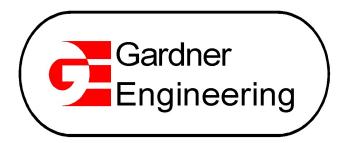
THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION (Phase 2)

& HARBOR VIEW ESTATES CLUSTER SUBDISISION

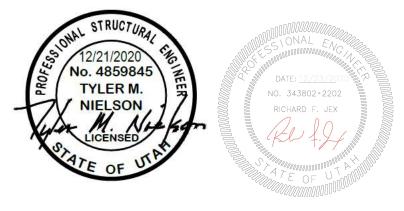
Engineering Report for

Large Underground Wastewater Disposal System

Prepared by



5150 South 375 East Ogden, Utah 84405 801-476-0202



System Reviewed by Richard F. Jex, P.E. LEHS
Onsite Certification 00046-OSP-3

1.0 Introduction

This report includes a summary of the proposed wastewater system addition to be installed for Harbor View Estates and The Reserve at Crimson Ridge Phase 2A, 2B, and 2C. The improvements for all phases will be installed with Harbor View Estates Cluster Subdivision. A construction permit approval letter is desired seeing as how the design has been completed.

The proposed system is designed to receive and treat the original 35 lots located in Phase 1 (which system was originally installed between 2008 and 2009). The new proposed additions will add an additional 41 lots (for a combined total of 76 residential homes) on the system. Currently there are 15 homes constructed of the original Phase 1 development. The existing system As-Built plans show that three (3) AdvanTex AX 100 sewer pods were initially installed at that time. As recommended by Chad Meyerhoffer of Weber County, we are adding an additional 4 sewer pods to the system for a combined total of 7 pods.

Expected average daily flows from the built out subdivision are as shown in Table 1 below:

Phase	No.	GPD/Home	Q(Avg) GPD
(Ex. The Reserve at Crimson Ridge Phase 1)	35	200	7,000
Harbor View Estates	8	200	1,600
The Reserve at Crimson Ridge Ph 2A, 2B, 2C	33	200	6,600
Totals	76	200	15,200

<u>Table 1 – Calculated Average Daily Flows</u>

When we compared actual existing data for the functioning system which has 15 homes installed, the actual average flow rates generally fall within this range. For the most recent year of available data 9-28-2019 – 9-27-2020, the total flow for the year was 1,272,388 Gal/Year. Dividing this number by 15 lots (which are currently on the system) averages 232 gallon per day. It was pointed out to Gardner Engineering that there is a spike in the sewer rates starting approximately March 6th until roughly May 7th. If we looked at the days when there was not the additional flows coming into the sewer, the average daily flows for the 15 homes was calculated to be 163 Gallons per day (which is under the calculated 200 GPD average daily flow number), so this tells us that actual sewer flows coming into the system are below the calculated average of 200 GPD.

(See Appendix A with Weber County Existing Sewer Plant Flow Data and related average daily use calculations.)

To help reduce the potential for seasonal groundwater infiltration into the sewer trenches, Bentonite clay cutoff collars have been designed to be located at key locations to help mitigate the potential for groundwater infiltration. Also Kor-N-Seal boots have also been specified to be utilized at the manhole to pipe connections. These additions should help reduce the potential for sewer trench groundwater seasonal flows into the system.

The calculated peak flow rates used for Design are shown in Table 2 below:

Phase	No.	GPD/Home	Q(Avg) GPD
(Ex. The Reserve at Crimson Ridge Phase 1)	35	400	14,000
Harbor View Estates	8	400	3,200
The Reserve at Crimson Ridge Ph 2A, 2B, 2C	33	400	13,200
Totals	76	400	30,400

<u>Table 2 – Calculated Design Flow Rates</u>

2.0 Sizing Calculations for Treatment System

Septic Tank Sizing:

The septic tanks have been sized at a minimum hydraulic retention time (HRT) of 1.5 times the daily design flow. The proposed system (including the existing Phase 1 and the Phases 2 and Harbor View Estates) have a calculated peak daily design flow of 30,400 gallons. (30,400 GPD x 1.5 days HRT) = 45,600 gallons

Minimum size for Harbor View Estates homes will be 1,500 gallon per residential lot. This is also the minimum size of tank for Phases 2A, 2B and 2C lots and existing Phase 1 lots. With 76 total lots on the sewer system and for each lot having the minimum 1,500 gallon tank per lot, the calculated septic tank storage is shown below in Table 3 below:

Phase	No.	GPD/Home	GAL / Phase
(Ex. The Reserve at Crimson Ridge Phase 1)	35	1,500	52,500
Harbor View Estates	8	1,500	12,000
The Reserve at Crimson Ridge Ph 2A, 2B, 2C	33	1,500	49,500
Totals	76	1,500	114,000

Table 3 – Calculated Septic Tank Minimum Available Storage

This equates to a minimum of 114,000 Gallons / 45,600 Gallons HRT to get a safety factor of 2.5 just in the available septic tank storage.

The initial Harbor View Estates (8 lots) septic tanks will all be part of a pressurized line. They will use a 1,500 gallon tank with pump discharge as shown in Appendix B, sheet D1. The attached pump calculations are shown on this sheet.

Absorption System:

There are currently two absorption systems with an alternating valve system for this development (in leu of providing for a future absorption replacement area). The existing drip absorption system is to be removed where new lots are designed to be located. See Appendix B, sheet C1 for existing absorption lot encompassing lots 44-47. The two absorption systems can be broken out into two types; Drip Absorption System and Chamber Absorption systems.

Drip Absorption System:

The drip absorption system will be located in the northeastern portion of the site. Three soil Pits were excavated and evaluated by AGEC and Summer Day from the Weber Morgan Environmental Health Division. The soil exploration findings from AGEC are located in Appendix C.

See also Appendix D for observations from Summer Day summarized in a written letter, dated November 9, 2020.

Also contained in Appendix D is a letter written by Summer Day, dated November 12, 2020 regarding the preliminary LUWDs design requirements. The drip absorption system will be located within the same vicinity that the testing was performed. There is some existing construction fill material that was placed over the area which will be required to be removed so that the drain field will be percolating into the native soils that were tested.

The drip absorption system was sized for 76 lots at 400 GAL/lot/Day = 30,400 GAL/Day for the system.

The drip absorption system was sized using the soil loading rate of 0.45 gpd/SF as recommended by Summer Day. The produced the following system sizing:

Required Drip System Area: 30,400 GPD / 0.45 GPD/SF = 67,556 SF

67,556 SF/ 2 FT spacing = 33,778 LF required drip tubing.

8 zones provided = 33,778 LF / 8 = 4,222 LF / Zone.

Emitter covers 4 SF 4SF/0.45 GAL/SF/Day = 1.8 GAL / Day (Per emitter)

Emitter supplies 0.53 Gal/Hr (per emitter)

Total Time to be applied Each Day = (1.8 GAL / Day) / (0.53 Gal / Hr) = 3.4 Hr / Day = 204 Min / Day

Drip absorption system dosing requirements:

21 cycles at 10 min/cycle = 210 cycles per day / zone.

Zone Areas:

- 1. 8 Zones
- 2. Total Required Drip system Area per Zone = 67,556 SF / 8 zones = 8,445 SF/Zone
- 3. $(8,445 \text{ SF / zone}) \times (0.45) = 3,810 \text{ GPD/Zone}$
- 4. 3810 GPD/zone / 21 cycles / Day = 181 Gal / Cycle
- 5. (181 Gal / Cycle) / 10 minutes = 18 Gal / Minute

 Designed 15 rows per zone with 284 LF per row for a total of 4,260 LF / Zone

 4,260 x 2' spacing = 8,520 SF / Zone to be installed.

The zones have automatic zone valves will split up the flows into the 8 zones. The zone valves will rotate with each pump cycle.

Chamber Absorption System:

The chamber absorption system will be built onto the existing chamber system.

The 76 lot system has the same 30,400 Gal/Day requirement.

Original Phase 1 approximate application rates to absorption field:

Q= 5 min / inch / SQRT of 53 min = 0.68 GAL/SF

(Rate used for additional expansion area for Harbor View Estates and The Reserve at Crimson Ridge Phase 2 chamber absorption area. We are requesting a waiver to use the same loading rates as was originally used for the Phase 1 development.)

Required Absorption Field Area Trench:

(Required Daily Flow / Application Rate)

30,400 GAL/Day / 0.68 SF = 44,706 SF

Required Absorption Field Trench Length for 3' wide trench:

44,706 SF / 3 FT = 14,901 LF of Trench Required.

The proposed new system has 14, 933 LF of chamber system of which 7,177 LF is currently installed with Phase 1, so a total of 7,816 LF of new 3' wide chamber system will be installed to accommodate Harbor View Estates and The Reserve at Crimson Ridge Phase 2 (total build out).

<u>Alternating Chamber or Drip Absorption System & Treatment Prior to Discharge:</u>

The pumping system includes a pair of existing valves directly down stream from the existing flow meter (shown in Appendix B on sheet C6) for manual rotation between the drip absorption field and the chamber absorption field. The manual valves controlling which drain field will receive the sewer effluent should be rotated at a minimum of once per year.

The existing system includes treatment prior to discharge into the soils, reducing the potential for drain field failure. In addition to this, there at to be two drain fields with alternating flow areas. Because of these conditions, a waver is requested to approve this proposed system without a third area for a reserve replacement area.

Orenco Systems has reviewed the design plans and has issued a design plan review letter indicating that they approve of the proposed system. See letter provided in Appendix E.

Existing Effluent Sampling Data:

The existing system has been performing within acceptable ranges for the sampled effluent. Refer to Appendix I for testing data from 2018, 2019 and 2020. It is anticipated that the new additions will produce similar test results as the existing system.

The following section includes the required information by section format using the layout from state rule R317-5-5 to determine project feasibility.

3.0 R317-5-5 Engineering Reports, Plans and Construction Permits

5.1 Engineering Report.

An engineering report shall be submitted which shall contain design criteria along with all other information necessary to clearly describe the proposed project and demonstrate project feasibility as described in feasibility determination and approval-in-concept of Section R317-5-4.

See above Section 317-5-4 for feasibility determination and approval-in-concept.

5.2. Plan Review.

Submission of plans for review. Plans for new, alterations, repairs and replacements of large underground wastewater disposal systems shall be submitted to the division for review as required by Rule R317-1 and include the following:

A. Local Health Departments Requirements.

It is the applicant's responsibility to ensure that a LUWD System application to the division is in compliance with local health department requirements regarding the location, design, construction and maintenance of a LUWD system prior to the applicant submitting a request for a construction permit to the division. Where the petition has been approved by the director, the applicant is required to submit documentation that the local health department has approved the proposed LUWD system before a construction permit may be issued.

Plans for the LUWD have been submitted to local Health Department and approved for feasibility of the soils. See email from Summery Day dated November 12th in Appendix D deferring the approval to be given by the DWQ.

B. Information Required.

Plans submitted for review shall be drawn to scale, 1" = 10', 20' or 30', or other scale as approved by the division. Plans shall be prepared in such a manner that the contractor can read and follow them in order to install the system properly. Depending on the individual site and circumstances, or as determined by the division, some or all of the following information may be required.

1. Applicant Information.

See provided Sheet C0 located in Appendix B.

a. The name, current address, and telephone number of the applicant.

See provided Sheet C0 located in Appendix B.

b. Complete address, legal description of the property, or both to be served by this LUWD system.

See Provided plats for Harbor View Estates Cluster Subdivision and The Reserve at Crimson Ridge Phase 2A, Phase 2B, and Phase 2C located in Appendix H.

2. LUWD System Site Plan.

See sheet C1 for overall Utility Plan, sheet C2 for overall sheet layout, sheet C6 for effluent treatment facility, sheet C7 for sewer drain field expansion, and sheet C8 for sewer effluent drip system; located in Appendix B.

- a. Submittal date of plan.
- b. North arrow.
- c. Lot size and dimensions.

See Provided plats for Harbor View Estates Cluster Subdivision and The Reserve at Crimson Ridge Phase 2A, Phase 2B, and Phase 2C located in Appendix H.

d. Legal description of property.

See Provided plats for Harbor View Estates Cluster Subdivision and The Reserve at Crimson Ridge Phase 2A, Phase 2B, and Phase 2C located in Appendix H.

e. Ground surface contours, preferably at 2 foot intervals, of both the original and proposed final grades of the property, or relative elevations using an established bench mark.

Ground surface contours area shown on sheet C6, C7, and sheet C8 respectively; located in Appendix B.

f. Location and explanation of type of dwelling(s) or structure(s) to be served by a LUWD system.

The type of dwellings are to be single family residential dwellings. No basements are allowed for Lot 205 and Lot 206, since these two lots would not be allowed to have a foundation drain. These restrictions for these two lots are shown for Harbor View Estates Cluster Subdivision plat located in Appendix H. These two lots will be required to have their structure be above ground. The remaining lots may have walkout basements as desired by home owner. Final location of dwellings for homes to be determined at permitting.

g. Location and dimensions of paved and unpaved driveways, roadways and parking areas.

The location and dimensions of the driveway will be determined at the time of home permitting. In general, it is anticipated that the driveways will be paved and generally centered on the lot, however site conditions may warrant that the driveway be located in some other location to facilitate grading to the future home. The standard driveway width is anticipated to be 26' wide.

h. Location and dimensions of the essential components of the wastewater system including the replacement area for the absorption system.

The location and dimensions of the wastewater system are in the plan set contained in Appendix B. See sheet C1 for overall utility layout. See sheet C2 for the he overall sheet layout. Blow ups of the individual areas are shown on sheets C6, C7, and C8. Refer to sheets D1-D6 for additional wastewater related details. See also Plan and profile sheets PP2-PP7 for main sewer effluent manhole and piping design and septic tank elevations. Due to there being two approved methods of effluent disposal, there will not be an additional replacement area for the absorption system.

i. Location of all soil exploration pits and all percolation test holes.

See Appendix C for Subsurface Exploration and Percolation Test Results Project No. 1200541-A dated November 6, 2020.

j. Location of building sewer and water service line to serve the building.

See plan set provided in Appendix B, sheet C1 (overall Utility Plan). See also sheet PP1-PP7 for enlarged view with design information.

k. Location of sewer mains, manholes, clean-outs, and other appurtenances.

See plan set provided in Appendix B, sheet C6, C7, C8, PP1-PP7. Also refer to D1-D6 for details and other appurtenances.

I. Location of easements or drainage right-of-ways affecting the property.

See Appendix H for plats for Harbor View Estates, and the Reserve at Crimson Ridge Phase 2A, Phase 2B, and Phase 2C for easements provided around all septic tanks and drainage easements affecting the property.

m. Location of all intermittent or year-round streams, ditches, watercourses, ponds, subsurface drains, etc. within 100 feet of proposed LUWD system.

See Appendix F sheet E1.

n. The location, type, and depth of all existing and proposed water supply sources

See Appendix F sheet E1.

o. Delineation of all drinking water source protection zones located on the project site.

See Appendix F sheet E1.

p. Distance to nearest public water main and size of main.

The distance to the nearest public water main is along Morning Side Lane and is 102' See Appendix F sheet E1. The main is an 8-inch water main.

q. Distance to nearest public sewer, size of sewer, and whether accessible by gravity.

The nearest public effluent sewer is 22' from the site boundary, has an 8-inch line and is accessible by gravity for all lots with the exception of the lower eight lots. Refer to Appendix B, PP4 Station 33+65.30 for connection to existing 8" Sanitary Sewer effluent pipe. Refer to PP7 for lower lots requiring pumping and detail D1 for proposed septic system with pump.

3. Statement with Site Plan.

Statement indicating the source of culinary water supply, whether a well, spring, non-public or public system, its location and distances from all LUWD systems.

The source of the culinary water supply is a newly installed well. This will be a non-public system. See Sheet Appendix F, sheet E1 showing distance of 1,987 feet from the Chamber effluent disposal area and 1,865 feet from the proposed effluent drip system disposal location.

- 4. Soil Evaluation.
- a. Soil Logs, Percolation Test Certificates, or both.

See Appendix C, Subsurface Exploration and Percolation Test Results Project No. 1200541-A dated November 6, 2020. Also refer to Appendix D for Weber County's statement of approval on soils evaluation.

c. Statement with supporting evidence indicating the maximum anticipated ground water table and the flooding potential for LUWD system sites.

See Appendix C, top of page 3 from Subsurface Exploration and Percolation Test Results Project No. 1200541-A dated November 6, 2020 by AGEC stating,

"SUBSURFACE WATER

Subsurface water or evidence of groundwater (iron oxide staining/mottling) was not observed in the test pits."

See also Appendix D, November 12th letter, from Summer Day portion under Design Requirements stating, "Anticipated ground water tables not to exceed 96 inches, fall within range of acceptability . . ."

Relative Elevations.

Show relative elevations of the following, using an established bench mark.

See Appendix B sheet C6 where the rim of the existing middle Blend Tank was used as the established bench mark. This benchmark is also shown on detail sheet D4. The established benchmark elevation is 5041.90.

a. Building drain outlet.

The drip system dosing tank outlet is shown at elevation 5033.90 based on provided As-Built plans for phase 1 which has been adjusted to the relative benchmark elevation. See Appendix B, sheet D6, detail 1 for Drip Dosing Tank drain outlet. Future building drain outlets to be determined at home permitting.

b. The inlet and outlet inverts of any septic tanks.

See Appendix B sheets PP2 through sheet PP7.

c. Septic tank access cover, including height and diameter of riser, if used.

See Appendix B, sheet D1 (detail 2) and sheet D2 for septic tank access cover with 24-inch diameter riser.

d. Pump tank inlet, if used, including height and diameter of riser.

See Appendix B, sheet D1 (detail 2) with 24-inch diameter riser and sheet D6 for pump tank access cover with 30-inch diameter riser.

e. The outlet invert of the distribution box, if provided, and the ends or corners of each distribution pipe lateral in the absorption system.

See Appendix B, sheets C6-C8 for outlet inverts.

f. The final ground surface over the absorption system.

Final ground surface over the absorption system for the additional chamber system is shown on sheet C7. For drip dispersal system see sheet C8 for finish grade contours. Refer to Appendix B for referenced drawings.

6. System Design.

Details for said site, plans, and specifications are listed in Design in Section R317-4-6.

System has been designed as required per section R317-4-6.

a. Schedule or grade, material, diameter, and minimum slope of building sewer and effluent sewer.

See Appendix B, Cover sheet C0 for Sanitary sewer general notes and pipe schedule (SDR-35). See PP2-PP7 for design slopes for effluent sewer.

b. Septic tank and pump tank capacity, design, cross sections, etc., materials, and dimensions. If tank is commercially manufactured, state the name and address of manufacturer.

Refer to Appendix B, Details shown on sheet D1 for Harbor View Estates Cluster Subdivision proposed 1,000 gallon septic tank with pump discharge. See details shown on sheet D2 for the remaining Phase 2 lots which will be either a 1,000 gallon septic tank (for four bedrooms or less), a 1,500 gallon septic tank (for 5 bedrooms or larger) or a 2,000 gallon tank to be determined at home permitting. Manufacturer information is shown next to the details on the detail sheets.

- c. Absorption system details, including the following: (See provided drawings and details provided in Appendix B.)
 - i. details of drop boxes or distribution boxes, if provided;

See Appendix B, sheet D3.

ii. schedule or grade, material, and diameter of distribution pipes;

Pipe schedules are called out in Appendix B, sheet C0 under sanitary sewer general notes.

ii. length, slope, and spacing of each absorption system component;

See Appendix B, sheet C7 and D5 for chamber absorption system, and sheet C8 and D7 for drip field absorption system.

iii. maximum slope across ground surface of absorption system area;

See Appendix B, sheet C7 and sheet C8 for surface slopes.

v. distance of absorption system from trees, cut banks, fills, or subsurface drains; and cross section of absorption system showing the:

See appendix F, sheet E1 and Appendix B sheet C7 and sheet C8. We have called out for existing trees to be removed 30' from the new drain field (where existing trees are present). There are not any additional cut banks, fills, or known subsurface drains otherwise nearby.

(1) depth and width of absorption system excavation;

See Appendix B, sheets C6, C8, and detail sheets D5 and D6.

(2) depth of distribution pipe;

See Appendix B, sheets C6-C8. 6' Min cover for pressurized sewer and 4' min cover for sewer effluent distribution line.

(3) depth of filter material;

See Appendix B, sheet D5 and D6 details.

(4) barrier material, i.e., synthetic filter fabric, straw, etc., used to separate filter material from cover; and

See Appendix B, sheets D5 and D6 details.

(5) depth of cover.

See Appendix B, detail sheets D5 and D6 for cover depth.

d. Pump, if provided, details as referenced in Section R317-4-14 Appendix B.

See detail sheet D1 in Appendix B for pressurized sewer pump and detail D6 for drip system dosing tank pumps.

- e. If an alternative LUWD system is designed, include all pertinent information to allow plan review and permitting for compliance with this rule.
 - C. Plans Submitted.
- 1. All applicants requesting plan approval for a LUWD shall submit two copies of the above required information to enable the division to retain one copy as a permanent record.
 - 2. Applications may be rejected if proper information is not submitted.
 - 5.3. Construction Permit Required.

No person shall make or construct any device for treatment or discharge of wastewater without first receiving a permit to do so from the director.

4.0 Conclusion Summary

The LUWD expanded system has been found to be in compliance with all applicable standard requirements as described within this report and the accompanying design plan set. We would request a construction permit approval letter for Harbor View Estates Cluster Subdivision and the Reserve at Crimson Ridge Phase 2A, Phase 2B and Phase 2C.

Please feel free to contact Gardner Engineering with any questions related to this submittal.

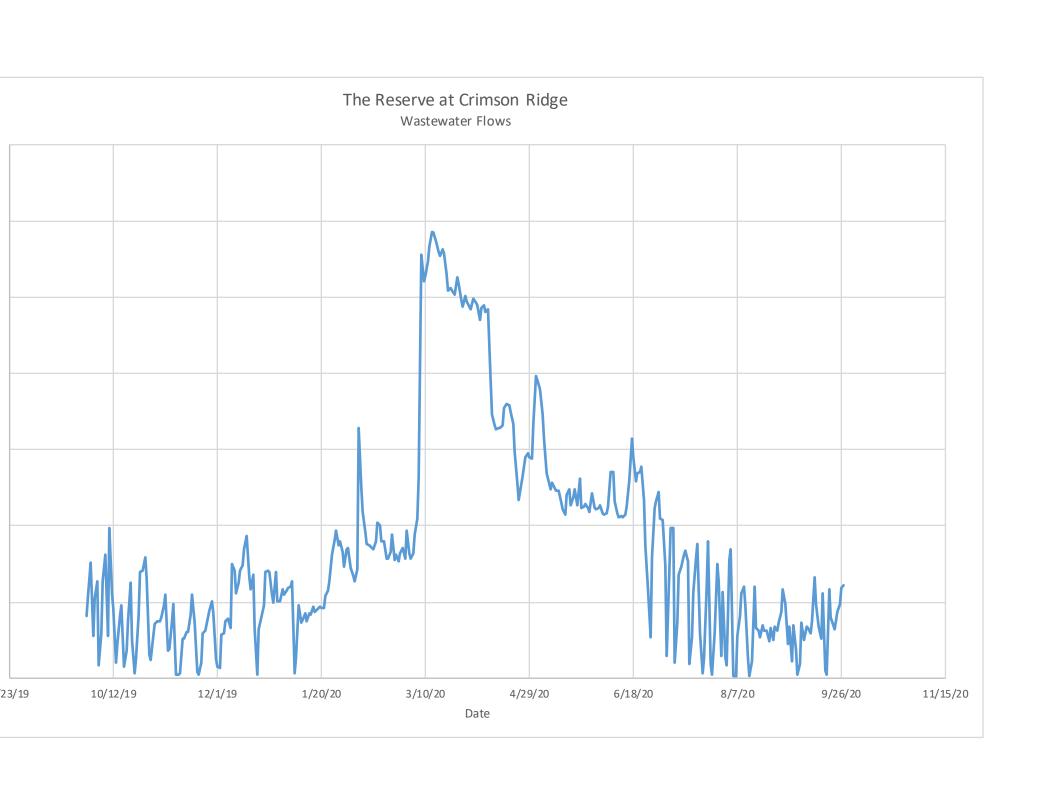
Sincerely,

Wesley J. Stewart 801-476-0202-ext 233

Appendix A

Date	Flow, gpd	Date	Flow, gpd	Date	Flow, gpd	Date	Flow, gpd
9/29/19	1640.39	11/13/19	119.09	12/28/19	1980.68	2/11/20	3509.27
9/30/19	2165.35	11/14/19	1053.66	12/29/19	2780.99	2/12/20	3478.9
10/1/19	3022.85	11/15/19	1038.32	12/30/19	2004	2/13/20	3425.91
10/2/19	1105.78	11/16/19	1214.87	12/31/19	2007.5	2/14/20	3365.3
10/3/19	2092.18	11/17/19	1219.6	1/1/20	2318.88	2/15/20	3589.55
10/4/19	2545.15	11/18/19	1673.16	1/2/20	2187.72	2/16/20	4091.82
10/5/19	354.29	11/19/19	2202.17	1/3/20	2303.91	2/17/20	4003.13
10/6/19	1193.7	11/20/19	1444.41	1/4/20	2383.6	2/18/20	3598.23
10/7/19	2527.69	11/21/19	157.94	1/5/20	2406.35	2/19/20	3584.84
10/8/19	3252.94	11/22/19	78.04	1/6/20	2536.08	2/20/20	3122.71
10/9/19	1123.88	11/23/19	413.81	1/7/20	116.05	2/21/20	3143.63
10/10/19	3940.17	11/24/19	1161.27	1/8/20	560.69	2/22/20	3312.91
10/11/19	2235.59	11/25/19	1260.91	1/9/20	1909.99	2/23/20	3754.96
10/12/19	1810.89	11/26/19	1422.6	1/10/20	1448.98	2/24/20	3116.42
10/13/19	415.57	11/27/19	1773.03	1/11/20	1526.21	2/25/20	3249.63
10/14/19	894.54	11/28/19	2027.66	1/12/20	1711.61	2/26/20	3077.69
10/15/19	1635.2	11/29/19	1692.55	1/13/20	1488.29	2/27/20	3278.7
10/16/19	1898.01	11/30/19	515.35	1/14/20	1716.98	2/28/20	3428.5
10/17/19	286.52	12/1/19	287.48	1/15/20	1669.69	2/29/20	3150.57
10/18/19	717.47	12/2/19	258.71	1/16/20	1883.68	3/1/20	3881.15
10/19/19	1485.4	12/3/19	1153.57	1/17/20	1754.52	3/2/20	3286.26
10/20/19	2523.66	12/4/19	1172.92	1/18/20	1801.62	3/3/20	3147.7
10/21/19	992.33	12/5/19	1487.8	1/19/20	1890.11	3/4/20	3291.36
10/22/19	142.1	12/6/19	1551.81	1/20/20	1858.92	3/5/20	3755.89
10/23/19	507	12/7/19	1313.2	1/21/20	1845.75	3/6/20	4199.97
10/24/19	1654.62	12/8/19	3003.19	1/22/20	2171.11	3/7/20	5237.58
10/25/19	2770.49	12/9/19	2810.52	1/23/20	2293.74	3/8/20	11108.73
10/26/19	2838.84	12/10/19	2236.78	1/24/20	2528.38	3/9/20	10411.17
10/27/19	3162.33	12/11/19	2509.76	1/25/20	3231.37	3/10/20	10563.98
10/28/19	2629.4	12/12/19	2812.36	1/26/20	3610.37	3/11/20	10947.27
10/29/19	613.22	12/13/19	2947.49	1/27/20	3863.05	3/12/20	11328.76
10/30/19	480.23	12/14/19	3374.87	1/28/20	3490.01	3/13/20	11695.78
10/31/19	1123.18	12/15/19	3747.82	1/29/20	3582.52	3/14/20	11698.83
11/1/19	1438.07	12/16/19	2645.36	1/30/20	3313.53	3/15/20	11471.14
11/2/19	1479.97	12/17/19	2342.68	1/31/20	2942.53	3/16/20	11200.74
11/3/19	1478.41	12/18/19	2713.65	2/1/20	3375.43	3/17/20	11077.34
11/4/19	1611.23	12/19/19	1285.75	2/2/20	3427	3/18/20	11243.88
11/5/19	1912.14	12/20/19	79.42	2/3/20	2909.79	3/19/20	11141.03
11/6/19	2175.73	12/21/19	1287.66	2/4/20	2679.34	3/20/20	10572.29
11/7/19	739.42	12/22/19	1585.5	2/5/20	2558.48	3/21/20	10165.81
11/8/19	746.31	12/23/19	1901.97	2/6/20	2871.12	3/22/20	10227.62
11/9/19	1502.25	12/24/19	2799.31	2/7/20	6579.96	3/23/20	10167.56
11/10/19	1942.47	12/25/19	2816.65	2/8/20	4998.94	3/24/20	10074.35
11/11/19	103.92	12/26/19	2802.62	2/9/20	4362.34	3/25/20	10528.75
11/12/19	99.23	12/27/19	2201.56	2/10/20	3838.17	3/26/20	10360.4

Date	Flow, gpd						
3/27/20	9936.44	5/13/20	4904.32	6/29/20	4629.26	8/15/20	2415.57
3/28/20	9747.11	5/14/20	4621.38	6/30/20	4902.67	8/16/20	1327.06
3/29/20	10033.42	5/15/20	4441.72	7/1/20	4175.65	8/17/20	1251.55
3/30/20	9882.97	5/16/20	4275.7	7/2/20	4162.96	8/18/20	1085.15
3/31/20	9735.82	5/17/20	4803.69	7/3/20	2957.67	8/19/20	1388.66
4/1/20	9688.67	5/18/20	4958.56	7/4/20	595.95	8/20/20	1251.19
4/2/20	9953.66	5/19/20	4537.18	7/5/20	2792.23	8/21/20	1241.32
4/3/20	9861.72	5/20/20	4754.53	7/6/20	3949.13	8/22/20	958.65
4/4/20	9801.64	5/21/20	4968.87	7/7/20	3924.96	8/23/20	1333.96
4/5/20	9416.59	5/22/20	4522.78	7/8/20	411.98	8/24/20	1007.27
4/6/20	9731.05	5/23/20	5243.19	7/9/20	1469.31	8/25/20	1369.5
4/7/20	9792.03	5/24/20	4484.26	7/10/20	2732.23	8/26/20	1239.69
4/8/20	9608.78	5/25/20	4516.88	7/11/20	2938.8	8/27/20	1450.15
4/9/20	9672.23	5/26/20	4572.87	7/12/20	3225.65	8/28/20	1733.02
4/10/20	7793.55	5/27/20	4464.13	7/13/20	3361.62	8/29/20	2316.65
4/11/20	6912.6	5/28/20	4373.35	7/14/20	3059.61	8/30/20	1935.89
4/12/20	6629.23	5/29/20	4853.85	7/15/20	359.69	8/31/20	881.87
4/13/20	6548.22	5/30/20	4462.74	7/16/20	1067.98	9/1/20	1365.77
4/14/20	6557.98	5/31/20	4421.86	7/17/20	2264.57	9/2/20	451.41
4/15/20	6554.8	6/1/20	4464.31	7/18/20	3152.84	9/3/20	1393.33
4/16/20	6631.16	6/2/20	4521.06	7/19/20	3507.47	9/4/20	774.7
4/17/20	7105.01	6/3/20	4322.42	7/20/20	1162.74	9/5/20	88.24
4/18/20	7188.85	6/4/20	4301.44	7/21/20	134.84	9/6/20	379.51
4/19/20	7163.51	6/5/20	4331.76	7/22/20	517.47	9/7/20	1446.27
4/20/20	6972.37	6/6/20	4517.47	7/23/20	2376.44	9/8/20	991.14
4/21/20	6673.09	6/7/20	5399.61	7/24/20	3588.63	9/9/20	1349.58
4/22/20	5919.22	6/8/20	5418.07	7/25/20	388.66	9/10/20	1307.72
4/23/20	5126.02	6/9/20	4636.8	7/26/20	78.9	9/11/20	1189.87
4/24/20	4678	6/10/20	4341.87	7/27/20	1177.52	9/12/20	1482.62
4/25/20	5093.73	6/11/20	4229.82	7/28/20	3008.06	9/13/20	2651.47
4/26/20	5316.32	6/12/20	4254.5	7/29/20	2555.96	9/14/20	1948.84
4/27/20	5813.5	6/13/20	4216.22	7/30/20	578.67	9/15/20	1365.44
4/28/20	5897.7	6/14/20	4288.3	7/31/20	2264.25	9/16/20	1032.12
4/29/20	5804.8	6/15/20	4511.28	8/1/20	556.45	9/17/20	2216.71
4/30/20	5763.48	6/16/20	5195.28	8/2/20	332.73	9/18/20	205.42
5/1/20	6681.38	6/17/20	6296.48	8/3/20	3108.1	9/19/20	90.96
5/2/20	7922.11	6/18/20	5808.14	8/4/20	3384.54	9/20/20	2334.14
5/3/20	7811.18	6/19/20	5157.09	8/5/20	75.87	9/21/20	1585.41
5/4/20	7590.03	6/20/20	5381.85	8/6/20	57.03	9/22/20	1399.02
5/5/20	6902.32	6/21/20	5408.45	8/7/20	1106.76	9/23/20	1277.17
5/6/20	6299.2	6/22/20	5563.57	8/8/20	1630.17	9/24/20	1732.5
5/7/20	5364.88	6/23/20	4687.42	8/9/20	2238.4	9/25/20	1931.4
5/8/20	5220.7	6/24/20	3475.34	8/10/20	2406.71	9/26/20	2367.63
5/9/20	4955.09	6/25/20	2318.28	8/11/20	1918.48	9/27/20	2427.19
5/10/20	5131.74	6/26/20	1076.12	8/12/20	518.81		
5/11/20	4992.93	6/27/20	3156.1	8/13/20	58.05		
5/12/20	4929.86	6/28/20	4456.88	8/14/20	427.71		



Appendix B

TRAFFIC CONTROL & SAFETY NOTES

1. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT STATE OF UTAH DEPARTMENT OF TRANSPORTATION MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES. AND THE CURRENT WEBER COUNTY STANDARD DRAWING, AND SHALL BE APPROVED BY THE WEBER COUNTY ENGINEER PRIOR TO ANY WORK,

2. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE WEBER COUNTY TRAFFIC ENGINEER, EXCEPT WHEN

3. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY, ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK,

4. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORAR STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE WEBER COUNTY TRAFFIC ENGINEER FOR REVIEW AND APPROVAL

. TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF

6. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.

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

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 COWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIBBLITY, 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 DESIDED.

SANITARY SEWER GENERAL NOTES

- 1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN CONFORMANCE WITH STATE STANDARDS, HEALTH DEPARTMENT STANDARDS AND
- 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 US 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 RE IN ACCORDANCE WITH THE WEBER COUNTY STANDARDS AND SPECIFICATIONS. COPIES OF
- COMPACTION TESTING OF ALL TRENCHES WITH THE PROJECT SITE MUST BE ATTAINED AND RESULTS SUBMITTED TO THE WEBER COUNTY ENGINEER PRIOR TO FINAL ACCEPTANCE.
- 7. CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXISTING STRUCTURES AND IMPROVEMENTS DURING INSTALLATION OF SANITARY
- 8. WHERE CONNECTION TO EXISTING UTILITY IS PROPOSED, CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION AND NOTIFY
- 9. CAMERA TESTING AND PRESSURE TESTING PER WEBER COUNTY STANDARD

Call 811 before you did

www.bluestakes.org

1-800-662-4111

Know what's **below**.

- 10. CONTRACTOR IS TO INSTALL BENTONITE CLAY CUTOFF COLLARS AS SHOWN IN PLAN AND PROFILE SHEETS.
- 11. ALL SEWER PIPE TO MANHOLE CONNECTIONS TO USE KOR-N-SEAL CONNECTORS

GENERAL NOTES

- 1. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE WEBER COUNTY ENGINEER, PLANNING, CODES AND SPECIFICATIONS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE
- 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 WIST 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 ORTAINING 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, OF CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
- 4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH WEBER COUNTY 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,
- 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 INTENDE 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 WEBER 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 LITELITY RELOCATIONS CONSISTENT WITH THE

SWPPP GENERAL NOTES

- 1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AS REQUIRED BY WEBER COUNTY AND STATE.
- 2. ALL STRUCTURAL EROSION MEASURES SHALL BE INSTALLED AS SHOWN ON THE SWPP PLAN, PRIOR TO ANY OTHER GROUND-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.

STORM SEWER GENERAL NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:
- A)OBTAIN ALL REQUIRED PERMITS FROM WEBER COUNTY OR REGULATORY AGENCIES. INCLUDING PERMITS TO WORK IN THE
- B) RESTORATION OF EXISTING IMPROVEMENTS INCLUDING BUT NOT LIMITED TO FENCES, SOD, LANDSCAPING, PAVEMENT, SPRINKLER
- BRESTORATION OF EXISTING IMPROVEMENTS INCLUDING BUT NOT LIMITED TO FERCES, SOD, LANDSCAPING, SYSTEM.

 C)VERIFICATION AND PROTECTION OF ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION.

 D)PROVIDING AS-BUILT DRAWINGS TO WEBER COUNTY AND THE ENGINEER.

 E)ALL PERMITTING, DEVELOPMENT, LOCATION, CONNECTION AND INSPECTION AND SCHEDULING FOR SUCH.
- 2. ALL STORM SEWER CONNECTIONS SHALL BE IN CONFORMANCE WITH COUNTY STANDARDS AND SPECIFICATIONS.
- 3. 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 WEBER COUNTY STANDARDS AND SPECIFICATIONS AND PLANS. ALL FRAMES SHALL BE ADJUSTED TO FINAL GRADE
- 4. COMPACTION OF ALL TRENCHES WITHIN THE PROJECT SITE MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED TO THE ENGINEER
- 5. ALL STORM DRAIN PIPES IN WEBER COUNTY RIGHT-OF-WAY SHALL BE RCP CL III.
- 6. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING LIDS. ALL STORM SEWER LIDS SHALL BE LABELED "STORM DRAIN".
- 7. WHERE CONNECTION TO EXISTING UTILITY IS PROPOSED, CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION AND NOTIFY

DEVELOPERS:

STEVE FENTON 6130 E. LAST CAMP CIR. SLC. UT 84108 801-535-4055

KEVIN DEPPE 110 W. 1700 N. CENTERVILLE, UT 84014 801-535-4032

ALL IMPROVEMENTS TO CONFORM TO CURRENT WEBER COUNTY STANDARDS AND SPECIFICATIONS

CUI INARY WATER IMPROVEMENTS TO CONFORM TO CRIMSON RIDGE WATER COMPANY UTILITY STANDARDS AND SPECIFICATIONS

GENERAL GRADING NOTES

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APWA STANDARDS AND SPECIFICATION FOR PUBLIC WORKS AND WEBER COUNTY STANDARDS, CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS AND ENTRIES. FINISHED GRADE A 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 WEBER COUNTY STANDARDS
- 4. NO FILL SHALL BE PLACED UNTIL VEGETATION HAS BEEN REMOVED AND SUB-GRADE PREPARED PER THE SOILS REPORT.
- 6. CONTRACTOR SHALL COMPLY WITH STORM WATER POLLUTION PREVENTION PLAN BY INSTALLING BMP'S PRIOR TO COMMENCEMENT OF
- 7. ALL RECOMMENDATIONS OF THE GEOTECHINICAL INC. SOCIAL PART OF THIS GRADING PLAN AND SHALL BE COMPLIED WITH. RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ALL SUBSEQUENT REPORTS, ADDENDUM ETC. SHALL BE CONSIDERED A
- 8. THE CONTRACTOR SHALL CONTACT BLUE STAKES FOR LOCATION MARKING PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
- 9. WEBER 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

CULINARY WATER GENERAL NOTES

- ALL INSTALLATION AND MATERIALS SHALL CONFORM TO CRIMSON RIDGE WATER COMPANY STANDARDS, SPECIFICATIONS AND PLANS, AVAILABLE UPON REQUEST.
- 2. BEFORE AN DURING BACK FILL OPERATIONS. CONSTRUCITON WORK WILL BE INSPECTED BY A REPRESENTATIVE OF CRIMSON RIDGE WATER
- 3. THRUST BLOCKING IS REQUIRED AT ALL BENDS AND FITTINGS. TIE RODS SHALL BE USED AT ALL BENDS AND FITTINGS WHERE THRUST BLOCKS DO NOT BEAR AGAINST UNDISTURBED SOIL.
- 4 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, THE WATERLING SHALL BE INSTALLED WITH 20 L.F. OF CONCRETE CASING CENTERED OVER THE SEWER PIPE.
- 5, DISINFECTION TESTS IS REQUIRED PER WATER COMPANY SPECIFICATIONS,
- 6. A MINIMUM HORIZONTAL CLEARANCE OF 10 FEET SHALL BE MAINTAINED FROM SANITARY SEWER MAINS.
- 7. UNLESS OTHERWISE SPECIFIED. ALL WATERLINES SHALL BE AWWA C900 PVC CLASS 200 PIPE. PER ASTM D2241, WASHOUT ASSEMBLIES SHALL CONSIST OF A KUPFERLE FOUNDRY CO. 2" BLOW-OFF HYDRANT (OR WATER COMPANY APPROVED FOUND.) PLACED IN A BOX LOCATED IN THE PARK STRIP. WATER LINES SHALL BE ADJUSTED IN DEPTH AND GATE VALVES IN LOCATIONS AS NOT TO INTERFERE WITH STORM
- 8. CONTRACTOR SHALL LOCATE VALVES PRIOR TO CONNECTION WITH EXISTING SYSTEM, BUT SHALL NOT OPERATE ANY VALVE WITHOUT PERMISSION FROM THE WATER UTILITY.
- 9. ALL WATER MAINS, VALVES, FIRE HYDRANTS, SERVICES AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO
- 10. THERE SHALL BE A WATER SUPPLY TO THE DEVELOPMENT BEFORE ANY WOOD CONSTRUCTION STARTS.
- 11. THE WATER LITERTY REQUIRES THE USE OF CORROSION RESISTANT MATERIALS FOR ALL CULINARY WATER IMPROVEMENTS. SPECIFICALLY, ROMAC BLUE BOLTS OR STAINLESS STEEL BOLTS MUST BE USED ON ALL FITTINGS. FURTHER, ALL METAL FITTINGS SHALL BE POLY WRAPPED.

SHEET INDEX

COVER SHEET

OVERALL UTILITY PLAN

OVERALL SHEET LAYOUT ENTRY ACCESS DEMO

ENTRY ACCESS REGRADING

DRAINAGE CALCS
EFFLUENT TREATMENT FACILITY

SEWER DRAIN FIELD EXPANSION DRIP SYSTEM & DETENTION PONDS

OPEN SPACE PRESERVATION PLAN

C11 - OPEN SPACE PRESERVATION PLAN
C11 - OVERALL GRADING PLAN (WITH PHASED WORK)
PP1 - SKYLINE DRIVE - PLAN AND PROFILE
PP2 - SKYLINE DRIVE - PLAN AND PROFILE
PP3 - SKYLINE DRIVE - PLAN AND PROFILE
PP4 - SKYLINE DRIVE - PLAN AND PROFILE

VALLEY VIEW DRIVE - PLAN AND PROFILE
VALLEY VIEW DRIVE - PLAN AND PROFILE
HARBOR VIEW COURT - PLAN AND PROFILE

SR-158 (UDOT) - PLAN AND PROFILE ORENCO DETAILS (HARBOR VIEW ESTATES SUBDIVISION)

SEPTIC DETAILS PHASE 2A, 2B & 2C) EFFLUENT TREATMENT FACILITY DETAILS

EFFLUENT AND AIR POD DETAILS
EFFLUENT TREATMENT — ABSORPTION BED DETAILS

EFFLUENT TREATMENT FACILITY DRIP SYSTEM DETAILS



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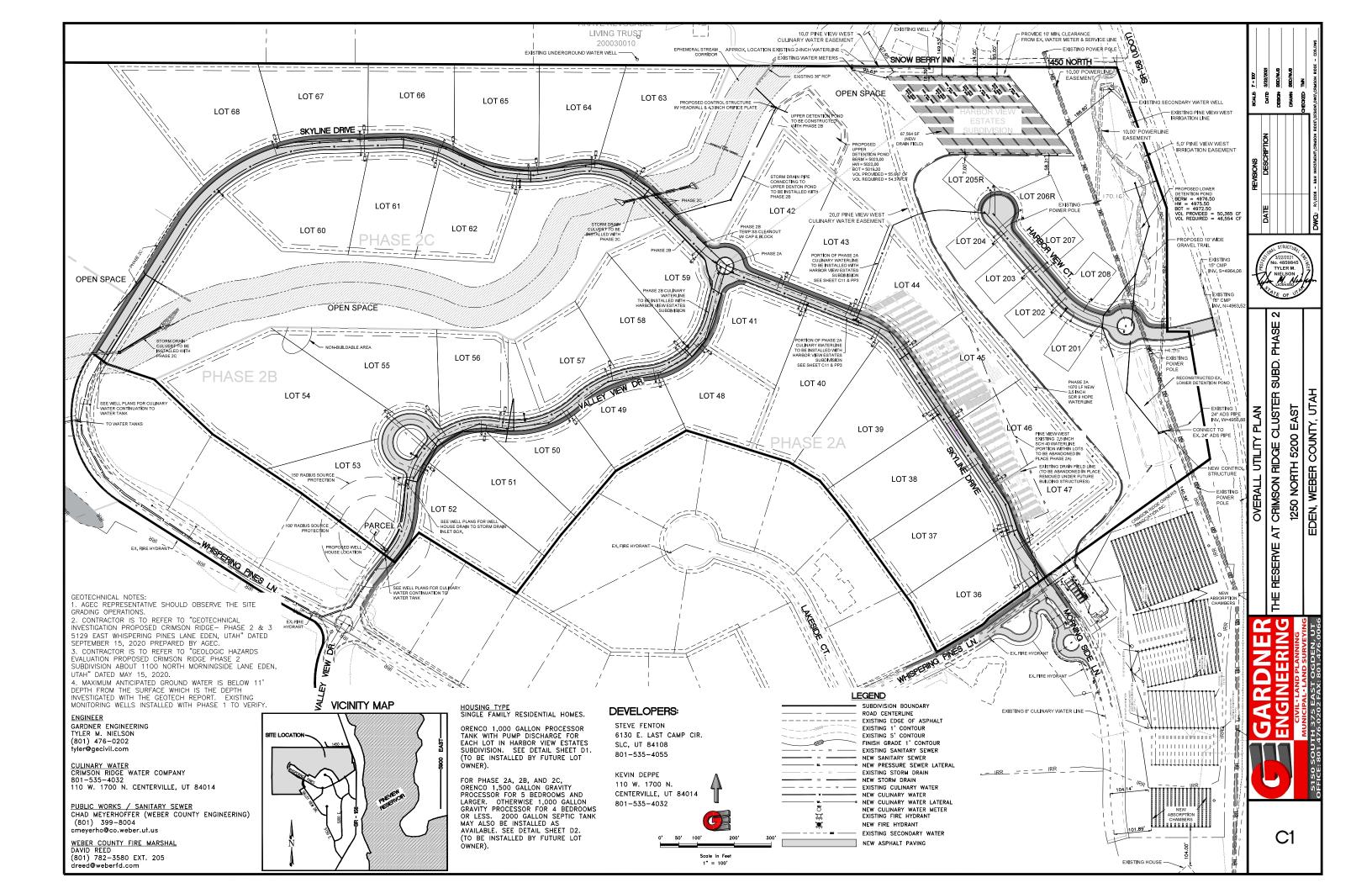
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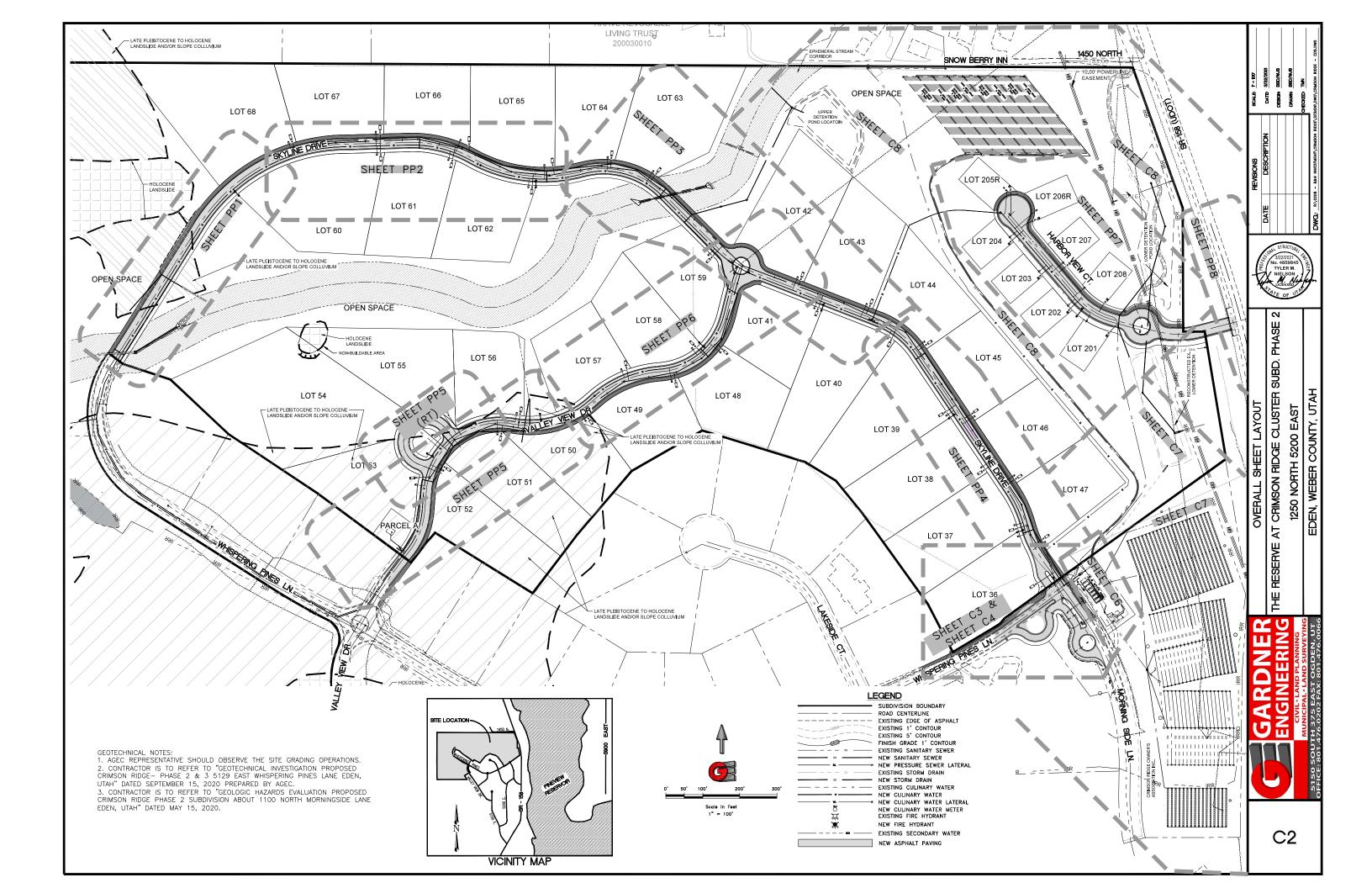
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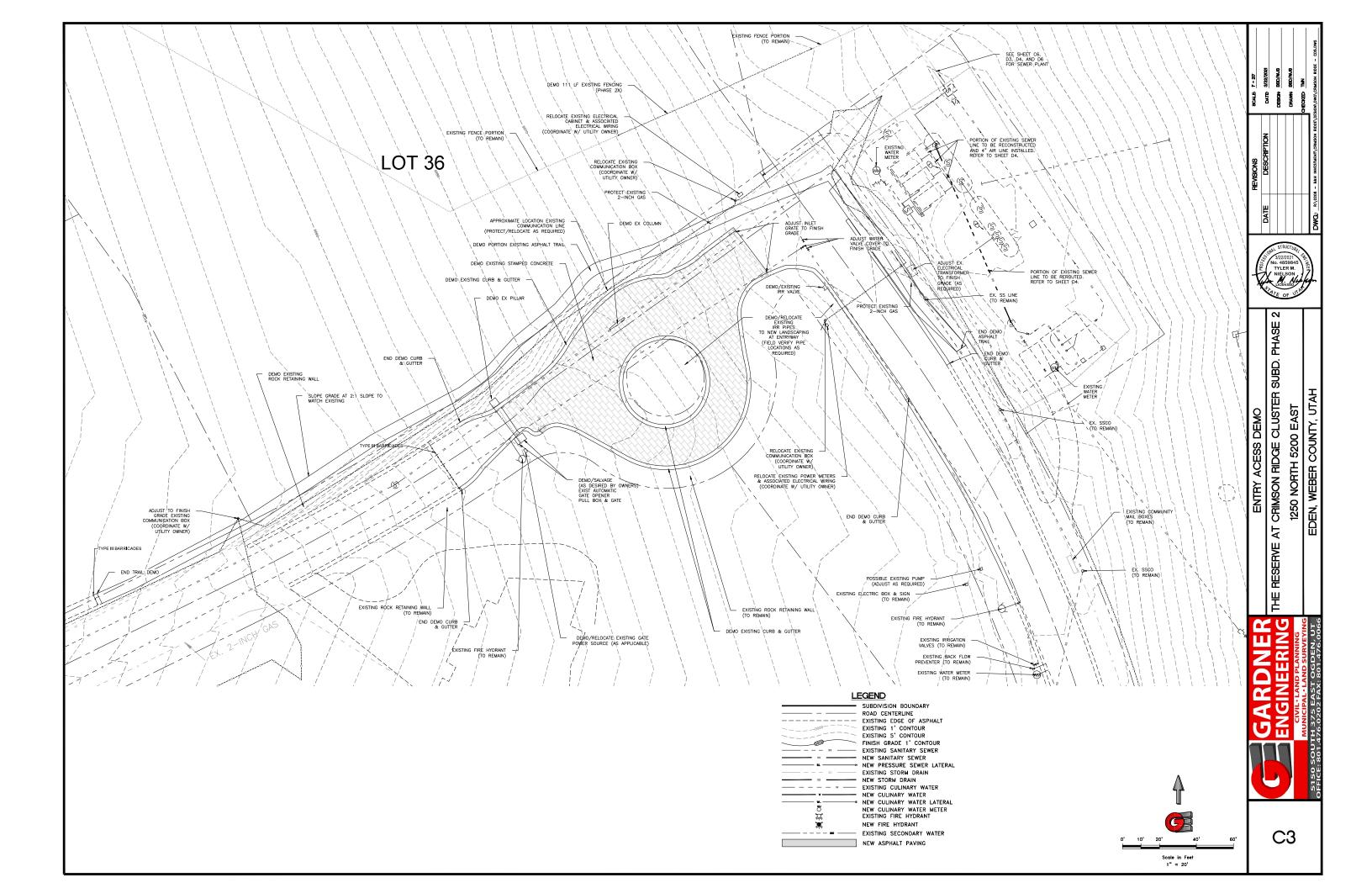
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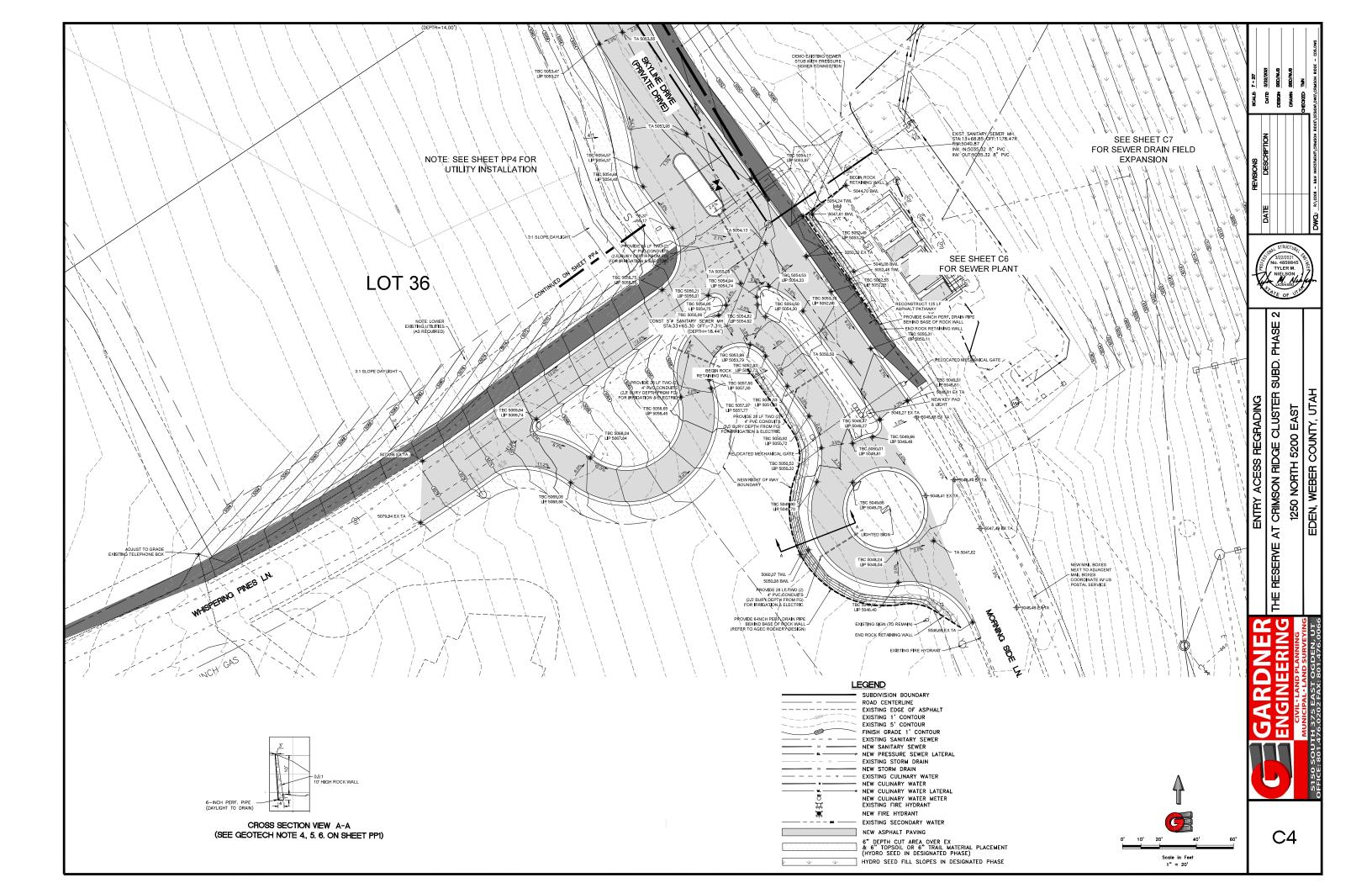
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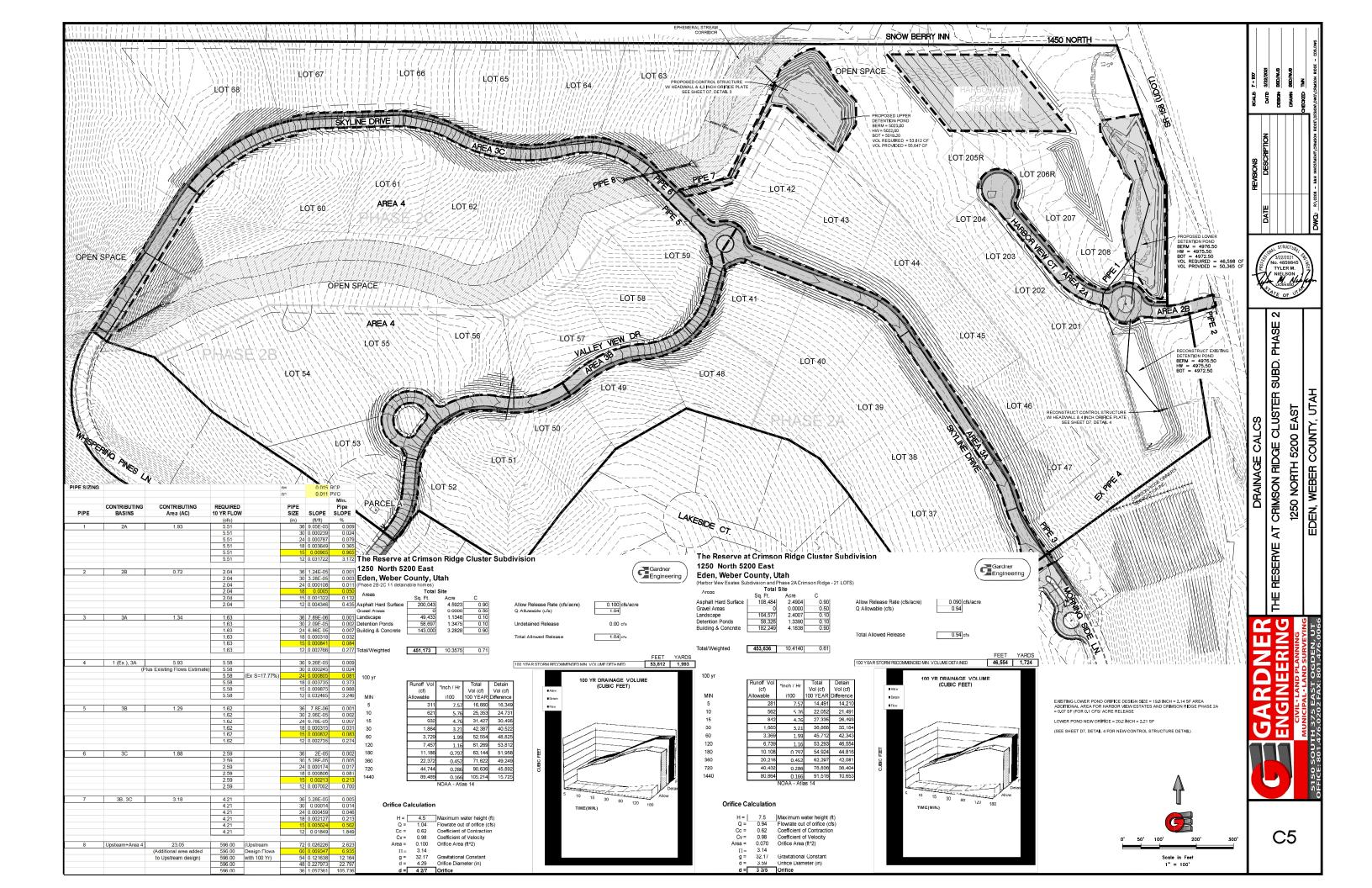
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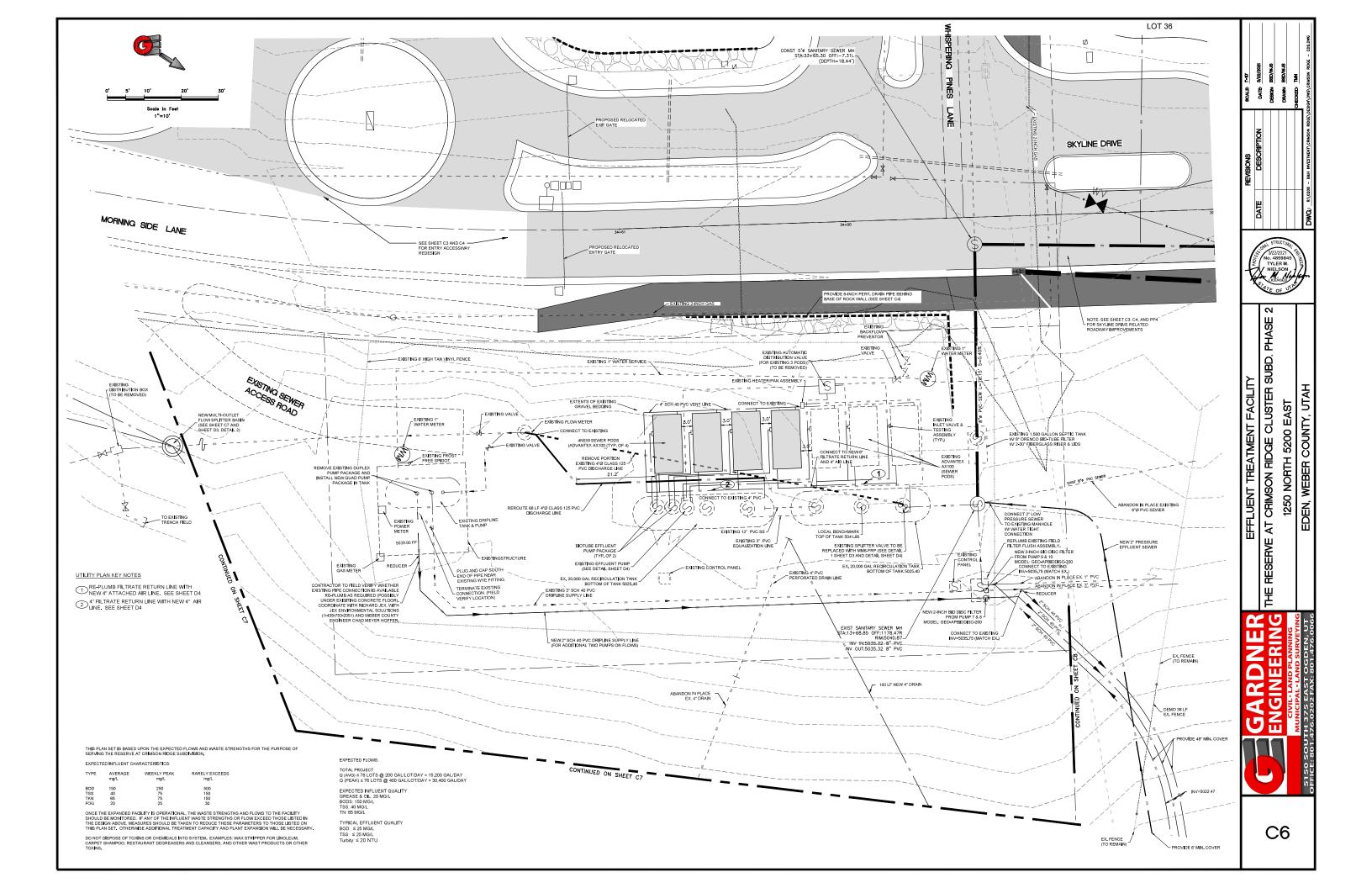


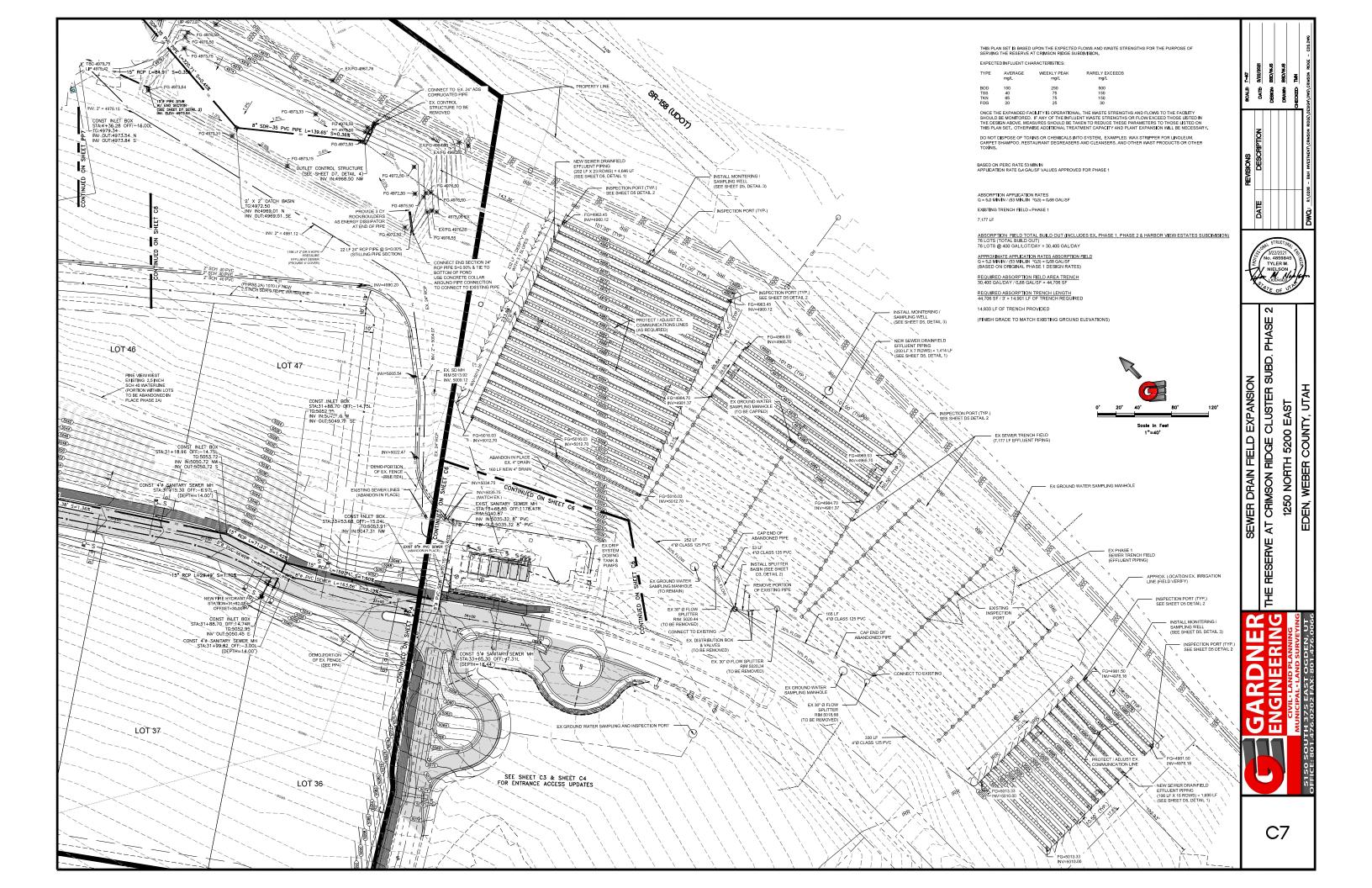


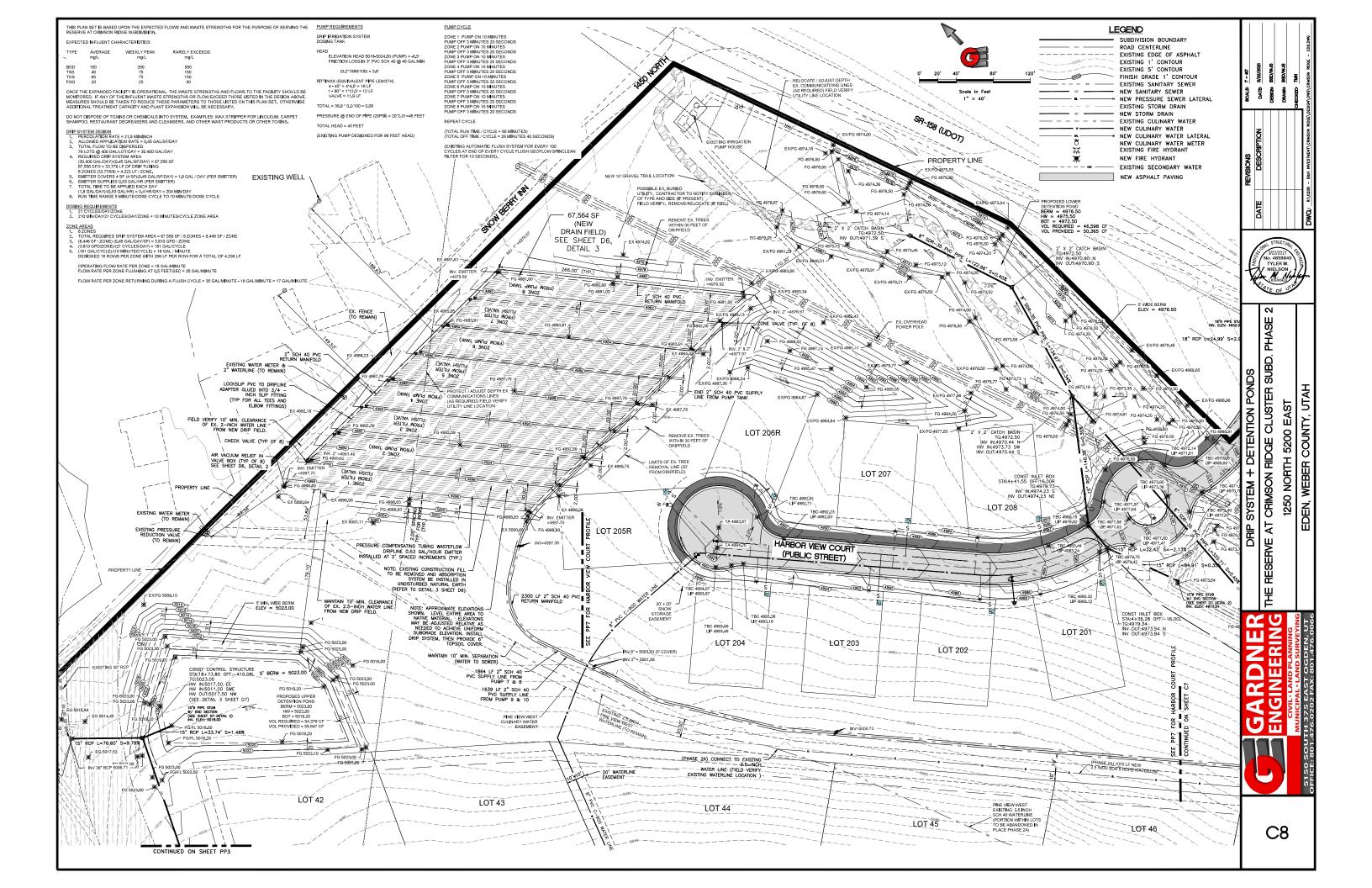








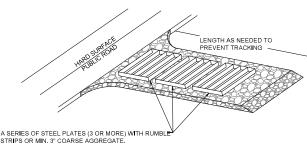




EROSION CONTROL NOTES:

1. SANDBAGS WILL BE PLACED AT DISCHARGE LOCATIONS TO CONTAIN AND DIVERT STORM WATER THROUGH THE INLET PROTECTION.

- 2. AN EARTHEN BERM $6^{\rm H}$ 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.



- 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 SO AS TO PREVENT SEDIMENTS FROM BEING DEPOSITED INTO THE STORM DRAIN SYSTEMS, DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS INTO THE STORM DRAIN SYSTEM.

 2. STABILIZED CONSTRUCTION ENTRANCE SHALL BE:

 3. 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 PAYED SURFACES.

 3. ADDING A WASH RACK WITH A SEDIMENT TRAP LARGE ENOUGH TO COLLECT ALL WASH WATER CAN GREATLY IMPROVE EFFICIENCY.

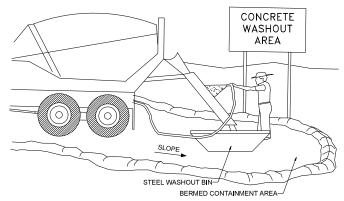
- ADDITION A WASHINGTON ASSUMENT HAP DARGE ENGOGETION COLLEGET ALL WAS WATER CAN GREATLY IMPROVE EFFICIENCY.

 ALL VEHICLES ACCESSING THE CONSTRUCTION SITE SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE SITES.

STREET MAINTENANCE NOTES:

- REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS IMMEDIATELY.
 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.

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



- 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.

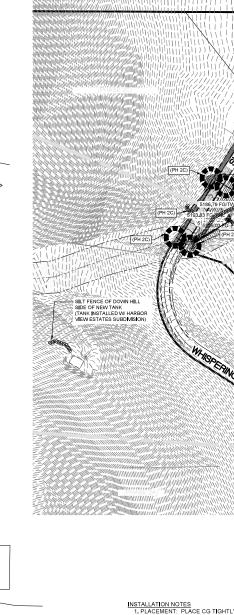
 3. FOR WASHOUT OF CONCRETE AND MORTAR PRODUCTS ONSITE, A DESIGNATED CONTAINMENT FACILITY OF SUFFICIENT CAPACITY TO RETAIN LIQUID AND SOLID WASTE SHALL BE PROVIDED.
- WASTIES STALL BE PROVIDED.

 4. ONSITE CONCRETE WASHOUT CONTAINMENT FACILITY SHALL BE A STEEL BIN OR APPROVED ALTERNATE.

 5. SLURRY FROM CONCRETE AND ASPHALT SAW CUTTING SHAL BE VACUUMED OR
- CONTAINED, DRIED, PICKED UP AND DISPOSED OF PROPERLY.



SUTFENCE

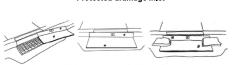


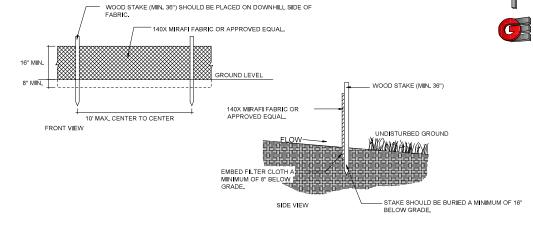
INSTALLATION NOTES 1. PLACEMENT: PLACE CG TIGHTLY AGAINST CURB OPENING AND COVER ENTIRE GRATE. CG SHOULD EXTEND AT LEAST 2 INCHES PAST GRATE TOWARDS

- AT LONGER OPENINGS. 3. ANCHOR: ANCHOR CG SO THAT WATER CANNOT
- FLOW BEHIND IT.

 4. ALTERNATE ANCHOR METHODS: A) INSTALL GRAVEL
- BAGS AT EACH SIDE OF CG HALF-ON AND HALF-OFF THE EDGES. USE HALF-FILLED GRAVEL BAGS (15 OR 20 LBS), ROUND ROCK IS RECOMMENDED, OR B) ATTACH WITH 16 GAUGE TIE-WIRE, CUT WIRE TO 18" LENGTH. AT EACH CORNER OF CG, FEED ONE END OF WIRE DOWN THROUGH CG, AROUND GRATE BAR, AND BACK UP THRU CG. ABOVE GROUND, TWIST WIRES SEVERAL TIMES. CUT-OFF EXCESS, OR C) FASTEN WITH CONCRETE ANCHORS/NAILS AT THE OUTSIDE EDGES OF CG.



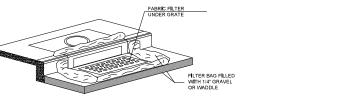




1A INLET PROTECTION - OPTION 1

DEVELOPERS:

2 SILT FENCE

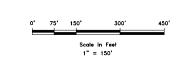


(1B) INLET PROTECTION - OPTION 2

6130 E. LAST CAMP CIR. SLC, UT 84108 801-535-4055 KEVIN DEPPE

STEVE FENTON

110 W. 1700 N. CENTERVILLE, UT 84014 801-535-4032





PHASE SUBD.

UTAH CLUSTER EAST 5200

NORTH

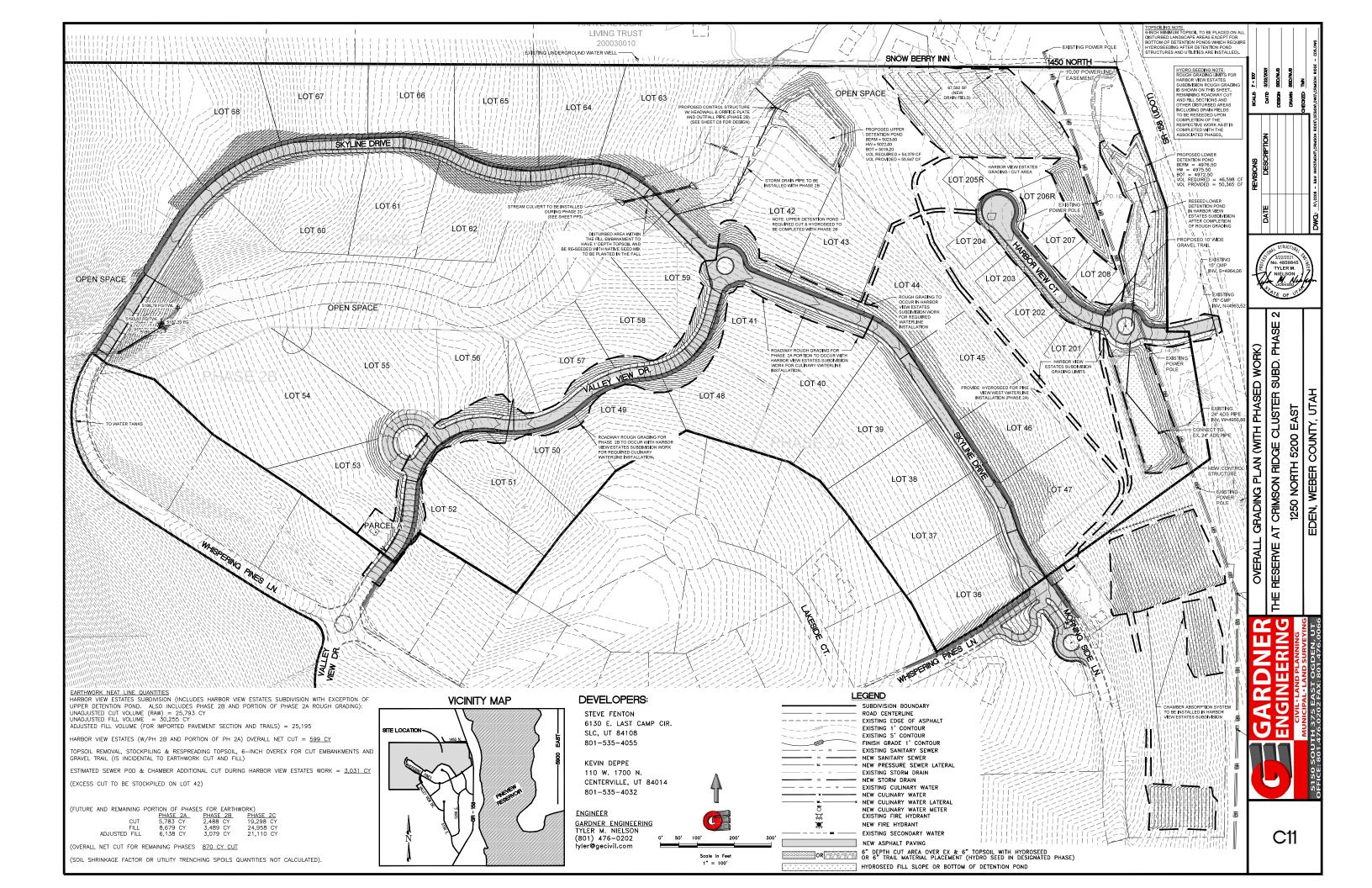
CRIMSON 1250 ΑT

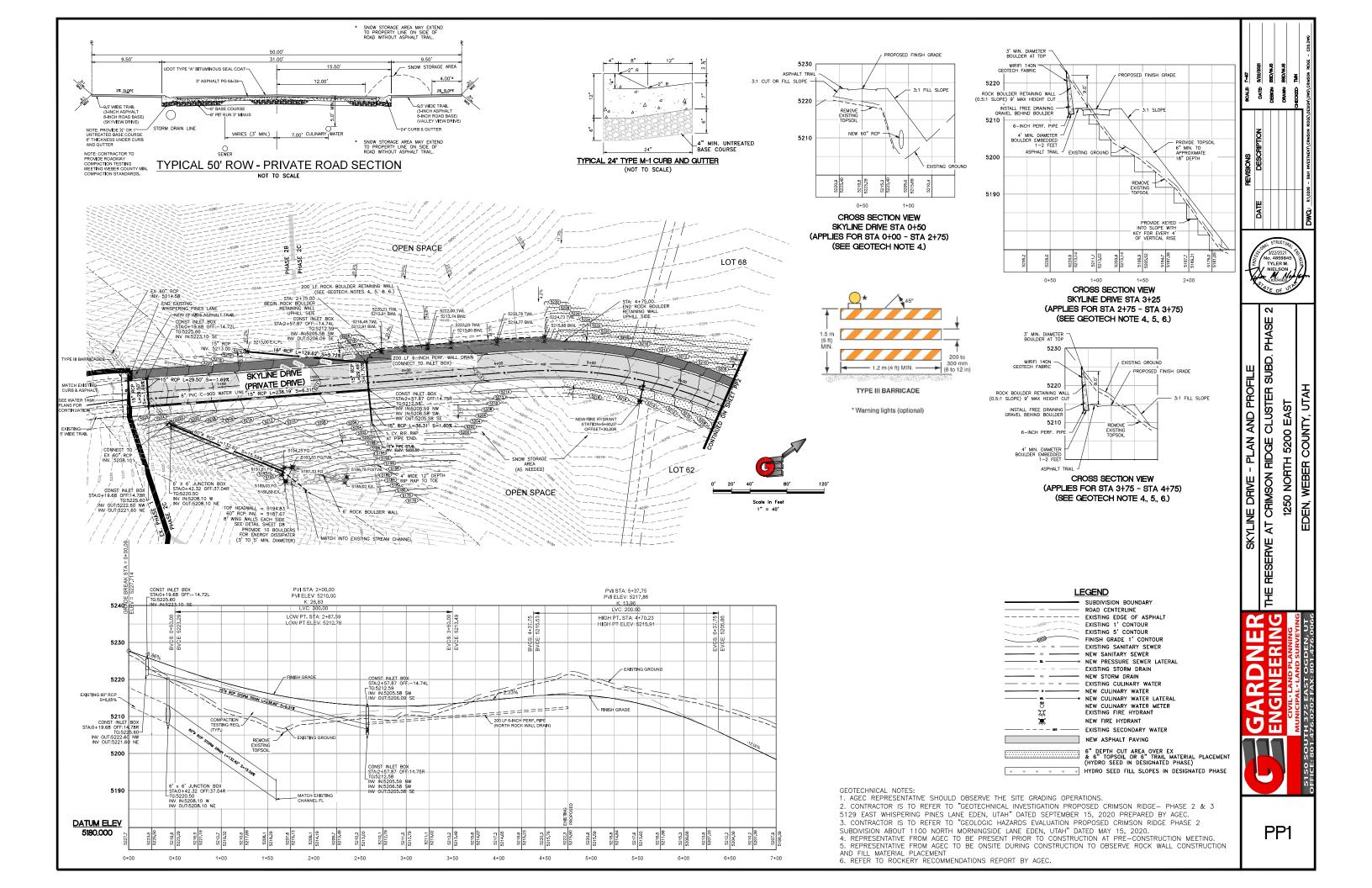
RESERVE 뿔 ac u RIN

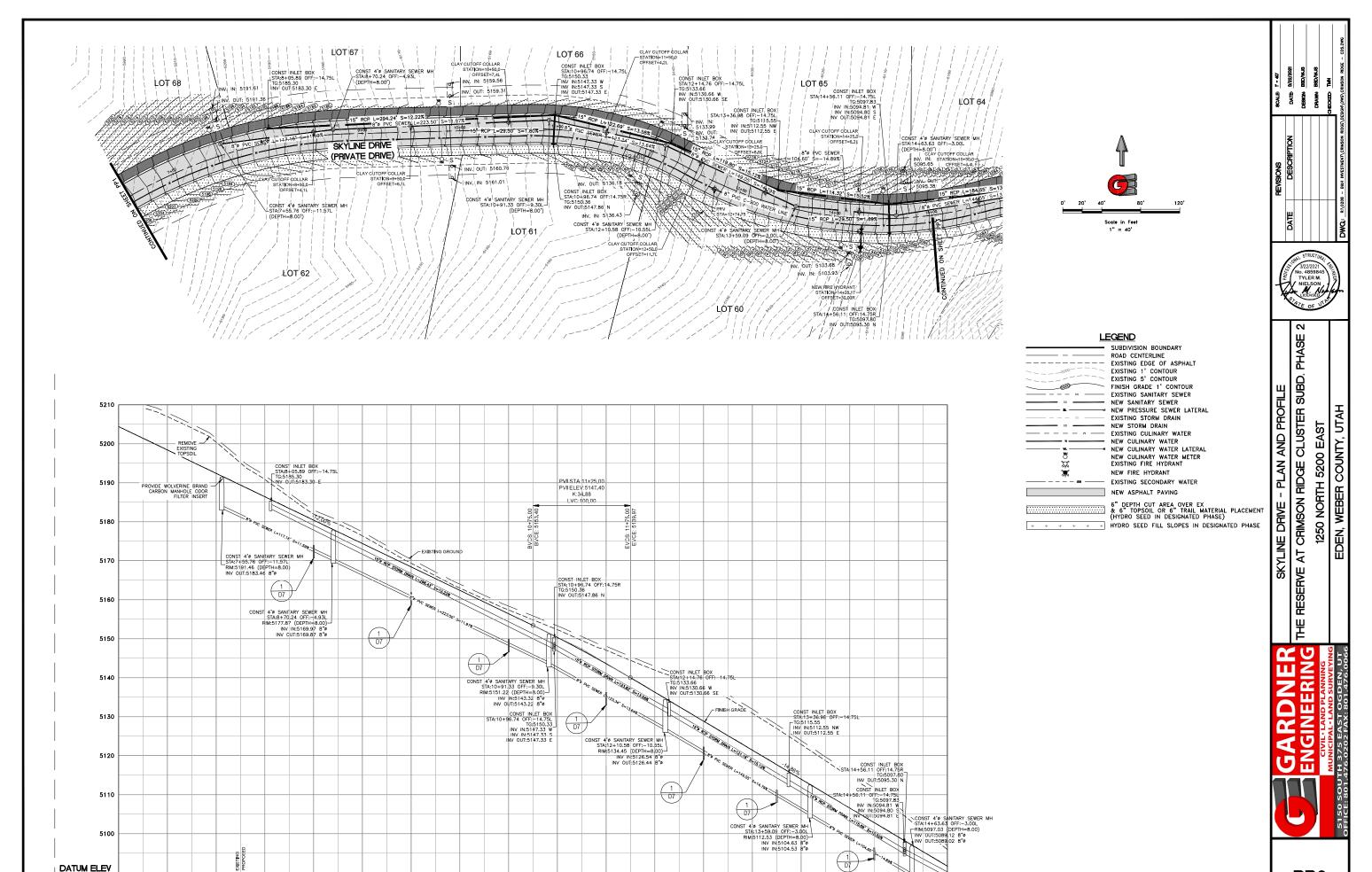
<u>ق</u> Ž

C9

OPEN SPACE PRESERVATION PLAN THE RESERVE AT CRIMSON RIDGE CLUSTER SUBD. - PHASE 2A, 2B, 2C + HARBOR VIEW ESTATES SUBDIVISION OPEN SPACE HARBOR VIEW **ESTATES SUBDIVISION** SKYLINE DR. 357,165 SF 8.20 AC) OPEN SPACE PHASE OPEN SPACE OPEN SPACE LEY VIEW DA 10850 SF 0.249 AC OPEN SPACE OPEN SPACE 1,520 SF 0.035 AC (PHASE 2B OPEN SPACE 969409 SF 22.25 AC) PINE VIEW RESEVOIR PHASE 2B SR-158 (**NEW WATER TANK EXISTING WATER TANK** WELL HOUSE (OPEN SPACE) EXISTING SECONDARY WATER RESEVOIR (PHASE 2A OPEN SPACE 923202 SF 21.19 AC) M U (HARBOR VIEW ESTATES SUBDIVISION OPEN SPACE 308724 SF 7.09 AC) BOAT DOCKS OPEN SPACE NARRATIVE: ALL OPEN SPACE RAFEAS TO BE MAINTAINED BY THE HOA. AREAS WEST OF SKYLINE DRAIVE AND WHISPERING PINES LANE ARE TO BE PRESERVED AS NATURAL OPEN SPACE AREAS WITH THE EXCEPTION OF AREAS WHERE WATER TANK IS CURRENTLY INSTALLED AND NEW WATER TANK WILL BE INSTALLED AS A PART OF THIS DEVELOPMENT. IN THESE AREAS ANY DISTURBED AREAS WILL BE RESEEDED WITH A NATIVE SEED MIX TO HELP RE-ESTABLISH THE EXISTING LANDSCAPING. THESE OPEN SPACE AREAS WILL BE ACCESSIBLE FOR RESIDENTS OF THIS DEVELOPMENT TO UTILIZE FOR LIGHT FOOT TRAFFIC. EXISTING VEGETATION AND MATURE TREES WILL BE PRESERVED AND AREA CAN BE UTILIZED BY WHILL DELY AND ALL OF THE PROPERTY OF THE PROPER LEGEND: **DEVELOPERS**: STEVE FENTON OPEN SPACE TABLE 6130 E. LAST CAMP CIR. PHASE (LOTS) AREA (AC) OPEN SPACE (AC) COMBINED PHASE PERCENTAGE SLC, UT 84108 89.14% (HARBOR VIEW ESTATES SUBDIVISION) 69.66% (*-2A) * (8 LOTS) 2A (12 LOTS) 26.68 37.94 23.78 21.23 BY WILDLIFE. 2. COMMON AREAS NEAR THE EPHEMERAL STREAM CORRIDOR WILL BE PRESERVED AS EXISTING NATURAL AREAS. ANY LOG REMOVAL OR OTHER DEBRIS WHERE PIPES CROSS UNDER A ROADWAY WILL BE MAINTAINED TO PREVENT LOGS FROM PLUGGING UP DESIGNED STORM WATER GOING UNDER ROADWAYS. AREAS NEAR THE EPHEMERAL STREAM SHALL ALSO BE ACCESSIBLE TO ALL RESIDENTS OF THIS DEVELOPMENT TO UTILIZE FOR LIGHT FOOT TRAFFIC. EXISTING VEGETATION AND MATURE TREES WILL BE PRESERVED AND AREA CAN BE UTILIZED BY WILDLIFE. 3. SMALLER COMMON AREAS WITHIN THE DEDICATED ROADWAY SHALL BE MAINTAINED BY THE HOA IN AN ATTRACTIVE MANNER AS DESIRED BY THE HOA. THESE AREAS ARE FOR AESTHETICALLY VISIBLE FEATURES FOR THIS DEVELOPMENT. BY WILDLIFE. 801-535-4055 22.75 16.37 2B (12 LOTS) 40.22 64.63% (*-2B) 2C (9 LOTS) 61.80% (*-2C) KEVIN DEPPE C10 * = INITIAL PHASE IS HARBOR VIEW ESTATES SUBDIVISION 110 W. 1700 N. CENTERVILLE, UT 84014 801-535-4032

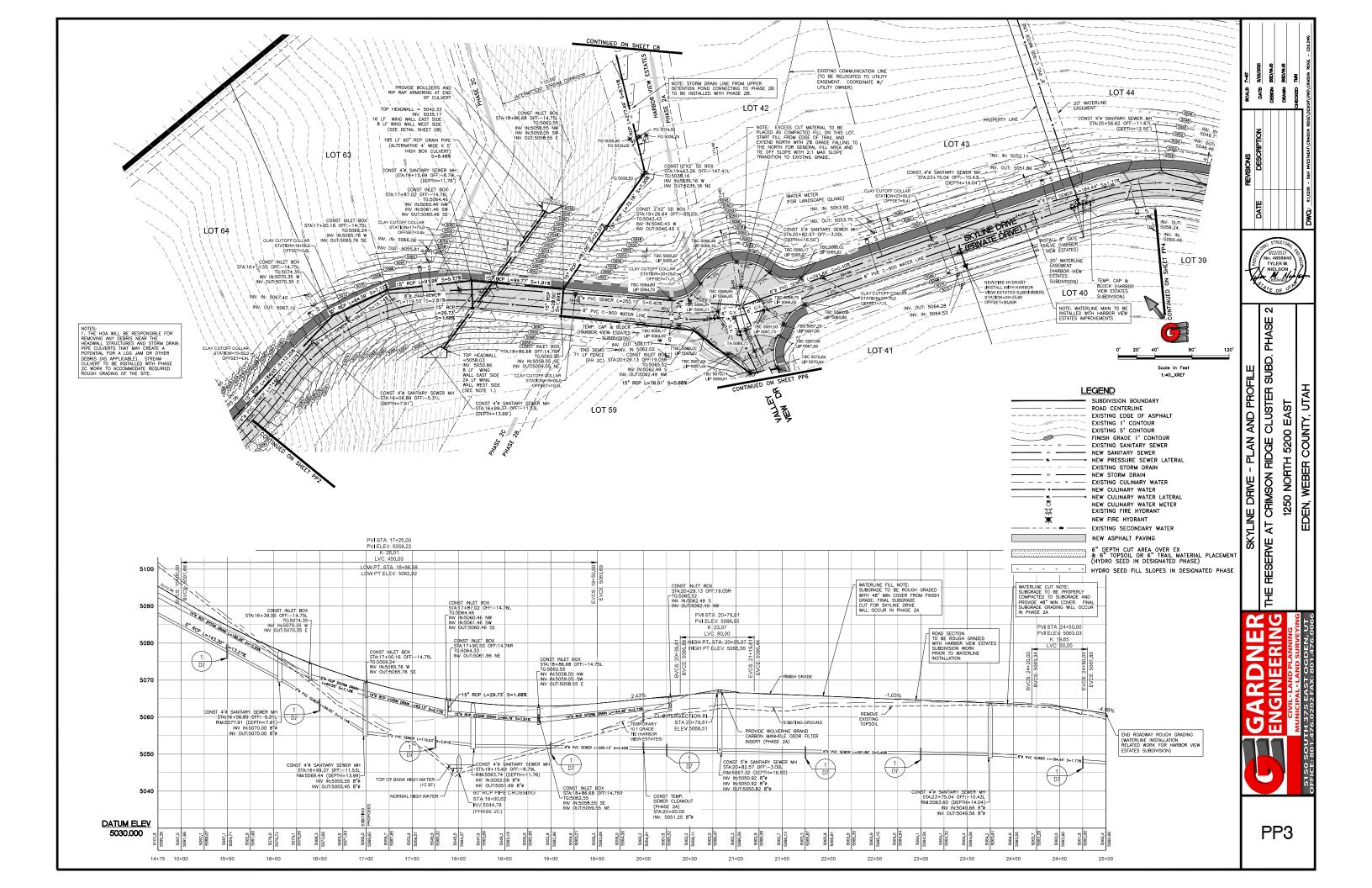


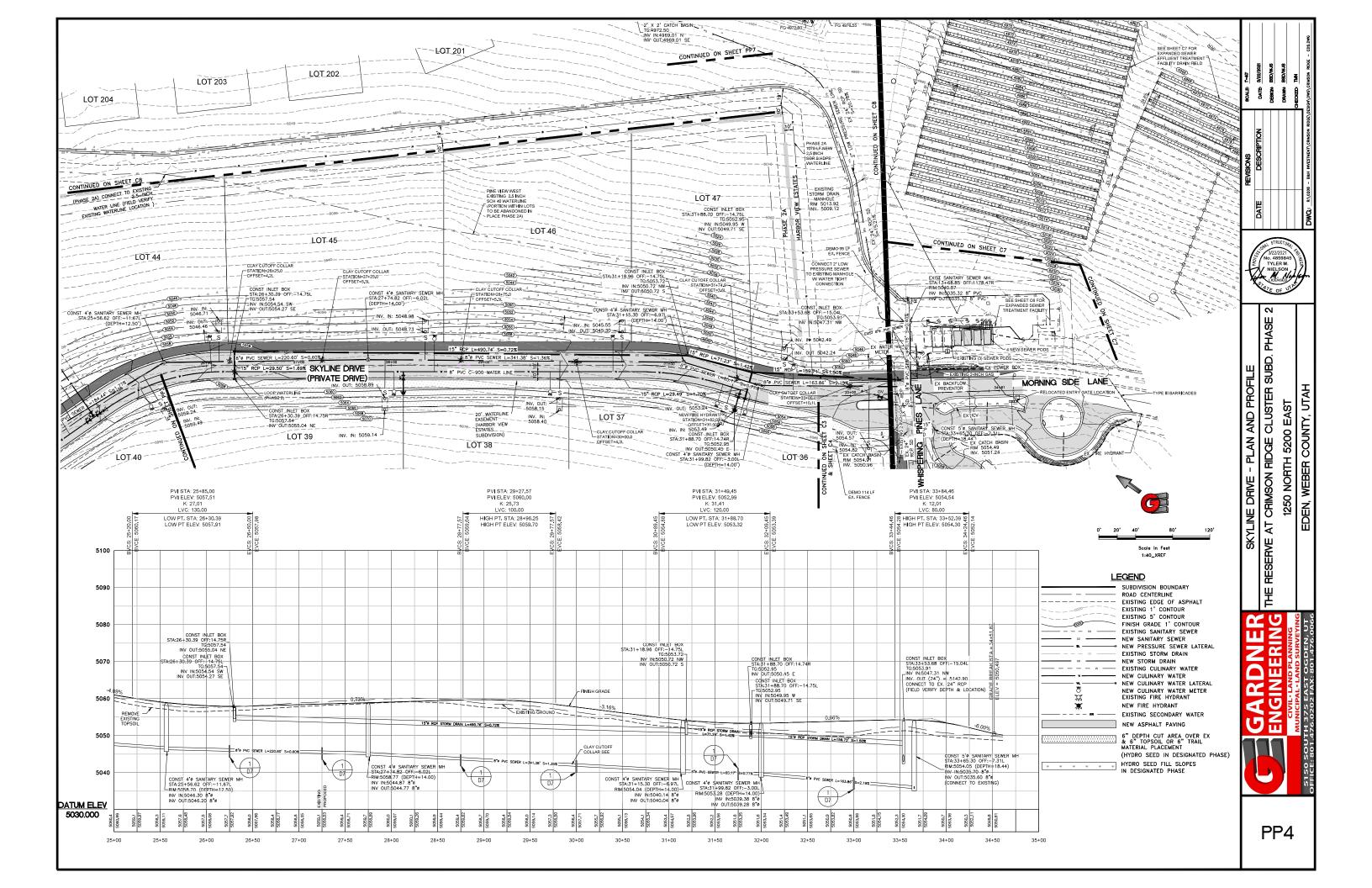


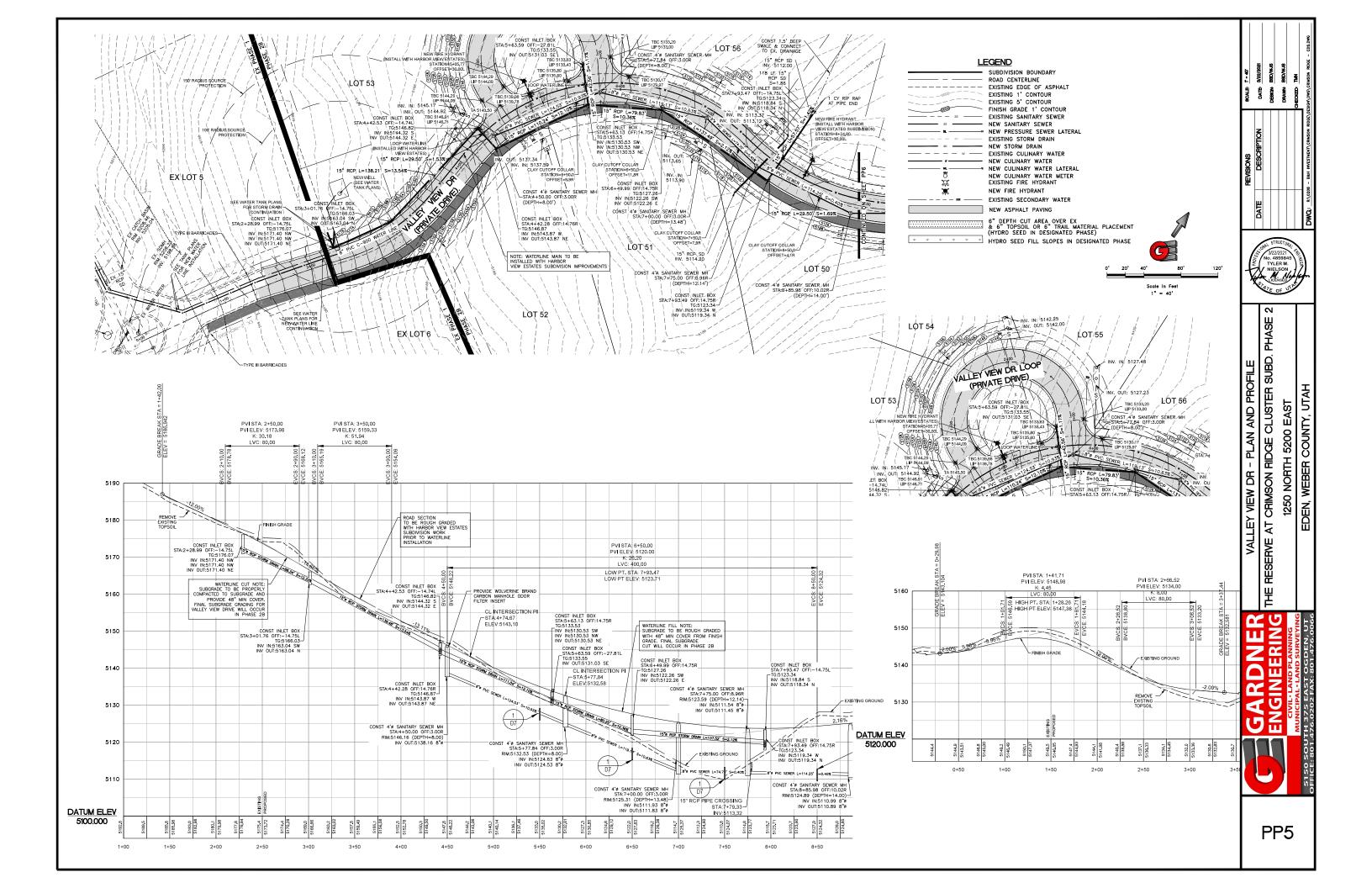


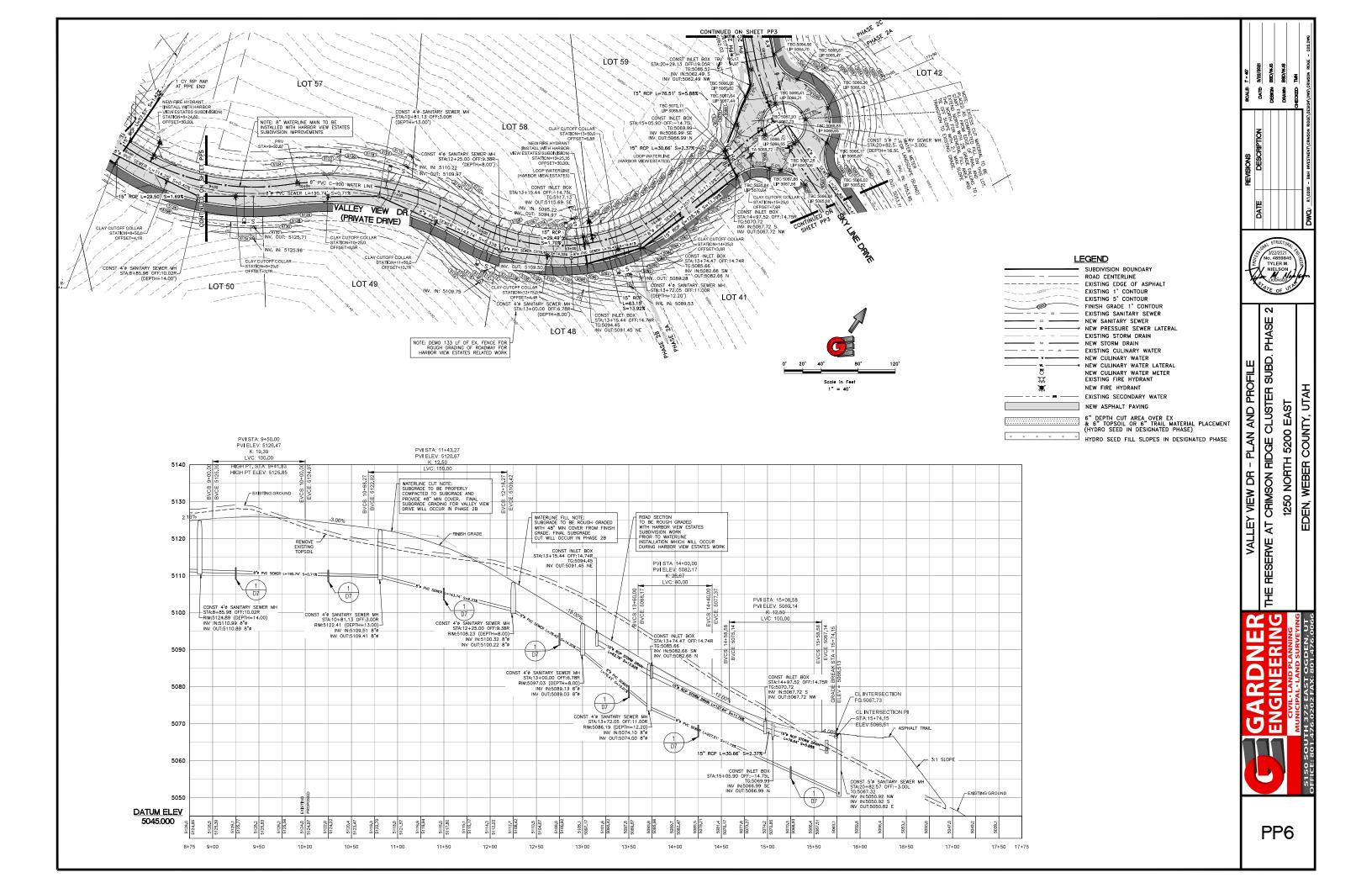
5090.000

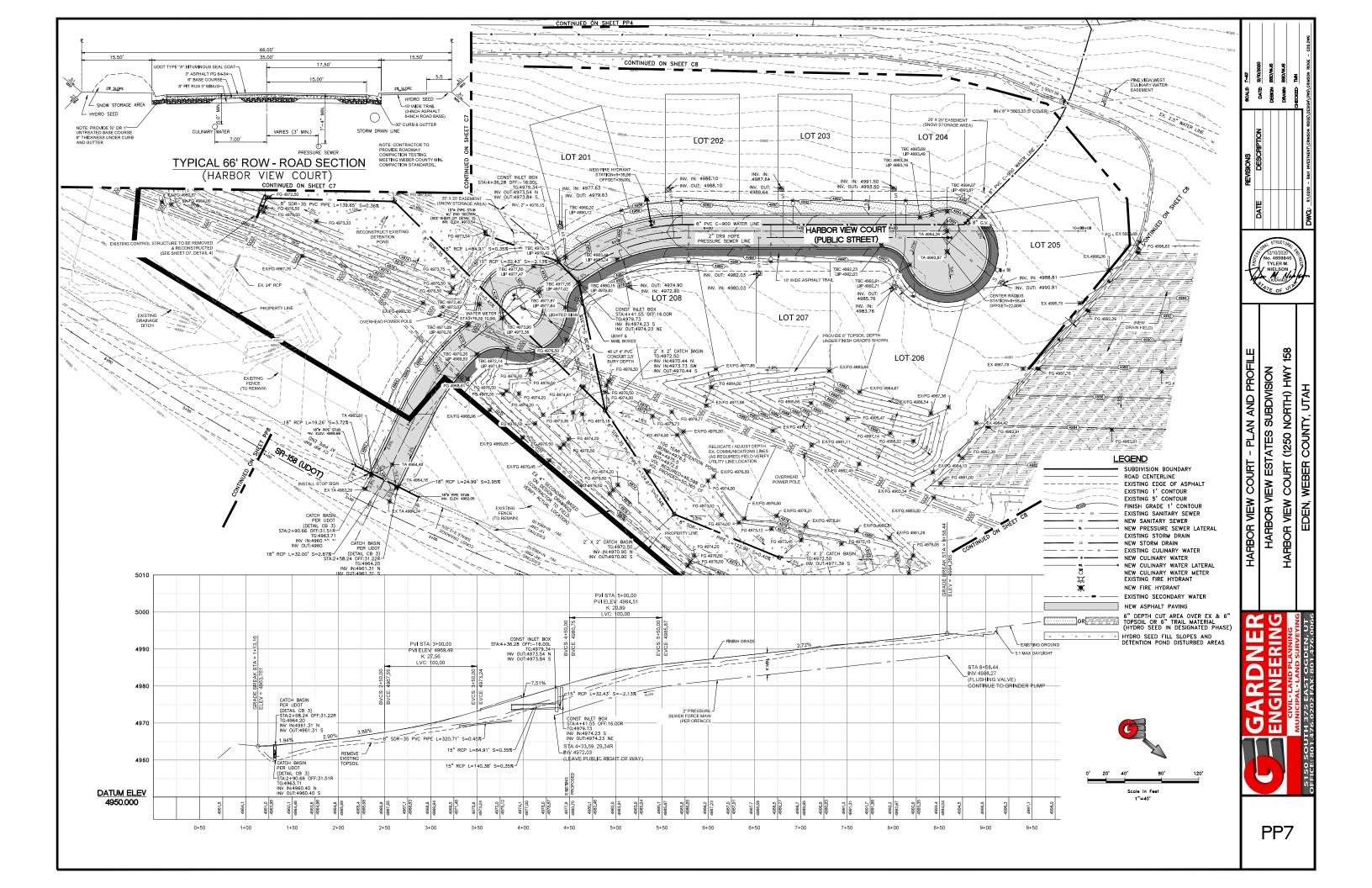
PP2

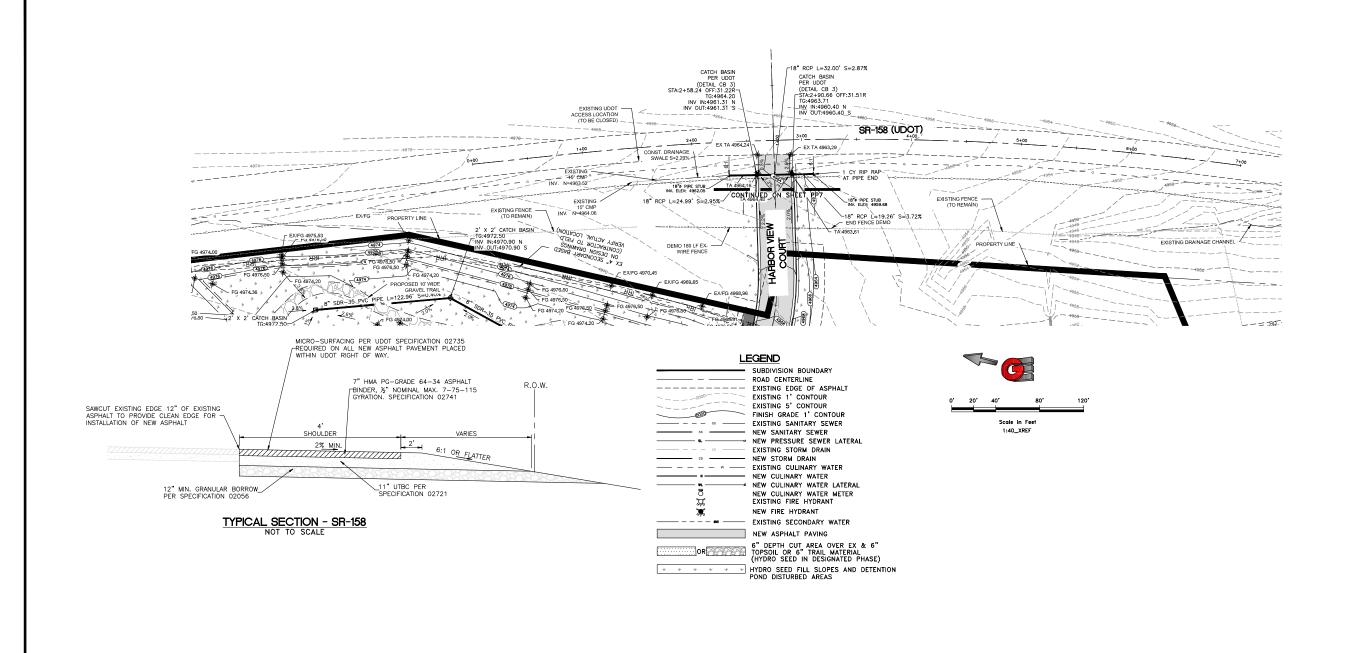


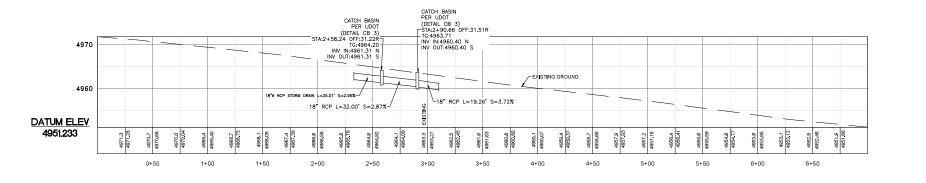














SCALE DATE DESIGN Crimson Ridge / Harbor View Estates - Effluent Sewer Section

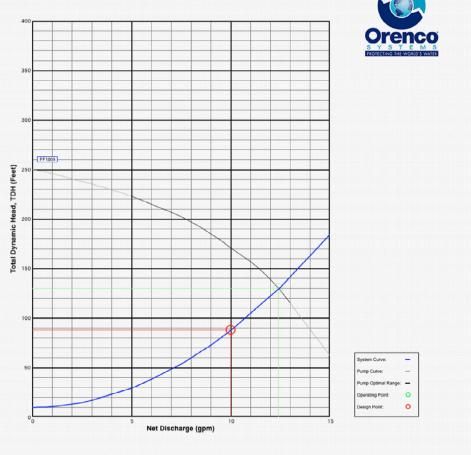
Parameters					
Discharge Assembly Size	1.25	inches			
Transport Length	70	feet			
Transport Pipe Class	40				
Transport Line Size	1.25	inches			
Distributing Valve Model	None				
Max Elevation Lift	10	feet			
Design Flow Rate	10	gpm			
Flow Meter	None	inches			

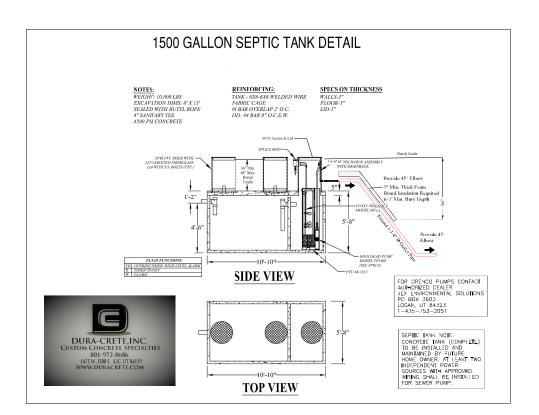
Frictional Head Losses 0.7 1.0 0.0 0.0 76.0 Loss through Discharge Loss in Transport

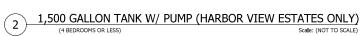
Pipe Volumes

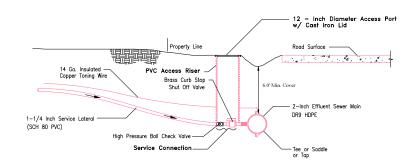
Minimum Pump Requirements

10.0 gpm 87.7 feet



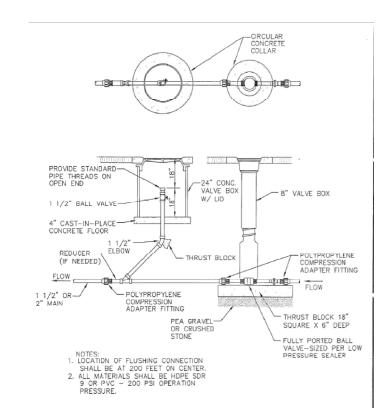






All service line connections shall be solvent welded. The only acceptable solvents and cements are those that are recommended by the pipe manufacturer. All service laterals from the effluent sewer main to the property line shall be pressure tested prior to any backfilling.

EFFLUENT PRESSURE SEWER TYPICAL SERVICE CONNECTION





8

COUNTY, UTAH

1250 NORTH 5200 EAST

SEWER DETAILS - HARBOR VIEW ESTATES SUBDIVISION IE RESERVE AT CRIMSON RIDGE CLUSTER SUBD. PHASE 置

20 GARDNER ENGINEERING







24" DIAMETER TUFF TITE POLY FLAT LID

DURA-CRETE INC. 1475 W. 3500 S. WVC. UTAH 84119 801-972-8686 SALES@DURACRETE.COM

MFG. TANK MARKINGS INLET & OUTLET TANK GAL. SIZE MFG. NAME ON OUTLET SIDE

1500 GALLON SEPTIC TANK

DURA-CRETE INC.

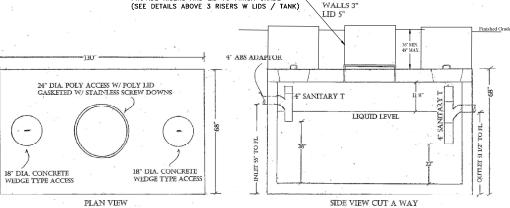
EXCAVATION HOLE SIZE 8'X 13'

WEIGHT 12,400 LBS

CONCRETE THICKNESS

ENGINEERED FOR 48" EARTH COVERAGE

PROVIDE RISERS AND LID TO FINISH GRADE (SEE DETAILS ABOVE 3 RISERS W LIDS / TANK)



1,500 GALLON CONCRETE SEPTIC TANK (GRAVITY EFFLUENT)

SEPTIC TANK NOTE: CONCRETE TANK (COMPLETE) TO BE INSTALLED AND MAINTAINED BY FUTURE HOME OWNER

24" DIAMETER TUFF TITE POLY RISERS (AVAILABLE IN 12" OR 6" STACKABLE HEIGHT INCREMENTS)



9'X 15'

DURA-CRETE INC. 1475 W. 3500 S. WVC, UTAH 84119 801-972-8686 SALES@DURACRETE.COM

MFG. TANK MARKINGS INLET & OUTLET TANK GAL. SIZE MFG. NAME ON OUTLET SIDE

18" DÍA. CONCRETE WEDGE TYPE ACCESS

24" DIA, POLY ACCESS W/ POLY LID

ENGINEERED FOR 48" EARTH COVERAGE PROVIDE RISERS AND LID TO FINISH GRADE (SEE DETAILS ABOVE 3 RISERS W LIDS / TANK)

2500 GALLON SEPTIC TANK

4" ABS ADAPTOR

DURA-CRETE INC.

CONCRETE THICKNESS FLOOR 5" WALLS 4" LID 5" H4" SANITARY T LIQUID LEVEL

EXCAVATION HOLE SIZE

WEIGHT 16,000 LBS

PLAN VIEW SIDE VIEW CUT A WAY

18" DIA. CONCRETE WEDGE TYPE ACCESS

2,500 GALLON CONCRETE SEPTIC TANK (GRAVITY EFFLUENT)



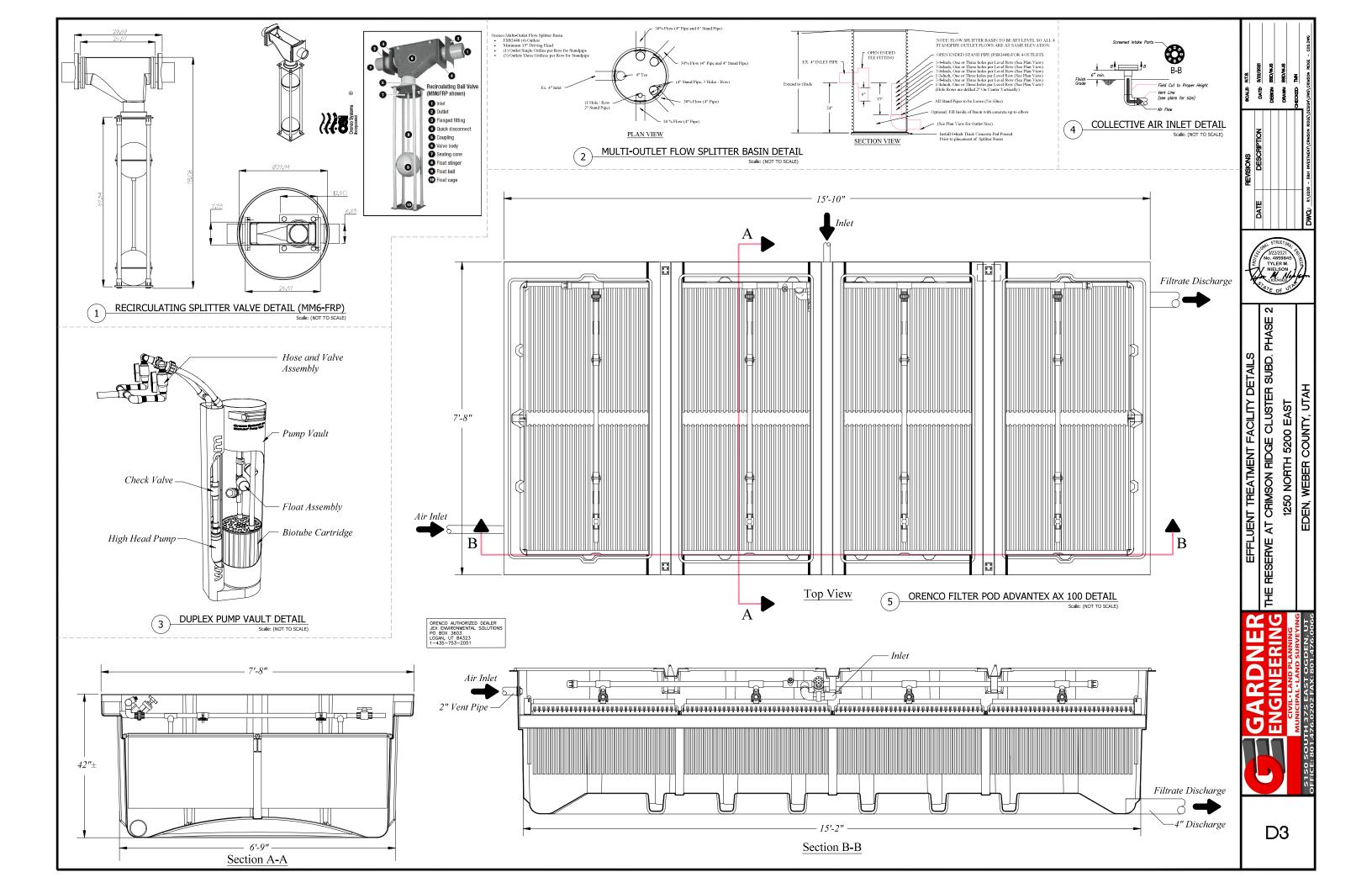
PHASE

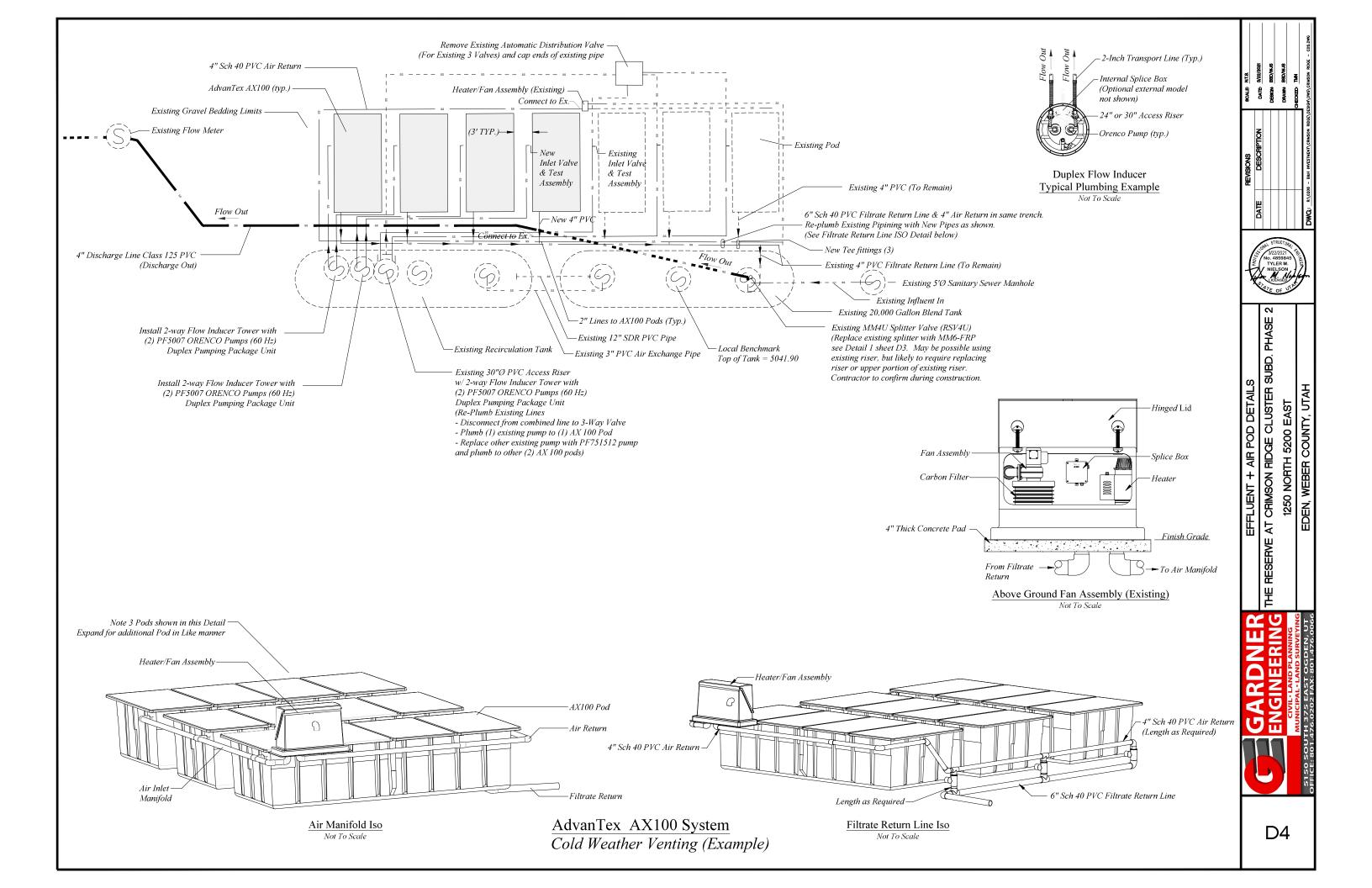
+ 2C SEPTIC TANK DETAILS PHASE 2A. 2B. + 2C RESERVE AT CRIMSON RIDGE CLUSTER SUBD.

COUNTY, UTAH

1250 NORTH 5200 EAST

뿔 C U ARDNEF IGINEERING



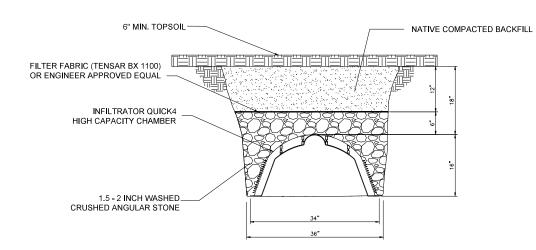


INFILTRATOR WATER TECHNOLOGIES

QUICK4 HIGH CAPACITY CHAMBER PRODUCT SPECIFICATIONS (NOT TO SCALE)

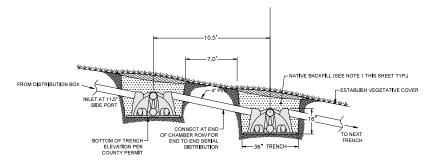
TOP VIEW SIDE VIEW **END VIEW** -INSPECTION PORT QUICK4 HIGH CAPACITY MULTIPORT END CAP __ 11.5" INVERT 19" ---11.75" OUTLET END* 17" INLET END*

*ALL VIEWS = INSTALLED LENGTHS.



CHAMBER SYSTEM TRENCH DETAIL (NOT TO SCALE)

INFILTRATION TRENCH DETAIL



SEE SHEET C7 FOR PLAN VIEW LENGTHS.
CENTER TO CENTER SPACING PER STATE CODE.

NOTES:

1. MAX SIZE ROCK: 3-4", BACKFILL
CAREFULLY PLACED (LADLED IN, OR
PUSHED IN LIGHTLY FROM THE SIDES). NO
DUMPING - IMPACT LOADING.

INFILTRATOR WATER TECHNOLOGIES QUICK4 HIGH CAPACITY CHAMBER SERIAL DISTRIBUTION TYPICAL DETAIL SECTION VIEW (NOT TO SCALE)

TYPE	AVERAGE mg/L	WEEKLY PEAK mg/L	RARELY EXCEED mg/L
BOD	150	250	500
TSS	40	75	150
TKN	65	75	150
FOG	20	25	30

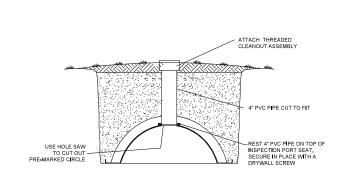
ONCE THE EXPANDED FACILITY IS OPERATIONAL. THE WASTE STRENGTHS AND FLOWS TO THE FACILITY SHOULD BE MONITORED. IF ANY OF THE INFLUENT WASTE STRENGTHS OR FLOW EXCEED THOSE LISTED IN THE DESIGN ABOVE, MEASURES SHOULD BE TAKEN TO REDUCE THESE PARAMETERS TO THOSE LISTED ON THIS PLAN SET, OTHERMISE ADDITIONAL TREATMENT CAPACITY AND PLANT EXPANSION WILL BE NECESSAR

ABSORPTION APPLICATION RATES Q = 5.0 MIN/IN / (53 MIN/IN *0.5) = 0.68 GAL/SF

ABSORPTION FIELD TOTAL BUILD OUT (INCLUDES EX. PHASE 1, PHASE 2 & HARBOR VIEW ESTATES SUBDIVISION 76 LOTS (TOTAL BUILD OUT) 76 LOTS @ 400 GAL/LOT/DAY = 30,400 GAL/DAY

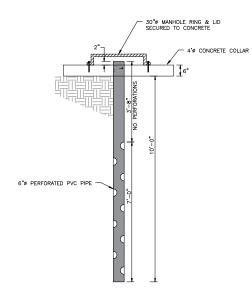
APPROXIMATE APPLICATION RATES ABSORPTION FIELD
Q = 5.0 MIN/IN (53 MIN/IN *0.5) = 0.68 GAU/SF
(BASED ON ORIGINAL PHASE 1 DESIGN REQUIREMENTS)

PHASE REQUIRED ABSORPTION FIELD AREA TRENCH 30.400 GAL/DAY / 0.68 GAL/SF = 44,706 SF EATMENT - ABSORPTION BED DETAILS CRIMSON RIDGE CLUSTER SUBD. PHAS REQUIRED ABSORPTION TRENCH LENGTH 44,706 SF / 3' = 14,901 LF OF TRENCH REQUIRED 14,933 LF OF TRENCH PROVIDED COUNTY, UTAH



QUICK4 CHAMBERS **INSPECTION PORT** TYPICAL INSTALLATION DETAIL (Not to Scale)

CHAMBER CLEANOUT DETAIL

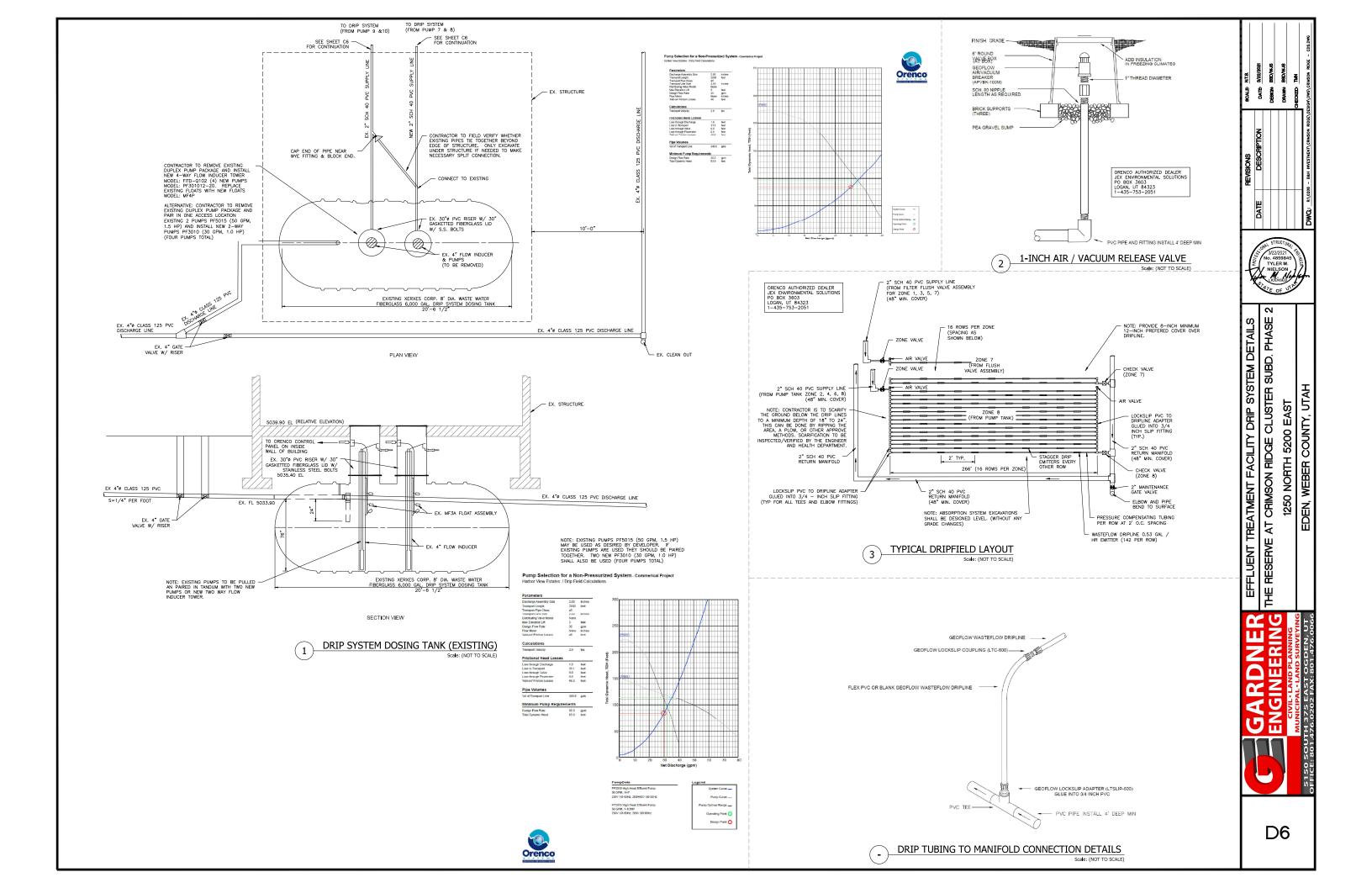


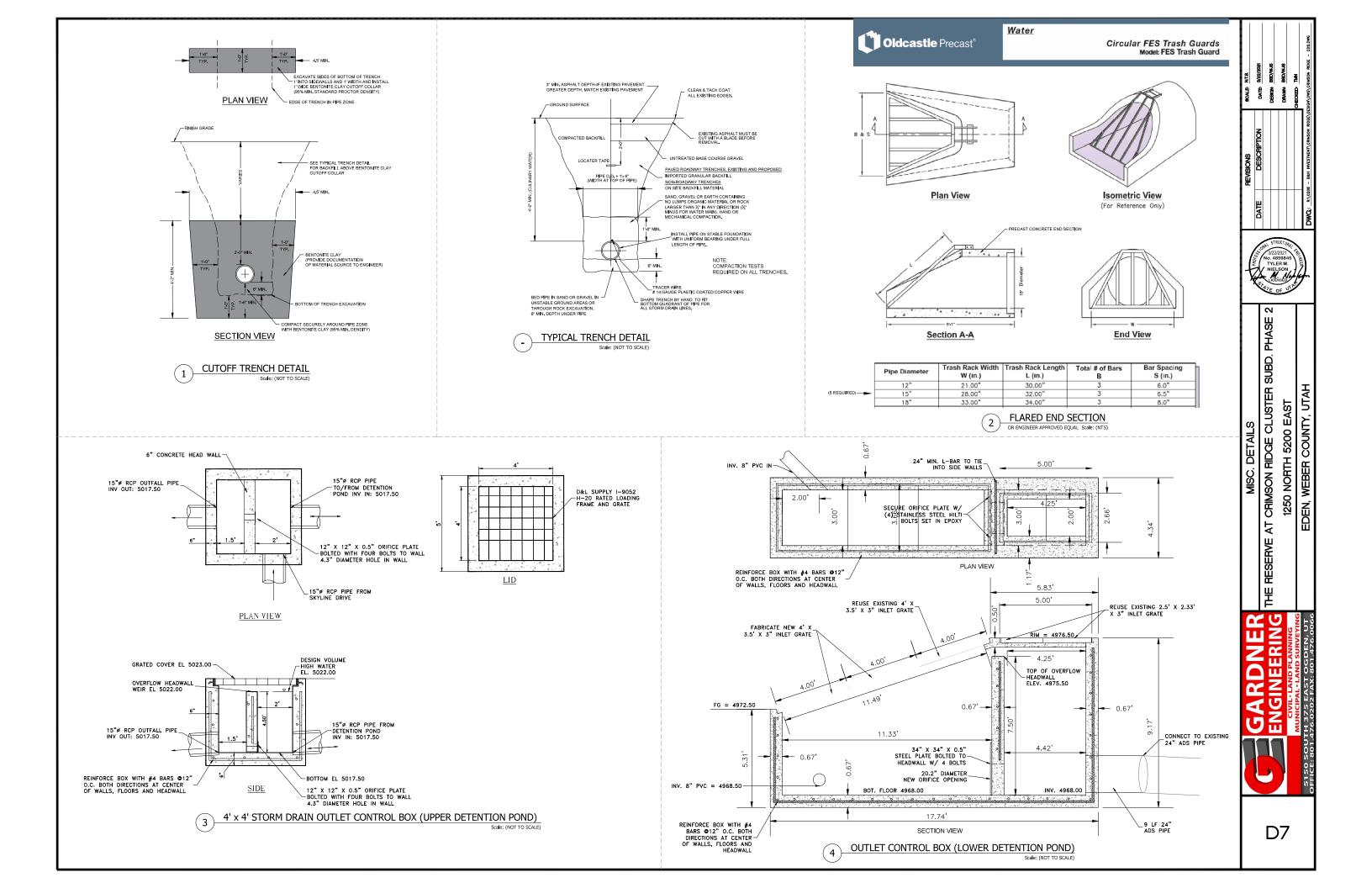
MONITERING / SAMPLING WELL

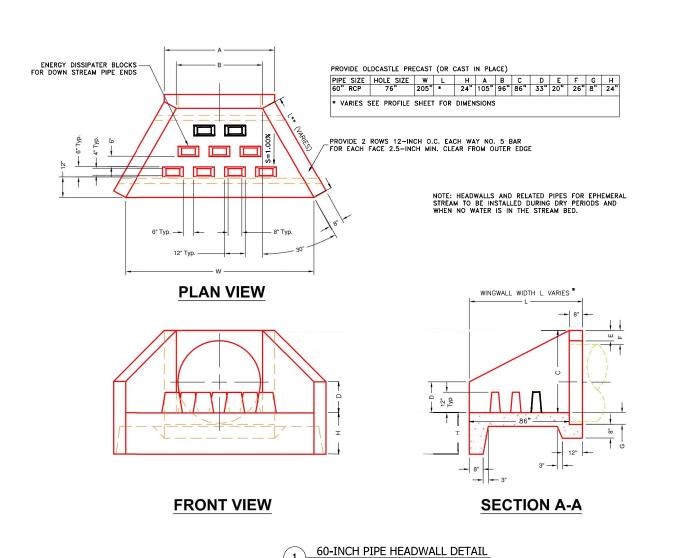


1250 NORTH 5200 EAST

D5









PHASE

MISC. DETAILS THE RESERVE AT CRIMSON RIDGE CLUSTER SUBD.

1250 NORTH 5200 EAST EDEN, WEBER COUNTY, UTAH

GARDNER ENGINEERING

Appendix C



November 6, 2020

Crimson Ridge Utah 110 West Jennings Lane Centerville, Utah 84014

Attention:

Kevin Deppe

EMAIL: Crimsonridgeutah.kevin@gmail.com

Steve Fenton

EMAIL: Crimsonridgeutah.steve@gmail.com

Subject:

Subsurface Exploration and Percolation Test Results

Crimson Ridge Phases 2 and 3 5129 East Whispering Pines Lane

Eden, Utah

Project No. 1200541-A

Gentlemen:

Applied Geotechnical Engineering Consultants, Inc. (AGEC) was requested to perform subsurface exploration and percolation testing for Crimson Ridge Phases 2 and 3. The property is located at 5129 East Whispering Pines Lane in Eden, Utah.

PROPOSED CONSTRUCTION

We understand that an on-site wastewater disposal (septic) system is planned for the community. The drain fields are planned for the eastern portion of the site. We understand that the Weber-Morgan Health Department and the Utah State Department of Environmental Quality, Division of Water Quality will have regulatory oversight of the proposed community septic system.

SITE CONDITIONS

The site consists primarily of undeveloped land. There are no permanent structures or pavements on the site. There are unpaved trails and access roads in the eastern portion of the site. There is a drainage that extends generally east/west through the northern portion of the property.

The general slope of the ground is down to the east and down toward the drainage. There are moderately steep slopes generally on the order of 2 horizontal to 1 vertical along the west side of the

Crimson Ridge Utah November 9, 2020 Page 2

property and along the drainage. Slope are generally flatter on the order of 4 horizontal to 1 vertical and flatter in the rest of the property.

Vegetation in the western two-thirds of the site consists of relatively dense coverage of grass, brush and trees. There are only a few number of trees in the eastern one-third.

The site is bounded on the south by Crimson Ridge Phase 1 which contains several residences and roads. State Road 158 extends along the east side of the site. There are several residences and out-buildings north of the east end of the site. Undeveloped land similar to the project site extends north of the west end of the site. Steep, undeveloped mountainside is west of the site.

SUBSURFACE EXPLORATION

Six test pits (TP-11 to TP-16) were excavated with a rubber-tired excavator in the east portion of the property planned for septic system drain fields on October 26 and 27, 2020 (See Figure 1). The locations of Test Pits TP-11 to TP-15 were marked in the field by the client prior to AGEC's arrival. Test Pit TP-16 was excavated in an area of suspected fill on the northeast portion of the site to help determine the fill depth and condition. Test Pits TP-11 to TP-15 were excavated to depths of approximately 9 and 12 feet below the surrounding ground surface. TP-16 was excavated to a depth of approximately 15 feet below the surrounding ground surface.

Percolation Test Holes P-1 and P-2 were excavated adjacent to Test Pits TP-11 and TP-12 to depths of approximately 3 feet and 2 feet, respectively.

The test pits were backfilled without significant compaction effort. The percolation test holes were left open. Test pit backfill should be properly compacted where it will support buildings, pavement, concrete flatwork or other settlement-sensitive structures.

SUBSURFACE CONDITIONS

The subsurface conditions encountered in Test Pits TP-11 to TP-15 generally consists of up to approximately ½ foot of topsoil overlying stony, gravelly coarse loamy sand with few to many cobbles and occasional small to medium boulders. The coarse loamy sand is medium dense to very dense, slightly moist to moist and light brownish gray to gray. Layers of silty clay loam, clay and sandy clay loam were observed in the test pits.

The subsurface conditions encountered in Test Pit TP-16 consists of fill to the maximum depth investigated, approximately 15 feet. The fill consists of lean clay with occasional cobbles and boulders and is moist to very moist, soft, gray with mottles and contains considerable organic debris and occasional plastic debris. Logs of the subsurface conditions encountered in Test Pits TP-11 and TP-12 are presented in the appendix.

Crimson Ridge Utah November 9, 2020 Page 3

SUBSURFACE WATER

Subsurface water or evidence of groundwater (iron oxide staining/mottling) was not observed in the test pits.

PERCOLATION TESTING

Weber-Morgan Health Department representative Summer Day observed the five septic profile test pits (TP-11 to TP-15) excavated at the site on October 26, 2020. After her observation, the test pits were backfilled with excavated material. Ms. Day indicated that the Weber-Morgan Health Department will require percolation tests to be performed adjacent Test Pits TP-11 and TP-12, at depths of approximately 3 feet and 2 feet, respectively. The percolation tests (P-1 and P-2) were performed at the site on October 29 and 30, 2020.

Results of the percolation tests indicate the soil tested has percolation rates of approximately 21.8 minutes per inch and less than 1 minute per inch, respectively. Percolation test results and a percolation test certificate are provided in the appendix.

CONCLUSIONS

Based on conditions observed at the site, results of percolation tests performed at the site, Utah State Department of Environmental Quality, Division of Water Quality, Individual Wastewater Disposal Systems Administrative Code (R317-4) and Weber-Morgan Health Department guidance, the following conclusions are given:

- 1. Six test pits (TP-11 to TP-16) were excavated in the east portion of the property in areas planned for community septic system drain fields. Information presented by the State of Utah indicates a conventional septic system may be installed if at least 4 feet of suitable soil is present between the bottom of the drain field and bedrock. An alternative septic system may be constructed in areas with at least 3 feet of suitable soil. The soil thickness measured in Test Pits TP-11 to TP-15 is acceptable for use in design of a conventional or alternative septic system. The fill encountered in Test Pit TP-16 is not considered to be suitable for construction of septic system drain fields.
- 2. Percolation Tests P-1 and P-2 were performed adjacent Test Pits TP-11 and TP-12, respectively. Results of the percolation tests indicate percolation rates in P-1 and P-2 of approximately 21.8 minutes per inch and less than 1 minute per inch, respectively.

The measured percolation rate for Percolation Test P-1 is considered suitable for use in design of a conventional or an alternative septic system. The measured percolation rate for Percolation Test P-2 is only considered suitable for use in design of an alternative septic system utilizing UV light disinfection processes.

Crimson Ridge Utah November 9, 2020 Page 4

> 3. The Weber-Morgan Health Department is mandated to determine the feasibility of proposed subdivisions that are planned to use on site wastewater disposal (septic) The health department should be coordinated with concerning their determination of septic feasibility of the proposed subdivision.

LIMITATIONS

This letter has been prepared in general accordance with Utah State Department of Environmental Quality, Division of Water Quality, Individual Wastewater Disposal Systems Administrative Code (R317-4) and Weber-Morgan Health Department Guidelines. The conclusions included in the letter are based on observations made at the time of our site visits, information obtained from the client, information obtained from the test pits excavated at the site, results of percolation tests performed at the site, the Utah Administrative Code (R317-4) and Weber-Morgan Health Department Guidelines. Subsurface conditions and/or soil percolation rates may vary on the site and may not become evident until additional excavation, exploration and/or testing is conducted.

If you have any questions or if we can be of further service, please call.

Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

Jőseph R. DeGoover

DEQ Certificate #00214-OSP-2

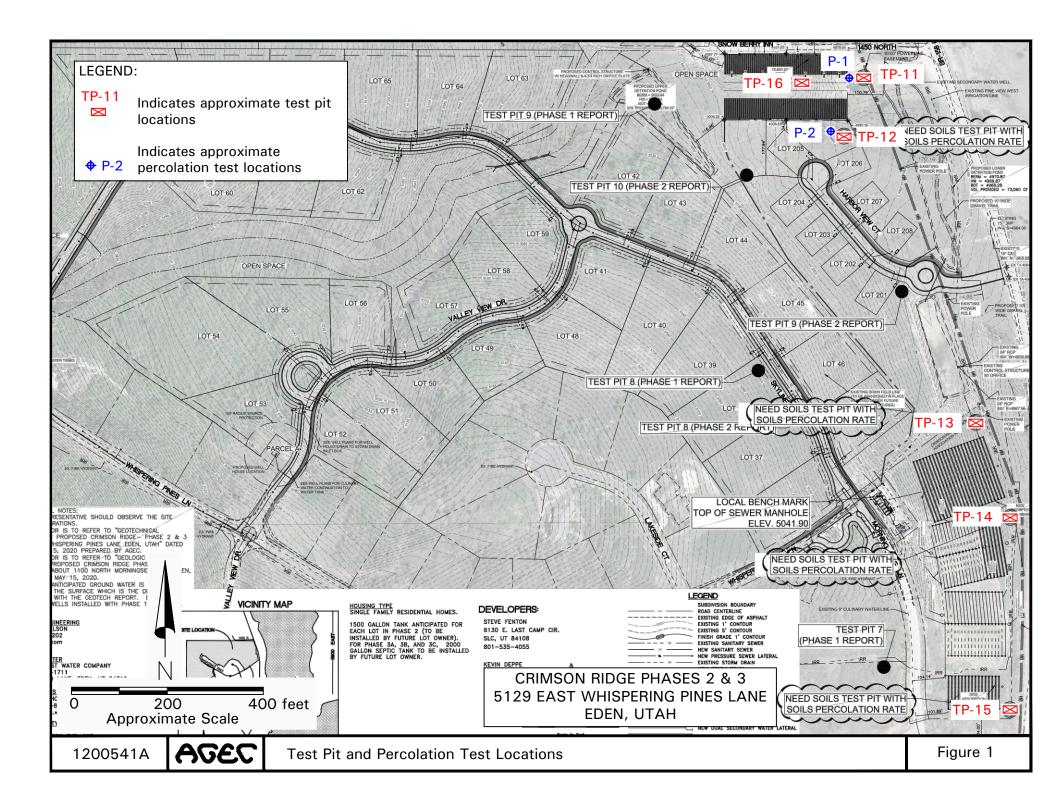
Reviewed by CJB, P.E.

JRD/bw

Enclosures

CC: Weber-Morgan Health Department, Attn: Summer Day EMAIL: sday@co.weber.ut.us

Garner Engineering, Attn: Wes Stewart EMAIL: Wes@gecivil.com



APPENDIX PERCOLATION TEST RESULTS



Applied Geotechnical Engineering Consultants, Inc.

UTAH DEPARTMENT OF HEALTH PERCOLATION TEST CERTIFICATE AND SOIL EXPLORATION RESULTS

(Information required for Determining Soil Suitability for Individual Wastewater Disposal Systems)

Project/Property Location:

Crimson Ridge Subdivision, Phases 2 and 3

5129 East Whispering Pines Lane

Eden, Utah

Prepared for: Crimson Ridge Utah

I certify that percolation tests have been conducted on the above property, in accordance with requirements specified in the <u>On-site Wastewater Systems Rule R317-4</u>, adopted by the Utah Department of Health, and that percolation rate, calculated as specified by said regulations, is as follows (use reverse side or additional sheets if necessary):

TEST HOLE NO.	TEST HOLE DEPTH (FEET)	SATURATION PERIOD (HOURS)	SWELLING PERIOD (HOURS)	TIME INTERVAL / FINAL WATER LEVEL DROP (INCHES)	FINAL STABILIZED PERCOLATION RATE ** (MINUTES PER INCH)
P-1	3 .	4	16	30 / 1.375	21.8
P-2	2	NA	NA	* 5 / > 6	< 1

Statement of soil conditions obtained from soil explorations to a depth of 10 feet. In the event that absorption systems will be deeper than 6 feet, soil explorations must extend to a depth of at least 4 feet below the bottom of the proposed absorption field, seepage trench, seepage pit, or absorption bed. A descriptive log of <u>each</u> exploration hole should be given: See attached letter for test pit logs.

Date soil exploration(s) conducted: October 26, 2020.

Statement of present and maximum anticipated groundwater table throughout the property and area of the proposed soil absorption: Ground water, or evidence of groundwater, was not observed in the test pits excavated at the property to the maximum depth investigated, approximately 10 feet.

Date groundwater table determined: October 26, 2020.

I hereby certify that, to the best of my knowledge, the foregoing information is correct.

Date Movembe 6 2020

Signed by: Joseph R De Joseph

(Unsigned test certificates will not be accepted.)

- * Five and fifteen minute time intervals between percolation test measurements may be used <u>only</u> for certain circumstances—see detailed instruction for conducting percolation tests as referenced above. If a 5 or 15 minute time interval is used for tests, so indicate.
- ** Percolation rate is equal to period of time used in minutes, divided by distance water dropped in inches and/or fractions thereof.

Name of Project or Development:	Crimson Ridge Subdivision	Date of Test:	Oct. 30, 2020
Location of Property:	5129 East Whispering Pines Lane Eden, Utah	Project No.:	1200541-A
Name of Person Performing Test:	Joe DeGooyer	Depth to _ top of	0.6
Percolation Test No.	P-1	percolation hole:	3 feet

Period of time hole was saturate	4 Hrs.	Time interval used for measuring water drop	30 min.	Hole width or diameter	10"
Total depth of hole	14"	Period of time soil permitted to swell	16 Hrs.	Depth of water table	>12'

Successive Percolation Tests	Initial Depth to Water (inches)	Beginning Time	Final Depth to Water (inches)	Ending Time	Distance Water Dropped in Inches	Elapsed Time in Minutes	Perc Rate in Min./ Inch
1	6	8:56 AM	8.0625	9:26 AM	2.0625	30	14.5
2	6	9:27 AM	7.5	9:57 AM	1.5	30	20
3	6	10:05 AM	7.375	10:35 AM	1.375	30	21.8
4	6	10:36 AM	7.375	11:06 AM	1.375	. 30	21.8

Final Stabilized Percolation Rate: 21.8 minutes/inch

<u>Thicknes</u>	Thickness of Each Stratum		Description and Texture of Each Stratum
Surface	to: 	3"	Topsoil, sandy loam with slight gravel, moist, brown, roots and organics, platy structure.
3"		3'	Stony, gravelly coarse loamy sand with occasional small cobbles, moist, brown to grayish brown, massive structure.
3'		41/2′	Silty clay loam, moist, orangish brown, massive structure.
4½′		7'	Stony, gravelly coarse loamy sand with occasional small cobbles, moist, dark grayish brown, massive structure.
7'		10'	Loamy sand with gravelly sandy loam layers, moist, orangish brown to brown, massive structure.
10'	to:	12'	Stony, gravelly coarse loamy sand with occasional small cobbles, moist, brown, massive structure.

Name of Project or Development:	Crimson Ridge Subdivision	Date of Test:	Oct. 29, 2020	
Location of Property:	5129 East Whispering Pines Lane Eden, Utah	Project No.:	1200541-A	
Name of Person Performing Test:	Joe DeGooyer	Depth to top of	2 feet	
Percolation Test No.	P-2	percolation hole:		
		•		

Period of time hole was saturate	NA	Time interval used for measuring water drop	5 min.	Hole width or diameter	10"
Total depth of hole	14"	Period of time soil permitted to swell	NA	Depth of water table	>11'
-					

Successive Percolation Tests	Initial Depth to Water (inches)	Beginning Time	Final Depth to Water (inches)	Ending Time	Distance Water Dropped in Inches	Elapsed Time in Minutes	Perc Rate in Min./ Inch
1	6	2:05 PM	> 12	2:10 PM	> 6	5	< 1
2	6	2:12 PM	>12	2:17 PM	> 6	5	< 1
3	6	2:19 PM	> 12	2:24 PM	> 6	5	< 1

Final Stabilized Percolation Rate: < 1 minutes/inch

<u>Thicknes</u>	Thickness of Each Stratum		Description and Texture of Each Stratum		
Surface 	to: 	½'	Topsoil, slightly gravelly sandy loam, moist, brown, roots and organics, platy structure.		
1/2 '		6½′	Stony, gravelly coarse loamy sand with occasional small cobbles, moist, brown to grayish brown, massive to near single grain structure.		
6½'		9′	Clay loam to silty clay loam, moist, brown to reddish brown, blocky structure, slickensided, possible swell potential.		
9'	to: 	11'	Stony, gravelly coarse loamy sand with occasional small cobbles, moist, brown, massive structure.		

Name of Project or Development:	Crimson Ridge Subdivision	Date of Test:	Oct. 30, 2020	
Location of Property:	5129 East Whispering Pines Lane Eden, Utah	Project No.:	1200541-A	
Name of Person Performing Test:	Joe DeGooyer	Depth to top of	NA	
Percolation Test No.	NA	percolation hole:		
Pariod of time halo	Time interval used	Holo width	or II	

was saturate	NA	for measuring water drop	NA	diameter	NA
Total depth of hole	NA	Period of time soil permitted to swell	NA	Depth of water table	>11'
	1	Final	Distan	ce	Perc

Successive Percolation Tests	Initial Depth to Water (inches)	Beginning Time	Final Depth to Water (inches)	Ending Time	Distance Water Dropped in Inches	Elapsed Time in Minutes	Perc Rate in Min./ Inch		
1	Pei	Percolation test not required as per Weber-Morgan Health Department							
2									
3									
4									

Final Stabilized Percolation Rate: NA minutes/inch

Thicknes	ss of Eacl	n Stratum	Description and Texture of Each Stratum			
Surface	to:	1/2′	Topsoil, sandy loam with slight gravel, moist, brown, roots and organics, platy structure.			
1/2′	to:	2½′	Sandy loam with slight gravel, moist, brown, roots and organics, granular structure.			
2½'	to:	11'	Stony, gravelly coarse loamy sand with cobbles and boulders, moist, brown, massive structure.			

Period of Constant	The state of the state of	11.1. 240.		
Percolation Test No.	NA	percolation hole:	NA	
Name of Person Performing Test:	Joe DeGooyer	Depth to top of		
Location of Property:	5129 East Whispering Pines Lane Eden, Utah	Project No.:	1200541-A	
Name of Project or Development:	Crimson Ridge Subdivision	Date of Test:	Oct. 30, 2020	

Period of time hole was saturate	NA	for measuring water drop	NA	Hole width or diameter	NA
Total depth of hole	NA	Period of time soil permitted to swell	NA	Depth of water table	>11½′
	Initial	Final	Dista	nce	Perc

Successive Percolation Tests	Initial Depth to Water (inches)	Beginning Time	Final Depth to Water (inches)	Ending Time	Distance Water Dropped in Inches	Elapsed Time in Minutes	Perc Rate in Min./ Inch		
1	Perd	Percolation test not required as per Weber-Morgan Health Department							
2									
3									
4									

Final Stabilized Percolation Rate: NA minutes/inch

Thickness of Each Stratum			Description and Texture of Each Stratum		
Surface	to:	1/2 '	Topsoil, sandy loam with slight gravel, moist, brown, roots and organics, platy structure.		
1/2′	to:	2′	Sandy loam to loam with slight gravel, moist, brown, roots and organics, granular structure.		
2'	to:	11½′	Stony, gravelly coarse loamy sand with cobbles and boulders, moist, brown, massive structure.		

Name of Project or Development:	Crimson Ridge Subdivision	Date of Test:	Oct. 30, 2020	
Location of Property:	5129 East Whispering Pines Lane Eden, Utah	Project No.:	1200541-A	
Name of Person Performing Test:	Joe DeGooyer	Depth to top of		
Percolation Test No.	NA	percolation hole:	NA 	
Period of time hale	Time interval used	Hole width	or	

NA

diameter

NA

Total depth of hole		NA		of time soil ted to swell	NA		Depth of water table	>10'
	Successive Percolation Tests	Initial Depth to Water (inches)	Beginning Time	Final Depth to Water (inches)	Ending Time	Distance Water Dropped in Inches	Elapsed Time in	Perc Rate in Min./ Inch
	1	Perd	Percolation test not required as per Weber-Morgan Health Department					

for measuring water

drop

1	Percolation test not required as per Weber-Morgan Health Department						
2							
3							
4							
1							

Final Stabilized Percolation Rate: NA minutes/inch

Descriptive log of soil exploration hole No. TP-15

NA

was saturate

Thickness of Each Stratum			Description and Texture of Each Stratum		
Surface	to:	1/2 '	Topsoil, sandy loam with slight gravel, moist, brown, roots and organics, platy structure.		
1/2′	to:	1½′	Sandy loam with slight gravel, moist, brown, roots and organics, granular structure.		
1 ½ '	to:	10'	Stony, gravelly coarse loamy sand with cobbles and boulders, moist, brown, massive structure.		

Appendix D

Wes Stewart

From: Day, Summer <sday@co.weber.ut.us>
Sent: Thursday, November 12, 2020 9:21 AM

To: Wes Stewart; Robert Beers; Richard Jex; Joe DeGooyer

Subject: FW: Additional Absorption Field Option

Attachments: Crimson Ridge phase 2-3 LUWD LOF.docx; crimson ridge 1_4800.pdf; Crimson

Ridge.docx; crimson ridge 1_12000.pdf

Gentlemen

Here is what our office would suggest for the design standard of the expansion of the LUWDs. However after inquiring with our EH director it appears that Robert Beers with DWQ is who should truly define the design criteria for the system. Our office has performed the field work, we will review the design and articulate our concerns to all parties if we have them, our staff will also perform the majority of construction inspections on the system. Our office will have required fees to cover this work. However the construction permit and approval will be given by Robert Beer at DWQ. As such please forward any further question on the system design to him.

Robert-please let me know if you need additional information on the field work. Wes or Joe- please forward the AGEC soil write up to Robert

DESIGN REQUIREMENTS

Anticipated ground water tables not to exceed 96 inches, fall within the range of acceptability for the utilization of a Packed Bed Media with non-chemical disinfection followed by a Conventional Treatment System and or a drip irrigation drain filed as a means of wastewater disposal. Maximum trench depth is limited to 30 inches. The absorption field is to be designed using a maximum loading rate of 0.45 gal/sq. ft./day as required for the gravelly coarse sandy loam, with a massive structure. The certified onsite wastewater designer may alternatively propose to design the drainfield using the UAC R317-4 Table 5 foot note (a) The following formula may be used in place of the values in this table: q = 2.35 divided by the square root of the percolation rate and then add 0.15 where q is the hydraulic loading rate. In no case shall the loading rate be greater than 1.0. If utilizing this method the percolation rate used in the equation should be the documented rate of 21.8 minute per inch found in TP 2 (AGEC TP12) as it is representative of TP 3 (AGEC TP13), TP 4 (AGEC TP14), and TP 5 (AGEC TP5). The area of TP 1 (AGEC TP11)

Thank You Summer Day, LEHS III, Program Manager 801-399-7174

From: Wes Stewart <wes@gecivil.com>

Sent: Wednesday, November 11, 2020 11:09 AM

To: Day, Summer <sday@co.weber.ut.us>

Subject: [EXTERNAL]RE: Additional Absorption Field Option

CAUTION: This email originated from outside Weber County. Do not click links or open attachments unless you know the sender and are expecting the link or attachment. **Think Before You Click!**

Just wanted to follow up on your review of the drainfield configuration and loading rate for Crimson Ridge. Let me know if you have something we can proceed with altering our design (as may be needed). I am at a point where we would like to wrap up final changes in the design. Also will we need to coordinate anything more with Robert, or are you doing most of that on your end? I'm assuming we will resubmit to you both with any needed changes and then do both Weber County and the State give us an approval letter (once everything is completed)?

Thanks.

From: Day, Summer < sday@co.weber.ut.us > Sent: Tuesday, November 10, 2020 11:25 AM

To: Wes Stewart < wes@gecivil.com > Cc: Joe DeGooyer < joed@agecinc.com >

Subject: RE: Additional Absorption Field Option

Wes and Joe

This is soil letter documented the soil classifications for the test pit evaluated On October 26th. I've received and looked over the AGEC letter and find it adequate both in classification and in the percolation rate submitted. I will now take a look at the drainfield configuration and loading rate. I'll try to have a design details specified latter today.

Thank You Summer Day, LEHS III, Program Manager 801-399-7174

From: Wes Stewart < wes@gecivil.com > Sent: Tuesday, November 10, 2020 9:21 AM To: Day, Summer < sday@co.weber.ut.us >

Subject: [EXTERNAL] Additional Absorption Field Option

CAUTION: This email originated from outside Weber County. Do not click links or open attachments unless you know the sender and are expecting the link or attachment. **Think Before You Click!**

Summer,

I see potentially one other option drain field option for our site from the soils boring data. It appears to me that for both test pits 11 an 12, near the surface, we are into the faster draining material. But what if we were to be at the 3' depth where we run into TP 11, and 6.5' depth for TP 12. Seeing as how the soil make up is essentially the same, I would anticipate that we would get the slower 21.8 min. per inch also at TP-12 for this soil strata. Would that simply things and make it easier for us to get approval if we were to use this? (If we set the drip line just on top of the silty clay loam layer (or say 8 inches down into this layer), I would expect we would get the 21.8 min/ inch rate and then we don't need to add UV protection (unless you feel that this is still warranted).

Let us know your thoughts.

Thanks.

November 9, 2020

Steve Fenton 6130 E Last Camp Cir. Salt Lake City, Utah 84108

RE: Wastewater Site and Soils Evaluation #15088

1250 N 5200 E Huntsville, UT

Parcel # 20-005-0021

An evaluation of the site and soils at the above-referenced address was completed by staff of this office on October 26, 2020. The exploration pit(s) is located at the referenced GPS coordinate and datum. The soil texture and structure, as classified using the USDA system, are as follows:

Exploration Pit #1 (AGEC TP11) (UTM Zone 12 Nad 83 431121E 4570427N)

gravelly sandy loam, granular to massive structure, 30% fine to medium gravel gravelly loam coarse sand, massive structure, 60% fine gravel to boulders 0 - 42"42-70"

70-106" sandy loam, massive structure

106-111" gravelly loamy coarse sand, massive structure, 60% gravel

Conduct the required percolation test so that the bottom of the percolation test hole is at 36 inches deep from the original grade.

Exploration Pit #2(AGEC TP12) (UTM Zone 12 Nad 83 431100E 4570359N) 0-6" loam, granular structure, 10%-15% fine to medium gravel, (0.5 gd/ff 6-72" gravelly loamy coarse sand, massive- near single grained structure. loam, granular structure, 10%-15% fine to medium gravel, (0.5 gd/ft ²) gravelly loamy coarse sand, massive- near single grained structure, 60%-80% fine gravel to cobble, (0.9 gd/ft ²(e)) clay to silty clay loam, blocky structure

72-108"

108-132" gravelly loamy coarse sand, single grained structure, 60%-80% fine gravel to cobble, (0.9 gd/ft ²(e))

Conduct the required percolation test so that the bottom of the percolation test hole is at 24 inches deep from the original grade

Exploration Pit #3 (AGEC TP13) (UTM Zone 12 Nad 83 431232E 4570092N)

0-32" sandy loam (some clays), granular structure, 5% medium gravel, (0.45 gd/ft ²) 32-132" gravelly coarse sandy loam, massive structure, stiff, , 70% fine gravel to boulders, (0.45 gd/ft ²)

Exploration Pit #4 (AGEC TP14) (UTM Zone 12 Nad 83 431256E 4570004N) 0-24" loam .granular structure (0.45 c4/£ 2)

loam ,granular structure, (0.45 gd/ft ²)

24-138" gravelly coarse sandy loams, massive structure, 70%-80% fine gravel to cobbles, (0.45 gd/ft ²)

Exploration Pit #5 (AGEC TP15) (UTM Zone 12 Nad 83 431242E 4569826N)

sandy loam, granular structure, (0.45 gd/ft ²)

18-108" gravelly coarse sandy loam, massive structure, 70%-80% fine gravel to boulders, (0.45 gd/ft ²)

Note Exploration Pit #3 (AGEC TP13), Exploration Pit # (AGEC TP14), and Exploration Pit #15 (AGEC TP15) are very similar with the same horizon A and horizon B

Exploration pits should be backfilled immediately upon completion to prevent a hazardous environment that may cause death or injury to people or animals.

Percolation tests may be completed by any individual on the enclosed list. The stabilized percolation test results are to be submitted to this office for review prior to the recommendation for further development to the appropriate planning agency or prior to the issuance of a wastewater disposal permit.

If you have any further questions, contact this office at your convenience.

Sincerely,

Summer Day Environmental Health Division 801-399-7160



1 inch = 400 feet 0 200 400 800 Feet



1 inch = 1,000 feet 0 500 1,000 2,000 Feet

November 12, 2020

Weber County Planning Commission 2380 Washington Blvd. Ogden, UT 84401

RE: Steve Fenton

Crimson Ridge cluster sub Phase 2-3 Parcel #20-005-0021 & 20-105-0004

Soil log #15088

RE: Preliminary LUWDs Design Requirements

The soil and percolation information for the above-referenced LUWDs addition has been reviewed. A culinary water service provider has not yet been established. Please be aware that if a new public water system is established to service the additional phase of this subdivision the source protection zones for the new public water system may have impact on what types of sewer components may be installed. At current there are no onsite wastewater treatment system types that are approved to be installed within a zone one or two of a public water system.

DESIGN REQUIREMENTS

Anticipated ground water tables not to exceed 96 inches, fall within the range of acceptability for the utilization of a Packed Bed Media with non-chemical disinfection followed by a Conventional Treatment System and or a drip irrigation drain filed as a means of wastewater disposal. Maximum trench depth is limited to 30 inches. The absorption field is to be designed using a maximum loading rate of 0.45 gal/sq. ft./day as required for the gravelly coarse sandy loam, with a massive structure. The certified onsite wastewater designer may alternatively propose to design the drainfield using the UAC R317-4 Table 5 foot note (a) The following formula may be used in place of the values in this table: q = 2.35 divided by the square root of the percolation rate and then add 0.15 where q is the hydraulic loading rate. In no case shall the loading rate be greater than 1.0. If utilizing this method the percolation rate used in the equation should be the documented rate of 21.8 minute per inch found in TP 2 (AGEC TP12) as it is representative of TP 3 (AGEC TP13), TP 4 (AGEC TP14), and TP 5 (AGEC TP5). The area of TP 1 (AGEC TP11)

Plans for the construction of any wastewater disposal system are to be prepared by a Utah State certified individual and submitted to this office for review prior to the issuance of a Wastewater Disposal permit.

The following items are required for a formal **subdivision review**; application, receipt of the appropriate fee, and a full sized copy of the subdivision plats showing the location of exploration pits and percolation tests as well as the documented soil horizons and percolation rates. A subdivision review will not occur until all items are submitted. Mylars submitted for signature without this information will be returned.

Each on-site individual wastewater disposal system must be installed in accordance with R317-4, Utah Administrative Code, Individual Wastewater Disposal Systems and Weber-Morgan District Health Department Rules. Final approval will be given only after an on-site inspection of the completed project and prior to the accomplishment of any backfilling.

Please be advised that the conditions of this letter are valid for a period of 18 months. At that time, the site will be re-evaluated in relation to rules in effect at that time.

Sincerely,

Summer Day, LEHS Environmental Health Division 801-399-7160

Appendix E

December 23, 2020

Wes Stewart Tyler M. Nielson Gardner Engineering 5150 S 375 E Washington Terrace, UT 84405

Subject: Final Design Review of The Reserve at Crimson Ridge

Mr. Stewart and Mr. Nielson,

Orenco Systems, Inc. ("Orenco") has received the Plans with all required fields completed (attached to this letter), a copy of the plan set showing the designed site layout and configuration plans, and other documents that comprise the Final Design for the Reserve at Crimson Ridge project. Orenco staff reviews the Final Design of all wastewater collection and treatment systems for commercial applications to ensure that the design is compliant with the most current version of the system's applicable design criteria published by Orenco for the specified parameters provided by the system's designer in the Plans. The findings and conclusions of my review of this Final Design are as follows:

Design Basis

The system has been designed for a Type 1, New Subdivision application. Influent flow and constituent concentrations and effluent constituent concentration requirements have been provided by the system's designer on the attached Plans and were used in my review of the Final Design.

The influent flow on the Plans were not extrapolated from the metered flows from the subject site, but in our experience, they are consistent with influent flows from other, similar Type 1 systems that Orenco has previously observed. As such, I have no reason to doubt the accuracy of the designer's findings and assumptions as to the influent flow, and find that it was reasonable for the designer to use them as the design basis for the system.

System Design

The proposed Final Design of full build out of the system consists of liquid-only sewer collection flowing into two (2) 20,000 U.S. gallon fiberglass tanks. Primary treated effluent blends and recirculates in these tanks and doses seven (7) AX100 Pods. The MM6-FRP Recirculating Ball Valve controls the circulation of filtrate from the AdvanTex pods to the recirculation tank. When the liquid in the tank rises to a predetermined maximum bypass level, the valve closes, diverting filtrate past the recirculation tank. Effluent discharged from the MM6-flows into the existing dose tank for final disposal in the drainfield.

Design Criteria

The applicable design criteria for this system, which I used to conduct the review of its Final Design, is revision 7.0 of document NDA-ATX-1, titled *Orenco® AdvanTex® Design Criteria, Commercial Treatment Systems*, which was published by Orenco in May, 2019. A copy of the design criteria can be downloaded from Orenco's online document library at www.orenco.com/corporate/doclibrary.cfm.

Findings

The findings of my review as to whether the Final Design complies with Orenco's design criteria for treating wastewater to the effluent constituent concentration requirements provided in the Plans are as follows:

Primary Treatment

The Final Design specifies the use of effluent sewer collection and no primary tanks preceding secondary treatment.

According to the Primary Tank Sizing Chart in the applicable design criteria, a treatment system with Effluent Sewer Collection does not require additional onsite primary tankage. Therefore, the configuration and specifications of the primary treatment tank in the Final Design satisfies Orenco's minimum design criteria.

Recirculation Tank — Standard Stage

The Final Design specifies the use of two (2) 20,000 U.S. gallon existing fiberglass tanks for recirculation and blending of the AdvanTex treated effluent with primary tank effluent. Using the flow data specified on the Plans, the tank is sized to be equal to 132% of the Design Peak Flow.

According to the Recirculation-Blend Tankage Requirements in the applicable design criteria, the tank should be sized to equal at least 75% of the Design Peak Flow. Therefore, the specifications of the recirculation-blend tank in the Final Design satisfy Orenco's minimum design criteria.

Hydraulic Load — Standard Stage

The current design specifies the use of seven (7) AX100, which contains a nominal surface area of 700 square feet of treatment media. Using the flow data specified on the Plans the hydraulic loading rate for the system calculates as follows:

Hydraulic Loading Rate (HLR) — Standard Stage								
Design Average Flow (gpd)	Design Maximum Day Flow (gpd)	Nominal Textile Area (sq. ft.)	Average HLR (gal. per day/sq. ft.)	Peak HLR (gal. per day/sq. ft.)				
15,200	30,400	700	21.7	43.4				

According to the AdvanTex System Loading Chart in the applicable design criteria, the standard AdvanTex treatment system should not be hydraulically loaded more than 25 gpd/square foot at Design Average Flow or 50 gpd/square foot at Design Max Day Flow. Therefore, the specified type and number of AdvanTex units in the Final Design satisfy Orenco's design criteria to achieve the effluent quality listed in the design criteria at a 95% confidence level for this Type 1 application.

Organic Load — Standard Stage

The following influent characteristics provided on the Plans wee estimated and not derived from direct sampling. Even though the influent characteristics were not derived from direct sampling, the values provided are consistent with values we have seen in other, similar applications.

Influent (Primary Tank Effluent) Characteristics — Loading to Textile					
Average BOD ₅ (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Average TSS (mg/L)	Max FOG (mg/L)		
150	65	50	25		

Based on the average influent biochemical oxygen demand (BOD₅) concentration and flow data specified on the Plans, the system will receive approximately 19.0 pounds of BOD₅ per day at Design Average Flow, and 38.1 pounds of BOD₅ per day at Maximum Day Design Flow. Using this information, the organic loading rate of the system calculates as:

Organic Loading Rate (OLR) — Standard Stage					
Average Organic Load (lbs/day)	Maximum Organic Load (lbs/day)	Nominal Treatment Area (sq. ft.)	Average OLR (lbs BOD/sq. ft./day)	Maximum OLR (lbs BOD/sq. ft./day)	
19.0	38.1	700	0.03	0.05	

According to the Organic Load Requirements in the applicable design criteria, an AdvanTex Treatment System should not be organically loaded more than 0.04 pounds BOD₅/square foot at Design Average Flow or 0.08 pounds BOD₅/square foot at Design Peak Flow, Therefore, the specified type and number of AdvanTex units in the final design satisfy Orenco's design criteria to achieve the effluent quality listed in the design criteria at a 95% confidence level for this Type 1, Subdivision application.

Conclusions

I have reviewed the current design of The Reserve at Crimson Ridge subdivision wastewater treatment system and have found that the design is compliant with the most current version of the system's applicable design criteria published by Orenco for the specified parameters provided by the system's designer in the Plans. In addition, I noted no anomalies in the site layout or configuration of the system during my review.

Compliance Table — Meets Minimum Design Standards		
Stage	One	
Recirc Tank Size	Yes	
Hydraulic Load	Yes	
Organic Load	Yes	

As such, the system as designed satisfactorily complies with Orenco's design criteria to meet the following effluent limits specified in the Plans at a 95% confidence level, provided that all influent flows and constituent concentrations specified in the Plans are not exceeded:

Expected Effluent Quality			
Constituent	Average (mg/L)		
BOD₅	≤ 25		
TSS	≤ 25		
Turbidity	≤ 20 NTU		

It is important to note that even though the AdvanTex Treatment System has the capability to meet or exceed the required treatment parameters, there is no way that Orenco can guarantee that a particular system will be operated or maintained in a manner consistent with the Final Design reviewed. Once the facility is placed into operation, the influent flows and constituent concentrations to the facility should be monitored, and if flow or any of the influent constituent concentrations exceed those listed in the Plans, measures should be taken to reduce the flow or constituent concentration to those listed. However, if additional treatment capacity becomes necessary, the system is designed to have the capability to expand to account for the new flow or constituent concentration.

Proper air ventilation is a critical feature of all commercial AdvanTex Treatment Systems, and as such, adequate active ventilation is required for all systems. In addition, please note that disposing of toxics or chemicals into the system is strictly prohibited. Examples of toxics include restaurant degreasers, cleansers, wax strippers for linoleum, carpet shampoo, waste products, or any other toxins. Furthermore, water softener brine discharge is prohibited from being discharged into the AdvanTex Treatment System. Failure to adhere to these policies will void Orenco's limited product warranties.

If you have any questions about my review process, findings, or conclusions, please feel free to call or e-mail me.

Sincerely,

Jessy Tucker

Systems Engineering Orenco Systems, Inc.

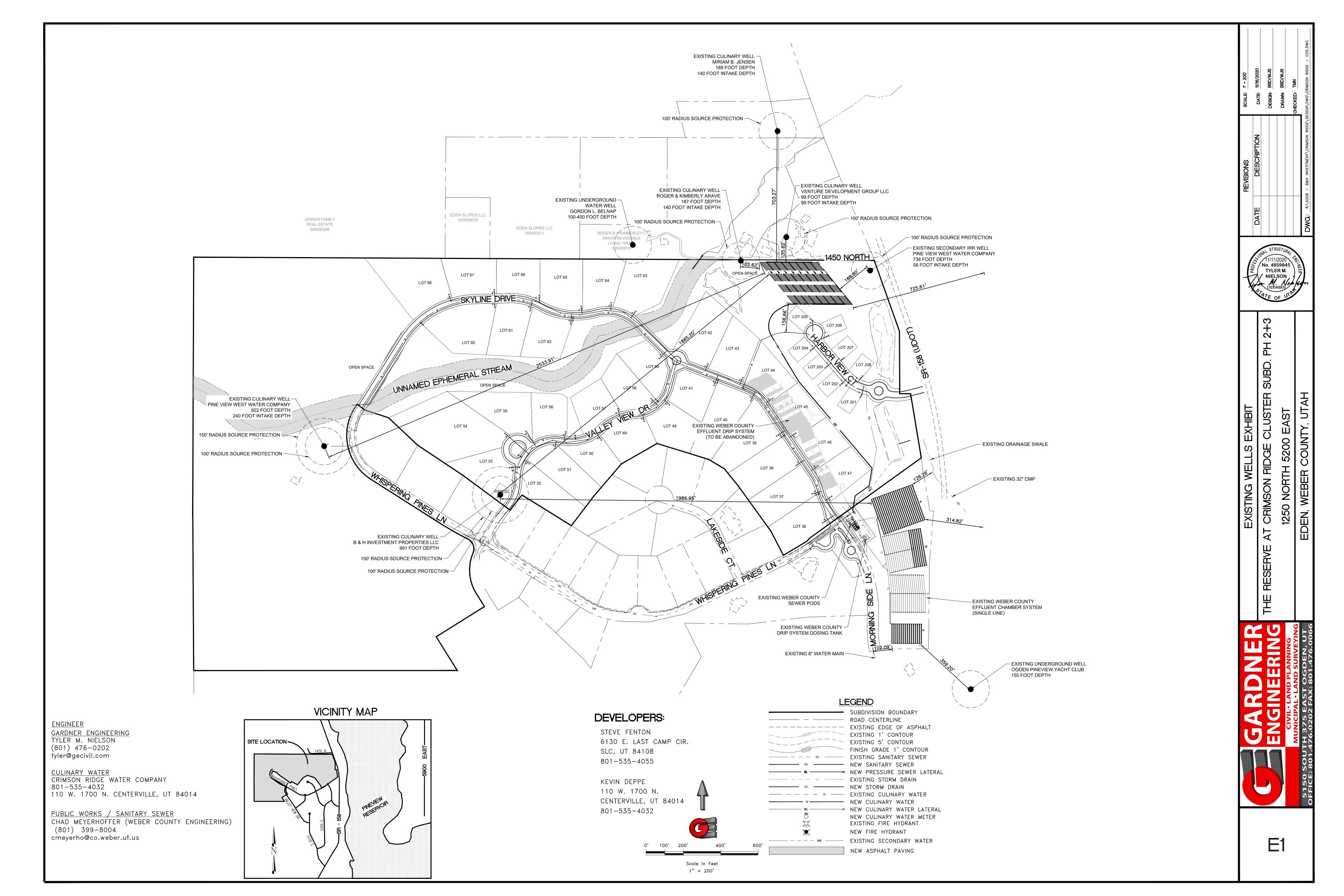
814 Airway Avenue Sutherlin, OR 97479

P: (800) 348-9843 ext. 279

Jessy Tucker

jcugley@orenco.com +

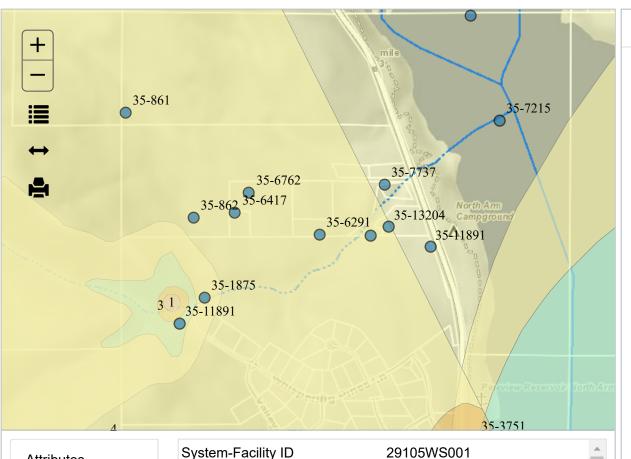
Appendix F



Appendix G

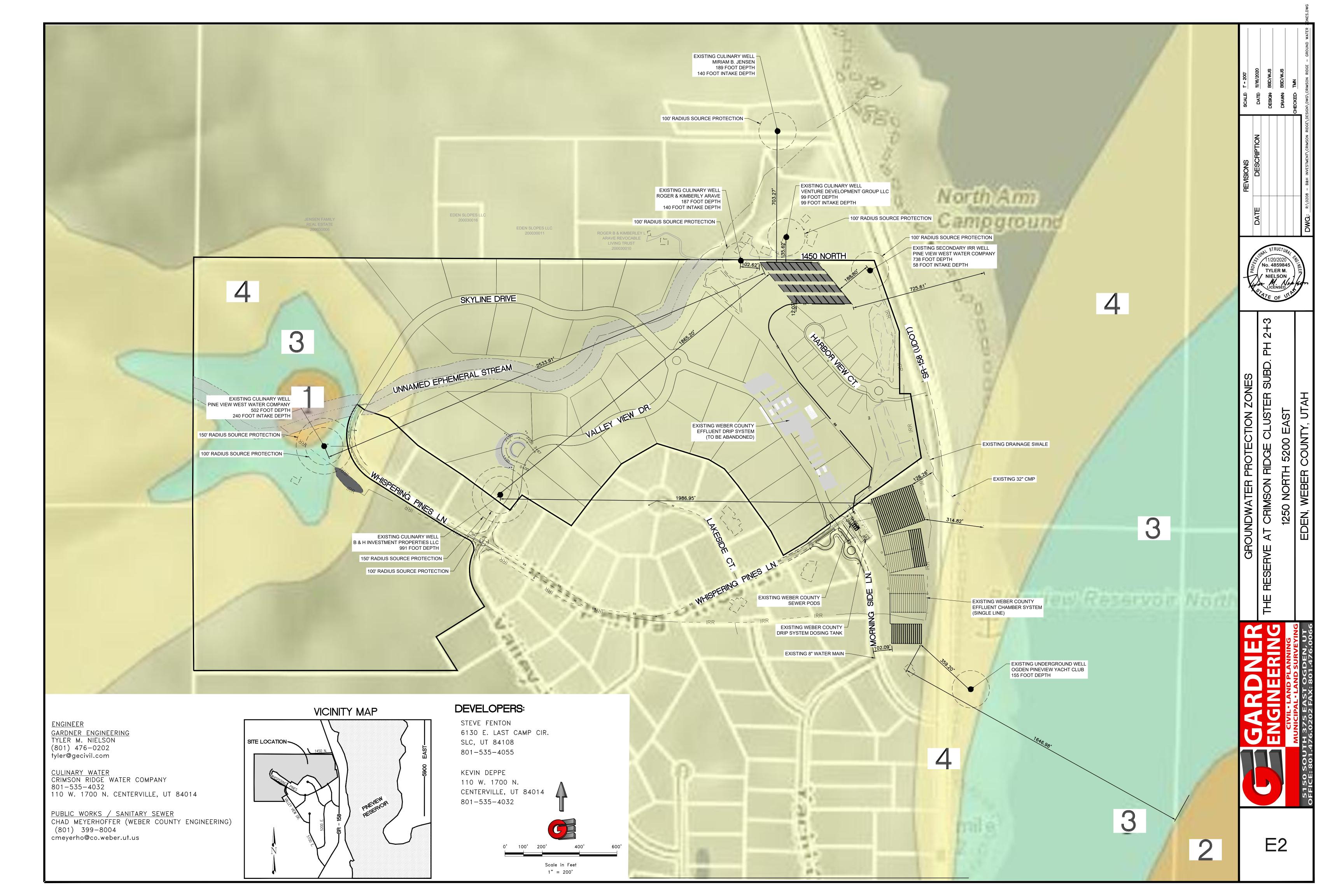


Utah Environmental Interactive Map 1.7.1 (ChangeLog.html)

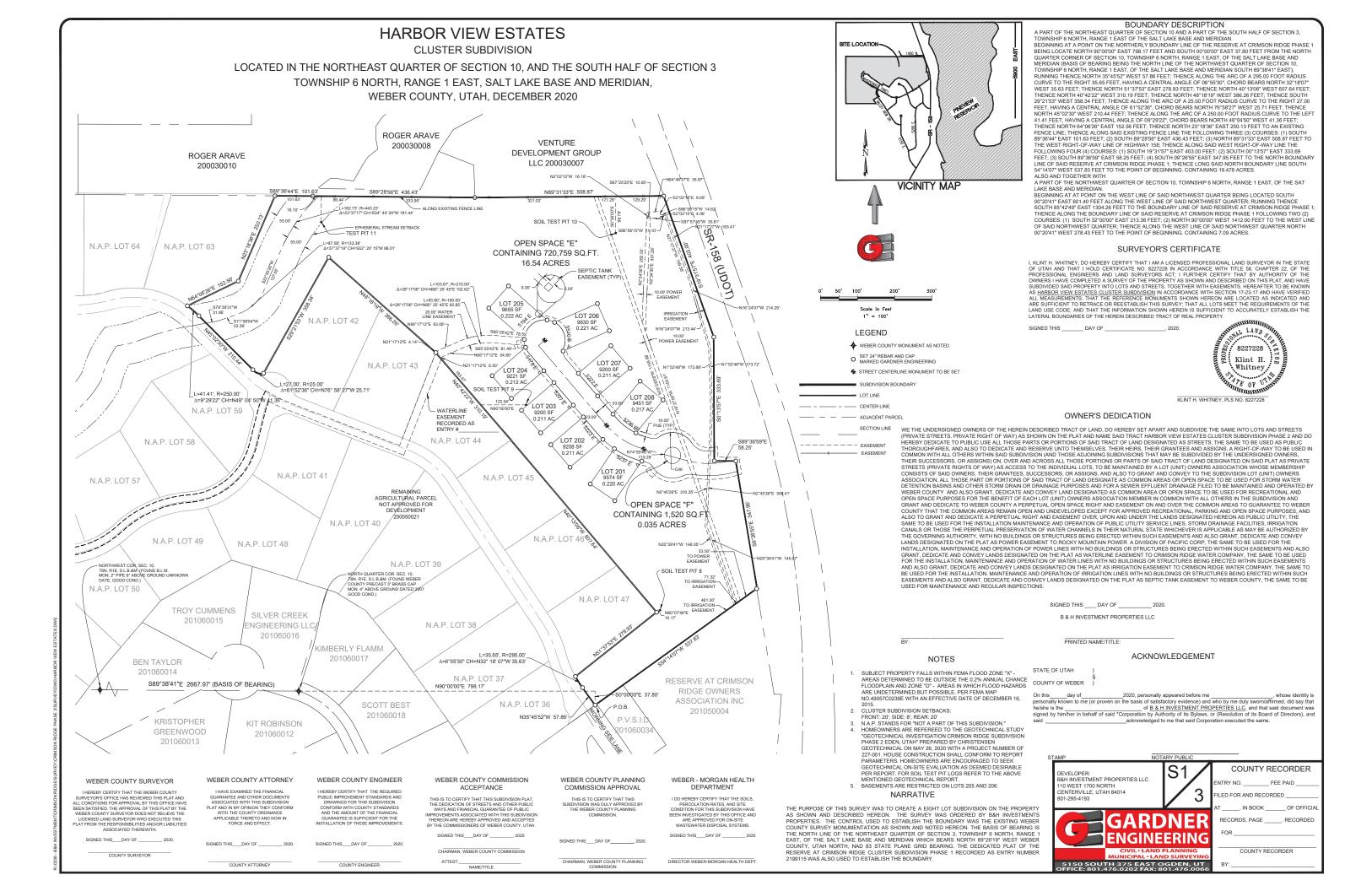


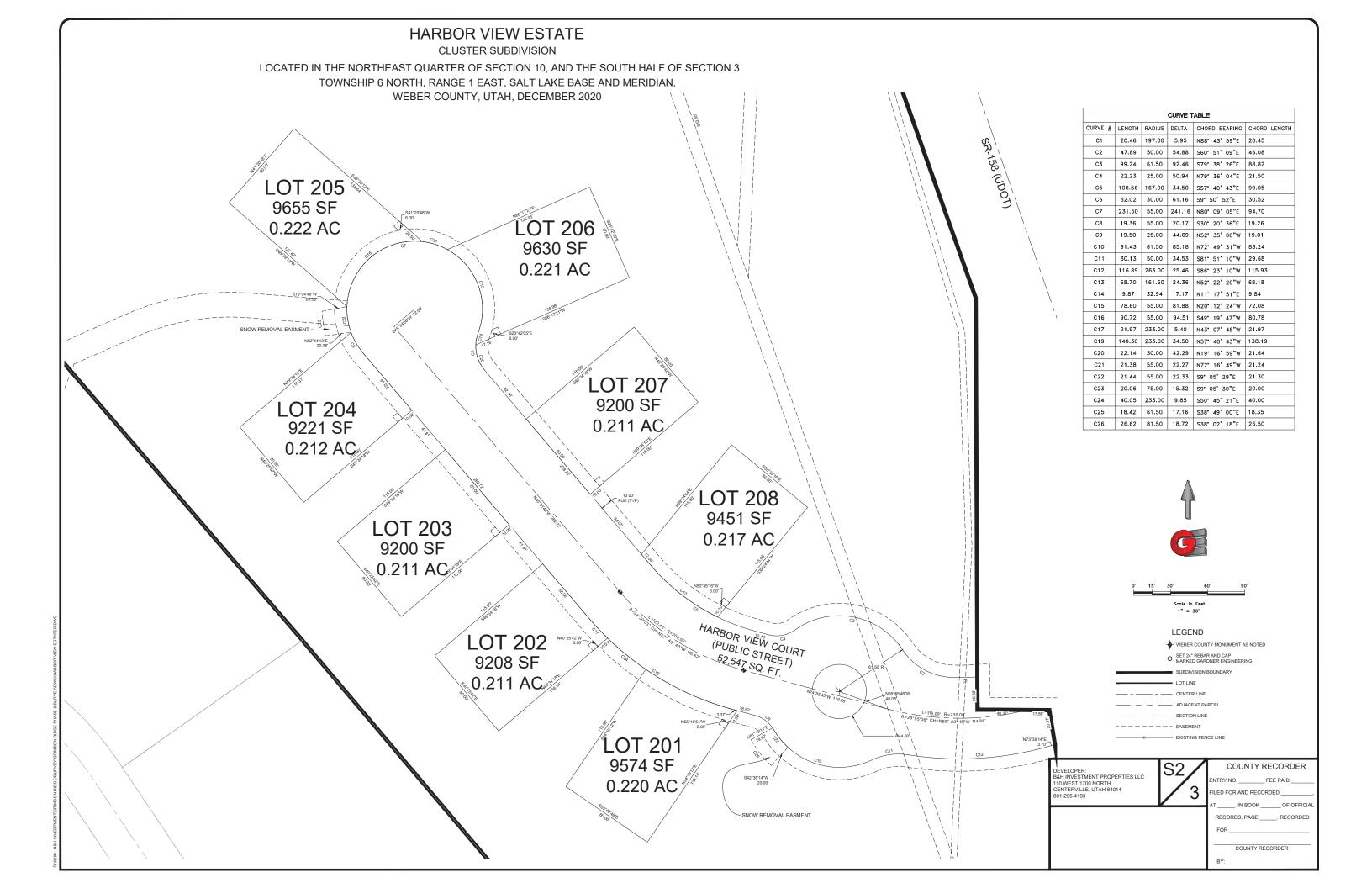
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Related Records	System Name	PIONEER BIBLE CAMP	
	Facility Identifier	WS001	
Links	Facility Name	WELL #1	
ℚ Zoom to feature	Facility Type Code	WL	
2 Zoom to rockers	Facility Type Description	Well	
← Back to results	Facility Activity Status	Α	
	Ducto etian Zene	A	•

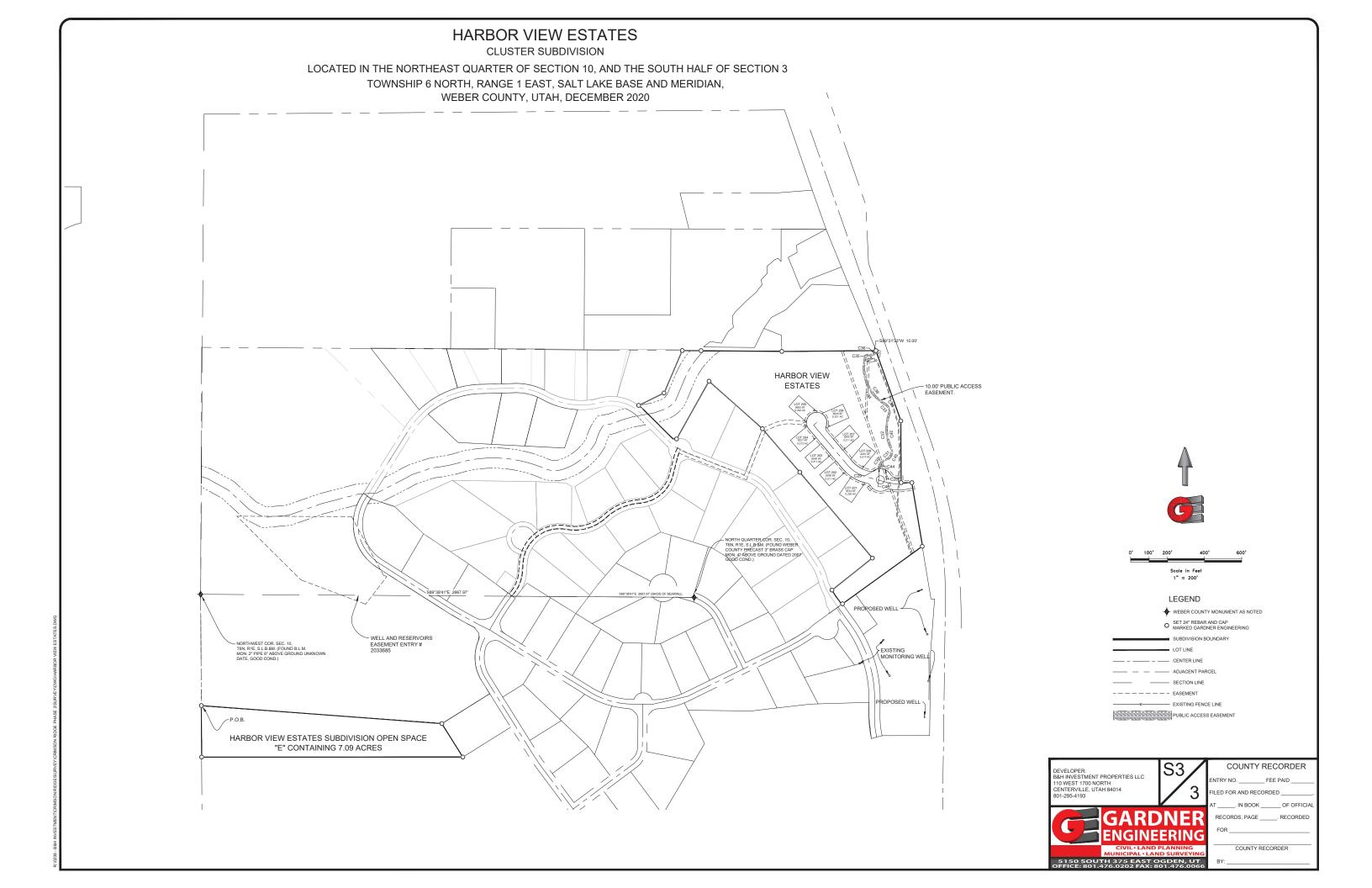
Select Query Layers **Drinking Water** Public Water System Facilities 2 (http://168.178.6.56/TabsPage.aspx? Al PageConfigID=100000&DivName=DDW) ✓ Ground Water Protection Zones ② (http://168.178.6.56/TabsPage.aspx? Al PageConfigID=100005&DivName=DDW) **▼** () Source Water Assessment Zones ? (http://168.178.6.56/TabsPage.aspx? Al_PageConfigID=100010&DivName=DDW) Surface Water Protection Zones (http://168.178.6.56/TabsPage.aspx? Al_PageConfigID=100015&DivName=DDW) Irrigated Crop Consumptive Use Zones (http://168.178.6.56/TabsPage.aspx? Al PageConfigID=100020&DivName=DDW) ✓ Water Rights Points of Diversion ② (http://168.178.6.56/TabsPage.aspx? Al PageConfigID=100160&DivName=DDW)

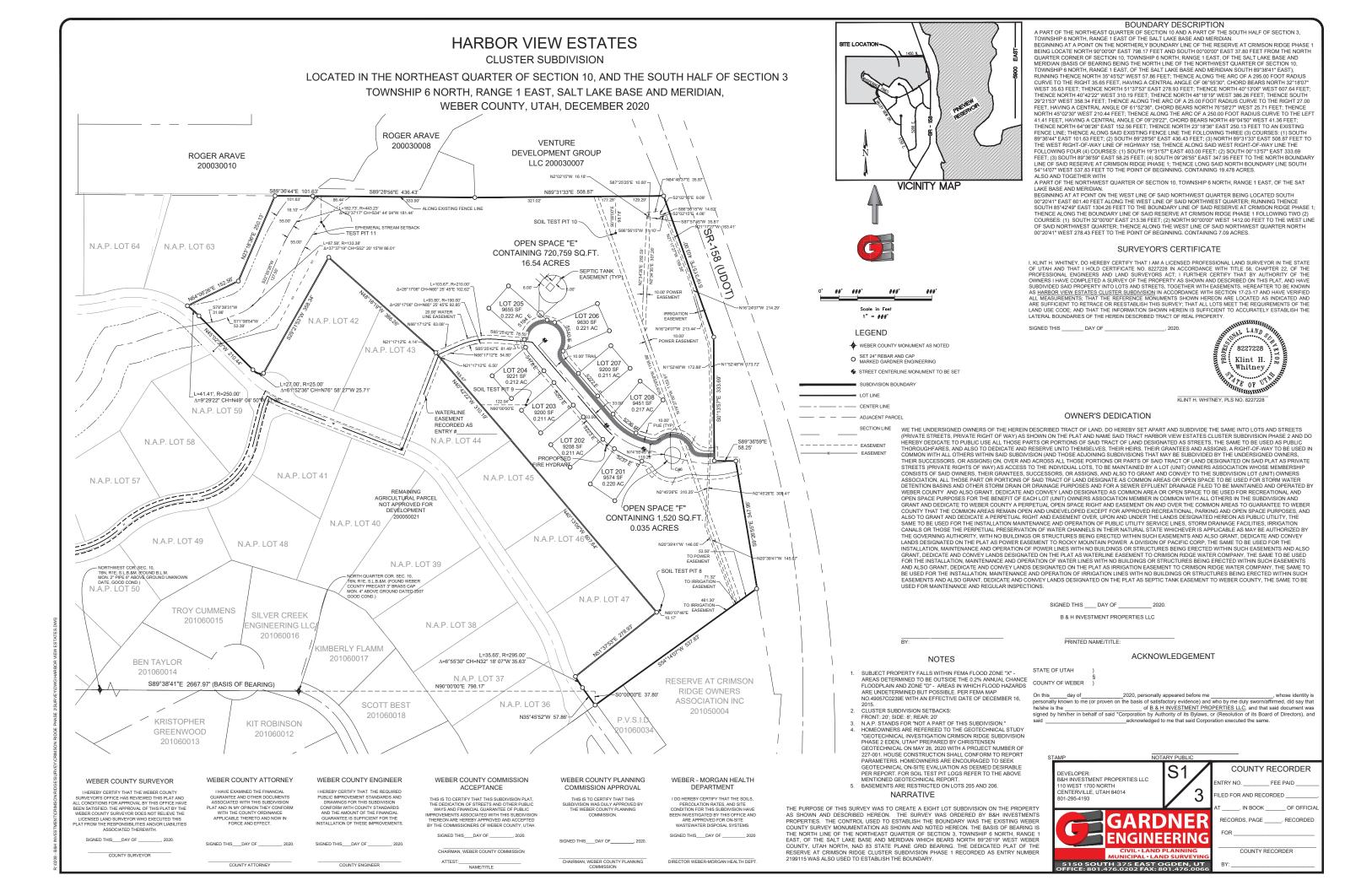


Appendix H









THE RESERVE AT CRIMSON RIDGE PHASE 2A SITE LOCATION **CLUSTER SUBDIVISION** LOCATED IN THE NORTHEAST QUARTER OF SECTION 10, AND THE SOUTH HALF OF SECTION 3 TOWNSHIP 6 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, WEBER COUNTY, UTAH, DECEMBER 2020 ROGER ARAVE ROGER ARAVE **DEVELOPMENT GROUP** 200030008 200030010 LLC 200030007 NAPIOT 64 NAPIOT 63 EMERAL STREAM SETBACK N.A.P. LOT 205 3 (NDOT) N.A.P. LOT 206 LOT 42 67058 SF 1.539 AC N.A.P. Λ=61°52'36" CH=576° 58' 27"F 25 N.A.F LOT 204 LOT 207. 1.233 AC =21 71' R=25 0 L=21.39', R=25.00' =49°00'52" CH=N23° 32' 48"W 20.74' N.A.P. NAF LOT 208/ LOT 203 L=39.23', R=61.50' 1.085 AC Δ=36°32'48" CH=N17° 18' 47"W 38.57' -N14°09'57"F 66:99 N.A.P N66°18'53"W 50.70 — TEST PIT 12 N.A.P. LOT 58 LOT 202 L=79.98', R=225.02 1.020 AC 4"W 6 84 LOT 201 NAPIOT 57 LOT 45 REMAINING AGRICULTURAL PARCEL 1.562 AC NOT APPROVED FOR DEVELOPMENT N.A.P. LOT 49 N.A.P. LOT 48 68461 SF 1.572 AC N.A.P. LOT 50 8*52'38"E 6.96" N58°50/03"W 97 TROY CUMMENS SILVER CREEK 1.000 AC 201060015 IGINEERING LLC 201060016 KIMBERLY FLAMI S33°52'38"F 8 1 BEN TAYLOR 201060017 L=114.37', R=320.00' 35.65'. R=295.00 2 18' 07"F 35.63' 201060014 -S35°45'52"E 57.86' S89°38'41"E 2667.97' (BASIS OF BEARING) 190°00'00"E 802.28 STATE OF UTAH COUNTY OF WEBER 201060018 RESERVE AT CRIMSON P.V.S.I.I KRISTOPHER KIT ROBINSON RIDGE OWNERS **GREENWOOD** 201060012 1.198 AC ASSOCIATION INC 201060013 201050004 16N, R1E, S.L.B.&M. (FOUND W COUNTY PRECAST 3" BRASS (\=18°58'58" CH=S46 L=142.86', R=1176.82' Δ=6°57'20" CH=S59° 10' 45"W 142.77' WEBER COUNTY SURVEYOR WEBER COUNTY ATTORNEY WEBER COUNTY ENGINEER WEBER COUNTY COMMISSION WEBER COUNTY PLANNING WEBER - MORGAN HEALTH ACCEPTANCE COMMISSION APPROVAL I HERERY CERTIEV THAT THE WERER COLINT I HAVE EXAMINED THE FINANCIAL THIS IS TO CERTIFY THAT THIS SUBDIVISION PLAT, THE DEDICATION OF STREETS AND OTHER PUBLIC WAYS AND FINANCIAL GUARANTEE OF PUBLIC "ROVEMENTS ASSOCIATED WITH THIS SUBDIVISIO, IEREON ARE HEREBY APPROVED AND ACCEPTED THE COMMISSIONERS OF WARPEN COUNTY. SURVEYOR'S OFFICE HAS REVIEWED THIS PLAT AND ALL CONDITIONS FOR APPROVAL BY THIS OFFICE HAVE BEEN SATISFIED. THE APPROVAL OF THIS PLAT BY THE WEBER COUNTY SURVEYOR DOES NOT RELIEVE THE HIGENSEN LAND SUBVEYOR DOES NOT RELIEVE THE GUARANTEE AND OTHER DOCUMENTS ASSOCIATED WITH THIS SUBDIVISION PLAT AND IN MY OPINION THEY CONFORI WITH THE COUNTY ORDINANCE PUBLIC IMPROVEMENT STANDARDS AND DRAWINGS FOR THIS SUBDIVISION PERCOLATION RATES, AND SITE CONDITION FOR THIS SUBDIVISION HAVE BEEN INVESTIGATED BY THIS OFFICE AND ARE APPROVED FOR ON-SITE WASTEWATER DISPOSAL SYSTEMS COMMISSION NTEE IS SUFFICIENT FOR THE APPLICABLE THERETO AND NOW IN SIGNED THIS___DAY OF ______, 2020 SIGNED THIS DAY OF SIGNED THIS___DAY OF ___ CHAIRMAN, WEBER COUNTY COMMISSION COUNTY SURVEYOR ATTEST:_____NAME/TITLE DIRECTOR WEBER-MORGAN HEALTH DEP COUNTY ATTORNEY COUNTY ENGINEER

BOUNDARY DESCRIPTION

A PART OF THE NORTHEAST QUARTER OF SECTION 10 AND A PART OF THE SOUTH HALF OF SECTION 3, TOWNSHIP 6 NORTH, RANGE 1 EAST OF THE SALT LAKE BASE AND MERIDIAN.

BEGINNING AT A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF THE RESERVE AT CRIMSON RIDGE PHASE 1 BEING LOCATE NORTH 90°00'00" EAST 798.17 FEET AND SOUTH 00°00'00" EAST 37.80 FEET FROM THE NORTH QUARTER CORNER OF SECTION 10, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN (BASIS OF BEARING BEING THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 10, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN SOUTH 89°38'41" EAST); TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN SOUTH 89°38'41" EAST); RUNNING THENCE ALONG THE NORTHERLY BOUNDARY OF THE RESERVE AT CRIMSON RIDGE PHASE 1 CLUSTER SUBDINISION FOLLOWING NINE (9) COURSES: (1) SOUTH 54"1407" WEST 193.17 FEET; (2) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO THE LEFT 15.30 FEET; HAVING A CENTRAL ANGLE OF 17" ATOLIS WITH A CHORD BEARING SOUTH 45"21" WEST 15.24 FEET; (3) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO THE RIGHT 16.57 FEET, HAVING A CENTRAL ANGLE OF 18"58"58" WITH A CHORD BEARING SOUTH 46"11"38" WEST 14.69 FEET; (4) ALONG THE ARC OF A 11"0.82 FOOT RADIUS CURVE 142.86 FEET; HAVING A CENTRAL ANGLE OF 6"5"20" WITH A CHORD BEARING SOUTH 59"10"45" WEST 142.77 FEET; (5) NORTH 27"1701" WEST 144.04 FEET; (6) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (9) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 35"453" WEST 300.28 FEET; (7) NORTH 39"0"450" WEST 117.40 FEET; (8) NORTH 30"450" WEST 300.28 FEET; (7) NORTH 30"450" WEST 317.40 FEET; (8) NORTH 30"450" WEST 317.40 FEET; (9) NORTH 30"450" WEST 317.40 FEET; (9 (8) NORTH 58°50'03" WEST 97.54 FEET; (9) NORTH 72°44'01" WEST 108.03 FEET; THENCE NORTH 21°17'12" EAS (8) NORTH 58"50"3" WEST 97.54 FEET; (9) NORTH 72"44"0" WEST 108.03 FEET; THENCE NORTH 21"17"12" EAST 176.61 FEET; THENCE NORTH 56"49"52" WEST 21.82 FEET; THENCE ALONG THE ARC OF A 225 PGOT RADIUS CURVE TO THE LEFT 79.98 FEET, HAVING A CENTRAL ANGLE OF 20"21"55" WITH A CHORD BEARING NORTH 24"20"55" EAST 79.56 FEET; THENCE NORTH 14"09"57" EAST 66.99 FEET; THENCE NORTH 66"18"53" WEST 50.70 FEET; THENCE ALONG THE ARC OF A 25.00 FOOT RADIUS CURVE TO THE LEFT 21.71 FEET, HAVING A CENTRAL ANGLE OF 49"45"08" WITH A CHORD BEARING NORTH 10"42"37" WEST 21.03 FEET; THENCE ALONG THE ARC OF A 61.50 FOOT RADIUS CURVE TO THE RIGHT 39.23 FEET, HAVING A CENTRAL ANGLE OF 36"32"48" WITH A CHORD BEARING NORTH 17"18"47" WEST 38.57 FEET; THENCE ALONG THE ARC OF A 25.00 FOOT RADIUS CURVE TO THE LEFT 21.39 FEET, THENCE ALONG THE ARC OF A 25.00 FOOT RADIUS CURVE TO THE LEFT 21.39 FEET, THENCE ALONG THE ARC OF A 25.00 FOOT RADIUS CURVE TO THE LEFT 21.39 FEET, HAVING A CENTRAL ANGLE OF 49"00"52" WITH A CHORD BEARING NORTH 47" 45" A CENTRAL ANGLE OF 49"00"52" WITH A CHORD BEARING NORTH 47" 45" A CENTRAL ANGLE OF 49"00"52" WITH A CHORD SEABURG NORTH 35" MEST 27" A CETET THENCE NORTH 30"5.03" EAST 52.5 FEET TO THE SUITHED IV BEARING NORTH 23°32'48" WEST 20.74 FEET; THENCE NORTH 30°15'03" EAST 51.25 FEET TO THE SOUTHERLY BOUNDARY OF THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION PHASE 2: THENCE ALONG SAID BOUNDARY OF THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION PHASE 2; THENCE ALONG SAID SOUTHERY BOUNDARY FOLLOWING EIGHT (8) COURSES: (1) ALONG THE ARC OF A 25.00 FOOT RADIUS CURVE TO THE RIGHT 27.00 FEET; HAVING A CENTRAL ANGLE OF 61'52'36' WITH A CHORD BEARING SOUTH 67'58'27' WEST 25.71 FEET; (2) NORTH 29'21'53' EAST 358.34 FEET; (3) SOUTH 48'18'19' EAST 386.26 FEET; (4) SOUTH 40'42'22' EAST 310.19 FEET; (6) SOUTH 40'13'06' EAST 607.64 FEET; (6) SOUTH 51'37'53' WEST 278.93 FEET; (7) ALONG THE ARC OF A 295.00 FOOT RADIUS CURVE TO THE RIGHT 35.65 FEET, HAVING A CENTRAL ANGLE OF 6'55'30' WITH A CHORD BEARING SOUTH 22"1807' EAST 35.63 FEET; (8) SOUTH 35'45'52' EAST 57.86 FEET TO THE POINT OF BEGINNING, CONTAINING 16.750 ACRES CONTAINING ALSO AND TOGETHER WITH A PART OF THE NORTHWEST QUARTER OF SECTION 2 THE SOUTHWEST QUARTER OF SECTION 2 THE SOUTHWEST QUARTER OF SECTION 2 THE SOUTH WEST QUARTER OF SECTION 2 THE SAIT MER DESCANDA MEDIDIAN.

A PART OF THE NORTHWEST QUARTER OF SECTION 10 AND A PART OF THE SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SAT LAKE BASE AND MERIDIAN. BEGINNING AT AT POINT ON THE WEST LINE OF SAID NORTHWEST QUARTER BEING LOCATED SOUTH 00°20'4" EAST 221.38 FEET A LONG THE WEST LINE OF SAID NORTHWEST QUARTER; RUNNING THENCE NORTH 68°55'14" EAST 1020.29 FEET TO THE BOUNDARY LINE OF SAID NORTHWEST QUARTER; RUNNING THENCE 1. THENCE ALONG THE BOUNDARY LINE OF SAID RESERVE AT CRIMSON RIDGE PHASE 1. THENCE ALONG THE BOUNDARY LINE OF SAID RESERVE AT CRIMSON RIDGE PHASE 1. FOLLOWING SIGHT (8) COURSES: (1) SOUTH 5"30'19" EAST 424.54 FEET; (2) ALONG THE ARC OF A 1991.16 FOOT RADIUS CURVE TO THE RIGHT 191.25 FEET, HAVING A CENTRAL ANGLE OF 5"30'12" WITH A CHORD BEARING SOUTH 60" 1585T 101.48 EET. (2) ALONG THE 60°C. A 40.00 EOOT RADIUS CHEVE TO THE BIGHT 414.15 EET. MANUNC A EAST 191.18 FEET: (3) ALONG THE ARC OF A 49.99 FOOT RADIUS CURVE TO THE RIGHT 41.41 FEET. HAVING A CENTRAL ANGLE OF 47°27'44" WITH A CHORD BEARING SOUTH 39°16'39" EAST 40.24 FEET; (4) ALONG THE ARC OF A 61.48 FOOT RADIUS CURVE TO THE RIGHT 3.52 FEET, HAVING A CENTRAL ANGLE OF 3°16'52" WITH A CHORD BEARING SOUTH 17°11'13" EAST 3.52 FEET: (5) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO A CHORD BEARING SOUTH 7"113" EAST 3.52 FEET; (5) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE THE RICHT 36.83 FEET, HAVING A CENTRAL ANGLE OF A 2"11"50" WITH A CHORD BEARING SOUTH 2"16"16" WEST 36.00 FEET; (6) ALONG THE ARC OF A 236.65 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 56"22"10" WITH A CHORD BEARING SOUTH 4"18"58" EAST 219.90 FEET; (7) SOUTH 32"00" CAST 82.73 FEET; (8) SOUTH 58"00"00" WEST 305.00 FEET; THENCE NORTH 58"42"49" WEST 1304.28 TO THE WEST LINE OF SAID NORTHWEST QUARTER; THENCE ALONG THE WEST LINE OF SAID NORTHWEST QUARTER NORTH 00"20"41" WEST 380.03 FEET TO THE POINT OF BEGINNING. CONTAINING 21.19 ACRES.

SURVEYOR'S CERTIFICATE

I, KLINT H. WHITNEY, DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF UTAH AND THAT I HOLD CERTIFICATE NO. 8227228 IN ACCORDANCE WITH TITLE 58, CHAPTER 22, OF THE PROFESSIONAL ENGINEERS AND LAND SURVEYORS ACT; I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS I HAVE COMPLETED A SURVEY OF THE PROPERTY AS SHOWN AND DESCRIBED ON THIS PLAT, AND HAVE SUBDIVIDED SAID PROPERTY INTO LOTS AND STREETS, TOGETHER WITH EASEMENTS, HEREAFTER TO BE KNOWN AS THE RESERVER AT CRIMSON RIDGE PHASE 2A CLUSTER SUBDIVISION IN ACCORDANCE WITH SECTION 17-23-1: AND HAVE VERIFIED ALL MEASUREMENTS; THAT THE REFERENCE MONUMENTS SHOWN HEREON ARE LOCATED AS INDICATED AND ARE SUFFICIENT TO RETRACE OR REESTABLISH THIS SURVEY; THAT ALL LOTS MEET THE REQUIREMENTS OF THE LAND USE CODE; AND THAT THE INFORMATION SHOWN HEREIN IS SUFFICIENT TO ACCURATELY ESTABLISH THE LATERAL BOUNDARIES OF THE HEREIN DESCRIBED TRACT OF REAL PROPERTY

DAY OF 8227228 Klint H Whitne TE OF

OWNER'S DEDICATION

KLINT H. WHITNEY, PLS NO. 8227228

WE THE UNDERSIGNED OWNERS OF THE HEREIN DESCRIBED TRACT OF LAND, DO HEREBY SET APART ANI SUBDIVIDE THE SAME INTO LOTS AND STREETS (PRIVATE STREETS, PRIVATE RIGHT OF WAY) AS SHOWN ITHE PLAT AND NAME SAID TRACT THE RESERVE AT CRIMSON RIDGE PHASE 2A CLUSTER SUBDIVISION PHASE 2 AND DO HEREBY DEDICATE TO PUBLIC USE ALL THOSE PARTS OR PORTIONS OF SAID TRACT OF LAND DESIGNATED AS STREETS, THE SAME TO BE USED AS PUBLIC THOROUGHARES, AND ALSO DEDICATE AND RESERVE UNTO THEMSELVES, THEIR HEIRS, THEIR GRANTEES AND ASSIGNS, A DEDICATE AND RESERVE UNTO THEMSELVES, THEIR HEIRS, THEIR GRANTEES AND ASSIGNS, TRIGHT-OF-WAY TO BE USED IN COMMON WITH ALL OTHERS WITHIN SAID SUBDIVISION (AND THOS) ADJOINING SUBDIVISIONS THAT MAY BE SUBDIVIDED BY THE UNDERSIGNED OWNERS, THEIR SUCCESSORS OR ASSIGNS) ON, OVER AND ACROSS ALL THOSE PORTIONS OR PARTS OF SAID TRACT OF LAND DESIGNATED ON SAID PLAT AS PRIVATE STREETS PRIVATE RIGHTS OF WAY) AS ACCESS TO THE INDIVIDUAL LOTS, TO BE MAINTAINED BY A LOT (UNIT) OWNERS ASSOCIATION WHOSE MEMBERSHIP CONSISTS OF SAID OWNERS, THEIR GRANTEES, SUCCESSORS, OR ASSIGNS, AND ALSO TO GRANT AND CONVEY TO THIS SUBDIVISION LOT (UNIT) OWNERS ASSOCIATION, ALL THOSE PART OR PORTIONS OF SAID TRACT OF LAND DEPENDENCE AS CONVEYED FOR THE PROPERTY OF THE PRO DESIGNATE AS COMMON AREAS TO BE USED FOR RECREATIONAL AND OPEN SPACE PURPOSES FOR THE BENEFIT OF EACH LOT (UNIT) OWNERS ASSOCIATION MEMBER IN COMMON WITH ALL THERS IN THE SUBDIVISION AND GRANT AND DEDICATE TO WEBER COUNTY A PERPETUAL OPEN SPACE RIGHT AND EASEMENT ON AND OVER THE COMMON AREAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON AREAS REMAIN OPEN AND UNDEVELOPED EXCEPT FOR APPROVED RECREATIONAL, PARKING AND OPEN SPACE PURPOSES, AND ALSO TO GRANT AND DEDICATE A PERPETUAL RIGHT AND EASEMENT OVER, UPON AND UNDER THE LANDS DESIGNATED HEREON AS PUBLIC UTILITY, THE SAME TO BE USED FOR THE INSTALLATION MAINTENANCE AND OPERATION OF PUBLIC UTILITY SERVICE LINES, STORM DRAINAGE FACILITIES, IRRIGATION CANALS OR THOSE THE PERPETUAL PRESERVATION OF WATER CHANNELS IN THEIR NATURAL STAT WHICHEVER IS APPLICABLE AS MAY BE AUTHORIZED BY THE GOVERNING AUTHORITY, WITH NO BILLI DINGS OR STELUTION ESPECTIVED FOR THE MEMBER SERVATION OF WATER CHANNELS IN THEIR NATURAL STAT WHICHEVER IS APPLICABLE AS MAY BE AUTHORIZED BY THE GOVERNING AUTHORITY, WITH NO BILLI DINGS OR STELUTIONES BEING EPECTED WITHIN SILVEL ASSEMBLYS AND A SIGNATURE DEPLICATE DESIGNATE AS COMMON AREAS TO BE USED FOR RECREATIONAL AND OPEN SPACE PURPOSES FOR THI NO BUILDINGS OR STRUCTURES BEING ERECTED WITHIN SUCH EASEMENTS AND ALSO GRANT, DEDICAT AND CONVEY LANDS DESIGNATED ON THE PLAT AS SEPTIC TANK EASEMENT TO WEBER COUNTY. THE SA TO BE USED FOR MAINTENANCE AND REGULAR INSPECTIONS

> SIGNED THIS DAY OF B & H INVESTMENT PROPERTIES LLC



NARRATIVE

VICINIT

LEGEND

CENTERLINE

- EXISTING FENCE LINE

1. SUBJECT PROPERTY FALLS WITHIN FEMA FLOOD ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AND ZONE "D" - AREAS IN WHICH FLOOD HAZARDS ARE UNDETERMINED BUT POSSIBLE. PER FEMA MAP

CLUSTER SUBDIVISION SETBACKS

NOTES

NO.49057C0239E WITH AN EFFECTIVE DATE OF DECEMBER 16,

CLUSTER SUBDIVISION SETBACKS:
FRONT: 20; SIDE: 8'; REAR: 20'
N.A.P. STANDS FOR "NOT A PART OF THIS SUBDIVISION."
HOMEOWNERS ARE REFEREED TO THE GEOTECHNICAL STUDY
"GEOTECHNICAL INVESTIGATION CRIMSON RIDGE SUBDIVISION
PHASE 2 EDEN, UTAH" PREPARED BY CHRISTENSEN

GEOTECHNICAL ON MAY 26, 2020 WITH A PROJECT NUMBER O

227-001, HOUSE CONSTRUCTION SHALL CONFORM TO REPORT PARAMETERS. HOMEOWNERS ARE ENCOURAGED TO SEEK GEOTECHNICAL ON-SITE EVALUATION AS DEEMED DESIRABLE PER REPORT. FOR SOIL TEST PIT LOGS REFER TO THE ABOVI

ACKNOWLEDGEMENT

I PROPERTIES LLC, and that said document was signed frer in behalf of said "Corporation by Authority of its Bylaws, or ion of its Board of Directors), and said adged to me that said Corporation executed the same.

2020, personally appeared before me

NOTARY PUBLIC

◆ WEBER COUNTY MONUMENT AS NOTED

SET 24" REBAR AND CAP MARKED GARDNER ENGINEERING

♠ STREET CENTERI INE MONUMENT TO BE SET

THE PURPOSE OF THIS SURVEY WAS TO CREATE A EIGHT LOT SUBDIVISION ON THE PROPERTY AS SHOWN AND DESCRIBED HEREON. THE SURVEY WAS ORDERED BY B&H INVESTMENTS PROPERTIES. THE CONTROL USED TO ESTABLISH THE BOUNDARY WAS THE EXISTING WEBER COUNTY SURVEY MONUMENTATION AS SHOWN AND NOTED HEREON. THE BASIS OF BEARING IS COUNTY SURVEY MONOMENTATION AS SHOWN AND NOTED HEREON. THE BASIS OF BEARING IS THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 3, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN WHICH BEARS NORTH 89°26′19″ WEST WEBER COUNTY, UTAH NORTH, NAD 83 STATE PLANE GRID BEARING. THE DEDICATED PLAT OF THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION PHASE 1 RECORDED AS ENTRY NUMBER 2199115 WAS ALSO USED TO ESTABLISH THE BOUNDARY.

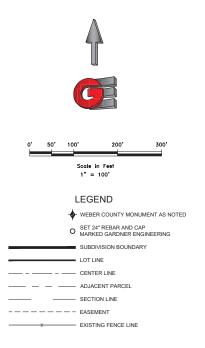
THE RESERVE AT CRIMSON RIDGE PHASE 2A

CLUSTER SUBDIVISION

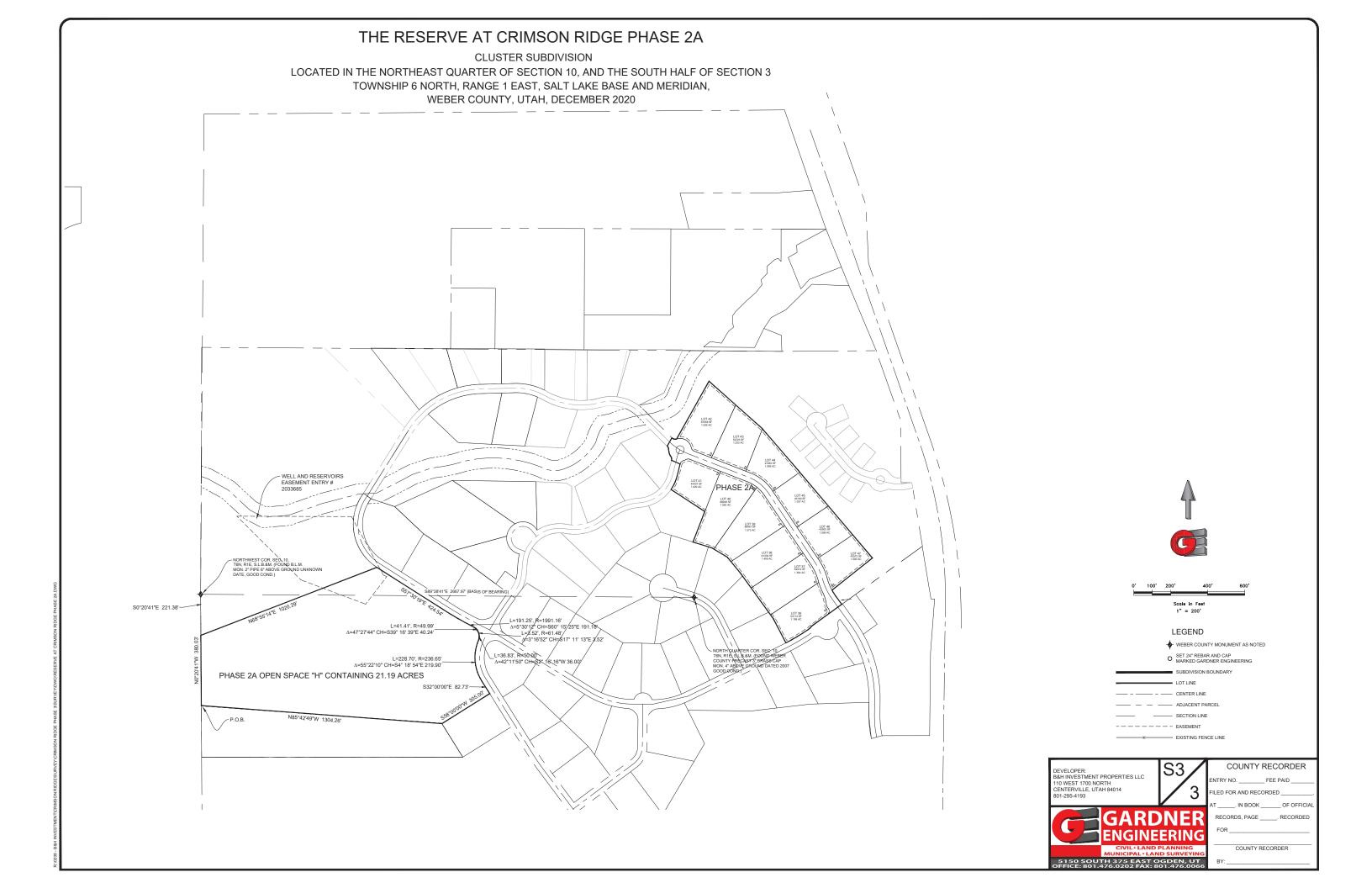
LOCATED IN THE NORTHEAST QUARTER OF SECTION 10, AND THE SOUTH HALF OF SECTION 3
TOWNSHIP 6 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN,
WEBER COUNTY, UTAH, DECEMBER 2020



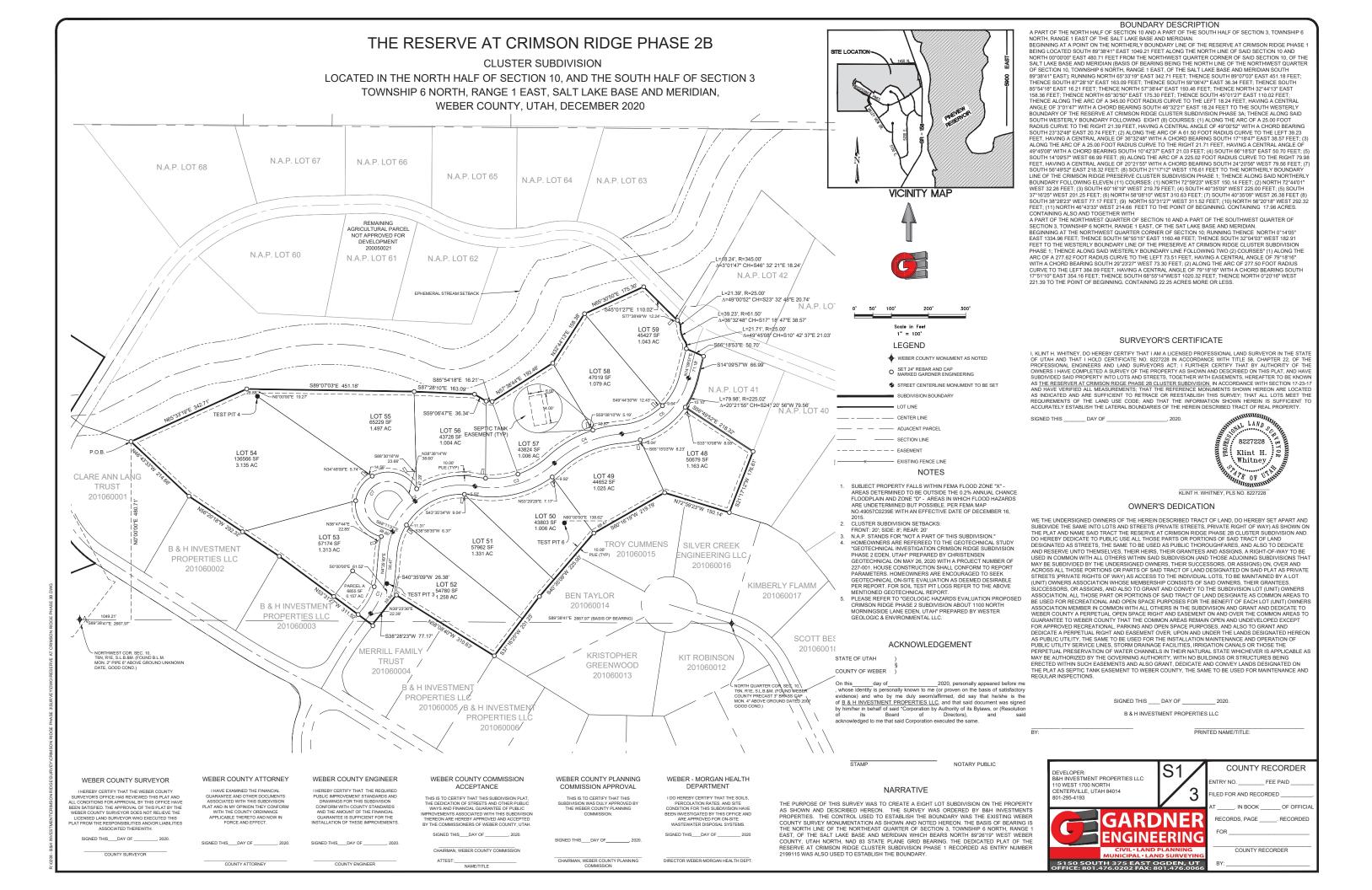
		4	CURVE 1	ΓABLE .	
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	69.78	295.00	13.55	N22° 03' 48"W	69.62
C2	111.94	345.00	18.59	N24° 34' 56"W	111.45
C4	152.00	250.00	34.84	N51° 17' 43"W	149.67
C6	25.20	25.00	57.75	N39° 50' 21"W	24.14
C7	104.06	61.50	96.95	N59° 26' 19"W	92.08
C8	25.89	25.00	59.34	N43° 50' 05"E	24.75
C9	14.73	61.50	13.72	N66° 38' 32"E	14.69
C10	22.47	25.00	51.51	N85° 32' 01"E	21.72
C12	121.60	200.00	34.84	S51° 17' 43"E	119.74
C14	95.72	295.00	18.59	S24° 34' 56"E	95.30
C15	68.97	345.00	11.45	S21° 00' 51"E	68.86
C16	66.32	189.00	20.11	S16° 41' 18"E	65.98
C17	15.89	36.00	25.30	S19° 17' 00"E	15.77
C18	0.67	11.00	3.47	S33° 39' 56"E	0.67
C20	39.11	25.00	89.64	S9° 25' 04"W	35.24
C21	111.94	345.00	18.59	S24° 34' 56"E	111.45
C22	69.78	295.00	13.55	S22° 03' 48"E	69.62
C23	152.00	250.00	34.84	S51° 17' 43"E	149.67
C24	25.20	25.00	57.75	N39° 50' 21"W	24.14
C25	104.06	61.50	96.95	N59° 26' 19"W	92.08
C26	60.80	200.00	17.42	N60° 00' 15"W	60.57
C27	60.80	200.00	17.42	S42° 35' 10"E	60.57
C28	10.35	345.00	1.72	N16° 08' 47"W	10.35
C29	95.72	295.00	18.59	N24° 34' 56"W	95.30
C30	58.62	345.00	9.74	S21° 52' 24"E	58.55







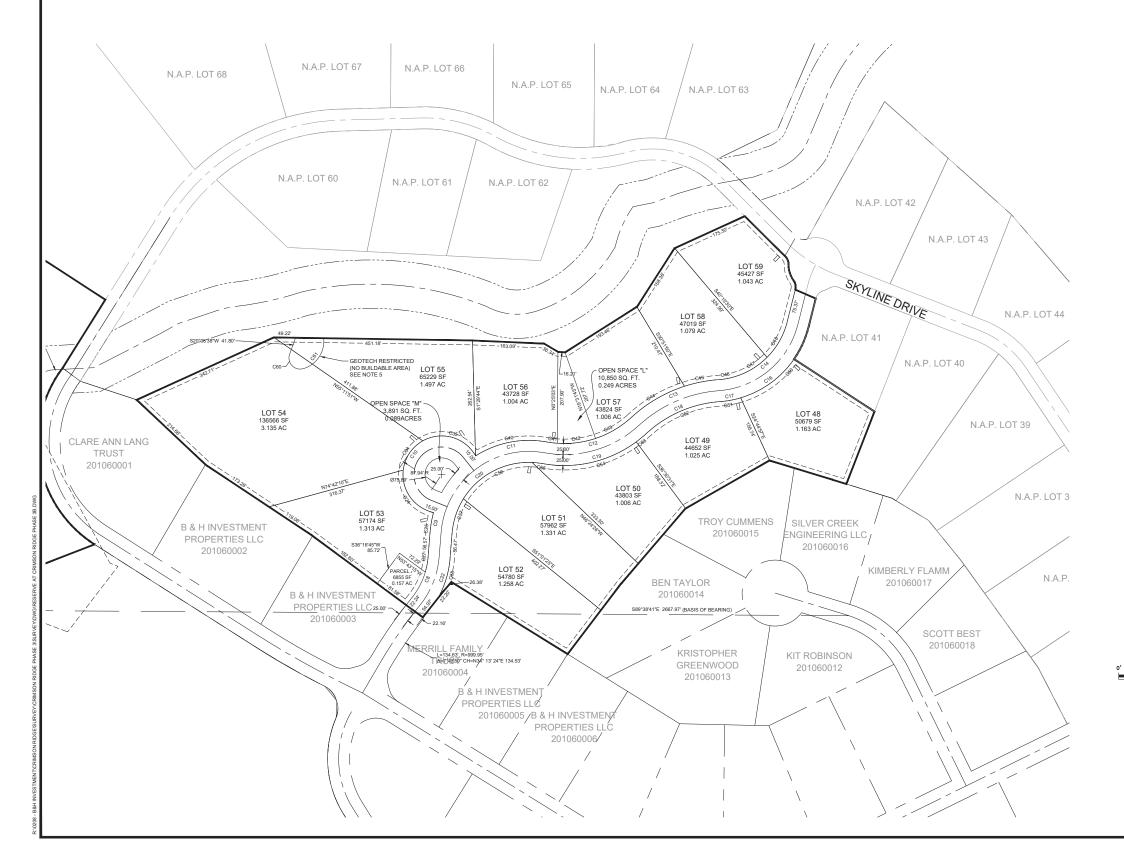
BOUNDARY DESCRIPTION THE RESERVE AT CRIMSON RIDGE PHASE 2A A PART OF THE NORTHEAST QUARTER OF SECTION 10 AND A PART OF THE SOUTH HALF OF SECTION 3, TOWNSHIP 6 NORTH, RANGE 1 EAST OF THE SALT LAKE BASE AND MERIDIAN. BEGINNING AT A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF THE RESERVE AT CRIMSON RIDGE PHASE 1 BEING LOCATE NORTH 90°0000° EAST 798.17 FEET AND SOUTH 00°000° EAST 37.80 FEET FROM THE SITE LOCATION **CLUSTER SUBDIVISION** NORTH QUARTER CORNER OF SECTION 10, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN (BASIS OF BEARING BEING THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 10 LOCATED IN THE NORTHEAST QUARTER OF SECTION 10, AND THE SOUTH HALF OF SECTION 3 AND MERIDIAN (BASIS OF BEARING BEING THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 10, TOWNSHIP OF NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN SOUTH 89°3841" EAST); RUNNING THENCE ALONG THE NORTHERLY BOUNDARY OF THE RESERVE AT CRIMSON RIDGE PHASE I CLUSTER SUBDIVISION FOLLOWING NINE (9) COURSES: (1) SOUTH 84"140" WEST 193.17 FEET; (2) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO THE LEFT 15.30 FEET, HAVING A CENTRAL ANGLE OF 17"3150" WITH A CHORD BEARING SOUTH 45"23"2" WEST 15.24 FEET; (3) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO THE RICHT 16.57 FEET. HAVING A CENTRAL ANGLE OF 18"58"58" WITH A CHORD BEARING SOUTH 45"21"2" WEST 15.24 THE 15"2" ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO THE RICHT 16.57 FEET. HAVING A CENTRAL ANGLE OF 18"58"58" WITH A CHORD BEARING SOUTH 45"30" AND A 14"5 A 15" COLOT DANIES (1) BEARING SOUTH 45"30" AND A 14"5 A 15" COLOT DANIES (1) BEARING SOUTH 45" AND A 14"5 A 15" COLOT DANIES (1) BEARING SOUTH 45" AND A 15" A 1 TOWNSHIP 6 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, WEBER COUNTY, UTAH, DECEMBER 2020 46°11'38" WEST 16.49 FEET: (4) ALONG THE ARC OF A 1176.82 FOOT RADIUS CURVE 142.86 FEET. HAVING A CENTRAL ANGLE OF 6°57'20" WITH A CHORD BEARING SOUTH 59°10'45" WEST 142.77 FEET: (5) NORTH 27°17'01" WEST 144.04 FEET; (6) NORTH 35°45'53" WEST 300.28 FEET; (7) NORTH 39°04'50" WEST 117.40 FEET ROGER ARAVE VENTURE 27*1701* WEST 144.04 FEET; (6) NORTH 35*4553* WEST 300.28 FEET; (7) NORTH 39*0450* WEST 117.40 FEET; (8) NORTH 59*5003* WEST 97.54 FEET; DENCE NORTH 21*17*12* EAST 176.61 FEET; THENCE NORTH 25*502 FOOT RADIUS CURVE TO THE LEFT 79.98 FEET, HAVING A CENTRAL ANGLE OF 20*21*55* WITH A CHORD BEARING NORTH 24*2056* FEAT 75.6 FEET; THENCE NORTH 41*0957* EAST 66.99 FEET; THENCE NORTH 66*18*53* WEST 50.70 FEET; THENCE NORTH 14*0957* EAST 66.99 FEET; THENCE NORTH 66*18*53* WEST 50.70 FEET; THENCE NORTH 66*0 FA 25.00 FOOT RADIUS CURVE TO THE LEFT 21.71 FEET; HAVING A CENTRAL ANGLE OF 49*4508* WITH A CHORD BEARING NORTH 10*42*37* WEST 21.03 FEET; THENCE ALONG THE ARC OF A 61.05 FOOT RADIUS CURVE TO THE RIGHT 39.23 FEET; HAVING A CENTRAL ANGLE OF 49*4508* WITH A CHORD BEARING NORTH 10*42*37* WEST 21.03 FEET; THENCE ALONG THE ARC OF A 61.05 FOOT RADIUS CURVE TO THE RIGHT 39.23 FEET; HAVING A CENTRAL ANGLE OF 38*32*48* WITH A CHORD BEARING NORTH 17*18*47* WEST 38.57 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 39*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 39*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 39*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 39*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 39*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 30*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 30*2.5 FEET; THENCE ALONG THE ARC OF A 62.00 FOOT RADIUS CURVE TO THE RIGHT 30*2.5 FEET; THENCE ALONG THE ARC OF A 64.00 FEET AND AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A CENTRAL AND ALONG THE ARC OF A 64.00 FEET AND ALONG A C **ROGER ARAVE DEVELOPMENT GROUP** 200030008 200030010 LLC 200030007 FOOT RADIUS CURVE TO THE LEFT 21.39 FEFT, HAVING A CENTRAL ANGLE OF 49°00'52" WITH A CHORD BEARING NORTH 23°32'48" WEST 20.74 FEET; THENCE NORTH 30°15'03" EAST 51.25 FEET TO THE SOUTHERLY BOUNDARY OF THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION PHASE 2; THENCE ALONG SAID VICINITY BOUNDARY OF THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION PHASE 2; THENCE ALONG SAID SOUTHERLY BOUNDARY FOLLOWING EIGHT (8) COURSES: (1) ALONG THE ARC OF A 25.01 FOOT RADIUS CURVE TO THE RIGHT 27.00 FEET, HAVING A CENTRAL ANGLE OF 61*52'36" WITH A CHORD BEARING SOUTH 76*592" WEST 25.71 FEET; (2) NORTH 29'21'53" EAST 386.34 FEET; (3) SOUTH 48"18'19" EAST 386.25 FEET; SOUTH 49"22" EAST 310.19 FEET; (5) SOUTH 49"30" EAST 67.00" EAST 6 NAPIOT64 NAPIOT 63 EMERAL STREAM SETBACK ANGLE OF 6°55'30" WITH A CHORD BEARING SOUTH 32°18'07" EAST 35.63 FEET; (8) SOUTH 35°45'52" EAST 57.86 FEET TO THE POINT OF BEGINNING, CONTAINING 16,750 ACRES CONTAINING ALSO AND TOGETHER WITH A PART OF THE NORTHWEST QUARTER OF SECTION 10 AND A PART OF THE SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SAT LAKE BASE AND MERIDIAN, BEGINNING AT AT POINT ON THE WEST LINE OF SAID NORTHWEST QUARTER BEING LOCATED SOUTH 00°204"1 EAST 221:38 FEET ALONG THE WEST LINE OF SAID NORTHWEST QUARTER; RUNNING THENCE NORTH 68°55'14" EAST 1020:29 FEET TO THE BOUNDARY LINE OF SAID RESERVE AT CRIMSON RIDGE PHASE 1; THENCE ALONG THE BOUNDARY LINE OF SAID RESERVE AT CRIMSON RIDGE PHASE 16 COLLOWING EIGHT (8) COURSES: (1) SOUTH 57°30'19" EAST 424.54 FEET; (2) ALONG THE ARC OF A 1991.16 FOOT RADIUS CURVE TO THE RIGHT 191.25 FEET. HAVING A CENTRAL ANGLE OF 5°30'12" WITH A CHORD BEARING SOUTH 60°1525" EAST 191.18 FEET; (3) ALONG THE ARC OF A 9.99 FOOT RADIUS CURVE TO THE RIGHT 41 41 FEET. HAVING A CENTRAL ANGLE OF 67°30'74" WITH A CHORD BEARING ANGLE OF 5°30'74530" EAST 10.24 FEET; (4) ALONG THE CONTAINING ALSO AND TOGETHER WITH N.A.P. LOT 205 3 (UDOT) N.A.P. LOT 206 LOT 42 67058 SF 1.539 AC EAST 191.18 FEET; (3) ALONG THE ARC OF A 499 FOOT RADIUS CURVE TO THE RIGHT 41.41 FEET, HAVING A CENTRAL ANGLE OF 47°27"44" WITH A CHORD BEARING SOUTH 39"1639" EAST 40.24 FEET; (4) AND THE ARC OF A 61.48 FOOT RADIUS CURVE TO THE RIGHT 3.52 FEET, HAVING A CENTRAL ANGLE OF 3°16'82" WITH A CHORD BEARING SOUTH 17"111"3" EAST 3.52 FEET; (5) ALONG THE ARC OF A 50.00 FOOT RADIUS CURVE TO THE RIGHT 36.83 FEET; HAVING A CENTRAL ANGLE OF 42"1150" WITH A CHORD BEARING SOUTH 2"16"16" WEST 36.00 FEET; (6) ALONG THE ARC OF A 236.65 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 55°22"10" WITH A CHORD BEARING SOUTH 4"1654" EAST 21.99 FEET; (7) SOUTH 32"000" EAST 82.73 FEET; (8) SOUTH 58"0000" WEST 305.00 FEET; THENCE NORTH 85"4"249" WEST 1304.26 TO THE WEST 1404.26 TO THE WEST 1404.00 FEET; THENCE NORTH 85"4"249" WEST 1304.26 TO THE WEST 1404.00 FEET; THENCE NORTH 85"4"249" WEST 1304.26 TO THE WEST 1404.00 FEET; THENCE NORTH 150" CENTRAL DOTTHWEST CHARTEN L=27:00', N=25. Δ=61°52'36" CH=\$76° 58' 27"E 25: N.A.P N.A.P. LOT 204 LOT 207 1.233 AC L=21.39', R=25.00' =49°00'52" CH=N23° 32' 48"W 20.74' LINE OF SAID NORTHWEST QUARTER; THENCE ALONG THE WEST LINE OF SAID NORTHWEST QUARTER N.A.P. LEGEND NORTH 00°20'41" WEST 380.03 FEET TO THE POINT OF BEGINNING, CONTAINING 21.19 ACRES. LOT 208/ LOT 203 ♦ WEBER COUNTY MONUMENT AS NOTED SURVEYOR'S CERTIFICATE O SET 24" REBAR AND CAP I, KLINT H. WHITNEY, DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF UTAH AND THAT I HOLD CERTIFICATE NO. 8227228 IN ACCORDANCE WITH TITLE 58, CHAPTER 22, OF THE PROFESSIONAL ENGINEERS AND LAND SURVEYORS ACT; I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS I HAVE COMPLETED A SURVEY OF THE PROPERTY AS SHOWN AND DESCRIBED ON THIS PLAT, AND HAVE SUBDIVIDED SAID PROPERTY INTO LOTS AND STREETS, TOGETHER WITH EASEMENTS, HEREAFTER TO BE KNOWN AS THE DESCRIPTED THE OWNER HAVE ON A STATE DESCRIPTION AND ACTION AND STREETS. L=39.23', R=61.50' 1.085 AC Δ=36°32'48" CH=N17° 18' 47"W 38.57' N66°18'53"W 50 — TEST PIT 12 N.A.P. LOT 58 LOT 202 AS THE RESERVER AT CRIMSON RIDGE PHASE 2A CLUSTER SUBDIVISION IN ACCORDANCE WITH SECTION 17-23-17 AND HAVE VERIFIED ALL MEASUREMENTS. THAT THE REFERENCE MONUMENTS SHOWN HEREON ARE LOCATED AS INDICATED AND ARE SUFFICIENT TO RETRACE OR REESTABLISH THIS SURVEY, THAT ALL LOTS MEET THE REQUIREMENTS OF THE LAND USE CODE; AND THAT THE INFORMATION SHOWN HEREIN IS SUFFICIENT TO ACCURATELY ESTABLISH THE LATERAL BOUNDARIES OF THE HEREIN DESCRIBED TRACT OF REAL PROPERTY. — – CENTER LINE L=79.98', R=22 1.020 AC Λ=20°21'55" CH=N24° 20' 56" F 7 4"W 6 84 LOT 201 NAPIOT 57 LOT 45 ---- FASEMENT LOT 40 68048 SF 1.562 AC EXISTING FENCE LINE REMAINING AGRICULTURAL PARCEL 8227228 NOT APPROVED FOR DEVELOPMENT Klint H. Whitney N.A.P. LOT 49 N.A.P. LOT 48 NOTES SEPTIC TANK 1.572 AC SUBJECT PROPERTY FALLS WITHIN FEMA FLOOD ZONE "X" KLINT H. WHITNEY, PLS NO. 8227228 AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AND ZONE "D" - AREAS IN WHICH FLOOD HAZARDS ARE UNDETERMINED BUT POSSIBLE. PER FEMA MAP OWNER'S DEDICATION WE THE UNDERSIGNED OWNERS OF THE HEREIN DESCRIBED TRACT OF LAND, DO HEREBY SET APART AND SUBDIVIDE THE SAME INTO LOTS AND STREETS (PRIVATE STREETS, PRIVATE RIGHT OF WAY) AS SHOWN ON THE PLAT AND NAME SAID TRACT THE RESERVE AT CRIMSON RIDGE PHASE 2A CLUSTER SUBDIVISION PHASE 2 AND DO HEREBY DEDICATE TO PUBLIC USE ALL THOSE PARTS OR PORTIONS OF SAID TRACT OF LAND DESIGNATED AS STREETS, THE SAME TO BE USED AS PUBLIC THOROUGHFARES, AND ALSO TO DEDICATE AND RESERVE UNTO THEMSELVES, THEIR HEIRS, THEIR GRANTEES AND ASSIGNS, A RIGHT-OF-WAY TO BE USED IN COMMON WITH ALL OTHERS WITHIN SAID SUBDIVISION (AND THOSE ADJOINING SUBDIVISIONS THAT MAY BE SUBDIVIDED BY THE UNDERSIGNED OWNERS, THEIR SUCCESSORS, DA ASSIGNS) ON OVER AND ASSIGNS, ON OVER AND ASSIGNS OF A DESIGNS OF SAID TRACT OF LAND NO.49057C0239E WITH AN EFFECTIVE DATE OF DECEMBER 16. N.A.P. LOT 50 CLUSTER SUBDIVISION SETBACKS: CLUSTER SUBDIVISION SETBACKS: FRONT: 20', SIDE: 8', REAR: 20' N.A.P., STANDS FOR "NOT A PART OF THIS SUBDIVISION." HOMEOWNERS ARE REFERED TO THE GEOTECHNICAL STUDY "GEOTECHNICAL INVESTIGATION CRIMSON RIDGE SUBDIVISION PHASE 2 EDEN, UTAH" PREPARED BY CHRISTENSEN GEOTECHNICAL ON MAY 26, 2020 WITH A PROJECT NUMBER OF 227-001. HOUSE CONSTRUCTION SHALL CONFORM TO REPORT PARAMETERS UNMEMBERS ARE ENCYLOLOGICAL TO SEEV. 752'38"E 6.96" N58°50'03"W 97 S33°52'38"E TROY CUMMENS SILVER CREEK 201060015 IGINEERING LLC 201060016 OR ASSIGNS) ON OVER AND ACROSS ALL THOSE PORTIONS OR PARTS OF SAID TRACT OF LAND OR ASSIGNS) ON, OVER AND ACROSS ALL THOSE PORTIONS OR PARTS OF SAID TRACT OF LAND DESIGNATED ON SAID PLAT AS PRIVATE STREETS PRIVATE RIGHTS OF WAY). AS ACCESS TO THE INDIVIDUAL LOTS, TO BE MAINTAINED BY A LOT (UNIT) OWNERS ASSOCIATION WHOSE MEMBERSHIP CONSISTS OF SAID OWNERS, THEIR GRANTEES, SUCCESSORS, OR ASSIGNS, AND ALSO TO GRANT AND CONVEY TO THE SUBDIVISION LOT (UNIT) OWNERS ASSOCIATION, ALL THOSE PART OR PORTIONS OF SAID TRACT OF LAND DESIGNATE AS COMMON AREAS TO BE USED FOR RECREATIONAL AND OPEN SPACE PURPOSES FOR THE BENEFIT OF EACH LOT (UNIT) OWNERS ASSOCIATION MEMBER IN COMMON WITH ALL OTHERS IN THE SUBDIVISION AND GRANT AND DEDICATE TO WEBER COUNTY A PERPETUAL OPEN SPACE RIGHT AND EASEMENT ON AND OVER THE COMMON AREAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON ABEAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON ABEAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON ABEAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON ABEAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON ABEAS TO GUARANTEE TO WEBER COUNTY THAT THE COMMON ABEAS THAT AND ABEAS ENDAIN OPEN AND INDIPICE OPEN EXPERTED FOR ADPROVED RECREATIONAL PARKING AND OPEN. PARAMETERS. HOMEOWNERS ARE ENCOURAGED TO SEEK KIMBERLY FLAM S33°52'38"F 8 1 GEOTECHNICAL ON-SITE EVALUATION AS DEEMED DESIRABLE PER REPORT. FOR SOIL TEST PIT LOGS REFER TO THE ABOVE MENTIONED GEOTECHNICAL REPORT. BEN TAYLOR 201060017 35.65', R=295.00', 30" CH=S32° 18' 07"E 35.63' 201060014 FIRE HYDRANT -S35%45'52"E 57.86' **ACKNOWLEDGEMENT** S89°38'41"E 2667.97' (BASIS OF BEARING) 190°00'00"E 802.28 STATE OF UTAH AREAS REMAIN OPEN AND UNDEVELOPED EXCEPT FOR APPROVED RECREATIONAL, PARKING AND OPEN SPACE PURPOSES, AND ALSO TO GRANT AND DEDICATE A PERPETUAL RIGHT AND EASEMENT OVER, UPON SPACE PURPOSES, AND ALSO TO GRANT AND DEDICATE A PERPETUAL RIGHT AND EASEMENT OVER, UPON AND UNDER THE LANDS DESIGNATED HEREON AS PUBLIC UTILITY, THE SAME TO BE USED FOR THE INSTALLATION MAINTENANCE AND OPERATION OF PUBLIC UTILITY SERVICE LINES, STORM DRAINAGE FACILITIES, IRRIGATION CANALS OR THOSE THE PERPETUAL PRESERVATION OF WATER CHANNELS IN THEIR NATURAL STAT WHICHEVER IS APPLICABLE AS MAY BE AUTHORIZED BY THE GOVERNING AUTHORITY, WITH NO BUILDINGS OR STRUCTURES BEING FRECTED WITHIN SUCH EASEMENTS AND A LSO GRANT, DEDICATE AND CONVEY LANDS DESIGNATED ON THE PLAT AS SEPTIC TANK EASEMENT TO WEBER COUNTY, THE SAME TO BE USED FOR MAINTENANCE AND BEGLIL AD INSPECTIONS. COUNTY OF WEBER 201060018 RESERVE AT CRIMSON On this day of 2020, personally appeared before me , whose identity is personally known to me (or proven on the basis of satisfactory evidence) and who by me duly sworn/affirmed, did say that he/she is the 0f B & H INVESTMENT PROPERTIES LLC. P.V.S.I. KRISTOPHER KIT ROBINSON RIDGE OWNERS 0106003 **GREENWOOD** 201060012 1.198 AC ASSOCIATION INC 201060013 TO BE USED FOR MAINTENANCE AND REGULAR INSPECTIONS. and that said document was signed by him/her in behalf of said *Corporation by Authority of its Bylaws, or (Resolution of its Board of Directors), and said 201050004 acknowledged to me that said Corporation exe 1=18°58'58" CH=S46° 11' 38'W SIGNED THIS DAY OF B & H INVESTMENT PROPERTIES LLC L=142.86', R=1176.82' Δ=6°57'20" CH=S59° 10' 45"W 142.77' NOTARY PUBLIC **COUNTY RECORDER** EVELOPER &H INVESTMENT PROPERTIES LLC WEBER COUNTY SURVEYOR WEBER COUNTY ATTORNEY WEBER COUNTY ENGINEER WEBER COUNTY COMMISSION WEBER COUNTY PLANNING WEBER - MORGAN HEALTH 0 WEST 1700 NORTH ACCEPTANCE COMMISSION APPROVAL I HERERY CERTIEV THAT THE WERER COLINT I HAVE EXAMINED THE FINANCIAL NARRATIVE ENTERVILLE LITAH 84014 GUARANTEE AND OTHER DOCUMENTS ASSOCIATED WITH THIS SUBDIVISION PLAT AND IN MY OPINION THEY CONFORI WITH THE COUNTY ORDINANCE THIS IS TO CERTIFY THAT THIS SUBDIVISION PLAT, HE DEDICATION OF STREETS AND OTHER PUBLIC WAYS AND FINANCIAL GUARANTEE OF PUBLIC PROVEMENTS ASSOCIATED WITH THIS SUBDIVISION HEREON ARE HEREBY APPROVED AND ACCEPTED THE COMMISSIONERS OF WEBER COUNTY, UTAH. ED FOR AND RECORDED SURVEYOR'S OFFICE HAS REVIEWED THIS PLAT AND ALL CONDITIONS FOR APPROVAL BY THIS OFFICE HAVE SEEN SATISFIED. THE APPROVAL OF THIS PLAT BY THE WEBER COUNTY SURVEYOR DOES NOT RELIEVE THE PUBLIC IMPROVEMENT STANDARDS AND DRAWINGS FOR THIS SUBDIVISION PERCOLATION RATES, AND SITE CONDITION FOR THIS SUBDIVISION HAVE THE PURPOSE OF THIS SURVEY WAS TO CREATE A EIGHT LOT SUBDIVISION ON THE PROPERTY THE PURPOSE OF THIS SURVEY WAS TO CREATE A EIGHT LOT SUBDIVISION ON THE PROPERTY AS SHOWN AND DESCRIBED HEREON. THE SURVEY WAS ORDERED BY B&H INVESTMENTS PROPERTIES. THE CONTROL USED TO ESTABLISH THE BOUNDARY WAS THE EXISTING WEBER COUNTY SURVEY MONUMENTATION AS SHOWN AND NOTED HEREON. THE BASIS OF BEARING IS THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 3, TOWNSHIP 6 NORTH, RANGE 1 EAST, OF THE SALT LAKE BASE AND MERIDIAN WHICH BEARS NORTH 89°26'19" WEST WEBER COUNTY, UTAH NORTH, NAD 83 STATE PLANE GRID BEARING. THE DEDICATED PLAT OF THE RESERVE AT CRIMSON RIDGE CLUSTER SUBDIVISION PHASE 1 RECORDED AS ENTRY NUMBER 1800ALEST DESCRIPTOR SECTION OF THE SE BEEN INVESTIGATED BY THIS OFFICE AND ARE APPROVED FOR ON-SITE WASTEWATER DISPOSAL SYSTEMS COMMISSION GUARANTEE IS SUFFICIENT FOR THE TALLATION OF THESE IMPROVEMENT APPLICABLE THERETO AND NOW IN RECORDS, PAGE ____ SIGNED THIS___DAY OF ______, 2020 SIGNED THIS DAY OF ENGINEERING SIGNED THIS DAY OF SIGNED THIS DAY OF SIGNED THIS___DAY OF ___ SIGNED THIS___DAY OF ____ CHAIRMAN, WEBER COUNTY COMMISSION COUNTY RECORDER COUNTY SURVEYOR 2199115 WAS ALSO USED TO ESTABLISH THE BOUNDARY ATTEST:_____NAME/TITLE DIRECTOR WEBER-MORGAN HEALTH DEPT. COUNTY ATTORNEY COUNTY ENGINEER

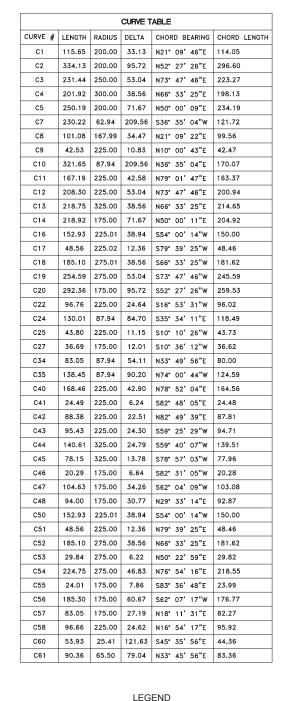


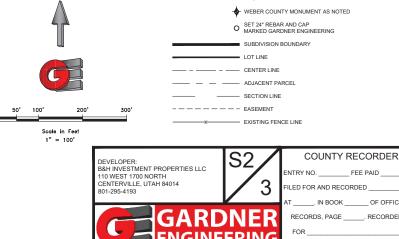
THE RESERVE AT CRIMSON RIDGE PHASE 2B

CLUSTER SUBDIVISION

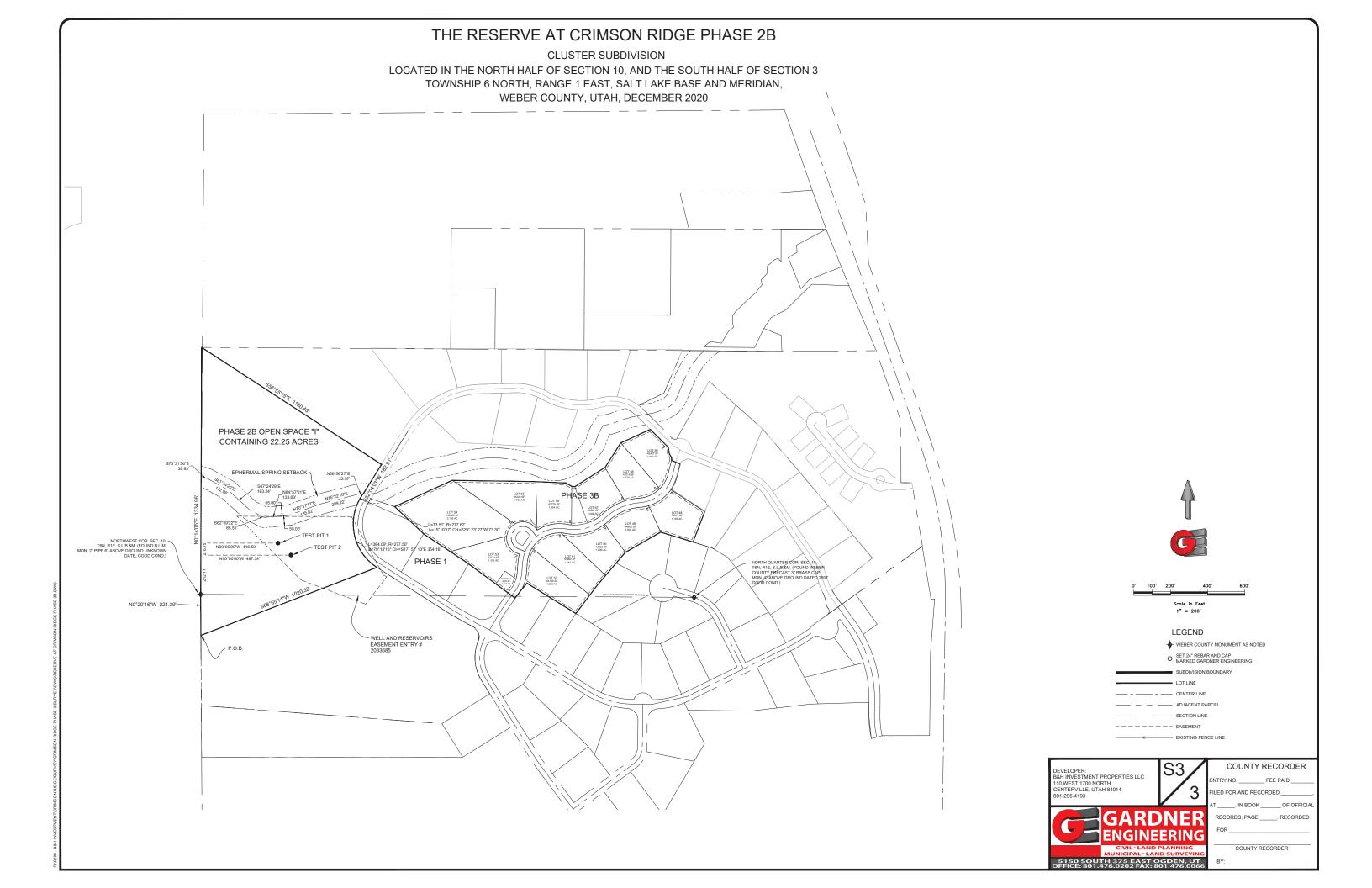
LOCATED IN THE NORTH HALF OF SECTION 10, AND THE SOUTH HALF OF SECTION 3
TOWNSHIP 6 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN,
WEBER COUNTY, UTAH, DECEMBER 2020

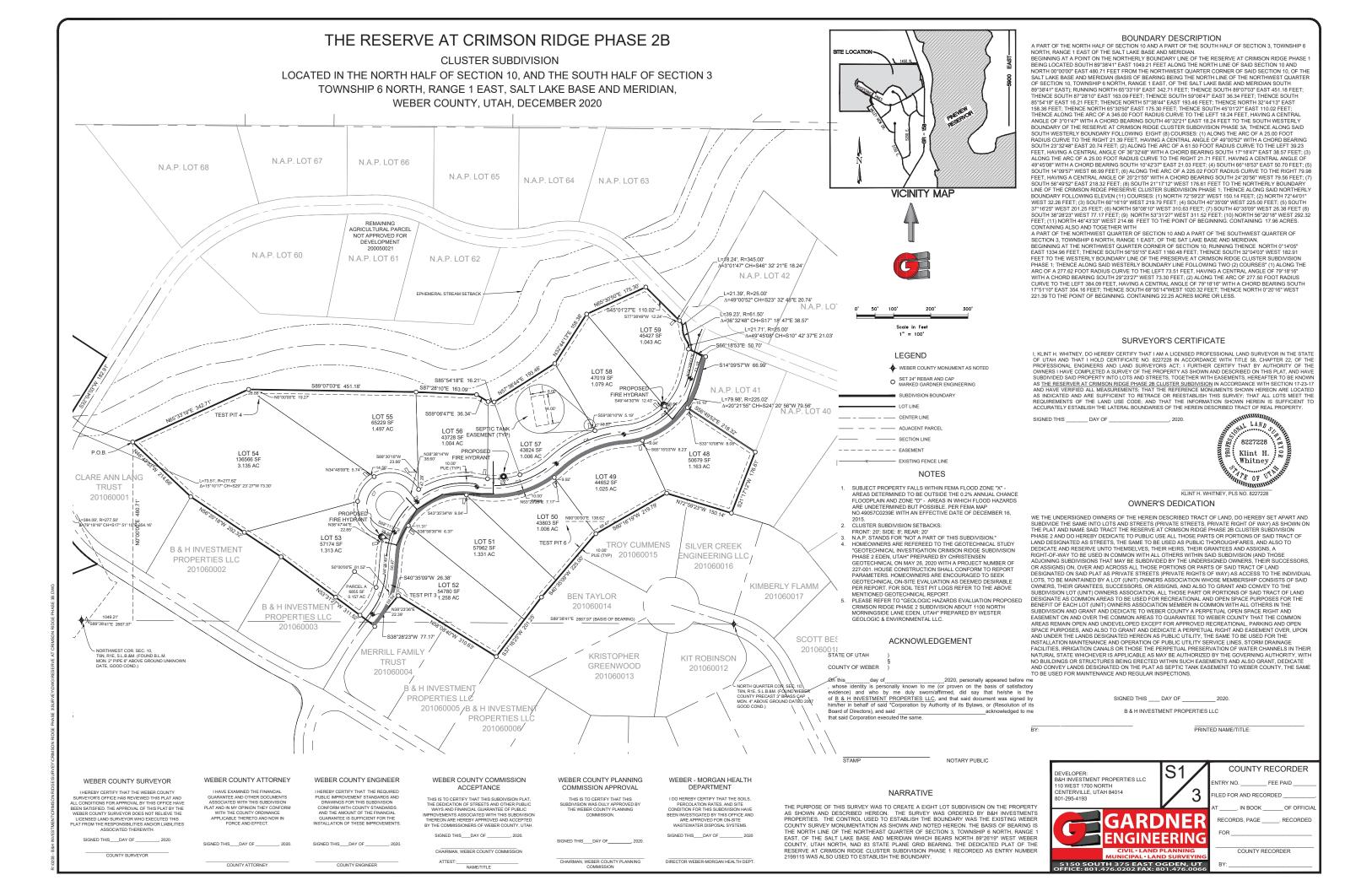


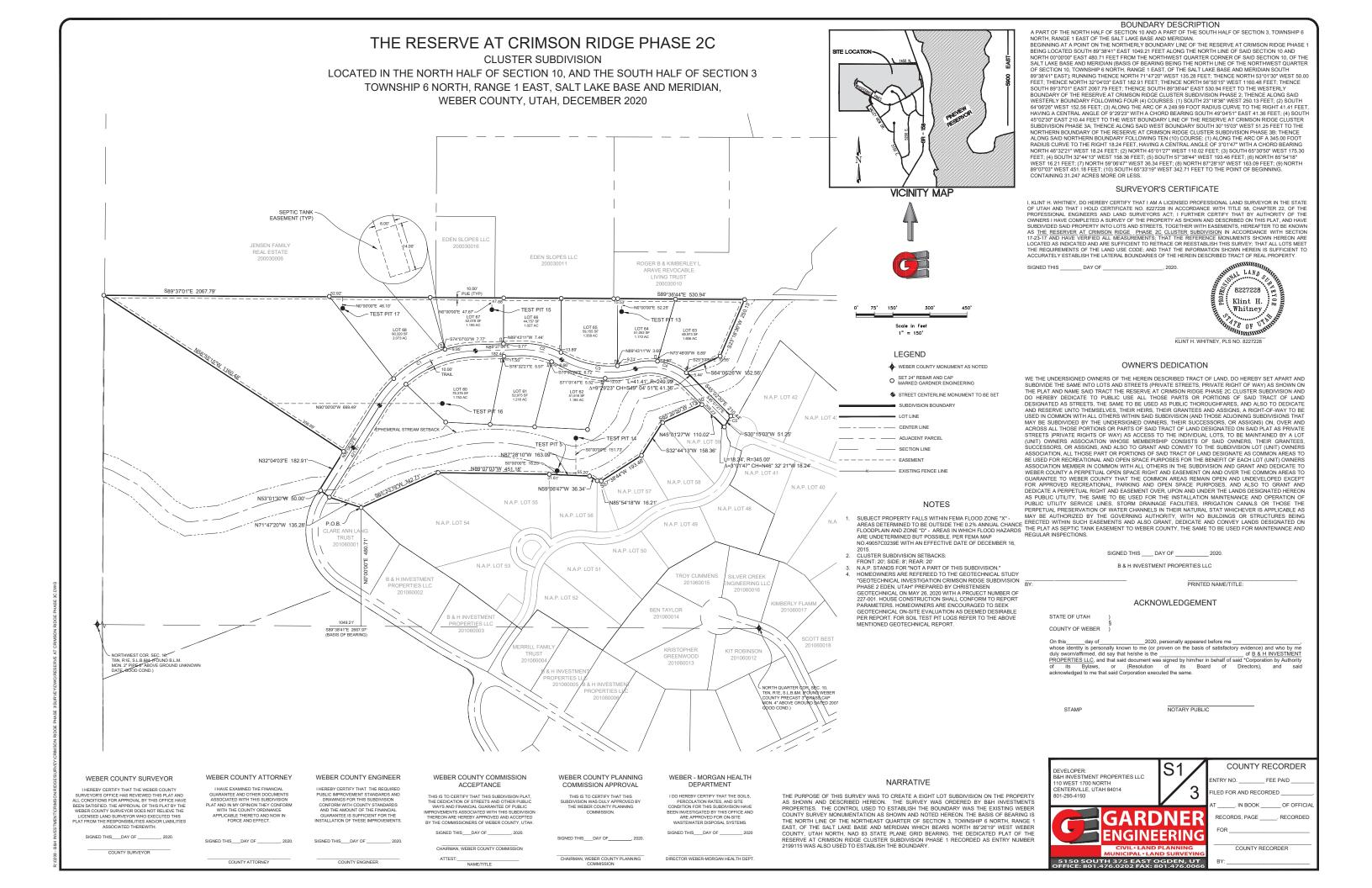




COUNTY RECORDER



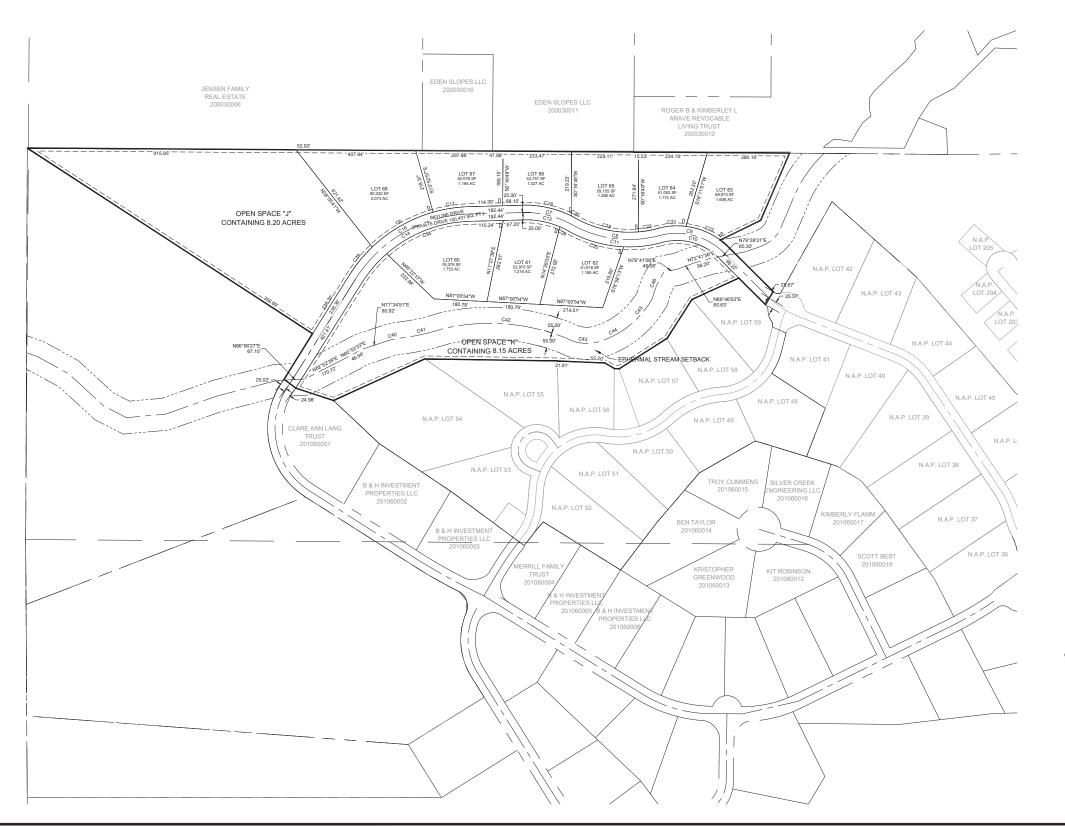


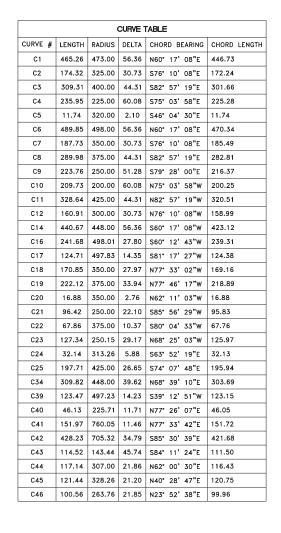


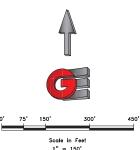
THE RESERVE AT CRIMSON RIDGE PHASE 2C

CLUSTER SUBDIVISION

LOCATED IN THE NORTH HALF OF SECTION 10, AND THE SOUTH HALF OF SECTION 3 TOWNSHIP 6 NORTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, WEBER COUNTY, UTAH, DECEMBER 2020





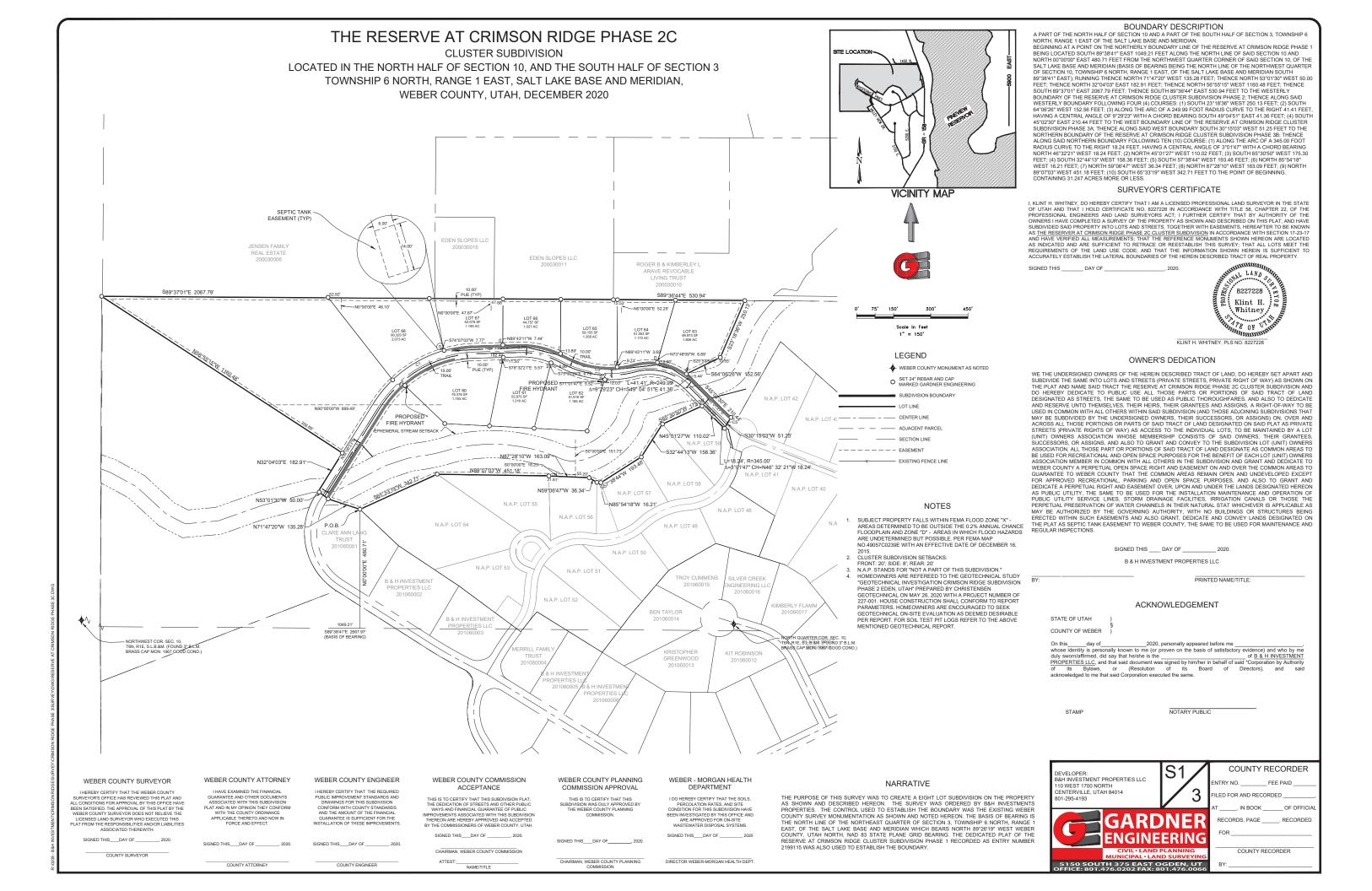


LEGEND ♦ WEBER COUNTY MONUMENT AS NOTED O SET 24" REBAR AND CAP MARKED GARDNER ENGINEERING __ LOT LINE CENTER LINE --- EASEMENT

DEVELOPER: B&H INVESTMENT PROPERTIES LLC 0 WEST 1700 NORTH ENTERVILLE, UTAH 84014

COUNTY RECORDER

COUNTY RECORDER



Appendix I

Lab Number:	2380180618DIS	Location:	Pineview West Sewer Distric		
Sample Number;	2380	Sample Site:	Discharge Valve		
Date Sampled:	6/18/2018	Time Sample	ed:	7:30	
Date Submitted:	6/18/2018	Time Receiv		9:23	
Date Issued:	6/27/2018	Time Analyza		14:49	

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	RL.	DATE ANALYZED	METHOD	ANALYST
BOD, mg/L	11.2	2.0	6/18/2018	5210B	KT
*TSS, mg/L	11.0	5.0	6/18/2018	2540D	KT
Nitrate-N, mg/L	22.12	0.45	6/19/2018	4500NO3D	KT
Nitrite-N, mg/L	0.668	0.015	6/18/2018	4500NO2B	KT
Total Kjeldahl Nitrogen as N, mg/L	5.8	5.0	6/20/2018	4500NorgC	KT

Quality Control

Passed

Approved By:

Dawn/Nielsen

Laboratory Director

Approved By:

Kevin Hall

Laboratory QA Manager

Date:

Date: 6-28-18

•NOTE: Samples received on ice and stored at 3° Celsius until analysis.

*Total Suspended Solids.

PINEVIEW WEST SEWER DISTRICT

CHAIN OF CUTODY

SAMPLE LOCATIONS/ SAMPLE #:		COMPANY: Samp		Sample:	DATE	TIME		
Discharge Valve/ 23gc		Pineveiw \	West Sewer D	istrict	6/18/2018	7:30		
SAMPLER'S PRINTED NAME:		SAMPLER'S	SIGNATURE	7 .				
Chad Meyerhoffer			/ Ca ////					
PHONE:		FAX:		EMAIL:				
801-399-8004		801-399-88	362	cmeyerho@co	o.weber.ut.u	S		
ANALYSIS REQUIRED	X	Grab Samp	le			Composite Sample		
	X X X	•	ended Solid	emand (BOD) s (TSS)				

RECEIVED ON I	105.



NO

Relinquished by:	Date 6/15/18	Time 9118	Received By:	Date 6-18-18	Time 9:23
Relinquished by:	Date	Time	Received By:	Date	Time
Relinquished by:	Date	Time	Received By:	Date	Time

Bill to:

Pineveiw West Sewer District c/o Weber County 2380 Washington Blvd. Ste. 240 Ogden Utah 84401

PINEVIEW WEST SEWER DISTRICT

CHAIN OF CUTODY

SAMPLE LOCATIONS/	SAMPLE	#:	COMPANY:	:	Sample:	DATE	TIME
Discharge Va	lve/ a	2380	Pineveiw '	West Sewer [District	6/18/2018	7:40
SAMPLER'S PRINTED	NAME:		SAMPLER'S	SIGNATURE	A STATE OF THE PARTY OF THE PAR		
Chad Meyerhoffer					Ma	Manufacture *	
PHONE:		FAX:	Annual and Artificial	EMAIL:			
801-399-8004	No. of the Control of	801-399-88	362	cmeyerho@c	<u>o.weber.ut.u</u> :		
	Х	_Grab Samp	le			Composite Sample	
ANALYSIS REQUIRED							
	Х	Biochemica	al Oxygen D	emand (BOD)			
	X	_	ended Solid:	s (TSS)			
_	Х	Total Nitro	gen (TN)				

RECEIVED ON ICE:

YES

NO

Relinquished by:	Date [6] 18-[18	Time 9:18	Received By:	Date 6-18-18	Time 9: 23
Relinquished by:	Date	Time	Received By:	Date	Time
Relinquished by:	Date	Time	Received By:	Date	Time

Bill to:

Pineveiw West Sewer District c/o Weber County 2380 Washington Blvd. Ste. 240

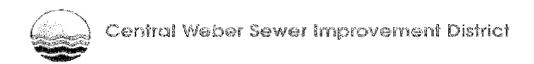
Ogden Utah 84401

Central Weber Sewer Improvement District

2618 W. Pioneer Rd. Ogden, UT 84404 (801) 731-3011

Sample Receipt Checklist

Sample ID #:	2380	Sample Receiving Temperature:	<i>15</i> °c	
Laboratory ID #: 2380 1	806/8 BISB-A-B	Sample Storage Temperature:	3 °c	
Intials Sample Custodian:	KT	Number of Sample Containers:	_2_	
Date Sample Received:	6-18-18			
	Yes	No Not Applicable	Comments	
Chain of Custody Submitted				
Custody Seal(s) Present				
Custody Seal(s) Intact				-
Sample Label(s) Attached				-
Sample Container(s) Acceptable				-
Laboratory Identification Number Marked On Container(s)				u
Volume of Sample(s) Acceptable				-
Sample(s) Stored				-
Sample(s) Preserved.				_pŀ
Sample(s) Tested for BOD5			7,0	pΗ
Maximum Holding Time(s) Exceeded				
Sample(s) Received on Ice				-
Comments:				
				1



Lab Number:

2380190701DOS

Location:

Pineview West Sewer District

Sample Number:

2380

Sample Site: Discharge Valve

Date Sampled: Date Submitted: 7/1/2019 7/1/2019 Time Sampled:

7:30

Date Issued:

7/1/2019 7/10/2019 Time Received: Time Analyzed BOD: 8:14 14:11

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	RL	DATE ANALYZED	METHOD	ANALYST
BOD, mg/L	1 1 .1	2.0	7/1/2019	5210B	KT
TSS, mg/L	12.0	5.0	7/1/2019	2540D	ΚT
Nitrate-N, mg/L	14,15	0.45	7/1/2019	4500NO3D	K⊤
Nitrite-N, mg/L	0.376	0.015	7/1/2019	4500NO2B	ΚT
Total Kieldahl Nitrogen as N, mg/L	<5.0	5,0	7/6/2019	4500NorgC	SB

Quality Control

Passed

Approved By:

Dawn Nielsen Laboratory Director

____, ___, ____,

Kevin Hall

Laboratory QA Manager

)ate: _____

Date: 7-10-19

NOTE: Samples received on ice and stored at 3 °C until analysis.

PINEVIEW WEST SEWER DISTRICT

CHAIN OF CUTODY

SAMPLE LOCATIONS	S/ SAMPLE	#:	COMPANY:	,	Sample:	DATE	TIME
Discharge V	alve/	2380	Pineveiw \	West Sewer Di	strict	7/1/2019	7.30
SAMPLER'S PRINTED	NAME:		SAMPLER'S	SIGNATURE	111		
Chad Meyer	hoffer			2e///			
PHONE:		FAX:		EMAÏL:			
801-399-8004		801-399-88	362	cmeyerho@co.	.weber.ut.u	<u>s</u>	
- ANALYSIS REQUIRED	X	Grab Samp	ie			Composite Sample	
ANALISIS NEQUINEL	<u>,</u>						
_	X	Biochemica	al Oxygen D	emand (BOD)			
	Χ	Total Suspe	ended Solids	s (TSS)			
	X	Total Nitro	gen (TN)				

DECE	IVED	ON	100.
RECE	IVED	UN	ICE.

YES

NO

Relinquished by: Coffee Metoeger tow	Date 7/1/19	Time 8:13mm	Received By:	Date 7-1-19	Time 8:14
Relinquished by:	Date	Time	Received By:	Date	Time
Relinquished by:	Date	Time	Received By:	Date	Time

Bill to:

Pineveiw West Sewer District c/o Weber County 2380 Washington Blvd. Ste. 240 Ogden Utah 84401

Central Weber Sewer Improvement District 2618 W. Pioneer Rd. Ogden, UT 84404 (801) 731-3011

Sample Receipt Checklist

Sample ID #:	2380 Wynn	Sample Receiving Temperature:	°c	
	0 190701 DOSB	Sample Storage Temperature:	3⁰ℂ	
Intials Sample Custodian:	KT	Number of Sample Containers:		
Date Sample Received:	7-1-19			
	Yes	No Not Applicable	Comments	
Chain of Custody Submitted			-	-
Custody Seal(s) Present	" vra			
Custody Seal(s) Intact	m fw			-
Sample Label(s) Attached				-
Sample Container(s) Acceptable				-
Laboratory Identification Number Marked On Container(s)				- '
Volume of Sample(s) Acceptable				-
Sample(s) Stored				-
Sample(s) Preserved				. p l
Sample(s) Tested for BOD5		A	7.0	ġΗ
Maximum Holding Time(s) Exceeded				•
Sample(s) Received on Ice				
Comments:				
		-		
	¥.			

Lab Number:

2380200520DOS

Pineview West Sewer District

Sample Number: 2380

Date Sampled:

Time Sampled:

8:35

Date Submitted: Date Issued:

5/20/2020 5/20/2020 5/28/2020

Time Received: Time Analyzed BOD:

Sample Site: Dosing Tank

10:11 14:58

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	RL	DATE ANALYZED	METHOD	ANALYST
BOD, mg/L	12.8	2.0	5/20/2020	5210B	DM
TSS, mg/L	9,0	5,0	5/20/2020	2540D	DM
Nitrate-N, mg/L	13.03	0.45	5/20/2020	4500NO3D	SB
Nitrite-N, mg/L	0.474	0.015	5/20/2020	4500NO2B	DM
Total Kjeldahl Nitrogen as N, mg/L	8.7	5.0	5/23/2020	4500NorgC	SB

Quality Control Passed

Album Hel Album Dawn Nigrisen Laboratory Director

Kevin Hall

Laboratory QA Manager

NOTE: Samples received on ice and stored at 1 - 6 °C until analysis.

PINEVIEW WEST SEWER DISTRICT

CHAIN OF CUTODY

SAMPLE LOCATIONS/ SAMPL	.E #:	COMPANY		Sample:	DATE	TIME	
Dosing Tank/	2380	Pineveiw West Sewer		istrict	5/20/2020	8:35	
SAMPLER'S PRINTED NAME:		SAMPLER'S	SAMPLER'S SIGNATURE				
Chad Meyerhoffe	r		CUCA	Ma	1/2		
PHONE:	FAX:		EMAIL:	,			
801-399-8004	801-399-88	362	cmeyerho@co	o.weber.ut.u	<u>s</u>		
X	Grab Samp	le			Composite Sample		
ANALYSIS REQUIRED							
Х	Biochemic:	al Ovugen D	emand (BOD)				
- X		ended Solid	•				
X	— Total Nitro		- ()				

RECEIVED ON ICE:	YES	NO					
Relinguished by:	Date	Time	Received By:	ett-	Date	Time	
(Q/(n	5/20/2000	10:11	WAL roll	alalan.	5/20/2020	10:11	
Relinquished by:	Date	Time	Received By:	review 2	Date Date	Time	
			·				
Relinquished by:	Date	Time	Received By:	<u> </u>	Date	Time	

Bill to:

Pineveiw West Sewer District c/o Weber County 2380 Washington Blvd. Ste. 240 Ogden Utah 84401

Central Weber Sewer Improvement District

2618 W. Pioneer Rd. Ogden, UT 84404 (801) 731-3011

Sample Receipt Checklist

Sample ID #:	2380	Sample Receiving Temperature:	
Laboratory ID #: 23802	200520D03B	Sample Storage Temperature:	<u>3,0</u> °c
Intials Sample Custodian:	DN	Number of Sample Containers:	
Date Sample Received:	5-20-2020		
	Yes	No Not Applicable	Comments
Chain of Custody Submitted			
Custody Seal(s) Present			
Custody Seal(s) Intact			
Sample Label(s) Attached			
Sample Container(s) Acceptable			A.co.
Laboratory Identification Number Marked On Container(s)			
Volume of Sample(s) Acceptable			
Sample(s) Stored			
Sample(s) Preserved			pl-
Sample(s) Tested for BOD5			p
Maximum Holding Time(s) Exceeded			
Sample(s) Received on Ice			
Comments:			
	. /		