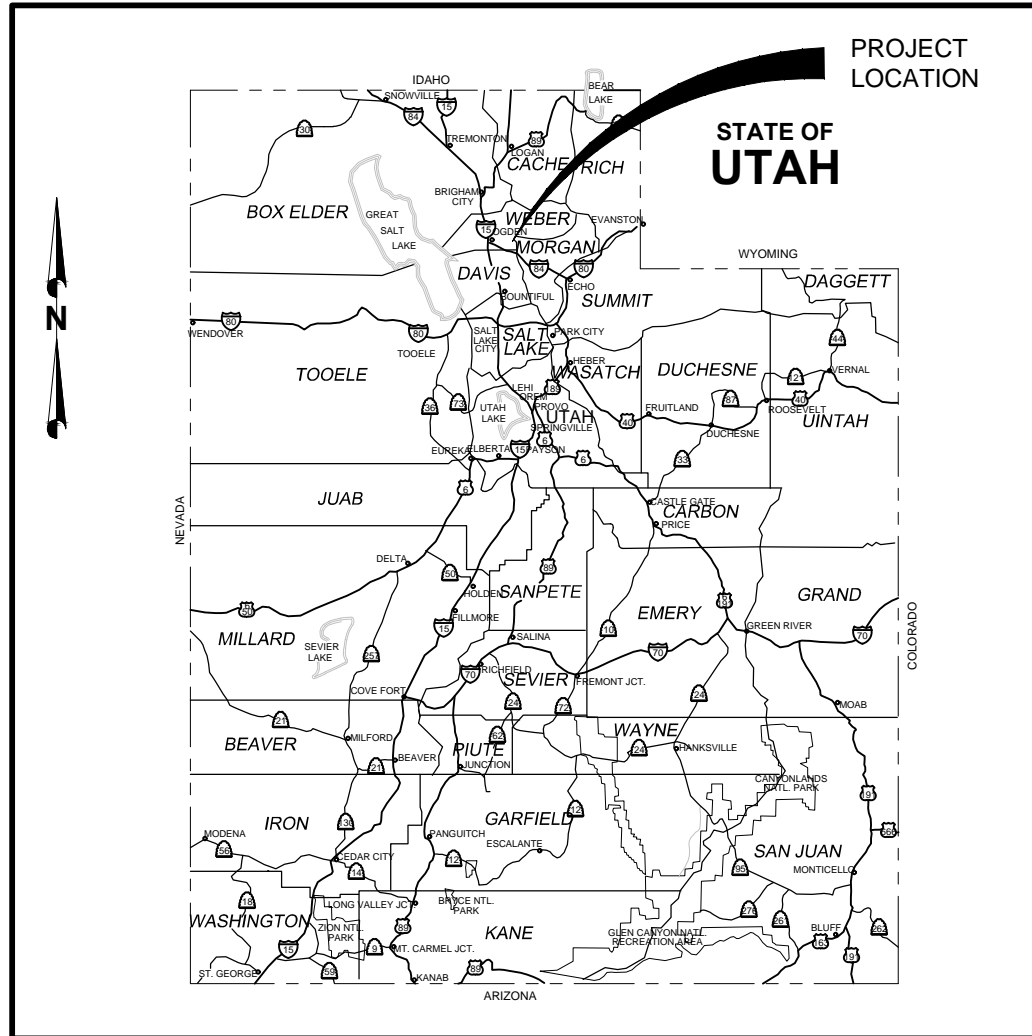
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VICINITY MAP

N.T.S.



PROJECT LOCATION MAP

N.T.S.

**DRAWINGS ARE HALF
SCALE WHEN PRINTED
ON 11x17**

FA PROJECT NO. 05-16-0138

APR. 2017

CONSTRUCTION SCHEDULE:

- | | | |
|----|------------|---|
| 1. | JUNE 15 | NOTICE TO PROCEED, BEGIN CONSTRUCTION OF COMPONENTS OUTSIDE CAMPING AREA <ul style="list-style-type: none"> • DEVELOP ACCESS ROADS • CONSTRUCT STORAGE TANK • CONSTRUCT PIPING FROM STORAGE TANK TO CAMPS |
| 2. | AUGUST 21 | BEGIN CONSTRUCTION OF COMPONENTS INSIDE CAMPING AREA <ul style="list-style-type: none"> • EXISTING SPRINGS REDEVELOPMENT • CONSTRUCT BOOSTER PUMP STATION • INSTALL PIPING WITHIN CAMP AREA • INSTALL ALL OTHER COMPONENTS TO COMPLETE CONSTRUCTION |
| 3. | OCTOBER 1 | SUBSTANTIAL COMPLETION |
| 4. | OCTOBER 15 | FINAL WALK THROUGH |

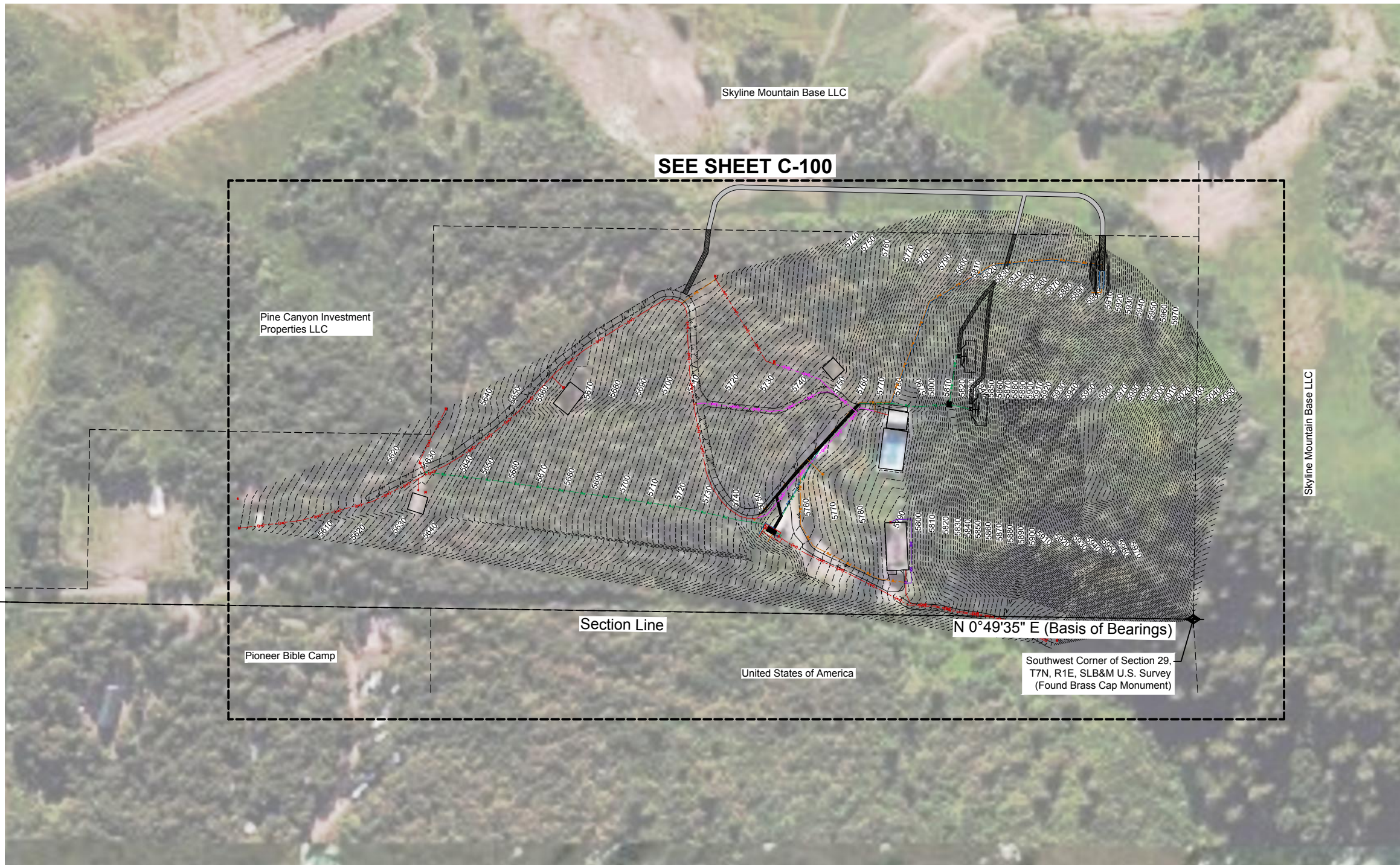
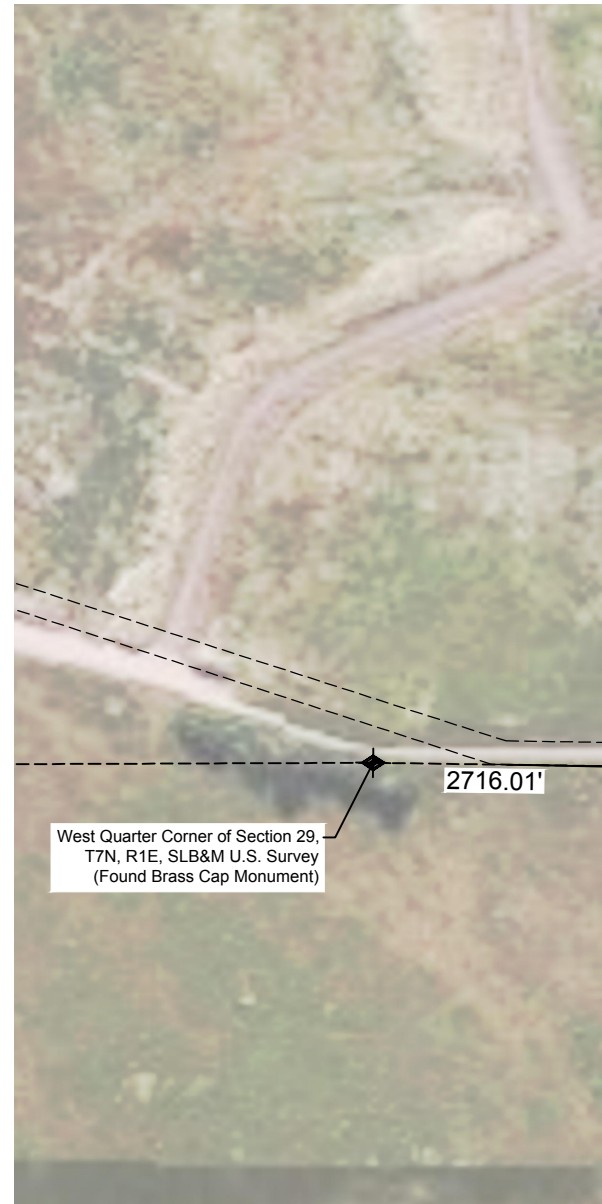


Know what's below.
Call before you dig.



FORSGREN
Associates Inc.

370 EAST 500 SOUTH, STE 200, SALT LAKE CITY, UT 84111
PH: 801.364.4785 FAX: 801.364.4802



SURVEY NARRATIVE:

This survey was requested by Mr. Brent Bigelow for the purposes of preparing the site for development.

A line with the bearing of North 0°49'35" East between monuments found in the Southwest Corner and the West Quarter Corner of Section 29 was used as the Basis of Bearings for this Survey.

No Boundary Survey was performed. Boundary Description and Boundary shown is for informational purposes only.

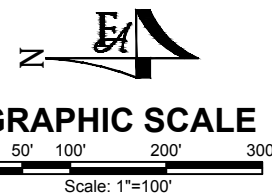
RECORD DESCRIPTION:

PART OF THE WEST HALF OF SECTION 29, TOWNSHIP 7 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY; BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 29; AND RUNNING THENCE EAST 10 CHAINS, THENCE NORTH 20 CHAINS, THENCE WEST 360 FEET, THENCE NORTH 588 FEET, THENCE WEST 275.25 FEET, THENCE NORTH 670 FEET, THENCE NORTH 17°10' EAST 1452 FEET TO CENTER OF ROAD, THENCE WEST 24.75 FEET, THENCE SOUTH 17°10' WEST 1452 FEET, MORE OR LESS, TO SECTION LINE, THENCE SOUTH 2578 FEET, MORE OR LESS, TO BEGINNING, CONTAINING 25.25 ACRES, M/L.

SUBJECT TO A RIGHT OF WAY DESCRIBED AS FOLLOWS: PART OF THE WEST HALF OF SECTION 29, TOWNSHIP 7 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY; BEGINNING AT THE WEST QUARTER CORNER OF SAID SECTION 29 (EAST QUARTER CORNER OF SECTION 30) AND RUNNING THENCE SOUTH 970 FEET ALONG THE SECTION LINE, THENCE EAST 24.75 FEET, THENCE NORTH 970 FEET, THENCE NORTH 17°10' EAST 1452 FEET TO CENTER OF ROAD, THENCE WEST 24.75 FEET, THENCE SOUTH 17°10' WEST 1452 FEET, MORE OR LESS, TO THE POINT OF BEGINNING (BOOK 1585 PAGE 2492).

BENCHMARK:

West Side Door of Existing Building with an elevation of 5788.43 feet was used as the Benchmark for this Topographic Survey.



BID SET

NO.	REVISIONS	BY	DATE

DRAWN	N. PATTERSON
DESIGNED	N. PATTERSON
APPROVED	J. BROOME
QA	J. BROOME

ATTENTION
LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2" SCALE ACCORDINGLY)



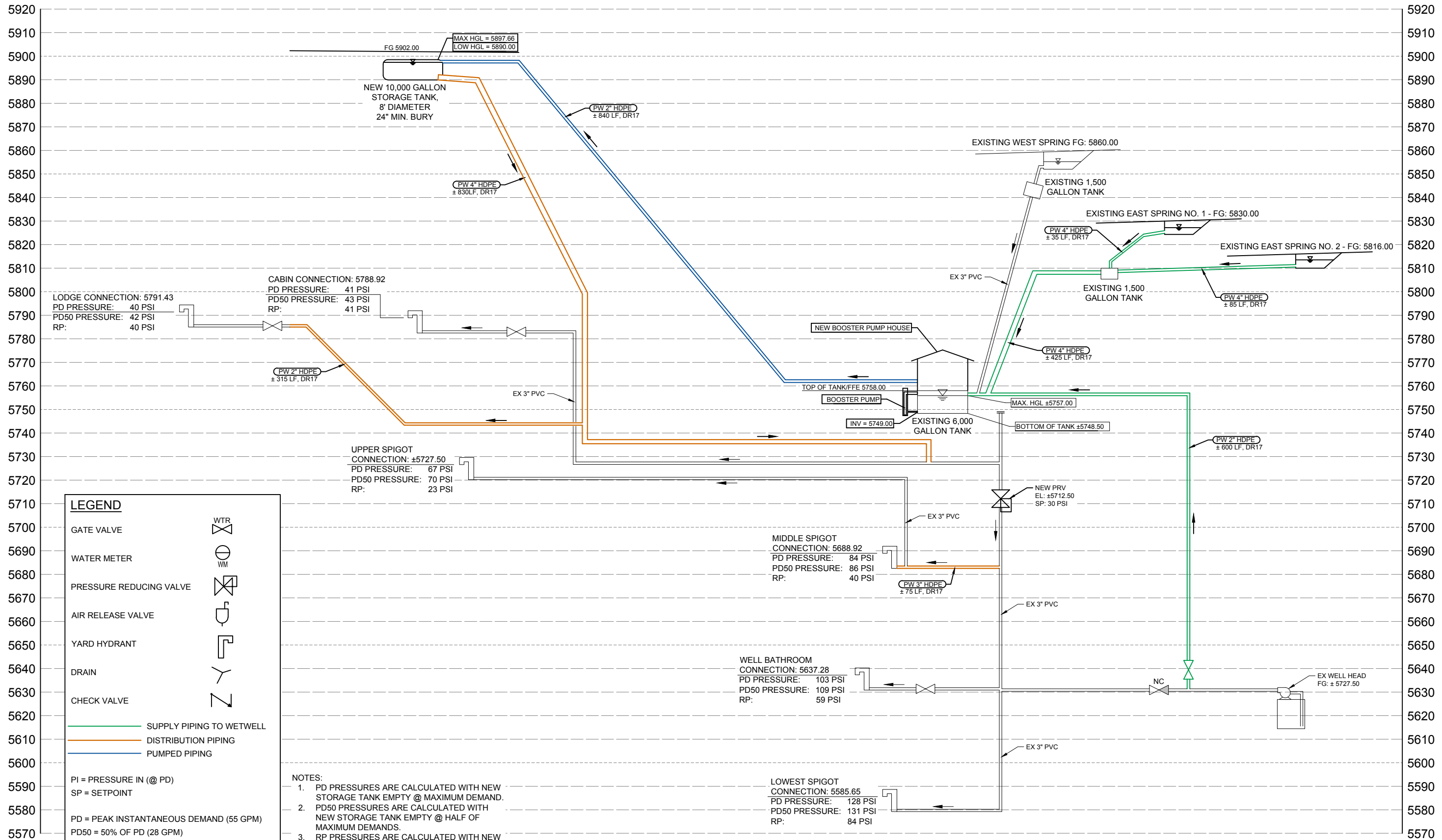
Project for:
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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
SURVEY CONTROL AND SITE KEY PLAN

PROJECT NO:	05-16-0138
SHEET NO:	G-02
DATE:	APR. 2017
PAGE NO:	02 OF 24



LEGEND

GATE VALVE	
WATER METER	
PRESSURE REDUCING VALVE	
AIR RELEASE VALVE	
YARD HYDRANT	
DRAIN	
CHECK VALVE	
WTR	

— SUPPLY PIPING TO WETWELL
 — DISTRIBUTION PIPING
 — PUMPED PIPING

PI = PRESSURE IN (@ PD)
 SP = SETPOINT

PD = PEAK INSTANTANEOUS DEMAND (55 GPM)
 PD50 = 50% OF PD (28 GPM)
 RP = REDUCED PRESSURES W/ NEW PRV ACTIVE

- NOTES:**
1. PD PRESSURES ARE CALCULATED WITH NEW STORAGE TANK EMPTY @ MAXIMUM DEMAND.
 2. PD50 PRESSURES ARE CALCULATED WITH NEW STORAGE TANK EMPTY @ HALF OF MAXIMUM DEMANDS.
 3. RP PRESSURES ARE CALCULATED WITH NEW PRV ACTIVE @ SETPOINT SHOWN.

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NO.	REVISIONS	BY	DATE

DRAWN N. PATTERSON
 DESIGNED N. PATTERSON
 APPROVED J. BROOME
 QA J. BROOME

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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
HYDRAULIC PROFILE

BID SET

PROJECT NO: **05-16-0138**
 SHEET NO: **G-03**
 DATE: APR. 2017 PAGE NO: 03 OF 24

LEGEND

	EXISTING	PROPOSED
MATCH LINE		
CENTER LINE		
CONTROL LINE		
PROPERTY OR R/W LINE		
EASEMENT LINE		
STREET MONUMENT LINE		
WIRE FENCE		
CHAIN LINK FENCE		
BARBED WIRE FENCE		
CONTOUR LINE		
SPOT ELEVATION		
BANK SLOPES		
CANAL		
OPEN DITCH		
UNDERGROUND ELECTRIC		
OVERHEAD ELECTRIC		
ELECTRIC BOX		
ELECTRIC MANHOLE		
ELECTRIC METER		
GAS LINE		
GAS VALVE		
GAS METER		
IRRIGATION LINE		
SANITARY SEWER LINE		
SANITARY SEWER CLEANOUT		
SANITARY SEWER MANHOLE		
SECONDARY WATER LINE		
SECONDARY WATER VALVE		
SECONDARY WATER VAULT		
STORM DRAIN LINE		
STORM DRAIN CATCH BASIN		
STORM DRAIN INLET(S)		
STORM DRAIN COMBO BOX		
STORM DRAIN MANHOLE		
STORM DRAIN CLEANOUT BOX		
STORM DRAIN VAULT		
CULVERT		
TELEPHONE CABLE		
TELEPHONE BOX		
TELEPHONE MANHOLE		
TELEPHONE POST		
WATER LINE		
FIRE HYDRANT		
FIRE RISER		
WATER VALVE		
WATER AIR RELEASE VALVE		
WATER METER		
UTILITY POLE & ANCHOR		
POWER POLE		
STREET LIGHT		
LIGHT		
ASPHALT PAVING		
CURB & GUTTER		
SIDEWALK		
RAILROAD TRACKS		
GUARD RAIL		
SIGN		
STRUCTURE		
LANDSCAPING (TREES ETC.)		
SECTION CORNER		
MONUMENT		
BENCH MARK		
TESTING BOREHOLE		

ANNOTATION

<p>REVISION TRIANGLE</p> REVISION NO.	<p>KEYNOTE CALLOUT</p> KEYNOTE REFERENCE
<p>PIPE CALLOUT</p> SYSTEM SIZE MATERIAL DESCRIPTION	<p>EQUIPMENT CALLOUT</p> SYSTEM TAG NUMBER DESCRIPTION
<p>DETAIL NAME</p> DETAIL #	<p>DETAIL CALLOUT</p> DETAIL # DETAIL NAME/DESCRIPTION SHEET NO.
<p>SECTION NAME</p> DESIGNATION	<p>SECTION CALLOUT</p> DESIGNATION SHEET NO.
<p>VIEW NAME</p> SCALE: 1"=1" VIEWPORT SCALE	<p>ISOMETRIC VIEW CALLOUT</p> DESIGNATION SHEET NO.
<p>GENERAL CALLOUT</p> GENERAL NOTE	<p>PROPOSED CALLOUT</p> CONSTRUCTION NOTE

HATCHING/PATTERNS

CONCRETE	
ASPHALT PAVEMENT	
SAND	
UNDISTURBED SOIL	
GROUTED RIP RAP	
LOOSE RIP RAP	
UNTREATED BASE COURSE	
STRUCTURAL FILL	
WETLANDS	
WATER	
DEMOLITION AREA	
BACKFILL	
STEEL	
CONCRETE MASONRY UNIT (CMU)	

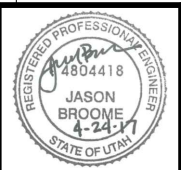
CIVIL ABBREVIATIONS

ABUT	ABUTMENT	G	GAS	R/W	RIGHT OF WAY
AC	ASPHALT CEMENT	GALV	GALVANIZED	S	SOUTH
ALT	ALTERNATE	GM	GAS METER	SAN	SANITARY
APPROX	APPROXIMATELY	GRD	GROUND	SCHED	SCHEDULE
ARV	AIR RELEASE VALVE	GV	GAS VALVE	SD	STORM DRAIN
ASP	ASPHALT	HDWL	HEADWALL	SEC	SECTION
BCR	BEGIN CURB RETURN	HDPE	HIGH DENSITY POLY ETHYLENE	SHT	SHEET
BEG	BEGINNING/BEGIN	HORIZ	HORIZONTAL	SLB&M	SALT LAKE BASE & MERIDIAN
BDRY	BOUNDARY	HWSE	HIGH WATER SURFACE ELEVATION	SPECS	SPECIFICATIONS
BK	BACK	HWY	HIGHWAY	SQ	SQUARE
BKFL	BACKFILL	HYD	HYDRANT	SS	SANITARY SEWER
BLDG	BUILDING	ID	INSIDE DIAMETER	ST	STREET
BLM	BUREAU OF LAND MANAGEMENT	IE	INVERT ELEVATION	STL	STEEL
BM	BENCH MARK	IRR	IRRIGATION	STA	STATION
BOT	BOTTOM	INV	INVERT	STD	STANDARD
BRG	BEARING	JCT	JUNCTION	STRUCT	STRUCTURE
BSMT	BASEMENT	Jb	JUNCTION BOX	T	TOWNSHIP, TELEPHONE
BTWN	BETWEEN	km	KILOMETER	TAN	TANGENT
BOF	BOTTOM OF FOOTING	L	LENGTH	TBC	TOP BACK CURB
BW	BACK OF WALK	LB	POUND	TEMP	TEMPORARY
CALC	CALCULATED	LF	LINEAR FEET	TEL	TELEPHONE/TELEGRAM
CB	CATCH BASIN	LIN	LINEAR/LINEAL	TH	TEST HOLE
CCW	COUNTERCLOCKWISE	LT	LEFT	TOC	TOP OF CONCRETE
C-C	CENTER TO CENTER	LLWSE	LOW WATER SURFACE ELEVATION	TOF	TOP OF FOOTING
C&G	CURB AND GUTTER	LLWSE	LOW LOW WATER SURFACE ELEVATION	TOS	TOP OF SLAB
CFS	CUBIC FEET PER SECOND	m	METER	TP	TELEPHONE POLE
CLS	CLASS	MATL	MATERIAL	TPY	TYPICAL
CL or CL	CENTERLINE/CONTROL LINE	MAX	MAXIMUM	UBC	UNIFORM BUILDING CODES
CIP	CAST IRON PIPE	MKR	MARKER	UG	UNDERGROUND
cm	CENTIMETER	MH	MANHOLE	UT	UNDERGROUND TELEPHONE
CMP	CORRUGATED METAL PIPE	MI	MILE	VB	VALVE BOX
CMPA	CORRUGATED METAL PIPE-ARCH	MISC	MISCELLANEOUS	VC	VERTICAL CURVE
COB	CLEAN OUT BOX	MON	MONUMENT	VERT	VERTICAL
COL	COLUMN	MPH	MILES PER HOUR	VOL	VOLUME
CONC	CONCRETE	N	NORTH	VPI	VERTICAL POINT OF INTERSECTION
CONST	CONSTRUCT	N/A	NO ACCESS or NOT APPLICABLE	VPC	VERTICAL POINT OF CURVE
COR	CORNER	NIC	NOT IN CONTRACT	VPT	VERTICAL POINT OF TANGENCY
CORR	CORRUGATED	NC	NORMALLY CLOSED	W	WEST/WATER
CEN	CENTER	NTS	NOT TO SCALE	WM	WATER METER
CU	CUBIC	NO	NORMALLY OPEN	WP	WORK POINT
CULV	CULVERT	OBLIT	OBLITERATE	WV	WATER VALVE
CW	CLOCKWISE	OD	OUTSIDE DIAMETER	XING	CROSSING
°	DEGREE	O-O	OUTSIDE TO OUTSIDE	XSEC	CROSSING SECTION
DET	DETAIL	OFF REV	OFFICE REVISION	Yd	YARD
DIA	DIAMETER	ORIG	ORIGINAL	@	AT
DIP	DUCTILE IRON PIPE	PVMT	PAVEMENT	&	AND
DIST	DISTANCE	PC	POINT OF CURVATURE	<	ANGLE
DN	DOWN	PCC	POINT OF COMPOUND CURVATURE	Ø	ROUND or DIAMETER
DWG	DRAWING	PE	POLYETHYLENE	W/	WITH
DRWY	DRIVEWAY	PERF	PERFORATED	W/O	WITHOUT
E	EAST	PI	POINT OF INTERSECTION	Δ	DELTA
EA	EACH	PL or P L	PROPERTY LINE	%	PERCENT
ECR	END CURB RETURN	POB	POINT OF BEGINNING		
ELEV	ELEVATION	POC	POINT ON CURVE		
ELEC	ELECTRIC/ELECTRICAL	PP	POWER POLE		
EMB	EMBANKMENT	PRC	POINT OF REVERSE CURVE		
EO	EDGE OF OIL	PROJ	PROJECT		
EXC	EXCAVATION	PROP	PROPERTY		
EQUIP	EQUIPMENT	PSC	POINT OF SPIRAL CURVE		
EST	ESTIMATE	PSI	POUNDS PER SQUARE INCH		
EXIST	EXISTING	PT	POINT OF TANGENCY		
FEN	FENCE	PVC	POLYVINYL CHLORIDE		
FD	FOUND	QTY	QUANTITY		
FDN	FOUNDATION	R	RANGE/RADIUS		
FG	FINISH GRADE	RCP	REINFORCED CONCRETE PIPE		
FIN	FINISH	RD	ROAD		
FL OR FL	FLOW LINE	REF	REFERENCE		
FLR	FLOOR	REINF	REINFORCED		
FLG	FLANGE	REQD	REQUIRED		
FPS	FEET PER SECOND	REV	REVISION		
FS	FINISH SURFACE	RP	REFERENCE POINT/RADIUS POINT		
FT	FEET	RR	RAILROAD		
FTG	FOOTING	RT	RIGHT/ROUTE		

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NO.		REVISIONS		BY		DATE		QA		J. BROOME	

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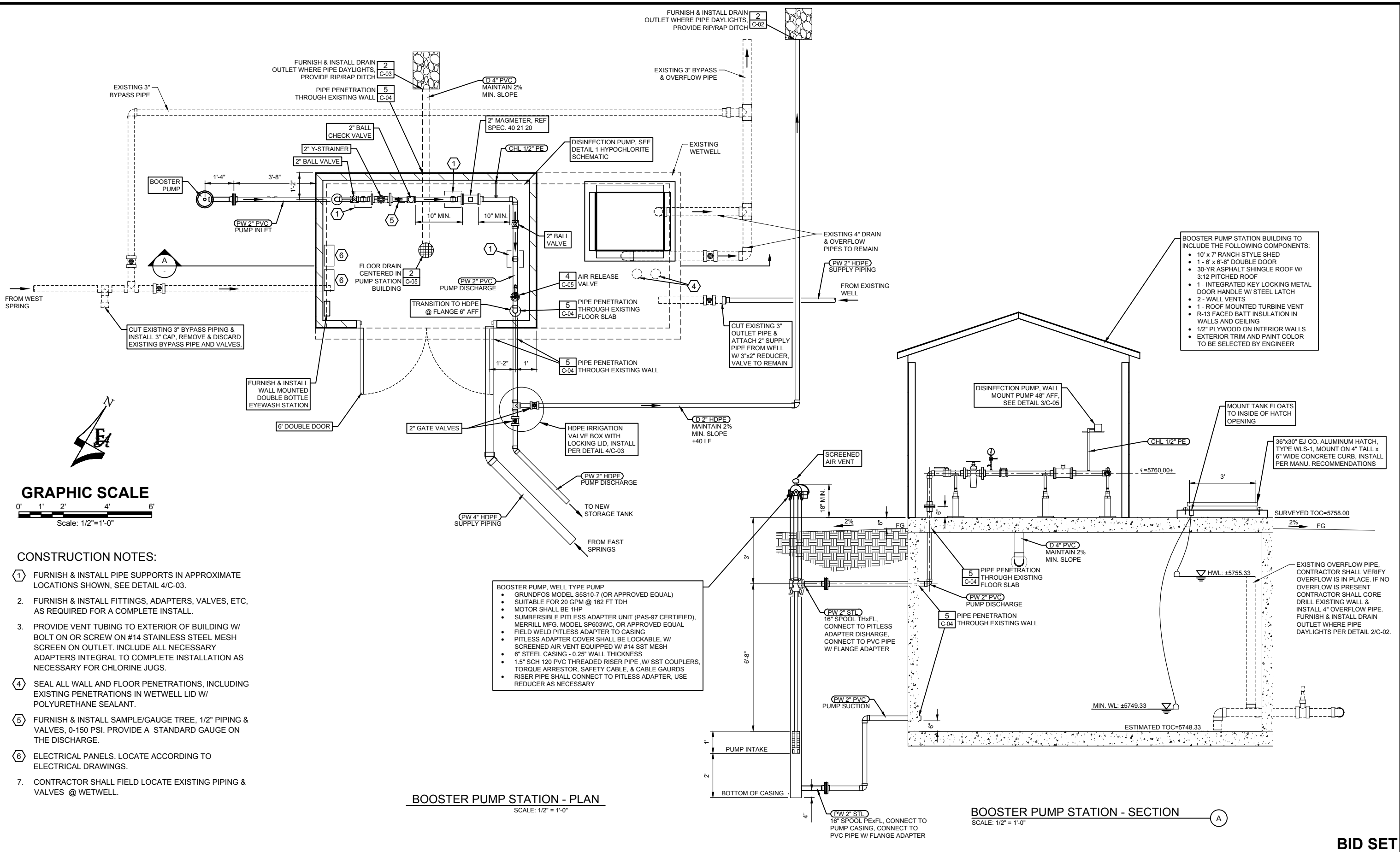
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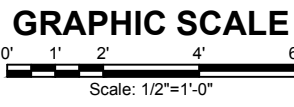
VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS CIVIL
SYMBOLS, LEGENDS, & ABBREVIATIONS

PROJECT NO:
05-16-0138
SHEET NO:
C-01
DATE: APR. 2017 PAGE NO:
04 OF 24

BID SET



- BOOSTER PUMP STATION BUILDING TO INCLUDE THE FOLLOWING COMPONENTS:**
- 10' x 7' RANCH STYLE SHED
 - 1- 6' x 6'-8" DOUBLE DOOR
 - 30-YR ASPHALT SHINGLE ROOF W/ 3:12 PITCHED ROOF
 - 1- INTEGRATED KEY LOCKING METAL DOOR HANDLE W/ STEEL LATCH
 - 2- WALL VENTS
 - 1- ROOF MOUNTED TURBINE VENT
 - R-13 FACED BATT INSULATION IN WALLS AND CEILING
 - 1/2" PLYWOOD ON INTERIOR WALLS
 - EXTERIOR TRIM AND PAINT COLOR TO BE SELECTED BY ENGINEER



- CONSTRUCTION NOTES:**
1. FURNISH & INSTALL PIPE SUPPORTS IN APPROXIMATE LOCATIONS SHOWN, SEE DETAIL 4/C-03.
 2. FURNISH & INSTALL FITTINGS, ADAPTERS, VALVES, ETC, AS REQUIRED FOR A COMPLETE INSTALL.
 3. PROVIDE VENT TUBING TO EXTERIOR OF BUILDING W/ BOLT ON OR SCREW ON #14 STAINLESS STEEL MESH SCREEN ON OUTLET. INCLUDE ALL NECESSARY ADAPTERS INTEGRAL TO COMPLETE INSTALLATION AS NECESSARY FOR CHLORINE JUGS.
 4. SEAL ALL WALL AND FLOOR PENETRATIONS, INCLUDING EXISTING PENETRATIONS IN WETWELL LID W/ POLYURETHANE SEALANT.
 5. FURNISH & INSTALL SAMPLE/GAUGE TREE, 1/2" PIPING & VALVES, 0-150 PSI. PROVIDE A STANDARD GAUGE ON THE DISCHARGE.
 6. ELECTRICAL PANELS. LOCATE ACCORDING TO ELECTRICAL DRAWINGS.
 7. CONTRACTOR SHALL FIELD LOCATE EXISTING PIPING & VALVES @ WETWELL.

- BOOSTER PUMP, WELL TYPE PUMP**
- GRUNDFOS MODEL S5S10-7 (OR APPROVED EQUAL)
 - SUITABLE FOR 20 GPM @ 162 FT TDH
 - MOTOR SHALL BE 1HP
 - SUMBERSIBLE PITLESS ADAPTER UNIT (PAS-97 CERTIFIED), MERRILL MFG. MODEL SP603WC, OR APPROVED EQUAL
 - FIELD WELD PITLESS ADAPTER TO CASING
 - PITLESS ADAPTER COVER SHALL BE LOCKABLE, W/ SCREENED AIR VENT EQUIPPED W/ #14 SST MESH
 - 6" STEEL CASING - 0.25" WALL THICKNESS
 - 1.5" SCH 120 PVC THREADED RISER PIPE, W/ SST COUPLERS, TORQUE ARRESTOR, SAFETY CABLE, & CABLE GAURDS
 - RISER PIPE SHALL CONNECT TO PITLESS ADAPTER, USE REDUCER AS NECESSARY

BOOSTER PUMP STATION - PLAN
SCALE: 1/2" = 1'-0"

BOOSTER PUMP STATION - SECTION
SCALE: 1/2" = 1'-0"

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BOOSTER PUMP STATION PLAN

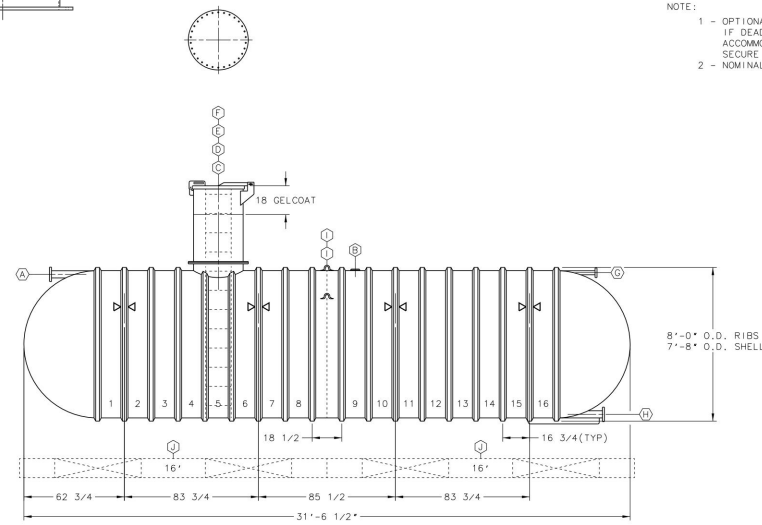
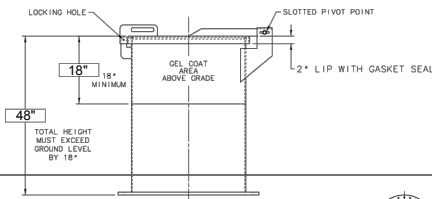
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DATE: APR. 2017 PAGE NO: 05 OF 24

GENERAL NOTES

1. ANY MODIFICATION TO THE ORIGINAL CONSTRUCTION PACKAGE SHALL BE APPROVED BY THE ENGINEER OF RECORD.
2. CONTRACTOR SHALL NOTIFY BLUE STAKES OF UTAH (800-662-4111) 48 HOURS IN ADVANCE OF ANY CONSTRUCTION.
3. ALL EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON DISCOVERY.
4. CONTRACTOR SHALL LOCATE, RETAIN, AND PROTECT ALL EXISTING UTILITIES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS IMPACTED BY CONSTRUCTION.
7. ALL PARTS, FITTINGS, SEALS, SOLVENTS, ETC. SHALL BE NSF APPROVED FOR USE IN DRINKING WATER APPLICATIONS.
8. CONTRACTOR SHALL PROVIDE ALL FITTINGS, BOLTS, FLANGES, ETC. THAT ARE INTEGRAL TO A COMPLETE OPERATIONAL PROJECT.
9. CONTRACTOR SHALL PROVIDE ALL WIRING, CONDUITS, JUNCTIONS, EQUIPMENT, ETC. THAT ARE INTEGRAL TO A COMPLETE OPERATIONAL PROJECT.



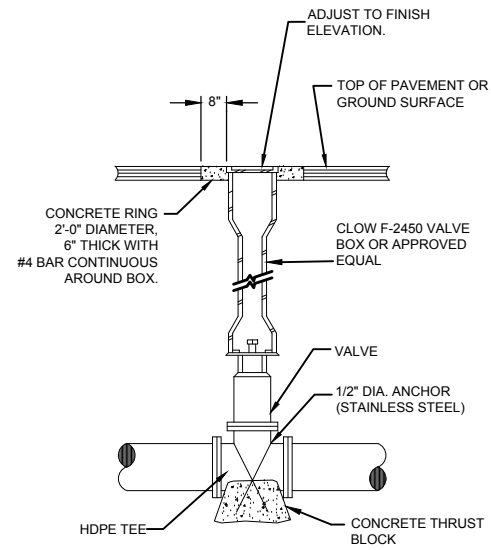
GEL COAT
 □ - WHITE
 □ - TAN
 □ - GREEN



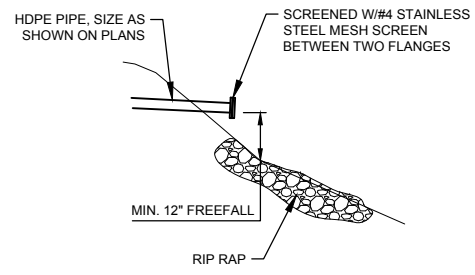
NOTE:
 1 - OPTIONAL PREFABRICATED DEADMEN SHOWN. IF DEADMEN ARE ADDED TO THE ORDER, ACCOMMODATIONS MAY BE REQUIRED TO SECURE THE STRAPS TO THE DEADMEN.
 2 - NOMINAL TANK WEIGHT: 4,200 LBS.

ITEM	QTY	DESCRIPTION
(A)	1	4" DIA (NSF) FRP FLANGED & GUSSETED TANGENTIAL NOZZLE
(B)	1	4" NPT SERVICE FITTING
(C)	1	30" DIA MANWAY WITH BLANK COVER (COVER FOR FIELD TESTING ONLY)
(D)	1	30" DIA x 48" HIGH MANWAY EXTENSION WITH HINGED & LOCKABLE TOP (TAN GELCOAT)
(E)	1	8' HIGH (NSF) FIBERGLASS LADDER (16" WIDE, TANK MOUNTED)
(F)	1	48' HIGH FIBERGLASS LADDER (16" WIDE, EXTENSION MOUNTED)
(G)	1	2" DIA (NSF) FRP FLANGED & GUSSETED TANGENTIAL NOZZLE
(H)	1	4" DIA (NSF) FRP FLANGED & GUSSETED TANGENTIAL NOZZLE WITH BOTTOM SUPPORT
(I)	2	LIFTING LUG (1 EXTRA)
(J)	4	16" PREFABRICATED CONCRETE DEADMEN (OPTIONAL)
(K)	4	HOLD DOWN STRAP LOCATION

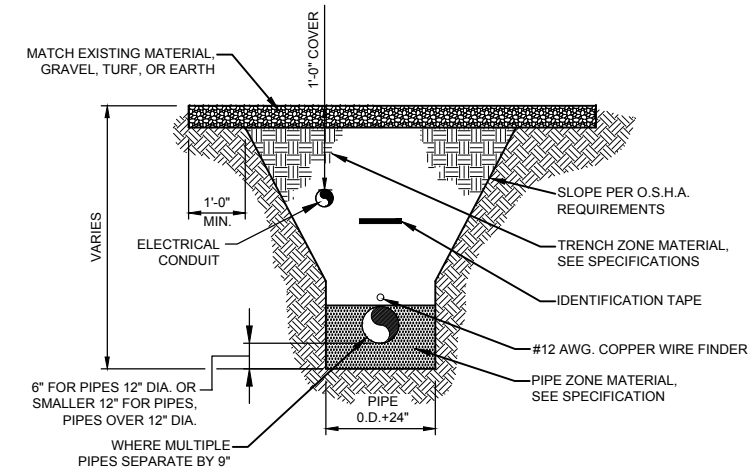
- NOTES:
 1. ITEM J (CONCRETE DEADMEN) IS NOT REQUIRED FOR THIS PROJECT.
 2. CONTRACTOR SHALL FURNISH & INSTALL 4" GOOSENECK VENT ASSEMBLY WITH BOLT ON OR SCREW ON #14 STAINLESS STEEL MESH SCREEN. VENT SHALL HAVE 24" CLEARANCE FROM FINAL GRADE.



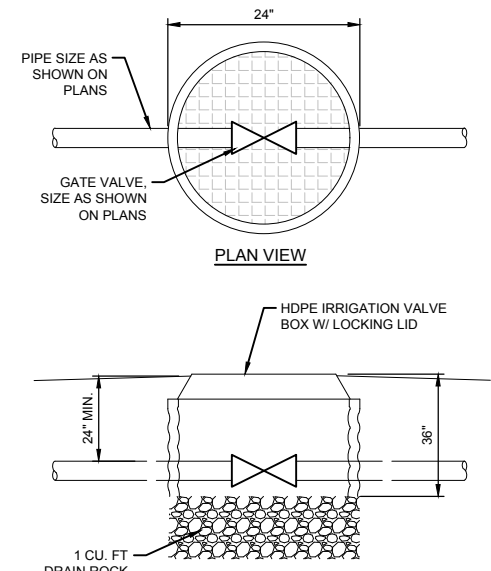
BURIED VALVE TYPE 2
 SCALE: N.T.S. 1



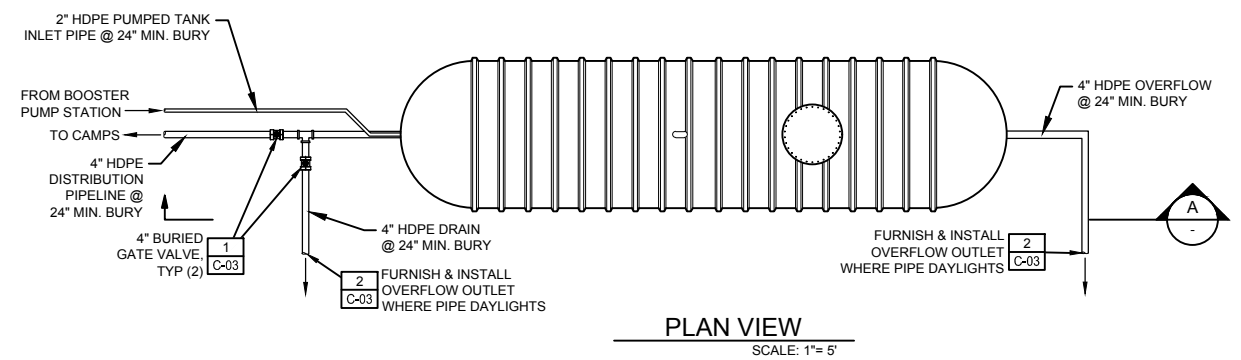
OVERFLOW/DRAIN OUTLET
 SCALE: N.T.S. 2



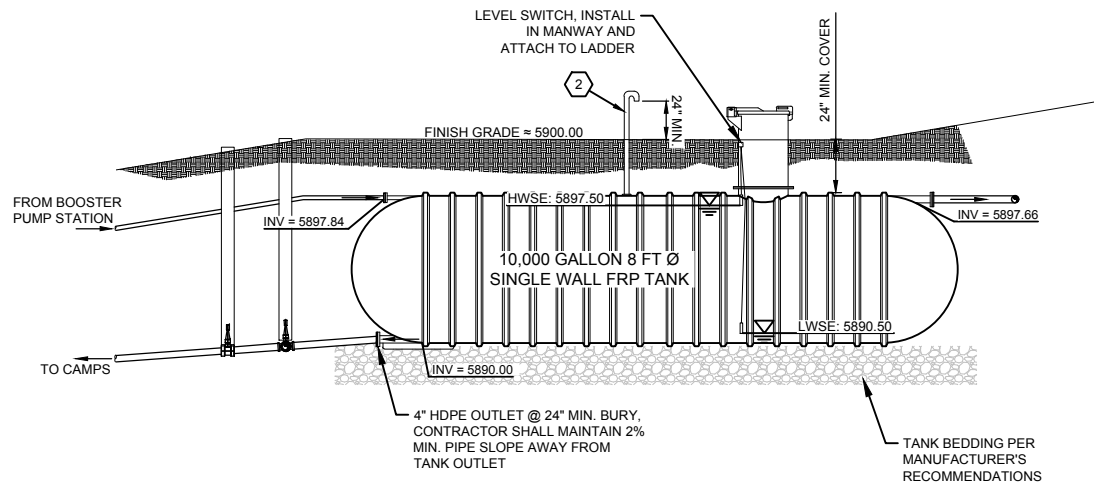
TYPICAL PIPE TRENCH
 SCALE: N.T.S. SPEC # 31 22 22 3



BURIED VALVE TYPE 1
 SCALE: N.T.S. 4



PLAN VIEW
 SCALE: 1"=5'



SECTION A
 SCALE: 1"=5'

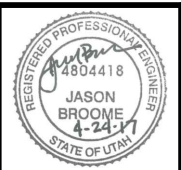
POTABLE WATER STORAGE TANK
 SCALE: 1"=5' 5

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 DESIGNED N. PATTERSON
 APPROVED J. BROOME
 QA J. BROOME

ATTENTION
 LINE IS 2 INCHES
 AT FULL SIZE
 (IF NOT 2" SCALE ACCORDINGLY)



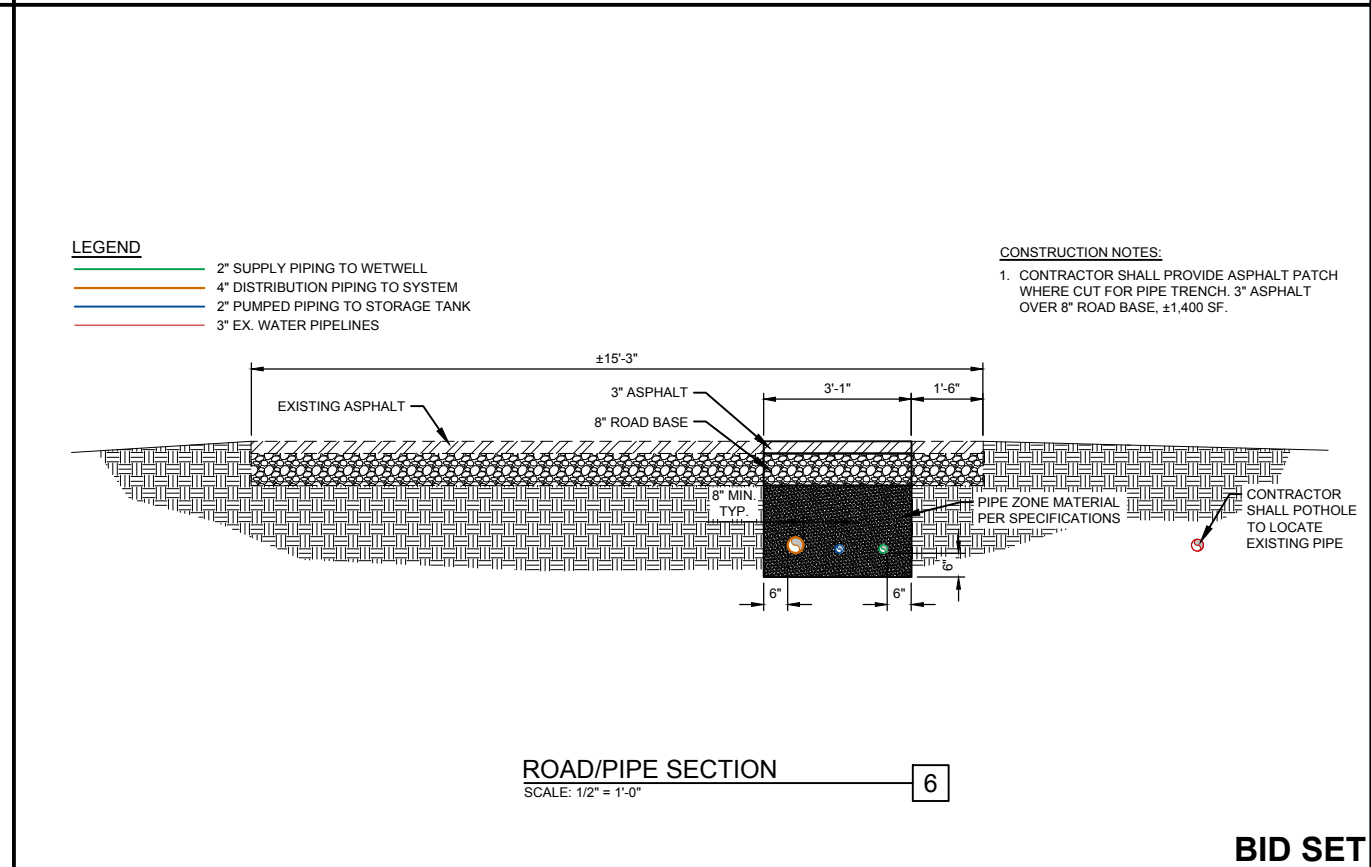
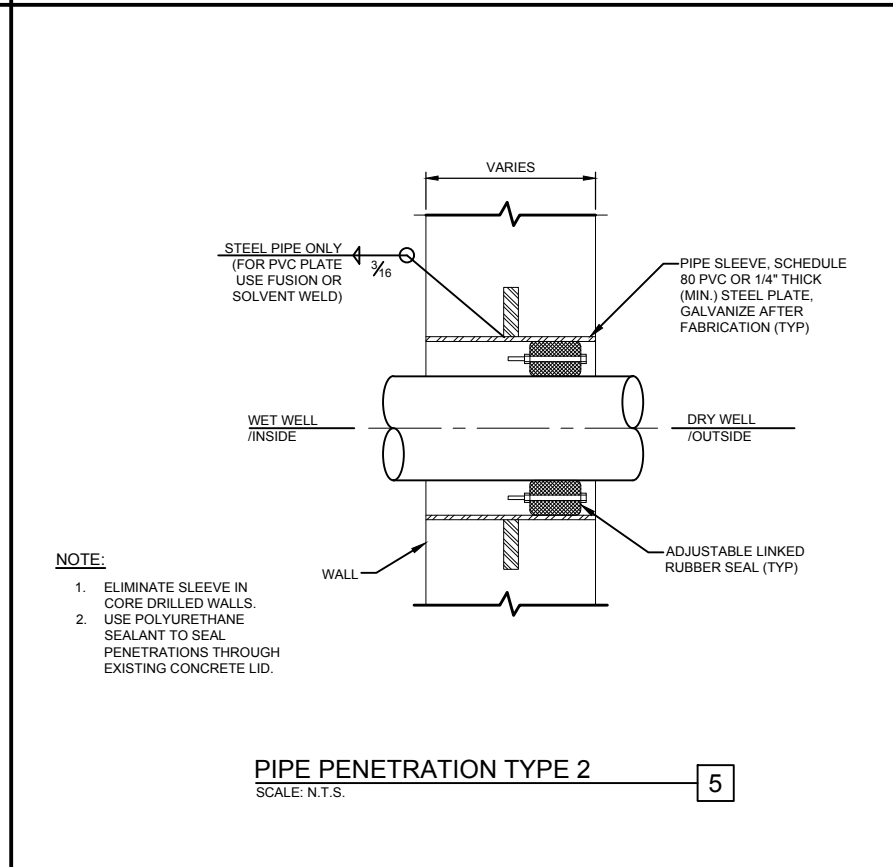
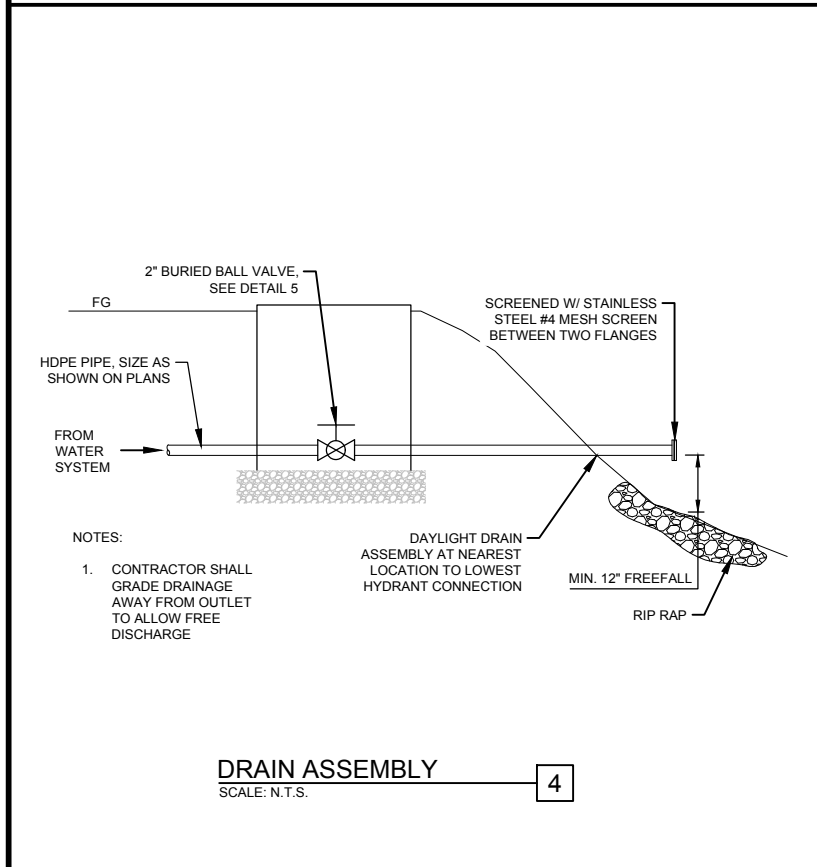
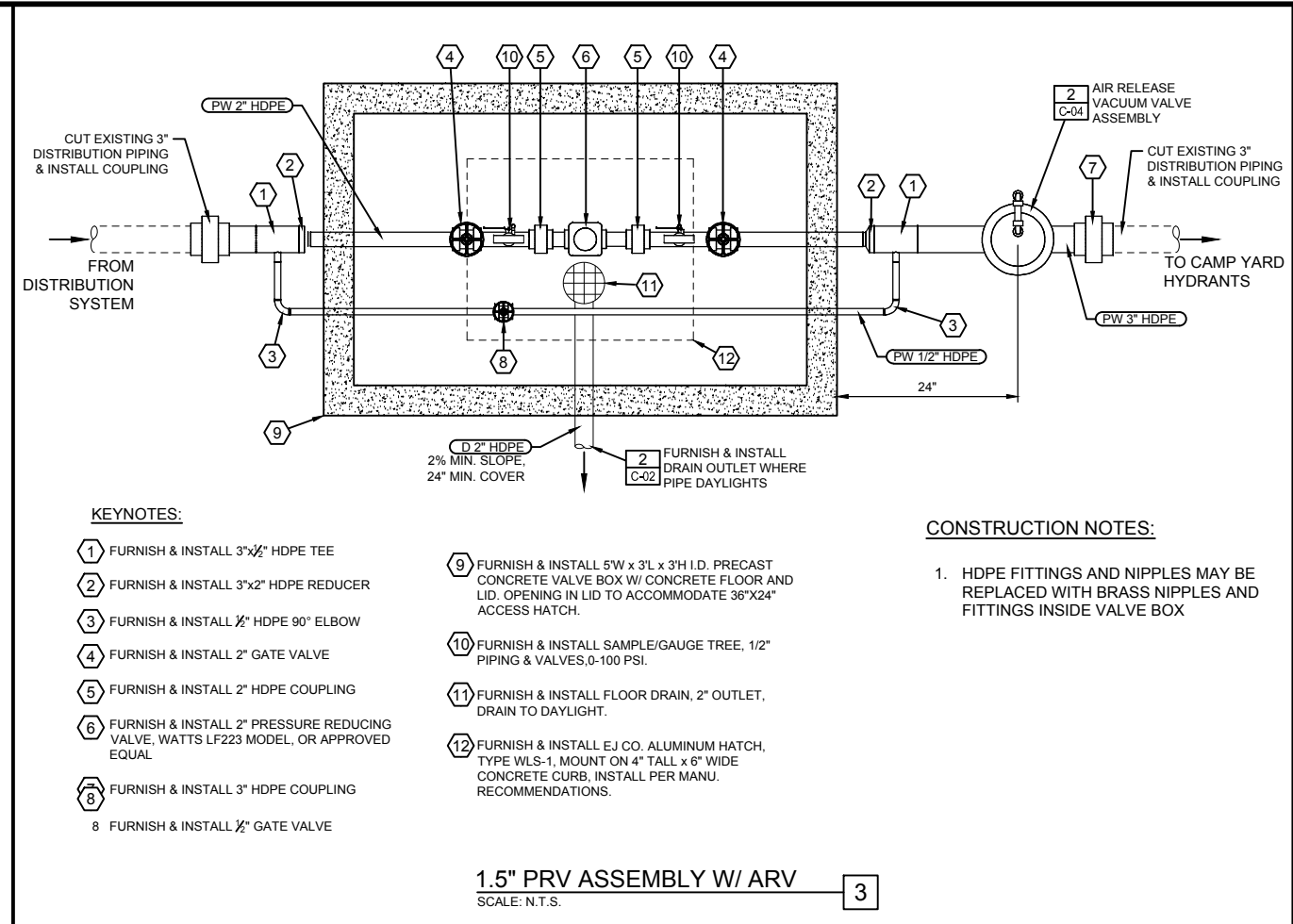
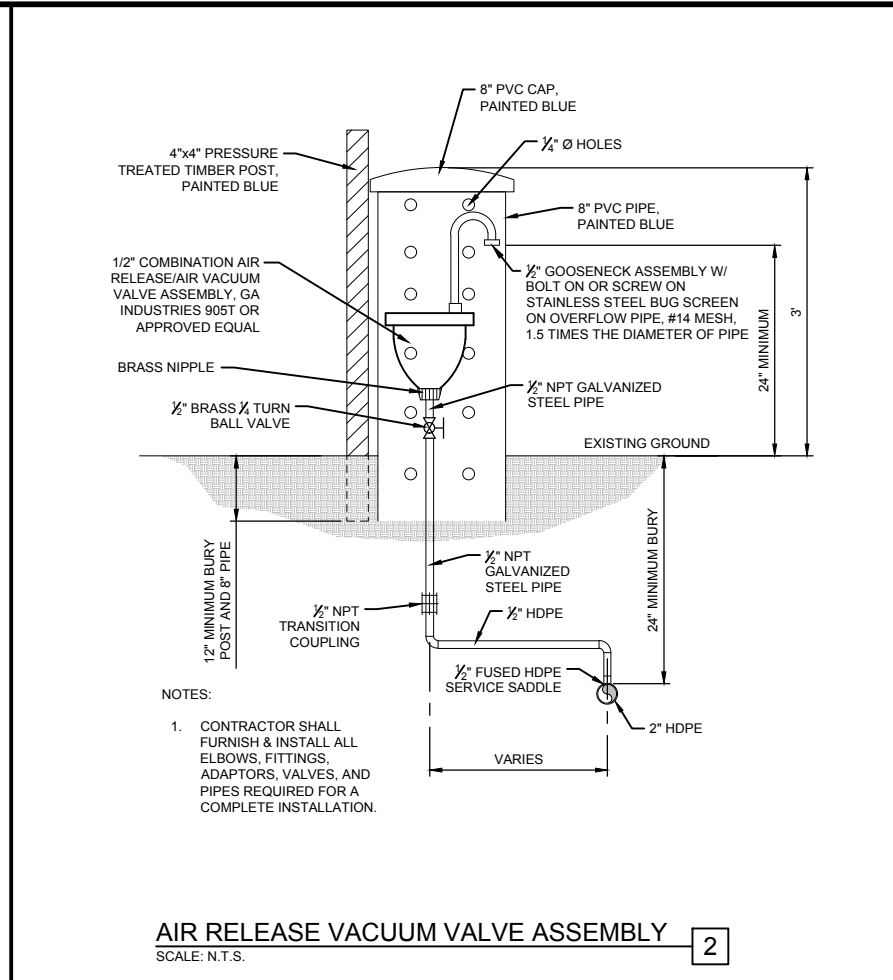
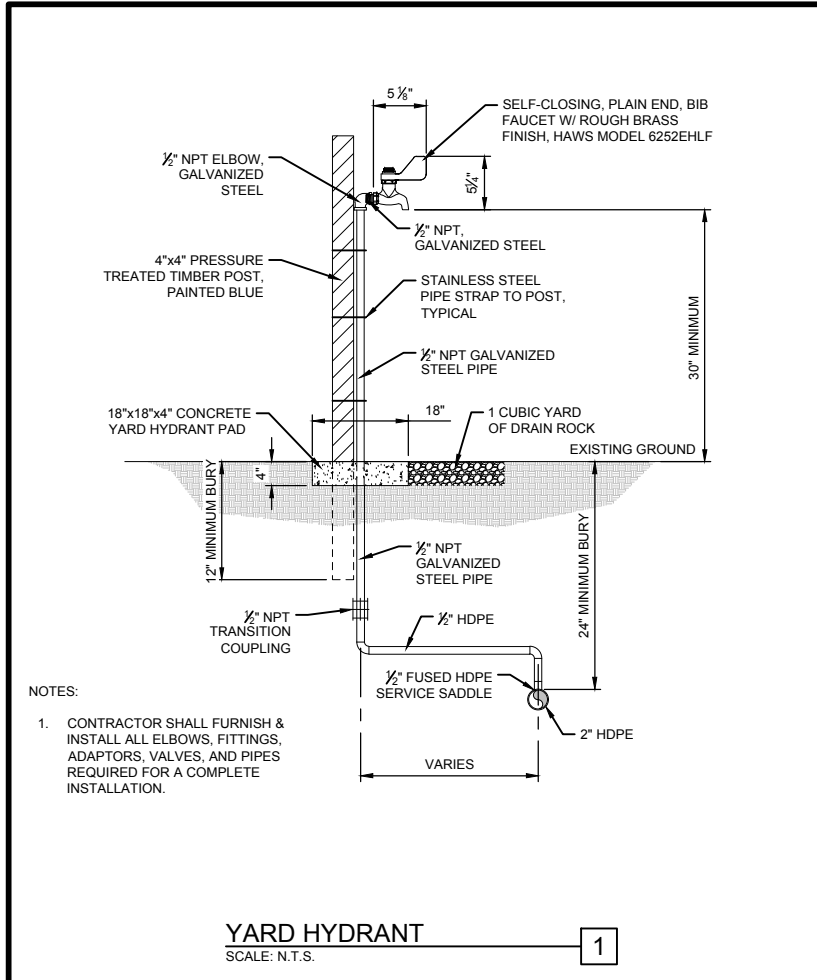
Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

FORSGREN Associates Inc.
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 PH: 801.364.4785 FAX: 801.364.4802



VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
CIVIL NOTES AND DETAILS

PROJECT NO: **05-16-0138**
 SHEET NO: **C-03**
 DATE: APR. 2017 PAGE NO: 06 OF 24



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DESIGNED N. PATTERSON
APPROVED J. BROOME
QA J. BROOME

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(IF NOT 2" SCALE ACCORDINGLY)

REGISTERED PROFESSIONAL ENGINEER
4804418
JASON BROOME
4-24-17
STATE OF UTAH

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

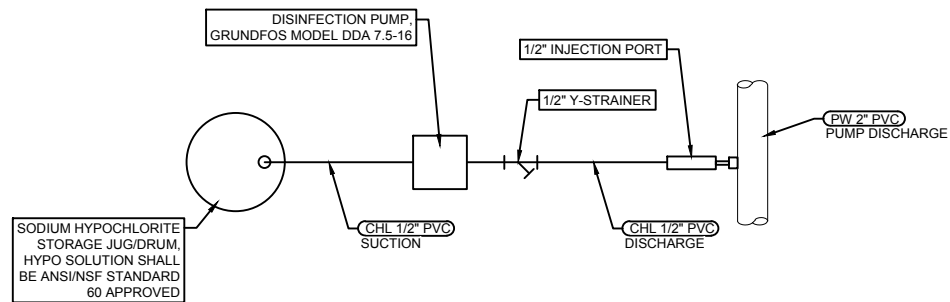
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WATER SYSTEM IMPROVEMENTS
CIVIL DETAILS

PROJECT NO: **05-16-0138**
SHEET NO: **C-04**
DATE: APR. 2017
PAGE NO: 07 OF 24

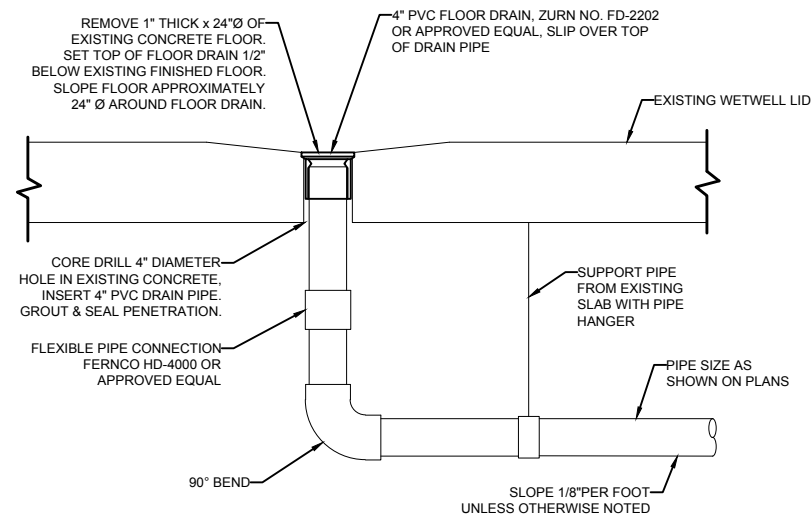
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NOTES:
1. ALL CHEMICAL PIPING AND EQUIPMENT SHALL BE ANSI/NSF STANDARD 61 APPROVED.

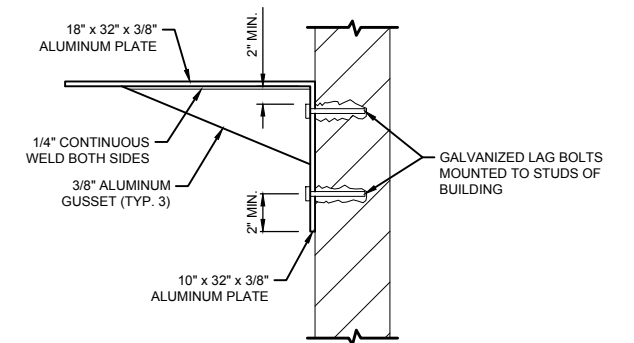
SODIUM HYPOCHLORITE SCHEMATIC
SCALE: N.T.S.

1



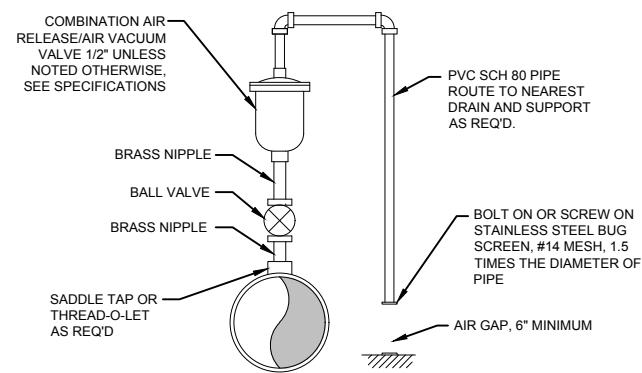
FLOOR DRAIN
SCALE: N.T.S.

2



DOSING PUMP WALL MOUNT
SCALE: N.T.S.

3

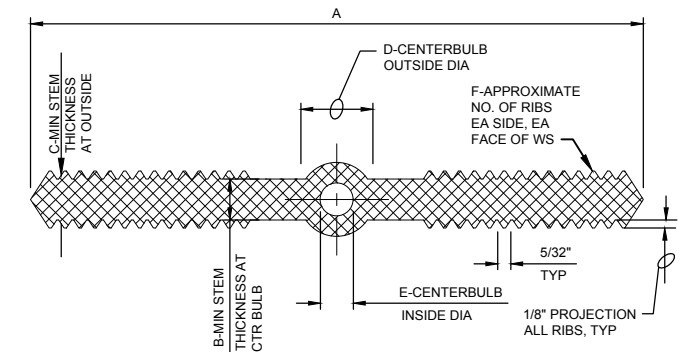


AIR RELEASE VACUUM VALVE ASSEMBLY
SCALE: N.T.S.

4

DETAIL NOT USED
SCALE: N.T.S.

5



SIZE	A	B	C	D	E	F
4" FLATSTRAP	4"	3/16"	3/16"	---	---	4
4" CENTERBULB	4"	3/16"	3/16"	3/4"	1/4"	4
6" FLATSTRAP	6"	3/8"	3/8"	---	---	7
6" CENTERBULB	6"	3/8"	3/8"	7/8"	3/8"	7
9" FLATSTRAP	9"	3/8"	3/8"	---	---	7
9" CENTERBULB	9"	3/8"	3/8"	1"	1/2"	7

NOTES:
1. MATERIAL QUALITY PER SPECIFICATIONS.
2. DIMENSION REQUIREMENTS INDICATED SHOULD BE GIVEN TO SUPPLIERS PRIOR TO PLACING ORDERS.
3. NON-ROUND CENTER BULBS SHALL HAVE A MIN OUTSIDE DIM OF 'D'.

PVC WATERSTOP
SCALE: N.T.S.

6

BID SET

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QA J. BROOME

ATTENTION
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Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

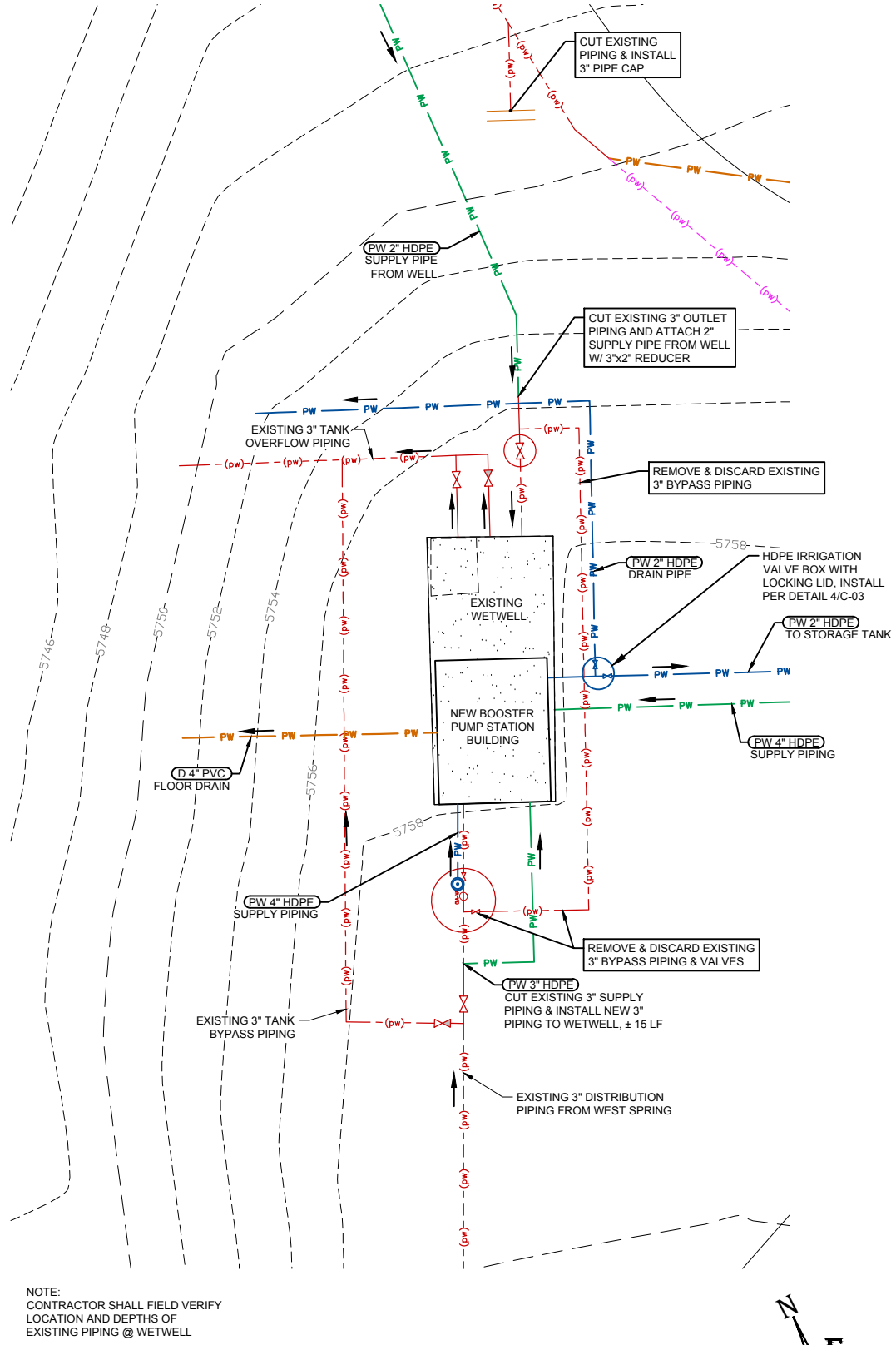
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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
CIVIL DETAILS

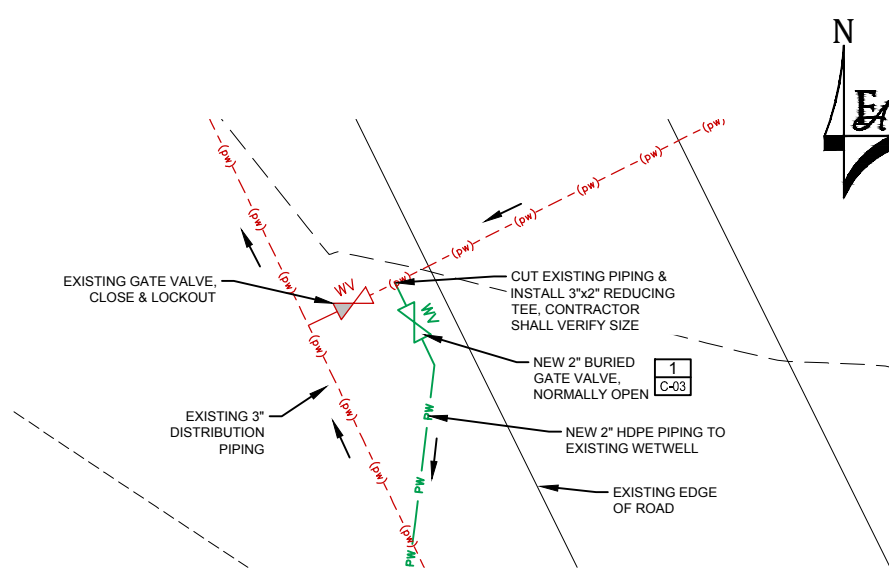
PROJECT NO:
05-16-0138
SHEET NO:
C-05
DATE:
APR. 2017
PAGE NO:
08 OF 24

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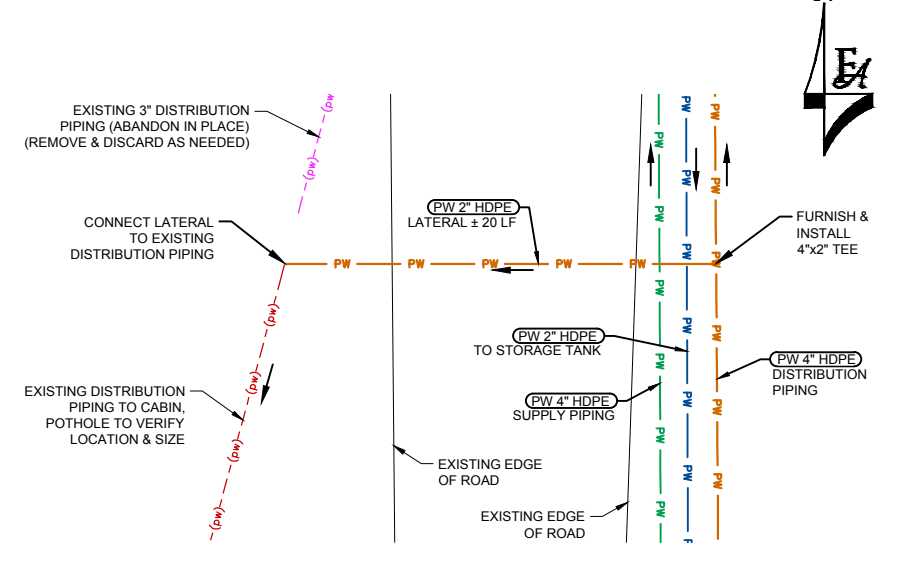
PIPE CONNECTION DETAIL @ WETWELL
SCALE: N.T.S.

1



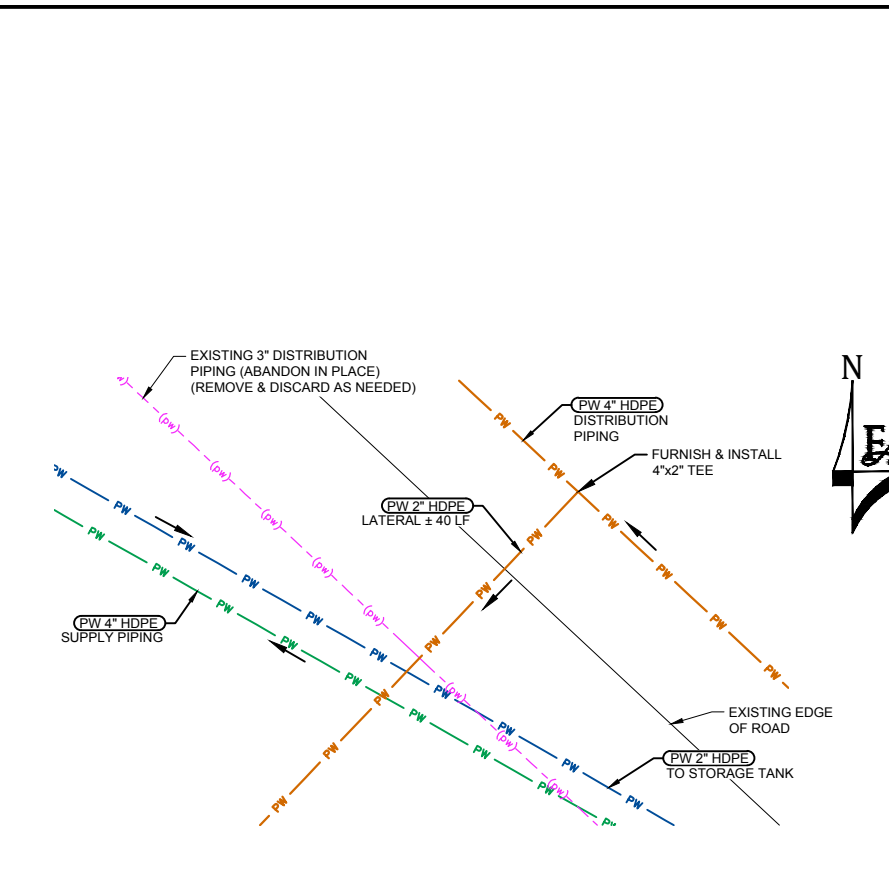
PIPE CONNECTION DETAIL
SCALE: N.T.S.

2



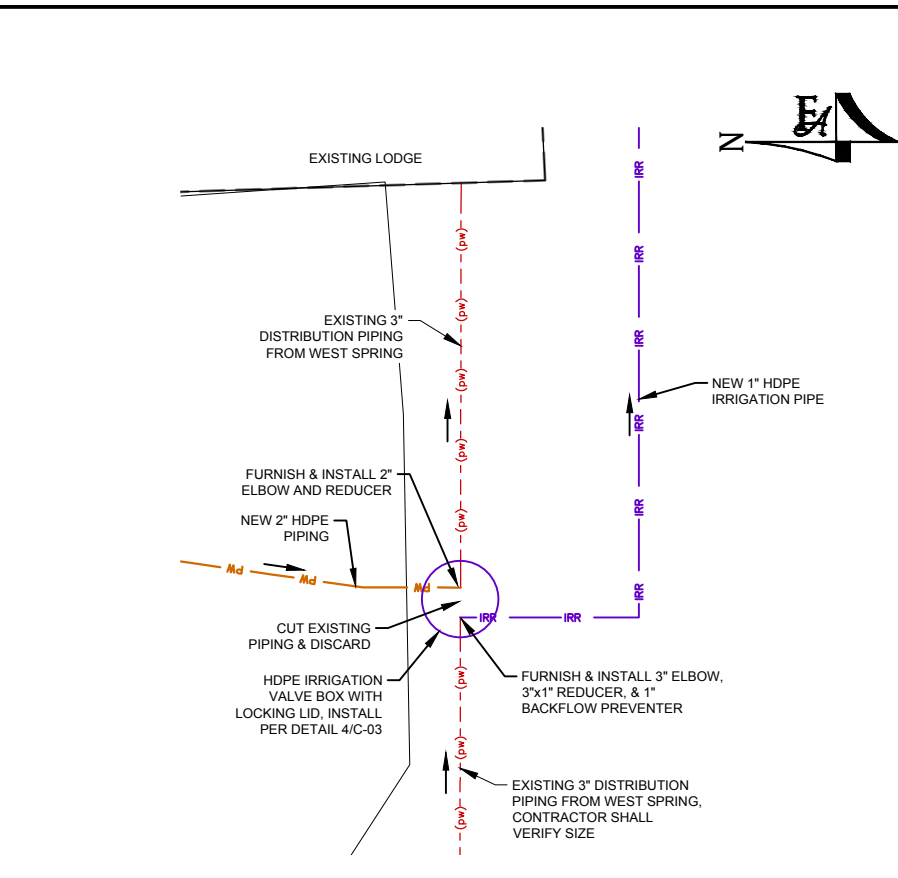
PIPE CONNECTION DETAIL
SCALE: N.T.S.

4



PIPE CONNECTION DETAIL
SCALE: N.T.S.

3



PIPE CONNECTION DETAIL
SCALE: N.T.S.

5

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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
CIVIL DETAILS

PROJECT NO:
05-16-0138
 SHEET NO:
C-06
 DATE: APR. 2017 PAGE NO: 09 OF 24

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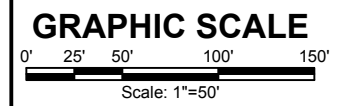


CONSTRUCTION NOTES:

1. CONTRACTOR SHALL RE-VEGETATE ALL AREAS DISTURBED BY CONSTRUCTION. SEED MIX SHALL CONTAIN AREA NATIVE GRASSES. SUBMIT PLAN AND DETAILS FOR APPROVAL BY ENGINEER.
2. MAINTAIN 24" MINIMUM BURY DEPTH TO TOP OF PIPE.
3. FURNISH & INSTALL HDPE PIPE FITTINGS AS NEEDED.
4. CONTRACTOR SHALL REPAIR DIRT ACCESS ROADS TO PRE-CONSTRUCTION CONDITIONS.
5. CONTRACTOR SHALL LOCATE HIGH POINTS ON TRANSMISSION PIPELINE FOR AIR RELEASE VALVE INSTALLATION, LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD LOCATED.
6. CONTRACTOR SHALL LOCATE LOW POINTS IN TRANSMISSION PIPELINE FOR DRAIN ASSEMBLY INSTALLATION, LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD LOCATED.
7. CONTRACTOR SHALL PROVIDE ASPHALT PATCH WHERE CUT FOR PIPE TRENCH. 3" ASPHALT OVER 8" ROAD BASE, ±1,400 SF.
8. LOCATE HACH CL17 CHLORINE ANALYZER IN CABIN, INCLUDE ALL NECESSARY COMPONENTS FOR A COMPLETE & FUNCTIONAL SYSTEM PER MANUFACTURER'S RECOMMENDATIONS, FIELD COORDINATE LOCATION W/ FACILITY MANAGER.
9. PROVIDE NEW WATER CONNECTION FOR POOL FILLING WITH BALL VALVE & CHECK VALVE. COORDINATE LOCATION & SIZE WITH FACILITY MANAGER AND POOL PROFESSIONAL.

LEGEND

- PW — SUPPLY PIPING TO WETWELL
- PW — DISTRIBUTION PIPING TO SYSTEM
- PW — PUMPED PIPING TO STORAGE TANK
- - - (PW) - EX. WATER PIPELINES
- - - (PW) - EX. WATER PIPELINES (ABANDONED)
- IRR — IRRIGATION PIPING



BID SET

NO.	REVISIONS	BY	DATE

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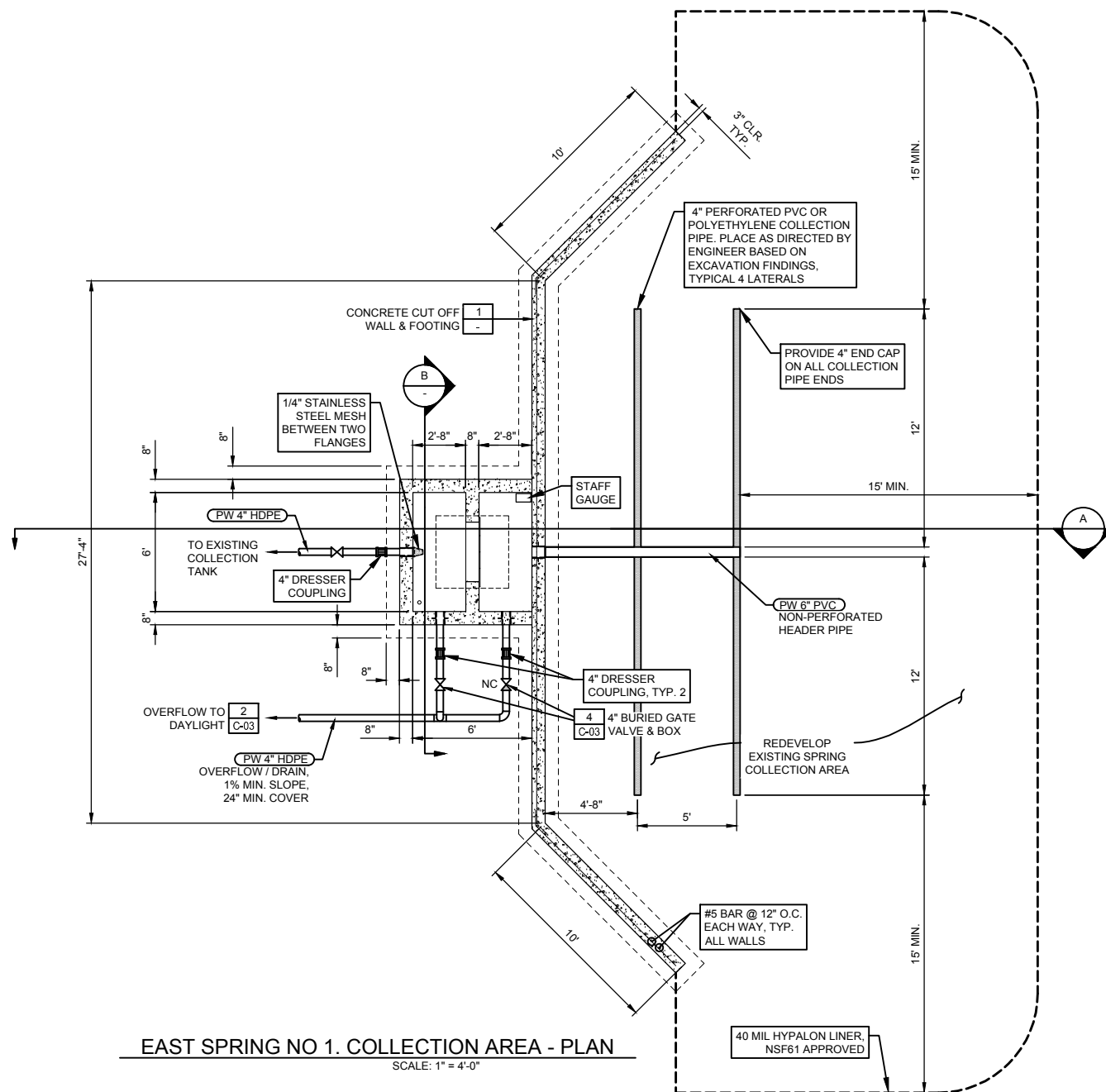
Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

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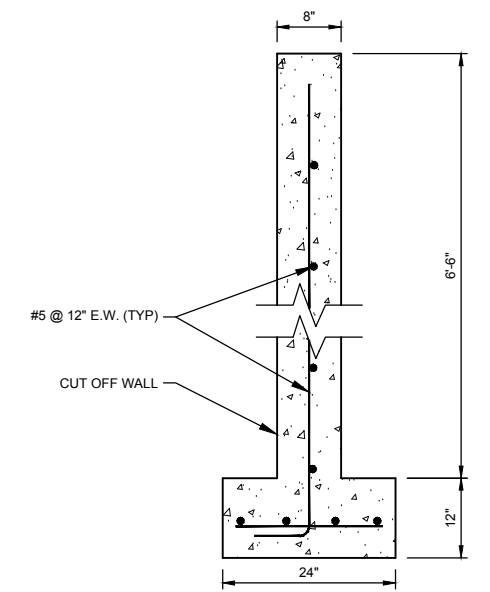
VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
OVERALL SITE PLAN

PROJECT NO: 05-16-0138	PAGE NO: 10 OF 24
SHEET NO: C-100	DATE: APR. 2017

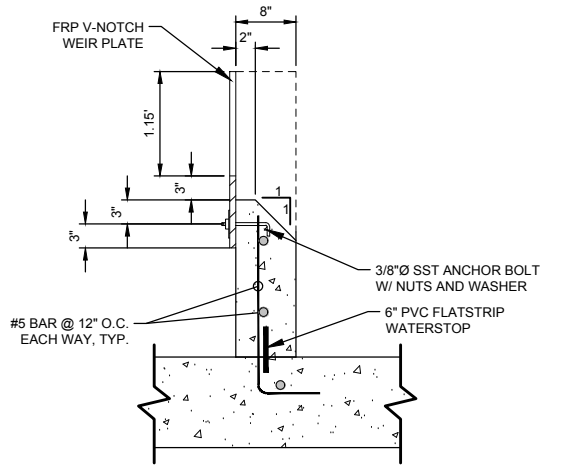


EAST SPRING NO 1. COLLECTION AREA - PLAN
SCALE: 1" = 4'-0"

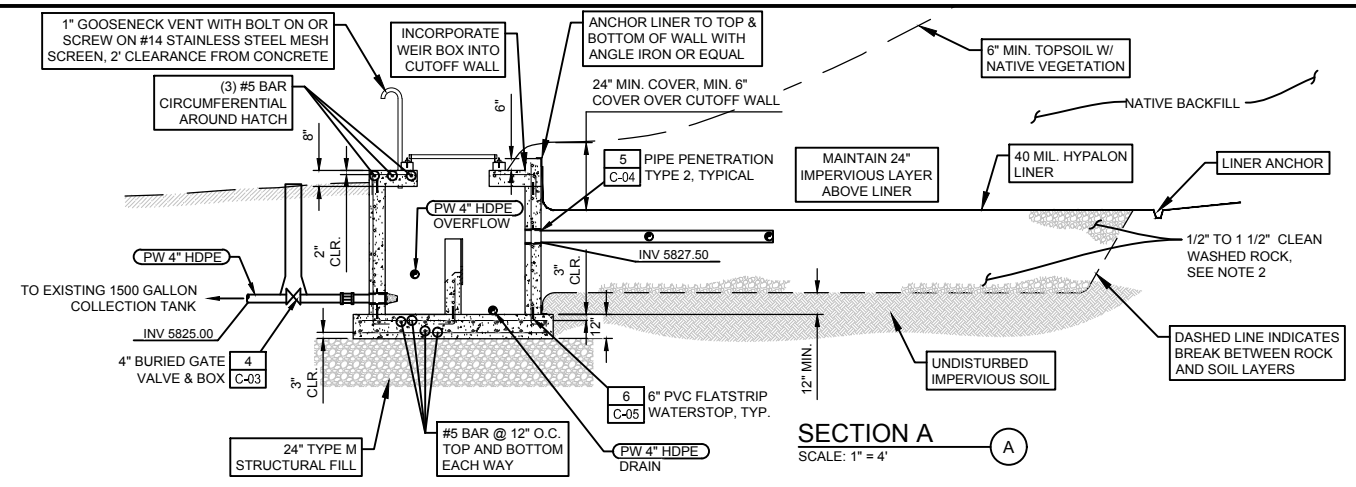
- CONSTRUCTION NOTES:**
1. DIMENSIONS WILL BE MODIFIED AS REQUIRED BASED ON ACTUAL DEPTH OF PIPE AND HYDRAULIC GRADES AS FIELD VERIFIED BY CONTRACTOR.
 2. ADD CALCIUM HYPOCHLORITE POWDER TO ROCK DURING PLACEMENT FOR DISINFECTION.
 3. CONTRACTOR SHALL RE-VEGETATE ALL AREAS DISTURBED BY CONSTRUCTION. SEED MIX SHALL CONTAIN AREA NATIVE GRASSES. SUBMIT PLAN AND DETAILS FOR APPROVAL BY ENGINEER.
 4. MAINTAIN 24" MINIMUM BURY DEPTH TO TOP OF PIPE.
 5. FURNISH & INSTALL HDPE PIPE FITTINGS AS NEEDED.
 6. ALL SEAMS IN THE LINER SHALL BE FOLDED OR WELDED TO PREVENT LEAKAGE.
 7. THE LINER SHALL BE INSTALLED IN A MANNER AS TO ASSURE ITS INTEGRITY. NO STONES, 2-INCHES OR LARGER OR SHARP EDGED, SHALL BE LOCATED WITHIN 2-INCHES OF THE LINER.
 8. A MINIMUM OF 2-FEET OF RELATIVELY IMPERVIOUS SOIL COVER SHALL BE PLACED OVER THE IMPERMEABLE LINER.
 9. FURNISH & INSTALL LEVEL TROLL 300, ZIPTIE TRANSDUCER TO 2" PERFORATE PVC POLE W/ GRADUATION MARKINGS ON POLE @ 1" INTERVALS. INCLUDE 10-FT CABLE. COORDINATE WITH FACILITY MANAGER FOR PREFERRED INSTALLATION.



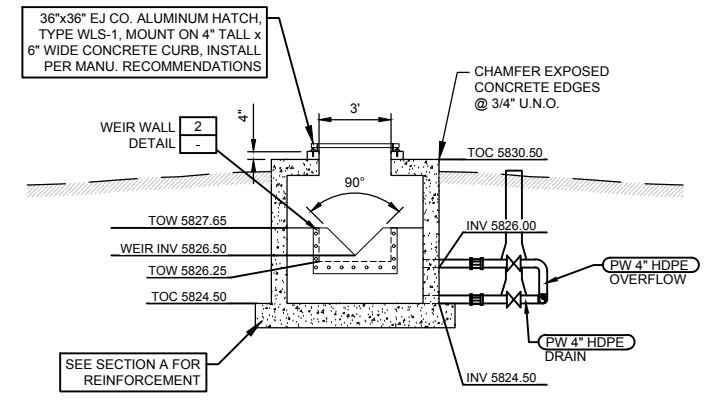
CONCRETE CUTOFF WALL & FOOTING DETAIL 1
SCALE: N.T.S.



WEIR WALL DETAIL 2
SCALE: N.T.S.



SECTION A
SCALE: 1" = 4'



SECTION B
SCALE: 1" = 4'

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 QA J. BROOME

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Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

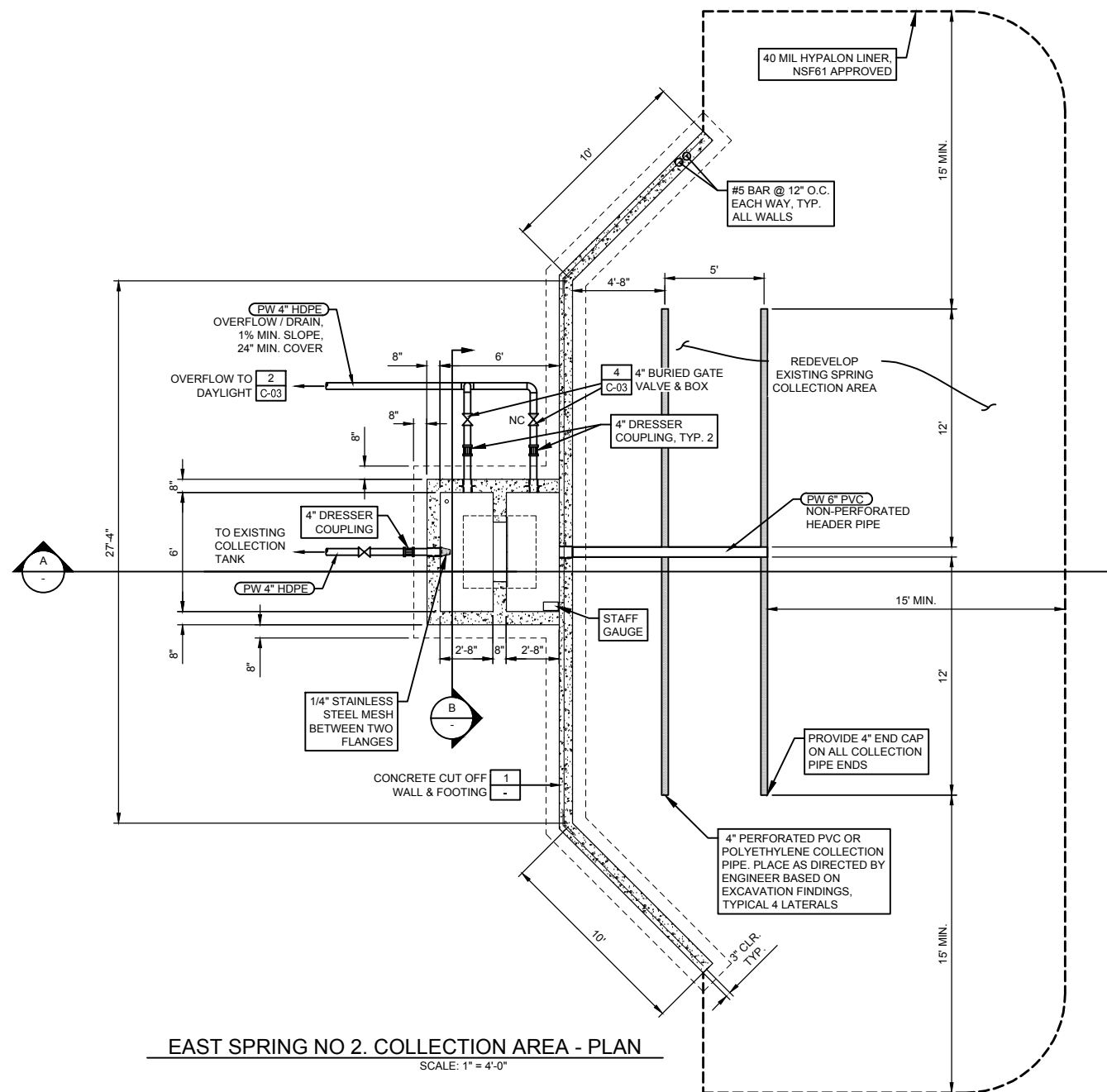
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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
EAST SPRING NO. 1 DETAILS

PROJECT NO: **05-16-0138**
SHEET NO: **C-101**
DATE: APR. 2017
PAGE NO: 11 OF 24

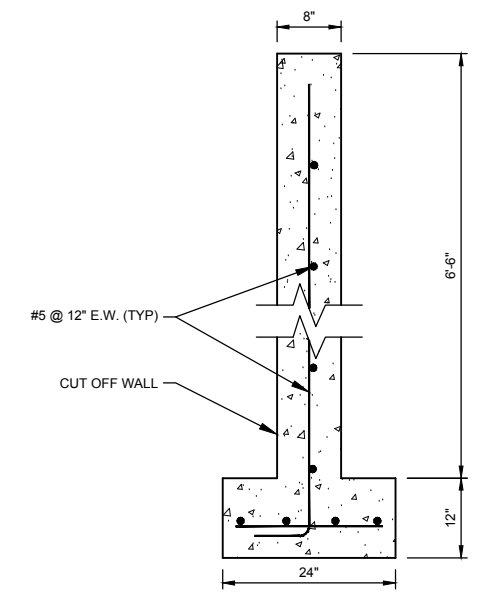
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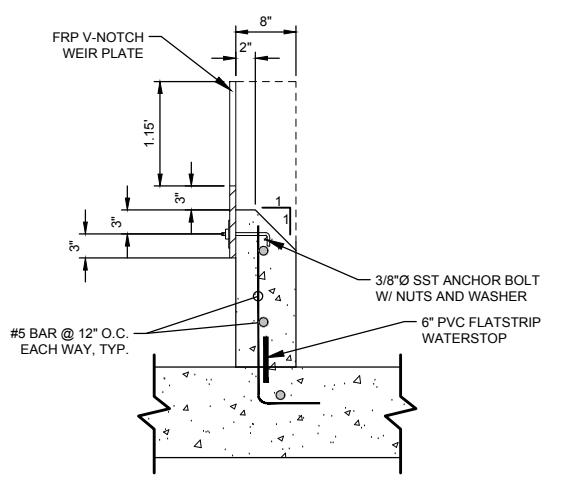
EAST SPRING NO 2. COLLECTION AREA - PLAN
SCALE: 1" = 4'-0"

CONSTRUCTION NOTES:

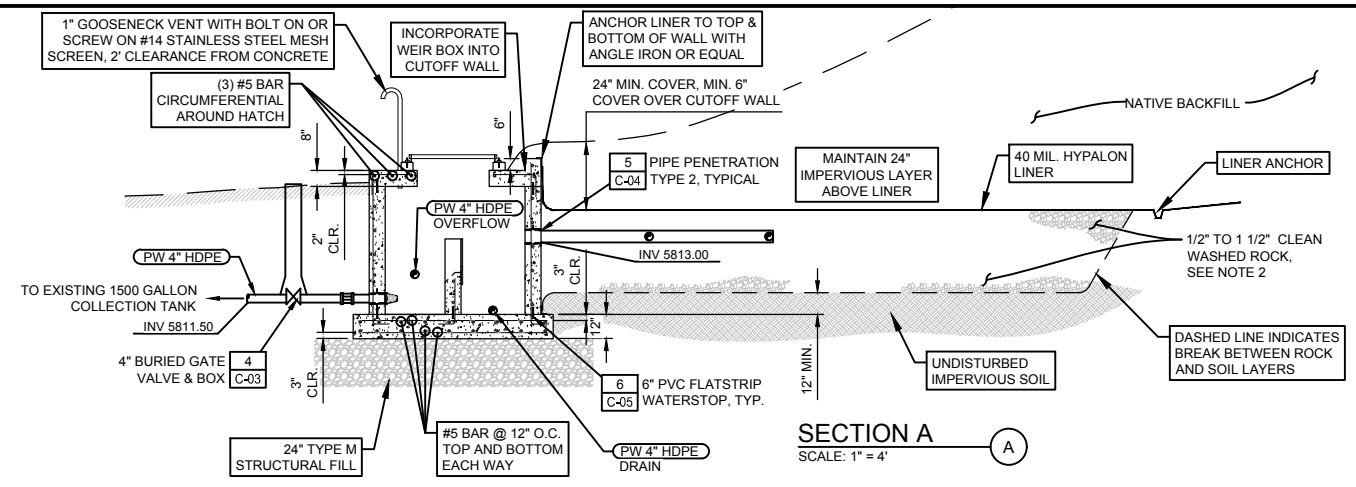
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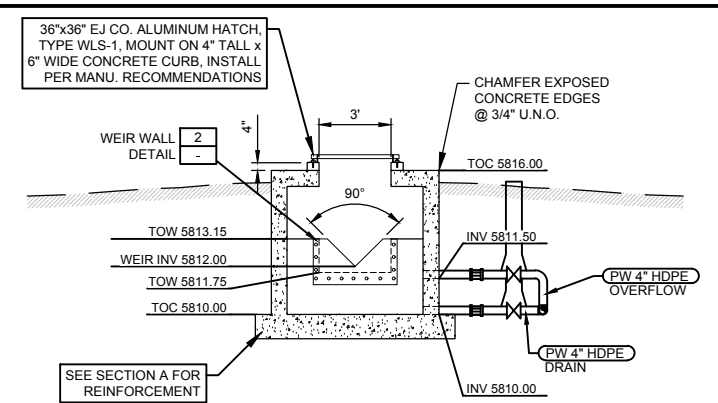
CONCRETE CUTOFF WALL & FOOTING DETAIL
SCALE: N.T.S. 1



WEIR WALL DETAIL
SCALE: N.T.S. 2



SECTION A
SCALE: 1" = 4'



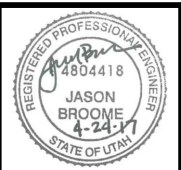
SECTION B
SCALE: 1" = 4'

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Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

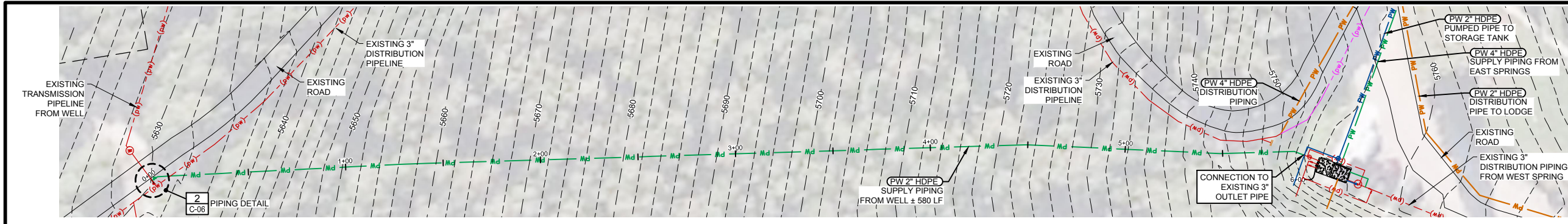
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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
EAST SPRING NO. 2 DETAILS

PROJECT NO: **05-16-0138**
SHEET NO: **C-102**
DATE: APR. 2017
PAGE NO: 12 OF 24

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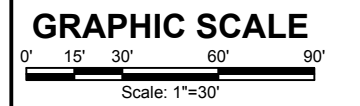
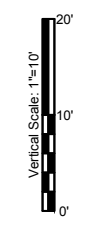
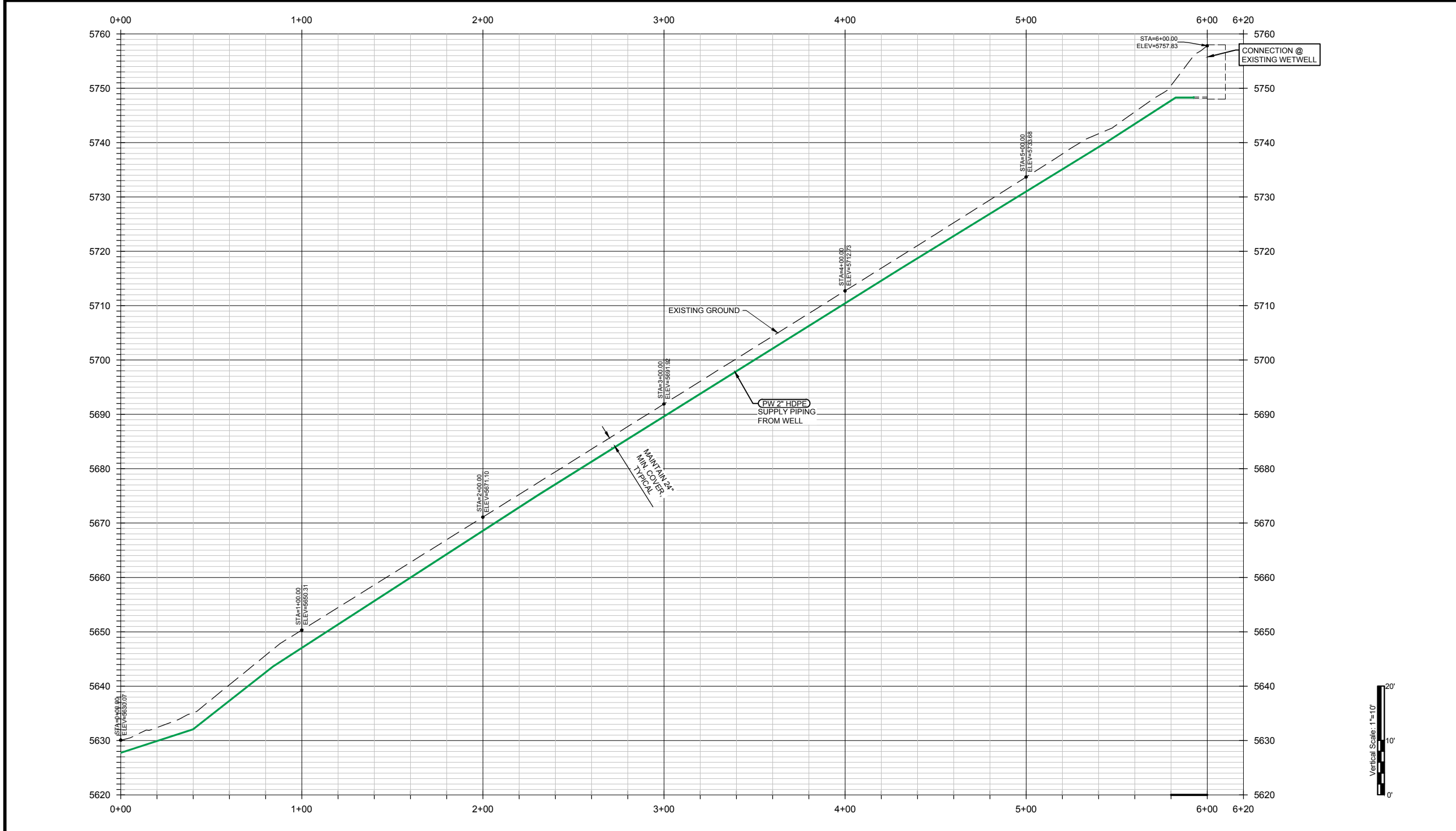


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7. CONTRACTOR SHALL PROVIDE ASPHALT PATCH WHERE CUT FOR PIPE TRENCH. 3" ASPHALT OVER 8" ROAD BASE.

LEGEND

- PW — SUPPLY PIPING TO WETWELL
- PW — DISTRIBUTION PIPING TO SYSTEM
- PW — PUMPED PIPING TO STORAGE TANK
- - - (pw) - EX. WATER PIPELINES
- - - (pw) - EX. WATER PIPELINES (ABANDONED)
- IRR — IRRIGATION PIPING



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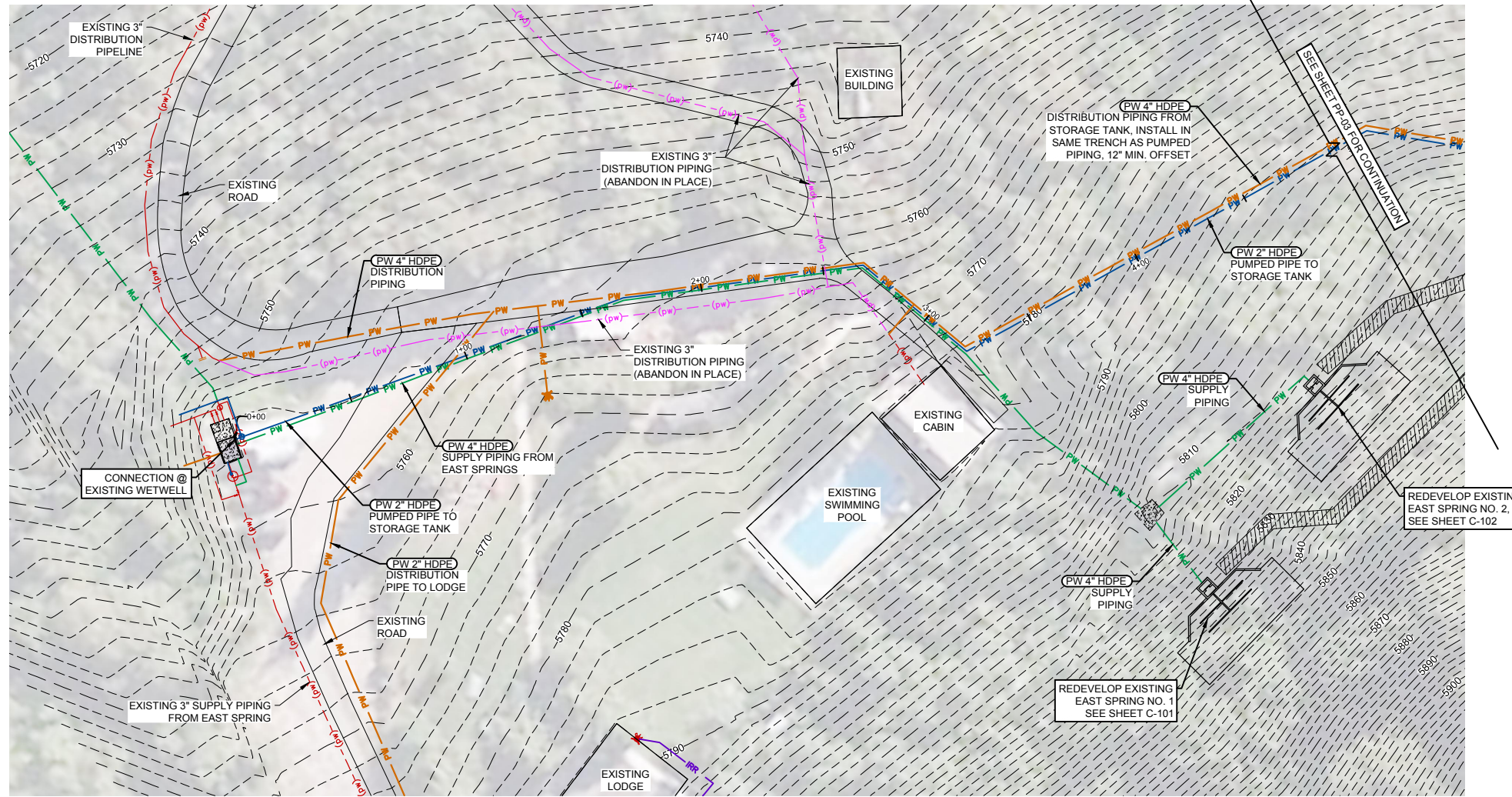
Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

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WATER SYSTEM IMPROVEMENTS PIPING PLAN & PROFILE
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PROJECT NO: 05-16-0138	PAGE NO: 13 OF 24
SHEET NO: PP-01	DATE: APR. 2017

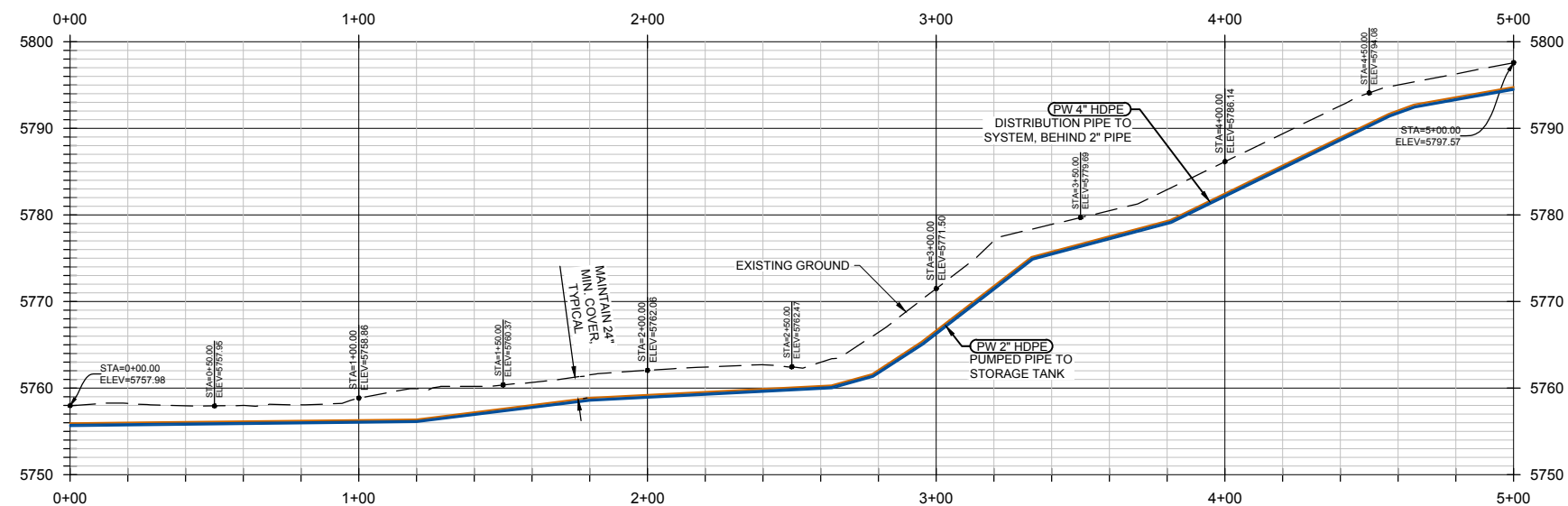


CONSTRUCTION NOTES:

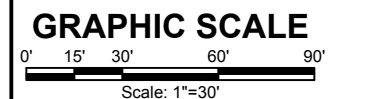
1. CONTRACTOR SHALL RE-VEGETATE ALL AREAS DISTURBED BY CONSTRUCTION. SEED MIX SHALL CONTAIN AREA NATIVE GRASSES. SUBMIT PLAN AND DETAILS FOR APPROVAL BY ENGINEER.
2. MAINTAIN 24" MINIMUM BURY DEPTH TO TOP OF PIPE.
3. FURNISH & INSTALL HDPE PIPE FITTINGS AS NEEDED.
4. CONTRACTOR SHALL REPAIR DIRT ACCESS ROADS TO PRE-CONSTRUCTION CONDITIONS.
5. CONTRACTOR SHALL LOCATE HIGH POINTS ON TRANSMISSION PIPELINE FOR AIR RELEASE VALVE INSTALLATION, LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD LOCATED.
6. CONTRACTOR SHALL LOCATE LOW POINTS IN TRANSMISSION PIPELINE FOR DRAIN ASSEMBLY INSTALLATION, LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD LOCATED.
7. CONTRACTOR SHALL PROVIDE ASPHALT PATCH WHERE CUT FOR PIPE TRENCH. 3" ASPHALT OVER 8" ROAD BASE.

LEGEND

- PW — SUPPLY PIPING TO WETWELL
- PW — DISTRIBUTION PIPING TO SYSTEM
- PW — PUMPED PIPING TO STORAGE TANK
- (pw) - EX. WATER PIPELINES
- (pw) - EX. WATER PIPELINES (ABANDONED)
- IRR — IRRIGATION PIPING



Vertical Scale: 1"=5'

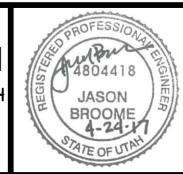


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 QA J. BROOME

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Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

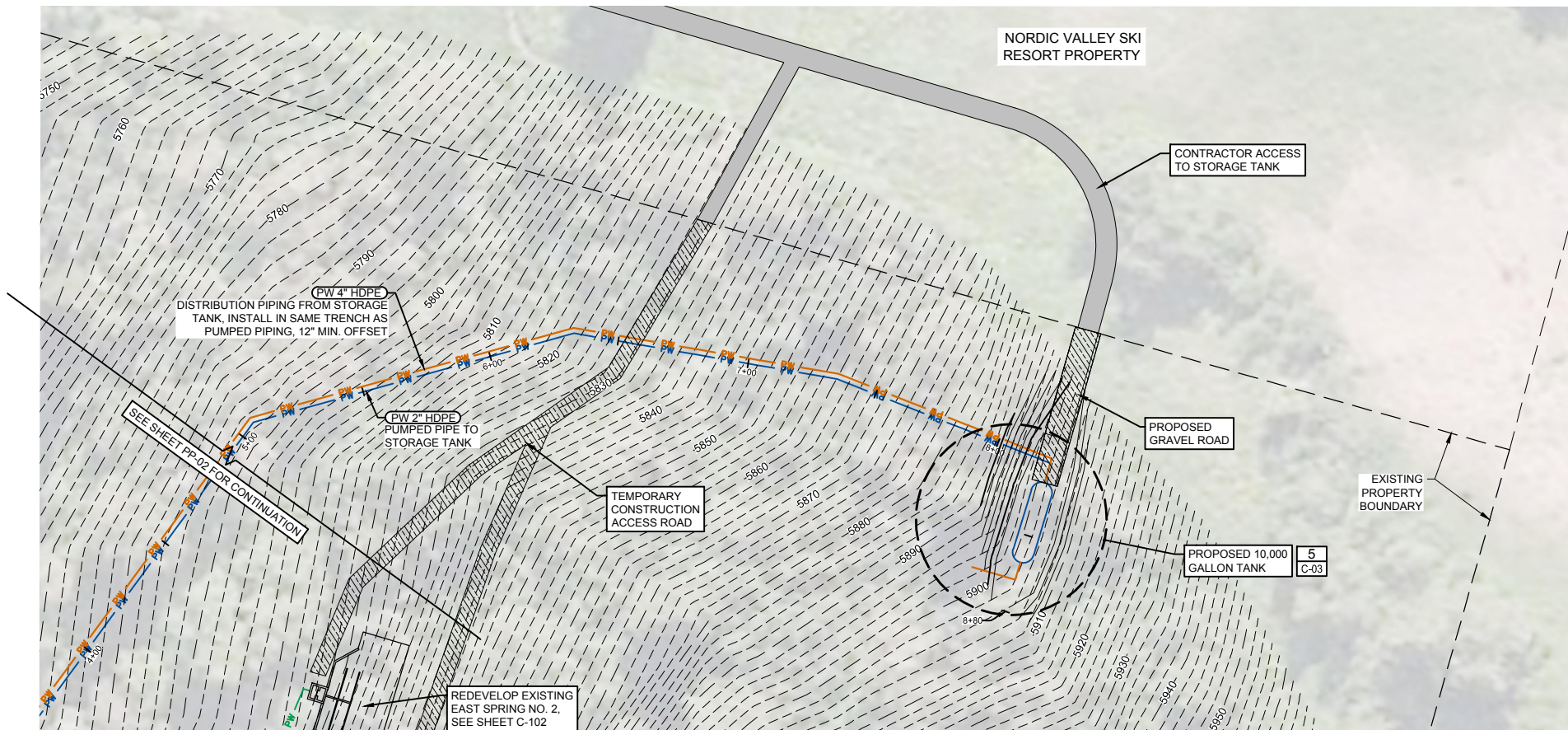
FORSGREN Associates Inc.
 370 EAST 500 SOUTH, STE 200, SALT LAKE CITY, UT 84111
 PH: 801.364.4785 FAX: 801.364.4802



VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS PIPING PLAN & PROFILE
 0+00 - 5+00

PROJECT NO: **05-16-0138**
 SHEET NO: **PP-02**
 DATE: APR. 2017 PAGE NO: 14 OF 24

BID SET

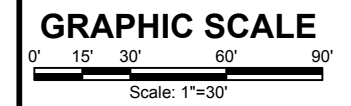
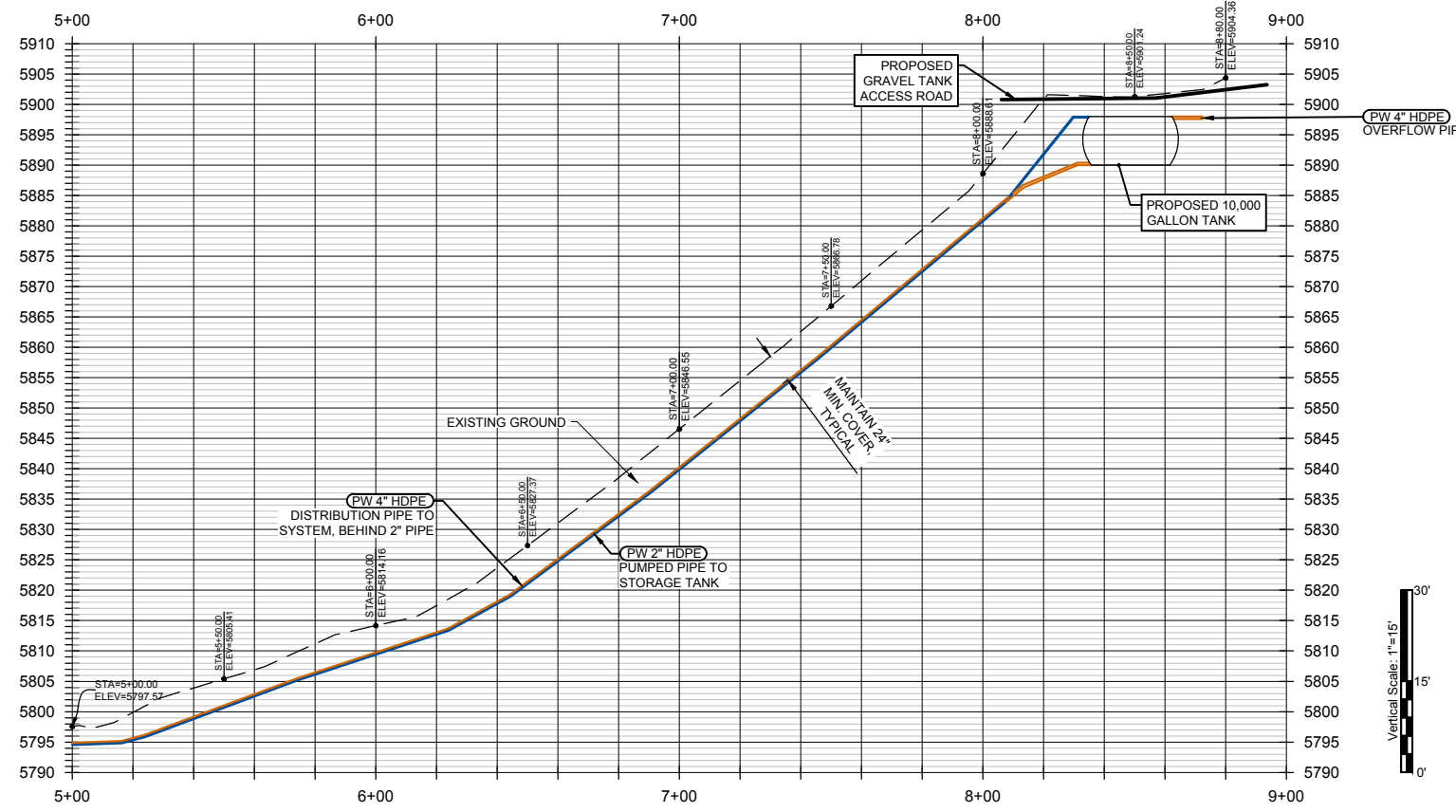


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2. MAINTAIN 24\"/>

LEGEND

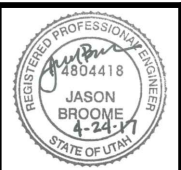
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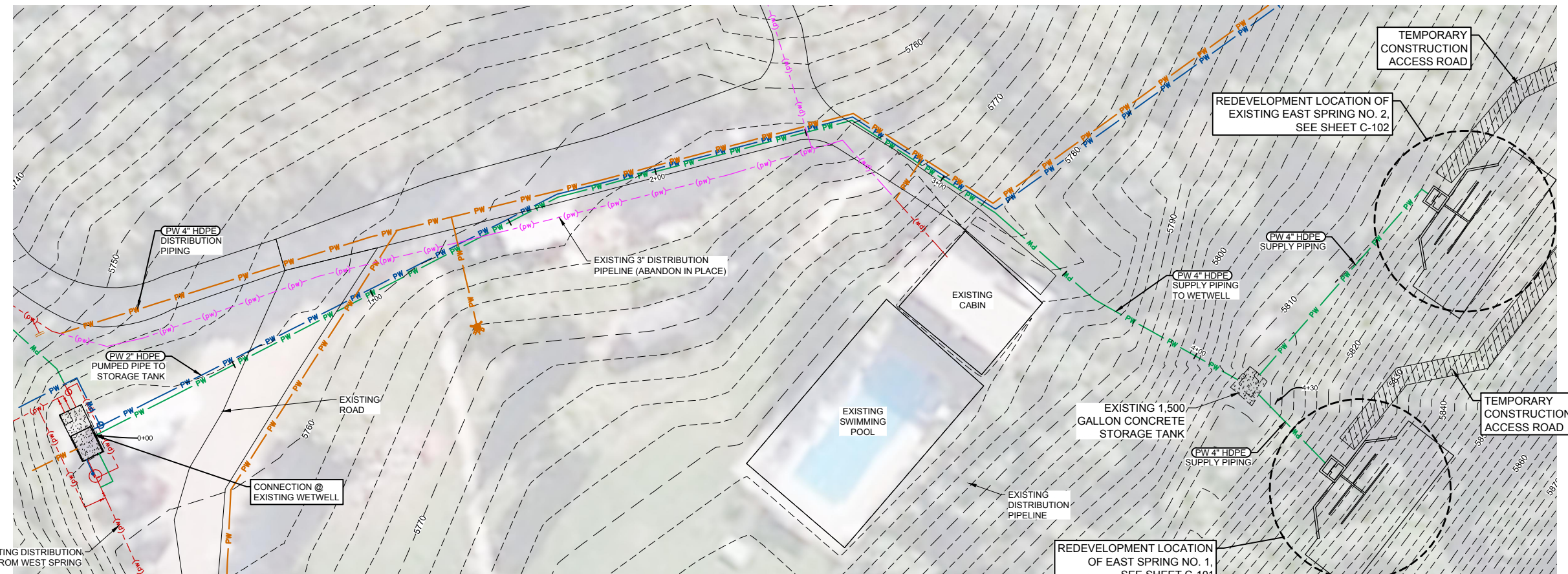
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PROJECT NO:
05-16-0138
SHEET NO:
PP-03
DATE:
APR. 2017
PAGE NO:
15 OF 24

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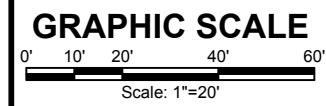
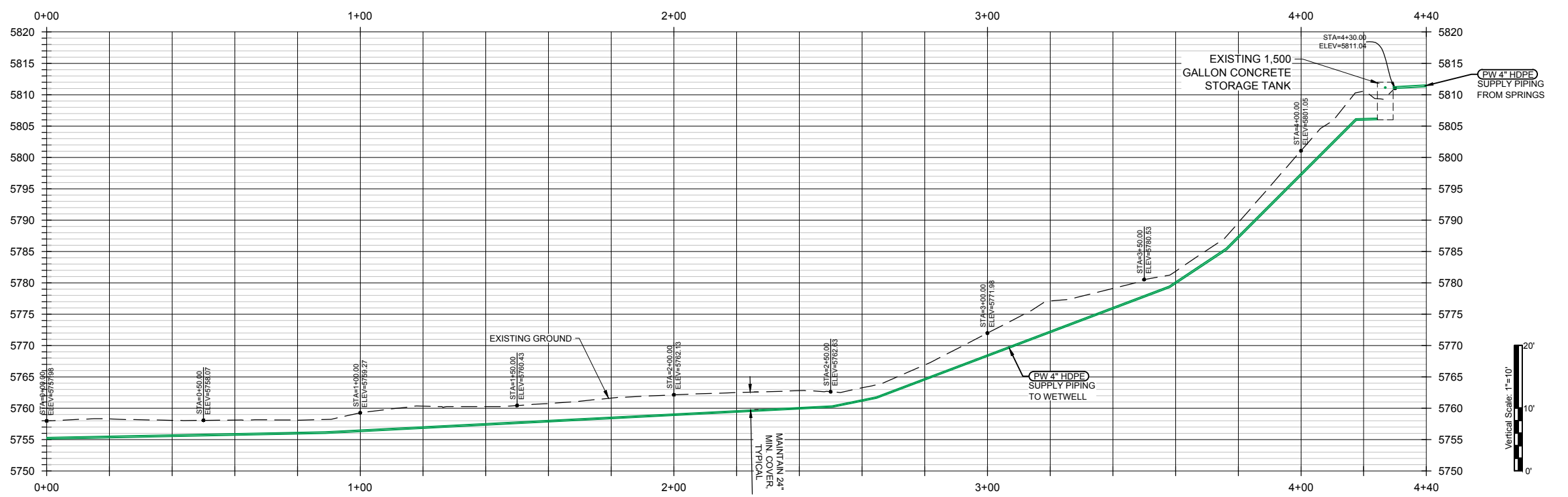


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7. CONTRACTOR SHALL REPAIR ASPHALT ROAD TO PRE-CONSTRUCTION CONDITIONS. SEE DETAIL 1/C-04 PAVEMENT TRENCH PATCH.

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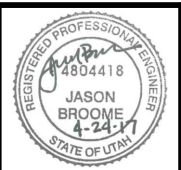


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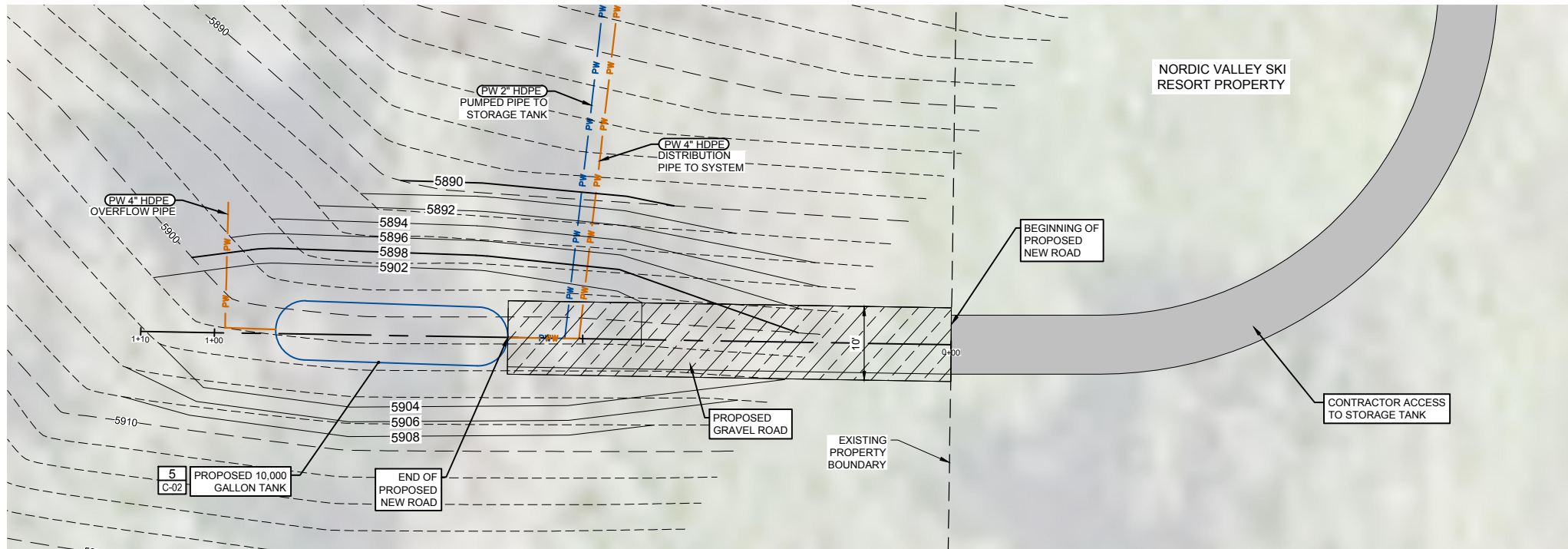
Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

FORSGREN Associates Inc.
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PROJECT NO: 05-16-0138	PAGE NO: 16 OF 24
SHEET NO: PP-04	DATE: APR. 2017

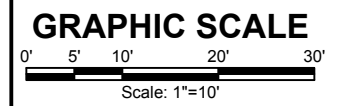
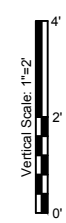
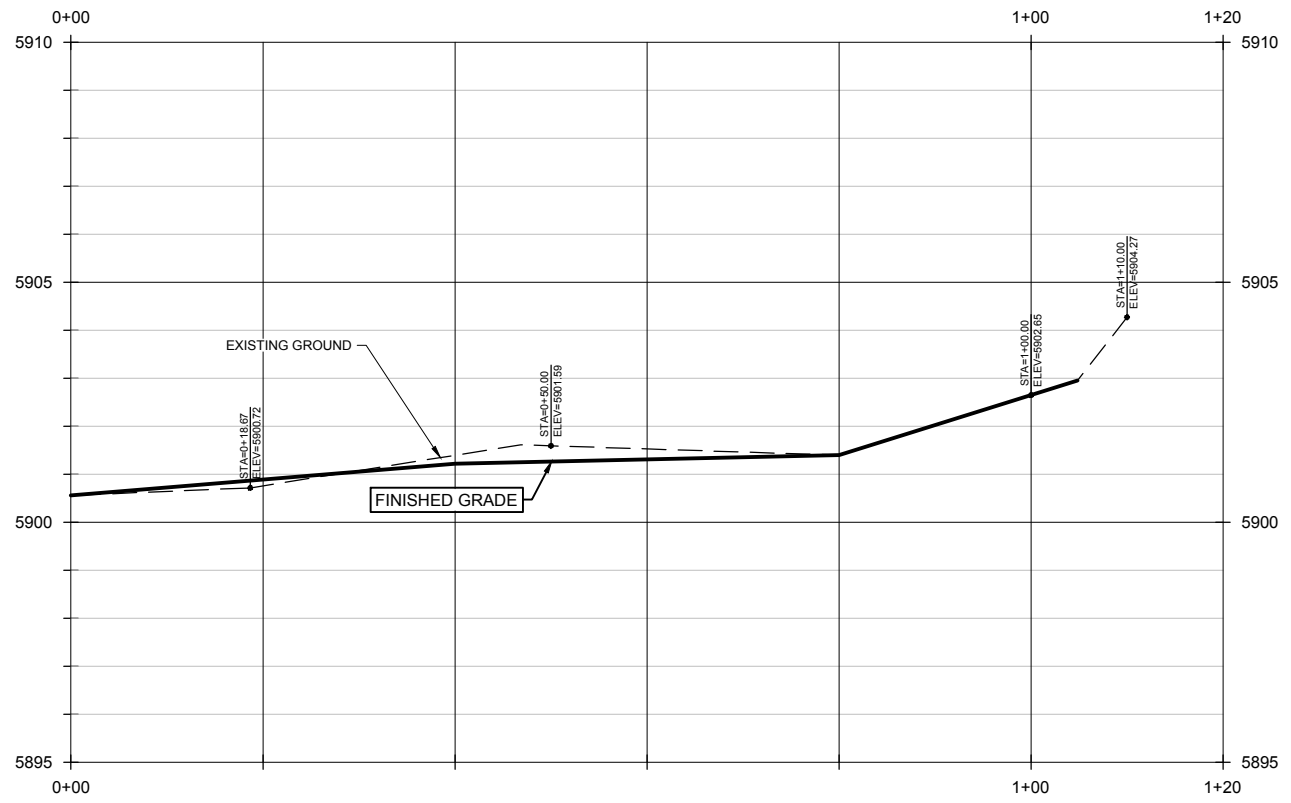


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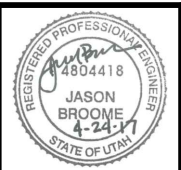
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 DESIGNED N. PATTERSON
 APPROVED J. BROOME
 QA J. BROOME

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ACCESS ROAD PLAN & PROFILE
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PROJECT NO: 05-16-0138	PAGE NO: 17 OF 24
SHEET NO: PP-05	DATE: APR. 2017

ELECTRICAL SYMBOL LEGEND

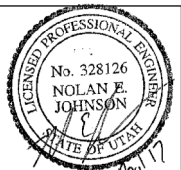
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION					
	DUPLEX RECEPTACLE		TELEPHONE OUTLET, RECESSED CEILING MOUNTED		TEMPERATURE ELEMENT		MC CONNECTION					
	DUPLEX RECEPTACLE, RECESSED FLOOR MOUNTED		ETHERNET / TELEPHONE JACK # INDICATES NUMBER OF DATA AND VOICE JACKS RESPECTIVELY		TEMPERATURE INDICATING TRANSMITTER		MOTOR					
	DUPLEX RECEPTACLE, RECESSED CEILING MOUNTED		ETHERNET / TELEPHONE JACK, RECESSED FLOOR MOUNTED		TEMPERATURE SWITCH		DEVICE LOCATED AT REMOTE LOCATION.					
	QUADRAPLEX RECEPTACLE		ETHERNET / TELEPHONE JACK, RECESSED CEILING MOUNTED		TEMPERATURE TRANSMITTER		FUSE					
	QUADRAPLEX RECEPTACLE, RECESSED FLOOR MOUNTED		TELEPHONE TERMINAL BOARD		LIMIT OR POSITION SWITCH		NODE OR CONNECTION					
	QUADRAPLEX RECEPTACLE, RECESSED CEILING MOUNTED		SECURITY CAMERA		EMERGENCY STOP PUSH BUTTON (MAINTAINED)		TERMINAL LUG, STRIP, OR POWER DISTRIBUTION BLOCK					
	ISOLATED GROUND TYPE DUPLEX RECEPTACLE		SPEAKER		NORMALLY CLOSED PUSH BUTTON		TRANSFORMER					
	SPECIAL PURPOSE OR WELDING OUTLET.		ANTENNA MAST		LOCKOUT STOP PUSH BUTTON		HEATING ELEMENT					
	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE.		CABLE TV OUTLET		NORMALLY OPEN PUSH BUTTON		LINE REACTOR					
	WEATHERPROOF CONVENIENCE OUTLET		MANUAL PULL STATION MOUNTED AT 48" A.F.F.		CONTACT - TIME DELAY		GROUND CONNECTION					
	WIRE MOLD		HORN		T.C. = NORMALLY OPEN W/ TIME DELAY CLOSING. I.C. - T.O. = NORMALLY OPEN WITH INSTANT CLOSING AND TIME DELAY OPENING. T.C.-T.O. = NORMALLY OPEN W/ TIME DELAY CLOSING AND TIME DELAY OPENING AFTER DEENERGIZATION.		BOND TO METALLIC WATER PIPE					
	FLUSH FLOOR DEVICE BOX		HORNSTROBE W/ MINI HORN		T.O. = NORMALLY CLOSED WITH TIME DELAY OPENING. I.O.-T.C. = NORMALLY CLOSED WITH TIME DELAY CLOSING AND TIME DELAY OPENING AFTER DEENERGIZATION.		BOND TO METALLIC WATER PIPE					
	HOME RUN TO PANEL - INDICATING 2 #12, #12 GND, 3/4" CONDUIT OR AS SHOWN.		STROBE ONLY		NORMALLY OPEN CONTACT		BOND TO BUILDING STEEL					
	HOME RUN TO PANEL - INDICATING NUMBER OF CONDUCTORS - #12 OR AS SHOWN.		HORNSTROBE		NORMALLY CLOSED CONTACT		GENERATOR					
	HOME RUN TO PANEL SHOWING BRANCH CIRCUIT NUMBERS.		BELL		LIMIT SWITCH		SCADA NETWORK DATA DROP 4-1 1/1 6" OUTLET BOX W/ 1 GANG RING AND ONE CAT. 5e JACK, CAT. 5e PLENUM CABLE TO SCADA PATCH PANEL. TERMINATE AND TEST. RUN IN 3/4" CONDUIT.					
	HATCH MARKS IN CONDUIT RUN DENOTES NUMBER OF CONDUCTORS IN CONDUIT. LONG HATCH MARK DENOTES GROUND CONDUCTOR. SIZE OF CONDUCTORS TO BE #12 AWG CONDUCTORS IN CONDUIT UNLESS NOTED OTHERWISE. UNMARKED CONDUITS SHALL BE 3/4" WITH 3 #12.		SMOKE DETECTOR		PRESSURE SWITCH LOW		OFFICE NETWORK DATA DROP. 4-1 1/1 6" OUTLET BOX W/ 1 GANG RING AND ONE CAT. 6 JACK, CAT. 6 PLENUM TO OFFICE NETWORK PATCH PANEL. TERMINATE AND TEST. RUN IN 3/4" CONDUIT.					
	CONDUIT SEALOFF		HEAT DETECTOR		PRESSURE SWITCH HIGH		VOICE DROP. 4-1 1/1 6" OUTLET BO W/ 1 GANG RING ONE CAT. 3 VOICE JACK, CAT. 3 PLENUM. TERMINATE AND TEST. RUN IN 3/4" CONDUIT.					
	DENOTES EXISTING EQUIPMENT OR DEVICES		DUCT SMOKE DETECTOR		FLOW SWITCH	ELECTRICAL LINETYPES						
	THERMOSTAT		AUXILIARY RELAY		LEVEL FLOAT SWITCH							
	MOTOR, X = HORSE POWER		AUXILIARY RELAY CONNECT TO FAN STOP CIRCUIT/ DOOR HOLDERS/DAMPER MOTOR AS APPLICABLE.		TEMPERATURE SWITCH		EXPOSED CONDUIT					
	CEILING EXHAUST FAN		VOICE COMMUNICATION PANEL		DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES.		UNDERGROUND CONDUIT					
	ROOFTOP EXHAUST FAN		ELECTRIC SHUTOFF		CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR, SHOWN WITH TRIP RATING AND NUMBER OF POLES.		BARE COPPER GROUND CONDUCTOR					
	JUNCTION BOX		SMOKE/PRESSURIZATION CONTROL		FUSEHOLDER OR FUSEBLOCK		EXISTING EXPOSED CONDUIT					
	GROUND ROD WITH TEST WELL AS INDICATED		CONTROL PANEL		3 POSITION SELECTOR SWITCH HAND - OFF - AUTO, POSITION LEGEND: X=CLOSED O=OPEN		EXISTING UNDERGROUND CONDUIT					
	ELECTRICAL PANEL, POWER OR LIGHTING		DOOR HOLD-OPEN DEVICE		2 POSITION SELECTOR SWITCH, POSITION LEGEND: X=CLOSED O=OPEN		CAPPED UNDERGROUND CONDUIT OR STUBBUP					
	METER BASE		ADDRESSABLE RELAY MONITORING MODULE		TIMER RELAY CONTACT INSTANTANEOUS CLOSE TIME DELAY OPEN.		NEW ELECTRICAL EQUIPMENT					
	COMBINATION MOTOR STARTER, SEE SPECS		SPRINKLER FLOW SWITCH		TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE.		DETAIL VIEW, MATCHING, OR PACKAGED EQUIPMENT.					
	DISCONNECT SWITCH. VOLTAGE RATING NEMA ENCLOSURE FUSE (NF-NO FUSE) POLES SIZE (AMPS)		SPRINKLER TAMPER SWITCH		FULL VOLTAGE NONREVERSING (FVNR) MOTOR STARTER OR CONTACTOR NUMBER DESIGNATES NEMA SIZE.		FUTURE					
	CONDUIT DROP		COMMUNICATOR		RTU, PLC, OR RIO CONTACT		CONDUIT RISE					
	CONDUIT RISE		TRANSPONDER OR TRANSMITTER		UTILITY METER		DEMOLITION					
	DEMOLITION		FIRE SYSTEM ANNUNCIATOR		BEACON ALARM LIGHT. LETTER INDICATES COLOR: R=RED, A=AMBER, B=BLUE, G=GREEN	CONDUIT CALLOUT						
	DEMOLITION		ANALYZER ELEMENT		PILOT LIGHT. LETTER INDICATES COLOR: R=RED, A=AMBER, B=BLUE, G=GREEN							
	RELAY		ANALYZING INDICATING TRANSMITTER		RELAY	<table border="1"> <tr> <th>TAG</th> <th>DESCRIPTION</th> </tr> <tr> <td>COXX</td> <td>GROUPED CONDUIT AND CIRCUIT IDENTIFICATION TAGS. REFER TO THE ONE-LINE DIAGRAM, POWER AND CONTROL CONDUIT SCHEDULES FOR CONDUIT SIZES AND CONTENTS:</td> </tr> <tr> <td>PXXX</td> <td>C-CONTROL/INSTRUMENTATION P-POWER</td> </tr> </table>	TAG	DESCRIPTION	COXX	GROUPED CONDUIT AND CIRCUIT IDENTIFICATION TAGS. REFER TO THE ONE-LINE DIAGRAM, POWER AND CONTROL CONDUIT SCHEDULES FOR CONDUIT SIZES AND CONTENTS:	PXXX	C-CONTROL/INSTRUMENTATION P-POWER
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	RELAY		ANALYZING INDICATING TRANSMITTER		TIME DELAY RELAY							
	KIRK KEY INTERLOCK		CONDUCTIVITY ELEMENT		ALARM RELAY							
	DAMPER MOTOR		COMBUSTIBLE GAS DETECTOR		ELAPSED TIME METER							
	LIGHTING FIXTURE TYPE - SEE FIXTURE SCHEDULE.		CONDUCTIVITY INDICATING TRANSMITTER		MOTOR STARTER OR CONTACTOR COIL							
	SINGLE POLE SWITCH		FLOW ELEMENT		ELECTRONIC OVERLOAD RELAY							
	3 WAY SWITCH		FLOW INDICATING TRANSMITTER		SOLID STATE REDUCED VOLTAGE STARTER							
	4 WAY SWITCH		FLOW SWITCH		VARIABLE FREQUENCY DRIVE							
	WALL MOUNTED MOTION SENSOR		LEVEL ELEMENT		HARMONIC FILTER							
	CEILING MOUNTED MOTION SENSOR		LEVEL INDICATING TRANSMITTER		CURRENT TRANSFORMER							
	PHOTOCELL		LEVEL SWITCH		THERMAL OVERLOAD RELAY							
	ETHERNET OUTLET, NUMBER INDICATES NUMBER OF JACKS.		LEVEL TRANSMITTER		LTC CONNECTION							
	ETHERNET OUTLET, RECESSED FLOOR MOUNTED		MOISTURE ELEMENT									
	ETHERNET OUTLET, RECESSED CEILING MOUNTED		MOTOR OPERATED VALVE OR GATE									
	TELEPHONE OUTLET, NUMBER INDICATES NUMBER OF JACKS.		OVER TORQUE SWTCH									
	TELEPHONE OUTLET, RECESSED FLOOR MOUNTED		PUSH BUTTON									
	TELEPHONE OUTLET, RECESSED FLOOR MOUNTED		PRESSURE INDICATING TRANSMITTER									
			PRESSURE SWITCH									
			PRESSURE TRANSMITTER									
			SPEED SWITCH									
			SOLENOID OPERATED VALVE									

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NO.	REVISIONS	BY	DATE

DRAWN	N.D. JOHNSON
DESIGNED	N.E. JOHNSON
APPROVED	N.E. JOHNSON
QA	R. CLARK

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HEATH Engineering Company
Mechanical/Electrical/Plumbing Consultants
37 West 800 South Salt Lake City, Utah 84111 Tel: 801.333.9400 Fax: 801.333.9400

VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
ELECTRICAL SYMBOL LEGEND

PROJECT NO:	05-16-0138
SHEET NO:	E-001
DATE:	MAR. 2017
PAGE NO:	18 OF 24

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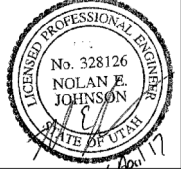
PANEL A														
VOLTAGE: 120/240				MAIN LUGS ONLY				BUS AMPS: 125						
ENCLOSURE: NEMA 3R				CIRCUIT BREAKER TYPE: BOLT-ON				COPPER WINDINGS AND BUSSING						
				INTERRUPTING CAPACITY: 10 KAC				MOUNTING: SURFACE						
								LOCATION: AS INDICATED						
NOTES	BRANCH CKT BRKR			CONN. LOAD (VA)	DESCRIPTION	PHASE			DESCRIPTION	CONN. LOAD (VA)	BRANCH CKT BRKR			
	#	AMP	P.			A	B	C			P.	AMP	#	NOTES
	1	20	1	200	FLOW METER	1256			BOOSTER PUMP (1 HP)	1056	2	15	2	
	3	20	1	225	DOSING PUMP			1281	--	1056	--	--	4	
	5	20	1	250	LIGHTING	250			SPARE		1	20	6	
	7	20	1	400	RECEPTACLES			400	SPARE		1	20	8	
	9	20	1	500	SPARE	500			SPARE		1	20	10	
	11	20	1		SPARE			0	SPARE		1	20	12	
	13	20	1	250	LIGHTING	250			SPARE		1	20	14	
	15	20	1	400	RECEPTACLES			400	SPARE		1	20	16	
	17					0			SPARE		1	20	18	
PHASE SUBTOTALS (VA)						2006		1681						
PHASE TOTALS (KVA)						2.0		1.7						
PHASE TOTALS @ 120 V (AMPS)						16.7		14.0						

NOTES:
1.-
2.-
3.-

LIGHTING FIXTURE SCHEDULE						
TYPE	VOLTAGE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP(S)	NOTES
F1	120-277	LITHONIA METALUX BEGHELLI DAY BRITE	DMW2 L24 4000LM ACL WD MVOLT GZ1 35K 80CRI 4VT2 LD4 4 DR W UNV L835 CD1 WL 55 B5100LED 4 HT LO WT35 120-277V 55 D W A E 43L 835 4 UNV WHP	2' VAPOR TIGHT LED, NON-METALLIC, FIBERGLASS HOUSING, HIGH IMPACT DR ACRYLIC DIFFUSER, (MOISTURE TIGHT) STAINLESS STEEL LATCHES AND MOUNTING BRACKETS.	30 W 3500K LEDS	
F2	120-277	GARDCO LITHONIA HUBBEL LUMARK	I 21 CWL MT 351A NW UNIV BRP WST LED P1 30K VW MVOLT TRP 30L 4K 070 4 U DB LDWP FC 3B ED 7040	LED WALL PACK, DIE CAST ALUMINUM HOUSING, MEDIUM THROW, GLASS LENS, DARK BRONZE FINISH.	37 W 4500K LEDS	

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370 East 500 South, Salt Lake City, Utah 84111 Tel: 801.364.4785 Fax: 801.364.4802

VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
ELECTRICAL SCHEDULES

PROJECT NO:	05-16-0138
SHEET NO:	E-002
DATE:	MAR. 2017
PAGE NO:	19 OF 24

BID SET



DRAWING NOTES

- 1 PROVIDE AND INSTALL NEW FOUR FLOATS WITHIN TANK. PUMP START, PUMP STOP, HIGH LEVEL ALARM, LOW LEVEL ALARM. CONNECT EACH TO CABLES FROM PUMP STATION.
- 2 PROVIDE AND INSTALL NEW IN GROUND 24"x18" PULL BOX. DO NOT SPLICE CONDUCTORS.
- 3 PROVIDE AND INSTALL NEW FLOAT WITHIN TANK FOR LOW SUCTION TO STOP PUMP BEFORE TANK GOES DRY. SEE DETAIL.
- 4 REMOVE EXISTING WELL PUMP CONTROL FLOATS. PROVIDE AND INSTALL NEW FLOATS. CONNECT TO EXISTING WIRING. FIELD COORDINATE.
- 5 CONTINUE WITHIN BUILDING TO POWER PANEL. SEE ONE-LINE DIAGRAM.
- 6 TORK 24-HOUR, 7-DAY ELECTRONIC TIME CLOCK TO CONTROL CL2 RESIDUAL AND SOLENOID VALVE. SEE ONE-LINE DIAGRAM. INTERMATIC #ET1700 SERIES OF EQUAL. CORD AND PLUG CONNECT TO 120V RECEPTACLE.
- 7 CL2 ANALYZER. CONTROLLED BY TIME CLOCK. CONNECT TO TIME CLOCK WITH 3/4" CONDUIT, 2#12, 1#12 G.
- 8 CL2 SAMPLE SOLENOID VALVE OPEN WHEN TIME CLOCK CALLS FOR SAMPLE. CONNECT TO TIME CLOCK WITH 3/4" 2#12, 1#12 G.

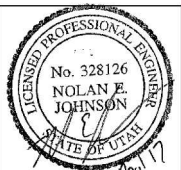
ELECTRICAL SITE PLAN
 SCALE: 1"=50'-0"
 50 0 50 100



NO.	REVISIONS	BY	DATE

DRAWN N.D. JOHNSON
 DESIGNED N.E. JOHNSON
 APPROVED N.E. JOHNSON
 QA R. CLARK

ATTENTION
 LINE IS 2 INCHES
 AT FULL SIZE
 (IF NOT 2"-SCALE ACCORDINGLY)



Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

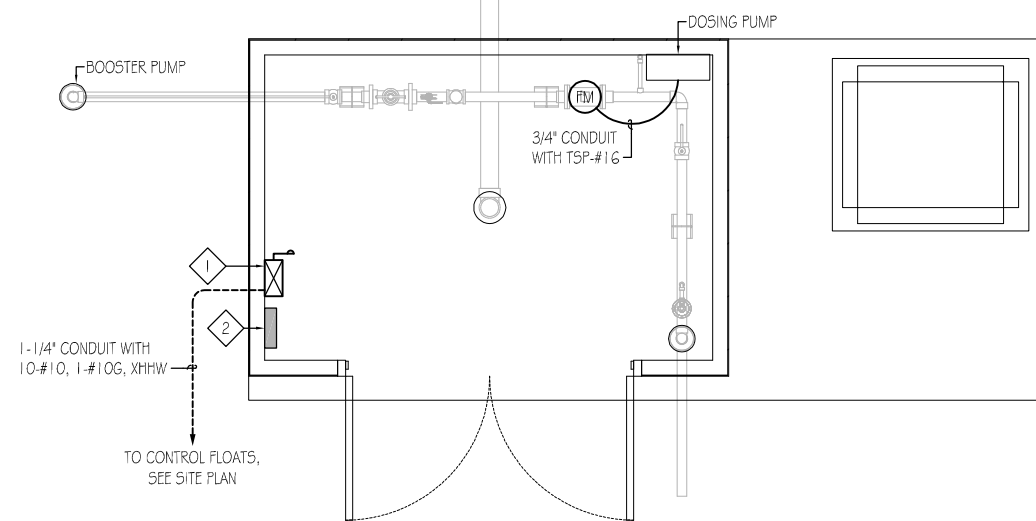
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 370 EAST 500 SOUTH, STE 200, SALT LAKE CITY, UT 84111
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HEATH
 Engineering Company
 Mechanical/Electrical/Plumbing Consultants
 377 West 800 North Salt Lake City, Utah 84103 Tel: 801.322-9607 Fax: 801.322-9608

VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
ELECTRICAL SITE PLAN

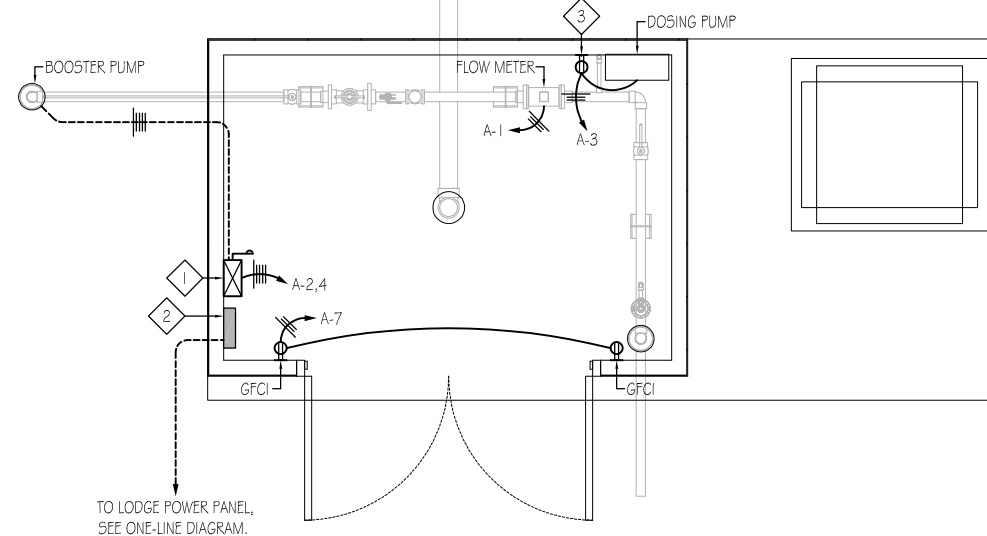
BID SET
 PROJECT NO: **05-16-0138**
 SHEET NO: **E-100**
 DATE: MAR. 2017 PAGE NO: 20 OF 24

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BOOSTER PUMP STATION CONTROLS PLAN

SCALE: 1/2"=1'-0"
 2 0 5

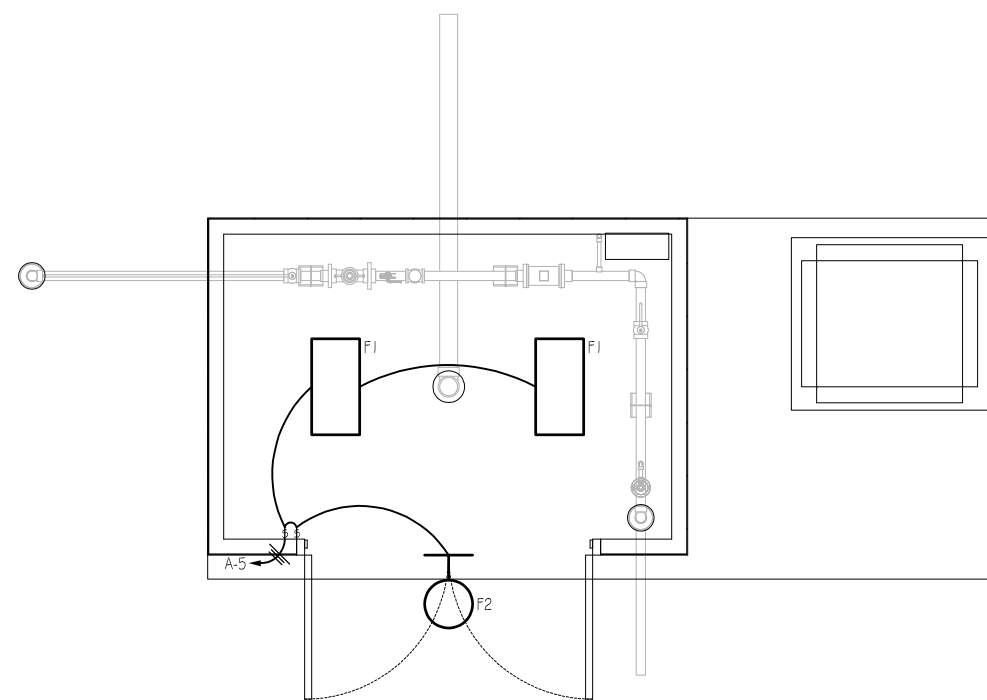


BOOSTER PUMP STATION POWER PLAN

SCALE: 1/2"=1'-0"
 2 0 5

DRAWING NOTES

- 1 COMBINATION FUSED SWITCH (30/2LPM-RK-12-5P/3R/HD/250) AND 2-POLE SIZE 0 STARTER WITH OVERLOADS SIZED PER NAMEPLATE, H.O.A. SWITCH, PILOT LIGHT, AUX CONTACTORS, CONTROL POWER TRANSFORMER.
- 2 PANEL 'A', 120/240V, 1Ø, 3W. SEE SCHEDULE.
- 3 CORD AND PLUG CONNECT TO DOSING PUMP.



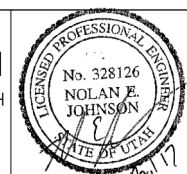
BOOSTER PUMP STATION LIGHTING PLAN

SCALE: 1/2"=1'-0"
 2 0 5

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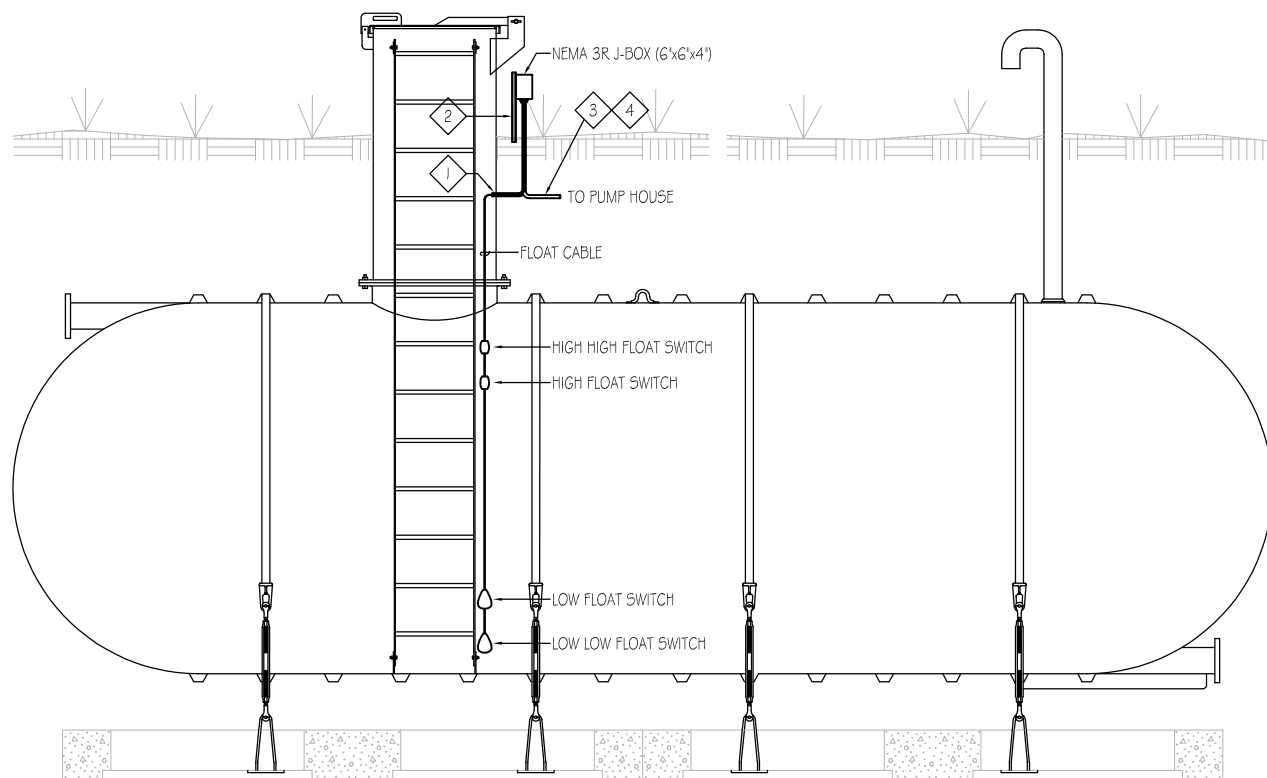
Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
ELECTRICAL PLANS

BID SET
 PROJECT NO: **05-16-0138**
 SHEET NO: **E-101**
 DATE: MAR. 2017 PAGE NO: 21 OF 24



TANK ELEVATION
SCALE: NONE

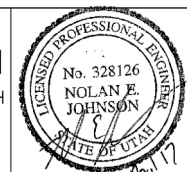
DRAWING NOTES

- 1 - 1/4" STUBBED INTO TANK HATCH. SEAL AROUND CABLES W/ SILICONE.
- 2 - UNISTRUT SUPPORT RACK SET IN 18" OF CONCRETE.
- 3 - ELECTRICAL CONDUIT TO FOLLOW PIPELINE ROUTE TO PUMP HOUSE.
- 4 - SEE SITE PLAN FOR CONDUIT CALLOUT

NO.	REVISIONS	BY	DATE

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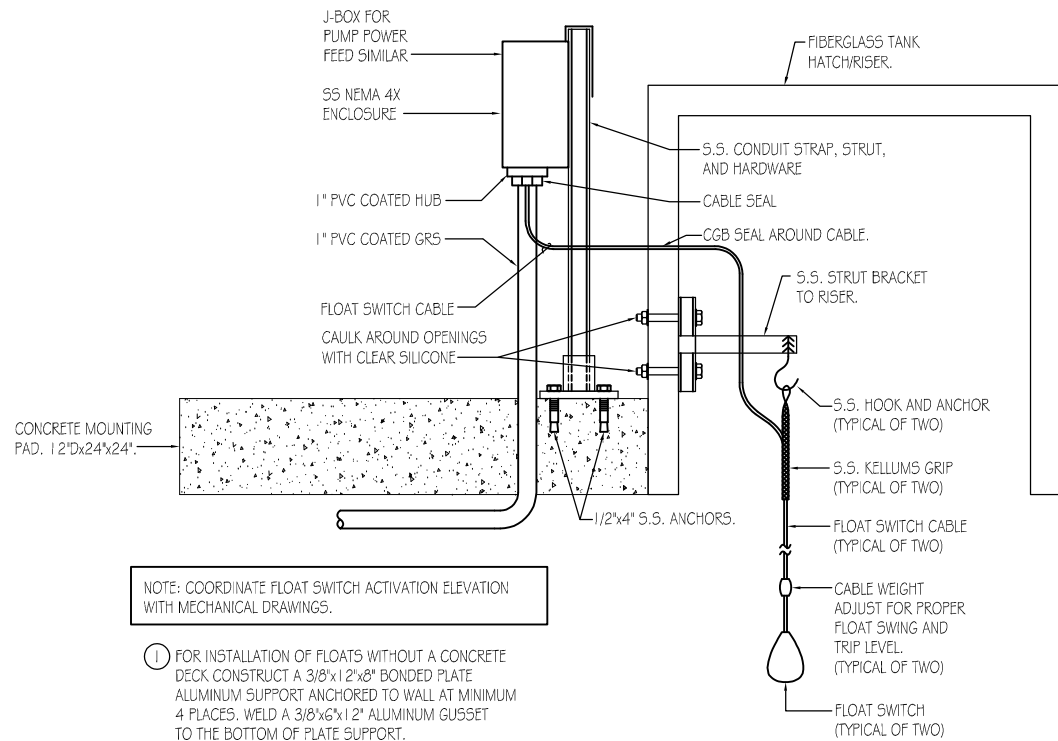
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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
TANK ELEVATION

BID SET
 PROJECT NO: **05-16-0138**
 SHEET NO: **E-201**
 DATE: MAR. 2017 PAGE NO: 22 OF 24



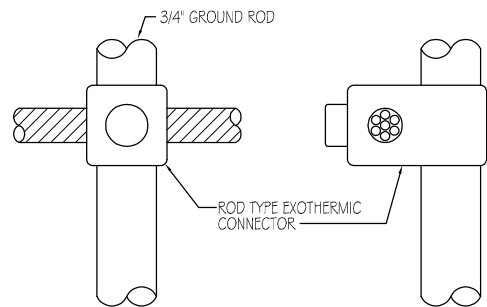
NOTE: COORDINATE FLOAT SWITCH ACTIVATION ELEVATION WITH MECHANICAL DRAWINGS.

1 FOR INSTALLATION OF FLOATS WITHOUT A CONCRETE DECK CONSTRUCT A 3/8"x1 2"x8" BONDED PLATE ALUMINUM SUPPORT ANCHORED TO WALL AT MINIMUM 4 PLACES. WELD A 3/8"x6"x1 2" ALUMINUM GUSSET TO THE BOTTOM OF PLATE SUPPORT.

FLOAT SWITCH MOUNTING DETAIL

SCALE: NONE

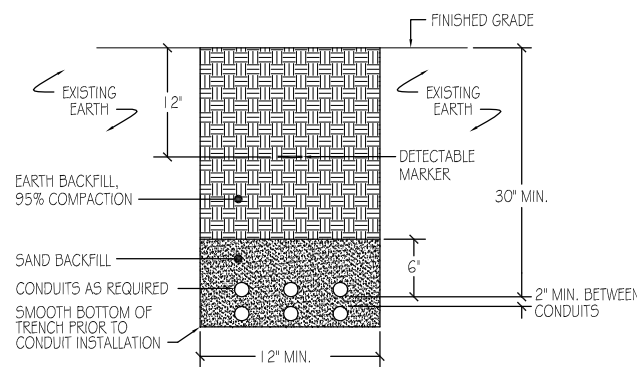
5
E-501



CABLE TO ROD CONNECTION DETAIL

SCALE: NONE

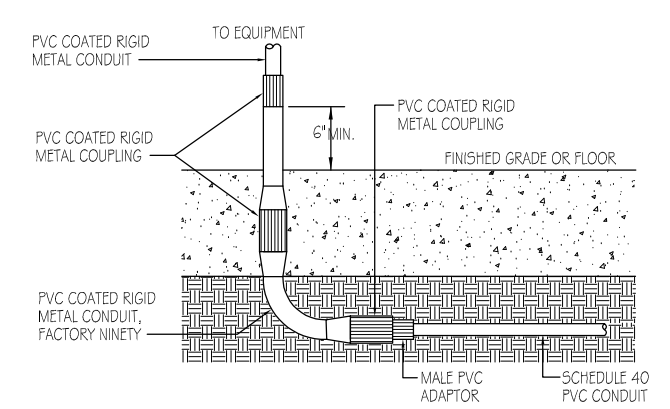
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E-501



TRENCH DETAIL - NATURAL RESTORATION

SCALE: NONE

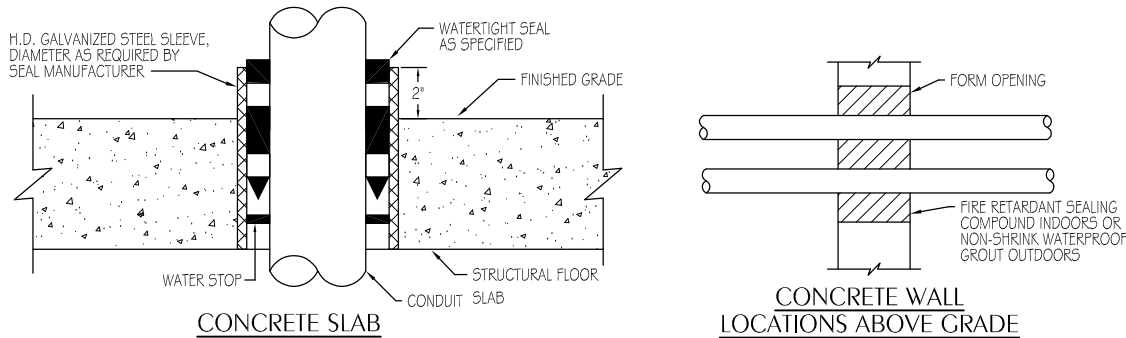
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E-501



CONDUIT RISER DETAIL

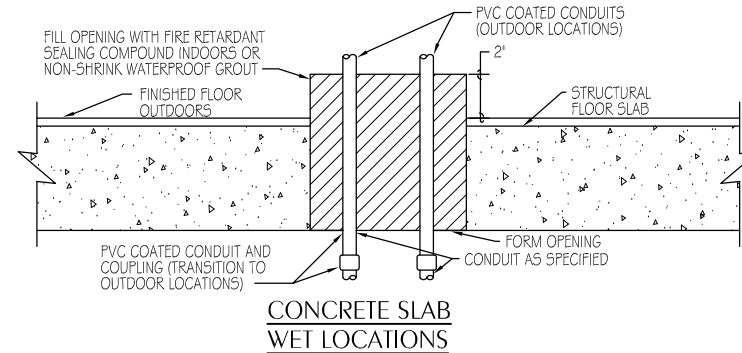
SCALE: NONE

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E-501



CONCRETE SLAB

CONCRETE WALL LOCATIONS ABOVE GRADE

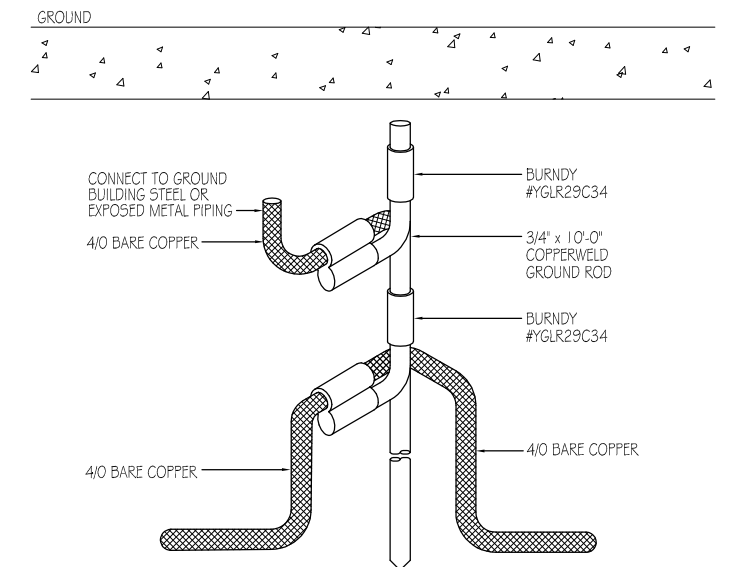


CONCRETE SLAB WET LOCATIONS

TYPICAL CONDUIT PENETRATIONS

SCALE: NONE

4
E-501



GROUND ROD DETAIL

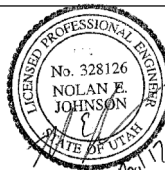
SCALE: NONE

2
E-501

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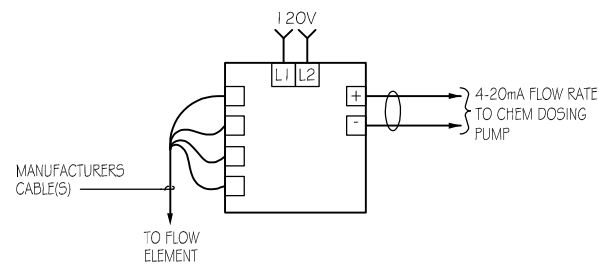


VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
ELECTRICAL DETAILS

PROJECT NO:
05-16-0138
 SHEET NO:
E-501
 DATE: MAR. 2017
 PAGE NO: 23 OF 24

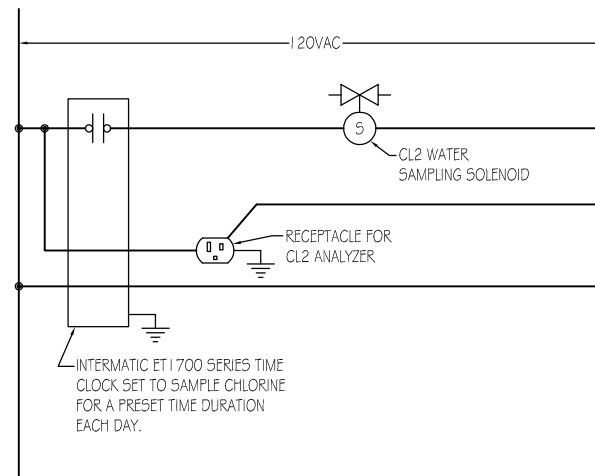
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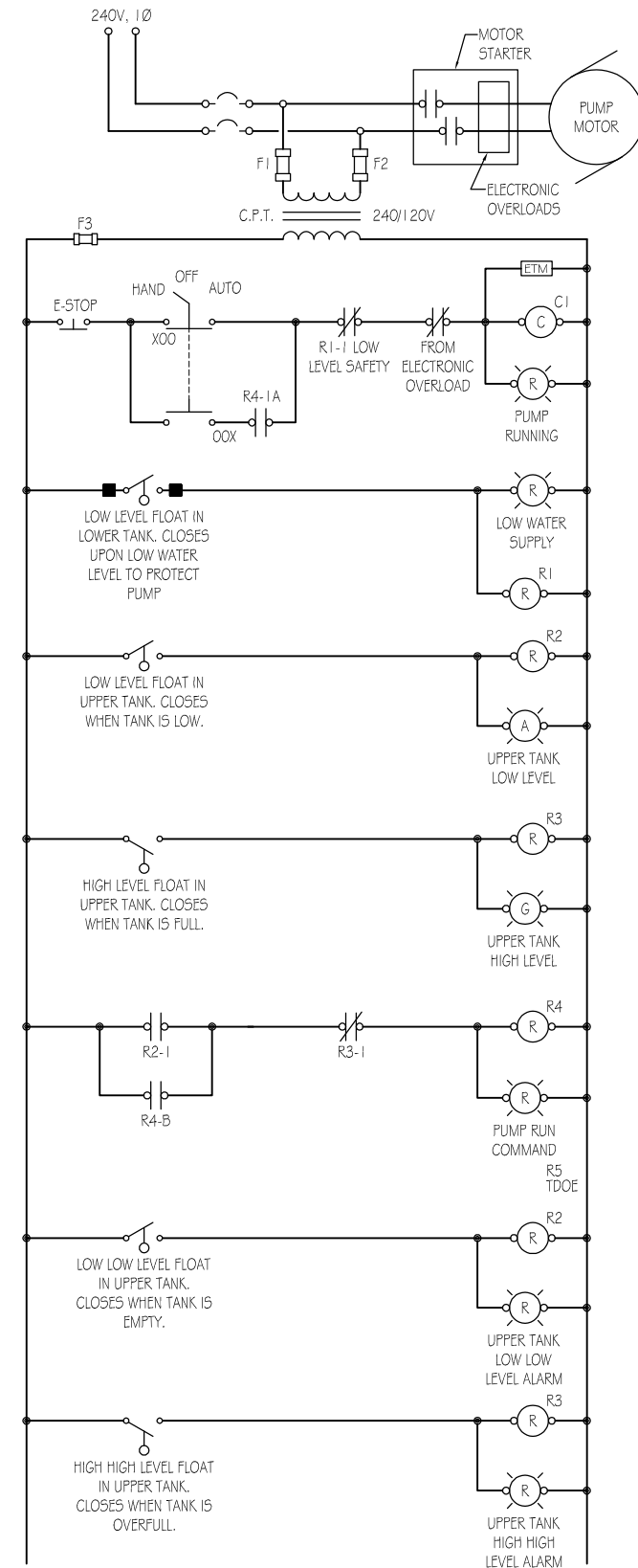
TYPICAL FLOW INDICATING TRANSMITTER WIRING DIAGRAM

SCALE: NONE



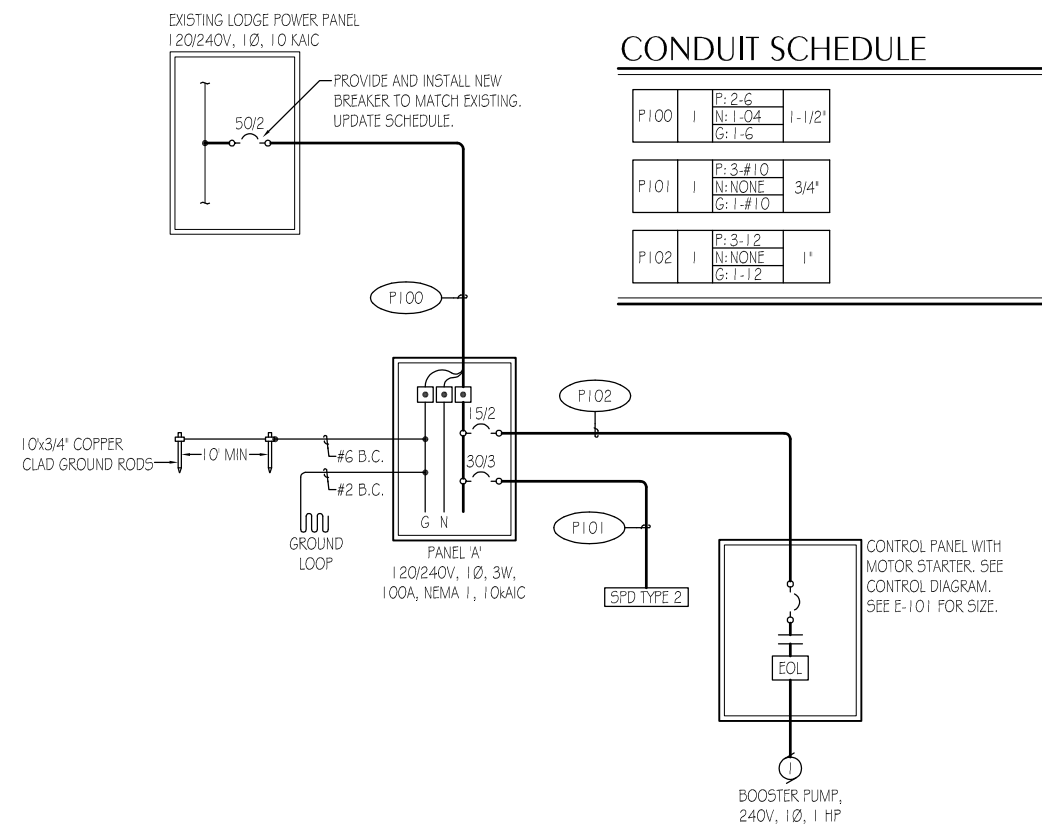
WIRING DIAGRAM

SCALE: NONE



WIRING DIAGRAM

SCALE: NONE



ONE-LINE DIAGRAM

SCALE: NONE

CONDUIT SCHEDULE

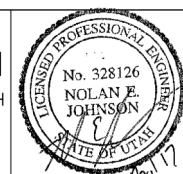
P100	1	P: 2-G N: 1-04 G: 1-6	1-1/2"
P101	1	P: 3-#10 N: NONE G: 1-#10	3/4"
P102	1	P: 3-12 N: NONE G: 1-12	1"

BID SET

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VALLEY VIEW RCMP
WATER SYSTEM IMPROVEMENTS
ELECTRICAL DIAGRAMS

PROJECT NO: 05-16-0138	PAGE NO: 24 OF 24
SHEET NO: E-601	DATE: MAR. 2017