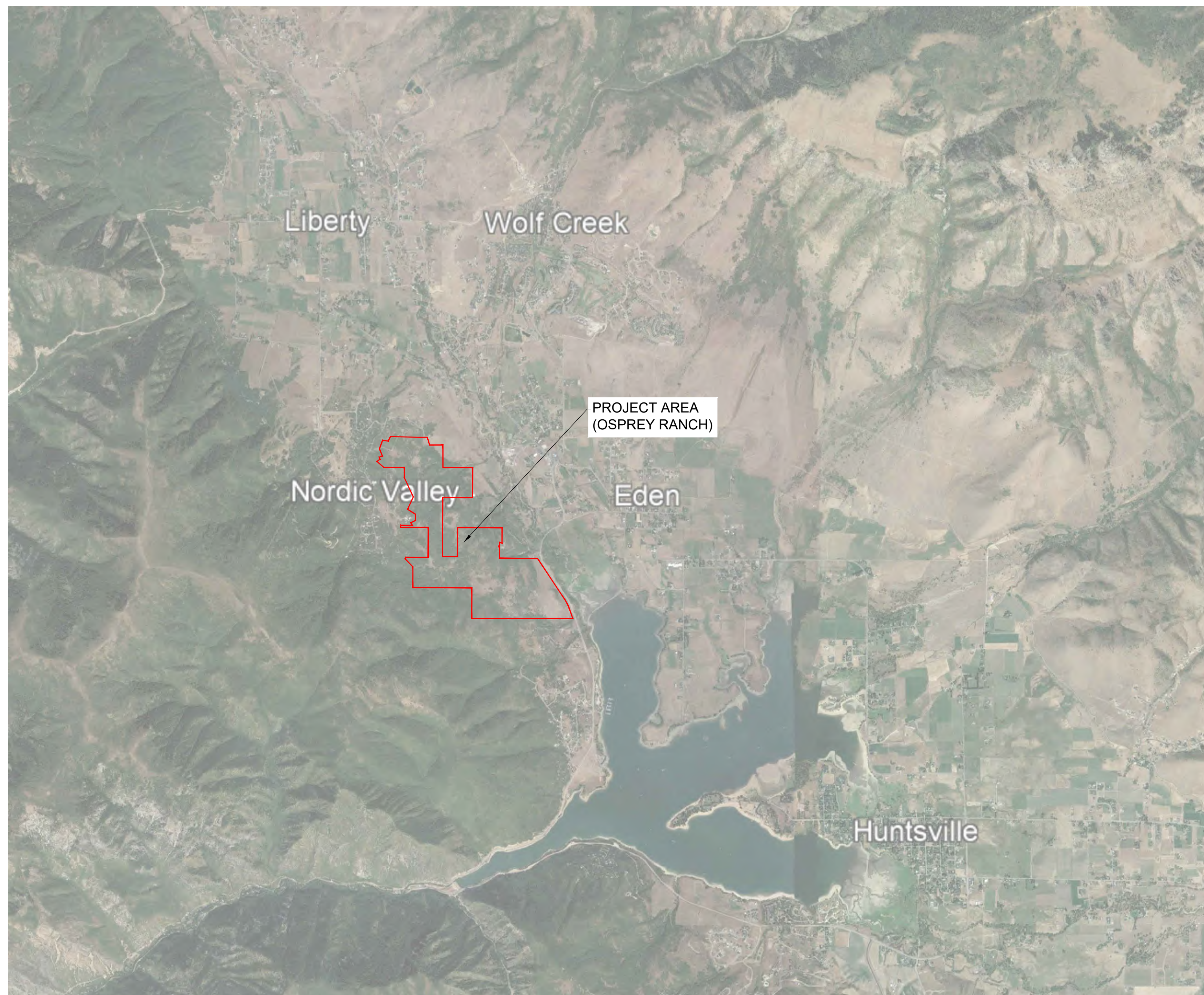


OSPREY RANCH



PHASE 1
WEBER COUNTY, UTAH

LOCATION MAP



OSPREY RANCH

PREPARED FOR:

OSPREY RANCH LLC.
JOHN LEWIS/SHANE DUNLEAVY
3718 N WOLF CREEK DR
EDEN, UTAH 84310
801.430.1507 - 801.979.7989

CONSULTANTS:



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ENGINEER:
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PROJECT MANAGEMENT:
THE HOUSEHOLDER GROUP
ERIC HOUSEHOLDER
2850 NORTH NORDIC VALLEY DRIVE
EDEN, UTAH 84310
801.389.0040

SHEET INDEX:

C-01	COVER SHEET
SA1	SLOPE ANALYSIS
PH1	PHASING PLAN
TS1	TYPICAL SECTIONS AND NOTES
SP1	SITE PLAN - PHASE 1
UM1	UTILITY MASTER PLAN
UT1-3	UTILITY SHEETS - PHASE 1
DR1	DRAINAGE MASTER PLAN
DR2-3	DRAINAGE CALCULATIONS
DR4-9	DRAINAGE PROFILES
DR10	OFFSITE STORM CALCULATIONS
SW1	SWPPP
PP0	PLAN AND PROFILE KEY MAP
PP1-15	PLAN AND PROFILE SHEETS
PS1-PS6	SEWER PLAN AND PROFILE

DETAILS:

DT1	WATER TANK DETAIL - NOT INCLUDED WITH THIS SET
DT2	WATER TANK DETAILS - NOT INCLUDED WITH THIS SET
DT3	ALTITUDE VALVE DETAIL
DT4	WATER DETAILS
DT5	SEWER DETAILS

OSPREY RANCH

PHASE 1

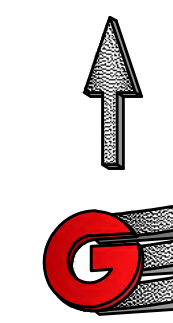
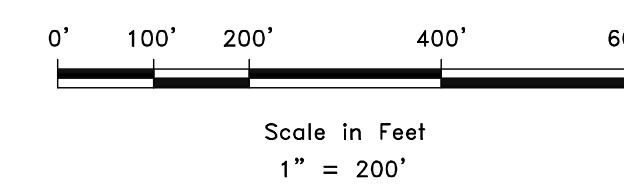
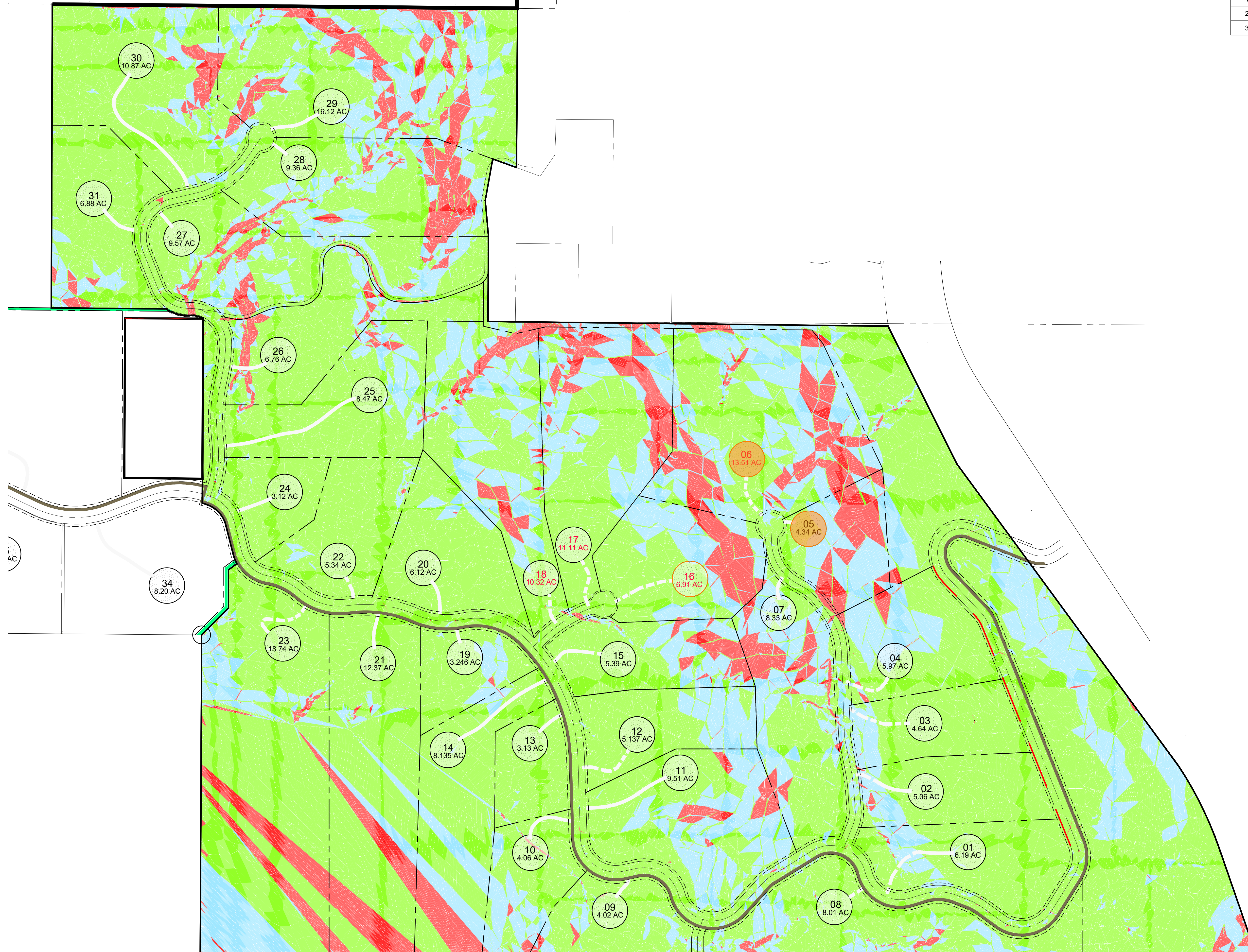
October 28, 2022

SLOPE ANALYSIS - PHASE 1 OSPREY RANCH

PHASE 1

Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	25.00%	99598.32	
2	25.00%	40.00%	90153.86	
3	40.00%	46347.70%	72215.25	

● R-LOTS



REVISIONS	
DATE	DESCRIPTION

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DATE: 5-18-22
DESIGN: KAN
DRAWN: KAN
CHECKED: PC
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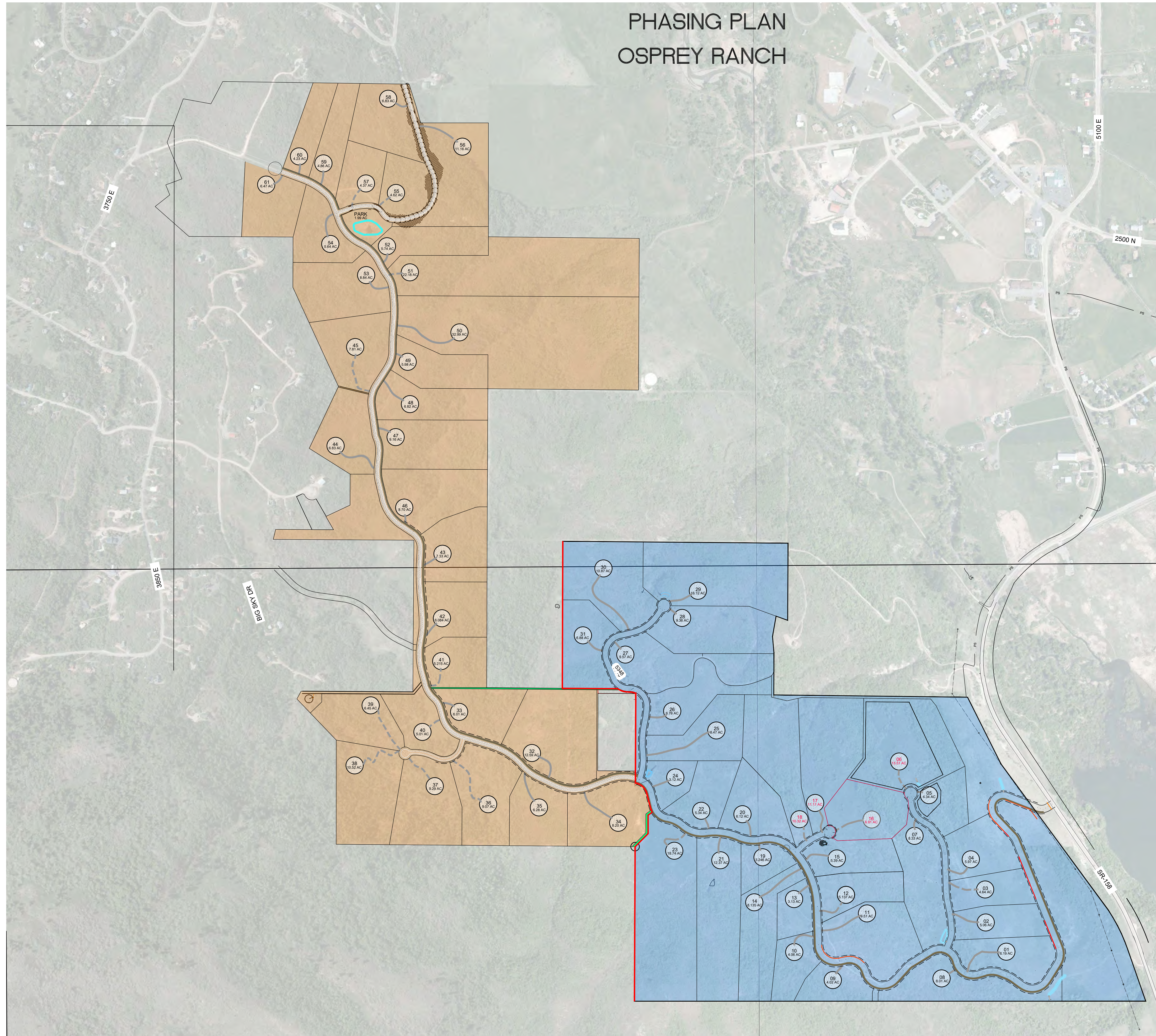
SLOPE ANALYSIS - PHASE 1
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

GARDNER ENGINEERING
CIVIL • LAND PLANNING
MUNICIPAL • LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT
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6/1/2011 - LKWS: HOMERD.1105 - OSPREY RANCH DESIGN DWG: OSPREY RANCH SLOPE ANALYSIS PHASE 1.DWG

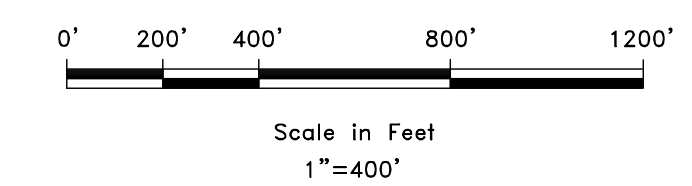
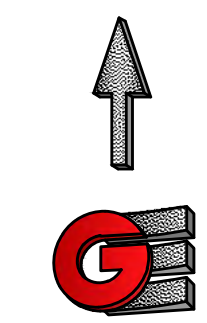
PHASING PLAN OSPREY RANCH



- PHASE 1 - 283.839 ACRES (31 LOTS)
- PHASE 2 - 280.91 ACRES (30 LOTS)

SITE DATA:

TOTAL AREA	564.75 ACRES
EXISTING ZONE FV-3	
ROAD ROW	30.06 ACRES
SLOPES OVER 40%	62.12 ACRES
STREAM CORRIDOR	16.15 ACRES
NET DEVELOPABLE AREA	456.42 ACRES
PROPOSED UNITS	61 UNITS
PROPOSED NET DENSITY	1 UNIT/ 7.48 ACRES



REVISIONS	
DATE	DESCRIPTION

SCALE: 1"=400'
DATE: 07-28-22
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CHECKED: RC

PHASING PLAN
OSPREY RANCH
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PH1

A:\1201 - LEWIS, HOWES & SONS - OSPREY RANCH\DESIGN\OSPREY PHASING PLAN SHEETS 6-17-22.DWG

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.

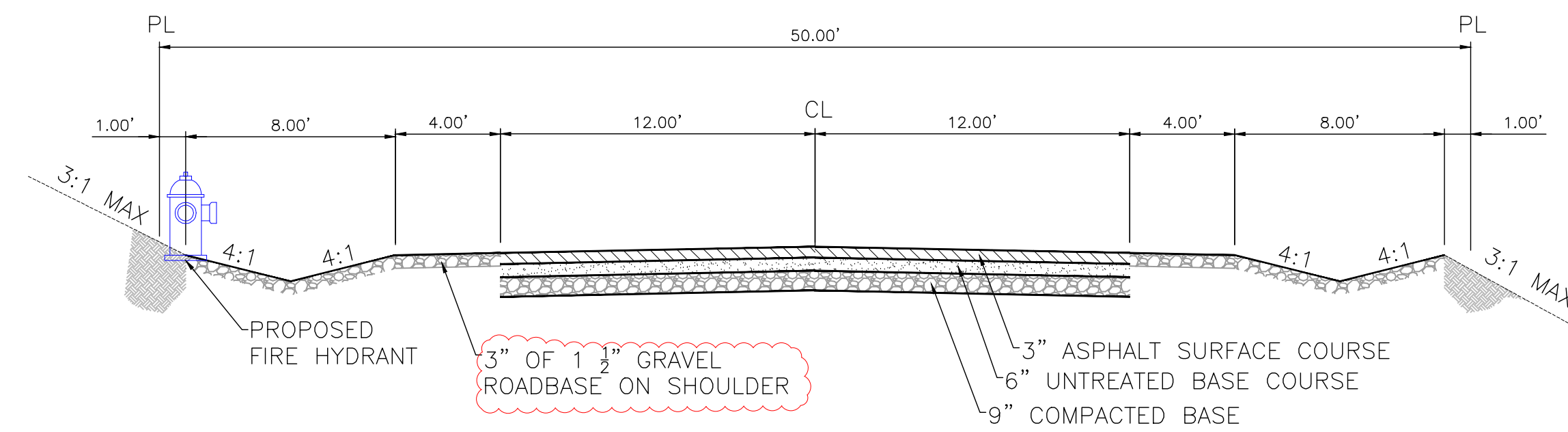
CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT 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.

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 SWPPP 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 PERFORMED WEEKLY BY A RSI OR OTHER CERTIFIED INSPECTOR.

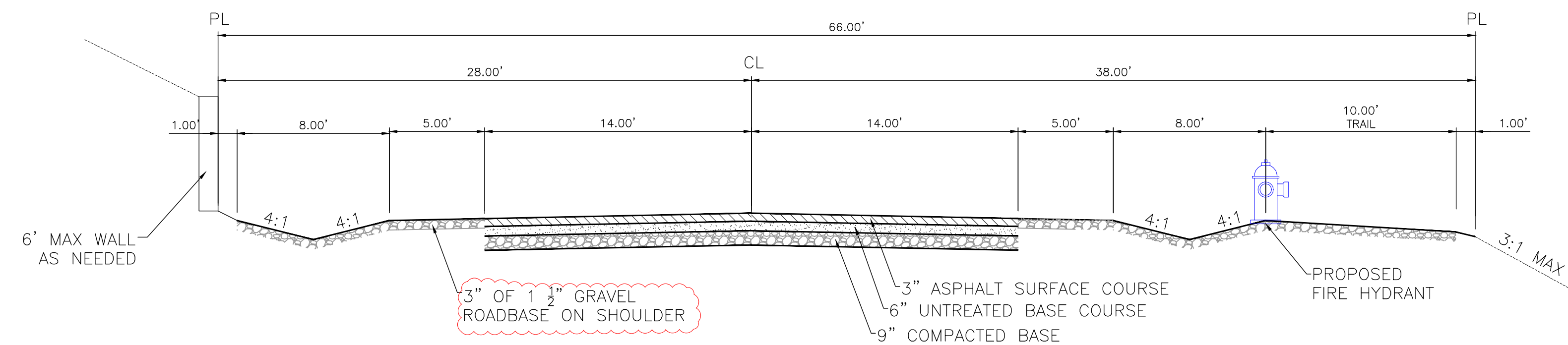
CULINARY WATER GENERAL NOTES

1. ALL INSTALLATION AND MATERIALS INSTALLED SHALL BE NEW AND CONFORM TO NORDIC MOUNTAIN WATER INC. WATER COMPANY STANDARDS, SPECIFICATIONS AND PLANS.
2. ALL INTERIOR SURFACES AND COATINGS SHALL COMPLY WITH ANS/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 PC 250 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.



TYPICAL ROAD SECTION - 50 ROW

NOT TO SCALE
ROAD 2
ROAD 3
ROAD 4
ROAD 5
ROAD 6



TYPICAL ROAD SECTION - 66 ROW TRAIL RT

NOT TO SCALE
ROAD A
WE WILL HOLD ROAD CL AND OFFSET ROW AS NEED FOR TRAIL ON LEFT OR RIGHT SIDE

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 (CG PROJECT NO. 133-014) 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.

SANITARY SEWER GENERAL NOTES

1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN CONFORMANCE WITH WCWSID STANDARDS AND SPECIFICATIONS.
2. ALL GRAVITY SANITARY SEWER LINES SHALL BE SDR-35 PVC MATERIAL. SEWER LINE CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM STANDARDS AND SPECIFICATIONS.
3. DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT.
4. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATION. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT AND STEEL SHIMS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS. ALL FRAMES SHALL BE ADJUSTED TO FINAL GRADE.
5. ALL SANITARY SEWER MAIN TESTING SHALL BE IN ACCORDANCE WITH WCWSID STANDARDS AND SPECIFICATIONS. COPIES OF ALL TEST RESULTS SHALL BE PROVIDED TO THE PUBLIC WORKS SANITARY SEWER DEPARTMENT HEAD PRIOR TO FINAL ACCEPTANCE.
6. COMPACTION TESTING OF ALL TRENCHES WITH THE PROJECT SITE MUST BE ATTAINED AND RESULTS SUBMITTED TO WCWSID ENGINEER PRIOR TO FINAL ACCEPTANCE.
7. CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXISTING STRUCTURES AND IMPROVEMENTS DURING INSTALLATION OF SANITARY SEWER LINE.
8. WHERE CONNECTION TO EXISTING UTILITY IS PROPOSED, CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY VARIES FROM THE DESIGN.
9. CAMERA TESTING AND PRESSURE TESTING PER WCWSID STANDARD.

TYPICAL SECTIONS AND GENERAL NOTES

OSPREY RANCH

UT-158

EDEN, WEBER, UTAH

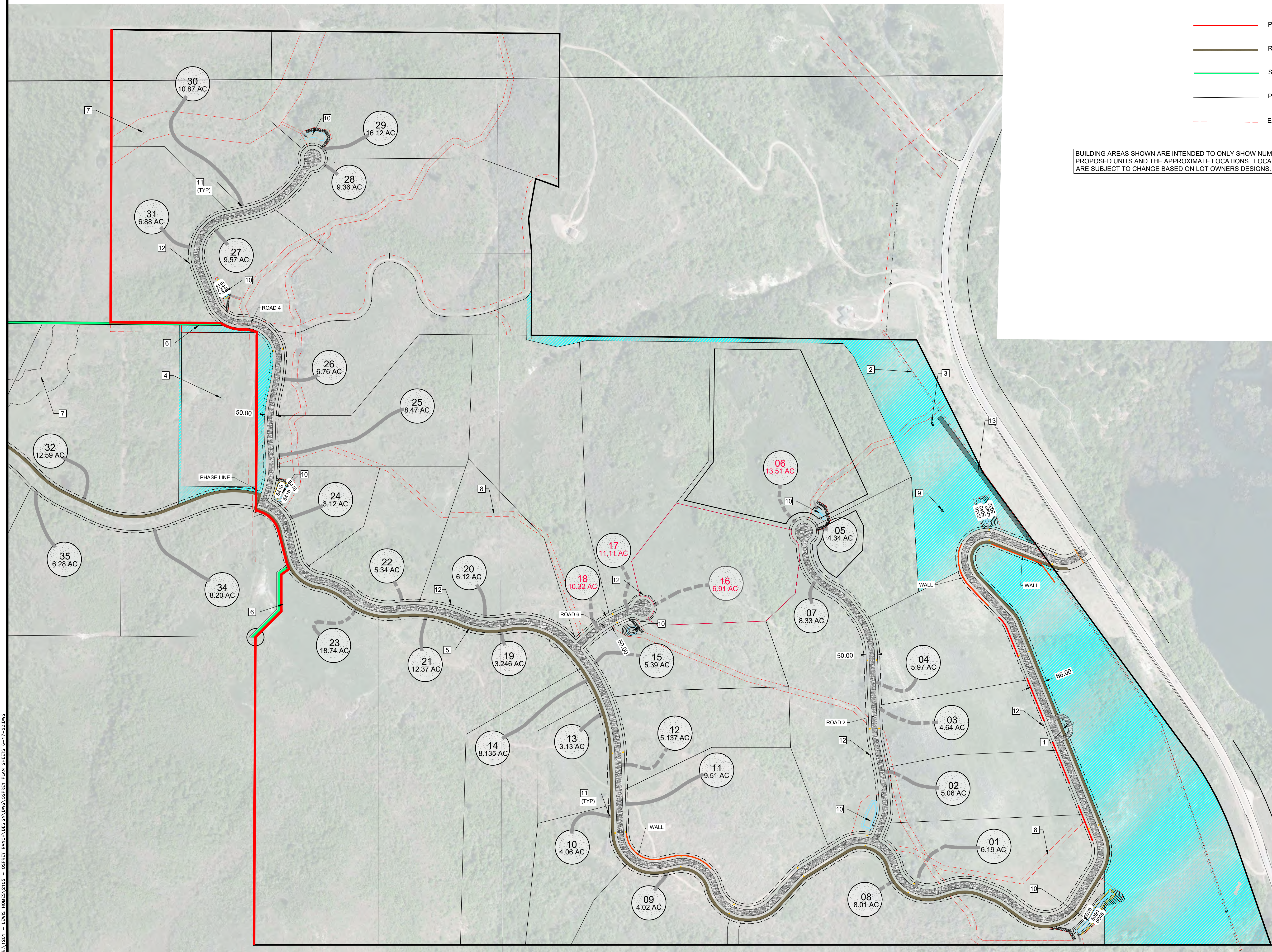
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TS1

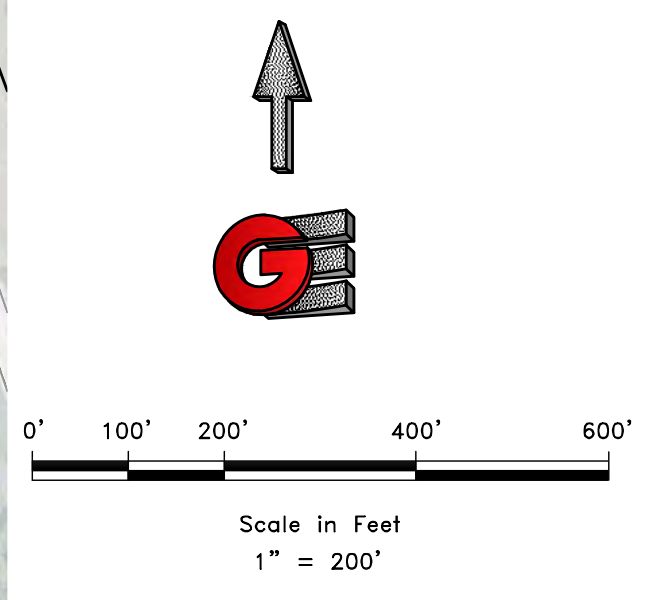
SITE PLAN - PHASE 1 OSPREY RANCH

- ASPHALT PHASE 1 - 13.35 ACRES
- COMMON AREA - 28.69 ACRES
- PHASE LINE
- ROADSIDE PATHWAY
- SOFT TRAIL
- PROPOSED BOUNDARY
- EASEMENT

BUILDING AREAS SHOWN ARE INTENDED TO ONLY SHOW NUMBER OF PROPOSED UNITS AND THE APPROXIMATE LOCATIONS. LOCATION AND SIZE ARE SUBJECT TO CHANGE BASED ON LOT OWNERS DESIGNS.



- KEY NOTES:**
- 1 MAIL PICKUP AREA (BY OTHERS)
 - 2 POWER CORRIDOR
 - 3 PROPOSED SEWER LIFT STATION
 - 4 FRANKLIN AND BETH MAUGHAN - 5 ACRES
 - 5 ROAD SIDE PATHWAY (SEE TS1 TYPICAL SECTIONS) (7225 FT)
 - 6 SOFT TRAIL (757 FT)
 - 7 50 FT - EPHEMERAL STREAM SETBACK
 - 8 20 FT - SEWER EASEMENT
 - 9 MONUMENT SIGN
 - 10 DETENTION POND
 - 11 PROPOSED DRIVEWAY LOCATION
 - 12 10' PUE
 - 13 20' ACCESS ROAD



SCALE	1" = 200'
DATE	07-28-22
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GARDNER
ENGINEERING

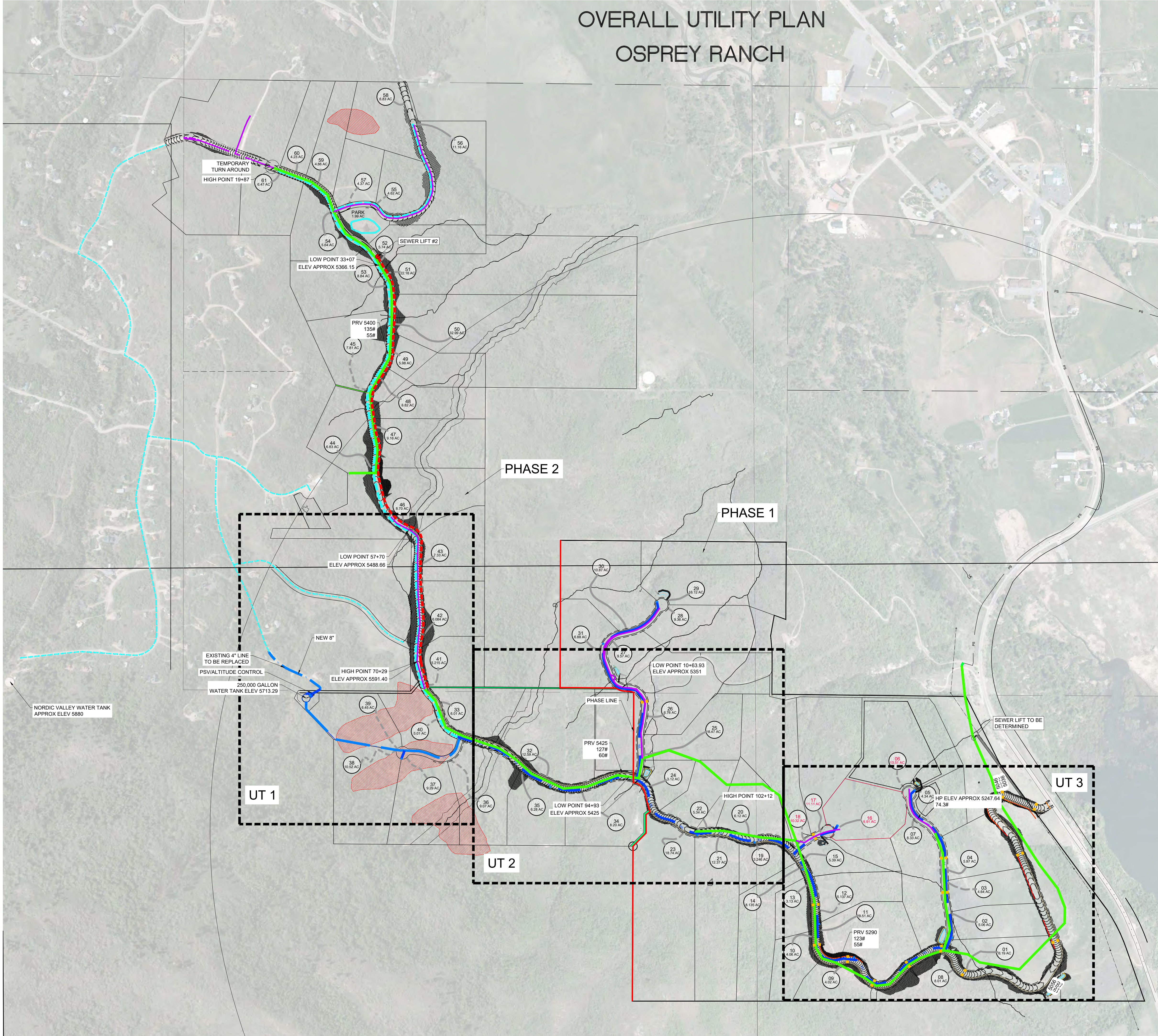
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SP1

A:\1201 - LEWIS HOMES\1205 - OSPREY RANCH\DESIGN\DWG\OSPREY PLAN SHEETS 6-17-22.DWG

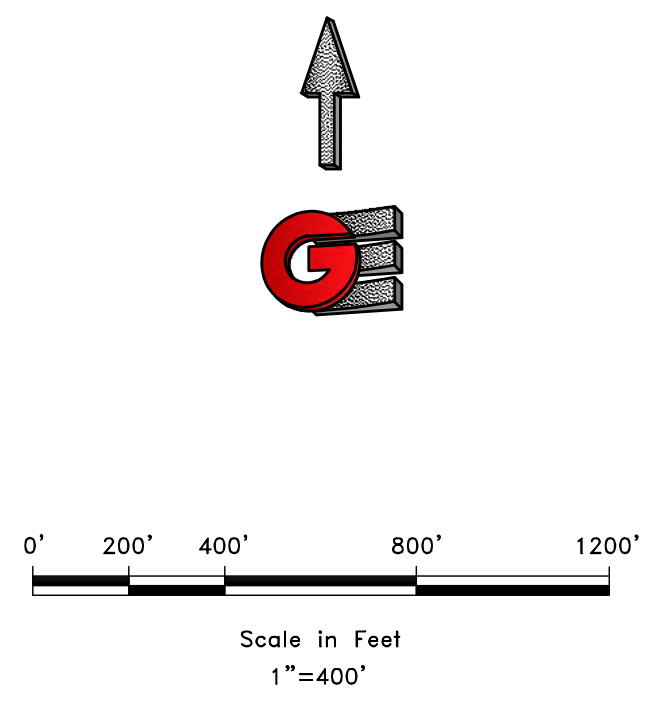
OVERALL UTILITY PLAN OSPREY RANCH



- - - - - PRESSURE SEWER
 - - - - - GRAVITY SEWER
 - - - - - LOW PRESSURE SEWER
 - - - - - PROPOSED 12" WATERLINE
 - - - - - PROPOSED 8" WATERLINE
 - - - - - EXISTING WATERLINE
-
- 250,000 GALLON WATER TANK
 - ◀ PROPOSED FIRE HYDRANT
 - ⊠ PROPOSED PRV
 - PROPOSED SEWER LIFT STATION

- SEWER IMPROVEMENTS**
- PHASE 1**
- GRAVITY SEWER
 - LOW PRESSURE SEWER
 - SEWER TREATMENT PLANT
- PHASE 2**
- LOW PRESSURE SEWER
 - 1 SEWER LIFT STATION WITH HIGH PRESSURE SEWER

- CULINARY WATER IMPROVEMENTS**
- PHASE 1**
- 250 K GALLON WATER TANK
 - 12"/8" WATER MAIN
 - PRESSURE SUSTAINING/ALTITUDE VALVE STATION
 - 2 - PRESSURE REDUCING VALVES
- PHASE 2**
- 8" WATER MAIN
 - 1 - PRESSURE REDUCING VALVE



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DATE	07-28-22
DESIGN	KAN
DRAWN	KAN
CHECKED	RC

REVISIONS	DESCRIPTION
DATE	

DWG:

OVERALL UTILITY PLAN
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

**GARDNER
ENGINEERING**

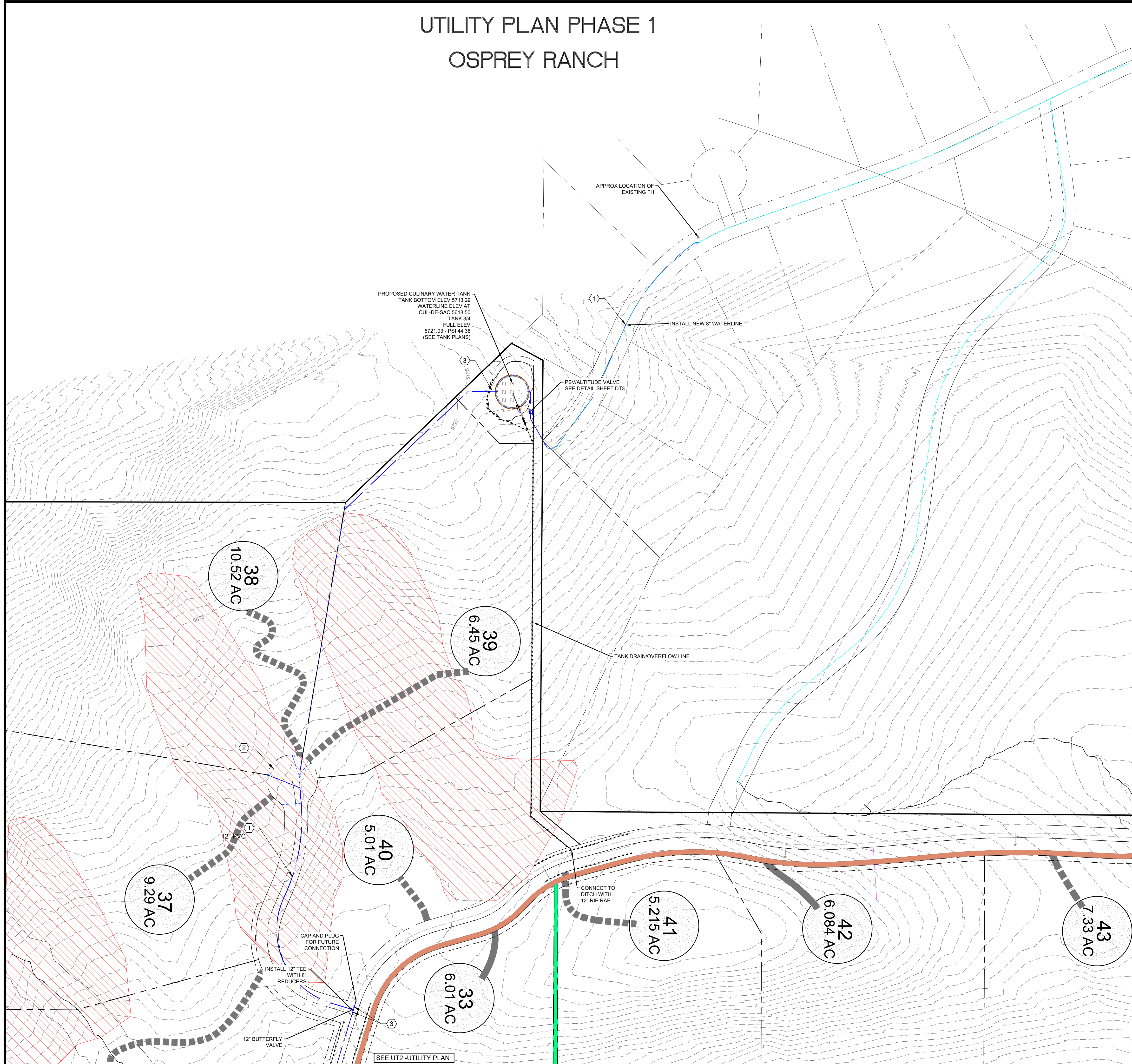
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UM1

A:\1201 - LEWIS, HOMES\1205 - OSPREY RANCH\DESIGN\DWG\OSPREY PLAN SHEETS 6-17-22.DWG

UTILITY PLAN PHASE 1 OSPREY RANCH



- PROPOSED WATER
- PROPOSED PRESSURE SEWER
- PROPOSED LOW PRESSURE SEWER
- PROPOSED GRAVITY SEWER
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED FIRE HYDRANT
- PROPOSED PRV
- ▨ TRAIL

KEY NOTES

- ① 8" WATER C900 DR18 UNLESS INDICATED OTHERWISE (MIN DEPTH 5')
- ② FIRE HYDRANT (PER DISTRICT STD)
- ③ GATE VALVES (PER DISTRICT STD)
- ④ 8" SEWER - SDR 35 PVC
- ⑤ 2" LOW PRESSURE SEWER - SDR11 HDPE (MIN DEPTH 5')
- ⑥ LOW PRESSURE LATERAL SEE DETAIL DT5
- ⑦ GRAVITY SEWER LATERAL
- ⑧ WATER SERVICE LATERAL (PER DISTRICT STD)

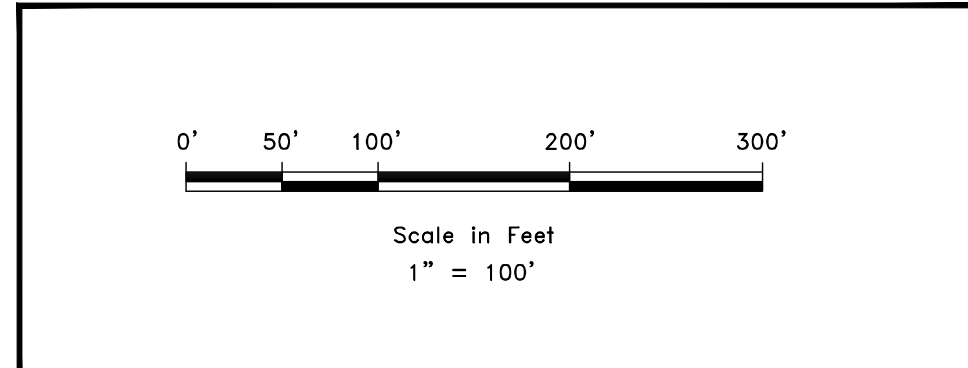
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REVISIONS	DESCRIPTION
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DWG: R11.201 - LEWIS HOMES, 2105 - OSPREY RANCH, DESIGN/DWG/OSPREY UTILITY PLAN.DWG

UTILITY PLAN PHASE 1
OSPREY RANCH
1800 N HYW 158
EDEN, WEBER, UTAH

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UT1

UTILITY PLAN PHASE 1 OSPREY RANCH

- PROPOSED WATER
- PROPOSED PRESSURE SEWER
- PROPOSED LOW PRESSURE SEWER
- PROPOSED GRAVITY SEWER
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH

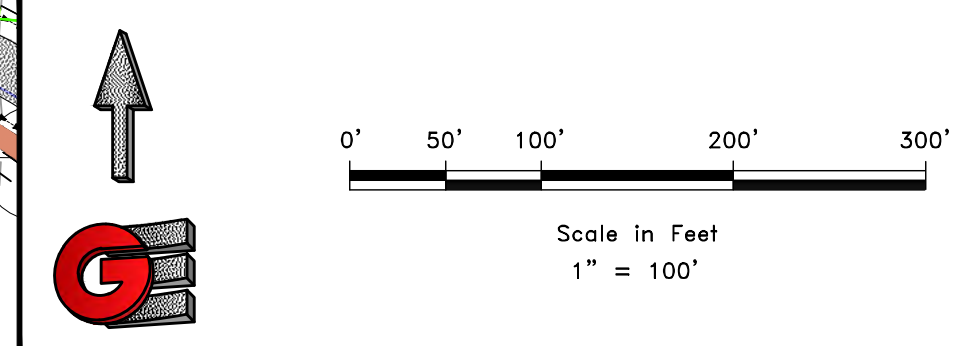
- PROPOSED FIRE HYDRANT
- PROPOSED PRV
- TRAIL

KEY NOTES

- ① 8" WATER C900 DR18 (MIN DEPTH 5')
- ② FIRE HYDRANT (SEE DT4)
- ③ GATE VALVES (SEE DT4)
- ④ 8" SEWER - SDR 35 PVC
- ⑤ 2" LOW PRESSURE SEWER - SDR11 HDPE (MIN DEPTH 5')
- ⑥ LOW PRESSURE LATERAL SEE DETAIL DT5
- ⑦ GRAVITY SEWER LATERAL
- ⑧ WATER SERVICE LATERAL (SEE DT 4)
- ⑨ LOW PRESSURE SEWER CLEANOUT
- ⑩ POND OUTLET SEE DT6
- ⑪ 15" RCP STORM DRAIN
- ⑫ CHECK DAM SEE DR4 FOR DETAIL

Osprey Sewer STRUCTURE TABLE			
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
SSMH10 4' SSMH	RIM = 5431.93 INV IN = 5423.66 INV OUT = 5423.36	INV (W) = 5423.46	INV (E) = 5423.36
SSMH11 4' SSMH	RIM = 5425.93 INV IN = 5417.76 INV OUT = 5417.66	INV (W) = 5417.76	INV (N) = 5417.66
SSMH12 9' SSMH	RIM = 5416.85 INV IN = 5406.45 INV OUT = 5406.35	INV (S) = 5406.45	INV (E) = 5406.35
SSMH13 4' SSMH	RIM = 5415.00 INV IN = 5405.38 INV OUT = 5405.28	INV (W) = 5405.38	INV (E) = 5405.28
SSMH14 4' SSMH	RIM = 5412.57 INV IN = 5404.12 INV OUT = 5404.02	INV (W) = 5404.12	INV (SE) = 5404.02
SSMH15 4' SSMH	RIM = 5410.00 INV IN = 5402.18 INV OUT = 5402.08	INV (NW) = 5402.18	INV (E) = 5402.08
SSMH16 4' SSMH	RIM = 5408.13 INV IN = 5400.81 INV OUT = 5400.71	INV (W) = 5400.81	INV (SE) = 5400.71
SSMH17 4' SSMH	RIM = 5407.96 INV IN = 5400.02 INV OUT = 5399.92	INV (NW) = 5400.02	INV (S) = 5399.92
SSMH42 4' SSMH	RIM = 5438.22 INV IN = 5428.50 INV OUT = 5428.40	INV (W) = 5428.50	INV (E) = 5428.40
SSMH43 4' SSMH	RIM = 5458.26 INV IN = 5450.26 INV OUT = 5450.16	INV (W) = 5450.26	INV (E) = 5450.16
SSMH44 4' SSMH	RIM = 5470.74 INV IN = 5464.89		INV (E) = 5464.89

- LOW PRESSURE SEWER PUMP
- PUMP TO GRAVITY SEWER



REVISIONS	
DATE	DESCRIPTION
10/28/22	REVISED SERVICE LATERAL LOCATIONS
9-12-22	COUNTY COMMENTS

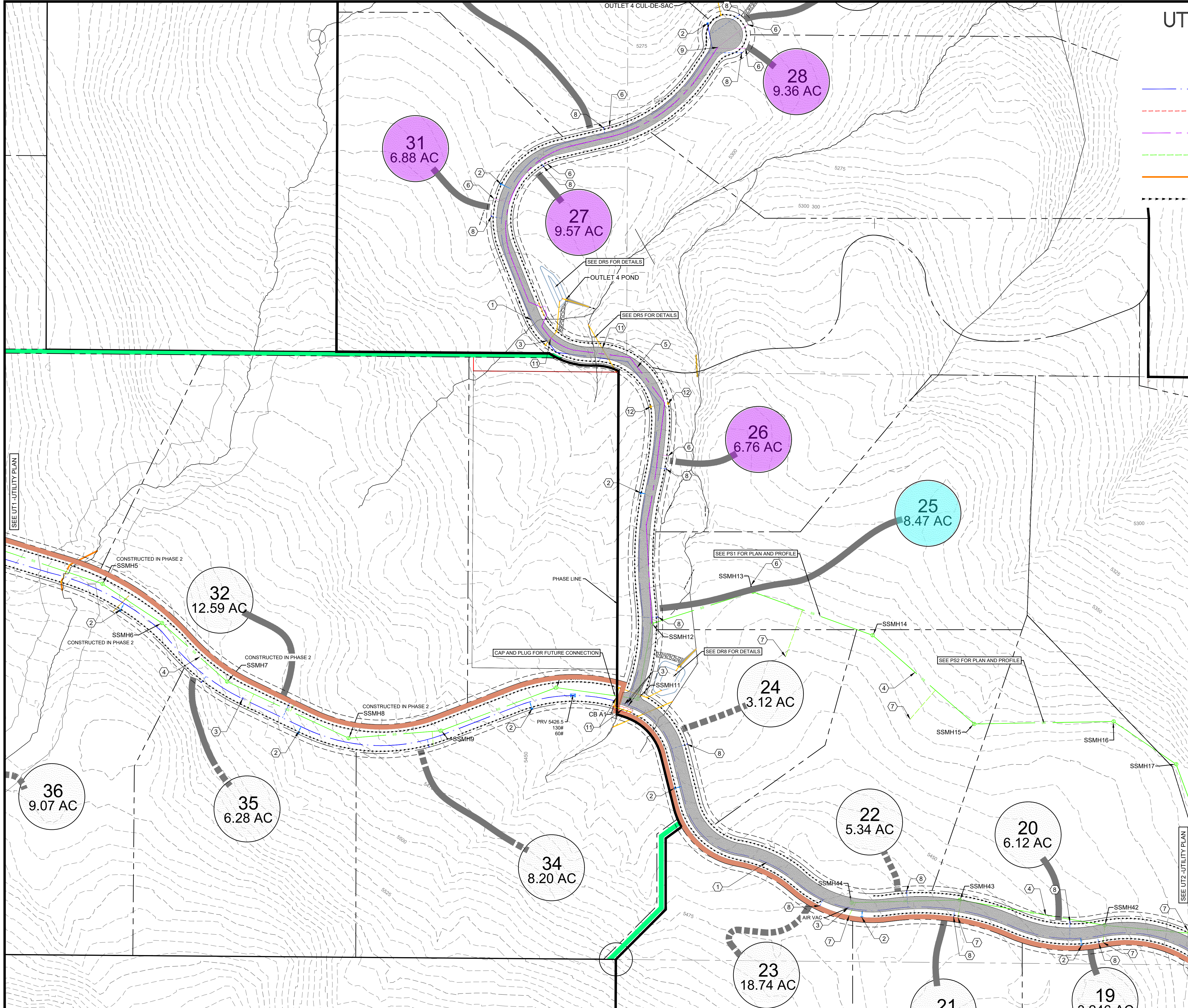
DATE	DESCRIPTION
10/28/22	REVISED SERVICE LATERAL LOCATIONS
9-12-22	COUNTY COMMENTS

DATE	DESCRIPTION
10/28/22	REVISED SERVICE LATERAL LOCATIONS
9-12-22	COUNTY COMMENTS

UTILITY PLAN PHASE 1
OSPREY RANCH
1800 N HYW 158
EDEN, WEBER, UTAH

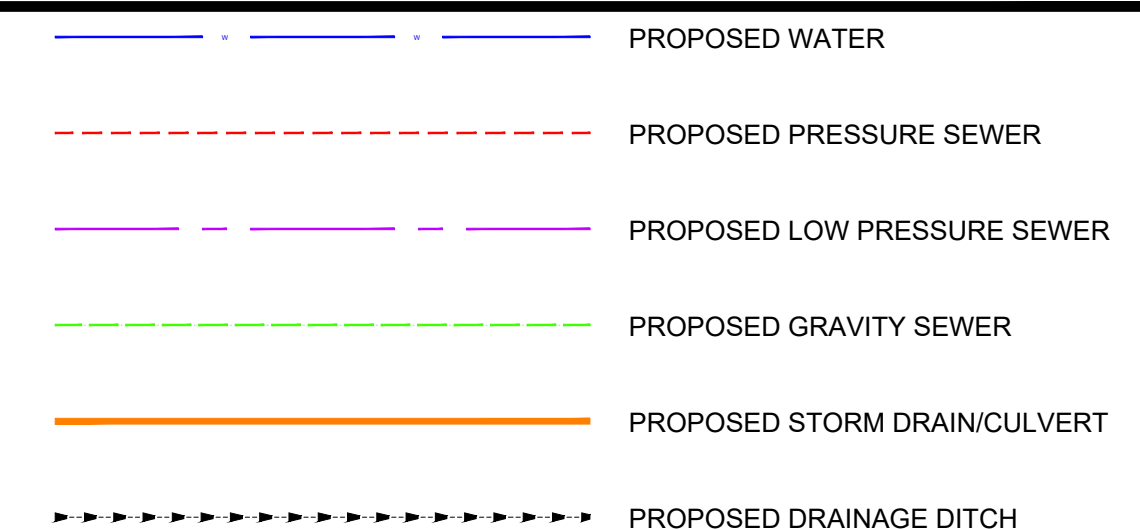
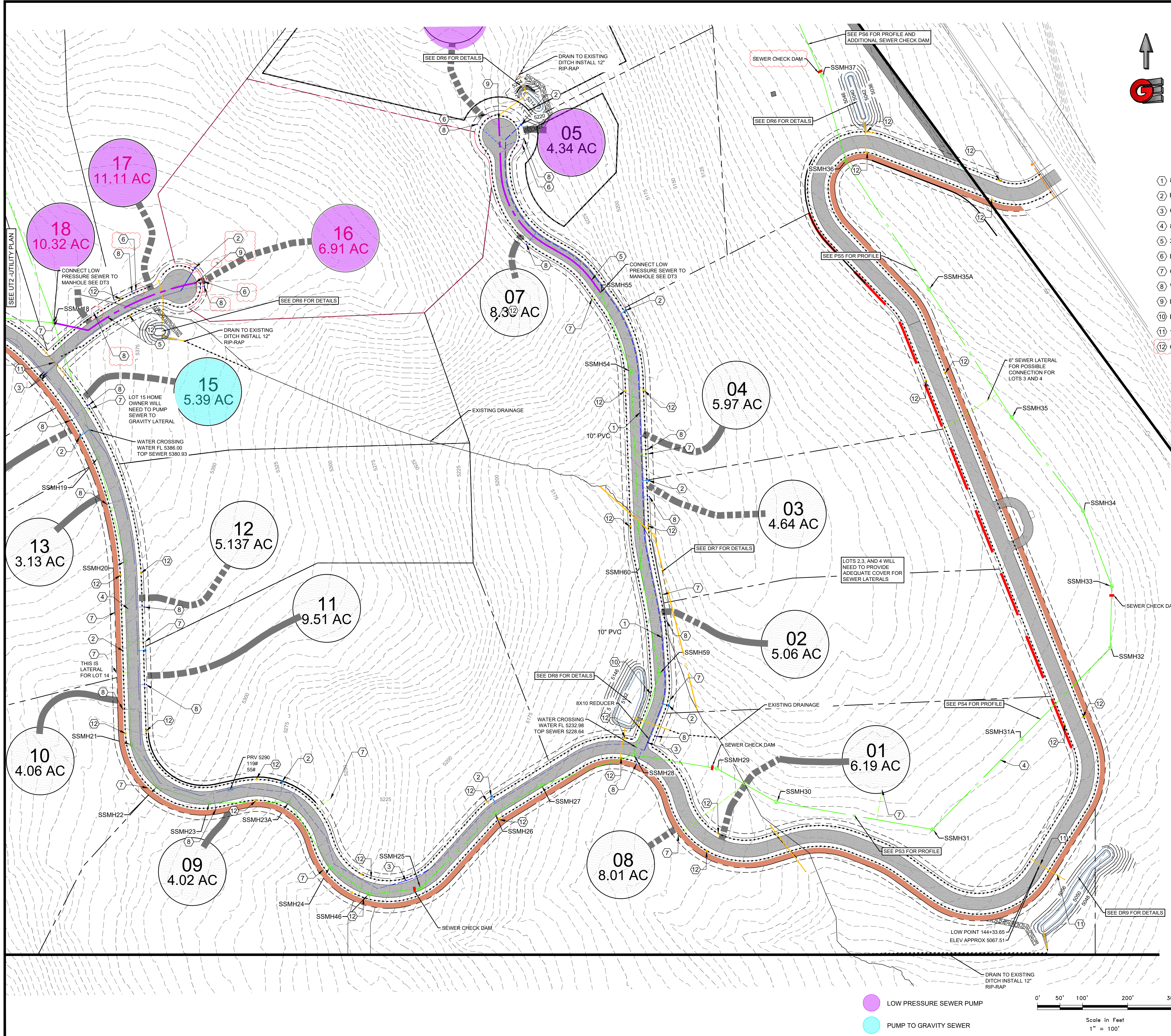
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UT2



SEE UT1-UTILITY PLAN

SEE UT2-UTILITY PLAN



- KEY NOTES**
- ① 8" WATER C900 DR18 UNLESS INDICATED OTHERWISE (MIN DEPTH 5')
 - ② FIRE HYDRANT (SEE DT4)
 - ③ GATE VALVES (SEE DT4)
 - ④ 8" SEWER - SDR 35 PVC
 - ⑤ 2" LOW PRESSURE SEWER - SDR11 HDPE (MIN DEPTH 5')
 - ⑥ LOW PRESSURE LATERAL SEE DETAIL DT5
 - ⑦ GRAVITY SEWER LATERAL
 - ⑧ WATER SERVICE LATERAL (SEE DT4)
 - ⑨ LOW PRESSURE SEWER CLEANOUT
 - ⑩ POND OUTLET SEE DT6
 - ⑪ 15" RCP STORM DRAIN
 - ⑫ CHECK DAM SEE DR4 FOR DETAIL

Osprey Sewer STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT:
SSMH18	RIM = 5404.40 INV IN = 5397.82 INV OUT = 5397.82	INV (N) = 5397.82 INV (W) = 5397.82	INV (S) = 5397.72
SSMH19	RIM = 5381.65 INV IN = 5373.33 INV OUT = 5373.23	INV (N) = 5373.33 INV (S) = 5373.23	
SSMH20	RIM = 5382.74 INV IN = 5346.68 INV OUT = 5346.58	INV (N) = 5346.68 INV (S) = 5346.58	
SSMH21	RIM = 5304.15 INV IN = 5297.77 INV OUT = 5297.67	INV (N) = 5297.77 INV (SE) = 5297.67	
SSMH22	RIM = 5291.74 INV IN = 5285.59 INV OUT = 5285.49	INV (NW) = 5285.59 INV (E) = 5285.49	
SSMH23	RIM = 5277.91 INV IN = 5269.91 INV OUT = 5269.81	INV (W) = 5269.91 INV (E) = 5269.81	
SSMH23A	RIM = 5255.59 INV IN = 5247.60 INV OUT = 5247.50	INV (W) = 5247.60 INV (SE) = 5247.50	
SSMH24	RIM = 5234.28 INV IN = 5225.78 INV OUT = 5225.68	INV (NW) = 5225.78 INV (SE) = 5225.68	
SSMH25	RIM = 5202.16 INV IN = 5202.12 INV OUT = 5202.02	INV (W) = 5202.12 INV (NE) = 5202.02	
SSMH26	RIM = 5181.45 INV IN = 5174.38 INV OUT = 5174.28	INV (SW) = 5174.38 INV (NE) = 5174.28	
SSMH27	RIM = 5166.86 INV IN = 5159.87 INV OUT = 5159.77	INV (SW) = 5159.87 INV (E) = 5159.77	
SSMH28	RIM = 5138.94 INV IN = 5129.55 INV OUT = 5129.45	INV (W) = 5129.55 INV (E) = 5129.45	
SSMH29	RIM = 5108.24 INV IN = 5092.89 INV OUT = 5092.79	INV (W) = 5092.89 INV (SE) = 5092.79	
SSMH30	RIM = 5097.87 INV IN = 5091.28 INV OUT = 5091.39	INV (NW) = 5091.28 INV (E) = 5091.39	
SSMH31	RIM = 5095.00 INV IN = 5090.06 INV OUT = 5089.96	INV (W) = 5090.06 INV (NE) = 5089.96	
SSMH31A	RIM = 5096.60 INV IN = 5088.89 INV OUT = 5088.79	INV (SW) = 5088.89 INV (NE) = 5088.79	
SSMH32	RIM = 5095.00 INV IN = 5087.72 INV OUT = 5087.62	INV (SW) = 5087.72 INV (N) = 5087.62	
SSMH33	RIM = 5095.00 INV IN = 5087.10 INV OUT = 5087.00	INV (S) = 5087.10 INV (N) = 5087.00	
SSMH34	RIM = 5095.00 INV IN = 5086.32 INV OUT = 5086.22	INV (S) = 5086.32 INV (NW) = 5086.22	
SSMH35	RIM = 5095.03 INV IN = 5085.23 INV OUT = 5085.13	INV (SE) = 5085.23 INV (NW) = 5085.13	
SSMH35A	RIM = 5073.62 INV IN = 5064.89 INV OUT = 5064.79	INV (SE) = 5064.89 INV (NW) = 5064.79	
SSMH36	RIM = 5051.27 INV IN = 5044.56 INV OUT = 5044.46	INV (SE) = 5044.56 INV (N) = 5044.46	
SSMH37	RIM = 5050.81 INV IN = 5040.38 INV OUT = 5040.28	INV (S) = 5040.38 INV (NW) = 5040.28	
SSMH46	RIM = 5223.31 INV IN = 5215.24 INV OUT = 5215.14	INV (NW) = 5215.24 INV (E) = 5215.14	
SSMH54	RIM = 5207.71 INV IN = 5199.53 INV OUT = 5199.43	INV (N) = 5199.53 INV (S) = 5199.43	
SSMH55	RIM = 5230.83 INV IN = 5224.65	INV (S) = 5224.65	
SSMH59	RIM = 5138.93 INV IN = 5130.40 INV OUT = 5130.30	INV (N) = 5130.40 INV (S) = 5130.30	
SSMH60	RIM = 5155.54 INV IN = 5147.58 INV OUT = 5147.48	INV (N) = 5147.58 INV (S) = 5147.48	

UTILITY PLAN PHASE 1
OSPREY RANCH
1800 N HYW 158
EDEN, WEBER, UTAH

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UT3

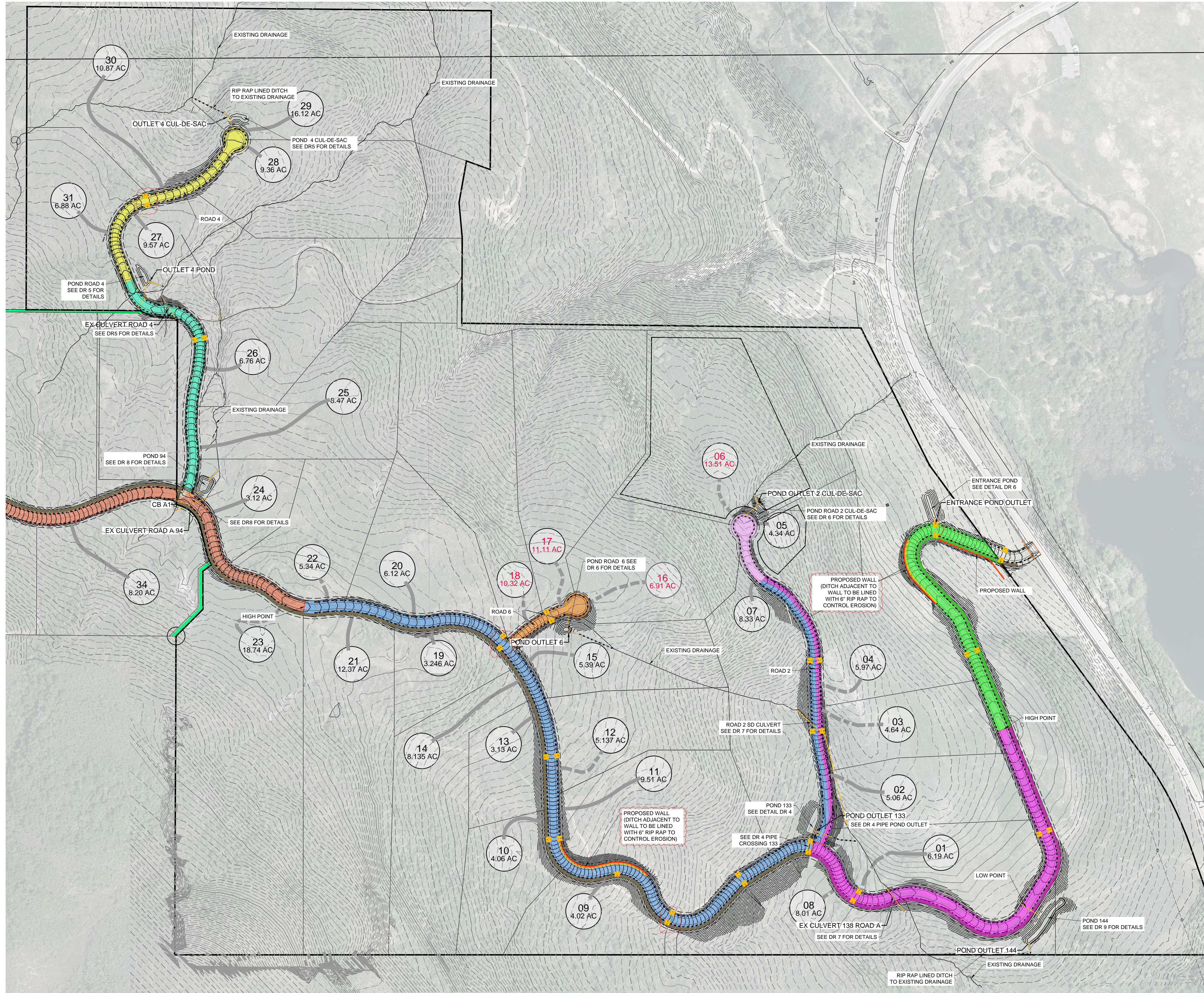
No. 8010280
RYAN A. CHRISTENSEN
STATE OF UTAH

REVISIONS

DATE	DESCRIPTION	DESIGNER	DRAWN	CHECKED
6-7-22	REVISED SEWER LATERAL LOCATIONS	KAN	KAN	PC
9-12-22	COUNT COMMENTS	KAN	KAN	PC
10-12-22	REVISED LOT LAYOUT	KAN	KAN	PC

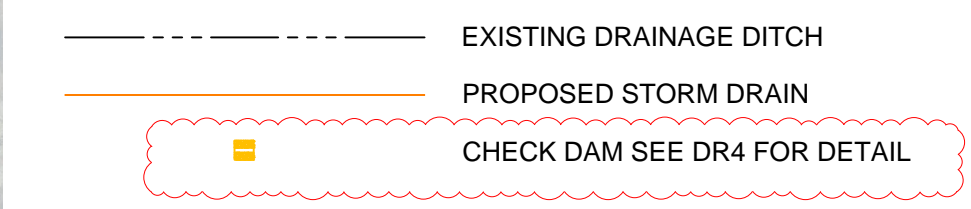
SCALE: 1" = 100'
DATE: 10/28/22
DESIGNER: KAN
DRAWN: KAN
CHECKED: PC
DWG#: R11201 - LEWIS HOMES 2105 - OSPREY RANCH DESIGN (DWG) OSPREY UTILITY PLAN (DWG)

PHASE 1 - DRAINAGE OSPREY RANCH



Basin	Area (acres)	Detention Volume (cy)
Pond 94	3.67	306
Pond 133	5.46	456
Pond 144	3.62	303
Pond Road 4	1.23	94
Pond 4 cul-de-sac	1.19	91
Pond 2 cul-de-sac	0.44	34
Entrance Pond	1.93	148
Road 6	0.59	45

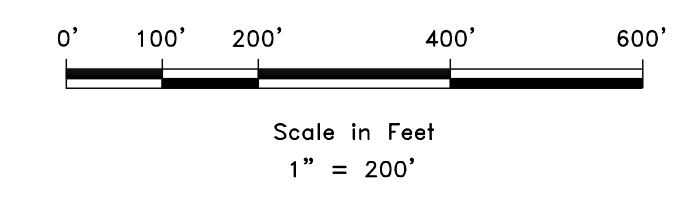
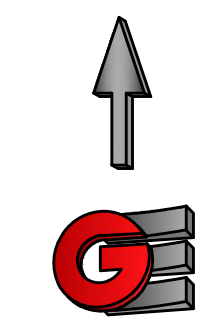
- NOTE:
1. DETENTION CALCS ARE FOR THE 10 YR STORM WITH A RELEASE RATE OF 0.1 CFS/SCRE
 2. ALL LOTS ARE REQUIRED TO PROVIDE THEIR OWN DETENTION TO CONTROL RUNOFF.
 3. STORM WATER RUN OFF FROM ROAD RIGHT OF WAY TO BE DETAINED BY PROJECT IMPROVEMENTS.
 4. SEE DR4 AND DR5 FOR PROFILE OF POND OUTLETS



REVISIONS	DESCRIPTION
DATE	ADDED EASEMENTS
9-8-22	LINE DITCH
11-16-22	

PHASE 1 - DRAINAGE
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

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DR1

04.1201 - LEWIS, HOWES & SONS - OSPREY RANCH, UTAH, OSPREY PLAN SHEETS 8-17-22 DWG

PHASE 1 - BASIN CALCULATIONS OSPREY RANCH

SCALE	DATE	DESIGN	DRAWN	CHECKED
	07-28-22	KAN	KAN	RC

REVISIONS	DATE	DESCRIPTION

DWG:

PHASE 1 - BASIN CALCULATIONS
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH



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DR2

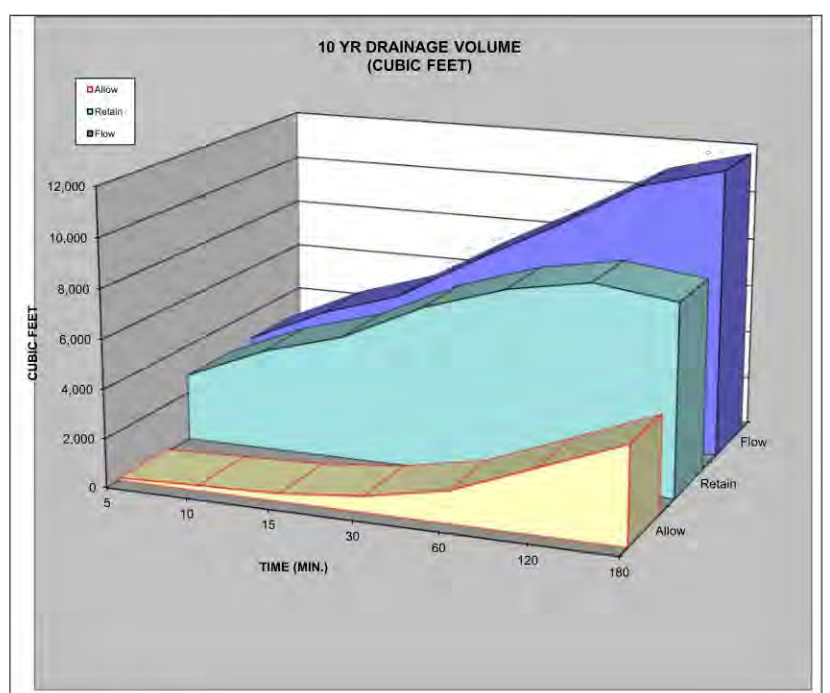
Osprey Ranch Pond Sta 94

Latitude: 41.2207° Longitude: -111.8218°

Areas	Sq. Ft.	Acres	C
Pond 94	158,637	3.67	0.65
Total/Wetland	158,767	3.67	0.65

Allow Release Rate (cfs/acre) = 0.1
Q Allowable (cfs) = 0.37

10 YEAR STORM EVENT	Release Vol (cf)	Inch / Hr	Total Vol (cf)	Detain Vol (cf)
MIN	110	4.01	2,807	2,729
5	220	3.05	4,361	4,141
10	330	2.52	5,404	5,074
15	440	1.7	7,291	6,523
20	550	1.05	9,007	7,887
25	660	0.636	10,714	9,272
30	770	0.458	11,838	10,287
35	880	0.295	15,183	13,262
40	990	0.191	19,611	18,320
45	1,100	0.121	24,911	24,911



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED: 3,372 CUBIC FEET (3.92 YARDS)
Pond Volume: 367.00

Orifice Calculation

H = 8.16 Maximum water height to center of orifice (ft)
Q = 0.37 Flowrate out of orifice (cfs)
Cc = 0.62 Coefficient of Contraction
Cv = 0.98 Coefficient of Velocity
Area = 0.030 Orifice Area (ft²)
Tt = 3.14
g = 32.17 Gravitational Constant
d = 3 Orifice Diameter (in)

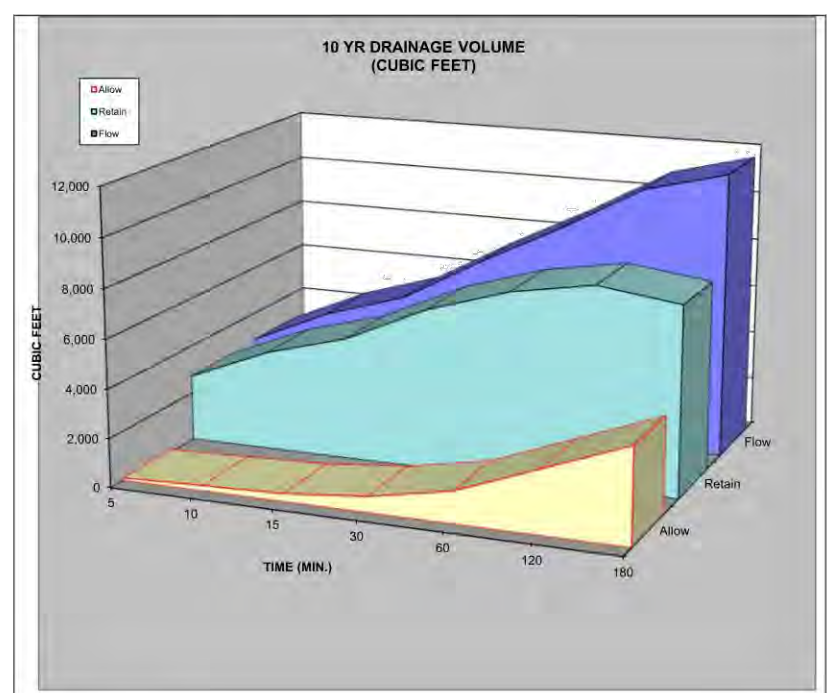
Osprey Ranch Road POND 144

Latitude: 41.2207° Longitude: -111.8218°

Areas	Sq. Ft.	Acres	C
Pond 144	157,578	3.62	0.65
Total/Wetland	157,578	3.62	0.65

Allow Release Rate (cfs/acre) = 0.1
Q Allowable (cfs) = 0.36

10 YEAR STORM EVENT	Release Vol (cf)	Inch / Hr	Total Vol (cf)	Detain Vol (cf)
MIN	109	4.01	2,830	2,722
5	217	3.05	4,306	4,086
10	326	2.52	5,338	5,011
15	435	1.7	7,255	6,548
20	544	1.05	8,984	7,951
25	653	0.636	10,714	9,188
30	762	0.458	11,838	10,293
35	871	0.295	14,992	13,174
40	980	0.191	19,414	18,795
45	1,089	0.121	24,988	24,988



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED: 3,168 CUBIC FEET (3.68 YARDS)
Pond Volume: 379.00

Orifice Calculation

H = 8.25 Maximum water height to center of orifice (ft)
Q = 0.36 Flowrate out of orifice (cfs)
Cc = 0.62 Coefficient of Contraction
Cv = 0.98 Coefficient of Velocity
Area = 0.047 Orifice Area (ft²)
Tt = 3.14
g = 32.17 Gravitational Constant
d = 3 Orifice Diameter (in)

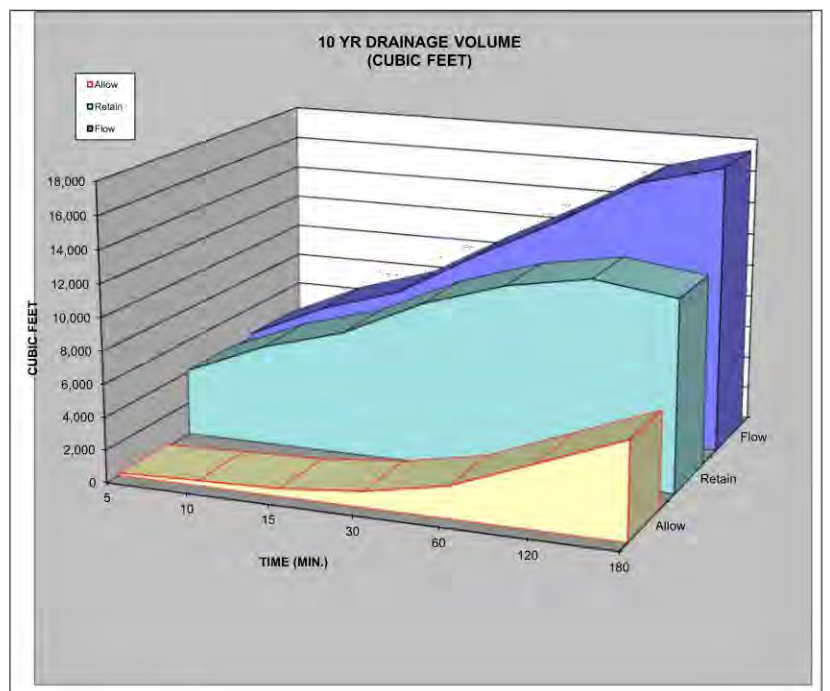
Osprey Ranch Pond Sta 133

Latitude: 41.2207° Longitude: -111.8218°

Areas	Sq. Ft.	Acres	C
Pond 133	237,513	5.46	0.65
Total/Wetland	237,513	5.46	0.65

Allow Release Rate (cfs/acre) = 0.1
Q Allowable (cfs) = 0.55

10 YEAR STORM EVENT	Release Vol (cf)	Inch / Hr	Total Vol (cf)	Detain Vol (cf)
MIN	164	4.01	4,271	4,107
5	328	3.05	6,497	6,166
10	492	2.52	8,652	7,965
15	656	1.7	10,863	9,880
20	820	1.05	13,416	11,423
25	984	0.636	16,207	13,324
30	1,148	0.458	17,960	14,862
35	1,312	0.295	22,621	19,524
40	1,476	0.191	29,293	26,186
45	1,640	0.121	37,114	37,114



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED: 13,324 CUBIC FEET (15.42 YARDS)
Pond Volume: 458.00

Orifice Calculation

H = 3.07 Maximum water height to center of orifice (ft)
Q = 0.55 Flowrate out of orifice (cfs)
Cc = 0.62 Coefficient of Contraction
Cv = 0.98 Coefficient of Velocity
Area = 0.064 Orifice Area (ft²)
Tt = 3.14
g = 32.17 Gravitational Constant
d = 3 Orifice Diameter (in)

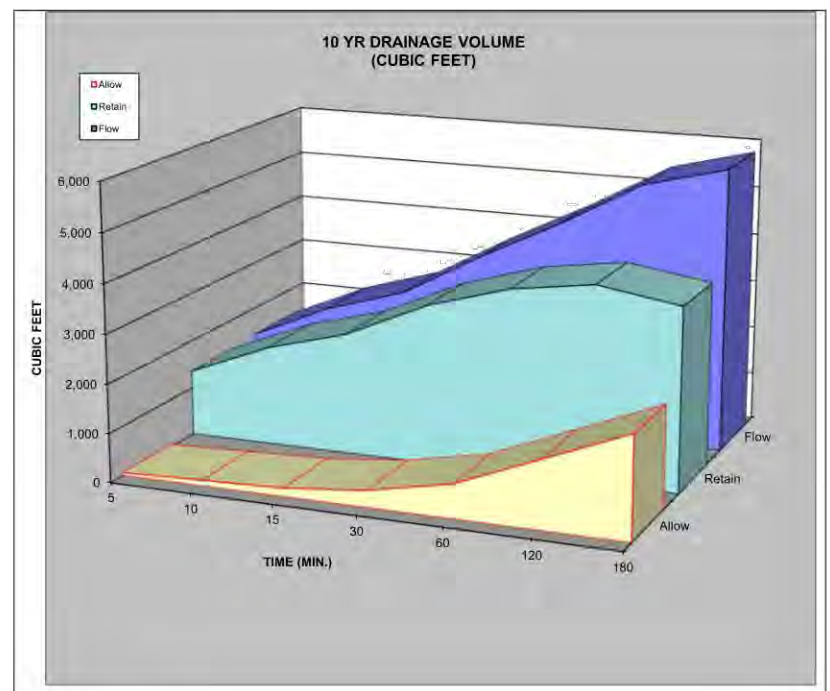
Osprey Ranch Road A ENTRANCE

Latitude: 41.2207° Longitude: -111.8218°

Areas	Sq. Ft.	Acres	C
Road A ENTRANCE	34,012	1.93	0.91
Total/Wetland	34,012	1.93	0.91

Allow Release Rate (cfs/acre) = 0.1
Q Allowable (cfs) = 0.19

10 YEAR STORM EVENT	Release Vol (cf)	Inch / Hr	Total Vol (cf)	Detain Vol (cf)
MIN	75	4.01	1,415	1,350
5	150	3.05	2,183	2,037
10	225	2.52	2,866	2,495
15	300	1.7	3,600	3,253
20	375	1.05	4,447	3,732
25	450	0.636	5,387	3,990
30	525	0.458	5,918	3,726
35	600	0.295	7,497	5,331
40	675	0.191	9,707	7,370
45	750	0.121	12,298	9,798



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED: 13,324 CUBIC FEET (15.42 YARDS)
Pond Volume: 168.00

Orifice Calculation

H = 2.18 Maximum water height to center of orifice (ft)
Q = 0.19 Flowrate out of orifice (cfs)
Cc = 0.62 Coefficient of Contraction
Cv = 0.98 Coefficient of Velocity
Area = 0.027 Orifice Area (ft²)
Tt = 3.14
g = 32.17 Gravitational Constant
d = 2 Orifice Diameter (in)

A:\1201 - LEWIS, HOWES, 2105 - OSPREY RANCH\LEWES\DWG\OSPREY PLAN SHEETS 6-17-22.DWG

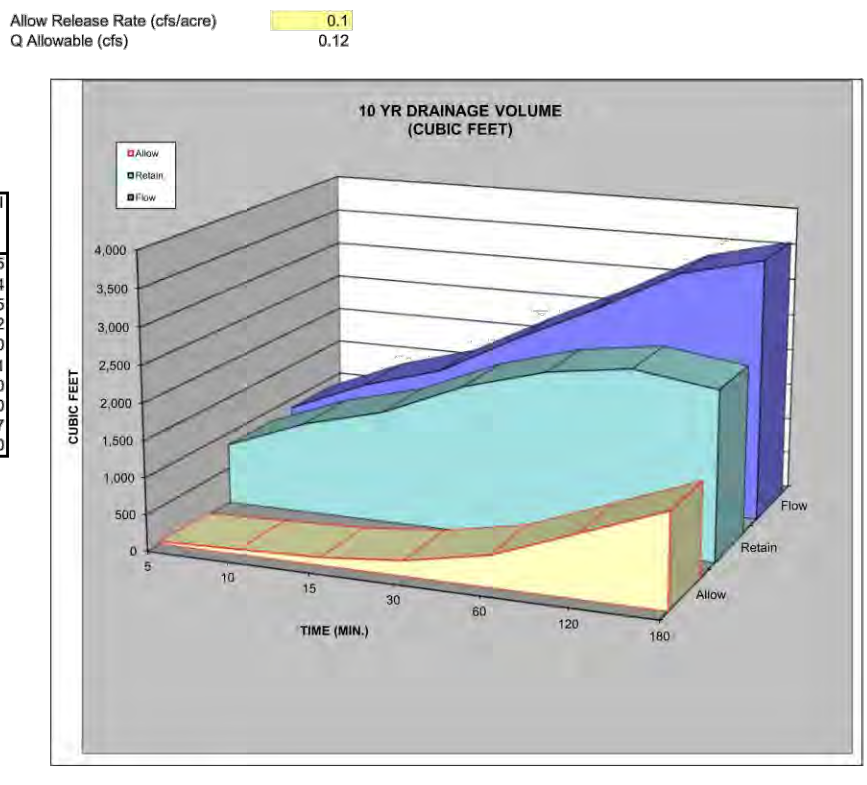
PHASE 1 - BASIN CALCULATIONS OSPREY RANCH

**Osprey Ranch
Road 4 Pond - Cul-de-sac**
Latitude: 41.2978° Longitude: -111.8318°

Area	Sq. Ft.	Acres	C
Road 4 CUL-DE-SAC	51,707	1.19	0.61
Total Weighted	51,707	1.19	0.61

10 YEAR STORM EVENT

MIN	Release Vol (cf) Allowable	Inch / Hr	Total Vol (cf) 10 YEAR	Detain Vol (cf) Difference
5	36	4.01	871	835
10	71	3.05	1,320	1,249
15	107	2.52	1,862	1,755
30	214	1.77	2,210	2,002
60	427	1.06	2,701	2,274
120	854	0.638	3,316	2,461
180	1,281	0.458	3,862	2,584
360	2,564	0.295	4,614	2,050
720	5,128	0.191	5,972	844
1440	7,252	0.123	7,252	0



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED
Pond Volume: **2,461** **51** **91.50**

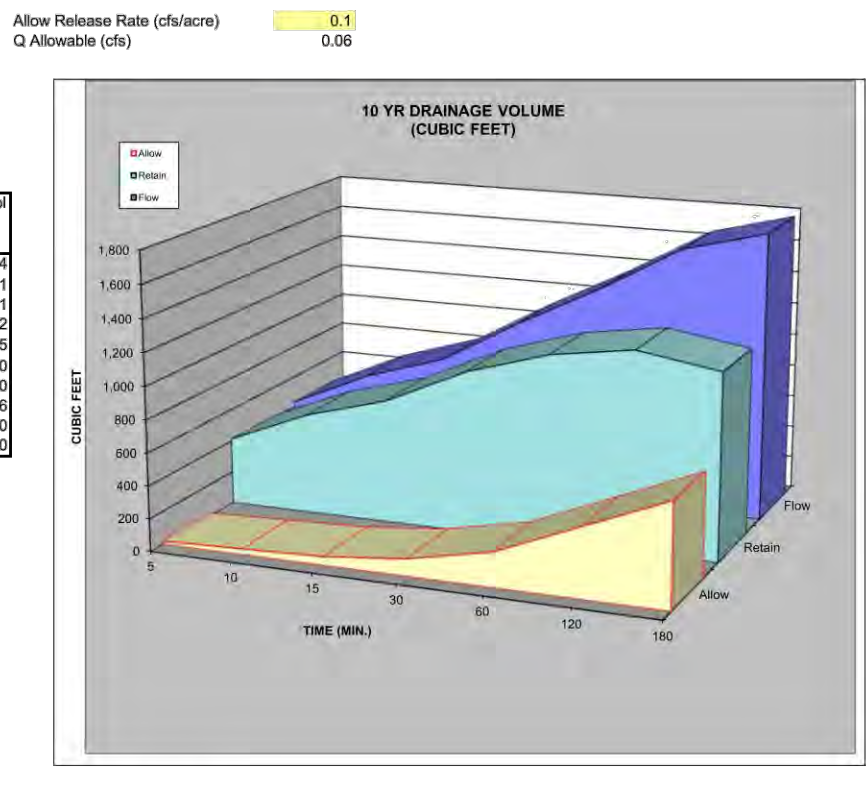
Orifice Calculation
 $H = 8.5$ Maximum water height to center of orifice (ft)
 $Q = 0.12$ Flowrate out of orifice (cfs)
 $C_c = 0.62$ Coefficient of Contraction
 $C_v = 0.98$ Coefficient of Velocity
 $Area = 0.010$ Orifice Area (ft²)
 $\beta = 3.14$
 $g = 32.17$ Gravitational Constant
 $d = 1$ Orifice Diameter (in)

**Osprey Ranch
Road 6**
Latitude: 41.2978° Longitude: -111.8318°

Area	Sq. Ft.	Acres	C
Road 6	25,624	0.59	0.61
Total Weighted	25,624	0.59	0.61

10 YEAR STORM EVENT

MIN	Release Vol (cf) Allowable	Inch / Hr	Total Vol (cf) 10 YEAR	Detain Vol (cf) Difference
5	18	4.01	435	417
10	36	3.05	857	821
15	54	2.52	1,284	1,237
30	108	1.77	1,596	1,488
60	216	1.06	1,966	1,744
120	432	0.638	2,424	2,192
180	648	0.458	2,778	2,514
360	1,296	0.295	3,312	2,946
720	2,592	0.191	3,960	3,468
1440	3,115	0.123	3,960	3,960



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED
Pond Volume: **1,220** **45** **47.00**

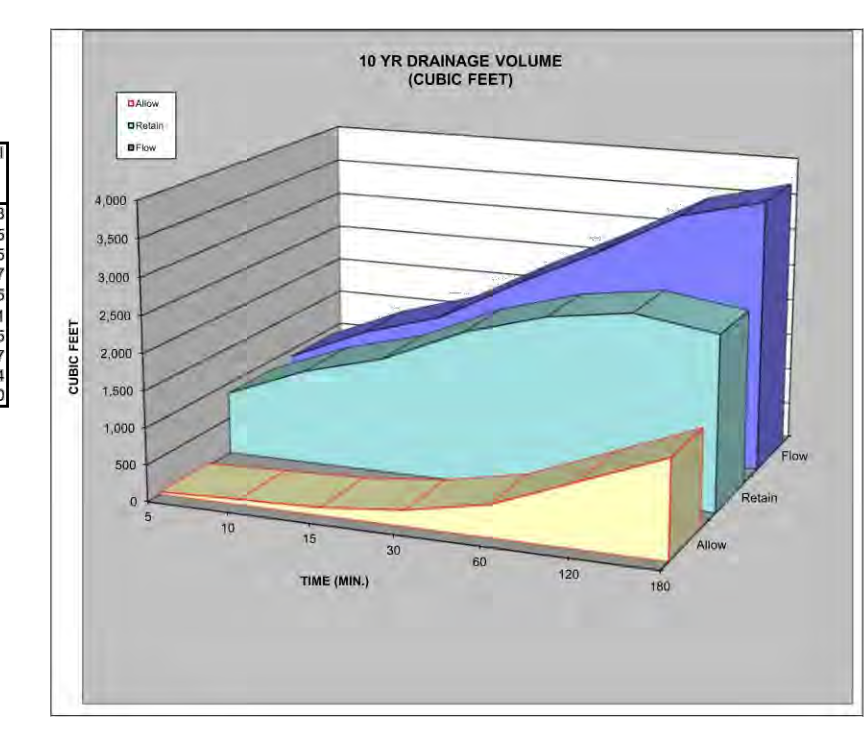
Orifice Calculation
 $H = 5.78$ Maximum water height to center of orifice (ft)
 $Q = 0.08$ Flowrate out of orifice (cfs)
 $C_c = 0.62$ Coefficient of Contraction
 $C_v = 0.98$ Coefficient of Velocity
 $Area = 0.005$ Orifice Area (ft²)
 $\beta = 3.14$
 $g = 32.17$ Gravitational Constant
 $d = 1$ Orifice Diameter (in)

**Osprey Ranch
Road 4 Pond**
Latitude: 41.2978° Longitude: -111.8318°

Area	Sq. Ft.	Acres	C
Road 4 Pond	53,391	1.23	0.61
Total Weighted	53,391	1.23	0.61

10 YEAR STORM EVENT

MIN	Release Vol (cf) Allowable	Inch / Hr	Total Vol (cf) 10 YEAR	Detain Vol (cf) Difference
5	31	4.01	696	665
10	62	3.05	1,368	1,296
15	93	2.52	2,052	1,964
30	186	1.77	2,388	2,087
60	372	1.06	2,826	2,396
120	744	0.638	3,424	2,841
180	1,116	0.458	3,894	3,279
360	2,232	0.295	4,764	2,117
720	4,464	0.191	5,196	874
1440	7,016	0.123	7,016	0



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED
Pond Volume: **2,541** **56** **99.50**

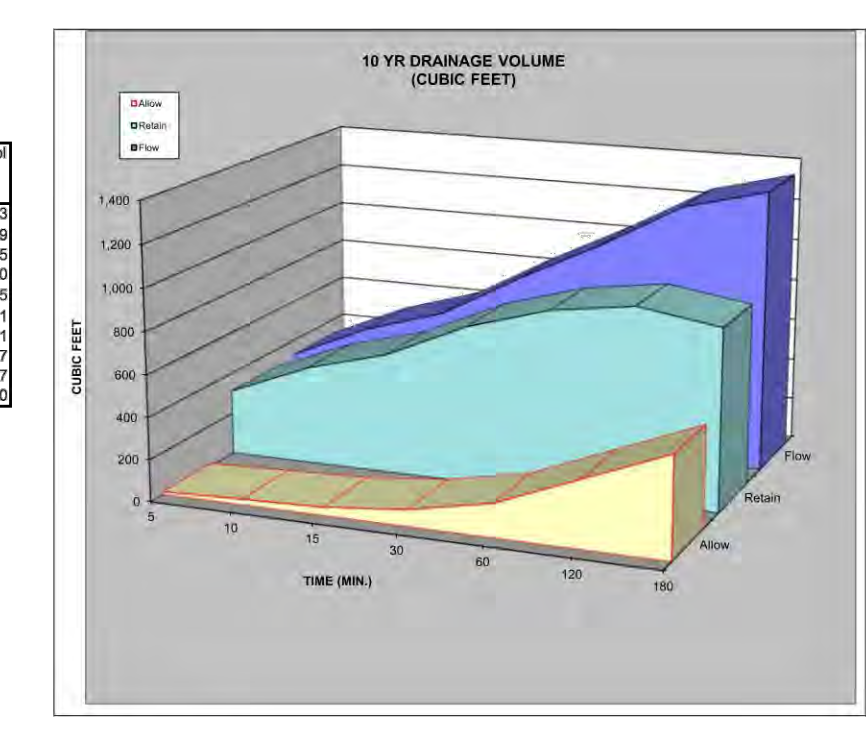
Orifice Calculation
 $H = 3$ Maximum water height to center of orifice (ft)
 $Q = 0.12$ Flowrate out of orifice (cfs)
 $C_c = 0.62$ Coefficient of Contraction
 $C_v = 0.98$ Coefficient of Velocity
 $Area = 0.010$ Orifice Area (ft²)
 $\beta = 3.14$
 $g = 32.17$ Gravitational Constant
 $d = 2$ Orifice Diameter (in)

**Osprey Ranch
POND ROAD 2 CUL-DE-SAC**
Latitude: 41.2978° Longitude: -111.8318°

Area	Sq. Ft.	Acres	C
Pond 2 CUL-DE-SAC	19,358	0.44	0.61
Total Weighted	19,358	0.44	0.61

10 YEAR STORM EVENT

MIN	Release Vol (cf) Allowable	Inch / Hr	Total Vol (cf) 10 YEAR	Detain Vol (cf) Difference
5	13	4.01	320	313
10	27	3.05	640	626
15	40	2.52	960	939
30	80	1.77	1,120	1,040
60	160	1.06	1,280	1,120
120	320	0.638	1,541	1,221
180	480	0.458	1,741	1,261
360	960	0.295	2,121	1,161
720	1,920	0.191	2,331	1,411
1440	2,834	0.123	2,834	2,834



10 YEAR STORM - RECOMMENDED MIN. VOLUME RETAINED
Pond Volume: **921** **30** **51.00**

Orifice Calculation
 $H = 6.1$ Maximum water height to center of orifice (ft)
 $Q = 0.04$ Flowrate out of orifice (cfs)
 $C_c = 0.62$ Coefficient of Contraction
 $C_v = 0.98$ Coefficient of Velocity
 $Area = 0.004$ Orifice Area (ft²)
 $\beta = 3.14$
 $g = 32.17$ Gravitational Constant
 $d = 0.8$ Orifice Diameter (in)

REVISIONS	DATE	DESCRIPTION

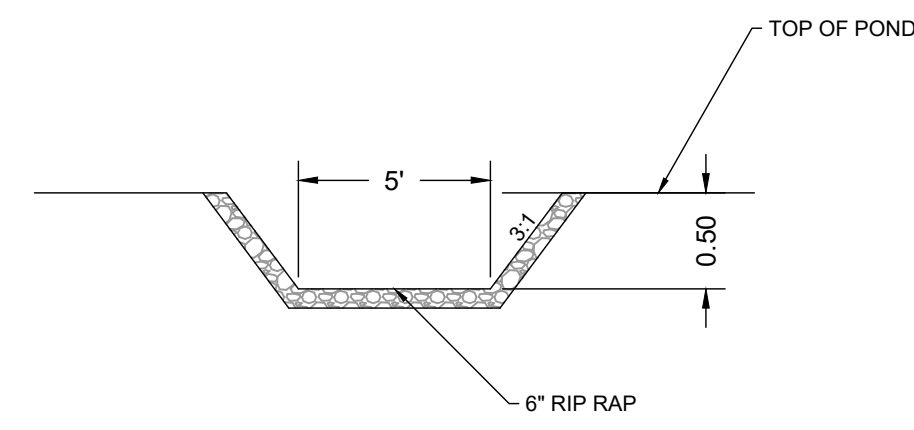
SCALE	DATE	DESIGN	DRAWN	CHECKED
	07-28-22	KAN	KAN	RC

PHASE 1 - BASIN CALCULATIONS
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

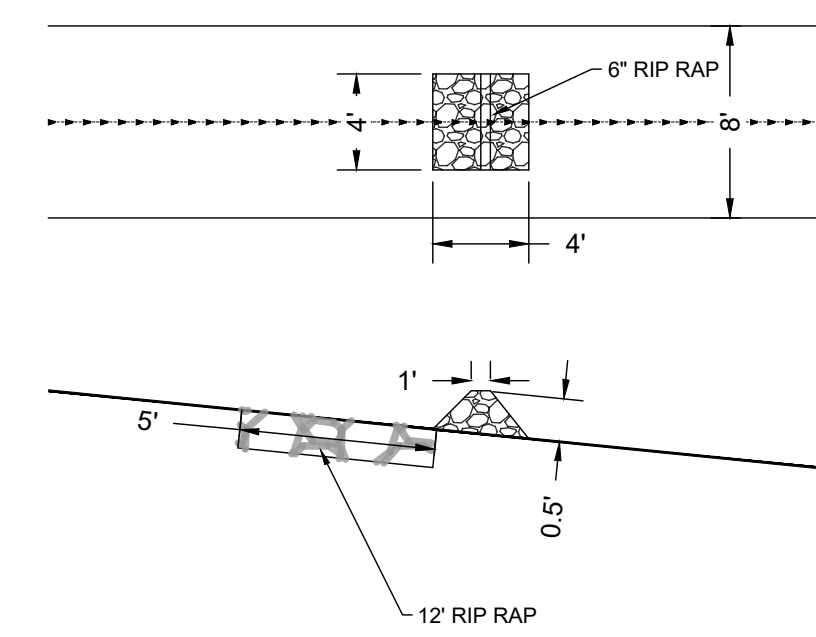
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 OFFICE: 801-476-0202 FAX: 801-476-0066

A:\1201 - LEWIS, HOWES, 2105 - OSPREY RANCH\LEWES\DWG\OSPREY PLAN SHEETS 6-17-22.DWG

A:\1251 - LEWIS, HOWES, 2105 - OSPREY RANCH\DESIGN\DWG\OSPREY PLAN PROFILE SHEETS\SHAPE - RECORD - RECOVER.DWG



POND OVERFLOW DETAIL



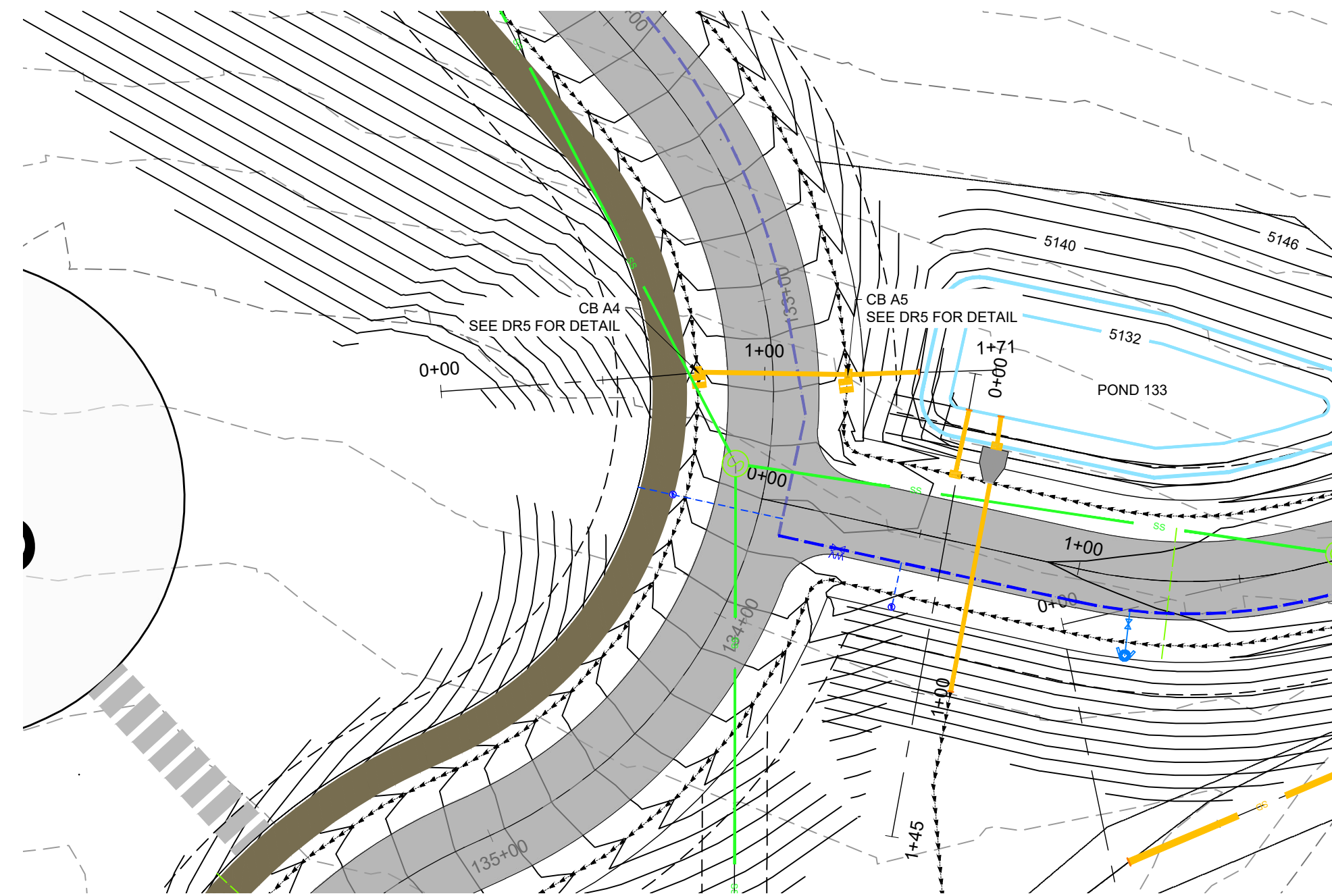
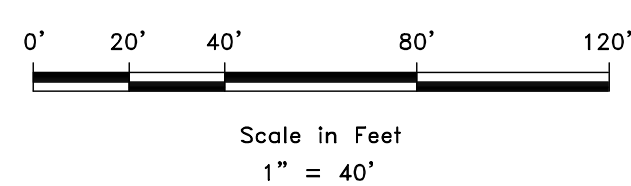
CHECK DAM

Calculated from open channel flow	
Q _{cr}	3.92
V _{cr}	7.02 4:1 V ditch @ 12%
n	0.025 Natural Channel
d	0.374

Check dam rip rap	
V	7.02 ft/sec
C	0.90
S	3.00
G	32.17
D ₅₀	0.47 ft
	5.67 in

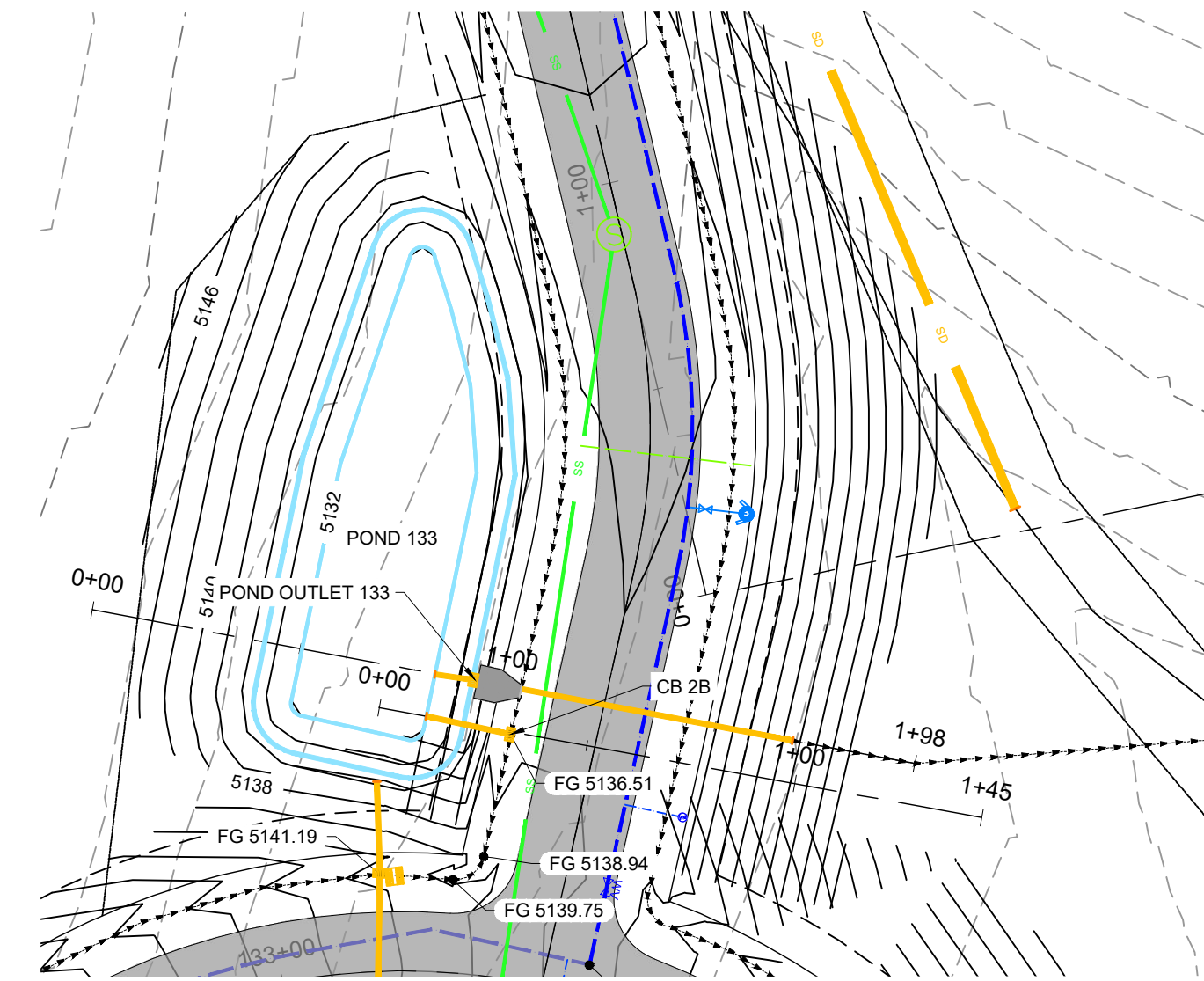
$$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$$

D₅₀ represents the average diameter of 50% of the spherical rocks for rip rap expressed in meters;
 V is the designation for the average channel speed in meters per second;
 g is the acceleration of 9,806 m/s²;
 C is the Isbash constant whose value is equal to 0.86 for a turbulent water flow or 1.20 for a water flow whose turbulence is significantly lower;
 S is the designation for the specific weight of the rock, whose value ranges from about 2.50 to 3.00.



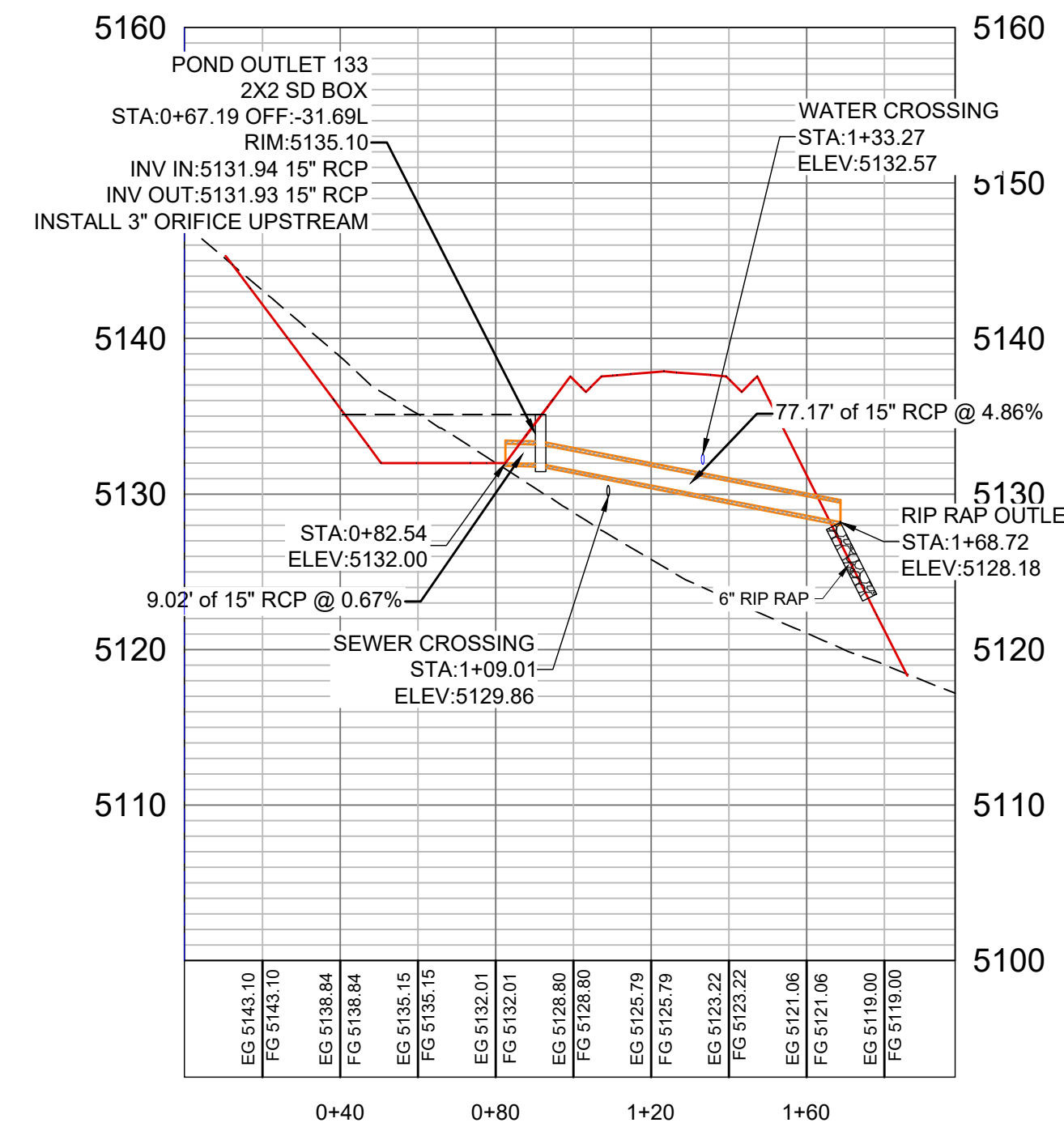
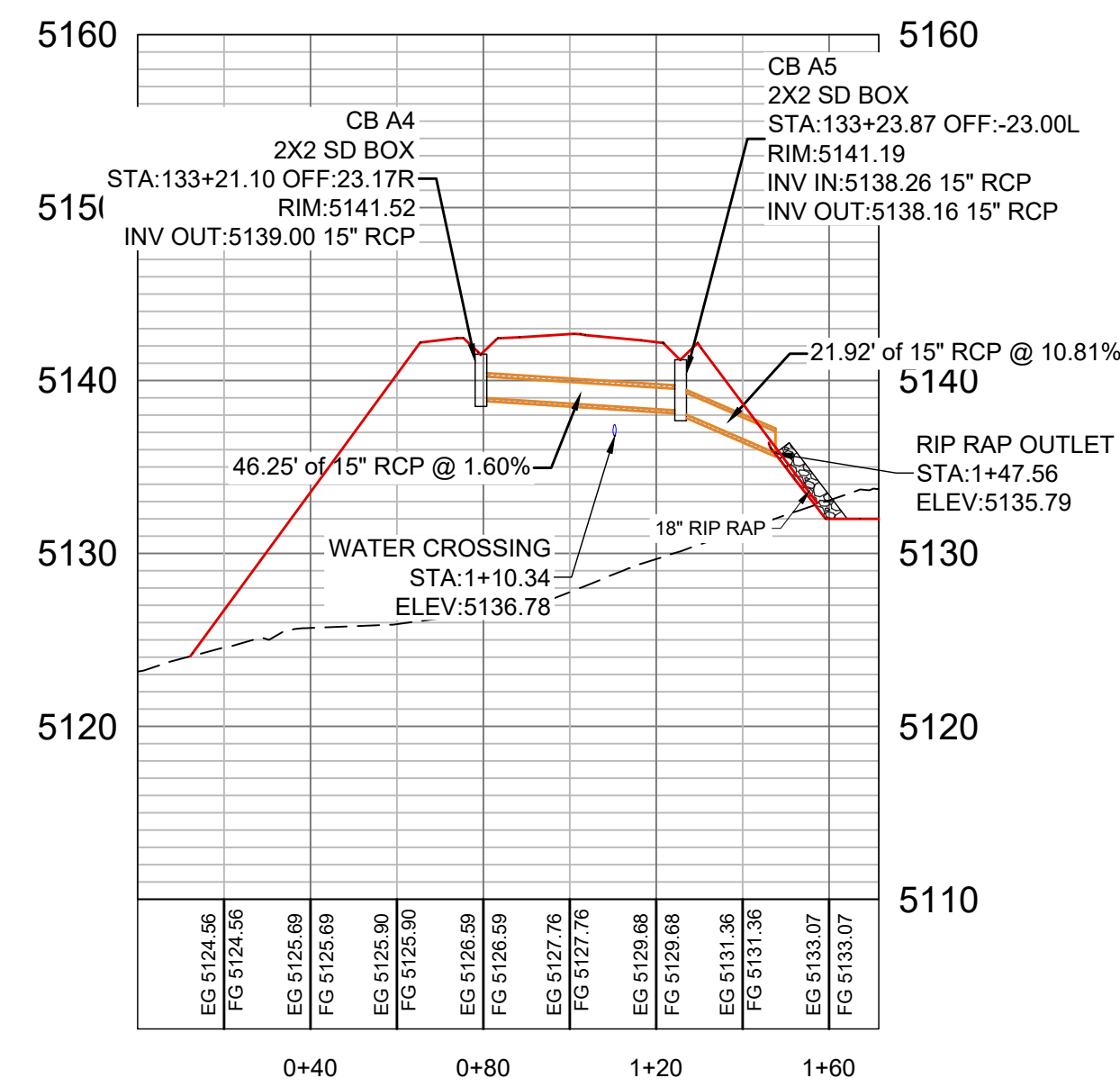
POND 133
 TOP OF POND ELEV:5136.10
 BOTTOM POND ELEV:5132.00
 WATER SURFACE ELEV:5135.10
 POND VOLUME REQ. - 456 CY
 ACTUAL POND VOLUME - 498 CY

RIP RAP SIZE			
	$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$		
	Pond Inlet 1	Outlet	pond Inlet 2
V=ft/sec	11.89	5.75	3.09
C=	0.86	0.86	0.86
S=	3.00	3.00	3.00
G=	32.17	32.17	32.17
D ₅₀ (ft)	1.28	0.30	0.09
inches	15.33	3.58	1.04

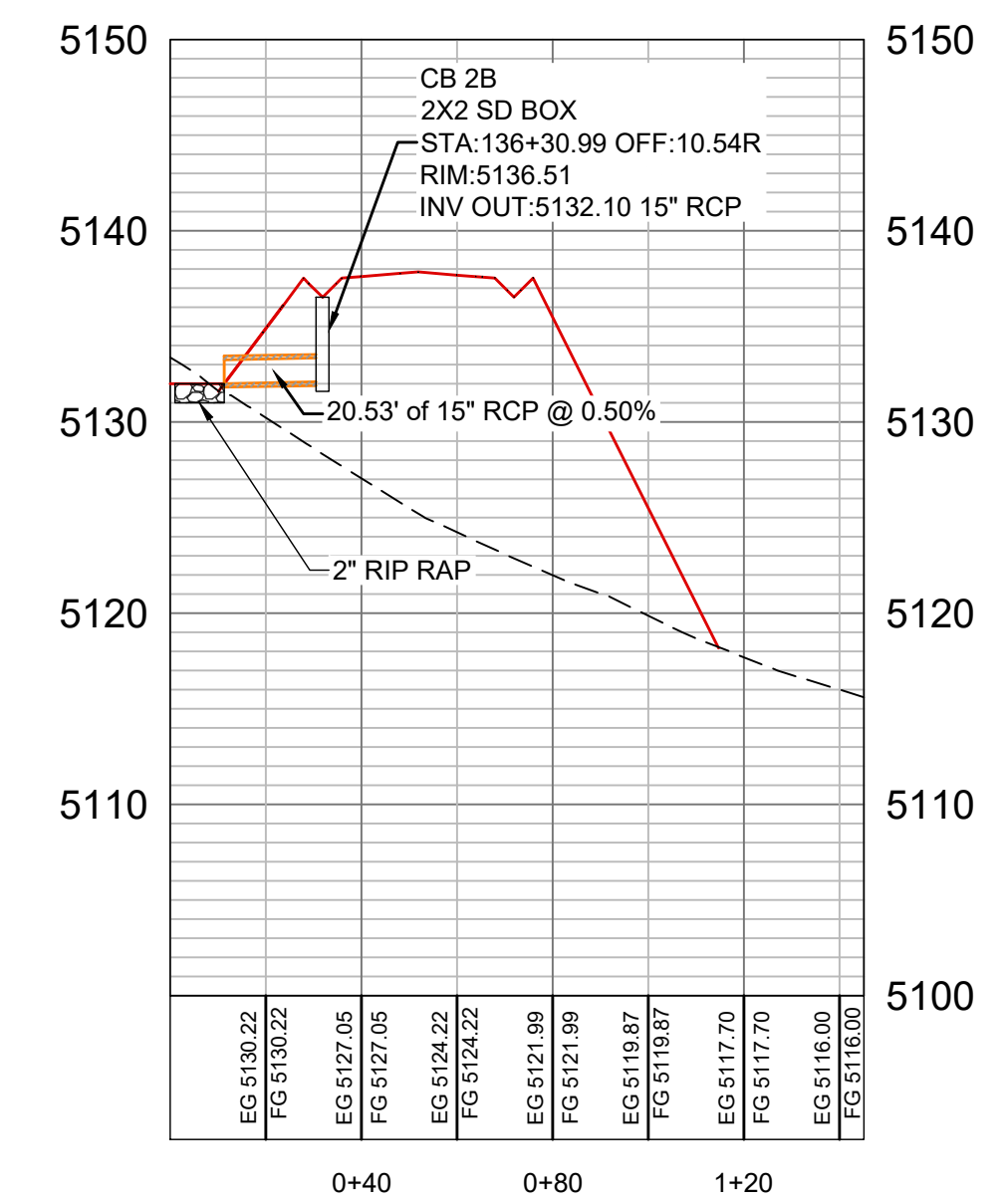


POND OUTLET 133

**PIPE CROSSING 133
INLET 1**



POND 133 INLET 2



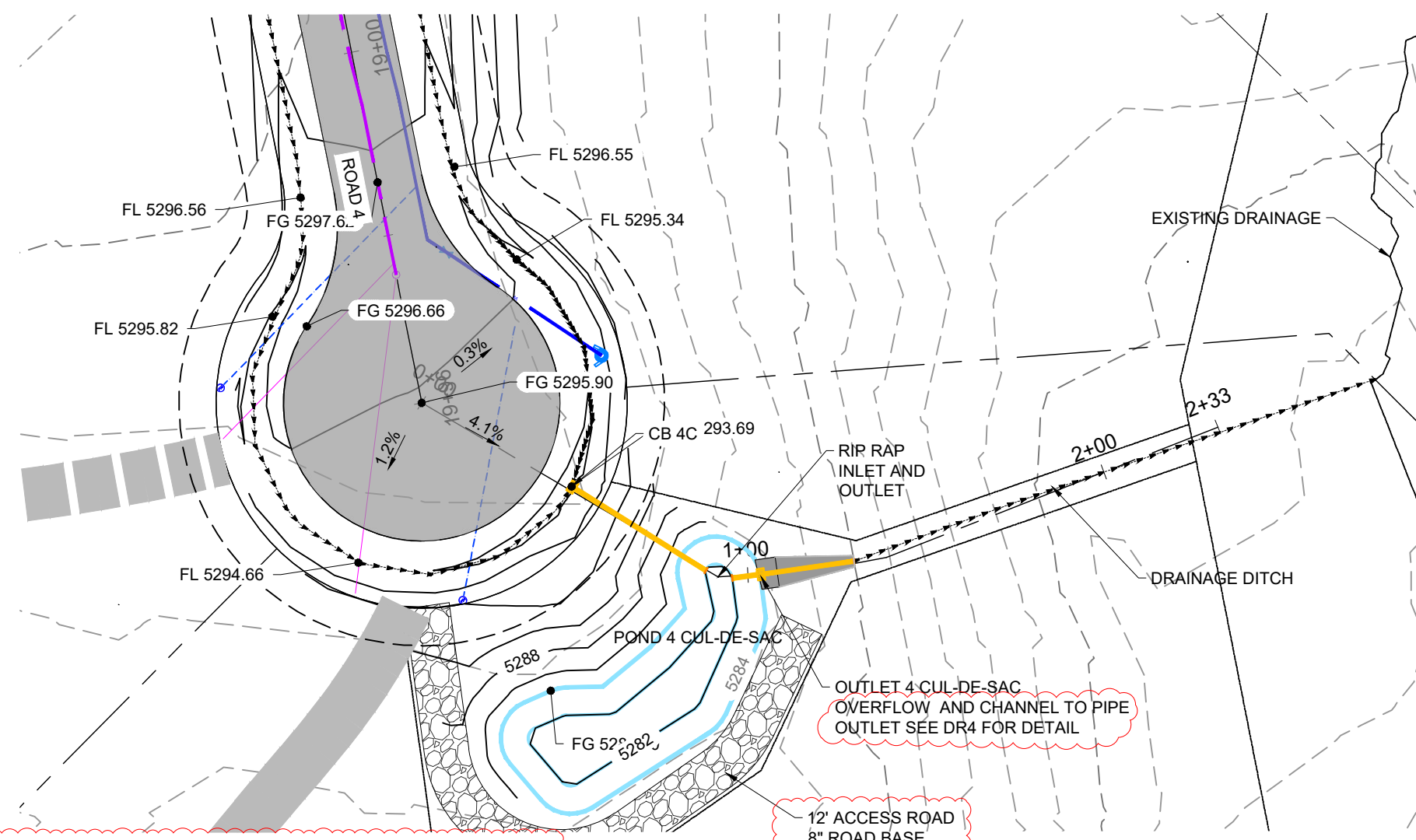
SCALE 1" = 40'

REVISIONS	
DATE	DESCRIPTION
7-14-22	COUNTY COMMENTS
9-8-22	

DATE 8-12-22
 DESIGNER KAN
 COUNTY COMMENTS
 DRAWN KAN
 CHECKED RC
 DWG:

SD CROSSINGS
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH

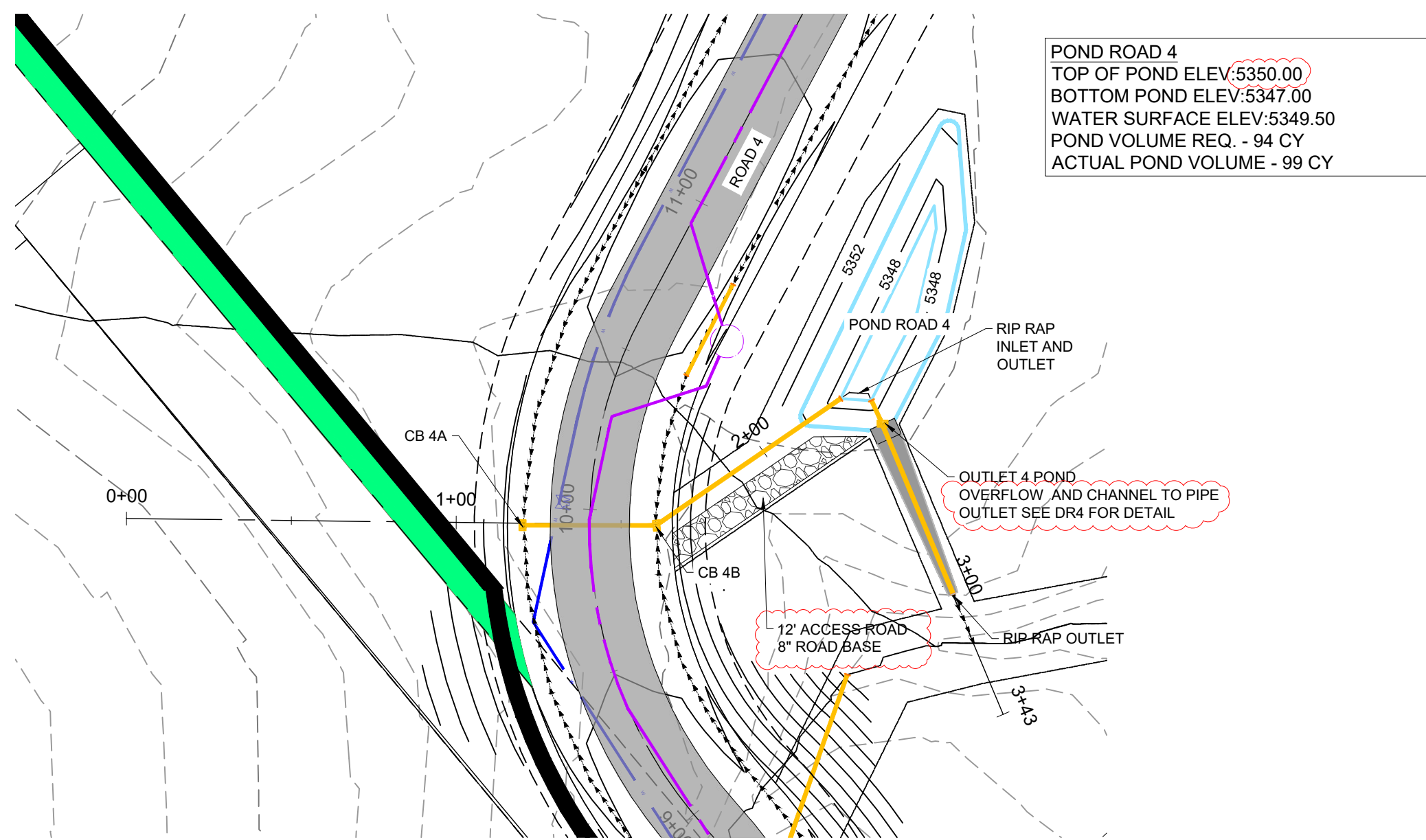
GARDNER ENGINEERING
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 5150 SOUTH 375 EAST OGDEN, UT
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RIP RAP SIZE		
$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$		
V=ft/sec	pond inlet	outlet
C=	0.86	0.86
S=	3.00	3.00
G=	32.17	32.17
D50 (ft)	1.49	0.25
inches	17.85	2.97

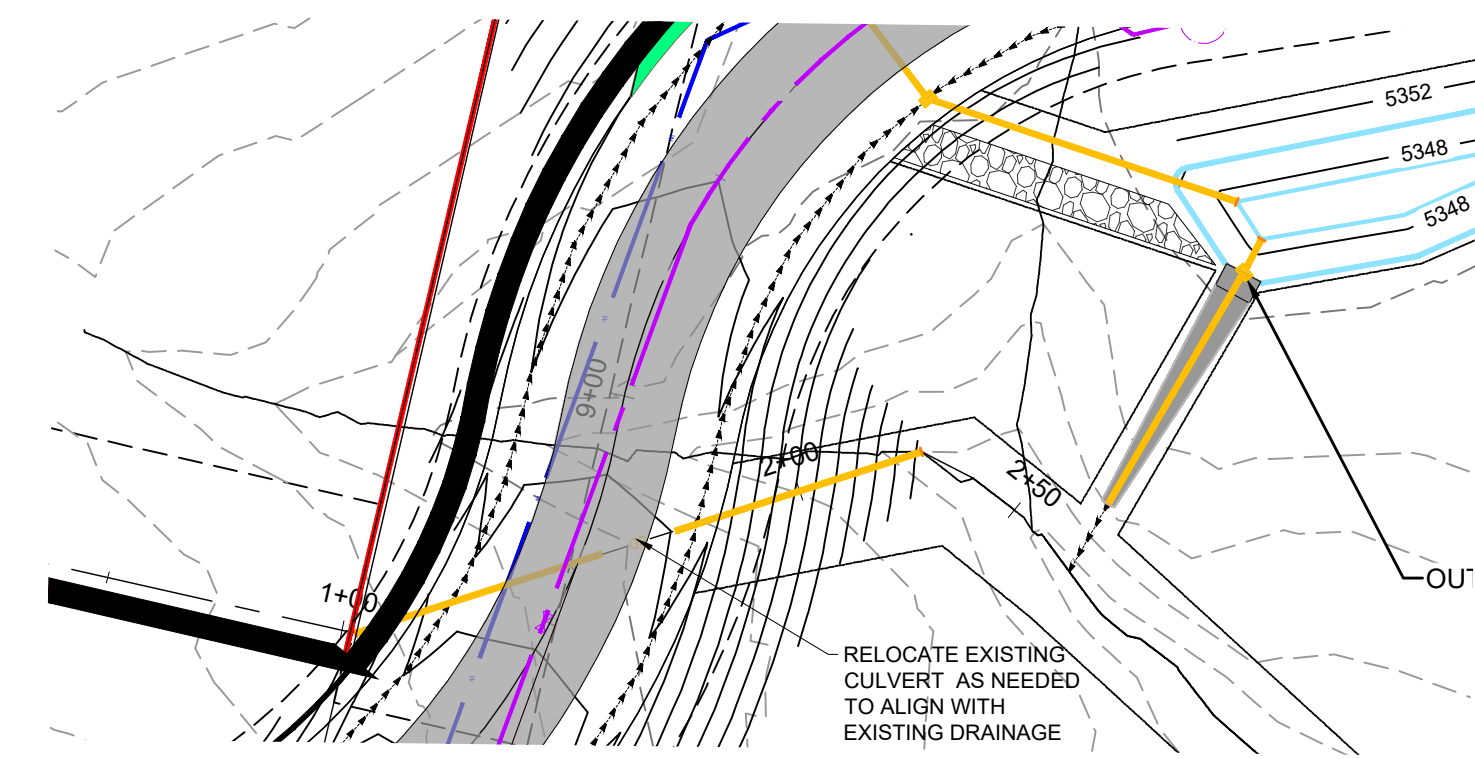
POND 4 - CUL-DE-SAC
 TOP OF POND ELEV:5285.00
 BOTTOM POND ELEV:5282.00
 WATER SURFACE ELEV:5284.00
 POND VOLUME REQ. - 91 CY
 ACTUAL POND VOLUME - 105.4 CY

POND 4 CUL-DE-SAC

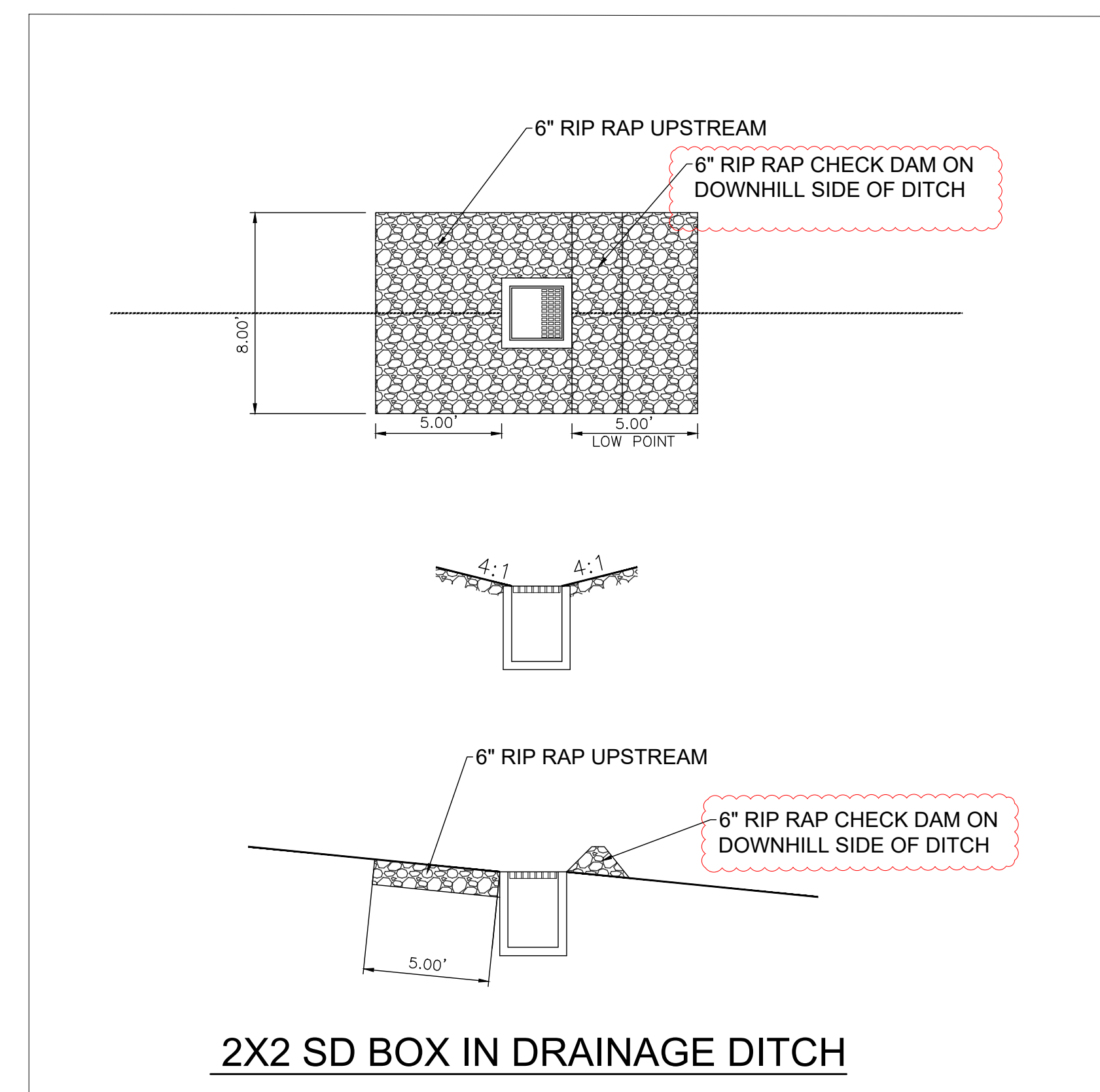
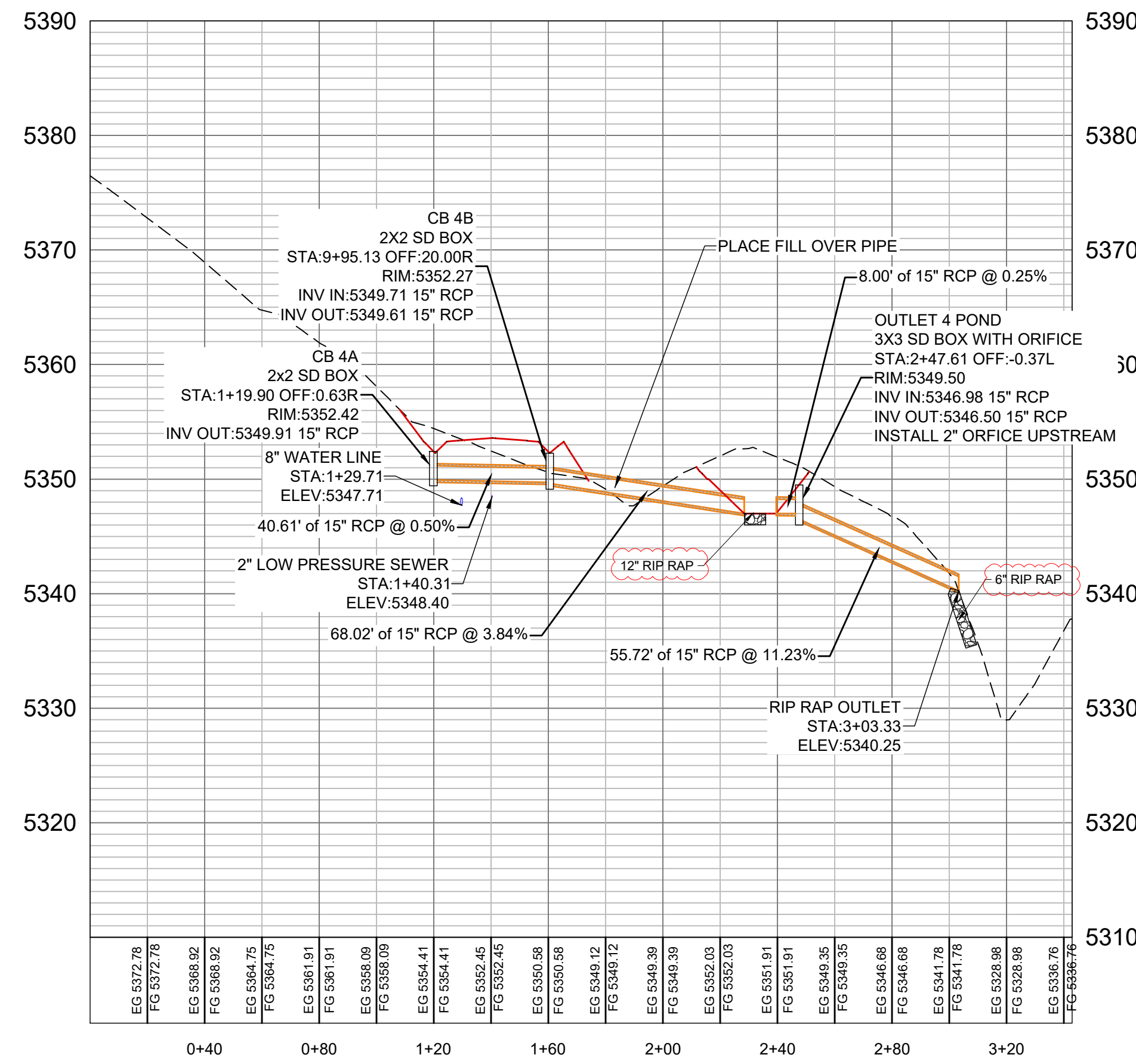
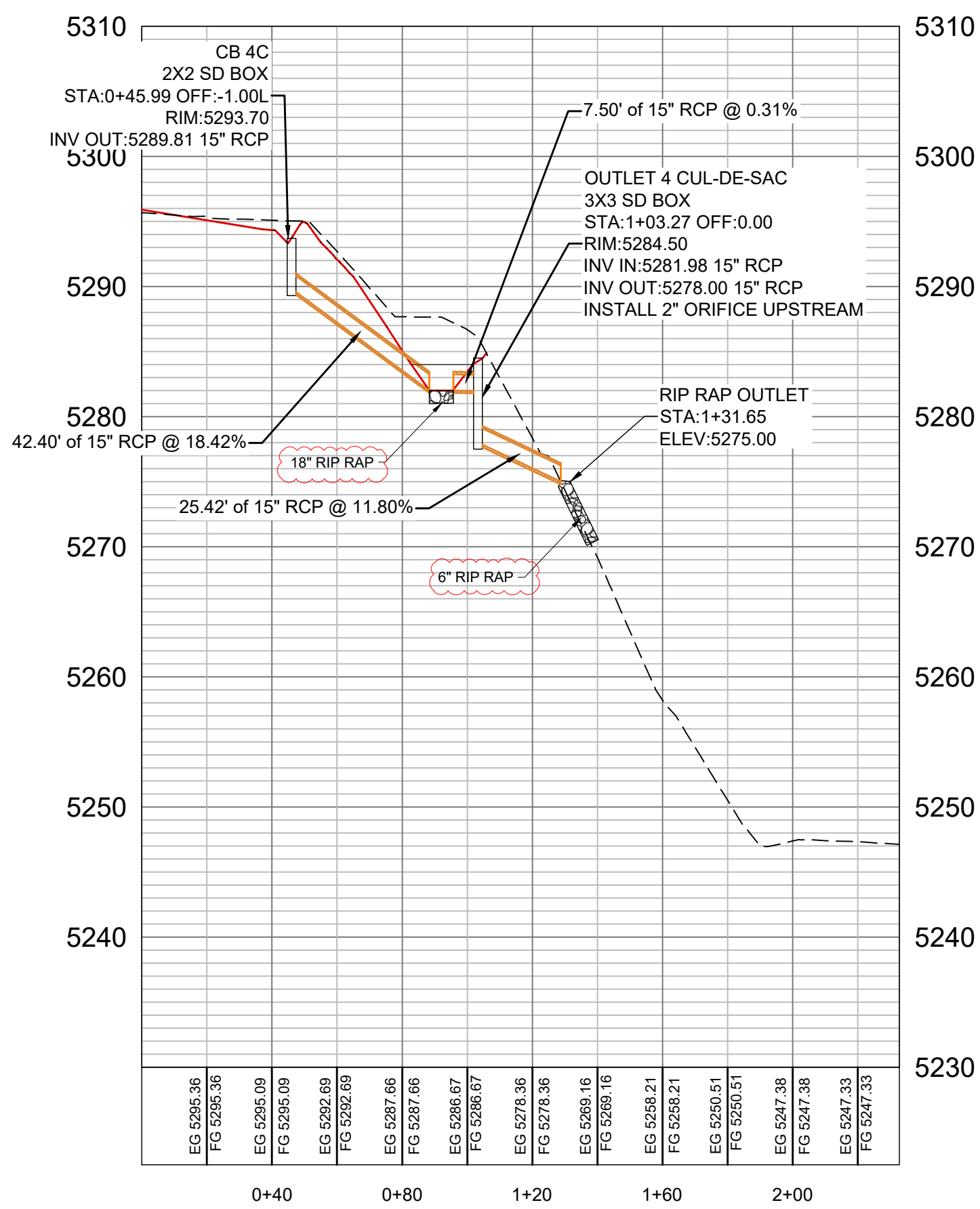
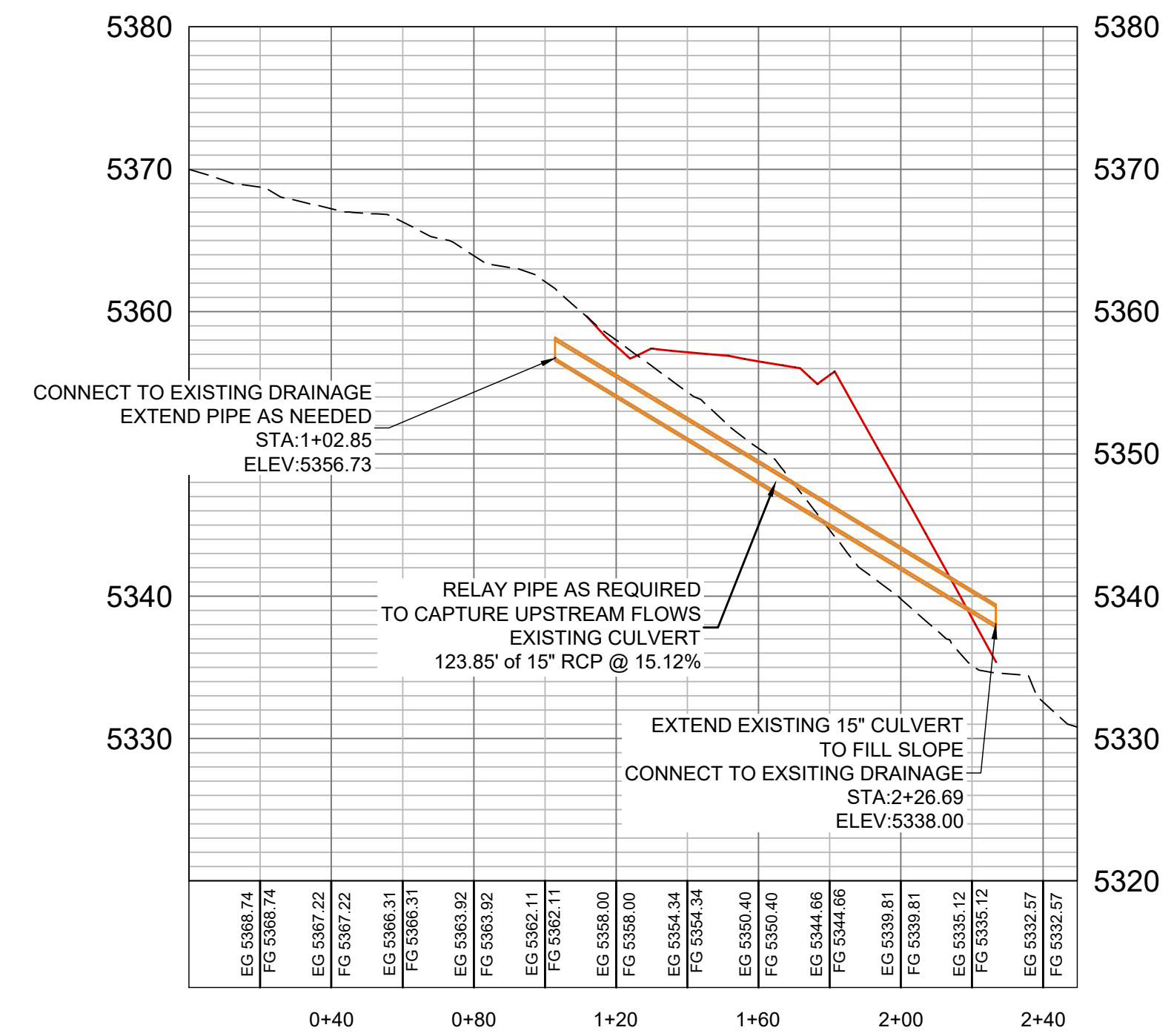


POND ROAD 4
 TOP OF POND ELEV:5350.00
 BOTTOM POND ELEV:5347.00
 WATER SURFACE ELEV:5349.50
 POND VOLUME REQ. - 94 CY
 ACTUAL POND VOLUME - 99 CY

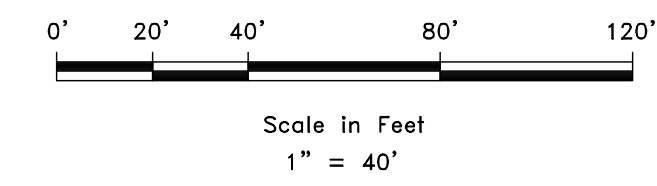
POND ROAD 4



EX CULVERT ROAD 4 CROSSING



2X2 SD BOX IN DRAINAGE DITCH

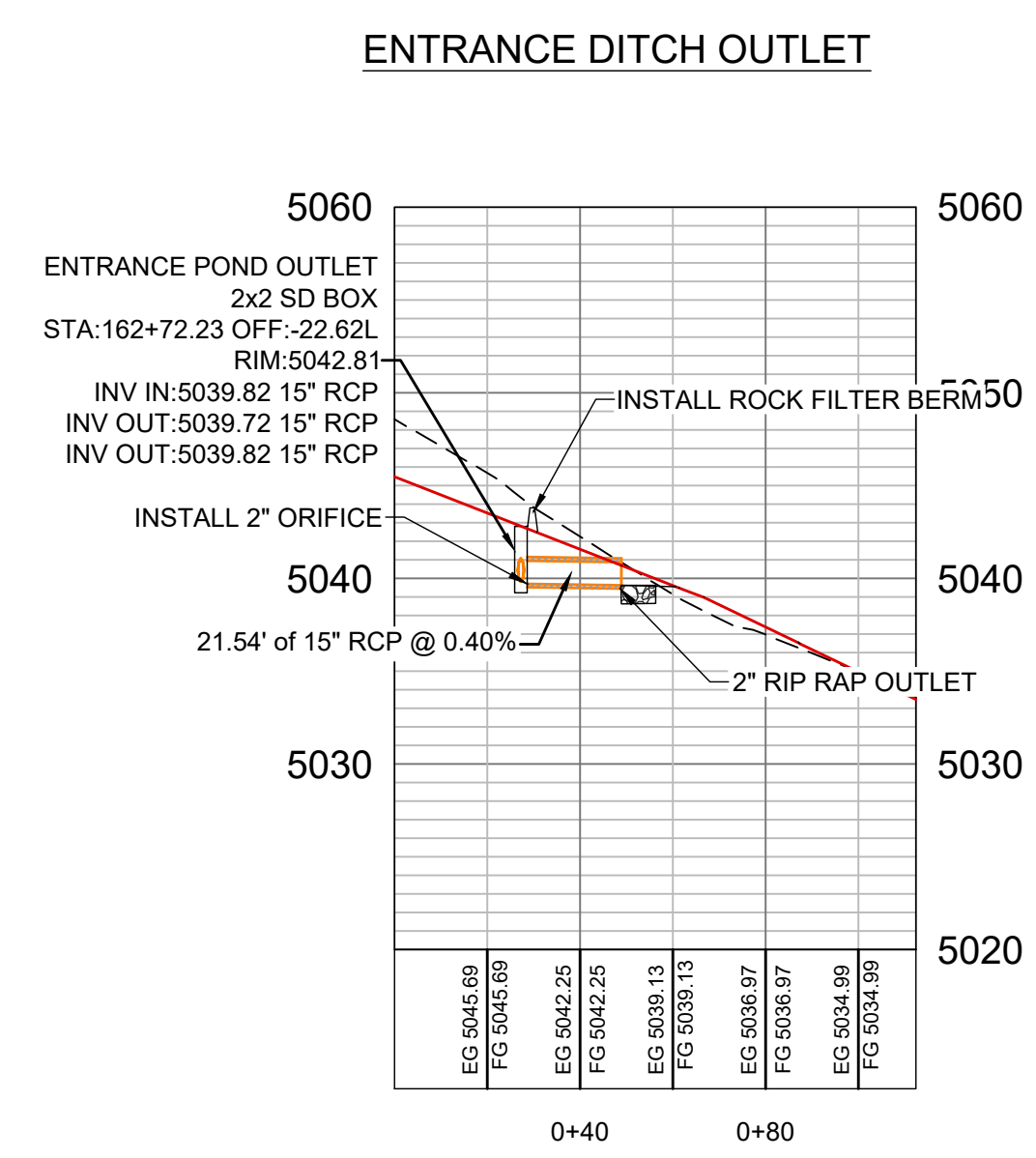
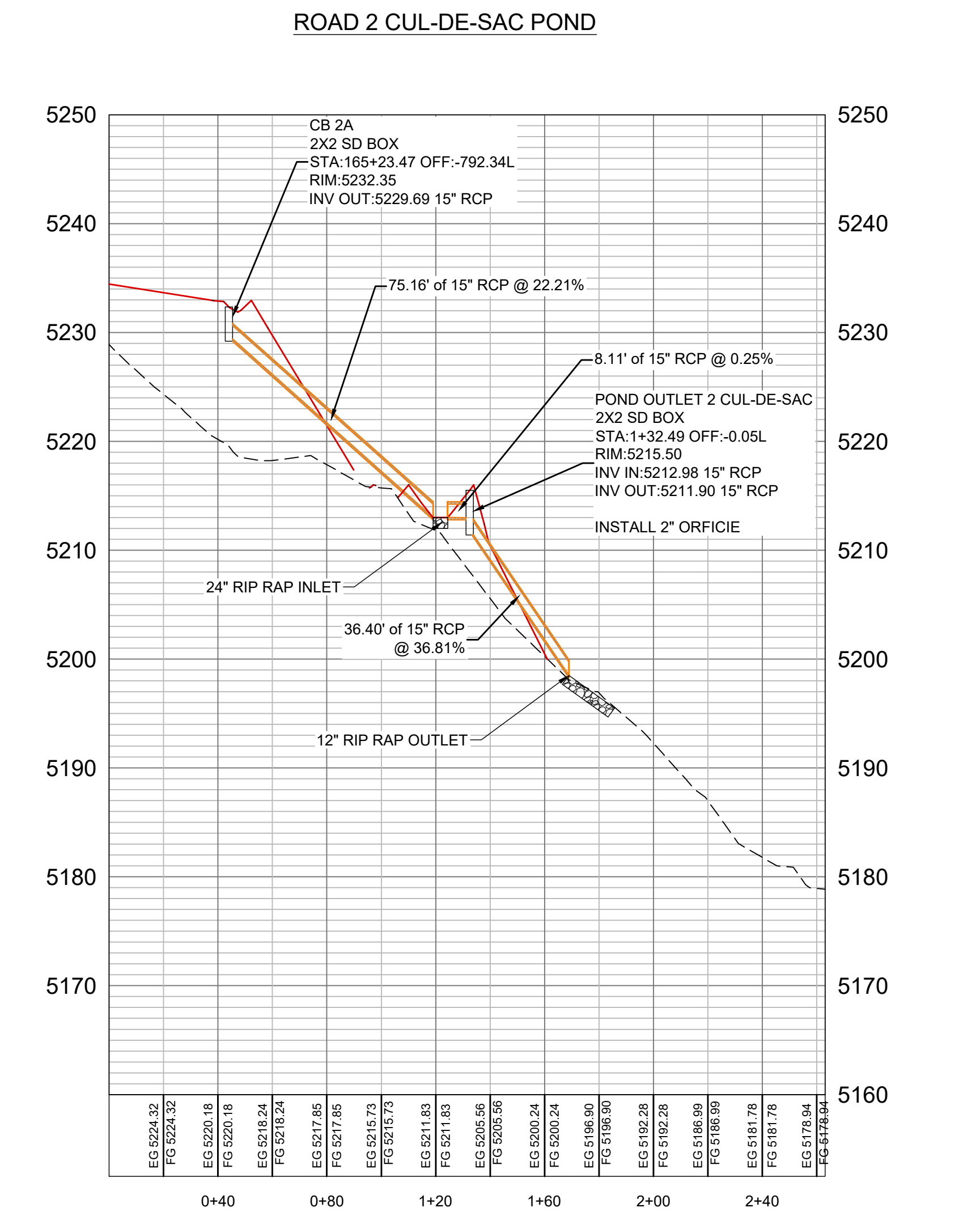
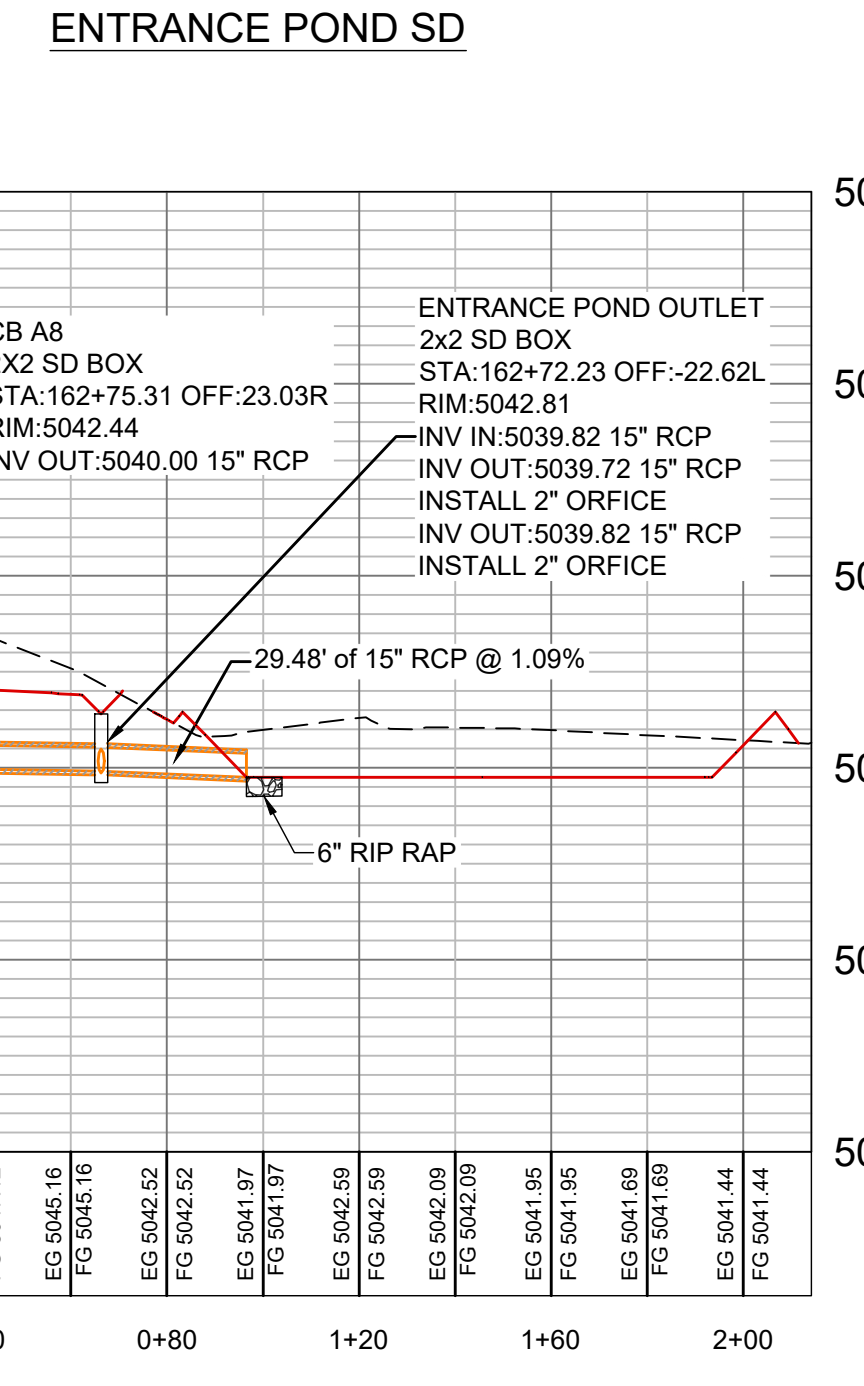
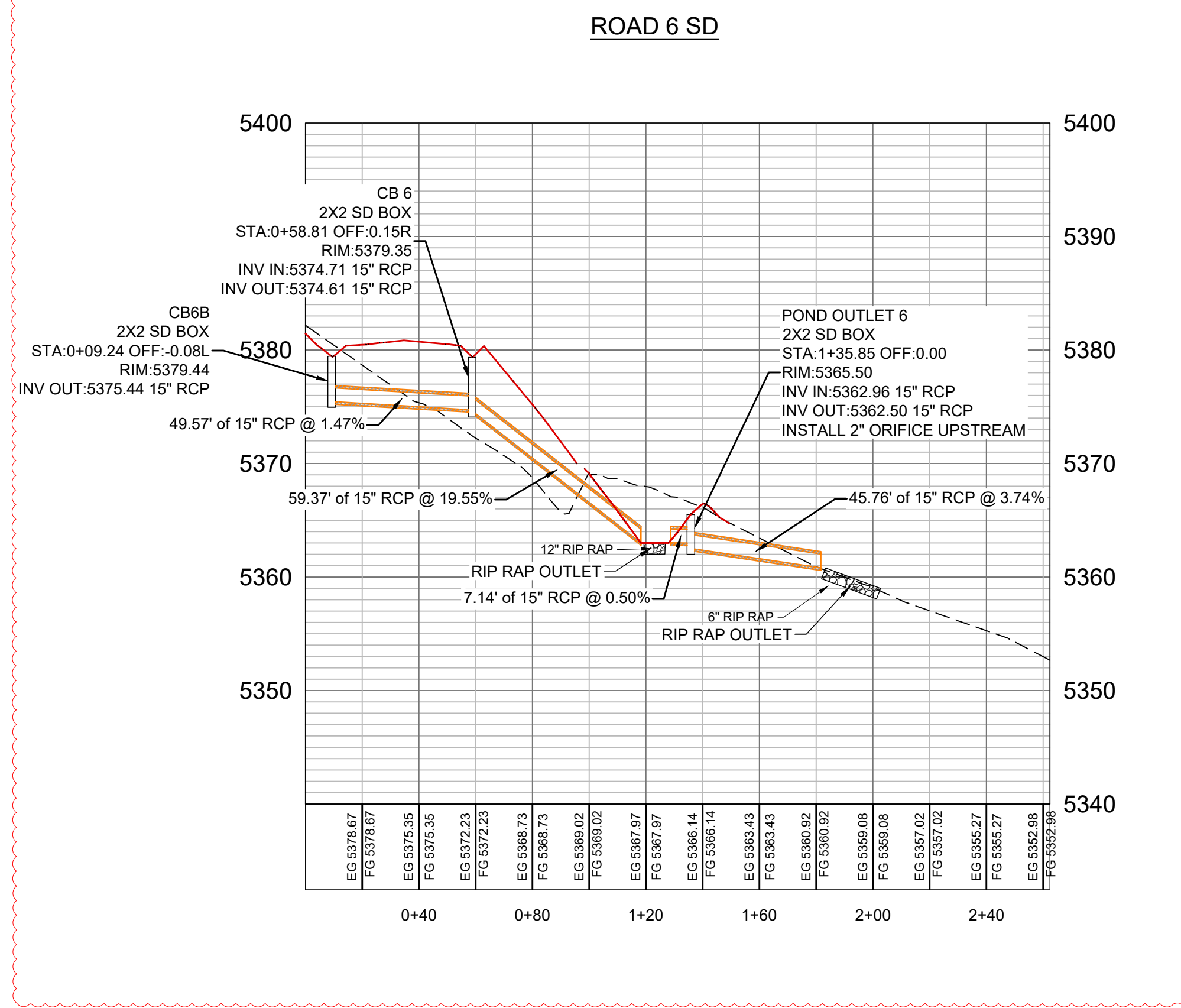
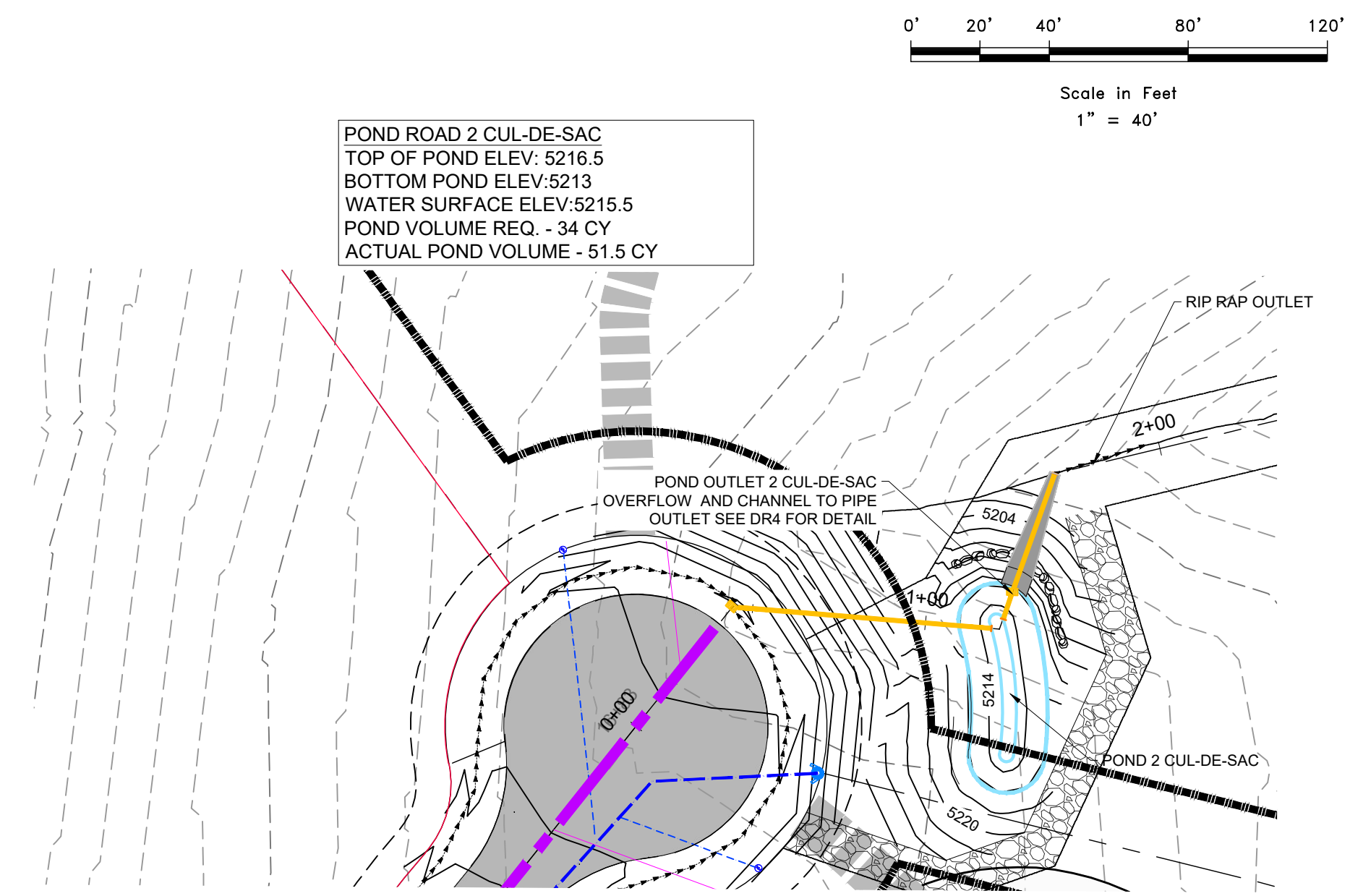
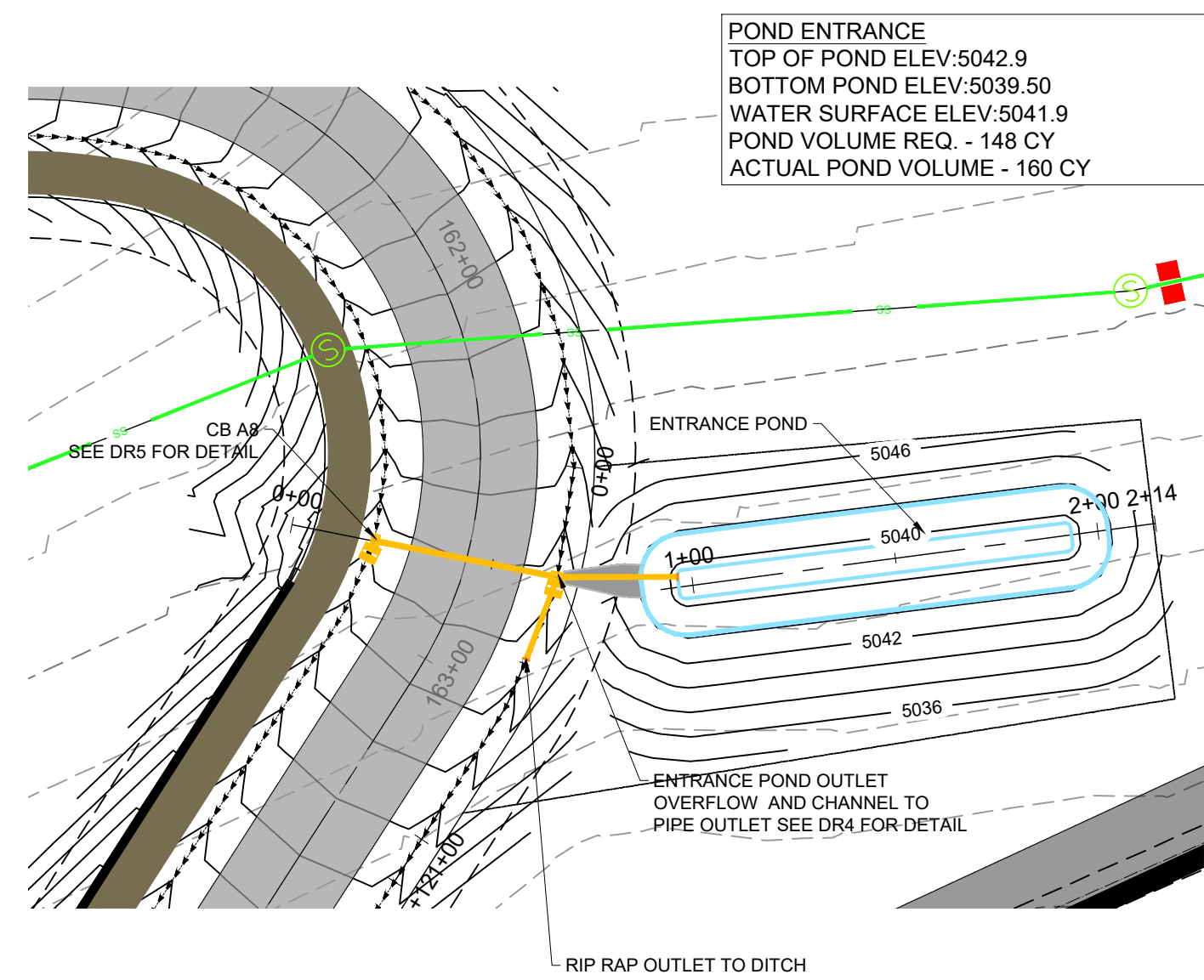
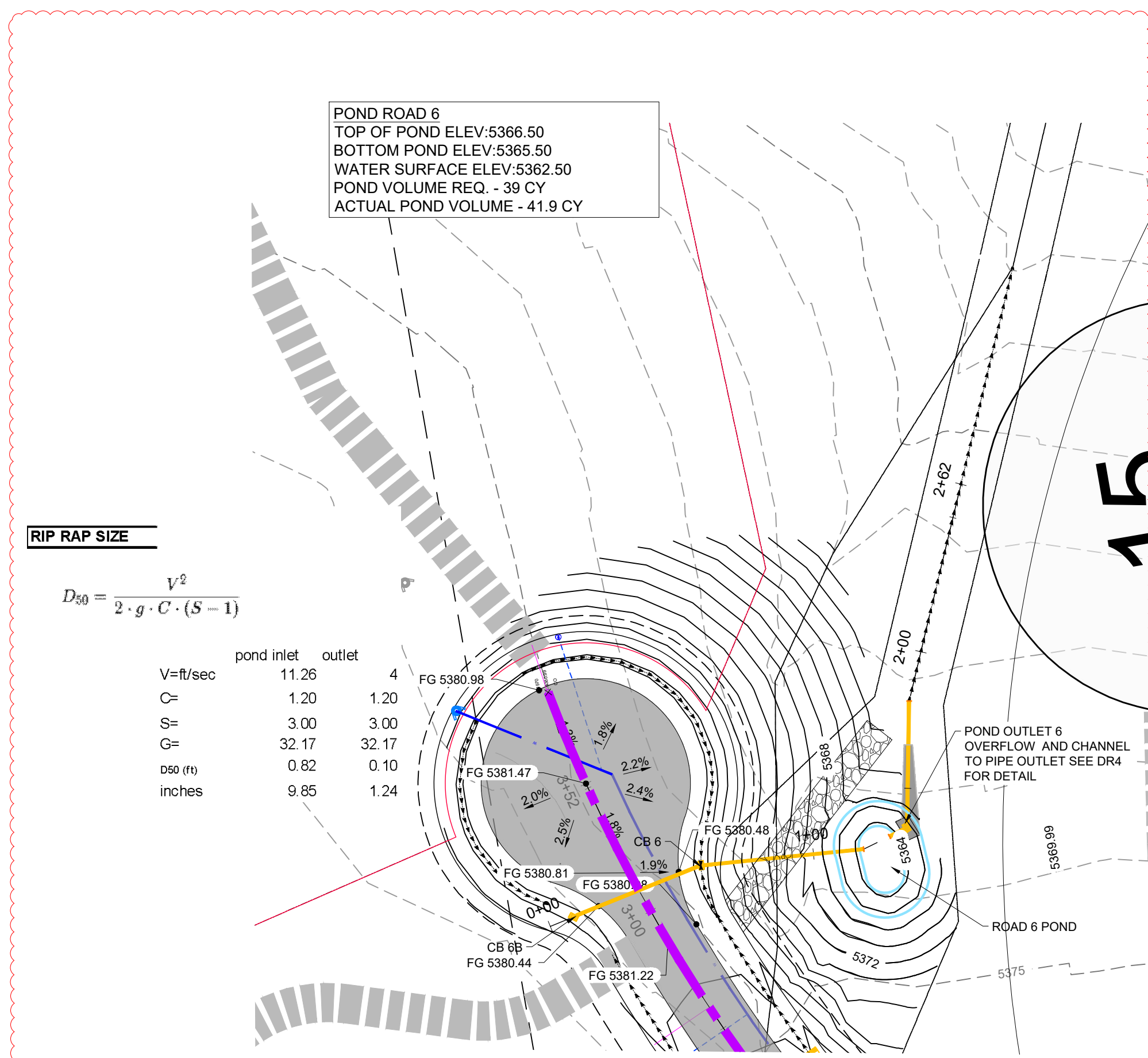


RIP RAP SIZE		
$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$		
	Pond Inlet	Outlet
V=ft/sec	7.55	5.10
C=	0.86	0.86
S=	2.50	2.50
G=	32.17	32.17
D50 (ft)	0.69	0.31
inches	8.24	3.76

REVISIONS	
DATE	DESCRIPTION
7-14-22	REVISED EXISTING CULVERT
9-8-22	COUNTY COMMENTS

SD CROSSINGS
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH

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RIP RAP SIZE

	$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$	
V=ft/sec	pond inlet	outlet
C=	5.35	1.60
S=	0.86	1.20
G=	2.65	2.65
d50 (ft)	0.31	0.02
inches	3.76	0.24

RIP RAP SIZE

	$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$	
V=ft/sec	Pond Inlet	Outlet
C=	10.57	7.09
S=	0.86	0.86
G=	2.50	2.50
d50 (ft)	32.17	32.17
inches	1.35	0.61
	16.15	7.27

SCALE: 1" = 40'

DATE: 8-12-22
 DESIGN: KAN
 COUNTY COMMENTS: REVISION CUL-DE-SAC
 DRAWN: KAN
 CHECKED: RC

REVISIONS

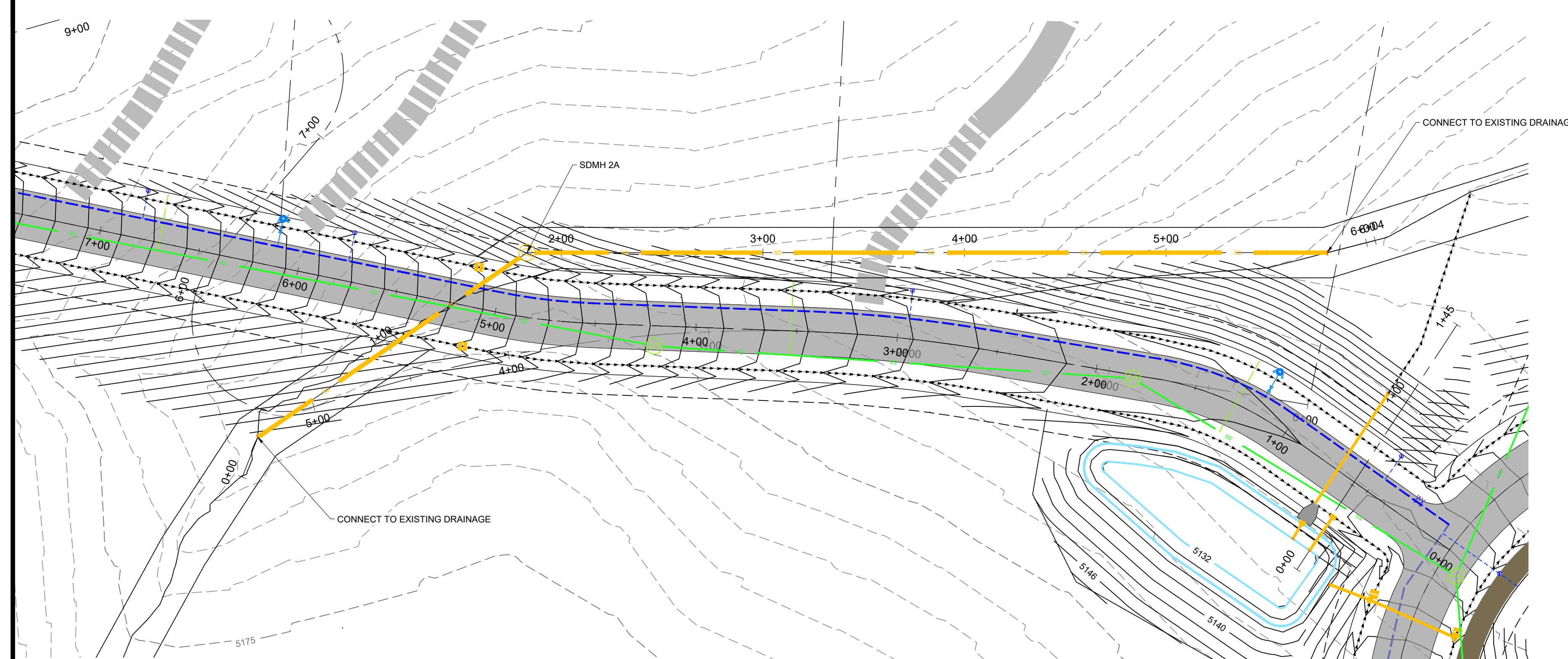
DATE	DESCRIPTION
7-14-22	
9-8-22	
10-13-22	

SD CROSSINGS
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH

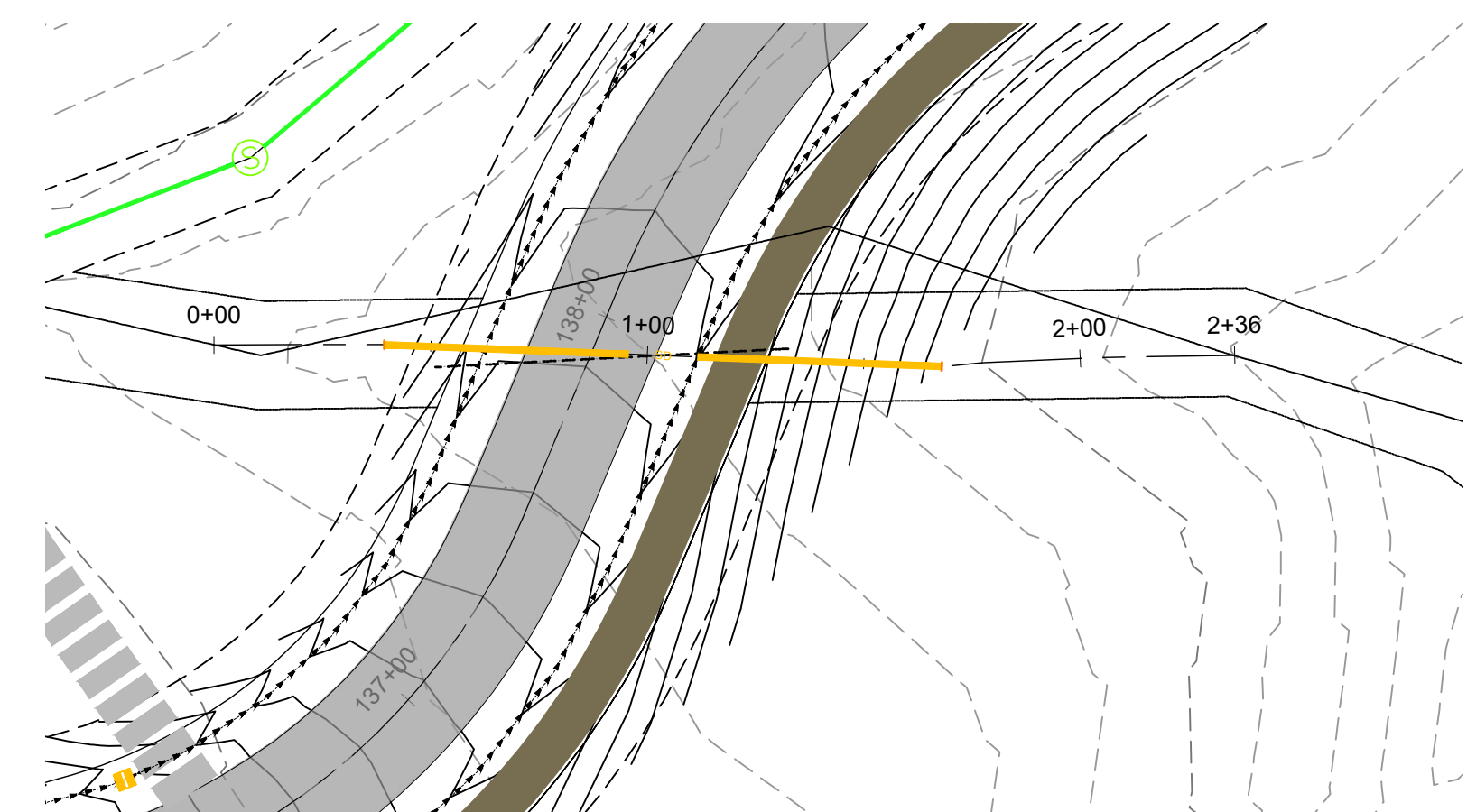
GARDNER ENGINEERING
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 OFFICE: 801-476-0202 FAX: 801-476-0066

DR6

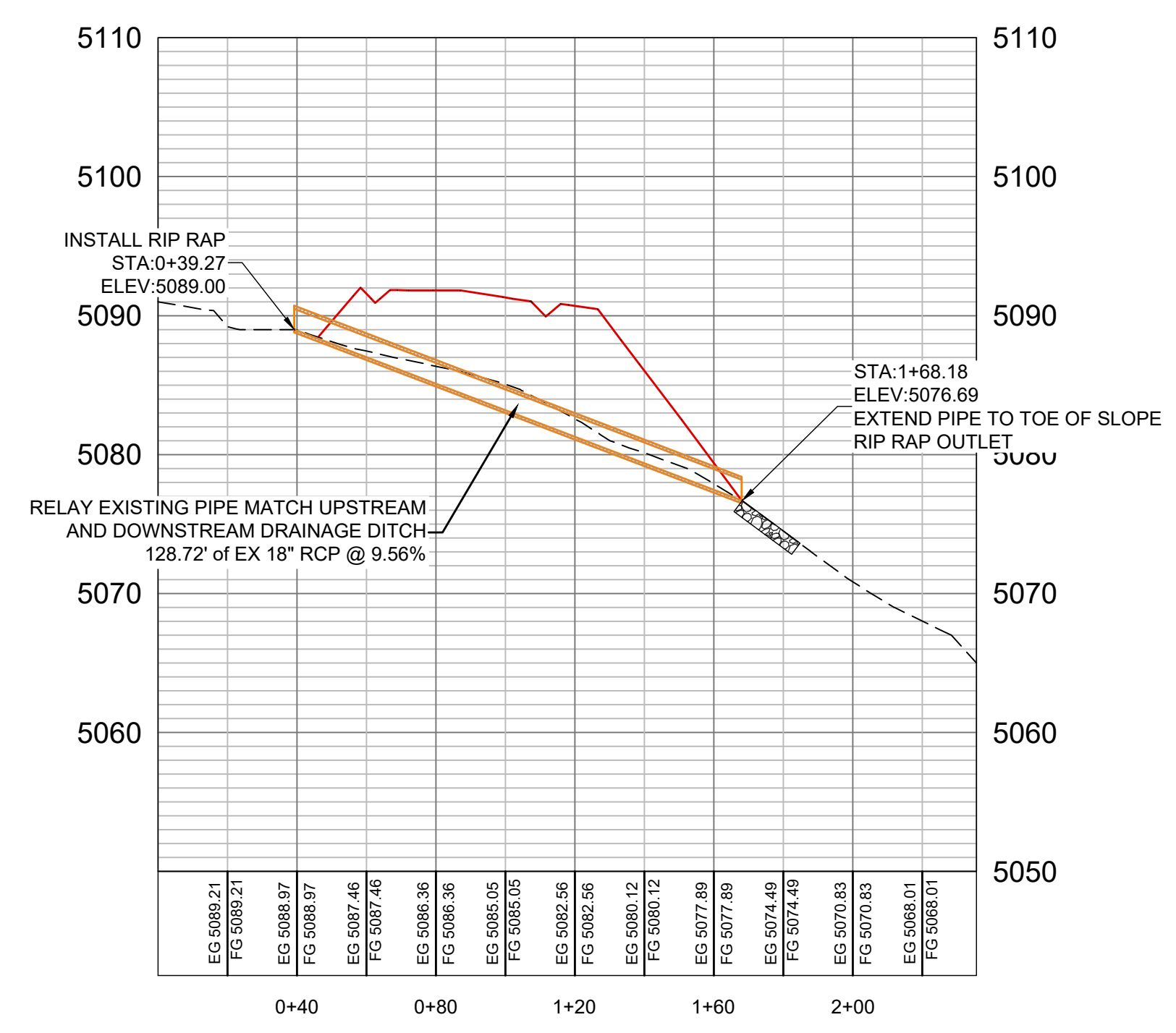
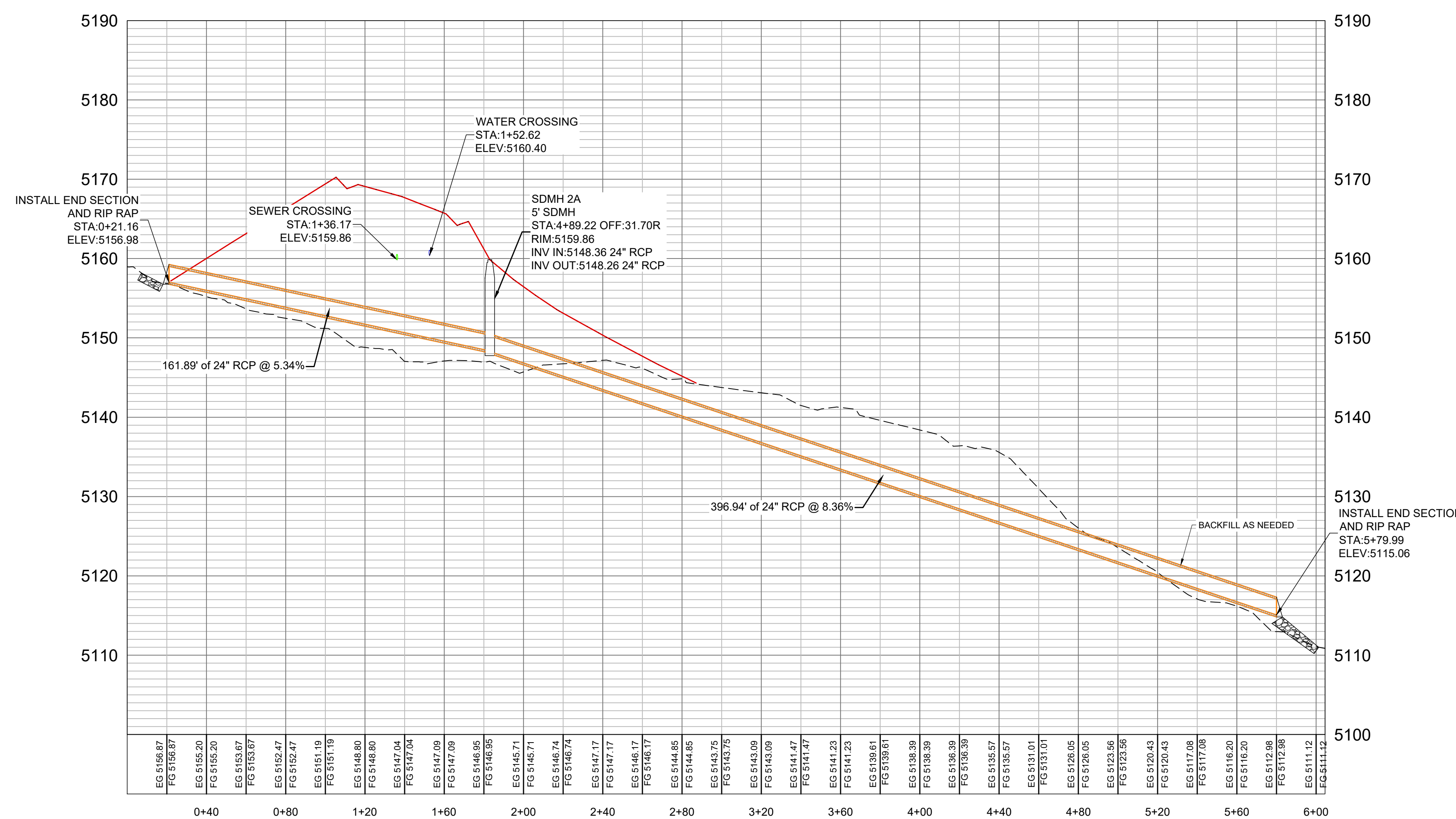
\\1201 - LEWIS, HOWES, 2/10/25 - OSPREY RANCH, UTAH - SD CROSSING PLAN - PROFILE SHEETS PHASE 1 - RECOVER, RECOVER.DWG



ROAD 2 SD CULVERT



EX CULVERT 138 ROAD A



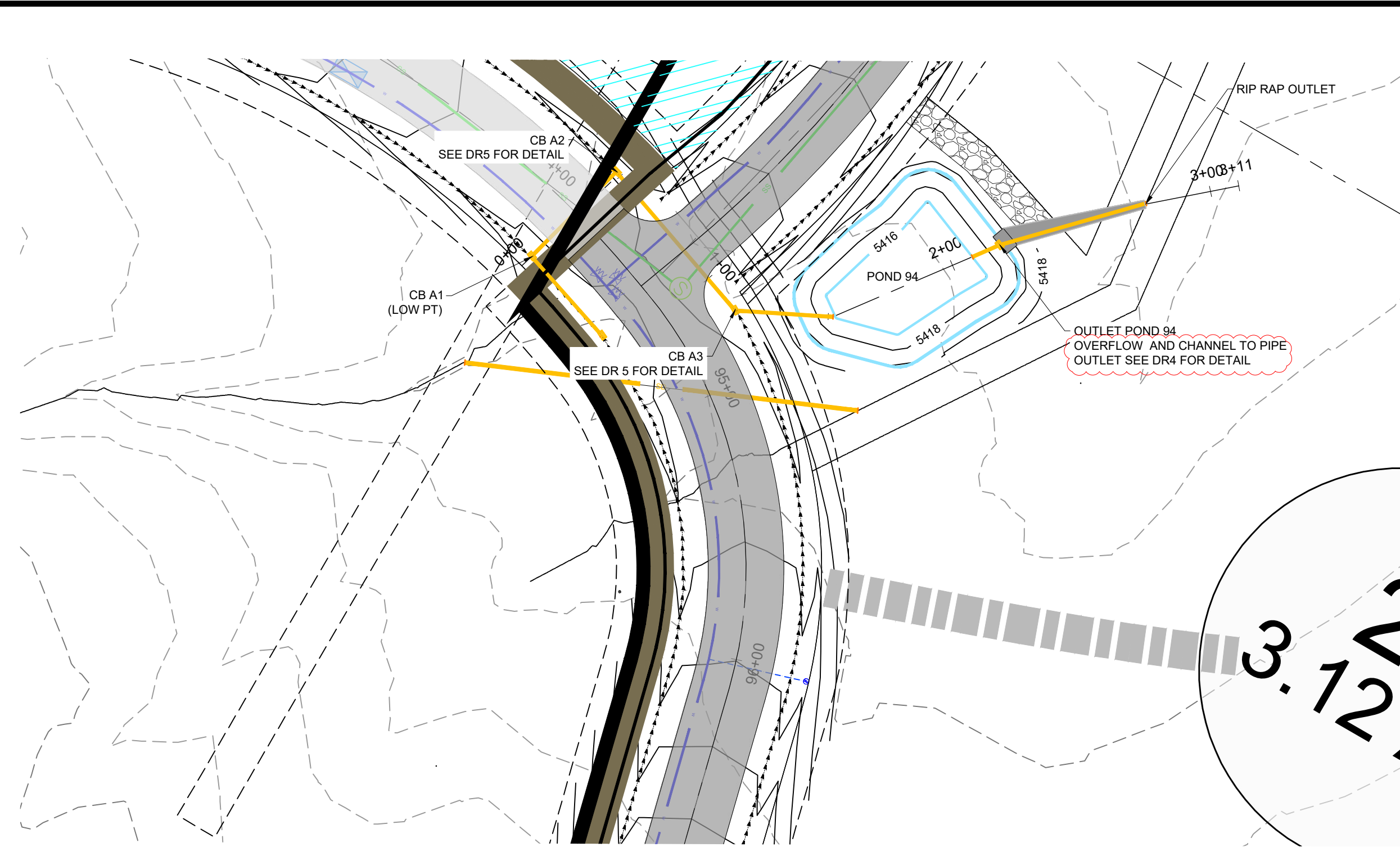
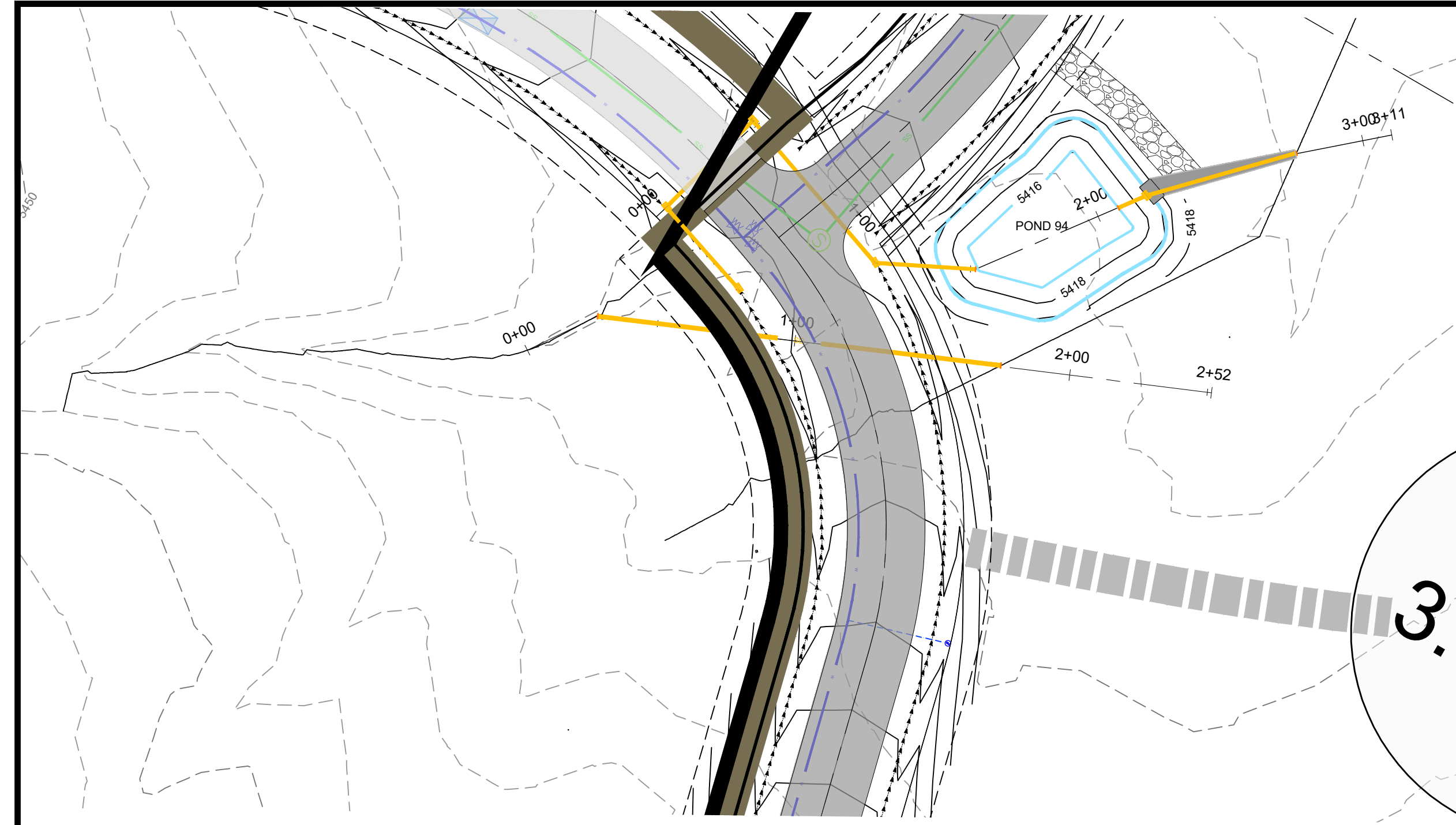
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SD CROSSINGS
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH

REVISIONS	DATE	DESCRIPTION
1	9-1-22	REVISED EX CULVERT

SCALE	*****
DATE	8-12-22
DESIGN	KAN
DRAWN	KAN
CHECKED	RC

PLAN 1201 - LEWIS HOMES 2105 - OSPREY RANCH, BENTON COUNTY, OSPREY RANCH, UT - RECOVER, RECOVER.DWG



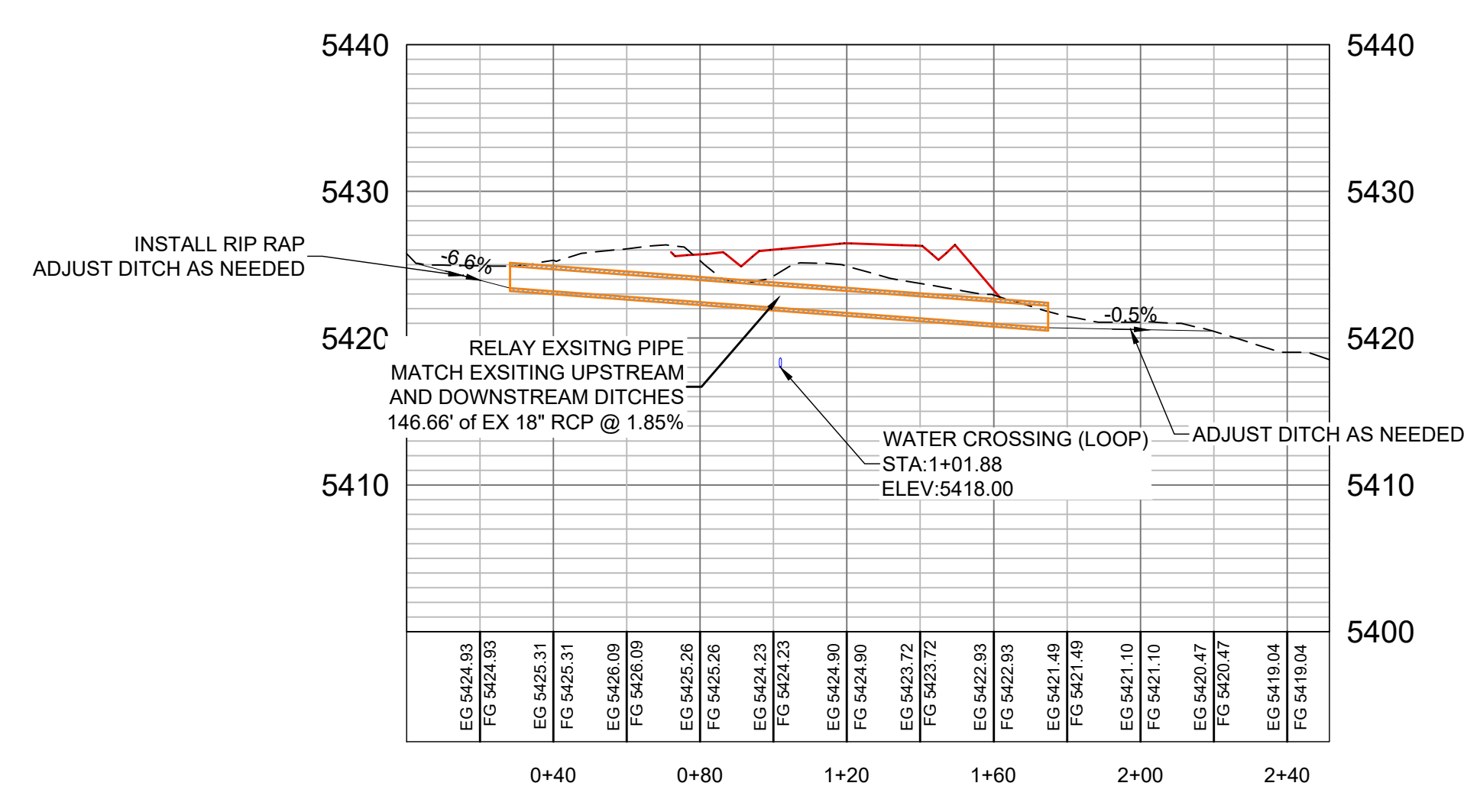
POND 94
 TOP OF POND ELEV:5420.50
 BOTTOM POND ELEV:5416.00
 WATER SURFACE ELEV:5419.5
 POND VOLUME REQ. - 306 CY
 ACTUAL POND VOLUME - 318 CY

RIP RAP SIZE

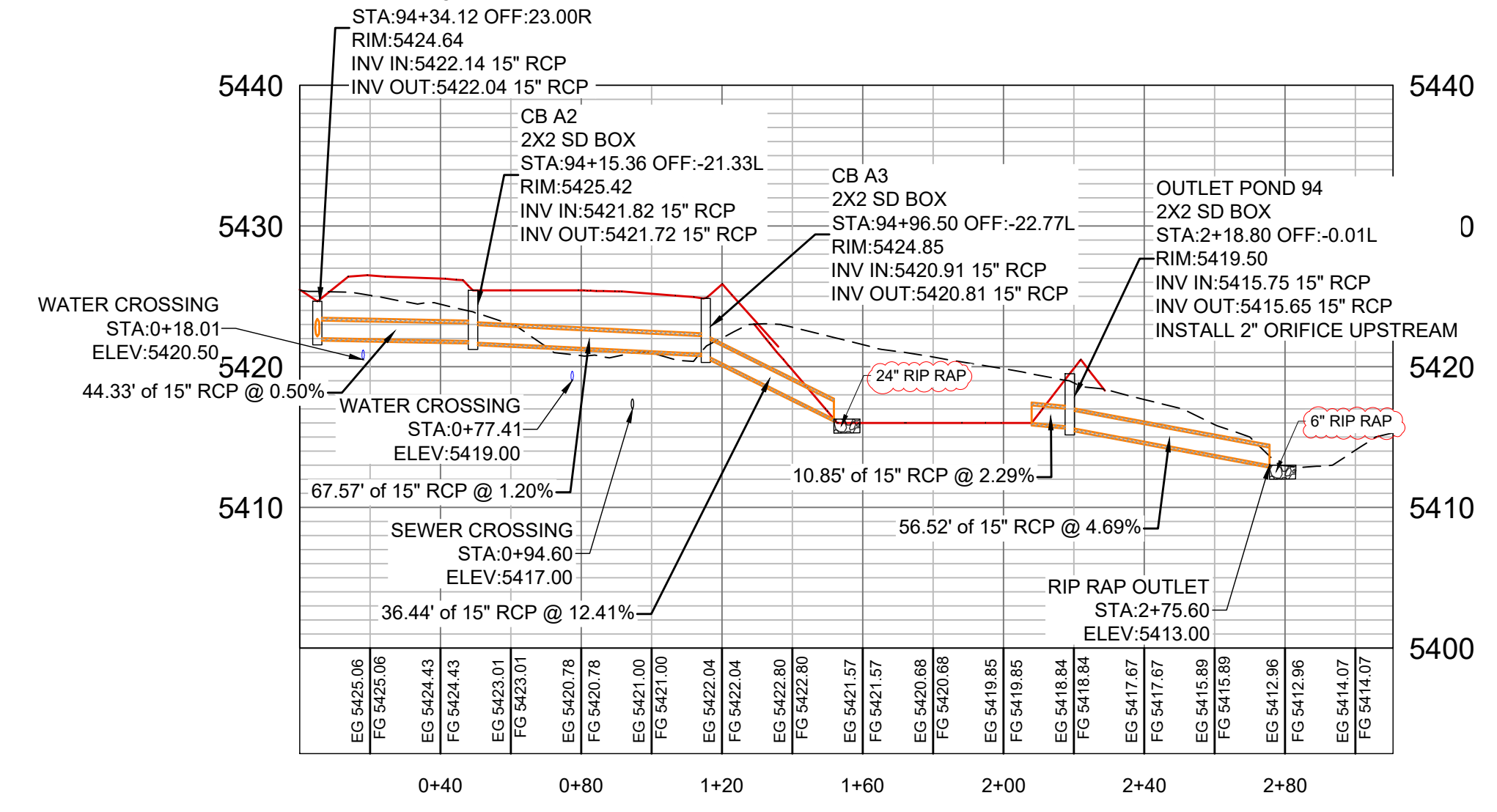
$$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$$

	Pond Inlet	Outlet
V=ft/sec	15.86	5.13
C=	1.10	0.86
S=	3.00	2.65
G=	32.17	32.17
d50 (m)	1.78	0.29
inches	21.32	3.46

EX CULVERT ROAD A 94



POND 94



REVISIONS		DATE	DESCRIPTION
7-14-22	REVISD EX CULVERT	7-14-22	
9-8-22	COUNTY COMMENTS	9-8-22	

SCALE: *****
 DATE: 8-12-22
 DESIGNER: KAN
 DRAWN: KAN
 CHECKED: RC

DATE: 7-14-22
 REVISD EX CULVERT
 COUNTY COMMENTS

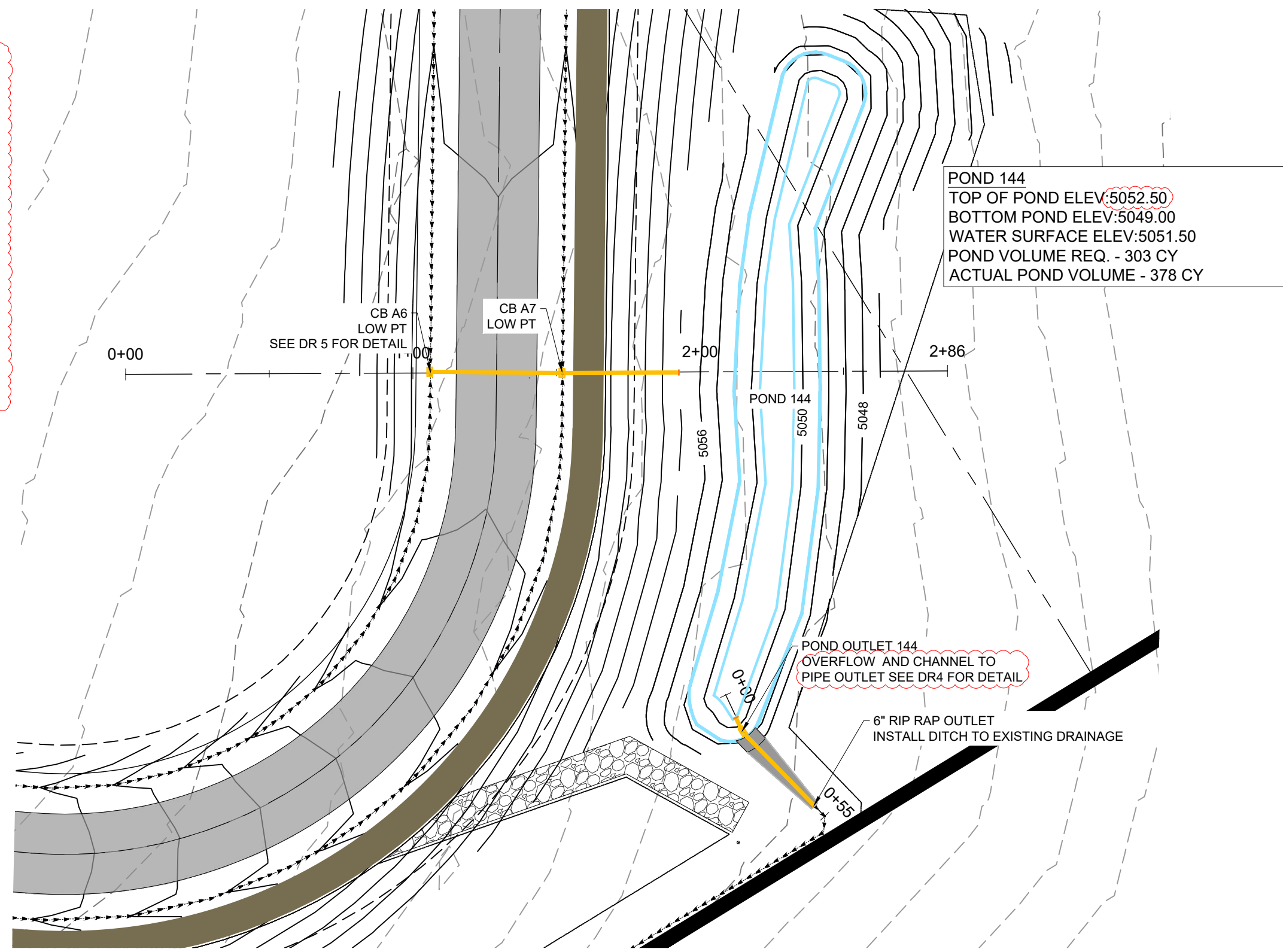
DWG:

SD CROSSINGS
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH

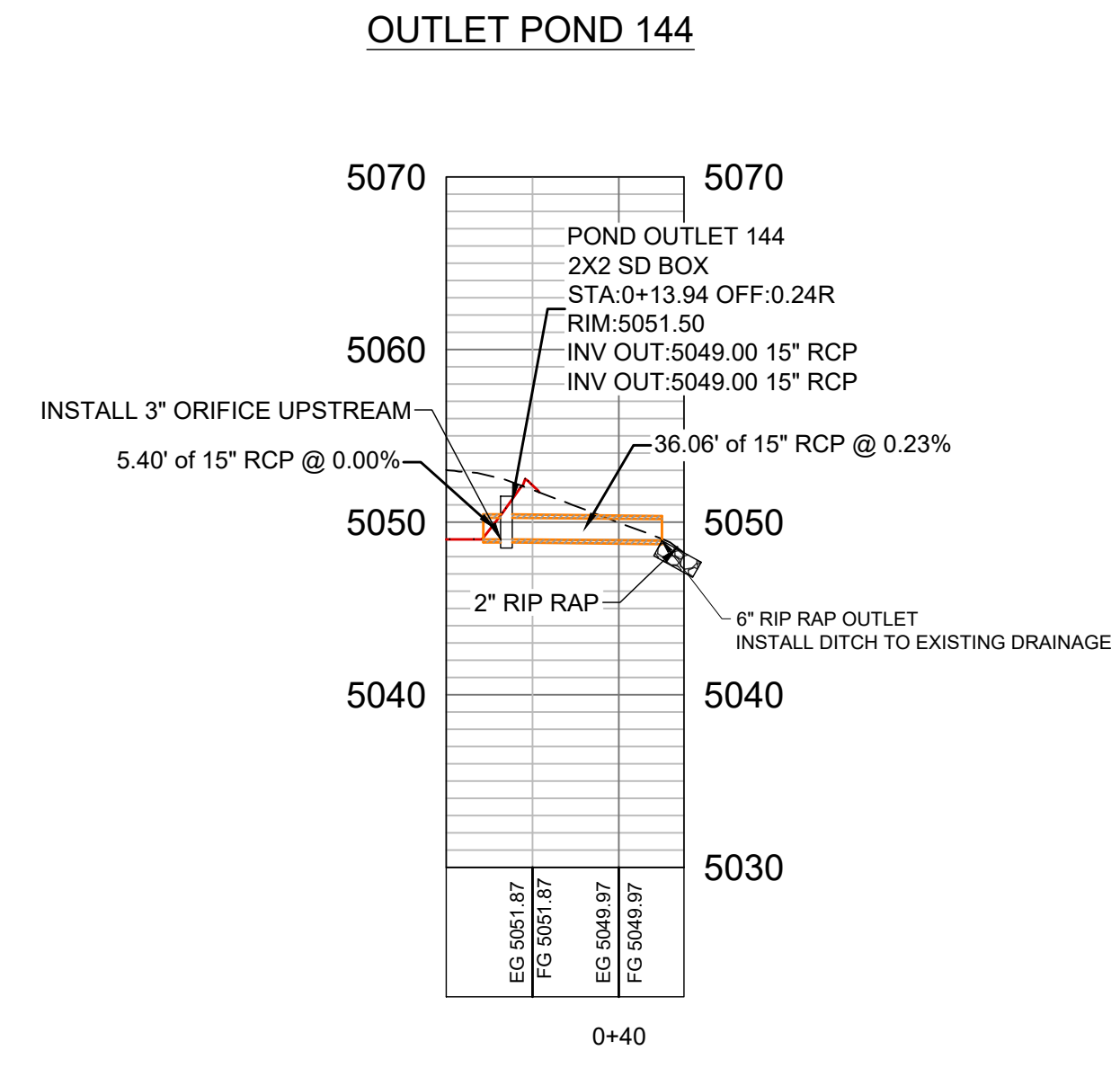
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 OFFICE: 801-476-0202 FAX: 801-476-0066

PLAN 1201 - LEWIS HOMES 2105 - OSPREY RANCH LESCA DWA OSPREY PLAN PROFILE SHEETS PHASE 1 - RECOVER RECOVER.DWG

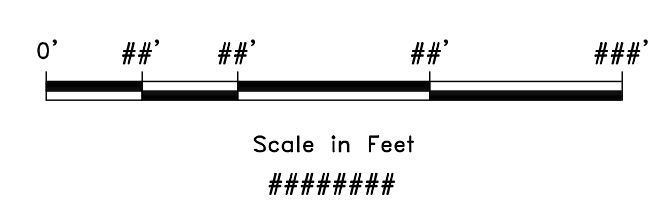
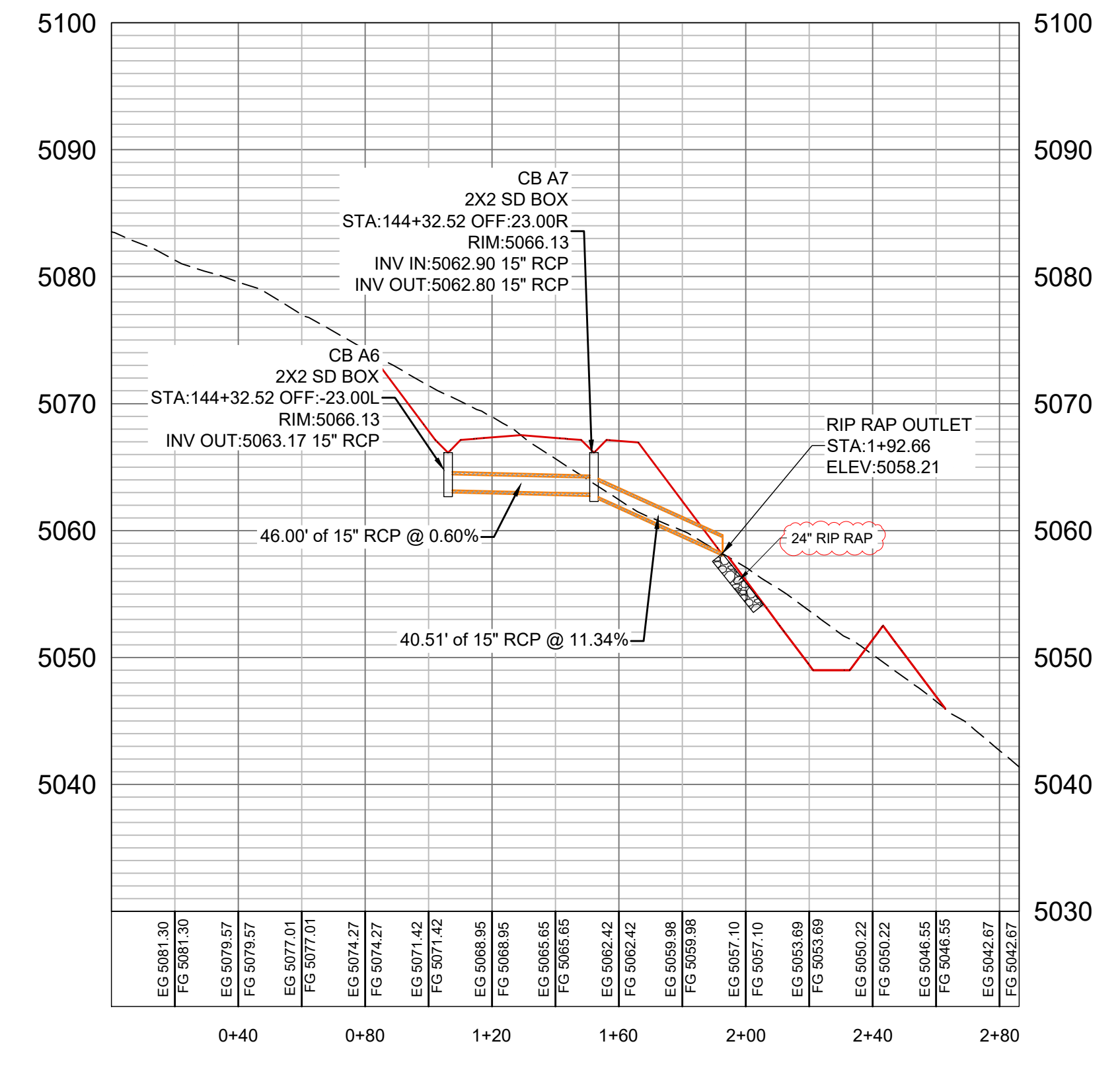
RIP RAP SIZE		
$D_{50} = \frac{V^2}{2 \cdot g \cdot C \cdot (S - 1)}$		
	Pond Inlet	Outlet
V=ft/sec	15.10	2.00
C=	0.86	0.86
S=	3.00	3.00
G=	32.17	32.17
D50 (ft)	2.06	0.04
inches	24.72	0.43



STORM DRAIN CROSSING 144



OUTLET POND 144



REVISIONS	
DATE	DESCRIPTION
7-14-22	COUNTY COMMENTS
9-8-22	

SCALE: #####	DATE: 8-12-22	DESIGN: KAN	DRAWN: KAN	CHECKED: RC
SD CROSSINGS DETAIL				
OSPREY RANCH				
UT-158				
EDEN, WEBER, UTAH				

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 51150 SOUTH 375 EAST OGDEN, UT
 OFFICE: 801.476.0202 FAX: 801.476.0066

StreamStats Report
Road 1 - Sta 94

Region ID: UT
Workspace ID: UT202108022095493200
Clicked Point (Latitude, Longitude): 41.29423, -111.82897
Time: 2021-09-26 16:09:27 -0600



CULVERT CROSSING STA 94
Q-PIPE CAP AT 1.85% SLOPE = 13.96 cfs
100 YR FLOW FROM BASIN = 9.26 cfs

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.12	square miles
PRECIP	Mean Annual Precipitation	28.7	inches

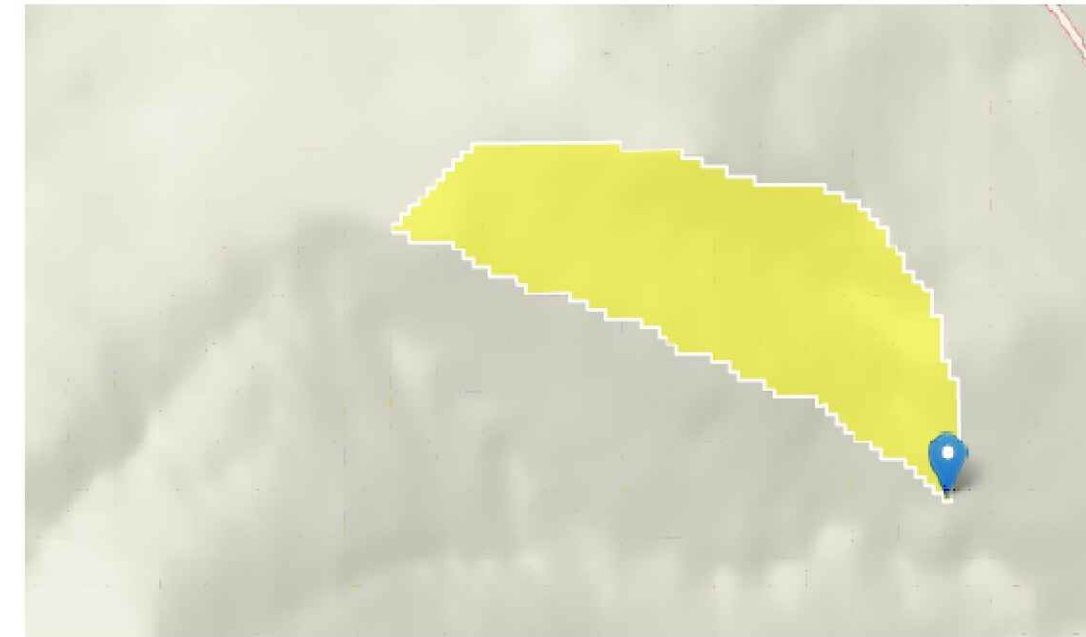
Peak-Flow Statistics Parameters [Region 2]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	2.14	84.1
PRECIP	Mean Annual Precipitation	28.7	inches	16.5	53.7

Peak-Flow Statistics Disclaimers [Region 2]
One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [Region 2]		
Statistic	Value	Unit
50-percent AEP Flood	0.753	ft ³ /s
20-percent AEP Flood	2.06	ft ³ /s
10-percent AEP Flood	3.35	ft ³ /s
4-percent AEP Flood	5.1	ft ³ /s
2-percent AEP Flood	7.23	ft ³ /s
1-percent AEP Flood	9.26	ft ³ /s
0.5-percent AEP Flood	11.6	ft ³ /s
0.2-percent AEP Flood	16.7	ft ³ /s

StreamStats Report
Road 1 - STA 138

Region ID: UT
Workspace ID: UT20220901172407637000
Clicked Point (Latitude, Longitude): 41.28671, -111.82893
Time: 2022-09-01 11:24:30 -0600



CULVERT CROSSING STA 138
Q-PIPE CAP AT 9.56% SLOPE = 31.74 cfs
100 YR FLOW FROM BASIN = 7.72 cfs

Peak-Flow Statistics

Peak-Flow Statistics Parameters [Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0461	square miles	2.14	84.1
PRECIP	Mean Annual Precipitation	36	inches	16.5	53.7

Peak-Flow Statistics Disclaimers [Region 2]

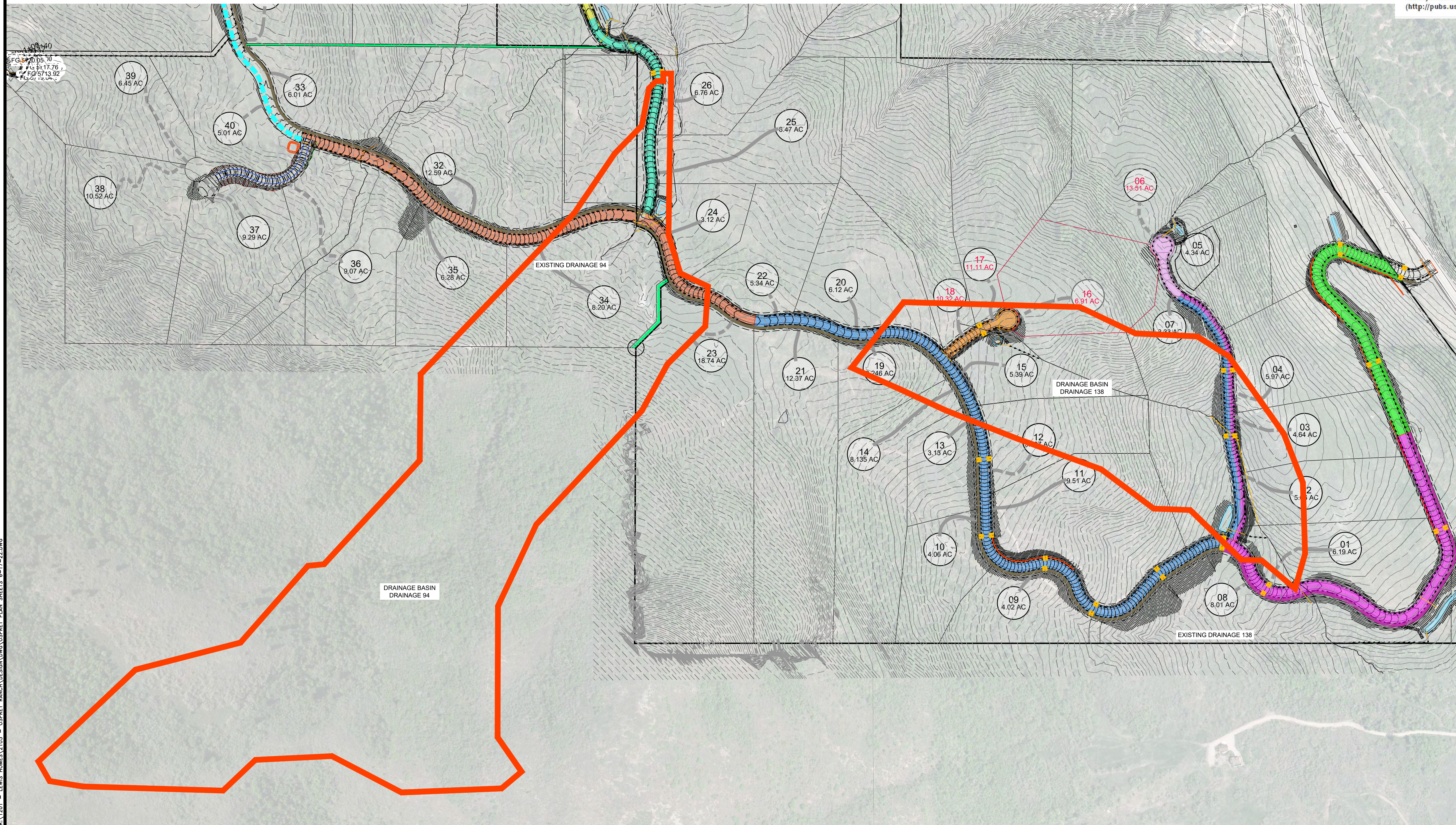
One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [Region 2]

Statistic	Value	Unit
50-percent AEP Flood	0.564	ft ³ /s
20-percent AEP Flood	1.62	ft ³ /s
10-percent AEP Flood	2.69	ft ³ /s
4-percent AEP Flood	4.12	ft ³ /s
2-percent AEP Flood	5.98	ft ³ /s
1-percent AEP Flood	7.72	ft ³ /s
0.5-percent AEP Flood	9.77	ft ³ /s
0.2-percent AEP Flood	14.4	ft ³ /s

Peak-Flow Statistics Citations

Kennedy, T.A., Wilkowske, C.D., and Wright, S.J., 2007, Methods for Estimating Magnitude and Frequency of Peak Flows for Natural Streams in Utah: U.S. Geological Survey Scientific Investigations Report 2007-5158, 28 p. (<http://pubs.usgs.gov/sir/2007/5158/>)



OFFSITE EX CULVERT DRAINAGE

OSPREY RANCH

UT-158

EDEN, WEBER, UTAH

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DR10

REVISIONS	DATE	DESCRIPTION
	07-28-22	
	08-22	

DESIGN: KAN
DRAWN: KAN
CHECKED: RC

DWG:

BA 1201 - LEWIS, HOWES & SONS - OSPREY RANCH DESIGN (DWG) OSPREY PLAN SHEETS 8-17-22 DWG

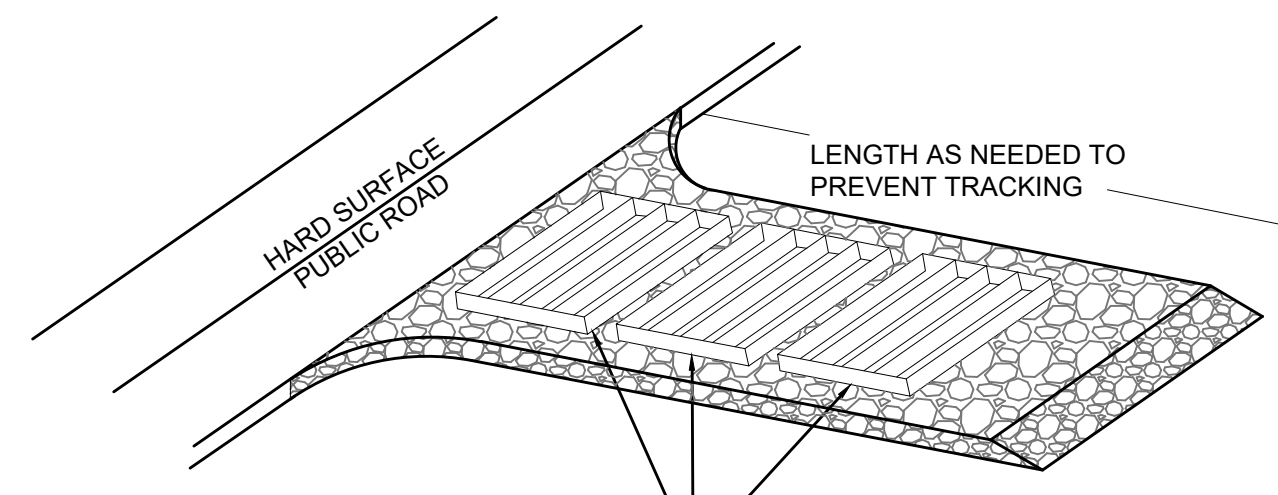
STORM WATER PROTECTION PLAN

OSPREY RANCH

TOTAL AREA 629.64 ACRES
TOTAL DISTURBED AREA 32.61 ACRES

EROSION CONTROL NOTES:

1. SANDBAGS WILL BE PLACED AT DISCHARGE LOCATIONS TO CONTAIN AND DIVERT STORM WATER THROUGH THE INLET PROTECTION.
2. AN EARTHEN BERM 6" HIGH WILL BE CONSTRUCTED TO CONTAIN THE STORM WATER AND DIVERT IT TO DISCHARGE AREAS.
3. STORM WATER WILL BE DISCHARGED INTO AN EXISTING DRAINAGE SYSTEM. EXISTING LINES SHALL BE INSPECTED PRIOR TO CERTIFICATE OF OCCUPANCY AND CLEANED IF NECESSARY.
4. THE STORM WATER POLLUTION PREVENTION PLAN SHALL CONFORM TO ALL STATE DIVISION OF ENVIRONMENTAL PROTECTION REGULATIONS.



A SERIES OF STEEL PLATES (3 OR MORE) WITH RUMBLE STRIPS OR MIN. 3" COARSE AGGREGATE.

ENTRANCE STABILIZATION NOTES:

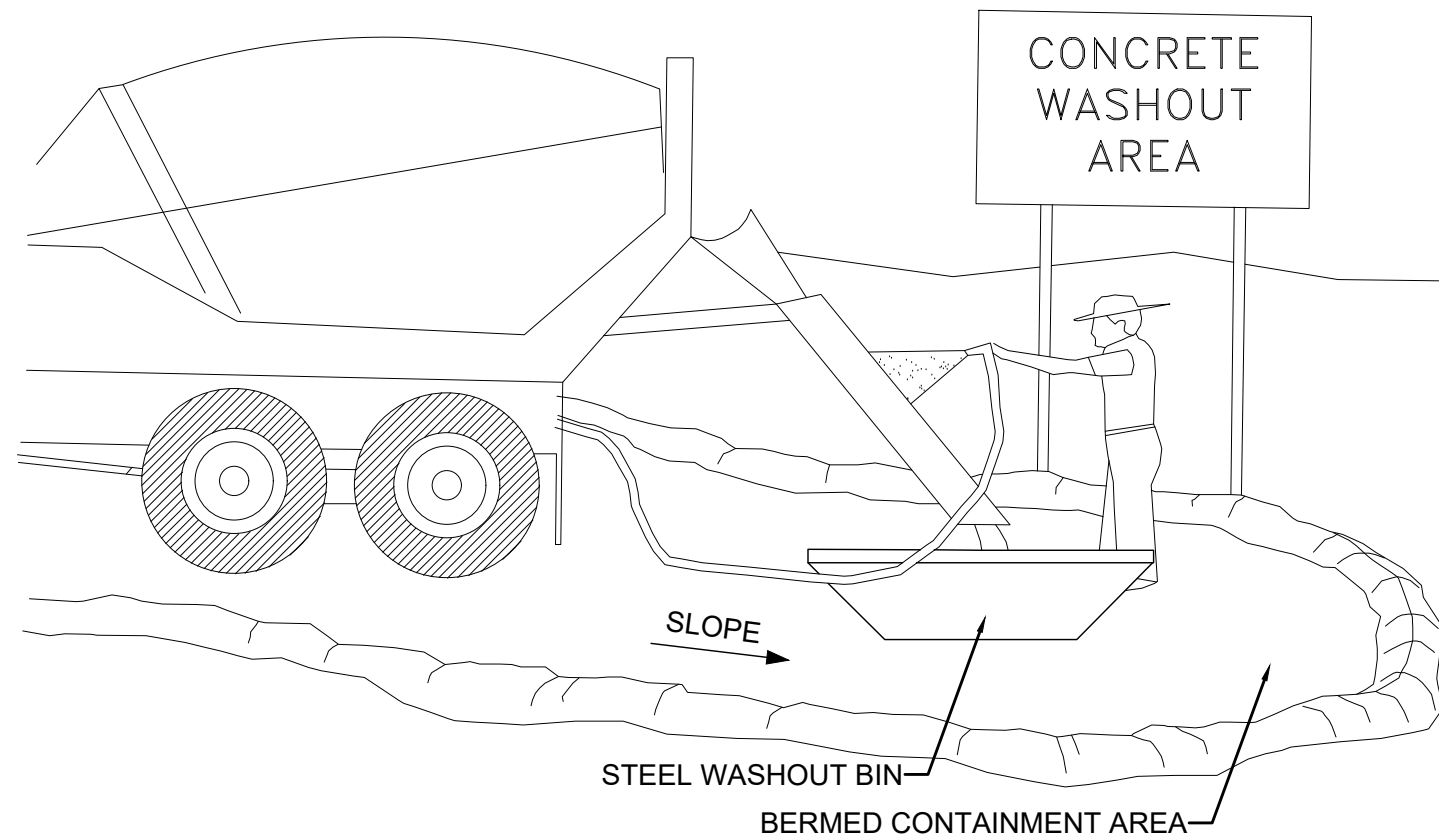
1. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO PREVENT SEDIMENTS FROM BEING DEPOSITED INTO THE STORM DRAIN SYSTEMS. DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR 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 PUBLIC RIGHT-OF-WAY, STREET, ALLEY AND SIDEWALK OR PARKING AREA.
 - 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.

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.

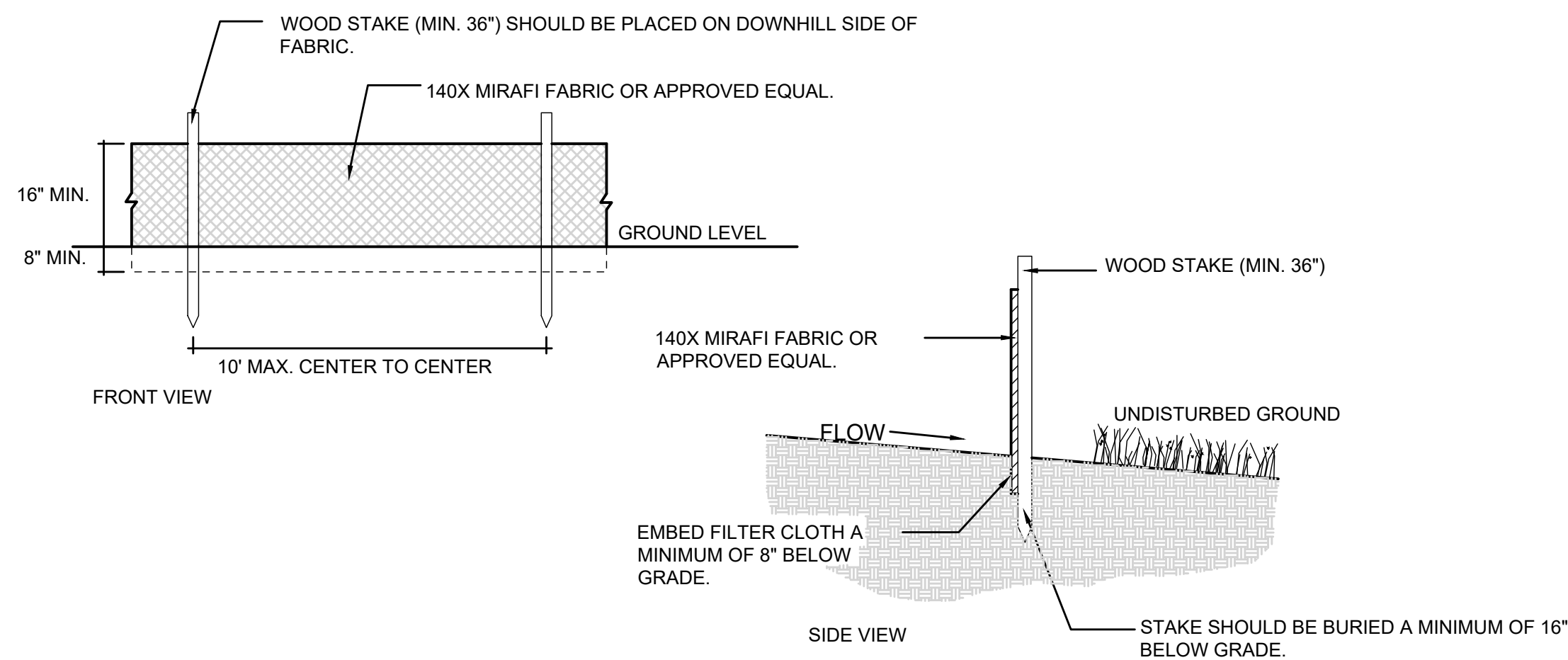
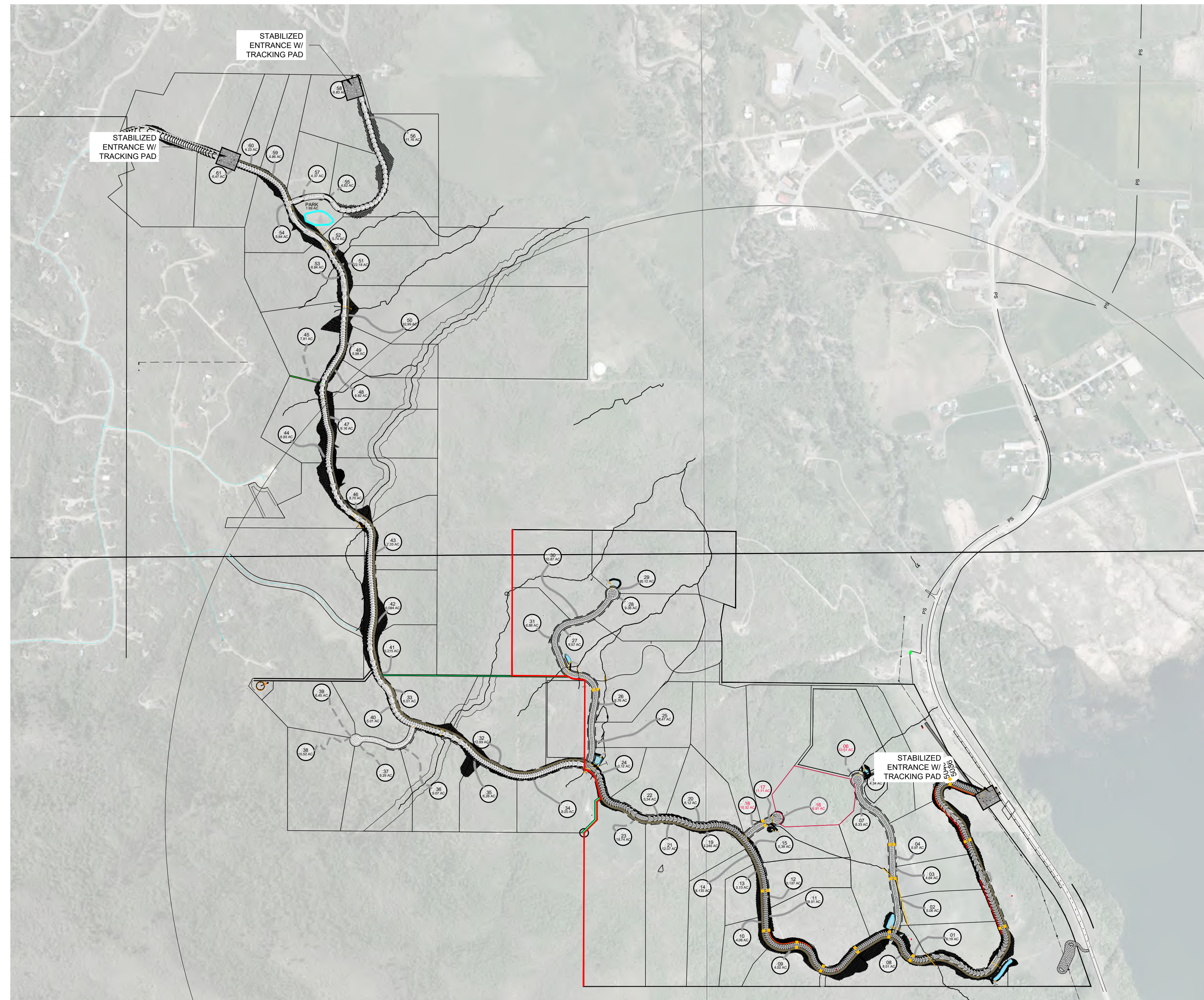
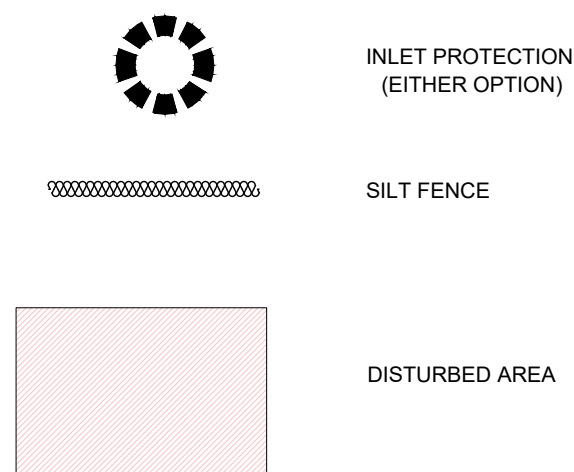
NOTE:

CONTRACTOR SHALL COMPLETE AND SUBMIT A STATE NOTICE OF INTENT (NOI) AND A STORM WATER POLLUTION PREVENTION PLAN BOOKLET



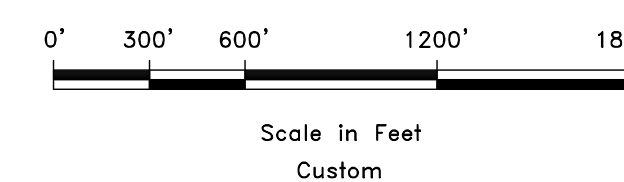
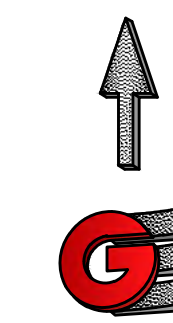
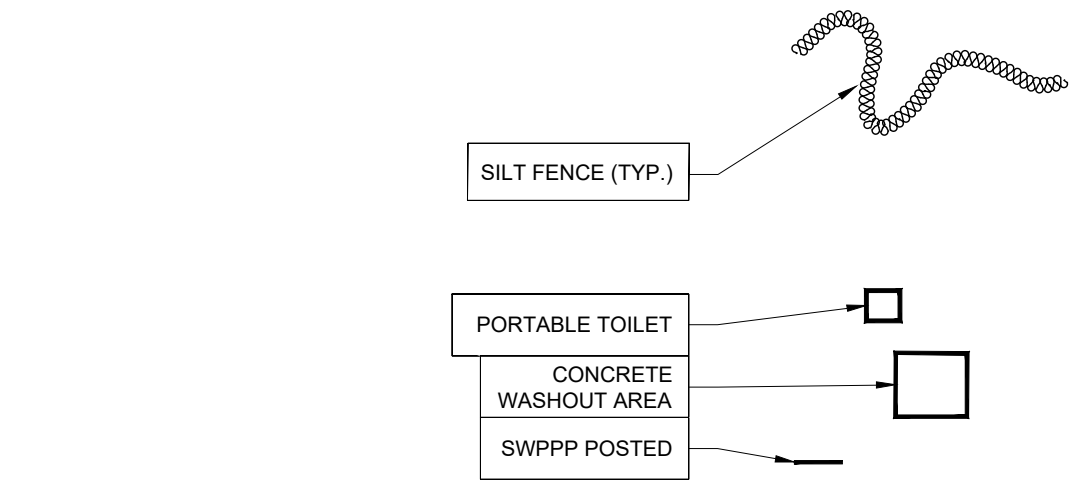
NOTES:

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.



2 SILT FENCE

Scale: NTS



REVISIONS	DATE	DESCRIPTION

SCALE: #/XXXX	DATE: 07-28-22
DESIGN: KAN	DRAWN: KAN
CHECKED: PC	

STORM WATER PROTECTION PLAN
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

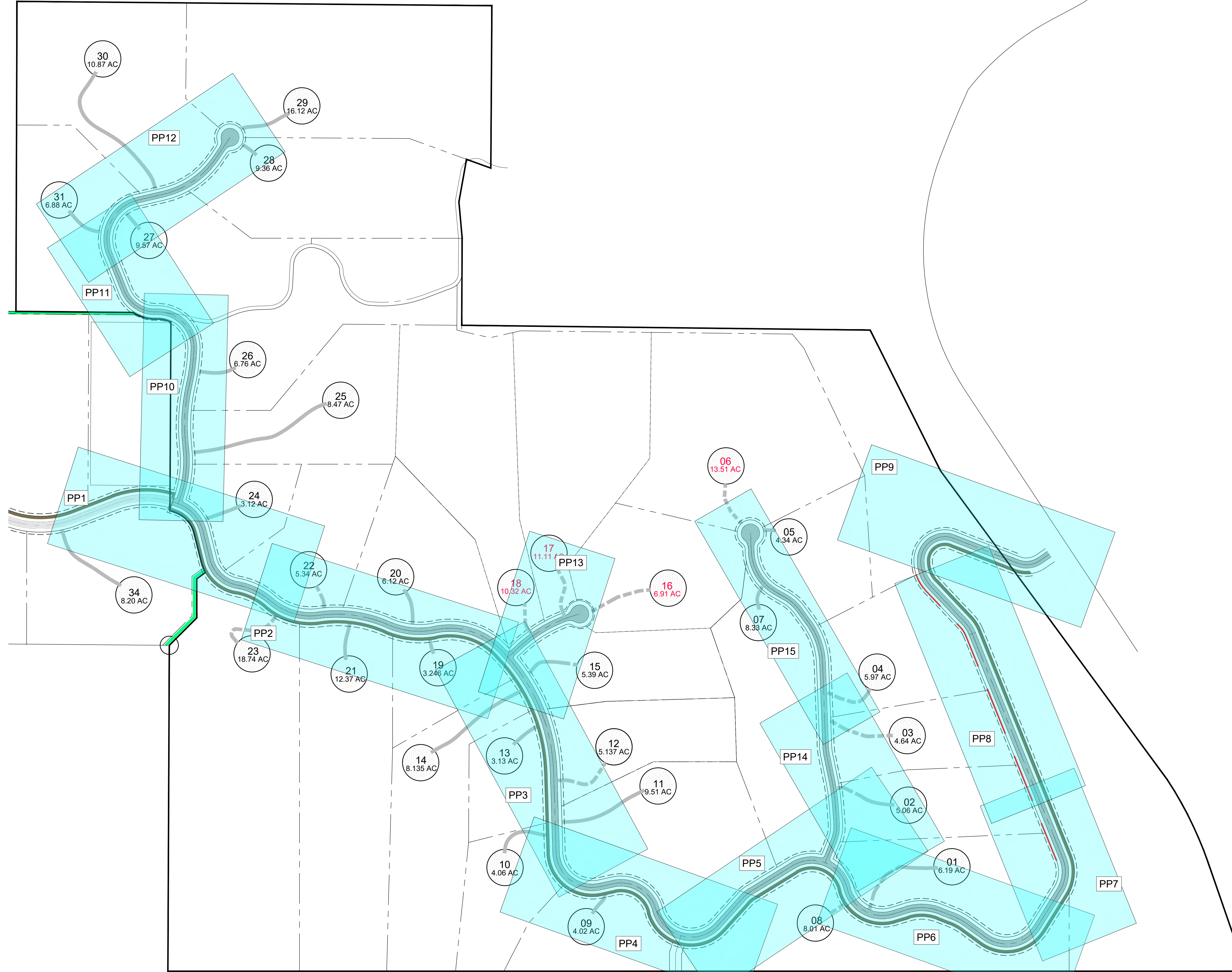
GARDNER ENGINEERING
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SWWP

R:\1201 - LEWIS HOMES 2105 - OSPREY RANCH DESIGN DWG\OSPREY PLAN SHEETS 6-17-22.DWG

KEY MAP PLAN AND PROFILE SHEETS PHASE 1



04/12/21 - LEWIS, HOWES & SONS - OSPREY RANCH, UTAH - OSPREY RANCH, UTAH - OSPREY RANCH, UTAH - RECOVER, RECOVERING

REVISIONS	
DATE	DESCRIPTION

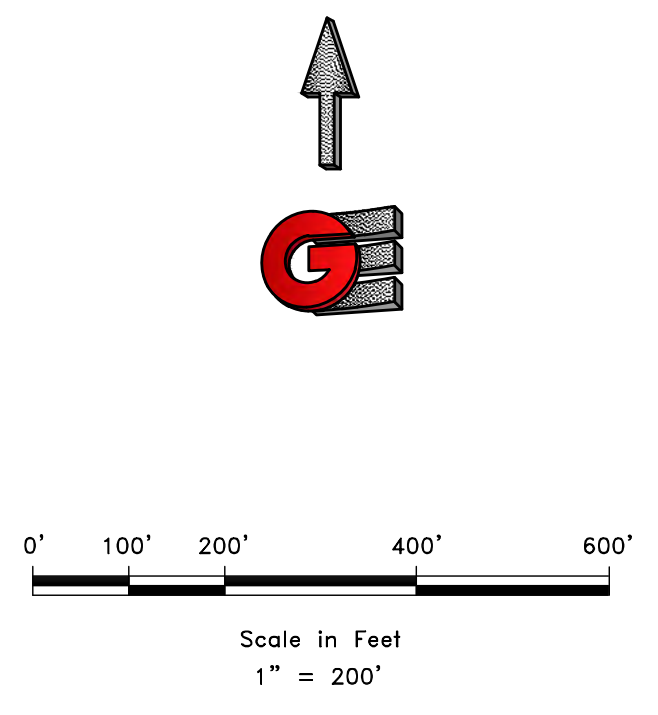
OVERVIEW PP SHEETS
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH

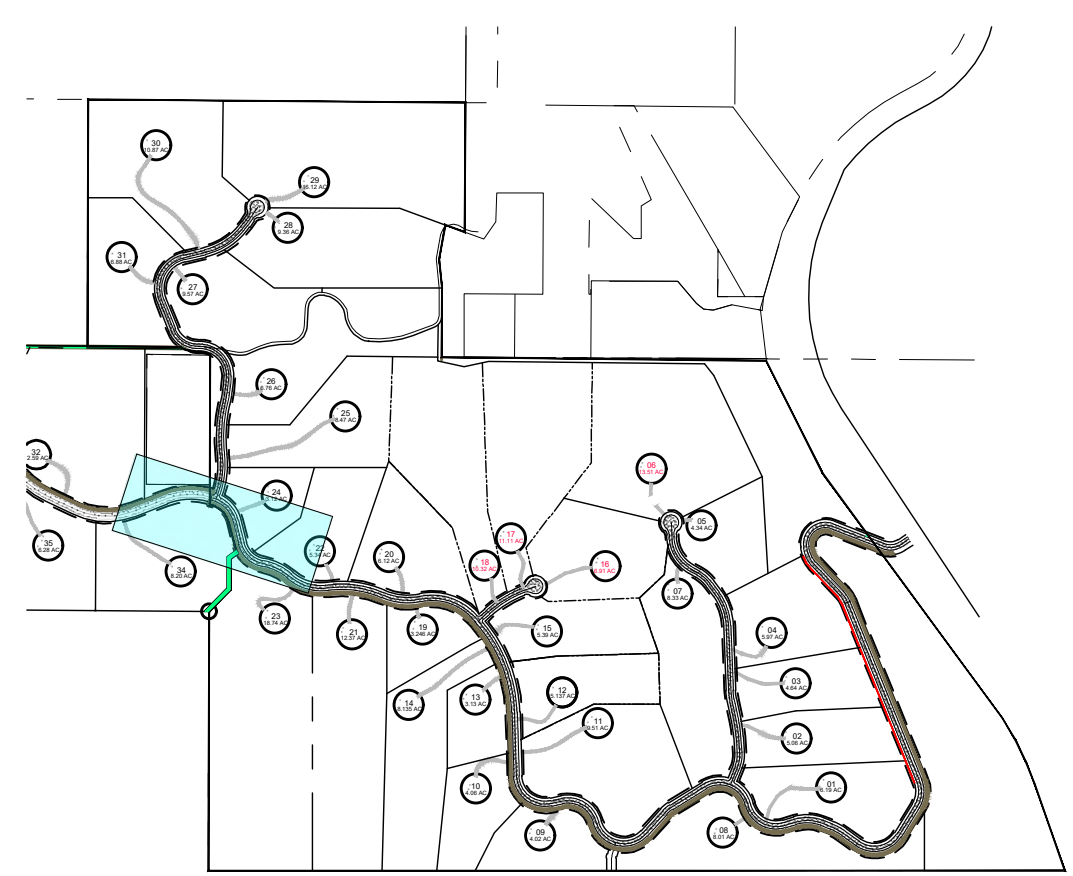
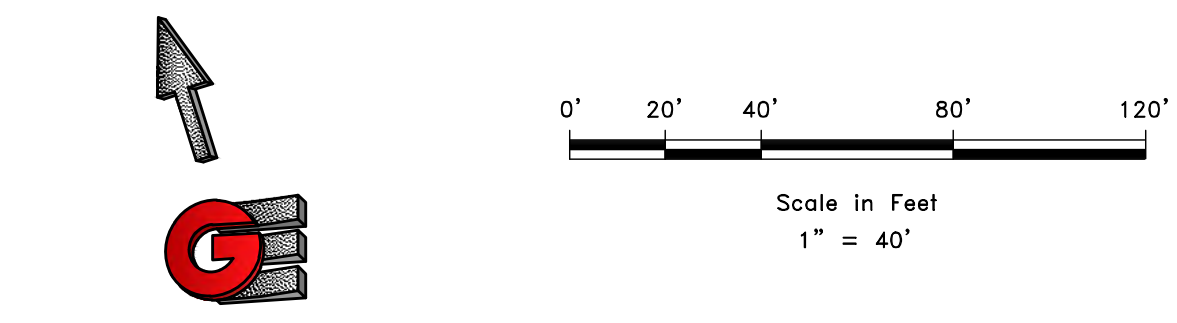
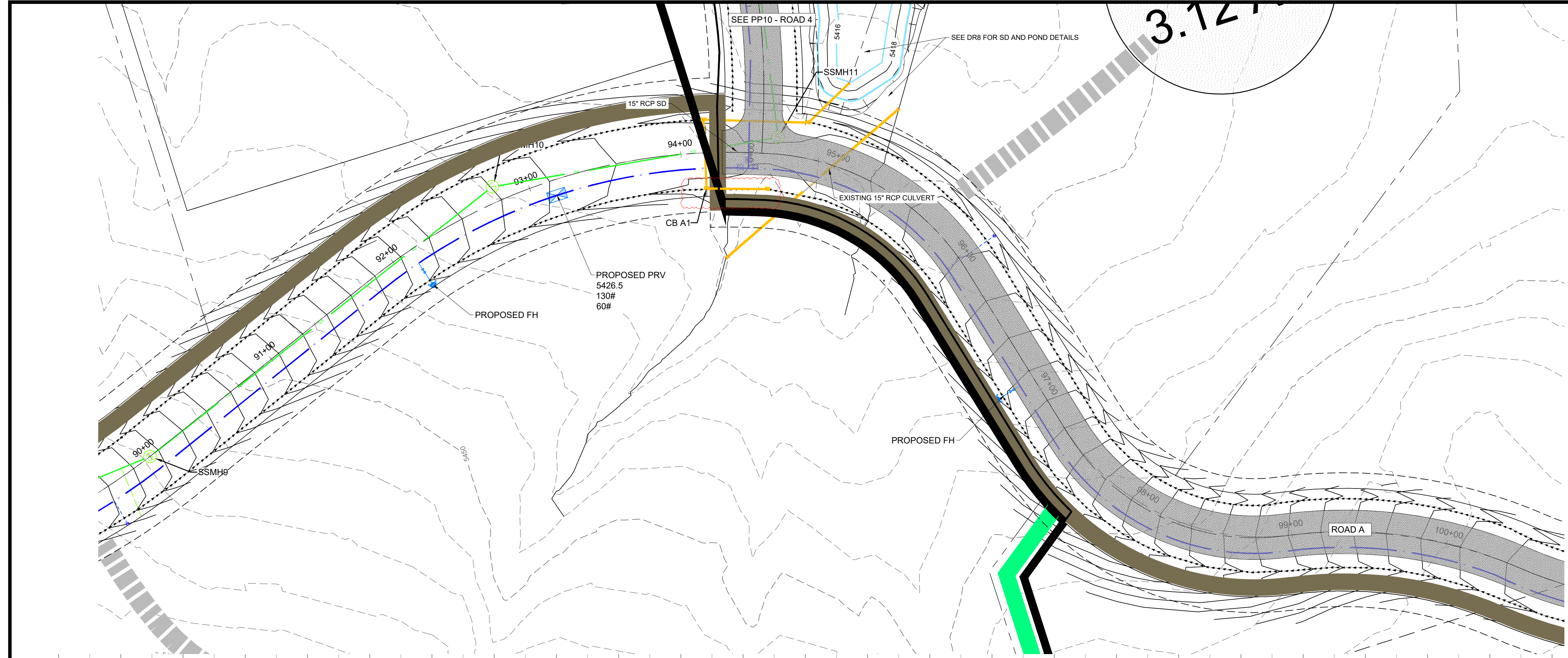
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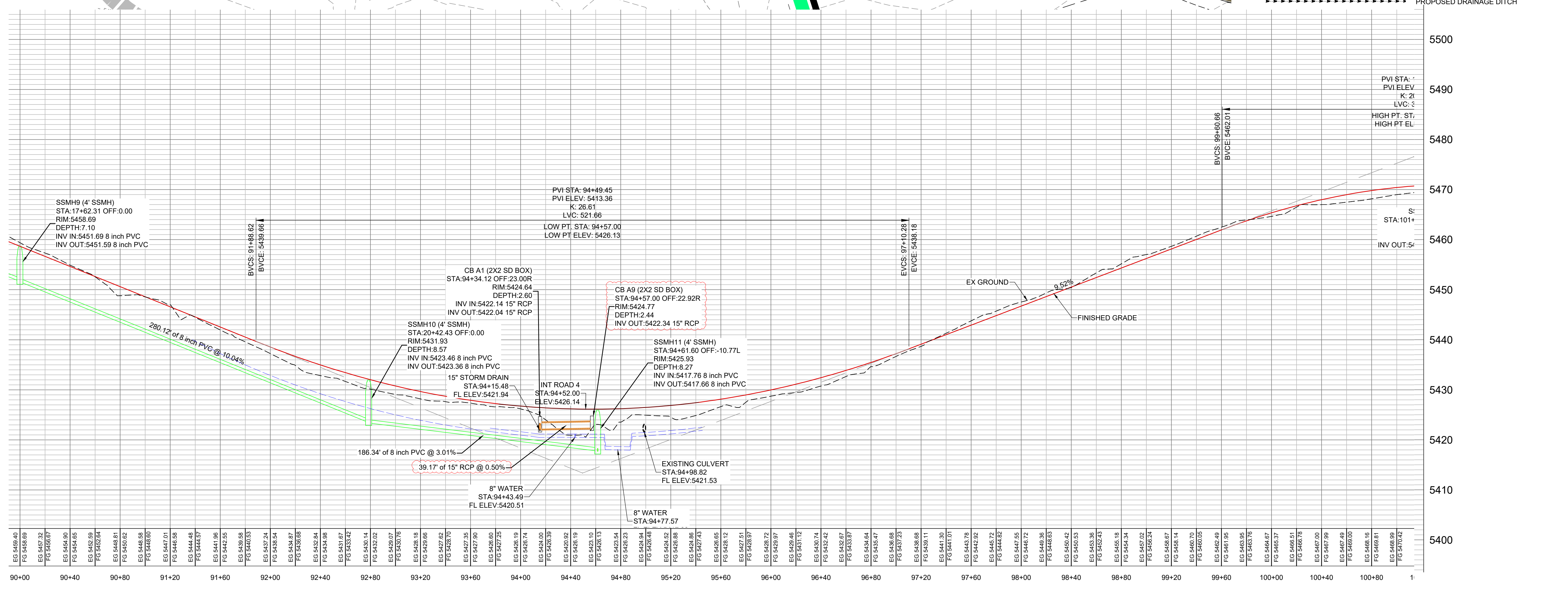
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LOCATION MAP

- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR-11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH



SCALE: 1" = 40'

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DRAWN	KAN
CHECKED	RC

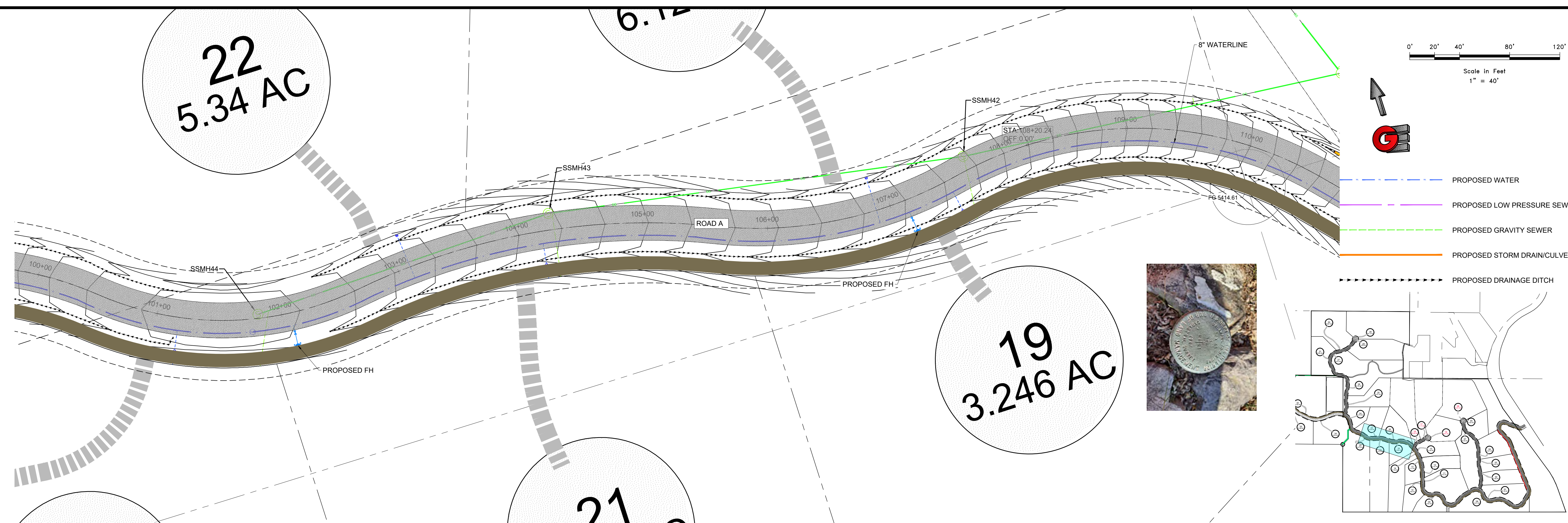
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10-27-22	COUNTY COMMENTS

DWG:

PLAN AND PROFILE ROAD A
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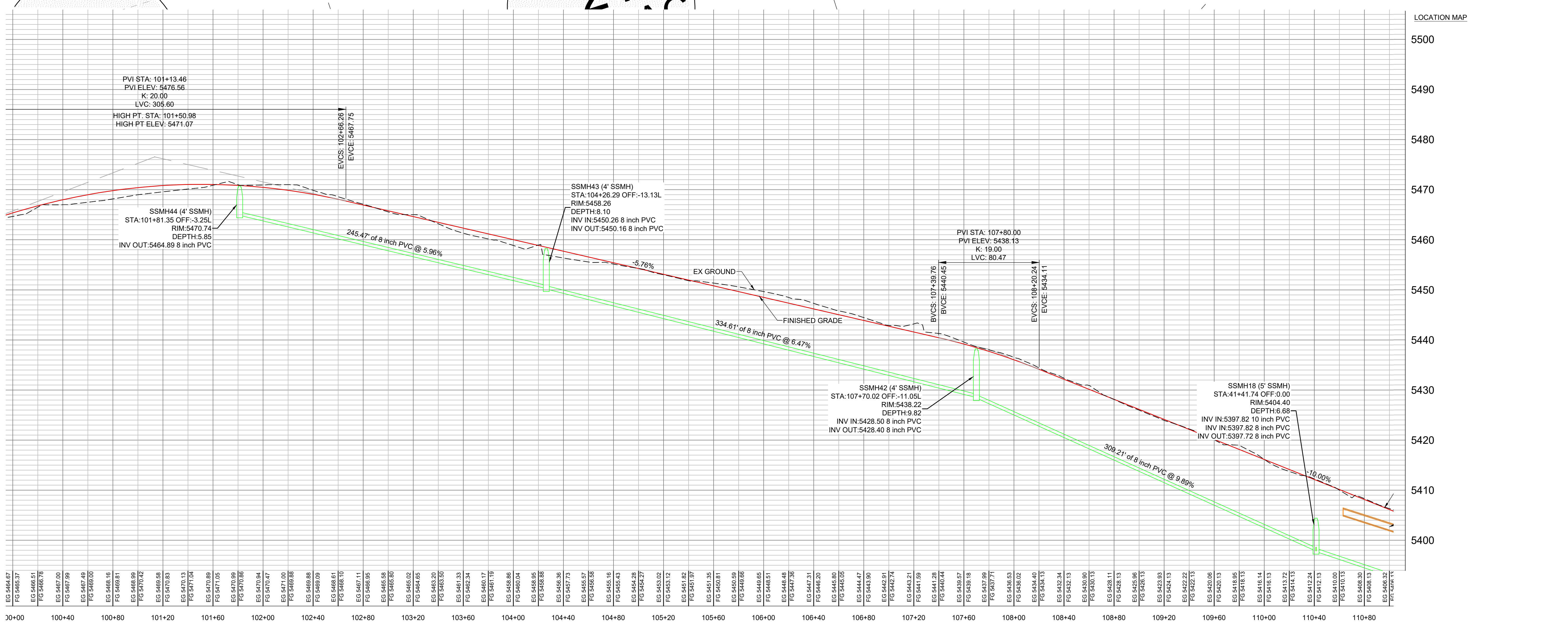


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CHECKED	RC

REVISIONS	DESCRIPTION
DATE	ADDED MONUMENT
8-12-22	

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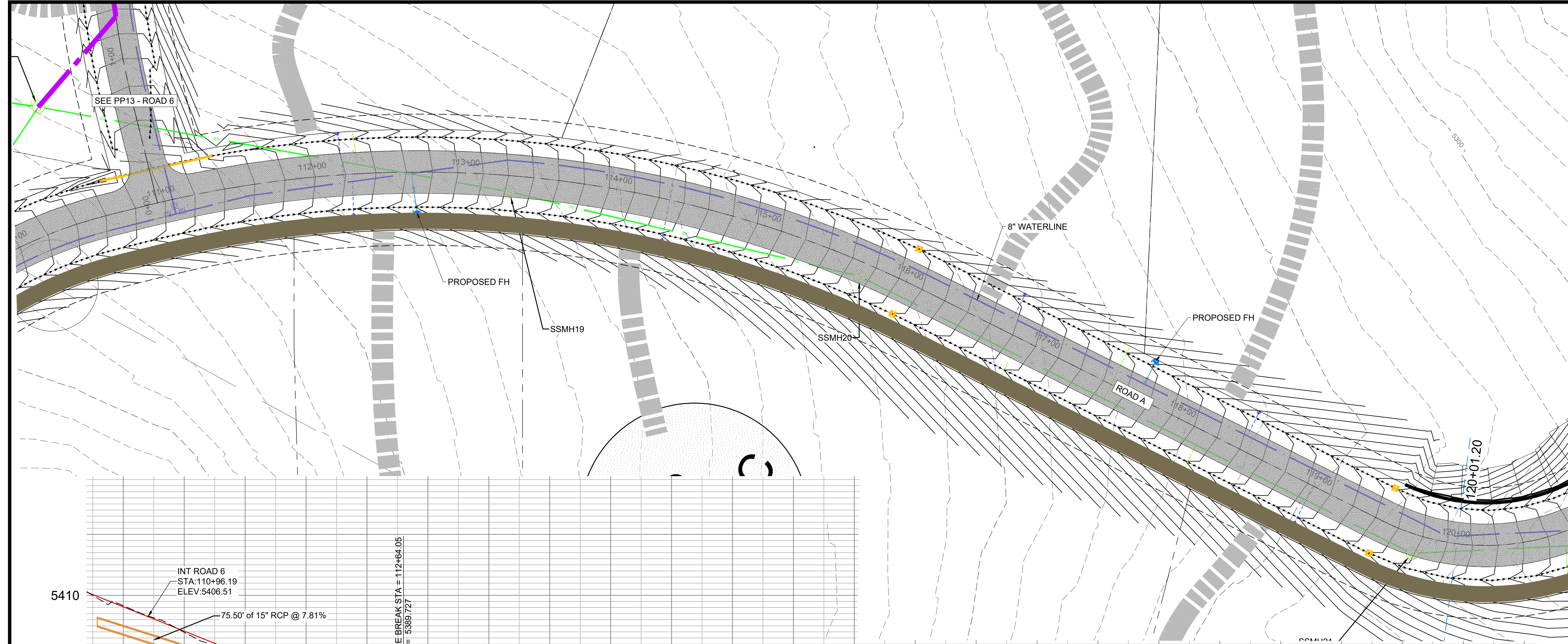


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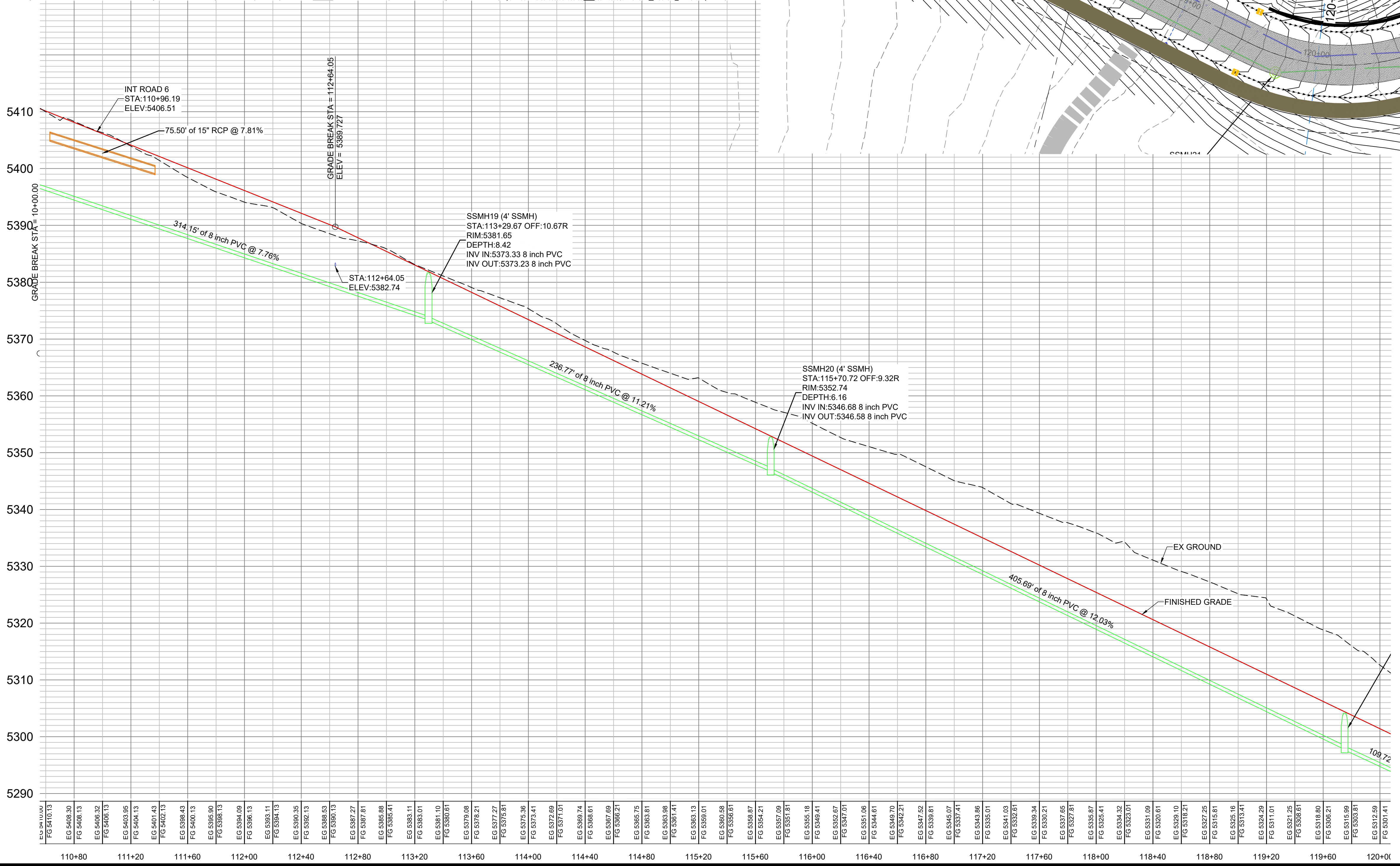
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PP2



LOCATION MAP

- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR -11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH



SCALE: 1" = 40'

DATE	8-12-22
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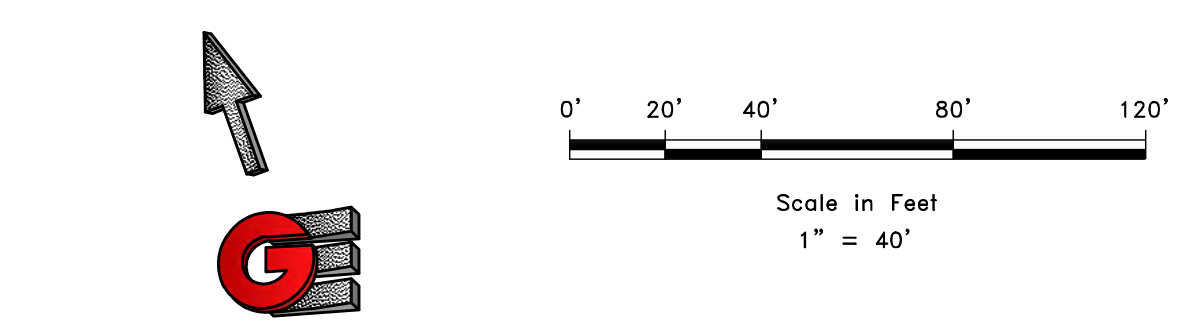
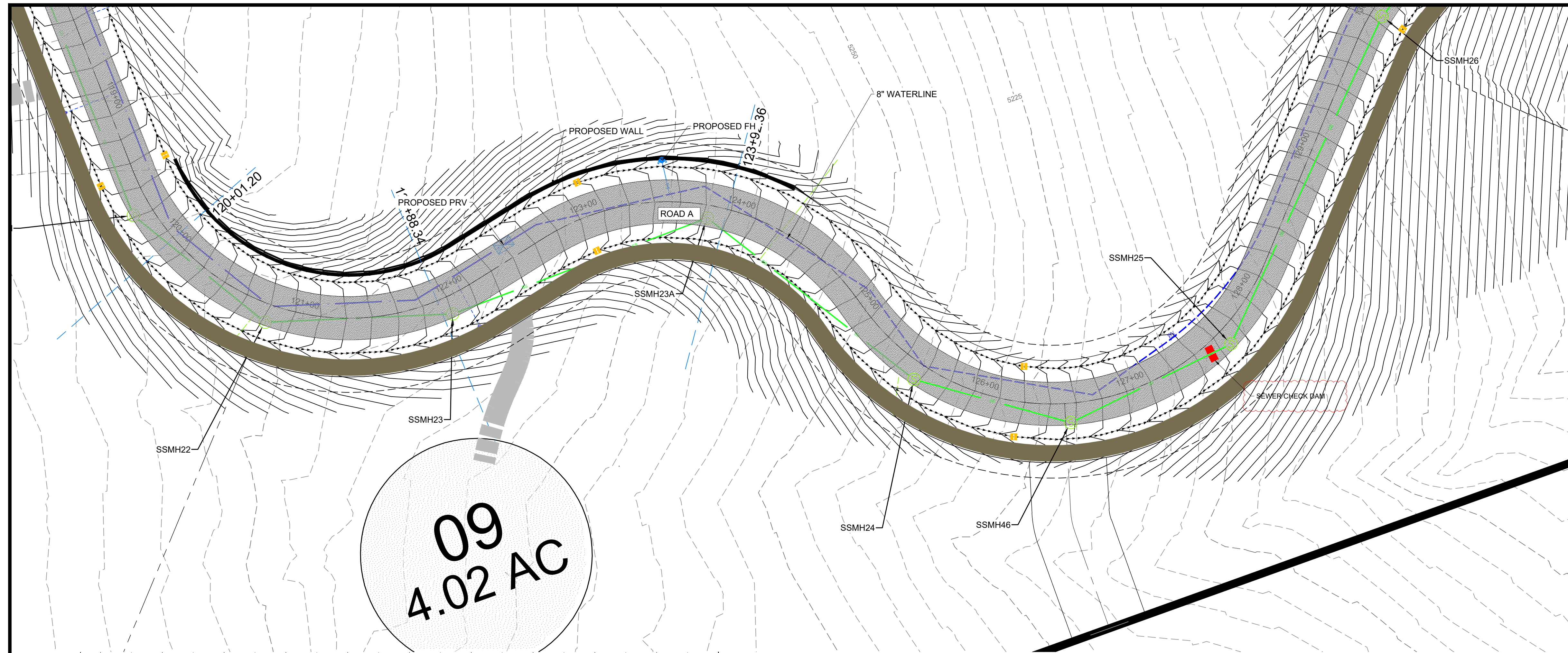
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OSPREY RANCH
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EDEN, WEBER, UTAH

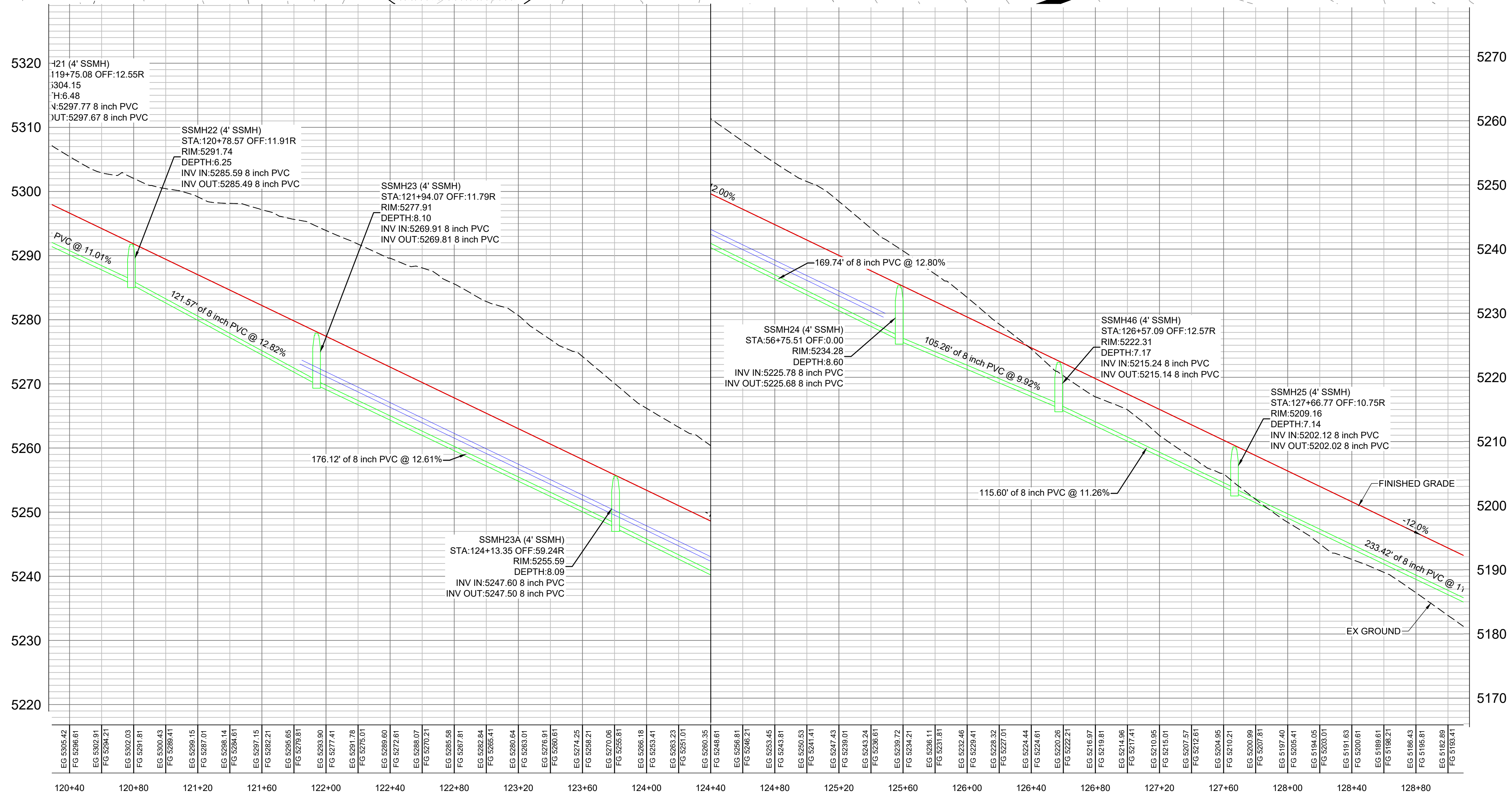
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LOCATION MAP

- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR-11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH



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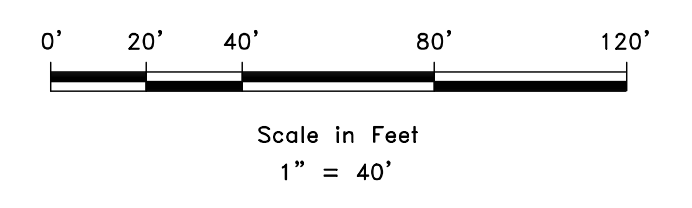
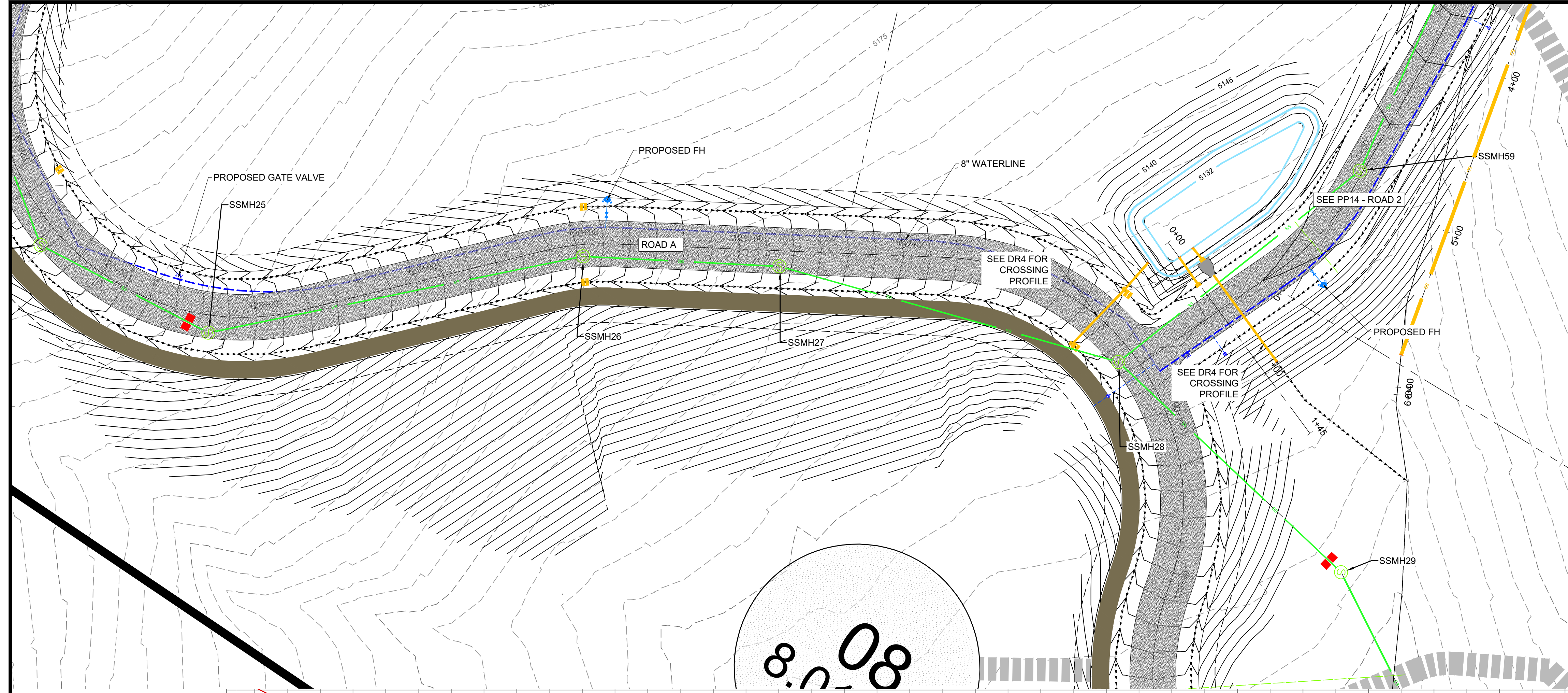
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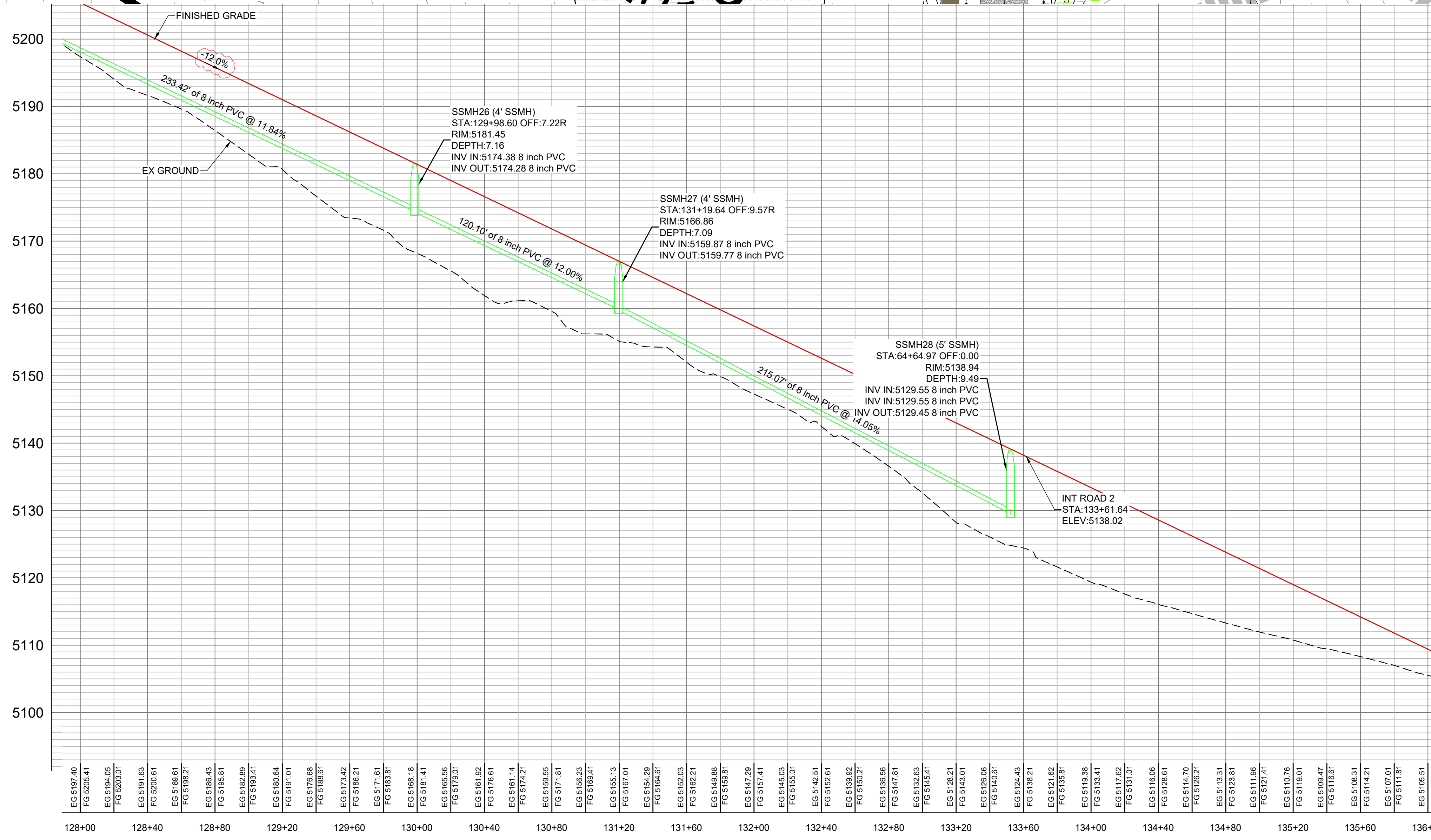
PLAN AND PROFILE ROAD A
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PP4



LOCATION MAP



- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER - SDR-11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH

SCALE	1" = 40'
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REVISIONS	DESCRIPTION
DATE	COUNTY REVISIONS
10-27-22	

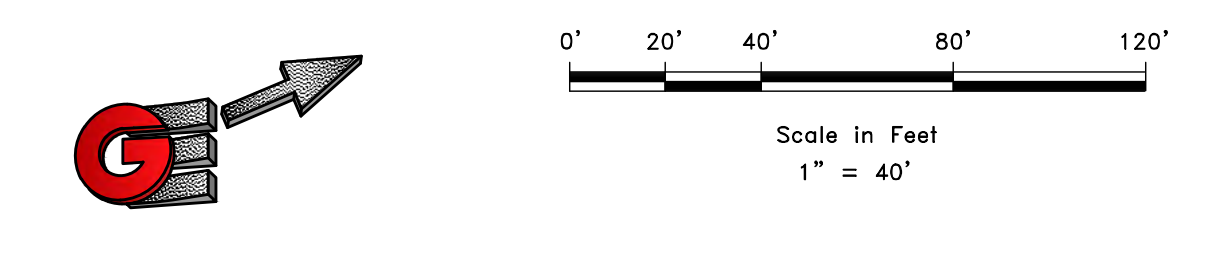
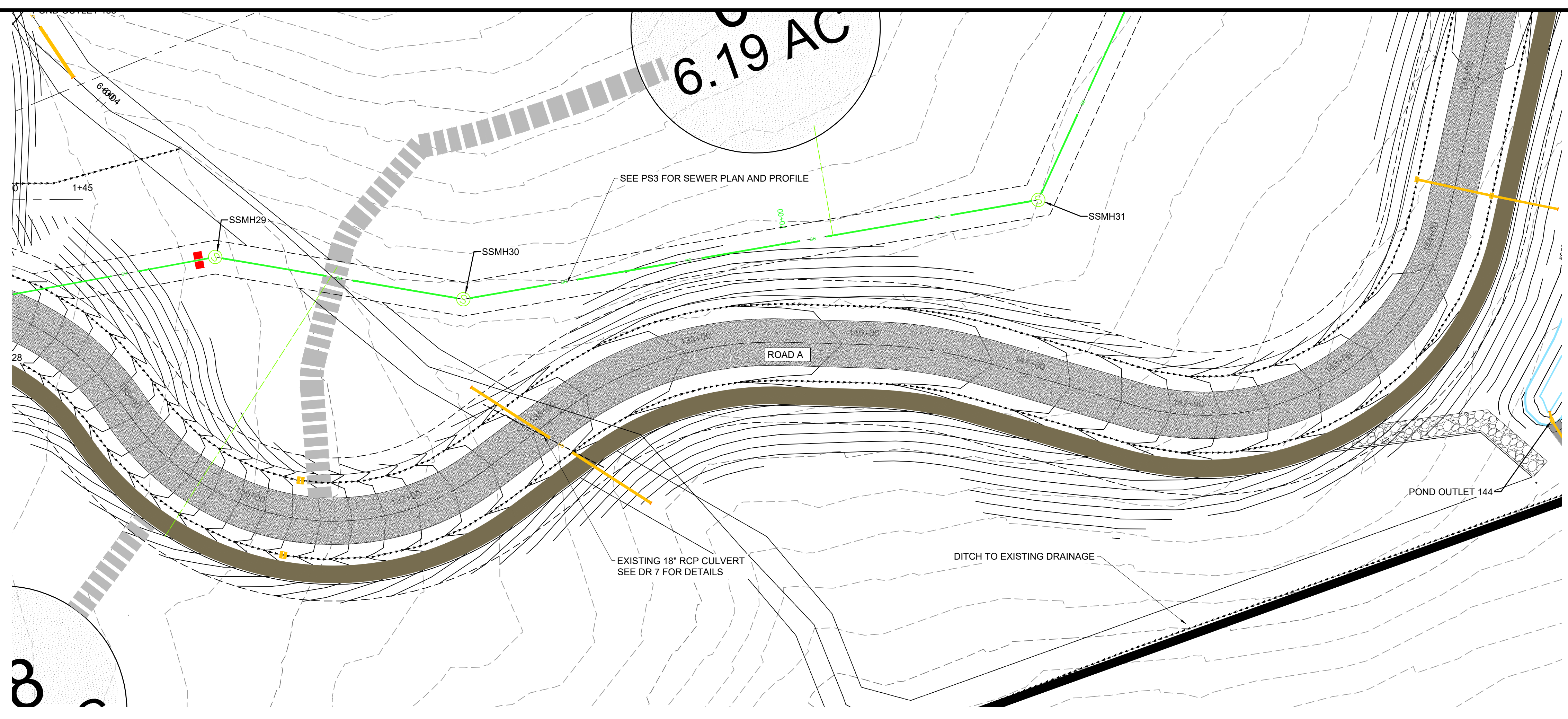
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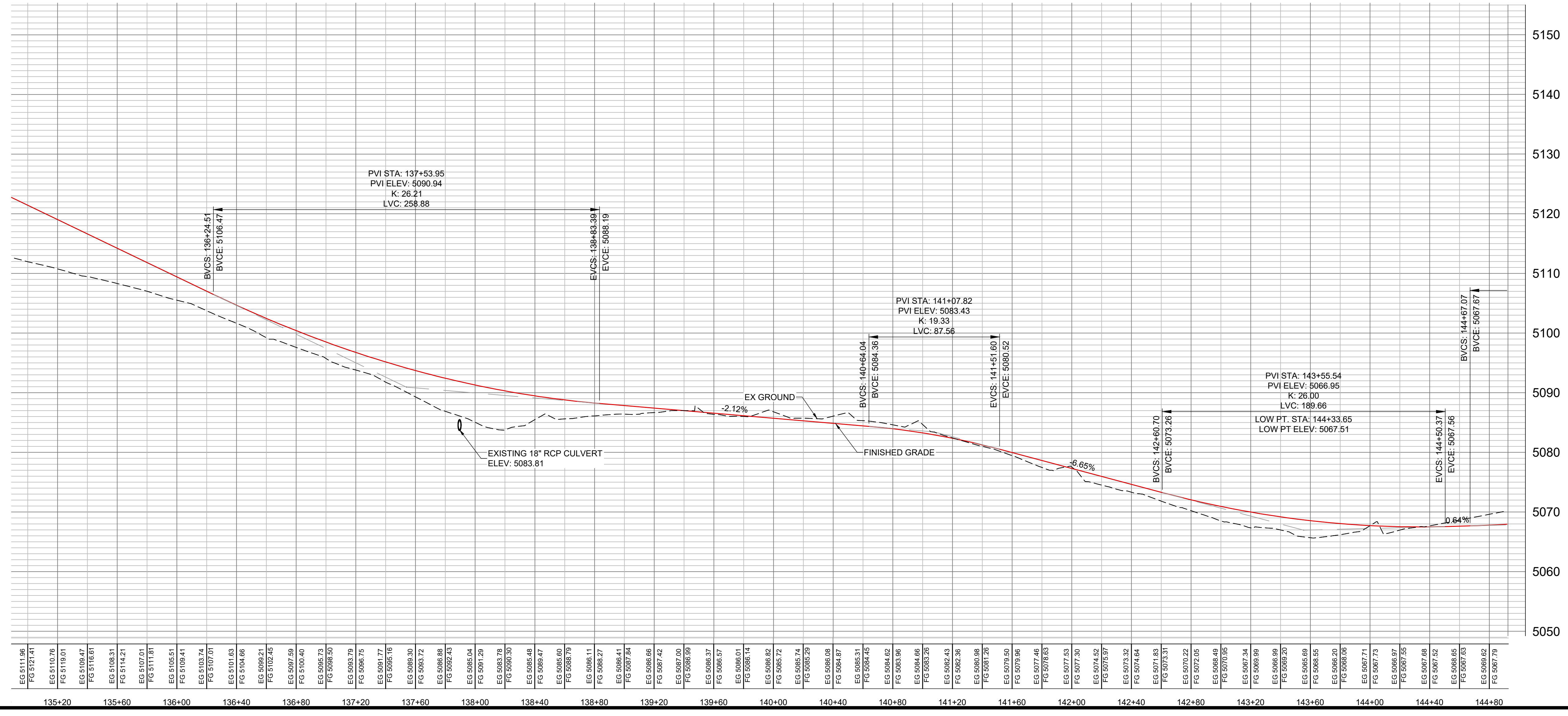
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PLAN AND PROFILE ROAD A
 OSPREY RANCH
 UT-158
 EDEN, WEBER, UTAH



LOCATION MAP

- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR - 11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH



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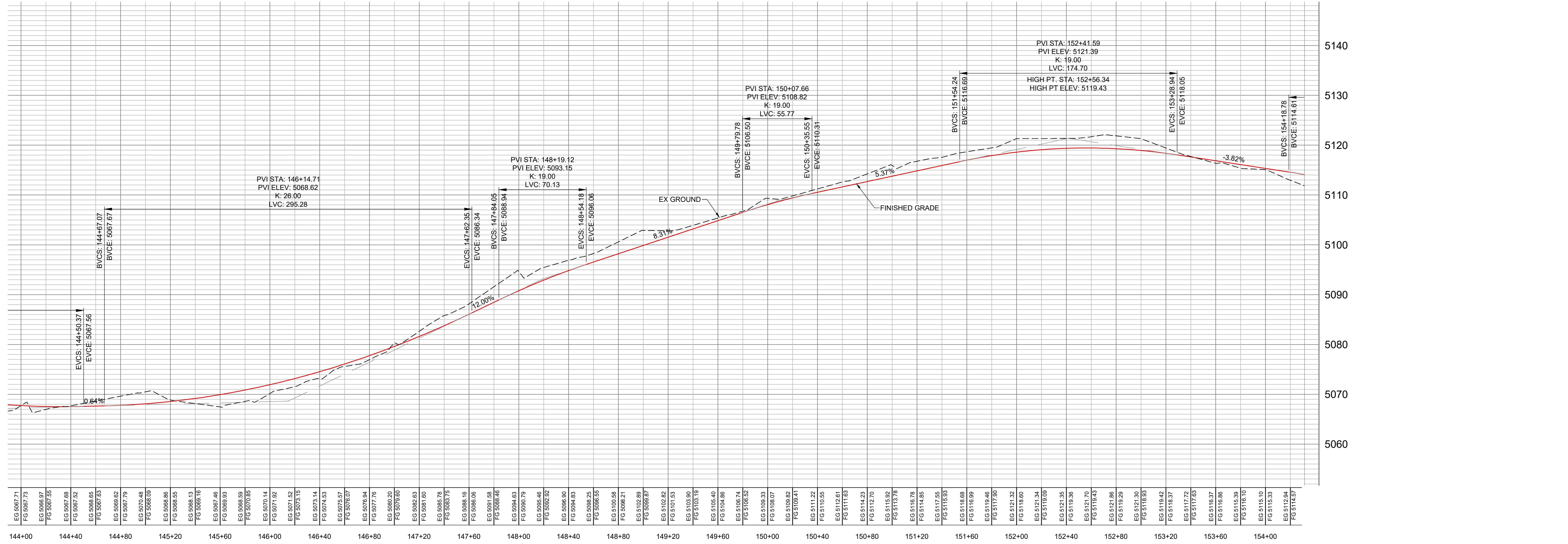
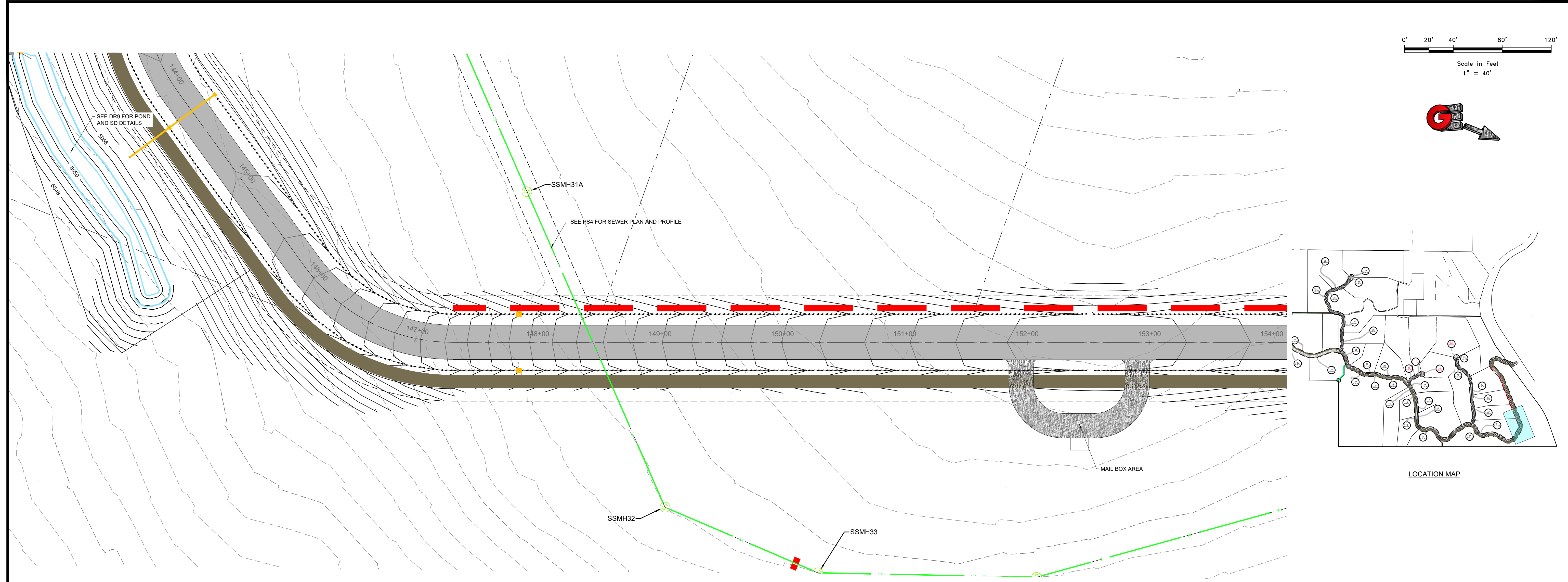
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PLAN AND PROFILE ROAD A
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 EDEN, WEBER, UTAH



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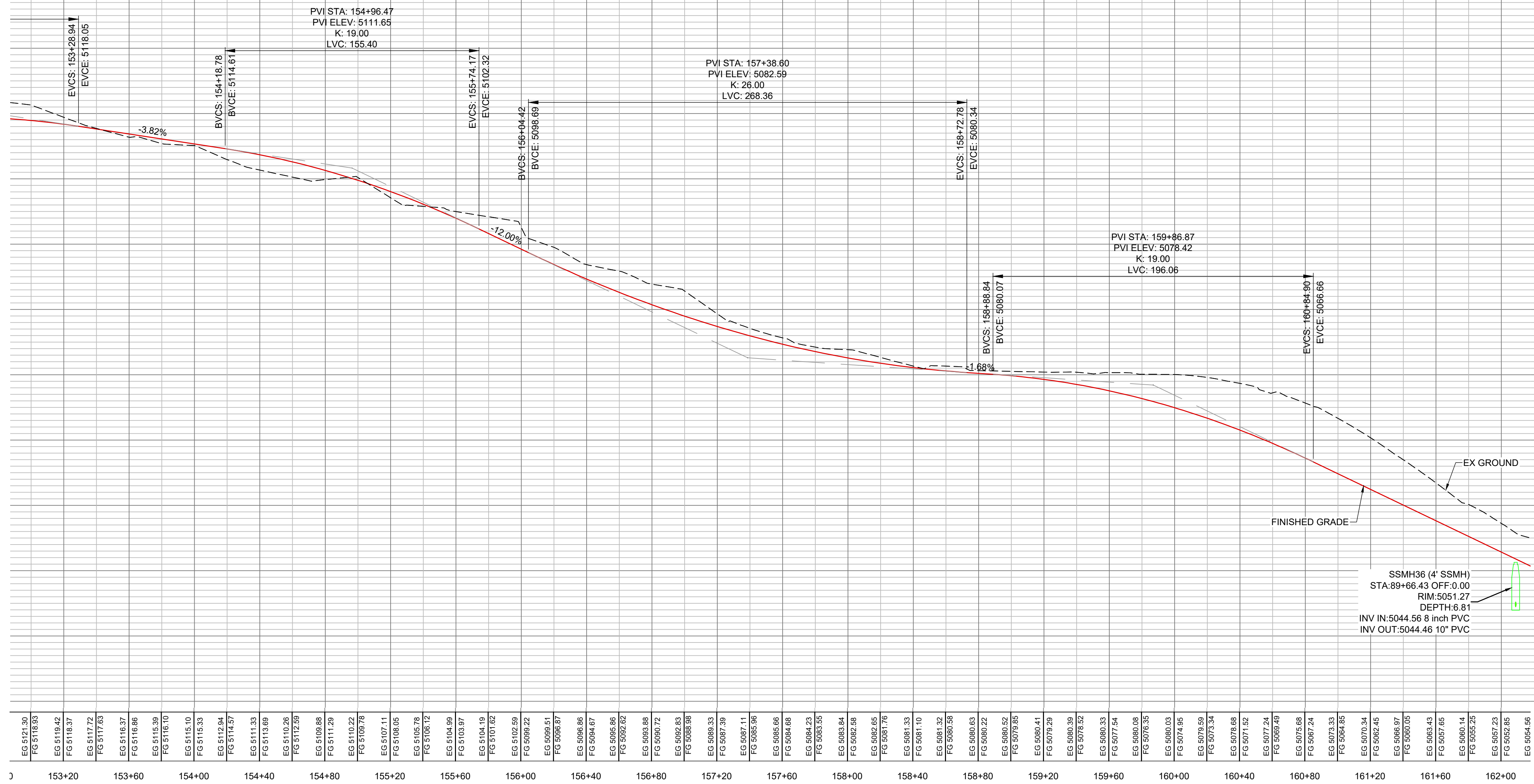
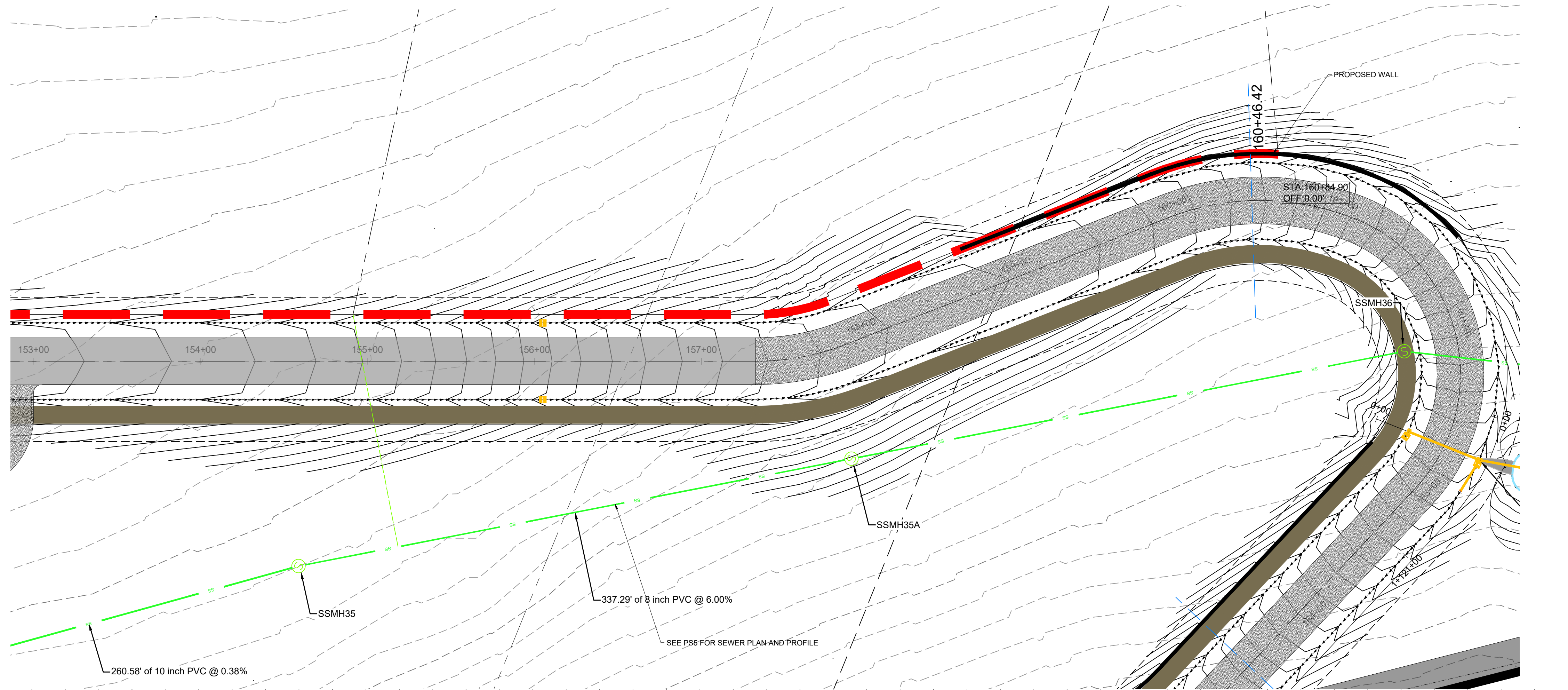
REVISIONS	DATE	DESCRIPTION

PLAN AND PROFILE ROAD A	
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PP7



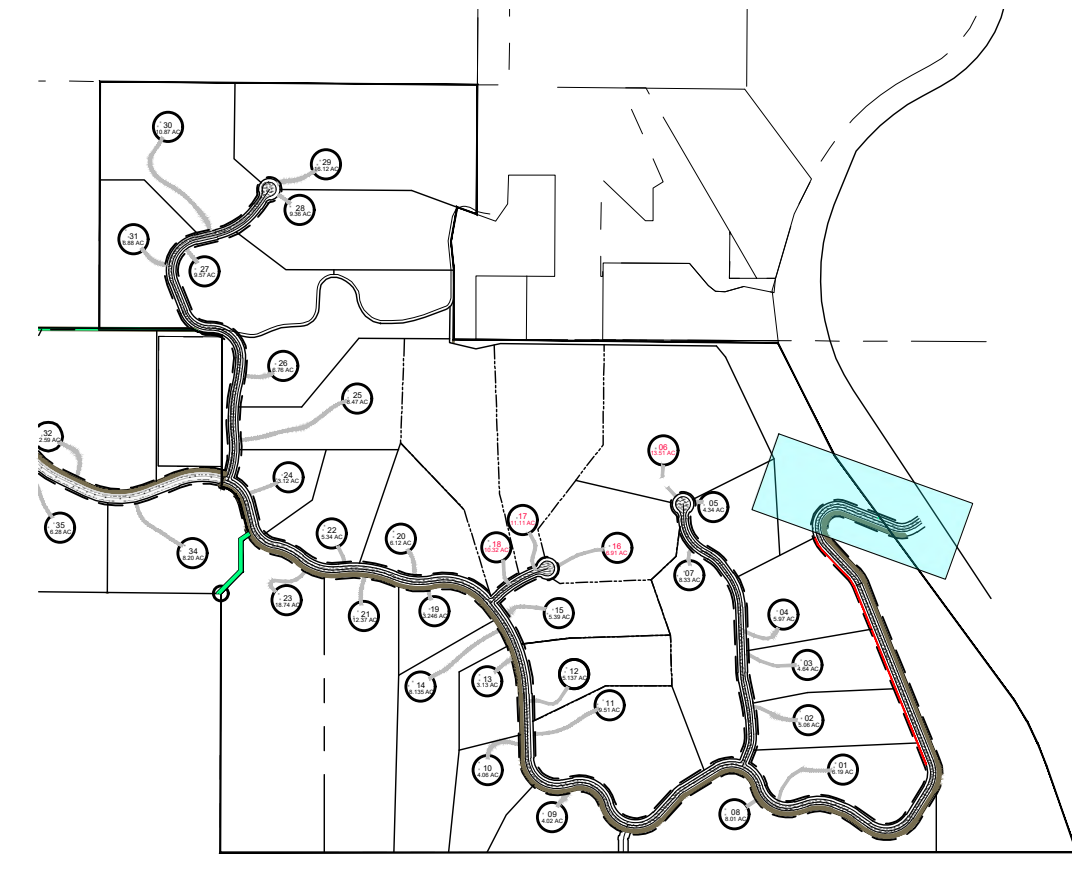
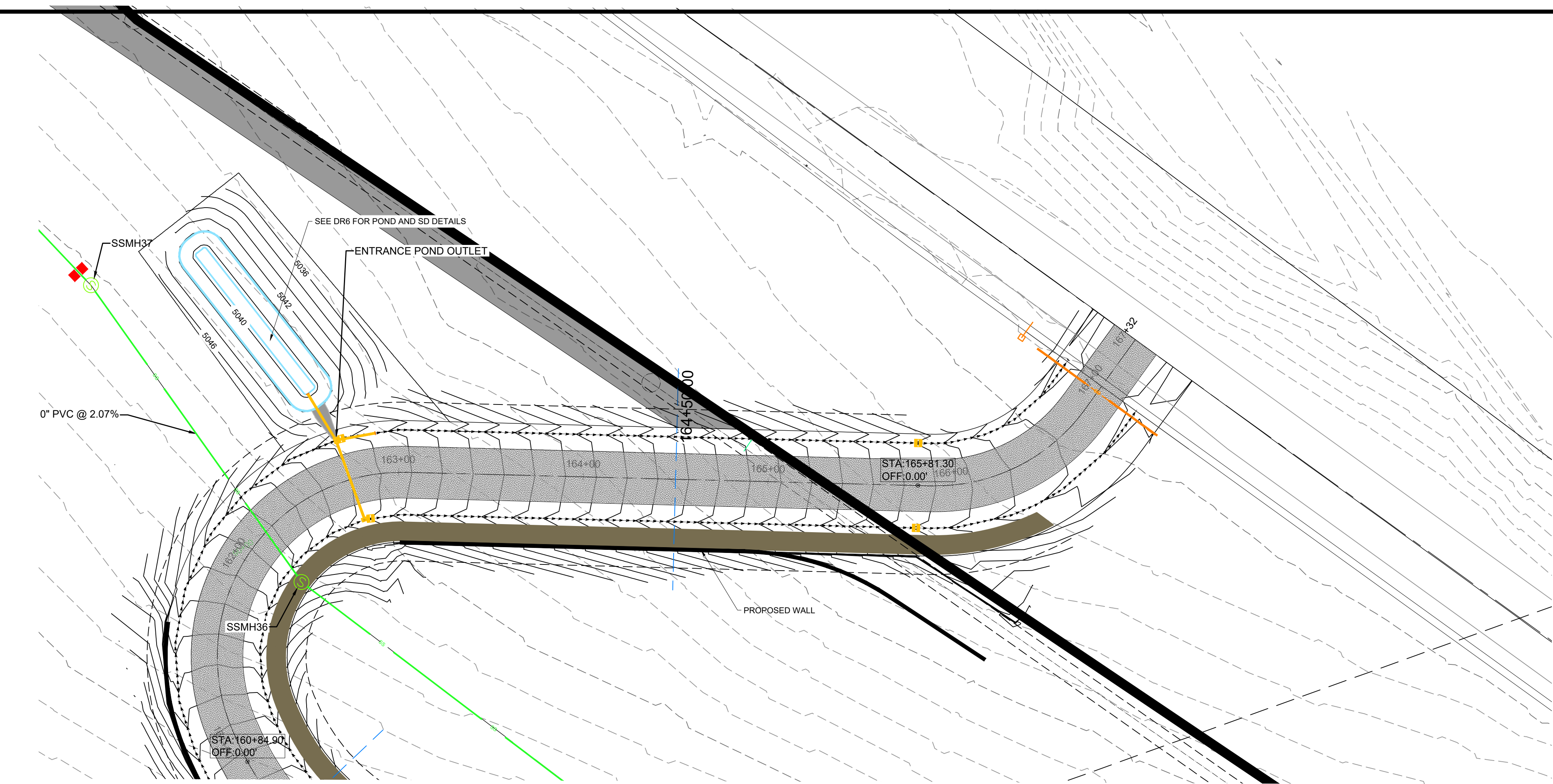
PLAN AND PROFILE ROAD A
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

REVISIONS	DATE	DESCRIPTION

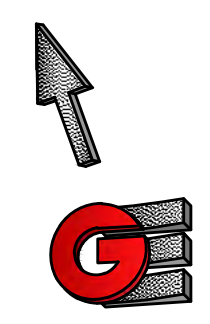
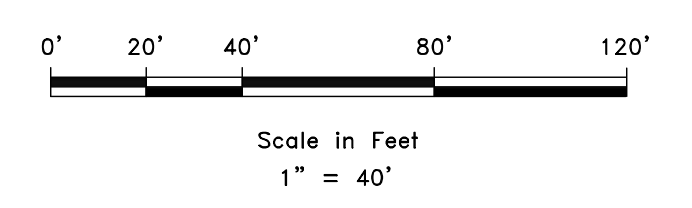
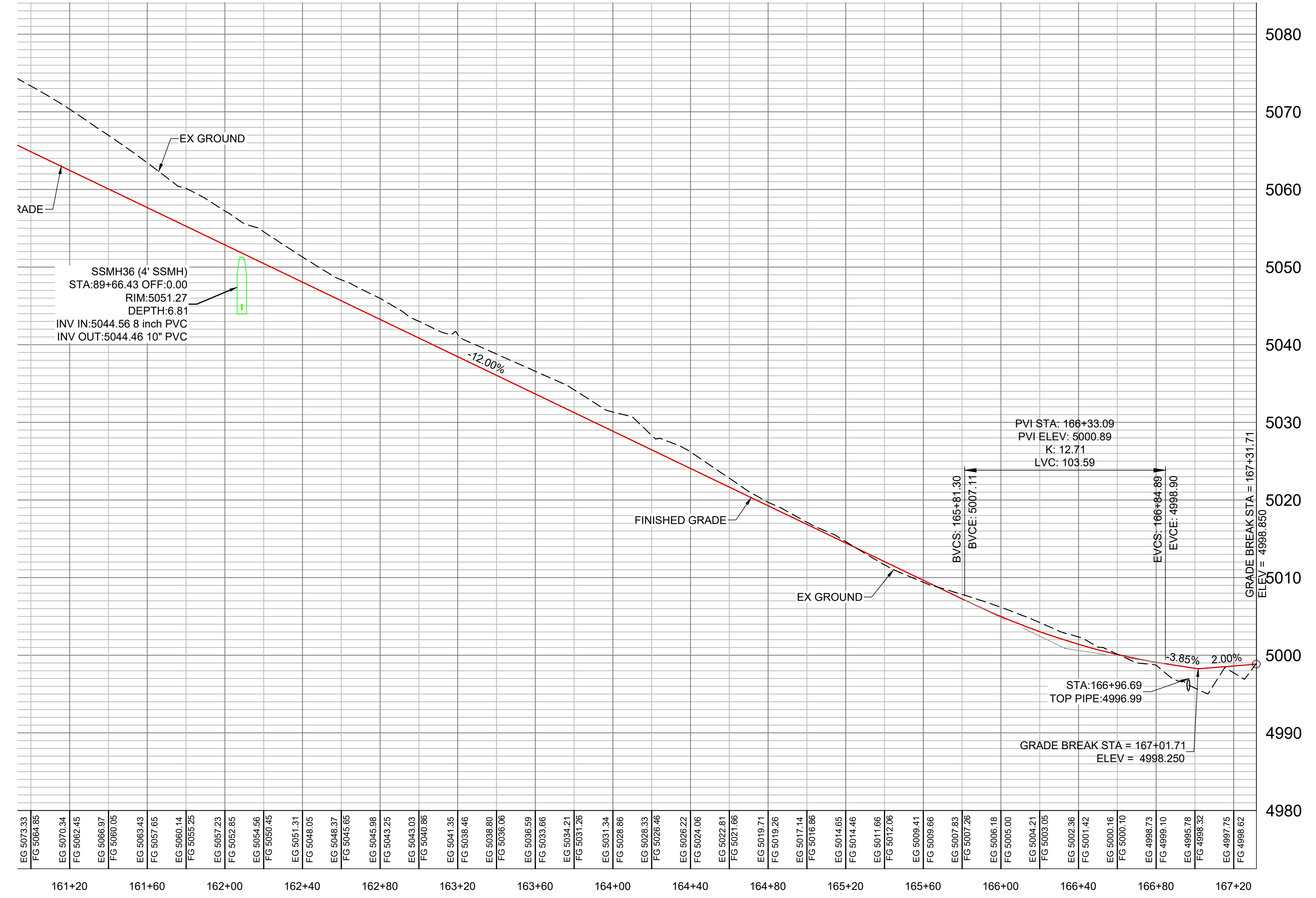
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PLAN AND PROFILE ROAD A - OSPREY RANCH DESIGN (MUNICIPAL) - PLAN AND PROFILE SHEETS - PHASE 1 - RECOVER - RESURFACING



LOCATION MAP



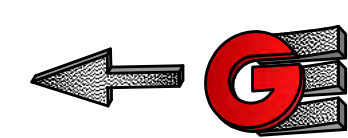
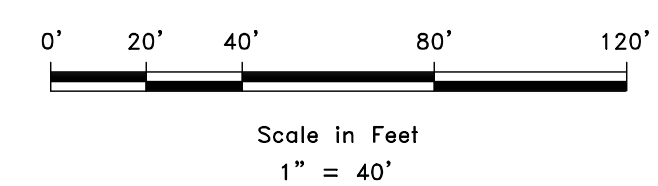
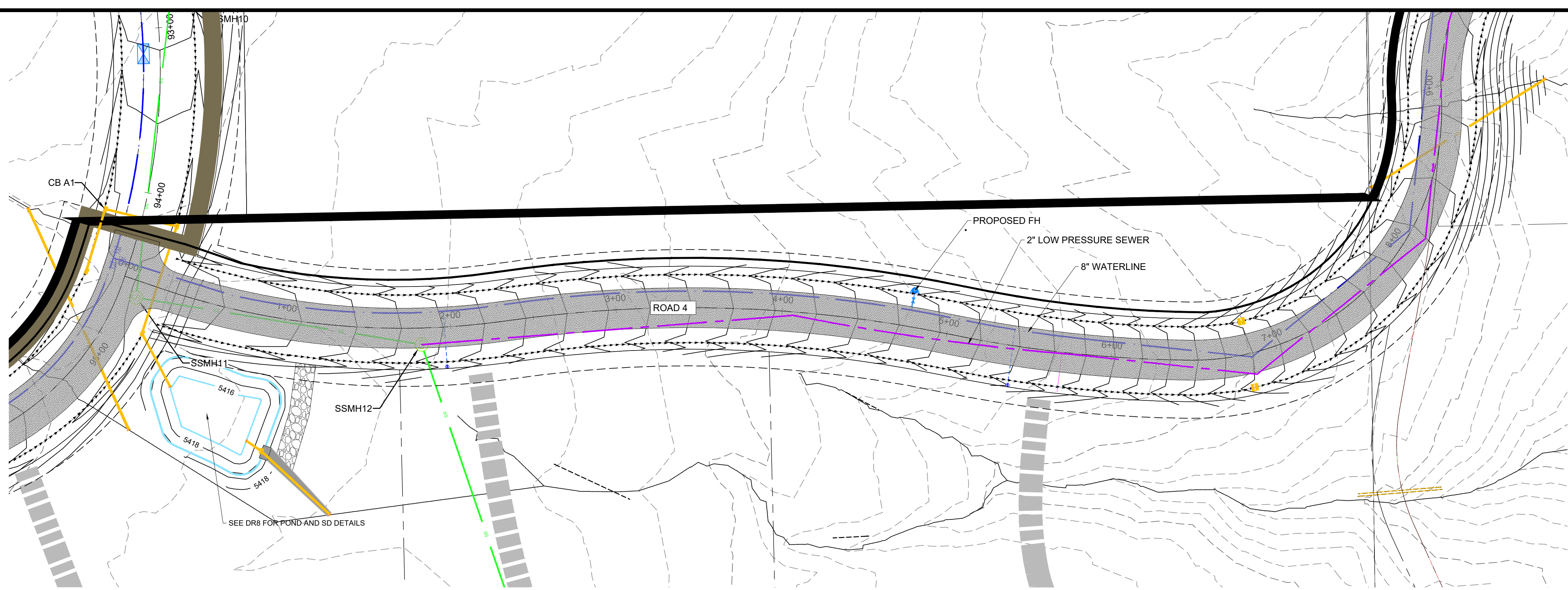
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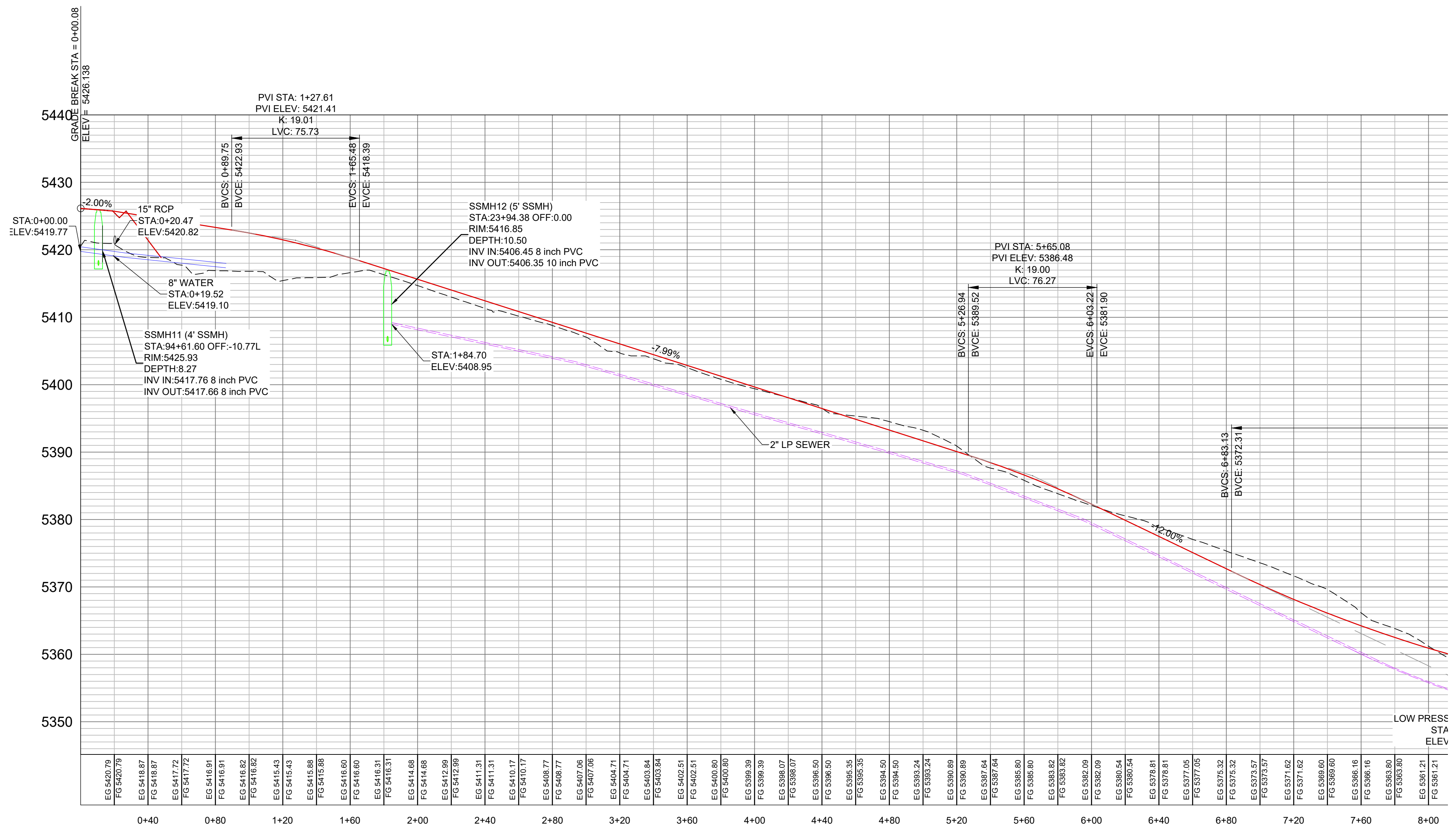
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PLAN AND PROFILE ROAD 4



LOCATION MAP



- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR -11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH

PLAN AND PROFILE ROAD 4
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

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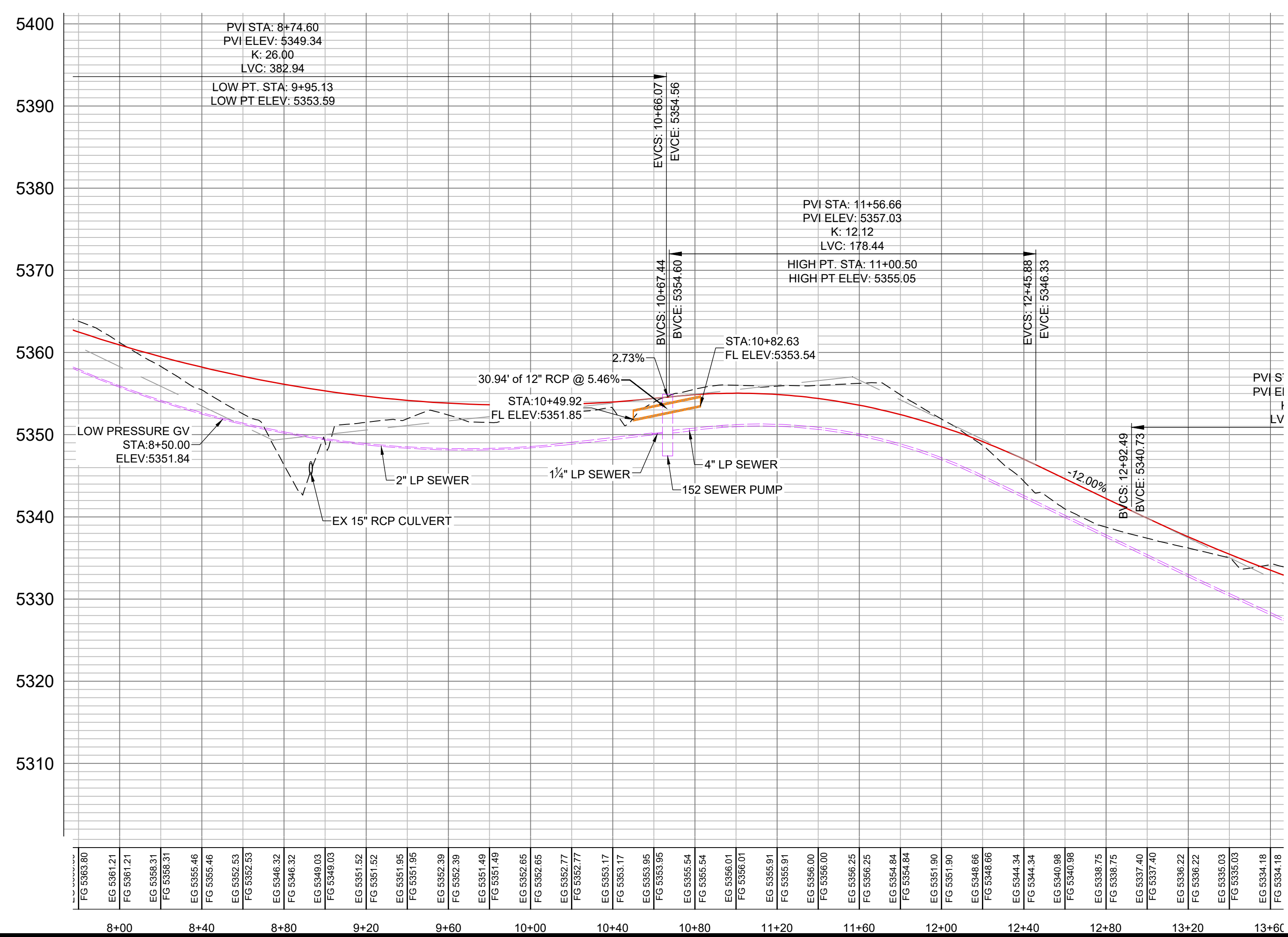
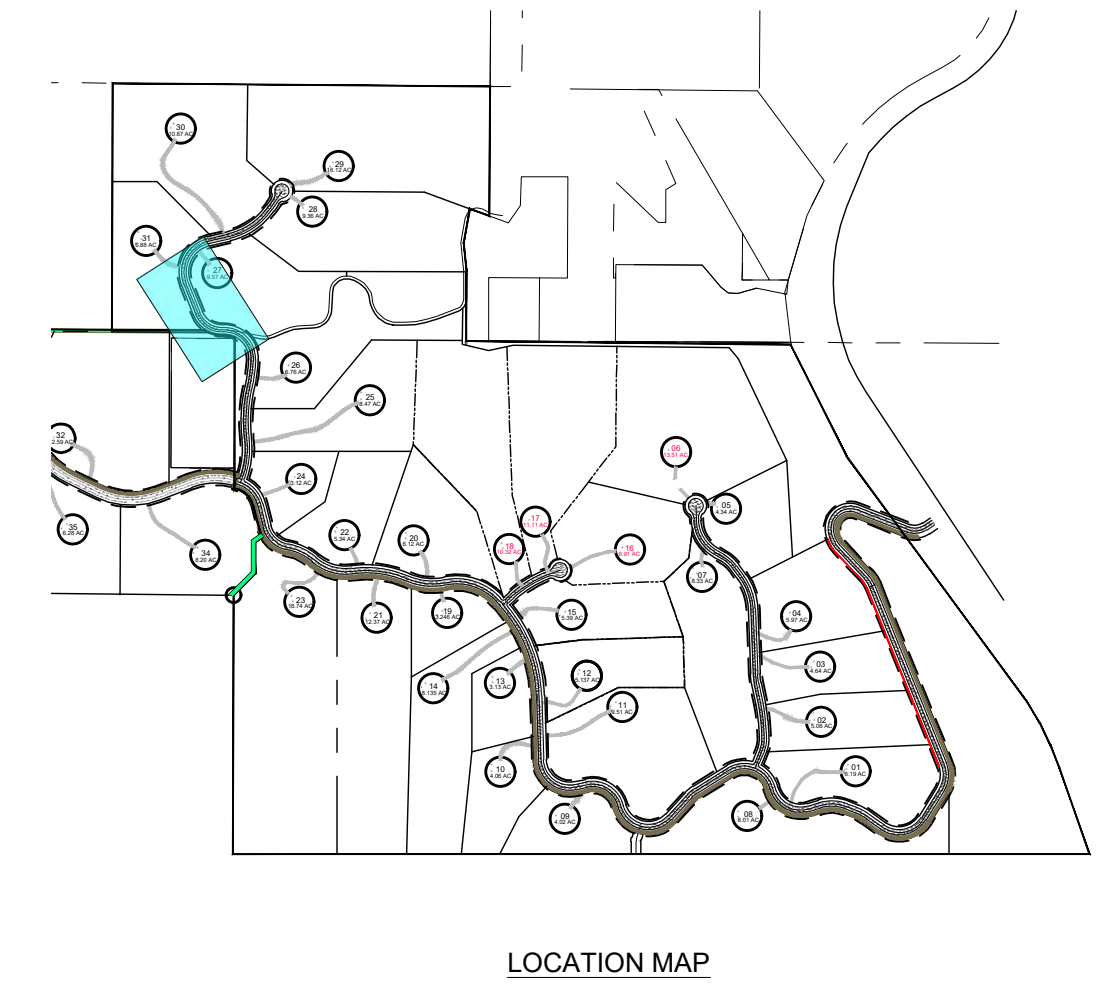
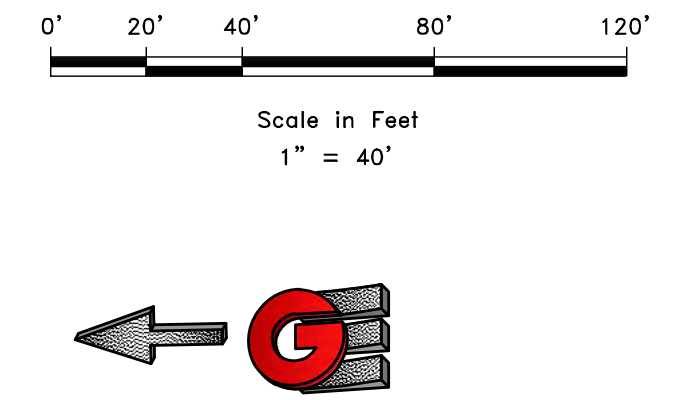
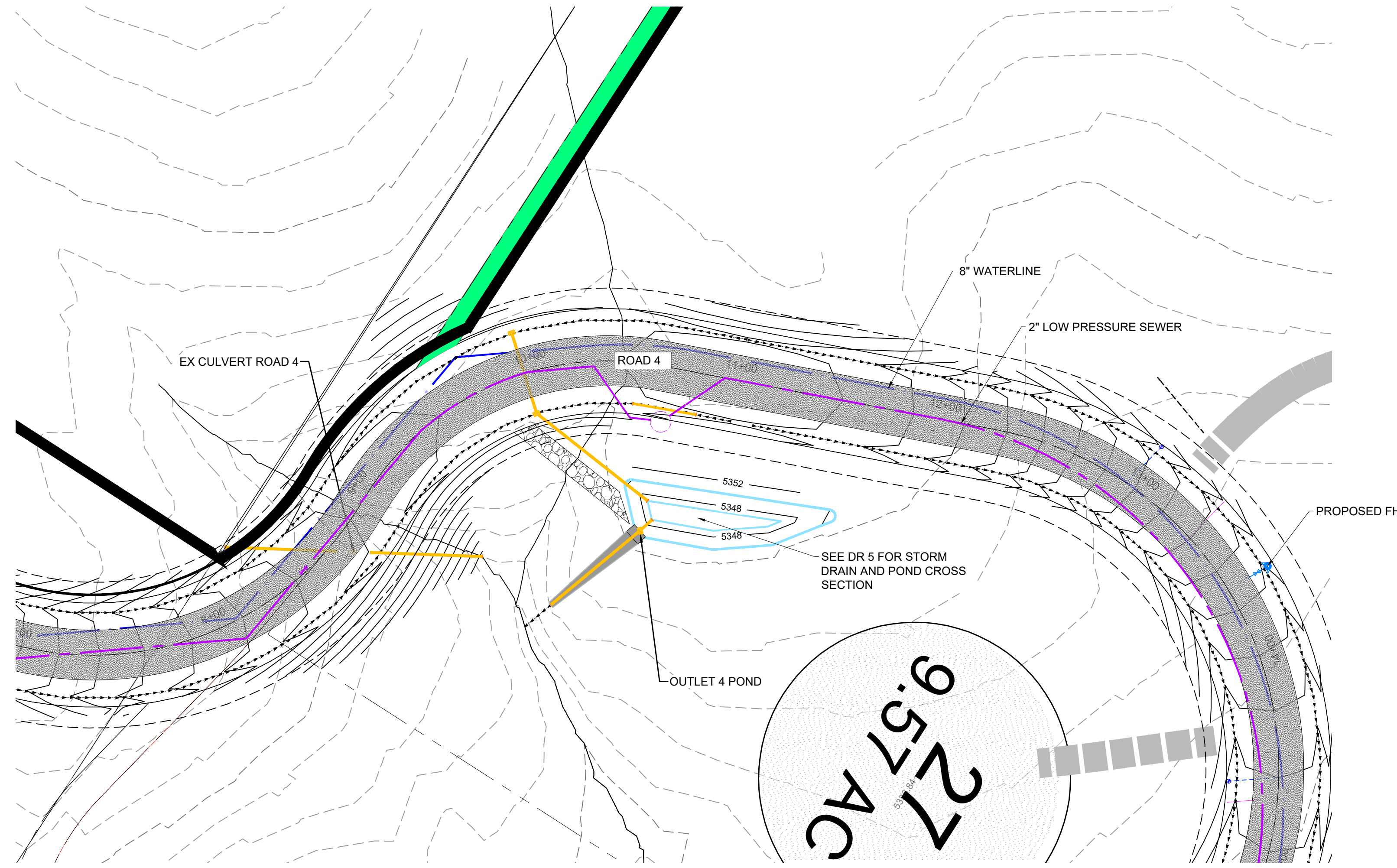
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DATE	DESCRIPTION

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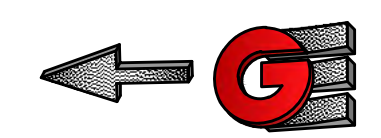
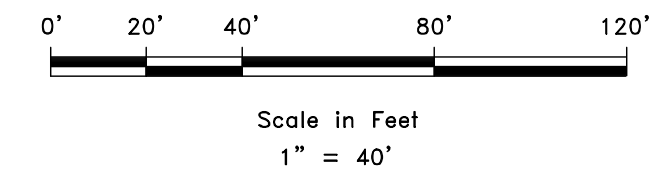
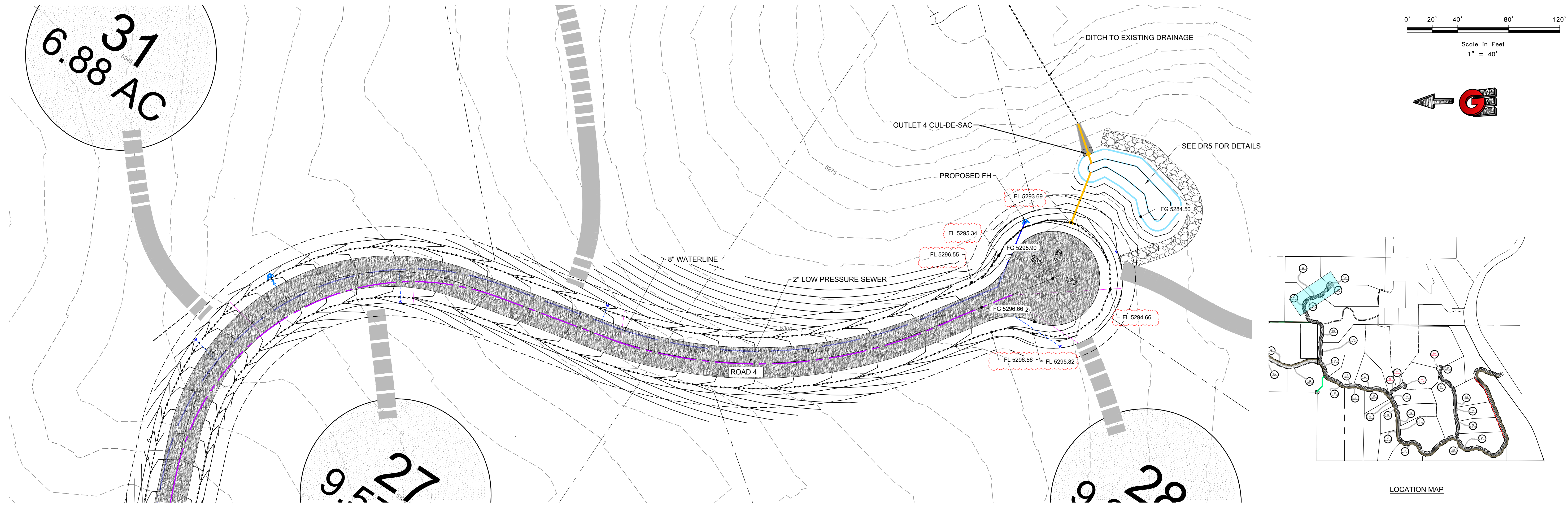
BA 1201 - LEWIS, HOWES & SONS - OSPREY RANCH LAND SURVEY - PLAN PROFILE SHEETS PHASE 4 - RECOVER, RECOVER.DWG



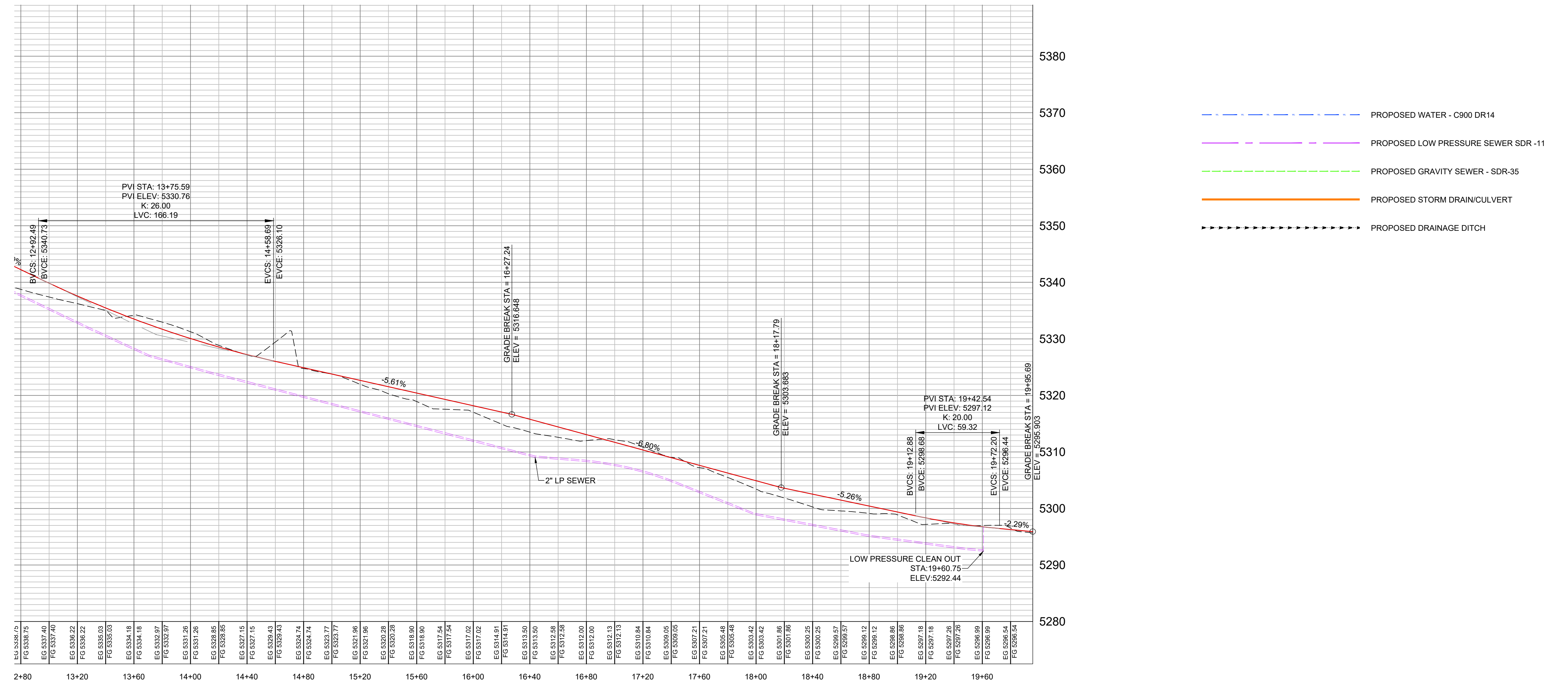
- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR -11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH

PLAN AND PROFILE ROAD 4 OSPREY RANCH UT-158 EDEN, WEBER, UTAH		SCALE: 1" = 40' DATE: 8-12-22 DESIGN: KAN DRAWN: KAN CHECKED: RC
REVISIONS DATE DESCRIPTION	DWG:	
GARDNER ENGINEERING CIVIL • LAND PLANNING MUNICIPAL • LAND SURVEYING 5150 SOUTH 375 EAST OGDEN, UT OFFICE: 801.476.0202 FAX: 801.476.0066		
PP11		

PLAN AND PROFILE ROAD 4



LOCATION MAP



DATE	DESCRIPTION
10-27-22	COUNTY COMMENTS

DATE	DESCRIPTION
8-12-22	COUNTY COMMENTS

DATE	DESCRIPTION
8-12-22	COUNTY COMMENTS

SCALE: 1" = 40'

DATE: 8-12-22

DESIGN: KAN

DRAWN: KAN

CHECKED: RC

REVISIONS

DATE: 10-27-22

DESCRIPTION: COUNTY COMMENTS

DWG:

PLAN AND PROFILE ROAD 4

OSPREY RANCH

UT-158

EDEN, WEBER, UTAH

GARDNER ENGINEERING

CIVIL • LAND PLANNING

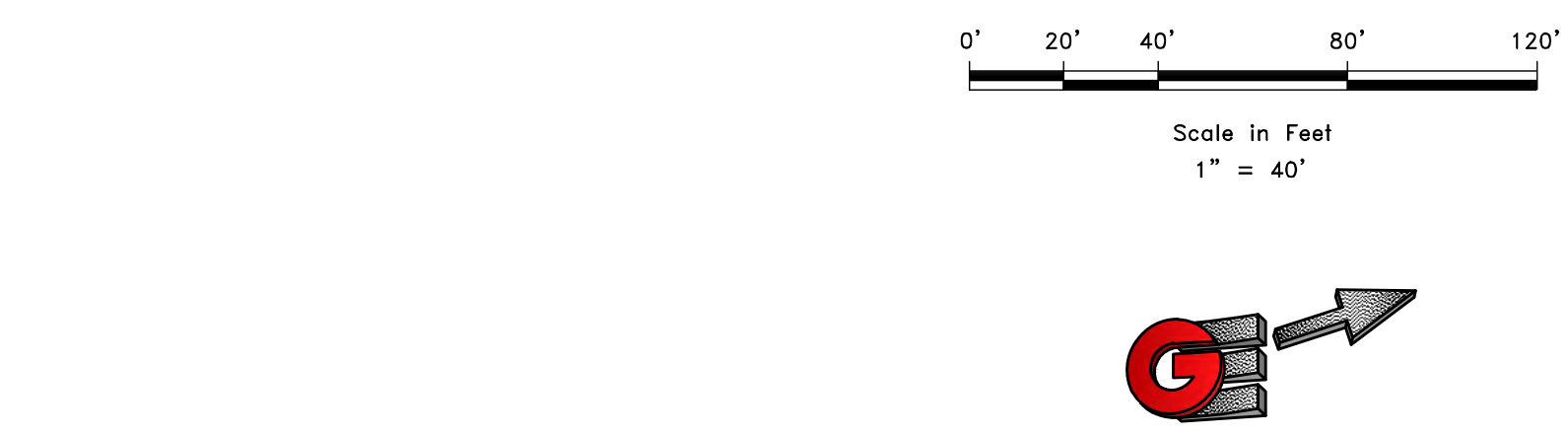
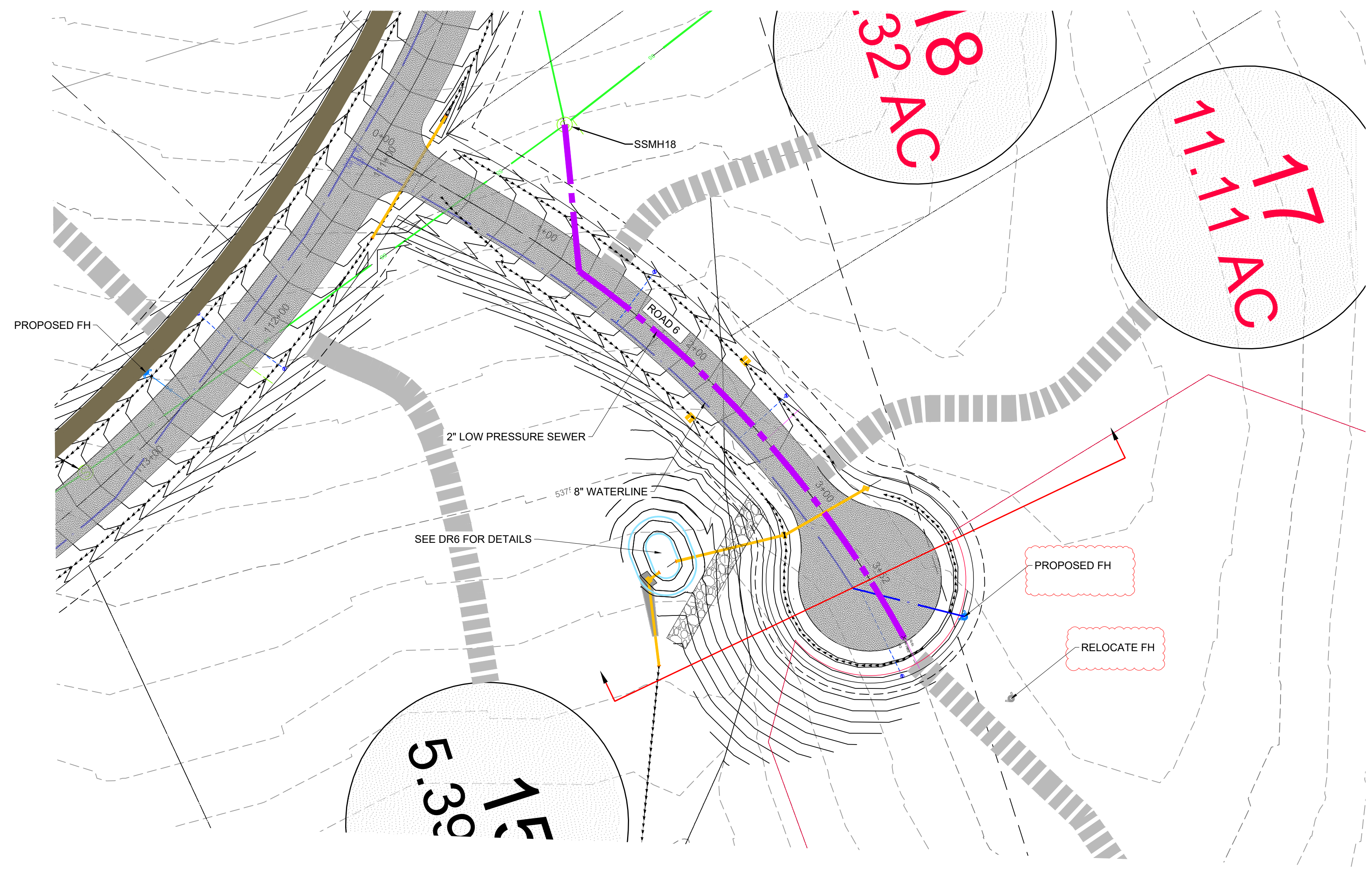
MUNICIPAL • LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT

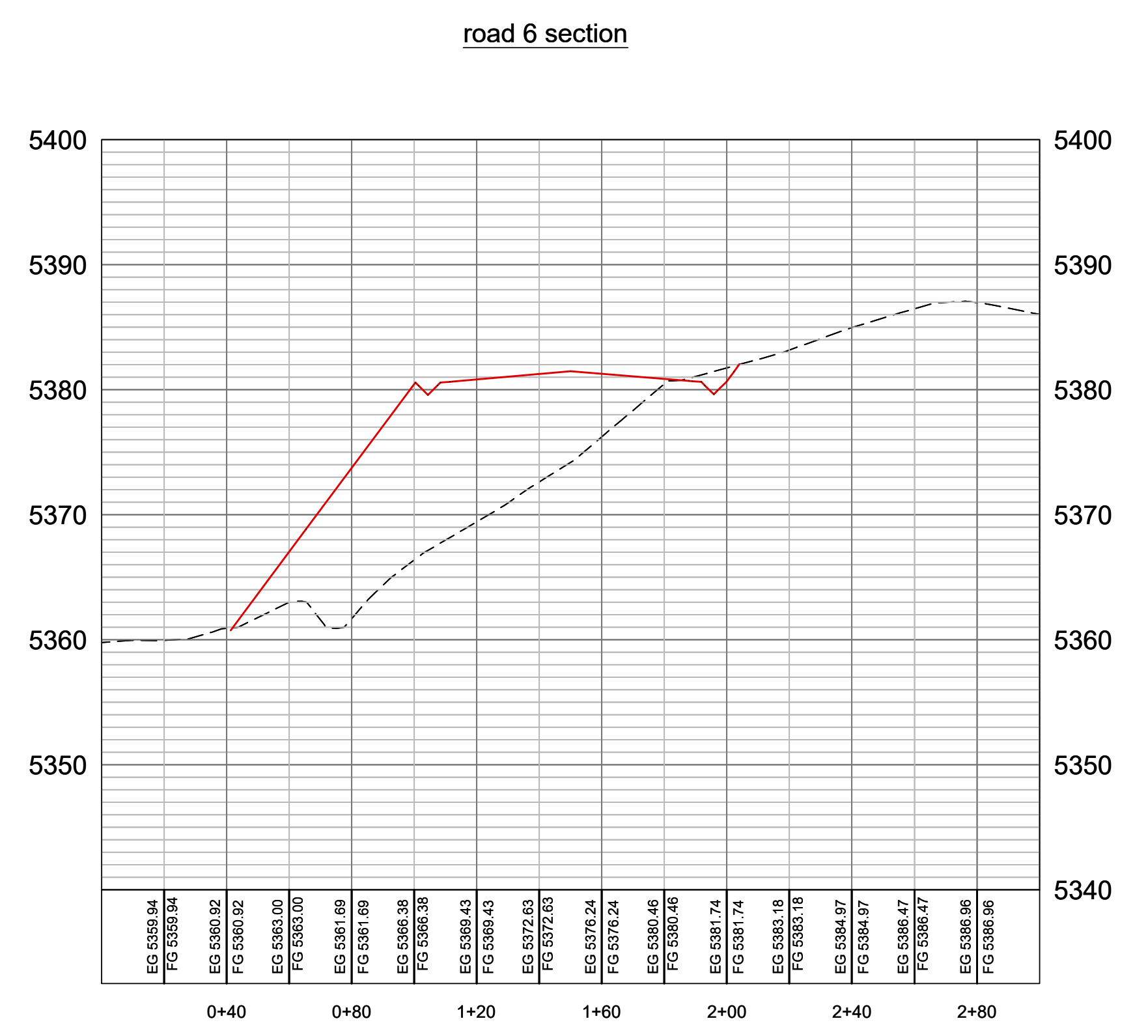
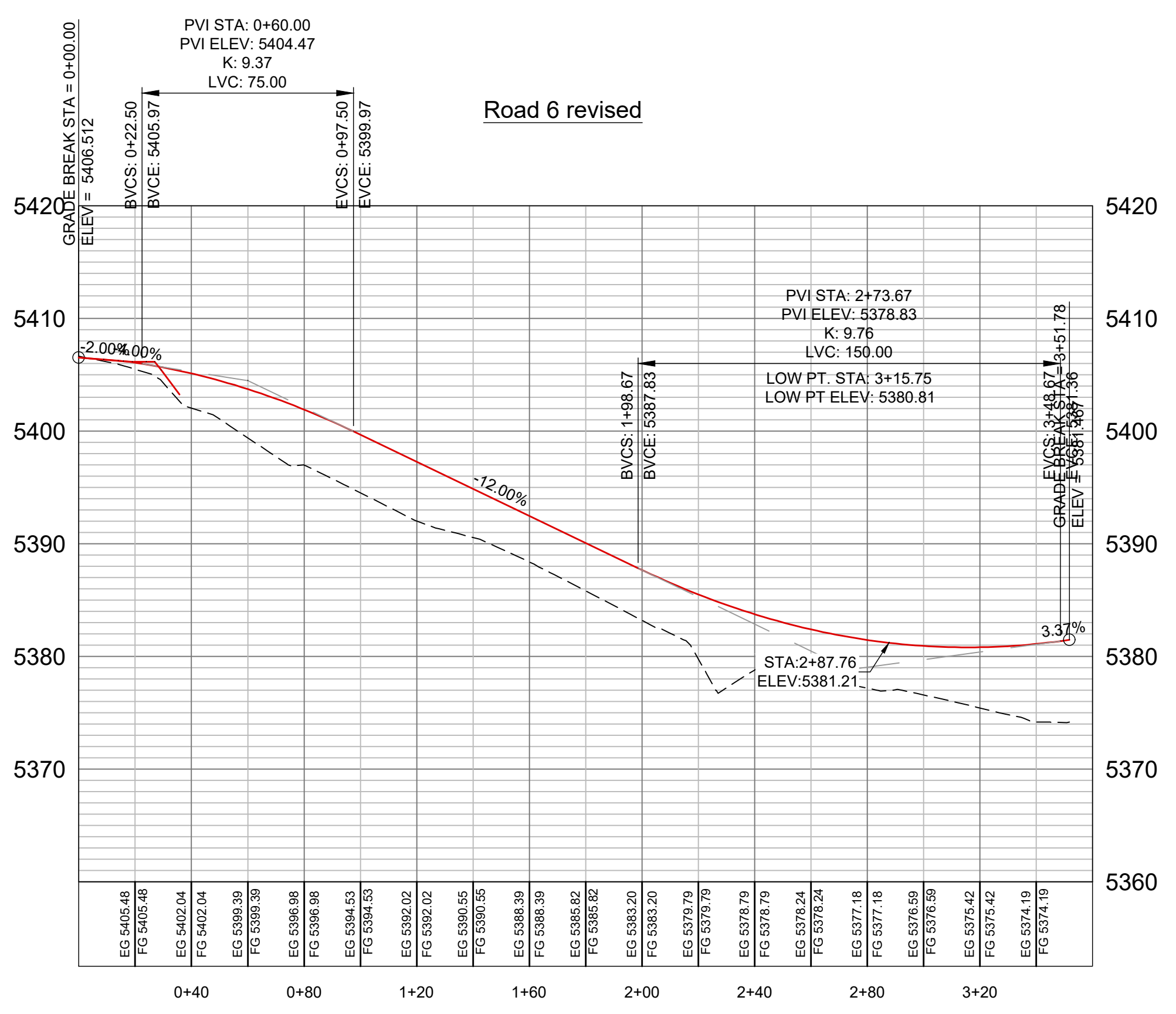
OFFICE: 801.476.0202 FAX: 801.476.0066

PP12

PLAN 1201 - LEWIS, HOWES & SONS - OSPREY RANCH, BENCH, UTAH, OSPREY PLAN, PROFILE SHEETS PHASE - RECOVER, RECOVER.DWG



- PROPOSED WATER - C900 DR14
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- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH



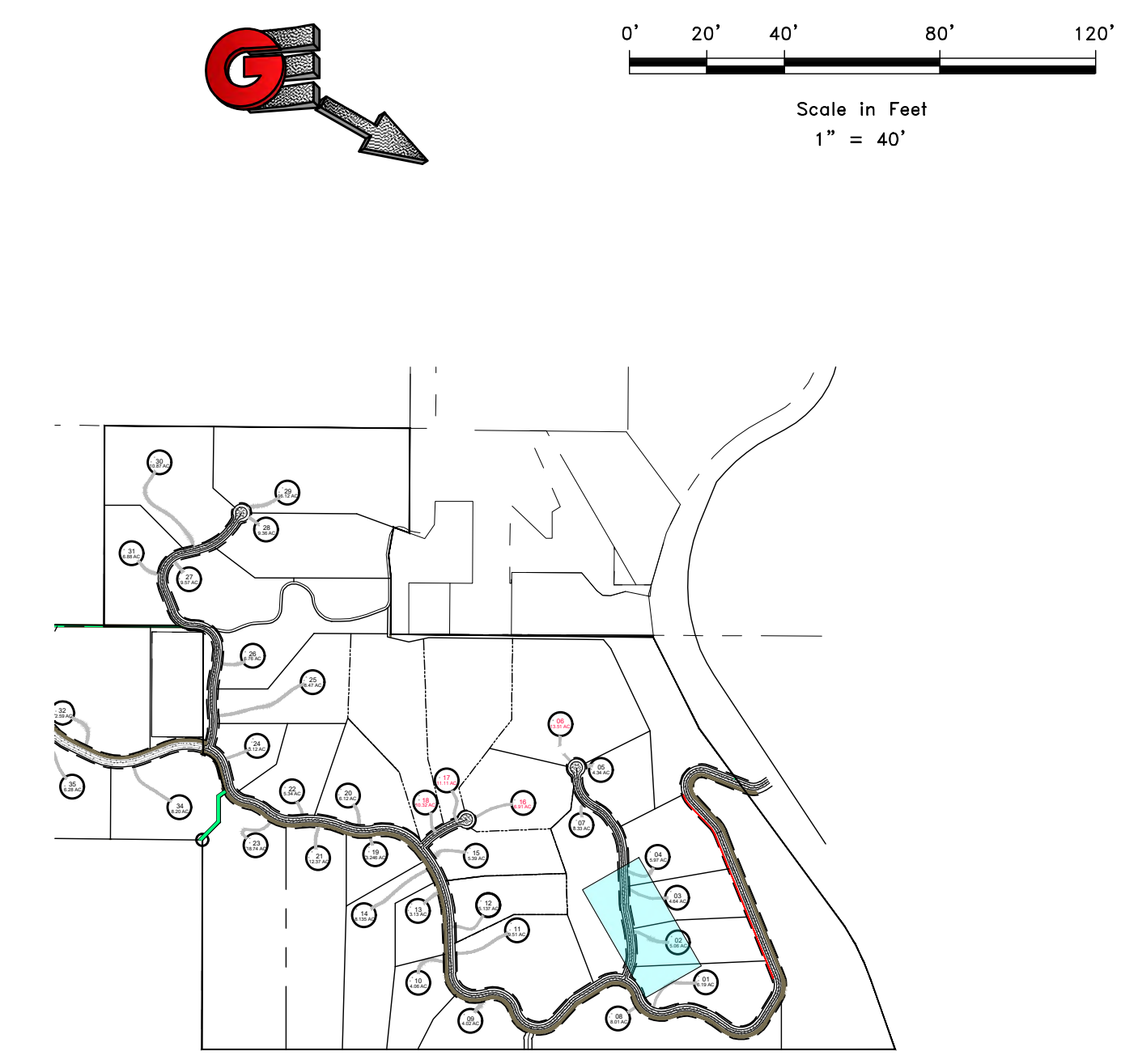
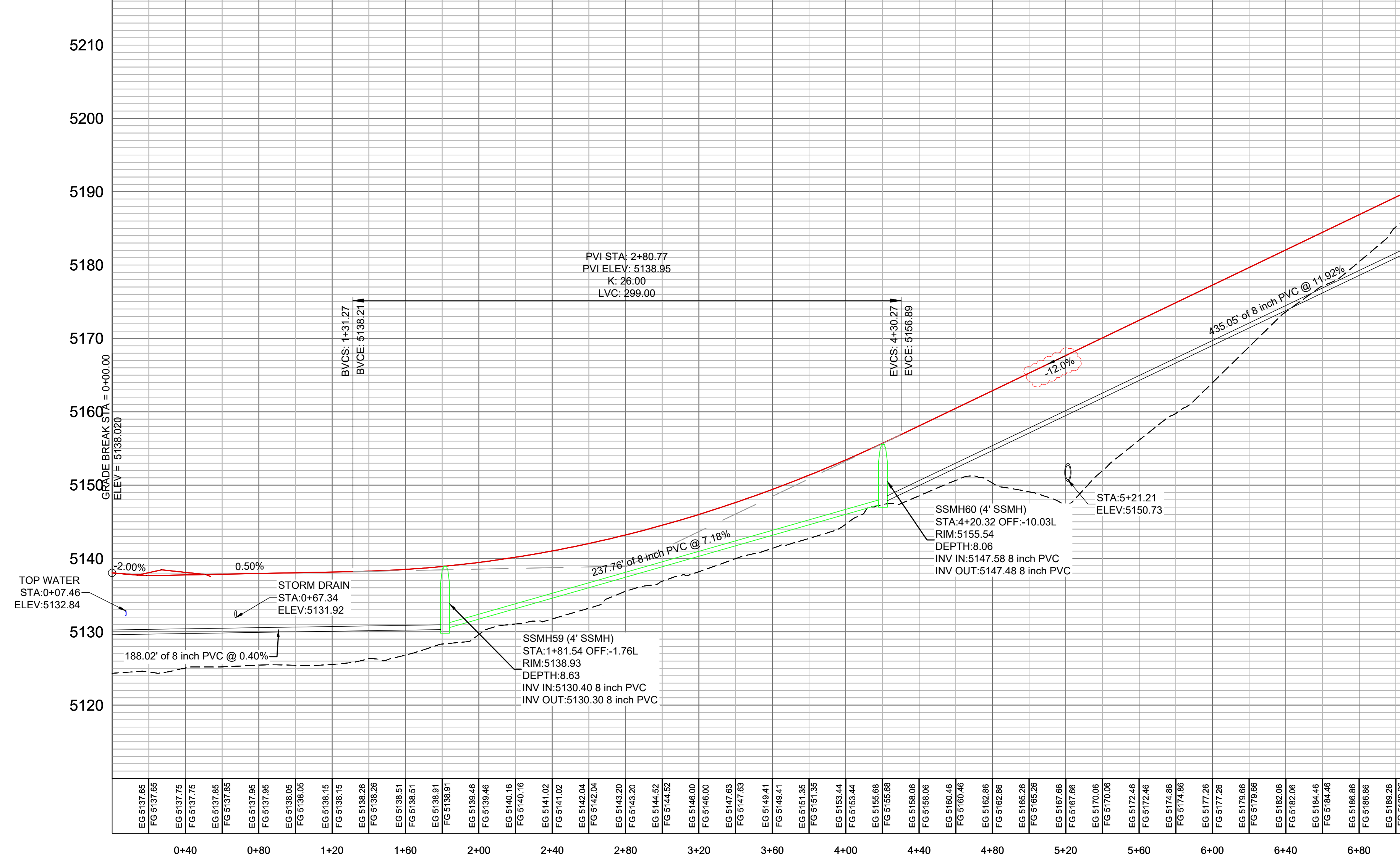
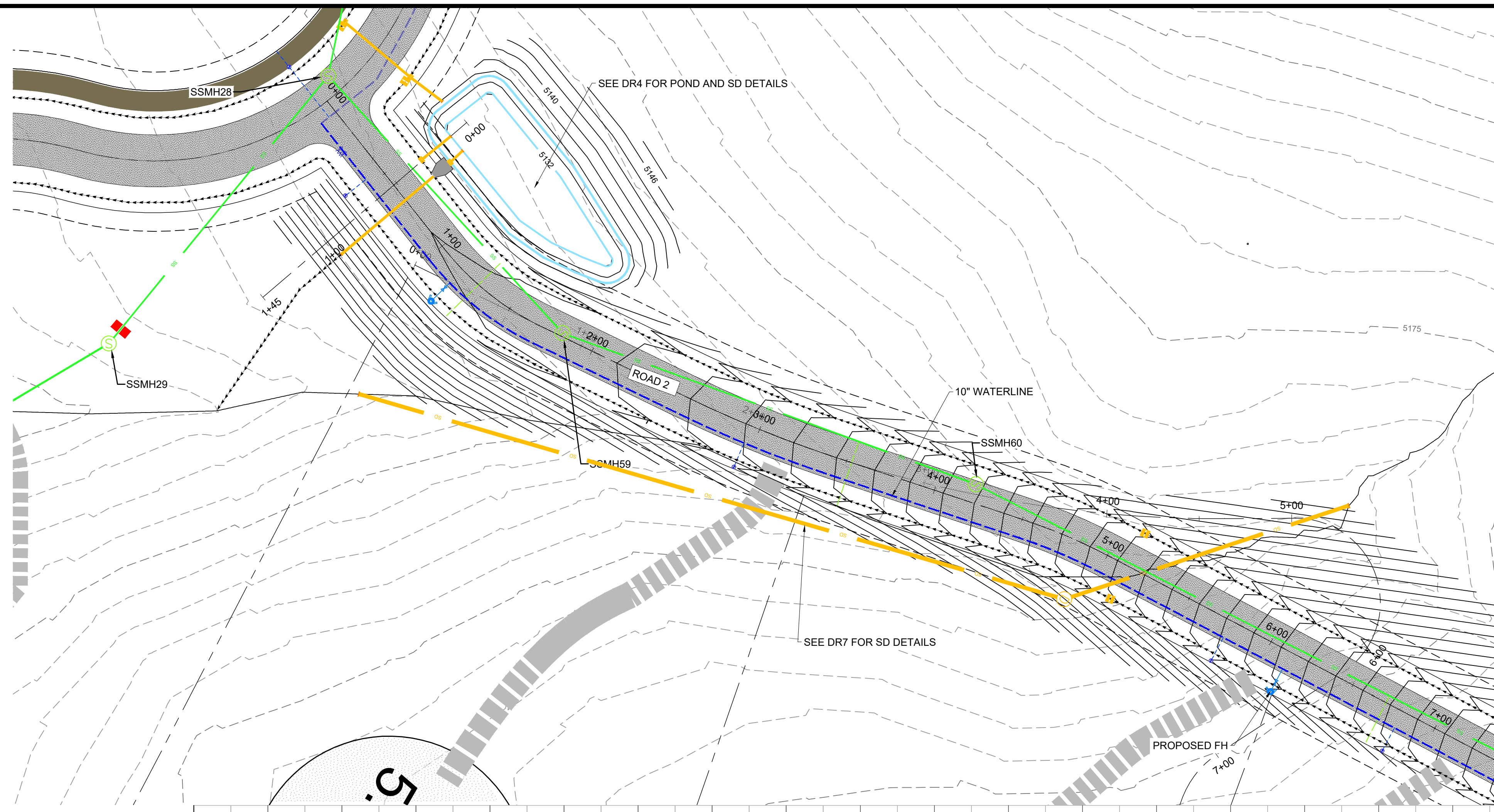
PLAN AND PROFILE ROAD 6
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

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CIVIL • LAND PLANNING
MUNICIPAL • LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT
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DATE	DESCRIPTION
10-18-22	REVISED CUL-DE-SAC AND LOTS

SCALE: 1" = 40'
DATE: 8-12-22
DESIGN: KAN
DRAWN: KAN
CHECKED: RC



- LOCATION MAP
- PROPOSED WATER - C900 DR14
 - PROPOSED LOW PRESSURE SEWER SDR -11
 - PROPOSED GRAVITY SEWER - SDR-35
 - PROPOSED STORM DRAIN/CULVERT
 - PROPOSED DRAINAGE DITCH

SCALE	1" = 40'
DATE	8-12-22
DESIGN	KAN
DRAWN	KAN
CHECKED	RC

REVISIONS	DESCRIPTION
DATE	COUNTY REVISIONS
10-27-22	

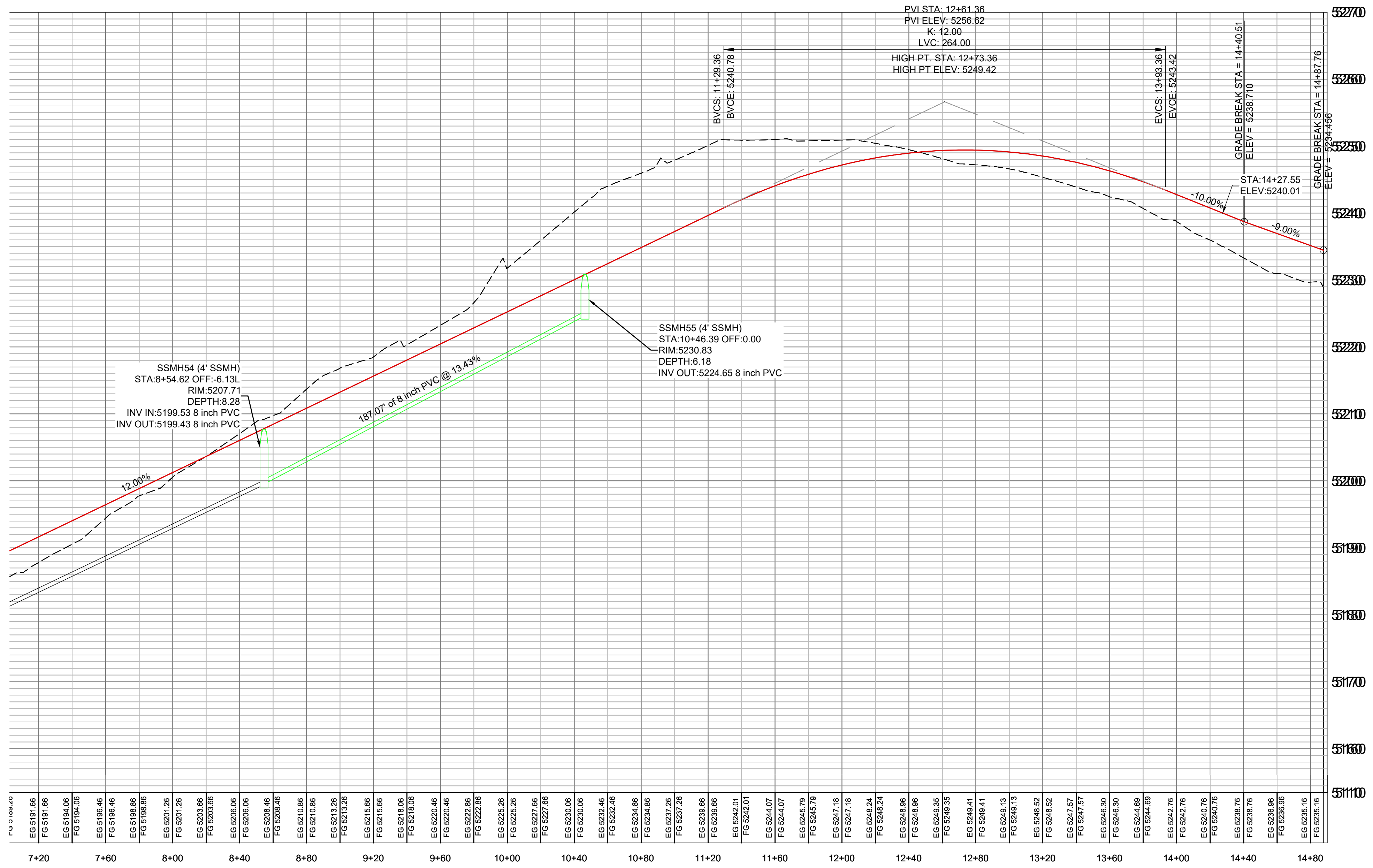
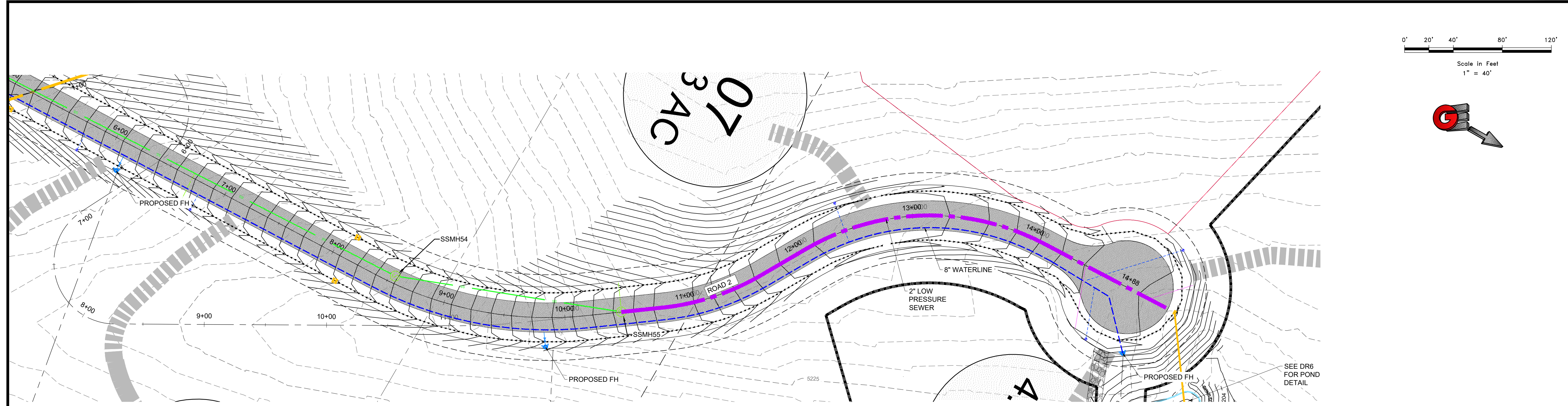
DWG:

PLAN AND PROFILE ROAD 2
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

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5150 SOUTH 375 EAST OGDEN, UT
OFFICE: 801-476-0202 FAX: 801-476-0066

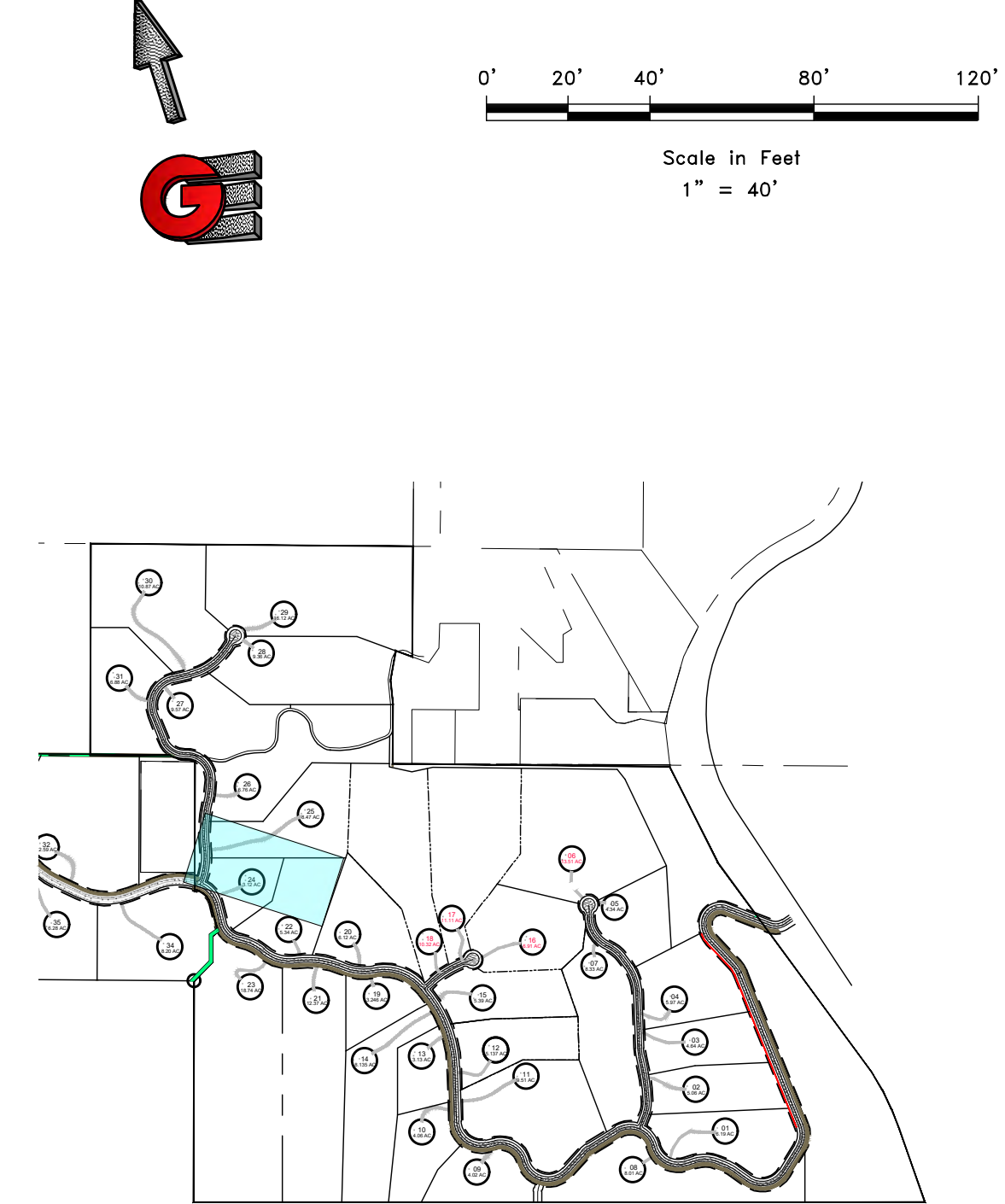
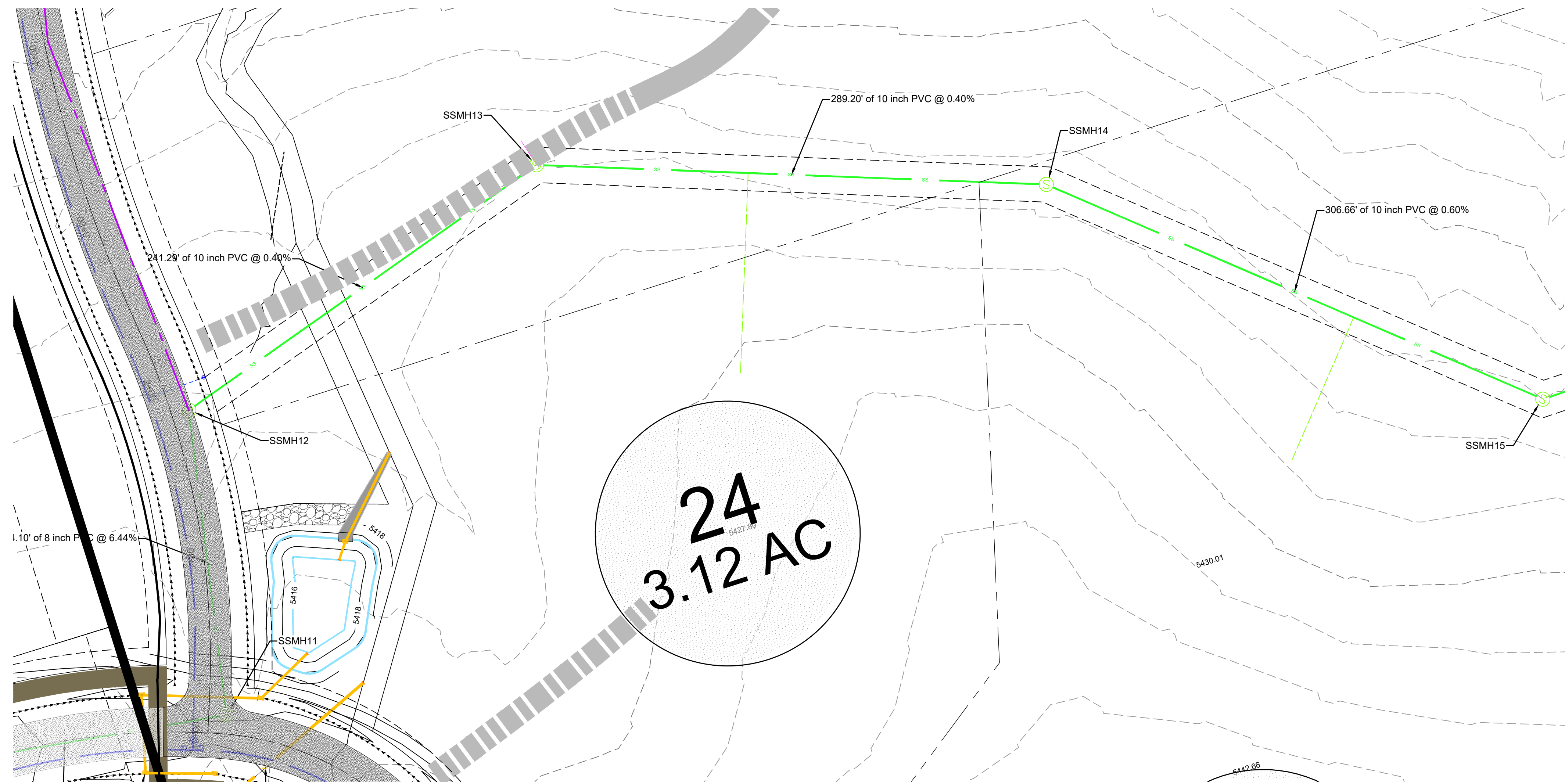
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- PROPOSED WATER - C900 DR14
- PROPOSED LOW PRESSURE SEWER SDR - 11
- PROPOSED GRAVITY SEWER - SDR-35
- PROPOSED STORM DRAIN/CULVERT
- PROPOSED DRAINAGE DITCH

SCALE: 1" = 40' DATE: 8-12-22 DESIGN: KAN DRAWN: KAN CHECKED: RC	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">DATE</th> <th style="width: 90%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	DATE	DESCRIPTION			<h2 style="margin: 0;">PLAN AND PROFILE ROAD 2</h2> <h3 style="margin: 0;">OSPREY RANCH</h3> <h4 style="margin: 0;">UT-158</h4> <h4 style="margin: 0;">EDEN, WEBER, UTAH</h4>
DATE	DESCRIPTION					
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DWG: PP15						



REVISIONS	DATE	DESCRIPTION

SCALE: 1" = 40'
DATE: 8-12-22
DESIGN: KAN
DRAWN: KAN
CHECKED: RC

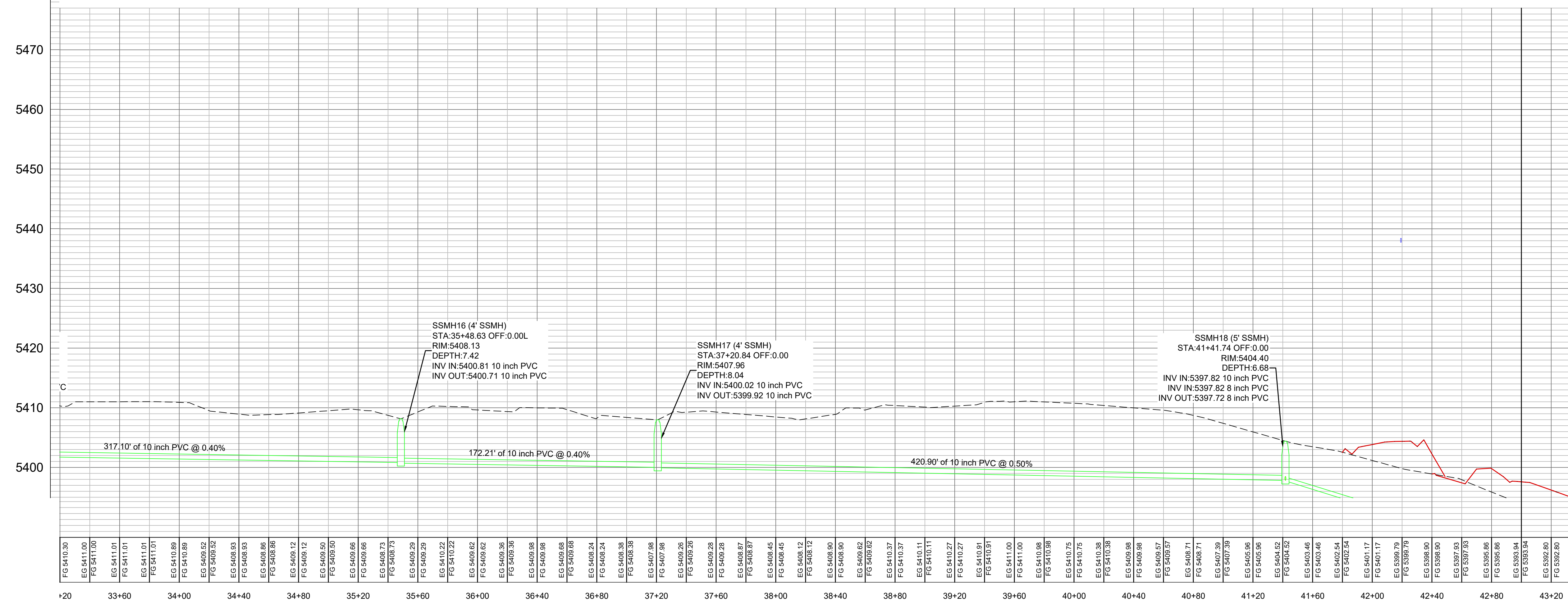
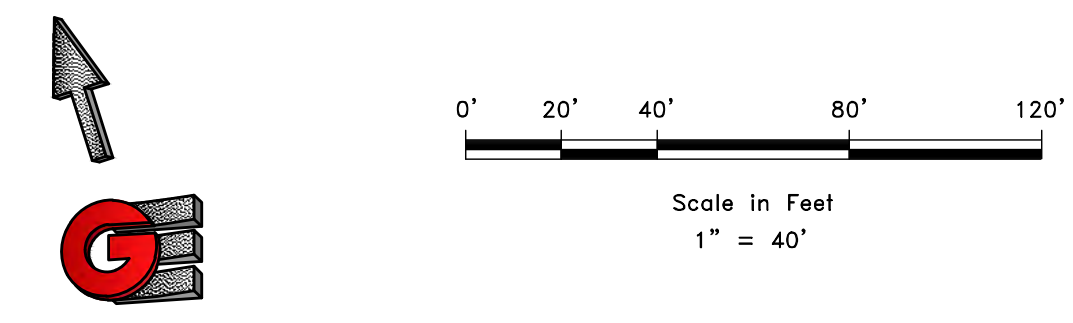
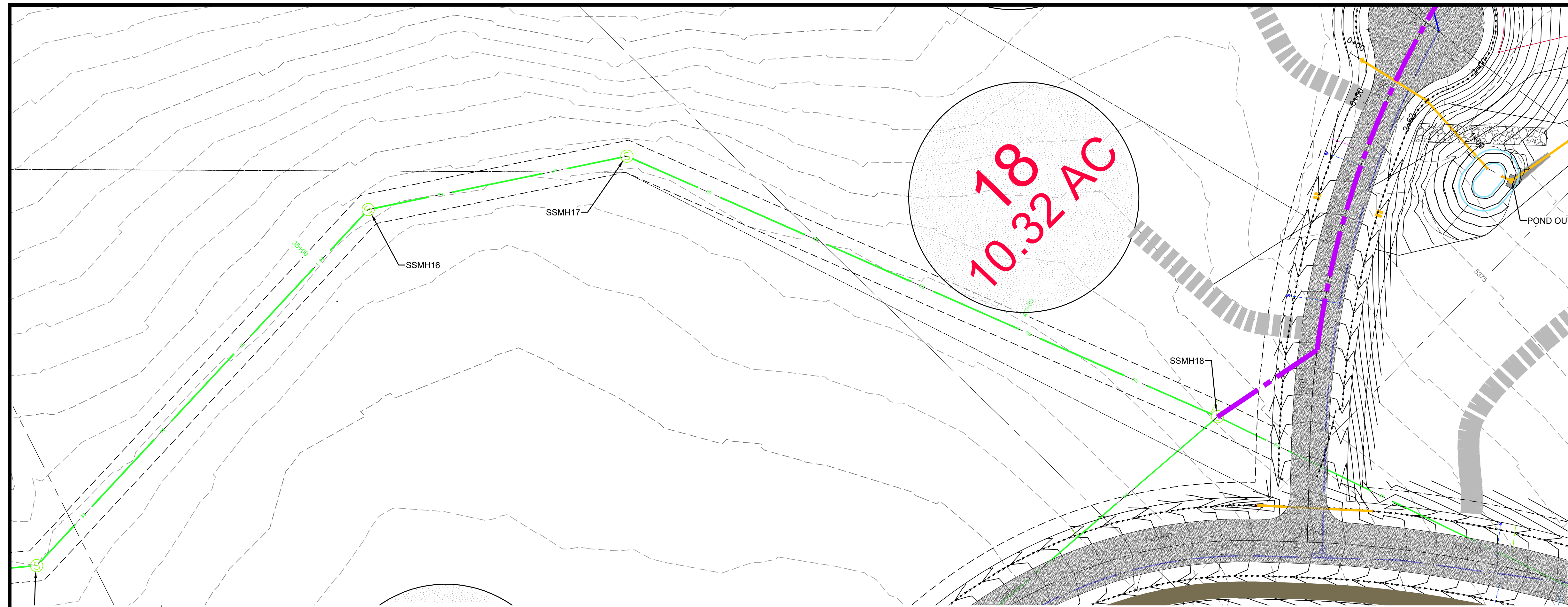
PLAN AND PROFILE SEWER
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH



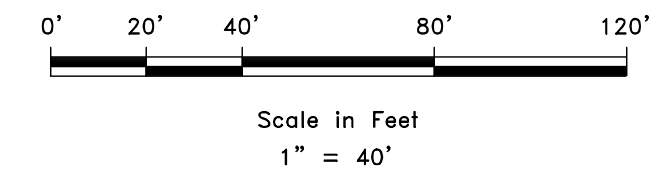
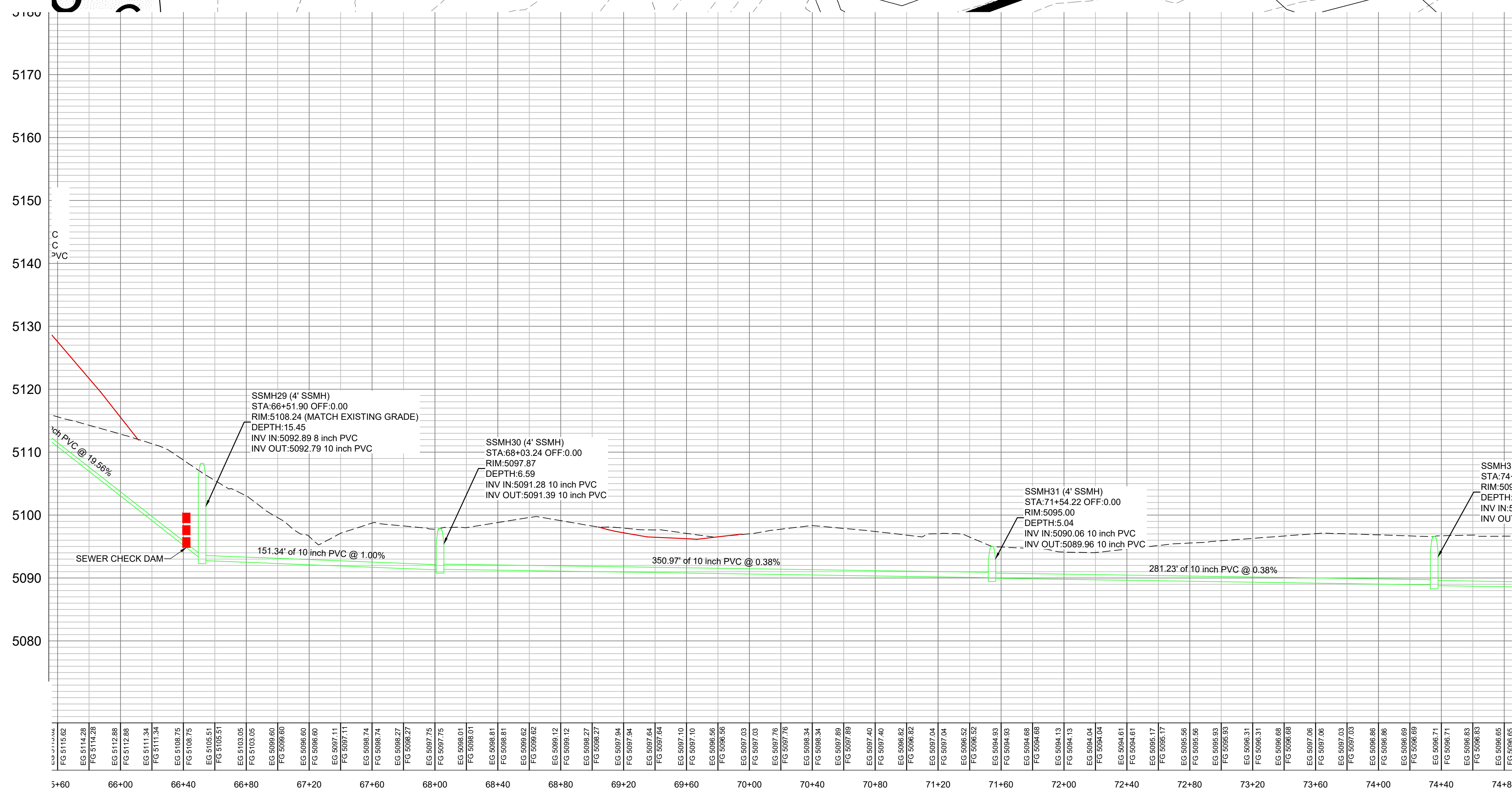
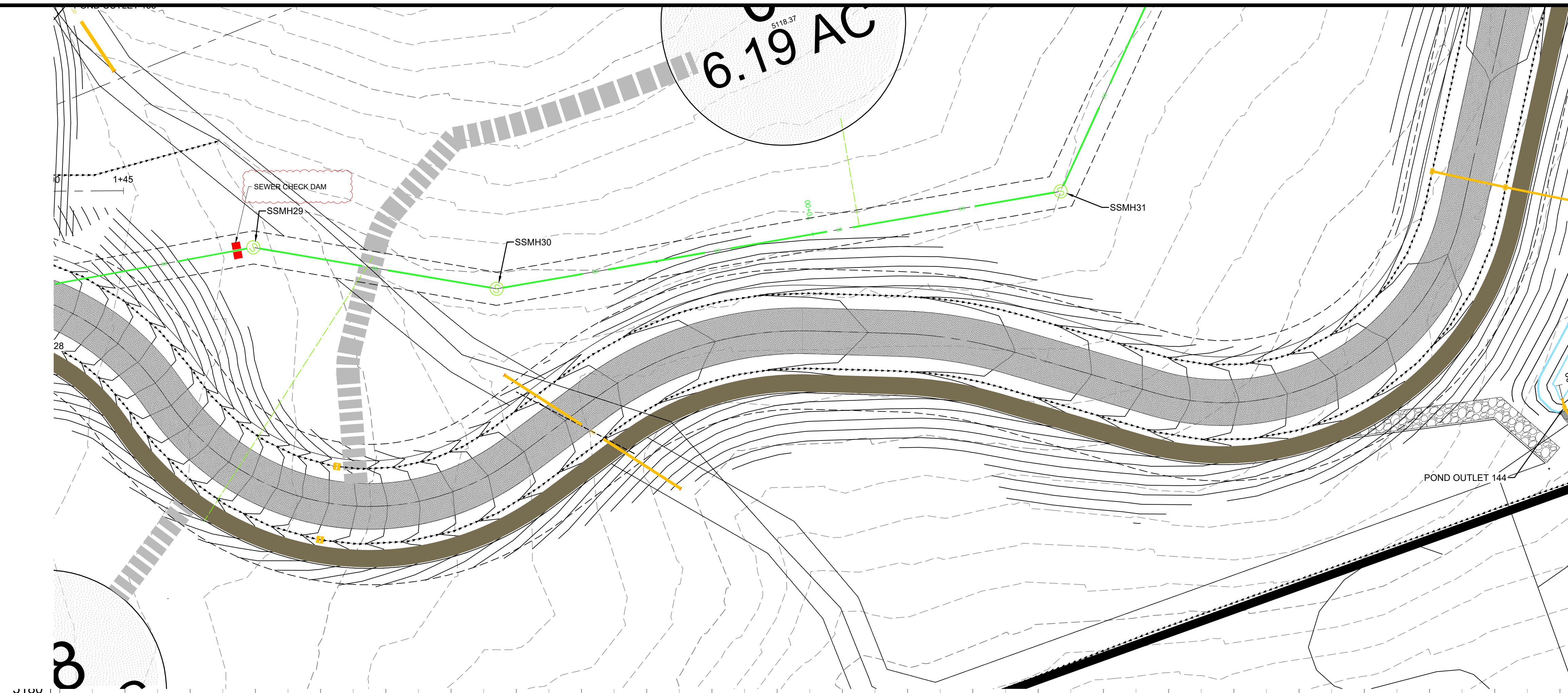
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5150 SOUTH 375 EAST OGDEN, UT
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A:\1201 - LEWIS HOMES\1205 - OSPREY RANCH\DESIGN\DWG\OSPREY PLAN PROFILE SHEETS PHASE 1 - RECOVER RECOVER.DWG



	PLAN AND PROFILE SEWER OSPREY RANCH UT-158 EDEN, WEBER, UTAH	SCALE: 1" = 40' DATE: 8-12-22 DESIGN: KAN DRAWN: KAN CHECKED: RC						
GARDNER ENGINEERING CIVIL • LAND PLANNING MUNICIPAL • LAND SURVEYING 5150 SOUTH 375 EAST OGDEN, UT OFFICE: 801-476-0202 FAX: 801-476-0066								
REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			DATE	DESCRIPTION				
DATE	DESCRIPTION							
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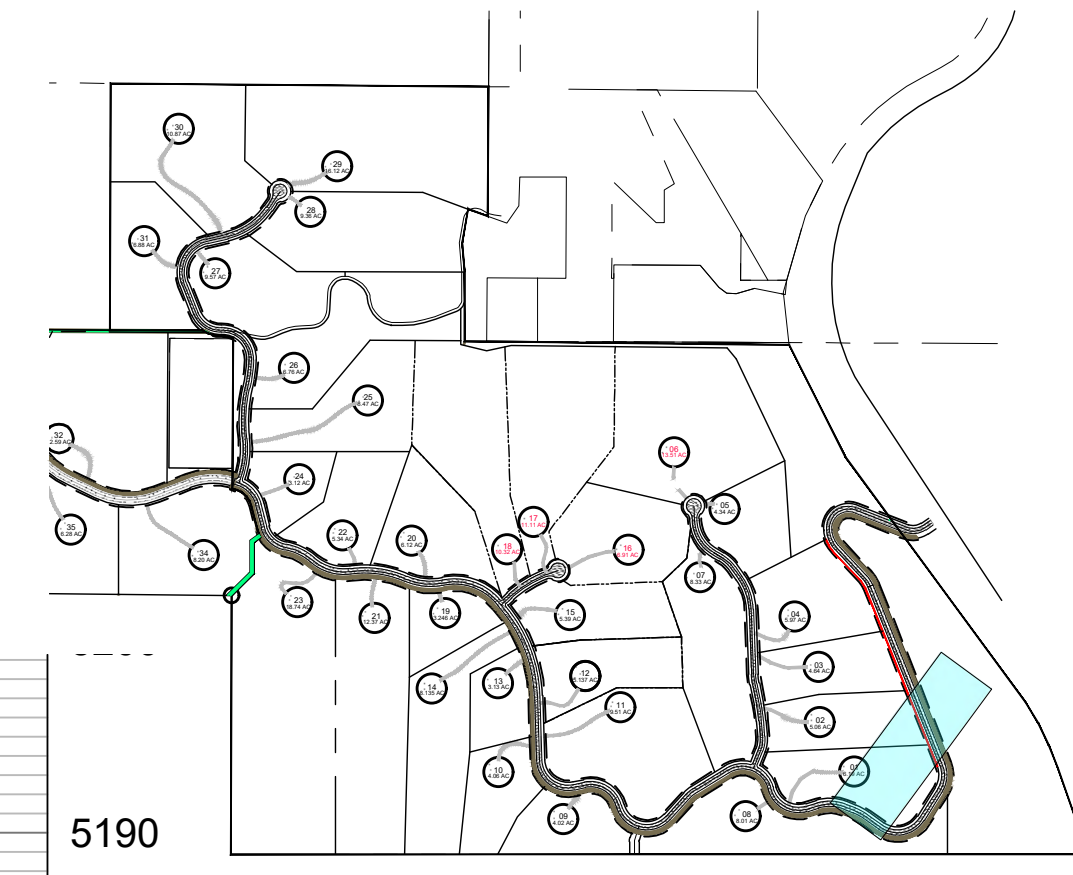
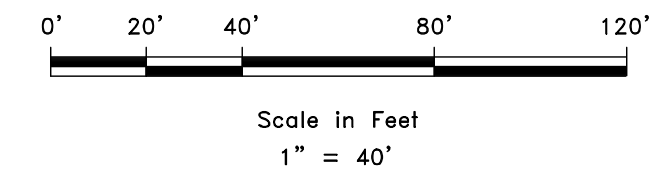
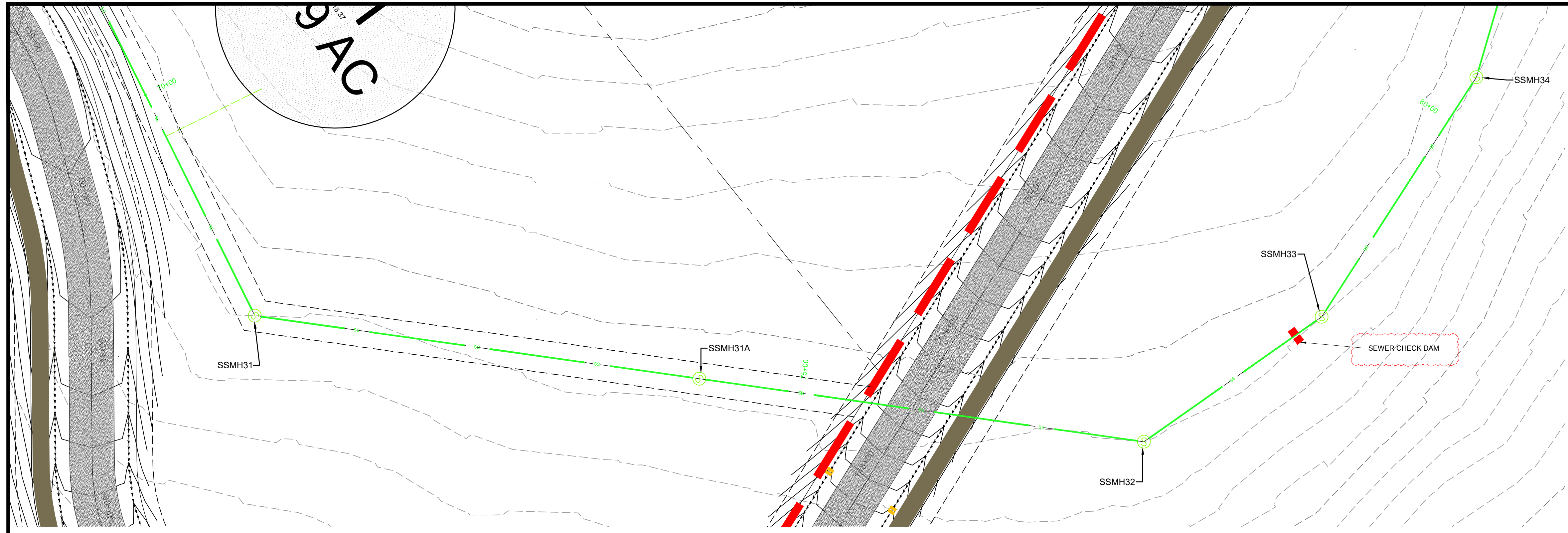


LOCATION MAP

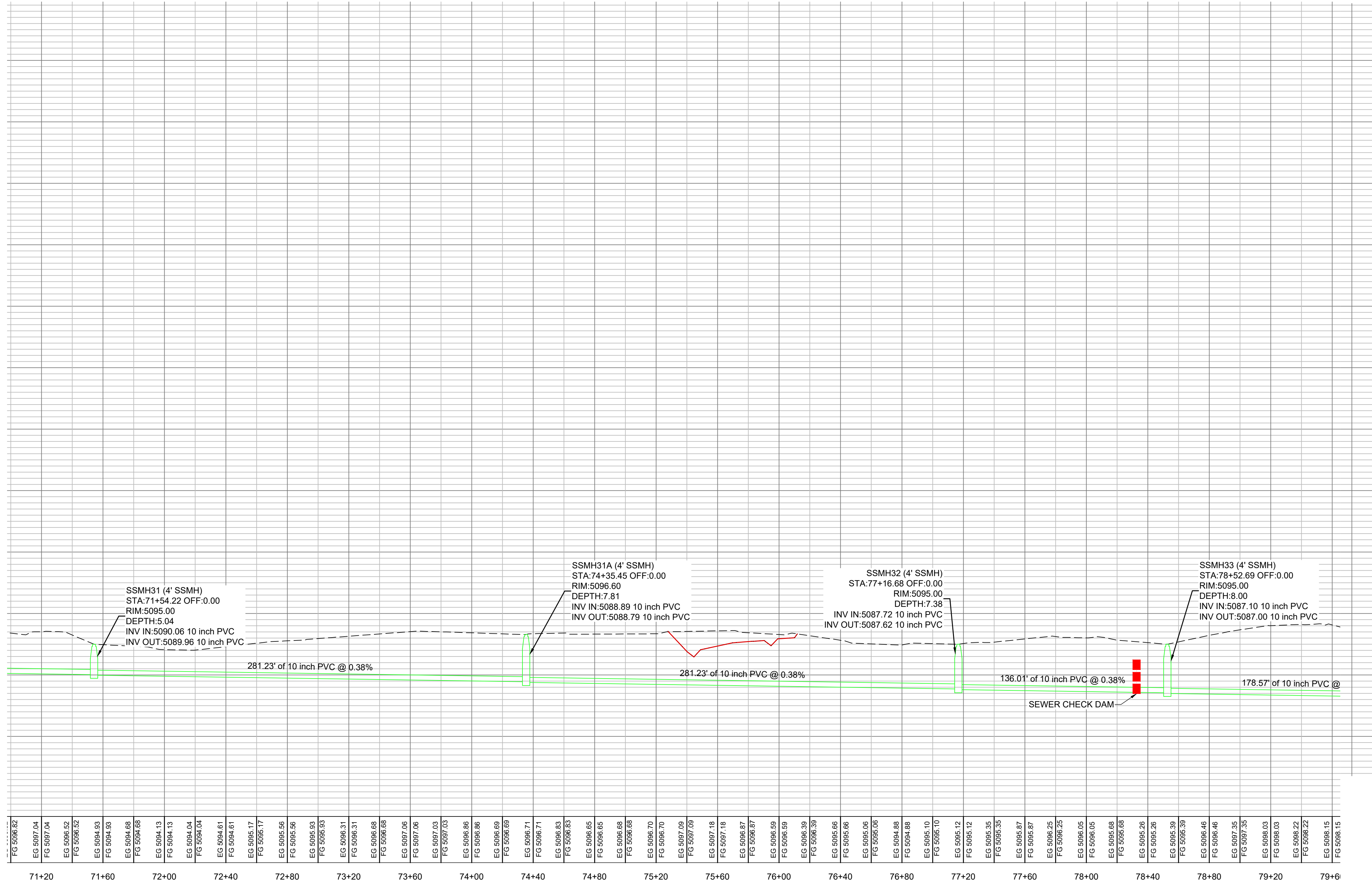
PLAN AND PROFILE SEWER	
OSPREY RANCH	
UT-158	
EDEN, WEBER, UTAH	
GARDNER ENGINEERING	CIVIL • LAND PLANNING
MUNICIPAL • LAND SURVEYING	
5150 SOUTH 375 EAST OGDEN, UT	
OFFICE: 801.476.0202 FAX: 801.476.0066	
PS3	

DATE	DESCRIPTION
9-12-22	COUNTY COMMENTS
9-12-22	DESIGN: KAN
	DRAWN: KAN
	CHECKED: RC
DWG:	

SCALE: 1" = 40'	DATE: 9-12-22	DESIGN: KAN	DRAWN: KAN	CHECKED: RC
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LOCATION MAP



FG 5096.82	71+20	FG 5096.82	71+20
EG 5097.04	71+40	EG 5097.04	71+40
FG 5096.52	71+60	FG 5096.52	71+60
EG 5094.03	72+00	EG 5094.03	72+00
FG 5094.35	72+20	FG 5094.35	72+20
EG 5094.68	72+40	EG 5094.68	72+40
FG 5094.08	72+60	FG 5094.08	72+60
EG 5094.13	73+00	EG 5094.13	73+00
FG 5094.04	73+20	FG 5094.04	73+20
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FG 5095.93	74+60	FG 5095.93	74+60
EG 5096.31	75+00	EG 5096.31	75+00
FG 5096.31	75+20	FG 5096.31	75+20
EG 5096.68	75+40	EG 5096.68	75+40
FG 5096.68	75+60	FG 5096.68	75+60
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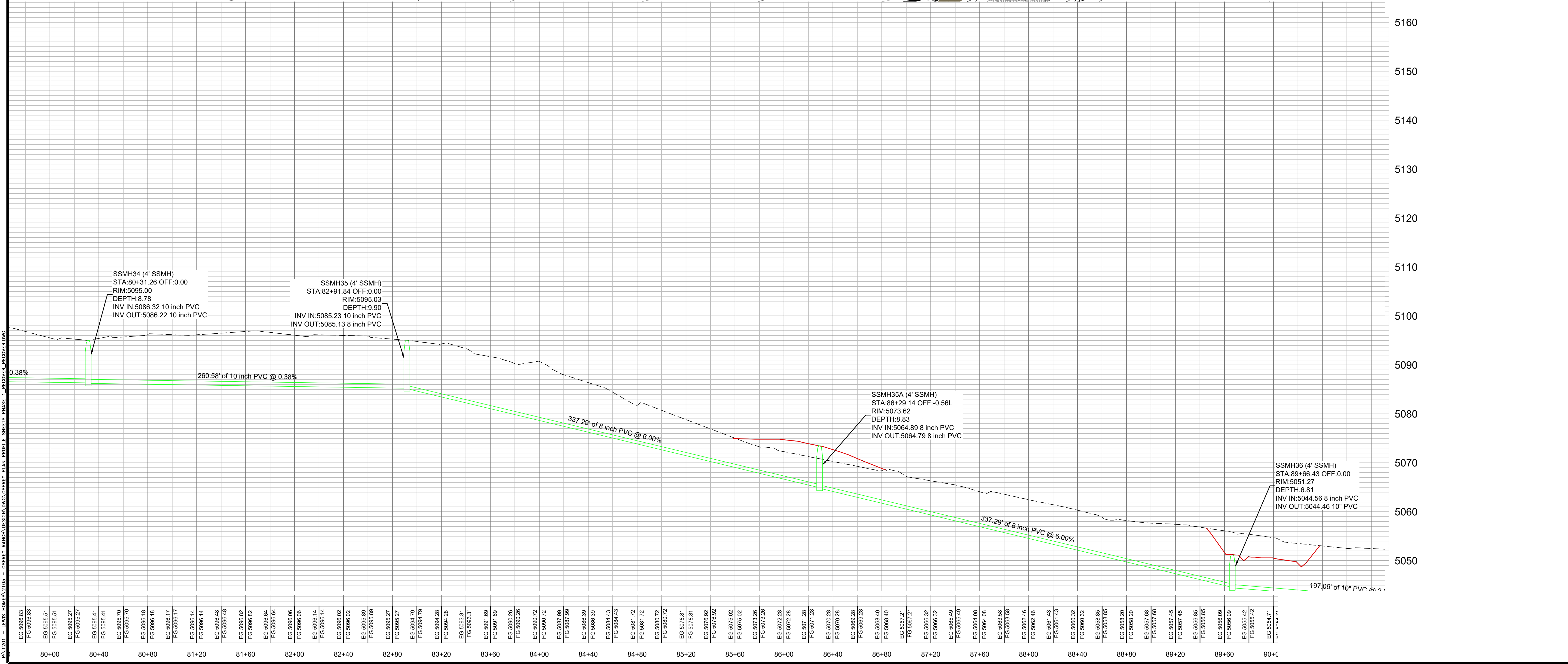
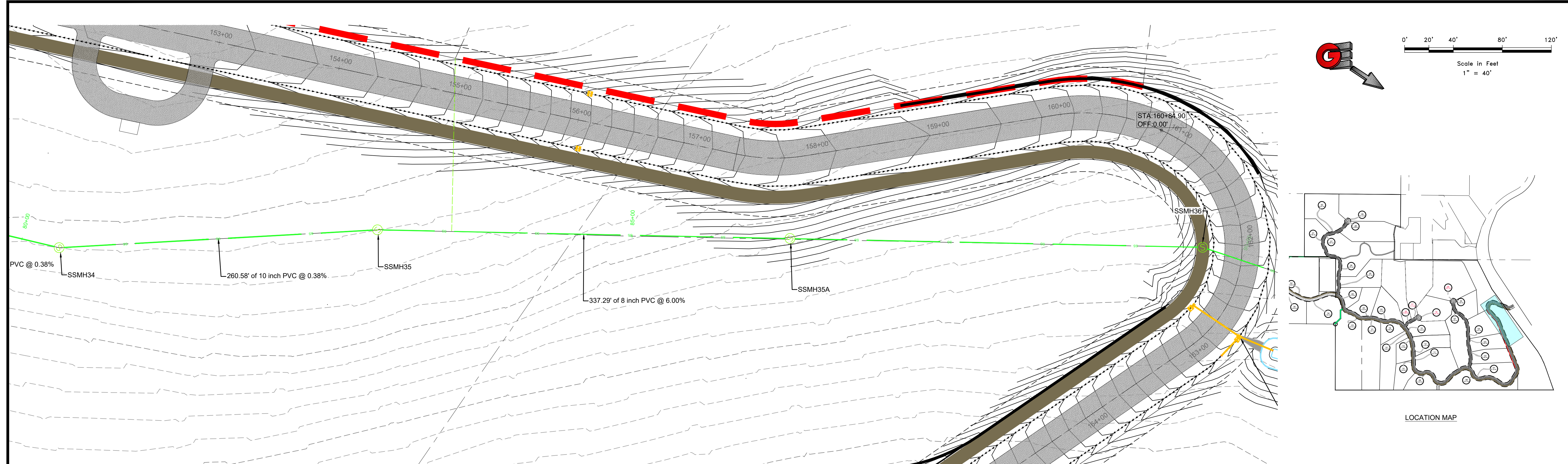
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PLAN AND PROFILE SEWER
OSPREY RANCH
UT-158
EDEN, WEBER, UTAH

GARDNER ENGINEERING
CIVIL • LAND PLANNING
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5150 SOUTH 375 EAST OGDEN, UT
OFFICE: 801.476.0202 FAX: 801.476.0066

DATE	DESCRIPTION
9-15-22	COUNTY COMMENTS

SCALE: 1" = 40'
DATE: 9-15-22
DESIGN: KAN
DRAWN: KAN
CHECKED: RC



11/2/21 - LEWIS HOWES 2105 - OSPREY RANCH (DESIGN) OSPREY RANCH UT - PROFILE SHEETS PHASE 1 - RECORDS RECOVERING

SCALE: 1" = 40' DATE: 8-12-22 DESIGN: KAN DRAWN: KAN CHECKED: RC	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISIONS</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS	DESCRIPTION							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"> PLAN AND PROFILE SEWER OSPREY RANCH UT-158 EDEN, WEBER, UTAH </td> </tr> </table>	PLAN AND PROFILE SEWER OSPREY RANCH UT-158 EDEN, WEBER, UTAH
REVISIONS	DESCRIPTION										
PLAN AND PROFILE SEWER OSPREY RANCH UT-158 EDEN, WEBER, UTAH											
GARDNER ENGINEERING CIVIL • LAND PLANNING MUNICIPAL • LAND SURVEYING 5150 SOUTH 375 EAST OGDEN, UT OFFICE: 801.476.0202 FAX: 801.476.0066											
PS5											

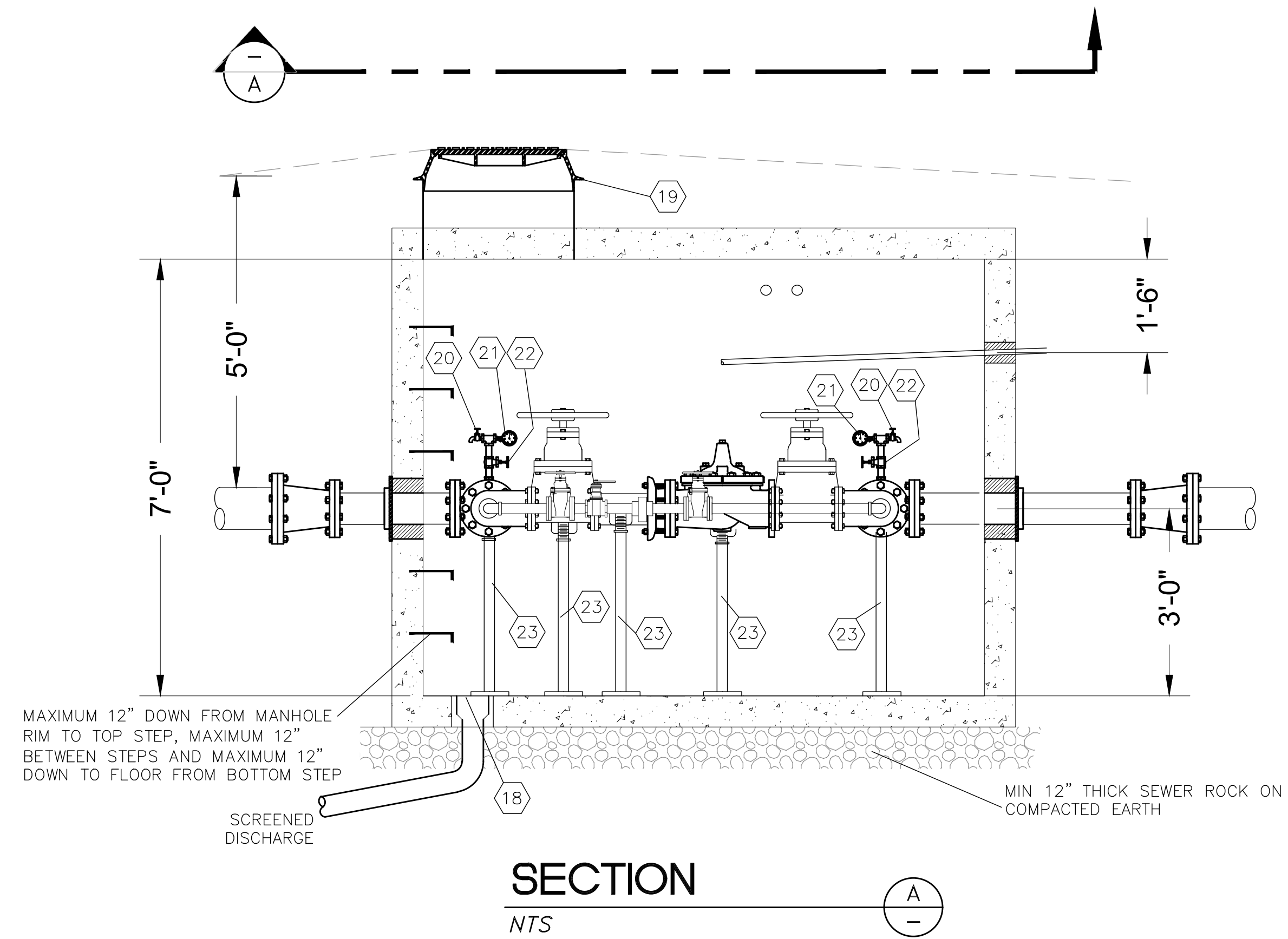
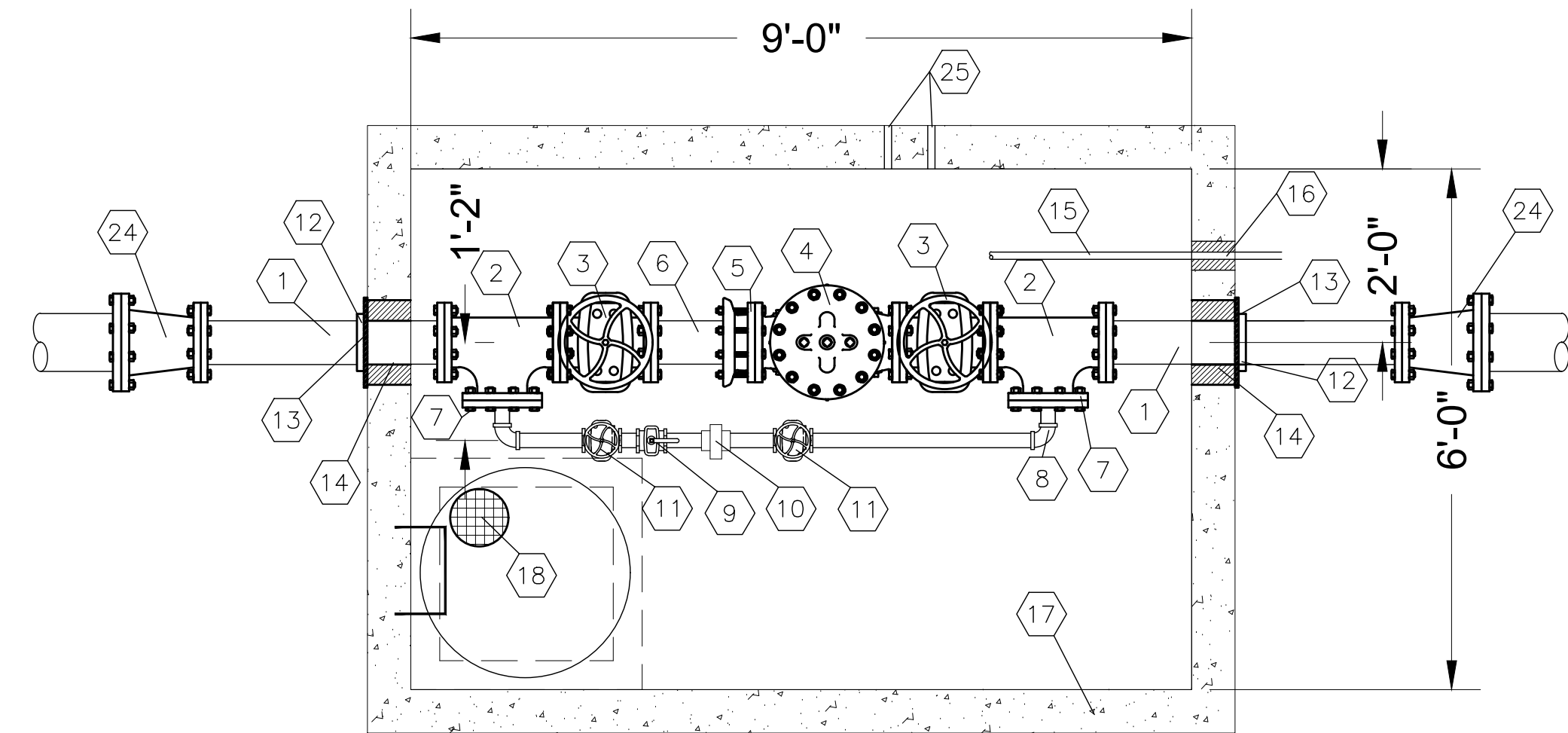
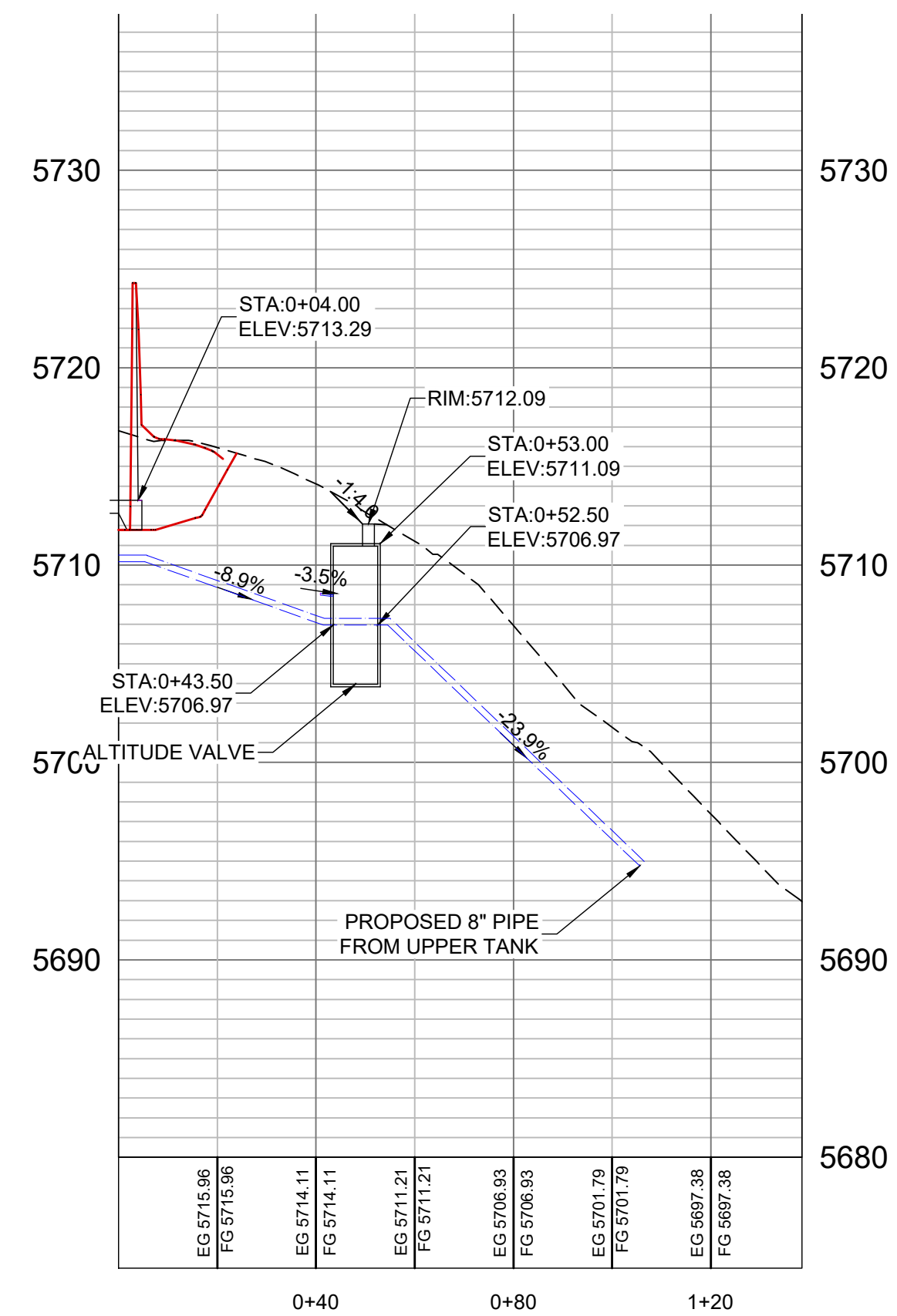
DETAIL ALTITUDE VALVE

BILL OF MATERIALS			NOTES
1	2	6" DIP SPOOL 4'-0" LENGTH FLGXPE	
2	2	6" TEE FLGXFLG	W/ 3/4" TAP FOR PRESSURE GAUGE
3	2	6" GATE VALVE W/ HAND WHEEL	
4	1	6" ALTITUDE VALVE	CLA-VAL 210-01KO G, I50#FLG, D.I., 5'-40'PILOT, ABY, KC, XP2F, REMOTE PILOT ADJUSTMENT
5	1	6" FLANGED COUPLING ADAPTER	
6	1	6" DIP SPOOL 9" LENGTH FLGXPE	
7	2	6" BLIND FLANGE	W/ 2" THREADED TAP
8	-	2" BRASS PIPE ELBOWS FOR BYPASS	AS NEEDED
9	1	2" BRASS BODY GATE VALVE	W/ IMPRINTED TAG*
10	1	2" 3 PIECE UNION	
11	2	2" BRASS BODY BUTTERFLY VALVE	W/ IMPRINTED TAG*
12	2	6" FIELD FLANGE FOR DIP	
13	2	1/4" THICK STEEL THRUST PLATE	10"x10" W/7" WIDE SLOT FOR PIPE CENTERED IN PLATE WELDED TO PIPE WALL
14	2	PRE-CORED HOLES 8"Ø	PACK W/NON SHRINK GROUT
15	-	1" CTS SDR9 HDPE NSF61 SENSING LINE	3.5% UP TO TANK, NO COUPLINGS, PROVIDE NEEDED FITTINGS, CONNECT TO ALTITUDE VALVE
16	1	PRE-CORED HOLE 4"Ø	PACK AROUND CONDUIT WITH NON SHRINK GROUT
17	1	6' X 9' X 7' TALL PRECAST CONCRETE VAULT	W/ STEPS AND 1' GRADE RING SECURED TO ROOF DECK OVER MANHOLE
18	1	4" DRAIN PVC PIPE TO DAYLIGHT	
19	1	A-1180 D&L MANHOLE RING AND COVER	"WATER"
20	2	1/2" SMOOTH NOSE TAP	
21	2	1/4" (1-100) PSI DIGITAL PRESSURE SENSOR	WITH LOCAL DISPLAY AND 4-20 MA OUTPUT
22	2	3/4" BRASS PIPING AND ISOLATION VALVE	
23	5	ADJUSTABLE PIPE STAND	
24	2	6" X 8" REDUCER	6" MJ X 8" MJ W/MECHANICAL RESTRAINTS ON BOTH ENDS
25	2	1" S.S. THREADED NIPPLE THROUGH WALL AND RNC TO VALVE/METER.	ROUTE ELECTRICAL/CONTROL CONDUITS ALONG CEILING, TERMINATE AT VALVE/METER. MAINTAIN WATER TIGHT CONSTRUCTION

*IMPRINTED STAINLESS STEEL TAG, 1/8" THICK, 2"x4" 8" LETTERING HEIGHT. ATTACHED TO VALVE W/SS. CHAIN (WIRE LINK OR BEADED TYPE)

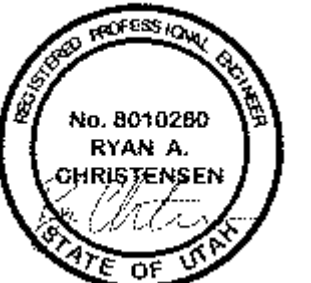
"EMERGENCY BYPASS

- "1. FULLY OPEN GATE VALVES
- "2. OPEN B.V. ENOUGH FOR 2 PSI DROP ON UPSTREAM GAUGE.
- "3. FULLY CLOSE GATE VALVES WHEN DONE"



SCALE: #/###
DATE: 01-21-22
DESIGN: KAN
DRAWN: KAN
CHECKED: RC

REVISIONS
DATE
DESCRIPTION



DETAIL ALTITUDE VALVE
OSPREY RANCH
1800 N HYW 158
EDEN, WEBER, UTAH



DT3

WATER DETAILS

1 THRUST BLOCK DETAIL
NTS

APPLIES TO ALL PRESSURE PIPE

ADJUST WATER VALVE BOX TO GRADE FOLLOWING FINAL SURFACE PREP. W/CONCRETE COLLAR. COLLAR TO BE HELD DOWN 1/4" BELOW TOP OF NEW ASPHALT IF IN ROADWAY.

2 TYPICAL VALVE DETAIL
NTS

ADJUST WATER VALVE BOX TO GRADE FOLLOWING FINAL SURFACE PREP. W/CONCRETE COLLAR. COLLAR TO BE HELD DOWN 1/4" BELOW TOP OF NEW ASPHALT IF IN ROADWAY.

NOTE:
1. VALVE BOX, RISER AND LID MUST COME FROM THE SAME MFR. BE INTENDED FOR USE TOGETHER AND SHALL BE WITHIN PUBLISHED DIMENSIONS TO BRANDES.
2. IF LOCATED IN ROADWAY W/ SPEED LIMIT OF 40 MPH OR GREATER, LID SHALL BE HEAVY AND EXTRA DEEP.
3. VALVES MUST BE INSTALLED ON EACH SIDE OF TEES AND CROSSINGS, UNLESS THERE IS A VALVE WITHIN 200 FEET OF SAID FITTINGS.

3A TYPICAL TRENCH SECTION
NTS

NOTE:
CONTRACTOR IS RESPONSIBLE TO MEET TRENCH RESTORATION STANDARDS OF THE ENTITY OWNING THE ROADWAY. RESTORE THE ROADWAY TO SAID STANDARDS AND SHALL BE SOLELY RESPONSIBLE FOR ALL ROADWAY PERMITS AND/OR FEES.

NOTE:
WATER & SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10 HORIZONTAL FEET FROM EACH OTHER.
WHERE A WATER LINE AND A SEWER LINE MUST CROSS, THE WATER LINE SHALL BE AT LEAST 10" ABOVE THE SEWER LINE.
SEPARATION DISTANCES ARE TO BE MEASURED SCOUR TO SCOUR.
WATER LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.
IF THESE STANDARDS CANNOT BE MET AN EXCEPTION TO THE STANDARD MAY BE POSSIBLE. THE ENTITY OWNING THE EXCEPTION SHALL INITIATE AND PURSUE A REQUEST FOR A SEPARATION EXCEPTION WITH THE STATE DEPARTMENT OF DRINKING WATER, IN ACCORDANCE WITH R309-200-7 OF THE STATE OF UTAH ADMINISTRATIVE RULES.

4 TYPICAL WATER CONNECTION/RE-CONNECTION
NTS

ACCEPTABLE COPPER SETTERS:
2" FORD V8HC 74-18W-44-30-0L
1" FORD V8HC 74-18W-44-44-0L

ACCEPTABLE COPORATION STOPS:
2" FORD F81100-3-0-0L
1" FORD F81100-4-0-0L

ACCEPTABLE COPORATION FITTINGS:
SMALL WAVE STAINLESS STEEL INSERTS

5 FIRE HYDRANT DETAIL
NTS

NOTE: HYDRANT DRAINS SHALL NOT BE CONNECTED TO OR LOCATED WITHIN 10 FEET OF SANITARY SEWERS. WHERE POSSIBLE, HYDRANT DRAINS SHALL NOT BE LOCATED WITHIN 10 FEET OF STORM DRAINS.

6 COMBINATION AIR/VAC VALVE DETAILS
NTS

NOTE:
1. LOCATE STANDPIPE WELL OUTSIDE TRAVELED ROADWAY OR AS DIRECTED BY THE ENGINEER.

NOTE:
1. LOCATE STANDPIPE WELL OUTSIDE TRAVELED ROADWAY OR AS DIRECTED BY THE ENGINEER.

8A PRV STATION
NTS

SEE DETAIL 8B ON SHEET 7 FOR BILL OF MATERIALS

8B PRV STATION
NTS

VENT SHROUD DETAIL
NTS

AIR-VAC ASSEMBLY
NTS

BILL OF MATERIALS

NO.	QTY	DESCRIPTION	6" LINE	8" LINE	10" LINE	NOTES	
1	1	6" OR FIVE MORE	6"	8"	10"		
2	2	REDUCER 1/2" DIA	6"x4"	8"x6"	10"x8"	USE JOINT RETAINER GLANDS	
3	1	DIP SHOUL. 3" LENGTH FLOPPE	4"	6"	8"		
4	2	TEE FLANGE FOR DIP	4"	6"	8"		
5	2	1/4" THICK STEEL THRUST PLATE	10"x10"	12"x12"	14"x14"	SO. W/ # 4 CUT OUT	
6	2	DRILL 1" WEEP HOLE AT BASE	10" x 4"	12" x 6"	14" x 8"	SEAL WITH NON-SHRINK GROUT	
7	2	TEE FLANGE	4"x4"x4"	6"x6"x6"	8"x8"x8"		
8	2	1/4" (1-200) PSI LIQUID FILLED PRESSURE GAUGE	4"	6"	8"	SUPPLY WITH BRASS STOP COCK	
9	2	RESILIENT SEAT GATE VALVE W/ VALVE BOX	4"	6"	8"		
10	1	ELBOW AT VALVE. TRANSITION TO POLY PIPE TO TOP OF VENT. DIAMETER DETERMINED BY AIR VALVE SIZE	4"	6"	8"		
11	1	PRESSURE REDUCING VALVE THROTTLE	4"	6"	8"	CLA-VAL MODEL 90-01 RC	
12	1	DA. X LENGTH GATE VALVE THROTTLE	4"	6"	8"	CLA-VAL MODEL 90-01 RC	
13	2	DA. X LENGTH GATE PIPE THROTTLE	4"	6"	8"	FIELD ADJUST LENGTH	
14	2	DA. X LENGTH GATE PIPE THROTTLE	4"	6"	8"	FIELD ADJUST LENGTH	
15	1	DA. X LENGTH GATE PIPE THROTTLE	4"	6"	8"	FIELD ADJUST LENGTH	
16	2	DA. X LENGTH GATE PIPE THROTTLE	4"	6"	8"	FIELD ADJUST LENGTH	
17	2	DA. X LENGTH GATE PIPE THROTTLE	4"	6"	8"	FIELD ADJUST LENGTH	
18	2	DA. X 8" GALV. PIPE THROTTLE	4"	6"	8"		
19	2	BEND FLANGE W/ THROTTLE TAP	4"	6"	8"		
20	2	DA. X 1" COUPLER	4"	6"	8"		
21	1	PRE-CORR HOLES/2" DIA. AND PIPE TO DRAINAGE	4"	6"	8"	SUMP FOR SUBSURFACE WATER	
22	1	4-1181 DAL MANDREL RING AND COVER	4"	6"	8"	"WATER" GRADE RING IF NEEDED	
23	6	4-1181 DAL MANDREL RING AND COVER	4"	6"	8"	"WATER" GRADE RING IF NEEDED	
24	1	DA. X LENGTH DIP FLANGE	4"	6"	8"		
25	1	DA. X 2" COUPLER	4"	6"	8"		
26	1	DIP SLEEVE 1/2" DIA	4"	6"	8"		
27	1	DA. X 1" COUPLER	4"	6"	8"		
28	1	RESTRICTED FLANGED COUPLER ADAPTER	4"	6"	8"		
31	4	PIPE STAND				RSD LOADING	
32	1	6" X 12" X 1" WALL PRECAST CONCRETE VALVE	1"	1.500"	2"	1.500"	APRD MODEL 100-T-100 W/ FITTINGS
33	1	SCREWED GATE VALVE	1"	1.500"	2"	1.500"	APRD MODEL 100-T-100 W/ FITTINGS
34	2	1/2" SMOOTH NOZZLE TAP	3/4"	3/4"	3/4"	W/ FITTINGS	
35	1	SCREWED GATE VALVE	3/4"	3/4"	3/4"	W/ FITTINGS	
36	1	CROSS	4"	6"	8"	FNPT	
37	1	SCREWED GATE VALVE	4"	6"	8"	CLA-VAL 50-1 OR EQL	
38	1	RELIEF/SUSTAINING VALVE	4"	6"	8"	FNPT	
39	1	DA. X 1" COUPLER	4"	6"	8"	FNPT	
40	1	CORE AND GROUT	4"	6"	8"	TAP INSIDE VALVE FOR DRAINAGE	
41	1	GALVANIZED STEEL PIPE (GSP)	4"	6"	8"	ELBOW GSP	
42	1	ELBOW GSP	4"	6"	8"	NON-CORRODIBLE	
43	1	CONCRETE COLLAR	2"	3"	4"	NON-CORRODIBLE	
44	1	12" X 12" X 12"					

* TO BE DETERMINED BY SITE ** 8" CROSS MAY USE 8"x4" CROSS W/DIP FITTINGS FOR RELIEF VALVE. VERIFY WITH OWNER AND ENGINEER

SCALE: *****
DATE: 01-21-22
DESIGN: KAN
DRAWN: KAN
CHECKED: RC

REVISIONS
DATE DESCRIPTION

DATE

WATER DETAILS
OSPREY RANCH
1800 N HYW 158
EDEN, WEBER, UTAH

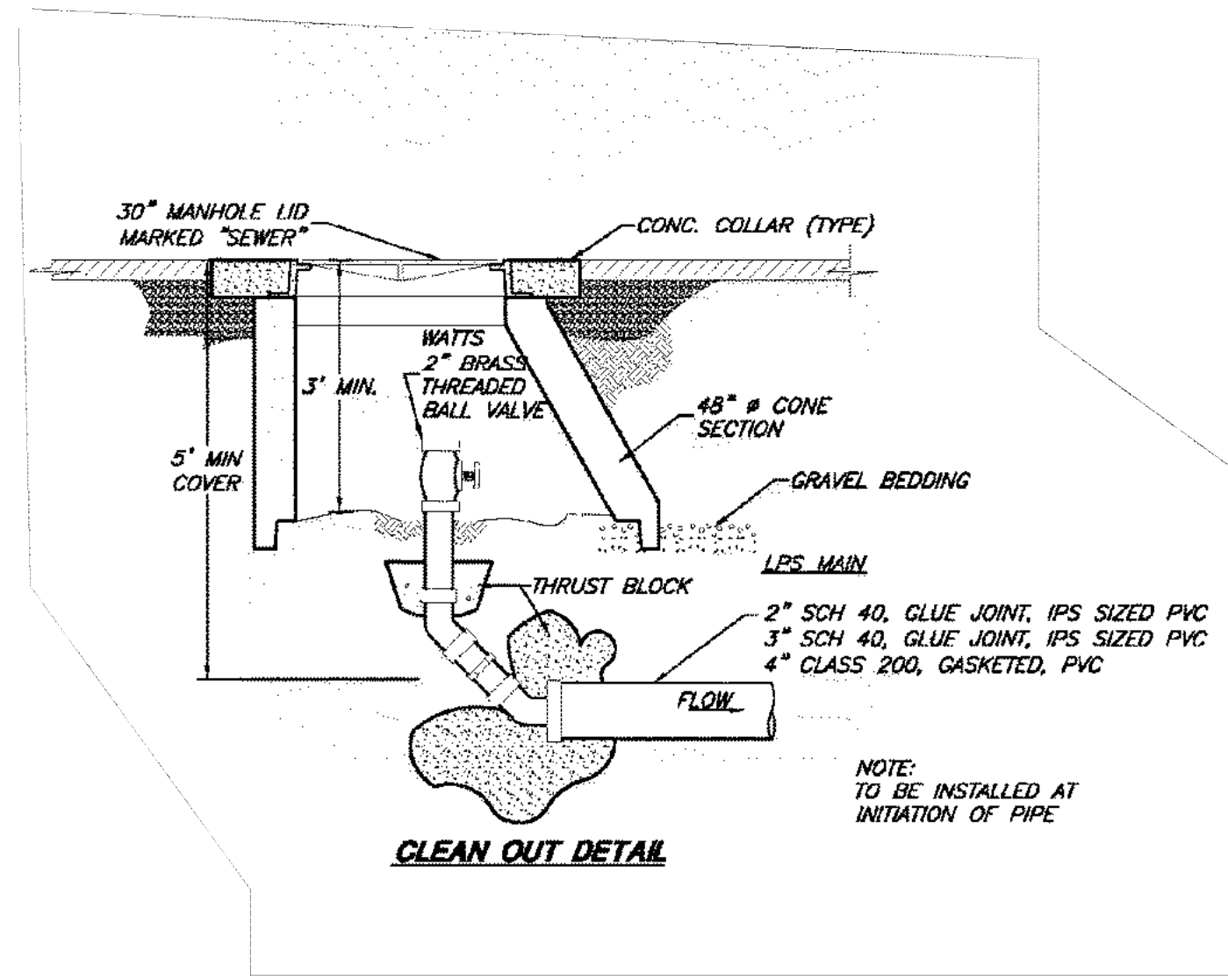
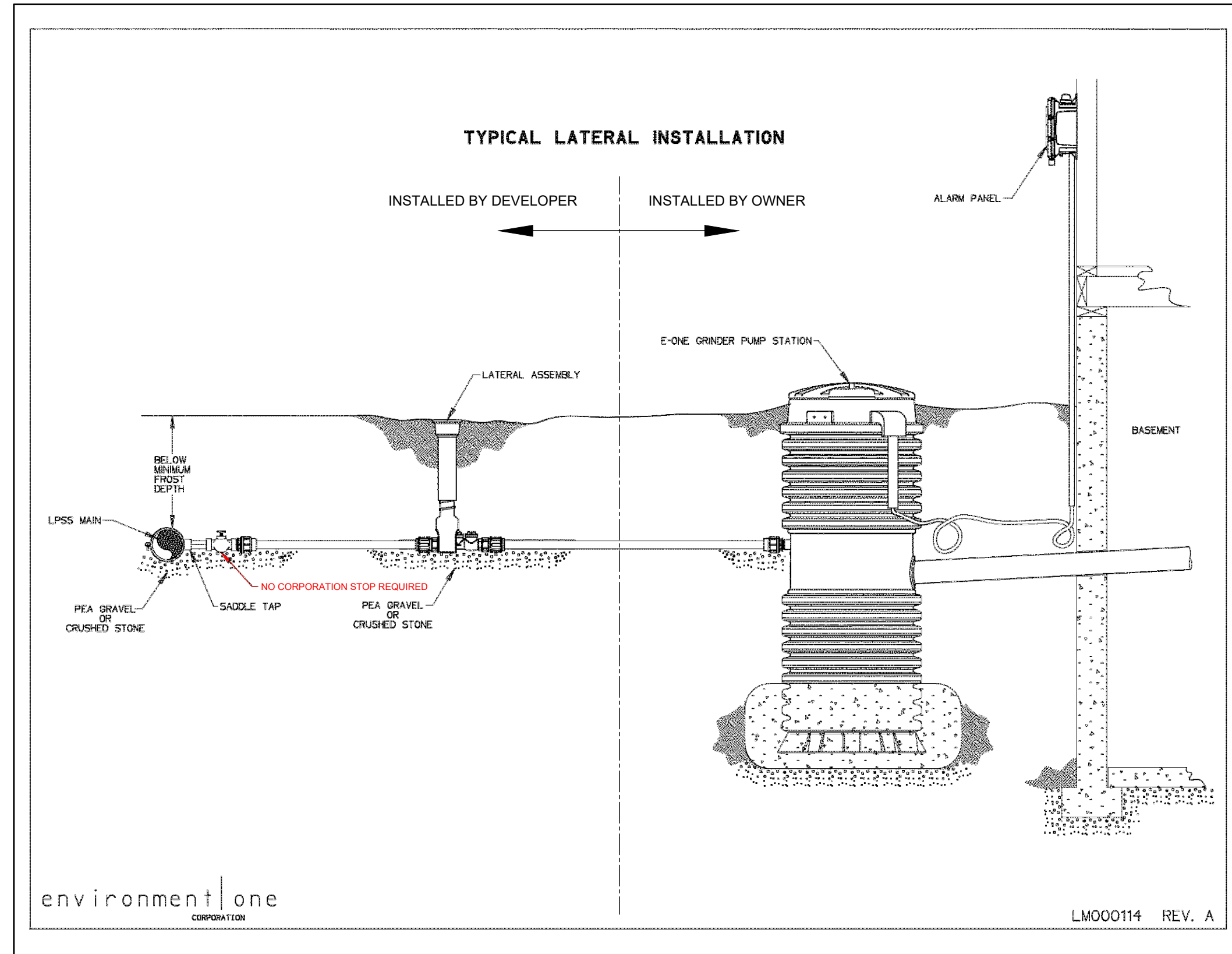
REGISTERED PROFESSIONAL ENGINEER
No. 8010280
RYAN A. CHRISTENSEN
STATE OF UTAH

GARDNER ENGINEERING
CIVIL/LAND PLANNING
MUNICIPAL/LAND SURVEYING

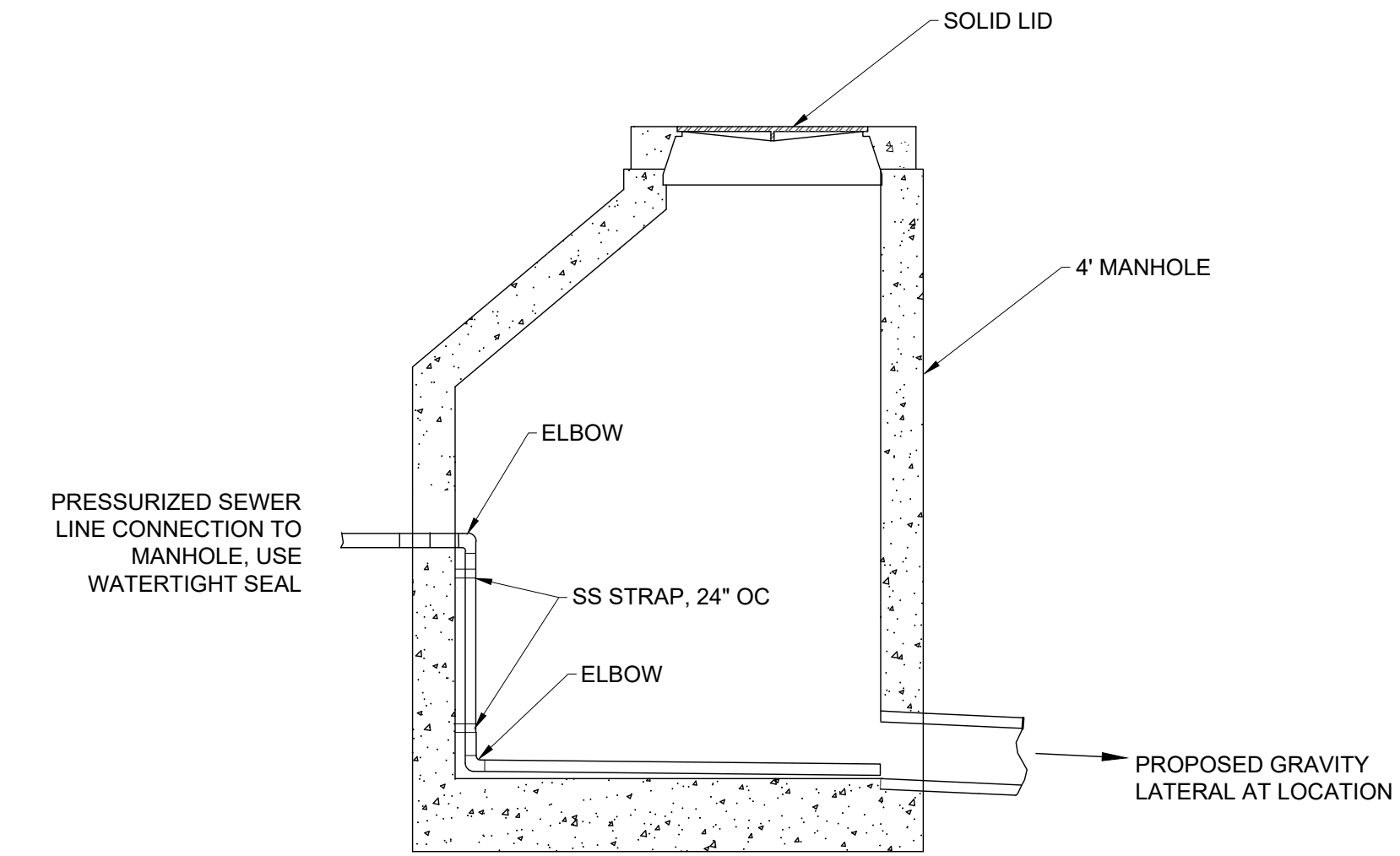
5150 SOUTH 375 EAST OGDEN, UT
OFFICE: 801-476-0202 FAX: 801-476-0066

DT4

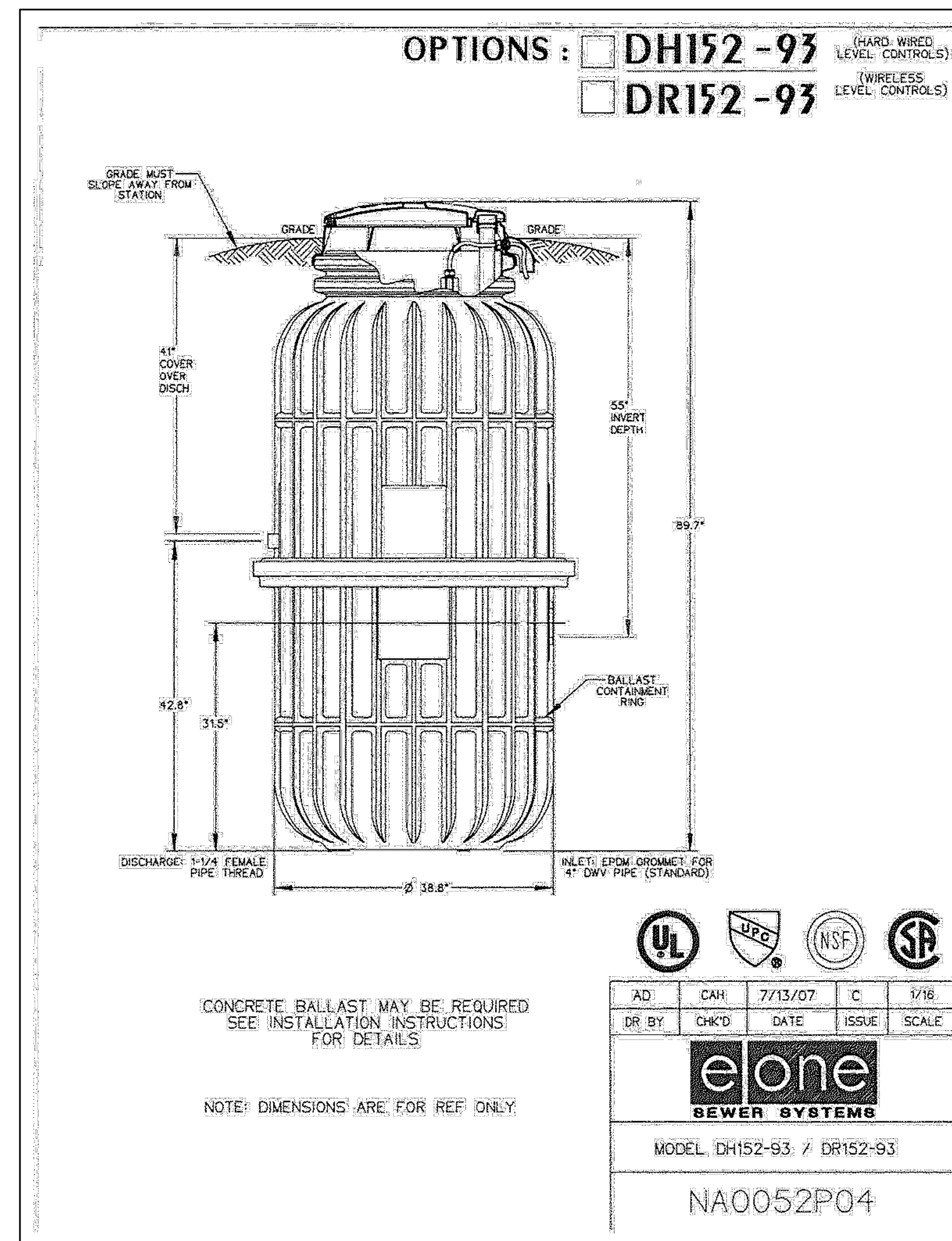
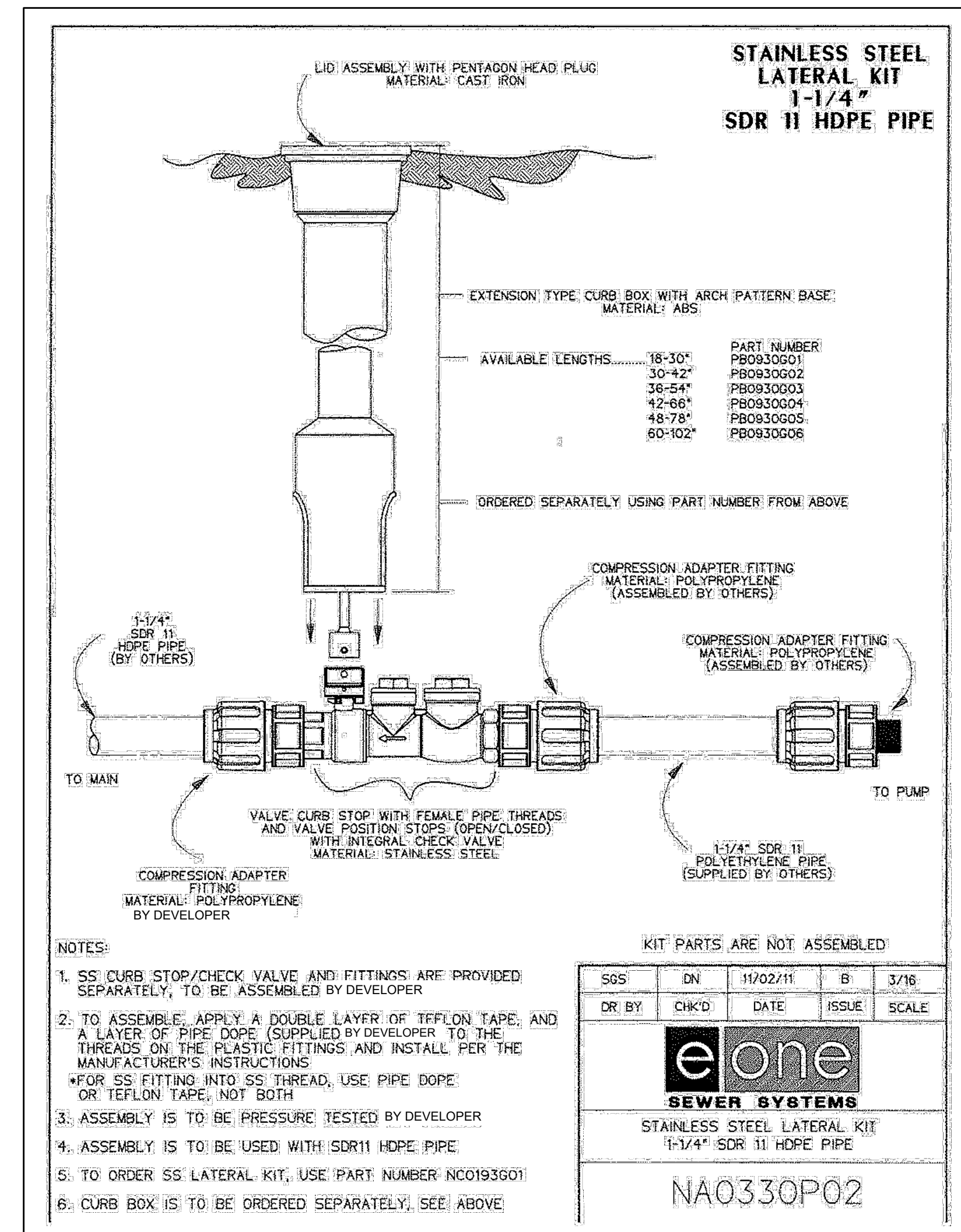
SEWER DETAILS



LOW PRESSURE - SEWER CLEAN OUT



PRESSURE LINE CONNECTION TO MANHOLE (TYP.)



INTERMITTENT PUMP

REVISIONS	DESCRIPTION



SEWER DETAILS
OSPREY RANCH
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