ALPINE CITY PLANNING COMMISSION MEETING

NOTICE is hereby given that the **PLANNING COMMISSION** of Alpine City, UT will hold a **Regular Meeting at Alpine City Hall,** 20 North Main, Alpine, Utah on **Tuesday, January 7, 2020 at 7:00 pm** as follows:

I. GENERAL BUSINESS

A. Welcome and Roll Call: Bryce Higbee
B. Prayer/Opening Comments: Jessica Smuin
C. Pledge of Allegiance: By Invitation

II. PUBLIC COMMENT

Any person wishing to comment on any item not on the agenda may address the Planning Commission at this point by stepping to the microphone and giving his or her name and address for the record.

III. ACTION ITEMS

A. Public Hearing – Amendment to Development Code – Road Grade Changes
Planning Commission will hold a public hearing, review proposed updates to Development Code and make a recommendation to City Council

B. Major Subdivision – Preliminary Design Plan – Brookside Meadows
Planning Commission will review plans and make a recommendation to City Council.

C. Gateway/Historic Requirements – J & L Automotive Addition
Planning Commission will review the updated plans and make a recommendation to City Council.

D. Amendment to Development Code – Short Term Rentals
Planning Commission will review proposed updates to Development Code and make a recommendation to City Council.

IV. COMMUNICATIONS

V. APPROVAL OF PLANNING COMMISSION MINUTES: December 3, 2019

ADJOURN

Vice-Chairman Bryce Higbee
January 7, 2020

THE PUBLIC IS INVITED TO ATTEND ALL PLANNING COMMISSION MEETINGS. If you need a special accommodation to participate in the meeting, please call the City Recorder's Office at 801-756-6347 ext. 5.

CERTIFICATION OF POSTING. The undersigned duly appointed recorder does hereby certify that the above agenda notice was posted at Alpine City Hall, 20 North Main, Alpine, UT. It was also sent by e-mail to The Daily Herald located in Provo, UT a local newspaper circulated in Alpine, UT. This agenda is also available on the City's web site at www.alpinecity.org and on the Utah Public Meeting Notices website at www.utah.gov/pmn/index.html.

PUBLIC MEETING AND PUBLIC HEARING ETIQUETTE

Please remember all public meetings and public hearings are now recorded.

- All comments **must** be recognized by the Chairperson and addressed through the microphone.
- When speaking to the Planning Commission, please stand, speak slowly and clearly into the microphone, and state your name and address for the recorded record.
- Be respectful to others and refrain from disruptions during the meeting. Please refrain from conversation with others in the audience as the microphones are very sensitive and can pick up whispers in the back of the room.
- Keep comments constructive and not disruptive.
- Avoid verbal approval or dissatisfaction of the ongoing discussion (i.e., booing or applauding).
- Exhibits (photos, petitions, etc.) given to the City become the property of the City.
- Please silence all cellular phones, beepers, pagers or other noise making devices.
- Be considerate of others who wish to speak by limiting your comments to a reasonable length, and avoiding repetition of what has already been said. Individuals may be limited to two minutes and group representatives may be limited to five minutes.
- Refrain from congregating near the doors or in the lobby area outside the council room to talk as it can be very noisy and disruptive. If you must carry on conversation in this area, please be as quiet as possible. (The doors must remain open during a public meeting/hearing.)

Public Hearing vs. Public Meeting

If the meeting is a **public hearing**, the public may participate during that time and may present opinions and evidence for the issue for which the hearing is being held. In a public hearing there may be some restrictions on participation such as time limits.

Anyone can observe a **public meeting**, but there is no right to speak or be heard there - the public participates in presenting opinions and evidence at the pleasure of the body conducting the meeting.

ALPINE PLANNING COMMISSION AGENDA

SUBJECT: Public Hearing – Amendment to Development Code – Road Grade Changes

FOR CONSIDERATION ON: 7 January 2020

PETITIONER: Staff

ACTION REQUESTED BY PETITIONER: Recommend approval of proposed changes.

BACKGROUND INFORMATION:

Staff has noticed differences between State Code and Fire Code vs the Development Code. It is proposed that the Development Code be amended to match State Code and Fire Code. See attached staff report for further details.

STAFF RECOMMENDATION:
Recommend approval of the proposed ordinance.

SAMPLE MOTION TO APPROVE:
I motion to recommend that Ordinance 2020-1 be approved as proposed.

SAMPLE MOTION TO APPROVE WITH CONDITIONS:
I motion to recommend that Ordinance 2020-1 be approved with the following conditions/changes:

- ***Insert Finding***

SAMPLE MOTION TO DENY:
I motion to recommend that Ordinance 2020-1 be denied based on the following:

- ***Insert Finding***

ALPINE CITY
STAFF REPORT
December 17, 2019

To: Alpine City Planning Commission & City Council

From: Staff

Prepared By: Jed Muhlestein, City Engineer
Engineering & Public Works Department

Re: **Development Code 4.07.060 & 4.07.090 – Road Design**

Staff has noticed differences between State Code and Fire Code vs the Development Code. The following changes are proposed to resolve the differences:

1. Adjust maximum road grade on minor roads to 10% to match Fire Code
   (DC 4.07.090.2)
2. Add a section requiring the Fire Marshal's approval when grades are proposed above 10%. The fire code does allow grades above 10, but not over 12 percent, so long as the local Fire Marshal approves the design.
   (DC 4.07.090.2)
3. Reduce the maximum distance a road can be installed at maximum grade from 600 feet to 500 feet to align with State Code.
   (DC 4.07.090.5)

Also, for clarification purposes, the following two items are addressed:

1. Roads are designed with minimum and maximum grades in mind; current ordinance does not specify a minimum grade. Minimum road grade of 1% was added.
   (DC 4.07.090.1-3)
2. The cul-de-sac section of ordinance is often misunderstood; this section was re-written for clarity.
   (DC 4.07.090.3)
3. Section 4.07.090.6 was deleted as this section is covered in 4.07.060. 4.07.060 was also looked at and updated to reflect current AASHTO (American Association of State Highway Officials) roadway design policies.

MODEL MOTION

SAMPLE MOTION TO APPROVE

I motion to recommend approval of the proposed ordinance 2020-1 as presented.

ALPINE CITY
ORDINANCE 2020-1

AN ORDINANCE ADOPTING AMENDMENTS TO ARTICLE 4.07.060 AND 4.07.090 OF THE ALPINE CITY DEVELOPMENT CODE PERTAINING TO CURVATURE AND ALIGNMENT AND ROAD GRADES..

WHEREAS, The Alpine City Council has deemed it in the best interest of Alpine City to amend the design standards, specifically curvature and alignment and road grades; and

WHEREAS, the Alpine City Planning Commission has reviewed the proposed Amendments to the Development Code, held a public hearing, and has forwarded a recommendation to the City Council; and

WHEREAS, the Alpine City Council has reviewed the proposed Amendments to the Development Code:

NOW THEREFORE, be it ordained by the Alpine City Council, in the State of Utah, as follows: The amendments to Article 4.07.060 and 4.07.090 contained in the attached document will supersede Article 4.07.060 and 4.07.090 as previously adopted. This ordinance shall take effect upon posting.

SECTION 1: **AMENDMENT** "4.07.060 Curvature And Alignment" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

4.07.060 Curvature And Alignment

1. **Horizontal Curves**. To ensure adequate sight distances, street roadway line connections shall be made by horizontal curves. The minimum centerline radii for minor streets shall be one hundred fifty feet (150') and of all other streets shall be three hundred feet (300'). On collector and arterial streets, a minimum tangent of one hundred feet (100') shall be required between a curve and street intersection; a minimum tangent of one hundred feet (100') shall be required between reverse curves.
2. **Vertical Curves**. Vertical curves shall be used at all changes of grades exceeding one per cent (1%) and shall be designed to provide minimum sight distances of two hundred feet (200') for minor streets and three hundred feet (300') for all other streets, except that vertical curves for major streets shall be as determined by the current specifications of the Utah State Department of Transportation.

3. Where minimum vertical curve lengths cannot be met, the requirements in the AASHTO (American Association of State Highway Officials) publication, AA Policy on Geometric Design of Highways and Streets shall be used. The design of streets shall be based on a 25 mph design speed.

(Ord. 98-19 amending Ord. 78-03)
(Amended by Ord. 2014-12, 7/08/14; Ord. 2016-03, 02/23/16)

AFTER AMENDMENT

4.07.060 Curvature And Alignment

1. **Horizontal Curves**. To ensure adequate sight distances, street roadway line connections shall be made by horizontal curves by as large a radius as practical. The minimum centerline radii for minor streets shall be one hundred fifty feet (150') and of all other streets shall be three hundred feet (300'). On collector and arterial streets, a minimum tangent of one hundred feet (100') shall be required between a curve and street intersection; a minimum tangent of one hundred feet (100') shall be required between reverse curves.
2. **Vertical Curves**. Vertical curves shall be used at all changes of grades exceeding one per cent (1%) and shall be designed to provide the maximum sight distances practical. For minimum sight distance~~s~~ requirements, refer to Exhibit 3-1 on page 112~~of two hundred feet (200') for minor streets and three hundred feet (300') for all other streets, except that vertical curves for major streets shall be as determined by the current specifications of the Utah State Department of Transportation.~~
~~3.~~ ~~Where minimum vertical curve lengths cannot be met, the requirements in~~of the 2001 AASHTO (American Association of State Highway Officials) publication, A~~A~~ Policy on Geometric Design of Highways and Streets.~~shall be used.~~ The design ~~of streets~~ shall be based on the anticipated posted speed limit of that street.~~a 25 mph design speed.~~

(Ord. 98-19 amending Ord. 78-03)
(Amended by Ord. 2014-12, 7/08/14; Ord. 2016-03, 02/23/16)

SECTION 2: **AMENDMENT** "4.07.090 Road Grades" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

4.07.090 Road Grades

All road and street grades (including common-use private roads) shall be designed as follows:

1. **Arterial and Collector roads or streets**: Limited to a maximum grade of ten per cent (10%). Sustained grades shall be limited to seven per cent (7%).
2. **Minor roads or streets and common-use private roads**: limited to a maximum grade of twelve percent (12%). Sustained grades shall be limited to nine per cent (9%).
3. **Cul-de-sacs** with a negative grade progressing toward the turnaround shall be limited to a maximum grade of four per cent (4%). The cul-de-sac shall terminate with a grade not to exceed two per cent (2%) for the last one hundred feet (100') of traveled surface. The maximum grade of the bubble in a cul-de-sac is not to exceed 3%.
4. **Street intersections**: Have a vertical alignment such that the grade shall not exceed three per cent (3%) for a minimum distance of fifty feet (50') each way from the centerline of the intersection.
5. **Maximum grades**: Approved only when accompanied by changes to a lesser grade, and where length of that portion of that road at maximum grade is less than six hundred feet (600').
6. **All changes in vertical alignment**: Made by vertical curves with minimum length of two hundred feet (200') for minor streets and three hundred feet (300') for major streets. (See DCA 4.07.060 Part 3).
7. **Roads in mountainous terrain**: Shall be designed at less than maximum allowable slope in order that they can be safely negotiated and that snow can be removed during winter.
8. **All cuts and fills** must be treated with top soil and vegetated.

(Ord. 98-19 amending Ord. 78-03)
(Amended by Ord. 2014-12, 7/08/14; Ord. 2016-03, 02/23/16)

AFTER AMENDMENT

4.07.090 Road Grades

All road and street grades (including common-use private roads) shall be designed as follows:

1. **Arterial and Collector roads or streets**: Limited to a maximum grade of ten per cent (10%). Sustained grades shall be limited to seven per cent (7%). Minimum grades shall be one percent (1%).
2. **Minor roads or streets and common-use private roads**: limited to a maximum grade of twelve percent (12%). Sustained grades shall be limited to ten percent~~nine per cent~~ (10~~9~~%). Grades above ten percent (10%) must be approved by the Fire Marshall. Minimum grades shall be one percent (1%).

3. **Cul-de-sacs** with a negative grade progressing toward the turnaround shall be limited to a maximum grade of four per cent (4%). The cul-de-sac shall terminate with a grade not to exceed two per cent (2%) for the last one hundred feet (100') of traveled surface. The cross-slope grades of the bubble shall not exceed two percent (2%) or be less than one percent (1%). Cul-de-sacs with a prositive grade progressing toward the turnaround shall be limited to maximum grades as specified in 4.07.090.2 and 4.07.090.5. ~~The maximum grade of the bubble in a cul-de-sac is~~ The cul-de-sac shall terminate with a grade not to exceed three percent(3%) for the last one hundred feet (100') of traveled surface. The cross-slope grades of the bubble shall not exceed two percent (2%) or be less than one percent (1%).
4. **Street intersections**: Shall h~~H~~ave a vertical alignment such that the grade shall not exceed three per cent (3%) for a minimum distance of fifty feet (50') each way from the centerline of the intersection.
5. **Maximum grades**: Approved only when accompanied by sections of sustained grade or less (as specified in 4.07.090.1-2) for minimum length of one hundred feet (100') between vertical curves ~~changes to a lesser grade~~, and where length of that portion of ~~that~~ road at maximum grade is less than ~~six~~five hundred feet (~~6~~500') between vertical curves.
6. ~~**All changes in vertical alignment**: Made by vertical curves with minimum length of two hundred feet (200') for minor streets and three hundred feet (300') for major streets. (See DCA 4.07.060 Part 3).~~**Roads in mountainous terrain**: Shall be designed at less than maximum allowable slope in order that they can be safely negotiated and that snow can be removed during winter.
7. **All cuts and fills** must be treated with top soil and vegetated per Alpine City Standard Specifications and Details.

   ~~**Roads in mountainous terrain**: Shall be designed at less than maximum allowable slope in order that they can be safely negotiated and that snow can be removed during winter.~~**All cuts and fills** ~~must be treated with top soil and vegetated.~~

(Ord. 98-19 amending Ord. 78-03)
(Amended by Ord. 2014-12, 7/08/14; Ord. 2016-03, 02/23/16)

PASSED AND ADOPTED BY THE ALPINE CITY COUNCIL
_____.

	AYE	**NAY**	**ABSENT**	**ABSTAIN**
Lon Lott	_____	_____	_____	_____
Judi Pickell	_____	_____	_____	_____
Carla Merrill	_____	_____	_____	_____
Gregory Gordon	_____	_____	_____	_____
Jason Thelin	_____	_____	_____	_____

Presiding Officer

Attest

_____
Troy Stout, Mayor, Alpine City

_____
Charmayne G. Warnock, City Recorder Alpine City

ALPINE CITY
ORDINANCE 2020-1

AN ORDINANCE ADOPTING AMENDMENTS TO ARTICLE 4.07.060 AND 4.07.090 OF THE ALPINE CITY DEVELOPMENT CODE PERTAINING TO CURVATURE AND ALIGNMENT AND ROAD GRADES..

WHEREAS, The Alpine City Council has deemed it in the best interest of Alpine City to amend the design standards, specifically curvature and alignment and road grades; and

WHEREAS, the Alpine City Planning Commission has reviewed the proposed Amendments to the Development Code, held a public hearing, and has forwarded a recommendation to the City Council; and

WHEREAS, the Alpine City Council has reviewed the proposed Amendments to the Development Code:

NOW THEREFORE, be it ordained by the Alpine City Council, in the State of Utah, as follows: The amendments to Article 4.07.060 and 4.07.090 contained in the attached document will supersede Article 4.07.060 and 4.07.090 as previously adopted. This ordinance shall take effect upon posting.

SECTION 1: **AMENDMENT** "4.07.060 Curvature And Alignment" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

4.07.060 Curvature And Alignment

1. **Horizontal Curves**. To ensure adequate sight distances, street roadway line connections shall be made by horizontal curves. by as large a radius as practical The minimum centerline radii for minor streets shall be one hundred fifty feet (150') and of all other streets shall be three hundred feet (300'). On collector and arterial streets, a minimum tangent of one hundred feet (100') shall be required between a curve and street intersection; a minimum tangent of one hundred feet (100') shall be required between reverse curves.
2. **Vertical Curves**. Vertical curves shall be used at all changes of grades exceeding one per cent (1%) and shall be designed to provide the maximum sight distances practical. For minimum sight distance requirements, refer to Exhibit 3-1 on page 112 of the 2001 AASHTO (American Association of State Highway Officials) publication, A Policy on Geometric Design of Highways and Streets. The design shall be based on the anticipated posted speed limit of that street.

(Ord. 98-19 amending Ord. 78-03)
(Amended by Ord. 2014-12, 7/08/14; Ord. 2016-03, 02/23/16)

SECTION 2: **AMENDMENT** "4.07.090 Road Grades" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

4.07.090 Road Grades

All road and street grades (including common-use private roads) shall be designed as follows:

1. **Arterial and Collector roads or streets**: Limited to a maximum grade of ten per cent (10%). Sustained grades shall be limited to seven per cent (7%). Minimum grades shall be one percent (1%).
2. **Minor roads or streets and common-use private roads**: limited to a maximum grade of twelve percent (12%). Sustained grades shall be limited to ten percent (10%). Grades above ten percent (10%) must be approved by the Fire Marshall. Minimum grades shall be one percent (1%).
3. **Cul-de-sacs** with a negative grade progressing toward the turnaround shall be limited to a maximum grade of four per cent (4%). The cul-de-sac shall terminate with a grade not to exceed two per cent (2%) for the last one hundred feet (100') of traveled surface. The cross-slope grades of the bubble shall not exceed two percent (2%) or be less than one percent (1%). Cul-de-sacs with a prositive grade progressing toward the turnaround shall be limited to maximum grades as specified in 4.07.090.2 and 4.07.090.5. The cul-de-sac shall terminate with a grade not to exceed three percent (3%) for the last one hundred feet (100') of traveled surface. The cross-slope grades of the bubble shall not exceed two percent (2%) or be less than one percent (1%).
4. **Street intersections**: Shall have a vertical alignment such that the grade shall not exceed three per cent (3%) for a minimum distance of fifty feet (50') each way from the centerline of the intersection.
5. **Maximum grades**: Approved only when accompanied by sections of sustained grade or less (as specified in 4.07.090.1-2) for minimum length of one hundred feet (100') between vertical curves, and where length of that portion of road at maximum grade is less than five hundred feet (500') between vertical curves.

Roads

6. **in mountainous terrain: Shall be designed at less than maximum allowable slope in order that they can be safely negotiated and that snow can be removed during winter.**
7. **All cuts and fillsmust**

be treated with top soil and vegetated per Alpine City Standard Specifications and Details.

(Ord. 98-19 amending Ord. 78-03)
(Amended by Ord. 2014-12, 7/08/14; Ord. 2016-03, 02/23/16)

PASSED AND ADOPTED BY THE ALPINE CITY COUNCIL
_____.

	AYE	**NAY**	**ABSENT**	**ABSTAIN**
Lon Lott	_____	_____	_____	_____
Judi Pickell	_____	_____	_____	_____
Carla Merrill	_____	_____	_____	_____
Gregory Gordon	_____	_____	_____	_____
Jason Thelin	_____	_____	_____	_____

Presiding Officer

Attest

_____
Troy Stout, Mayor, Alpine City

_____
Charmayne G. Warnock, City Recorder Alpine City

ALPINE PLANNING COMMISSION AGENDA

SUBJECT: Major Subdivision – Preliminary Design Plan – Alpine Ridge Estates

FOR CONSIDERATION ON: 7 January 2020

PETITIONER: David Gifford

ACTION REQUESTED BY PETITIONER: Approve the Preliminary Plan.

BACKGROUND INFORMATION:
Brookside Meadows consists of 15 lots on 13.306 acres. The development is located at approximately 430 North 400 West, and in the CR 20,000 zone. The preliminary plan shows a connection to the Whitby Woodlands Subdivision on the east side of the property.

The City Council has reviewed and approved the concept plan and Planned Residential Development (PRD) status of the subdivision. The property owner has since changed the plans and is now incorporating additional land on the east side of the property, going from 9 lots to 15.

STAFF RECOMMENDATION:
Review and approve the proposed plans.

SAMPLE MOTION TO APPROVE (assumes the Planning Commission grants an exception to the 50-foot clear zone grading rule)
I motion to approve the Brookside Meadows preliminary plan and changes to the concept plan with the following conditions:

- The Developer is granted an exception to the 50-foot clear zone grading requirement for the westerly cul-de-sac;
- The Developer address the sight triangle issue near lot 7;
- The Developer add landscaping plans for the retaining walls;
- The Developer add a fence on the north side of the easterly detention basin;
- The Developer address the redlines on the plans;
- The Developer submit a complete retaining wall design prior to construction;
- The Developer change the name of Brookside Circle.

SAMPLE MOTION TO APPROVE (assumes no exception granted)
I motion to approve the Brookside Meadows preliminary plan and changes to the concept plan with the following conditions:

- The Developer address the sight triangle issue near lot 7;
- The Developer add landscaping plans for the retaining walls;
- The Developer add a fence on the north side of the easterly detention basin;
- The Developer address the redlines on the plans;
- The Developer change the name of Brookside Circle.

SAMPLE MOTION TO TABLE
I motion to table the Brookside Meadows preliminary plan and changes to the concept plan based on the following:

- **INSERT FINDING**

ALPINE CITY
STAFF REPORT
January 3, 2020

To: Alpine City Planning Commission & City Council

From: Staff

Prepared By: Austin Roy, City Planner
Planning & Zoning Department

Jed Muhlestein, City Engineer
Engineering & Public Works Department

Re: **Brookside Meadows – PRELIMINARY**

Applicant:	Greg Wilding of Wilding Engineering, representing David Gifford
Project Location:	Approximately 430 North 400 West
Zoning:	CR-20,000 Zone
Acreage:	13.306 Acres
Lot Number & Size:	15 lots ranging from 0.31 acres to 0.63 acres
Request:	Recommend approval of the revised Concept Plan and Approve the Preliminary Plan

SUMMARY

Brookside Meadows consists of 15 lots on 13.306 acres. The development is located at approximately 430 North 400 West, and in the CR 20,000 zone. The preliminary plan shows a connection to the Whitby Woodlands Subdivision on the east side of the property.

BACKGROUND

The City Council has reviewed and approved the concept plan and Planned Residential Development (PRD) status of the subdivision. The property owner has since changed the plans and is now incorporating additional land on the east side of the property, going from 9 lots to 15.

ANALYSIS

PRD Status and Requirements

The City Council approved PRD at Concept. The open space is to be dedicated as "private" as a condition of approval.

Lot Width and Area

Lot width requirements for the CR-20,000 zone are 110 feet for a standard lot, and 80 feet for a cul-de-sac lot located on a curve. Lots located within a PRD shall have a width of not less than

90 feet (measured 30 feet back from the front property line) and the length of the front lot line abutting the City street shall not be less than 60 feet. The proposed lots appear to meet the lot with requirements for a PRD.

Lots in the CR-20,000 zone are required to be a minimum of 20,000 square feet in size. However, the Brookside Meadows Subdivision has been approved as a PRD, which grants density bonuses for the dedication of open space. The proposed preliminary appears to meet the density requirements set forth in the PRD ordinance.

Use
The developer is proposing that the lots be used for single-unit detached dwellings, which is consistent with the permitted uses for the CR-20,000 zone.

Sensitive Lands (Wildland Urban Interface)
See the Engineering and Public Works, and the Lone Peak Fire Department Reviews below for further comments on sensitive lands requirements.

Trails
The City Trail Master Plan shows no trails within the development area, and there are no nor does it show any proposed trails, and thus trails would not be a requirement for this subdivision.

General Plan
As part of the City General Plan, the Street Master Plan, shows a proposed new local street running through the Brookside Meadows property, connecting Whitby Woodlands Drive with 200 North street. The proposed preliminary plan has incorporated the proposed new local street from the street master plan, which connects earlier phases of the Whitby Woodlands PRD Subdivision to future phases of the Whitby Woodlands PRD Subdivision.

Other
Alpine City already has a street names Brookside Court and Brook Circle. Though the proposed street name is different (Brookside Circle), **staff would recommend changing the name to avoid confusion with other streets**.

The original concept plan showed 9 lots on 9.77 acres, and the preliminary plan now shows 15 lots on 13.306 acres. Staff would recommend that **Planning Commission approve that the revised concept site plan**.

REVIEWS

PLANNING AND ZONING DEPARTMENT REVIEW
The analysis section in the body of this report serves as the Planning and Zoning Department review.

ENGINEERING AND PUBLIC WORKS DEPARTMENT REVIEW
Streets
The plans show a compliant cul-de-sac extending off 400 West (less than 450 feet), an extension of Whitby Woodlands Drive which terminates in a temporary turn-a-round, and a cul-de-sac running northward off Whitby Woodlands Drive. The roads meet ordinance regarding width,

length, grade, and curvature. There is a large roadway cut at the intersection of Whitby Woodlands Drive and the proposed Soldier Circle. Because of the cut, there is the potential to block the sight triangle with landscaping at this intersection on Lot 7. Dev. Code 3.21.060.5 states that "*The sight triangle on corner lots shall not be obstructed. Privacy fences, walls, or hedges shall not exceed three (3) feet in height, and open-style fences shall not exceed four (4) feet...*" The grading on this corner lot shows dirt over six (6) feet high within the sight triangle, on the outer edge, this is could cause an obstruction of the sight triangle. **Engineering recommends EITHER a retaining wall be added just outside the sight triangle to lower the grading OR a landscaping restriction be added restricting all shrubs/trees/landscaping features to be less than one (1) foot tall to reduce all obstructions within the sight triangle area.**

Staff was concerned that the grading of Soldier Circle would make it difficult, if not impossible, to construct driveways to the uphill lots 7 – 9. The Developer submitted a driveway design showing how the worst-case scenario, lot 9, could have a driveway built and therefore the lots are viable lots.

Dev. Code 4.17 and Standard Detail 1b require roadway cuts to remain within fifty (50) feet of the public right of way. Where they do extend into this area, a slope easement shall be placed on the plat for the slopes (to be reviewed at Final Approval). The grading for Brookside Circle shows a large nine (9) foot tall retaining wall on the south side to reduce the amount of fill pushing into the private open space and to keep the fill slope within the fifty (50) foot clear zone. If the retaining wall was eliminated, the grading would extend another forty (40) feet into private open space. In this instance, **Staff would be in favor of an exception to the 50-foot clear zone requirement to eliminate a large retaining wall** that would be the city's responsibility to maintain in the future. See attached Exhibit A showing the differences between the two situations.

Speaking of retaining walls, a tiered wall system is proposed on the west side of Whitby Woodlands Drive as well as another on the west and north sides of the easterly detention basin. **The tiered retaining wall along Whitby Woodlands Dr. will require landscaping per Dev. Code 3.32.030.5.f and the wall in the detention basin will require an <u>open style</u> fence on the north side per Dev. Code 3.32.030.5.g.**
For reference, these sections state:

"*f. For terraced walls viewable from the nearest public right-of-way, the horizontal separation between walls shall be planted with a minimum of five shrubs for every 20 linear feet of planting area. The size of the shrubs shall be less than one-half the width of the terrace. Shrubs shall be watered by drip irrigation to minimize erosion by property owner, not by Alpine City.*

g. Walls greater than four (4) feet in height (H) placed within H/2 of an adjacent property line, which would create a drop-off for the adjacent property, shall install a fence along the top of the wall in accordance with ADC 3.21.060."

Retaining wall designs are to be submitted prior to construction.

The Fire Chief has approved road grades and design. His report is attached.

<u>Lots</u>
Lots, and slopes on lots, were covered extensively at Concept. Since Concept, a Geotech report has been submitted requiring certain setbacks from the tops and bottoms of steep slopes. The

report specifically mentions lots 1-9. The final plat needs to reflect the setbacks mentioned in the report. This can be discussed further at that time.

Utilities

A detailed utility plan has been submitted and reviewed. The subdivision has been accounted for within the utility master plans. Horrocks Engineers has modeled each utility system and has given recommendations regarding line sizing. That letter is attached and the plans reflect the recommendations.

Sewer System. 8-inch sewer mains exist in both Whitby Woodlands Dr. and 400 West which can serve the development. 8-inch mains and 4-inch sewer laterals would be required and are shown for each new lot. Sewer (along with culinary and pressurized irrigation) is shown to stub southward for a future phase on development. An existing home located at 430 N 400 W was recently removed. The sewer lateral for that lot can be either reused or capped in place, 10-feet behind sidewalk.

Culinary Water System. The subdivision is well below the 5350-foot elevation, which is the highest elevation the existing water system can serve and still provide a minimum 40 psi required by ordinance. There are currently 8 and 12-inch waterlines in the surrounding roads which would serve the development. The plans show connection to these lines with 8-inch lines throughout the development. 1-inch water service laterals with ¾-inch meters would be required. New laterals are shown to be constructed for each lot. The existing culinary service for 430 N 400 W would be re-used for lot 1. The Fire Chief has approved the location of proposed fire hydrants.

Pressurized Irrigation System. Similar to the culinary, 6-inch pressurized irrigation lines exist in the surrounding roads which would serve the development. The plans show connection to these lines with 6-inch and 4-inch lines throughout the development. Horrocks review letter recommends 6 and 4-inch lines within the development. 1-inch laterals are shown to be constructed for each new lot. The two existing services for 430 N 400 W would be re-used for lots 1 and 2.

Storm Water Drainage System. The development shows a storm drain system that meets City Standards. The storm drain system report is attached for reference. In general, two detention ponds are proposed for the east and west sides of development. Each pond retains the 90th percentile storm and detains all storms larger, up to the 100-yr event storm. The larger storms are released at a controlled rate to the existing systems in 400 W or within Whitby Woodlands system.

A storm water pollution prevention plan (SWPPP) was submitted with the plans. A City Land Disturbance permit will be obtained prior to construction which incorporates the SWPPP and requires a state storm water permit as well. The contractor will be required to follow erosion and control guidelines during construction to prevent erosion, dust, and downstream pollution.

Natural Hazards

Sensitive Lands. The proposed development falls within the Geologic Hazards Overlay Zone which has areas identified as having the potential for rockfall, slide, and debris flows. Within

these areas the Sensitive Lands Ordinance applies (DC 3.12). Section 3.12.090.4.e states *"Development shall not be allowed within fifty (50) feet of slopes in excess of forty (40) percent, areas subject to landsliding, or other high-hazard geologic areas as determined by a soils report and/or geology report produced pursuant to the requirements of item H-5 documentation."* Lots 3-5 and 7-9 would be affected by this ordinance and be required to show setbacks from the 40% and greater slopes at a minimum. A rockfall study, if more restrictive, would override that. Lot 9 would be impacted the most as the 50-foot setback extends deep into the lot. Slope stability is the concern when building on top of steep slopes. The added pressure of a structure could cause the slope to fail. Two geotechnical reports were submitted which did show slope stability tests for all areas of concern. The slope stability analysis has shown that the stability of Lot 9 would be safe if built to the regular zoning setbacks; the 50-foot setback can be reduced to the typical setbacks of the zone as shown.

Rockfall, debris flow, and slides were also reviewed and, in each instance, were shown to have a low risk for such an event. With this information, Staff would be in support of the preliminary plan as shown, with typical zoning setbacks applied to each lot, subject to the top/toe of slope recommendations as previously mentioned.

Flood Plain. The property is situated away from the mapped flood plains of Fort and Dry Creek.

Irrigation Ditches. Westfield Ditch runs along the east side of the development. Ditches are typically required to be piped when development occurs (Dev. Code 4.07.190) but this section of ditch (Westfield Ditch, north of 200 North) is specifically required to be left open per agreement with Alpine Irrigation Company. The plans reflect this and an easement is shown for the ditch on the plat.

Other
The property has existing buildings onsite. Prior to the recordation of any phase of development that contains existing buildings, the existing building(s) must be removed, existing services either re-used or cut/capped/removed; or a bond provided to ensure those things will happen prior to a building permit being issued on the affected lot(s).

There are several minor redlines on the drawings which need corrected and approved by Staff prior to Final submittal.

LONE PEAK FIRE DEPARTMENT REVIEW
See the attached review from the Lone Peak Fire Department.

HORROCKS ENGINEER'S REVIEW
See the attached review from Horrocks Engineering.

NOTICING
Notice has been properly issued in the manner outlined in City and State Code

STAFF RECOMMENDATION

Review staff report and findings and make a motion to approve or table the proposed subdivision. Findings are outlined below.

Findings for a Positive Motion:

A. The streets and layout appear to meet ordinance;
B. Proposed roadway construction appears to meet Alpine City design standards;
C. Frontage improvements are shown throughout the development;
D. Plan appears to comply with the General Plan and Street Master Plan, showing a local street running through the southeast corner of the property, connecting Whitby Woodlands Drive to future phases of the Whitby Woodlands PRD Subdivision.
E. The property appears to meet the requirements of a PRD, based on slope analysis, lot width, and density requirements, as well as the other requirements including:
    a. Recognize and incorporate natural conditions of site;
    b. Efficiently utilize land resources and benefit the public in delivery of utilities and services;
    c. Help to provide variety to style of dwelling available;
    d. Preserve open space for recreational, scenic and public service needs;
    e. Be consistent with objectives of underlying zone;
F. There are no major hazards of concern mentioned in the geotechnical reports.

Findings for a Motion to Table:

A. None.

MODEL MOTIONS

SAMPLE MOTION TO APPROVE (assumes the Planning Commission grants an exception to the 50-foot clear zone grading rule)

I motion to approve the Brookside Meadows preliminary plan and changes to the concept plan with the following conditions:

- The Developer is granted an exception to the 50-foot clear zone grading requirement for the westerly cul-de-sac;
- The Developer address the sight triangle issue near lot 7;
- The Developer add landscaping plans for the retaining walls;
- The Developer add a fence on the north side of the easterly detention basin;
- The Developer address the redlines on the plans;
- The Developer submit a complete retaining wall design prior to construction;
- The Developer change the name of Brookside Circle.

SAMPLE MOTION TO APPROVE (assumes no exception granted)

I motion to approve the Brookside Meadows preliminary plan and changes to the concept plan with the following conditions:

- The Developer address the sight triangle issue near lot 7;
- The Developer add landscaping plans for the retaining walls;
- The Developer add a fence on the north side of the easterly detention basin;
- The Developer address the redlines on the plans;
- The Developer change the name of Brookside Circle.

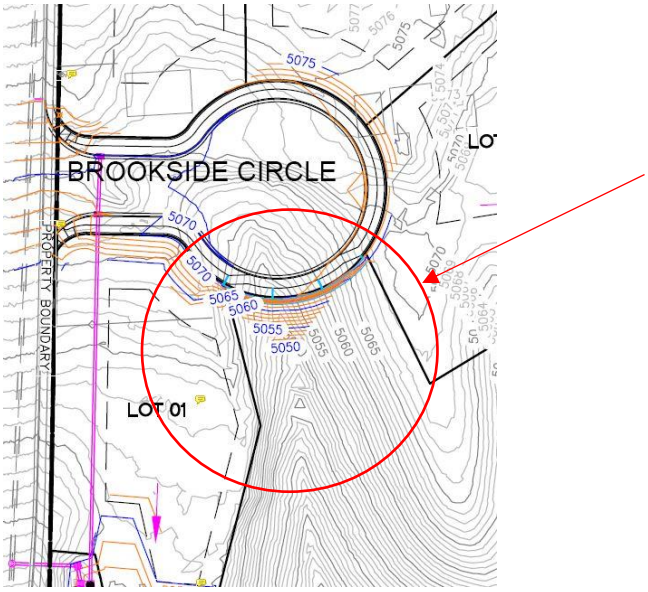
SAMPLE MOTION TO TABLE

I motion to table the Brookside Meadows preliminary plan and changes to the concept plan based on the following:

- **INSERT FINDING**

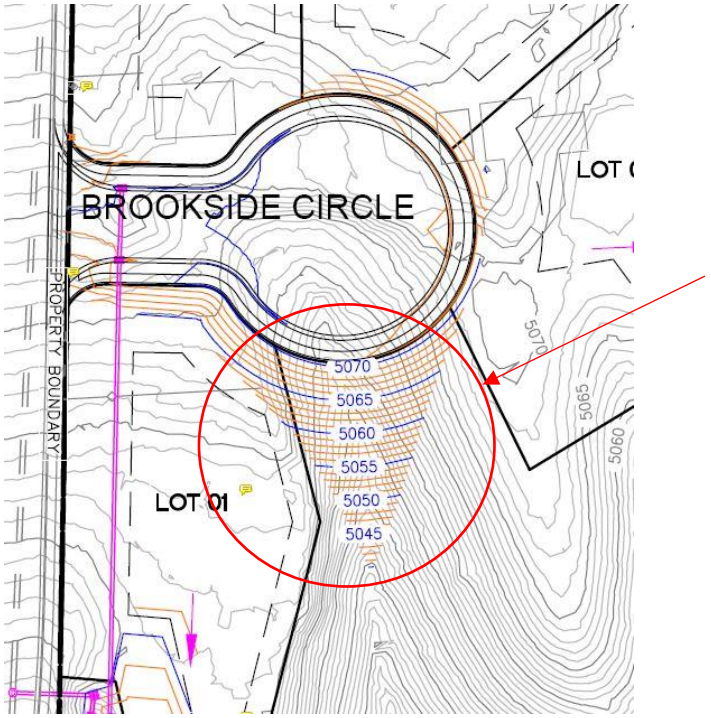
EXHIBIT A

Picture 1 – Shows the proposed nine (9) foot tall retaining wall on Brookside Circle with somewhat minimal grading into the Private Open Space.



Picture 1

Picture 2 – Shows the proposed grading without retaining a large retaining wall. Staff favors this option.



Picture 2

LONE PEAK FIRE DISTRICT
5582 PARKWAY WEST DRIVE
HIGHLAND, UTAH 84003
(801) 763-5365
WWW.LONEPEAKFIRE.COM

REED M. THOMPSON, FIRE CHIEF

MEMORANDUM

DATE: 9 December 2019

TO: Jed Muhlestein, City Engineer, Alpine City
Austin Roy, City Planner, Alpine City
CC: Shane Sorensen, City Administrator, Alpine City

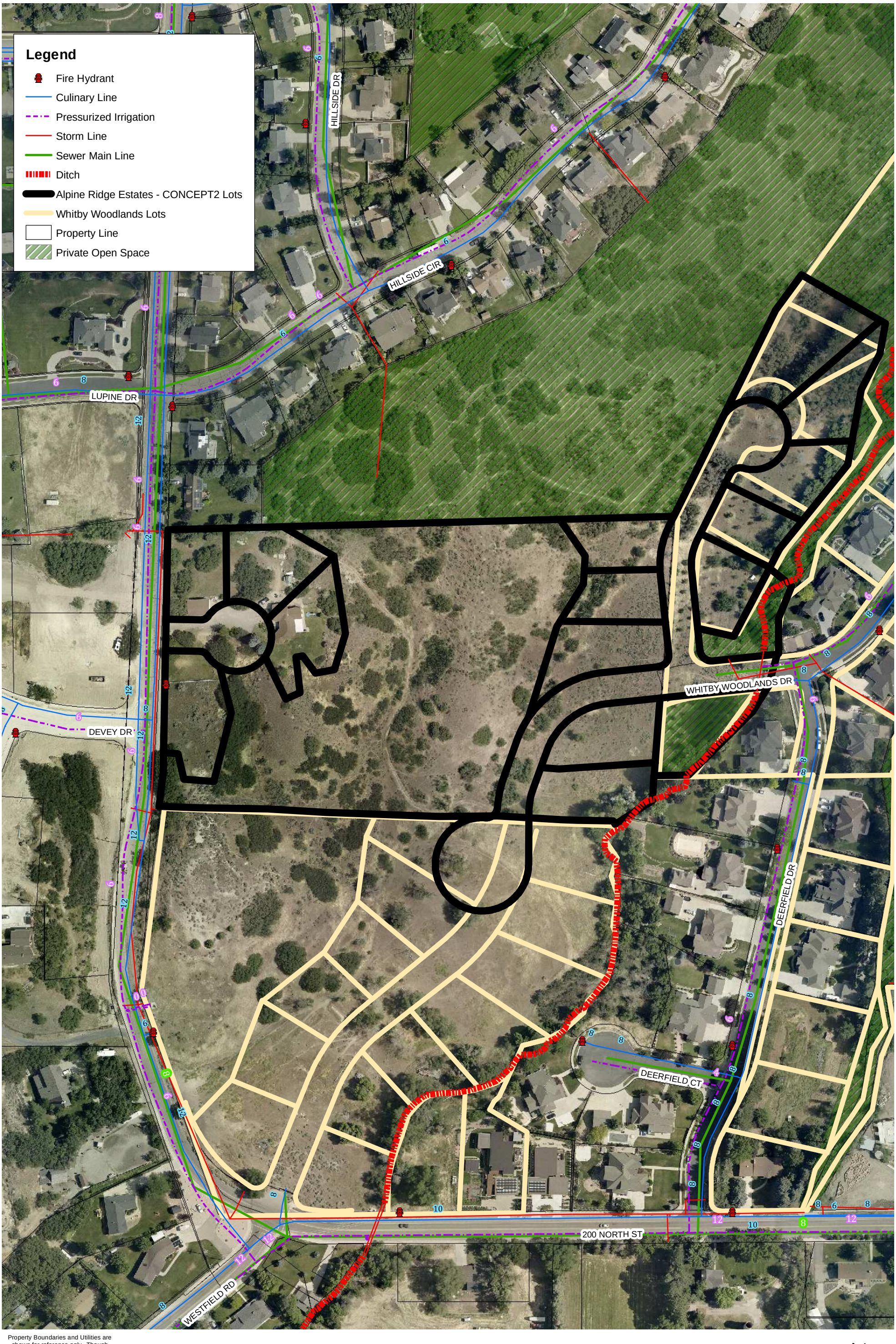
FROM: Reed M. Thompson, Fire Chief

SUBJECT: BROOKSIDE MEADOWS SUBDIVISION PRELIMINARY DESIGN

The preliminary plans for Brookside Meadows submitted on 5 November 2019, formerly submitted as concept drawings under the name of Alpine Ridge Estates on 12 Aug 2019. Fire hydrants appear to be located in accordance with appropriate spacing as required by the International Fire Code.

The update to those plans and review of the new plans have the following items that need to be addressed:

- The cover page general/construction notes need to reflect language identifying this project as within the Wildland Urban Interface Area and as such is subject to compliance with the Alpine City Sensitive Land Ordinance and Wildland-Urban Interface Site Plan/Development Review Guide.
- The temporary turnaround on Whitby Woodlands Drive to the south of the project boundary shall be an all-weather access road capable of sustaining the weight limits of fire apparatus as required in the International Fire Code.
- The area designated as open space shall be cleared of all dead fall, leaf litter, and standing dead oak in an effort to address fire spread mitigation.
- No vertical construction shall commence until water lines are tested, streets are accessible including turnarounds.



Property Boundaries and Utilities are shown for reference only. Though shown generally close, a survey and Blue Stake should be done to locate both accurately.

ALPINE RIDGE ESTATES CONCEPT

1 inch = 150 feet

0 45 90 180 270 360 Feet

N

BROOKSIDE MEADOWS

COVER

CONSTRUCTION NOTES

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALPINE CITY STANDARDS AND SPECIFICATIONS. SEE SEWER AND WATERLINE NOTES FOR ADDITIONAL REQUIREMENTS. CONTRACTOR TO OBTAIN CURRENT STANDARDS AT ALPINE CITY.
2. CONTRACTOR RESPONSIBLE FOR PROTECTION OF ALL UTILITIES SHOWN OR NOT SHOWN.
3. CONTRACTORS SHALL ATTEND ALL PRE-CONSTRUCTION CONFERENCES AND ABIDE BY DIRECTIVES AND DECISIONS MADE THEREIN.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC SAFETY AND OSHA STANDARDS.
5. LOCATION AND INSTALLATION OF GAS, POWER, TELEPHONE, AND CABLE LINES TO BE DONE IN ACCORDANCE WITH LOCAL STANDARDS.
6. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
7. CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS FOR WORK.
8. CONTRACTOR IS RESPONSIBLE TO KEEP A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SW3P) AND THE UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT ON SITE DURING THE COURSE OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THESE STATE REQUIRED DOCUMENTS.
9. WHEN INSTALLING PROPOSED UTILITIES, CONTRACTOR TO IDENTIFY POTENTIAL CONFLICTS BETWEEN STORM DRAIN, CULINARY WATER, AND/OR SECONDARY WATER. IN ALL CASES, STORM DRAIN DESIGN SHALL GOVERN.
10. IF CONSTRUCTION WORK IS IN EXISTING ASPHALT AREAS, CONTRACTOR TO SAWCUT EXISTING ASPHALT FOR MATCH.
11. ROAD STUBS CONSTRUCTED FOR FUTURE CONNECTION SHALL BE BLOCKED OFF WITH BARRICADED AND/ OR APPROPRIATE SIGNAGE PER MUTCD REQUIREMENTS.
12. A COPY OF APPROVED PLANS ARE REQUIRED ON SITE AT ALL TIMES.

WATERLINE NOTES:

13. PROJECT SHALL COMPLY WITH ALL ALPINE CITY SPECIFICATIONS AND REQUIREMENTS.
14. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
15. ALL CONSTRUCTION IN THE CULINARY WATERLINE AND SANITARY SEWER LINE PIPE ZONE SHALL COMPLY WITH ALL ALPINE CITY SPECIFICATIONS AND REQUIREMENTS.
16. CULINARY WATERLINES TO BE 8 INCH DUCTILE PIPE UNLESS OTHERWISE NOTED AND SHALL MEET THE STANDARDS AND SPECIFICATIONS OF APWA 33 05 05.
17. FIRE HYDRANTS SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF APWA 33 12 19.
18. ALL MATERIALS THAT COME INTO CONTACT WITH DRINKING WATER SHALL BE ANSI/NSF 61 CERTIFIED.
19. ALL PIPE, JOINTS, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARDS C104-C550 AND C900-C950.
20. SERVICE LATERALS SHALL CONFORM TO THE UTAH PLUMBING CODE.
21. ALL DEAD-END WATER MAINS SHALL BE PROVIDED WITH A FIRE HYDRANT OR BLOW-OFF.
22. PIPE SHALL BE BURIED AT LEAST 4 FEET BELOW GROUND SURFACE.
23. THE OPEN ENDS OF ALL PIPELINES UNDER CONSTRUCTION SHALL BE SEALED AT THE END OF EACH DAY.
24. NO USED MATERIALS (VALVES, FITTINGS, PIPE, FIRE HYDRANTS, ETC...) SHALL BE USED.
25. NO VAULTS WITH VALVES OR BLOW-OFFS SHALL DISCHARGE DIRECTLY TO THE STORM DRAIN OR SEWER SYSTEM.
26. IN PRV VAULTS, ISOLATION VALVES SHALL BE INSTALLED ON BOTH SIDES OF THE PRV.
27. SERVICE LATERALS SHALL NOT BE CONNECTED TO FIRE LINES.
28. WATER METERS SHALL BE PLACED AT THE CENTER OF THE LOT IN THE PARK STRIP
29. BACKFLOW DEVICES MUST BE INSTALLED PER 2015 INTERNATIONAL PLUMBING CODE SECTION 608 AND TESTED WITHIN 10 WORKING DAYS OF THE INITIAL INSTALLATION.
30. MEGA LUG RESTRAINTS OR EQUIVALENT ARE REQUIRED AT ALL WATER MAIN TEES AND BEDS PER DISTRICT SPECIFICATIONS.
31. CONCRETE THRUST BLOCKING IS REQUIRED AT ALL WATER MAIN TEES AND BENDS PER DISTRICT SPECIFICATIONS
32. REFER TO ALL ALPINE CITY STANDARD SPECIFICATION AND REQUIREMENTS.

SEWER NOTES:

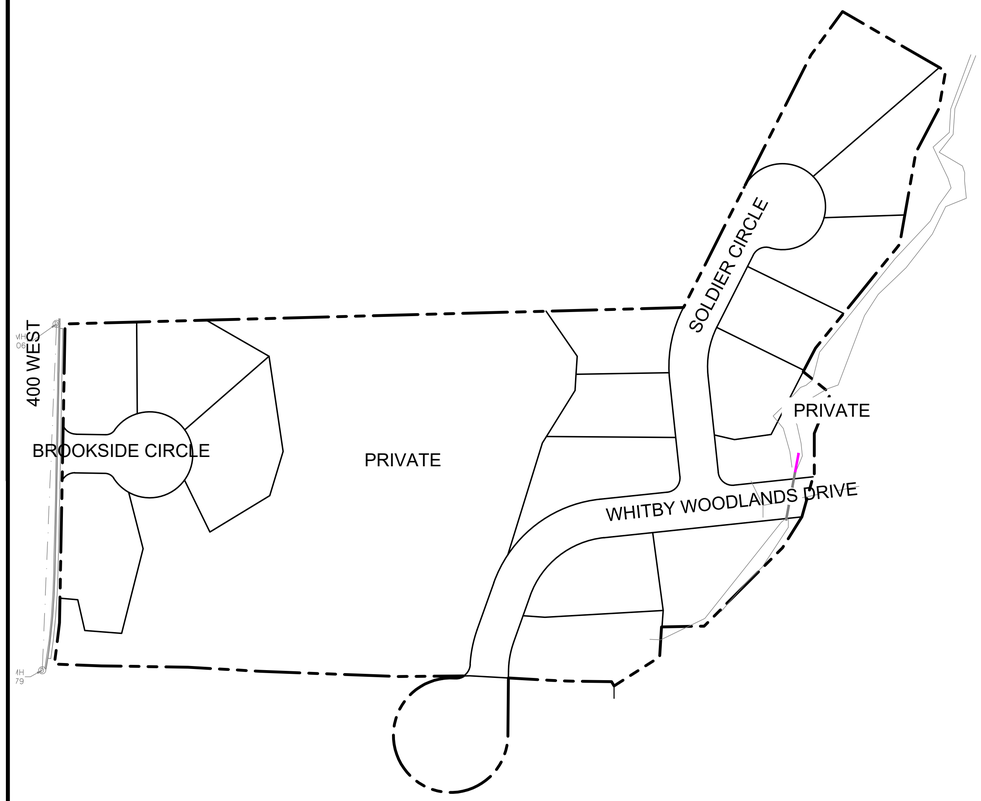
33. END ALL SEWER MAINS WITH A MANHOLE OR CLEANOUT.
34. ALL BUILDING CONNECTIONS MUST HAVE AN EXTERIOR LATERAL CLEANOUT WITHIN FIVE FEET OF THE BUILDING.
35. MAXIMUM SPACING FOR ALL 4-INCH CLEANOUTS SHALL NOT EXCEED 60 FEET.
36. ALL WASTEWATER PIPELINES AND LATERALS MUST CONFORM TO ALPINE CITY'S TYPICAL CONFLICT DETAIL.
37. SANITARY SEWER LINES TO BE PVC SDR 35 UNLESS OTHERWISE NOTED.

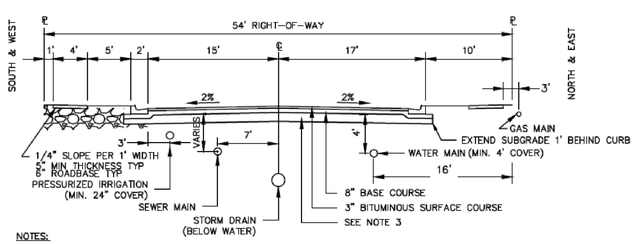
STORM DRAIN NOTES:

38. ALL STORM DRAIN FACILITIES ARE TO MEET ALPINE CITY STANDARDS AND SPECIFICATIONS.

GRADING NOTES:

39. AREAS OF CUT AND FILL ARE TO HAVE THE TOP SOIL AND BIOLOGIC MATTER REMOVED.
40. STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR IN AREAS WHERE STRUCTURES ARE TO BE BUILT, OR WHERE PAVEMENT WILL BE LOCATED. FILL IN LANDSCAPED AREAS SHALL BE COMPACTED TO 90% OF THE MODIFIED PROCTOR.
41. SOILS THAT ARE OBSERVED TO RUT OR DEFLECT GREATER THAN ONE INCH UNDER A MOVING LOAD SHOULD BE OVER-EXCAVATED DOWN TO FIRM UNDISTURBED NATIVE SOILS AND BACKFILLED WITH PROPERLY PLACED AND COMPACTED STRUCTURAL FILL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. A ALPINE CITY INSPECTOR SHALL BE PRESENT FOR THE PROOF ROLL.
42. ALL UTILITIES ENCOUNTERED IN EXCAVATING SHALL BE CAREFULLY SUPPORTED, MAINTAINED, AND PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH OSHA REGULATIONS.
43. ALL PIPING SHALL BE PROTECTED FROM LATERAL DISPLACEMENT AND POSSIBLE DAMAGE RESULTING FROM IMPACT OR UNBALANCED LOADING DURING BACKFILLING OPERATIONS BY BEING ADEQUATELY BEDDED.

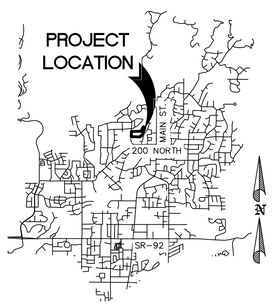




NOTES:

1. WATER VALVES AND 5-INCH VALVE OPENING MUELLER FIRE HYDRANTS SHALL BE LOCATED AS APPROVED.
2. NO WATER LINE SMALLER THAN 8-INCH DIA. SHALL BE INSTALLED WITHOUT APPROVAL OF CITY COUNCIL.
3. SUBGRADE DEPTHS VARY DEPENDING ON CBR VALUE OF THE AREA, SEE ALPINE CITY STANDARD SPECIFICATIONS
4. CULINARY WATER MAINS SHALL BE ON THE NORTH AND EAST SIDES OF THE STREET. PRESSURIZED IRRIGATION AND SEWER LINES SHALL BE ON THE SOUTH AND WEST SIDES OF THE STREET.

ASPHALT CONCRETE (IN.)	UNTREATED BASE COURSE (IN.)	GRANULAR BORROW (IN.)
3"	8"	8"



VICINITY MAP

SCALE: 1"=2000'

CONTACT LIST

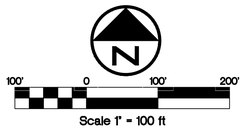
OWNER:
DAVE GIFFORD
(801) 836-8402

DESIGN ENGINEER:
WILDING ENGINEERING
(801) 553-8112
CONTACT: TOMMY SCHERBEL, E.I.T.

REGULATORY AGENCIES:
ALPINE CITY PLANNING
(801) 756-6347 EXT. 6
CONTACT: AUSTIN ROY

ALPINE CITY ENGINEERING
(801) 756-6347 EXT. 116
CONTACT: JED MUHLESTEIN, P.E.

SHEET INDEX	
SHEET	TITLE
C100	COVER
1 OF 1	ROS
1 OF 1	PLAT
C201	SITE PLAN
C202	UTILITY PLAN
C203	GRADING & DRAINAGE PLAN
C204	GRADING & DRAINAGE PLAN - EAST DETENTION
C205	SOIL TYPE MAP
C206	EROSION CONTROL PLAN
C301	PLAN & PROFILE - WHITBY WOODLANDS DRIVE
C302	PLAN & PROFILE - WHITBY WOODLANDS DRIVE
C303	PLAN & PROFILE SOLDIER CIRCLE
C304	PLAN & PROFILE BROOKSIDE CIRCLE
C305	PLAN & PROFILE TO WEST RETENTION



Scale 1" = 100 ft

WILDING
ENGINEERING
14721 South Heritage Crest Way
Bluffdale, Utah 84065
801.553.8112
www.wildingengineering.com

DRAWING NOTES:

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

COVER

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
Jason Peterson
JASON REDD PETERSON
12/24/2019
STATE OF UTAH

ENGINEER'S STAMP

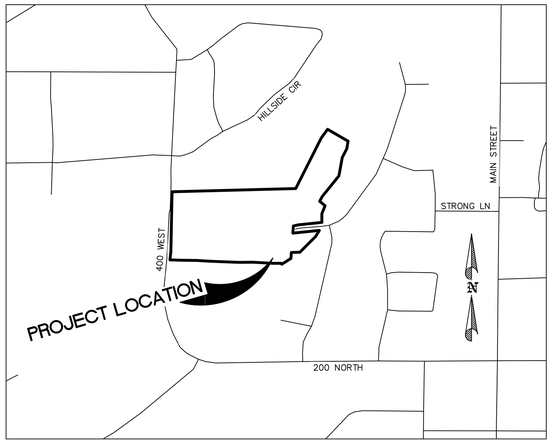
DATE 11/05/2019

SCALE 1" = 100'

SHEET C100-01/14

BROOKSIDE MEADOWS P.R.D.

LOCATED IN THE NORTH HALF OF SECTION 24,
TOWNSHIP 4 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
CITY OF ALPINE, UTAH COUNTY, UTAH



VICINITY MAP
SCALE: 1" = 500'
ALPINE, UTAH

Curve Table					
Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	48.46'	254.00'	10°55'54"	S78°32'03"W	48.39'
C2	1.76'	200.00'	0°30'10"	N83°44'27"E	1.76'
C3	22.59'	19.93'	64°57'55"	S57°43'58"E	21.40'
C4	21.71'	19.83'	62°42'06"	S58°43'02"W	20.64'
C5	305.66'	60.00'	291°53'18"	N01°04'00"E	67.20'
C6	14.65'	15.00'	55°56'39"	N60°57'37"W	14.07'
C7	14.65'	15.00'	55°56'39"	N63°05'40"E	14.07'
C8	39.91'	60.00'	38°06'51"	S54°10'46"W	39.18'
C9	74.59'	60.00'	71°13'56"	N71°08'50"W	69.88'
C10	74.81'	60.00'	71°26'17"	N00°11'16"E	70.06'
C11	87.34'	60.00'	83°24'01"	N77°36'25"E	79.83'
C12	29.01'	60.00'	27°42'14"	S46°50'28"E	28.73'
C14	58.96'	177.00'	19°05'06"	S10°02'29"W	58.69'
C15	40.97'	123.00'	19°05'06"	S10°02'30"W	40.78'
C16	199.00'	177.00'	64°24'57"	S51°47'31"W	188.68'
C17	43.75'	177.00'	14°09'44"	S26°39'55"W	43.64'
C18	155.25'	177.00'	50°15'13"	S58°52'23"W	150.32'
C19	138.29'	123.00'	64°24'57"	S51°47'31"W	131.12'
C20	31.43'	20.00'	90°02'00"	N38°59'00"E	28.29'
C21	31.40'	20.00'	89°58'00"	S51°01'00"E	28.28'
C22	101.34'	177.00'	32°48'20"	S10°22'10"W	99.97'
C23	91.32'	177.00'	29°33'42"	S11°59'29"W	90.31'
C24	10.02'	177.00'	3°14'38"	S04°24'41"E	10.02'
C25	70.43'	123.00'	32°48'20"	S10°22'10"W	69.47'
C26	69.49'	123.00'	32°22'15"	S10°09'08"W	68.57'
C27	0.93'	123.00'	0°26'05"	S26°33'18"W	0.93'
C28	272.19'	60.00'	259°55'17"	N23°16'02"W	91.98'
C29	113.64'	60.00'	108°31'06"	S81°01'54"W	97.40'
C30	62.25'	60.00'	59°26'46"	N14°59'09"W	59.50'
C31	96.30'	60.00'	91°57'23"	N60°42'55"E	86.29'
C32	27.90'	20.00'	79°55'18"	S66°43'58"W	25.69'
C33	85.88'	150.00'	32°48'20"	S10°22'10"W	84.72'
C34	168.64'	150.00'	64°24'57"	S51°47'31"W	159.90'
C35	49.96'	150.00'	19°05'06"	S10°02'30"W	49.73'

Parcel Line Table		
Line #	Length	Direction
L1	6.91'	N30°16'09"W
L2	61.10'	N89°15'56"W
L3	27.89'	N87°26'36"W
L4	109.48'	N86°48'27"W
L5	100.18'	S89°28'07"W
L6	193.36'	N87°50'37"W
L7	100.37'	N86°42'12"W
L8	120.91'	N89°08'14"W
L9	65.93'	N87°48'00"W
L10	58.16'	N07°04'00"E
L11	74.92'	N36°03'20"E
L12	52.88'	S10°00'00"W
L13	69.81'	S27°39'52"W
L14	130.00'	S10°00'00"W
L15	187.00'	S39°00'00"W
L16	37.00'	S27°40'00"W
L17	48.84'	S51°16'59"E
L18	60.16'	S22°00'00"W
L19	60.52'	S00°00'00"E
L20	50.18'	S04°12'04"W

Parcel Line Table		
Line #	Length	Direction
L21	50.78'	S32°00'00"W
L22	155.00'	S45°00'00"W
L23	59.67'	S89°00'44"W
L24	41.92'	S03°23'29"W
L25	75.64'	S57°26'29"W
L26	41.99'	S88°56'21"E
L27	41.12'	N88°55'06"W
L28	24.91'	N85°04'24"W
L29	44.17'	N12°47'27"W
L30	51.77'	N85°31'14"W
L31	122.17'	S14°10'22"W
L32	81.27'	S14°22'53"E
L33	80.87'	N26°06'26"W
L34	72.51'	S77°02'00"E
L35	135.73'	S63°48'47"E

Parcel Address Table	
Parcel #	Address
1	384 WEST
2	387 WEST
3	366 WEST
4	446 NORTH
5	364 NORTH
6	378 NORTH
7	431 NORTH
8	447 NORTH
9	463 NORTH
10	217 WEST
11	454 NORTH
12	468 NORTH
13	484 NORTH
14	498 NORTH
15	514 NORTH

SURVEYOR'S CERTIFICATE

I, KAGAN M. DIXON, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD LICENSE NO. 9061091 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS AND STREETS HEREAFTER TO BE KNOWN AS

BROOKSIDE MEADOWS P.R.D.

AND THAT SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT. I FURTHER CERTIFY THAT ALL LOTS MEET FRONTAGE, WIDTH, AND AREA REQUIREMENTS OF THE APPLICABLE ZONING ORDINANCES.

BOUNDARY DESCRIPTION

A TRACT OF LAND BEING SITUATE IN THE NORTH HALF OF SECTION 24, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, HAVING A BASIS OF BEARINGS OF NORTH 89°38'36" WEST BETWEEN THE EAST QUARTER AND THE WEST QUARTER OF SAID SECTION 24, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS NORTH 89°38'36" WEST ALONG THE QUARTER SECTION LINE A DISTANCE OF 2682.94 FEET AND NORTH 17.27 FEET FROM THE EAST QUARTER OF SECTION 24, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, SAID POINT ALSO BEING THE NORTHWESTERLY CORNER OF LOT 7, PLAT A, DEERFIELD SUBDIVISION, ON FILE WITH THE OFFICE OF THE UTAH COUNTY RECORDER AS MAP FILING NO. 10153, AND RUNNING THENCE NORTH 30°16'09" WEST 6.91 FEET; THENCE NORTH 89°15'56" WEST 61.10 FEET; THENCE NORTH 87°26'36" WEST 27.89 FEET; THENCE NORTH 86°48'27" WEST 109.48 FEET; THENCE SOUTH 89°28'07" WEST 100.18 FEET; THENCE NORTH 87°50'37" WEST 193.36 FEET; THENCE NORTH 86°42'12" WEST 100.37 FEET; THENCE NORTH 89°08'14" WEST 120.91 FEET; THENCE NORTH 87°48'00" WEST 65.93 FEET TO THE EAST RIGHT-OF-WAY LINE OF 400 WEST STREET; THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING TWO (2) COURSES, 1) NORTH 07°04'00" EAST 58.16 FEET, 2) NORTH 01°04'00" EAST 417.73 FEET TO THE SOUTHWEST CORNER OF MOUNTAINVILLE HEIGHTS PUD, ON FILE WITH THE OFFICE OF THE UTAH COUNTY RECORDER AS MAP FILING NO. 2498; THENCE ALONG SAID PLAT THE FOLLOWING THREE (3) COURSES, 1) NORTH 88°28'55" EAST 864.51 FEET, 2) NORTH 26°46'20" EAST 395.43 FEET, 3) NORTH 36°03'20" EAST 74.92 FEET TO THE WESTERLY CORNER OF PARCEL 101C, PLAT C, WHITBY WOODLANDS PRD, ON FILE WITH THE OFFICE OF THE UTAH COUNTY RECORDER AS MAP FILING NO. 11809; THENCE ALONG SAID PLAT THE FOLLOWING TEN (10) COURSES, 1) SOUTH 60°00'00" EAST 166.36 FEET, 2) SOUTH 10°00'00" WEST 52.88 FEET, 3) SOUTH 27°39'52" WEST 69.81 FEET, 4) SOUTH 10°00'00" WEST 130.00 FEET, 5) SOUTH 39°00'00" WEST 187.00 FEET, 6) SOUTH 27°40'00" WEST 37.00 FEET, 7) SOUTH 51°16'59" EAST 48.84 FEET, 8) SOUTH 22°00'00" WEST 60.16 FEET, 9) SOUTH 60.52 FEET TO THE POINT OF A NON-TANGENT 200.00 FOOT RADIUS CURVE TO THE RIGHT, 10) ALONG SAID CURVE A DISTANCE OF 1.76 FEET THROUGH A CENTRAL ANGLE OF 00°30'10" (CHORD BEARS SOUTH 83°44'27" WEST 1.76 FEET) TO THE NORTHEAST CORNER OF THAT CERTAIN WARRANTY DEED RECORDED ON AUGUST 11, 2005, AS ENTRY 88437:2005, ON FILE WITH THE OFFICE OF THE UTAH COUNTY RECORDER, AND RUNNING THENCE ALONG SAID WARRANTY DEED THE FOLLOWING THREE (3) COURSES, 1) SOUTH 84°00'00" WEST 151.02 FEET TO THE POINT OF A 254.00 FOOT RADIUS CURVE TO THE LEFT, 2) ALONG SAID CURVE A DISTANCE OF 48.46 FEET THROUGH A CENTRAL ANGLE OF 10°55'54" (CHORD BEARS SOUTH 78°32'03" WEST 48.39 FEET), 3) SOUTH 04°12'04" WEST 50.18 FEET TO THE POINT OF A NON-TANGENT 200.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE NORTH 84°00'00" EAST 186.62 FEET TO THE WEST LINE OF SAID PLAT C, WHITBY WOODLANDS PRD; THENCE ALONG SAID WEST LINE THE FOLLOWING TWO (2) COURSES, 1) SOUTH 32°00'00" WEST 50.78 FEET, 2) SOUTH 45°00'00" WEST 155.00 FEET TO THE NORTH LINE OF SAID PLAT A, DEERFIELD SUBDIVISION; THENCE ALONG SAID SUBDIVISION THE FOLLOWING THREE 3) COURSES, 1) SOUTH 89°00'44" WEST 59.67 FEET, 2) SOUTH 03°23'29" WEST 41.92 FEET, 3) SOUTH 57°26'29" WEST 75.64 FEET TO THE POINT OF BEGINNING.

CONTAINS 15 LOTS, 576,669 SQUARE FEET, OR 13.238 ACRES, MORE OR LESS.

OWNERS' DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNER(S) OF THE ABOVE DESCRIBED TRACT OF LAND HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, PARCELS, AND STREETS, TOGETHER WITH EASEMENTS AND RIGHTS-OF-WAY, TO BE HEREAFTER KNOWN AS

BROOKSIDE MEADOWS P.R.D.

AND DO HEREBY DEDICATE FOR PERPETUAL USE OF THE PUBLIC AND CITY ALL PARCELS, LOTS, STREETS, EASEMENTS, RIGHTS-OF-WAY, AND PUBLIC AMENITIES SHOWN ON THIS PLAT AS INTENDED FOR PUBLIC OR CITY USE. THE OWNER(S) VOLUNTARILY DEFEND, INDEMNIFY, AND SAVE HARMLESS THE CITY AGAINST ANY EASEMENTS OR OTHER ENCUMBRANCE ON A DEDICATED STREET WHICH WILL INTERFERE WITH THE CITY'S USE, MAINTENANCE, AND OPERATION OF THE STREET. THE OWNERS(S) AND ALL AGENTS, SUCCESSORS, AND ASSIGNS VOLUNTARILY DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY FROM ANY CLAIM ARISING FROM THE OWNER'S CREATION OF THIS SUBDIVISION, THE ALTERATION OF THE GROUND SURFACE, VEGETATION, DRAINAGE, OR SURFACE OR SUB-SURFACE WATER FLOWS WITHIN THIS SUBDIVISION, AND THE DEVELOPMENT ACTIVITY WITHIN THIS SUBDIVISION BY THE OWNERS AND ALL AGENTS, SUCCESSORS, AND ASSIGNS.

IN WITNESS WHEREOF I HAVE SET FORTH MY HAND THIS ___ DAY OF _____,A.D. 20____.

SIGNATURE PRINT NAME

ACKNOWLEDGMENT:

STATE OF UTAH

COUNTY OF _____

ON THIS ___ DAY OF _____, A.D. _____, PERSONALLY APPEARED BEFORE ME _____, WHO BEING DULY SWORN OF AFFIRMED, DID SAY THAT (S)HE IS THE SIGNER OF THE WITHIN OWNER'S DEDIATION AND THAT SAID DEDICATION WAS SIGNED BY HER FREELY AND VOLUNTARILY AND FOR THE PURPOSES THEREIN STATED.

SIGNATURE PRINTED NAME, A NOTARY PUBLIC COMMISSIONED IN UTAH

COMMISSION NUMBER EXPIRATION DATE

APPROVAL BY LEGISLATIVE BODY

THE CITY COUNCIL OF THE CITY OF ALPINE, COUNTY OF UTAH, APPROVES THIS SUBDIVISION SUBJECT TO THE CONDITIONS AND RESTRICTIONS STATED HEREON, AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR THE PUBLIC PURPOSE OF THE PERPETUAL USE OF THE PUBLIC.

THIS _____ DAY OF _____,A.D. 20____.

ENGINEER CITY RECORDER (SEE SEAL BELOW)

PLANNING COMMISSION APPROVAL

APPROVED THIS ____ DAY OF _____, A.D. 20____, BY THE APLINE CITY PLANNING COMMISSION.

DIRECTOR-SECRETARY CHAIRMAN, PLANNING COMMISSION

APPROVAL AS TO FORM

APPROVED TO FORM THIS ___ DAY OF _____, A.D. 20____.

CITY ATTORNEY

WILDING ENGINEERING
14721 South Heritage Crest Way
Bluffdale, Utah 84065
801.553.8112
www.wildingengineering.com

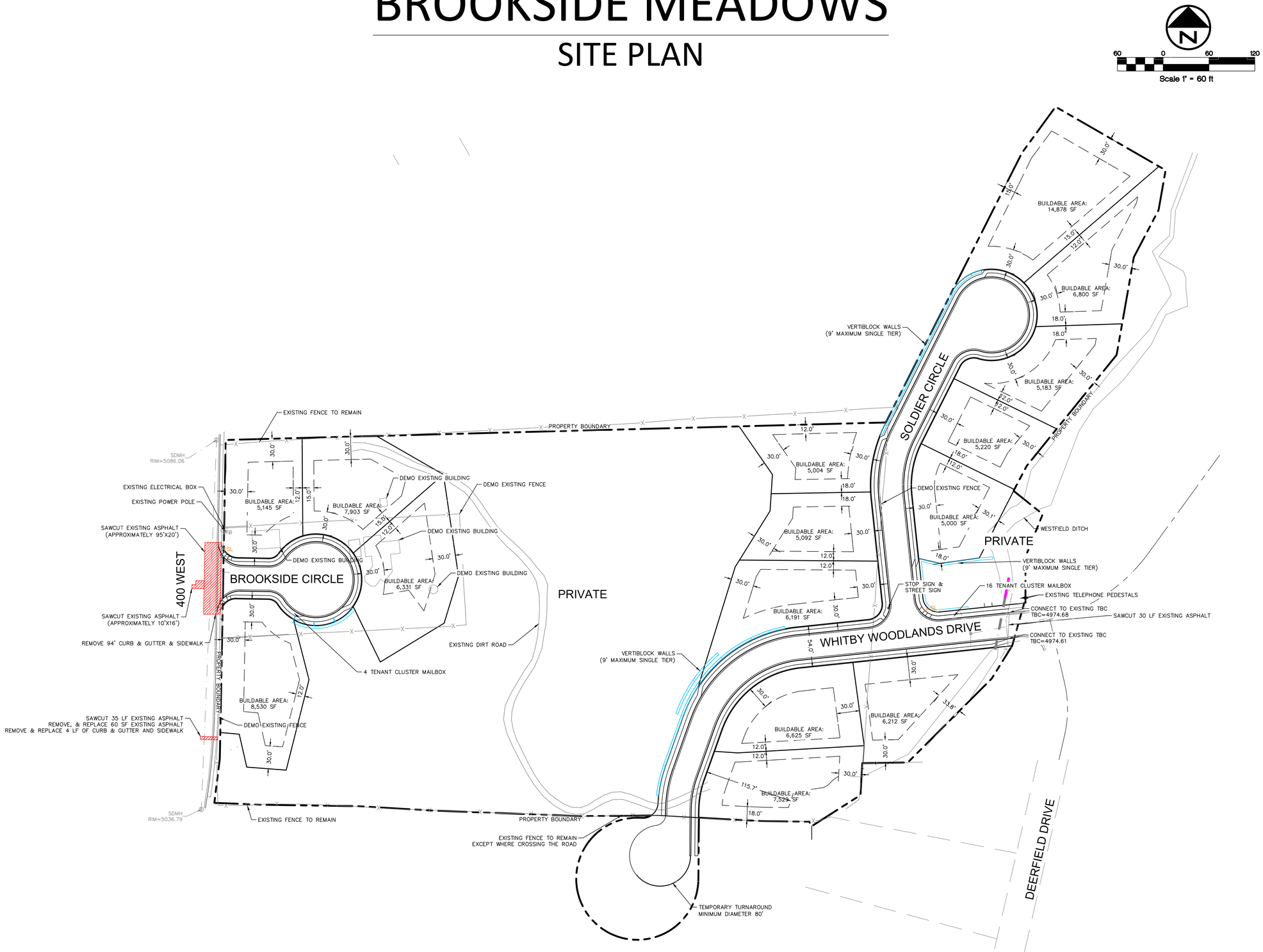
NOTES:
1. OPEN SPACE PARCELS ARE PRIVATE AND ARE TO BE OWNED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION.
2. ALL OF OPEN SPACE A AND OPEN SPACE B IS A PUBLIC UTILITY, PRIVATE DETENTION, AND PRIVATE DRAINAGE EASEMENT.
3. ALL LOTS SHALL BE SUBJECT TO PUBLIC UTILITY EASEMENTS AS FOLLOWS:
   10 FEET ON FRONT AND REAR
   10 FEET ON EXTERIOR LINES OF SUBDIVISION
   5 FEET ON SIDE LOT LINES

BROOKSIDE MEADOWS P.R.D.
LOCATED IN THE NORTH HALF OF SECTION 24,
TOWNSHIP 4 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
CITY OF ALPINE, UTAH COUNTY, UTAH

SURVEYOR'S SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL
PROFESSIONAL LAND SURVEYOR KAGAN M. DIXON No. 9061091 STATE OF UTAH		

BROOKSIDE MEADOWS

SITE PLAN



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DRAWING NOTES:

LEGEND

1. 3/4" COPPER PIPE WATER LATERAL
2. 4" SEWER LATERAL
3. EXISTING WATER LATERAL
4. 1" SECONDARY WATER LATERAL
5. EXISTING SECONDARY WATER LATERAL

PROPOSED 8" SEWER
PROPOSED 8" WATERLINE
SW PROPOSED SECONDARY WATERLINE (SIZE VARIES)
EXISTING SEWER
EXISTING WATERLINE
EXISTING SECONDARY LINE
*SL PROPOSED STREET LIGHT

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 23, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

SITE PLAN

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER No. 9259147 Jason Peterson JASON REDD PETERSON 12/24/2019 STATE OF UTAH
ENGINEER'S STAMP

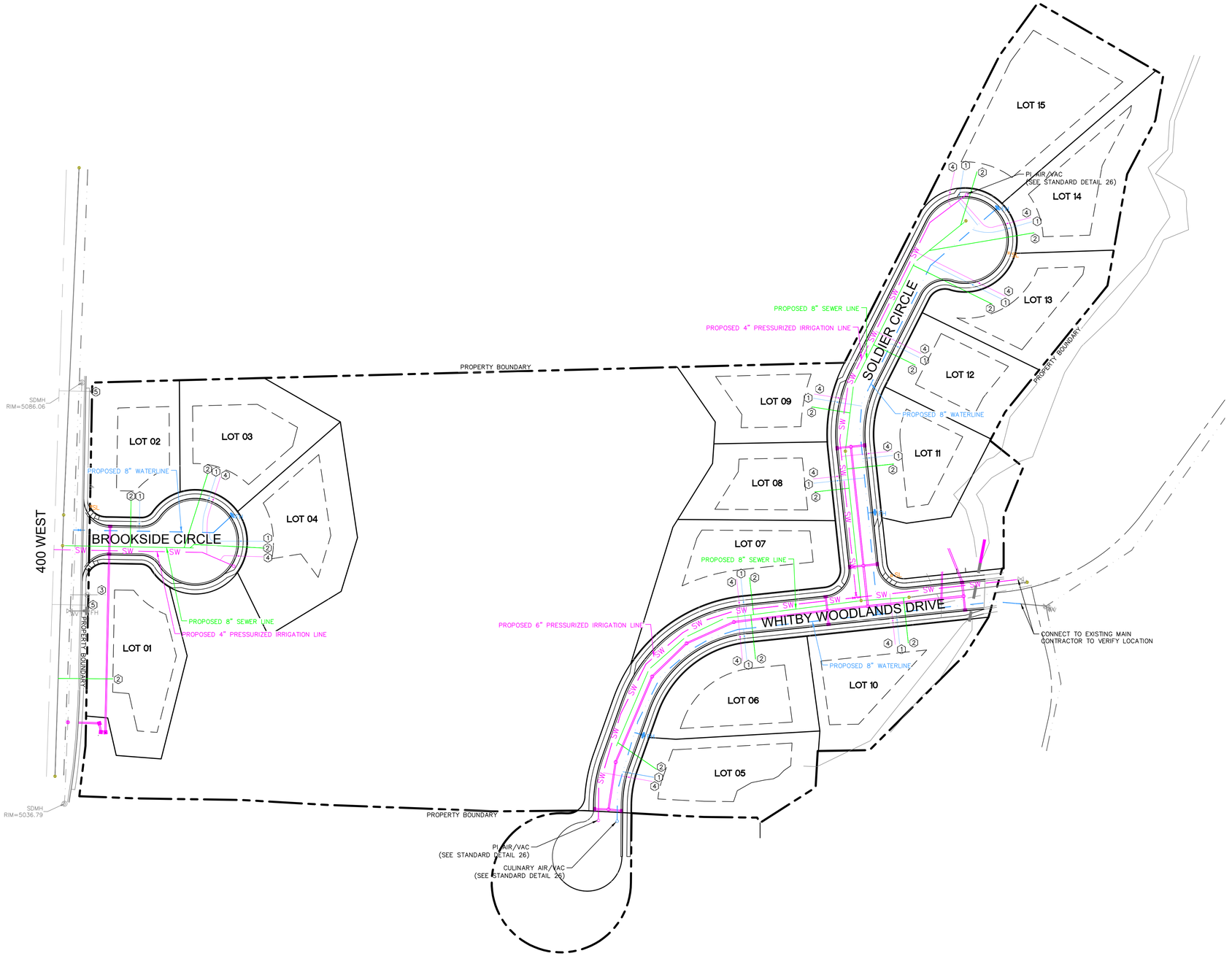
DATE 11/05/2019

SCALE 1" = 60'

SHEET C201-02/14

BROOKSIDE MEADOWS

UTILITY PLAN



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DRAWING NOTES:

GENERAL NOTES
1. THE CONTRACTOR IS RESPONSIBLE TO BE IN ACCORDANCE WITH ALL ALPINE CITY STANDARDS AND SPECIFICATION.
2. ADA RAMPS TO BE LOCATED ALL INTERSECTIONS WITH SIDEWALKS. RAMPS SHALL MEET ADA REQUIREMENTS FOR SLOPE.

UTILITY NOTES
1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALPINE CITY STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL UTILITIES SHOWN OR NOT SHOWN.
3. ALL UTILITIES SHALL REMAIN ACTIVE DURING CONSTRUCTION.

WATERLINE NOTES
1. THRUST BLOCKS OR MECHANICAL RESTRAINING DEVICES SHALL BE USED FOR TEES, VALVES, PLUGS, CAPS AND BENDS.
2. MINIMUM BURY DEPTH OF WATERLINE IS 4'.
3. DUCTILE IRON PIPE SHALL BE USED FOR ALL CULINARY DRINKING WATER MAINS UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.

SEWER NOTES
1. ALL CONSTRUCTION SHALL COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERTS ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTION ANY NEW SEWER LINES.
3. FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.
4. PVC SEWER LINES TO BE SDR-35 PVC PIPE.

PRESSURIZED IRRIGATION NOTES
1. THRUST BLOCKS OR MECHANICAL RESTRAINING DEVICES SHALL BE USED FOR TEES, VALVES, PLUGS, CAPS AND BENDS.
2. MINIMUM BURY DEPTH OF THE PRESSURIZED IRRIGATION LINE IS 2'.
3. PRESSURIZED IRRIGATION LINES ARE TO BE PVC C-900.

LEGEND

- (1) 3/4" COPPER PIPE WATER LATERAL
- (2) 4" SEWER LATERAL
- (3) EXISTING WATER LATERAL
- (4) 1" SECONDARY WATER LATERAL
- (5) EXISTING SECONDARY WATER LATERAL
- PROPOSED 8" SEWER
- PROPOSED 8" WATERLINE
- SW PROPOSED SECONDARY WATERLINE (SIZE VARIES)
- FH PROPOSED FIRE HYDRANT W/ ASSEMBLY
- EXISTING SEWER
- EXISTING WATERLINE
- EXISTING SECONDARY LINE
- FH EXISTING FIRE HYDRANT
- SL PROPOSED STREET LIGHT

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PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

UTILITY PLAN

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
JASON REDD PETERSON
12/24/2019
STATE OF UTAH
ENGINEER'S STAMP

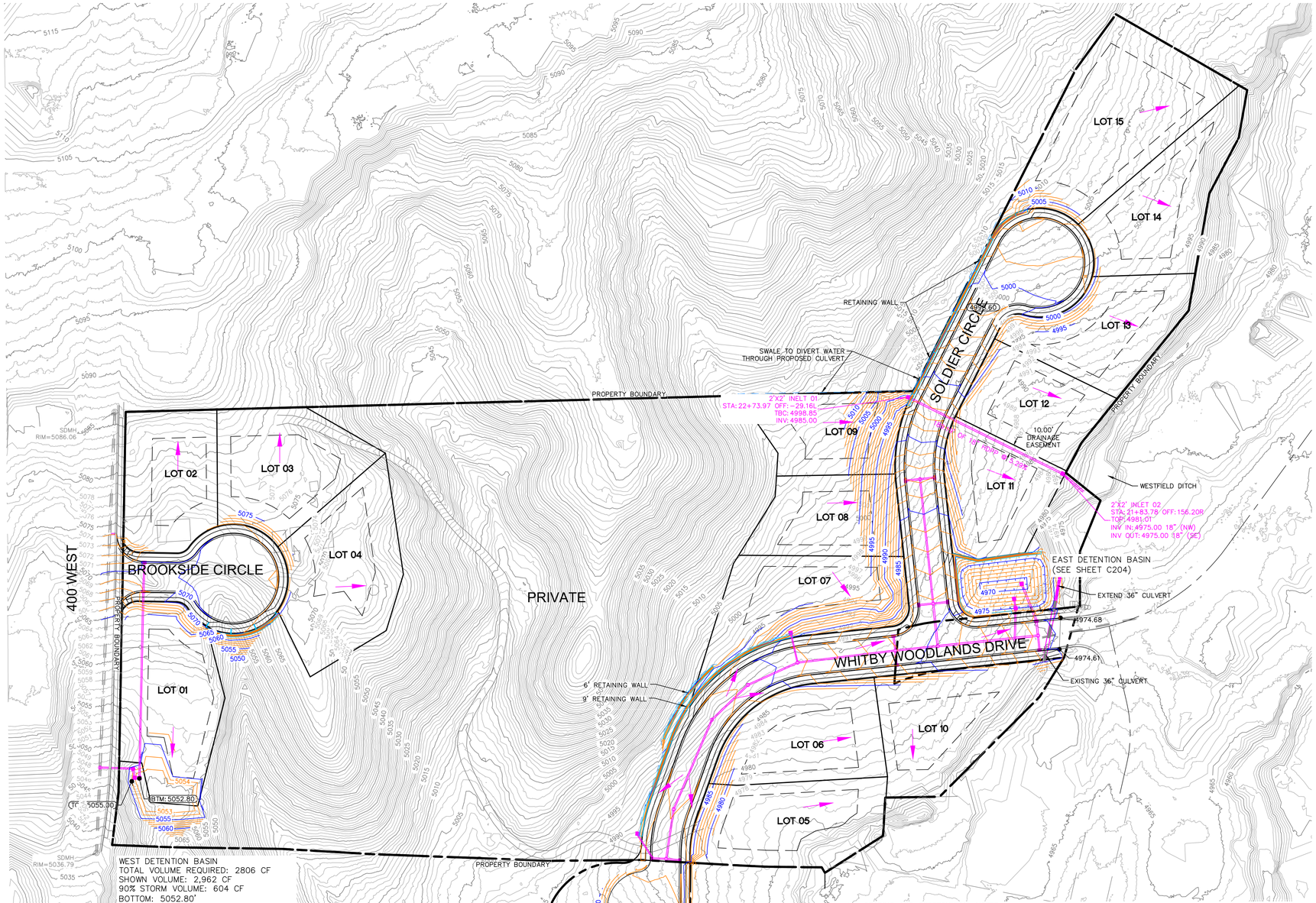
DATE 11/05/2019

SCALE 1" = 60'

SHEET C202-03/14

BROOKSIDE MEADOWS

GRADING & DRAINAGE PLAN



WEST DETENTION BASIN
TOTAL VOLUME REQUIRED: 2806 CF
SHOWN VOLUME: 2,962 CF
90% STORM VOLUME: 604 CF
BOTTOM: 5052.80'
90% STORM OUTLET ELEVATION: 5053.10'
HIGH WATER ELEVATOIN: 5054.00'
TOP OF POND: 5055.00''

GRADING AND GEOTECHNICAL NOTES:

1. AREAS OF CUT AND FILL ARE TO HAVE THE TOP SOIL AND BIOLOGIC MATTER REMOVED.
2. STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR, FILL IN LANDSCAPED AREAS SHALL BE COMPACTED TO 90% OF THE MODIFIED PROCTOR.
3. A SITE SPECIFIC GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE GEOTECHNICAL REPORT AND COMPLYING WITH THE RECOMMENDATIONS CONTAINED THEREIN.
4. SOILS THAT ARE OBSERVED TO RUT OR DEFLECT GREATER THAN 1/2 INCH UNDER A MOVING LOAD SHOULD BE OVER-EXCAVATED DOWN TO FIRM UNDISTURBED NATIVE SOILS AND BACKFILLED WITH PROPERLY PLACED AND COMPACTED STRUCTURAL FILL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. AN ALPINE CITY INSPECTOR SHALL BE PRESENT FOR THE PROOF ROLL.
5. ALL UTILITIES ENCOUNTERED IN EXCAVATING SHALL BE CAREFULLY SUPPORTED, MAINTAINED, AND PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH OSHA REGULATIONS.
6. ALL PIPING SHALL BE PROTECTED FROM LATERAL DISPLACEMENT AND POSSIBLE DAMAGE RESULTING FROM IMPACT OR UNBALANCED LOADING DURING BACKFILLING OPERATIONS BY BEING ADEQUATELY BEDDED.
7. THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION.

N

60 0 60 120

Scale 1" = 60 ft

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DRAWING NOTES:

DRAINAGE NOTES
1. WHEN APPLYING FOR BUILDING PERMITS, EACH LOT SHALL SUBMIT A SEPARATE GRADING & DRAINAGE PLAN TO SHOW HOW IT WILL RETAIN A 100-YEAR EVENT, WITH THE EXCEPTION OF LOTS 1, 7, 8, AND 9.
2. WATER IS NOT TO CROSS PROPERTY LINES. PROPERTY LINE BERMS MAY BE NEEDED.
3. ARROWS SHOW ANTICIPATED FLOW DIRECTION.

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- UTILITY EASEMENT
- PROPOSED SWALE
- DRAINAGE DIRECTION
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT
- PROPOSED SD MANHOLE
- PROPOSED FINISHED GRADE (4987.28)
- EXISTING GRADE (4974.61)

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PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

GRADING & DRAINAGE PLAN

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
Jason Peterson
JASON REDD PETERSON
12/24/2015
STATE OF UTAH
ENGINEER'S STAMP

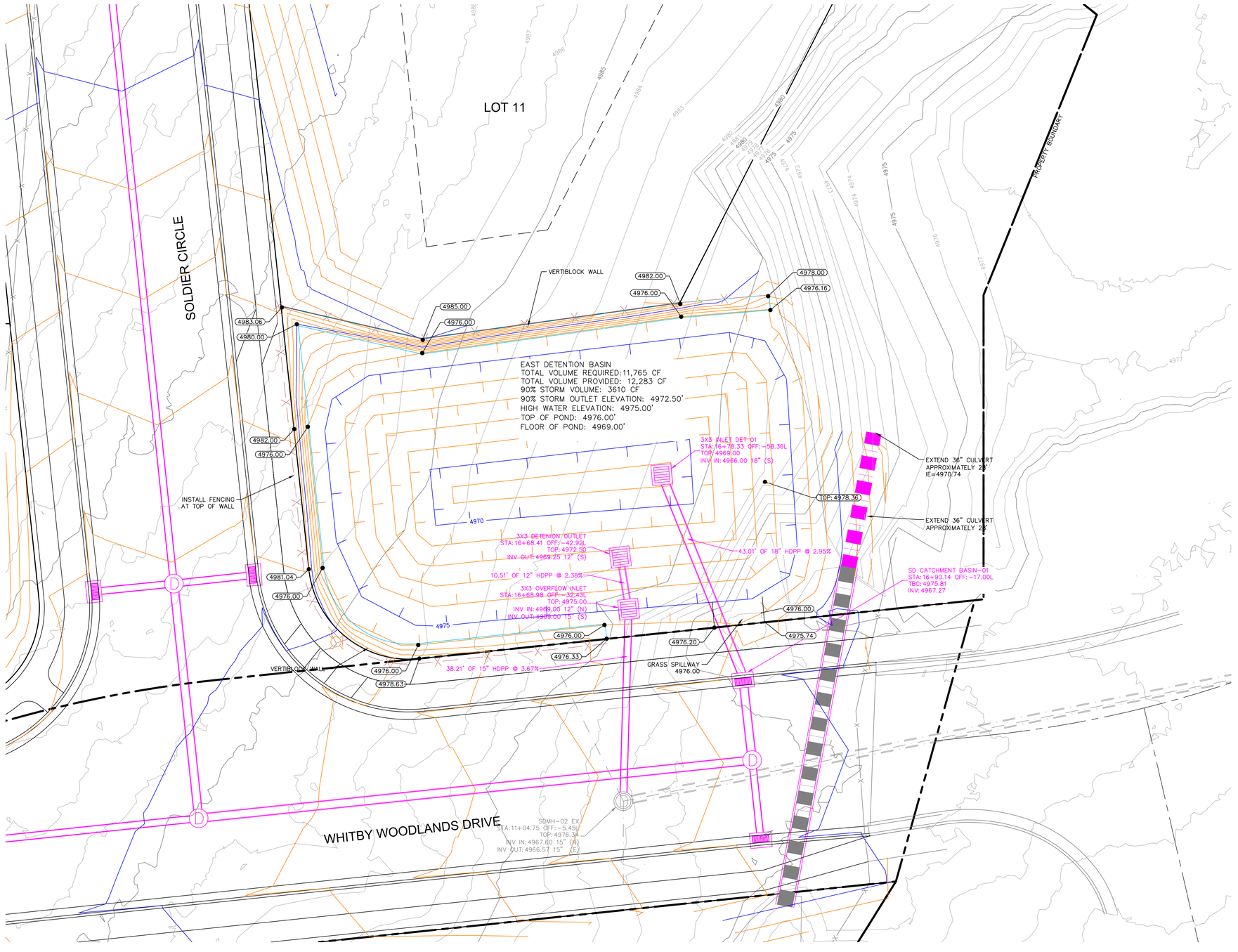
DATE 11/05/2019

SCALE 1" = 60'

SHEET C203-04/14

BROOKSIDE MEADOWS

GRADING & DRAINAGE PLAN - EAST DETENTION



N

10 0 10 20

Scale 1" = 10 ft

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DRAWING NOTES:

1. THE ORIFICE PLATE SHALL BE BOLTED TO THE OUTLET OF THE SPECIFIED STRUCTURE.

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- UTILITY EASEMENT
- PROPOSED SWALE
- DRAINAGE DIRECTION
- PROPOSED CATCH BASIN
- PROPOSED BUBBLE-UP BOX
- PROPOSED CLEANOUT
- STORMTECH MC-4500 CHAMBER
- STORMTECH MC-4500 END CAP
- PROPOSED FINISHED GRADE (4987.28)

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PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

GRADING & DRAINAGE PLAN - EAST DETENTION

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
JASON REDD PETERSON
12/24/2019
STATE OF UTAH

ENGINEER'S STAMP

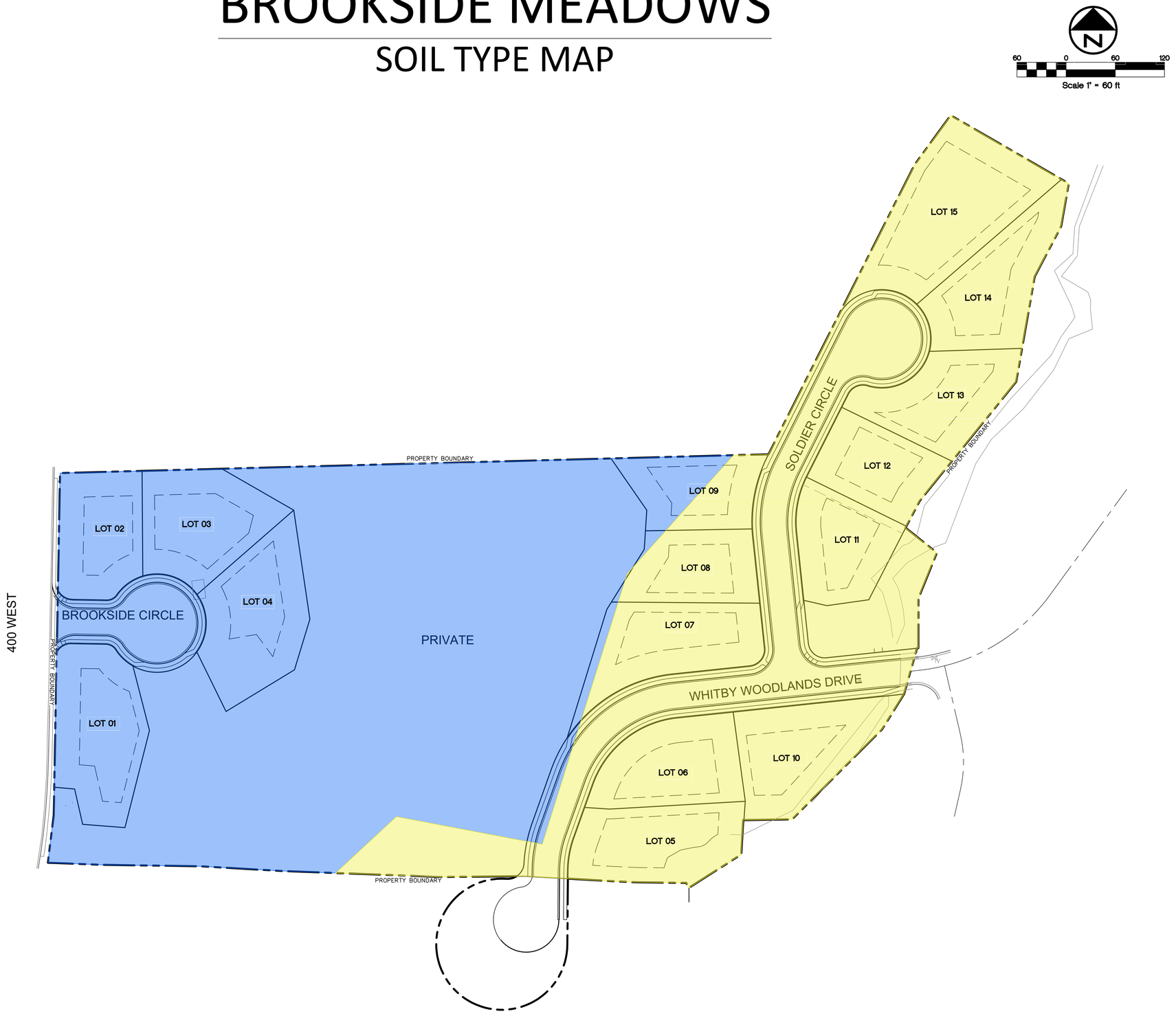
DATE: 11/05/2019

SCALE: 1" = 10'

SHEET: C204-05/14

BROOKSIDE MEADOWS

SOIL TYPE MAP



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DRAWING NOTES:

LEGEND

- TYPE A SOIL
- TYPE C SOIL

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PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

SOIL TYPE MAP

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
JASON REDD PETERSON
12/24/2019
STATE OF UTAH
ENGINEER'S STAMP

DATE 11/05/2019

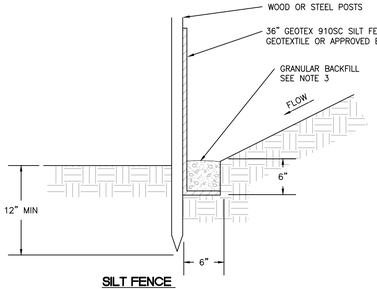
SCALE 1" = 60'

SHEET C205-06/14

BROOKSIDE MEADOWS

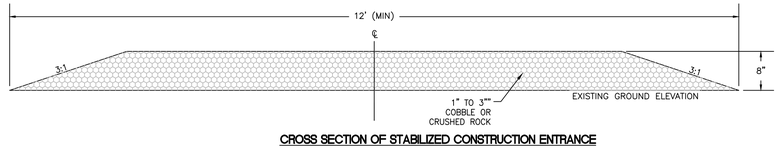
EROSION CONTROL PLAN

NOTES:
1. EXCAVATE 6" X 6" TRENCH ALONG LIMITS OF DISTURBANCE AS SHOWN ON CONSTRUCTION DRAWINGS.
2. POSTS SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
3. LAY TOE-IN FABRIC FLAP IN BOTTOM OF TRENCH, BACKFILL TRENCH WITH FREE DRAINING GRANULAR MATERIAL, COMPACT TRENCH TO SATISFACTION OF CITY INSPECTOR.
4. SILT FENCE GEOTEXTILE SHALL MEET AASHTO M288-92 REQUIREMENTS.
5. REMOVE & DISPOSE OF SEDIMENT WHEN ACCUMULATION IS 50% OF EXPOSED FENCE HEIGHT.
6. 10' MAXIMUM SPACING BETWEEN STAKES.

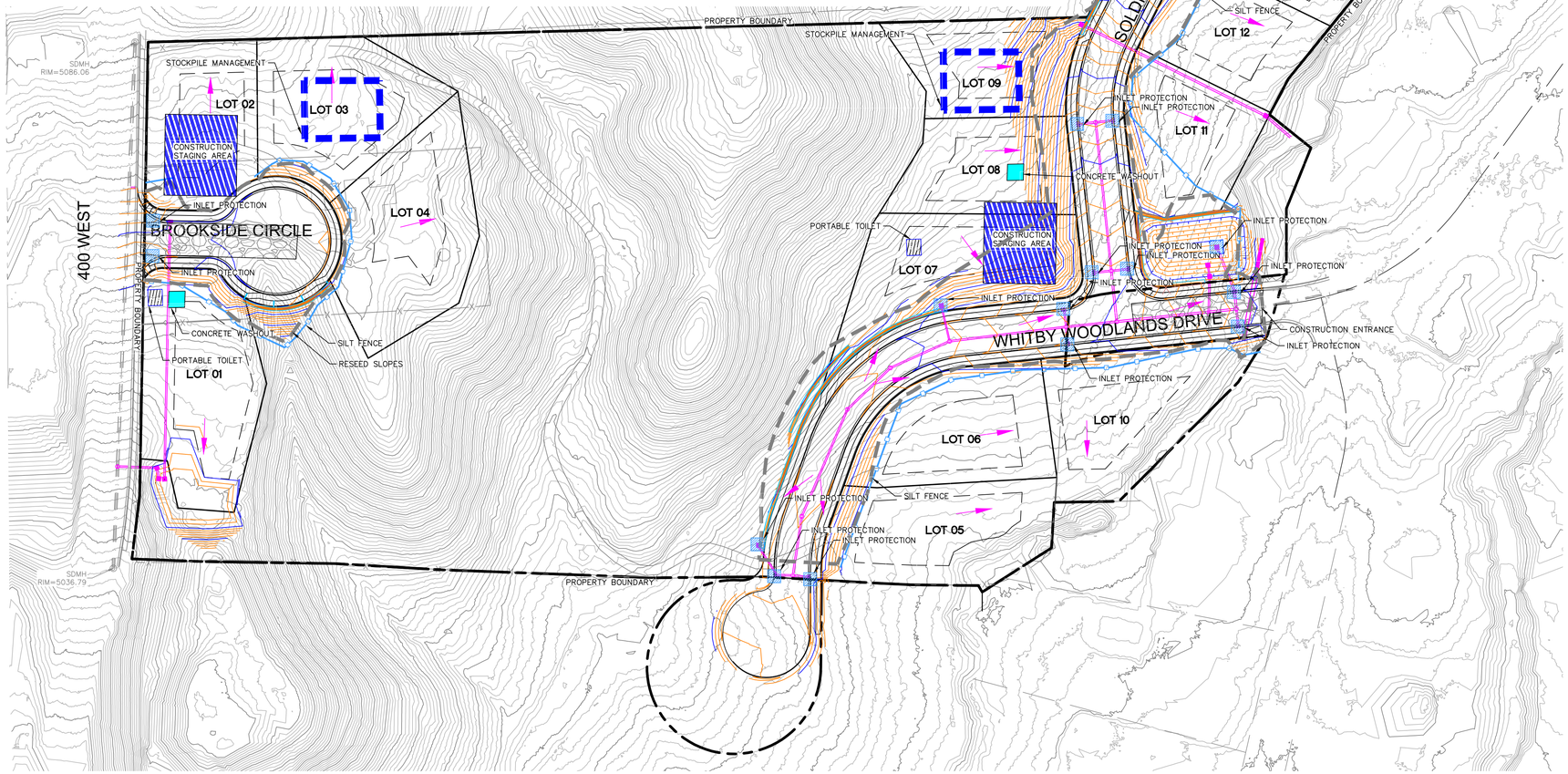


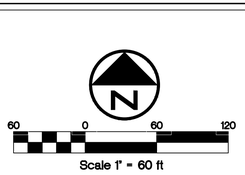
SILT FENCE
NOT TO SCALE

NOTES:
1. UNLESS OTHERWISE SHOWN, THE DIMENSIONS OF THE CONSTRUCTION ENTRANCE IS 12' WIDE AND 50 FEET LONG.
2. PLACE STABILIZED CONSTRUCTION ENTRANCE ON SOLID GROUND OR ON A 6" LAYER OF UNTREATED BASE COURSE FOR BEARING STRENGTH ON SOFT GROUND.
3. PROVIDE A 10' TRANSITION RAMP FROM THE EXISTING ROADWAY ELEVATION TO THE TOP OF THE STABILIZED CONSTRUCTION ENTRANCE AT EACH END.
4. REMOVE STABILIZED CONSTRUCTION ENTRANCE WHEN SITE IS STABILIZED AND OTHER EARTH MOVING AND HAUL OPERATIONS ARE COMPLETE.



CROSS SECTION OF STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE





Scale 1" = 60 ft

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DRAWING NOTES:
1. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES, PER THE REQUIREMENTS OF THE UPDES CONSTRUCTION GENERAL PERMIT.
2. THE SWPPP SHALL BE REVISED AS NEEDED AND KEPT UP-TO-DATE DURING THE TIME OF CONSTRUCTION
3. ALL DUST, MUD AND EROSION CONTROL DEVICES SHALL BE CHECKED BY THE CONTRACTOR AS NEEDED. NEEDED CLEANING AND REPAIRS SHALL BE DONE IMMEDIATELY UPON DISCOVERY.
4. EROSION CONTROL METHODS AND STRUCTURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED BY THE CONTRACTOR AS LONG AS NEEDED TO PREVENT EROSION.
5. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM THE SITE.
6. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS, FOR DUST SUPPRESSION, IS ABSOLUTELY PROHIBITED.
7. SILT FENCES, TEMPORARY SEDIMENT TRAPS, TEMPORARY BERMS, AND OTHER EROSION CONTROL DEVICES ARE TO BE INSPECTED AND MAINTAINED WITHIN 24 HOURS AFTER EACH SIGNIFICANT STORM EVENT (0.5 INCHES).
8. TEMPORARY SEDIMENTATION BASINS AND STORM WATER MANAGEMENT FACILITIES REQUIRE A MANDATORY INSPECTION ONCE A WEEK OR WITHIN 24 HOURS OF A MAJOR STORM EVENT (0.5 INCHES) OR A SNOW MELT UNTIL ALL DISTURBED AREAS ARE STABILIZED ACCORDING TO THESE PLANS.
9. CONTRACTOR TO REPLACE DAMAGED EROSION CONTROL DEVICES, OR DEVICES THAT DO NOT FUNCTION PROPERLY AT NO ADDITIONAL COST TO THE OWNER.
10. THIS EROSION CONTROL PLAN REPRESENTS EROSION CONTROL NECESSARY PRIOR TO EARTH DISTURBANCE ACTIVITIES AT THE BEGINNING OF CONSTRUCTION.
11. SITE SOIL STABILITY SHALL BE MAINTAINED BY GRADING TEMPORARY SWALES AND BERMS DURING MASS GRADING. DISTURBED AREAS WHERE CONSTRUCTION IS NOT UNDERWAY WILL BE STABILIZED BY BERMS AND SWALES. THIS CAN BE ACCOMPLISHED BY USING TRACK MOUNTED HEAVY EQUIPMENT TO TRACK SLOPES PARALLEL TO SITE TOPOGRAPHY. THIS WILL SLOW THE VELOCITY OF SHEETING STORM WATER RUNOFF AND MITIGATE AGAINST LARGE RILL AND GULLY FORMATION, THUS LESSENING SITE SOIL EROSION.
12. 12" TO 2 FOOT EARTHEN BERMS WILL BE PLACED STRATEGICALLY ONSITE TO MITIGATE AGAINST SOIL EROSION DURING TIMES OF INCLEMENT WEATHER. THE LOCATION OF THOSE BERMS WILL BE DETERMINED DURING THE SWPPP MONITORING PROCESS AND WILL BE BASED ON CHANGING SITE CONDITIONS DURING MASS GRADING.
13. COCONUT MATTING SHALL BE USED TO STABILIZE TEMPORARY SLOPES OR SWALES AS NEEDED.
14. PERMANENT STABILIZATION WILL CONSIST OF SEEDING WILL TAKE PLACE ON SITE EXPOSED SLOPES WITHIN THE FALL OR SPRING SEEDING WINDOW CORRESPONDING WITH THIS AREA. SEED WILL BE BROADCAST AND INCORPORATED INTO TOPSOIL AS PER SPECIFICATION STATED BY THE STORM WATER POLLUTION PREVENTION PLAN. INCORPORATION REQUIREMENTS WILL VARY BASED ON SLOPE ANGLE, SOIL STABILITY AND LAND USE. MULCH MATTING WILL BE INSTALLED OVER AREAS SEEDED.
15. A CERTIFIED WEED-FREE MIX APPROVED BY ALPINE CITY WOULD BE USED DURING RECLAMATION ACTIVITIES AND WHERE PRACTICAL WOULD UTILIZE NATIVE SPECIES FOUND IN OR ENDEMIC TO THE AREA. THE OBJECTIVE OF RECLAMATION WOULD BE TO RESTORE TEMPORARILY DISTURBED AREAS IMPACTED AS PART OF THIS PROJECT TO AT LEAST 50 PERCENT OF THE RANGE SITE POTENTIAL WITHIN 3 YEARS OF COMPLETION OF RESTORATION EFFORTS. IF THE REHABILITATION OBJECTIVE IS NOT ACHIEVED, THE DEVELOPER WOULD BE RESPONSIBLE FOR FURTHER RESTORATION ACTIVITIES.

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- CLEARING LIMITS
- SILT FENCE
- DRAINAGE DIRECTION
- CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING
- CONCRETE WASH AREA
- PORTABLE WASTE AREA
- INLET PROTECTION

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

EROSION CONTROL PLAN

ALPINE CITY, UTAH

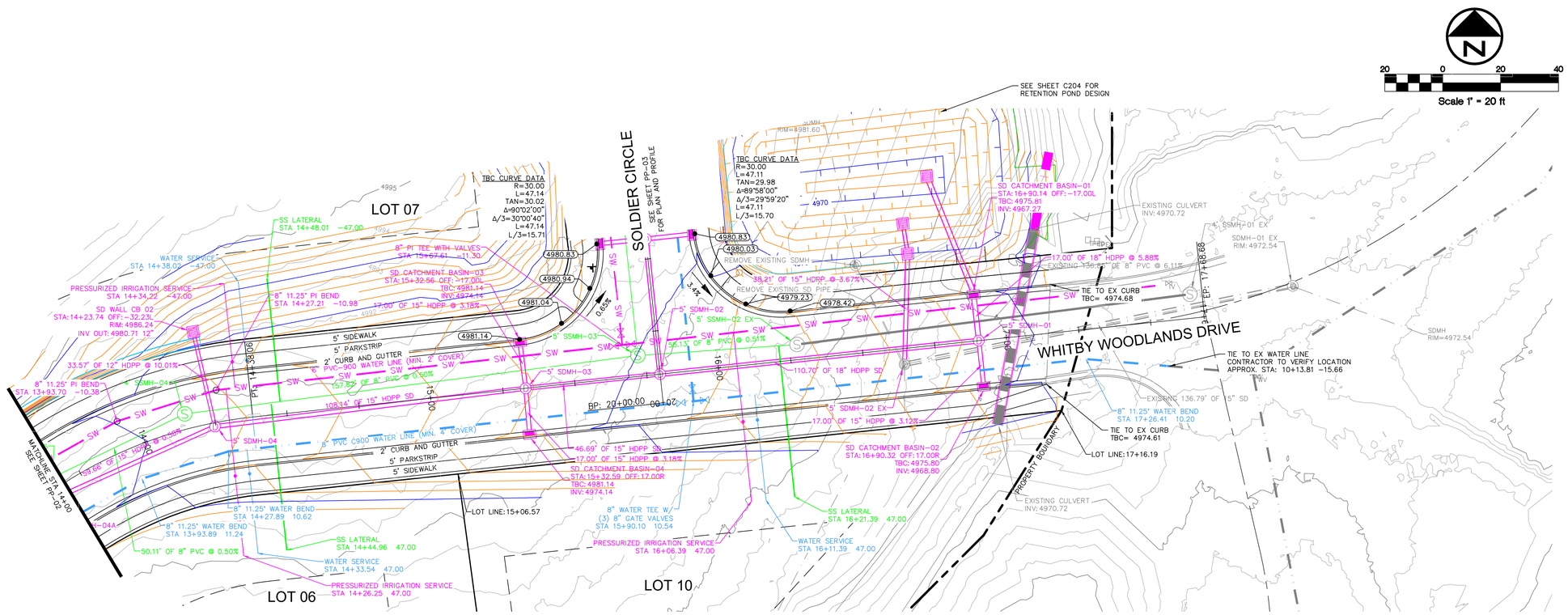
DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

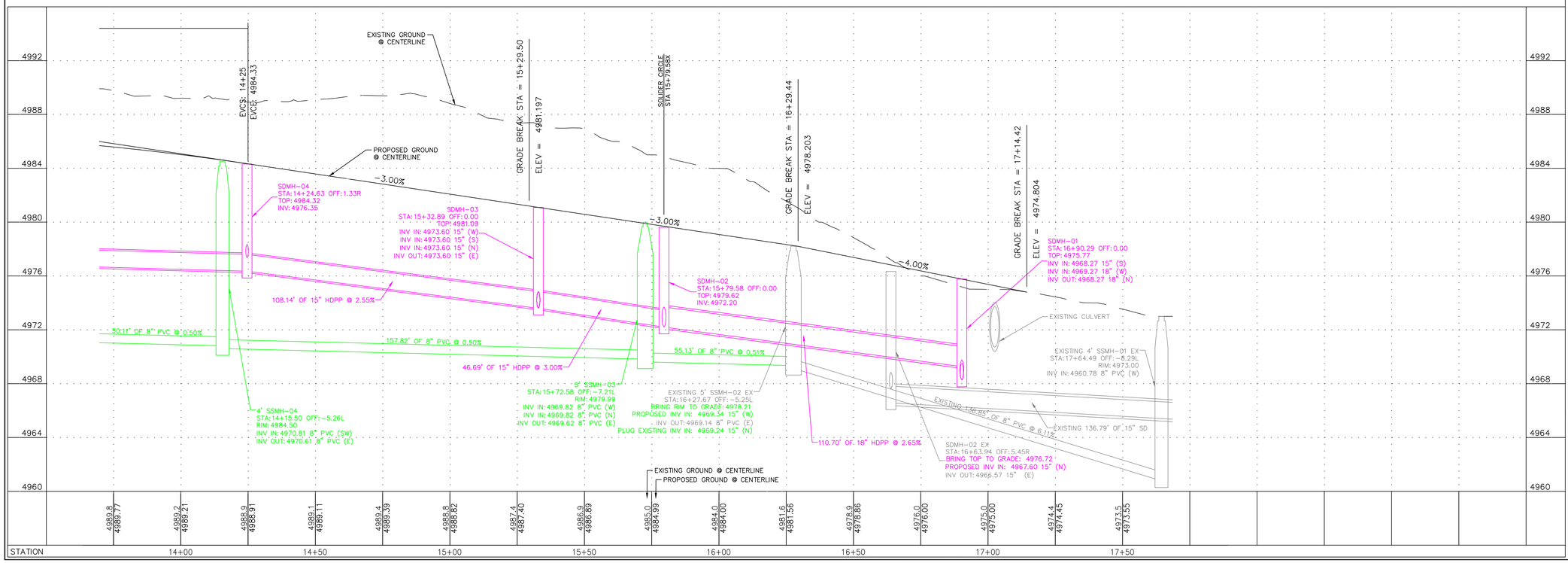
PROFESSIONAL ENGINEER
No. 9259147
JASON REDD PETERSON
12/24/2019
STATE OF UTAH
ENGINEER'S STAMP

DATE: 11/05/2019

SCALE: 1" = 60'

SHEET: C206-07/14





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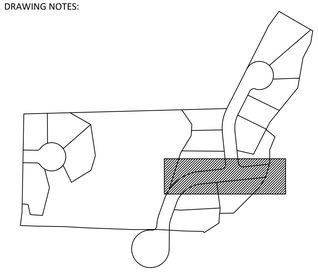
ENGINEERING
14721 South Heritage Crest Way
Bluffdale, Utah 84065
801.553.8112
www.wildingengineering.com

DRAWING NOTES:



VICINITY MAP

1. THE VERTICAL DATUM USED IS THE 1988 NORTH AMERICAN VERTICAL DATUM.
2. STUB ALL UTILITY LATERALS 10' PAST THE SIDEWALK, MARK WITH 4X4 POST PAINTED GREEN (SEWER), PURPLE (SECONDARY WATER) OR BLUE (CULINARY WATER)

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED STORM DRAIN
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED PRESSURIZED IRRIGATION — SW —
- PUBLIC UTILITY EASEMENT
- PROPOSED FIRE HYDRANT
- PROPOSED STREET LIGHT
- PROPOSED SEWER MANHOLE
- EXISTING STORMDRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT BOX

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

PLAN & PROFILE - WHITBY WOODLANDS DRIVE

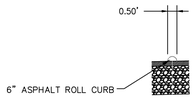
STA 10+00 - 14+00

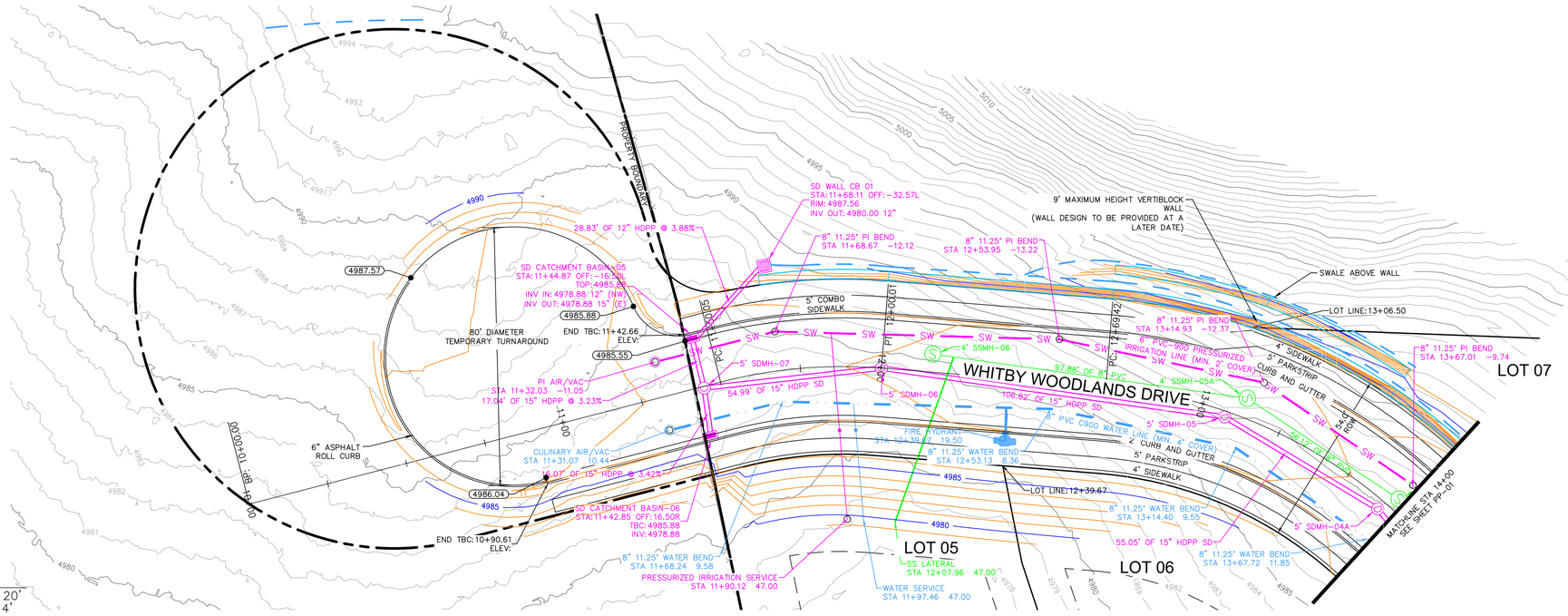
ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
Jason Peterson
JASON REDD PETERSON
12/24/2019
STATE OF UTAH
ENGINEER'S STAMP

DATE: 11/05/2019
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'
SHEET: C301-08/14





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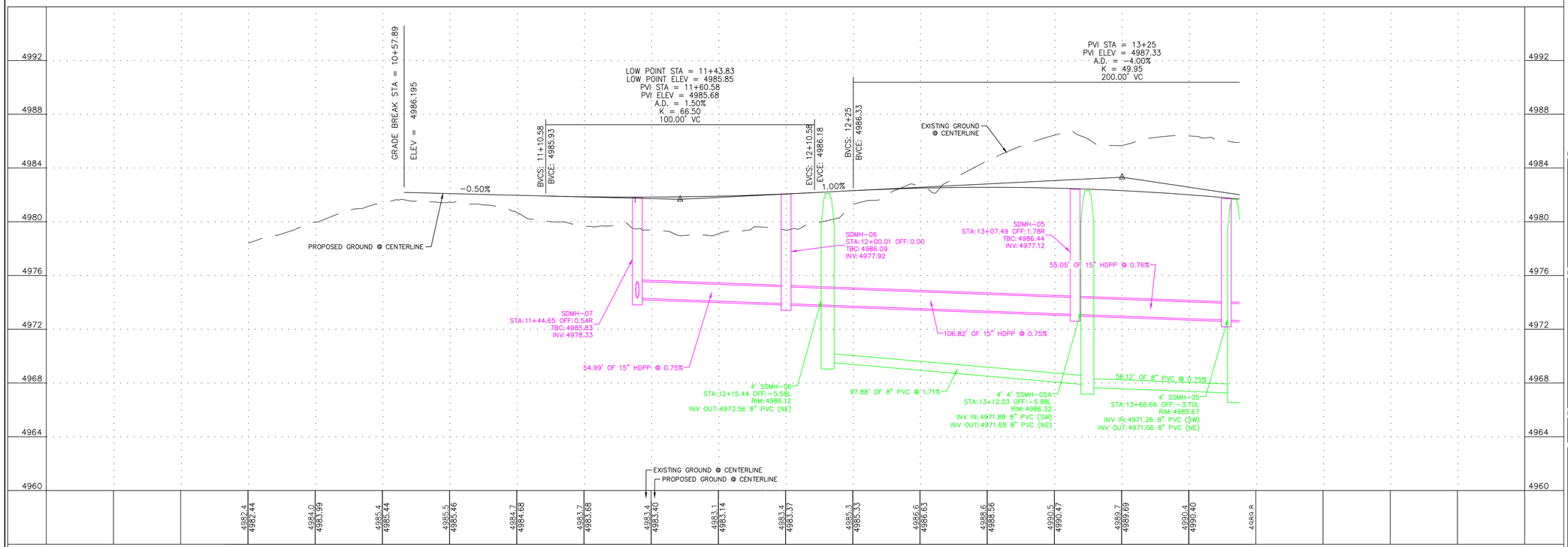
VER. 1" = 4'



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801.553.8112
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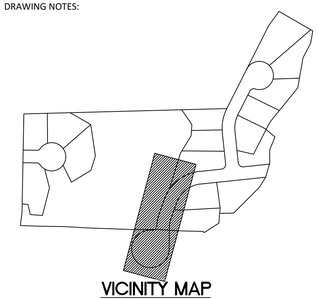
DRAWING NOTES:



VICINITY MAP

1. THE VERTICAL DATUM USED IS THE 1988 NORTH AMERICAN VERTICAL DATUM.
2. STUB ALL UTILITY LATERALS 10' PAST THE SIDEWALK, MARK WITH 4X4 POST PAINTED GREEN (SEWER), PURPLE (SECONDARY WATER) OR BLUE (CULINARY WATER)

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED STORM DRAIN
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED PRESSURIZED IRRIGATION (SW)
- PUBLIC UTILITY EASEMENT
- DRAINAGE SWALE
- PROPOSED FIRE HYDRANT
- PROPOSED STREET LIGHT
- PROPOSED SEWER MANHOLE
- EXISTING STORMDRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT BOX

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

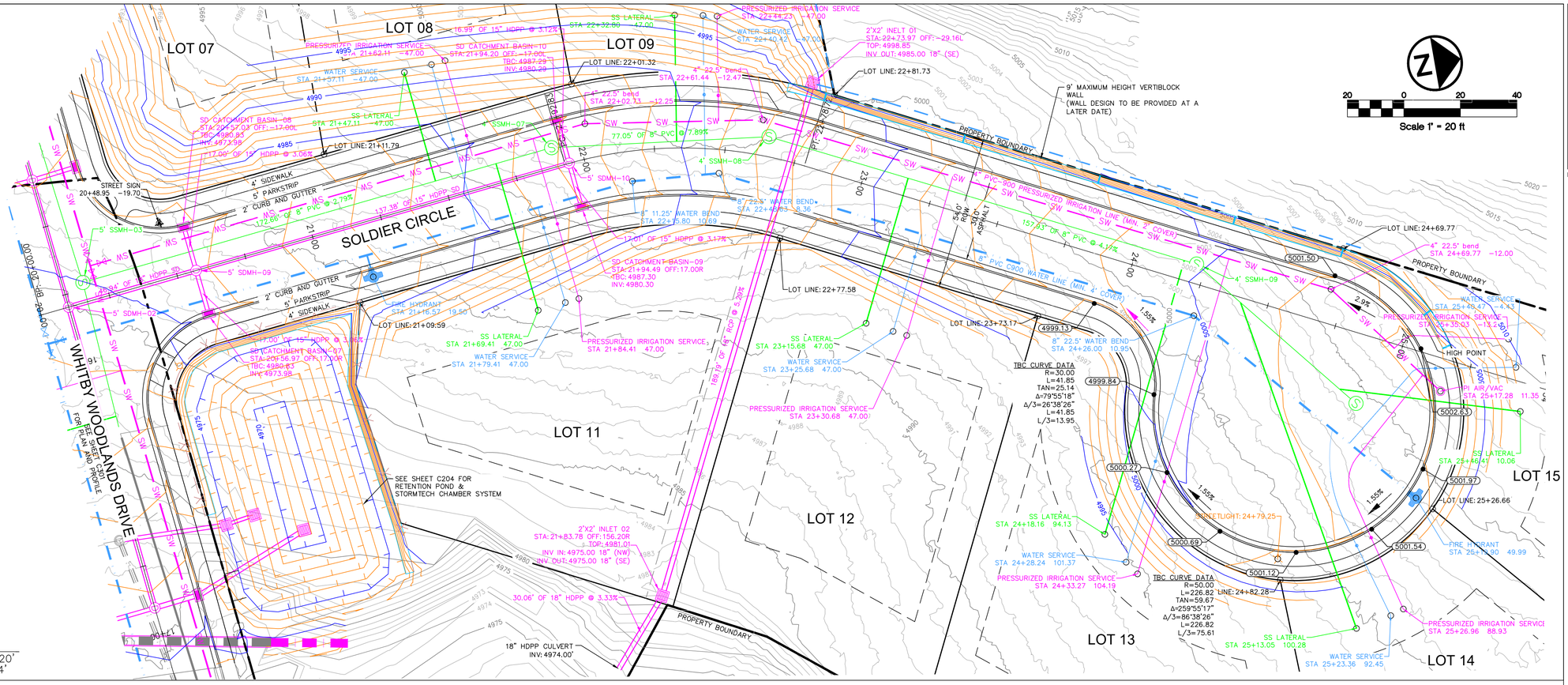
PLAN & PROFILE - WHITBY WOODLANDS DRIVE

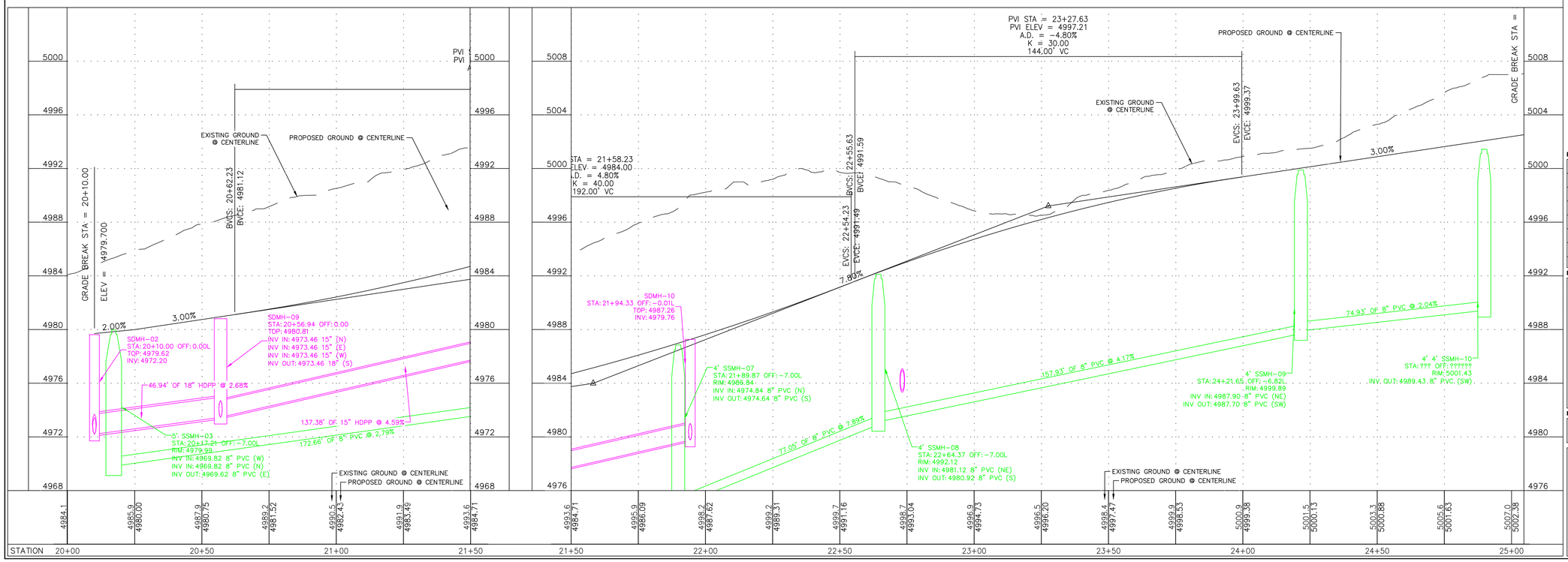
STA 14+00 - 17+68.68
ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
Jason Redd
JASON REDD PETERSON
12/24/2019
STATE OF UTAH
ENGINEER'S STAMP

DATE 11/05/2019
HORIZONTAL SCALE 1" = 20'
VERTICAL SCALE 1" = 4'
SHEET C302-09/14





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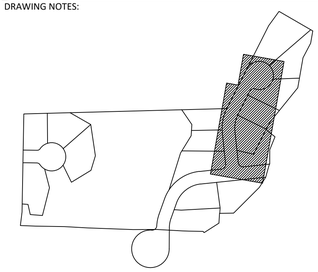
DRAWING NOTES:



VICINITY MAP

1. THE VERTICAL DATUM USED IS THE 1988 NORTH AMERICAN VERTICAL DATUM.
2. STUB ALL UTILITY LATERALS 10' PAST THE SIDEWALK, MARK WITH 4X4 POST PAINTED GREEN (SEWER), PURPLE (SECONDARY WATER) OR BLUE (CULINARY WATER)

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED STORM DRAIN
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED PRESSURIZED IRRIGATION (SW)
- PUBLIC UTILITY EASEMENT
- PROPOSED DRAINAGE SWALE
- PROPOSED FIRE HYDRANT
- PROPOSED STREET LIGHT
- PROPOSED SEWER MANHOLE
- EXISTING STORMDRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT BOX

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

PLAN & PROFILE SOLDIER CIRCLE

20+00 - 25+04.63

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER No. 9259147 Jason Redd PETERSON 12/24/2019 STATE OF UTAH

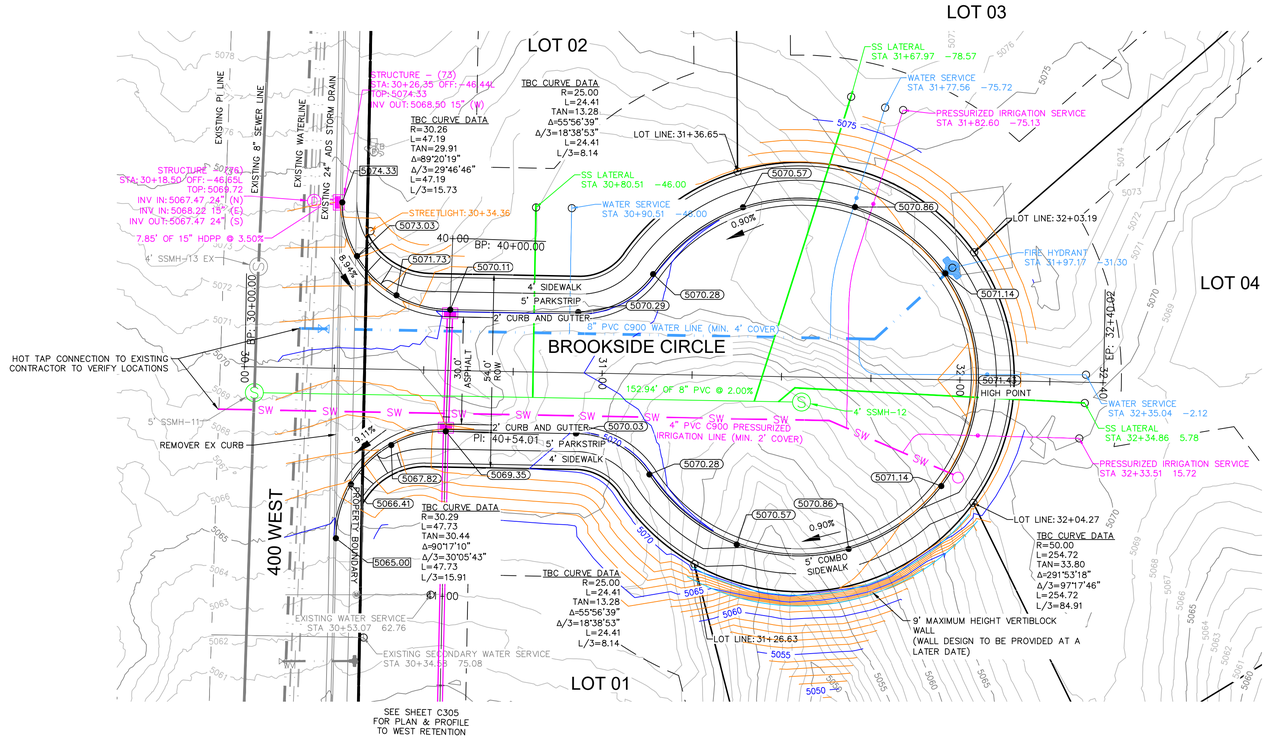
ENGINEER'S STAMP

DATE 11/05/2019

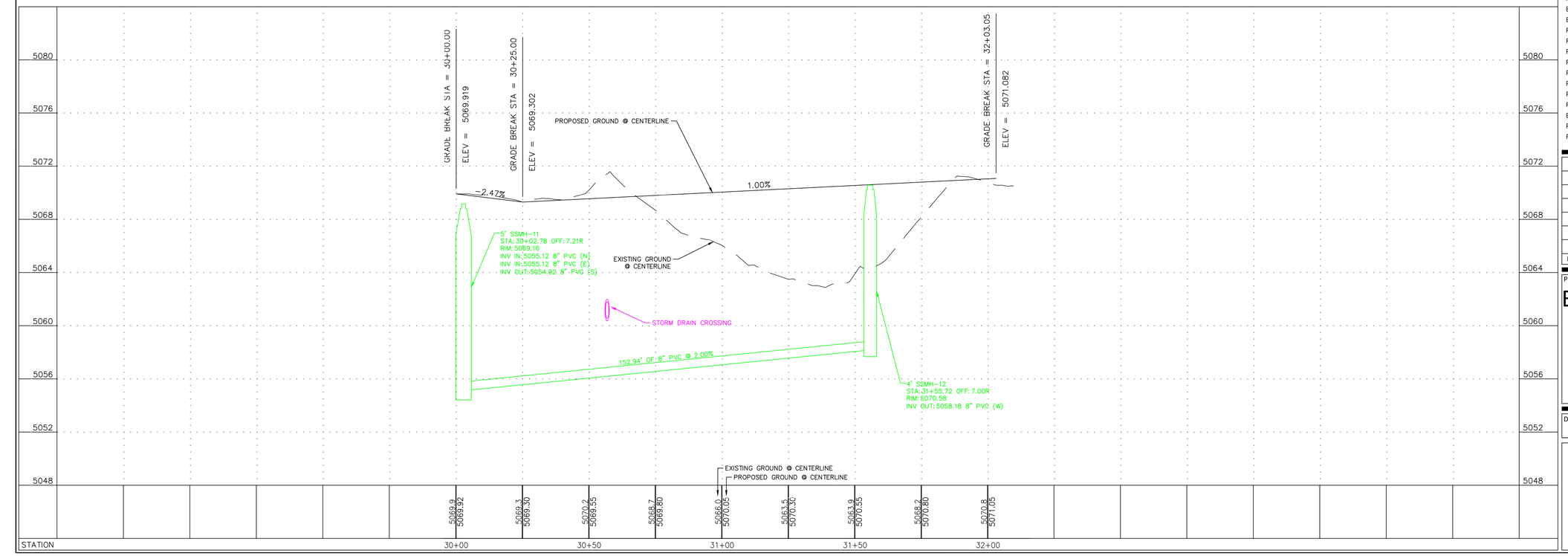
HORIZONTAL SCALE 1" = 20'

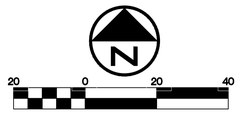
VERTICAL SCALE 1" = 4'

SHEET C303-10/14



SCALES
HOR. 1" = 20'
VER. 1" = 4'





Scale 1" = 20 ft

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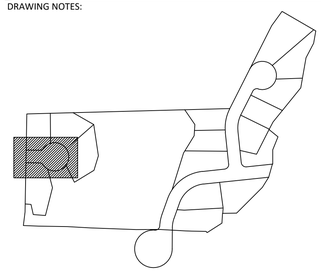
DRAWING NOTES:



VICINITY MAP

1. THE VERTICAL DATUM USED IS THE 1988 NORTH AMERICAN VERTICAL DATUM.
2. STUB ALL UTILITY LATERALS 10' PAST THE SIDEWALK, MARK WITH 4X4 POST PAINTED GREEN (SEWER), PURPLE (SECONDARY WATER) OR BLUE (CULINARY WATER)

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED STORM DRAIN
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED PRESSURIZED IRRIGATION — SW —
- PUBLIC UTILITY EASEMENT
- PROPOSED FIRE HYDRANT
- PROPOSED STREET LIGHT
- PROPOSED SEWER MANHOLE
- EXISTING STORMDRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT BOX

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

PLAN & PROFILE
BROOKSIDE CIRCLE

STA 30+00 - 32+03.05

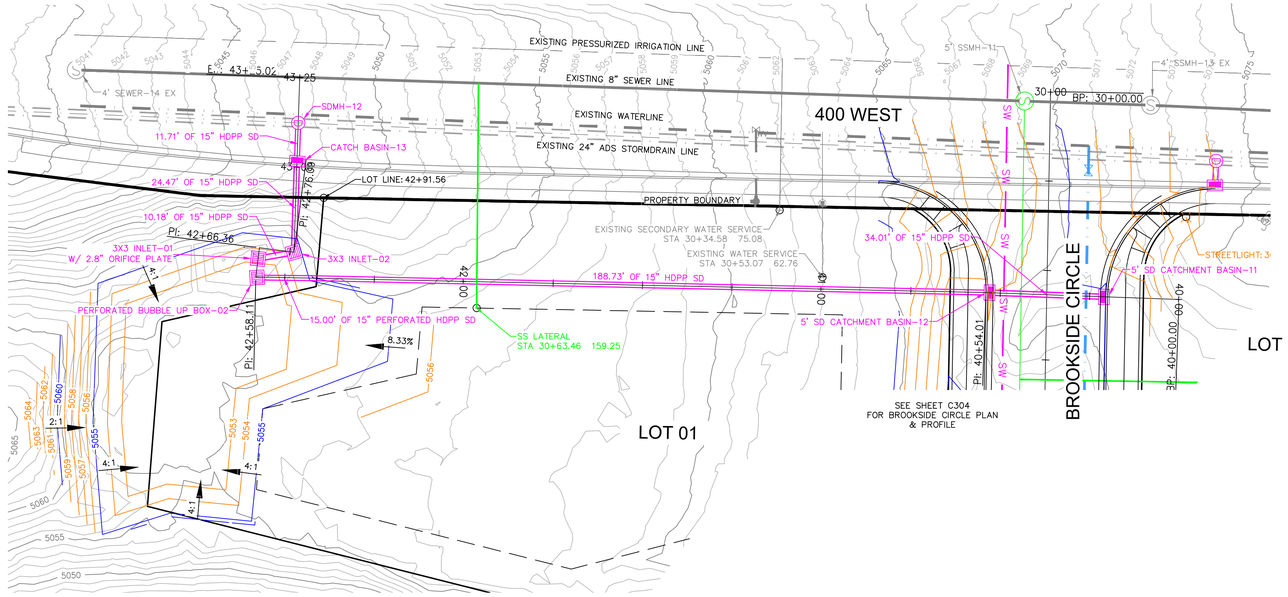
ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

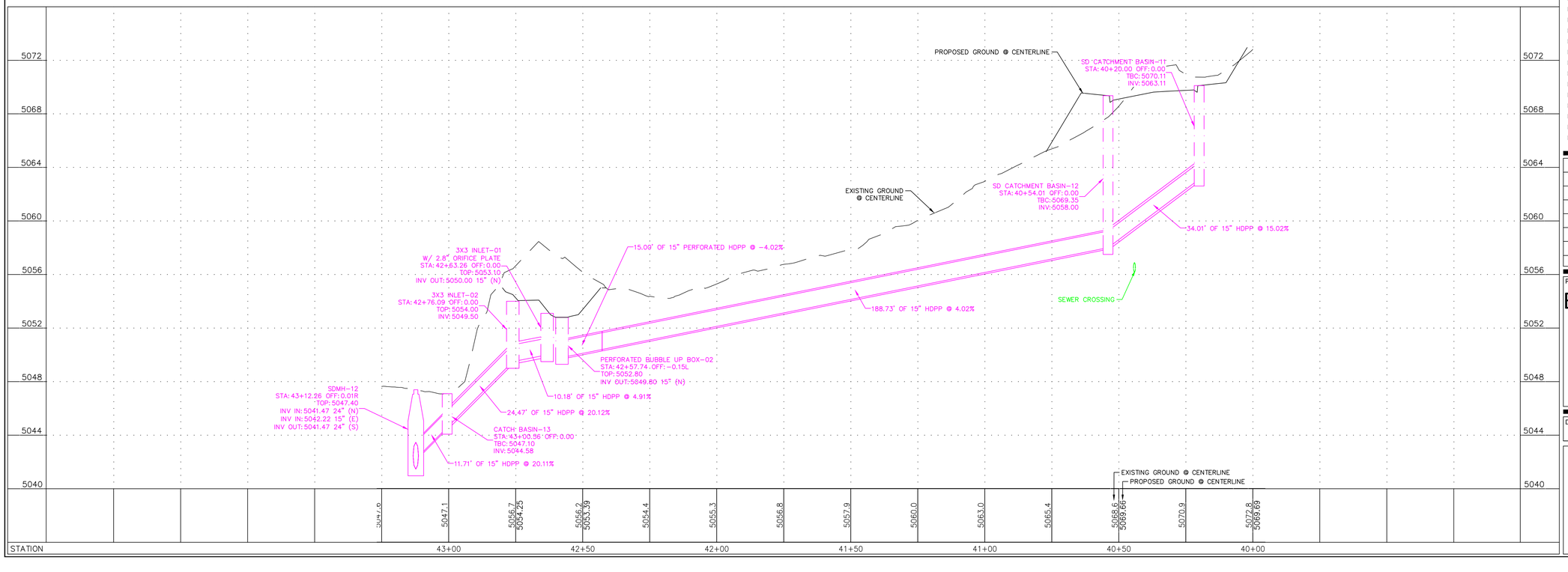
PROFESSIONAL ENGINEER
No. 9259147
JASON REDD PETERSON
12/24/2019
STATE OF UTAH

ENGINEER'S STAMP

DATE 11/05/2019
HORIZONTAL SCALE 1" = 20'
VERTICAL SCALE 1" = 4'
SHEET C304-11/14



SCALES
HOR. 1" = 20'
VER. 1" = 4'



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14721 South Heritage Crest Way
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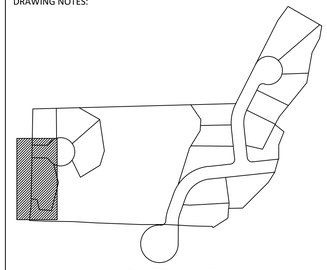
801.553.8112
www.wildingengineering.com

DRAWING NOTES:



VICINITY MAP

1. THE VERTICAL DATUM USED IS THE 1988 NORTH AMERICAN VERTICAL DATUM.
2. THE ORIFICE PLATE SHALL BE BOLTED TO THE OUTLET OF THE SPECIFIED STRUCTURE
3. STUB ALL UTILITY LATERALS 10' PAST THE SIDEWALK, MARK WITH 4X4 POST PAINTED GREEN (SEWER), PURPLE (SECONDARY WATER) OR BLUE (CULINARY WATER)

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED STORM DRAIN
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED PRESSURIZED IRRIGATION — SW
- PUBLIC UTILITY EASEMENT
- PROPOSED FIRE HYDRANT
- PROPOSED STREET LIGHT
- PROPOSED SEWER MANHOLE
- EXISTING STORMDRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT BOX

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 24, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

PLAN & PROFILE TO WEST RETENTION

STA 30+00 - 32+03.05

ALPINE CITY, UTAH

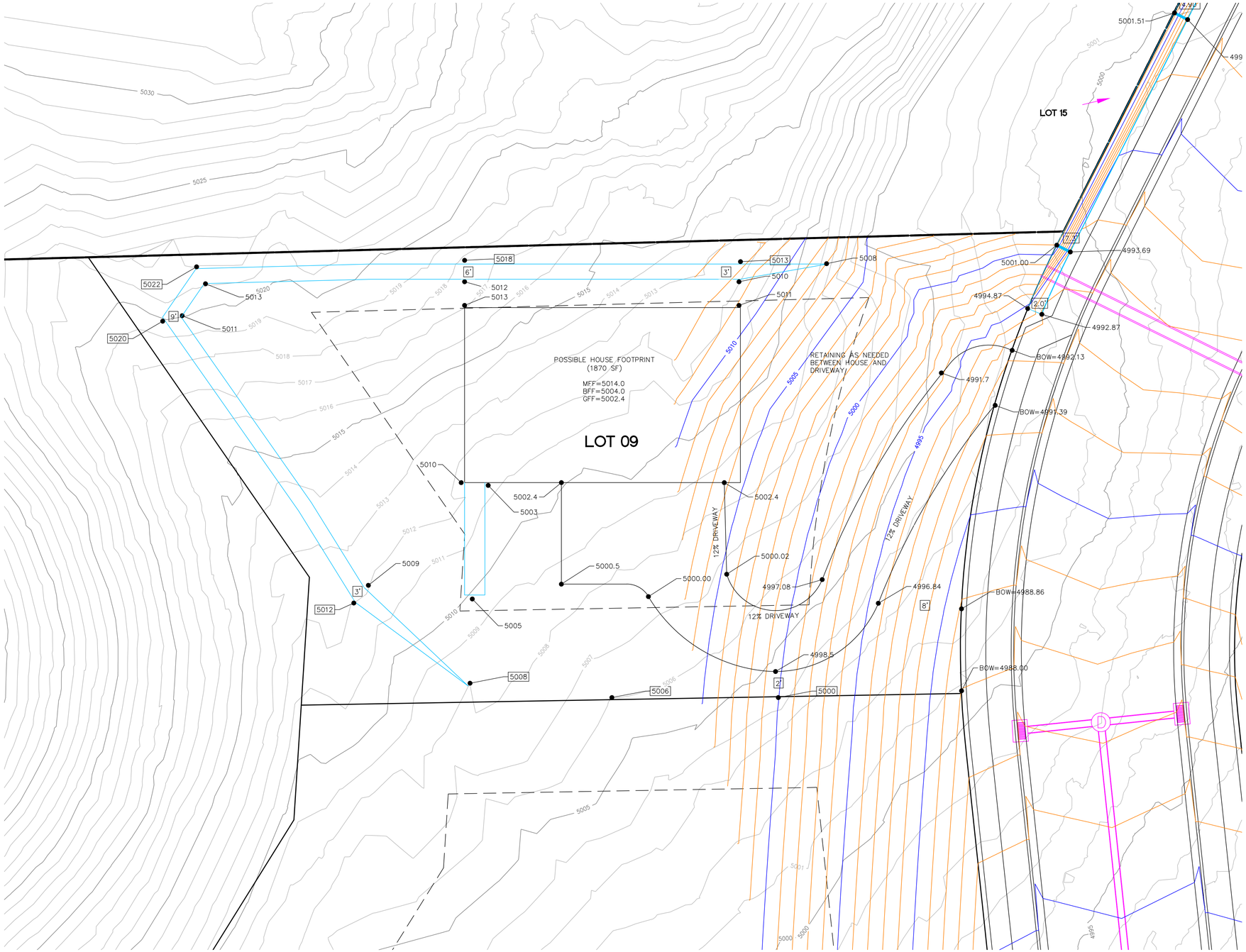
DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

PROFESSIONAL ENGINEER
No. 9259147
Jason Peterson
JASON REDD PETERSON
12/24/2019
STATE OF UTAH
ENGINEER'S STAMP

DATE: 11/05/2019
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'
SHEET: C305-12/14

BROOKSIDE MEADOWS

POSSIBLE DRIVEWAY DESIGN



Scale 1" = 60 ft

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Bluffdale, Utah 84065
801.553.8112
www.wildingengineering.com

DRAWING NOTES:

NOTES
1. THE PURPOSE OF THIS DRAWING IS TO SHOW THAT IT IS POSSIBLE TO BUILDING ON THE PROPOSED LOT. LOT 7 AND 8 ARE SIMILAR BUT LOT 9 IS THE WORST CASE SCENARIO FOR THIS SUBDIVISION.
2. APPROXIMATE WALL HEIGHTS ARE SHOWN. ADDITIONAL WALLS MAY BE REQUIRED BETWEEN THE DRIVEWAY AND THE BACK OF WALK.
3. THE ACTUAL HOUSE FOOTPRINT, GRADING AND RETAINING WALL LOCATIONS MAY VARY.

LEGEND

PROPOSED CONTOUR	
PROPOSED INDEX	
EXISTING CONTOUR	
EXISTING INDEX CONTOUR	
UTILITY EASEMENT	
PROPOSED SWALE	
DRAINAGE DIRECTION	
PROPOSED CATCH BASIN	
PROPOSED CLEANOUT	
PROPOSED SD MANHOLE	
PROPOSED FINISHED GRADE	4987.28
EXISTING GRADE	4974.61
APPROXIMATE WALL HEIGHT	8'

G:\DATA\19011 Olson Property\dwg\19011 Base - Driveway Design.dwg
PLOT DATE: Dec 20, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

POSSIBLE DRIVEWAY DESIGN

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

DATE 12/20/19

SCALE 1" = 10'

SHEET 1 OF 1

ENGINEER'S STAMP

BROOKSIDE MEADOWS SUBDIVISION

HYDROLOGY AND HYDRAULICS CALCULATIONS

Property location:
430 North 400 West
Alpine, Utah

Prepared for:
DAVE GIFFORD

DECEMBER 2019

PREPARED BY:
Jason Peterson PE

WILDING ENGINEERING
14721 SOUTH HERITAGE CREST DRIVE
BLUFFDALE, UTAH 84065

APPENDIX

A1 Grading and Drainage Plan
A2 Sub Basin Map
A3 Junction and Pipe Map
A4 FEMA exhibit
A5 Sub Basin Areas and Runoff Coefficients Calculations
A6 SSA model layout
A7 Storm and Sanitary Analysis Input and Output Report (10-year event)
A8 Storm and Sanitary Analysis Input and Output Report (100-year event)
A9 Detention Basin Calculations
A10 Detention/ Retention Calculations

INTRODUCTION

This report presents the drainage calculations for the Brookside Meadows Subdivision site located at 430 North 400 West in Alpine, Utah located in Section 24 of Township 4 South, Range 1 East. The purpose of this report is to show the proposed storm drain system has the capacity to convey storm water within the site to the proposed outfalls as shown on the grading and drainage plan in the appendix.

SITE OVERVIEW

The subdivision has a total area of 13.461 acres with 5.567 acres consisting of private open space. The site used to have a ditch running through the middle of it that has been filled. Now there is a ditch that runs along the east property line called the Westfield Ditch. The Westfield Ditch is a manmade ditch designed to flow at 1500 gpm with the addition of a 100-year storm event. The proposed roadway will pass over an existing 36" culvert for the Westfield Ditch. The site is in "zone C", area of minimal flooding, per FEMA panel 4902280005A shown in the appendix.

The site will be developed into single family residential lots and supporting facilities. A storm drain system will drain the site to one of two proposed detention basins which will then release the runoff at 0.07 cfs/ac into the existing municipal storm drain system. We do not anticipate the subdivision runoff to significantly affect the downstream system due to the detention basin releasing runoff at pre-development runoff conditions.

The site can generally be split up into three separate portions. The first is the west side of the property, where the proposed Brookside Circle shown in the grading plan will drain towards 400 West. The existing grade in this area slopes generally to the south at 5% to 20%. The second portion is the east side of the property, where the existing road Whitby Woodlands Drive and proposed road Soldier Circle are located. The existing grade in this area slope to the southeast generally at 5% to 20%. The last portion of this subdivision is in the middle shown as private open space. Within this area are higher slope generally in the southern direction. In the middle of this section there is a dirt road that acts as a swale.

There is an undeveloped offsite area north of Lot 9 that will drain onto Solider Circle. We have proposed the runoff from this offsite area be directed to a

proposed culvert using swales. The culvert will then discharge the flows into the Westfield Ditch. The area and runoff calculations can be found in the appendix.

STORM DRAIN DESIGN

To analyze stormdrain capacity, the site was divided into 16 sub basins according to proposed catch basin placement and is shown on the Sub-Basin Map found in the appendix. The sub basins were divided into permeable (lot, natural) and impermeable (paved) area to determine the amount of runoff at each catch basin as shown in the storm drainage calculations in the appendix. The time of concentration was assumed to be 10 minutes for each sub basin, based on the size and shape of the sub basin. This was determined using the Velocity Method. The travel times for the runoff from a typical back yard, down a driveway to the curb and gutter was estimated to be slightly over 10 minutes for the average sub basin. The precipitation data from Alpine City's Drainage Design Manual was used to determine the peak flows.

The storm drain inlets and piping from each basin were analyzed to be sure they would have capacity for a 10-year storm. The sub basins and stormdrain system was modeled in Storm and Sanitary Analysis. The modified rational method was used to model the Hydrology. The input and output report from the model can be found in the appendix of this report.

The storm drain system has capacity for the 10-year event. Larger storms will be conveyed within the right of way and to the low point of the site over the surface within the right of way.

The proposed site is split into two systems each with a detention basin and a connection to the existing storm drain system. The west system includes the Brookside Circle area and consists of 2 catch basins running to a detention basin located South of Lot 1. The required volume for the West Detention Basin is 2806 Cu ft for the 100-year event. The 90th percentile storm volume is designed to be retained in the basin before any stormwater is released into the existing drainage system. The volume that has been calculated to be retained on this west portion of the site is 604 cu ft. Once that volume has been retained, it will enter the outlet structure with an orifice plate to restrict the flows to 0.07 cfs/ acre. At the highwater mark of the basin there is a 3'x3' overflow structure that will allow additional flows into the existing system to avoid the basin overtopping and eroding the basin rim.

The east system includes the Whitby Woodlands Drive and Solider Circle area and consists of 12 catch basins running to a detention basin located South of Lot 11. The required volume for the east Detention Basin is 11,765 Cu ft for the 100-year event. The 90th percentile storm volume is designed to be retained in the basin before any stormwater is released into the existing drainage system. The volume that has been calculated to be retained on this east portion of the site is 3610 cu ft. Once that volume has been retained, it will enter the outlet structure at the elevation of 4972.50 with an orifice plate to restrict the flows to 0.07 cfs/ acre. At the highwater mark of the basin there is a 3'x3' overflow structure that will allow additional flows into the existing system to avoid the basin overtopping and eroding the basin rim.

Lots 4-6 and 10-14 will be required to retain the 100-year event on their own lots. These lots are "downhill" lots and it has been assumed that the runoff above the 90th percentile storm will not be directed to the right of way.

The stormdrain inlets have been located to keep the spread under 9.25 feet wide. Due to the subdivision layout, the maximum spacing for storm drain inlets was never attained so the gutter spread does not reach the maximum width. The spread widths can be found under the Inlet Results section of the SSA output reports in the appendix.

The ground water was not encountered in the test pits during the geotechnical investigation on site. The test pits were dug to a depth of 12'; therefore, groundwater is more than 12' lower than our site.

CERTIFICATION

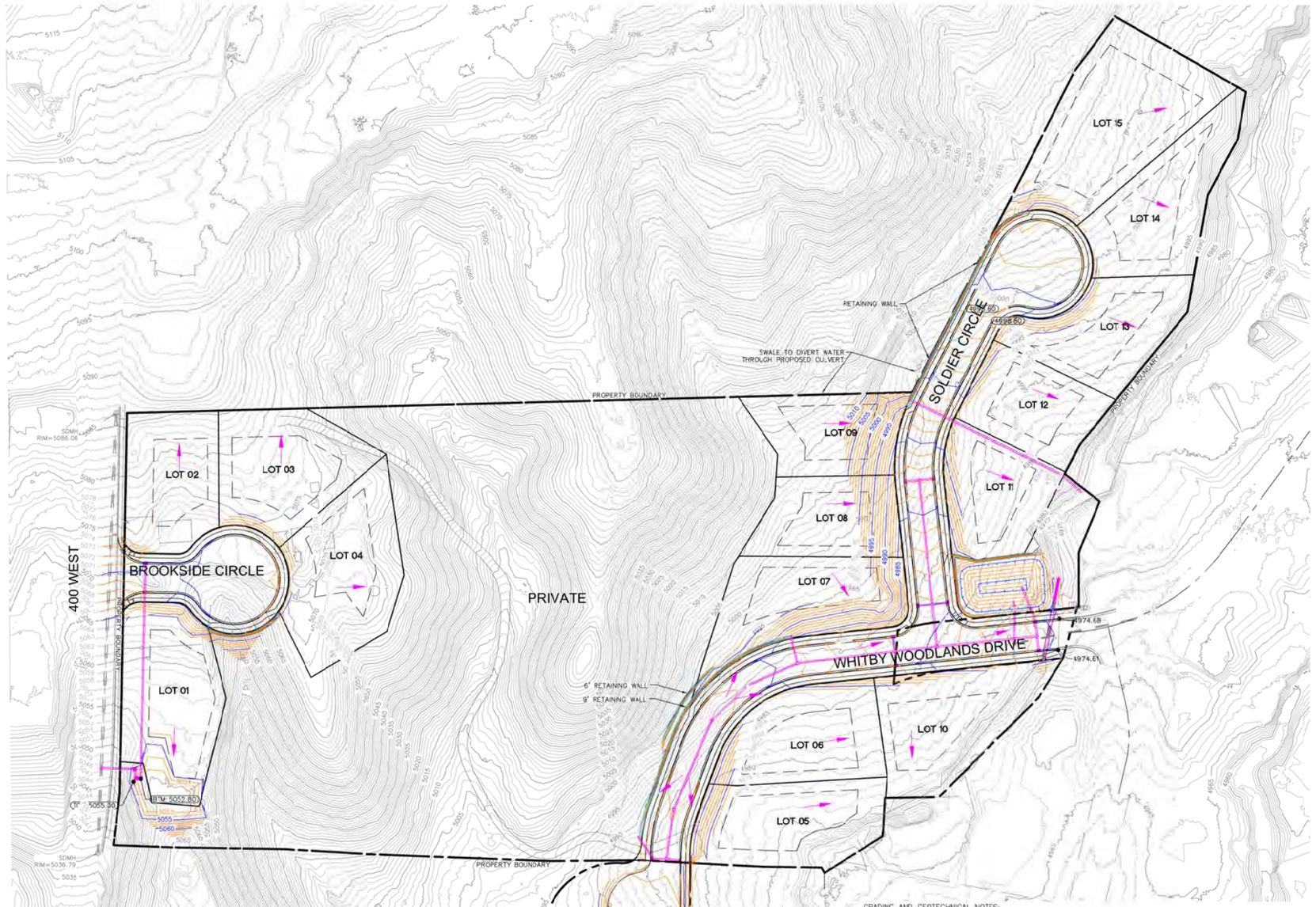
I hereby certify that this report for the onsite drainage of this development was prepared by me in accordance with the provisions of the Alpine City Storm Water Drainage Design Manual, and was designed to comply with the provisions thereof

APPENDIX

Grading and Drainage Plan
Sub Basin Map
Junction and Pipe Map
FEMA exhibit
Sub Basin Areas and Runoff Coefficients Calculations
SSA model layout
Storm and Sanitary Analysis Input and Output Report (10-year event)
Storm and Sanitary Analysis Input and Output Report (100-year event)
Detention Basin Calculations
Detention/Retention Calculations

BROOKSIDE MEADOWS

GRADING & DRAINAGE PLAN



Scale 1" = 60 ft

GRADING AND GEOTECHNICAL NOTES:

1. AREAS OF CUT AND FILL ARE TO HAVE THE TOP SOIL AND BIOLOGIC MATTER REMOVED.
2. STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR. FILL IN LANDSCAPED AREAS SHALL BE COMPACTED TO 90% OF THE MODIFIED PROCTOR.
3. A SITE SPECIFIC GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE GEOTECHNICAL REPORT AND COMPLYING WITH THE RECOMMENDATIONS CONTAINED THEREIN.
4. SOILS THAT ARE OBSERVED TO RUT OR DEFLECT GREATER THAN 1/2 INCH UNDER A MOVING LOAD SHOULD BE OVER-EXCAVATED DOWN TO FIRM UNDISTURBED NATIVE SOILS AND BACKFILLED WITH PROPERLY PLACED AND COMPACTED STRUCTURAL FILL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. AN ALPINE CITY INSPECTOR SHALL BE PRESENT FOR THE PROOF ROLL.
5. ALL UTILITIES ENCOUNTERED IN EXCAVATING SHALL BE CAREFULLY SUPPORTED, MAINTAINED, AND PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH OSHA REGULATIONS.
6. ALL PIPING SHALL BE PROTECTED FROM LATERAL DISPLACEMENT AND POSSIBLE DAMAGE RESULTING FROM IMPACT OR UNBALANCED LOADING DURING BACKFILLING OPERATIONS BY BEING ADEQUATELY BEDDED.
7. THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION.

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14721 South Heritage Crest Way
Bluffdale, Utah 84065
801.553.8112
www.wildingengineering.com

DRAWING NOTES:

DRAINAGE NOTES:
1. WHEN APPLYING FOR BUILDING PERMITS, EACH LOT SHALL SUBMIT A SEPARATE GRADING & DRAINAGE PLAN TO SHOW HOW IT WILL RETAIN A 100-YEAR EVENT, WITH THE EXCEPTION OF LOTS 1, 7, 8, AND 9.
2. WATER IS NOT TO CROSS PROPERTY LINES. PROPERTY LINE BERMS MAY BE NEEDED.
3. ARROWS SHOW ANTICIPATED FLOW DIRECTION.

LEGEND

- PROPOSED CONTOUR
- PROPOSED INDEX
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- UTILITY EASEMENT
- PROPOSED SWALE
- DRAINAGE DIRECTION
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT
- PROPOSED SD MANHOLE
- PROPOSED FINISHED GRADE (4981.28)
- EXISTING GRADE (4977.81)

G:\DATA\19011 Olson Property\dwg\19011 Base.dwg
PLOT DATE: Dec 20, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

GRADING & DRAINAGE PLAN

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

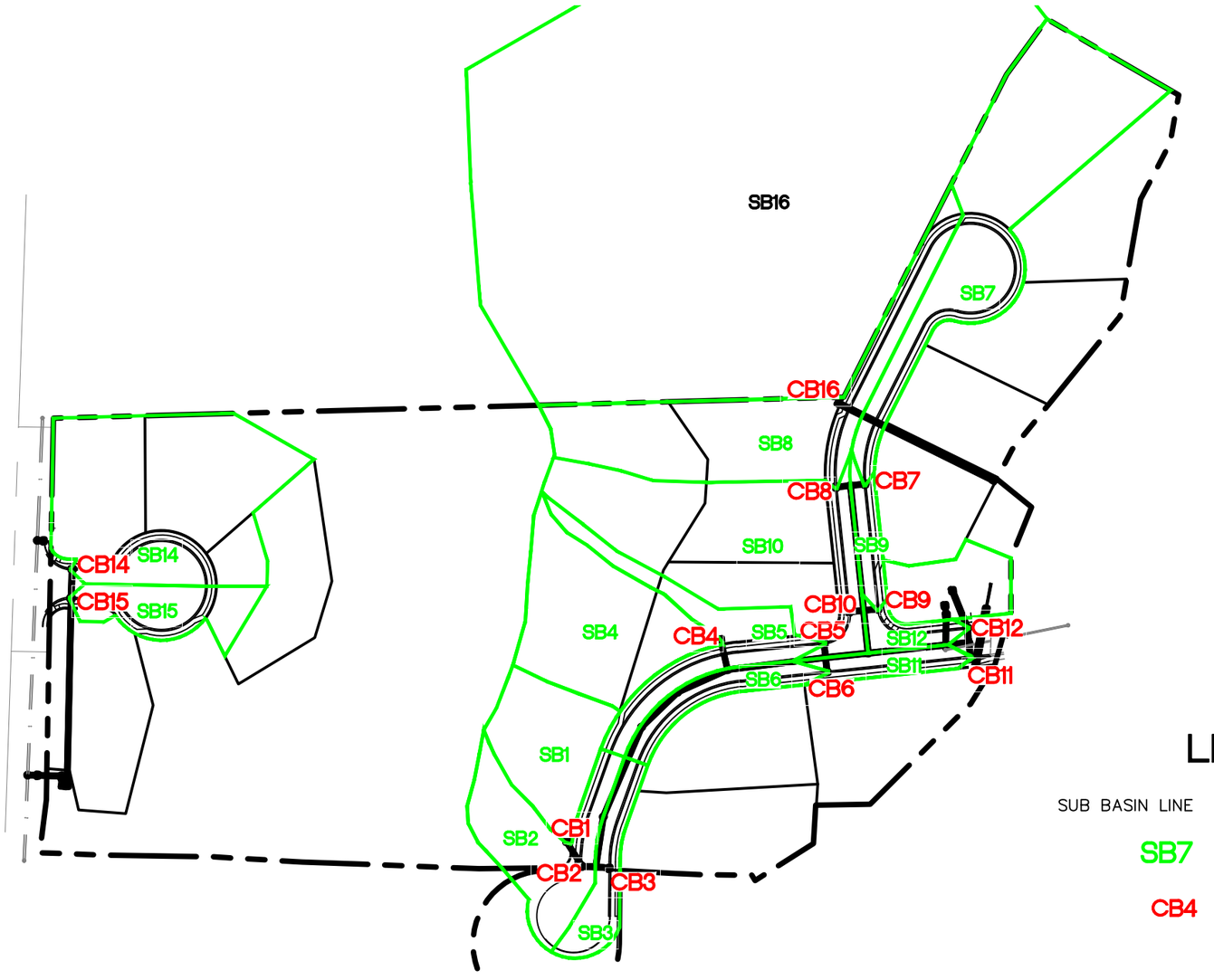
DATE: 11/05/2019

SCALE: 1" = 60'

SHEET: C203-04/14

ENGINEER'S STAMP

BROOKSIDE MEADOWS



LEGEND

SUB BASIN LINE	
SB7	SUB BASIN NUMBER CORRESPONDING TO DRAINAGE REPORT
CB4	CATCH BASIN NUMBER CORRESPONDING TO DRAINAGE REPORT

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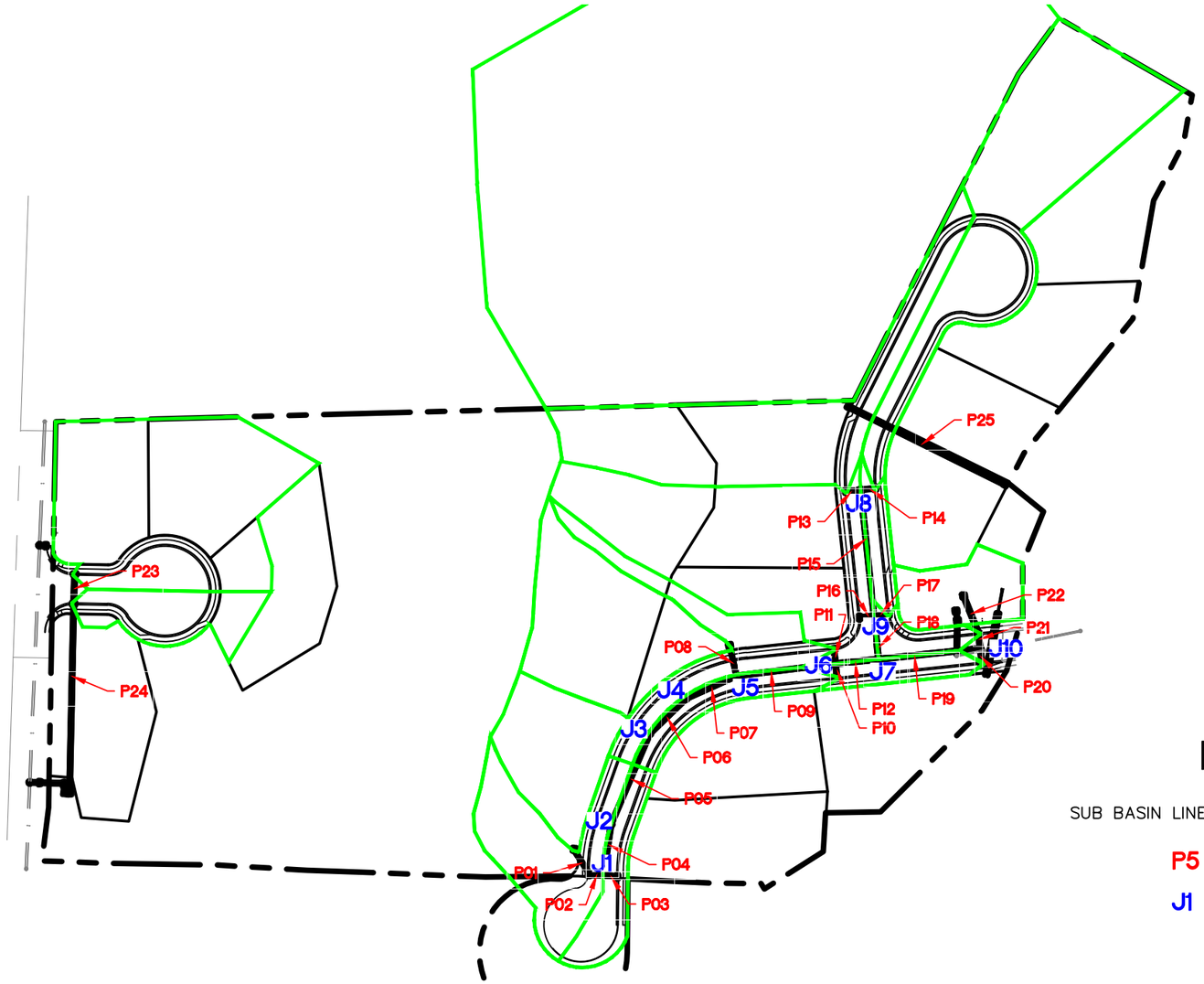
NO.	REVISION	DATE

DRAWING TITLE: SUB BASIN MAP	PROJECT NAME: BROOKSIDE MEADOWS	DATE: 12/20/19
		SCALE: 1"=150'
LOCATION	DRAWN: JRP / CHECKED	SHEET: 1 OF 1
ALPINE, UTAH	FILE NAME: G:\DATA\19011...\DWG\19011 HYDROLOGY	

BROOKSIDE MEADOWS



LEGEND

SUB BASIN LINE

P5 PIPE NUMBER CORRESPONDING TO DRAINAGE REPORT

J1 JUNCTION NUMBER CORRESPONDING TO DRAINAGE REPORT

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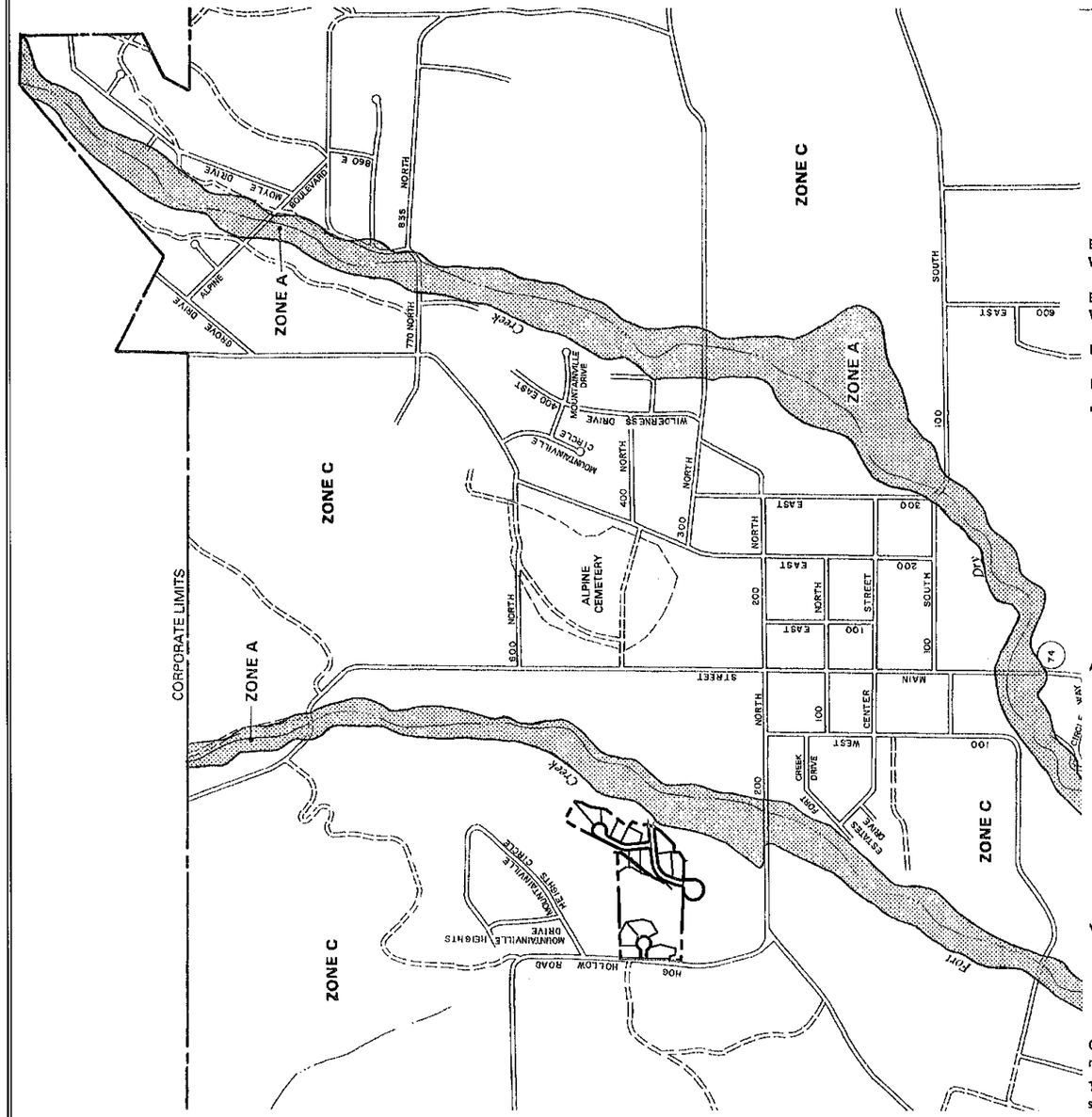
NO.	REVISION	DATE

DRAWING TITLE	PIPE AND JUNCTION MAP
PROJECT NAME	BROOKSIDE MEADOWS
DATE	12/20/19
SCALE	1"=150'
LOCATION	ALPINE, UTAH
DRAWN	JRP
CHECKED	
FILE NAME:	G:\DATA\19011...\DWG\19011 HYDROLOGY
SHEET	1 OF 1

BROOKSIDE MEADOWS

FEMA EXHIBIT



KEY TO MAP

SPECIAL FLOOD HAZARD AREA

ZONE C
ZONE A
ZONE C

Base Flood Elevation Line With Elevation In Feet** — 513

Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)

Elevation Reference Mark — RM7 ×

River Mile — • M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

INITIAL IDENTIFICATION:

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE: APRIL 4, 1983

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

Scale 1" = 500 ft

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DRAWING NOTES:

LEGEND

PROPERTY BOUNDARY

G:\DATA\19011 Glen Property View\19011 hydrology.dwg
PLOT DATE: Nov 05, 2019

NO.	REVISION	DATE

PROJECT INFORMATION

BROOKSIDE MEADOWS

FEMA EXHIBIT

ALPINE CITY, UTAH

DRAWN	CHECKED	PROJECT #
TMS	JRP	19011

DATE: 11/05/2019

SCALE: 1" = 500'

SHEET: 2 -04/14

ENGINEER'S STAMP

Sub-Basin Areas and Runoff Coefficients

Project: Brookside Meadows Subdivision
Location: Alpine, Utah
Prepared By: Jason Peterson
Date: December 23, 2019

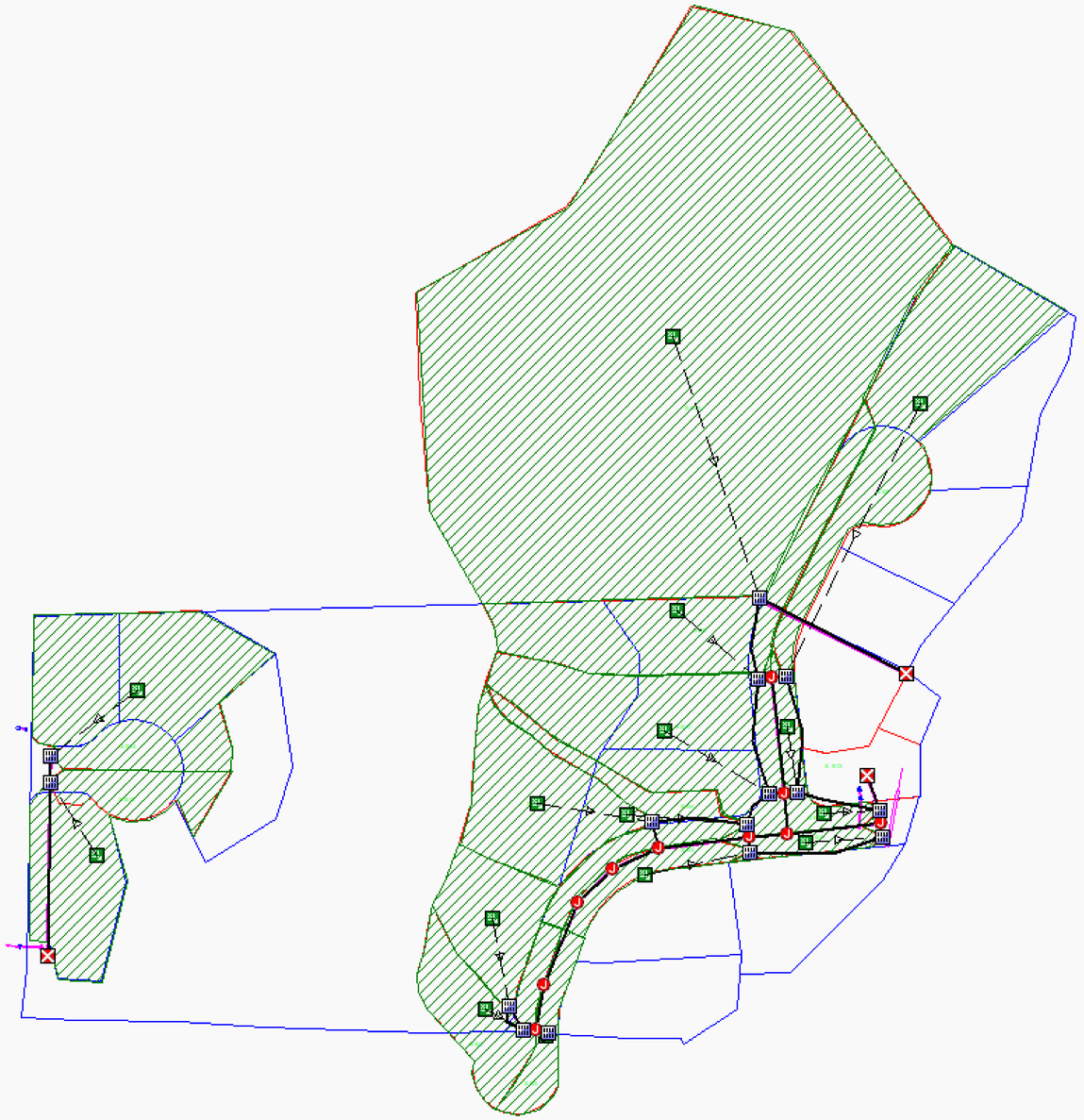
Sub-Basin	Total Area (SF)	Total Area (acres)	Roadway Area (sq ft)	Roadway Area (acres)	C_R	Lot areas (sq ft)	Lot Areas (acres)	C_L	Undisturbed Areas (acres)	C_U	Composite C
Sub-Basin 1	15690	0.36	0	0.00	0.9	0	0.00	0.3	0.36	0.2	**0.200**
Sub-Basin 2	17085	0.39	5825	0.13	0.9	0	0.00	0.3	0.26	0.2	**0.439**
Sub-Basin 3	7459	0.17	5859	0.13	0.9	0	0.00	0.3	0.04	0.2	**0.750**
Sub-Basin 4	25632	0.59	0	0.00	0.9	4890	0.11	0.3	0.48	0.2	**0.219**
Sub-Basin 5	14061	0.32	5753	0.13	0.9	4530	0.10	0.3	0.09	0.2	**0.519**
Sub-Basin 6	6311	0.14	5227	0.12	0.9	0	0.00	0.3	0.02	0.2	**0.780**
Sub-Basin 7	41693	0.96	12740	0.29	0.9	26860	0.62	0.3	0.05	0.2	**0.478**
Sub-Basin 8	34218	0.79	6746	0.15	0.9	13490	0.31	0.3	0.32	0.2	**0.377**
Sub-Basin 9	3890	0.09	3204	0.07	0.9	0	0.00	0.3	0.02	0.2	**0.777**
Sub-Basin 10	41999	0.96	5271	0.12	0.9	23115	0.53	0.3	0.31	0.2	**0.343**
Sub-Basin 11	4408	0.10	3569	0.08	0.9	0	0.00	0.3	0.02	0.2	**0.767**
Sub-Basin 12	3552	0.08	3072	0.07	0.9	0	0.00	0.3	0.01	0.2	**0.805**
Sub-Basin 13	9302	0.21	0	0.00	0.9	0	0.00	0.3	0.21	0.2	**0.200**
Sub-Basin 14	43955	1.01	5658	0.13	0.9	37320	0.86	0.3	0.02	0.2	**0.375**
Sub-Basin 15	9814	0.23	5670	0.13	0.9	520	0.01	0.3	0.08	0.2	**0.610**
Sub-Basin 16	288702	6.63	0	0.00	0.9	0	0.00	0.3	6.63	0.2	**0.200**
Total Site		13.03	68594	1.57	0.9	110725	2.54	0.3	8.92	0.2	**0.304**

Sample Runoff Coefficient Calculation (Sub-Basin 1):

Composite 'C':

$$C_{\text{Sub-Basin 1}} = \frac{(\text{Road Areas})(C_R) + (\text{Lot Areas})(C_L) + (\text{Undisturbed Areas})(C_U)}{A_{\text{Sub-Basin 1}}}$$

$$= \frac{0.00\ (0.90) + 0.00\ (0.30) + 0.36\ (0.20)}{0.36} = \mathbf{0.200}$$



Project Description

File Name	19011 Brookside Meadows SSA.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Modified Rational
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Kinematic Wave
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Jan 01, 2019	00:00:00
End Analysis On	Jan 02, 2019	00:00:00
Start Reporting On	Jan 01, 2019	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	0
Subbasins	15
Nodes	28
Junctions	10
Outfalls	3
Flow Diversions	0
Inlets	15
Storage Nodes	0
Links	33
Channels	0
Pipes	33
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period	10 year(s)

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub01	0.36	0.2000	0.45	0.09	0.03	0.19	0 00:10:00
2	Sub02	0.39	0.4400	0.45	0.20	0.08	0.46	0 00:10:00
3	Sub03	0.17	0.7500	0.45	0.33	0.06	0.34	0 00:10:00
4	Sub04	0.59	0.2200	0.45	0.10	0.06	0.35	0 00:10:00
5	Sub05	0.32	0.5200	0.45	0.23	0.07	0.44	0 00:10:00
6	Sub06	0.14	0.7800	0.45	0.35	0.05	0.29	0 00:10:00
7	Sub07	0.96	0.4800	0.45	0.21	0.20	1.23	0 00:10:00
8	Sub08	0.79	0.3800	0.45	0.17	0.13	0.80	0 00:10:00
9	Sub09	0.09	0.7800	0.45	0.35	0.03	0.19	0 00:10:00
10	Sub10	0.96	0.3400	0.45	0.15	0.14	0.87	0 00:10:00
11	Sub11	0.10	0.7700	0.45	0.34	0.03	0.21	0 00:10:00
12	Sub12	0.08	0.8100	0.45	0.36	0.03	0.17	0 00:10:00
13	Sub14	1.01	0.3800	0.45	0.17	0.17	1.02	0 00:10:00
14	Sub15	0.23	0.6100	0.45	0.27	0.06	0.37	0 00:10:00
15	Sub16	6.63	0.2000	0.64	0.13	0.84	2.53	0 00:20:00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J01	Junction	4978.33	4985.83	0.99	4978.71	0.00	7.12	0 00:00	0.00	0.00
2	J02	Junction	4977.92	4986.09	0.98	4978.30	0.00	7.79	0 00:00	0.00	0.00
3	J03	Junction	4977.12	4986.44	0.97	4977.50	0.00	8.94	0 00:00	0.00	0.00
4	J04	Junction	4976.70	4985.74	0.97	4977.10	0.00	8.64	0 00:00	0.00	0.00
5	J05	Junction	4976.35	4984.32	1.28	4977.48	0.00	6.84	0 00:00	0.00	0.00
6	J06	Junction	4973.60	4981.09	1.90	4973.97	0.00	7.12	0 00:00	0.00	0.00
7	J07	Junction	4972.20	4979.62	5.00	4972.75	0.00	6.87	0 00:00	0.00	0.00
8	J08	Junction	4979.76	4987.26	1.79	4980.09	0.00	7.17	0 00:00	0.00	0.00
9	J09	Junction	4973.46	4980.81	3.14	4973.96	0.00	6.85	0 00:00	0.00	0.00
10	J10	Junction	4968.27	4975.77	5.21	4968.82	0.00	6.95	0 00:00	0.00	0.00
11	outletE	Outfall	4966.00		5.38	4966.61					
12	outletW	Outfall	5049.80		1.38	5050.09					
13	OutOffsite	Outfall	4975.00		2.19	4975.33					

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)
1	BPCB01	Pipe	CB01	CB02	40.55	4979.00	4977.88	2.7600	18.000	0.0150	0.00	0.00	0.00	0.00	0.00
2	BPCB04	Pipe	CB04	CB05	112.69	4980.71	4974.14	5.8300	0.000	0.0150	0.00	0.00	0.00	0.00	0.00
3	BPCB05	Pipe	CB05	CB10	46.99	4974.14	4973.98	0.3400	0.000	0.0150	0.01	0.00	0.00	0.00	0.00
4	BPCB06	Pipe	CB06	CB11	159.79	4974.14	4968.80	3.3400	0.000	0.0150	0.02	0.00	0.00	0.00	0.00
5	BPCB07	Pipe	CB07	CB09	140.09	4980.30	4973.98	4.5100	0.000	0.0150	0.24	0.00	0.00	0.00	0.00
6	BPCB08	Pipe	CB08	CB10	139.51	4980.29	4973.98	4.5200	0.000	0.0150	0.08	0.00	0.00	0.00	0.00
7	BPCB09	Pipe	CB09	CB12	99.00	4973.98	4967.27	6.7800	0.000	0.0150	0.01	0.00	0.00	0.00	0.00
8	BPCB16	Pipe	CB16InletOffsite	CB08	97.56	4985.00	4980.29	4.8300	0.000	0.0150	0.33	0.00	0.00	0.00	0.00
9	P01	Pipe	CB01	CB02	28.83	4980.00	4978.88	3.8800	12.000	0.0150	0.19	6.09	0.03	3.54	0.12
10	P02	Pipe	CB02	J01	17.04	4978.88	4978.33	3.2300	15.000	0.0150	0.65	10.06	0.06	4.59	0.21
11	P03	Pipe	CB03	J01	16.07	4978.88	4978.33	3.4200	15.000	0.0150	0.34	10.36	0.03	3.90	0.15
12	P04	Pipe	J01	J02	54.99	4978.33	4977.92	0.7500	15.000	0.0150	0.98	4.83	0.20	3.10	0.38
13	P05	Pipe	J02	J03	106.82	4977.92	4977.12	0.7500	15.000	0.0150	0.97	4.84	0.20	3.11	0.38
14	P06	Pipe	J03	J04	55.05	4977.12	4976.70	0.7600	15.000	0.0150	0.97	4.89	0.20	3.12	0.38
15	P07	Pipe	J04	J05	59.66	4976.70	4976.35	0.5900	15.000	0.0150	0.97	4.29	0.23	2.84	0.40
16	P08	Pipe	CB04	J05	33.57	4980.71	4977.35	10.0100	12.000	0.0150	0.35	9.77	0.04	5.87	0.13
17	P09	Pipe	J05	J06	180.14	4976.35	4973.60	1.5300	15.000	0.0150	1.28	6.92	0.18	4.34	0.36
18	P10	Pipe	CB06	J06	17.00	4974.14	4973.60	3.1800	15.000	0.0150	0.43	9.98	0.04	4.06	0.18
19	P11	Pipe	CB05	J06	17.00	4974.14	4973.60	3.1800	15.000	0.0150	0.28	9.98	0.03	3.59	0.14
20	P12	Pipe	J06	J07	46.69	4973.60	4972.20	3.0000	15.000	0.0150	1.90	9.69	0.20	6.15	0.37
21	P13	Pipe	CB08	J08	16.99	4980.29	4979.76	3.1200	15.000	0.0150	0.80	9.89	0.08	4.84	0.24
22	P14	Pipe	CB07	J08	17.01	4980.30	4979.76	3.1700	15.000	0.0150	0.99	9.98	0.10	5.20	0.27
23	P15	Pipe	J08	J09	137.38	4979.76	4973.46	4.5900	15.000	0.0150	1.78	11.99	0.15	7.03	0.33
24	P16	Pipe	CB10	J09	17.00	4973.98	4973.46	3.0600	15.000	0.0150	0.96	9.79	0.10	5.08	0.26
25	P17	Pipe	CB09	J09	17.00	4973.98	4973.46	3.0600	15.000	0.0150	0.41	9.79	0.04	3.98	0.17
26	P18	Pipe	J09	J07	46.94	4973.46	4972.20	2.6800	15.000	0.0150	3.14	9.17	0.34	6.78	0.50
27	P19	Pipe	J07	J10	110.70	4972.20	4968.27	3.5500	18.000	0.0150	4.99	17.15	0.29	8.43	0.55
28	P20	Pipe	CB11	J10	17.00	4968.80	4968.27	3.1200	15.000	0.0150	0.22	9.89	0.02	3.22	0.13
29	P21	Pipe	J10	CB12	17.00	4968.27	4967.27	5.8800	18.000	0.0150	5.21	22.08	0.24	10.22	0.50
30	P22	Pipe	CB12	outletE	43.01	4967.27	4966.00	2.9500	18.000	0.0150	5.38	15.64	0.34	8.03	0.61
31	P23	Pipe	CB14	CB15	34.01	5063.11	5058.00	15.0200	15.000	0.0150	1.02	21.70	0.05	9.10	0.18
32	P24	Pipe	CB15	outletW	188.73	5058.00	5049.80	4.3400	15.000	0.0150	1.38	11.67	0.12	6.43	0.29
33	P25	Pipe	CB16InletOffsite	OutOffsite	193.73	4985.00	4975.00	5.1600	18.000	0.0150	2.19	20.68	0.11	8.70	0.33

Peak Flow Depth/ Total Depth Ratio
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.12
0.17
0.12
0.31
0.30
0.30
0.32
0.13
0.29
0.14
0.11
0.30
0.19
0.21
0.26
0.21
0.14
0.40
0.37
0.11
0.33
0.40
0.15
0.23
0.22

Inlet Summary

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	CB01	On Grade	1	4980.00	4987.56	0.19	0.19	0.00	99.31	9.25	1.05	4987.61
2	CB02	On Sag	1	4978.88	4985.88	0.46	N/A	N/A	N/A	9.25	2.47	4986.04
3	CB03	On Sag	1	4978.88	4985.88	0.34	N/A	N/A	N/A	9.25	1.84	4986.00
4	CB04	On Grade	1	4980.71	4986.24	0.35	0.35	0.00	99.99	9.25	1.46	4986.33
5	CB05	On Grade	1	4974.14	4981.14	0.29	0.28	0.01	96.23	9.25	1.59	4981.22
6	CB06	On Grade	1	4974.14	4981.14	0.44	0.43	0.02	96.23	9.25	2.42	4981.26
7	CB07	On Grade	1	4980.30	4987.30	1.23	0.99	0.24	80.85	9.25	4.36	4987.47
8	CB08	On Grade	1	4980.29	4987.29	0.80	0.72	0.08	89.70	9.25	3.15	4987.44
9	CB09	On Grade	1	4973.98	4980.83	0.19	0.18	0.01	96.23	9.25	1.02	4980.88
10	CB10	On Sag	1	4973.98	4980.83	0.87	N/A	N/A	N/A	9.25	3.71	4981.14
11	CB11	On Sag	1	4968.80	4975.80	0.21	N/A	N/A	N/A	9.25	0.88	4975.87
12	CB12	On Sag	1	4967.27	4975.81	0.17	N/A	N/A	N/A	9.25	0.93	4975.87
13	CB14	On Sag	1	5063.11	5070.11	1.02	N/A	N/A	N/A	9.25	5.50	5070.47
14	CB15	On Sag	1	5058.00	5069.35	0.37	N/A	N/A	N/A	9.25	2.02	5069.48
15	CB16InletOffsite	On Grade	1	4985.00	4998.85	2.53	2.20	0.33	86.84	9.25	3.79	4999.15

Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)
1	J01	4978.33	4985.83	7.50
2	J02	4977.92	4986.09	8.17
3	J03	4977.12	4986.44	9.32
4	J04	4976.70	4985.74	9.04
5	J05	4976.35	4984.32	7.97
6	J06	4973.60	4981.09	7.49
7	J07	4972.20	4979.62	7.42
8	J08	4979.76	4987.26	7.50
9	J09	4973.46	4980.81	7.35
10	J10	4968.27	4975.77	7.50

Junction Results

SN	Element ID	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Max HGL Elevation Attained (ft)	Max HGL Depth Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Max HGL Occurrence (days hh:mm)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J01	0.99	0.00	4978.71	0.38	0.00	7.12	4978.33	0.00	0 00:10	0 00:00	0.00	0.00
2	J02	0.98	0.00	4978.30	0.38	0.00	7.79	4977.92	0.00	0 00:10	0 00:00	0.00	0.00
3	J03	0.97	0.00	4977.50	0.38	0.00	8.94	4977.12	0.00	0 00:10	0 00:00	0.00	0.00
4	J04	0.97	0.00	4977.10	0.40	0.00	8.64	4976.70	0.00	0 00:11	0 00:00	0.00	0.00
5	J05	1.28	0.00	4977.48	1.13	0.00	6.84	4977.35	1.00	0 00:10	0 00:00	0.00	0.00
6	J06	1.90	0.00	4973.97	0.37	0.00	7.12	4973.60	0.00	0 00:11	0 00:00	0.00	0.00
7	J07	5.00	0.00	4972.75	0.55	0.00	6.87	4972.21	0.01	0 00:10	0 00:00	0.00	0.00
8	J08	1.79	0.00	4980.09	0.33	0.00	7.17	4979.76	0.00	0 00:10	0 00:00	0.00	0.00
9	J09	3.14	0.00	4973.96	0.50	0.00	6.85	4973.47	0.01	0 00:10	0 00:00	0.00	0.00
10	J10	5.21	0.00	4968.82	0.55	0.00	6.95	4968.28	0.01	0 00:10	0 00:00	0.00	0.00

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Manning's Roughness	Initial Flow (cfs)
1	BPCB01	40.55	4979.00	4977.88	1.12	2.7600	Dummy	0.000	0.0150	0.00
2	BPCB04	112.69	4980.71	4974.14	6.57	5.8300	Dummy	0.000	0.0150	0.00
3	BPCB05	46.99	4974.14	4973.98	0.16	0.3400	Dummy	0.000	0.0150	0.00
4	BPCB06	159.79	4974.14	4968.80	5.34	3.3400	Dummy	0.000	0.0150	0.00
5	BPCB07	140.09	4980.30	4973.98	6.32	4.5100	Dummy	0.000	0.0150	0.00
6	BPCB08	139.51	4980.29	4973.98	6.31	4.5200	Dummy	0.000	0.0150	0.00
7	BPCB09	99.00	4973.98	4967.27	6.71	6.7800	Dummy	0.000	0.0150	0.00
8	BPCB16	97.56	4985.00	4980.29	4.71	4.8300	Dummy	0.000	0.0150	0.00
9	P01	28.83	4980.00	4978.88	1.12	3.8800	CIRCULAR	12.000	0.0150	0.00
10	P02	17.04	4978.88	4978.33	0.55	3.2300	CIRCULAR	15.000	0.0150	0.00
11	P03	16.07	4978.88	4978.33	0.55	3.4200	CIRCULAR	15.000	0.0150	0.00
12	P04	54.99	4978.33	4977.92	0.41	0.7500	CIRCULAR	15.000	0.0150	0.00
13	P05	106.82	4977.92	4977.12	0.80	0.7500	CIRCULAR	15.000	0.0150	0.00
14	P06	55.05	4977.12	4976.70	0.42	0.7600	CIRCULAR	15.000	0.0150	0.00
15	P07	59.66	4976.70	4976.35	0.35	0.5900	CIRCULAR	15.000	0.0150	0.00
16	P08	33.57	4980.71	4977.35	3.36	10.0100	CIRCULAR	12.000	0.0150	0.00
17	P09	180.14	4976.35	4973.60	2.75	1.5300	CIRCULAR	15.000	0.0150	0.00
18	P10	17.00	4974.14	4973.60	0.54	3.1800	CIRCULAR	15.000	0.0150	0.00
19	P11	17.00	4974.14	4973.60	0.54	3.1800	CIRCULAR	15.000	0.0150	0.00
20	P12	46.69	4973.60	4972.20	1.40	3.0000	CIRCULAR	15.000	0.0150	0.00
21	P13	16.99	4980.29	4979.76	0.53	3.1200	CIRCULAR	15.000	0.0150	0.00
22	P14	17.01	4980.30	4979.76	0.54	3.1700	CIRCULAR	15.000	0.0150	0.00
23	P15	137.38	4979.76	4973.46	6.30	4.5900	CIRCULAR	15.000	0.0150	0.00
24	P16	17.00	4973.98	4973.46	0.52	3.0600	CIRCULAR	15.000	0.0150	0.00
25	P17	17.00	4973.98	4973.46	0.52	3.0600	CIRCULAR	15.000	0.0150	0.00
26	P18	46.94	4973.46	4972.20	1.26	2.6800	CIRCULAR	15.000	0.0150	0.00
27	P19	110.70	4972.20	4968.27	3.93	3.5500	CIRCULAR	18.000	0.0150	0.00
28	P20	17.00	4968.80	4968.27	0.53	3.1200	CIRCULAR	15.000	0.0150	0.00
29	P21	17.00	4968.27	4967.27	1.00	5.8800	CIRCULAR	18.000	0.0150	0.00
30	P22	43.01	4967.27	4966.00	1.27	2.9500	CIRCULAR	18.000	0.0150	0.00
31	P23	34.01	5063.11	5058.00	5.11	15.0200	CIRCULAR	15.000	0.0150	0.00
32	P24	188.73	5058.00	5049.80	8.20	4.3400	CIRCULAR	15.000	0.0150	0.00
33	P25	193.73	4985.00	4975.00	10.00	5.1600	CIRCULAR	18.000	0.0150	0.00

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)
1	BPCB01	0.00	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
2	BPCB04	0.00	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
3	BPCB05	0.01	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
4	BPCB06	0.02	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
5	BPCB07	0.24	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
6	BPCB08	0.08	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
7	BPCB09	0.01	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
8	BPCB16	0.33	0 00:20	0.00	0.00	0.00		0.00	0.00	0.00
9	P01	0.19	0 00:10	6.09	0.03	3.54	0.14	0.12	0.12	0.00
10	P02	0.65	0 00:10	10.06	0.06	4.59	0.06	0.21	0.17	0.00
11	P03	0.34	0 00:10	10.36	0.03	3.90	0.07	0.15	0.12	0.00
12	P04	0.98	0 00:10	4.83	0.20	3.10	0.30	0.38	0.31	0.00
13	P05	0.97	0 00:10	4.84	0.20	3.11	0.57	0.38	0.30	0.00
14	P06	0.97	0 00:11	4.89	0.20	3.12	0.29	0.38	0.30	0.00
15	P07	0.97	0 00:11	4.29	0.23	2.84	0.35	0.40	0.32	0.00
16	P08	0.35	0 00:10	9.77	0.04	5.87	0.10	0.13	0.13	0.00
17	P09	1.28	0 00:11	6.92	0.18	4.34	0.69	0.36	0.29	0.00
18	P10	0.43	0 00:10	9.98	0.04	4.06	0.07	0.18	0.14	0.00
19	P11	0.28	0 00:10	9.98	0.03	3.59	0.08	0.14	0.11	0.00
20	P12	1.90	0 00:11	9.69	0.20	6.15	0.13	0.37	0.30	0.00
21	P13	0.80	0 00:10	9.89	0.08	4.84	0.06	0.24	0.19	0.00
22	P14	0.99	0 00:10	9.98	0.10	5.20	0.05	0.27	0.21	0.00
23	P15	1.78	0 00:10	11.99	0.15	7.03	0.33	0.33	0.26	0.00
24	P16	0.96	0 00:10	9.79	0.10	5.08	0.06	0.26	0.21	0.00
25	P17	0.41	0 00:10	9.79	0.04	3.98	0.07	0.17	0.14	0.00
26	P18	3.14	0 00:10	9.17	0.34	6.78	0.12	0.50	0.40	0.00
27	P19	4.99	0 00:10	17.15	0.29	8.43	0.22	0.55	0.37	0.00
28	P20	0.22	0 00:10	9.89	0.02	3.22	0.09	0.13	0.11	0.00
29	P21	5.21	0 00:10	22.08	0.24	10.22	0.03	0.50	0.33	0.00
30	P22	5.38	0 00:10	15.64	0.34	8.03	0.09	0.61	0.40	0.00
31	P23	1.02	0 00:10	21.70	0.05	9.10	0.06	0.18	0.15	0.00
32	P24	1.38	0 00:10	11.67	0.12	6.43	0.49	0.29	0.23	0.00
33	P25	2.19	0 00:20	20.68	0.11	8.70	0.37	0.33	0.22	0.00

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Grate Clogging Factor (%)
1	CB01	On Grade	1	4980.00	4987.56	7.56	0.00
2	CB02	On Sag	1	4978.88	4985.88	7.00	0.00
3	CB03	On Sag	1	4978.88	4985.88	7.00	0.00
4	CB04	On Grade	1	4980.71	4986.24	5.53	0.00
5	CB05	On Grade	1	4974.14	4981.14	7.00	0.00
6	CB06	On Grade	1	4974.14	4981.14	7.00	0.00
7	CB07	On Grade	1	4980.30	4987.30	7.00	0.00
8	CB08	On Grade	1	4980.29	4987.29	7.00	0.00
9	CB09	On Grade	1	4973.98	4980.83	6.85	0.00
10	CB10	On Sag	1	4973.98	4980.83	6.85	0.00
11	CB11	On Sag	1	4968.80	4975.80	7.00	0.00
12	CB12	On Sag	1	4967.27	4975.81	8.54	0.00
13	CB14	On Sag	1	5063.11	5070.11	7.00	0.00
14	CB15	On Sag	1	5058.00	5069.35	11.35	0.00
15	CB16InletOffsite	On Grade	1	4985.00	4998.85	13.85	0.00

Roadway & Gutter Input

SN	Element ID	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (in)	Allowable Spread (ft)
1	CB01	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
2	CB02	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
3	CB03	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
4	CB04	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	9.25
5	CB05	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
6	CB06	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
7	CB07	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	9.25
8	CB08	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	9.25
9	CB09	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
10	CB10	N/A	0.0300	0.0160	0.0620	2.00	0.0656	9.25
11	CB11	N/A	0.0300	0.0160	0.0620	2.00	0.0656	9.25
12	CB12	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
13	CB14	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
14	CB15	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
15	CB16InletOffsite	0.0500	0.1000	0.0300	0.0620	2.00	0.0656	9.25

Inlet Results

SN	Element ID	Peak Flow (cfs)	Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Max Depth Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	CB01	0.19	0.19	0.19	0.00	99.31	1.05	4987.61	0.05	0 00:10	0.00	0.00
2	CB02	0.46	0.46	N/A	N/A	N/A	2.47	4986.04	0.16	0 00:10	0.00	0.00
3	CB03	0.34	0.34	N/A	N/A	N/A	1.84	4986.00	0.12	0 00:10	0.00	0.00
4	CB04	0.35	0.35	0.35	0.00	99.99	1.46	4986.33	0.09	0 00:10	0.00	0.00
5	CB05	0.29	0.29	0.28	0.01	96.23	1.59	4981.22	0.08	0 00:09	0.00	0.00
6	CB06	0.44	0.44	0.43	0.02	96.23	2.42	4981.26	0.12	0 00:10	0.00	0.00
7	CB07	1.23	1.23	0.99	0.24	80.85	4.36	4987.47	0.17	0 00:10	0.00	0.00
8	CB08	0.80	0.80	0.72	0.08	89.70	3.15	4987.44	0.15	0 00:10	0.00	0.00
9	CB09	0.19	0.19	0.18	0.01	96.23	1.02	4980.88	0.05	0 00:10	0.00	0.00
10	CB10	0.87	0.87	N/A	N/A	N/A	3.71	4981.14	0.31	0 00:10	0.00	0.00
11	CB11	0.21	0.21	N/A	N/A	N/A	0.88	4975.87	0.07	0 00:10	0.00	0.00
12	CB12	0.17	0.17	N/A	N/A	N/A	0.93	4975.87	0.06	0 00:10	0.00	0.00
13	CB14	1.02	1.02	N/A	N/A	N/A	5.50	5070.47	0.36	0 00:10	0.00	0.00
14	CB15	0.37	0.37	N/A	N/A	N/A	2.02	5069.48	0.13	0 00:10	0.00	0.00
15	CB16InletOffsite	2.53	2.53	2.20	0.33	86.84	3.79	4999.15	0.30	0 00:20	0.00	0.00

Project Description

File Name	19011 Brookside Meadows SSA.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Modified Rational
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Kinematic Wave
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Jan 01, 2019	00:00:00
End Analysis On	Jan 02, 2019	00:00:00
Start Reporting On	Jan 01, 2019	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	0
Subbasins	15
Nodes	28
Junctions	10
Outfalls	3
Flow Diversions	0
Inlets	15
Storage Nodes	0
Links	33
Channels	0
Pipes	33
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period	100 year(s)

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub01	0.36	0.2000	0.87	0.17	0.06	0.37	0 00:10:00
2	Sub02	0.39	0.4400	0.87	0.38	0.15	0.89	0 00:10:00
3	Sub03	0.17	0.7500	0.87	0.65	0.11	0.66	0 00:10:00
4	Sub04	0.59	0.2200	0.87	0.19	0.11	0.68	0 00:10:00
5	Sub05	0.32	0.5200	0.87	0.45	0.14	0.87	0 00:10:00
6	Sub06	0.14	0.7800	0.87	0.68	0.09	0.57	0 00:10:00
7	Sub07	0.96	0.4800	0.87	0.42	0.40	2.40	0 00:10:00
8	Sub08	0.79	0.3800	0.87	0.33	0.26	1.56	0 00:10:00
9	Sub09	0.09	0.7800	0.87	0.68	0.06	0.37	0 00:10:00
10	Sub10	0.96	0.3400	0.87	0.30	0.28	1.70	0 00:10:00
11	Sub11	0.10	0.7700	0.87	0.67	0.07	0.40	0 00:10:00
12	Sub12	0.08	0.8100	0.87	0.70	0.06	0.34	0 00:10:00
13	Sub14	1.01	0.3800	0.87	0.33	0.33	2.00	0 00:10:00
14	Sub15	0.23	0.6100	0.87	0.53	0.12	0.73	0 00:10:00
15	Sub16	6.63	0.2000	1.24	0.25	1.64	4.93	0 00:20:00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J01	Junction	4978.33	4985.83	1.92	4978.88	0.00	6.95	0 00:00	0.00	0.00
2	J02	Junction	4977.92	4986.09	1.92	4978.47	0.00	7.62	0 00:00	0.00	0.00
3	J03	Junction	4977.12	4986.44	1.90	4977.66	0.00	8.78	0 00:00	0.00	0.00
4	J04	Junction	4976.70	4985.74	1.90	4977.28	0.00	8.46	0 00:00	0.00	0.00
5	J05	Junction	4976.35	4984.32	2.50	4977.53	0.00	6.79	0 00:00	0.00	0.00
6	J06	Junction	4973.60	4981.09	3.65	4974.13	0.00	6.96	0 00:00	0.00	0.00
7	J07	Junction	4972.20	4979.62	9.86	4973.02	0.00	6.60	0 00:00	0.00	0.00
8	J08	Junction	4979.76	4987.26	3.04	4980.19	0.00	7.07	0 00:00	0.00	0.00
9	J09	Junction	4973.46	4980.81	6.32	4974.22	0.00	6.59	0 00:00	0.00	0.00
10	J10	Junction	4968.27	4975.77	10.37	4969.09	0.00	6.68	0 00:00	0.00	0.00
11	outletE	Outfall	4966.00		10.71	4966.91					
12	outletW	Outfall	5049.80		2.70	5050.21					
13	OutOffsite	Outfall	4975.00		3.81	4975.44					

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)
1	BPCB01	Pipe	CB01	CB02	40.55	4979.00	4977.88	2.7600	18.000	0.0150	0.00	0.00	0.00	0.00	0.00
2	BPCB04	Pipe	CB04	CB05	112.69	4980.71	4974.14	5.8300	0.000	0.0150	0.02	0.00	0.00	0.00	0.00
3	BPCB05	Pipe	CB05	CB10	46.99	4974.14	4973.98	0.3400	0.000	0.0150	0.04	0.00	0.00	0.00	0.00
4	BPCB06	Pipe	CB06	CB11	159.79	4974.14	4968.80	3.3400	0.000	0.0150	0.14	0.00	0.00	0.00	0.00
5	BPCB07	Pipe	CB07	CB09	140.09	4980.30	4973.98	4.5100	0.000	0.0150	0.84	0.00	0.00	0.00	0.00
6	BPCB08	Pipe	CB08	CB10	139.51	4980.29	4973.98	4.5200	0.000	0.0150	0.39	0.00	0.00	0.00	0.00
7	BPCB09	Pipe	CB09	CB12	99.00	4973.98	4967.27	6.7800	0.000	0.0150	0.01	0.00	0.00	0.00	0.00
8	BPCB16	Pipe	CB16InletOffsite	CB08	97.56	4985.00	4980.29	4.8300	0.000	0.0150	1.10	0.00	0.00	0.00	0.00
9	P01	Pipe	CB01	CB02	28.83	4980.00	4978.88	3.8800	12.000	0.0150	0.37	6.09	0.06	4.28	0.17
10	P02	Pipe	CB02	J01	17.04	4978.88	4978.33	3.2300	15.000	0.0150	1.26	10.06	0.13	5.61	0.30
11	P03	Pipe	CB03	J01	16.07	4978.88	4978.33	3.4200	15.000	0.0150	0.66	10.36	0.06	4.72	0.21
12	P04	Pipe	J01	J02	54.99	4978.33	4977.92	0.7500	15.000	0.0150	1.92	4.83	0.40	3.73	0.55
13	P05	Pipe	J02	J03	106.82	4977.92	4977.12	0.7500	15.000	0.0150	1.90	4.84	0.39	3.74	0.54
14	P06	Pipe	J03	J04	55.05	4977.12	4976.70	0.7600	15.000	0.0150	1.90	4.89	0.39	3.74	0.54
15	P07	Pipe	J04	J05	59.66	4976.70	4976.35	0.5900	15.000	0.0150	1.89	4.29	0.44	3.40	0.58
16	P08	Pipe	CB04	J05	33.57	4980.71	4977.35	10.0100	12.000	0.0150	0.65	9.77	0.07	7.04	0.18
17	P09	Pipe	J05	J06	180.14	4976.35	4973.60	1.5300	15.000	0.0150	2.49	6.92	0.36	5.22	0.52
18	P10	Pipe	CB06	J06	17.00	4974.14	4973.60	3.1800	15.000	0.0150	0.72	9.98	0.07	4.74	0.23
19	P11	Pipe	CB05	J06	17.00	4974.14	4973.60	3.1800	15.000	0.0150	0.54	9.98	0.05	4.35	0.20
20	P12	Pipe	J06	J07	46.69	4973.60	4972.20	3.0000	15.000	0.0150	3.65	9.69	0.38	7.34	0.53
21	P13	Pipe	CB08	J08	16.99	4980.29	4979.76	3.1200	15.000	0.0150	1.49	9.89	0.15	5.80	0.33
22	P14	Pipe	CB07	J08	17.01	4980.30	4979.76	3.1700	15.000	0.0150	1.55	9.98	0.16	5.91	0.33
23	P15	Pipe	J08	J09	137.38	4979.76	4973.46	4.5900	15.000	0.0150	3.03	11.99	0.25	8.16	0.43
24	P16	Pipe	CB10	J09	17.00	4973.98	4973.46	3.0600	15.000	0.0150	2.12	9.79	0.22	6.38	0.39
25	P17	Pipe	CB09	J09	17.00	4973.98	4973.46	3.0600	15.000	0.0150	1.19	9.79	0.12	5.39	0.29
26	P18	Pipe	J09	J07	46.94	4973.46	4972.20	2.6800	15.000	0.0150	6.31	9.17	0.69	8.06	0.76
27	P19	Pipe	J07	J10	110.70	4972.20	4968.27	3.5500	18.000	0.0150	9.85	17.15	0.57	10.05	0.81
28	P20	Pipe	CB11	J10	17.00	4968.80	4968.27	3.1200	15.000	0.0150	0.54	9.89	0.05	4.31	0.20
29	P21	Pipe	J10	CB12	17.00	4968.27	4967.27	5.8800	18.000	0.0150	10.37	22.08	0.47	12.30	0.72
30	P22	Pipe	CB12	outletE	43.01	4967.27	4966.00	2.9500	18.000	0.0150	10.71	15.64	0.68	9.53	0.91
31	P23	Pipe	CB14	CB15	34.01	5063.11	5058.00	15.0200	15.000	0.0150	1.99	21.70	0.09	11.06	0.26
32	P24	Pipe	CB15	outletW	188.73	5058.00	5049.80	4.3400	15.000	0.0150	2.70	11.67	0.23	7.78	0.41
33	P25	Pipe	CB16InletOffsite	OutOffsite	193.73	4985.00	4975.00	5.1600	18.000	0.0150	3.81	20.68	0.18	10.13	0.44

Peak Flow Depth/ Total Depth Ratio
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.17
0.24
0.17
0.44
0.43
0.43
0.47
0.18
0.41
0.18
0.16
0.43
0.26
0.27
0.34
0.32
0.24
0.61
0.54
0.16
0.48
0.61
0.20
0.33
0.29

Inlet Summary

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	CB01	On Grade	1	4980.00	4987.56	0.37	0.37	0.00	99.31	9.25	2.04	4987.66
2	CB02	On Sag	1	4978.88	4985.88	0.89	N/A	N/A	N/A	9.25	4.82	4986.20
3	CB03	On Sag	1	4978.88	4985.88	0.66	N/A	N/A	N/A	9.25	3.58	4986.12
4	CB04	On Grade	1	4980.71	4986.24	0.67	0.66	0.02	97.11	9.25	2.72	4986.38
5	CB05	On Grade	1	4974.14	4981.14	0.57	0.53	0.04	92.66	9.25	2.97	4981.28
6	CB06	On Grade	1	4974.14	4981.14	0.87	0.72	0.14	83.60	9.25	4.05	4981.30
7	CB07	On Grade	1	4980.30	4987.30	2.40	1.55	0.84	64.89	9.25	6.37	4987.51
8	CB08	On Grade	1	4980.29	4987.29	1.56	1.17	0.39	75.23	9.25	5.07	4987.48
9	CB09	On Grade	1	4973.98	4980.83	0.36	0.35	0.01	96.23	9.25	1.99	4980.93
10	CB10	On Sag	1	4973.98	4980.83	1.70	N/A	N/A	N/A	9.25	6.25	4981.25
11	CB11	On Sag	1	4968.80	4975.80	0.40	N/A	N/A	N/A	9.25	1.71	4975.94
12	CB12	On Sag	1	4967.27	4975.81	0.34	N/A	N/A	N/A	9.25	1.82	4975.93
13	CB14	On Sag	1	5063.11	5070.11	2.00	N/A	N/A	N/A	9.25	9.65	5070.55
14	CB15	On Sag	1	5058.00	5069.35	0.73	N/A	N/A	N/A	9.25	3.94	5069.61
15	CB16InletOffsite	On Grade	1	4985.00	4998.85	4.93	3.83	1.10	77.61	9.25	4.73	4999.25

Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)
1	J01	4978.33	4985.83	7.50
2	J02	4977.92	4986.09	8.17
3	J03	4977.12	4986.44	9.32
4	J04	4976.70	4985.74	9.04
5	J05	4976.35	4984.32	7.97
6	J06	4973.60	4981.09	7.49
7	J07	4972.20	4979.62	7.42
8	J08	4979.76	4987.26	7.50
9	J09	4973.46	4980.81	7.35
10	J10	4968.27	4975.77	7.50

Junction Results

SN	Element ID	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Max HGL Elevation Attained (ft)	Max HGL Depth Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Max HGL Occurrence (days hh:mm)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J01	1.92	0.00	4978.88	0.55	0.00	6.95	4978.34	0.01	0 00:10	0 00:00	0.00	0.00
2	J02	1.92	0.00	4978.47	0.55	0.00	7.62	4977.93	0.01	0 00:10	0 00:00	0.00	0.00
3	J03	1.90	0.00	4977.66	0.54	0.00	8.78	4977.13	0.01	0 00:10	0 00:00	0.00	0.00
4	J04	1.90	0.00	4977.28	0.58	0.00	8.46	4976.71	0.01	0 00:10	0 00:00	0.00	0.00
5	J05	2.50	0.00	4977.53	1.18	0.00	6.79	4977.35	1.00	0 00:10	0 00:00	0.00	0.00
6	J06	3.65	0.00	4974.13	0.53	0.00	6.96	4973.61	0.01	0 00:11	0 00:00	0.00	0.00
7	J07	9.86	0.00	4973.02	0.82	0.00	6.60	4972.21	0.01	0 00:10	0 00:00	0.00	0.00
8	J08	3.04	0.00	4980.19	0.43	0.00	7.07	4979.77	0.01	0 00:10	0 00:00	0.00	0.00
9	J09	6.32	0.00	4974.22	0.76	0.00	6.59	4973.47	0.01	0 00:10	0 00:00	0.00	0.00
10	J10	10.37	0.00	4969.09	0.82	0.00	6.68	4968.28	0.01	0 00:10	0 00:00	0.00	0.00

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Manning's Roughness	Initial Flow (cfs)
1	BPCB01	40.55	4979.00	4977.88	1.12	2.7600	Dummy	0.000	0.0150	0.00
2	BPCB04	112.69	4980.71	4974.14	6.57	5.8300	Dummy	0.000	0.0150	0.00
3	BPCB05	46.99	4974.14	4973.98	0.16	0.3400	Dummy	0.000	0.0150	0.00
4	BPCB06	159.79	4974.14	4968.80	5.34	3.3400	Dummy	0.000	0.0150	0.00
5	BPCB07	140.09	4980.30	4973.98	6.32	4.5100	Dummy	0.000	0.0150	0.00
6	BPCB08	139.51	4980.29	4973.98	6.31	4.5200	Dummy	0.000	0.0150	0.00
7	BPCB09	99.00	4973.98	4967.27	6.71	6.7800	Dummy	0.000	0.0150	0.00
8	BPCB16	97.56	4985.00	4980.29	4.71	4.8300	Dummy	0.000	0.0150	0.00
9	P01	28.83	4980.00	4978.88	1.12	3.8800	CIRCULAR	12.000	0.0150	0.00
10	P02	17.04	4978.88	4978.33	0.55	3.2300	CIRCULAR	15.000	0.0150	0.00
11	P03	16.07	4978.88	4978.33	0.55	3.4200	CIRCULAR	15.000	0.0150	0.00
12	P04	54.99	4978.33	4977.92	0.41	0.7500	CIRCULAR	15.000	0.0150	0.00
13	P05	106.82	4977.92	4977.12	0.80	0.7500	CIRCULAR	15.000	0.0150	0.00
14	P06	55.05	4977.12	4976.70	0.42	0.7600	CIRCULAR	15.000	0.0150	0.00
15	P07	59.66	4976.70	4976.35	0.35	0.5900	CIRCULAR	15.000	0.0150	0.00
16	P08	33.57	4980.71	4977.35	3.36	10.0100	CIRCULAR	12.000	0.0150	0.00
17	P09	180.14	4976.35	4973.60	2.75	1.5300	CIRCULAR	15.000	0.0150	0.00
18	P10	17.00	4974.14	4973.60	0.54	3.1800	CIRCULAR	15.000	0.0150	0.00
19	P11	17.00	4974.14	4973.60	0.54	3.1800	CIRCULAR	15.000	0.0150	0.00
20	P12	46.69	4973.60	4972.20	1.40	3.0000	CIRCULAR	15.000	0.0150	0.00
21	P13	16.99	4980.29	4979.76	0.53	3.1200	CIRCULAR	15.000	0.0150	0.00
22	P14	17.01	4980.30	4979.76	0.54	3.1700	CIRCULAR	15.000	0.0150	0.00
23	P15	137.38	4979.76	4973.46	6.30	4.5900	CIRCULAR	15.000	0.0150	0.00
24	P16	17.00	4973.98	4973.46	0.52	3.0600	CIRCULAR	15.000	0.0150	0.00
25	P17	17.00	4973.98	4973.46	0.52	3.0600	CIRCULAR	15.000	0.0150	0.00
26	P18	46.94	4973.46	4972.20	1.26	2.6800	CIRCULAR	15.000	0.0150	0.00
27	P19	110.70	4972.20	4968.27	3.93	3.5500	CIRCULAR	18.000	0.0150	0.00
28	P20	17.00	4968.80	4968.27	0.53	3.1200	CIRCULAR	15.000	0.0150	0.00
29	P21	17.00	4968.27	4967.27	1.00	5.8800	CIRCULAR	18.000	0.0150	0.00
30	P22	43.01	4967.27	4966.00	1.27	2.9500	CIRCULAR	18.000	0.0150	0.00
31	P23	34.01	5063.11	5058.00	5.11	15.0200	CIRCULAR	15.000	0.0150	0.00
32	P24	188.73	5058.00	5049.80	8.20	4.3400	CIRCULAR	15.000	0.0150	0.00
33	P25	193.73	4985.00	4975.00	10.00	5.1600	CIRCULAR	18.000	0.0150	0.00

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)
1	BPCB01	0.00	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
2	BPCB04	0.02	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
3	BPCB05	0.04	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
4	BPCB06	0.14	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
5	BPCB07	0.84	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
6	BPCB08	0.39	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
7	BPCB09	0.01	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00
8	BPCB16	1.10	0 00:20	0.00	0.00	0.00		0.00	0.00	0.00
9	P01	0.37	0 00:10	6.09	0.06	4.28	0.11	0.17	0.17	0.00
10	P02	1.26	0 00:10	10.06	0.13	5.61	0.05	0.30	0.24	0.00
11	P03	0.66	0 00:10	10.36	0.06	4.72	0.06	0.21	0.17	0.00
12	P04	1.92	0 00:10	4.83	0.40	3.73	0.25	0.55	0.44	0.00
13	P05	1.90	0 00:10	4.84	0.39	3.74	0.48	0.54	0.43	0.00
14	P06	1.90	0 00:10	4.89	0.39	3.74	0.25	0.54	0.43	0.00
15	P07	1.89	0 00:11	4.29	0.44	3.40	0.29	0.58	0.47	0.00
16	P08	0.65	0 00:10	9.77	0.07	7.04	0.08	0.18	0.18	0.00
17	P09	2.49	0 00:11	6.92	0.36	5.22	0.58	0.52	0.41	0.00
18	P10	0.72	0 00:10	9.98	0.07	4.74	0.06	0.23	0.18	0.00
19	P11	0.54	0 00:10	9.98	0.05	4.35	0.07	0.20	0.16	0.00
20	P12	3.65	0 00:11	9.69	0.38	7.34	0.11	0.53	0.43	0.00
21	P13	1.49	0 00:10	9.89	0.15	5.80	0.05	0.33	0.26	0.00
22	P14	1.55	0 00:10	9.98	0.16	5.91	0.05	0.33	0.27	0.00
23	P15	3.03	0 00:10	11.99	0.25	8.16	0.28	0.43	0.34	0.00
24	P16	2.12	0 00:10	9.79	0.22	6.38	0.04	0.39	0.32	0.00
25	P17	1.19	0 00:10	9.79	0.12	5.39	0.05	0.29	0.24	0.00
26	P18	6.31	0 00:10	9.17	0.69	8.06	0.10	0.76	0.61	0.00
27	P19	9.85	0 00:10	17.15	0.57	10.05	0.18	0.81	0.54	0.00
28	P20	0.54	0 00:10	9.89	0.05	4.31	0.07	0.20	0.16	0.00
29	P21	10.37	0 00:10	22.08	0.47	12.30	0.02	0.72	0.48	0.00
30	P22	10.71	0 00:10	15.64	0.68	9.53	0.08	0.91	0.61	0.00
31	P23	1.99	0 00:10	21.70	0.09	11.06	0.05	0.26	0.20	0.00
32	P24	2.70	0 00:10	11.67	0.23	7.78	0.40	0.41	0.33	0.00
33	P25	3.81	0 00:20	20.68	0.18	10.13	0.32	0.44	0.29	0.00

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Grate Clogging Factor (%)
1	CB01	On Grade	1	4980.00	4987.56	7.56	0.00
2	CB02	On Sag	1	4978.88	4985.88	7.00	0.00
3	CB03	On Sag	1	4978.88	4985.88	7.00	0.00
4	CB04	On Grade	1	4980.71	4986.24	5.53	0.00
5	CB05	On Grade	1	4974.14	4981.14	7.00	0.00
6	CB06	On Grade	1	4974.14	4981.14	7.00	0.00
7	CB07	On Grade	1	4980.30	4987.30	7.00	0.00
8	CB08	On Grade	1	4980.29	4987.29	7.00	0.00
9	CB09	On Grade	1	4973.98	4980.83	6.85	0.00
10	CB10	On Sag	1	4973.98	4980.83	6.85	0.00
11	CB11	On Sag	1	4968.80	4975.80	7.00	0.00
12	CB12	On Sag	1	4967.27	4975.81	8.54	0.00
13	CB14	On Sag	1	5063.11	5070.11	7.00	0.00
14	CB15	On Sag	1	5058.00	5069.35	11.35	0.00
15	CB16InletOffsite	On Grade	1	4985.00	4998.85	13.85	0.00

Roadway & Gutter Input

SN	Element ID	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (in)	Allowable Spread (ft)
1	CB01	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
2	CB02	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
3	CB03	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
4	CB04	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	9.25
5	CB05	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
6	CB06	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
7	CB07	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	9.25
8	CB08	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	9.25
9	CB09	0.0300	0.0200	0.0160	0.0620	2.00	0.0656	9.25
10	CB10	N/A	0.0300	0.0160	0.0620	2.00	0.0656	9.25
11	CB11	N/A	0.0300	0.0160	0.0620	2.00	0.0656	9.25
12	CB12	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
13	CB14	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
14	CB15	N/A	0.0200	0.0160	0.0620	2.00	0.0656	9.25
15	CB16InletOffsite	0.0500	0.1000	0.0300	0.0620	2.00	0.0656	9.25

Inlet Results

SN	Element ID	Peak Flow (cfs)	Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Max Depth Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	CB01	0.37	0.37	0.37	0.00	99.31	2.04	4987.66	0.10	0 00:10	0.00	0.00
2	CB02	0.89	0.89	N/A	N/A	N/A	4.82	4986.20	0.32	0 00:10	0.00	0.00
3	CB03	0.66	0.66	N/A	N/A	N/A	3.58	4986.12	0.24	0 00:10	0.00	0.00
4	CB04	0.67	0.67	0.66	0.02	97.11	2.72	4986.38	0.14	0 00:10	0.00	0.00
5	CB05	0.57	0.57	0.53	0.04	92.66	2.97	4981.28	0.14	0 00:10	0.00	0.00
6	CB06	0.87	0.87	0.72	0.14	83.60	4.05	4981.30	0.16	0 00:10	0.00	0.00
7	CB07	2.40	2.40	1.55	0.84	64.89	6.37	4987.51	0.21	0 00:10	0.00	0.00
8	CB08	1.56	1.56	1.17	0.39	75.23	5.07	4987.48	0.19	0 00:10	0.00	0.00
9	CB09	0.36	0.36	0.35	0.01	96.23	1.99	4980.93	0.10	0 00:10	0.00	0.00
10	CB10	1.70	1.70	N/A	N/A	N/A	6.25	4981.25	0.42	0 00:10	0.00	0.00
11	CB11	0.40	0.40	N/A	N/A	N/A	1.71	4975.94	0.14	0 00:10	0.00	0.00
12	CB12	0.34	0.34	N/A	N/A	N/A	1.82	4975.93	0.12	0 00:10	0.00	0.00
13	CB14	2.00	2.00	N/A	N/A	N/A	9.65	5070.55	0.44	0 00:10	0.00	0.00
14	CB15	0.73	0.73	N/A	N/A	N/A	3.94	5069.61	0.26	0 00:10	0.00	0.00
15	CB16InletOffsite	4.93	4.93	3.83	1.10	77.61	4.73	4999.25	0.40	0 00:20	0.00	0.00

Storm Drainage Detention Calculations
Brookside Meadows
East Portion
100-yr, 24-hr Post-Development Rational Method Calculations[1]

Area and Weighted C Calculation

Description	Acres	C^2
Total Roads	1.590	0.90
Total Undeveloped	1.900	0.20
Total Lot Area	1.690	0.30
Total:	5.180	**0.45**

Storage requirements by duration (maximum volume is bolded)

Duration (min)	C_w	i (100 yr.)	Area (ac)	Q(cfs)	Vol. (cf)	Allowable Release (cf)	Storage[3] (cf)	Storage (ac-ft)
5	0.45	6.71	5.18	15.64	4,692	166	4,526	0.10
10	0.45	5.11	5.18	11.91	7,147	332	6,815	0.16
15	0.45	4.22	5.18	9.84	8,853	498	8,355	0.19
30	0.45	2.84	5.18	6.62	11,916	997	10,919	0.25
60	0.45	1.76	5.18	4.10	14,769	1,993	**12,776**	0.29
120	0.45	0.97	5.18	2.27	16,347	3,987	12,360	0.28
180	0.45	0.67	5.18	1.55	16,766	5,980	10,786	0.25
360	0.45	0.37	5.18	0.86	18,579	11,960	6,619	0.15
720	0.45	0.22	5.18	0.52	22,456	23,920	-1,464	-0.03
1,440	0.45	0.11	5.18	0.263	22,758	47,840	-25,082	-0.58

Orifice Size

C (sharp edge constant)	0.61
Q (release rate x area, cfs)	0.554
H (Depth of pond, ft)	6.0
A (Area of orifice, ft^2)	0.046
A (Area of orifice, in^2)	6.6
r (radius of orifice, in)	1.5

$$A = \frac{Q}{C\sqrt{2gh}}$$

$$r = \sqrt{\frac{A}{\pi}}$$

1) Per Alpine City Storage Requirements
2) Runoff Coefficients from "*Hydrologic Analysis and Design*", Richard H. McCuen, 1998
3) Storage = Storm Volume - Allowable Release

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www.wildingengineering.com

Storm Drainage Detention Calculations
Brookside Meadows
West Portion
100-yr, 24-hr Post-Development Rational Method Calculations[1]

Area and Weighted C Calculation

Description	Acres	C^2
Total Roads	0.310	0.90
Total Undeveloped	0.130	0.20
Total Lot Area	0.890	0.30
Total:	1.330	**0.43**

Storage requirements by duration (maximum volume is bolded)

Duration (min)	C_w	i (100 yr.)	Area (ac)	Q(cfs)	Vol. (cf)	Allowable Release (cf)	Storage[3] (cf)	Storage (ac-ft)
5	0.43	6.71	1.33	3.84	1,151	28	1,123	0.03
10	0.43	5.11	1.33	2.92	1,753	56	1,698	0.04
15	0.43	4.22	1.33	2.41	2,172	84	2,088	0.05
30	0.43	2.84	1.33	1.62	2,924	168	2,756	0.06
60	0.43	1.76	1.33	1.01	3,624	335	3,288	0.08
120	0.43	0.97	1.33	0.56	4,011	670	**3,340**	0.08
180	0.43	0.67	1.33	0.38	4,114	1,005	3,108	0.07
360	0.43	0.37	1.33	0.21	4,558	2,011	2,547	0.06
720	0.43	0.22	1.33	0.13	5,509	4,022	1,488	0.03
1,440	0.43	0.11	1.33	0.065	5,584	8,044	-2,460	-0.06

Orifice Size

C (sharp edge constant)	0.61
Q (release rate x area, cfs)	0.093
H (Depth of pond, ft)	2.2
A (Area of orifice, ft^2)	0.013
A (Area of orifice, in^2)	1.8
r (radius of orifice, in)	0.8

$$A = \frac{Q}{C\sqrt{2gh}}$$

$$r = \sqrt{\frac{A}{\pi}}$$

1) Per Alpine City Storage Requirements
2) Runoff Coefficients from "*Hydrologic Analysis and Design*", Richard H. McCuen, 1998
3) Storage = Storm Volume - Allowable Release

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Storm Drainage Detention/ Retention Calculations

Brookside Meadows

East Portion

Areas	Sq ft	Acres
East		
Roads	69,129	1.59
Undeveloped	82,727	1.90
Lots	73,485	1.69
		5.17
East total	225,341	5.17

Total 100 year detention	12,776	
90% volume for lots	1010	subtract this from total detention volume
Volume to detained	**11,765**	
retained volume		
90% volume for roads	2852	
90% volume for undev.	758	**3610** volume to be retained

Storm Drainage Detention/ Retention Calculations
Brookside Meadows
West Portion

Areas	Sq ft	Acres
West		
Roads	13,392	0.31
Undeveloped	5,644	0.13
Lots	38,887	0.89
		1.33
West total	57,923	1.33

Total 100 year detention	3,340	
90% volume for lots	535	subtract this from total detention volume
Volume to detained	**2,806**	
retained volume		
90% volume for roads	552	
90% volume for undev.	52	**604** volume to be retained

HORROCKS ENGINEERS

To: **Jed Muhlestein**
Alpine City

From: **John E. Schiess, P.E.**

Date: Aug 28, 2019 **Memorandum**

Subject: **Alpine Ridge Hydraulic Modeling Results and Recommendations**

The proposed development consists of 9 single family home lots split between Hog Hollow Rd (4) and Whitby Woodlands Dr (5).

The development proposes 9 culinary ERC's, 2.3 irrigated acres, and 9 sanitary sewer ERU's. The current master plan anticipated 4 culinary ERC's, 6.2 irrigated acres, and 4 sanitary sewer ERU's. Proposed connections are slightly different than the master plan projected. 5 more culinary and sanitary sewer connection will not adversely affect operations of those systems. Less irrigated acreage will enhance buildout service in the PI system.

The proposed culinary water improvements have been modeled in both the current and buildout models. The proposed improvements fit well within the City's culinary water master plan and modeling shows them to be adequate.

The proposed pressurized irrigation improvements have been modeled in both the current and buildout models under both wet and dry year supply conditions. The proposed improvements fit well within the City's pressurized irrigation master plan and modeling shows them to be adequate.

The proposed sanitary sewer improvements have been modeled in both the current and buildout models. The proposed improvements fit well within the City's sanitary sewer master plan and modeling shows them to be adequate.

Recommendations:

1. None.

Comments:

2. Fire flow available in the area surrounding the proposed improvements should be over 2,500 gallons per minute at 20 psi for the proposed lines.

ALPINE PLANNING COMMISSION AGENDA

SUBJECT: Gateway/Historic Requirements – J & L Automotive Addition

FOR CONSIDERATION ON: 7 January 2020

PETITIONER: James Lawrence

ACTION REQUESTED BY PETITIONER: Approve the addition as proposed.

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BACKGROUND INFORMATION:

The property is located at 80 South Main Street. The proposed addition is to be on the front or east side of the building (side closest to Main Street). In December the applicant came to Planning Commission and received a recommendation of approval. However, one of the conditions of approval was that the Planning Commission approve revised elevations that would make the building more attractive to meet the Gateway/Historic requirements. The applicant has revised the design of the building and is now returning for a recommendation from the Planning Commission.

Staff Recommendation:
Approve the proposed update to the building elevations.

Sample Motion to Approve:
I motion that the proposed plans be approved as proposed.

Sample Motion to Approve with Conditions:
I motion that the proposed plans be approved with the following conditions:

- ***Insert Finding***

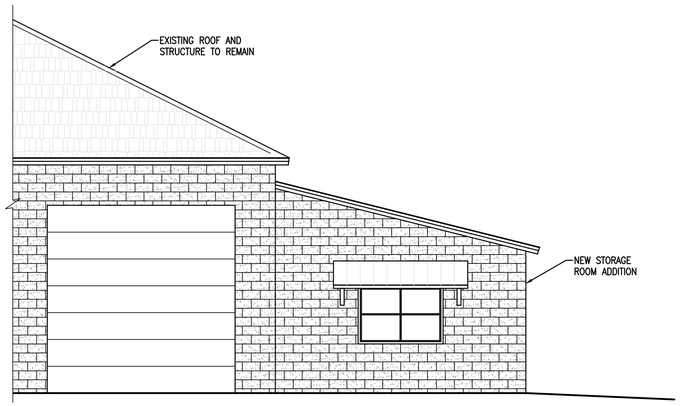
Sample Motion to Deny:
I motion that the proposed plans be denied based on the following:

- ***Insert Finding***

EAST ELEVATION

STORAGE ROOM ADDITION

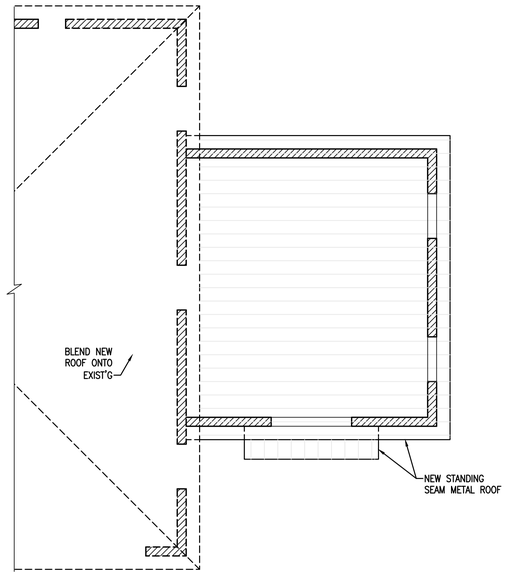
3/16" = 1'-0"



PARTIAL SOUTH ELEVATION

STORAGE ROOM ADDITION

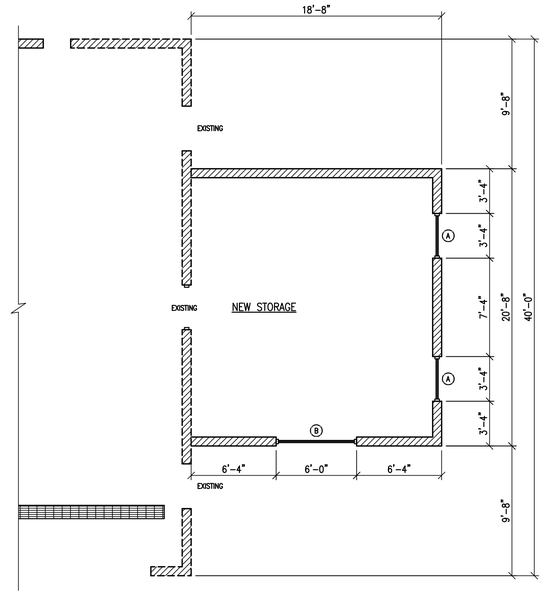
3/16" = 1'-0"



PARTIAL ROOF PLAN

STORAGE ROOM ADDITION

3/16" = 1'-0"



PARTIAL MAIN FLOOR PLAN

STORAGE ROOM ADDITION

3/16" = 1'-0"

WINDOW SCHEDULE

MARK	SIZE	TYPE	MATERIALS	NOTES
A	3-0 x 4-0	SINGLE HUNG	DBL PANE, VINYL FRAME	TO MATCH EXISTING
B	6-0 x 4-0	SINGLE HUNG	DBL PANE, VINYL FRAME	TO MATCH EXISTING

DATE:	6-20-14	DESIGNED BY: RTA	DRAWN BY: MGP	CHECKED BY: RTA
REV. #	DATE	BY:	DESCRIPTION	

VECTOR
ENGINEERS
SANDY, UTAH
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(801) 990-1776 FAX
ST. GEORGE, UTAH
(435) 628-5122
LAYTON, UTAH
(801) 927-3094

JAMES LAWRENCE

LAWRENCE SHOP - PROPOSED ADDITION

ADDITION PLANS & ELEVATIONS

U0858-004-141

A1

ALPINE PLANNING COMMISSION AGENDA

SUBJECT: Short Term Rentals

FOR CONSIDERATION ON: 7 January 2019

PETITIONER: Staff

ACTION REQUESTED BY PETITIONER: Review and make a recommendation to City Council.

BACKGROUND INFORMATION:

In October 2019 the Planning Commission reviewed and discussed a draft Short Term Rental ordinance. Ultimately, the Planning Commission discussed how they felt that downsides to allowing Short Term Rentals outweighed the benefits. Staff have prepared a new ordinance which would prohibit Short Term Rentals in Alpine City.

STAFF RECOMMENDATION:
Review and discuss Ordinance 2020-2 and make a recommendation to City Council.

SAMPLE MOTION TO APPROVE:
I motion to recommend that Ordinance 2020-2 be approved as proposed.

SAMPLE MOTION TO APPROVE WITH CONDITIONS:
I motion to recommend that Ordinance 2020-2 be approved with the following conditions/changes:

- ***Insert Finding***

SAMPLE MOTION TO DENY:
I motion to recommend that Ordinance 2020-2 be denied based on the following:

- ***Insert Finding***

ALPINE CITY
ORDINANCE 2020-2

AN ORDINANCE ADOPTING AMENDMENTS TO ARTICLE 3.01.110; 3.02.090; 3.03.100; 3.04.100; 3.05.100; AND 3.07.080 OF THE ALPINE CITY DEVELOPMENT CODE PERTAINING TO SHORT TERM RENTALS.

WHEREAS, The Alpine City Council has deemed it in the best interest of Alpine City to prohibit Short Term Rentals within City boundaries; and

WHEREAS, the Alpine City Planning Commission has reviewed the proposed Amendments to the Development Code, held a public hearing, and has forwarded a recommendation to the City Council; and

WHEREAS, the Alpine City Council has reviewed the proposed Amendments to the Development Code:

NOW THEREFORE, be it ordained by the Council of Alpine City, in the State of Utah, as follows: The amendments to Article 3.01.110; 3.02.090; 3.03.100; 3.04.100; 3.05.100; and 3.07.080 contained in the attached document will supersede Article 3.01.110; 3.02.090; 3.03.100; 3.04.100; 3.05.100; and 3.07.080 as previously adopted. This ordinance shall take effect upon posting.

SECTION 1: **AMENDMENT** "3.01.110 Definitions" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

3.01.110 Definitions

ACCESSORY APARTMENT. A subordinate dwelling unit within and part of a principle dwelling and which has its own cooking, sleeping and sanitation facilities.

ACCESSORY BUILDING. A detached subordinate building, the use of which is appropriate, subordinate, and customarily incidental to that of the main building or to the main use of the land and which is located on the same lot or parcel of land with the main building or use.

AGRICULTURE. The tilling of soil, the raising of crops, horticulture, the gardening, but not including the keeping or raising of domestic animals or fowl, except household pets, and not including any agricultural industry or business such as fruit packing plants, commercial egg production, or similar uses.

APIARY. Any place where one (1) or more colonies of bees are located.

AVERAGE SLOPE OF LOT. The average slope of a lot, expressed as the percent of slope, to be determined via computer modeling. AutoCAD or ESRI products are acceptable programs to be used for determining the average slope of lot; any other program must be pre-approved by the City Engineer.

BEEKEEPING EQUIPMENT. Anything used in the operation of an apiary, such as hive bodies, supers, frames, top and bottom boards, and extractors.

BUILDABLE AREA. (Ord. 94-02, 2/8/94) A lot or portion thereof possessing all of the following physical characteristics:

1. The area contains no territory having a natural slope of twenty (20) percent or greater;
2. The area contains no territory which is located in any identified flood plain or within any recognized inundation zone, mud flow zone or zone of deformation, or lands subject to earth slippage, landslide or rockfall;
3. The engineering properties of the soil provide adequate structural support for the intended use;
4. The area does not possess any other recognized natural condition, which renders it unsafe for building purposes;
5. The area is within the building setback envelope as determined in accordance with the setback provisions of the zone; and
6. The area is readily capable of vehicular access from the adjacent public street over a driveway having a slope of not more than twelve (12) percent with no cut or fill greater than five feet as measured at the finished grade of the centerline alignment.

BUILDING. Any structure having a roof supported by columns or walls, built for the support, shelter, or enclosure of persons, animals, chattels, or property of any kind.

CIVIC BUILDING. A structure owned by the City and used for governmental purposes, including administrative buildings (City Hall) fire stations, police stations, libraries, but not including shop and repair facilities.

COLONY. Bees in a hive including queens, workers, or drones.

CONDITIONAL USE. A use of land that, because of its unique characteristics or potential impact on the municipality, surrounding neighbors, or adjacent land uses, may not be compatible in some areas or may be compatible only if certain conditions are required that mitigate or eliminate the detrimental impacts.

CUSTOMARY RESIDENTIAL ACCESSORY STRUCTURE. A structure constructed on the same zoning lot as a dwelling and which is intended for the incidental and exclusive use of the residents of said dwelling, including but not limited to detached garages, carports, swimming pools, tennis courts, green houses, storage buildings, and satellite dishes.

DEVELOPMENT. Any change to a parcel of ground, which alters it from its natural state in any way. This includes clearing, excavation, grading, installation of any infrastructure or erection of any types of buildings.

DWELLING CLUSTER. A Group of three (3) or more single-unit detached Dwellings whose respective Buildable Areas are located no more than 400 feet from one Buildable Area to the next closest Buildable Area as measured from the midpoint of each Buildable Area.

DWELLING UNIT. One or more rooms in a building or portion thereof designed, occupied, or intended as a residence for a family with complete and independent facilities for living, sleeping, eating, cooking, and sanitation provided within the dwelling unit. See also Dwelling, Single Family.

DWELLING, MULTIPLE-UNIT. A building arranged to be occupied by two (2) or more families, the structure having two (2) or more attached dwelling units.

DWELLING, SINGLE FAMILY. A building arranged or designed to include only one (1) dwelling unit occupied by one (1) family, including extended living areas or an accessory apartment which may be approved as provided elsewhere in this Code.

FAMILY. An individual or two (2) or more persons related by blood, marriage, adoption, or guardianship; or a group of not more than four (4) persons, (excluding domestic help) who are not related, living in a dwelling unit as a single housekeeping unit and using common cooking facilities. "Family" does not exclude the care of foster children.

FENCES. A fence shall include any tangible barrier, an obstruction of any material, a line of obstacles, lattice work, screen, wall, hedge, or continuous growth of shrubs with the purpose of preventing passage or view across a boundary or lot line. (Ord. 2004-13, 9/28/04)

1. Privacy fences are structures where the field of vision through the fence is less than 50%.
2. Open-style fences are structures where the field of vision through the fence is 50% or greater.

FRONTAGE. The width of the lot or parcel of land measured at the required front setback-line.

GARAGE/CARPORT (PRIVATE). A structure for the parking or temporary storage of automobiles, but which does not involve commercial repairing or storage.

GEOLOGIC HAZARD. A hazard inherent in the surface or subsurface of the earth or artificially created, which is dangerous or potentially dangerous to life, property, or improvements, due to movement, failure, or shifting of earth.

GROUP LIVING ARRANGEMENT. A group living or congregate living arrangement where groups of more than four unrelated persons live together in a single dwelling unit, including, but not limited to, a batching apartment, boarding house, Congregate Living Unit, Assisted Living Facility, Nursing Care Facility, Residential Facility for Persons With a Disability, dormitory, student housing, fraternity, club, institutional group, half-way house, or similar group living or congregate living arrangement.

GUEST HOUSE. An accessory building constructed on the same zoning lot as the principle Single-Unit dwelling to be used for temporary occupancy.

HANDICRAFT PRODUCTION. Production of an individual's one-of-a-kind objects for sale on the site.

HELICOPTER. A manned aircraft in which lift, flight and landing is achieved by means of one or more power-driven horizontal propellers.

HELIPORT. An area on land or upon a building or structure set aside and used for the landing or takeoff of helicopters or other manned rotary wing aircrafts capable of vertical takeoff or landing.

HIVE. A frame hive, box hive, box, barrel, log, gum skep, or other artificial or natural receptacle which may be used to house bees.

HOME OCCUPATION. Any gainful occupation, service, profession or similar activity conducted in a consistent and ongoing manner within a dwelling. Business activity consisting primarily of the sale of goods produced elsewhere on the premises (i.e. retail sales establishment) shall not qualify as a home occupation.

HOBBY BEEKEEPER. A person who owns or has charge of eight (8) or fewer hives of bees.

HONEYBEE. The common honeybee, Apis mellifera species, at any stage of development, but not including the African honeybee, Apis mellifera scutellata species, or any hybrid thereof.

HOUSEHOLD PETS. Animals or fowl ordinarily permitted to a residence and kept for company or pleasure, such as dogs, cats, fish and canaries. Household pets do not include inherently or potentially dangerous animals or fowl, or those normally considered agricultural livestock.

IMPERVIOUS MATERIAL. Matter that is impenetrable as by moisture.

LOT. A parcel or unit of land describable either by metes and bounds, or by other legal plat designation held or intended to be held in separate ownership or leasehold or a parcel or unit of land shown as a lot or parcel on a recorded subdivision map, or shown on a plat used in the lease or sale of land resulting from the division of a larger tract into smaller units. Lots shall be generally rectangular in nature, and shall have no more than five sides without an exception being recommended by the Planning Commission and approved by the City Council; the front of a property, located at the front right of way, does not count against this requirement.

LOT, CORNER. Shall mean a lot located at the junction of and fronting on two (2) or more intersecting streets.

MOBILE HOME. A detached dwelling designed for long-term occupancy and to be transported on its own wheels, or on a flatbed or other trailer or detachable wheels, and arriving at the site where it is to be occupied as a complete dwelling unit ready for occupancy except for connections to utilities and other minor work. Removal of such wheels or placing such dwelling unit on a foundation shall not remove such unit from classification as a mobile home. Excluded from this definition shall be those permanent dwelling structures that are constructed of component parts that are transported to the building site and which meet structural requirements of the Uniform Building Code and which are finished with exterior building material that is typical of permanent residential buildings.

NON-CONFORMING USE. A building or structure, or portion thereof, or use of a building or land which does not conform to use regulations for the district in which it is situated, but which is in conformity with said regulations, if any, at the time of its establishment.

OFF STREET PARKING. An area adjoining a building providing for the parking of automobiles which does not include a public street but has convenient access to it.

OFFICE, PROFESSIONAL. A building or space used by persons such as accountants, architects, artists, dentists, designers, engineers, lawyers, physicians, realtors, teachers, and others who, by virtue of training and for license, are qualified to perform services of a professional nature, and where storage of goods and sale of merchandise is minimal and secondary to performance of the service.

OPEN SPACE. The use of land which leaves soil generally undisturbed and upon which natural vegetation, whether or not native to the area, occupies the major visible aspect of the land.

PERMITTED USE. A use of land for which no conditional use permit is required.

PUBLIC USE. A use operated or supervised exclusively by a public body, such use having the purpose of serving the public health, safety, or general welfare, and including uses such as public schools, parks, playgrounds, and other recreational facilities, administrative and service facilities, and public utilities.

QUASI PUBLIC USE. A use operated by a private non-profit educational, religious, recreational, charitable or philanthropic institution, having the primary purpose of serving the general public, such as churches, private schools, hospitals and similar uses.

REASONABLE ACCOMMODATION. A reasonable change in any rule, policy, practice, or service necessary to afford persons with a disability equal opportunity to use and enjoy a dwelling when compared to similarly-situated persons or groups.

RECREATION, PUBLIC. Recreation facilities operated by a public agency and open to the public with or without a fee.

RESIDENCE. A dwelling unit where an individual or family is actually domiciled at a given point in time and not a place of temporary sojourn or transient visit. Temporary sojourn or transient visit shall be thirty (30) days or less.

RESIDENTIAL FACILITY FOR PERSONS WITH A DISABILITY. A residence in which no more than eight (8) unrelated persons with a disability resides and which is:

1. Licensed or certified by the Department of Human Services under Title 62A, Chapter 2, of the Utah Code, Licensure of Programs and Facilities; or
2. Licensed or certified by the Department of Human Health under Title 26, Chapter 21, Health Care Facilities Licensing and Inspection Act.

RETAINING WALL. Any structure designed to resist the lateral displacement of soil or other materials. Examples include block walls, rock walls, concrete walls and segmented walls. A retaining wall is not considered a fence.

SIGN. Any device for visual communication to the public displayed out-of-doors, including signs painted on exterior walls, and interior illuminated signs, to be viewed from out-of-doors, but not including a flag, badge, or ensign of any government or government agency.

STREET, PUBLIC. A thoroughfare which has been dedicated and accepted by proper public authority (or abandoned to the public) or a thoroughfare not less than twenty-four (24) feet wide which has been made public by right of use and which affords the principal means of access to abutting property.

STRUCTURE. Anything constructed, the use of which requires fixed location upon the ground, or attached to something having a fixed location upon the ground, and which creates an impervious material on or above the ground; definition includes "building."

YARD. A required space on a lot other than a court, unoccupied and unobstructed from the ground upward, by buildings, except as otherwise provided herein.

YARD, FRONT. A space between the front of the main building on a lot and the front lot line or line of an abutting street or right-of-way and extending across the full width of a lot. The depth (or setback) of the front yard is the minimum distance between the front lot line, and the front-most part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches, and decks).

YARD, REAR. A space between the back wall of the nearest main building extending the full width of the lot and the lot line that is most distant from, and is most nearly parallel with, the front lot line. If the rear lot line is less than ten feet (10') in length, or if the lot comes to a point at the rear, the rear lot line shall be deemed to be a ten foot (10') line parallel to the front line, lying wholly within the lot for the purpose of establishing the minimum rear yard. The depth (or setback) of the rear yard is the minimum distance between the rear lot line and the rearmost part of the primary structure of the nearest main building at the foundation level.

(Primary structure includes overhangs, porches and decks. See drawing in Appendix A). (Ord. 2004-13, 9/28/04)

YARD, SIDE. A yard that is neither a front yard nor a rear yard. The depth (or setback) of the side yard is the minimum distance between the side lot line and the nearest part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches and decks).

ZONING LOT (Ord. 94-02, 2/8/94). A lot or parcel of land which:

1. Meets all area (lot size), frontage (width), setback (yard), and other zoning requirements applicable within the zone in which it is located;
2. Abuts upon and has direct access to a street which has been dedicated to the City or otherwise accepted by the City as a City Street;
3. Is served by the minimum level of improvements required for issuance of a building permit or for which the construction of the minimum level of improvements is secured through the posting of a performance guarantee; and
4. Is shown as a separate lot on the final plat of a subdivision or similar development, which has been approved in accordance with the applicable ordinance, or is legally exempted from compliance with said ordinance. A parcel which is part of an unapproved or illegal subdivision shall not qualify as a zoning lot.

(Amended by Ord. 2004-14 on 9/28/04; Ord. 2009-16, 10/13/09; Ord. 20011-06, 03/08/11; Ord. 2011-12, 10/25/11; Ord. 2014-11, 6/24/14; Ord. 2015-02, 02/10/15; Ord. 2015-07, 05/26/15)

A F T E R A M E N D M E N T

3.01.110 Definitions

ACCESSORY APARTMENT. A subordinate dwelling unit within and part of a principle dwelling and which has its own cooking, sleeping and sanitation facilities.

ACCESSORY BUILDING. A detached subordinate building, the use of which is appropriate, subordinate, and customarily incidental to that of the main building or to the main use of the land and which is located on the same lot or parcel of land with the main building or use.

AGRICULTURE. The tilling of soil, the raising of crops, horticulture, the gardening, but not including the keeping or raising of domestic animals or fowl, except household pets, and not including any agricultural industry or business such as fruit packing plants, commercial egg production, or similar uses.

APIARY. Any place where one (1) or more colonies of bees are located.

AVERAGE SLOPE OF LOT. The average slope of a lot, expressed as the percent of slope, to be determined via computer modeling. AutoCAD or ESRI products are acceptable programs to be used for determining the average slope of lot; any other program must be pre-approved by the City Engineer.

BEEKEEPING EQUIPMENT. Anything used in the operation of an apiary, such as hive bodies, supers, frames, top and bottom boards, and extractors.

BUILDABLE AREA. (Ord. 94-02, 2/8/94) A lot or portion thereof possessing all of the following physical characteristics:

1. The area contains no territory having a natural slope of twenty (20) percent or greater;
2. The area contains no territory which is located in any identified flood plain or within any recognized inundation zone, mud flow zone or zone of deformation, or lands subject to earth slippage, landslide or rockfall;
3. The engineering properties of the soil provide adequate structural support for the intended use;
4. The area does not possess any other recognized natural condition, which renders it unsafe for building purposes;
5. The area is within the building setback envelope as determined in accordance with the setback provisions of the zone; and
6. The area is readily capable of vehicular access from the adjacent public street over a driveway having a slope of not more than twelve (12) percent with no cut or fill greater than five feet as measured at the finished grade of the centerline alignment.

BUILDING. Any structure having a roof supported by columns or walls, built for the support, shelter, or enclosure of persons, animals, chattels, or property of any kind.

CIVIC BUILDING. A structure owned by the City and used for governmental purposes, including administrative buildings (City Hall) fire stations, police stations, libraries, but not including shop and repair facilities.

COLONY. Bees in a hive including queens, workers, or drones.

CONDITIONAL USE. A use of land that, because of its unique characteristics or potential impact on the municipality, surrounding neighbors, or adjacent land uses, may not be compatible in some areas or may be compatible only if certain conditions are required that mitigate or eliminate the detrimental impacts.

CUSTOMARY RESIDENTIAL ACCESSORY STRUCTURE. A structure constructed on the same zoning lot as a dwelling and which is intended for the incidental and exclusive use of the residents of said dwelling, including but not limited to detached garages, carports, swimming pools, tennis courts, green houses, storage buildings, and satellite dishes.

DEVELOPMENT. Any change to a parcel of ground, which alters it from its natural state in any way. This includes clearing, excavation, grading, installation of any infrastructure or erection of any types of buildings.

DWELLING CLUSTER. A Group of three (3) or more single-unit detached Dwellings whose respective Buildable Areas are located no more than 400 feet from one Buildable Area to the next closest Buildable Area as measured from the midpoint of each Buildable Area.

DWELLING UNIT. One or more rooms in a building or portion thereof designed, occupied, or intended as a residence for a family with complete and independent facilities for living, sleeping, eating, cooking, and sanitation provided within the dwelling unit. See also Dwelling, Single Family.

DWELLING, MULTIPLE-UNIT. A building arranged to be occupied by two (2) or more families, the structure having two (2) or more attached dwelling units.

DWELLING, SINGLE FAMILY. A building arranged or designed to include only one (1) dwelling unit occupied by one (1) family, including extended living areas or an accessory apartment which may be approved as provided elsewhere in this Code.

FAMILY. An individual or two (2) or more persons related by blood, marriage, adoption, or guardianship; or a group of not more than four (4) persons, (excluding domestic help) who are not related, living in a dwelling unit as a single housekeeping unit and using common cooking facilities. "Family" does not exclude the care of foster children.

FENCES. A fence shall include any tangible barrier, an obstruction of any material, a line of obstacles, lattice work, screen, wall, hedge, or continuous growth of shrubs with the purpose of preventing passage or view across a boundary or lot line. (Ord. 2004-13, 9/28/04)

1. Privacy fences are structures where the field of vision through the fence is less than 50%.
2. Open-style fences are structures where the field of vision through the fence is 50% or greater.

FRONTAGE. The width of the lot or parcel of land measured at the required front setback-line.

GARAGE/CARPORT (PRIVATE). A structure for the parking or temporary storage of automobiles, but which does not involve commercial repairing or storage.

GEOLOGIC HAZARD. A hazard inherent in the surface or subsurface of the earth or artificially created, which is dangerous or potentially dangerous to life, property, or improvements, due to movement, failure, or shifting of earth.

GROUP LIVING ARRANGEMENT. A group living or congregate living arrangement where groups of more than four unrelated persons live together in a single dwelling unit, including, but not limited to, a batching apartment, boarding house, Congregate Living Unit, Assisted Living Facility, Nursing Care Facility, Residential Facility for Persons With a Disability, dormitory, student housing, fraternity, club, institutional group, half-way house, or similar group living or congregate living arrangement.

GUEST HOUSE. An accessory building constructed on the same zoning lot as the principle Single-Unit dwelling to be used for temporary occupancy.

HANDICRAFT PRODUCTION. Production of an individual's one-of-a-kind objects for sale on the site.

HELICOPTER. A manned aircraft in which lift, flight and landing is achieved by means of one or more power-driven horizontal propellers.

HELIPORT. An area on land or upon a building or structure set aside and used for the landing or takeoff of helicopters or other manned rotary wing aircrafts capable of vertical takeoff or landing.

HIVE. A frame hive, box hive, box, barrel, log, gum skep, or other artificial or natural receptacle which may be used to house bees.

HOME OCCUPATION. Any gainful occupation, service, profession or similar activity conducted in a consistent and ongoing manner within a dwelling. Business activity consisting primarily of the sale of goods produced elsewhere on the premises (i.e. retail sales establishment) shall not qualify as a home occupation.

HOBBY BEEKEEPER. A person who owns or has charge of eight (8) or fewer hives of bees.

HONEYBEE. The common honeybee, Apis mellifera species, at any stage of development, but not including the African honeybee, Apis mellifera scutellata species, or any hybrid thereof.

HOUSEHOLD PETS. Animals or fowl ordinarily permitted to a residence and kept for company or pleasure, such as dogs, cats, fish and canaries. Household pets do not include inherently or potentially dangerous animals or fowl, or those normally considered agricultural livestock.

IMPERVIOUS MATERIAL. Matter that is impenetrable as by moisture.

LOT. A parcel or unit of land describable either by metes and bounds, or by other legal plat designation held or intended to be held in separate ownership or leasehold or a parcel or unit of land shown as a lot or parcel on a recorded subdivision map, or shown on a plat used in the lease or sale of land resulting from the division of a larger tract into smaller units. Lots shall be generally rectangular in nature, and shall have no more than five sides without an exception being recommended by the Planning Commission and approved by the City Council; the front of a property, located at the front right of way, does not count against this requirement.

LOT, CORNER. Shall mean a lot located at the junction of and fronting on two (2) or more intersecting streets.

MOBILE HOME. A detached dwelling designed for long-term occupancy and to be transported on its own wheels, or on a flatbed or other trailer or detachable wheels, and arriving at the site where it is to be occupied as a complete dwelling unit ready for occupancy except for connections to utilities and other minor work. Removal of such wheels or placing such dwelling unit on a foundation shall not remove such unit from classification as a mobile home. Excluded from this definition shall be those permanent dwelling structures that are constructed of component parts that are transported to the building site and which meet structural requirements of the Uniform Building Code and which are finished with exterior building material that is typical of permanent residential buildings.

NON-CONFORMING USE. A building or structure, or portion thereof, or use of a building or land which does not conform to use regulations for the district in which it is situated, but which is in conformity with said regulations, if any, at the time of its establishment.

OFF STREET PARKING. An area adjoining a building providing for the parking of automobiles which does not include a public street but has convenient access to it.

OFFICE, PROFESSIONAL. A building or space used by persons such as accountants, architects, artists, dentists, designers, engineers, lawyers, physicians, realtors, teachers, and others who, by virtue of training and for license, are qualified to perform services of a professional nature, and where storage of goods and sale of merchandise is minimal and secondary to performance of the service.

OPEN SPACE. The use of land which leaves soil generally undisturbed and upon which natural vegetation, whether or not native to the area, occupies the major visible aspect of the land.

PERMITTED USE. A use of land for which no conditional use permit is required.

PUBLIC USE. A use operated or supervised exclusively by a public body, such use having the purpose of serving the public health, safety, or general welfare, and including uses such as public schools, parks, playgrounds, and other recreational facilities, administrative and service facilities, and public utilities.

QUASI PUBLIC USE. A use operated by a private non-profit educational, religious, recreational, charitable or philanthropic institution, having the primary purpose of serving the general public, such as churches, private schools, hospitals and similar uses.

REASONABLE ACCOMMODATION. A reasonable change in any rule, policy, practice, or service necessary to afford persons with a disability equal opportunity to use and enjoy a dwelling when compared to similarly-situated persons or groups.

RECREATION, PUBLIC. Recreation facilities operated by a public agency and open to the public with or without a fee.

RESIDENCE. A dwelling unit where an individual or family is actually domiciled at a given point in time and not a place of temporary sojourn or transient visit. Temporary sojourn or transient visit shall be thirty (30) days or less.

RESIDENTIAL FACILITY FOR PERSONS WITH A DISABILITY. A residence in which no more than eight (8) unrelated persons with a disability resides and which is:

1. Licensed or certified by the Department of Human Services under Title 62A, Chapter 2, of the Utah Code, Licensure of Programs and Facilities; or
2. Licensed or certified by the Department of Human Health under Title 26, Chapter 21, Health Care Facilities Licensing and Inspection Act.

RETAINING WALL. Any structure designed to resist the lateral displacement of soil or other materials. Examples include block walls, rock walls, concrete walls and segmented walls. A retaining wall is not considered a fence.

SHORT TERM RENTAL. A place of temporary sojourn or transient visit. Temporary sojourn or transient visit shall be thirty (30) days or less.

SIGN. Any device for visual communication to the public displayed out-of-doors, including signs painted on exterior walls, and interior illuminated signs, to be viewed from out-of-doors, but not including a flag, badge, or ensign of any government or government agency.

STREET, PUBLIC. A thoroughfare which has been dedicated and accepted by proper public authority (or abandoned to the public) or a thoroughfare not less than twenty-four (24) feet wide which has been made public by right of use and which affords the principal means of access to abutting property.

STRUCTURE. Anything constructed, the use of which requires fixed location upon the ground, or attached to something having a fixed location upon the ground, and which creates an impervious material on or above the ground; definition includes "building."

YARD. A required space on a lot other than a court, unoccupied and unobstructed from the ground upward, by buildings, except as otherwise provided herein.

YARD, FRONT. A space between the front of the main building on a lot and the front lot line or line of an abutting street or right-of-way and extending across the full width of a lot. The depth (or setback) of the front yard is the minimum distance between the front lot line, and the front-most part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches, and decks).

YARD, REAR. A space between the back wall of the nearest main building extending the full width of the lot and the lot line that is most distant from, and is most nearly parallel with, the front lot line. If the rear lot line is less than ten feet (10') in length, or if the lot comes to a point at the rear, the rear lot line shall be deemed to be a ten foot (10') line parallel to the front line, lying wholly within the lot for the purpose of establishing the minimum rear yard. The depth (or setback) of the rear yard is the minimum distance between the rear lot line and the rearmost part of the primary structure of the nearest main building at the foundation level.

(Primary structure includes overhangs, porches and decks. See drawing in Appendix A). (Ord. 2004-13, 9/28/04)

YARD, SIDE. A yard that is neither a front yard nor a rear yard. The depth (or setback) of the side yard is the minimum distance between the side lot line and the nearest part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches and decks).

ZONING LOT (Ord. 94-02, 2/8/94). A lot or parcel of land which:

1. Meets all area (lot size), frontage (width), setback (yard), and other zoning requirements applicable within the zone in which it is located;
2. Abuts upon and has direct access to a street which has been dedicated to the City or otherwise accepted by the City as a City Street;
3. Is served by the minimum level of improvements required for issuance of a building permit or for which the construction of the minimum level of improvements is secured through the posting of a performance guarantee; and
4. Is shown as a separate lot on the final plat of a subdivision or similar development, which has been approved in accordance with the applicable ordinance, or is legally exempted from compliance with said ordinance. A parcel which is part of an unapproved or illegal subdivision shall not qualify as a zoning lot.

(Amended by Ord. 2004-14 on 9/28/04; Ord. 2009-16, 10/13/09; Ord. 20011-06, 03/08/11; Ord. 2011-12, 10/25/11; Ord. 2014-11, 6/24/14; Ord. 2015-02, 02/10/15; Ord. 2015-07, 05/26/15)

SECTION 2: **AMENDMENT** "3.02.090 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

3.02.090 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.

(Ord. 2015-02, 02/10/15)

AFTER AMENDMENT

3.02.090 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 2015-02, 02/10/15)

SECTION 3: **AMENDMENT** "3.03.100 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

3.03.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.

(Ord. 95-24, 11/14/95; Ord. 2014-11, 6/24/14)

AFTER AMENDMENT

3.03.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Shorter Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 95-24, 11/14/95; Ord. 2014-11, 6/24/14)

SECTION 4: **AMENDMENT** "3.04.100 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

3.04.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.

(CR-1 Created by Ord. 91-01, 4/9/91 and amended by Ord. 95-04, 2/3/95; Ord. 2014-11, 6/24/14)

AFTER AMENDMENT

3.04.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(CR-1 Created by Ord. 91-01, 4/9/91 and amended by Ord. 95-04, 2/3/95; Ord. 2014-11, 6/24/14)

SECTION 5: **AMENDMENT** "3.05.100 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

3.05.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.

(Ord. 95-28, 11/28/95)

AFTER AMENDMENT

3.05.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 95-28, 11/28/95)

SECTION 6: **AMENDMENT** "3.07.080 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

BEFORE AMENDMENT

3.07.080 Special Provisions

1. **Uses Within Buildings**. All commercial activities and storage shall be conducted entirely within a fully enclosed building, except those uses deemed by the City to be customarily and appropriately conducted in the open, including gasoline dispensing, plant nursery displays, temporarily parked automobiles in need of repair, and temporary sale of Christmas trees.
2. **Site Plan to Be Approved For All New Commercial Uses**. Prior to the establishment of a new commercial use or the construction of a new building, a site plan shall be submitted, reviewed and recommended by the Planning Commission and approved by the City Council. (Amended by Ord. 2004-13, 9/28/04).
3. **Off-street Parking**. Off-street parking area which requires backing from the off-street parking space onto the street right-of-way in order to exit shall not be permitted. All ingress and egress shall be by forward motion only.

   All points of ingress and egress to a commercial use or off-street parking areas shall be as shown on the site plan and shall be located not less than forty (40) feet from any intersection of public streets.

   All off-street parking areas shall be hard-surfaced and shall be bordered by a curb or other barrier.

   The number of required parking spaces and other particulars about the design and construction of off-street parking shall conform to the provisions of DCA 3.24.

4. **Trash Storage**. Adequate facilities for the disposal of solid waste shall be provided. All containers for the temporary storage and disposal solid waste material shall be of a size, type and quantity approved by the City shall be maintained in a location as shown on the Site Plan.
5. **Storage Containers**. The use of any portable unit, pod, or similar type of storage container is prohibited in this zone unless approved by the city.
6. **Surface Water Drainage to be Retained On-site**. All additional surface drainage generated as a result of development activity shall be disposed of on-site, as determined by the City Engineer.
7. **Height of Buildings**. The maximum height of any dwelling or other main building shall be thirty-four (34) feet, as determined in accordance with the provisions of DCA 3.21.080. (Ord. 96-15, 12/18/96).

8. **Landscaping Required**. As a means of mitigating safety hazards or adverse visual impacts all areas of the site not devoted to buildings or off street parking shall be landscaped. The landscaped area shall be not less than twenty (20) percent of the total area of the site. In addition to all other plan elements, the site plan shall contain a landscape plan showing the location, type and initial size of all planting materials and other landscape features, and the location of the proposed sprinkler system.
9. **Design of Commercial Structures**. Commercial buildings shall comply with the following architectural design criteria. (Preliminary architectural design drawings of all building elevations shall be presented to the Planning Commission for review).
    a. The exterior of all commercial buildings shall be finished predominantly with wood and/or brick, stucco, stone or similar materials in accordance with guidelines in the Historical/Commercial/Residential Ordinance. Pitched roofs are preferred.
    b. The architectural styles of the business district should be consistent and harmonious. The style of building design and trim should be compatible with the relatively uncomplicated rural, small town character of Alpine. Extremely irrelevant, contrived or inconsistent styles will be discouraged.
10. **Water Rights Conveyance Requirements**. Water rights shall be conveyed to the City in accordance with the provisions of DCA 3.21.070.
11. **Nuisances Prohibited**. No land or building shall be used in any manner so as to create dangerous, injurious, noxious or otherwise objectionable fire, explosive, or other hazard, noise, or vibration, smoke, dust, odor, or other form of air pollution; liquid or solid refuse or wastes; or other substance, condition or element in such a manner or in such an amount as to adversely affect the surrounding area or adjoining premises.
12. **Accessory Buildings**. All accessory buildings shall be located in accordance with the following (Ordinance 2002-13) (Amended by Ord. 2006-14, 9/12/06; Ord. 2010-03, 8/24/10):
    a. Setback from main building. Accessory buildings which are located twelve (12) feet or closer to a main building and are attached to the main building by a common roof or wall shall be considered as part of the main building and shall meet the same setbacks as the main building.
    b. Side Setback - Corner Lot, Side Abutting a Street. Accessory buildings shall be set back not less than forty (40) feet from the side lot line which abuts on a street.
    c. Front Setback. Accessory buildings shall be set back not less than forty (40) feet from the front property line.
    d. Side and Rear Setback - Interior Lot Line. Accessory buildings shall be set back no less than ten (10) feet from the rear lot line and five (5) feet from the side lot line, except that no minimum rear or side setback shall be required when all the following conditions are met:
        i. The accessory building is located more than twelve (12) feet from an existing dwelling on the same or adjacent lot;
        ii. The accessory building contains no openings on the side contiguous to the lot line;

iii. No drainage from the roof will be discharged onto an adjacent lot;
iv. The accessory building shall be constructed of non-combustive materials or have fire resistive walls rated at one (1) hour or more;
v. The building will not be placed on land designated as a recorded easement, such as a utility or trail easement; and
vi. The building will not be taller than ten (10) feet to the top of the roof line.

e. Accessory Building Height. The maximum height of any accessory building shall be twenty (20) feet as measured form the average finished grade of the ground surface adjacent to the foundation o the structure to the top of the ridge line.
i. Exceptions to the Height Requirement. Chimneys, flag poles, television antennas, and similar ancillary structures not used for human occupancy shall be excluded in determining height, provided that no such ancillary structure shall extend to a height in excess of fifteen (15) feet above the building.
ii. Additional Accessory Building Height. For every one (1) foot of additional height above twenty (20) feet, an additional two (2) feet of side yard and rear yard setback will be required. The maximum height of the accessory building as measured to the ridgeline shall be thirty (30) feet.

13. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.

(Ord. 95-22, 8/22/95 and Ord. 2002-13, Amended by Ord. 2011-09, 5/10/11; Ord. 2014-04, 3/25/14)

AFTER AMENDMENT

3.07.080 Special Provisions

1. **Uses Within Buildings**. All commercial activities and storage shall be conducted entirely within a fully enclosed building, except those uses deemed by the City to be customarily and appropriately conducted in the open, including gasoline dispensing, plant nursery displays, temporarily parked automobiles in need of repair, and temporary sale of Christmas trees.
2. **Site Plan to Be Approved For All New Commercial Uses**. Prior to the establishment of a new commercial use or the construction of a new building, a site plan shall be submitted, reviewed and recommended by the Planning Commission and approved by the City Council. (Amended by Ord. 2004-13, 9/28/04).

3. **Off-street Parking**. Off-street parking area which requires backing from the off-street parking space onto the street right-of-way in order to exit shall not be permitted. All ingress and egress shall be by forward motion only.

   All points of ingress and egress to a commercial use or off-street parking areas shall be as shown on the site plan and shall be located not less than forty (40) feet from any intersection of public streets.

   All off-street parking areas shall be hard-surfaced and shall be bordered by a curb or other barrier.

   The number of required parking spaces and other particulars about the design and construction of off-street parking shall conform to the provisions of DCA 3.24.

4. **Trash Storage**. Adequate facilities for the disposal of solid waste shall be provided. All containers for the temporary storage and disposal solid waste material shall be of a size, type and quantity approved by the City shall be maintained in a location as shown on the Site Plan.
5. **Storage Containers**. The use of any portable unit, pod, or similar type of storage container is prohibited in this zone unless approved by the city.
6. **Surface Water Drainage to be Retained On-site**. All additional surface drainage generated as a result of development activity shall be disposed of on-site, as determined by the City Engineer.
7. **Height of Buildings**. The maximum height of any dwelling or other main building shall be thirty-four (34) feet, as determined in accordance with the provisions of DCA 3.21.080. (Ord. 96-15, 12/18/96).
8. **Landscaping Required**. As a means of mitigating safety hazards or adverse visual impacts all areas of the site not devoted to buildings or off street parking shall be landscaped. The landscaped area shall be not less than twenty (20) percent of the total area of the site. In addition to all other plan elements, the site plan shall contain a landscape plan showing the location, type and initial size of all planting materials and other landscape features, and the location of the proposed sprinkler system.
9. **Design of Commercial Structures**. Commercial buildings shall comply with the following architectural design criteria. (Preliminary architectural design drawings of all building elevations shall be presented to the Planning Commission for review).
    a. The exterior of all commercial buildings shall be finished predominantly with wood and/or brick, stucco, stone or similar materials in accordance with guidelines in the Historical/Commercial/Residential Ordinance. Pitched roofs are preferred.
    b. The architectural styles of the business district should be consistent and harmonious. The style of building design and trim should be compatible with the relatively uncomplicated rural, small town character of Alpine. Extremely irrelevant, contrived or inconsistent styles will be discouraged.

10. **Water Rights Conveyance Requirements**. Water rights shall be conveyed to the City in accordance with the provisions of DCA 3.21.070.
11. **Nuisances Prohibited**. No land or building shall be used in any manner so as to create dangerous, injurious, noxious or otherwise objectionable fire, explosive, or other hazard, noise, or vibration, smoke, dust, odor, or other form of air pollution; liquid or solid refuse or wastes; or other substance, condition or element in such a manner or in such an amount as to adversely affect the surrounding area or adjoining premises.
12. **Accessory Buildings**. All accessory buildings shall be located in accordance with the following (Ordinance 2002-13) (Amended by Ord. 2006-14, 9/12/06; Ord. 2010-03, 8/24/10):
    a. Setback from main building. Accessory buildings which are located twelve (12) feet or closer to a main building and are attached to the main building by a common roof or wall shall be considered as part of the main building and shall meet the same setbacks as the main building.
    b. Side Setback - Corner Lot, Side Abutting a Street. Accessory buildings shall be set back not less than forty (40) feet from the side lot line which abuts on a street.
    c. Front Setback. Accessory buildings shall be set back not less than forty (40) feet from the front property line.
    d. Side and Rear Setback - Interior Lot Line. Accessory buildings shall be set back no less than ten (10) feet from the rear lot line and five (5) feet from the side lot line, except that no minimum rear or side setback shall be required when all the following conditions are met:
        i. The accessory building is located more than twelve (12) feet from an existing dwelling on the same or adjacent lot;
        ii. The accessory building contains no openings on the side contiguous to the lot line;
        iii. No drainage from the roof will be discharged onto an adjacent lot;
        iv. The accessory building shall be constructed of non-combustive materials or have fire resistive walls rated at one (1) hour or more;
        v. The building will not be placed on land designated as a recorded easement, such as a utility or trail easement; and
        vi. The building will not be taller than ten (10) feet to the top of the roof line.
    e. Accessory Building Height. The maximum height of any accessory building shall be twenty (20) feet as measured form the average finished grade of the ground surface adjacent to the foundation o the structure to the top of the ridge line.
        i. Exceptions to the Height Requirement. Chimneys, flag poles, television antennas, and similar ancillary structures not used for human occupancy shall be excluded in determining height, provided that no such ancillary structure shall extend to a height in excess of fifteen (15) feet above the building.

ii. Additional Accessory Building Height. For every one (1) foot of additional height above twenty (20) feet, an additional two (2) feet of side yard and rear yard setback will be required. The maximum height of the accessory building as measured to the ridgeline shall be thirty (30) feet.

13. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
14. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 95-22, 8/22/95 and Ord. 2002-13, Amended by Ord. 2011-09, 5/10/11; Ord. 2014-04, 3/25/14)

PASSED AND ADOPTED BY THE ALPINE CITY COUNCIL
_____.

	AYE	NAY	ABSENT	ABSTAIN
Lon Lott	_____	_____	_____	_____
Judi Pickell	_____	_____	_____	_____
Carla Merrill	_____	_____	_____	_____
Gregory Gordon	_____	_____	_____	_____
Jason Thelin	_____	_____	_____	_____

Presiding Officer

Attest

_____
Troy Stout, Mayor, Alpine City

_____
Charmayne G. Warnock, City Recorder Alpine City

ALPINE CITY
ORDINANCE 2020-2

AN ORDINANCE ADOPTING AMENDMENTS TO ARTICLE 3.01.110; 3.02.090; 3.03.100; 3.04.100; 3.05.100; AND 3.07.080 OF THE ALPINE CITY DEVELOPMENT CODE PERTAINING TO SHORT TERM RENTALS.

WHEREAS, The Alpine City Council has deemed it in the best interest of Alpine City to prohibit Short Term Rentals within City boundaries; and

WHEREAS, the Alpine City Planning Commission has reviewed the proposed Amendments to the Development Code, held a public hearing, and has forwarded a recommendation to the City Council; and

WHEREAS, the Alpine City Council has reviewed the proposed Amendments to the Development Code:

NOW THEREFORE, be it ordained by the Council of Alpine City, in the State of Utah, as follows: The amendments to Article 3.01.110; 3.02.090; 3.03.100; 3.04.100; 3.05.100; and 3.07.080 contained in the attached document will supersede Article 3.01.110; 3.02.090; 3.03.100; 3.04.100; 3.05.100; and 3.07.080 as previously adopted. This ordinance shall take effect upon posting.

SECTION 1: **AMENDMENT** "3.01.110 Definitions" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.01.110 Definitions

ACCESSORY APARTMENT. A subordinate dwelling unit within and part of a principle dwelling and which has its own cooking, sleeping and sanitation facilities.

ACCESSORY BUILDING. A detached subordinate building, the use of which is appropriate, subordinate, and customarily incidental to that of the main building or to the main use of the land and which is located on the same lot or parcel of land with the main building or use.

AGRICULTURE. The tilling of soil, the raising of crops, horticulture, the gardening, but not including the keeping or raising of domestic animals or fowl, except household pets, and not including any agricultural industry or business such as fruit packing plants, commercial egg production, or similar uses.

APIARY. Any place where one (1) or more colonies of bees are located.

AVERAGE SLOPE OF LOT. The average slope of a lot, expressed as the percent of slope, to be determined via computer modeling. AutoCAD or ESRI products are acceptable programs to be used for determining the average slope of lot; any other program must be pre-approved by the City Engineer.

BEEKEEPING EQUIPMENT. Anything used in the operation of an apiary, such as hive bodies, supers, frames, top and bottom boards, and extractors.

BUILDABLE AREA. (Ord. 94-02, 2/8/94) A lot or portion thereof possessing all of the following physical characteristics:

1. The area contains no territory having a natural slope of twenty (20) percent or greater;
2. The area contains no territory which is located in any identified flood plain or within any recognized inundation zone, mud flow zone or zone of deformation, or lands subject to earth slippage, landslide or rockfall;
3. The engineering properties of the soil provide adequate structural support for the intended use;
4. The area does not possess any other recognized natural condition, which renders it unsafe for building purposes;
5. The area is within the building setback envelope as determined in accordance with the setback provisions of the zone; and
6. The area is readily capable of vehicular access from the adjacent public street over a driveway having a slope of not more than twelve (12) percent with no cut or fill greater than five feet as measured at the finished grade of the centerline alignment.

BUILDING. Any structure having a roof supported by columns or walls, built for the support, shelter, or enclosure of persons, animals, chattels, or property of any kind.

CIVIC BUILDING. A structure owned by the City and used for governmental purposes, including administrative buildings (City Hall) fire stations, police stations, libraries, but not including shop and repair facilities.

COLONY. Bees in a hive including queens, workers, or drones.

CONDITIONAL USE. A use of land that, because of its unique characteristics or potential impact on the municipality, surrounding neighbors, or adjacent land uses, may not be compatible in some areas or may be compatible only if certain conditions are required that mitigate or eliminate the detrimental impacts.

CUSTOMARY RESIDENTIAL ACCESSORY STRUCTURE. A structure constructed on the same zoning lot as a dwelling and which is intended for the incidental and exclusive use of the residents of said dwelling, including but not limited to detached garages, carports, swimming pools, tennis courts, green houses, storage buildings, and satellite dishes.

DEVELOPMENT. Any change to a parcel of ground, which alters it from its natural state in any way. This includes clearing, excavation, grading, installation of any infrastructure or erection of any types of buildings.

DWELLING CLUSTER. A Group of three (3) or more single-unit detached Dwellings whose respective Buildable Areas are located no more than 400 feet from one Buildable Area to the next closest Buildable Area as measured from the midpoint of each Buildable Area.

DWELLING UNIT. One or more rooms in a building or portion thereof designed, occupied, or intended as a residence for a family with complete and independent facilities for living, sleeping, eating, cooking, and sanitation provided within the dwelling unit. See also Dwelling, Single Family.

DWELLING, MULTIPLE-UNIT. A building arranged to be occupied by two (2) or more families, the structure having two (2) or more attached dwelling units.

DWELLING, SINGLE FAMILY. A building arranged or designed to include only one (1) dwelling unit occupied by one (1) family, including extended living areas or an accessory apartment which may be approved as provided elsewhere in this Code.

FAMILY. An individual or two (2) or more persons related by blood, marriage, adoption, or guardianship; or a group of not more than four (4) persons, (excluding domestic help) who are not related, living in a dwelling unit as a single housekeeping unit and using common cooking facilities. "Family" does not exclude the care of foster children.

FENCES. A fence shall include any tangible barrier, an obstruction of any material, a line of obstacles, lattice work, screen, wall, hedge, or continuous growth of shrubs with the purpose of preventing passage or view across a boundary or lot line. (Ord. 2004-13, 9/28/04)

1. Privacy fences are structures where the field of vision through the fence is less than 50%.
2. Open-style fences are structures where the field of vision through the fence is 50% or greater.

FRONTAGE. The width of the lot or parcel of land measured at the required front setback-line.

GARAGE/CARPORT (PRIVATE). A structure for the parking or temporary storage of automobiles, but which does not involve commercial repairing or storage.

GEOLOGIC HAZARD. A hazard inherent in the surface or subsurface of the earth or artificially created, which is dangerous or potentially dangerous to life, property, or improvements, due to movement, failure, or shifting of earth.

GROUP LIVING ARRANGEMENT. A group living or congregate living arrangement where groups of more than four unrelated persons live together in a single dwelling unit, including, but not limited to, a batching apartment, boarding house, Congregate Living Unit, Assisted Living Facility, Nursing Care Facility, Residential Facility for Persons With a Disability, dormitory, student housing, fraternity, club, institutional group, half-way house, or similar group living or congregate living arrangement.

GUEST HOUSE. An accessory building constructed on the same zoning lot as the principle Single-Unit dwelling to be used for temporary occupancy.

HANDICRAFT PRODUCTION. Production of an individual's one-of-a-kind objects for sale on the site.

HELICOPTER. A manned aircraft in which lift, flight and landing is achieved by means of one or more power-driven horizontal propellers.

HELIPORT. An area on land or upon a building or structure set aside and used for the landing or takeoff of helicopters or other manned rotary wing aircrafts capable of vertical takeoff or landing.

HIVE. A frame hive, box hive, box, barrel, log, gum skep, or other artificial or natural receptacle which may be used to house bees.

HOME OCCUPATION. Any gainful occupation, service, profession or similar activity conducted in a consistent and ongoing manner within a dwelling. Business activity consisting primarily of the sale of goods produced elsewhere on the premises (i.e. retail sales establishment) shall not qualify as a home occupation.

HOBBY BEEKEEPER. A person who owns or has charge of eight (8) or fewer hives of bees.

HONEYBEE. The common honeybee, Apis mellifera species, at any stage of development, but not including the African honeybee, Apis mellifera scutellata species, or any hybrid thereof.

HOUSEHOLD PETS. Animals or fowl ordinarily permitted to a residence and kept for company or pleasure, such as dogs, cats, fish and canaries. Household pets do not include inherently or potentially dangerous animals or fowl, or those normally considered agricultural livestock.

IMPERVIOUS MATERIAL. Matter that is impenetrable as by moisture.

LOT. A parcel or unit of land describable either by metes and bounds, or by other legal plat designation held or intended to be held in separate ownership or leasehold or a parcel or unit of land shown as a lot or parcel on a recorded subdivision map, or shown on a plat used in the lease or sale of land resulting from the division of a larger tract into smaller units. Lots shall be generally rectangular in nature, and shall have no more than five sides without an exception being recommended by the Planning Commission and approved by the City Council; the front of a property, located at the front right of way, does not count against this requirement.

LOT, CORNER. Shall mean a lot located at the junction of and fronting on two (2) or more intersecting streets.

MOBILE HOME. A detached dwelling designed for long-term occupancy and to be transported on its own wheels, or on a flatbed or other trailer or detachable wheels, and arriving at the site where it is to be occupied as a complete dwelling unit ready for occupancy except for connections to utilities and other minor work. Removal of such wheels or placing such dwelling unit on a foundation shall not remove such unit from classification as a mobile home. Excluded from this definition shall be those permanent dwelling structures that are constructed of component parts that are transported to the building site and which meet structural requirements of the Uniform Building Code and which are finished with exterior building material that is typical of permanent residential buildings.

NON-CONFORMING USE. A building or structure, or portion thereof, or use of a building or land which does not conform to use regulations for the district in which it is situated, but which is in conformity with said regulations, if any, at the time of its establishment.

OFF STREET PARKING. An area adjoining a building providing for the parking of automobiles which does not include a public street but has convenient access to it.

OFFICE, PROFESSIONAL. A building or space used by persons such as accountants, architects, artists, dentists, designers, engineers, lawyers, physicians, realtors, teachers, and others who, by virtue of training and for license, are qualified to perform services of a professional nature, and where storage of goods and sale of merchandise is minimal and secondary to performance of the service.

OPEN SPACE. The use of land which leaves soil generally undisturbed and upon which natural vegetation, whether or not native to the area, occupies the major visible aspect of the land.

PERMITTED USE. A use of land for which no conditional use permit is required.

PUBLIC USE. A use operated or supervised exclusively by a public body, such use having the purpose of serving the public health, safety, or general welfare, and including uses such as public schools, parks, playgrounds, and other recreational facilities, administrative and service facilities, and public utilities.

QUASI PUBLIC USE. A use operated by a private non-profit educational, religious, recreational, charitable or philanthropic institution, having the primary purpose of serving the general public, such as churches, private schools, hospitals and similar uses.

REASONABLE ACCOMMODATION. A reasonable change in any rule, policy, practice, or service necessary to afford persons with a disability equal opportunity to use and enjoy a dwelling when compared to similarly-situated persons or groups.

RECREATION, PUBLIC. Recreation facilities operated by a public agency and open to the public with or without a fee.

RESIDENCE. A dwelling unit where an individual or family is actually domiciled at a given point in time and not a place of temporary sojourn or transient visit. Temporary sojourn or transient visit shall be thirty (30) days or less.

RESIDENTIAL FACILITY FOR PERSONS WITH A DISABILITY. A residence in which no more than eight (8) unrelated persons with a disability resides and which is:

1. Licensed or certified by the Department of Human Services under Title 62A, Chapter 2, of the Utah Code, Licensure of Programs and Facilities; or
2. Licensed or certified by the Department of Human Health under Title 26, Chapter 21, Health Care Facilities Licensing and Inspection Act.

RETAINING WALL. Any structure designed to resist the lateral displacement of soil or other materials. Examples include block walls, rock walls, concrete walls and segmented walls. A retaining wall is not considered a fence.

SHORT TERM RENTAL. A place of temporary sojourn or transient visit. Temporary sojourn or transient visit shall be thirty (30) days or less.

SIGN. Any device for visual communication to the public displayed out-of-doors, including signs painted on exterior walls, and interior illuminated signs, to be viewed from out-of-doors, but not including a flag, badge, or ensign of any government or government agency.

STREET, PUBLIC. A thoroughfare which has been dedicated and accepted by proper public authority (or abandoned to the public) or a thoroughfare not less than twenty-four (24) feet wide which has been made public by right of use and which affords the principal means of access to abutting property.

STRUCTURE. Anything constructed, the use of which requires fixed location upon the ground, or attached to something having a fixed location upon the ground, and which creates an impervious material on or above the ground; definition includes "building."

YARD. A required space on a lot other than a court, unoccupied and unobstructed from the ground upward, by buildings, except as otherwise provided herein.

YARD, FRONT. A space between the front of the main building on a lot and the front lot line or line of an abutting street or right-of-way and extending across the full width of a lot. The depth (or setback) of the front yard is the minimum distance between the front lot line, and the front-most part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches, and decks).

YARD, REAR. A space between the back wall of the nearest main building extending the full width of the lot and the lot line that is most distant from, and is most nearly parallel with, the front lot line. If the rear lot line is less than ten feet (10') in length, or if the lot comes to a point at the rear, the rear lot line shall be deemed to be a ten foot (10') line parallel to the front line, lying wholly within the lot for the purpose of establishing the minimum rear yard. The depth (or setback) of the rear yard is the minimum distance between the rear lot line and the rearmost part of the primary structure of the nearest main building at the foundation level.

(Primary structure includes overhangs, porches and decks. See drawing in Appendix A). (Ord. 2004-13, 9/28/04)

YARD, SIDE. A yard that is neither a front yard nor a rear yard. The depth (or setback) of the side yard is the minimum distance between the side lot line and the nearest part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches and decks).

ZONING LOT (Ord. 94-02, 2/8/94). A lot or parcel of land which:

1. Meets all area (lot size), frontage (width), setback (yard), and other zoning requirements applicable within the zone in which it is located;
2. Abuts upon and has direct access to a street which has been dedicated to the City or otherwise accepted by the City as a City Street;
3. Is served by the minimum level of improvements required for issuance of a building permit or for which the construction of the minimum level of improvements is secured through the posting of a performance guarantee; and
4. Is shown as a separate lot on the final plat of a subdivision or similar development, which has been approved in accordance with the applicable ordinance, or is legally exempted from compliance with said ordinance. A parcel which is part of an unapproved or illegal subdivision shall not qualify as a zoning lot.

(Amended by Ord. 2004-14 on 9/28/04; Ord. 2009-16, 10/13/09; Ord. 20011-06, 03/08/11; Ord. 2011-12, 10/25/11; Ord. 2014-11, 6/24/14; Ord. 2015-02, 02/10/15; Ord. 2015-07, 05/26/15)

SECTION 2: **AMENDMENT** "3.02.090 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.02.090 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 2015-02, 02/10/15)

SECTION 3: **AMENDMENT** "3.03.100 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.03.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Shorter Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 95-24, 11/14/95; Ord. 2014-11, 6/24/14)

SECTION 4: **AMENDMENT** "3.04.100 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.04.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
2. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(CR-1 Created by Ord. 91-01, 4/9/91 and amended by Ord. 95-04, 2/3/95; Ord. 2014-11, 6/24/14)

SECTION 5: **AMENDMENT** "3.05.100 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.05.100 Special Provisions

1. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.

2. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 95-28, 11/28/95)

SECTION 6: **AMENDMENT** "3.07.080 Special Provisions" of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.07.080 Special Provisions

1. **Uses Within Buildings**. All commercial activities and storage shall be conducted entirely within a fully enclosed building, except those uses deemed by the City to be customarily and appropriately conducted in the open, including gasoline dispensing, plant nursery displays, temporarily parked automobiles in need of repair, and temporary sale of Christmas trees.
2. **Site Plan to Be Approved For All New Commercial Uses**. Prior to the establishment of a new commercial use or the construction of a new building, a site plan shall be submitted, reviewed and recommended by the Planning Commission and approved by the City Council. (Amended by Ord. 2004-13, 9/28/04).
3. **Off-street Parking**. Off-street parking area which requires backing from the off-street parking space onto the street right-of-way in order to exit shall not be permitted. All ingress and egress shall be by forward motion only.

   All points of ingress and egress to a commercial use or off-street parking areas shall be as shown on the site plan and shall be located not less than forty (40) feet from any intersection of public streets.

   All off-street parking areas shall be hard-surfaced and shall be bordered by a curb or other barrier.

   The number of required parking spaces and other particulars about the design and construction of off-street parking shall conform to the provisions of DCA 3.24.

4. **Trash Storage**. Adequate facilities for the disposal of solid waste shall be provided. All containers for the temporary storage and disposal solid waste material shall be of a size, type and quantity approved by the City shall be maintained in a location as shown on the Site Plan.
5. **Storage Containers**. The use of any portable unit, pod, or similar type of storage container is prohibited in this zone unless approved by the city.

6. **Surface Water Drainage to be Retained On-site**. All additional surface drainage generated as a result of development activity shall be disposed of on-site, as determined by the City Engineer.
7. **Height of Buildings**. The maximum height of any dwelling or other main building shall be thirty-four (34) feet, as determined in accordance with the provisions of DCA 3.21.080. (Ord. 96-15, 12/18/96).
8. **Landscaping Required**. As a means of mitigating safety hazards or adverse visual impacts all areas of the site not devoted to buildings or off street parking shall be landscaped. The landscaped area shall be not less than twenty (20) percent of the total area of the site. In addition to all other plan elements, the site plan shall contain a landscape plan showing the location, type and initial size of all planting materials and other landscape features, and the location of the proposed sprinkler system.
9. **Design of Commercial Structures**. Commercial buildings shall comply with the following architectural design criteria. (Preliminary architectural design drawings of all building elevations shall be presented to the Planning Commission for review).
    a. The exterior of all commercial buildings shall be finished predominantly with wood and/or brick, stucco, stone or similar materials in accordance with guidelines in the Historical/Commercial/Residential Ordinance. Pitched roofs are preferred.
    b. The architectural styles of the business district should be consistent and harmonious. The style of building design and trim should be compatible with the relatively uncomplicated rural, small town character of Alpine. Extremely irrelevant, contrived or inconsistent styles will be discouraged.
10. **Water Rights Conveyance Requirements**. Water rights shall be conveyed to the City in accordance with the provisions of DCA 3.21.070.
11. **Nuisances Prohibited**. No land or building shall be used in any manner so as to create dangerous, injurious, noxious or otherwise objectionable fire, explosive, or other hazard, noise, or vibration, smoke, dust, odor, or other form of air pollution; liquid or solid refuse or wastes; or other substance, condition or element in such a manner or in such an amount as to adversely affect the surrounding area or adjoining premises.
12. **Accessory Buildings**. All accessory buildings shall be located in accordance with the following (Ordinance 2002-13) (Amended by Ord. 2006-14, 9/12/06; Ord. 2010-03, 8/24/10):
    a. Setback from main building. Accessory buildings which are located twelve (12) feet or closer to a main building and are attached to the main building by a common roof or wall shall be considered as part of the main building and shall meet the same setbacks as the main building.
    b. Side Setback - Corner Lot, Side Abutting a Street. Accessory buildings shall be set back not less than forty (40) feet from the side lot line which abuts on a street.
    c. Front Setback. Accessory buildings shall be set back not less than forty (40) feet from the front property line.
    d. Side and Rear Setback - Interior Lot Line. Accessory buildings shall be set back no less than ten (10) feet from the rear lot line and five (5) feet from the side lot

line, except that no minimum rear or side setback shall be required when all the following conditions are met:

i. The accessory building is located more than twelve (12) feet from an existing dwelling on the same or adjacent lot;
ii. The accessory building contains no openings on the side contiguous to the lot line;
iii. No drainage from the roof will be discharged onto an adjacent lot;
iv. The accessory building shall be constructed of non-combustive materials or have fire resistive walls rated at one (1) hour or more;
v. The building will not be placed on land designated as a recorded easement, such as a utility or trail easement; and
vi. The building will not be taller than ten (10) feet to the top of the roof line.

e. Accessory Building Height. The maximum height of any accessory building shall be twenty (20) feet as measured form the average finished grade of the ground surface adjacent to the foundation o the structure to the top of the ridge line.

i. Exceptions to the Height Requirement. Chimneys, flag poles, television antennas, and similar ancillary structures not used for human occupancy shall be excluded in determining height, provided that no such ancillary structure shall extend to a height in excess of fifteen (15) feet above the building.
ii. Additional Accessory Building Height. For every one (1) foot of additional height above twenty (20) feet, an additional two (2) feet of side yard and rear yard setback will be required. The maximum height of the accessory building as measured to the ridgeline shall be thirty (30) feet.

13. **Heliports**. The installation of a heliport for the use of a helicopter or other manned rotary wing aircrafts capable of vertical takeoff or landing is prohibited.
14. **Short Term Rentals**. All types of Short Term Rentals shall be strictly prohibited.

(Ord. 95-22, 8/22/95 and Ord. 2002-13, Amended by Ord. 2011-09, 5/10/11; Ord. 2014-04, 3/25/14)

PASSED AND ADOPTED BY THE ALPINE CITY COUNCIL
_____.

	AYE	**NAY**	**ABSENT**	**ABSTAIN**
Lon Lott	_____	_____	_____	_____
Judi Pickell	_____	_____	_____	_____
Carla Merrill	_____	_____	_____	_____
Gregory Gordon	_____	_____	_____	_____
Jason Thelin	_____	_____	_____	_____

Presiding Officer

Attest

_____
Troy Stout, Mayor, Alpine City

_____
Charmayne G. Warnock, City Recorder Alpine City

SHORT TERM RENTAL CONSIDERATIONS

There are currently approximately 30-35 Short Term Rentals in Alpine. If Alpine considered a Short Term Rental Ordinance (STR) what are the questions that should be answered?

How many short term rental units would be allowed in the City

There could be no limit on the number of units or for example Sandy City limits STRs to 2 per 100 dwellings. In Alpine's case this would allow 50 STRs.

How many rentals in each home would be allowed? This could be as low as one or up to three or four.

How many bedrooms would be allowed in each unit? The City could set a limit on the number of bedrooms allowed.

Should a short term rental be owner occupied? An STR could require that the rental be owner occupied or that a local manager be required.

Permits & licenses- A STR would be required to obtain a Business License

Which Zones would STRs be allowed? They could be allowed in any zone.

How many people would be allowed to stay in the units? The City could limit the number of people allowed to stay in the unit.

Parking- Parking could be limited to the garage and driveway.

Revenue- How much revenue would be generated by STRs

One time Application Fee of $250 x 30 = $7500

Annual Renewal $150 x 30 = $4500 per year

Transient Room Tax of 1% assuming 30 rentals bringing in $50,000 per year each would be $1,500,000 and would generate $15,000 per year in taxes.

DRAFT 8-24-19

Chapter 7 SHORT-TERM RENTALS

Sections:

The City Council finds that while short-term rental properties may provide additional lodging opportunities for visitors to the City, such use is, essentially, a commercial use that can have a significant adverse impact on the appearance, tranquility and standard of living in the surrounding neighborhoods and, therefore, merits careful regulation and enforcement. The purpose of this chapter is to regulate short-term rentals in the City in order to safeguard the peace, safety and general welfare of existing neighborhoods by reducing or eliminating detrimental effects caused by noise, vandalism, overcrowding, congestion, traffic, parking and other adverse effects that may accompany the introduction of transient populations in neighborhoods as a result of the operation of short-term rental properties.

7.01 Definitions.

A. “Bedroom” means a room designated and used primarily for sleeping and rest on a bed. Every bedroom shall have at least one operable emergency escape and rescue opening that

complies with all applicable requirements and standards set forth in the latest version of the International Building Code adopted by the City.

B. “Director” means the city’s planner, his designee, or any other designee of the City.

C. “Short-term rental” means the rental, letting of rooms or sub- leasing/renting of any structure, dwelling or portion thereof for occupancy, dwelling, lodging or sleeping purposes for at least three but not more than 30 consecutive days in duration.

D. “Short-term rental operator” or “operator” means the owner or a responsible party designated by the owner of a short-term rental property to act for and in behalf of the owner in managing the property. If the operator is not the owner, the actions, undertakings and certifications of the operator shall be binding on the owner. To assure prompt response to complaints and _ issues concerning a short-term rental property, the operator must:

1. maintain a call center or other complaint “hotline” that 1s staffed by a live person (i.e.—mere voicemail or an answering machine is non-compliant with this requirement) and fully responsive 24 hours per day, 365 days per year;

2. cause a responsible party with decision-making authority to be on-site

at the short-term rental property within one hour after the telephonic lodging of a complaint reasonably requiring the operator’s on-site presence, including, without limitation, complaints from neighbors and the city concerning the behavior of occupants or guests of the short-term rental property; and

3. continuously maintain on file with the city the operator’s current (i) address, (ii) telephone number, and (ii) facsimile number and/or e-mail address, for the city’s use in contacting the operator for purposes of this chapter and Title 5 of this code, which information shall be promptly updated on the city’s records by the operator as such information changes.

E. “Short-term rental property” means real property licensed under this chapter for use for short-term rental purposes.

7.02 Permit required.

All short-term rental properties shall obtain a short-term rental permit from the city prior to operation. A short-term rental permit is a conditional use permit that is in addition to, and not in substitution for, a business license for each short-term rental property required by title 7.08 of this code. A short-term rental permit previously granted as provided in this chapter, and which has not been previously terminated, may be renewed annually upon application by the holder to the director. The holder’s failure to, annually renew a short-term rental permit as provided in this chapter is, of itself, grounds for revocation of such conditional.

7.03-Minimum duration.

Renting, letting of rooms or sub- leasing/renting of any structure or dwelling or portion thereof for occupancy, dwelling, lodging or sleeping purposes for less than three consecutive calendar days in duration is prohibited in any zone in the city where residential use is a permitted or conditional use unless use of such structure, etc. as a hotel, motel, bed and breakfast or similar use has been specifically authorized as a permitted or conditional use of such parcel.

A. Short-term rental permits, and renewals thereof, may be approved by the director as conditional uses in the city's TR 10,000, CR- 20,000, CR- 40,000, CE-5 and Business Commercial zoning districts.

7.04 Exceptions.

Rentals of more than 30 consecutive days in duration in any of the city's residential zoning districts are not required to obtain a short-term rental permit.

7.05 Permit application and renewal; Approval standards.

Application for, and issuance of, a short-term rental permit shall proceed as follows:

A. The applicant shall submit an application for a short-term rental permit, or annual renewal thereof, to the city on a city-approved form, paying all applicable fees and complying with all required inspections. Unless sooner revoked, issued permits initially shall expire on the first July 1 "that follows issuance of the permit by at least five months, with renewal permits expiring each July 1, thereafter. The City shall provide to the operator a written renewal notice for each currently issued short- term rental permit. Failure to renew a short-term rental permit within one month after the deadline specified in such renewal notice shall, of itself, constitute grounds for revocation of such conditional use. The applicant may be the operator of the proposed short-term rental property or the operator's agent. Both the operator and the applicant (if different from the operator) shall be responsible for compliance with all provisions of this chapter. and all other applicable ordinances regulating or applicable to short-term rentals, including, without

B. An initial or renewal application for a short-term rental permit shall include a declaration of compliance with all legal requirements and all other applicable laws, which shall be signed and swom to by the operator under penalty of perjury. Material misstatements in such declaration by the operator, or elsewhere in the application, shall, of itself, constitute grounds for rejection of the application or revocation of any resulting conditional use (issued in error based on such improper application).

C. The application shall be granted unless the director makes one or more of the following findings:

1. The proposed use is not a conditional use under this chapter;

2. The permit should not be granted due to (a) uncured violations of this chapter or of any other applicable law, ordinance, rule or regulation, (b) the occurrence of three or more violations for such short-term rental property during the (typically, 12-month)

term of the preceding permit (in which event the operator may not re-apply for any available short-term rental permit or business license for such property for two years from the date of denial), or (c) any other reason for which the short- term rental permit application legally could have been denied; or

3, The City is unable to impose reasonable conditions to mitigate the reasonably anticipated detrimental effects of the proposed use on the surrounding residential properties and neighborhood.

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In recognition that short-term rental uses are commercial in nature, and can have a significant adverse impact on the appearance, tranquility and standard of living in surrounding residential neighborhoods, the following special operational standards are mandatory for all short-term rental properties in order to protect the health, safety, welfare and tranquility of the surrounding residential neighborhoods:

A. Each short-term rental operator shall ensure that the occupants and guests of its short-term rental property do not create unreasonable noise or disturbances (judged against, inter alia, the nature of the neighborhood where the short-term rental property is located, the time of day of the noise or disturbance, and the level of noise or similar disturbances then emanating from surrounding properties), engage in disorderly conduct, or violate provisions of this code or any other applicable federal, state, county, city or other law,

mule or regulation (collectively, "applicable laws') pertaining to noise, disorderly conduct, overcrowding,

illegal consumption of alcohol, use of illegal drugs, or otherwise. An operator shall be deemed to have ensured compliance with applicable laws if it

1. clearly advises its occupants and guests of such requirements before they take occupancy of the property;

2. promptly and appropriately responds to complaints concerning the behavior of its occupants and guests as required by this chapter;

3. promptly evicts from the short- term rental property any who have failed to comply with applicable laws on two or more occasions ("persistent violations') during their period of

occupancy of a short-term rental property; and

4. refuses to allow any persons who have engaged in or been party to persistent violations of applicable laws in their occupancy of a short-term rental property to occupy in the future any short-term rental property under such operator's ownership or control.

B. Promptly upon notification that the occupants or guests of a short-term rental property have violated subsection 7. (A) above, the operator shall use its most diligent best efforts to prevent a recurrence of such conduct by those occupants or guests and all future occupants

and guests. Such response by the operator to the notification shall occur within one hour after receipt. Failure to timely or properly respond to a complaint regarding any such violation as provided in this subsection shall constitute a violation of this chapter and shall be grounds for imposition of the penalties specified in section 7. below.

C. Each operator shall ensure that the operation of its short-term rental property complies with all other requirements of this code and all other applicable laws.

D. The director shall be authorized to prospectively impose additional reasonable conditions, applicable to all short-term rental properties in the city, as necessary to achieve the intent and objectives of this chapter. The city shall endeavor to notify all short-term rental operators of any change in the standards applicable to short-term rentals and short-term rental properties.

E. A short-term rental property shall not contain more than four (4) bedrooms. Only one short term rental is allowed per property.

F, Short-term rental properties and all related or accessory structures or improvements shall be properly maintained, painted and kept in good repair, and grounds and landscaped areas shall be properly maintained and watered in order that the use in no way detracts from the general appearance of the surrounding neighborhood.

G. Snow shall be removed from sidewalks and driveways as provided by the City Municipal Code.

H. A short-term rental property shall not have any signs visible from the exterior of the premises that advertise the use, other than as required by this chapter.

I. The use of a property in a residential neighborhood for short-term rental purposes shall not change the exterior appearance of the property so that it appears dissimilar from residential properties in the surrounding neighborhood.

J. Outdoor pools, hot tubs, saunas or spas shall not be used between the hours of 10:00 p.m. and 8:00 a.m.

K. Occupants and guests of a short- term rental property shall not create unreasonable noise or disturbances, engage in disorderly conduct, or violate provisions of this code or any other applicable federal, state, county, city or other law, rule' or _ regulation (collectively, "applicable laws'') pertaining to noise, disorderly conduct, overcrowding, illegal consumption of alcohol, use of illegal drugs, or otherwise.

7.06 Display of permit.

Each operator shall affix and maintain a copy of its short-term rental permit on the inside of the main entry door of the short-term rental property to which it applies.

7.07 Exterior display of contact information.

A. Short-term rental operators shall prominently display in a city-approved location on the exterior of the short-term rental property that is visible to the general public and/or the

common areas of the surrounding neighborhood, the name and 24-hour per day, 365-days per year telephone number for the short-term rental operator who will take and resolve complaints regarding operation of the short-term rental property and its © occupants and guests. Such display also shall include (1) a telephone number to report violations of this chapter to a city code compliance officer 24 hours per day, 365 days per year; (2) the identifying number of the city-issued business license for the property; and (3) the date of the last city inspection of the property. The city will prescribe the form of said display of contact and other information. Applicants also — shall provide such information to all property owners residing within 300 feet of the short-term rental property. Operators shall provide updated contact information to all recipients, and for all purposes, specified hereunder as such information changes.

B. Operators shall respond (in person, if appropriate) to telephonic complaints within one hour after such complaint is made. Inappropriate and/or non-response to such complaints shall constitute a violation of this chapter, and shall be grounds for imposition of the

The operator must continuously maintain in force and effect a city business license for the short-term rental property and timely shall pay all taxes and fees relating to such business, including, without limitation, the city's transient room tax.

7.08 Occupancy limits.

A. The city has determined that the preferred means to avoid or minimize safety concerns and the adverse impacts on the surrounding neighborhood attending a large transient population residing in one dwelling is to limit both the occupancy of each short term rental property and the bedrooms available for use at such property. Consequently, occupancy in any short-term rental property shall not exceed the lesser of:

1. Up to two adults (persons aged 18 and above) and two related children (persons under age 18) per bedroom,

2. Total occupancy (adults and children) of no more than 12 persons in the entire short-term rental property.

B. A short-term rental property may not be artificially divided or partitioned for the purpose of increasing the available occupancy of an otherwise standard dwelling unit such as a house, a condominium unit, or an apartment.

7.09 Parking.

Occupants or guests of any short- term rental property shall not park more vehicles at the short-term rental property than can be legally parked in the garage or carport or on the driveway. Parking of occupant or guest vehicles on the public right-of-way adjoining the short-

term rental property, or on areas of the property designated as (or intended for, based on the landscaping of the surrounding neighborhood) yard or lawn, is prohibited. Required parking areas shall be properly maintained and be available for use at all times.

7.10 Maintenance.

All short-term rental properties shall comply with chapter 7.05 of this code, entitled "Nuisances and Abatement."

7.11 Binding effect.

A. The requirements of this chapter shall be in effect throughout the time that a short-term rental permit is in effect for a property, notwithstanding that such property may be used intermittently by its owner or non-paying guests, based on the city's determinations that, inter alia,

1. Given the practical difficulty of determining whether or not the occupants are paying guests, enforcement of this chapter should be based on whether the property is licensed as a short-term rental property rather than the identity of its occupants from time to time;

2. Such a property essentially exists to provide lodging for a_ transient population (which may include a non- resident owner or its non-resident guests) that may not honor neighborhood mores or exhibit neighborly consideration to the same extent as more permanent residents; and

3. Requiring such compliance may encourage an owner that is not actively engaged in a short-term rental business for a property to terminate the short-term rental permit for such property, thereby mitigating the adverse impact on the character of the surrounding neighborhood posed by the potential

B. A short-term rental permit may be terminated at any time by the owner of a short-term rental property upon submission to the city of the property owner's signed, notarized written notice of such termination.

7.12 Inspections.

A. The city has determined that the preferred method of assuring compliance with this chapter is through regular annual inspections of the short-term rental property at the time of permit application or renewal; through possible additional intermittent regular inspections upon prior notice to the operator during the term of a permit; and through special inspections immediately upon the city's reasonable determination that a violation of this chapter may have occurred. Consequently, the city shall have the right to inspect a short-term rental property for compliance with the requirements of this code. Such an inspection (a "renewal inspection") shall occur after application and _ before issuance of the short-term rental permit or any renewal thereof.

B. Additional inspections ("inter- mittent inspections') may occur during the term of an issued permit upon at least 24 hours' prior telephonic or written (via e-mail, facsimile or personal delivery) notice to the operator (measured from the time of delivery of such notice), using the operator's contact information on file with the city.

C. The city also shall have the right to immediately inspect (a “violation inspection”) a short term rental property for compliance with this chapter upon issuance of a citation for violation of this chapter.

D. All inspections under this chapter shall comply with the requirements of section 7.12 (or its successor) of this code.

E. If necessary to gain entry for inspection purposes, the city may obtain an administrative search warrant.

F. Failure by an owner, operator, occupant or guest to allow inspection of a short-term rental property as provided in this section shall, of itself, constitute grounds for

1. Revocation of an issued short- term rental permit for such property as provided, in the case of an intermittent inspection or a violation inspection, or

2. Rejection of an application for renewal of a short-term rental permit, in the case of a renewal inspection.

7.13 (Reserved).

7.14 Fees.

The operator of a short-term rental property shall pay a yearly business license fee for the short-term rental property. An applicant for a short-term rental permit also shall pay

A. A one-time application fee conditional uses, as specified in the consolidated fee schedule; and

B. An annual permit renewal fee as specified in the consolidated fee

schedule.

7.15 Violations and penalties.

A. Failure to comply with this chapter shall constitute a violation of this code for which a citation may be issued and penalties may be imposed by the city. Each day that a violation occurs or continues is a separate violation.

B. Operation of a property in the city for short-term rental purposes

without a permit or a business license shall be a violation of this code and shall be punishable as provided in this section of this code, with each day of unlicensed operation constituting a separate offense.

C. For noncompliance with this chapter of a permitted and licensed short-term rental property, the issuing officer shall issue a written citation to the operator, specifying the violation and the penalty to be imposed for such violation. Except as otherwise provided in this chapter, the penalty for violation of this chapter shall be as follows:

1. For the first violation within any 12 month period, the penalty shall be $250;

2. For a second violation within any 12-month period, the penalty shall be an additional $500; and,

3. For a third violation within any 12 month period, the penalty shall be an additional $1,000 and revocation of the short term rental permit and the business license for the subject property; provided, however, that the operator may not re-apply for any available short- term rental permit or business license for such property for two years from the date of such revocation.

7.16 Appeals.

An operator desiring to contest a citation must appeal the citation to the City's appeal authority.

ALPINE PLANNING COMMISSION AGENDA

SUBJECT: Planning Commission Minutes December 3, 2019

FOR CONSIDERATION ON: January 7, 2020

PETITIONER: Staff

ACTION REQUESTED BY PETITIONER: Approve Minutes

BACKGROUND INFORMATION:

Minutes from the December 3, 2019 Planning Commission Meeting.

STAFF RECOMMENDATION:

Review and approve the Planning Commission Minutes.

ALPINE CITY PLANNING COMMISSION MEETING
Alpine City Hall, 20 North Main, Alpine, UT
December 3, 2019

I. GENERAL BUSINESS

A. Welcome and Roll Call: The meeting was called to order at 7:00 p.m. by Chairman David Fotheringham. The following were present and constituted a quorum:

Chairman: David Fotheringham
Commission Members: Bryce Higbee, Jane Griener, Alan MacDonald, John MacKay, Jessica Smuin, Sylvia Christiansen
Excused: Bryce Higbee
Staff: Austin Roy, Jed Muhlestein, Marla Fox

Others:

B. Prayer/Opening Comments: Sylvia Christiansen
C. Pledge of Allegiance: John MacKay

II. PUBLIC COMMENT

There were no public comments.

III. ACTION ITEMS

A. Public hearing – Site Plan – Alpine Animal Hospital Kennels – Michel Kendig

Austin Roy said The Alpine Animal Hospital at 424 South Alpine Highway would like to build a new accessory building which would serve as a dog boarding facility and be offered as an additional service of the Alpine Animal Hospital. Existing accessory buildings would need to be demolished in order for the proposed structure to be built.

The site was located within the Business Commercial zone and the Gateway Historic District. The new proposed accessory building was approximately 1,920 square feet, with total combined square footage (new plus existing) being approximately 4,497 square feet. The overall size of the property was 1.01 acres. Twenty-one total off-street parking stalls were proposed. The Developer was seeking a recommendation of approval for the proposed site plan.

Austin Roy said the same materials would be used on the proposed building as were used to upgrade the existing building.

Austin Roy said the applicant would need an exception to the setback for the proposed building. He pulled up a map of the property lines to show where the current buildings were. He showed that only the Southwest corner would encroach into the setback.

Austin Roy said the property would need sixteen parking spaces and they had sixteen spaces. The Planning Commission asked if the proposed building could be moved forward and Jed Muhlestein said they would lose a good portion of their parking if they approved that suggestion and that the idea would not work. There was some discussion of various possibilities and features for this property to evade the parking issue and property encroachment.

Austin Roy said the landscaping, lighting, parking, dumpster, streets all meet the ordinance.

David Fotheringham opened the Public Hearing.

James Lawrence, a resident, said the Forge behind the Animal Hospital was very loud. He said the new owner had improved the property ten-fold and said he had been in the Animal Hospital and it was very clean and well run.

David Fotheringham closed the Public Hearing.

MOTION: Sylvia Christiansen moved to recommend that the Alpine Animal Hospital Accessory Building Site Plan be DENIED because the setback exception was too great. Jane Griener seconded the motion.

Clarification was sought on the motion. There was further discussion of a potential noise issue for residents and soundproofing the facility accordingly.

MOTION: Alan MacDonald moved to recommend to the City Council that the Alpine Animal Hospital Accessory Building Site Plan be approved with the following conditions:

1. Exception be granted to the side setback of the new building
2. The sound proofing be adequate to 115 decibels

Jessica Smuin seconded the motion. There were 5 Ayes and 1 Nays (recorded below). The motion passed.

Ayes:	**Nays:**
Jane Griener	Sylvia Christiansen
John MacKay	
David Fotheringham	
Alan MacDonald	
Jessica Smuin	

B. Public Hearing – Setback Exception – J&L Automotive Addition – James Lawrence

Austin Roy said the petitioner was seeking approval of a new addition for the automotive shop. In order to build the addition, an exception to the front setback requirements for a commercial structure in the Business/Commercial Zone would be required. The setback being requested was 12 feet 3 inches.

The property was located at 80 South Main Street. The proposed addition was to be on the front or East side of the building (side closest to Main Street). The front of the property was the only area on the lot that was suited for an expansion (i.e. any expansion on the back of the property would reduce the parking area, and thus made it so the property no longer met the off-street parking requirement).

There was an existing storm drainpipe that ran through the area where the new addition was proposed. If the new addition and setback were approved, it should be approved with the condition that the storm drainpipe be re-routed from underneath the building, and construction plans must be approved through the Engineering Department prior to the release of a building permit.

All properties in the Business Commercial Zone were required to have at least twenty percent of the lot landscaped, and according to the plans, J & L Automotive would still meet this requirement if the proposed expansion and setback exception were approved.
The Development Code stated that the Planning Commission may grant exceptions to the setback requirements for the Business/Commercial and Gateway Historic Zones.

Article 3.07.050.1

Front setback shall be not less than thirty (30) feet from the property line on all streets. No portion of the setback area adjacent to a street shall be used for off-street parking.

Article 3.11.040.3.e

The Planning Commission may recommend exceptions to the Business Commercial Zone requirements regarding parking, building height, signage, setbacks and use if it finds that the plans proposed better implement the design guidelines to the City Council for approval.

James Lawrence, applicant, said he put a new storm drain across the front of the property when the original building was built. He said he would pay for the new drain or give the money to the City for a new drain. Jed Muhlestein said the City would abandon this line and put a storm drain line in Main Street.

James Lawrence said he could not build all across the front of the building because he had oil drums under part of the property that he could not build on top of. He said he could not build off the back of the building because of the overhead power lines. He met with several City officials to discuss this issue.

James Lawrence said he also needed storage for car parts for future use.

It was suggested that the building plans include something aesthetically pleasing to match the surrounding neighborhood. Austin Roy was open to suggestions for the architect.

David Fotheringham opened the Public Hearing. There were no comments and David Fotheringham closed the Public Hearing.

MOTION: Jane Griener moved to recommend DENIAL of the J&L Automotive Setback Exception because of the storm drain, the thirty (30) foot setback requirement in the Historical District, and because the extra storage requested was not necessary for the success of the building.

Alan MacDonald seconded the motion.

Jane Griener amended her motion and it was then stated as follows:

MOTION: Jane Griener moved to recommend DENIAL of the J&L Automotive Setback Exception because of the thirty (30) foot setback requirement in the Historic District.

Alan MacDonald seconded the motion.

MOTION: John MacKay moved to recommend approval of the J&L automotive Setback Exception with the following conditions:

1. Storm drainpipe be re-routed, and construction plan approved through the Engineering Department prior to a building permit being released and that the applicant pays for it.
2. Modify the architectural design to meet the Historic Gateway requirement.

MOTION: Sylvia Christiansen moved to recommend APPROVAL of the J&L automotive Setback Exception with the following condition:

` 1. Storm drainpipe be re-routed, and construction plan approved through the Engineering Department prior to a building permit being released and that the applicant pays for it.
2. Fifteen-foot setback exception.

3. Modify the architectural design to meet the Historic Gateway requirement.

Jessica Smuin seconded Sylvia Christiansen's motion. There were 3 Ayes and 3 Nays (recorded below). The motion passed.

Ayes:	**Nays:**
Jane Griener	David Fotheringham
John MacKay	Alan MacDonald
Jessica Smuin	Jane Griener
Sylvia Christiansen	

MOTION: John MacKay moved to recommend APPROVAL of the J&L automotive Setback Exception with the following condition:

1. Modify the architectural design to meet the Historic Gateway requirement.
2. Storm drainpipe be re-routed, and construction plan approved through the Engineering Department prior to a building permit being released and that the applicant pays for it

Jessica Smuin seconded. There were 3 Ayes and 3 Nays. Ayes: David Fotheringham, John Mackay, Jessica Smuin. Nays: Jane Griener, Alan MacDonald, Sylvia Christiansen.

MOTION: John MacKay moved to recommend approval of the J&L automotive Setback Exception with the following condition:

1. Modify the architectural design to meet the Historic Gateway requirement.
2. Storm drainpipe be re-routed, and construction plan approved through the Engineering Department prior to a building permit being released and the applicant pay for it
3. Applicant to come back to Planning Commission after City Council approval for Historic Gateway rendering approval.

Alan MacDonald seconded the motion. There were 4 Ayes and 2 Nays. Ayes: John Mackay, David Fotheringham, Alan MacDonald, and Jessica Smuin. Nays: Jane Griener and Sylvia Christiansen.

C. Annual Meeting Schedule 2020.

Austin Roy shared a proposed meeting schedule for the 2020 Planning Commission meetings. He asked the Planning Commission to review the dates and discuss any conflicts.

MOTION: Jane Griener moved to adopt the proposed 2020 Planning Commission Meeting Schedule.

Sylvia Christiansen seconded the motion. There were 6 Ayes and 0 Nays (recorded below). The motion passed.

Ayes:	**Nays:**
Jane Griener	None
John MacKay	
David Fotheringham	
Alan MacDonald	
Jessica Smuin	
Sylvia Christiansen	

IV. Communications

David Fotheringham said this would be his last meeting as he was moving for two years to Hawaii.

Alpine City Staff, City Council and Planning Commission Christmas Dinner to be held on Tuesday December 10, 2019 at the Skipo building in American Fork.

V. APPROVAL OF PLANNING COMMISSION MINUTES: November 12, 2019

MOTION: Jane Griener moved to approve the minutes for November 12, 2019 with changes made.

Alan MacDonald seconded the motion. There were 6 Ayes and 0 Nays (recorded below). The motion passed.

Ayes:	**Nays:**
Jane Griener	None
John MacKay	
David Fotheringham	
Alan MacDonald	
Jessica Smuin	
Sylvia Christiansen	

The meeting was adjourned at 9:02 p.m.