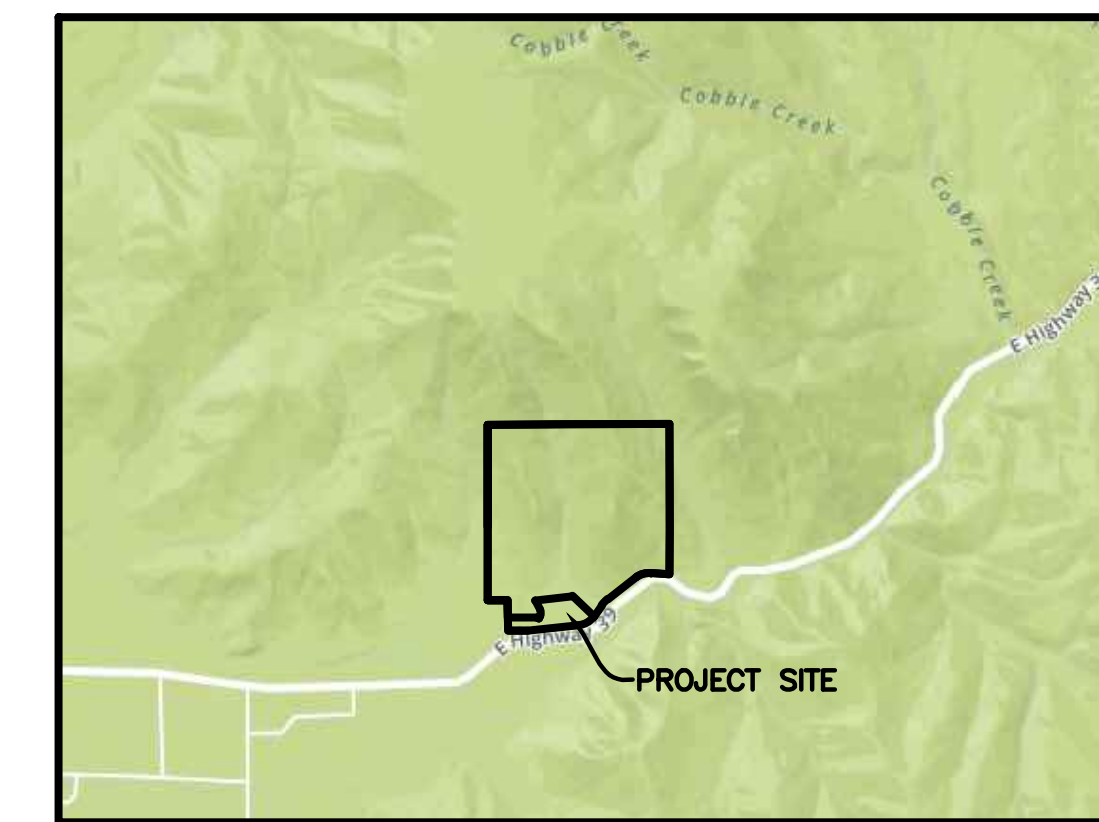


Project Narrative/Notes/Revisions

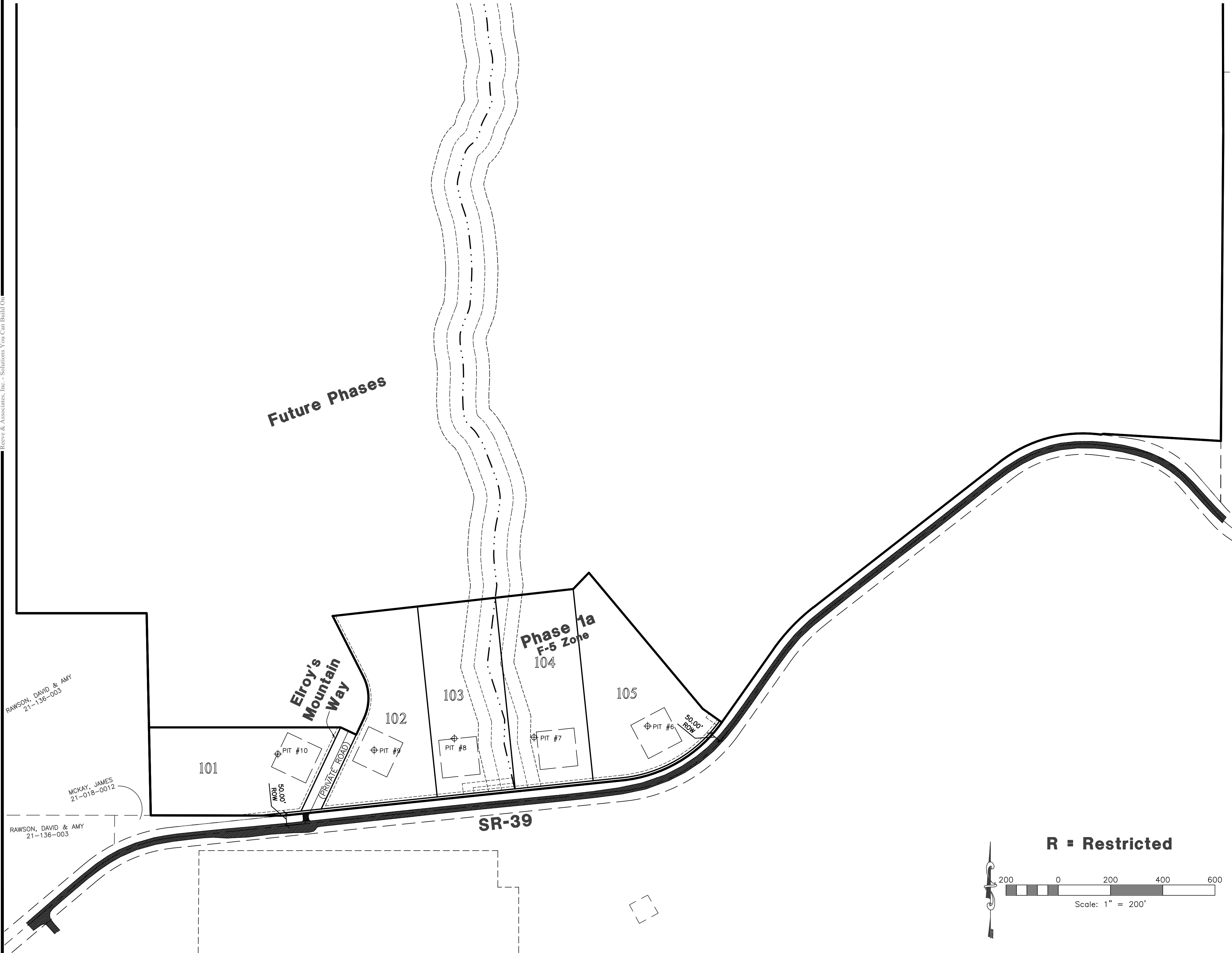
1. 11/04/2021 CK - COMPLETED DESIGN FOR CLIENT & COUNTY REVIEW.
2. 12/02/2021 CK - UPDATED UDOT STREET SECTION.
3. 12/21/2021 KH - DRAINAGE NOTE ADDED TO SHEET 2.
4. 01/14/2022 CK - ADDITIONAL UDOT DEDICATION.
5. 03/16/2022 CK - ADDED HYDRANT AND WATERLINE EXTENSION PER FIRE MARSHALL DAVE REED.
6. 04/18/2023 CK - UPDATED PHASING.
7. 06/12/2023 CK - UPDATED PHASING.
8. 06/30/2023 CK - REVIEW COMMENTS.

Gateway Estates Subdivision Phase 1 Improvement Plans

WEBER COUNTY, UTAH
OCTOBER 2021



Vicinity Map
SCALE: NONE



Sheet Index

- Sheet 1 - Cover/Index Sheet
- Sheet 2 - Notes/Legend/Street Cross-Section
- Sheet 3 - Elroy's Mountain Way - 0+00.00 - 3+75.00
- Sheet 4 - Grading, Drainage, & Utility Plan
- Sheet 5 - Drive Approach Details & Grading Lot 105
- Sheet 6 - Drive Approach Details & Grading Lots 103 & 104
- Sheet 7 - Drive Approach Details & Grading Elroy's Mountain Way
- Sheet 8 - Storm Water Pollution Prevention Plan Exhibit
- Sheet 9 - Storm Water Pollution Prevention Plan Details

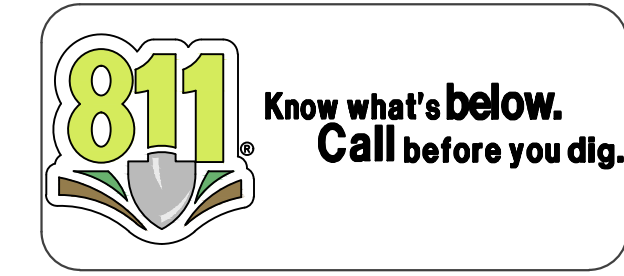
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06-12-23	CK Phasing Update
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Gateway Estates Subdivision Phase 1 WEBER COUNTY, UTAH

Cover/Index Sheet

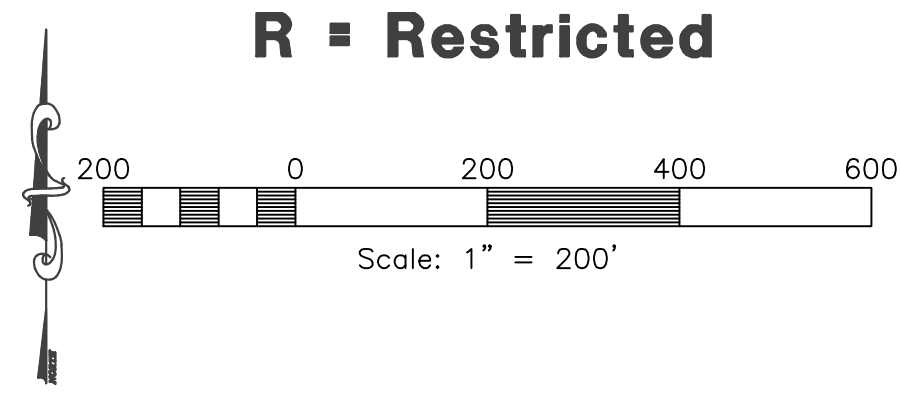
Engineer's Notice To Contractors
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM AVAILABLE INFORMATION PROVIDED BY OTHERS. THE LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO CONTACT THE UTILITY COMPANIES AND TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN, AND ANY OTHER LINES OBTAINED BY THE CONTRACTOR'S RESEARCH, AND OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

Surveyor:
Trevor Hatch
Reeve & Associates, Inc.
5160 South 1500 West
Riverdale, Utah, 84405
PH: (801) 621-3100



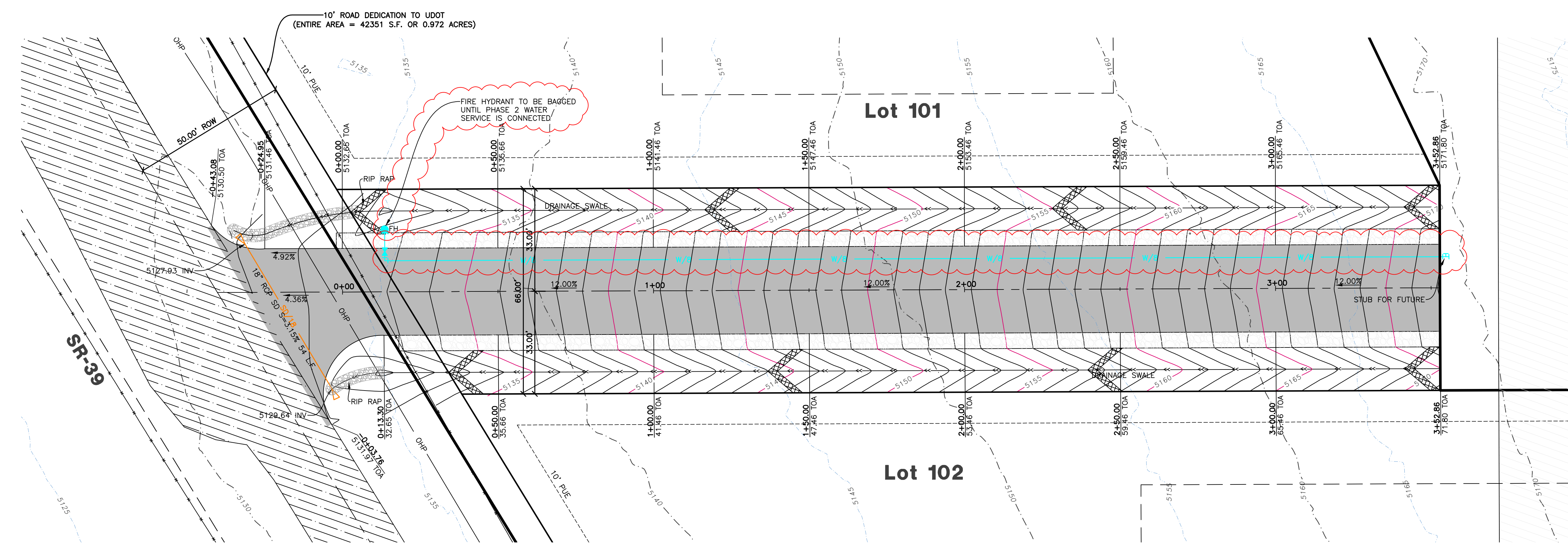
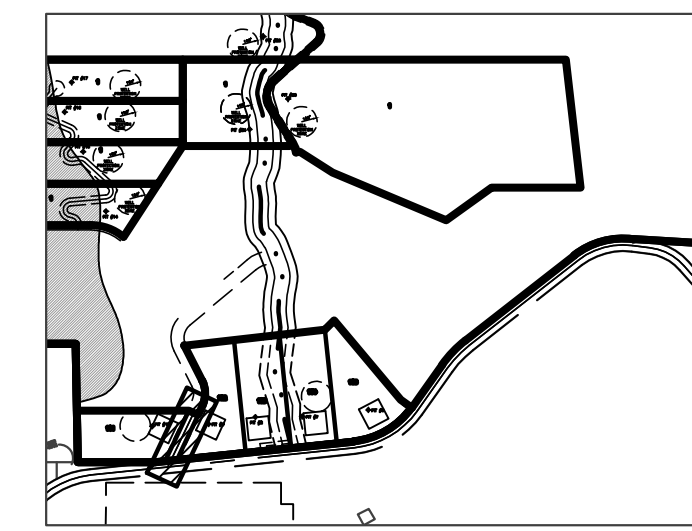
Developer Contact:
Matt Lowe
6028 South Ridgeline Dr.,
Ste. 200
Ogden, Utah, 84405
PH: (801) 648-8229

Project Contact:
Jeremy Draper
Reeve & Associates, Inc.
5160 South 1500 West
Riverdale, Utah, 84405
PH: (801) 621-3100

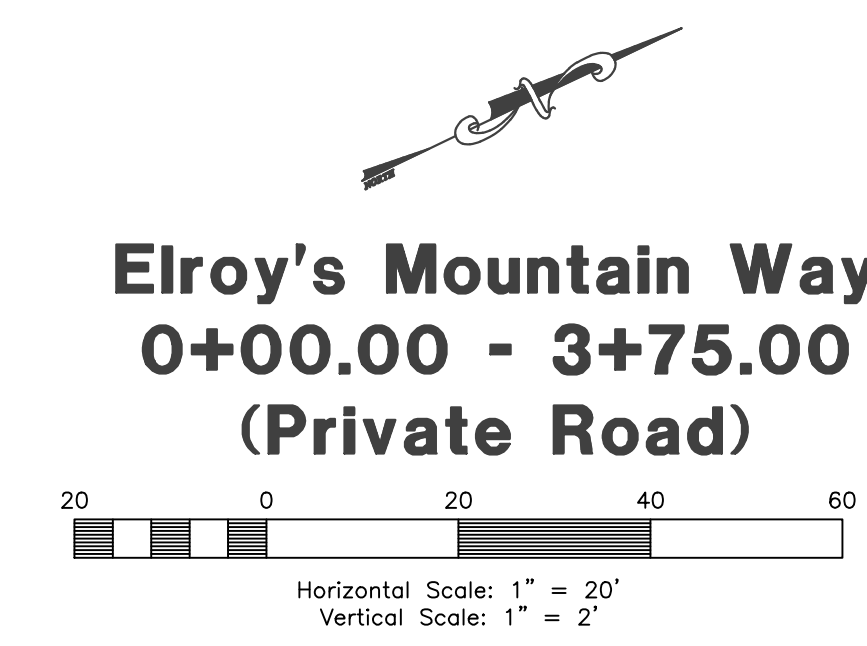
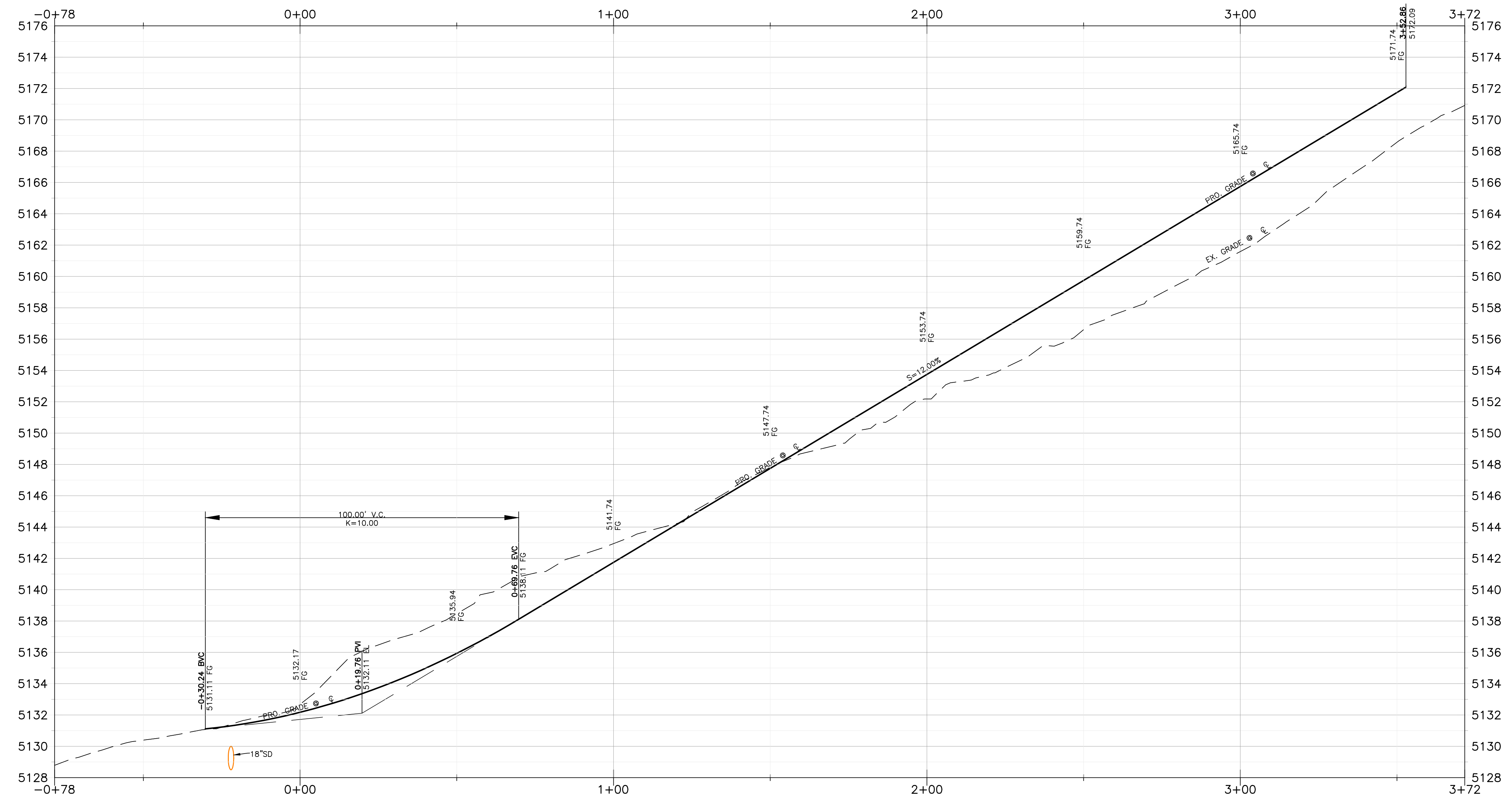


Project Info.
Engineer: KENNETH H. HUNTER, P.E.
Drafter: C. KINGSLEY
Begin Date: OCTOBER 2021
Name: GATEWAY ESTATES SUBDIVISION PHASE 1
Number: 4825-26

Key Map
NOT TO SCALE



Future Phases



NOTES

1. CONTOURS ARE SHOWN IN 5 FOOT INTERVALS
2. LOTS WILL HAVE WELLS WITH A 100' RADIUS PROTECTION ZONE
3. LOTS WILL HAVE SEPTIC TANKS
4. EACH INDIVIDUAL RESIDENTIAL HOME TO HAVE A FIRE SPRINKLER SYSTEM INSTALLED.
5. LOTS 102-105 WILL SHARE A COMMON WELL THAT WILL BE LOCATED ON LOT 104.

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REVISIONS	DATE	DESCRIPTION
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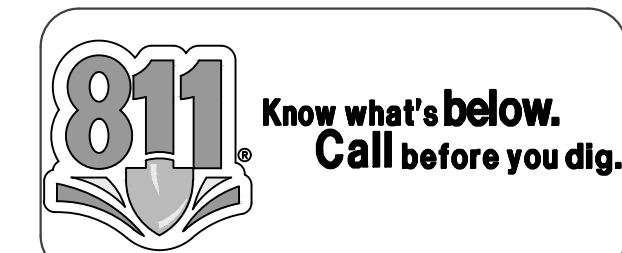
Gateway Estates Subdivision
Phase 1
WEBER COUNTY, UTAH

Elroy's Mountain Way
0+00.00 - 3+75.00



Project Info.

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Stormwater Pipe Flow Calculations
Gateway Phase 1A Drainage
6/29/2023 KHH

The following pipe flow calculations are based on the peak 100-yr flow for the drainage area contributing to the existing drainageway. Rainfall intensity is taken from NOAA Atlas 14 for the 100-yr event.

Time of Concentration - Kirpich Equation

L =	9515 ft
S =	0.25 ft/ft
t _c =	15 min
I =	4.54 in/hr (15-min TOC)

Peak Run-off:

Runoff Coefficient	C =	0.15 (deciduous forest)
Rainfall Intensity	i =	4.54 IN/HR
Acreage	A =	319.22 ACRES
Q	Q =	217.4 cfs

Pipe Sizing

Description	Pipe Size (in)	Slope	Cap. (cfs)
Corrugated HDPE	36	9.0%	218.8

Lot 104 Drainage Crossing Pipe Calculations

COUNTY SEASONAL DRAINAGE
50' SETBACK
NO BUILD ZONE

50.00' 100.00' 50.00'

Future Phases

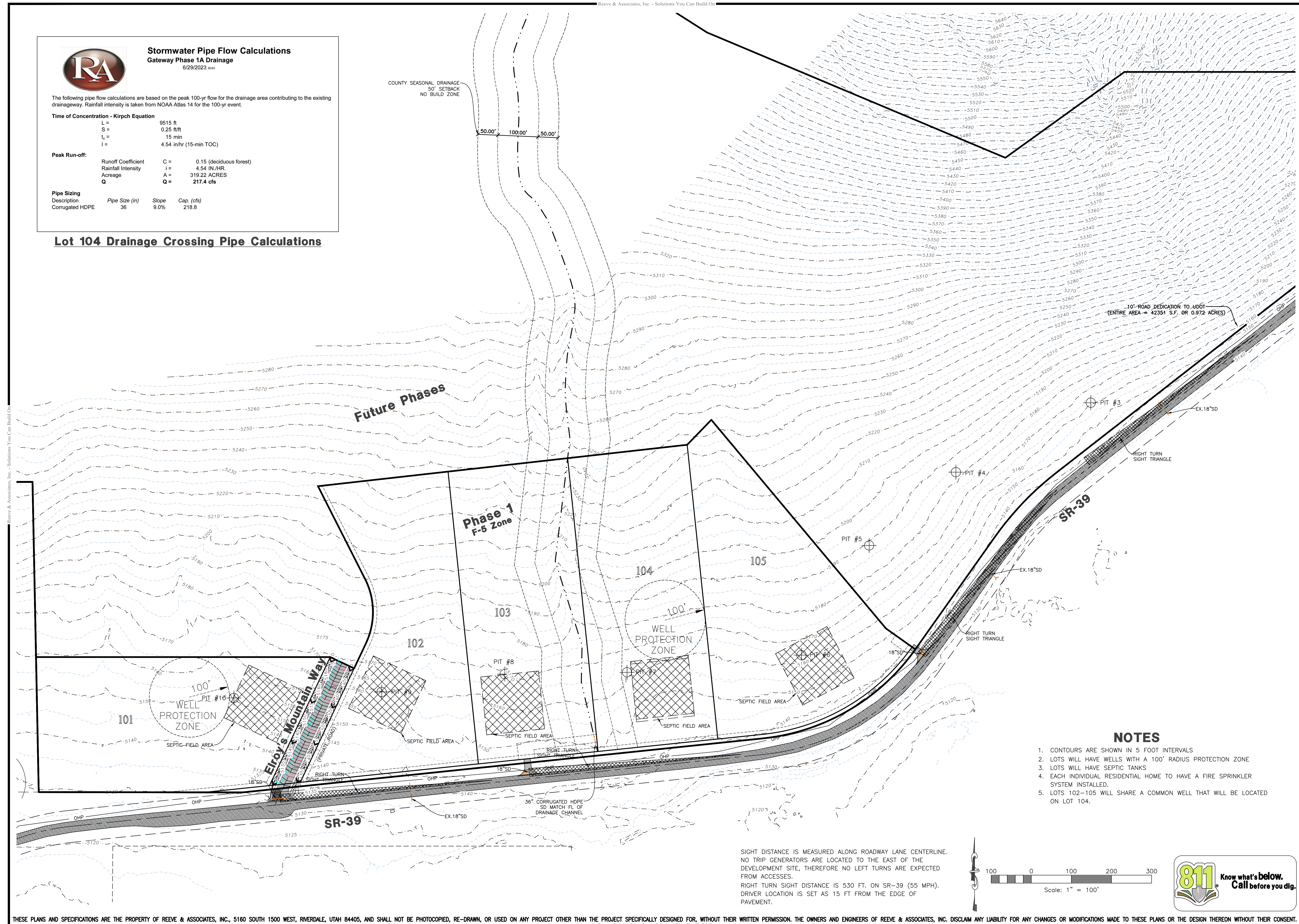
Phase 1
F-5 Zone

100'
WELL PROTECTION ZONE

10' ROAD DEDICATION TO UDOT
(ENTIRE AREA = 42351 S.F. OR 0.972 ACRES)

SR-39

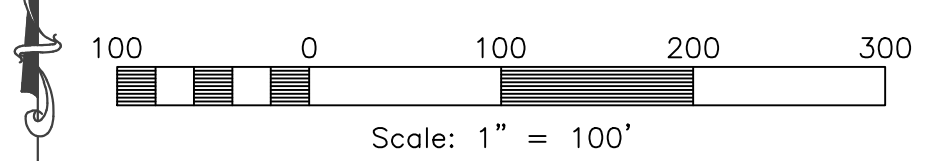
SR-39



NOTES

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5. LOTS 102-105 WILL SHARE A COMMON WELL THAT WILL BE LOCATED ON LOT 104.

SIGHT DISTANCE IS MEASURED ALONG ROADWAY LANE CENTERLINE. NO TRIP GENERATORS ARE LOCATED TO THE EAST OF THE DEVELOPMENT SITE, THEREFORE NO LEFT TURNS ARE EXPECTED FROM ACCESSES.
RIGHT TURN SIGHT DISTANCE IS 530 FT. ON SR-39 (55 MPH). DRIVER LOCATION IS SET AS 15 FT FROM THE EDGE OF PAVEMENT.



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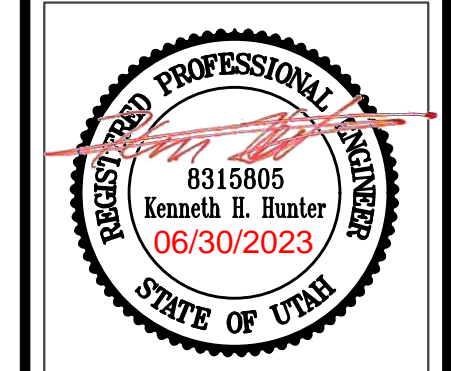
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REVISIONS

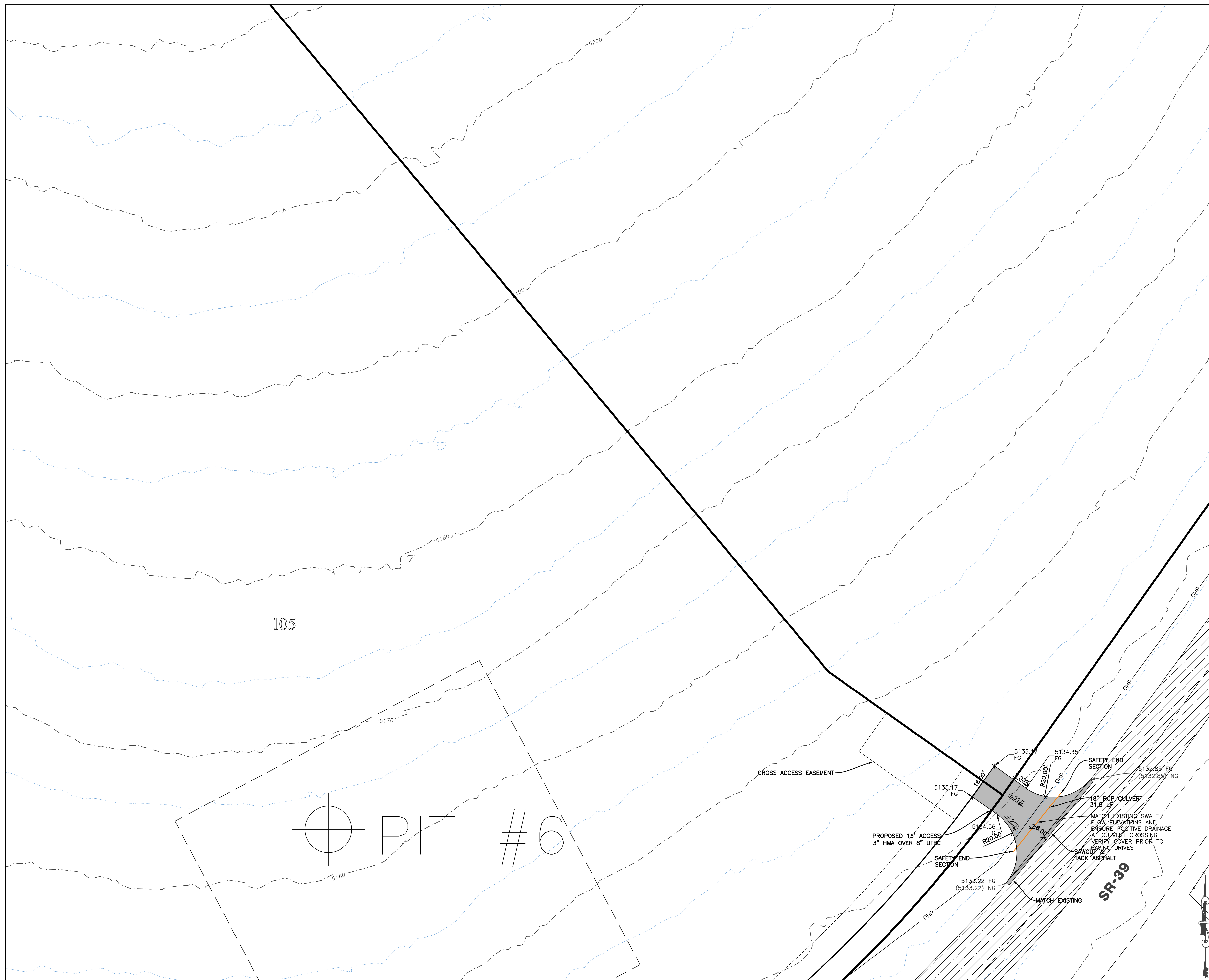
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Gateway Estates Subdivision
Phase 1
WEBER COUNTY, UTAH

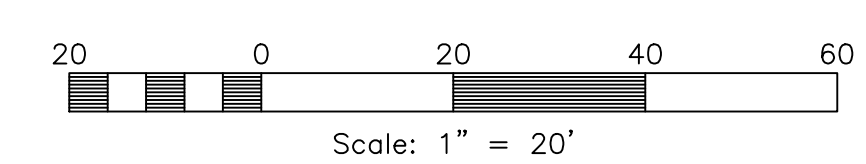
Grading, Drainage, & Utility Plan



Project Info.
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Drafted: C. KINGSLEY
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Name: GATEWAY ESTATES SUBDIVISION PHASE 1
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LOTS 6 & 5 SHARED ACCESS



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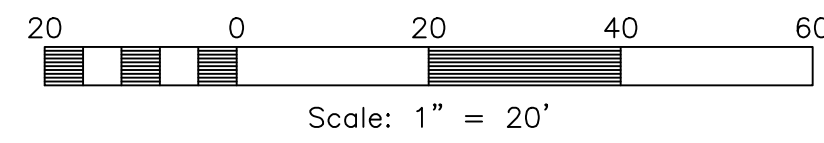
Gateway Estates Subdivision
Phase 1
 WEBER COUNTY, UTAH
Drive Approach Details & Grading
Lot 105



Project Info.

Engineer:	KENNETH H. HUNTER, P.E.
Drafter:	C. KINGSLEY
Begin Date:	OCTOBER 2021
Name:	GATEWAY ESTATES SUBDIVISION PHASE 1
Number:	4825-26

LOTS 8 & 7 SHARED ACCESS



50' SEASONAL DRAINAGE
NO BUILD ZONE

PIT #8

PIT #7

104

103

36" CORRUGATED HDPE
SD MATCH FL OF
DRAINAGE CHANNEL

CROSS ACCESS EASEMENT

PROPOSED 16' ACCESS
3" HMA OVER 8" UTBC

SAFETY END SECTION
5141.98 FG
(5141.98) NG

SAFETY END SECTION
5141.98 FG
(5141.98) NG

18" RCP CULVERT
31.5' LF

SAWCUT &
TACK ASPHALT

MATCH EXISTING SWALE FLOW
ELEVATIONS AND ENSURE POSITIVE
DRAINAGE AT CULVERT CROSSING
VERIFY COVER PRIOR TO PAVING DRIVES

SR-39

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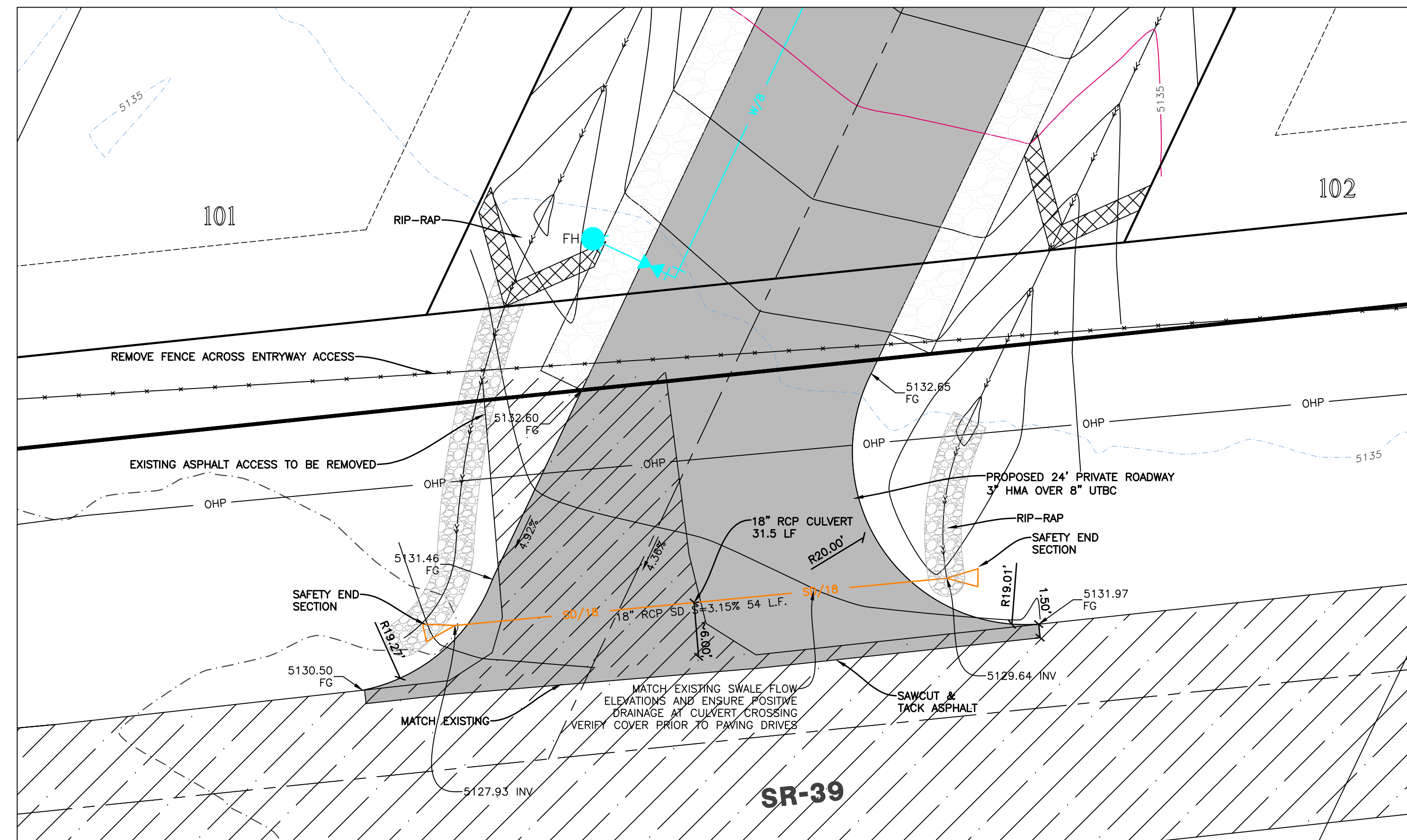
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Gateway Estates Subdivision
Phase 1
 WEBER COUNTY, UTAH

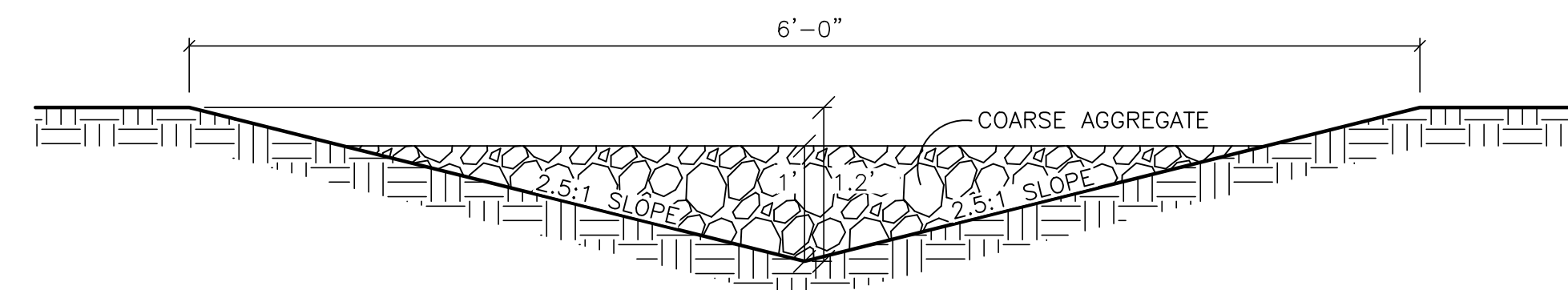
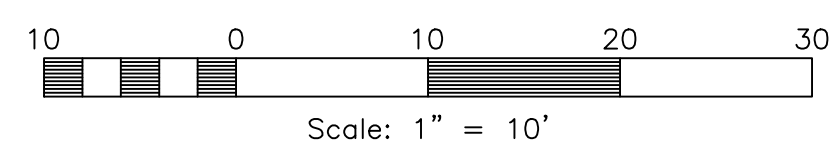
Drive Approach Details & Grading
Lots 103 & 104



Project Info.
 Engineer: KENNETH H. HUNTER, P.E.
 Drafter: C. KINGSLEY
 Begin Date: OCTOBER 2021
 Name: GATEWAY ESTATES
 SUBDIVISION
 PHASE 1
 Number: 4825-26

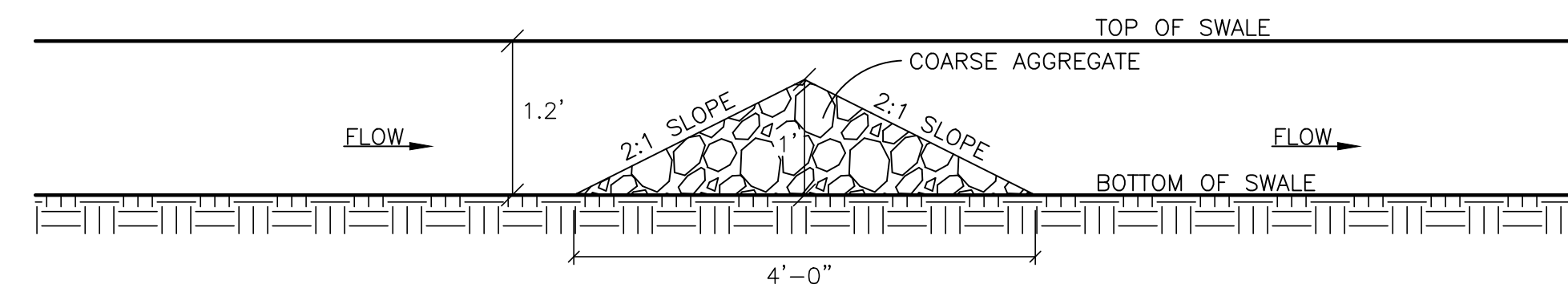


Eroy's Mountain Way Access



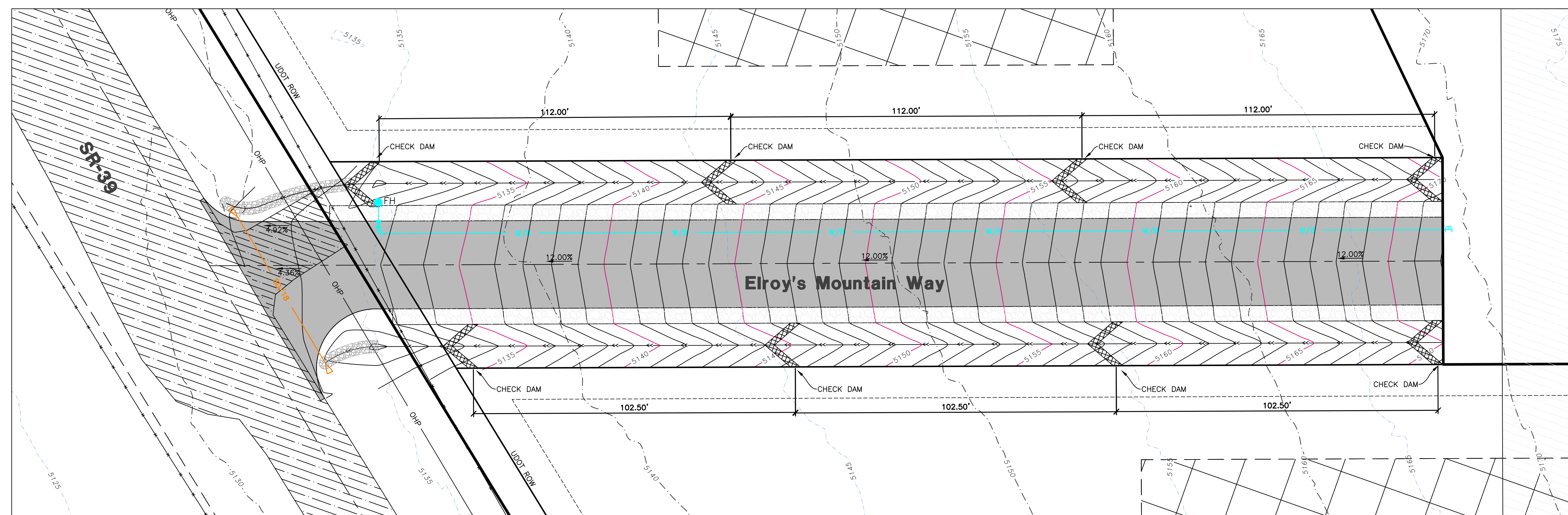
Swale Detail W/ Rock Check Dam

SCALE: NONE

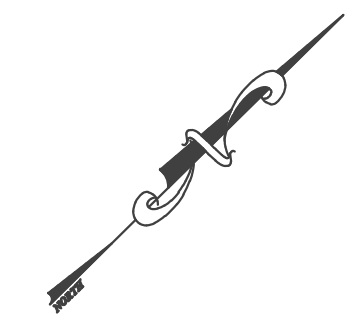
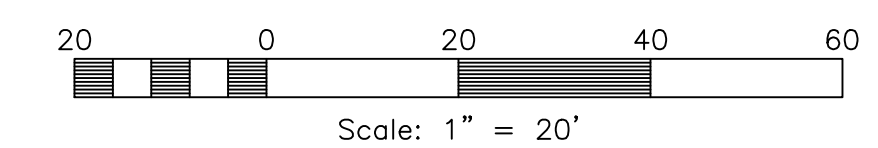


Swale Detail W/ Rock Check Dam

SCALE: NONE



Eroy's Mountain Way Check Dams



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Gateway Estates Subdivision
Phase 1
 WEBER COUNTY, UTAH

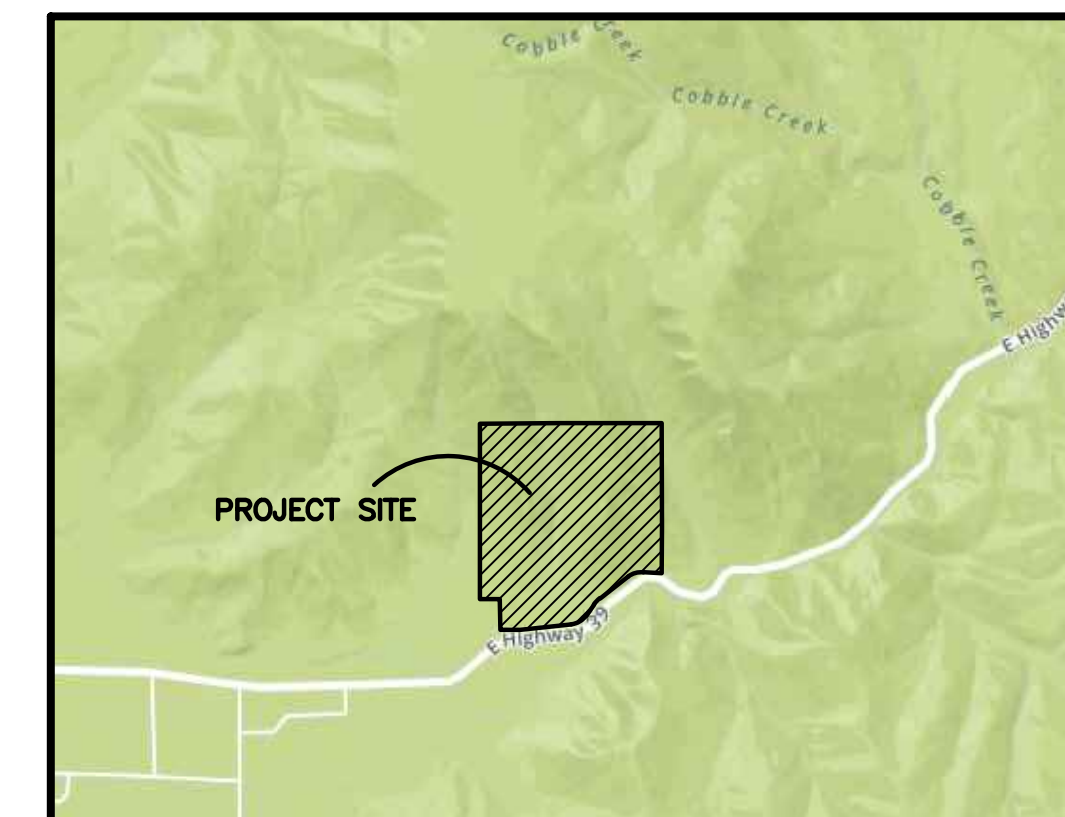
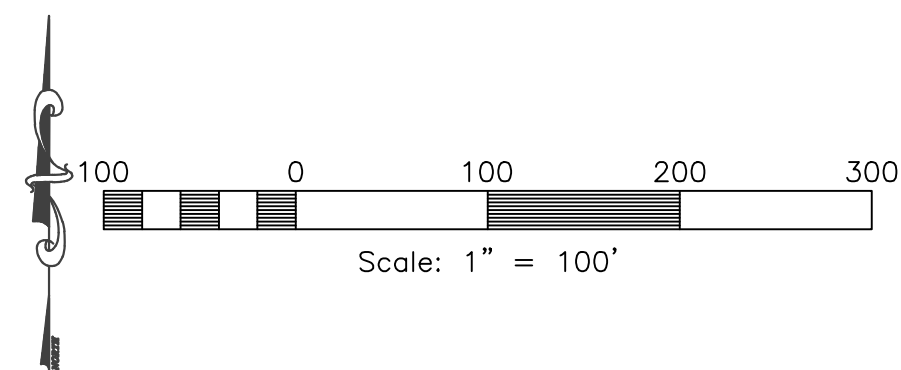
Drive Approach Details & Grading - Eroy's Mountain Way

Project Info.

Engineer: KENNETH H. HUNTER, P.E.
 Drafter: C. KINGSLEY
 Begin Date: OCTOBER 2021
 Name: GATEWAY ESTATES SUBDIVISION PHASE 1
 Number: 4825-26

Gateway Estates Subdivision Phase 1 Storm Water Pollution Prevention Plan Exhibit

WEBER COUNTY, UTAH
OCTOBER 2021



Vicinity Map
SCALE: NONE



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

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

ALL VEHICLES EXITING SITE TO PROCEED THROUGH CONSTRUCTION ENTRANCE TO REDUCE AMOUNTS OF SEDIMENT TRACKED ONTO ROADWAYS.

50'x20' CONSTRUCTION ENTRANCE W/8" CLEAN GRAVEL

Construction Activity Schedule	
- PROJECT LOCATION.....	WEBER COUNTY, UTAH
- PROJECT BEGINNING DATE.....	OCTOBER 2021
- BMP'S DEPLOYMENT DATE.....	OCTOBER 2021
- STORM WATER MANAGEMENT CONTACT / INSPECTOR.....	MATT LOWE (801) 648-8229
- SPECIFIC CONSTRUCTION SCHEDULE INCLUDING BMP CONSTRUCTION SCHEDULE TO BE INCLUDED WITH SWPPP BY OWNER/DEVELOPER	

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**Gateway Estates Subdivision
Phase 1**
 WEBER COUNTY, UTAH

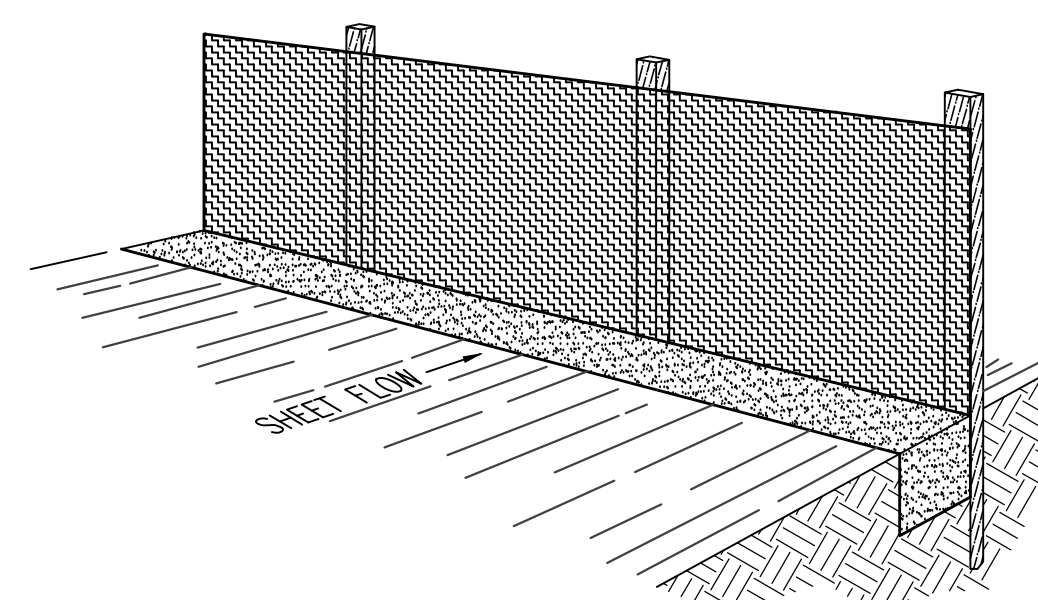
**Storm Water Pollution
Prevention Plan Exhibit**



Project Info.	
Engineer:	KENNETH H. HUNTER, P.E.
Drafter:	C. KINGSLEY
Begin Date:	OCTOBER 2021
Name:	GATEWAY ESTATES SUBDIVISION PHASE 1
Number:	4825-26

Notes:

- Describe all BMP's to protect storm water inlets:
All storm water inlets to be protected by straw wattle barriers, or gravel bags (see detail).
- Describe BMP's to eliminate/reduce contamination of storm water from:
 - Equipment / building / concrete wash areas:
To be performed in designated areas only and surrounded with silt fence barriers.
 - Soil contaminated by soil amendments:
If any contaminants are found or generated, contact environmental engineer and contacts listed.
 - Areas of contaminated soil:
If any contaminants are found or generated, contact environmental engineer and contacts listed.
 - Fueling area:
To be performed in designated areas only and surrounded with silt fence.
 - Vehicle maintenance areas:
To be performed in designated areas only and surrounded with silt fence.
 - Vehicle parking areas:
To be performed in designated areas only and surrounded with silt fence.
 - Equipment storage areas:
To be performed in designated areas only and surrounded with silt fence.
 - Materials storage areas:
To be performed in designated areas only and surrounded with silt fence.
 - Waste containment areas:
To be performed in designated areas only and surrounded with silt fence.
 - Service areas:
To be performed in designated areas only and surrounded with silt fence.
- BMP's for wind erosion:
Stockpiles and site as needed to be watered regularly to eliminate / control wind erosion
- Construction Vehicles and Equipment:
 - Maintenance
 - Maintain all construction equipment to prevent oil or other fluid leaks.
 - Keep vehicles and equipment clean; prevent excessive build-up of oil and grease.
 - Regularly inspect on-site vehicles and equipment for leaks, and repair immediately.
 - Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment on-site.
 - Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic, and transmission fluids.
 - Fueling
 - If fueling must occur on-site, use designated areas away from drainage.
 - Locate on-site fuel storage tanks within a bermed area designed to hold the tank volume.
 - Cover retention area with an impervious material and install in a manner to ensure that any spills will be contained in the retention area. To catch spills or leaks when removing or changing fluids.
 - Use drip pans for any oil or fluid changes.
 - Washing
 - Use as little water as possible to avoid installing erosion and sediment controls for the wash area.
 - If washing must occur on-site, use designated, bermed wash areas to prevent waste water discharge into storm water, creeks, rivers, and other water bodies.
 - Use phosphate-free, biodegradable soaps.
 - Do not permit steam cleaning on-site.
- Spill Prevention and Control
 - Minor Spills:
Minor spills are those which are likely to be controlled by on-site personnel. After contacting local emergency response agencies, the following actions should occur upon discovery of a minor spill:
 - Contain the spread of the spill.
 - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (i.e. absorbent materials, cat litter, and / or rags).
 - If the spill occurs in dirt areas, immediately contain the spill by constructing an earth dike. Dig up and properly dispose of contaminated soil.
 - If the spill occurs during rain, cover the impacted area to avoid runoff.
 - Record all steps taken to report and contain spill.
 - Major Spills:
On-site personnel should not attempt to control major spills until the appropriate and qualified emergency response staff have arrived at the site. For spills of federal reportable quantities, also notify the National Response Center at (800) 424-8802. A written report should be sent to all notified authorities. Failure to report major spills can result in significant fines and penalties.
- Post Roadway / Utility Construction
 - Maintain good housekeeping practices.
 - Enclose or cover building material storage areas.
 - Properly store materials such as paints and solvents.
 - Store dry and wet materials under cover, away from drainage areas.
 - Avoid mixing excess amounts of fresh concrete or cement on-site.
 - Perform washout of concrete trucks offsite or in designated areas only.
 - Do not wash out concrete trucks into storm drains, open ditches, streets or streams.
 - Do not place material or debris into streams, gutters or catch basins that stop or reduce the flow of runoff water.
 - All public streets and storm drain facilities shall be maintained free of building materials, mud and debris caused by grading or construction operations. Roads will be swept within 1000' of construction entrance daily, if necessary.
 - Install straw wattle around all inlets contained within the development and all others that receive runoff from the development.
- Erosion Control Plan Notes
 - The contractor will designate an emergency contact that can be reached 24 hours a day 7 days a week.
 - A stand-by crew for emergency work shall be available at all times during potential rain or snow runoff events. Necessary materials shall be available on site and stockpiled at convenient locations to facilitate rapid construction of emergency devices when rain or runoff is eminent.
 - Erosion control devices shown on the plans and approved for the project may not be removed without approval of the engineer of record. If devices are removed, no work may continue that have the potential of erosion without consulting the engineer of record. If deemed necessary erosion control should be reestablished before this work begins.
 - Graded areas adjacent to fill slopes located at the site perimeter must drain away from the top of the slope at the conclusion of each working day. This should be confirmed by survey or other means acceptable to the engineer of record.
 - All silt and debris shall be removed from all devices within 24 hours after each rain or runoff event.
 - Except as otherwise approved by the inspector, all removable protective devices shown shall be in place at the end of each working day and through weekends until removal of the system is approved.
 - All loose soil and debris, which may create a potential hazard to offsite property, shall be removed from the site as directed by the engineer of record of the governing agency.
 - The placement of additional devices to reduce erosion damage within the site is left to the discretion of the engineer of record.
 - Desilting basins may not be removed or made inoperable without the approval of the engineer of record and the governing agency.
 - Erosion control devices will be modified as need as the project progresses and plans of these changes submitted for approval by the engineer of record and the governing agency.
- Conduct a minimum of one inspection of the erosion and sediment controls every two weeks. Maintain documentation on site.
 - Part III.D.4 of general permit UTRC00000 identifies the minimum inspection requirements.
 - Part III.D.4.C identifies the minimum inspection report requirements.
 - Failure to complete and/or document storm water inspections is a violation of part III.D.4 of Utah General Permit UTR 300000.



Perspective View

Figure 2

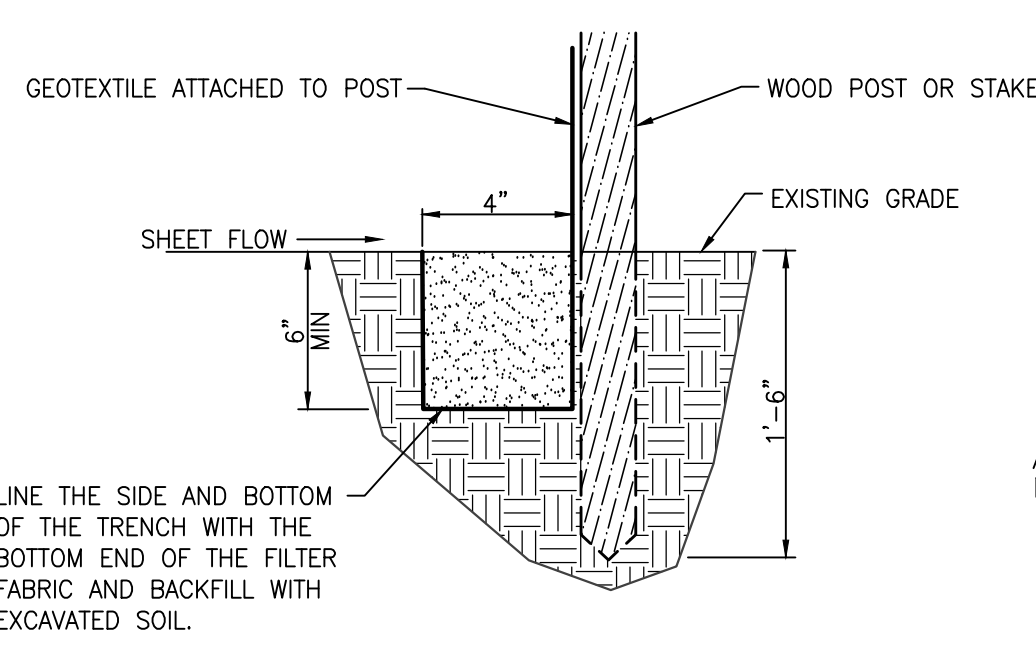
INSTALLATION

The silt fence should be installed prior to major soil disturbances in the drainage area. The fence should be placed across the slope along a line of uniform elevation wherever flow of sediment is anticipated. Table 1 shows generally-recommended maximum slope lengths (slope spacing between fences) at various site grades for most silt fence applications.

Slope Steepness (%)	Max. Slope Length m (ft)
<2%	30.5m (100ft)
2-5%	22.9m (75ft)
5-10%	15.2m (50ft)
10-20%	7.6m (25ft)
>20%	4.5m (15ft)

PREFABRICATED SILT FENCE ROLLS

*Excavate a minimum 15.2cm x 15.2cm (6"x6") trench at the desired location.
*Unroll the silt fence, positioning the post against the downstream wall of the trench.
*Adjacent rolls of silt fence should be joined by nesting the end post of one fence into the other. Before nesting the end posts, rotate each post until the geotextile is wrapped completely around the post, then abut the end posts to create a tight seal as shown in Figure 1.
*Drive posts into the ground until the required fence height and/or anchorage depth is obtained.
*Bury the loose geotextile at the bottom of the fence in the upstream trench and backfill with natural soil, compacting the backfill to provide good compaction and anchorage. Figure 2 illustrates a typical silt fence installation and anchor trench placement.



Section

FIELD ASSEMBLY:

*Excavate a minimum 15.2cm x 15.2cm (6"x6") trench at the desired location.
*Drive wooden posts, or steel posts with fastening projections, against the downstream wall of the trench. Maximum post spacing should be 2.4-3.0m (8-10ft). Post spacing

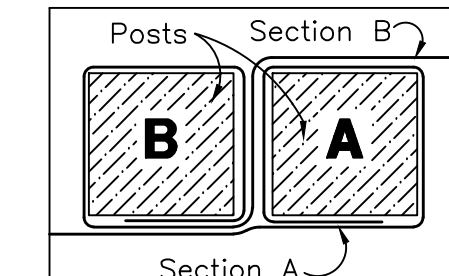
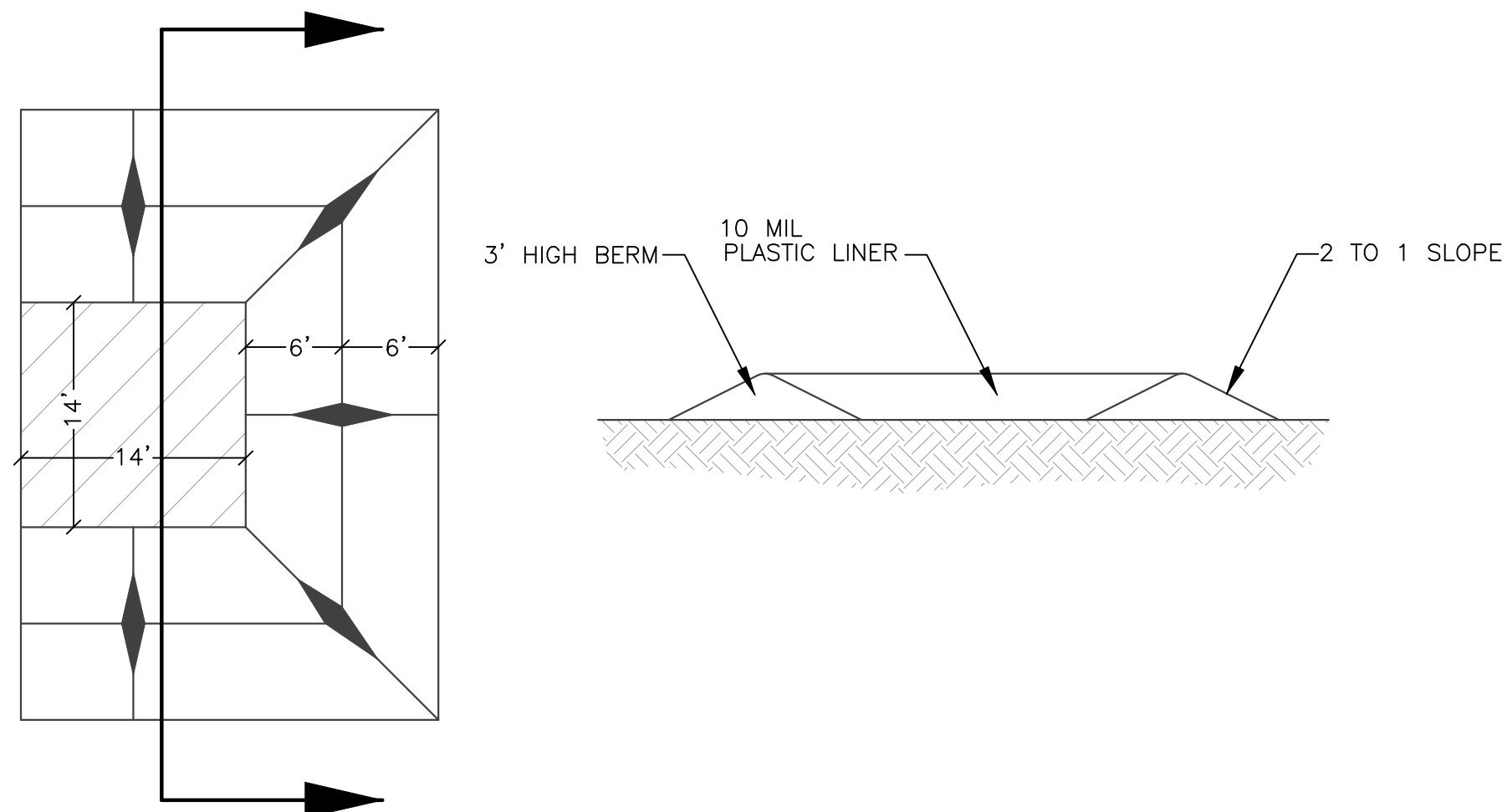


Figure 1: Top View of Roll-to-Roll Connection

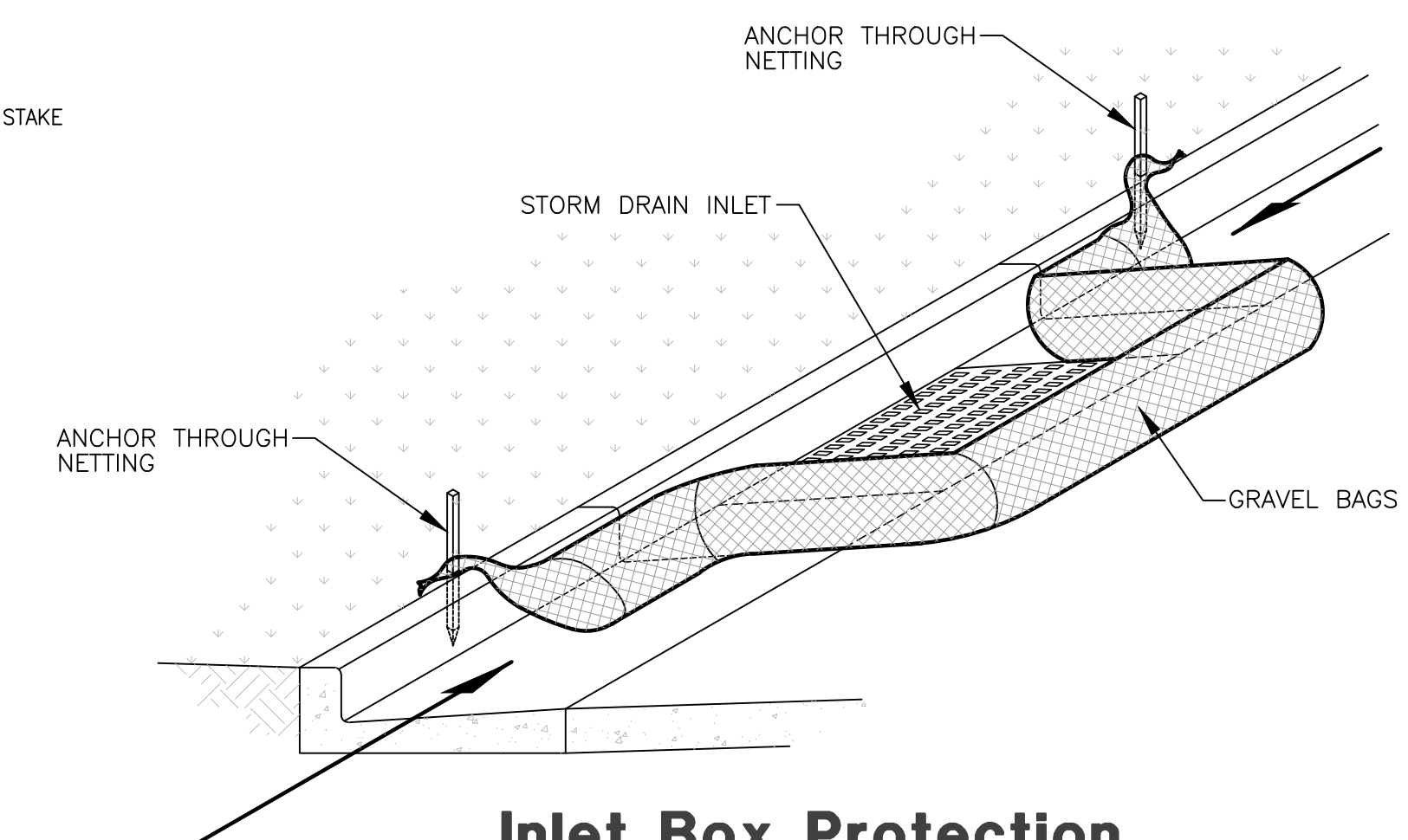
Silt Fence Detail

SCALE: NONE

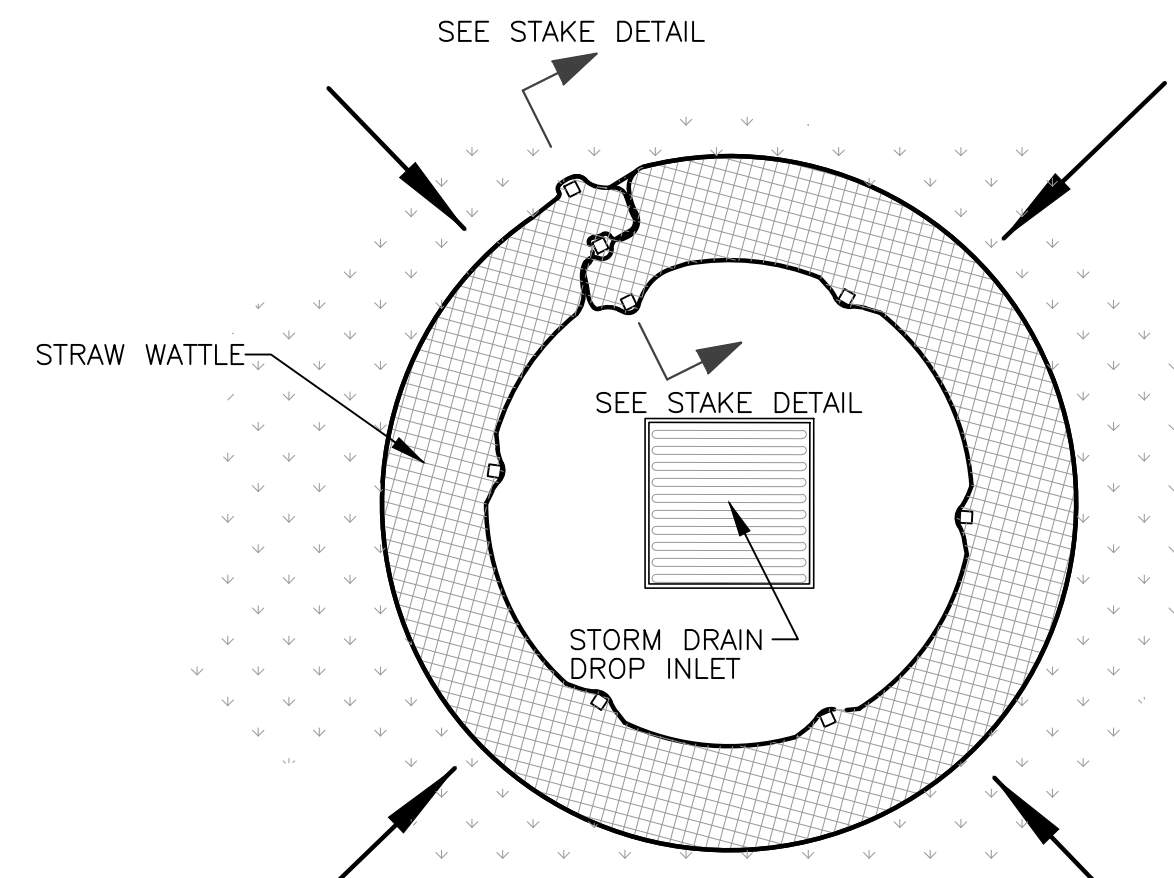


Concrete Washout Area w/ 10 mil Plastic Liner

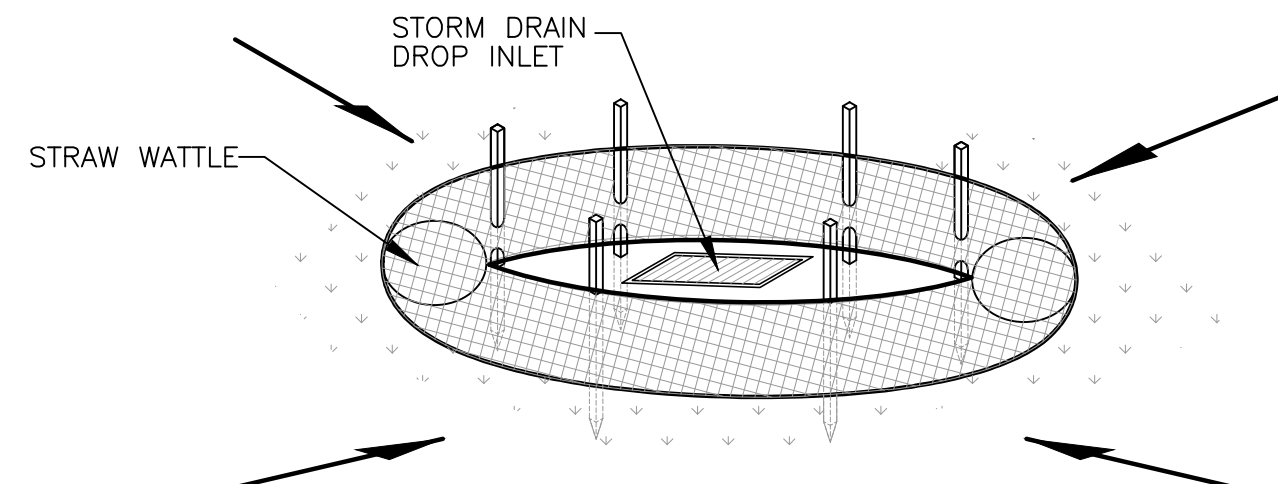
SCALE: NONE



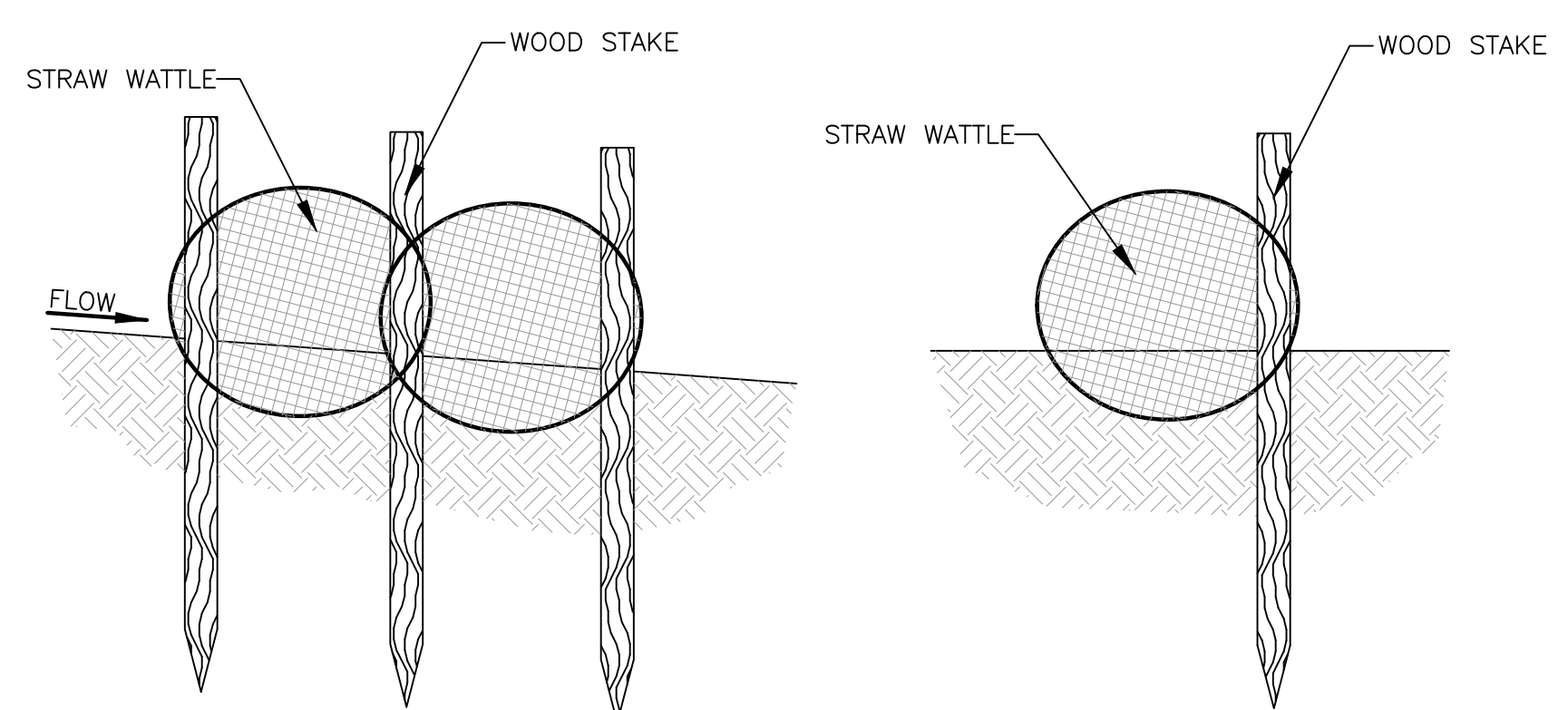
Inlet Box Protection



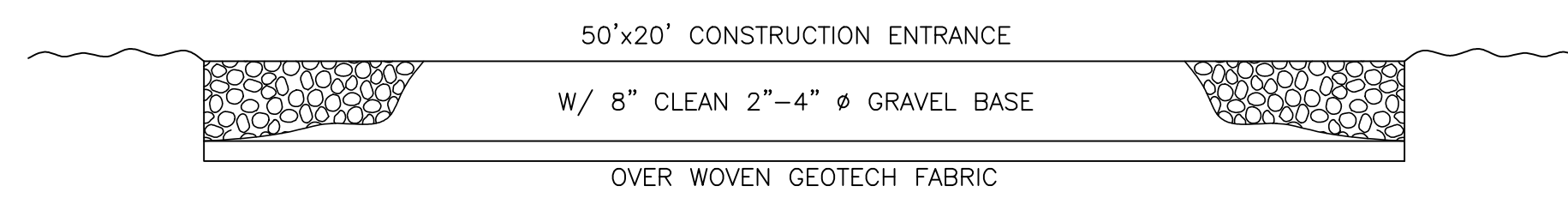
Plan View



Drop Inlet Protection



Stake Detail



Cross Section 50' x 20' Construction Entrance

Reeve & Associates, Inc.
5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DATE	DESCRIPTION
12-02-21	CK	UDOT Section
01-14-22	CK	UDOT Dedication
03-16-22	CK	Waterline Extension
04-18-23	CK	Phasing Update
06-12-23	CK	Phasing Update
06-29-23	CK	Review Comments

Gateway Estates Subdivision Phase 1
WEBER COUNTY, UTAH

Storm Water Pollution Prevention Plan Details

Project Info.

Engineer: KENNETH H. HUNTER, P.E.
 Drafter: C. KINGSLEY
 Begin Date: OCTOBER 2021
 Name: GATEWAY ESTATES SUBDIVISION PHASE 1
 Number: 4825-26