



PLANNING COMMISSION MEETING STAFF REPORT

DATE OF MEETING: October 12, 2021

NAME OF PROJECT: The Village

NAME OF APPLICANT: Midway Heritage Development, LLC

AUTHORIZED REPRESENTATIVE: Daniel Luster

AGENDA ITEM: Master Plan Concept Amendment

LOCATION OF ITEM: 541 East Main Street

ZONING DESIGNATIONS: C-2

ITEM: 2

Dan Luster, agent for Midway Heritage Development LLC, is proposing a master plan amendment for The Village. The proposed revised plan is a mixed-use development that contains both commercial and residential uses. The proposal includes 44,128 square feet of commercial space in multiple buildings, 143 dwellings, park, and trails, to be developed in five phases. The master plan is on 27.47 acres and contains 8.68 acres of open space. The property located at 541 East Main is in the C-2 zone.

BACKGROUND:

Dan Luster, agent for Midway Heritage Development LLC, is proposing to amend the approved concept of the master plan for The Village that was originally approved by the City Council on May 18, 2021. On August 17, 2021, the City Council approved a conditional zone map amendment that, once all conditions have been met, will rezone the entire property to C-2. The applicant is now proposing to amend the approved concept master plan to a revised master plan that is based on the C-2 zoning regulations for

mixed-use projects and on the conditions approved by the City Council for the rezoning for the property. The City Council's motion for the conditional zone map amendment included the following conditions:

- The amendment to the Land Use Map was not official until a master plan agreement was signed and recorded by the applicant and the City.
- The concept plan, recorded with the master plan, was the only development that could occur on the property and the layout would be substantially similar to the approved concept plan.
- The density of the development was limited to 143 residential units.
- The minimum setbacks would correspond with what was shown on the concept plan included as Exhibit 5 (Proposed Rezone Concept Plan (August 17)) in the supplemental file for the meeting.
- Adjustments could be made if all parties agreed.
- The automotive shop and other buildings on Parcel 00-0006-6261 would be included in the master plan application as open space.
- Acknowledged that the first application would have to be withdrawn so that the second application could be approved.
- All commercial uses except Home Occupation Businesses, as defined in the City Code, would be located only in the buildings designated as commercial on the revised concept plan.
- Both the Developer and the City agreed that gas stations and car washes were not compatible with the design and were no longer permitted uses with the acceptance of the agreement.
- A maximum of 20% of the residential units would have direct driveway access to a public road with the garage facing a public road.
- The area proposed as open space, as currently defined in the City Code, would be no less than 8.32 acres.
- Any large buildings on Main Street would have architectural and landscaping design elements to reduce noise reflection as reviewed by the Vision Architecture Committee and City Architect.
- The TROD line would remain as drawn on the map prior to this motion. The TROD would no longer encompass all of the commercial zones.
- If any portion or all of a unit was in the rezoned area, then it could not be a transient rental.

The property is located at 541 East Main and encompasses 27.47 acres and contains 8.81 acres of open space. The proposal includes 88,256 square feet of commercial space in multiple buildings, 143 townhomes, park, trails, pool, and sports club. The proposed plan is a mixed-use development that will be developed in five phases.

The property has historically and is currently in agricultural production except of the land occupied by the automotive shops, storage units, and dwelling. Sensitive land area located on the property will be left undisturbed as required by the land use ordinance. These sensitive lands include the sloped areas at the base of Memorial Hill.

The C-2 zone allows mixed-use development. The proposal is to create a mixed-use development that will include commercial uses along Main Street and residential uses in the remainder of the property. The application covers the largest commercial properties in town. Development of the property could greatly increase the City's tax base and add more commercial space that has become increasingly more difficult to find in the past few years. The property is also very visible from Main Street and because of its location at the base of Memorial Hill, many residents and visitors of Midway are familiar with the property. There are existing residents and commercial businesses in the area that will be impacted by the development and careful planning must be taken to mitigate negative impacts wherever reasonably possible. Because mixed-use projects are a conditional use, the City Council may require reasonable conditions to mitigate negative impacts to the neighbors and the area.

Most of the property has been in the C-2 zone and four applications have been submitted for commercial development on the site over the past ten years. Two of the applications included commercial development and storage units. Both applications were reviewed but, in the end, neither project was ever built. Since then, the City has removed storage units as a potential use in the C-2 zone. The City has also received two large mixed-use development applications on the property. Both applications were reviewed but neither progressed through the approval process and eventually, the applicants pulled their applications. The City also considered amending the zoning on the property to a new commercial zone that was a performance-based code that focused on creating a community gathering area by incentivizing the developer to create a unique place. After some public hearings, it was apparent that the proposal did not have broad public support.

The Land Use Code requires that a Master Plan request must demonstrate that approval of the project in multiple phases can occur such that the project can still function autonomously if subsequent phases are not completed. Therefore, the Master Plan application must demonstrate that sufficient property, water rights, roads, sensitive lands protection, and open space are proposed with the first phase to allow the project to function without the subsequent phase or phases. All water rights required will be held in escrow before the master plan agreement is recorded and then dedicated to the City as required per phase. Not every issue and detail will need to be resolved for master plan approval but any issue regarding the aforementioned items do need to be resolved before master plan approval is granted. Some items will be reviewed and resolved during the preliminary and final approval of each phase.

LAND USE SUMMARY:

- 27.47 acres
- 8.81 acres of open space
- C-2 zone

- Five phases
- Public loop road through phases 1, 2, and 3. The connector road to River Road is also a public road. All remaining roads and alleys are private.
- Private roads, alleys, parking areas, and open space will be maintained by the HOA or POA
- Potential trail connection to Memorial Hill
- Sensitive lands on the property include sloped areas

ANALYSIS:

Water Rights – Master plans require that water rights be held in escrow with the City before the master plan agreement can be recorded. The required water rights per phase are then dedicated to the City before the recording of each plat. The Water Advisory Board has approved an estimated 172 acre-feet will need to be held by the City in escrow before the master plan can be recorded.

Roads and Traffic Circulation – Each phase of the subdivision must meet access requirements. All phases comply with access requirements.

Traffic Study – A traffic study has been submitted to the City for review. The study has determined the impact of traffic generated from the proposal on the surrounding UDOT and City streets. One significant finding is a third access is required for better traffic distribution and to lower the impact on the intersection of River Road and Main Street. The third access will be from River Road. There are off-site improvements required based on the traffic study. More information on this issue is provided in Horrocks Engineers review letter that is attached to this report.

Alley Access – The proposed plan has street access to each unit but there is also additional alley access proposed for parking access. The alley access areas will be private and will be owned and maintained by the HOA or POA. Snow removal and storage from the alley is a concern and staff has asked that a snow removal and storage plan is prepared for review and approval. The developer is developing a plan to assure functionality of the proposed master plan. The developer has also provided a will-serve letter from Wasatch County Solid Waste (previous concept master plan). The County will enter private alley areas to unload trash containers. The Fire District did meet with staff and the developer to review all fire related issues. The proposed plan has been modified to address concerns raised in that meeting.

Main Street Improvements – The developer will be required to improve Main Street to UDOT requirements.

Sensitive Lands – Sensitive land area located on the property will be left undisturbed as required by the land use ordinance. These sensitive lands include the sloped areas at the base of Memorial Hill. No building pads are located on any slopes 25% or greater.

Open Space – The proposal is required to provide 8.32 acres of open space; 8.81 acres have been provided.

Public Participation Meeting – The developers will hold a public participation meeting on October 11, 2021, as required by the ordinance for master plan applications. This requirement is to give the developer an opportunity to present the development to the surrounding residents of the proposed project. The developer will need to provide a report of that meeting, as required by code, to planning staff that will outline the discussions and concerns that were addressed that night.

Density – The maximum amount of residential unit is 143 as per the condition of the conditionally approved rezone of the property.

Trails – There are no planned trails on the property as per the Trails Master Plan though all trails shown on the will have a public trail easement. Staff has asked the developer to consider a trail connection from the development to Memorial Hill. Wasatch County, owner of Memorial Hill, would need to approve the trail. It is anticipated that if a trail is built, it would be a backcountry soft surface trail to eliminate impact on Memorial Hill and to limit a visual impact when looking at the hill. Staff's concern is that without a trail plan and design, the public will create their own trails that may have a visual impact and an erosion impact on Memorial Hill.

Architecture Theme – The developer is required to receive architectural approval of all structures in the mixed-use development, this includes all commercial and residential buildings, along with any other features that require architectural approval. Specific review of each building will be required through the approval process.

Parking – The developer is providing 189 commercial stalls and 286 residential stalls along with 17 visitor stalls. At master plan, calculating the exact number of commercial stalls is not realistic because until the exact use and size of a structure is known, the exact amount of parking cannot be calculated. The goal at master plan is to make sure there is the possibility of enough parking for future planned uses. The typical amount of parking required is one stall for every 250 square feet for areas accessible to the public. Generally, this should be an adequate number of stalls for master plan but as each individual permit is submitted, parking will need to be reviewed. The 303 residential stalls do not comply with code requirements. The required number of stalls for the residential area is 358 stalls.

Required Commercial Square Footage – The mixed-use code requires 20% of the gross square footage of all structures is deed restricted as commercial. The plan presented appears to meet the requirements of the code as outlined on page 3 of the submitted plans dated October 4, 2021. The developer is proposing 44,128 square feet of commercial and 81,401 square feet of residential. To assure that the commercial square feet requirement is met, staff is proposing that approvals of phases 4 and 5 (which are fully residential) are not approved for preliminary approval until the commercial structures are built. The details to this provision will need to be outlined in the master plan agreement.

Setbacks – The proposed development is required to meet the setback requirements for the mixed-use code and the conditions placed on the project through the rezoning approval. All commercial buildings are required to have an 8' setback and all residential structures are required to have a 10' setback. Residential setbacks along the western boundary are a minimum of 36' and residential setbacks along the eastern boundary are a minimum of 100'.

Height of structures – Structures cannot exceed 35' in height, measured from natural grade to the roof. Architectural elements may exceed the 35' limit as per code.

Transient Rental Overlay District – The mixed-use area of the proposal is in the transient rental overlay district (TROD) and, if the units comply with all requirements, may be rented on a short-term basis.

One Property Owners Association – All residential phases of the master plan are required to be part of one property owner's association. The commercial areas will all be required to be part of one property owner's association. This is required to maintain all private areas including, private roads, alleys, roads, and common areas. The requirement to be part of one POA is to reduce conflict in the future. Sometimes in phased developments, phases are sold to different developers and the new developers of a phase do not want to be part of the POA. This has created problems in other phased developments in Midway and for that reason the code requires that all phases be part of one POA.

Geotechnical Report – The City has received two geotechnical reports for the property. One from 2017 and one from 2021. The geotechnical report from 2017 found water in some of the test pits on the west side of the property. The report from 2021 did not find water in any of the test pits, including pits dug near the test pits with water from 2017. A high-water table is a concern because the proposed plan is dependent on below grade parking. Without the below grade parking, the master plan would need to be amended. Staff is recommending piezometers are installed in multiple areas of the development to monitor water levels over the next few years, especially in the areas of phases 2-6. The piezometers will provide information regarding the water table over multiple years. This will give information regarding the ability to develop future phases. If the water table is a problem for some phases,

then the master plan will need to be amended to continue to comply with code requirements.

Landscaping – The proposed development has a significant amount of frontage along Main Street. The view of Midway along Main Street is of high importance for the City for a couple of reasons. First, it is important to the residents of Midway that Main Street is aesthetically beautiful. Most residents of Midway use Main Street at least once a day and maintaining a beautiful corridor through town is of high priority. Second, the Midway economy is dependent on tourism and a clean and orderly Main Street is vital for creating the atmosphere needed to create a beautiful community that will attract tourists. For these reasons staff is proposing a requirement that the commercial areas of the development be either kept in agricultural production until constructed or, once those areas are developed, the commercial pads and surrounding area are landscaped until the structures are built. The landscaping may be minimal with grass and an irrigation system, but they will need to be kept orderly and maintained. There are many examples of commercial developments where the commercial pads are not maintained and become weed infested and an eyesore for the community. It is important that this situation is avoided along Midway's main corridor.

VISUAL AND ARCHITECTURAL COMMITTEE RECOMMENDATION:

The Visual and Architectural Committee (VAC) has reviewed the conceptual architectural renderings for this project and has recommended general concept approval. All commercial and mixed-use residential buildings will be reviewed in detail by the VAC during the preliminary approval for each phase and before building permits are issued for any structures.

WATER BOARD RECOMMENDATION:

The Water Advisory Board as approved an estimated 172 acre-feet will need to be held by the City in escrow before the master plan can be recorded.

POSSIBLE FINDINGS:

- The proposal will benefit the City financially by creating a greater tax base.
- The proposal may help the City better comply with State requirements regarding the ability to collect resort tax depending on the number of units that are rented on a short-term basis.
- The developer has provided a parking stall plan that does not comply with residential code requirements.

- The proposal does appear to comply with the requirement of 20% commercial square feet of the mixed-use portion of the plan.
- Groundwater must be addressed to assure the below grade parking areas and basements are feasible.

ALTERNATIVE ACTIONS:

1. Recommendation of Approval (conditional). This action can be taken if the Planning Commission finds the proposal complies with the requirements of the code.
 - a. Accept staff report
 - b. List accepted findings
 - c. Place condition(s) if needed
2. Continuance. This action can be taken if the Planning Commission finds that there are unresolved issues.
 - a. Accept staff report
 - b. List accepted findings
 - c. Reasons for continuance
 - i. Unresolved issues that must be addressed
 - d. Date when the item will be heard again
3. Recommendation of Denial. This action can be taken if the Planning Commission finds that the request does not comply with the requirements of the code.
 - a. Accept staff report
 - b. List accepted findings
 - c. Reasons for denial

PROPOSED CONDITIONS:

1. Piezometers are installed in multiple areas of the development to monitor water levels over the next few years, especially in the areas of phases 2-5. The piezometers will provide information regarding the water table over multiple years. This will give information regarding the ability to develop future phases. If the water table is a problem for some phases, then the master plan will need to be amended to continue to comply with code requirements.

2. The timing of required off-site improvements, including the traffic signal at River Road and Main Street, are included in the master plan agreement.
3. All public road required rights-of-way must be dedicated to the City. Right-of-way dedications must be real property and not public access easements.
4. Phases 4 and 5, which are completely residential, are not allowed to submit for preliminary approval until the correct ratio of commercial square feet has been built for each phase. 60% of the required commercial would need to be built to submit for preliminary approval of phase 4 and 80% of the required commercial would need to be built to submit for the preliminary of phase 5.
5. The commercial areas of Phases 1 and 2, which front Main Street, must either be in agricultural production or landscaped, even in areas where future buildings will be located. The landscaping may be minimal with grass and an irrigation system, but they will need to be kept orderly and maintained.

March 9th, 2021

Midway City
Attn: Michael Henke
75 North 100 West
Midway, Utah 84049

Subject: The Village Development – Master Plan Review

Dear Michael:

Horrocks Engineers recently reviewed The Village development plans for Master Plan approval. The proposed development borders Memorial Hill to the North and Main Street to the South. The development is a mixed-use development and PUD. The proposed development consists of 28,170 SF of commercial building space, 151 residential units zoned C-2, and 25 PUD residential units. The following issues should be addressed.

General Comments

- There are 6 phases within the development, each phase within the Master Plan appears to be a stand-alone phase.
- All drawings and standards should meet the Midway City updated 2020 specifications.
- Snow removal and snow storage needs to be addressed.

Water

- The proposed development will be served from the Gerber / Mahogany pressure zone.
- The proposed development will connect to the existing 12" culinary water line in Main Street.

Roads

- The proposed roads within the C-2 Zone of the development will be public and have right-of-way widths of 56' with sidewalk on both sides of the road.
- The roads within the PUE will be private and have right-of-way widths of 56' with sidewalk on both sides of the road.
- There are private alley ways within the development. Each alley way will need two points of access.
- The access and improvement onto 870 East will require permission and documentation from land owner.
- Main Street access and cross sections will need to go through the UDOT approval process.
- A traffic study has been submitted. Our traffic engineers in our Pleasant Grove office have reviewed the study. Some clarifications are required regarding the study.
- The traffic study shall include an evaluation of an access off of River Road.

Pressure Irrigation

- The subdivision will be serviced by Midway Irrigation Company.
- All removal, additions, or revisions to pressure irrigation system must be approved by Midway Irrigation Company.
- The ditch towards north end of the property that runs west to east must be maintained.

Trails

- The majority of the development has 5' or 6' sidewalk. There is one 8' trail in front of the park / open space area that connects to 5' sidewalk on each side.

Storm Drain

- The storm drain system will be a combination of public and private and will be collected within the proposed curb and gutter and discharged to a series of catch basins, sumps, and detention basins with the development.

Sewer

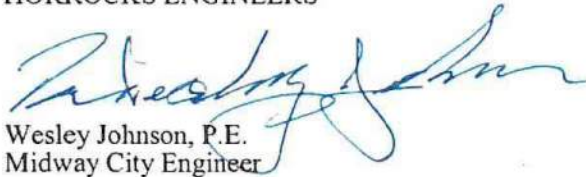
- Sewer will be provided by Midway Sanitary Sewer District.

The following items will need to be submitted prior to preliminary review:

- Geotechnical Report for the east half of development that was not done as part of previous geotechnical report.
 - Perc tests need to be located near all retention ponds / basins and sumps in alley ways. Perc tests should been done at the bottom of the proposed sump elevations.
- Access approval from UDOT for the two new access points onto Main Street.

Please feel free to call our office with any questions.

Sincerely,
HORROCKS ENGINEERS



Wesley Johnson, P.E.
Midway City Engineer

cc: Berg Engineering

Exhibits

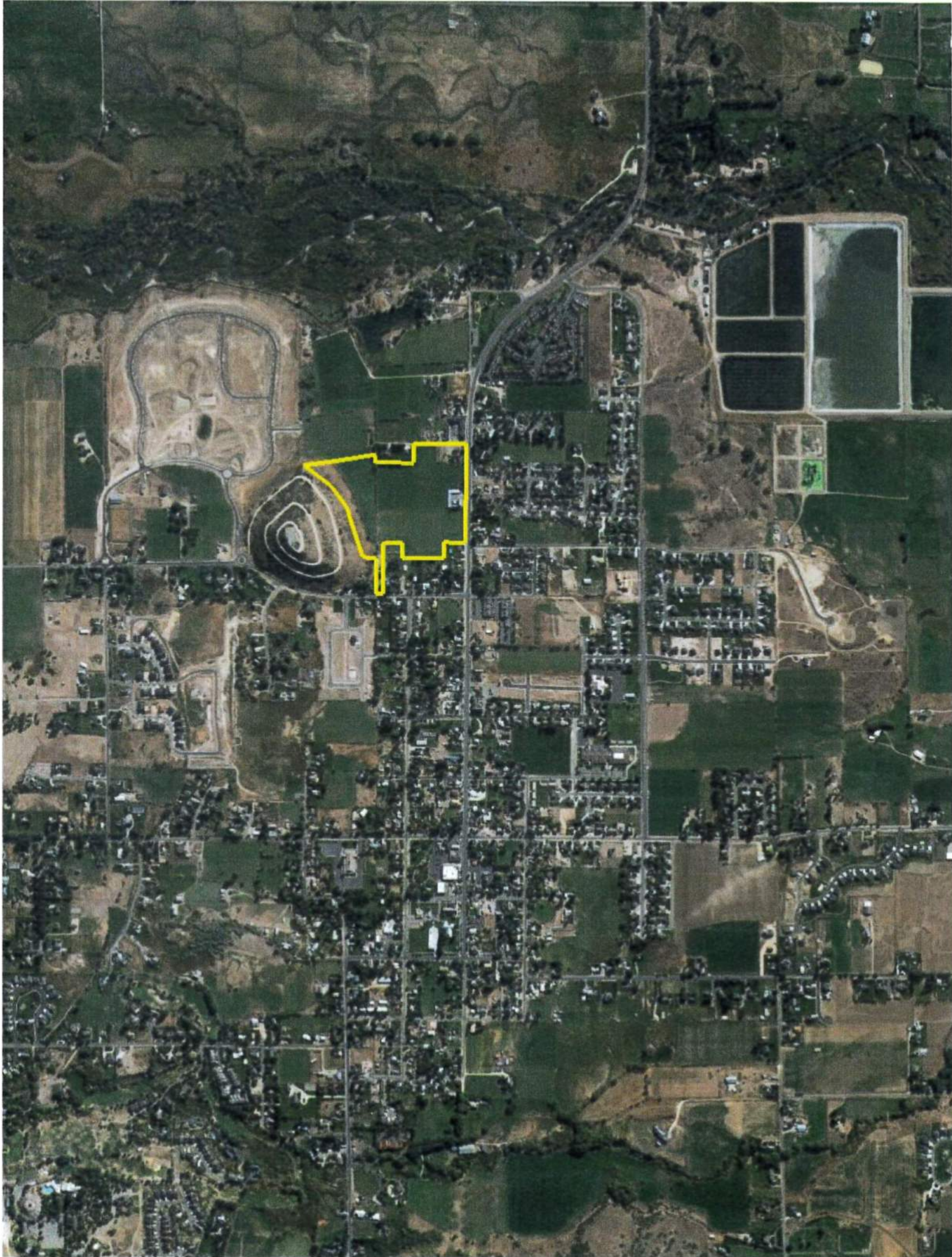
Exhibit 1 – Location maps

Exhibit 2 – Proposed revised master plan

Exhibit 3 – Developer supplementary documents

Exhibit 4 – Traffic impact study

Exhibit 1





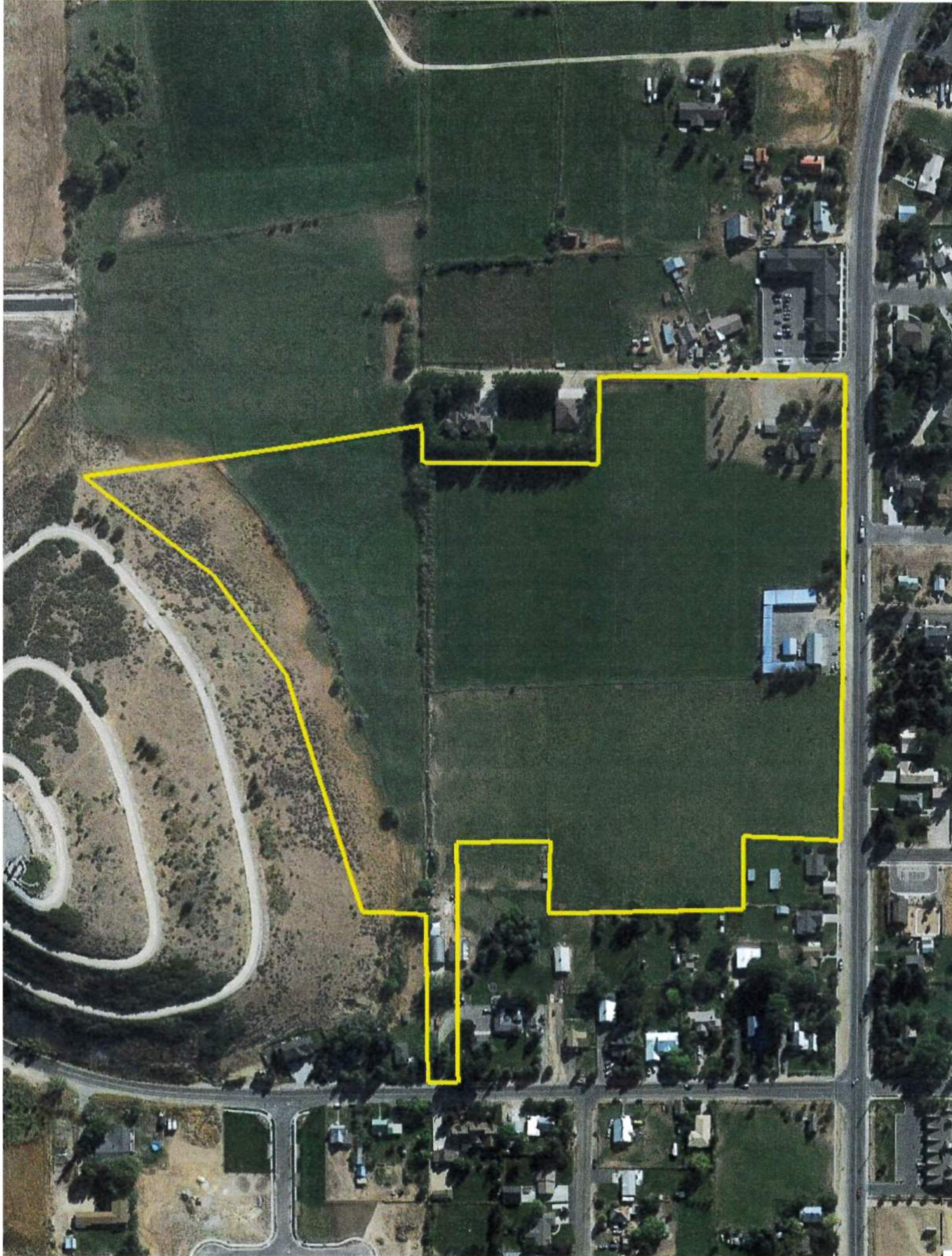


Exhibit 2

THE VILLAGE

A MIXED USE DEVELOPMENT REVISED MASTER PLAN APPLICATION



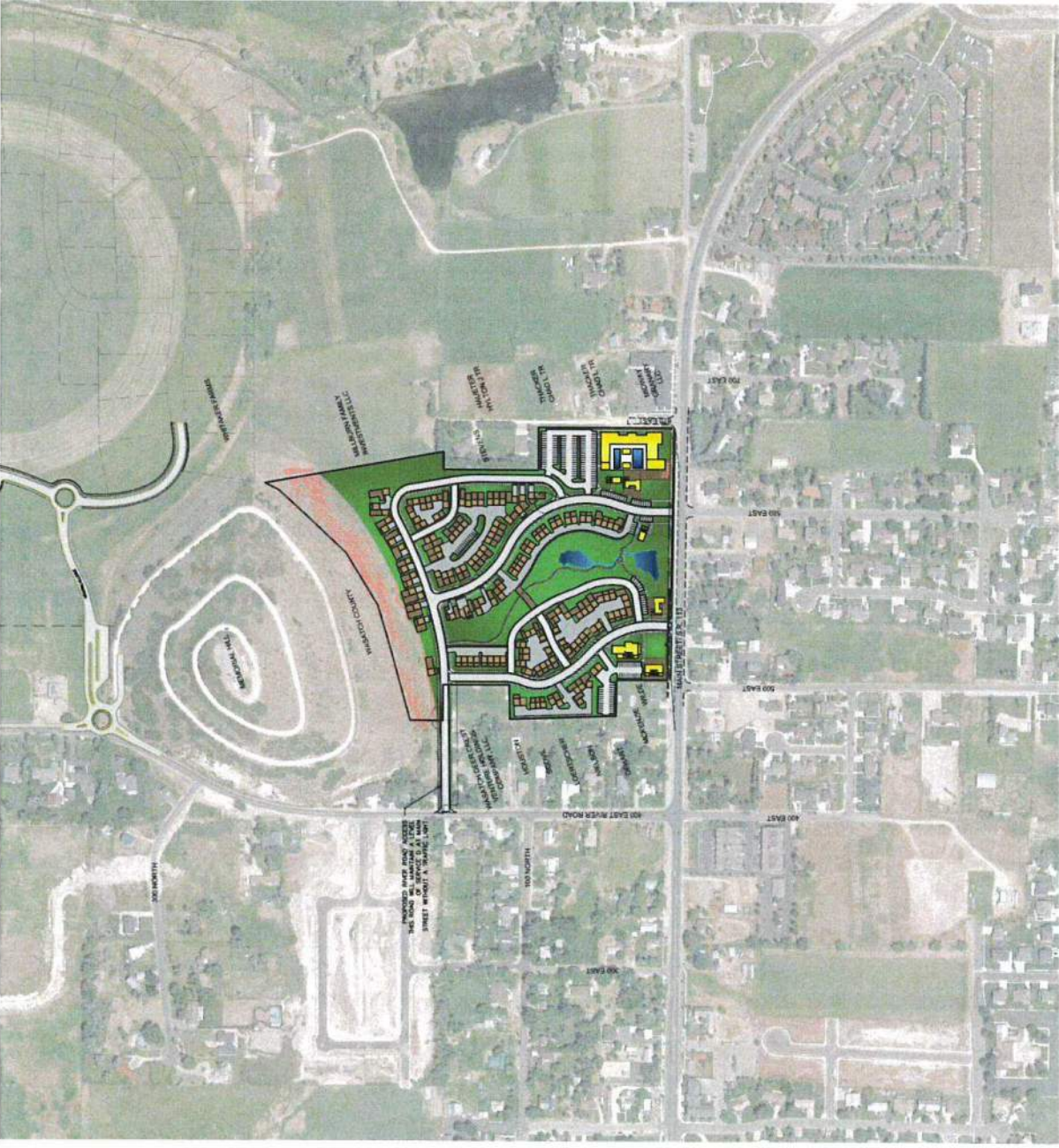
MIDWAY CITY
VICINITY MAP

SHEET INDEX

1. VICINITY MAP
2. SENSITIVE LANDS MAP
3. REVISED MASTER PLAN
4. MASTER LANDSCAPE PLAN
5. PHASING PLAN
6. OPEN SPACE PLAN
7. ROADS & TRAILS MASTER PLAN
8. SEWER MASTER PLAN
9. WATER MASTER PLAN
10. IRRIGATION MASTER PLAN
11. STORM DRAIN MASTER PLAN

THE ENGINEER HAS REVIEWED
THIS DOCUMENT FOR TECHNICAL
COMPLETENESS AND ACCURACY
AND HAS FOUND IT TO BE
SATISFACTORY. IT IS NOT
GUARANTEED THAT THE
DESIGN WILL BE SUCCESSFUL
IN ALL RESPECTS.
PAUL S. BERG
P.E.
SINCE NO. 25000
DATE: 1.06.2021

PROJECT NO.	DATE	REV.	SHEET
THE VILLAGE	10/01/2021	0	0
THE VILLAGE	10/01/2021	0	0
COVER SHEET			
			



- LEGEND**
- NON-BUILDABLE AREA
(25%+ SLOPES)
 - COMMERCIAL BUILDINGS
 - RESIDENTIAL UNIT
 - GARAGE
 - LANDSCAPED AREAS



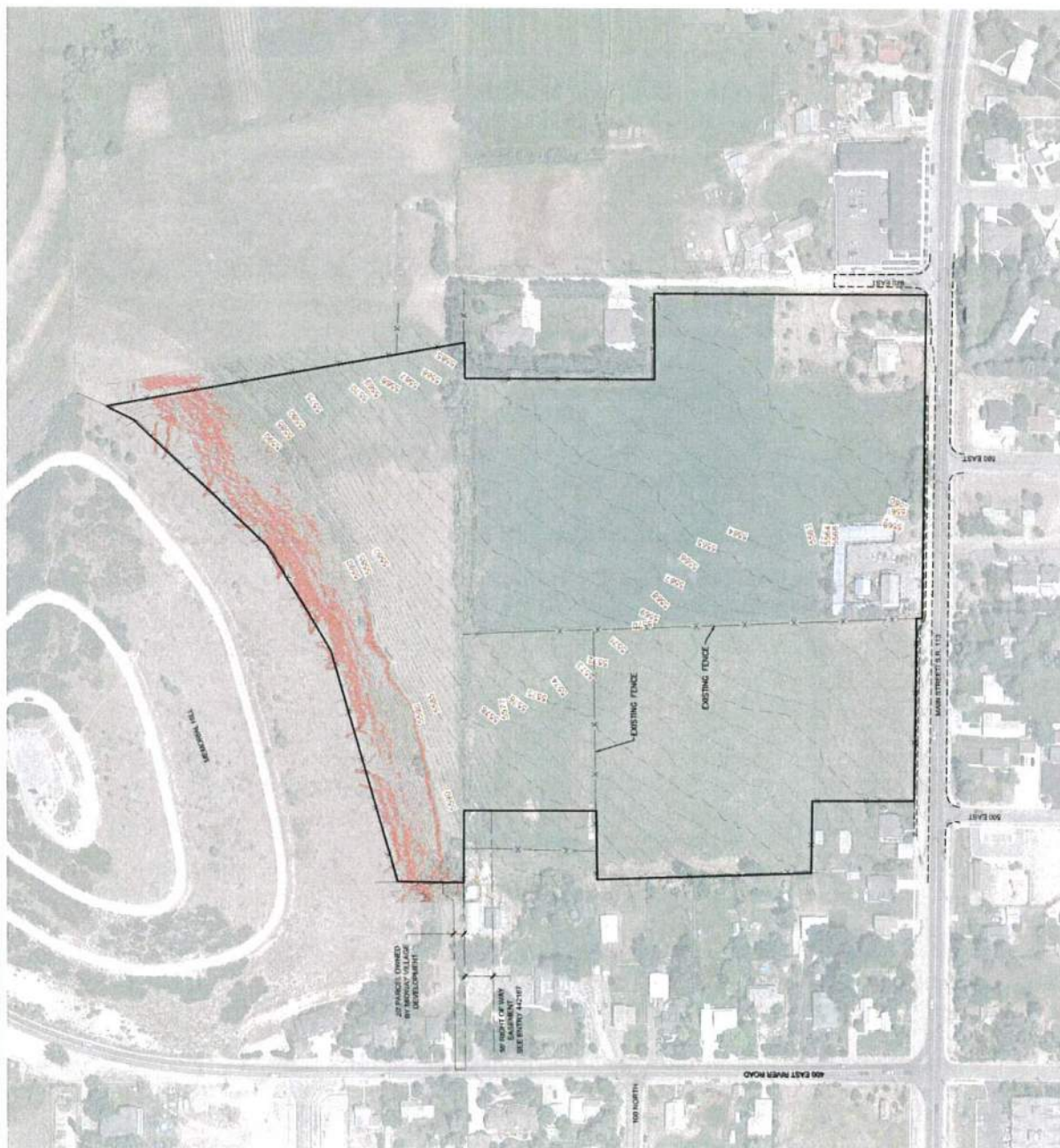
CLUSTER
THE VILLAGE

VICINITY MAP

BERG ENGINEERING
1000 E Main St., Suite 200
Bloomington, IL 61820
Phone: 309.244.8800
Fax: 309.244.8801
Email: info@berg-engineering.com

DESIGNED BY: BERG
DATE: 10/1/2011
DRAWN BY: BERG
REV: 1

THIS DOCUMENT IS RELEASED
FOR REVIEW OF THE PROJECT
UNLESS NOTED AND SEALED.
DATE: 10/1/2011



SENSITIVE LANDS NOTES

LAND USE: THE LANDSLIDE HAZARD POTENTIAL ON THE PROPERTY IS LOW PER THE WIMAY CITY AND COUNTY ZONING ORDINANCES. THE PROPERTY IS ZONED COMMERCIAL. THE GENERAL LAND USE AND PROBLEM SOIL MAP CONTAINED IN THE CITY GENERAL PLAN AND THE COUNTY GENERAL PLAN PLEASE SEE THE GEOTECHNICAL REPORT FOR MORE INFORMATION.

SHALLOW GROUND WATER: THE PROPERTY DOES NOT CONTAIN SHALLOW GROUND WATER PER MAP 28 OF THE GENERAL LAND USE AND PROBLEM SOIL MAP.

SEPTICS, STREAMS OR SEEPS: NO SPRINGS, STREAMS OR SEEPS HAVE BEEN FOUND ON THE PROPERTY.

ALLUVIAL FANS
NO ALLUVIAL FANS ARE FOUND ON THE PROPERTY PER MAP 26 OF THE WASATCH COUNTY
GENERAL PLAN.

FLOOD HAZARDS
THERE ARE NO 100 YEAR FEMA FLOOD HAZARDS ON THIS PROPERTY PER FEMA MAPS.

WETLANDS ARE ON THE PROPERTY PER THE NATIONAL WETLANDS INVENTORY PUBLISHED BY THE U.S. FISH AND WILDLIFE SERVICE.

Fault Lines
NO FAULT LINES CROSS THE PROPERTY PER MAP 26-- FLOOD HAZARDS, EARTHQUAKE HAZARDS

EXISTING HAY FIELD WILL BE DISTURBED FOR CONSTRUCTION OF HOMES, COMMERCIAL BUILDINGS
VEGETATION REMOVAL

ROADS AND PARKING TOPSOIL WILL BE STORED FOR USE ON SITE. EXCESS SOIL MATERIALS TO BE DISPOSED OF. TREES ON MEMORIAL HILL WILL BE PRESERVED. TREES ALONG THE NORTH DITCH BANK WILL BE REMOVED AND DISPOSED OF.

WATER QUALITY
STORM WATER RUNOFF WILL BE COLLECTED AND RETAINED ON SITE. STORM WATER POLLUTION PREVENTION MEASURES WILL BE INSTALLED DURING CONSTRUCTION. MEASURES INCLUDE SILT

FENCING, STABILIZED CONSTRUCTION ENTRANCE AND INLET PROTECTION.

LEGEND

 NON-BUILDABLE AREA
(25%+ SLOPES)

—+— EXISTING FENCE

2

SCALE: 1" = 100'

Cluster

THIS DOCUMENT IS RELEASED
FOR SENIOR EYES. IT IS NOT
SENSITIVE.

PAUL D. HENNING P.E.

SERIAL NO. 285503
DATE 4 OCT 2021

2000 E. 80th
Midway, IL
60135, U.S.A.

DESIGN BY: TUB	DATE: 4/08
DRAWN BY: DBJ	REV:

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UNLESS SIGNED AND SEALED.

PAUL D. NERO P.E.
SERIAL NO. 285585
DATE: 4 OCT 2021

LUSTER
THE VILLAGE

SENSITIVE LANDS MAP

BERG ENGINEERING
300 E. Main St. Suite 204
Midway, UT 84049
Tel: 435-667-0740

DATE: 4 OCT 2021	SHEET 2
REV:	
DESIGN: HV- PCH	
ISSUES: HV- 186	

DATE: _____ REV: _____

PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	CONT	SIZE
	33	Ashum Shrub Maple / Ashum Shrub / Ashum Shrub	B&B	2" Cal
	86	Canada Red Chokeberry / Phytolacca virginiana / Canada Red	B&B	2" Cal
	4	Eastern Cinnamon Shrublet / Populus deltoides 'Stoutlet'	B&B	2.5" Cal
	81	Spring Snow Crab Apple / Malus x 'Spring Snow'	B&B	2" Cal
	6	Weeping Willow / Salix babingtonii	B&B	2" Cal
EVERGREEN TREES	QTY	COMMON / BOTANICAL NAME	CONT	SIZE
	11	Colorado Spruce / Picea canadensis	B&B	8-10"
GROUND COVERS	QTY	COMMON / BOTANICAL NAME	CONT	SIZE
	483,000 sf	Kentucky Bluegrass / Poa pratensis	W&I	
	11,328 sf	4" Wood Mulch / 4" Wood Mulch	Mulch	

LEGEND
 NON-BUILDABLE AREA (25% SLOPES)
 COMMERCIAL BUILDINGS
 RESIDENTIAL BUILDINGS
 GARAGE

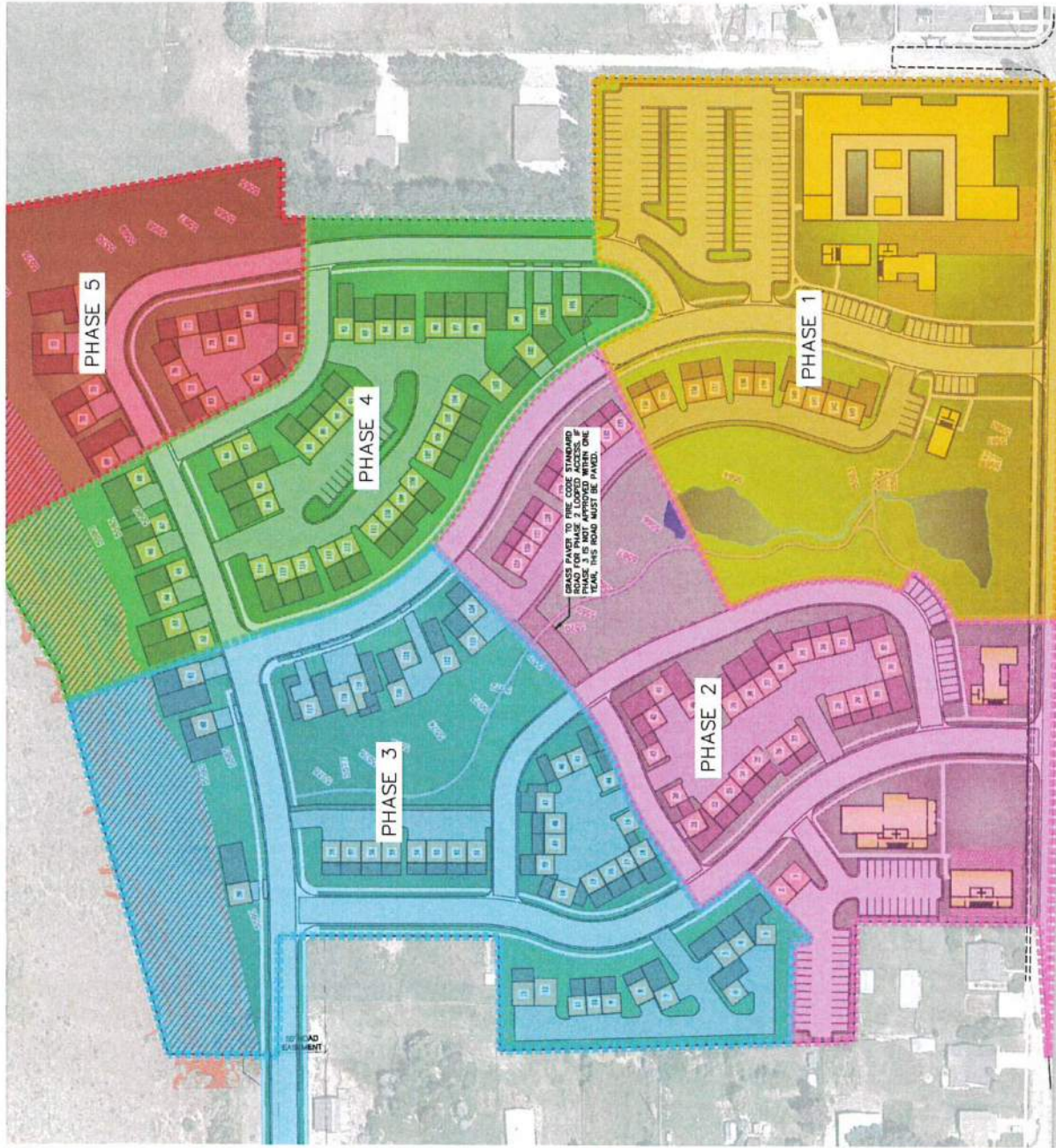


THIS DOCUMENT IS BELIEVED
TO BE A TRUE AND CORRECT
REPRESENTATION OF THE
MASTER LANDSCAPE PLAN
FOR THE PROJECT.
DATE: 10/1/2011
BY: [Signature]

LISTER
THE VILLAGE
MASTER LANDSCAPE PLAN

BERG
ENGINEERING
300 E Main St, Suite 200
Baltimore, MD 21201
410.552.8100
www.berg-engineering.com

REVISION: 009 DATE: 10/1/2011 SHEET: 4
DRAWN BY: SD REV:



- LEGEND**
- NON-BUILDABLE AREA
(25%+ SLOPES)
 - COMMERCIAL BUILDINGS
 - RESIDENTIAL BUILDINGS
 - GARAGES

NOTES

TEMPORARY CUL-DE-SAC TO BE INSTALLED WITH PHASE 1 AS SHOWN.

PHASING PLAN			RESIDENTIAL UNITS OPEN SPACE		
PHASE	AREA		RESIDENTIAL		
1	6.55 AC	25,045 SF	11,005 SF	10	1.94 ac
2	5.70 AC	11,295 SF	34,383 SF	35	1.21 ac
3	6.64 AC	0 SF	46,486 SF	43	2.28 ac
4	4.59 AC	0 SF	50,251 SF	40	0.87 ac
5	3.09 AC	0 SF	18,643 SF	15	2.88 ac
	27.47 AC	36,330 SF	160,678 SF	143	8.81 ac

PHASE			NON-DECATED HILLSIDE		
PHASE	DECATED AREA		NON-DECATED		
1	3.16 ac	0 ac	0 ac		
2	2.20 ac	0 ac	0 ac		
3	2.26 ac	1.13 ac	1.13 ac		
4	1.79 ac	0.52 ac	0.52 ac		
5	1.85 ac	1.35 ac	1.35 ac		
	11.09 ac	3.00 ac	3.00 ac		



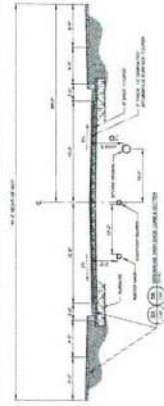
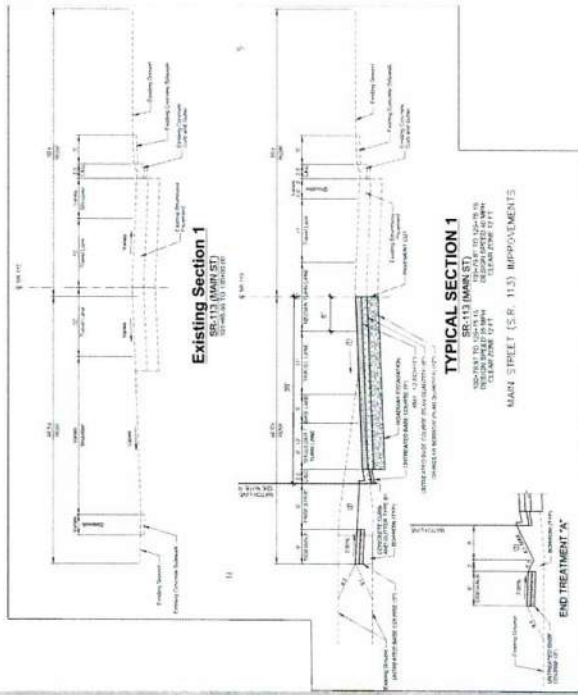
SCALE: 1"=60'

LISTER
THE VILLAGE
PHASING PLAN



DESIGNED BY: JRM | DATE: 4 OCT 2021
DRAWN BY: JRM | REV: 5

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PUBLIC ACCESS TO INFORMATION ACT
SÉRIAL NO. 2020048
DATE: 4 OCT 2021



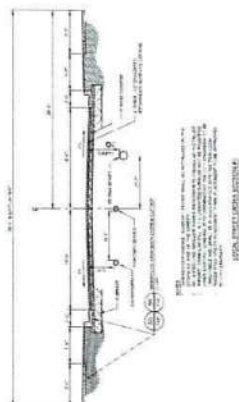
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ASSASSINATION RECORDS ACT



LUSTER
THE VILLAGE
ROAD & TRAIL PLAN



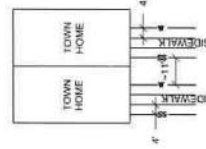
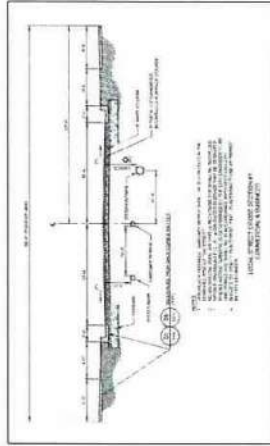
DESIGN BY: PWB	DATE: 4 OCT 2021	SHEET
DRAWN BY: DEJ	REV	7



- LEGEND**
- EXISTING SOWER
 - PROPOSED SOWER
 - EXISTING WATER
 - PROPOSED WATER
 - EXISTING PRESSURIZED IRRIGATION
 - PROPOSED PRESSURIZED IRRIGATION
 - PROPOSED STORM DRAIN

BLUE LINE USER:
 LOCATION OF EXISTING UTILITIES SHOWN ON
 PLAN ARE APPROXIMATE AND MAY BE
 DIFFERENT FROM ACTUAL LOCATIONS
 FOR BLUE STAKING OF UTILITIES.

WATER NOTES:
 ALL WATER IMPROVEMENTS SHALL MEET MIDWAY CITY
 STANDARDS AND SPECIFICATIONS AS ADOPTED IN ALL
 ORDINANCES.
 ALL WATER LINES ARE 8" UNLESS OTHERWISE NOTED.



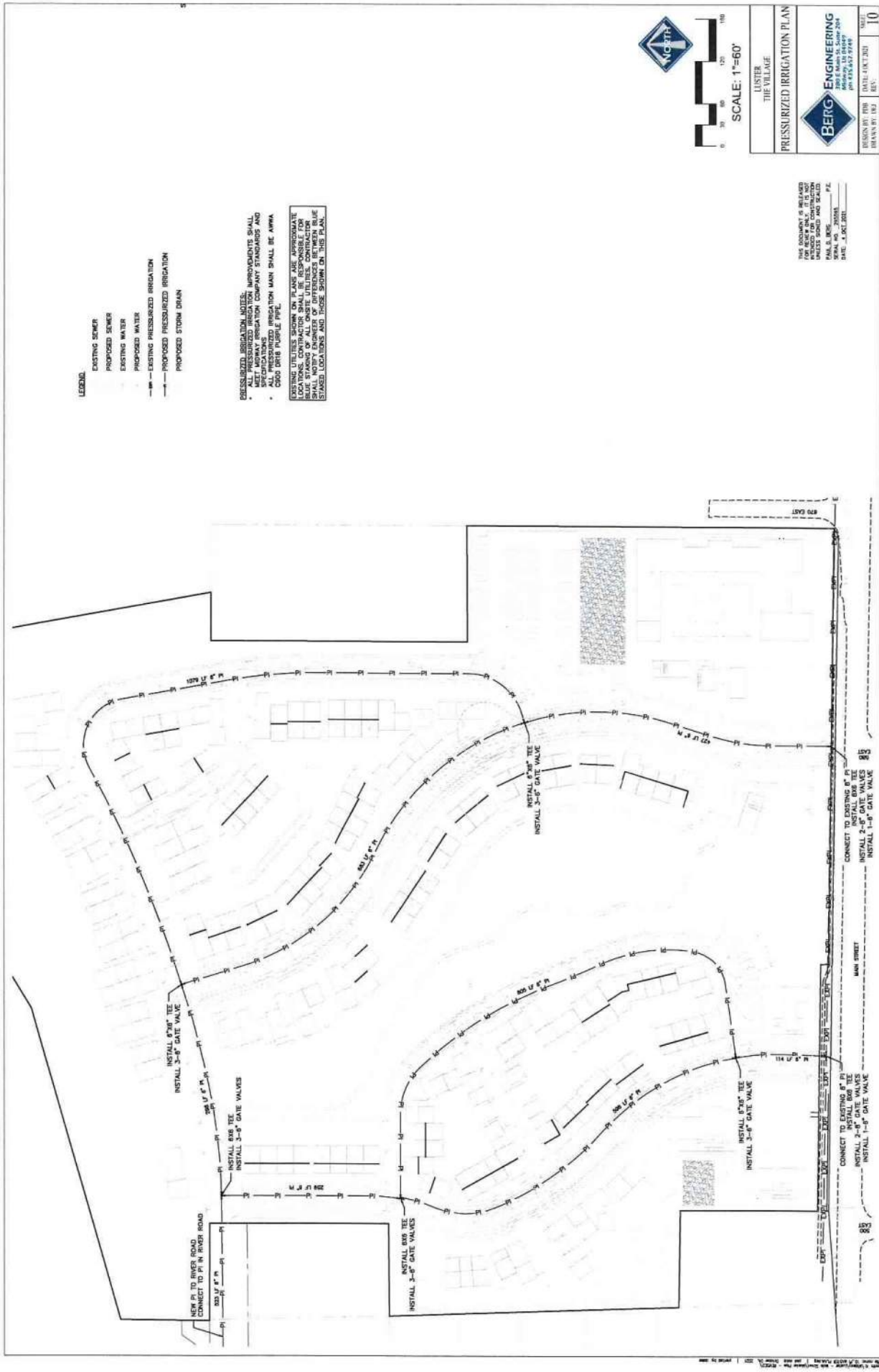
TYPICAL UTILITY DETAIL

THIS DOCUMENT IS RELEASED
 FOR THE CITY OF MIDWAY, MISSOURI
 UNLESS SHOWN AND SIGNED
 BY THE ENGINEER.
 DATE: 11/11/2021

BERG ENGINEERING
 200 E. Main St., Suite 200
 Midway, MO 64579
 (816) 434-0000

PROJECT: LUSTER THE VILLAGE WATER PLAN
 DRAWN BY: RMB
 DATE: 11/11/2021
 SHEET: 9





- LEGEND**
- EXISTING SEWER
 - PROPOSED SEWER
 - EXISTING WATER
 - PROPOSED WATER
 - EXISTING PRESSURIZED IRRIGATION
 - PROPOSED PRESSURIZED IRRIGATION
 - PROPOSED STORM DRAIN

PRESSURIZED IRRIGATION NOTES:

- * ALL PRESSURIZED IRRIGATION IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE IRRIGATION COMPANY STANDARDS AND SPECIFICATIONS.
- * ALL PRESSURIZED IRRIGATION MAIN SHALL BE AWWA C900 DUBUQUE PIPE.
- * EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BLUE STAKING OF ALL ON-SITE UTILITIES. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES SHOWN ON THIS PLAN AND THOSE SHOWN ON THE PLAN.



CLUSTER
THE VILLAGE

PRESSURIZED IRRIGATION PLAN

BERG ENGINEERING

2800 E. Main St., Suite 204
Salt Lake City, UT 84143
PH: 801.462.7749

DESIGN BY: RWS
DRAWN BY: RWS

DATE: 08/18/2021
REV: 10

THIS DOCUMENT IS PREPARED FOR THE CLIENT'S USE AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF BERG ENGINEERING.

FILE NO. 2021001
SHEET NO. 10



Notes: 1. All elevations are in feet above mean sea level (AMSL).
2. All flow rates are in cubic feet per second (CFS).
3. All pipe diameters are in inches (IN).
4. All pipe materials are in feet (FT).
5. All pipe slopes are in feet per foot (FT/FT).

Table 1: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 2: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 3: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Notes: 1. All elevations are in feet above mean sea level (AMSL).
2. All flow rates are in cubic feet per second (CFS).
3. All pipe diameters are in inches (IN).
4. All pipe materials are in feet (FT).
5. All pipe slopes are in feet per foot (FT/FT).

Table 4: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 5: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 6: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Notes: 1. All elevations are in feet above mean sea level (AMSL).
2. All flow rates are in cubic feet per second (CFS).
3. All pipe diameters are in inches (IN).
4. All pipe materials are in feet (FT).
5. All pipe slopes are in feet per foot (FT/FT).

Table 7: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 8: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 9: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Notes: 1. All elevations are in feet above mean sea level (AMSL).
2. All flow rates are in cubic feet per second (CFS).
3. All pipe diameters are in inches (IN).
4. All pipe materials are in feet (FT).
5. All pipe slopes are in feet per foot (FT/FT).

Table 10: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 11: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 12: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Table 13: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 14: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 15: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Table 16: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 17: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 18: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Table 19: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 20: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 21: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05

Table 22: Storm Drain Flow Rates

Basin	Flow Rate (CFS)	Flow Rate (MGD)
A	1.5	0.011
B	2.5	0.018
C	3.5	0.025
D	4.5	0.033
E	5.5	0.040

Table 23: Storm Drain Pipe Materials

Basin	Material	Length (FT)
A	4" PVC	100
B	6" PVC	150
C	8" PVC	200
D	10" PVC	250
E	12" PVC	300

Table 24: Storm Drain Pipe Slopes

Basin	Slope (FT/FT)
A	0.01
B	0.02
C	0.03
D	0.04
E	0.05



SCALE: 1"=60'

STORM DRAIN PLAN



DATE: 04/20/2011
DRAWN BY: [Name]
CHECKED BY: [Name]
SCALE: 1"=60'

BLUE SEAL NOTE
LOCATION OF EXISTING UTILITIES SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. COMPLETE CONTRACTOR IS RESPONSIBLE FOR BLUE SEALING OF UTILITIES.
STORM DRAINAGE CONSTRUCTION TO MEET AURORA CITY STANDARDS AS ACCEPTED IN JULY 2010 EDITION.

- LEGEND**
- EXISTING SEWER
 - PROPOSED SEWER
 - EXISTING WATER
 - PROPOSED WATER
 - EXISTING PRESSURIZED IRRIGATION
 - PROPOSED PRESSURIZED IRRIGATION
 - PROPOSED STORM DRAIN

THIS PLAN WAS PREPARED BY BERG ENGINEERING, INC. FOR THE PROJECT OF [Project Name] AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF BERG ENGINEERING, INC.
DATE: 04/20/2011
SCALE: 1"=60'

Exhibit 3

The Village Mixed-Use Project

Master Plan Submission

January 12th, 2020

The Village and Midway's Vision

The Village is a mixed-use development on Midway's historic Main Street that seeks to preserve the rural and historic European character of Midway in the face of unprecedented growth in the Heber Valley. The Village will contribute to Midway's vision in three key ways:

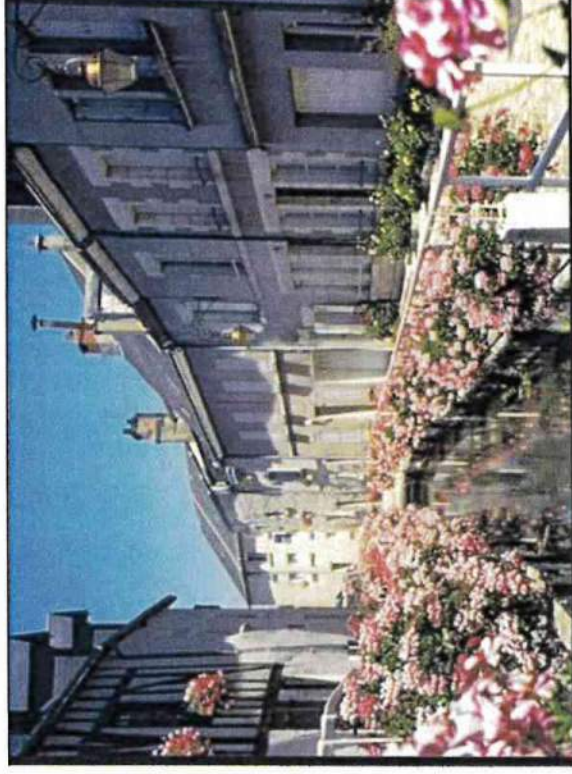
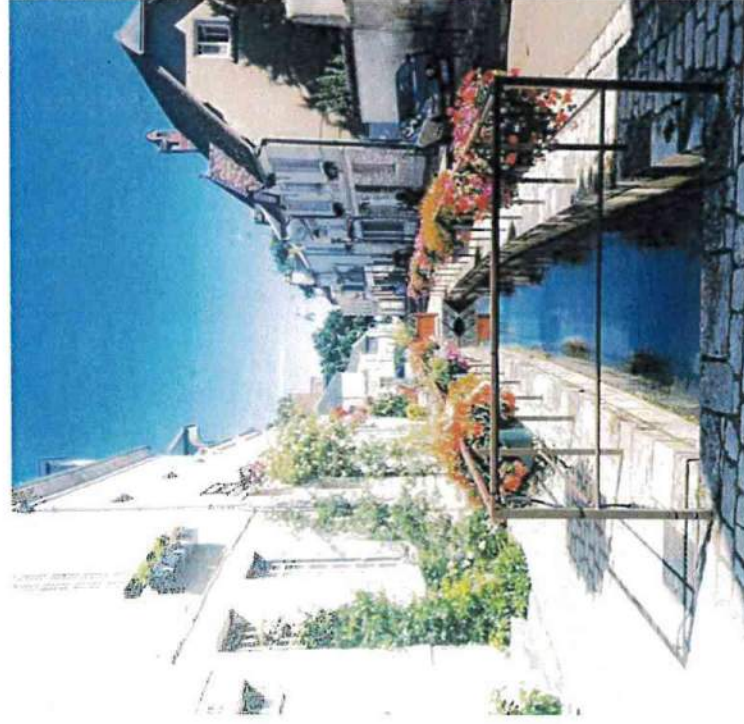
- Architecture. The Village is designed as a European walking village modeled after authentic villages in France and Switzerland. Key elements include hanging flowers, a flowing canal, and quality natural materials and building techniques that evoke timeless and practical design. Far from a "theme park," The Village will include live/work residences that lend themselves to village life and walkability. Tourists and residents will enjoy walking these streets as much as visiting the retail along main street.
- Village Life/Rural Character. The Village will include restaurants, retail, and office space on main street with a distinctly rural character. The goal is to drive agriculture-based tourism including farm animals, nature walks, farm-to-market dining, European furnishing imports, and to promote local/historic craftsman and boutique restaurants. This can be achieved by linking farm/grazing space directly with main street retail. Retail will share a common courtyard with access/views to grazing areas and trails to encourage both locals and tourists to think of Midway as an agritourism destination.
- Trail Access/Connectivity. The Village will form a critical link to open the south east corner of Midway to Memorial Hill and a trail system that connects North to the Dutch Fields, and West to the Homestead with European-style trails through wide open preserved agricultural land on Whitaker Farm. Biking, or walking to Memorial Hill or the Homestead will now be a practical reality with residents and tourists avoiding busy roads and enjoying much of the preserved rural character of Midway. With links to the Homestead, Memorial Hill, the Kohler Dairy, and the Provo River, The Village and Whitaker Farm to the north will be the key link in a trail system that sets a new standard for an open-space based, European style walkable/bikeable community.

The Village and Midway's Vision

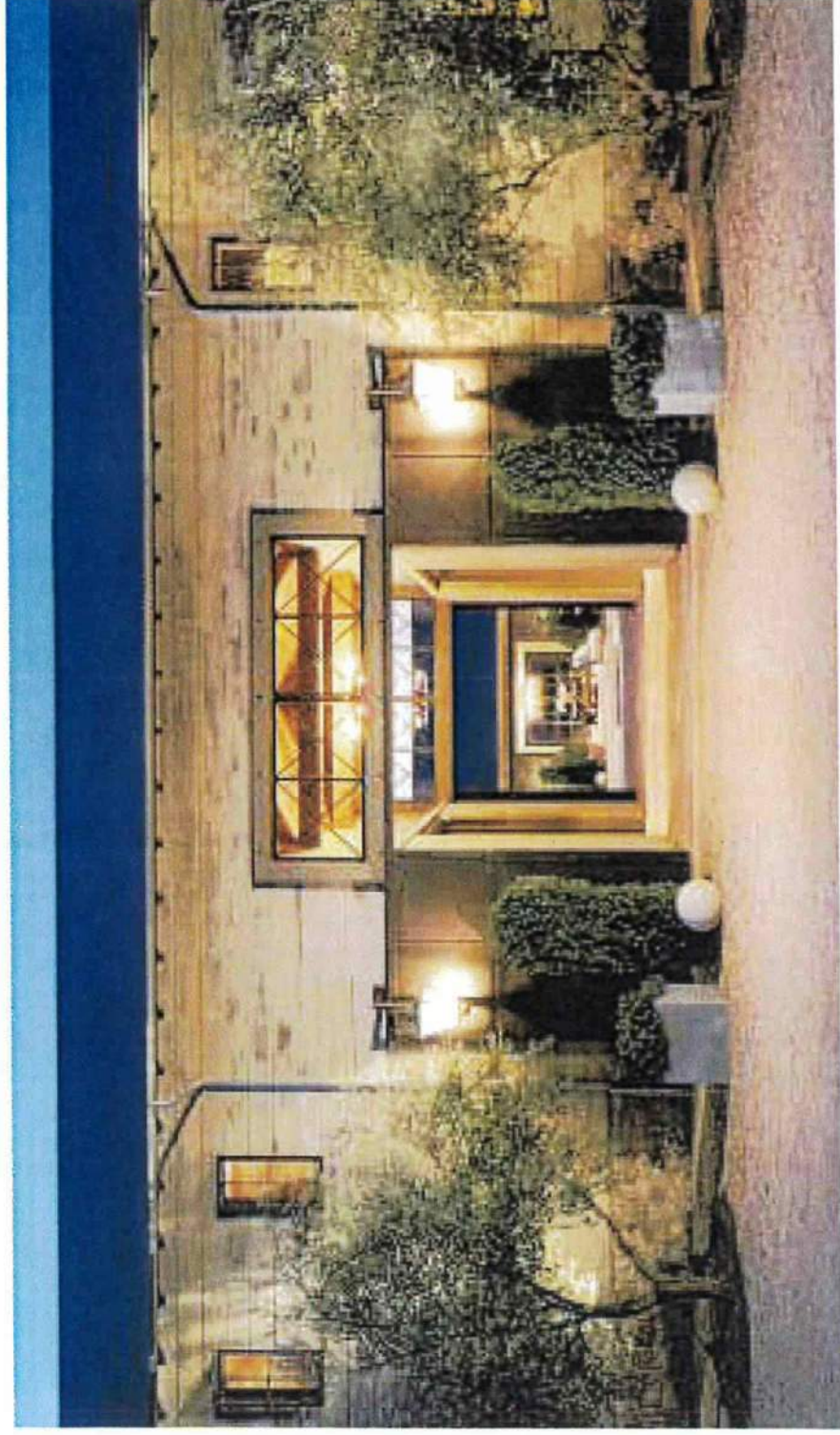
- Walkability, historic quality, adjacent to nature/agriculture



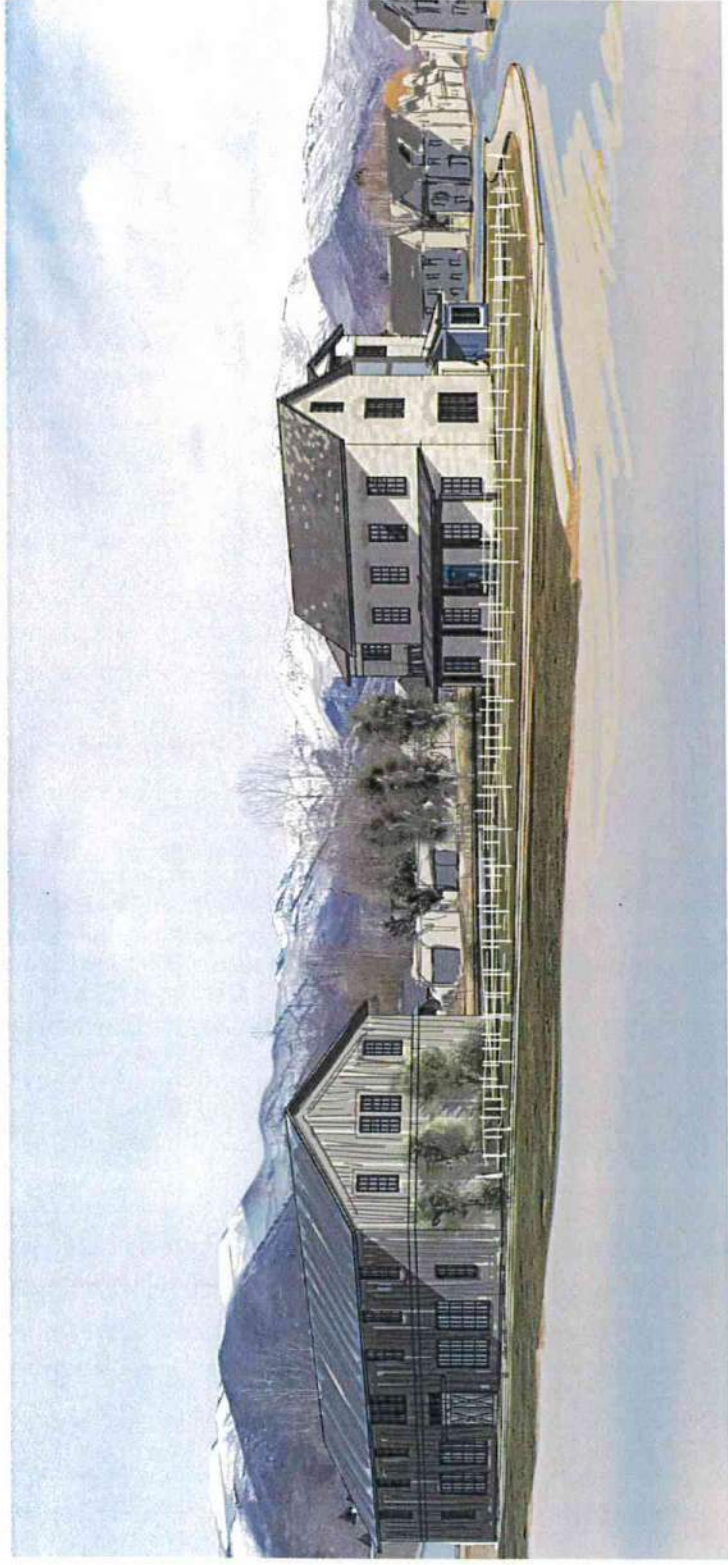
Typical Building Renderings: Streetscape



Typical Building Rendering: Commercial Buildings



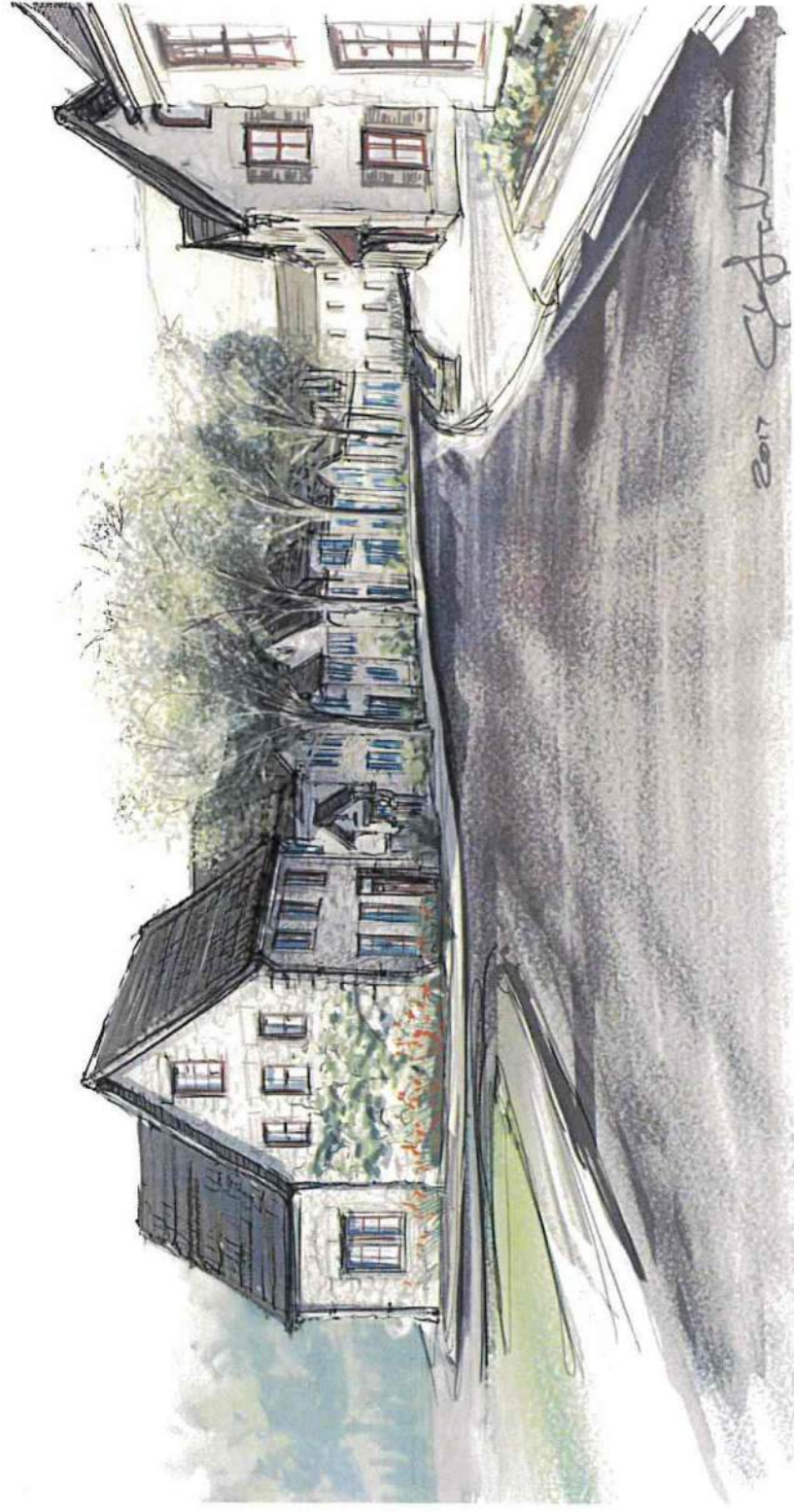
Typical Building Rendering: Commercial Buildings



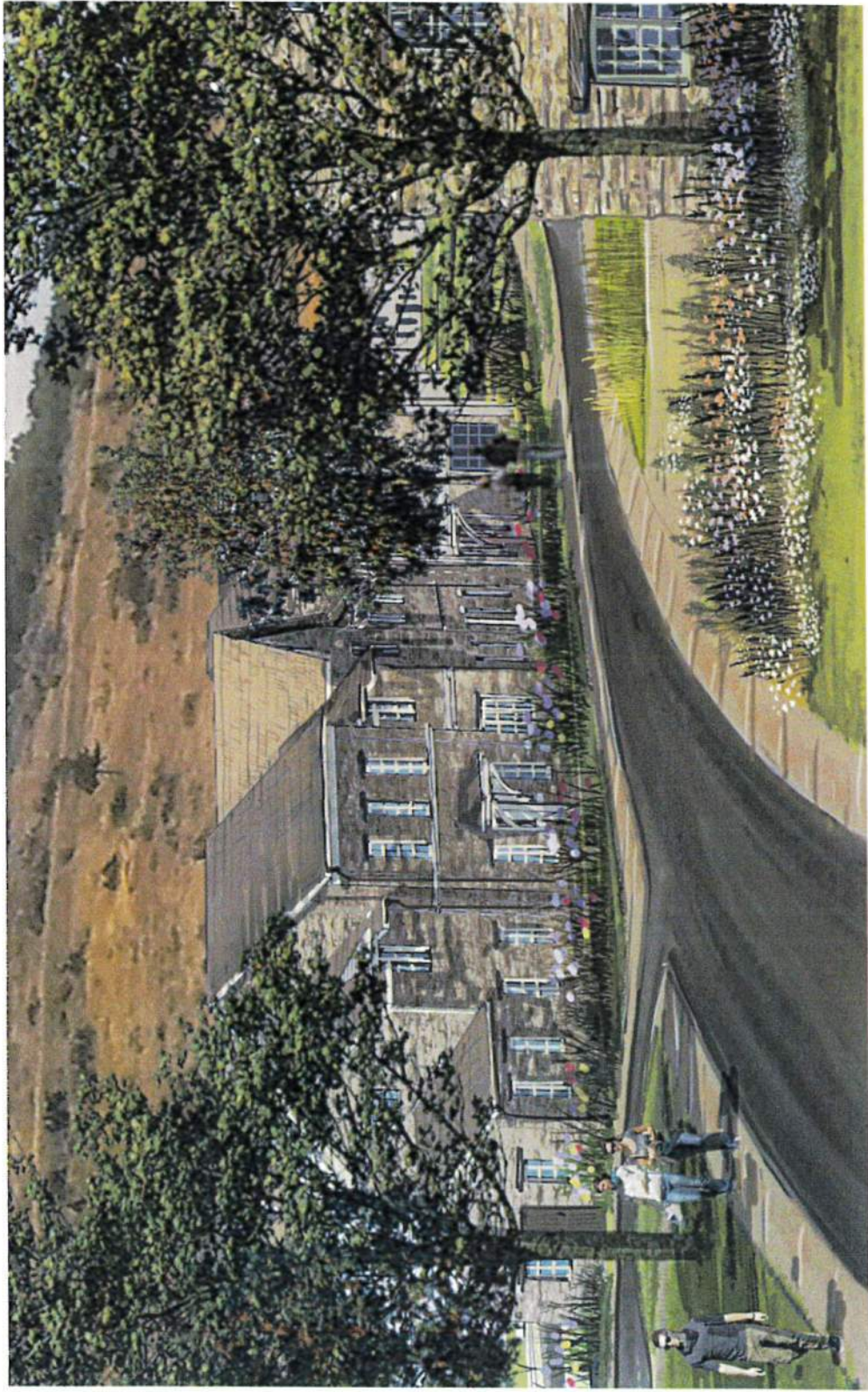
Typical Building Rendering: Commercial/Residential



Typical Building Rendering: Commercial/Residential

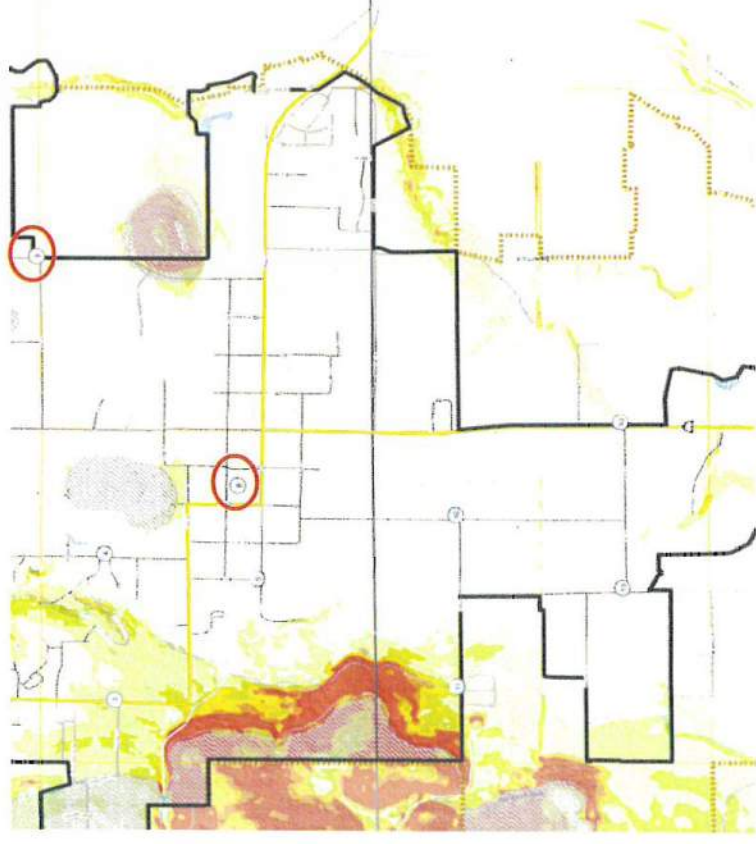


Typical Building Rendering: Residential



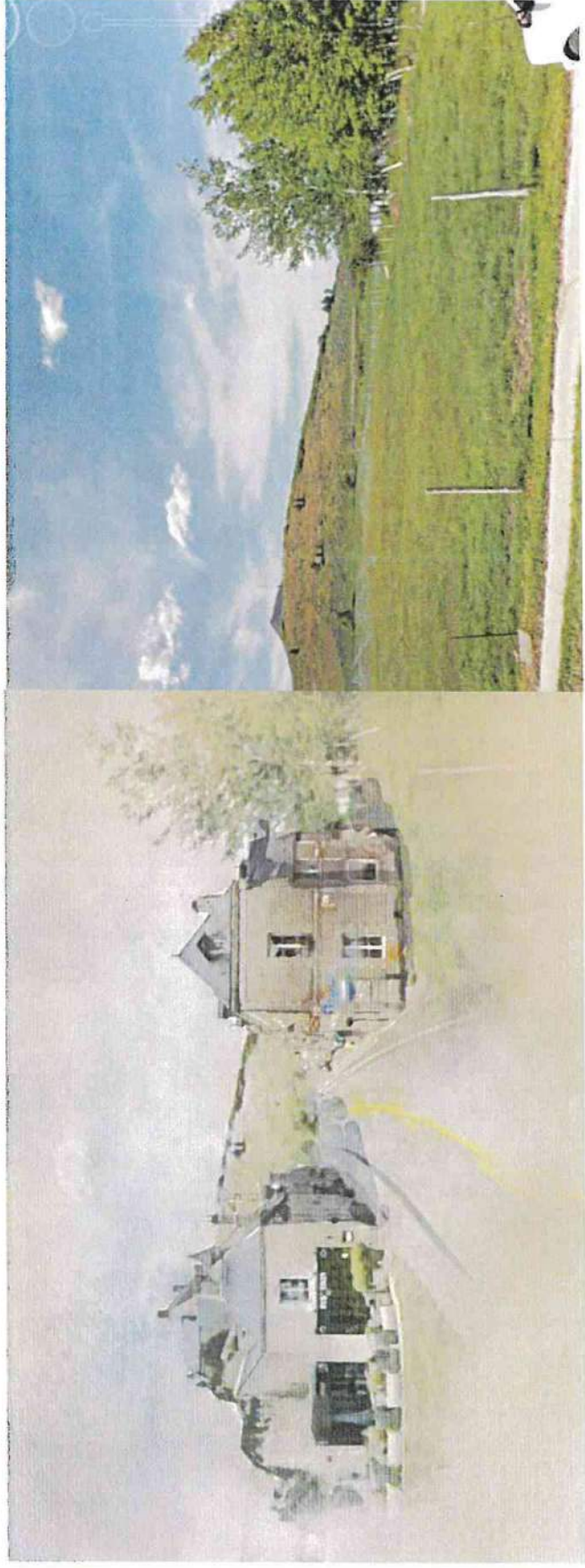
View-shed Analysis

- None of the observation points are impacted. Points 6 and 9 are nearest, but have no observable view of The Village Subdivision



View-shed Analysis

- Care is being taken to create view corridors up to the hill through the development



Community Impact Assumptions

- Estimated 50% of home sites will be second homes
- Average home value will be \$550,000
- Estimated \$300k+ in annual Wasatch County property tax
- 30 transient rental units (90 bedrooms).
- Access to Memorial Hill Trail and North/South East/West Midway trail systems

Fiscal Analysis: Services Budget

Sample HOA Budget

	Per household	Total	Notes
Annual Fee	1,500.00	210,000.00	\$125 per household per month
Open Space & Common Gardens			
Landscape Maintenance	405.00	56,700.00	Assumes 1.5 employees full time for 7 months @ \$30/hr
Materials	142.86	20,000.00	Lump sum
Streets			
Maintenance Budget	357.14	50,000.00	Lump sum
Snow Removal	85.71	12,000.00	Assumes 2 employees working 25 full days @ \$30/hr
Clubhouse and Pool			
Management	231.43	32,400.00	Assumes 1 employee working 20 hours per week @ \$30/hr
Utilities and Repairs	277.86	38,900.00	Lump sum, includes utilities and repairs

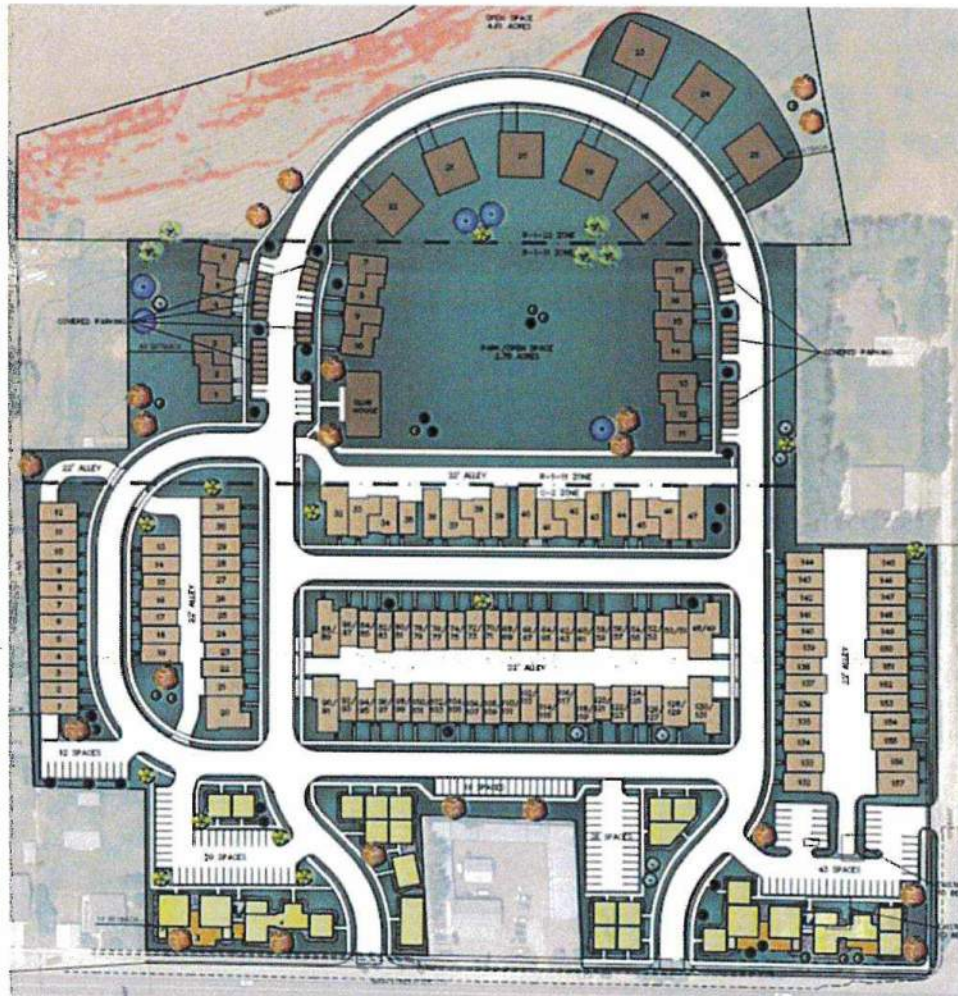
Sample Commercial OA Budget

	Per business	Total	Notes
Annual Fee	3,000.00	36,000.00	\$125 per household per month
Open Space & Common Gardens			
Landscape Maintenance	94.50	13,230.00	Assumes 1 employee 14 hours a week for 7 months @ \$30/hr
Materials	35.71	5,000.00	Lump sum
Parking and Sidewalks			
Maintenance Budget	41.21	5,770.00	Lump sum
Snow Removal	85.71	12,000.00	Assumes 2 employees working 25 full days @ \$30/hr

Exhibit 4

The Village

Traffic Impact Study



Midway, Utah

March 23, 2021

UT21-1835



EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed The Village development located in Midway, Utah. The Village project is located on the north side of Main Street, east of River Road.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2021) conditions with and without the proposed project and to recommend mitigation measures as needed. The evening peak hour level of service (LOS) results are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2.

Table ES-1: Evening Peak Hour Level of Service Results

Intersection		Level of Service	
		Existing (2021)	
		BG	PP
1	River Road / Main Street (S.R. 113)	c	d
2	Fox Den Road / Main Street (S.R. 113)	a	b
3	580 East / Main Street (S.R. 113)	a	c
4	670 East / Main Street (S.R. 113)	b	b
5	Access 1 / Main Street (S.R. 113)	-	b
6	Access 3 / River Road	-	a

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)

2. BG = Background (without project traffic), PP = Plus Project (with project traffic)

Source: Hales Engineering, March 2021

Table ES-2: Recommended Storage Lengths

Intersection		Recommended Storage Lengths (feet)															
		Northbound				Southbound				Eastbound				Westbound			
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	River Road / Main Street (S.R. 113)	-	100	-	-	-	100	-	-	-	100	-	100	-	100	-	100
2	580 East / Main Street (S.R. 113)	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-
3	West Access / Main Street (S.R. 113)	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-

1. Storage lengths are based on 2021 95th percentile queue lengths and do not include required deceleration / taper distances

2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicable

Source: Hales Engineering, February 2021

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions

- The development will consist of residential townhome and single-family units and some commercial
- The project is anticipated to generate approximately 3,832 weekday daily trips, including 256 trips in the morning peak hour, and 322 trips in the evening peak hour

2021	Background	Plus Project
Assumptions	• None	• 580 East / Main St (S.R. 113): Construct EB left turn pocket • West Access / Main St (S.R. 113): Construct EB left-turn pocket • The access shown at 670 East on the site plan is no longer applicable; neither are the 20 townhomes on the east end
Findings	• Acceptable LOS	• Acceptable LOS
Mitigations	• None. A signal is warranted at the River Rd / Main St (S.R. 113) intersection, but it was not included in the analysis due to acceptable operation.	• None

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed The Village development located in Midway, Utah. The proposed project is located on the north side of Main Street, east of River Road. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2021) conditions with and without the proposed project and to recommend mitigation measures as needed.



Figure 1: Vicinity map showing the project location in Midway, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- River Road / Main Street (S.R. 113)
- Fox Den Road / Main Street (S.R. 113)
- 580 East / Main Street (S.R. 113)
- 670 East / Main Street (S.R. 113)

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 6th Edition, 2016 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix B. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 6th Edition, 2016 Methodology (Transportation Research Board)

II. EXISTING (2021) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Main Street (S.R. 113) – is a state-maintained roadway (classified by UDOT access management standards as a “Community – Urban Importance” facility, or access category 8 roadway). Main Street (S.R. 113) has one travel lane in each direction. As identified and controlled by UDOT, a “Community – Urban Importance” access classification identifies minimum signalized intersection spacing of one-quarter mile (1,320 feet), minimum unsignalized street spacing of 300 feet, and minimum driveway spacing of 150 feet. The posted speed limit on Main Street (S.R. 113) is 35 mph.

River Road – is a city-maintained roadway. The roadway has one travel lane in each direction. The posted speed limit is 25 mph in the study area.

C. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- River Road / Main Street (S.R. 113)
- Fox Den Road / Main Street (S.R. 113)
- 580 East / Main Street (S.R. 113)
- 670 East / Main Street (S.R. 113)

The counts were performed on Thursday, February 4 and Tuesday, February 9, 2021. The morning peak hour was determined to be between 7:30 and 8:30 a.m., and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The evening peak hour volumes were approximately 22% higher than the morning peak hour volumes. Therefore, the evening peak hour volumes were used in the analysis to represent the worst-case conditions. Detailed count data are included in Appendix A.

The traffic counts were collected during the COVID-19 pandemic when traffic volumes were slightly reduced due to social distancing measures. According to the UDOT Automatic Traffic

Signal Performance Measures (ATSPM) website, the traffic volumes on February 6, 2020 (pre-social distancing) were approximately 17% higher than those on February 4, 2021. Therefore, the collected data were increased by 17% to represent normal conditions.

Figure 2 shows the existing evening peak hour volumes as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable levels of service during the evening peak hour, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2021) conditions.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the evening peak hour.

F. Mitigation Measures

No mitigation measures are recommended. According to UDOT guidelines, a traffic signal is warranted at the River Road / Main Street (S.R. 113) intersection. However, because it operates at an acceptable LOS, it was not included in the analysis.

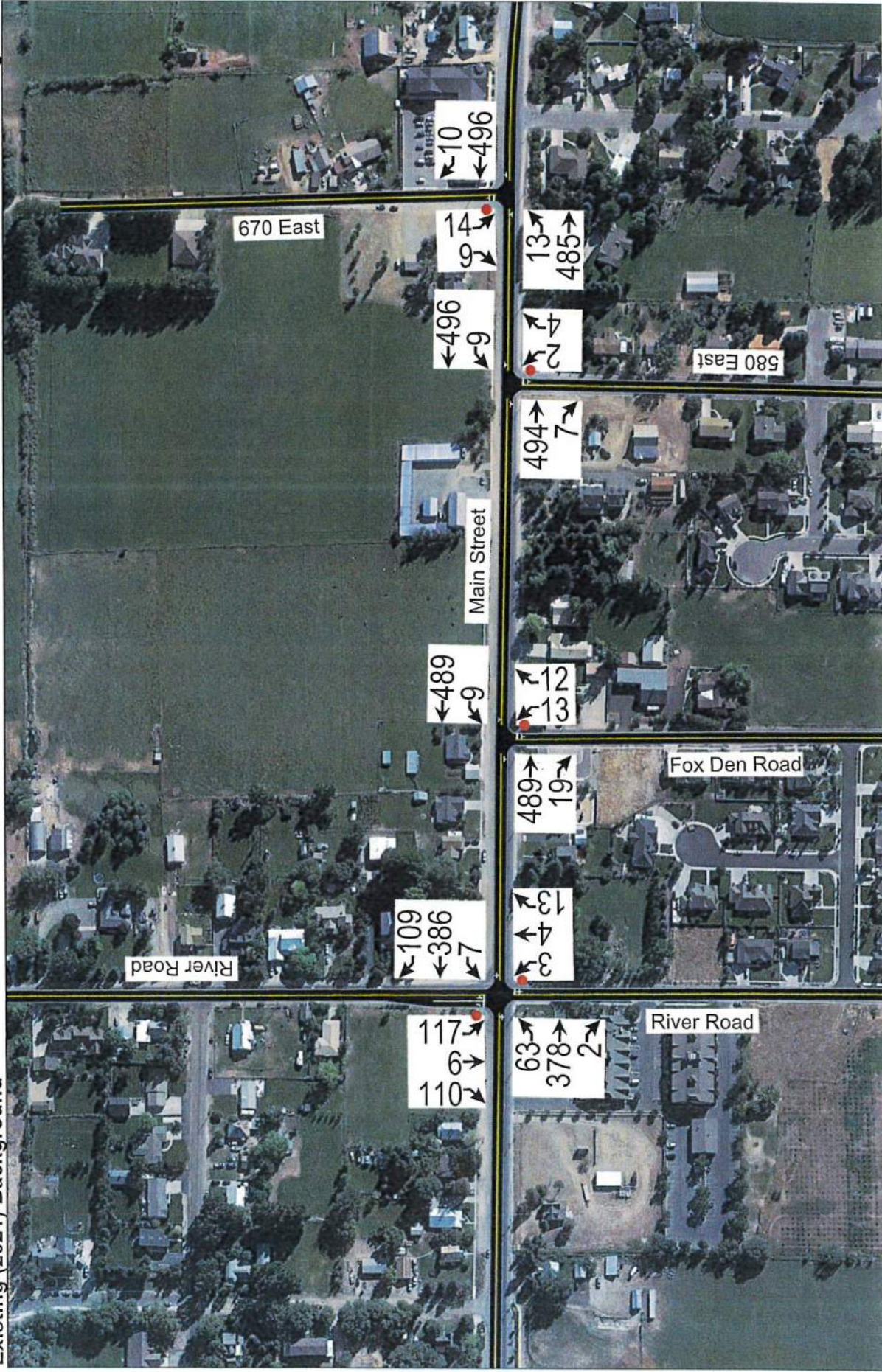


Table 2: Existing (2021) Background Evening Peak Hour LOS

Intersection		Level of Service		
Description	Control	Movement ¹	Aver. Delay (Sec. / Veh.)	LOS ²
River Road / Main Street (S.R. 113)	NB/SB Stop	SBL	23.6	c
Fox Den Road / Main Street (S.R. 113)	NB Stop	NBL	9.9	a
580 East / Main Street (S.R. 113)	NB Stop	NBL	9.9	a
670 East / Main Street (S.R. 113)	SB Stop	SBL	11.5	b

¹ Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

² Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lower case LOS used for all other unsignalized intersections.

Source: Hales Engineering, March 2021

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed The Village development is located on the north side of Main Street, east of River Road. The development will consist of residential townhome and single-family units and some commercial. A concept plan for the proposed development is provided in Appendix C. The 20 townhomes shown on the east side of the project are no longer planned. The proposed land use for the development has been identified in Table 3.

Table 3: Project Land Uses

Land Use	Intensity
Single-family detached housing	25 Units
Townhomes	137 Units
Commercial / Retail	28,170 sq. ft.

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 10th Edition, 2017. Trip generation for the proposed project is included in Table 4.

The total trip generation for the development is as follows:

- Daily Trips: 3,832
 - Morning Peak Hour Trips: 256
 - Evening Peak Hour Trips: 322
-

Table 4: Trip Generation

Trip Generation Midway - The Village TIS								
Weekday Daily Land Use ¹	# of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total New Daily Trips
Single-Family Detached Housing (210)	25	Dwelling Units	292	50%	50%	146	146	292
Multifamily Housing (Low-Rise) (220)	137	Dwelling Units	996	50%	50%	498	498	996
Shopping Center (820)	28	1,000 Sq. Ft. GLA	2,544	50%	50%	1,272	1,272	2,544
Total			3,832			1,916	1,916	3,832
Morning Peak Hour Land Use ¹	# of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total New AM Trips
Single-Family Detached Housing (210)	25	Dwelling Units	24	25%	75%	6	18	24
Multifamily Housing (Low-Rise) (220)	137	Dwelling Units	66	23%	77%	15	51	66
Shopping Center (820)	28	1,000 Sq. Ft. GLA	166	62%	38%	103	63	166
Total			256			124	132	256
Evening Peak Hour Land Use ¹	# of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total New PM Trips
Single-Family Detached Housing (210)	25	Dwelling Units	28	63%	37%	18	10	28
Multifamily Housing (Low-Rise) (220)	137	Dwelling Units	80	63%	37%	50	30	80
Shopping Center (820)	28	1,000 Sq. Ft. GLA	214	48%	52%	103	111	214
Total			322			171	151	322

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition, 2017.

SOURCE: Hales Engineering, March 2021

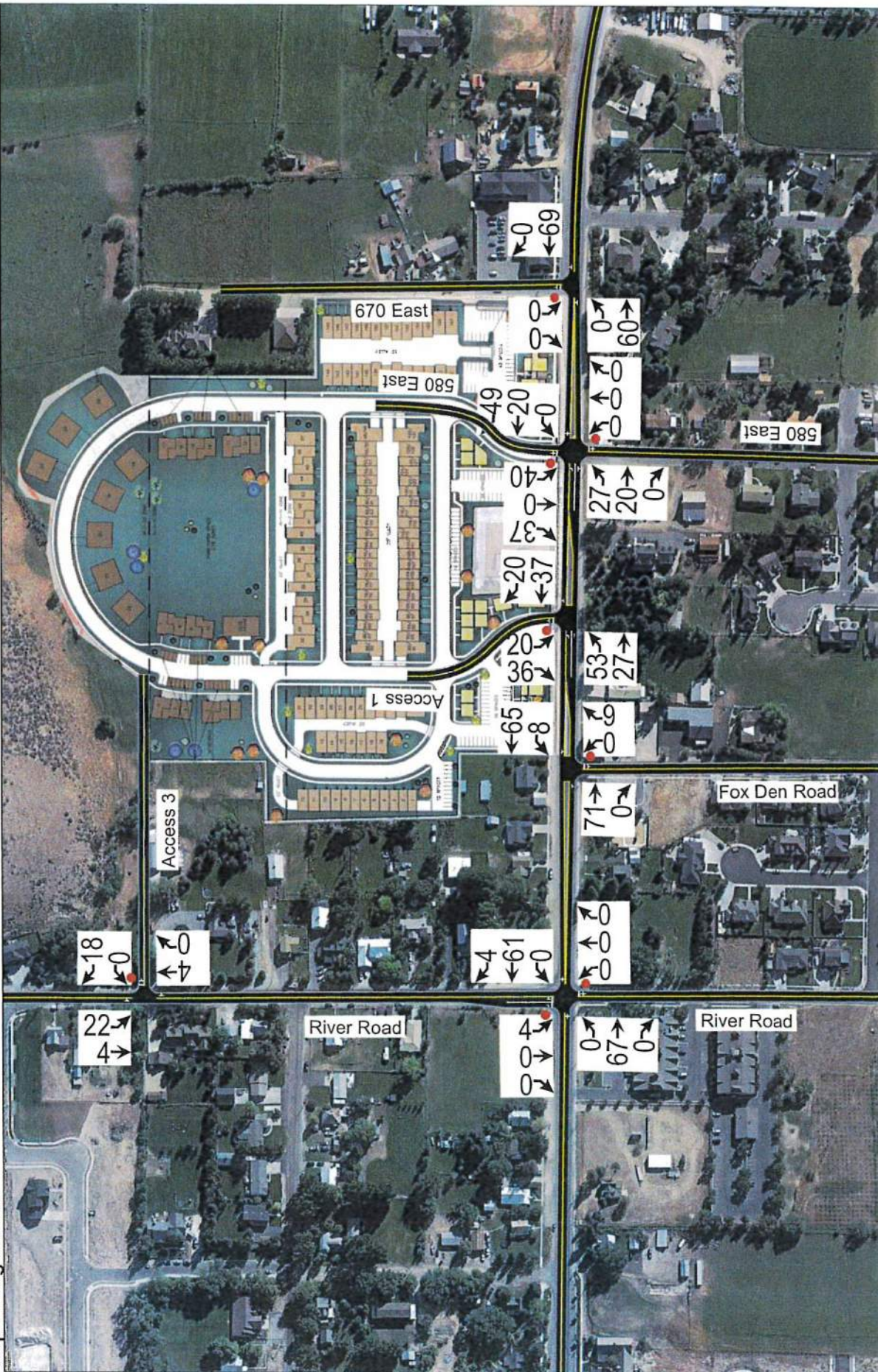
D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially near the site. The resulting distribution of project generated trips during the evening peak hour is shown in Table 5.

Table 5: Trip Distribution

Direction	% To/From Project
North	15%
South	5%
East	40%
West	40%

These trip distribution assumptions were used to assign the evening peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.



E. Access

The proposed access for the site will be gained at the following locations (see also concept plan in Appendix C):

Main Street (S.R. 113):

- Access 1 will be located approximately 265 feet east of the Fox Den Road / Main Street (S.R. 113) intersection. It will access the project on the north side of Main Street (S.R. 113). It is anticipated that the access will be stop-controlled.
- Access 2 will be located directly across from the 580 East / Main Street (S.R. 113) intersection. It will access the project on the north side of Main Street (S.R. 113). It is anticipated that the access will be stop-controlled.

River Road:

- Access 3 will be located approximately 900 feet north of the River Road / Main Street (S.R. 113) intersection. It will access the project on the east side of River Road. It is anticipated that the access will be stop-controlled.

While the site plan currently shows accesses to 670 East, a recent decision was made to eliminate them and confine access to River Road and Main Street (S.R. 113).

F. Auxiliary Lane Requirements

UDOT Administrative Rule R930-6 outlines minimum turn volumes (measured in vehicles per hour) to warrant auxiliary lanes. It is anticipated that auxiliary lanes are required for these accesses, as shown in Table 6 and Table 7.

Table 6: Auxiliary Lane Summary – Access 1

Auxiliary Lane Type		Minimum Requirement	Measure	Met?
Left turn	Deceleration (EB-to-NB)	25 vph	53 vph	Yes
Right turn	Deceleration (WB-to-NB)	50 vph	20 vph	No

Table 7: Auxiliary Lane Summary – Access 2

Auxiliary Lane Type		Minimum Requirement	Measure	Met?
Left turn	Deceleration (EB-to-NB)	25 vph	27 vph	Yes
Right turn	Deceleration (WB-to-NB)	50 vph	49 vph	No

IV. EXISTING (2021) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2021) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2021) background traffic volumes to predict turning movement volumes for existing (2021) plus project conditions. Existing (2021) plus project evening peak hour turning movement volumes are shown in Figure 4.

C. Level of Service Analysis

Hales Engineering determined that all study intersections are anticipated to operate at acceptable levels of service during the evening peak hour with project traffic added, as shown in Table 8.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queuing is anticipated during the evening peak hour.

E. Mitigation Measures

No additional mitigation measures are recommended.

F. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95th percentile queue lengths given in the future (2040) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the study intersections are shown in Table 9. Intersections shown in Table 9 include new intersections and existing intersections that have recommended storage length changes.

Table 8: Existing (2021) Plus Project Evening Peak Hour LOS

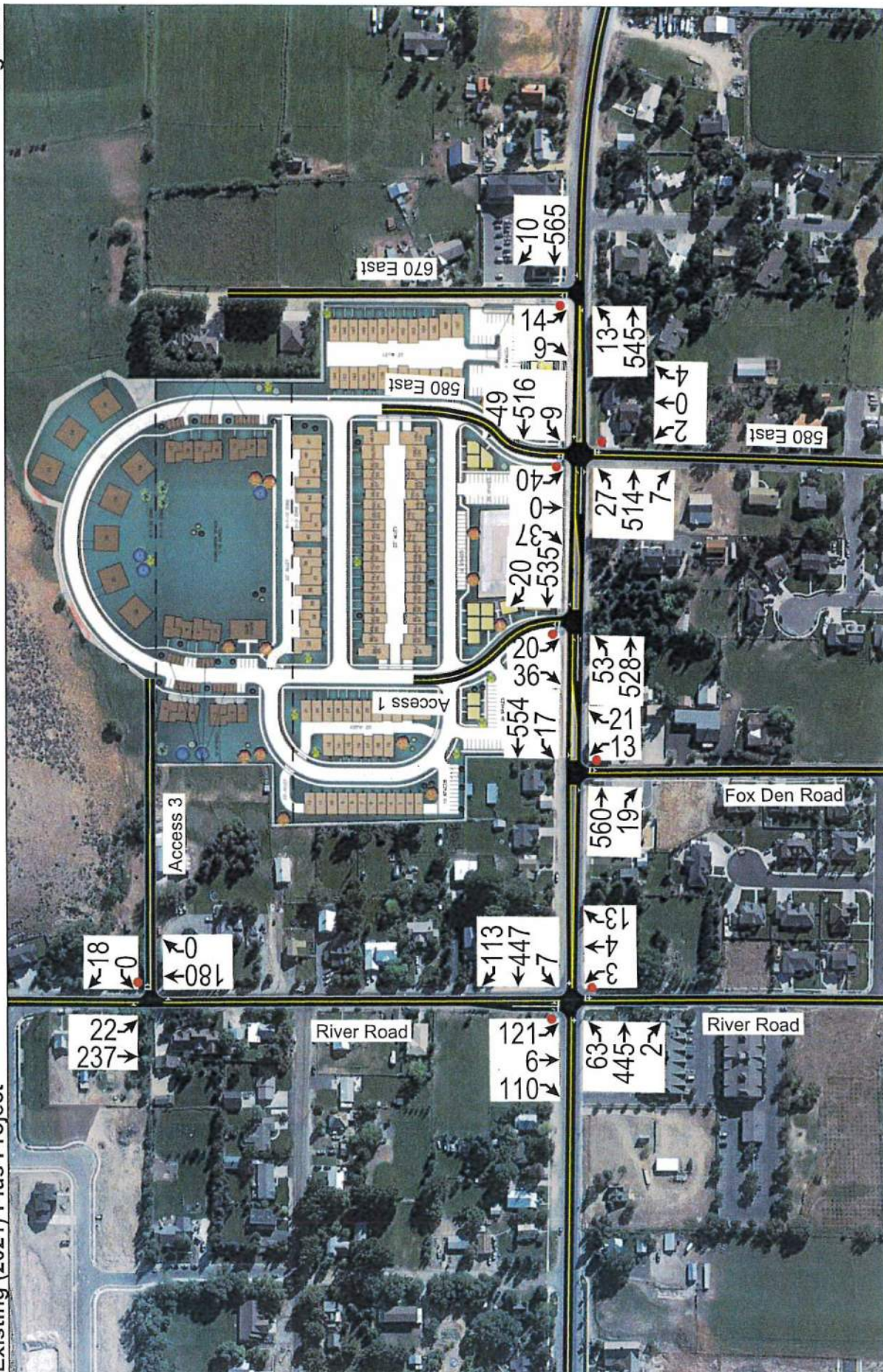
Intersection		Level of Service		
Description	Control	Movement ¹	Aver. Delay (Sec. / Veh.)	LOS ²
River Road / Main Street (S.R. 113)	NB/SB Stop	SBL	29.6	d
Fox Den Road / Main Street (S.R. 113)	NB Stop	NBL	15.0	b
580 East / Main Street (S.R. 113)	NB/SB Stop	SBL	16.0	c
670 East / Main Street (S.R. 113)	SB Stop	SBL	12.5	b
Access 1 / Main Street (S.R. 113)	SB Stop	SBL	12.5	b
Access 3 / River Road	WB Stop	WBR	3.2	a

¹ Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL – Southbound left movement, etc.

² Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, March 2021

Table 9: Recommended Storage Lengths



APPENDIX A

Turning Movement Counts

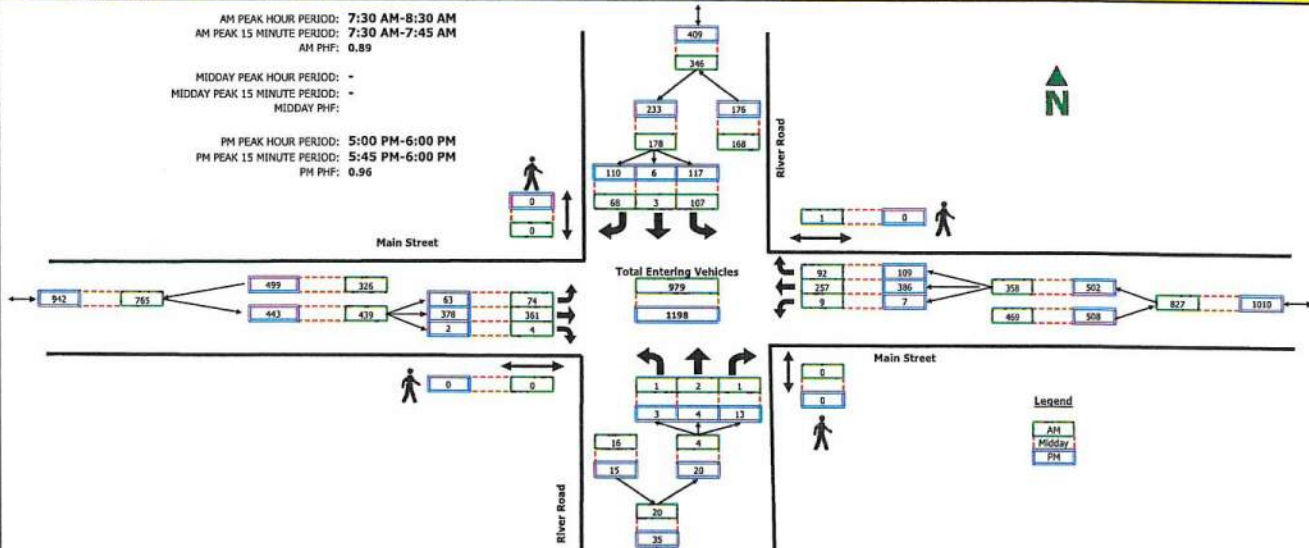
TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

Intersection: River Road / Main Street
North/South: River Road
East/West: Main Street
Jurisdiction: Midway
Project Title: Boagency TIS Update
Project No: UT21-1835
Weather: Clear

Date: 2-4-21, Thu
COVID-19 Adjustment: 85.5%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0



RAW COUNT SUMMARIES	River Road Northbound				River Road Southbound				Main Street Eastbound				Main Street Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	0	0	2	0	9	1	6	0	12	43	0	0	6	36	18	0	133
7:15 - 7:30	0	0	0	0	25	0	4	0	12	74	0	0	1	32	21	0	169
7:30 - 7:45	0	1	1	0	50	1	13	0	16	117	0	0	2	55	20	0	276
7:45 - 8:00	0	1	0	0	26	1	16	0	16	84	2	0	5	76	34	1	261
8:00 - 8:15	1	0	0	0	12	0	16	0	16	76	1	0	1	65	25	0	213
8:15 - 8:30	0	0	0	0	19	1	23	0	26	84	1	0	1	61	13	0	229
8:30 - 8:45	1	0	2	0	26	0	23	1	30	91	2	0	0	76	18	0	269
8:45 - 9:00	1	0	2	0	30	0	12	0	28	78	0	0	1	82	22	0	256
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	0	0	2	0	12	0	16	1	26	92	1	0	1	111	33	0	293
16:15 - 16:30	0	1	1	0	37	0	26	0	11	110	1	0	2	90	13	0	292
16:30 - 16:45	2	1	2	0	28	0	32	0	12	85	0	5	2	106	32	0	302
16:45 - 17:00	0	0	5	0	28	1	25	0	5	76	2	0	2	87	36	0	267
17:00 - 17:15	1	2	7	0	30	2	28	0	16	87	1	0	4	98	33	0	309
17:15 - 17:30	2	1	4	0	26	2	33	0	11	105	0	0	1	102	23	0	310
17:30 - 17:45	0	0	2	0	31	0	27	0	21	101	0	0	0	71	12	0	267
17:45 - 18:00	0	1	0	0	28	2	22	0	15	85	1	0	2	115	41	0	312

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

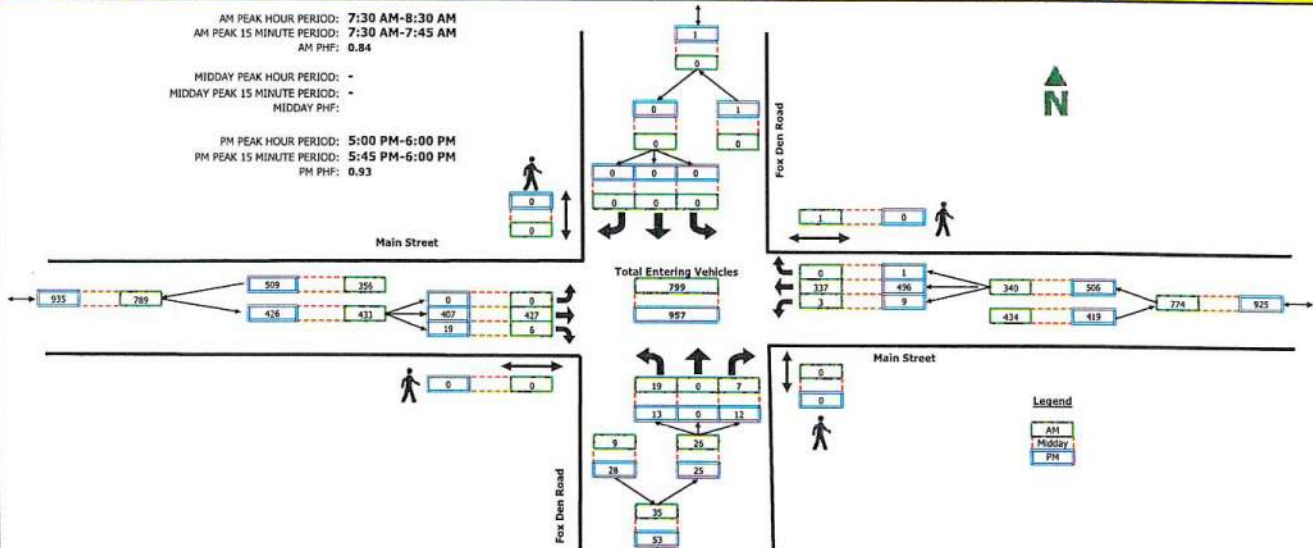
Intersection: Fox Den Road / Main Street
North/South: Fox Den Road
East/West: Main Street
Jurisdiction: Midway
Project Title: Beasugency TIS Update
Project No: UT21-1835
Weather: Clear

Date: 2-4-21, Thu
COVID-19 Adjustment: 85.5%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: 7:30 AM-8:30 AM
AM PEAK 15 MINUTE PERIOD: 7:30 AM-7:45 AM
AM PHF: 0.84

MIDDAY PEAK HOUR PERIOD: -
MIDDAY PEAK 15 MINUTE PERIOD: -
MIDDAY PHF: -

PM PEAK HOUR PERIOD: 5:00 PM-6:00 PM
PM PEAK 15 MINUTE PERIOD: 5:45 PM-6:00 PM
PM PHF: 0.93



RAW COUNT SUMMARIES	Fox Den Road Northbound				Fox Den Road Southbound				Main Street Eastbound				Main Street Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	2	1	2	0	1	0	0	0	1	44	1	0	1	61	0	0	114
7:15 - 7:30	4	0	2	0	0	0	0	0	0	89	4	0	0	48	0	0	147
7:30 - 7:45	4	0	2	0	0	0	0	0	0	157	0	0	0	75	0	0	238
7:45 - 8:00	6	0	2	0	0	0	0	0	0	98	1	0	1	104	0	1	212
8:00 - 8:15	5	0	1	0	0	0	0	0	0	81	1	0	1	87	0	0	176
8:15 - 8:30	4	0	2	0	0	0	0	0	0	91	4	0	1	71	0	0	173
8:30 - 8:45	1	1	0	0	0	0	0	0	0	102	4	1	5	97	0	0	210
8:45 - 9:00	2	0	5	0	0	0	0	0	0	98	6	0	5	104	0	0	220
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	4	0	1	0	0	0	0	0	0	97	4	0	1	139	0	0	246
16:15 - 16:30	4	0	2	0	0	0	0	0	0	129	7	0	2	97	0	1	241
16:30 - 16:45	1	0	2	0	0	0	0	0	0	111	0	4	2	130	0	0	246
16:45 - 17:00	1	0	1	0	0	0	0	0	0	82	1	0	1	132	0	0	218
17:00 - 17:15	1	0	0	0	0	0	0	0	0	104	1	0	0	144	0	0	250
17:15 - 17:30	1	0	6	0	0	0	0	0	0	102	5	0	1	123	1	0	239
17:30 - 17:45	4	0	2	0	0	0	0	0	0	119	5	0	4	78	0	0	212
17:45 - 18:00	7	0	4	0	0	0	0	0	0	82	8	0	4	151	0	0	256

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

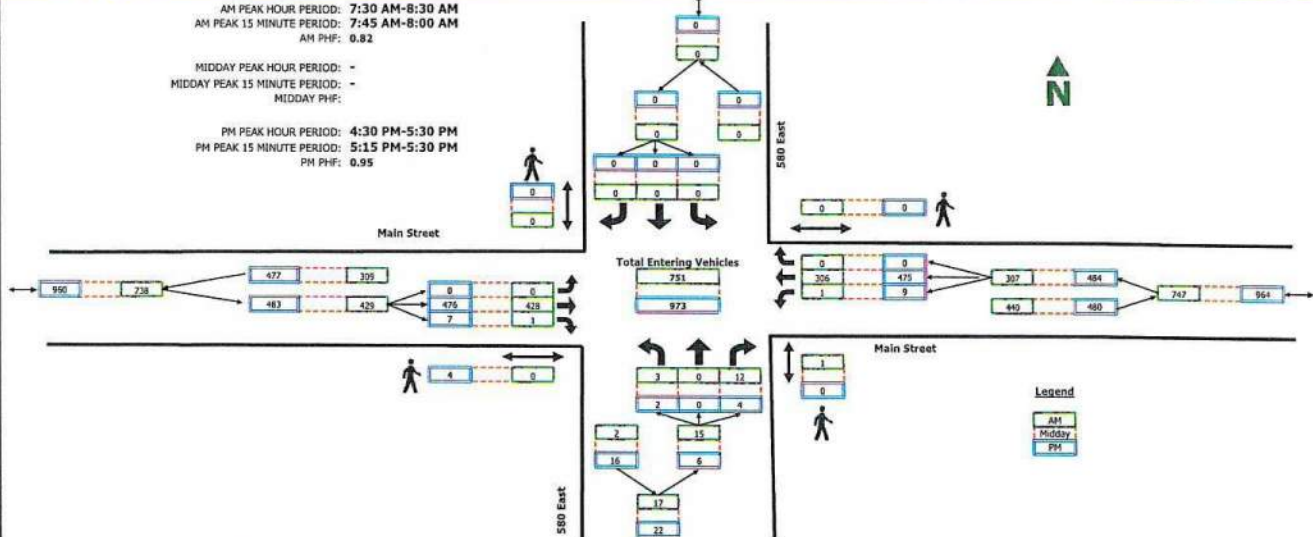
Intersection: 580 East / Main Street
North/South: 580 East
East/West: Main Street
Jurisdiction: Midway
Project Title: Deaagency TES Update
Project No: UT21-1835
Weather: Clear

Date: 2-4-21, Thu
COVID-19 Adjustment: 85.5%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: 7:30 AM-8:30 AM
AM PEAK 15 MINUTE PERIOD: 7:45 AM-8:00 AM
AM PHF: 0.82

MIDDAY PEAK HOUR PERIOD: -
MIDDAY PEAK 15 MINUTE PERIOD: -
MIDDAY PHF: -

PM PEAK HOUR PERIOD: 4:30 PM-5:30 PM
PM PEAK 15 MINUTE PERIOD: 5:15 PM-5:30 PM
PM PHF: 0.95



RAW COUNT SUMMARIES	580 East Northbound				580 East Southbound				Main Street Eastbound				Main Street Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	0	0	0	1	0	0	0	0	0	37	1	0	0	44	0	0	82
7:15 - 7:30	1	0	0	0	0	0	0	0	0	78	0	0	0	39	0	0	118
7:30 - 7:45	2	0	4	1	0	0	0	0	0	136	0	0	0	64	0	0	206
7:45 - 8:00	0	0	5	0	0	0	0	0	0	135	0	0	0	89	0	0	229
8:00 - 8:15	0	0	2	0	0	0	0	0	0	80	0	0	1	82	0	0	165
8:15 - 8:30	1	0	1	0	0	0	0	0	0	77	1	0	0	71	0	0	151
8:30 - 8:45	1	0	4	0	0	0	0	0	0	108	1	0	0	88	0	0	202
8:45 - 9:00	2	0	1	0	0	0	0	0	0	119	0	1	1	101	0	0	224
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	0	0	0	0	0	0	0	0	1	0	106	1	0	131	0	0	239
16:15 - 16:30	1	0	2	1	0	0	0	0	0	130	4	0	0	108	0	0	245
16:30 - 16:45	0	0	0	0	0	0	0	0	0	112	0	4	2	124	0	0	238
16:45 - 17:00	1	0	2	0	0	0	0	0	0	101	2	0	2	118	0	0	226
17:00 - 17:15	0	0	1	0	0	0	0	0	0	123	5	0	1	122	0	0	252
17:15 - 17:30	1	0	1	0	0	0	0	0	0	140	0	0	4	111	0	0	257
17:30 - 17:45	0	0	1	0	0	0	0	0	0	124	1	0	1	81	0	0	208
17:45 - 18:00	1	0	2	0	0	0	0	0	0	103	0	2	1	132	0	0	239

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

Intersection Turning Movement Summary

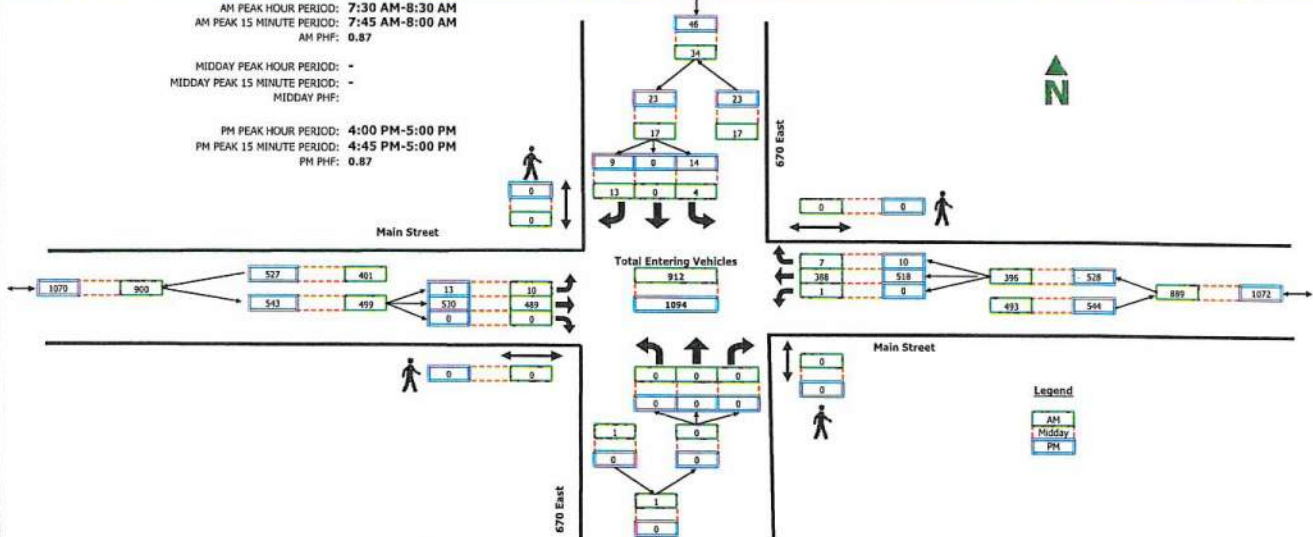
Intersection: 670 East / Main Street
North/South: 670 East
East/West: Main Street
Jurisdiction: Midway
Project Title: Beaugency TIS Update
Project No: UT21-8839
Weather: Clear

Date: 2-9-21, Tue
COVID-19 Adjustment: 85.5%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: 7:30 AM-8:30 AM
AM PEAK 15 MINUTE PERIOD: 7:45 AM-8:00 AM
AM PHF: 0.87

MIDDAY PEAK HOUR PERIOD: -
MIDDAY PEAK 15 MINUTE PERIOD: -
MIDDAY PHF: -

PM PEAK HOUR PERIOD: 4:00 PM-5:00 PM
PM PEAK 15 MINUTE PERIOD: 4:45 PM-5:00 PM
PM PHF: 0.87



RAW COUNT SUMMARIES	670 East Northbound				670 East Southbound				Main Street Eastbound				Main Street Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	0	0	0	0	0	0	0	0	0	46	0	0	0	47	0	0	93
7:15 - 7:30	0	0	0	0	2	0	0	0	0	108	0	0	0	50	0	0	160
7:30 - 7:45	0	0	0	0	2	0	1	0	0	171	0	0	0	78	1	0	253
7:45 - 8:00	0	0	0	0	2	0	2	0	4	143	0	0	0	109	2	0	262
8:00 - 8:15	0	0	0	0	0	0	5	0	4	87	0	0	1	113	4	0	214
8:15 - 8:30	0	0	0	0	0	0	5	0	2	88	0	0	0	88	0	0	183
8:30 - 8:45	0	0	0	0	1	0	2	0	2	104	0	0	0	97	0	0	206
8:45 - 9:00	0	0	0	0	4	0	0	0	2	143	0	0	0	91	1	0	241
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	0	0	0	0	1	0	5	0	5	117	0	0	0	135	4	0	267
16:15 - 16:30	0	0	0	0	5	0	2	0	1	131	0	0	0	124	4	0	267
16:30 - 16:45	0	0	0	0	2	0	1	0	1	116	0	0	0	123	1	0	244
16:45 - 17:00	0	0	0	0	6	0	1	0	6	166	0	0	0	136	1	0	316
17:00 - 17:15	0	0	0	0	1	0	2	0	1	125	0	0	0	133	4	0	266
17:15 - 17:30	0	0	0	0	2	0	2	0	1	96	0	0	0	126	4	0	231
17:30 - 17:45	0	0	0	0	1	0	4	0	1	101	0	0	0	133	0	0	240
17:45 - 18:00	0	0	0	0	2	0	4	0	0	132	0	0	0	108	1	0	247

APPENDIX B

LOS Results

SimTraffic LOS Report

Project: Midway - The Village TIS
Analysis Period: Existing (2021) Background
Time Period: Evening Peak Hour

Project #: UT21-1835

Intersection: River Road & Main Street
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	3	2	67	7.7	A
	T	4	4	100	15.2	C
	R	13	15	113	6.1	A
	Subtotal	20	21	105	8.0	A
SB	L	117	121	104	23.6	C
	T	6	6	100	18.2	C
	R	110	106	97	6.4	A
	Subtotal	233	233	100	15.6	C
EB	L	63	61	97	5.4	A
	T	378	376	99	2.4	A
	R	2	3	150	0.6	A
	Subtotal	443	440	99	2.8	A
WB	L	7	7	100	3.9	A
	T	393	396	101	2.2	A
	R	109	112	103	1.0	A
	Subtotal	509	515	101	2.0	A
Total		1,205	1,209	100	5.0	A

Intersection: Fox Den Road & Main Street
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	13	13	98	9.9	A
	R	12	14	114	4.5	A
	Subtotal	25	27	108	7.1	A
EB	T	496	498	100	1.1	A
	R	19	21	109	0.9	A
	Subtotal	515	519	101	1.1	A
WB	L	9	8	89	3.4	A
	T	489	496	101	0.9	A
	Subtotal	498	504	101	0.9	A
Total		1,039	1,050	101	1.2	A

SimTraffic LOS Report

Project: Midway - The Village TIS
Analysis Period: Existing (2021) Background
Time Period: Evening Peak Hour
Project #: UT21-1835

Intersection: 580 East & Main Street
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	2	1	50	9.9	A
	R	4	4	100	4.2	A
	Subtotal	6	5	83	5.3	A
EB	T	494	497	101	0.7	A
	R	7	8	114	0.3	A
	Subtotal	501	505	101	0.7	A
WB	L	9	7	78	3.6	A
	T	496	503	101	0.5	A
	Subtotal	505	510	101	0.5	A
Total		1,012	1,020	101	0.7	A

Intersection: Main Street & 670 East
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	14	14	98	11.5	B
	R	9	9	100	5.0	A
	Subtotal	23	23	100	9.0	A
EB	L	13	11	83	3.6	A
	T	486	490	101	0.6	A
	Subtotal	499	501	100	0.7	A
WB	T	496	501	101	1.1	A
	R	10	10	100	0.7	A
	Subtotal	506	511	101	1.1	A
Total		1,028	1,035	101	1.1	A

SimTraffic LOS Report

Project: Midway The Village TIS
Analysis Period: Existing (2021) Plus Project
Time Period: Evening Peak Hour

Project #: UT21-1835

Intersection: River Road & Main Street
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	3	3	100	19.5	C
	T	4	5	125	21.6	C
	R	13	13	98	6.8	A
	Subtotal	20	21	105	12.1	B
SB	L	121	116	96	29.6	D
	T	7	6	89	18.7	C
	R	110	111	101	6.7	A
	Subtotal	238	233	98	18.4	C
EB	L	63	64	102	6.8	A
	T	445	437	98	2.6	A
	R	2	1	50	3.4	A
	Subtotal	510	502	98	3.1	A
WB	L	7	7	100	4.5	A
	T	454	463	102	2.4	A
	R	113	113	100	1.1	A
	Subtotal	574	583	102	2.2	A
Total		1,342	1,339	100	5.5	A

Intersection: Fox Den Road & Main Street
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	13	15	113	15.0	B
	R	21	23	108	6.1	A
	Subtotal	34	38	112	9.6	A
EB	T	567	552	97	1.2	A
	R	19	19	99	0.8	A
	Subtotal	586	571	97	1.2	A
WB	L	17	16	93	4.5	A
	T	555	564	102	0.8	A
	Subtotal	572	580	101	0.9	A
Total		1,193	1,189	100	1.3	A

SimTraffic LOS Report

Project: Midway The Village TIS
Analysis Period: Existing (2021) Plus Project
Time Period: Evening Peak Hour
Project #: UT21-1835

Intersection: 580 East & Main Street
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	2	2	100	8.7	A
	R	4	5	125	4.8	A
	Subtotal	6	7	117	5.9	A
SB	L	40	38	96	16.0	C
	R	37	37	101	7.5	A
	Subtotal	77	75	97	11.8	B
EB	L	27	25	92	4.4	A
	T	514	500	97	0.5	A
	R	7	7	100	0.2	A
	Subtotal	548	532	97	0.7	A
WB	L	9	8	89	4.3	A
	T	519	530	102	1.3	A
	R	49	46	94	0.5	A
	Subtotal	577	584	101	1.3	A
Total		1,208	1,198	99	1.7	A

Intersection: Main Street & 670 East
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	14	14	98	12.5	B
	R	9	10	111	4.8	A
	Subtotal	23	24	104	9.3	A
EB	L	13	13	98	4.1	A
	T	546	530	97	0.7	A
	Subtotal	559	543	97	0.8	A
WB	T	565	569	101	1.4	A
	R	10	11	110	1.1	A
	Subtotal	575	580	101	1.4	A
Total		1,157	1,147	99	1.3	A

SimTraffic LOS Report

Project: Midway The Village TIS
Analysis Period: Existing (2021) Plus Project
Time Period: Evening Peak Hour
Project #: UT21-1835

Intersection: Main Street & Access 1
Type: Unsignalized

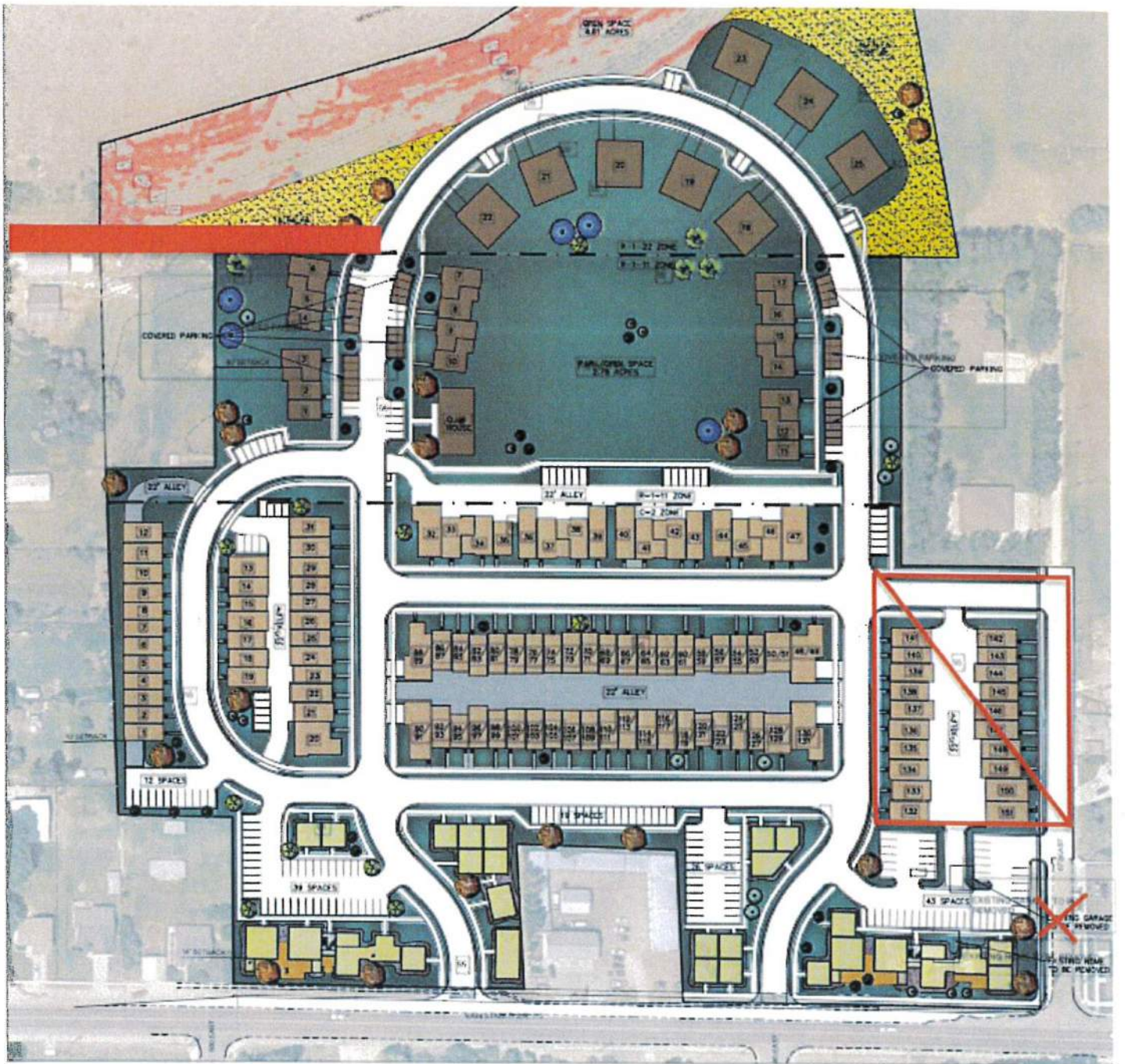
Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	18	89	12.5	B
	R	36	35	96	5.9	A
	Subtotal	56	53	95	8.1	A
EB	L	53	53	100	4.2	A
	T	530	517	98	0.4	A
	Subtotal	583	570	98	0.8	A
WB	T	536	545	102	1.1	A
	R	20	21	104	0.5	A
	Subtotal	556	566	102	1.1	A
Total		1,195	1,189	99	1.2	A

Intersection: River Road & Access 3
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	181	183	101	0.5	A
	Subtotal	181	183	101	0.5	A
SB	L	22	23	103	2.2	A
	T	237	232	98	0.3	A
	Subtotal	259	255	98	0.5	A
WB	R	18	20	110	3.2	A
	Subtotal	18	20	111	3.2	A
Total		458	458	100	0.6	A

APPENDIX C

Site Plan



APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Midway - The Village TIS

Analysis: Existing (2021) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet)

HALES  **ENGINEERING**
innovative transportation solutions

Project #: UT21-1835

Intersection	NB		SB		EB		WB	
	LR	LTR	LR	LT	LT	LTR	LT	LTR
01: River Road & Main Street	--	41	--	134	--	88	--	26
02: Fox Den Road & Main Street	46	--	--	--	--	--	27	--
03: 580 East & Main Street	24	--	--	--	--	--	34	--
04: Main Street & 670 East	--	--	44	--	36	--	--	--

Intersection	NB			SB			EB			WB				
	LR	LTR	TR	LR	LT	LTR	R	L	LT	LTR	LR	LT	LTR	TR
01: River Road & Main Street	--	45	--	--	124	--	70	--	--	108	--	--	33	--
02: Fox Den Road & Main Street	53	--	--	--	--	--	--	--	--	--	--	53	--	--
03: 580 East & Main Street	--	27	--	--	--	67	--	34	--	--	--	--	38	--
04: Main Street & 670 East	--	--	--	43	--	--	--	--	45	--	--	--	--	--
05: Main Street & Access 1	--	--	--	55	--	--	--	47	--	--	--	--	--	3
06: River Road & Access 3	--	--	--	--	27	--	--	--	--	--	42	--	--	--