

General Notes:

- ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: GOVERNING UTILITY MUNICIPALITY, GOVERNING CITY OR COUNTY (IF UN-INCORPORATED), INDIVIDUAL PRODUCT MANUFACTURERS, AMERICAN PUBLIC WORKS ASSOCIATION (APWA), AND THE DESIGN ENGINEER. THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
- CONTRACTOR TO STRICTLY FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR THIS PROJECT, ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACT TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, RETAINING WALLS AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH THE PROJECT GEOTECHNICAL ENGINEER.
- TRAFFIC CONTROL, STRIPING & SIGNAGE TO CONFORM TO CURRENT GOVERNING AGENCIES TRANSPORTATION ENGINEER'S MANUAL AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
- CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATING REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
- AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED THOROUGHLY REVIEWED PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
- ANY WORK IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE PERMITS FROM THE APPROPRIATE CITY, COUNTY OR STATE AGENCY CONTROLLING THE ROAD, INCLUDING OBTAINING REQUIRED INSPECTIONS.
- ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR SPECIFICATION CORRECTIONS.
- CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER.
- CATCH SLOPES SHALL BE GRADES AS SPECIFIED ON GRADING PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLAGGING, CAUTION SIGNS, LIGHTS, BARRICADES, FLAGMEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
- CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE WHERE THE PROJECT IS TO BE LOCATED FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT OF THE CONTRACT AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY HIMSELF BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS HE DEEMED APPROPRIATE. IF AWARDED THE CONTRACT, HE HAS RELIED AND IS RELYING ON HIS OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON HIS OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT. THE INFORMATION PROVIDED BY THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE CONTRACTOR'S OWN INVESTIGATION. THE CONTRACTOR SHALL CONDUCT AN INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT HE HAS NOT RELIED SOLELY UPON OWNER- OR ENGINEER-FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING HIS BID.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER, ENGINEER, AND/OR GOVERNING AGENCIES.
- CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
- CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND 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 THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
- IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPAIRING OR REPLACING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
- WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
- CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHEN NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REFINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
- WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE HIGHEST QUALITY ARE TO BE USED.
- CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THE TRUE INTENT AND PURPOSE OF THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS IN THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO THE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
- CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4 FEET OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH LOCAL, STATE AND NATIONAL SAFETY CODES, ORDINANCES, OR REQUIREMENTS FOR EXCAVATION AND TRENCHES.
- ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.

Utility Notes:

- CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER, INTERNET.
- EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING A COMBINATION OF ON-SITE SURVEYS (BY OTHERS), PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE IN THE FIELD, THEIR MAIN AND SERVICE LINES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
- CONTRACTOR SHALL NOT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST PRIOR TO BEGINNING ANY EXCAVATION. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
- CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
- ALL VALVES AND MANHOLE COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE.
- CONTRACTOR SHALL CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE.
- CONTRACTOR SHALL GROUT AT CONNECTION OF PIPE TO BOX WITH NON-SHRINKING GROUT, INCLUDING PIPE VOIDS LEFT BY CUTTING PROCESS, TO A SMOOTH FINISH.
- CONTRACTOR SHALL GROUT WITH NON-SHRINK GROUT BETWEEN GRADE RINGS AND BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX.
- SILT AND DEBRIS IS TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
- CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
- EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DE-WATERED CONDITIONS.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
- MAINTAIN A MINIMUM 18" VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
- CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
- ALL BOLTED FITTINGS MUST BE GREASED AND WRAPPED.
- UNLESS SPECIFICALLY NOTED OTHERWISE, MAINTAIN AT LEAST 2 FEET OF COVER OVER ALL STORM DRAIN LINES AT ALL TIMES (INCLUDING DURING CONSTRUCTION).
- ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 60" BELOW FINISHED GRADE.
- ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, PIPE EDGE TO PIPE EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, THE SEWER LINE AND WATER LINE SHALL BE LAID IN SEPARATE TRENCHES AND THE BOTTOM OF THE WATER LINE SHALL BE AT LEAST 18" ABOVE THE TOP OF THE SEWER LINE.
- CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
- ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURBS, GUTTER, SIDEWALK AND STREET PAVING.
- CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

Notice to Contractor:

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON RECORDS OF THE VARIOUS UTILITY COMPANIES AND/OR MUNICIPALITIES 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 APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

THE CONTRACTOR AGREES THAT THEY 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. 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 ENGINEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

- NOTE:
 1. SAWCUT EXISTING ASPHALT INSIDE FROM OUTER EDGE FOR TACK SEAL OF NEW ASPHALT
 2. CONTRACTOR TO VERIFY 2% MIN. AND 5% MAX SLOPE FROM EDGE OF ASPHALT TO LIP OF GUTTER

Survey Control Note:

THE CONTRACTOR OR SURVEYOR SHALL BE RESPONSIBLE FOR FOLLOWING THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS (NSPS) MODEL STANDARDS FOR ANY SURVEYING OR CONSTRUCTION LAYOUT TO BE COMPLETED USING REEVE & ASSOCIATES, INC. SURVEY DATA OR CONSTRUCTION IMPROVEMENT PLANS. PRIOR TO PROCEEDING WITH CONSTRUCTION STAKING, THE SURVEYOR SHALL BE RESPONSIBLE FOR VERIFYING HORIZONTAL CONTROL FROM THE SURVEY MONUMENTS AND FOR VERIFYING ANY ADDITIONAL CONTROL POINTS SHOWN ON AN ALTA SURVEY, IMPROVEMENT PLAN, OR ANY ELECTRONIC DATA PROVIDED. THE SURVEYOR SHALL ALSO USE THE BENCHMARKS AS SHOWN ON THE PLAN, AND VERIFY THEM AGAINST NO LESS THAN FIVE (5) EXISTING HARD IMPROVEMENT ELEVATIONS INCLUDED ON THESE PLANS OR ON ELECTRONIC DATA PROVIDED. IF ANY DISCREPANCIES ARE ENCOUNTERED, THE SURVEYOR SHALL IMMEDIATELY NOTIFY REEVE & ASSOCIATES, INC. AND RESOLVE THE DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION STAKING.

Erosion Control General Notes:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO GOVERNING AGENCIES ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE COUNTIES. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT OPEN FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS. THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE GOVERNING AGENCIES.

Maintenance:

ALL BEST MANAGEMENT PRACTICES (BMP'S) SHOWN ON THIS PLAN MUST BE MAINTAINED AT ALL TIMES UNTIL PROJECT CLOSE-OUT.

THE CONTRACTOR'S RESPONSIBILITY SHALL INCLUDE MAKING BI-WEEKLY CHECKS ON ALL EROSION CONTROL MEASURES TO DETERMINE IF REPAIR OR SEDIMENT REMOVAL IS NECESSARY. CHECKS SHALL BE DOCUMENTED AND COPIES OF THE INSPECTIONS KEPT ON SITE.

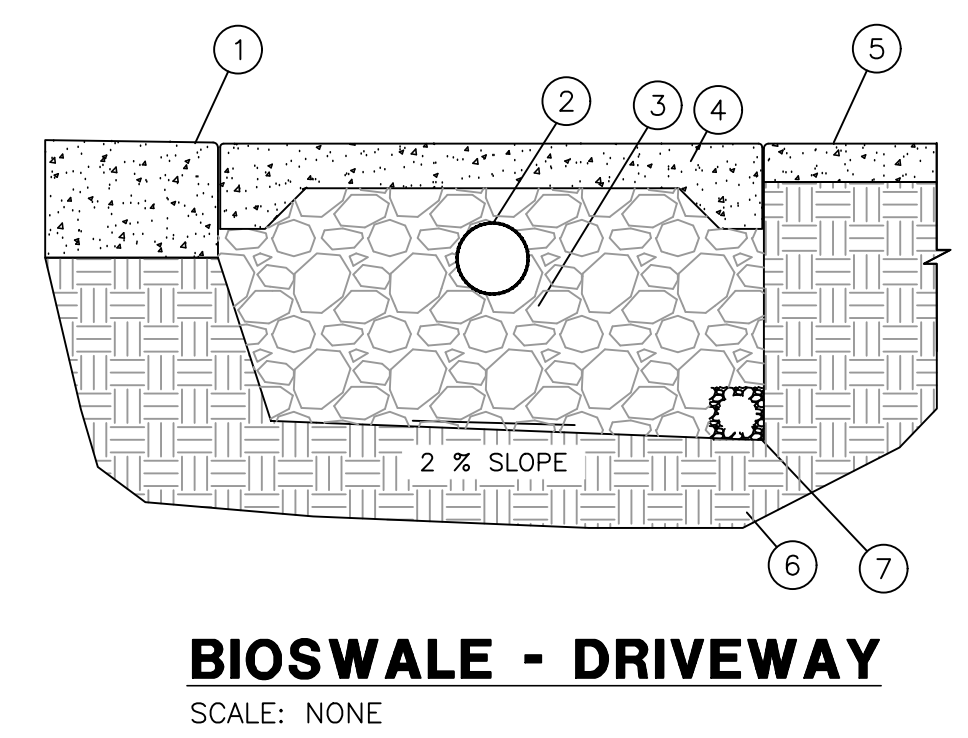
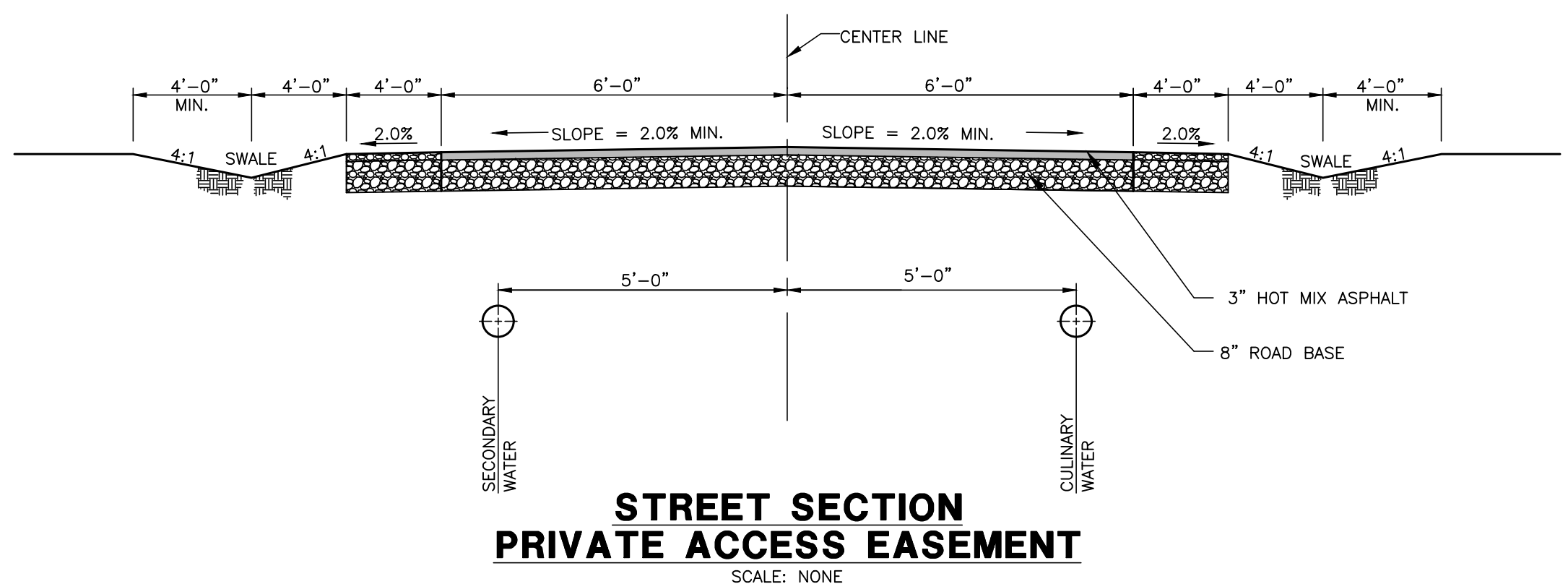
SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF BARRIER.

SEDIMENT TRACKED ONTO PAVED ROADS MUST BE CLEANED UP AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN THE END OF THE NORMAL WORK DAY. THE CLEAN UP WILL INCLUDE SWEEPING OF THE TRACKED MATERIAL, PICKING IT UP, AND DEPOSITING IT TO A CONTAINED AREA.

EXPOSED SLOPES:

- ANY EXPOSED SLOPE THAT WILL REMAIN UNTOUCHED FOR LONGER THAN 14 DAYS MUST BE STABILIZED BY ONE OR MORE OF THE FOLLOWING METHODS:
 A) SPRAYING DISTURBED AREAS WITH A TACKIFIER VIA HYDROSEED
 B) TRACKING STRAW PERPENDICULAR TO SLOPES
 C) INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

— SW LAT — = PROPOSED SECONDARY WATER LATERAL	■ = PROPOSED WATER METER	PUE = PUBLIC UTILITY EASEMENT
— LD LAT — = PROPOSED LAND DRAIN LATERAL	■ = EXISTING WATER METER	PP = POWER/UTILITY POLE
— W LAT — = PROPOSED WATER LATERAL	■ = PROPOSED CATCH BASIN	PRC = POINT OF RETURN CURVATURE
— SS LAT — = PROPOSED SEWER LATERAL	□ = EXISTING CATCH BASIN	PT = POINT OF TANGENCY
— W/B — = PROPOSED CULINARY WATER LINE	⊕ = PLUG W/ 2" BLOW-OFF	RCP = REINFORCED CONCRETE PIPE
— EX.W — = EXISTING CULINARY WATER LINE	○ = STREET LIGHT	RIM = RIM OF MANHOLE
— SW/B — = PROPOSED SECONDARY WATER LINE	— = SIGN	ROW = RIGHT-OF-WAY
— EX.SW — = EXISTING SECONDARY WATER LINE	BFE = BASEMENT FLOOR ELEVATION	SD = STORM DRAIN
— SS/B — = PROPOSED SANITARY SEWER LINE	BLDG = BUILDING	SS = SANITARY SEWER
— EX.SS — = EXISTING SANITARY SEWER LINE	BOS = BOTTOM OF STAIRS	SW = SECONDARY WATER
— SD/15 — = PROPOSED STORM DRAIN LINE	BOW = BOTTOM OF WALL	TBC = TOP BACK OF CURB
— EX.SD — = EXISTING STORM DRAIN LINE	BP = BEGINNING POINT	TOA = TOP OF ASPHALT
— LD/B — = PROPOSED LAND DRAIN LINE	C&G = CURB & GUTTER	TOC = TOP OF CONCRETE
— EX.LD — = EXISTING LAND DRAIN LINE	CB = CATCH BASIN	TOW = TOP OF WALL
— IRR/18 — = PROPOSED IRRIGATION LINE	CF = CATCH BASIN	TOS = TOP OF STAIRS
— EX.IRR — = EXISTING IRRIGATION LINE	CF = CUBIC FEET	TSW = TOP OF SIDEWALK
× × × = FENCE LINE	CFS = CUBIC FEET PER SECOND	W = CULINARY WATER
— — — = DRAINAGE SWALE	CO = CLEANOUT	WM = WATER METER
● = PROPOSED FIRE HYDRANT	EP = END POINT	EXISTING ASPHALT PAVEMENT
○ = EXISTING FIRE HYDRANT	FF = FINISH FLOOR	PROPOSED ASPHALT PAVEMENT
● = PROPOSED MANHOLE	FFE = FINISH FLOOR ELEVATION	PROPOSED CONCRETE
○ = EXISTING MANHOLE	FG = FINISHED GRADE	PROPOSED GRAVEL
● = PROPOSED SEWER CLEAN-OUT	FH = FIRE HYDRANT	4800 = EXISTING CONTOUR GRADE
● = PROPOSED GATE VALVE	FL = FLOW LINE	4800 = PROPOSED CONTOUR GRADE
× = EXISTING GATE VALVE	GB = GRADE BREAK	⟨ = CHECK DAM IN SWALE
— = PLUG & BLOCK	INV = INVERT	
◆ = AIR VAC ASSEMBLY	LF = LINEAR FEET	
	NG = NATURAL GRADE	
	PC = POINT OF CURVATURE	



Reeve & Associates, Inc.
 5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
 TEL: (801) 621-1100 www.reeve-assoc.com
 LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

RA

REVISIONS	DESCRIPTION	DATE

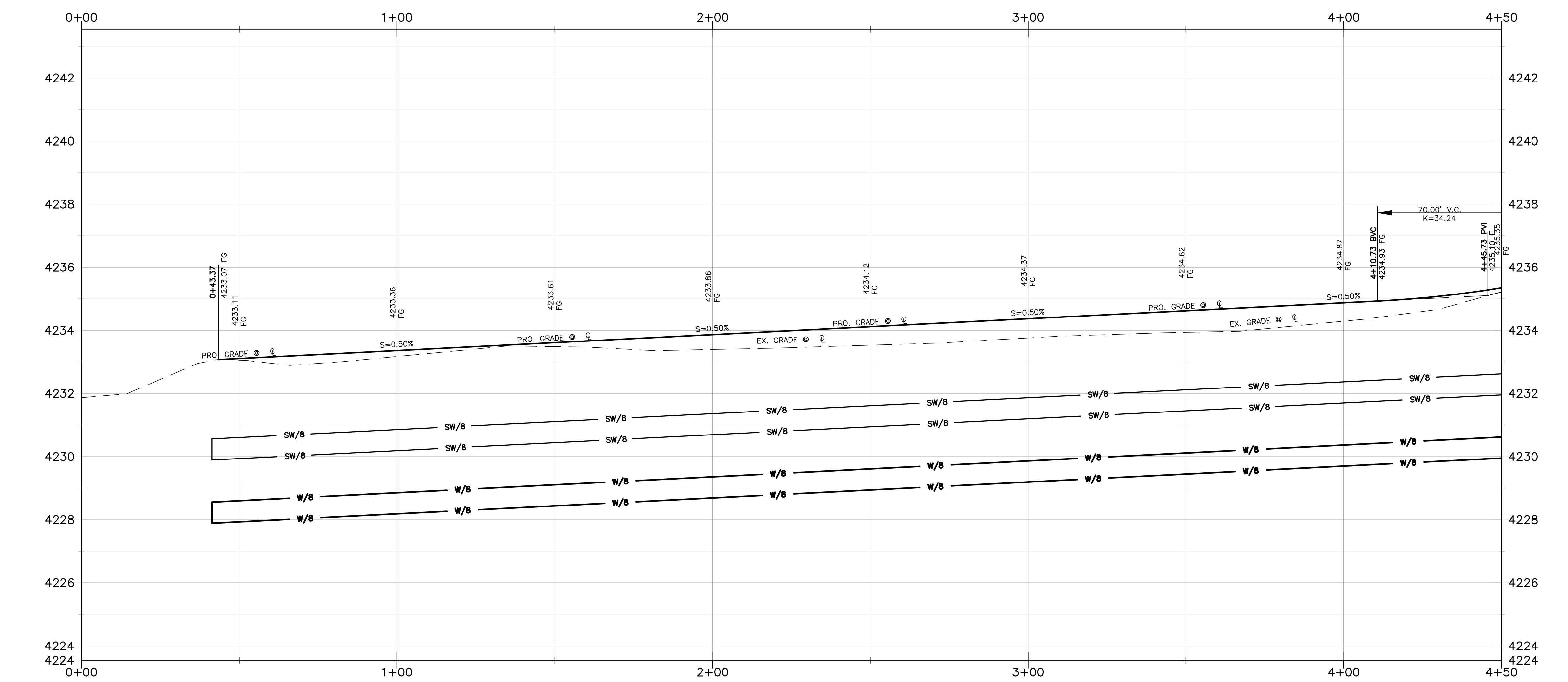
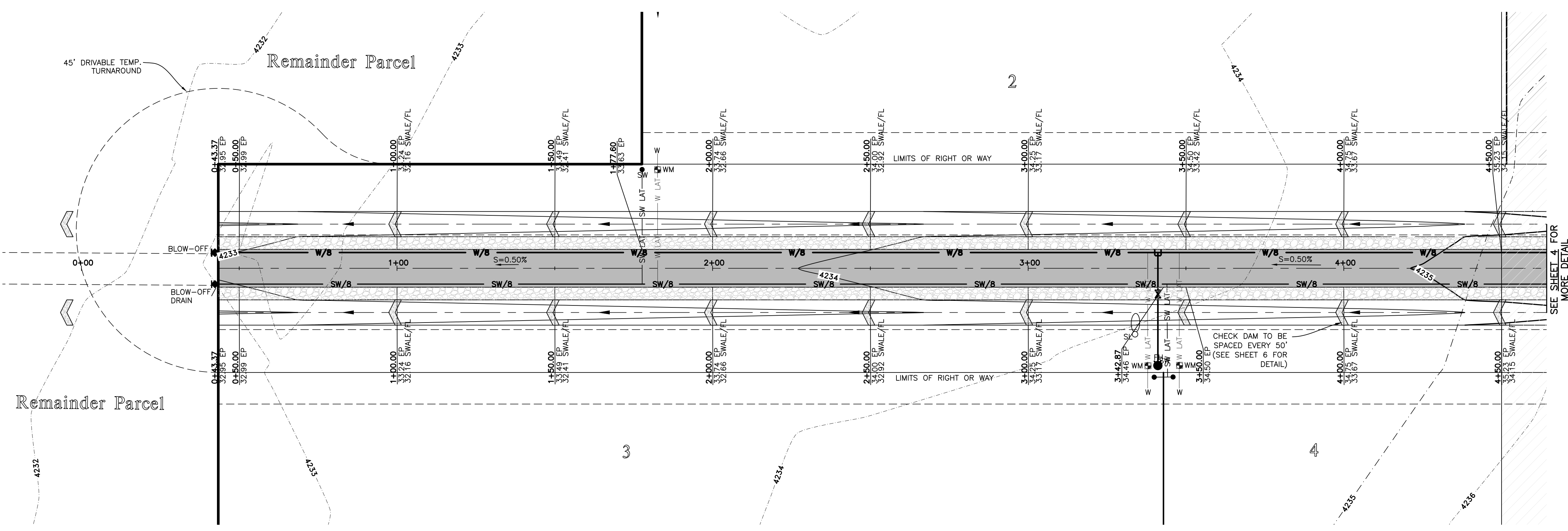
Bridger Butler Subdivision
 PART OF THE NW 1/4 OF SECTION 32, T.6N., R.2W., S.1B. & M., U.S. SURVEY
 WEBER COUNTY, UTAH

**Notes/Legend/
 Street Cross-Section**

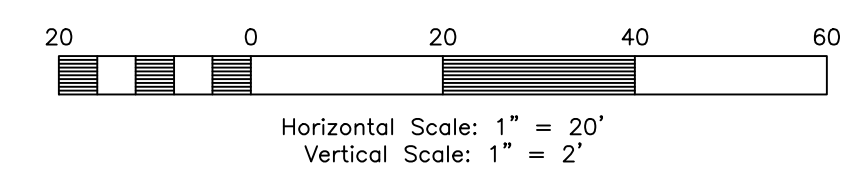
PROFESSIONAL ENGINEER
 JEREMY A. DRAPER
 5338480
 09/04/2020
 STATE OF UTAH

Project Info.
 Engineer: JEREMY DRAPER P.E.
 Drafter: K.EAVES
 Begin Date: 5/28/2020
 Name: BRIDGER BUTLER SUBDIVISION
 Number: 6403-01

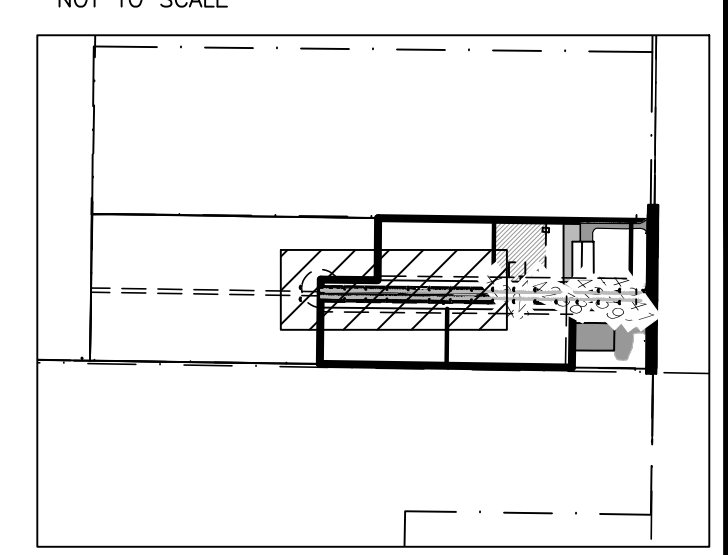
Sheet **9**
 2 Sheets



PR 0+00.00 - 4+50.00



Key Map



Construction Notes:

- CULINARY WATER**
 W/8 - 8" PVC DR18 C-900 WATER
 W - 1" SDR 11 CTS HDPE WATER SERVICE
- SECONDARY WATER**
 SW/8 - 8" PVC C-900 DR-14 SECONDARY WATER LINE
 SW - 1" POLYETHYLENE SDR CTS LATERAL ASTM D-2737
- IRRIGATION**
 IRR/18 - 18" RCP IRRIGATION PIPE

Reeve & Associates, Inc.
 5160 SOUTH 1500 WEST RIVERDALE, UTAH 84405
 TEL: (801) 621-3100 www.reeve-assoc.com

LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION

Bridger Butler Subdivision
 PART OF THE NW 1/4 OF SECTION 32, T.6N., R.2W., S.1B & M., U.S. SURVEY
 WEBER COUNTY, UTAH

Private Road
0+00.00 - 4+50.00

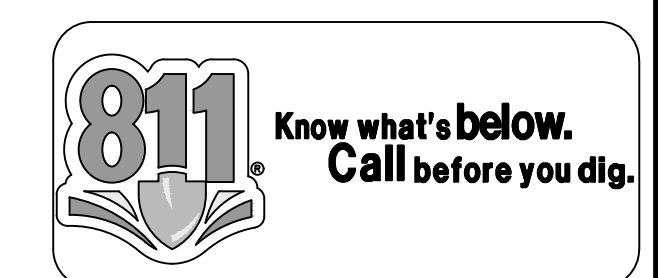
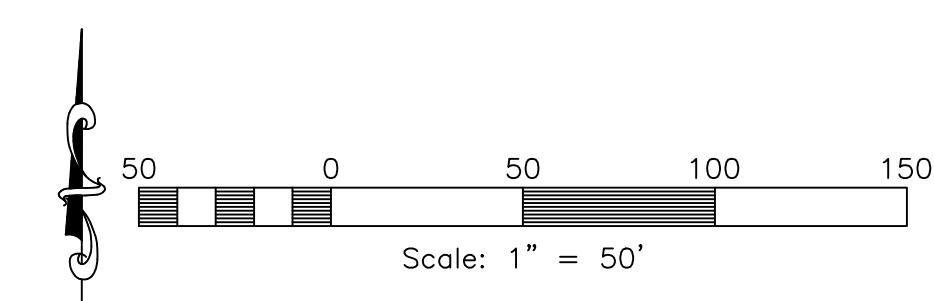
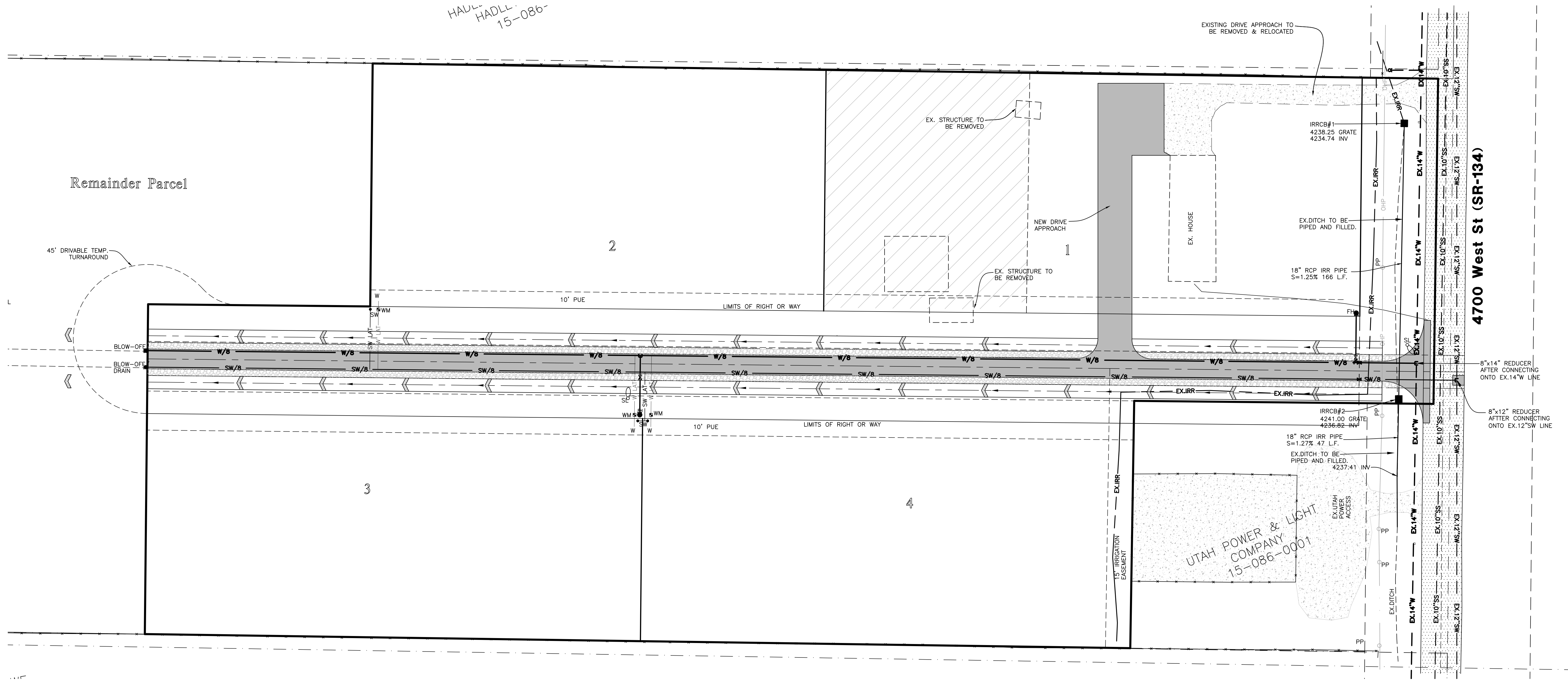


Project Info.

Engineer: JEREMY DRAPER P.E.
 Drafter: K. EAVES
 Begin Date: 5/28/2020
 Name: BRIDGER BUTLER SUBDIVISION
 Number: 6403-01



HAUL HADLL: 15-086-



Reeve & Associates, Inc.
IRA
 5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
 TEL: (801) 621-3100 www.reeve-assoc.com
 LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION

Bridger Butler Subdivision
 PART OF THE NW 1/4 OF SECTION 32, T.6N., R.2W., S.11B & M., U.S. SURVEY
 WEBER COUNTY, UTAH

Utility Plan



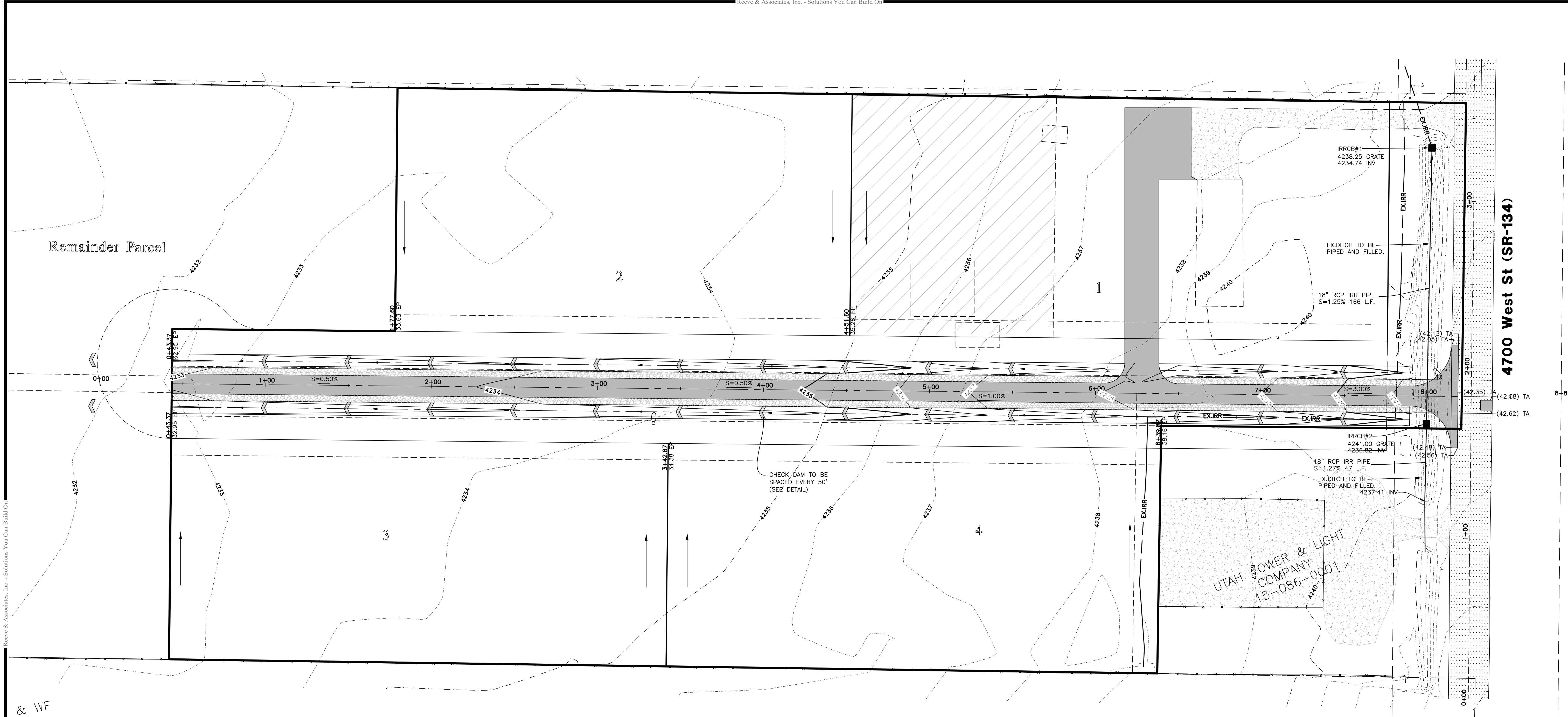
Project Info.

Engineer:	JEREMY DRAPER P.E.
Drafter:	K. EAVES
Begin Date:	5/28/2020
Name:	BRIDGER BUTLER SUBDIVISION
Number:	6403-01

Sheet	9
5	Sheets

Reeve & Associates, Inc. - Solutions You Can Build On

Reeve & Associates, Inc. - Solutions You Can Build On



& WF
SON

Storm Runoff Calculations
Butler Property
6/3/2020 vs 6403-01

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for Farr West, UT area taken from the NOAA Atlas 14 database, using a 100-year storm event for detention discharging at a rate of 0.1 cfs. Storm water runoff has been calculated for completed site conditions.

The calculations are as follows:

1. Drainage Area:
Total Area = 1.11 acre or 48,327 ft²

Runoff Coefficients
Paved Area (ft²) 9,187 C = 0.90
Landscaped Area (ft²) 39,140 C = 0.20
Roof/Hardscape Area (ft²) 0 C = 0.90

Weighted Runoff Coefficient C = 0.33

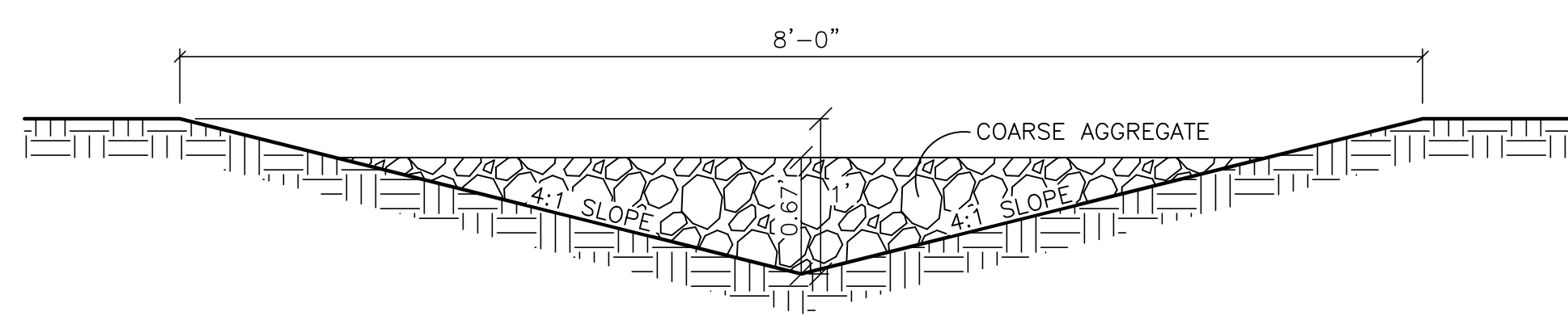
2. Volume of Run-off for 100-year Storm Event:
C = 0.33 Post-Development Allowed Flow: 0.00 cfs/acre
I = See Below in/hr
A = 48,327 ft²
Q(out) = 0.00 ft³/s

time (min)	time (sec)	i (in.)	i (in./hr)	Q (cfs)	Vol. in (cf)	Vol. out (cf)	Difference (cf)
0	0	0.00	0.00	0.00	0.00	0.00	0.00
5	300	0.54	6.52	2.43	728.80	0.00	728.80
10	600	0.83	4.96	1.85	1108.86	0.00	1108.86
15	900	1.03	4.10	1.53	1374.89	0.00	1374.89
30	1800	1.39	2.76	1.03	1851.07	0.00	1851.07
60	3600	1.71	1.71	0.64	2293.72	0.00	2293.72
120	7200	2.06	0.93	0.35	2494.93	0.00	2494.93
360	21600	2.13	0.354	0.13	2849.05	0.00	2849.05
720	43200	2.58	0.2160	0.08	3476.80	0.00	3476.80
1440	86400	2.83	0.1200	0.04	3863.11	0.00	3863.11

Total Required Detention Volume: 3,863.1 ft³

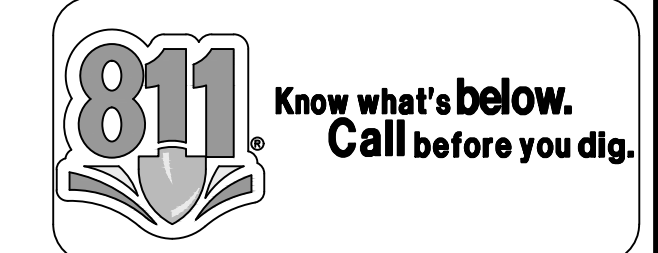
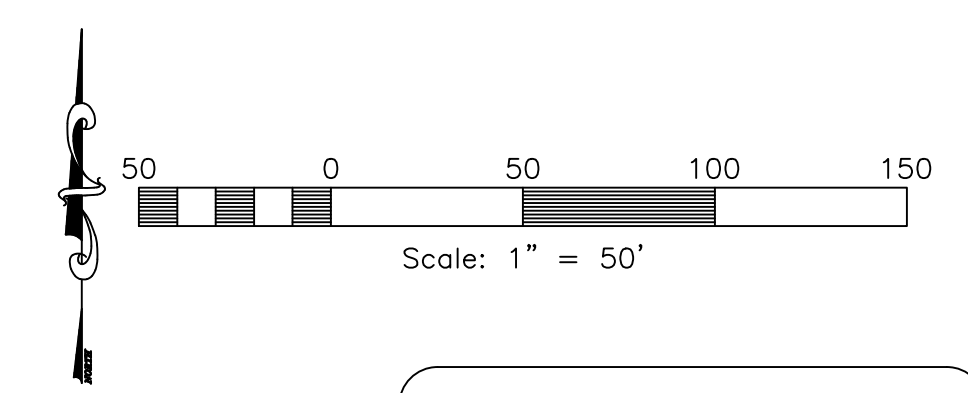
3. Orifice Sizing
Given: Q = 0.00 cfs
2g = 64.4 ft/s²
H = 3.00 ft
Cd = 0.62 for circular openings
R = SQRT(Q/pi/(Cd*(64.4H)^0.5))
R = 0.00 feet
D = 0.00 inches
A = 0.00 inches * 2 = 0.0000 ft * 2

SUMMARY: The required storage volume is 3,863 cubic feet
Orifice size is 0.00 inches



Swale Detail W/ Rock Check Dam
SCALE: NONE

STORAGE PER CHECK DAM: 250 c.f. x 20 = 5,000 c.f.
STORAGE REQUIRED: 3,863 c.f.
STORAGE PROVIDED: 491 c.f.



Reeve & Associates, Inc.
5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
TEL: (801) 621-3100 www.reeve-assoc.com
LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION
DATE	

Bridger Butler Subdivision
PART OF THE NW 1/4 OF SECTION 32, T.6N., R.2W., S.1B. & M., U.S. SURVEY
WEBER COUNTY, UTAH

Grading & Drainage Plan



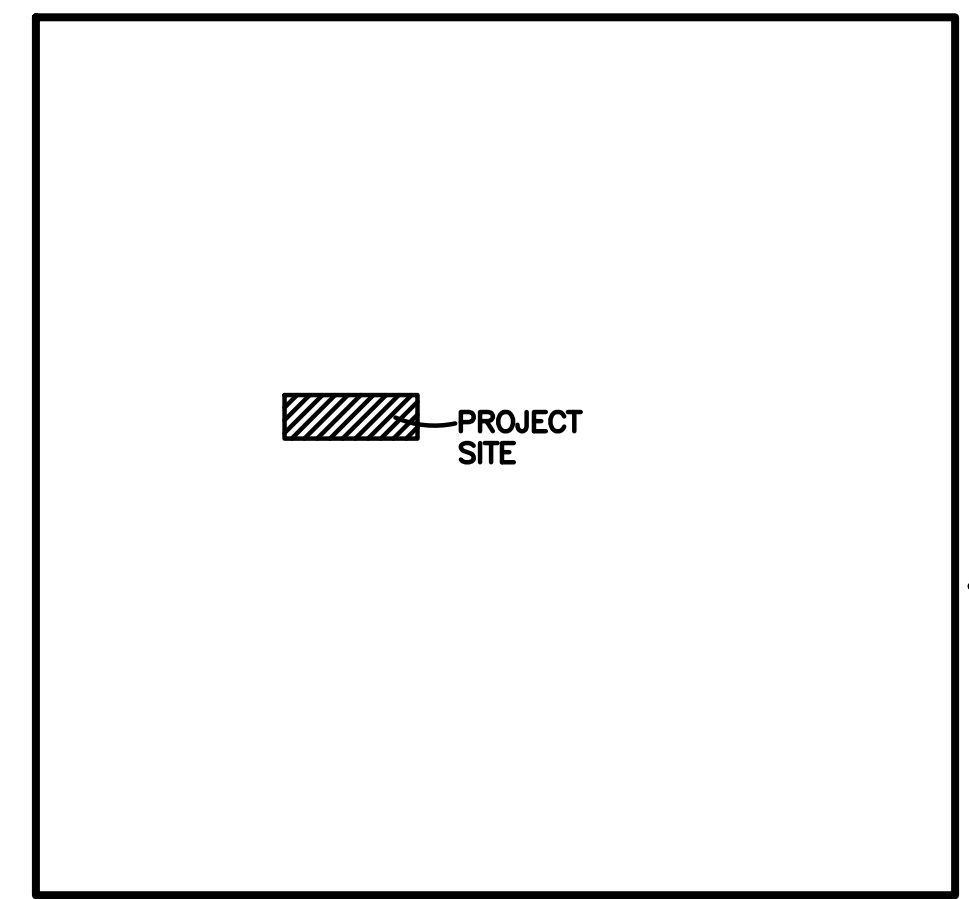
Project Info.

Engineer: JEREMY DRAPER P.E.
Drafted: K. EAVES
Begin Date: 5/28/2020
Name: BRIDGER BUTLER SUBDIVISION
Number: 6403-01

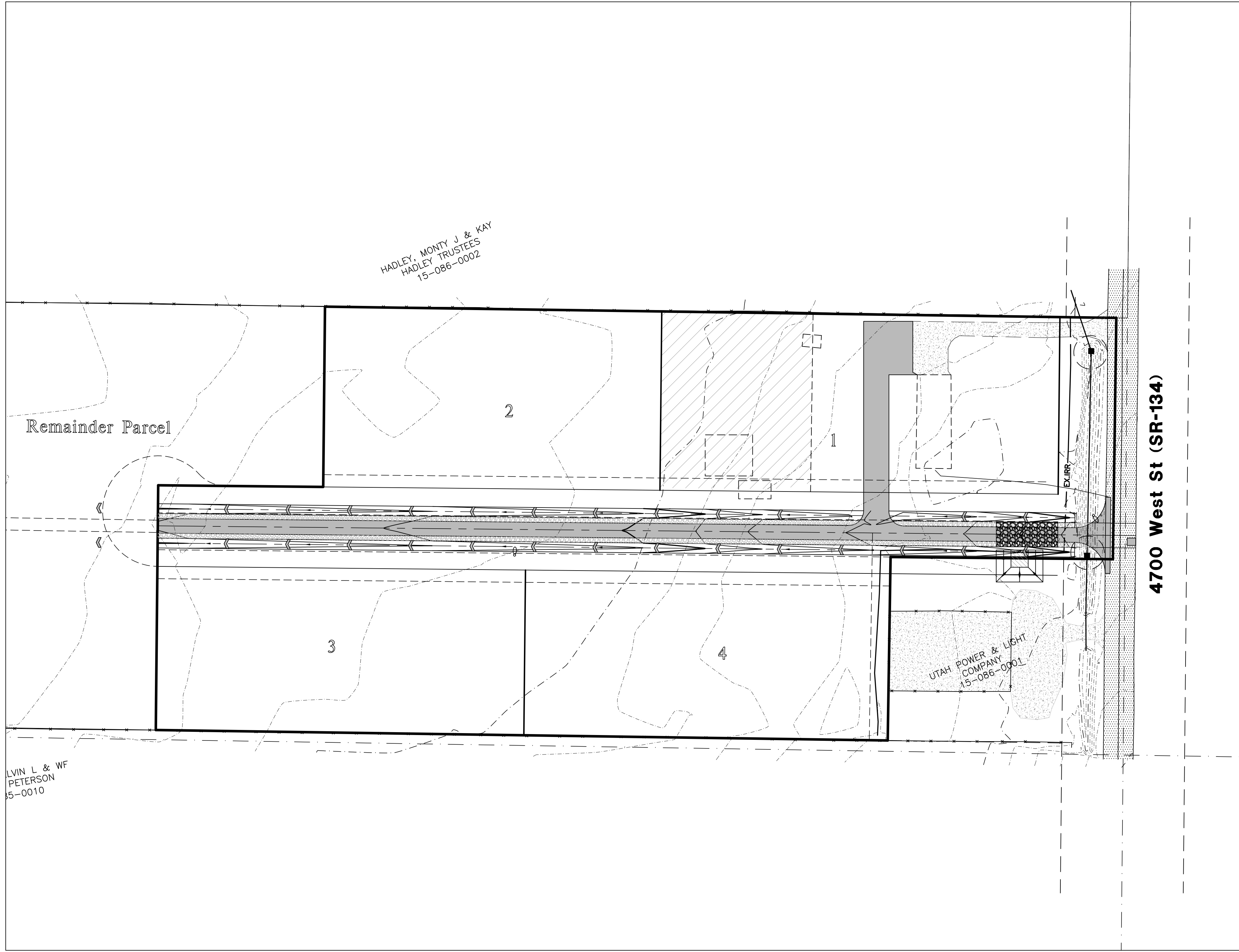
Sheet	9
6	Sheets

Bridger Butler Subdivision Storm Water Pollution Prevention Plan

WEST HAVEN CITY, WEBER COUNTY, UTAH
JUNE 2020

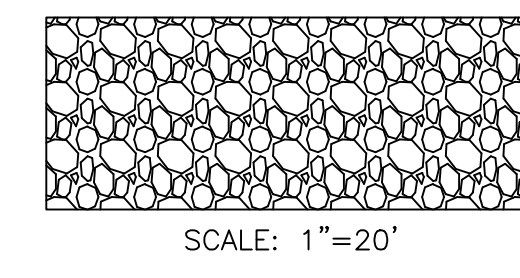


Vicinity Map
NOT TO SCALE

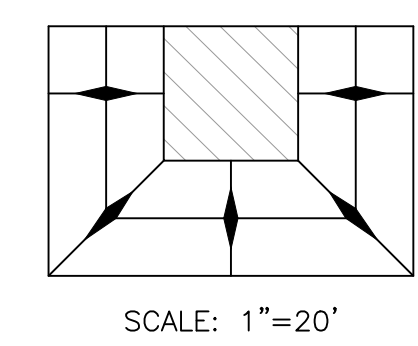


- PORTABLE TOILET
- INLET PROTECTION TYP. (SEE DETAIL)
- SILT FENCE (SEE DETAIL)

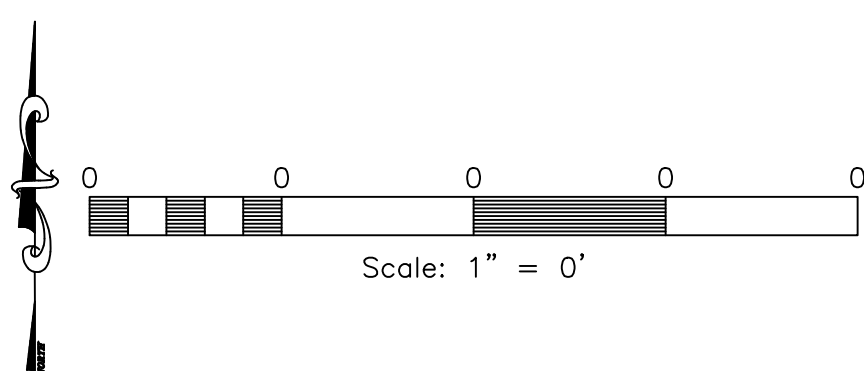
STREETS TO BE SWEEPED WITHIN 1000 FEET OF CONSTRUCTION ENTRANCE DAILY IF NECESSARY



ALL VEHICLES EXITING SITE TO PROCEED THROUGH CONSTRUCTION ENTRANCE TO REDUCE AMOUNTS OF SEDIMENT TRACKED ONTO ROADWAYS.
50'x20' CONSTRUCTION ENTRANCE W/8" CLEAN GRAVEL



CONCRETE WASH AREA (SEE DETAIL) OR AS SELECTED BY CONTRACTOR



Construction Activity Schedule	
- PROJECT LOCATION.....	HOOPER CITY, WEBER COUNTY, (UT)
- PROJECT BEGINNING DATE.....	JUNE 2020
- BMP'S DEPLOYMENT DATE.....	JUNE 2021
- STORM WATER MANAGEMENT CONTACT / INSPECTOR.....	JEFF BUTLER (801) 710-9568
- SPECIFIC CONSTRUCTION SCHEDULE INCLUDING BMP CONSTRUCTION SCHEDULE TO BE INCLUDED WITH SWPPP BY OWNER/DEVELOPER	

Reeve & Associates, Inc.
5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
TEL: (801) 621-3100 www.reeve-assoc.com

IRA
LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION
DATE	

Bridger Butler Subdivision
PART OF THE NW 1/4 OF SECTION 32, T.6N., R.2W., S.1B. & M., U.S. SURVEY WEBER COUNTY, UTAH

Storm Water Pollution Prevention Plan Exhibit



Project Info.	
Engineer:	JEREMY DRAPER P.E.
Drafter:	K.EAVES
Begin Date:	5/28/2020
Name:	BRIDGER BUTLER SUBDIVISION
Number:	6403-01

