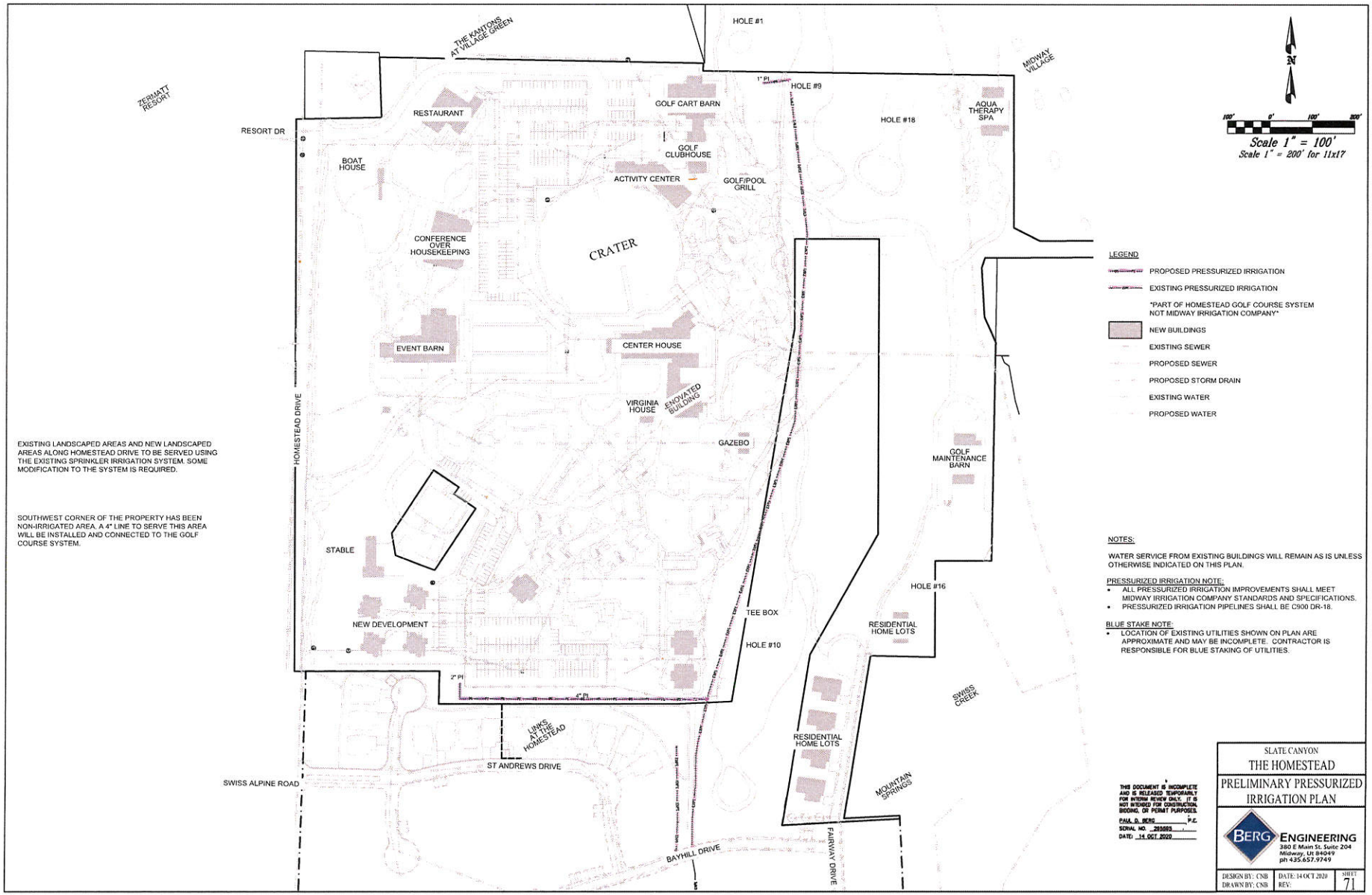

EXISTING LANDSCAPED AREAS AND NEW LANDSCAPED AREAS ALONG HOMESTEAD DRIVE TO BE SERVED USING THE EXISTING SPRINKLER IRRIGATION SYSTEM. SOME MODIFICATION TO THE SYSTEM IS REQUIRED.

SOUTHWEST CORNER OF THE PROPERTY HAS BEEN NON-IRRIGATED AREA. A 4" LINE TO SERVE THIS AREA WILL BE INSTALLED AND CONNECTED TO THE GOLF COURSE SYSTEM.

LEGEND

- PROPOSED PRESSURIZED IRRIGATION
- EXISTING PRESSURIZED IRRIGATION
- *PART OF HOMESTEAD GOLF COURSE SYSTEM NOT MIDWAY IRRIGATION COMPANY*
- NEW BUILDINGS
- EXISTING SEWER
- PROPOSED SEWER
- PROPOSED STORM DRAIN
- EXISTING WATER
- PROPOSED WATER

NOTES:

WATER SERVICE FROM EXISTING BUILDINGS WILL REMAIN AS IS UNLESS OTHERWISE INDICATED ON THIS PLAN.

PRESSURIZED IRRIGATION NOTE:

- ALL PRESSURIZED IRRIGATION IMPROVEMENTS SHALL MEET MIDWAY IRRIGATION COMPANY STANDARDS AND SPECIFICATIONS.
- PRESSURIZED IRRIGATION PIPELINES SHALL BE C900 DR-18.

BLUE STAKE NOTE:

- LOCATION OF EXISTING UTILITIES SHOWN ON PLAN ARE APPROXIMATE AND MAY BE INCOMPLETE. CONTRACTOR IS RESPONSIBLE FOR BLUE STAKING OF UTILITIES.

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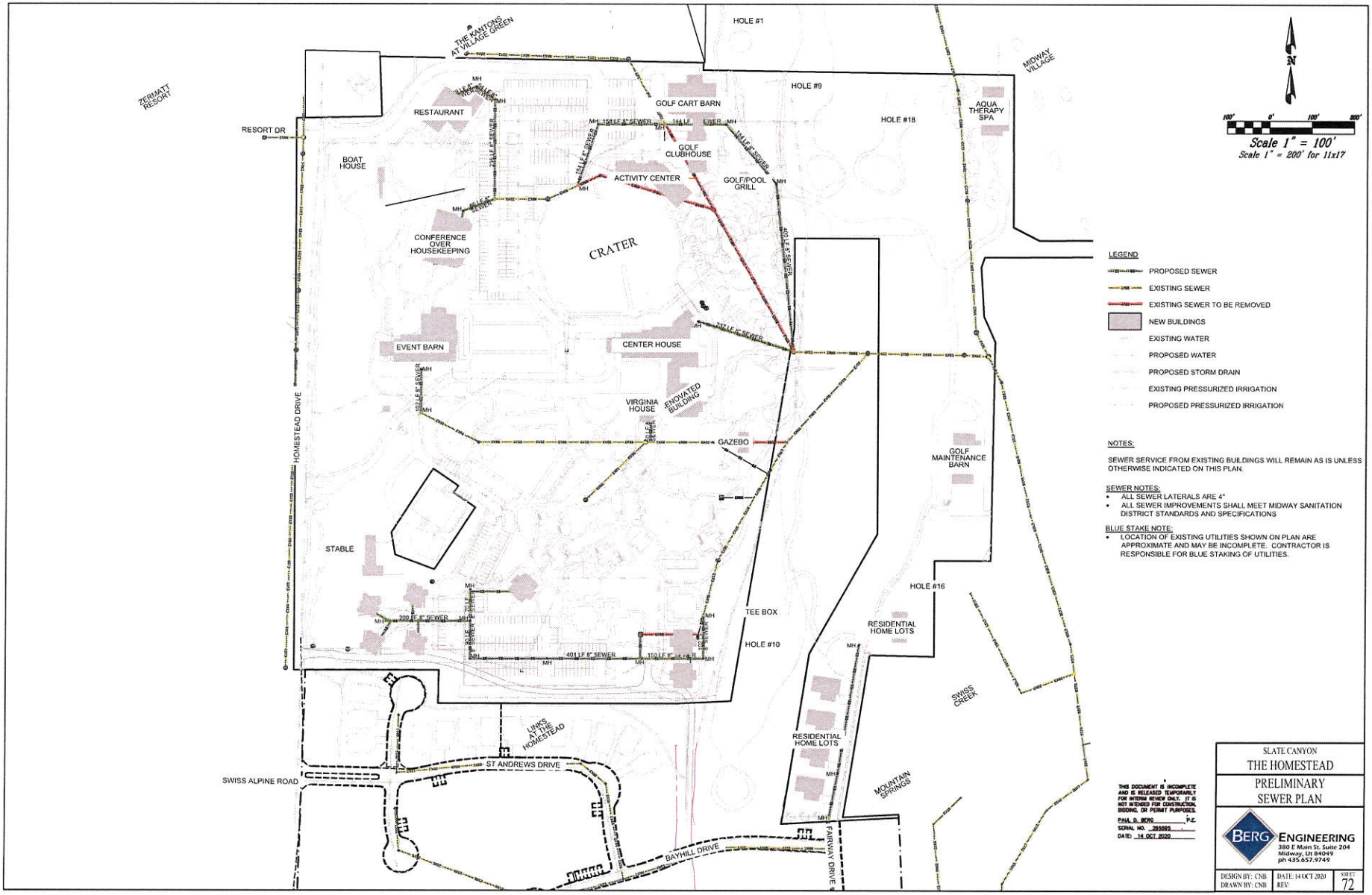
PAUL D. BERG P.E.
SERIAL NO. 295695
DATE: 14 OCT 2020

SLATE CANYON
THE HOMESTEAD
PRELIMINARY PRESSURIZED IRRIGATION PLAN

BERG ENGINEERING
380 E Main St. Suite 204
Midway, Ut 84049
ph 435.657.9749

DESIGN BY: CNB
DRAWN BY: CNB
DATE: 14 OCT 2020
REV:
SHEET 71


THE KANTONS AT VILLAGE GREEN
HOLE #1
ZERMATT RESORT
HOLE #9
MIDWAY VILLAGE
RESTAURANT
GOLF CART BARN
HOLE #18
AQUA THERAPY SPA
RESORT DR
GOLF CLUBHOUSE
BOAT HOUSE
ACTIVITY CENTER
GOLF/POOL GRILL
CONFERENCE OVER HOUSEKEEPING
CRATER
EVENT BARN
CENTER HOUSE
VIRGINIA HOUSE
RENOVATED BUILDING
GAZEBO
HOMESTEAD DRIVE
GOLF MAINTENANCE BARN
STABLE
HOLE #16
TEE BOX
RESIDENTIAL HOME LOTS
HOLE #10
SWISS CREEK
LINKS AT THE HOMESTEAD
ST ANDREWS DRIVE
SWISS ALPINE ROAD
RESIDENTIAL HOME LOTS
MOUNTAIN SPRINGS
BAYHILL DRIVE
FAIRWAY DRIVE
N
100' 0' 100' 200'
Scale 1" = 100'
Scale 1" = 200' for 11x17
LEGEND
PROPOSED SEWER
EXISTING SEWER
EXISTING SEWER TO BE REMOVED
NEW BUILDINGS
EXISTING WATER
PROPOSED WATER
PROPOSED STORM DRAIN
EXISTING PRESSURIZED IRRIGATION
PROPOSED PRESSURIZED IRRIGATION
NOTES:
SEWER SERVICE FROM EXISTING BUILDINGS WILL REMAIN AS IS UNLESS OTHERWISE INDICATED ON THIS PLAN.
SEWER NOTES:
• ALL SEWER LATERALS ARE 4"
• ALL SEWER IMPROVEMENTS SHALL MEET MIDWAY SANITATION DISTRICT STANDARDS AND SPECIFICATIONS
BLUE STAKE NOTE:
• LOCATION OF EXISTING UTILITIES SHOWN ON PLAN ARE APPROXIMATE AND MAY BE INCOMPLETE. CONTRACTOR IS RESPONSIBLE FOR BLUE STAKING OF UTILITIES.
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PAUL D. BERG P.E.
SERIAL NO. 285095
DATE: 14 OCT 2020
SLATE CANYON
THE HOMESTEAD
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SEWER PLAN
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DATE: 14 OCT 2020
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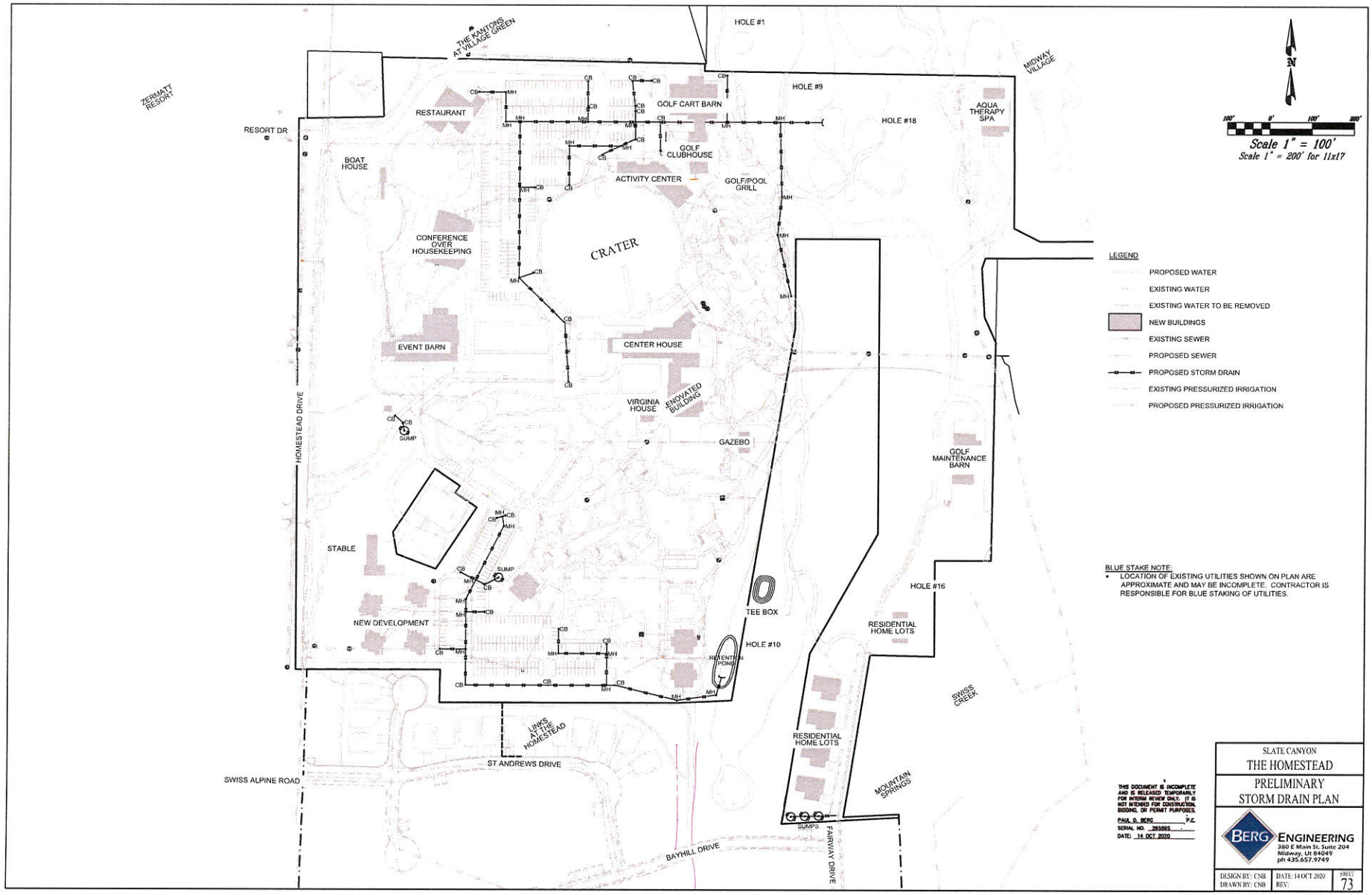
THE KANTONS AT VILLAGE GREEN
HOLE #1
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MIDWAY VILLAGE
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HOLE #18
RESORT DR
BOAT HOUSE
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ACTIVITY CENTER
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EVENT BARN
CENTER HOUSE
VIRGINIA HOUSE
RENOVATED BUILDING
HOMESTEAD DRIVE
SUMP
GAZEBO
GOLF MAINTENANCE BARN
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HOLE #16
TEE BOX
NEW DEVELOPMENT
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NEW BUILDINGS
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EXISTING PRESSURIZED IRRIGATION
PROPOSED PRESSURIZED IRRIGATION
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PAUL D. BERG P.E.
SIGNAL NO. 285095
DATE: 14 OCT 2020
SLATE CANYON
THE HOMESTEAD
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STORM DRAIN PLAN
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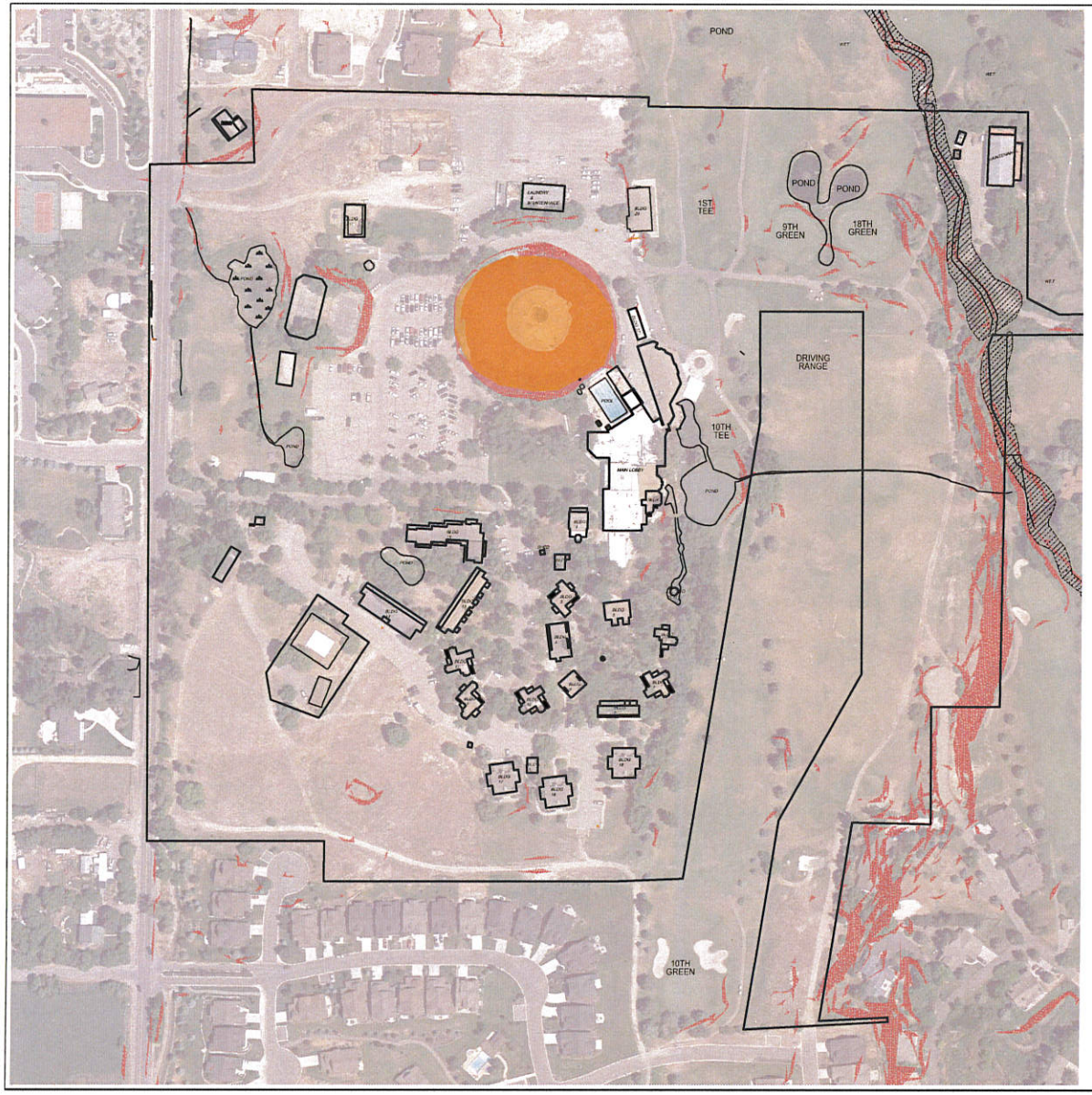

N

100' 0' 100' 200'

Scale 1" = 100'
Scale 1" = 200' for 11"x17"

EXISTING CONDITIONS:

EXISTING BUILDING FOOTPRINT	116,196 SF
EXISTING PARKING SPACES	558 SPACES
EXISTING ASPHALT	7.20 ACRES

LEGEND:

- WETLANDS
- HOT POT - MAJOR GEOLOGIC FEATURE
- SLOPES >25%
- FEMA 100 YEAR Flood Plain

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PAUL D. BERG, P.E.
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SLATE CANYON
THE HOMESTEAD
EXISTING CONDITIONS & SENSITIVE LANDS

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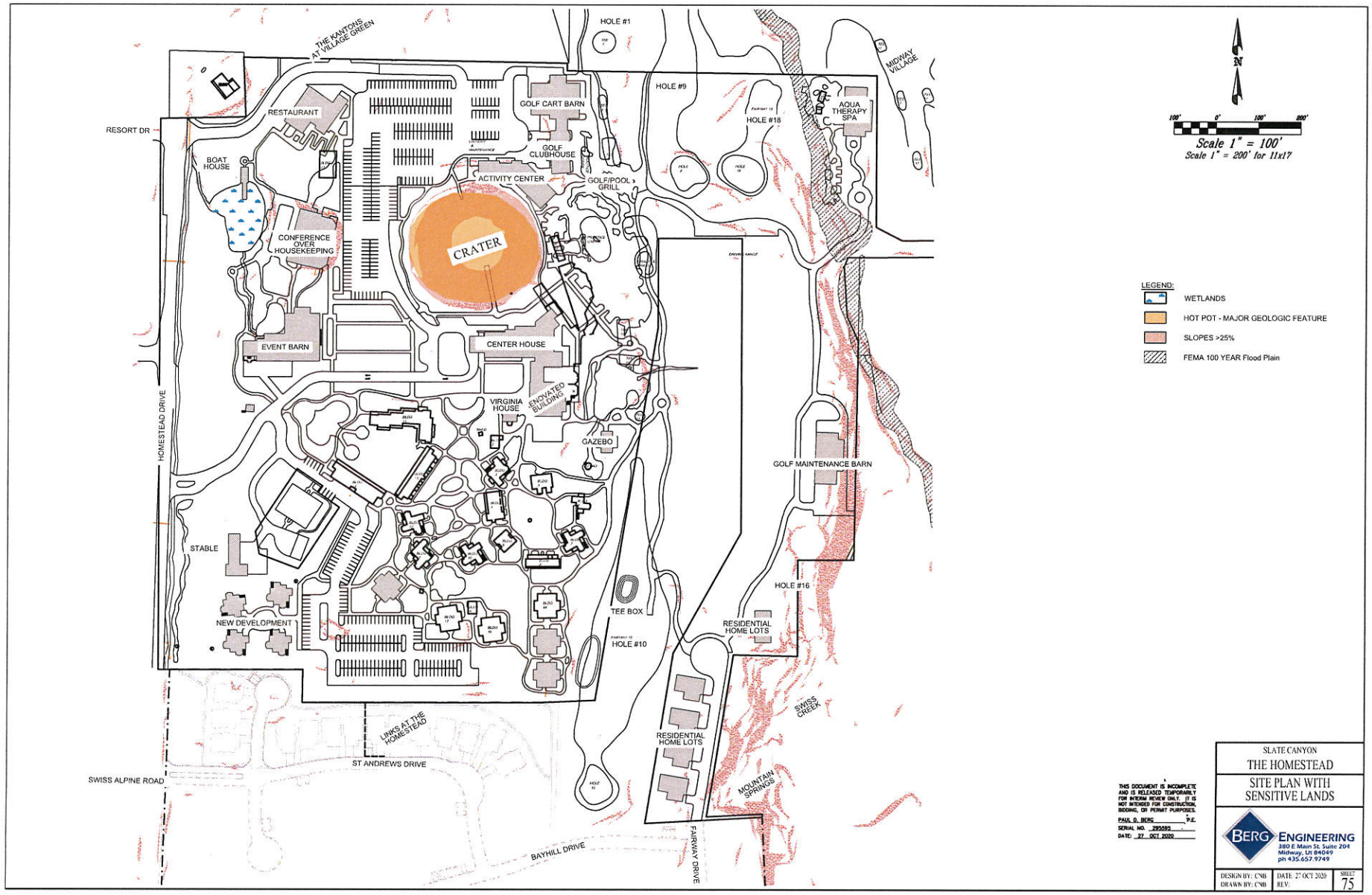
DRAWN BY: CNB
DATE: 27 OCT 2020
REV.
SHEET 74



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PAUL D. BERG P.E.

SERIAL NO. 293093

DATE: 27 OCT 2020

SLATE CANYON

THE HOMESTEAD

SITE PLAN WITH SENSITIVE LANDS

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ph 435.657.9749

DESIGN BY: CNB	DATE: 27 OCT 2020	SHEET
DRAWN BY: CNB	REV.	75

Exhibit 2

Homestead Resort Master Plan
Traffic Impact Study

Respectfully submitted to

Midway City

By JLN Solutions, Inc.
556 W. 800 N. #9
Provo, Utah 84601
801 425-3606

February 28, 2019

Traffic Impact Study Homestead Resort Master Plan

Completed By
Jay Nelson
President/Senior Transportation Planner
JLN Solutions, Inc.
801.425.3606

Completed For
Midway City

February 28, 2019

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I. INTRODUCTION

1. Purpose of Report and Study Objectives

The purpose of this Traffic Impact Study (TIS) is to evaluate the potential traffic impacts of the proposed Homestead Resort Master Plan. The proposed Master Plan will update and enhance the existing resort that currently includes a hotel and villas with a total of 127 units, an 18 hole golf course, the Homestead Crater and other amenities. The Homestead Resort has existed for 157 years. The project is located on approximately 72 acres on the east side of Homestead Drive, which is SR-222, between St. Andrews Drive and Cari Lane in Midway City, Utah. One principal objective of this study is to determine the appropriate intersection geometry for the project's connections to Homestead Drive and to determine if any off-site roadway or intersection improvements are required to accommodate anticipated project traffic.

2. Executive Summary

Project Description and Study Area

The Master Plan proposes the construction of a new Homestead Resort Hotel. The existing resort will continue to be used while the new hotel is being constructed. The existing hotel and Villas have a total of 127 rooms. The new hotel will have 130 rooms. After the new hotel is operational the old hotel and other buildings on the property will be demolished and replaced with 70 Condominiums, 60 Townhomes, 18 Estate Homes, and 12 Bungalows resulting in a total of 290 rental units when the Master Plan is completed. Some of the condos, townhomes and estate homes will be sold (primarily as second homes), and if the owners want the Homestead Resort can rent their units to resort guests when the owners are not using them. The existing golf course and crater will not be changed as part of this master plan update to the resort.

The Homestead Resort Master Plan also includes the construction of a conference center, employee housing, a number of swimming pools, a new club house for the golf course, a tree house play area, on-site walkways/trails and other amenities to enhance and update the existing resort. The project is currently expected to be completed in approximately 8 years. However,

depending on market conditions the construction schedule for complete build-out of the Master Plan could vary.

Access to the project will be provided by the two existing access on Homestead Drive. The primary entrance to the Homestead Resort currently is off-set about 30 feet south of Bigler Lane which provides access to the Zermatt Resort. The proposed Master Plan will move the main entrance north so it aligns with Bigler Lane. The second access is aligned with the main entrance to the Zermatt Resort. Secondary project access will be provided by a new connection to Pine Canyon Road (350 West). The applicant is working with adjacent property owners to acquire additional right-of-way so this new project access can be constructed as a 30-foot wide private street. If this additional right-of-way cannot be obtained the new road would just be a service/emergency access with only 20 feet of pavement. The estates in the southeast corner of the project will be connected to Fairway Drive and Mountain Springs Drive.

The following intersections were evaluated for this Traffic Impact Study:

1) Homestead Drive/Resort Drive/North Homestead Resort Access,
2) Homestead Drive/Bigler Lane/Main Homestead Resort Access,
3) Homestead Drive/Swiss Alpine Road/St. Andrews Drive, and
4) Pine Canyon Road (350 West)/Mountain Springs Drive.

Weekday morning and evening peak period traffic counts were collected in February of 2019 by JLN Solutions, Inc. at the four study intersections. We then evaluated the Level of Service (LOS) during the weekday AM and PM peak hour using Synchro traffic analysis software for the following three traffic scenarios:

1) Existing 2019 Traffic Conditions,
2) Background 2027 Traffic Conditions, and
3) Background 2027 Plus New Homestead Project Traffic.

Principal Findings

At full build-out the proposed Homestead Resort Master Plan is expected to generate a total of 99 new trips during the AM peak hour (50 inbound and 49 outbound) and 170 PM peak hour trips (97 inbound and 73 outbound). This traffic forecast is based on the observed trip generation rates at the existing resort. These rates were considerable higher than the trip generation rates for Resort Hotels published by the Institute of Transportation Engineers (ITE).

Traffic counts were completed in February 2019 from 7:00 to 9:00 am and from 4:00 to 6:00 pm in fifteen minute intervals at the study intersections. Based on available data from the Utah Department of Transportation (UDOT) traffic in the area in February is generally less than the peak summer months. Also the golf course at the Homestead Resort is not open in the winter when the counts were completed. So the February counts were increased by 37 percent to approximate the peak traffic volumes in July. Additionally, ITE trip generation rates were used to forecast the traffic from the existing golf course and this traffic was added to the counted peak hour traffic volumes.

The project is expected to be completed in about 8 years, so the year 2027 was chosen as the time period to evaluate potential project-related traffic impacts. Background 2027 traffic volumes at the study intersections were calculated by increasing the peak 2019 traffic volumes by twelve percent (one and a half percent per year for eight years) to account for additional traffic growth throughout the surrounding area that will be on adjacent street system. The peak period traffic counts recently completed by JLN Solutions were compared to traffic counts completed by Trafmetrics, Inc. in 2008 and this comparison indicated that the traffic volumes at the two existing entrances to the Homestead Resort on Homestead Drive have not changed significantly in the last 11 years so assuming a 12 percent increase in traffic volumes in the next eight years could be over stating future traffic volumes. See Appendix C for the calculations of the 2019 July peak hour traffic volumes, as well as the future 2027 traffic volumes at the study intersections with and without the anticipated new traffic with the completion of the proposed Homestead Resort improvements.

Conclusions

The Homestead Resort Project is not expected to create any significant off-site traffic impacts. A traffic analysis using Synchro Traffic Software shows that all the traffic movements at the four study intersections are expected to operate at level of service B or better during the AM and PM peak hours without any improvements to these intersections. Based the Synchro level of service analysis, the maximum average delay for any movement at the study intersections is less than 14 seconds per vehicle. On-site roadway improvements will be constructed as illustrated on the site plan. No off-site roadway or intersection improvements are required to accommodate anticipated traffic from the proposed project.

A right turn lane and left turn lane on Homestead Drive at the two project access are not required based on this level of service analysis. Homestead Drive is State Road 222 which is owned and operated by UDOT. A left turn lane could potentially be striped on Homestead Drive by narrowing the existing lanes and shoulders at the three study intersections on Homestead Drive. We recommend that the project applicant cooperate with UDOT if they decide to widen SR-222 in the future to provide left and/or right turn lanes along the project frontage. The proposed trail and development in the Homestead Master Plan will be located far enough from SR-222 so they would not be impacted if the road is widened to accommodate left and right turn lanes at the two project access in the future.

Recommendations

No off-site improvements are warranted based on this detailed traffic study for the project. The existing connection to the Homestead Resort from Mountain Springs is controlled by a locked emergency gate north of the Swiss Creek Project. A similar gate is currently planned on Fairway Drive connection to the project immediately north of Bayhill Drive. The Midway City Master Plan recommends connecting adjacent developments and roads to improve traffic circulation throughout the City. We recommend that these gates be left open so people in these adjacent developments could access the golf course and other amenities at the Homestead Resort without having to drive all the way to Pine Canyon Road or Homestead Drive significantly increasing the length of these trips. Very few, if any resort guests are expected to use Fairway Drive and

Mountain Springs Drive to access the project because the most direct access for the resort guests will be from Homestead Drive where the two main entrances to the project are located. However, if resort traffic did negatively impact the adjacent developments the gates could be closed and only used for emergency access.

II. PROPOSED DEVELOPMENT

Location, Land Use and Intensity

The Homestead Resort is located east of Homestead Drive (SR-222) in Midway, Utah. The Homestead Resort Project is located on a 72 acre site. The resort currently has a total of 127 rental units in the existing hotel and Villas, plus the Simons's Restaurant, the Crater, Conference space, a gift shop, an 18 hole golf course, swimming pool and other amenities. The proposed Master Plan will increase the total number of units to 290. The old hotel will be replaced with a new hotel with 130 rooms, and the existing Villas will be replaced with 70 condos, 60 townhomes, 18 estate homes and 12 bungalows as shown in the site plan included as Figure 1. All of the figures for this traffic study are located at the end of this report.

The majority of the units in the resort will be owned by the resort, but some of the estate homes, townhomes and condos could be sold. The owners of these units will have the option to have the resort rent their home to resort guests when they are not using them.

The project will not require any zone change to construct the proposed enhancements and expansion. The Homestead Resort Master Plan will also include the construction of a number of new swimming pools, a mineral pool, a splash pad, and a children play area. Trails and sidewalks will be constructed throughout the project as shown on the site plan.

For the purpose of this traffic study, the project is expected to be completed in eight years. However, the actual time to complete the entire master plan will be determined by market forces.

Site Plan

A site plan of the proposed master plan is presented in Figure 1 at the end of this report. As shown on the site plan, the access for the project will not change significantly. The main access to the Homestead Resort will be shifted slightly to the north so it is located opposite Bigler Lane eliminating the 30-foot off set that currently exists. This will improve traffic flow and safety at the primary entrance to the resort. The proposed Master Plan will modify the existing parking and internal circulation network in the project. A new east/west road will be constructed between the employee housing/maintenance facility and the estate homes. This new road will extend east from the new golf club house to Pine Canyon Road. The applicant is working with the adjacent property owners to get the required right-of-way to construct this as a 30-foot private road. This new connection would be a secondary/emergency access to the Homestead Resort from Pine Canyon Road so all of the resort traffic would not have to use Homestead Drive. It is anticipated that this new access would be primarily for employees and owners of the 18 estate homes.

Additionally, two new road connections will be constructed in the southeast corner of the project by extending Fairway Drive north of Bayhill Drive into the project and extending Mountain Springs Drive north into the project. Residents in these two adjacent developments have expressed concern about Homestead Resort traffic using these local roads so these two new accesses may be gated. This traffic study evaluates how much resort traffic may use Fairway Drive and Mountain Springs Drive if full project access is permitted to these streets.

Project Phasing

The first phase of the master plan will be the construction of the new Homestead Hotel. The entire master plan is expected to be completed in about 8 years or by the end of 2027. Therefore, future traffic conditions were evaluated at the four study intersections during the AM and PM weekday peak hour in 2027 with and without the proposed Homestead Resort development.

III. STUDY AREA CONDITIONS

Study Area

Four study intersections have been selected to evaluate potential traffic impacts associated with the proposed project. The study intersections are:

1) Homestead Drive/Resort Drive/North Homestead Resort Access,
2) Homestead Drive/Bigler Lane/Main Homestead Resort Access,
3) Homestead Drive/Swiss Alpine Road/St. Andrews Drive, and
4) Pine Canyon Road (350 West)/Mountain Springs Drive.

All of the project traffic is expected to pass through the three study intersections on Homestead Drive if no project traffic is assumed to use the new east/west private service road that will connect to Pine Canyon Road or the Mountain Spring Road connection to Pine Canyon Road. The fourth study intersection was evaluated to determine if Homestead traffic was assigned to Pine Canyon Road if it would adversely impact traffic flow at this intersection.

Land Use

The land where the project is planned is currently developed and zoned for resort uses. No modification to the existing zoning is required to construct this project. The project is well served by the two existing access on Homestead Drive. The Zermatt Resort is located immediately west of the Homestead Resort with two access points directly opposite the two existing accesses to the Homestead Resort. The Zermatt Resort has a third access on Lime Canyon Road that connects to Homestead Drive directly north of the two resorts. These two resorts allow guest to use the restaurants and retail stores in both resorts, plus some of the amenities like the golf course, crater, and horseback riding. Most of the other areas adjacent to the Homestead Resort are developed with residential property that is primarily second homes (vacation homes).

Site Accessibility

The project will have two primary entrances on Homestead Drive, with minor secondary access to Pine Canyon Road which will provide good project access.

IV. ANALYSIS OF EXISTING CONDITIONS

1. Roadway Characteristics

Homestead Drive is a minor arterial, and is owned and operated by the Utah Department of Transportation (UDOT) as State Road 222. It is a north/south road immediately adjacent to the project. It has a single travel lane in each direction.

All the other roads in the study area are local two-lane roads that are Midway City roads or private roads. Bigler Lane and Resort Road are private roads in the Zermatt Resort. Mountain Springs Drive is also a private road. Pine Canyon Road is a north/south road with a posted speed limit of 25 miles per hour that is a Midway City Road. Swiss Alpine Road is also a city road that runs west from Homestead Drive south of the Homestead Resort.

2. Traffic Volumes

Manual traffic counts were collected at the four study intersections in 15 minute increments from 7:00 to 9:00 AM and from 4:00 to 6:00 PM on Wednesday, February 13, 2019. The day the counts were completed 123 of the 127 units at the Homestead Resort were occupied (97% occupancy rate) and the Hotel der Baer at the Zermatt Resort was 100 percent occupied. The detailed count information for the study intersections is presented in Appendix A. The existing February2019 AM and PM peak hour traffic volumes are shown in Figure 2 and 3 at the end of this report. The counted volumes are low at the study intersections.

Table 1 summarizes the average annual daily traffic on SR-222 based on counts completed by UDOT from 2008 through 2017 which are the most recent counts completed by UDOT in the study area. In 2017 there are 1,700 vehicles on an average day on SR-222 north of the Homestead Resort. This is the most current daily count information that is available at this time. However, all the traffic analysis in this report is based on the am and pm peak hour counts that were completed in February 2019 factored up to reflect the maximum traffic volumes that exist in July. Homestead Drive does not currently have curb, gutter and sidewalk on either side of the road. As shown in Table 1 the annual average percent of growth in the daily traffic on SR-222

near the project is 1.5% per year between 2008 and 2017. The population in Midway has grown faster than the traffic volumes on SR-222. The population in Midway has grown from 2,121 people in the year 2000 to 3,845 people in 2010; and an estimated population of 4,898 in 2016.

Table 1

Average Annual Daily Traffic (AADT) on SR-222
North of Homestead Resort

Year	UDOT AADT	Annual Percent Change
2008	1,500	
2011	1,900	0.089
2014	2,000	0.018
2017	1,700	-0.050
Annual Growth from 2008 to 2017	0.015	

AADT is Average Annual Daily Traffic
The AADT was calculated by UDOT from 2 or 3 day counts and then adjusted to estimate the AADT

3. Level of Service

A Level of Service (LOS) analysis was performed to evaluate traffic conditions at the study intersections during the critical AM and PM peak hours. The analysis is based on procedures outlined in the *Highway Capacity Manual* published by the Transportation Research Board. The LOS represents the average delay experienced by vehicles by an assigned letter value. The letter values assigned range from A to F, with A providing the best service with little or no delay and F representing congested conditions with delays longer than 50 seconds for unsignalized intersections and 80 second per vehicle for signalized intersections.

A summary of the general definitions of each level of service is shown in Table 2. At stop controlled intersections the LOS is only calculated for the stop controlled movements and the

movements that must yield to other traffic, but not for the entire intersection. LOS D or E is generally considered an acceptable service level during the peak hours, and at the other times of the day less delay would occur. Requiring LOS C or better during the peak hour would often require much wider intersections that would be underutilized during most of the day.

Table 2 - General Definitions of Intersection Levels of Service

Level Of Service (LOS)	Unsignalized Intersection Control Delay (seconds/vehicle)	Signalized Intersection Control Delay (seconds/vehicle)	Definition
A	0 – 10	0 – 10	Very Little Delay Free Flow
B	>10 – 15	>10 – 20	Little Delay Reasonably Free Flow
C	>15 – 25	>20 – 35	Average Delays Stable Flow
D	> 25 – 35	> 35 – 55	Approaching Unstable Flow During Peak Periods
E	> 35 – 50	> 55 – 80	Unstable Flow During Peak Periods
F	> 50	> 80	Long Delays, and Forced or Breakdown Flow

Source: *Highway Capacity Manual*, Transportation Research Board

The LOS analysis was performed for the four study intersections according to the Highway Capacity Manual 2010 methodology for Two Way Stop Controlled intersections (TWSC) using the Synchro traffic analysis software. The calculated peak hour based on the existing counts ranged from 0.74 to 0.92. The peak hour values can vary day to day particularly when the traffic volumes are low. Therefore, to accurately evaluate the change in the LOS between the three analysis scenarios the same peak hour value of 0.92 was used for each scenario for each intersection. This 0.92 value is the default value for the peak hour value in the Synchro traffic analysis software.

The existing February 2019 level of service analysis for the four study intersections is presented in Table 3. All the movements at the study intersections currently operate at LOS B or better during both the AM and PM peak hours. As shown in Table 3, the maximum delay occurs on the westbound lane on Swiss Alpine Road at Homestead Drive where the average delay is calculated to be 12.1 seconds per vehicle during the PM peak hour.

Table 3 – Existing February 2019 Level of Service Analysis for Study Intersections

Study Intersection	Approach	AM Peak Hour		PM Peak Hour	
		Delay (sec./vehicle)	LOS	Delay (sec./vehicle)	LOS
Homestead Dr./Resort Drive/North Project Access	Eastbound	9.2	A	9.2	A
	Westbound	10.5	B	9.9	A
	Northbound	2.6	A	1.7	A
	Southbound	0.3	A	0.0	A
Homestead Dr./Bigler Lane/Main Project Access	Eastbound	10.2	B	9.0	A
	Westbound	10.1	B	10.1	B
	Northbound	0.1	A	0.5	A
	Southbound	0.5	A	2.1	A
Homestead Dr./Swiss Alpine Road/St. Andrews Drive	Eastbound	9.7	A	9.5	A
	Westbound	10.9	B	12.1	B
	Northbound	1.7	A	2.4	A
	Southbound	0.1	A	1.3	A
Pine Canyon Road/ Mountain Springs Drive	Eastbound	8.6	A	8.7	A
	Northbound	1.5	A	1.8	A

V. PROJECTED TRAFFIC

1. Non-Site Traffic Forecast

The non-site or background traffic is the traffic that would occur on the roadway network without the proposed development. The future non-site traffic volumes are projected to the horizon year of 2027, the expected completion year of the Homestead Resort Master Plan. Future traffic volumes were developed from past growth trends on SR-222. The February 2019 peak period traffic counts were increased by the UDOT monthly adjustment factor to obtain the estimated peak July volume. Additionally, the traffic from the existing 18 hole golf course at Homestead Resort was estimated using Institute of Transportation (ITE) trip generation rates (see page B3 in Appendix B). Appendix B contains worksheets showing the trip forecast and trip generation rates for a 290 room resort hotel, a 290 room hotel, and an 18 hole golf course. A yearly growth rate of one and a half percent (1 ½ %) for 8 years; or a total increase of twelve percent (12%) was applied to the estimated peak July 2019 traffic volumes to obtain the 2027 Background traffic volumes.

Appendix C shows how the future traffic volumes were calculated at each study intersection during the AM and PM peak hour. The Background 2027 AM and PM peak hour traffic volumes at the study intersections are presented in Figures 4 and 5, respectively at the end of this report.

2. New Homestead Project Traffic Forecast

Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual (ITE land use code 430) was used to forecast traffic generated by the existing golf course on the project site since the golf course was covered with snow and closed when the traffic counts were completed in February 2019. The trip generation rates used in this study and the number of trips generated by the project during the AM and PM peak hours are presented in Table 4. As shown in Table 4, the project is expected to generate 99 new trips during the AM peak hour (50 inbound and 49 outbound) and 170 PM peak hour trips (97 inbound and 73 outbound) based on the observed trip generation rates at the Homestead Resort.

Table 4 - Project Traffic Generation Forecast

Description	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Feb. 13, 2019 Traffic Count	37	35	72	71	54	125
Observed Trip Generation Rate (TE/Occupied Room)	51%	49%	0.59	57%	43%	1.02
ITE Resort Hotel Trip Generation Rate (TE/Occupied Room)	72%	28%	0.37	43%	57%	0.49
ITE Golf Course Trip Generation Rate (TE/Golf Hole)	79%	21%	2.06	51%	49%	2.92
Existing Homestead 18 Hole Course Trip Forecast	29	8	37	27	26	53
Total Existing Homestead Resort Traffic	66	43	109	98	80	178
Total New Homestead Resort Traffic	50	49	99	97	73	170
Total Homestead Resort Traffic at Full Build-out of Proposed Master Plan	116	92	208	195	153	348

More detailed traffic generation data is included in Appendix B of this report.

Trip Distribution

The project trips were distributed based on anticipated travel patterns in the study area and the observed distribution of Homestead Resort traffic. To analysis the worst possible condition at each study intersection the three study intersections on Homestead Drive were evaluated assuming all the project traffic would enter and leave the project via the two existing entrances on Homestead Drive, with 50 percent of the new project traffic using each driveway. The evaluation of the study intersection on Pine Canyon Road assumed 24 percent of the new project traffic would use the Homestead Resort connection directly to Pine Canyon Road or the planned connection to Mountain Springs Drive to Pine Canyon Road. The project trip distribution is presented in Figure 6 at the end of this report.

Trip Assignment

The new project trips expected to be generated with the build-out of the proposed Homestead Resort Master plan are presented in Table 4 were assigned to the study intersections according to the distribution pattern presented in Figure 6. The anticipated project traffic during the AM and PM peak hour on an average weekday at the study intersections is presented in Figures 7 and 8.

3. Total 2027 Traffic

The Background 2027 traffic during the AM and PM peak hours is presented in Figures 4 and 5, respectively. The total 2027 peak hour traffic volumes are presented in Figures 9 and 10. These volumes were calculated by adding the new Homestead Resort project trips to the Background 2027 Traffic.

VI. TRAFFIC AND IMPROVEMENT ANALYSIS

1. Capacity and Level of Service Analysis

The peak hour delay and LOS at the four study intersections were evaluated using Synchro traffic analysis software and the results are presented in Table 5 for the AM peak hour and in Table 6 for the PM peak hour for each of the three traffic analysis scenarios. As shown in Tables 5 and 6, all movements at the study intersections are expected to operate at LOS B or better during both the AM and PM peak hour in 2027 with all the anticipated traffic from the proposed Homestead Resort Master Plan. The maximum increases in average delay associated with new Homestead Resort traffic is 0.6 seconds during the AM peak hour and 1.9 seconds during the PM peak hour. Therefore, the completion of the proposed Homestead Resort Master Plan is not expected to have any significant adverse impact on traffic conditions.

As illustrated by comparing the non-parenthetical and parenthetical values in the final row and final two columns in Tables 5 and 6, even if 24 percent of the new Homestead traffic was assigned to the new project connection to Mountain Springs Drive and then Pine Canyon Road this study intersection would only increase the average delay by 0.4 seconds in the AM peak hour and 0.6 seconds in the PM peak hour. This small change would not be noticeable to motorist in the area; therefore, we conclude that having connections to adjacent developments will not have an adverse traffic impact and would reduce the travel time for people in these areas to access the golf course, restaurant, Crater and other amenities at the Homestead Resort.

Table 5 –AM Peak Hour LOS Analysis Summary for Study Intersections

Control Delay in Seconds per Vehicle/Level of Service

Study Intersection	Approach	Existing Feb. 2019	Background Year 2027	Background Plus Project Traffic
Homestead Dr./Resort Drive/North Project Access	Eastbound Westbound Northbound Southbound	9.2/A 10.5/B 2.6/A 0.3/A	10.0/B 10.7/B 2.6/A 1.1/A	10.6/B 11.1/B 2.4/A 1.7/A
Homestead Dr./Bigler Lane/Main Project Access	Eastbound Westbound Northbound Southbound	10.2/B 10.1/B 0.1/A 0.5/A	11.5/B 11.7/B 0.1/A 0.6/A	12.2/B 12.3/B 0.1/A 1.0/A
Homestead Dr./Swiss Alpine Road/St. Andrews Drive	Eastbound Westbound Northbound Southbound	9.7/A 10.9/B 1.7/A 0.1/A	11.0/B 13.4/B 1.7/A 0.1/A	11.4/B 13.5/B 1.6/B 0.1/A
Pine Canyon Road/ Mountain Springs Drive	Eastbound Northbound	8.6/A 1.5/A	8.8/A 1.5/A	8.8/A(9.0/A)* 1.3/A(1.9/A)*

*Note the value in parenthesis represent the delay/LOS if all the project traffic assigned to Pine Canyon Road used Mountain Springs Drive instead of the new project connection directly to Pine Canyon Road as shown in Figure 6.

Table 6 –PM Peak Hour LOS Analysis Summary for Study Intersections

Control Delay in Seconds per Vehicle/Level of Service

Study Intersection	Approach	Existing Feb. 2019	Background Year 2027	Background Plus Project Traffic
Homestead Dr./Resort Drive/North Project Access	Eastbound Westbound Northbound Southbound	9.2/A 9.9/A 1.7/A 0.0/A	9.9/A 10.8/B 1.7/A 0.6/A	10.6/B 12.2/B 1.5/A 1.7/A
Homestead Dr./Bigler Lane/Main Project Access	Eastbound Westbound Northbound Southbound	9.0/A 10.1/B 0.5/A 2.1/A	9.8/A 12.1/B 0.5/A 2.3/A	10.7/B 14.0/B 0.4/A 2.7/A
Homestead Dr./Swiss Alpine Road/St. Andrews Drive	Eastbound Westbound Northbound Southbound	9.5/A 12.1/B 2.4/A 1.3/A	10.6/B 13.7/B 2.5/A 0.2/A	11.6/B 13.3/B 2.3/B 0.3/A
Pine Canyon Road/ Mountain Springs Drive	Eastbound Northbound	8.7/A 1.8/A	8.9/A 1.7/A	8.9/A(9.2/A)* 1.7/A(2.3/A)*

*Note the value in parenthesis represent the delay/LOS if all the project traffic assigned to Pine Canyon Road used Mountain Springs Drive instead of the new project connection directly to Pine Canyon Road as shown in Figure 6.

2. Roadway and Intersection Improvements

No improvements are required to support anticipated non-site (background) peak hour traffic in 2027. The Homestead Resort Project will complete all the new roads within the project as shown on the site plan for the project. **Based on this traffic analysis no off-site improvements are required to accommodate anticipated traffic from full build-out of the proposed Homestead Resort Master Plan.**

3. Traffic Safety

The proposed project is not expected to create any traffic safety issues, and adequate sight distance will be provided at the study intersections and the roadway connections that will be constructed as part of this project. The main entrance to the Homestead Resort will be reconstructed about 30 feet north of the existing location so it aligns with Bigler Lane on the opposite side of the road. Bigler Lane provides access to the Zermatt Resort. This will improve traffic safety fixing the existing off-set intersection. Homestead Resort will have to get a permit from UDOT to complete this improvement because UDOT controls Homestead Drive, which is SR-222.

Landscaping and signs at the two project access on Homestead Drive should be designed to not obstruct required sight distance. The proposed street system for the project is adequate and internal site circulation is expected to function properly.

No new traffic signals are warranted or needed in the study area to accommodate the proposed Homestead Resort Development.

The project will construct sidewalks/trails along the project frontage on Homestead Drive, and other locations throughout the resort. These improvements will provide safe pedestrian amenities within the project and connect to the trails north and south of the project.

VII. RECOMMENDATIONS AND CONCLUSIONS

1. Site Access and Circulation Plan

Site access and on site circulation is appropriate for the proposed Homestead Resort Master Plan.

2. Roadway Improvements

On-Site Roadway Improvements

Roads and parking will be constructed as shown on the project site plan to provide good circulation and access to the resort.

Off-Site Roadway Improvements

The anticipated traffic from the proposed project will not have significant impacts on the adjacent street network. Based on the LOS analysis in this report all movements at the study intersections will operate at LOS B or better during both the AM and PM peak hours. **Therefore, no off-site transportation improvements are required to accommodate anticipated traffic from the Homestead Resort Development.**

A right turn lane and left turn lane on Homestead Drive at the two project access are not required based on this level of service analysis. Homestead Drive is State Road 222 which is owned and operated by UDOT. A left turn lane could potentially be striped on Homestead Drive by narrowing the existing lanes and shoulders at the three study intersections on Homestead Drive. We recommend that the project applicant cooperate with UDOT if they decide to widen SR-222 in the future to provide left and/or right turn lanes along the project frontage. The proposed trail and development in the Homestead Master Plan will be located far enough from SR-222 so they would not be impacted if the road is widened to accommodate left and right turn lanes at the two project access in the future.

Exhibit 3

WASATCH FIRE DISTRICT

10420 N. Jordanelle Blvd. Heber City, UT 84032
435-940-9636

Midway City Planning,

Homestead Master Plan has been reviewed and approved by Wasatch Fire for the provided plans on August 26 (Last update per plans show August 14, 2020). The approval is contingent on the following:

- Access from the North East section to Pine Canyon Road
- Access from the South East section to Mountain Springs Road
- Emergency Access path to Linx Subdivision
- All access road to be a minimum of 26-foot width or as allowed by International Fire Code and approved by Wasatch Fire.
- Hydrants as per code (dependent on structure size and sprinkler/standpipe requirements)
- Access required to within all portions of main floor within 150 feet.

Wasatch Fire District