Wolf Creek Water and Sewer Improvement District

500,000 Gallon Tank

WEBER COUNTY CONDITIONAL USE PERMIT

Prepared By

GARDNER ENGINEERING
CIVIL • LAND PLANNING
MUNICIPAL • LAND SURVEYING

JANUARY 2017

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I. D.

PART OF SECTION 22,

TOWNSHIP 7N, RANGE 1E,

SALT LAKE BASE AND MERIDIAN

EDEN, WEBER, UTAH

PROJECT LOCATION

SHEET INDEX

GENERAL NOTES

1. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE ENGINEER, PLANNING, CODES AND SPECIFICATIONS AND APPLICABLE COUNTY, STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY THE DESIGNATED PUBLIC WORKS INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE CITY AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE.
5. THE CONTRACTOR SHALL HAVE ONE (1) COPY OF APPROVED PLANS, AND ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON SITE AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
7. IF DURING THE CONSTRUCTION PROCESS CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED AND RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT DRAWINGS ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE, AND AVAILABLE TO THE COUNTY INSPECTOR AT ALL TIMES.
11. THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.

UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.

NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS". THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

GENERAL GRADING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APWA STANDARDS AND SPECIFICATION FOR PUBLIC WORKS AND THE COMPANY STANDARDS. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS AND ENTRIES. FINISHED GRADE AT FOUNDATION FOR WOOD FRAMED STRUCTURES SHALL BE 8 INCHES BELOW TOP OF FOUNDATION AND DRAINAGE SHALL BE A MINIMUM OF 5% WITHIN 10 FEET FROM THE BUILDING.
2. MAXIMUM SLOPES SHALL BE 3:1 FOR CUT AND FILL UNLESS OTHERWISE NOTED.
3. COMPACTION REQUIREMENTS AND TESTING SHALL BE PERFORMED TO MEET THE MANUAL OF STD. SPECIFICATIONS (ORANGE BOOK, LATEST EDITION).
4. NO FILL SHALL BE PLACED UNTIL VEGETATION HAS BEEN REMOVED AND SUB-GRADE PREPARED PER THE SOILS REPORT.
5. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
6. CONTRACTOR SHALL COMPLY WITH STORM WATER POLLUTION PREVENTION PLAN BY INSTALLING BMP'S PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES. CONTACT THE COUNTY INSPECTOR FOR INSPECTION.
7. ALL RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ALL SUBSEQUENT REPORTS, ADDENDUM ETC. SHALL BE CONSIDERED A PART OF THE GRADING PLAN CONTAINED HEREIN AND SHALL BE COMPLIED WITH.
8. THE CONTRACTOR SHALL CONTACT BLUE STAKES FOR LOCATION MARKING PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
9. COUNTY MAY REQUIRE A PRE-CONSTRUCTION MEETING BEFORE A PERMIT IS ISSUED.
10. STREETS ADJACENT TO THE PROJECT SHALL BE CLEAN AT ALL TIMES.
11. CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR ALL REQUIRED INSPECTIONS.
12. PRIOR TO TAKING WATER FROM A FIRE HYDRANT, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE WATER UTILITY TO OBTAIN A WATER METER.

CULINARY WATER GENERAL NOTES

1. ALL INSTALLATION AND MATERIALS INSTALLED SHALL BE NEW AND CONFORM TO WOLF CREEK WATER AND SEWER I.D. STANDARDS, SPECIFICATIONS AND PLANS.
2. ALL INTERIOR SURFACES AND COATINGS SHALL COMPLY WITH ANSI/NSF STANDARD 61 OR OTHER STANDARDS APPROVED BY THE DIRECTOR. THIS REQUIREMENT APPLIES TO ANY PIPES AND FITTINGS, PROTECTIVE MATERIALS (E.G., PAINTS, COATINGS, CONCRETE ADMIXTURES, CONCRETE RELEASE AGENTS, OR CONCRETE SEALERS), JOINING AND SEALING MATERIALS (E.G., ADHESIVES, CAULKS, GASKETS, PRIMERS AND SEALANTS) AND MECHANICAL DEVICES (E.G., ELECTRICAL WIRE, SWITCHES, SENSORS, VALVES, OR SUBMERSIBLE PUMPS) THAT MAY COME INTO CONTACT WITH THE DRINKING WATER.
3. THE CURRENT REQUIREMENTS OF THE UTAH DIVISION OF DRINKING WATER, GOVERNING THE MATERIALS AND INSTALLATION USED IN THE PROJECT SHALL BE MET.
4. THRUST BLOCKING AND MECHANICAL RESTRAINTS ARE REQUIRED AT ALL BENDS AND FITTINGS.
5. ALL WATERLINES AT SEWER CROSSINGS SHALL BE LOCATED ABOVE AND HAVE AN 18-INCH VERTICAL SEPARATION FROM THE SEWER PIPE. IF THIS IS NOT PROVIDED, CARE SHALL BE TAKEN TO ENSURE, THERE ARE NO JOINTS IN EITHER PIPE WITHIN 20' OF THE POINT AT WHICH THE PIPES CROSS EACH OTHER, EITHER THROUGH INSTALLING THE PIPES IN CASINGS OR BY PLACEMENT OF JOINTS.
6. DISINFECTION TESTS SHALL BE PERFORMED BY THE WATER UTILITY WITH COOPERATION FROM THE CONTRACTOR IN PERFORMING ANY NECESSARY EXCAVATION AND SUBSEQUENT BACKFILLING AT NO COST TO THE COUNTY.
7. CHLORINATION OF COMPLETED WATER LINE. THE NEW WATER LINES SHALL BE DISINFECTED BY CHLORINATION IN ACCORDANCE WITH AWWA STANDARD C651-14. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL RELATED COSTS AND FEES RELATED TO THE CHLORINATION OF THE COMPLETED WATER LINE. THIS TEST SHALL BE PERFORMED PRIOR TO CONNECTION OF THE NEW WATER LINES TO THE EXISTING WATER SYSTEM. THE CONTRACTOR SHALL NOTIFY THE WATER UTILITY AT LEAST 24 HOURS BEFORE THE CHLORINATION IS DESIRED.
8. A MINIMUM HORIZONTAL CLEARANCE OF 10 FEET SHALL BE MAINTAINED FROM SANITARY SEWER MAINS.
9. UNLESS OTHERWISE SPECIFIED, ALL WATERLINES SHALL BE AWWA DUCTILE IRON CLASS 51, MIN. WORKING PRESSURE 200 PSI AND SHALL BE PRESSURE TESTED AT 200 PSI FOR AT LEAST 2 HOUR.
10. CONTRACTOR SHALL LOCATE VALVES PRIOR TO CONNECTION WITH EXISTING SYSTEM, BUT SHALL NOT OPERATE ANY VALVE WITHOUT PERMISSION FROM THE WATER UTILITY.
11. ALL WATER MAINS, VALVES, FIRE HYDRANTS, SERVICES AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO COMMISSIONING TANK.
12. THE WATER UTILITY REQUIRES THE USE OF CORROSION RESISTANT MATERIALS FOR ALL CULINARY WATER IMPROVEMENTS. SPECIFICALLY, TRIPAC BLUE BOLTS OR STAINLESS STEEL BOLTS MUST BE USED ON ALL FITTINGS. FURTHER, ALL METAL FITTINGS SHALL BE POLY WRAPPED.

SWPPP GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY UPDES PERMITS AS REQUIRED BY THE COUNTY ENGINEERING DEPARTMENT AND UTAH STATE DEPT. OF ENV. QUALITY.
2. ALL STRUCTURAL EROSION MEASURES SHALL BE INSTALLED AS SHOWN ON THE SWPP PLAN, PRIOR TO ANY OTHER GROUND-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.
3. INSPECTION TO BE PREFORMED WEEKLY BY A RSI OR OTHER CERTIFIED INSPECTOR.

PROJECT ENGINEER

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SYSTEM OPERATOR

WOLF CREEK WATER AND
SEWER I.D.
ROB THOMAS
3632 N. WOLF CREEK DR.
EDEN, UT 84310
801-781-4171

REGISTERED PROFESSIONAL ENGINEER
No. 354312
Daniel Leon White
01/11/2017
STATE OF UTAH

WOLF CREEK WATER + SEWER I. D.
500,000 GALLON TANK
2017 CONSTRUCTION DOCUMENTS

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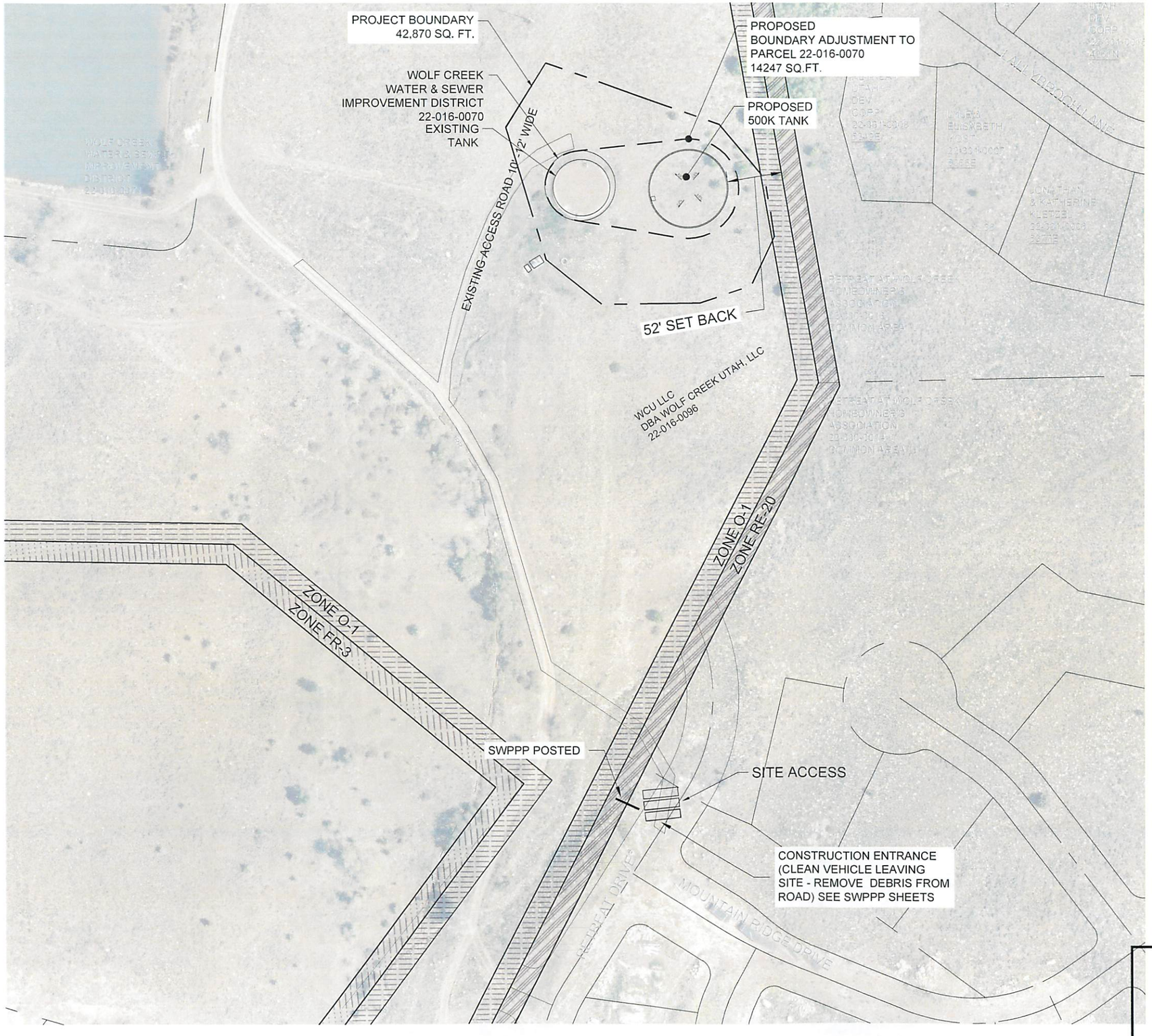

CURRENTLY ZONED O-1
PROPERTY 92.1 ACRES
AFFECTED AREA = 0.98 ACRES

0' 50' 100' 200'

Scale in Feet
1" = 100'

VICINITY MAP

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I. D.

EDEN, WEBER, UTAH

Revisions	
Date	Description

Date: 1/11/2017
Scale: 1" = 100'
Designed: MDD
Drafted: MDD
Checked: DLW

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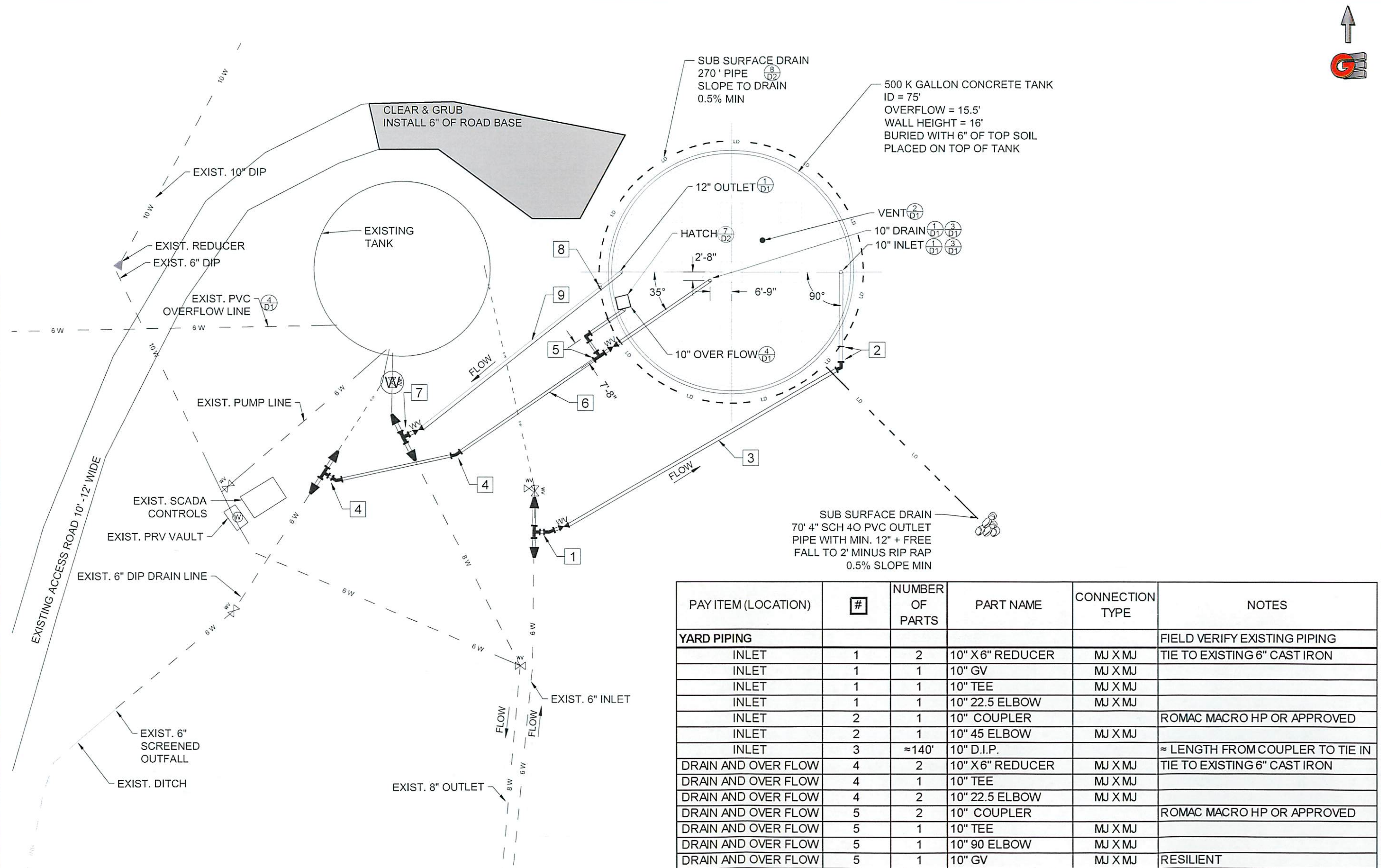

PAY ITEM (LOCATION)	#	NUMBER OF PARTS	PART NAME	CONNECTION TYPE	NOTES
YARD PIPING					FIELD VERIFY EXISTING PIPING
INLET	1	2	10" X 6" REDUCER	MJ X MJ	TIE TO EXISTING 6" CAST IRON
INLET	1	1	10" GV	MJ X MJ	
INLET	1	1	10" TEE	MJ X MJ	
INLET	1	1	10" 22.5 ELBOW	MJ X MJ	
INLET	2	1	10" COUPLER		ROMAC MACRO HP OR APPROVED
INLET	2	1	10" 45 ELBOW	MJ X MJ	
INLET	3	≈140'	10" D.I.P.		≈ LENGTH FROM COUPLER TO TIE IN
DRAIN AND OVER FLOW	4	2	10" X 6" REDUCER	MJ X MJ	TIE TO EXISTING 6" CAST IRON
DRAIN AND OVER FLOW	4	1	10" TEE	MJ X MJ	
DRAIN AND OVER FLOW	4	2	10" 22.5 ELBOW	MJ X MJ	
DRAIN AND OVER FLOW	5	2	10" COUPLER		ROMAC MACRO HP OR APPROVED
DRAIN AND OVER FLOW	5	1	10" TEE	MJ X MJ	
DRAIN AND OVER FLOW	5	1	10" 90 ELBOW	MJ X MJ	
DRAIN AND OVER FLOW	5	1	10" GV	MJ X MJ	RESILIENT
DRAIN AND OVER FLOW	6	≈140'	10" D.I.P.		≈ LENGTH FROM COUPLER TO TIE IN
OUTLET	7	2	12" X 8" REDUCER	MJ X MJ	TIE TO EXISTING 8" CAST IRON
OUTLET	7	1	12" TEE	MJ X MJ	TIE TO EXISTING 8" CAST IRON
OUTLET	7	1	12" BV	MJ X MJ	
OUTLET	8	1	12" COUPLER		ROMAC MACRO HP OR APPROVED
OUTLET	9	≈100'	12" D.I.P.		≈ LENGTH FROM COUPLER TO TIE IN

Date: 1/11/2017
Scale: 1" = 30'
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Drafted: MDD
Checked: DLW

Revisions

Date	Description

REGISTERED PROFESSIONAL ENGINEER
No. 354312
Daniel Leon White
STATE OF UTAH

TANK SITE PLAN

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I. D.

EDEN, WEBER, UTAH

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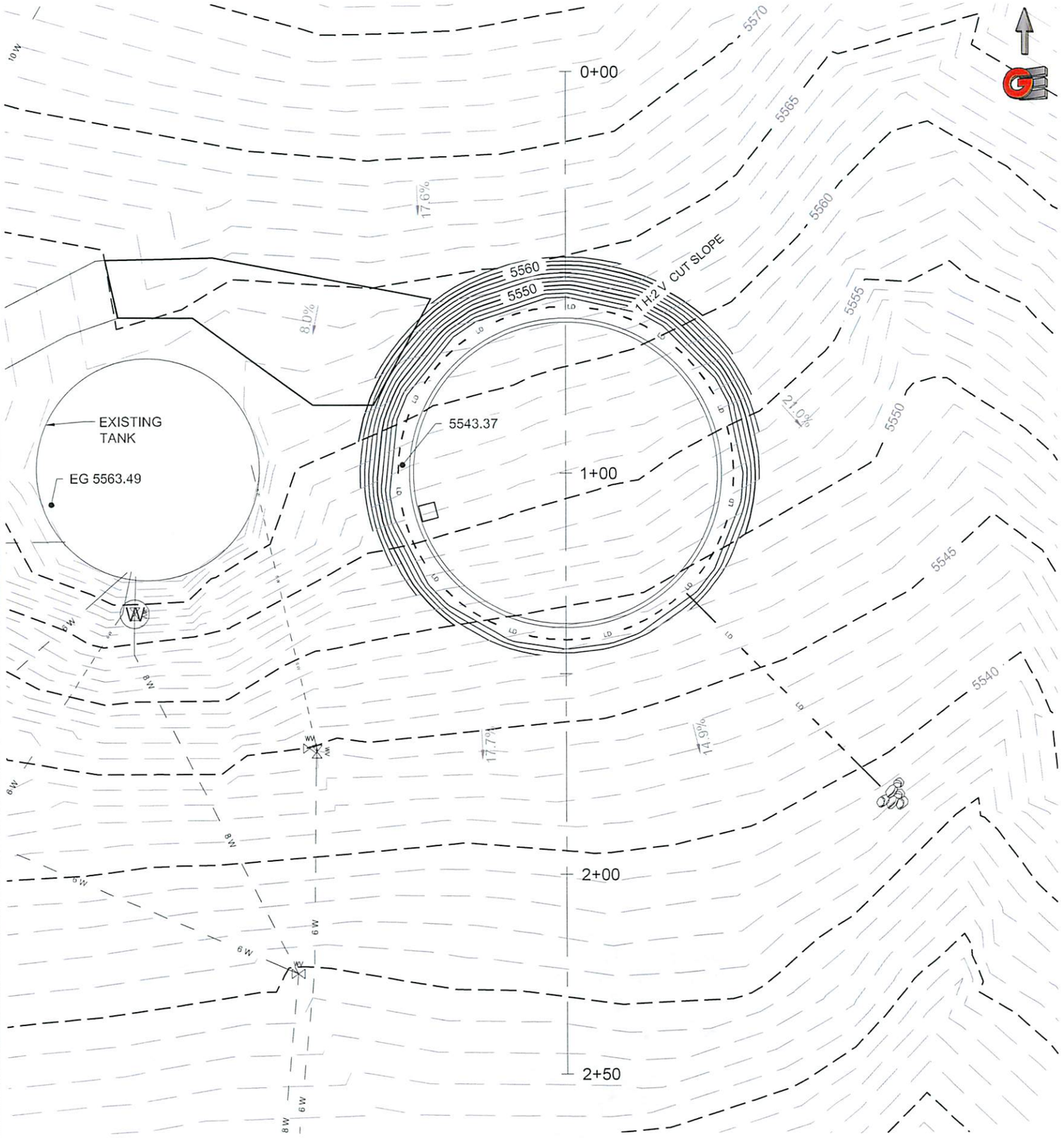
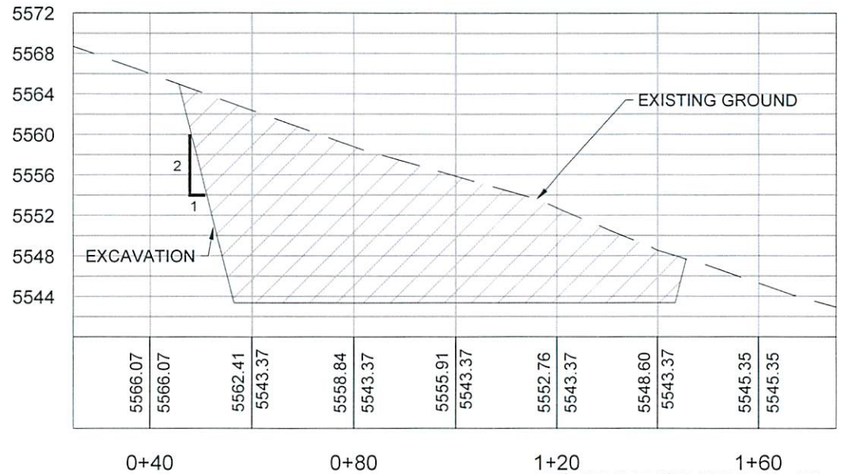


EXCAVATION PROFILE



PROFILE VERTICAL SCALE 1" = 15'

ANTICIPATED VOLUME OF SOIL/ROCK REMOVAL: 3330 CU YD

Revisions		
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TANK EXCAVATION
500,000 GALLON TANK
WOLF CREEK WATER + SEWER I. D.
EDEN, WEBER, UTAH

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0' 15' 30' 60'
Scale in Feet
1" = 30'

C2
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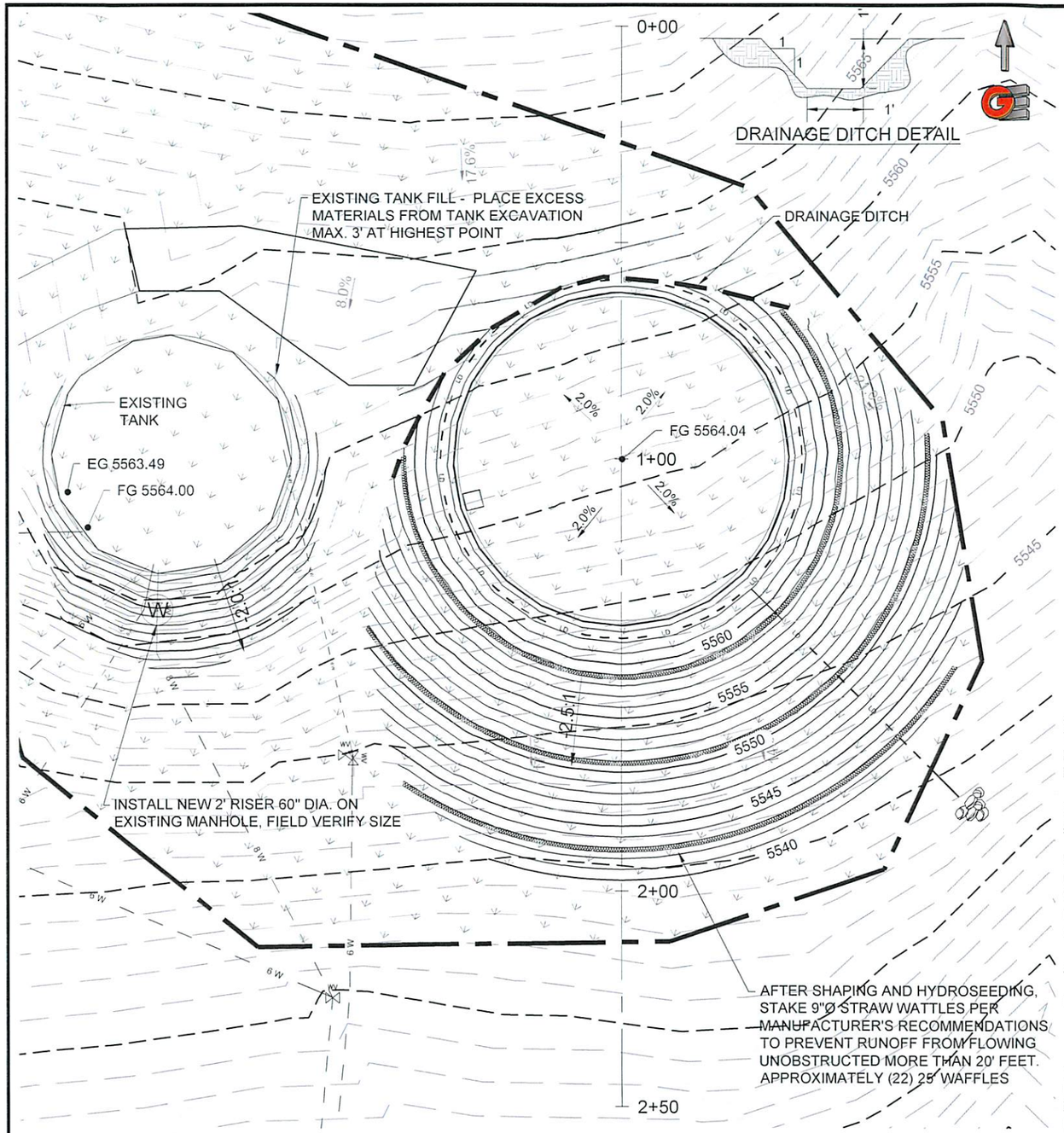
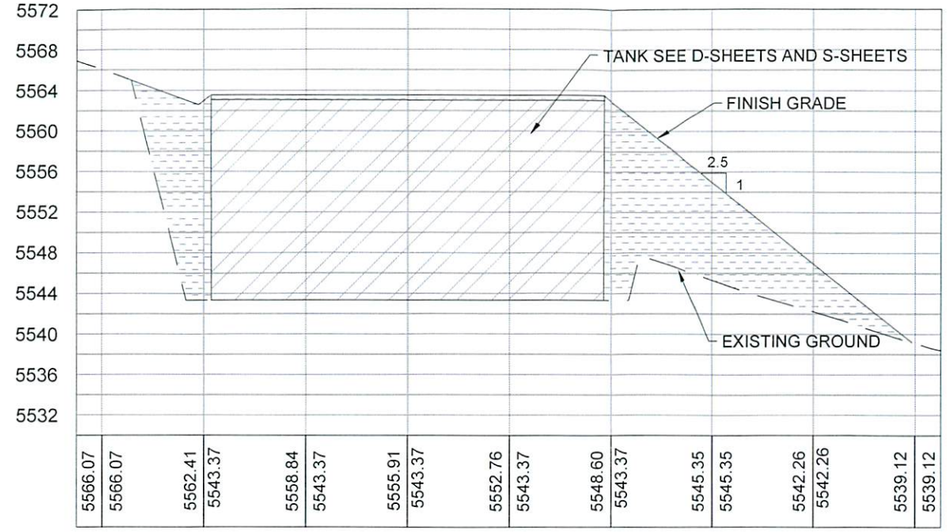


GRADING FILL PROFILE



PROFILE VERTICAL SCALE 1" = 15'

CONCRETE MUST CURE AT LEAST 7 DAYS AND THE 7-DAY BREAKS OF SAMPLED CONCRETE MUST BE ON TRAJECTORY TO REACH FULL DESIGN STRENGTH AND PASS LEAK TEST BEFORE BACKFILLING NEXT TO TANK BEGINS.
PROVIDE ADEQUATE DUST CONTROL THROUGHOUT CONSTRUCTION

SEE EXCAVATION PLAN FOR ANTICIPATED EXCAVATION VOLUMES
ANTICIPATED FILL VOLUMES, SEE DETAIL 8/D2:

UNDER SLAB STRUCTURAL FILL (REFER TO GEOTECH REPORT) -12" MIN: 360 TONS
UNDER SLAB FILL GRAVEL - $\frac{3}{4}$" OR 1" WASHED,DEPTH VARIES 6" - 12" : 230 TONS
WITHIN 2' OF TANK WALLS - 2" MINUS IMPORT OR SCREENED NATIVE: 550TONS
REPLACEMENT OF EXCAVATED MATERIALS AT PROPOSED TANK AND EXISTING TANK - PER PLANS AND TYPICAL SECTION ON THIS SHEET: 3200 CUBIC YARDS

ANTICIPATED EXCESS MATERIALS WILL BE USED TO BUILD DRIVING SURFACE

NOTE: SITE RESTORATION BID ITEM:
CUT AND FILL SLOPES: TOP DRESS WITH 3" OF SANDY LOAM TOP SOIL ON 4" OF 2" MINUS WELL GRADED MATERIAL.

THE COURSE OF 2" MINUS MATERIAL IS INTENDED TO FILL VOIDS AND PREVENT THE TOPSOIL LAYER FROM FILTERING INTO THE LARGER VOIDS BELOW. THE CONTRACTOR SHALL SCREEN AND STOCKPILE OR IMPORT MATERIALS AS NEEDED OR OTHER PROCEDURES AND METHODS AT NO ADDITIONAL COST TO THE OWNER, TO ENSURE THAT THE TOPSOIL IS AVAILABLE ON THE SURFACE OF THE FILL TO ACT AS A SEEDBED FOR THE HYDRO SEED.

DRYLAND SEED MIX ANTICIPATED AREA = 0.95 ACRES

Species	PLS Pounds per Acre
Streambank wheatgrass (Elymus lanceolatus ssp. psammophilus)	10
Mountain brome (Bromus marginatus)	20
Western wheatgrass (Pascopyrum smithii)	10
Sheep fescue (Festuca ovina)	2.5
Lewis blue flax (Linum lewisii)	2.5
Total	45

IMPORT 3" OF TOP SOIL, HYDROSEED WITH 2000#/AC WOOD MULCH, 100#/AC MBINDER TACKIFIER, HYDRO SEEDING TO TAKE PLACE BETWEEN OCTOBER 1 AND NOVEMBER 15 - APPROXIMATELY 42,000 SQ.FT.

BREAK UP COMPACTED SURFACES USED FOR STAGING OR OTHER AREAS DISTURBED DURING CONSTRUCTION AND HYDROSEED

0' 15' 30' 60'

Scale in Feet
1" = 30'

Revisions

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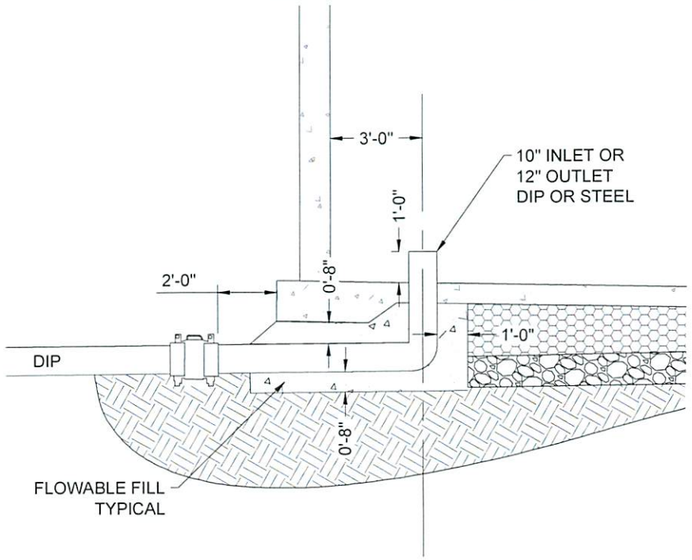
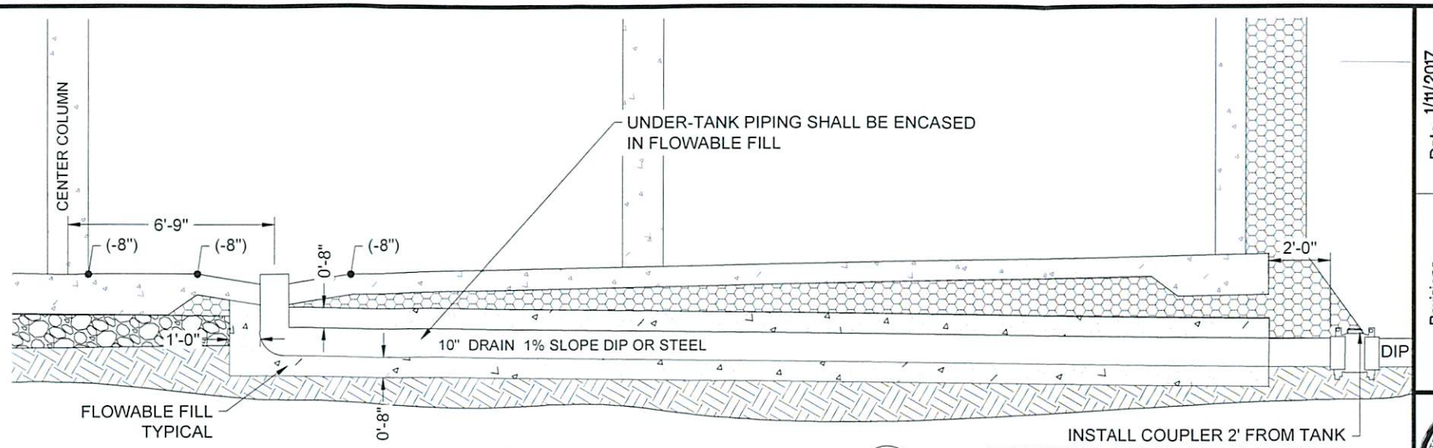


INLET/ OUTLET PROFILE VIEW — 1 / D1

NOT TO SCALE

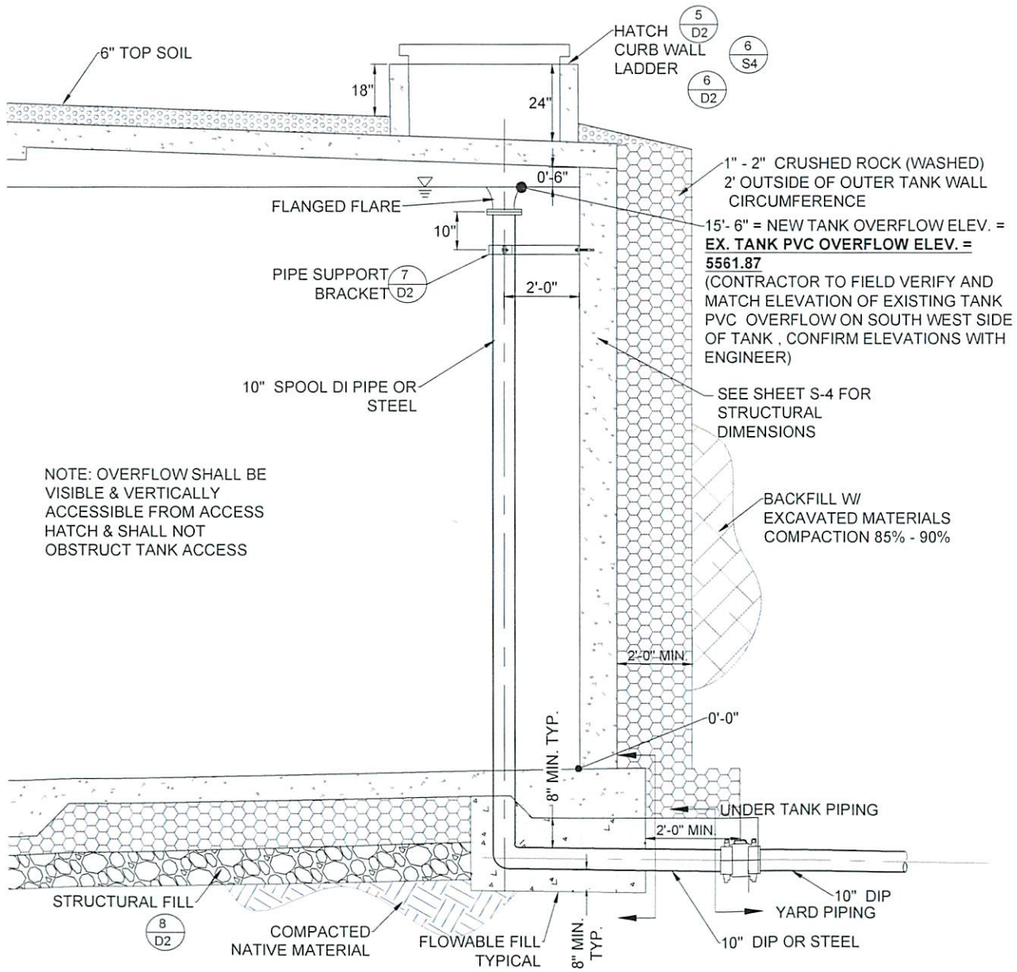


DRAIN PIPE PROFILE VIEW — 3 / D1

NOT TO SCALE

INSTALL COUPLER 2' FROM TANK FOUNDATION. INSTALL ROMAC MACRO HP COUPLER OR APPROVED EQUAL TO ACCOMMODATE TANK SETTLEMENT (TYP.)

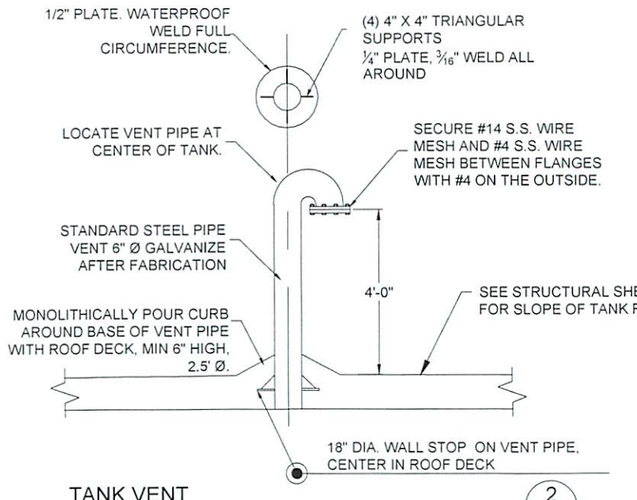
NOTE: ALL PIPING SHALL BE DUCTILE IRON OR STEEL WITHIN 2' OF TANK. ALL PIPING AND FITTINGS IN CONTACT WITH CONCRETE SHALL HAVE PROTECTIVE COATING OR BE ENCASED IN A MIN. 8 MIL POLYWRAP.



NOTE: OVERFLOW SHALL BE VISIBLE & VERTICALLY ACCESSIBLE FROM ACCESS HATCH & SHALL NOT OBSTRUCT TANK ACCESS

OVER FLOW PROFILE VIEW — 4 / D1

NOT TO SCALE



TANK VENT — 2 / D1

NOT TO SCALE

Revisions						
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Date: 1/11/2017
Scale:
Designed: MDD
Drafted: MDD
Checked: DLW

REGISTERED PROFESSIONAL ENGINEER
No. 354312
Daniel Leon White
STATE OF UTAH

TANK DETAILS

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I. D.

EDEN, WEBER, UTAH

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D1

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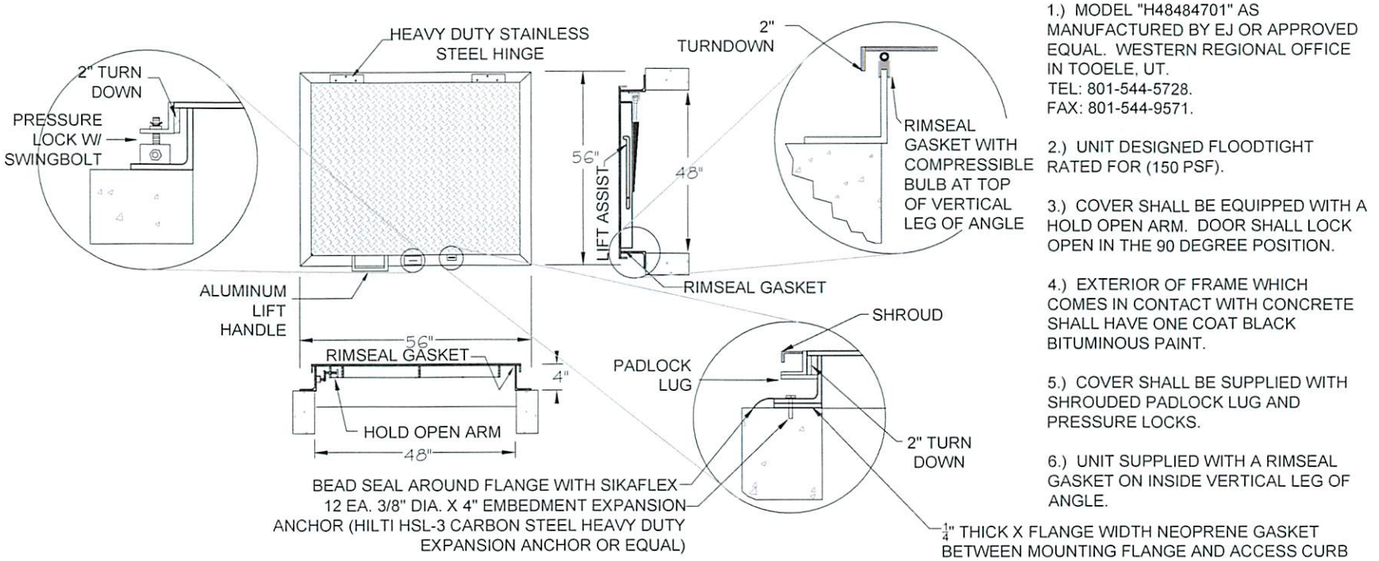


1.) MODEL "H48484701" AS MANUFACTURED BY EJ OR APPROVED EQUAL. WESTERN REGIONAL OFFICE IN TOOELE, UT.
TEL: 801-544-5728.
FAX: 801-544-9571.

2.) UNIT DESIGNED FLOODTIGHT RATED FOR (150 PSF).

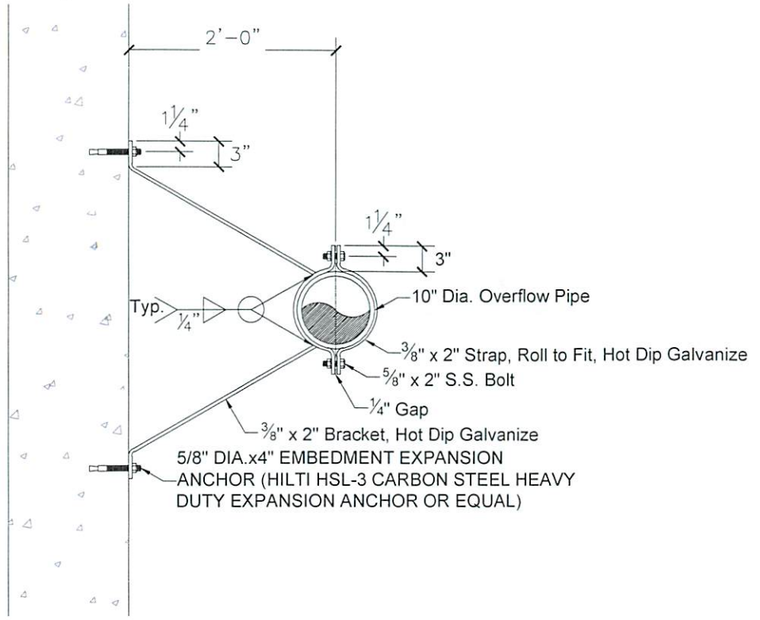
3.) COVER SHALL BE EQUIPPED WITH A HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION.

4.) EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH CONCRETE SHALL HAVE ONE COAT BLACK BITUMINOUS PAINT.

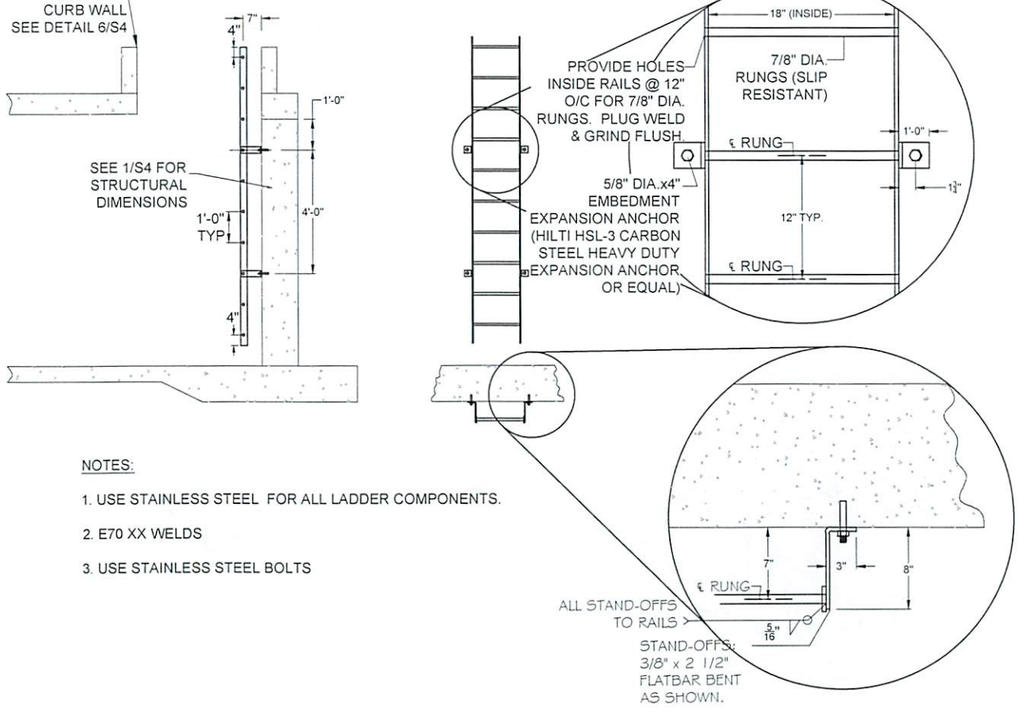
5.) COVER SHALL BE SUPPLIED WITH SHROUDED PADLOCK LUG AND PRESSURE LOCKS.

6.) UNIT SUPPLIED WITH A RIMSEAL GASKET ON INSIDE VERTICAL LEG OF ANGLE.

WATER TANK HATCH — 5 / D2
NOT TO SCALE



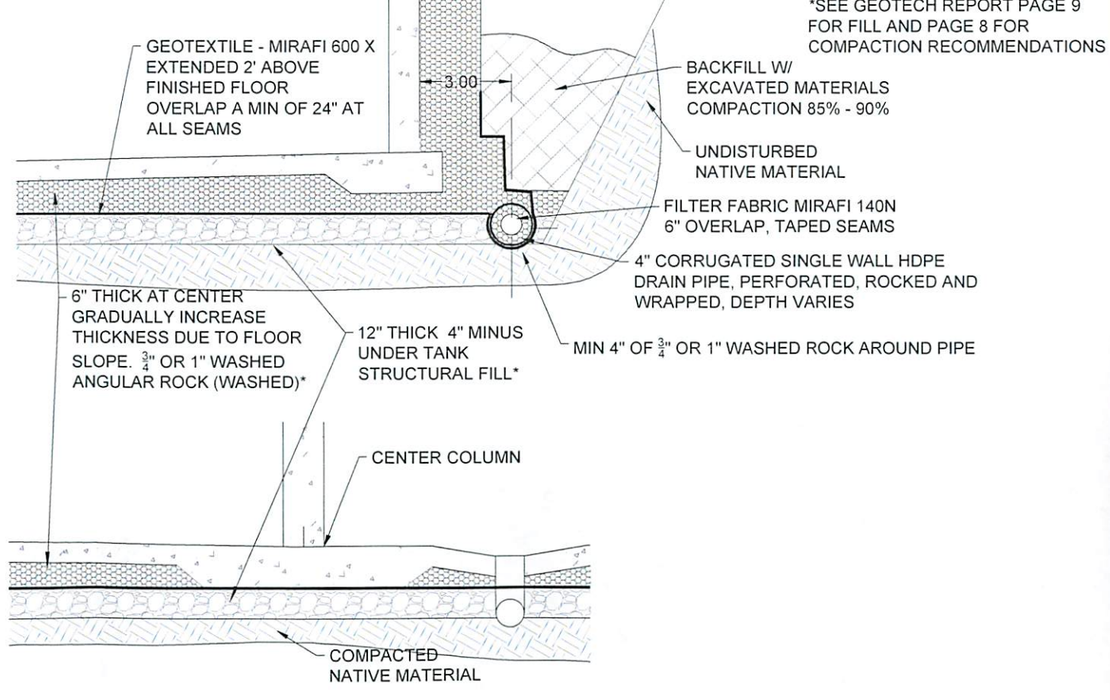
PIPE SUPPORT BRACKET DETAIL — 7 / D2
NOT TO SCALE



NOTES:

1. USE STAINLESS STEEL FOR ALL LADDER COMPONENTS.
2. E70 XX WELDS
3. USE STAINLESS STEEL BOLTS

LADDER DETAIL — 6 / D2
NOT TO SCALE



*SEE GEOTECH REPORT PAGE 9 FOR FILL AND PAGE 8 FOR COMPACTION RECOMMENDATIONS

UNDER DRAIN/FILL DETAIL — 8 / D2
NOT TO SCALE

Date: 1/11/2017
Scale: #######
Designed: MDD
Drafted: MDD
Checked: DLW

Revisions

Date	Description

REGISTERED PROFESSIONAL ENGINEER
No. 354312
Daniel Leon White
STATE OF UTAH

TANK DETAILS 2
500,000 GALLON TANK
WOLF CREEK WATER + SEWER I. D.
EDEN, WEBER, UTAH

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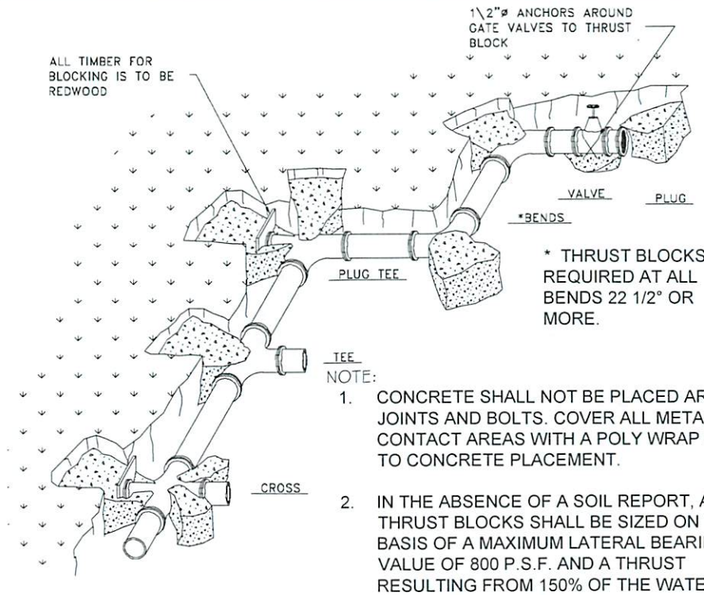
D2 / 10



* THRUST BLOCKS REQUIRED AT ALL BENDS 22 1/2° OR MORE.

NOTE:

1. CONCRETE SHALL NOT BE PLACED AROUND JOINTS AND BOLTS. COVER ALL METAL CONTACT AREAS WITH A POLY WRAP PRIOR TO CONCRETE PLACEMENT.
2. IN THE ABSENCE OF A SOIL REPORT, ALL THRUST BLOCKS SHALL BE SIZED ON THE BASIS OF A MAXIMUM LATERAL BEARING VALUE OF 800 P.S.F. AND A THRUST RESULTING FROM 150% OF THE WATER LINE STATIC PRESSURE.

TABLE OF BEARING AREAS IN SQ. FT FOR CONCRETE THRUST BLOCKING

SIZE	BENDS				TEES*	GATE VALVES	DEAD ENDS	CROSSW/ 1BRANCH PLUGGED	CROSSW/ 2 BRAN. PLUGGED
	90°	45°	22 ½°	11 ¼°					
3	1.0	0.0	0.3	0	0.7	0.5	0.7	0.7	0.7
4	1.8	1.0	0.5	0	1.3	0.5	1.3	1.3	1.3
6	4.0	2.2	1.1	0	2.8	0.7	2.8	2.8	2.8
8	7.1	3.8	2.0	1.0	5.0	2.4	5.0	5.0	5.0
10	11.1	6.0	3.0	1.5	7.8	4.5	7.8	7.8	7.8
12	16.0	8.6	4.4	2.2	11.3	7.3	11.3	11.3	11.3
14	21.7	11.8	6.0	3.0	15.4	11.0	15.4	15.4	15.4
15	25.0	13.5	7.0	3.5	17.6	SPECIAL DESIGN	176	17.6	17.6
16	28.4	15.3	8.0	4.0	20.0		20.0	20.0	20.0
18	36.0	19.4	10.0	5.0	25.4		25.4	25.4	25.4
20	44.2	24.0	12.2	6.1	31.4		31.4	31.4	31.4
21	49.0	26.5	13.5	6.8	34.6		34.6	34.6	34.6
22	54.0	29.0	14.8	7.4	38.0		38.0	38.0	38.0
24	64.0	34.5	17.7	8.8	45.0		45.0	45.0	45.0
30	100.0	54.0	27.6	13.8	71.0		71.0	71.0	71.0
36	144.0	78.0	40.0	20.0	102.0		102.0	102.0	102.0

*SIZE IS BRANCH SIZE.

FOR 100 P.S.I. INTERNAL STATIC PRESSURE AND 1000 LBS.PER SQ. FT. SOIL BEARING CAPACITY.

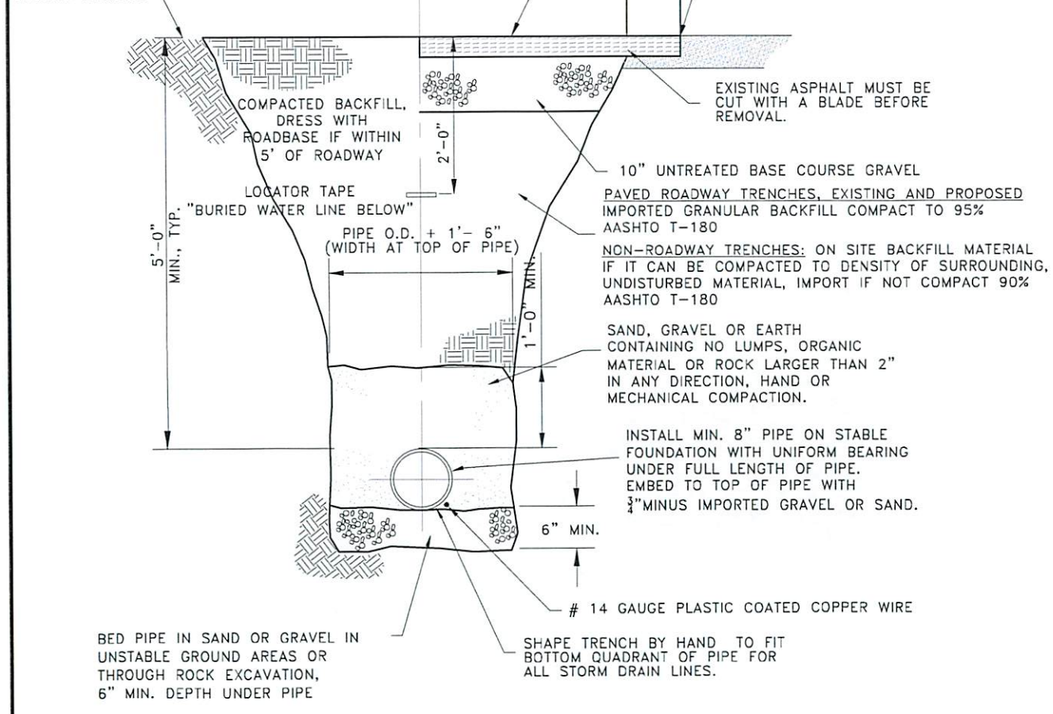
ALL VALVES, TEES, CROSSES AND BENDS SHALL ALSO BE FITTED WITH MECHANICAL RESTRAINTS, SUCH AS MEGA LUGS OR APPROVED EQUAL.

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I AND A SOIL BEARING CAPACITY OF 1000 LBS PER SQ. FT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

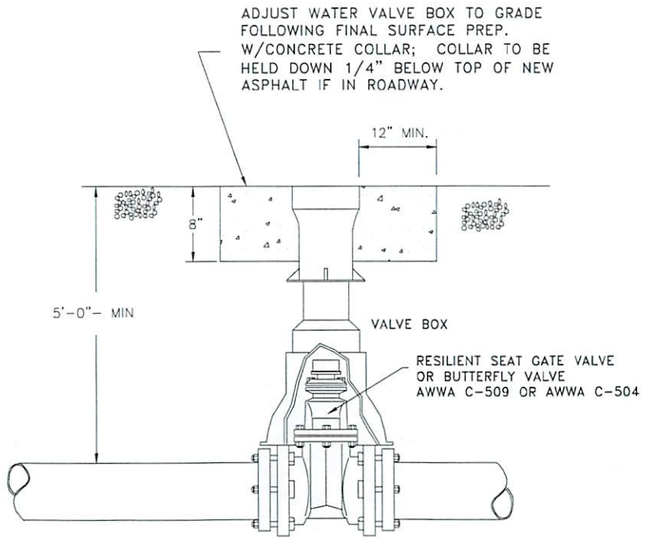
$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS/SQ. IN.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.}}$

EXAMPLE: TO FIND BEARING AREA FOR 8"–90° BEND WITH A STATIC INTERNAL PRESSURE OF 1500 P.S.I AND WITH A SOIL BEARING CAPACITY OF 3000 LBS. PER SQ. FT.
F=1.5 / 3=0.5 TABULATED VALUE = 7.1 SQ. FT.
0.5 X 7.1=3.56 ~ 4 SQ. FT. (~OR 2FT. LONG BY 2FT. HIGH.)

THRUST BLOCKING DETAIL — 9 / D3
NOT TO SCALE



TYPICAL TRENCH DETAIL — 10 / D3
NOT TO SCALE



TYPICAL VALVE — 12 / D4

Revisions		
Date	Description	

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Designed: MDD
Drafted: MDD
Checked: DLW

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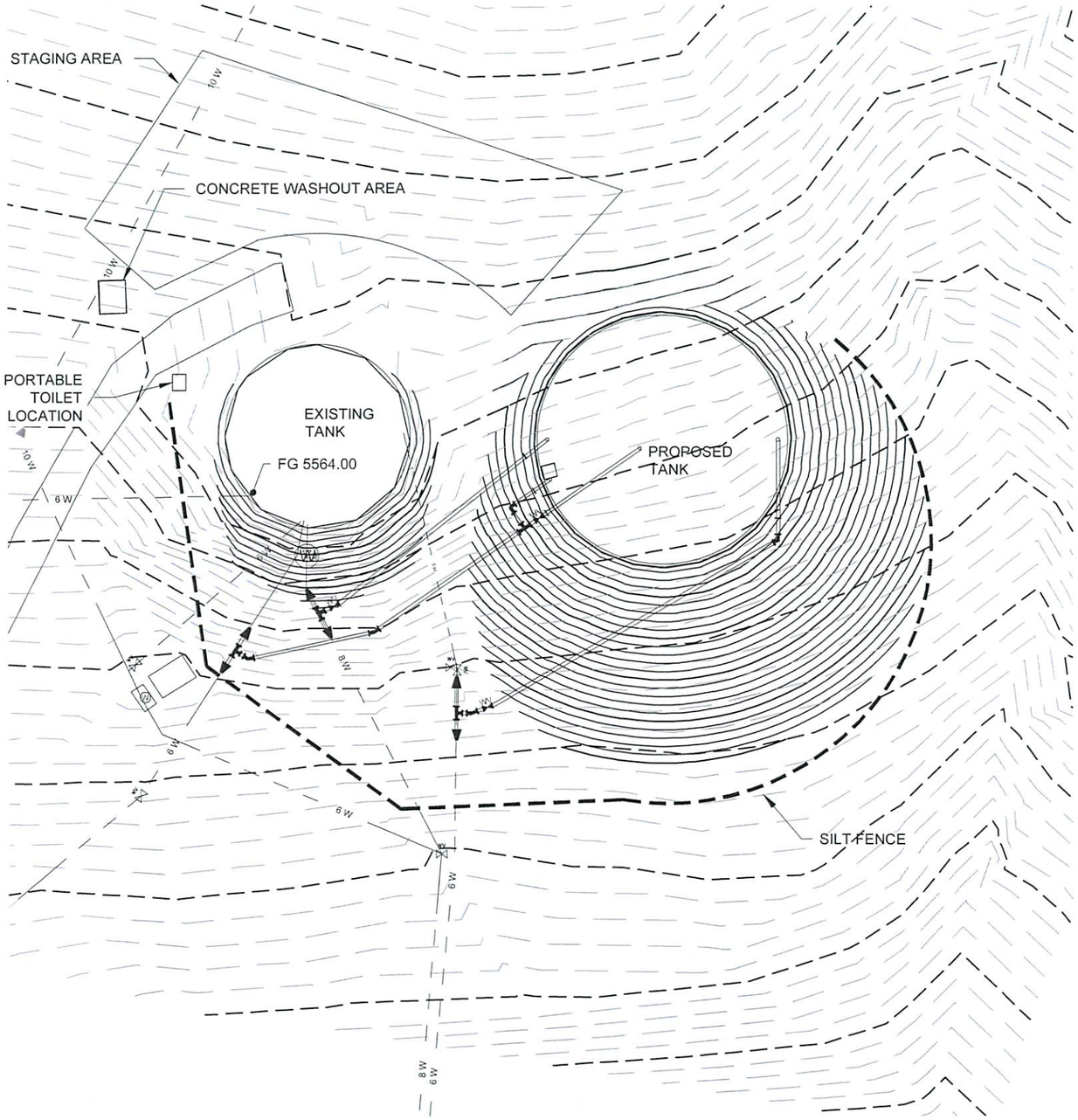
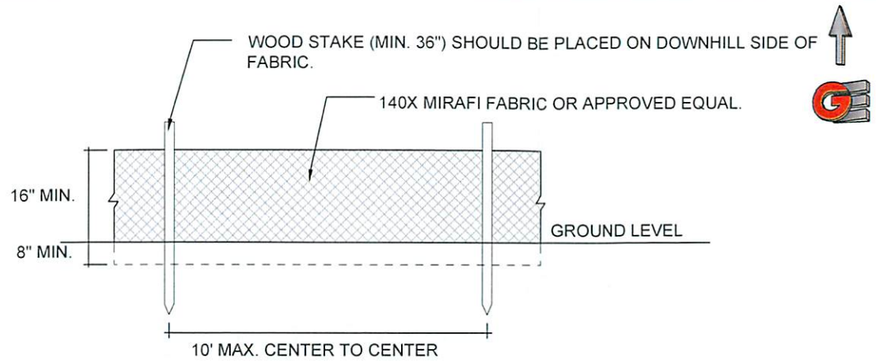
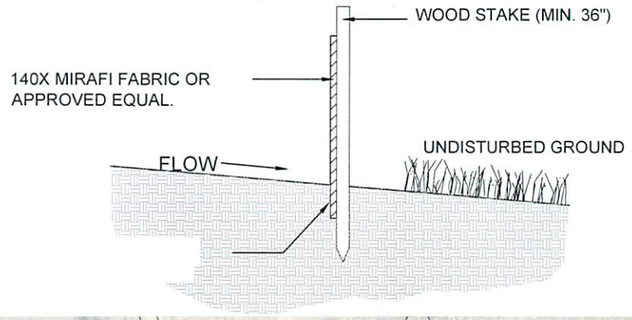
D3 / 10

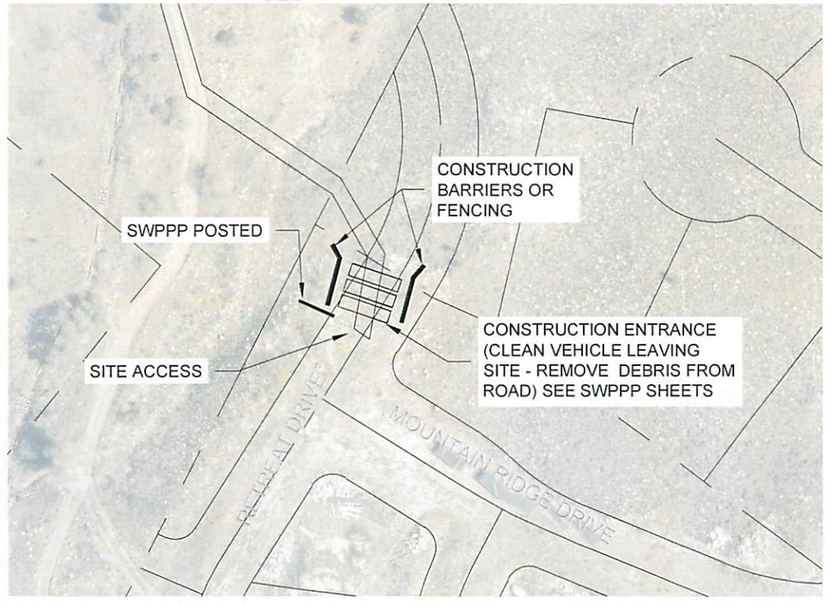


NOTE: ALL CONSTRUCTION TO CONFORM TO WEBER COUNTY STANDARDS AND SPECIFICATIONS.



FRONT VIEW





LEGEND

SILT FENCE

NOTE: ALL CONSTRUCTION TO CONFORM TO WEBER COUNTY STANDARDS AND SPECIFICATIONS.

0' 20' 40' 80'

Scale in Feet
1" = 40'

Date: 1/11/2017
Scale: 1" = 40'
Designed: MDD
Drafted: MDD
Checked: DLW

Revisions
Date | Description

REGISTERED PROFESSIONAL ENGINEER
No. 354312
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SWWP PLAN
500,000 GALLON TANK
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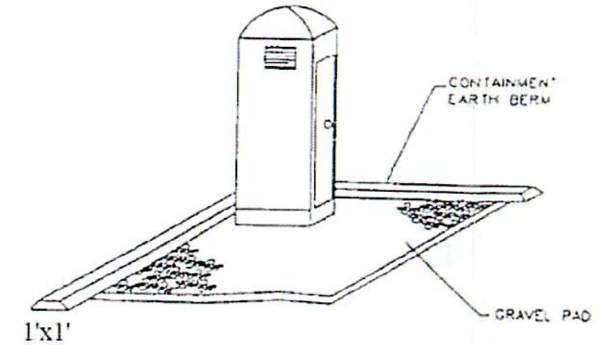
SW1
10

NOTE: ALL CONSTRUCTION TO CONFORM TO WEBER COUNTY STANDARDS AND SPECIFICATIONS.
INSPECTION TO BE PREFORMED WEEKLY BY A RSI OR OTHER CERTIFIED INSPECTOR.



TEMPORARY ON-SITE FACILITIES (PORTA-POTTY) NOTES:

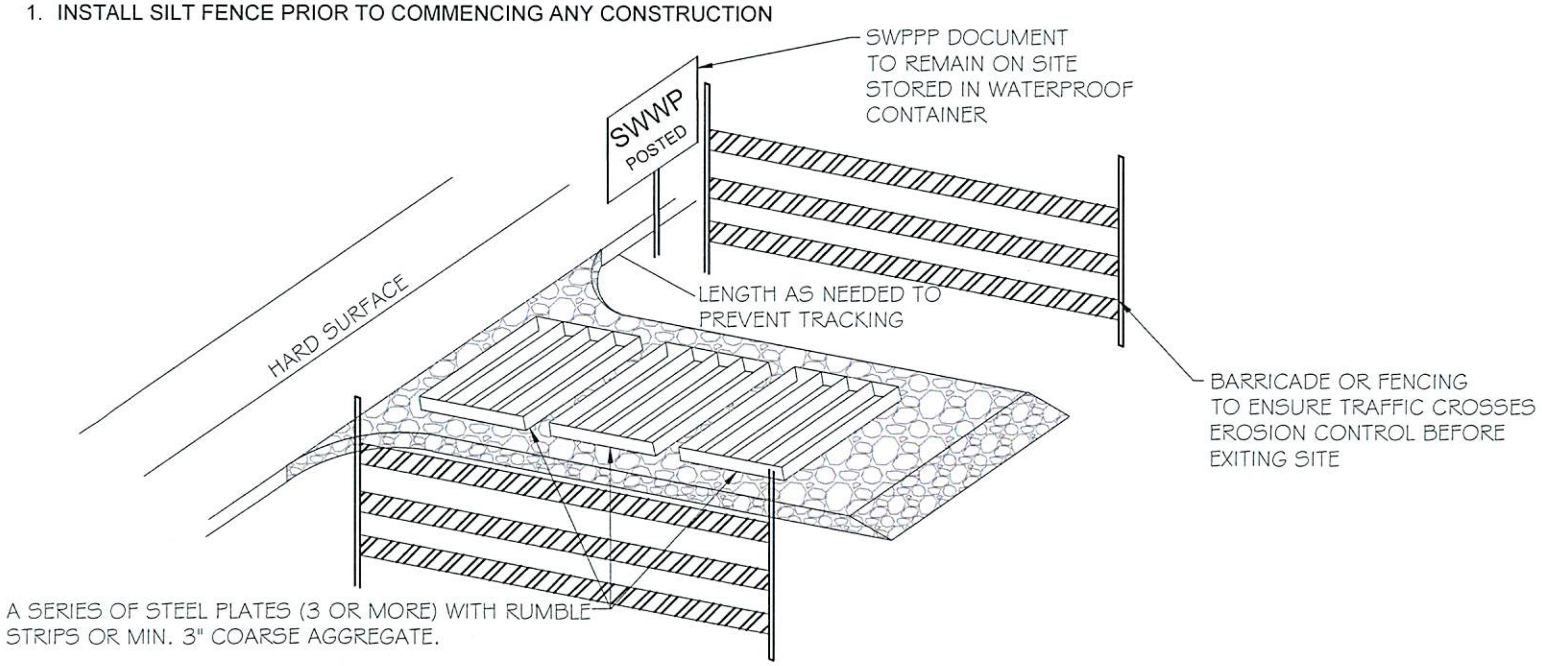
1. PREPARE LEVEL, GRAVEL SURFACE AND PROVIDE CLEAR ACCESS TO THE TOILETS FOR SERVICING AND FOR ON-SITE PERSONNEL.
2. CONSTRUCT EARTH BERM PERIMETER, CONTROL FOR SPILL/PROTECTION LEAK.
3. STAKE PORTA-POTTY TO GROUND TO PREVENT TIP OVER.

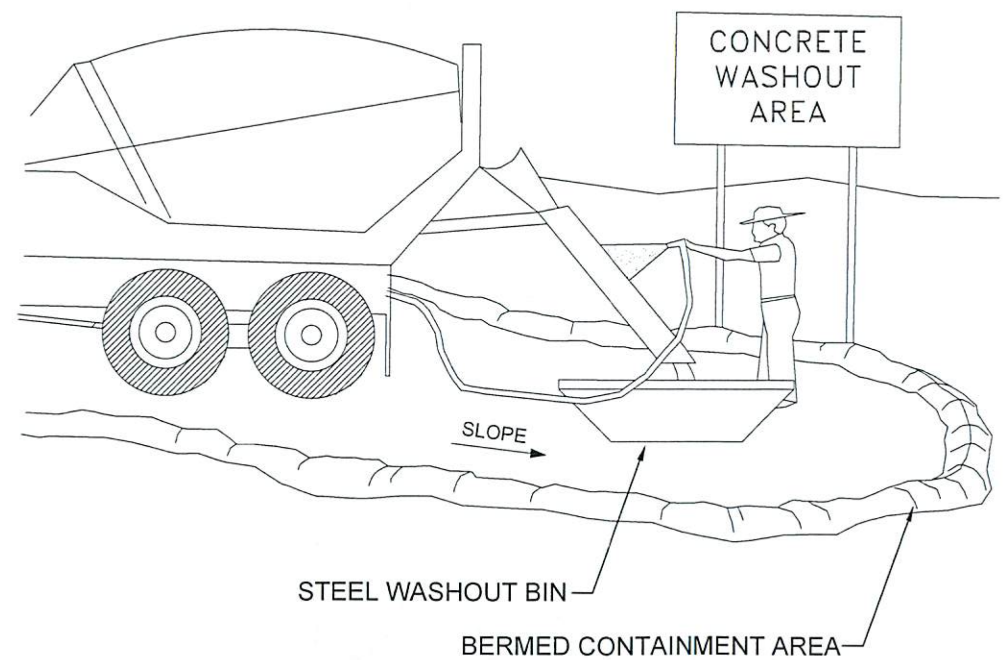
STREET MAINTENANCE NOTES:

1. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS IMMEDIATELY.
2. SWEEP PAVED AREAS THAT RECEIVE CONSTRUCTION TRAFFIC WHENEVER SEDIMENT BECOMES VISIBLE.
3. PAVEMENT WASHING WITH WATER IS PROHIBITED IF IT RESULTS IN A DISCHARGE TO THE STORM DRAIN SYSTEM OR NATURAL WATERWAY.

EROSION CONTROL NOTES:

1. INSTALL SILT FENCE PRIOR TO COMMENCING ANY CONSTRUCTION





ENTRANCE STABILIZATION NOTES:

1. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO PREVENT SEDIMENTS FROM BEING DEPOSITED INTO THE STORM DRAIN SYSTEMS. DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS INTO THE STORM DRAIN SYSTEM.
2. STABILIZED CONSTRUCTION ENTRANCE SHALL BE:
   a. LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A HARD DRIVING SURFACE.
   b. A SERIES OF STEEL PLATES WITH "RUMBLE STRIPS", AND/OR MIN. 3" COARSE AGGREGATE WITH LENGTH, WIDTH AND THICKNESS AS NEEDED TO ADEQUATELY PREVENT ANY TRACKING ONTO PAVED SURFACES.
3. ADDING A WASH RACK WITH A SEDIMENT TRAP LARGE ENOUGH TO COLLECT ALL WASH WATER CAN GREATLY IMPROVE EFFICIENCY.
4. ALL VEHICLES ACCESSING THE CONSTRUCTION SITE SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE SITES.

CONCRETE WASTE MANAGEMENT NOTES:

1. EXCESS AND WASTE CONCRETE SHALL BE DISPOSED OF OFF SITE OR AT DESIGNATED AREAS ONLY.
2. EXCESS AND WASTE CONCRETE SHALL NOT BE WASHED INTO THE STREET OR INTO A DRAINAGE SYSTEM.
3. FOR WASHOUT OF CONCRETE AND MORTAR PRODUCTS ONSITE, A DESIGNATED CONTAINMENT FACILITY OF SUFFICIENT CAPACITY TO RETAIN LIQUID AND SOLID WASTE SHALL BE PROVIDED.
4. ONSITE CONCRETE WASHOUT CONTAINMENT FACILITY SHALL BE A STEEL BIN OR APPROVED ALTERNATE.
5. SLURRY FROM CONCRETE AND ASPHALT SAW CUTTING SHALL BE VACUUMED OR CONTAINED, DRIED, PICKED UP AND DISPOSED OF PROPERLY.
6. CONCRETE WASH OUT TO BE EMPTIED WHEN IT REACHES $\frac{1}{2}$ CAPACITY.

Date: 1/11/2017
Scale: ########
Designed: MDD
Drafted: MDD
Checked: DLW

Date	Revisions Description

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SWWP DETAILS
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SW2

STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
3. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
4. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
5. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. SUBMITTALS WHICH ARE UNCLEAR OR DIFFICULT TO READ SHALL BE REJECTED.
6. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS.
7. TYPICAL DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN.
8. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ENGINEER FOR APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS OR SUBSTITUTIONS.
9. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. CONTRACTOR IS RESPONSIBLE FOR DESIGN OF ALL SHORING.
10. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS.

B. SPECIAL INSPECTIONS

1. SPECIAL INSPECTION OF ALL CONCRETE SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED AS OUTLINED IN THE SPECIFICATIONS. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : ACI 318 / ACI 350 / ACI 350.3
   a. SNOW LOAD = 82 PSF
   b. MAXIMUM SOIL OVER COVER = 6" SOIL

D. FOUNDATION

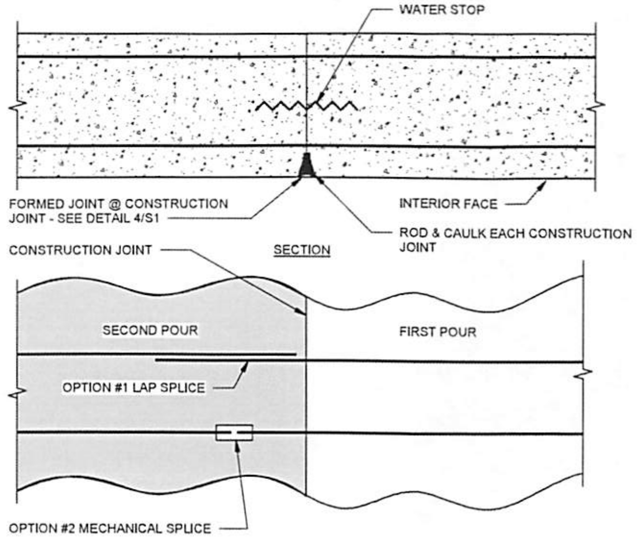
1. DESIGN SOIL PRESSURE : 3,500 PSF
2. SOILS REPORT BY : AGEC
   REPORT # : 1160909
   DATED : NOVEMBER 22, 2016
3. SOIL PREPARATION UNDER FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT.
4. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS TO BE CENTERED BELOW COLUMNS

E. CONCRETE

1. ALL CONCRETE SHALL HAVE A DESIGN 28-DAY COMPRESSIVE STRENGTH AS FOLLOWS :
   a. FOOTINGS, SLAB ON GRADE, COLUMNS, WALLS, AND ROOF SLAB : 4500psi
   b. ALL CONCRETE SHALL HAVE AN AIR CONTENT OF 5% AND MAXIMUM WATER / CEMENT RATIO OF 0.40
2. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU WALLS WHEN APPROVED SHALL BE BUILT INTO THE WALL PRIOR TO PLACEMENT OF CONCRETE.
3. REFER TO OTHER (CIVIL, ETC.) DRAWINGS FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC..
4. AROUND OPENINGS IN SUSPENDED CONCRETE SLABS, ADD REINFORCING BARS EQUIVALENT TO BARS CUT BY OPENING WITH HALF ON EACH SIDE OF OPENING. BARS SHALL RUN FULL LENGTH OF SPAN. SEE DETAIL 3/S1.
5. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE WATERSTOP IN ALL VERTICAL AND HORIZONTAL JOINTS. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS, WITH LAP SPLICES AS INDICATED, UNLESS NOTED OTHERWISE.
6. SEE PROJECT SPECIFICATION FOR WATERPROOFING ADMIXTURE.

F. REINFORCING STEEL

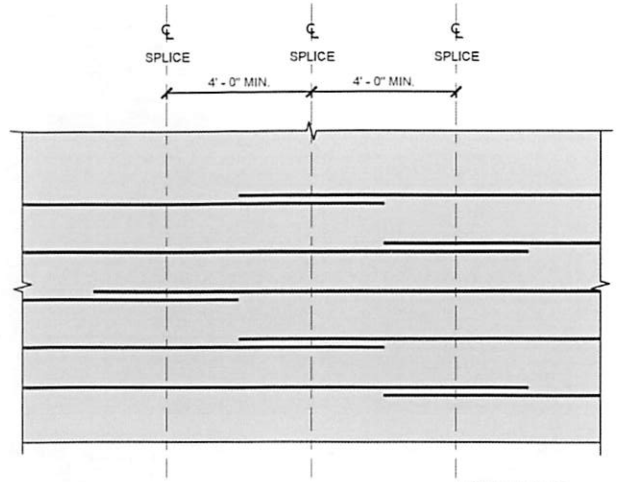
1. ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 315, TO MAINTAIN EXACT REQUIRED POSITION. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACINGS INDICATED REDUCED BY 1/3.
2. REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE:
   a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
   b. EXPOSED TO EARTH, WATER OR WEATHER:
      1. #6 & LARGER . . . . . 2"
      2. #5 & SMALLER . . . . . 2" (1 3/4" FOR #3 COLUMN TIES)
   c. SLAB ON GRADE
      1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
3. EXCEPT WHERE NOTED, CONTINUOUS REINFORCEMENT SHALL BE SPLICED WITH LAP SPLICES AT POINTS OF MINIMUM STRESS AS FOLLOWS:
   a. IN RESERVOIR WALLS, SEE DETAILS 1/S1, 2/S1 AND 1/S4.
   b. IN COLUMNS, USE 35 INCH LAP
   c. IN SUSPENDED SLAB, USE 48 BAR DIAMETER LAP AND STAGGER ADJACENT BAR SPLICES 24" MIN.
   d. IN SLAB-ON-GRADE, USE 30 BAR DIAMETER LAP.
4. ALL VERTICAL REINFORCING SHALL BE DOWELED TO FOOTINGS OR STRUCTURE BELOW WITH DOWELS TO MATCH. SPLICE LENGTHS SHALL COMPLY WITH NOTE F.3. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE FOOTING, BUT NOT MORE THAN 14" INTO FOOTING. SEE DETAILS FOR REQ'D. EMBEDMENT OR DOWELS.
5. DO NOT WELD REINFORCING.



NOTES:
1. FOR OPTION #1 - SPLICE LENGTHS ARE
   a. #5 BARS - 39"
   b. #6 BARS - 46"
2. FOR OPTION #2 - USE MECHANICAL CONNECTORS WHICH ACHIEVE 125% OF THE STRENGTH OF THE BARS BEING SPLICED. SUBMIT A CURRENT ICC RESEARCH REPORT FOR APPROVAL PRIOR TO CONSTRUCTION.

TYPICAL CONST. JOINT IN WALL DETAIL (1/S1)

SCALE : NONE

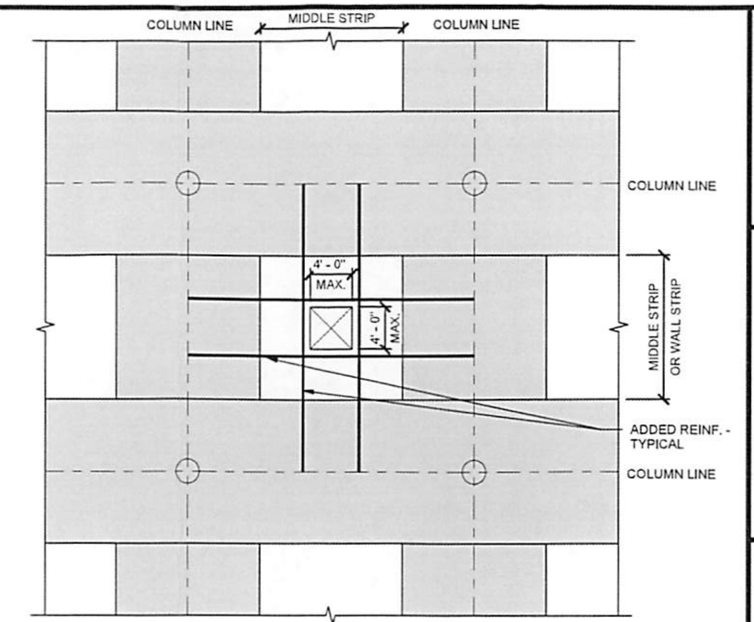


NOTES:
SPLICES MAY NOT COINCIDE VERTICALLY MORE REQUENTLY THAN EVERY THIRD BAR.

SPLICE LENGTHS
#5 BARS - 39"
#6 BARS - 46"

TYPICAL REINF. BAR SPLICE DETAIL (2/S1)

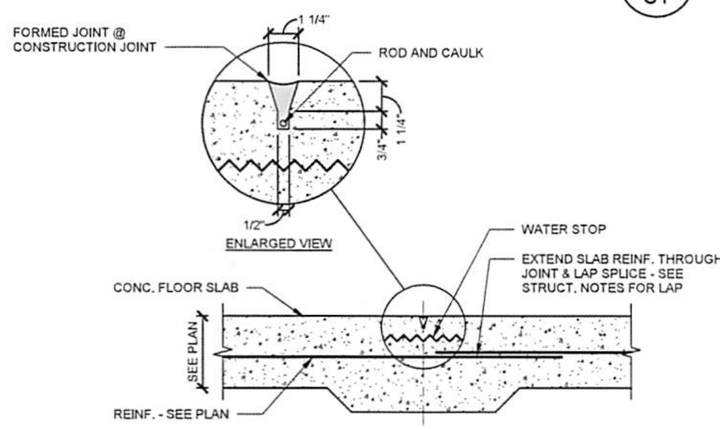
SCALE : NONE



NOTES:
1. ADD REINFORCING ON ALL SIDES OF OPENING EQUAL TO 1/2 THE AMOUNT CUT IN THAT DIRECTION. ADDED BARS TO EXTEND TO COLUMN LINES AS SHOWN.
2. OPENINGS MAY ONLY OCCUR @ INTERSECTIONS OF MIDDLE STRIPS (OR INTERSECTION OF MIDDLE STRIP WITH WALL STRIP) AS SHOWN.

TYPICAL ROOF OPENING DETAIL (3/S1)

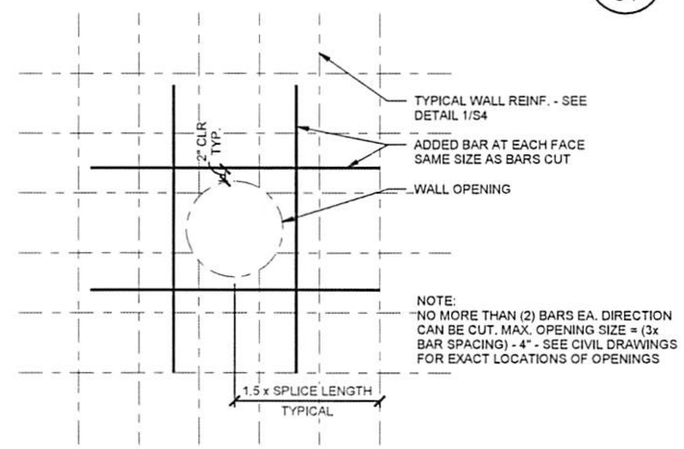
SCALE : NONE



NOTE:
IT IS NOT ANTICIPATED THAT THIS DETAIL WILL BE REQ'D. IT IS ONLY PROVIDED TO GIVE THE CONTRACTOR THE OPTION OF POURING THE FLOOR WITH MULTIPLE POURS

TYP. CONST. JOINT IN FLOOR SLAB DETAIL (4/S1)

SCALE : NONE



NOTE:
NO MORE THAN (2) BARS EA. DIRECTION CAN BE CUT. MAX. OPENING SIZE = (3x BAR SPACING) - 4" - SEE CIVIL DRAWINGS FOR EXACT LOCATIONS OF OPENINGS

TYPICAL WALL OPENING DETAIL (5/S1)

SCALE : NONE

Structural Sheet Index

SHEET NUMBER	SHEET NAME
S1	STRUCTURAL NOTES
S2	FOOTING & FOUNDATION PLAN
S3	ROOF FRAMING PLAN
S4	DETAILS

Date 2016.11.28
Engineer Z. Hansen
Drawn By D Bartelson
Checked By Z. Hansen
ARW Project No. 16402

REVISION	
DATE	DESCRIPTION

DWG.

STRUCTURAL NOTES

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I.D.

EDEN, WEBER, UTAH

GARDNER ENGINEERING
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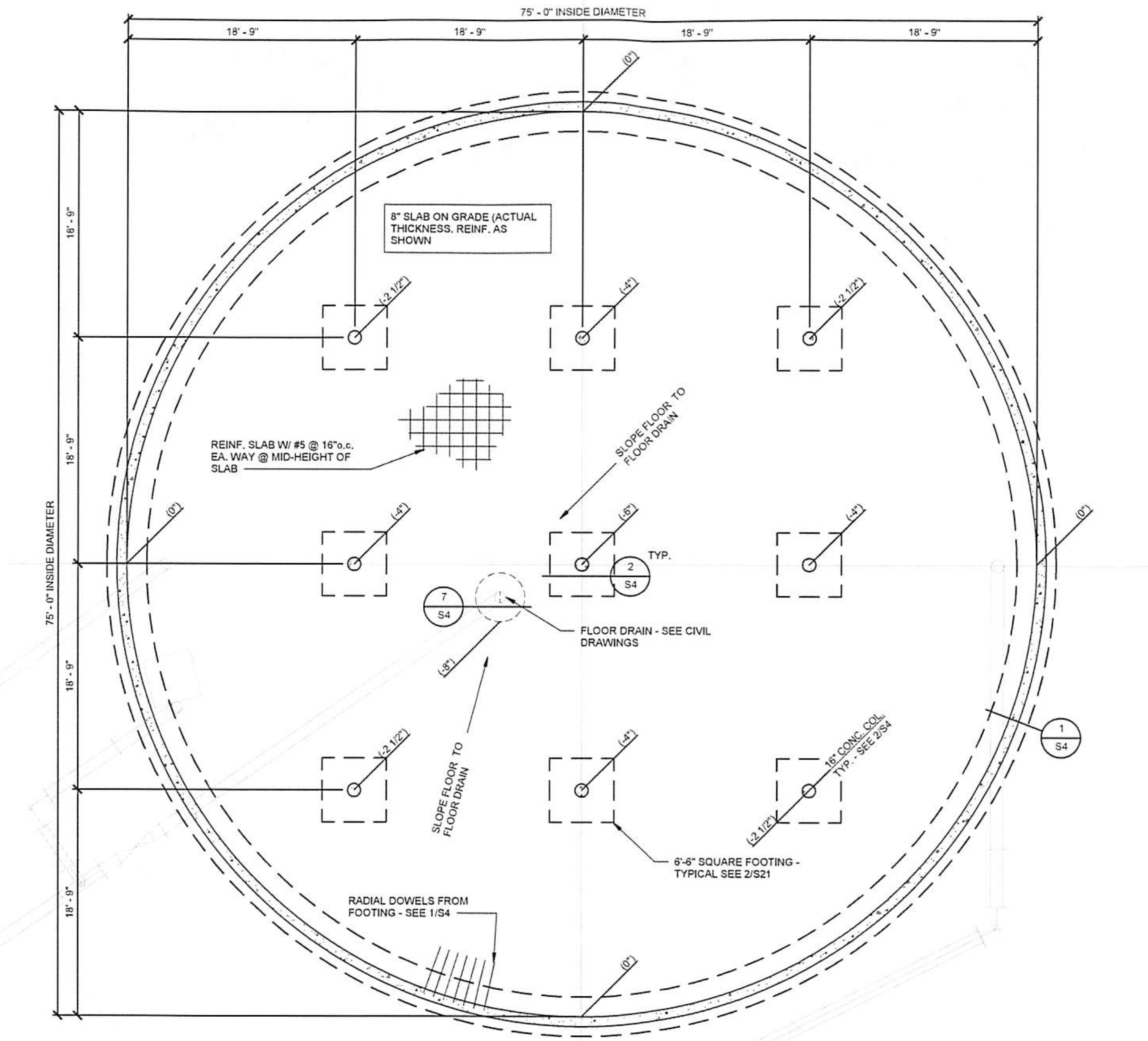
structural consultants

S1



NOTE:
1. FLOOR SLOPES 8" FROM OUTSIDE TO DRAIN AT CENTER. NUMBERS SHOWN IN ( ) ARE RELATIVE TOP OF SLAB ELEVATIONS AT COLUMNS

NOTE:
SEE GARDNER ENGINEERING SITE PLAN FOR ORIENTATION & NORTH ARROW.

FOOTING & FOUNDATION PLAN

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

A / S2

Date	2016.11.28
Engineer	Z. Hansen
Drawn By	D Bartelson
Checked By	Z. Hansen
ARW Project No.	16402

REVISION — DATE | DESCRIPTION

DWG.

PROFESSIONAL STRUCTURAL ENGINEER Zachary C. Hansen No. 7749124-2203 12/1/16 STATE OF UTAH

FOOTING & FOUNDATION PLAN

500,000 GALLON TANK

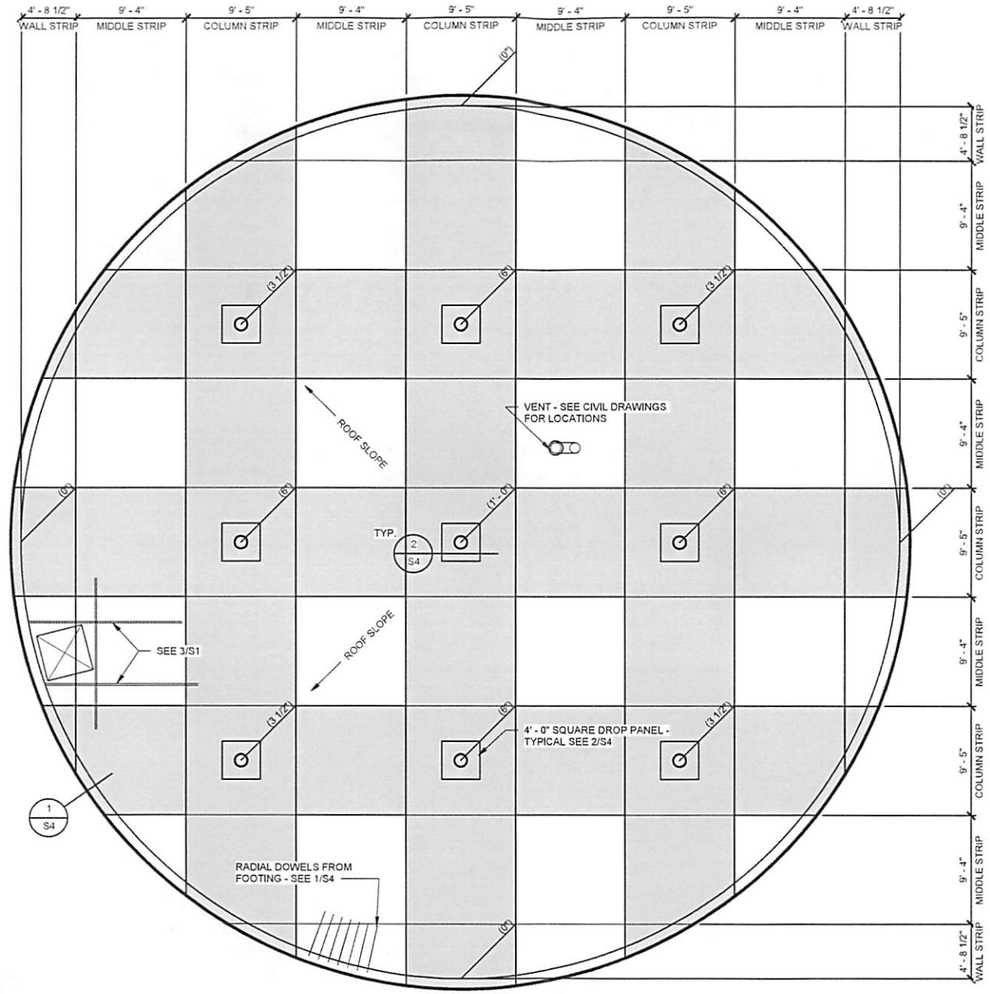
WOLF CREEK WATER + SEWER I.D.

EDEN, WEBER, UTAH

GARDNER ENGINEERING
CIVIL • LAND PLANNING
MUNICIPAL • LAND SURVEYING

ARW ENGINEERS
structural consultants

S2



NOTE:
1. ROOF SLOPES 1/2" FROM CENTER TO EDGE. NUMBERS SHOWN IN ( ) ARE RELATIVE TOP OF SLAB ELEVATIONS AT COLUMNS

NOTE:
SEE GARDNER ENGINEERING SITE PLAN FOR ORIENTATION & NORTH ARROW.

ROOF SLAB PLAN

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

A
S3

REVISION		
DATE	DESCRIPTION	

Date 2016.11.28
Engineer Z. Hansen
Drawn By D.Barrelson
Checked By Z. Hansen
ARW Project No. 16402
DWG.

PROFESSIONAL STRUCTURAL ENGINEER
Zachary C. Hansen
No. 7749124-2203
12/1/16
STATE OF UTAH

ROOF FRAMING PLAN

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I.D.

EDEN, WEBER, UTAH

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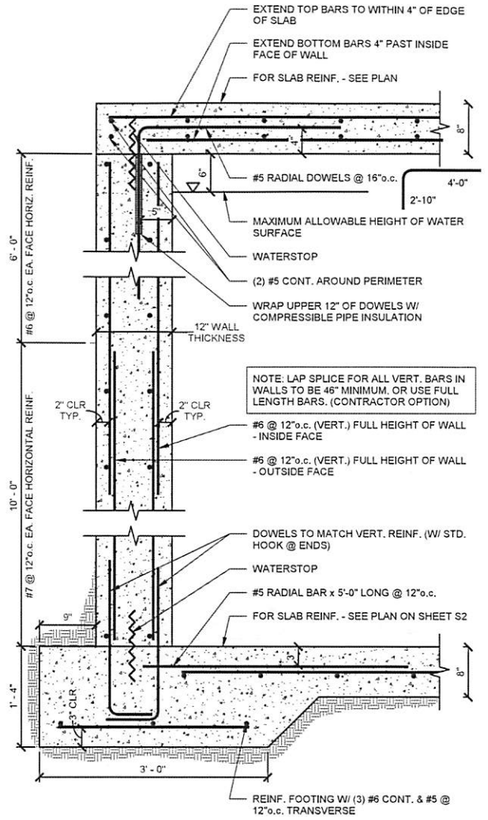
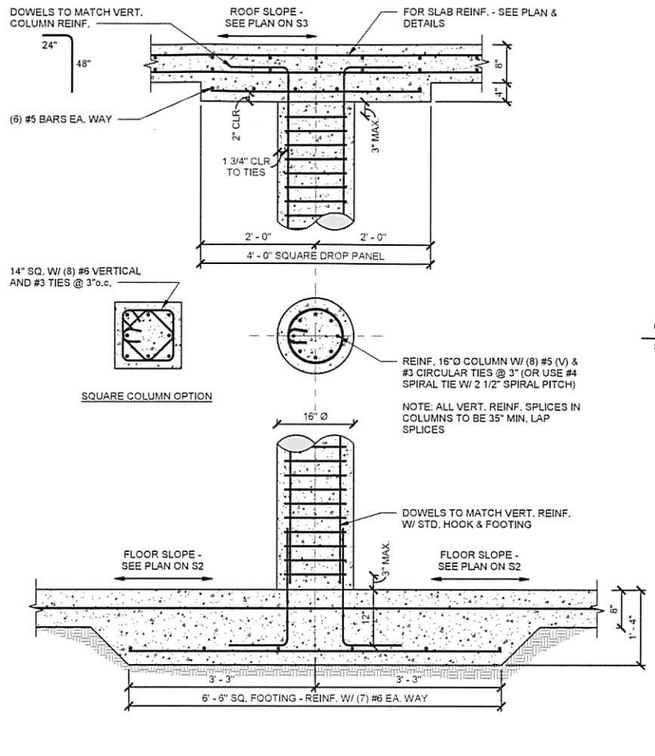
ENGINEERS
structural consultants

S3

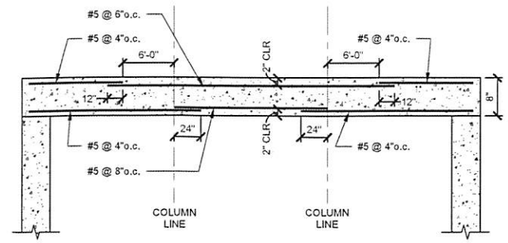
15/2017 2:32:34 PM



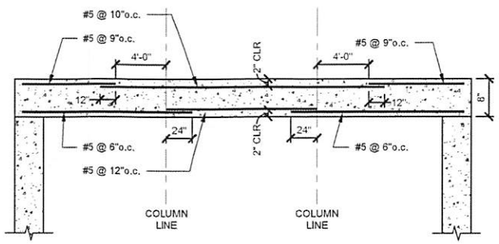
TYPICAL RESERVOIR WALL SECTION — 1 / S4
SCALE : NONE



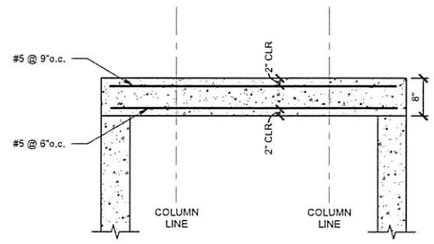
TYPICAL INTERIOR COLUMN — 2 / S4
SCALE : NONE



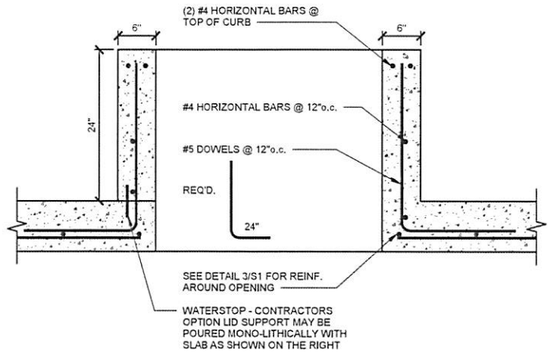
COLUMN STRIP (EACH DIRECTION) — 3 / S4
SCALE : NONE



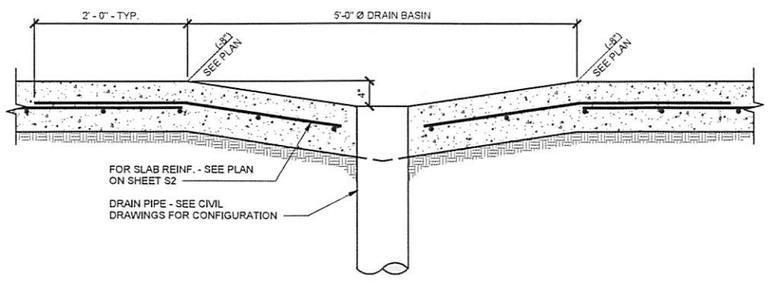
MIDDLE STRIP (EACH DIRECTION) — 4 / S4
SCALE : NONE



WALL STRIP (EACH DIRECTION) — 5 / S4
SCALE : NONE



CURB WALL SECTION — 6 / S4
SCALE : NONE



DRAIN BASIN — 7 / S4
SCALE : NONE

Date 2016.11.28
Engineer Z. Hansen
Drawn By D.Bartelson
Checked By Z. Hansen
ARW Project No. 16492

REVISION DESCRIPTION DATE

Zachary C. Hansen No. 7749124-2203 12/1/16 STATE OF UTAH

DETAILS

500,000 GALLON TANK

WOLF CREEK WATER + SEWER I.D.

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S4